JLR No.: 26783-003
Revision: 2

May 23, 2025

Prepared for:

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Site Servicing Report

Wren Subdivision – Phases 3 and 4
Village of Cobden, Ontario

J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

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Appendix F Storm Sewer & Ditch Design Sheets
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1.0 Introduction

1.1 Background

Bonnechere Excavating Inc. (BEI) has retained the services of J.L. Richards & Associates Limited (JLR) to proceed with the detailed design of municipal infrastructure to support the development of Phases 3 and 4 of the Wren Subdivision, in the Village of Cobden, Township of Whitewater Region (Township), Ontario.

In April 2017, the municipality approved the development plans for Phase 2. In April 2021, JLR amended this approval to support the construction of 12 semi-detached units along Bamagillia Street, replacing the design of 8-single family units.

This report outlines the site servicing (water, wastewater, storm sewer and runoff management) needed to develop the remaining development area (Phases 3 and 4). Also included are recommended best management practices (BMP) for the implementation of Erosion and Sedimental Control (ESC) measures during construction.

1.2 Site Description and Proposed Development

Approximately 5.87 ha of the ±10.76 ha subdivision area remains to be developed. The site is bound by farmlands northwest, McLeod Municipal Drain (MMD) west, and Cobden District Public School yard south. There are residential lots that front along Pembroke and Gould Streets northeast and east of the site. There is also a nursing and retirement facility west of Wren Drive. Refer to Figure 1 for the location plan.

The site's legal description: Blocks 11 and 12 of Registered Plan No. 573 and Part of Block E of Registered Plan No. 65 in the Township of Whitewater Region County of Renfrew. See Legal under Appendix A.

At buildout there will be a total of 83 lots onsite, a breakdown of lots per phase as follows:

- Phase 1 - 10 lots (single-family units),
- Phase 2 - 27 lots (mix of single-family and semi-detached units),
- Phase 3 - 34 lots (single-family units), and
- Phase 4 - 12 lots (single-family units).

In 1991, all the homes within the Phase 1 site, along Morrison Drive, were completed. As of May 2023, a few dwellings remain to be realized within the Phase 2 site along Bamagillia Street.

1.3 Existing Infrastructure

The development to be serviced by extending the existing infrastructure along Wren Drive and Morrison Drive to consist of:

- Water service to be supplied by extending the existing 203 mm diameter watermain along Wren Drive and Morrison Drive.
- Sanitary service to be achieved by extending the existing 200 mm diameter sanitary sewer along Morrison Drive and Wren Drive.
- Storm runoff to be conveyed via rear yard ditches, and shallow roadside swales equipped with a perforated storm pipe system draining to an existing end-of-pipe Stormwater Management Facility (SWMF); ultimately this system discharges controlled flows to the McLeod Municipal Drain (MMD).

1.4 Municipal Design Guidelines

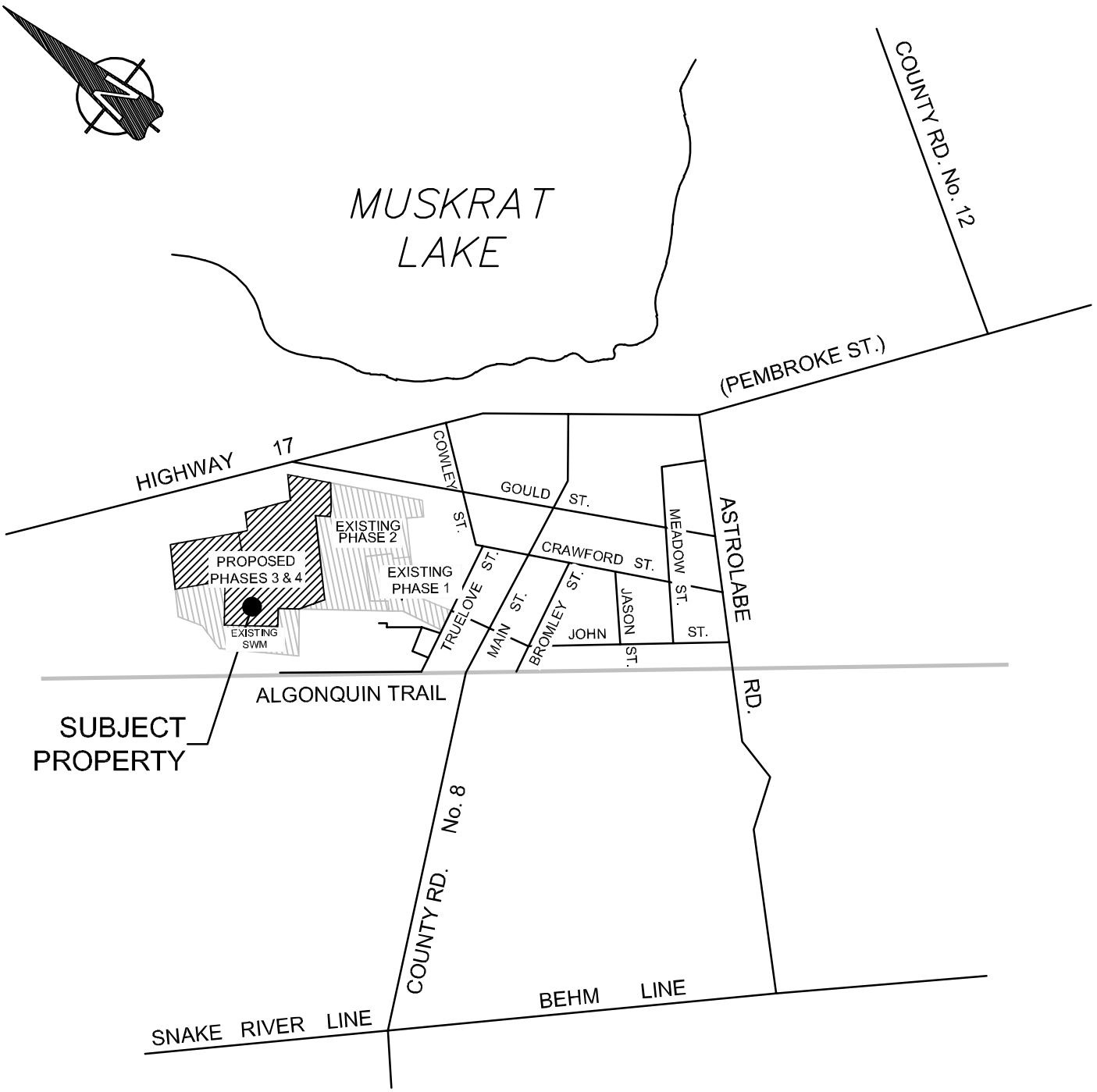
This Servicing Brief and associated functional site servicing drawings were prepared in accordance with the following:

- Ottawa Sewer Design Guidelines (October 2012) complete with the following Technical Bulletins: ISTB-2012-01, ISTDB-2014-01, ISTDB-2016-01, ISTDB-2018-01, ISTDB-2019-01, and ISTDB-2019-02.
- City of Ottawa Water Distribution Guidelines complete with the following Technical Bulletins: ISTDB-2010-02, ISTDB-2014-02, and ISTDB-2018-02.
- City Detail Drawings and Sewer Material Specifications:
    - Sewer Connection (2003-513) and Sewer Use (2003-514) By-Laws.
    - Watermains/Services Material Specifications as well as Water and Road Standard Detail Drawings.
    - Water By-Law (2018-167).

1.5 Correspondences and Approvals

Email correspondences were sent between the Township of Whitewater Region and JLR regarding updated fire hydrant pumping data (refer to Appendix C).

In addition, as part of Phase 2 of the Wren Subdivision development, an Environmental Compliance Approval (ECA) approval was obtained for the onsite stormwater management system. A copy of the approved ECA can be found in Appendix C.



PROJECT:

BONNECHERE EXCAVATING INC. WREN SUBDIVISION - PHASES 3 & 4

COBDEN, ONTARIO

DRAWING:

LOCATION PLAN

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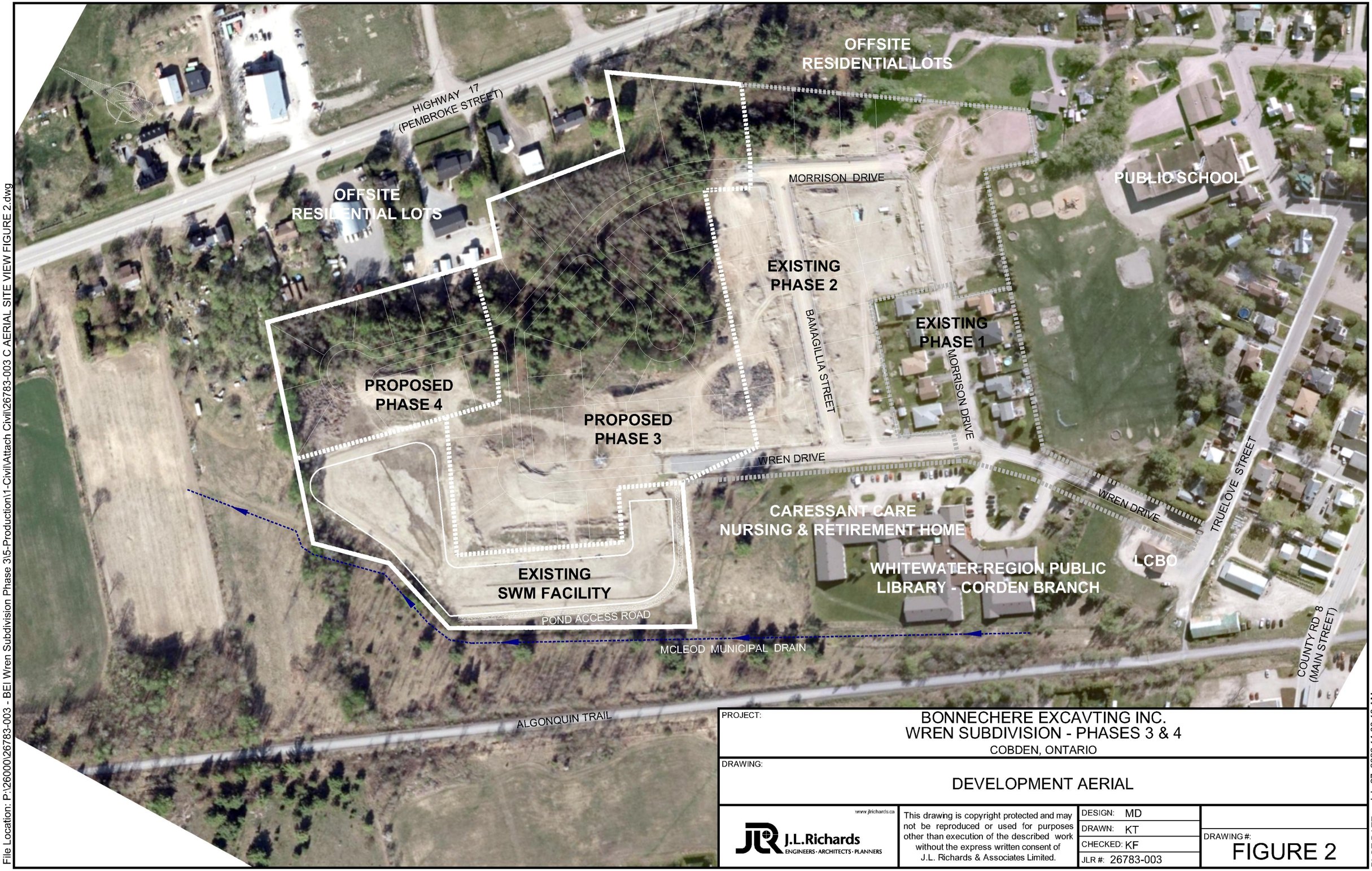
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FIGURE 1

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PLOT DATE: July 27, 2022 11:01:17 AM



PROJECT:
BONNECHERE EXCAVTING INC.
WREN SUBDIVISION - PHASES 3 & 4
COBDEN, ONTARIO

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FIGURE 2

File Location: P:\26000\26783-003 - BEI Wren Subdivision Phase 3\5-Production\1-Civil\Attach Civil\26783-003 C AERIAL SITE VIEW FIGURE 2.dwg

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2.0 Geotechnical and Groundwater Considerations

Gemtec Consulting Engineers and Scientists Limited (Gemtec, formerly Houle Chevrier Engineering Ltd.) initially conducted a geotechnical investigation in 2014 for the proposed subdivision to assess general soil and groundwater conditions and provide development recommendations, including construction considerations. The 2014 geotechnical investigation report was updated in December 2022 and now includes the totality of Phase 3 and 4. In addition, as part of the draft plan application and serviceability report, Gemtec had provided Hydrogeological commentary on the stormwater management solutions and in 2025, provided a response to concerns from the Township regarding high groundwater levels. Refer to Appendix B.

A summary of the report findings and recommendations are provided as follows, but are not limited to:

1. Section 3.0 - Subsurface Conditions: The field work for this investigation was carried out on August 14, 2014, at which time, thirteen (13) test pits, numbered 1 to 13 inclusive were excavated using a track mounted excavator.

2. Section 3.1 – General:: Based on the results of the test pits advanced as part of the current investigation, the subsurface conditions at this site can be generally summarized as topsoil underlain by surficial deposits of silty clay over deposits of glacial till. Inferred bedrock was encountered in some of the test pits. Across portions of the site, relatively thin deposits of sand exist below the topsoil.

3. Section 3.7 - Groundwater Levels: The groundwater levels measured in the well screens on August 21, 2014, are summarized in Table 4.3 of the Geotechnical Report and are as follows: groundwater was measured below the existing ground surface at depths ranging from 1.6 m to 2.2 m in August 2014. Additional commentary is provided in Appendix B2 in response to Township comments provided on the previous engineering submission.

   It should be noted that the groundwater level may be higher during wet periods of the year such as the early spring or following periods of precipitation.

4. Section 4.2 - Grade Raise Restrictions: For preliminary design purposes, the grade raise fill restriction in areas that are underlain by silty clay is 2.5 m. For specific soil details and construction considerations, refer to the detailed Geotechnical Report presented in Appendix B.

3.0 Water Servicing

A Hydraulic Network Analysis (HNA) was performed to confirm the subdivision's watermain sizing and to demonstrate its compliance to the Ministry of the Environment, Conservation and Parks (MECP) Design Guidelines for Drinking-Water Systems and the Ontario Building Code (OBC). To ensure that sufficient water supply and fire flow is provided for all phases of the development, the analysis was conducted for the ultimate built-out condition (all 4 phases) of the Wren Subdivision. The proposed Phases 3 and 4 will consist of 34 and 12 residential units, respectively.

3.1 Water Supply Design Criteria

The MECP Design Guidelines specify the following design criteria for water distribution systems:

- The static pressure at any point in the distribution system shall not be less than 276 kPa (40 psi), except during fire demand periods, as noted below.
- The static pressure at any point in the distribution system shall not exceed 552 kPa (80 psi). Where localized areas must have pressures above the 552 kPa level, individual pressure reducing valves (PRV) should be installed for each service connection.
- During periods of fire demand, the static pressure at any point of the distribution system shall not be less than 140 kPa (20 psi).

3.2 Water Demands

To assess the performance of the proposed water distribution system (refer to Drawing S1-S3), water demands were simulated to evaluate system pressures with respect to the pressure criteria listed above. The average day demand was calculated based on a residential consumption rate of 450 L/capita/day. For residential land uses, the MECP Design Guidelines recommend a maximum day peaking factor of 2.75 and a peak hour peaking factor of 4.13 times average day demand. The total demands for average day, maximum day and peak hour were calculated to be 1.36 L/s, 3.74 L/s, and 5.61 L/s, respectively. Refer to the Water Consumption Summary Table in Appendix D.

3.3 Fire Flow Requirements

Based on discussions with the Township and the technical memorandum *Wren Subdivision Phases 3 and 4, Water Servicing Analysis and Required Fire Flow – Revision 01* prepared by JLR dated June 7, 2022, the OBC was used to determine the minimum fire flow requirements for the Wren Subdivision. Based on the proposed building sizes and lot separations, a minimum fire flow of 45 L/s is required throughout the development.

Refer to Fire Flow Calculations in Appendix D for details.

3.4 Proposed Water Servicing, Boundary Conditions and Water Model

3.4.1 Proposed Water Servicing

The proposed water servicing for the development includes a 203 mm watermain loop connected to the following existing watermains from Phase 2:

- Connection-1: the existing 203 mm watermain at the intersection of Morrison Drive and Bamagillia Street; and
- Connection-2: the existing 203 mm watermain at the intersection of Wren Drive and Bamagillia Street.

The two cul-de-sacs will be serviced via 203 mm watermains.

3.4.2 Hydraulic Boundary Conditions

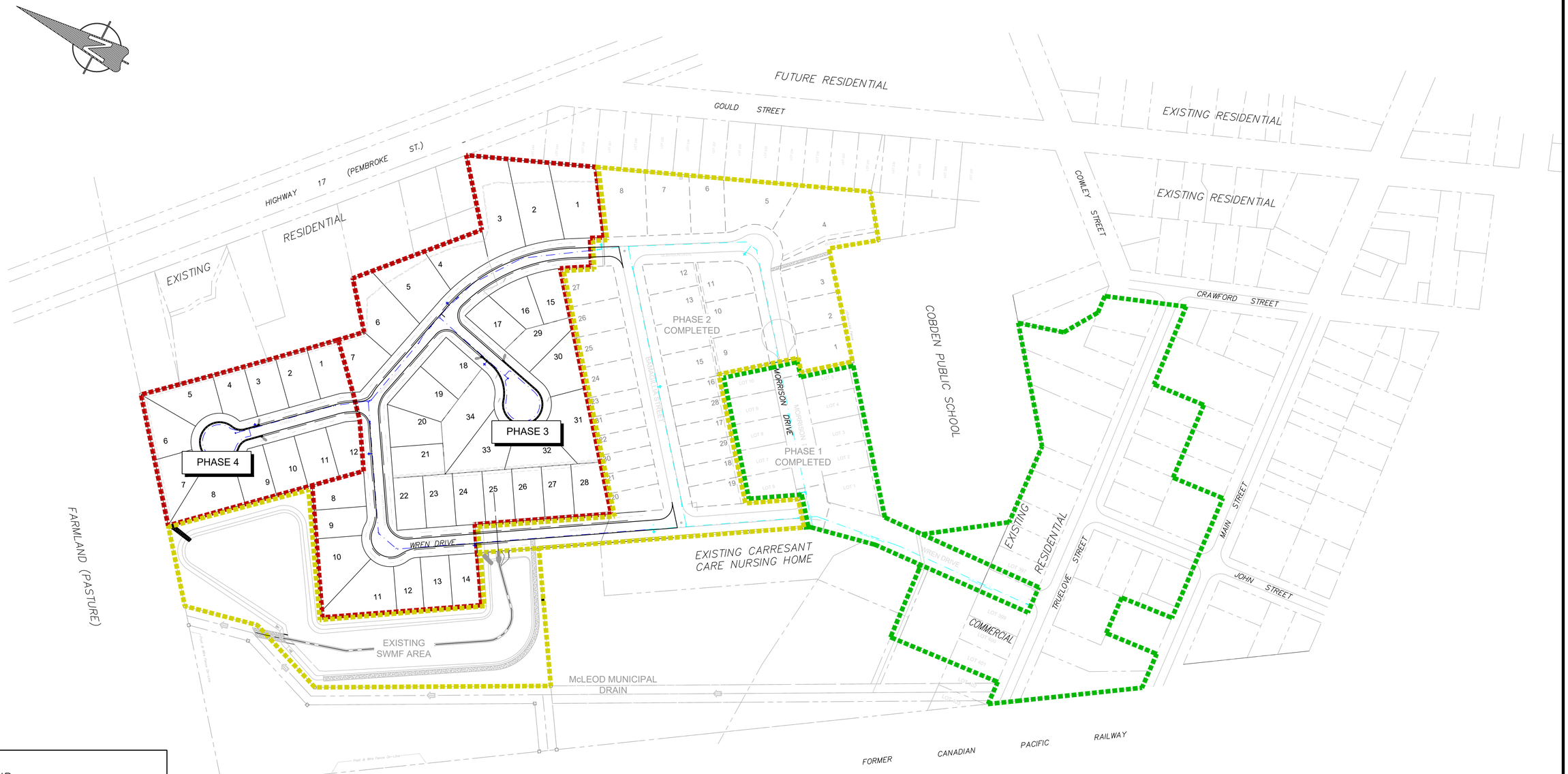
For this HNA, hydraulic boundary conditions were obtained from hydrant testing completed by SCG Flowmetrix Technical Services at the intersection of Wren Drive and Morrison Drive on November 16, 2021. The fire hydrant test results are included in Appendix D and a theoretical fire flow of 59.2 L/s (939 USGPM) was calculated based on NFPA 291 for the residual hydrant at 140 kPa (20 psi). A pump operating based on the foregoing supply characteristics was input into the water model (refer to Appendix D) to mimic current system operation to the proposed development. The pump curve representing the hydrant test is shown in Table 3-1.

Table 3-1: Pump Curve Based on Hydrant Test

Flow Rate	Pressure
0 GPM (0 L/s)	55.9 PSI (39.31 m)
708 GPM (44.7 L/s)	34.6 PSI (24.33 m)
939 GPM (59.2 L/s)	20 PSI (14.06 m)

3.4.3 Water Model

A hydraulic water model within the WaterCAD® software platform was used to model the HNA. The water demands from Section 3.2 and the boundary conditions from Section 3.4.3 were input into the model for each demand scenario. The watermain layout and sizing for the proposed development is shown in Appendix D. Ground and hydrant elevations were based on the grading plan (refer to Drawing G1). Watermain Hazen Williams roughness coefficients of 100 and 110 were applied to the 150 mm and 200 mm diameter watermains, respectively.



LEGEND

- PROPOSED WATERMAIN, VALVE & HYDRANT
- EXISTING WATERMAIN, VALVE & HYDRANT
- PHASING BOUNDARY EXISTING PHASE 1
- PHASING BOUNDARY EXISTING PHASE 2
- PHASING BOUNDARY PROPOSED PHASES 3 & 4

PROJECT:

BONNECHERE EXCAVATING INC.
WREN SUBDIVISION - PHASES 3 AND 4
COBDEN, ONTARIO

DRAWING:

WATERMAIN LAYOUT

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3.5 Hydraulic Simulation Results

The HNA was modelled under steady-state peak hour, maximum day plus fire flow, and maximum pressure conditions to confirm that the proposed water servicing can meet the design criteria outlined in Section 3.1. Refer to Appendix D for the model simulation results.

3.5.1 Peak Hour Demand

The proposed water servicing for all 87 units was evaluated under the peak hour demand condition. The simulation results indicate that pressures are expected to range between 351 kPa (50.9 psi) and 382 kPa (55.4 psi). Therefore, the minimum operating pressure of 276 kPa (40 psi) will be exceeded across the site, as recommended in the MECP Design Guidelines.

3.5.2 Maximum Day Plus Fire Flow

To ensure adequate fire protection, the maximum day demand was analyzed simultaneously with the fire flow requirements. The fire flow simulation was modelled by allowing WaterCAD® to calculate the maximum fire flow that can be drawn from each hydrant without allowing any part of the system to experience pressures less than 140 kPa (20 psi). The available fire flow is also limited by the supply characteristics of the existing distribution system (i.e., the results of the hydrant test).

Simulation results show a minimum fire flow availability of 47.7 L/s at hydrant H-4. Therefore, the fire flow requirement of 45 L/s is expected to be available from the water distribution system and supplemental fire protection measures are not anticipated to be required.

3.5.3 Maximum Pressure

Based on a zero (0 L/s) demand condition, the simulation results indicate that pressures during the maximum pressure condition are expected to range between 354 kPa (51.3 psi) and 385 kPa (55.8 psi). None of the units will require the installation of pressure reducing valves (PRVs), as simulated pressures are below the maximum pressure constraint of 552 kPa as recommended in the MECP Design Guidelines.

3.6 Summary and Conclusion

Based on the water simulation results, the proposed water servicing can adequately supply the Wren Subdivision. The results under peak hour demand and maximum pressure conditions showed that the design criteria can be achieved for all of the units within the development, and PRVs will not be required for any units. Furthermore, adequate fire water supply can be achieved via the proposed hydrants.

4.0 Wastewater Servicing

4.1 Background

Sanitary servicing of the development was accounted for as part of the Phase 1 Wren Subdivision works completed in 1991. As part of Phase 1, a 200 mm sanitary sewer system was constructed from Truelove Street (formerly Morton Street) to the Morrison Drive cul-de-sac. This sanitary sewer was identified as the designated outlet for the future development lands (Phases 2 to 4).

4.2 Existing Sanitary System

In Phase 2, an analysis of the downstream gravity sewer to Main Street, the Truelove Pumping Station and the Cobden Wastewater Treatment Plant was undertaken to ensure that the existing wastewater system could accommodate the proposed BEI Wren subdivision. Analysis of the downstream gravity sewers consisted of calculating existing pipe carrying capacities based on information presented in as-constructed drawings and comparing these carrying capacities to the ultimate wastewater flows from the BEI Wren subdivision and the Caressant Care Nursing and Retirement Home. During Phase 2, the Township's engineering consultant, Jp2g, provided the average day wastewater flows for the nursing home of 450 L/bed based on historical wastewater flow monitoring data. As such, the average existing estimated day flow rate is 49,500 L/day.

Based on the Phase 2 redesign, all downstream sanitary sewer sections appear to have sufficient carrying capacity to convey the wastewater flows for the subdivision build-out conditions.

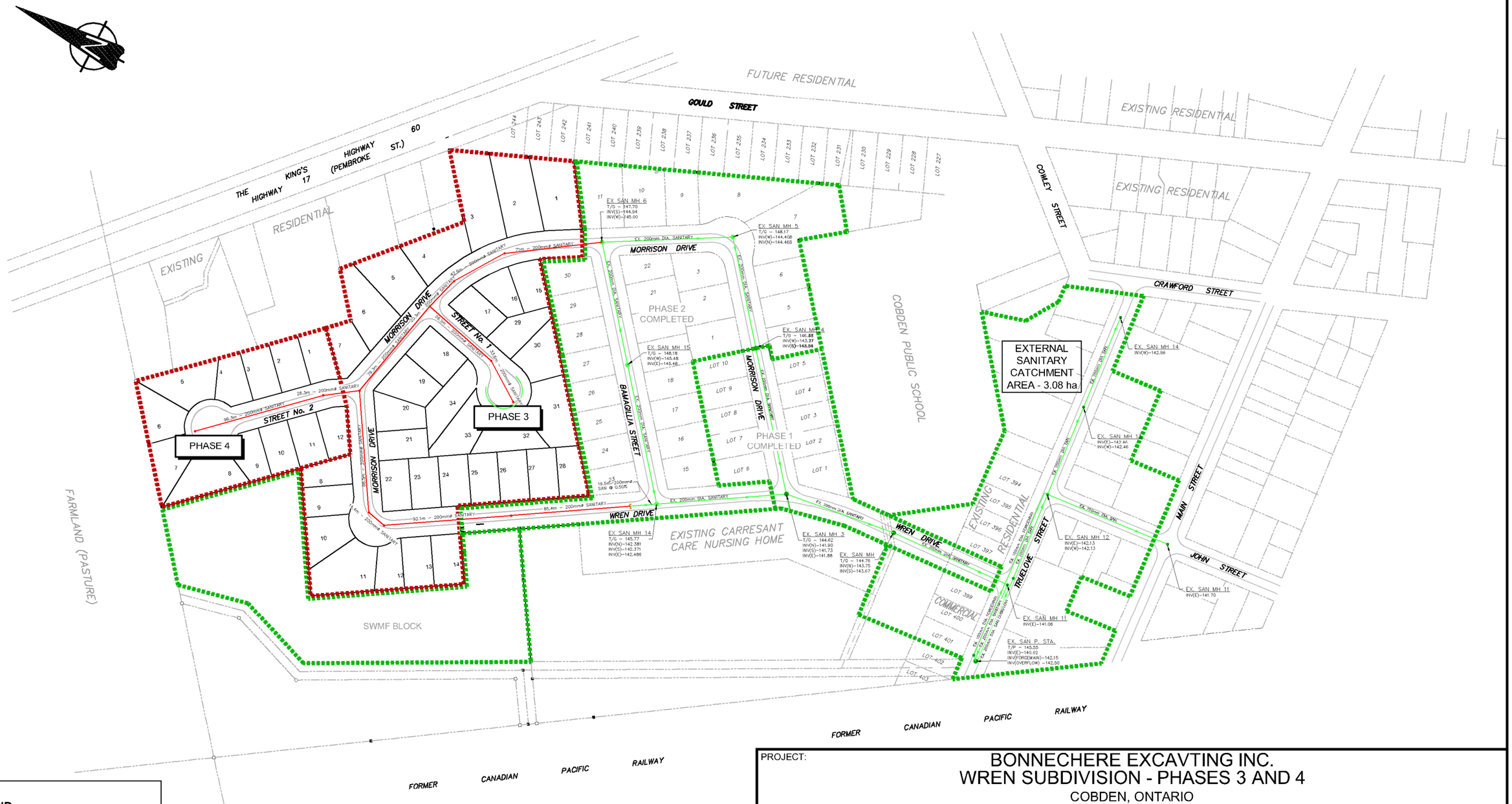
4.3 Existing Truelove Street Sanitary Pump Station

During Phase 2, a capacity analysis of the existing sanitary pump station, located at the west end of Truelove Street, was completed by the Township's engineering consultant, Jp2g. Their findings had confirmed that the pumping station was designed to accept wastewater peak flow of approximately 18 L/s. The sanitary sewer design sheet and the technical memo from the Phase 2 redesign suggested that the Truelove Street Sanitary Pump Station can accept the additional wastewater flows associated with the Wren subdivision under ultimate build-out conditions.

4.4 Proposed Sanitary System

A 200 mm diameter sanitary sewer system is proposed to collect and convey wastewater generated from the development. The local sanitary sewer system will outlet to existing MH 14 located at the south intersection of Bamagillia Street and Wren Drive.

In support of the proposed sanitary sewer servicing strategy, a Sanitary Sewer Design Sheet was prepared to assess the pipe capacities of the proposed gravity sanitary sewer system for the development (refer to the Sanitary Sewer Design Sheet included in Appendix E). Sanitary sewer flow rates were determined from MECP guidelines, which recommends a residential flow rate of 450 L/cap/day, with a sewer infiltration rate of 0.28 L/s/ha. A density of three (3) persons per unit was used for the population calculation. A review of the Sanitary Sewer Design Sheet indicates that all proposed sewers are capable of conveying the peak design flows.



LEGEND

- PROPOSED SANITARY SEWER & MANHOLE
- EXISTING SANITARY SEWER & MANHOLE
- PROPOSED BOUNDARY PHASES 3 AND 4
- PHASING BOUNDARY EXISTING

PROJECT:

BONNECHERE EXCAVTING INC.
WREN SUBDIVISION - PHASES 3 AND 4
COBDEN, ONTARIO

DRAWING:

SANITARY SEWER LAYOUT

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FIGURE 4

File Location: P:\26000\26783-003 - BEI Wren Subdivision Phase 3\5-Production\1-Civil\Figures & Sketchs\26783-003 C FIG 04-SANITARY_SEWER_LAYOUT.dwg

4.5 Summary and Conclusions

Based on the above servicing details and Sanitary Sewer Design Sheet prepared for the Wren development (refer to Appendix E), it is recommended that sanitary servicing shown on the Site Servicing Plans (Drawings S1-S3) be implemented to provide adequate sanitary servicing for the Wren development.

5.0 Storm Servicing and Stormwater Management

5.1 Background

5.1.1 Pre-development Drainage Condition

The pre-development drainage condition for the site is shown on Figure 5. All lands have been considered as undeveloped except for the residential Phase 1 (10 lots) and Phase 2 (31 lots).

The existing topography of the subject property at the north end of the site shows ground surface elevations ranging from 152 to 144 m across the site. The property generally drains in a southwest direction towards the existing McLeod Municipal Drain (MMD), with an average slope ranging from approximately 0.5% to 2% across the site. Based on current land use, the ground cover on the Wren Subdivision consists of a mix of open fields and wooded areas (refer to Figure 2 for aerial photo). The pre-development areas and overland flow patterns are listed in Table 5-1 below.

Table 5-1: Pre-Development Areas

Drainage Area ID	Size (ha)	Land Use	Flow Direction
PH1	1.36	Residential	South – toward MMD
A1 (a)	3.68	Residential Rear Yard / Undeveloped	Southwest direction through Phase 1 development
A1 (b)	1.17	Residential Rear Yard / Undeveloped	Southwest direction via school property
A1 (c)	0.48	Residential Rear Yard / Undeveloped	West – to Wren Drive ditch system
A2	4.97	Undeveloped	West – toward MMD
A3	2.46	Undeveloped	West – toward MMD

The hydrological response from the above-noted areas was modeled using the SWMHYMO model. The calculated pre-development flows were then set as the allowable release rates prior to discharging into the MMD under the post-development condition for the future phases of Wren development.

File Location: P:\26000\26783-003 - BE\Wren Subdivision Phase 3\5-Production\1-Civil\Figures & Sketchs\26783-003 C FIG 05-PRE-BASINS.dwg

FUTURE RESIDENTIAL

GOULD STREET

EXISTING RESIDENTIAL

EXISTING RESIDENTIAL

HIGHWAY 17 (PEMBROKE ST.)

RESIDENTIAL

EXISTING

MORRISON DRIVE

BAMAGILLIA STREET

COBDEN PUBLIC SCHOOL

CRAWFORD STREET

MAIN STREET

JOHN STREET

TRUELOVE STREET

EXISTING RESIDENTIAL

COMMERCIAL

EXISTING DITCH

WREN DRIVE

EXISTING CARRESANT CARE NURSING HOME

FARMLAND (PASTURE)

McLEOD MUNICIPAL DRAIN

FORMER CANADIAN PACIFIC

PHASE COMPLETED

DRAINAGE AREA TO EXISTING DITCH

EXISTING 600mmØ CSP CULVERT

A1(a) 3.68 81

A1(b) 1.17 81

A1(c) 0.48 81

A2 4.97 81

A3 2.46 81

PH1 1.36 0.43 0.34

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8 LOT 9 LOT 10

LOT 227 LOT 228 LOT 229 LOT 230 LOT 231 LOT 232 LOT 233 LOT 234 LOT 235 LOT 236 LOT 237 LOT 238 LOT 239 LOT 240 LOT 241 LOT 242 LOT 243 LOT 244

LOT 394 LOT 395 LOT 396 LOT 397 LOT 399 LOT 400 LOT 401 LOT 402 LOT 403

LEGEND

SWMHYMO MODELING SYMBOLOGY AND HYDROLOGICAL PARAMETERS

UNDEVELOPED BASIN AREA

A1 — AREA ID
6.12 — AREA (ha)
81 — CURVE NUMBER (CN)

DEVELOPED BASIN AREA

SUB-AREA NO.	AREA (ha.)
PH1	1.38
0.43	0.34

TOTAL IMPERVIOUSNESS (%)

DIRECTLY CONNECTED IMPERVIOUSNESS (%)

APPROXIMATE DRAINAGE AREA BOUNDARY

DIRECTION OF OVERLAND FLOW

PROJECT:

BONNECHERE EXCAVTING INC.
WREN SUBDIVISION - PHASES 3 AND 4
COBDEN, ONTARIO

DRAWING:

PRE-DEVELOPMENT DRAINAGE CONDITIONS
(PRIOR TO PHASE 2)

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FIGURE 5

5.1.2 Interim Drainage Condition

The interim drainage condition consists of the existing Phase 1 as well as the recently approved Phase 2 subdivision. The various drainage areas along with the flow patterns are presented on Figure 6. Under the interim condition, the site generally flows in a south and southwest direction towards the following two (2) outlets:

- Outlet 1: The existing ditch on Wren Drive adjacent to the existing Carresant Care Nursing Home, which in turn discharges into the MMD.
- Outlet 2: The existing dry pond located near the southwestern corner of the Wren Subdivision, adjacent to the MMD. This dry pond was constructed in 2017 to satisfy the conditions outlined in the Environmental Compliance Approval (ECA) Number 1864-ALXRS6 dated September 5, 2017 (refer to Appendix C for copy of the ECA).

The existing ditch referred to as Outlet 1 collects storm runoff from the Wren Phase 1 and a portion of the Wren Phase 2 development as described in the detailed design of the Wren Phase 2. Runoff is collected and conveyed via the existing roadside ditches and culverts in southwesterly direction along Morrison Drive and south along Wren Drive before discharging to the MMD.

The existing dry pond (i.e., the Outlet 2) was designed and constructed with sufficient water quantity to accommodate the Wren subdivision, including the future Phases 3 and 4, and achieve the targeted pre-development peak flows before discharging to the MMD. Currently, this dry pond collects the uncontrolled storm runoff from approximately 6.60 ha of which 5.87 ha belongs to undeveloped Phases 3 and 4 lands and from approximately 1.9 ha of a Phase 2 development (Figure 6).

5.1.3 Post-Development Condition

Phase 3

Grading for the Wren Phases 3 and 4 was developed to maintain, whenever feasible and practical, the existing drainage patterns. Based on the proposed layout and grading, runoff from all the proposed right-of-way (ROW) will be accommodated by local containment swales and a perforated pipe system located within the ROW in front of each dwelling unit (refer to Drawing DST). Once runoff is captured by the containment swales, it will be conveyed in a southwesterly direction towards the existing dry pond via the perforated pipe system.

Runoff from the rear yards for the central lots within Phase 3 (i.e., Lots 19 to 21, 24 and 29 to 33) and northern Lot 7 will sheet flow towards the containment swales along Morrison and Wren Drive before discharging into the perforated pipe system. Rear yard drainage for the southern lots within Phase 3 (i.e., Lots 8 to 14) will sheet flow directly into the Dry Pond.

EXISTING DEVELOPMENT (0.50 ha)
STORM RUNOFF DIRECTED TOWARDS PHASE 2 DEVELOPMENT

PHASE 2 DEVELOPMENT (1.45 ha)
STORM RUNOFF FROM THIS PORTION OF DEVELOPMENT DIRECTED TOWARDS THE FUTURE PHASE 3 UNDEVELOPED LANDS

EXISTING DEVELOPMENT (0.73 ha)
STORM RUNOFF DRAINS TOWARDS OUTLET 2 LOCATION

EXISTING DEVELOPMENT (0.28 ha)
STORM RUNOFF DIRECTED VIA SCHOOL PROPERTY TOWARDS OUTLET 1 LOCATION

PHASE 2 DEVELOPMENT (0.67 ha)
STORM RUNOFF FROM THIS PORTION DIRECTED THROUGH PHASE 1 TOWARDS OUTLET 1 LOCATION

PHASE 1 COMPLETED
STORM RUNOFF FROM THIS AREA COLLECTED AND DISCHARGED TO OUTLET 1 LOCATION

FUTURE PHASE 3 AND PHASE 4 UNDEVELOPED LANDS (5.87 ha)
STORM RUNOFF SHEET DRAINS TOWARDS THE OUTLET 2 LOCATION

EXISTING 600mmØ CSP CULVERT

EXISTING 600 mm HDPE CULVERT

PHASE 2 DEVELOPMENT (1.35 ha)
STORM RUNOFF FROM THIS PORTION OF DEVELOPMENT DIRECTED TOWARDS THE OUTLET 2 LOCATION

WREN DRIVE ROW (0.08ha)
STORM RUNOFF DIRECTED TO THE OUTLET 1 LOCATION

WREN DRIVE ROW (0.13ha)
STORM RUNOFF DIRECTED TOWARDS THE OUTLET 2 LOCATION

OUTLET 1- EXISTING DITCH

OUTLET 2- DRY POND

EXISTING PHASE 1

McLEOD MUNICIPAL DRAIN

HIGHWAY 17 (PEMBROKE ST.)

EXISTING RESIDENTIAL

EXISTING CARRESANT CARE NURSING HOME

EXISTING COMMERCIAL

FARMLAND (PASTURE)

FORMER CANADIAN PACIFIC

MORRISON DRIVE

BAMAGILLIA STREET

WREN DRIVE

POND ACCESS ROAD

CRAWFORD STREET

PUBLIC

JOHN STREET

MAIN STREET

TRUELOVE STREET

EXISTING DITCH

LEGEND

- APPROXIMATE DRAINAGE AREA BOUNDARY
- DIRECTION OF OVERLAND FLOW
- OUTLET STRUCTURE LOCATION
- CONVEYANCE DITCH FOR PHASE 2 STORM FLOWS TO DRY POND UNDER INTERIM CONDITION

PROJECT:
BONNECHERE EXCAVTING INC.
WREN SUBDIVISION - PHASES 3 AND 4
COBDEN, ONTARIO

DRAWING:
INTERIM CONDITIONS DRAINAGE PLAN

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File Location: P:\26000\26783-003 - BEI Wren Subdivision Phase 3\5-Production\1-Civil\Figures & Sketchs\26783-003 C FIG 06-INTERIM_CONDITIONS_DRAINAGE_PLAN.dwg

Phase 4

Grading of the rear yards within Phase 4 were graded similarly to the lots within Phase 3. The northern Lots (i.e., Lot No. 1 and 2) were graded to direct runoff toward the storage swales along the Morrison Drive ROW. From there, flows are to be treated and released into perforated piping system. The rear yards for Lot No. 8-12 were graded to direct runoff directly into dry pond, while the grading of rear yard for Lot No. 1-7 along the northern and western boundary of development will sheet drain towards the rear yard open ditch system that will convey the storm runoff into dry pond.

The existing overland flow contributions from the lands located to the north of the Subject Property will be intercepted by a rear yard perimeter ditch of the Phase 4 Lots No. 1-7 that will redirect storm runoff toward dry pond.

The storm discharge for water quality is intended to be met using lot level and conveyance control stormwater management practices (SWMPs) in combination with a roadside grass swale perforated pipe drainage system. The overall "treatment train" approach will achieve the required level of protection as presented in the following sections of this Report.

5.2 Design Criteria and Servicing Approach

Storm servicing for the development was developed using the conventional dual drainage principle, which incorporates both minor and major drainage systems. The minor system is comprised of a roadside perforated pipe subdrain network combined with an open swale system sized to capture and convey runoff from minor storm events. The major system is formed by swales, ditches, culverts, and streets that combined can accommodate runoff generated by major storm events.

Storm servicing and stormwater management for the proposed subdivision were developed based on the following:

- The Ministry of Environment, Conservation and Parks (MECP). March 2003. *Stormwater Management Planning and Design Manual (SWMPDM)*; and
- The City of Ottawa Sewer Design Guidelines. October 2012, and associated complete Technical Bulletins: ISTB-2012-01, ISTDB-2014-01, ISTDB-2016-01, ISTDB-2018-01, ISTDB-2019-01, and ISTDB-2019-02. These documents have been referred as the OSDG.

Based on the above noted documents, the following design criteria were considered:

- The roadside perforated pipe subdrain system was sized using the Rational Method with the intensity calculated the Intensity-Duration-Frequency (IDF) curves provided in the City of Ottawa Sewer Design Guidelines. The roadside perforated system was designed to capture and convey runoff from storm events up to a 1:10 year recurrence without overtopping the driveways.

- The storm pipes crossing the road intersections will be sized to convey, as a minimum, the 1:25 year storm event without overtopping the road.
- Minimum perforated pipe size to be 300 mm in diameter.
- Non-perforated pipes to be installed underneath the driveways.
- The roadside grass swale system was sized to safely convey major overland flow in the excess of the 1:10 year storm up to the 1:100-year storm.
- The control of post-development peak flows to pre-development levels was achieved by means of the containment cells that are supplemented by the existing end-of-pipe dry pond. As noted above, this facility was designed to detain and attenuate the peak flows under build out conditions for storm events ranging from a 1:2-year up to a 1:100-year recurrence.
- Prior to discharging into the MMD, an enhanced protection level was set as the water quality criterion. Based on MECP's SWMPDM, this protection level is associated with 80% total suspended solids (TSS) removal (refer to Table 3.2 of the SWMPDM). Hence, the storm servicing strategy for Phases 3 and 4 was developed to meet this storm design criterion.
- Stormwater Management Practices (SWMPs) were implemented at both a lot level and within the conveyance system in a "treatment train" approach to meet the water quality objectives through all stages of development. Proposed lot level SWMP's include minimizing ground slopes and impervious surfaces of lots. Runoff originating from impervious surfaces, such as roofs and driveways, will be directed to grassed yard areas before entering the roadside swale perforated pipe drainage system.

5.3 Minor System Perforated Pipe Network

As previously noted, the roadside perforated subdrain system was sized to convey the 1:10 year storm event using the Rational Method with an inlet time of 10 minutes. Rainfall intensities were extracted from the OSDG's IDF regression curves. The roadside swale will be vegetated and underlined by a perforated pipe subdrain and by non-perforated pipes underneath the driveways.

Runoff Coefficients (C-Factors) for Phases 3 and 4 were calculated based on the percentage of pervious surface (C-Factor of 0.2) and impervious area (C-Factor of 0.9). These percentages were calculated based on the proposed roads and conceptual house footprints and driveways. An overall weighted runoff coefficient of 0.45 was calculated for the front yard areas across the subdivision. The storm design sheet was prepared to demonstrate that the minor system was sized to capture the 1:10 peak flows consistent with the design criteria listed in Section 4.3. Refer to Appendix F for the storm sewer design sheet.

6.0 Water Quality

6.1 Protection Level and Quality Approach

Urbanization modifies the hydrological regime of a receiving stream if inadequate stormwater management measures are implemented. The potential impacts associated with runoff arise primarily from the amount of urban area that is impervious to rain and snowmelt. These impervious surfaces increase the amount of direct surface runoff that is generated and conveyed more efficiently to the receiving stream.

As noted in Section 5.2, an enhanced protection level (80% TSS removal) is targeted for development of Phases 3 and 4. To achieve this design target, it is proposed to provide filtration storage in accordance with the guidance of Table 3.2 of the SWMPDM. This table specifies a unit water quality storage requirement for different levels of imperviousness to fulfill the enhanced protection level (80% TSS removal). It is proposed to provide filtration storage within the ROW such that runoff originating from all paved areas (roadway or driveways) is captured by the proposed containment cells where it will filtrate vertically through the soils, geotextile and clear stone and then be intercepted by the perforated pipe system. Once the treated runoff is captured by the perforated pipe system, the “treated flow” will be conveyed to the dry pond. Additional stormwater management practices (SWMPs) will be implemented to act as a “treatment train”, as detailed in the following section.

6.2 Infiltration Storage Requirement

Water quality storage requirements was calculated to confirm that the enhanced protection level is achieved at each of the filtration storage cells. The calculation was based on the serviced area and corresponding level of imperviousness which accounts for the hard surfaces and landscaped area.

Rear yard runoff will sheet flow along the grass surfaces where it can filtrate naturally through the topsoil layer. When the filtration capability of that substrate (grass and vegetation) is exceeded, runoff will be directed over vegetated rear yard areas to achieve preliminary filtration before being captured by the vegetated perimeter ditch system, where opportunities for additional filtration will occur. This type of system has been implemented for many years in rural estate settings and has been accepted by regulatory agencies for meeting the enhanced protection level.

The water quality control volume has been reviewed for each containment swale to ensure that each one is sized with sufficient storage to meet the storage requirements for the respective tributary area based the imperviousness and corresponding filtration requirement set out by Table 3.2 from the SWMPD. Detailed calculations have been included in Appendix G where, for each of the containment swales, the sum of the hard surfaces (rooftop, driveway, and roadway) and landscaped areas is tabulated, and weighted imperviousness calculated.

The required storage volume to achieve 80% TSS removal in Phases 3 and 4 has been calculated as 25 m³/ha based on Table 3.2 from SWMPD. The table in Appendix G demonstrates that each storage cell provided sufficient storage to meet 25 m^3/ha by considering both swale and granular envelope storage (above the obvert of the perforated sewer). The latter storage volume was calculated individually based on the depth of granular above the sewer (300 mm), the width of

1.0 m and the length of each of the swales as shown on detailed sheet D1. Thus, the calculations shown in Appendix G confirm that quality storage per the SWMPDM is met or exceeded.

In addition to the roadside grassed swale/perforated pipe system within the ROW, various lot-level and conveyance control SWMPs have also been proposed as part of a "treatment train" approach, including:

- rear yard grading with reduced slopes
- direct roof leaders to grassed areas; and
- grass swales with minimum slopes, as feasible and practical.

The proposed servicing approach focuses on providing water quality treatment for those areas of the development that are connected to the roadside drainage system (i.e., paved roads, gravel shoulders and private driveways). It is recognized that these hard surfaces are those that are known to generate sediments, and where the majority of TSS are generated in urban storm runoff. The proposed SWM strategy will provide water quality treatment via filtration for all impervious and pervious surfaces that are contributing surface runoff toward the roadside swales.

With perched catch basins (i.e., catch basins with top of grates set above the bottom of the ditch), the proposed roadside swales will allow for vertical filtration of runoff which will be captured by the perforated pipe network below through a soil layer, followed by a geotextile filter cloth that surrounds a clear stone trench. It is expected that the filtered surface runoff entering the perforated pipe network will meet or exceed the required enhanced level of protection for water quality (i.e., 80% TSS removal).

7.0 Hydrological Analysis

7.1 General

A hydrological analysis was completed for the Wren development to demonstrate that the proposed stormwater management system comprising of the containment swales, perforated pipes and dry pond can limit the post-development peak flows to pre-development levels. The analysis was conducted using the PCSWMM software platform. This software allows the simulation of both hydrologic and hydraulic components within the same platform and was set-up to simulate both minor and major systems as well as the end-of-pipe dry pond and outlet structure. The simulation results presented herein demonstrates that proposed storm servicing strategy can satisfy the stormwater quantity control objectives presented in Section 5.2. The modelling approach adopted for this project hinges on the following:

- Generate surface runoff hydrographs for each sub-catchment under various storm events.
- Subdivide inflow hydrograph into its minor and major system components based on the proposed swale storage and inlet capture rates of the perched catch basin.
- Assess swale storage depths under various storm events, especially during critical storms such as the 1:100-year storm and climate change event.
- Assess cascading over driveways, if any, and review the dynamic routing of storm flows to determine flow depths along the driveways.

PCSWMM was set-up to evaluate the performance of the proposed storm servicing as detailed on the Grading Plans, Ponding Plans, Storm Drainage Area Plans and Site Servicing Plans. As depicted on the Storm Area Drainage Plans, Phases 3 and 4 were discretized in several front- and rear-yard sub-catchments with calculated imperviousness. The model schematic is shown in Appendix I, depicting the drainage area limits, the drainage area (in hectares).

7.2 Pre-Development Conditions

Pre-Development peak flows for Phases 3 and 4 were established using SWMHYMO as described in the Phase 2 engineering submission documents. The excerpt from SWMHYMO model and hydrological parameters used to calculate pre-development flows are included in Appendix H.

The pre-development peak flows were calculated based on the sub-watersheds depicted on Figure 5. The total area of 14 ha area was considered as undeveloped, with approximately 1.4 ha area from the Phase 1 subdivision. Under the pre-development analysis, both Phases 3 and 4 areas were simulated as undeveloped lands with the discharge points located downstream of the southwestern corner of the property near the MMD. Surface runoff was calculated using the SCS Curve Number methodology and information on soil conditions based on geotechnical investigation completed by Gemtec Consulting Engineers and Scientists Limited (Gemtec, formerly Houle Chevrier Engineering Ltd.), entitled “Geotechnical Investigation, Proposed Wren Subdivision – Phase 3 Wren Drive, Cobden, Ontario” (December 21, 2022).

7.3 Post-Development Conditions

As noted in Section 7.1, PCSWMM is used to compute the hydrological response of the proposed development and to estimate the storage and flow conveyance capacity of the proposed shallow swale perforated pipe system within Phases 3 and 4. The model is set-up such that flow generated by each front-yard area is directed to a storage node representing the swale storage below and above the perched catchbasin. Each storage node has a weir link, conveying spill, to a conduit link, representing the major street system and an outlet link, representing capture by the perched catchbasin, to conduit links, representing the perforated pipe minor system. The pond is represented using a storage node where the volume is determined using an area versus depth curve derived from survey information carried out by BEI in May 2022. A detailed description of all the parameters used in the model are presented in Appendix I.

There are two (2) outlets proposed where minor system discharges into dry pond and two (2) outlet location where open ditch conveys and discharges the surface runoff into the pond:

- **Outlet 1** - A 750 mm diameter pipe (4.1 ha contributing drainage area) located at the south side of Wren Drive ROW. This pipe collects storm runoff from Phase 4 development, northern portion of Phase 3 and from the phasing limits correspond with drainage areas defined for the existing Phases 2 along Morrison Drive.
- **Outlet 2** - A 610 x 965 mm elliptical pipe (3.5 ha contributing drainage area) crossing the Wren Drive. This pipe collects storm runoff from Central and Southern Portion of Phase 3 development and from the phasing limits correspond with drainage areas defined for the existing Phases 2 along Morrison Drive and Wren Drive.
- **Outlet 3** - The Wren Drive roadside drainage ditch that collects storm runoff from south portion of Phase 2 development and Wren Drive ROW.
- **Outlet 4** - A rear yard open ditch system that will convey the storm runoff from Phase 4 Lots No. 1-7 along northern and western boundary of development and discharged them into the dry pond.

To evaluate performance of the existing dry pond, the inflow hydrographs from Phase 2 tributary areas were imported into PCSWMM nodes of Phases 3 and 4 developments. The receiving nodes represent the location where runoff from Phase 2 enters the swale perforated pipe system within Phase 3. The inflow hydrographs were imported from the SWMHYMO post-development model that was developed to support the Phase 2 engineering submission. Figure 7 shows the location where Phase 2 enters Phase 3 while Table 7-1 provides a summary of PCSWMM node IDs and type of flow (i.e., major, or minor system flow).

PCSWMM NODE J273
SWMHYMO HYDROGRAPH: MAJS2

PCSWMM NODE J7
SWMHYMO HYDROGRAPH: MAJS3

EXCB13
SWMHYMO INPUT
HYDROGRAPH: MINS2

EXCB14
SWMHYMO INPUT
HYDROGRAPH: MINS3

EXISTING OFFSITE

SWMHYMO
AREA S2

SWMHYMO
AREA S3

EX. PHASE 2

SWMHYMO
AREAS RY2,
S4, & WD2

SWMHYMO AREAS RY1, S1, PH1 &
WD1 BYPASSING THE DRY POND
SWMHYMO HYDROGRAPH: OUT-1

PCSWMM NODE J297
SWMHYMO HYDROGRAPH: MAJS4

EXISTING 600mmØ
CSP CULVERT

EXISTING ARCH
560x420
CSP CULVERT

PCSWMM NODE J2
SWMHYMO HYDROGRAPH:
WD2

EXISTING PHASE 1

OUTLET LOCATION 4
(REAR YARD DITCH)
DRAINAGE AREA: 4.1 ha

OUTLET LOCATION 1
(750mm Ø PIPE)
DRAINAGE AREA: 4.1 ha

OUTLET LOCATION 3
(600mm Ø HDPE CULVERT)
DRAINAGE AREA: 1.2 ha

OUTLET LOCATION 2
(610 mm x 965 mm
ELLIPTICAL PIPE)
DRAINAGE AREA: 3.5
ha

EXISTING DRY POND

POND ACCESS ROAD

PCSWMM NODE MD-1
SWMHYMO HYDROGRAPH: OUT-1

McLEOD MUNICIPAL DRAIN

PHASE 2 REAR YARD

PHASE 2 REAR YARD

MORRISON DRIVE

BAMAGILLIA STREET

MORRISON DRIVE

WREN DRIVE

WREN DRIVE

EXISTING DITCH

TRUELOVE STREET

FORMER CANADIAN PACIFIC

LEGEND

- EXISTING DEVELOPMENT SUBCATCHMENT AREAS
- DIRECTION OF OVERLAND FLOW
- LOT SWALE FLOW DIRECTION
- MINOR SYSTEM FLOW DIRECTION
- REAR LOT SURFACE FLOW
- POST-DEVELOPMENT BASINS
- 20 PHASES 3 AND 4 LOT NUMBER
- OUTLET STRUCTURE LOCATION
- MINOR SYSTEM FLOW OUTLET LOCATION
- MAJOR SYSTEM FLOW OUTLET LOCATION
- PCSWMM NODE TO RECEIVE SWMHYMO HYDROGRAPHS

PROJECT:
BONNECHERE EXCAVTING INC.
WREN SUBDIVISION - PHASES 3 AND 4
COBDEN, ONTARIO

DRAWING:
STORM RUNOFF OUTLET LOCATION

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FIGURE 7

File Location: P:\26000\26783-003 - BEI Wren Subdivision Phase 3\5-Production\1-Civil\Figures & Sketchs\26783-003 C FIG 07-POST-BASINS.dwg

Table 7-1: Phase 2 Development Discharge Locations

PCSWMM Node ID	Location	Flow Type	Hydrograph ID
EXCB13	Morrison Drive East	Minor System Flow (i.e., Pipe Flow)	MINS2
EXCB14	Morrison Drive West	Minor System Flow (i.e., Pipe Flow)	MINS3
J273	Storage Swale at the proposed CB700 - Morrison Drive East	Major System Flow – Driveway Cascading	MAJS2
J7	Storage Swale at the proposed CB600 - Morrison Drive West	Major System Flow – Driveway Cascading	MAJS3
J297	Storage Swale at the proposed CB613 - Wren Drive East	Major System Flow – Driveway Cascading	MAJS4
J2	Wren Drive ROW Ditch	Major/Minor System Flow	WD2
MD-1	McLeod Municipal Drain	Major/Minor System Flow	OUT-1

The SWMHYMO hydrograph 'WD2' represents the cumulative hydrograph from Phase 2 (refer to Figure 7) which includes the following contributions:

- Minor system flows from drainage area S4 (0.56 ha contributing area).
- Uncontrolled flows from rear yard area RY2 (0.54 ha contributing area).
- Sheet flow from Wren Drive ROW area WD2 (0.13 ha contributing area).

The 'OUT-1' hydrograph represents the uncontrolled flow draining from the post-development areas from Phases 1 and 2 that discharges into the MMD and that bypasses the dry pond (refer to Figure 7):

- Drainage area PH1 (1.26 ha contributing area), which encompasses the existing Phase 1 lands that drains southerly towards the existing ditch on Wren Drive. This area includes the existing roadside ditches and culverts to convey storm runoff southwesterly along Morrison Drive and South along Wren Drive before ultimately discharging to an existing ditch which ultimately outlets to the MMD.
- Drainage Area S1 (0.35 ha contributing area) of Phase 2 on Morrison Drive that includes the front yards/roadway that is conveyed by the existing Phase 1 roadside grassed swale perforated pipe drainage system.
- Drainage Area WD1 of Phase 2 on Wren Drive (0.08 ha contributing area) which drains into the existing ditch located adjacent to the existing Caressant Care Nursing and Retirement Home approximately 95 m north of the Wren Drive/Trulove Street intersection from where flow is conveyed into MMD bypassing the dry pond.

- Rear Yard Area RY1 and the undeveloped area A1b (0.60 ha contributing area) sheet flows towards the Cobden Public school lands, from where it flows in a southerly direction to the 600 mm CSP culvert crossing Wren Drive north of Truelove Street (refer to Figure 7). This culvert outlets into existing ditch from where the flows are entering the MMD and bypassing the dry pond.

Based on the above contributions, runoff from a total area of approximately 2.3 ha area is conveyed to the MMD and bypasses the dry pond.

7.4 Critical Storm Distributions

Simulation of design storms is typically used to evaluate the hydrological response of a given area. The OSDG recommends that simulation was analyzed under the following design storms:

- Chicago Design Storm
- SCS Type II Design Storm

The Chicago storm distribution is generally applied to urban catchments where the peak runoff rates are influenced by peak rainfall intensities while the SCS Type II storm is generally applicable to undeveloped or rural basins where peak runoff rates are mostly influenced by the total volume of rainfall. The 3-hour Chicago storm was identified as the critical storm for this subdivision as it produces more restrictive flow rates when compared to the 12-hour and 24-hour SCS Type II storm. However, the performance of the swale system as well as the dry pond was evaluated under both Chicago and SCS design storms. In addition, the historical storms listed in the Ottawa Sewer Design Guidelines (i.e., July 1, 1979, August 4, 1988, and August 8, 1996) were also simulated under the post-development condition. The following sections present the summary of the simulated results of the 3-hour Chicago, 12-hour and 24-hour SCS Type II Design Storm events. Detailed simulation results of all storms modelled including the historical storms, is presented in Appendix I.

7.5 Pre-Development Flows

Table 7-2 below identifies pre-development peak flows that should be maintained throughout the various phases of the Wren Subdivision development at the point of discharge with the McLeod Municipal Drain (refer to Appendix H for SWMHYMO input and output files).

Table 7-2: SWMHYMO Simulation Results for 3-hour Chicago Storm (Pre-Development Condition, L/s)

Return Period	Catchment A1a	Catchment A1b	Catchment A1c	Catchment A2	Catchment A3	Catchment PH1	Peak Flows at MMD
2 year	36	27	11	83	31	91	192
5 year	72	61	25	176	63	150	400
10 year	100	89	36	249	88	200	557
25 year	139	128	52	353	124	265	780

50 year	171	160	65	437	153	321	957
100 year	205	194	80	592	184	377	1,145

7.6 Post-Development Simulation Results

7.6.1 Capacity Assessment of Swale System

The simulation results under the 3-hour Chicago Storm are summarized in Table 7-3 below along with the 12-hour and 24-hour SCS Type II storm results. In Table 7-3 the Maximum Static Ponding Depth (m) represents the depth between the maximum spill elevation less the invert of the swale. The maximum spill elevation represents the point at which the swale will spill into the downstream system either by overtopping a road at a 'T' intersection or a driveway.

Table 7-3: Swale Storage PCSWMM Simulation Results – 1:100-year Storm

Storage Cell	Max. Static Ponding Elevation	Max. Static Ponding Depth	1:100-year Water Elevation (3-hour Chicago)	1:100-year Water Elevation (12-hour SCS)	1:100-year Water Elevation (24-hour SCS)	Maximum Overtopping Flow	Maximum Overtopping Depth
	(m)	(m)	(m)	(m)	(m)	(L/s)	(mm)
Morrison Drive South Side							
CB600	147.57	0.81	147.37	147.38	147.39	0	0
CB601	147.42	0.90	146.88	146.87	146.87	0	0
CB602	147.14	0.85	146.69	146.66	146.66	0	0
CB603	146.80	0.49	146.77	146.72	146.73	0	0
CB604	146.60	0.58	146.33	146.32	146.32	0	0
CB605	146.23	0.83	145.75	145.75	145.75	0	0
CB606	146.03	0.32	145.96	145.95	145.95	0	0
CB607	145.58	0.32	145.64	145.64	145.64	10	55
Morrison Drive North Side							
CB700	147.57	0.7	147.53	147.59	147.61	0	0
CB701	147.38	0.69	147.11	147.1	147.1	0	0
CB702	147.19	0.71	146.88	146.88	146.88	0	0

Storage Cell	Max. Static Ponding Elevation	Max. Static Ponding Depth	1:100-year Water Elevation (3-hour Chicago)	1:100-year Water Elevation (12-hour SCS)	1:100-year Water Elevation (24-hour SCS)	Maximum Overtopping Flow	Maximum Overtopping Depth
CB703	146.95	0.4	146.93	146.93	146.93	0	0
CB704	146.69	0.56	146.55	146.54	146.55	0	0
CB705	146.46	0.59	146.22	146.22	146.22	0	0
MH700	146.34	0.65	146.09	146.09	146.09	0	0
CB706	145.96	0.66	145.60	145.59	145.59	0	0
CB707	145.84	0.56	145.56	145.55	145.55	0	0
CB708	145.71	0.61	145.42	145.41	145.41	0	0
CB709	145.65	0.58	145.39	145.38	145.38	0	0
Street 1 East Side							
CB403	147.09	0.98	146.75	146.73	146.73	0	0
Street No. 2 - Northeast Side							
CB803	146.63	0.66	146.60	146.55	146.55	0	0
CB804	146.52	0.63	146.17	146.17	146.17	0	0
CB805	146.38	0.64	146.02	146.01	146.01	0	0
Street No. 2 - Northwest Side							
CB902	146.63	0.67	146.51	146.46	146.46	0	0
CB903	146.49	0.62	146.17	146.15	146.16	0	0
CB904	146.36	0.63	146.08	146.07	146.07	0	0
Wren Drive East Side							
CB608	145.48	0.32	145.45	145.45	145.45	0	0
CB609	145.35	0.32	145.27	145.26	145.27	0	0
DIMH600	145.16	0.37	145.16	145.16	145.16	9	5

Storage Cell	Max. Static Ponding Elevation	Max. Static Ponding Depth	1:100-year Water Elevation (3-hour Chicago)	1:100-year Water Elevation (12-hour SCS)	1:100-year Water Elevation (24-hour SCS)	Maximum Overtopping Flow	Maximum Overtopping Depth
CB613	145.35	0.42	145.44	145.45	145.46	30	90
CB612	145.24	0.36	145.15	145.16	145.18	0	0
CB611	145.17	0.32	145.14	145.13	145.13	0	0
CB610	145.12	0.31	145.07	145.06	145.06	0	0
Wren Drive West Side							
CB710	145.58	0.54	145.36	145.36	145.36	0	0
CB711	145.47	0.46	145.21	145.20	145.20	0	0
CB712	145.34	0.32	145.25	145.24	145.24	0	0

Simulation results summarized above show that during the 1:100-year event, runoff was contained within the swales for all storm events without any overtopping except at the three (3) locations CB607, CB613 and DIMH600. The maximum overtopping of 30 L/s and maximum overtopping depth of 90 mm was simulated at the CB613 location. The results also confirm that the 3-hour Chicago storm was marginally higher for most of the swales. Therefore, it was considered as the critical storm event.

7.6.2 Drawdown Time

The drawdown times for each of the swale/ditch cell are shown in Table 7-4. It shows that the cells empty out within 48 hours, during the 4-hour - 25 mm water quality and 100-year storm events.

Table 7-4: Swale Drawdown Times (hours) for Varying Storm Events

Storage Cell ID	4-hr 25 mm (hrs)	1:100-year 3-hour Chicago (hrs)	1:100-year 12-hour SCS (hrs)	1:100-year 24-hour SCS (hrs)
CB600	21.0	20.9	25.6	31.7
CB601	17.7	16.8	21.2	27.1
CB602	12.6	12.3	16.6	22.5
CB603	11.6	10.9	15.1	21.0

Storage Cell ID	4-hr 25 mm (hrs)	1:100-year 3-hour Chicago (hrs)	1:100-year 12-hour SCS (hrs)	1:100-year 24-hour SCS (hrs)
CB604	11.9	11.2	15.5	21.5
CB605	11.3	14.0	18.2	24.1
CB606	8.5	7.8	12.0	17.9
CB607	14.8	14.7	19.2	25.2
Morrison Drive North Side				
CB700	26.8	27.3	31.8	35.9
CB701	20.5	20.4	24.8	30.9
CB702	18.0	18.9	23.4	29.5
CB703	20.9	20.7	25.3	31.5
CB704	18.7	18.9	23.4	29.5
CB705	14.1	13.7	18.2	24.3
MH700	21.4	22.5	26.9	32.9
CB706	9.2	8.5	12.7	18.6
CB707	14.8	14.1	18.2	24.2
CB708	18.9	18.4	22.5	28.5
CB709	22.8	22.1	26.3	32.3
Street 1 East Side				
CB403	13.0	12.2	16.5	22.5
Street No. 2 - Northeast Side				
CB803	19.0	18.2	22.5	28.5
CB804	18.3	17.5	21.8	27.7
CB805	10.8	10.3	14.7	20.7
S**treet No. 2 - Northwest Side**				
CB902	19.9	19.1	23.5	29.5

Storage Cell ID	4-hr 25 mm (hrs)	1:100-year 3-hour Chicago (hrs)	1:100-year 12-hour SCS (hrs)	1:100-year 24-hour SCS (hrs)
CB903	12.3	11.5	15.7	21.7
CB904	17.2	16.5	20.7	26.7
Wren Drive East Side				
CB608	18.4	17.7	22.0	28.1
CB609	11.3	10.5	14.8	20.8
DIMH600	20.3	20.1	24.4	30.3
CB613	16.1	15.6	20.1	26.3
CB612	10.3	9.5	13.8	19.8
CB611	17.2	16.4	20.8	26.9
CB610	11.4	10.6	14.9	20.9
Wren Drive West Side				
CB710	21.7	20.9	25.1	31.1
CB711	9.3	8.5	12.7	18.7
CB712	11.8	11.0	15.1	21.1
CB710	21.7	20.9	25.1	31.1

On average, drawdown time of the swales are approximately16 hours during the 4-hour 25 mm and the 3-hour 1:100-year Chicago storm event. Similarly, the average drawdown times of 20 hours and 25 hours were found under the 12-hour SCS and 24-hour SCS 1:100-year events, respectively. The maximum drawdown durations are 27 hours for the 25 mm event and 36 hours for the 1:100-year 24-hour SCS event.

7.6.3 Climate Change - Swales

Simulation results under the climate change scenario (i.e., 1:100-year storm event increased by 20%) showed that 4 storage cells will be overtopped. Table 7-5 provides a result summary of the overtopped cells for all three (3) climate events.

Table 7-5: Swale Storage Climate Change Event Simulation Results

Storage Cell	Max. Static Ponding Elevation	Climate Change Water Elevation 3-hour Chicago Storm	Maximum Overtopping Flow 3-hour Chicago Storm	Maximum Overtopping Depth 3-hour Chicago Storm	Climate Change Water Elevation 12-hour SCS Storm	Maximum Overtopping Flow 12-hour SCS Storm	Maximum Overtopping Depth 12-hour SCS Storm	Climate Change Water Elevation 24-hour SCS Storm	Maximum Overtopping Flow 24-hour SCS Storm	Maximum Overtopping Depth 24-hour SCS Storm
	(m)	(m)	(L/s)	(mm)	(m)	(L/s)	(mm)	(m)	(L/s)	(mm)
Morrison Drive South Side										
CB600	147.57	147.63	10.00	55.00	147.66	28.00	85.00	147.66	28.00	85.00
CB607	145.58	145.67	33.00	90.00	145.66	26.00	85.00	145.67	28.00	85.00
Morrison Drive North Side										
CB700	147.57	147.71	92.00	140.00	147.73	125.00	155.00	147.73	135.00	160.00
CB701	147.38	147.48	36.00	95.00	147.49	53.00	110.00	147.50	65.00	120.00
Street No. 2 - Northeast Side										
CB803	146.63	146.69	14.00	65.00	146.64	0.40	10	146.64	0.12	15.00
Wren Drive East Side										
DIMH600	145.16	145.17	19.00	5.00	145.16	6.00	5.00	145.16	7.00	5.00
CB613	145.35	145.48	78.00	130.00	145.50	112.00	150.00	145.51	125.00	155.00
CB612	145.24	145.30	14.00	65.00	145.35	47.00	105.00	145.36	62.00	120.00
CB611	145.17	145.16	0.00	0.00	145.20	3.00	35.00	145.23	12.00	60.00

Based on the results presented in the above table the most critical storm event under the climate change scenario is the 24-hour SCS storm event. The maximum overtopping flow and depth of 135 L/s and 160 mm respectively were simulated at CB700. However, the water level remains within ROW.

7.7 Dry Pond Performance

The dry pond was previously sized and designed as part of Phase 2 to provide adequate storage to limit post-development flows to those at pre-development levels. The approach for pond sizing considered build-out condition of the Wren development which included both Phases 3 and 4. Thus, the dry pond was designed to have a footprint area of approximately 11,200 m² and an active storage of approximately 5,900 m³. As noted in Section 5.1.2, the dry pond was constructed in 2017 satisfying the conditions outlined in ECA document number 1864-ALXRS6 dated September 5, 2017 (refer to Appendix C). The size of the pond was confirmed by BEI survey information in May 2002.

The pond outlet structure is comprised of a headwall structure that is equipped with the elements listed in Table 7-6 below:

Table 7-6: Dry Pond Outlet Structure

Outlet Structure Element	Design Elevation (m)	Survey Elevation (m)
200 mm dia. Orifice	143.15	143.142
250 mm dia. Orifice	143.35	143.344
Rectangular Weir	143.60	143.62
Emergency Spillway	143.90	143.90

The 200 mm diameter orifice is the lowest outlet control device, which was sized to provide flow control for the events up to the 1:2-year recurrence, while the 250 mm diameter orifice was sized to provide additional flow attenuation for events ranging between the 1:5 year and 1:100-year recurrence. The length of the rectangular weir was set to 4 m to provide quantity control for the events above the 1:2-ear return period. An emergency overflow spillway was also included as a protective measure during events more than the 1:100-year recurrence. The spillway was sized to convey the peak flow generated by the 1:100-year storm assuming no outflow via the weir or outlet pipes. The size of the outlet structure and invert elevation of various elements were confirmed via survey information received from BEI in May 2022.

The performance of the proposed dry pond was evaluated to demonstrate its effectiveness in limiting the post-development peak flows to pre-development levels. Simulation results for the 3-hour Chicago storm distribution have been summarized below as this storm represents the critical storm as indicated in Section 7.4. Detailed simulation results of all storms modelled including the historical storms, is presented in Appendix I.

Table 7-7: Dry Pond Simulation Results 3-hour Chicago Storm

Return Period	Pond Inflow (L/s)	Pond Outflow (L/s)	Storage Used (m^3)	Pond Depth (m)	Water Level
25 mm event	295	65	499	0.400	143.55
1:2 year	712	109	982	0.490	143.64
1:5 year	1167	276	1427	0.550	143.70
1:10 year	1525	413	1722	0.590	143.74
1:25 year	2067	604	2092	0.630	143.78
1:50 year	2411	761	2384	0.670	143.82
1:100 year	2739	924	2680	0.700	143.85
Climate Change	3431	1266	3253	0.750	143.90

From the above simulation results and the various outlet structure elements displayed in Table 7-6, the simulated water surface elevation (WSEL) is below the weir invert elevation during the 4hr-25 mm event, and the two orifice plate structures regulate the outflow (200 mm and 250 mm diameter). The weir structure is utilized during the 1:2-year event and above. Based on the above simulation results, the 1:100-year water level is below the surveyed top of the pond elevation of 144.07 m.

The drawdown time for the dry pond was assessed and summarized in Table 7-8. (below).

Table 7-8: Dry Pond Drawdown Time

Return Period	Drawdown Time (hours)
25 mm event	44.2
1:2 year	44.3
1:5 year	44.8
1:10 year	44.8
1:25 year	44.9
1:50 year	44.9
1:100 year	45.0
Climate Change	44.9

The simulated drawdown times summarized above are within the recommended drawdown period between 24hr - 48hrs.

7.8 Peak Flow Comparison

The post-development release rate at the McLeod Municipal Drian was compared to the calculated pre-development flow (allowable) as discussed in Section 7.2. The following table (Table 7-9) provides a summary of the flow rate comparisons.

Table 7-9: Post verse Pre-Development Storm Release Rates (SWMF Outlet discharging to the McLeod Municipal Drain)

Return Period	Dry Pond Outflow (L/s)	Uncontrolled Flow to MMD (OUT-1 SWMHYMO Hydrograph) (L/s)	Post-Development Overall Peak Outflow (L/s)	Pre-Development Flow (L/s)
1:2 year	109	125	153	192
1:5 year	276	212	306	400
1:10 year	413	282	455	557
1:25 year	604	376	667	781
1:50 year	761	453	839	957
1:100 year	924	529	1081	1145

It should be noted that the overall post-development peak outflow in MMD includes pond outflow and uncontrolled flow. However, due to routing, the overall post-development peak outflow is not the sum of the total peak flows from the Dry Pond and Uncontrolled flow as the times to peak do not coincide.

The simulation results in the above table show that the post-development peak flows are less than those under pre-development for all storm events. Therefore, the constructed dry pond provides adequate storage to accept and attenuate storm runoff from the buildout site conditions respecting the pre-condition flow rates to the McLeod Municipal Drain.

7.9 Summary and Conclusions

The hydrological analysis presented above was performed in support of the development application for Phases 3 and 4 of the Wren subdivision. The modelling methodology and the PCSWMM simulation results presented herein indicate that storm runoff generated by the proposed development will be attenuated by the existing dry pond to levels below those under pre-development conditions before discharge into the MMD.

Simulation results showed that the proposed dry pond has sufficient storage to accommodate the 1:100-year storm event while releasing flows below the pre-development levels. Simulation results also indicated that the dry pond would empty within a 45-hours during the 1:100-year storm event under the build-out stage of the Wren Subdivision. Regarding water quality, each of the

storage cells were sized to meet the requirements of Table 3.2 of the SWMPDM as described in Section 6.2 and calculations included in Appendix G. Therefore, the servicing provided for Phases 3 and 4 meets the water quality criterion as well as the water quantity control requirement.

8.0 Stormwater Management Practices

To provide an integrated and treatment train approach to SWM, it is proposed to implement several SWMPs and lot-level control measures to reproduce the pre-development drainage conditions of Phases 3 and 4. The following measures are proposed to mitigate the potential hydrological resulting from the proposed development:

Lot Grading

Grading within Phases 3 and 4 was developed using reduced slopes, where feasible and practical, mostly in the rear yard areas, to reduce the peak flows while promoting the opportunity for infiltration.

Roof Leaders Directed to Grassed Areas

It is recommended that roof leaders (front and rear) from the proposed dwelling units be directed onto grassed areas to reduce flow velocities and promote infiltration. The benefit of this measure includes reduced peak flows to the receiving system and an enhanced groundwater/base flow recharge.

Servicing Via Roadside Swale Perforated Pipe Drainage System

Storm drainage servicing for Phases 3 and 4 will be achieved by means of a roadside grassed swale perforated pipe subdrain system. Once the roadside system has been constructed, sodding will be implemented within the City's ROW shortly thereafter to provide an immediate vegetated cover. Once the vegetation has reached maturity, this system will provide numerous environmental benefits, including sediment removal by filtration and reduction of peak flows and volumes.

Rear Yard Grassed Swale Grading

The grading of the rear yard swales was developed using reduced slopes, where feasible and practical. The use of reduced slopes will provide an opportunity to promote infiltration.

Hydroseeding of Rear Yard Swales

Rear yard swales should be hydroseeded immediately following construction so that at maturity, water quality enhancement through settling, adsorption, filtration, and infiltration is provided

9.0 Erosion and Sediment Control Measures

During the construction of the development, the Contractor shall implement the appropriate erosion and sediment control (ESC) measures per the Ontario Ministry of Environment and Energy (MOEE) standards. These practices are to be supplied and installed following the provided ESC plan but are not limited to:

- Light Duty Straw Bale and Light Duty Silt Fence Barriers per OPSD 219.100 and OPSD 219.110, respectively.
- Rip Rap with Geotextile per OPSD 810.010 Type B.
- Silt fence to enclose all borrow and stockpile areas (i.e., the exact location to be determined during construction) as a result of topsoil stripping activities or any excavating activities associated with the construction of the proposed ditch or other proposed works.

Furthermore, if dewatering and pumping operations are necessary, the Contractor shall build a detention trap to hold groundwater and promote sediment settlement. All ESC measures are to be installed according to the following standards:

- Toronto and Region Conservation Authority (TRCA). 2019. Erosion and Sediment Control Guideline for Urban Construction. Toronto and Region Conservation Authority, Vaughan, Ontario.
- CISEC Canada. 2018. Certified Inspector of Sediment and Erosion Control Training Manual. Vaughan, Ontario.
- Ontario Ministry of Transportation. 2015. Environmental Guide for Erosion and Sediment Control During Construction of Highway Projects. St. Catherine's, Ontario.
- Ministry of Natural Resources (MNR) – Stormwater Management Practices to be implemented during construction of municipal services.
    - Any stockpiled material will be kept in flat areas during construction, away from any natural flow paths. Suppose the stockpile is placed in other areas where potential wash-off to the conveyance system is expected. In that case, the Contractor will install silt fences to enclose the materials and prevent any wash-off to the conveyance system.
    - Any onsite pumped stormwater and/or groundwater shall be filtered through a detention trap before being released to the McLeod Municipal Drain.

ESC measures are to be implemented during individual lot development. Roadside storm infrastructure will be protected through the use various ESC measures, including cover grates and silt fence barriers along roadside swales.

10.0 Conclusions

This report and the associated Drawings provide the recommended infrastructure servicing (water, wastewater and storm) required to support BEI's development of Wren Subdivision Phases 3 and 4. In general, the site will be serviced as follows:

- Water service (Domestic and Fire Protection) to be provided via an extension of the existing watermains along Morrison and Wren Drive.

- Wastewater to gravity flow towards the existing sanitary sewer mains along Morrison and Wren Drive, which further flow to the existing sewer along Truelove Street. The Township will confirm the available sewage capacity of the mains along Truelove Street.

- Building foundations to drain via a sump, pumped to the surface and discharged to the proposed front yard drainage and roadside ditches.

- Site stormwater runoff to be managed via the existing SWMF pond approved by the ECA and built within the development of Phase 2. The SWMF is designed to treat 80% TSS and hold all major storm events up to the 100-year storm, discharging only the permitted flow to the McLeod Municipal Drain system.

- Development minor system flows are conveyed via the proposed roadside ditches, equipped with a perforated subdrain system. Note that storm pipes installed under the driveways will be non-perforated.

- Development major system flows to overland flow via the proposed roadside ditches, cascading over the end of the driveway and road, and outlet to the SWMF.

- Surface flows from the rear yard and any offsite areas will be managed via proposed rear-yard open-channel swales designed to manage the minor and major storm runoff.

- Each proposed lot will be serviced with natural gas, hydro, and Bell. The cables are to be placed in a common trench.

This report has been prepared by J.L. Richards & Associates Limited for BEI's exclusive use. Report discussions and conclusions shall not be used, interpreted or extended to other purposes without a detailed understanding and discussions with BEI regarding its mandated purpose, scope and limitations. This report is based on information, drawings, data, or reports provided by BEI, its agents, and certain other suppliers or third parties, as applicable. It relies upon the accuracy and completeness of such information. Any inaccuracy or omissions in the information provided or changes to applications, designs, or materials may significantly impact this report's accuracy, reliability, findings, or conclusions.

J.L. RICHARDS & ASSOCIATES LIMITED

Prepared by:

Steve Picken, C.Tech.
Civil Technician

Reviewed by:



Karla Ferrey, P.Eng.
Senior Associate; Senior Civil Engineer;
Manager, Ottawa Civil Development

Appendix A

Legal Plan

DRAFT PLAN OF SUBDIVISION

OF PART OF
BLOCK E
REGISTERED PLAN 65
TOWNSHIP OF WHITEWATER REGION
COUNTY OF RENFREW

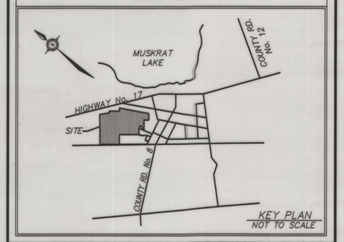
SCALE 1 : 1000

METRES 10 5 0 10 20 30 40 50 60 70 80 90 100

ADAM KASPRZAK SURVEYING LTD.



KEY MAP



OWNER'S AUTHORIZATION

I AUTHORIZE J. L. RICHARDS & ASSOCIATES LTD. TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE COUNTY OF RENFREW FOR APPROVAL.

JULY 14, 2022
DATE

TOM ENRIGHT, SECRETARY-TREASURER
BONNECHERE EXCAVATING INC.

SURVEYOR'S AUTHORIZATION

I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED ARE CORRECTLY SHOWN.

JULY 14, 2022
DATE

ADAM KASPRZAK, O.L.S.
ADAM KASPRZAK SURVEYING LTD.
ONTARIO LAND SURVEYORS

THIS IS A REVISED DRAFT PLAN OF SUBDIVISION (47T93005) REFERRED TO IN CHANGE OF CONDITIONS ISSUED UNDER THE PLANNING ACT ON THE 12 DAY OF September 2022.

BRUCE HOWARTH, MCIP, RPP
MANAGER OF PLANNING SERVICES
DEVELOPMENT & PROPERTY DEPARTMENT
CORPORATION OF THE COUNTY OF RENFREW

ADDITIONAL INFORMATION

UNDER SECTION 51 (17) OF THE PLANNING ACT RSO, 1990 CHAPTER P. 13

a) AS SHOWN ON THE DRAFT PLAN
b) AS SHOWN ON THE DRAFT PLAN
c) AS SHOWN ON THE DRAFT PLAN
d) SINGLE FAMILY, MEDIUM DENSITY RESIDENTIAL
e) AS SHOWN ON THE DRAFT PLAN
f) AS SHOWN ON THE DRAFT PLAN
g) AS SHOWN ON DRAFT PLAN
h) PIPED WATER
i) CLAY LOAM, MODERATE POROSITY
j) AS SHOWN ON THE DRAFT PLAN
k) WATER, SANITARY SEWERS & DRAINAGE DITCHES
l) N/A

NOTES

BLOCK 11 & 12, REGISTERED PLAN 573 TO BE ACQUIRED FROM THE MUNICIPALITY.

CONTOURS HAVE BEEN OBTAINED FROM INFORMATION SHOWN ON A DRAFT PLAN OF SUBDIVISION BY D. W. PATTERSON, O.L.S., DATED AUGUST 27, 1993.

LOT/BLOCK SUMMARY

LOT or BLOCK #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
FRONTAGE (metres)	26.91	28.25	23.58	28.23	23.80	24.99	36.09	42.89	24.03	30.48	31.08	28.11	27.49	27.73	22.89	21.50	21.50	21.50	21.50	21.50	21.50	20.69	21.38
AREA (sq. m.)	733	882	920	761	658	853	2528	1982	946	1307	1522	1533	1587	1867	887	787	786	787	786	786	786	690	730

LOT or BLOCK #	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
FRONTAGE (metres)	21.50	21.50	21.50	21.50	21.50	21.50	23.58	22.74	26.18	36.30	33.07	30.68	21.64	23.05	27.20	29.84	28.05	24.77	32.08	27.00	32.05	26.95	21.50
AREA (sq. m.)	786	786	786	786	786	786	926	760	737	1002	1409	1448	763	855	983	1317	932	1087	1332	920	986	821	785

LOT or BLOCK #	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69
FRONTAGE (metres)	33.33	22.98	22.79	22.79	22.76	22.76	22.99	35.23	17.40	24.60	20.00	31.76	24.98	20.71	20.71	20.71	20.71	20.71	20.71	20.71	20.71	20.71	20.71
AREA (sq. m.)	1317	932	1087	1332	920	986	821	785	888	838	825	822	772	1060	949	943	1153	763	831	831	756	767	699

LOT or BLOCK #	70	71	72	73	74
FRONTAGE (metres)	20.71	20.71	20.71	20.71	24.44
AREA (sq. m.)	756	756	756	756	842

DISTANCES ARE ALONG THE FRONT OF EACH LOT WHERE THE SIDELINES ARE PARALLEL. WHERE SIDELINES ARE NOT PARALLEL, LOT FRONTAGE DISTANCES ARE MEASURED 7.5 METRES BACK.

DISTANCE NOTE:

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

ADAM KASPRZAK SURVEYING LTD.
ONTARIO LAND SURVEYORS
113 ARGYLE ST. S., P.O. BOX 633
RENFREW ONTARIO K7V 4E7
PHONE (613) 432-3048

SCALE: 1 : 750 | REF: 22-5133 D
FILE No :

Appendix B1

Geotechnical Investigation

GEMTEC
www.gemtec.ca

Geotechnical Investigation
Proposed Wren Subdivision - Phase 3
Wren Drive
Cobden, Ontario

GEMTEC Project: 62658.03

GEMTEC
www.gemtec.ca

Submitted to:

Bonnechere Excavating Inc.
1 Innovation Drive
Renfrew, Ontario
K7V 3Z4

Geotechnical Investigation
Proposed Wren Subdivision - Phase 3
Wren Drive
Cobden, Ontario

December 21, 2022
GEMTEC Project: 62658.03

experience • knowledge • integrity

GEMTEC Consulting Engineers and Scientists Limited
32 Steacie Drive
Ottawa, ON, Canada
K2K 2A9

December 21, 2022 File: 62658.03

Bonnechere Excavating Inc.
1 Innovation Drive
Renfrew, Ontario
K7V 3Z4

Attention: Matt Naismith

Re: Geotechnical Investigation
Proposed Wren Subdivision – Phase 3
Wren Drive
Cobden, Ontario

Please find enclosed our geotechnical investigation report for the above noted project, in accordance with our proposal dated November 30, 2022. This report was prepared by Mr. Alex Meacoe, P.Eng., and reviewed by Mr. Bill Cavers, P.Eng..

Alex Meacoe, P.Eng.

Bill Cavers, P.Eng.

WAM/BC

Enclosures
N:\Projects\62600\62658.03\Reports\Phase 3 report\62658.03_RPT.02_GEOT_V.01_2022-12-21.docx

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1.0 INTRODUCTION

This report presents the results of a geotechnical assessment carried out at proposed Phase 3 of the proposed Wren Subdivision at Wren Drive in Cobden, Ontario. The purpose of the investigation was to identify the general subsurface conditions at Phase 3 of the site based on the previously completed test pits.

This report should be read in conjunction with our previous geotechnical investigation report:

- Report titled "Geotechnical Investigation, Wren Subdivision, Township of Whitewater Region, Cobden, Ontario", dated October 7, 2014 (Project No. 14-327).

2.0 PROJECT DESCRIPTION AND SITE GEOLOGY

Plans are being prepared to develop a parcel of land located west of Morrison Drive and south of Highway 17 in Cobden, Ontario (refer to Key Plan inset, Figure 1).

It is understood that the proposed phase 3 of the development will consist of a residential subdivision with an internal roadway system. It is understood that the residences will be either homes, townhouses, or a combination of both, all of conventional wood frame construction with full depth concrete basements. Water, sanitary and storm services will be part of the proposed development, along with a stormwater management facility at the northwest corner of the site.

Based on our previous local experience and published geology maps of the area, it is expected that the subsurface conditions within the project area are characterized primarily by overburden deposits composed of silty clay and shallow bedrock. Based on nearby Ministry of Environment, Conservation, and Parks (MECP) well records, the overburden thickness is indicated to range from 0 to 15 metres. Bedrock geology maps of the area indicate that the overburden deposits are underlain by Precambrian bedrock.

During the previous investigations, 13 test pits were advanced at the site. The test pits encountered topsoil underlain by deposits of silty clay over glacial till over bedrock.

3.0 SUBSURFACE CONDITIONS

3.1 General

The boreholes and test pits advanced within and adjacent to Phase 3 of the subdivision consist of test pits 2 to 13 from the previous investigations.

Descriptions of the subsurface conditions encountered in the test pits are provided on the Record of Test Pit sheets in Appendix A. The approximate locations of the test pits are shown on the Site Plan, Figure 1. The results of the laboratory classification tests are provided on the Test Pit sheets and in Appendix B. The results of the corrosion testing are provided in Appendix C.

The logs indicate the subsurface conditions at the specific test locations only. Boundaries between zones on the logs are often not distinct, but rather are transitional and have been interpreted. Subsurface conditions at other than the test pit and borehole locations may vary from the conditions encountered in the test pits. In addition to soil variability, fill of variable physical and chemical composition can be present over portions of the site.

The soil descriptions in this report are based on commonly accepted methods of classification and identification employed in geotechnical practice. Classification and identification of soil involves judgement and GEMTEC does not guarantee descriptions as exact, but infers accuracy to the extent that is common in current geotechnical practice.

The groundwater conditions described in this report refer only to those observed at the location and date of observation noted in the report and on the test pit logs. Groundwater conditions may vary seasonally, or may be affected by construction activities on or in the vicinity of the site.

3.2 Topsoil

A surficial layer of topsoil was encountered from ground surface at all of the test pits. The topsoil has thicknesses ranging from about 50 to 310 millimetres.

3.3 Silty Clay

Native deposits of silty clay were encountered below the topsoil in test pits 2, 3, 4, 7 to 11, and 13 and below a native deposit of silty sand in test pit 12.

The silty clay is grey brown and weathered. Based on the effort required for excavation and our visual and tactile examination, the weathered silty clay is estimated to have a very stiff consistency. The weathered crust extends to depths ranging from about 0.5 to 4.3 metres below the existing ground surface.

At the locations of test pits 3 and 8, the weathered silty clay is underlain by grey silty clay. The grey silty clay was not fully penetrated in the boreholes, but was proven to depths of about 3.7 and 4.9 metres below the existing ground surface in test pits 3 and 8, respectively.

The results of in situ field vane tests carried out in bucket samples of the grey silty clay deposit in test pit 8 between about 4.5 and 5.0 metres below ground surface gave undrained shear strength values ranging from about 35 to 50 kilopascals, which represents a firm consistency. It is pointed out that the samples tested were likely disturbed during excavating and therefore, the undrained shear strength values should be considered as approximate.

The water contents of samples of the silty clay from test pit 4 range from about 30 to 33 percent.

3.4 Silty Sand

At the locations of test pits 6 and 12, native deposits of brown, silty sand with trace to some gravel were encountered below the topsoil. The thickness of the silty sand deposits are about 0.4 and 0.3 metres at the locations of test pits 6 and 12, respectively.

The results of grain size classification testing carried out on samples of the silty sand deposits are provided in Appendix B. The results of the testing are summarized in the table below.

Table 4.1 – Summary of Grain Size Distribution Test (Silty Sand)

Location	Sample Number	Sample Depth (metres)	Gravel (%)	Sand (%)	Silt and Clay(%)
6	2	0.2 – 0.5	13	66	21
12	2	0.2 – 0.5	5	73	22

The water contents of samples of the silty sand from test pit 6 and 12 were about 13 and 10 percent, respectively.

3.5 Glacial Till

Native deposits of glacial till were encountered below the silty clay in test pits 2, 3, 4, 7, and 9 to 12, and below the silty sand in test pit 6.

Glacial till is a heterogeneous mixture of all grain sizes, which at this site can be described as a silty sand with some gravel, cobbles and boulders and trace clay. The glacial till extends to depths ranging from about 0.8 to 4.7 metres below the existing ground surface.

The water content of a sample of the glacial till from test pit 4 was about 13 percent.

3.6 Practical Refusal to Excavation (Inferred Bedrock)

Practical refusal to excavating occurred in test pits 5, 6, 9, 10 and 12 at depths ranging from about 0.3 to 3.9 metres below ground surface. Probable weathered bedrock was encountered at a depth of about 1.2 metres below the existing ground surface.

The operator of the excavation equipment indicated possible bedrock depths at the locations of test pits 7 and 13 at about 3.7 and 3.9 metres below ground surface, respectively. It is possible that these refusals represent the surface of the bedrock, however, refusal can also occur on large boulders within the glacial till deposit.

The following table summarizes the depths and elevations of practical excavator refusal.

Table 4.2 – Summary of Excavator Refusal Depths and Elevations

Test Pit	Ground Surface Elevation (metres)	Depth to Excavator Refusal (metres)	Elevation of Excavator Refusal (metres)
Test Pit 5	147.4	0.3	147.2
Test Pit 6	146.2	1.6	144.6
Test Pit 9	145.4	0.8	144.6
Test Pit 10	148.2	1.7	146.5
Test Pit 12	149.1	1.3	147.8

3.7 Groundwater Levels

The groundwater levels measured in the well screens on August 21, 2014, are summarized in the following table.

Table 4.3 – Groundwater Levels in Well Screens

Test Pit	Groundwater Level (metres below ground surface)	Groundwater Elevation (metres, geodetic datum)
Test Pit 8	1.6	142.5
Test Pit 11	2.1	143.3
Test Pit 13	2.2	141.9

Groundwater infiltration measured for the short time the test pits remained open in test pits 1, 2, 3, 4, 7, 8, and 11, are summarized in the following table. Test pits 5, 6, 9, and 10 were dry upon completion of the excavation.

Table 4.4 – Groundwater Levels in Open Test Pits

Test Pit	Ground Surface Elevation (metres)	Groundwater Infiltration Depth (metres)
Test Pit 2	147.1	3.3
Test Pit 3	147.3	3.2

Test Pit	Ground Surface Elevation (metres)	Groundwater Infiltration Depth (metres)
Test Pit 4	147.2	2.7
Test Pit 7	144.6	2.5
Test Pit 8	144.1	4.6
Test Pit 11	145.4	3.3
Test Pit 13	144.1	3.3

It should be noted that the groundwater levels may be higher during wet periods of the year such as the early spring or following periods of precipitation.

3.8 Groundwater Chemistry Related to Corrosion

The results of chemical testing carried out on a sample of the groundwater obtained from the well screen in test pit 1 on August 21, 2014, are provided in Appendix C and summarized in the following table.

Table 4.5 – Groundwater Chemistry Relating to Corrosion

Parameter	Well Screen, Test Pit 1 August 21, 2014
Conductivity (µS/cm)	506
Hardness (mg/L)	267
pH	7.5
Chloride (mg/L)	5
Sulphate (mg/L)	27

4.0 GEOTECHNICAL GUIDELINES

4.1 General

This section of the report provides preliminary engineering guidelines on the geotechnical design aspects of the project based on our interpretation of the available test pit information, and the

project requirements. It is stressed that the information in the following sections is provided for the guidance of the designers and is intended for this project only. Contractors bidding on or undertaking the works should examine the factual results of the investigation, satisfy themselves as to the adequacy of the information for construction, and make their own interpretation of the factual data as it affects their construction techniques, schedule, safety and equipment capabilities.

The professional services retained for this project include only the geotechnical aspects of the subsurface conditions at this site. The presence or implications of possible surface and/or subsurface contamination resulting from previous uses or activities of this site or adjacent properties, and/or resulting from the introduction onto the site from materials from off site sources are outside the terms of reference for this report and have not been investigated or addressed.

4.2 Grade Raise Restrictions

Portions of the site are underlain by deposits of silty clay, which have an estimated firm to very stiff consistency. The placement of fill material must be controlled so that the stress imposed by the fill material does not result in excessive consolidation of the silty clay deposits. The settlement response of the silty clay deposits due to the increase in stress caused by fill materials is influenced by variables such as the existing effective overburden pressure, the past preconsolidation pressure for the silty clay, the compressibility characteristics of the silty clay, and the presence or absence of drainage paths, etc. It is well established that the settlement response of silty clay deposits can be significant when the stress increase is near or above the preconsolidation pressure.

For preliminary design purposes, the grade raise fill restriction in areas that are underlain by silty clay is 2.5 metres. This represents the thickness of the fill material above the existing grade as required for development of the site. If grade raise fill in excess of 2.5 metres is required on portions of the site underlain by silty clay deposits, additional investigation may be required. The subdivision grading plan should be reviewed by GEMTEC Consulting Engineers and Scientists Limited at the detailed design stage.

4.3 Proposed Houses

4.3.1 Excavation

The excavations for the foundations should be made through any surficial fill, topsoil, or otherwise deleterious material to expose undisturbed soil. The sides of the excavations should be sloped in accordance with the requirements in Ontario Regulation 213/91 under the Occupational Health and Safety Act. According to the Act, the shallow native overburden deposits of clay and the sands and till above the groundwater level can be classified as Type 3 and, accordingly, allowance should be made for excavation side slopes of 1 horizontal to 1 vertical extending upwards from the base of the excavation.

Excavation of the native silty clay should not present any constraints. Furthermore, excavation of the native silty sand and glacial till above the groundwater should also not present any excavation constraints. In contrast, excavation in the native silty sand and glacial till below the groundwater level could present constraints. Groundwater inflow from the silty sand and glacial till deposits could cause sloughing of the sides of the excavation and disturbance to the soils at the bottom of the excavation. Flatter side slopes may be required if excavation below the groundwater in silty sands or glacial till is required.

Based on our observations on site during the construction of Phase 1 and 2 of the site, groundwater inflow from the overburden deposits into the excavations should be expected during the excavations for the proposed houses. It is not expected that short term pumping during excavation will have any significant affect on nearby structures and services.

Bedrock excavation may be required for foundations at this site. Guidelines on bedrock excavation are provided below in Section 5.5.1.2.

4.3.2 Placement of Engineered Fill

In areas where the proposed founding level is above the level of the native soil, or where subexcavation of disturbed material is required below proposed founding level (i.e., due to groundwater infiltration), imported granular material (engineered fill) should be used. The engineered fill should consist of granular material meeting Ontario Provincial Standard Specifications (OPSS) requirements for Granular B Type I or II and should be compacted in maximum 200 millimetre thick lifts to at least 95 percent of the material's standard Proctor maximum dry density. To allow spread of load beneath the footings, the engineered fill should extend horizontally at least 0.3 metres beyond the footings and then down and out from the edges of the footings at 1 horizontal to 1 vertical, or flatter. The excavations should be sized to accommodate this fill placement. The engineered fill should be placed in accordance with the site grade raise restrictions, where applicable.

4.3.3 Spread Footing Design

The proposed houses could be founded on spread footings bearing on or within the native soil or on engineered fill above the native deposits. The topsoil and any fill materials are not considered suitable for the support of the proposed houses or concrete floor slabs and should be removed from the proposed building areas.

To reduce the potential for long term pumping requirements, we recommend that the footings be designed to be at least 0.3 metres above the high groundwater level. Based on the water infiltration into excavations during the construction of Phase 1 and 2 of the development, the proposed underside of footing elevations may need to be increased to accommodate the groundwater level. Where the underside of footing elevations need to be increased, recommendation for the placement of engineered fill are provided in Section 4.3.2, above.

Based on the results of the borehole investigation, the following may be used to size the spread footing foundations:

Table 5.1 – Allowable Bearing Pressures for Foundations

Subgrade Material	Allowable Bearing Pressure for Foundations (kilopascals)
Weathered silty clay	100
Glacial till	150
Bedrock	200
Engineered fill material, over undisturbed native deposits	150

Note: The allowable bearing pressures assume the native soils are in an undisturbed state.

The allowable bearing pressures provided above are based on settlement. The post construction total and differential settlement of footings should be less than 25 and 15 millimetres, respectively, provided that all loose or disturbed soil is removed from the bearing surfaces and provided that any engineered fill material used is compacted to the required density.

4.3.4 Frost Protection of Foundations

All exterior footings should be provided with at least 1.5 metres of earth cover for frost protection purposes. Isolated, unheated exterior footings adjacent to surfaces which are cleaned of snow cover during the winter months should be provided with a minimum of 1.8 metres of earth cover. Alternatively, the required frost protection could be provided by means of a combination of earth cover and extruded polystyrene insulation. Further details regarding the insulation of foundations could be provided at the detailed design stage, if necessary.

4.3.5 Basement Foundation Wall Backfill and Drainage

In accordance with the Ontario Building Code, the following alternatives could be considered for drainage of the basement foundation walls:

- Damp proof the exterior of the foundation walls and backfill the walls with free draining, non-frost susceptible sand or sand and gravel such as that meeting OPSS requirements for Granular B Type I or II; OR,
- Damp proof the exterior of the foundation walls and install an approved proprietary drainage material on the exterior of the foundation walls and backfill the walls with native material or imported soil.

Where areas of hard surfacing (walkways, driveways, etc.) abut the proposed houses, a gradual transition should be provided between those areas of hard surfacing underlain by non-frost

susceptible granular wall backfill and those areas underlain by existing frost susceptible materials to reduce the effects of differential frost heaving. It is suggested that granular frost tapers be constructed from 1.5 metres below ground surface to the underside of the granular base/subbase material for the hard surfaced areas. The frost tapers should be sloped at 1 horizontal to 1 vertical, or flatter.

A perforated plastic foundation drain with a surround of clear crushed stone should be installed on the exterior of the foundation walls, with the exception of garages. To avoid loss of sand backfill into the voids in the clear stone (and possible post construction settlement of the ground around the houses), the perforated drains should be wrapped in a geotextile. The top of the drain should be located below the bottom of the floor slab. The drain should outlet to a sump from which the water is pumped or should drain by gravity to a storm sewer.

4.3.6 Garage Foundation and Pier Backfill

To avoid adfreeze and possible jacking (heaving) of the foundation walls, between the unheated garage foundation walls and the wall backfill, the interior and exterior of the garage foundation walls should be backfilled with free draining, non-frost susceptible sand or sand and gravel such as that meeting OPSS requirements for Granular B Type I or II or 19 millimetre clear stone. The backfill within the garage should be compacted in maximum 300 millimetres thick lifts to at least 95 percent of the material's standard Proctor dry density value using suitable vibratory compaction equipment. Compaction of clear stone is not essential.

The backfill against isolated (unheated) walls or piers should consist of free draining, non-frost susceptible material, such as sand meeting OPSS Granular B Type I or II requirements. Other measures to prevent frost jacking of these foundation elements could be provided, if required.

4.3.7 Basement Concrete Slab Support

To provide predictable settlement performance of the basement slab, all topsoil, fill material, and other deleterious materials should be removed from the slab area.

The base for the floor slab should consist of 19 millimetre clear crushed stone. For preliminary design purposes, allowance should be made for between 150 and 200 millimetres of base material.

The clear crushed stone should be nominally compacted in maximum 300 millimetre thick lifts with at least 2 passes of a diesel plate compactor. If the subgrade consists of silty sand, a suitable nonwoven geotextile should be placed over the subgrade prior to the placement of clear stone to prevent the ingress of sand into voids in the clear stone, which could result in settlement/cracking of the slab.

Underfloor drainage should be provided below the floor slab. If clear crushed stone is used below the floor slab, drains are not considered essential provided that the clear stone can outlet to the

sump and drains are installed to link any hydraulically isolated areas in the basement. The drains should outlet by gravity to a sump from which the water is pumped or drained by gravity to a sewer or to a suitable outlet such as a drainage ditch.

Basement floor slabs should be constructed in accordance with guidelines provided in ACI 302.1R-04 “Guide for Concrete Floor and Slab Construction”.

4.3.8 Effects of Trees on the Foundations

The results of this investigation indicate that silty clay deposits exist at the site. This material is known to be susceptible to shrinkage with a change/reduction in moisture content. Research by the Institute for Research in Construction (formerly the Division of Building Research) of the National Research Council of Canada has shown that trees can cause a reduction of moisture content in the sensitive clays in the Ottawa area, which can result in significant settlement/damage to nearby buildings supported on shallow foundations. Therefore, for houses bearing on or within the silty clay deposits, no deciduous trees should be permitted closer to the houses (or any ground supported structures which may be affected by settlement) than the ultimate height of the trees. For groups of trees or trees in rows, the separation distance should be increased to 1.5 times the ultimate height of the trees.

The effects of existing and future trees on proposed houses, services and other ground supported structures should be considered in the landscaping design.

4.4 Internal Roadways

4.4.1 Subgrade Preparation

In preparation for roadway construction at this site, all surficial topsoil and any soft, wet or deleterious materials should be removed from the proposed roadways. Any subexcavated areas could be filled with compacted earth borrow. Similarly, should it be necessary to raise the roadway grades at this site, material which meets OPSS specifications for Select Subgrade Material or earth borrow may be used. The select subgrade material or earth borrow should be placed in maximum 300 millimetre thick lifts and compacted to at least 95 percent of the material’s standard Proctor maximum dry density value using vibratory compaction equipment. Prior to placing granular material for the roadway, the exposed subgrade should be heavily proof rolled and inspected and approved by geotechnical personnel. Any soft areas evident from the proof rolling should be subexcavated and replaced with suitable earth borrow or rock fill approved by the geotechnical engineer.

The subgrade should be shaped and crowned to promote drainage of the roadway granular materials.

4.4.2 Pavement Design

For internal roadways at this site, the following minimum pavement structure is suggested:

- 80 millimetres of asphaltic concrete (40 millimetres of Superpave 12.5 Traffic Level B over 40 millimetres of Superpave 19.0 or HL8 Traffic Level B), over
- 150 millimetres of OPSS Granular A base, over
- 375 millimetres of OPSS Granular B, Type I or II subbase

The above pavement structure assumes that any trench backfill is adequately compacted and that the roadway subgrade surface is prepared as described in this report. If the roadway subgrade surface is disturbed or wetted due to construction operations or precipitation, the granular thickness given above may not be adequate and it may be necessary to increase the thickness of the Granular B Type I or II subbase and/or to incorporate a woven geotextile separator between the roadway subgrade surface and the granular subbase material. The adequacy of the design pavement thickness should be assessed by geotechnical personnel at the time of construction.

It is suggested that the placement of the surface course of asphaltic concrete be delayed for at least six months to allow for any settlement of fill material and service trench backfill within the roadway.

4.4.3 Granular Material Compaction

The pavement granular materials should be compacted in maximum 300 millimetre thick lifts to at least 98 percent of material's standard Proctor maximum dry density using suitable vibratory compaction equipment.

4.4.4 Asphaltic Concrete Types

Performance grade PG 58-34 asphaltic cement should be specified for Superpave asphaltic concrete mixes.

4.4.5 Transition Treatments

In areas where the new pavement structure will abut existing pavements, the depths of the granular materials should taper up or down at 5 horizontal to 1 vertical, or flatter, to match the depths of the granular material(s) exposed in the existing pavement.

4.4.6 Pavement Drainage

Adequate drainage of the pavement granular materials and subgrade is important for the long term performance of the pavement at this site. In order to provide drainage of the granular subbase, it is suggested that catch basins be provided with perforated stub drains extending about 3 metres out from the catch basins in two directions parallel to the roadway. These drains should be installed at the bottom of the subbase layer. Where ditches are used, the bottom of the OPSS

Granular B Type I or II should be at least 0.3 metres above the bottom of the ditch and the granular material should extend to the ditch slopes.

4.5 Site Services

4.5.1 Excavation

4.5.1.1 Overburden Excavation

The overburden excavations for the site services will be carried out through topsoil, silty sand, silty clay and glacial till.

In the overburden, the excavation for flexible service pipes should be in accordance with Ontario Provincial Standard Drawing (OPSD) 802.010 for Type 3 Soil. The excavation for rigid service pipes should be in accordance with OPSD 802.031 for Type 3 soil.

The sides of the excavations within overburden soils should be sloped in accordance with the requirements in Ontario Regulation 213/91 under the Occupational Health and Safety Act. According to the Act, most of the soils at this site can be classified as Type 3 soils. Therefore, for design purposes, allowance should be made for 1 horizontal to 1 vertical, or flatter, excavation slopes. As an alternative or where space constraints dictate, the service installations could be carried out within a tightly fitting, braced steel trench box, which is specifically designed for this purpose.

4.5.1.2 Bedrock Excavation

In bedrock, the excavation for flexible service pipes should be in accordance with OPSD 802.013 for bedrock. The excavation for rigid service pipes should be in accordance with OPSD 802.033 for bedrock.

Localized removal of competent bedrock at this site could be carried out using (a) drill and blasting, (b) hoe ramming techniques possibly in conjunction with line drilling on close centres or (c) a combination of both. Provided that good bedrock excavation techniques are used, the competent bedrock could be excavated using vertical side walls.

Any blasting should be carried out under the supervision of a blasting specialist engineer. As a guideline for blasting, the suggested peak vibration limits at the nearest structure or service are provided in Table 5.2.

Table 5.2 Peak Vibration Limits

Frequency of Virbration (Hz)	Vibration Limits (millimetres/second)
<10	5
10 to 40	5 to 50 (interpolated)
>40	50

It is pointed out that these criteria, although conservative, were established to prevent damage to existing buildings and services in good condition; more stringent criteria may be required to prevent damage to freshly placed (uncured) concrete or vibration sensitive equipment or utilities. Monitoring of the blasting should be carried out to ensure that the blasting meets the limiting vibration criteria. Pre-construction condition surveys of nearby structures and existing buried services are considered essential. The effects due to vibration from blasting can be controlled by limiting the size and amount of charge, using delayed detonation techniques, and the like. To reduce the effects of vibration on nearby services, we suggest that the separation distance between any blasting and existing underground services be at least 3 metres. Any bedrock removal within these limits could be carried out using hoe ramming techniques in conjunction with line drilling on close centres. It is noted that the cost of bedrock removal generally increases the closer the bedrock removal is to any existing structures or services.

As an alternative to blasting, bedrock removal could be carried out using large hydraulic excavation equipment in combination with hoe ramming. Line drilling on close centres could be used to reduce, not prevent, over break and under break of the bedrock excavation and to define the limit of excavation next to existing structures and services. For the bedrock at this site, it is suggested that allowance be made for line drilling 75 to 100 millimetre diameter holes on 200 to 300 millimetre centres. The vibration effects of hoe ramming are usually minor and localized. Monitoring of the hoe ramming could be carried out, at least initially, to measure the vibrations to ensure that they are below the acceptable threshold value. Provided that good bedrock excavation techniques are used, the bedrock could be excavated using vertical side walls. Any loose rock should be scaled from the side of the excavation.

Depending on the depth of the proposed excavations, a Permit to Take Water (PTTW) may be required for the project in accordance with Ministry of the Environment requirements (MOE). The type of permit (i.e., Category 2 or 3) will depend on the depth of the excavations relative to the groundwater level, type of soil within the anticipated depth of excavation, and project duration. Issuance of the permit by the MOE usually takes about 90 business days.

4.5.2 Bedding and Cover

The bedding and cover for the proposed utilities should consist of OPSS Granular A backfill placed in accordance with the applicable Ontario Standard Drawings (OPSD) for the type of underground utility installed. The use of 19 millimetre clear stone is not recommended as bedding or cover.

Bedding and cover materials should be placed in lifts not exceeding 200 millimetres thick and compacted to at least 95 percent of standard Proctor density.

4.5.3 Trench Backfill

In areas where the service trench will be located below or in close proximity to existing or future areas of hard surfacing (i.e., access roadways and parking), acceptable native materials should be used as backfill between the roadway subgrade level and the depth of seasonal frost penetration in order to reduce the potential for differential frost heaving between the area over the trench and the adjacent hard surfaced area. The depth of frost penetration in exposed areas can normally be taken as 1.8 metres below finished grade. Where native backfill is used, it should match the native materials exposed on the trench walls. Backfill below the zone of seasonal frost penetration could consist of either acceptable native material or imported granular material conforming to OPSS Granular B Type I.

It is anticipated that most of the inorganic overburden materials encountered during the subsurface investigation will be acceptable for reuse as trench backfill. Any topsoil or organic soil from the trench should be wasted.

To minimize future settlement of the backfill and achieve an acceptable subgrade for the access roadways the trench backfill should be compacted in maximum 300 millimetre thick lifts to at least 95 percent of the material's standard Proctor maximum dry density. The specified density may be reduced to 90 percent of the material's standard Proctor dry density in areas where the trench backfill is not located below or in close proximity to existing or future roadways and parking areas, provided that some settlement above the trench is acceptable.

The lower portions of the silty clay deposits may have water contents that are too high for adequate compaction. Furthermore, depending on the weather conditions at the time of construction, some wetting of materials could occur. As such, the specified densities may not be possible to achieve and, as a consequence, some settlement of these backfill materials should be expected. We recommend final paving be deferred to allow for some settlement.

4.6 Corrosion of Buried Concrete and Steel

The measured sulphate concentration in samples of the groundwater obtained from test pit 1 is 27 milligrams per Litre. According to Canadian Standards Association (CSA) "Concrete Materials and Methods of Concrete Construction", the concentration of sulphate in the groundwater can be classified as low. Any concrete that will be in contact with the native soil or groundwater should

be batched with General Use (formerly known as Type 10 cement). The effects of freeze thaw in the presence of de-icing chemical (sodium chloride) use on the roadways should be considered in selecting the air entrainment and the concrete mix proportions for any concrete.

Based on the conductivity and pH of the groundwater recovered from test pit 1, the groundwater sampled can be classified as non-aggressive towards unprotected steel. The manufacturer of any buried steel elements that will be in contact with the groundwater should be consulted to determine the durability of the product used. It is noted that the corrosivity of the groundwater could vary throughout the year due to the application sodium chloride for de-icing.

5.0 ADDITIONAL CONSIDERATIONS

5.1 Construction Induced Vibration

Some of the construction operations (such as granular material compaction, overburden and bedrock excavation, etc.) will cause ground vibration on the site. The vibrations will attenuate with distance from the source but may be felt at nearby structures. It is suggested therefore that these construction operations be planned to avoid any adverse effects of such vibrations on freshly placed (uncured) concrete and on existing buildings.

Pre-construction surveys should be carried out on existing, nearby structures to assist with any damage related claims.

5.2 Winter Construction

In the event that construction is required during freezing temperatures, the soil below the footings should be protected immediately from freezing using straw, propane heaters and insulated tarpaulins, or other suitable means.

Any service trenches should be opened for as short a time as practicable and the excavations should be carried out only in lengths which allow all of the construction operations, including backfilling, to be fully completed in one working day. The materials on the sides of the trenches should not be allowed to freeze. In addition, the backfill should be excavated, stored and replaced without being disturbed by frost or contaminated by snow or ice.

Provision must be made to prevent freezing of any soil below the level of any existing structures or services. Freezing of the soil could result in heaving related damage to structures or services.

5.3 Excess Soil Management Plan

This report does not constitute an excess soil management plan. The disposal requirements for excess soil from the site have not been assessed.

5.4 Design Review and Construction Observation

The details for the proposed construction were not available to us at the time of preparation of this report. It is recommended that the design drawings be reviewed by the geotechnical engineer as the design progresses to ensure that the guidelines provided in this report have been interpreted as intended.

The subgrade surfaces for the proposed structures, utilities and roadways should be inspected by experienced geotechnical personnel to ensure that suitable materials have been reached and properly prepared. The placing and compaction of earth fill and imported granular materials should be inspected to ensure that the materials used conform to the grading and compaction specifications.

6.0 CLOSURE

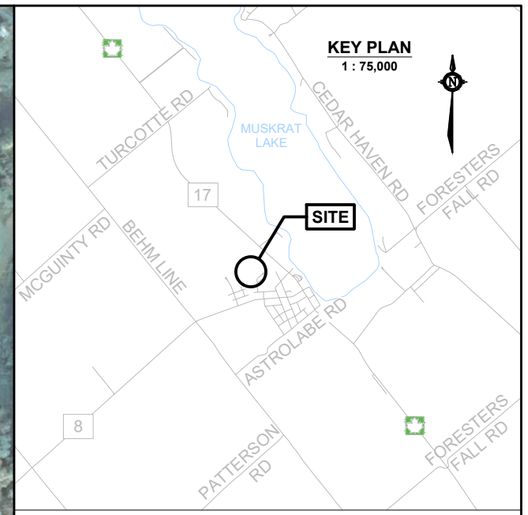
We trust this report provides sufficient information for your present purposes. If you have any questions concerning this report, please do not hesitate to contact our office.

Alex Meacoe, P.Eng.
Senior Geotechnical Engineer



Bill Cavers, P.Eng.
Senior Geotechnical Engineer





LEGEND

TP # ← TEST PIT ID

APPROXIMATE TEST PIT LOCATION (GEMTEC, 2014)

APPROXIMATE SITE BOUNDARY

PHASE 3 BOUNDARY

GENERAL NOTE(S)

1. Coordinate system: NAD83, UTM ZONE 18N.

SCALE 1:3000

0 100 200m

DRAWING

SITE PLAN

CLIENT

BONNECHERE EXCAVATING INC.

PROJECT

PROPOSED DEVELOPMENT
WREN SUBDIVISION
PHASE 3
COBDEN, ONTARIO

DRAWN BY	CHECKED BY
S.L.	W.A.M.
PROJECT NO.	REVISION NO.
62658.03	0
DATE	FIGURE NO.
DECEMBER 2022	**FIGURE 1**

GEMTEC
Consulting Engineers and Scientists
32 Steacie Drive
Ottawa, ON, K2K 2A9
Tel: (613) 836-1422
www.gemtec.ca
ottawa@gemtec.ca

N:\PROJECTS\62600\62658.03\DRAFTING\1. DRAWINGS\62658.03_SP_R0_2022-12.DWG

APPENDIX A

Record of Test Pit Sheets
List of Abbreviations and Symbols
Test Pits 2 to 13

ABBREVIATIONS AND TERMINOLOGY USED ON RECORDS OF BOREHOLES AND TEST PITS

SAMPLE TYPES	
AS	Auger sample
CA	Casing sample
CS	Chunk sample
BS	Borros piston sample
GS	Grab sample
MS	Manual sample
RC	Rock core
SS	Split spoon sampler
ST	Slotted tube
TO	Thin-walled open shelby tube
TP	Thin-walled piston shelby tube
WS	Wash sample

SOIL TESTS	
w	Water content
PL, w_p	Plastic limit
LL, w_L	Liquid limit
C	Consolidation (oedometer) test
D_R	Relative density
DS	Direct shear test
G_S	Specific gravity
M	Sieve analysis for particle size
MH	Combined sieve and hydrometer (H) analysis
MPC	Modified Proctor compaction test
SPC	Standard Proctor compaction test
OC	Organic content test
UC	Unconfined compression test
γ	Unit weight

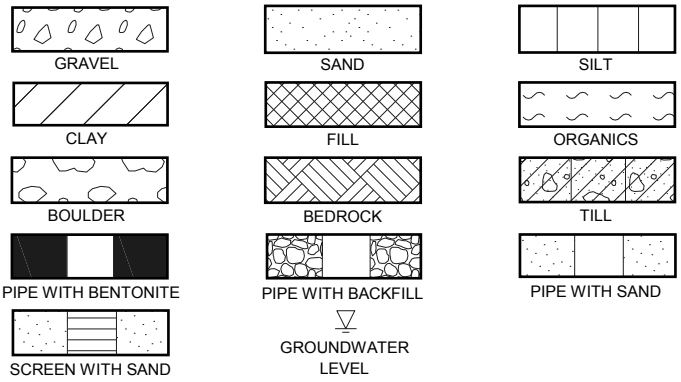
PENETRATION RESISTANCE

Standard Penetration Resistance, N
The number of blows by a 63.5 kg (140 lb) hammer dropped 760 millimetres (30 in.) required to drive a 50 mm split spoon sampler for a distance of 300 mm (12 in.). For split spoon samples where less than 300 mm of penetration was achieved, the number of blows is reported over the sampler penetration in mm.

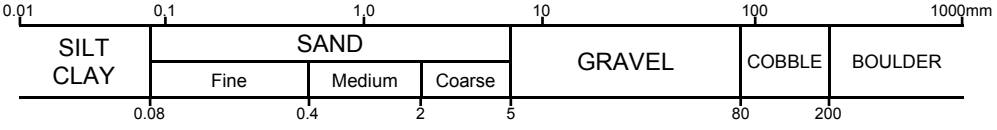
Dynamic Penetration Resistance
The number of blows by a 63.5 kg (140 lb) hammer dropped 760 mm (30 in.) to drive a 50 mm (2 in.) diameter 60° cone attached to 'A' size drill rods for a distance of 300 mm (12 in.).

WH	Sampler advanced by static weight of hammer and drill rods
WR	Sampler advanced by static weight of drill rods
PH	Sampler advanced by hydraulic pressure from drill rig
PM	Sampler advanced by manual pressure

COHESIONLESS SOIL Compactness		COHESIVE SOIL Consistency	
SPT N-Values	**Description**	**Cu, kPa**	**Description**
0-4	Very Loose	0-12	Very Soft
4-10	Loose	12-25	Soft
10-30	Compact	25-50	Firm
30-50	Dense	50-100	Stiff
>50	Very Dense	100-200	Very Stiff
		>200	Hard

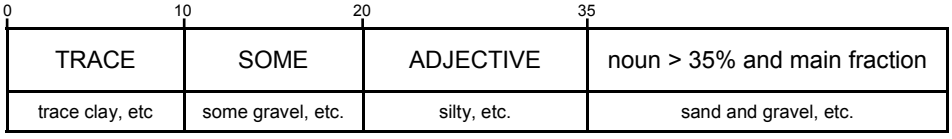


GRAIN SIZE



DESCRIPTIVE TERMINOLOGY

(Based on the CANFEM 4th Edition)



PROJECT: 14-327

RECORD OF TEST PIT 2

SHEET 1 OF 1

LOCATION: See Test Pit Location Plan, Figure 2

DATUM: Geodetic

DATE OF EXCAVATION: August 14, 2014

TYPE OF EXCAVATOR: CAT 330C

DEPTH SCALE METRES	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLE NUMBER	SHEAR STRENGTH, Cu (kPa) Natural. V - + Remoulded. V - ⊕ (20 40 60 80)	WATER CONTENT (PERCENT) Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION
0	Ground Surface		147.13					Native Backfill
	Dark brown silty clay, trace organic material (TOPSOIL)		146.88	1				
			0.25	2				
1	Very stiff, grey brown SILTY CLAY (Weathered Crust)							
				3				
2								
3			143.93					
	Grey brown silty sand, some gravel, cobbles, and boulders, trace clay (GLACIAL TILL)		3.20	4				
			143.47					
4	End of Test Pit		3.66					
	Notes:							
	- Groundwater inflow observed at about 3.3 metres below ground surface							
5								
6								

DEPTH SCALE

1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

RECORD OF TEST PIT 3

PROJECT: 14-327

LOCATION: See Test Pit Location Plan, Figure 2

DATE OF EXCAVATION: August 14, 2014

SHEET 1 OF 1

DATUM: Geodetic

TYPE OF EXCAVATOR: CAT 330C

DEPTH SCALE METRES	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE NUMBER	SHEAR STRENGTH, Cu (kPa) — Natural. V - +, Remoulded. V - ⊕ (20, 40, 60, 80)	WATER CONTENT (PERCENT) — Wp, W, Wl (20, 40, 60, 80)	ADDITIONAL LAB. TESTING	WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION
0	Ground Surface		147.30					Native Backfill
	Dark brown silty clay, trace organic material (TOPSOIL)		147.07 / 0.23	1				
	Very stiff, grey brown SILTY CLAY (Weathered Crust)			2				
1				3				
2								
3			143.82 / 3.48	4				
	Firm, grey SILTY CLAY		143.64 / 3.66	5				
4	Grey silty sand, some gravel, cobbles and boulders, trace to some clay (GLACIAL TILL)							
			142.60 / 4.70					
5	End of Test Pit Notes: - Groundwater inflow observed at about 3.2 metres below ground surface							
6								

DEPTH SCALE

1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

RECORD OF TEST PIT 4

PROJECT: 14-327

SHEET 1 OF 1

LOCATION: See Test Pit Location Plan, Figure 2

DATUM: Geodetic

DATE OF EXCAVATION: August 14, 2014

TYPE OF EXCAVATOR: CAT 330C

DEPTH SCALE METRES	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLE NUMBER	SHEAR STRENGTH, Cu (kPa) (Natural. V - +, Remoulded. V - ⊕) 20 40 60 80	WATER CONTENT (PERCENT) Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION
0	Ground Surface		147.15					Native Backfill
	Dark brown silty clay, trace organic material (TOPSOIL)		146.92	1				
	Very stiff, grey brown SILTY CLAY (Weathered Crust)		0.23	2				
1								
				3				
2			144.81					
	Grey brown silty sand, some gravel, cobbles, and boulders (GLACIAL TILL)		2.34	4				
3								
			143.49					
	End of Test Pit		3.66					
	Notes:							
4	- Groundwater inflow observed at about 2.7 metres below ground surface							
5								
6								

DEPTH SCALE

1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

RECORD OF TEST PIT 5

PROJECT: 14-327

LOCATION: See Test Pit Location Plan, Figure 2

DATE OF EXCAVATION: August 14, 2014

SHEET 1 OF 1

DATUM: Geodetic

TYPE OF EXCAVATOR: CAT 330C

DEPTH SCALE METRES	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLE NUMBER	SHEAR STRENGTH, Cu (kPa) (Natural. V - +, Remoulded. V - ⊕) 20 40 60 80	WATER CONTENT (PERCENT) Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION
0	Ground Surface		147.42					Native Backfill
	Dark brown silty sand, trace organic material (TOPSOIL)		147.17	1				
	Practical Excavator Refusal on Inferred Bedrock End of Test Pit		0.25					
	Notes: - No groundwater observed upon completion of test pit							
1								
2								
3								
4								
5								
6								

DEPTH SCALE

1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

PROJECT: 14-327

RECORD OF TEST PIT 6

SHEET 1 OF 1

LOCATION: See Test Pit Location Plan, Figure 2

DATUM: Geodetic

DATE OF EXCAVATION: August 14, 2014

TYPE OF EXCAVATOR: CAT 330C

DEPTH SCALE METRES	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLE NUMBER	SHEAR STRENGTH, Cu (kPa) Natural. V - + Remoulded. V - ⊕ (20 40 60 80)	WATER CONTENT (PERCENT) Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION
0	Ground Surface		146.18					Native Backfill
	Dark brown silty sand, trace organic material (TOPSOIL)		145.98	1				
	Brown, SILTY SAND, some gravel		0.20	2			Sieve (see Fig. A1)	
			145.57					
1	Grey brown silty sand, some gravel, cobbles and boulders (GLACIAL TILL)		0.61	3				
			144.96					
	Possible Weathered Bedrock		1.22	4				
			144.60					
	Practical Excavator Refusal on Inferred Bedrock		1.58					
	End of Test Pit							
2	Notes:							
	- No groundwater inflow observed upon completion of test pit							
3								
4								
5								
6								

DEPTH SCALE

1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

RECORD OF TEST PIT 7

PROJECT: 14-327

LOCATION: See Test Pit Location Plan, Figure 2

DATE OF EXCAVATION: August 14, 2014

SHEET 1 OF 1

DATUM: Geodetic

TYPE OF EXCAVATOR: CAT 330C

DEPTH SCALE METRES	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLE NUMBER	SHEAR STRENGTH, Cu (kPa) — Natural. V - +, Remoulded. V - ⊕ (20 40 60 80)	WATER CONTENT (PERCENT) — Wp, W, Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION
0	Ground Surface		144.56					Native Backfill
	Dark brown silty clay, trace organic material (TOPSOIL)		144.33					
			0.23					
1	Very stiff, grey brown SILTY CLAY (Weathered Crust)							
2								
			141.99					
			2.57					
3	Grey brown silty sand, some gravel, cobbles, and boulders, trace clay (GLACIAL TILL)							
			140.85					
			3.71					
4	End of Test Pit Notes: - Groundwater inflow observed at about 2.5 metres below ground surface - Possible bedrock at about 3.7 metres below ground surface							
5								
6								

DEPTH SCALE

1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

RECORD OF TEST PIT 8

PROJECT: 14-327

LOCATION: See Test Pit Location Plan, Figure 2

DATE OF EXCAVATION: August 14, 2014

SHEET 1 OF 1

DATUM: Geodetic

TYPE OF EXCAVATOR: CAT 330C

DEPTH SCALE METRES	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLE NUMBER	SHEAR STRENGTH, Cu (kPa) (Natural. V - +, Remoulded. V - ⊕) 20 40 60 80	WATER CONTENT (PERCENT) Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION
0	Ground Surface		144.12					Native Backfill
	Dark brown silty clay, trace organic material (TOPSOIL)		143.89					
			0.23					
1	Very stiff, grey brown SILTY CLAY (Weathered Crust)							
2								
3								
4			139.80					25mm diameter, 1.52m long slotted PVC pipe
			4.32					
	Firm, Grey SILTY CLAY			1				
			139.24					
5	End of Test Pit		4.88					Water level in standpipe at about 1.6 metres below ground surface (elevation 142.5 metres geodetic) on August 21, 2014.
	Notes:							
	- Groundwater inflow observed at about 4.6 metres below ground surface							
6								

DEPTH SCALE

1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

RECORD OF TEST PIT 9

PROJECT: 14-327

SHEET 1 OF 1

LOCATION: See Test Pit Location Plan, Figure 2

DATUM: Geodetic

DATE OF EXCAVATION: August 14, 2014

TYPE OF EXCAVATOR: CAT 330C

DEPTH SCALE METRES	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLE NUMBER	SHEAR STRENGTH, Cu (kPa) Natural. V - + Remoulded. V - ⊕ (20 40 60 80)	WATER CONTENT (PERCENT) Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION
0	Ground Surface		145.37					Native Backfill
	Dark brown silty clay, trace organic material (TOPSOIL)		145.12	1				
	Very stiff, grey brown SILTY CLAY (Weathered Crust)		0.25 144.86	2				
	Grey brown silty sand, some gravel, cobbles, and boulders (GLACIAL TILL)		0.51 144.61	3				
1	Practical Excavator Refusal on Inferred Bedrock End of Test Pit		0.76					
	Notes: - No groundwater inflow observed upon completion of test pit							
2								
3								
4								
5								
6								

DEPTH SCALE

1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

PROJECT: 14-327

RECORD OF TEST PIT 10

SHEET 1 OF 1

LOCATION: See Test Pit Location Plan, Figure 2

DATUM: Geodetic

DATE OF EXCAVATION: August 14, 2014

TYPE OF EXCAVATOR: CAT 330C

DEPTH SCALE METRES	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE NUMBER	SHEAR STRENGTH, Cu (kPa) — Natural. V - +, Remoulded. V - ⊕ (20 40 60 80)	WATER CONTENT (PERCENT) — Wp, W, Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION
0	Ground Surface		148.22					Native Backfill
	Dark brown silty sand, trace organic material (TOPSOIL)		147.91 / 0.31	1				
	Very stiff, grey brown SILTY CLAY (Weathered Crust)		147.41 / 0.81	2				
1	Grey brown silty sand, some gravel, cobbles and boulders (GLACIAL TILL)		146.52 / 1.70	3				
	Practical Excavator Refusal on Inferred Bedrock End of Test Pit							
2	Notes - No groundwater inflow observed upon completion of test pit							
3								
4								
5								
6								

DEPTH SCALE

1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

PROJECT: 14-327

RECORD OF TEST PIT 11

SHEET 1 OF 1

LOCATION: See Test Pit Location Plan, Figure 2

DATUM: Geodetic

DATE OF EXCAVATION: August 14, 2014

TYPE OF EXCAVATOR: CAT 330C

DEPTH SCALE METRES	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE NUMBER	SHEAR STRENGTH, Cu (kPa) — Natural. V - ; Remoulded. V - ⊕ (20 40 60 80)	WATER CONTENT (PERCENT) — Wp, W, Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION
0	Ground Surface		145.44					Native Backfill
	Dark brown silty clay, trace organic material (TOPSOIL)		145.39 / 0.05	1				
	Very stiff, grey brown SILTY CLAY (Weathered Crust)			2				
1								
				3				25mm diameter, 1.52m long slotted PVC pipe
2								
3			142.29 / 3.15					
	Grey silty sand, trace to some clay, some gravel, cobbles, and boulders (GLACIAL TILL)			4				
			141.65 / 3.79					
4	End of Test Pit							Water level in standpipe at about 2.1 metres below ground surface (elevation 143.3 metres geodetic) on August 21, 2014.
	Notes:							
	- Groundwater inflow noted at 3.3 metres below ground surface							
5								
6								

DEPTH SCALE

1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

RECORD OF TEST PIT 12

PROJECT: 14-327

SHEET 1 OF 1

LOCATION: See Test Pit Location Plan, Figure 2

DATUM: Geodetic

DATE OF EXCAVATION: August 14, 2014

TYPE OF EXCAVATOR: CAT 330C

DEPTH SCALE METRES	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE NUMBER	SHEAR STRENGTH, Cu (kPa) (Natural. V - +, Remoulded. V - ⊕) 20 40 60 80	WATER CONTENT (PERCENT) Wp — W — Wl 20 40 60 80	ADDITIONAL LAB. TESTING	WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION
0	Ground Surface		149.05					Native Backfill
	Dark brown silty sand, trace organic material (TOPSOIL)		148.85	1			Sieve (See Fig. A1)	
	Brown, SILTY SAND, trace gravel		0.20 / 148.57	2				
1	Very stiff, grey brown SILTY CLAY (Weathered Crust)		0.48 / 147.98	3				
	Grey brown silty sand, some gravel, cobbles and boulders (GLACIAL TILL)		1.07 / 147.75	4				
2	Practical Excavator Refusal on Inferred Bedrock End of Test Pit		1.30					
	Notes: - No groundwater inflow observed upon completion of test pit							
3								
4								
5								
6								

DEPTH SCALE

1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

RECORD OF TEST PIT 13

PROJECT: 14-327

LOCATION: See Test Pit Location Plan, Figure 2

DATE OF EXCAVATION: August 14, 2014

SHEET 1 OF 1

DATUM: Geodetic

TYPE OF EXCAVATOR: CAT 330C

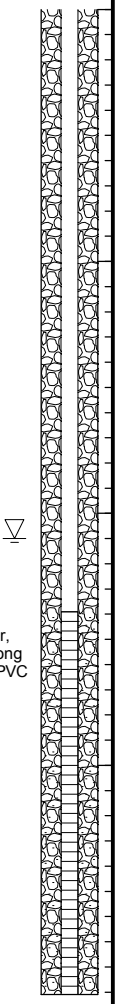
DEPTH SCALE METRES	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLE NUMBER
0	Ground Surface		144.12	
	Dark brown silty sand, trace organic material (TOPSOIL)		144.02 0.10	1
	Very stiff, grey brown SILTY CLAY (Weathered Crust)			2
1				3
				4
2				
3			140.84 3.28	
	Grey brown silty sand, trace clay, some gravel, cobbles, and boulders (GLACIAL TILL)			
4			140.21 3.91	
	End of Test Pit Notes: - Groundwater inflow observed at about 3.3 metres below ground surface - Possible bedrock at about 3.9 metres below ground surface			
5				
6				

SHEAR STRENGTH, Cu (kPa)
Natural. V - +
Remoulded. V - ⊕
20 40 60 80

WATER CONTENT (PERCENT)
Wp W Wl
20 40 60 80

ADDITIONAL LAB. TESTING

WATER LEVEL IN OPEN TEST PIT OR STANDPIPE INSTALLATION



Water level in standpipe at about 2.2 metres below ground surface (elevation 141.9 metres geodetic) on August 21, 2014.

DEPTH SCALE
1 to 30

Houle Chevrier Engineering

LOGGED: A.N.

CHECKED:

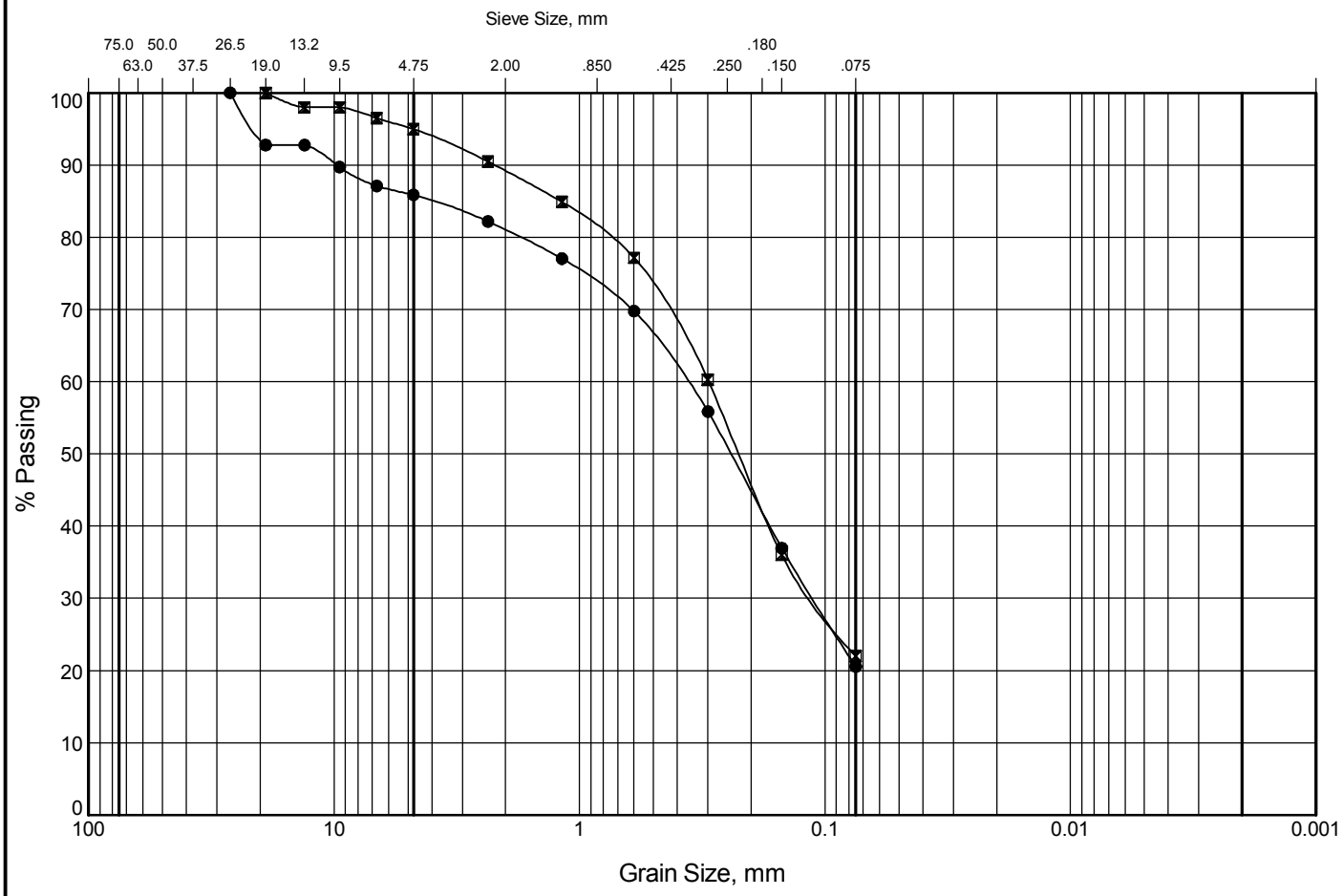
TESTPIT RECORD 2012 14-327 TEST PIT LOGS AUGUST 2014.GPJ HCE DATA TEMPLATE.GDT 9-29-14

APPENDIX B

Laboratory Test Results
Grain Size Distribution Testing

GRAIN SIZE DISTRIBUTION

FIGURE A1



COBBLES	COARSE	FINE	COARSE	MEDIUM	FINE	SILT OR CLAY
	GRAVEL		SAND			
Unified Soil Classification System						

Test pit	Sample	Depth (m)	Legend
6	2	0.2 - 0.5	●
12	2	0.2 - 0.5	⊠

Houle Chevrier Engineering

Date: October 2014

Project: 14-327

SOILS GRAIN SIZE GRAPH - UNIFIED 14-327 TEST PIT LOGS AUGUST 2014.GPJ HOULE CHEVRIER FEB 9 2011.GDT 14/10/7

APPENDIX C

Chemical Analysis of Soil Samples
Sample Relating to Corrosion
(Paracel Laboratories Ltd. Order No. 1434268)

PARACEL LABORATORIES LTD.

Order #: 1434268

Certificate of Analysis

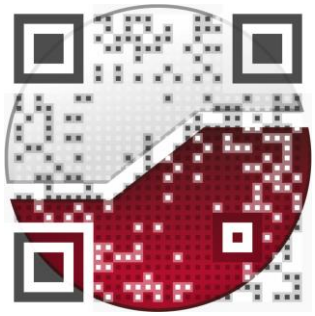
Report Date: 27-Aug-2014
Order Date:21-Aug-2014

Client: **Houle Chevrier**
Client PO:

Project Description: 14-327

	Client ID:	TP1	-	-	-
	Sample Date:	21-Aug-14	-	-	-
	Sample ID:	1434268-01	-	-	-
	MDL/Units	Water	-	-	-
General Inorganics					
Conductivity	5 uS/cm	506	-	-	-
Hardness	1.0 mg/L	267	-	-	-
pH	0.1 pH Units	7.5	-	-	-
Anions					
Chloride	1 mg/L	5	-	-	-
Sulphate	1 mg/L	27	-	-	-

experience • knowledge • integrity



civil	civil
geotechnical	géotechnique
environmental	environnement
structural	structures
field services	surveillance de chantier
materials testing	service de laboratoire des matériaux

expérience • connaissance • intégrité

Appendix B2

Gemtec Response to Comments

GEMTEC
Consulting Engineers and Scientists

GEMTEC Consulting Engineers and Scientists Limited
32 Steacie Drive
Ottawa, ON, Canada
K2K 2A9
613.836.1422
ottawa@gemtec.ca
www.gemtec.ca

May 12, 2025

File: 100220.030

J.L. Richards
1000-343 Preston Street
Ottawa, Ontario
K1S 1N4

Attention: Evan Way, P.Eng.

Re: Response to Comments - Wren Subdivision Phase 3 and 4
Wren Drive
Cobden, Ontario

This letter presents GEMTEC's response to comments raised by Jp2g relating to potential for groundwater impacts on the proposed buildings to be constructed in Phase 3 and 4 of the Wren Subdivision in Cobden, Ontario.

BACKGROUND

GEMTEC carried out a geotechnical investigation for the above noted subdivision in 2014. The findings of that investigation and geotechnical guidelines for the current phases of the subdivision were presented in a geotechnical investigation report titled "Geotechnical Investigation, Proposed Wren Subdivision – Phase 3, Wren Drive, Cobden, Ontario". The report was prepared for Bonnechere Excavating Inc. and is dated December 2022. This report is referred to further herein as GEMTEC (2022).

Jp2g, acting on behalf of the Township has provided commentary on GEMTEC (2022), which is the subject of this letter.

SUMMARY OF EXISTING INFORMATION AND CONDITIONS

Summary of GEMTEC (2022)

GEMTEC (2022) refers to 13 test pits which were advanced at the site in 2014 for an initial phase of the subsurface investigation. Four of these test pits are located in the Phase 3 area and a further 6 are located within 50 metres of the Phase 3 area and so are considered relevant. 2 test pits were located within the Phase 4 area. The test pits encountered topsoil underlain by deposits of weathered silty clay, over glacial till, over bedrock. The depth of the test pits ranged from about 0.3 to about 4.8 metres. A summary of the groundwater observations / measurements from each of the test pits is provided in Table 1, along with basic information on the subsurface conditions. The information on groundwater levels were obtained in August 2014. Shallow refusal (i.e. within

about 1.8 metres of depth of excavation) was encountered in test pits TP14-5, TP14-6, TP-9. TP-10 and TP-12, as indicated on the table by the letter (R).

Table 1 – Summary of Subsurface Conditions

Test Pit ID / Final Depth	Surface Elevation	Location	Groundwater Level	
			Observed	Measured
TP14-2 / 3.7 m	147.1 m	< 50 m from Ph. 3	Inflow at 3.3 m from Glacial Till (elev. 143.3 m)	~
TP14-3 / 4.7 m	147.3 m	Within Ph. 3	Inflow at 3.2 m from Glacial Till (elev. 144.1 m)	~
TP14-4 / 3.7 m	147.2 m	Within Ph. 3	Inflow at 2.7 m from Glacial Till (elev. 144.5)	~
TP14-5 / 0.3 m (R)	147.4 m	Within Ph. 4	Dry / No observed inflow.	~
TP14-6 / 1.6 m (R)	146.2 m	Within Ph. 4	Dry / No observed inflow.	~
TP14-7 / 3.7 m (R)	144.6 m	Within Ph. 3	Inflow at 2.5 m from Silty Clay / Glacial Till (elev. 142.1)	~
TP14-8 / 4.8 m	144.1 m	< 50 m from Ph. 3	Inflow at 4.6 m from Silty Clay (elev. 139.5 m)	1.6 m (elev. 142.5 m)
TP14-9 / 0.8 m (R)	145.4 m	< 50 m from Ph. 3	Dry / No observed inflow.	~
TP14-10 / 1.7 m (R)	148.2 m	Within Ph. 3	Dry / No observed inflow.	~
TP14-11 / 3.8 m	145.4 m	< 50 m from Ph. 3	Inflow at 3.3 m from Glacial Till (elev. 142.1 m)	2.1 m (elev. 143.3 m)
TP14-12 / 1.3 m (R)	149.1 m	< 50 m from Ph. 3	Dry / No observed inflow.	~
TP14-13 / 3.9 m (R)	144.1 m	< 50 m from Ph. 3	Inflow at 3.3 m from Glacial Till (elev. 140.8)	2.2 m (elev. 141.9 m)

Overview of Site and Surrounding Conditions

JL Richards has prepared a series of grading and drainage plans for Phases 3 and 4 of the subdivision. J.L. Richards has also prepared a sketch with a possible interpretation of the bedrock level (based on the refusal levels encountered in the test pits). The following is noted from these drawings and sketches, in combination with publicly available information on ground levels in the area;

- The overall land topography in the area in which the Wren Subdivision is located is sloping from west to east dropping down to the Muskat River. The water level in the Muskat, located to the east of the Subdivision, is significantly below the ground level in the subdivision (by 20 metres or greater);
- A stormwater management pond has been constructed on the northwest side of the subdivision. The top of the pond wall near the western inlet is at about 144.2 m elevation. The base of the low water drainage channel in the pond at this location is at about 143.7 metres elevation. The pond drains to the north and out of the subdivision. The northern end of the pond is a dry pond. Its base level is at about 143.7 to 143.3 metres elevation. The pond outlet level is at about 143.1 metres elevation;
- Within Phase 3 USF levels are proposed from between about 144.3 to 146.6 metres elevation. Lower USF are planned on lots closer to the pond boundary in general but above the level of the base of the pond;
- Within Phase 4 USF levels are proposed from 144.2 to 145.2 metres elevation. Lower USF are planned on lots closer to the pond boundary in general but above the level of the base of the pond;
- Houses along Bamagillia Street in the adjacent phase of the development have been constructed with USF elevations of 144.5 to 146.0;
- The sketch of bedrock levels identifies a potential for bedrock excavation for many of the lots located within the central portion of Phase 3. The map points towards a general trend of higher / shallower bedrock within this area of the site, and no consistent bedrock level throughout. However, it is important to note the quantum of data available to develop the map and the bias that contour plots can show to clusters of data, and therefore it should be used with caution.

SUMMARY OF COMMENTARY BY JP2G ON GEMTEC (2022) AND GEMTEC RESPONSE

Jp2g Commentary

The comment from Jp2g is reproduced below for reference (with some minor rewording and numbering for clarity / context).

The township and Jp2g are concerned over the issue of groundwater and its impact on the buildings both during construction and long term. None of the test pits located within the lots for

Phase 3/4 had well screens installed in them so there is no information on groundwater levels for the lots in these phases. A significant number of houses will have basements within the bedrock, if full depth basements are used. Sumps with a drainage outlet to a ditch could be prone to freezing in the winter months and individuals may connect the sump drains to the sanitary lines. Jp2g recommends that alternative house styles be considered for specific lots with either slab on grade or shallow basements being adopted (to avoid the possibility of foundations being installed below the groundwater level).

GEMTEC Response

For clarity, and to comprehensively respond to Jp2g / the township, GEMTEC has addressed each component of the comment individually below.

1. *The township and Jp2g are concerned over the issue of groundwater and its impact on the buildings both during construction and long term.*

GEMTEC notes the concern raised on this matter. GEMTEC agrees that groundwater management will be required by the contractor during construction, however this should be manageable. Houses within previous phases of the development have been constructed with USF at similar levels to those proposed in Phase 3 and 4 and below the groundwater level. Test pit TP12 encountered a relatively shallow refusal level (147.8 m elevation) and the foundation USF of the adjacent Lots 23 and 15 from Phase 2 was at about 146.2 m elevation. Available aerial imagery of open excavations along Bamagillia Street show groundwater within the excavations.

As noted in GEMTEC (2022) – based on observations during the construction of Phase 1 and 2 groundwater inflow to excavations should be expected. GEMTEC does not expect short term pumping during excavation to have any significant effect on nearby structures and services. Notwithstanding, during construction groundwater management is the responsibility of the contractor.

Observed and measured groundwater levels from GEMTEC (2022) were above the outlet level of the drainage ponds. However, in the longer term, groundwater level lowering should it occur, is not anticipated to have a significant impact on the subsurface units at this site, given the already weathered condition of the silty clay soils, and as glacial till and bedrock are not prone to significant volume change as a result of reduction in moisture content.

2. *None of the test pits located within the lots for Phase 3/4 had well screens installed in them so there is no information on groundwater levels for the lots in these phases.*

Two of the standpipe piezometers are within adequate distance of the Phases 3 and 4 to be of relevance. Also, observations of groundwater conditions were made in each of the test pits. Notwithstanding, this information can be supplemented with observations from construction of

previous phases for the houses and the stormwater management pond (which if unlined will provide a clear indication of the groundwater level in the vicinity of the pond).

In GEMTEC's opinion there is a low risk of the relatively isolated shallow bedrock in the central portion of Phase 3 having connectivity to a significant body of water. Groundwater therein would likely drain to the lower surrounding areas and the groundwater level in the shallow rock is likely consistent with the groundwater level in the surrounding soils. There may be a potential for groundwater to accumulate in zones of lower transmissivity and in bowls or poorly drained areas but dewatering during construction will result in drainage and and ongoing recharge of this rock would be reduced by the development of the subdivision.

3. *A significant number of houses will have basements within the bedrock, if full depth basements are used. Sumps with a drainage outlet to a ditch could be prone to freezing in the winter months and individuals may connect the sump drains to the sanitary lines.*

GEMTEC agrees that houses with basements constructed partially below the bedrock level are likely, particularly in the central portion of Phase 3, and also that poorly constructed or inadequately protected sump drainage lines may not perform as intended. However, the drainage lines can be designed to mitigate these risks.

4. *Jp2g recommends that alternative house styles be considered for specific lots with either slab on grade or shallow basements being adopted (to avoid the possibility of foundations being installed below the groundwater level).*

Based on the water level observations available from GEMTEC (2022) the USF levels are above the measured water level at least for a portion of the year within parts of the site. The selection of the style of house to be constructed is not a geotechnical consideration but it is GEMTEC's opinion that construction of the proposed style of house, i.e. with a full depth basement level with foundations below the seasonal high water level, is feasible for the site conditions. Homes are routinely constructed, when designed with adequate surface and foundation drainage and sump pumps, in these types of conditions.

CLOSURE

We trust that this letter is sufficient for your purposes. If you have any questions or require additional information, please call.





Andrius Paznekas, P.Geo..
Hydrogeologist

William (Bill) Cavers, P.Eng.
Principal Geotechnical Engineer

DC/WC/AP

Enclosures
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ATTACHMENTS

None

Appendix B3

Geotechnical/Hydrogeological Review Stormwater Management

Houle Chevrier Engineering Ltd.
32 Steacie Drive
Ottawa, Ontario
K2K 2A9

tel: 613.836.1422
fax: 613.836.9731
info@hceng.ca
www.hceng.ca

J.L. Richards & Associates Limited
864 Lady Ellen Place
Ottawa, Ontario
K1Z 5M2

September 28, 2015
Project: 62463.58

Attention: Mr. Terry O'Brien, C.E.T., CPT

Re: Geotechnical/Hydrogeological Review
Stormwater Management
Wren Subdivision
Cobden, Ontario

INTRODUCTION

This letter provides our comments on the proposed roadside swale and perforated pipe system being proposed as part of the stormwater management plan for the build out of the Wren Subdivision in Cobden, Ontario.

BACKGROUND

It is understood that concerns have been raised by the Township of Whitewater Region's engineering consultant (Jp2g Consultants Inc.) regarding the use of roadside swales and perforated pipes as part of the stormwater management plan, prepared by J.L. Richards & Associates Limited for the Wren Subdivision. We were provided with a copy of a letter from Jp2g Consultants Inc. dated September 3, 2015, which indicates concerns that the resulting groundwater infiltration "will not aid in the current situation with the sump pumps running within the houses in Phase 1"(Comment No. 3 in September 3, 2015 letter).

Houle Chevrier Engineering Ltd. carried out the geotechnical investigation for the Wren Subdivision. The results of that investigation are provided in our report dated October 7, 2014. As part of that investigation thirteen (13) test pits were advanced across Phases 2, 3 and 4 of the subdivision.

The following summarizes the subsurface conditions at the locations of the test pits advanced within Phases 2 to 4 of the subdivision:

- The majority of the site is underlain by native deposits of weathered, grey brown silty clay, underlain by glacial till. Where encountered, the silty clay deposits extend to depths ranging from 1.3 to greater than 4 metres below ground surface.
- At the location of test pit 14-5, shallow bedrock was encountered at about 0.6 metres below ground surface.
- No silty clay was encountered at the location of test pit 14-6. At this location, weathered bedrock was encountered below a deposit of glacial till at about 1.2 metres below ground surface.
- At the location of test pit 14-12 a thin (0.3 metre thick) layer of silty sand was encountered between the topsoil and the silty clay.

DISCUSSION

The following comments are provided based on the above information and our review of the "Typical Roadside Ditch Section" provided to us by J.L. Richards & Associates Limited. It is noted that the section provided to us includes the catch basin and catch basin sump details. It is understood that, for the typical section, the perforated pipe will be underlain by only 50 millimetres of clear stone (i.e. no sump below pipe).

- Based on the results of the test pits, the perforated pipe and surround of 50 millimetre diameter, clear stone will be within or above the native deposits of silty clay across the majority of the site. In some areas the pipe and clear stone will be within or above the glacial till deposits, and in isolated areas the pipe and clear stone may be within or above the shallow bedrock.

- The silty clay has an estimated hydraulic conductivity in the order of 10^{-6} centimetres per second. The glacial till deposits have an estimated hydraulic conductivity in the range of 10^{-4} to 10^{-5} centimetres per second.

Based on the above information, in our opinion, the proposed use of roadside swales and perforated pipes will not negatively impact the existing groundwater/surface water issues in Phase 1 of the development.

The following provides our rationale for this opinion:

- Storm runoff collected by the proposed drainage system will be conveyed through positive drainage to the stormwater management area. Based on the hydraulic conductivity of the native deposits of silty clay and glacial till across much of the site, the

path of least resistance for stormwater will be the drainage system, rather than exfiltration into the native deposits.

- Currently, stormwater is not controlled across the undeveloped portions of the subdivision (Phases 2 to 4). The proposed drainage system will intercept a significant amount of overland flow and direct it to the stormwater management area. Furthermore, the post-development conditions will include impervious areas such as roofs and driveways. Stormwater from these impervious areas will be directed to the drainage system through engineered lot grading and proper use of roof leaders.

- During periods of elevated groundwater (e.g. following the spring thaw, or during wet fall months) the proposed drainage system could allow for flow of groundwater to the controlled stormwater management area.

It is considered that, based on the above rationale, the proposed drainage system will not negatively impact the current groundwater/surface water problems in Phase 1 of the subdivision.

ADDITIONAL CONSIDERATIONS

Based on the plans provided to us, the proposed roadside swales and perforated pipes will be hydraulically connected to the granular roadway subbase material. In our opinion this will result in suitable drainage of the pavement structure, as recommended in our geotechnical report.

The granular bedding in the lateral service trenches to individual houses could act as “French Drains”. As such, the installation of seepage barriers could be considered in areas where there are concerns with storm runoff from the drainage system migrating towards houses. The seepage barriers should begin within the native deposits and extend vertically through the granular pipe bedding and granular surround to within the native backfill materials, and horizontally across the full width of the lateral service trenches. The seepage barriers could consist of 1.0 metre wide dykes of compacted weathered silty clay. The weathered silty clay should be compacted in maximum 300 millimetre thick lifts to at least 95 percent of the standard Proctor dry density value.

We trust this letter provides the necessary information for your purposes. Please do not hesitate to contact us should you have any questions.



Brent Wiebe, P.Eng.
Senior Geotechnical Engineer

Serge Bourque, M.Sc.E., P.Eng.
Principal, Operations Manager

Appendix C

Existing Documentation and Correspondence

Content Copy Of Original

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 1864-ALXRS6
Issue Date: September 5, 2017

Bonnechere Excavating Inc.
1 Innovation Drive
Renfrew, Ontario
K7V 3Z5

Site Location: Morrison Drive
Morrison Drive Village of Cobden
Whitewater Region Township, County of Renfrew
K0J 1K0

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

the establishment of stormwater management Works to service approximately 3.68 hectares of the Phase 2 of the Wren Subdivision, bound by Truelove Street to the south, McLeod Municipal Drain to the east and existing residential developments along Pembroke and Gould Street to the north and west, within the Muskrat watershed, in the Village of Cobden, Township of Whitewater Region, for the collection, treatment and disposal of stormwater run-off from the site, providing Enhanced Level of quality control and erosion protection and attenuating post-development peak flows to pre-development levels for all storm events up to and including the 100-year storm event, consisting of the following:

Proposed Works:

sanitary sewers on Morrison Drive from Bamagillia Street to approximately 105 m north-east of Wren Drive, discharging to existing sanitary sewers on Morrison Drive;

sanitary sewers on Bamagillia Street from approximately 80 m south-east of Morrison Street, discharging to sanitary sewers on Morrison drive described above, and from approximately 80 m south-east of Morrison Street to Wren Drive, discharging to sanitary sewers on Wren Drive, described below;

sanitary sewers on Wren Drive from approximately 20 m north-west of Bamagillia Street to approximately 80 m south-east of Bamagillia Street, discharging to existing sanitary sewers on Wren Drive;

storm sewers on either side of Bamagillia Street from approximately 80 m south-east of Morrison Street, discharging to storm sewers on Morrison Drive described above, and from approximately 80 m south-east of Morrison Street to Wren Drive, discharging to existing sanitary sewers on Wren Drive;

Rear yard collector system located along the backayrds of the Lots of the Phase 2 of the Wren Subdivision development, outletting to the swale perforated pipe drainage system described below;

Grassed swale (catchment area 0.83-ha) : - a grassed swale perforated pipe drainage system

located on Wren Drive southeast of Bamagillia Street, on Morrison Drive and on Bamagillia Street, with 250 mm diameter perforated pipes, with a total length of approximately 746 m, equipped with a 0.9 m wide , 25 mm clearstone infiltration trench with a minimum depth of 0.65 m, receiving inflow from the surface areas excluding rear yard areas, having a total estimated infiltration storage volume of approximately 64.6 m 3 , discharging to the existing perforated pipe system on Morrison Drive to the McLeod Municipal Drain, or through the dry pond described below;

stormwater management facility (catchment area 1.1 hectares): -one (1) dry pond, located at the northwest limit of the Wren Subdivision, southwest of Wren Drive, having a total detention storage volume of 5,916 m 3 at a depth of approximately 1 m, receiving minor and major inflows from the site through drainage ditch system described above, discharging via an outlet structure equipped with orifice control, wier structure, and a 24 m wide spillaway, ultimately discharging to the McLeod Municipal Drain;

Interim Works:

Ditch : an ditch running along Morrison Drive thru the Future Phase 3/4 to convey storm runoff from the Morrison Drive area

including erosion/sedimentation control measures during construction and all other controls and appurtenances essential for the proper operation of the aforementioned Works;

all in accordance with the submitted supporting documents listed in Schedule"A" forming part of this Approval.

For the purpose of this environmental compliance approval, the following definitions apply:

1. "Approval" means this entire document and any schedules attached to it, and the application;
2. "Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;
3. "District Manager" means the District Manager of the appropriate local District Office of the Ministry, where the Works are geographically located;
4. "EPA" means the *Environmental Protection Act,* R.S.O. 1990, c.E.19, as amended;
5. "Interim Works" means the interim stormwater management works, described in this Approval and that are to be used for short-term purposes only in accordance with this Approval, until otherwise approval for an extension of this period has been granted;
6. "Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;
7. "Owner" means Bonnechere Excavating Inc., and includes its successors and assignees;
8. "OWRA" means the *Ontario Water Resources Act,* R.S.O. 1990, c. O.40, as amended;
9. "Water Supervisor" means the Water Supervisor of the appropriate local office of the Safe Drinking Water Branch of the Ministry, where the Works are geographically located;
10. "Works" means the sewage works described in the Owner's application, and this Approval.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. **GENERAL CONDITIONS**
    1. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
    2. Except as otherwise provided by these Conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with the description given in this Approval, and the application for approval of the Works.
    3. Where there is a conflict between a provision of any document in the schedule referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence, and where there is a conflict between the documents in the schedule, the document bearing the most recent date shall prevail.
    4. Where there is a conflict between the documents listed in Schedule 'A' and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.
    5. The conditions of this Approval are severable. If any condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.
    6. The issuance of, and compliance with the conditions of, this Approval does not:
        1. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority/MNR necessary to construct or operate the sewage works; or
        2. limit in any way the authority of the Ministry to require certain steps be taken to require the Owner to furnish any further information related to compliance with this Approval.
2. **EXPIRY OF APPROVAL**
    1. This Approval will cease to apply to those parts of the Work which have not been constructed within five (5) years of the date of this Approval.
    2. In the event that completion and commissioning of any portion of the Works is anticipated to be delayed beyond the specified expiry period, the Owner shall submit an application of extension to the expiry period, at least twelve (12) months prior to the end of the period. The application for extension shall include the reason(s) for the delay, whether there is any design change(s) and a review of whether the standards applicable at the time of Approval of the Works are still applicable at the time of request for extension, to ensure the ongoing protection of the environment.
    3. This Approval to the Interim Works shall expire and become null and void on [date]
3. **CHANGE OF OWNER**
    1. The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within thirty (30) days of the change occurring:
        a. change of Owner;
        b. change of address of the Owner;
        c. change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Business Names Act,* R.S.O. 1990, c.B17 shall be included in the notification to the District Manager; or
        d. change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the *Corporations Information Act,* R.S.O. 1990, c. C39 shall be included in the notification to the District Manager.

2. In the event of any change in ownership of the Works, other than a change to a successor municipality, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager and the Director.
3. The Owner shall ensure that all communications made pursuant to this condition refer to the number at the top of this Approval.
4. Notwithstanding any other requirements in this Approval, upon transfer of the ownership or assumption of the Works to a municipality if applicable, any reference to the District Manager shall be replaced with the Water Supervisor.

4. **OPERATION AND MAINTENANCE**
   1. If applicable, any proposed storm sewers or other stormwater conveyance in this Approval can be constructed but not operated until the proposed stormwater management facilities in this Approval or any other Approval that are designed to service the storm sewers or other stormwater conveyance are in operation.
   2. The Owner shall make all necessary investigations, take all necessary steps and obtain all necessary approvals so as to ensure that the physical structure, siting and operations of the Works do not constitute a safety or health hazard to the general public.
   3. The Owner shall inspect and ensure that the design minimum liquid retention volume is maintained in the Works at all times, except when maintenance is required.
   4. The Owner shall undertake an inspection of the condition of the Works, at least once a year, and undertake any necessary cleaning and maintenance to ensure that sediment, debris and excessive decaying vegetation are removed from the Works to prevent the excessive build-up of sediment, oil/grit, debris and/or decaying vegetation, to avoid reduction of the capacity and/or permeability of the Works, as applicable. The Owner shall also regularly inspect and clean out the inlet to and outlet from the Works to ensure that these are not obstructed.
   5. The Owner shall design, construct and operate the Works with the objective that the effluent from the Works is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen, foam or discoloration on the receiving waters.
   6. The Owner shall maintain a logbook to record the results of these inspections and any cleaning and maintenance operations undertaken, and shall keep the logbook at the Owner's administration office for inspection by the Ministry. The logbook shall include the following:
      a. the name of the Works; and
      b. the date and results of each inspection, maintenance and cleaning, including an estimate of the quantity of any materials removed and method of clean-out of the Works.
   7. The Owner shall prepare an operations manual prior to the commencement of operation of the Works that includes, but is not necessarily limited to, the following information:
      a. operating and maintenance procedures for routine operation of the Works;
      b. inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;
      c. repair and maintenance programs, including the frequency of repair and maintenance for the Works;
      d. contingency plans and procedures for dealing with potential spills and any other abnormal situations and for notifying the District Manager; and
      e. procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.
   8. The Owner shall maintain the operations manual current and retain a copy at the location of the Works for the operational life of the Works. Upon request, the Owner shall make the

manual available to Ministry staff.

5. **TEMPORARY EROSION AND SEDIMENT CONTROL**
   1. The Owner shall install and maintain temporary sediment and erosion control measures during construction and conduct inspections once every two (2) weeks and after each significant storm event (a significant storm event is defined as a minimum of 25 mm of rain in any 24 hours period). The inspections and maintenance of the temporary sediment and erosion control measures shall continue until they are no longer required and at which time they shall be removed and all disturbed areas reinstated properly.
   2. The Owner shall maintain records of inspections and maintenance which shall be made available for inspection by the Ministry, upon request. The record shall include the name of the inspector, date of inspection, and the remedial measures, if any, undertaken to maintain the temporary sediment and erosion control measures.
6. **REPORTING**
   1. One (1) week prior to the start-up of the operation of the Works, the Owner shall notify the District Manager (in writing) of the pending start-up date.
   2. The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
   3. The Owner shall prepare and submit a performance report to the District Manager on an annual basis, within ninety (90) days following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the Works and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:
      a. a description of any operating problems encountered and corrective actions taken;
      b. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works, including an estimate of the quantity of any materials removed from the Works;
      c. a summary of any complaints received during the reporting period and any steps taken to address the complaints;
      d. a summary of all spill or abnormal discharge events; and
      e. any other information the District Manager requires from time to time.

Application for Environmental Compliance Approval , dated November 15, 2016 and received on December 1, 2016, submitted by Bonnechere Excavating Inc.;

Site Servicing Report – Bonnechere Excavating Inc. (Wren) Subdivision – Phase 2 – Village of Cobden, Ontario, dated March 2016, revised August 2017, prepared by J.L. Richards & Associates Limited;

Engineering Drawings – Bonnechere Excavating Inc. (Wren) Subdivision – Phase 2, Dated October 12, 2016 prepared by J.L. Richards & Associates Limited;

Pipe Data Form, Sanitary Sewer Design Sheet and Storm Sewer Design Sheet, prepared by J.L. Richards & Associates Limited;

E-mail from David Upton and Ivan Dzeparoski of J.L. Richards & Associates Limited to the Ministry, dated February 2, 16, 21, April 6, 10, May 25, and September 1, 2017;

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the Works are constructed and operated in the manner in which they were described and upon which approval was granted. This condition is also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. Condition 1.6 is included to emphasize that the issuance of this Approval does not diminish any other statutory and regulatory obligations to which the Owner is subject in the construction, maintenance and operation of the Works. The Condition specifically highlights the need to obtain any necessary conservation authority approvals. The Condition also emphasizes the fact that this Approval doesn't limit the authority of the Ministry to require further information.
2. Condition 2 is included to ensure that, when the Works are constructed, the Works will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.
3. Condition 3 is included to ensure that the Ministry records are kept accurate and current with respect to approved Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.
4. Condition 4 is included as regular inspection and necessary removal of sediment and excessive decaying vegetation from the Works are required to mitigate the impact of sediment, debris and/or decaying vegetation on the treatment capacity of the Works. The Condition also ensures that adequate storage is maintained in the Works at all times as required by the design. Furthermore, this Condition is included to ensure that the Works are operated and maintained to function as designed.
5. Condition 5 is included as installation, regular inspection and maintenance of the temporary sediment and erosion control measures is required to mitigate the impact on the downstream receiving watercourse during construction until they are no longer required.
6. Condition 6 is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this Approval, so that the Ministry can work with the Owner in resolving any problems in a timely manner.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;

6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary* Environmental Review Tribunal 655 Bay Street, Suite 1500 Toronto, Ontario M5G 1E5	AND	The Director appointed for the purposes of Part II.1 of the Environmental Protection Act Ministry of the Environment and Climate Change 135 St. Clair Avenue West, 1st Floor Toronto, Ontario M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or** www.ert.gov.on.ca

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 5th day of September, 2017

Christina Labarge, P.Eng.
Director
appointed for the purposes of Part II.1 of the *Environmental Protection Act*

EC/
c: District Manager, MOECC Ottawa
Derrick Upton and Ivan Dzeparoski, JL Richards and Associates Ltd

From: Lane Cleroux <lcleroux@whitewaterregion.ca>
Sent: May 27, 2022 2:52 PM
To: Marie-France Duthilleul <mduthilleul@jlrichards.ca>
Cc: Ivan Burton <iburton@whitewaterregion.ca>; Karla Ferrey <kferrey@jlrichards.ca>; Matt Naismith <mnaismith@bonnechereexcavating.com>; Anna Yuke <ayuke@bonnechereexcavating.com>
Subject: RE: Supplemental Water for Fire Fighting - Phases 3 and 4 - Wren Subdivisions

[CAUTION] This email originated from outside JLR. Do not click links or open attachments unless you recognize the sender and know the content is safe. If in doubt, please forward suspicious emails to Helpdesk.

Hi Marie-France

Thank you for taking the time to discuss the Wren subdivision today. As discussed, please see the attached map showing the hydrant and fire flow report.

Lane Cleroux
Manager of Public Works
Township of Whitewater Region

P.O. Box 40, 44 Main Street
Cobden, ON K0J 1K0
Tel: 613-646-2282 x128
whitewaterregion.ca

From: Marie-France Duthilleul <mduthilleul@jlrichards.ca>
Sent: May-10-22 7:25 PM
To: Lane Cleroux <lcleroux@whitewaterregion.ca>
Cc: Ivan Burton <iburton@whitewaterregion.ca>; Karla Ferrey <kferrey@jlrichards.ca>; Matt Naismith <mnaismith@bonnechereexcavating.com>; Anna Yuke <ayuke@bonnechereexcavating.com>
Subject: Supplemental Water for Fire Fighting - Phases 3 and 4 - Wren Subdivisions

Dear Mr. Cleroux,

JRL is currently under contract with BEI to complete the engineering design for the Wren subdivision Phases 3 and 4 (buildout condition). Per our analysis, the existing domestic water supply serving the current Phase 2 development has the available flow to service the proposed phases. However, available flow/water for fire protection for buildout conditions remains inadequate as per Phase 2. As such, water for fire protection would still need to be supplied by the Township via shuttle/tanks.

To ensure that the Township still sees this fire protection method as a viable option to service the buildout development, we are looking to obtain water service pre-approval. If the town requires an alternative service method, we will revise the design (to be submitted at site plan application). Attached is a letter that summarizes our analysis for your review and pre-approval.

If you have any questions, do not hesitate to contact us.

Best Regards,
Marie-France Duthilleul, P.Eng., ing.
Senior Civil Engineer

J.L. Richards & Associates Limited
700 - 1565 Carling Avenue, Ottawa, ON K1Z 8R1
Direct: 343-804-4349

J.L. Richards & Associates Limited
ENGINEERS · ARCHITECTS · PLANNERS

BEST MANAGED COMPANIES
Platinum member


GOULD ST
FH-0077
FH-0125
MORRISSON DR
FH-0071
BAMAGILLA ST
FH-0070
FH-0103
MORRISSON DR
FH-0102
FH-0124
WREN DR
FH-0123
WREN DR
TRUELOVE ST
FH-0085

TOTAL NUMBER OF TESTS 56

Township of Whitewater - Cobden

2021 Fire Flow Testing Program

Start Date 15-Nov-21

End Date 18-Nov-21

	TEST INFORMATION		TEST HYDRANT INFORMATION						FLOW HYDRANT(S) INFORMATION			
	Date	Time	Test Hydrant #	Static Pressure (PSI)	Residual Pressure (PSI)	% Drop (PSI)	Fire Flow Rating @ 20 PSI		Hydrant #	# of Ports Flowed	Pitot Pressure (PSI)	Discharge Flow (USGPM)
# tests							AVL. FLOW	COLOUR				
1	15-Nov-21	13:20	97	51.2	25.1	51.0	773	ORANGE	99	2	5.4	702
2	15-Nov-21	13:20	98	51.1	21.2	58.6	717	ORANGE	99	2	5.4	702
3	15-Nov-21	13:50	96	55.8	40.5	27.3	1226	GREEN	93	1	26.3	773
4	15-Nov-21	13:50	95	56.0	40.7	27.2	1229	GREEN	93	1	26.3	773
5	15-Nov-21	14:20	93	54.9	28.5	48.1	1201	GREEN	89	2	11.7	1033
6	15-Nov-21	14:20	90	53.3	26.0	51.2	1150	GREEN	89	2	11.7	1033
7	15-Nov-21	14:50	88	62.6	41.4	33.9	1318	GREEN	72	1	35.9	904
8	15-Nov-21	14:50	89	80.7	58.7	27.3	1563	BLUE	72	1	35.9	904
9	16-Nov-21	8:00	72	80.2	65.7	18.0	1785	BLUE	116	1	30.0	826
10	16-Nov-21	8:00	73	83.5	68.8	17.6	1819	BLUE	116	1	30.0	826
11	16-Nov-21	8:25	116	70.7	57.1	19.3	1912	BLUE	110	1	39.0	942
12	16-Nov-21	8:25	115	69.0	55.3	19.8	1880	BLUE	110	1	39.0	942
13	16-Nov-21	8:35	109	66.0	52.1	21.0	1823	BLUE	110	1	40.0	954
14	16-Nov-21	8:55	107	67.5	46.4	31.3	1460	GREEN	110	1	39.0	942
15	16-Nov-21	8:55	111	61.3	40.3	34.2	1358	GREEN	110	1	39.0	942
16	16-Nov-21	9:25	106	55.4	33.2	40.1	582	ORANGE	114	1	9.0	453
17	16-Nov-21	9:25	108	50.0	24.5	50.9	494	RED	114	1	9.0	453
18	16-Nov-21	9:50	114	47.7	21.3	55.5	558	ORANGE	113	1	13.0	544
19	16-Nov-21	9:50	112	47.0	19.7	58.0	541	ORANGE	113	1	13.0	544
20	16-Nov-21	10:05	110	67.5	63.9	5.4	3783	BLUE	77	1	39.0	942
21	16-Nov-21	10:05	76	65.3	61.7	5.5	3715	BLUE	77	1	39.0	942
22	16-Nov-21	10:25	78	52.6	48.2	8.4	2779	BLUE	77	1	39.0	942
23	16-Nov-21	10:25	79	54.7	51.2	6.4	3242	BLUE	77	1	39.0	942
24	16-Nov-21	10:35	121	55.7	42.4	23.9	1498	GREEN	79	1	34.0	880
25	16-Nov-21	10:35	85	56.6	43.4	23.3	1527	BLUE	79	1	34.0	880
26	16-Nov-21	10:50	92	55.6	42.8	23.0	1505	BLUE	79	1	33.0	867
27	16-Nov-21	11:05	102	55.9	34.6	38.0	939	ORANGE	71	1	22.0	708
28	16-Nov-21	11:05	103	54.2	32.3	40.3	901	ORANGE	71	1	22.0	708
29	16-Nov-21	11:25	125	52.1	29.5	43.5	794	ORANGE	71	1	19.0	658
30	16-Nov-21	11:25	70	51.9	30.1	41.9	808	ORANGE	71	1	19.0	658
31	16-Nov-21	11:35	71	51.5	27.3	47.1	777	ORANGE	125	1	20.0	675
32	16-Nov-21	11:50	124	55.0	34.9	36.5	933	ORANGE	102	1	21.0	691
33	16-Nov-21	12:50	66	68.7	54.7	20.4	1564	BLUE	68	1	28.0	798
34	16-Nov-21	12:50	67	62.4	46.9	24.9	1373	GREEN	68	1	28.0	798
35	16-Nov-21	13:05	69	54.3	34.7	36.1	1060	GREEN	68	1	27.0	784
36	16-Nov-21	13:05	80	56.3	42.3	24.9	1310	GREEN	68	1	27.0	784
37	16-Nov-21	13:20	86	58.6	54.7	6.6	827	ORANGE	80	1	2.5	239
38	16-Nov-21	13:20	119	56.9	54.1	5.0	955	ORANGE	80	1	2.5	239
39	16-Nov-21	13:35	101	59.4	52.9	11.0	629	ORANGE	80	1	2.5	239
40	16-Nov-21	13:35	100	62.8	58.5	6.8	830	ORANGE	80	1	2.5	239
41	16-Nov-21	13:55	82	60.7	46.0	24.2	1140	GREEN	83	1	19.0	658
42	16-Nov-21	13:55	81	67.2	52.6	21.8	1238	GREEN	83	1	19.0	658
43	16-Nov-21	14:15	84	56.7	41.3	27.1	1107	GREEN	83	1	21.0	691
44	16-Nov-21	14:15	118	56.6	41.7	26.3	1123	GREEN	83	1	21.0	691
45	16-Nov-21	14:35	75	56.2	41.0	27.1	1404	GREEN	74	1	34.0	880
46	16-Nov-21	14:35	87	56.0	41.0	26.8	1411	GREEN	74	1	34.0	880
47	16-Nov-21	14:50	94	55.3	51.1	7.5	1072	GREEN	75	1	5.0	337
48	16-Nov-21	14:50	74	56.3	52.5	6.8	1139	GREEN	75	1	5.0	337
49	16-Nov-21	15:05	83	57.5	47.0	18.2	1533	BLUE	84	1	26.0	769
50	17-Nov-21	7:25	105	64.3	52.7	18.1	2014	BLUE	110	1	42.0	978
51	17-Nov-21	7:40	77	52.8	50.2	4.8	3394	BLUE	76	1	32.0	853
52	17-Nov-21	7:50	91	53.8	50.1	6.8	2920	BLUE	77	1	34.0	880
53	17-Nov-21	8:10	64	56.5	32.6	42.3	910	ORANGE	104	1	23.0	724
54	17-Nov-21	8:10	65	55.7	37.0	33.5	1027	GREEN	104	1	23.0	724
55	17-Nov-21	8:20	104	55.6	32.3	41.9	869	ORANGE	64	1	21.0	691
56	18-Nov-21	10:55	68	56.1	29.6	47.2	855	ORANGE	69	1	23.0	724

FLOWMETRIX
INDU-TECH
PROCESS
WESTCAN

Fire Flow Testing Report

Residual Hydrant # **102**

NFPA Colour Code **ORANGE**

DATE 2021-11-16
TIME 11:05:00 AM

RESIDUAL HYDRANT INFO.

HYDRANT #	102	
N.F.P.A. COLOUR CODE	ORANGE	
STATIC PRESSURE	55.9	psi
RESIDUAL PRESSURE	34.6	psi
PRESSURE DROP	21.2	psi
% PRESSURE DROP	38.0	% psi

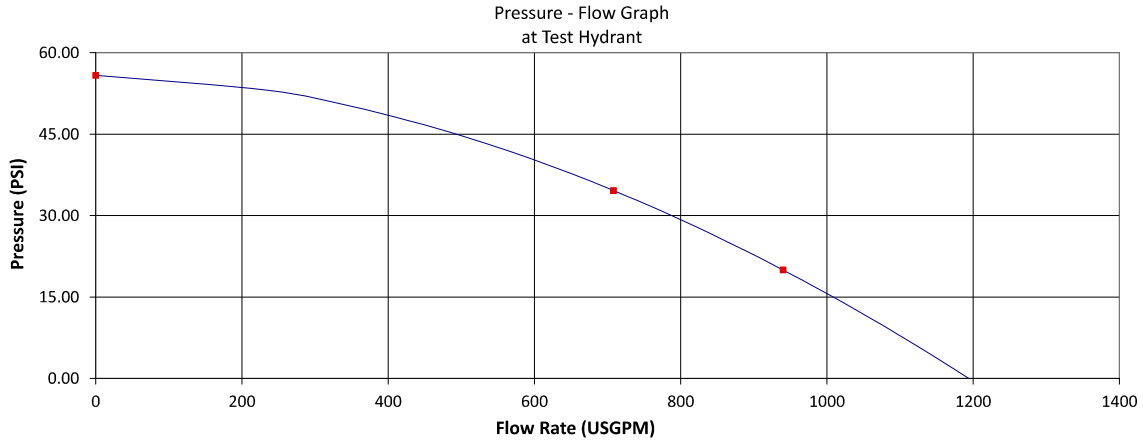
Flow on Water Main At Test Hydrant - 20 psi 940 USGPM

CONTACT INFO Lane Cleroux
Township of Whitewater Region
T: 613-646-2282 x128
E: lcleroux@whitewaterregion.ca

FLOW HYDRANT(S) INFO.

HYDRANT ASSET ID	HYD. # PORTS	OUTLET DIAMETER (INCHES)	NOZZLE COEFFICIENT	DIFFUSER TYPE	DIFFUSER COEFFICIENT	PITOT READING (psi)	PITOT FLOW (USGPM)	FLOW METER (USGPM)
71	1	2.5	Round	LPD250	0.90	**22.0**	708	0
								0
					Total Flow (USGPM)		708	0
					Total Flow (USGPM)		708	

FIRE FLOW CHART



COMMENTS

OPERATOR Ryan Ritchie
OPERATOR
OPERATOR Township of Whitewater Region

Wren Subdivision Phase 3 and 4

Pump Curve

Element Details			
ID	54	Notes	
Label	B.C. Hydrant Test Results - Intersection Wren and Morrison Dr.		

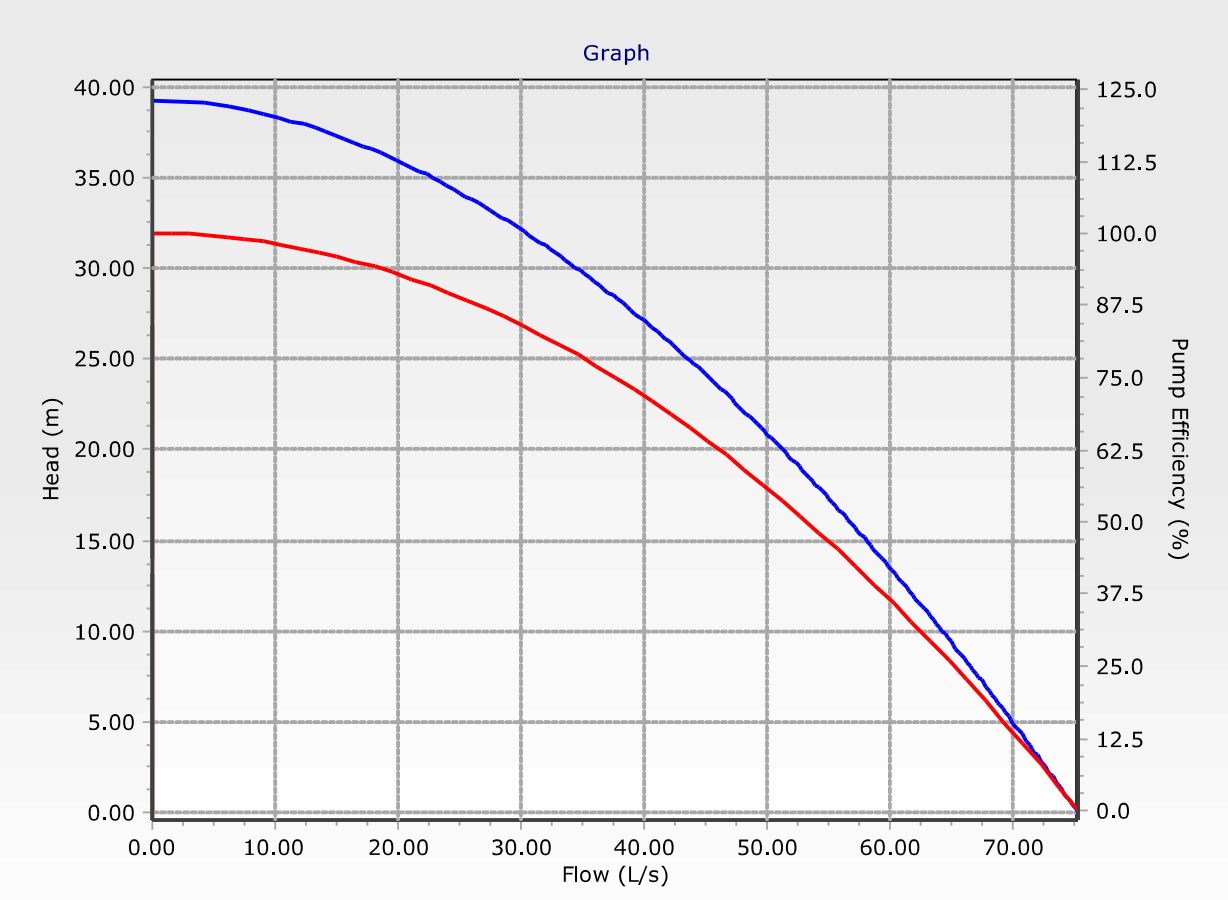
Pump Curve

Flow (L/s)	Head (m)
0.00	39.31
44.67	24.33
59.24	14.06

Pump Efficiency Type			
Pump Efficiency Type	Best Efficiency Point	Motor Efficiency	100.0 %
BEP Efficiency	100.0 %	Is Variable Speed Drive?	False
BEP Flow	0.00 L/s		

Transient (Physical)			
Inertia (Pump and Motor)	0.000 kg·m²	Specific Speed	SI=25, US=1280
Speed (Full)	0 rpm	Reverse Spin Allowed?	True

Wren Subdivision Phase 3 and 4
Pump Curve



Appendix D

Water Servicing and
Hydraulic Network Analysis

BEI WREN SUBDIVISION BUILD-OUT

WATER CONSUMPTION SUMMARY TABLE

Township of Whitewater Region

Node Number	Demand Type	DEMANDS				
		Population		Demand (L/s)		
		Number of Units	Population per Node	Avg Day Demand	Max Day Demand	Peak Hour
J-1	Res	4	12	0.0625	0.1719	0.2581
J-2	Res	8	24	0.1250	0.3438	0.5163
J-3	Res	8	24	0.1250	0.3438	0.5163
J-4	Res	7	21	0.1094	0.3008	0.4517
J-5	Res	4	12	0.0625	0.1719	0.2581
J-6	Res	10	30	0.1563	0.4297	0.6453
J-7	Res	6	18	0.0938	0.2578	0.3872
J-8	Res	4	12	0.0625	0.1719	0.2581
J-9	Res	3	9	0.0469	0.1289	0.1936
J-10	Res	4	12	0.0625	0.1719	0.2581
J-11	Res	4	12	0.0625	0.1719	0.2581
J-12	Res	7	21	0.1094	0.3008	0.4517
J-13	Res	2	6	0.0313	0.0859	0.1291
J-14	Res	6	18	0.0938	0.2578	0.3872
J-15	Res	2	6	0.0313	0.0859	0.1291
J-16	Res	4	12	0.0625	0.1719	0.2581
J-17	Res	1	3	0.0156	0.0430	0.0645
J-18	Res	3	9	0.0469	0.1289	0.1936
Number of Units:		87	Tot Demand (L/s):	1.36	3.74	5.61
Total Population:			261			

Note: Green cells are from Phases 3 and 4

Residential Consumption

Residential Density:	3.00	person/unit
Average Day Demand:	450	L/cap/day
Maximum Day Demand: (2.75 x Avg Day)	1238	L/cap/day
Peak Hour Demand (4.13 x Avg Day):	1859	L/cap/day

BEI (Wren 3 & 4) Subdivision Fire Flow Calculation
(per OFM/OBC Guidelines)

Type of Structure:	Two-Storey Single Detached Building with basement
A=	Area of structure considered (117 m^2)
	First and Second level height (3.1m), Basement Height (2.64m),
	Wood Frame Combustible Construction
	Exposure: Greater than 10m Front and Back, 8 m for both sides

Q= = Required fire flow (litres) **74824 L**

= K V S_{tot}

"K" - Water Supply Coefficient from Table 1 **K =** **23**

Group C, combustible construction, no fire-resistance rating

"V" - Total building volume in cubic meters **V =** **2502 m^3**

(222 m2 x (3.1+3.1+2.64) m) for main level and basement+ (540 m^3) for attic
Attic volume assumes 12:5 roof slope along 12 m building width,
18 m building length

"S_{tot}" - total of spatial coefficient values from Figure 1 **S_{tot} =** 1.3

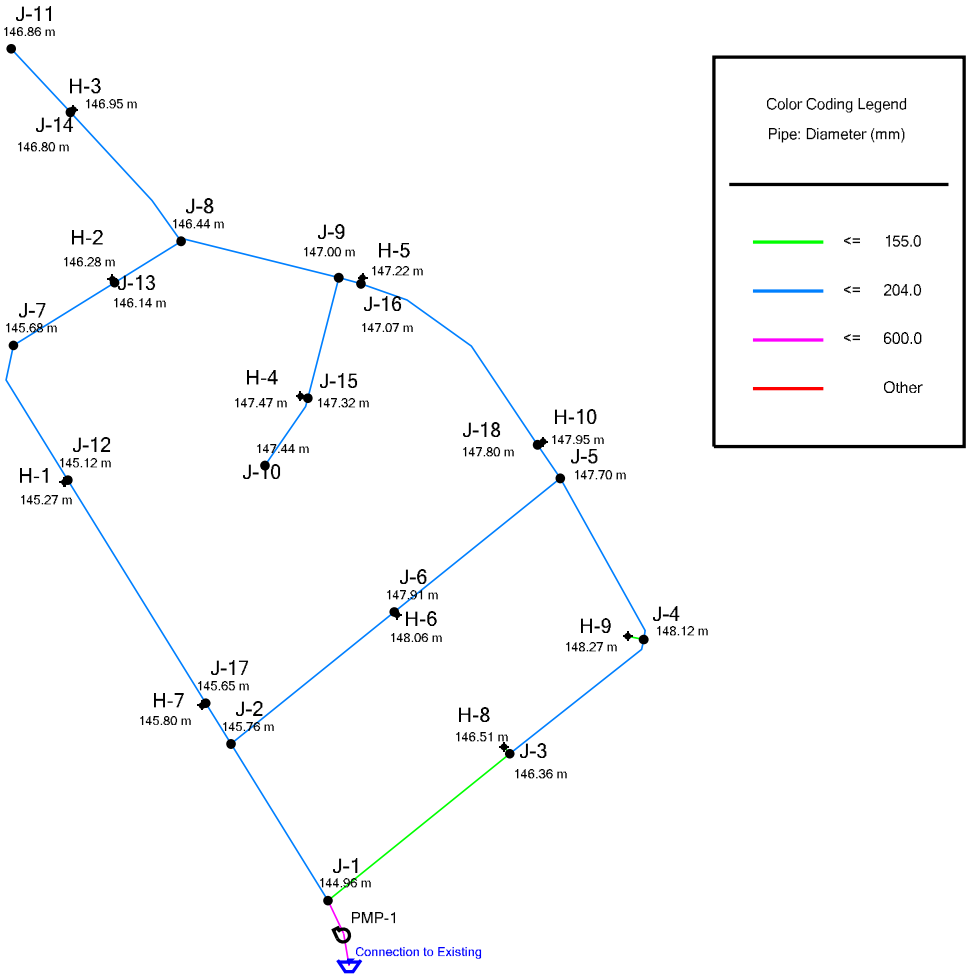
1 + (0.15 + 0.15 + 0.0 + 0.0), therefore S_{tot} = 1.30

Fire Flow Requirement from Table 2 =

Since Q < 108,000 L minimum fire flow = 2,700 L/min

2700 L/min
713 USGPM
45 L/s

Wren Subdivision Phases 3 and 4
Model Schematic
Elevation Model



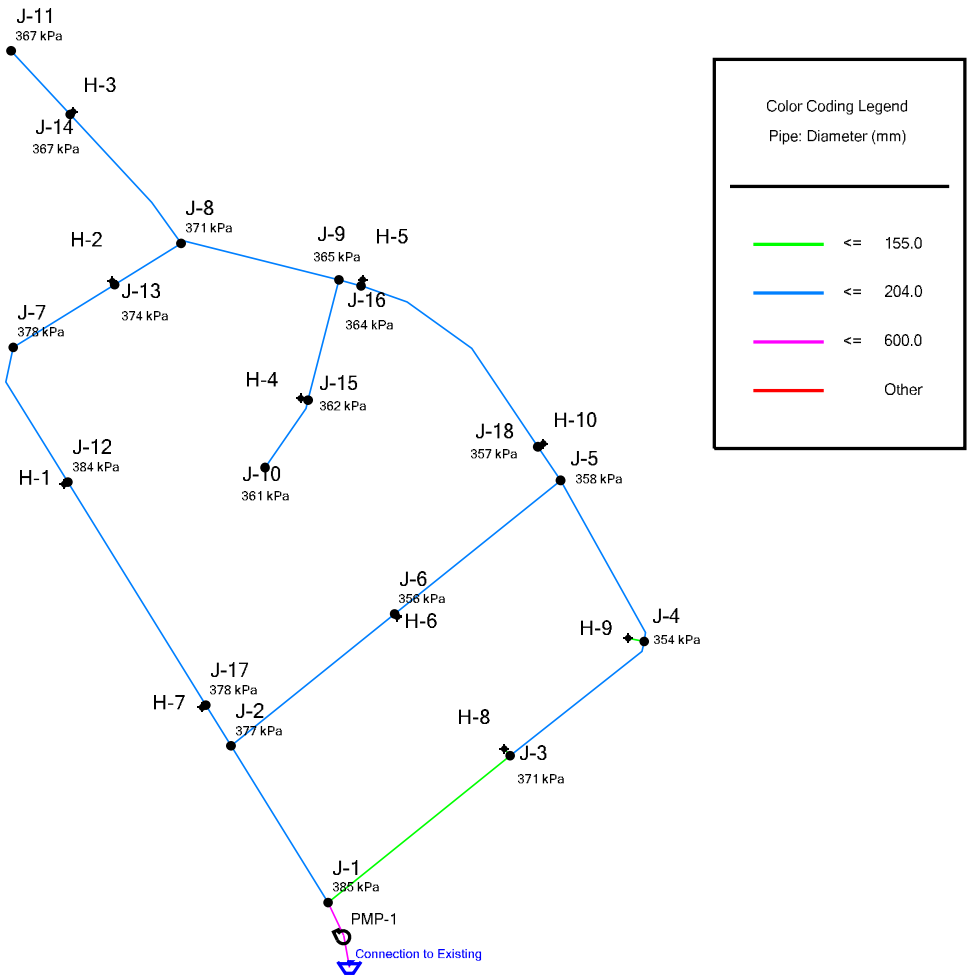
Wren Subdivision Phases 3 and 4
Maximum Day Analysis
Pipe Table

Label	Length (Scaled) (m)	Diameter (mm)	Material	Hazen-Williams C	Hydraulic Grade (Start) (m)	Hydraulic Grade (Stop) (m)	Flow (L/s)	Velocity (m/s)
P-1	110	155.0	PVC	100.0	184.31	184.31	0.00	0.00
P-2	15	600.0	PVC	130.0	145.00	145.00	0.00	0.00
P-3	17	600.0	PVC	130.0	184.31	184.31	0.00	0.00
P-4	84	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-5	87	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-6	101	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-7	99	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-8	87	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-9	77	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-10	72	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-11	2	155.0	PVC	100.0	184.31	184.31	0.00	0.00
P-12	56	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-13	37	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-14	2	155.0	PVC	100.0	184.31	184.31	0.00	0.00
P-15	80	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-16	41	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-17	2	155.0	PVC	100.0	184.31	184.31	0.00	0.00
P-18	59	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-19	38	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-20	4	155.0	PVC	100.0	184.31	184.31	0.00	0.00
P-21	11	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-22	3	155.0	PVC	100.0	184.31	184.31	0.00	0.00
P-23	2	155.0	PVC	100.0	184.31	184.31	0.00	0.00
P-24	23	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-25	124	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-26	2	155.0	PVC	100.0	184.31	184.31	0.00	0.00
P-27	4	155.0	PVC	100.0	184.31	184.31	0.00	0.00
P-28	8	155.0	PVC	100.0	184.31	184.31	0.00	0.00
P-29	120	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-30	19	204.0	PVC	110.0	184.31	184.31	0.00	0.00
P-31	3	155.0	PVC	100.0	184.31	184.31	0.00	0.00

Wren Subdivision Phases 3 and 4
Maximum Day Analysis
Junction Table

Label	ID	Elevation (m)	Demand (L/s)	Hydraulic Grade (m)	Pressure (kPa)
J-4	42	148.12	0.00	184.31	354
J-6	47	147.91	0.00	184.31	356
J-18	115	147.80	0.00	184.31	357
J-5	44	147.70	0.00	184.31	358
J-10	63	147.44	0.00	184.31	361
J-15	93	147.32	0.00	184.31	362
J-16	98	147.07	0.00	184.31	364
J-9	60	147.00	0.00	184.31	365
J-11	65	146.86	0.00	184.31	367
J-14	88	146.80	0.00	184.31	367
J-8	58	146.44	0.00	184.31	371
J-3	33	146.36	0.00	184.31	371
J-13	83	146.14	0.00	184.31	374
J-2	31	145.76	0.00	184.31	377
J-7	56	145.68	0.00	184.31	378
J-17	106	145.65	0.00	184.31	378
J-12	75	145.12	0.00	184.31	384
J-1	30	144.96	0.00	184.31	385

Wren Subdivision Phases 3 and 4
Maximum Day Analysis

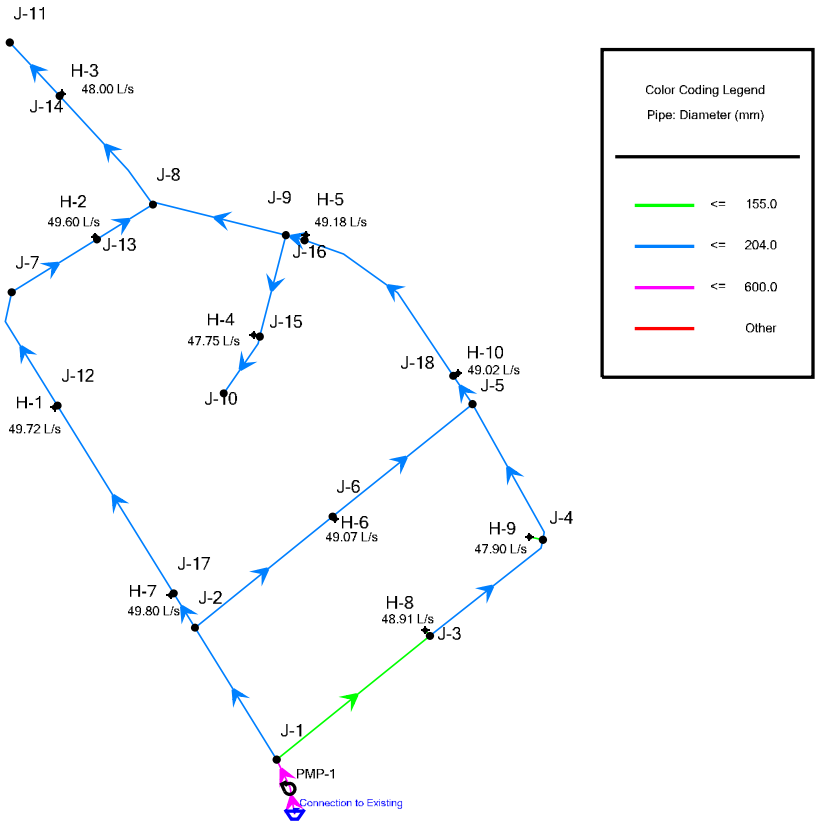


Wren Subdivision Phases 3 and 4

Maximum Day Fire Flow (RFF=45L/s)

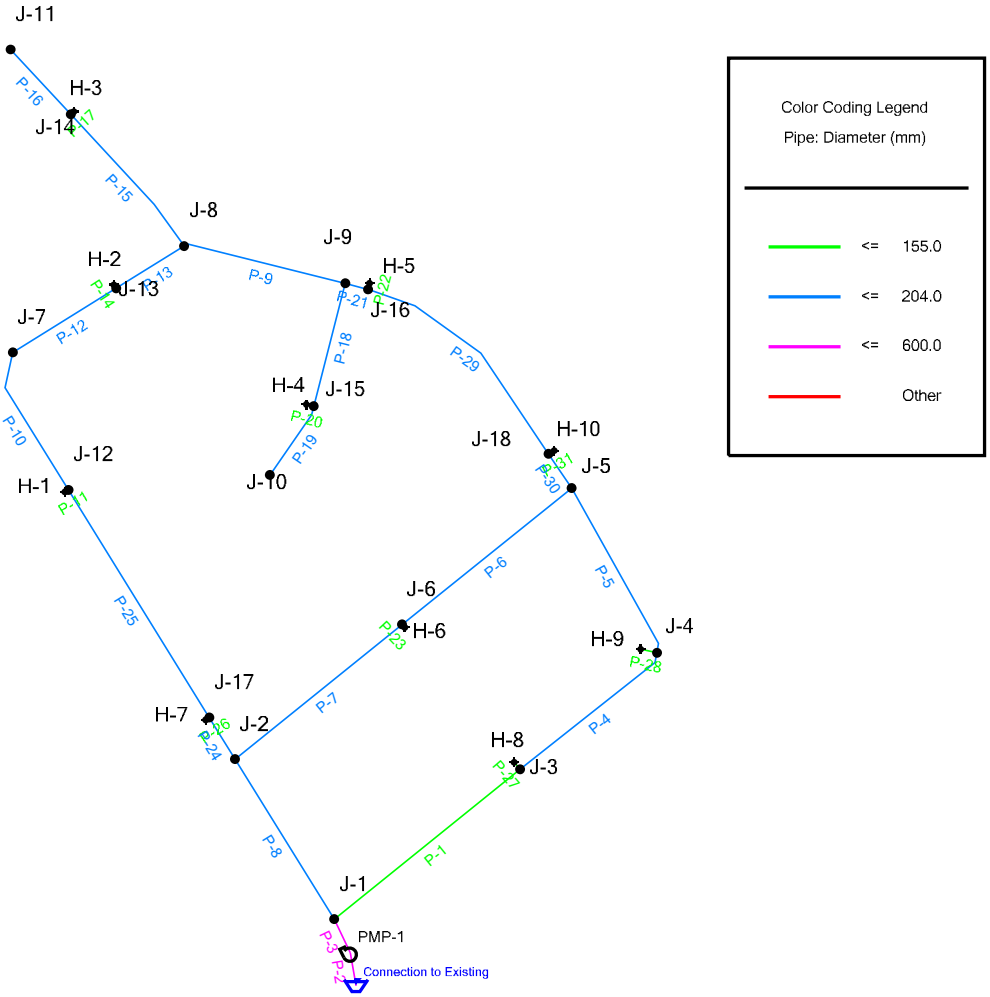
Label	Fire Flow (Available) (L/s)	Flow (Total Available) (L/s)	Satisfies Fire Flow Constraints?	Pressure (Residual Lower Limit) (kPa)	Pressure (Calculated System Lower Limit) (kPa)	Pressure (Calculated Residual) (kPa)	Junction w/ Minimum Pressure (System)
H-4	47.75	47.75	True	140	143	140	J-10
H-9	47.90	47.90	True	140	146	140	J-4
H-3	48.00	48.00	True	140	142	140	J-11
H-8	48.91	48.91	True	140	140	150	H-9
H-10	49.02	49.02	True	140	141	140	H-9
H-6	49.07	49.07	True	140	143	140	J-6
H-5	49.18	49.18	True	140	140	141	H-4
H-2	49.60	49.60	True	140	140	146	H-9
H-1	49.72	49.72	True	140	140	157	H-9
H-7	49.80	49.80	True	140	140	159	H-9

Wren Subdivision Phases 3 and 4
Maximum Day Fire Flow (RFF=45L/s)



Bentley Systems, Inc. Haestad Methods Solution Center
76 Watertown Road, Suite 2D Thomaston, CT 06787 USA
+1-203-755-1666

Wren Subdivision Phases 3 and 4
Model Schematic



Wren Subdivision Phases 3 and 4
Peak Hour Demand
Junction Table

Label	ID	Elevation (m)	Demand (L/s)	Hydraulic Grade (m)	Pressure (kPa)
J-4	42	148.12	0.45	183.97	351
J-6	47	147.91	0.65	183.97	353
J-18	115	147.80	0.19	183.97	354
J-5	44	147.70	0.26	183.97	355
J-10	63	147.44	0.26	183.97	358
J-15	93	147.32	0.13	183.97	359
J-16	98	147.07	0.26	183.97	361
J-9	60	147.00	0.19	183.97	362
J-11	65	146.86	0.26	183.97	363
J-14	88	146.80	0.39	183.97	364
J-8	58	146.44	0.26	183.97	367
J-3	33	146.36	0.52	183.97	368
J-13	83	146.14	0.13	183.97	370
J-2	31	145.76	0.52	183.98	374
J-7	56	145.68	0.39	183.97	375
J-17	106	145.65	0.06	183.97	375
J-12	75	145.12	0.45	183.97	380
J-1	30	144.96	0.26	183.99	382

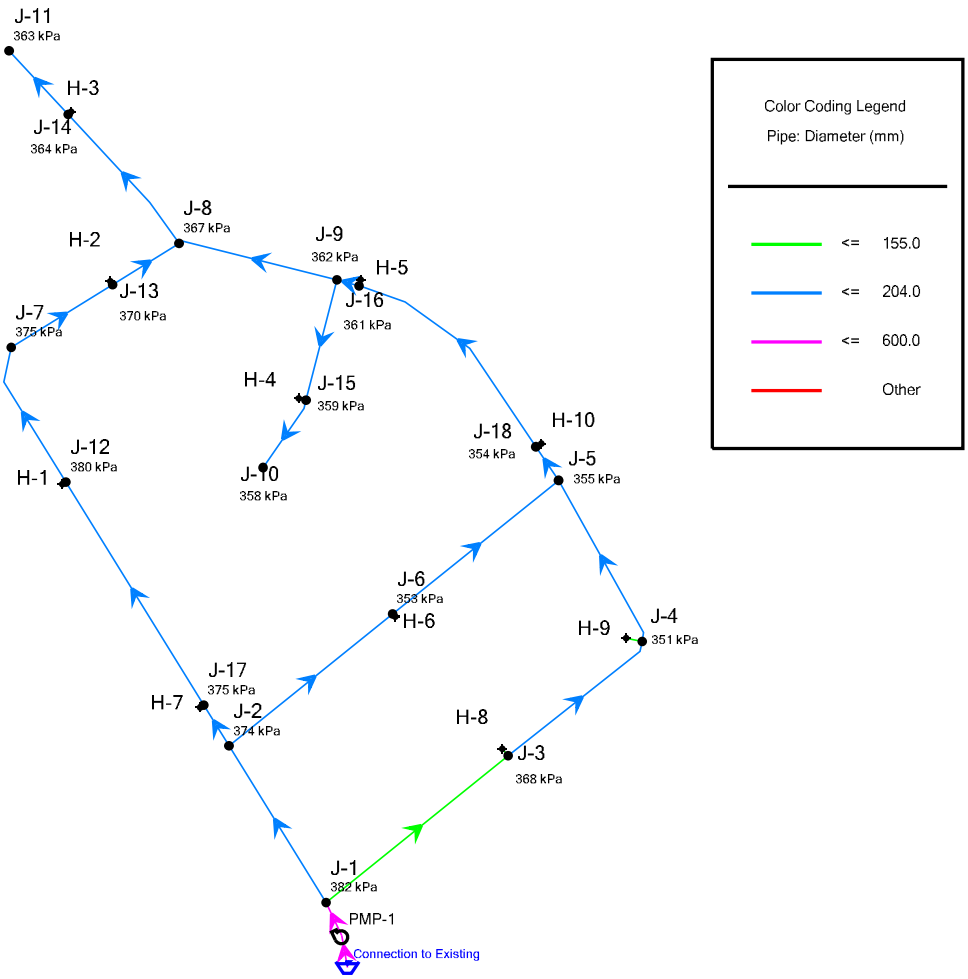
Wren Subdivision Phases 3 and 4

Peak Hour Demand

Pipe Table

Label	Length (Scaled) (m)	Diameter (mm)	Material	Hazen-Williams C	Hydraulic Grade (Start) (m)	Hydraulic Grade (Stop) (m)	Flow (L/s)	Velocity (m/s)
P-1	110	155.0	PVC	100.0	183.99	183.97	1.60	0.08
P-2	15	600.0	PVC	130.0	145.00	145.00	5.61	0.02
P-3	17	600.0	PVC	130.0	183.99	183.99	5.61	0.02
P-4	84	204.0	PVC	110.0	183.97	183.97	1.08	0.03
P-5	87	204.0	PVC	110.0	183.97	183.97	0.63	0.02
P-6	101	204.0	PVC	110.0	183.97	183.97	-0.93	0.03
P-7	99	204.0	PVC	110.0	183.97	183.98	-1.57	0.05
P-8	87	204.0	PVC	110.0	183.98	183.99	-3.76	0.12
P-9	77	204.0	PVC	110.0	183.97	183.97	-0.26	0.01
P-10	72	204.0	PVC	110.0	183.97	183.97	1.16	0.04
P-11	2	155.0	PVC	100.0	183.97	183.97	0.00	0.00
P-12	56	204.0	PVC	110.0	183.97	183.97	0.77	0.02
P-13	37	204.0	PVC	110.0	183.97	183.97	0.64	0.02
P-14	2	155.0	PVC	100.0	183.97	183.97	0.00	0.00
P-15	80	204.0	PVC	110.0	183.97	183.97	0.65	0.02
P-16	41	204.0	PVC	110.0	183.97	183.97	0.26	0.01
P-17	2	155.0	PVC	100.0	183.97	183.97	0.00	0.00
P-18	59	204.0	PVC	110.0	183.97	183.97	0.39	0.01
P-19	38	204.0	PVC	110.0	183.97	183.97	0.26	0.01
P-20	4	155.0	PVC	100.0	183.97	183.97	0.00	0.00
P-21	11	204.0	PVC	110.0	183.97	183.97	-0.84	0.03
P-22	3	155.0	PVC	100.0	183.97	183.97	0.00	0.00
P-23	2	155.0	PVC	100.0	183.97	183.97	0.00	0.00
P-24	23	204.0	PVC	110.0	183.98	183.97	1.67	0.05
P-25	124	204.0	PVC	110.0	183.97	183.97	1.61	0.05
P-26	2	155.0	PVC	100.0	183.97	183.97	0.00	0.00
P-27	4	155.0	PVC	100.0	183.97	183.97	0.00	0.00
P-28	8	155.0	PVC	100.0	183.97	183.97	0.00	0.00
P-29	120	204.0	PVC	110.0	183.97	183.97	-1.10	0.03
P-30	19	204.0	PVC	110.0	183.97	183.97	-1.30	0.04
P-31	3	155.0	PVC	100.0	183.97	183.97	0.00	0.00

Wren Subdivision Phases 3 and 4
Peak Hour Demand



Appendix E

Sanitary Sewer Design Sheet

J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

BONNECHERE EXCAVATING INC.
WREN SUBDIVISION - PHASES 3 and 4
Village of Cobden, Ontario
SANITARY SEWER DESIGN SHEET
JLR NO. 26783-003

DESIGNED BY: SP
CHECKED BY: MM
May 2023

Street Name	Maintenace Hole No.		Residential								Infiltration			Peak Design Flow L/s	Pipe Data								Upstream Geometry				Downstream Geometry				
	From	To	Singles	Multiples	Area (ha)	Pop.	Cum. Pop.	Cum. Area (ha)	Peaking Factor	Residential Flow (L/s)	Area (ha)	Cum. Area (ha)	Peak Extr. Flow L/s		Dia	Type	Actual Diameter	Slope	Q Full (L/s)	V Full	Length	Residual Capacity	% Full	TG From	Obvert	Invert	Cover	TG To	Drop	Obvert	Invert	Cover
Wren Subdivision - Phases 3 and 4																															
MORRISON	EX 6	207	3	0	0.67	9	9	0.67	4.00	0.19	0.67	0.67	0.19	0.38	200	Circular	203.20	0.65%	27.59	0.85	71.00	27.21	1%	147.629	145.429	145.226	2.200	147.535	0.060	144.968	144.764	2.568
MORRISON	207	206	3	0	0.45	9	18	1.12	4.00	0.38	0.45	1.12	0.31	0.69	200	Circular	203.20	0.65%	27.59	0.85	41.64	26.90	2%	147.535	144.908	144.704	2.628	147.221	0.030	144.637	144.434	2.584
MORRISON	206	203	2	0	0.26	6	24	1.38	4.00	0.50	0.26	1.38	0.39	0.89	200	Circular	203.20	0.65%	27.59	0.85	25.29	26.70	3%	147.221	144.607	144.404	2.614	147.013	0.060	144.442	144.239	2.570
STREET 1	205	204	4	0	0.56	12	12	0.56	4.00	0.25	0.56	0.56	0.16	0.41	200	Circular	203.20	0.65%	27.59	0.85	33.61	27.18	1%	147.369	145.288	145.084	2.082	147.342		145.069	144.866	2.273
STREET 1	204	203	2	0	0.34	6	18	0.90	4.00	0.38	0.34	0.90	0.25	0.63	200	Circular	203.20	0.65%	27.59	0.85	59.48	26.96	2%	147.342	145.069	144.866	2.273	147.013	0.300	144.682	144.479	2.330
MORRISON	203	202	4	0	0.58	12	54	2.86	4.00	1.13	0.58	2.86	0.80	1.93	200	Circular	203.20	0.65%	27.59	0.85	79.34	25.66	7%	147.013	144.382	144.179	2.630	146.391	0.030	143.867	143.664	2.524
FUTURE PHASE 4	301	300	11	0	1.24	33	33	1.24	4.00	0.69	1.24	1.24	0.35	1.03	200	Circular	203.20	0.65%	27.59	0.85	96.25	26.55	4%	146.950	144.614	144.411	2.336	146.457		143.989	143.786	2.468
FUTURE PHASE 4	300	202	1	0	0.11	3	36	1.35	4.00	0.75	0.11	1.35	0.38	1.13	200	Circular	203.20	0.35%	20.24	0.62	26.29	19.11	6%	146.457	143.989	143.786	2.468	146.391	0.060	143.897	143.694	2.494
WREN	202	201B	4	0	0.48	12	102	4.69	4.00	2.13	0.48	4.69	1.31	3.44	200	Circular	203.20	0.35%	20.24	0.62	88.47	16.80	17%	146.391	143.837	143.634	2.554	145.726	0.030	143.527	143.324	2.199
WREN	201B	201A	2	0	0.30	6	108	4.99	4.00	2.25	0.30	4.99	1.40	3.65	200	Circular	203.20	0.35%	20.24	0.62	14.37	16.60	18%	145.726	143.497	143.294	2.229	145.615	0.030	143.447	143.244	2.168
WREN	201A	200	7	0	0.70	21	129	5.69	4.00	2.69	0.70	5.69	1.59	4.28	200	Circular	203.20	0.35%	20.24	0.62	92.09	15.96	21%	145.615	143.417	143.214	2.198	145.128		143.095	142.891	2.033
WREN	200	EX STUB	3	0	0.68	9	138	6.37	4.00	2.88	0.68	6.37	1.78	4.66	200	Circular	203.20	0.47%	23.46	0.72	86.11	18.80	20%	145.128	143.095	142.891	2.033	142.697		142.690	142.487	0.007
WREN	EX STUB	EX 14	0	0	0.00	0	138	6.37	4.00	2.88	0.00	6.37	1.78	4.66	200	Circular	203.20	0.50%	24.19	0.75	19.52	19.54	19%	142.697	142.690	142.487	0.007	145.742		142.592	142.389	3.149

Total 733.46

Design Parameters		
Single Family Population	3	Cap/Unit
Semi-Detached/Townhouse Population	2.7	Cap/Unit
Residential Flows	450	L/Cap/Day
Infiltration Flows	0.28	L/s/ha
Manning Coefficient	0.013	

NOTES:
1. Information taken from as-built survey by Bonnechere Excavating Inc. dated April 11, 2022

Legend

89.232 Existing/Proposed Infrastructure
Existing (As-Built Information)

Appendix F

Storm Sewer & Ditch Design Sheets

J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

DESIGNED BY: SP
CHECKED BY: MM
2023-05-23

WREN SUBDIVISION PHASE 3 AND 4
VILLAGE OF COBDEN ONTATIO

STORM SEWER DESIGN SHEET (1:10 YEAR STORM)
JLR NO. 26783-003

Street Name	Maintenace Hole No.		1:10 Year Storm			Total Areas	Total Area (ha)	Cum. Total Area (ha)	Inlet Time (min.)	In Pipe Flow Time (min)	Total Time	1:10 Year Peak Flow					Total Peak Flow	Pipe Data											Upstream Geometry					Downstream Geometry					
	From	To	0.25	0.30	0.45	1:10 Yr						2.78AR	Additional 2.78AR	Cum. 2.78AR	1:10 Yr Intensity	Peak Flow		REQ'D DIA.	REQ'D ACTUAL DIA.	Type	Actual Diameter	Slope	Q Full (L/s)	V Full	Length	Residual Capacity	% Full	Ditch CL From	Obvert	Invert	Springline Elev	Cover	Ditch CL To	Drop	Obvert	Invert	Springline Elev	Cover
Morrison Drive East Side																																					
MORRISON DRIVE	EXCB12	EXCB13	0.16		0.19	0.35	0.35	1.07	11.51	1.04	12.55	0.35		1.13	113.48	127.93	127.93	450	457.2	Circular	457.20	0.11%	97.60	0.59	37.2	-30.33	131%	147.300	146.677	146.220		0.527	147.300		146.637	146.180		0.620
Morrision Drive West Side- North Side of Intersection																																					
MORRISON DRIVE	EXMH103	EXCB14				0.00	0.00	0.19	11.66	0.53	12.19	0.00		0.24	112.68	26.78	26.78	300	304.8	Circular	304.80	0.17%	41.35	0.57	17.9	14.56	65%	147.280	146.375	146.070		0.690	147.040		146.345	146.040		0.800
Street 1 West Side																																					
STREET 1	CO500	MH601				0.00	0.00	0.00	10.00	0.57	10.57	0.00		0.00	122.14	0.00	0.00	300	304.8	Circular	304.80	0.60%	78.14	1.07	36.84	78.14	0%	146.606	145.887	145.582	145.734	0.719	146.744		145.665	145.361	145.513	1.079
Street 1 East Side																																					
STREET 3	CO400	CB403				0.00	0.00	0.00	10.00	0.48	10.48	0.00		0.00	122.14	0.00	0.00	300	304.8	Circular	304.80	0.60%	78.14	1.07	31.06	78.14	0%	146.405	145.968	145.664	145.816	0.436	146.111		145.782	145.477	145.630	0.329
STREET 4	CB403	MH600			0.39	0.39	0.39	0.39	10.48	0.08	10.56	0.49		0.49	119.21	58.16	58.16	300	304.8	Circular	304.80	0.60%	78.08	1.07	5.17	19.91	74%	146.111	145.782	145.477	145.630	0.329	146.842		145.751	145.445	145.598	1.091
Morrison Drive West Side																																					
MORRISON DRIVE	EXCB14	CB600			0.07	0.07	0.07	0.26	12.19	0.43	12.61	0.09		0.33	110.02	35.79	35.79	300	304.8	Circular	304.80	0.58%	76.83	1.05	26.90	41.04	47%	147.040	146.342	146.037	146.189	0.698	146.772		146.186	145.881	146.033	0.586
MORRISON DRIVE	CB600	CB601		0.32		0.32	0.32	0.58	12.61	0.30	12.91	0.27		0.59	107.96	63.93	63.93	300	304.8	Circular	304.80	0.58%	76.83	1.05	18.83	12.90	83%	146.772	146.186	145.881	146.033	0.586	146.545		146.077	145.772	145.924	0.468
MORRISON DRIVE	CB601	TC601			0.05	0.05	0.05	0.63	12.91	0.23	13.15	0.06		0.65	106.58	69.77	69.77	375	381	Circular	381.00	0.58%	139.30	1.22	17.11	69.53	50%	146.545	146.077	145.696	145.886	0.468	146.564		145.977	145.596	145.787	0.587
MORRISON DRIVE	TC601	CB602				0.00	0.00	0.63	13.15	0.23	13.37	0.00		0.65	105.52	69.08	69.08	375	381	Circular	381.00	0.58%	139.30	1.22	16.65	70.22	50%	146.564	145.977	145.596	145.787	0.587	146.301		145.881	145.500	145.690	0.420
MORRISON DRIVE	CB602	MH600			0.08	0.08	0.08	0.71	13.37	0.30	13.68	0.10		0.75	104.51	78.88	78.88	375	381	Circular	381.00	0.58%	139.30	1.22	22.35	60.42	57%	146.301	145.881	145.500	145.690	0.420	146.842		145.751	145.370	145.561	1.091
MORRISON DRIVE	MH600	MH601				0.00	0.00	1.10	13.68	0.20	13.88	0.00		1.24	103.18	128.22	128.22	375	381	Circular	381.00	0.58%	139.30	1.22	14.77	11.08	92%	146.842	145.751	145.370	145.561	1.091	146.744		145.665	145.284	145.475	1.079
Morrison Drive West/ Wren Drive East																																					
MORRISON DRIVE	MH601	CB603				0.00	0.00	1.10	13.88	0.06	13.93	0.00		1.24	102.33	127.16	127.16	375	381	Circular	381.00	0.76%	159.46	1.40	4.67	32.30	80%	146.744	145.665	145.284	145.475	1.079	146.308		145.630	145.249	145.440	0.678
MORRISON DRIVE	CB603	CB604			0.28	0.28	0.28	1.38	13.93	0.29	14.22	0.35		1.59	102.10	162.63	162.63	450	457.2	Circular	457.20	0.76%	259.30	1.58	27.41	96.66	63%	146.308	145.630	145.173	145.401	0.678	146.025		145.422	144.965	145.193	0.603
MORRISON DRIVE	CB604	TC600			0.11	0.11	0.11	1.49	14.22	0.34	14.56	0.14		1.73	100.90	174.62	174.62	450	457.2	Circular	457.20	0.83%	270.65	1.65	33.34	96.03	65%	146.025	145.422	144.965	145.193	0.603	145.887		145.146	144.688	144.917	0.741
MORRISON DRIVE	TC600	CB605				0.00	0.00	1.49	14.56	0.07	14.63	0.00		1.73	99.55	172.28	172.28	450	457.2	Circular	457.20	0.83%	270.97	1.65	6.88	98.69	64%	145.887	145.146	144.688	144.917	0.741	145.400		145.089	144.631	144.860	0.311
MORRISON DRIVE	CB605	CB606			0.10	0.10	0.10	1.59	14.63	0.34	14.97	0.13		1.86	99.28	184.22	184.22	450	457.2	Circular	457.20	0.83%	270.97	1.65	33.94	86.75	68%	145.400	145.089	144.631	144.860	0.311	145.713		144.957	144.350	144.578	0.906
MORRISON DRIVE	CB606	CB607			0.08	0.08	0.08	1.67	14.97	0.64	15.61	0.10		1.96	97.96	191.57	191.57	525	533.4	Circular	533.40	0.34%	261.61	1.17	45.10	70.04	73%	145.713	144.807	144.273	144.540	0.906	145.260		144.653	144.120	144.387	0.607
MORRISON DRIVE	CB607	TC602		0.360		0.36	0.36	2.03	15.61	0.08	15.70	0.30		2.26	95.58	215.62	215.62	525	533.4	Circular	533.40	0.50%	317.25	1.42	7.07	101.63	68%	145.260	144.653	144.120	144.387	0.607	145.280		144.618	144.085	144.351	0.662
Wren Drive East																																					
WREN DRIVE	TC602	CB608				0.00	0.00	2.03	15.70	0.34	16.04	0.00		2.26	95.28	214.94	214.94	600	609.6	Circular	609.60	0.20%	286.47	0.98	20.23	71.52	75%	145.280	144.618	144.009	144.313	0.662	145.161		144.578	143.968	144.273	0.583
WREN DRIVE	CB608	CB609			0.08	0.08	0.08	2.11	16.04	0.35	16.39	0.10		2.36	94.06	221.62	221.62	600	609.6	Circular	609.60	0.20%	285.03	0.98	20.70	63.41	78%	145.161	144.578	143.968	144.273	0.583	145.031		144.537	143.927	144.232	0.494
WREN DRIVE	CB609	DIMH600			0.10	0.10	0.10	2.21	16.39	0.46	16.85	0.13		2.48	92.85	230.38	230.38	600	609.6	Circular	609.60	0.20%	286.47	0.98	26.97	56.09	80%	145.031	144.537	143.927	144.232	0.494	144.790		144.483	143.873	144.178	0.307
WREN DRIVE	CC600	CB613				0.00	0.00	0.00	10.00	0.41	10.41	0.00		0.00	122.14	0.00	0.00	300	304.8	Circular	304.80	0.20%	45.12	0.62	15.31	45.12	0%	144.970	144.663	144.358	144.510	0.307	144.933		144.632	144.327	144.480	0.301
WREN DRIVE	CB613	CB612		0.470		0.47	0.47	0.47	10.41	0.66	11.07	0.39		0.39	119.63	46.89	46.89	375	381	Circular	381.00	0.20%	81.80	0.72	28.48	34.91	57%	144.933	144.632	144.251	144.442	0.301	144.876		144.575	144.194	144.385	0.301
WREN DRIVE	CB612	CB611			0.10	0.10	0.10	0.57	11.07	0.32	11.39	0.13		0.52	115.84	59.90	59.90	375	381	Circular	381.00	0.20%	81.80	0.72	13.73	21.90	73%	144.876	144.575	144.194	144.385	0.301	144.850		144.548	144.167	144.357	0.302
WREN DRIVE	CB611	CB610			0.08	0.08	0.08	0.65	11.39	0.43	11.82	0.10		0.62	114.10	70.42	70.42	450	457.2	Circular	457.20	0.20%	133.02	0.81	20.94	62.60	53%	144.850	144.548	144.091	144.319	0.302	144.810		144.506	144.049	144.277	0.304
WREN DRIVE	CB610	DIMH600			0.10	0.10	0.10	0.75	11.82	0.24	12.06	0.13		0.74	111.85	83.02	83.02	450	457.2	Circular	457.20	0.20%	133.02	0.81	11.56	49.99	62%	144.810	144.506	144.049	144.277	0.304	144.790		144.483	144.026	144.254	0.307
Morrison Drive East																																					
MORRISON DRIVE	EXCB13	CB700			0.16	0.16	0.16	1.23	12.55	0.30	12.85	0.20		1.33	108.26	143.71	143.71	450	457.2	Circular	457.20	0.76%	259.30	1.58	28.44	115.58	55%	147.300	146.508	146.051	146.279	0.792	146.874		146.292	145.835	146.063	0.582
MORRISON DRIVE	CB700	CB701	0.07		0.20	0.27	0.27	1.50	12.85	0.28	13.13	0.30		1.63	106.85	173.78	173.78	450	457.2	Circular	457.20	0.76%	259.30	1.58	26.54	85.52	67%	146.874	146.292	145.835	146.063	0.582	146.694		146.090	145.633	145.862	0.604
MORRISON DRIVE	CB701	CB702	0.04		0.20	0.24	0.24	1.74	13.13	0.28	13.42	0.28		1.90	105.58	201.05	201.05	450	457.2	Circular	457.20	0.76%	259.30	1.58	26.98	58.25	78%	146.694	146.090	145.633	145.862	0.604	146.485		146.090	145.428	145.657	0.600
MORRISON DRIVE	CB702	CB703			0.17	0.17	0.17	1.91	13.42	0.32	13.75	0.21		2.12	104.31	220.83	220.83	525	533.4	Circular	533.40	0.76%	391.13	1.75	33.27	170.30	56%	146.485	145.885	145.352	145.619	0.600	146.564		145.632	145.099	145.366	0.932
MORRISON DRIVE	CB703	CB704	0.21		0.16	0.37	0.37	2.28	13.75	0.32	14.05	0.35		2.46	102.95	253.56	253.56	525	533.4	Circular	533.40	0.76%	391.13	1.75	33.55	137.57	65%	146.564	145.632	145.099	145.366	0.932	146.133		145.377	144.844	145.111	0.755
MORRISON DRIVE	CB704	CB705	0.07		0.19	0.26	0.26	2.54	14.05	0.28	14.33	0.29		2.75	101.61	279.36	279.36	525	533.4	Circular	533.40	0.76%	391.13	1.75	29.65	111.77	71%	146.133	145.377	144.844	145.111	0.755	145.874		145.152	144.619	144.885	0.722
MORRISON DRIVE	CB705	CBMH700	0.06		0.13	0.19	0.19	2.73	14.33	0.20	14.54	0.20		2.95	100.45	296.72	296.72	525	533.4	Circular	533.40	0.76%	391.13	1.75	21.39	94.41	76%	145.874	145.152	144.619	144.885	0.722	145.690		144.990	144.456	144.723	0.700
Street 2- East																																					
STREET 2	CO800	CB803				0.00	0.00	0.00	10.00	0.17	10.17	0.00		0.00	122.14	0.00	0.00	300	304.8	Circular	304.80	0.50%	71.33	0.98	9.96	71.33	0%	146.050	145.399	145.094	145.247	0.651	145.973		145.349	145.045	145.197	0.624
STREET 2	CB803	CB804			0.25	0.25	0.25	0.25	10.17	0.36	10.53	0.31		0.31	121.10	37.87	37.87	300	304.8	Circular	304.80	0.50%	71.33	0.98	20.88	33.46	53%	145.973	145.349	145.045	145.197	0.624	145.890		145.245	144.940	145.093	0.645
STREET 2	CB804	CB805			0.04	0.04	0.04	0.29	10.53	0.34	10.86	0.05		0.36	116.96	43.16	43.16	375	381	Circular	381.00	0.50%	129.34	1.13	22.92	86.18	33%	145.890	145.245	144.864	145.054	0.645	145.740		145.130	144.749	144.940	0.610
STREET 2	CB805	CBMH700	0.06		0.11	0.17	0.17	0.46	10.86	0.41	11.28	0.18		0.54	117.02	63.44	63.44	375	381	Circular	381.00	0.50%	129.34	1.13	28.16	65.90	49%	145.740	145.130	144.749	144.940	0.610	145.690		144.990	144.609	144.799	0.700
Street 2- West																																					
STREET 2	CO900	CB902				0.00	0.00	0.00	10.00	0.11	10.11	0.00		0.00	122.14	0.00	0.00	300	304.8	Circular	304.80	0.50%	71.33	0.98	6.35	71.33	0%	146.004	145.257	144.953	145.105	0.746	145.960		145.226	144.921	145.073	0.734
STREET 2	CB902	CB903			0.19	0.19	0.19	0.19	10.11	0.43	10.54	0.24		0.24	121.47	28.87	28.87	300	304.8	Circular	304.80	0.50%	71.33	0.98	25.43	42.46	40%	145.960	145.226	144.921	145.073	0.734	145.878		145.099	144.794	144.946	0.780
STREET 2	CB903	CB904			0.05	0.05	0.05	0.24	10.54	0.37	10.91	0.06		0.30	118.87	35.69	35.69	300	304.8	Circular	304.80	0.50%	71.33	0.98	21.47	35.64	50%	145.878	145.099	144.794	144.946	0.780	145.736		144.991	144.686	144.839	0.745
STREET 2	CB904	MH701			0.05	0.05	0.05	0.29	10.91	0.35	11.26	0.06		0.36	116.77	42.36	42.36	300	304.8	Circular	304.80	0.50%	71.33	0.98	20.81	28.97	59%	145.736	144.991	144.686	144.839	0.745	146.001		144.887	144.582	144.735	1.114
Morrison Drive North/ Wren Drive West																																					
MORRISON DRIVE	CBMH700	MH701	0.09		0.14	0.23	0.23	3.42	14.54	0.14	14.67	0.24		3.73	99.64	372.02	372.02	600	609.6	Circular	609.60	0.69%	532.09	1.82	14.85	160.07	70%	145.690	144.990	144.380	144.685	0.700	146.001		144.887	144.278	144.582	1.114
MORRISON DRIVE	MH701	CB706				0.00	0.00	3.71	14.67	0.69	15.37	0.00		4.10	99.11	405.98	405.98	750	762	Circular	762.00	0.16%	470.34	1.03	42.88	64.36	86%	146.001	144.887	144.125	144.506	1.114	145.303		144.817	144.055	144.436	0.486
MORRISON DRIVE	CB706	CB707			0.11	0.11	0.11	3.82	15.37	0.32	15.69	0.14		4.23	96.48	408.49	408.49	750	762	Circular	762.00	0.15%	449.81	0.99	19.08	41.33	91%	145.303	144.817	144.055	144.436	0.486	145.283		144.788	144.026	144.407	0.495
MORRISON DRIVE	CB707	TC701			0.05	0.05	0.05	3.87	15.69	0.19	15.88	0.06		4.30	95.31	409.49	409.49	750	762	Circular	762.00	0.15%	449.81	0.99	11.35	40.32	91%	145.283	144.788	144.026	144.407	0.495	145.164		144.771	144.009	144.390	0.393
MORRISON DRIVE	TC701	CB708				0.00	0.00	3.87	15.88	0.18	16.06	0.00		4.30	94.63	406.56	406.56	750	762	Circular	762.00	0.15%	449.81	0.99	10.87	43.25	90%	145.164	144.771	144.009	144.390	0.393	145.106		144.755	143.993	144.374	0.352
MORRISON DRIVE	CB708	TC702			0.06	0.06	0.06	3.93	16.06	0.18	16.24	0.08		4.37	93.98	410.86	410.86	750	762	Circular	762.00	0.15%	449.81	0.99	10.63	38.96	91%	145.106	144.755	143.993	144.374	0.352	145.081		144.739	143.977	144.358	0.342
MORRISON DRIVE	TC702	CB709				0.00	0.00	3.93	16.24	0.10	16.34	0.00		4.37	93.36	408.15	408.15	750	762	Circular	762.00	0.15%	449.81	0.99	5.90	41.66	91%	145.081	144.739	143.977	144.358	0.342	145.072		144.730	143.968	144.349	0.342
WREN DRIVE	CB709	TC703			0.06	0.06	0.06	3.99	16.34	0.18	16.52	0.08		4.45	93.03	413.65	413.65	750	762	Circular	762.00	0.15%	449.81	0.99	10.52	36.17	92%	145.072	144.730	143.968	144.349	0.342	145.061		144.714	143.952	144.333	0.347
WREN DRIVE	TC703	CB710				0.00	0.00	3.99	16.52	0.16	16.68	0.00		4.45	92.43	410.98	410.98	750	762	Circular	762.00	0.15%	449.81	0.99	9.48	38.83	91%	145.061	144.714	143.952	144.333	0.347	145.042		144.700	143.938	144.319	0.342
WREN DRIVE	CB710	CB704			0.07	0.07	0.07	4.06	16.68	0.19	16.88	0.09		4.53	91.89	416.66	416.66	750	762	Circular	762.00	0.15%	449.81	0.99	11.53	33.15	93%	145.042	144.700	143.938	144.319	0.342	145.030		144.683	143.921	144.302	0.347
WREN DRIVE	TC704	CB711				0.00	0.00	4.06	16.88	0.17	17.04	0.00		4.53	91.25	413.77	413.77	750	762	Circular	762.00	0.15%	449.81	0.99	9.80	36.05	92%	145.030	144.683	143.921	144.302	0.347	145.010		144.668	143.906	144.287	0.342
WREN DRIVE	CB711	CB712			0.06	0.06	0.06	4.12	17.04	0.33	17.37	0.08		4.61	90.72	418.15	418.15	750	762	Circular	762.00	0.15%	449.81	0.99	19.64	31.66	93%	145.010	144.668	143.906	144.287	0.342	145.021		144.639	143.877	144.258	0.383
WREN DRIVE	CB712	TC705			0.05	0.05	0.05	4.17	17.37	0.21	17.58	0.06		4.67	89.67	418.91	418.91	750	762	Circular	762.00	0.15%	449.81	0.99	12.14	30.90	93%	145.021	144.639	143.877	144.258	0.383	145.000		144.620	143.858	144.239	0.380
WREN DRIVE	TC705	OUTLET 1				0.00	0.00	4.17	17.58	0.10	17.67	0.00		4.67	89.03	415.94	415.94	750	762	Circular	762.00	0.15%	449.81	0.99	5.62	33.88	92%	145.000	144.620	143.858	144.239	0.380	145.150		144.612	143.850	144.231	0.538
Wren Drive East Crossing																																					
WREN DRIVE	DIMH600	OUTLET 2			0.11	0.11	0.11	3.07	16.85	0.36	17.22	0.14		3.36	91.33	306.97	306.97	610	610	Elliptical	610.00	0.20%	286.97	0.98	21.35	-20.00	107%	144.790	144.483	143.873	144.178	0.307	144.467		144.440	143.830	144.135	0.027

Design Parameter	
Manning's Coefficient	0.013

Legend

89.232 Proposed Mainline Sewers
89.232 Existing (As-Built Information)

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WREN SUBDIVISION PHASES 3 AND 4
VILLAGE OF COBDEN ONTARIO

JLR No. 26783-003

PERIMETER DITCH AND STORM SEWER DESIGN SHEET
1:100 YEAR STORM

Prepared by: KT
Checked by: SP

Date: May 2023
Issue: Submission 2

West Perimeter Ditch Sizing to Morrison Drive Subdrain System

Manning's Coefficient (n) = 0.035 (grass channel) A= 1735.688
Runoff coefficients increased by 25% for 1:100 year storm (per City of Ottawa Guidelines) B= 0.82
C= 6.014

LOCATION			DRAINAGE AREAS AND COEFFICIENTS				1:100 YR PEAK FLOW GENERATION													U/S	D/S
Description	From	To	1.25 x C =	1.25 x C = 0.43	Area (ha)	Cum. Area (ha)	2.78AC	Cum. 2.78AC	Time, Tc (min)	Intensity (mm/hr)	Peak Flow (L/s)	h (m)	SS X:1	Slope (%)	Length (m)	Capacity (L/s)	Qdes Qcap	Velocity (m/s)	Flow Time (min)	Elev. (m)	Elev. (m)
Ditch Cross-Section E-E																					
Lots 33 (rear)	1	2		0.07	0.07	0.07	0.09	0.09	10.00	178.56	15.81	0.30	3	2.02	42.0	299.13	0.05	1.11	0.63	147.20	146.35
Lots 34-19-20-21 (rear) to CB607	2	3		0.19	0.19	0.26	0.22	0.31	10.63	172.98	53.23	0.30	3	1.50	36.6	257.76	0.21	0.95	0.64	146.35	145.80

West Perimeter Ditch Sizing to South Perimeter Ditch

Manning's Coefficient (n) = 0.035 (grass channel) A= 1735.688
Runoff coefficients increased by 25% for 1:100 year storm (per City of Ottawa Guidelines) B= 0.82
C= 6.014

LOCATION			DRAINAGE AREAS AND COEFFICIENTS				1:100 YR PEAK FLOW GENERATION													U/S	D/S
Description	From	To	1.25 x C =	1.25 x C = 0.43	Area (ha)	Cum. Area (ha)	2.78AC	Cum. 2.78AC	Time, Tc (min)	Intensity (mm/hr)	Peak Flow (L/s)	D (m)	SS X:1	Slope (%)	Length (m)	Capacity (L/s)	Qdes Qcap	Velocity (m/s)	Flow Time (min)	Elev. (m)	Elev. (m)
Ditch Cross-Section E-E																					
Lots 32-31 (rear)	4	5		0.06	0.06	0.06	0.07	0.07	10.00	178.56	12.14	0.30	3	1.54	50.0	260.93	0.05	0.97	0.86	147.20	146.43
Lots 31-DITCH (rear)	5	6		0.04	0.04	0.10	0.05	0.12	10.00	178.56	20.54	0.30	3	1.60	15.0	265.97	0.08	0.99	0.25	146.43	146.19
									0.00												

South Perimeter Ditch Sizing to Morrison Drive Subdrain System

Manning's Coefficient (n) = 0.035 (grass channel) A= 1735.688
Runoff coefficients increased by 25% for 1:100 year storm (per City of Ottawa Guidelines) B= 0.82
C= 6.014

LOCATION			DRAINAGE AREAS AND COEFFICIENTS				1:100 YR PEAK FLOW GENERATION													U/S	D/S	
Description	From	To	1.25 x C =	1.25 x C = 0.43	Area (ha)	Cum. Area (ha)	2.78AC	Cum. 2.78AC	Time, Tc (min)	Intensity (mm/hr)	Peak Flow (L/s)	D (m)	SS X:1	Slope (%)	Length (m)	Capacity (L/s)	Qdes Qcap	Velocity (m/s)	Flow Time (min)	Elev. (m)	Elev. (m)	
Ditch Cross-Section D-D																						
Lots 30-29 (rear)	1	2		0.09	0.09	0.09	0.10	0.10	10.00	178.56	18.54	0.30	3	0.57	27.9	601.60	0.03	0.95	0.49	147.70	147.54	See Phase 2
Lots 29-15 (rear)	2	3		0.09	0.09	0.18	0.11	0.21	10.49	174.23	36.99	0.30	3	0.62	8.1	625.70	0.06	0.99	0.14	147.54	147.49	design
Lots 15-CB600 (rear)	3	4		0.11	0.11	0.29	0.13	0.34	10.62	173.06	58.83	0.30	3	0.54	34.9	586.16	0.10	0.93	0.63	147.49	147.30	

South Perimeter Ditch Sizing to Wren Drive Subdrain System

Manning's Coefficient (n) = 0.035 (grass channel) A= 1735.688
Runoff coefficients increased by 25% for 1:100 year storm (per City of Ottawa Guidelines) B= 0.82
C= 6.014

LOCATION			DRAINAGE AREAS AND COEFFICIENTS				1:100 YR PEAK FLOW GENERATION													U/S	D/S	
Description	From	To	1.25 x C = 0.40	1.25 x C = 0.43	Area (ha)	Cum. Area (ha)	2.78AC	Cum. 2.78AC	Time, Tc (min)	Intensity (mm/hr)	Peak Flow (L/s)	D (m)	SS X:1	Slope (%)	Length (m)	Capacity (L/s)	Qdes Qcap	Velocity (m/s)	Flow Time (min)	Elev. (m)	Elev. (m)	
Ditch Cross-Section D-D																						
Lots 30-31 (rear)	4	5		0.05	0.05	0.05	0.06	0.06	10.00	178.56	10.55	0.30	3	2.27	14.1	1196.79	0.01	1.90	0.12	147.70	147.38	See Phase 2
Lots 31-28 (rear)	5	6		0.27	0.27	0.32	0.32	0.38	10.12	177.44	66.98	0.30	3	2.25	52.9	1191.51	0.06	1.89	0.47	147.38	146.19	design
Lots 28-CB613 (WREN)	6	7		0.13	0.13	0.45	0.16	0.54	10.59	173.34	92.78	0.30	3	2.27	37.0	1196.99	0.08	1.90	0.32	146.19	145.35	

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WREN SUBDIVISION PHASES 3 AND 4
VILLAGE OF COBDEN ONTARIO

JLR No. 26783-003

PERIMETER DITCH AND STORM SEWER DESIGN SHEET
1:100 YEAR STORM

Prepared by: KT
Checked by: SP

Date: May 2023
Issue: Submission 2

North Perimeter Ditch Sizing to SWM Pond- Street 2 Rear Lots

Manning's Coefficient (n) = 0.035 (grass channel)
Runoff coefficients increased by 25% for 1:100 year storm (per City of Ottawa Guidelines)

A= 1735.688
B= 0.82
C= 6.014

LOCATION			DRAINAGE AREAS AND COEFFICIENTS				1:100 YR PEAK FLOW GENERATION													U/S	D/S
Description	From	To	1.25 x C =	1.25 x C = 0.43	Area (ha)	Cum. Area (ha)	2.78AC	Cum. 2.78AC	Time, Tc (min)	Intensity (mm/hr)	Peak Flow (L/s)	h (m)	SS X:1	Slope (%)	Length (m)	Capacity (L/s)	Qdes Qcap	Velocity (m/s)	Flow Time (min)	Elev. (m)	Elev. (m)
Ditch Cross-Section D-D																					
Lots 2 (rear)	1	2		0.02	0.02	0.02	0.03	0.03	10.00	178.56	4.58	0.15	3	1.65	10.9	42.55	0.11	0.63	0.29	147.50	147.32
Lots 3 (rear)	2	3		0.05	0.05	0.07	0.06	0.08	10.29	175.97	14.35	0.15	3	1.62	22.9	42.09	0.34	0.62	0.61	147.32	146.95
Lots 4 (rear)	3	4		0.04	0.04	0.11	0.05	0.13	10.90	170.73	21.68	0.15	3	1.55	22.6	41.25	0.53	0.61	0.62	146.95	146.60
Lots 5 (rear)	4	5		0.07	0.07	0.18	0.08	0.21	11.52	165.80	34.83	0.15	3	1.51	49.7	40.69	0.86	0.60	1.37	146.60	145.85
Lots 6 (rear)	5	6		0.07	0.07	0.24	0.08	0.29	12.89	155.86	44.90	0.20	3	1.90	44.7	98.37	0.46	0.82	0.91	145.85	145.00
Lots 7-POND (rear)	6	7		0.07	0.07	0.31	0.08	0.37	13.80	149.97	54.84	0.20	3	1.79	44.7	95.44	0.57	0.80	0.94	145.00	144.20

Appendix G

Water Quality Calculations

Table 3.2 from MOECC SWMPDG

Protection Level	SWMP Type	Storage Volume (m³/ha) for Impervious Level			
		35%	55%	70%	85%
Enhanced 80% long-term S.S. removal	Infiltration	25	30	35	40
	Wetlands	80	105	120	140
	Hybrid Wet Pond/Wetland	110	150	175	195
	Wet Pond	140	190	225	250
Normal 70% long-term S.S. removal	Infiltration	20	20	25	30
	Wetlands	60	70	80	90
	Hybrid Wet Pond/Wetland	75	90	105	120
	Wet Pond	90	110	130	150
Basic 60% long-term S.S. removal	Infiltration	20	20	20	20
	Wetlands	60	60	60	60
	Hybrid Wet Pond/Wetland	60	70	75	80
	Wet Pond	60	75	85	95
	Dry Pond (Continuous Flow)	90	150	200	240

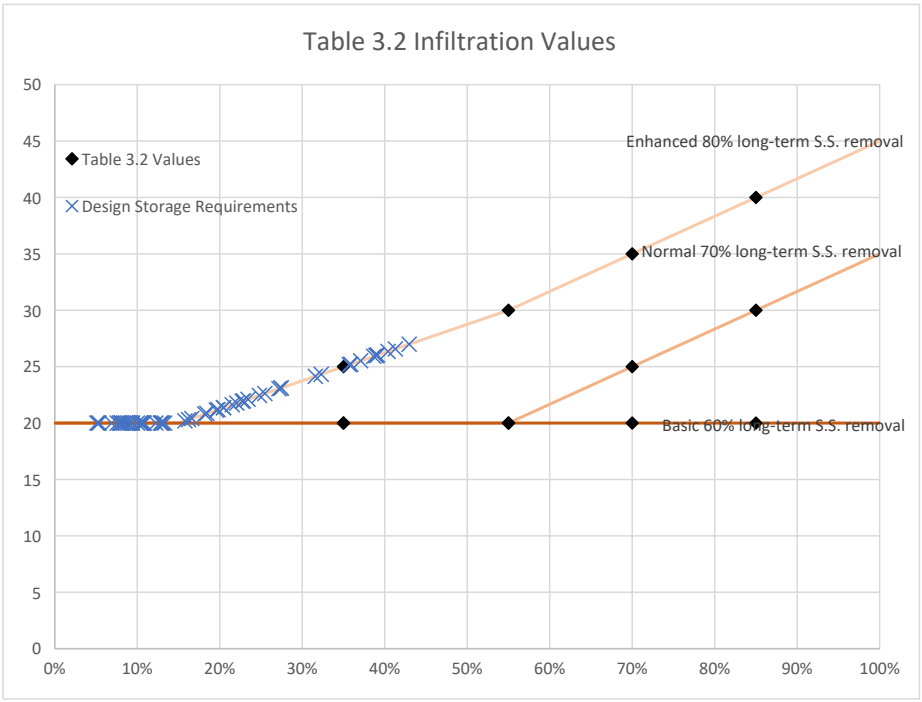


Table 1: Water Quality Storage Requirements					
Subcatchment Area ID	**CB ID**	**Area (ha)**	**Imperv. (%)**	**Storage Volume Requirement (m^3/ha)**	**Total Storage Volume Requirement (m^3)**
CB403-MH600	St_CB403	0.387	45%	28	10.64
RY_CB600-CB601	St_CB600	0.168	30%	25	4.19
CB601-CB602	St_CB601	0.050	54%	30	1.48
CB602-MH600	St_CB602	0.079	43%	27	2.15
CB603-CB604	St_CB603	0.277	49%	28	7.89
CB604-TC600	St_CB604	0.113	33%	25	2.82
CB605-CB606	St_CB605	0.105	37%	25	2.67
CB606-TC601	St_CB606	0.082	50%	29	2.35
CB608-CB609	St_CB608	0.079	40%	26	2.07
CB609-CBMH600	St_CB609	0.096	39%	26	2.51
CB610-CBMH600	St_CB610	0.097	40%	26	2.54
CB611-CB610	St_CB611	0.082	41%	26	2.18
CB612-CB611	St_CB612	0.100	34%	25	2.51
CB702-CB703	St_CB702	0.171	14%	25	4.29
CB706-CB707	St_CB706	0.114	42%	27	3.05
CB707-CB708	St_CB707	0.047	52%	29	1.38
CB708-TC702	St_CB708	0.061	52%	29	1.78
CB709-TC703	St_CB709	0.063	49%	28	1.78
CB710-CB711	St_CB710	0.068	59%	31	2.12
CB711-CB712	St_CB711	0.056	50%	29	1.61
CB712-OUTLET	St_CB712	0.050	52%	29	1.47
CB803-CB804	St_CB803	0.245	53%	30	7.25
CB804-CB805	St_CB804	0.042	46%	28	1.16
CB902-CB903	St_CB902	0.186	50%	29	5.34
CB903-CB904	St_CB903	0.050	55%	30	1.49
CB904-MH701	St_CB904	0.054	50%	29	1.56
CBMH600-OUTLET	St_DIMH600	0.111	37%	26	2.84
RY607-TC600	St_CB607	0.360	26%	25	9.00
CB704-CB705	St_CB704	0.260	18%	25	6.49
CB703-TC701	St_CB703	0.364	19%	25	9.09
CB701-CB702	St_CB701	0.242	20%	25	6.06
CB700-CB701	St_CB700	0.268	15%	25	6.69
RY_CB613-CB612	St_CB613	0.497	27%	25	12.41
CB705-MH700	St_CB705	0.186	24%	25	4.65
MH700-MH701	St_MH700	0.225	23%	25	5.64
CB805-MH700	St_CB805	0.109	40%	26	2.84
Total Water Quality Storage Requirement					***146***

Calculation by: ID
Reviewed by:
Date: May 18, 2023

WREN Subdivision Phase 3 and Phase 4
VILLAGE OF COBDEN
JLR No. 26783-003

Prepared by: I. Dzeparoski, P. Eng.
Checked by: D. Upton, P.Eng.

Water Quality Storage Requirements Calculation

Table 1: Morrison Drive South Side

	Swale Storage					Granular Storage above the Pipe Obvert							
Subcatchment Area Inlet	**Area (ha)**	**CB T/G Elevation (m)**	**CL Swale Elevation (m)**	**CB Height (m)**	**Available Storage (m^3)**	**Granular Depth above the Pipe Obvert (m)**	**Swale Length (m)**	**Swale Width (m)**	**Granular Envelope Cross Sectional Area (m^2/m)**	**Available Granular Storage at 40% Void Ratio (m^3)**	**Total Available Storage for Water Quality Treatment (m^3)**	**Total Storage Volume Requirement (m^3)**	**Volume Provided Check**
St_CB600	0.15	147.11	146.76	0.35	6.88	0.30	20.81	1.00	0.30	2.50	9.38	4.19	OK
St_CB601	0.05	146.84	146.52	0.32	2.00	0.30	8.98	1.00	0.30	1.08	3.08	1.48	OK
St_CB602	0.08	146.59	146.29	0.30	3.41	0.30	23.57	1.00	0.30	2.83	6.24	2.15	OK
St_CB603	0.28	146.60	146.31	0.29	6.24	0.30	42.77	1.00	0.30	5.13	11.37	7.89	OK
St_CB604	0.11	146.27	146.02	0.25	2.93	0.30	15.82	1.00	0.30	1.90	4.83	2.82	OK
St_CB605	0.11	145.70	145.40	0.30	4.81	0.30	34.21	1.00	0.30	4.10	8.91	2.67	OK
St_CB606	0.08	145.91	145.71	0.20	4.09	0.30	19.10	1.00	0.30	2.29	6.38	2.35	OK
St_CB607	0.36	145.51	145.26	0.25	13.85	0.30	42.84	1.00	0.30	5.14	18.99	9.00	OK

Table 2: Morrison Drive North Side

	Swale Storage					Granular Storage above the Pipe Obvert							
Subcatchment Area Inlet	**Area (ha)**	**CB T/G Elevation (m)**	**CL Swale Elevation (m)**	**CB Height (m)**	**Available Storage (m^3)**	**Granular Depth above the Pipe Obvert (m)**	**Swale Length (m)**	**Swale Width (m)**	**Granular Envelope Cross Sectional Area (m^2/m)**	**Available Granular Storage at 40% Void Ratio (m^3)**	**Total Available Storage for Water Quality Treatment (m^3)**	**Total Storage Volume Requirement (m^3)**	**Volume Provided Check**
St_CB700	0.20	147.22	146.87	0.35	6.90	0.30	16.20	1.00	0.30	1.94	8.84	6.69	OK
St_CB701	0.20	147.01	146.69	0.32	6.53	0.30	16.77	1.00	0.30	2.01	8.54	6.06	OK
St_CB702	0.17	146.83	146.48	0.35	4.98	0.30	16.87	1.00	0.30	2.02	7.00	4.29	OK
St_CB703	0.16	146.85	146.55	0.30	11.25	0.30	23.94	1.00	0.30	2.87	14.12	9.09	OK
St_CB704	0.19	146.48	146.13	0.35	8.11	0.30	22.99	1.00	0.30	2.76	10.87	6.49	OK
St_CB705	0.13	146.17	145.87	0.30	4.49	0.30	19.78	1.00	0.30	2.37	6.86	4.65	OK
St_MH700	0.09	146.04	145.69	0.35	11.53	0.30	26.57	1.00	0.30	3.19	14.72	5.64	OK
St_CB706	0.11	145.55	145.30	0.25	17.65	0.30	44.17	1.00	0.30	5.30	22.95	3.05	OK
St_CB707	0.05	145.53	145.28	0.25	2.49	0.30	8.99	1.00	0.30	1.08	3.57	1.38	OK
St_CB708	0.06	145.39	145.10	0.29	3.91	0.30	12.53	1.00	0.30	1.50	5.41	1.78	OK
St_CB709	0.06	145.36	145.07	0.29	3.16	0.30	6.43	1.00	0.30	0.77	3.93	1.78	OK

Table 3: Street 1 East side

	Swale Storage					Granular Storage above the Pipe Obvert							
Subcatchment Area Inlet	**Area (ha)**	**CB T/G Elevation (m)**	**CL Swale Elevation (m)**	**CB Height (m)**	**Available Storage (m^3)**	**Granular Depth above the Pipe Obvert (m)**	**Swale Length (m)**	**Swale Width (m)**	**Granular Envelope Cross Sectional Area (m^2/m)**	**Available Granular Storage at 40% Void Ratio (m^3)**	**Total Available Storage for Water Quality Treatment (m^3)**	**Total Storage Volume Requirement (m^3)**	**Volume Provided Check**
St_CB403	0.39	146.41	146.11	0.30	6.97	0.30	52.96	1.00	0.30	6.36	13.33	10.64	OK

Table 4: Street 2 Northeast Side

	Swale Storage					Granular Storage above the Pipe Obvert							
Subcatchment Area Inlet	Area (ha)	CB T/G Elevation (m)	CL Swale Elevation (m)	CB Height (m)	Available Storage (m^3)	Granular Depth above the Pipe Obvert (m)	Swale Length (m)	Swale Width (m)	Granular Envelope Cross Sectional Area (m^2/m)	Available Granular Storage at 40% Void Ratio (m^3)	Total Available Storage for Water Quality Treatment (m^3)	Total Storage Volume Requirement (m^3)	Volume Provided Check
St_CB803	0.25	146.27	145.97	0.30	5.50	0.30	16.45	1.00	0.30	1.97	7.47	7.25	OK
St_CB804	0.04	146.14	145.89	0.25	1.87	0.30	6.63	1.00	0.30	0.80	2.67	1.16	OK
St_CB805	0.11	145.94	145.74	0.20	1.79	0.30	13.90	1.00	0.30	1.67	3.46	2.84	OK

Table 5: Street 2 Northwest Side

	Swale Storage					Granular Storage above the Pipe Obvert							
Subcatchment Area Inlet	Area (ha)	CB T/G Elevation (m)	CL Swale Elevation (m)	CB Height (m)	Available Storage (m^3)	Granular Depth above the Pipe Obvert (m)	Swale Length (m)	Swale Width (m)	Granular Envelope Cross Sectional Area (m^2/m)	Available Granular Storage at 40% Void Ratio (m^3)	Total Available Storage for Water Quality Treatment (m^3)	Total Storage Volume Requirement (m^3)	Volume Provided Check
St_CB902	0.19	146.26	145.96	0.30	4.32	0.30	12.71	1.00	0.30	1.52	5.84	5.34	OK
St_CB903	0.05	146.12	145.87	0.25	1.71	0.30	8.62	1.00	0.30	1.03	2.74	1.49	OK
St_CB904	0.05	146.03	145.73	0.30	3.47	0.30	11.41	1.00	0.30	1.37	4.84	1.56	OK

Table 6: Wren Drive East Side

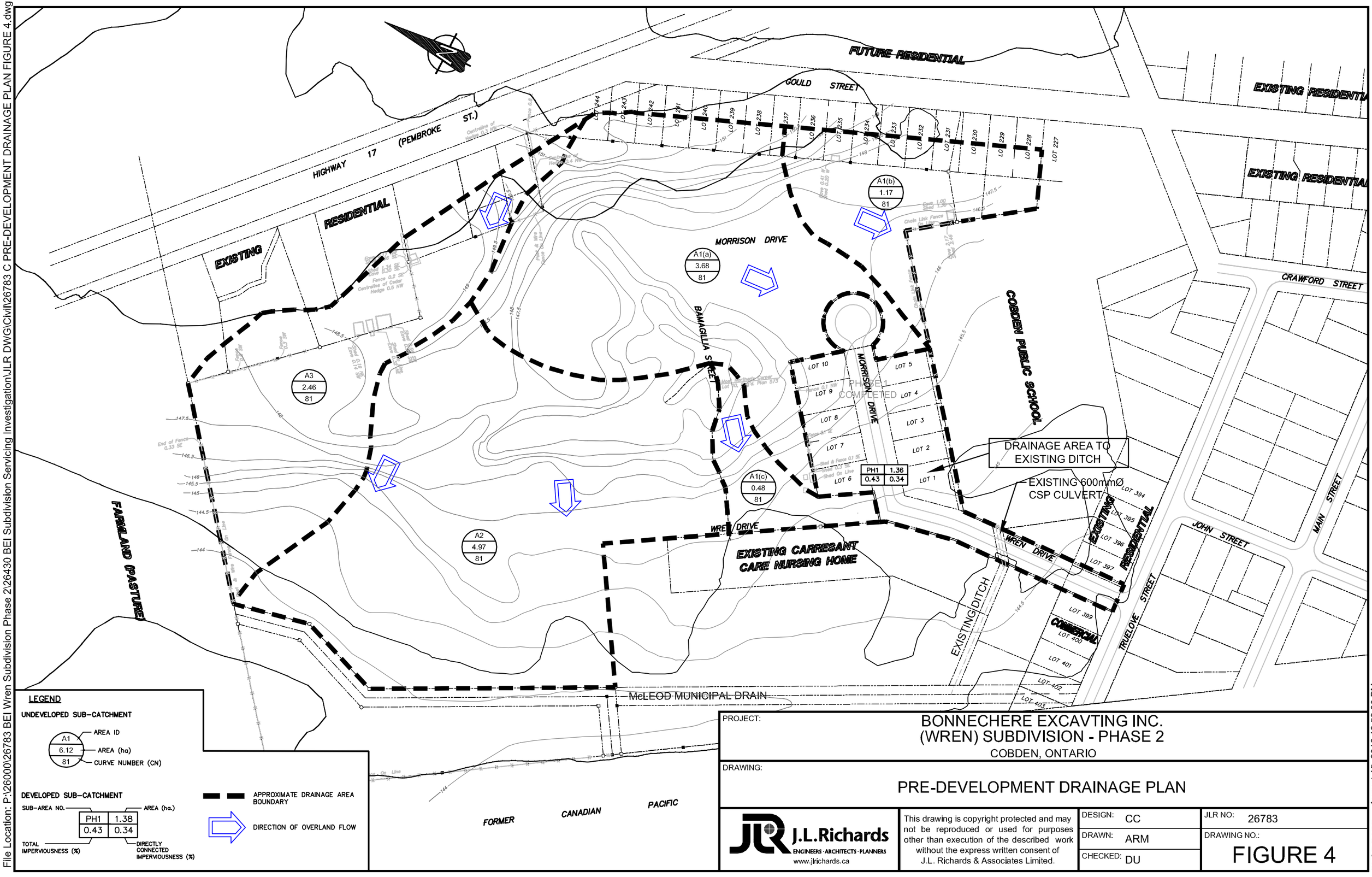
	Swale Storage					Granular Storage above the Pipe Obvert							
Subcatchment Area Inlet	Area (ha)	CB T/G Elevation (m)	CL Swale Elevation (m)	CB Height (m)	Available Storage (m^3)	Granular Depth above the Pipe Obvert (m)	Swale Length (m)	Swale Width (m)	Granular Envelope Cross Sectional Area (m^2/m)	Available Granular Storage at 40% Void Ratio (m^3)	Total Available Storage for Water Quality Treatment (m^3)	Total Storage Volume Requirement (m^3)	Volume Provided Check
St_CB608	0.08	145.41	145.16	0.25	2.86	0.30	3.87	1.00	0.30	0.46	3.32	2.07	OK
St_CB609	0.10	145.23	145.03	0.20	3.24	0.30	10.72	1.00	0.30	1.29	4.53	2.51	OK
St_DIMH600	0.11	145.09	144.79	0.30	9.47	0.30	17.58	1.00	0.30	2.11	11.58	2.84	OK
St_CB613	0.22	145.18	144.93	0.25	12.37	0.30	21.14	1.00	0.30	2.54	14.91	12.41	OK
St_CB612	0.10	145.07	144.88	0.19	3.58	0.30	11.89	1.00	0.30	1.43	5.01	2.51	OK
St_CB611	0.08	145.09	144.85	0.24	2.65	0.30	3.49	1.00	0.30	0.42	3.07	2.18	OK
St_CB610	0.10	145.01	144.81	0.20	4.08	0.30	10.14	1.00	0.30	1.22	5.30	2.54	OK

Table 7: Wren Drive West Side

	Swale Storage					Granular Storage above the Pipe Obvert							
Subcatchment Area Inlet	Area (ha)	CB T/G Elevation (m)	CL Swale Elevation (m)	CB Height (m)	Available Storage (m^3)	Granular Depth above the Pipe Obvert (m)	Swale Length (m)	Swale Width (m)	Granular Envelope Cross Sectional Area (m^2/m)	Available Granular Storage (m^3)	Total Available Storage for Water Quality Treatment (m^3)	Total Storage Volume Requirement (m^3)	
St_CB710	0.07	145.33	145.04	0.29	2.98	0.30	10.40	1.00	0.30	1.25	4.23	2.12	OK
St_CB711	0.06	145.18	145.01	0.17	1.99	0.30	9.66	1.00	0.30	1.16	3.15	1.61	OK
St_CB712	0.05	145.22	145.02	0.20	3.26	0.30	10.00	1.00	0.30	1.20	4.46	1.47	OK
Total:	***4.59***				***197***						***273***	***146***	

Appendix H

SWMHYMO Modeling Files
Pre & Post Development
Flows per Phase 2



LEGEND

UNDEVELOPED SUB-CATCHMENT

A1 — AREA ID
6.12 — AREA (ha)
81 — CURVE NUMBER (CN)

DEVELOPED SUB-CATCHMENT

SUB-AREA NO. — AREA (ha.)

PH1	1.38
0.43	0.34

TOTAL IMPERVIOUSNESS (%) — DIRECTLY CONNECTED IMPERVIOUSNESS (%)

APPROXIMATE DRAINAGE AREA BOUNDARY

DIRECTION OF OVERLAND FLOW

PROJECT:

BONNECHERE EXCAVTING INC.
(WREN) SUBDIVISION - PHASE 2
COBDEN, ONTARIO

DRAWING:

PRE-DEVELOPMENT DRAINAGE PLAN

J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS
www.jlrichards.ca

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DESIGN: CC
DRAWN: ARM
CHECKED: DU

JLR NO: 26783

DRAWING NO.: FIGURE 4

File Location: P:\26000\26783 BEI Wren Subdivision Phase 2\26430 BEI Subdivision Servicing Investigation\JLR DWG\Civil\26783 C PRE-DEVELOPMENT DRAINAGE PLAN FIGURE 4.dwg

PLOT DATE: August 15, 2016 12:52:30 PM

```
2     Metric units
*#**************************************************************************
*#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
*#  Date        : 09-August-2016
*#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
*#  Company     : J. L. Richards & Associates Limited
*#  License #   :  4418403
*#**************************************************************************
*
*##########################################################################
*#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
*#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
*#BEI WREN SUBDIVISION AREA                                                 #
*#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
*#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
*#3HR CHICAGO STORM)                                                        #
*#HISTORICAL STORMS: JULY 1, 1979                                           #
*##########################################################################
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                   ["4HR25-15.STM"] <--storm filename, one per line for NSTORM time
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READ STORM          STORM_FILENAME=["STORM.001"]
*%------------------|-------------------------------------------------------|
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*Runoff from undeveloped area draining towards the existing residential area *
*Wren Subdivision Phase 1                                                  *
*Sub-Area A1a                                                              *
**************************************************************************
*
CALIB NASHYD        ID=[1], NHYD=["A1a"], DT=[1]min, AREA=[3.68](ha),
                    DWF=[0](cms),  CN/C=[81], IA=[9.2](mm),
                    N=[3], TP=[0.58]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------|
*
************************************
*Exisitng Residential Area          *
*Wren Subdivision Phase 1           *
*Sub-Area PH1                       *
************************************
*
CALIB STANDHYD      ID=[2], NHYD=["PH1"], DT=[1](min), AREA=[1.38](ha),
                    XIMP=[0.343], TIMP=[0.429], DWF=[0](cms), LOSS=[1],
                    Horton: Fo=[76.2](mm/hr), Fc=[2.4](mm/hr),
                            DCAY=[2](/hr), F=[0](mm),
                    Pervious   surfaces: IAper=[4.67](mm), SLPP=[2](%),
                                         LGP=[40](m), MNP=[0.25], SCP=[0](min),
                    Impervious surfaces: IAimp=[1.57](mm), SLPI=[1.5](%),
                                         LGI=[295](m), MNI=[0.013], SCI=[0](min),
                    RAINFALL=[ ,  ,  ,  , ](mm/hr) ,  END=-1
*%------------------|-------------------------------------------------------|
*
************************************************
*TOTAL FLOW THROUGH EXISITNG RESIDENTIAL AREA  *
*WREN SUBDIVISION PHASE 1                      *
************************************************
*
ADD HYD             IDsum=[3], NHYD=["HYD-1"], IDs to add=[1+2]
*%------------------|-------------------------------------------------------|
*
**************************************************************************
*Runoff from undeveloped area draining towards the Cobden Public School      *
*Sub-Area A1b                                                              *
**************************************************************************
*
CALIB NASHYD        ID=[1], NHYD=["A1b"], DT=[1]min, AREA=[1.17](ha),
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                    N=[3], TP=[0.1]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------|
*
**************************************************************************
*Runoff from undeveloped area draining towards Wren Drive adjacent to        *
*exisitng Carresant Care Nursing Home                                       *
*Sub-Area A1c                                                              *
**************************************************************************
*
CALIB NASHYD        ID=[2], NHYD=["A1C"], DT=[1]min, AREA=[0.48](ha),
                    DWF=[0](cms),  CN/C=[81], IA=[9.2](mm),
                    N=[3], TP=[0.1]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------|
*
****************************************************
*TOTAL FLOW FROM THE SOUTH EAST AREA OF THE SITE   *
****************************************************
*
ADD HYD             IDsum=[4], NHYD=["HYD-2"], IDs to add=[1+2+3]
*%------------------|-------------------------------------------------------|
*
*
SAVE HYD            ID=[4],   # OF PCYCLES=[-1],  ICASEsh=[-1]
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                    HYD_COMMENT=["PHASE1&A1a&A1b&A1c"]
*%------------------|-------------------------------------------------------|
*
************************************
*Sub-Area A2                       *
************************************
*
CALIB NASHYD        ID=[1], NHYD=["A2"], DT=[1]min, AREA=[4.97](ha),
                    DWF=[0](cms),  CN/C=[81], IA=[9.2](mm),
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*%------------------|-------------------------------------------------------|
*
************************************
*Sub-Area A3                       *
************************************
*
CALIB NASHYD        ID=[2], NHYD=["A3"], DT=[1]min, AREA=[2.46](ha),
                    DWF=[0](cms),  CN/C=[81], IA=[9.2](mm),
                    N=[3], TP=[0.38]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------|
*
************************************************
*TOTAL FLOW FROM NORTH WEST AREA OF THE SITE   *
************************************************
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*%------------------|-------------------------------------------------------|
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                    HYD_COMMENT=["A2&A3"]
*%------------------|-------------------------------------------------------|
*
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*TOTAL PRE-DEVELOPMENT FLOW FROM THE SITE AREA   *
************************************************
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*%------------------|-------------------------------------------------------|
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*12hr SCS Storm
****************************************
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****************************************
*24hr SCS Storm
****************************************
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*Historical Storm - August 8, 1996
*
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[996]
                    "AUG8-96.stm"
*

FINISH
```

```
================================================================================
   SSSSS  W   W  M   M  H   H  Y   Y  M   M    OOO        999    999    =========
   S      W W W  MM MM  H   H   Y Y   MM MM   O   O      9   9  9   9
   SSSSS  W W W  M M M  HHHHH    Y    M M M   O   O  ##  9   9  9   9   Ver  4.05
       S   W W   M   M  H   H    Y    M   M   O   O       9999   9999   Sept 2011
   SSSSS   W W   M   M  H   H    Y    M   M    OOO            9      9   =========
                                                          9   9  9   9   # 4418403
        StormWater Management HYdrologic Model             999    999    =========

 ********************************************************************************
 ***************************** SWMHYMO Ver/4.05  ********************************
 *********  A single event and continuous hydrologic simulation model  *********
 *********     based on the principles of HYMO and its successors      *********
 *********                OTTHYMO-83 and OTTHYMO-89.                   *********
 ********************************************************************************
 ********* Distributed by:  J.F. Sabourin and Associates Inc.           *********
 *********                  Ottawa,  Ontario: (613) 836-3884            *********
 *********                  Gatineau, Quebec: (819) 243-6858            *********
 *********                  E-Mail: swmhymo@jfsa.Com                    *********
 ********************************************************************************

 +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
 +++++++++ Licensed user: J. L. Richards & Associates Limited          +++++++++
 +++++++++                Ottawa              SERIAL#:4418403         +++++++++
 +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

 ********************************************************************************
 *********           ++++++ PROGRAM ARRAY DIMENSIONS ++++++             *********
 *********           Maximum value for ID numbers  :      10           *********
 *********           Max. number of rainfall points: 105408            *********
 *********           Max. number of flow points    : 105408            *********
 ********************************************************************************

 ***** DESCRIPTION SUMMARY TABLE HEADERS (units depend on METOUT in START) *****
 *****------------------------------------------------------------------------*****
 *****     ID:  Hydrograph IDentification numbers, (1-10).                    *****
 *****   NHYD:  Hydrograph reference numbers, (6 digits or characters).       *****
 *****   AREA:  Drainage area associated with hydrograph, (ac.) or (ha.).     *****
 ***** QPEAK:  Peak flow of simulated hydrograph, (ft^3/s) or (m^3/s).        *****
 ***** TpeakDate hh:mm is the date and time of the peak flow.                 *****
 *****  R.V.:  Runoff Volume of simulated hydrograph, (in) or (mm).           *****
 *****  R.C.:  Runoff Coefficient of simulated hydrograph, (ratio).           *****
 *****     *:  see WARNING or NOTE message printed at end of run.             *****
 *****    **:  see  ERROR  message printed at end of run.                     *****
 ********************************************************************************
 ********************************************************************************

::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

 ********************************************************************************

 **********************   S U M M A R Y   O U T P U T   **********************
 ********************************************************************************
 *         DATE: 2022-07-26     TIME: 11:04:33     RUN COUNTER: 000099          *
 ********************************************************************************
 * Input   filename: C:\SWMHYMO\26783PRD.dat                                    *
 * Output  filename: C:\SWMHYMO\26783PRD.out                                    *
 * Summary filename: C:\SWMHYMO\26783PRD.sum                                    *
 * User comments:                                                               *
 * 1:                                                                           *
 * 2:                                                                           *
 * 3:                                                                           *
 ********************************************************************************


#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*******************************************************************************
################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR      #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                         #
#HISTORICAL STORMS: JULY 1, 1979                                            #
################################################################################
 RUN:COMMAND#
 001:0001------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  =   1 ]
 001:0002------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=   4.00:PTOT=  25.00]
 001:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1a            3.68     .016 No_date    2:10    3.31 .132
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 001:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:PH1            1.38     .054 No_date    1:16    8.04 .322
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 001:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1a            3.68     .016 No_date    2:10    3.31  n/a
                      + 02:PH1            1.38     .054 No_date    1:16    8.04  n/a
      [DT= 1.00]  SUM=  03:HYD-1          5.06     .054 No_date    1:16    4.60  n/a
 001:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1b            1.17     .011 No_date    1:20    3.31 .132
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 001:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1C             .48     .005 No_date    1:20    3.31 .132
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 001:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1b            1.17     .011 No_date    1:20    3.31  n/a
                      + 02:A1C             .48     .005 No_date    1:20    3.31  n/a
                      + 03:HYD-1          5.06     .054 No_date    1:16    4.60  n/a
      [DT= 1.00]  SUM=  04:HYD-2          6.71     .068 No_date    1:17    4.28  n/a
 001:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           04:HYD-2          6.71     .068 No_date    1:17    4.28  n/a
      fname :C:\SWMHYMO\HYD-2.001
      remark:PHASE1&A1a&A1b&A1c
 001:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A2             4.97     .035 No_date    1:35    3.31 .132
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 001:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A3             2.46     .013 No_date    1:51    3.31 .132
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 001:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A2             4.97     .035 No_date    1:35    3.31  n/a
                      + 02:A3             2.46     .013 No_date    1:51    3.31  n/a
      [DT= 1.00]  SUM=  03:HYD-3          7.43     .046 No_date    1:38    3.31  n/a
 001:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           03:HYD-3          7.43     .046 No_date    1:38    3.31  n/a
      fname :C:\SWMHYMO\HYD-3.001
      remark:A2&A3
 001:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            03:HYD-3          7.43     .046 No_date    1:38    3.31  n/a
                      + 04:HYD-2          6.71     .068 No_date    1:17    4.28  n/a
      [DT= 1.00]  SUM=  05:McLEOD_D      14.14     .084 No_date    1:19    3.77  n/a
 001:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           05:McLEOD_D       14.14     .084 No_date    1:19    3.77  n/a
      fname :C:\SWMHYMO\McLEOD_D.001
      remark:TOT_PRE-DEV_Flow
  ** END OF RUN :   1

********************************************************************************




 RUN:COMMAND#
 002:0001------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  =   2 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*******************************************************************************
################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR      #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                         #
#HISTORICAL STORMS: JULY 1, 1979                                            #
################################################################################
 002:0002------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=10.00:SDUR=   3.00:PTOT=  31.86]
 002:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1a            3.68     .036 No_date    1:52    6.24 .196
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 002:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:PH1            1.38     .091 No_date    1:01   12.95 .407
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 002:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1a            3.68     .036 No_date    1:52    6.24  n/a
                      + 02:PH1            1.38     .091 No_date    1:01   12.95  n/a
      [DT= 1.00]  SUM=  03:HYD-1          5.06     .092 No_date    1:02    8.07  n/a
 002:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1b            1.17     .027 No_date    1:07    6.24 .196
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 002:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1C             .48     .011 No_date    1:07    6.24 .196
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 002:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1b            1.17     .027 No_date    1:07    6.24  n/a
                      + 02:A1C             .48     .011 No_date    1:07    6.24  n/a
                      + 03:HYD-1          5.06     .092 No_date    1:02    8.07  n/a
      [DT= 1.00]  SUM=  04:HYD-2          6.71     .124 No_date    1:03    7.62  n/a
 002:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           04:HYD-2          6.71     .124 No_date    1:03    7.62  n/a
      fname :C:\SWMHYMO\HYD-2.002
      remark:PHASE1&A1a&A1b&A1c
 002:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A2             4.97     .083 No_date    1:19    6.24 .196
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 002:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A3             2.46     .031 No_date    1:34    6.24 .196
      [CN= 81.0: N= 3.00]
```

```
     [Tp=  .38:DT= 1.00]
 002:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A2             4.97     .083 No_date    1:19    6.24  n/a
                       +  02:A3             2.46     .031 No_date    1:34    6.24  n/a
      [DT= 1.00]  SUM=  03:HYD-3           7.43     .109 No_date    1:22    6.24  n/a
 002:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:HYD-3          7.43     .109 No_date    1:22    6.24  n/a
      fname :C:\SWMHYMO\HYD-3.002
      remark:A2&A3
 002:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             03:HYD-3          7.43     .109 No_date    1:22    6.24  n/a
                       +  04:HYD-2          6.71     .124 No_date    1:03    7.62  n/a
      [DT= 1.00]  SUM=  05:McLEOD_D       14.14     .192 No_date    1:14    6.90  n/a
 002:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:McLEOD_D       14.14     .192 No_date    1:14    6.90  n/a
      fname :C:\SWMHYMO\McLEOD_D.002
      remark:TOT_PRE-DEV_Flow
  ** END OF RUN :   4

**********************************************************************************



 RUN:COMMAND#
 005:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  =   5 ]
#*********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*********************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                         #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#################################################################################
 005:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=10.00:SDUR=   3.00:PTOT=  42.51]
 005:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1a            3.68     .072 No_date    1:48   11.95 .281
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 005:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:PH1            1.38     .150 No_date    1:01   19.99 .470
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 005:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1a            3.68     .072 No_date    1:48   11.95  n/a
                       +  02:PH1            1.38     .150 No_date    1:01   19.99  n/a
      [DT= 1.00]  SUM=  03:HYD-1           5.06     .155 No_date    1:02   14.14  n/a
 005:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1b            1.17     .061 No_date    1:05   11.95 .281
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 005:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1C             .48     .025 No_date    1:05   11.95 .281
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 005:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1b            1.17     .061 No_date    1:05   11.95  n/a
                       +  02:A1C            .48     .025 No_date    1:05   11.95  n/a
                       +  03:HYD-1          5.06     .155 No_date    1:02   14.14  n/a
      [DT= 1.00]  SUM=  04:HYD-2           6.71     .235 No_date    1:03   13.60  n/a
 005:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            04:HYD-2          6.71     .235 No_date    1:03   13.60  n/a
      fname :C:\SWMHYMO\HYD-2.005
      remark:PHASE1&Ala&Alb&Alc
 005:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A2             4.97     .176 No_date    1:17   11.95 .281
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 005:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A3             2.46     .063 No_date    1:31   11.95 .281
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 005:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A2             4.97     .176 No_date    1:17   11.95  n/a
                       +  02:A3             2.46     .063 No_date    1:31   11.95  n/a
      [DT= 1.00]  SUM=  03:HYD-3           7.43     .228 No_date    1:19   11.95  n/a
 005:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:HYD-3          7.43     .228 No_date    1:19   11.95  n/a
      fname :C:\SWMHYMO\HYD-3.005
      remark:A2&A3
 005:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             03:HYD-3          7.43     .228 No_date    1:19   11.95  n/a
                       +  04:HYD-2          6.71     .235 No_date    1:03   13.60  n/a
      [DT= 1.00]  SUM=  05:McLEOD_D       14.14     .400 No_date    1:12   12.73  n/a
 005:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:McLEOD_D       14.14     .400 No_date    1:12   12.73  n/a
      fname :C:\SWMHYMO\McLEOD_D.005
      remark:TOT_PRE-DEV_Flow
  ** END OF RUN :   9

**********************************************************************************
```



```
 RUN:COMMAND#
 010:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  =  10 ]
#*********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*********************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                         #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#################################################################################
 010:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=10.00:SDUR=   3.00:PTOT=  49.50]
 010:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1a            3.68     .100 No_date    1:46   16.26 .329
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 010:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:PH1            1.38     .200 No_date    1:02   24.84 .502
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 010:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1a            3.68     .100 No_date    1:46   16.26  n/a
                       +  02:PH1            1.38     .200 No_date    1:02   24.84  n/a
      [DT= 1.00]  SUM=  03:HYD-1           5.06     .208 No_date    1:02   18.60  n/a
 010:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1b            1.17     .089 No_date    1:04   16.26 .329
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 010:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1C             .48     .036 No_date    1:04   16.26 .329
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 010:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1b            1.17     .089 No_date    1:04   16.26  n/a
                       +  02:A1C            .48     .036 No_date    1:04   16.26  n/a
                       +  03:HYD-1          5.06     .208 No_date    1:02   18.60  n/a
      [DT= 1.00]  SUM=  04:HYD-2           6.71     .328 No_date    1:03   18.03  n/a
 010:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            04:HYD-2          6.71     .328 No_date    1:03   18.03  n/a
      fname :C:\SWMHYMO\HYD-2.010
      remark:PHASE1&Ala&Alb&Alc
 010:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A2             4.97     .249 No_date    1:16   16.26 .329
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 010:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A3             2.46     .088 No_date    1:29   16.26 .329
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 010:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A2             4.97     .249 No_date    1:16   16.26  n/a
                       +  02:A3             2.46     .088 No_date    1:29   16.26  n/a
      [DT= 1.00]  SUM=  03:HYD-3           7.43     .322 No_date    1:18   16.26  n/a
 010:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:HYD-3          7.43     .322 No_date    1:18   16.26  n/a
      fname :C:\SWMHYMO\HYD-3.010
      remark:A2&A3
 010:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             03:HYD-3          7.43     .322 No_date    1:18   16.26  n/a
                       +  04:HYD-2          6.71     .328 No_date    1:03   18.03  n/a
      [DT= 1.00]  SUM=  05:McLEOD_D       14.14     .557 No_date    1:11   17.10  n/a
 010:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:McLEOD_D       14.14     .557 No_date    1:11   17.10  n/a
      fname :C:\SWMHYMO\McLEOD_D.010
      remark:TOT_PRE-DEV_Flow
  ** END OF RUN :  24

**********************************************************************************

 RUN:COMMAND#
 025:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  =  25 ]
#*********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*********************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                         #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#################################################################################
 025:0002---------------------------------------------------------------------------------
     READ STORM
```

```
     Filename = STORM.001
     Comment  =
     [SDT=10.00:SDUR=   3.00:PTOT=  58.23]
025:0003--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1a            3.68     .139 No_date    1:44   22.13 .380
     [CN= 81.0: N= 3.00]
     [Tp=  .58:DT= 1.00]
025:0004--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:PH1            1.38     .265 No_date    1:02   31.63 .543
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
025:0005--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1a            3.68     .139 No_date    1:44   22.13  n/a
                     + 02:PH1            1.38     .265 No_date    1:02   31.63  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .278 No_date    1:02   24.72  n/a
025:0006--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1b            1.17     .128 No_date    1:04   22.13 .380
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
025:0007--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A1C             .48     .052 No_date    1:04   22.13 .380
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
025:0008--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1b            1.17     .128 No_date    1:04   22.13  n/a
                     + 02:A1C             .48     .052 No_date    1:04   22.13  n/a
                     + 03:HYD-1          5.06     .278 No_date    1:02   24.72  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .454 No_date    1:03   24.08  n/a
025:0009--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:HYD-2          6.71     .454 No_date    1:03   24.08  n/a
     fname :C:\SWMHYMO\HYD-2.025
     remark:PHASE1&A1a&A1b&A1c
025:0010--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2             4.97     .353 No_date    1:15   22.13 .380
     [CN= 81.0: N= 3.00]
     [Tp=  .22:DT= 1.00]
025:0011--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A3             2.46     .124 No_date    1:28   22.13 .380
     [CN= 81.0: N= 3.00]
     [Tp=  .38:DT= 1.00]
025:0012--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2             4.97     .353 No_date    1:15   22.13  n/a
                     + 02:A3             2.46     .124 No_date    1:28   22.13  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43     .455 No_date    1:17   22.13  n/a
025:0013--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           03:HYD-3          7.43     .455 No_date    1:17   22.13  n/a
     fname :C:\SWMHYMO\HYD-3.025
     remark:A2&A3
025:0014--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            03:HYD-3          7.43     .455 No_date    1:17   22.13  n/a
                     + 04:HYD-2          6.71     .454 No_date    1:03   24.08  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D      14.14     .780 No_date    1:11   23.06  n/a
025:0015--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:McLEOD_D       14.14     .780 No_date    1:11   23.06  n/a
     fname :C:\SWMHYMO\McLEOD_D.025
     remark:TOT_PRE-DEV_Flow
 ** END OF RUN :  49

*******************************************************************************




 RUN:COMMAND#
 050:0001-------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  =  50 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*******************************************************************************
###############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
###############################################################################
 050:0002-------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=10.00:SDUR=   3.00:PTOT=  64.81]
050:0003--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1a            3.68     .171 No_date    1:44   26.84 .414
     [CN= 81.0: N= 3.00]
     [Tp=  .58:DT= 1.00]
050:0004--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:PH1            1.38     .321 No_date    1:02   37.63 .581
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
050:0005--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1a            3.68     .171 No_date    1:44   26.84  n/a
                     + 02:PH1            1.38     .321 No_date    1:02   37.63  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .339 No_date    1:02   29.78  n/a
050:0006--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1b            1.17     .160 No_date    1:04   26.84 .414
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
050:0007--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A1C             .48     .065 No_date    1:04   26.84 .414
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
050:0008--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1b            1.17     .160 No_date    1:04   26.84  n/a
                     + 02:A1C             .48     .065 No_date    1:04   26.84  n/a
                     + 03:HYD-1          5.06     .339 No_date    1:02   29.78  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .559 No_date    1:03   29.06  n/a
050:0009--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:HYD-2          6.71     .559 No_date    1:03   29.06  n/a
     fname :C:\SWMHYMO\HYD-2.050
     remark:PHASE1&A1a&A1b&A1c
050:0010--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2             4.97     .437 No_date    1:15   26.84 .414
     [CN= 81.0: N= 3.00]
     [Tp=  .22:DT= 1.00]
050:0011--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A3             2.46     .153 No_date    1:28   26.84 .414
     [CN= 81.0: N= 3.00]
     [Tp=  .38:DT= 1.00]
050:0012--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2             4.97     .437 No_date    1:15   26.84  n/a
                     + 02:A3             2.46     .153 No_date    1:28   26.84  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43     .564 No_date    1:17   26.84  n/a
050:0013--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           03:HYD-3          7.43     .564 No_date    1:17   26.84  n/a
     fname :C:\SWMHYMO\HYD-3.050
     remark:A2&A3
050:0014--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            03:HYD-3          7.43     .564 No_date    1:17   26.84  n/a
                     + 04:HYD-2          6.71     .559 No_date    1:03   29.06  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D      14.14     .957 No_date    1:11   27.90  n/a
050:0015--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:McLEOD_D       14.14     .957 No_date    1:11   27.90  n/a
     fname :C:\SWMHYMO\McLEOD_D.050
     remark:TOT_PRE-DEV_Flow
 ** END OF RUN :  99

*******************************************************************************




 RUN:COMMAND#
 100:0001-------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 100 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*******************************************************************************
###############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
###############################################################################
 100:0002-------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=10.00:SDUR=   3.00:PTOT=  71.66]
100:0003--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1a            3.68     .205 No_date    1:43   31.97 .446
     [CN= 81.0: N= 3.00]
     [Tp=  .58:DT= 1.00]
100:0004--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:PH1            1.38     .377 No_date    1:01   44.39 .619
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
100:0005--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1a            3.68     .205 No_date    1:43   31.97  n/a
                     + 02:PH1            1.38     .377 No_date    1:01   44.39  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .396 No_date    1:01   35.36  n/a
100:0006--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1b            1.17     .194 No_date    1:04   31.97 .446
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
100:0007--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A1C             .48     .080 No_date    1:04   31.97 .446
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
100:0008--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1b            1.17     .194 No_date    1:04   31.97  n/a
                     + 02:A1C             .48     .080 No_date    1:04   31.97  n/a
                     + 03:HYD-1          5.06     .396 No_date    1:01   35.36  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .658 No_date    1:02   34.52  n/a
100:0009--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:HYD-2          6.71     .658 No_date    1:02   34.52  n/a
     fname :C:\SWMHYMO\HYD-2.100
     remark:PHASE1&A1a&A1b&A1c
100:0010--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2             4.97     .529 No_date    1:14   31.97 .446
     [CN= 81.0: N= 3.00]
     [Tp=  .22:DT= 1.00]
100:0011--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A3             2.46     .184 No_date    1:27   31.97 .446
     [CN= 81.0: N= 3.00]
     [Tp=  .38:DT= 1.00]
100:0012--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2             4.97     .529 No_date    1:14   31.97  n/a
                     + 02:A3             2.46     .184 No_date    1:27   31.97  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43     .681 No_date    1:16   31.97  n/a
```

```
100:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:HYD-3          7.43     .681 No_date    1:16   31.97  n/a
     fname :C:\SWMHYMO\HYD-3.100
     remark:A2&A3
100:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:HYD-3          7.43     .681 No_date    1:16   31.97  n/a
                      + 04:HYD-2          6.71     .658 No_date    1:02   34.52  n/a
      [DT= 1.00]  SUM=  05:McLEOD_D      14.14    1.145 No_date    1:11   33.18  n/a
100:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:McLEOD_D      14.14    1.145 No_date    1:11   33.18  n/a
     fname :C:\SWMHYMO\McLEOD_D.I00
     remark:TOT_PRE-DEV_Flow
  ** END OF RUN : 119

*******************************************************************************



 RUN:COMMAND#
 120:0001---------------------------------------------------------------------------
    START
      [TZERO =    .00 hrs on       0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 120 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   : 4418403
#*******************************************************************************
###############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
###############################################################################
 120:0002---------------------------------------------------------------------------
    READ STORM
     Filename = STORM.001
     Comment  =
      [SDT=10.00:SDUR=   3.00:PTOT=  85.96]
 120:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1a            3.68     .282 No_date    1:42   43.22 .503
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 120:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:PH1            1.38     .499 No_date    1:01   58.50 .681
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 120:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1a            3.68     .282 No_date    1:42   43.22  n/a
                      + 02:PH1            1.38     .499 No_date    1:01   58.50  n/a
      [DT= 1.00]  SUM=  03:HYD-1          5.06     .528 No_date    1:01   47.38  n/a
 120:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1b            1.17     .270 No_date    1:03   43.22 .503
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 120:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A1C             .48     .111 No_date    1:03   43.22 .503
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 120:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1b            1.17     .270 No_date    1:03   43.22  n/a
                      + 02:A1C             .48     .111 No_date    1:03   43.22  n/a
                      + 03:HYD-1          5.06     .528 No_date    1:01   47.38  n/a
      [DT= 1.00]  SUM=  04:HYD-2          6.71     .897 No_date    1:02   46.36  n/a
 120:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:HYD-2          6.71     .897 No_date    1:02   46.36  n/a
     fname :C:\SWMHYMO\HYD-2.120
     remark:PHASE1&Ala&Alb&Alc
 120:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2             4.97     .733 No_date    1:14   43.22 .503
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 120:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A3             2.46     .254 No_date    1:26   43.22 .503
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 120:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2             4.97     .733 No_date    1:14   43.22  n/a
                      + 02:A3             2.46     .254 No_date    1:26   43.22  n/a
      [DT= 1.00]  SUM=  03:HYD-3          7.43     .944 No_date    1:16   43.22  n/a
 120:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:HYD-3          7.43     .944 No_date    1:16   43.22  n/a
     fname :C:\SWMHYMO\HYD-3.120
     remark:A2&A3
 120:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:HYD-3          7.43     .944 No_date    1:16   43.22  n/a
                      + 04:HYD-2          6.71     .897 No_date    1:02   46.36  n/a
      [DT= 1.00]  SUM=  05:McLEOD_D      14.14    1.568 No_date    1:11   44.71  n/a
 120:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:McLEOD_D      14.14    1.568 No_date    1:11   44.71  n/a
     fname :C:\SWMHYMO\McLEOD_D.I20
     remark:TOT_PRE-DEV_Flow
  ** END OF RUN : 201

*******************************************************************************



 RUN:COMMAND#
 202:0001---------------------------------------------------------------------------
    START
      [TZERO =    .00 hrs on       0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 202 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   : 4418403
#*******************************************************************************
###############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
###############################################################################
 202:0002---------------------------------------------------------------------------
    READ STORM
     Filename = STORM.001
     Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT=  43.20]
 202:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1a            3.68     .057 No_date    6:39   12.35 .286
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 202:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:PH1            1.38     .068 No_date    6:01   16.89 .391
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 202:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1a            3.68     .057 No_date    6:39   12.35  n/a
                      + 02:PH1            1.38     .068 No_date    6:01   16.89  n/a
      [DT= 1.00]  SUM=  03:HYD-1          5.06     .085 No_date    6:03   13.59  n/a
 202:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1b            1.17     .052 No_date    6:02   12.35 .286
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 202:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A1C             .48     .021 No_date    6:02   12.35 .286
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 202:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1b            1.17     .052 No_date    6:02   12.35  n/a
                      + 02:A1C             .48     .021 No_date    6:02   12.35  n/a
                      + 03:HYD-1          5.06     .085 No_date    6:03   13.59  n/a
      [DT= 1.00]  SUM=  04:HYD-2          6.71     .158 No_date    6:02   13.29  n/a
 202:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:HYD-2          6.71     .158 No_date    6:02   13.29  n/a
     fname :C:\SWMHYMO\HYD-2.202
     remark:PHASE1&Ala&Alb&Alc
 202:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2             4.97     .145 No_date    6:08   12.35 .286
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 202:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A3             2.46     .050 No_date    6:21   12.35 .286
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 202:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2             4.97     .145 No_date    6:08   12.35  n/a
                      + 02:A3             2.46     .050 No_date    6:21   12.35  n/a
      [DT= 1.00]  SUM=  03:HYD-3          7.43     .187 No_date    6:10   12.35  n/a
 202:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:HYD-3          7.43     .187 No_date    6:10   12.35  n/a
     fname :C:\SWMHYMO\HYD-3.202
     remark:A2&A3
 202:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:HYD-3          7.43     .187 No_date    6:10   12.35  n/a
                      + 04:HYD-2          6.71     .158 No_date    6:02   13.29  n/a
      [DT= 1.00]  SUM=  05:McLEOD_D      14.14     .318 No_date    6:05   12.80  n/a
 202:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:McLEOD_D      14.14     .318 No_date    6:05   12.80  n/a
     fname :C:\SWMHYMO\McLEOD_D.I02
     remark:TOT_PRE-DEV_Flow
  ** END OF RUN : 204

*******************************************************************************



 RUN:COMMAND#
 205:0001---------------------------------------------------------------------------
    START
      [TZERO =    .00 hrs on       0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 205 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   : 4418403
#*******************************************************************************
###############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
###############################################################################
 205:0002---------------------------------------------------------------------------
    READ STORM
     Filename = STORM.001
```

```
     Comment  =
     [SDT=15.00:SDUR=  12.00:PTOT=  57.60]
205:0003--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1a            3.68     .106 No_date    6:36   21.69 .377
     [CN= 81.0: N= 3.00]
     [Tp=  .58:DT= 1.00]
205:0004--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:PH1            1.38     .122 No_date    6:02   25.92 .450
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
205:0005--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1a            3.68     .106 No_date    6:36   21.69  n/a
                     +  02:PH1            1.38     .122 No_date    6:02   25.92  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .163 No_date    6:03   22.85  n/a
205:0006--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1b            1.17     .093 No_date    6:01   21.69 .377
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
205:0007--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A1C             .48     .038 No_date    6:01   21.69 .377
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
205:0008--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1b            1.17     .093 No_date    6:01   21.69  n/a
                     +  02:A1C             .48     .038 No_date    6:01   21.69  n/a
                     +  03:HYD-1          5.06     .163 No_date    6:03   22.85  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .293 No_date    6:02   22.56  n/a
205:0009--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:HYD-2          6.71     .293 No_date    6:02   22.56  n/a
     fname :C:\SWMHYMO\HYD-2.205
     remark:PHASE1&A1a&A1b&Ac
205:0010--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2             4.97     .269 No_date    6:08   21.69 .377
     [CN= 81.0: N= 3.00]
     [Tp=  .22:DT= 1.00]
205:0011--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A3             2.46     .093 No_date    6:19   21.69 .377
     [CN= 81.0: N= 3.00]
     [Tp=  .38:DT= 1.00]
205:0012--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2             4.97     .269 No_date    6:08   21.69  n/a
                     +  02:A3             2.46     .093 No_date    6:19   21.69  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43     .348 No_date    6:09   21.69  n/a
205:0013--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           03:HYD-3          7.43     .348 No_date    6:09   21.69  n/a
     fname :C:\SWMHYMO\HYD-3.205
     remark:A2&A3
205:0014--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            03:HYD-3          7.43     .348 No_date    6:09   21.69  n/a
                     +  04:HYD-2          6.71     .293 No_date    6:02   22.56  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D       14.14     .601 No_date    6:04   22.11  n/a
205:0015--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:McLEOD_D       14.14     .601 No_date    6:04   22.11  n/a
     fname :C:\SWMHYMO\McLEOD_D.Z05
     remark:TOT_PRE-DEV_Flow
  ** END OF RUN : 209

*******************************************************************************



 RUN:COMMAND#
 210:0001--------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 210 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*******************************************************************************
################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
################################################################################
 210:0002--------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT=  67.20]
 210:0003--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1a            3.68     .142 No_date    6:35   28.61 .426
     [CN= 81.0: N= 3.00]
     [Tp=  .58:DT= 1.00]
210:0004--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:PH1            1.38     .166 No_date    6:02   33.99 .506
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
210:0005--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1a            3.68     .142 No_date    6:35   28.61  n/a
                     +  02:PH1            1.38     .166 No_date    6:02   33.99  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .224 No_date    6:03   30.08  n/a
210:0006--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1b            1.17     .123 No_date    6:01   28.61 .426
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
210:0007--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A1C             .48     .051 No_date    6:01   28.61 .426
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
210:0008--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1b            1.17     .123 No_date    6:01   28.61  n/a
                     +  02:A1C             .48     .051 No_date    6:01   28.61  n/a
                     +  03:HYD-1          5.06     .224 No_date    6:03   30.08  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .396 No_date    6:02   29.72  n/a
210:0009--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:HYD-2          6.71     .396 No_date    6:02   29.72  n/a
     fname :C:\SWMHYMO\HYD-2.210
     remark:PHASE1&A1a&A1b&A1c
210:0010--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2             4.97     .360 No_date    6:07   28.61 .426
     [CN= 81.0: N= 3.00]
     [Tp=  .22:DT= 1.00]
210:0011--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A3             2.46     .125 No_date    6:19   28.61 .426
     [CN= 81.0: N= 3.00]
     [Tp=  .38:DT= 1.00]
210:0012--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2             4.97     .360 No_date    6:07   28.61  n/a
                     +  02:A3             2.46     .125 No_date    6:19   28.61  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43     .468 No_date    6:09   28.61  n/a
210:0013--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           03:HYD-3          7.43     .468 No_date    6:09   28.61  n/a
     fname :C:\SWMHYMO\HYD-3.210
     remark:A2&A3
210:0014--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            03:HYD-3          7.43     .468 No_date    6:09   28.61  n/a
                     +  04:HYD-2          6.71     .396 No_date    6:02   29.72  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D       14.14     .815 No_date    6:04   29.14  n/a
210:0015--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:McLEOD_D       14.14     .815 No_date    6:04   29.14  n/a
     fname :C:\SWMHYMO\McLEOD_D.Z10
     remark:TOT_PRE-DEV_Flow
  ** END OF RUN : 224

*******************************************************************************



 RUN:COMMAND#
 225:0001--------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 225 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*******************************************************************************
################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
################################################################################
 225:0002--------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT=  79.20]
 225:0003--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1a            3.68     .191 No_date    6:34   37.81 .477
     [CN= 81.0: N= 3.00]
     [Tp=  .58:DT= 1.00]
225:0004--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:PH1            1.38     .221 No_date    6:01   45.19 .571
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
225:0005--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1a            3.68     .191 No_date    6:34   37.81  n/a
                     +  02:PH1            1.38     .221 No_date    6:01   45.19  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .300 No_date    6:02   39.82  n/a
225:0006--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1b            1.17     .164 No_date    6:01   37.81 .477
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
225:0007--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A1C             .48     .067 No_date    6:01   37.81 .477
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
225:0008--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1b            1.17     .164 No_date    6:01   37.81  n/a
                     +  02:A1C             .48     .067 No_date    6:01   37.81  n/a
                     +  03:HYD-1          5.06     .300 No_date    6:02   39.82  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .529 No_date    6:02   39.33  n/a
225:0009--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:HYD-2          6.71     .529 No_date    6:02   39.33  n/a
     fname :C:\SWMHYMO\HYD-2.225
     remark:PHASE1&A1a&A1b&A1c
225:0010--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2             4.97     .483 No_date    6:07   37.81 .477
     [CN= 81.0: N= 3.00]
     [Tp=  .22:DT= 1.00]
225:0011--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A3             2.46     .168 No_date    6:18   37.81 .477
     [CN= 81.0: N= 3.00]
     [Tp=  .38:DT= 1.00]
225:0012--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2             4.97     .483 No_date    6:07   37.81  n/a
                     +  02:A3             2.46     .168 No_date    6:18   37.81  n/a
```

```
    [DT= 1.00]  SUM=  03:HYD-3          7.43     .628 No_date    6:09   37.81  n/a
225:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:HYD-3          7.43     .628 No_date    6:09   37.81  n/a
     fname :C:\SWMHYMO\HYD-3.225
     remark:A2&A3
225:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:HYD-3          7.43     .628 No_date    6:09   37.81  n/a
                      + 04:HYD-2          6.71     .529 No_date    6:02   39.33  n/a
    [DT= 1.00]  SUM=  05:McLEOD_D       14.14    1.088 No_date    6:04   38.53  n/a
225:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:McLEOD_D       14.14    1.088 No_date    6:04   38.53  n/a
     fname :C:\SWMHYMO\McLEOD_D.Z25
     remark:TOT_PRE-DEV_Flow
 ** END OF RUN : 249

*******************************************************************************



 RUN:COMMAND#
 250:0001---------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on       0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 250 ]
#*****************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*****************************************************************************
#############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#############################################################################
 250:0002---------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT=  87.60]
 250:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1a            3.68     .226 No_date    6:34   44.55 .509
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 250:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:PH1            1.38     .260 No_date    6:01   52.57 .600
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 250:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1a            3.68     .226 No_date    6:34   44.55  n/a
                      + 02:PH1            1.38     .260 No_date    6:01   52.57  n/a
    [DT= 1.00]  SUM=  03:HYD-1            5.06     .356 No_date    6:02   46.73  n/a
 250:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1b            1.17     .193 No_date    6:01   44.55 .509
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 250:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A1C             .48     .079 No_date    6:01   44.55 .509
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 250:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1b            1.17     .193 No_date    6:01   44.55  n/a
                      + 02:A1C             .48     .079 No_date    6:01   44.55  n/a
                      + 03:HYD-1          5.06     .356 No_date    6:02   46.73  n/a
    [DT= 1.00]  SUM=  04:HYD-2            6.71     .626 No_date    6:02   46.20  n/a
 250:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:HYD-2          6.71     .626 No_date    6:02   46.20  n/a
     fname :C:\SWMHYMO\HYD-2.250
     remark:PHASE1&Ala&Alb&Alc
 250:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2             4.97     .572 No_date    6:07   44.55 .509
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 250:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A3             2.46     .200 No_date    6:18   44.55 .509
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 250:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2             4.97     .572 No_date    6:07   44.55  n/a
                      + 02:A3             2.46     .200 No_date    6:18   44.55  n/a
    [DT= 1.00]  SUM=  03:HYD-3            7.43     .745 No_date    6:08   44.55  n/a
 250:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:HYD-3          7.43     .745 No_date    6:08   44.55  n/a
     fname :C:\SWMHYMO\HYD-3.250
     remark:A2&A3
 250:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:HYD-3          7.43     .745 No_date    6:08   44.55  n/a
                      + 04:HYD-2          6.71     .626 No_date    6:02   46.20  n/a
    [DT= 1.00]  SUM=  05:McLEOD_D       14.14    1.291 No_date    6:04   45.33  n/a
 250:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:McLEOD_D       14.14    1.291 No_date    6:04   45.33  n/a
     fname :C:\SWMHYMO\McLEOD_D.Z50
     remark:TOT_PRE-DEV_Flow
 ** END OF RUN : 299

*******************************************************************************



 RUN:COMMAND#
```

```
 300:0001---------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on       0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 300 ]
#*****************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*****************************************************************************
#############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#############################################################################
 300:0002---------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT=  96.00]
 300:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1a            3.68     .262 No_date    6:33   51.47 .536
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 300:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:PH1            1.38     .306 No_date    6:01   62.49 .651
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 300:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1a            3.68     .262 No_date    6:33   51.47  n/a
                      + 02:PH1            1.38     .306 No_date    6:01   62.49  n/a
    [DT= 1.00]  SUM=  03:HYD-1            5.06     .420 No_date    6:02   54.48  n/a
 300:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1b            1.17     .222 No_date    6:01   51.47 .536
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 300:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A1C             .48     .091 No_date    6:01   51.47 .536
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 300:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1b            1.17     .222 No_date    6:01   51.47  n/a
                      + 02:A1C             .48     .091 No_date    6:01   51.47  n/a
                      + 03:HYD-1          5.06     .420 No_date    6:02   54.48  n/a
    [DT= 1.00]  SUM=  04:HYD-2            6.71     .731 No_date    6:02   53.74  n/a
 300:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:HYD-2          6.71     .731 No_date    6:02   53.74  n/a
     fname :C:\SWMHYMO\HYD-2.300
     remark:PHASE1&Ala&Alb&Alc
 300:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2             4.97     .663 No_date    6:07   51.47 .536
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 300:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A3             2.46     .232 No_date    6:17   51.47 .536
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 300:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2             4.97     .663 No_date    6:07   51.47  n/a
                      + 02:A3             2.46     .232 No_date    6:17   51.47  n/a
    [DT= 1.00]  SUM=  03:HYD-3            7.43     .865 No_date    6:08   51.47  n/a
 300:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:HYD-3          7.43     .865 No_date    6:08   51.47  n/a
     fname :C:\SWMHYMO\HYD-3.300
     remark:A2&A3
 300:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:HYD-3          7.43     .865 No_date    6:08   51.47  n/a
                      + 04:HYD-2          6.71     .731 No_date    6:02   53.74  n/a
    [DT= 1.00]  SUM=  05:McLEOD_D       14.14    1.506 No_date    6:04   52.55  n/a
 300:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:McLEOD_D       14.14    1.506 No_date    6:04   52.55  n/a
     fname :C:\SWMHYMO\McLEOD_D.300
     remark:TOT_PRE-DEV_Flow
 ** END OF RUN : 319

*******************************************************************************



 RUN:COMMAND#
 320:0001---------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on       0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 320 ]
#*****************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*****************************************************************************
#############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#############################################################################
```

```
320:0002----------------------------------------------------------------------------
    READ STORM
     Filename = STORM.001
     Comment  =
     [SDT=15.00:SDUR=  12.00:PTOT= 115.20]
320:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1a            3.68     .348 No_date    6:33   67.86 .589
     [CN= 81.0: N= 3.00]
     [Tp=  .58:DT= 1.00]
320:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:PH1            1.38     .398 No_date    6:01   80.79 .701
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
320:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1a            3.68     .348 No_date    6:33   67.86  n/a
                     + 02:PH1            1.38     .398 No_date    6:01   80.79  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .555 No_date    6:02   71.39  n/a
320:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1b            1.17     .292 No_date    6:01   67.86 .589
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
320:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A1C             .48     .120 No_date    6:01   67.86 .589
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
320:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1b            1.17     .292 No_date    6:01   67.86  n/a
                     + 02:A1C             .48     .120 No_date    6:01   67.86  n/a
                     + 03:HYD-1          5.06     .555 No_date    6:02   71.39  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .964 No_date    6:01   70.52  n/a
320:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:HYD-2          6.71     .964 No_date    6:01   70.52  n/a
     fname :C:\SWMHYMO\HYD-2.320
     remark:PHASE1&Ala&Alb&Alc
320:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2             4.97     .878 No_date    6:07   67.86 .589
     [CN= 81.0: N= 3.00]
     [Tp=  .22:DT= 1.00]
320:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A3             2.46     .308 No_date    6:17   67.86 .589
     [CN= 81.0: N= 3.00]
     [Tp=  .38:DT= 1.00]
320:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2             4.97     .878 No_date    6:07   67.86  n/a
                     + 02:A3             2.46     .308 No_date    6:17   67.86  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43    1.149 No_date    6:08   67.86  n/a
320:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           03:HYD-3          7.43    1.149 No_date    6:08   67.86  n/a
     fname :C:\SWMHYMO\HYD-3.320
     remark:A2&A3
320:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            03:HYD-3          7.43    1.149 No_date    6:08   67.86  n/a
                     + 04:HYD-2          6.71     .964 No_date    6:01   70.52  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D      14.14    1.997 No_date    6:03   69.12  n/a
320:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:McLEOD_D       14.14    1.997 No_date    6:03   69.12  n/a
     fname :C:\SWMHYMO\McLEOD_D.320
     remark:TOT_PRE-DEV_Flow
 ** END OF RUN : 401

*******************************************************************************



 RUN:COMMAND#
 402:0001----------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN   = 402 ]
#*****************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*****************************************************************************
##############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
##############################################################################
 402:0002----------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT=  48.00]
 402:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1a            3.68     .065 No_date   12:33   15.30 .319
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 402:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:PH1            1.38     .080 No_date   12:02   19.91 .415
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 402:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1a            3.68     .065 No_date   12:33   15.30  n/a
                      + 02:PH1            1.38     .080 No_date   12:02   19.91  n/a
      [DT= 1.00]  SUM=  03:HYD-1          5.06     .106 No_date   12:03   16.56  n/a
 402:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1b            1.17     .062 No_date   12:01   15.30 .319
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 402:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1C             .48     .025 No_date   12:01   15.30 .319
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 402:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1b            1.17     .062 No_date   12:01   15.30  n/a
                      + 02:A1C             .48     .025 No_date   12:01   15.30  n/a
                      + 03:HYD-1          5.06     .106 No_date   12:03   16.56  n/a
      [DT= 1.00]  SUM=  04:HYD-2          6.71     .192 No_date   12:02   16.25  n/a
 402:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           04:HYD-2          6.71     .192 No_date   12:02   16.25  n/a
      fname :C:\SWMHYMO\HYD-2.402
      remark:PHASE1&Ala&Alb&Alc
 402:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A2             4.97     .174 No_date   12:07   15.30 .319
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 402:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A3             2.46     .059 No_date   12:18   15.30 .319
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 402:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A2             4.97     .174 No_date   12:07   15.30  n/a
                      + 02:A3             2.46     .059 No_date   12:18   15.30  n/a
      [DT= 1.00]  SUM=  03:HYD-3          7.43     .224 No_date   12:09   15.30  n/a
 402:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           03:HYD-3          7.43     .224 No_date   12:09   15.30  n/a
      fname :C:\SWMHYMO\HYD-3.402
      remark:A2&A3
 402:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            03:HYD-3          7.43     .224 No_date   12:09   15.30  n/a
                      + 04:HYD-2          6.71     .192 No_date   12:02   16.25  n/a
      [DT= 1.00]  SUM=  05:McLEOD_D      14.14     .391 No_date   12:04   15.75  n/a
 402:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           05:McLEOD_D       14.14     .391 No_date   12:04   15.75  n/a
      fname :C:\SWMHYMO\McLEOD_D.402
      remark:TOT_PRE-DEV_Flow
  ** END OF RUN : 404

*******************************************************************************



 RUN:COMMAND#
 405:0001----------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN   = 405 ]
#*****************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*****************************************************************************
##############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
##############################################################################
 405:0002----------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT=  62.40]
 405:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1a            3.68     .110 No_date   12:32   25.09 .402
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 405:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:PH1            1.38     .138 No_date   12:02   28.82 .462
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 405:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1a            3.68     .110 No_date   12:32   25.09  n/a
                      + 02:PH1            1.38     .138 No_date   12:02   28.82  n/a
      [DT= 1.00]  SUM=  03:HYD-1          5.06     .187 No_date   12:03   26.11  n/a
 405:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1b            1.17     .103 No_date   12:01   25.09 .402
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 405:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1C             .48     .042 No_date   12:01   25.09 .402
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 405:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1b            1.17     .103 No_date   12:01   25.09  n/a
                      + 02:A1C             .48     .042 No_date   12:01   25.09  n/a
                      + 03:HYD-1          5.06     .187 No_date   12:03   26.11  n/a
      [DT= 1.00]  SUM=  04:HYD-2          6.71     .330 No_date   12:02   25.86  n/a
 405:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           04:HYD-2          6.71     .330 No_date   12:02   25.86  n/a
      fname :C:\SWMHYMO\HYD-2.405
      remark:PHASE1&Ala&Alb&Alc
 405:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A2             4.97     .294 No_date   12:07   25.09 .402
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 405:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A3             2.46     .100 No_date   12:17   25.09 .402
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 405:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A2             4.97     .294 No_date   12:07   25.09  n/a
```

```
                +  02:A3              2.46     .100 No_date   12:17   25.09  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43     .381 No_date   12:08   25.09  n/a
405:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:HYD-3          7.43     .381 No_date   12:08   25.09  n/a
     fname :C:\SWMHYMO\HYD-3.405
     remark:A2&A3
405:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:HYD-3          7.43     .381 No_date   12:08   25.09  n/a
                   +  04:HYD-2          6.71     .330 No_date   12:02   25.86  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D      14.14     .672 No_date   12:04   25.46  n/a
405:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:McLEOD_D      14.14     .672 No_date   12:04   25.46  n/a
     fname :C:\SWMHYMO\McLEOD_D.405
     remark:TOT_PRE-DEV_Flow
 ** END OF RUN : 409

**********************************************************************************



RUN:COMMAND#
410:0001---------------------------------------------------------------------------------
    START
     [TZERO =    .00 hrs on        0]
     [METOUT=   2    (1=imperial, 2=metric output)]
     [NSTORM=   1 ]
     [NRUN  = 410 ]
#*********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*********************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#################################################################################
 410:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT=  72.00]
 410:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1a            3.68     .144 No_date   12:31   32.23 .448
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 410:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:PH1            1.38     .179 No_date   12:02   36.09 .501
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 410:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1a            3.68     .144 No_date   12:31   32.23  n/a
                   +  02:PH1            1.38     .179 No_date   12:02   36.09  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .246 No_date   12:03   33.28  n/a
 410:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1b            1.17     .132 No_date   12:01   32.23 .448
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 410:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A1C             .48     .054 No_date   12:01   32.23 .448
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 410:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1b            1.17     .132 No_date   12:01   32.23  n/a
                   +  02:A1C             .48     .054 No_date   12:01   32.23  n/a
                   +  03:HYD-1          5.06     .246 No_date   12:03   33.28  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .429 No_date   12:02   33.02  n/a
 410:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:HYD-2          6.71     .429 No_date   12:02   33.02  n/a
     fname :C:\SWMHYMO\HYD-2.410
     remark:PHASE1&A1a&A1b&A1c
 410:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2             4.97     .381 No_date   12:07   32.23 .448
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 410:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A3             2.46     .130 No_date   12:17   32.23 .448
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 410:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2             4.97     .381 No_date   12:07   32.23  n/a
                   +  02:A3             2.46     .130 No_date   12:17   32.23  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43     .495 No_date   12:08   32.23  n/a
 410:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:HYD-3          7.43     .495 No_date   12:08   32.23  n/a
     fname :C:\SWMHYMO\HYD-3.410
     remark:A2&A3
 410:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:HYD-3          7.43     .495 No_date   12:08   32.23  n/a
                   +  04:HYD-2          6.71     .429 No_date   12:02   33.02  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D      14.14     .876 No_date   12:04   32.60  n/a
 410:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:McLEOD_D      14.14     .876 No_date   12:04   32.60  n/a
     fname :C:\SWMHYMO\McLEOD_D.410
     remark:TOT_PRE-DEV_Flow
 ** END OF RUN : 424

**********************************************************************************



RUN:COMMAND#
```



```
 425:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 425 ]
#*********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*********************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#################################################################################
 425:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT=  84.00]
 425:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1a            3.68     .188 No_date   12:31   41.64 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 425:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:PH1            1.38     .233 No_date   12:01   46.90 .558
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 425:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1a            3.68     .188 No_date   12:31   41.64  n/a
                   +  02:PH1            1.38     .233 No_date   12:01   46.90  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .319 No_date   12:02   43.07  n/a
 425:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1b            1.17     .170 No_date   12:01   41.64 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 425:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A1C             .48     .070 No_date   12:01   41.64 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 425:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1b            1.17     .170 No_date   12:01   41.64  n/a
                   +  02:A1C             .48     .070 No_date   12:01   41.64  n/a
                   +  03:HYD-1          5.06     .319 No_date   12:02   43.07  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .557 No_date   12:02   42.72  n/a
 425:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:HYD-2          6.71     .557 No_date   12:02   42.72  n/a
     fname :C:\SWMHYMO\HYD-2.425
     remark:PHASE1&A1a&A1b&A1c
 425:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2             4.97     .496 No_date   12:07   41.64 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 425:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A3             2.46     .170 No_date   12:16   41.64 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 425:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2             4.97     .496 No_date   12:07   41.64  n/a
                   +  02:A3             2.46     .170 No_date   12:16   41.64  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43     .645 No_date   12:08   41.64  n/a
 425:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:HYD-3          7.43     .645 No_date   12:08   41.64  n/a
     fname :C:\SWMHYMO\HYD-3.425
     remark:A2&A3
 425:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:HYD-3          7.43     .645 No_date   12:08   41.64  n/a
                   +  04:HYD-2          6.71     .557 No_date   12:02   42.72  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D      14.14    1.134 No_date   12:03   42.15  n/a
 425:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:McLEOD_D      14.14    1.134 No_date   12:03   42.15  n/a
     fname :C:\SWMHYMO\McLEOD_D.425
     remark:TOT_PRE-DEV_Flow
 ** END OF RUN : 449

**********************************************************************************



RUN:COMMAND#
450:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 450 ]
#*********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*********************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                        #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#################################################################################
 450:0002---------------------------------------------------------------------------------
```

```
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT=  93.60]
 450:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1a            3.68     .224 No_date   12:30   49.47 .529
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 450:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:PH1            1.38     .278 No_date   12:01   55.13 .589
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 450:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1a            3.68     .224 No_date   12:30   49.47  n/a
                      + 02:PH1            1.38     .278 No_date   12:01   55.13  n/a
      [DT= 1.00]  SUM=  03:HYD-1          5.06     .382 No_date   12:02   51.02  n/a
 450:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1b            1.17     .202 No_date   12:01   49.47 .529
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 450:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1C             .48     .083 No_date   12:01   49.47 .529
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 450:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1b            1.17     .202 No_date   12:01   49.47  n/a
                      + 02:A1C             .48     .083 No_date   12:01   49.47  n/a
                      + 03:HYD-1          5.06     .382 No_date   12:02   51.02  n/a
      [DT= 1.00]  SUM=  04:HYD-2          6.71     .663 No_date   12:01   50.64  n/a
 450:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           04:HYD-2          6.71     .663 No_date   12:01   50.64  n/a
      fname :C:\SWMHYMO\HYD-2.450
      remark:PHASE1&A1a&A1b&A1c
 450:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A2             4.97     .591 No_date   12:07   49.47 .529
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 450:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A3             2.46     .203 No_date   12:16   49.47 .529
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 450:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A2             4.97     .591 No_date   12:07   49.47  n/a
                      + 02:A3             2.46     .203 No_date   12:16   49.47  n/a
      [DT= 1.00]  SUM=  03:HYD-3          7.43     .769 No_date   12:08   49.47  n/a
 450:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           03:HYD-3          7.43     .769 No_date   12:08   49.47  n/a
      fname :C:\SWMHYMO\HYD-3.450
      remark:A2&A3
 450:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            03:HYD-3          7.43     .769 No_date   12:08   49.47  n/a
                      + 04:HYD-2          6.71     .663 No_date   12:01   50.64  n/a
      [DT= 1.00]  SUM=  05:McLEOD_D      14.14    1.353 No_date   12:03   50.03  n/a
 450:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           05:McLEOD_D       14.14    1.353 No_date   12:03   50.03  n/a
      fname :C:\SWMHYMO\McLEOD_D.450
      remark:TOT_PRE-DEV_Flow
  ** END OF RUN : 499

*******************************************************************************



 RUN:COMMAND#
 500:0001---------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 500 ]
#*****************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*****************************************************************************
#############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                         #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#############################################################################
 500:0002---------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT= 103.20]
 500:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1a            3.68     .262 No_date   12:30   57.53 .557
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 500:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:PH1            1.38     .318 No_date   12:01   63.73 .618
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 500:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1a            3.68     .262 No_date   12:30   57.53  n/a
                      + 02:PH1            1.38     .318 No_date   12:01   63.73  n/a
      [DT= 1.00]  SUM=  03:HYD-1          5.06     .442 No_date   12:02   59.22  n/a
 500:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1b            1.17     .234 No_date   12:01   57.53 .557
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 500:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1C             .48     .096 No_date   12:01   57.53 .557
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 500:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1b            1.17     .234 No_date   12:01   57.53  n/a
                      + 02:A1C             .48     .096 No_date   12:01   57.53  n/a
                      + 03:HYD-1          5.06     .442 No_date   12:02   59.22  n/a
      [DT= 1.00]  SUM=  04:HYD-2          6.71     .769 No_date   12:01   58.81  n/a
 500:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           04:HYD-2          6.71     .769 No_date   12:01   58.81  n/a
      fname :C:\SWMHYMO\HYD-2.500
      remark:PHASE1&A1a&A1b&A1c
 500:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A2             4.97     .688 No_date   12:07   57.53 .557
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 500:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A3             2.46     .237 No_date   12:16   57.53 .557
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 500:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A2             4.97     .688 No_date   12:07   57.53  n/a
                      + 02:A3             2.46     .237 No_date   12:16   57.53  n/a
      [DT= 1.00]  SUM=  03:HYD-3          7.43     .897 No_date   12:08   57.53  n/a
 500:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           03:HYD-3          7.43     .897 No_date   12:08   57.53  n/a
      fname :C:\SWMHYMO\HYD-3.500
      remark:A2&A3
 500:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            03:HYD-3          7.43     .897 No_date   12:08   57.53  n/a
                      + 04:HYD-2          6.71     .769 No_date   12:01   58.81  n/a
      [DT= 1.00]  SUM=  05:McLEOD_D      14.14    1.575 No_date   12:03   58.14  n/a
 500:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           05:McLEOD_D       14.14    1.575 No_date   12:03   58.14  n/a
      fname :C:\SWMHYMO\McLEOD_D.500
      remark:TOT_PRE-DEV_Flow
  ** END OF RUN : 519

*******************************************************************************



 RUN:COMMAND#
 520:0001---------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 520 ]
#*****************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*****************************************************************************
#############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                         #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#############################################################################
 520:0002---------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT= 123.84]
 520:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1a            3.68     .345 No_date   12:29   75.44 .609
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 520:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:PH1            1.38     .414 No_date   12:01   82.51 .666
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 520:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1a            3.68     .345 No_date   12:29   75.44  n/a
                      + 02:PH1            1.38     .414 No_date   12:01   82.51  n/a
      [DT= 1.00]  SUM=  03:HYD-1          5.06     .580 No_date   12:02   77.36  n/a
 520:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1b            1.17     .305 No_date   12:01   75.44 .609
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 520:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1C             .48     .125 No_date   12:01   75.43 .609
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 520:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1b            1.17     .305 No_date   12:01   75.44  n/a
                      + 02:A1C             .48     .125 No_date   12:01   75.43  n/a
                      + 03:HYD-1          5.06     .580 No_date   12:02   77.36  n/a
      [DT= 1.00]  SUM=  04:HYD-2          6.71    1.007 No_date   12:01   76.89  n/a
 520:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           04:HYD-2          6.71    1.007 No_date   12:01   76.89  n/a
      fname :C:\SWMHYMO\HYD-2.520
      remark:PHASE1&A1a&A1b&A1c
 520:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A2             4.97     .903 No_date   12:06   75.44 .609
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 520:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A3             2.46     .311 No_date   12:16   75.44 .609
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 520:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A2             4.97     .903 No_date   12:06   75.44  n/a
                      + 02:A3             2.46     .311 No_date   12:16   75.44  n/a
```

```
     [DT= 1.00]  SUM=  03:HYD-3          7.43    1.178 No_date   12:08   75.44  n/a
 520:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:HYD-3        7.43    1.178 No_date   12:08   75.44  n/a
      fname :C:\SWMHYMO\HYD-3.520
      remark:A2&A3
 520:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             03:HYD-3        7.43    1.178 No_date   12:08   75.44  n/a
                       + 04:HYD-2        6.71    1.007 No_date   12:01   76.89  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D      14.14    2.069 No_date   12:03   76.13  n/a
 520:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:McLEOD_D     14.14    2.069 No_date   12:03   76.13  n/a
      fname :C:\SWMHYMO\McLEOD_D.520
      remark:TOT_PRE-DEV_Flow
  ** END OF RUN : 978

**********************************************************************************



 RUN:COMMAND#
 979:0001---------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 979 ]
#**********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#**********************************************************************************
##################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                         #
#HISTORICAL STORMS: JULY 1, 1979                                           #
##################################################################################
 979:0002---------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT= 5.00:SDUR=   3.00:PTOT=  83.99]
 979:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1a          3.68     .307 No_date    2:09   41.63 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 979:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:PH1          1.38     .273 No_date    1:33   56.82 .677
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 979:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1a          3.68     .307 No_date    2:09   41.63  n/a
                       + 02:PH1          1.38     .273 No_date    1:33   56.82  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .438 No_date    1:42   45.77  n/a
 979:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1b          1.17     .199 No_date    1:33   41.63 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 979:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1C           .48     .082 No_date    1:33   41.63 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 979:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1b          1.17     .199 No_date    1:33   41.63  n/a
                       + 02:A1C           .48     .082 No_date    1:33   41.63  n/a
                       + 03:HYD-1        5.06     .438 No_date    1:42   45.77  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .692 No_date    1:40   44.75  n/a
 979:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            04:HYD-2        6.71     .692 No_date    1:40   44.75  n/a
      fname :C:\SWMHYMO\HYD-2.979
      remark:PHASE1&Ala&Alb&Alc
 979:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A2           4.97     .685 No_date    1:44   41.63 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 979:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A3           2.46     .262 No_date    1:55   41.63 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 979:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A2           4.97     .685 No_date    1:44   41.63  n/a
                       + 02:A3           2.46     .262 No_date    1:55   41.63  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43     .920 No_date    1:45   41.63  n/a
 979:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:HYD-3        7.43     .920 No_date    1:45   41.63  n/a
      fname :C:\SWMHYMO\HYD-3.979
      remark:A2&A3
 979:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             03:HYD-3        7.43     .920 No_date    1:45   41.63  n/a
                       + 04:HYD-2        6.71     .692 No_date    1:40   44.75  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D      14.14    1.583 No_date    1:42   43.11  n/a
 979:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:McLEOD_D     14.14    1.583 No_date    1:42   43.11  n/a
      fname :C:\SWMHYMO\McLEOD_D.979
      remark:TOT_PRE-DEV_Flow
  ** END OF RUN : 987

**********************************************************************************



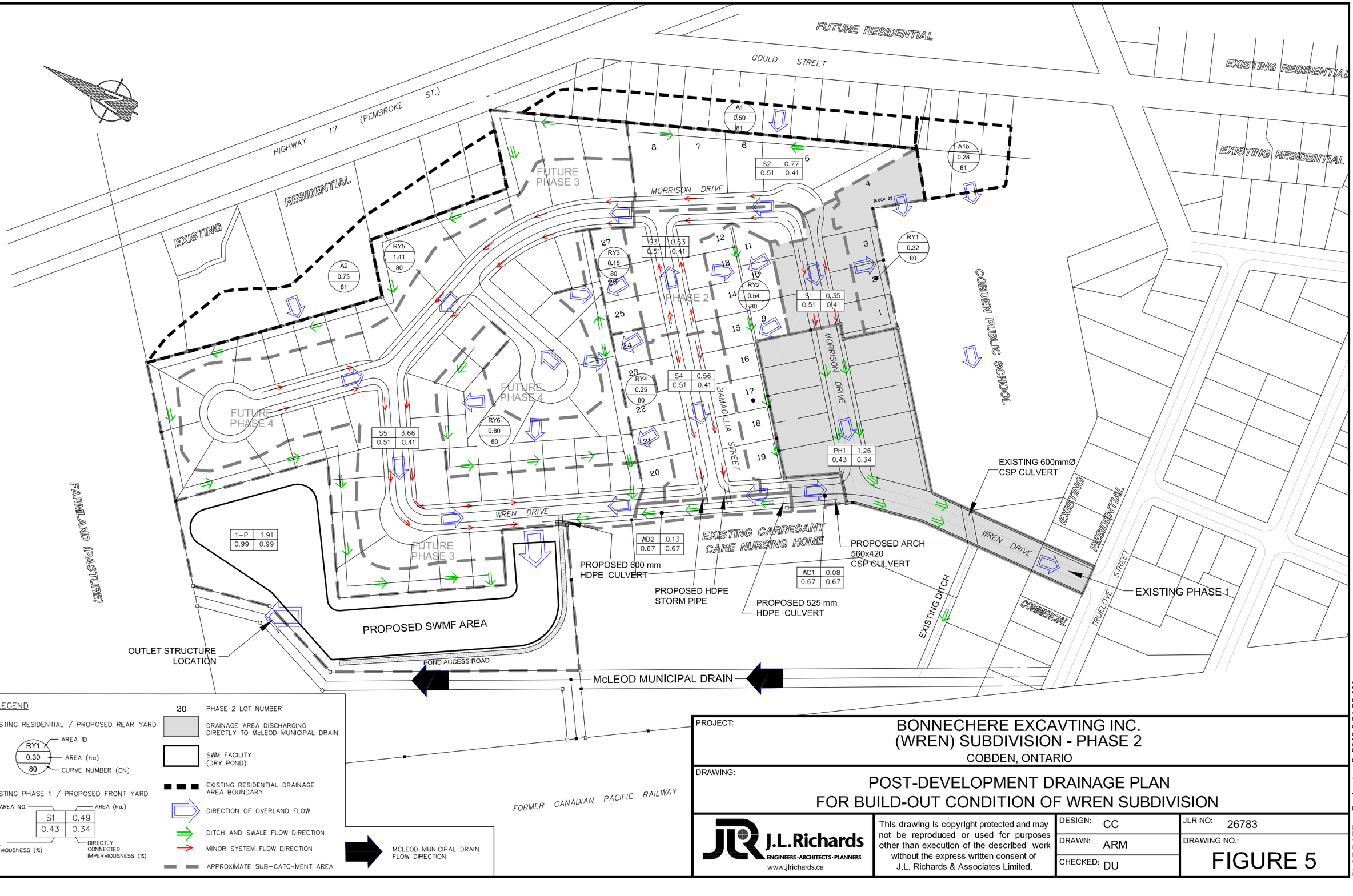
 RUN:COMMAND#
 988:0001---------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 988 ]
#**********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#**********************************************************************************
##################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                         #
#HISTORICAL STORMS: JULY 1, 1979                                           #
##################################################################################
 988:0002---------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT= 5.00:SDUR=   5.75:PTOT=  80.59]
 988:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1a          3.68     .256 No_date    2:28   38.91 .483
      [CN= 81.0: N= 3.00]
      [Tp=  .58:DT= 1.00]
 988:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:PH1          1.38     .304 No_date    2:06   53.84 .668
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 988:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1a          3.68     .256 No_date    2:28   38.91  n/a
                       + 02:PH1          1.38     .304 No_date    2:06   53.84  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .461 No_date    2:07   42.98  n/a
 988:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1b          1.17     .227 No_date    2:07   38.91 .483
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 988:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1C           .48     .093 No_date    2:07   38.91 .483
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 988:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1b          1.17     .227 No_date    2:07   38.91  n/a
                       + 02:A1C           .48     .093 No_date    2:07   38.91  n/a
                       + 03:HYD-1        5.06     .461 No_date    2:07   42.98  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .781 No_date    2:07   41.98  n/a
 988:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            04:HYD-2        6.71     .781 No_date    2:07   41.98  n/a
      fname :C:\SWMHYMO\HYD-2.988
      remark:PHASE1&Ala&Alb&Alc
 988:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A2           4.97     .650 No_date    2:12   38.91 .483
      [CN= 81.0: N= 3.00]
      [Tp=  .22:DT= 1.00]
 988:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A3           2.46     .233 No_date    2:19   38.91 .483
      [CN= 81.0: N= 3.00]
      [Tp=  .38:DT= 1.00]
 988:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A2           4.97     .650 No_date    2:12   38.91  n/a
                       + 02:A3           2.46     .233 No_date    2:19   38.91  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43     .866 No_date    2:13   38.91  n/a
 988:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:HYD-3        7.43     .866 No_date    2:13   38.91  n/a
      fname :C:\SWMHYMO\HYD-3.988
      remark:A2&A3
 988:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             03:HYD-3        7.43     .866 No_date    2:13   38.91  n/a
                       + 04:HYD-2        6.71     .781 No_date    2:07   41.98  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D      14.14    1.561 No_date    2:08   40.37  n/a
 988:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:McLEOD_D     14.14    1.561 No_date    2:08   40.37  n/a
      fname :C:\SWMHYMO\McLEOD_D.988
      remark:TOT_PRE-DEV_Flow
  ** END OF RUN : 995

**********************************************************************************



 RUN:COMMAND#
 996:0001---------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 996 ]
#**********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 09-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#**********************************************************************************
##################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS PREDEVELOPMENT FLOW THAT WILL BE USED #
#TO CONCEPTUALY SIZE SWM DRY POND TO PROVIDE QUANTITY CONTROL FROM THE      #
#BEI WREN SUBDIVISION AREA                                                  #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#3HR CHICAGO STORM; AND STRESS TEST-(CLIMATE CHANGE EVENT 20% INCREASE OF   #
#3HR CHICAGO STORM)                                                         #
#HISTORICAL STORMS: JULY 1, 1979                                           #
##################################################################################
 996:0002---------------------------------------------------------------------------
     READ STORM
```

```
     Filename = STORM.001
     Comment  =
     [SDT= 5.00:SDUR=   5.75:PTOT=  73.90]
 996:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1a            3.68     .174 No_date    3:42   33.68 .456
     [CN= 81.0: N= 3.00]
     [Tp=  .58:DT= 1.00]
 996:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:PH1            1.38     .193 No_date    1:31   46.55 .630
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious      area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious    area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 996:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1a            3.68     .174 No_date    3:42   33.68  n/a
                     +  02:PH1            1.38     .193 No_date    1:31   46.55  n/a
     [DT= 1.00]  SUM=  03:HYD-1          5.06     .251 No_date    3:17   37.19  n/a
 996:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1b            1.17     .133 No_date    3:11   33.68 .456
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
 996:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A1C             .48     .055 No_date    3:11   33.68 .456
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
 996:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1b            1.17     .133 No_date    3:11   33.68  n/a
                     +  02:A1C             .48     .055 No_date    3:11   33.68  n/a
                     +  03:HYD-1          5.06     .251 No_date    3:17   37.19  n/a
     [DT= 1.00]  SUM=  04:HYD-2          6.71     .429 No_date    3:15   36.33  n/a
 996:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:HYD-2          6.71     .429 No_date    3:15   36.33  n/a
     fname :C:\SWMHYMO\HYD-2.996
     remark:PHASE1&A1a&A1b&A1c
 996:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2             4.97     .445 No_date    3:19   33.68 .456
     [CN= 81.0: N= 3.00]
     [Tp=  .22:DT= 1.00]
 996:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A3             2.46     .157 No_date    3:30   33.68 .456
     [CN= 81.0: N= 3.00]
     [Tp=  .38:DT= 1.00]
 996:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2             4.97     .445 No_date    3:19   33.68  n/a
                     +  02:A3             2.46     .157 No_date    3:30   33.68  n/a
     [DT= 1.00]  SUM=  03:HYD-3          7.43     .582 No_date    3:21   33.68  n/a
 996:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           03:HYD-3          7.43     .582 No_date    3:21   33.68  n/a
     fname :C:\SWMHYMO\HYD-3.996
     remark:A2&A3
 996:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            03:HYD-3          7.43     .582 No_date    3:21   33.68  n/a
                     +  04:HYD-2          6.71     .429 No_date    3:15   36.33  n/a
     [DT= 1.00]  SUM=  05:McLEOD_D       14.14     .981 No_date    3:18   34.94  n/a
 996:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:McLEOD_D       14.14     .981 No_date    3:18   34.94  n/a
     fname :C:\SWMHYMO\McLEOD_D.996
     remark:TOT_PRE-DEV_Flow
 996:0002---------------------------------------------------------------------------------
     FINISH
--------------------------------------------------------------------------------
********************************************************************************
     WARNINGS / ERRORS / NOTES
     -------------------------
   Simulation ended on 2022-07-26     at 11:04:39
================================================================================
```



PROJECT:

BONNECHERE EXCAVTING INC.
(WREN) SUBDIVISION - PHASE 2

COBDEN, ONTARIO

DRAWING:

POST-DEVELOPMENT DRAINAGE PLAN
FOR BUILD-OUT CONDITION OF WREN SUBDIVISION

J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS
www.jlrichards.ca

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DESIGN: CC	JLR NO: 26783
DRAWN: ARM	DRAWING NO.: FIGURE 5
CHECKED: DU	

File Location: P:\26000\26783 BEI Wren Subdivision Phase 2\JLR DWG\Civil\Figures\26783 C POST-DEVELOPMENT DRAINAGE PLAN FIGURE 5.dwg

PLOT DATE: September 2, 2016 8:24:26 AM

```
2     Metric units
*#*************************************************************************
*#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
*#  Date        : 15-August-2016
*#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
*#  Company     : J. L. Richards & Associates Limited
*#  License #   :  4418403
*#*************************************************************************
*
*#########################################################################
*#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN    #
*#SUBDIVISION;                                                              #
*#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                 #
*#STORMRUNOFF FROM BEI WREN SUBDIVISION                                      #
*#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
*#HISTORICAL STORMS: JULY 1, 1979,                                          #
*#########################################################################
*
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[001]
                   ["4HR25-15.STM"] <--storm filename, one per line for NSTORM time
*%------------------|-------------------------------------------------------|
READ STORM          STORM_FILENAME=["STORM.001"]
*%------------------|-------------------------------------------------------|
*
*********************************************
*OUTLET TO EXISTING 600mm DIA. CSP CULVERT   *
*********************************************
*
*************************************
*Exisitng Residential Area - Phase 1*
*************************************
*
CALIB STANDHYD      ID=[1], NHYD=["PH1"], DT=[1](min), AREA=[1.26](ha),
                    XIMP=[0.343], TIMP=[0.429], DWF=[0](cms), LOSS=[1],
                    Horton: Fo=[76.2](mm/hr), Fc=[2.4](mm/hr),
                            DCAY=[2](/hr), F=[0](mm),
                    Pervious   surfaces: IAper=[4.67](mm), SLPP=[2](%),
                                         LGP=[40](m), MNP=[0.25], SCP=[0](min),
                    Impervious surfaces: IAimp=[1.57](mm), SLPI=[1.5](%),
                                         LGI=[295](m), MNI=[0.013], SCI=[0](min),
                    RAINFALL=[ ,  ,  ,  , ](mm/hr) ,  END=-1
*%------------------|-------------------------------------------------------|
*
*************************************
*Proposed Phase 2 development       *
*Sub-Area S1 - Street Area          *
*************************************
*
CALIB STANDHYD      ID=[2], NHYD=["S1"], DT=[1](min), AREA=[0.35](ha),
                    XIMP=[0.406], TIMP=[0.508], DWF=[0](cms), LOSS=[1],
                    Horton: Fo=[76.2](mm/hr), Fc=[2.4](mm/hr),
                            DCAY=[2](/hr), F=[0](mm),
                    Pervious   surfaces: IAper=[4.67](mm), SLPP=[1.7](%),
                                         LGP=[15](m), MNP=[0.25], SCP=[0](min),
                    Impervious surfaces: IAimp=[1.57](mm), SLPI=[2.6](%),
                                         LGI=[75](m), MNI=[0.013], SCI=[0](min),
                    RAINFALL=[ ,  ,  ,  , ](mm/hr) ,  END=-1
*%------------------|-------------------------------------------------------|
*
ROUTE RESERVOIR     IDout=[3],   NHYD=["S1"],  IDin=[2],
                    RDT=[1](min),
                          TABLE of ( OUTFLOW-STORAGE ) values
                                   (cms) - (ha-m)
                               0.000       0.00000
                               0.001       0.00049
                               0.079       0.00573
                                [   -1  ,  -1  ]  (max twenty pts)
                          IDovf=[4], NHYDovf=["OVF-S1"]
*%------------------|-------------------------------------------------------|
*
*********************************************************
*Flow through existing residenetial area - Phase 1 *
*********************************************************
*
ADD HYD             IDsum=[5], NHYD=["HYD-1"], IDs to add=[1+3+4]
*%------------------|-------------------------------------------------------|
*
*************************************
*Proposed Phase 2 development       *
*Sub-Area RY1 - Rear Yard Area      *
*************************************
*
CALIB NASHYD        ID=[1], NHYD=["RY1"], DT=[1]min, AREA=[0.32](ha),
                    DWF=[0](cms),  CN/C=[80], IA=[4.67](mm),
                    N=[3], TP=[0.10]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------|
*
*************************************
*Exisitng External Area             *
*Sub-Area A1b - Undeveloped         *
*************************************
*
CALIB NASHYD        ID=[2], NHYD=["A1b"], DT=[1]min, AREA=[0.28](ha),
                    DWF=[0](cms),  CN/C=[81], IA=[9.2](mm),
                    N=[3], TP=[0.10]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------|
*
*****************************************************
*Flow towards the Existing Cobden School Area      *
*****************************************************
*
ADD HYD             IDsum=[4], NHYD=["HYD-2"], IDs to add=[1+2]
*%------------------|-------------------------------------------------------|
*
*************************************
*Proposed Phase 2 development       *
*Sub-Area WD1 - Wren Drive ROW      *
*************************************
*
CALIB STANDHYD      ID=[1], NHYD=["WD1"], DT=[1](min), AREA=[0.08](ha),
                    XIMP=[0.670], TIMP=[0.670], DWF=[0](cms), LOSS=[1],
                    Horton: Fo=[76.2](mm/hr), Fc=[2.4](mm/hr),
                            DCAY=[2](/hr), F=[0](mm),
                    Pervious   surfaces: IAper=[4.67](mm), SLPP=[20](%),
                                         LGP=[5](m), MNP=[0.25], SCP=[0](min),
                    Impervious surfaces: IAimp=[1.57](mm), SLPI=[5.0](%),
                                         LGI=[35](m), MNI=[0.013], SCI=[0](min),
                    RAINFALL=[ ,  ,  ,  , ](mm/hr) ,  END=-1
*%------------------|-------------------------------------------------------|
*
ADD HYD             IDsum=[8], NHYD=["HYD-3"], IDs to add=[1+4]
*%------------------|-------------------------------------------------------|
*
*********************************************
*TOTAL FLOW TO EXISTING DITCH               *
*********************************************
*
*ADD FLOW FROM PH1, S1 AND WD1
*
*
ADD HYD             IDsum=[6], NHYD=["OUT-1"], IDs to add=[5+8]
*%------------------|-------------------------------------------------------|
*
SAVE HYD            ID=[6],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["OUT-1"]
                    HYD_COMMENT=["FLOW TO EXISITNG DITCH"]
*%------------------|-------------------------------------------------------|
*
*********************************************
*FLOW TO PROPOSED SWM DRY PACILITY - PHASE 2  *
*********************************************
*
*************************************
*Exisitng undeveloped               *
*Sub-Area A1                        *
*************************************
*
CALIB NASHYD        ID=[1], NHYD=["A1"], DT=[1]min, AREA=[0.39](ha),
                    DWF=[0](cms),  CN/C=[81], IA=[9.2](mm),
                    N=[3], TP=[0.15]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------|
*
*************************************
*Proposed Phase 2 development       *
*Sub-Area S2 - Street Area          *
*************************************
*
CALIB STANDHYD      ID=[2], NHYD=["S2"], DT=[1](min), AREA=[0.77](ha),
                    XIMP=[0.406], TIMP=[0.508], DWF=[0](cms), LOSS=[1],
                    Horton: Fo=[76.2](mm/hr), Fc=[2.4](mm/hr),
                            DCAY=[2](/hr), F=[0](mm),
                    Pervious   surfaces: IAper=[4.67](mm), SLPP=[1.3](%),
                                         LGP=[85](m), MNP=[0.25], SCP=[0](min),
                    Impervious surfaces: IAimp=[1.57](mm), SLPI=[0.5](%),
                                         LGI=[116](m), MNI=[0.013], SCI=[0](min),
                    RAINFALL=[ ,  ,  ,  , ](mm/hr) ,  END=-1
*%------------------|-------------------------------------------------------|
*
ADD HYD             IDsum=[4], NHYD=["HYD-4"], IDs to add=[1+2]
*%------------------|-------------------------------------------------------|
*
ROUTE RESERVOIR     IDout=[3],   NHYD=["S2"],  IDin=[4],
                    RDT=[1](min),
                          TABLE of ( OUTFLOW-STORAGE ) values
                                   (cms) - (ha-m)
                               0.000       0.00000
                               0.001       0.00075
                               0.110       0.00481
                                [   -1  ,  -1  ]  (max twenty pts)
                          IDovf=[5], NHYDovf=["OVF-S2"]
*%------------------|-------------------------------------------------------|
*
SAVE HYD            ID=[3],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["MINS2"]
                    HYD_COMMENT=["Minor Flow to EXCB13"]
*%------------------|-------------------------------------------------------|
*
SAVE HYD            ID=[5],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["MAJS2"]
                    HYD_COMMENT=["Major Flow to CB700 "]
*%------------------|-------------------------------------------------------|
*
*************************************
*Proposed Phase 2 development       *
*Sub-Area S3 - Street Area          *
*************************************
*
CALIB STANDHYD      ID=[1], NHYD=["S3"], DT=[1](min), AREA=[0.53](ha),
                    XIMP=[0.406], TIMP=[0.508], DWF=[0](cms), LOSS=[1],
                    Horton: Fo=[76.2](mm/hr), Fc=[2.4](mm/hr),
                            DCAY=[2](/hr), F=[0](mm),
                    Pervious   surfaces: IAper=[4.67](mm), SLPP=[1.8](%),
                                         LGP=[35](m), MNP=[0.25], SCP=[0](min),
                    Impervious surfaces: IAimp=[1.57](mm), SLPI=[0.5](%),
                                         LGI=[99](m), MNI=[0.013], SCI=[0](min),
                    RAINFALL=[ ,  ,  ,  , ](mm/hr) ,  END=-1
*%------------------|-------------------------------------------------------|
*
ROUTE RESERVOIR     IDout=[2],   NHYD=["S3"],  IDin=[1],
                    RDT=[1](min),
                          TABLE of ( OUTFLOW-STORAGE ) values
                                   (cms) - (ha-m)
                               0.000       0.00000
                               0.001       0.00109
                               0.095       0.00800
                                [   -1  ,  -1  ]  (max twenty pts)
                          IDovf=[10], NHYDovf=["OVF-S3"]
*%------------------|-------------------------------------------------------|
*
SAVE HYD            ID=[2],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["MINS3"]
```

```
                    HYD_COMMENT=["Minor Flow to EXCB14 "]
*%------------------|-------------------------------------------------------------|
*
SAVE HYD            ID=[10],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["MAJS3"]
                    HYD_COMMENT=["Major Flow to CB600 "]
*%------------------|-------------------------------------------------------------|
*
ADD HYD             IDsum=[4], NHYD=["HYD-5"], IDs to add=[2+3+5+10]
*%------------------|-------------------------------------------------------------|
*
CALIB NASHYD        ID=[1], NHYD=["RY3"], DT=[1]min, AREA=[0.15](ha),
                    DWF=[0](cms),  CN/C=[80], IA=[4.67](mm),
                    N=[3], TP=[0.10]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------------|
*
ADD HYD             IDsum=[5], NHYD=["HYD-6"], IDs to add=[1+4]
*%------------------|-------------------------------------------------------------|
*
SAVE HYD            ID=[5],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["HYD-6"]
                    HYD_COMMENT=["PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4"]
*%------------------|-------------------------------------------------------------|
*
************************************
*Proposed Phase 2 development       *
*Sub-Area RY2 - Rear Yard Area      *
************************************
*
CALIB NASHYD        ID=[1], NHYD=["RY2"], DT=[1]min, AREA=[0.54](ha),
                    DWF=[0](cms),  CN/C=[80], IA=[4.67](mm),
                    N=[3], TP=[0.10]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------------|
*
************************************
*Proposed Phase 2 development       *
*Sub-Area S4 - Street Area          *
************************************
*
CALIB STANDHYD      ID=[2], NHYD=["S4"], DT=[1](min), AREA=[0.56](ha),
                    XIMP=[0.406], TIMP=[0.508], DWF=[0](cms), LOSS=[1],
                    Horton: Fo=[76.2](mm/hr), Fc=[2.4](mm/hr),
                            DCAY=[2](/hr), F=[0](mm),
                    Pervious   surfaces: IAper=[4.67](mm), SLPP=[2.2](%),
                                         LGP=[15](m), MNP=[0.25], SCP=[0](min),
                    Impervious surfaces: IAimp=[1.57](mm), SLPI=[2.4](%),
                                         LGI=[110](m), MNI=[0.013], SCI=[0](min),
                    RAINFALL=[ ,  ,  ,  , ](mm/hr) ,  END=-1
*%------------------|-------------------------------------------------------------|
*
ROUTE RESERVOIR     IDout=[8],   NHYD=["S4"],  IDin=[2],
                    RDT=[1](min),
                          TABLE of ( OUTFLOW-STORAGE ) values
                                   (cms) - (ha-m)
                                0.000       0.00000
                                0.001       0.00143
                                0.126       0.00513
                                 [   -1  ,  -1  ]  (max twenty pts)
                          IDovf=[10], NHYDovf=["OVF-S2"]
*%------------------|-------------------------------------------------------------|
*
SAVE HYD            ID=[8],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["MINS4"]
                    HYD_COMMENT=["Minor Flow to WD ROW Ditch"]
*%------------------|-------------------------------------------------------------|
*
*
SAVE HYD            ID=[10],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["MAJS4"]
                    HYD_COMMENT=["Major Flow to CB613"]
*%------------------|-------------------------------------------------------------|
*
*******************************
*Add S4 and RY2 Flows
*******************************
*
ADD HYD             IDsum=[4], NHYD=["HYD-7"], IDs to add=[1+8+10]
*%------------------|-------------------------------------------------------------|
*
************************************
*Proposed Phase 2 development       *
*Sub-Area WD2 - Wren Drive ROW      *
************************************
*
CALIB STANDHYD      ID=[1], NHYD=["WD2"], DT=[1](min), AREA=[0.13](ha),
                    XIMP=[0.670], TIMP=[0.670], DWF=[0](cms), LOSS=[1],
                    Horton: Fo=[76.2](mm/hr), Fc=[2.4](mm/hr),
                            DCAY=[2](/hr), F=[0](mm),
                    Pervious   surfaces: IAper=[4.67](mm), SLPP=[20](%),
                                         LGP=[5](m), MNP=[0.25], SCP=[0](min),
                    Impervious surfaces: IAimp=[1.57](mm), SLPI=[0.5](%),
                                         LGI=[100](m), MNI=[0.013], SCI=[0](min),
                    RAINFALL=[ ,  ,  ,  , ](mm/hr) ,  END=-1
*%------------------|-------------------------------------------------------------|
*
*******************************
*Add flows from RY2, S4 and WD2
*******************************
*
ADD HYD             IDsum=[6], NHYD=["WD2"], IDs to add=[1+4]
*%------------------|-------------------------------------------------------------|
*
SAVE HYD            ID=[6],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["WD2"]
                    HYD_COMMENT=["Flow from RY2_S4_WD2"]
*%------------------|-------------------------------------------------------------|
*
************************************
*Proposed Phase 2 development       *
*Sub-Area RY4 - Rear Yard Area      *
************************************
*
CALIB NASHYD        ID=[3], NHYD=["RY4"], DT=[1]min, AREA=[0.25](ha),
                    DWF=[0](cms),  CN/C=[80], IA=[4.67](mm),
                    N=[3], TP=[0.10]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------------|
*
*************************
*Add RY4 Hydrograph
*************************
*
ADD HYD             IDsum=[4], NHYD=["HYD-8"], IDs to add=[3+6]
*%------------------|-------------------------------------------------------------|
*
****************************************
*TOTAL FLOW FROM PHASE 2 DEVELOPMENT *
****************************************
*
ADD HYD             IDsum=[7], NHYD=["PH2"], IDs to add=[5+4]
*%------------------|-------------------------------------------------------------|
*
SAVE HYD            ID=[7],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["PH2"]
                    HYD_COMMENT=["FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY"]
*%------------------|-------------------------------------------------------------|
*
************************************
*Exisitng undeveloped               *
*Sub-Area A2                        *
************************************
*
CALIB NASHYD        ID=[1], NHYD=["A2"], DT=[1]min, AREA=[0.73](ha),
                    DWF=[0](cms),  CN/C=[81], IA=[9.2](mm),
                    N=[3], TP=[0.15]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------------|
*
************************************
*Future Phases 3 AND 4              *
*Sub-Area RY5 - Rear Yard Area      *
************************************
*
CALIB NASHYD        ID=[2], NHYD=["RY5"], DT=[1]min, AREA=[1.41](ha),
                    DWF=[0](cms),  CN/C=[80], IA=[4.67](mm),
                    N=[3], TP=[0.10]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------------|
*
ADD HYD             IDsum=[7], NHYD=["HYD-9"], IDs to add=[1+2]
*%------------------|-------------------------------------------------------------|
*
************************************
*Future Phases 3 AND 4              *
*Sub-Area S5 - Street Area          *
************************************
*
CALIB STANDHYD      ID=[1], NHYD=["S5"], DT=[1](min), AREA=[3.66](ha),
                    XIMP=[0.406], TIMP=[0.508], DWF=[0](cms), LOSS=[1],
                    Horton: Fo=[76.2](mm/hr), Fc=[2.4](mm/hr),
                            DCAY=[2](/hr), F=[0](mm),
                    Pervious   surfaces: IAper=[4.67](mm), SLPP=[2](%),
                                         LGP=[20](m), MNP=[0.25], SCP=[0](min),
                    Impervious surfaces: IAimp=[1.57](mm), SLPI=[0.6](%),
                                         LGI=[390](m), MNI=[0.013], SCI=[0](min),
                    RAINFALL=[ ,  ,  ,  , ](mm/hr) ,  END=-1
*%------------------|-------------------------------------------------------------|
*
************************************
*Future Phases 3 AND 4              *
*Sub-Area RY6 - Rear Yard Area      *
************************************
*
CALIB NASHYD        ID=[2], NHYD=["RY6"], DT=[1]min, AREA=[0.80](ha),
                    DWF=[0](cms),  CN/C=[80], IA=[4.67](mm),
                    N=[3], TP=[0.10]hrs,
                    RAINFALL=[ ,  ,  ,  , ](mm/hr),  END=-1
*%------------------|-------------------------------------------------------------|
*
ADD HYD             IDsum=[9], NHYD=["HYD-10"], IDs to add=[1+2]
*%------------------|-------------------------------------------------------------|
*
ROUTE RESERVOIR     IDout=[8],   NHYD=["S5"],  IDin=[9],
                    RDT=[1](min),
                          TABLE of ( OUTFLOW-STORAGE ) values
                                   (cms) - (ha-m)
                                0.000       0.00000
                                0.001       0.01000
                                0.581       0.05000
                                 [   -1  ,  -1  ]  (max twenty pts)
                          IDovf=[10], NHYDovf=["OVF-S2"]
*%------------------|-------------------------------------------------------------|
*
************************************************************
*TOTAL FLOW-EXISTING RESIDENTIAL AND FUTURE PHASES 3 and 4       *
************************************************************
*
*ADD FLOW FROM A2, S5, RY5 and RY6
*
ADD HYD             IDsum=[4], NHYD=["PH3-4"], IDs to add=[7+8+10]
*%------------------|-------------------------------------------------------------|
*
SAVE HYD            ID=[4],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["PH3-4"]
                    HYD_COMMENT=["FLOW FROM PHASES 3-4 SENT TO DRY POND"]
*%------------------|-------------------------------------------------------------|
*
*****************************************************
*SUB-CATCHMENT AREA 1-P                             *
*SWM DRY POND                                       *
*****************************************************
*
CALIB STANDHYD      ID=[1], NHYD=["1-P"], DT=[1](min), AREA=[1.91](ha),
                    XIMP=[0.999], TIMP=[0.999], DWF=[0](cms), LOSS=[1],
                    Horton: Fo=[76.2](mm/hr), Fc=[2.4](mm/hr),
                            DCAY=[2](/hr), F=[0](mm),
```

```
                    Pervious   surfaces: IAper=[4.67](mm), SLPP=[0.3](%),
                                         LGP=[195](m), MNP=[0.25], SCP=[0](min),
                    Impervious surfaces: IAimp=[1.57](mm), SLPI=[1.5](%),
                                         LGI=[20](m), MNI=[0.013], SCI=[0](min),
                    RAINFALL=[ ,  ,  ,  ,](mm/hr) ,  END=-1
*%-----------------|-------------------------------------------------------------|
*
****************************************
*INFLOW IN THE PROPOSED SWM DRY POND   *
****************************************
*
READ HYD            ID=[7],  NHYD=["PH2"],
                    HYD_FILENAME=["PH2"]
*%-----------------|-------------------------------------------------------------|
*
READ HYD            ID=[4],  NHYD=["PH3-4"],
                    HYD_FILENAME=["PH3-4"]
*%-----------------|-------------------------------------------------------------|
*
ADD HYD             IDsum=[9], NHYD=["PNDINF"], IDs to add=[1+7+4]
*%-----------------|-------------------------------------------------------------|
*
ROUTE RESERVOIR     IDout=[10],   NHYD=["PNDOUT"],  IDin=[9],
                    RDT=[1](min),
                          TABLE of ( OUTFLOW-STORAGE ) values
                                   (cms) - (ha-m)
                                0.000       0.00000
                                0.002       0.00010
                                0.006       0.00064
                                0.013       0.00216
                                0.021       0.00522
                                0.032       0.01026
                                0.045       0.01847
                                0.058       0.03191
                                0.072       0.05116
                                0.087       0.07591
                                0.184       0.10567
                                0.347       0.14099
                                0.554       0.18070
                                0.790       0.22365
                                1.055       0.27050
                                1.346       0.32035
                                1.571       0.37225
                                2.001       0.42580
                                3.268       0.53567
                                4.071       0.59162
                                [   -1   ,  -1   ]   (max twenty pts)
                          IDovf=[1], NHYDovf=["OVR"]
*%-----------------|-------------------------------------------------------------|
*
SAVE HYD            ID=[10],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["PNDOUT"]
                    HYD_COMMENT=["Outflow from the proposed dry pond"]
*%-----------------|-------------------------------------------------------------|
*
****************************************
*TOTAL FLOW TO McLEOD MUNICIPAL DRAIN  *
****************************************
*
*ADD UNCONTROLED FLOW FROM PH1 (OUT-1) AND PNDOUT
*
READ HYD            ID=[6],  NHYD=["OUT-1"],
                    HYD_FILENAME=["OUT-1"]
*%-----------------|-------------------------------------------------------------|
*
ADD HYD             IDsum=[4], NHYD=["OUTMMD"], IDs to add=[6+10]
*%-----------------|-------------------------------------------------------------|
*
SAVE HYD            ID=[4],   # OF PCYCLES=[-1],  ICASEsh=[-1]
                    HYD_FILENAME=["OUTMMD"]
                    HYD_COMMENT=["TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN"]
*%-----------------|-------------------------------------------------------------|
*
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[002]
                    "2yr3h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[005]
                    "5yr3h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[010]
                    "10yr3h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[025]
                    "25yr3h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[050]
                    "50yr3h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[100]
                    "100yr3h.stm"
*
*Climate Change Scenario (20% increase over the 1:100 Year Storm)
*
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[120]
                    "STRESST.stm"
*
****************************************
*12hr SCS Storm
****************************************
*
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[202]
                    "2y12h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[205]
                    "5y12h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[210]
                    "10y12h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[225]
                    "25y12h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[250]
                    "50y12h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[300]
                    "100y12h.stm"
*
*Climate Change Scenario (20% increase over the 1:100 Year Storm)
*
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[320]
                    "120y12h.stm"
*
****************************************
*24hr SCS Storm
****************************************
*
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[402]
                    "2y24h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[405]
                    "5y24h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[410]
                    "10y24h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[425]
                    "25y24h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[450]
                    "50y24h.stm"
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[500]
                    "100y24h.stm"
*
*Climate Change Scenario (20% increase over the 1:100 Year Storm)
*
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[520]
                    "120y24h.stm"
*
********************************
*HISTORICAL STORMS
********************************
*
*Historical Storm - July 1, 1979
*
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[979]
                    "JUL1-79.stm"
*
*Historical Storm - August 4, 1988
*
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[988]
                    "AUG4-88.stm"
*
*Historical Storm - August 8, 1996
*
START               TZERO=[0.0],  METOUT=[2],  NSTORM=[1],  NRUN=[996]
                    "AUG8-96.stm"
*

FINISH
```

```
================================================================================

   SSSSS  W   W  M   M  H   H  Y   Y  M   M    OOO        999    999     =========
   S      W W W  MM MM  H   H   Y Y   MM MM   O   O      9   9  9   9    =========
   SSSSS  W W W  M M M  HHHHH    Y    M M M   O   O  ##  9   9  9   9    Ver  4.05
       S   W W   M   M  H   H    Y    M   M   O   O       9999   9999    Sept 2011
   SSSSS   W W   M   M  H   H    Y    M   M    OOO           9      9     =========
                                                          9   9  9   9    # 4418403
        StormWater Management HYdrologic Model            999    999     =========

 ********************************************************************************
 **************************** SWMHYMO Ver/4.05  *********************************
 *********  A single event and continuous hydrologic simulation model  *********
 *********     based on the principles of HYMO and its successors      *********
 *********                    OTTHYMO-83 and OTTHYMO-89.                *********
 ********************************************************************************
 ********* Distributed by:  J.F. Sabourin and Associates Inc.          *********
 *********                   Ottawa,  Ontario: (613) 836-3884          *********
 *********                   Gatineau, Quebec: (819) 243-6858          *********
 *********                   E-Mail: swmhymo@jfsa.Com                  *********
 ********************************************************************************

 ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
 +++++++++ Licensed user: J. L. Richards & Associates Limited          +++++++++
 +++++++++                Ottawa                  SERIAL#:4418403      +++++++++
 ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

 ********************************************************************************
 *********           ++++++ PROGRAM ARRAY DIMENSIONS ++++++             *********
 *********           Maximum value for ID numbers  :     10            *********
 *********           Max. number of rainfall points: 105408            *********
 *********           Max. number of flow points    : 105408            *********
 ********************************************************************************

 ***** DESCRIPTION SUMMARY TABLE HEADERS (units depend on METOUT in START) *****
 *****------------------------------------------------------------------------*****
 *****    ID:  Hydrograph IDentification numbers, (1-10).                  *****
 *****  NHYD:  Hydrograph reference numbers, (6 digits or characters).     *****
 *****  AREA:  Drainage area associated with hydrograph, (ac.) or (ha.).   *****
 ***** QPEAK:  Peak flow of simulated hydrograph, (ft^3/s) or (m^3/s).     *****
 ***** TpeakDate_hh:mm is the date and time of the peak flow.              *****
 *****  R.V.:  Runoff Volume of simulated hydrograph, (in) or (mm).        *****
 ***** R.C.:  Runoff Coefficient of simulated hydrograph, (ratio).         *****
 *****    *:  see WARNING or NOTE message printed at end of run.           *****
 *****   **:  see  ERROR  message printed at end of run.                   *****
 ********************************************************************************
 ********************************************************************************

::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

 ********************************************************************************

 **********************   S U M M A R Y   O U T P U T   **********************
 ********************************************************************************
 *         DATE: 2022-07-26      TIME: 11:11:18      RUN COUNTER: 000102        *
 ********************************************************************************
 * Input   filename: C:\SWMHYMO\26783PD.dat                                     *
 * Output  filename: C:\SWMHYMO\26783PD.out                                     *
 * Summary filename: C:\SWMHYMO\26783PD.sum                                     *
 * User comments:                                                               *
 * 1:_____________________________________________________________________      *
 * 2:_____________________________________________________________________      *
 * 3:_____________________________________________________________________      *
 ********************************************************************************


#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   : 4418403
#*******************************************************************************
##############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN    #
#SUBDIVISION;                                                                #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                  #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                       #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR      #
#HISTORICAL STORMS: JULY 1, 1979,                                            #
##############################################################################
 RUN:COMMAND#
 001:0001----------------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on       0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  =   1 ]
 001:0002----------------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=   4.00:PTOT=  25.00]
 001:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:PH1            1.26     .049 No_date    1:16    8.04 .322
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 001:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S1             .35     .018 No_date    1:15    9.60 .384
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 001:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1             .35     .018 No_date    1:15    9.60  n/a
      [RDT= 1.00] out<- 03:S1             .35     .012 No_date    1:17    9.60  n/a
           overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.1232E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 001:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:PH1            1.26     .049 No_date    1:16    8.04  n/a
                   +  03:S1               .35     .012 No_date    1:17    9.60  n/a

                   +  04:OVF-S1           .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  05:HYD-1          1.61     .061 No_date    1:16    8.38  n/a
 001:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY1            .32     .006 No_date    1:18    4.93 .197
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 001:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1b            .28     .003 No_date    1:20    3.31 .132
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 001:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY1            .32     .006 No_date    1:18    4.93  n/a
                   +  02:A1b              .28     .003 No_date    1:20    3.31  n/a
      [DT= 1.00]  SUM=  04:HYD-2          .60     .009 No_date    1:19    4.17  n/a
 001:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *   CALIB STANDHYD     01:WD1            .08     .007 No_date    1:13   15.70 .628
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 001:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:WD1            .08     .007 No_date    1:13   15.70  n/a
                   +  04:HYD-2           .60     .009 No_date    1:19    4.17  n/a
      [DT= 1.00]  SUM=  08:HYD-3          .68     .014 No_date    1:15    5.53  n/a
 001:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            05:HYD-1          1.61     .061 No_date    1:16    8.38  n/a
                   +  08:HYD-3           .68     .014 No_date    1:15    5.53  n/a
      [DT= 1.00]  SUM=  06:OUT-1          2.29     .074 No_date    1:15    7.54  n/a
 001:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           06:OUT-1          2.29     .074 No_date    1:15    7.54  n/a
      fname :C:\SWMHYMO\OUT-1.001
      remark:FLOW TO EXISITNG DITCH
 001:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1             .39     .003 No_date    1:30    3.31 .132
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 001:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S2             .77     .037 No_date    1:15    9.60 .384
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
 001:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1             .39     .003 No_date    1:30    3.31  n/a
                   +  02:S2               .77     .037 No_date    1:15    9.60  n/a
      [DT= 1.00]  SUM=  04:HYD-4          1.16     .039 No_date    1:15    7.49  n/a
 001:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4          1.16     .039 No_date    1:15    7.49  n/a
      [RDT= 1.00] out<- 03:S2             1.16     .032 No_date    1:19    7.49  n/a
           overflow <= 05:OVF-S2          .00      .000 No_date    0:00     .00  n/a
     {MxStoUsed=.1908E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 001:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           03:S2             1.16     .032 No_date    1:19    7.49  n/a
      fname :C:\SWMHYMO\MINS2.001
      remark:Minor Flow to EXCB13
 001:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *   SAVE HYD           05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
      fname :C:\SWMHYMO\MAJS2.001
      remark:Major Flow to CB700
 001:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:S3             .53     .026 No_date    1:15    9.60 .384
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
 001:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3             .53     .026 No_date    1:15    9.60  n/a
      [RDT= 1.00] out<- 02:S3             .53     .015 No_date    1:21    9.60  n/a
           overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.2083E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 001:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           02:S3             .53     .015 No_date    1:21    9.60  n/a
      fname :C:\SWMHYMO\MINS3.001
      remark:Minor Flow to EXCB14
 001:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *   SAVE HYD           10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
      fname :C:\SWMHYMO\MAJS3.001
      remark:Major Flow to CB600
 001:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            02:S3             .53     .015 No_date    1:21    9.60  n/a
                   +  03:S2               1.16     .032 No_date    1:19    7.49  n/a
                   +  05:OVF-S2           .00      .000 No_date    0:00     .00  n/a
                   +  10:OVF-S3           .00      .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  04:HYD-5          1.69     .046 No_date    1:20    8.14  n/a
 001:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY3            .15     .003 No_date    1:18    4.93 .197
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 001:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY3            .15     .003 No_date    1:18    4.93  n/a
                   +  04:HYD-5           1.69     .046 No_date    1:20    8.14  n/a
      [DT= 1.00]  SUM=  05:HYD-6          1.84     .049 No_date    1:20    7.88  n/a
 001:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           05:HYD-6          1.84     .049 No_date    1:20    7.88  n/a
      fname :C:\SWMHYMO\HYD-6.001
      remark:PH2 FLOW SENNT TO A POND THROUGH FUTURE PH3-4
 001:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY2            .54     .011 No_date    1:18    4.93 .197
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 001:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S4             .56     .029 No_date    1:15    9.60 .384
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
 001:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S4             .56     .029 No_date    1:15    9.60  n/a
      [RDT= 1.00] out<- 08:S4             .56     .022 No_date    1:17    9.60  n/a
           overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.2068E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
```

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001:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            08:S4              .56     .022 No_date    1:17    9.60  n/a
     fname :C:\SWMHYMO\MINS4.001
     remark:Minor Flow to WD ROW Ditch
001:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS4.001
     remark:Major Flow to CB613
001:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY2             .54     .011 No_date    1:18    4.93  n/a
                    +   08:S4              .56     .022 No_date    1:17    9.60  n/a
                    +   10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-7          1.10     .033 No_date    1:18    7.29  n/a
001:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  CALIB STANDHYD      01:WD2             .13     .011 No_date    1:15   15.70 .628
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
001:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD2             .13     .011 No_date    1:15   15.70  n/a
                    +   04:HYD-7          1.10     .033 No_date    1:18    7.29  n/a
     [DT= 1.00]  SUM=  06:WD2            1.23     .043 No_date    1:17    8.18  n/a
001:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:WD2             1.23     .043 No_date    1:17    8.18  n/a
     fname :C:\SWMHYMO\WD2.001
     remark:Flow from RY2_S4 WD2
001:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        03:RY4             .25     .005 No_date    1:18    4.93 .197
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
001:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:RY4             .25     .005 No_date    1:18    4.93  n/a
                    +   06:WD2            1.23     .043 No_date    1:17    8.18  n/a
     [DT= 1.00]  SUM=  04:HYD-8          1.48     .048 No_date    1:17    7.63  n/a
001:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-6           1.84     .049 No_date    1:20    7.88  n/a
                    +   04:HYD-8          1.48     .048 No_date    1:17    7.63  n/a
     [DT= 1.00]  SUM=  07:PH2            3.32     .095 No_date    1:18    7.77  n/a
001:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            07:PH2             3.32     .095 No_date    1:18    7.77  n/a
     fname :C:\SWMHYMO\PH2.001
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
001:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2              .73     .006 No_date    1:30    3.31 .132
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
001:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY5             1.41     .028 No_date    1:18    4.93 .197
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
001:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2              .73     .006 No_date    1:30    3.31  n/a
                    +   02:RY5            1.41     .028 No_date    1:18    4.93  n/a
     [DT= 1.00]  SUM=  07:HYD-9          2.14     .032 No_date    1:19    4.38  n/a
001:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S5              3.66     .144 No_date    1:18    9.60 .384
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
001:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY6             .80     .016 No_date    1:18    4.93 .197
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
001:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:S5              3.66     .144 No_date    1:18    9.60  n/a
                    +   02:RY6             .80     .016 No_date    1:18    4.93  n/a
     [DT= 1.00]  SUM=  09:HYD-10         4.46     .160 No_date    1:18    8.76  n/a
001:0047---------------ID:NH7----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10         4.46     .160 No_date    1:18    8.76  n/a
     [RDT= 1.00] out<- 08:S5             4.46     .088 No_date    1:32    8.76  n/a
           overflow <= 10:OVF-S2         .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.1600E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
001:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9           2.14     .032 No_date    1:19    4.38  n/a
                    +   08:S5              4.46     .088 No_date    1:32    8.76  n/a
                    +   10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:PH3-4          6.60     .110 No_date    1:31    7.34  n/a
001:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4           6.60     .110 No_date    1:31    7.34  n/a
     fname :C:\SWMHYMO\PH3-4.001
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
001:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  CALIB STANDHYD      01:1-P             1.91     .242 No_date    1:15   23.41 .936
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
001:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2             3.32     .095 No_date    1:18    7.77  n/a
     Filename = C:\SWMHYMO\PH2.001
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
001:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4           6.60     .110 No_date    1:31    7.33  n/a
     Filename = C:\SWMHYMO\PH3-4.001
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
001:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P             1.91     .242 No_date    1:15   23.41  n/a
                    +   07:PH2             3.32     .095 No_date    1:18    7.77  n/a
                    +   04:PH3-4           6.60     .110 No_date    1:31    7.33  n/a
     [DT= 1.00]  SUM=  09:PNDINF        11.83     .353 No_date    1:15   10.05  n/a
001:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83     .353 No_date    1:15   10.05  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83     .074 No_date    2:07   10.05  n/a
           overflow <= 01:OVR            .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.5420E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
001:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT        11.83     .074 No_date    2:07   10.05  n/a
     fname :C:\SWMHYMO\PNDOUT.001
     remark:Outflow from the proposed dry pond
001:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1           2.29     .074 No_date    1:15    7.53  n/a
     Filename = C:\SWMHYMO\OUT-1.001
     Comment  = FLOW TO EXISITNG DITCH
001:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1           2.29     .074 No_date    1:15    7.53  n/a
                    +   10:PNDOUT        11.83     .074 No_date    2:07   10.05  n/a
     [DT= 1.00]  SUM=  04:OUTMMD        14.12     .125 No_date    1:16    9.64  n/a
001:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD          14.12     .125 No_date    1:16    9.64  n/a
     fname :C:\SWMHYMO\OUTMMD.001
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN :   1

**********************************************************************************




 RUN:COMMAND#
 002:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  =   2 ]
 #*************************************************************************
 #  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
 #  Date        : 15-August-2016
 #  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
 #  Company     : J. L. Richards & Associates Limited
 #  License #   :  4418403
 #*************************************************************************
 ##########################################################################
 #SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN    #
 #SUBDIVISION;                                                               #
 #SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                 #
 #STORMRUNOFF FROM BEI WREN SUBDIVISION                                      #
 #DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR      #
 #HISTORICAL STORMS: JULY 1, 1979,                                           #
 ##########################################################################
 002:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=10.00:SDUR=   3.00:PTOT=  31.86]
 002:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1             1.26     .083 No_date    1:01   12.95 .407
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 002:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1              .35     .037 No_date    1:00   14.90 .468
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 002:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1              .35     .037 No_date    1:00   14.90  n/a
      [RDT= 1.00] out<- 03:S1              .35     .021 No_date    1:05   14.90  n/a
            overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.1834E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 002:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1             1.26     .083 No_date    1:01   12.95  n/a
                     +   03:S1              .35     .021 No_date    1:05   14.90  n/a
                     +   04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  05:HYD-1           1.61     .103 No_date    1:02   13.38  n/a
 002:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1             .32     .012 No_date    1:04    8.15 .256
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 002:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b             .28     .007 No_date    1:07    6.24 .196
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 002:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1             .32     .012 No_date    1:04    8.15  n/a
                     +   02:A1b             .28     .007 No_date    1:07    6.24  n/a
      [DT= 1.00]  SUM=  04:HYD-2           .60     .018 No_date    1:05    7.26  n/a
 002:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD1             .08     .013 No_date    1:00   21.05 .661
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=****:LGI=  35.:MNI=.013:SCI=   .0]
 002:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD1             .08     .013 No_date    1:00   21.05  n/a
                     +   04:HYD-2           .60     .018 No_date    1:05    7.26  n/a
      [DT= 1.00]  SUM=  08:HYD-3           .68     .025 No_date    1:00    8.88  n/a
 002:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-1           1.61     .103 No_date    1:02   13.38  n/a
                     +   08:HYD-3           .68     .025 No_date    1:00    8.88  n/a
      [DT= 1.00]  SUM=  06:OUT-1           2.29     .125 No_date    1:02   12.04  n/a
 002:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:OUT-1           2.29     .125 No_date    1:02   12.04  n/a
      fname :C:\SWMHYMO\OUT-1.002
      remark:FLOW TO EXISITNG DITCH
 002:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1              .39     .008 No_date    1:13    6.24 .196
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 002:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S2              .77     .061 No_date    1:00   14.90 .468
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 116.:MNI=.013:SCI=   .0]
 002:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1              .39     .008 No_date    1:13    6.24  n/a
                     +   02:S2              .77     .061 No_date    1:00   14.90  n/a
      [DT= 1.00]  SUM=  04:HYD-4           1.16     .064 No_date    1:01   11.99  n/a
 002:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4           1.16     .064 No_date    1:01   11.99  n/a
      [RDT= 1.00] out<- 03:S2              1.16     .049 No_date    1:05   11.99  n/a
            overflow <= 05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
```

```
    {MxStoUsed=.2546E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
002:0018----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:S2             1.16     .049 No_date    1:05   11.99  n/a
     fname :C:\SWMHYMO\MINS2.002
     remark:Minor Flow to EXCB13
002:0019----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS2.002
     remark:Major Flow to CB700
002:0020----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S3             1.53     .046 No_date    1:00   14.90 .468
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
002:0021----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3              .53     .046 No_date    1:00   14.90  n/a
     [RDT= 1.00] out<- 02:S3              .53     .025 No_date    1:10   14.90  n/a
           overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.2832E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
002:0022----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            02:S3             .53     .025 No_date    1:10   14.90  n/a
     fname :C:\SWMHYMO\MINS3.002
     remark:Minor Flow to EXCB14
002:0023----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS3.002
     remark:Major Flow to CB600
002:0024----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             02:S3             .53     .025 No_date    1:10   14.90  n/a
                    +   03:S2            1.16     .049 No_date    1:05   11.99  n/a
                    +   05:OVF-S2         .00     .000 No_date    0:00     .00  n/a
                    +   10:OVF-S3         .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=   04:HYD-5         1.69     .073 No_date    1:05   12.89  n/a
002:0025----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY3             .15     .005 No_date    1:04    8.15 .256
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
002:0026----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY3             .15     .005 No_date    1:04    8.15  n/a
                    +   04:HYD-5          1.69     .073 No_date    1:05   12.89  n/a
     [DT= 1.00]  SUM=   05:HYD-6          1.84     .078 No_date    1:05   12.50  n/a
002:0027----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:HYD-6          1.84     .078 No_date    1:05   12.50  n/a
     fname :C:\SWMHYMO\HYD-6.002
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
002:0028----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY2             .54     .020 No_date    1:04    8.15 .256
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
002:0029----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S4              .56     .059 No_date    1:00   14.90 .468
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
002:0030----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4              .56     .059 No_date    1:00   14.90  n/a
     [RDT= 1.00] out<- 08:S4              .56     .044 No_date    1:03   14.90  n/a
           overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.2695E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
002:0031----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            08:S4              .56     .044 No_date    1:03   14.90  n/a
     fname :C:\SWMHYMO\MINS4.002
     remark:Minor Flow to WD ROW Ditch
002:0032----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS4.002
     remark:Major Flow to CB613
002:0033----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY2             .54     .020 No_date    1:04    8.15  n/a
                    +   08:S4              .56     .044 No_date    1:03   14.90  n/a
                    +   10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=   04:HYD-7          1.10     .063 No_date    1:03   11.57  n/a
002:0034----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:WD2             .13     .019 No_date    1:00   21.05 .661
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
002:0035----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD2             .13     .019 No_date    1:00   21.05  n/a
                    +   04:HYD-7          1.10     .063 No_date    1:03   11.57  n/a
     [DT= 1.00]  SUM=   06:WD2            1.23     .079 No_date    1:02   12.58  n/a
002:0036----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:WD2            1.23     .079 No_date    1:02   12.58  n/a
     fname :C:\SWMHYMO\WD2.002
     remark:Flow from RY2_S4_WD2
002:0037----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        03:RY4             .25     .009 No_date    1:04    8.15 .256
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
002:0038----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:RY4             .25     .009 No_date    1:04    8.15  n/a
                    +   06:WD2            1.23     .079 No_date    1:02   12.58  n/a
     [DT= 1.00]  SUM=   04:HYD-8          1.48     .087 No_date    1:02   11.83  n/a
002:0039----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-6          1.84     .078 No_date    1:05   12.50  n/a
                    +   04:HYD-8          1.48     .087 No_date    1:02   11.83  n/a
     [DT= 1.00]  SUM=   07:PH2            3.32     .162 No_date    1:04   12.20  n/a
002:0040----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            07:PH2            3.32     .162 No_date    1:04   12.20  n/a
     fname :C:\SWMHYMO\PH2.002
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
002:0041----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2              .73     .015 No_date    1:13    6.24 .196
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
002:0042----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY5            1.41     .052 No_date    1:04    8.15 .256
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
002:0043----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2              .73     .015 No_date    1:13    6.24  n/a
                    +   02:RY5            1.41     .052 No_date    1:04    8.15  n/a
     [DT= 1.00]  SUM=   07:HYD-9          2.14     .062 No_date    1:05    7.50  n/a
002:0044----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S5             3.66     .262 No_date    1:04   14.90 .468
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
002:0045----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY6             .80     .029 No_date    1:04    8.15 .256
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
002:0046----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:S5             3.66     .262 No_date    1:04   14.90  n/a
                    +   02:RY6             .80     .029 No_date    1:04    8.15  n/a
     [DT= 1.00]  SUM=   09:HYD-10         4.46     .291 No_date    1:04   13.69  n/a
002:0047----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10          4.46     .291 No_date    1:04   13.69  n/a
     [RDT= 1.00] out<- 08:S5              4.46     .183 No_date    1:16   13.69  n/a
           overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.2254E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
002:0048----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9          2.14     .062 No_date    1:05    7.50  n/a
                    +   08:S5             4.46     .183 No_date    1:16   13.69  n/a
                    +   10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=   04:PH3-4          6.60     .232 No_date    1:14   11.68  n/a
002:0049----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4          6.60     .232 No_date    1:14   11.68  n/a
     fname :C:\SWMHYMO\PH3-4.002
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
002:0050----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:1-P            1.91     .407 No_date    1:00   30.26 .950
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
002:0051----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2            3.32     .162 No_date    1:04   12.20  n/a
     Filename = C:\SWMHYMO\PH2.002
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
002:0052----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4          6.60     .232 No_date    1:14   11.67  n/a
     Filename = C:\SWMHYMO\PH3-4.002
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
002:0053----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P            1.91     .407 No_date    1:00   30.26  n/a
                    +   07:PH2            3.32     .162 No_date    1:04   12.20  n/a
                    +   04:PH3-4          6.60     .232 No_date    1:14   11.67  n/a
     [DT= 1.00]  SUM=   09:PNDINF        11.83     .598 No_date    1:00   14.82  n/a
002:0054----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83     .598 No_date    1:00   14.82  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83     .143 No_date    1:48   14.82  n/a
           overflow <= 01:OVR             .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.9311E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
002:0055----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT        11.83     .143 No_date    1:48   14.82  n/a
     fname :C:\SWMHYMO\PNDOUT.002
     remark:Outflow from the proposed dry pond
002:0056----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1          2.29     .125 No_date    1:02   12.04  n/a
     Filename = C:\SWMHYMO\OUT-1.002
     Comment  = FLOW TO EXISITNG DITCH
002:0057----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1          2.29     .125 No_date    1:02   12.04  n/a
                    +   10:PNDOUT        11.83     .143 No_date    1:48   14.82  n/a
     [DT= 1.00]  SUM=   04:OUTMMD        14.12     .186 No_date    1:02   14.37  n/a
002:0058----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD        14.12     .186 No_date    1:02   14.37  n/a
     fname :C:\SWMHYMO\OUTMMD.002
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN :   4

**********************************************************************************




 RUN:COMMAND#
 005:0001----------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on       0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  =   5 ]
#*************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   : 4418403
#*************************************************************************
#########################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN   #
#SUBDIVISION;                                                              #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                     #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#HISTORICAL STORMS: JULY 1, 1979,                                          #
#########################################################################
 005:0002----------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=10.00:SDUR=   3.00:PTOT=  42.51]
 005:0003----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1            1.26     .137 No_date    1:01   19.99 .470
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 005:0004----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1             .35     .063 No_date    1:00   22.29 .524
      [XIMP=.41:TIMP=.51]
```

```
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
005:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S1              .35     .063 No_date    1:00    22.29  n/a
     [RDT= 1.00] out<- 03:S1              .35     .035 No_date    1:05    22.29  n/a
           overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.2803E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
005:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:PH1          1.26     .137 No_date    1:01    19.99  n/a
                        + 03:S1              .35     .035 No_date    1:05    22.29  n/a
                        + 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  05:HYD-1          1.61     .170 No_date    1:02    20.49  n/a
005:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          01:RY1             .32     .022 No_date    1:04    14.13 .332
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
005:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          02:A1b             .28     .015 No_date    1:05    11.95 .281
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
005:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:RY1             .32     .022 No_date    1:04    14.13  n/a
                        + 02:A1b             .28     .015 No_date    1:05    11.95  n/a
     [DT= 1.00]  SUM=  04:HYD-2           .60     .036 No_date    1:04    13.11  n/a
005:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD        01:WD1             .08     .019 No_date    1:00    29.89 .703
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
005:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:WD1             .08     .019 No_date    1:00    29.89  n/a
                        + 04:HYD-2           .60     .036 No_date    1:04    13.11  n/a
     [DT= 1.00]  SUM=  08:HYD-3           .68     .046 No_date    1:00    15.09  n/a
005:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               05:HYD-1          1.61     .170 No_date    1:02    20.49  n/a
                        + 08:HYD-3           .68     .046 No_date    1:00    15.09  n/a
     [DT= 1.00]  SUM=  06:OUT-1          2.29     .212 No_date    1:02    18.88  n/a
005:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              06:OUT-1          2.29     .212 No_date    1:02    18.88  n/a
     fname :C:\SWMHYMO\OUT-1.005
     remark:FLOW TO EXISITNG DITCH
005:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          01:A1              .39     .017 No_date    1:11    11.95 .281
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
005:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD        02:S2              .77     .090 No_date    1:00    22.29 .524
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
005:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:A1              .39     .017 No_date    1:11    11.95  n/a
                        + 02:S2              .77     .090 No_date    1:00    22.29  n/a
     [DT= 1.00]  SUM=  04:HYD-4          1.16     .097 No_date    1:00    18.81  n/a
005:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 04:HYD-4           1.16     .097 No_date    1:00    18.81  n/a
     [RDT= 1.00] out<- 03:S2              1.16     .074 No_date    1:04    18.81  n/a
           overflow <= 05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3469E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
005:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              03:S2             1.16     .074 No_date    1:04    18.81  n/a
     fname :C:\SWMHYMO\MINS2.005
     remark:Minor Flow to EXCB13
005:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD              05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS2.005
     remark:Major Flow to CB700
005:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD        01:S3              .53     .074 No_date    1:01    22.29 .524
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
005:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3              .53     .074 No_date    1:01    22.29  n/a
     [RDT= 1.00] out<- 02:S3              .53     .043 No_date    1:10    22.29  n/a
           overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4204E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
005:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              02:S3              .53     .043 No_date    1:10    22.29  n/a
     fname :C:\SWMHYMO\MINS3.005
     remark:Minor Flow to EXCB14
005:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD              10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS3.005
     remark:Major Flow to CB600
005:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               02:S3              .53     .043 No_date    1:10    22.29  n/a
                        + 03:S2             1.16     .074 No_date    1:04    18.81  n/a
                        + 05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
                        + 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5          1.69     .115 No_date    1:06    19.89  n/a
005:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          01:RY3             .15     .010 No_date    1:04    14.13 .332
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
005:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:RY3             .15     .010 No_date    1:04    14.13  n/a
                        + 04:HYD-5          1.69     .115 No_date    1:06    19.89  n/a
     [DT= 1.00]  SUM=  05:HYD-6          1.84     .125 No_date    1:05    19.42  n/a
005:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              05:HYD-6          1.84     .125 No_date    1:05    19.42  n/a
     fname :C:\SWMHYMO\HYD-6.005
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
005:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          01:RY2             .54     .037 No_date    1:04    14.13 .332
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
005:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD        02:S4              .56     .100 No_date    1:00    22.29 .524
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI=  110.:MNI=.013:SCI=   .0]
005:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4              .56     .100 No_date    1:00    22.29  n/a
     [RDT= 1.00] out<- 08:S4              .56     .076 No_date    1:02    22.29  n/a
           overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3668E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
005:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              08:S4              .56     .076 No_date    1:02    22.29  n/a
     fname :C:\SWMHYMO\MINS4.005
     remark:Minor Flow to WD_ROW Ditch
005:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD              10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS4.005
     remark:Major Flow to CB613
005:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:RY2             .54     .037 No_date    1:04    14.13  n/a
                        + 08:S4              .56     .076 No_date    1:02    22.29  n/a
                        + 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-7          1.10     .113 No_date    1:03    18.27  n/a
005:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD        01:WD2             .13     .029 No_date    1:00    29.89 .703
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
005:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:WD2             .13     .029 No_date    1:00    29.89  n/a
                        + 04:HYD-7          1.10     .113 No_date    1:03    18.27  n/a
     [DT= 1.00]  SUM=  06:WD2            1.23     .137 No_date    1:02    19.50  n/a
005:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              06:WD2             1.23     .137 No_date    1:02    19.50  n/a
     fname :C:\SWMHYMO\WD2.005
     remark:Flow from RY2_S4_WD2
005:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          03:RY4             .25     .017 No_date    1:04    14.13 .332
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
005:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               03:RY4             .25     .017 No_date    1:04    14.13  n/a
                        + 06:WD2            1.23     .137 No_date    1:02    19.50  n/a
     [DT= 1.00]  SUM=  04:HYD-8          1.48     .153 No_date    1:02    18.59  n/a
005:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               05:HYD-6          1.84     .125 No_date    1:05    19.42  n/a
                        + 04:HYD-8          1.48     .153 No_date    1:02    18.59  n/a
     [DT= 1.00]  SUM=  07:PH2            3.32     .272 No_date    1:03    19.05  n/a
005:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              07:PH2             3.32     .272 No_date    1:03    19.05  n/a
     fname :C:\SWMHYMO\PH2.005
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
005:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          01:A2              .73     .032 No_date    1:11    11.95 .281
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
005:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          02:RY5             1.41     .097 No_date    1:04    14.13 .332
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
005:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:A2              .73     .032 No_date    1:11    11.95  n/a
                        + 02:RY5            1.41     .097 No_date    1:04    14.13  n/a
     [DT= 1.00]  SUM=  07:HYD-9          2.14     .122 No_date    1:05    13.39  n/a
005:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD        01:S5              3.66     .442 No_date    1:04    22.29 .524
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
005:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          02:RY6             .80     .055 No_date    1:04    14.13 .332
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
005:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:S5              3.66     .442 No_date    1:04    22.29  n/a
                        + 02:RY6             .80     .055 No_date    1:04    14.13  n/a
     [DT= 1.00]  SUM=  10:HYD-10         4.46     .496 No_date    1:04    20.83  n/a
005:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10          4.46     .496 No_date    1:04    20.83  n/a
     [RDT= 1.00] out<- 08:S5              4.46     .322 No_date    1:14    20.83  n/a
           overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3215E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
005:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               07:HYD-9           2.14     .122 No_date    1:05    13.39  n/a
                        + 08:S5              4.46     .322 No_date    1:14    20.83  n/a
                        + 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:PH3-4          6.60     .421 No_date    1:12    18.41  n/a
005:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              04:PH3-4           6.60     .421 No_date    1:12    18.41  n/a
     fname :C:\SWMHYMO\PH3-4.005
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
005:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD        01:1-P             1.91     .552 No_date    1:00    40.91 .962
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
005:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD              07:PH2             3.32     .272 No_date    1:03    19.05  n/a
     Filename = C:\SWMHYMO\PH2.005
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
005:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD              04:PH3-4           6.60     .421 No_date    1:12    18.40  n/a
     Filename = C:\SWMHYMO\PH3-4.005
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
005:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:1-P             1.91     .552 No_date    1:00    40.91  n/a
                        + 07:PH2             3.32     .272 No_date    1:03    19.05  n/a
                        + 04:PH3-4           6.60     .421 No_date    1:12    18.40  n/a
     [DT= 1.00]  SUM=  09:PNDINF        11.83     .969 No_date    1:00    22.22  n/a
005:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83     .969 No_date    1:00    22.22  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83     .310 No_date    1:36    22.22  n/a
           overflow <= 01:OVR             .00     .000 No_date    0:00     .00  n/a
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    {MxStoUsed=.1330E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
005:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT         11.83     .310 No_date    1:36   22.22  n/a
     fname :C:\SWMHYMO\PNDOUT.005
     remark:Outflow from the proposed dry pond
005:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1           2.29     .212 No_date    1:02   18.88  n/a
     Filename = C:\SWMHYMO\OUT-1.005
     Comment  = FLOW TO EXISITNG DITCH
005:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1           2.29     .212 No_date    1:02   18.88  n/a
                      + 10:PNDOUT         11.83     .310 No_date    1:36   22.22  n/a
     [DT= 1.00]  SUM=  04:OUTMMD         14.12     .355 No_date    1:30   21.68  n/a
005:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD         14.12     .355 No_date    1:30   21.68  n/a
     fname :C:\SWMHYMO\OUTMMD.005
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN :   9

**********************************************************************************




 RUN:COMMAND#
 010:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN   =  10 ]
 #*********************************************************************************
 #  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
 #  Date        : 15-August-2016
 #  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
 #  Company     : J. L. Richards & Associates Limited
 #  License #   :  4418403
 #*********************************************************************************
 ###################################################################################
 #SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN         #
 #SUBDIVISION;                                                                     #
 #SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                       #
 #STORMRUNOFF FROM BEI WREN SUBDIVISION                                            #
 #DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR           #
 #HISTORICAL STORMS: JULY 1, 1979,                                                 #
 ###################################################################################
 010:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=10.00:SDUR=   3.00:PTOT=  49.50]
 010:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1            1.26     .182 No_date    1:02   24.84 .502
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 010:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1             .35     .079 No_date    1:00   27.52 .556
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 010:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1              .35     .079 No_date    1:00   27.52  n/a
      [RDT= 1.00] out<- 03:S1              .35     .044 No_date    1:05   27.52  n/a
            overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3384E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 010:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1            1.26     .182 No_date    1:02   24.84  n/a
                       + 03:S1              .35     .044 No_date    1:05   27.52  n/a
                       + 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  05:HYD-1           1.61     .225 No_date    1:02   25.42  n/a
 010:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1            .32     .030 No_date    1:04   18.55 .375
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 010:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b            .28     .021 No_date    1:04   16.26 .329
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 010:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1            .32     .030 No_date    1:04   18.55  n/a
                       + 02:A1b            .28     .021 No_date    1:04   16.26  n/a
      [DT= 1.00]  SUM=  04:HYD-2           .60     .051 No_date    1:04   17.49  n/a
 010:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD1            .08     .023 No_date    1:00   35.68 .721
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 010:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD1            .08     .023 No_date    1:00   35.68  n/a
                       + 04:HYD-2           .60     .051 No_date    1:04   17.49  n/a
      [DT= 1.00]  SUM=  08:HYD-3           .68     .062 No_date    1:00   19.63  n/a
 010:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-1          1.61     .225 No_date    1:02   25.42  n/a
                       + 08:HYD-3           .68     .062 No_date    1:00   19.63  n/a
      [DT= 1.00]  SUM=  06:OUT-1           2.29     .282 No_date    1:02   23.70  n/a
 010:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:OUT-1          2.29     .282 No_date    1:02   23.70  n/a
      fname :C:\SWMHYMO\OUT-1.010
      remark:FLOW TO EXISITNG DITCH
 010:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1             .39     .024 No_date    1:10   16.26 .329
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 010:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S2             .77     .110 No_date    1:00   27.52 .556
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
 010:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1             .39     .024 No_date    1:10   16.26  n/a
                       + 02:S2             .77     .110 No_date    1:00   27.52  n/a
      [DT= 1.00]  SUM=  04:HYD-4          1.16     .121 No_date    1:01   23.74  n/a
 010:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4          1.16     .121 No_date    1:01   23.74  n/a
      [RDT= 1.00] out<- 03:S2             1.16     .093 No_date    1:05   23.74  n/a
            overflow <= 05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4182E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 010:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:S2             1.16     .093 No_date    1:05   23.74  n/a
      fname :C:\SWMHYMO\MINS2.010
      remark:Minor Flow to EXCB13
 010:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
  *  SAVE HYD            05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
      fname :C:\SWMHYMO\MAJS2.010
      remark:Major Flow to CB700
 010:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:S3             .53     .095 No_date    1:01   27.52 .556
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
 010:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3              .53     .095 No_date    1:01   27.52  n/a
      [RDT= 1.00] out<- 02:S3              .53     .056 No_date    1:09   27.52  n/a
            overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.5127E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 010:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            02:S3             .53     .056 No_date    1:09   27.52  n/a
      fname :C:\SWMHYMO\MINS3.010
      remark:Minor Flow to EXCB14
 010:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
  *  SAVE HYD            10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
      fname :C:\SWMHYMO\MAJS3.010
      remark:Major Flow to CB600
 010:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             02:S3             .53     .056 No_date    1:09   27.52  n/a
                       + 03:S2            1.16     .093 No_date    1:05   23.74  n/a
                       + 04:OVF-S2          .00     .000 No_date    0:00     .00  n/a
                       + 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  04:HYD-5           1.69     .147 No_date    1:07   24.91  n/a
 010:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY3            .15     .014 No_date    1:04   18.55 .375
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 010:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY3            .15     .014 No_date    1:04   18.55  n/a
                       + 04:HYD-5           1.69     .147 No_date    1:07   24.91  n/a
      [DT= 1.00]  SUM=  05:HYD-6           1.84     .160 No_date    1:06   24.39  n/a
 010:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:HYD-6          1.84     .160 No_date    1:06   24.39  n/a
      fname :C:\SWMHYMO\HYD-6.010
      remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
 010:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY2            .54     .050 No_date    1:04   18.55 .375
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 010:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S4             .56     .126 No_date    1:00   27.52 .556
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
 010:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S4              .56     .126 No_date    1:00   27.52  n/a
      [RDT= 1.00] out<- 08:S4              .56     .097 No_date    1:02   27.52  n/a
            overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4280E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 010:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            08:S4             .56     .097 No_date    1:02   27.52  n/a
      fname :C:\SWMHYMO\MINS4.010
      remark:Minor Flow to WD ROW Ditch
 010:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
  *  SAVE HYD            10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
      fname :C:\SWMHYMO\MAJS4.010
      remark:Major Flow to CB613
 010:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY2            .54     .050 No_date    1:04   18.55  n/a
                       + 08:S4             .56     .097 No_date    1:02   27.52  n/a
                       + 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  04:HYD-7           1.10     .147 No_date    1:03   23.11  n/a
 010:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD2            .13     .035 No_date    1:00   35.68 .721
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
 010:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD2            .13     .035 No_date    1:00   35.68  n/a
                       + 04:HYD-7           1.10     .147 No_date    1:03   23.11  n/a
      [DT= 1.00]  SUM=  06:WD2            1.23     .176 No_date    1:02   24.44  n/a
 010:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:WD2            1.23     .176 No_date    1:02   24.44  n/a
      fname :C:\SWMHYMO\WD2.010
      remark:Flow from RY2 S4 WD2
 010:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        03:RY4            .25     .023 No_date    1:04   18.55 .375
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 010:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             03:RY4            .25     .023 No_date    1:04   18.55  n/a
                       + 06:WD2            1.23     .176 No_date    1:02   24.44  n/a
      [DT= 1.00]  SUM=  04:HYD-8           1.48     .198 No_date    1:02   23.44  n/a
 010:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-6          1.84     .160 No_date    1:06   24.39  n/a
                       + 04:HYD-8           1.48     .198 No_date    1:02   23.44  n/a
      [DT= 1.00]  SUM=  07:PH2            3.32     .349 No_date    1:03   23.97  n/a
 010:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            07:PH2            3.32     .349 No_date    1:03   23.97  n/a
      fname :C:\SWMHYMO\PH2.010
      remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
 010:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A2             .73     .045 No_date    1:10   16.26 .329
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     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
010:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      02:RY5             1.41     .131 No_date    1:04   18.56 .375
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
010:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:A2               .73     .045 No_date    1:10   16.26  n/a
                    +  02:RY5            1.41     .131 No_date    1:04   18.56  n/a
     [DT= 1.00]  SUM=  07:HYD-9          2.14     .169 No_date    1:05   17.77  n/a
010:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD    01:S5              3.66     .583 No_date    1:03   27.52 .556
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
010:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      02:RY6              .80     .074 No_date    1:04   18.55 .375
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
010:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:S5              3.66     .583 No_date    1:03   27.52  n/a
                    +  02:RY6             .80     .074 No_date    1:04   18.55  n/a
     [DT= 1.00]  SUM=  09:HYD-10         4.46     .657 No_date    1:03   25.91  n/a
010:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10         4.46     .657 No_date    1:03   25.91  n/a
     [RDT= 1.00] out<- 08:S5             4.46     .422 No_date    1:13   25.91  n/a
           overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.3908E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
010:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           07:HYD-9           2.14     .169 No_date    1:05   17.77  n/a
                    +  08:S5             4.46     .422 No_date    1:13   25.91  n/a
                    +  10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:PH3-4          6.60     .563 No_date    1:11   23.27  n/a
010:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          04:PH3-4           6.60     .563 No_date    1:11   23.27  n/a
     fname :C:\SWMHYMO\PH3-4.010
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
010:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD    01:1-P             1.91     .647 No_date    1:00   47.90 .968
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
010:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD          07:PH2             3.32     .349 No_date    1:03   23.97  n/a
     Filename = C:\SWMHYMO\PH2.010
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
010:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD          04:PH3-4           6.60     .563 No_date    1:11   23.26  n/a
     Filename = C:\SWMHYMO\PH3-4.010
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
010:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:1-P             1.91     .647 No_date    1:00   47.90  n/a
                    +  07:PH2            3.32     .349 No_date    1:03   23.97  n/a
                    +  04:PH3-4          6.60     .563 No_date    1:11   23.26  n/a
     [DT= 1.00]  SUM=  09:PNDINF        11.83    1.238 No_date    1:00   27.44  n/a
010:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83    1.238 No_date    1:00   27.44  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83     .443 No_date    1:32   27.44  n/a
           overflow <= 01:OVR            .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.1593E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
010:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          10:PNDOUT          11.83     .443 No_date    1:32   27.44  n/a
     fname :C:\SWMHYMO\PNDOUT.010
     remark:Outflow from the proposed dry pond
010:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD          06:OUT-1           2.29     .282 No_date    1:02   23.70  n/a
     Filename = C:\SWMHYMO\OUT-1.010
     Comment  = FLOW TO EXISITNG DITCH
010:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           06:OUT-1           2.29     .282 No_date    1:02   23.70  n/a
                    +  10:PNDOUT        11.83     .443 No_date    1:32   27.44  n/a
     [DT= 1.00]  SUM=  04:OUTMMD        14.12     .505 No_date    1:26   26.83  n/a
010:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          04:OUTMMD          14.12     .505 No_date    1:26   26.83  n/a
     fname :C:\SWMHYMO\OUTMMD.010
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN :  24

*******************************************************************************



 RUN:COMMAND#
 025:0001---------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  =  25 ]
#*****************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*****************************************************************************
#############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN   #
#SUBDIVISION;                                                               #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                 #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                      #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#HISTORICAL STORMS: JULY 1, 1979,                                           #
#############################################################################
 025:0002---------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=10.00:SDUR=   3.00:PTOT=  58.23]
 025:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD    01:PH1             1.26     .242 No_date    1:02   31.63 .543
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
025:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD    02:S1              .35     .103 No_date    1:00   34.86 .599
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  75.:MNI=.013:SCI=   .0]
025:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S1              .35     .103 No_date    1:00   34.86  n/a
     [RDT= 1.00] out<- 03:S1              .35     .057 No_date    1:04   34.86  n/a
           overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.4250E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
025:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:PH1             1.26     .242 No_date    1:02   31.63  n/a
                    +  03:S1              .35     .057 No_date    1:04   34.86  n/a
                    +  04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  05:HYD-1          1.61     .297 No_date    1:02   32.33  n/a
025:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      01:RY1              .32     .040 No_date    1:03   24.50 .421
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
025:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      02:A1b              .28     .031 No_date    1:04   22.13 .380
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
025:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:RY1              .32     .040 No_date    1:03   24.50  n/a
                    +  02:A1b             .28     .031 No_date    1:04   22.13  n/a
     [DT= 1.00]  SUM=  04:HYD-2           .60     .071 No_date    1:04   23.40  n/a
025:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD    01:WD1              .08     .028 No_date    1:00   43.12 .740
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
025:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:WD1              .08     .028 No_date    1:00   43.12  n/a
                    +  04:HYD-2           .60     .071 No_date    1:04   23.40  n/a
     [DT= 1.00]  SUM=  08:HYD-3           .68     .084 No_date    1:00   25.72  n/a
025:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           05:HYD-1           1.61     .297 No_date    1:02   32.33  n/a
                    +  08:HYD-3           .68     .084 No_date    1:00   25.72  n/a
     [DT= 1.00]  SUM=  06:OUT-1          2.29     .376 No_date    1:02   30.37  n/a
025:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          06:OUT-1           2.29     .376 No_date    1:02   30.37  n/a
     fname :C:\SWMHYMO\OUT-1.025
     remark:FLOW TO EXISITNG DITCH
025:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      01:A1               .39     .034 No_date    1:09   22.13 .380
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
025:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD    02:S2               .77     .137 No_date    1:00   34.86 .599
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=  .50:LGI= 116.:MNI=.013:SCI=   .0]
025:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:A1               .39     .034 No_date    1:09   22.13  n/a
                    +  02:S2              .77     .137 No_date    1:00   34.86  n/a
     [DT= 1.00]  SUM=  04:HYD-4          1.16     .156 No_date    1:01   30.58  n/a
025:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 04:HYD-4          1.16     .156 No_date    1:01   30.58  n/a
     [RDT= 1.00] out<- 03:S2             1.13     .110 No_date    1:02   30.58  n/a
           overflow <= 05:OVF-S2          .03     .043 No_date    1:02   30.58  n/a
    {MxStoUsed=.4796E-02, TotOvfVol=.1050E-02, N-Ovf=    2, TotDurOvf=    0.hrs}
025:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          03:S2              1.13     .110 No_date    1:02   30.58  n/a
     fname :C:\SWMHYMO\MINS2.025
     remark:Minor Flow to EXCB13
025:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          05:OVF-S2           .03     .043 No_date    1:02   30.58  n/a
     fname :C:\SWMHYMO\MAJS3.025
     remark:Major Flow to CB700
025:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD    01:S3               .53     .124 No_date    1:01   34.86 .599
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=  .50:LGI=  99.:MNI=.013:SCI=   .0]
025:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3              .53     .124 No_date    1:01   34.86  n/a
     [RDT= 1.00] out<- 02:S3              .53     .072 No_date    1:09   34.86  n/a
           overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.6339E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
025:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          02:S3              .53     .072 No_date    1:09   34.86  n/a
     fname :C:\SWMHYMO\MINS3.025
     remark:Minor Flow to EXCB14
025:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD          10:OVF-S3           .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS3.025
     remark:Major Flow to CB600
025:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           02:S3              .53     .072 No_date    1:09   34.86  n/a
                    +  03:S2             1.13     .110 No_date    1:02   30.58  n/a
                    +  05:OVF-S2          .03     .043 No_date    1:02   30.58  n/a
                    +  10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5          1.69     .213 No_date    1:02   31.91  n/a
025:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      01:RY3              .15     .019 No_date    1:03   24.50 .421
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
025:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:RY3              .15     .019 No_date    1:03   24.50  n/a
                    +  04:HYD-5          1.69     .213 No_date    1:02   31.91  n/a
     [DT= 1.00]  SUM=  05:HYD-6          1.84     .231 No_date    1:02   31.31  n/a
025:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          05:HYD-6           1.84     .231 No_date    1:02   31.31  n/a
     fname :C:\SWMHYMO\HYD-6.025
```

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    remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
025:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:RY2             .54     .068 No_date    1:03   24.50 .421
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
025:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:S4              .56     .163 No_date    1:00   34.86 .599
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
025:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4              .56     .163 No_date    1:00   34.86  n/a
     [RDT= 1.00] out<- 08:S4              .56     .126 No_date    1:02   34.86  n/a
           overflow <= 10:OVF-S2          .00     .017 No_date    1:02   34.86  n/a
     {MxStoUsed=.5057E-02, TotOvfVol=.1003E-03, N-Ovf=    1, TotDurOvf=    0.hrs}
025:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           08:S4              .56     .126 No_date    1:02   34.86  n/a
     fname :C:\SWMHYMO\MINS4.025
     remark:Minor Flow to WD ROW Ditch
025:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           10:OVF-S2          .00     .017 No_date    1:02   34.86  n/a
     fname :C:\SWMHYMO\MAJS4.025
     remark:Major Flow to CB613
025:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:RY2             .54     .068 No_date    1:03   24.50  n/a
                     + 08:S4              .56     .126 No_date    1:02   34.86  n/a
                     + 10:OVF-S2          .00     .017 No_date    1:02   34.86  n/a
     [DT= 1.00]  SUM=  04:HYD-7          1.10     .209 No_date    1:02   29.76  n/a
025:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:WD2             .13     .044 No_date    1:00   43.12 .740
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
025:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:WD2             .13     .044 No_date    1:00   43.12  n/a
                     + 04:HYD-7          1.10     .209 No_date    1:02   29.76  n/a
     [DT= 1.00]  SUM=  06:WD2            1.23     .247 No_date    1:02   31.17  n/a
025:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           06:WD2             1.23     .247 No_date    1:02   31.17  n/a
     fname :C:\SWMHYMO\WD2.025
     remark:Flow from RY2_S4_WD2
025:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       03:RY4             .25     .032 No_date    1:03   24.50 .421
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
025:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            03:RY4             .25     .032 No_date    1:03   24.50  n/a
                     + 06:WD2            1.23     .247 No_date    1:02   31.17  n/a
     [DT= 1.00]  SUM=  04:HYD-8          1.48     .277 No_date    1:02   30.05  n/a
025:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            05:HYD-6           1.84     .231 No_date    1:02   31.31  n/a
                     + 04:HYD-8          1.48     .277 No_date    1:02   30.05  n/a
     [DT= 1.00]  SUM=  07:PH2            3.32     .508 No_date    1:02   30.75  n/a
025:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           07:PH2             3.32     .508 No_date    1:02   30.75  n/a
     fname :C:\SWMHYMO\PH2.025
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
025:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2              .73     .064 No_date    1:09   22.13 .380
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
025:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:RY5             1.41     .178 No_date    1:03   24.50 .421
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
025:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2              .73     .064 No_date    1:09   22.13  n/a
                     + 02:RY5            1.41     .178 No_date    1:03   24.50  n/a
     [DT= 1.00]  SUM=  07:HYD-9          2.14     .233 No_date    1:04   23.69  n/a
025:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:S5              3.66     .766 No_date    1:03   34.86 .599
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .10:LGI= 390.:MNI=.013:SCI=   .0]
025:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:RY6             .80     .101 No_date    1:03   24.50 .421
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
025:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:S5              3.66     .766 No_date    1:03   34.86  n/a
                     + 02:RY6             .80     .101 No_date    1:03   24.50  n/a
     [DT= 1.00]  SUM=  09:HYD-10         4.46     .867 No_date    1:03   33.00  n/a
025:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10         4.46     .867 No_date    1:03   33.00  n/a
     [RDT= 1.00] out<- 08:S5              4.46     .556 No_date    1:12   33.00  n/a
           overflow <= 10:OVF-S2          .00     .000 No_date    0:00    .00  n/a
     {MxStoUsed=.4827E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
025:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            07:HYD-9           2.14     .233 No_date    1:04   23.69  n/a
                     + 08:S5              4.46     .556 No_date    1:12   33.00  n/a
                     + 10:OVF-S2          .00     .000 No_date    0:00    .00  n/a
     [DT= 1.00]  SUM=  04:PH3-4          6.60     .751 No_date    1:10   29.98  n/a
025:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:PH3-4           6.60     .751 No_date    1:10   29.98  n/a
     fname :C:\SWMHYMO\PH3-4.025
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
025:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:1-P             1.91     .767 No_date    1:00   56.62 .972
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
025:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           07:PH2             3.32     .508 No_date    1:02   30.75  n/a
     Filename = C:\SWMHYMO\PH2.025
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
025:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           04:PH3-4           6.60     .751 No_date    1:10   29.97  n/a
     Filename = C:\SWMHYMO\PH3-4.025
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
025:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:1-P             1.91     .767 No_date    1:00   56.62  n/a
                     + 07:PH2             3.32     .508 No_date    1:02   30.75  n/a
                     + 04:PH3-4           6.60     .751 No_date    1:10   29.97  n/a
     [DT= 1.00]  SUM=  09:PNDINF         11.83    1.576 No_date    1:00   34.49  n/a
025:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF         11.83    1.576 No_date    1:00   34.49  n/a
     [RDT= 1.00] out<- 10:PNDOUT         11.83     .621 No_date    1:30   34.49  n/a
           overflow <= 01:OVR             .00     .000 No_date    0:00    .00  n/a
     {MxStoUsed=.1929E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
025:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           10:PNDOUT          11.83     .621 No_date    1:30   34.49  n/a
     fname :C:\SWMHYMO\PNDOUT.025
     remark:Outflow from the proposed dry pond
025:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           06:OUT-1           2.29     .376 No_date    1:02   30.36  n/a
     Filename = C:\SWMHYMO\OUT-1.025
     Comment  = FLOW TO EXISITNG DITCH
025:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            06:OUT-1           2.29     .376 No_date    1:02   30.36  n/a
                     + 10:PNDOUT         11.83     .621 No_date    1:30   34.49  n/a
     [DT= 1.00]  SUM=  04:OUTMMD         14.12     .714 No_date    1:22   33.82  n/a
025:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:OUTMMD          14.12     .714 No_date    1:22   33.82  n/a
     fname :C:\SWMHYMO\OUTMMD.025
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN :  49

**********************************************************************************



 RUN:COMMAND#
 050:0001---------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  =  50 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   : 4418403
#*******************************************************************************
################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN      #
#SUBDIVISION;                                                                  #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                    #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                         #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR        #
#HISTORICAL STORMS: JULY 1, 1979,                                              #
################################################################################
 050:0002---------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=10.00:SDUR=   3.00:PTOT=  64.81]
 050:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:PH1             1.26     .293 No_date    1:02   37.63 .581
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 050:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S1              .35     .119 No_date    1:00   41.09 .634
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 050:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1              .35     .119 No_date    1:00   41.09  n/a
      [RDT= 1.00] out<- 03:S1              .35     .066 No_date    1:04   41.09  n/a
            overflow <= 04:OVF-S1          .00     .000 No_date    0:00    .00  n/a
      {MxStoUsed=.4853E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 050:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:PH1             1.26     .293 No_date    1:02   37.63  n/a
                      + 03:S1              .35     .066 No_date    1:04   41.09  n/a
                      + 04:OVF-S1          .00     .000 No_date    0:00    .00  n/a
      [DT= 1.00]  SUM=  05:HYD-1          1.61     .356 No_date    1:02   38.38  n/a
 050:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY1             .32     .049 No_date    1:03   29.25 .451
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 050:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1b             .28     .038 No_date    1:04   26.84 .414
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 050:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY1             .32     .049 No_date    1:03   29.25  n/a
                      + 02:A1b             .28     .038 No_date    1:04   26.84  n/a
      [DT= 1.00]  SUM=  04:HYD-2          .60     .087 No_date    1:04   28.13  n/a
 050:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:WD1             .08     .032 No_date    1:00   48.93 .755
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 050:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:WD1             .08     .032 No_date    1:00   48.93  n/a
                      + 04:HYD-2          .60     .087 No_date    1:04   28.13  n/a
      [DT= 1.00]  SUM=  08:HYD-3          .68     .102 No_date    1:00   30.57  n/a
 050:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            05:HYD-1           1.61     .356 No_date    1:02   38.38  n/a
                      + 08:HYD-3          .68     .102 No_date    1:00   30.57  n/a
      [DT= 1.00]  SUM=  06:OUT-1          2.29     .453 No_date    1:02   36.06  n/a
 050:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           06:OUT-1           2.29     .453 No_date    1:02   36.06  n/a
      fname :C:\SWMHYMO\OUT-1.050
      remark:FLOW TO EXISITNG DITCH
 050:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1              .39     .042 No_date    1:09   26.84 .414
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     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
050:0015----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S2              .77     .160 No_date    1:00   41.09 .634
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
050:0016----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1              .39     .042 No_date    1:09   26.84  n/a
                      + 02:S2              .77     .160 No_date    1:00   41.09  n/a
     [DT= 1.00]  SUM=  04:HYD-4           1.16     .185 No_date    1:01   36.30  n/a
050:0017----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 04:HYD-4           1.16     .185 No_date    1:01   36.30  n/a
     [RDT= 1.00] out<- 03:S2              1.05     .110 No_date    1:00   36.30  n/a
           overflow <= 05:OVF-S2           .11     .074 No_date    1:01   36.30  n/a
     {MxStoUsed=.4805E-02, TotOvfVol=.4051E-02, N-Ovf=    Z, TotDurOvf=    0.hrs}
050:0018----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:S2              1.05     .110 No_date    1:00   36.30  n/a
     fname :C:\SWMHYMO\MINS2.050
     remark:Minor Flow to EXCB13
050:0019----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:OVF-S2           .11     .074 No_date    1:01   36.30  n/a
     fname :C:\SWMHYMO\MAJS2.050
     remark:Major Flow to CB700
050:0020----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S3              .53     .147 No_date    1:01   41.09 .634
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
050:0021----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3              .53     .147 No_date    1:01   41.09  n/a
     [RDT= 1.00] out<- 02:S3              .53     .085 No_date    1:08   41.09  n/a
           overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.7281E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
050:0022----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            02:S3              .53     .085 No_date    1:08   41.09  n/a
     fname :C:\SWMHYMO\MINS3.050
     remark:Minor Flow to EXCB14
050:0023----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS3.050
     remark:Major Flow to CB600
050:0024----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             02:S3              .53     .085 No_date    1:08   41.09  n/a
                      + 03:S2             1.05     .110 No_date    1:00   36.30  n/a
                      + 05:OVF-S2          .11     .074 No_date    1:01   36.30  n/a
                      + 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5           1.69     .254 No_date    1:02   37.79  n/a
050:0025----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY3             .15     .023 No_date    1:03   29.25 .451
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
050:0026----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY3             .15     .023 No_date    1:03   29.25  n/a
                      + 04:HYD-5           1.69     .254 No_date    1:02   37.79  n/a
     [DT= 1.00]  SUM=  05:HYD-6           1.84     .276 No_date    1:02   37.09  n/a
050:0027----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:HYD-6           1.84     .276 No_date    1:02   37.09  n/a
     fname :C:\SWMHYMO\HYD-6.050
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
050:0028----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY2             .54     .083 No_date    1:03   29.25 .451
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
050:0029----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S4              .56     .189 No_date    1:00   41.09 .634
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
050:0030----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4              .56     .189 No_date    1:00   41.09  n/a
     [RDT= 1.00] out<- 08:S4              .54     .126 No_date    1:00   41.09  n/a
           overflow <= 10:OVF-S2          .02     .060 No_date    1:00   41.09  n/a
     {MxStoUsed=.5122E-02, TotOvfVol=.9385E-03, N-Ovf=    1, TotDurOvf=    0.hrs}
050:0031----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            08:S4              .54     .126 No_date    1:00   41.09  n/a
     fname :C:\SWMHYMO\MINS4.050
     remark:Minor Flow to WD ROW Ditch
050:0032----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:OVF-S2          .02     .060 No_date    1:00   41.09  n/a
     fname :C:\SWMHYMO\MAJS4.050
     remark:Major Flow to CB613
050:0033----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY2             .54     .083 No_date    1:03   29.25  n/a
                      + 08:S4              .54     .126 No_date    1:00   41.09  n/a
                      + 10:OVF-S2          .02     .060 No_date    1:00   41.09  n/a
     [DT= 1.00]  SUM=  04:HYD-7           1.10     .259 No_date    1:01   35.26  n/a
050:0034----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:WD2             .13     .050 No_date    1:00   48.93 .755
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
050:0035----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD2             .13     .050 No_date    1:00   48.93  n/a
                      + 04:HYD-7           1.10     .259 No_date    1:01   35.26  n/a
     [DT= 1.00]  SUM=  06:WD2             1.23     .307 No_date    1:01   36.71  n/a
050:0036----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:WD2             1.23     .307 No_date    1:01   36.71  n/a
     fname :C:\SWMHYMO\WD2.050
     remark:Flow from RY2 S4 WD2
050:0037----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        03:RY4             .25     .038 No_date    1:03   29.25 .451
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
050:0038----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:RY4             .25     .038 No_date    1:03   29.25  n/a
                      + 06:WD2             1.23     .307 No_date    1:01   36.71  n/a
     [DT= 1.00]  SUM=  04:HYD-8           1.48     .342 No_date    1:01   35.45  n/a
050:0039----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-6           1.84     .276 No_date    1:02   37.09  n/a
                      + 04:HYD-8           1.48     .342 No_date    1:01   35.45  n/a
     [DT= 1.00]  SUM=  07:PH2             3.32     .612 No_date    1:01   36.36  n/a
050:0040----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            07:PH2             3.32     .612 No_date    1:01   36.36  n/a
     fname :C:\SWMHYMO\PH2.050
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
050:0041----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2               .73     .079 No_date    1:09   26.84 .414
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
050:0042----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY5             1.41     .216 No_date    1:03   29.25 .451
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
050:0043----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2               .73     .079 No_date    1:09   26.84  n/a
                      + 02:RY5             1.41     .216 No_date    1:03   29.25  n/a
     [DT= 1.00]  SUM=  07:HYD-9           2.14     .286 No_date    1:04   28.43  n/a
050:0044----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S5              3.66     .892 No_date    1:03   41.09 .634
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
050:0045----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY6              .80     .123 No_date    1:03   29.25 .451
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
050:0046----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:S5              3.66     .892 No_date    1:03   41.09  n/a
                      + 02:RY6              .80     .123 No_date    1:03   29.25  n/a
     [DT= 1.00]  SUM=  09:HYD-10          4.46    1.015 No_date    1:03   38.97  n/a
050:0047----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10          4.46    1.015 No_date    1:03   38.97  n/a
     [RDT= 1.00] out<- 08:S5              4.28     .581 No_date    1:07   38.96  n/a
           overflow <= 10:OVF-S2           .18     .333 No_date    1:07   38.97  n/a
     {MxStoUsed=.4998E-01, TotOvfVol=.7082E-02, N-Ovf=    Z, TotDurOvf=    0.hrs}
050:0048----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9           2.14     .286 No_date    1:04   28.43  n/a
                      + 08:S5              4.28     .581 No_date    1:07   38.96  n/a
                      + 10:OVF-S2           .18     .333 No_date    1:07   38.97  n/a
     [DT= 1.00]  SUM=  04:PH3-4           6.60    1.186 No_date    1:07   35.55  n/a
050:0049----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4           6.60    1.186 No_date    1:07   35.55  n/a
     fname :C:\SWMHYMO\PH3-4.050
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
050:0050----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:1-P             1.91     .856 No_date    1:00   63.19 .975
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
050:0051----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2             3.32     .612 No_date    1:01   36.36  n/a
     Filename = C:\SWMHYMO\PH2.050
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
050:0052----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4           6.60    1.186 No_date    1:07   35.53  n/a
     Filename = C:\SWMHYMO\PH3-4.050
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
050:0053----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P             1.91     .856 No_date    1:00   63.19  n/a
                      + 07:PH2             3.32     .612 No_date    1:01   36.36  n/a
                      + 04:PH3-4           6.60    1.186 No_date    1:07   35.53  n/a
     [DT= 1.00]  SUM=  09:PNDINF         11.83    1.948 No_date    1:00   40.23  n/a
050:0054----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF         11.83    1.948 No_date    1:00   40.23  n/a
     [RDT= 1.00] out<- 10:PNDOUT         11.83     .757 No_date    1:28   40.23  n/a
           overflow <= 01:OVR             0.00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.2177E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
050:0055----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT          11.83     .757 No_date    1:28   40.23  n/a
     fname :C:\SWMHYMO\PNDOUT.050
     remark:Outflow from the proposed dry pond
050:0056----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1           2.29     .453 No_date    1:02   36.06  n/a
     Filename = C:\SWMHYMO\OUT-1.050
     Comment  = FLOW TO EXISITNG DITCH
050:0057----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1           2.29     .453 No_date    1:02   36.06  n/a
                      + 10:PNDOUT          11.83     .757 No_date    1:28   40.23  n/a
     [DT= 1.00]  SUM=  04:OUTMMD          14.12     .883 No_date    1:20   39.56  n/a
050:0058----------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD          14.12     .883 No_date    1:20   39.56  n/a
     fname :C:\SWMHYMO\OUTMMD.050
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN :  99

************************************************************************************




 RUN:COMMAND#
 100:0001----------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2     (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 100 ]
#*************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*************************************************************************
#########################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN   #
#SUBDIVISION;                                                              #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                     #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
```

```
#HISTORICAL STORMS: JULY 1, 1979,                                              #
################################################################################
100:0002------------------------------------------------------------------------------------------
    READ STORM
     Filename = STORM.001
     Comment  =
     [SDT=10.00:SDUR=   3.00:PTOT=  71.66]
100:0003---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:PH1              1.26     .344 No_date    1:01   44.39 .619
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
100:0004---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:S1               .35     .136 No_date    1:00   48.03 .670
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
100:0005---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S1               .35     .136 No_date    1:00   48.03  n/a
     [RDT= 1.00] out<- 03:S1               .35     .075 No_date    1:04   48.03  n/a
           overflow <= 04:OVF-S1           .00     .000 No_date    0:00    .00   n/a
     {MxStoUsed=.5490E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
100:0006---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:PH1              1.26     .344 No_date    1:01   44.39  n/a
                     + 03:S1               .35     .075 No_date    1:04   48.03  n/a
                     + 04:OVF-S1           .00     .000 No_date    0:00    .00   n/a
     [DT= 1.00]  SUM=  05:HYD-1            1.61     .414 No_date    1:01   45.18  n/a
100:0007---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:RY1              .32     .058 No_date    1:03   34.39 .480
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
100:0008---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A1b              .28     .046 No_date    1:04   31.97 .446
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
100:0009---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:RY1              .32     .058 No_date    1:03   34.39  n/a
                     + 02:A1b              .28     .046 No_date    1:04   31.97  n/a
     [DT= 1.00]  SUM=  04:HYD-2            .60     .105 No_date    1:03   33.26  n/a
100:0010---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:WD1              .08     .036 No_date    1:00   55.31 .772
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
100:0011---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:WD1              .08     .036 No_date    1:00   55.31  n/a
                     + 04:HYD-2            .60     .105 No_date    1:03   33.26  n/a
     [DT= 1.00]  SUM=  08:HYD-3            .68     .121 No_date    1:00   35.86  n/a
100:0012---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            05:HYD-1            1.61     .414 No_date    1:01   45.18  n/a
                     + 08:HYD-3            .68     .121 No_date    1:00   35.86  n/a
     [DT= 1.00]  SUM=  06:OUT-1            2.29     .529 No_date    1:01   42.41  n/a
100:0013---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           06:OUT-1            2.29     .529 No_date    1:01   42.41  n/a
     fname :C:\SWMHYMO\OUT-1.100
     remark:FLOW TO EXISITNG DITCH
100:0014---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1               .39     .051 No_date    1:08   31.97 .446
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
100:0015---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:S2               .77     .183 No_date    1:00   48.03 .670
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
100:0016---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1               .39     .051 No_date    1:08   31.97  n/a
                     + 02:S2               .77     .183 No_date    1:00   48.03  n/a
     [DT= 1.00]  SUM=  04:HYD-4            1.16     .216 No_date    1:01   42.63  n/a
100:0017---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 04:HYD-4            1.16     .216 No_date    1:01   42.63  n/a
     [RDT= 1.00] out<- 03:S2               .98     .110 No_date    0:59   42.63  n/a
           overflow <= 05:OVF-S2           .18     .104 No_date    1:01   42.63  n/a
     {MxStoUsed=.4788E-02, TotOvfVol=.7759E-02, N-Ovf=    2, TotDurOvf=    0.hrs}
100:0018---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           03:S2               .98     .110 No_date    0:59   42.63  n/a
     fname :C:\SWMHYMO\MINS2.100
     remark:Minor Flow to EXCB13
100:0019---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:OVF-S2           .18     .104 No_date    1:01   42.63  n/a
     fname :C:\SWMHYMO\MAJS2.100
     remark:Major Flow to CB700
100:0020---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:S3               .53     .168 No_date    1:00   48.03 .670
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
100:0021---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3               .53     .168 No_date    1:00   48.03  n/a
     [RDT= 1.00] out<- 02:S3               .53     .095 No_date    1:06   48.03  n/a
           overflow <= 10:OVF-S3           .00     .022 No_date    1:06   48.03  n/a
     {MxStoUsed=.7987E-02, TotOvfVol=.1802E-03, N-Ovf=    2, TotDurOvf=    0.hrs}
100:0022---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           02:S3               .53     .095 No_date    1:06   48.03  n/a
     fname :C:\SWMHYMO\MINS3.100
     remark:Minor Flow to EXCB14
100:0023---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           10:OVF-S3           .00     .022 No_date    1:06   48.03  n/a
     fname :C:\SWMHYMO\MAJS3.100
     remark:Major Flow to CB600
100:0024---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            02:S3               .53     .095 No_date    1:06   48.03  n/a
                     + 03:S2               .98     .110 No_date    0:59   42.63  n/a
                     + 05:OVF-S2           .18     .104 No_date    1:01   42.63  n/a
                     + 10:OVF-S3           .00     .022 No_date    1:06   48.03  n/a
     [DT= 1.00]  SUM=  04:HYD-5            1.69     .301 No_date    1:06   44.31  n/a
100:0025---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:RY3              .15     .027 No_date    1:03   34.39 .480
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
100:0026---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:RY3              .15     .027 No_date    1:03   34.39  n/a
                     + 04:HYD-5            1.69     .301 No_date    1:06   44.31  n/a
     [DT= 1.00]  SUM=  05:HYD-6            1.84     .327 No_date    1:06   43.50  n/a
100:0027---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:HYD-6            1.84     .327 No_date    1:06   43.50  n/a
     fname :C:\SWMHYMO\HYD-6.100
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
100:0028---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:RY2              .54     .098 No_date    1:03   34.39 .480
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
100:0029---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:S4               .56     .216 No_date    1:00   48.03 .670
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
100:0030---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4               .56     .216 No_date    1:00   48.03  n/a
     [RDT= 1.00] out<- 08:S4               .51     .126 No_date    0:59   48.03  n/a
           overflow <= 10:OVF-S2           .05     .086 No_date    1:00   48.03  n/a
     {MxStoUsed=.5096E-02, TotOvfVol=.2193E-02, N-Ovf=    1, TotDurOvf=    0.hrs}
100:0031---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           08:S4               .51     .126 No_date    0:59   48.03  n/a
     fname :C:\SWMHYMO\MINS4.100
     remark:Minor Flow to WD ROW Ditch
100:0032---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           10:OVF-S2           .05     .086 No_date    1:00   48.03  n/a
     fname :C:\SWMHYMO\MAJS4.100
     remark:Major Flow to CB613
100:0033---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:RY2              .54     .098 No_date    1:03   34.39  n/a
                     + 08:S4               .51     .126 No_date    0:59   48.03  n/a
                     + 10:OVF-S2           .05     .086 No_date    1:00   48.03  n/a
     [DT= 1.00]  SUM=  04:HYD-7            1.10     .301 No_date    1:01   41.32  n/a
100:0034---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:WD2              .13     .057 No_date    1:00   55.31 .772
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
100:0035---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:WD2              .13     .057 No_date    1:00   55.31  n/a
                     + 04:HYD-7            1.10     .301 No_date    1:01   41.32  n/a
     [DT= 1.00]  SUM=  06:WD2              1.23     .353 No_date    1:01   42.80  n/a
100:0036---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           06:WD2              1.23     .353 No_date    1:01   42.80  n/a
     fname :C:\SWMHYMO\WD2.100
     remark:Flow from RY2_S4_WD2
100:0037---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       03:RY4              .25     .046 No_date    1:03   34.39 .480
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
100:0038---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            03:RY4              .25     .046 No_date    1:03   34.39  n/a
                     + 06:WD2              1.23     .353 No_date    1:01   42.80  n/a
     [DT= 1.00]  SUM=  04:HYD-8            1.48     .395 No_date    1:01   41.38  n/a
100:0039---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            05:HYD-6            1.84     .327 No_date    1:06   43.50  n/a
                     + 04:HYD-8            1.48     .395 No_date    1:01   41.38  n/a
     [DT= 1.00]  SUM=  07:PH2              3.32     .710 No_date    1:01   42.56  n/a
100:0040---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           07:PH2              3.32     .710 No_date    1:01   42.56  n/a
     fname :C:\SWMHYMO\PH2.100
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
100:0041---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2               .73     .096 No_date    1:08   31.97 .446
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
100:0042---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:RY5              1.41     .257 No_date    1:03   34.39 .480
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
100:0043---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2               .73     .096 No_date    1:08   31.97  n/a
                     + 02:RY5              1.41     .257 No_date    1:03   34.39  n/a
     [DT= 1.00]  SUM=  07:HYD-9            2.14     .343 No_date    1:04   33.57  n/a
100:0044---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:S5               3.66    1.044 No_date    1:03   48.03 .670
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
100:0045---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:RY6              .80     .146 No_date    1:03   34.39 .480
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
100:0046---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:S5               3.66    1.044 No_date    1:03   48.03  n/a
                     + 02:RY6              .80     .146 No_date    1:03   34.39  n/a
     [DT= 1.00]  SUM=  09:HYD-10           4.46    1.190 No_date    1:03   45.58  n/a
100:0047---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10           4.46    1.190 No_date    1:03   45.58  n/a
     [RDT= 1.00] out<- 08:S5               4.02     .581 No_date    1:04   45.58  n/a
           overflow <= 10:OVF-S2           .44     .596 No_date    1:04   45.58  n/a
     {MxStoUsed=.4995E-01, TotOvfVol=.2004E-01, N-Ovf=    2, TotDurOvf=    0.hrs}
100:0048---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            07:HYD-9            2.14     .343 No_date    1:04   33.57  n/a
                     + 08:S5               4.02     .581 No_date    1:04   45.58  n/a
                     + 10:OVF-S2           .44     .596 No_date    1:04   45.58  n/a
     [DT= 1.00]  SUM=  04:PH3-4            6.60    1.520 No_date    1:04   41.69  n/a
100:0049---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:PH3-4            6.60    1.520 No_date    1:04   41.69  n/a
     fname :C:\SWMHYMO\PH3-4.100
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
100:0050---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:1-P              1.91     .946 No_date    1:00   70.05 .977
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
100:0051---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
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     READ HYD            07:PH2              3.32     .710 No_date    1:01   42.56  n/a
      Filename = C:\SWMHYMO\PH2.100
      Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
 100:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     READ HYD            04:PH3-4            6.60    1.520 No_date    1:04   41.67  n/a
      Filename = C:\SWMHYMO\PH3-4.100
      Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
 100:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:1-P              1.91     .946 No_date    1:00   70.05  n/a
                       + 07:PH2              3.32     .710 No_date    1:01   42.56  n/a
                       + 04:PH3-4            6.60    1.520 No_date    1:04   41.67  n/a
       [DT= 1.00]  SUM=  09:PNDINF         11.83    2.434 No_date    1:04   46.50  n/a
 100:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 09:PNDINF         11.83    2.434 No_date    1:04   46.50  n/a
      [RDT= 1.00] out<- 10:PNDOUT         11.83     .906 No_date    1:26   46.50  n/a
            overflow <= 01:OVR             .00     .000 No_date    0:00    .00  n/a
     {MxStoUsed=.2441E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 100:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            10:PNDOUT           11.83     .906 No_date    1:26   46.50  n/a
      fname :C:\SWMHYMO\PNDOUT.100
      remark:Outflow from the proposed dry pond
 100:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     READ HYD            06:OUT-1            2.29     .529 No_date    1:01   42.41  n/a
      Filename = C:\SWMHYMO\OUT-1.100
      Comment  = FLOW TO EXISITNG DITCH
 100:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             06:OUT-1            2.29     .529 No_date    1:01   42.41  n/a
                       + 10:PNDOUT           11.83     .906 No_date    1:26   46.50  n/a
       [DT= 1.00]  SUM=  04:OUTMMD         14.12    1.078 No_date    1:16   45.84  n/a
 100:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            04:OUTMMD           14.12    1.078 No_date    1:16   45.84  n/a
      fname :C:\SWMHYMO\OUTMMD.100
      remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN : 119

*******************************************************************************



 RUN:COMMAND#
 120:0001---------------------------------------------------------------------------
     START
       [TZERO =    .00 hrs on       0]
       [METOUT=   2    (1=imperial, 2=metric output)]
       [NSTORM=   1 ]
       [NRUN   = 120 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*******************************************************************************
###############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN     #
#SUBDIVISION;                                                                 #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                   #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                        #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR       #
#HISTORICAL STORMS: JULY 1, 1979                                              #
###############################################################################
 120:0002---------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
       [SDT=10.00:SDUR=   3.00:PTOT=  85.96]
 120:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1              1.26     .455 No_date    1:01   58.50 .681
       [XIMP=.34:TIMP=.43]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 120:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1               .35     .174 No_date    1:00   62.32 .725
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 120:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1               .35     .174 No_date    1:00   62.32  n/a
      [RDT= 1.00] out<- 03:S1               .32     .079 No_date    1:00   62.32  n/a
            overflow <= 04:OVF-S1           .03     .093 No_date    1:00   62.32  n/a
     {MxStoUsed=.5678E-02, TotOvfVol=.1690E-02, N-Ovf=    1, TotDurOvf=    0.hrs}
 120:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1              1.26     .455 No_date    1:01   58.50  n/a
                       + 03:S1               .32     .079 No_date    1:00   62.32  n/a
                       + 04:OVF-S1           .03     .093 No_date    1:00   62.32  n/a
       [DT= 1.00]  SUM=  05:HYD-1            1.61     .617 No_date    1:00   59.33  n/a
 120:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1              .32     .079 No_date    1:03   45.64 .531
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
 120:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b              .28     .065 No_date    1:03   43.22 .503
       [CN= 81.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
 120:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1              .32     .079 No_date    1:03   45.64  n/a
                       + 02:A1b              .28     .065 No_date    1:03   43.22  n/a
       [DT= 1.00]  SUM=  04:HYD-2            .60     .144 No_date    1:03   44.51  n/a
 120:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD1              .08     .045 No_date    1:00   69.50 .809
       [XIMP=.67:TIMP=.67]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 120:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD1              .08     .045 No_date    1:00   69.50  n/a
                       + 04:HYD-2            .60     .144 No_date    1:03   44.51  n/a
       [DT= 1.00]  SUM=  08:HYD-3            .68     .164 No_date    1:00   47.45  n/a
 120:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-1            1.61     .617 No_date    1:00   59.33  n/a
                       + 08:HYD-3            .68     .164 No_date    1:00   47.45  n/a
       [DT= 1.00]  SUM=  06:OUT-1            2.29     .781 No_date    1:00   55.80  n/a
 120:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:OUT-1            2.29     .781 No_date    1:00   55.80  n/a
      fname :C:\SWMHYMO\OUT-1.120
      remark:FLOW TO EXISITNG DITCH
 120:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1               .39     .072 No_date    1:08   43.22 .503
       [CN= 81.0: N= 3.00]
       [Tp=  .15:DT= 1.00]
 120:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S2               .77     .241 No_date    1:01   62.32 .725
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
 120:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1               .39     .072 No_date    1:08   43.22  n/a
                       + 02:S2               .77     .241 No_date    1:01   62.32  n/a
       [DT= 1.00]  SUM=  04:HYD-4            1.16     .291 No_date    1:01   55.89  n/a
 120:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4            1.16     .291 No_date    1:01   55.89  n/a
      [RDT= 1.00] out<- 03:S2               .86     .110 No_date    0:57   55.89  n/a
            overflow <= 05:OVF-S2           .30     .180 No_date    1:02   55.89  n/a
     {MxStoUsed=.4809E-02, TotOvfVol=.1697E-01, N-Ovf=    2, TotDurOvf=    0.hrs}
 120:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:S2               .86     .110 No_date    0:57   55.89  n/a
      fname :C:\SWMHYMO\MINS2.120
      remark:Minor Flow to EXCB13
 120:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:OVF-S2           .30     .180 No_date    1:02   55.89  n/a
      fname :C:\SWMHYMO\MAJS2.120
      remark:Major Flow to CB700
 120:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:S3               .53     .219 No_date    1:00   62.32 .725
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
 120:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3               .53     .219 No_date    1:00   62.32  n/a
      [RDT= 1.00] out<- 02:S3               .47     .095 No_date    1:01   62.32  n/a
            overflow <= 10:OVF-S3           .06     .121 No_date    1:01   62.32  n/a
     {MxStoUsed=.7970E-02, TotOvfVol=.3543E-02, N-Ovf=    2, TotDurOvf=    0.hrs}
 120:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            02:S3               .47     .095 No_date    1:01   62.32  n/a
      fname :C:\SWMHYMO\MINS3.120
      remark:Minor Flow to EXCB14
 120:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            10:OVF-S3           .06     .121 No_date    1:01   62.32  n/a
      fname :C:\SWMHYMO\MAJS3.120
      remark:Major Flow to CB600
 120:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             02:S3               .47     .095 No_date    1:01   62.32  n/a
                       + 03:S2               .86     .110 No_date    0:57   55.89  n/a
                       + 05:OVF-S2           .30     .180 No_date    1:02   55.89  n/a
                       + 10:OVF-S3           .06     .121 No_date    1:01   62.32  n/a
       [DT= 1.00]  SUM=  04:HYD-5            1.69     .503 No_date    1:01   57.90  n/a
 120:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY3              .15     .037 No_date    1:03   45.64 .531
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
 120:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY3              .15     .037 No_date    1:03   45.64  n/a
                       + 04:HYD-5            1.69     .503 No_date    1:01   57.90  n/a
       [DT= 1.00]  SUM=  05:HYD-6            1.84     .537 No_date    1:01   56.90  n/a
 120:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:HYD-6            1.84     .537 No_date    1:01   56.90  n/a
      fname :C:\SWMHYMO\HYD-6.120
      remark:PH2  FLOW SENT TO A POND THROUGH FUTURE PH3-4
 120:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY2              .54     .133 No_date    1:03   45.64 .531
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
 120:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S4               .56     .277 No_date    1:00   62.32 .725
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
 120:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S4               .56     .277 No_date    1:00   62.32  n/a
      [RDT= 1.00] out<- 08:S4               .47     .126 No_date    0:57   62.32  n/a
            overflow <= 10:OVF-S2           .09     .148 No_date    1:01   62.32  n/a
     {MxStoUsed=.5108E-02, TotOvfVol=.5572E-02, N-Ovf=    1, TotDurOvf=    0.hrs}
 120:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            08:S4               .47     .126 No_date    0:57   62.32  n/a
      fname :C:\SWMHYMO\MINS4.120
      remark:Minor Flow to WD ROW Ditch
 120:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            10:OVF-S2           .09     .148 No_date    1:00   62.32  n/a
      fname :C:\SWMHYMO\MAJS4.120
      remark:Major Flow to CB613
 120:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY2              .54     .133 No_date    1:03   45.64  n/a
                       + 08:S4               .47     .126 No_date    0:57   62.32  n/a
                       + 10:OVF-S2           .09     .148 No_date    1:00   62.32  n/a
       [DT= 1.00]  SUM=  04:HYD-7            1.10     .392 No_date    1:01   54.12  n/a
 120:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD2              .13     .070 No_date    1:00   69.50 .809
       [XIMP=.67:TIMP=.67]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
 120:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD2              .13     .070 No_date    1:00   69.50  n/a
                       + 04:HYD-7            1.10     .392 No_date    1:01   54.12  n/a
       [DT= 1.00]  SUM=  06:WD2              1.23     .456 No_date    1:01   55.74  n/a
 120:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:WD2              1.23     .456 No_date    1:01   55.74  n/a
      fname :C:\SWMHYMO\WD2.120
      remark:Flow from RY2_S4 WD2
 120:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        03:RY4              .25     .062 No_date    1:03   45.64 .531
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     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
120:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:RY4             .25     .062 No_date    1:03   45.64  n/a
                    +  06:WD2             1.23     .456 No_date    1:01   55.74  n/a
     [DT= 1.00]  SUM=  04:HYD-8           1.48     .514 No_date    1:01   54.04  n/a
120:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-6           1.84     .537 No_date    1:01   56.90  n/a
                    +  04:HYD-8           1.48     .514 No_date    1:01   54.04  n/a
     [DT= 1.00]  SUM=  07:PH2             3.32    1.051 No_date    1:01   55.62  n/a
120:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            07:PH2             3.32    1.051 No_date    1:01   55.62  n/a
     fname :C:\SWMHYMO\PH2.120
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
120:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2               .73     .134 No_date    1:08   43.22 .503
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
120:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY5             1.41     .348 No_date    1:03   45.64 .531
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
120:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2               .73     .134 No_date    1:08   43.22  n/a
                    +  02:RY5             1.41     .348 No_date    1:03   45.64  n/a
     [DT= 1.00]  SUM=  07:HYD-9           2.14     .469 No_date    1:04   44.81  n/a
120:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S5              3.66    1.368 No_date    1:02   62.32 .725
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
120:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY6              .80     .198 No_date    1:03   45.64 .531
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
120:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:S5              3.66    1.368 No_date    1:02   62.32  n/a
                    +  02:RY6              .80     .198 No_date    1:03   45.64  n/a
     [DT= 1.00]  SUM=  09:HYD-10          4.46    1.562 No_date    1:02   59.33  n/a
120:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10          4.46    1.562 No_date    1:02   59.33  n/a
     [RDT= 1.00] out<- 08:S5              3.57     .581 No_date    1:01   59.32  n/a
           overflow <= 10:OVF-S2           .89     .979 No_date    1:03   59.33  n/a
     {MxStoUsed=.5002E-01, TotOvfVol=.5257E-01, N-Ovf=    Z, TotDurOvf=    0.hrs}
120:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9           2.14     .469 No_date    1:04   44.81  n/a
                    +  08:S5              3.57     .581 No_date    1:01   59.32  n/a
                    +  10:OVF-S2           .89     .979 No_date    1:03   59.33  n/a
     [DT= 1.00]  SUM=  04:PH3-4           6.60    2.024 No_date    1:03   54.62  n/a
120:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4           6.60    2.024 No_date    1:03   54.62  n/a
     fname :C:\SWMHYMO\PH3-4.120
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
120:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:1-P             1.91    1.136 No_date    1:00   84.35 .981
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
120:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2             3.32    1.051 No_date    1:01   55.62  n/a
     Filename = C:\SWMHYMO\PH2.120
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
120:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4           6.60    2.024 No_date    1:03   54.60  n/a
     Filename = C:\SWMHYMO\PH3-4.120
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
120:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P             1.91    1.136 No_date    1:00   84.35  n/a
                    +  07:PH2             3.32    1.051 No_date    1:01   55.62  n/a
                    +  04:PH3-4           6.60    2.024 No_date    1:03   54.60  n/a
     [DT= 1.00]  SUM=  09:PNDINF         11.83    3.460 No_date    1:01   59.69  n/a
120:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF         11.83    3.460 No_date    1:01   59.69  n/a
     [RDT= 1.00] out<- 10:PNDOUT         11.83    1.239 No_date    1:22   59.69  n/a
           overflow <= 01:OVR             0.00     .000 No_date    0:00    .00  n/a
     {MxStoUsed=.3020E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
120:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT          11.83    1.239 No_date    1:22   59.69  n/a
     fname :C:\SWMHYMO\PNDOUT.120
     remark:Outflow from the proposed dry pond
120:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1           2.29     .781 No_date    1:00   55.80  n/a
     Filename = C:\SWMHYMO\OUT-1.120
     Comment  = FLOW TO EXISITNG DITCH
120:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1           2.29     .781 No_date    1:00   55.80  n/a
                    +  10:PNDOUT         11.83    1.239 No_date    1:22   59.69  n/a
     [DT= 1.00]  SUM=  04:OUTMMD         14.12    1.527 No_date    1:13   59.06  n/a
120:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD          14.12    1.527 No_date    1:13   59.06  n/a
     fname :C:\SWMHYMO\OUTMMD.120
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
 ** END OF RUN : 201

************************************************************************************




 RUN:COMMAND#
 202:0001---------------------------------------------------------------------------------
     START
     [TZERO =    .00 hrs on        0]
     [METOUT=   2    (1=imperial, 2=metric output)]
     [NSTORM=   1 ]
     [NRUN  = 202 ]
#************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN    #
#SUBDIVISION;                                                                 #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                   #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                        #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR       #
#HISTORICAL STORMS: JULY 1, 1979,                                             #
#################################################################################
 202:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT=  43.20]
 202:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1             1.26     .062 No_date    6:01   16.89 .391
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 202:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1               .35     .027 No_date    6:00   19.60 .454
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 202:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1               .35     .027 No_date    6:00   19.60  n/a
      [RDT= 1.00] out<- 03:S1               .35     .019 No_date    6:02   19.60  n/a
            overflow <= 04:OVF-S1           .00     .000 No_date    0:00    .00  n/a
      {MxStoUsed=.1701E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 202:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1             1.26     .062 No_date    6:01   16.89  n/a
                     +  03:S1               .35     .019 No_date    6:02   19.60  n/a
                     +  04:OVF-S1           .00     .000 No_date    0:00    .00  n/a
      [DT= 1.00]  SUM=  05:HYD-1           1.61     .081 No_date    6:01   17.48  n/a
 202:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1              .32     .017 No_date    6:01   14.55 .337
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 202:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b              .28     .012 No_date    6:02   12.35 .286
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 202:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1              .32     .017 No_date    6:01   14.55  n/a
                     +  02:A1b              .28     .012 No_date    6:02   12.35  n/a
      [DT= 1.00]  SUM=  04:HYD-2            .60     .029 No_date    6:02   13.52  n/a
 202:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD1              .08     .008 No_date    6:00   28.57 .661
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 202:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD1              .08     .008 No_date    6:00   28.57  n/a
                     +  04:HYD-2            .60     .029 No_date    6:02   13.52  n/a
      [DT= 1.00]  SUM=  08:HYD-3            .68     .036 No_date    6:00   15.29  n/a
 202:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-1           1.61     .081 No_date    6:01   17.48  n/a
                     +  08:HYD-3            .68     .036 No_date    6:00   15.29  n/a
      [DT= 1.00]  SUM=  06:OUT-1           2.29     .116 No_date    6:00   16.83  n/a
 202:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:OUT-1           2.29     .116 No_date    6:00   16.83  n/a
      fname :C:\SWMHYMO\OUT-1.202
      remark:FLOW TO EXISITNG DITCH
 202:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1               .39     .014 No_date    6:04   12.35 .286
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 202:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S2               .77     .044 No_date    6:00   19.60 .454
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=  .50:LGI= 116.:MNI=.013:SCI=   .0]
 202:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1               .39     .014 No_date    6:04   12.35  n/a
                     +  02:S2               .77     .044 No_date    6:00   19.60  n/a
      [DT= 1.00]  SUM=  04:HYD-4           1.16     .056 No_date    6:01   17.17  n/a
 202:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4           1.16     .056 No_date    6:01   17.17  n/a
      [RDT= 1.00] out<- 03:S2              1.16     .049 No_date    6:04   17.17  n/a
            overflow <= 05:OVF-S2           .00     .000 No_date    0:00    .00  n/a
      {MxStoUsed=.2526E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 202:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:S2              1.16     .049 No_date    6:04   17.17  n/a
      fname :C:\SWMHYMO\MINS2.202
      remark:Minor Flow to EXCB13
 202:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
  *  SAVE HYD            05:OVF-S2           .00     .000 No_date    0:00    .00  n/a
      fname :C:\SWMHYMO\MAJS2.202
      remark:Major Flow to CB700
 202:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:S3               .53     .033 No_date    6:00   19.60 .454
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
 202:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3               .53     .033 No_date    6:00   19.60  n/a
      [RDT= 1.00] out<- 02:S3               .53     .024 No_date    6:05   19.60  n/a
            overflow <= 10:OVF-S3           .00     .000 No_date    0:00    .00  n/a
      {MxStoUsed=.2798E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 202:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            02:S3              .53     .024 No_date    6:05   19.60  n/a
      fname :C:\SWMHYMO\MINS3.202
      remark:Minor Flow to EXCB14
 202:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
  *  SAVE HYD            10:OVF-S3           .00     .000 No_date    0:00    .00  n/a
      fname :C:\SWMHYMO\MAJS3.202
      remark:Major Flow to CB600
 202:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
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    ADD HYD           02:S3              .53     .024 No_date    6:05   19.60  n/a
                    +  03:S2             1.16     .049 No_date    6:04   17.17  n/a
                    +  05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
                    +  10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5          1.69     .073 No_date    6:04   17.92  n/a
202:0025--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      01:RY3             .15     .008 No_date    6:01   14.55 .337
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
202:0026--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:RY3             .15     .008 No_date    6:01   14.55  n/a
                    +  04:HYD-5          1.69     .073 No_date    6:04   17.92  n/a
     [DT= 1.00]  SUM=  05:HYD-6          1.84     .080 No_date    6:04   17.64  n/a
202:0027--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          05:HYD-6           1.84     .080 No_date    6:04   17.64  n/a
     fname :C:\SWMHYMO\HYD-6.202
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
202:0028--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      01:RY2             .54     .028 No_date    6:01   14.55 .337
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
202:0029--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD    02:S4              .56     .042 No_date    6:00   19.60 .454
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
202:0030--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4             .56     .042 No_date    6:00   19.60  n/a
     [RDT= 1.00] out<- 08:S4             .56     .038 No_date    6:02   19.60  n/a
           overflow <= 10:OVF-S2         .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.2512E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=   0.hrs}
202:0031--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          08:S4              .56     .038 No_date    6:02   19.60  n/a
     fname :C:\SWMHYMO\MINS4.202
     remark:Minor Flow to WD ROW Ditch
202:0032--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD          10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS4.202
     remark:Major Flow to CB613
202:0033--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:RY2             .54     .028 No_date    6:01   14.55  n/a
                    +  08:S4             .56     .038 No_date    6:02   19.60  n/a
                    +  10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-7          1.10     .065 No_date    6:02   17.11  n/a
202:0034--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD    01:WD2             .13     .013 No_date    6:00   28.57 .661
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
202:0035--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:WD2             .13     .013 No_date    6:00   28.57  n/a
                    +  04:HYD-7          1.10     .065 No_date    6:02   17.11  n/a
     [DT= 1.00]  SUM=  06:WD2            1.23     .078 No_date    6:01   18.32  n/a
202:0036--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          06:WD2             1.23     .078 No_date    6:01   18.32  n/a
     fname :C:\SWMHYMO\WD2.202
     remark:Flow from RY2_S4_WD2
202:0037--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      03:RY4             .25     .013 No_date    6:01   14.55 .337
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
202:0038--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           03:RY4             .25     .013 No_date    6:01   14.55  n/a
                    +  06:WD2            1.23     .078 No_date    6:01   18.32  n/a
     [DT= 1.00]  SUM=  04:HYD-8          1.48     .091 No_date    6:01   17.68  n/a
202:0039--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           05:HYD-6           1.84     .080 No_date    6:04   17.64  n/a
                    +  04:HYD-8          1.48     .091 No_date    6:01   17.68  n/a
     [DT= 1.00]  SUM=  07:PH2            3.32     .169 No_date    6:02   17.66  n/a
202:0040--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          07:PH2             3.32     .169 No_date    6:02   17.66  n/a
     fname :C:\SWMHYMO\PH2.202
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
202:0041--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      01:A2              .73     .027 No_date    6:04   12.35 .286
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
202:0042--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      02:RY5             1.41     .073 No_date    6:01   14.55 .337
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
202:0043--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:A2              .73     .027 No_date    6:04   12.35  n/a
                    +  02:RY5            1.41     .073 No_date    6:01   14.55  n/a
     [DT= 1.00]  SUM=  07:HYD-9          2.14     .099 No_date    6:02   13.80  n/a
202:0044--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD    01:S5              3.66     .206 No_date    6:04   19.60 .454
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
202:0045--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD      02:RY6             .80     .041 No_date    6:01   14.55 .337
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
202:0046--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:S5              3.66     .206 No_date    6:04   19.60  n/a
                    +  02:RY6            .80     .041 No_date    6:01   14.55  n/a
     [DT= 1.00]  SUM=  09:HYD-10         4.46     .246 No_date    6:03   18.70  n/a
202:0047--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10         4.46     .246 No_date    6:03   18.70  n/a
     [RDT= 1.00] out<- 08:S5             4.46     .188 No_date    6:10   18.70  n/a
           overflow <= 10:OVF-S2         .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.2289E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=   0.hrs}
202:0048--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           07:HYD-9           2.14     .099 No_date    6:02   13.80  n/a
                    +  08:S5             4.46     .188 No_date    6:10   18.70  n/a
                    +  10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:PH3-4          6.60     .261 No_date    6:05   17.11  n/a
202:0049--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          04:PH3-4           6.60     .261 No_date    6:05   17.11  n/a
     fname :C:\SWMHYMO\PH3-4.202
      remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
202:0050--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD    01:1-P             1.91     .268 No_date    6:00   41.59 .963
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
202:0051--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD          07:PH2             3.32     .169 No_date    6:02   17.66  n/a
     Filename = C:\SWMHYMO\PH2.202
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
202:0052--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD          04:PH3-4           6.60     .261 No_date    6:05   17.09  n/a
     Filename = C:\SWMHYMO\PH3-4.202
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
202:0053--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           01:1-P             1.91     .268 No_date    6:00   41.59  n/a
                    +  07:PH2            3.32     .169 No_date    6:02   17.66  n/a
                    +  04:PH3-4          6.60     .261 No_date    6:05   17.09  n/a
     [DT= 1.00]  SUM=  09:PNDINF        11.83     .658 No_date    6:00   21.21  n/a
202:0054--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83     .658 No_date    6:00   21.21  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83     .181 No_date    6:38   21.21  n/a
           overflow <= 01:OVR            .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.1048E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=   0.hrs}
202:0055--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          10:PNDOUT          11.83     .181 No_date    6:38   21.21  n/a
     fname :C:\SWMHYMO\PNDOUT.202
     remark:Outflow from the proposed dry pond
202:0056--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD          06:OUT-1           2.29     .116 No_date    6:00   16.83  n/a
     Filename = C:\SWMHYMO\OUT-1.202
     Comment  = FLOW TO EXISITNG DITCH
202:0057--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD           06:OUT-1           2.29     .116 No_date    6:00   16.83  n/a
                    +  10:PNDOUT        11.83     .181 No_date    6:38   21.21  n/a
     [DT= 1.00]  SUM=  04:OUTMMD        14.12     .213 No_date    6:31   20.50  n/a
202:0058--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD          04:OUTMMD          14.12     .213 No_date    6:31   20.50  n/a
     fname :C:\SWMHYMO\OUTMMD.202
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN : 204

************************************************************************************




 RUN:COMMAND#
 205:0001--------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 205 ]
#*************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   : 4418403
#*************************************************************************
#########################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN    #
#SUBDIVISION;                                                               #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                 #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                      #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#HISTORICAL STORMS: JULY 1, 1979,                                           #
#########################################################################
 205:0002--------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT=  57.60]
 205:0003--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD    01:PH1             1.26     .112 No_date    6:02   25.92 .450
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 205:0004--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD    02:S1              .35     .047 No_date    6:00   29.74 .516
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 205:0005--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1             .35     .047 No_date    6:00   29.74  n/a
      [RDT= 1.00] out<- 03:S1             .35     .032 No_date    6:03   29.74  n/a
            overflow <= 04:OVF-S1         .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.2573E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=   0.hrs}
 205:0006--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD           01:PH1             1.26     .112 No_date    6:02   25.92  n/a
                     +  03:S1              .35     .032 No_date    6:03   29.74  n/a
                     +  04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  05:HYD-1           1.61     .143 No_date    6:02   26.75  n/a
 205:0007--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD      01:RY1              .32     .028 No_date    6:01   24.06 .418
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 205:0008--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD      02:A1b              .28     .022 No_date    6:01   21.69 .377
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 205:0009--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD           01:RY1              .32     .028 No_date    6:01   24.06  n/a
                     +  02:A1b            .28     .022 No_date    6:01   21.69  n/a
      [DT= 1.00]  SUM=  04:HYD-2           .60     .050 No_date    6:01   22.96  n/a
 205:0010--------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD    01:WD1              .08     .013 No_date    6:00   40.03 .695
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
```

```
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
205:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD1             .08     .013 No_date    6:00   40.03  n/a
                      +  04:HYD-2           .60     .050 No_date    6:01   22.96  n/a
     [DT= 1.00]  SUM=  08:HYD-3           .68     .061 No_date    6:00   24.97  n/a
205:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-1          1.61     .143 No_date    6:02   26.75  n/a
                      +  08:HYD-3           .68     .061 No_date    6:00   24.97  n/a
     [DT= 1.00]  SUM=  06:OUT-1          2.29     .200 No_date    6:00   26.22  n/a
205:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:OUT-1          2.29     .200 No_date    6:00   26.22  n/a
     fname :C:\SWMHYMO\OUT-1.205
     remark:FLOW TO EXISITNG DITCH
205:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1              .39     .026 No_date    6:04   21.69 .377
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
205:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S2              .77     .065 No_date    6:00   29.74 .516
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
205:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1              .39     .026 No_date    6:04   21.69  n/a
                      +  02:S2              .77     .065 No_date    6:00   29.74  n/a
     [DT= 1.00]  SUM=  04:HYD-4          1.16     .089 No_date    6:01   27.03  n/a
205:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 04:HYD-4          1.16     .089 No_date    6:01   27.03  n/a
     [RDT= 1.00] out<- 03:S2             1.16     .076 No_date    6:04   27.03  n/a
           overflow <= 05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3543E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
205:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:S2             1.16     .076 No_date    6:04   27.03  n/a
     fname :C:\SWMHYMO\MINS2.205
     remark:Minor Flow to EXCB13
205:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS2.205
     remark:Major Flow to CB700
205:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S3              .53     .058 No_date    6:01   29.74 .516
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
205:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3              .53     .058 No_date    6:01   29.74  n/a
     [RDT= 1.00] out<- 02:S3              .53     .040 No_date    6:06   29.74  n/a
           overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3985E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
205:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            02:S3              .53     .040 No_date    6:06   29.74  n/a
     fname :C:\SWMHYMO\MINS3.205
     remark:Minor Flow to EXCB14
205:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS3.205
     remark:Major Flow to CB600
205:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             02:S3              .53     .040 No_date    6:06   29.74  n/a
                      +  03:S2             1.16     .076 No_date    6:04   27.03  n/a
                      +  05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
                      +  10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5          1.69     .116 No_date    6:05   27.87  n/a
205:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY3             .15     .013 No_date    6:01   24.06 .418
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
205:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY3             .15     .013 No_date    6:01   24.06  n/a
                      +  04:HYD-5          1.69     .116 No_date    6:05   27.87  n/a
     [DT= 1.00]  SUM=  05:HYD-6          1.84     .127 No_date    6:04   27.56  n/a
205:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:HYD-6          1.84     .127 No_date    6:04   27.56  n/a
     fname :C:\SWMHYMO\HYD-6.205
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
205:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY2             .54     .047 No_date    6:01   24.06 .418
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
205:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S4              .56     .074 No_date    6:00   29.74 .516
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
205:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4              .56     .074 No_date    6:00   29.74  n/a
     [RDT= 1.00] out<- 08:S4              .56     .064 No_date    6:02   29.74  n/a
           overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3308E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
205:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            08:S4              .56     .064 No_date    6:02   29.74  n/a
     fname :C:\SWMHYMO\MINS4.205
     remark:Minor Flow to WD ROW Ditch
205:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS4.205
     remark:Major Flow to CB613
205:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY2             .54     .047 No_date    6:01   24.06  n/a
                      +  08:S4              .56     .064 No_date    6:02   29.74  n/a
                      +  10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-7          1.10     .110 No_date    6:01   26.94  n/a
205:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:WD2             .13     .020 No_date    6:00   40.03 .695
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
205:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD2             .13     .020 No_date    6:00   40.03  n/a
                      +  04:HYD-7          1.10     .110 No_date    6:01   26.94  n/a
     [DT= 1.00]  SUM=  06:WD2            1.23     .130 No_date    6:01   28.32  n/a
205:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:WD2            1.23     .130 No_date    6:01   28.32  n/a
     fname :C:\SWMHYMO\WD2.205
     remark:Flow from RY2_S4 WD2
205:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        03:RY4             .25     .022 No_date    6:01   24.06 .418
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
205:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:RY4             .25     .022 No_date    6:01   24.06  n/a
                      +  06:WD2            1.23     .130 No_date    6:01   28.32  n/a
     [DT= 1.00]  SUM=  04:HYD-8          1.48     .151 No_date    6:01   27.60  n/a
205:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-6          1.84     .127 No_date    6:04   27.56  n/a
                      +  04:HYD-8          1.48     .151 No_date    6:01   27.60  n/a
     [DT= 1.00]  SUM=  07:PH2            3.32     .274 No_date    6:02   27.58  n/a
205:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            07:PH2            3.32     .274 No_date    6:02   27.58  n/a
     fname :C:\SWMHYMO\PH2.205
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
205:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2              .73     .049 No_date    6:04   21.69 .377
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
205:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY5            1.41     .122 No_date    6:01   24.06 .418
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
205:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2              .73     .049 No_date    6:04   21.69  n/a
                      +  02:RY5            1.41     .122 No_date    6:01   24.06  n/a
     [DT= 1.00]  SUM=  07:HYD-9          2.14     .169 No_date    6:02   23.25  n/a
205:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S5             3.66     .363 No_date    6:03   29.74 .516
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
205:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY6             .80     .069 No_date    6:01   24.06 .418
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
205:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:S5             3.66     .363 No_date    6:03   29.74  n/a
                      +  02:RY6            .80     .069 No_date    6:01   24.06  n/a
     [DT= 1.00]  SUM=  09:HYD-10         4.46     .430 No_date    6:03   28.72  n/a
205:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10         4.46     .430 No_date    6:03   28.72  n/a
     [RDT= 1.00] out<- 08:S5             4.46     .320 No_date    6:10   28.72  n/a
           overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3198E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
205:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9          2.14     .169 No_date    6:02   23.25  n/a
                      +  08:S5             4.46     .320 No_date    6:10   28.72  n/a
                      +  10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:PH3-4          6.60     .444 No_date    6:06   26.95  n/a
205:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4          6.60     .444 No_date    6:06   26.95  n/a
     fname :C:\SWMHYMO\PH3-4.205
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
205:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:1-P            1.91     .358 No_date    6:00   55.98 .972
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
205:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2            3.32     .274 No_date    6:02   27.58  n/a
     Filename = C:\SWMHYMO\PH2.205
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
205:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4          6.60     .444 No_date    6:06   26.93  n/a
     Filename = C:\SWMHYMO\PH3-4.205
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
205:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P            1.91     .358 No_date    6:00   55.98  n/a
                      +  07:PH2            3.32     .274 No_date    6:02   27.58  n/a
                      +  04:PH3-4          6.60     .444 No_date    6:06   26.93  n/a
     [DT= 1.00]  SUM=  09:PNDINF        11.83    1.005 No_date    6:00   31.80  n/a
205:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83    1.005 No_date    6:00   31.80  n/a
     [RDT= 1.00] out<- 01:PNDOUT        11.83     .380 No_date    6:31   31.80  n/a
           overflow <= 01:OVR            .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.1473E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
205:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT         11.83     .380 No_date    6:31   31.80  n/a
     fname :C:\SWMHYMO\PNDOUT.205
     remark:Outflow from the proposed dry pond
205:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1          2.29     .200 No_date    6:00   26.22  n/a
     Filename = C:\SWMHYMO\OUT-1.205
     Comment  = FLOW TO EXISITNG DITCH
205:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1          2.29     .200 No_date    6:00   26.22  n/a
                      +  10:PNDOUT        11.83     .380 No_date    6:31   31.80  n/a
     [DT= 1.00]  SUM=  04:OUTMMD        14.12     .436 No_date    6:26   30.90  n/a
205:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD         14.12     .436 No_date    6:26   30.90  n/a
     fname :C:\SWMHYMO\OUTMMD.205
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
 ** END OF RUN : 209

************************************************************************



RUN:COMMAND#
210:0001---------------------------------------------------------------------------
    START
     [TZERO =    .00 hrs on       0]
```

```
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN    = 210 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*******************************************************************************
###############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN     #
#SUBDIVISION;                                                                 #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                   #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                        #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR       #
#HISTORICAL STORMS: JULY 1, 1979,                                             #
###############################################################################
210:0002-------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT=  67.20]
210:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1             1.26     .151 No_date    6:02   33.99 .506
       [XIMP=.34:TIMP=.43]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
210:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1              .35     .060 No_date    6:00   38.61 .575
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
210:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1              .35     .060 No_date    6:00   38.61  n/a
       [RDT= 1.00] out<- 03:S1             .35     .042 No_date    6:03   38.61  n/a
            overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
       {MxStoUsed=.3234E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
210:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1            1.26     .151 No_date    6:02   33.99  n/a
                       + 03:S1              .35     .042 No_date    6:03   38.61  n/a
                       + 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
       [DT= 1.00]  SUM=  05:HYD-1          1.61     .193 No_date    6:02   34.99  n/a
210:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1             .32     .036 No_date    6:01   31.02 .462
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
210:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b             .28     .030 No_date    6:01   28.61 .426
       [CN= 81.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
210:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1             .32     .036 No_date    6:01   31.02  n/a
                       + 02:A1b             .28     .030 No_date    6:01   28.61  n/a
       [DT= 1.00]  SUM=  04:HYD-2          .60     .065 No_date    6:01   29.90  n/a
210:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD1             .08     .016 No_date    6:00   48.04 .715
       [XIMP=.67:TIMP=.67]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
210:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD1             .08     .016 No_date    6:00   48.04  n/a
                       + 04:HYD-2          .60     .065 No_date    6:01   29.90  n/a
       [DT= 1.00]  SUM=  08:HYD-3          .68     .079 No_date    6:00   32.03  n/a
210:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-1          1.61     .193 No_date    6:02   34.99  n/a
                       + 08:HYD-3          .68     .079 No_date    6:00   32.03  n/a
       [DT= 1.00]  SUM=  06:OUT-1          2.29     .266 No_date    6:00   34.11  n/a
210:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:OUT-1          2.29     .266 No_date    6:00   34.11  n/a
       fname :C:\SWMHYMO\OUT-1.210
       remark:FLOW TO EXISITNG DITCH
210:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1              .39     .035 No_date    6:04   28.61 .426
       [CN= 81.0: N= 3.00]
       [Tp=  .15:DT= 1.00]
210:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S2              .77     .084 No_date    6:00   38.61 .575
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
210:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1              .39     .035 No_date    6:04   28.61  n/a
                       + 02:S2              .77     .084 No_date    6:00   38.61  n/a
       [DT= 1.00]  SUM=  04:HYD-4          1.16     .117 No_date    6:01   35.25  n/a
210:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4          1.16     .117 No_date    6:01   35.25  n/a
       [RDT= 1.00] out<- 03:S2            1.16     .100 No_date    6:05   35.25  n/a
            overflow <= 05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
       {MxStoUsed=.4436E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
210:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:S2             1.16     .100 No_date    6:05   35.25  n/a
       fname :C:\SWMHYMO\MINS2.210
       remark:Minor Flow to EXCB13
210:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *   SAVE HYD            05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
       fname :C:\SWMHYMO\MAJS2.210
       remark:Major Flow to CB700
210:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:S3              .53     .076 No_date    6:00   38.61 .575
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
210:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3              .53     .076 No_date    6:00   38.61  n/a
       [RDT= 1.00] out<- 02:S3             .53     .052 No_date    6:06   38.61  n/a
            overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
       {MxStoUsed=.4841E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
210:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            02:S3              .53     .052 No_date    6:06   38.61  n/a
       fname :C:\SWMHYMO\MINS3.210
       remark:Minor Flow to EXCB14
210:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *   SAVE HYD            10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
       fname :C:\SWMHYMO\MAJS3.210
       remark:Major Flow to CB600
210:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             02:S3              .53     .052 No_date    6:06   38.61  n/a
                       + 03:S2             1.16     .100 No_date    6:05   35.25  n/a
                       + 04:OVF-S2          .00     .000 No_date    0:00     .00  n/a
                       + 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
       [DT= 1.00]  SUM=  04:HYD-5          1.69     .152 No_date    6:05   36.29  n/a
210:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY3             .15     .017 No_date    6:01   31.02 .462
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
210:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY3             .15     .017 No_date    6:01   31.02  n/a
                       + 04:HYD-5          1.69     .152 No_date    6:05   36.29  n/a
       [DT= 1.00]  SUM=  05:HYD-6          1.84     .166 No_date    6:04   35.86  n/a
210:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:HYD-6          1.84     .166 No_date    6:04   35.86  n/a
       fname :C:\SWMHYMO\HYD-6.210
       remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
210:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY2             .54     .060 No_date    6:01   31.02 .462
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
210:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S4              .56     .095 No_date    6:00   38.61 .575
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
210:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S4              .56     .095 No_date    6:00   38.61  n/a
       [RDT= 1.00] out<- 08:S4             .56     .082 No_date    6:02   38.61  n/a
            overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
       {MxStoUsed=.3853E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
210:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            08:S4              .56     .082 No_date    6:02   38.61  n/a
       fname :C:\SWMHYMO\MINS4.210
       remark:Minor Flow to WD ROW Ditch
210:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *   SAVE HYD            10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
       fname :C:\SWMHYMO\MAJS4.210
       remark:Major Flow to CB613
210:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY2             .54     .060 No_date    6:01   31.02  n/a
                       + 08:S4              .56     .082 No_date    6:02   38.61  n/a
                       + 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
       [DT= 1.00]  SUM=  04:HYD-7          1.10     .142 No_date    6:01   34.87  n/a
210:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD2             .13     .024 No_date    6:00   48.04 .715
       [XIMP=.67:TIMP=.67]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
210:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD2             .13     .024 No_date    6:00   48.04  n/a
                       + 04:HYD-7          1.10     .142 No_date    6:01   34.87  n/a
       [DT= 1.00]  SUM=  06:WD2            1.23     .166 No_date    6:01   36.27  n/a
210:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:WD2            1.23     .166 No_date    6:01   36.27  n/a
       fname :C:\SWMHYMO\WD2.210
       remark:Flow from RY2 S4 WD2
210:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY4             .25     .028 No_date    6:01   31.02 .462
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
210:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             03:RY4             .25     .028 No_date    6:01   31.02  n/a
                       + 06:WD2            1.23     .166 No_date    6:01   36.27  n/a
       [DT= 1.00]  SUM=  04:HYD-8          1.48     .194 No_date    6:01   35.38  n/a
210:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-6          1.84     .166 No_date    6:04   35.86  n/a
                       + 04:HYD-8          1.48     .194 No_date    6:01   35.38  n/a
       [DT= 1.00]  SUM=  07:PH2            3.32     .353 No_date    6:02   35.65  n/a
210:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            07:PH2            3.32     .353 No_date    6:02   35.65  n/a
       fname :C:\SWMHYMO\PH2.210
       remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
210:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A2              .73     .065 No_date    6:04   28.61 .426
       [CN= 81.0: N= 3.00]
       [Tp=  .15:DT= 1.00]
210:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:RY5            1.41     .157 No_date    6:01   31.02 .462
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
210:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A2              .73     .065 No_date    6:04   28.61  n/a
                       + 02:RY5            1.41     .157 No_date    6:01   31.02  n/a
       [DT= 1.00]  SUM=  07:HYD-9          2.14     .220 No_date    6:02   30.20  n/a
210:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:S5             3.66     .476 No_date    6:03   38.61 .575
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
210:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:RY6             .80     .089 No_date    6:01   31.02 .462
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
210:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:S5             3.66     .476 No_date    6:03   38.61  n/a
                       + 02:RY6             .80     .089 No_date    6:01   31.02  n/a
       [DT= 1.00]  SUM=  09:HYD-10         4.46     .563 No_date    6:02   37.25  n/a
210:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 09:HYD-10         4.46     .563 No_date    6:02   37.25  n/a
       [RDT= 1.00] out<- 08:S5            4.46     .415 No_date    6:10   37.25  n/a
            overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
       {MxStoUsed=.3859E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
```

```
210:0048----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9           2.14     .220 No_date    6:02   30.20  n/a
                      + 08:S5              4.46     .415 No_date    6:10   37.25  n/a
                      + 10:OVF-S2           .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:PH3-4           6.60     .584 No_date    6:05   34.96  n/a
210:0049----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4           6.60     .584 No_date    6:05   34.96  n/a
     fname :C:\SWMHYMO\PH3-4.210
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
210:0050----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:1-P             1.91     .417 No_date    6:00   65.58 .976
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
210:0051----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2             3.32     .353 No_date    6:02   35.65  n/a
     Filename = C:\SWMHYMO\PH2.210
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
210:0052----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4           6.60     .584 No_date    6:05   34.95  n/a
     Filename = C:\SWMHYMO\PH3-4.210
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
210:0053----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P             1.91     .417 No_date    6:00   65.58  n/a
                      + 07:PH2             3.32     .353 No_date    6:02   35.65  n/a
                      + 04:PH3-4           6.60     .584 No_date    6:05   34.95  n/a
     [DT= 1.00]  SUM=  09:PNDINF         11.83    1.267 No_date    6:00   40.09  n/a
210:0054----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83    1.267 No_date    6:00   40.09  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83     .526 No_date    6:28   40.09  n/a
           overflow <= 01:OVR            .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.1754E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
210:0055----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT          11.83     .526 No_date    6:28   40.09  n/a
     fname :C:\SWMHYMO\PNDOUT.210
     remark:Outflow from the proposed dry pond
210:0056----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1           2.29     .266 No_date    6:00   34.11  n/a
     Filename = C:\SWMHYMO\OUT-1.210
     Comment  = FLOW TO EXISITNG DITCH
210:0057----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1           2.29     .266 No_date    6:00   34.11  n/a
                      + 10:PNDOUT          11.83     .526 No_date    6:28   40.09  n/a
     [DT= 1.00]  SUM=  04:OUTMMD          14.12     .607 No_date    6:20   39.12  n/a
210:0058----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD          14.12     .607 No_date    6:20   39.12  n/a
     fname :C:\SWMHYMO\OUTMMD.210
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN : 224

************************************************************************************



 RUN:COMMAND#
 225:0001----------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on      0]
      [METOUT=   2     (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 225 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*******************************************************************************
################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN      #
#SUBDIVISION;                                                                  #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                    #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                         #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR        #
#HISTORICAL STORMS: JULY 1, 1979,                                              #
################################################################################
 225:0002----------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT=  79.20]
 225:0003----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:PH1             1.26     .202 No_date    6:01   45.19 .571
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 225:0004----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S1               .35     .075 No_date    6:00   49.38 .623
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 225:0005----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1            .35     .075 No_date    6:00   49.38  n/a
      [RDT= 1.00] out<- 03:S1            .35     .053 No_date    6:03   49.38  n/a
            overflow <= 04:OVF-S1        .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3980E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 225:0006----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:PH1             1.26     .202 No_date    6:01   45.19  n/a
                      + 03:S1              .35     .053 No_date    6:03   49.38  n/a
                      + 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  05:HYD-1           1.61     .254 No_date    6:01   46.10  n/a
 225:0007----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY1              .32     .046 No_date    6:01   40.24 .508
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 225:0008----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1b              .28     .039 No_date    6:01   37.81 .477
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 225:0009----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY1              .32     .046 No_date    6:01   40.24  n/a
                      + 02:A1b              .28     .039 No_date    6:01   37.81  n/a
     [DT= 1.00]  SUM=  04:HYD-2            .60     .086 No_date    6:01   39.11  n/a
 225:0010----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:WD1              .08     .019 No_date    6:00   59.49 .751
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 225:0011----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:WD1              .08     .019 No_date    6:00   59.49  n/a
                      + 04:HYD-2            .60     .086 No_date    6:01   39.11  n/a
     [DT= 1.00]  SUM=  08:HYD-3            .68     .103 No_date    6:00   41.51  n/a
 225:0012----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            05:HYD-1           1.61     .254 No_date    6:01   46.10  n/a
                      + 08:HYD-3            .68     .103 No_date    6:00   41.51  n/a
     [DT= 1.00]  SUM=  06:OUT-1           2.29     .352 No_date    6:00   44.73  n/a
 225:0013----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           06:OUT-1           2.29     .352 No_date    6:00   44.73  n/a
      fname :C:\SWMHYMO\OUT-1.225
      remark:FLOW TO EXISITNG DITCH
 225:0014----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1               .39     .046 No_date    6:03   37.81 .477
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 225:0015----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S2               .77     .112 No_date    6:01   49.38 .623
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=  .50:LGI= 116.:MNI=.013:SCI=   .0]
 225:0016----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1               .39     .046 No_date    6:03   37.81  n/a
                      + 02:S2               .77     .112 No_date    6:01   49.38  n/a
     [DT= 1.00]  SUM=  04:HYD-4           1.16     .156 No_date    6:01   45.49  n/a
 225:0017----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4         1.16     .156 No_date    6:01   45.49  n/a
      [RDT= 1.00] out<- 03:S2            1.12     .110 No_date    5:59   45.49  n/a
            overflow <= 05:OVF-S2         .04     .046 No_date    6:02   45.49  n/a
     {MxStoUsed=.4808E-02, TotOvfVol=.1698E-02, N-Ovf=    2, TotDurOvf=    0.hrs}
 225:0018----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           03:S2              1.12     .110 No_date    5:59   45.49  n/a
      fname :C:\SWMHYMO\MINS2.225
      remark:Minor Flow to EXCB13
 225:0019----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           05:OVF-S2           .04     .046 No_date    6:02   45.49  n/a
      fname :C:\SWMHYMO\MAJS2.225
      remark:Major Flow to CB700
 225:0020----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:S3               .53     .097 No_date    6:00   49.38 .623
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=  .50:LGI=  99.:MNI=.013:SCI=   .0]
 225:0021----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3            .53     .097 No_date    6:00   49.38  n/a
      [RDT= 1.00] out<- 02:S3            .53     .067 No_date    6:05   49.38  n/a
            overflow <= 10:OVF-S3        .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.5968E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 225:0022----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           02:S3               .53     .067 No_date    6:05   49.38  n/a
      fname :C:\SWMHYMO\MINS3.225
      remark:Minor Flow to EXCB14
 225:0023----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
  *  SAVE HYD           10:OVF-S3           .00     .000 No_date    0:00     .00  n/a
      fname :C:\SWMHYMO\MAJS3.225
      remark:Major Flow to CB600
 225:0024----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            02:S3               .53     .067 No_date    6:05   49.38  n/a
                      + 03:S2              1.12     .110 No_date    5:59   45.49  n/a
                      + 05:OVF-S2           .04     .046 No_date    6:02   45.49  n/a
                      + 10:OVF-S3           .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5           1.69     .220 No_date    6:02   46.70  n/a
 225:0025----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY3              .15     .022 No_date    6:01   40.24 .508
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 225:0026----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY3              .15     .022 No_date    6:01   40.24  n/a
                      + 04:HYD-5           1.69     .220 No_date    6:02   46.70  n/a
     [DT= 1.00]  SUM=  05:HYD-6           1.84     .241 No_date    6:02   46.17  n/a
 225:0027----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           05:HYD-6           1.84     .241 No_date    6:02   46.17  n/a
      fname :C:\SWMHYMO\HYD-6.225
      remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
 225:0028----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY2              .54     .078 No_date    6:01   40.24 .508
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 225:0029----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S4               .56     .119 No_date    6:00   49.38 .623
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
 225:0030----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S4            .56     .119 No_date    6:00   49.38  n/a
      [RDT= 1.00] out<- 08:S4            .56     .105 No_date    6:01   49.38  n/a
            overflow <= 10:OVF-S2         .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4530E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 225:0031----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           08:S4               .56     .105 No_date    6:01   49.38  n/a
      fname :C:\SWMHYMO\MINS4.225
      remark:Minor Flow to WD ROW Ditch
 225:0032----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
  *  SAVE HYD           10:OVF-S2           .00     .000 No_date    0:00     .00  n/a
      fname :C:\SWMHYMO\MAJS4.225
      remark:Major Flow to CB613
 225:0033----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY2              .54     .078 No_date    6:01   40.24  n/a
                      + 08:S4               .56     .105 No_date    6:01   49.38  n/a
                      + 10:OVF-S2           .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-7           1.10     .183 No_date    6:01   44.88  n/a
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225:0034----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:WD2              .13     .030 No_date    6:00   59.49 .751
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
225:0035----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD2              .13     .030 No_date    6:00   59.49  n/a
                    +   04:HYD-7           1.10     .183 No_date    6:01   44.88  n/a
     [DT= 1.00]  SUM=   06:WD2             1.23     .212 No_date    6:01   46.42  n/a
225:0036----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:WD2              1.23     .212 No_date    6:01   46.42  n/a
     fname :C:\SWMHYMO\WD2.225
     remark:Flow from RY2_S4 WD2
225:0037----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        03:RY4              .25     .036 No_date    6:01   40.24 .508
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
225:0038----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:RY4              .25     .036 No_date    6:01   40.24  n/a
                    +   06:WD2             1.23     .212 No_date    6:01   46.42  n/a
     [DT= 1.00]  SUM=   04:HYD-8           1.48     .248 No_date    6:01   45.38  n/a
225:0039----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-6            1.84     .241 No_date    6:02   46.17  n/a
                    +   04:HYD-8            1.48     .248 No_date    6:01   45.38  n/a
     [DT= 1.00]  SUM=   07:PH2              3.32     .487 No_date    6:01   45.82  n/a
225:0040----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            07:PH2              3.32     .487 No_date    6:01   45.82  n/a
     fname :C:\SWMHYMO\PH2.225
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
225:0041----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2               .73     .087 No_date    6:03   37.81 .477
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
225:0042----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY5              1.41     .204 No_date    6:01   40.24 .508
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
225:0043----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2               .73     .087 No_date    6:03   37.81  n/a
                    +   02:RY5             1.41     .204 No_date    6:01   40.24  n/a
     [DT= 1.00]  SUM=   07:HYD-9           2.14     .288 No_date    6:02   39.41  n/a
225:0044----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S5               3.66     .614 No_date    6:02   49.38 .623
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
225:0045----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY6               .80     .116 No_date    6:01   40.24 .508
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
225:0046----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:S5               3.66     .614 No_date    6:02   49.38  n/a
                    +   02:RY6              .80     .116 No_date    6:01   40.24  n/a
     [DT= 1.00]  SUM=   09:HYD-10          4.46     .729 No_date    6:02   47.74  n/a
225:0047----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10           4.46     .729 No_date    6:02   47.74  n/a
     [RDT= 1.00] out<- 08:S5               4.46     .538 No_date    6:09   47.74  n/a
           overflow <= 10:OVF-S2            .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4705E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
225:0048----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9            2.14     .288 No_date    6:02   39.41  n/a
                    +   08:S5               4.46     .538 No_date    6:09   47.74  n/a
                    +   10:OVF-S2            .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=   04:PH3-4           6.60     .765 No_date    6:05   45.04  n/a
225:0049----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4            6.60     .765 No_date    6:05   45.04  n/a
     fname :C:\SWMHYMO\PH3-4.225
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
225:0050----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:1-P              1.91     .492 No_date    6:00   77.57 .979
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
225:0051----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2              3.32     .487 No_date    6:01   45.82  n/a
     Filename = C:\SWMHYMO\PH2.225
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
225:0052----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4            6.60     .765 No_date    6:05   45.02  n/a
     Filename = C:\SWMHYMO\PH3-4.225
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
225:0053----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P              1.91     .492 No_date    6:00   77.57  n/a
                    +   07:PH2              3.32     .487 No_date    6:01   45.82  n/a
                    +   04:PH3-4            6.60     .765 No_date    6:05   45.02  n/a
     [DT= 1.00]  SUM=   09:PNDINF          11.83    1.645 No_date    6:00   50.50  n/a
225:0054----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF          11.83    1.645 No_date    6:00   50.50  n/a
     [RDT= 1.00] out<- 10:PNDOUT          11.83     .719 No_date    6:24   50.50  n/a
           overflow <= 01:OVR              .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.2107E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
225:0055----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT          11.83     .719 No_date    6:24   50.50  n/a
     fname :C:\SWMHYMO\PNDOUT.225
     remark:Outflow from the proposed dry pond
225:0056----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1            2.29     .352 No_date    6:00   44.73  n/a
     Filename = C:\SWMHYMO\OUT-1.225
     Comment  = FLOW TO EXISITNG DITCH
225:0057----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1            2.29     .352 No_date    6:00   44.73  n/a
                    +   10:PNDOUT          11.83     .719 No_date    6:24   50.50  n/a
     [DT= 1.00]  SUM=   04:OUTMMD          14.12     .841 No_date    6:11   49.57  n/a
225:0058----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD          14.12     .841 No_date    6:11   49.57  n/a
     fname :C:\SWMHYMO\OUTMMD.225
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
 ** END OF RUN : 249

************************************************************************************
```

```
 RUN:COMMAND#
 250:0001----------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on       0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 250 ]
#*******************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   : 4418403
#*******************************************************************************
###############################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN    #
#SUBDIVISION;                                                                #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                  #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                       #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR      #
#HISTORICAL STORMS: JULY 1, 1979,                                            #
###############################################################################
 250:0002----------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT=  87.60]
 250:0003----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1              1.26     .238 No_date    6:01   52.57 .600
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 250:0004----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1               .35     .085 No_date    6:00   57.49 .656
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 250:0005----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1               .35     .085 No_date    6:00   57.49  n/a
      [RDT= 1.00] out<- 03:S1               .35     .061 No_date    6:03   57.49  n/a
            overflow <= 04:OVF-S1           .00     .000 No_date    0:00     .00  n/a
      {MxStoUsed=.440E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 250:0006----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1              1.26     .238 No_date    6:01   52.57  n/a
                     +   03:S1               .35     .061 No_date    6:03   57.49  n/a
                     +   04:OVF-S1           .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=   05:HYD-1            1.61     .298 No_date    6:01   53.64  n/a
 250:0007----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1              .32     .054 No_date    6:01   46.97 .536
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 250:0008----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b              .28     .046 No_date    6:01   44.55 .509
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 250:0009----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1              .32     .054 No_date    6:01   46.97  n/a
                     +   02:A1b              .28     .046 No_date    6:01   44.55  n/a
      [DT= 1.00]  SUM=   04:HYD-2            .60     .100 No_date    6:01   45.84  n/a
 250:0010----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD1              .08     .021 No_date    6:00   67.35 .769
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 250:0011----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD1              .08     .021 No_date    6:00   67.35  n/a
                     +   04:HYD-2            .60     .100 No_date    6:01   45.84  n/a
      [DT= 1.00]  SUM=   08:HYD-3            .68     .120 No_date    6:00   48.37  n/a
 250:0012----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-1           1.61     .298 No_date    6:01   53.64  n/a
                     +   08:HYD-3            .68     .120 No_date    6:00   48.37  n/a
      [DT= 1.00]  SUM=   06:OUT-1           2.29     .413 No_date    6:00   52.07  n/a
 250:0013----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:OUT-1           2.29     .413 No_date    6:00   52.07  n/a
      fname :C:\SWMHYMO\OUT-1.250
      remark:FLOW TO EXISITNG DITCH
 250:0014----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1               .39     .055 No_date    6:03   44.55 .509
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 250:0015----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S2               .77     .132 No_date    6:00   57.49 .656
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
 250:0016----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1               .39     .055 No_date    6:03   44.55  n/a
                     +   02:S2               .77     .132 No_date    6:00   57.49  n/a
      [DT= 1.00]  SUM=   04:HYD-4            1.16     .184 No_date    6:01   53.14  n/a
 250:0017----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4            1.16     .184 No_date    6:01   53.14  n/a
      [RDT= 1.00] out<- 03:S2               1.08     .110 No_date    5:56   53.14  n/a
            overflow <= 05:OVF-S2           .08     .073 No_date    6:01   53.14  n/a
      {MxStoUsed=.4793E-02, TotOvfVol=.4334E-02, N-Ovf=    2, TotDurOvf=    0.hrs}
 250:0018----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:S2              1.08     .110 No_date    5:56   53.14  n/a
      fname :C:\SWMHYMO\MINS2.250
      remark:Minor Flow to EXCB13
 250:0019----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:OVF-S2           .08     .073 No_date    6:01   53.14  n/a
      fname :C:\SWMHYMO\MAJS2.250
      remark:Major Flow to CB700
 250:0020----------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:S3               .53     .113 No_date    6:00   57.49 .656
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
```

```
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
250:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3              .53     .113 No_date    6:00   57.49  n/a
     [RDT= 1.00] out<- 02:S3              .53     .078 No_date    6:05   57.49  n/a
          overflow <= 10:OVF-S3           .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.6782E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
250:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              02:S3           .53     .078 No_date    6:05   57.49  n/a
     fname :C:\SWMHYMO\MINS3.250
     remark:Minor Flow to EXCB14
250:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD              10:OVF-S3       .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS3.250
     remark:Major Flow to CB600
250:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               02:S3           .53     .078 No_date    6:05   57.49  n/a
                      +   03:S2          1.08     .110 No_date    5:56   53.14  n/a
                      +   05:OVF-S2        .08     .073 No_date    6:01   53.14  n/a
                      +   10:OVF-S3        .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5          1.69     .256 No_date    6:02   54.49  n/a
250:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          01:RY3          .15     .025 No_date    6:01   46.97 .536
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
250:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:RY3          .15     .025 No_date    6:01   46.97  n/a
                      +   04:HYD-5        1.69     .256 No_date    6:02   54.49  n/a
     [DT= 1.00]  SUM=  05:HYD-6          1.84     .281 No_date    6:02   53.88  n/a
250:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              05:HYD-6        1.84     .281 No_date    6:02   53.88  n/a
     fname :C:\SWMHYMO\HYD-6.250
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
250:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          01:RY2          .54     .091 No_date    6:01   46.97 .536
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
250:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD        02:S4           .56     .136 No_date    6:00   57.49 .656
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
250:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4              .56     .136 No_date    6:00   57.49  n/a
     [RDT= 1.00] out<- 08:S4              .56     .121 No_date    6:01   57.49  n/a
          overflow <= 10:OVF-S2           .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.5003E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
250:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              08:S4           .56     .121 No_date    6:01   57.49  n/a
     fname :C:\SWMHYMO\MINS4.250
     remark:Minor Flow to WD ROW Ditch
250:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD              10:OVF-S2       .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS4.250
     remark:Major Flow to CB613
250:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:RY2          .54     .091 No_date    6:01   46.97  n/a
                      +   08:S4           .56     .121 No_date    6:01   57.49  n/a
                      +   10:OVF-S2        .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-7          1.10     .212 No_date    6:01   52.31  n/a
250:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD        01:WD2          .13     .034 No_date    6:00   67.35 .769
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
250:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:WD2          .13     .034 No_date    6:00   67.35  n/a
                      +   04:HYD-7        1.10     .212 No_date    6:01   52.31  n/a
     [DT= 1.00]  SUM=  06:WD2            1.23     .245 No_date    6:01   53.90  n/a
250:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              06:WD2          1.23     .245 No_date    6:01   53.90  n/a
     fname :C:\SWMHYMO\WD2.250
     remark:Flow from RY2 S4 WD2
250:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          03:RY4          .25     .042 No_date    6:01   46.97 .536
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
250:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               03:RY4          .25     .042 No_date    6:01   46.97  n/a
                      +   06:WD2          1.23     .245 No_date    6:01   53.90  n/a
     [DT= 1.00]  SUM=  04:HYD-8          1.48     .287 No_date    6:01   52.73  n/a
250:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               05:HYD-6        1.84     .281 No_date    6:02   53.88  n/a
                      +   04:HYD-8        1.48     .287 No_date    6:01   52.73  n/a
     [DT= 1.00]  SUM=  07:PH2            3.32     .568 No_date    6:01   53.37  n/a
250:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              07:PH2          3.32     .568 No_date    6:01   53.37  n/a
     fname :C:\SWMHYMO\PH2.250
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
250:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          01:A2           .73     .103 No_date    6:03   44.55 .509
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
250:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          02:RY5          1.41     .238 No_date    6:01   46.97 .536
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
250:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:A2           .73     .103 No_date    6:03   44.55  n/a
                      +   02:RY5          1.41     .238 No_date    6:01   46.97  n/a
     [DT= 1.00]  SUM=  07:HYD-9          2.14     .338 No_date    6:02   46.14  n/a
250:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD        01:S5           3.66     .722 No_date    6:02   57.49 .656
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
250:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD          02:RY6           .80     .135 No_date    6:01   46.97 .536
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
250:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:S5           3.66     .722 No_date    6:02   57.49  n/a
                      +   02:RY6           .80     .135 No_date    6:01   46.97  n/a
     [DT= 1.00]  SUM=  09:HYD-10         4.46     .856 No_date    6:02   55.60  n/a
250:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10          4.46     .856 No_date    6:02   55.60  n/a
     [RDT= 1.00] out<- 08:S5              4.37     .581 No_date    6:04   55.60  n/a
          overflow <= 10:OVF-S2           .09     .257 No_date    6:04   55.60  n/a
    {MxStoUsed=.4995E-01, TotOvfVol=.4839E-02, N-Ovf=    2, TotDurOvf=    0.hrs}
250:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               07:HYD-9        2.14     .338 No_date    6:02   46.14  n/a
                      +   05:S5           4.37     .581 No_date    6:04   55.60  n/a
                      +   10:OVF-S2        .09     .257 No_date    6:04   55.60  n/a
     [DT= 1.00]  SUM=  04:PH3-4          6.60    1.155 No_date    6:04   52.53  n/a
250:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              04:PH3-4        6.60    1.155 No_date    6:04   52.53  n/a
     fname :C:\SWMHYMO\PH3-4.250
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
250:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD        01:1-P          1.91     .544 No_date    6:00   85.97 .981
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
250:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD              07:PH2          3.32     .568 No_date    6:01   53.37  n/a
     Filename = C:\SWMHYMO\PH2.250
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
250:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD              04:PH3-4        6.60    1.155 No_date    6:04   52.52  n/a
     Filename = C:\SWMHYMO\PH3-4.250
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
250:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               01:1-P          1.91     .544 No_date    6:00   85.97  n/a
                      +   07:PH2          3.32     .568 No_date    6:01   53.37  n/a
                      +   04:PH3-4        6.60    1.155 No_date    6:04   52.52  n/a
     [DT= 1.00]  SUM=  09:PNDINF        11.83    1.907 No_date    6:00   58.16  n/a
250:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83    1.907 No_date    6:00   58.16  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83     .864 No_date    6:22   58.16  n/a
          overflow <= 01:OVR              .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.2368E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
250:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              10:PNDOUT       11.83     .864 No_date    6:22   58.16  n/a
     fname :C:\SWMHYMO\PNDOUT.250
     remark:Outflow from the proposed dry pond
250:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD              06:OUT-1        2.29     .413 No_date    6:00   52.07  n/a
     Filename = C:\SWMHYMO\OUT-1.250
     Comment  = FLOW TO EXISITNG DITCH
250:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD               06:OUT-1        2.29     .413 No_date    6:00   52.07  n/a
                      +   10:PNDOUT       11.83     .864 No_date    6:22   58.16  n/a
     [DT= 1.00]  SUM=  04:OUTMMD         14.12    1.037 No_date    6:09   57.17  n/a
250:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD              04:OUTMMD       14.12    1.037 No_date    6:09   57.17  n/a
     fname :C:\SWMHYMO\OUTMMD.250
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN : 299

************************************************************************************




 RUN:COMMAND#
 300:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 300 ]
#*********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   : 4418403
#*********************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN    #
#SUBDIVISION;                                                                 #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                   #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                        #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR       #
#HISTORICAL STORMS: JULY 1, 1979,                                             #
#################################################################################
 300:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT=  96.00]
 300:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD        01:PH1          1.26     .280 No_date    6:01   62.49 .651
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 300:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD        02:S1            .35     .097 No_date    6:00   66.40 .692
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 300:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1             .35     .097 No_date    6:00   66.40  n/a
      [RDT= 1.00] out<- 03:S1             .35     .071 No_date    6:02   66.40  n/a
           overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.5213E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 300:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD               01:PH1          1.26     .280 No_date    6:01   62.49  n/a
                       +   03:S1           .35     .071 No_date    6:02   66.40  n/a
                       +   04:OVF-S1       .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  05:HYD-1          1.61     .350 No_date    6:01   63.34  n/a
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300:0007---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY1              .32     .062 No_date    6:01   53.87 .561
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
300:0008---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A1b              .28     .053 No_date    6:01   51.47 .536
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
300:0009---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY1              .32     .062 No_date    6:01   53.87  n/a
                    +   02:A1b              .28     .053 No_date    6:01   51.47  n/a
     [DT= 1.00]  SUM=   04:HYD-2            .60     .115 No_date    6:01   52.75  n/a
300:0010---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:WD1              .08     .024 No_date    6:00   75.35 .785
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
300:0011---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD1              .08     .024 No_date    6:00   75.35  n/a
                    +   04:HYD-2            .60     .115 No_date    6:01   52.75  n/a
     [DT= 1.00]  SUM=   08:HYD-3            .68     .137 No_date    6:00   55.41  n/a
300:0012---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-1           1.61     .350 No_date    6:01   63.34  n/a
                    +   08:HYD-3            .68     .137 No_date    6:00   55.41  n/a
     [DT= 1.00]  SUM=   06:OUT-1           2.29     .483 No_date    6:00   60.99  n/a
300:0013---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:OUT-1           2.29     .483 No_date    6:00   60.99  n/a
     fname :C:\SWMHYMO\OUT-1.300
     remark:FLOW TO EXISITNG DITCH
300:0014---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1               .39     .064 No_date    6:03   51.47 .536
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
300:0015---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S2               .77     .156 No_date    6:00   66.40 .692
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=  .50:LGI=  116.:MNI=.013:SCI=   .0]
300:0016---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1               .39     .064 No_date    6:03   51.47  n/a
                    +   02:S2               .77     .156 No_date    6:00   66.40  n/a
     [DT= 1.00]  SUM=   04:HYD-4            1.16     .216 No_date    6:01   61.38  n/a
300:0017---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 04:HYD-4            1.16     .216 No_date    6:01   61.38  n/a
     [RDT= 1.00] out<- 03:S2               1.03     .110 No_date    5:54   61.38  n/a
           overflow <= 05:OVF-S2            .13     .105 No_date    6:01   61.38  n/a
     {MxStoUsed=.4792E-02, TotOvfVol=.8096E-02, N-Ovf=    Z, TotDurOvf=    0.hrs}
300:0018---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:S2              1.03     .110 No_date    5:54   61.38  n/a
     fname :C:\SWMHYMO\MINS2.300
     remark:Minor Flow to EXCB13
300:0019---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:OVF-S2           .13     .105 No_date    6:01   61.38  n/a
     fname :C:\SWMHYMO\MAJS2.300
     remark:Major Flow to CB700
300:0020---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S3               .53     .131 No_date    6:00   66.40 .692
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=  .50:LGI=  99.:MNI=.013:SCI=   .0]
300:0021---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3               .53     .131 No_date    6:00   66.40  n/a
     [RDT= 1.00] out<- 02:S3               .53     .092 No_date    6:05   66.40  n/a
           overflow <= 10:OVF-S3           .00     .000 No_date    0:00    .00  n/a
     {MxStoUsed=.7771E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
300:0022---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            02:S3               .53     .092 No_date    6:05   66.40  n/a
     fname :C:\SWMHYMO\MINS3.300
     remark:Minor Flow to EXCB14
300:0023---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            10:OVF-S3           .00     .000 No_date    0:00    .00  n/a
     fname :C:\SWMHYMO\MAJS3.300
     remark:Major Flow to CB600
300:0024---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             02:S3               .53     .092 No_date    6:05   66.40  n/a
                    +   03:S2              1.03     .110 No_date    5:54   61.38  n/a
                    +   05:OVF-S2           .13     .105 No_date    6:01   61.38  n/a
                    +   10:OVF-S3           .00     .000 No_date    0:00    .00  n/a
     [DT= 1.00]  SUM=   04:HYD-5           1.69     .301 No_date    6:02   62.95  n/a
300:0025---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY3              .15     .029 No_date    6:01   53.87 .561
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
300:0026---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY3              .15     .029 No_date    6:01   53.87  n/a
                    +   04:HYD-5           1.69     .301 No_date    6:02   62.95  n/a
     [DT= 1.00]  SUM=   05:HYD-6           1.84     .330 No_date    6:02   62.21  n/a
300:0027---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:HYD-6           1.84     .330 No_date    6:02   62.21  n/a
     fname :C:\SWMHYMO\HYD-6.300
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
300:0028---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY2              .54     .105 No_date    6:01   53.87 .561
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
300:0029---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S4               .56     .154 No_date    6:00   66.40 .692
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
300:0030---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4               .56     .154 No_date    6:00   66.40  n/a
     [RDT= 1.00] out<- 08:S4               .55     .126 No_date    5:58   66.40  n/a
           overflow <= 10:OVF-S2           .01     .027 No_date    6:00   66.40  n/a
     {MxStoUsed=.5091E-02, TotOvfVol=.5989E-03, N-Ovf=    I, TotDurOvf=    0.hrs}
300:0031---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            08:S4               .55     .126 No_date    5:58   66.40  n/a
     fname :C:\SWMHYMO\MINS4.300
     remark:Minor Flow to WD ROW Ditch
300:0032---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:OVF-S2           .01     .027 No_date    6:00   66.40  n/a
     fname :C:\SWMHYMO\MAJS4.300
     remark:Major Flow to CB613
300:0033---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY2              .54     .105 No_date    6:01   53.87  n/a
                    +   08:S4               .55     .126 No_date    5:58   66.40  n/a
                    +   10:OVF-S2           .01     .027 No_date    6:00   66.40  n/a
     [DT= 1.00]  SUM=   04:HYD-7           1.10     .256 No_date    6:00   60.24  n/a
300:0034---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:WD2              .13     .038 No_date    6:00   75.35 .785
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
300:0035---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD2              .13     .038 No_date    6:00   75.35  n/a
                    +   04:HYD-7           1.10     .256 No_date    6:00   60.24  n/a
     [DT= 1.00]  SUM=   06:WD2             1.23     .294 No_date    6:00   61.84  n/a
300:0036---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:WD2             1.23     .294 No_date    6:00   61.84  n/a
     fname :C:\SWMHYMO\WD2.300
     remark:Flow from RY2 S4 WD2
300:0037---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        03:RY4              .25     .048 No_date    6:01   53.87 .561
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
300:0038---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:RY4              .25     .048 No_date    6:01   53.87  n/a
                    +   06:WD2             1.23     .294 No_date    6:00   61.84  n/a
     [DT= 1.00]  SUM=   04:HYD-8           1.48     .342 No_date    6:00   60.49  n/a
300:0039---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-6           1.84     .330 No_date    6:02   62.21  n/a
                    +   04:HYD-8           1.48     .342 No_date    6:00   60.49  n/a
     [DT= 1.00]  SUM=   07:PH2             3.32     .667 No_date    6:01   61.44  n/a
300:0040---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            07:PH2             3.32     .667 No_date    6:01   61.44  n/a
     fname :C:\SWMHYMO\PH2.300
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
300:0041---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2               .73     .119 No_date    6:03   51.47 .536
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
300:0042---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY5             1.41     .273 No_date    6:01   53.87 .561
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
300:0043---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2               .73     .119 No_date    6:03   51.47  n/a
                    +   02:RY5             1.41     .273 No_date    6:01   53.87  n/a
     [DT= 1.00]  SUM=   07:HYD-9           2.14     .388 No_date    6:02   53.05  n/a
300:0044---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S5              3.66     .830 No_date    6:02   66.40 .692
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=  .60:LGI= 390.:MNI=.013:SCI=   .0]
300:0045---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY6              .80     .155 No_date    6:01   53.87 .561
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
300:0046---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:S5              3.66     .830 No_date    6:02   66.40  n/a
                    +   02:RY6              .80     .155 No_date    6:01   53.87  n/a
     [DT= 1.00]  SUM=   09:HYD-10          4.46     .984 No_date    6:02   64.16  n/a
300:0047---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10           4.46     .984 No_date    6:02   64.16  n/a
     [RDT= 1.00] out<- 08:S5               4.21     .581 No_date    6:01   64.15  n/a
           overflow <= 10:OVF-S2           .25     .402 No_date    6:02   64.16  n/a
     {MxStoUsed=.4993E-01, TotOvfVol=.1628E-01, N-Ovf=    Z, TotDurOvf=    0.hrs}
300:0048---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9           2.14     .388 No_date    6:02   53.05  n/a
                    +   08:S5              4.21     .581 No_date    6:01   64.15  n/a
                    +   10:OVF-S2           .25     .402 No_date    6:02   64.16  n/a
     [DT= 1.00]  SUM=   04:PH3-4           6.60    1.371 No_date    6:02   60.55  n/a
300:0049---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4           6.60    1.371 No_date    6:02   60.55  n/a
     fname :C:\SWMHYMO\PH3-4.300
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
300:0050---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:1-P             1.91     .596 No_date    6:00   94.37 .983
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=  .50:LGI=  20.:MNI=.013:SCI=   .0]
300:0051---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2             3.32     .667 No_date    6:01   61.44  n/a
     Filename = C:\SWMHYMO\PH2.300
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
300:0052---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4           6.60    1.371 No_date    6:02   60.54  n/a
     Filename = C:\SWMHYMO\PH3-4.300
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
300:0053---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P             1.91     .596 No_date    6:00   94.37  n/a
                    +   07:PH2             3.32     .667 No_date    6:01   61.44  n/a
                    +   04:PH3-4           6.60    1.371 No_date    6:02   60.54  n/a
     [DT= 1.00]  SUM=   09:PNDINF         11.83    2.284 No_date    6:01   66.26  n/a
300:0054---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF         11.83    2.284 No_date    6:01   66.26  n/a
     [RDT= 1.00] out<- 10:PNDOUT         11.83    1.022 No_date    6:18   66.26  n/a
           overflow <= 01:OVR              .00     .000 No_date    0:00    .00  n/a
     {MxStoUsed=.2647E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
300:0055---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT          11.83    1.022 No_date    6:18   66.26  n/a
     fname :C:\SWMHYMO\PNDOUT.300
     remark:Outflow from the proposed dry pond
300:0056---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1           2.29     .483 No_date    6:00   60.98  n/a
     Filename = C:\SWMHYMO\OUT-1.300
     Comment  = FLOW TO EXISITNG DITCH
300:0057---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1           2.29     .483 No_date    6:00   60.98  n/a
                    +   10:PNDOUT         11.83    1.022 No_date    6:18   66.26  n/a
     [DT= 1.00]  SUM=   04:OUTMMD         14.12    1.274 No_date    6:08   65.40  n/a
```

```
 300:0058---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            04:OUTMMD         14.12    1.274 No_date    6:08   65.40  n/a
      fname :C:\SWMHYMO\OUTMMD.300
      remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN : 319

**********************************************************************************




 RUN:COMMAND#
 320:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN   = 320 ]
#*************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*************************************************************************
#########################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN   #
#SUBDIVISION;                                                              #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                     #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#HISTORICAL STORMS: JULY 1, 1979                                           #
#########################################################################
 320:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  12.00:PTOT= 115.20]
 320:0003---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1              1.26     .363 No_date    6:01   80.79 .701
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 320:0004---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1               .35     .122 No_date    6:00   85.87 .745
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 320:0005---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1               .35     .122 No_date    6:00   85.87  n/a
      [RDT= 1.00] out<- 03:S1               .34     .079 No_date    5:58   85.87  n/a
            overflow <= 04:OVF-S1           .01     .043 No_date    6:00   85.87  n/a
     {MxStoUsed=.5687E-02, TotOvfVol=.1023E-02, N-Ovf=    1, TotDurOvf=    0.hrs}
 320:0006---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1              1.26     .363 No_date    6:01   80.79  n/a
                       + 03:S1               .34     .079 No_date    5:58   85.87  n/a
                       + 04:OVF-S1           .01     .043 No_date    6:00   85.87  n/a
      [DT= 1.00]  SUM=  05:HYD-1            1.61     .484 No_date    6:00   81.90  n/a
 320:0007---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1              .32     .081 No_date    6:01   70.20 .609
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 320:0008---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b              .28     .070 No_date    6:01   67.86 .589
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 320:0009---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1              .32     .081 No_date    6:01   70.20  n/a
                       + 02:A1b              .28     .070 No_date    6:01   67.86  n/a
      [DT= 1.00]  SUM=  04:HYD-2            .60     .150 No_date    6:01   69.11  n/a
 320:0010---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD1              .08     .029 No_date    6:00   94.77 .823
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 320:0011---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD1              .08     .029 No_date    6:00   94.77  n/a
                       + 04:HYD-2            .60     .150 No_date    6:01   69.11  n/a
      [DT= 1.00]  SUM=  08:HYD-3            .68     .177 No_date    6:00   72.13  n/a
 320:0012---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-1           1.61     .484 No_date    6:00   81.90  n/a
                       + 08:HYD-3            .68     .177 No_date    6:00   72.13  n/a
      [DT= 1.00]  SUM=  06:OUT-1            2.29     .661 No_date    6:00   78.99  n/a
 320:0013---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:OUT-1           2.29     .661 No_date    6:00   78.99  n/a
      fname :C:\SWMHYMO\OUT-1.320
      remark:FLOW TO EXISITNG DITCH
 320:0014---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1               .39     .084 No_date    6:03   67.86 .589
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 320:0015---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S2               .77     .205 No_date    6:00   85.87 .745
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
 320:0016---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1               .39     .084 No_date    6:03   67.86  n/a
                       + 02:S2               .77     .205 No_date    6:00   85.87  n/a
      [DT= 1.00]  SUM=  04:HYD-4            1.16     .284 No_date    6:01   79.81  n/a
 320:0017---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4           1.16     .284 No_date    6:01   79.81  n/a
      [RDT= 1.00] out<- 03:S2               .94     .110 No_date    5:50   79.81  n/a
            overflow <= 05:OVF-S2           .22     .173 No_date    6:01   79.81  n/a
     {MxStoUsed=.4803E-02, TotOvfVol=.1765E-01, N-Ovf=    Z, TotDurOvf=    1.hrs}
 320:0018---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:S2               .94     .110 No_date    5:50   79.81  n/a
      fname :C:\SWMHYMO\MINS2.320
      remark:Minor Flow to EXCB13
 320:0019---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:OVF-S2           .22     .173 No_date    6:01   79.81  n/a
      fname :C:\SWMHYMO\MAJS2.320
      remark:Major Flow to CB700
 320:0020---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:S3               .53     .169 No_date    6:00   85.87 .745
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
 320:0021---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3               .53     .169 No_date    6:00   85.87  n/a
      [RDT= 1.00] out<- 02:S3               .50     .095 No_date    5:58   85.87  n/a
            overflow <= 10:OVF-S3           .03     .072 No_date    6:00   85.87  n/a
     {MxStoUsed=.7997E-02, TotOvfVol=.2755E-02, N-Ovf=    Z, TotDurOvf=    0.hrs}
 320:0022---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            02:S3               .50     .095 No_date    5:58   85.87  n/a
      fname :C:\SWMHYMO\MINS3.320
      remark:Minor Flow to EXCB14
 320:0023---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            10:OVF-S3           .03     .072 No_date    6:00   85.87  n/a
      fname :C:\SWMHYMO\MAJS3.320
      remark:Major Flow to CB600
 320:0024---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             02:S3               .50     .095 No_date    5:58   85.87  n/a
                       + 03:S2               .94     .110 No_date    5:50   79.81  n/a
                       + 05:OVF-S2           .22     .173 No_date    6:01   79.81  n/a
                       + 10:OVF-S3           .03     .072 No_date    6:00   85.87  n/a
      [DT= 1.00]  SUM=  04:HYD-5           1.69     .450 No_date    6:01   81.70  n/a
 320:0025---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY3              .15     .038 No_date    6:01   70.20 .609
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 320:0026---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY3              .15     .038 No_date    6:01   70.20  n/a
                       + 04:HYD-5           1.69     .450 No_date    6:01   81.70  n/a
      [DT= 1.00]  SUM=  05:HYD-6           1.84     .488 No_date    6:01   80.76  n/a
 320:0027---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:HYD-6           1.84     .488 No_date    6:01   80.76  n/a
      fname :C:\SWMHYMO\HYD-6.320
      remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
 320:0028---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY2              .54     .136 No_date    6:01   70.20 .609
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 320:0029---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S4               .56     .195 No_date    6:00   85.87 .745
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
 320:0030---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S4               .56     .195 No_date    6:00   85.87  n/a
      [RDT= 1.00] out<- 08:S4               .52     .126 No_date    5:53   85.87  n/a
            overflow <= 10:OVF-S2           .04     .068 No_date    6:00   85.87  n/a
     {MxStoUsed=.5049E-02, TotOvfVol=.3567E-02, N-Ovf=    1, TotDurOvf=    0.hrs}
 320:0031---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            08:S4               .52     .126 No_date    5:53   85.87  n/a
      fname :C:\SWMHYMO\MINS4.320
      remark:Minor Flow to WD ROW Ditch
 320:0032---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            10:OVF-S2           .04     .068 No_date    6:00   85.87  n/a
      fname :C:\SWMHYMO\MAJS4.320
      remark:Major Flow to CB613
 320:0033---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY2              .54     .136 No_date    6:01   70.20  n/a
                       + 08:S4               .52     .126 No_date    5:53   85.87  n/a
                       + 10:OVF-S2           .04     .068 No_date    6:00   85.87  n/a
      [DT= 1.00]  SUM=  04:HYD-7           1.10     .328 No_date    6:00   78.16  n/a
 320:0034---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD2              .13     .046 No_date    6:00   94.77 .823
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
 320:0035---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD2              .13     .046 No_date    6:00   94.77  n/a
                       + 04:HYD-7           1.10     .328 No_date    6:00   78.16  n/a
      [DT= 1.00]  SUM=  06:WD2             1.23     .375 No_date    6:00   79.92  n/a
 320:0036---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:WD2             1.23     .375 No_date    6:00   79.92  n/a
      fname :C:\SWMHYMO\WD2.320
      remark:Flow from RY2_S4 WD2
 320:0037---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        03:RY4              .25     .063 No_date    6:01   70.20 .609
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 320:0038---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             03:RY4              .25     .063 No_date    6:01   70.20  n/a
                       + 06:WD2             1.23     .375 No_date    6:00   79.92  n/a
      [DT= 1.00]  SUM=  04:HYD-8           1.48     .437 No_date    6:00   78.28  n/a
 320:0039---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-6           1.84     .488 No_date    6:01   80.76  n/a
                       + 04:HYD-8           1.48     .437 No_date    6:00   78.28  n/a
      [DT= 1.00]  SUM=  07:PH2             3.32     .920 No_date    6:00   79.66  n/a
 320:0040---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            07:PH2             3.32     .920 No_date    6:00   79.66  n/a
      fname :C:\SWMHYMO\PH2.320
      remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
 320:0041---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A2               .73     .157 No_date    6:03   67.86 .589
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 320:0042---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:RY5             1.41     .355 No_date    6:01   70.20 .609
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 320:0043---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A2               .73     .157 No_date    6:03   67.86  n/a
                       + 02:RY5             1.41     .355 No_date    6:01   70.20  n/a
      [DT= 1.00]  SUM=  07:HYD-9           2.14     .507 No_date    6:01   69.40  n/a
 320:0044---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:S5              3.66    1.080 No_date    6:01   85.87 .745
      [XIMP=.41:TIMP=.51]
```

```
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
320:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:RY6             .80     .201 No_date    6:01   70.20 .609
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
320:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:S5             3.66    1.080 No_date    6:01   85.87  n/a
                   +   02:RY6             .80     .201 No_date    6:01   70.20  n/a
     [DT= 1.00]  SUM=  09:HYD-10         4.46    1.282 No_date    6:01   83.06  n/a
320:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10         4.46    1.282 No_date    6:01   83.06  n/a
     [RDT= 1.00] out<- 08:S5             3.88     .581 No_date    5:56   83.06  n/a
           overflow <= 10:OVF-S2          .58     .698 No_date    6:02   83.06  n/a
     {MxStoUsed=.4998E-01, TotOvfVol=.4855E-01, N-Ovf=    Z, TotDurOvf=    0.hrs}
320:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            07:HYD-9          2.14     .507 No_date    6:01   69.40  n/a
                   +   08:S5             3.88     .581 No_date    5:56   83.06  n/a
                   +   10:OVF-S2          .58     .698 No_date    6:02   83.06  n/a
     [DT= 1.00]  SUM=  04:PH3-4          6.60    1.786 No_date    6:02   78.63  n/a
320:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:PH3-4          6.60    1.786 No_date    6:02   78.63  n/a
     fname :C:\SWMHYMO\PH3-4.320
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
320:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:1-P            1.91     .716 No_date    6:00  113.57 .986
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
320:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           07:PH2            3.32     .920 No_date    6:00   79.66  n/a
     Filename = C:\SWMHYMO\PH2.320
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
320:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           04:PH3-4          6.60    1.786 No_date    6:02   78.62  n/a
     Filename = C:\SWMHYMO\PH3-4.320
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
320:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:1-P            1.91     .716 No_date    6:00  113.57  n/a
                   +   07:PH2            3.32     .920 No_date    6:00   79.66  n/a
                   +   04:PH3-4          6.60    1.786 No_date    6:02   78.62  n/a
     [DT= 1.00]  SUM=  09:PNDINF        11.83    3.379 No_date    6:00   84.55  n/a
320:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83    3.379 No_date    6:00   84.55  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83    1.398 No_date    6:13   84.55  n/a
           overflow <= 01:OVR            .00     .000 No_date    0:00    .00  n/a
     {MxStoUsed=.3324E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
320:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           10:PNDOUT         11.83    1.398 No_date    6:13   84.55  n/a
     fname :C:\SWMHYMO\PNDOUT.320
     remark:Outflow from the proposed dry pond
320:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           06:OUT-1          2.29     .661 No_date    6:00   78.99  n/a
     Filename = C:\SWMHYMO\OUT-1.320
     Comment  = FLOW TO EXISITNG DITCH
320:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            06:OUT-1          2.29     .661 No_date    6:00   78.99  n/a
                   +   10:PNDOUT         11.83    1.398 No_date    6:13   84.55  n/a
     [DT= 1.00]  SUM=  04:OUTMMD        14.12    1.790 No_date    6:07   83.65  n/a
320:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:OUTMMD         14.12    1.790 No_date    6:07   83.65  n/a
     fname :C:\SWMHYMO\OUTMMD.320
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
 ** END OF RUN : 401

************************************************************************************




 RUN:COMMAND#
 402:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 402 ]
#************************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#************************************************************************************
#####################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN           #
#SUBDIVISION;                                                                       #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                         #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                              #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR             #
#HISTORICAL STORMS: JULY 1, 1979,                                                   #
#####################################################################################
 402:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT=  48.00]
 402:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:PH1            1.26     .073 No_date   12:02   19.91 .415
     [XIMP=.34:TIMP=.43]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
402:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:S1              .35     .032 No_date   12:00   22.94 .478
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
402:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S1               .35     .032 No_date   12:00   22.94  n/a
     [RDT= 1.00] out<- 03:S1               .35     .022 No_date   12:03   22.94  n/a
           overflow <= 04:OVF-S1           .00     .000 No_date    0:00    .00  n/a
     {MxStoUsed=.1906E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
402:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:PH1            1.26     .073 No_date   12:02   19.91  n/a
                   +   03:S1              .35     .022 No_date   12:03   22.94  n/a
                   +   04:OVF-S1          .00     .000 No_date    0:00    .00  n/a
     [DT= 1.00]  SUM=  05:HYD-1          1.61     .095 No_date   12:02   20.57  n/a
402:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:RY1             .32     .019 No_date   12:01   17.57 .366
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
402:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:A1b             .28     .015 No_date   12:01   15.30 .319
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
402:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:RY1             .32     .019 No_date   12:01   17.57  n/a
                   +   02:A1b             .28     .015 No_date   12:01   15.30  n/a
     [DT= 1.00]  SUM=  04:HYD-2           .60     .034 No_date   12:01   16.51  n/a
402:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:WD1             .08     .009 No_date   12:00   32.53 .678
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
402:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:WD1             .08     .009 No_date   12:00   32.53  n/a
                   +   04:HYD-2           .60     .034 No_date   12:01   16.51  n/a
     [DT= 1.00]  SUM=  08:HYD-3           .68     .042 No_date   12:00   18.40  n/a
402:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            05:HYD-1          1.61     .095 No_date   12:02   20.57  n/a
                   +   08:HYD-3           .68     .042 No_date   12:00   18.40  n/a
     [DT= 1.00]  SUM=  06:OUT-1          2.29     .134 No_date   12:00   19.93  n/a
402:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           06:OUT-1          2.29     .134 No_date   12:00   19.93  n/a
     fname :C:\SWMHYMO\OUT-1.402
     remark:FLOW TO EXISITNG DITCH
402:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1              .39     .017 No_date   12:04   15.30 .319
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
402:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:S2              .77     .047 No_date   12:00   22.94 .478
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=  .50:LGI= 116.:MNI=.013:SCI=   .0]
402:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1              .39     .017 No_date   12:04   15.30  n/a
                   +   02:S2              .77     .047 No_date   12:00   22.94  n/a
     [DT= 1.00]  SUM=  04:HYD-4          1.16     .063 No_date   12:01   20.37  n/a
402:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 04:HYD-4          1.16     .063 No_date   12:01   20.37  n/a
     [RDT= 1.00] out<- 01:S2              1.16     .053 No_date   12:04   20.37  n/a
           overflow <= 05:OVF-S2           .00     .000 No_date    0:00    .00  n/a
     {MxStoUsed=.2705E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
402:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           03:S2             1.16     .053 No_date   12:04   20.37  n/a
     fname :C:\SWMHYMO\MINS2.402
     remark:Minor Flow to EXCB13
402:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD           05:OVF-S2          .00     .000 No_date    0:00    .00  n/a
     fname :C:\SWMHYMO\MAJS2.402
     remark:Major Flow to CB700
402:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:S3              .53     .040 No_date   12:00   22.94 .478
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
402:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3               .53     .040 No_date   12:00   22.94  n/a
     [RDT= 1.00] out<- 02:S3               .53     .028 No_date   12:06   22.94  n/a
           overflow <= 10:OVF-S3           .00     .000 No_date    0:00    .00  n/a
     {MxStoUsed=.3044E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
402:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           02:S3              .53     .028 No_date   12:06   22.94  n/a
     fname :C:\SWMHYMO\MINS3.402
     remark:Minor Flow to EXCB14
402:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD           10:OVF-S3          .00     .000 No_date    0:00    .00  n/a
     fname :C:\SWMHYMO\MAJS3.402
     remark:Major Flow to CB600
402:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            02:S3              .53     .028 No_date   12:06   22.94  n/a
                   +   03:S2             1.16     .053 No_date   12:04   20.37  n/a
                   +   05:OVF-S2          .00     .000 No_date    0:00    .00  n/a
                   +   10:OVF-S3          .00     .000 No_date    0:00    .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5          1.69     .081 No_date   12:04   21.17  n/a
402:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:RY3             .15     .009 No_date   12:01   17.57 .366
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
402:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:RY3             .15     .009 No_date   12:01   17.57  n/a
                   +   04:HYD-5          1.69     .081 No_date   12:04   21.17  n/a
     [DT= 1.00]  SUM=  05:HYD-6          1.84     .089 No_date   12:04   20.88  n/a
402:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:HYD-6          1.84     .089 No_date   12:04   20.88  n/a
     fname :C:\SWMHYMO\HYD-6.402
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
402:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:RY2             .54     .032 No_date   12:01   17.57 .366
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
402:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:S4              .56     .052 No_date   12:00   22.94 .478
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
402:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4               .56     .052 No_date   12:00   22.94  n/a
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    [RDT= 1.00] out<- 08:S4              .56     .045 No_date   12:02   22.94  n/a
          overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
  {MxStoUsed=.2730E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
402:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            08:S4            .56     .045 No_date   12:02   22.94  n/a
     fname :C:\SWMHYMO\MINS4.402
     remark:Minor Flow to WD ROW Ditch
402:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            10:OVF-S2        .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS4.402
     remark:Major Flow to CB613
402:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY2           .54     .032 No_date   12:01   17.57  n/a
                      + 08:S4            .56     .045 No_date   12:02   22.94  n/a
                      + 10:OVF-S2        .00     .000 No_date    0:00     .00  n/a
    [DT= 1.00]  SUM=  04:HYD-7          1.10     .077 No_date   12:02   20.29  n/a
402:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:WD2           .13     .014 No_date   12:00   32.53 .678
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
402:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD2           .13     .014 No_date   12:00   32.53  n/a
                      + 04:HYD-7        1.10     .077 No_date   12:02   20.29  n/a
    [DT= 1.00]  SUM=  06:WD2            1.23     .090 No_date   12:01   21.59  n/a
402:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:WD2           1.23     .090 No_date   12:01   21.59  n/a
     fname :C:\SWMHYMO\WD2.402
     remark:Flow from RY2_S4_WD2
402:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        03:RY4           .25     .015 No_date   12:01   17.57 .366
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
402:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:RY4           .25     .015 No_date   12:01   17.57  n/a
                      + 06:WD2           1.23     .090 No_date   12:01   21.59  n/a
    [DT= 1.00]  SUM=  04:HYD-8          1.48     .105 No_date   12:01   20.91  n/a
402:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-6         1.84     .089 No_date   12:04   20.88  n/a
                      + 04:HYD-8         1.48     .105 No_date   12:01   20.91  n/a
    [DT= 1.00]  SUM=  07:PH2             3.32     .192 No_date   12:02   20.89  n/a
402:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            07:PH2           3.32     .192 No_date   12:02   20.89  n/a
     fname :C:\SWMHYMO\PH2.402
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
402:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2            .73     .032 No_date   12:04   15.30 .319
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
402:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY5           1.41     .084 No_date   12:01   17.57 .366
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
402:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2            .73     .032 No_date   12:04   15.30  n/a
                      + 02:RY5           1.41     .084 No_date   12:01   17.57  n/a
    [DT= 1.00]  SUM=  07:HYD-9          2.14     .115 No_date   12:02   16.80  n/a
402:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S5            3.66     .244 No_date   12:04   22.94 .478
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
402:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY6            .80     .048 No_date   12:01   17.57 .366
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
402:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:S5            3.66     .244 No_date   12:04   22.94  n/a
                      + 02:RY6           .80      .048 No_date   12:01   17.57  n/a
    [DT= 1.00]  SUM=  09:HYD-10         4.46     .288 No_date   12:03   21.98  n/a
402:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10         4.46     .288 No_date   12:03   21.98  n/a
     [RDT= 1.00] out<- 08:S5             4.46     .215 No_date   12:11   21.98  n/a
          overflow <= 10:OVF-S2          .00      .000 No_date    0:00     .00  n/a
  {MxStoUsed=.2475E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
402:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9         2.14     .115 No_date   12:02   16.80  n/a
                      + 08:S5            4.46     .215 No_date   12:11   21.98  n/a
                      + 10:OVF-S2        .00      .000 No_date    0:00     .00  n/a
    [DT= 1.00]  SUM=  04:PH3-4          6.60     .294 No_date   12:05   20.30  n/a
402:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4         6.60     .294 No_date   12:05   20.30  n/a
     fname :C:\SWMHYMO\PH3-4.402
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
402:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:1-P           1.91     .281 No_date   12:00   46.39 .966
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=  .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  20.:MNI=.013:SCI=   .0]
402:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2           3.32     .192 No_date   12:02   20.89  n/a
     Filename = C:\SWMHYMO\PH2.402
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
402:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4         6.60     .294 No_date   12:05   20.29  n/a
     Filename = C:\SWMHYMO\PH3-4.402
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
402:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P           1.91     .281 No_date   12:00   46.39  n/a
                      + 07:PH2           3.32     .192 No_date   12:02   20.89  n/a
                      + 04:PH3-4         6.60     .294 No_date   12:05   20.29  n/a
    [DT= 1.00]  SUM=  09:PNDINF         11.83     .718 No_date   12:00   24.67  n/a
402:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83     .718 No_date   12:00   24.67  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83     .198 No_date   12:34   24.67  n/a
          overflow <= 01:OVR             .00      .000 No_date    0:00     .00  n/a
  {MxStoUsed=.1087E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
402:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT       11.83     .198 No_date   12:34   24.67  n/a
     fname :C:\SWMHYMO\PNDOUT.402
     remark:Outflow from the proposed dry pond
402:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1         2.29     .134 No_date   12:00   19.92  n/a
     Filename = C:\SWMHYMO\OUT-1.402
     Comment  = FLOW TO EXISITNG DITCH
402:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1         2.29     .134 No_date   12:00   19.92  n/a
                      + 10:PNDOUT       11.83     .198 No_date   12:34   24.67  n/a
    [DT= 1.00]  SUM=  04:OUTMMD         14.12     .230 No_date   12:30   23.90  n/a
402:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD        14.12     .230 No_date   12:30   23.90  n/a
     fname :C:\SWMHYMO\OUTMMD.402
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
 ** END OF RUN : 404

************************************************************************************



 RUN:COMMAND#
 405:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on       0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 405 ]
#*********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   : 4418403
#*********************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN    #
#SUBDIVISION;                                                                 #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                   #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                        #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR       #
#HISTORICAL STORMS: JULY 1, 1979,                                             #
#################################################################################
 405:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT=  62.40]
 405:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1           1.26     .126 No_date   12:02   28.82 .462
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 405:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1             .35     .051 No_date   12:00   32.58 .522
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 405:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1             .35     .051 No_date   12:00   32.58  n/a
      [RDT= 1.00] out<- 03:S1             .35     .035 No_date   12:03   32.58  n/a
           overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
   {MxStoUsed=.2743E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 405:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1           1.26     .126 No_date   12:02   28.82  n/a
                       + 03:S1             .35     .035 No_date   12:03   32.58  n/a
                       + 04:OVF-S1         .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  05:HYD-1           1.61     .160 No_date   12:02   29.64  n/a
 405:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1            .32     .030 No_date   12:01   27.49 .441
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 405:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b            .28     .025 No_date   12:01   25.09 .402
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 405:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1            .32     .030 No_date   12:01   27.49  n/a
                       + 02:A1b            .28     .025 No_date   12:01   25.09  n/a
     [DT= 1.00]  SUM=  04:HYD-2            .60     .055 No_date   12:01   26.37  n/a
 405:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD1            .08     .014 No_date   12:00   44.12 .707
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 405:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD1            .08     .014 No_date   12:00   44.12  n/a
                       + 04:HYD-2          .60     .055 No_date   12:01   26.37  n/a
     [DT= 1.00]  SUM=  08:HYD-3            .68     .067 No_date   12:00   28.46  n/a
 405:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-1         1.61     .160 No_date   12:02   29.64  n/a
                       + 08:HYD-3          .68     .067 No_date   12:00   28.46  n/a
     [DT= 1.00]  SUM=  06:OUT-1           2.29     .221 No_date   12:00   29.29  n/a
 405:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:OUT-1         2.29     .221 No_date   12:00   29.29  n/a
      fname :C:\SWMHYMO\OUT-1.405
      remark:FLOW TO EXISITNG DITCH
 405:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1             .39     .029 No_date   12:03   25.09 .402
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 405:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S2             .77     .069 No_date   12:00   32.58 .522
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
 405:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1             .39     .029 No_date   12:03   25.09  n/a
                       + 02:S2             .77     .069 No_date   12:00   32.58  n/a
     [DT= 1.00]  SUM=  04:HYD-4           1.16     .096 No_date   12:01   30.06  n/a
 405:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
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    ROUTE RESERVOIR -> 04:HYD-4          1.16     .096 No_date   12:01   30.06  n/a
     [RDT= 1.00] out<- 03:S2             1.16     .081 No_date   12:04   30.06  n/a
          overflow <= 05:OVF-S2           .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.3748E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
405:0018---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD             03:S2           1.16     .081 No_date   12:04   30.06  n/a
     fname :C:\SWMHYMO\MINS2.405
     remark:Minor Flow to EXCB13
405:0019---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD             05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS2.405
     remark:Major Flow to CB700
405:0020---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD       01:S3            .53     .063 No_date   12:01   32.58 .522
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
405:0021---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3             .53     .063 No_date   12:01   32.58  n/a
     [RDT= 1.00] out<- 02:S3             .53     .043 No_date   12:06   32.58  n/a
          overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.4177E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
405:0022---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD             02:S3           .53     .043 No_date   12:06   32.58  n/a
     fname :C:\SWMHYMO\MINS3.405
     remark:Minor Flow to EXCB14
405:0023---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD             10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS3.405
     remark:Major Flow to CB600
405:0024---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD              02:S3           .53     .043 No_date   12:06   32.58  n/a
                     +   03:S2          1.16     .081 No_date   12:04   30.06  n/a
                     +   05:OVF-S2       .00     .000 No_date    0:00     .00  n/a
                     +   10:OVF-S3       .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5         1.69     .124 No_date   12:05   30.84  n/a
405:0025---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD         01:RY3           .15     .014 No_date   12:01   27.49 .441
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
405:0026---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD              01:RY3           .15     .014 No_date   12:01   27.49  n/a
                     +   04:HYD-5         1.69     .124 No_date   12:05   30.84  n/a
     [DT= 1.00]  SUM=  05:HYD-6         1.84     .136 No_date   12:04   30.57  n/a
405:0027---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD             05:HYD-6        1.84     .136 No_date   12:04   30.57  n/a
     fname :C:\SWMHYMO\HYD-6.405
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
405:0028---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD         01:RY2           .54     .051 No_date   12:01   27.49 .441
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
405:0029---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD       02:S4            .56     .082 No_date   12:00   32.58 .522
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
405:0030---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4             .56     .082 No_date   12:00   32.58  n/a
     [RDT= 1.00] out<- 08:S4             .56     .070 No_date   12:02   32.58  n/a
          overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.3491E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
405:0031---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD             08:S4           .56     .070 No_date   12:02   32.58  n/a
     fname :C:\SWMHYMO\MINS4.405
     remark:Minor Flow to WD ROW Ditch
405:0032---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD             10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS4.405
     remark:Major Flow to CB613
405:0033---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD              01:RY2           .54     .051 No_date   12:01   27.49  n/a
                     +   08:S4            .56     .070 No_date   12:02   32.58  n/a
                     +   10:OVF-S2        .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-7         1.10     .120 No_date   12:01   30.07  n/a
405:0034---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD       01:WD2           .13     .021 No_date   12:00   44.12 .707
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
405:0035---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD              01:WD2           .13     .021 No_date   12:00   44.12  n/a
                     +   04:HYD-7         1.10     .120 No_date   12:01   30.07  n/a
     [DT= 1.00]  SUM=  06:WD2           1.23     .141 No_date   12:01   31.55  n/a
405:0036---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD             06:WD2          1.23     .141 No_date   12:01   31.55  n/a
     fname :C:\SWMHYMO\WD2.405
     remark:Flow from RY2 S4 WD2
405:0037---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD         03:RY4           .25     .023 No_date   12:01   27.49 .441
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
405:0038---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD              03:RY4           .25     .023 No_date   12:01   27.49  n/a
                     +   06:WD2          1.23     .141 No_date   12:01   31.55  n/a
     [DT= 1.00]  SUM=  04:HYD-8         1.48     .164 No_date   12:01   30.87  n/a
405:0039---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD              05:HYD-6        1.84     .136 No_date   12:04   30.57  n/a
                     +   04:HYD-8         1.48     .164 No_date   12:01   30.87  n/a
     [DT= 1.00]  SUM=  07:PH2           3.32     .294 No_date   12:02   30.70  n/a
405:0040---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD             07:PH2          3.32     .294 No_date   12:02   30.70  n/a
     fname :C:\SWMHYMO\PH2.405
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
405:0041---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD         01:A2            .73     .054 No_date   12:03   25.09 .402
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
405:0042---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD         02:RY5           1.41     .132 No_date   12:01   27.49 .441
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
405:0043---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD              01:A2            .73     .054 No_date   12:03   25.09  n/a
                     +   02:RY5          1.41     .132 No_date   12:01   27.49  n/a
     [DT= 1.00]  SUM=  07:HYD-9         2.14     .184 No_date   12:02   26.67  n/a
405:0044---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD       01:S5            3.66     .400 No_date   12:03   32.58 .522
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
405:0045---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD         02:RY6           .80     .075 No_date   12:01   27.49 .441
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
405:0046---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD              01:S5            3.66     .400 No_date   12:03   32.58  n/a
                     +   02:RY6           .80     .075 No_date   12:01   27.49  n/a
     [DT= 1.00]  SUM=  09:HYD-10        4.46     .472 No_date   12:03   31.67  n/a
405:0047---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10         4.46     .472 No_date   12:03   31.67  n/a
     [RDT= 1.00] out<- 08:S5             4.46     .343 No_date   12:10   31.66  n/a
          overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.3359E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
405:0048---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD              07:HYD-9        2.14     .184 No_date   12:02   26.67  n/a
                     +   08:S5            4.46     .343 No_date   12:10   31.66  n/a
                     +   10:OVF-S2        .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:PH3-4         6.60     .475 No_date   12:05   30.05  n/a
405:0049---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD             04:PH3-4        6.60     .475 No_date   12:05   30.05  n/a
     fname :C:\SWMHYMO\PH3-4.405
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
405:0050---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD       01:1-P           1.91     .365 No_date   12:00   60.78 .974
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
405:0051---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD             07:PH2          3.32     .294 No_date   12:02   30.70  n/a
     Filename = C:\SWMHYMO\PH2.405
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
405:0052---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD             04:PH3-4        6.60     .475 No_date   12:05   30.03  n/a
     Filename = C:\SWMHYMO\PH3-4.405
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
405:0053---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD              01:1-P           1.91     .365 No_date   12:00   60.78  n/a
                     +   07:PH2           3.32     .294 No_date   12:02   30.70  n/a
                     +   04:PH3-4         6.60     .475 No_date   12:05   30.03  n/a
     [DT= 1.00]  SUM=  09:PNDINF        11.83    1.056 No_date   12:00   35.18  n/a
405:0054---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83    1.056 No_date   12:00   35.18  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83     .379 No_date   12:28   35.18  n/a
          overflow <= 01:OVR             .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.1472E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
405:0055---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD             10:PNDOUT       11.83     .379 No_date   12:28   35.18  n/a
     fname :C:\SWMHYMO\PNDOUT.405
     remark:Outflow from the proposed dry pond
405:0056---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD             06:OUT-1        2.29     .221 No_date   12:00   29.29  n/a
     Filename = C:\SWMHYMO\OUT-1.405
     Comment  = FLOW TO EXISITNG DITCH
405:0057---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD              06:OUT-1        2.29     .221 No_date   12:00   29.29  n/a
                     +   10:PNDOUT       11.83     .379 No_date   12:28   35.18  n/a
     [DT= 1.00]  SUM=  04:OUTMMD        14.12     .439 No_date   12:19   34.23  n/a
405:0058---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD             04:OUTMMD       14.12     .439 No_date   12:19   34.23  n/a
     fname :C:\SWMHYMO\OUTMMD.405
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
 ** END OF RUN : 409

************************************************************************************




 RUN:COMMAND#
 410:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 410 ]
#*********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*********************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN    #
#SUBDIVISION;                                                                 #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                   #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                        #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR       #
#HISTORICAL STORMS: JULY 1, 1979,                                             #
#################################################################################
 410:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT=  72.00]
 410:0003---------------ID:NHYD-----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD       01:PH1           1.26     .163 No_date   12:02   36.09 .501
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
```

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410:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S1              .35     .063 No_date   12:00   40.27 .559
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
410:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S1              .35     .063 No_date   12:00   40.27  n/a
      [RDT= 1.00] out<- 03:S1             .35     .043 No_date   12:03   40.27  n/a
           overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3346E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
410:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:PH1            1.26     .163 No_date   12:02   36.09  n/a
                      +  03:S1             .35     .043 No_date   12:03   40.27  n/a
                      +  04:OVF-S1         .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  05:HYD-1          1.61     .207 No_date   12:02   37.00  n/a
410:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY1             .32     .038 No_date   12:01   34.65 .481
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
410:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:A1b             .28     .032 No_date   12:01   32.23 .448
     [CN= 81.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
410:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY1             .32     .038 No_date   12:01   34.65  n/a
                      +  02:A1b            .28     .032 No_date   12:01   32.23  n/a
      [DT= 1.00]  SUM=  04:HYD-2          .60     .069 No_date   12:01   33.52  n/a
410:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:WD1             .08     .016 No_date   12:00   51.82 .720
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
410:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD1             .08     .016 No_date   12:00   51.82  n/a
                      +  04:HYD-2          .60     .069 No_date   12:01   33.52  n/a
      [DT= 1.00]  SUM=  08:HYD-3          .68     .084 No_date   12:00   35.67  n/a
410:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-1          1.61     .207 No_date   12:02   37.00  n/a
                      +  08:HYD-3          .68     .084 No_date   12:00   35.67  n/a
      [DT= 1.00]  SUM=  06:OUT-1          2.29     .284 No_date   12:00   36.61  n/a
410:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:OUT-1          2.29     .284 No_date   12:00   36.61  n/a
     fname :C:\SWMHYMO\OUT-1.410
     remark:FLOW TO EXISITNG DITCH
410:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A1              .39     .037 No_date   12:03   32.23 .448
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
410:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S2              .77     .088 No_date   12:00   40.27 .559
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
410:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A1              .39     .037 No_date   12:03   32.23  n/a
                      +  02:S2             .77     .088 No_date   12:00   40.27  n/a
      [DT= 1.00]  SUM=  04:HYD-4          1.16     .124 No_date   12:01   37.57  n/a
410:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 04:HYD-4           1.16     .124 No_date   12:01   37.57  n/a
      [RDT= 1.00] out<- 03:S2             1.16     .105 No_date   12:05   37.57  n/a
           overflow <= 05:OVF-S2          .00      .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4620E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
410:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            03:S2             1.16     .105 No_date   12:05   37.57  n/a
     fname :C:\SWMHYMO\MINS2.410
     remark:Minor Flow to EXCB13
410:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS2.410
     remark:Major Flow to CB700
410:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S3              .53     .080 No_date   12:00   40.27 .559
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
410:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3              .53     .080 No_date   12:00   40.27  n/a
      [RDT= 1.00] out<- 02:S3             .53     .054 No_date   12:06   40.27  n/a
           overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4956E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
410:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            02:S3              .53     .054 No_date   12:06   40.27  n/a
     fname :C:\SWMHYMO\MINS3.410
     remark:Minor Flow to EXCB14
410:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS3.410
     remark:Major Flow to CB600
410:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             02:S3              .53     .054 No_date   12:06   40.27  n/a
                      +  03:S2             .63     .105 No_date   12:05   37.57  n/a
                      +  05:OVF-S2         .00     .000 No_date    0:00     .00  n/a
                      +  10:OVF-S3         .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  04:HYD-5          1.69     .158 No_date   12:05   38.40  n/a
410:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY3             .15     .018 No_date   12:01   34.65 .481
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
410:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY3             .15     .018 No_date   12:01   34.65  n/a
                      +  04:HYD-5          1.69     .158 No_date   12:05   38.40  n/a
      [DT= 1.00]  SUM=  05:HYD-6          1.84     .173 No_date   12:04   38.10  n/a
410:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:HYD-6          1.84     .173 No_date   12:04   38.10  n/a
     fname :C:\SWMHYMO\HYD-6.410
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
410:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY2             .54     .064 No_date   12:01   34.65 .481
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
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410:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S4              .56     .101 No_date   12:00   40.27 .559
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
410:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4              .56     .101 No_date   12:00   40.27  n/a
      [RDT= 1.00] out<- 08:S4             .56     .088 No_date   12:01   40.27  n/a
           overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4020E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
410:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            08:S4              .56     .088 No_date   12:01   40.27  n/a
     fname :C:\SWMHYMO\MINS4.410
     remark:Minor Flow to WD ROW Ditch
410:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD            10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS4.410
     remark:Major Flow to CB613
410:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY2             .54     .064 No_date   12:01   34.65  n/a
                      +  08:S4             .56     .088 No_date   12:01   40.27  n/a
                      +  10:OVF-S2         .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  04:HYD-7          1.10     .151 No_date   12:01   37.50  n/a
410:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:WD2             .13     .025 No_date   12:00   51.82 .720
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
410:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD2             .13     .025 No_date   12:00   51.82  n/a
                      +  04:HYD-7          1.10     .151 No_date   12:01   37.50  n/a
      [DT= 1.00]  SUM=  06:WD2            1.23     .176 No_date   12:01   39.01  n/a
410:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:WD2            1.23     .176 No_date   12:01   39.01  n/a
     fname :C:\SWMHYMO\WD2.410
     remark:Flow from RY2_S4 WD2
410:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        03:RY4             .25     .029 No_date   12:01   34.65 .481
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
410:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:RY4             .25     .029 No_date   12:01   34.65  n/a
                      +  06:WD2            1.23     .176 No_date   12:01   39.01  n/a
      [DT= 1.00]  SUM=  04:HYD-8          1.48     .205 No_date   12:01   38.27  n/a
410:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-6          1.84     .173 No_date   12:04   38.10  n/a
                      +  04:HYD-8          1.48     .205 No_date   12:01   38.27  n/a
      [DT= 1.00]  SUM=  07:PH2            3.32     .370 No_date   12:02   38.18  n/a
410:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            07:PH2            3.32     .370 No_date   12:02   38.18  n/a
     fname :C:\SWMHYMO\PH2.410
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
410:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2              .73     .070 No_date   12:03   32.23 .448
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
410:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY5            1.41     .166 No_date   12:01   34.65 .481
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
410:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2              .73     .070 No_date   12:03   32.23  n/a
                      +  02:RY5            1.41     .166 No_date   12:01   34.65  n/a
      [DT= 1.00]  SUM=  07:HYD-9          2.14     .233 No_date   12:02   33.82  n/a
410:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S5              3.66     .497 No_date   12:03   40.27 .559
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
410:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY6             .80     .094 No_date   12:01   34.65 .481
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
410:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:S5              3.66     .497 No_date   12:03   40.27  n/a
                      +  02:RY6            .80      .094 No_date   12:01   34.65  n/a
      [DT= 1.00]  SUM=  09:HYD-10         4.46     .589 No_date   12:02   39.26  n/a
410:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10          4.46     .589 No_date   12:02   39.26  n/a
      [RDT= 1.00] out<- 08:S5             4.46     .427 No_date   12:09   39.26  n/a
           overflow <= 10:OVF-S2          .00      .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3938E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
410:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9          2.14     .233 No_date   12:02   33.82  n/a
                      +  08:S5             4.46     .427 No_date   12:09   39.26  n/a
                      +  10:OVF-S2         .00      .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  04:PH3-4          6.60     .602 No_date   12:05   37.50  n/a
410:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4          6.60     .602 No_date   12:05   37.50  n/a
     fname :C:\SWMHYMO\PH3-4.410
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
410:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:1-P            1.91     .421 No_date   12:00   70.37 .977
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=-.30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
410:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2            3.32     .370 No_date   12:02   38.18  n/a
     Filename = C:\SWMHYMO\PH2.410
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
410:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4          6.60     .602 No_date   12:05   37.48  n/a
     Filename = C:\SWMHYMO\PH3-4.410
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
410:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P            1.91     .421 No_date   12:00   70.37  n/a
                      +  07:PH2            3.32     .370 No_date   12:02   38.18  n/a
                      +  04:PH3-4          6.60     .602 No_date   12:05   37.48  n/a
      [DT= 1.00]  SUM=  09:PNDINF        11.83    1.303 No_date   12:00   42.99  n/a
410:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
```

```
     ROUTE RESERVOIR -> 09:PNDINF        11.83     1.303 No_date   12:00   42.99  n/a
      [RDT= 1.00] out<- 10:PNDOUT        11.83      .512 No_date   12:24   42.99  n/a
            overflow <= 01:OVR            .00      .000 No_date    0:00     .00  n/a
     {MxStoUsed=.1726E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 410:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            10:PNDOUT        11.83      .512 No_date   12:24   42.99  n/a
      fname :C:\SWMHYMO\PNDOUT.410
      remark:Outflow from the proposed dry pond
 410:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     READ HYD            06:OUT-1          2.29      .284 No_date   12:00   36.60  n/a
      Filename = C:\SWMHYMO\OUT-1.410
      Comment  = FLOW TO EXISITNG DITCH
 410:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             06:OUT-1          2.29      .284 No_date   12:00   36.60  n/a
                       + 10:PNDOUT        11.83      .512 No_date   12:24   42.99  n/a
      [DT= 1.00]  SUM=  04:OUTMMD         14.12      .605 No_date   12:11   41.95  n/a
 410:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            04:OUTMMD         14.12      .605 No_date   12:11   41.95  n/a
      fname :C:\SWMHYMO\OUTMMD.410
      remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN : 424

**********************************************************************************



 RUN:COMMAND#
 425:0001---------------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2     (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 425 ]
#*************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*************************************************************************
#########################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN   #
#SUBDIVISION;                                                              #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                     #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#HISTORICAL STORMS: JULY 1, 1979,                                          #
#########################################################################
 425:0002---------------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT=  84.00]
 425:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1            1.26      .213 No_date   12:01   46.90 .558
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 425:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1             .35      .078 No_date   12:00   51.16 .609
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 425:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1             .35      .078 No_date   12:00   51.16  n/a
      [RDT= 1.00] out<- 03:S1             .35      .055 No_date   12:03   51.16  n/a
            overflow <= 04:OVF-S1         .00      .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4101E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 425:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1            1.26      .213 No_date   12:01   46.90  n/a
                       + 03:S1             .35      .055 No_date   12:03   51.16  n/a
                       + 04:OVF-S1         .00      .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  05:HYD-1          1.61      .267 No_date   12:01   47.83  n/a
 425:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1            .32      .048 No_date   12:01   44.06 .525
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 425:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b            .28      .041 No_date   12:01   41.64 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 425:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1            .32      .048 No_date   12:01   44.06  n/a
                       + 02:A1b            .28      .041 No_date   12:01   41.64  n/a
      [DT= 1.00]  SUM=  04:HYD-2          .60      .089 No_date   12:01   42.93  n/a
 425:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD1            .08      .019 No_date   12:00   62.38 .743
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 425:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD1            .08      .019 No_date   12:00   62.38  n/a
                       + 04:HYD-2          .60      .089 No_date   12:01   42.93  n/a
      [DT= 1.00]  SUM=  08:HYD-3          .68      .106 No_date   12:00   45.22  n/a
 425:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-1          1.61      .267 No_date   12:01   47.83  n/a
                       + 08:HYD-3          .68      .106 No_date   12:00   45.22  n/a
      [DT= 1.00]  SUM=  06:OUT-1          2.29      .368 No_date   12:00   47.05  n/a
 425:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:OUT-1          2.29      .368 No_date   12:00   47.05  n/a
      fname :C:\SWMHYMO\OUT-1.425
      remark:FLOW TO EXISITNG DITCH
 425:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1             .39      .048 No_date   12:03   41.64 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 425:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S2             .77      .116 No_date   12:01   51.16 .609
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
 425:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1             .39      .048 No_date   12:03   41.64  n/a
                       + 02:S2             .77      .116 No_date   12:01   51.16  n/a
      [DT= 1.00]  SUM=  04:HYD-4          1.16      .162 No_date   12:01   47.96  n/a
 425:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4          1.16      .162 No_date   12:01   47.96  n/a
      [RDT= 1.00] out<- 03:S2             1.12      .110 No_date   11:59   47.96  n/a
            overflow <= 05:OVF-S2          .04      .051 No_date   12:02   47.96  n/a
     {MxStoUsed=.4811E-02, TotOvfVol=.2035E-02, N-Ovf=    2, TotDurOvf=    0.hrs}
 425:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:S2             1.12      .110 No_date   11:59   47.96  n/a
      fname :C:\SWMHYMO\MINS2.425
      remark:Minor Flow to EXCB13
 425:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:OVF-S2          .04      .051 No_date   12:02   47.96  n/a
      fname :C:\SWMHYMO\MAJS2.425
      remark:Major Flow to CB700
 425:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:S3              .53      .102 No_date   12:00   51.16 .609
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
 425:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3              .53      .102 No_date   12:00   51.16  n/a
      [RDT= 1.00] out<- 02:S3              .53      .069 No_date   12:05   51.16  n/a
            overflow <= 10:OVF-S3          .00      .000 No_date    0:00     .00  n/a
     {MxStoUsed=.6105E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 425:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            02:S3              .53      .069 No_date   12:05   51.16  n/a
      fname :C:\SWMHYMO\MINS3.425
      remark:Minor Flow to EXCB14
 425:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *   SAVE HYD            10:OVF-S3          .00      .000 No_date    0:00     .00  n/a
      fname :C:\SWMHYMO\MAJS3.425
      remark:Major Flow to CB600
 425:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             02:S3              .53      .069 No_date   12:05   51.16  n/a
                       + 03:S2             1.12      .110 No_date   11:59   47.96  n/a
                       + 05:OVF-S2          .04      .051 No_date   12:02   47.96  n/a
                       + 10:OVF-S3          .00      .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  04:HYD-5          1.69      .227 No_date   12:02   48.95  n/a
 425:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY3             .15      .022 No_date   12:01   44.06 .525
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 425:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY3             .15      .022 No_date   12:01   44.06  n/a
                       + 04:HYD-5          1.69      .227 No_date   12:02   48.95  n/a
      [DT= 1.00]  SUM=  05:HYD-6          1.84      .249 No_date   12:02   48.56  n/a
 425:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:HYD-6          1.84      .249 No_date   12:02   48.56  n/a
      fname :C:\SWMHYMO\HYD-6.425
      remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
 425:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY2             .54      .081 No_date   12:01   44.06 .525
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 425:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S4              .56      .124 No_date   12:00   51.17 .609
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
 425:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S4              .56      .124 No_date   12:00   51.17  n/a
      [RDT= 1.00] out<- 08:S4              .56      .110 No_date   12:01   51.16  n/a
            overflow <= 10:OVF-S2          .00      .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4665E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 425:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            08:S4              .56      .110 No_date   12:01   51.16  n/a
      fname :C:\SWMHYMO\MINS4.425
      remark:Minor Flow to WD ROW Ditch
 425:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *   SAVE HYD            10:OVF-S2          .00      .000 No_date    0:00     .00  n/a
      fname :C:\SWMHYMO\MAJS4.425
      remark:Major Flow to CB613
 425:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY2             .54      .081 No_date   12:01   44.06  n/a
                       + 08:S4              .56      .110 No_date   12:01   51.16  n/a
                       + 10:OVF-S2          .00      .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  04:HYD-7          1.10      .190 No_date   12:01   47.66  n/a
 425:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD2             .13      .031 No_date   12:00   62.38 .743
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
 425:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD2             .13      .031 No_date   12:00   62.38  n/a
                       + 04:HYD-7          1.10      .190 No_date   12:01   47.66  n/a
      [DT= 1.00]  SUM=  06:WD2            1.23      .220 No_date   12:01   49.22  n/a
 425:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:WD2            1.23      .220 No_date   12:01   49.22  n/a
      fname :C:\SWMHYMO\WD2.425
      remark:Flow from RY2 S4 WD2
 425:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        03:RY4             .25      .037 No_date   12:01   44.06 .525
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 425:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             03:RY4             .25      .037 No_date   12:01   44.06  n/a
                       + 06:WD2            1.23      .220 No_date   12:01   49.22  n/a
      [DT= 1.00]  SUM=  04:HYD-8          1.48      .257 No_date   12:01   48.35  n/a
 425:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-6          1.84      .249 No_date   12:02   48.56  n/a
                       + 04:HYD-8          1.48      .257 No_date   12:01   48.35  n/a
      [DT= 1.00]  SUM=  07:PH2            3.32      .504 No_date   12:01   48.46  n/a
 425:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            07:PH2            3.32      .504 No_date   12:01   48.46  n/a
      fname :C:\SWMHYMO\PH2.425
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     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
 425:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A2              .73     .090 No_date   12:03   41.64 .496
       [CN= 81.0: N= 3.00]
       [Tp=  .15:DT= 1.00]
 425:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:RY5            1.41     .211 No_date   12:01   44.06 .525
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
 425:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A2              .73     .090 No_date   12:03   41.64  n/a
                    +  02:RY5            1.41     .211 No_date   12:01   44.06  n/a
       [DT= 1.00]  SUM=  07:HYD-9         2.14     .298 No_date   12:02   43.23  n/a
 425:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:S5              3.66     .637 No_date   12:02   51.16 .609
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
 425:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:RY6             .80     .120 No_date   12:01   44.06 .525
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
 425:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:S5              3.66     .637 No_date   12:02   51.16  n/a
                    +  02:RY6             .80     .120 No_date   12:01   44.06  n/a
       [DT= 1.00]  SUM=  09:HYD-10        4.46     .755 No_date   12:02   49.89  n/a
 425:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 09:HYD-10          4.46     .755 No_date   12:02   49.89  n/a
       [RDT= 1.00] out<- 08:S5             4.46     .550 No_date   12:09   49.89  n/a
            overflow <= 10:OVF-S2           .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4786E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 425:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            07:HYD-9           2.14     .298 No_date   12:02   43.23  n/a
                    +  08:S5              4.46     .550 No_date   12:09   49.89  n/a
                    +  10:OVF-S2           .00     .000 No_date    0:00     .00  n/a
       [DT= 1.00]  SUM=  04:PH3-4         6.60     .780 No_date   12:05   47.73  n/a
 425:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           04:PH3-4           6.60     .780 No_date   12:05   47.73  n/a
       fname :C:\SWMHYMO\PH3-4.425
       remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
 425:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:1-P             1.91     .492 No_date   12:00   82.37 .981
       [XIMP=***:TIMP=***]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
 425:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     READ HYD           07:PH2             3.32     .504 No_date   12:01   48.46  n/a
       Filename = C:\SWMHYMO\PH2.425
       Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
 425:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     READ HYD           04:PH3-4           6.60     .780 No_date   12:05   47.72  n/a
       Filename = C:\SWMHYMO\PH3-4.425
       Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
 425:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:1-P             1.91     .492 No_date   12:00   82.37  n/a
                    +  07:PH2             3.32     .504 No_date   12:01   48.46  n/a
                    +  04:PH3-4           6.60     .780 No_date   12:05   47.72  n/a
       [DT= 1.00]  SUM=  09:PNDINF        11.83    1.674 No_date   12:00   53.52  n/a
 425:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 09:PNDINF          11.83    1.674 No_date   12:00   53.52  n/a
       [RDT= 1.00] out<- 10:PNDOUT         11.83     .696 No_date   12:22   53.52  n/a
            overflow <= 01:OVR              .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.2066E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 425:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           10:PNDOUT          11.83     .696 No_date   12:22   53.52  n/a
       fname :C:\SWMHYMO\PNDOUT.425
       remark:Outflow from the proposed dry pond
 425:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     READ HYD           06:OUT-1           2.29     .368 No_date   12:00   47.05  n/a
       Filename = C:\SWMHYMO\OUT-1.425
       Comment  = FLOW TO EXISITNG DITCH
 425:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            06:OUT-1           2.29     .368 No_date   12:00   47.05  n/a
                    +  10:PNDOUT          11.83     .696 No_date   12:22   53.52  n/a
       [DT= 1.00]  SUM=  04:OUTMMD        14.12     .836 No_date   12:09   52.47  n/a
 425:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           04:OUTMMD          14.12     .836 No_date   12:09   52.47  n/a
       fname :C:\SWMHYMO\OUTMMD.425
       remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN : 449

************************************************************************************




 RUN:COMMAND#
 450:0001---------------------------------------------------------------------------
     START              [TZERO =    .00 hrs on       0]
       [METOUT=   2    (1=imperial, 2=metric output)]
       [NSTORM=   1 ]
       [NRUN   = 450 ]
#*************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016                                          #
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*************************************************************************
#########################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN    #
#SUBDIVISION;                                                               #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                 #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                      #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#HISTORICAL STORMS: JULY 1, 1979,                                           #
#########################################################################
 450:0002---------------------------------------------------------------------------
     READ STORM
       Filename = STORM.001
     Comment  =
       [SDT=15.00:SDUR=  24.00:PTOT=  93.60]
 450:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:PH1             1.26     .253 No_date   12:01   55.13 .589
       [XIMP=.34:TIMP=.43]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 450:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S1              .35     .089 No_date   12:00   59.66 .637
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 450:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1               .35     .089 No_date   12:00   59.66  n/a
       [RDT= 1.00] out<- 03:S1              .35     .063 No_date   12:03   59.66  n/a
            overflow <= 04:OVF-S1           .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4682E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 450:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:PH1             1.26     .253 No_date   12:01   55.13  n/a
                    +  03:S1              .35     .063 No_date   12:03   59.66  n/a
                    +  04:OVF-S1           .00     .000 No_date    0:00     .00  n/a
       [DT= 1.00]  SUM=  05:HYD-1         1.61     .316 No_date   12:01   56.11  n/a
 450:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY1             .32     .056 No_date   12:01   51.88 .554
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
 450:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1b             .28     .048 No_date   12:01   49.47 .529
       [CN= 81.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
 450:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY1             .32     .056 No_date   12:01   51.88  n/a
                    +  02:A1b             .28     .048 No_date   12:01   49.47  n/a
       [DT= 1.00]  SUM=  04:HYD-2         .60     .105 No_date   12:01   50.76  n/a
 450:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:WD1             .08     .022 No_date   12:00   71.31 .762
       [XIMP=.67:TIMP=.67]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 450:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:WD1             .08     .022 No_date   12:00   71.31  n/a
                    +  04:HYD-2           .60     .105 No_date   12:01   50.76  n/a
       [DT= 1.00]  SUM=  08:HYD-3         .68     .125 No_date   12:00   53.18  n/a
 450:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            05:HYD-1           1.61     .316 No_date   12:01   56.11  n/a
                    +  08:HYD-3           .68     .125 No_date   12:00   53.18  n/a
       [DT= 1.00]  SUM=  06:OUT-1         2.29     .436 No_date   12:00   55.24  n/a
 450:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           06:OUT-1           2.29     .436 No_date   12:00   55.24  n/a
       fname :C:\SWMHYMO\OUT-1.450
       remark:FLOW TO EXISITNG DITCH
 450:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1              .39     .057 No_date   12:03   49.47 .529
       [CN= 81.0: N= 3.00]
       [Tp=  .15:DT= 1.00]
 450:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S2              .77     .137 No_date   12:00   59.66 .637
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
 450:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1              .39     .057 No_date   12:03   49.47  n/a
                    +  02:S2              .77     .137 No_date   12:00   59.66  n/a
       [DT= 1.00]  SUM=  04:HYD-4         1.16     .192 No_date   12:01   56.24  n/a
 450:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4           1.16     .192 No_date   12:01   56.24  n/a
       [RDT= 1.00] out<- 03:S2             1.08     .110 No_date   11:56   56.24  n/a
            overflow <= 05:OVF-S2           .08     .081 No_date   12:01   56.24  n/a
     {MxStoUsed=.4807E-02, TotOvfVol=.4773E-02, N-Ovf=    2, TotDurOvf=    0.hrs}
 450:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           03:S2              1.08     .110 No_date   11:56   56.24  n/a
       fname :C:\SWMHYMO\MINS2.450
       remark:Minor Flow to EXCB13
 450:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           05:OVF-S2           .08     .081 No_date   12:01   56.24  n/a
       fname :C:\SWMHYMO\MAJS2.450
       remark:Major Flow to CB700
 450:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:S3              .53     .118 No_date   12:00   59.66 .637
       [XIMP=.41:TIMP=.51]
       [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
       [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
       [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
 450:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3               .53     .118 No_date   12:00   59.66  n/a
       [RDT= 1.00] out<- 02:S3              .53     .081 No_date   12:05   59.66  n/a
            overflow <= 10:OVF-S3           .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.6943E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 450:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           02:S3              .53     .081 No_date   12:05   59.66  n/a
       fname :C:\SWMHYMO\MINS3.450
       remark:Minor Flow to EXCB14
 450:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
  *  SAVE HYD           10:OVF-S3           .00     .000 No_date    0:00     .00  n/a
       fname :C:\SWMHYMO\MAJS3.450
       remark:Major Flow to CB600
 450:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            02:S3              .53     .081 No_date   12:05   59.66  n/a
                    +  03:S2             1.08     .110 No_date   11:56   56.24  n/a
                    +  05:OVF-S2          .08     .081 No_date   12:01   56.24  n/a
                    +  10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
       [DT= 1.00]  SUM=  04:HYD-5         1.69     .266 No_date   12:02   57.30  n/a
 450:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY3             .15     .026 No_date   12:01   51.88 .554
       [CN= 80.0: N= 3.00]
       [Tp=  .10:DT= 1.00]
 450:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY3             .15     .026 No_date   12:01   51.88  n/a
                    +  04:HYD-5           1.69     .266 No_date   12:02   57.30  n/a
       [DT= 1.00]  SUM=  05:HYD-6         1.84     .292 No_date   12:02   56.86  n/a
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450:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:HYD-6          1.84     .292 No_date   12:02   56.86  n/a
     fname :C:\SWMHYMO\HYD-6.450
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
450:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY2            .54     .095 No_date   12:01   51.88 .554
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
450:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S4             .56     .143 No_date   12:00   59.66 .637
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
450:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4             .56     .143 No_date   12:00   59.66  n/a
     [RDT= 1.00] out<- 08:S4             .56     .126 No_date   12:01   59.66  n/a
          overflow <= 10:OVF-S2          .00     .012 No_date   12:01   59.66  n/a
    {MxStoUsed=.5093E-02, TotOvfVol=.7170E-04, N-Ovf=    1, TotDurOvf=    0.hrs}
450:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            08:S4             .56     .126 No_date   12:01   59.66  n/a
     fname :C:\SWMHYMO\MINS4.450
     remark:Minor Flow to WD ROW Ditch
450:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:OVF-S2         .00     .012 No_date   12:01   59.66  n/a
     fname :C:\SWMHYMO\MAJS4.450
     remark:Major Flow to CB613
450:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY2            .54     .095 No_date   12:01   51.88  n/a
                      + 08:S4             .56     .126 No_date   12:01   59.66  n/a
                      + 10:OVF-S2         .00     .012 No_date   12:01   59.66  n/a
     [DT= 1.00]  SUM=  04:HYD-7          1.10     .233 No_date   12:01   55.83  n/a
450:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:WD2            .13     .035 No_date   12:00   71.31 .762
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
450:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD2            .13     .035 No_date   12:00   71.31  n/a
                      + 04:HYD-7          1.10     .233 No_date   12:01   55.83  n/a
     [DT= 1.00]  SUM=  06:WD2            1.23     .266 No_date   12:01   57.47  n/a
450:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:WD2            1.23     .266 No_date   12:01   57.47  n/a
     fname :C:\SWMHYMO\WD2.450
     remark:Flow from RY2 S4 WD2
450:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        03:RY4            .25     .044 No_date   12:01   51.88 .554
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
450:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:RY4            .25     .044 No_date   12:01   51.88  n/a
                      + 06:WD2            1.23     .266 No_date   12:01   57.47  n/a
     [DT= 1.00]  SUM=  04:HYD-8          1.48     .310 No_date   12:01   56.52  n/a
450:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-6          1.84     .292 No_date   12:02   56.86  n/a
                      + 04:HYD-8          1.48     .310 No_date   12:01   56.52  n/a
     [DT= 1.00]  SUM=  07:PH2            3.32     .601 No_date   12:01   56.71  n/a
450:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            07:PH2            3.32     .601 No_date   12:01   56.71  n/a
     fname :C:\SWMHYMO\PH2.450
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
450:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2             .73     .107 No_date   12:03   49.47 .529
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
450:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY5            1.41     .248 No_date   12:01   51.88 .554
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
450:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2             .73     .107 No_date   12:03   49.47  n/a
                      + 02:RY5            1.41     .248 No_date   12:01   51.88  n/a
     [DT= 1.00]  SUM=  07:HYD-9          2.14     .352 No_date   12:01   51.06  n/a
450:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S5             3.66     .751 No_date   12:02   59.66 .637
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
450:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY6            .80     .141 No_date   12:01   51.88 .554
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
450:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:S5             3.66     .751 No_date   12:02   59.66  n/a
                      + 02:RY6            .80      .141 No_date   12:01   51.88  n/a
     [DT= 1.00]  SUM=  09:HYD-10         4.46     .890 No_date   12:02   58.27  n/a
450:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10         4.46     .890 No_date   12:02   58.27  n/a
     [RDT= 1.00] out<- 08:S5             4.35     .581 No_date   12:04   58.27  n/a
          overflow <= 10:OVF-S2          .11      .288 No_date   12:04   58.27  n/a
    {MxStoUsed=.4992E-01, TotOvfVol=.6424E-02, N-Ovf=    2, TotDurOvf=    0.hrs}
450:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9          2.14     .352 No_date   12:01   51.06  n/a
                      + 08:S5             4.35     .581 No_date   12:04   58.27  n/a
                      + 10:OVF-S2         .11      .288 No_date   12:04   58.27  n/a
     [DT= 1.00]  SUM=  04:PH3-4          6.60    1.196 No_date   12:04   55.93  n/a
450:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4          6.60    1.196 No_date   12:04   55.93  n/a
     fname :C:\SWMHYMO\PH3-4.450
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
450:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:1-P            1.91     .548 No_date   12:00   91.97 .983
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
450:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2            3.32     .601 No_date   12:01   56.71  n/a
     Filename = C:\SWMHYMO\PH2.450
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
450:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4          6.60    1.196 No_date   12:04   55.92  n/a
     Filename = C:\SWMHYMO\PH3-4.450
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
450:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P            1.91     .548 No_date   12:00   91.97  n/a
                      + 07:PH2            3.32     .601 No_date   12:01   56.71  n/a
                      + 04:PH3-4          6.60    1.196 No_date   12:04   55.92  n/a
     [DT= 1.00]  SUM=  09:PNDINF        11.83    1.951 No_date   12:00   61.96  n/a
450:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83    1.951 No_date   12:00   61.96  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83     .849 No_date   12:19   61.96  n/a
          overflow <= 01:OVR             .00      .000 No_date    0:00     .00  n/a
    {MxStoUsed=.2341E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
450:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT         11.83     .849 No_date   12:19   61.96  n/a
     fname :C:\SWMHYMO\PNDOUT.450
     remark:Outflow from the proposed dry pond
450:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1          2.29     .436 No_date   12:00   55.24  n/a
     Filename = C:\SWMHYMO\OUT-1.450
     Comment  = FLOW TO EXISITNG DITCH
450:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1          2.29     .436 No_date   12:00   55.24  n/a
                      + 10:PNDOUT         11.83     .849 No_date   12:19   61.96  n/a
     [DT= 1.00]  SUM=  04:OUTMMD         14.12    1.051 No_date   12:08   60.87  n/a
450:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD         14.12    1.051 No_date   12:08   60.87  n/a
     fname :C:\SWMHYMO\OUTMMD.450
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
 ** END OF RUN : 499

************************************************************************************



 RUN:COMMAND#
 500:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2   (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 500 ]
#*************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*************************************************************************
#########################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN   #
#SUBDIVISION;                                                              #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                     #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR    #
#HISTORICAL STORMS: JULY 1, 1979,                                          #
#########################################################################
 500:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT= 103.20]
 500:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1            1.26     .291 No_date   12:01   63.73 .618
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 500:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1             .35     .102 No_date   12:00   68.47 .663
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 500:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 03:S1             .35     .102 No_date   12:00   68.47  n/a
      [RDT= 1.00] out<- 03:S1             .35     .073 No_date   12:02   68.47  n/a
           overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.5343E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 500:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1            1.26     .291 No_date   12:01   63.73  n/a
                       + 03:S1             .35      .073 No_date   12:02   68.47  n/a
                       + 04:OVF-S1         .00      .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  05:HYD-1          1.61     .363 No_date   12:01   64.76  n/a
 500:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1            .32      .065 No_date   12:01   59.92 .581
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 500:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b            .28      .056 No_date   12:01   57.53 .557
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 500:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1            .32      .065 No_date   12:01   59.92  n/a
                       + 02:A1b            .28      .056 No_date   12:01   57.53  n/a
      [DT= 1.00]  SUM=  04:HYD-2          .60      .121 No_date   12:01   58.80  n/a
 500:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD1            .08      .024 No_date   12:00   80.36 .779
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 500:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD1            .08      .024 No_date   12:00   80.36  n/a
                       + 04:HYD-2          .60      .121 No_date   12:01   58.80  n/a
      [DT= 1.00]  SUM=  08:HYD-3          .68      .143 No_date   12:00   61.34  n/a
 500:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-1          1.61     .363 No_date   12:01   64.76  n/a
                       + 08:HYD-3          .68      .143 No_date   12:00   61.34  n/a
      [DT= 1.00]  SUM=  06:OUT-1          2.29     .502 No_date   12:00   63.75  n/a
 500:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:OUT-1          2.29     .502 No_date   12:00   63.75  n/a
      fname :C:\SWMHYMO\OUT-1.500
```

```
    remark:FLOW TO EXISITNG DITCH
500:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1              .39     .067 No_date   12:03   57.53 .557
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
500:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:S2              .77     .161 No_date   12:00   68.47 .663
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
500:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1              .39     .067 No_date   12:03   57.53  n/a
                     +  02:S2              .77     .161 No_date   12:00   68.47  n/a
     [DT= 1.00]  SUM=  04:HYD-4           1.16     .224 No_date   12:01   64.79  n/a
500:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 04:HYD-4           1.16     .224 No_date   12:01   64.79  n/a
     [RDT= 1.00] out<- 03:S2              1.03     .110 No_date   11:54   64.79  n/a
           overflow <= 05:OVF-S2          .13     .113 No_date   12:01   64.79  n/a
     {MxStoUsed=.4789E-02, TotOvfVol=.8444E-02, N-Ovf=    Z, TotDurOvf=    0.hrs}
500:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           03:S2              1.03     .110 No_date   11:54   64.79  n/a
     fname :C:\SWMHYMO\MINS2.500
     remark:Minor Flow to EXCB13
500:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:OVF-S2          .13     .113 No_date   12:01   64.79  n/a
     fname :C:\SWMHYMO\MAJS2.500
     remark:Major Flow to CB700
500:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:S3              .53     .136 No_date   12:00   68.47 .663
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
500:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3              .53     .136 No_date   12:00   68.47  n/a
     [RDT= 1.00] out<- 02:S3              .53     .094 No_date   12:05   68.47  n/a
           overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.7903E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
500:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           02:S3              .53     .094 No_date   12:05   68.47  n/a
     fname :C:\SWMHYMO\MINS3.500
     remark:Minor Flow to EXCB14
500:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD           10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS3.500
     remark:Major Flow to CB600
500:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            02:S3              .53     .094 No_date   12:05   68.47  n/a
                     +  03:S2             1.03     .110 No_date   11:54   64.79  n/a
                     +  05:OVF-S2          .13     .113 No_date   12:01   64.79  n/a
                     +  10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5           1.69     .310 No_date   12:02   65.93  n/a
500:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:RY3             .15     .030 No_date   12:01   59.91 .581
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
500:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:RY3             .15     .030 No_date   12:01   59.91  n/a
                     +  04:HYD-5          1.69     .310 No_date   12:02   65.93  n/a
     [DT= 1.00]  SUM=  05:HYD-6           1.84     .340 No_date   12:02   65.44  n/a
500:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:HYD-6           1.84     .340 No_date   12:02   65.44  n/a
     fname :C:\SWMHYMO\HYD-6.500
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
500:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:RY2             .54     .110 No_date   12:01   59.92 .581
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
500:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:S4              .56     .162 No_date   12:00   68.47 .663
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
500:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4              .56     .162 No_date   12:00   68.47  n/a
     [RDT= 1.00] out<- 08:S4              .55     .126 No_date   11:57   68.47  n/a
           overflow <= 10:OVF-S2          .01     .035 No_date   12:00   68.47  n/a
     {MxStoUsed=.5125E-02, TotOvfVol=.9573E-03, N-Ovf=    I, TotDurOvf=    0.hrs}
500:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           08:S4              .55     .126 No_date   11:57   68.47  n/a
     fname :C:\SWMHYMO\MINS4.500
     remark:Minor Flow to WD ROW Ditch
500:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           10:OVF-S2          .01     .035 No_date   12:00   68.47  n/a
     fname :C:\SWMHYMO\MAJS4.500
     remark:Major Flow to CB613
500:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:RY2             .54     .110 No_date   12:01   59.92  n/a
                     +  08:S4              .55     .126 No_date   11:57   68.47  n/a
                     +  10:OVF-S2          .01     .035 No_date   12:00   68.47  n/a
     [DT= 1.00]  SUM=  04:HYD-7           1.10     .269 No_date   12:00   64.26  n/a
500:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:WD2             .13     .039 No_date   12:00   80.36 .779
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=*****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
500:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:WD2             .13     .039 No_date   12:00   80.36  n/a
                     +  04:HYD-7          1.10     .269 No_date   12:00   64.26  n/a
     [DT= 1.00]  SUM=  06:WD2             1.23     .308 No_date   12:00   65.96  n/a
500:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           06:WD2             1.23     .308 No_date   12:00   65.96  n/a
     fname :C:\SWMHYMO\WD2.500
     remark:Flow from RY2 S4 WD2
500:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       03:RY4             .25     .051 No_date   12:01   59.91 .581
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
500:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            03:RY4             .25     .051 No_date   12:01   59.91  n/a
                     +  06:WD2             1.23     .308 No_date   12:00   65.96  n/a
     [DT= 1.00]  SUM=  04:HYD-8           1.48     .358 No_date   12:00   64.94  n/a
500:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            05:HYD-6           1.84     .340 No_date   12:02   65.44  n/a
                     +  04:HYD-8           1.48     .358 No_date   12:00   64.94  n/a
     [DT= 1.00]  SUM=  07:PH2             3.32     .694 No_date   12:01   65.22  n/a
500:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           07:PH2             3.32     .694 No_date   12:01   65.22  n/a
     fname :C:\SWMHYMO\PH2.500
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
500:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2              .73     .125 No_date   12:03   57.53 .557
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
500:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:RY5            1.41     .286 No_date   12:01   59.92 .581
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
500:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2              .73     .125 No_date   12:03   57.53  n/a
                     +  02:RY5            1.41     .286 No_date   12:01   59.92  n/a
     [DT= 1.00]  SUM=  07:HYD-9           2.14     .407 No_date   12:01   59.10  n/a
500:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:S5              3.66     .859 No_date   12:02   68.47 .663
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
500:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:RY6             .80     .162 No_date   12:01   59.92 .581
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
500:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:S5              3.66     .859 No_date   12:02   68.47  n/a
                     +  02:RY6             .80     .162 No_date   12:01   59.92  n/a
     [DT= 1.00]  SUM=  09:HYD-10          4.46    1.019 No_date   12:02   66.93  n/a
500:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10          4.46    1.019 No_date   12:02   66.93  n/a
     [RDT= 1.00] out<- 08:S5              4.20     .581 No_date   12:01   66.93  n/a
           overflow <= 10:OVF-S2          .26     .438 No_date   12:02   66.93  n/a
     {MxStoUsed=.4987E-01, TotOvfVol=.1773E-01, N-Ovf=    I, TotDurOvf=    0.hrs}
500:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            07:HYD-9           2.14     .407 No_date   12:01   59.10  n/a
                     +  08:S5              4.20     .581 No_date   12:01   66.93  n/a
                     +  10:OVF-S2           .26     .438 No_date   12:02   66.93  n/a
     [DT= 1.00]  SUM=  04:PH3-4           6.60    1.425 No_date   12:02   64.39  n/a
500:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:PH3-4           6.60    1.425 No_date   12:02   64.39  n/a
     fname :C:\SWMHYMO\PH3-4.500
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
500:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:1-P             1.91     .604 No_date   12:00  101.57 .984
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  20.:MNI=.013:SCI=   .0]
500:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           07:PH2             3.32     .694 No_date   12:01   65.22  n/a
     Filename = C:\SWMHYMO\PH2.500
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
500:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           04:PH3-4           6.60    1.425 No_date   12:02   64.38  n/a
     Filename = C:\SWMHYMO\PH3-4.500
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
500:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:1-P             1.91     .604 No_date   12:00  101.57  n/a
                     +  07:PH2             3.32     .694 No_date   12:01   65.22  n/a
                     +  04:PH3-4           6.60    1.425 No_date   12:02   64.38  n/a
     [DT= 1.00]  SUM=  09:PNDINF          11.83    2.343 No_date   12:01   70.62  n/a
500:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF          11.83    2.343 No_date   12:01   70.62  n/a
     [RDT= 1.00] out<- 10:PNDOUT          11.83    1.011 No_date   12:16   70.62  n/a
           overflow <= 01:OVR              .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.2627E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
500:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           10:PNDOUT          11.83    1.011 No_date   12:16   70.62  n/a
     fname :C:\SWMHYMO\PNDOUT.500
     remark:Outflow from the proposed dry pond
500:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           06:OUT-1           2.29     .502 No_date   12:00   63.74  n/a
     Filename = C:\SWMHYMO\OUT-1.500
     Comment  = FLOW TO EXISITNG DITCH
500:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            06:OUT-1           2.29     .502 No_date   12:00   63.74  n/a
                     +  10:PNDOUT         11.83    1.011 No_date   12:16   70.62  n/a
     [DT= 1.00]  SUM=  04:OUTMMD          14.12    1.284 No_date   12:07   69.50  n/a
500:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:OUTMMD          14.12    1.284 No_date   12:07   69.50  n/a
     fname :C:\SWMHYMO\OUTMMD.500
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN : 519

************************************************************************************




 RUN:COMMAND#
 520:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 520 ]
#*********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*********************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN    #
#SUBDIVISION;                                                                #
```

```
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                     #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                          #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR         #
#HISTORICAL STORMS: JULY 1, 1979,                                               #
################################################################################
 520:0002-------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT=15.00:SDUR=  24.00:PTOT= 123.84]
 520:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1              1.26     .378 No_date   12:01   82.51 .666
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 520:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1               .35     .126 No_date   12:00   87.58 .707
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 520:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1               .35     .126 No_date   12:00   87.58  n/a
      [RDT= 1.00] out<- 03:S1               .34     .079 No_date   11:58   87.58  n/a
            overflow <= 04:OVF-S1           .01     .047 No_date   12:00   87.58  n/a
     {MxStoUsed=.5700E-02, TotOvfVol=.1122E-02, N-Ovf=    I, TotDurOvf=    0.hrs}
 520:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1              1.26     .378 No_date   12:01   82.51  n/a
                       + 03:S1               .34     .079 No_date   11:58   87.58  n/a
                       + 04:OVF-S1           .01     .047 No_date   12:00   87.58  n/a
      [DT= 1.00]  SUM=  05:HYD-1            1.61     .503 No_date   12:00   83.61  n/a
 520:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1              .32     .084 No_date   12:01   77.74 .628
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 520:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b              .28     .073 No_date   12:01   75.43 .609
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 520:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1              .32     .084 No_date   12:01   77.74  n/a
                       + 02:A1b              .28     .073 No_date   12:01   75.43  n/a
      [DT= 1.00]  SUM=  04:HYD-2            .60     .157 No_date   12:01   76.67  n/a
 520:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD1              .08     .030 No_date   12:00   99.97 .807
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 520:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD1              .08     .030 No_date   12:00   99.97  n/a
                       + 04:HYD-2            .60     .157 No_date   12:01   76.67  n/a
      [DT= 1.00]  SUM=  08:HYD-3            .68     .184 No_date   12:00   79.41  n/a
 520:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-1            1.61     .503 No_date   12:00   83.61  n/a
                       + 08:HYD-3            .68     .184 No_date   12:00   79.41  n/a
      [DT= 1.00]  SUM=  06:OUT-1            2.29     .687 No_date   12:00   82.36  n/a
 520:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:OUT-1            2.29     .687 No_date   12:00   82.36  n/a
      fname :C:\SWMHYMO\OUT-1.520
      remark:FLOW TO EXISITNG DITCH
 520:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A1               .39     .087 No_date   12:03   75.43 .609
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 520:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S2               .77     .209 No_date   12:00   87.58 .707
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
 520:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A1               .39     .087 No_date   12:03   75.43  n/a
                       + 02:S2               .77     .209 No_date   12:00   87.58  n/a
      [DT= 1.00]  SUM=  04:HYD-4            1.16     .291 No_date   12:01   83.50  n/a
 520:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4            1.16     .291 No_date   12:01   83.50  n/a
      [RDT= 1.00] out<- 03:S2               .95     .110 No_date   11:51   83.50  n/a
            overflow <= 05:OVF-S2           .21     .181 No_date   12:01   83.50  n/a
     {MxStoUsed=.4799E-02, TotOvfVol=.1726E-01, N-Ovf=    Z, TotDurOvf=    0.hrs}
 520:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            03:S2               .95     .110 No_date   11:51   83.50  n/a
      fname :C:\SWMHYMO\MINS2.520
      remark:Minor Flow to EXCB13
 520:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:OVF-S2           .21     .181 No_date   12:01   83.50  n/a
      fname :C:\SWMHYMO\MAJS2.520
      remark:Major Flow to CB700
 520:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:S3               .53     .174 No_date   12:00   87.58 .707
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
 520:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3               .53     .174 No_date   12:00   87.58  n/a
      [RDT= 1.00] out<- 02:S3               .50     .095 No_date   11:58   87.58  n/a
            overflow <= 10:OVF-S3           .03     .077 No_date   12:00   87.58  n/a
     {MxStoUsed=.7986E-02, TotOvfVol=.2835E-02, N-Ovf=    Z, TotDurOvf=    0.hrs}
 520:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            02:S3               .50     .095 No_date   11:58   87.58  n/a
      fname :C:\SWMHYMO\MINS3.520
      remark:Minor Flow to EXCB14
 520:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            10:OVF-S3           .03     .077 No_date   12:00   87.58  n/a
      fname :C:\SWMHYMO\MAJS3.520
      remark:Major Flow to CB600
 520:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             02:S3               .50     .095 No_date   11:58   87.58  n/a
                       + 03:S2               .95     .110 No_date   11:51   83.50  n/a
                       + 05:OVF-S2           .21     .181 No_date   12:01   83.50  n/a
                       + 10:OVF-S3           .03     .077 No_date   12:00   87.58  n/a
      [DT= 1.00]  SUM=  04:HYD-5            1.69     .463 No_date   12:01   84.77  n/a
 520:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY3              .15     .039 No_date   12:01   77.74 .628
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 520:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY3              .15     .039 No_date   12:01   77.74  n/a
                       + 04:HYD-5            1.69     .463 No_date   12:01   84.77  n/a
      [DT= 1.00]  SUM=  05:HYD-6            1.84     .502 No_date   12:01   84.20  n/a
 520:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            05:HYD-6            1.84     .502 No_date   12:01   84.20  n/a
      fname :C:\SWMHYMO\HYD-6.520
      remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
 520:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY2              .54     .142 No_date   12:01   77.74 .628
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 520:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S4               .56     .201 No_date   12:00   87.58 .707
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
 520:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S4               .56     .201 No_date   12:00   87.58  n/a
      [RDT= 1.00] out<- 08:S4               .52     .126 No_date   11:53   87.58  n/a
            overflow <= 10:OVF-S2           .04     .075 No_date   12:00   87.58  n/a
     {MxStoUsed=.5119E-02, TotOvfVol=.3800E-02, N-Ovf=    I, TotDurOvf=    0.hrs}
 520:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            08:S4               .52     .126 No_date   11:53   87.58  n/a
      fname :C:\SWMHYMO\MINS4.520
      remark:Minor Flow to WD ROW Ditch
 520:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            10:OVF-S2           .04     .075 No_date   12:00   87.58  n/a
      fname :C:\SWMHYMO\MAJS4.520
      remark:Major Flow to CB613
 520:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY2              .54     .142 No_date   12:01   77.74  n/a
                       + 08:S4               .52     .126 No_date   11:53   87.58  n/a
                       + 10:OVF-S2           .04     .075 No_date   12:00   87.58  n/a
      [DT= 1.00]  SUM=  04:HYD-7            1.10     .340 No_date   12:00   82.74  n/a
 520:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:WD2              .13     .048 No_date   12:00   99.97 .807
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
 520:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:WD2              .13     .048 No_date   12:00   99.97  n/a
                       + 04:HYD-7            1.10     .340 No_date   12:00   82.74  n/a
      [DT= 1.00]  SUM=  06:WD2              1.23     .388 No_date   12:00   84.56  n/a
 520:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            06:WD2              1.23     .388 No_date   12:00   84.56  n/a
      fname :C:\SWMHYMO\WD2.520
      remark:Flow from RY2_S4 WD2
 520:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        03:RY4              .25     .066 No_date   12:01   77.74 .628
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 520:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             03:RY4              .25     .066 No_date   12:01   77.74  n/a
                       + 06:WD2              1.23     .388 No_date   12:00   84.56  n/a
      [DT= 1.00]  SUM=  08:HYD-8            1.48     .453 No_date   12:00   83.41  n/a
 520:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             05:HYD-6            1.84     .502 No_date   12:01   84.20  n/a
                       + 04:HYD-8            1.48     .453 No_date   12:00   83.41  n/a
      [DT= 1.00]  SUM=  07:PH2              3.32     .949 No_date   12:00   83.84  n/a
 520:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            07:PH2              3.32     .949 No_date   12:00   83.84  n/a
      fname :C:\SWMHYMO\PH2.520
      remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
 520:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:A2               .73     .163 No_date   12:03   75.44 .609
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 520:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:RY5              1.41     .369 No_date   12:01   77.74 .628
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 520:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:A2               .73     .163 No_date   12:03   75.44  n/a
                       + 02:RY5              1.41     .369 No_date   12:01   77.74  n/a
      [DT= 1.00]  SUM=  07:HYD-9            2.14     .528 No_date   12:01   76.96  n/a
 520:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:S5               3.66    1.106 No_date   12:01   87.58 .707
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
 520:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:RY6              .80     .210 No_date   12:01   77.74 .628
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 520:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:S5               3.66    1.106 No_date   12:01   87.58  n/a
                       + 02:RY6              .80     .210 No_date   12:01   77.74  n/a
      [DT= 1.00]  SUM=  09:HYD-10           4.46    1.315 No_date   12:01   85.82  n/a
 520:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 09:HYD-10           4.46    1.315 No_date   12:01   85.82  n/a
      [RDT= 1.00] out<- 08:S5               3.90     .581 No_date   11:57   85.81  n/a
            overflow <= 10:OVF-S2           .56     .732 No_date   12:02   85.82  n/a
     {MxStoUsed=.4994E-01, TotOvfVol=.4826E-01, N-Ovf=    I, TotDurOvf=    0.hrs}
 520:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             07:HYD-9            2.14     .528 No_date   12:01   76.96  n/a
                       + 08:S5               3.90     .581 No_date   11:57   85.81  n/a
                       + 10:OVF-S2           .56     .732 No_date   12:02   85.82  n/a
      [DT= 1.00]  SUM=  04:PH3-4            6.60    1.838 No_date   12:02   82.94  n/a
 520:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD            04:PH3-4            6.60    1.838 No_date   12:02   82.94  n/a
      fname :C:\SWMHYMO\PH3-4.520
      remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
 520:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:1-P              1.91     .725 No_date   12:00  122.20 .987
      [XIMP=***:TIMP=***]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
```

```
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
520:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2             3.32     .949 No_date   12:00   83.84  n/a
     Filename = C:\SWMHYMO\PH2.520
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
520:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4           6.60    1.838 No_date   12:02   82.93  n/a
     Filename = C:\SWMHYMO\PH3-4.520
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
520:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P             1.91     .725 No_date   12:00  122.20  n/a
                      + 07:PH2             3.32     .949 No_date   12:00   83.84  n/a
                      + 04:PH3-4           6.60    1.838 No_date   12:02   82.93  n/a
     [DT= 1.00]  SUM=  09:PNDINF        11.83    3.468 No_date   12:00   89.53  n/a
520:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83    3.468 No_date   12:00   89.53  n/a
     [RDT= 1.00] out<- 10:PNDOUT        11.83    1.390 No_date   12:12   89.53  n/a
           overflow <= 01:OVR            .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3307E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
520:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT        11.83    1.390 No_date   12:12   89.53  n/a
     fname :C:\SWMHYMO\PNDOUT.520
     remark:Outflow from the proposed dry pond
520:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1           2.29     .687 No_date   12:00   82.36  n/a
     Filename = C:\SWMHYMO\OUT-1.520
     Comment  = FLOW TO EXISITNG DITCH
520:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1           2.29     .687 No_date   12:00   82.36  n/a
                      + 10:PNDOUT        11.83    1.390 No_date   12:12   89.53  n/a
     [DT= 1.00]  SUM=  04:OUTMMD        14.12    1.787 No_date   12:06   88.36  n/a
520:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD        14.12    1.787 No_date   12:06   88.36  n/a
     fname :C:\SWMHYMO\OUTMMD.520
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
 ** END OF RUN : 978

************************************************************************************




 RUN:COMMAND#
 979:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 979 ]
#*********************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]                 #
#  Date        : 15-August-2016                                                    #
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]                          #
#  Company     : J. L. Richards & Associates Limited                               #
#  License #   :  4418403                                                         #
#*********************************************************************************
#################################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN       #
#SUBDIVISION;                                                                   #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                     #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                          #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR         #
#HISTORICAL STORMS: JULY 1, 1979,                                               #
#################################################################################
 979:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT= 5.00:SDUR=   3.00:PTOT=  83.99]
 979:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:PH1             1.26     .249 No_date    1:33   56.82 .677
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  295.:MNI=.013:SCI=   .0]
 979:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S1              .35     .089 No_date    1:30   60.30 .718
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 979:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1              .35     .089 No_date    1:30   60.30  n/a
      [RDT= 1.00] out<- 03:S1              .35     .067 No_date    1:39   60.30  n/a
            overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4941E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 979:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:PH1             1.26     .249 No_date    1:33   56.82  n/a
                      + 03:S1              .35     .067 No_date    1:39   60.30  n/a
                      + 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  05:HYD-1           1.61     .314 No_date    1:33   57.58  n/a
 979:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY1             .32     .056 No_date    1:33   44.05 .524
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 979:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1b             .28     .048 No_date    1:33   41.63 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 979:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY1             .32     .056 No_date    1:33   44.05  n/a
                      + 02:A1b             .28     .048 No_date    1:33   41.63  n/a
     [DT= 1.00]  SUM=  04:HYD-2           .60     .103 No_date    1:33   42.92  n/a
 979:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:WD1             .08     .022 No_date    1:30   67.83 .808
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 979:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:WD1             .08     .022 No_date    1:30   67.83  n/a
                      + 04:HYD-2           .60     .103 No_date    1:33   42.92  n/a
     [DT= 1.00]  SUM=  08:HYD-3           .68     .119 No_date    1:30   45.85  n/a
 979:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            05:HYD-1          1.61     .314 No_date    1:33   57.58  n/a
                      + 08:HYD-3           .68     .119 No_date    1:30   45.85  n/a
     [DT= 1.00]  SUM=  06:OUT-1           2.29     .432 No_date    1:33   54.09  n/a
 979:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           06:OUT-1          2.29     .432 No_date    1:33   54.09  n/a
      fname :C:\SWMHYMO\OUT-1.979
      remark:FLOW TO EXISITNG DITCH
 979:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1              .39     .060 No_date    1:40   41.63 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 979:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S2              .77     .136 No_date    1:31   60.30 .718
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  116.:MNI=.013:SCI=   .0]
 979:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1              .39     .060 No_date    1:40   41.63  n/a
                      + 02:S2              .77     .136 No_date    1:31   60.30  n/a
     [DT= 1.00]  SUM=  04:HYD-4           1.16     .194 No_date    1:40   54.02  n/a
 979:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4          1.16     .194 No_date    1:40   54.02  n/a
      [RDT= 1.00] out<- 03:S2              .97     .110 No_date    1:27   54.02  n/a
            overflow <= 05:OVF-S2          .19     .084 No_date    1:40   54.02  n/a
     {MxStoUsed=.4803E-02, TotOvfVol=.1051E-01, N-Ovf=    2, TotDurOvf=    1.hrs}
 979:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           03:S2              .97     .110 No_date    1:27   54.02  n/a
      fname :C:\SWMHYMO\MINS2.979
      remark:Minor Flow to EXCB13
 979:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           05:OVF-S2          .19     .084 No_date    1:40   54.02  n/a
      fname :C:\SWMHYMO\MAJS2.979
      remark:Major Flow to CB700
 979:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:S3              .53     .117 No_date    1:31   60.30 .718
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
 979:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3              .53     .117 No_date    1:31   60.30  n/a
      [RDT= 1.00] out<- 02:S3              .53     .093 No_date    1:42   60.30  n/a
            overflow <= 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.7856E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 979:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           02:S3              .53     .093 No_date    1:42   60.30  n/a
      fname :C:\SWMHYMO\MINS3.979
      remark:Minor Flow to EXCB14
 979:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *   SAVE HYD           10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
      fname :C:\SWMHYMO\MAJS3.979
      remark:Major Flow to CB600
 979:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            02:S3              .53     .093 No_date    1:42   60.30  n/a
                      + 03:S2              .97     .110 No_date    1:27   54.02  n/a
                      + 05:OVF-S2          .19     .084 No_date    1:40   54.02  n/a
                      + 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5           1.69     .286 No_date    1:41   55.98  n/a
 979:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY3             .15     .026 No_date    1:33   44.05 .524
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 979:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY3             .15     .026 No_date    1:33   44.05  n/a
                      + 04:HYD-5           1.69     .286 No_date    1:41   55.98  n/a
     [DT= 1.00]  SUM=  05:HYD-6           1.84     .309 No_date    1:40   55.01  n/a
 979:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           05:HYD-6          1.84     .309 No_date    1:40   55.01  n/a
      fname :C:\SWMHYMO\HYD-6.979
      remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
 979:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY2             .54     .094 No_date    1:33   44.05 .524
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 979:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S4              .56     .140 No_date    1:30   60.30 .718
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI=  110.:MNI=.013:SCI=   .0]
 979:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S4              .56     .140 No_date    1:30   60.30  n/a
      [RDT= 1.00] out<- 08:S4              .56     .125 No_date    1:34   60.30  n/a
            overflow <= 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.5093E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 979:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           08:S4              .56     .125 No_date    1:34   60.30  n/a
      fname :C:\SWMHYMO\MINS4.979
      remark:Minor Flow to WD ROW Ditch
 979:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *   SAVE HYD           10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
      fname :C:\SWMHYMO\MAJS4.979
      remark:Major Flow to CB613
 979:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY2             .54     .094 No_date    1:33   44.05  n/a
                      + 08:S4              .56     .125 No_date    1:34   60.30  n/a
                      + 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-7           1.10     .218 No_date    1:33   52.31  n/a
 979:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:WD2             .13     .035 No_date    1:30   67.83 .808
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
 979:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:WD2             .13     .035 No_date    1:30   67.83  n/a
                      + 04:HYD-7           1.10     .218 No_date    1:33   52.31  n/a
     [DT= 1.00]  SUM=  06:WD2             1.23     .250 No_date    1:32   53.95  n/a
 979:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           06:WD2            1.23     .250 No_date    1:32   53.95  n/a
      fname :C:\SWMHYMO\WD2.979
```

```
     remark:Flow from RY2_S4_WD2
 979:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       03:RY4             .25     .043 No_date    1:33   44.05 .524
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 979:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            03:RY4             .25     .043 No_date    1:33   44.05  n/a
                      +  06:WD2            1.23     .250 No_date    1:32   53.95  n/a
       [DT= 1.00]  SUM=  04:HYD-8          1.48     .293 No_date    1:32   52.28  n/a
 979:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            05:HYD-6           1.84     .309 No_date    1:40   55.01  n/a
                      +  04:HYD-8           1.48     .293 No_date    1:32   52.28  n/a
       [DT= 1.00]  SUM=  07:PH2            3.32     .587 No_date    1:33   53.79  n/a
 979:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           07:PH2             3.32     .587 No_date    1:33   53.79  n/a
      fname :C:\SWMHYMO\PH2.979
      remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
 979:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A2              .73     .113 No_date    1:40   41.63 .496
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 979:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:RY5            1.41     .245 No_date    1:33   44.05 .524
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 979:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A2              .73     .113 No_date    1:40   41.63  n/a
                      +  02:RY5            1.41     .245 No_date    1:33   44.05  n/a
       [DT= 1.00]  SUM=  07:HYD-9          2.14     .351 No_date    1:34   43.22  n/a
 979:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:S5              3.66     .764 No_date    1:35   60.30 .718
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
 979:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:RY6             .80     .139 No_date    1:33   44.05 .524
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 979:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:S5              3.66     .764 No_date    1:35   60.30  n/a
                      +  02:RY6             .80     .139 No_date    1:33   44.05  n/a
       [DT= 1.00]  SUM=  09:HYD-10         4.46     .901 No_date    1:35   57.39  n/a
 979:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 09:HYD-10          4.46     .901 No_date    1:35   57.39  n/a
       [RDT= 1.00] out<- 08:S5             4.08     .581 No_date    1:34   57.38  n/a
            overflow <= 10:OVF-S2          .38     .319 No_date    1:36   57.39  n/a
      {MxStoUsed=.4996E-01, TotOvfVol=.2162E-01, N-Ovf=    Q, TotDurOvf=    0.hrs}
 979:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            07:HYD-9           2.14     .351 No_date    1:34   43.22  n/a
                      +  08:S5              4.08     .581 No_date    1:34   57.38  n/a
                      +  10:OVF-S2           .38     .319 No_date    1:36   57.39  n/a
       [DT= 1.00]  SUM=  04:PH3-4          6.60    1.250 No_date    1:35   52.79  n/a
 979:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           04:PH3-4           6.60    1.250 No_date    1:35   52.79  n/a
      fname :C:\SWMHYMO\PH3-4.979
      remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
 979:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:1-P             1.91     .566 No_date    1:30   82.37 .981
      [XIMP=***:TIMP=***]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=  .30:LGP= 195.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
 979:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     READ HYD           07:PH2             3.32     .587 No_date    1:33   53.79  n/a
      Filename = C:\SWMHYMO\PH2.979
      Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
 979:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     READ HYD           04:PH3-4           6.60    1.250 No_date    1:35   52.78  n/a
      Filename = C:\SWMHYMO\PH3-4.979
      Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
 979:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:1-P             1.91     .566 No_date    1:30   82.37  n/a
                      +  07:PH2             3.32     .587 No_date    1:33   53.79  n/a
                      +  04:PH3-4           6.60    1.250 No_date    1:35   52.78  n/a
       [DT= 1.00]  SUM=  09:PNDINF         11.83    2.213 No_date    1:35   57.84  n/a
 979:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 09:PNDINF         11.83    2.213 No_date    1:35   57.84  n/a
       [RDT= 1.00] out<- 10:PNDOUT        11.83    1.229 No_date    1:55   57.84  n/a
            overflow <= 01:OVR             .00     .000 No_date    0:00     .00  n/a
      {MxStoUsed=.3003E+00, TotOvfVol=.0000E+00, N-Ovf=    Q, TotDurOvf=    0.hrs}
 979:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           10:PNDOUT          11.83    1.229 No_date    1:55   57.84  n/a
      fname :C:\SWMHYMO\PNDOUT.979
      remark:Outflow from the proposed dry pond
 979:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     READ HYD           06:OUT-1           2.29     .432 No_date    1:33   54.09  n/a
      Filename = C:\SWMHYMO\OUT-1.979
      Comment  = FLOW TO EXISITNG DITCH
 979:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            06:OUT-1           2.29     .432 No_date    1:33   54.09  n/a
                      +  10:PNDOUT         11.83    1.229 No_date    1:55   57.84  n/a
       [DT= 1.00]  SUM=  04:OUTMMD         14.12    1.509 No_date    1:46   57.23  n/a
 979:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           04:OUTMMD          14.12    1.509 No_date    1:46   57.23  n/a
      fname :C:\SWMHYMO\OUTMMD.979
      remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
  ** END OF RUN : 987

************************************************************************************




 RUN:COMMAND#
 988:0001---------------------------------------------------------------------------------
     START              [TZERO =    .00 hrs on       0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN    = 988 ]
#*********************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   : 4418403
#**********************************************************************
#####################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN   #
#SUBDIVISION;                                                               #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                 #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                      #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#HISTORICAL STORMS: JULY 1, 1979,                                           #
#####################################################################
 988:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT= 5.00:SDUR=   5.75:PTOT=  80.59]
 988:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:PH1             1.26     .277 No_date    2:06   53.84 .668
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  40.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 988:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S1              .35     .115 No_date    2:05   57.20 .710
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 988:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1               .35     .115 No_date    2:05   57.20  n/a
       [RDT= 1.00] out<- 03:S1              .35     .067 No_date    2:08   57.20  n/a
            overflow <= 04:OVF-S1           .00     .000 No_date    0:00     .00  n/a
      {MxStoUsed=.4911E-02, TotOvfVol=.0000E+00, N-Ovf=    Q, TotDurOvf=    0.hrs}
 988:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:PH1            1.26     .277 No_date    2:06   53.84  n/a
                      +  03:S1              .35     .067 No_date    2:08   57.20  n/a
                      +  04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
       [DT= 1.00]  SUM=  05:HYD-1          1.61     .343 No_date    2:07   54.57  n/a
 988:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:RY1             .32     .063 No_date    2:07   41.34 .513
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 988:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       02:A1b             .28     .054 No_date    2:07   38.91 .483
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 988:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:RY1             .32     .063 No_date    2:07   41.34  n/a
                      +  02:A1b             .28     .054 No_date    2:07   38.91  n/a
       [DT= 1.00]  SUM=  04:HYD-2           .60     .117 No_date    2:07   40.21  n/a
 988:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:WD1             .08     .033 No_date    2:05   64.65 .802
      [XIMP=.67:TIMP=.67]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
 988:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:WD1             .08     .033 No_date    2:05   64.65  n/a
                      +  04:HYD-2           .60     .117 No_date    2:07   40.21  n/a
       [DT= 1.00]  SUM=  08:HYD-3           .68     .138 No_date    2:05   43.08  n/a
 988:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            05:HYD-1          1.61     .343 No_date    2:07   54.57  n/a
                      +  08:HYD-3           .68     .138 No_date    2:05   43.08  n/a
       [DT= 1.00]  SUM=  06:OUT-1          2.29     .471 No_date    2:06   51.16  n/a
 988:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           06:OUT-1           2.29     .471 No_date    2:06   51.16  n/a
      fname :C:\SWMHYMO\OUT-1.988
      remark:FLOW TO EXISITNG DITCH
 988:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD       01:A1              .39     .062 No_date    2:09   38.91 .483
      [CN= 81.0: N= 3.00]
      [Tp=  .15:DT= 1.00]
 988:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     02:S2              .77     .167 No_date    2:05   57.20 .710
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
 988:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD            01:A1              .39     .062 No_date    2:09   38.91  n/a
                      +  02:S2              .77     .167 No_date    2:05   57.20  n/a
       [DT= 1.00]  SUM=  04:HYD-4          1.16     .222 No_date    2:06   51.06  n/a
 988:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 04:HYD-4           1.16     .222 No_date    2:06   51.06  n/a
       [RDT= 1.00] out<- 03:S2             1.05     .110 No_date    1:59   51.05  n/a
            overflow <= 05:OVF-S2           .11     .110 No_date    2:06   51.06  n/a
      {MxStoUsed=.4797E-02, TotOvfVol=.5836E-02, N-Ovf=    Q, TotDurOvf=    0.hrs}
 988:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           03:S2              1.05     .110 No_date    1:59   51.05  n/a
      fname :C:\SWMHYMO\MINS2.988
      remark:Minor Flow to EXCB13
 988:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           05:OVF-S2           .11     .110 No_date    2:06   51.06  n/a
      fname :C:\SWMHYMO\MAJS2.988
      remark:Major Flow to CB700
 988:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD     01:S3              .53     .134 No_date    2:06   57.20 .710
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
 988:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 01:S3               .53     .134 No_date    2:06   57.20  n/a
       [RDT= 1.00] out<- 02:S3              .53     .087 No_date    2:10   57.20  n/a
            overflow <= 10:OVF-S3           .00     .000 No_date    0:00     .00  n/a
      {MxStoUsed=.7407E-02, TotOvfVol=.0000E+00, N-Ovf=    Q, TotDurOvf=    0.hrs}
 988:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     SAVE HYD           02:S3              .53     .087 No_date    2:10   57.20  n/a
      fname :C:\SWMHYMO\MINS3.988
      remark:Minor Flow to EXCB14
 988:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
  *  SAVE HYD           10:OVF-S3           .00     .000 No_date    0:00     .00  n/a
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     fname :C:\SWMHYMO\MAJS3.988
     remark:Major Flow to CB600
988:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             02:S3              .53     .087 No_date    2:10   57.20  n/a
                    +  03:S2              1.05     .110 No_date    1:59   51.05  n/a
                    +  05:OVF-S2           .11     .110 No_date    2:06   51.06  n/a
                    +  10:OVF-S3           .00     .000 No_date    0:00     .00  n/a
     [DT= 1.00]  SUM=  04:HYD-5           1.69     .300 No_date    2:07   52.97  n/a
988:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY3             .15     .029 No_date    2:07   41.34 .513
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
988:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY3             .15     .029 No_date    2:07   41.34  n/a
                    +  04:HYD-5           1.69     .300 No_date    2:07   52.97  n/a
     [DT= 1.00]  SUM=  05:HYD-6           1.84     .329 No_date    2:07   52.02  n/a
988:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            05:HYD-6           1.84     .329 No_date    2:07   52.02  n/a
     fname :C:\SWMHYMO\HYD-6.988
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
988:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:RY2             .54     .106 No_date    2:07   41.34 .513
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
988:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      02:S4              .56     .179 No_date    2:05   57.20 .710
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
988:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4              .56     .179 No_date    2:05   57.20  n/a
     [RDT= 1.00] out<- 08:S4              .55     .126 No_date    2:06   57.20  n/a
           overflow <= 10:OVF-S2          .01     .048 No_date    2:06   57.20  n/a
    {MxStoUsed=.5043E-02, TotOvfVol=.4553E-03, N-Ovf=    I, TotDurOvf=    0.hrs}
988:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            08:S4              .55     .126 No_date    2:06   57.20  n/a
     fname :C:\SWMHYMO\MINS4.988
     remark:Minor Flow to WD ROW Ditch
988:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:OVF-S2          .01     .048 No_date    2:06   57.20  n/a
     fname :C:\SWMHYMO\MAJS4.988
     remark:Major Flow to CB613
988:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:RY2             .54     .106 No_date    2:07   41.34  n/a
                    +  08:S4              .55     .126 No_date    2:06   57.20  n/a
                    +  10:OVF-S2          .01     .048 No_date    2:06   57.20  n/a
     [DT= 1.00]  SUM=  04:HYD-7           1.10     .277 No_date    2:06   49.40  n/a
988:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:WD2             .13     .045 No_date    2:05   64.65 .802
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
988:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:WD2             .13     .045 No_date    2:05   64.65  n/a
                    +  04:HYD-7           1.10     .277 No_date    2:06   49.40  n/a
     [DT= 1.00]  SUM=  06:WD2             1.23     .321 No_date    2:06   51.02  n/a
988:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            06:WD2             1.23     .321 No_date    2:06   51.02  n/a
     fname :C:\SWMHYMO\WD2.988
     remark:Flow from RY2  S4  WD2
988:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        03:RY4             .25     .049 No_date    2:07   41.34 .513
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
988:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             03:RY4             .25     .049 No_date    2:07   41.34  n/a
                    +  06:WD2             1.23     .321 No_date    2:06   51.02  n/a
     [DT= 1.00]  SUM=  04:HYD-8           1.48     .369 No_date    2:06   49.38  n/a
988:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             05:HYD-6           1.84     .329 No_date    2:07   52.02  n/a
                    +  04:HYD-8           1.48     .369 No_date    2:06   49.38  n/a
     [DT= 1.00]  SUM=  07:PH2             3.32     .696 No_date    2:06   50.85  n/a
988:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            07:PH2             3.32     .696 No_date    2:06   50.85  n/a
     fname :C:\SWMHYMO\PH2.988
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
988:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        01:A2              .73     .116 No_date    2:09   38.91 .483
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
988:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY5            1.41     .276 No_date    2:07   41.34 .513
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
988:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:A2              .73     .116 No_date    2:09   38.91  n/a
                    +  02:RY5             1.41     .276 No_date    2:07   41.34  n/a
     [DT= 1.00]  SUM=  07:HYD-9           2.14     .388 No_date    2:08   40.51  n/a
988:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:S5              .56     .804 No_date    2:08   57.20 .710
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
988:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD        02:RY6             .80     .157 No_date    2:07   41.34 .513
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
988:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:S5             3.66     .804 No_date    2:08   57.20  n/a
                    +  02:RY6             .80     .157 No_date    2:07   41.34  n/a
     [DT= 1.00]  SUM=  09:HYD-10          4.46     .959 No_date    2:08   54.36  n/a
988:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10          4.46     .959 No_date    2:08   54.36  n/a
     [RDT= 1.00] out<- 08:S5              4.23     .581 No_date    2:07   54.36  n/a
           overflow <= 10:OVF-S2          .23     .374 No_date    2:08   54.36  n/a
    {MxStoUsed=.4982E-01, TotOvfVol=.1224E-01, N-Ovf=    Z, TotDurOvf=    0.hrs}
988:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             07:HYD-9           2.14     .388 No_date    2:08   40.51  n/a
                    +  08:S5              4.23     .581 No_date    2:07   54.36  n/a
                    +  10:OVF-S2          .23     .374 No_date    2:08   54.36  n/a
     [DT= 1.00]  SUM=  04:PH3-4           6.60    1.342 No_date    2:08   49.87  n/a
988:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:PH3-4           6.60    1.342 No_date    2:08   49.87  n/a
     fname :C:\SWMHYMO\PH3-4.988
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
988:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD      01:1-P             1.91     .828 No_date    2:05   78.98 .980
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP= .30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
988:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            07:PH2             3.32     .696 No_date    2:06   50.85  n/a
     Filename = C:\SWMHYMO\PH2.988
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
988:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            04:PH3-4           6.60    1.342 No_date    2:08   49.85  n/a
     Filename = C:\SWMHYMO\PH3-4.988
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
988:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             01:1-P             1.91     .828 No_date    2:05   78.98  n/a
                    +  07:PH2             3.32     .696 No_date    2:06   50.85  n/a
                    +  04:PH3-4           6.60    1.342 No_date    2:08   49.85  n/a
     [DT= 1.00]  SUM=  09:PNDINF          11.83    2.321 No_date    2:05   54.84  n/a
988:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF          11.83    2.321 No_date    2:05   54.84  n/a
     [RDT= 1.00] out<- 10:PNDOUT          11.83    1.093 No_date    2:16   54.84  n/a
           overflow <= 01:OVR              .00     .000 No_date    0:00     .00  n/a
    {MxStoUsed=.2771E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
988:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            10:PNDOUT          11.83    1.093 No_date    2:16   54.84  n/a
     fname :C:\SWMHYMO\PNDOUT.988
     remark:Outflow from the proposed dry pond
988:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD            06:OUT-1           2.29     .471 No_date    2:06   51.16  n/a
     Filename = C:\SWMHYMO\OUT-1.988
     Comment  = FLOW TO EXISITNG DITCH
988:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD             06:OUT-1           2.29     .471 No_date    2:06   51.16  n/a
                    +  10:PNDOUT          11.83    1.093 No_date    2:16   54.84  n/a
     [DT= 1.00]  SUM=  04:OUTMMD          14.12    1.417 No_date    2:10   54.24  n/a
988:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD            04:OUTMMD          14.12    1.417 No_date    2:10   54.24  n/a
     fname :C:\SWMHYMO\OUTMMD.988
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
 ** END OF RUN : 995

************************************************************************************



 RUN:COMMAND#
 996:0001---------------------------------------------------------------------------------
     START
      [TZERO =    .00 hrs on        0]
      [METOUT=   2    (1=imperial, 2=metric output)]
      [NSTORM=   1 ]
      [NRUN  = 996 ]
#*************************************************************************
#  Project Name: [BEI Wren Subdivision]    Project Number: [26783]
#  Date        : 15-August-2016
#  Modeller    : [Ivan Dzeparoski, Water Resorces Intern]
#  Company     : J. L. Richards & Associates Limited
#  License #   :  4418403
#*************************************************************************
#########################################################################
#SWMHYMO FILE WAS DEVELOPED TO ASSESS POST-DEVELOPMENT FLOW FROM BEI WREN   #
#SUBDIVISION;                                                              #
#SWM DRY POND WAS SIZED TO PROVIDE QUANTITY CONTROL FOR THE                #
#STORMRUNOFF FROM BEI WREN SUBDIVISION                                     #
#DESIGN STORM EVENTS: 25 MM, 1:2, 1:5, 1:10, 1:25, 1:50 AND 1:100 YEAR     #
#HISTORICAL STORMS: JULY 1, 1979,                                          #
#########################################################################
 996:0002---------------------------------------------------------------------------------
     READ STORM
      Filename = STORM.001
      Comment  =
      [SDT= 5.00:SDUR=   5.75:PTOT=  73.90]
 996:0003---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      01:PH1            1.26     .176 No_date    1:31   46.55 .630
      [XIMP=.34:TIMP=.43]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI= 295.:MNI=.013:SCI=   .0]
 996:0004---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB STANDHYD      02:S1              .35     .070 No_date    1:30   50.39 .682
      [XIMP=.41:TIMP=.51]
      [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
      [Pervious     area: IAper= 4.67:SLPP=1.70:LGP=  15.:MNP=.250:SCP=   .0]
      [Impervious   area: IAimp= 1.57:SLPI=2.60:LGI=  75.:MNI=.013:SCI=   .0]
 996:0005---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ROUTE RESERVOIR -> 02:S1              .35     .070 No_date    1:30   50.39  n/a
      [RDT= 1.00] out<- 03:S1              .35     .046 No_date    1:32   50.39  n/a
            overflow <= 04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.3542E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
 996:0006---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:PH1            1.26     .176 No_date    1:31   46.55  n/a
                     +  03:S1              .35     .046 No_date    1:32   50.39  n/a
                     +  04:OVF-S1          .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  05:HYD-1           1.61     .222 No_date    1:31   47.38  n/a
 996:0007---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        01:RY1             .32     .037 No_date    1:31   36.11 .489
      [CN= 80.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 996:0008---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     CALIB NASHYD        02:A1b             .28     .032 No_date    3:11   33.68 .456
      [CN= 81.0: N= 3.00]
      [Tp=  .10:DT= 1.00]
 996:0009---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD             01:RY1             .32     .037 No_date    1:31   36.11  n/a
                     +  02:A1b             .28     .032 No_date    3:11   33.68  n/a
      [DT= 1.00]  SUM=  04:HYD-2           .60     .069 No_date    3:11   34.98  n/a
 996:0010---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
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    CALIB STANDHYD     01:WD1             .08     .023 No_date    1:25   57.89 .783
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=5.00:LGI=  35.:MNI=.013:SCI=   .0]
996:0011---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:WD1             .08     .023 No_date    1:25   57.89  n/a
                     + 04:HYD-2           .60     .069 No_date    3:11   34.98  n/a
      [DT= 1.00]  SUM=  08:HYD-3          .68     .082 No_date    1:30   37.67  n/a
996:0012---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            05:HYD-1          1.61     .222 No_date    1:31   47.38  n/a
                     + 08:HYD-3           .68     .082 No_date    1:30   37.67  n/a
      [DT= 1.00]  SUM=  06:OUT-1          2.29     .302 No_date    1:30   44.50  n/a
996:0013---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           06:OUT-1          2.29     .302 No_date    1:30   44.50  n/a
     fname :C:\SWMHYMO\OUT-1.996
     remark:FLOW TO EXISITNG DITCH
996:0014---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A1              .39     .041 No_date    3:16   33.68 .456
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
996:0015---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:S2              .77     .102 No_date    1:27   50.39 .682
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.30:LGP=  85.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 116.:MNI=.013:SCI=   .0]
996:0016---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A1              .39     .041 No_date    3:16   33.68  n/a
                     + 02:S2              .77     .102 No_date    1:27   50.39  n/a
      [DT= 1.00]  SUM=  04:HYD-4          1.16     .128 No_date    1:30   44.77  n/a
996:0017---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 04:HYD-4          1.16     .128 No_date    1:30   44.77  n/a
      [RDT= 1.00] out<- 03:S2            1.16     .106 No_date    3:18   44.77  n/a
            overflow <= 05:OVF-S2         .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4667E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
996:0018---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           03:S2             1.16     .106 No_date    3:18   44.77  n/a
     fname :C:\SWMHYMO\MINS2.996
     remark:Minor Flow to EXCB13
996:0019---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD           05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS2.996
     remark:Major Flow to CB700
996:0020---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:S3              .53     .090 No_date    1:30   50.39 .682
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=1.80:LGP=  35.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI=  99.:MNI=.013:SCI=   .0]
996:0021---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 01:S3              .53     .090 No_date    1:30   50.39  n/a
      [RDT= 1.00] out<- 02:S3             .53     .059 No_date    1:35   50.39  n/a
            overflow <= 10:OVF-S3         .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.5328E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
996:0022---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           02:S3              .53     .059 No_date    1:35   50.39  n/a
     fname :C:\SWMHYMO\MINS3.996
     remark:Minor Flow to EXCB14
996:0023---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD           10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS3.996
     remark:Major Flow to CB600
996:0024---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            02:S3              .53     .059 No_date    1:35   50.39  n/a
                     + 03:S2             1.16     .106 No_date    3:18   44.77  n/a
                     + 05:OVF-S2          .00     .000 No_date    0:00     .00  n/a
                     + 10:OVF-S3          .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  04:HYD-5          1.69     .163 No_date    1:34   46.53  n/a
996:0025---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:RY3             .15     .018 No_date    1:31   36.11 .489
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
996:0026---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:RY3             .15     .018 No_date    1:31   36.11  n/a
                     + 04:HYD-5          1.69     .163 No_date    1:34   46.53  n/a
      [DT= 1.00]  SUM=  05:HYD-6          1.84     .180 No_date    1:33   45.68  n/a
996:0027---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           05:HYD-6          1.84     .180 No_date    1:33   45.68  n/a
     fname :C:\SWMHYMO\HYD-6.996
     remark:PH2 FLOW SENT TO A POND THROUGH FUTURE PH3-4
996:0028---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:RY2             .54     .063 No_date    1:31   36.11 .489
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
996:0029---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     02:S4              .56     .113 No_date    1:30   50.39 .682
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.20:LGP=  15.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=2.40:LGI= 110.:MNI=.013:SCI=   .0]
996:0030---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 02:S4              .56     .113 No_date    1:30   50.39  n/a
      [RDT= 1.00] out<- 08:S4             .56     .098 No_date    1:31   50.39  n/a
            overflow <= 10:OVF-S2         .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4323E-02, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
996:0031---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           08:S4              .56     .098 No_date    1:31   50.39  n/a
     fname :C:\SWMHYMO\MINS4.996
     remark:Minor Flow to WD ROW Ditch
996:0032---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 *  SAVE HYD           10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
     fname :C:\SWMHYMO\MAJS4.996
     remark:Major Flow to CB613
996:0033---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:RY2             .54     .063 No_date    1:31   36.11  n/a
                     + 08:S4              .56     .098 No_date    1:31   50.39  n/a
                     + 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  04:HYD-7          1.10     .161 No_date    1:31   43.37  n/a
996:0034---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:WD2             .13     .032 No_date    1:27   57.89 .783
     [XIMP=.67:TIMP=.67]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=****:LGP=   5.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .50:LGI= 100.:MNI=.013:SCI=   .0]
996:0035---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:WD2             .13     .032 No_date    1:27   57.89  n/a
                     + 04:HYD-7          1.10     .161 No_date    1:31   43.37  n/a
      [DT= 1.00]  SUM=  06:WD2            1.23     .189 No_date    1:31   44.90  n/a
996:0036---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           06:WD2            1.23     .189 No_date    1:31   44.90  n/a
     fname :C:\SWMHYMO\WD2.996
     remark:Flow from RY2_S4 WD2
996:0037---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       03:RY4             .25     .029 No_date    1:31   36.11 .489
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
996:0038---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            03:RY4             .25     .029 No_date    1:31   36.11  n/a
                     + 06:WD2            1.23     .189 No_date    1:31   44.90  n/a
      [DT= 1.00]  SUM=  04:HYD-8          1.48     .218 No_date    1:31   43.42  n/a
996:0039---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            05:HYD-6          1.84     .180 No_date    1:33   45.68  n/a
                     + 04:HYD-8          1.48     .218 No_date    1:31   43.42  n/a
      [DT= 1.00]  SUM=  07:PH2            3.32     .390 No_date    1:32   44.67  n/a
996:0040---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           07:PH2            3.32     .390 No_date    1:32   44.67  n/a
     fname :C:\SWMHYMO\PH2.996
     remark:FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
996:0041---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       01:A2              .73     .076 No_date    3:16   33.68 .456
     [CN= 81.0: N= 3.00]
     [Tp=  .15:DT= 1.00]
996:0042---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:RY5            1.41     .165 No_date    1:31   36.11 .489
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
996:0043---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:A2              .73     .076 No_date    3:16   33.68  n/a
                     + 02:RY5            1.41     .165 No_date    1:31   36.11  n/a
      [DT= 1.00]  SUM=  07:HYD-9          2.14     .236 No_date    3:13   35.28  n/a
996:0044---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:S5              3.66     .581 No_date    1:32   50.39 .682
     [XIMP=.41:TIMP=.51]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=2.00:LGP=  20.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI= .60:LGI= 390.:MNI=.013:SCI=   .0]
996:0045---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB NASHYD       02:RY6             .80     .093 No_date    1:31   36.11 .489
     [CN= 80.0: N= 3.00]
     [Tp=  .10:DT= 1.00]
996:0046---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:S5              3.66     .581 No_date    1:32   50.39  n/a
                     + 02:RY6             .80     .093 No_date    1:31   36.11  n/a
      [DT= 1.00]  SUM=  09:HYD-10         4.46     .674 No_date    1:32   47.83  n/a
996:0047---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:HYD-10         4.46     .674 No_date    1:32   47.83  n/a
      [RDT= 1.00] out<- 08:S5            4.46     .459 No_date    1:38   47.83  n/a
            overflow <= 10:OVF-S2         .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.4159E-01, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
996:0048---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            07:HYD-9          2.14     .236 No_date    3:13   35.28  n/a
                     + 08:S5             4.46     .459 No_date    1:38   47.83  n/a
                     + 10:OVF-S2          .00     .000 No_date    0:00     .00  n/a
      [DT= 1.00]  SUM=  04:PH3-4          6.60     .633 No_date    1:35   43.76  n/a
996:0049---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:PH3-4          6.60     .633 No_date    1:35   43.76  n/a
     fname :C:\SWMHYMO\PH3-4.996
     remark:FLOW FROM PHASES 3-4 SENT TO DRY POND
996:0050---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    CALIB STANDHYD     01:1-P            1.91     .646 No_date    1:25   72.29 .978
     [XIMP=***:TIMP=***]
     [Horton parameters: Fo= 76.20:Fc=  2.40:DCAY=2.00:  F= .00]
     [Pervious     area: IAper= 4.67:SLPP=.30:LGP= 195.:MNP=.250:SCP=   .0]
     [Impervious   area: IAimp= 1.57:SLPI=1.50:LGI=  20.:MNI=.013:SCI=   .0]
996:0051---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           07:PH2            3.32     .390 No_date    1:32   44.67  n/a
     Filename = C:\SWMHYMO\PH2.996
     Comment  = FLOW FROM PHASE 2 SENT TO SWM DRY FACILITY
996:0052---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           04:PH3-4          6.60     .633 No_date    1:35   43.75  n/a
     Filename = C:\SWMHYMO\PH3-4.996
     Comment  = FLOW FROM PHASES 3-4 SENT TO DRY POND
996:0053---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            01:1-P            1.91     .646 No_date    1:25   72.29  n/a
                     + 07:PH2            3.32     .390 No_date    1:32   44.67  n/a
                     + 04:PH3-4          6.60     .633 No_date    1:35   43.75  n/a
      [DT= 1.00]  SUM=  09:PNDINF        11.83    1.380 No_date    1:30   48.61  n/a
996:0054---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ROUTE RESERVOIR -> 09:PNDINF        11.83    1.380 No_date    1:30   48.61  n/a
      [RDT= 1.00] out<- 10:PNDOUT       11.83     .673 No_date    3:30   48.61  n/a
            overflow <= 01:OVR           .00     .000 No_date    0:00     .00  n/a
     {MxStoUsed=.2024E+00, TotOvfVol=.0000E+00, N-Ovf=    0, TotDurOvf=    0.hrs}
996:0055---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           10:PNDOUT         11.83     .673 No_date    3:30   48.61  n/a
     fname :C:\SWMHYMO\PNDOUT.996
     remark:Outflow from the proposed dry pond
996:0056---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    READ HYD           06:OUT-1          2.29     .302 No_date    1:30   44.50  n/a
     Filename = C:\SWMHYMO\OUT-1.996
     Comment  = FLOW TO EXISITNG DITCH
996:0057---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    ADD HYD            06:OUT-1          2.29     .302 No_date    1:30   44.50  n/a
                     + 10:PNDOUT        11.83     .673 No_date    3:30   48.61  n/a
      [DT= 1.00]  SUM=  04:OUTMMD        14.12     .819 No_date    3:21   47.95  n/a
996:0058---------------ID:NHYD----------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
    SAVE HYD           04:OUTMMD         14.12     .819 No_date    3:21   47.95  n/a
     fname :C:\SWMHYMO\OUTMMD.996
     remark:TOTAL FLOW SENT TO McLEOD MUNICIPAL DRAIN
996:0002---------------------------------------------------------------------------------
     FINISH
---------------------------------------------------------------------------------------
*******************************************************************************
    WARNINGS / ERRORS / NOTES
    -------------------------
001:0010 CALIB STANDHYD
     *** NOTE: The pervious area has no runoff.
001:0019 SAVE HYD
```

```
     *** WARNING: This hydrograph is dry.
 001:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 001:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 001:0034 CALIB STANDHYD
     *** NOTE: The pervious area has no runoff.
 001:0050 CALIB STANDHYD
     *** NOTE: The pervious area has no runoff.
 002:0019 SAVE HYD
     *** WARNING: This hydrograph is dry.
 002:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 002:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 005:0019 SAVE HYD
     *** WARNING: This hydrograph is dry.
 005:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 005:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 010:0019 SAVE HYD
     *** WARNING: This hydrograph is dry.
 010:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 010:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 025:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
     *** WARNING: This hydrograph is dry.
 202:0019 SAVE HYD
     *** WARNING: This hydrograph is dry.
 202:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 202:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 205:0019 SAVE HYD
     *** WARNING: This hydrograph is dry.
 205:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 205:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 210:0019 SAVE HYD
     *** WARNING: This hydrograph is dry.
 210:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 210:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 225:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 225:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 250:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 250:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 300:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 402:0019 SAVE HYD
     *** WARNING: This hydrograph is dry.
 402:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 402:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 405:0019 SAVE HYD
     *** WARNING: This hydrograph is dry.
 405:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 405:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 410:0019 SAVE HYD
     *** WARNING: This hydrograph is dry.
 410:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 410:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 425:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 425:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 450:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
     *** WARNING: This hydrograph is dry.
     *** WARNING: This hydrograph is dry.
 979:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
 988:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 996:0019 SAVE HYD
     *** WARNING: This hydrograph is dry.
 996:0023 SAVE HYD
     *** WARNING: This hydrograph is dry.
 996:0032 SAVE HYD
     *** WARNING: This hydrograph is dry.
   Simulation ended on 2022-07-26     at 11:11:47
================================================================================
```

Appendix I

PCSWMM Modeling
Post-Development for
Built-out Conditions

Appendix J – PCSWMM Model Parameters

The following sets out a description of each of the parameters used in the modelling. Any differences from the below at any of the specific elements are noted in the description in the model.

The event modelling is used to provide the analysis of the storm major and minor system design for HGL and capacity assessments. All surface and infrastructure elements are presented in the simulation.

J.1. Subcatchments

General Parameters

Parameter	Units	Description / Values
Name	-	The name of the subcatchment was based on the type of flow that was generated. Where the flows were generated from the front of the house and street ROW the subcatchment was named after the inlet and outlet catchbasin nodes representing the perforated pipe reach that collects and conveys storm runoff. Rear yards were given the prefix RY When the flows from undeveloped lands were directed towards the swale the name of the subcatchment representing undeveloped lands were given prefix 'EX_', associated number ID and inlet and outlet node of perforated pipe reach that collects and conveys storm runoff (i.e., EX_3_(CB702-CB703)).
Tag	-	Rear yard areas were tagged as 'Rear_Yard' while the subcatchments draining towards the shallow swale pipe perforated system were tagged as 'Front_Yard'. Subcatchments representing undeveloped land are tagged as 'Existing'.

Parameter	Units	Description / Values
Rain Gauge	-	The storm type selected for the model run. In the event simulations the following storm files are used: **Distribution** — **Return Periods** 4hr -25 mm — Rainfall Volume 3-hour Chicago — 1:2, 1:5, 1:10, 1:25, 1:50, and 1:100 year and Climate 12-hour SCS Type II — 1:2, 1:5, 1:10, 1:25, 1:50, and 1:100 year and Climate Change Event 24-hour SCS Type II — 1:2, 1:5, 1:10, 1:25, 1:50, and 1:100 year and Climate Change Event Historic Storm — July 1, 1979, August 4, 1988 and August 8, 1996
Outlet	-	The downstream major system node to which the subcatchment drains
Area	ha	The area is calculated internally by PCSWMM
Width / Flow Length	m	Width is calculated internally by PCSWMM based on the Subcatchment flow path segment.
Slope	%	For subcatchments under pre-development condition slopes are calculated based on the available topographic information. For subcatchments under post-development condition slopes are calculated based on the proposed grading plan.
Imperv	%	The percentage of impervious area is determined based on the runoff coefficient (C-Factor), which was calculated using the layout of proposed development and the percentage area of impervious and pervious surfaces. For undeveloped areas the imperviousness was assessed based on the aerial view.
N Imperv	-	A constant of 0.013 is selected as the Manning's N for impervious surfaces such as roads, sidewalk and parking areas. The value is representative of smooth impervious surface as per Table 3-5 of the EPA Storm Water Management Model Reference Manual Vol I – Hydrology (EPA, 2016).

Parameter	Units	Description / Values
N Perv	-	A constant of 0.25 is selected as the Manning's N for pervious areas. The value is representative of light to tense turf land cover as per Table 3-5 of the EPA Storm Water Management Model Reference Manual Vol I – Hydrology (EPA, 2016).
DStore Imperv	mm	A constant of 1.57 mm is used as the impervious depression storage as per the industry standards.
DStore Perv	mm	A constant of 4.67 mm is used as the impervious depression storage as per the industry standards.
Zero Imperv	%	Determines areas where it is considered that there is no depression storage. Not applied in this model.
Subarea Routing	-	The constant 'PERVIOUS' is entered to simulate the subarea of impervious surface, such as the rear part of roofs, which may flow over pervious areas prior to discharging to the outlet of the subcatchment. The constant 'OUTLET' was used for subareas which are having a 100% of impervious areas directly connected to a proposed perforated pipe system. The constant 'OUTLET' was used for the rear yard and undeveloped areas where the flow is being discharged as uncontrolled overland flow.
Percent Routed	%	The percentage of impervious catchment area within each subcatchment which is routed across the pervious area.
Drying Time	days	The time for a fully saturated soil to completely dry is set at 7 days though this is not used in design event analysis.
Curve Number	-	The curve number is representative of the infiltration of the pervious land cover within the catchment. The curve number is based on the information presented in geotechnical report and the land use classification.

The parameters Curb Length, Snow Pack, LID Controls, Groundwater and Erosion are not used in the model.

J.2. Link Elements

Conduits

Parameter	Units	Description / Values
Name	-	Conduits representing the perforated pipe system are imported using the LandXML file developed by AutoCAD Civil 3D software. The pipe names were imported from the aforementioned AutoCAD software. Conduits representing the swales were drawn in PCSWMM using a standard cross section of the swales and located using autoCAD exports
Inlet Node	-	Upstream node of the link element.
Outlet Node	-	Downstream node of the link element.
Tag	-	Minor system conduits representing perforated pipe system are tagged as 'Storm_Sewer'. Major system conduits representing swale storage are tagged as 'Swale_Storage' Major system conduits representing rear yard swale are tagged as 'RY_Ditch'.
Length	m	Length is auto-calculated in PCSWMM.
Roughness	-	The roughness coefficient of 0.013 was used for the minor system conduits (i.e., perforated pipe system network) while for the major system conduits value of 0.035 was used.
Inlet Elev	m	Elevation of conduit invert at the inlet.
Outlet Elev	m	Elevation of conduit invert at the outlet.
Initial Flow	m^3/s	No initial flows are set in the model
Flow Limit	m^3/s	No flow limits are set in the model

Parameter	Units	Description / Values
Entry Loss Coeff.	-	Entrance loss coefficient was applied at the culvert conduit to account losses for the projected type of culvert inlet
Exit Loss Coeff.	-	For the pipe system the exit loss coefficient is based on the angle of change in flow direction at the upstream manhole as per the values below (read from City of Ottawa Sewer Design Guidelines Appendix 6-B). No losses are applied to the major system. **Angle ° / Loss Coeff.** 0 / 0.020 10 / 0.045 15 / 0.150 20 / 0.118 30 / 0.210 40 / 0.325 50 / 0.460 60 / 0.635 70 / 0.840 80 / 1.065 90 / 1.320
Average Loss Coeff.	-	The average loss coefficient is not used in this model.
Seepage Rate	mm/hr	The perforated pipe system has a seepage rate of 21.68 mm/hr applied to represent loss from the pipe to the surrounding soils. The rate is approximately equivalent to the lower Saturated Hydraulic Conductivity Horton Coefficient for moderate to slow infiltrating soils.
Flap Gate	-	No flap gates are applied to the model conduits.
Cross Section	-	Minor system conduits are circular.
Geometry	m	The geometry of the conduit for cross sections other than irregular.
Barrels	-	The number of identical sewers within the conduit set to 1.
Transect	-	Transect cross section obtained from survey information was used for the McLeod Municipal Drain.
Shape Curve	-	Not used in this model

Parameter	Units	Description / Values
Culvert Code	-	Culvert Code 6 was used in the model.

Weirs

Weirs are generally used in the model to represent the transfer of flow from surcharging of low points to a downstream node. Weirs are also used to represent potential flow across the road or rail over a culvert crossing. In this model weirs were only used to represent the overflow across driveways between the storage cells in the residential blocks.

Parameter	Units	Description / Values
Name	-	Weirs have the prefix 'W' and are numbered relative to the storage node (ex., 'W-St_CB712').
Inlet Node	-	Upstream node of the weir element.
Outlet Node	-	Downstream node of the weir element.
Tag	-	Weir representing emergency spillway was tagged as'Emergency_Spillway'.
Type	-	Where the overflow from the storage cell goes across a driveway, a V-Notch weir has been used; other weirs are traverse for going over roads or trapezoidal for emergency spillway.
Height	m	Weirs have been provided a 0.5 m height as standard to accommodate any potential flows prior to flooding of the model. .
Length	m	For V-Notch weirs representing flow across a driveway, the top length is 8.33 m which represents the top width of the flow at a depth of 0.5 m. For road crossings, a wide width has been used to represent the flow across the low point of the road as close to sheet flow.
Side Slope	m/m	Side slope of 20:1 was applied for emergency spillway.
Inlet Offset	m	The inlet offset is the depth of the storage cell to the spillover point (i.e. the driveway elevation).

Parameter	Units	Description / Values
Discharge Coeff.	m^3/s	The discharge coefficient of 1.55 is used in the model to represent a crested-notch weir. The discharge coefficient of 1.84 is used in the model to represent a transverse broad crested weir
Flap Gate	-	No flap gates are applied to weirs in the model.
End Contractions	-	No end contractions are applied to weirs in the model.
End Coeff.	m^3/s	No end coefficient losses are applied to weirs in the model.
Can Surcharge	-	Weirs are not allowed to surcharge.

Outlets

Outlets are used to simulate the inflow through the catchbasin inlet grate or the loss of water in the storage cell to the surrounding soils.

Parameter	Units	Description / Values
Name	-	Outlet links are prefixed with 'O-' for inflow to the minor system and are numbered as per the storage cell (i.e., 'O-St_CB605')
Inlet Node	-	Upstream node of the outlet link, in each case this is the storage cell.
Outlet Node	-	Downstream node of the outlet link, either the perforated pipe manhole.
Tag	-	Outlets were tagged as 'Sewer_Inlet' for flow to the perforated pipe system. If the outlet link represents the captured flow from the manhole (with closed cover) surcharge condition that is sent to storage swale low point (perched catchbasin) they were tagged as the 'Surcharge'
Inlet Offset	m	For outlet links representing the inlet grate opening the inlet offset is the depth of the grate above the invert of the storage cell.
Flap Gate	-	No flap gates are applied to the outlet links which means that flow from a surcharged pipe system could enter the storage cells.

Parameter	Units	Description / Values
Rating Curve	-	The calculated rating curve for the link. Outlet links representing the grate opening the rating curve as per the manufacturer is applied with the top points extrapolated as required (see attached graph).

Orifices

Parameter	Units	Description / Values
Name	-	Orifices have been used to model the orifice in the SWM pond outlet structure and they were named using the standard PCSWMM orifice naming convention having prefix 'OR' and associated number ID.
Inlet Node	-	Upstream node of the orifice link, in each case this is the storage cell.
Outlet Node	-	Downstream node of the orifice link, either the perforated pipe manhole.
Tag	-	No tags were used for orifice elements.
Type	-	The SWM pond orifice link is Side orifice
Cross Section	-	The SWM pond orifice cross section is circular.
Height	m	The orifice dimensions are set to 200 mm and 250 mm diameter.
Width	m	No orifice width is applied in the model.
Inlet Offset	m	The inlet offsets are calculated by PCSWMM based on the difference between the pond bottom and orifice invert elevation.
Discharge Coefficient	-	For circular orifice a coefficient of 0.61 was used.
Flap Gate	-	No flap gate option is applied.
Time to Open/Close	H	This value was set to 0.

J.3. Node elements

Junctions

For standard manholes and CB structures, the Storage node type is used. Junction node types are used for major system nodes at the, specifically at swale high points for this model. Major

system nodes have no storage or spatial dimensions, other than elevation, associated with them.

Parameter	Units	Description / Values
Name	-	The junction naming convention was kept as the default PCSWMM naming convention J__.
Tag	-	No tags were used for junction nodes.
Inflows	-	Where major system flows from Phase 2 were discharged into Phase 3 development timeseries hydrograph from SWMHYMO model were used.
Treatment	-	No treatment is modelled
Invert Elevation	m	Invert elevations are as per grading plan.
Rim Elevation	m	The rim elevation is internally calculated from the depth in PCSWMM.
Depth	m	The depth is generally the maximum of the upstream or downstream connecting conduit.
Initial Depth	m	No initial depths are set in the model.
Surcharge Depth	m	No surcharge depths are set in the model.
Ponded Area	m^2	No ponded areas are set in the model.

Storage

Storage nodes are used to represent available swale storage at the perched CB locations as well as the minor system manholes.

Parameter	Units	Description / Values
Name	-	Nodes representing catch basins the prefix ‘St’. and those representing minor system catch basins are prefixed ‘T-CB’. Nodes are numbered as per the storage cell. Manholes not part of the storage cells are named as per the design drawings.
Tag	-	Manhole storage nodes are tagged ‘Manhole’ while swale storage cells are tagged as ‘Swale_Storage’.

Parameter	Units	Description / Values
Inflows	-	Where the minor system flows from Phase 2 were discharged into Phase 3 development timeseries hydrograph from SWMHYMO model were used.
Treatment	-	No treatment is modelled
Invert Elevation	m	All inverts are taken from the design drawings.
Rim Elevation	m	Rim elevations for nodes representing the storage cells are based on the overtopping elevation (or driveway elevation) plus 0.5 m to allow for connectivity. The manholes have the same rim elevation as the associated or closest storage cell.
Depth	m	The depth is internally calculated in PCSWMM as the difference between the invert and rim elevations.
Initial Depth	m	Initial depth of 0.38 m at the storage node representing the Dry Pond was used to account for the depth of low flow channel in the pond that outlets only via infiltration.
Ponded Area	m²	No ponded areas are set in the model.
Evaporation Factor	fraction	No evaporation is considered in design event analysis.
Storage Curve	-	For minor system storage nodes, the storage curve is functional with a constant area of based on the diameter of the structure. The storage curve for the SWM Facility (i.e., pond) is based on the survey information received form BEI.
Conductivity	mm/hr	Storage nodes representing the catchbasin at a low point in a swale had a seepage rate of 21.68mm/hr applied along the length of the swale and divided by the area of the node. Thus intended to represent seepage from the perforated pipe under the swale.

Outfalls

Outfalls are the terminal nodes of the drainage system used to define the final downstream boundary.

Parameter	Units	Description / Values
Name	-	Outfall nodes are named as per the PCSWMM naming convention using prefix ‘OF’ and associated ID number (i.e., ‘OF1’).
Tag	-	Outfalls were not tagged
Inflows	-	No external inflows are applied at outfall nodes
Treatment	-	No treatment is modelled
Invert Elevation	m	The invert elevation is based on the existing topographical information.
Rim Elevation	m	Similarly as for the invert elevation, same sources were used to determine RIM elevations of outfall node.
Tide Gate	-	No backflow is prevented in the model outfalls and therefore ‘No’ is selected.
Route To	-	If flow from the outfall is directed to another subcatchment but this is not done in the model and this parameter is left blank.
Type	-	The downstream outfall is ‘Normal’ where the normal water level dictates the boundary condition elevation.

Legend

- Junctions
- Outfalls

Storages

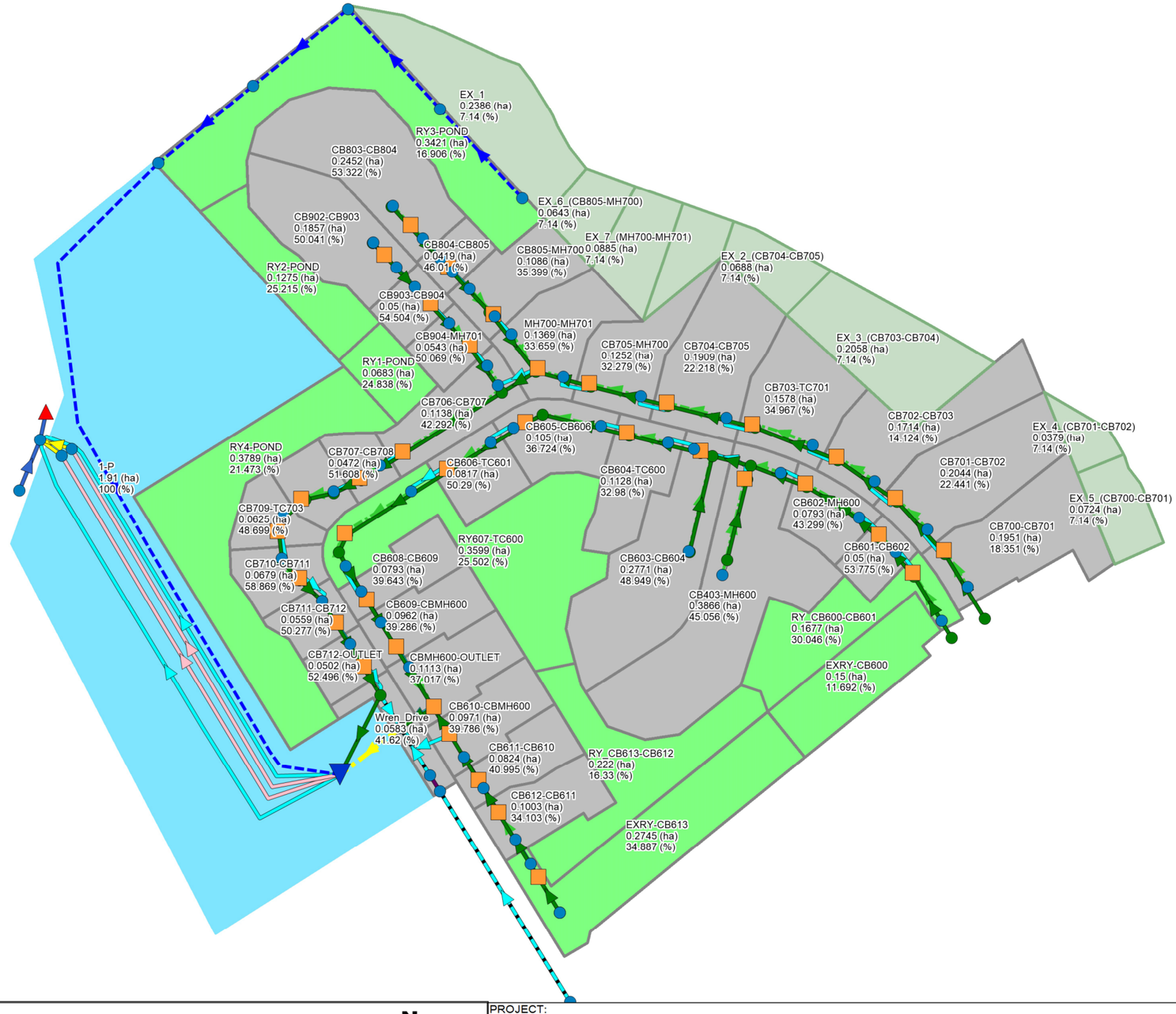
- Swale Storage
- Manhole
- Dry Pond

Conduits

- Outlet Pipes
- Rear Yard Ditch
- Storm Sewer
- Shallow Storage Swale
- McLeod Municipal Drain
- Dummy Link
- HDPE_Culvert
- Roadside Ditch
- Pond_Inlet
- Orifices
- Weirs
- Sewer Inlets

Subcatchments

- Existing_Off-Site
- SWM Block
- Front_Yard
- Rear Yard



N

50 m

PROJECT:

Bonnechere Excavating Inc. - Wren Subdivsion Phase 3 and 4
Village of Cobden, ONTARIO

DRAWING:

Post-Development Condition - Model Schematic

J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

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DESIGN:	ID	JLR NO.:	26783-003
DRAWN:	ID	DRAWING NO.:	FIGURE J-1
CHECKED:	BP		

1:100 year 3-hour Chicago Design Storm – Input File

```
[TITLE]
;;Project Title/Notes

[OPTIONS]
;;Option             Value
FLOW_UNITS           CMS
INFILTRATION         CURVE_NUMBER
FLOW_ROUTING         DYNWAVE
LINK_OFFSETS         ELEVATION
MIN_SLOPE            0
ALLOW_PONDING        NO
SKIP_STEADY_STATE    NO

START_DATE           01/01/2000
START_TIME           00:00:00
REPORT_START_DATE    01/01/2000
REPORT_START_TIME    00:00:00
END_DATE             01/03/2000
END_TIME             00:00:00
SWEEP_START          01/01
SWEEP_END            12/31
DRY_DAYS             0
REPORT_STEP          00:01:00
WET_STEP             00:05:00
DRY_STEP             00:05:00
ROUTING_STEP         1
RULE_STEP            00:00:00

INERTIAL_DAMPING     PARTIAL
NORMAL_FLOW_LIMITED  BOTH
FORCE_MAIN_EQUATION  H-W
VARIABLE_STEP        0.75
LENGTHENING_STEP     0
MIN_SURFAREA         0
MAX_TRIALS           8
HEAD_TOLERANCE       0.0015
SYS_FLOW_TOL         5
LAT_FLOW_TOL         5
MINIMUM_STEP         0.5
THREADS              4

[EVAPORATION]
;;Data Source    Parameters
;;--------------- ----------------
CONSTANT         0.0
DRY_ONLY         NO

[RAINGAGES]
;;Name           Format    Interval SCF      Source
;;-------------- --------- -------- -------- ----------
Rainfall         INTENSITY 0:10     1.0      TIMESERIES 3CHI100

[SUBCATCHMENTS]
;;Name           Rain Gage        Outlet           Area     %Imperv  Width    %Slope   CurbLen
SnowPack
;;-------------- ---------------- ---------------- -------- -------- -------- -------- -----
--- ----------------
1-P              Rainfall         PND-1            1.91     100      955      2        0
CB403-MH600      Rainfall         St_CB403         0.3866   45.056   314.52   2.5      0
CB601-CB602      Rainfall         St_CB601         0.05     53.775   53.459   1.5      0
CB602-MH600      Rainfall         St_CB602         0.0793   43.299   51.239   1.5      0
CB603-CB604      Rainfall         St_CB603         0.2771   48.949   240.24   1.9      0
CB604-TC600      Rainfall         St_CB604         0.1128   32.98    99.298   2.2      0
CB605-CB606      Rainfall         St_CB605         0.105    36.724   59.703   2.5      0
CB606-TC601      Rainfall         St_CB606         0.0817   50.29    56.615   3.1      0
CB608-CB609      Rainfall         St_CB608         0.0793   39.643   76.105   2.9      0
CB609-CBMH600    Rainfall         St_CB609         0.0962   39.286   93.674   3.5      0
CB610-CBMH600    Rainfall         St_CB610         0.0971   39.786   94.251   4        0
CB611-CB610      Rainfall         St_CB611         0.0824   40.995   78.137   3.3      0
CB612-CB611      Rainfall         St_CB612         0.1003   34.103   91.128   3.1      0
CB700-CB701      Rainfall         St_CB700         0.1951   18.351   108.728  2.4      0
CB701-CB702      Rainfall         St_CB701         0.2044   22.441   168.811  2.4      0
CB702-CB703      Rainfall         St_CB702         0.1714   14.124   104.252  1.7      0
CB703-TC701      Rainfall         St_CB703         0.1578   34.967   81.114   2        0
CB704-CB705      Rainfall         St_CB704         0.1909   22.218   118.25   1.5      0
CB705-MH700      Rainfall         St_CB705         0.1252   32.279   107.601  0.5      0
CB706-CB707      Rainfall         St_CB706         0.1138   42.292   121.382  2        0
CB707-CB708      Rainfall         St_CB707         0.0472   51.608   49.682   1.8      0
CB708-TC702      Rainfall         St_CB708         0.0611   51.727   56.72    2.5      0
CB709-TC703      Rainfall         St_CB709         0.0625   48.699   55.351   2.5      0
CB710-CB711      Rainfall         St_CB710         0.0679   58.869   64.049   2.1      0
CB711-CB712      Rainfall         St_CB711         0.0559   50.277   53.914   2.1      0
CB712-OUTLET     Rainfall         St_CB712         0.0502   52.496   50.453   2.2      0
CB803-CB804      Rainfall         St_CB803         0.2452   53.322   196.05   2.2      0
CB804-CB805      Rainfall         St_CB804         0.0419   46.01    50.141   2.5      0
CB805-MH700      Rainfall         St_CB805         0.1086   35.399   93.629   2.6      0
CB902-CB903      Rainfall         St_CB902         0.1857   50.041   159.69   2.1      0
CB903-CB904      Rainfall         St_CB903         0.05     54.504   50.506   1.9      0
CB904-MH701      Rainfall         St_CB904         0.0543   50.069   50.685   2        0
CBMH600-OUTLET   Rainfall         St_DIMH600       0.1113   37.017   107.683  3.5      0
EX_1             Rainfall         RY3-J4           0.2386   7.14     88.321   2        0
EX_2_(CB704-CB705) Rainfall       St_CB704         0.0688   7.14     37.139   2        0
EX_3_(CB703-CB704) Rainfall       St_CB703         0.2058   7.14     66.809   2        0
EX_4_(CB701-CB702) Rainfall       St_CB701         0.0379   7.14     22.106   2        0
EX_5_(CB700-CB701) Rainfall       St_CB700         0.0724   7.14     36.002   2        0
EX_6_(CB805-MH700) Rainfall       St_CB805         0.0643   7.14     22.459   2        0
EX_7_(MH700-MH701) Rainfall       St_MH700         0.0885   7.14     22.911   2        0
EX_8_(MH705-MH700) Rainfall       St_CB705         0.0609   7.14     19.629   2        0
EXRY-CB600       Rainfall         St_CB600         0.15     11.692   68.152   1.5      0
EXRY-CB613       Rainfall         J297             0.2745   34.887   123.877  1.9      0
MH700-MH701      Rainfall         St_MH700         0.1369   33.659   87.064   1.7      0
RY_CB600-CB601   Rainfall         St_CB600         0.1677   30.046   70.799   3.3      0
RY_CB613-CB612   Rainfall         St_CB613         0.222    16.33    221.681  4.9      0
RY1-POND         Rainfall         PND-1            0.0683   24.838   32.787   3.4      0
RY2-POND         Rainfall         PND-1            0.1275   25.215   73.301   2.7      0
RY3-POND         Rainfall         RY3-J2           0.3421   16.906   155.451  3.6      0
RY4-POND         Rainfall         PND-1            0.3789   21.473   165.787  14.1     0
RY607-TC600      Rainfall         St_CB607         0.3599   25.502   177.297  3        0
Wren_Drive       Rainfall         PND-1            0.0583   41.62    48.41    2        0

[SUBAREAS]
;;Subcatchment   N-Imperv   N-Perv     S-Imperv   S-Perv     PctZero    RouteTo    PctRouted
;;-------------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
-
1-P              0.013      0.25       1.57       4.67       0          OUTLET
CB403-MH600      0.013      0.25       1.57       4.67       0          PERVIOUS   19.949
CB601-CB602      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB602-MH600      0.013      0.25       1.57       4.67       0          PERVIOUS   16.627
CB603-CB604      0.013      0.25       1.57       4.67       0          PERVIOUS   13.129
CB604-TC600      0.013      0.25       1.57       4.67       0          PERVIOUS   25.952
CB605-CB606      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB606-TC601      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB608-CB609      0.013      0.25       1.57       4.67       0          PERVIOUS   28.544
CB609-CBMH600    0.013      0.25       1.57       4.67       0          PERVIOUS   29.174
CB610-CBMH600    0.013      0.25       1.57       4.67       0          PERVIOUS   28.934
CB611-CB610      0.013      0.25       1.57       4.67       0          PERVIOUS   29.254
CB612-CB611      0.013      0.25       1.57       4.67       0          PERVIOUS   25.741
CB700-CB701      0.013      0.25       1.57       4.67       0          PERVIOUS   25.211
CB701-CB702      0.013      0.25       1.57       4.67       0          PERVIOUS   29.821
CB702-CB703      0.013      0.25       1.57       4.67       0          PERVIOUS   12.716
CB703-TC701      0.013      0.25       1.57       4.67       0          PERVIOUS   30.979
CB704-CB705      0.013      0.25       1.57       4.67       0          PERVIOUS   25.509
CB705-MH700      0.013      0.25       1.57       4.67       0          PERVIOUS   25.597
CB706-CB707      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB707-CB708      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB708-TC702      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB709-TC703      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB710-CB711      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB711-CB712      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB712-OUTLET     0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB803-CB804      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB804-CB805      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB805-MH700      0.013      0.25       1.57       4.67       0          PERVIOUS   27.528
CB902-CB903      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB903-CB904      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CB904-MH701      0.013      0.25       1.57       4.67       0          PERVIOUS   0
CBMH600-OUTLET   0.013      0.25       1.57       4.67       0          PERVIOUS   30.909
EX_1             0.013      0.25       1.57       4.67       0          OUTLET
EX_2_(CB704-CB705) 0.013    0.25       1.57       4.67       0          OUTLET
EX_3_(CB703-CB704) 0.013    0.25       1.57       4.67       0          OUTLET
EX_4_(CB701-CB702) 0.013    0.25       1.57       4.67       0          OUTLET
EX_5_(CB700-CB701) 0.013    0.25       1.57       4.67       0          OUTLET
EX_6_(CB805-MH700) 0.013    0.25       1.57       4.67       0          OUTLET
EX_7_(MH700-MH701) 0.013    0.25       1.57       4.67       0          OUTLET
EX_8_(MH705-MH700) 0.013    0.25       1.57       4.67       0          OUTLET
EXRY-CB600       0.013      0.25       1.57       4.67       0          PERVIOUS   100
EXRY-CB613       0.013      0.25       1.57       4.67       0          PERVIOUS   100
MH700-MH701      0.013      0.25       1.57       4.67       0          PERVIOUS   22.502
RY_CB600-CB601   0.013      0.25       1.57       4.67       0          PERVIOUS   100
RY_CB613-CB612   0.013      0.25       1.57       4.67       0          PERVIOUS   100
RY1-POND         0.013      0.25       1.57       4.67       0          PERVIOUS   100
RY2-POND         0.013      0.25       1.57       4.67       0          PERVIOUS   100
RY3-POND         0.013      0.25       1.57       4.67       0          PERVIOUS   100
RY4-POND         0.013      0.25       1.57       4.67       0          PERVIOUS   100
RY607-TC600      0.013      0.25       1.57       4.67       0          PERVIOUS   100
Wren_Drive       0.013      0.25       1.57       4.67       0          PERVIOUS   0

[INFILTRATION]
;;Subcatchment   Param1     Param2     Param3     Param4     Param5
;;-------------- ---------- ---------- ---------- ---------- ----------
1-P              82         0.5        7          0          0
CB403-MH600      82         12.7       7          0          0
CB601-CB602      82         12.7       7          0          0
CB602-MH600      82         12.7       7          0          0
CB603-CB604      82         12.7       7          0          0
CB604-TC600      82         12.7       7          0          0
CB605-CB606      82         12.7       7          0          0
CB606-TC601      82         12.7       7          0          0
CB608-CB609      82         12.7       7          0          0
CB609-CBMH600    82         12.7       7          0          0
CB610-CBMH600    82         12.7       7          0          0
CB611-CB610      82         12.7       7          0          0
CB612-CB611      82         12.7       7          0          0
CB700-CB701      82         12.7       7          0          0
CB701-CB702      82         12.7       7          0          0
CB702-CB703      82         12.7       7          0          0
CB703-TC701      82         12.7       7          0          0
CB704-CB705      82         12.7       7          0          0
CB705-MH700      82         12.7       7          0          0
CB706-CB707      82         12.7       7          0          0
CB707-CB708      82         12.7       7          0          0
CB708-TC702      82         12.7       7          0          0
CB709-TC703      82         12.7       7          0          0
CB710-CB711      82         12.7       7          0          0
CB711-CB712      82         12.7       7          0          0
CB712-OUTLET     82         12.7       7          0          0
CB803-CB804      82         12.7       7          0          0
CB804-CB805      82         12.7       7          0          0
CB805-MH700      82         12.7       7          0          0
CB902-CB903      82         12.7       7          0          0
CB903-CB904      82         12.7       7          0          0
CB904-MH701      82         12.7       7          0          0
CBMH600-OUTLET   82         12.7       7          0          0
EX_1             82         12.7       7          0          0
EX_2_(CB704-CB705) 82       12.7       7          0          0
EX_3_(CB703-CB704) 82       12.7       7          0          0
EX_4_(CB701-CB702) 82       12.7       7          0          0
EX_5_(CB700-CB701) 82       12.7       7          0          0
EX_6_(CB805-MH700) 82       12.7       7          0          0
EX_7_(MH700-MH701) 82       12.7       7          0          0
EX_8_(MH705-MH700) 82       12.7       7          0          0
EXRY-CB600       82         12.7       7          0          0
EXRY-CB613       82         12.7       7          0          0
MH700-MH701      82         12.7       7          0          0
RY_CB600-CB601   82         12.7       7          0          0
RY_CB613-CB612   82         12.7       7          0          0
RY1-POND         82         12.7       7          0          0
RY2-POND         82         12.7       7          0          0
RY3-POND         82         12.7       7          0          0
RY4-POND         82         12.7       7          0          0
RY607-TC600      82         12.7       7          0          0
Wren_Drive       82         12.7       7          0          0

[JUNCTIONS]
;;Name           Elevation  MaxDepth   InitDepth  SurDepth   Aponded
;;-------------- ---------- ---------- ---------- ---------- ----------
J1               145.502    0.826      0          0          0
J1_OUT           142.389    1.761      0          0          0
J10              145.76     1.12       0          0          0
J11              146.05     1.08       0          0          0
J2               144.8      1          0          0          0
J201             146.05     0.69       0          0          0
J203             145.92     0.684      0          0          0
J205             145.8      0.7        0          0          0
J207             145.81     0.52       0          0          0
J208             145.83     0.575      0          0          0
J215             146        0.696      0          0          0
J217             145.98     0.599      0          0          0
J219             145.84     0.6        0          0          0
J221             145.57     0.739      0          0          0
J225             145.34     0.57       0          0          0
J227             145.16     0.64       0          0          0
J229             145.08     0.61       0          0          0
J231             145.06     0.57       0          0          0
J232             145.19     0.77       0          0          0
J234             145.57     0.64       0          0          0
J235             145.43     1.3        0          0          0
J236             145.6      0.95       0          0          0
J238             146.14     1.06       0          0          0
J239             146.31     0.99       0          0          0
J242             146.6      0.56       0          0          0
J253             146.46     0.72       0          0          0
J255             146.21     0.89       0          0          0
J257             146.5      1.24       0          0          0
```

```
J259             146.06     0.61       0          0          0
J261             146.32     0.61       0          0          0
J263             146.67     1.25       0          0          0
J267             146.6      0.57       0          0          0
J269             146.67     0.69       0          0          0
J271             146.78     0.77       0          0          0
J273             146.92     0.82       0          0          0
J276             145.29     0.79       0          0          0
J277             145.17     0.23       0          0          0
J279             145.06     0.38       0          0          0
J281             144.84     0.46       0          0          0
J284             144.84     0.3        0          0          0
J286             144.86     0.33       0          0          0
J288             144.91     0.41       0          0          0
J290             145.03     0.52       0          0          0
J292             145.04     0.39       0          0          0
J296             144.95     0.9        0          0          0
J297             144.97     0.49       0          0          0
J3               144.63     1          0          0          0
J4               144.58     1          0          0          0
J5               144.12     1          0          0          0
;300mmPipeInv.
J5230            143.142    1.008      0          0          0
;300mmPipeInv.
J5260            143.344    0.806      0          0          0
J6               146.05     1.08       0          0          0
J7               146.91     0.84       0          0          0
J8               145.9      1.12       0          0          0
J9               144.08     1          0          0          0
MD-1             142.443    1.707      0          0          0
OUTLET_2_(P-Stm-500_&_600_Series) 143.83 1 0       0          0
RY3-J2           147.35     0.5        0          0          0
RY3-J3           147.3      0.5        0          0          0
RY3-J4           145.4      0.5        0          0          0
RY3-J5           144.68     0.5        0          0          0
RY3-J6           144        0.5        0          0          0

[OUTFALLS]
;;Name           Elevation  Type       Stage Data       Gated    Route To
;;-------------- ---------- ---------- ---------------- -------- ----------------
OF1              142.348    NORMAL                      NO

[STORAGE]
;;Name           Elev.    MaxDepth   InitDepth  Shape      Curve Name/Params            N/A
Fevap    Psi      Ksat     IMD
;;-------------- -------- ---------- ---------- ---------- ------------------------------ ----
---- --------          -------- --------
;Cylindrical Junction Structure NF SI
CB403_(P-Stm-400_Series) 145.177 2.413 0         FUNCTIONAL 0          0          0.07      0
0
;Cylindrical Junction Structure NF SI
CB600_(P-Stm-500_&_600_Series) 145.581 2.489 0   FUNCTIONAL 0          0          0.07      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB601_(P-Stm-500_&_600_Series) 145.396 2.524 0   FUNCTIONAL 0          0          0.11      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB602_(P-Stm-500_&_600_Series) 145.2 2.44 0      FUNCTIONAL 0          0          0.11      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB603_(P-Stm-500_&_600_Series) 144.873 2.427 0   FUNCTIONAL 0          0          0.16      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB604_(P-Stm-500_&_600_Series) 144.665 2.435 0   FUNCTIONAL 0          0          0.16      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB605_(P-Stm-500_&_600_Series) 144.331 2.399 0   FUNCTIONAL 0          0          0.16      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB606_(P-Stm-500_&_600_Series) 143.973 2.897 0   FUNCTIONAL 0          0          0.16      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB607_(P-Stm-500_&_600_Series) 143.82 2.26 0     FUNCTIONAL 0          0          0.28      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB608_(P-Stm-500_&_600_Series) 143.668 2.832 0   FUNCTIONAL 0          0          0.28      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB609_(P-Stm-500_&_600_Series) 143.627 2.753 0   FUNCTIONAL 0          0          0.28      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB610_(P-Stm-500_&_600_Series) 143.749 1.871 0   FUNCTIONAL 0          0          0.44      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB611_(P-Stm-500_&_600_Series) 143.791 1.879 0   FUNCTIONAL 0          0          0.16      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB612_(P-Stm-500_&_600_Series) 143.894 1.846 0   FUNCTIONAL 0          0          0.16      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB613_(P-Stm-500_&_600_Series) 143.951 2.229 0   FUNCTIONAL 0          0          0.16      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB700_(P-Stm-_800_&_700_Series) 145.535 2.535 0 FUNCTIONAL 0          0          0.16      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB701_(P-Stm-_800_&_700_Series) 145.333 2.555 0 FUNCTIONAL 0          0          0.16      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB702_(P-Stm-_800_&_700_Series) 145.052 2.638 0 FUNCTIONAL 0          0          0.216     0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB703_(P-Stm-_800_&_700_Series) 144.799 2.651 0 FUNCTIONAL 0          0          0.216     0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB704_(P-Stm-_800_&_700_Series) 144.544 2.646 0 FUNCTIONAL 0          0          0.216     0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB705_(P-Stm-_800_&_700_Series) 144.319 2.641 0 FUNCTIONAL 0          0          0.216     0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB706_(P-Stm-_800_&_700_Series) 143.755 2.705 0 FUNCTIONAL 0          0          0.28      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB707_(P-Stm-_800_&_700_Series) 143.726 2.754 0 FUNCTIONAL 0          0          0.44      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB708_(P-Stm-_800_&_700_Series) 143.693 2.637 0 FUNCTIONAL 0          0          0.44      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB709_(P-Stm-_800_&_700_Series) 143.668 2.482 0 FUNCTIONAL 0          0          0.44      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB710_(P-Stm-_800_&_700_Series) 143.638 2.442 0 FUNCTIONAL 0          0          0.44      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB711_(P-Stm-_800_&_700_Series) 143.606 2.364 0 FUNCTIONAL 0          0          0.44      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB712_(P-Stm-_800_&_700_Series) 143.577 2.783 0 FUNCTIONAL 0          0          0.44      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB803_(P-Stm-_800_&_700_Series) 144.745 2.385 0 FUNCTIONAL 0          0          0.07      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB804_(P-Stm-_800_&_700_Series) 144.564 2.456 0 FUNCTIONAL 0          0          0.11      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB805_(P-Stm-_800_&_700_Series) 144.449 2.431 0 FUNCTIONAL 0          0          0.11      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB902_(P-Stm-900_Series) 144.621 2.509 0         FUNCTIONAL 0          0          0.07      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB903_(P-Stm-900_Series) 144.494 2.496 0         FUNCTIONAL 0          0          0.07      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CB904_(P-Stm-900_Series) 144.386 2.474 0         FUNCTIONAL 0          0          0.07      0
0
;Cylindrical Junction Structure NF SI
CO400_(P-Stm-400_Series) 145.364 1.816 0         FUNCTIONAL 0          0          0.07      0
0
;Cylindrical Junction Structure NF SI
CO500_(P-Stm-500_&_600_Series) 145.282 1.878 0   FUNCTIONAL 0          0          0.07      0
0
;Cylindrical Structure Slab Top Circular Frame SI
CO600_(P-Stm-500_&_600_Series) 144.058 0.912 0   FUNCTIONAL 0          0          0.07      0.49
0
;Cylindrical Structure Slab Top Circular Frame SI
CO800_(P-Stm-_800_&_700_Series) 144.794 1.256 0 FUNCTIONAL 0          0          0.07      0.69
0
;Cylindrical Structure Slab Top Circular Frame SI
CO900_(P-Stm-900_Series) 144.653 1.351 0         FUNCTIONAL 0          0          0.07      0.692
0
;Rectangular Junction Structure NF SI
DIMH600_(P-Stm-500_&_600_Series) 143.573 2.087 0 FUNCTIONAL 0          0          0.44      0
0
;Cylindrical Structure Slab Top Circular Frame SI
EXCB13_(P-Stm-_800_&_700_Series) 145.751 2.498 0 FUNCTIONAL 0          0          0.16      0
0
;Cylindrical Structure Slab Top Circular Frame SI
EXCB14_(P-Stm-500_&_600_Series) 145.737 2.513 0 FUNCTIONAL 0          0          0.07      0
0
;Cylindrical Structure Slab Top Circular Frame SI
MH600_(P-Stm-500_&_600_Series) 145.07 1.772 0    FUNCTIONAL 0          0          0.16      0.098
0
;Cylindrical Structure Slab Top Circular Frame SI
MH601_(P-Stm-500_&_600_Series) 144.984 1.76 0    FUNCTIONAL 0          0          0.16      0.096
0
;Cylindrical Structure Slab Top Circular Frame SI
MH700_(P-Stm-_800_&_700_Series) 144.08 2.76 0    FUNCTIONAL 0          0          0.28      0
0
;Cylindrical Structure Slab Top Circular Frame SI
MH701_(P-Stm-_800_&_700_Series) 143.825 2.176 0 FUNCTIONAL 0          0          0.44      0
0
PND-1            143.15   1          0          TABULAR    As-per-Design              0
0
St_CB403         146.11   1.48       0          FUNCTIONAL 0          0          0.07      0
0        0       16402    0
St_CB600         146.76   1.31       0          FUNCTIONAL 0          0          0.07      0
0        0       6445     0
St_CB601         146.52   1.4        0          FUNCTIONAL 0          0          0.11      0
0        0       1770     0
St_CB602         146.29   1.35       0          FUNCTIONAL 0          0          0.11      0
0        0       4644     0
St_CB603         146.31   0.99       0          FUNCTIONAL 0          0          0.16      0
0        0       5796     0
St_CB604         146.02   1.08       0          FUNCTIONAL 0          0          0.16      0
0        0       2143     0
St_CB605         145.4    1.33       0          FUNCTIONAL 0          0          0.16      0
0        0       4635     0
St_CB606         145.71   1.16       0          FUNCTIONAL 0          0          0.16      0
0        0       2588     0
St_CB607         145.26   0.82       0          FUNCTIONAL 0          0          0.28      0
0        0       3317     0
St_CB608         145.16   1.34       0          FUNCTIONAL 0          0          0.28      0
0        0       299      0
St_CB609         145.03   1.35       0          FUNCTIONAL 0          0          0.28      0
0        0       830      0
St_CB610         144.81   0.81       0          FUNCTIONAL 0          0          0.44      0
0        0       500      0
St_CB611         144.85   0.82       0          FUNCTIONAL 0          0          0.16      0
0        0       472      0
St_CB612         144.88   0.86       0          FUNCTIONAL 0          0          0.16      0
0        0       1612     0
St_CB613         144.93   1.25       0          FUNCTIONAL 0          0          0.16      0
0        0       2865     0
;Swale_Storage
St_CB700         146.87   1.2        0          FUNCTIONAL 0          0          0.16      0
0        0       2196     0
St_CB701         146.69   1.198      0          FUNCTIONAL 0          0          0.16      0
0        0       2272     0
St_CB702         146.48   1.21       0          FUNCTIONAL 0          0          0.216     0
0        0       1693     0
St_CB703         146.55   0.9        0          FUNCTIONAL 0          0          0.216     0
0        0       2403     0
St_CB704         146.13   1.06       0          FUNCTIONAL 0          0          0.216     0
0        0       2308     0
St_CB705         145.87   1.09       0          FUNCTIONAL 0          0          0.216     0
0        0       1985     0
St_CB706         145.3    1.16       0          FUNCTIONAL 0          0          0.28      0
0        0       3420     0
St_CB707         145.28   1.2        0          FUNCTIONAL 0          0          0.44      0
0        0       443      0
St_CB708         145.1    1.23       0          FUNCTIONAL 0          0          0.44      0
0        0       617      0
St_CB709         145.07   1.08       0          FUNCTIONAL 0          0          0.44      0
0        0       317      0
St_CB710         145.04   1.04       0          FUNCTIONAL 0          0          0.44      0
0        0       512      0
St_CB711         145.01   0.96       0          FUNCTIONAL 0          0          0.44      0
0        0       476      0
St_CB712         145.02   1.34       0          FUNCTIONAL 0          0          0.44      0
0        0       493      0
St_CB803         145.97   1.16       0          FUNCTIONAL 0          0          0.07      0
0        0       5094     0
St_CB804         145.89   1.13       0          FUNCTIONAL 0          0          0.11      0
0        0       1306     0
St_CB805         145.74   1.14       0          FUNCTIONAL 0          0          0.11      0
0        0       2740     0
St_CB902         145.96   1.17       0          FUNCTIONAL 0          0          0.07      0
0        0       3935     0
```

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St_CB903          145.87   1.12        0           FUNCTIONAL 0          0          0.07      0
0         0       2670     0
St_CB904          145.73   1.13        0           FUNCTIONAL 0          0          0.07      0
0         0       3534     0
St_DIMH600        144.79   0.87        0           FUNCTIONAL 0          0          0.44      0
0         0       866      0
St_MH700          145.69   1.15        0           FUNCTIONAL 0          0          0.28      0
0         0       2058     0
;Cylindrical Structure Slab Top Circular Frame SI
TC600_(P-Stm-500_&_600_Series) 144.388 1.499 0  FUNCTIONAL 0         0         0.28      0.363
0
;Cylindrical Structure Slab Top Circular Frame SI
TC601_(P-Stm-500_&_600_Series) 145.296 1.268 0  FUNCTIONAL 0         0         0.11      0.576
0
;Cylindrical Structure Slab Top Circular Frame SI
TC602_(P-Stm-500_&_600_Series) 143.709 1.571 0  FUNCTIONAL 0          0          0.28      0
0
;Cylindrical Structure Slab Top Circular Frame SI
TC702_(P-Stm-_800_&_700_Series) 143.677 1.404 0 FUNCTIONAL 0         0         0.44      0.609
0
;Cylindrical Structure Slab Top Circular Frame SI
TC703_(P-Stm-_800_&_700_Series) 143.652 1.409 0 FUNCTIONAL 0          0          0.44      0
0
;Cylindrical Structure Slab Top Circular Frame SI
TC705_(P-Stm-_800_&_700_Series) 143.558 1.442 0 FUNCTIONAL 0          0          0.44      0
0
;Cylindrical Structure Slab Top Circular Frame SI
TCB701_(P-Stm-_800_&_700_Series) 143.709 1.455 0 FUNCTIONAL 0        0         0.44      0.579
0
;Cylindrical Structure Slab Top Circular Frame SI
TCB704_(P-Stm-_800_&_700_Series) 143.621 1.409 0 FUNCTIONAL 0         0          0.44      0
0


[CONDUITS]
;;Name           From Node        To Node          Length     Roughness  InOffset   OutOffset
InitFlow   MaxFlow
;;-------------- ---------------- ---------------- ---------- ---------- ---------- --------
-- ---------- ----------
C1               J1_OUT           OF1              10.686     0.013      142.389    142.348
0          0
C10              J235              St_CB605         4.957      0.035      145.43     145.4
0          0
C11              J234             St_CB606         19.098     0.035      145.81     145.71
0          0
C12              J232             St_CB607         29.474     0.035      145.31     145.26
0          0
C13              J276             St_CB607         13.369     0.035      145.29     145.26
0          0
C14              J277             St_CB608         3.866      0.035      145.17     145.16
0          0
C15              J279             St_CB609         10.722     0.035      145.06     145.03
0          0
C16              J281             St_DIMH600       17.577     0.035      144.84     144.79
0          0
C17              J6               St_CB902         6.425      0.035      146.05     145.96
0          0
C18              J11              St_CB803         6.594      0.035      146.05     145.97
0          0
C2               J263             St_CB601         8.983      0.035      146.67     146.52
0          0
C24              J273             St_CB700         16.204     0.035      146.92     146.87
0          0
C25              J271             St_CB701         16.768     0.035      146.78     146.69
0          0
C26              J269             St_CB702         16.872     0.035      146.67     146.48
0          0
C27              J267             St_CB703         23.938     0.035      146.6      146.55
0          0
C28              J261             St_CB704         22.99      0.035      146.32     146.13
0          0
C29              J259             St_CB705         19.78      0.035      146.06     145.87
0          0
C3               J257             St_CB602         23.565     0.035      146.5      146.29
0          0
C30              J208             St_MH700         10.158     0.035      145.83     145.69
0          0
C31              J207             St_MH700         16.415     0.035      145.81     145.69
0          0
C35              J201             St_CB803         9.852      0.035      146.05     145.97
0          0
C36              J203             St_CB804         4.372      0.035      145.92     145.89
0          0
C37              J205             St_CB805         13.022     0.035      145.8      145.74
0          0
C4               J255             St_CB403         16.145     0.035      146.21     146.11
0          0
C40              J215             St_CB902         6.281      0.035      146        145.96
0          0
C41              J217             St_CB903         8.614      0.035      145.98     145.87
0          0
C42              J219             St_CB904         11.409     0.035      145.84     145.73
0          0
C43              J225             St_CB707         8.986      0.035      145.34     145.28
0          0
C43_1            J221             J1               8.464      0.035      145.57     145.502
0          0
C43_2            J1               St_CB706         44.172     0.035      145.502    145.3
0          0
C45              J227             St_CB708         12.53      0.035      145.16     145.1
0          0
C46              J229             St_CB709         6.431      0.035      145.08     145.07
0          0
C47              J231             St_CB710         10.395     0.035      145.06     145.04
0          0
C48              J290             St_CB711         9.655      0.035      145.03     145.01
0          0
C5               J253             St_CB403         36.815     0.035      146.46     146.11
0          0
C50              J292             St_CB712         10.003     0.035      145.04     145.02
0          0
C51              J297             St_CB613         15.329     0.035      144.97     144.93
0          0
C52              J296             St_CB613         5.813      0.035      144.95     144.93
0          0
C53              J288             St_CB612         11.893     0.035      144.91     144.88
0          0
C54              J286             St_CB611         3.486      0.035      144.86     144.85
0          0
C55              J284             St_CB610         10.14      0.035      144.84     144.81
0          0
C56              J2               J3               42.274     0.035      144.8      144.63
0          0
C57              J3               J4               9.081      0.035      144.63     144.58
0          0
C58              J4               J5               92.474     0.035      144.58     144.12
0          0
C59               TC705_(P-Stm-_800_&_700_Series) OUTLET_2_(P-Stm-500_&_600_Series) 14.929
0.035 143.9 143.83 0 0
C6               J242             St_CB603         40.186     0.035      146.6      146.31
0          0
C60              J5               J9               6.983      0.013      144.12     144.08
0          0
C61              RY3-J6           PND-1            2          0.035      144        143.95
0          0
C66              J7               St_CB600         20.809     0.035      146.91     146.76
0          0
C67              J9              OUTLET_2_(P-Stm-500_&_600_Series) 22.64 0.035 144.08 143.83
0          0
C68              J8               St_CB804         2.976      0.035      145.9      145.89
0          0
C69              J10              St_CB805         0.88       0.035      145.76     145.74
0          0
C7               J239             St_CB603         2.586      0.035      146.32     146.31
0          0
C8               J238             St_CB604         15.815     0.035      146.14     146.02
0          0
C9               J236              St_CB605         29.251     0.035      145.6      145.4
0          0
EX_Ditch         MD-1             J1_OUT           25.823     0.035      142.443    142.389
0          0
OUT1             J5230            J1_OUT           8.249      0.013      143.142    143.104
0          0
OUT2             J5260            J1_OUT           8.205      0.013      143.344    143.243
0          0
;HDPE PERFORATED
Pipe_-_(118)_(P-Stm-500_&_600_Series)      CO500_(P-Stm-500_&_600_Series)      MH601_(P-Stm-
500_&_600_Series) 36.845 0.013 145.582 145.361 0 0
;HDPE PERFORATED
Pipe_-_(119)_(P-Stm-500_&_600_Series)      EXCB14_(P-Stm-500_&_600_Series)      CB600_(P-Stm-
500_&_600_Series) 26.902 0.013 146.037 145.881 0 0
;HDPE PERFORATED
Pipe_-_(120)_(P-Stm-500_&_600_Series)      CB600_(P-Stm-500_&_600_Series)      CB601_(P-Stm-
500_&_600_Series) 18.83 0.013 145.881 145.772 0 0
;HDPE PERFORATED
Pipe_-_(121)_(P-Stm-500_&_600_Series)      CB602_(P-Stm-500_&_600_Series)      MH600_(P-Stm-
500_&_600_Series) 22.354 0.013 145.5 145.37 0 0
;HDPE PERFORATED
Pipe_-_(122)_(P-Stm-500_&_600_Series)      MH600_(P-Stm-500_&_600_Series)      MH601_(P-Stm-
500_&_600_Series) 14.77 0.013 145.37 145.284 0 0
;HDPE PERFORATED
Pipe_-_(123)_(1)_(P-Stm-500_&_600_Series)    CB603_(P-Stm-500_&_600_Series)    CB604_(P-Stm-
500_&_600_Series) 27.409 0.013 145.173 144.965 0 0
;HDPE PERFORATED
Pipe_-_(123)_(P-Stm-500_&_600_Series)      MH601_(P-Stm-500_&_600_Series)      CB603_(P-Stm-
500_&_600_Series) 4.668 0.013 145.284 145.249 0 0
;HDPE PERFORATED
Pipe_-_(124)_(P-Stm-500_&_600_Series)      CB604_(P-Stm-500_&_600_Series)      TC600_(P-Stm-
500_&_600_Series) 33.341 0.013 144.965 144.688 0 0
;HDPE PERFORATED
Pipe_-_(125)_(P-Stm-500_&_600_Series)      TC600_(P-Stm-500_&_600_Series)      CB605_(P-Stm-
500_&_600_Series) 6.882 0.013 144.688 144.631 0 0
;HDPE PERFORATED
Pipe_-_(126)_(1)_(1)_(P-Stm-500_&_600_Series)  CB606_(P-Stm-500_&_600_Series)  CB607_(P-Stm-
500_&_600_Series) 45.103 0.013 144.273 144.12 0 0
;HDPE PERFORATED
Pipe_-_(126)_(P-Stm-500_&_600_Series)      CB605_(P-Stm-500_&_600_Series)      CB606_(P-Stm-
500_&_600_Series) 33.946 0.013 144.631 144.35 0 0
;HDPE PERFORATED
Pipe_-_(127)_(P-Stm-500_&_600_Series)      CB607_(P-Stm-500_&_600_Series)      TC602_(P-Stm-
500_&_600_Series) 7.068 0.013 144.12 144.085 0 0
;HDPE PERFORATED
Pipe_-_(128)_(1)_(P-Stm-500_&_600_Series)    CB608_(P-Stm-500_&_600_Series)    CB609_(P-Stm-
500_&_600_Series) 20.704 0.013 143.968 143.927 0 0
;HDPE PERFORATED
Pipe_-_(128)_(P-Stm-500_&_600_Series)      TC602_(P-Stm-500_&_600_Series)      CB608_(P-Stm-
500_&_600_Series) 20.228 0.013 144.009 143.968 0 0
;PVC Pipes
Pipe_-_(131)_(1)_(P-Stm-_800_&_700_Series)   CO800_(P-Stm-_800_&_700_Series)   CB803_(P-Stm-
_800_&_700_Series) 9.957 0.013 145.094 145.045 0 0
;HDPE PERFORATED
Pipe_-_(132)_(P-Stm-_800_&_700_Series)     CB803_(P-Stm-_800_&_700_Series)     CB804_(P-Stm-
_800_&_700_Series) 20.883 0.013 145.045 144.94 0 0
;HDPE PERFORATED
Pipe_-_(133)_(P-Stm-_800_&_700_Series)     CB804_(P-Stm-_800_&_700_Series)     CB805_(P-Stm-
_800_&_700_Series) 22.916 0.013 144.864 144.749 0 0
;HDPE PERFORATED
Pipe_-_(134)_(P-Stm-_800_&_700_Series)     CB805_(P-Stm-_800_&_700_Series)     MH700_(P-Stm-
_800_&_700_Series) 28.157 0.013 144.749 144.609 0 0
;HDPE PERFORATED
Pipe_-_(135)_(P-Stm-_800_&_700_Series)     TCB701_(P-Stm-_800_&_700_Series)     CB708_(P-Stm-
_800_&_700_Series) 10.867 0.013 144.009 143.993 0 0
;HDPE PERFORATED
Pipe_-_(138)_(P-Stm-900_Series)  CB902_(P-Stm-900_Series)  CB903_(P-Stm-900_Series)  25.426
0.013 144.921 144.794 0 0
;HDPE PERFORATED
Pipe_-_(139)_(P-Stm-900_Series)  CB904_(P-Stm-900_Series)  MH701_(P-Stm-_800_&_700_Series)
20.808 0.013 144.686 144.582 0 0
;HDPE PERFORATED
Pipe_-_(141)_(P-Stm-900_Series)  CB903_(P-Stm-900_Series)  CB904_(P-Stm-900_Series)  21.471
0.013 144.794 144.686 0 0
;HDPE PERFORATED
Pipe_-_(143)_(1)_(P-Stm-500_&_600_Series)    CB613_(P-Stm-500_&_600_Series)    CB612_(P-Stm-
500_&_600_Series) 28.479 0.013 144.251 144.194 0 0
;HDPE PERFORATED
Pipe_-_(143)_(P-Stm-500_&_600_Series)      CO600_(P-Stm-500_&_600_Series)      CB613_(P-Stm-
500_&_600_Series) 15.31 0.013 144.358 144.327 0 0
;HDPE PERFORATED
Pipe_-_(144)_(P-Stm-500_&_600_Series)      CB612_(P-Stm-500_&_600_Series)      CB611_(P-Stm-
500_&_600_Series) 13.729 0.013 144.194 144.167 0 0
;HDPE PERFORATED
Pipe_-_(145)_(P-Stm-500_&_600_Series)      CB611_(P-Stm-500_&_600_Series)      CB610_(P-Stm-
500_&_600_Series) 20.939 0.013 144.091 144.049 0 0
;HDPE PERFORATED
Pipe_-_(146)_(P-Stm-500_&_600_Series)     CB610_(P-Stm-500_&_600_Series)     DIMH600_(P-Stm-
500_&_600_Series) 11.558 0.013 144.049 144.026 0 0
;HDPE PERFORATED
Pipe_-_(148)_(P-Stm-_800_&_700_Series)     CB712_(P-Stm-_800_&_700_Series)     TC705_(P-Stm-
_800_&_700_Series) 12.143 0.013 143.877 143.858 0 0
;HDPE PERFORATED
Pipe_-_(158)_(P-Stm-500_&_600_Series)     CB609_(P-Stm-500_&_600_Series)     DIMH600_(P-Stm-
500_&_600_Series) 26.974 0.013 143.927 143.873 0 0
;HDPE PERFORATED
Pipe_-_(159)_(1)_(P-Stm-500_&_600_Series)    TC601_(P-Stm-500_&_600_Series)    CB602_(P-Stm-
500_&_600_Series) 16.646 0.013 145.596 145.5 0 0
;HDPE PERFORATED
Pipe_-_(159)_(P-Stm-500_&_600_Series)      CB601_(P-Stm-500_&_600_Series)      TC601_(P-Stm-
500_&_600_Series) 17.107 0.013 145.696 145.596 0 0
;HDPE PERFORATED
Pipe_-_(162)_(P-Stm-_800_&_700_Series)     CB707_(P-Stm-_800_&_700_Series)     TCB701_(P-Stm-
_800_&_700_Series) 11.346 0.013 144.026 144.009 0 0
;Concrete Horizontal Elliptical Concrete Culvert SI
Pipe_-_(165)_(P-Stm-500_&_600_Series)    DIMH600_(P-Stm-500_&_600_Series)    OUTLET_2_(P-Stm-
500_&_600_Series) 21.353 0.013 143.873 143.83 0 0
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;HDPE PERFORATED
Pipe_-_(166)_(P-Stm-900_Series) CO900_(P-Stm-900_Series) CB902_(P-Stm-900_Series) 6.354 0.013
144.953 144.921 0 0
;HDPE PERFORATED
Pipe_-_(177)_(P-Stm-_800_&_700_Series)  TC705_(P-Stm-_800_&_700_Series)  PND-1  5.625  0.013
143.858 143.85 0 0
;HDPE PERFORATED
Pipe_-_(64)_(P-Stm-_800_&_700_Series)     EXCB13_(P-Stm-_800_&_700_Series)     CB700_(P-Stm-
_800_&_700_Series) 28.439 0.013 146.051 145.835 0 0
;HDPE PERFORATED
Pipe_-_(65)_(P-Stm-_800_&_700_Series)     CB700_(P-Stm-_800_&_700_Series)     CB701_(P-Stm-
_800_&_700_Series) 26.538 0.013 145.835 145.633 0 0
;HDPE PERFORATED
Pipe_-_(66)_(P-Stm-_800_&_700_Series)     CB701_(P-Stm-_800_&_700_Series)     CB702_(P-Stm-
_800_&_700_Series) 26.979 0.013 145.633 145.428 0 0
;HDPE PERFORATED
Pipe_-_(67)_(P-Stm-_800_&_700_Series)     CB702_(P-Stm-_800_&_700_Series)     CB703_(P-Stm-
_800_&_700_Series) 33.27 0.013 145.352 145.099 0 0
;HDPE PERFORATED
Pipe_-_(69)_(1)_(P-Stm-_800_&_700_Series)    CB703_(P-Stm-_800_&_700_Series)    CB704_(P-Stm-
_800_&_700_Series) 33.547 0.013 145.099 144.844 0 0
;HDPE PERFORATED
Pipe_-_(70)_(P-Stm-_800_&_700_Series)     CB704_(P-Stm-_800_&_700_Series)     CB705_(P-Stm-
_800_&_700_Series) 29.65 0.013 144.844 144.619 0 0
;HDPE PERFORATED
Pipe_-_(71)_(P-Stm-_800_&_700_Series)     CB705_(P-Stm-_800_&_700_Series)     MH700_(P-Stm-
_800_&_700_Series) 21.388 0.013 144.619 144.456 0 0
;HDPE PERFORATED
Pipe_-_(73)_(P-Stm-_800_&_700_Series)     MH700_(P-Stm-_800_&_700_Series)     MH701_(P-Stm-
_800_&_700_Series) 14.847 0.013 144.38 144.278 0 0
;HDPE PERFORATED
Pipe_-_(74)_(P-Stm-_800_&_700_Series)     MH701_(P-Stm-_800_&_700_Series)     CB706_(P-Stm-
_800_&_700_Series) 42.88 0.013 144.125 144.055 0 0
;HDPE PERFORATED
Pipe_-_(76)_(P-Stm-_800_&_700_Series)     CB706_(P-Stm-_800_&_700_Series)     CB707_(P-Stm-
_800_&_700_Series) 19.076 0.013 144.055 144.026 0 0
;HDPE PERFORATED
Pipe_-_(77)_(1)_(P-Stm-_800_&_700_Series)    TC702_(P-Stm-_800_&_700_Series)    CB709_(P-Stm-
_800_&_700_Series) 5.896 0.013 143.977 143.968 0 0
;HDPE PERFORATED
Pipe_-_(77)_(P-Stm-_800_&_700_Series)     CB708_(P-Stm-_800_&_700_Series)     TC702_(P-Stm-
_800_&_700_Series) 10.63 0.013 143.993 143.977 0 0
;HDPE PERFORATED
Pipe_-_(78)_(1)_(P-Stm-_800_&_700_Series)    TC703_(P-Stm-_800_&_700_Series)    CB710_(P-Stm-
_800_&_700_Series) 9.478 0.013 143.952 143.938 0 0
;PVC Pipes
Pipe_-_(78)_(P-Stm-_800_&_700_Series)     CB709_(P-Stm-_800_&_700_Series)     TC703_(P-Stm-
_800_&_700_Series) 10.516 0.013 143.968 143.952 0 0
;HDPE PERFORATED
Pipe_-_(79)_(1)_(P-Stm-_800_&_700_Series)    TCB704_(P-Stm-_800_&_700_Series)    CB711_(P-Stm-
_800_&_700_Series) 9.795 0.013 143.921 143.906 0 0
;HDPE PERFORATED
Pipe_-_(79)_(P-Stm-_800_&_700_Series)     CB710_(P-Stm-_800_&_700_Series)     TCB704_(P-Stm-
_800_&_700_Series) 11.534 0.013 143.938 143.921 0 0
;HDPE PERFORATED
Pipe_-_(80)_(P-Stm-_800_&_700_Series)     CB711_(P-Stm-_800_&_700_Series)     CB712_(P-Stm-
_800_&_700_Series) 19.639 0.013 143.906 143.877 0 0
;HDPE PERFORATED
Pipe_-_(98)_(P-Stm-400_Series) CO400_(P-Stm-400_Series) CB403_(P-Stm-400_Series) 31.062 0.013
145.664 145.477 0 0
;HDPE PERFORATED
Pipe_-_(99)_(P-Stm-400_Series) CB403_(P-Stm-400_Series) MH600_(P-Stm-500_&_600_Series) 5.167
0.013 145.477 145.445 0 0
RY3-SW2           RY3-J2            RY3-J3            45.359     0.035      147.35     147.3
0         0
RY3-SW3           RY3-J3            RY3-J4            50.712     0.035      147.3      145.4
0         0
RY3-SW4           RY3-J4            RY3-J5            45.589     0.035      145.4      144.68
0         0
RY3-SW5           RY3-J5            RY3-J6            45.596     0.035      144.68     144
0         0
W-IN1             OUTLET_2_(P-Stm-500_&_600_Series) PND-1 5    0.013      143.83     143.73
0         0

[ORIFICES]
;;Name           From Node        To Node          Type         Offset     Qcoeff     Gated
CloseTime
;;-------------- ---------------- ---------------- ------------ ---------- ---------- ------
-- ----------
OR1               PND-1            J5230            SIDE         143.15     0.61       NO
0
OR2               PND-1            J5260            SIDE         143.344    0.61       NO
0

[WEIRS]
;;Name           From Node        To Node          Type         CrestHt    Qcoeff     Gated
EndCon   EndCoeff   Surcharge  RoadWidth  RoadSurf   Coeff. Curve
;;-------------- ---------------- ---------------- ------------ ---------- ---------- ------
-- -------- ---------- ---------- ---------- ---------- ----------------
W1                PND-1            J1_OUT           TRANSVERSE   143.62     1.84       NO
0         0          NO
W2                PND-1            J1_OUT           TRAPEZOIDAL  143.9      1.84       NO
0         0          NO
W-St_CB403        St_CB403         St_CB603         TRANSVERSE   147.09     1.84       NO
0         0          NO
W-St_CB600        St_CB600         J263             V-NOTCH      147.57     1.55       NO
0         0          NO
W-St_CB601        St_CB601         J257             V-NOTCH      147.42     1.55       NO
0         0          NO
W-St_CB602        St_CB602         J255             V-NOTCH      147.14     1.55       NO
0         0          NO
W-St_CB603        J239             J238             V-NOTCH      146.8      1.55       NO
0         0          NO
W-St_CB604        St_CB604         J236             V-NOTCH      146.6      1.55       NO
0         0          NO
W-St_CB605        J235             J234             V-NOTCH      146.23     1.55       NO
0         0          NO
W-St_CB606        St_CB606         J232             V-NOTCH      146.03     1.55       NO
0         0          NO
W-St_CB607        J276             J277             V-NOTCH      145.58     1.55       NO
0         0          NO
W-St_CB608        St_CB608         J279             V-NOTCH      145.48     1.55       NO
0         0          NO
W-St_CB609        St_CB609         J281             V-NOTCH      145.35     1.55       NO
0         0          NO
W-St_CB610        St_CB610         OUTLET_2_(P-Stm-500_&_600_Series) TRANSVERSE 145.12 1.84 NO
0         0          NO
W-St_CB611        St_CB611         J284             V-NOTCH      145.17     1.55       NO
0         0          NO
W-St_CB612        St_CB612         J286             V-NOTCH      145.24     1.55       NO
0         0          NO
W-St_CB613        J296             J288             V-NOTCH      145.35     1.55       NO
0         0          NO
W-St_CB700        St_CB700         J271             V-NOTCH      147.57     1.55       NO
0         0          NO
W-St_CB701        St_CB701         J269             V-NOTCH      147.38     1.55       NO
0         0          NO
W-St_CB702        St_CB702         J267             V-NOTCH      147.19     1.55       NO
0         0          NO
W-St_CB703        St_CB703         J261             V-NOTCH      146.95     1.55       NO
0         0          NO
W-St_CB704        St_CB704         J259             V-NOTCH      146.69     1.55       NO
0         0          NO
W-St_CB705        St_CB705         J208             V-NOTCH      146.46     1.55       NO
0         0          NO
W-St_CB706        St_CB706         J225             V-NOTCH      145.96     1.55       NO
0         0          NO
W-St_CB707        St_CB707         J227             V-NOTCH      145.84     1.55       NO
0         0          NO
W-St_CB708        St_CB708         J229             V-NOTCH      145.71     1.55       NO
0         0          NO
W-St_CB709        St_CB709         J231             V-NOTCH      145.65     1.55       NO
0         0          NO
W-St_CB710        St_CB710         J290             V-NOTCH      145.58     1.55       NO
0         0          NO
W-St_CB711        St_CB711         J292             V-NOTCH      145.47     1.55       NO
0         0          NO
W-St_CB712        St_CB712         TC705_(P-Stm-_800_&_700_Series) V-NOTCH 145.34 1.55 NO
0         0          NO
W-St_CB803        J11              J203             V-NOTCH      146.63     1.55       NO
0         0          NO
W-St_CB804        J8               J205             V-NOTCH      146.52     1.55       NO
0         0          NO
W-St_CB805        J10              J207             V-NOTCH      146.38     1.55       NO
0         0          NO
W-St_CB902        J6               J217             V-NOTCH      146.63     1.55       NO
0         0          NO
W-St_CB903        St_CB903         J219             V-NOTCH      146.49     1.55       NO
0         0          NO
W-St_CB904        St_CB904         J221             V-NOTCH      146.36     1.55       NO
0         0          NO
W-St_DIMH600      St_DIMH600       OUTLET_2_(P-Stm-500_&_600_Series) TRANSVERSE 145.16 1.84 NO
0         0          NO
W-St_MH700        St_MH700         J1               TRANSVERSE   146.34     1.84       NO
0         0          NO

[OUTLETS]
;;Name           From Node        To Node          Offset     Type            QTable/Qcoeff
Qexpon     Gated
;;-------------- ---------------- ---------------- ---------- ---------------- -------------
--- ---------- --------
O_CO400           CO400_(P-Stm-400_Series) J253     146.4      TABULAR/HEAD     Manhole_Lid
YES
O_CO500           CO500_(P-Stm-500_&_600_Series) J242 146.606  TABULAR/HEAD     Manhole_Lid
YES
O-St_CB403        St_CB403         CB403_(P-Stm-400_Series) 146.41 TABULAR/HEAD Nyloplast12
NO
O-St_CB600        St_CB600         CB600_(P-Stm-500_&_600_Series) 147.11 TABULAR/HEAD Nyloplast12
NO
O-St_CB601        St_CB601         CB601_(P-Stm-500_&_600_Series) 146.84 TABULAR/HEAD Nyloplast15
NO
O-St_CB602        St_CB602         CB602_(P-Stm-500_&_600_Series) 146.59 TABULAR/HEAD Nyloplast15
NO
O-St_CB603        St_CB603         CB603_(P-Stm-500_&_600_Series) 146.6 TABULAR/HEAD Nyloplast18
NO
O-St_CB604        St_CB604         CB604_(P-Stm-500_&_600_Series) 146.27 TABULAR/HEAD Nyloplast18
NO
O-St_CB605        St_CB605         CB605_(P-Stm-500_&_600_Series) 145.7 TABULAR/HEAD Nyloplast18
NO
O-St_CB606        St_CB606         CB606_(P-Stm-500_&_600_Series) 145.91 TABULAR/HEAD Nyloplast18
NO
O-St_CB607        St_CB607         CB607_(P-Stm-500_&_600_Series) 145.51 TABULAR/HEAD Nyloplast18
NO
O-St_CB608        St_CB608         CB608_(P-Stm-500_&_600_Series) 145.41 TABULAR/HEAD Nyloplast24
NO
O-St_CB609        St_CB609         CB609_(P-Stm-500_&_600_Series) 145.23 TABULAR/HEAD Nyloplast24
NO
O-St_CB610        St_CB610         CB610_(P-Stm-500_&_600_Series) 145.01 TABULAR/HEAD Nyloplast18
NO
O-St_CB611        St_CB611         CB611_(P-Stm-500_&_600_Series) 145.09 TABULAR/HEAD Nyloplast18
NO
O-St_CB612        St_CB612         CB612_(P-Stm-500_&_600_Series) 145.07 TABULAR/HEAD Nyloplast18
NO
O-St_CB613        St_CB613         CB613_(P-Stm-500_&_600_Series) 145.18 TABULAR/HEAD Nyloplast18
NO
O-St_CB700        St_CB700         CB700_(P-Stm-_800_&_700_Series) 147.22 TABULAR/HEAD
Nyloplast18          NO
O-St_CB701        St_CB701         CB701_(P-Stm-_800_&_700_Series) 147.01 TABULAR/HEAD
Nyloplast18          NO
O-St_CB702        St_CB702         CB702_(P-Stm-_800_&_700_Series) 146.83 TABULAR/HEAD
Nyloplast24          NO
O-St_CB703        St_CB703         CB703_(P-Stm-_800_&_700_Series) 146.85 TABULAR/HEAD
Nyloplast24          NO
O-St_CB704        St_CB704         CB704_(P-Stm-_800_&_700_Series) 146.48 TABULAR/HEAD
Nyloplast24          NO
O-St_CB705        St_CB705         CB705_(P-Stm-_800_&_700_Series) 146.17 TABULAR/HEAD
Nyloplast24          NO
O-St_CB706        St_CB706         CB706_(P-Stm-_800_&_700_Series) 145.55 TABULAR/HEAD
Nyloplast24          NO
O-St_CB707        St_CB707         CB707_(P-Stm-_800_&_700_Series) 145.53 TABULAR/HEAD
Nyloplast30          NO
O-St_CB708        St_CB708         CB708_(P-Stm-_800_&_700_Series) 145.39 TABULAR/HEAD
Nyloplast30          NO
O-St_CB709        St_CB709         CB709_(P-Stm-_800_&_700_Series) 145.36 TABULAR/HEAD
Nyloplast30          NO
O-St_CB710        St_CB710         CB710_(P-Stm-_800_&_700_Series) 145.33 TABULAR/HEAD
Nyloplast30          NO
O-St_CB711        St_CB711         CB711_(P-Stm-_800_&_700_Series) 145.18 TABULAR/HEAD
Nyloplast30          NO
O-St_CB712        St_CB712         CB712_(P-Stm-_800_&_700_Series) 145.22 TABULAR/HEAD
Nyloplast30          NO
O-St_CB803        St_CB803         CB803_(P-Stm-_800_&_700_Series) 146.27 TABULAR/HEAD
Nyloplast12          NO
O-St_CB804        St_CB804         CB804_(P-Stm-_800_&_700_Series) 146.14 TABULAR/HEAD
Nyloplast15          NO
O-St_CB805        St_CB805         CB805_(P-Stm-_800_&_700_Series) 145.94 TABULAR/HEAD
Nyloplast15          NO
O-St_CB902        St_CB902         CB902_(P-Stm-900_Series) 146.26 TABULAR/HEAD Nyloplast12
NO
O-St_CB903        St_CB903         CB903_(P-Stm-900_Series) 146.12 TABULAR/HEAD Nyloplast12
NO
O-St_CB904        St_CB904         CB904_(P-Stm-900_Series) 146.03 TABULAR/HEAD Nyloplast12
NO
O-St_DIMH600      St_DIMH600       DIMH600_(P-Stm-500_&_600_Series) 145.09 TABULAR/HEAD
DI_GRATE_B_OPSD403.01          NO
O-St_MH700        St_MH700         MH700_(P-Stm-_800_&_700_Series) 146.04 TABULAR/HEAD
Nyloplast30          NO

[XSECTIONS]
;;Link           Shape        Geom1            Geom2      Geom3      Geom4      Barrels
Culvert
;;-------------- ------------ ---------------- ---------- ---------- ---------- ---------- -
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C1              IRREGULAR    Existing_Ditch   0          0          0          1
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C10             TRAPEZOIDAL  1               0         5         5         1
C11             TRAPEZOIDAL  1               0         5         5         1
C12             TRAPEZOIDAL  1               0         5         5         1
C13             TRAPEZOIDAL  1               0         5         5         1
C14             TRAPEZOIDAL  1               0         5         5         1
C15             TRAPEZOIDAL  1               0         5         5         1
C16             TRAPEZOIDAL  1               0         5         5         1
C17             TRAPEZOIDAL  1               0         5         5         1
C18             TRAPEZOIDAL  1               0         5         5         1
C2              TRAPEZOIDAL  1               0         5         5         1
C24             TRAPEZOIDAL  1               0         5         5         1
C25             TRAPEZOIDAL  1               0         5         5         1
C26             TRAPEZOIDAL  1               0         5         5         1
C27             TRAPEZOIDAL  1               0         5         5         1
C28             TRAPEZOIDAL  1               0         5         5         1
C29             TRAPEZOIDAL  1               0         5         5         1
C3              TRAPEZOIDAL  1               0         5         5         1
C30             TRAPEZOIDAL  1               0         5         5         1
C31             TRAPEZOIDAL  1               0         5         5         1
C35             TRAPEZOIDAL  1               0         5         5         1
C36             TRAPEZOIDAL  1               0         5         5         1
C37             TRAPEZOIDAL  1               0         5         5         1
C4              TRAPEZOIDAL  1               0         5         5         1
C40             TRAPEZOIDAL  1               0         5         5         1
C41             TRAPEZOIDAL  1               0         5         5         1
C42             TRAPEZOIDAL  1               0         5         5         1
C43             TRAPEZOIDAL  1               0         5         5         1
C43_1           TRAPEZOIDAL  1               0         5         5         1
C43_2           TRAPEZOIDAL  1               0         5         5         1
C45             TRAPEZOIDAL  1               0         5         5         1
C46             TRAPEZOIDAL  1               0         5         5         1
C47             TRAPEZOIDAL  1               0         5         5         1
C48             TRAPEZOIDAL  1               0         5         5         1
C5              TRAPEZOIDAL  1               0         5         5         1
C50             TRAPEZOIDAL  1               0         5         5         1
C51             TRAPEZOIDAL  1               0         5         5         1
C52             TRAPEZOIDAL  1               0         5         5         1
C53             TRAPEZOIDAL  1               0         5         5         1
C54             TRAPEZOIDAL  1               0         5         5         1
C55             TRAPEZOIDAL  1               0         5         5         1
C56             TRAPEZOIDAL  1               0.6       2.5       2.5       1
C57             TRAPEZOIDAL  1               0.6       2.5       2.5       1
C58             TRAPEZOIDAL  1               0.6       2.5       2.5       1
C59             TRAPEZOIDAL  1               0.6       2.5       2.5       1
C6              TRAPEZOIDAL  1               0         5         5         1
C60             CIRCULAR     0.6             0         0         0         1
C61             TRAPEZOIDAL  0.5             0.3       3         3         1
C66             TRAPEZOIDAL  1               0         5         5         1
C67             TRAPEZOIDAL  1               0.6       2.5       2.5       1
C68             TRAPEZOIDAL  1               0         5         5         1
C69             TRAPEZOIDAL  1               0         5         5         1
C7              TRAPEZOIDAL  1               0         5         5         1
C8              TRAPEZOIDAL  1               0         5         5         1
C9              TRAPEZOIDAL  1               0         5         5         1
EX_Ditch        IRREGULAR    Existing_Ditch  0         0         0         1
OUT1            CIRCULAR     0.3             0         0         0         1
OUT2            CIRCULAR     0.3             0         0         0         1
Pipe_-_(118)_(P-Stm-500_&_600_Series) CIRCULAR 0.3 0      0         0         1
Pipe_-_(119)_(P-Stm-500_&_600_Series) CIRCULAR 0.3 0      0         0         1
Pipe_-_(120)_(P-Stm-500_&_600_Series) CIRCULAR 0.3 0      0         0         1
Pipe_-_(121)_(P-Stm-500_&_600_Series) CIRCULAR 0.375 0    0         0         1
Pipe_-_(122)_(P-Stm-500_&_600_Series) CIRCULAR 0.375 0    0         0         1
Pipe_-_(123)_(1)_(P-Stm-500_&_600_Series) CIRCULAR 0.45 0 0         0         1
Pipe_-_(123)_(P-Stm-500_&_600_Series) CIRCULAR 0.375 0    0         0         1
Pipe_-_(124)_(P-Stm-500_&_600_Series) CIRCULAR 0.45 0     0         0         1
Pipe_-_(125)_(P-Stm-500_&_600_Series) CIRCULAR 0.45 0     0         0         1
Pipe_-_(126)_(1)_(1)_(P-Stm-500_&_600_Series) CIRCULAR 0.525 0 0    0         1
Pipe_-_(126)_(P-Stm-500_&_600_Series) CIRCULAR 0.45 0     0         0         1
Pipe_-_(127)_(P-Stm-500_&_600_Series) CIRCULAR 0.525 0    0         0         1
Pipe_-_(128)_(1)_(P-Stm-500_&_600_Series) CIRCULAR 0.6 0  0         0         1
Pipe_-_(128)_(P-Stm-500_&_600_Series) CIRCULAR 0.6 0      0         0         1
Pipe_-_(131)_(1)_(P-Stm-_800_&_700_Series) CIRCULAR 0.3 0 0         0         1
Pipe_-_(132)_(P-Stm-_800_&_700_Series) CIRCULAR 0.3 0     0         0         1
Pipe_-_(133)_(P-Stm-_800_&_700_Series) CIRCULAR 0.375 0   0         0         1
Pipe_-_(134)_(P-Stm-_800_&_700_Series) CIRCULAR 0.375 0   0         0         1
Pipe_-_(135)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0    0         0         1
Pipe_-_(138)_(P-Stm-900_Series) CIRCULAR 0.3   0          0         0         1
Pipe_-_(139)_(P-Stm-900_Series) CIRCULAR 0.3   0          0         0         1
Pipe_-_(141)_(P-Stm-900_Series) CIRCULAR 0.3   0          0         0         1
Pipe_-_(143)_(1)_(P-Stm-500_&_600_Series) CIRCULAR 0.375 0 0         0         1
Pipe_-_(143)_(P-Stm-500_&_600_Series) CIRCULAR 0.3 0      0         0         1
Pipe_-_(144)_(P-Stm-500_&_600_Series) CIRCULAR 0.375 0    0         0         1
Pipe_-_(145)_(P-Stm-500_&_600_Series) CIRCULAR 0.45 0     0         0         1
Pipe_-_(146)_(P-Stm-500_&_600_Series) CIRCULAR 0.45 0     0         0         1
Pipe_-_(148)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0    0         0         1
Pipe_-_(158)_(P-Stm-500_&_600_Series) CIRCULAR 0.6 0      0         0         1
Pipe_-_(159)_(1)_(P-Stm-500_&_600_Series) CIRCULAR 0.375 0 0         0         1
Pipe_-_(159)_(P-Stm-500_&_600_Series) CIRCULAR 0.375 0    0         0         1
Pipe_-_(162)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0    0         0         1
Pipe_-_(165)_(P-Stm-500_&_600_Series) HORIZ_ELLIPSE 0.61 0.965 0    0         1
Pipe_-_(166)_(P-Stm-900_Series) CIRCULAR 0.3   0          0         0         1
Pipe_-_(177)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0    0         0         1
Pipe_-_(64)_(P-Stm-_800_&_700_Series) CIRCULAR 0.45 0     0         0         1
Pipe_-_(65)_(P-Stm-_800_&_700_Series) CIRCULAR 0.45 0     0         0         1
Pipe_-_(66)_(P-Stm-_800_&_700_Series) CIRCULAR 0.45 0     0         0         1
Pipe_-_(67)_(P-Stm-_800_&_700_Series) CIRCULAR 0.525 0    0         0         1
Pipe_-_(69)_(1)_(P-Stm-_800_&_700_Series) CIRCULAR 0.525 0 0         0         1
Pipe_-_(70)_(P-Stm-_800_&_700_Series) CIRCULAR 0.525 0    0         0         1
Pipe_-_(71)_(P-Stm-_800_&_700_Series) CIRCULAR 0.525 0    0         0         1
Pipe_-_(73)_(P-Stm-_800_&_700_Series) CIRCULAR 0.6 0      0         0         1
Pipe_-_(74)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0     0         0         1
Pipe_-_(76)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0     0         0         1
Pipe_-_(77)_(1)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0 0         0         1
Pipe_-_(77)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0     0         0         1
Pipe_-_(78)_(1)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0 0         0         1
Pipe_-_(78)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0     0         0         1
Pipe_-_(79)_(1)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0 0         0         1
Pipe_-_(79)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0     0         0         1
Pipe_-_(80)_(P-Stm-_800_&_700_Series) CIRCULAR 0.75 0     0         0         1
Pipe_-_(98)_(P-Stm-400_Series) CIRCULAR 0.3    0          0         0         1
Pipe_-_(99)_(P-Stm-400_Series) CIRCULAR 0.3    0          0         0         1
RY3-SW2         TRAPEZOIDAL  0.5             0.3       3         3         1
RY3-SW3         TRAPEZOIDAL  0.5             0.3       3         3         1
RY3-SW4         TRAPEZOIDAL  0.5             0.3       3         3         1
RY3-SW5         TRAPEZOIDAL  0.5             0.3       3         3         1
W-IN1           IRREGULAR    Pond_Inlet      0         0         0         1
OR1             CIRCULAR     0.2             0         0         0
OR2             CIRCULAR     0.25            0         0         0
W1              RECT_OPEN    0.53            4         0         0
W2              TRAPEZOIDAL  0.25            20        20        20
W-St_CB403      RECT_OPEN    0.268           20        0         0
W-St_CB600      TRIANGULAR   0.5             8.33      0         0
W-St_CB601      TRIANGULAR   0.5             8.33      0         0
W-St_CB602      TRIANGULAR   0.5             8.33      0         0
W-St_CB603      TRIANGULAR   0.5             8.33      0         0
W-St_CB604      TRIANGULAR   0.5             8.33      0         0
W-St_CB605      TRIANGULAR   0.5             8.33      0         0
W-St_CB606      TRIANGULAR   0.5             8.33      0         0
W-St_CB607      TRIANGULAR   0.5             8.33      0         0
W-St_CB608      TRIANGULAR   0.5             8.33      0         0
W-St_CB609      TRIANGULAR   0.5             8.33      0         0
W-St_CB610      RECT_OPEN    0.5             20        0         0
W-St_CB611      TRIANGULAR   0.5             8.33      0         0
W-St_CB612      TRIANGULAR   0.5             8.33      0         0
W-St_CB613      TRIANGULAR   0.5             8.33      0         0
W-St_CB700      TRIANGULAR   0.5             8.33      0         0
W-St_CB701      TRIANGULAR   0.5             8.33      0         0
W-St_CB702      TRIANGULAR   0.5             8.33      0         0
W-St_CB703      TRIANGULAR   0.5             8.33      0         0
W-St_CB704      TRIANGULAR   0.5             8.33      0         0
W-St_CB705      TRIANGULAR   0.5             8.33      0         0
W-St_CB706      TRIANGULAR   0.5             8.33      0         0
W-St_CB707      TRIANGULAR   0.5             8.33      0         0
W-St_CB708      TRIANGULAR   0.5             8.33      0         0
W-St_CB709      TRIANGULAR   0.5             8.33      0         0
W-St_CB710      TRIANGULAR   0.5             8.33      0         0
W-St_CB711      TRIANGULAR   0.5             8.33      0         0
W-St_CB712      TRIANGULAR   0.5             8.33      0         0
W-St_CB803      TRIANGULAR   0.5             8.33      0         0
W-St_CB804      TRIANGULAR   0.5             8.33      0         0
W-St_CB805      TRIANGULAR   0.5             8.33      0         0
W-St_CB902      TRIANGULAR   0.5             8.33      0         0
W-St_CB903      TRIANGULAR   0.5             8.33      0         0
W-St_CB904      TRIANGULAR   0.8             8.33      0         0
W-St_DIMH600    RECT_OPEN    0.5             20        0         0
W-St_MH700      RECT_OPEN    0.5             10        0         0

[TRANSECTS]
;;Transect Data in HEC-2 format
;
NC 0.035    0.035    0.035
X1 Existing_Ditch    11       1        8        0.0      0.0      0.0      0.0      0.0
GR 143.062  0        143.041  1        142.938  2        142.671  3        142.549  4
GR 142.578  5        142.797  6        142.96   7        143.006  8        142.981  9
GR 142.935  10.7880694510316
;
NC 0.035    0.035    0.035
X1 Pond_Inlet        8        6.36     8.56     0.0      0.0      0.0      0.0      0.0
GR 144.15   0        144.03   0.36     144.03   6.36     143.83   6.96     143.83   7.96
GR 144.03   8.56     144.03   14.56    144.15   14.92

[LOSSES]
;;Link           Kentry     Kexit      Kavg       Flap Gate  Seepage
;;-------------- ---------- ---------- ---------- ---------- ----------
C60             0.9        0.5        0          NO         0
OUT1            0          1          0          NO         0
OUT2            0          1          0          NO         0
Pipe_-_(118)_(P-Stm-500_&_600_Series) 0 1.32 0    NO         0
Pipe_-_(119)_(P-Stm-500_&_600_Series) 0 0.15 0    NO         0
Pipe_-_(120)_(P-Stm-500_&_600_Series) 0 0.045 0   NO         0
Pipe_-_(121)_(P-Stm-500_&_600_Series) 0 0.045 0   NO         0
Pipe_-_(122)_(P-Stm-500_&_600_Series) 0 0.045 0   NO         0
Pipe_-_(123)_(1)_(P-Stm-500_&_600_Series) 0 0.045 0 NO         0
Pipe_-_(123)_(P-Stm-500_&_600_Series) 0 0.045 0   NO         0
Pipe_-_(124)_(P-Stm-500_&_600_Series) 0 0.46 0    NO         0
Pipe_-_(125)_(P-Stm-500_&_600_Series) 0 0.045 0   NO         0
Pipe_-_(126)_(1)_(1)_(P-Stm-500_&_600_Series) 0 0.325 0 NO         0
Pipe_-_(126)_(P-Stm-500_&_600_Series) 0 0.045 0   NO         0
Pipe_-_(127)_(P-Stm-500_&_600_Series) 0 0.635 0   NO         0
Pipe_-_(128)_(1)_(P-Stm-500_&_600_Series) 0 0.02 0 NO         0
Pipe_-_(128)_(P-Stm-500_&_600_Series) 0 0.045 0   NO         0
Pipe_-_(131)_(1)_(P-Stm-_800_&_700_Series) 0 0.02 0 NO         0
Pipe_-_(132)_(P-Stm-_800_&_700_Series) 0 0.02 0   NO         0
Pipe_-_(133)_(P-Stm-_800_&_700_Series) 0 0.045 0  NO         0
Pipe_-_(134)_(P-Stm-_800_&_700_Series) 0 1.32 0   NO         0
Pipe_-_(135)_(P-Stm-_800_&_700_Series) 0 0.21 0   NO         0
Pipe_-_(138)_(P-Stm-900_Series) 0 0.02 0          NO         0
Pipe_-_(139)_(P-Stm-900_Series) 0 1.32 0          NO         0
Pipe_-_(141)_(P-Stm-900_Series) 0 0.045 0         NO         0
Pipe_-_(143)_(1)_(P-Stm-500_&_600_Series) 0 0.02 0 NO         0
Pipe_-_(143)_(P-Stm-500_&_600_Series) 0 0.02 0    NO         0
Pipe_-_(144)_(P-Stm-500_&_600_Series) 0 0.02 0    NO         0
Pipe_-_(145)_(P-Stm-500_&_600_Series) 0 0.02 0    NO         0
Pipe_-_(146)_(P-Stm-500_&_600_Series) 0 1.32 0    NO         0
Pipe_-_(148)_(P-Stm-_800_&_700_Series) 0 0.635 0  NO         0
Pipe_-_(158)_(P-Stm-500_&_600_Series) 0 1.32 0    NO         0
Pipe_-_(159)_(1)_(P-Stm-500_&_600_Series) 0 0.045 0 NO         0
Pipe_-_(159)_(P-Stm-500_&_600_Series) 0 0.045 0   NO         0
Pipe_-_(162)_(P-Stm-_800_&_700_Series) 0 0.15 0   NO         0
Pipe_-_(165)_(P-Stm-500_&_600_Series) 0 0.5 0     NO         0
Pipe_-_(166)_(P-Stm-900_Series) 0 0.045 0         NO         0
Pipe_-_(177)_(P-Stm-_800_&_700_Series) 0 0.5 0    NO         0
Pipe_-_(64)_(P-Stm-_800_&_700_Series) 0 0.15 0    NO         0
Pipe_-_(65)_(P-Stm-_800_&_700_Series) 0 0.15 0    NO         0
Pipe_-_(66)_(P-Stm-_800_&_700_Series) 0 0.15 0    NO         0
Pipe_-_(67)_(P-Stm-_800_&_700_Series) 0 0.045 0   NO         0
Pipe_-_(69)_(1)_(P-Stm-_800_&_700_Series) 0 0.02 0 NO         0
Pipe_-_(70)_(P-Stm-_800_&_700_Series) 0 0.045 0   NO         0
Pipe_-_(71)_(P-Stm-_800_&_700_Series) 0 0.46 0    NO         0
Pipe_-_(73)_(P-Stm-_800_&_700_Series) 0 0.045 0   NO         0
Pipe_-_(74)_(P-Stm-_800_&_700_Series) 0 0.045 0   NO         0
Pipe_-_(76)_(P-Stm-_800_&_700_Series) 0 0.045 0   NO         0
Pipe_-_(77)_(1)_(P-Stm-_800_&_700_Series) 0 0.21 0 NO         0
Pipe_-_(77)_(P-Stm-_800_&_700_Series) 0 0.21 0    NO         0
Pipe_-_(78)_(1)_(P-Stm-_800_&_700_Series) 0 0.045 0 NO         0
Pipe_-_(78)_(P-Stm-_800_&_700_Series) 0 0.325 0   NO         0
Pipe_-_(79)_(1)_(P-Stm-_800_&_700_Series) 0 0.045 0 NO         0
Pipe_-_(79)_(P-Stm-_800_&_700_Series) 0 0.118 0   NO         0
Pipe_-_(80)_(P-Stm-_800_&_700_Series) 0 0.02 0    NO         0
Pipe_-_(98)_(P-Stm-400_Series) 0 0.045 0          NO         0
Pipe_-_(99)_(P-Stm-400_Series) 0 1.32  0          NO         0

[INFLOWS]
;;Node           Constituent     Time Series     Type     Mfactor  Sfactor  Baseline Pattern
;;-------------- --------------- --------------- -------- -------- -------- -------- -----
---
J2              FLOW            WD2             FLOW     1.0      1        0
J273            FLOW            MAJS2           FLOW     1.0      1        0
J297            FLOW            MAJS4           FLOW     1.0      1        0
J7              FLOW            MAJS3           FLOW     1.0      1        0
MD-1            FLOW            OUT-1           FLOW     1.0      1        0
EXCB13_(P-Stm-_800_&_700_Series) FLOW           MINS2           FLOW     1.0      1        0
EXCB14_(P-Stm-500_&_600_Series) FLOW            MINS3           FLOW     1.0      1        0

[CURVES]
;;Name           Type       X-Value    Y-Value
;;-------------- ---------- ---------- ----------
DI_GRATE_A_OPSD403.01 Rating     0.02       0.00762
DI_GRATE_A_OPSD403.01            0.04       0.01524
DI_GRATE_A_OPSD403.01            0.08       0.0381
DI_GRATE_A_OPSD403.01            0.12       0.06858
DI_GRATE_A_OPSD403.01            0.2        0.1524
DI_GRATE_A_OPSD403.01            0.26       0.23622
DI_GRATE_A_OPSD403.01            0.36       0.4572
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DI_GRATE_A_OPSD403.01            0.46       0.6858

DI_GRATE_B_OPSD403.01 Rating     0.02       0.00768
DI_GRATE_B_OPSD403.01            0.04       0.01536
DI_GRATE_B_OPSD403.01            0.06       0.02304
DI_GRATE_B_OPSD403.01            0.08       0.03456
DI_GRATE_B_OPSD403.01            0.1        0.04608
DI_GRATE_B_OPSD403.01            0.135      0.0768
DI_GRATE_B_OPSD403.01            0.16       0.10752
DI_GRATE_B_OPSD403.01            0.198      0.1536
DI_GRATE_B_OPSD403.01            0.224      0.192
DI_GRATE_B_OPSD403.01            0.292      0.3072
DI_GRATE_B_OPSD403.01            0.338      0.401
DI_GRATE_B_OPSD403.01            0.422      0.614
DI_GRATE_B_OPSD403.01            0.48       0.768

DI_GRATE_C_OPSD403.01 Rating     0.02       0.01465
DI_GRATE_C_OPSD403.01            0.04       0.0293
DI_GRATE_C_OPSD403.01            0.08       0.07325
DI_GRATE_C_OPSD403.01            0.12       0.13185
DI_GRATE_C_OPSD403.01            0.2        0.293
DI_GRATE_C_OPSD403.01            0.26       0.45415
DI_GRATE_C_OPSD403.01            0.36       0.879
DI_GRATE_C_OPSD403.01            0.46       1.3185

;Inflow rate from SWMHYMO Model of Phase 2 development
EXCB13           Rating     0          0
EXCB13                      0.15       0.001
EXCB13                      0.31       0.11

;Inflow rate from SWMHYMO Model of Phase 2 development
EXCB14           Rating     0          0
EXCB14                      0.15       0.001
EXCB14                      0.37       0.095

Manhole_Lid      Rating     0          0
Manhole_Lid                 0.11       0
Manhole_Lid                 0.2        0.187
Manhole_Lid                 0.3        0.395
Manhole_Lid                 0.4        0.602
Manhole_Lid                 0.5        0.81
Manhole_Lid                 0.6        1.018
Manhole_Lid                 0.7        1.225
Manhole_Lid                 0.8        1.433
Manhole_Lid                 0.9        1.641
Manhole_Lid                 1          1.848

;10" Standard Grate; Curve From Nyloplast website converted to metric.
;Last two points are estimated;
Nyloplast10      Rating     0          0
Nyloplast10                 0.015      0.002
Nyloplast10                 0.03       0.007
Nyloplast10                 0.037      0.009
Nyloplast10                 0.039      0.009
Nyloplast10                 0.046      0.01
Nyloplast10                 0.061      0.012
Nyloplast10                 0.107      0.016
Nyloplast10                 0.168      0.02
Nyloplast10                 0.213      0.022
Nyloplast10                 0.259      0.024
Nyloplast10                 0.305      0.026
Nyloplast10                 0.335      0.028
Nyloplast10                 0.6        0.037
Nyloplast10                 1          0.048

;12" Standard Grate; Curve From Nyloplast website converted to metric.
;Last two points are estimated;
Nyloplast12      Rating     0          0
Nyloplast12                 0.015      0.004
Nyloplast12                 0.03       0.011
Nyloplast12                 0.046      0.02
Nyloplast12                 0.049      0.022
Nyloplast12                 0.052      0.023
Nyloplast12                 0.061      0.025
Nyloplast12                 0.076      0.028
Nyloplast12                 0.107      0.034
Nyloplast12                 0.137      0.038
Nyloplast12                 0.168      0.042
Nyloplast12                 0.229      0.05
Nyloplast12                 0.305      0.057
Nyloplast12                 0.335      0.06
Nyloplast12                 0.6        0.071
Nyloplast12                 1          0.0812

;15" Standard Grate; Curve From Nyloplast website converted to metric.
;Last two points are estimated;
Nyloplast15      Rating     0          0
Nyloplast15                 0.015      0.005
Nyloplast15                 0.03       0.014
Nyloplast15                 0.046      0.025
Nyloplast15                 0.061      0.038
Nyloplast15                 0.067      0.04
Nyloplast15                 0.076      0.044
Nyloplast15                 0.107      0.051
Nyloplast15                 0.137      0.059
Nyloplast15                 0.168      0.065
Nyloplast15                 0.229      0.075
Nyloplast15                 0.29       0.085
Nyloplast15                 0.335      0.091
Nyloplast15                 0.6        0.125
Nyloplast15                 1          0.155

;15" Drop In Grate; Curve From Nyloplast website converted to metric. Drop In Grate Inlet
Capacity Chart.
;Last two points are estimated;
Nyloplast15-DropIn Rating     0          0
Nyloplast15-DropIn            0.0122     0.0028
Nyloplast15-DropIn            0.0247     0.0071
Nyloplast15-DropIn            0.0305     0.0102
Nyloplast15-DropIn            0.0457     0.019
Nyloplast15-DropIn            0.0549     0.0248
Nyloplast15-DropIn            0.0762     0.0294
Nyloplast15-DropIn            0.1067     0.0345
Nyloplast15-DropIn            0.1372     0.0391
Nyloplast15-DropIn            0.1829     0.0453
Nyloplast15-DropIn            0.221      0.0496
Nyloplast15-DropIn            0.2896     0.0566
Nyloplast15-DropIn            0.3353     0.0614
Nyloplast15-DropIn            0.6        0.082
Nyloplast15-DropIn            1          0.1059

;18" Standard Grate; Curve From Nyloplast website converted to metric.
;Last two points are estimated;
Nyloplast18      Rating     0          0
Nyloplast18                 0.015240046 0.004759133
Nyloplast18                 0.030480092 0.013087617
Nyloplast18                 0.045720138 0.023795667
Nyloplast18                 0.060960184 0.036407371
Nyloplast18                 0.07620023 0.050684771
Nyloplast18                 0.08290585 0.05663369
Nyloplast18                 0.106680322 0.064724215
Nyloplast18                 0.15240046 0.077335918
Nyloplast18                 0.198120598 0.088043969
Nyloplast18                 0.243840735 0.097562236
Nyloplast18                 0.289560873 0.107080502
Nyloplast18                 0.335281011 0.115171029
Nyloplast18                 0.6        0.154124971
Nyloplast18                 1          0.1993

;24" Standard Grate; Curve From Nyloplast website converted to metric.
;Last two points are estimated;
Nyloplast24      Rating     0          0
Nyloplast24                 0.0381     0.028
Nyloplast24                 0.062484   0.057
Nyloplast24                 0.082296   0.085
Nyloplast24                 0.09144    0.099
Nyloplast24                 0.115824   0.113
Nyloplast24                 0.18288    0.142
Nyloplast24                 0.260604   0.17
Nyloplast24                 0.33528    0.193
Nyloplast24                 0.6        0.24
Nyloplast24                 1          0.28

;30
;" Standard Grate; Curve From Nyloplast website converted to metric.
;Last two points are estimated;
Nyloplast30      Rating     0          0
Nyloplast30                 0.015      0.008
Nyloplast30                 0.03       0.023
Nyloplast30                 0.049      0.045
Nyloplast30                 0.058      0.057
Nyloplast30                 0.076      0.074
Nyloplast30                 0.107      0.152
Nyloplast30                 0.126      0.193
Nyloplast30                 0.128      0.197
Nyloplast30                 0.168      0.227
Nyloplast30                 0.183      0.235
Nyloplast30                 0.213      0.253
Nyloplast30                 0.274      0.291
Nyloplast30                 0.335      0.319
Nyloplast30                 0.6        0.41
Nyloplast30                 1          0.51

;CBMH Inlet Capture Curve based on the OSDG Appendix 7-A.11 (DWG S24 - Perforated Cover)
S24_Cover        Rating     0          0
S24_Cover                   0.122      0.06
S24_Cover                   0.183      0.073
S24_Cover                   0.2        0.076
S24_Cover                   0.243      0.084
S24_Cover                   0.305      0.094

;Inflow rate from SWMHYMO Model of Phase 2 development
S4               Rating     0          0
S4                          0.15       0.001
S4                          0.27       0.126

As-Constructed   Storage    0          0.11
As-Constructed              0.1        5.25
As-Constructed              0.2        7.88
As-Constructed              0.3        39.05
As-Constructed              0.4        109.8
As-Constructed              0.5        613.94
As-Constructed              0.6        1578.13
As-Constructed              0.7        2921.73
As-Constructed              0.8        4642.45
As-Constructed              0.9        7181.82
As-Constructed              1          9189.79
As-Constructed              1.1        10250.21
As-Constructed              1.2        10715.15
As-Constructed              1.3        10740.3

As-per-Design    Storage    0          0.8
As-per-Design               0.05       38.8
As-per-Design               0.1        177.6
As-per-Design               0.15       428.8
As-per-Design               0.2        795.6
As-per-Design               0.25       1220.4
As-per-Design               0.3        2064
As-per-Design               0.35       3312
As-per-Design               0.4        4388.8
As-per-Design               0.45       5509.2
As-per-Design               0.5        6393.6
As-per-Design               0.55       7734.4
As-per-Design               0.6        8149.6
As-per-Design               0.65       9033.2
As-per-Design               0.7        9706.4
As-per-Design               0.75       10234
As-per-Design               0.8        10523.6
As-per-Design               0.85       10896
As-per-Design               0.9        10940.4
As-per-Design               0.95       11171.2
As-per-Design               1          11211.6

;Curve from Phase 2 SWMHYMO model:
;Area S2+A1
St_EXCB13        Storage    0          0
St_EXCB13                   0.15       170.533
St_EXCB13                   0.31       416.692

;Curve from Phase 2 SWMHYMO model: Area S3
St_EXCB14        Storage    0          0
St_EXCB14                   0.15       145.0666667
St_EXCB14                   0.37       536.9180662

;Curve from Phase 2 SWMHYMO model: Area S4
St_S4            Storage    0          0
St_S4                       0.15       190.9333333
St_S4                       0.27       641.2920188

[TIMESERIES]
;;Name           Date       Time       Value
;;-------------- ---------- ---------- ----------
;Rainfall (mm/hr)
12SCS10          01/01/2000 00:00:00   2.016
12SCS10          01/01/2000 00:15:00   2.016
12SCS10          01/01/2000 00:30:00   0.9408
12SCS10          01/01/2000 00:45:00   0.9408
12SCS10          01/01/2000 01:00:00   1.7472
12SCS10          01/01/2000 01:15:00   1.7472
12SCS10          01/01/2000 01:30:00   1.7472
12SCS10          01/01/2000 01:45:00   1.7472
12SCS10          01/01/2000 02:00:00   2.2848
12SCS10          01/01/2000 02:15:00   2.2848
12SCS10          01/01/2000 02:30:00   2.016
```

1:100 year 3-hour Chicago Design Storm – Input File

```
12SCS10         01/01/2000 02:45:00   2.016
12SCS10         01/01/2000 03:00:00   2.688
12SCS10         01/01/2000 03:15:00   2.688
12SCS10         01/01/2000 03:30:00   2.688
12SCS10         01/01/2000 03:45:00   2.688
12SCS10         01/01/2000 04:00:00   3.6288
12SCS10         01/01/2000 04:15:00   3.6288
12SCS10         01/01/2000 04:30:00   4.5696
12SCS10         01/01/2000 04:45:00   4.5696
12SCS10         01/01/2000 05:00:00   7.2576
12SCS10         01/01/2000 05:15:00   7.2576
12SCS10         01/01/2000 05:30:00   36.288
12SCS10         01/01/2000 05:45:00   78.7584
12SCS10         01/01/2000 06:00:00   14.6496
12SCS10         01/01/2000 06:15:00   14.6496
12SCS10         01/01/2000 06:30:00   6.4512
12SCS10         01/01/2000 06:45:00   6.4512
12SCS10         01/01/2000 07:00:00   4.3008
12SCS10         01/01/2000 07:15:00   4.3008
12SCS10         01/01/2000 07:30:00   3.7632
12SCS10         01/01/2000 07:45:00   3.7632
12SCS10         01/01/2000 08:00:00   2.9568
12SCS10         01/01/2000 08:15:00   2.9568
12SCS10         01/01/2000 08:30:00   3.0912
12SCS10         01/01/2000 08:45:00   3.0912
12SCS10         01/01/2000 09:00:00   2.016
12SCS10         01/01/2000 09:15:00   2.016
12SCS10         01/01/2000 09:30:00   1.6128
12SCS10         01/01/2000 09:45:00   1.6128
12SCS10         01/01/2000 10:00:00   2.2848
12SCS10         01/01/2000 10:15:00   2.2848
12SCS10         01/01/2000 10:30:00   1.4784
12SCS10         01/01/2000 10:45:00   1.4784
12SCS10         01/01/2000 11:00:00   1.344
12SCS10         01/01/2000 11:15:00   1.344
12SCS10         01/01/2000 11:30:00   1.344
12SCS10         01/01/2000 11:45:00   1.344
12SCS10         01/01/2000 12:00:00   0

12SCS100        01/01/2000 00:00:00   2.88
12SCS100        01/01/2000 00:15:00   2.88
12SCS100        01/01/2000 00:30:00   1.344
12SCS100        01/01/2000 00:45:00   1.344
12SCS100        01/01/2000 01:00:00   2.496
12SCS100        01/01/2000 01:15:00   2.496
12SCS100        01/01/2000 01:30:00   2.496
12SCS100        01/01/2000 01:45:00   2.496
12SCS100        01/01/2000 02:00:00   3.264
12SCS100        01/01/2000 02:15:00   3.264
12SCS100        01/01/2000 02:30:00   2.88
12SCS100        01/01/2000 02:45:00   2.88
12SCS100        01/01/2000 03:00:00   3.84
12SCS100        01/01/2000 03:15:00   3.84
12SCS100        01/01/2000 03:30:00   3.84
12SCS100        01/01/2000 03:45:00   3.84
12SCS100        01/01/2000 04:00:00   5.184
12SCS100        01/01/2000 04:15:00   5.184
12SCS100        01/01/2000 04:30:00   6.528
12SCS100        01/01/2000 04:45:00   6.528
12SCS100        01/01/2000 05:00:00   10.368
12SCS100        01/01/2000 05:15:00   10.368
12SCS100        01/01/2000 05:30:00   51.84
12SCS100        01/01/2000 05:45:00   112.512
12SCS100        01/01/2000 06:00:00   20.928
12SCS100        01/01/2000 06:15:00   20.928
12SCS100        01/01/2000 06:30:00   9.216
12SCS100        01/01/2000 06:45:00   9.216
12SCS100        01/01/2000 07:00:00   6.144
12SCS100        01/01/2000 07:15:00   6.144
12SCS100        01/01/2000 07:30:00   5.376
12SCS100        01/01/2000 07:45:00   5.376
12SCS100        01/01/2000 08:00:00   4.224
12SCS100        01/01/2000 08:15:00   4.224
12SCS100        01/01/2000 08:30:00   4.416
12SCS100        01/01/2000 08:45:00   4.416
12SCS100        01/01/2000 09:00:00   2.88
12SCS100        01/01/2000 09:15:00   2.88
12SCS100        01/01/2000 09:30:00   2.304
12SCS100        01/01/2000 09:45:00   2.304
12SCS100        01/01/2000 10:00:00   3.264
12SCS100        01/01/2000 10:15:00   3.264
12SCS100        01/01/2000 10:30:00   2.112
12SCS100        01/01/2000 10:45:00   2.112
12SCS100        01/01/2000 11:00:00   1.92
12SCS100        01/01/2000 11:15:00   1.92
12SCS100        01/01/2000 11:30:00   1.92
12SCS100        01/01/2000 11:45:00   1.92
12SCS100        01/01/2000 12:00:00   0

;Rainfall (mm/hr)
12SCS120        01/01/2000 00:00:00   3.456
12SCS120        01/01/2000 00:15:00   3.456
12SCS120        01/01/2000 00:30:00   1.6128
12SCS120        01/01/2000 00:45:00   1.6128
12SCS120        01/01/2000 01:00:00   2.9952
12SCS120        01/01/2000 01:15:00   2.9952
12SCS120        01/01/2000 01:30:00   2.9952
12SCS120        01/01/2000 01:45:00   2.9952
12SCS120        01/01/2000 02:00:00   3.9168
12SCS120        01/01/2000 02:15:00   3.9168
12SCS120        01/01/2000 02:30:00   3.456
12SCS120        01/01/2000 02:45:00   3.456
12SCS120        01/01/2000 03:00:00   4.608
12SCS120        01/01/2000 03:15:00   4.608
12SCS120        01/01/2000 03:30:00   4.608
12SCS120        01/01/2000 03:45:00   4.608
12SCS120        01/01/2000 04:00:00   6.2208
12SCS120        01/01/2000 04:15:00   6.2208
12SCS120        01/01/2000 04:30:00   7.8336
12SCS120        01/01/2000 04:45:00   7.8336
12SCS120        01/01/2000 05:00:00   12.4416
12SCS120        01/01/2000 05:15:00   12.4416
12SCS120        01/01/2000 05:30:00   62.208
12SCS120        01/01/2000 05:45:00   135.0144
12SCS120        01/01/2000 06:00:00   25.1136
12SCS120        01/01/2000 06:15:00   25.1136
12SCS120        01/01/2000 06:30:00   11.0592
12SCS120        01/01/2000 06:45:00   11.0592
12SCS120        01/01/2000 07:00:00   7.3728
12SCS120        01/01/2000 07:15:00   7.3728
12SCS120        01/01/2000 07:30:00   6.4512
12SCS120        01/01/2000 07:45:00   6.4512
12SCS120        01/01/2000 08:00:00   5.0688
12SCS120        01/01/2000 08:15:00   5.0688
12SCS120        01/01/2000 08:30:00   5.2992
12SCS120        01/01/2000 08:45:00   5.2992
12SCS120        01/01/2000 09:00:00   3.456
12SCS120        01/01/2000 09:15:00   3.456
12SCS120        01/01/2000 09:30:00   2.7648
12SCS120        01/01/2000 09:45:00   2.7648
12SCS120        01/01/2000 10:00:00   3.9168
12SCS120        01/01/2000 10:15:00   3.9168
12SCS120        01/01/2000 10:30:00   2.5344
12SCS120        01/01/2000 10:45:00   2.5344
12SCS120        01/01/2000 11:00:00   2.304
12SCS120        01/01/2000 11:15:00   2.304
12SCS120        01/01/2000 11:30:00   2.304
12SCS120        01/01/2000 11:45:00   2.304
12SCS120        01/01/2000 12:00:00   0

;Rainfall (mm/hr)
12SCS2          01/01/2000 00:00:00   1.296
12SCS2          01/01/2000 00:15:00   1.296
12SCS2          01/01/2000 00:30:00   0.6048
12SCS2          01/01/2000 00:45:00   0.6048
12SCS2          01/01/2000 01:00:00   1.1232
12SCS2          01/01/2000 01:15:00   1.1232
12SCS2          01/01/2000 01:30:00   1.1232
12SCS2          01/01/2000 01:45:00   1.1232
12SCS2          01/01/2000 02:00:00   1.4688
12SCS2          01/01/2000 02:15:00   1.4688
12SCS2          01/01/2000 02:30:00   1.296
12SCS2          01/01/2000 02:45:00   1.296
12SCS2          01/01/2000 03:00:00   1.728
12SCS2          01/01/2000 03:15:00   1.728
12SCS2          01/01/2000 03:30:00   1.728
12SCS2          01/01/2000 03:45:00   1.728
12SCS2          01/01/2000 04:00:00   2.3328
12SCS2          01/01/2000 04:15:00   2.3328
12SCS2          01/01/2000 04:30:00   2.9376
12SCS2          01/01/2000 04:45:00   2.9376
12SCS2          01/01/2000 05:00:00   4.6656
12SCS2          01/01/2000 05:15:00   4.6656
12SCS2          01/01/2000 05:30:00   23.328
12SCS2          01/01/2000 05:45:00   50.6304
12SCS2          01/01/2000 06:00:00   9.4176
12SCS2          01/01/2000 06:15:00   9.4176
12SCS2          01/01/2000 06:30:00   4.1472
12SCS2          01/01/2000 06:45:00   4.1472
12SCS2          01/01/2000 07:00:00   2.7648
12SCS2          01/01/2000 07:15:00   2.7648
12SCS2          01/01/2000 07:30:00   2.4192
12SCS2          01/01/2000 07:45:00   2.4192
12SCS2          01/01/2000 08:00:00   1.9008
12SCS2          01/01/2000 08:15:00   1.9008
12SCS2          01/01/2000 08:30:00   1.9872
12SCS2          01/01/2000 08:45:00   1.9872
12SCS2          01/01/2000 09:00:00   1.296
12SCS2          01/01/2000 09:15:00   1.296
12SCS2          01/01/2000 09:30:00   1.0368
12SCS2          01/01/2000 09:45:00   1.0368
12SCS2          01/01/2000 10:00:00   1.4688
12SCS2          01/01/2000 10:15:00   1.4688
12SCS2          01/01/2000 10:30:00   0.9504
12SCS2          01/01/2000 10:45:00   0.9504
12SCS2          01/01/2000 11:00:00   0.864
12SCS2          01/01/2000 11:15:00   0.864
12SCS2          01/01/2000 11:30:00   0.864
12SCS2          01/01/2000 11:45:00   0.864
12SCS2          01/01/2000 12:00:00   0

;Rainfall (mm/hr)
12SCS25         01/01/2000 00:00:00   2.376
12SCS25         01/01/2000 00:15:00   2.376
12SCS25         01/01/2000 00:30:00   1.1088
12SCS25         01/01/2000 00:45:00   1.1088
12SCS25         01/01/2000 01:00:00   2.0592
12SCS25         01/01/2000 01:15:00   2.0592
12SCS25         01/01/2000 01:30:00   2.0592
12SCS25         01/01/2000 01:45:00   2.0592
12SCS25         01/01/2000 02:00:00   2.6928
12SCS25         01/01/2000 02:15:00   2.6928
12SCS25         01/01/2000 02:30:00   2.376
12SCS25         01/01/2000 02:45:00   2.376
12SCS25         01/01/2000 03:00:00   3.168
12SCS25         01/01/2000 03:15:00   3.168
12SCS25         01/01/2000 03:30:00   3.168
12SCS25         01/01/2000 03:45:00   3.168
12SCS25         01/01/2000 04:00:00   4.2768
12SCS25         01/01/2000 04:15:00   4.2768
12SCS25         01/01/2000 04:30:00   5.3856
12SCS25         01/01/2000 04:45:00   5.3856
12SCS25         01/01/2000 05:00:00   8.5536
12SCS25         01/01/2000 05:15:00   8.5536
12SCS25         01/01/2000 05:30:00   42.768
12SCS25         01/01/2000 05:45:00   92.8224
12SCS25         01/01/2000 06:00:00   17.2656
12SCS25         01/01/2000 06:15:00   17.2656
12SCS25         01/01/2000 06:30:00   7.6032
12SCS25         01/01/2000 06:45:00   7.6032
12SCS25         01/01/2000 07:00:00   5.0688
12SCS25         01/01/2000 07:15:00   5.0688
12SCS25         01/01/2000 07:30:00   4.4352
12SCS25         01/01/2000 07:45:00   4.4352
12SCS25         01/01/2000 08:00:00   3.4848
12SCS25         01/01/2000 08:15:00   3.4848
12SCS25         01/01/2000 08:30:00   3.6432
12SCS25         01/01/2000 08:45:00   3.6432
12SCS25         01/01/2000 09:00:00   2.376
12SCS25         01/01/2000 09:15:00   2.376
12SCS25         01/01/2000 09:30:00   1.9008
12SCS25         01/01/2000 09:45:00   1.9008
12SCS25         01/01/2000 10:00:00   2.6928
12SCS25         01/01/2000 10:15:00   2.6928
12SCS25         01/01/2000 10:30:00   1.7424
12SCS25         01/01/2000 10:45:00   1.7424
12SCS25         01/01/2000 11:00:00   1.584
12SCS25         01/01/2000 11:15:00   1.584
12SCS25         01/01/2000 11:30:00   1.584
12SCS25         01/01/2000 11:45:00   1.584
12SCS25         01/01/2000 12:00:00   0

;Rainfall (mm/hr)
12SCS5          01/01/2000 00:00:00   1.728
12SCS5          01/01/2000 00:15:00   1.728
12SCS5          01/01/2000 00:30:00   0.8064
12SCS5          01/01/2000 00:45:00   0.8064
12SCS5          01/01/2000 01:00:00   1.4976
12SCS5          01/01/2000 01:15:00   1.4976
12SCS5          01/01/2000 01:30:00   1.4976
12SCS5          01/01/2000 01:45:00   1.4976
12SCS5          01/01/2000 02:00:00   1.9584
12SCS5          01/01/2000 02:15:00   1.9584
12SCS5          01/01/2000 02:30:00   1.728
```

1:100 year 3-hour Chicago Design Storm – Input File

```
12SCS5          01/01/2000 02:45:00   1.728
12SCS5          01/01/2000 03:00:00   2.304
12SCS5          01/01/2000 03:15:00   2.304
12SCS5          01/01/2000 03:30:00   2.304
12SCS5          01/01/2000 03:45:00   2.304
12SCS5          01/01/2000 04:00:00   3.1104
12SCS5          01/01/2000 04:15:00   3.1104
12SCS5          01/01/2000 04:30:00   3.9168
12SCS5          01/01/2000 04:45:00   3.9168
12SCS5          01/01/2000 05:00:00   6.2208
12SCS5          01/01/2000 05:15:00   6.2208
12SCS5          01/01/2000 05:30:00   31.104
12SCS5          01/01/2000 05:45:00   67.5072
12SCS5          01/01/2000 06:00:00   12.5568
12SCS5          01/01/2000 06:15:00   12.5568
12SCS5          01/01/2000 06:30:00   5.5296
12SCS5          01/01/2000 06:45:00   5.5296
12SCS5          01/01/2000 07:00:00   3.6864
12SCS5          01/01/2000 07:15:00   3.6864
12SCS5          01/01/2000 07:30:00   3.2256
12SCS5          01/01/2000 07:45:00   3.2256
12SCS5          01/01/2000 08:00:00   2.5344
12SCS5          01/01/2000 08:15:00   2.5344
12SCS5          01/01/2000 08:30:00   2.6496
12SCS5          01/01/2000 08:45:00   2.6496
12SCS5          01/01/2000 09:00:00   1.728
12SCS5          01/01/2000 09:15:00   1.728
12SCS5          01/01/2000 09:30:00   1.3824
12SCS5          01/01/2000 09:45:00   1.3824
12SCS5          01/01/2000 10:00:00   1.9584
12SCS5          01/01/2000 10:15:00   1.9584
12SCS5          01/01/2000 10:30:00   1.2672
12SCS5          01/01/2000 10:45:00   1.2672
12SCS5          01/01/2000 11:00:00   1.152
12SCS5          01/01/2000 11:15:00   1.152
12SCS5          01/01/2000 11:30:00   1.152
12SCS5          01/01/2000 11:45:00   1.152
12SCS5          01/01/2000 12:00:00   0

;Rainfall (mm/hr)
12SCS50         01/01/2000 00:00:00   2.628
12SCS50         01/01/2000 00:15:00   2.628
12SCS50         01/01/2000 00:30:00   1.2264
12SCS50         01/01/2000 00:45:00   1.2264
12SCS50         01/01/2000 01:00:00   2.2776
12SCS50         01/01/2000 01:15:00   2.2776
12SCS50         01/01/2000 01:30:00   2.2776
12SCS50         01/01/2000 01:45:00   2.2776
12SCS50         01/01/2000 02:00:00   2.9784
12SCS50         01/01/2000 02:15:00   2.9784
12SCS50         01/01/2000 02:30:00   2.628
12SCS50         01/01/2000 02:45:00   2.628
12SCS50         01/01/2000 03:00:00   3.504
12SCS50         01/01/2000 03:15:00   3.504
12SCS50         01/01/2000 03:30:00   3.504
12SCS50         01/01/2000 03:45:00   3.504
12SCS50         01/01/2000 04:00:00   4.7304
12SCS50         01/01/2000 04:15:00   4.7304
12SCS50         01/01/2000 04:30:00   5.9568
12SCS50         01/01/2000 04:45:00   5.9568
12SCS50         01/01/2000 05:00:00   9.4608
12SCS50         01/01/2000 05:15:00   9.4608
12SCS50         01/01/2000 05:30:00   47.304
12SCS50         01/01/2000 05:45:00   102.6672
12SCS50         01/01/2000 06:00:00   19.0968
12SCS50         01/01/2000 06:15:00   19.0968
12SCS50         01/01/2000 06:30:00   8.4096
12SCS50         01/01/2000 06:45:00   8.4096
12SCS50         01/01/2000 07:00:00   5.6064
12SCS50         01/01/2000 07:15:00   5.6064
12SCS50         01/01/2000 07:30:00   4.9056
12SCS50         01/01/2000 07:45:00   4.9056
12SCS50         01/01/2000 08:00:00   3.8544
12SCS50         01/01/2000 08:15:00   3.8544
12SCS50         01/01/2000 08:30:00   4.0296
12SCS50         01/01/2000 08:45:00   4.0296
12SCS50         01/01/2000 09:00:00   2.628
12SCS50         01/01/2000 09:15:00   2.628
12SCS50         01/01/2000 09:30:00   2.1024
12SCS50         01/01/2000 09:45:00   2.1024
12SCS50         01/01/2000 10:00:00   2.9784
12SCS50         01/01/2000 10:15:00   2.9784
12SCS50         01/01/2000 10:30:00   1.9272
12SCS50         01/01/2000 10:45:00   1.9272
12SCS50         01/01/2000 11:00:00   1.752
12SCS50         01/01/2000 11:15:00   1.752
12SCS50         01/01/2000 11:30:00   1.752
12SCS50         01/01/2000 11:45:00   1.752
12SCS50         01/01/2000 12:00:00   0

;Rainfall (mm/hr)
24SCS10         01/01/2000 00:00:00   1.08
24SCS10         01/01/2000 00:15:00   1.08
24SCS10         01/01/2000 00:30:00   1.08
24SCS10         01/01/2000 00:45:00   1.08
24SCS10         01/01/2000 01:00:00   0.504
24SCS10         01/01/2000 01:15:00   0.504
24SCS10         01/01/2000 01:30:00   0.504
24SCS10         01/01/2000 01:45:00   0.504
24SCS10         01/01/2000 02:00:00   0.936
24SCS10         01/01/2000 02:15:00   0.936
24SCS10         01/01/2000 02:30:00   0.936
24SCS10         01/01/2000 02:45:00   0.936
24SCS10         01/01/2000 03:00:00   0.936
24SCS10         01/01/2000 03:15:00   0.936
24SCS10         01/01/2000 03:30:00   0.936
24SCS10         01/01/2000 03:45:00   0.936
24SCS10         01/01/2000 04:00:00   1.224
24SCS10         01/01/2000 04:15:00   1.224
24SCS10         01/01/2000 04:30:00   1.224
24SCS10         01/01/2000 04:45:00   1.224
24SCS10         01/01/2000 05:00:00   1.08
24SCS10         01/01/2000 05:15:00   1.08
24SCS10         01/01/2000 05:30:00   1.08
24SCS10         01/01/2000 05:45:00   1.08
24SCS10         01/01/2000 06:00:00   1.44
24SCS10         01/01/2000 06:15:00   1.44
24SCS10         01/01/2000 06:30:00   1.44
24SCS10         01/01/2000 06:45:00   1.44
24SCS10         01/01/2000 07:00:00   1.44
24SCS10         01/01/2000 07:15:00   1.44
24SCS10         01/01/2000 07:30:00   1.44
24SCS10         01/01/2000 07:45:00   1.44
24SCS10         01/01/2000 08:00:00   1.944
24SCS10         01/01/2000 08:15:00   1.944
24SCS10         01/01/2000 08:30:00   1.944
24SCS10         01/01/2000 08:45:00   1.944
24SCS10         01/01/2000 09:00:00   2.304
24SCS10         01/01/2000 09:15:00   2.304
24SCS10         01/01/2000 09:30:00   2.592
24SCS10         01/01/2000 09:45:00   2.592
24SCS10         01/01/2000 10:00:00   3.312
24SCS10         01/01/2000 10:15:00   3.312
24SCS10         01/01/2000 10:30:00   4.464
24SCS10         01/01/2000 10:45:00   4.464
24SCS10         01/01/2000 11:00:00   6.912
24SCS10         01/01/2000 11:15:00   6.912
24SCS10         01/01/2000 11:30:00   29.952
24SCS10         01/01/2000 11:45:00   79.488
24SCS10         01/01/2000 12:00:00   10.368
24SCS10         01/01/2000 12:15:00   10.368
24SCS10         01/01/2000 12:30:00   5.328
24SCS10         01/01/2000 12:45:00   5.328
24SCS10         01/01/2000 13:00:00   3.888
24SCS10         01/01/2000 13:15:00   3.888
24SCS10         01/01/2000 13:30:00   3.024
24SCS10         01/01/2000 13:45:00   3.024
24SCS10         01/01/2000 14:00:00   2.304
24SCS10         01/01/2000 14:15:00   2.304
24SCS10         01/01/2000 14:30:00   2.304
24SCS10         01/01/2000 14:45:00   2.304
24SCS10         01/01/2000 15:00:00   2.016
24SCS10         01/01/2000 15:15:00   2.016
24SCS10         01/01/2000 15:30:00   2.016
24SCS10         01/01/2000 15:45:00   2.016
24SCS10         01/01/2000 16:00:00   1.584
24SCS10         01/01/2000 16:15:00   1.584
24SCS10         01/01/2000 16:30:00   1.584
24SCS10         01/01/2000 16:45:00   1.584
24SCS10         01/01/2000 17:00:00   1.656
24SCS10         01/01/2000 17:15:00   1.656
24SCS10         01/01/2000 17:30:00   1.656
24SCS10         01/01/2000 17:45:00   1.656
24SCS10         01/01/2000 18:00:00   1.08
24SCS10         01/01/2000 18:15:00   1.08
24SCS10         01/01/2000 18:30:00   1.08
24SCS10         01/01/2000 18:45:00   1.08
24SCS10         01/01/2000 19:00:00   0.864
24SCS10         01/01/2000 19:15:00   0.864
24SCS10         01/01/2000 19:30:00   0.864
24SCS10         01/01/2000 19:45:00   0.864
24SCS10         01/01/2000 20:00:00   1.224
24SCS10         01/01/2000 20:15:00   1.224
24SCS10         01/01/2000 20:30:00   1.224
24SCS10         01/01/2000 20:45:00   1.224
24SCS10         01/01/2000 21:00:00   0.792
24SCS10         01/01/2000 21:15:00   0.792
24SCS10         01/01/2000 21:30:00   0.792
24SCS10         01/01/2000 21:45:00   0.792
24SCS10         01/01/2000 22:00:00   0.72
24SCS10         01/01/2000 22:15:00   0.72
24SCS10         01/01/2000 22:30:00   0.72
24SCS10         01/01/2000 22:45:00   0.72
24SCS10         01/01/2000 23:00:00   0.72
24SCS10         01/01/2000 23:15:00   0.72
24SCS10         01/01/2000 23:30:00   0.72
24SCS10         01/01/2000 23:45:00   0.72
24SCS10         01/02/2000 00:00:00   0

;Rainfall (mm/hr)
;Rainfall (mm/hr)
24SCS100        01/01/2000 00:00:00   1.548
24SCS100        01/01/2000 00:15:00   1.548
24SCS100        01/01/2000 00:30:00   1.548
24SCS100        01/01/2000 00:45:00   1.548
24SCS100        01/01/2000 01:00:00   0.7224
24SCS100        01/01/2000 01:15:00   0.7224
24SCS100        01/01/2000 01:30:00   0.7224
24SCS100        01/01/2000 01:45:00   0.7224
24SCS100        01/01/2000 02:00:00   1.3416
24SCS100        01/01/2000 02:15:00   1.3416
24SCS100        01/01/2000 02:30:00   1.3416
24SCS100        01/01/2000 02:45:00   1.3416
24SCS100        01/01/2000 03:00:00   1.3416
24SCS100        01/01/2000 03:15:00   1.3416
24SCS100        01/01/2000 03:30:00   1.3416
24SCS100        01/01/2000 03:45:00   1.3416
24SCS100        01/01/2000 04:00:00   1.7544
24SCS100        01/01/2000 04:15:00   1.7544
24SCS100        01/01/2000 04:30:00   1.7544
24SCS100        01/01/2000 04:45:00   1.7544
24SCS100        01/01/2000 05:00:00   1.548
24SCS100        01/01/2000 05:15:00   1.548
24SCS100        01/01/2000 05:30:00   1.548
24SCS100        01/01/2000 05:45:00   1.548
24SCS100        01/01/2000 06:00:00   2.064
24SCS100        01/01/2000 06:15:00   2.064
24SCS100        01/01/2000 06:30:00   2.064
24SCS100        01/01/2000 06:45:00   2.064
24SCS100        01/01/2000 07:00:00   2.064
24SCS100        01/01/2000 07:15:00   2.064
24SCS100        01/01/2000 07:30:00   2.064
24SCS100        01/01/2000 07:45:00   2.064
24SCS100        01/01/2000 08:00:00   2.7864
24SCS100        01/01/2000 08:15:00   2.7864
24SCS100        01/01/2000 08:30:00   2.7864
24SCS100        01/01/2000 08:45:00   2.7864
24SCS100        01/01/2000 09:00:00   3.3024
24SCS100        01/01/2000 09:15:00   3.3024
24SCS100        01/01/2000 09:30:00   3.7152
24SCS100        01/01/2000 09:45:00   3.7152
24SCS100        01/01/2000 10:00:00   4.7472
24SCS100        01/01/2000 10:15:00   4.7472
24SCS100        01/01/2000 10:30:00   6.3984
24SCS100        01/01/2000 10:45:00   6.3984
24SCS100        01/01/2000 11:00:00   9.9072
24SCS100        01/01/2000 11:15:00   9.9072
24SCS100        01/01/2000 11:30:00   42.9312
24SCS100        01/01/2000 11:45:00   113.9328
24SCS100        01/01/2000 12:00:00   14.8608
24SCS100        01/01/2000 12:15:00   14.8608
24SCS100        01/01/2000 12:30:00   7.6368
24SCS100        01/01/2000 12:45:00   7.6368
24SCS100        01/01/2000 13:00:00   5.5728
24SCS100        01/01/2000 13:15:00   5.5728
24SCS100        01/01/2000 13:30:00   4.3344
24SCS100        01/01/2000 13:45:00   4.3344
24SCS100        01/01/2000 14:00:00   3.3024
24SCS100        01/01/2000 14:15:00   3.3024
24SCS100        01/01/2000 14:30:00   3.3024
24SCS100        01/01/2000 14:45:00   3.3024
24SCS100        01/01/2000 15:00:00   2.8896
24SCS100        01/01/2000 15:15:00   2.8896
24SCS100        01/01/2000 15:30:00   2.8896
```

1:100 year 3-hour Chicago Design Storm – Input File

```
24SCS100        01/01/2000 15:45:00   2.8896
24SCS100        01/01/2000 16:00:00   2.2704
24SCS100        01/01/2000 16:15:00   2.2704
24SCS100        01/01/2000 16:30:00   2.2704
24SCS100        01/01/2000 16:45:00   2.2704
24SCS100        01/01/2000 17:00:00   2.3736
24SCS100        01/01/2000 17:15:00   2.3736
24SCS100        01/01/2000 17:30:00   2.3736
24SCS100        01/01/2000 17:45:00   2.3736
24SCS100        01/01/2000 18:00:00   1.548
24SCS100        01/01/2000 18:15:00   1.548
24SCS100        01/01/2000 18:30:00   1.548
24SCS100        01/01/2000 18:45:00   1.548
24SCS100        01/01/2000 19:00:00   1.2384
24SCS100        01/01/2000 19:15:00   1.2384
24SCS100        01/01/2000 19:30:00   1.2384
24SCS100        01/01/2000 19:45:00   1.2384
24SCS100        01/01/2000 20:00:00   1.7544
24SCS100        01/01/2000 20:15:00   1.7544
24SCS100        01/01/2000 20:30:00   1.7544
24SCS100        01/01/2000 20:45:00   1.7544
24SCS100        01/01/2000 21:00:00   1.1352
24SCS100        01/01/2000 21:15:00   1.1352
24SCS100        01/01/2000 21:30:00   1.1352
24SCS100        01/01/2000 21:45:00   1.1352
24SCS100        01/01/2000 22:00:00   1.032
24SCS100        01/01/2000 22:15:00   1.032
24SCS100        01/01/2000 22:30:00   1.032
24SCS100        01/01/2000 22:45:00   1.032
24SCS100        01/01/2000 23:00:00   1.032
24SCS100        01/01/2000 23:15:00   1.032
24SCS100        01/01/2000 23:30:00   1.032
24SCS100        01/01/2000 23:45:00   1.032
24SCS100        01/02/2000 00:00:00   0

;Rainfall (mm/hr)
24SCS120        01/01/2000 00:00:00   1.8576
24SCS120        01/01/2000 00:15:00   1.8576
24SCS120        01/01/2000 00:30:00   1.8576
24SCS120        01/01/2000 00:45:00   1.8576
24SCS120        01/01/2000 01:00:00   0.86688
24SCS120        01/01/2000 01:15:00   0.86688
24SCS120        01/01/2000 01:30:00   0.86688
24SCS120        01/01/2000 01:45:00   0.86688
24SCS120        01/01/2000 02:00:00   1.60992
24SCS120        01/01/2000 02:15:00   1.60992
24SCS120        01/01/2000 02:30:00   1.60992
24SCS120        01/01/2000 02:45:00   1.60992
24SCS120        01/01/2000 03:00:00   1.60992
24SCS120        01/01/2000 03:15:00   1.60992
24SCS120        01/01/2000 03:30:00   1.60992
24SCS120        01/01/2000 03:45:00   1.60992
24SCS120        01/01/2000 04:00:00   2.10528
24SCS120        01/01/2000 04:15:00   2.10528
24SCS120        01/01/2000 04:30:00   2.10528
24SCS120        01/01/2000 04:45:00   2.10528
24SCS120        01/01/2000 05:00:00   1.8576
24SCS120        01/01/2000 05:15:00   1.8576
24SCS120        01/01/2000 05:30:00   1.8576
24SCS120        01/01/2000 05:45:00   1.8576
24SCS120        01/01/2000 06:00:00   2.4768
24SCS120        01/01/2000 06:15:00   2.4768
24SCS120        01/01/2000 06:30:00   2.4768
24SCS120        01/01/2000 06:45:00   2.4768
24SCS120        01/01/2000 07:00:00   2.4768
24SCS120        01/01/2000 07:15:00   2.4768
24SCS120        01/01/2000 07:30:00   2.4768
24SCS120        01/01/2000 07:45:00   2.4768
24SCS120        01/01/2000 08:00:00   3.34368
24SCS120        01/01/2000 08:15:00   3.34368
24SCS120        01/01/2000 08:30:00   3.34368
24SCS120        01/01/2000 08:45:00   3.34368
24SCS120        01/01/2000 09:00:00   3.96288
24SCS120        01/01/2000 09:15:00   3.96288
24SCS120        01/01/2000 09:30:00   4.45824
24SCS120        01/01/2000 09:45:00   4.45824
24SCS120        01/01/2000 10:00:00   5.69664
24SCS120        01/01/2000 10:15:00   5.69664
24SCS120        01/01/2000 10:30:00   7.67808
24SCS120        01/01/2000 10:45:00   7.67808
24SCS120        01/01/2000 11:00:00   11.88864
24SCS120        01/01/2000 11:15:00   11.88864
24SCS120        01/01/2000 11:30:00   51.51744
24SCS120        01/01/2000 11:45:00   136.7193
24SCS120        01/01/2000 12:00:00   17.83296
24SCS120        01/01/2000 12:15:00   17.83296
24SCS120        01/01/2000 12:30:00   9.16416
24SCS120        01/01/2000 12:45:00   9.16416
24SCS120        01/01/2000 13:00:00   6.68736
24SCS120        01/01/2000 13:15:00   6.68736
24SCS120        01/01/2000 13:30:00   5.20128
24SCS120        01/01/2000 13:45:00   5.20128
24SCS120        01/01/2000 14:00:00   3.96288
24SCS120        01/01/2000 14:15:00   3.96288
24SCS120        01/01/2000 14:30:00   3.96288
24SCS120        01/01/2000 14:45:00   3.96288
24SCS120        01/01/2000 15:00:00   3.46752
24SCS120        01/01/2000 15:15:00   3.46752
24SCS120        01/01/2000 15:30:00   3.46752
24SCS120        01/01/2000 15:45:00   3.46752
24SCS120        01/01/2000 16:00:00   2.72448
24SCS120        01/01/2000 16:15:00   2.72448
24SCS120        01/01/2000 16:30:00   2.72448
24SCS120        01/01/2000 16:45:00   2.72448
24SCS120        01/01/2000 17:00:00   2.84832
24SCS120        01/01/2000 17:15:00   2.84832
24SCS120        01/01/2000 17:30:00   2.84832
24SCS120        01/01/2000 17:45:00   2.84832
24SCS120        01/01/2000 18:00:00   1.8576
24SCS120        01/01/2000 18:15:00   1.8576
24SCS120        01/01/2000 18:30:00   1.8576
24SCS120        01/01/2000 18:45:00   1.8576
24SCS120        01/01/2000 19:00:00   1.48608
24SCS120        01/01/2000 19:15:00   1.48608
24SCS120        01/01/2000 19:30:00   1.48608
24SCS120        01/01/2000 19:45:00   1.48608
24SCS120        01/01/2000 20:00:00   2.10528
24SCS120        01/01/2000 20:15:00   2.10528
24SCS120        01/01/2000 20:30:00   2.10528
24SCS120        01/01/2000 20:45:00   2.10528
24SCS120        01/01/2000 21:00:00   1.36224
24SCS120        01/01/2000 21:15:00   1.36224
24SCS120        01/01/2000 21:30:00   1.36224
24SCS120        01/01/2000 21:45:00   1.36224
24SCS120        01/01/2000 22:00:00   1.2384
24SCS120        01/01/2000 22:15:00   1.2384
24SCS120        01/01/2000 22:30:00   1.2384
24SCS120        01/01/2000 22:45:00   1.2384
24SCS120        01/01/2000 23:00:00   1.2384
24SCS120        01/01/2000 23:15:00   1.2384
24SCS120        01/01/2000 23:30:00   1.2384
24SCS120        01/01/2000 23:45:00   1.2384
24SCS120        01/02/2000 00:00:00   0

;Rainfall (mm/hr)
24SCS2          01/01/2000 00:00:00   0.72
24SCS2          01/01/2000 00:15:00   0.72
24SCS2          01/01/2000 00:30:00   0.72
24SCS2          01/01/2000 00:45:00   0.72
24SCS2          01/01/2000 01:00:00   0.336
24SCS2          01/01/2000 01:15:00   0.336
24SCS2          01/01/2000 01:30:00   0.336
24SCS2          01/01/2000 01:45:00   0.336
24SCS2          01/01/2000 02:00:00   0.624
24SCS2          01/01/2000 02:15:00   0.624
24SCS2          01/01/2000 02:30:00   0.624
24SCS2          01/01/2000 02:45:00   0.624
24SCS2          01/01/2000 03:00:00   0.624
24SCS2          01/01/2000 03:15:00   0.624
24SCS2          01/01/2000 03:30:00   0.624
24SCS2          01/01/2000 03:45:00   0.624
24SCS2          01/01/2000 04:00:00   0.816
24SCS2          01/01/2000 04:15:00   0.816
24SCS2          01/01/2000 04:30:00   0.816
24SCS2          01/01/2000 04:45:00   0.816
24SCS2          01/01/2000 05:00:00   0.72
24SCS2          01/01/2000 05:15:00   0.72
24SCS2          01/01/2000 05:30:00   0.72
24SCS2          01/01/2000 05:45:00   0.72
24SCS2          01/01/2000 06:00:00   0.96
24SCS2          01/01/2000 06:15:00   0.96
24SCS2          01/01/2000 06:30:00   0.96
24SCS2          01/01/2000 06:45:00   0.96
24SCS2          01/01/2000 07:00:00   0.96
24SCS2          01/01/2000 07:15:00   0.96
24SCS2          01/01/2000 07:30:00   0.96
24SCS2          01/01/2000 07:45:00   0.96
24SCS2          01/01/2000 08:00:00   1.296
24SCS2          01/01/2000 08:15:00   1.296
24SCS2          01/01/2000 08:30:00   1.296
24SCS2          01/01/2000 08:45:00   1.296
24SCS2          01/01/2000 09:00:00   1.536
24SCS2          01/01/2000 09:15:00   1.536
24SCS2          01/01/2000 09:30:00   1.728
24SCS2          01/01/2000 09:45:00   1.728
24SCS2          01/01/2000 10:00:00   2.208
24SCS2          01/01/2000 10:15:00   2.208
24SCS2          01/01/2000 10:30:00   2.976
24SCS2          01/01/2000 10:45:00   2.976
24SCS2          01/01/2000 11:00:00   4.608
24SCS2          01/01/2000 11:15:00   4.608
24SCS2          01/01/2000 11:30:00   19.968
24SCS2          01/01/2000 11:45:00   52.992
24SCS2          01/01/2000 12:00:00   6.912
24SCS2          01/01/2000 12:15:00   6.912
24SCS2          01/01/2000 12:30:00   3.552
24SCS2          01/01/2000 12:45:00   3.552
24SCS2          01/01/2000 13:00:00   2.592
24SCS2          01/01/2000 13:15:00   2.592
24SCS2          01/01/2000 13:30:00   2.016
24SCS2          01/01/2000 13:45:00   2.016
24SCS2          01/01/2000 14:00:00   1.536
24SCS2          01/01/2000 14:15:00   1.536
24SCS2          01/01/2000 14:30:00   1.536
24SCS2          01/01/2000 14:45:00   1.536
24SCS2          01/01/2000 15:00:00   1.344
24SCS2          01/01/2000 15:15:00   1.344
24SCS2          01/01/2000 15:30:00   1.344
24SCS2          01/01/2000 15:45:00   1.344
24SCS2          01/01/2000 16:00:00   1.056
24SCS2          01/01/2000 16:15:00   1.056
24SCS2          01/01/2000 16:30:00   1.056
24SCS2          01/01/2000 16:45:00   1.056
24SCS2          01/01/2000 17:00:00   1.104
24SCS2          01/01/2000 17:15:00   1.104
24SCS2          01/01/2000 17:30:00   1.104
24SCS2          01/01/2000 17:45:00   1.104
24SCS2          01/01/2000 18:00:00   0.72
24SCS2          01/01/2000 18:15:00   0.72
24SCS2          01/01/2000 18:30:00   0.72
24SCS2          01/01/2000 18:45:00   0.72
24SCS2          01/01/2000 19:00:00   0.576
24SCS2          01/01/2000 19:15:00   0.576
24SCS2          01/01/2000 19:30:00   0.576
24SCS2          01/01/2000 19:45:00   0.576
24SCS2          01/01/2000 20:00:00   0.816
24SCS2          01/01/2000 20:15:00   0.816
24SCS2          01/01/2000 20:30:00   0.816
24SCS2          01/01/2000 20:45:00   0.816
24SCS2          01/01/2000 21:00:00   0.528
24SCS2          01/01/2000 21:15:00   0.528
24SCS2          01/01/2000 21:30:00   0.528
24SCS2          01/01/2000 21:45:00   0.528
24SCS2          01/01/2000 22:00:00   0.48
24SCS2          01/01/2000 22:15:00   0.48
24SCS2          01/01/2000 22:30:00   0.48
24SCS2          01/01/2000 22:45:00   0.48
24SCS2          01/01/2000 23:00:00   0.48
24SCS2          01/01/2000 23:15:00   0.48
24SCS2          01/01/2000 23:30:00   0.48
24SCS2          01/01/2000 23:45:00   0.48
24SCS2          01/02/2000 00:00:00   0

;Rainfall (mm/hr)
24SCS25         01/01/2000 00:00:00   1.26
24SCS25         01/01/2000 00:15:00   1.26
24SCS25         01/01/2000 00:30:00   1.26
24SCS25         01/01/2000 00:45:00   1.26
24SCS25         01/01/2000 01:00:00   0.588
24SCS25         01/01/2000 01:15:00   0.588
24SCS25         01/01/2000 01:30:00   0.588
24SCS25         01/01/2000 01:45:00   0.588
24SCS25         01/01/2000 02:00:00   1.092
24SCS25         01/01/2000 02:15:00   1.092
24SCS25         01/01/2000 02:30:00   1.092
24SCS25         01/01/2000 02:45:00   1.092
24SCS25         01/01/2000 03:00:00   1.092
24SCS25         01/01/2000 03:15:00   1.092
24SCS25         01/01/2000 03:30:00   1.092
24SCS25         01/01/2000 03:45:00   1.092
24SCS25         01/01/2000 04:00:00   1.428
24SCS25         01/01/2000 04:15:00   1.428
24SCS25         01/01/2000 04:30:00   1.428
24SCS25         01/01/2000 04:45:00   1.428
```

1:100 year 3-hour Chicago Design Storm – Input File

```
24SCS25          01/01/2000 05:00:00   1.26
24SCS25          01/01/2000 05:15:00   1.26
24SCS25          01/01/2000 05:30:00   1.26
24SCS25          01/01/2000 05:45:00   1.26
24SCS25          01/01/2000 06:00:00   1.68
24SCS25          01/01/2000 06:15:00   1.68
24SCS25          01/01/2000 06:30:00   1.68
24SCS25          01/01/2000 06:45:00   1.68
24SCS25          01/01/2000 07:00:00   1.68
24SCS25          01/01/2000 07:15:00   1.68
24SCS25          01/01/2000 07:30:00   1.68
24SCS25          01/01/2000 07:45:00   1.68
24SCS25          01/01/2000 08:00:00   2.268
24SCS25          01/01/2000 08:15:00   2.268
24SCS25          01/01/2000 08:30:00   2.268
24SCS25          01/01/2000 08:45:00   2.268
24SCS25          01/01/2000 09:00:00   2.688
24SCS25          01/01/2000 09:15:00   2.688
24SCS25          01/01/2000 09:30:00   3.024
24SCS25          01/01/2000 09:45:00   3.024
24SCS25          01/01/2000 10:00:00   3.864
24SCS25          01/01/2000 10:15:00   3.864
24SCS25          01/01/2000 10:30:00   5.208
24SCS25          01/01/2000 10:45:00   5.208
24SCS25          01/01/2000 11:00:00   8.064
24SCS25          01/01/2000 11:15:00   8.064
24SCS25          01/01/2000 11:30:00   34.944
24SCS25          01/01/2000 11:45:00   92.736
24SCS25          01/01/2000 12:00:00   12.096
24SCS25          01/01/2000 12:15:00   12.096
24SCS25          01/01/2000 12:30:00   6.216
24SCS25          01/01/2000 12:45:00   6.216
24SCS25          01/01/2000 13:00:00   4.536
24SCS25          01/01/2000 13:15:00   4.536
24SCS25          01/01/2000 13:30:00   3.528
24SCS25          01/01/2000 13:45:00   3.528
24SCS25          01/01/2000 14:00:00   2.688
24SCS25          01/01/2000 14:15:00   2.688
24SCS25          01/01/2000 14:30:00   2.688
24SCS25          01/01/2000 14:45:00   2.688
24SCS25          01/01/2000 15:00:00   2.352
24SCS25          01/01/2000 15:15:00   2.352
24SCS25          01/01/2000 15:30:00   2.352
24SCS25          01/01/2000 15:45:00   2.352
24SCS25          01/01/2000 16:00:00   1.848
24SCS25          01/01/2000 16:15:00   1.848
24SCS25          01/01/2000 16:30:00   1.848
24SCS25          01/01/2000 16:45:00   1.848
24SCS25          01/01/2000 17:00:00   1.932
24SCS25          01/01/2000 17:15:00   1.932
24SCS25          01/01/2000 17:30:00   1.932
24SCS25          01/01/2000 17:45:00   1.932
24SCS25          01/01/2000 18:00:00   1.26
24SCS25          01/01/2000 18:15:00   1.26
24SCS25          01/01/2000 18:30:00   1.26
24SCS25          01/01/2000 18:45:00   1.26
24SCS25          01/01/2000 19:00:00   1.008
24SCS25          01/01/2000 19:15:00   1.008
24SCS25          01/01/2000 19:30:00   1.008
24SCS25          01/01/2000 19:45:00   1.008
24SCS25          01/01/2000 20:00:00   1.428
24SCS25          01/01/2000 20:15:00   1.428
24SCS25          01/01/2000 20:30:00   1.428
24SCS25          01/01/2000 20:45:00   1.428
24SCS25          01/01/2000 21:00:00   0.924
24SCS25          01/01/2000 21:15:00   0.924
24SCS25          01/01/2000 21:30:00   0.924
24SCS25          01/01/2000 21:45:00   0.924
24SCS25          01/01/2000 22:00:00   0.84
24SCS25          01/01/2000 22:15:00   0.84
24SCS25          01/01/2000 22:30:00   0.84
24SCS25          01/01/2000 22:45:00   0.84
24SCS25          01/01/2000 23:00:00   0.84
24SCS25          01/01/2000 23:15:00   0.84
24SCS25          01/01/2000 23:30:00   0.84
24SCS25          01/01/2000 23:45:00   0.84
24SCS25          01/02/2000 00:00:00   0

;Rainfall (mm/hr)
24SCS5           01/01/2000 00:00:00   0.936
24SCS5           01/01/2000 00:15:00   0.936
24SCS5           01/01/2000 00:30:00   0.936
24SCS5           01/01/2000 00:45:00   0.936
24SCS5           01/01/2000 01:00:00   0.4368
24SCS5           01/01/2000 01:15:00   0.4368
24SCS5           01/01/2000 01:30:00   0.4368
24SCS5           01/01/2000 01:45:00   0.4368
24SCS5           01/01/2000 02:00:00   0.8112
24SCS5           01/01/2000 02:15:00   0.8112
24SCS5           01/01/2000 02:30:00   0.8112
24SCS5           01/01/2000 02:45:00   0.8112
24SCS5           01/01/2000 03:00:00   0.8112
24SCS5           01/01/2000 03:15:00   0.8112
24SCS5           01/01/2000 03:30:00   0.8112
24SCS5           01/01/2000 03:45:00   0.8112
24SCS5           01/01/2000 04:00:00   1.0608
24SCS5           01/01/2000 04:15:00   1.0608
24SCS5           01/01/2000 04:30:00   1.0608
24SCS5           01/01/2000 04:45:00   1.0608
24SCS5           01/01/2000 05:00:00   0.936
24SCS5           01/01/2000 05:15:00   0.936
24SCS5           01/01/2000 05:30:00   0.936
24SCS5           01/01/2000 05:45:00   0.936
24SCS5           01/01/2000 06:00:00   1.248
24SCS5           01/01/2000 06:15:00   1.248
24SCS5           01/01/2000 06:30:00   1.248
24SCS5           01/01/2000 06:45:00   1.248
24SCS5           01/01/2000 07:00:00   1.248
24SCS5           01/01/2000 07:15:00   1.248
24SCS5           01/01/2000 07:30:00   1.248
24SCS5           01/01/2000 07:45:00   1.248
24SCS5           01/01/2000 08:00:00   1.6848
24SCS5           01/01/2000 08:15:00   1.6848
24SCS5           01/01/2000 08:30:00   1.6848
24SCS5           01/01/2000 08:45:00   1.6848
24SCS5           01/01/2000 09:00:00   1.9968
24SCS5           01/01/2000 09:15:00   1.9968
24SCS5           01/01/2000 09:30:00   2.2464
24SCS5           01/01/2000 09:45:00   2.2464
24SCS5           01/01/2000 10:00:00   2.8704
24SCS5           01/01/2000 10:15:00   2.8704
24SCS5           01/01/2000 10:30:00   3.8688
24SCS5           01/01/2000 10:45:00   3.8688
24SCS5           01/01/2000 11:00:00   5.9904
24SCS5           01/01/2000 11:15:00   5.9904
24SCS5           01/01/2000 11:30:00   25.9584
24SCS5           01/01/2000 11:45:00   68.8896
24SCS5           01/01/2000 12:00:00   8.9856
24SCS5           01/01/2000 12:15:00   8.9856
24SCS5           01/01/2000 12:30:00   4.6176
24SCS5           01/01/2000 12:45:00   4.6176
24SCS5           01/01/2000 13:00:00   3.3696
24SCS5           01/01/2000 13:15:00   3.3696
24SCS5           01/01/2000 13:30:00   2.6208
24SCS5           01/01/2000 13:45:00   2.6208
24SCS5           01/01/2000 14:00:00   1.9968
24SCS5           01/01/2000 14:15:00   1.9968
24SCS5           01/01/2000 14:30:00   1.9968
24SCS5           01/01/2000 14:45:00   1.9968
24SCS5           01/01/2000 15:00:00   1.7472
24SCS5           01/01/2000 15:15:00   1.7472
24SCS5           01/01/2000 15:30:00   1.7472
24SCS5           01/01/2000 15:45:00   1.7472
24SCS5           01/01/2000 16:00:00   1.3728
24SCS5           01/01/2000 16:15:00   1.3728
24SCS5           01/01/2000 16:30:00   1.3728
24SCS5           01/01/2000 16:45:00   1.3728
24SCS5           01/01/2000 17:00:00   1.4352
24SCS5           01/01/2000 17:15:00   1.4352
24SCS5           01/01/2000 17:30:00   1.4352
24SCS5           01/01/2000 17:45:00   1.4352
24SCS5           01/01/2000 18:00:00   0.936
24SCS5           01/01/2000 18:15:00   0.936
24SCS5           01/01/2000 18:30:00   0.936
24SCS5           01/01/2000 18:45:00   0.936
24SCS5           01/01/2000 19:00:00   0.7488
24SCS5           01/01/2000 19:15:00   0.7488
24SCS5           01/01/2000 19:30:00   0.7488
24SCS5           01/01/2000 19:45:00   0.7488
24SCS5           01/01/2000 20:00:00   1.0608
24SCS5           01/01/2000 20:15:00   1.0608
24SCS5           01/01/2000 20:30:00   1.0608
24SCS5           01/01/2000 20:45:00   1.0608
24SCS5           01/01/2000 21:00:00   0.6864
24SCS5           01/01/2000 21:15:00   0.6864
24SCS5           01/01/2000 21:30:00   0.6864
24SCS5           01/01/2000 21:45:00   0.6864
24SCS5           01/01/2000 22:00:00   0.624
24SCS5           01/01/2000 22:15:00   0.624
24SCS5           01/01/2000 22:30:00   0.624
24SCS5           01/01/2000 22:45:00   0.624
24SCS5           01/01/2000 23:00:00   0.624
24SCS5           01/01/2000 23:15:00   0.624
24SCS5           01/01/2000 23:30:00   0.624
24SCS5           01/01/2000 23:45:00   0.624
24SCS5           01/02/2000 00:00:00   0

;Rainfall (mm/hr)
24SCS50          01/01/2000 00:00:00   1.404
24SCS50          01/01/2000 00:15:00   1.404
24SCS50          01/01/2000 00:30:00   1.404
24SCS50          01/01/2000 00:45:00   1.404
24SCS50          01/01/2000 01:00:00   0.6552
24SCS50          01/01/2000 01:15:00   0.6552
24SCS50          01/01/2000 01:30:00   0.6552
24SCS50          01/01/2000 01:45:00   0.6552
24SCS50          01/01/2000 02:00:00   1.2168
24SCS50          01/01/2000 02:15:00   1.2168
24SCS50          01/01/2000 02:30:00   1.2168
24SCS50          01/01/2000 02:45:00   1.2168
24SCS50          01/01/2000 03:00:00   1.2168
24SCS50          01/01/2000 03:15:00   1.2168
24SCS50          01/01/2000 03:30:00   1.2168
24SCS50          01/01/2000 03:45:00   1.2168
24SCS50          01/01/2000 04:00:00   1.5912
24SCS50          01/01/2000 04:15:00   1.5912
24SCS50          01/01/2000 04:30:00   1.5912
24SCS50          01/01/2000 04:45:00   1.5912
24SCS50          01/01/2000 05:00:00   1.404
24SCS50          01/01/2000 05:15:00   1.404
24SCS50          01/01/2000 05:30:00   1.404
24SCS50          01/01/2000 05:45:00   1.404
24SCS50          01/01/2000 06:00:00   1.872
24SCS50          01/01/2000 06:15:00   1.872
24SCS50          01/01/2000 06:30:00   1.872
24SCS50          01/01/2000 06:45:00   1.872
24SCS50          01/01/2000 07:00:00   1.872
24SCS50          01/01/2000 07:15:00   1.872
24SCS50          01/01/2000 07:30:00   1.872
24SCS50          01/01/2000 07:45:00   1.872
24SCS50          01/01/2000 08:00:00   2.5272
24SCS50          01/01/2000 08:15:00   2.5272
24SCS50          01/01/2000 08:30:00   2.5272
24SCS50          01/01/2000 08:45:00   2.5272
24SCS50          01/01/2000 09:00:00   2.9952
24SCS50          01/01/2000 09:15:00   2.9952
24SCS50          01/01/2000 09:30:00   3.3696
24SCS50          01/01/2000 09:45:00   3.3696
24SCS50          01/01/2000 10:00:00   4.3056
24SCS50          01/01/2000 10:15:00   4.3056
24SCS50          01/01/2000 10:30:00   5.803199
24SCS50          01/01/2000 10:45:00   5.803199
24SCS50          01/01/2000 11:00:00   8.9856
24SCS50          01/01/2000 11:15:00   8.9856
24SCS50          01/01/2000 11:30:00   38.9376
24SCS50          01/01/2000 11:45:00   103.3344
24SCS50          01/01/2000 12:00:00   13.4784
24SCS50          01/01/2000 12:15:00   13.4784
24SCS50          01/01/2000 12:30:00   6.9264
24SCS50          01/01/2000 12:45:00   6.9264
24SCS50          01/01/2000 13:00:00   5.0544
24SCS50          01/01/2000 13:15:00   5.0544
24SCS50          01/01/2000 13:30:00   3.9312
24SCS50          01/01/2000 13:45:00   3.9312
24SCS50          01/01/2000 14:00:00   2.9952
24SCS50          01/01/2000 14:15:00   2.9952
24SCS50          01/01/2000 14:30:00   2.9952
24SCS50          01/01/2000 14:45:00   2.9952
24SCS50          01/01/2000 15:00:00   2.6208
24SCS50          01/01/2000 15:15:00   2.6208
24SCS50          01/01/2000 15:30:00   2.6208
24SCS50          01/01/2000 15:45:00   2.6208
24SCS50          01/01/2000 16:00:00   2.0592
24SCS50          01/01/2000 16:15:00   2.0592
24SCS50          01/01/2000 16:30:00   2.0592
24SCS50          01/01/2000 16:45:00   2.0592
24SCS50          01/01/2000 17:00:00   2.1528
24SCS50          01/01/2000 17:15:00   2.1528
24SCS50          01/01/2000 17:30:00   2.1528
24SCS50          01/01/2000 17:45:00   2.1528
24SCS50          01/01/2000 18:00:00   1.404
24SCS50          01/01/2000 18:15:00   1.404
24SCS50          01/01/2000 18:30:00   1.404
24SCS50          01/01/2000 18:45:00   1.404
```

1:100 year 3-hour Chicago Design Storm – Input File

```
24SCS50          01/01/2000 19:00:00   1.1232
24SCS50          01/01/2000 19:15:00   1.1232
24SCS50          01/01/2000 19:30:00   1.1232
24SCS50          01/01/2000 19:45:00   1.1232
24SCS50          01/01/2000 20:00:00   1.5912
24SCS50          01/01/2000 20:15:00   1.5912
24SCS50          01/01/2000 20:30:00   1.5912
24SCS50          01/01/2000 20:45:00   1.5912
24SCS50          01/01/2000 21:00:00   1.0296
24SCS50          01/01/2000 21:15:00   1.0296
24SCS50          01/01/2000 21:30:00   1.0296
24SCS50          01/01/2000 21:45:00   1.0296
24SCS50          01/01/2000 22:00:00   0.936
24SCS50          01/01/2000 22:15:00   0.936
24SCS50          01/01/2000 22:30:00   0.936
24SCS50          01/01/2000 22:45:00   0.936
24SCS50          01/01/2000 23:00:00   0.936
24SCS50          01/01/2000 23:15:00   0.936
24SCS50          01/01/2000 23:30:00   0.936
24SCS50          01/01/2000 23:45:00   0.936
24SCS50          01/02/2000 00:00:00   0

;Rainfall (mm/hr)
3CHI10           01/01/2000 00:00:00   3.755
3CHI10           01/01/2000 00:10:00   4.478
3CHI10           01/01/2000 00:20:00   5.593
3CHI10           01/01/2000 00:30:00   7.551
3CHI10           01/01/2000 00:40:00   11.936
3CHI10           01/01/2000 00:50:00   30.856
3CHI10           01/01/2000 01:00:00   122.142
3CHI10           01/01/2000 01:10:00   35.237
3CHI10           01/01/2000 01:20:00   18.159
3CHI10           01/01/2000 01:30:00   12.238
3CHI10           01/01/2000 01:40:00   9.269
3CHI10           01/01/2000 01:50:00   7.492
3CHI10           01/01/2000 02:00:00   6.309
3CHI10           01/01/2000 02:10:00   5.465
3CHI10           01/01/2000 02:20:00   4.831
3CHI10           01/01/2000 02:30:00   4.338
3CHI10           01/01/2000 02:40:00   3.942
3CHI10           01/01/2000 02:50:00   3.617
3CHI10           01/01/2000 03:00:00   0

;Rainfall (mm/hr)
3CHI100          01/01/2000 00:00:00   5.339
3CHI100          01/01/2000 00:10:00   6.376
3CHI100          01/01/2000 00:20:00   7.977
3CHI100          01/01/2000 00:30:00   10.797
3CHI100          01/01/2000 00:40:00   17.136
3CHI100          01/01/2000 00:50:00   45.128
3CHI100          01/01/2000 01:00:00   178.107
3CHI100          01/01/2000 01:10:00   51.056
3CHI100          01/01/2000 01:20:00   26.163
3CHI100          01/01/2000 01:30:00   17.571
3CHI100          01/01/2000 01:40:00   13.277
3CHI100          01/01/2000 01:50:00   10.712
3CHI100          01/01/2000 02:00:00   9.008
3CHI100          01/01/2000 02:10:00   7.793
3CHI100          01/01/2000 02:20:00   6.883
3CHI100          01/01/2000 02:30:00   6.174
3CHI100          01/01/2000 02:40:00   5.607
3CHI100          01/01/2000 02:50:00   5.142
3CHI100          01/01/2000 03:00:00   0

;Rainfall (mm/hr)
3CHI120          01/01/2000 00:00:00   6.406801
3CHI120          01/01/2000 00:10:00   7.6512
3CHI120          01/01/2000 00:20:00   9.572401
3CHI120          01/01/2000 00:30:00   12.9564
3CHI120          01/01/2000 00:40:00   20.5632
3CHI120          01/01/2000 00:50:00   54.1536
3CHI120          01/01/2000 01:00:00   213.7284
3CHI120          01/01/2000 01:10:00   61.2672
3CHI120          01/01/2000 01:20:00   31.3956
3CHI120          01/01/2000 01:30:00   21.0852
3CHI120          01/01/2000 01:40:00   15.9324
3CHI120          01/01/2000 01:50:00   12.8544
3CHI120          01/01/2000 02:00:00   10.8096
3CHI120          01/01/2000 02:10:00   9.351601
3CHI120          01/01/2000 02:20:00   8.259601
3CHI120          01/01/2000 02:30:00   7.4088
3CHI120          01/01/2000 02:40:00   6.7284
3CHI120          01/01/2000 02:50:00   6.170401
3CHI120          01/01/2000 03:00:00   0

;Rainfall (mm/hr)
3CHI2            01/01/2000 00:00:00   2.491
3CHI2            01/01/2000 00:10:00   2.966
3CHI2            01/01/2000 00:20:00   3.696
3CHI2            01/01/2000 00:30:00   4.976
3CHI2            01/01/2000 00:40:00   7.828
3CHI2            01/01/2000 00:50:00   19.966
3CHI2            01/01/2000 01:00:00   76.805
3CHI2            01/01/2000 01:10:00   22.777
3CHI2            01/01/2000 01:20:00   11.852
3CHI2            01/01/2000 01:30:00   8.025
3CHI2            01/01/2000 01:40:00   6.096
3CHI2            01/01/2000 01:50:00   4.938
3CHI2            01/01/2000 02:00:00   4.165
3CHI2            01/01/2000 02:10:00   3.613
3CHI2            01/01/2000 02:20:00   3.197
3CHI2            01/01/2000 02:30:00   2.873
3CHI2            01/01/2000 02:40:00   2.613
3CHI2            01/01/2000 02:50:00   2.4
3CHI2            01/01/2000 03:00:00   0

;Rainfall (mm/hr)
3CHI25           01/01/2000 00:00:00   4.358
3CHI25           01/01/2000 00:10:00   5.202
3CHI25           01/01/2000 00:20:00   6.506
3CHI25           01/01/2000 00:30:00   8.801
3CHI25           01/01/2000 00:40:00   13.954
3CHI25           01/01/2000 00:50:00   36.302
3CHI25           01/01/2000 01:00:00   144.693
3CHI25           01/01/2000 01:10:00   41.479
3CHI25           01/01/2000 01:20:00   21.286
3CHI25           01/01/2000 01:30:00   14.308
3CHI25           01/01/2000 01:40:00   10.818
3CHI25           01/01/2000 01:50:00   8.732
3CHI25           01/01/2000 02:00:00   7.345
3CHI25           01/01/2000 02:10:00   6.356
3CHI25           01/01/2000 02:20:00   5.615
3CHI25           01/01/2000 02:30:00   5.038
3CHI25           01/01/2000 02:40:00   4.576
3CHI25           01/01/2000 02:50:00   4.197
3CHI25           01/01/2000 03:00:00   0

;Rainfall (mm/hr)
3CHI5            01/01/2000 00:00:00   3.256
3CHI5            01/01/2000 00:10:00   3.881
3CHI5            01/01/2000 00:20:00   4.844
3CHI5            01/01/2000 00:30:00   6.532
3CHI5            01/01/2000 00:40:00   10.308
3CHI5            01/01/2000 00:50:00   26.792
3CHI5            01/01/2000 01:00:00   103.93
3CHI5            01/01/2000 01:10:00   30.286
3CHI5            01/01/2000 01:20:00   15.655
3CHI5            01/01/2000 01:30:00   10.568
3CHI5            01/01/2000 01:40:00   8.013
3CHI5            01/01/2000 01:50:00   6.482
3CHI5            01/01/2000 02:00:00   5.462
3CHI5            01/01/2000 02:10:00   4.733
3CHI5            01/01/2000 02:20:00   4.186
3CHI5            01/01/2000 02:30:00   3.76
3CHI5            01/01/2000 02:40:00   3.418
3CHI5            01/01/2000 02:50:00   3.137
3CHI5            01/01/2000 03:00:00   0

;Rainfall (mm/hr)
3CHI50           01/01/2000 00:00:00   4.828
3CHI50           01/01/2000 00:10:00   5.766
3CHI50           01/01/2000 00:20:00   7.214
3CHI50           01/01/2000 00:30:00   9.763
3CHI50           01/01/2000 00:40:00   15.496
3CHI50           01/01/2000 00:50:00   40.401
3CHI50           01/01/2000 01:00:00   161.471
3CHI50           01/01/2000 01:10:00   46.17
3CHI50           01/01/2000 01:20:00   23.66
3CHI50           01/01/2000 01:30:00   15.89
3CHI50           01/01/2000 01:40:00   12.006
3CHI50           01/01/2000 01:50:00   9.687
3CHI50           01/01/2000 02:00:00   8.146
3CHI50           01/01/2000 02:10:00   7.047
3CHI50           01/01/2000 02:20:00   6.224
3CHI50           01/01/2000 02:30:00   5.583
3CHI50           01/01/2000 02:40:00   5.07
3CHI50           01/01/2000 02:50:00   4.649
3CHI50           01/01/2000 03:00:00   0

;Rainfall (mm/hr)
4hr-25mm         01/01/2000 00:00:00   1.777
4hr-25mm         01/01/2000 00:15:00   2.357
4hr-25mm         01/01/2000 00:30:00   3.618
4hr-25mm         01/01/2000 00:45:00   8.975
4hr-25mm         01/01/2000 01:00:00   45.631
4hr-25mm         01/01/2000 01:15:00   11.911
4hr-25mm         01/01/2000 01:30:00   6.051
4hr-25mm         01/01/2000 01:45:00   4.108
4hr-25mm         01/01/2000 02:00:00   3.138
4hr-25mm         01/01/2000 02:15:00   2.555
4hr-25mm         01/01/2000 02:30:00   2.165
4hr-25mm         01/01/2000 02:45:00   1.885
4hr-25mm         01/01/2000 03:00:00   1.675
4hr-25mm         01/01/2000 03:15:00   1.509
4hr-25mm         01/01/2000 03:30:00   1.376
4hr-25mm         01/01/2000 03:45:00   1.266

;Rainfall (mm/hr)
AUG4-88          01/01/2000 00:00:00   0
AUG4-88          01/01/2000 00:05:00   0.1
AUG4-88          01/01/2000 00:10:00   0.1
AUG4-88          01/01/2000 00:15:00   0
AUG4-88          01/01/2000 00:20:00   3.7
AUG4-88          01/01/2000 00:25:00   6.2
AUG4-88          01/01/2000 00:30:00   101.5
AUG4-88          01/01/2000 00:35:00   15.5
AUG4-88          01/01/2000 00:40:00   29.3
AUG4-88          01/01/2000 00:45:00   19.8
AUG4-88          01/01/2000 00:50:00   1.5
AUG4-88          01/01/2000 00:55:00   1.7
AUG4-88          01/01/2000 01:00:00   5.4
AUG4-88          01/01/2000 01:05:00   24.6
AUG4-88          01/01/2000 01:10:00   26.5
AUG4-88          01/01/2000 01:15:00   34.9
AUG4-88          01/01/2000 01:20:00   10.2
AUG4-88          01/01/2000 01:25:00   27.1
AUG4-88          01/01/2000 01:30:00   104.4
AUG4-88          01/01/2000 01:35:00   27.5
AUG4-88          01/01/2000 01:40:00   62.5
AUG4-88          01/01/2000 01:45:00   31.8
AUG4-88          01/01/2000 01:50:00   79.8
AUG4-88          01/01/2000 01:55:00   67.5
AUG4-88          01/01/2000 02:00:00   156.2
AUG4-88          01/01/2000 02:05:00   5.1
AUG4-88          01/01/2000 02:10:00   0.2
AUG4-88          01/01/2000 02:15:00   0.2
AUG4-88          01/01/2000 02:20:00   0.2
AUG4-88          01/01/2000 02:25:00   0.2
AUG4-88          01/01/2000 02:30:00   0.2
AUG4-88          01/01/2000 02:35:00   0.2
AUG4-88          01/01/2000 02:40:00   0.2
AUG4-88          01/01/2000 02:45:00   0.2
AUG4-88          01/01/2000 02:50:00   0.2
AUG4-88          01/01/2000 02:55:00   0.2
AUG4-88          01/01/2000 03:00:00   12.8
AUG4-88          01/01/2000 03:05:00   14
AUG4-88          01/01/2000 03:10:00   22.2
AUG4-88          01/01/2000 03:15:00   21.8
AUG4-88          01/01/2000 03:20:00   1.4
AUG4-88          01/01/2000 03:25:00   0.2
AUG4-88          01/01/2000 03:30:00   0.2
AUG4-88          01/01/2000 03:35:00   0.2
AUG4-88          01/01/2000 03:40:00   0.2
AUG4-88          01/01/2000 03:45:00   0.2
AUG4-88          01/01/2000 03:50:00   0.2
AUG4-88          01/01/2000 03:55:00   0.2
AUG4-88          01/01/2000 04:00:00   0.2
AUG4-88          01/01/2000 04:05:00   0.2
AUG4-88          01/01/2000 04:10:00   0.2
AUG4-88          01/01/2000 04:15:00   0.2
AUG4-88          01/01/2000 04:20:00   0.2
AUG4-88          01/01/2000 04:25:00   0.2
AUG4-88          01/01/2000 04:30:00   0.2
AUG4-88          01/01/2000 04:35:00   0.2
AUG4-88          01/01/2000 04:40:00   0.2
AUG4-88          01/01/2000 04:45:00   0.2
AUG4-88          01/01/2000 04:50:00   0.2
AUG4-88          01/01/2000 04:55:00   0.2
AUG4-88          01/01/2000 05:00:00   2.9
AUG4-88          01/01/2000 05:05:00   7.8
AUG4-88          01/01/2000 05:10:00   10
AUG4-88          01/01/2000 05:15:00   6.3
AUG4-88          01/01/2000 05:20:00   5.1
AUG4-88          01/01/2000 05:25:00   9.8
```

1:100 year 3-hour Chicago Design Storm – Input File

```
AUG4-88          01/01/2000 05:30:00   2.6
AUG4-88          01/01/2000 05:35:00   1.7
AUG4-88          01/01/2000 05:40:00   0
AUG4-88          01/01/2000 05:45:00   0

;Rainfall (mm/hr)
AUG8-96          01/01/2000 00:00:00   4
AUG8-96          01/01/2000 00:05:00   11.9
AUG8-96          01/01/2000 00:10:00   26.5
AUG8-96          01/01/2000 00:15:00   13.3
AUG8-96          01/01/2000 00:20:00   0
AUG8-96          01/01/2000 00:25:00   2.7
AUG8-96          01/01/2000 00:30:00   0
AUG8-96          01/01/2000 00:35:00   8
AUG8-96          01/01/2000 00:40:00   18.6
AUG8-96          01/01/2000 00:45:00   10.6
AUG8-96          01/01/2000 00:50:00   21.2
AUG8-96          01/01/2000 00:55:00   2.7
AUG8-96          01/01/2000 01:00:00   2.7
AUG8-96          01/01/2000 01:05:00   15.9
AUG8-96          01/01/2000 01:10:00   66.3
AUG8-96          01/01/2000 01:15:00   55.7
AUG8-96          01/01/2000 01:20:00   122
AUG8-96          01/01/2000 01:25:00   88.9
AUG8-96          01/01/2000 01:30:00   9.3
AUG8-96          01/01/2000 01:35:00   8
AUG8-96          01/01/2000 01:40:00   4
AUG8-96          01/01/2000 01:45:00   0
AUG8-96          01/01/2000 01:50:00   2.7
AUG8-96          01/01/2000 01:55:00   0
AUG8-96          01/01/2000 02:00:00   0
AUG8-96          01/01/2000 02:05:00   0
AUG8-96          01/01/2000 02:10:00   5.3
AUG8-96          01/01/2000 02:15:00   0
AUG8-96          01/01/2000 02:20:00   0
AUG8-96          01/01/2000 02:25:00   0
AUG8-96          01/01/2000 02:30:00   0
AUG8-96          01/01/2000 02:35:00   0
AUG8-96          01/01/2000 02:40:00   0
AUG8-96          01/01/2000 02:45:00   4
AUG8-96          01/01/2000 02:50:00   53.1
AUG8-96          01/01/2000 02:55:00   69
AUG8-96          01/01/2000 03:00:00   63.7
AUG8-96          01/01/2000 03:05:00   58.4
AUG8-96          01/01/2000 03:10:00   47.8
AUG8-96          01/01/2000 03:15:00   15.9
AUG8-96          01/01/2000 03:20:00   13.3
AUG8-96          01/01/2000 03:25:00   8
AUG8-96          01/01/2000 03:30:00   5.3
AUG8-96          01/01/2000 03:35:00   6.6
AUG8-96          01/01/2000 03:40:00   2.7
AUG8-96          01/01/2000 03:45:00   4
AUG8-96          01/01/2000 03:50:00   2.7
AUG8-96          01/01/2000 03:55:00   4
AUG8-96          01/01/2000 04:00:00   2.7
AUG8-96          01/01/2000 04:05:00   5.3
AUG8-96          01/01/2000 04:10:00   4
AUG8-96          01/01/2000 04:15:00   2.7
AUG8-96          01/01/2000 04:20:00   4
AUG8-96          01/01/2000 04:25:00   2.7
AUG8-96          01/01/2000 04:30:00   1.3
AUG8-96          01/01/2000 04:35:00   1.3
AUG8-96          01/01/2000 04:40:00   0
AUG8-96          01/01/2000 04:45:00   0
AUG8-96          01/01/2000 04:50:00   0
AUG8-96          01/01/2000 04:55:00   0
AUG8-96          01/01/2000 05:00:00   2.7
AUG8-96          01/01/2000 05:05:00   0
AUG8-96          01/01/2000 05:10:00   0
AUG8-96          01/01/2000 05:15:00   0
AUG8-96          01/01/2000 05:20:00   0
AUG8-96          01/01/2000 05:25:00   0
AUG8-96          01/01/2000 05:30:00   0
AUG8-96          01/01/2000 05:35:00   0
AUG8-96          01/01/2000 05:40:00   1.3
AUG8-96          01/01/2000 05:45:00   0

;Rainfall (mm/hr)
JUL1-79          01/01/2000 00:00:00   2.3
JUL1-79          01/01/2000 00:05:00   2.3
JUL1-79          01/01/2000 00:10:00   8.89
JUL1-79          01/01/2000 00:15:00   8.89
JUL1-79          01/01/2000 00:20:00   8.89
JUL1-79          01/01/2000 00:25:00   8.89
JUL1-79          01/01/2000 00:30:00   38.1
JUL1-79          01/01/2000 00:35:00   38.1
JUL1-79          01/01/2000 00:40:00   38.1
JUL1-79          01/01/2000 00:45:00   38.1
JUL1-79          01/01/2000 00:50:00   38.1
JUL1-79          01/01/2000 00:55:00   38.1
JUL1-79          01/01/2000 01:00:00   38.1
JUL1-79          01/01/2000 01:05:00   50.8
JUL1-79          01/01/2000 01:10:00   50.8
JUL1-79          01/01/2000 01:15:00   76.2
JUL1-79          01/01/2000 01:20:00   106.7
JUL1-79          01/01/2000 01:25:00   106.7
JUL1-79          01/01/2000 01:30:00   71.1
JUL1-79          01/01/2000 01:35:00   71.1
JUL1-79          01/01/2000 01:40:00   30.5
JUL1-79          01/01/2000 01:45:00   30.5
JUL1-79          01/01/2000 01:50:00   30.5
JUL1-79          01/01/2000 01:55:00   30.5
JUL1-79          01/01/2000 02:00:00   3.8
JUL1-79          01/01/2000 02:05:00   3.8
JUL1-79          01/01/2000 02:10:00   3.8
JUL1-79          01/01/2000 02:15:00   3.8
JUL1-79          01/01/2000 02:20:00   3.8
JUL1-79          01/01/2000 02:25:00   3.8
JUL1-79          01/01/2000 02:30:00   3.8
JUL1-79          01/01/2000 02:35:00   3.8
JUL1-79          01/01/2000 02:40:00   3.8
JUL1-79          01/01/2000 02:45:00   3.8
JUL1-79          01/01/2000 02:50:00   3.8
JUL1-79          01/01/2000 02:55:00   3.8

;Flow (m³/s)
MAJS2            01/01/2000 00:00:00   0
MAJS2            01/01/2000 00:01:00   0
MAJS2            01/01/2000 00:02:00   0
MAJS2            01/01/2000 00:03:00   0
MAJS2            01/01/2000 00:04:00   0
MAJS2            01/01/2000 00:05:00   0
MAJS2            01/01/2000 00:06:00   0
MAJS2            01/01/2000 00:07:00   0
MAJS2            01/01/2000 00:08:00   0
MAJS2            01/01/2000 00:09:00   0
MAJS2            01/01/2000 00:10:00   0
.....
Too many data points (1295 in total).

;Flow (m³/s)
MAJS3            01/01/2000 00:00:00   0
MAJS3            01/01/2000 00:01:00   0
MAJS3            01/01/2000 00:02:00   0
MAJS3            01/01/2000 00:03:00   0
MAJS3            01/01/2000 00:04:00   0
MAJS3            01/01/2000 00:05:00   0
MAJS3            01/01/2000 00:06:00   0
MAJS3            01/01/2000 00:07:00   0
MAJS3            01/01/2000 00:08:00   0
MAJS3            01/01/2000 00:09:00   0
MAJS3            01/01/2000 00:10:00   0
.....
Too many data points (1295 in total).

;Flow (m³/s)
MAJS4            01/01/2000 00:00:00   0
MAJS4            01/01/2000 00:01:00   0
MAJS4            01/01/2000 00:02:00   0
MAJS4            01/01/2000 00:03:00   0
MAJS4            01/01/2000 00:04:00   0
MAJS4            01/01/2000 00:05:00   0
MAJS4            01/01/2000 00:06:00   0
MAJS4            01/01/2000 00:07:00   0
MAJS4            01/01/2000 00:08:00   0
MAJS4            01/01/2000 00:09:00   0
MAJS4            01/01/2000 00:10:00   0
.....
Too many data points (1295 in total).

;Flow (m³/s)
MINS2            01/01/2000 00:00:00   0
MINS2            01/01/2000 00:01:00   0
MINS2            01/01/2000 00:02:00   0
MINS2            01/01/2000 00:03:00   0
MINS2            01/01/2000 00:04:00   0
MINS2            01/01/2000 00:05:00   0
MINS2            01/01/2000 00:06:00   0
MINS2            01/01/2000 00:07:00   0
MINS2            01/01/2000 00:08:00   0
MINS2            01/01/2000 00:09:00   0
MINS2            01/01/2000 00:10:00   0
.....
Too many data points (1295 in total).

;Flow (m³/s)
MINS3            01/01/2000 00:00:00   0
MINS3            01/01/2000 00:01:00   0
MINS3            01/01/2000 00:02:00   0
MINS3            01/01/2000 00:03:00   0
MINS3            01/01/2000 00:04:00   0
MINS3            01/01/2000 00:05:00   0
MINS3            01/01/2000 00:06:00   0
MINS3            01/01/2000 00:07:00   0
MINS3            01/01/2000 00:08:00   0
MINS3            01/01/2000 00:09:00   0
MINS3            01/01/2000 00:10:00   0
.....
Too many data points (1295 in total).

;Flow (m³/s)
MINS4            01/01/2000 00:00:00   0
MINS4            01/01/2000 00:01:00   0
MINS4            01/01/2000 00:02:00   0
MINS4            01/01/2000 00:03:00   0
MINS4            01/01/2000 00:04:00   0
MINS4            01/01/2000 00:05:00   0
MINS4            01/01/2000 00:06:00   0
MINS4            01/01/2000 00:07:00   0
MINS4            01/01/2000 00:08:00   0
MINS4            01/01/2000 00:09:00   0
MINS4            01/01/2000 00:10:00   0
.....
Too many data points (1295 in total).

;Flow (m³/s)
OUT-1            01/01/2000 00:00:00   0
OUT-1            01/01/2000 00:01:00   0
OUT-1            01/01/2000 00:02:00   0
OUT-1            01/01/2000 00:03:00   0
OUT-1            01/01/2000 00:04:00   0
OUT-1            01/01/2000 00:05:00   0
OUT-1            01/01/2000 00:06:00   0
OUT-1            01/01/2000 00:07:00   0
OUT-1            01/01/2000 00:08:00   0
OUT-1            01/01/2000 00:09:00   0
OUT-1            01/01/2000 00:10:00   0
.....
Too many data points (1295 in total).

;Flow (m³/s)
WD2              01/01/2000 00:00:00   0
WD2              01/01/2000 00:01:00   0
WD2              01/01/2000 00:02:00   0
WD2              01/01/2000 00:03:00   0
WD2              01/01/2000 00:04:00   0
WD2              01/01/2000 00:05:00   0
WD2              01/01/2000 00:06:00   0
WD2              01/01/2000 00:07:00   0
WD2              01/01/2000 00:08:00   0
WD2              01/01/2000 00:09:00   0
WD2              01/01/2000 00:10:00   0
.....
Too many data points (1295 in total).

[REPORT]
;;Reporting Options
INPUT      YES
CONTROLS   NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL

[TAGS]
Subcatch   1-P              SWM_Block
Subcatch   CB403-MH600      Front_Yard
Subcatch   CB601-CB602      Front_Yard
Subcatch   CB602-MH600      Front_Yard
Subcatch   CB603-CB604      Front_Yard
Subcatch   CB604-TC600      Front_Yard
Subcatch   CB605-CB606      Front_Yard
Subcatch   CB606-TC601      Front_Yard
Subcatch   CB608-CB609      Front_Yard
Subcatch   CB609-CBMH600    Front_Yard
```

```
Subcatch   CB610-CBMH600    Front_Yard
Subcatch   CB611-CB610      Front_Yard
Subcatch   CB612-CB611      Front_Yard
Subcatch   CB700-CB701      Front_Yard
Subcatch   CB701-CB702      Front_Yard
Subcatch   CB702-CB703      Front_Yard
Subcatch   CB703-TC701      Front_Yard
Subcatch   CB704-CB705      Front_Yard
Subcatch   CB705-MH700      Front_Yard
Subcatch   CB706-CB707      Front_Yard
Subcatch   CB707-CB708      Front_Yard
Subcatch   CB708-TC702      Front_Yard
Subcatch   CB709-TC703      Front_Yard
Subcatch   CB710-CB711      Front_Yard
Subcatch   CB711-CB712      Front_Yard
Subcatch   CB712-OUTLET     Front_Yard
Subcatch   CB803-CB804      Front_Yard
Subcatch   CB804-CB805      Front_Yard
Subcatch   CB805-MH700      Front_Yard
Subcatch   CB902-CB903      Front_Yard
Subcatch   CB903-CB904      Front_Yard
Subcatch   CB904-MH701      Front_Yard
Subcatch   CBMH600-OUTLET   Front_Yard
Subcatch   EX_1             Existing
Subcatch   EX_2_(CB704-CB705) Existing
Subcatch   EX_3_(CB703-CB704) Existing
Subcatch   EX_4_(CB701-CB702) Existing
Subcatch   EX_5_(CB700-CB701) Existing
Subcatch   EX_6_(CB805-MH700) Existing
Subcatch   EX_7_(MH700-MH701) Existing
Subcatch   EX_8_(MH705-MH700) Existing
Subcatch   EXRY-CB600       Rear_Yard
Subcatch   EXRY-CB613       Rear_Yard
Subcatch   MH700-MH701      Front_Yard
Subcatch   RY_CB600-CB601   Rear_Yard
Subcatch   RY_CB613-CB612   Rear_Yard
Subcatch   RY1-POND         Rear_Yard
Subcatch   RY2-POND         Rear_Yard
Subcatch   RY3-POND         Rear_Yard
Subcatch   RY4-POND         Rear_Yard
Subcatch   RY607-TC600      Rear_Yard
Subcatch   Wren_Drive       Front_Yard
Node       J5230            300mmPipeInv.
Node       J5260            300mmPipeInv.
Node       CB403_(P-Stm-400_Series) Manhole
Node       CB600_(P-Stm-500_&_600_Series) Manhole
Node       CB601_(P-Stm-500_&_600_Series) Manhole
Node       CB602_(P-Stm-500_&_600_Series) Manhole
Node       CB603_(P-Stm-500_&_600_Series) Manhole
Node       CB604_(P-Stm-500_&_600_Series) Manhole
Node       CB605_(P-Stm-500_&_600_Series) Manhole
Node       CB606_(P-Stm-500_&_600_Series) Manhole
Node       CB607_(P-Stm-500_&_600_Series) Manhole
Node       CB608_(P-Stm-500_&_600_Series) Manhole
Node       CB609_(P-Stm-500_&_600_Series) Manhole
Node       CB610_(P-Stm-500_&_600_Series) Manhole
Node       CB611_(P-Stm-500_&_600_Series) Manhole
Node       CB612_(P-Stm-500_&_600_Series) Manhole
Node       CB613_(P-Stm-500_&_600_Series) Manhole
Node       CB700_(P-Stm-_800_&_700_Series) Manhole
Node       CB701_(P-Stm-_800_&_700_Series) Manhole
Node       CB702_(P-Stm-_800_&_700_Series) Manhole
Node       CB703_(P-Stm-_800_&_700_Series) Manhole
Node       CB704_(P-Stm-_800_&_700_Series) Manhole
Node       CB705_(P-Stm-_800_&_700_Series) Manhole
Node       CB706_(P-Stm-_800_&_700_Series) Manhole
Node       CB707_(P-Stm-_800_&_700_Series) Manhole
Node       CB708_(P-Stm-_800_&_700_Series) Manhole
Node       CB709_(P-Stm-_800_&_700_Series) Manhole
Node       CB710_(P-Stm-_800_&_700_Series) Manhole
Node       CB711_(P-Stm-_800_&_700_Series) Manhole
Node       CB712_(P-Stm-_800_&_700_Series) Manhole
Node       CB803_(P-Stm-_800_&_700_Series) Manhole
Node       CB804_(P-Stm-_800_&_700_Series) Manhole
Node       CB805_(P-Stm-_800_&_700_Series) Manhole
Node       CB902_(P-Stm-900_Series) Manhole
Node       CB903_(P-Stm-900_Series) Manhole
Node       CB904_(P-Stm-900_Series) Manhole
Node       CO400_(P-Stm-400_Series) Manhole
Node       CO500_(P-Stm-500_&_600_Series) Manhole
Node       CO600_(P-Stm-500_&_600_Series) Manhole
Node       CO800_(P-Stm-_800_&_700_Series) Manhole
Node       CO900_(P-Stm-900_Series) Manhole
Node       DIMH600_(P-Stm-500_&_600_Series) Manhole
Node       EXCB13_(P-Stm-_800_&_700_Series) Manhole
Node       EXCB14_(P-Stm-500_&_600_Series) Manhole
Node       MH600_(P-Stm-500_&_600_Series) Manhole
Node       MH601_(P-Stm-500_&_600_Series) Manhole
Node       MH700_(P-Stm-_800_&_700_Series) Manhole
Node       MH701_(P-Stm-_800_&_700_Series) Manhole
Node       POND-1           Dry_Pond
Node       St_CB403         Swale_Storage
Node       St_CB600         Swale_Storage
Node       St_CB601         Swale_Storage
Node       St_CB602         Swale_Storage
Node       St_CB603         Swale_Storage
Node       St_CB604         Swale_Storage
Node       St_CB605         Swale_Storage
Node       St_CB606         Swale_Storage
Node       St_CB607         Swale_Storage
Node       St_CB608         Swale_Storage
Node       St_CB609         Swale_Storage
Node       St_CB610         Swale_Storage
Node       St_CB611         Swale_Storage
Node       St_CB612         Swale_Storage
Node       St_CB613         Swale_Storage
Node       St_CB700         Swale_Storage
Node       St_CB701         Swale_Storage
Node       St_CB702         Swale_Storage
Node       St_CB703         Swale_Storage
Node       St_CB704         Swale_Storage
Node       St_CB705         Swale_Storage
Node       St_CB706         Swale_Storage
Node       St_CB707         Swale_Storage
Node       St_CB708         Swale_Storage
Node       St_CB709         Swale_Storage
Node       St_CB710         Swale_Storage
Node       St_CB711         Swale_Storage
Node       St_CB712         Swale_Storage
Node       St_CB803         Swale_Storage
Node       St_CB804         Swale_Storage
Node       St_CB805         Swale_Storage
Node       St_CB902         Swale_Storage
Node       St_CB903         Swale_Storage
Node       St_CB904         Swale_Storage
Node       St_DIMH600       Swale_Storage
Node       St_MH700         Swale_Storage
Node       TC600_(P-Stm-500_&_600_Series) Manhole
Node       TC601_(P-Stm-500_&_600_Series) Manhole
Node       TC602_(P-Stm-500_&_600_Series) Manhole
Node       TC702_(P-Stm-_800_&_700_Series) Manhole
Node       TC703_(P-Stm-_800_&_700_Series) Manhole
Node       TC705_(P-Stm-_800_&_700_Series) Manhole
Node       TCB701_(P-Stm-_800_&_700_Series) Manhole
Node       TCB704_(P-Stm-_800_&_700_Series) Manhole
Link       C1               McLeod_Drain
Link       C10              Swale_Storage
Link       C11              Swale_Storage
Link       C12              Swale_Storage
Link       C13              Swale_Storage
Link       C14              Swale_Storage
Link       C15              Swale_Storage
Link       C16              Swale_Storage
Link       C17              Swale_Storage
Link       C18              Swale_Storage
Link       C2               Swale_Storage
Link       C24              Swale_Storage
Link       C25              Swale_Storage
Link       C26              Swale_Storage
Link       C27              Swale_Storage
Link       C28              Swale_Storage
Link       C29              Swale_Storage
Link       C3               Swale_Storage
Link       C30              Swale_Storage
Link       C31              Swale_Storage
Link       C35              Swale_Storage
Link       C36              Swale_Storage
Link       C37              Swale_Storage
Link       C4               Swale_Storage
Link       C40              Swale_Storage
Link       C41              Swale_Storage
Link       C42              Swale_Storage
Link       C43              Swale_Storage
Link       C43_1            Swale_Storage
Link       C43_2            Swale_Storage
Link       C45              Swale_Storage
Link       C46              Swale_Storage
Link       C47              Swale_Storage
Link       C48              Swale_Storage
Link       C5               Swale_Storage
Link       C50              Swale_Storage
Link       C51              Swale_Storage
Link       C52              Swale_Storage
Link       C53              Swale_Storage
Link       C54              Swale_Storage
Link       C55              Swale_Storage
Link       C56              Ditch_ROW
Link       C57              Ditch_ROW
Link       C58              Ditch_ROW
Link       C59              Ditch_ROW
Link       C6               Swale_Storage
Link       C60              HDPE_Culvert
Link       C61              RY_Ditch
Link       C66              Swale_Storage
Link       C67              Ditch_ROW
Link       C68              Swale_Storage
Link       C69              Swale_Storage
Link       C7               Swale_Storage
Link       C8               Swale_Storage
Link       C9               Swale_Storage
Link       EX_Ditch         McLeod_Drain
Link       OUT1             Outlet_Pipe
Link       OUT2             Outlet_Pipe
Link       Pipe_-_(118)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(119)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(120)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(121)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(122)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(123)_(1)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(123)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(124)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(125)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(126)_(1)_(1)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(126)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(127)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(128)_(1)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(128)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(131)_(1)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(132)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(133)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(134)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(135)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(138)_(P-Stm-900_Series) Storm_Sewer
Link       Pipe_-_(139)_(P-Stm-900_Series) Storm_Sewer
Link       Pipe_-_(141)_(P-Stm-900_Series) Storm_Sewer
Link       Pipe_-_(143)_(1)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(143)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(144)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(145)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(146)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(148)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(158)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(159)_(1)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(159)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(162)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(165)_(P-Stm-500_&_600_Series) Storm_Sewer
Link       Pipe_-_(166)_(P-Stm-900_Series) Storm_Sewer
Link       Pipe_-_(177)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(64)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(65)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(66)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(67)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(69)_(1)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(70)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(71)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(73)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(74)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(76)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(77)_(1)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(77)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(78)_(1)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(78)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(79)_(1)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(79)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(80)_(P-Stm-_800_&_700_Series) Storm_Sewer
Link       Pipe_-_(98)_(P-Stm-400_Series) Storm_Sewer
Link       Pipe_-_(99)_(P-Stm-400_Series) Storm_Sewer
Link       RY3-SW2          RY_Ditch
Link       RY3-SW3          RY_Ditch
Link       RY3-SW4          RY_Ditch
Link       RY3-SW5          RY_Ditch
Link       W-IN1            Pond_Inlet
Link       W2               Emergency_Spillway
Link       O_CO400          Surcharge
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Link       O_CO500          Surcharge
Link       O-St_CB403       Sewer_Inlet
Link       O-St_CB600       Sewer_Inlet
Link       O-St_CB601       Sewer_Inlet
Link       O-St_CB602       Sewer_Inlet
Link       O-St_CB603       Sewer_Inlet
Link       O-St_CB604       Sewer_Inlet
Link       O-St_CB605       Sewer_Inlet
Link       O-St_CB606       Sewer_Inlet
Link       O-St_CB607       Sewer_Inlet
Link       O-St_CB608       Sewer_Inlet
Link       O-St_CB609       Sewer_Inlet
Link       O-St_CB610       Sewer_Inlet
Link       O-St_CB611       Sewer_Inlet
Link       O-St_CB612       Sewer_Inlet
Link       O-St_CB613       Sewer_Inlet
Link       O-St_CB700       Sewer_Inlet
Link       O-St_CB701       Sewer_Inlet
Link       O-St_CB702       Sewer_Inlet
Link       O-St_CB703       Sewer_Inlet
Link       O-St_CB704       Sewer_Inlet
Link       O-St_CB705       Sewer_Inlet
Link       O-St_CB706       Sewer_Inlet
Link       O-St_CB707       Sewer_Inlet
Link       O-St_CB708       Sewer_Inlet
Link       O-St_CB709       Sewer_Inlet
Link       O-St_CB710       Sewer_Inlet
Link       O-St_CB711       Sewer_Inlet
Link       O-St_CB712       Sewer_Inlet
Link       O-St_CB803       Sewer_Inlet
Link       O-St_CB804       Sewer_Inlet
Link       O-St_CB805       Sewer_Inlet
Link       O-St_CB902       Sewer_Inlet
Link       O-St_CB903       Sewer_Inlet
Link       O-St_CB904       Sewer_Inlet
Link       O-St_DIMH600     Sewer_Inlet
Link       O-St_MH700       Sewer_Inlet

[MAP]
DIMENSIONS       352662.4675      5054554.8918     353136.1825      5055012.4522
UNITS            Meters

[COORDINATES]
;;Node           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
J1               352865.816         5054849.742
J1_OUT           352694.679         5054829.331
J10              352864.593         5054875.576
J11              352837.645         5054904.665
J2               352919.72          5054575.69
J201             352826.516         5054916.77
J203             352844.252         5054897.135
J205             352855.178         5054885.799
J207             352870.745         5054868.844
J208             352890.247         5054852.786
J215             352819.148         5054903.134
J217             352834.683         5054886.54
J219             352847.49          5054873.036
J221             352861.697         5054857.014
J225             352821.655         5054819.775
J227             352804.339         5054810.168
J229             352785.64          5054801.035
J231             352784.988         5054785.039
J232             352833.304         5054810.158
J234             352863.044         5054828.55
J235             352871.549         5054833.81
J236             352904.326         5054834.545
J238             352929.381         5054828.336
J239             352939.087         5054825.931
J242             352937.054         5054787.765
J253             352949.633         5054778.957
J255             352971.489         5054816.978
J257             353000.643         5054800.341
J259             352919.147         5054845.613
J261             352951.163         5054837.668
J263             353014.497         5054787.382
J267             352983.442         5054827.481
J269             353006.537         5054813.862
J271             353026.201         5054795.766
J273             353041.357         5054774.467
J276             352808.8           5054782.17
J277             352814.62          5054772.85
J279             352822.066         5054761.135
J281             352832.638         5054744.46
J284             352853.054         5054710.823
J286             352860.321         5054699.165
J288             352872.294         5054679.955
J290             352800.041         5054769.207
J292             352810.461         5054753.095
J296             352877.939         5054670.783
J297             352888.92          5054652.72
J3               352897.49          5054611.64
J4               352892.71          5054619.36
J5               352844.08          5054698
J5230            352702.728         5054823.378
J5260            352706.412         5054825.911
J6               352827.832         5054893.862
J7               353031.67          5054761.82
J8               352848.683         5054892.209
J9               352840.41          5054703.94
MD-1             352686.9           5054810.394
OUTLET_2_(P-Stm-500_&_600_Series) 352829.35         5054721.73
RY3-J2           352874.78          5054919.61
RY3-J3           352844.11          5054953.02
RY3-J4           352809.72          5054990.28
RY3-J5           352774.29          5054961.6
RY3-J6           352738.86          5054932.91
OF1              352696.934         5054839.775
CB403_(P-Stm-400_Series) 352958.919         5054814.65
CB600_(P-Stm-500_&_600_Series) 353021.277         5054778.359
CB601_(P-Stm-500_&_600_Series) 353008.802         5054792.463
CB602_(P-Stm-500_&_600_Series) 352981.215         5054811.748
CB603_(P-Stm-500_&_600_Series) 352941.454         5054824.397
CB604_(P-Stm-500_&_600_Series) 352914.844         5054830.967
CB605_(P-Stm-500_&_600_Series) 352876.29          5054835.613
CB606_(P-Stm-500_&_600_Series) 352847.42          5054817.759
CB607_(P-Stm-500_&_600_Series) 352809.254         5054793.726
CB608_(P-Stm-500_&_600_Series) 352816.487         5054769.828
CB609_(P-Stm-500_&_600_Series) 352827.377         5054752.22
CB610_(P-Stm-500_&_600_Series) 352847.65          5054719.453
CB611_(P-Stm-500_&_600_Series) 352858.664         5054701.644
CB612_(P-Stm-500_&_600_Series) 352865.885         5054689.968
CB613_(P-Stm-500_&_600_Series) 352880.864         5054665.746
CB700_(P-Stm-_800_&_700_Series) 353032.867         5054786.705
CB701_(P-Stm-_800_&_700_Series) 353014.895         5054806.23
CB702_(P-Stm-_800_&_700_Series) 352992.848         5054821.778
CB703_(P-Stm-_800_&_700_Series) 352961.916         5054834.025
CB704_(P-Stm-_800_&_700_Series) 352929.361         5054842.12
CB705_(P-Stm-_800_&_700_Series) 352900.582         5054849.251
CB706_(P-Stm-_800_&_700_Series) 352830.854         5054824.335
CB707_(P-Stm-_800_&_700_Series) 352814.629         5054814.302
CB708_(P-Stm-_800_&_700_Series) 352793.816         5054807.019
CB709_(P-Stm-_800_&_700_Series) 352783.859         5054794.456
CB710_(P-Stm-_800_&_700_Series) 352791.522         5054776.99
CB711_(P-Stm-_800_&_700_Series) 352805.194         5054760.881
CB712_(P-Stm-_800_&_700_Series) 352815.524         5054744.177
CB803_(P-Stm-_800_&_700_Series) 352832.82          5054909.071
CB804_(P-Stm-_800_&_700_Series) 352847.025         5054893.763
CB805_(P-Stm-_800_&_700_Series) 352862.612         5054876.965
CB902_(P-Stm-900_Series) 352823.274         5054898.332
CB903_(P-Stm-900_Series) 352840.563         5054879.689
CB904_(P-Stm-900_Series) 352855.169         5054863.952
CO400_(P-Stm-400_Series) 352951.469         5054784.495
CO500_(P-Stm-500_&_600_Series) 352937.347         5054787.417
CO600_(P-Stm-500_&_600_Series) 352888.916         5054652.725
CO800_(P-Stm-_800_&_700_Series) 352826.041         5054916.364
CO900_(P-Stm-900_Series) 352818.94          5054902.979
DIMH600_(P-Stm-500_&_600_Series) 352841.568         5054729.281
EXCB13_(P-Stm-_800_&_700_Series) 353047.748         5054762.471
EXCB14_(P-Stm-500_&_600_Series) 353035.313         5054755.409
MH600_(P-Stm-500_&_600_Series) 352960.297         5054819.629
MH601_(P-Stm-500_&_600_Series) 352945.975         5054823.237
MH700_(P-Stm-_800_&_700_Series) 352879.915         5054854.753
MH701_(P-Stm-_800_&_700_Series) 352867.248         5054847.01
PND-1            352806.793         5054704.249
St_CB403         352958.026         5054814.797
St_CB600         353020.905         5054779.605
St_CB601         353008.219         5054793.799
St_CB602         352980.755         5054812.906
St_CB603         352941.586         5054825.27
St_CB604         352914.033         5054832.142
St_CB605         352875.99          5054836.014
St_CB606         352846.804         5054818.507
St_CB607         352808.531         5054794.292
St_CB608         352816.825         5054769.676
St_CB609         352827.809         5054752.083
St_CB610         352847.71          5054719.438
St_CB611         352858.558         5054702.172
St_CB612         352866.11          5054690.112
St_CB613         352881.007         5054665.846
St_CB700         353032.515         5054788.008
St_CB701         353014.33          5054807.587
St_CB702         352992.377         5054822.99
St_CB703         352960.868         5054835.259
St_CB704         352928.856         5054843.219
St_CB705         352899.953         5054850.381
St_CB706         352830.198         5054824.938
St_CB707         352814.013         5054815.049
St_CB708         352792.255         5054807.239
St_CB709         352783.513         5054794.988
St_CB710         352791.578         5054777.749
St_CB711         352805.243         5054761.082
St_CB712         352815.721         5054744.589
St_CB803         352833.174         5054909.51
St_CB804         352847.168         5054893.878
St_CB805         352864.034         5054876.258
St_CB902         352823.407         5054898.519
St_CB903         352840.689         5054880.366
St_CB904         352855.25          5054864.674
St_DIMH600       352841.788         5054729.456
St_MH700         352880.607         5054855.885
TC600_(P-Stm-500_&_600_Series) 352882.422         5054838.736
TC601_(P-Stm-500_&_600_Series) 352995.537         5054803.265
TC602_(P-Stm-500_&_600_Series) 352806.301         5054787.304
TC702_(P-Stm-_800_&_700_Series) 352785.818         5054800.017
TC703_(P-Stm-_800_&_700_Series) 352785.166         5054784.021
TC705_(P-Stm-_800_&_700_Series) 352821.909         5054733.848
TCB701_(P-Stm-_800_&_700_Series) 352804.437         5054809.316
TCB704_(P-Stm-_800_&_700_Series) 352800.032         5054769.205

[VERTICES]
;;Link           X-Coord            Y-Coord
;;-------------- ------------------ ------------------
C12              352810.217         5054795.923
C13              352806.284         5054786.385
C13              352806.074         5054787.135
C13              352806.106         5054787.902
C13              352806.477         5054789.613
C13              352806.703         5054790.452
C13              352807.388         5054792.336
C13              352807.778         5054793.293
C2               353012.143         5054789.863
C2               353009.688         5054792.479
C24              353037.625         5054780.88
C24              353033.756         5054786.595
C25              353021.086         5054801.27
C25              353015.713         5054806.462
C26              353001.847         5054817.221
C26              352998.952         5054819.11
C26              352994.735         5054821.816
C27              352975.799         5054830.799
C27              352970.49          5054832.72
C27              352963.622         5054834.699
C3               352994.913         5054804.317
C3               352988.134         5054808.925
C3               352982.396         5054812.196
C30              352883.421         5054854.638
C30              352882.127         5054855.129
C31              352872.539         5054866.456
C31              352874.457         5054863.513
C31              352876.018         5054860.926
C31              352877.757         5054858.34
C31              352878.961         5054857.091
C37              352862.746         5054877.757
C4               352968.718         5054818.012
C4               352965.352         5054819.044
C4               352963.777         5054819.261
C4               352961.877         5054819.098
C4               352960.534         5054818.62
C4               352960.019         5054818.262
C4               352959.462         5054817.847
C4               352958.945         5054817.307
C4               352958.732         5054816.796
C43_1            352863.982         5054853.728
C43_1            352865.735         5054850.678
C43_2            352865.865         5054849.185
C43_2            352865.281         5054847.497
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C9               352882.359        5054838.482
C9               352881.411        5054838.268
C9               352880.136        5054837.871
C9               352877.322        5054836.778
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OR1              352740.792        5054759.658
OR2              352781.404        5054699.704
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W1               352776.696        5054688.029
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W1               352700.625        5054812.404
W1               352695.305        5054826.108
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[POLYGONS]
;;Subcatchment   X-Coord           Y-Coord
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1:100 year 3-hour Chicago Design Storm – Input File

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CB803-CB804	352817.586	5054914.966
CB804-CB805	352836.065	5054895.049
CB804-CB805	352835.448	5054895.714
CB804-CB805	352847.109	5054906.533
CB804-CB805	352854.084	5054912.694
CB804-CB805	352865.483	5054900.977
CB804-CB805	352846.675	5054883.615
CB804-CB805	352836.065	5054895.049
CB805-MH700	352846.675	5054883.615
CB805-MH700	352862.074	5054897.83
CB805-MH700	352865.483	5054900.977
CB805-MH700	352867.197	5054898.975
CB805-MH700	352883.14	5054912.255
CB805-MH700	352900.984	5054893.641
CB805-MH700	352900.224	5054892.832
CB805-MH700	352889.861	5054887.47
CB805-MH700	352881.194	5054884.075
CB805-MH700	352862.616	5054866.434
CB805-MH700	352846.675	5054883.615
CB902-CB903	352836.065	5054895.049
CB902-CB903	352817.646	5054877.94
CB902-CB903	352809.354	5054886.876
CB902-CB903	352800.359	5054888.463
CB902-CB903	352798.471	5054890.497
CB902-CB903	352791.514	5054897.99
CB902-CB903	352785.021	5054902.559
CB902-CB903	352772.737	5054916.099
CB902-CB903	352771.913	5054933.523
CB902-CB903	352772.789	5054936.642
CB902-CB903	352792.671	5054931.057
CB902-CB903	352806.682	5054926.717
CB902-CB903	352820.936	5054911.355
CB902-CB903	352836.065	5054895.049
CB903-CB904	352849.596	5054880.467
CB903-CB904	352831.167	5054863.367
CB903-CB904	352817.646	5054877.94
CB903-CB904	352836.065	5054895.049
CB903-CB904	352849.596	5054880.467
CB904-MH701	352864.007	5054864.845
CB904-MH701	352845.649	5054847.288
CB904-MH701	352843.519	5054849.703
CB904-MH701	352839.207	5054854.321
CB904-MH701	352833.128	5054861.254
CB904-MH701	352831.167	5054863.367
CB904-MH701	352849.596	5054880.467
CB904-MH701	352862.616	5054866.434
CB904-MH701	352864.007	5054864.845
CBMH600-OUTLET	352824.055	5054743.995
CBMH600-OUTLET	352845.785	5054756.936
CBMH600-OUTLET	352847.115	5054754.703
CBMH600-OUTLET	352865.272	5054765.753
CBMH600-OUTLET	352876.164	5054748.141
CBMH600-OUTLET	352857.975	5054736.926
CBMH600-OUTLET	352859.507	5054734.331
CBMH600-OUTLET	352838.28	5054721.281
CBMH600-OUTLET	352835.016	5054726.271
CBMH600-OUTLET	352824.055	5054743.995
EX_1	352860.012	5054936.829
EX_1	352809.834	5054991.654
EX_1	352830.461	5054987.965
EX_1	352845.495	5054981.714
EX_1	352856.722	5054976.603
EX_1	352866.537	5054972.133
EX_1	352873.834	5054969.46
EX_1	352878.636	5054963.18
EX_1	352885.238	5054952.398
EX_1	352886.296	5054950.683
EX_1	352888.075	5054946.429
EX_1	352892.577	5054938.563
EX_1	352898.892	5054930.556
EX_1	352883.14	5054912.255
EX_1	352860.012	5054936.829
EX_2_(CB704-CB705)	352949.279	5054897.608
EX_2_(CB704-CB705)	352953.968	5054910.858
EX_2_(CB704-CB705)	352962.111	5054907.976
EX_2_(CB704-CB705)	352990.203	5054892.556
EX_2_(CB704-CB705)	352973.643	5054875.893
EX_2_(CB704-CB705)	352949.279	5054897.608
EX_3_(CB703-CB704)	352990.203	5054892.556
EX_3_(CB703-CB704)	353028.458	5054871.558
EX_3_(CB703-CB704)	353051.461	5054858.067
EX_3_(CB703-CB704)	353021.054	5054833.027
EX_3_(CB703-CB704)	353004.11	5054848.366
EX_3_(CB703-CB704)	352973.643	5054875.893
EX_3_(CB703-CB704)	352990.203	5054892.556

```
EX_4_(CB701-CB702) 353099.623        5054823.852
EX_4_(CB701-CB702) 353082.353        5054816.829
EX_4_(CB701-CB702) 353069.996        5054847.197
EX_4_(CB701-CB702) 353094.113        5054833.053
EX_4_(CB701-CB702) 353095.864        5054830.555
EX_4_(CB701-CB702) 353098.053        5054826.802
EX_4_(CB701-CB702) 353099.623        5054823.852
EX_5_(CB700-CB701) 353082.353        5054816.829
EX_5_(CB700-CB701) 353082.303        5054816.796
EX_5_(CB700-CB701) 353099.623        5054823.852
EX_5_(CB700-CB701) 353100.114        5054822.929
EX_5_(CB700-CB701) 353101.421        5054818.808
EX_5_(CB700-CB701) 353105.923        5054812.933
EX_5_(CB700-CB701) 353107.112        5054810.426
EX_5_(CB700-CB701) 353107.83         5054807.644
EX_5_(CB700-CB701) 353114.65         5054790.873
EX_5_(CB700-CB701) 353096.33         5054782.753
EX_5_(CB700-CB701) 353089.092        5054799.998
EX_5_(CB700-CB701) 353082.353        5054816.829
EX_5_(CB700-CB701) 353082.353        5054816.829
EX_6_(CB805-MH700) 352917.306        5054923.88
EX_6_(CB805-MH700) 352900.984        5054893.641
EX_6_(CB805-MH700) 352883.14         5054912.255
EX_6_(CB805-MH700) 352898.892        5054930.556
EX_6_(CB805-MH700) 352917.306        5054923.88
EX_7_(MH700-MH701) 352917.306        5054923.88
EX_7_(MH700-MH701) 352934.97         5054917.582
EX_7_(MH700-MH701) 352919.877        5054873.609
EX_7_(MH700-MH701) 352900.984        5054893.641
EX_7_(MH700-MH701) 352917.306        5054923.88
EX_8_(MH705-MH700) 352934.97         5054917.582
EX_8_(MH705-MH700) 352953.968        5054910.858
EX_8_(MH705-MH700) 352949.499        5054897.713
EX_8_(MH705-MH700) 352919.877        5054873.609
EX_8_(MH705-MH700) 352934.97         5054917.582
EXRY-CB600         352966.705        5054727.768
EXRY-CB600         352983.397        5054741.318
EXRY-CB600         352988.592        5054745.534
EXRY-CB600         352994.803        5054750.576
EXRY-CB600         353000.102        5054754.852
EXRY-CB600         353021.907        5054772.552
EXRY-CB600         353026.535        5054765.113
EXRY-CB600         353031.504        5054758.029
EXRY-CB600         353024.55         5054752.13
EXRY-CB600         353027.367        5054748.659
EXRY-CB600         353010.681        5054735.076
EXRY-CB600         353000.596        5054726.889
EXRY-CB600         352988.554        5054717.113
EXRY-CB600         352980.598        5054710.654
EXRY-CB600         352966.705        5054727.768
EXRY-CB613         352966.701        5054727.604
EXRY-CB613         352980.598        5054710.654
EXRY-CB613         352900.435        5054645.578
EXRY-CB613         352899.304        5054641.327
EXRY-CB613         352890.748        5054636.149
EXRY-CB613         352868.691        5054671.817
EXRY-CB613         352876.859        5054676.869
EXRY-CB613         352885.742        5054662.505
EXRY-CB613         352966.701        5054727.604
MH700-MH701        352862.616        5054866.434
MH700-MH701        352881.194        5054884.075
MH700-MH701        352889.881        5054887.48
MH700-MH701        352900.224        5054892.832
MH700-MH701        352900.984        5054893.641
MH700-MH701        352919.877        5054873.609
MH700-MH701        352904.543        5054873.291
MH700-MH701        352899.458        5054866.689
MH700-MH701        352893.302        5054843.678
MH700-MH701        352890.165        5054844.456
MH700-MH701        352880.617        5054844.665
MH700-MH701        352877.677        5054843.954
MH700-MH701        352868.13         5054859.493
MH700-MH701        352865.539        5054863.095
MH700-MH701        352862.616        5054866.434
RY_CB600-CB601     352966.705        5054727.768
RY_CB600-CB601     352963.97         5054735.208
RY_CB600-CB601     352956.602        5054737.53
RY_CB600-CB601     352960.51         5054749.929
RY_CB600-CB601     352963.601        5054758.715
RY_CB600-CB601     352967.265        5054770.342
RY_CB600-CB601     352975.982        5054767.594
RY_CB600-CB601     352982.021        5054764.644
RY_CB600-CB601     352995.412        5054778.795
RY_CB600-CB601     352998.564        5054775.433
RY_CB600-CB601     353005.056        5054768.732
RY_CB600-CB601     353022.98         5054787.715
RY_CB600-CB601     353025.282        5054784.892
RY_CB600-CB601     353027.493        5054781.997
RY_CB600-CB601     353029.61         5054779.033
RY_CB600-CB601     353031.631        5054776.003
RY_CB600-CB601     353033.555        5054772.909
RY_CB600-CB601     353039.568        5054762.42
RY_CB600-CB601     353031.504        5054758.029
RY_CB600-CB601     353026.535        5054765.113
RY_CB600-CB601     353021.907        5054772.552
RY_CB600-CB601     353000.102        5054754.852
RY_CB600-CB601     352994.803        5054750.576
RY_CB600-CB601     352988.592        5054745.534
RY_CB600-CB601     352983.397        5054741.318
RY_CB600-CB601     352966.705        5054727.768
RY_CB613-CB612     352956.602        5054737.53
RY_CB613-CB612     352963.97         5054735.208
RY_CB613-CB612     352966.705        5054727.768
RY_CB613-CB612     352885.742        5054662.505
RY_CB613-CB612     352876.859        5054676.869
RY_CB613-CB612     352897.846        5054689.848
RY_CB613-CB612     352899.473        5054687.218
RY_CB613-CB612     352909.865        5054693.645
RY_CB613-CB612     352879.558        5054742.652
RY_CB613-CB612     352894.73         5054745.776
RY_CB613-CB612     352896.967        5054737.586
RY_CB613-CB612     352906.782        5054722.164
RY_CB613-CB612     352920.902        5054717.257
RY_CB613-CB612     352933.744        5054719.28
RY_CB613-CB612     352956.602        5054737.53
RY1-POND           352806.265        5054858.803
RY1-POND           352821.921        5054873.332
RY1-POND           352824.836        5054870.19
RY1-POND           352833.128        5054861.254
RY1-POND           352839.207        5054854.321
RY1-POND           352843.519        5054849.703
RY1-POND           352828.142        5054835.227
RY1-POND           352808.28         5054856.631
RY1-POND           352806.275        5054858.792
RY1-POND           352806.265        5054858.803
RY2-POND           352821.932        5054873.32
RY2-POND           352806.275        5054858.792
RY2-POND           352754.556        5054914.527
RY2-POND           352772.325        5054924.811
RY2-POND           352772.737        5054916.099
RY2-POND           352785.021        5054902.559
RY2-POND           352791.514        5054897.99
RY2-POND           352800.359        5054888.463
RY2-POND           352809.354        5054886.876
RY2-POND           352817.646        5054877.94
RY2-POND           352821.921        5054873.332
RY2-POND           352821.932        5054873.32
RY3-POND           352754.556        5054914.527
RY3-POND           352737.403        5054933.012
RY3-POND           352810.098        5054991.356
RY3-POND           352844.564        5054953.975
RY3-POND           352860.012        5054936.829
RY3-POND           352883.14         5054912.255
RY3-POND           352867.177        5054898.959
RY3-POND           352850.171        5054916.802
RY3-POND           352847.587        5054919.585
RY3-POND           352842.373        5054931.527
RY3-POND           352836.93         5054937.39
RY3-POND           352832.388        5054946.378
RY3-POND           352819.894        5054959.724
RY3-POND           352802.582        5054960.85
RY3-POND           352799.289        5054959.842
RY3-POND           352787.782        5054956.414
RY3-POND           352775.429        5054946.039
RY3-POND           352771.913        5054933.523
RY3-POND           352772.325        5054924.811
RY3-POND           352754.556        5054914.527
RY4-POND           352828.104        5054835.204
RY4-POND           352823.014        5054832.056
RY4-POND           352808.812        5054831.845
RY4-POND           352801.276        5054831.112
RY4-POND           352790.909        5054824.701
RY4-POND           352782.834        5054820.031
RY4-POND           352771.787        5054813.177
RY4-POND           352765.501        5054791.246
RY4-POND           352765.985        5054779.066
RY4-POND           352772.881        5054769.985
RY4-POND           352779.292        5054759.617
RY4-POND           352787.883        5054754.689
RY4-POND           352794.295        5054744.321
RY4-POND           352798.402        5054737.679
RY4-POND           352804.814        5054727.311
RY4-POND           352806.349        5054724.834
RY4-POND           352788.196        5054713.583
RY4-POND           352729.761        5054808.074
RY4-POND           352808.28         5054856.631
RY4-POND           352828.104        5054835.204
RY607-TC600        352839.042        5054820.981
RY607-TC600        352853.887        5054797.055
RY607-TC600        352878.514        5054812.335
RY607-TC600        352885.559        5054816.704
RY607-TC600        352896.103        5054817.084
RY607-TC600        352904.631        5054814.83
RY607-TC600        352901.948        5054802.328
RY607-TC600        352898.671        5054795.316
RY607-TC600        352897.397        5054788.197
RY607-TC600        352907.431        5054786.752
RY607-TC600        352907.107        5054783.958
RY607-TC600        352906.433        5054777.768
RY607-TC600        352893.323        5054770.686
RY607-TC600        352891.206        5054758.681
RY607-TC600        352894.73         5054745.776
RY607-TC600        352879.558        5054742.652
RY607-TC600        352871.245        5054756.095
RY607-TC600        352849.462        5054791.319
RY607-TC600        352843.281        5054801.165
RY607-TC600        352825.321        5054789.498
RY607-TC600        352827.211        5054786.692
RY607-TC600        352805.916        5054773.067
RY607-TC600        352803.165        5054777.776
RY607-TC600        352802.846        5054778.279
RY607-TC600        352802.545        5054778.792
RY607-TC600        352802.364        5054779.121
RY607-TC600        352802.087        5054779.661
RY607-TC600        352801.829        5054780.21
RY607-TC600        352801.59         5054780.768
RY607-TC600        352801.37         5054781.333
RY607-TC600        352801.17         5054781.906
RY607-TC600        352800.991        5054782.486
RY607-TC600        352800.832        5054783.071
RY607-TC600        352800.693        5054783.662
RY607-TC600        352800.574        5054784.257
RY607-TC600        352800.477        5054784.856
RY607-TC600        352800.4          5054785.458
RY607-TC600        352800.345        5054786.062
RY607-TC600        352800.31         5054786.668
RY607-TC600        352800.297        5054787.275
RY607-TC600        352800.305        5054787.881
RY607-TC600        352800.334        5054788.488
RY607-TC600        352800.384        5054789.092
RY607-TC600        352800.455        5054789.695
RY607-TC600        352800.547        5054790.295
RY607-TC600        352802.207        5054795.268
RY607-TC600        352808.519        5054802.105
RY607-TC600        352839.042        5054820.981
Wren_Drive         352806.349        5054724.834
Wren_Drive         352803.23         5054729.873
Wren_Drive         352824.612        5054743.095
Wren_Drive         352838.28         5054721.281
Wren_Drive         352850.347        5054701.48
Wren_Drive         352841.842        5054696.22
Wren_Drive         352819.215        5054732.809
Wren_Drive         352806.349        5054724.834

[SYMBOLS]
;;Gage             X-Coord           Y-Coord
;;---------------- ----------------- -----------------
```

1:100 year 3-hour Chicago Design Strom – Output File

```
  EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
  ---------------------------------------------------------------

  WARNING 10: crest elevation raised to downstream invert for regulator Link O_CO400
  WARNING 02: maximum depth increased for Node J1
  WARNING 02: maximum depth increased for Node J201
  WARNING 02: maximum depth increased for Node J203
  WARNING 02: maximum depth increased for Node J205
  WARNING 02: maximum depth increased for Node J207
  WARNING 02: maximum depth increased for Node J208
  WARNING 02: maximum depth increased for Node J215
  WARNING 02: maximum depth increased for Node J217
  WARNING 02: maximum depth increased for Node J219
  WARNING 02: maximum depth increased for Node J221
  WARNING 02: maximum depth increased for Node J225
  WARNING 02: maximum depth increased for Node J227
  WARNING 02: maximum depth increased for Node J229
  WARNING 02: maximum depth increased for Node J231
  WARNING 02: maximum depth increased for Node J232
  WARNING 02: maximum depth increased for Node J234
  WARNING 02: maximum depth increased for Node J236
  WARNING 02: maximum depth increased for Node J239
  WARNING 02: maximum depth increased for Node J242
  WARNING 02: maximum depth increased for Node J253
  WARNING 02: maximum depth increased for Node J255
  WARNING 02: maximum depth increased for Node J259
  WARNING 02: maximum depth increased for Node J261
  WARNING 02: maximum depth increased for Node J267
  WARNING 02: maximum depth increased for Node J269
  WARNING 02: maximum depth increased for Node J271
  WARNING 02: maximum depth increased for Node J273
  WARNING 02: maximum depth increased for Node J276
  WARNING 02: maximum depth increased for Node J277
  WARNING 02: maximum depth increased for Node J279
  WARNING 02: maximum depth increased for Node J281
  WARNING 02: maximum depth increased for Node J284
  WARNING 02: maximum depth increased for Node J286
  WARNING 02: maximum depth increased for Node J288
  WARNING 02: maximum depth increased for Node J290
  WARNING 02: maximum depth increased for Node J292
  WARNING 02: maximum depth increased for Node J296
  WARNING 02: maximum depth increased for Node J297
  WARNING 02: maximum depth increased for Node J7

  *************
  Element Count
  *************
  Number of rain gages ...... 1
  Number of subcatchments ... 52
  Number of nodes ........... 154
  Number of links ........... 195
  Number of pollutants ...... 0
  Number of land uses ....... 0


  ****************
  Raingage Summary
  ****************

                                                  Data       Recording
  Name                 Data Source                Type       Interval
  ------------------------------------------------------------------
  Rainfall             3CHI100                    INTENSITY  10 min.


  ********************
  Subcatchment Summary
  ********************
  Name                        Area     Width   %Imperv    %Slope Rain Gage            Outlet
  ----------------------------------------------------------------------------------------
  1-P                         1.91    955.00    100.00    2.0000 Rainfall             PND-1
  CB403-MH600                 0.39    314.52     45.06    2.5000 Rainfall             St_CB403
  CB601-CB602                 0.05     53.46     53.77    1.5000 Rainfall             St_CB601
  CB602-MH600                 0.08     51.24     43.30    1.5000 Rainfall             St_CB602
  CB603-CB604                 0.28    240.24     48.95    1.9000 Rainfall             St_CB603
  CB604-TC600                 0.11     99.30     32.98    2.2000 Rainfall             St_CB604
  CB605-CB606                 0.10     59.70     36.72    2.5000 Rainfall             St_CB605
  CB606-TC601                 0.08     56.62     50.29    3.1000 Rainfall             St_CB606
  CB608-CB609                 0.08     76.11     39.64    2.9000 Rainfall             St_CB608
  CB609-CBMH600               0.10     93.67     39.29    3.5000 Rainfall             St_CB609
  CB610-CBMH600               0.10     94.25     39.79    4.0000 Rainfall             St_CB610
  CB611-CB610                 0.08     78.14     40.99    3.3000 Rainfall             St_CB611
  CB612-CB611                 0.10     91.13     34.10    3.1000 Rainfall             St_CB612
  CB700-CB701                 0.20    108.73     18.35    2.4000 Rainfall             St_CB700
  CB701-CB702                 0.20    168.81     22.44    2.4000 Rainfall             St_CB701
  CB702-CB703                 0.17    104.25     14.12    1.7000 Rainfall             St_CB702
  CB703-TC701                 0.16     81.11     34.97    2.0000 Rainfall             St_CB703
  CB704-CB705                 0.19    118.25     22.22    1.5000 Rainfall             St_CB704
  CB705-MH700                 0.13    107.60     32.28    0.5000 Rainfall             St_CB705
  CB706-CB707                 0.11    121.38     42.29    2.0000 Rainfall             St_CB706
  CB707-CB708                 0.05     49.68     51.61    1.8000 Rainfall             St_CB707
  CB708-TC702                 0.06     56.72     51.73    2.5000 Rainfall             St_CB708
  CB709-TC703                 0.06     55.35     48.70    2.5000 Rainfall             St_CB709
  CB710-CB711                 0.07     64.05     58.87    2.1000 Rainfall             St_CB710
  CB711-CB712                 0.06     53.91     50.28    2.1000 Rainfall             St_CB711
  CB712-OUTLET                0.05     50.45     52.50    2.2000 Rainfall             St_CB712
  CB803-CB804                 0.25    196.05     53.32    2.2000 Rainfall             St_CB803
  CB804-CB805                 0.04     50.14     46.01    2.5000 Rainfall             St_CB804
  CB805-MH700                 0.11     93.63     35.40    2.6000 Rainfall             St_CB805
  CB902-CB903                 0.19    159.69     50.04    2.1000 Rainfall             St_CB902
  CB903-CB904                 0.05     50.51     54.50    1.9000 Rainfall             St_CB903
  CB904-MH701                 0.05     50.69     50.07    2.0000 Rainfall             St_CB904
  CBMH600-OUTLET              0.11    107.68     37.02    3.5000 Rainfall             St_DIMH600
  EX_1                        0.24     88.32      7.14    2.0000 Rainfall             RY3-J4
  EX_2_(CB704-CB705)          0.07     37.14      7.14    2.0000 Rainfall             St_CB704
  EX_3_(CB703-CB704)          0.21     66.81      7.14    2.0000 Rainfall             St_CB703
  EX_4_(CB701-CB702)          0.04     22.11      7.14    2.0000 Rainfall             St_CB701
  EX_5_(CB700-CB701)          0.07     36.00      7.14    2.0000 Rainfall             St_CB700
  EX_6_(CB805-MH700)          0.06     22.46      7.14    2.0000 Rainfall             St_CB805
  EX_7_(MH700-MH701)          0.09     22.91      7.14    2.0000 Rainfall             St_MH700
  EX_8_(MH705-MH700)          0.06     19.63      7.14    2.0000 Rainfall             St_CB705
  EXRY-CB600                  0.15     68.15     11.69    1.5000 Rainfall             St_CB600
  EXRY-CB613                  0.27    123.88     34.89    1.9000 Rainfall             J297
  MH700-MH701                 0.14     87.06     33.66    1.7000 Rainfall             St_MH700
  RY_CB600-CB601              0.17     70.80     30.05    3.3000 Rainfall             St_CB600
  RY_CB613-CB612              0.22    221.68     16.33    4.9000 Rainfall             St_CB613
  RY1-POND                    0.07     32.79     24.84    3.4000 Rainfall             PND-1
  RY2-POND                    0.13     73.30     25.21    2.7000 Rainfall             PND-1
  RY3-POND                    0.34    155.45     16.91    3.6000 Rainfall             RY3-J2
  RY4-POND                    0.38    165.79     21.47   14.1000 Rainfall             PND-1
  RY607-TC600                 0.36    177.30     25.50    3.0000 Rainfall             St_CB607
  Wren_Drive                  0.06     48.41     41.62    2.0000 Rainfall             PND-1


  ************
  Node Summary
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                                                  Invert      Max.    Ponded    External
  Name                 Type                        Elev.     Depth      Area    Inflow
  ------------------------------------------------------------------------------------
  J1                   JUNCTION                  145.50      1.00       0.0
  J1_OUT               JUNCTION                  142.39      1.76       0.0
  J10                  JUNCTION                  145.76      1.12       0.0
  J11                  JUNCTION                  146.05      1.08       0.0
  J2                   JUNCTION                  144.80      1.00       0.0    Yes
  J201                 JUNCTION                  146.05      1.00       0.0
  J203                 JUNCTION                  145.92      1.00       0.0
  J205                 JUNCTION                  145.80      1.00       0.0
  J207                 JUNCTION                  145.81      1.00       0.0
  J208                 JUNCTION                  145.83      1.00       0.0
  J215                 JUNCTION                  146.00      1.00       0.0
  J217                 JUNCTION                  145.98      1.00       0.0
  J219                 JUNCTION                  145.84      1.00       0.0
  J221                 JUNCTION                  145.57      1.00       0.0
  J225                 JUNCTION                  145.34      1.00       0.0
  J227                 JUNCTION                  145.16      1.00       0.0
  J229                 JUNCTION                  145.08      1.00       0.0
  J231                 JUNCTION                  145.06      1.00       0.0
  J232                 JUNCTION                  145.19      1.12       0.0
  J234                 JUNCTION                  145.57      1.24       0.0
  J235                 JUNCTION                  145.43      1.30       0.0
  J236                 JUNCTION                  145.60      1.00       0.0
  J238                 JUNCTION                  146.14      1.06       0.0
  J239                 JUNCTION                  146.31      1.01       0.0
  J242                 JUNCTION                  146.60      1.00       0.0
  J253                 JUNCTION                  146.46      1.00       0.0
  J255                 JUNCTION                  146.21      1.00       0.0
  J257                 JUNCTION                  146.50      1.24       0.0
  J259                 JUNCTION                  146.06      1.00       0.0
  J261                 JUNCTION                  146.32      1.00       0.0
  J263                 JUNCTION                  146.67      1.25       0.0
  J267                 JUNCTION                  146.60      1.00       0.0
  J269                 JUNCTION                  146.67      1.00       0.0
  J271                 JUNCTION                  146.78      1.00       0.0
  J273                 JUNCTION                  146.92      1.00       0.0    Yes
  J276                 JUNCTION                  145.29      1.00       0.0
  J277                 JUNCTION                  145.17      1.00       0.0
  J279                 JUNCTION                  145.06      1.00       0.0
  J281                 JUNCTION                  144.84      1.00       0.0
  J284                 JUNCTION                  144.84      1.00       0.0
  J286                 JUNCTION                  144.86      1.00       0.0
  J288                 JUNCTION                  144.91      1.00       0.0
  J290                 JUNCTION                  145.03      1.00       0.0
  J292                 JUNCTION                  145.04      1.00       0.0
  J296                 JUNCTION                  144.95      1.00       0.0
  J297                 JUNCTION                  144.97      1.00       0.0    Yes
  J3                   JUNCTION                  144.63      1.00       0.0
  J4                   JUNCTION                  144.58      1.00       0.0
  J5                   JUNCTION                  144.12      1.00       0.0
  J5230                JUNCTION                  143.14      1.01       0.0
  J5260                JUNCTION                  143.34      0.81       0.0
  J6                   JUNCTION                  146.05      1.08       0.0
  J7                   JUNCTION                  146.91      1.00       0.0    Yes
  J8                   JUNCTION                  145.90      1.12       0.0
  J9                   JUNCTION                  144.08      1.00       0.0
  MD-1                 JUNCTION                  142.44      1.71       0.0    Yes
  OUTLET_2_(P-Stm-500_&_600_Series) JUNCTION      143.83      1.00       0.0
  RY3-J2               JUNCTION                  147.35      0.50       0.0
  RY3-J3               JUNCTION                  147.30      0.50       0.0
  RY3-J4               JUNCTION                  145.40      0.50       0.0
  RY3-J5               JUNCTION                  144.68      0.50       0.0
  RY3-J6               JUNCTION                  144.00      0.50       0.0
  OF1                  OUTFALL                   142.35      0.51       0.0
  CB403_(P-Stm-400_Series) STORAGE               145.18      2.41       0.0
  CB600_(P-Stm-500_&_600_Series) STORAGE         145.58      2.49       0.0
  CB601_(P-Stm-500_&_600_Series) STORAGE         145.40      2.52       0.0
  CB602_(P-Stm-500_&_600_Series) STORAGE         145.20      2.44       0.0
  CB603_(P-Stm-500_&_600_Series) STORAGE         144.87      2.43       0.0
  CB604_(P-Stm-500_&_600_Series) STORAGE         144.66      2.44       0.0
  CB605_(P-Stm-500_&_600_Series) STORAGE         144.33      2.40       0.0
  CB606_(P-Stm-500_&_600_Series) STORAGE         143.97      2.90       0.0
  CB607_(P-Stm-500_&_600_Series) STORAGE         143.82      2.26       0.0
  CB608_(P-Stm-500_&_600_Series) STORAGE         143.67      2.83       0.0
  CB609_(P-Stm-500_&_600_Series) STORAGE         143.63      2.75       0.0
  CB610_(P-Stm-500_&_600_Series) STORAGE         143.75      1.87       0.0
  CB611_(P-Stm-500_&_600_Series) STORAGE         143.79      1.88       0.0
  CB612_(P-Stm-500_&_600_Series) STORAGE         143.89      1.85       0.0
  CB613_(P-Stm-500_&_600_Series) STORAGE         143.95      2.23       0.0
  CB700_(P-Stm-_800_&_700_Series) STORAGE        145.53      2.54       0.0
  CB701_(P-Stm-_800_&_700_Series) STORAGE        145.33      2.56       0.0
  CB702_(P-Stm-_800_&_700_Series) STORAGE        145.05      2.64       0.0
  CB703_(P-Stm-_800_&_700_Series) STORAGE        144.80      2.65       0.0
  CB704_(P-Stm-_800_&_700_Series) STORAGE        144.54      2.65       0.0
  CB705_(P-Stm-_800_&_700_Series) STORAGE        144.32      2.64       0.0
  CB706_(P-Stm-_800_&_700_Series) STORAGE        143.75      2.71       0.0
  CB707_(P-Stm-_800_&_700_Series) STORAGE        143.73      2.75       0.0
  CB708_(P-Stm-_800_&_700_Series) STORAGE        143.69      2.64       0.0
  CB709_(P-Stm-_800_&_700_Series) STORAGE        143.67      2.48       0.0
  CB710_(P-Stm-_800_&_700_Series) STORAGE        143.64      2.44       0.0
  CB711_(P-Stm-_800_&_700_Series) STORAGE        143.61      2.36       0.0
  CB712_(P-Stm-_800_&_700_Series) STORAGE        143.58      2.78       0.0
  CB803_(P-Stm-_800_&_700_Series) STORAGE        144.75      2.38       0.0
  CB804_(P-Stm-_800_&_700_Series) STORAGE        144.56      2.46       0.0
  CB805_(P-Stm-_800_&_700_Series) STORAGE        144.45      2.43       0.0
  CB902_(P-Stm-900_Series) STORAGE      144.62      2.51       0.0
  CB903_(P-Stm-900_Series) STORAGE      144.49      2.50       0.0
  CB904_(P-Stm-900_Series) STORAGE      144.39      2.47       0.0
  CO400_(P-Stm-400_Series) STORAGE      145.36      1.82       0.0
  CO500_(P-Stm-500_&_600_Series) STORAGE         145.28      1.88       0.0
  CO600_(P-Stm-500_&_600_Series) STORAGE         144.06      0.91       0.0
  CO800_(P-Stm-_800_&_700_Series) STORAGE        144.79      1.26       0.0
  CO900_(P-Stm-900_Series) STORAGE      144.65      1.35       0.0
  DIMH600_(P-Stm-500_&_600_Series) STORAGE       143.57      2.09       0.0
  EXCB13_(P-Stm-_800_&_700_Series) STORAGE       145.75      2.50       0.0    Yes
  EXCB14_(P-Stm-500_&_600_Series) STORAGE        145.74      2.51       0.0    Yes
  MH600_(P-Stm-500_&_600_Series) STORAGE         145.07      1.77       0.0
  MH601_(P-Stm-500_&_600_Series) STORAGE         144.98      1.76       0.0
  MH700_(P-Stm-_800_&_700_Series) STORAGE        144.08      2.76       0.0
  MH701_(P-Stm-_800_&_700_Series) STORAGE        143.82      2.18       0.0
  PND-1                STORAGE                   143.15      1.00       0.0
  St_CB403             STORAGE                   146.11      1.48       0.0
  St_CB600             STORAGE                   146.76      1.31       0.0
  St_CB601             STORAGE                   146.52      1.40       0.0
  St_CB602             STORAGE                   146.29      1.35       0.0
  St_CB603             STORAGE                   146.31      0.99       0.0
  St_CB604             STORAGE                   146.02      1.08       0.0
  St_CB605             STORAGE                   145.40      1.33       0.0
  St_CB606             STORAGE                   145.71      1.16       0.0
  St_CB607             STORAGE                   145.26      0.82       0.0
  St_CB608             STORAGE                   145.16      1.34       0.0
  St_CB609             STORAGE                   145.03      1.35       0.0
  St_CB610             STORAGE                   144.81      0.81       0.0
  St_CB611             STORAGE                   144.85      0.82       0.0
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  St_CB612              STORAGE             144.88      0.86       0.0
  St_CB613              STORAGE             144.93      1.25       0.0
  St_CB700              STORAGE             146.87      1.20       0.0
  St_CB701              STORAGE             146.69      1.20       0.0
  St_CB702              STORAGE             146.48      1.21       0.0
  St_CB703              STORAGE             146.55      0.90       0.0
  St_CB704              STORAGE             146.13      1.06       0.0
  St_CB705              STORAGE             145.87      1.09       0.0
  St_CB706              STORAGE             145.30      1.16       0.0
  St_CB707              STORAGE             145.28      1.20       0.0
  St_CB708              STORAGE             145.10      1.23       0.0
  St_CB709              STORAGE             145.07      1.08       0.0
  St_CB710              STORAGE             145.04      1.04       0.0
  St_CB711              STORAGE             145.01      0.96       0.0
  St_CB712              STORAGE             145.02      1.34       0.0
  St_CB803              STORAGE             145.97      1.16       0.0
  St_CB804              STORAGE             145.89      1.13       0.0
  St_CB805              STORAGE             145.74      1.14       0.0
  St_CB902              STORAGE             145.96      1.17       0.0
  St_CB903              STORAGE             145.87      1.12       0.0
  St_CB904              STORAGE             145.73      1.13       0.0
  St_DIMH600            STORAGE             144.79      0.87       0.0
  St_MH700              STORAGE             145.69      1.15       0.0
  TC600_(P-Stm-500_&_600_Series) STORAGE            144.39      1.50       0.0
  TC601_(P-Stm-500_&_600_Series) STORAGE            145.30      1.27       0.0
  TC602_(P-Stm-500_&_600_Series) STORAGE            143.71      1.57       0.0
  TC702_(P-Stm-_800_&_700_Series) STORAGE            143.68      1.40       0.0
  TC703_(P-Stm-_800_&_700_Series) STORAGE            143.65      1.41       0.0
  TC705_(P-Stm-_800_&_700_Series) STORAGE            143.56      1.44       0.0
  TCB701_(P-Stm-_800_&_700_Series) STORAGE            143.71      1.46       0.0
  TCB704_(P-Stm-_800_&_700_Series) STORAGE            143.62      1.41       0.0


  ************
  Link Summary
  ************
  Name              From Node       To Node         Type          Length    %Slope Roughness
  ----------------------------------------------------------------------------------------
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  C1                J1_OUT          OF1             CONDUIT         10.7    0.3837    0.0350
  C10               J235            St_CB605        CONDUIT          5.0    0.6052    0.0350
  C11               J234            St_CB606        CONDUIT         19.1    0.5236    0.0350
  C12               J232            St_CB607        CONDUIT         29.5    0.1696    0.0350
  C13               J276            St_CB607        CONDUIT         13.4    0.2244    0.0350
  C14               J277            St_CB608        CONDUIT          3.9    0.2587    0.0350
  C15               J279            St_CB609        CONDUIT         10.7    0.2798    0.0350
  C16               J281            St_DIMH600      CONDUIT         17.6    0.2845    0.0350
  C17               J6              St_CB902        CONDUIT          6.4    1.4009    0.0350
  C18               J11             St_CB803        CONDUIT          6.6    1.2133    0.0350
  C2                J263            St_CB601        CONDUIT          9.0    1.6701    0.0350
  C24               J273            St_CB700        CONDUIT         16.2    0.3086    0.0350
  C25               J271            St_CB701        CONDUIT         16.8    0.5367    0.0350
  C26               J269            St_CB702        CONDUIT         16.9    1.1262    0.0350
  C27               J267            St_CB703        CONDUIT         23.9    0.2089    0.0350
  C28               J261            St_CB704        CONDUIT         23.0    0.8265    0.0350
  C29               J259            St_CB705        CONDUIT         19.8    0.9606    0.0350
  C3                J257            St_CB602        CONDUIT         23.6    0.8912    0.0350
  C30               J208            St_MH700        CONDUIT         10.2    1.3784    0.0350
  C31               J207            St_MH700        CONDUIT         16.4    0.7311    0.0350
  C35               J201            St_CB803        CONDUIT          9.9    0.8120    0.0350
  C36               J203            St_CB804        CONDUIT          4.4    0.6862    0.0350
  C37               J205            St_CB805        CONDUIT         13.0    0.4608    0.0350
  C4                J255            St_CB403        CONDUIT         16.1    0.6194    0.0350
  C40               J215            St_CB902        CONDUIT          6.3    0.6369    0.0350
  C41               J217            St_CB903        CONDUIT          8.6    1.2771    0.0350
  C42               J219            St_CB904        CONDUIT         11.4    0.9642    0.0350
  C43               J225            St_CB707        CONDUIT          9.0    0.6677    0.0350
  C43_1             J221            J1              CONDUIT          8.5    0.8034    0.0350
  C43_2             J1              St_CB706        CONDUIT         44.2    0.4573    0.0350
  C45               J227            St_CB708        CONDUIT         12.5    0.4789    0.0350
  C46               J229            St_CB709        CONDUIT          6.4    0.1555    0.0350
  C47               J231            St_CB710        CONDUIT         10.4    0.1924    0.0350
  C48               J290            St_CB711        CONDUIT          9.7    0.2071    0.0350
  C5                J253            St_CB403        CONDUIT         36.8    0.9507    0.0350
  C50               J292            St_CB712        CONDUIT         10.0    0.1999    0.0350
  C51               J297            St_CB613        CONDUIT         15.3    0.2609    0.0350
  C52               J296            St_CB613        CONDUIT          5.8    0.3441    0.0350
  C53               J288            St_CB612        CONDUIT         11.9    0.2523    0.0350
  C54               J286            St_CB611        CONDUIT          3.5    0.2869    0.0350
  C55               J284            St_CB610        CONDUIT         10.1    0.2959    0.0350
  C56               J2              J3              CONDUIT         42.3    0.4021    0.0350
  C57               J3              J4              CONDUIT          9.1    0.5506    0.0350
  C58               J4              J5              CONDUIT         92.5    0.4974    0.0350
  C59               TC705_(P-Stm-_800_&_700_Series) OUTLET_2_(P-Stm-500_&_600_Series) CONDUIT
14.9    0.4689    0.0350
  C6                J242            St_CB603        CONDUIT         40.2    0.7217    0.0350
  C60               J5              J9              CONDUIT          7.0    0.5728    0.0130
  C61               RY3-J6          PND-1           CONDUIT          2.0    2.5008    0.0350
  C66               J7              St_CB600        CONDUIT         20.8    0.7209    0.0350
  C67               J9              OUTLET_2_(P-Stm-500_&_600_Series) CONDUIT          22.6
1.1043    0.0350
  C68               J8              St_CB804        CONDUIT          3.0    0.3360    0.0350
  C69               J10             St_CB805        CONDUIT          0.9    2.2733    0.0350
  C7                J239            St_CB603        CONDUIT          2.6    0.3867    0.0350
  C8                J238            St_CB604        CONDUIT         15.8    0.7588    0.0350
  C9                J236            St_CB605        CONDUIT         29.3    0.6838    0.0350
  EX_Ditch          MD-1            J1_OUT          CONDUIT         25.8    0.2091    0.0350
  OUT1              J5230           J1_OUT          CONDUIT          8.2    0.4607    0.0130
  OUT2              J5260           J1_OUT          CONDUIT          8.2    1.2311    0.0130
  Pipe_-_(118)_(P-Stm-500_&_600_Series)     CO500_(P-Stm-500_&_600_Series)     MH601_(P-Stm-
500_&_600_Series) CONDUIT          36.8    0.5998    0.0130
  Pipe_-_(119)_(P-Stm-500_&_600_Series)     EXCB14_(P-Stm-500_&_600_Series)     CB600_(P-Stm-
500_&_600_Series) CONDUIT          26.9    0.5799    0.0130
  Pipe_-_(120)_(P-Stm-500_&_600_Series)     CB600_(P-Stm-500_&_600_Series)     CB601_(P-Stm-
500_&_600_Series) CONDUIT          18.8    0.5789    0.0130
  Pipe_-_(121)_(P-Stm-500_&_600_Series)     CB602_(P-Stm-500_&_600_Series)     MH600_(P-Stm-
500_&_600_Series) CONDUIT          22.4    0.5816    0.0130
  Pipe_-_(122)_(P-Stm-500_&_600_Series)     MH600_(P-Stm-500_&_600_Series)     MH601_(P-Stm-
500_&_600_Series) CONDUIT          14.8    0.5823    0.0130
  Pipe_-_(123)_(1)_(P-Stm-500_&_600_Series)   CB603_(P-Stm-500_&_600_Series)   CB604_(P-Stm-
500_&_600_Series) CONDUIT          27.4    0.7589    0.0130
  Pipe_-_(123)_(P-Stm-500_&_600_Series)     MH601_(P-Stm-500_&_600_Series)     CB603_(P-Stm-
500_&_600_Series) CONDUIT           4.7    0.7498    0.0130
  Pipe_-_(124)_(P-Stm-500_&_600_Series)     CB604_(P-Stm-500_&_600_Series)     TC600_(P-Stm-
500_&_600_Series) CONDUIT          33.3    0.8308    0.0130
  Pipe_-_(125)_(P-Stm-500_&_600_Series)     TC600_(P-Stm-500_&_600_Series)     CB605_(P-Stm-
500_&_600_Series) CONDUIT           6.9    0.8283    0.0130
  Pipe_-_(126)_(1)_(1)_(P-Stm-500_&_600_Series) CB606_(P-Stm-500_&_600_Series) CB607_(P-Stm-
500_&_600_Series) CONDUIT          45.1    0.3392    0.0130
  Pipe_-_(126)_(P-Stm-500_&_600_Series)     CB605_(P-Stm-500_&_600_Series)     CB606_(P-Stm-
500_&_600_Series) CONDUIT          33.9    0.8278    0.0130
  Pipe_-_(127)_(P-Stm-500_&_600_Series)     CB607_(P-Stm-500_&_600_Series)     TC602_(P-Stm-
500_&_600_Series) CONDUIT           7.1    0.4952    0.0130
  Pipe_-_(128)_(1)_(P-Stm-500_&_600_Series)   CB608_(P-Stm-500_&_600_Series)   CB609_(P-Stm-
500_&_600_Series) CONDUIT          20.7    0.1980    0.0130
  Pipe_-_(128)_(P-Stm-500_&_600_Series)     TC602_(P-Stm-500_&_600_Series)     CB608_(P-Stm-
500_&_600_Series) CONDUIT          20.2    0.2027    0.0130
  Pipe_-_(131)_(1)_(P-Stm-_800_&_700_Series)  CO800_(P-Stm-_800_&_700_Series)  CB803_(P-Stm-
_800_&_700_Series) CONDUIT          10.0    0.4921    0.0130
  Pipe_-_(132)_(P-Stm-_800_&_700_Series)    CB803_(P-Stm-_800_&_700_Series)    CB804_(P-Stm-
_800_&_700_Series) CONDUIT          20.9    0.5028    0.0130
  Pipe_-_(133)_(P-Stm-_800_&_700_Series)    CB804_(P-Stm-_800_&_700_Series)    CB805_(P-Stm-
_800_&_700_Series) CONDUIT          22.9    0.5018    0.0130
  Pipe_-_(134)_(P-Stm-_800_&_700_Series)    CB805_(P-Stm-_800_&_700_Series)    MH700_(P-Stm-
_800_&_700_Series) CONDUIT          28.2    0.4972    0.0130
  Pipe_-_(135)_(P-Stm-_800_&_700_Series)    TCB701_(P-Stm-_800_&_700_Series)   CB708_(P-Stm-
_800_&_700_Series) CONDUIT          10.9    0.1472    0.0130
  Pipe_-_(138)_(P-Stm-900_Series) CB902_(P-Stm-900_Series) CB903_(P-Stm-900_Series) CONDUIT
25.4    0.4995    0.0130
  Pipe_-_(139)_(P-Stm-900_Series) CB904_(P-Stm-900_Series) MH701_(P-Stm-_800_&_700_Series)
CONDUIT          20.8    0.4998    0.0130
  Pipe_-_(141)_(P-Stm-900_Series) CB903_(P-Stm-900_Series) CB904_(P-Stm-900_Series) CONDUIT
21.5    0.5030    0.0130
  Pipe_-_(143)_(1)_(P-Stm-500_&_600_Series)   CB613_(P-Stm-500_&_600_Series)   CB612_(P-Stm-
500_&_600_Series) CONDUIT          28.5    0.2001    0.0130
  Pipe_-_(143)_(P-Stm-500_&_600_Series)     CO600_(P-Stm-500_&_600_Series)     CB613_(P-Stm-
500_&_600_Series) CONDUIT          15.3    0.2025    0.0130
  Pipe_-_(144)_(P-Stm-500_&_600_Series)     CB612_(P-Stm-500_&_600_Series)     CB611_(P-Stm-
500_&_600_Series) CONDUIT          13.7    0.1967    0.0130
  Pipe_-_(145)_(P-Stm-500_&_600_Series)     CB611_(P-Stm-500_&_600_Series)     CB610_(P-Stm-
500_&_600_Series) CONDUIT          20.9    0.2006    0.0130
  Pipe_-_(146)_(P-Stm-500_&_600_Series)     CB610_(P-Stm-500_&_600_Series)     DIMH600_(P-Stm-
500_&_600_Series) CONDUIT          11.6    0.1990    0.0130
  Pipe_-_(148)_(P-Stm-_800_&_700_Series)    CB712_(P-Stm-_800_&_700_Series)    TC705_(P-Stm-
_800_&_700_Series) CONDUIT          12.1    0.1565    0.0130
  Pipe_-_(158)_(P-Stm-500_&_600_Series)     CB609_(P-Stm-500_&_600_Series)     DIMH600_(P-Stm-
500_&_600_Series) CONDUIT          27.0    0.2002    0.0130
  Pipe_-_(159)_(1)_(P-Stm-500_&_600_Series)   TC601_(P-Stm-500_&_600_Series)   CB602_(P-Stm-
500_&_600_Series) CONDUIT          16.6    0.5767    0.0130
  Pipe_-_(159)_(P-Stm-500_&_600_Series)     CB601_(P-Stm-500_&_600_Series)     TC601_(P-Stm-
500_&_600_Series) CONDUIT          17.1    0.5846    0.0130
  Pipe_-_(162)_(P-Stm-_800_&_700_Series)    CB707_(P-Stm-_800_&_700_Series)    TCB701_(P-Stm-
_800_&_700_Series) CONDUIT          11.3    0.1498    0.0130
  Pipe_-_(165)_(P-Stm-500_&_600_Series)   DIMH600_(P-Stm-500_&_600_Series)   OUTLET_2_(P-Stm-
500_&_600_Series) CONDUIT          21.4    0.2014    0.0130
  Pipe_-_(166)_(P-Stm-900_Series) CO900_(P-Stm-900_Series) CB902_(P-Stm-900_Series) CONDUIT
6.4    0.5036    0.0130
  Pipe_-_(177)_(P-Stm-_800_&_700_Series)        TC705_(P-Stm-_800_&_700_Series)        PND-1
CONDUIT           5.6    0.1422    0.0130
  Pipe_-_(64)_(P-Stm-_800_&_700_Series)     EXCB13_(P-Stm-_800_&_700_Series)     CB700_(P-Stm-
_800_&_700_Series) CONDUIT          28.4    0.7595    0.0130
  Pipe_-_(65)_(P-Stm-_800_&_700_Series)     CB700_(P-Stm-_800_&_700_Series)     CB701_(P-Stm-
_800_&_700_Series) CONDUIT          26.5    0.7612    0.0130
  Pipe_-_(66)_(P-Stm-_800_&_700_Series)     CB701_(P-Stm-_800_&_700_Series)     CB702_(P-Stm-
_800_&_700_Series) CONDUIT          27.0    0.7599    0.0130
  Pipe_-_(67)_(P-Stm-_800_&_700_Series)     CB702_(P-Stm-_800_&_700_Series)     CB703_(P-Stm-
_800_&_700_Series) CONDUIT          33.3    0.7605    0.0130
  Pipe_-_(69)_(1)_(P-Stm-_800_&_700_Series)   CB703_(P-Stm-_800_&_700_Series)   CB704_(P-Stm-
_800_&_700_Series) CONDUIT          33.5    0.7601    0.0130
  Pipe_-_(70)_(P-Stm-_800_&_700_Series)     CB704_(P-Stm-_800_&_700_Series)     CB705_(P-Stm-
_800_&_700_Series) CONDUIT          29.6    0.7589    0.0130
  Pipe_-_(71)_(P-Stm-_800_&_700_Series)     CB705_(P-Stm-_800_&_700_Series)     MH700_(P-Stm-
_800_&_700_Series) CONDUIT          21.4    0.7621    0.0130
  Pipe_-_(73)_(P-Stm-_800_&_700_Series)     MH700_(P-Stm-_800_&_700_Series)     MH701_(P-Stm-
_800_&_700_Series) CONDUIT          14.8    0.6870    0.0130
  Pipe_-_(74)_(P-Stm-_800_&_700_Series)     MH701_(P-Stm-_800_&_700_Series)     CB706_(P-Stm-
_800_&_700_Series) CONDUIT          42.9    0.1632    0.0130
  Pipe_-_(76)_(P-Stm-_800_&_700_Series)     CB706_(P-Stm-_800_&_700_Series)     CB707_(P-Stm-
_800_&_700_Series) CONDUIT          19.1    0.1520    0.0130
  Pipe_-_(77)_(1)_(P-Stm-_800_&_700_Series)   TC702_(P-Stm-_800_&_700_Series)   CB709_(P-Stm-
_800_&_700_Series) CONDUIT           5.9    0.1526    0.0130
  Pipe_-_(77)_(P-Stm-_800_&_700_Series)     CB708_(P-Stm-_800_&_700_Series)     TC702_(P-Stm-
_800_&_700_Series) CONDUIT          10.6    0.1505    0.0130
  Pipe_-_(78)_(1)_(P-Stm-_800_&_700_Series)   TC703_(P-Stm-_800_&_700_Series)   CB710_(P-Stm-
_800_&_700_Series) CONDUIT           9.5    0.1477    0.0130
  Pipe_-_(78)_(P-Stm-_800_&_700_Series)     CB709_(P-Stm-_800_&_700_Series)     TC703_(P-Stm-
_800_&_700_Series) CONDUIT          10.5    0.1521    0.0130
  Pipe_-_(79)_(1)_(P-Stm-_800_&_700_Series)   TCB704_(P-Stm-_800_&_700_Series)   CB711_(P-Stm-
_800_&_700_Series) CONDUIT           9.8    0.1531    0.0130
  Pipe_-_(79)_(P-Stm-_800_&_700_Series)     CB710_(P-Stm-_800_&_700_Series)     TCB704_(P-Stm-
_800_&_700_Series) CONDUIT          11.5    0.1474    0.0130
  Pipe_-_(80)_(P-Stm-_800_&_700_Series)     CB711_(P-Stm-_800_&_700_Series)     CB712_(P-Stm-
_800_&_700_Series) CONDUIT          19.6    0.1477    0.0130
  Pipe_-_(98)_(P-Stm-400_Series)  CO400_(P-Stm-400_Series)  CB403_(P-Stm-400_Series)  CONDUIT
31.1    0.6020    0.0130
  Pipe_-_(99)_(P-Stm-400_Series)    CB403_(P-Stm-400_Series)    MH600_(P-Stm-500_&_600_Series)
CONDUIT           5.2    0.6193    0.0130
  RY3-SW2           RY3-J2          RY3-J3          CONDUIT          45.4    0.1102    0.0350
  RY3-SW3           RY3-J3          RY3-J4          CONDUIT          50.7    3.7493    0.0350
  RY3-SW4           RY3-J4          RY3-J5          CONDUIT          45.6    1.5795    0.0350
  RY3-SW5           RY3-J5          RY3-J6          CONDUIT          45.6    1.4915    0.0350
  W-IN1             OUTLET_2_(P-Stm-500_&_600_Series) PND-1           CONDUIT           5.0
2.0004    0.0350
  OR1               PND-1           J5230           ORIFICE
  OR2               PND-1           J5260           ORIFICE
  W1                PND-1           J1_OUT          WEIR
  W2                PND-1           J1_OUT          WEIR
  W-St_CB403        St_CB403        St_CB603        WEIR
  W-St_CB600        St_CB600        J263            WEIR
  W-St_CB601        St_CB601        J257            WEIR
  W-St_CB602        St_CB602        J255            WEIR
  W-St_CB603        J239            J238            WEIR
  W-St_CB604        St_CB604        J236            WEIR
  W-St_CB605        J235            J234            WEIR
  W-St_CB606        St_CB606        J232            WEIR
  W-St_CB607        J276            J277            WEIR
  W-St_CB608        St_CB608        J279            WEIR
  W-St_CB609        St_CB609        J281            WEIR
  W-St_CB610        St_CB610        OUTLET_2_(P-Stm-500_&_600_Series) WEIR
  W-St_CB611        St_CB611        J284            WEIR
  W-St_CB612        St_CB612        J286            WEIR
  W-St_CB613        J296            J288            WEIR
  W-St_CB700        St_CB700        J271            WEIR
  W-St_CB701        St_CB701        J269            WEIR
  W-St_CB702        St_CB702        J267            WEIR
  W-St_CB703        St_CB703        J261            WEIR
  W-St_CB704        St_CB704        J259            WEIR
  W-St_CB705        St_CB705        J208            WEIR
  W-St_CB706        St_CB706        J225            WEIR
  W-St_CB707        St_CB707        J227            WEIR
  W-St_CB708        St_CB708        J229            WEIR
  W-St_CB709        St_CB709        J231            WEIR
  W-St_CB710        St_CB710        J290            WEIR
  W-St_CB711        St_CB711        J292            WEIR
  W-St_CB712        St_CB712        TC705_(P-Stm-_800_&_700_Series) WEIR
  W-St_CB803        J11             J203            WEIR
  W-St_CB804        J8              J205            WEIR
  W-St_CB805        J10             J207            WEIR
  W-St_CB902        J6              J217            WEIR
  W-St_CB903        St_CB903        J219            WEIR
  W-St_CB904        St_CB904        J221            WEIR
  W-St_DIMH600      St_DIMH600      OUTLET_2_(P-Stm-500_&_600_Series) WEIR
  W-St_MH700        St_MH700        J1              WEIR
  O_CO400           CO400_(P-Stm-400_Series) J253             OUTLET
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O_CO500	CO500_(P-Stm-500_&_600_Series) J242	OUTLET
O-St_CB403	St_CB403	CB403_(P-Stm-400_Series) OUTLET
O-St_CB600	St_CB600	CB600_(P-Stm-500_&_600_Series) OUTLET
O-St_CB601	St_CB601	CB601_(P-Stm-500_&_600_Series) OUTLET
O-St_CB602	St_CB602	CB602_(P-Stm-500_&_600_Series) OUTLET
O-St_CB603	St_CB603	CB603_(P-Stm-500_&_600_Series) OUTLET
O-St_CB604	St_CB604	CB604_(P-Stm-500_&_600_Series) OUTLET
O-St_CB605	St_CB605	CB605_(P-Stm-500_&_600_Series) OUTLET
O-St_CB606	St_CB606	CB606_(P-Stm-500_&_600_Series) OUTLET
O-St_CB607	St_CB607	CB607_(P-Stm-500_&_600_Series) OUTLET
O-St_CB608	St_CB608	CB608_(P-Stm-500_&_600_Series) OUTLET
O-St_CB609	St_CB609	CB609_(P-Stm-500_&_600_Series) OUTLET
O-St_CB610	St_CB610	CB610_(P-Stm-500_&_600_Series) OUTLET
O-St_CB611	St_CB611	CB611_(P-Stm-500_&_600_Series) OUTLET
O-St_CB612	St_CB612	CB612_(P-Stm-500_&_600_Series) OUTLET
O-St_CB613	St_CB613	CB613_(P-Stm-500_&_600_Series) OUTLET
O-St_CB700	St_CB700	CB700_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB701	St_CB701	CB701_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB702	St_CB702	CB702_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB703	St_CB703	CB703_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB704	St_CB704	CB704_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB705	St_CB705	CB705_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB706	St_CB706	CB706_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB707	St_CB707	CB707_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB708	St_CB708	CB708_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB709	St_CB709	CB709_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB710	St_CB710	CB710_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB711	St_CB711	CB711_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB712	St_CB712	CB712_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB803	St_CB803	CB803_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB804	St_CB804	CB804_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB805	St_CB805	CB805_(P-Stm-_800_&_700_Series) OUTLET
O-St_CB902	St_CB902	CB902_(P-Stm-900_Series) OUTLET
O-St_CB903	St_CB903	CB903_(P-Stm-900_Series) OUTLET
O-St_CB904	St_CB904	CB904_(P-Stm-900_Series) OUTLET
O-St_DIMH600	St_DIMH600	DIMH600_(P-Stm-500_&_600_Series) OUTLET
O-St_MH700	St_MH700	MH700_(P-Stm-_800_&_700_Series) OUTLET

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	Existing_Ditch	0.51	2.18	0.20	10.79	1	1.32
C10	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	6.91
C11	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	6.43
C12	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	3.66
C13	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	4.21
C14	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	4.52
C15	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	4.70
C16	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	4.74
C17	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	10.52
C18	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	9.79
C2	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	11.48
C24	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	4.93
C25	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	6.51
C26	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	9.43
C27	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	4.06
C28	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	8.08
C29	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	8.71
C3	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	8.39
C30	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	10.43
C31	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	7.60
C35	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	8.01
C36	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	7.36
C37	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	6.03
C4	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	6.99
C40	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	7.09
C41	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	10.04
C42	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	8.72
C43	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	7.26
C43_1	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	7.96
C43_2	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	6.01
C45	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	6.15
C46	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	3.50
C47	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	3.90
C48	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	4.04
C5	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	8.66
C50	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	3.97
C51	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	4.54
C52	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	5.21
C53	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	4.46
C54	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	4.76
C55	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	4.83
C56	TRAPEZOIDAL	1.00	3.10	0.52	5.60	1	3.62
C57	TRAPEZOIDAL	1.00	3.10	0.52	5.60	1	4.24
C58	TRAPEZOIDAL	1.00	3.10	0.52	5.60	1	4.03
C59	TRAPEZOIDAL	1.00	3.10	0.52	5.60	1	3.91
C6	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	7.55
C60	CIRCULAR	0.60	0.28	0.15	0.60	1	0.46
C61	TRAPEZOIDAL	0.50	0.90	0.26	3.30	1	1.66
C66	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	7.54
C67	TRAPEZOIDAL	1.00	3.10	0.52	5.60	1	6.00
C68	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	5.15
C69	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	13.39
C7	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	5.52
C8	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	7.74
C9	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1	7.35
EX_Ditch	Existing_Ditch	0.51	2.18	0.20	10.79	1	0.97
OUT1	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
OUT2	CIRCULAR	0.30	0.07	0.07	0.30	1	0.11
Pipe_-_(118)_(P-Stm-500_&_600_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
Pipe_-_(119)_(P-Stm-500_&_600_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
Pipe_-_(120)_(P-Stm-500_&_600_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
Pipe_-_(121)_(P-Stm-500_&_600_Series)	CIRCULAR	0.38	0.11	0.09	0.38	1	0.13
Pipe_-_(122)_(P-Stm-500_&_600_Series)	CIRCULAR	0.38	0.11	0.09	0.38	1	0.13
Pipe_-_(123)_(1)_(P-Stm-500_&_600_Series)	CIRCULAR	0.45	0.16	0.11	0.45	1	0.25
Pipe_-_(123)_(P-Stm-500_&_600_Series)	CIRCULAR	0.38	0.11	0.09	0.38	1	0.15
Pipe_-_(124)_(P-Stm-500_&_600_Series)	CIRCULAR	0.45	0.16	0.11	0.45	1	0.26
Pipe_-_(125)_(P-Stm-500_&_600_Series)	CIRCULAR	0.45	0.16	0.11	0.45	1	0.26
Pipe_-_(126)_(1)_(1)_(P-Stm-500_&_600_Series)	CIRCULAR	0.53	0.22	0.13	0.53	1	0.25
Pipe_-_(126)_(P-Stm-500_&_600_Series)	CIRCULAR	0.45	0.16	0.11	0.45	1	0.26
Pipe_-_(127)_(P-Stm-500_&_600_Series)	CIRCULAR	0.53	0.22	0.13	0.53	1	0.30
Pipe_-_(128)_(1)_(P-Stm-500_&_600_Series)	CIRCULAR	0.60	0.28	0.15	0.60	1	0.27
Pipe_-_(128)_(P-Stm-500_&_600_Series)	CIRCULAR	0.60	0.28	0.15	0.60	1	0.28
Pipe_-_(131)_(1)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
Pipe_-_(132)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
Pipe_-_(133)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.38	0.11	0.09	0.38	1	0.12
Pipe_-_(134)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.38	0.11	0.09	0.38	1	0.12
Pipe_-_(135)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.43
Pipe_-_(138)_(P-Stm-900_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
Pipe_-_(139)_(P-Stm-900_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
Pipe_-_(141)_(P-Stm-900_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
Pipe_-_(143)_(1)_(P-Stm-500_&_600_Series)	CIRCULAR	0.38	0.11	0.09	0.38	1	0.08
Pipe_-_(143)_(P-Stm-500_&_600_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.04
Pipe_-_(144)_(P-Stm-500_&_600_Series)	CIRCULAR	0.38	0.11	0.09	0.38	1	0.08
Pipe_-_(145)_(P-Stm-500_&_600_Series)	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
Pipe_-_(146)_(P-Stm-500_&_600_Series)	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
Pipe_-_(148)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.44
Pipe_-_(158)_(P-Stm-500_&_600_Series)	CIRCULAR	0.60	0.28	0.15	0.60	1	0.27
Pipe_-_(159)_(1)_(P-Stm-500_&_600_Series)	CIRCULAR	0.38	0.11	0.09	0.38	1	0.13
Pipe_-_(159)_(P-Stm-500_&_600_Series)	CIRCULAR	0.38	0.11	0.09	0.38	1	0.13
Pipe_-_(162)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.43
Pipe_-_(165)_(P-Stm-500_&_600_Series)	HORIZ_ELLIPSE	0.61	0.47	0.19	0.96	1	0.53
Pipe_-_(166)_(P-Stm-900_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
Pipe_-_(177)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.42
Pipe_-_(64)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.45	0.16	0.11	0.45	1	0.25
Pipe_-_(65)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.45	0.16	0.11	0.45	1	0.25
Pipe_-_(66)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.45	0.16	0.11	0.45	1	0.25
Pipe_-_(67)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.53	0.22	0.13	0.53	1	0.38
Pipe_-_(69)_(1)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.53	0.22	0.13	0.53	1	0.38
Pipe_-_(70)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.53	0.22	0.13	0.53	1	0.37
Pipe_-_(71)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.53	0.22	0.13	0.53	1	0.38
Pipe_-_(73)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.60	0.28	0.15	0.60	1	0.51
Pipe_-_(74)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.45
Pipe_-_(76)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.43
Pipe_-_(77)_(1)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.44
Pipe_-_(77)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.43
Pipe_-_(78)_(1)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.43
Pipe_-_(78)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.43
Pipe_-_(79)_(1)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.44
Pipe_-_(79)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.43
Pipe_-_(80)_(P-Stm-_800_&_700_Series)	CIRCULAR	0.75	0.44	0.19	0.75	1	0.43
Pipe_-_(98)_(P-Stm-400_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.08
Pipe_-_(99)_(P-Stm-400_Series)	CIRCULAR	0.30	0.07	0.07	0.30	1	0.08
RY3-SW2	TRAPEZOIDAL	0.50	0.90	0.26	3.30	1	0.35
RY3-SW3	TRAPEZOIDAL	0.50	0.90	0.26	3.30	1	2.03
RY3-SW4	TRAPEZOIDAL	0.50	0.90	0.26	3.30	1	1.32
RY3-SW5	TRAPEZOIDAL	0.50	0.90	0.26	3.30	1	1.28
W-IN1	Pond_Inlet	0.32	2.07	0.14	14.92	1	2.22

****
Transect Summary
****

Transect Existing_Ditch
Area:

0.0010	0.0041	0.0092	0.0155	0.0223
0.0298	0.0379	0.0466	0.0559	0.0658
0.0763	0.0875	0.0991	0.1112	0.1236
0.1365	0.1497	0.1634	0.1774	0.1919
0.2067	0.2220	0.2376	0.2537	0.2702
0.2871	0.3045	0.3224	0.3408	0.3597
0.3790	0.3988	0.4191	0.4399	0.4611
0.4829	0.5051	0.5279	0.5528	0.5804
0.6110	0.6450	0.6824	0.7232	0.7672
0.8120	0.8574	0.9032	0.9504	1.0000

Hrad:

0.0255	0.0510	0.0796	0.1206	0.1589
0.1950	0.2296	0.2629	0.2951	0.3265
0.3572	0.3881	0.4245	0.4602	0.4952
0.5295	0.5633	0.5965	0.6293	0.6616
0.6935	0.7250	0.7562	0.7871	0.8148
0.8418	0.8686	0.8954	0.9221	0.9487
0.9752	1.0016	1.0280	1.0543	1.0806
1.1068	1.1329	1.1574	1.1652	1.1696
1.1409	1.1137	1.0898	1.0692	0.8709
0.9123	0.9534	0.9923	0.9951	1.0000

Width:

0.0406	0.0812	0.1168	0.1290	0.1411
0.1532	0.1654	0.1775	0.1897	0.2018
0.2139	0.2256	0.2335	0.2414	0.2493
0.2572	0.2651	0.2730	0.2809	0.2889
0.2968	0.3047	0.3126	0.3205	0.3296
0.3390	0.3484	0.3578	0.3672	0.3766
0.3860	0.3954	0.4048	0.4142	0.4236

```
            0.4330     0.4424     0.4662     0.5183     0.5703
            0.6363     0.7032     0.7710     0.8390     0.8800
            0.8893     0.8985     0.9094     0.9547     1.0000

Transect Pond_Inlet
Area:
            0.0032     0.0064     0.0098     0.0133     0.0170
            0.0207     0.0246     0.0286     0.0327     0.0369
            0.0412     0.0457     0.0503     0.0550     0.0598
            0.0648     0.0698     0.0750     0.0803     0.0857
            0.0912     0.0969     0.1027     0.1085     0.1146
            0.1207     0.1269     0.1333     0.1398     0.1464
            0.1531     0.1878     0.2319     0.2761     0.3205
            0.3650     0.4096     0.4543     0.4991     0.5440
            0.5891     0.6343     0.6796     0.7250     0.7705
            0.8162     0.8620     0.9079     0.9539     1.0000
Hrad:
            0.0456     0.0894     0.1316     0.1724     0.2120
            0.2504     0.2878     0.3243     0.3599     0.3947
            0.4288     0.4622     0.4951     0.5274     0.5591
            0.5904     0.6213     0.6517     0.6818     0.7115
            0.7409     0.7699     0.7987     0.8272     0.8554
            0.8834     0.9111     0.9387     0.9660     0.9932
            1.0201     0.1974     0.2430     0.2886     0.3340
            0.3793     0.4244     0.4694     0.5143     0.5591
            0.6037     0.6482     0.6926     0.7369     0.7810
            0.8251     0.8690     0.9128     0.9564     1.0000
Width:
            0.0696     0.0722     0.0747     0.0773     0.0799
            0.0825     0.0850     0.0876     0.0902     0.0928
            0.0953     0.0979     0.1005     0.1031     0.1056
            0.1082     0.1108     0.1134     0.1159     0.1185
            0.1211     0.1236     0.1262     0.1288     0.1314
            0.1339     0.1365     0.1391     0.1417     0.1442
            0.1468     0.9537     0.9562     0.9588     0.9614
            0.9640     0.9665     0.9691     0.9717     0.9743
            0.9768     0.9794     0.9820     0.9846     0.9871
            0.9897     0.9923     0.9949     0.9974     1.0000


************************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
************************************************************

***************
Analysis Options
***************
Flow Units ............... CMS
Process Models:
  Rainfall/Runoff ........ YES
  RDII ................... NO
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Surcharge Method ......... EXTRAN
Starting Date ............ 01/01/2000 00:00:00
Ending Date .............. 01/03/2000 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:01:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 00:05:00
Routing Time Step ........ 1.00 sec
Variable Time Step ....... YES
Maximum Trials ........... 8
Number of Threads ........ 4
Head Tolerance ........... 0.001500 m


**************************        Volume         Depth
Runoff Quantity Continuity     hectare-m            mm
**************************     ---------       -------
Total Precipitation ......         0.637        71.708
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........         0.173        19.488
Surface Runoff ...........         0.456        51.299
Final Storage ............         0.012         1.386
Continuity Error (%) .....        -0.648


**************************        Volume         Volume
Flow Routing Continuity        hectare-m       10^6 ltr
**************************     ---------       ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......         0.456         4.556
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.227         2.268
External Outflow .........         0.657         6.575
Flooding Loss ............         0.000         0.000
Evaporation Loss .........         0.000         0.000
Exfiltration Loss ........         0.022         0.225
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.000         0.004
Continuity Error (%) .....         0.303


*************************
Highest Continuity Errors
*************************
Node J234 (13.57%)
Node J1 (2.37%)
Node J232 (1.71%)
Node St_DIMH600 (-1.54%)
Node J242 (1.01%)


***************************
Time-Step Critical Elements
***************************
None


********************************
Highest Flow Instability Indexes
********************************
Link O-St_DIMH600 (2)
Link C69 (2)
Link C60 (1)


************************

  Routing Time Step Summary
  *************************
  Minimum Time Step           :     0.50 sec
  Average Time Step           :     1.00 sec
  Maximum Time Step           :     1.00 sec
  Percent in Steady State     :     0.00
  Average Iterations per Step :     2.00
  Percent Not Converging      :     0.00
  Time Step Frequencies       :
      1.000 -  0.871 sec      :    99.06 %
      0.871 -  0.758 sec      :     0.61 %
      0.758 -  0.660 sec      :     0.07 %
      0.660 -  0.574 sec      :     0.06 %
      0.574 -  0.500 sec      :     0.20 %


  ***************************
  Subcatchment Runoff Summary
  ***************************

  ---------------------------------------------------------------------------------------------
-----------------------------------
                                  Total       Total       Total       Total      Imperv       Perv
Total       Total      Peak  Runoff
                                Precip       Runon        Evap       Infil     Runoff      Runoff
Runoff      Runoff    Runoff   Coeff
  Subcatchment                     mm          mm          mm          mm          mm          mm
mm    10^6 ltr       CMS
  ---------------------------------------------------------------------------------------------
-----------------------------------
  1-P                           71.71        0.00        0.00        0.00       70.37        0.00
70.37        1.34      0.95   0.981
  CB403-MH600                   71.71        0.00        0.00       19.45       31.67       26.00
51.35        0.20      0.15   0.716
  CB601-CB602                   71.71        0.00        0.00       16.32       37.80       16.77
54.57        0.03      0.02   0.761
  CB602-MH600                   71.71        0.00        0.00       20.21       30.43       25.20
50.58        0.04      0.03   0.705
  CB603-CB604                   71.71        0.00        0.00       18.07       34.41       22.83
52.72        0.15      0.11   0.735
  CB604-TC600                   71.71        0.00        0.00       23.78       23.19       29.99
47.16        0.05      0.04   0.658
  CB605-CB606                   71.71        0.00        0.00       22.50       25.81       22.56
48.37        0.05      0.04   0.675
  CB606-TC601                   71.71        0.00        0.00       17.60       35.35       17.97
53.32        0.04      0.03   0.744
  CB608-CB609                   71.71        0.00        0.00       21.37       27.87       29.60
49.52        0.04      0.03   0.691
  CB609-CBMH600                 71.71        0.00        0.00       21.44       27.62       29.86
49.42        0.05      0.04   0.689
  CB610-CBMH600                 71.71        0.00        0.00       21.26       27.97       29.72
49.60        0.05      0.04   0.692
  CB611-CB610                   71.71        0.00        0.00       20.89       28.82       29.61
50.00        0.04      0.03   0.697
  CB612-CB611                   71.71        0.00        0.00       23.33       23.98       29.82
47.62        0.05      0.04   0.664
  CB700-CB701                   71.71        0.00        0.00       29.17       12.90       32.11
41.76        0.08      0.05   0.582
  CB701-CB702                   71.71        0.00        0.00       27.58       15.78       32.41
43.48        0.09      0.06   0.606
  CB702-CB703                   71.71        0.00        0.00       30.75        9.93       31.51
40.18        0.07      0.04   0.560
  CB703-TC701                   71.71        0.00        0.00       23.23       24.58       30.59
47.55        0.08      0.05   0.663
  CB704-CB705                   71.71        0.00        0.00       27.85       15.62       31.41
43.05        0.08      0.05   0.600
  CB705-MH700                   71.71        0.00        0.00       24.31       22.69       29.61
46.49        0.06      0.04   0.648
  CB706-CB707                   71.71        0.00        0.00       20.38       29.73       20.89
50.62        0.06      0.04   0.706
  CB707-CB708                   71.71        0.00        0.00       17.09       36.28       17.57
53.84        0.03      0.02   0.751
  CB708-TC702                   71.71        0.00        0.00       17.05       36.36       17.54
53.90        0.03      0.02   0.752
  CB709-TC703                   71.71        0.00        0.00       18.12       34.23       18.59
52.83        0.03      0.02   0.737
  CB710-CB711                   71.71        0.00        0.00       14.49       41.38       14.98
56.35        0.04      0.03   0.786
  CB711-CB712                   71.71        0.00        0.00       17.56       35.34       18.03
53.38        0.03      0.02   0.744
  CB712-OUTLET                  71.71        0.00        0.00       16.78       36.90       17.27
54.18        0.03      0.02   0.756
  CB803-CB804                   71.71        0.00        0.00       16.48       37.48       16.89
54.37        0.13      0.10   0.758
  CB804-CB805                   71.71        0.00        0.00       19.02       32.35       19.68
52.03        0.02      0.02   0.726
  CB805-MH700                   71.71        0.00        0.00       22.92       24.89       29.97
48.01        0.05      0.04   0.669
  CB902-CB903                   71.71        0.00        0.00       17.68       35.17       18.07
53.24        0.10      0.07   0.742
  CB903-CB904                   71.71        0.00        0.00       16.07       38.31       16.53
54.84        0.03      0.02   0.765
  CB904-MH701                   71.71        0.00        0.00       17.63       35.19       18.08
53.28        0.03      0.02   0.743
  CBMH600-OUTLET                71.71        0.00        0.00       22.29       26.03       30.65
48.63        0.05      0.04   0.678
  EX_1                          71.71        0.00        0.00       33.63        5.02       32.21
37.23        0.09      0.04   0.519
  EX_2_(CB704-CB705)            71.71        0.00        0.00       33.33        5.02       32.60
37.62        0.03      0.01   0.525
  EX_3_(CB703-CB704)            71.71        0.00        0.00       33.71        5.02       32.06
37.08        0.08      0.03   0.517
  EX_4_(CB701-CB702)            71.71        0.00        0.00       33.33        5.02       32.67
37.69        0.01      0.01   0.526
  EX_5_(CB700-CB701)            71.71        0.00        0.00       33.41        5.02       32.52
37.54        0.03      0.01   0.523
  EX_6_(CB805-MH700)            71.71        0.00        0.00       33.63        5.02       32.14
37.16        0.02      0.01   0.518
  EX_7_(MH700-MH701)            71.71        0.00        0.00       33.94        5.02       31.78
36.80        0.03      0.01   0.513
  EX_8_(MH705-MH700)            71.71        0.00        0.00       33.71        5.02       32.05
37.07        0.02      0.01   0.517
  EXRY-CB600                    71.71        0.00        0.00       31.91        8.22       38.93
38.93        0.06      0.03   0.543
  EXRY-CB613                    71.71        0.00        0.00       23.42       24.52       47.43
47.43        0.13      0.08   0.662
  MH700-MH701                   71.71        0.00        0.00       23.70       23.66       28.84
47.18        0.06      0.04   0.658
  RY_CB600-CB601                71.71        0.00        0.00       25.05       21.12       45.80
45.80        0.08      0.05   0.639
  RY_CB613-CB612                71.71        0.00        0.00       29.62       11.48       41.48
41.48        0.09      0.07   0.578
  RY1-POND                      71.71        0.00        0.00       26.91       17.46       44.04
44.04        0.03      0.02   0.614
  RY2-POND                      71.71        0.00        0.00       26.72       17.73       44.21
44.21        0.06      0.04   0.617
```

RY3-POND			71.71	0.00	0.00	29.76	11.89	41.18
41.18	0.14	0.09	0.574					
RY4-POND			71.71	0.00	0.00	27.86	15.10	43.16
43.16	0.16	0.12	0.602					
RY607-TC600			71.71	0.00	0.00	26.68	17.93	44.26
44.26	0.16	0.10	0.617					
Wren_Drive			71.71	0.00	0.00	20.67	29.26	21.00
50.26	0.03	0.02	0.701					

****
Node Depth Summary
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Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J1	JUNCTION	0.01	0.10	145.60	0 01:10	0.10
J1_OUT	JUNCTION	0.04	0.47	142.86	0 01:27	0.47
J10	JUNCTION	0.03	0.26	146.02	0 01:10	0.26
J11	JUNCTION	0.06	0.55	146.60	0 01:12	0.55
J2	JUNCTION	0.01	0.37	145.17	0 01:00	0.37
J201	JUNCTION	0.06	0.55	146.60	0 01:13	0.55
J203	JUNCTION	0.06	0.25	146.17	0 01:10	0.25
J205	JUNCTION	0.03	0.22	146.02	0 01:10	0.22
J207	JUNCTION	0.07	0.28	146.09	0 01:11	0.28
J208	JUNCTION	0.06	0.26	146.09	0 01:10	0.26
J215	JUNCTION	0.08	0.51	146.51	0 01:12	0.51
J217	JUNCTION	0.02	0.19	146.17	0 01:10	0.19
J219	JUNCTION	0.04	0.24	146.08	0 01:10	0.24
J221	JUNCTION	0.00	0.03	145.60	0 01:10	0.03
J225	JUNCTION	0.04	0.22	145.56	0 01:10	0.22
J227	JUNCTION	0.06	0.26	145.42	0 01:10	0.26
J229	JUNCTION	0.09	0.31	145.39	0 01:10	0.31
J231	JUNCTION	0.09	0.30	145.36	0 01:10	0.30
J232	JUNCTION	0.16	0.45	145.64	0 01:14	0.45
J234	JUNCTION	0.25	0.39	145.96	0 01:10	0.39
J235	JUNCTION	0.06	0.32	145.75	0 01:11	0.32
J236	JUNCTION	0.02	0.15	145.75	0 01:10	0.15
J238	JUNCTION	0.02	0.19	146.33	0 01:10	0.19
J239	JUNCTION	0.06	0.46	146.77	0 01:11	0.46
J242	JUNCTION	0.00	0.17	146.77	0 01:12	0.17
J253	JUNCTION	0.01	0.29	146.75	0 01:20	0.29
J255	JUNCTION	0.04	0.54	146.75	0 01:20	0.54
J257	JUNCTION	0.01	0.19	146.69	0 01:18	0.19
J259	JUNCTION	0.02	0.16	146.22	0 01:10	0.16
J261	JUNCTION	0.04	0.23	146.55	0 01:10	0.23
J263	JUNCTION	0.04	0.21	146.88	0 01:16	0.21
J267	JUNCTION	0.08	0.33	146.93	0 01:10	0.33
J269	JUNCTION	0.04	0.21	146.88	0 01:10	0.21
J271	JUNCTION	0.07	0.33	147.11	0 01:11	0.33
J273	JUNCTION	0.12	0.61	147.53	0 01:12	0.61
J276	JUNCTION	0.05	0.35	145.64	0 01:15	0.35
J277	JUNCTION	0.07	0.28	145.45	0 01:10	0.28
J279	JUNCTION	0.03	0.21	145.27	0 01:10	0.21
J281	JUNCTION	0.07	0.32	145.16	0 01:10	0.32
J284	JUNCTION	0.03	0.23	145.07	0 01:10	0.23
J286	JUNCTION	0.06	0.28	145.14	0 01:10	0.28
J288	JUNCTION	0.03	0.24	145.15	0 01:12	0.24
J290	JUNCTION	0.02	0.18	145.21	0 01:10	0.18
J292	JUNCTION	0.03	0.21	145.25	0 01:10	0.21
J296	JUNCTION	0.06	0.49	145.44	0 01:12	0.49
J297	JUNCTION	0.05	0.47	145.44	0 01:12	0.47
J3	JUNCTION	0.01	0.33	144.96	0 01:01	0.33
J4	JUNCTION	0.01	0.34	144.92	0 01:02	0.34
J5	JUNCTION	0.02	0.56	144.68	0 01:05	0.56
J5230	JUNCTION	0.04	0.26	143.40	0 01:33	0.26
J5260	JUNCTION	0.02	0.23	143.57	0 01:33	0.23
J6	JUNCTION	0.06	0.46	146.51	0 01:12	0.46
J7	JUNCTION	0.06	0.46	147.37	0 01:19	0.46
J8	JUNCTION	0.07	0.27	146.17	0 01:10	0.27
J9	JUNCTION	0.01	0.26	144.34	0 01:05	0.26
MD-1	JUNCTION	0.03	0.42	142.87	0 01:27	0.42
OUTLET_2_(P-Stm-500_&_600_Series)	JUNCTION	0.01	0.28	144.11	0 01:12	0.28
RY3-J2	JUNCTION	0.01	0.29	147.64	0 01:10	0.29
RY3-J3	JUNCTION	0.00	0.12	147.42	0 01:12	0.12
RY3-J4	JUNCTION	0.00	0.18	145.58	0 01:12	0.18
RY3-J5	JUNCTION	0.01	0.19	144.87	0 01:13	0.19
RY3-J6	JUNCTION	0.00	0.16	144.16	0 01:13	0.16
OF1	OUTFALL	0.04	0.48	142.83	0 01:36	0.47
CB403_(P-Stm-400_Series)	STORAGE	0.31	1.39	146.57	0 01:15	1.39
CB600_(P-Stm-500_&_600_Series)	STORAGE	0.32	1.61	147.19	0 01:15	1.61
CB601_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.47	146.86	0 01:16	1.47
CB602_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.47	146.67	0 01:16	1.47
CB603_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.46	146.33	0 01:14	1.46
CB604_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.45	146.12	0 01:14	1.45
CB605_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.34	145.67	0 01:14	1.34
CB606_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.33	145.30	0 01:14	1.33
CB607_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.21	145.03	0 01:14	1.21
CB608_(P-Stm-500_&_600_Series)	STORAGE	0.32	1.12	144.79	0 01:14	1.12
CB609_(P-Stm-500_&_600_Series)	STORAGE	0.32	1.07	144.69	0 01:14	1.07
CB610_(P-Stm-500_&_600_Series)	STORAGE	0.31	0.85	144.60	0 01:12	0.85
CB611_(P-Stm-500_&_600_Series)	STORAGE	0.30	0.89	144.69	0 01:12	0.89
CB612_(P-Stm-500_&_600_Series)	STORAGE	0.30	0.90	144.80	0 01:12	0.90
CB613_(P-Stm-500_&_600_Series)	STORAGE	0.30	0.94	144.89	0 01:12	0.94
CB700_(P-Stm-_800_&_700_Series)	STORAGE	0.31	1.45	146.99	0 01:14	1.45
CB701_(P-Stm-_800_&_700_Series)	STORAGE	0.31	1.49	146.83	0 01:14	1.49
CB702_(P-Stm-_800_&_700_Series)	STORAGE	0.31	1.52	146.57	0 01:14	1.52
CB703_(P-Stm-_800_&_700_Series)	STORAGE	0.31	1.62	146.41	0 01:14	1.61
CB704_(P-Stm-_800_&_700_Series)	STORAGE	0.31	1.64	146.18	0 01:14	1.63
CB705_(P-Stm-_800_&_700_Series)	STORAGE	0.31	1.60	145.92	0 01:14	1.59
CB706_(P-Stm-_800_&_700_Series)	STORAGE	0.32	1.55	145.31	0 01:14	1.55
CB707_(P-Stm-_800_&_700_Series)	STORAGE	0.32	1.50	145.23	0 01:13	1.50
CB708_(P-Stm-_800_&_700_Series)	STORAGE	0.32	1.41	145.10	0 01:13	1.40
CB709_(P-Stm-_800_&_700_Series)	STORAGE	0.32	1.31	144.98	0 01:13	1.31
CB710_(P-Stm-_800_&_700_Series)	STORAGE	0.32	1.21	144.84	0 01:13	1.21
CB711_(P-Stm-_800_&_700_Series)	STORAGE	0.32	1.12	144.73	0 01:13	1.12
CB712_(P-Stm-_800_&_700_Series)	STORAGE	0.31	1.06	144.64	0 01:13	1.06
CB803_(P-Stm-_800_&_700_Series)	STORAGE	0.30	1.13	145.88	0 01:14	1.13
CB804_(P-Stm-_800_&_700_Series)	STORAGE	0.30	1.23	145.80	0 01:13	1.23
CB805_(P-Stm-_800_&_700_Series)	STORAGE	0.31	1.31	145.76	0 01:13	1.31
CB902_(P-Stm-900_Series)	STORAGE	0.30	1.21	145.83	0 01:13	1.21
CB903_(P-Stm-900_Series)	STORAGE	0.30	1.26	145.76	0 01:13	1.26
CB904_(P-Stm-900_Series)	STORAGE	0.30	1.28	145.66	0 01:13	1.28
CO400_(P-Stm-400_Series)	STORAGE	0.30	1.20	146.57	0 01:15	1.20
CO500_(P-Stm-500_&_600_Series)	STORAGE	0.30	1.10	146.38	0 01:14	1.10
CO600_(P-Stm-500_&_600_Series)	STORAGE	0.30	0.83	144.89	0 01:12	0.83
CO800_(P-Stm-_800_&_700_Series)	STORAGE	0.30	1.09	145.88	0 01:14	1.08
CO900_(P-Stm-900_Series)	STORAGE	0.30	1.18	145.83	0 01:13	1.18
DIMH600_(P-Stm-500_&_600_Series)	STORAGE	0.31	0.76	144.33	0 01:13	0.76
EXCB13_(P-Stm-_800_&_700_Series)	STORAGE	0.31	1.28	147.03	0 01:14	1.28
EXCB14_(P-Stm-500_&_600_Series)	STORAGE	0.32	1.68	147.42	0 01:13	1.68
MH600_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.46	146.53	0 01:15	1.46
MH601_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.40	146.38	0 01:14	1.40
MH700_(P-Stm-_800_&_700_Series)	STORAGE	0.31	1.52	145.60	0 01:14	1.52
MH701_(P-Stm-_800_&_700_Series)	STORAGE	0.32	1.64	145.46	0 01:14	1.64
PND-1	STORAGE	0.08	0.70	143.85	0 01:33	0.70
St_CB403	STORAGE	0.07	0.64	146.75	0 01:20	0.64
St_CB600	STORAGE	0.12	0.61	147.37	0 01:19	0.61
St_CB601	STORAGE	0.09	0.36	146.88	0 01:17	0.36
St_CB602	STORAGE	0.06	0.40	146.69	0 01:18	0.40
St_CB603	STORAGE	0.05	0.46	146.77	0 01:12	0.46
St_CB604	STORAGE	0.05	0.31	146.33	0 01:10	0.31
St_CB605	STORAGE	0.07	0.35	145.75	0 01:11	0.35
St_CB606	STORAGE	0.03	0.25	145.96	0 01:10	0.25
St_CB607	STORAGE	0.06	0.38	145.64	0 01:15	0.38
St_CB608	STORAGE	0.07	0.29	145.45	0 01:10	0.29
St_CB609	STORAGE	0.04	0.24	145.27	0 01:10	0.24
St_CB610	STORAGE	0.04	0.26	145.07	0 01:10	0.26
St_CB611	STORAGE	0.06	0.29	145.14	0 01:10	0.29
St_CB612	STORAGE	0.03	0.27	145.15	0 01:12	0.27
St_CB613	STORAGE	0.06	0.51	145.44	0 01:12	0.51
St_CB700	STORAGE	0.15	0.66	147.53	0 01:12	0.66
St_CB701	STORAGE	0.11	0.42	147.11	0 01:11	0.42
St_CB702	STORAGE	0.11	0.40	146.88	0 01:10	0.40
St_CB703	STORAGE	0.10	0.38	146.93	0 01:10	0.38
St_CB704	STORAGE	0.11	0.42	146.55	0 01:10	0.42
St_CB705	STORAGE	0.07	0.35	146.22	0 01:10	0.35
St_CB706	STORAGE	0.04	0.30	145.60	0 01:10	0.30
St_CB707	STORAGE	0.06	0.28	145.56	0 01:10	0.28
St_CB708	STORAGE	0.08	0.32	145.42	0 01:10	0.32
St_CB709	STORAGE	0.10	0.32	145.39	0 01:10	0.32
St_CB710	STORAGE	0.09	0.32	145.36	0 01:10	0.32
St_CB711	STORAGE	0.03	0.20	145.21	0 01:10	0.20
St_CB712	STORAGE	0.04	0.23	145.25	0 01:10	0.23
St_CB803	STORAGE	0.09	0.63	146.60	0 01:12	0.63
St_CB804	STORAGE	0.07	0.28	146.17	0 01:10	0.28
St_CB805	STORAGE	0.04	0.28	146.02	0 01:10	0.28
St_CB902	STORAGE	0.09	0.55	146.51	0 01:12	0.55
St_CB903	STORAGE	0.05	0.30	146.17	0 01:10	0.30
St_CB904	STORAGE	0.08	0.35	146.08	0 01:10	0.35
St_DIMH600	STORAGE	0.09	0.37	145.16	0 01:10	0.37
St_MH700	STORAGE	0.13	0.40	146.09	0 01:10	0.40
TC600_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.36	145.74	0 01:14	1.35
TC601_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.47	146.76	0 01:16	1.47
TC602_(P-Stm-500_&_600_Series)	STORAGE	0.31	1.16	144.87	0 01:14	1.16
TC702_(P-Stm-_800_&_700_Series)	STORAGE	0.32	1.35	145.03	0 01:13	1.35
TC703_(P-Stm-_800_&_700_Series)	STORAGE	0.32	1.24	144.89	0 01:13	1.24
TC705_(P-Stm-_800_&_700_Series)	STORAGE	0.31	0.71	144.27	0 01:13	0.71
TCB701_(P-Stm-_800_&_700_Series)	STORAGE	0.32	1.46	145.17	0 01:13	1.46
TCB704_(P-Stm-_800_&_700_Series)	STORAGE	0.32	1.16	144.78	0 01:13	1.16

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J1	JUNCTION	0.000	0.005	0 01:02	0	0.00236	2.426
J1_OUT	JUNCTION	0.000	1.040	0 01:27	0	6.58	0.049
J10	JUNCTION	0.000	0.000	0 00:20	0	0.000428	-2.464
J11	JUNCTION	0.000	0.008	0 01:09	0	0.00542	0.101
J2	JUNCTION	0.353	0.353	0 01:01	0.526	0.526	-0.049
J201	JUNCTION	0.000	0.012	0 01:10	0	0.00808	0.096
J203	JUNCTION	0.000	0.001	0 00:59	0	0.00135	0.118
J205	JUNCTION	0.000	0.002	0 01:10	0	0.00181	0.234
J207	JUNCTION	0.000	0.010	0 01:05	0	0.00402	0.237
J208	JUNCTION	0.000	0.006	0 01:05	0	0.00225	0.178
J215	JUNCTION	0.000	0.006	0 01:05	0	0.0043	0.134
J217	JUNCTION	0.000	0.001	0 00:52	0	0.000964	0.214
J219	JUNCTION	0.000	0.003	0 01:01	0	0.00197	0.203
J221	JUNCTION	0.000	0.000	0 01:04	0	4.1e-05	0.816
J225	JUNCTION	0.000	0.001	0 00:56	0	0.00119	0.261
J227	JUNCTION	0.000	0.005	0 01:02	0	0.00238	0.195
J229	JUNCTION	0.000	0.002	0 00:56	0	0.0016	0.244
J231	JUNCTION	0.000	0.002	0 00:58	0	0.00249	0.242
J232	JUNCTION	0.000	0.021	0 01:07	0	0.00865	1.741
J234	JUNCTION	0.000	0.002	0 01:03	0	0.00173	15.697
J235	JUNCTION	0.000	0.002	0 01:05	0	0.00138	0.277
J236	JUNCTION	0.000	0.008	0 01:05	0	0.00286	0.947
J238	JUNCTION	0.000	0.002	0 01:01	0	0.00191	0.365
J239	JUNCTION	0.000	0.001	0 01:09	0	0.00136	1.162
J242	JUNCTION	0.000	0.010	0 01:10	0	0.00518	1.019
J253	JUNCTION	0.000	0.023	0 01:10	0	0.0123	0.951
J255	JUNCTION	0.000	0.017	0 01:10	0	0.0128	0.105
J257	JUNCTION	0.000	0.009	0 01:13	0	0.00335	0.568
J259	JUNCTION	0.000	0.005	0 01:01	0	0.00206	0.564
J261	JUNCTION	0.000	0.012	0 01:04	0	0.00417	0.441
J263	JUNCTION	0.000	0.001	0 00:58	0	0.00145	0.184

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  J267                    JUNCTION      0.000     0.014     0  01:03            0      0.00691
0.301
  J269                    JUNCTION      0.000     0.009     0  01:05            0      0.00265
0.396
  J271                    JUNCTION      0.000     0.012     0  01:03            0      0.00519
0.191
  J273                    JUNCTION      0.104     0.104     0  01:01       0.0776      0.0789
-0.038
  J276                    JUNCTION      0.000     0.011     0  01:14            0      0.0081
0.260
  J277                    JUNCTION      0.000     0.010     0  01:15            0      0.00562
-0.159
  J279                    JUNCTION      0.000     0.001     0  00:54            0      0.00132
0.342
  J281                    JUNCTION      0.000     0.013     0  01:05            0      0.00548
0.201
  J284                    JUNCTION      0.000     0.001     0  01:00            0      0.00144
0.304
  J286                    JUNCTION      0.000     0.001     0  01:00            0     0.000937
-0.738
  J288                    JUNCTION      0.000     0.030     0  01:12            0       0.0131
0.045
  J290                    JUNCTION      0.000     0.001     0  01:02            0     0.000825
0.537
  J292                    JUNCTION      0.000     0.001     0  00:54            0      0.00113
0.406
  J296                    JUNCTION      0.000     0.030     0  01:12            0       0.0145
0.124
  J297                    JUNCTION      0.095     0.095     0  01:01        0.152        0.152
-0.219
  J3                      JUNCTION      0.000     0.353     0  01:01            0        0.527
0.036
  J4                      JUNCTION      0.000     0.347     0  01:01            0        0.526
-0.371
  J5                      JUNCTION      0.000     0.335     0  01:02            0        0.528
0.434
  J5230                   JUNCTION      0.000     0.057     0  01:33            0         1.22
0.002
  J5260                   JUNCTION      0.000     0.069     0  01:33            0        0.956
-0.000
  J6                      JUNCTION      0.000     0.005     0  01:05            0      0.00378
0.098
  J7                      JUNCTION      0.022     0.025     0  01:06       0.0018       0.0129
0.337
  J8                      JUNCTION      0.000     0.000     0  00:55            0     0.000873
0.142
  J9                      JUNCTION      0.000     0.287     0  01:05            0        0.526
-0.123
  MD-1                    JUNCTION      0.529     0.529     0  01:01        0.971        0.971
-0.100
  OUTLET_2_(P-Stm-500_&_600_Series) JUNCTION      0.000     1.327     0  01:12            0
2.94       0.014
  RY3-J2                  JUNCTION      0.087     0.087     0  01:10        0.141        0.141
-0.122
  RY3-J3                  JUNCTION      0.000     0.084     0  01:11            0        0.141
0.134
  RY3-J4                  JUNCTION      0.041     0.119     0  01:11       0.0888         0.23
-0.054
  RY3-J5                  JUNCTION      0.000     0.118     0  01:12            0         0.23
0.022
  RY3-J6                  JUNCTION      0.000     0.117     0  01:13            0         0.23
0.025
  OF1                     OUTFALL       0.000     1.081     0  01:36            0         6.57
0.000
  CB403_(P-Stm-400_Series) STORAGE      0.000     0.061     0  01:25            0        0.186
0.253
  CB600_(P-Stm-500_&_600_Series) STORAGE      0.000     0.130     0  01:12            0        0.379
-0.082
  CB601_(P-Stm-500_&_600_Series) STORAGE      0.000     0.139     0  01:12            0        0.403
0.158
  CB602_(P-Stm-500_&_600_Series) STORAGE      0.000     0.155     0  01:23            0        0.435
0.097
  CB603_(P-Stm-500_&_600_Series) STORAGE      0.000     0.254     0  01:19            0        0.752
0.118
  CB604_(P-Stm-500_&_600_Series) STORAGE      0.000     0.277     0  01:12            0          0.8
0.067
  CB605_(P-Stm-500_&_600_Series) STORAGE      0.000     0.296     0  01:13            0        0.839
0.018
  CB606_(P-Stm-500_&_600_Series) STORAGE      0.000     0.314     0  01:13            0        0.878
0.121
  CB607_(P-Stm-500_&_600_Series) STORAGE      0.000     0.383     0  01:14            0         1.02
-0.071
  CB608_(P-Stm-500_&_600_Series) STORAGE      0.000     0.409     0  01:14            0         1.06
0.016
  CB609_(P-Stm-500_&_600_Series) STORAGE      0.000     0.430     0  01:14            0          1.1
-0.128
  CB610_(P-Stm-500_&_600_Series) STORAGE      0.000     0.208     0  01:12            0        0.365
0.136
  CB611_(P-Stm-500_&_600_Series) STORAGE      0.000     0.179     0  01:12            0         0.32
0.093
  CB612_(P-Stm-500_&_600_Series) STORAGE      0.000     0.156     0  01:12            0        0.281
0.222
  CB613_(P-Stm-500_&_600_Series) STORAGE      0.000     0.101     0  01:13            0        0.226
0.320
  CB700_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.215     0  01:13            0
0.592       0.077
  CB701_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.269     0  01:09            0
0.687       0.085
  CB702_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.294     0  01:14            0
0.748       0.155
  CB703_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.355     0  01:14            0
0.887       0.061
  CB704_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.402     0  01:14            0
0.984       0.038
  CB705_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.435     0  01:14            0
1.06        0.068
  CB706_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.682     0  01:14            0
1.55       -0.063
  CB707_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.693     0  01:14            0
1.57       -0.003
  CB708_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.706     0  01:14            0
1.6         0.013
  CB709_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.718     0  01:14            0
1.63        0.018
  CB710_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.733     0  01:13            0
1.66        0.016
  CB711_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.745     0  01:13            0
1.69        0.040
  CB712_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.756     0  01:13            0
1.71        0.010
  CB803_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.060     0  01:12            0
0.128       0.339
  CB804_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.069     0  01:13            0
0.145       0.273
  CB805_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.108     0  01:12            0
0.217       0.250
  CB902_(P-Stm-900_Series) STORAGE      0.000     0.052     0  01:12            0       0.0944
0.510
  CB903_(P-Stm-900_Series) STORAGE      0.000     0.065     0  01:11            0        0.118
0.301
  CB904_(P-Stm-900_Series) STORAGE      0.000     0.079     0  01:11            0        0.142
0.482
  CO400_(P-Stm-400_Series) STORAGE      0.000     0.013     0  01:08            0      0.00248
8.340
  CO500_(P-Stm-500_&_600_Series) STORAGE        0.000     0.019       0  01:09              0
0.00248       0.175
  CO600_(P-Stm-500_&_600_Series) STORAGE        0.000     0.012       0  01:01              0
0.00141      26.850
  CO800_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.007       0  01:08              0
0.00138      31.588
  CO900_(P-Stm-900_Series) STORAGE      0.000     0.004     0  01:08            0      0.00141
30.661
  DIMH600_(P-Stm-500_&_600_Series) STORAGE       0.000     0.661       0  01:13              0
1.52        0.109
  EXCB13_(P-Stm-_800_&_700_Series) STORAGE       0.110     0.110       0  00:59          0.417
0.417       0.224
  EXCB14_(P-Stm-500_&_600_Series) STORAGE        0.095     0.095       0  01:08          0.253
0.253       0.338
  MH600_(P-Stm-500_&_600_Series) STORAGE     0.000    0.212     0  01:23            0        0.618
-0.001
  MH601_(P-Stm-500_&_600_Series) STORAGE     0.000    0.215     0  01:23            0         0.62
0.138
  MH700_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.579       0  01:14              0
1.36       -0.006
  MH701_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.655       0  01:14              0
1.5         0.018
  PND-1                   STORAGE       1.145     2.739     0  01:10           1.62          5.61
0.001
  St_CB403                STORAGE       0.146     0.146     0  01:10          0.199         0.224
-0.057
  St_CB600                STORAGE       0.078     0.078     0  01:10          0.135         0.148
-0.028
  St_CB601                STORAGE       0.020     0.020     0  01:10         0.0273        0.0287
-0.010
  St_CB602                STORAGE       0.028     0.028     0  01:10         0.0401        0.0434
-0.043
  St_CB603                STORAGE       0.107     0.107     0  01:10          0.146         0.153
-0.030
  St_CB604                STORAGE       0.039     0.039     0  01:10         0.0532        0.0551
-0.013
  St_CB605                STORAGE       0.035     0.035     0  01:10         0.0508         0.055
-0.051
  St_CB606                STORAGE       0.032     0.032     0  01:10         0.0436        0.0451
0.458
  St_CB607                STORAGE       0.103     0.103     0  01:10          0.159         0.171
0.316
  St_CB608                STORAGE       0.029     0.030     0  01:10         0.0393        0.0449
0.026
  St_CB609                STORAGE       0.036     0.036     0  01:10         0.0475        0.0489
-0.010
  St_CB610                STORAGE       0.037     0.037     0  01:10         0.0482        0.0496
-0.009
  St_CB611                STORAGE       0.031     0.031     0  01:10         0.0412        0.0421
0.023
  St_CB612                STORAGE       0.036     0.056     0  01:12         0.0478        0.0609
-0.010
  St_CB613                STORAGE       0.072     0.136     0  01:10         0.0921         0.247
0.128
  St_CB700                STORAGE       0.066     0.121     0  01:10          0.109         0.188
0.015
  St_CB701                STORAGE       0.071     0.071     0  01:10          0.103         0.108
-0.009
  St_CB702                STORAGE       0.041     0.041     0  01:10         0.0689        0.0715
-0.014
  St_CB703                STORAGE       0.083     0.083     0  01:10          0.151         0.158
-0.014
  St_CB704                STORAGE       0.065     0.065     0  01:10          0.108         0.112
-0.016
  St_CB705                STORAGE       0.046     0.046     0  01:10         0.0808        0.0828
-0.014
  St_CB706                STORAGE       0.043     0.043     0  01:10         0.0576        0.0599
-0.094
  St_CB707                STORAGE       0.019     0.019     0  01:10         0.0254        0.0266
-0.010
  St_CB708                STORAGE       0.024     0.024     0  01:10         0.0329        0.0353
-0.014
  St_CB709                STORAGE       0.024     0.024     0  01:10          0.033        0.0346
-0.011
  St_CB710                STORAGE       0.028     0.028     0  01:10         0.0383        0.0407
-0.018
  St_CB711                STORAGE       0.022     0.022     0  01:10         0.0298        0.0307
-0.016
  St_CB712                STORAGE       0.020     0.020     0  01:10         0.0272        0.0283
-0.018
  St_CB803                STORAGE       0.097     0.097     0  01:10          0.133         0.147
-0.009
  St_CB804                STORAGE       0.016     0.016     0  01:10         0.0218         0.024
0.011
  St_CB805                STORAGE       0.049     0.049     0  01:10          0.076        0.0783
0.012
  St_CB902                STORAGE       0.072     0.072     0  01:10         0.0989         0.107
-0.008
  St_CB903                STORAGE       0.020     0.020     0  01:10         0.0274        0.0284
-0.008
  St_CB904                STORAGE       0.021     0.021     0  01:10         0.0289        0.0309
-0.013
  St_DIMH600              STORAGE       0.041     0.041     0  01:10         0.0541        0.0596
-1.514
  St_MH700                STORAGE       0.056     0.056     0  01:10         0.0972         0.103
-0.013
  TC600_(P-Stm-500_&_600_Series) STORAGE      0.000    0.273     0  01:16            0          0.8
0.039
  TC601_(P-Stm-500_&_600_Series) STORAGE      0.000    0.137     0  01:13            0        0.403
0.107
  TC602_(P-Stm-500_&_600_Series) STORAGE      0.000    0.384     0  01:14            0         1.02
0.035
  TC702_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.706       0  01:14              0
1.6         0.009
  TC703_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.718       0  01:14              0
1.63        0.004
  TC705_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.756       0  01:13              0
1.71        0.009
  TCB701_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.693       0  01:14              0
1.57        0.013
  TCB704_(P-Stm-_800_&_700_Series) STORAGE       0.000     0.733       0  01:14              0
1.66       -0.030


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  Node Surcharge Summary
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  Surcharging occurs when water rises above the top of the highest conduit.
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Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
CO600_(P-Stm-500_&_600_Series)	STORAGE		0.18	0.235	0.077
CO800_(P-Stm-_800_&_700_Series)	STORAGE		0.22	0.485	0.171
CO900_(P-Stm-900_Series)	STORAGE	0.24	0.576	0.175	
MH600_(P-Stm-500_&_600_Series)	STORAGE		0.42	0.790	0.307
MH601_(P-Stm-500_&_600_Series)	STORAGE		0.38	0.722	0.361
TC600_(P-Stm-500_&_600_Series)	STORAGE		0.40	0.606	0.143
TC601_(P-Stm-500_&_600_Series)	STORAGE		0.39	0.794	0.000
TC702_(P-Stm-_800_&_700_Series)	STORAGE		0.29	0.301	0.053
TCB701_(P-Stm-_800_&_700_Series)	STORAGE		0.32	0.407	0.000

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Node Flooding Summary
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No nodes were flooded.

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Storage Volume Summary
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Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CMS
CB403_(P-Stm-400_Series)	0.000	13	0	0	0.000	58	0 01:15	0.064
CB600_(P-Stm-500_&_600_Series)	0.000	13	0	0	0.000	65	0 01:15	0.126
CB601_(P-Stm-500_&_600_Series)	0.000	12	0	0	0.000	58	0 01:16	0.137
CB602_(P-Stm-500_&_600_Series)	0.000	13	0	0	0.000	60	0 01:16	0.156
CB603_(P-Stm-500_&_600_Series)	0.000	13	0	0	0.000	60	0 01:14	0.255
CB604_(P-Stm-500_&_600_Series)	0.000	13	0	0	0.000	60	0 01:14	0.273
CB605_(P-Stm-500_&_600_Series)	0.000	13	0	0	0.000	56	0 01:14	0.296
CB606_(P-Stm-500_&_600_Series)	0.000	11	0	0	0.000	46	0 01:14	0.313
CB607_(P-Stm-500_&_600_Series)	0.000	14	0	0	0.000	53	0 01:14	0.384
CB608_(P-Stm-500_&_600_Series)	0.000	11	0	0	0.000	40	0 01:14	0.410
CB609_(P-Stm-500_&_600_Series)	0.000	11	0	0	0.000	39	0 01:14	0.431
CB610_(P-Stm-500_&_600_Series)	0.000	16	0	0	0.000	46	0 01:12	0.208
CB611_(P-Stm-500_&_600_Series)	0.000	16	0	0	0.000	48	0 01:12	0.180
CB612_(P-Stm-500_&_600_Series)	0.000	16	0	0	0.000	49	0 01:12	0.157
CB613_(P-Stm-500_&_600_Series)	0.000	14	0	0	0.000	42	0 01:12	0.103
CB700_(P-Stm-_800_&_700_Series)	0.000	12	0	0	0.000	57	0 01:14	0.215
CB701_(P-Stm-_800_&_700_Series)	0.000	12	0	0	0.000	58	0 01:14	0.264
CB702_(P-Stm-_800_&_700_Series)	0.000	12	0	0	0.000	58	0 01:14	0.294
CB703_(P-Stm-_800_&_700_Series)	0.000	12	0	0	0.000	61	0 01:14	0.356
CB704_(P-Stm-_800_&_700_Series)	0.000	12	0	0	0.000	62	0 01:14	0.404
CB705_(P-Stm-_800_&_700_Series)	0.000	12	0	0	0.000	60	0 01:14	0.437
CB706_(P-Stm-_800_&_700_Series)	0.000	12	0	0	0.000	57	0 01:14	0.684
CB707_(P-Stm-_800_&_700_Series)	0.000	12	0	0	0.001	55	0 01:13	0.693
CB708_(P-Stm-_800_&_700_Series)	0.000	12	0	0	0.001	53	0 01:13	0.706
CB709_(P-Stm-_800_&_700_Series)	0.000	13	0	0	0.001	53	0 01:13	0.718
CB710_(P-Stm-_800_&_700_Series)	0.000	13	0	0	0.001	49	0 01:13	0.733
CB711_(P-Stm-_800_&_700_Series)	0.000	13	0	0	0.000	47	0 01:13	0.745
CB712_(P-Stm-_800_&_700_Series)	0.000	11	0	0	0.000	38	0 01:13	0.756
CB803_(P-Stm-_800_&_700_Series)	0.000	13	0	0	0.000	48	0 01:14	0.060
CB804_(P-Stm-_800_&_700_Series)	0.000	12	0	0	0.000	50	0 01:13	0.069
CB805_(P-Stm-_800_&_700_Series)	0.000	13	0	0	0.000	54	0 01:13	0.105
CB902_(P-Stm-900_Series)	0.000	12	0	0	0.000	48	0 01:13	0.051
CB903_(P-Stm-900_Series)	0.000	12	0	0	0.000	51	0 01:13	0.063
CB904_(P-Stm-900_Series)	0.000	12	0	0	0.000	52	0 01:13	0.077
CO400_(P-Stm-400_Series)	0.000	17	0	0	0.000	66	0 01:15	0.006
CO500_(P-Stm-500_&_600_Series)	0.000	16	0	0	0.000	59	0 01:14	0.007
CO600_(P-Stm-500_&_600_Series)	0.000	33	0	0	0.000	92	0 01:12	0.006
CO800_(P-Stm-_800_&_700_Series)	0.000	24	0	0	0.000	86	0 01:14	0.002
CO900_(P-Stm-900_Series)	0.000	22	0	0	0.000	87	0 01:13	0.002
DIMH600_(P-Stm-500_&_600_Series)	0.000	15	0	0	0.000	36	0 01:13	0.661
EXCB13_(P-Stm-_800_&_700_Series)	0.000	12	0	0	0.000	51	0 01:14	0.122
EXCB14_(P-Stm-500_&_600_Series)	0.000	13	0	0	0.000	67	0 01:13	0.095
MH600_(P-Stm-500_&_600_Series)	0.000	18	0	0	0.000	83	0 01:15	0.214
MH601_(P-Stm-500_&_600_Series)	0.000	18	0	0	0.000	80	0 01:14	0.218
MH700_(P-Stm-_800_&_700_Series)	0.000	11	0	0	0.000	55	0 01:14	0.580
MH701_(P-Stm-_800_&_700_Series)	0.000	15	0	0	0.001	75	0 01:14	0.657
PND-1	0.150	3	0	0	2.680	45	0 01:33	0.924
St_CB403	0.000	5	0	7	0.000	43	0 01:20	0.093
St_CB600	0.000	9	0	6	0.000	47	0 01:19	0.057
St_CB601	0.000	6	0	12	0.000	26	0 01:17	0.020
St_CB602	0.000	5	0	16	0.000	30	0 01:18	0.030
St_CB603	0.000	5	0	7	0.000	46	0 01:12	0.089
St_CB604	0.000	5	0	8	0.000	29	0 01:10	0.038
St_CB605	0.000	5	0	20	0.000	27	0 01:11	0.032
St_CB606	0.000	3	0	8	0.000	22	0 01:10	0.031
St_CB607	0.000	7	0	8	0.000	46	0 01:15	0.084
St_CB608	0.000	5	0	3	0.000	22	0 01:10	0.030
St_CB609	0.000	3	0	5	0.000	18	0 01:10	0.036
St_CB610	0.000	5	0	5	0.000	32	0 01:10	0.036
St_CB611	0.000	7	0	3	0.000	36	0 01:10	0.031
St_CB612	0.000	4	0	4	0.000	32	0 01:12	0.056
St_CB613	0.000	5	0	3	0.000	41	0 01:12	0.131
St_CB700	0.000	12	0	5	0.000	55	0 01:12	0.110
St_CB701	0.000	9	0	7	0.000	35	0 01:11	0.066
St_CB702	0.000	9	0	10	0.000	33	0 01:10	0.040
St_CB703	0.000	11	0	7	0.000	42	0 01:10	0.080
St_CB704	0.000	10	0	9	0.000	39	0 01:10	0.063
St_CB705	0.000	7	0	8	0.000	32	0 01:10	0.045
St_CB706	0.000	3	0	15	0.000	26	0 01:10	0.041
St_CB707	0.000	5	0	11	0.000	23	0 01:10	0.019
St_CB708	0.000	7	0	15	0.000	26	0 01:10	0.024
St_CB709	0.000	9	0	9	0.000	30	0 01:10	0.024
St_CB710	0.000	9	0	12	0.000	31	0 01:10	0.028
St_CB711	0.000	3	0	6	0.000	21	0 01:10	0.022
St_CB712	0.000	3	0	9	0.000	17	0 01:10	0.020
St_CB803	0.000	8	0	5	0.000	55	0 01:12	0.076
St_CB804	0.000	6	0	11	0.000	25	0 01:10	0.016
St_CB805	0.000	3	0	4	0.000	25	0 01:10	0.047
St_CB902	0.000	8	0	5	0.000	47	0 01:12	0.061
St_CB903	0.000	4	0	8	0.000	26	0 01:10	0.020
St_CB904	0.000	7	0	14	0.000	31	0 01:10	0.021
St_DIMH600	0.000	11	0	13	0.000	43	0 01:10	0.041
St_MH700	0.000	11	0	13	0.000	35	0 01:10	0.053
TC600_(P-Stm-500_&_600_Series)	0.000	21	0	0	0.000	90	0 01:14	0.275
TC601_(P-Stm-500_&_600_Series)	0.000	25	0	0	0.000	100	0 01:11	0.137
TC602_(P-Stm-500_&_600_Series)	0.000	20	0	0	0.000	74	0 01:14	0.384
TC702_(P-Stm-_800_&_700_Series)	0.000	23	0	0	0.001	96	0 01:13	0.707
TC703_(P-Stm-_800_&_700_Series)	0.000	22	0	0	0.001	88	0 01:13	0.719
TC705_(P-Stm-_800_&_700_Series)	0.000	21	0	0	0.000	49	0 01:13	0.756
TCB701_(P-Stm-_800_&_700_Series)	0.000	22	0	0	0.001	100	0 01:13	0.694
TCB704_(P-Stm-_800_&_700_Series)	0.000	22	0	0	0.001	82	0 01:13	0.733

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Outfall Loading Summary
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Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
OF1	39.96	0.101	1.081	6.575
System	39.96	0.101	1.081	6.575

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Link Flow Summary
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Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
C1	CHANNEL	1.081	0 01:36	0.67	0.82	0.94
C10	CONDUIT	0.002	0 01:05	0.04	0.00	0.34
C11	CONDUIT	0.002	0 01:03	0.03	0.00	0.20
C12	CONDUIT	0.021	0 01:07	0.14	0.01	0.35
C13	CONDUIT	0.011	0 01:14	0.07	0.00	0.36
C14	CONDUIT	0.010	0 01:15	0.09	0.00	0.28
C15	CONDUIT	0.001	0 00:54	0.05	0.00	0.23
C16	CONDUIT	0.013	0 01:05	0.03	0.00	0.35
C17	CONDUIT	0.005	0 01:15	0.03	0.00	0.51
C18	CONDUIT	0.008	0 01:09	0.04	0.00	0.59

C2	CONDUIT	0.002	0	01:21	0.01	0.00	0.29	
C24	CONDUIT	0.083	0	01:01	0.12	0.02	0.63	
C25	CONDUIT	0.012	0	01:03	0.03	0.00	0.37	
C26	CONDUIT	0.009	0	01:05	0.03	0.00	0.30	
C27	CONDUIT	0.014	0	01:03	0.04	0.00	0.35	
C28	CONDUIT	0.012	0	01:04	0.04	0.00	0.32	
C29	CONDUIT	0.005	0	01:01	0.02	0.00	0.26	
C3	CONDUIT	0.009	0	01:13	0.03	0.00	0.29	
C30	CONDUIT	0.006	0	01:05	0.02	0.00	0.33	
C31	CONDUIT	0.010	0	01:05	0.02	0.00	0.34	
C35	CONDUIT	0.012	0	01:10	0.03	0.00	0.59	
C36	CONDUIT	0.001	0	00:59	0.04	0.00	0.27	
C37	CONDUIT	0.003	0	01:13	0.02	0.00	0.25	
C4	CONDUIT	0.017	0	01:10	0.02	0.00	0.59	
C40	CONDUIT	0.006	0	01:15	0.06	0.00	0.53	
C41	CONDUIT	0.001	0	00:52	0.01	0.00	0.24	
C42	CONDUIT	0.003	0	01:01	0.01	0.00	0.29	
C43	CONDUIT	0.001	0	00:56	0.03	0.00	0.25	
C43_1	CONDUIT	0.000	0	01:04	0.03	0.00	0.06	
C43_2	CONDUIT	0.005	0	01:02	0.04	0.00	0.20	
C45	CONDUIT	0.005	0	01:02	0.03	0.00	0.29	
C46	CONDUIT	0.002	0	00:56	0.08	0.00	0.32	
C47	CONDUIT	0.002	0	00:58	0.06	0.00	0.31	
C48	CONDUIT	0.001	0	01:02	0.06	0.00	0.19	
C5	CONDUIT	0.023	0	01:10	0.05	0.00	0.46	
C50	CONDUIT	0.001	0	00:54	0.06	0.00	0.22	
C51	CONDUIT	0.083	0	01:01	0.39	0.02	0.49	
C52	CONDUIT	0.030	0	01:12	0.14	0.01	0.50	
C53	CONDUIT	0.030	0	01:12	0.09	0.01	0.26	
C54	CONDUIT	0.001	0	01:00	0.10	0.00	0.29	
C55	CONDUIT	0.001	0	01:00	0.05	0.00	0.25	
C56	CONDUIT	0.353	0	01:01	0.69	0.10	0.35	
C57	CONDUIT	0.347	0	01:01	0.76	0.08	0.33	
C58	CONDUIT	0.335	0	01:02	0.54	0.08	0.44	
C59	CONDUIT	0.451	0	01:13	0.98	0.12	0.33	
C6	CONDUIT	0.011	0	01:15	0.03	0.00	0.31	
C60	CONDUIT	0.287	0	01:05	1.39	0.62	0.68	
C61	CONDUIT	0.117	0	01:13	0.96	0.07	0.31	
C66	CONDUIT	0.019	0	01:09	0.09	0.00	0.54	
C67	CONDUIT	0.287	0	01:05	0.90	0.05	0.26	
C68	CONDUIT	0.000	0	00:55	0.09	0.00	0.28	
C69	CONDUIT	0.000	0	00:20	0.10	0.00	0.27	
C7	CONDUIT	0.001	0	01:15	0.12	0.00	0.45	
C8	CONDUIT	0.002	0	01:01	0.01	0.00	0.25	
C9	CONDUIT	0.008	0	01:05	0.04	0.00	0.25	
EX_Ditch	CHANNEL	0.528	0	01:01	0.54	0.54	0.87	
OUT1	CONDUIT	0.057	0	01:33	1.01	0.86	0.74	
OUT2	CONDUIT	0.069	0	01:33	1.37	0.65	0.68	
Pipe_-_(118)_(P-Stm-500_&_600_Series)	CONDUIT	0.019	0	01:09	0.35	0.26	1.00	
Pipe_-_(119)_(P-Stm-500_&_600_Series)	CONDUIT	0.095	0	01:06	1.34	1.29	1.00	
Pipe_-_(120)_(P-Stm-500_&_600_Series)	CONDUIT	0.126	0	01:13	1.79	1.72	1.00	
Pipe_-_(121)_(P-Stm-500_&_600_Series)	CONDUIT	0.156	0	01:23	1.41	1.17	1.00	
Pipe_-_(122)_(P-Stm-500_&_600_Series)	CONDUIT	0.214	0	01:23	1.94	1.60	1.00	
Pipe_-_(123)_(1)_(P-Stm-500_&_600_Series)	CONDUIT	0.255	0	01:19	1.60	1.03	1.00	
Pipe_-_(123)_(P-Stm-500_&_600_Series)	CONDUIT	0.218	0	01:23	1.97	1.43	1.00	
Pipe_-_(124)_(P-Stm-500_&_600_Series)	CONDUIT	0.273	0	01:16	1.72	1.05	1.00	
Pipe_-_(125)_(P-Stm-500_&_600_Series)	CONDUIT	0.275	0	01:16	1.75	1.06	1.00	
Pipe_-_(126)_(1)_(1)_(P-Stm-500_&_600_Series)	CONDUIT	0.313	0	01:14	1.44	1.25	1.00	
Pipe_-_(126)_(P-Stm-500_&_600_Series)	CONDUIT	0.296	0	01:15	1.86	1.14	1.00	
Pipe_-_(127)_(P-Stm-500_&_600_Series)	CONDUIT	0.384	0	01:14	1.77	1.27	1.00	
Pipe_-_(128)_(1)_(P-Stm-500_&_600_Series)	CONDUIT	0.410	0	01:14	1.45	1.50	1.00	
Pipe_-_(128)_(P-Stm-500_&_600_Series)	CONDUIT	0.384	0	01:15	1.36	1.39	1.00	
Pipe_-_(131)_(1)_(P-Stm-_800_&_700_Series)	CONDUIT	0.007	0	01:08	0.19	0.10	1.00	
Pipe_-_(132)_(P-Stm-_800_&_700_Series)	CONDUIT	0.060	0	01:15	1.11	0.88	1.00	
Pipe_-_(133)_(P-Stm-_800_&_700_Series)	CONDUIT	0.069	0	01:14	0.80	0.56	1.00	
Pipe_-_(134)_(P-Stm-_800_&_700_Series)	CONDUIT	0.105	0	01:13	1.07	0.85	1.00	
Pipe_-_(135)_(P-Stm-_800_&_700_Series)	CONDUIT	0.694	0	01:14	1.57	1.62	1.00	
Pipe_-_(138)_(P-Stm-900_Series)	CONDUIT	0.051	0	01:14	0.82	0.75	1.00	
Pipe_-_(139)_(P-Stm-900_Series)	CONDUIT	0.077	0	01:12	1.08	1.12	1.00	
Pipe_-_(141)_(P-Stm-900_Series)	CONDUIT	0.063	0	01:13	0.89	0.91	1.00	
Pipe_-_(143)_(1)_(P-Stm-500_&_600_Series)	CONDUIT	0.103	0	01:14	0.93	1.31	1.00	
Pipe_-_(143)_(P-Stm-500_&_600_Series)	CONDUIT	0.012	0	01:01	0.45	0.27	1.00	
Pipe_-_(144)_(P-Stm-500_&_600_Series)	CONDUIT	0.157	0	01:13	1.42	2.02	1.00	
Pipe_-_(145)_(P-Stm-500_&_600_Series)	CONDUIT	0.180	0	01:12	1.13	1.41	1.00	
Pipe_-_(146)_(P-Stm-500_&_600_Series)	CONDUIT	0.208	0	01:12	1.43	1.64	0.86	
Pipe_-_(148)_(P-Stm-_800_&_700_Series)	CONDUIT	0.756	0	01:13	1.87	1.72	0.86	
Pipe_-_(158)_(P-Stm-500_&_600_Series)	CONDUIT	0.431	0	01:14	1.63	1.57	0.88	
Pipe_-_(159)_(1)_(P-Stm-500_&_600_Series)	CONDUIT	0.137	0	01:13	1.28	1.03	1.00	
Pipe_-_(159)_(P-Stm-500_&_600_Series)	CONDUIT	0.137	0	01:13	1.30	1.02	1.00	
Pipe_-_(162)_(P-Stm-_800_&_700_Series)	CONDUIT	0.693	0	01:14	1.57	1.61	1.00	
Pipe_-_(165)_(P-Stm-500_&_600_Series)	CONDUIT	0.661	0	01:13	2.13	1.24	0.61	
Pipe_-_(166)_(P-Stm-900_Series)	CONDUIT	0.004	0	01:08	0.22	0.06	1.00	
Pipe_-_(177)_(P-Stm-_800_&_700_Series)	CONDUIT	0.305	0	01:13	1.38	0.73	0.50	
Pipe_-_(64)_(P-Stm-_800_&_700_Series)	CONDUIT	0.122	0	01:22	1.47	0.49	1.00	
Pipe_-_(65)_(P-Stm-_800_&_700_Series)	CONDUIT	0.215	0	01:15	1.66	0.86	1.00	
Pipe_-_(66)_(P-Stm-_800_&_700_Series)	CONDUIT	0.264	0	01:14	1.82	1.06	1.00	
Pipe_-_(67)_(P-Stm-_800_&_700_Series)	CONDUIT	0.294	0	01:15	1.71	0.78	1.00	
Pipe_-_(69)_(1)_(P-Stm-_800_&_700_Series)	CONDUIT	0.356	0	01:15	1.75	0.95	1.00	
Pipe_-_(70)_(P-Stm-_800_&_700_Series)	CONDUIT	0.404	0	01:15	1.86	1.08	1.00	
Pipe_-_(71)_(P-Stm-_800_&_700_Series)	CONDUIT	0.437	0	01:15	2.02	1.16	1.00	
Pipe_-_(73)_(P-Stm-_800_&_700_Series)	CONDUIT	0.580	0	01:14	2.05	1.14	1.00	
Pipe_-_(74)_(P-Stm-_800_&_700_Series)	CONDUIT	0.657	0	01:14	1.49	1.46	1.00	
Pipe_-_(76)_(P-Stm-_800_&_700_Series)	CONDUIT	0.684	0	01:14	1.55	1.58	1.00	
Pipe_-_(77)_(1)_(P-Stm-_800_&_700_Series)	CONDUIT	0.707	0	01:14	1.60	1.62	1.00	
Pipe_-_(77)_(P-Stm-_800_&_700_Series)	CONDUIT	0.706	0	01:14	1.60	1.63	1.00	
Pipe_-_(78)_(1)_(P-Stm-_800_&_700_Series)	CONDUIT	0.719	0	01:14	1.63	1.68	1.00	
Pipe_-_(78)_(P-Stm-_800_&_700_Series)	CONDUIT	0.718	0	01:14	1.63	1.65	1.00	
Pipe_-_(79)_(1)_(P-Stm-_800_&_700_Series)	CONDUIT	0.733	0	01:14	1.66	1.68	1.00	
Pipe_-_(79)_(P-Stm-_800_&_700_Series)	CONDUIT	0.733	0	01:14	1.66	1.72	1.00	
Pipe_-_(80)_(P-Stm-_800_&_700_Series)	CONDUIT	0.745	0	01:13	1.69	1.74	1.00	
Pipe_-_(98)_(P-Stm-400_Series)	CONDUIT	0.013	0	01:08	0.20	0.17	1.00	
Pipe_-_(99)_(P-Stm-400_Series)	CONDUIT	0.064	0	01:31	0.91	0.84	1.00	
RY3-SW2	CONDUIT	0.084	0	01:11	0.44	0.24	0.41	
RY3-SW3	CONDUIT	0.082	0	01:12	0.73	0.04	0.30	
RY3-SW4	CONDUIT	0.118	0	01:12	0.77	0.09	0.36	
RY3-SW5	CONDUIT	0.117	0	01:13	0.83	0.09	0.35	
W-IN1	CHANNEL	1.327	0	01:13	1.13	0.60	0.87	
OR1	ORIFICE	0.057	0	01:33			1.00	
OR2	ORIFICE	0.069	0	01:33			1.00	
W1	WEIR	0.798	0	01:33			0.43	
W2	WEIR	0.000	0	00:00			0.00	
W-St_CB403	WEIR	0.000	0	00:00			0.00	
W-St_CB600	WEIR	0.000	0	00:00			0.00	
W-St_CB601	WEIR	0.000	0	00:00			0.00	
W-St_CB602	WEIR	0.000	0	00:00			0.00	
W-St_CB603	WEIR	0.000	0	00:00			0.00	
W-St_CB604	WEIR	0.000	0	00:00			0.00	
W-St_CB605	WEIR	0.000	0	00:00			0.00	
W-St_CB606	WEIR	0.000	0	00:00			0.00	
W-St_CB607	WEIR	0.010	0	01:15			0.11	
W-St_CB608	WEIR	0.000	0	00:00			0.00	
W-St_CB609	WEIR	0.000	0	00:00			0.00	
W-St_CB610	WEIR	0.000	0	00:00			0.00	
W-St_CB611	WEIR	0.000	0	00:00			0.00	
W-St_CB612	WEIR	0.000	0	00:00			0.00	
W-St_CB613	WEIR	0.030	0	01:12			0.18	
W-St_CB700	WEIR	0.000	0	00:00			0.00	
W-St_CB701	WEIR	0.000	0	00:00			0.00	
W-St_CB702	WEIR	0.000	0	00:00			0.00	
W-St_CB703	WEIR	0.000	0	00:00			0.00	
W-St_CB704	WEIR	0.000	0	00:00			0.00	
W-St_CB705	WEIR	0.000	0	00:00			0.00	
W-St_CB706	WEIR	0.000	0	00:00			0.00	
W-St_CB707	WEIR	0.000	0	00:00			0.00	
W-St_CB708	WEIR	0.000	0	00:00			0.00	
W-St_CB709	WEIR	0.000	0	00:00			0.00	
W-St_CB710	WEIR	0.000	0	00:00			0.00	
W-St_CB711	WEIR	0.000	0	00:00			0.00	
W-St_CB712	WEIR	0.000	0	00:00			0.00	
W-St_CB803	WEIR	0.000	0	00:00			0.00	
W-St_CB804	WEIR	0.000	0	00:00			0.00	
W-St_CB805	WEIR	0.000	0	00:00			0.00	
W-St_CB902	WEIR	0.000	0	00:00			0.00	
W-St_CB903	WEIR	0.000	0	00:00			0.00	
W-St_CB904	WEIR	0.000	0	00:00			0.00	
W-St_DIMH600	WEIR	0.009	0	01:10			0.01	
W-St_MH700	WEIR	0.000	0	00:00			0.00	
O_CO400	DUMMY	0.000	0	00:00				
O_CO500	DUMMY	0.000	0	00:00				
O-St_CB403	DUMMY	0.059	0	01:24				
O-St_CB600	DUMMY	0.052	0	01:22				
O-St_CB601	DUMMY	0.020	0	01:10				
O-St_CB602	DUMMY	0.030	0	01:23				
O-St_CB603	DUMMY	0.080	0	01:12				
O-St_CB604	DUMMY	0.037	0	01:10				
O-St_CB605	DUMMY	0.030	0	01:11				
O-St_CB606	DUMMY	0.031	0	01:10				
O-St_CB607	DUMMY	0.070	0	01:15				
O-St_CB608	DUMMY	0.030	0	01:10				
O-St_CB609	DUMMY	0.035	0	01:10				
O-St_CB610	DUMMY	0.036	0	01:10				
O-St_CB611	DUMMY	0.031	0	01:10				
O-St_CB612	DUMMY	0.056	0	01:12				
O-St_CB613	DUMMY	0.101	0	01:12				
O-St_CB700	DUMMY	0.110	0	01:12				
O-St_CB701	DUMMY	0.062	0	01:11				
O-St_CB702	DUMMY	0.039	0	01:10				
O-St_CB703	DUMMY	0.078	0	01:10				
O-St_CB704	DUMMY	0.062	0	01:10				
O-St_CB705	DUMMY	0.044	0	01:10				
O-St_CB706	DUMMY	0.040	0	01:10				
O-St_CB707	DUMMY	0.018	0	01:10				
O-St_CB708	DUMMY	0.024	0	01:10				
O-St_CB709	DUMMY	0.024	0	01:10				
O-St_CB710	DUMMY	0.028	0	01:10				
O-St_CB711	DUMMY	0.022	0	01:10				
O-St_CB712	DUMMY	0.020	0	01:10				
O-St_CB803	DUMMY	0.060	0	01:12				
O-St_CB804	DUMMY	0.016	0	01:10				
O-St_CB805	DUMMY	0.045	0	01:10				
O-St_CB902	DUMMY	0.052	0	01:12				
O-St_CB903	DUMMY	0.020	0	01:10				
O-St_CB904	DUMMY	0.020	0	01:10				
O-St_DIMH600	DUMMY	0.031	0	01:10				
O-St_MH700	DUMMY	0.052	0	01:10				

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Flow Classification Summary
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	Adjusted	Fraction of Time in Flow Class								
	/Actual		Up	Down	Sub	Sup	Up	Down	Norm	Inlet
Conduit	Length	Dry	Dry	Dry	Crit	Crit	Crit	Crit	Ltd	Ctrl
C1	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.39	0.00
C10	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
C11	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.02	0.00
C12	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.01	0.00
C13	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C14	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
C15	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.01	0.00
C16	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.01	0.00
C17	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.60	0.00

C18	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.02	0.00
C2	1.00	0.01	0.01	0.00	0.99	0.00	0.00	0.00	0.67	0.00
C24	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.01	0.00
C25	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.02	0.00
C26	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.66	0.00
C27	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.01	0.00
C28	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.08	0.00
C29	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.77	0.00
C3	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.81	0.00
C30	1.00	0.01	0.01	0.00	0.99	0.00	0.00	0.00	0.55	0.00
C31	1.00	0.01	0.01	0.00	0.99	0.00	0.00	0.00	0.03	0.00
C35	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.02	0.00
C36	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.01	0.00
C37	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.01	0.00
C4	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.02	0.00
C40	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.01	0.00
C41	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.77	0.00
C42	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.03	0.00
C43	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.01	0.00
C43_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.97	0.00
C43_2	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.09	0.00
C45	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.01	0.00
C46	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
C47	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
C48	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
C5	1.00	0.01	0.02	0.00	0.98	0.00	0.00	0.00	0.96	0.00
C50	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
C51	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.01	0.00
C52	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C53	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
C54	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.01	0.00
C55	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.01	0.00
C56	1.00	0.43	0.04	0.00	0.54	0.00	0.00	0.00	0.56	0.00
C57	1.00	0.31	0.11	0.00	0.57	0.00	0.00	0.00	0.97	0.00
C58	1.00	0.01	0.31	0.00	0.69	0.00	0.00	0.00	0.99	0.00
C59	1.00	0.39	0.55	0.00	0.06	0.00	0.00	0.00	0.96	0.00
C6	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.18	0.00
C60	1.00	0.01	0.00	0.00	0.86	0.13	0.00	0.00	0.00	0.15
C61	1.00	0.57	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00
C66	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.05	0.00
C67	1.00	0.38	0.00	0.00	0.62	0.00	0.00	0.00	0.59	0.00
C68	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
C69	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
C7	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
C8	1.00	0.01	0.01	0.00	0.99	0.00	0.00	0.00	0.03	0.00
C9	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.10	0.00
EX_Ditch	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.82	0.00
OUT1	1.00	0.01	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00
OUT2	1.00	0.83	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00
Pipe_-_(118)_(P-Stm-500_&_600_Series)	1.00	0.95	0.01	0.00	0.03	0.00	0.00	0.00	0.97	0.00
Pipe_-_(119)_(P-Stm-500_&_600_Series)	1.00	0.01	0.00	0.00	0.98	0.00	0.00	0.01	0.97	0.00
Pipe_-_(120)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.97	0.00	0.00
Pipe_-_(121)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.96	0.00
Pipe_-_(122)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.94	0.00	0.00	0.05	0.82	0.00
Pipe_-_(123)_(1)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.90	0.07	0.00	0.01	0.65	0.00
Pipe_-_(123)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.97	0.00	0.00
Pipe_-_(124)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.28	0.10	0.00	0.61	0.77	0.00
Pipe_-_(125)_(P-Stm-500_&_600_Series)	1.00	0.02	0.60	0.00	0.29	0.08	0.00	0.00	0.91	0.00
Pipe_-_(126)_(1)_(1)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.89	0.00
Pipe_-_(126)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.97	0.00	0.00
Pipe_-_(127)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.02	0.00	0.00	0.96	0.00	0.00
Pipe_-_(128)_(1)_(P-Stm-500_&_600_Series)	1.00	0.02	0.59	0.00	0.39	0.00	0.00	0.00	0.93	0.00
Pipe_-_(128)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.39	0.00	0.00	0.59	0.93	0.00
Pipe_-_(131)_(1)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.93	0.00	0.05	0.00	0.00	0.00	0.95	0.00
Pipe_-_(132)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.97	0.00	0.00
Pipe_-_(133)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.91	0.00	0.08	0.00	0.00	0.00	0.97	0.00
Pipe_-_(134)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.97	0.00	0.00
Pipe_-_(135)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.75	0.00
Pipe_-_(138)_(P-Stm-900_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.97	0.00
Pipe_-_(139)_(P-Stm-900_Series)	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.97	0.00	0.00
Pipe_-_(141)_(P-Stm-900_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.97	0.00
Pipe_-_(143)_(1)_(P-Stm-500_&_600_Series)	1.00	0.02	0.90	0.00	0.08	0.00	0.00	0.00	0.96	0.00
Pipe_-_(143)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.04	0.00	0.00	0.94	0.96	0.00
Pipe_-_(144)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.97	0.00	0.00
Pipe_-_(145)_(P-Stm-500_&_600_Series)	1.00	0.02	0.88	0.00	0.10	0.00	0.00	0.00	0.95	0.00
Pipe_-_(146)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.97	0.00	0.00
Pipe_-_(148)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.68	0.00	0.25	0.00	0.00	0.05	0.86	0.00
Pipe_-_(158)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.38	0.00	0.00	0.60	0.01	0.00
Pipe_-_(159)_(1)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.82	0.00
Pipe_-_(159)_(P-Stm-500_&_600_Series)	1.00	0.02	0.00	0.00	0.95	0.03	0.00	0.00	0.94	0.00
Pipe_-_(162)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.90	0.00
Pipe_-_(165)_(P-Stm-500_&_600_Series)	1.00	0.39	0.22	0.00	0.35	0.04	0.00	0.00	0.72	0.00
Pipe_-_(166)_(P-Stm-900_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.94	0.00
Pipe_-_(177)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00
Pipe_-_(64)_(P-Stm-_800_&_700_Series)	1.00	0.01	0.00	0.00	0.21	0.06	0.00	0.72	0.93	0.00
Pipe_-_(65)_(P-Stm-_800_&_700_Series)	1.00	0.01	0.71	0.00	0.21	0.06	0.00	0.01	0.95	0.00
Pipe_-_(66)_(P-Stm-_800_&_700_Series)	1.00	0.01	0.00	0.00	0.01	0.00	0.00	0.98	0.00	0.00
Pipe_-_(67)_(P-Stm-_800_&_700_Series)	1.00	0.01	0.00	0.00	0.93	0.05	0.00	0.01	0.96	0.00
Pipe_-_(69)_(1)_(P-Stm-_800_&_700_Series)	1.00	0.01	0.00	0.00	0.21	0.06	0.00	0.71	0.96	0.00
Pipe_-_(70)_(P-Stm-_800_&_700_Series)	1.00	0.01	0.71	0.00	0.22	0.06	0.00	0.00	0.95	0.00
Pipe_-_(71)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.97	0.00	0.00
Pipe_-_(73)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.01	0.00	0.00	0.97	0.00	0.00
Pipe_-_(74)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.94	0.00
Pipe_-_(76)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.93	0.00
Pipe_-_(77)_(1)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.78	0.00
Pipe_-_(77)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.77	0.00
Pipe_-_(78)_(1)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.92	0.00
Pipe_-_(78)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.85	0.00
Pipe_-_(79)_(1)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.92	0.00
Pipe_-_(79)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.72	0.00
Pipe_-_(80)_(P-Stm-_800_&_700_Series)	1.00	0.02	0.00	0.00	0.30	0.00	0.00	0.68	0.77	0.00
Pipe_-_(98)_(P-Stm-400_Series)	1.00	0.02	0.94	0.00	0.04	0.00	0.00	0.00	0.96	0.00
Pipe_-_(99)_(P-Stm-400_Series)	1.00	0.02	0.00	0.00	0.02	0.00	0.00	0.96	0.00	0.00
RY3-SW2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.56	0.00
RY3-SW3	1.00	0.01	0.04	0.00	0.95	0.00	0.00	0.00	0.89	0.00
RY3-SW4	1.00	0.01	0.06	0.00	0.94	0.00	0.00	0.00	0.98	0.00
RY3-SW5	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.09	0.00
W-IN1	1.00	0.39	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00

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Conduit Surcharge Summary
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Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
Pipe_-_(118)_(P-Stm-500_&_600_Series)		0.30	0.30	0.38	0.01	0.01
Pipe_-_(119)_(P-Stm-500_&_600_Series)		0.43	0.47	0.45	0.32	0.26
Pipe_-_(120)_(P-Stm-500_&_600_Series)		0.38	0.45	0.38	0.57	0.38
Pipe_-_(121)_(P-Stm-500_&_600_Series)		0.40	0.40	0.42	0.30	0.33
Pipe_-_(122)_(P-Stm-500_&_600_Series)		0.38	0.42	0.38	0.52	0.38
Pipe_-_(123)_(1)_(P-Stm-500_&_600_Series)			0.37	0.37	0.40	0.17
0.21						
Pipe_-_(123)_(P-Stm-500_&_600_Series)		0.37	0.38	0.37	0.43	0.35
Pipe_-_(124)_(P-Stm-500_&_600_Series)		0.40	0.40	0.40	0.23	0.35
Pipe_-_(125)_(P-Stm-500_&_600_Series)		0.40	0.40	0.41	0.23	0.29
Pipe_-_(126)_(1)_(1)_(P-Stm-500_&_600_Series)			0.43	0.44	0.43	0.42
0.43						
Pipe_-_(126)_(P-Stm-500_&_600_Series)		0.41	0.41	0.44	0.30	0.31
Pipe_-_(127)_(P-Stm-500_&_600_Series)		0.37	0.43	0.37	0.34	0.37
Pipe_-_(128)_(1)_(P-Stm-500_&_600_Series)			0.35	0.37	0.35	0.44
0.35						
Pipe_-_(128)_(P-Stm-500_&_600_Series)		0.37	0.37	0.37	0.41	0.37
Pipe_-_(131)_(1)_(P-Stm-_800_&_700_Series)			0.22	0.22	0.24	0.01
0.01						
Pipe_-_(132)_(P-Stm-_800_&_700_Series)		0.24	0.24	0.26	0.01	0.01
Pipe_-_(133)_(P-Stm-_800_&_700_Series)		0.26	0.26	0.29	0.01	0.01
Pipe_-_(134)_(P-Stm-_800_&_700_Series)		0.29	0.29	0.31	0.01	0.09
Pipe_-_(135)_(P-Stm-_800_&_700_Series)		0.31	0.32	0.31	0.35	0.31
Pipe_-_(138)_(P-Stm-900_Series)	0.25	0.25	0.29	0.01	0.01	
Pipe_-_(139)_(P-Stm-900_Series)	0.32	0.33	0.32	0.12	0.25	
Pipe_-_(141)_(P-Stm-900_Series)	0.29	0.29	0.33	0.01	0.01	
Pipe_-_(143)_(1)_(P-Stm-500_&_600_Series)			0.19	0.20	0.19	0.26
0.19						
Pipe_-_(143)_(P-Stm-500_&_600_Series)		0.18	0.18	0.20	0.01	0.01
Pipe_-_(144)_(P-Stm-500_&_600_Series)		0.16	0.19	0.16	0.39	0.16
Pipe_-_(145)_(P-Stm-500_&_600_Series)		0.16	0.17	0.16	0.19	0.16
Pipe_-_(146)_(P-Stm-500_&_600_Series)		0.01	0.16	0.01	0.27	0.01
Pipe_-_(148)_(P-Stm-_800_&_700_Series)		0.01	0.06	0.01	0.37	0.01
Pipe_-_(158)_(P-Stm-500_&_600_Series)		0.01	0.35	0.01	0.46	0.01
Pipe_-_(159)_(1)_(P-Stm-500_&_600_Series)			0.39	0.39	0.40	0.02
0.15						
Pipe_-_(159)_(P-Stm-500_&_600_Series)		0.38	0.38	0.39	0.02	0.04
Pipe_-_(162)_(P-Stm-_800_&_700_Series)		0.32	0.32	0.32	0.35	0.32
Pipe_-_(165)_(P-Stm-500_&_600_Series)		0.01	0.01	0.01	0.21	0.01
Pipe_-_(166)_(P-Stm-900_Series)	0.24	0.24	0.25	0.01	0.01	
Pipe_-_(64)_(P-Stm-_800_&_700_Series)		0.17	0.17	0.21	0.01	0.01
Pipe_-_(65)_(P-Stm-_800_&_700_Series)		0.21	0.21	0.23	0.01	0.01
Pipe_-_(66)_(P-Stm-_800_&_700_Series)		0.23	0.23	0.24	0.14	0.16
Pipe_-_(67)_(P-Stm-_800_&_700_Series)		0.24	0.24	0.27	0.01	0.01
Pipe_-_(69)_(1)_(P-Stm-_800_&_700_Series)			0.27	0.27	0.29	0.01
0.01						
Pipe_-_(70)_(P-Stm-_800_&_700_Series)		0.29	0.29	0.31	0.14	0.15
Pipe_-_(71)_(P-Stm-_800_&_700_Series)		0.31	0.31	0.31	0.21	0.31
Pipe_-_(73)_(P-Stm-_800_&_700_Series)		0.31	0.31	0.32	0.19	0.22
Pipe_-_(74)_(P-Stm-_800_&_700_Series)		0.33	0.33	0.33	0.33	0.32
Pipe_-_(76)_(P-Stm-_800_&_700_Series)		0.32	0.33	0.32	0.34	0.32
Pipe_-_(77)_(1)_(P-Stm-_800_&_700_Series)			0.28	0.29	0.28	0.35
0.28						
Pipe_-_(77)_(P-Stm-_800_&_700_Series)		0.29	0.31	0.29	0.35	0.29
Pipe_-_(78)_(1)_(P-Stm-_800_&_700_Series)			0.23	0.24	0.23	0.36
0.23						
Pipe_-_(78)_(P-Stm-_800_&_700_Series)		0.24	0.28	0.24	0.36	0.24
Pipe_-_(79)_(1)_(P-Stm-_800_&_700_Series)			0.16	0.19	0.16	0.36
0.16						
Pipe_-_(79)_(P-Stm-_800_&_700_Series)		0.19	0.23	0.19	0.37	0.19
Pipe_-_(80)_(P-Stm-_800_&_700_Series)		0.06	0.16	0.06	0.37	0.06
Pipe_-_(98)_(P-Stm-400_Series)	0.35	0.35	0.43	0.01	0.01	
Pipe_-_(99)_(P-Stm-400_Series)	0.42	0.43	0.42	0.01	0.36	

Analysis begun on: Thu May 18 08:32:45 2023
Analysis ended on: Thu May 18 08:33:09 2023
Total elapsed time: 00:00:24

HGL Analysis Summary Results for 3-hour Chicago Design Storm

Catchbasin	CL Swale Elevation (m)	CB T/G Elevation (m)	Spill Elevation (m)	1:2 Year				1:10 Year				1:100 Year			
				Max HGL (m)	Max Depth (m)	FB (m)	Cascading Flow Depth Over Driveway (m)	Max HGL (m)	Max Depth (m)	FB (m)	Cascading Flow Depth Over Driveway (m)	Max HGL (m)	Max Depth (m)	FB (m)	Cascading Flow Depth Over Driveway (m)
Morrison Drive South Side															
CB600	146.76	147.11	147.57	147.14	0.38	0.43	-	147.19	0.43	0.38	-	147.37	0.61	0.20	-
CB601	146.52	146.84	147.42	146.86	0.34	0.56	-	146.87	0.35	0.55	-	146.88	0.36	0.54	-
CB602	146.29	146.59	147.14	146.60	0.31	0.54	-	146.62	0.33	0.52	-	146.69	0.40	0.45	-
CB603	146.31	146.60	146.80	146.65	0.34	0.15	-	146.68	0.37	0.12	-	146.77	0.46	0.03	-
CB604	146.02	146.27	146.60	146.29	0.27	0.31	-	146.31	0.29	0.29	-	146.33	0.31	0.27	-
CB605	145.40	145.70	146.23	145.71	0.31	0.52	-	145.73	0.33	0.50	-	145.75	0.35	0.48	-
CB606	145.71	145.91	146.03	145.93	0.22	0.10	-	145.95	0.24	0.08	-	145.96	0.25	0.07	-
CB607	145.26	145.51	145.58	145.54	0.28	0.04	-	145.58	0.32	0.00	-	145.64	0.38	-	0.06
Morrison Drive North Side															
CB700	146.87	147.22	147.57	147.24	0.37	0.33	-	147.27	0.40	0.30	-	147.53	0.66	0.04	-
CB701	146.69	147.01	147.38	147.03	0.34	0.35	-	147.06	0.37	0.32	-	147.11	0.42	0.27	-
CB702	146.48	146.83	147.19	146.83	0.35	0.36	-	146.85	0.37	0.34	-	146.88	0.40	0.31	-
CB703	146.55	146.85	146.95	146.86	0.31	0.09	-	146.89	0.34	0.06	-	146.93	0.38	0.02	-
CB704	146.13	146.48	146.69	146.49	0.36	0.20	-	146.51	0.38	0.18	-	146.55	0.42	0.14	-
CB705	145.87	146.17	146.46	146.18	0.31	0.28	-	146.20	0.33	0.26	-	146.22	0.35	0.24	-
MH700	145.69	146.04	146.34	146.05	0.36	0.29	-	146.07	0.38	0.27	-	146.09	0.40	0.25	-
CB706	145.30	145.55	145.96	145.56	0.26	0.40	-	145.58	0.28	0.38	-	145.60	0.30	0.36	-
CB707	145.28	145.53	145.84	145.54	0.26	0.30	-	145.55	0.27	0.29	-	145.56	0.28	0.28	-
CB708	145.10	145.39	145.71	145.40	0.30	0.31	-	145.41	0.31	0.30	-	145.42	0.32	0.29	-
CB709	145.07	145.36	145.65	145.37	0.30	0.28	-	145.38	0.31	0.27	-	145.39	0.32	0.26	-
Street 1 East Side															
CB403	146.11	146.41	147.09	146.48	0.37	0.61	-	146.59	0.48	0.50	-	146.75	0.64	0.34	-
Street No. 2 - Northeast Side															
CB803	145.97	146.27	146.63	146.34	0.37	0.29	-	146.44	0.47	0.19	-	146.60	0.63	0.03	-
CB804	145.89	146.14	146.52	146.15	0.26	0.37	-	146.16	0.27	0.36	-	146.17	0.28	0.35	-
CB805	145.74	145.94	146.38	145.96	0.22	0.42	-	145.98	0.24	0.40	-	146.02	0.28	0.36	-
Street No. 2 - Northwest Side															
CB902	145.96	146.26	146.63	146.31	0.35	0.32	-	146.38	0.42	0.25	-	146.51	0.55	0.12	-
CB903	145.87	146.12	146.49	146.14	0.27	0.35	-	146.15	0.28	0.34	-	146.17	0.30	0.32	-
CB904	145.73	146.03	146.36	146.05	0.32	0.31	-	146.06	0.33	0.30	-	146.08	0.35	0.28	-
Wren Drive East Side															
CB608	145.16	145.41	145.48	145.42	0.26	0.06	-	145.43	0.27	0.05	-	145.45	0.29	0.03	-
CB609	145.03	145.23	145.35	145.24	0.21	0.11	-	145.26	0.23	0.09	-	145.27	0.24	0.08	-
DIMH600	144.79	145.09	145.16	145.09	0.30	0.07	-	145.14	0.35	0.02	-	145.16	0.37	0.00	-
CB613	144.93	145.18	145.35	145.23	0.30	0.12	-	145.30	0.37	0.05	-	145.44	0.51	-	0.09
CB612	144.88	145.07	145.24	145.09	0.21	0.15	-	145.11	0.23	0.13	-	145.15	0.27	0.09	-
CB611	144.85	145.09	145.17	145.11	0.26	0.06	-	145.13	0.28	0.04	-	145.14	0.29	0.03	-
CB610	144.81	145.01	145.12	145.03	0.22	0.09	-	145.05	0.24	0.07	-	145.07	0.26	0.05	-
Wren Drive West Side															
CB710	145.04	145.33	145.58	145.35	0.31	0.23	-	145.35	0.31	0.23	-	145.36	0.32	0.22	-
CB711	145.01	145.18	145.47	145.19	0.18	0.28	-	145.20	0.19	0.27	-	145.21	0.20	0.26	-
CB712	145.02	145.22	145.34	145.23	0.21	0.11	-	145.24	0.22	0.10	-	145.25	0.23	0.09	-

HGL Analysis Summary Results for Climate Change, 1:100 12-hour SCS Type II and 1:100 24-hour SCS Type II Storm

Catchbasin	CL Swale Elevation (m)	CB T/G Elevation (m)	Spill Elevation (m)	Climate Change Event (20% Increase of the 1:100 Year Storm Event)				12-hour SCS Type II Design Storm				24-hour SCS Type II Design Storm			
				Max HGL (m)	Max Depth (m)	FB (m)	Cascading Flow Depth Over Driveway (m)	Max HGL (m)	Max Depth (m)	FB (m)	Cascading Flow Depth Over Driveway (m)	Max HGL (m)	Max Depth (m)	FB (m)	Cascading Flow Depth Over Driveway (m)
Morrison Drive South Side															
CB600	146.76	147.11	147.57	147.63	0.87	-	0.06	147.38	0.62	0.19	-	147.39	0.63	0.18	-
CB601	146.52	146.84	147.42	147.11	0.59	0.31	-	146.87	0.35	0.55	-	146.87	0.35	0.55	-
CB602	146.29	146.59	147.14	146.86	0.57	0.28	-	146.66	0.37	0.48	-	146.66	0.37	0.48	-
CB603	146.31	146.60	146.80	146.82	0.51	-	0.02	146.72	0.41	0.08	-	146.73	0.42	0.07	-
CB604	146.02	146.27	146.60	146.35	0.33	0.25	-	146.32	0.30	0.28	-	146.32	0.30	0.28	-
CB605	145.40	145.70	146.23	145.84	0.44	0.39	-	145.75	0.35	0.48	-	145.75	0.35	0.48	-
CB606	145.71	145.91	146.03	145.97	0.26	0.06	-	145.95	0.24	0.08	-	145.95	0.24	0.08	-
CB607	145.26	145.51	145.58	145.67	0.41	-	0.09	145.64	0.38	-	0.06	145.64	0.38	-	0.06
Morrison Drive North Side															
CB700	146.87	147.22	147.57	147.71	0.84	-	0.14	147.59	0.72	-	0.02	147.61	0.74	-	0.04
CB701	146.69	147.01	147.38	147.48	0.79	-	0.10	147.10	0.41	0.28	-	147.10	0.41	0.28	-
CB702	146.48	146.83	147.19	147.11	0.63	0.08	-	146.88	0.40	0.31	-	146.88	0.40	0.31	-
CB703	146.55	146.85	146.95	146.95	0.40	0.00	-	146.93	0.38	0.02	-	146.93	0.38	0.02	-
CB704	146.13	146.48	146.69	146.65	0.52	0.04	-	146.54	0.41	0.15	-	146.55	0.42	0.14	-
CB705	145.87	146.17	146.46	146.33	0.46	0.13	-	146.22	0.35	0.24	-	146.22	0.35	0.24	-
MH700	145.69	146.04	146.34	146.11	0.42	0.23	-	146.09	0.40	0.25	-	146.09	0.40	0.25	-
CB706	145.30	145.55	145.96	145.61	0.31	0.35	-	145.59	0.29	0.37	-	145.59	0.29	0.37	-
CB707	145.28	145.53	145.84	145.56	0.28	0.28	-	145.55	0.27	0.29	-	145.55	0.27	0.29	-
CB708	145.10	145.39	145.71	145.43	0.33	0.28	-	145.41	0.31	0.30	-	145.41	0.31	0.30	-
CB709	145.07	145.36	145.65	145.40	0.33	0.25	-	145.38	0.31	0.27	-	145.38	0.31	0.27	-
Street 1 East Side															
CB403	146.11	146.41	147.09	146.87	0.76	0.22	-	146.73	0.62	0.36	-	146.73	0.62	0.36	-
Street No. 2 - Northeast Side															
CB803	145.97	146.27	146.63	146.69	0.72	-	0.06	146.55	0.58	0.08	-	146.55	0.58	0.08	-
CB804	145.89	146.14	146.52	146.21	0.32	0.31	-	146.17	0.28	0.35	-	146.17	0.28	0.35	-
CB805	145.74	145.94	146.38	146.18	0.44	0.20	-	146.01	0.27	0.37	-	146.01	0.27	0.37	-
Street No. 2 - Northwest Side															
CB902	145.96	146.26	146.63	146.60	0.64	0.03	-	146.46	0.50	0.17	-	146.46	0.50	0.17	-
CB903	145.87	146.12	146.49	146.21	0.34	0.28	-	146.15	0.28	0.34	-	146.16	0.29	0.33	-
CB904	145.73	146.03	146.36	146.09	0.36	0.27	-	146.07	0.34	0.29	-	146.07	0.34	0.29	-
Wren Drive East Side															
CB608	145.16	145.41	145.48	145.47	0.31	0.01	-	145.45	0.29	0.03	-	145.45	0.29	0.03	-
CB609	145.03	145.23	145.35	145.28	0.25	0.07	-	145.26	0.23	0.09	-	145.27	0.24	0.08	-
DIMH600	144.79	145.09	145.16	145.17	0.38	-	0.01	145.16	0.37	0.00	-	145.16	0.37	0.00	-
CB613	144.93	145.18	145.35	145.48	0.55	-	0.13	145.45	0.52	-	0.10	145.46	0.53	-	0.11
CB612	144.88	145.07	145.24	145.30	0.42	-	0.06	145.16	0.28	0.08	-	145.18	0.30	0.06	-
CB611	144.85	145.09	145.17	145.16	0.31	0.01	-	145.13	0.28	0.04	-	145.13	0.28	0.04	-
CB610	144.81	145.01	145.12	145.08	0.27	0.04	-	145.06	0.25	0.06	-	145.06	0.25	0.06	-
Wren Drive West Side															
CB710	145.04	145.33	145.58	145.37	0.33	0.21	-	145.36	0.32	0.22	-	145.36	0.32	0.22	-
CB711	145.01	145.18	145.47	145.21	0.20	0.26	-	145.20	0.19	0.27	-	145.20	0.19	0.27	-
CB712	145.02	145.22	145.34	145.25	0.23	0.09	-	145.24	0.22	0.10	-	145.24	0.22	0.10	-

HGL Analysis Summary Results for Historical Storms

Catchbasin	CL Swale Elevation (m)	CB T/G Elevation (m)	Spill Elevation (m)	July 1, 1979				August 4, 1988				August 8, 1996			
				Max HGL (m)	Max Depth (m)	FB (m)	Cascading Flow Depth Over Driveway (m)	Max HGL (m)	Max Depth (m)	FB (m)	Cascading Flow Depth Over Driveway (m)	Max HGL (m)	Max Depth (m)	FB (m)	Cascading Flow Depth Over Driveway (m)
Morrison Drive South Side															
CB600	146.76	147.11	147.57	147.39	0.63	0.18	-	147.34	0.58	0.23	-	147.23	0.47	0.34	-
CB601	146.52	146.84	147.42	146.87	0.35	0.55	-	146.88	0.36	0.54	-	146.87	0.35	0.55	-
CB602	146.29	146.59	147.14	146.65	0.36	0.49	-	146.63	0.34	0.51	-	146.62	0.33	0.52	-
CB603	146.31	146.60	146.80	146.71	0.40	0.09	-	146.73	0.42	0.07	-	146.68	0.37	0.12	-
CB604	146.02	146.27	146.60	146.32	0.30	0.28	-	146.33	0.31	0.27	-	146.31	0.29	0.29	-
CB605	145.40	145.70	146.23	145.75	0.35	0.48	-	145.75	0.35	0.48	-	145.74	0.34	0.49	-
CB606	145.71	145.91	146.03	145.95	0.24	0.08	-	145.96	0.25	0.07	-	145.95	0.24	0.08	-
CB607	145.26	145.51	145.58	145.62	0.36	-	0.04	145.63	0.37	-	0.05	145.59	0.33	-	0.01
Morrison Drive North Side															
CB700	146.87	147.22	147.57	147.56	0.69	0.01	-	147.56	0.69	0.01	-	147.28	0.41	0.29	-
CB701	146.69	147.01	147.38	147.09	0.40	0.29	-	147.11	0.42	0.27	-	147.07	0.38	0.31	-
CB702	146.48	146.83	147.19	146.87	0.39	0.32	-	146.88	0.40	0.31	-	146.86	0.38	0.33	-
CB703	146.55	146.85	146.95	146.92	0.37	0.03	-	146.93	0.38	0.02	-	146.90	0.35	0.05	-
CB704	146.13	146.48	146.69	146.54	0.41	0.15	-	146.55	0.42	0.14	-	146.52	0.39	0.17	-
CB705	145.87	146.17	146.46	146.22	0.35	0.24	-	146.22	0.35	0.24	-	146.20	0.33	0.26	-
MH700	145.69	146.04	146.34	146.09	0.40	0.25	-	146.10	0.41	0.24	-	146.08	0.39	0.26	-
CB706	145.30	145.55	145.96	145.59	0.29	0.37	-	145.59	0.29	0.37	-	145.58	0.28	0.38	-
CB707	145.28	145.53	145.84	145.55	0.27	0.29	-	145.55	0.27	0.29	-	145.55	0.27	0.29	-
CB708	145.10	145.39	145.71	145.41	0.31	0.30	-	145.42	0.32	0.29	-	145.41	0.31	0.30	-
CB709	145.07	145.36	145.65	145.38	0.31	0.27	-	145.39	0.32	0.26	-	145.38	0.31	0.27	-
Street 1 East Side															
CB403	146.11	146.41	147.09	146.73	0.62	0.36	-	146.71	0.60	0.38	-	146.62	0.51	0.47	-
Street No. 2 - Northeast Side															
CB803	145.97	146.27	146.63	146.51	0.54	0.12	-	146.53	0.56	0.10	-	146.45	0.48	0.18	-
CB804	145.89	146.14	146.52	146.16	0.27	0.36	-	146.17	0.28	0.35	-	146.16	0.27	0.36	-
CB805	145.74	145.94	146.38	146.00	0.26	0.38	-	146.02	0.28	0.36	-	145.99	0.25	0.39	-
Street No. 2 - Northwest Side															
CB902	145.96	146.26	146.63	146.43	0.47	0.20	-	146.46	0.50	0.17	-	146.38	0.42	0.25	-
CB903	145.87	146.12	146.49	146.15	0.28	0.34	-	146.16	0.29	0.33	-	146.15	0.28	0.34	-
CB904	145.73	146.03	146.36	146.06	0.33	0.30	-	146.07	0.34	0.29	-	146.06	0.33	0.30	-
Wren Drive East Side															
CB608	145.16	145.41	145.48	145.44	0.28	0.04	-	145.45	0.29	0.03	-	145.43	0.27	0.05	-
CB609	145.03	145.23	145.35	145.26	0.23	0.09	-	145.27	0.24	0.08	-	145.26	0.23	0.09	-
DIMH600	144.79	145.09	145.16	145.16	0.37	0.00	-	145.16	0.37	0.00	-	145.14	0.35	0.02	-
CB613	144.93	145.18	145.35	145.40	0.47	-	0.05	145.44	0.51	-	0.09	145.33	0.40	0.02	-
CB612	144.88	145.07	145.24	145.12	0.24	0.12	-	145.14	0.26	0.10	-	145.11	0.23	0.13	-
CB611	144.85	145.09	145.17	145.13	0.28	0.04	-	145.14	0.29	0.03	-	145.13	0.28	0.04	-
CB610	144.81	145.01	145.12	145.06	0.25	0.06	-	145.06	0.25	0.06	-	145.05	0.24	0.07	-
Wren Drive West Side															
CB710	145.04	145.33	145.58	145.35	0.31	0.23	-	145.36	0.32	0.22	-	145.35	0.31	0.23	-
CB711	145.01	145.18	145.47	145.20	0.19	0.27	-	145.21	0.20	0.26	-	145.20	0.19	0.27	-
CB712	145.02	145.22	145.34	145.24	0.22	0.10	-	145.25	0.23	0.09	-	145.24	0.22	0.10	-

Appendix J

Civil Drawings

(Under Separate Cover)

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