CITY OF OTTAWA

LANSDOWNE PARK REDEVELOPMENT 2.0 OTTAWA, ON

FUNCTIONAL SERVICING AND STORMWATER MANAGEMENT STUDY

MAY 25, 2023

CONFIDENTIAL

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CONFIDENTIAL

PROJECT NO.: CA0000286.1662
DATE: MAY 25, 2023

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May 25, 2023

Confidential

City of Ottawa

Attention: Sean Moore

Dear Sir:

Subject: Lansdowne 2.0 Re-development for Zoning By-Law Amendment (ZBLA)

We are pleased to deliver this enclosed Functional Servicing Study in support of the application for Zoning By-law Amendment for the subject institutional development project. This study compared estimations of civil demand (potable water, sanitary, and stormwater) based on current conceptual design of the site compared to existing municipal capacities in coordination with the City.

Should there be any questions or comments regarding this report, please do not hesitate to contact the undersigned.

Yours sincerely,

Winston Yang, P.Eng.
Senior Civil Engineer

WSP ref.: CA0000286.1662

SIGNATURES

PREPARED BY

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May 25th, 2023
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May 25th, 2023
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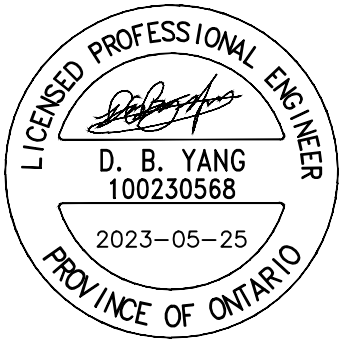

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1 INTRODUCTION

The proposed Zoning By-law & Official Plan Amendments for Lansdowne 2.0 represent the next step in the evolution and progression of Lansdowne towards a redevelopment approach that will allow the site to succeed as an important residential, sports, culture, recreation, commercial, and entertainment destination, and a more vibrant day-to day hub for Ottawa.

The work described below requires both an Official Plan and Zoning By-law Amendment to align the proposed development plan with the City's planning policy framework. In general, the proposed development includes two components – a public infrastructure component and a private infrastructure component.

These two principal components are advanced through a number of important elements, including:

- Increase residential density to foster daily vibrancy to the area through proposing three high-rise towers including a combination of condominium and rental including affordable housing units.
    - The private infrastructure component could include up to 1,200 new residential units on-site, which could be provided in three new towers atop the proposed retail podium.
    - The proposed heights of the towers as per the 2022 Council-endorsed concept are 29, 34, and 40 storeys, with the proposed maximum height limited to 40 storeys. Approximately 739 new parking spaces could be provided for the new residential units and located within the underground parking lot and within level 1 and level 1.5 (mezzanine) of the podium and north stadium stands.

- Add mixed-used retail space through replacing the current 3,809m² (41,000 ft²) retail space attached to the arena/stadium complex along Exhibition Way, with 9,290m² (100,000 ft²) of new mixed-use retail space in the podium of the new residential towers.
    - The new north stadium stands will be integrated with a new retail podium, which will provide additional retail options to the existing Lansdowne Park, enhance the existing public realm along Exhibition Way, and enhance the protected viewpoint of Aberdeen Pavilion from Bank Street.

- Replace the existing City facilities on-site through proposing a new 5,500-seat standalone multipurpose Event Centre and a re-designed and reconstructed 12,000-seat North Stadium Stands.
    - The public infrastructure component will include a new event centre which is intended to replace the existing 9,500 seat TD Place Arena which is located within the north stadium stands.
    - In addition to the new event centre, the north stadium stands will be replaced with 11,200 new seats, which will accommodate 12,000 spectators with additional standing-only areas.

- Consolidate service access & loading through including a common access point for service & loading is provided for the Event Centre, Stadium, Residential and Retail

- Facilitate City-led enhancements to the public realm and programming as per the direction of the Lansdowne Guiding Principles which will form an important part of Lansdowne 2.0.

Overall, the proposal intends to re-visit the form and function of Lansdowne, and specifically Exhibition Way, as a place of exhibition, open to the city as whole that fosters public gathering, vibrancy, and a centre of activity for the City. There will be a continued focus on placemaking, and the careful integration and enhancement of all new features with the objectives of the existing site – including a shared commitment to recognizing and celebrating Algonquin

history, art and culture, respecting heritage building views, animating Exhibition Way, providing access to the Great Lawn, and preserving an incorporating existing public and private components of Lansdowne today.

WSP was retained by the City of Ottawa to provide engineering services for the functional servicing study for the Lansdowne 2.0 Re-Development.

The following study was prepared in support of OP and ZBA and addressed water, wastewater, storm services and stormwater management to support the proposed development.

The services investigated are water supply servicing, wastewater servicing, and stormwater servicing.

1.1 SITE DESCRIPTION

The Lansdowne site is home to many commercial, residential, and leisure facilities. This includes TD place Stadium, Aberdeen Pavilion, Horticultural Building, mixed-use retail/office/residential, and a subsurface parking lot. The overall site is approximately 15.4 ha, and borders Bank Street to the west, Holmwood Ave to the north, and Queen Elizabeth Drive to the south and east.

The proposed development includes a new event centre, reconstruction of the north stands, new retail space, and three residential towers. See Appendix A for the architectural conceptual design upon which this report is based.

Figure 1-1 Lansdowne Site Location

1.2 EXISTING INFRASTRUCTURE

The site is currently serviced by a network of watermains, storm, and sanitary sewers constructed during the Lansdowne redevelopment project completed between 2012 and 2015. The Sport and Entertainment Group provided an as-built services plan after its completion, contained in Appendix A.

Base on the previous design information by DSEL and Stantec, portable water supply is available within the site, and there should be adequacy fire protection supply. The existing Lansdowne Park has a peak dry weather flow of

42.1 L/s and wet weather flow of 45.3 L/s. The existing storm conveyance system has been designed to convey all storms up to and including a 5-year storm event.

1.3 REFERENCES

This functional servicing study was undertaken in conformance with, and utilizing information from, the following documents:

- Ottawa Sewer Design Guidelines, Second Edition, Document SDG002, October 2012, City of Ottawa including:
    - Technical Bulletin ISDTB-2012-4 (June 20, 2012)
    - Technical Bulletin ISDTB-2014-01 (February 5, 2014)
    - Technical Bulletin PIEDTB-2016-01 (September 6, 2018)
    - Technical Bulletin ISDTB-2018-01 (March 21,2018)
    - Technical Bulletin ISDTB-2018-04 (June 27, 2018)
- Ottawa Design Guidelines – Water Distribution, July 2010 (WDG001), including:
    - Technical Bulletin ISDTB-2014-02 (May 27, 2014)
    - Technical Bulletin ISTB-2018-02 (March 21, 2018)
- Fire Underwriters Survey, Water Supply for Public Fire Protection (FUS), 2020.
- Functional Servicing and Stormwater Management Report for Lansdowne Live Ottawa Sports and Entertainment Group, Project No. 09-378, January 2012, by DSEL.
- Stormwater Management Design Report for Lansdowne Urban Park, February 2012, by Stantec Consulting Ltd.

In addition, the minutes for the Pre-Application Consultation Meeting for this Zoning By Law Amendment is provided for reference in Appendix A.

2 WATER SUPPLY SERVICING

2.1 EXISTING WATER SUPPLY SERVICES

Lansdowne Park resides within the City of Ottawa 1W Pressure Zone. Water supply is delivered to the subject property through existing 400mm and 200mm diameter watermains on Holmwood Avenue and Bank Street.

The Ottawa Sports and Entertainment Group has completed fire hydrant testing on site in September 2022. Table 2-1 summarized the results of the hydrant testing.

Table 2-1 Fire Hydrant Testing Results

Hydrant Location	Color Code	Static Pressure (psi)	Dynamic Pressure (psi)	Pitot Pressure (psi)	Measured Flow (Gallons/min)	Available Fire Flow at 20 psi (Gallons/min)
Apartment Facing Field	Blue	68	62	39	875	2689
Back Entrance	Blue	70	62	44	929	2499
Behind Apartment (Bank St)	Blue	70	61	41	897	2264
Behind Apartment (Parkway)	Blue	70	62	38	863	2323
Box Office	Blue	68	62	42	908	2790
Cattle Castle	Blue	70	62	38	863	2323
Cineplex	Blue	66	61	38	86	2739
Filed Entrance	Blue	70	60	39	875	2086
On Field	Blue	70	62	43	918	2471
Goodlife	Blue	67	60	37	852	2382
Milestones	Blue	67	62	34	817	2739
Sporting Life	Blue	65	58	41	897	2450

The existing water supply network is illustration on Figure F1 and the associated hydrant testing results are located Appendix B. Table 2-2 summarized the existing water demand and boundary conditions under existing conditions.

Table 2-2 Water Demand and Boundary Conditions Existing Conditions

Design Parameter	Anticipated Demand (L/s)	Boundary Condition (Hydraulic m/kPa)
Average Daily Demand	11.8	115.6/481.7
Max Day + Fire Flow	19.9+150=169.9	106.4/391.4
Peak Hour	38.0	103.1/359.0

2.2 PROPOSED WATER SUPPLY

No significant change to the existing water network except the 200mm watermain 'C' where running through the proposed Event Centre. The portion of the pipe running internally will be reconstructed with fitting and hydrant lead.

2.3 DOMESTIC SUPPLY AND PRESSURE

Water demands are based on Table 4.2 of the Ottawa Design Guidelines – Water Distribution. As previously noted, the development is considered as commercial and residential. A water demand calculation sheet is included in Appendix B, and the total water demands are summarized as follows:

	Proposed	Proposed plus Existing
Average Day	10.10 L/s	21.90 L/s
Maximum Day	23.86 L/s	193.76 L/s
Peak Hour	51.66 L/s	89.66 L/s

The 2010 City of Ottawa Water Distribution Guidelines stated that the preferred practice for design of a new distribution system is to have normal operating pressures range between 345 kPa (50 psi) and 552 kPa (80 psi) under maximum daily flow conditions. Other pressure criteria identified in the guidelines are as follows:

Minimum Pressure — Minimum system pressure under peak hour demand conditions shall not be less than 276 kPa (40 psi)

Fire Flow — During the period of maximum day demand, the system pressure shall not be less than 140 kPa (20 psi) during a fire flow event.

Maximum Pressure — Maximum pressure at any point the distribution system shall not exceed 689 kPa (100 psi). In accordance with the Ontario Building/Plumbing Code, the maximum pressure should not exceed 552 kPa (80 psi). Pressure reduction controls may be required for buildings where it is not possible/feasible to maintain the system pressure below 552 kPa.

2.4 FIRE FLOW PROTECTION

The fire flow rate has been calculated using the Fire Underwriters Survey (FUS) method. The method takes into account the type of building construction, the building occupancy, the use of sprinklers and the exposures to adjacent structures. Assuming fire resistive construction and a fully supervised sprinkler system, a fire flow demand of 10,000 l/min (166.7 l/s) for the proposed residential Tower 1 and 2. The fire flow rate of 4,000 l/min (67 l/s) for Tower 3 and 8,000 l/min (133 l/s) for Event Centre are calculated. Copy of the FUS calculations are included in Appendix B. The existing available fire flow for the nearby private hydrants at 20 psi ranging from 131.6 L/s to 176.0 L/s. Each proposed building can be serviced by two existing fire hydrants. The combined available fire flow exceeds the required fire flow by FUS.

2.5 CHECK OF HIGH PRESSURE

The recommended pressure range is respected during Maximum Day plus Fire Flow as well as Peak Hour demands. A pressure check should be conducted at the completion of construction to determine if pressure control is required.

2.6 WATER SUPPLY CONCLUSION

Ottawa Sports and Entertainment Group completed fire hydrant testing in 2022. The testing indicated that water supply is available between 7896.4 l/min and 10561 l/min at 140 kPa. Therefore, supply is available per FUS recommendations. The existing water supply design conforms to all relevant City Guidelines and Policies.

3 WASTEWATER SERVICING

3.1 EXISTING WASTEWATER SERVICES

The subject site lies within the Rideau River Interceptor catchment. The existing development is serviced by a 600mm diameter sanitary trunk sewer on Holmwood Street. The existing peak wastewater flow rates have been determined employing City guidelines based on building type and usage. The anticipated dry weather peak wastewater discharge from the site is 42.1 L/s while the wet weather peak is 45.3 L/s. The peak discharge from the development assumes that both the retail and stadium will be operating at maximum capacity.

3.2 DESIGN CRITERIA

In accordance with the City of Ottawa's Sewer Design Guidelines, the following design criteria have been utilized in order to predict wastewater flows generated by the subject site and complete the sewer design.

- Minimum Velocity 0.6 m/s
- Maximum Velocity 3.0 m/s
- Manning Roughness Coefficient 0.013
- Total est. hectares commercial and residential use 15.4
- Average residential daily flow 280 L/cap/day
- Average sanitary flow for institutional use 28,000 L/Ha/day
- Commercial/Institutional Peaking Factor 1.5
- Infiltration Allowance (Total) 0.33 L/Ha/s
- Minimum Sewer Slopes – 200 mm diameter 0.32%

The area of 15.4 ha represents the lot area of the Lansdowne Park. This is the sanitary collection area that is being considered to contribute to the existing 600mm trunk sanitary sewer along Holmwood Ave.

3.3 DEMAND ESTIMATION

The outlet for the sanitary service from the proposed buildings is the 375 mm diameter private sewer. The Ottawa Sewer Design Guidelines provide estimates of sewage flows based on residential development.

The criteria to determine anticipated actual peak flow based on site used as described in Ottawa Sewer Design Guidelines Appendix 4-A are as follows.

- Residential 280 L/Cap/day = 0.324 L/Ha/s
- Total units count for Tower 1, 2 and 3 1199
- Assumes 1/3 of one bed, 1/3 of two beds and 1/3 of 3 beds

The proposed Lansdowne 2.0 increases the peak dry weather flow from 42.1 L/s to 54.82 L/s. Under wet weather flow condition, the peak discharge is also increased from 45.3 L/s to 59.90 L/s.

3.4 EXISTING CAPACITY

The capacity of the downstream 375 mm diameter private sewer from existing sanitary manhole 7 to existing sanitary manhole 6 has 67.91 L/s capacity with slope at 0.15%, which is adequate for the flow assumptions from the proposed addition as noted above. The servicing pipe capacity is capable to handle the estimated peak sanitary flow rate of 59.90 L/s for the site include both existing and proposed. Please refer to sanitary sewer design sheet in Appendix C.

4 STORMWATER MANAGEMENT

4.1 DESIGN CRITERIA

Design criteria for the proposed development will follow the same criteria as identified in the Stantec 2012 as per OSDG 8.3.7.2. Design criteria are as follows:

- Peak flow rate of 616 L/s to O'Connor Street sewer for all events from the 2-year to the 100-year return period
- Stormwater shall be treated to MOE "enhanced" standard (80% TSS removal)
- The "first flush" (i.e. 10mm event) shall be directed to the O'Connor Street sewer for the entire site drainage area.
- The 600mm pipe to the Rideau Canal may be used as an overflow, with a peak flow of 480 L/s once the water level is above the operating level of the canal (64.08 m).
- Outflow to O'Connor Street Sewer will be restricted if the downstream system surcharges and will be cut off when the receiving sewer HGL is higher than the onsite HGL.
- Minor system shall be design for a 5-year level of service with minimal surface ponding.
- Major system shall provide a 100-year level of service while minimizing outflow to the canal.

4.2 EXISTING CONDITIONS

The existing conditions on the Lansdowne site are as designed in the Stantec Stormwater Management Design Report – Lansdowne Urban Park (2012). The primary site stormwater outlet is to the storm sewer on O'Connor Street, which discharges to a combined sewer at the intersection with Fifth Street. During large storm events (i.e. greater than the 5-year return period) runoff is directed to the Rideau Canal through an overflow pipe.

The stormwater management system consists of two subsurface storage tanks, surface storage on the Great Lawn, outlet controls, and quality control structures. The two underground storage tanks provide 600 m^3 in Basin 1 and 2200 m^3 in Basin 2, with 700 m^3 provided in pipe storage (total of 3500 m^3 subsurface storage). A minimum storage volume of 3000 m^3 is also provided on the surface of the Great Lawn.

A schematic of the existing stormwater management strategy is included in **Appendix D**.

A PCSWMM model was created to represent the existing conditions on the site based on the documentation provided in the Stantec 2012 report, the DSEL function servicing report (2012), and the As-Built servicing drawings.

4.2.1 MODELLING METHODOLOGY

A PCSWMM model of existing conditions was created as a baseline with which to compare the proposed design.

Catchment Areas: Catchment areas were delineated based on the Stantec catchment area plan (C03). Subcatchment imperviousness was determined by creating a land use shapefile and using the PCSWMM spatial weighting tool. Subcatchment parameters are included in Appendix D.

Storm Sewers: Storm sewers were modelled as conduits with their size and inverts based on the as-built servicing drawing. A roughness coefficient of 0.013 was used.

Weirs: Weirs were used to direct runoff along the major flow route when storm sewer capacity is exceeded. Weirs are also used within the underground storm chamber inlet/outlet structures.

Orifices: An orifice was modelled at the quantity control structure with a discharge coefficient of 0.62. Orifices were also used in the model to represent the 450 mm backflow preventers within the underground storage chamber inlet/outlet structures.

Storage: Underground storage chambers were modelled using storage nodes with storage curves based on their storage area. The Great Lawn was modelled as a storage node with storage defined as the average area available for storage. Roof storage was also modelled based on the documentation in the DSEL FSR report (2012).

Ditches: Ditches shown in the Stantec grading plan were modelled as conduits. Ditches were connected to storm sewers with a catch basin and discharge curve as per MTO design chart 4.19.

Rainfall: The 3-hour Chicago storm using the IDF parameters from the Ottawa Sewer Design Guidelines was used in the analysis.

Tailwater Conditions: Tailwater conditions at O'Connor Street were set as a timeseries with a peak at the 5-year peak HGL of 65.2 m. The timeseries was calibrated to produce similar results to those shown in the Stantec report. This tailwater condition will be revised as more information becomes available. Tailwater conditions at the Rideau Canal were fixed at 64.08 which is the maximum operating level of the canal during navigation season.

The results of the existing conditions PCSWMM model are not expected to exactly match those of the Stantec 2012 report due to the following:

1. Data regarding tailwater condition – In the Stantec analysis, they were provided with the City of Ottawa Infoworks model for the Holmwood and O'Connor sewer system so were able to incorporate a dynamic tailwater condition at the site outlet. The PCSWMM model can be refined as more information becomes available.
2. Infoworks Model – Stantec modelling for the existing site was completed in Infoworks. WSP has requested this model to review catchment parameters and model setup. Without the model or detailed documentation, differences in modelling parameters and methodology are inevitable leading to variations in model results.
3. SWMM Engines – Developments in stormwater management modelling software engines have been made since 2012, which affects the ability to replicate results.

The focus of this analysis is on the comparison between storage and outflows in the existing conditions PCSWMM model versus the proposed conditions PCSWMM model. The design intent is to match the outflows from the existing conditions PCSWMM model. PCSWMM modelling output is included in **Appendix D**.

4.2.2 EXISTING CONDITIONS MODEL RESULTS

The existing conditions PCSWMM model was run for the 5-year and the 100-year events. Storage volumes for Basin 1, Basin 2, and the Great Lawn are shown in Table 4-1, and peak flows at the outfalls are shown in Table 4-2.

Table 4-1: Existing condition storage results

	5-year		100-year	
	Peak Volume (m^3)	Peak HGL (m)	Peak Volume (m^3)	Peak HGL (m)
Basin 1	600	64.47	600	64.68
Basin 2	2200	64.47	2200	64.67
Great Lawn	264	64.43	2088	64.66

Table 4-2: Existing Condition Peak Flows

	5-year Peak Flow (m^3/s)	100-year Peak Flow (m^3/s)
O'Connor Sewer	0.534	0.607
Rideau Canal	0	0.142

As shown, there is no flow to the canal during the 5-year event, and flow to the canal during the 100-year is lower than shown in the Stantec report. Flows to O'Connor Street are similar to those shown in the Stantec report.

4.3 PROPOSED CONDITIONS

Under proposed conditions the majority of the site land use remains as it is under existing conditions, except for the new event centre with a green roof. The new event centre requires some rerouting of storm sewers and encroaches on the surface storage previously provided in the Great Lawn. The proposed design involves routing storm sewers south of the new event centre and installing subsurface storage beneath the Great Lawn to account for the additional storage required from the change in land use and elimination of storage available on the surface.

4.3.1 MINOR SYSTEM

The subject site will be serviced by a storm sewer system designed in accordance with the amendment to the storm sewer and stormwater management elements of the Ottawa Design Guidelines. The minor system has been designed to convey the 5-year storm without ponding on the surface. Storm sewer design sheets are included in **Appendix D**.

The site outlets remain the same as they are in existing conditions. The primary outlet is to O'Connor Street to the north. During large storm events runoff is directed to the Rideau Canal through an overflow pipe.

4.3.2 MAJOR SYSTEM

The major system will remain similar to how it is in existing conditions. The site is graded toward to Great Lawn where catch basins around the perimeter will intercept overland runoff and direct it to the underground storm chamber under the Great Lawn. Emergency overland flow is directed toward the Rideau Canal during extreme events exceeding the 100-year design storm.

4.3.3 QUANTITY CONTROL

Additional storage is required to account for the addition of the new event centre and the removal of surface storage on the Great Lawn. The proposed storm system was modelled in PCSWMM according to the same methodology presented in Section 4.2.1. Subcatchment areas and parameters were modified based on the proposed development. The new event centre will have a green roof, however with the steep slopes and limited infiltration, a conservative runoff coefficient of 0.8 (86% impervious in PCSWMM model) was used. The size of the new underground storage chamber (Basin 3) was modelled iteratively to determine the required area and volume to match the existing conditions PCSWMM model results.

The new underground storage chamber beneath the Great Lawn will have a volume of 4100 m^3. The addition of underground storage will improve the useability of the Great Lawn for recreation and events as the ground surface will no longer be used to pond runoff. Overland flow directed to the Great Lawn will be captured by catch basins around the perimeter, and the lawn will be graded to avoid ponding.

Storage volumes and peak HGL during the 5-year and 100-year events for Basin 1, Basin 2, and the new Basin 3 are shown in Table 4-3. Peak flows at the outfalls are shown in Table 4-4.

Table 4-3: Proposed condition storage results

	5-year		100-year	
	Peak Volume (m^3)	Peak HGL (m)	Peak Volume (m^3)	Peak HGL (m)
Basin 1	535	63.93	600	64.53
Basin 2	1617	63.86	2200	64.53
Basin 3	2191	63.86	4083	64.52

Table 4-4: Proposed Condition Peak Flows

	5-year Peak Flow (m^3/s)	100-year Peak Flow (m^3/s)
O'Connor Sewer	0.425	0.594
Rideau Canal	0	0.131

As shown, peak outflows in proposed conditions are lower than those in existing conditions based on the PCSWMM modelling.

5 CONCLUSION

The Ottawa Sport and Entertainment Group in collaboration with the City of Ottawa are proposed to demolish the existing Civic Arena and North Stands. The proposed Lansdowne 2.0 will include a new 5,500 seat Event Centre, a new 11,200 to 12,000 seat spectator North Stadium Stands and the addition of rental and owned residential units with approx. 1199 units, and associated subsurface parking, as well as the significant landscaping east of the new Event Centre.

Portable water supply is available within the recommended pressure range and is respected during Maximum Day plus Fire Flow as well as Peak Hour demands. A pressure check should be conducted at the completion of construction to determine if pressure control is required.

The Ottawa Sport and Entertainment Group completed fire hydrant testing in 2022. The testing indicated that water supply is available between 7896.4 l/min and 10561 l/min at 140 kPa. Therefore, fire protection supply is available.

The proposed Lansdowne 2.0 increases the peak dry weather flow from 42.1 L/s to 54.82 L/s. Under wet weather flow condition, the peak discharge is also increased from 45.3 L/s to 59.90 L/s.

The site will be required by the City to limit the discharge of stormwater to the existing conditions peak flow rate, with stormwater up to the post-development 100yr storm stored on-site. Preliminary estimates of the runoff rates lead to an approximate maximum site discharge rate of 594 L/s, with additional required storage of approximately 4100 m^3.

Therefore, it is confirmed the existing infrastructure is sufficient to support the proposed development. It should be noted that all demand calculations are estimates based on conceptual architectural plans and are subject to change during the design phase.

The proposed water, wastewater, and stormwater management designs conform to all relevant City guidelines and policies.

APPENDIX

A

- CRESPONDENCE AND NOTES
- CONCEPTUAL ARCHITECTUAL PLAN

LANSDOWNE PARK REDEVELOPMENT

AREA SUMMARY:

LEVEL	RESI TGFA				RETAIL GFA	MUSIC HALL	OFFICE	NORTH STANDS GFA
	PODIUM (6 STY) (SF)	TOWER 1 (40 STY) (SF)	TOWER 2 (34 STY) (SF)	TOWER 3 (29 STY) (SF)	(SF)	(SF)	(SF)	(SF)
LVL P1		691	1,146	847	1,504	17,734		14,400
LVL 01		5,935	4,621	4,683	27,599	10,111		48,520
LVL 01.5		568	464	4,683				33,253
LVL 02		763	802	12,453	50,073		8,089	42,300
LVL 03	37,279			10,490				40,423
LVL 04	37,147			10,490				6,740
LVL 05	37,147			10,490				
LVL 06	37,147			10,490				
LVL 07		14,246	13,943	8,331				
LVL 08-27		192,780	192,780	166,620				
LVL 28-29		19,278	19,278	16,662				
LVL 30-34		48,195	48,195					
LVL 35-40		57,834						
	148,720	**340,290**	**281,229**	**256,239**	**79,176**	**27,845**	**8,089**	**185,636**
TOTAL TGFA	**1,327,224**							

UNIT COUNT PER FLOOR			
PODIUM (6 STY)	TOWER 1 (40 STY)	TOWER 2 (34 STY)	TOWER 3 (29 STY)
33			12
42			12
42			12
42			12
			12
	260	260	200
	26	26	
	65	65	
	78		
159	**429**	**351**	**260**
TOTAL UNITS	**1,199**		

TGFA SUMMARY	
AREA	(SF)
RESI	1,026,478
RETAIL	79,176
MUSIC HALL	27,845
OFFICE	8,089
NORTH STANDS*	185,636
TOTAL TGFA	1,327,224
ARENA	160,000
TOTAL incl. ARENA	1,487,224

Note:
** North Stands GFA includes both enclosed and open areas.*

PARKING SUMMARY:

WEST PARKING				
AREA	RATIO	(SF)	PARKING REQUIRED	PARKING PROVIDED
SPORTS FIELD	-	12,000 seats	ALREADY INCL. IN EXISTING PARKING	*** INCL. IN EXISTING PARKING
RETAIL/ MUSIC HALL	1.25 per 100 SM (1,076 SF) GFA	107,021	ALREADY INCL. IN EXISTING PARKING	*** INCL. IN EXISTING PARKING
DWELLING IN MIXED USE	0.51 per DU T1+T2 (rental)	approx 950 units	481	481
BUILDING	1.00 per DU T3 (condo)	approx 258 units	258	258
TOTAL			**739**	**739**

Note:
Residential units
approx.700sf average size

BANK ST

EXHIBITION WAY

ABERDEEN PAVILION

EXISTING RETAIL/OFFICE BLDG

EXISTING RESIDENTIAL BLDG

ROOF OVER L2

TERRACE AT L6

T1 OUTDOOR AMENITY AT L7

±9,639 SF

ROOF OVER L7

OUTDOOR AMENITY AT L2

TERRACE AT L3

T3 RESI
±8,331 SF

ROOF OVER L6

PUBLIC PROMENADE BELOW

CLADDING

GUARDRAIL AT T/O NORTH STANDS

OPEN TO BELOW

FAN DECK BELOW

AODA GUARDRAIL AT UPPER CONCOURSE

VIEWS TO FIELD

1800 DIA. SOLID FAN SURROUNDS

NORTH-SOUTH SECTION

MAIN ENTRANCE

REMOVEABLE SCREEN

50' x 14' BOWL VENT UNIT

22' X 12' DEHUMIDIFICATION UNIT

BOILER 40' x 30'

45' x 15' AIR HANDLER UNIT

VIEWS TO CANAL

EXISTING RELOCATED ARTWORK

Legend:
- OHT Easement Property Boundary
- Views (A-D)
- (i) Framing Lands associated with dynamic views of the upper portions of the Aberdeen Pavilion
  ii) Framing Lands associated with two distinct views of the Aberdeen Pavilion, but are not part of the dynamic view

TOWER 1

TOWER 2

TOWER 3

EXISTING SOUTH STANDS

PROPOSED NORTH STANDS

ABERDEEN PAVILION

VIEW A

VIEW B

(i) FRAMING LANDS

(i) FRAMING LANDS

ARENA AERIAL VIEW
Showing OHT Setting Lands, Views & Framing Lands

APPENDIX

B

- FIRE FLOW CALCULATION FOR BUILDINGS
- WATER DEMAND CALCULATION
- FIRE HYDRANT TEST RESULTS
- FIGURE 1 – CONCEPT WATER SERVICES

Fire Flow Design Sheet (FUS)
Lansdowne Park Redevelopment
City of Ottawa
WSP Project No. CA000286.1662
Date: 19-Apr-23

Proposed Tower 1 & 2

Fire Flow Requirements Based on Fire Underwriters Survey (FUS) 2020

1. An estimate of the Fire Flow required for a given fire area may be estimated by: $F = 220\ C\ \sqrt{A}$

F = required fire flow in litres per minute
C = coefficient related to the type of construction
- 1.5 for **Type V** Wood Frame Construction
- 0.8 for **Type IV-A** Mass Timber Construction
- 0.9 for **Type IV-B** Mass Timber Construction
- 1.0 for **Type IV-C** Mass Timber Construction
- 1.5 for **Type IV-D** Mass Timber Construction
- 1.0 for **Type III** Ordinary Construction
- 0.8 for **Type II** Noncombustible Construction
- 0.6 for **Type I** Fire resistive Construction

A =2-b) The single largest Floor Area plus 25% of each of the two immediately adjoining floors

A = 5188.9 m^2
C = 0.6
F = 9508.5 L/min

rounded off to 10,000 L/min (min value of 2000 L/min)

2. The value obtained in 1. may be reduced by as much as 25% for occupancies having a low contents fire hazard.

Non-combustible	-25%
Limited Combustible	-15%
Combustible	0%
Free Burning	15%
Rapid Burning	25%

Reduction due to low occupancy hazard -15% x 10,000 = 8,500 L/min

3. The value obtained in 2. may be reduced by as much as 50% for buildings equipped with automatic sprinkler protection.

Adequate Sprinkler confirms to NFPA13	-30%
Water supply common for sprinklers & fire hoses	-10%
Fully supervised system	-10%
No Automatic Sprinkler System	0%

Reduction due to Sprinkler System -40% x 8,500 = -3,400 L/min

4. The value obtained in 2. is increased for structures exposed within 45 metres by the fire area under consideration.

Separation	Charge
0 to 3 m	25%
3.1 to 10 m	20%
10.1 to 20 m	15%
20.1 to 30 m	10%
30.1 to 45 m	0%

Side 1	31	0%	north side
Side 2	0	25%	east side
Side 3	21	10%	south side
Side 4	8	20%	west side
		55%	(Total shall not exceed 75%)

Increase due to separation 55% x 8,500 = 4,675 L/min

5. The flow requirement is the value obtained in 2., minus the reduction in 3., plus the addition in 4.

The fire flow requirement is 10,000 L/min (Rounded to nearest 1000 L/min)
or **167 L/sec**
or 2,642 gpm (us)
or 2,200 gpm (uk)

Based on method described in:
"Water Supply for Public Fire Protection - A Guide to Recommended Practice", 2020
by Fire Underwriters Survey

Fire Flow Design Sheet (FUS)
Lansdwone Park Redevelopment
City of Ottawa
WSP Project No. CA000286.1662
Date: 19-Apr-23

Proposed Tower 3

Fire Flow Requirements Based on Fire Underwriters Survey (FUS) 2020

1. An estimate of the Fire Flow required for a given fire area may be estimated by: $F = 220\ C\ \sqrt{A}$

F = required fire flow in litres per minute
C = coefficient related to the type of construction
- 1.5 for **Type V** Wood Frame Construction
- 0.8 for **Type IV-A** Mass Timber Construction
- 0.9 for **Type IV-B** Mass Timber Construction
- 1.0 for **Type IV-C** Mass Timber Construction
- 1.5 for **Type IV-D** Mass Timber Construction
- 1.0 for **Type III** Ordinary Construction
- 0.8 for **Type II** Noncombustible Construction
- 0.6 for **Type I** Fire resistive Construction

A =2-b) The single largest Floor Area plus 25% of each of the two immediately adjoining floors

A = 1644.2 m^2
C = 0.6
F = 5352.4 L/min

rounded off to 5,000 L/min (min value of 2000 L/min)

2. The value obtained in 1. may be reduced by as much as 25% for occupancies having a low contents fire hazard.

Non-combustible	-25%
Limited Combustible	-15%
Combustible	0%
Free Burning	15%
Rapid Burning	25%

Reduction due to low occupancy hazard -15% x 5,000 = 4,250 L/min

3. The value obtained in 2. may be reduced by as much as 50% for buildings equipped with automatic sprinkler protection.

Adequate Sprinkler confirms to NFPA13	-30%
Water supply common for sprinklers & fire hoses	-10%
Fully supervised system	-10%
No Automatic Sprinkler System	0%

Reduction due to Sprinkler System -40% x 4,250 = -1,700 L/min

4. The value obtained in 2. is increased for structures exposed within 45 metres by the fire area under consideration.

Separation	Charge
0 to 3 m	25%
3.1 to 10 m	20%
10.1 to 20 m	15%
20.1 to 30 m	10%
30.1 to 45 m	0%

Side 1	21	10%	north side
Side 2	450	0%	east side
Side 3	19	15%	south side
Side 4	0	25%	west side
		50%	(Total shall not exceed 75%)

Increase due to separation 50% x 4,250 = 2,125 L/min

5. The flow requirement is the value obtained in 2., minus the reduction in 3., plus the addition in 4.

The fire flow requirement is 5,000 L/min (Rounded to nearest 1000 L/min)
or **83 L/sec**
or 1,321 gpm (us)
or 1,100 gpm (uk)

Based on method described in:
"Water Supply for Public Fire Protection - A Guide to Recommended Practice", 2020
by Fire Underwriters Survey

Fire Flow Design Sheet (FUS)
Lansdowne Park Redevelopment
City of Ottawa
WSP Project No. CA000286.1662
Date: 19-Apr-23

Proposed Arena

Fire Flow Requirements Based on Fire Underwriters Survey (FUS) 2020

1. An estimate of the Fire Flow required for a given fire area may be estimated by: $F = 220\ C\ \sqrt{A}$

F = required fire flow in litres per minute
C = coefficient related to the type of construction
- 1.5 for **Type V** Wood Frame Construction
- 0.8 for **Type IV-A** Mass Timber Construction
- 0.9 for **Type IV-B** Mass Timber Construction
- 1.0 for **Type IV-C** Mass Timber Construction
- 1.5 for **Type IV-D** Mass Timber Construction
- 1.0 for **Type III** Ordinary Construction
- 0.8 for **Type II** Noncombustible Construction
- 0.6 for **Type I** Fire resistive Construction

A =2-b) The single largest Floor Area plus 25% of each of the two immediately adjoining floors

A = 7926.3 m^2
C = 0.6
F = 11751.9 L/min

rounded off to 12,000 L/min (min value of 2000 L/min)

2. The value obtained in 1. may be reduced by as much as 25% for occupancies having a low contents fire hazard.

Non-combustible	-25%
Limited Combustible	-15%
Combustible	0%
Free Burning	15%
Rapid Burning	25%

Reduction due to low occupancy hazard -15% x 12,000 = 10,200 L/min

3. The value obtained in 2. may be reduced by as much as 50% for buildings equipped with automatic sprinkler protection.

Adequate Sprinkler confirms to NFPA13	-30%
Water supply common for sprinklers & fire hoses	-10%
Fully supervised system	-10%
No Automatic Sprinkler System	0%

Reduction due to Sprinkler System -40% x 10,200 = -4,080 L/min

4. The value obtained in 2. is increased for structures exposed within 45 metres by the fire area under consideration.

Separation	Charge
0 to 3 m	25%
3.1 to 10 m	20%
10.1 to 20 m	15%
20.1 to 30 m	10%
30.1 to 45 m	0%

Side 1	19	15%	north side
Side 2	450	0%	east side
Side 3	180	0%	south side
Side 4	0	25%	west side
		40%	(Total shall not exceed 75%)

Increase due to separation 40% x 10,200 = 4,080 L/min

5. The flow requirement is the value obtained in 2., minus the reduction in 3., plus the addition in 4.

The fire flow requirement is 10,000 L/min (Rounded to nearest 1000 L/min)
or **167 L/sec**
or 2,642 gpm (us)
or 2,200 gpm (uk)

Based on method described in:
"Water Supply for Public Fire Protection - A Guide to Recommended Practice", 2020
by Fire Underwriters Survey

Water Demand Calculation Sheet

Project: Lansdowne Park Redevelopment
Location: 1015 Bank St, Ottawa ON K1S 3W7
WSP Project No. CA0000286.1662

Date: 2023-04-13
Design: N.N.
Checked: D.B.Y
Page: 1 of 1

Proposed Buildings	Residential				Non-Residential			Average Daily			Maximum Daily			Maximum Hourly			Fire
	Units			Beds	Industrial	Institutional	Commercial	Demand (l/s)			Demand (l/s)			Demand (l/s)			Demand
	SF	APT	ST		(ha)	(ha)	(ha)	Res.	Non-Res.	Total	Res.	Non-Res.	Total	Res.	Non-Res.	Total	(l/min)
Proposed Tower		360		1			4.28	1.63	1.39	10.10	4.08	2.08	23.86	8.98	3.75	51.66	10,000
		420		2				2.86			7.15			15.72			
		420		3				4.22			10.55			23.21			

Population Densities

Single Family	3.4	person/unit
Semi-Detached	2.7	person/unit
Duplex	2.3	person/unit
Townhome (Row)	2.7	person/unit
Bachelor Apartment	1.4	person/unit
1 Bedroom Apartment	1.4	person/unit
2 Bedroom Apartment	2.1	person/unit
3 Bedroom Apartment	3.1	person/unit
4 Bedroom Apartment	4.1	person/unit
Avg. Apartment	1.8	person/unit

Average Daily Demand

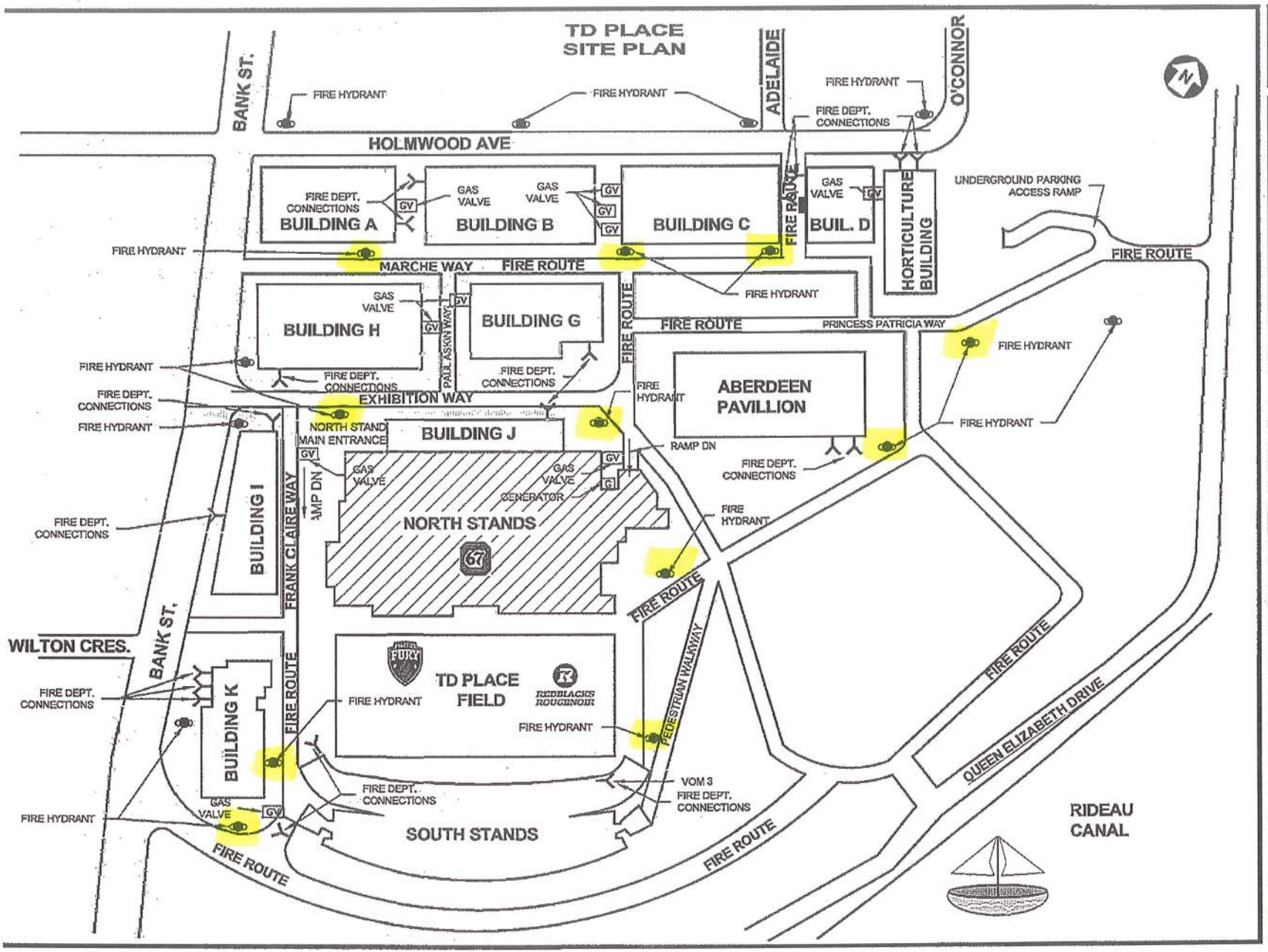
Residential	280	l/cap/day
Industrial	35000	l/ha/day
Institutional	28000	l/ha/day
Commercial	28000	l/ha/day

Maximum Daily Demand

Residential	2.5	x avg. day
Industrial	1.5	x avg. day
Institutional	1.5	x avg. day
Commercial	1.5	x avg. day

Maximum Hourly Demand

Residential	2.2	x max. day
Industrial	1.8	x max. day
Institutional	1.8	x max. day
Commercial	1.8	x max. day



LEGEND.

- FIRE DEPT. CONNECTION
- FIRE HYDRANT
- GV GAS VALVE
- G GENERATOR

FIRE SAFETY PLAN

SITE PLAN

TD PLACE NORTH STANDS
OTTAWA, ONTARIO

NOT TO SCALE

MAY 2014

HYDRANTS-R-US Inc.

Hydrants-R-Us Inc.
53 Forest Creek Drive
K2S 1M1
613-804-0088
dalton@hydrantsrus.com

Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **Apartment Facing Field** **Hydrant Type: DARLING**

Paint: **Paint to code**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **OK**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **68 PSI**
Residual Hydrant Flowing Pressure:**62 PSI**
Flowing Hydrant Pitot Pressure: **39 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 875**
Gallons Per Minute at 20 PSI: **2689**
Color Code: BLUE

Remarks: OK

HYDRANTS-R-US Inc.

Hydrants-R-Us Inc.
53 Forest Creek Drive
K2S 1M1
613-804-0088
dalton@hydrantsrus.com

Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **Back Entrance** **Hydrant Type: McAvity**

Paint: **Paint to code**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **OK**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **70 PSI**
Residual Hydrant Flowing Pressure:**62 PSI**
Flowing Hydrant Pitot Pressure: **44 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 929**
Gallons Per Minute at 20 PSI: **2499**
Color Code: BLUE

Remarks: OK

HYDRANTS-R-US Inc.

Hydrants-R-Us Inc.
53 Forest Creek Drive
K2S 1M1
613-804-0088
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Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **Behind Apartment (Bank St)** **Hydrant Type: DARLING**

Paint: **Paint to code**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **OK**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **70 PSI**
Residual Hydrant Flowing Pressure:**61 PSI**
Flowing Hydrant Pitot Pressure: **41 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 897**
Gallons Per Minute at 20 PSI: **2264**
Color Code: BLUE

Remarks: OK

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53 Forest Creek Drive
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613-804-0088
dalton@hydrantsrus.com

Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **Behind Apartment (Parkway)** **Hydrant Type: DARLING**

Paint: **Paint to code**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **OK**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **70 PSI**
Residual Hydrant Flowing Pressure:**62 PSI**
Flowing Hydrant Pitot Pressure: **38 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 863**
Gallons Per Minute at 20 PSI: **2323**
Color Code: BLUE

Remarks: OK

HYDRANTS-R-US Inc.

Hydrants-R-Us Inc.
53 Forest Creek Drive
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613-804-0088
dalton@hydrantsrus.com

Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **Box Office** **Hydrant Type: McAvity**

Paint: **OK**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **Buried**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **68 PSI**
Residual Hydrant Flowing Pressure:**62 PSI**
Flowing Hydrant Pitot Pressure: **42 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 908**
Gallons Per Minute at 20 PSI: **2790**
Color Code: BLUE

Remarks: OK
Isolation valve-could not locate

HYDRANTS-R-US Inc.

Hydrants-R-Us Inc.
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Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **Cattle Castle** **Hydrant Type: McAvity**

Paint: **Paint to code**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **OK**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **70 PSI**
Residual Hydrant Flowing Pressure:**62 PSI**
Flowing Hydrant Pitot Pressure: **38 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 863**
Gallons Per Minute at 20 PSI: **2323**
Color Code: BLUE

Remarks: OK

HYDRANTS-R-US Inc.

Hydrants-R-Us Inc.
53 Forest Creek Drive
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613-804-0088
dalton@hydrantsrus.com

Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **Cineplex** **Hydrant Type: DARLING**

Paint: **OK**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **OK**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **66 PSI**
Residual Hydrant Flowing Pressure:**61 PSI**
Flowing Hydrant Pitot Pressure: **38 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 86**
Gallons Per Minute at 20 PSI: **2739**
Color Code: BLUE

Remarks: OK

HYDRANTS-R-US Inc.

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Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **Field Entrance** **Hydrant Type: McAvity**

Paint: **Paint to code**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **Partially Paved over**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **70 PSI**
Residual Hydrant Flowing Pressure:**60 PSI**
Flowing Hydrant Pitot Pressure: **39 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 875**
Gallons Per Minute at 20 PSI: **2086**
Color Code: BLUE

Remarks: OK

HYDRANTS-R-US Inc.

Hydrants-R-Us Inc.
53 Forest Creek Drive
K2S 1M1
613-804-0088
dalton@hydrantsrus.com

Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **On Field** **Hydrant Type: McAvity**

Paint: **OK**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **OK**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **70 PSI**
Residual Hydrant Flowing Pressure:**62 PSI**
Flowing Hydrant Pitot Pressure: **43 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 918**
Gallons Per Minute at 20 PSI: **2471**
Color Code: BLUE

Remarks: OK

HYDRANTS-R-US Inc.

Hydrants-R-Us Inc.
53 Forest Creek Drive
K2S 1M1
613-804-0088
dalton@hydrantsrus.com

Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **Goodlife** **Hydrant Type: Darling**

Paint: **OK**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **OK**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **67 PSI**
Residual Hydrant Flowing Pressure:**60 PSI**
Flowing Hydrant Pitot Pressure: **37 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 852**
Gallons Per Minute at 20 PSI: **2382**
Color Code: BLUE

Remarks: OK

HYDRANTS-R-US Inc.

Hydrants-R-Us Inc.
53 Forest Creek Drive
K2S 1M1
613-804-0088
dalton@hydrantsrus.com

Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **Milestones** **Hydrant Type: DARLING**

Paint: **OK**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **OK**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **67 PSI**
Residual Hydrant Flowing Pressure:**62 PSI**
Flowing Hydrant Pitot Pressure: **34 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 817**
Gallons Per Minute at 20 PSI: **2739**
Color Code: BLUE

Remarks: OK

HYDRANTS-R-US Inc.

Hydrants-R-Us Inc.
53 Forest Creek Drive
K2S 1M1
613-804-0088
dalton@hydrantsrus.com

Sept 20th 2022

HYDRANT INSPECTION REPORT

Owner: **Ottawa Sports and Entertainment Group (TD PLACE)**

Hydrant Location: **Sporting Life** **Hydrant Type: DARLING**

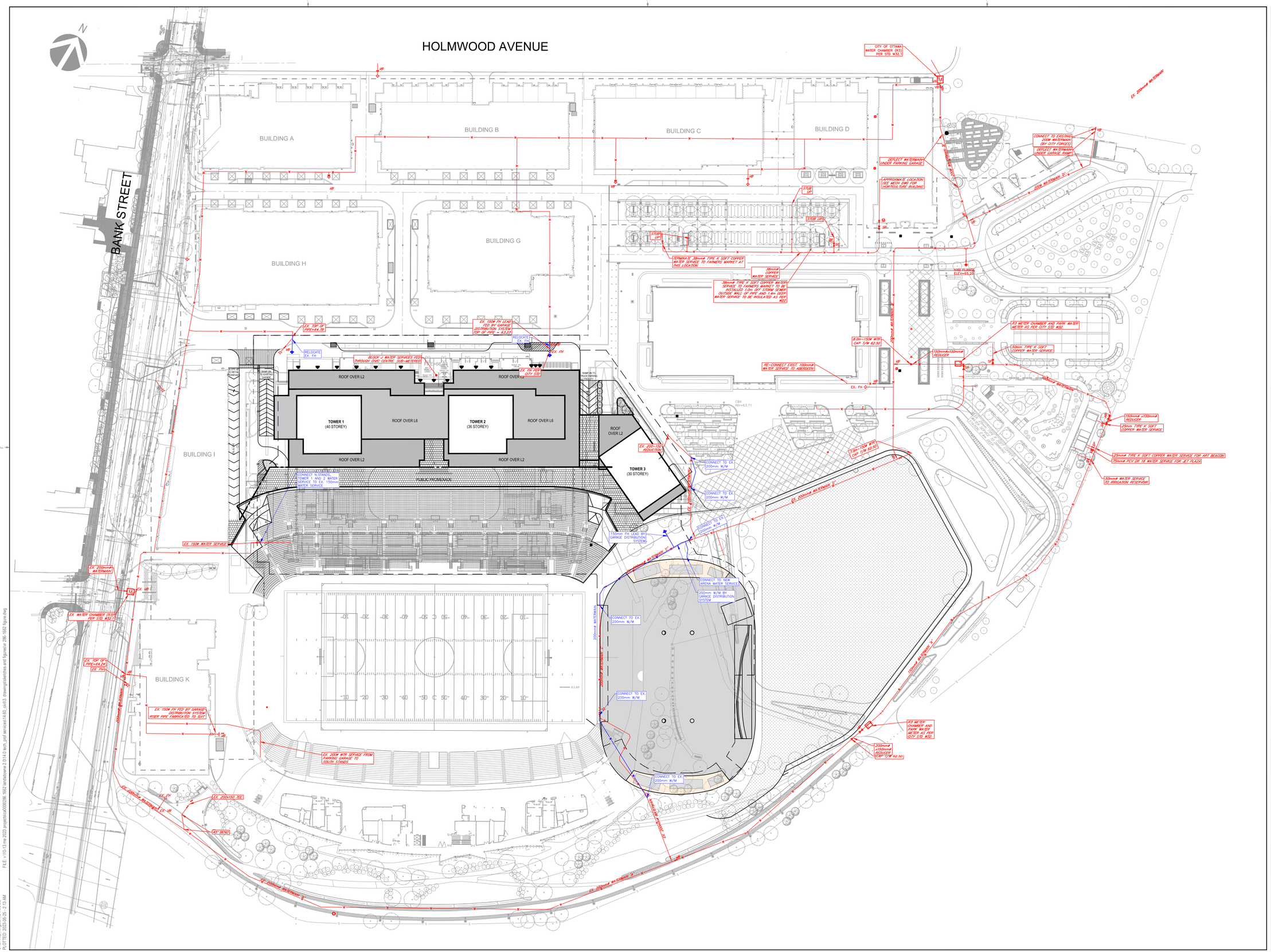
Paint: **OK**
Stem: **OK**
O-Rings: **OK**
Top Nut: **OK**
Valve Seat: **OK**
Condition of Water: **Normal**
Isolation Valve: **Partially Paved Over**
Flow test: **Complete**
Caps:**OK**

Residual Hydrant Static Pressure: **65 PSI**
Residual Hydrant Flowing Pressure:**58 PSI**
Flowing Hydrant Pitot Pressure: **41 PSI**

Number of Ports Flowed: **1**
Nozzle Size: **2 ½ in.**

Gallons Per Minute**: 897**
Gallons Per Minute at 20 PSI: **2450**
Color Code: BLUE

Remarks: OK



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CLIENT:

Ottawa

CLIENT REF. #:

WSP CANADA INC.
2611 QUEENSVIEW DR #300,
OTTAWA, ONTARIO
CANADA K2B 8K2
PHONE: 613-829-2800
WWW.WSP.COM

PROJECT NUMBER: CA0000286.1662

CONSULTANT TEAM:

KEY PLAN:

REVISION:

REV	DATE	DESCRIPTION	BY
1	2023-05-25	ISSUED FOR CITY REIVEW	DY

ORIGINAL SCALE: 1:750
DRAWN BY: JT
CHECKED BY: DY
APPROVED BY: DY
CA0000286.1662

DATE: 2023-05-19

IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

TITLE:

CONCEPTUAL WATER SERVICING

PROJECT:

LANDSDOWN PARK
REDEVELOPMENT
EXHIBITION WAY
OTTAWA, ONTARIO

DRAWING NUMBER: F1

REV. 0A

APPENDIX

C

- SANITARY SEWER DESIGN SHEET
- FIGURE 2 - CONCEPT SANITARY SERVICES
- EXISTING SANITARY DESIGN SHEET BY DSEL

SANITARY SEWER DESIGN SHEET
Lansdowne Redevelopment 2.0
Ottawa, ON
Project: CA0000286.1662
Date: MAY 2023

LOCATION				RESIDENTIAL AREA AND POPULATION												OTHER				RETAIL		OFFICE		I+C+I	INFILTRATION			TOTAL	PIPE					
LOCATION	FROM M.H.	TO M.H.	SANITARY DRAINAGE AREA ID	INDV AREA (ha)	ACCU AREA (ha)	NUMBER OF UNITS						POPULATION		PEAK FACT.	PEAK FLOW (l/s)	GROSS AREA (ha)	DEVEL. AREA (ha)	PEAK FLOW (l/s)	ACCU. PEAK FLOW (l/s)	INDIV AREA (ha)	ACCU. AREA (ha)	INDIV AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (l/s)	INDIV AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	**TOTAL FLOW (l/s)**	LENGTH (m)	DIA. (mm)	SLOPE (%)	CAP. (FULL) (l/s)	VEL. (FULL) (m/s)	AVAIL. CAP. (%)
						SINGLES	SEMIS	AVG TOWNS	AVG APT.	2-BED APT.	3-BED APT.	INDIV POP.	ACCU POP.																				
Existing																																
South Stands		Ex.19										0	0	3.80	0.00			11.60	11.60					11.60	0.000	0.00	0.00	**11.60**	*4.50*	*200*	*1.00*	32.80	1.04	**64.63%**
	Ex.19	Ex.18										0	0	3.80	0.00				11.60					11.60	0.000	0.00	0.00	**11.60**	*9.30*	*300*	*0.20*	43.25	0.61	**73.18%**
	Ex.18	Ex.17										0	0	3.80	0.00				11.60					11.60	0.000	0.00	0.00	**11.60**	*9.30*	*300*	*0.20*	43.25	0.61	**73.18%**
	Ex.17	Ex.16										0	0	3.80	0.00				11.60					11.60	0.000	0.00	0.00	**11.60**	*5.80*	*300*	*0.20*	43.25	0.61	**73.18%**
	Ex.16	Ex.13										0	0	3.80	0.00				11.60					11.60	0.000	0.00	0.00	**11.60**	*62.60*	*300*	*0.20*	43.25	0.61	**73.18%**
Bldg K, I, N Stands		Ex.15							190.00			342	342	3.44	3.82			7.60	7.60	0.25	0.25	0.84	0.84	7.95	0.000	0.00	0.00	**11.77**	*9.80*	*250*	*1.00*	59.47	1.21	**80.21%**
	Ex.15	Ex.14										0	342	3.44	3.82				7.60		0.25		0.84	7.95	0.000	0.00	0.00	**11.77**	*74.90*	*300*	*0.20*	43.25	0.61	**72.79%**
	Ex.14	Ex.13										0	342	3.44	3.82				7.60		0.25		0.84	7.95	0.000	0.00	0.00	**11.77**	*74.90*	*300*	*0.20*	43.25	0.61	**72.79%**
	Ex.13	Ex.12										0	342	3.44	3.82				19.20		0.25		0.84	19.55	0.000	0.00	0.00	**23.37**	*44.40*	*300*	*0.20*	43.25	0.61	**45.96%**
	Ex.12	Ex.9										0	342	3.44	3.82				19.20		0.25		0.84	19.55	0.000	0.00	0.00	**23.37**	*56.60*	*300*	*0.20*	43.25	0.61	**45.96%**
Bldg G1, G2, H, J		Ex.11										0	0	3.80	0.00				0.00	1.59	1.59			0.51	0.000	0.00	0.00	**0.51**	*8.40*	*250*	*0.38*	36.66	0.75	**98.60%**
Salon, Civic Centre		Ex.11										0	0	3.80	0.00			5.20	5.20		0.00			5.20	0.000	0.00	0.00	**5.20**	*30.80*	*250*	*0.38*	36.66	0.75	**85.81%**
	Ex.11	Ex.10										0	0	3.80	0.00				5.20		1.59			5.71	0.000	0.00	0.00	**5.71**	*38.20*	*250*	*0.38*	36.66	0.75	**84.41%**
	Ex.10	Ex.9										0	0	3.80	0.00				5.20		1.59			5.71	0.000	0.00	0.00	**5.71**	*7.50*	*250*	*0.38*	36.66	0.75	**84.41%**
	Ex.9	Ex.8										0	342	3.44	3.82				24.40		1.84		0.84	25.27	0.000	0.00	0.00	**29.08**	*84.00*	*375*	*0.15*	67.91	0.61	**57.17%**
Aberdeen Pavilion	Ex.8	Ex.7										0	342	3.44	3.82				24.40	0.41	2.25		0.84	25.40	0.000	0.00	0.00	**29.21**	*23.30*	*375*	*0.15*	67.91	0.61	**56.98%**
Bldg A, B, C, D, Horticulture	Ex.7	Ex.6						40.00	50.00			198	540	3.37	5.89				24.40	2.25	4.50		0.84	26.13	0.000	0.00	0.00	**32.02**	*23.30*	*375*	*0.15*	67.91	0.61	**52.85%**
	Ex.6	Ex.5										0	540	3.37	5.89				24.40		4.50		0.84	26.13	0.000	0.00	0.00	**32.02**	*83.50*	*375*	*0.15*	67.91	0.61	**52.85%**
	Ex.5	Ex.4										0	540	3.37	5.89				24.40		4.50		0.84	26.13	0.000	0.00	0.00	**32.02**	*10.10*	*375*	*0.15*	67.91	0.61	**52.85%**
	Ex.4	Ex.3										0	540	3.37	5.89				24.40		4.50		0.84	26.13	0.000	0.00	0.00	**32.02**	*17.50*	*375*	*0.15*	67.91	0.61	**52.85%**
	Ex.3	Ex.2										0	540	3.37	5.89				24.40		4.50		0.84	26.13	0.000	0.00	0.00	**32.02**	*60.00*	*375*	*0.15*	67.91	0.61	**52.85%**
	Ex.2	Ex.1										0	540	3.37	5.89				24.40		4.50		0.84	26.13	0.000	0.00	0.00	**32.02**	*24.70*	*375*	*0.15*	67.91	0.61	**52.85%**
	Ex.1	EX										0	540	3.37	5.89				24.40		4.50		0.84	26.13	0.000	0.00	0.00	**32.02**	*9.70*	*375*	*0.15*	67.91	0.61	**52.85%**

DESIGN PARAMETERS

RESIDENTIAL AVG. DAILY FLOW =	280	l/cap/day	COMMERCIAL PEAK FACTOR =	1.5	(WHEN AREA > 20%)	PEAK POPULATION FLOW, (l/s) =	P*q*M/86400	UNIT TYPE	PERSONS/UNIT
COMMERCIAL AVG. DAILY FLOW =	28,000	l/ha/day		1.0	(WHEN AREA < 20%)	PEAK EXTRANEOUS FLOW, (l/s) =	I*Ac	SINGLES	3.4
	0.324	l/ha/s				RESIDENTIAL PEAKING FACTOR, M =	1+(14/(4+P^0.5))*K	SEMI-DETACHED	2.7
INSTITUTIONAL AVG. DAILY FLOW =	28,000	l/ha/day	INSTITUTIONAL PEAK FACTOR =	1.5	(WHEN AREA > 20%)	Ac = CUMULATIVE AREA (ha)		TOWNHOMES	2.7
	0.324	l/ha/s		1.0	(WHEN AREA < 20%)	P = POPULATION (THOUSANDS)		WALK UP TOWNS	1.8
LIGHT INDUSTRIAL FLOW =	35,000	l/ha/day						2-BED APT. UNIT	2.1
	0.405	l/ha/s	RESIDENTIAL CORRECTION FACTOR, K =	0.80		SEWER CAPACITY, Qcap (l/s) =	1/N S^(1/2) R^(2/3) Ac	3-BED APT. UNIT	3.1
HEAVY INDUSTRIAL FLOW =	55,000	l/ha/day	MANNING N =	0.013		(MANNING'S EQUATION)			
	0.637	l/ha/s	PEAK EXTRANEOUS FLOW, I (l/s/ha) =	0.33					

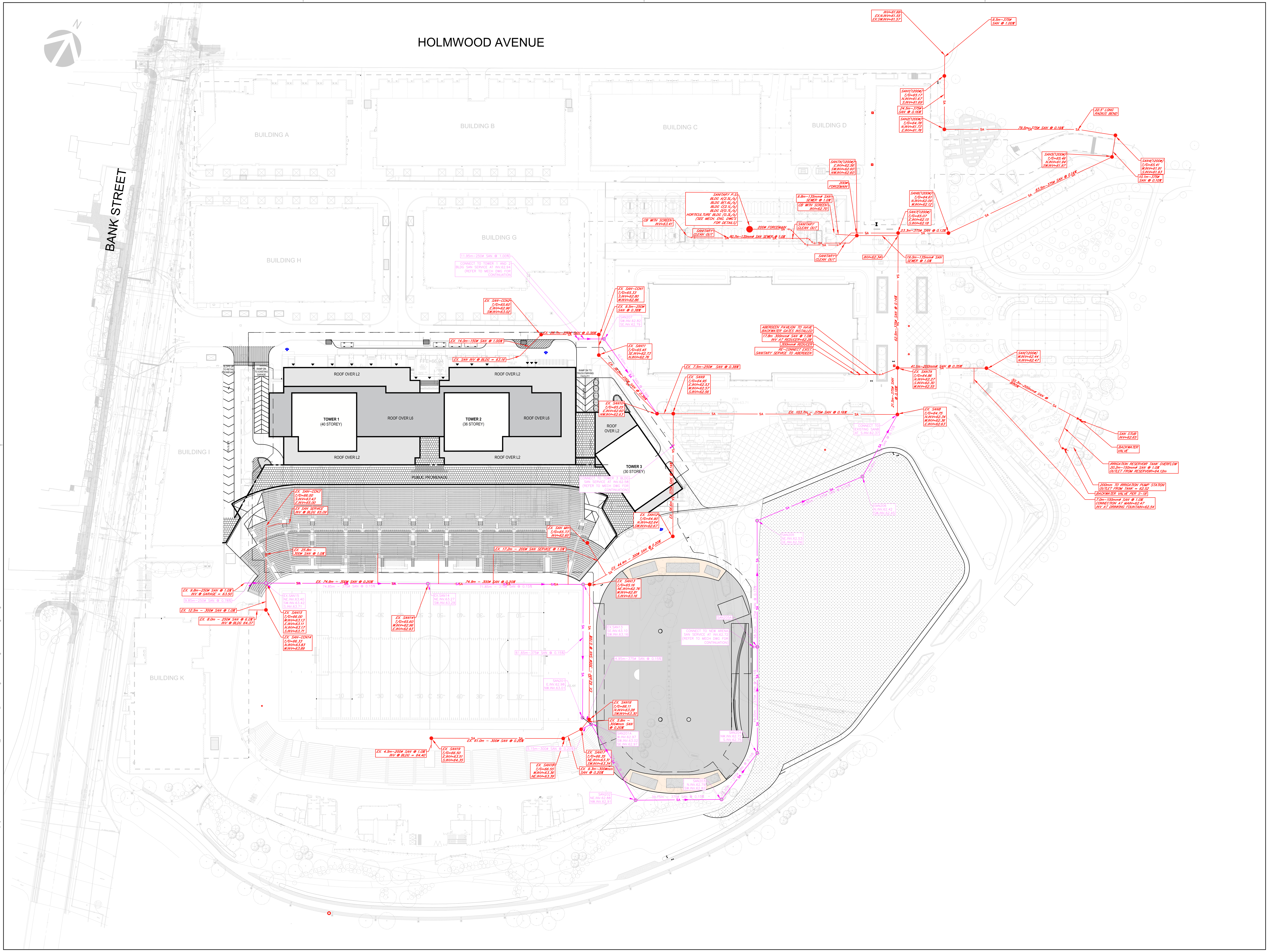
DESIGNED:	**NO.**	**REVISION**	**DATE**
D.B.Y	1.	City Submission No.1	2023-05-25
CHECKED:			
D.B.Y			
PROJECT:			
Lansdowne Redevelopment 2.0			
LOCATION:			
Ottawa, Ontario			
PAGE NO:	**FILE & DWG. REFERENCE:**		
1 of 2	F2		

SANITARY SEWER DESIGN SHEET
Lansdowne Redevelopment 2.0
Ottawa, ON
Project: CA0000286.1662
Date: MAY 2023

LOCATION				RESIDENTIAL AREA AND POPULATION												OTHER				RETAIL		OFFICE		I+C+I	INFILTRATION			TOTAL	PIPE				
LOCATION	FROM M.H.	TO M.H.	SANITARY DRAINAGE AREA ID	INDV AREA (ha)	ACCU AREA (ha)	NUMBER OF UNITS						POPULATION		PEAK FACT.	PEAK FLOW (l/s)	GROSS AREA (ha)	DEVEL. AREA (ha)	PEAK FLOW (l/s)	ACCU. PEAK FLOW (l/s)	INDIV AREA (ha)	ACCU. AREA (ha)	INDIV AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (l/s)	INDIV AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	TOTAL FLOW (l/s)	LENGTH (m)	DIA. (mm)	SLOPE (%)	CAP. (FULL) (l/s)	VEL. (FULL) (m/s)	AVAIL. CAP. (%)
						SINGLES	SEMIS	AVG TOWNS	AVG APT.	2-BED APT.	3-BED APT.	INDIV POP.	ACCU POP.																				
Proposed																																	
BLDG I, K, North Stands	BLDG	*Ex.15*							190.00			342	342	3.44	3.82			11.60	11.60	0.25	0.25	0.84	0.84	11.95	0.000	0.00	0.00	**15.77**	9.85	250	0.78	52.52	1.07	**69.98%**
	Ex.15	*Ex.14*										0	342	3.44	3.82				11.60		0.25		0.84	11.95	0.000	0.00	0.00	**15.77**	74.85	375	0.15	67.91	0.61	**76.78%**
	Ex.14	*Ex.13*										0	342	3.44	3.82				11.60		0.25		0.84	11.95	0.000	0.00	0.00	**15.77**	71.85	375	0.15	67.91	0.61	**76.78%**
	Ex.13	SAMH 201										0	342	3.44	3.82				11.60		0.25		0.84	11.95	0.000	0.00	0.00	**15.77**	61.65	375	0.15	67.91	0.61	**76.78%**
	SAMH 201	SAMH 201A										0	342	3.44	3.82				11.60		0.25		0.84	11.95	0.000	0.00	0.00	**15.77**	4.95	375	0.15	67.91	0.61	**76.78%**
South Stands	*Ex.17*	SAMH 201A										0	0	3.80	0.00			7.60	7.60		0.00		0.00	7.60	0.000	0.00	0.00	**7.60**	5.50	300	0.20	43.25	0.61	**82.43%**
	SAMH 201A	SAMH 202										0	342	3.44	3.82				19.20		0.25		0.84	19.55	0.000	0.00	0.00	**23.37**	40.70	375	0.15	67.91	0.61	**65.59%**
	SAMH 202	SAMH 203										0	342	3.44	3.82				19.20		0.25		0.84	19.55	0.000	0.00	0.00	**23.37**	39.75	375	0.15	67.91	0.61	**65.59%**
	SAMH 203	SAMH 204										0	342	3.44	3.82				19.20		0.25		0.84	19.55	0.000	0.00	0.00	**23.37**	27.10	375	0.15	67.91	0.61	**65.59%**
New Civic Arena	BLDG	SAMH205A										0	0	3.80	0.00			5.20	5.20		0.00		0.00	5.20	0.000	0.00	0.00	**5.20**	1.85	200	1.00	32.80	1.04	**84.15%**
	SAMH 204	SAMH 205A										0	342	3.44	3.82				24.40		0.25		0.84	24.75	0.000	0.00	0.00	**28.57**	49.05	375	0.15	67.91	0.61	**57.93%**
	SAMH 205A	SAMH 205										0	0	3.80	0.00				0.00		0.00		0.00	0.00	0.000	0.00	0.00	**0.00**	58.35	375	0.15	67.91	0.61	**100.00%**
	SAMH 205	SAMH 206										0	342	3.44	3.82				24.40		0.25		0.84	24.75	0.000	0.00	0.00	**28.57**	52.80	375	0.15	67.91	0.61	**57.93%**
	SAMH 206	*Ex.8*										0	342	3.44	3.82				24.40		0.25		0.84	24.75	0.000	0.00	0.00	**28.57**	32.95	375	0.15	67.91	0.61	**57.93%**
Tower 1 & 2, BLDG G1, G2, H, J	BLDG	SAMH 207							260.00	260.00	260	1820	1820	3.09	18.25				0.00	2.33	2.33	0.08	0.08	0.78	0.000	0.00	0.00	**19.03**	11.95	250	1.00	59.47	1.21	**68.01%**
	SAMH 207	*Ex. 10*										0	1820	3.09	18.25				0.00		2.33		0.08	0.78	0.000	0.00	0.00	**19.03**	42.40	250	0.38	36.66	0.75	**48.10%**
	Ex. 10	*Ex.9*										0	1820	3.09	18.25				0.00		2.33		0.08	0.78	0.000	0.00	0.00	**19.03**	*7.50*	*250*	*0.38*	36.66	0.75	**48.10%**
Tower 3	*Ex. CAP*	*Ex.9*							88.00	86.00	86	606	606	3.34	6.56				0.00		0.00		0.00	0.00	0.000	0.00	0.00	**6.56**	*20.20*	*375*	*0.14*	65.60	0.59	**90.00%**
	Ex.9	*Ex.8*										0	2426	3.02	23.70				0.00		2.33		0.08	0.78	0.000	0.00	0.00	**24.48**	*103.70*	*375*	*0.16*	70.13	0.63	**65.09%**
	Ex.8	*Ex.7*										0	2768	2.98	26.71				24.40	0.41	2.99		0.92	25.66	0.000	0.00	0.00	**52.37**	*23.30*	*375*	*0.15*	67.91	0.61	**22.88%**
Bldg A, B, C, D, Horticulture	*Ex.7*	*Ex.6*						40.00	50.00			198	2966	2.96	28.42				24.40	2.25	5.24		0.92	26.39	14.000	14.00	4.62	**59.44**	*23.30*	*375*	*0.15*	67.91	0.61	**12.47%**

DESIGN PARAMETERS

RESIDENTIAL AVG. DAILY FLOW =	280	l/cap/day	COMMERCIAL PEAK FACTOR =	1.5	(WHEN AREA > 20%)	PEAK POPULATION FLOW, (l/s) =	P*q*M/86400	UNIT TYPE	PERSONS/UNIT	**DESIGNED:**	**NO.**	**REVISION**	**DATE**
COMMERCIAL AVG. DAILY FLOW =	28,000	l/ha/day		1.0	(WHEN AREA < 20%)	PEAK EXTRANEOUS FLOW, (l/s) =	I*Ac	SINGLES	3.4	D.B.Y	1.	City Submission No.1	2023-05-25
	0.324	l/ha/s				RESIDENTIAL PEAKING FACTOR, M =	1+(14/(4+P^0.5))*K	SEMI-DETACHED	2.7	**CHECKED:**			
INSTITUTIONAL AVG. DAILY FLOW =	28,000	l/ha/day	INSTITUTIONAL PEAK FACTOR =	1.5	(WHEN AREA > 20%)	Ac = CUMULATIVE AREA (ha)		TOWNHOMES	2.7	D.B.Y			
	0.324	l/ha/s		1.0	(WHEN AREA < 20%)	P = POPULATION (THOUSANDS)		WALK UP TOWNS	1.8	**PROJECT:**			
LIGHT INDUSTRIAL FLOW =	35,000	l/ha/day						2-BED APT. UNIT	2.1	Lansdowne Redevelopment 2.0			
	0.405	l/ha/s	RESIDENTIAL CORRECTION FACTOR, K =	0.80		SEWER CAPACITY, Qcap (l/s) =	1/N S^(1/2) R^(2/3) Ac	3-BED APT. UNIT	3.1	**LOCATION:**			
HEAVY INDUSTRIAL FLOW =	55,000	l/ha/day	MANNING N =	0.013		(MANNING'S EQUATION)				Ottawa, Ontario			
	0.637	l/ha/s	PEAK EXTRANEOUS FLOW, I (l/s/ha) =	0.33						**PAGE NO:**	**FILE & DWG. REFERENCE:**		
										2 of 2	F2		



CLIENT:

Ottawa

CLIENT REF. #:

wsp

WSP CANADA INC.
2611 QUEENSVIEW DR #300,
OTTAWA, ONTARIO
CANADA K2B 8K2
PHONE: 613-829-2800
WWW.WSP.COM

PROJECT NUMBER: CA0000286.1662

CONSULTANT TEAM:

KEY PLAN:

REVISION:

REV	DATE	DESCRIPTION	BY
1	2023-05-25	ISSUED FOR CITY REIVEW	DY

ORIGINAL SCALE: 1:750
DATE: 2023-05-19
DRAWN BY: JT
CHECKED BY: DY
APPROVED BY: DY
CA0000286.1662

IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

TITLE:

CONCEPTUAL SANITARY SERVICING

PROJECT:

LANDSDOWN PARK REDEVELOPMENT
EXHIBITION WAY
OTTAWA, ONTARIO

DRAWING NUMBER: F2
REV. 0A

Building	Retail (m^2)	Residential # towns	Residential # apts	Office (m^2)	Estimated WTR / SAN / STM per Mechancal Eng. WTR (L/s)	FIRE (L/s)	SAN (L/s)	STM (L/s)	Estimated Per City of Ottawa Design Guidelines WTR AVG (L/s)	MAX. DAY (L/s)	PEAK HR (L/s)	FIRE (L/s)	SAN (L/s)	STM (L/s)	Notes
A	4,129	7	50		16.7		5.4	8.3	0.6	1.3	2.7	150	2.5	8.6	Mech Eng values provided by LKM 2011-11-29 (Includes retail and residential)
B	5,401	15			6.9		5.7	8.6	0.3	0.6	1.3	150	1.6	11.1	Mech Eng values provided by LKM 2011-11-29 (Includes retail and residential)
C	9,262	11			13.9		5.4	19.6	0.4	0.7	1.4	150	2.1	10.1	Mech Eng values provided by LKM 2011-11-29 (Includes retail and residential)
D	2,131	7			6.3		3.8	5.2	0.1	0.3	0.6	150	0.7	4.6	Mech Eng values provided by LKM 2011-11-29 (Includes retail and residential)
G1	3,507				6.3		5.4	5.5	0.1	0.2	0.3	150	0.6	5.8	Mech Eng values provided by LKM 2011-11-29 (Includes retail)
G2	399				5.0		2.6	2.4	0.0	0.0	0.0	150	0.1	1.3	Mech Eng values provided by LKM 2011-11-29 (Includes retail)
H	7,294				9.5		500FU	9.5	0.2	0.3	0.6	150	1.3	11.7	Mech Eng values provided by LKM 2011-11-29 (Includes retail)
I	2,505			8,361					0.9	1.3	2.3	150	1.6	8.1	
J	1,220								0.0	0.1	0.1	150	0.2	4.3	
J - Salon	3,425								0.1	0.1	0.3	150	0.6	N/A	Roof covered in North Stands flow.
K			190						1.4	3.5	7.6	150	5.5	5.3	
North Stands									2.8	4.2	7.6	150	7.6	219.2	No City standard for estimating flow from stadium / civic centre. Used monitored data
South Stands					25.2	31.5	11.6	211	2.8	4.2	7.5	150	11.6	212.0	No City standard for estimating flow from stadium / civic centre. Used monitored data
Civil Centre									1.9	2.9	5.2	150	5.2	N/A	No City standard for estimating flow from stadium / civic centre. Used monitored data
Aberdeen	4,098								0.1	0.2	0.3	150	0.7	N/A	Peaked Roof, storm runoff included in surface drainage.
Horticulture	1,591								0.0	0.1	0.1	150	0.3	N/A	Peaked Roof, storm runoff included in surface drainage.
Total	**44,962**	**40**	**240**	**8,361**	**89.9**	**31.5**	**39.8**	**270.1**	**11.8**	**19.9**	**38.0**		**42.1**	**502.2**	

Notes

1) Retail floor areas for buildings A, B, C, D, G1, G2, H, I, J, J - Salon provided by Perkins Eastman - Novemeber 18, 2011. Above table uses total GFA.

2) Residential for Buildings A, B, C, D, and K component extracted from RFO Addendum 3 - October 20, 2011 as follows:

Parcel A1 = Residential Tower above Bldg A. 240units (280units max less townhomes) proportionate between Bldg A and K. Therefore, 240units x 66,000/316,000 = 50units.

Parcel A2 = Townhomes abutting buildings A, B, C, D. Assuming 1,225sq.ft townhomes = 40units. Divided between buildings per ground floor area shown on Perkins Eastman November 19, 2011 merchandising plan.

Bldg A = 3,426/19,104 x 40 = 7 units

Bldg B = 7,188/19,104 = 15 units

Bldg C = 5,096/19,104 = 11 units

Bldg D = 3,394/19,104 = 7units

Parcel B = Office tower above Building I, 90,000sq.ft.

Parcel C = Building K 240units (280units max less townhomes) proportionate between Bldg A and K. Therefore, 240units x 250,000/316,000 = 190units.

3) Mech. Eng. Servcing for Bldgs A, B, C, D, G1, G2, H provided by LKM, dated July 19, 2011. Revised Storm and Sanitary flow per November 29, 2011 email.

4) City of Ottawa rates were estimated accordingly

Water Supply

Retail: Average Day 2.5L/m^2/d, Max Day = Avg Day x 1.5, Peak Hour = Avg Day x 2.7

Residential:

Townhouse Avg Day = 2.7p/unit x 350m^3/d, Max Day = Avg Day x 2.5, Peak Hour = Avg Day x 5.5

Apartement Avg Day = 1.8p/unit x 350m^3/d, Max Day = Avg Day x 2.5, Peak Hour = Avg Day x 5.5

Office: Average Day 75L/9.3m^2/d, Max Day = Avg Day x 1.5, Peak Hour = Avg Day x 2.7

North and South Stands: City of Ottawa completed Flow Monitoring in 2005. A peak dry weather flow for a capacity game was recorded to be 15.1L/s.

Report titled "Lansdowne Park - 2005, Combined Sewer Flow Monitoring Report," G.A. Clark & Associates Limited, Proj. No: 200524

Interpolated Average Day, Max Day and, Peak Hour accordingly: Peak Hour = 15.1L/s, Max Day = Peak Hour / 1.8, Average Day = Peak Hour / 2.7

North and South stands flow proportioned by number of seating: North Stands = 14,542 South Stands = 14,284, as decribed in Lansdowne Park information material.

Civil Centre: Flow monitoring completed in 2005 indicated a peak a 4L/s. However, this recorded flow did not account for wastewater directed to Holmwood.

Civil Centre Flow estimated based on Stadium monitored flow and seating: 9,836 / 28,826 x 15.1 = 5.2L/s

Interpolated Average Day, Max Day and, Peak Hour accordingly: Peak Hour = 5.2L/s, Max Day = Peak Hour / 1.8, Average Day = Peak Hour / 2.7

Wastewater

Retail: Average Day 5L/m^2/d x 24hour day / 12hour operation, Peak = Average Day x 1.5

Residential:

Townhouse Avg Day = 2.7p/unit x 350m^3/d, Peak = Avg Day x 3.95

Apartment Avg Day = 1.8p/unit x 350m^3/d, Peak = Avg Day x 3.95

Office: Average Day 75L/9.3m^2/d, Peak = Avg Day x 1.5

North and South Stands: City of Ottawa completed Flow Monitoring in 2005. A peak dry weather flow for a capacity game was recorded to be 15.1L/s.

Report titled "Lansdowne Park - 2005, Combined Sewer Flow Monitoring Report," G.A. Clark & Associates Limited, Proj. No: 200524

Peak flow interpreted as peak monitored flow (15.1L/s)

North stands flow proportioned by number of seating: North Stands = 14,542 South Stands = 14,284, as decribed in Lansdowne Park information material.

Civil Centre: Flow monitoring completed in 2005 indicated a peak a 4L/s. However, this recorded flow did not account for wastewater directed to Holmwood.

Civil Centre Flow estimated based on Stadium monitored flow and seating: 9,836 / 28,826 x 15.1 = 5.2L/s

South Stands - Mechanical Consultant provided estimated peak Wastewater Flow Rate (Smith and Anderson (2011-12-02) servicing sketch)

Storm

See Separate Analysis - Estimated per City of Ottawa IDF curves and Control Flow roof drains where appropriate

North and South Stands assumed to have roof drains sized to accommodate 5-year storm only. To be confirmed by DSEL through modeling.

PROJECT: **Lansdowne Park Re-Development**
LOCATION: **City of Ottawa**
FILE REF: **10-378**
DATE: **19-Dec-11**

DESIGN PARAMETERS

Avg. Daily Flow Res.	350	L/p/d	Peak Fact Res. Per Harmons: Min = 2.0, Max =4.0		Infiltration / Inflow	0.28	L/s/ha
Avg. Daily Flow Retail	5	$L/m^2/d$	Peak Fact. Retail	1.5	Min. Pipe Velocity	0.60	m/s full flowing
Avg. Office Flow	75	$L/9.3m^2/d$	Peak Fact. Office	1.5	Max. Pipe Velocity	3.00	m/s full flowing
					Mannings N	0.013	

Location			Residential Area and Population								Retail		Office		Other			Infiltration				Pipe Data							
Area ID	Up	Down	Area			Pop.	Cumulative		Peak.	Q_{res}	Area	Accu.	Incr.	Accu.	Area	Accu.	Q_{C+I+I}	Total	Accu.	Infiltration	Total	DIA	Slope	Length	$A_{hydraulic}$	R	Velocity	Q_{cap}	Q / Q full
							Area	Pop.	Fact.			Area	Area	Area		Area		Area	Area	Flow	Flow								
			(ha)	Town's	Apt's		(ha)		(-)	(L/s)	(m^2)	(m^2)	(m^2)	(m^2)	(L/s)	(L/s)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(mm)	(%)	(m)	(m^2)	(m)	(m/s)	(L/s)	(-)
South Stands	19	18				0.0	0.000	0.0	4.00	0.0		-		-	11.6	11.6	11.6	0.000	0.000	0.000	11.6	300	0.20	61.0	0.071	0.075	0.61	43.2	0.27
	18	17				0.0	0.000	0.0	4.00	0.0		-		-		11.6	11.6	0.000	0.000	0.000	11.6	300	0.20	9.3	0.071	0.075	0.61	43.2	0.27
	17	16				0.0	0.000	0.0	4.00	0.0		-		-		11.6	11.6	0.000	0.000	0.000	11.6	300	0.20	5.8	0.071	0.075	0.61	43.2	0.27
	16	13				0.0	0.000	0.0	4.00	0.0		-		-		11.6	11.6	0.000	0.000	0.000	11.6	300	0.20	62.6	0.071	0.075	0.61	43.2	0.27
BLDG K, I, N.Stands	15	14			190	342.0	0.000	342.0	4.00	5.5	2,505	2,505	8,361	8,361	7.6	7.6	9.2	0.000	0.000	0.000	14.8	300	0.20	74.9	0.071	0.075	0.61	43.2	0.34
	14	13				0.0	0.000	342.0	4.00	5.5		2,505		8,361		7.6	9.2	0.000	0.000	0.000	14.8	300	0.20	74.9	0.071	0.075	0.61	43.2	0.34
	13	12				0.0	0.000	342.0	4.00	5.5		2,505		8,361		19.2	20.8	0.000	0.000	0.000	26.4	300	0.20	44.4	0.071	0.075	0.61	43.2	0.61
	12	9				0.0	0.000	342.0	4.00	5.5		2,505		8,361		19.2	20.8	0.000	0.000	0.000	26.4	300	0.20	56.6	0.071	0.075	0.61	43.2	0.61
BLDG G1, G2, H, J, Salon, Civic Cen	11	10				0.0	0.000	0.0	4.00	0.0	15,845	15,845		-	5.2	5.2	8.0	0.000	0.000	0.000	8.0	250	0.38	38.2	0.049	0.063	0.75	36.7	0.22
	10	9				0.0	0.000	0.0	4.00	0.0		15,845		-		5.2	8.0	0.000	0.000	0.000	8.0	250	0.38	7.5	0.049	0.063	0.75	36.7	0.22
	9	8				0.0	0.000	342.0	4.00	5.5		18,350		8,361		24.4	28.8	0.000	0.000	0.000	34.3	375	0.15	84.0	0.110	0.094	0.61	67.9	0.51
Aberdeen Pavilion	8	7				0.0	0.000	342.0	4.00	5.5	4,098	22,448		8,361		24.4	29.5	0.000	0.000	0.000	35.0	375	0.15	23.3	0.110	0.094	0.61	67.9	0.52
BLDG A, B, C, D, Horticulture	7	5		40	50	198.0	0.000	540.0	3.96	8.7	22,514	44,962		8,361		24.4	33.4	0.000	0.000	0.000	42.0	375	0.15	83.5	0.110	0.094	0.61	67.9	0.62
	5	4				0.0	0.000	540.0	3.96	8.7		44,962		8,361		24.4	33.4	0.000	0.000	0.000	42.0	375	0.15	10.1	0.110	0.094	0.61	67.9	0.62
	4	3				0.0	0.000	540.0	3.96	8.7		44,962		8,361		24.4	33.4	0.000	0.000	0.000	42.0	375	0.15	17.5	0.110	0.094	0.61	67.9	0.62
	3	2				0.0	0.000	540.0	3.96	8.7		44,962		8,361		24.4	33.4	0.000	0.000	0.000	42.0	375	0.15	60.0	0.110	0.094	0.61	67.9	0.62
	2	1				0.0	0.000	540.0	3.96	8.7		44,962		8,361		24.4	33.4	0.000	0.000	0.000	42.0	375	0.15	24.7	0.110	0.094	0.61	67.9	0.62
	1	EX				0.0	0.000	540.0	3.96	8.7		44,962		8,361		24.4	33.4	0.000	0.000	0.000	42.0	375	0.15	9.7	0.110	0.094	0.61	67.9	0.62

APPENDIX

D

- STORM SEWER DESIGN SHEET
- FIGURE 3 – CONCEPT STORM SERVICES
- EXISTING STORM SEWER DESIGN SHEET BY STANTEC
- STORMWATER MANAGEMENT OUTPUT

STORM SEWER DESIGN SHEET
LANSDOWNE 2.0
REDEVELOPMENT
CITY OF OTTAWA
Project: CA0000286.1662
Date: May, 2023

LOCATION				AREA (Ha)						RATIONAL DESIGN FLOW												PROPSOED SEWER DATA								
STREET	AREA ID	FROM	TO	C= 0.25	C= 0.35	C= 0.75	C= 0.80	C= 0.90	C= 1.00	IND 2.78AC	CUM 2.78 AC	INLET (min)	TOTAL (min)	i (2) (mm/hr)	i (5) (mm/hr)	i (100) (mm/hr)	BLDG FLOW (L/s)	2yr PEAK FLOW (L/s)	5yr PEAK FLOW (L/s)	100yr PEAK FLOW (L/s)	ICD FIXED FLOW (L/s)	DESIGN FLOW (L/s)	MODIFIED DESIGN FLOW (L/s)	MATERIAL PIPE	SIZE (mm)	SLOPE (%)	LENGTH (m)	CAPACITY (l/s)	VELOCITY (m/s)	TIME IN PIPE	AVAIL CAP (2yr) (L/s)	AVAIL CAP (2yr) (%)
Lansdowne 2.0																															
	S.STANDS		*Ex. STM 117*					0.840		2.102	2.102	20.00	22.77	52.03	70.25	119.95		109.35				109.35		PVC DR-35	*450.0*	*0.20*	*133.40*	127.63	0.80	2.77	18.28	14.32%
		Ex. STM 117	STMH 201							0.000	2.102	22.77	22.85	47.96	64.70	110.39		100.79				100.79		PVC DR-35	600.0	0.20	4.50	274.87	0.97	0.08	174.08	63.33%
	A3, A4, A5, BLDG I, K, N STANDS		*Ex. STM 113*				2.133	1.761		9.150	9.150	20.00	22.89	52.03	70.25	119.95		476.08				476.08		PVC DR-35	*825.0*	*0.20*	*208.00*	642.59	1.20	2.89	166.52	25.91%
		Ex. STM 113	STMH 201							0.000	11.251	22.89	24.00	47.81	64.49	110.03		537.90				537.90		PVC DR-35	1050.0	0.10	66.75	864.40	1.00	1.12	326.50	37.77%
		STMH 201	STMH 202							0.000	13.353	24.00	24.32	46.37	62.54	106.67		619.21				619.21		PVC DR-35	1050.0	0.10	19.00	864.40	1.00	0.32	245.19	28.37%
		STMH 202	STMH 203							0.000	13.353	24.32	24.80	45.98	62.00	105.75		613.99				613.99		PVC DR-35	1050.0	0.10	28.50	864.40	1.00	0.48	250.42	28.97%
		Ex. D	STMH 204		1.820					1.771	1.771	15.00	17.74	61.77	83.56	142.89		109.38				109.38		PVC DR-35	600.0	0.14	133.40	229.97	0.81	2.74	120.59	52.44%
		STMH 203	STMH 204							0.000	13.353	24.80	25.58	45.41	61.22	104.41		606.33				606.33		PVC DR-35	1050.0	0.10	47.00	864.40	1.00	0.79	258.07	29.86%
		STMH 204	STMH 205							0.000	15.124	25.58	26.33	44.50	59.98	102.28		672.96				672.96		PVC DR-35	1050.0	0.10	45.00	864.40	1.00	0.75	191.44	22.15%
	EVENT CENTRE	BLDG	STMH 205					0.730		1.826	1.826	10.00	10.03	76.81	104.19	178.56		140.28				140.28		PVC DR-35	375.0	1.00	3.00	175.51	1.59	0.03	35.23	20.07%
		STMH 205	STMH 206							0.000	16.950	26.33	26.67	43.66	58.85	100.32		740.08				740.08		PVC DR-35	1050.0	0.10	20.00	864.40	1.00	0.33	124.32	14.38%
		STMH 206	UNDERGROUND CHAMBER							0.000	16.950	26.67	26.72	43.30	58.36	99.48		733.98				733.98		PVC DR-35	1050.0	0.10	3.00	864.40	1.00	0.05	130.43	15.09%
		GREAT LAWN	UNDERGROUND CHAMBER		1.570					1.528	1.528	15.00	15.00	61.77	83.56	142.89		94.36				94.36		CB LEADS								
		UNDERGROUND CHAMBER	STMH 207							0.000	18.478	26.72	26.77	43.25	58.28	99.36		799.14				799.14		PVC DR-35	1050.0	0.10	3.00	864.40	1.00	0.05	65.27	7.55%
		STMH 207	*EX. CHAMBER*							0.000	18.478	26.77	26.92	43.19	58.21	99.23		798.15				798.15		PVC DR-35	1050.0	0.10	9.00	864.40	1.00	0.15	66.25	7.66%
	A1, H, G1,G2, TOWER 1 AND 2	BLDG	STMH 209			1.181		0.720		4.264	4.264	20.00	20.08	52.03	70.25	119.95		221.85				221.85		PVC DR-35	450.0	1.00	8.10	285.39	1.79	0.08	63.54	22.26%
		STMH 209	STMH 208							0.000	4.264	20.08	20.13	51.91	70.09	119.67		221.34				221.34		PVC DR-35	600.0	0.20	3.35	274.87	0.97	0.06	53.53	19.48%
		STMH 208	*Ex. STM 110*							0.000	4.264	20.13	20.86	51.82	69.96	119.45		220.95				220.95		PVC DR-35	600.0	0.20	42.40	274.87	0.97	0.73	53.93	19.62%
		Ex. STM 110	*Ex. STM 109*							0.000	4.264	20.86	21.01	50.69	68.42	116.79		216.12				216.12		PVC DR-35	*600.0*	*0.20*	*8.50*	274.87	0.97	0.15	58.75	21.37%
	TOWER 3	*CAP*	*Ex. STM 109*					0.160		0.400	0.400	20.00	20.22	52.03	70.25	119.95		20.83				20.83		PVC DR-35	*1200.0*	*0.12*	*16.00*	1351.92	1.19	0.22	1331.09	98.46%
		Ex. STM 109	*EX. CHAMBER*							0.000	4.664	21.01	21.55	50.47	68.12	116.27		235.38				235.38		PVC DR-35	*1350.0*	*0.13*	*43.75*	1926.37	1.34	0.54	1690.99	87.78%
		EX. CHAMBER	*Ex. STM 108*							0.000	23.142	26.92	27.65	43.04	58.00	98.86		995.94				995.94		PVC DR-35	*1350.0*	*0.13*	*59.00*	1926.37	1.34	0.73	930.43	48.30%

Definition:
Q=2.78CiA, where:
Q = Peak Flow in Litres per Second (L/s)
A = Area in Hectares (Ha)
i = Rainfall Intensity in millimeters per hour (mm/hr)
i = 732.951/(TC+6.199)^0.810 — 2 Year
i = 1174.184/(TC+6.014)^0.816 — 5 Year
i = 1735.688/(TC+6.014)^0.820 — 100 Year

Notes:
1. Mannings coefficient (n) = 0.013

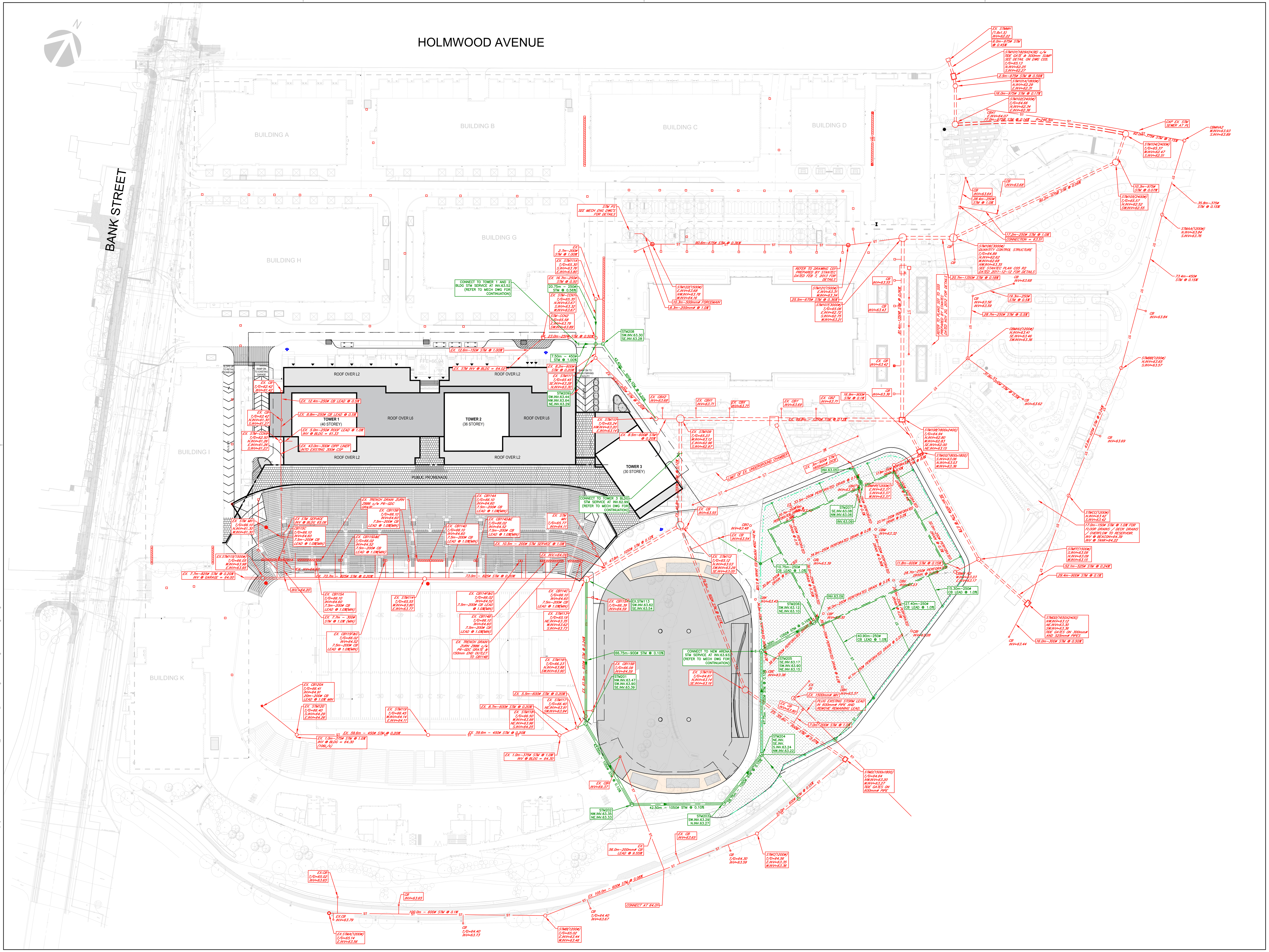
Time-of-Concentration in the Swale
FAA Equation: t (min) = 3.258 [(1.1 - C) L^0.5 / S^.33]
Where: Longest Watercourse Length, L (m). S (%)
Runoff Coef.C = Impervious

No.	L (m)	S %	Tc (min)
			#DIV/0!

Designed: D.B.Y.
Checked: D.B.Y.
Dwg. Reference: F2

No.	Revision	Date
1.	City Submission No. 1	2023-05-25

File Reference: CA0002045.0622
Date: 2023-05-25
Sheet No: 1 of 1



CLIENT:

Ottawa

CLIENT REF. #:

WSP

WSP CANADA INC.
2611 QUEENSVIEW DR #300,
OTTAWA, ONTARIO
CANADA K2B 8K2
PHONE: 613-829-2800
WWW.WSP.COM

PROJECT NUMBER: CA0000286.1662

CONSULTANT TEAM:

KEY PLAN:

REVISION:

REV	DATE	DESCRIPTION	BY
1	2023-05-25	ISSUED FOR CITY REIVEW	DY

ORIGINAL SCALE: 1:750
DATE: 2023-05-19
DRAWN BY: JT
CHECKED BY: DY
APPROVED BY: DY
CA0000286.1662

IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

TITLE:

CONCEPTUAL STORM SERVICING

PROJECT:

LANDSDOWN PARK REDEVELOPMENT
EXHIBITION WAY
OTTAWA, ONTARIO

DRAWING NUMBER: F3
REV. 0A

														Sewer Data								
Up	Down	BLDG ID	Q_{BLDG}	$Q_{BLDG\ TOT}$	AREA ID	Area	C	Indiv AxC	Acc AxC	T_C	I	Q	Q_{TOT}	DIA	Slope	Length	$A_{hydraulic}$	R	Velocity	Qcap	Time Flow	Q / Q full
			(L/s)	(L/s)		(ha)	(-)			(min)	(mm/hr)	(L/s)	(L/s)	(mm)	(%)	(m)	(m^2)	(m)	(m/s)	(L/s)	(min)	(-)
120	119	S. Stands	106.0	106.0				0.00	0.00	***20.0***	70.3	0.0	106.0	450	0.20	59.6	0.159	0.113	0.80	127.5	1.2	0.83
119	118			106.0				0.00	0.00	21.2	67.6	0.0	106.0	450	0.20	59.6	0.159	0.113	0.80	127.5	1.2	0.83
118	117	S. Stands	106.0	212.0				0.00	0.00	22.5	65.2	0.0	212.0	600	0.20	8.7	0.283	0.150	0.97	274.6	0.1	0.77
117	116			212.0				0.00	0.00	22.6	65.0	0.0	212.0	600	0.20	3.8	0.283	0.150	0.97	274.6	0.1	0.77
116	113			212.0				0.00	0.00	22.7	64.8	0.0	212.0	600	0.20	62.4	0.283	0.150	0.97	274.6	1.1	0.77
										23.8												
115	114	I, K, N.STANDS	232.6	232.6	A3, A4, A5	2.133	0.80	1.71	1.71	***20.0***	70.3	333.0	565.6	825	0.20	73.7	0.535	0.206	1.20	641.9	1.0	0.88
114	113			232.6				0.00	1.71	21.0	68.1	322.7	555.4	825	0.20	73.0	0.535	0.206	1.20	641.9	1.0	0.87
										22.0												
113	112			444.6				0.00	1.71	23.8	62.9	298.4	743.0	1050	0.10	47.8	0.866	0.263	1.00	863.5	0.8	0.86
										24.6												
A	B			0.0		0.870	0.35	0.30	0.30	***15.0***	83.6	70.7	70.7	600	0.10	100.0	0.283	0.150	0.69	194.2	2.4	0.36
B	C			0.0		0.430	0.35	0.15	0.46	17.4	76.5	96.6	96.6	600	0.10	100.0	0.283	0.150	0.69	194.2	2.4	0.50
C	D			0.0				0.00	0.46	19.9	70.6	89.2	89.2	600	0.10	57.0	0.283	0.150	0.69	194.2	1.4	0.46
D	D1			0.0		0.520	0.35	0.18	0.64	21.2	67.6	119.7	119.7	900	0.10	55.8	0.636	0.225	0.90	572.5	1.0	0.21
D1	112			0.0		0.340	0.35	0.12	0.76	22.3	65.6	137.8	137.8	900	0.10	85.0	0.636	0.225	0.90	572.5	1.6	0.24
										23.8												
112	109			444.6				0.00	2.46	24.6	61.6	421.4	866.0	1200	0.10	46.8	1.131	0.300	1.09	1232.9	0.7	0.70
										25.3												
111	110	H, G1, G2, J	23.1	23.1	A1	1.181	0.75	0.89	0.89	***20.0***	70.3	172.8	196.0	600	0.20	39.6	0.283	0.150	0.97	274.6	0.7	0.71
110	109			23.1				0.00	0.89	20.7	68.8	169.3	192.4	600	0.20	8.5	0.283	0.150	0.97	274.6	0.1	0.70
										20.8												
109	108			467.8				0.00	3.35	25.3	60.5	562.3	1030.0	1350	0.10	99.8	1.431	0.338	1.18	1687.8	1.4	0.61
										26.7												
CB1A	AA			0.0		0.430	0.60	0.26	0.26	***15.0***	83.6	59.9	59.9	375	0.15	114.0	0.110	0.094	0.61	67.9	3.1	0.88
AA	BB			0.0		0.360	0.35	0.13	0.38	18.1	74.7	79.7	79.7	450	0.12	35.0	0.159	0.113	0.62	98.8	0.9	0.81
BB	CC			0.0		0.870	0.35	0.30	0.69	19.0	72.5	138.6	138.6	525	0.24	120.0	0.216	0.131	0.97	210.7	2.1	0.66
CC	DD			0.0				0.00	0.69	21.1	68.0	130.0	130.0	525	0.24	38.0	0.216	0.131	0.97	210.7	0.7	0.62
										21.7												
EE	DD			0.0		0.320	0.35	0.11	0.11	***15.0***	83.6	26.0	26.0	300	0.40	59.0	0.071	0.075	0.87	61.2	1.1	0.43
										16.1												
DD	FF			0.0				0.00	0.80	***21.7***	66.7	148.2	148.2	900	0.10	31.0	0.636	0.225	0.90	572.5	0.6	0.26
										22.3												
H	G			0.0		0.270	0.35	0.09	0.09	***15.0***	83.6	21.9	21.9	300	0.20	66.0	0.071	0.075	0.61	43.2	1.8	0.51
G	J			0.0		0.310	0.35	0.11	0.20	16.8	78.2	44.1	44.1	375	0.15	30.0	0.110	0.094	0.61	67.9	0.8	0.65
J	FF			0.0		0.100	0.35	0.04	0.24	17.6	76.0	50.2	50.2	600	0.15	12.0	0.283	0.150	0.84	237.8	0.2	0.21
										17.8												
FF	GG			0.0				0.00	1.04	***22.3***	65.6	189.1	189.1	900	0.10	57.0	0.636	0.225	0.90	572.5	1.1	0.33
										23.4												
K	M			0.0		0.270	0.35	0.09	0.09	***15.0***	83.6	21.9	21.9	300	0.20	65.0	0.071	0.075	0.61	43.2	1.8	0.51
M	R			0.0		0.070	0.35	0.02	0.12	16.8	78.2	25.9	25.9	300	0.20	47.0	0.071	0.075	0.61	43.2	1.3	0.60
										18.1												

														Sewer Data								
Up	Down	BLDG ID	Q_{BLDG}	$Q_{BLDG\ TOT}$	AREA ID	Area	C	Indiv AxC	Acc AxC	T_C	I	Q	Q_{TOT}	DIA	Slope	Length	$A_{hydraulic}$	R	Velocity	Qcap	Time Flow	Q / Q full
			(L/s)	(L/s)		(ha)	(-)			(min)	(mm/hr)	(L/s)	(L/s)	(mm)	(%)	(m)	(m^2)	(m)	(m/s)	(L/s)	(min)	(-)
O	P			0.0		0.280	0.60	0.17	0.17	***15.0***	83.6	39.0	39.0	375	0.12	21.0	0.110	0.094	0.55	60.7	0.6	0.64
P	Q			0.0		0.180	0.60	0.11	0.28	15.6	81.6	62.5	62.5	375	0.10	34.0	0.110	0.094	0.50	55.4	1.1	1.13
Q	R			0.0		0.300	0.60	0.18	0.46	16.8	78.3	99.1	99.1	375	0.12	18.0	0.110	0.094	0.55	60.7	0.5	1.63
R	GG			0.0				0.00	0.58	17.3	76.8	122.6	122.6	600	0.10	13.0	0.283	0.150	0.69	194.2	0.3	0.63
										17.6												
S	U			0.0		0.130	0.60	0.08	0.08	***15.0***	83.6	18.1	18.1	450	0.20	30.0	0.159	0.113	0.80	127.5	0.6	0.14
U	GG			0.0		0.140	0.60	0.08	0.16	15.6	81.6	36.7	36.7	525	0.10	17.0	0.216	0.131	0.63	136.0	0.5	0.27
										16.1												
GG	108			0.0				0.00	1.78	***17.6***	75.9	374.5	374.5	900	0.10	22.0	0.636	0.225	0.90	572.5	0.4	0.65
										18.0												
108	107			0.0		0.340	0.60	0.20	5.33	***26.7***	58.3	863.2	863.2	1350	0.10	81.4	1.431	0.338	1.18	1687.8	1.2	0.51
107	106	A, B, C, D	34.4	502.2	A2	1.555	0.75	1.17	6.49	27.8	56.7	1023.0	1525.1	1350	0.10	20.7	1.431	0.338	1.18	1687.8	0.3	0.90
										28.1												
CONTROLLED FLOW																						
106	105		616.0	616.0				0.00	0.00	27.8	56.7	0.0	616.0	975	0.10	80.2	0.747	0.244	0.95	708.7	1.4	0.87
105	104			616.0				0.00	0.00	29.2	54.9	0.0	616.0	975	0.10	12.1	0.747	0.244	0.95	708.7	0.2	0.87
104	103			616.0				0.00	0.00	29.5	54.6	0.0	616.0	975	0.10	19.2	0.747	0.244	0.95	708.7	0.3	0.87
103	102			616.0				0.00	0.00	29.8	54.2	0.0	616.0	975	0.10	54.2	0.747	0.244	0.95	708.7	1.0	0.87
102	101			616.0				0.00	0.00	30.7	53.0	0.0	616.0	975	0.10	24.2	0.747	0.244	0.95	708.7	0.4	0.87
101	EX			616.0				0.00	0.00	31.2	52.5	0.0	616.0	975	0.10	5.8	0.747	0.244	0.95	708.7	0.1	0.87
										31.3												

KEY PLAN
N.T.S.

LEGEND

- PROPOSED STORM SEWER AND MAINTENANCE HOLE
- PROPOSED CATCH BASIN
- 65.00 PROPOSED SURFACE SWALE AND DIRECTION OF FLOW
- + 65.81 PROPOSED GRADE
- EXISTING GRADE
- STORM CATCHMENT BOUNDARY AREA
- B / 0.82 STORM CATCHMENT AREA ID / AREA (ha)

HOLMWOOD AVENUE
LANSDOWNE WAY
ABERDEEN AVENUE
ABERDEEN SQUARE
ABERDEEN PAVILION
WEST COURT
EAST COURT
EVENT SQUARE
GREAT PORCH
GREAT LAWN
EAST BERM
THE SCREEN
THE HILL
THE CROSSING
THE BEACON
HEIRLOOM ORCHARD
SHUTTLE LOOP
SKATING COURT
CHILDREN'S GARDEN
RELOCATED HORTICULTURE BUILDING
NCC LANDS
BANK STREET
BANK STREET ESPLANADE
QUEEN ELIZABETH DRIVEWAY
NORTH SIDE STANDS
CIVIC ARENA + SALONS BELOW
EXISTING FIELD
SOUTH BERMS
BLOCK A
BLOCK B
BLOCK C
BLOCK D
BLOCK H
BLOCK J
BLOCK K
BLOCK K INTERFACE ZONE

BLDG A	0.266	0.90
BLDG B	0.345	0.90
BLDG C	0.315	0.90
BLDG D	0.142	0.90
BLDG G1	0.182	0.90
BLDG G2	0.039	0.90
BLDG H	0.365	0.90
BLDG I	0.254	0.90
BLDG J	0.134	0.90
BLDG K	0.164	0.90
N.STANDS	1.343	0.90
S.STANDS	0.840	0.90
A1	1.181	0.75
A2	1.555	0.75
A3	0.948	0.80
A4	0.931	0.80
A5	0.254	0.75
102	0.432	
107AA	0.283	
AA	0.36	
108	0.34	
109A	0.051	
109	0.30	
109C	0.243	
116	0.255	
U	0.02	
BB	0.87	
V	0.14	
T	0.11	
N	0.07	
P	0.18	
GG	0.30	
O	0.26	
L	0.08	
M	0.08	
K	0.11	
G	0.10	
F	0.11	
E	0.10	
FF	0.10	
I	0.16	
H	0.11	
EE	0.32	
A	0.85	
D	0.52	
D1	0.43	

CLIENT PARTNERSHIP

Ottawa

OSEG
Ottawa Sports and Entertainment Group

CONSULTANT TEAM

CANNONDESIGN
AN IDEAS BASED PRACTICE

CORUSH SUNDERLAND WRIGHT

DSEL
david schaeffer engineering ltd
SMART SUBDIVISIONS

GreenbergFarrow

Stantec

PHILLIPS FAREVAAG SMALLENBERG
PLANNING • URBAN DESIGN
LANDSCAPE ARCHITECTURE

REVISIONS

No.	Date	Details	By
1	2011-11-21	ISSUED TO CITY FOR REVIEW	JVG
2	2011-12-12	REVISED AS PER CITY COMMENTS	JVG
3	2012-01-11	REVISED AS PER COORDINATION WITH DSEL	JVG
4	2012-01-26	REVISED AS PER CITY COMMENTS	JVG

1:600 0 6 18 30m

PROJECT

Lansdowne
THE TRANSFORMATION OF LANSDOWNE PARK
LA TRANSFORMATION DU PARC LANSDOWNE

DRAWING TITLE
CATCHMENT AREA PLAN

DATE

SCALE
1:600

REVISION #
4

DRAWING No.
C03

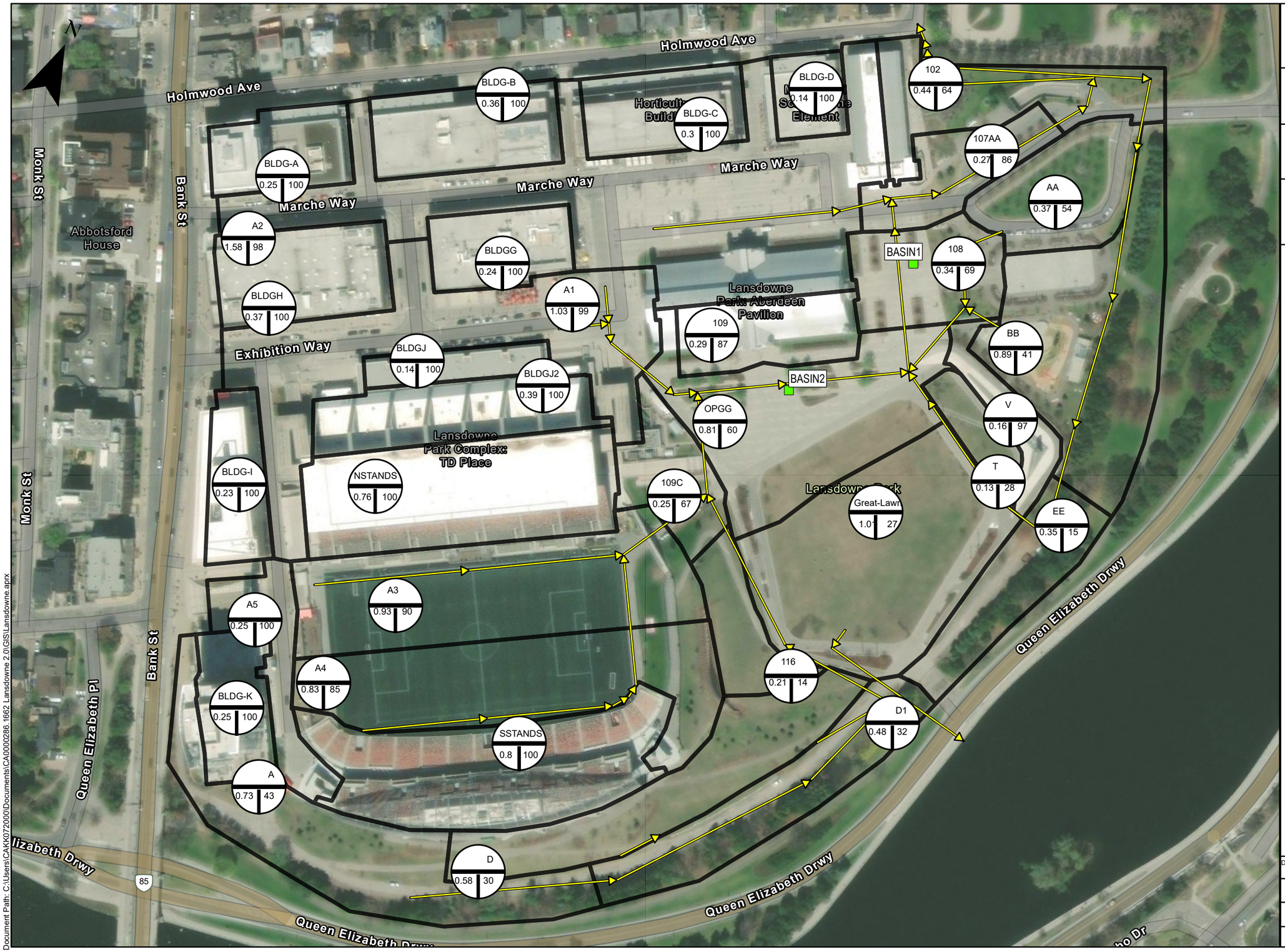
V:\01-634\active\1604_00832_Lansdowne Park Competition\design\drawing\160400832 Civil Stantec.dwg Feb06 _2012 - 3:16pm

PCSWMM Catchment Parameters - Proposed Conditions

Name	Area (ha)	Flow Length (m)	Slope (%)	Imperv. (%)	COEFF_R
102	0.444	100	0.5	64	0.64
107AA	0.270	15	0.5	86	0.80
108	0.344	21	0.5	69	0.67
109	0.288	32	0.5	87	0.81
A	0.733	193	0.5	43	0.48
A1	1.023	44	0.5	99	0.89
A2	1.578	44	0.5	98	0.89
A3	0.768	35	0.5	100	0.90
A4	0.623	37	2	100	0.90
A5	0.246	80	0.5	100	0.90
AA	0.370	51	0.5	54	0.56
BB	0.891	176	0.5	41	0.47
BLDG-A	0.254	10	0.5	100	0.90
BLDG-B	0.363	10	0.5	100	0.90
BLDG-C	0.299	10	0.5	100	0.90
BLDG-D	0.138	10	0.5	100	0.90
BLDGG	0.243	10	0.5	100	0.90
BLDGH	0.371	10	0.5	100	0.90
BLDG-I	0.226	10	0.5	100	0.90
BLDG-J	0.604	10	0.5	100	0.90
BLDG-J1	0.104	10	0.5	100	0.90
BLDG-J2	0.089	10	0.5	100	0.90
BLDG-K	0.247	10	0.5	100	0.90
BLDG-L	0.121	10	0.5	100	0.90
BLDG-L1	0.075	10	0.5	100	0.90
D	0.400	103	0.5	36	0.43
D1	0.479	18	0.5	32	0.40
EE	0.347	90	0.5	15	0.28
Great-Lawn	0.833	62	0.5	23	0.34
NEC	1.115	45	10	86	0.80
NSTANDS	0.483	78	2	100	0.90
OPGG	0.724	55	0.5	62	0.62
SSTANDS	0.786	48	10	100	0.90
T	0.131	17	0.5	28	0.37
V	0.158	9	0.5	97	0.88
TOTAL	16.167				0.74

PCSWMM Catchment Parameters - Existing Conditions

Name	Area (ha)	Flow Length (m)	Slope (%)	Imperv. (%)	COEFF_R
102	0.444	100	0.5	64	0.64
107AA	0.270	15	0.5	86	0.80
108	0.344	21	0.5	69	0.67
109	0.288	32	0.5	87	0.81
109C	0.254	49	0.5	67	0.65
116	0.212	32	10	14	0.27
A	0.733	193	0.5	43	0.47
A1	1.028	44	0.5	99	0.89
A2	1.578	44	0.5	98	0.89
A3	0.931	35	0.5	90	0.83
A4	0.832	37	2	85	0.79
A5	0.246	80	0.5	100	0.90
AA	0.370	51	0.5	54	0.56
BB	0.891	176	0.5	41	0.47
BLDG-A	0.254	10	0.5	100	0.90
BLDG-B	0.363	10	0.5	100	0.90
BLDG-C	0.299	10	0.5	100	0.90
BLDG-D	0.138	10	0.5	100	0.90
BLDGG	0.243	10	0.5	100	0.90
BLDGH	0.371	10	0.5	100	0.90
BLDG-I	0.226	10	0.5	100	0.90
BLDGJ_1	0.137	10	0.5	100	0.90
BLDGJ_2	0.389	10	0.5	100	0.90
BLDG-K	0.247	10	0.5	100	0.90
D	0.584	103	0.5	30	0.38
D1	0.479	18	0.5	32	0.40
EE	0.347	90	0.5	15	0.28
Great-Lawn	1.013	62	0.5	27	0.36
NSTANDS	0.756	78	2	100	0.90
OPGG	0.813	55	0.5	60	0.60
SSTANDS	0.799	48	10	100	0.90
T	0.131	17	0.5	28	0.37
V	0.158	9	0.5	97	0.88
TOTAL	16.167				0.71



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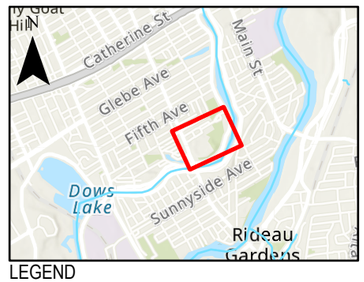
CLIENT
CITY OF OTTAWA

PROJECT
LANSDOWNE 2.0

TITLE
EXHIBIT 1
EXISTING CONDITIONS
DRAINAGE MOSAIC



LEGEND
- Storm Sewers
- Subcatchments
- Storage Areas

Catchment ID
Area (ha) | % Imperv

0 0.02 0.04 km

DRAWN BY	CHECKED BY
KK	BO
May 2023	
NAD 1983 MTM 9	
1:1,800	

CLIENT
CITY OF OTTAWA

PROJECT
LANSDOWNE 2.0

TITLE
EXHIBIT 2
PROPOSED CONDITIONS
DRAINAGE MOSAIC

LEGEND
- Existing Storm Sewers
- Proposed Storm Sewers
- Subcatchments
- Storage Areas

Catchment ID
Area (ha) | % Imperv

0 0.02 0.04 km

DRAWN BY	CHECKED BY
KK	BO
May 2023	
NAD 1983 MTM 9	
1:1,800	

wsp

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Existing Conditions PCSWMM Output

5-Year 3-hour Chicago Storm

```
EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
--------------------------------------------------------------


*************
Element Count
*************
Number of rain gages ...... 18
Number of subcatchments ... 33
Number of nodes ........... 89
Number of links ........... 132
Number of pollutants ...... 0
Number of land uses ....... 0


****************
Raingage Summary
****************
                                                 Data       Recording
Name                 Data Source                 Type       Interval
----------------------------------------------------------------------
100yr_3hr_Chicago    100yr_3hr_Chicago           INTENSITY   10 min.
100yr_3hr_Chicago_Climate_Change 100yr_3hr_Chicago_Increase_20percent INTENSITY   10 min.
100yr_6hr_Chicago    100yr_6hr_Chicago           INTENSITY   10 min.
100yr_6hr_Chicago_Climate_Change 100yr_6hr_Chicago_Increase_20percent INTENSITY   10 min.
100yr-SCS_12hr_Type_II 100yr-SCS_12hr_Type_II      INTENSITY    6 min.
100yr-SCS_24hr_Type_II 100yr-SCS_24hr_Type_II      INTENSITY   15 min.
10yr_3hr_Chicago     10yr_3hr_Chicago            INTENSITY   10 min.
10yr_6hr_Chicago     10yr_6hr_Chicago            INTENSITY   10 min.
25mm_3hr_Chicago     25mm_3hr_Chicago            INTENSITY   10 min.
25mm_4hr_Chicago     25mm_4hr_Chicago            INTENSITY   10 min.
25yr_3hr_Chicago     25yr_3hr_Chicago            INTENSITY   10 min.
25yr_6hr_Chicago     25yr_6hr_Chicago            INTENSITY   10 min.
2yr_3hr_Chicago      2yr_3hr_Chicago             INTENSITY   10 min.
2yr_6hr_Chicago      2yr_6hr_Chicago             INTENSITY   10 min.
50yr_3hr_Chicago     50yr_3hr_Chicago            INTENSITY   10 min.
50yr_6hr_Chicago     50yr_6hr_Chicago            INTENSITY   10 min.
5yr_3hr_Chicago      5yr_3hr_Chicago             INTENSITY   10 min.
5yr_6hr_Chicago      5yr_6hr_Chicago             INTENSITY   10 min.


*********************
Subcatchment Summary
*********************
Name                        Area     Width   %Imperv    %Slope Rain Gage            Outlet
-------------------------------------------------------------------------------------------------
102                         0.44     44.37     64.22    0.5000 5yr_3hr_Chicago      J43
107AA                       0.27    176.73     86.34    0.5000 5yr_3hr_Chicago      J23
108                         0.34    162.73     68.53    0.5000 5yr_3hr_Chicago      BASIN1
109                         0.29     88.92     87.48    0.5000 5yr_3hr_Chicago      J9
109C                        0.25     52.31     66.54    0.5000 5yr_3hr_Chicago      J8
116                         0.21     66.78     13.91   10.0000 5yr_3hr_Chicago      J30
A                           0.73     37.91     43.28    0.5000 5yr_3hr_Chicago      J38
A1                          1.03    236.01     98.55    0.5000 5yr_3hr_Chicago      J17
A2                          1.58    358.18     97.91    0.5000 5yr_3hr_Chicago      J22
A3                          0.93    263.12     90.26    0.5000 5yr_3hr_Chicago      J13
A4                          0.83    227.29     84.59    2.0000 5yr_3hr_Chicago      J3
A5                          0.25     30.92     99.94    0.5000 5yr_3hr_Chicago      J14
AA                          0.37     72.80     54.39    0.5000 5yr_3hr_Chicago      J37
BB                          0.89     50.53     41.05    0.5000 5yr_3hr_Chicago      J46
BLDG-A                      0.25    254.20    100.00    0.5000 5yr_3hr_Chicago      S-BLDG-A
BLDG-B                      0.36    362.60    100.00    0.5000 5yr_3hr_Chicago      S-BLDG-B
BLDG-C                      0.30    299.30    100.00    0.5000 5yr_3hr_Chicago      S-BLDG-C
BLDG-D                      0.14    138.00    100.00    0.5000 5yr_3hr_Chicago      S-BLDG-D
BLDGG                       0.24    242.90    100.00    0.5000 5yr_3hr_Chicago      S-BLDG-G
BLDGH                       0.37    370.90    100.00    0.5000 5yr_3hr_Chicago      S-BLDG-H
BLDG-I                      0.23    225.60    100.00    0.5000 5yr_3hr_Chicago      S-BLDG-I
BLDGJ                       0.14    137.10    100.00    0.5000 5yr_3hr_Chicago      S-BLDG-J
BLDGJ2                      0.39    388.50    100.00    0.5000 5yr_3hr_Chicago      J35
BLDG-K                      0.25    247.30     99.99    0.5000 5yr_3hr_Chicago      S-BLDG-K
D                           0.58     56.48     30.02    0.5000 5yr_3hr_Chicago      J48
D1                          0.48    271.32     32.46    0.5000 5yr_3hr_Chicago      J34
EE                          0.35     38.57     15.30    0.5000 5yr_3hr_Chicago      J47
Great-Lawn                  1.01    164.38     26.54    0.5000 5yr_3hr_Chicago      J12
NSTANDS                     0.76     97.25    100.00    2.0000 5yr_3hr_Chicago      J7
OPGG                        0.81    147.51     59.59    0.5000 5yr_3hr_Chicago      J16
SSTANDS                     0.80    165.31     99.95   10.0000 5yr_3hr_Chicago      J3
T                           0.13     75.86     27.76    0.5000 5yr_3hr_Chicago      J16
V                           0.16    167.82     96.59    0.5000 5yr_3hr_Chicago      J12


************
Node Summary
************
                                    Invert      Max.    Ponded    External
Name                 Type            Elev.     Depth      Area    Inflow
-------------------------------------------------------------------------
J1                   JUNCTION        63.56      2.79       0.0
J10                  JUNCTION        63.14      3.10       0.0
J11                  JUNCTION        62.00      3.95       0.0
J12                  JUNCTION        63.09      2.82       0.0
J13                  JUNCTION        63.77      2.28       0.0
J14                  JUNCTION        63.95      3.10       0.0
J15                  JUNCTION        63.28      3.17       0.0
J16                  JUNCTION        63.03      2.85       0.0
J17                  JUNCTION        63.32      3.03       0.0
J18                  JUNCTION        63.36      2.64       0.0
J19                  JUNCTION        63.62      1.08     720.0
J2                   JUNCTION        64.26      3.14       0.0
J20                  JUNCTION        62.72      3.53       0.0
J21                  JUNCTION        63.31      2.94       0.0
J22                  JUNCTION        63.68      2.63       0.0
```

J23	JUNCTION	62.64	3.29	1000.0
J24	JUNCTION	62.53	4.36	0.0
J25	JUNCTION	62.35	3.65	0.0
J26	JUNCTION	62.29	2.84	0.0
J27	JUNCTION	62.25	2.88	0.0
J29	JUNCTION	62.49	2.88	0.0
J3	JUNCTION	64.11	3.34	0.0
J30	JUNCTION	63.10	2.77	0.0
J31	JUNCTION	63.18	2.72	0.0
J32	JUNCTION	62.76	3.44	0.0
J33	JUNCTION	63.09	3.00	0.0
J34	JUNCTION	63.35	2.21	0.0
J35	JUNCTION	63.79	2.79	0.0
J36	JUNCTION	63.76	2.54	0.0
J37	JUNCTION	63.68	1.42	466.0
J38	JUNCTION	63.56	2.58	0.0
J39	JUNCTION	63.44	2.58	0.0
J4	JUNCTION	63.96	3.54	0.0
J40	JUNCTION	62.91	2.21	0.0
J41	JUNCTION	62.64	3.29	1000.0
J42	JUNCTION	64.07	1.93	0.0
J43	JUNCTION	63.89	2.31	0.0
J44	JUNCTION	63.76	2.64	0.0
J45	JUNCTION	63.57	2.83	0.0
J46	JUNCTION	63.42	2.78	0.0
J47	JUNCTION	63.12	2.93	0.0
J48	JUNCTION	64.69	3.00	0.0
J49	JUNCTION	64.40	3.00	0.0
J5	JUNCTION	63.91	3.49	0.0
J50	JUNCTION	65.08	3.00	0.0
J51	JUNCTION	65.35	3.00	0.0
J52	JUNCTION	65.31	3.00	0.0
J53	JUNCTION	65.25	3.00	0.0
J54	JUNCTION	65.25	3.00	0.0
J55	JUNCTION	65.20	3.00	0.0
J56	JUNCTION	64.95	3.00	0.0
J57	JUNCTION	65.30	3.00	0.0
J58	JUNCTION	65.35	3.00	0.0
J59	JUNCTION	65.58	3.00	0.0
J6	JUNCTION	63.87	3.63	0.0
J60	JUNCTION	64.65	3.00	0.0
J61	JUNCTION	64.30	3.00	0.0
J62	JUNCTION	64.70	3.00	0.0
J63	JUNCTION	64.50	3.00	0.0
J64	JUNCTION	64.65	3.00	0.0
J65	JUNCTION	65.10	3.00	0.0
J66	JUNCTION	64.50	3.00	0.0
J67	JUNCTION	65.17	3.00	0.0
J68	JUNCTION	65.00	3.00	0.0
J69	JUNCTION	65.43	3.00	0.0
J7	JUNCTION	63.59	2.81	0.0
J70	JUNCTION	65.20	3.00	0.0
J71	JUNCTION	65.70	3.00	0.0
J72	JUNCTION	65.30	3.00	0.0
J73	JUNCTION	64.93	3.00	0.0
J74	JUNCTION	65.01	3.00	0.0
J75	JUNCTION	65.89	3.00	0.0
J76	JUNCTION	62.95	2.45	0.0
J8	JUNCTION	62.99	3.13	0.0
J9	JUNCTION	62.91	3.32	0.0
Canal_Outlet	OUTFALL	62.58	1.02	0.0
J28	OUTFALL	62.22	0.97	0.0
BASIN1	STORAGE	62.81	2.23	0.0
BASIN2	STORAGE	62.95	2.19	0.0
Great-Lawn-Storage	STORAGE	64.40	0.50	0.0
S-BLDG-A	STORAGE	100.00	0.15	0.0
S-BLDG-B	STORAGE	100.00	0.15	0.0
S-BLDG-C	STORAGE	100.00	0.15	0.0
S-BLDG-D	STORAGE	100.00	0.15	0.0
S-BLDG-G	STORAGE	100.00	0.15	0.0
S-BLDG-H	STORAGE	100.00	0.15	0.0
S-BLDG-I	STORAGE	100.00	0.15	0.0
S-BLDG-J	STORAGE	100.00	0.15	0.0
S-BLDG-K	STORAGE	100.00	0.15	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J14	J13	CONDUIT	75.0	0.2001	0.0130
C10	J34	J31	CONDUIT	53.4	0.0937	0.0130
C11	J31	J30	CONDUIT	56.4	0.1063	0.0130
C12	J30	J8	CONDUIT	81.9	0.1099	0.0130
C13	J35	J17	CONDUIT	24.3	0.4946	0.0130
C14	J36	J17	CONDUIT	17.9	0.5037	0.0130
C15	J17	J15	CONDUIT	9.4	0.2126	0.0130
C16	J15	J10	CONDUIT	39.5	0.2785	0.0130
C17	J10	J9	CONDUIT	11.3	0.1770	0.0130
C18	J47	J12	CONDUIT	30.2	0.0992	0.0130
C18_1	J9	J40	CONDUIT	43.3	0.1271	0.0130
C18_2	J40	J11	CONDUIT	59.3	0.1265	0.0130
C19	J12	J16	CONDUIT	57.0	0.0526	0.0130
C2	J2	J3	CONDUIT	60.8	0.1975	0.0130
C20	J16	J11	CONDUIT	16.7	6.1921	0.0130
C21	J46	J47	CONDUIT	53.4	0.2247	0.0130
C21_1	J11	J32	CONDUIT	70.1	0.0599	0.0130
C21_2	J32	J20	CONDUIT	14.2	0.0565	0.0130
C22	J19	J18	CONDUIT	31.8	0.5029	0.0130
C23	J18	J11	CONDUIT	41.5	0.5054	0.0130
C24	J22	J21	CONDUIT	90.6	0.3752	0.0130
C25	J21	J20	CONDUIT	25.4	0.3937	0.0130
C26	J20	J23	CONDUIT	23.5	0.1703	0.0130
C27	J45	J46	CONDUIT	63.9	0.2347	0.0130

C27_2	J41	J24	CONDUIT	82.3	0.1093	0.0130
C28	J24	J29	CONDUIT	14.1	0.0711	0.0130
C29	J29	J25	CONDUIT	78.9	0.1394	0.0130
C3	J3	J4	CONDUIT	60.7	0.1976	0.0130
C30	J25	J26	CONDUIT	17.8	0.1125	0.0130
C31	J26	J27	CONDUIT	4.6	0.4383	0.0130
C32	J27	J28	CONDUIT	8.1	0.3695	0.0130
C33	J37	J1	CONDUIT	20.0	0.4509	0.0130
C34	J1	J18	CONDUIT	29.0	0.5178	0.0130
C35	J38	J39	CONDUIT	100.1	0.0999	0.0130
C36	J39	J34	CONDUIT	105.1	0.0761	0.0130
C37	J33	Canal_Outlet	CONDUIT	10.7	0.8418	0.0130
C38	J44	J45	CONDUIT	73.4	0.1498	0.0130
C39	J43	J44	CONDUIT	35.7	0.1400	0.0130
C4	J4	J5	CONDUIT	8.8	0.2278	0.0130
C40	J42	J43	CONDUIT	92.3	0.1517	0.0130
C41	J48	J49	CONDUIT	88.2	0.3287	0.0350
C42	J49	J31	CONDUIT	39.4	1.7782	0.0130
C43	J50	J51	CONDUIT	105.0	-0.2570	0.0350
C44	J51	J48	CONDUIT	21.6	3.0571	0.0240
C45	J52	J53	CONDUIT	90.8	0.0661	0.0130
C46	J53	J54	CONDUIT	22.0	0.0014	0.0130
C47	J54	J55	CONDUIT	7.7	0.6525	0.0130
C48	J55	J56	CONDUIT	65.7	0.3804	0.0130
C49	J59	J58	CONDUIT	18.0	1.2770	0.0130
C5	J5	J6	CONDUIT	6.7	0.1504	0.0130
C50	J58	J57	CONDUIT	14.2	0.3521	0.0130
C51	J57	J52	CONDUIT	47.6	-0.0210	0.0130
C52	J60	J61	CONDUIT	70.3	0.4980	0.0350
C53	J62	J63	CONDUIT	26.8	0.7450	0.0350
C54	J64	J63	CONDUIT	37.1	0.4039	0.0350
C55	J65	J66	CONDUIT	51.5	1.1643	0.0350
C56	J67	J68	CONDUIT	10.1	1.6809	0.0350
C57	J69	J68	CONDUIT	52.1	0.8247	0.0350
C58	J69	J70	CONDUIT	39.7	0.5794	0.0350
C59	J71	J72	CONDUIT	27.8	1.4378	0.0130
C6	J6	J7	CONDUIT	63.3	0.2053	0.0130
C60	J72	J73	CONDUIT	34.0	1.0892	0.0130
C61	J74	J73	CONDUIT	9.6	0.8371	0.0130
C62	J54	J74	CONDUIT	17.9	1.3420	0.0130
C63	J75	J71	CONDUIT	22.1	0.8607	0.0130
C64	BASIN2	J76	CONDUIT	3.0	0.0102	0.0130
C7	J13	J7	CONDUIT	74.9	0.2004	0.0130
C8	J7	J8	CONDUIT	50.1	0.0999	0.0130
C9	J8	J9	CONDUIT	49.2	0.1015	0.0130
C27_1	J23	J41	ORIFICE			
OR1	BASIN2	J40	ORIFICE			
OR2	BASIN1	J32	ORIFICE			
OL16	J25	J68	WEIR			
W10	J39	J48	WEIR			
W11	J34	J49	WEIR			
W12	J38	J50	WEIR			
W13	J15	Great-Lawn-Storage	WEIR			
W14	J31	J60	WEIR			
W15	J47	Great-Lawn-Storage	WEIR			
W16	J22	J52	WEIR			
W17	J21	J53	WEIR			
W18	J20	J54	WEIR			
W19	J32	J55	WEIR			
W2	J40	BASIN2	WEIR			
W20	J11	J56	WEIR			
W21	J35	J59	WEIR			
W22	J17	J58	WEIR			
W23	J36	J57	WEIR			
W24	J14	J13	WEIR			
W25	J13	J7	WEIR			
W26	J7	J8	WEIR			
W27	J2	J3	WEIR			
W28	J3	J4	WEIR			
W29	J4	J5	WEIR			
W3	J32	BASIN1	WEIR			
W30	J5	J6	WEIR			
W31	J6	J7	WEIR			
W32	J10	Great-Lawn-Storage	WEIR			
W33	J44	J65	WEIR			
W34	J45	J64	WEIR			
W35	J46	J62	WEIR			
W36	J1	J55	WEIR			
W37	J18	J56	WEIR			
W38	J42	J68	WEIR			
W39	J43	J70	WEIR			
W40	J9	Great-Lawn-Storage	WEIR			
W41	J23	J73	WEIR			
W42	J24	J75	WEIR			
W43	J41	J73	WEIR			
W44	J76	Great-Lawn-Storage	WEIR			
W5	J30	Great-Lawn-Storage	WEIR			
W6	J12	Great-Lawn-Storage	WEIR			
W7	J16	Great-Lawn-Storage	WEIR			
W8	J11	Great-Lawn-Storage	WEIR			
W9	J8	Great-Lawn-Storage	WEIR			
OL1	J61	J34	OUTLET			
OL10	S-BLDG-H	J17	OUTLET			
OL11	S-BLDG-G	J17	OUTLET			
OL12	S-BLDG-I	J14	OUTLET			
OL13	S-BLDG-K	J14	OUTLET			
OL14	Great-Lawn-Storage	J16	OUTLET			
OL15	Great-Lawn-Storage	J12	OUTLET			
OL17	S-BLDG-J	J35	OUTLET			
OL2	J63	J46	OUTLET			
OL3	J66	J45	OUTLET			
OL4	J68	J42	OUTLET			
OL5	J70	J43	OUTLET			
OL6	S-BLDG-A	J22	OUTLET			
OL7	S-BLDG-B	J22	OUTLET			

OL8	S-BLDG-C	J22	OUTLET
OL9	S-BLDG-D	J22	OUTLET
W1	Great-Lawn-Storage	J33	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	CIRCULAR	0.82	0.53	0.21	0.82	1	0.64
C10	CIRCULAR	0.60	0.28	0.15	0.60	1	0.19
C11	CIRCULAR	0.90	0.64	0.23	0.90	1	0.59
C12	CIRCULAR	0.90	0.64	0.23	0.90	1	0.60
C13	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C14	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C15	CIRCULAR	0.60	0.28	0.15	0.60	1	0.28
C16	CIRCULAR	0.60	0.28	0.15	0.60	1	0.32
C17	CIRCULAR	0.60	0.28	0.15	0.60	1	0.26
C18	CIRCULAR	0.90	0.64	0.23	0.90	1	0.57
C18_1	CIRCULAR	1.35	1.43	0.34	1.35	1	1.90
C18_2	CIRCULAR	1.35	1.43	0.34	1.35	1	1.90
C19	CIRCULAR	0.90	0.64	0.23	0.90	1	0.42
C2	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
C20	CIRCULAR	0.90	0.64	0.23	0.90	1	4.51
C21	CIRCULAR	0.53	0.22	0.13	0.53	1	0.20
C21_1	CIRCULAR	1.35	1.43	0.34	1.35	1	1.31
C21_2	CIRCULAR	1.35	1.43	0.34	1.35	1	1.27
C22	CIRCULAR	0.20	0.03	0.05	0.20	1	0.02
C23	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C24	CIRCULAR	0.68	0.36	0.17	0.68	1	0.51
C25	CIRCULAR	0.68	0.36	0.17	0.68	1	0.53
C26	CIRCULAR	1.35	1.43	0.34	1.35	1	2.20
C27	CIRCULAR	0.53	0.22	0.13	0.53	1	0.21
C27_2	CIRCULAR	0.97	0.75	0.24	0.97	1	0.74
C28	CIRCULAR	0.97	0.75	0.24	0.97	1	0.60
C29	CIRCULAR	0.97	0.75	0.24	0.97	1	0.84
C3	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
C30	CIRCULAR	0.97	0.75	0.24	0.97	1	0.75
C31	CIRCULAR	0.97	0.75	0.24	0.97	1	1.48
C32	CIRCULAR	0.97	0.75	0.24	0.97	1	1.36
C33	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C34	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C35	CIRCULAR	0.60	0.28	0.15	0.60	1	0.19
C36	CIRCULAR	0.60	0.28	0.15	0.60	1	0.17
C37	CIRCULAR	0.60	0.28	0.15	0.60	1	0.56
C38	CIRCULAR	0.45	0.16	0.11	0.45	1	0.11
C39	CIRCULAR	0.38	0.11	0.09	0.38	1	0.07
C4	CIRCULAR	0.60	0.28	0.15	0.60	1	0.29
C40	CIRCULAR	0.38	0.11	0.09	0.38	1	0.07
C41	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	4.38
C42	CIRCULAR	0.30	0.07	0.07	0.30	1	0.13
C43	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	3.87
C44	CIRCULAR	0.25	0.05	0.06	0.25	1	0.06
C45	RECT_OPEN	1.00	8.00	0.80	8.00	1	13.63
C46	RECT_OPEN	1.00	8.00	0.80	8.00	1	1.98
C47	RECT_OPEN	1.00	8.00	0.80	8.00	1	42.85
C48	RECT_OPEN	1.00	8.00	0.80	8.00	1	32.71
C49	RECT_OPEN	1.00	8.00	0.80	8.00	1	59.94
C5	CIRCULAR	0.60	0.28	0.15	0.60	1	0.24
C50	RECT_OPEN	1.00	8.00	0.80	8.00	1	31.48
C51	RECT_OPEN	1.00	8.00	0.80	8.00	1	7.69
C52	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	5.39
C53	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	6.59
C54	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	4.85
C55	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	8.24
C56	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	6.76
C57	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	4.74
C58	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	3.97
C59	RECT_OPEN	1.00	8.00	0.80	8.00	1	63.60
C6	CIRCULAR	0.60	0.28	0.15	0.60	1	0.28
C60	RECT_OPEN	1.00	8.00	0.80	8.00	1	55.36
C61	RECT_OPEN	1.00	8.00	0.80	8.00	1	48.53
C62	RECT_OPEN	1.00	8.00	0.80	8.00	1	61.44
C63	RECT_OPEN	1.00	8.00	0.80	8.00	1	49.21
C64	CIRCULAR	0.90	0.64	0.23	0.90	1	0.18
C7	CIRCULAR	0.82	0.53	0.21	0.82	1	0.64
C8	CIRCULAR	1.05	0.87	0.26	1.05	1	0.86
C9	CIRCULAR	1.20	1.13	0.30	1.20	1	1.24

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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.
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Analysis Options
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Flow Units ..... CMS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... YES
  Ponding Allowed ..... YES
  Water Quality ..... NO
Infiltration Method ..... HORTON
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date 07/23/2009 00:01:00

Ending Date 07/24/2009 00:01:00
Antecedent Dry Days 0.0
Report Time Step 00:05:00
Wet Time Step 00:05:00
Dry Time Step 00:05:00
Routing Time Step ..... 1.00 sec
Variable Time Step ..... YES
Maximum Trials 20
Number of Threads 2
Head Tolerance ..... 0.001500 m

Runoff Quantity Continuity	Volume hectare-m	Depth mm
Total Precipitation	0.687	42.514
Evaporation Loss	0.000	0.000
Infiltration Loss	0.193	11.967
Surface Runoff	0.479	29.659
Final Storage	0.019	1.165
Continuity Error (%)	-0.651	

Flow Routing Continuity	Volume hectare-m	Volume 10^6 ltr
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.479	4.795
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.287	2.874
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.001	0.008
Final Stored Volume	0.141	1.407
Continuity Error (%)	10.864	

Highest Continuity Errors
Node J33 (30.22%)
Node J40 (12.69%)
Node BASIN2 (-7.40%)
Node J30 (2.35%)
Node BASIN1 (-1.84%)

Time-Step Critical Elements
None

Highest Flow Instability Indexes
Link C27_1 (79)
Link OR1 (38)
Link OR2 (32)
Link C33 (32)
Link C31 (31)

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	:	5.05
Percent Not Converging	:	10.64
Time Step Frequencies	:	
1.000 - 0.871 sec	:	99.53 %
0.871 - 0.758 sec	:	0.08 %
0.758 - 0.660 sec	:	0.10 %
0.660 - 0.574 sec	:	0.08 %
0.574 - 0.500 sec	:	0.20 %

Subcatchment Runoff Summary

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS	Runoff Coeff
102	42.51	0.00	0.00	18.15	26.53	10.41	23.68	0.11	0.05	0.557
107AA	42.51	0.00	0.00	4.97	35.58	0.92	36.50	0.10	0.07	0.858
108	42.51	0.00	0.00	11.76	28.25	1.70	29.95	0.10	0.08	0.704
109	42.51	0.00	0.00	4.61	36.14	0.76	36.90	0.11	0.08	0.868
109C	42.51	0.00	0.00	16.45	27.49	13.09	25.46	0.06	0.04	0.599
116	42.51	0.00	0.00	33.97	5.72	8.69	8.69	0.02	0.02	0.204
A	42.51	0.00	0.00	31.60	17.87	10.43	10.43	0.08	0.02	0.245
A1	42.51	0.00	0.00	0.52	40.72	0.10	40.83	0.42	0.29	0.960
A2	42.51	0.00	0.00	0.75	40.46	0.15	40.61	0.64	0.45	0.955
A3	42.51	0.00	0.00	3.58	37.29	0.61	37.90	0.35	0.25	0.891
A4	42.51	0.00	0.00	5.63	34.88	0.99	35.87	0.30	0.22	0.844
A5	42.51	0.00	0.00	0.02	41.27	0.01	41.28	0.10	0.07	0.971
AA	42.51	0.00	0.00	21.24	22.47	9.50	20.73	0.08	0.04	0.488

BB	42.51	0.00	0.00	32.15	16.96	9.91	9.91	0.09	0.02	0.233
BLDG-A	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.10	0.07	0.968
BLDG-B	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.15	0.10	0.968
BLDG-C	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.12	0.09	0.968
BLDG-D	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.06	0.04	0.968
BLDGG	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.10	0.07	0.968
BLDGH	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.15	0.11	0.968
BLDG-I	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.09	0.07	0.968
BLDGJ	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.06	0.04	0.968
BLDGJ2	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.16	0.11	0.968
BLDG-K	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.10	0.07	0.968
D	42.51	0.00	0.00	34.41	12.40	7.79	7.79	0.05	0.01	0.183
D1	42.51	0.00	0.00	27.96	13.34	7.60	14.28	0.07	0.05	0.336
EE	42.51	0.00	0.00	38.27	6.30	4.08	4.08	0.01	0.01	0.096
Great-Lawn	42.51	0.00	0.00	34.09	10.95	8.16	8.16	0.08	0.03	0.192
NSTANDS	42.51	0.00	0.00	0.00	41.32	0.00	41.32	0.31	0.22	0.972
OPGG	42.51	0.00	0.00	15.79	24.62	1.42	26.05	0.21	0.15	0.613
SSTANDS	42.51	0.00	0.00	0.02	41.15	0.01	41.16	0.33	0.23	0.968
T	42.51	0.00	0.00	27.60	11.41	3.23	14.64	0.02	0.01	0.344
V	42.51	0.00	0.00	1.22	39.75	0.25	40.00	0.06	0.05	0.941

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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	0.23	0.92	64.48	0 02:49	0.91
J10	JUNCTION	0.52	1.34	64.48	0 02:53	1.33
J11	JUNCTION	1.64	2.47	64.47	0 02:53	2.47
J12	JUNCTION	0.57	1.38	64.47	0 02:52	1.38
J13	JUNCTION	0.17	0.71	64.48	0 02:49	0.71
J14	JUNCTION	0.11	0.53	64.48	0 02:50	0.53
J15	JUNCTION	0.39	1.20	64.48	0 02:53	1.19
J16	JUNCTION	0.63	1.44	64.47	0 02:53	1.44
J17	JUNCTION	0.35	1.16	64.48	0 02:53	1.15
J18	JUNCTION	0.31	1.11	64.47	0 02:52	1.11
J19	JUNCTION	0.21	0.88	64.50	0 02:47	0.86
J2	JUNCTION	0.05	1.75	66.01	0 01:10	1.72
J20	JUNCTION	0.93	1.75	64.47	0 02:53	1.75
J21	JUNCTION	0.36	1.16	64.47	0 02:53	1.16
J22	JUNCTION	0.19	0.80	64.48	0 02:54	0.79
J23	JUNCTION	1.00	1.83	64.47	0 02:54	1.83
J24	JUNCTION	1.09	1.94	64.47	0 02:53	1.94
J25	JUNCTION	1.26	2.12	64.47	0 02:54	2.12
J26	JUNCTION	1.32	2.21	64.50	0 02:56	2.18
J27	JUNCTION	1.36	2.24	64.49	0 02:55	2.23
J29	JUNCTION	1.13	2.01	64.50	0 02:55	1.98
J3	JUNCTION	0.09	1.88	65.99	0 01:10	1.87
J30	JUNCTION	0.56	1.38	64.48	0 02:54	1.37
J31	JUNCTION	0.48	1.30	64.48	0 02:53	1.29
J32	JUNCTION	0.89	1.72	64.48	0 02:53	1.72
J33	JUNCTION	0.99	0.99	64.08	0 07:39	0.99
J34	JUNCTION	0.32	1.13	64.48	0 02:47	1.12
J35	JUNCTION	0.17	1.44	65.23	0 01:10	1.44
J36	JUNCTION	0.16	0.72	64.48	0 02:54	0.71
J37	JUNCTION	0.19	0.82	64.50	0 02:49	0.80
J38	JUNCTION	0.22	0.92	64.48	0 02:46	0.91
J39	JUNCTION	0.26	1.04	64.48	0 02:48	1.03
J4	JUNCTION	0.12	0.63	64.59	0 01:10	0.63
J40	JUNCTION	0.75	1.58	64.49	0 02:52	1.56
J41	JUNCTION	0.98	1.83	64.47	0 02:54	1.83
J42	JUNCTION	0.08	0.41	64.48	0 02:51	0.40
J43	JUNCTION	0.13	0.59	64.48	0 02:51	0.58
J44	JUNCTION	0.16	0.72	64.48	0 02:51	0.71
J45	JUNCTION	0.22	0.91	64.48	0 02:52	0.90
J46	JUNCTION	0.27	1.06	64.48	0 02:52	1.05
J47	JUNCTION	0.54	1.35	64.47	0 02:52	1.35
J48	JUNCTION	0.00	0.06	64.75	0 01:17	0.06
J49	JUNCTION	0.01	0.08	64.48	0 02:49	0.08
J5	JUNCTION	0.13	0.64	64.55	0 01:10	0.63
J50	JUNCTION	0.00	0.00	65.08	0 00:00	0.00
J51	JUNCTION	0.00	0.00	65.35	0 00:00	0.00
J52	JUNCTION	0.00	0.00	65.31	0 00:00	0.00
J53	JUNCTION	0.00	0.00	65.25	0 00:00	0.00
J54	JUNCTION	0.00	0.00	65.25	0 00:00	0.00
J55	JUNCTION	0.00	0.00	65.20	0 00:00	0.00
J56	JUNCTION	0.00	0.00	64.95	0 00:00	0.00
J57	JUNCTION	0.00	0.00	65.30	0 00:00	0.00
J58	JUNCTION	0.00	0.00	65.35	0 00:00	0.00
J59	JUNCTION	0.00	0.00	65.58	0 00:00	0.00
J6	JUNCTION	0.14	0.65	64.52	0 01:10	0.64
J60	JUNCTION	0.00	0.00	64.65	0 00:00	0.00
J61	JUNCTION	0.02	0.18	64.48	0 02:47	0.17
J62	JUNCTION	0.00	0.00	64.70	0 00:00	0.00
J63	JUNCTION	0.00	0.00	64.50	0 00:00	0.00
J64	JUNCTION	0.00	0.00	64.65	0 00:00	0.00
J65	JUNCTION	0.00	0.00	65.10	0 00:00	0.00
J66	JUNCTION	0.00	0.00	64.50	0 00:00	0.00
J67	JUNCTION	0.00	0.00	65.17	0 00:00	0.00
J68	JUNCTION	0.00	0.00	65.00	0 00:00	0.00
J69	JUNCTION	0.00	0.00	65.43	0 00:00	0.00
J7	JUNCTION	0.22	0.89	64.48	0 02:49	0.88
J70	JUNCTION	0.00	0.00	65.20	0 00:00	0.00
J71	JUNCTION	0.00	0.00	65.70	0 00:00	0.00
J72	JUNCTION	0.00	0.00	65.30	0 00:00	0.00
J73	JUNCTION	0.00	0.00	64.93	0 00:00	0.00
J74	JUNCTION	0.00	0.00	65.01	0 00:00	0.00
J75	JUNCTION	0.00	0.00	65.89	0 00:00	0.00
J76	JUNCTION	0.69	1.53	64.48	0 02:52	1.52
J8	JUNCTION	0.67	1.48	64.47	0 02:54	1.48

J9	JUNCTION	0.75	1.56	64.47	0	02:53	1.56
Canal_Outlet	OUTFALL	1.50	1.50	64.08	0	00:00	1.50
J28	OUTFALL	1.60	2.98	65.20	0	03:00	2.98
BASIN1	STORAGE	0.83	1.67	64.48	0	02:53	1.66
BASIN2	STORAGE	0.69	1.54	64.49	0	02:52	1.52
Great-Lawn-Storage	STORAGE	0.01	0.03	64.43	0	03:49	0.03
S-BLDG-A	STORAGE	0.01	0.05	100.05	0	01:33	0.05
S-BLDG-B	STORAGE	0.01	0.06	100.06	0	01:35	0.06
S-BLDG-C	STORAGE	0.01	0.05	100.05	0	01:33	0.05
S-BLDG-D	STORAGE	0.01	0.05	100.05	0	01:34	0.05
S-BLDG-G	STORAGE	0.01	0.07	100.07	0	01:44	0.07
S-BLDG-H	STORAGE	0.01	0.06	100.06	0	01:34	0.06
S-BLDG-I	STORAGE	0.01	0.05	100.05	0	01:33	0.05
S-BLDG-J	STORAGE	0.01	0.06	100.06	0	01:34	0.06
S-BLDG-K	STORAGE	0.01	0.07	100.07	0	01:51	0.07

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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	0.042	0	01:10	0	0.0788	-0.012	
J10	JUNCTION	0.000	0.421	0	01:10	0	0.894	-0.012	
J11	JUNCTION	0.000	0.850	0	01:11	0	4.05	1.046	
J12	JUNCTION	0.067	0.232	0	01:05	0.146	0.599	1.468	
J13	JUNCTION	0.251	0.326	0	01:10	0.353	0.666	-0.027	
J14	JUNCTION	0.067	0.079	0	01:10	0.102	0.3	-0.073	
J15	JUNCTION	0.000	0.422	0	01:10	0	0.892	0.219	
J16	JUNCTION	0.162	0.292	0	01:10	0.231	0.922	0.828	
J17	JUNCTION	0.292	0.424	0	01:10	0.42	0.898	-0.016	
J18	JUNCTION	0.000	0.040	0	01:10	0	0.0832	-0.024	
J19	JUNCTION	0.000	0.007	0	01:04	0	0.000638	-2.181	
J2	JUNCTION	0.000	0.037	0	01:05	0	0.0209	0.249	
J20	JUNCTION	0.000	0.546	0	01:10	0	3.98	0.285	
J21	JUNCTION	0.000	0.475	0	01:10	0	1.07	-0.553	
J22	JUNCTION	0.446	0.478	0	01:10	0.641	1.08	0.792	
J23	JUNCTION	0.073	0.507	0	08:01	0.0986	3.13	1.254	
J24	JUNCTION	0.000	0.516	0	08:00	0	3.01	0.994	
J25	JUNCTION	0.000	0.529	0	08:00	0	2.93	1.238	
J26	JUNCTION	0.000	0.533	0	08:00	0	2.89	0.289	
J27	JUNCTION	0.000	0.534	0	08:00	0	2.88	0.185	
J29	JUNCTION	0.000	0.524	0	08:00	0	2.97	1.135	
J3	JUNCTION	0.450	0.450	0	01:10	0.627	0.656	0.481	
J30	JUNCTION	0.020	0.417	0	01:06	0.0184	0.503	2.407	
J31	JUNCTION	0.000	0.322	0	01:06	0	0.411	0.959	
J32	JUNCTION	0.000	1.356	0	01:10	0	5.74	1.257	
J33	JUNCTION	0.000	0.000	0	01:00	0	0.000202	43.315	
J34	JUNCTION	0.047	0.261	0	01:06	0.0684	0.363	0.168	
J35	JUNCTION	0.112	0.117	0	01:10	0.16	0.218	0.672	
J36	JUNCTION	0.000	0.011	0	01:04	0	0.00693	0.019	
J37	JUNCTION	0.042	0.042	0	01:10	0.0767	0.0769	0.322	
J38	JUNCTION	0.019	0.153	0	01:09	0.0764	0.0981	0.349	
J39	JUNCTION	0.000	0.245	0	01:07	0	0.164	-0.290	
J4	JUNCTION	0.000	0.432	0	01:10	0	0.641	-0.102	
J40	JUNCTION	0.000	1.553	0	01:12	0	5.66	14.536	
J41	JUNCTION	0.000	0.509	0	08:00	0	3.04	0.437	
J42	JUNCTION	0.000	0.011	0	02:28	0	0.0103	0.901	
J43	JUNCTION	0.050	0.050	0	01:10	0.105	0.124	0.630	
J44	JUNCTION	0.000	0.048	0	01:10	0	0.124	0.621	
J45	JUNCTION	0.000	0.111	0	01:06	0	0.139	-0.923	
J46	JUNCTION	0.023	0.104	0	01:05	0.0882	0.247	0.138	
J47	JUNCTION	0.005	0.154	0	01:05	0.0141	0.292	1.039	
J48	JUNCTION	0.015	0.015	0	01:20	0.0455	0.0455	-0.405	
J49	JUNCTION	0.000	0.017	0	01:20	0	0.0523	0.418	
J5	JUNCTION	0.000	0.431	0	01:10	0	0.643	-0.003	
J50	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J51	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J52	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J53	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J54	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J55	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J56	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J57	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J58	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J59	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J6	JUNCTION	0.000	0.431	0	01:10	0	0.646	0.666	
J60	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J61	JUNCTION	0.000	0.140	0	02:47	0	0.0635	0.630	
J62	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J63	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J64	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J65	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J66	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J67	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J68	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J69	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J7	JUNCTION	0.216	0.959	0	01:10	0.312	1.63	0.544	
J70	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J71	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J72	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J73	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J74	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J75	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J76	JUNCTION	0.000	0.092	0	02:52	0	0.32	-0.345	
J8	JUNCTION	0.036	1.121	0	01:11	0.0647	2.09	0.357	
J9	JUNCTION	0.076	1.543	0	01:12	0.106	2.92	0.555	
Canal_Outlet	OUTFALL	0.000	0.000	0	00:00	0	0.000343	0.000	
J28	OUTFALL	0.000	0.534	0	08:00	0	2.87	0.000	
BASIN1	STORAGE	0.076	1.423	0	01:10	0.103	2.21	-1.803	

BASIN2	STORAGE	0.000	1.300	0	01:16	0	2.55	-6.893
Great-Lawn-Storage	STORAGE	0.000	0.154	0	02:52	0	0.318	-0.021
S-BLDG-A	STORAGE	0.074	0.074	0	01:10	0.105	0.105	0.004
S-BLDG-B	STORAGE	0.105	0.105	0	01:10	0.149	0.149	0.004
S-BLDG-C	STORAGE	0.087	0.087	0	01:10	0.123	0.123	0.004
S-BLDG-D	STORAGE	0.040	0.040	0	01:10	0.0568	0.0568	0.004
S-BLDG-G	STORAGE	0.070	0.070	0	01:10	0.1	0.1	0.004
S-BLDG-H	STORAGE	0.107	0.107	0	01:10	0.153	0.153	0.004
S-BLDG-I	STORAGE	0.065	0.065	0	01:10	0.0929	0.0929	0.004
S-BLDG-J	STORAGE	0.040	0.040	0	01:10	0.0564	0.0564	0.004
S-BLDG-K	STORAGE	0.072	0.072	0	01:10	0.102	0.102	0.004

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	7.09	0.678	0.202
J26	JUNCTION	22.99	1.197	0.628
J27	JUNCTION	23.00	1.248	0.637
J29	JUNCTION	6.91	1.009	0.866
J33	JUNCTION	24.00	0.390	2.010
J37	JUNCTION	6.89	0.570	0.600
J40	JUNCTION	4.72	0.140	0.622

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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
BASIN1	0.368	58	0	0	0.630	99	0 02:53	0.467
BASIN2	1.154	51	0	0	2.237	100	0 02:52	0.578
Great-Lawn-Storage	0.059	1	0	0	0.264	6	0 03:49	0.023
S-BLDG-A	0.006	1	0	0	0.062	12	0 01:33	0.009
S-BLDG-B	0.010	1	0	0	0.091	14	0 01:35	0.011
S-BLDG-C	0.007	1	0	0	0.073	12	0 01:33	0.011
S-BLDG-D	0.003	1	0	0	0.034	13	0 01:34	0.005
S-BLDG-G	0.008	2	0	0	0.065	20	0 01:44	0.006
S-BLDG-H	0.009	1	0	0	0.092	14	0 01:34	0.012
S-BLDG-I	0.005	1	0	0	0.055	12	0 01:33	0.008
S-BLDG-J	0.003	1	0	0	0.034	14	0 01:34	0.004
S-BLDG-K	0.009	3	0	0	0.067	22	0 01:51	0.005

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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
Canal_Outlet	4.95	0.000	0.000	0.000
J28	69.57	0.048	0.534	2.874
System	37.26	0.048	0.534	2.875

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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	CONDUIT	0.084	0 01:11	0.43	0.13	0.73
C10	CONDUIT	0.230	0 01:06	0.82	1.22	1.00
C11	CONDUIT	0.322	0 01:06	0.57	0.54	1.00
C12	CONDUIT	0.413	0 01:06	0.67	0.69	1.00
C13	CONDUIT	0.116	0 01:09	2.36	2.77	1.00
C14	CONDUIT	0.011	0 01:04	0.26	0.26	1.00
C15	CONDUIT	0.422	0 01:10	1.49	1.49	1.00
C16	CONDUIT	0.421	0 01:10	1.49	1.30	1.00
C17	CONDUIT	0.420	0 01:10	1.48	1.62	1.00
C18	CONDUIT	0.154	0 01:05	0.30	0.27	1.00
C18_1	CONDUIT	1.553	0 01:12	1.25	0.82	1.00
C18_2	CONDUIT	0.739	0 01:17	0.67	0.39	1.00
C19	CONDUIT	0.185	0 01:05	0.35	0.45	1.00
C2	CONDUIT	0.037	0 01:14	0.26	0.29	1.00
C20	CONDUIT	0.295	0 01:10	0.46	0.07	1.00
C21	CONDUIT	0.102	0 01:05	0.53	0.50	1.00
C21_1	CONDUIT	0.834	0 01:11	0.62	0.64	1.00
C21_2	CONDUIT	0.543	0 01:10	0.59	0.43	1.00
C22	CONDUIT	0.007	0 01:04	0.33	0.32	1.00

C23	CONDUIT	0.039	0	01:11	0.80	0.93	1.00
C24	CONDUIT	0.475	0	01:10	1.54	0.92	1.00
C25	CONDUIT	0.472	0	01:10	1.39	0.89	1.00
C26	CONDUIT	0.507	0	08:01	0.70	0.23	1.00
C27	CONDUIT	0.082	0	01:06	0.48	0.40	1.00
C27_2	CONDUIT	0.516	0	08:00	0.86	0.70	1.00
C28	CONDUIT	0.524	0	08:00	0.88	0.88	1.00
C29	CONDUIT	0.529	0	08:00	0.71	0.63	1.00
C3	CONDUIT	0.432	0	01:10	2.72	3.41	1.00
C30	CONDUIT	0.533	0	08:00	0.71	0.71	1.00
C31	CONDUIT	0.534	0	08:00	0.71	0.36	1.00
C32	CONDUIT	0.534	0	08:00	0.72	0.39	1.00
C33	CONDUIT	0.042	0	01:10	0.92	1.04	1.00
C34	CONDUIT	0.040	0	01:10	0.82	0.93	1.00
C35	CONDUIT	0.147	0	01:09	0.71	0.76	1.00
C36	CONDUIT	0.245	0	01:07	1.04	1.44	1.00
C37	CONDUIT	0.000	0	00:00	0.00	0.00	1.00
C38	CONDUIT	0.053	0	01:10	0.63	0.48	1.00
C39	CONDUIT	0.048	0	01:10	0.82	0.73	1.00
C4	CONDUIT	0.431	0	01:10	1.52	1.47	1.00
C40	CONDUIT	0.011	0	02:28	0.17	0.16	1.00
C41	CONDUIT	0.017	0	01:20	0.23	0.00	0.06
C42	CONDUIT	0.015	0	01:26	0.37	0.11	0.63
C43	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C44	CONDUIT	0.000	0	00:00	0.00	0.00	0.13
C45	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C46	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C47	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C48	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C49	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C5	CONDUIT	0.431	0	01:10	1.52	1.81	1.00
C50	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C51	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C52	CONDUIT	0.000	0	00:00	0.00	0.00	0.09
C53	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C54	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C55	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C56	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C57	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C58	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C59	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C6	CONDUIT	0.432	0	01:10	1.60	1.55	1.00
C60	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C61	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C62	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C63	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C64	CONDUIT	0.092	0	02:52	0.25	0.51	1.00
C7	CONDUIT	0.321	0	01:10	0.82	0.50	0.93
C8	CONDUIT	0.957	0	01:10	1.88	1.11	0.87
C9	CONDUIT	1.158	0	01:12	1.07	0.93	1.00
C27_1	ORIFICE	0.509	0	08:00			1.00
OR1	ORIFICE	0.161	0	08:40			1.00
OR2	ORIFICE	0.061	0	08:31			1.00
OL16	WEIR	0.000	0	00:00			0.00
W10	WEIR	0.000	0	00:00			0.00
W11	WEIR	0.000	0	00:00			0.00
W12	WEIR	0.000	0	00:00			0.00
W13	WEIR	0.000	0	00:00			0.00
W14	WEIR	0.000	0	00:00			0.00
W15	WEIR	0.000	0	00:00			0.00
W16	WEIR	0.000	0	00:00			0.00
W17	WEIR	0.000	0	00:00			0.00
W18	WEIR	0.000	0	00:00			0.00
W19	WEIR	0.000	0	00:00			0.00
W2	WEIR	1.300	0	01:16			1.00
W20	WEIR	0.000	0	00:00			0.00
W21	WEIR	0.000	0	00:00			0.00
W22	WEIR	0.000	0	00:00			0.00
W23	WEIR	0.000	0	00:00			0.00
W24	WEIR	0.000	0	00:00			0.00
W25	WEIR	0.000	0	00:00			0.00
W26	WEIR	0.000	0	00:00			0.00
W27	WEIR	0.000	0	00:00			0.00
W28	WEIR	0.000	0	00:00			0.00
W29	WEIR	0.000	0	00:00			0.00
W3	WEIR	1.356	0	01:10			1.00
W30	WEIR	0.000	0	00:00			0.00
W31	WEIR	0.000	0	00:00			0.00
W32	WEIR	0.000	0	00:00			0.00
W33	WEIR	0.000	0	00:00			0.00
W34	WEIR	0.000	0	00:00			0.00
W35	WEIR	0.000	0	00:00			0.00
W36	WEIR	0.000	0	00:00			0.00
W37	WEIR	0.000	0	00:00			0.00
W38	WEIR	0.000	0	00:00			0.00
W39	WEIR	0.000	0	00:00			0.00
W40	WEIR	0.000	0	00:00			0.00
W41	WEIR	0.000	0	00:00			0.00
W42	WEIR	0.000	0	00:00			0.00
W43	WEIR	0.000	0	00:00			0.00
W44	WEIR	0.091	0	02:52			0.08
W5	WEIR	0.000	0	00:00			0.00
W6	WEIR	0.000	0	00:00			0.00
W7	WEIR	0.000	0	00:00			0.00
W8	WEIR	0.000	0	00:00			0.00
W9	WEIR	0.000	0	00:00			0.00
OL1	DUMMY	0.140	0	02:47			
OL10	DUMMY	0.012	0	01:12			
OL11	DUMMY	0.006	0	01:08			
OL12	DUMMY	0.008	0	01:20			
OL13	DUMMY	0.005	0	01:08			
OL14	DUMMY	0.033	0	02:53			
OL15	DUMMY	0.032	0	02:52			
OL17	DUMMY	0.004	0	01:13			
OL2	DUMMY	0.000	0	00:00			

OL3	DUMMY	0.000	0	00:00
OL4	DUMMY	0.000	0	00:00
OL5	DUMMY	0.000	0	00:00
OL6	DUMMY	0.009	0	01:16
OL7	DUMMY	0.011	0	01:12
OL8	DUMMY	0.011	0	01:16
OL9	DUMMY	0.005	0	01:14
W1	DUMMY	0.000	0	00:00

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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	0.02	0.00	0.00	0.32	0.00	0.00	0.66	0.05	0.00
C10	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C11	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C12	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.00
C13	1.00	0.02	0.00	0.00	0.31	0.00	0.00	0.67	0.01	0.00
C14	1.00	0.04	0.00	0.00	0.31	0.00	0.00	0.65	0.01	0.00
C15	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C16	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C17	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C18	1.00	0.00	0.03	0.00	0.97	0.00	0.00	0.00	0.00	0.00
C18_1	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C18_2	1.00	0.00	0.00	0.00	0.97	0.00	0.00	0.03	0.00	0.00
C19	1.00	0.00	0.00	0.00	0.96	0.00	0.00	0.04	0.00	0.00
C2	1.00	0.02	0.01	0.00	0.29	0.00	0.00	0.68	0.04	0.00
C20	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.02	0.00
C21	1.00	0.03	0.00	0.00	0.96	0.00	0.00	0.02	0.61	0.00
C21_1	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.00	0.00
C21_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C22	1.00	0.04	0.00	0.00	0.34	0.00	0.00	0.62	0.65	0.00
C23	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C24	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.65	0.00
C25	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C26	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C27	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.30	0.00
C27_2	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C28	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C29	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C3	1.00	0.02	0.00	0.00	0.25	0.00	0.00	0.73	0.02	0.00
C30	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C31	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C32	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C33	1.00	0.02	0.00	0.00	0.31	0.00	0.00	0.66	0.01	0.00
C34	1.00	0.02	0.00	0.00	0.36	0.00	0.00	0.62	0.04	0.00
C35	1.00	0.04	0.00	0.00	0.34	0.00	0.00	0.62	0.03	0.00
C36	1.00	0.02	0.46	0.00	0.51	0.00	0.00	0.00	0.62	0.00
C37	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C38	1.00	0.02	0.00	0.00	0.31	0.00	0.00	0.67	0.01	0.00
C39	1.00	0.02	0.00	0.00	0.29	0.00	0.00	0.69	0.01	0.00
C4	1.00	0.02	0.00	0.00	0.27	0.00	0.00	0.71	0.00	0.00
C40	1.00	0.03	0.02	0.00	0.29	0.00	0.00	0.67	0.04	0.00
C41	1.00	0.04	0.40	0.00	0.56	0.00	0.00	0.00	0.94	0.00
C42	1.00	0.05	0.00	0.00	0.30	0.00	0.00	0.65	0.15	0.00
C43	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C44	1.00	0.44	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C45	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C46	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C47	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C48	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C49	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C5	1.00	0.02	0.00	0.00	0.30	0.00	0.00	0.68	0.00	0.00
C50	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C51	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C52	1.00	0.79	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C53	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C54	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C55	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C56	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C57	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C58	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C59	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C6	1.00	0.02	0.00	0.00	0.30	0.00	0.00	0.67	0.02	0.00
C60	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C61	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C62	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C63	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C64	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C7	1.00	0.02	0.00	0.00	0.33	0.00	0.00	0.65	0.02	0.00
C8	1.00	0.02	0.00	0.00	0.31	0.00	0.00	0.66	0.01	0.00
C9	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00

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Conduit Surcharge Summary
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	Hours Full			Hours Above Full	Hours Capacity
Conduit	Both Ends	Upstream	Dnstream	Normal Flow	Limited
C10	6.76	6.76	6.94	0.04	0.02
C11	5.79	5.79	6.21	0.01	0.01
C12	6.40	6.40	6.93	0.01	0.01
C13	6.30	6.36	6.93	0.23	0.17
C14	6.39	6.39	6.93	0.01	0.01
C15	6.93	6.93	6.97	0.16	0.13

C16	7.00	7.00	7.19	0.12	0.12
C17	7.24	7.24	7.27	0.16	0.14
C18	6.17	6.17	6.40	0.01	0.01
C18_1	4.81	4.81	4.92	0.01	0.01
C18_2	4.92	4.92	5.17	0.01	0.01
C19	6.40	6.40	6.64	0.01	0.01
C2	0.20	0.20	0.22	0.01	0.01
C20	6.87	6.87	23.27	0.01	0.01
C21	6.85	6.85	7.08	0.01	0.01
C21_1	5.33	5.33	5.56	0.01	0.01
C21_2	5.56	5.56	5.61	0.01	0.01
C22	7.09	7.09	7.38	0.01	0.01
C23	7.47	7.47	8.84	0.01	0.01
C24	4.72	4.72	6.28	0.01	0.01
C25	6.46	6.46	6.94	0.01	0.01
C26	5.80	5.80	6.10	0.01	0.01
C27	5.65	5.65	6.85	0.01	0.01
C27_2	6.83	6.83	6.89	0.01	0.01
C28	6.91	6.91	6.91	0.01	0.81
C29	6.94	6.94	22.98	0.01	0.01
C3	0.13	0.23	0.95	0.35	0.13
C30	22.99	22.99	22.99	0.01	0.25
C31	23.00	23.00	23.00	0.01	0.85
C32	23.01	23.01	24.00	0.01	0.01
C33	6.89	6.89	7.05	0.02	0.02
C34	7.11	7.11	7.38	0.01	0.01
C35	5.35	5.35	5.92	0.01	0.01
C36	6.05	6.05	6.65	0.03	0.01
C37	24.00	24.00	24.00	0.01	0.01
C38	5.00	5.00	5.61	0.01	0.01
C39	4.89	4.89	4.99	0.01	0.01
C4	0.02	0.04	0.02	0.16	0.02
C40	0.73	0.73	4.82	0.01	0.01
C42	0.01	0.01	6.41	0.01	0.01
C5	0.03	0.06	0.03	0.19	0.03
C6	0.08	0.14	4.75	0.17	0.01
C64	6.59	6.59	6.59	0.01	1.55
C7	0.01	0.01	0.71	0.01	0.01
C8	0.01	0.01	0.01	0.09	0.01
C9	5.10	5.10	5.38	0.01	0.01

Analysis begun on: Thu May 11 15:38:13 2023
Analysis ended on: Thu May 11 15:38:22 2023
Total elapsed time: 00:00:09

100-Year 3-hour Chicago Storm

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
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*************
Element Count
*************
Number of rain gages ...... 18
Number of subcatchments ... 33
Number of nodes ........... 89
Number of links ........... 132
Number of pollutants ...... 0
Number of land uses ....... 0


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Raingage Summary
****************
                                                 Data       Recording
Name                 Data Source                 Type       Interval
----------------------------------------------------------------------
100yr_3hr_Chicago    100yr_3hr_Chicago           INTENSITY   10 min.
100yr_3hr_Chicago_Climate_Change 100yr_3hr_Chicago_Increase_20percent INTENSITY   10 min.
100yr_6hr_Chicago    100yr_6hr_Chicago           INTENSITY   10 min.
100yr_6hr_Chicago_Climate_Change 100yr_6hr_Chicago_Increase_20percent INTENSITY   10 min.
100yr-SCS_12hr_Type_II 100yr-SCS_12hr_Type_II      INTENSITY    6 min.
100yr-SCS_24hr_Type_II 100yr-SCS_24hr_Type_II      INTENSITY   15 min.
10yr_3hr_Chicago     10yr_3hr_Chicago            INTENSITY   10 min.
10yr_6hr_Chicago     10yr_6hr_Chicago            INTENSITY   10 min.
25mm_3hr_Chicago     25mm_3hr_Chicago            INTENSITY   10 min.
25mm_4hr_Chicago     25mm_4hr_Chicago            INTENSITY   10 min.
25yr_3hr_Chicago     25yr_3hr_Chicago            INTENSITY   10 min.
25yr_6hr_Chicago     25yr_6hr_Chicago            INTENSITY   10 min.
2yr_3hr_Chicago      2yr_3hr_Chicago             INTENSITY   10 min.
2yr_6hr_Chicago      2yr_6hr_Chicago             INTENSITY   10 min.
50yr_3hr_Chicago     50yr_3hr_Chicago            INTENSITY   10 min.
50yr_6hr_Chicago     50yr_6hr_Chicago            INTENSITY   10 min.
5yr_3hr_Chicago      5yr_3hr_Chicago             INTENSITY   10 min.
5yr_6hr_Chicago      5yr_6hr_Chicago             INTENSITY   10 min.


*********************
Subcatchment Summary
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Name                        Area     Width   %Imperv    %Slope Rain Gage            Outlet
-------------------------------------------------------------------------------------------------
102                         0.44     44.37     64.22    0.5000 100yr_3hr_Chicago    J43
107AA                       0.27    176.73     86.34    0.5000 100yr_3hr_Chicago    J23
108                         0.34    162.73     68.53    0.5000 100yr_3hr_Chicago    BASIN1
109                         0.29     88.92     87.48    0.5000 100yr_3hr_Chicago    J9
109C                        0.25     52.31     66.54    0.5000 100yr_3hr_Chicago    J8
116                         0.21     66.78     13.91   10.0000 100yr_3hr_Chicago    J30
A                           0.73     37.91     43.28    0.5000 100yr_3hr_Chicago    J38
A1                          1.03    236.01     98.55    0.5000 100yr_3hr_Chicago    J17
A2                          1.58    358.18     97.91    0.5000 100yr_3hr_Chicago    J22
A3                          0.93    263.12     90.26    0.5000 100yr_3hr_Chicago    J13
A4                          0.83    227.29     84.59    2.0000 100yr_3hr_Chicago    J3
A5                          0.25     30.92     99.94    0.5000 100yr_3hr_Chicago    J14
AA                          0.37     72.80     54.39    0.5000 100yr_3hr_Chicago    J37
BB                          0.89     50.53     41.05    0.5000 100yr_3hr_Chicago    J46
BLDG-A                      0.25    254.20    100.00    0.5000 100yr_3hr_Chicago    S-BLDG-A
BLDG-B                      0.36    362.60    100.00    0.5000 100yr_3hr_Chicago    S-BLDG-B
BLDG-C                      0.30    299.30    100.00    0.5000 100yr_3hr_Chicago    S-BLDG-C
BLDG-D                      0.14    138.00    100.00    0.5000 100yr_3hr_Chicago    S-BLDG-D
BLDGG                       0.24    242.90    100.00    0.5000 100yr_3hr_Chicago    S-BLDG-G
BLDGH                       0.37    370.90    100.00    0.5000 100yr_3hr_Chicago    S-BLDG-H
BLDG-I                      0.23    225.60    100.00    0.5000 100yr_3hr_Chicago    S-BLDG-I
BLDGJ                       0.14    137.10    100.00    0.5000 100yr_3hr_Chicago    S-BLDG-J
BLDGJ2                      0.39    388.50    100.00    0.5000 100yr_3hr_Chicago    J35
BLDG-K                      0.25    247.30     99.99    0.5000 100yr_3hr_Chicago    S-BLDG-K
D                           0.58     56.48     30.02    0.5000 100yr_3hr_Chicago    J48
D1                          0.48    271.32     32.46    0.5000 100yr_3hr_Chicago    J34
EE                          0.35     38.57     15.30    0.5000 100yr_3hr_Chicago    J47
Great-Lawn                  1.01    164.38     26.54    0.5000 100yr_3hr_Chicago    J12
NSTANDS                     0.76     97.25    100.00    2.0000 100yr_3hr_Chicago    J7
OPGG                        0.81    147.51     59.59    0.5000 100yr_3hr_Chicago    J16
SSTANDS                     0.80    165.31     99.95   10.0000 100yr_3hr_Chicago    J3
T                           0.13     75.86     27.76    0.5000 100yr_3hr_Chicago    J16
V                           0.16    167.82     96.59    0.5000 100yr_3hr_Chicago    J12


************
Node Summary
************
                                  Invert      Max.    Ponded    External
Name                 Type          Elev.     Depth      Area    Inflow
-----------------------------------------------------------------------
J1                   JUNCTION         63.56      2.79       0.0
J10                  JUNCTION         63.14      3.10       0.0
J11                  JUNCTION         62.00      3.95       0.0
J12                  JUNCTION         63.09      2.82       0.0
J13                  JUNCTION         63.77      2.28       0.0
J14                  JUNCTION         63.95      3.10       0.0
J15                  JUNCTION         63.28      3.17       0.0
J16                  JUNCTION         63.03      2.85       0.0
J17                  JUNCTION         63.32      3.03       0.0
J18                  JUNCTION         63.36      2.64       0.0
J19                  JUNCTION         63.62      1.08     720.0
J2                   JUNCTION         64.26      3.14       0.0
J20                  JUNCTION         62.72      3.53       0.0
J21                  JUNCTION         63.31      2.94       0.0
J22                  JUNCTION         63.68      2.63       0.0
J23                  JUNCTION         62.64      3.29    1000.0
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J24	JUNCTION	62.53	4.36	0.0
J25	JUNCTION	62.35	3.65	0.0
J26	JUNCTION	62.29	2.84	0.0
J27	JUNCTION	62.25	2.88	0.0
J29	JUNCTION	62.49	2.88	0.0
J3	JUNCTION	64.11	3.34	0.0
J30	JUNCTION	63.10	2.77	0.0
J31	JUNCTION	63.18	2.72	0.0
J32	JUNCTION	62.76	3.44	0.0
J33	JUNCTION	63.09	3.00	0.0
J34	JUNCTION	63.35	2.21	0.0
J35	JUNCTION	63.79	2.79	0.0
J36	JUNCTION	63.76	2.54	0.0
J37	JUNCTION	63.68	1.42	466.0
J38	JUNCTION	63.56	2.58	0.0
J39	JUNCTION	63.44	2.58	0.0
J4	JUNCTION	63.96	3.54	0.0
J40	JUNCTION	62.91	2.21	0.0
J41	JUNCTION	62.64	3.29	1000.0
J42	JUNCTION	64.07	1.93	0.0
J43	JUNCTION	63.89	2.31	0.0
J44	JUNCTION	63.76	2.64	0.0
J45	JUNCTION	63.57	2.83	0.0
J46	JUNCTION	63.42	2.78	0.0
J47	JUNCTION	63.12	2.93	0.0
J48	JUNCTION	64.69	3.00	0.0
J49	JUNCTION	64.40	3.00	0.0
J5	JUNCTION	63.91	3.49	0.0
J50	JUNCTION	65.08	3.00	0.0
J51	JUNCTION	65.35	3.00	0.0
J52	JUNCTION	65.31	3.00	0.0
J53	JUNCTION	65.25	3.00	0.0
J54	JUNCTION	65.25	3.00	0.0
J55	JUNCTION	65.20	3.00	0.0
J56	JUNCTION	64.95	3.00	0.0
J57	JUNCTION	65.30	3.00	0.0
J58	JUNCTION	65.35	3.00	0.0
J59	JUNCTION	65.58	3.00	0.0
J6	JUNCTION	63.87	3.63	0.0
J60	JUNCTION	64.65	3.00	0.0
J61	JUNCTION	64.30	3.00	0.0
J62	JUNCTION	64.70	3.00	0.0
J63	JUNCTION	64.50	3.00	0.0
J64	JUNCTION	64.65	3.00	0.0
J65	JUNCTION	65.10	3.00	0.0
J66	JUNCTION	64.50	3.00	0.0
J67	JUNCTION	65.17	3.00	0.0
J68	JUNCTION	65.00	3.00	0.0
J69	JUNCTION	65.43	3.00	0.0
J7	JUNCTION	63.59	2.81	0.0
J70	JUNCTION	65.20	3.00	0.0
J71	JUNCTION	65.70	3.00	0.0
J72	JUNCTION	65.30	3.00	0.0
J73	JUNCTION	64.93	3.00	0.0
J74	JUNCTION	65.01	3.00	0.0
J75	JUNCTION	65.89	3.00	0.0
J76	JUNCTION	62.95	2.45	0.0
J8	JUNCTION	62.99	3.13	0.0
J9	JUNCTION	62.91	3.32	0.0
Canal_Outlet	OUTFALL	62.58	1.02	0.0
J28	OUTFALL	62.22	0.97	0.0
BASIN1	STORAGE	62.81	2.23	0.0
BASIN2	STORAGE	62.95	2.19	0.0
Great-Lawn-Storage	STORAGE	64.40	0.50	0.0
S-BLDG-A	STORAGE	100.00	0.15	0.0
S-BLDG-B	STORAGE	100.00	0.15	0.0
S-BLDG-C	STORAGE	100.00	0.15	0.0
S-BLDG-D	STORAGE	100.00	0.15	0.0
S-BLDG-G	STORAGE	100.00	0.15	0.0
S-BLDG-H	STORAGE	100.00	0.15	0.0
S-BLDG-I	STORAGE	100.00	0.15	0.0
S-BLDG-J	STORAGE	100.00	0.15	0.0
S-BLDG-K	STORAGE	100.00	0.15	0.0

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Link Summary
****

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J14	J13	CONDUIT	75.0	0.2001	0.0130
C10	J34	J31	CONDUIT	53.4	0.0937	0.0130
C11	J31	J30	CONDUIT	56.4	0.1063	0.0130
C12	J30	J8	CONDUIT	81.9	0.1099	0.0130
C13	J35	J17	CONDUIT	24.3	0.4946	0.0130
C14	J36	J17	CONDUIT	17.9	0.5037	0.0130
C15	J17	J15	CONDUIT	9.4	0.2126	0.0130
C16	J15	J10	CONDUIT	39.5	0.2785	0.0130
C17	J10	J9	CONDUIT	11.3	0.1770	0.0130
C18	J47	J12	CONDUIT	30.2	0.0992	0.0130
C18_1	J9	J40	CONDUIT	43.3	0.1271	0.0130
C18_2	J40	J11	CONDUIT	59.3	0.1265	0.0130
C19	J12	J16	CONDUIT	57.0	0.0526	0.0130
C2	J2	J3	CONDUIT	60.8	0.1975	0.0130
C20	J16	J11	CONDUIT	16.7	6.1921	0.0130
C21	J46	J47	CONDUIT	53.4	0.2247	0.0130
C21_1	J11	J32	CONDUIT	70.1	0.0599	0.0130
C21_2	J32	J20	CONDUIT	14.2	0.0565	0.0130
C22	J19	J18	CONDUIT	31.8	0.5029	0.0130
C23	J18	J11	CONDUIT	41.5	0.5054	0.0130
C24	J22	J21	CONDUIT	90.6	0.3752	0.0130
C25	J21	J20	CONDUIT	25.4	0.3937	0.0130
C26	J20	J23	CONDUIT	23.5	0.1703	0.0130
C27	J45	J46	CONDUIT	63.9	0.2347	0.0130
C27_2	J41	J24	CONDUIT	82.3	0.1093	0.0130

C28	J24	J29	CONDUIT	14.1	0.0711	0.0130
C29	J29	J25	CONDUIT	78.9	0.1394	0.0130
C3	J3	J4	CONDUIT	60.7	0.1976	0.0130
C30	J25	J26	CONDUIT	17.8	0.1125	0.0130
C31	J26	J27	CONDUIT	4.6	0.4383	0.0130
C32	J27	J28	CONDUIT	8.1	0.3695	0.0130
C33	J37	J1	CONDUIT	20.0	0.4509	0.0130
C34	J1	J18	CONDUIT	29.0	0.5178	0.0130
C35	J38	J39	CONDUIT	100.1	0.0999	0.0130
C36	J39	J34	CONDUIT	105.1	0.0761	0.0130
C37	J33	Canal_Outlet	CONDUIT	10.7	0.8418	0.0130
C38	J44	J45	CONDUIT	73.4	0.1498	0.0130
C39	J43	J44	CONDUIT	35.7	0.1400	0.0130
C4	J4	J5	CONDUIT	8.8	0.2278	0.0130
C40	J42	J43	CONDUIT	92.3	0.1517	0.0130
C41	J48	J49	CONDUIT	88.2	0.3287	0.0350
C42	J49	J31	CONDUIT	39.4	1.7782	0.0130
C43	J50	J51	CONDUIT	105.0	-0.2570	0.0350
C44	J51	J48	CONDUIT	21.6	3.0571	0.0240
C45	J52	J53	CONDUIT	90.8	0.0661	0.0130
C46	J53	J54	CONDUIT	22.0	0.0014	0.0130
C47	J54	J55	CONDUIT	7.7	0.6525	0.0130
C48	J55	J56	CONDUIT	65.7	0.3804	0.0130
C49	J59	J58	CONDUIT	18.0	1.2770	0.0130
C5	J5	J6	CONDUIT	6.7	0.1504	0.0130
C50	J58	J57	CONDUIT	14.2	0.3521	0.0130
C51	J57	J52	CONDUIT	47.6	-0.0210	0.0130
C52	J60	J61	CONDUIT	70.3	0.4980	0.0350
C53	J62	J63	CONDUIT	26.8	0.7450	0.0350
C54	J64	J63	CONDUIT	37.1	0.4039	0.0350
C55	J65	J66	CONDUIT	51.5	1.1643	0.0350
C56	J67	J68	CONDUIT	10.1	1.6809	0.0350
C57	J69	J68	CONDUIT	52.1	0.8247	0.0350
C58	J69	J70	CONDUIT	39.7	0.5794	0.0350
C59	J71	J72	CONDUIT	27.8	1.4378	0.0130
C6	J6	J7	CONDUIT	63.3	0.2053	0.0130
C60	J72	J73	CONDUIT	34.0	1.0892	0.0130
C61	J74	J73	CONDUIT	9.6	0.8371	0.0130
C62	J54	J74	CONDUIT	17.9	1.3420	0.0130
C63	J75	J71	CONDUIT	22.1	0.8607	0.0130
C64	BASIN2	J76	CONDUIT	3.0	0.0102	0.0130
C7	J13	J7	CONDUIT	74.9	0.2004	0.0130
C8	J7	J8	CONDUIT	50.1	0.0999	0.0130
C9	J8	J9	CONDUIT	49.2	0.1015	0.0130
C27_1	J23	J41	ORIFICE			
OR1	BASIN2	J40	ORIFICE			
OR2	BASIN1	J32	ORIFICE			
OL16	J25	J68	WEIR			
W10	J39	J48	WEIR			
W11	J34	J49	WEIR			
W12	J38	J50	WEIR			
W13	J15	Great-Lawn-Storage	WEIR			
W14	J31	J60	WEIR			
W15	J47	Great-Lawn-Storage	WEIR			
W16	J22	J52	WEIR			
W17	J21	J53	WEIR			
W18	J20	J54	WEIR			
W19	J32	J55	WEIR			
W2	J40	BASIN2	WEIR			
W20	J11	J56	WEIR			
W21	J35	J59	WEIR			
W22	J17	J58	WEIR			
W23	J36	J57	WEIR			
W24	J14	J13	WEIR			
W25	J13	J7	WEIR			
W26	J7	J8	WEIR			
W27	J2	J3	WEIR			
W28	J3	J4	WEIR			
W29	J4	J5	WEIR			
W3	J32	BASIN1	WEIR			
W30	J5	J6	WEIR			
W31	J6	J7	WEIR			
W32	J10	Great-Lawn-Storage	WEIR			
W33	J44	J65	WEIR			
W34	J45	J64	WEIR			
W35	J46	J62	WEIR			
W36	J1	J55	WEIR			
W37	J18	J56	WEIR			
W38	J42	J68	WEIR			
W39	J43	J70	WEIR			
W40	J9	Great-Lawn-Storage	WEIR			
W41	J23	J73	WEIR			
W42	J24	J75	WEIR			
W43	J41	J73	WEIR			
W44	J76	Great-Lawn-Storage	WEIR			
W5	J30	Great-Lawn-Storage	WEIR			
W6	J12	Great-Lawn-Storage	WEIR			
W7	J16	Great-Lawn-Storage	WEIR			
W8	J11	Great-Lawn-Storage	WEIR			
W9	J8	Great-Lawn-Storage	WEIR			
OL1	J61	J34	OUTLET			
OL10	S-BLDG-H	J17	OUTLET			
OL11	S-BLDG-G	J17	OUTLET			
OL12	S-BLDG-I	J14	OUTLET			
OL13	S-BLDG-K	J14	OUTLET			
OL14	Great-Lawn-Storage	J16	OUTLET			
OL15	Great-Lawn-Storage	J12	OUTLET			
OL17	S-BLDG-J	J35	OUTLET			
OL2	J63	J46	OUTLET			
OL3	J66	J45	OUTLET			
OL4	J68	J42	OUTLET			
OL5	J70	J43	OUTLET			
OL6	S-BLDG-A	J22	OUTLET			
OL7	S-BLDG-B	J22	OUTLET			
OL8	S-BLDG-C	J22	OUTLET			

OL9 S-BLDG-D J22 OUTLET
W1 Great-Lawn-Storage J33 OUTLET

****
Cross Section Summary
****

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	0.82	0.53	0.21	0.82	1	0.64
C10	CIRCULAR	0.60	0.28	0.15	0.60	1	0.19
C11	CIRCULAR	0.90	0.64	0.23	0.90	1	0.59
C12	CIRCULAR	0.90	0.64	0.23	0.90	1	0.60
C13	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C14	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C15	CIRCULAR	0.60	0.28	0.15	0.60	1	0.28
C16	CIRCULAR	0.60	0.28	0.15	0.60	1	0.32
C17	CIRCULAR	0.60	0.28	0.15	0.60	1	0.26
C18	CIRCULAR	0.90	0.64	0.23	0.90	1	0.57
C18_1	CIRCULAR	1.35	1.43	0.34	1.35	1	1.90
C18_2	CIRCULAR	1.35	1.43	0.34	1.35	1	1.90
C19	CIRCULAR	0.90	0.64	0.23	0.90	1	0.42
C2	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
C20	CIRCULAR	0.90	0.64	0.23	0.90	1	4.51
C21	CIRCULAR	0.53	0.22	0.13	0.53	1	0.20
C21_1	CIRCULAR	1.35	1.43	0.34	1.35	1	1.31
C21_2	CIRCULAR	1.35	1.43	0.34	1.35	1	1.27
C22	CIRCULAR	0.20	0.03	0.05	0.20	1	0.02
C23	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C24	CIRCULAR	0.68	0.36	0.17	0.68	1	0.51
C25	CIRCULAR	0.68	0.36	0.17	0.68	1	0.53
C26	CIRCULAR	1.35	1.43	0.34	1.35	1	2.20
C27	CIRCULAR	0.53	0.22	0.13	0.53	1	0.21
C27_2	CIRCULAR	0.97	0.75	0.24	0.97	1	0.74
C28	CIRCULAR	0.97	0.75	0.24	0.97	1	0.60
C29	CIRCULAR	0.97	0.75	0.24	0.97	1	0.84
C3	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
C30	CIRCULAR	0.97	0.75	0.24	0.97	1	0.75
C31	CIRCULAR	0.97	0.75	0.24	0.97	1	1.48
C32	CIRCULAR	0.97	0.75	0.24	0.97	1	1.36
C33	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C34	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C35	CIRCULAR	0.60	0.28	0.15	0.60	1	0.19
C36	CIRCULAR	0.60	0.28	0.15	0.60	1	0.17
C37	CIRCULAR	0.60	0.28	0.15	0.60	1	0.56
C38	CIRCULAR	0.45	0.16	0.11	0.45	1	0.11
C39	CIRCULAR	0.38	0.11	0.09	0.38	1	0.07
C4	CIRCULAR	0.60	0.28	0.15	0.60	1	0.29
C40	CIRCULAR	0.38	0.11	0.09	0.38	1	0.07
C41	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	4.38
C42	CIRCULAR	0.30	0.07	0.07	0.30	1	0.13
C43	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	3.87
C44	CIRCULAR	0.25	0.05	0.06	0.25	1	0.06
C45	RECT_OPEN	1.00	8.00	0.80	8.00	1	13.63
C46	RECT_OPEN	1.00	8.00	0.80	8.00	1	1.98
C47	RECT_OPEN	1.00	8.00	0.80	8.00	1	42.85
C48	RECT_OPEN	1.00	8.00	0.80	8.00	1	32.71
C49	RECT_OPEN	1.00	8.00	0.80	8.00	1	59.94
C5	CIRCULAR	0.60	0.28	0.15	0.60	1	0.24
C50	RECT_OPEN	1.00	8.00	0.80	8.00	1	31.48
C51	RECT_OPEN	1.00	8.00	0.80	8.00	1	7.69
C52	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	5.39
C53	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	6.59
C54	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	4.85
C55	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	8.24
C56	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	6.76
C57	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	4.74
C58	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	3.97
C59	RECT_OPEN	1.00	8.00	0.80	8.00	1	63.60
C6	CIRCULAR	0.60	0.28	0.15	0.60	1	0.28
C60	RECT_OPEN	1.00	8.00	0.80	8.00	1	55.36
C61	RECT_OPEN	1.00	8.00	0.80	8.00	1	48.53
C62	RECT_OPEN	1.00	8.00	0.80	8.00	1	61.44
C63	RECT_OPEN	1.00	8.00	0.80	8.00	1	49.21
C64	CIRCULAR	0.90	0.64	0.23	0.90	1	0.18
C7	CIRCULAR	0.82	0.53	0.21	0.82	1	0.64
C8	CIRCULAR	1.05	0.87	0.26	1.05	1	0.86
C9	CIRCULAR	1.20	1.13	0.30	1.20	1	1.24

****
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 ..... YES
  Water Quality ..... NO
Infiltration Method ..... HORTON
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date 07/23/2009 00:01:00
Ending Date 07/24/2009 00:01:00

Antecedent Dry Days 0.0
Report Time Step 00:05:00
Wet Time Step 00:05:00
Dry Time Step 00:05:00
Routing Time Step ..... 1.00 sec
Variable Time Step ..... YES
Maximum Trials 20
Number of Threads 2
Head Tolerance ..... 0.001500 m

Runoff Quantity Continuity	Volume hectare-m	Depth mm
Total Precipitation	1.159	71.677
Evaporation Loss	0.000	0.000
Infiltration Loss	0.225	13.897
Surface Runoff	0.923	57.120
Final Storage	0.019	1.165
Continuity Error (%)	-0.705	

Flow Routing Continuity	Volume hectare-m	Volume 10^6 ltr
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.923	9.235
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.719	7.185
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.001	0.008
Final Stored Volume	0.141	1.409
Continuity Error (%)	7.011	

****
Highest Continuity Errors
****
Node J40 (6.55%)
Node J63 (3.90%)
Node BASIN2 (3.04%)
Node J60 (2.74%)
Node J64 (1.50%)

****
Time-Step Critical Elements
****
Link C64 (6.49%)

****
Highest Flow Instability Indexes
****
Link C27_1 (61)
Link OR1 (55)
Link C28 (35)
Link C33 (35)
Link C31 (35)

****
Routing Time Step Summary
****

Minimum Time Step	:	0.16 sec
Average Time Step	:	0.98 sec
Maximum Time Step	:	1.00 sec
Percent in Steady State	:	-0.00
Average Iterations per Step	:	6.19
Percent Not Converging	:	18.94
Time Step Frequencies	:	
1.000 - 0.871 sec	:	95.00 %
0.871 - 0.758 sec	:	1.57 %
0.758 - 0.660 sec	:	1.38 %
0.660 - 0.574 sec	:	0.95 %
0.574 - 0.500 sec	:	1.10 %

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Subcatchment Runoff Summary
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Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS	Runoff Coeff
102	71.68	0.00	0.00	20.12	45.43	28.48	51.20	0.23	0.11	0.714
107AA	71.68	0.00	0.00	5.97	60.78	4.19	64.97	0.18	0.13	0.906
108	71.68	0.00	0.00	14.03	48.26	8.93	57.20	0.20	0.15	0.798
109	71.68	0.00	0.00	5.52	61.79	3.68	65.47	0.19	0.14	0.913
109C	71.68	0.00	0.00	18.19	47.02	32.06	53.22	0.14	0.09	0.743
116	71.68	0.00	0.00	39.92	9.77	32.87	32.87	0.07	0.07	0.459
A	71.68	0.00	0.00	36.15	30.61	35.26	35.26	0.26	0.07	0.492
A1	71.68	0.00	0.00	0.63	69.69	0.47	70.17	0.72	0.51	0.979
A2	71.68	0.00	0.00	0.91	69.24	0.67	69.91	1.10	0.78	0.975
A3	71.68	0.00	0.00	4.28	63.78	2.89	66.67	0.62	0.45	0.930
A4	71.68	0.00	0.00	6.76	59.59	4.64	64.23	0.53	0.40	0.896
A5	71.68	0.00	0.00	0.03	70.69	0.02	70.71	0.17	0.12	0.987
AA	71.68	0.00	0.00	23.96	38.42	28.30	47.51	0.18	0.10	0.663
BB	71.68	0.00	0.00	36.89	29.04	34.55	34.55	0.31	0.08	0.482

BLDG-A	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.18	0.13	0.981
BLDG-B	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.25	0.18	0.981
BLDG-C	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.21	0.15	0.981
BLDG-D	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.10	0.07	0.981
BLDGG	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.17	0.12	0.981
BLDGH	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.26	0.18	0.981
BLDG-I	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.16	0.11	0.981
BLDGJ	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.10	0.07	0.981
BLDGJ2	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.27	0.19	0.981
BLDG-K	71.68	0.00	0.00	0.00	70.31	0.00	70.32	0.17	0.12	0.981
D	71.68	0.00	0.00	39.90	21.21	31.67	31.67	0.18	0.06	0.442
D1	71.68	0.00	0.00	32.49	22.80	28.00	39.40	0.19	0.14	0.550
EE	71.68	0.00	0.00	46.41	10.77	25.25	25.25	0.09	0.03	0.352
Great-Lawn	71.68	0.00	0.00	39.27	18.70	32.37	32.37	0.33	0.13	0.452
NSTANDS	71.68	0.00	0.00	0.00	70.70	0.00	70.70	0.53	0.37	0.986
OPGG	71.68	0.00	0.00	18.99	42.11	10.17	52.28	0.43	0.29	0.729
SSTANDS	71.68	0.00	0.00	0.02	70.30	0.02	70.32	0.56	0.40	0.981
T	71.68	0.00	0.00	32.90	19.50	19.45	38.95	0.05	0.04	0.543
V	71.68	0.00	0.00	1.48	67.90	1.13	69.03	0.11	0.08	0.963

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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	0.32	1.44	65.00	0	01:23	1.44
J10	JUNCTION	0.61	1.64	64.78	0	01:18	1.55
J11	JUNCTION	1.73	2.69	64.69	0	01:22	2.67
J12	JUNCTION	0.66	1.60	64.69	0	01:23	1.59
J13	JUNCTION	0.25	1.15	64.92	0	01:10	1.08
J14	JUNCTION	0.19	1.00	64.95	0	01:10	0.90
J15	JUNCTION	0.48	1.78	65.06	0	01:10	1.78
J16	JUNCTION	0.72	1.66	64.69	0	01:22	1.64
J17	JUNCTION	0.45	1.85	65.17	0	01:10	1.84
J18	JUNCTION	0.41	1.44	64.80	0	01:27	1.44
J19	JUNCTION	0.29	1.11	64.73	0	01:44	1.11
J2	JUNCTION	0.12	2.58	66.84	0	01:10	2.58
J20	JUNCTION	1.02	1.97	64.69	0	01:23	1.95
J21	JUNCTION	0.45	1.59	64.90	0	01:08	1.39
J22	JUNCTION	0.28	1.79	65.47	0	01:09	1.71
J23	JUNCTION	1.10	2.10	64.74	0	01:08	2.03
J24	JUNCTION	1.15	2.13	64.66	0	03:10	2.13
J25	JUNCTION	1.32	2.31	64.66	0	03:09	2.31
J26	JUNCTION	1.38	2.40	64.69	0	03:10	2.36
J27	JUNCTION	1.42	2.43	64.68	0	03:11	2.43
J29	JUNCTION	1.19	2.20	64.69	0	03:10	2.18
J3	JUNCTION	0.17	2.73	66.84	0	01:10	2.73
J30	JUNCTION	0.65	1.67	64.77	0	01:21	1.61
J31	JUNCTION	0.57	1.59	64.77	0	01:23	1.55
J32	JUNCTION	0.98	1.93	64.69	0	01:22	1.91
J33	JUNCTION	0.99	1.00	64.09	0	03:12	1.00
J34	JUNCTION	0.41	1.42	64.77	0	01:25	1.42
J35	JUNCTION	0.25	1.94	65.73	0	01:10	1.94
J36	JUNCTION	0.25	1.44	65.20	0	01:10	1.43
J37	JUNCTION	0.28	1.47	65.15	0	01:23	1.46
J38	JUNCTION	0.31	1.25	64.81	0	01:26	1.22
J39	JUNCTION	0.35	1.35	64.79	0	01:26	1.33
J4	JUNCTION	0.19	2.03	65.99	0	01:10	2.00
J40	JUNCTION	0.84	1.92	64.82	0	01:18	1.77
J41	JUNCTION	1.05	2.02	64.66	0	03:10	2.02
J42	JUNCTION	0.15	0.84	64.91	0	01:11	0.76
J43	JUNCTION	0.21	0.96	64.85	0	01:12	0.93
J44	JUNCTION	0.24	1.03	64.79	0	01:24	1.02
J45	JUNCTION	0.30	1.18	64.75	0	01:25	1.18
J46	JUNCTION	0.36	1.32	64.74	0	01:27	1.32
J47	JUNCTION	0.63	1.57	64.69	0	01:23	1.56
J48	JUNCTION	0.01	0.12	64.81	0	01:21	0.12
J49	JUNCTION	0.06	0.37	64.77	0	01:25	0.37
J5	JUNCTION	0.21	1.95	65.86	0	01:10	1.91
J50	JUNCTION	0.00	0.00	65.08	0	00:00	0.00
J51	JUNCTION	0.00	0.00	65.35	0	00:00	0.00
J52	JUNCTION	0.00	0.03	65.34	0	01:13	0.03
J53	JUNCTION	0.00	0.02	65.27	0	01:19	0.02
J54	JUNCTION	0.00	0.00	65.25	0	01:20	0.00
J55	JUNCTION	0.00	0.00	65.20	0	01:25	0.00
J56	JUNCTION	0.00	0.01	64.96	0	01:40	0.01
J57	JUNCTION	0.00	0.06	65.36	0	01:10	0.05
J58	JUNCTION	0.00	0.03	65.38	0	01:10	0.03
J59	JUNCTION	0.00	0.02	65.60	0	01:10	0.02
J6	JUNCTION	0.22	1.89	65.76	0	01:10	1.84
J60	JUNCTION	0.00	0.13	64.78	0	01:24	0.13
J61	JUNCTION	0.08	0.47	64.77	0	01:25	0.47
J62	JUNCTION	0.00	0.04	64.74	0	01:25	0.03
J63	JUNCTION	0.03	0.24	64.74	0	01:25	0.24
J64	JUNCTION	0.00	0.09	64.74	0	01:24	0.09
J65	JUNCTION	0.00	0.00	65.10	0	00:00	0.00
J66	JUNCTION	0.03	0.25	64.75	0	01:25	0.25
J67	JUNCTION	0.00	0.00	65.17	0	00:00	0.00
J68	JUNCTION	0.00	0.00	65.00	0	00:00	0.00
J69	JUNCTION	0.00	0.00	65.43	0	00:00	0.00
J7	JUNCTION	0.31	1.19	64.78	0	01:10	1.16
J70	JUNCTION	0.00	0.00	65.20	0	00:00	0.00
J71	JUNCTION	0.00	0.00	65.70	0	00:00	0.00
J72	JUNCTION	0.00	0.00	65.30	0	00:00	0.00
J73	JUNCTION	0.00	0.01	64.94	0	01:27	0.01
J74	JUNCTION	0.00	0.00	65.01	0	01:20	0.00
J75	JUNCTION	0.00	0.00	65.89	0	00:00	0.00
J76	JUNCTION	0.79	1.82	64.77	0	01:18	1.72
J8	JUNCTION	0.76	1.76	64.75	0	01:21	1.70
J9	JUNCTION	0.84	1.82	64.73	0	01:21	1.77

Canal_Outlet	OUTFALL	1.50	1.50	64.08	0	00:00	1.50
J28	OUTFALL	1.60	2.98	65.20	0	03:00	2.98
BASIN1	STORAGE	0.92	1.89	64.70	0	01:23	1.87
BASIN2	STORAGE	0.79	1.86	64.81	0	01:18	1.72
Great-Lawn-Storage	STORAGE	0.06	0.26	64.66	0	03:12	0.26
S-BLDG-A	STORAGE	0.01	0.07	100.07	0	01:52	0.07
S-BLDG-B	STORAGE	0.02	0.08	100.08	0	01:54	0.08
S-BLDG-C	STORAGE	0.01	0.07	100.07	0	01:52	0.07
S-BLDG-D	STORAGE	0.01	0.08	100.08	0	01:53	0.08
S-BLDG-G	STORAGE	0.02	0.09	100.09	0	02:11	0.09
S-BLDG-H	STORAGE	0.02	0.08	100.08	0	01:54	0.08
S-BLDG-I	STORAGE	0.01	0.07	100.07	0	01:50	0.07
S-BLDG-J	STORAGE	0.02	0.08	100.08	0	01:54	0.08
S-BLDG-K	STORAGE	0.03	0.10	100.10	0	02:20	0.10

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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	0.073	0	01:06	0	0.178	0.011	
J10	JUNCTION	0.000	0.646	0	01:10	0	1.51	0.059	
J11	JUNCTION	0.000	1.412	0	01:09	0	7.09	0.610	
J12	JUNCTION	0.185	0.398	0	01:14	0.437	2.29	0.382	
J13	JUNCTION	0.451	0.566	0	01:08	0.621	1.14	0.019	
J14	JUNCTION	0.119	0.265	0	01:19	0.174	0.514	-0.184	
J15	JUNCTION	0.000	0.645	0	01:10	0	1.51	0.141	
J16	JUNCTION	0.328	0.605	0	01:12	0.476	3.54	0.219	
J17	JUNCTION	0.506	0.647	0	01:08	0.722	1.51	-0.003	
J18	JUNCTION	0.000	0.066	0	01:06	0	0.204	0.023	
J19	JUNCTION	0.000	0.018	0	01:23	0	0.0245	-0.254	
J2	JUNCTION	0.000	0.095	0	01:04	0	0.03	-0.008	
J20	JUNCTION	0.000	0.948	0	01:08	0	6.65	0.177	
J21	JUNCTION	0.000	0.789	0	01:10	0	1.85	-0.245	
J22	JUNCTION	0.776	0.812	0	01:10	1.1	1.85	0.293	
J23	JUNCTION	0.131	0.790	0	01:08	0.175	5.64	0.656	
J24	JUNCTION	0.000	0.589	0	08:00	0	5.54	0.534	
J25	JUNCTION	0.000	0.602	0	08:00	0	5.47	0.658	
J26	JUNCTION	0.000	0.665	0	01:09	0	5.44	0.161	
J27	JUNCTION	0.000	0.665	0	01:09	0	5.43	0.105	
J29	JUNCTION	0.000	0.597	0	08:00	0	5.51	0.607	
J3	JUNCTION	0.796	0.862	0	01:06	1.1	1.13	0.865	
J30	JUNCTION	0.072	0.429	0	01:15	0.0695	0.994	1.224	
J31	JUNCTION	0.000	0.371	0	01:15	0	0.863	0.472	
J32	JUNCTION	0.000	1.897	0	01:06	0	8.13	0.357	
J33	JUNCTION	0.000	0.143	0	03:12	0	1.77	0.000	
J34	JUNCTION	0.143	0.397	0	01:15	0.189	0.82	0.013	
J35	JUNCTION	0.193	0.197	0	01:10	0.273	0.37	0.180	
J36	JUNCTION	0.000	0.040	0	01:18	0	0.0265	0.002	
J37	JUNCTION	0.102	0.102	0	01:10	0.176	0.176	0.058	
J38	JUNCTION	0.066	0.100	0	01:04	0.258	0.276	0.101	
J39	JUNCTION	0.000	0.182	0	01:04	0	0.34	-0.077	
J4	JUNCTION	0.000	0.794	0	01:10	0	1.09	-0.379	
J40	JUNCTION	0.000	3.724	0	01:09	0	8.13	7.013	
J41	JUNCTION	0.000	0.583	0	08:00	0	5.57	0.285	
J42	JUNCTION	0.000	0.045	0	01:10	0	0.0131	0.430	
J43	JUNCTION	0.113	0.123	0	01:11	0.227	0.242	0.432	
J44	JUNCTION	0.000	0.115	0	01:12	0	0.231	-0.097	
J45	JUNCTION	0.000	0.157	0	01:13	0	0.312	-0.622	
J46	JUNCTION	0.082	0.263	0	01:37	0.308	0.636	-0.398	
J47	JUNCTION	0.027	0.236	0	01:15	0.0875	0.683	0.431	
J48	JUNCTION	0.059	0.059	0	01:20	0.185	0.185	-0.923	
J49	JUNCTION	0.000	0.166	0	01:22	0	0.21	0.811	
J5	JUNCTION	0.000	0.780	0	01:08	0	1.09	-0.043	
J50	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J51	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J52	JUNCTION	0.000	0.162	0	01:09	0	0.0255	0.028	
J53	JUNCTION	0.000	0.028	0	01:14	0	0.0184	0.058	
J54	JUNCTION	0.000	0.010	0	01:19	0	0.0102	-0.085	
J55	JUNCTION	0.000	0.004	0	01:22	0	0.00394	-0.063	
J56	JUNCTION	0.000	0.003	0	01:27	0	0.0034	0.000	
J57	JUNCTION	0.000	0.094	0	01:10	0	0.0386	0.004	
J58	JUNCTION	0.000	0.105	0	01:10	0	0.0406	0.008	
J59	JUNCTION	0.000	0.106	0	01:10	0	0.0406	-0.061	
J6	JUNCTION	0.000	0.778	0	01:08	0	1.1	0.430	
J60	JUNCTION	0.000	0.077	0	01:23	0	0.0111	2.822	
J61	JUNCTION	0.000	0.201	0	01:21	0	0.158	0.557	
J62	JUNCTION	0.000	0.013	0	01:23	0	0.000981	1.124	
J63	JUNCTION	0.000	0.169	0	01:23	0	0.0741	4.057	
J64	JUNCTION	0.000	0.020	0	01:23	0	0.00294	1.527	
J65	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J66	JUNCTION	0.000	0.152	0	01:21	0	0.0704	1.522	
J67	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J68	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J69	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J7	JUNCTION	0.374	1.684	0	01:08	0.535	2.76	0.381	
J70	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J71	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J72	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J73	JUNCTION	0.000	0.006	0	01:20	0	0.00588	0.000	
J74	JUNCTION	0.000	0.006	0	01:20	0	0.00588	-0.141	
J75	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J76	JUNCTION	0.000	0.850	0	01:18	0	2	0.337	
J8	JUNCTION	0.086	1.848	0	01:08	0.135	3.73	0.139	
J9	JUNCTION	0.138	2.566	0	01:08	0.189	5.25	0.352	
Canal_Outlet	OUTFALL	0.000	0.143	0	03:12	0	1.77	0.000	
J28	OUTFALL	0.000	0.666	0	01:09	0	5.42	0.000	
BASIN1	STORAGE	0.151	2.008	0	01:06	0.197	2.56	-0.028	
BASIN2	STORAGE	0.000	3.724	0	01:09	0	4.05	3.136	

Great-Lawn-Storage	STORAGE	0.000	0.904	0	01:26	0	3.75	-0.315
S-BLDG-A	STORAGE	0.126	0.126	0	01:10	0.179	0.179	0.016
S-BLDG-B	STORAGE	0.180	0.180	0	01:10	0.255	0.255	0.015
S-BLDG-C	STORAGE	0.148	0.148	0	01:10	0.21	0.21	0.016
S-BLDG-D	STORAGE	0.068	0.068	0	01:10	0.097	0.097	0.016
S-BLDG-G	STORAGE	0.120	0.120	0	01:10	0.171	0.171	0.015
S-BLDG-H	STORAGE	0.184	0.184	0	01:10	0.261	0.261	0.015
S-BLDG-I	STORAGE	0.112	0.112	0	01:10	0.159	0.159	0.016
S-BLDG-J	STORAGE	0.068	0.068	0	01:10	0.0964	0.0964	0.015
S-BLDG-K	STORAGE	0.123	0.123	0	01:10	0.174	0.174	0.015

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	7.53	0.912	0.000
J26	JUNCTION	23.12	1.385	0.440
J27	JUNCTION	23.14	1.435	0.450
J29	JUNCTION	7.04	1.193	0.682
J33	JUNCTION	24.00	0.396	2.004
J37	JUNCTION	7.30	1.215	0.000
J40	JUNCTION	6.42	0.474	0.288

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Node Flooding Summary
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Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CMS	Time of Max Occurrence days hr:min	Total Flood Volume 10^6 ltr	Maximum Ponded Depth Meters
J19	1.11	0.018	0 01:23	0.024	0.032
J37	0.62	0.049	0 01:10	0.021	0.045

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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
BASIN1	0.380	60	0	0	0.632	99	0 01:23	0.498
BASIN2	1.214	54	0	0	2.240	100	0 01:18	0.850
Great-Lawn-Storage	0.500	12	0	0	2.089	51	0 03:12	0.449
S-BLDG-A	0.017	4	0	0	0.121	24	0 01:52	0.009
S-BLDG-B	0.028	4	0	0	0.176	27	0 01:54	0.011
S-BLDG-C	0.021	3	0	0	0.142	24	0 01:52	0.011
S-BLDG-D	0.010	4	0	0	0.066	25	0 01:53	0.005
S-BLDG-G	0.024	7	0	0	0.125	38	0 02:11	0.006
S-BLDG-H	0.027	4	0	0	0.179	27	0 01:54	0.012
S-BLDG-I	0.015	3	0	0	0.106	23	0 01:50	0.008
S-BLDG-J	0.010	4	0	0	0.066	26	0 01:54	0.004
S-BLDG-K	0.028	9	0	0	0.130	42	0 02:20	0.005

****
Outfall Loading Summary
****

Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
Canal_Outlet	26.09	0.077	0.143	1.767
J28	75.13	0.090	0.666	5.418
System	50.61	0.167	0.666	7.185

****
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	CONDUIT	0.209	0 01:19	0.41	0.33	1.00
C10	CONDUIT	0.303	0 01:15	1.07	1.61	1.00
C11	CONDUIT	0.387	0 01:15	0.61	0.66	1.00
C12	CONDUIT	0.448	0 01:15	0.70	0.75	1.00
C13	CONDUIT	0.135	0 01:03	2.74	3.22	1.00
C14	CONDUIT	0.039	0 01:19	0.79	0.92	1.00
C15	CONDUIT	0.645	0 01:10	2.28	2.28	1.00
C16	CONDUIT	0.646	0 01:10	2.28	1.99	1.00
C17	CONDUIT	0.654	0 01:10	2.31	2.53	1.00
C18	CONDUIT	0.241	0 01:15	0.38	0.42	1.00
C18_1	CONDUIT	2.540	0 01:08	1.80	1.33	1.00
C18_2	CONDUIT	1.411	0 01:09	0.99	0.74	1.00

C19	CONDUIT	0.407	0	01:14	0.64	0.98	1.00
C2	CONDUIT	0.073	0	01:04	0.46	0.57	1.00
C20	CONDUIT	0.616	0	01:12	0.97	0.14	1.00
C21	CONDUIT	0.210	0	01:15	0.97	1.03	1.00
C21_1	CONDUIT	1.091	0	01:07	0.77	0.83	1.00
C21_2	CONDUIT	0.835	0	01:06	0.61	0.66	1.00
C22	CONDUIT	0.018	0	01:23	0.56	0.76	1.00
C23	CONDUIT	0.059	0	01:16	1.20	1.39	1.00
C24	CONDUIT	0.789	0	01:10	2.20	1.53	1.00
C25	CONDUIT	0.825	0	01:09	2.30	1.56	1.00
C26	CONDUIT	0.662	0	01:08	0.72	0.30	1.00
C27	CONDUIT	0.128	0	01:14	0.59	0.61	1.00
C27_2	CONDUIT	0.589	0	08:00	0.89	0.79	1.00
C28	CONDUIT	0.597	0	08:00	0.90	1.00	1.00
C29	CONDUIT	0.602	0	08:00	0.81	0.72	1.00
C3	CONDUIT	0.494	0	01:04	3.11	3.90	1.00
C30	CONDUIT	0.665	0	01:09	0.89	0.88	1.00
C31	CONDUIT	0.665	0	01:09	0.89	0.45	1.00
C32	CONDUIT	0.666	0	01:09	0.89	0.49	1.00
C33	CONDUIT	0.073	0	01:06	1.49	1.84	1.00
C34	CONDUIT	0.066	0	01:06	1.34	1.54	1.00
C35	CONDUIT	0.094	0	01:04	0.51	0.48	1.00
C36	CONDUIT	0.182	0	01:04	0.66	1.08	1.00
C37	CONDUIT	0.143	0	03:12	0.50	0.25	1.00
C38	CONDUIT	0.113	0	01:12	0.71	1.03	1.00
C39	CONDUIT	0.115	0	01:12	1.04	1.75	1.00
C4	CONDUIT	0.780	0	01:08	2.76	2.66	1.00
C40	CONDUIT	0.045	0	01:10	0.41	0.67	1.00
C41	CONDUIT	0.058	0	01:21	0.31	0.01	0.25
C42	CONDUIT	0.068	0	01:16	1.06	0.53	1.00
C43	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C44	CONDUIT	0.000	0	00:00	0.00	0.00	0.25
C45	CONDUIT	0.028	0	01:14	0.17	0.00	0.02
C46	CONDUIT	0.010	0	01:19	0.11	0.00	0.01
C47	CONDUIT	0.004	0	01:22	0.15	0.00	0.00
C48	CONDUIT	0.003	0	01:27	0.11	0.00	0.00
C49	CONDUIT	0.105	0	01:10	0.55	0.00	0.02
C5	CONDUIT	0.778	0	01:08	2.75	3.27	1.00
C50	CONDUIT	0.094	0	01:10	0.47	0.00	0.04
C51	CONDUIT	0.061	0	01:11	0.18	0.01	0.04
C52	CONDUIT	0.077	0	01:23	0.18	0.01	0.30
C53	CONDUIT	0.013	0	01:23	0.08	0.00	0.14
C54	CONDUIT	0.020	0	01:23	0.11	0.00	0.16
C55	CONDUIT	0.000	0	00:00	0.00	0.00	0.13
C56	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C57	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C58	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C59	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C6	CONDUIT	0.769	0	01:08	2.72	2.76	1.00
C60	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C61	CONDUIT	0.006	0	01:20	0.19	0.00	0.01
C62	CONDUIT	0.006	0	01:20	0.19	0.00	0.00
C63	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C64	CONDUIT	0.850	0	01:18	1.34	4.66	1.00
C7	CONDUIT	0.587	0	01:11	1.10	0.91	1.00
C8	CONDUIT	1.695	0	01:11	2.13	1.96	1.00
C9	CONDUIT	1.802	0	01:08	1.59	1.45	1.00
C27_1	ORIFICE	0.583	0	08:00			1.00
OR1	ORIFICE	0.164	0	09:05			1.00
OR2	ORIFICE	0.056	0	08:55			1.00
OL16	WEIR	0.000	0	00:00			0.00
W10	WEIR	0.000	0	00:00			0.00
W11	WEIR	0.072	0	01:22			0.21
W12	WEIR	0.000	0	00:00			0.00
W13	WEIR	0.000	0	00:00			0.00
W14	WEIR	0.000	0	00:00			0.00
W15	WEIR	0.000	0	00:00			0.00
W16	WEIR	0.121	0	01:09			0.16
W17	WEIR	0.005	0	01:19			0.02
W18	WEIR	0.000	0	01:20			0.00
W19	WEIR	0.000	0	01:25			0.00
W2	WEIR	3.724	0	01:09			1.00
W20	WEIR	0.001	0	01:40			0.01
W21	WEIR	0.106	0	01:10			0.15
W22	WEIR	0.009	0	01:10			0.03
W23	WEIR	0.025	0	01:10			0.06
W24	WEIR	0.000	0	00:00			0.00
W25	WEIR	0.000	0	00:00			0.00
W26	WEIR	0.000	0	00:00			0.00
W27	WEIR	0.083	0	01:06			0.44
W28	WEIR	0.448	0	01:10			0.39
W29	WEIR	0.000	0	00:00			0.00
W3	WEIR	1.871	0	01:06			1.00
W30	WEIR	0.000	0	00:00			0.00
W31	WEIR	0.000	0	00:00			0.00
W32	WEIR	0.000	0	00:00			0.00
W33	WEIR	0.000	0	00:00			0.00
W34	WEIR	0.000	0	00:00			0.00
W35	WEIR	0.000	0	00:00			0.00
W36	WEIR	0.000	0	00:00			0.00
W37	WEIR	0.000	0	00:00			0.00
W38	WEIR	0.000	0	00:00			0.00
W39	WEIR	0.000	0	00:00			0.00
W40	WEIR	0.000	0	00:00			0.00
W41	WEIR	0.002	0	01:27			0.01
W42	WEIR	0.000	0	00:00			0.00
W43	WEIR	0.002	0	01:27			0.01
W44	WEIR	0.846	0	01:18			0.37
W5	WEIR	0.000	0	00:00			0.00
W6	WEIR	0.000	0	00:00			0.00
W7	WEIR	0.000	0	00:00			0.00
W8	WEIR	0.000	0	00:00			0.00
W9	WEIR	0.000	0	00:00			0.00
OL1	DUMMY	0.200	0	01:11			
OL10	DUMMY	0.012	0	01:06			

OL11	DUMMY	0.006	0	01:04
OL12	DUMMY	0.008	0	01:07
OL13	DUMMY	0.005	0	01:03
OL14	DUMMY	0.195	0	01:22
OL15	DUMMY	0.196	0	01:23
OL17	DUMMY	0.004	0	01:06
OL2	DUMMY	0.169	0	01:23
OL3	DUMMY	0.152	0	01:21
OL4	DUMMY	0.000	0	00:00
OL5	DUMMY	0.000	0	00:00
OL6	DUMMY	0.009	0	01:07
OL7	DUMMY	0.011	0	01:06
OL8	DUMMY	0.011	0	01:07
OL9	DUMMY	0.005	0	01:06
W1	DUMMY	0.143	0	03:12

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Flow Classification Summary
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	Adjusted	Fraction of Time in Flow Class								
Conduit	/Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.01	0.00	0.00	0.33	0.00	0.00	0.65	0.03	0.00
C10	1.00	0.01	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C11	1.00	0.01	0.00	0.00	0.98	0.00	0.00	0.01	0.00	0.00
C12	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C13	1.00	0.01	0.00	0.00	0.33	0.00	0.00	0.66	0.01	0.00
C14	1.00	0.04	0.00	0.00	0.33	0.00	0.00	0.63	0.01	0.00
C15	1.00	0.01	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C16	1.00	0.01	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C17	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.02	0.00	0.00
C18	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C18_1	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C18_2	1.00	0.00	0.00	0.00	0.98	0.00	0.00	0.02	0.00	0.00
C19	1.00	0.00	0.00	0.00	0.97	0.00	0.00	0.03	0.00	0.00
C2	1.00	0.02	0.01	0.00	0.30	0.00	0.00	0.67	0.01	0.00
C20	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.02	0.00
C21	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.59	0.00
C21_1	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C21_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C22	1.00	0.04	0.00	0.00	0.37	0.00	0.00	0.59	0.63	0.00
C23	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.02	0.00	0.00
C24	1.00	0.01	0.00	0.00	0.96	0.00	0.00	0.02	0.64	0.00
C25	1.00	0.01	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C26	1.00	0.01	0.00	0.00	0.98	0.00	0.00	0.01	0.00	0.00
C27	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.00
C27_2	1.00	0.01	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C28	1.00	0.01	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C29	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C3	1.00	0.01	0.00	0.00	0.29	0.00	0.00	0.69	0.01	0.00
C30	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C31	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C32	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C33	1.00	0.01	0.00	0.00	0.34	0.00	0.00	0.64	0.01	0.00
C34	1.00	0.02	0.00	0.00	0.40	0.00	0.00	0.58	0.07	0.00
C35	1.00	0.04	0.00	0.00	0.38	0.00	0.00	0.58	0.03	0.00
C36	1.00	0.02	0.44	0.00	0.55	0.00	0.00	0.00	0.60	0.00
C37	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C38	1.00	0.02	0.00	0.00	0.33	0.00	0.00	0.65	0.01	0.00
C39	1.00	0.01	0.00	0.00	0.31	0.00	0.00	0.68	0.01	0.00
C4	1.00	0.01	0.00	0.00	0.30	0.00	0.00	0.68	0.00	0.00
C40	1.00	0.02	0.02	0.00	0.30	0.00	0.00	0.66	0.01	0.00
C41	1.00	0.04	0.34	0.00	0.62	0.00	0.00	0.00	0.95	0.00
C42	1.00	0.04	0.00	0.00	0.32	0.00	0.00	0.63	0.06	0.00
C43	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C44	1.00	0.38	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C45	1.00	0.08	0.62	0.00	0.30	0.00	0.00	0.00	0.95	0.00
C46	1.00	0.08	0.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00
C47	1.00	0.68	0.11	0.00	0.21	0.00	0.00	0.00	0.21	0.00
C48	1.00	0.20	0.50	0.00	0.31	0.00	0.00	0.00	0.80	0.00
C49	1.00	0.94	0.03	0.00	0.02	0.01	0.00	0.00	0.95	0.00
C5	1.00	0.02	0.00	0.00	0.31	0.00	0.00	0.67	0.00	0.00
C50	1.00	0.41	0.54	0.00	0.06	0.00	0.00	0.00	0.95	0.00
C51	1.00	0.41	0.29	0.00	0.30	0.00	0.00	0.00	0.94	0.00
C52	1.00	0.47	0.00	0.00	0.53	0.00	0.00	0.00	0.25	0.00
C53	1.00	0.73	0.15	0.00	0.12	0.00	0.00	0.00	0.93	0.00
C54	1.00	0.71	0.01	0.00	0.28	0.00	0.00	0.00	0.23	0.00
C55	1.00	0.73	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C56	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C57	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C58	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C59	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C6	1.00	0.02	0.00	0.00	0.32	0.00	0.00	0.66	0.01	0.00
C60	1.00	0.30	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C61	1.00	0.30	0.31	0.00	0.38	0.00	0.00	0.00	0.68	0.00
C62	1.00	0.60	0.19	0.00	0.20	0.01	0.00	0.00	0.21	0.00
C63	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C64	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C7	1.00	0.01	0.00	0.00	0.37	0.00	0.00	0.62	0.03	0.00
C8	1.00	0.01	0.00	0.00	0.34	0.00	0.00	0.64	0.00	0.00
C9	1.00	0.01	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00

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Conduit Surcharge Summary
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	Hours Full			Hours Above Full	Hours Capacity
Conduit	Both Ends	Upstream	Dnstream	Normal Flow	Limited

C1	0.06	0.06	2.81	0.01	0.01
C10	7.24	7.24	7.35	0.10	0.14
C11	6.97	6.97	7.10	0.01	0.01
C12	7.14	7.14	7.33	0.01	0.01
C13	7.10	7.11	7.34	0.48	0.37
C14	7.15	7.15	7.34	0.01	0.01
C15	7.34	7.34	7.38	0.24	0.25
C16	7.42	7.42	7.65	0.22	0.23
C17	7.71	7.71	7.75	0.30	0.31
C18	7.07	7.07	7.14	0.01	0.01
C18_1	6.56	6.56	6.60	0.15	0.10
C18_2	6.60	6.60	6.70	0.01	0.01
C19	7.14	7.14	7.20	0.01	0.06
C2	0.56	0.56	5.54	0.01	0.01
C20	7.27	7.27	23.41	0.01	0.01
C21	7.24	7.24	7.51	0.03	0.04
C21_1	6.76	6.76	6.85	0.01	0.02
C21_2	6.85	6.85	6.87	0.01	0.01
C22	7.53	7.53	7.87	0.01	0.01
C23	8.00	8.00	9.64	0.23	0.23
C24	6.60	6.60	7.09	0.17	0.17
C25	7.15	7.15	7.36	0.16	0.17
C26	6.92	6.92	7.02	0.01	0.01
C27	6.91	6.91	7.24	0.01	0.01
C27_2	6.96	6.96	7.02	0.01	0.01
C28	7.04	7.04	7.04	0.01	1.31
C29	7.08	7.08	23.11	0.01	0.01
C3	6.19	6.23	6.52	0.52	0.38
C30	23.12	23.12	23.12	0.01	0.51
C31	23.14	23.14	23.14	0.01	1.16
C32	23.15	23.15	24.00	0.01	0.01
C33	7.30	7.30	7.49	0.68	0.68
C34	7.56	7.56	7.87	0.66	0.66
C35	6.81	6.81	7.00	0.01	0.01
C36	7.03	7.03	7.21	0.02	0.01
C37	24.00	24.00	24.00	0.01	0.01
C38	6.66	6.66	6.90	0.01	0.02
C39	6.61	6.61	6.65	0.15	0.15
C4	6.14	6.14	6.27	0.25	0.22
C40	6.40	6.40	6.57	0.01	0.01
C42	0.22	0.22	7.14	0.01	0.01
C5	6.37	6.38	6.39	0.29	0.24
C6	6.44	6.46	6.59	0.26	0.22
C64	7.31	7.31	7.31	0.48	3.09
C7	4.90	4.90	6.40	0.01	0.01
C8	1.81	1.86	5.20	0.19	0.02
C9	6.71	6.72	6.82	0.18	0.18

Analysis begun on: Thu May 11 15:40:23 2023
Analysis ended on: Thu May 11 15:40:34 2023
Total elapsed time: 00:00:11

Proposed Conditions PCSWMM Output

5-year 3-hour Chicago

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)

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Element Count
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Number of rain gages 18
Number of subcatchments ... 35
Number of nodes 89
Number of links 124
Number of pollutants 0
Number of land uses 0

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Raingage Summary
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Name	Data Source	Data Type	Recording Interval
100yr_3hr_Chicago	100yr_3hr_Chicago	INTENSITY	10 min.
100yr_3hr_Chicago_Climate_Change	100yr_3hr_Chicago_Increase_20percent	INTENSITY	10 min.
100yr_6hr_Chicago	100yr_6hr_Chicago	INTENSITY	10 min.
100yr_6hr_Chicago_Climate_Change	100yr_6hr_Chicago_Increase_20percent	INTENSITY	10 min.
100yr-SCS_12hr_Type_II	100yr-SCS_12hr_Type_II	INTENSITY	6 min.
100yr-SCS_24hr_Type_II	100yr-SCS_24hr_Type_II	INTENSITY	15 min.
10yr_3hr_Chicago	10yr_3hr_Chicago	INTENSITY	10 min.
10yr_6hr_Chicago	10yr_6hr_Chicago	INTENSITY	10 min.
25mm_3hr_Chicago	25mm_3hr_Chicago	INTENSITY	10 min.
25mm_4hr_Chicago	25mm_4hr_Chicago	INTENSITY	10 min.
25yr_3hr_Chicago	25yr_3hr_Chicago	INTENSITY	10 min.
25yr_6hr_Chicago	25yr_6hr_Chicago	INTENSITY	10 min.
2yr_3hr_Chicago	2yr_3hr_Chicago	INTENSITY	10 min.
2yr_6hr_Chicago	2yr_6hr_Chicago	INTENSITY	10 min.
50yr_3hr_Chicago	50yr_3hr_Chicago	INTENSITY	10 min.
50yr_6hr_Chicago	50yr_6hr_Chicago	INTENSITY	10 min.
5yr_3hr_Chicago	5yr_3hr_Chicago	INTENSITY	10 min.
5yr_6hr_Chicago	5yr_6hr_Chicago	INTENSITY	10 min.

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Subcatchment Summary
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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
102	0.44	44.37	64.22	0.5000	5yr_3hr_Chicago	J42
107AA	0.27	176.73	86.34	0.5000	5yr_3hr_Chicago	J23
108	0.34	162.73	68.53	0.5000	5yr_3hr_Chicago	BASIN1
109	0.29	88.92	87.49	0.5000	5yr_3hr_Chicago	J9
A	0.73	37.91	43.28	0.5000	5yr_3hr_Chicago	J38
A1	1.02	234.86	98.54	0.5000	5yr_3hr_Chicago	J17
A2	1.58	358.18	97.91	0.5000	5yr_3hr_Chicago	J22
A3	0.77	217.10	100.00	0.5000	5yr_3hr_Chicago	J13
A4	0.62	170.22	100.00	2.0000	5yr_3hr_Chicago	J3
A5	0.25	30.92	99.94	0.5000	5yr_3hr_Chicago	J14
AA	0.37	72.80	54.39	0.5000	5yr_3hr_Chicago	J37
BB	0.89	50.53	41.05	0.5000	5yr_3hr_Chicago	J46
BLDG-A	0.25	254.20	100.00	0.5000	5yr_3hr_Chicago	S-BLDG-A
BLDG-B	0.36	362.60	100.00	0.5000	5yr_3hr_Chicago	S-BLDG-B
BLDG-C	0.30	299.30	100.00	0.5000	5yr_3hr_Chicago	S-BLDG-C
BLDG-D	0.14	138.00	100.00	0.5000	5yr_3hr_Chicago	S-BLDG-D
BLDGG	0.24	242.90	100.00	0.5000	5yr_3hr_Chicago	S-BLDG-G
BLDGH	0.37	370.90	100.00	0.5000	5yr_3hr_Chicago	S-BLDG-H
BLDG-I	0.23	225.60	100.00	0.5000	5yr_3hr_Chicago	S-BLDG-I
BLDG-J	0.60	604.40	100.00	0.5000	5yr_3hr_Chicago	J17
BLDG-J1	0.10	103.90	100.00	0.5000	5yr_3hr_Chicago	S-BLDG-J1
BLDG-J2	0.09	89.20	100.00	0.5000	5yr_3hr_Chicago	S-BLDG-J2
BLDG-K	0.25	247.30	99.99	0.5000	5yr_3hr_Chicago	S-BLDG-K
BLDG-L	0.12	120.70	99.98	0.5000	5yr_3hr_Chicago	J10
BLDG-L1	0.07	74.90	100.00	0.5000	5yr_3hr_Chicago	S-BLDG-L
D	0.40	38.69	36.04	0.5000	5yr_3hr_Chicago	J48
D1	0.48	271.32	32.46	0.5000	5yr_3hr_Chicago	J34
EE	0.35	38.57	15.30	0.5000	5yr_3hr_Chicago	J47
Great-Lawn	0.83	135.11	23.48	0.5000	5yr_3hr_Chicago	BASIN3
NEC	1.11	247.73	85.95	10.0000	5yr_3hr_Chicago	J75
NSTANDS	0.48	62.16	99.98	2.0000	5yr_3hr_Chicago	J7
OPGG	0.72	131.24	62.40	0.5000	5yr_3hr_Chicago	J11
SSTANDS	0.79	162.57	99.99	10.0000	5yr_3hr_Chicago	J3
T	0.13	75.86	27.76	0.5000	5yr_3hr_Chicago	J16
V	0.16	167.82	96.59	0.5000	5yr_3hr_Chicago	J12

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Node Summary
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	63.56	2.79	0.0	
J10	JUNCTION	63.14	3.10	0.0	
J11	JUNCTION	62.00	3.95	0.0	
J12	JUNCTION	63.09	2.82	0.0	
J13	JUNCTION	63.77	2.28	0.0	
J14	JUNCTION	63.95	3.10	0.0	
J15	JUNCTION	63.28	3.17	0.0	
J16	JUNCTION	63.03	2.85	0.0	
J17	JUNCTION	63.32	3.03	0.0	
J18	JUNCTION	63.36	2.64	0.0	
J19	JUNCTION	63.62	1.08	720.0	
J2	JUNCTION	64.26	3.14	0.0	
J20	JUNCTION	62.72	3.53	0.0	
J21	JUNCTION	63.31	2.94	0.0	
J22	JUNCTION	63.68	2.63	0.0	

J23	JUNCTION	62.59	2.30	1000.0
J24	JUNCTION	62.53	3.04	0.0
J25	JUNCTION	62.35	2.65	0.0
J26	JUNCTION	62.29	2.84	0.0
J27	JUNCTION	62.25	2.88	0.0
J29	JUNCTION	62.49	2.88	0.0
J3	JUNCTION	64.11	3.34	0.0
J30	JUNCTION	63.12	1.78	0.0
J31	JUNCTION	64.13	0.75	0.0
J32	JUNCTION	62.76	3.44	0.0
J34	JUNCTION	63.35	2.21	0.0
J35	JUNCTION	63.79	2.79	0.0
J36	JUNCTION	63.76	2.54	0.0
J37	JUNCTION	63.68	1.42	466.0
J38	JUNCTION	63.56	2.58	0.0
J39	JUNCTION	63.44	2.58	0.0
J4	JUNCTION	63.96	3.54	0.0
J40	JUNCTION	62.85	2.26	0.0
J41	JUNCTION	62.59	2.30	1000.0
J42	JUNCTION	64.07	1.93	0.0
J43	JUNCTION	63.89	2.31	0.0
J44	JUNCTION	63.76	2.64	0.0
J45	JUNCTION	63.57	2.83	0.0
J46	JUNCTION	63.42	2.78	0.0
J47	JUNCTION	63.12	2.93	0.0
J48	JUNCTION	64.69	3.00	0.0
J49	JUNCTION	63.82	3.58	0.0
J5	JUNCTION	63.91	3.49	0.0
J50	JUNCTION	65.08	3.00	0.0
J51	JUNCTION	64.88	3.47	0.0
J52	JUNCTION	65.31	3.00	0.0
J53	JUNCTION	65.25	3.00	0.0
J54	JUNCTION	65.25	3.00	0.0
J55	JUNCTION	65.20	3.00	0.0
J56	JUNCTION	64.95	3.00	0.0
J57	JUNCTION	65.30	3.00	0.0
J58	JUNCTION	65.35	3.00	0.0
J59	JUNCTION	65.58	3.00	0.0
J6	JUNCTION	63.42	4.08	0.0
J60	JUNCTION	64.65	3.00	0.0
J61	JUNCTION	64.30	3.00	0.0
J62	JUNCTION	64.70	3.00	0.0
J63	JUNCTION	64.50	3.00	0.0
J64	JUNCTION	64.65	3.00	0.0
J65	JUNCTION	65.10	3.00	0.0
J66	JUNCTION	64.50	3.00	0.0
J67	JUNCTION	65.17	3.00	0.0
J68	JUNCTION	65.00	3.00	0.0
J69	JUNCTION	65.43	3.00	0.0
J7	JUNCTION	63.56	1.84	0.0
J70	JUNCTION	65.20	3.00	0.0
J71	JUNCTION	63.38	3.12	0.0
J73	JUNCTION	63.27	3.23	0.0
J74	JUNCTION	63.22	3.28	0.0
J75	JUNCTION	63.12	3.38	0.0
J8	JUNCTION	63.30	2.60	0.0
J9	JUNCTION	62.91	3.32	0.0
ST202	JUNCTION	63.33	3.17	0.0
J28	OUTFALL	62.22	0.97	0.0
J72	OUTFALL	62.58	0.60	0.0
BASIN1	STORAGE	62.81	2.39	0.0
BASIN2	STORAGE	62.95	2.19	0.0
BASIN3	STORAGE	63.09	1.81	0.0
S-BLDG-A	STORAGE	100.00	0.15	0.0
S-BLDG-B	STORAGE	100.00	0.15	0.0
S-BLDG-C	STORAGE	100.00	0.15	0.0
S-BLDG-D	STORAGE	100.00	0.15	0.0
S-BLDG-G	STORAGE	100.00	0.15	0.0
S-BLDG-H	STORAGE	100.00	0.15	0.0
S-BLDG-I	STORAGE	100.00	0.15	0.0
S-BLDG-J1	STORAGE	100.00	0.15	0.0
S-BLDG-J2	STORAGE	100.00	0.15	0.0
S-BLDG-K	STORAGE	100.00	0.15	0.0
S-BLDG-L	STORAGE	100.00	0.15	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J14	J13	CONDUIT	75.0	0.2001	0.0130
C10_1	J34	J8	CONDUIT	25.1	0.0954	0.0130
C11	J8	J74	CONDUIT	26.1	0.2298	0.0130
C12_2	J31	J72	CONDUIT	24.9	6.5133	0.0130
C13	J35	J17	CONDUIT	24.3	0.4946	0.0130
C14	J36	J17	CONDUIT	17.9	0.5037	0.0130
C15	J17	J15	CONDUIT	9.4	0.2126	0.0130
C16	J15	J10	CONDUIT	39.5	0.2785	0.0130
C17	J10	J9	CONDUIT	11.3	0.1770	0.0130
C18	J47	J12	CONDUIT	30.2	0.0992	0.0130
C18_1	J9	J40	CONDUIT	43.3	0.2542	0.0130
C18_2	J40	J11	CONDUIT	59.3	0.0337	0.0130
C19	J12	J16	CONDUIT	57.0	0.0526	0.0130
C2	J2	J3	CONDUIT	60.8	0.1975	0.0130
C20	J16	J11	CONDUIT	16.7	6.1921	0.0130
C21	J46	J47	CONDUIT	53.4	0.2247	0.0130
C21_1	J11	J32	CONDUIT	70.1	0.0599	0.0130
C21_2	J32	J20	CONDUIT	14.2	0.0565	0.0130
C22	J19	J18	CONDUIT	31.8	0.5029	0.0130
C23	J18	J11	CONDUIT	41.5	0.5054	0.0130
C24	J22	J21	CONDUIT	90.6	0.3752	0.0130
C25	J21	J20	CONDUIT	25.4	0.3937	0.0130
C26	J20	J23	CONDUIT	23.5	0.1703	0.0130
C27	J45	J46	CONDUIT	63.9	0.2347	0.0130

C27_2	J41	J24	CONDUIT	82.3	0.0850	0.0130
C28	J24	J29	CONDUIT	14.1	0.0711	0.0130
C29	J29	J25	CONDUIT	78.9	0.1394	0.0130
C3	J3	J4	CONDUIT	60.7	0.1976	0.0130
C30	J25	J26	CONDUIT	17.8	0.1125	0.0130
C31	J26	J27	CONDUIT	4.6	0.4383	0.0130
C32	J27	J28	CONDUIT	8.1	0.3695	0.0130
C33	J37	J1	CONDUIT	20.0	0.4509	0.0130
C34	J1	J18	CONDUIT	29.0	0.5178	0.0130
C35	J38	J39	CONDUIT	100.1	0.0999	0.0130
C36	J39	J34	CONDUIT	105.1	0.0761	0.0130
C38	J44	J45	CONDUIT	73.4	0.1498	0.0130
C39	J43	J44	CONDUIT	35.7	0.1400	0.0130
C4	J4	J5	CONDUIT	8.8	0.2278	0.0130
C40	J42	J43	CONDUIT	92.3	0.1517	0.0130
C41	J48	J49	CONDUIT	88.2	0.3287	0.0350
C43	J50	J51	CONDUIT	105.0	0.1904	0.0350
C44	J51	J48	CONDUIT	21.6	0.8797	0.0240
C45	J52	J53	CONDUIT	90.8	0.0661	0.0130
C46	J53	J54	CONDUIT	22.0	0.0014	0.0130
C47	J54	J55	CONDUIT	7.7	0.6525	0.0130
C48	J55	J56	CONDUIT	65.7	0.3804	0.0130
C49	J59	J58	CONDUIT	18.0	1.2770	0.0130
C5	J5	J6	CONDUIT	6.7	0.1504	0.0130
C50	J58	J57	CONDUIT	14.2	0.3521	0.0130
C51	J57	J52	CONDUIT	47.6	-0.0210	0.0130
C52	J60	J61	CONDUIT	70.3	0.4980	0.0350
C53	J62	J63	CONDUIT	26.8	0.7450	0.0350
C54	J64	J63	CONDUIT	37.1	0.4039	0.0350
C55	J65	J66	CONDUIT	51.5	1.1643	0.0350
C56	J67	J68	CONDUIT	10.1	1.6809	0.0350
C57	J69	J68	CONDUIT	52.1	0.8247	0.0350
C58	J69	J70	CONDUIT	39.7	0.5794	0.0350
C59	J71	ST202	CONDUIT	32.1	0.0934	0.0130
C6	J7	J6	CONDUIT	63.3	0.0947	0.0130
C60	ST202	J73	CONDUIT	42.4	0.0943	0.0130
C61	J73	J74	CONDUIT	28.8	0.1043	0.0130
C62	J74	J75	CONDUIT	48.2	0.1037	0.0130
C63	J75	BASIN3	CONDUIT	31.2	0.0961	0.0130
C7	J13	J7	CONDUIT	74.9	0.2004	0.0130
C8	J6	J71	CONDUIT	18.6	0.1073	0.0130
C9	J30	BASIN3	CONDUIT	44.8	0.0670	0.0130
W4	BASIN2	BASIN3	CONDUIT	9.3	-0.4287	0.0130
C12_1	J30	J31	ORIFICE			
C27_1	J23	J41	ORIFICE			
OR1	BASIN2	J40	ORIFICE			
OR2	BASIN1	J32	ORIFICE			
W1	BASIN1	J32	WEIR			
W10	J39	J48	WEIR			
W11	J34	J49	WEIR			
W12	J38	J50	WEIR			
W13	J15	BASIN3	WEIR			
W14	J8	J60	WEIR			
W15	J47	BASIN3	WEIR			
W16	J22	J52	WEIR			
W17	J21	J53	WEIR			
W18	J20	J54	WEIR			
W19	J32	J55	WEIR			
W2	J40	BASIN2	WEIR			
W20	J11	J56	WEIR			
W21	J35	J59	WEIR			
W22	J17	J58	WEIR			
W23	J36	J57	WEIR			
W24	J14	J13	WEIR			
W25	J13	J7	WEIR			
W27	J2	J3	WEIR			
W28	J3	J4	WEIR			
W29	J4	J5	WEIR			
W3	J32	BASIN1	WEIR			
W30	J5	J6	WEIR			
W31	J6	J7	WEIR			
W32	J10	BASIN3	WEIR			
W33	J44	J65	WEIR			
W34	J45	J64	WEIR			
W35	J46	J62	WEIR			
W36	J1	J55	WEIR			
W37	J18	J56	WEIR			
W38	J42	J68	WEIR			
W39	J43	J70	WEIR			
W40	J9	BASIN3	WEIR			
W6	J12	BASIN3	WEIR			
W7	J16	BASIN3	WEIR			
W8	J11	BASIN3	WEIR			
C42	J49	J8	OUTLET			
OL1	J61	J34	OUTLET			
OL10	S-BLDG-H	J17	OUTLET			
OL11	S-BLDG-G	J17	OUTLET			
OL12	S-BLDG-I	J14	OUTLET			
OL13	S-BLDG-K	J14	OUTLET			
OL14	S-BLDG-J1	J35	OUTLET			
OL15	S-BLDG-J2	J35	OUTLET			
OL16	S-BLDG-L	J10	OUTLET			
OL2	J63	J46	OUTLET			
OL3	J66	J45	OUTLET			
OL4	J68	J42	OUTLET			
OL5	J70	J43	OUTLET			
OL6	S-BLDG-A	J22	OUTLET			
OL7	S-BLDG-B	J22	OUTLET			
OL8	S-BLDG-C	J22	OUTLET			
OL9	S-BLDG-D	J22	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	CIRCULAR	0.82	0.53	0.21	0.82	1	0.64
C10_1	CIRCULAR	0.60	0.28	0.15	0.60	1	0.19
C11	CIRCULAR	0.90	0.64	0.23	0.90	1	0.87
C12_2	CIRCULAR	0.60	0.28	0.15	0.60	1	1.57
C13	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C14	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C15	CIRCULAR	0.60	0.28	0.15	0.60	1	0.28
C16	CIRCULAR	0.60	0.28	0.15	0.60	1	0.32
C17	CIRCULAR	0.60	0.28	0.15	0.60	1	0.26
C18	CIRCULAR	0.90	0.64	0.23	0.90	1	0.57
C18_1	CIRCULAR	1.35	1.43	0.34	1.35	1	2.69
C18_2	CIRCULAR	1.35	1.43	0.34	1.35	1	0.98
C19	CIRCULAR	0.90	0.64	0.23	0.90	1	0.42
C2	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
C20	CIRCULAR	0.90	0.64	0.23	0.90	1	4.51
C21	CIRCULAR	0.53	0.22	0.13	0.53	1	0.20
C21_1	CIRCULAR	1.35	1.43	0.34	1.35	1	1.31
C21_2	CIRCULAR	1.35	1.43	0.34	1.35	1	1.27
C22	CIRCULAR	0.20	0.03	0.05	0.20	1	0.02
C23	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C24	CIRCULAR	0.68	0.36	0.17	0.68	1	0.51
C25	CIRCULAR	0.68	0.36	0.17	0.68	1	0.53
C26	CIRCULAR	1.35	1.43	0.34	1.35	1	2.20
C27	CIRCULAR	0.53	0.22	0.13	0.53	1	0.21
C27_2	CIRCULAR	0.97	0.75	0.24	0.97	1	0.65
C28	CIRCULAR	0.97	0.75	0.24	0.97	1	0.60
C29	CIRCULAR	0.97	0.75	0.24	0.97	1	0.84
C3	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
C30	CIRCULAR	0.97	0.75	0.24	0.97	1	0.75
C31	CIRCULAR	0.97	0.75	0.24	0.97	1	1.48
C32	CIRCULAR	0.97	0.75	0.24	0.97	1	1.36
C33	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C34	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C35	CIRCULAR	0.60	0.28	0.15	0.60	1	0.19
C36	CIRCULAR	0.60	0.28	0.15	0.60	1	0.17
C38	CIRCULAR	0.45	0.16	0.11	0.45	1	0.11
C39	CIRCULAR	0.38	0.11	0.09	0.38	1	0.07
C4	CIRCULAR	0.60	0.28	0.15	0.60	1	0.29
C40	CIRCULAR	0.38	0.11	0.09	0.38	1	0.07
C41	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	4.38
C43	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	3.33
C44	CIRCULAR	0.25	0.05	0.06	0.25	1	0.03
C45	RECT_OPEN	1.00	8.00	0.80	8.00	1	13.63
C46	RECT_OPEN	1.00	8.00	0.80	8.00	1	1.98
C47	RECT_OPEN	1.00	8.00	0.80	8.00	1	42.85
C48	RECT_OPEN	1.00	8.00	0.80	8.00	1	32.71
C49	RECT_OPEN	1.00	8.00	0.80	8.00	1	59.94
C5	CIRCULAR	0.60	0.28	0.15	0.60	1	0.24
C50	RECT_OPEN	1.00	8.00	0.80	8.00	1	31.48
C51	RECT_OPEN	1.00	8.00	0.80	8.00	1	7.69
C52	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	5.39
C53	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	6.59
C54	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	4.85
C55	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	8.24
C56	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	6.76
C57	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	4.74
C58	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	3.97
C59	CIRCULAR	1.05	0.87	0.26	1.05	1	0.83
C6	CIRCULAR	1.05	0.87	0.26	1.05	1	0.84
C60	CIRCULAR	1.05	0.87	0.26	1.05	1	0.84
C61	CIRCULAR	1.05	0.87	0.26	1.05	1	0.88
C62	CIRCULAR	1.05	0.87	0.26	1.05	1	0.88
C63	CIRCULAR	1.05	0.87	0.26	1.05	1	0.85
C7	CIRCULAR	0.82	0.53	0.21	0.82	1	0.64
C8	CIRCULAR	1.05	0.87	0.26	1.05	1	0.89
C9	CIRCULAR	0.60	0.28	0.15	0.60	1	0.16
W4	CIRCULAR	0.60	0.28	0.15	0.60	1	0.40

****
Shape Summary
****

Shape 0.510_1
Area:

0.0040	0.0122	0.0237	0.0378	0.0541
0.0723	0.0915	0.1116	0.1323	0.1535
0.1753	0.1974	0.2200	0.2429	0.2660
0.2892	0.3125	0.3357	0.3589	0.3821
0.4053	0.4285	0.4517	0.4749	0.4981
0.5213	0.5445	0.5677	0.5910	0.6142
0.6374	0.6606	0.6838	0.7070	0.7302
0.7534	0.7766	0.7998	0.8230	0.8462
0.8695	0.8927	0.9159	0.9381	0.9570
0.9725	0.9845	0.9931	0.9983	1.0000

Hrad:

0.0326	0.0620	0.0927	0.1255	0.1571
0.1941	0.2345	0.2757	0.3174	0.3595
0.4018	0.4435	0.4860	0.5280	0.5727
0.6191	0.6650	0.7103	0.7551	0.7994
0.8433	0.8866	0.9295	0.9719	1.0138
1.0552	1.0963	1.1369	1.1770	1.2167
1.2560	1.2949	1.3334	1.3715	1.4092
1.4465	1.4834	1.5199	1.5561	1.5919
1.6273	1.6624	1.6971	1.5863	1.4511
1.3366	1.2373	1.1497	1.0712	1.0000

Width:

0.2699	0.4300	0.5564	0.6554	0.7492
0.8096	0.8484	0.8791	0.9048	0.9265
0.9452	0.9640	0.9791	0.9940	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000

1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 0.8889 0.7407
0.5926 0.4444 0.2963 0.1481 0.0000

Shape 0.510_2
Area:
0.0007 0.0029 0.0063 0.0108 0.0164
0.0230 0.0306 0.0392 0.0487 0.0591
0.0705 0.0827 0.0958 0.1097 0.1244
0.1399 0.1562 0.1733 0.1911 0.2096
0.2288 0.2488 0.2694 0.2908 0.3128
0.3355 0.3589 0.3829 0.4075 0.4329
0.4589 0.4855 0.5128 0.5408 0.5694
0.5987 0.6287 0.6593 0.6906 0.7225
0.7551 0.7884 0.8223 0.8570 0.8923
0.9284 0.9598 0.9822 0.9956 1.0000
Hrad:
0.0372 0.0761 0.1167 0.1577 0.1971
0.2365 0.2767 0.3160 0.3545 0.3926
0.4324 0.4727 0.5123 0.5513 0.5899
0.6298 0.6707 0.7109 0.7506 0.7899
0.8288 0.8684 0.9079 0.9473 0.9872
1.0266 1.0657 1.1045 1.1430 1.1812
1.2191 1.2568 1.2943 1.3316 1.3687
1.4056 1.4423 1.4789 1.5153 1.5517
1.5879 1.6237 1.6580 1.6923 1.7266
1.7432 1.4768 1.2801 1.1258 1.0000
Width:
0.0402 0.0771 0.1097 0.1387 0.1678
0.1958 0.2219 0.2480 0.2741 0.3002
0.3244 0.3474 0.3704 0.3935 0.4165
0.4380 0.4582 0.4785 0.4987 0.5189
0.5392 0.5585 0.5776 0.5964 0.6146
0.6327 0.6509 0.6691 0.6872 0.7054
0.7235 0.7417 0.7599 0.7780 0.7962
0.8143 0.8325 0.8506 0.8688 0.8870
0.9051 0.9235 0.9428 0.9622 0.9816
0.9876 0.7397 0.4917 0.2445 0.0000

Shape 0.510_3
Area:
0.0005 0.0019 0.0043 0.0076 0.0119
0.0170 0.0230 0.0299 0.0377 0.0464
0.0559 0.0663 0.0776 0.0897 0.1027
0.1165 0.1312 0.1467 0.1631 0.1804
0.1985 0.2175 0.2373 0.2580 0.2795
0.3018 0.3250 0.3489 0.3736 0.3991
0.4254 0.4525 0.4804 0.5091 0.5386
0.5689 0.6000 0.6319 0.6645 0.6980
0.7323 0.7673 0.8031 0.8396 0.8769
0.9149 0.9516 0.9785 0.9946 1.0000
Hrad:
0.0376 0.0752 0.1127 0.1518 0.1901
0.2280 0.2657 0.3033 0.3414 0.3798
0.4180 0.4559 0.4937 0.5313 0.5689
0.6063 0.6437 0.6811 0.7183 0.7556
0.7928 0.8300 0.8671 0.9042 0.9429
0.9819 1.0207 1.0593 1.0978 1.1362
1.1744 1.2125 1.2505 1.2884 1.3262
1.3639 1.4016 1.4392 1.4767 1.5142
1.5516 1.5904 1.6294 1.6682 1.7069
1.7455 1.5679 1.3259 1.1446 1.0000
Width:
0.0248 0.0496 0.0744 0.0976 0.1208
0.1440 0.1672 0.1904 0.2131 0.2352
0.2574 0.2796 0.3018 0.3240 0.3462
0.3684 0.3905 0.4127 0.4349 0.4571
0.4793 0.5015 0.5236 0.5458 0.5668
0.5874 0.6079 0.6285 0.6490 0.6696
0.6902 0.7107 0.7313 0.7519 0.7724
0.7930 0.8135 0.8341 0.8547 0.8752
0.8958 0.9153 0.9345 0.9538 0.9730
0.9923 0.8333 0.5556 0.2778 0.0000

Shape 1.030_1
Area:
0.0011 0.0036 0.0070 0.0115 0.0170
0.0237 0.0348 0.0512 0.0715 0.0924
0.1137 0.1363 0.1590 0.1817 0.2045
0.2272 0.2499 0.2727 0.2954 0.3181
0.3409 0.3636 0.3863 0.4090 0.4318
0.4545 0.4772 0.5000 0.5227 0.5454
0.5681 0.5909 0.6136 0.6363 0.6591
0.6818 0.7045 0.7272 0.7500 0.7727
0.7954 0.8182 0.8409 0.8636 0.8864
0.9091 0.9318 0.9545 0.9773 1.0000
Hrad:
0.0314 0.0635 0.0926 0.1201 0.1455
0.1620 0.1324 0.1419 0.1823 0.2297
0.2745 0.3125 0.3616 0.4100 0.4577
0.5046 0.5507 0.5962 0.6410 0.6850
0.7284 0.7712 0.8133 0.8548 0.8957
0.9360 0.9758 1.0149 1.0535 1.0916
1.1291 1.1661 1.2026 1.2386 1.2741
1.3091 1.3436 1.3777 1.4113 1.4445
1.4773 1.5096 1.5415 1.5730 1.6041
1.6348 1.6651 1.6950 1.7246 1.0000
Width:
0.0832 0.1290 0.1738 0.2192 0.2684
0.3361 0.6079 0.8354 0.9071 0.9283
0.9547 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000

1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000

Shape 1.030_2
Area:
0.0006 0.0025 0.0059 0.0111 0.0174
0.0246 0.0324 0.0407 0.0495 0.0589
0.0687 0.0791 0.0900 0.1014 0.1133
0.1257 0.1388 0.1524 0.1667 0.1815
0.1973 0.2142 0.2318 0.2503 0.2694
0.2893 0.3100 0.3313 0.3532 0.3758
0.3991 0.4229 0.4473 0.4723 0.4978
0.5241 0.5510 0.5787 0.6077 0.6381
0.6695 0.7019 0.7354 0.7699 0.8055
0.8421 0.8797 0.9185 0.9586 1.0000
Hrad:
0.0439 0.0784 0.1169 0.1600 0.2149
0.2771 0.3374 0.3949 0.4523 0.5075
0.5611 0.6132 0.6640 0.7137 0.7620
0.8054 0.8484 0.8912 0.9337 0.9723
0.9801 1.0115 1.0497 1.0882 1.1268
1.1656 1.2075 1.2511 1.2946 1.3380
1.3842 1.4302 1.4758 1.5212 1.5663
1.6056 1.6451 1.6692 1.6678 1.6891
1.7156 1.7430 1.7713 1.8004 1.8302
1.8607 1.8918 1.9130 1.9355 1.0000
Width:
0.0272 0.0632 0.1025 0.1394 0.1631
0.1778 0.1913 0.2046 0.2167 0.2288
0.2408 0.2529 0.2650 0.2771 0.2894
0.3036 0.3178 0.3320 0.3462 0.3619
0.3912 0.4118 0.4296 0.4473 0.4651
0.4829 0.4993 0.5148 0.5304 0.5458
0.5598 0.5739 0.5879 0.6020 0.6160
0.6325 0.6491 0.6724 0.7082 0.7349
0.7597 0.7846 0.8094 0.8343 0.8591
0.8840 0.9088 0.9392 0.9696 1.0000

Shape 1.030_3
Area:
0.0028 0.0081 0.0149 0.0226 0.0310
0.0401 0.0498 0.0600 0.0709 0.0824
0.0943 0.1068 0.1199 0.1335 0.1476
0.1624 0.1777 0.1937 0.2102 0.2274
0.2451 0.2634 0.2823 0.3018 0.3219
0.3425 0.3637 0.3855 0.4079 0.4308
0.4543 0.4784 0.5030 0.5282 0.5540
0.5804 0.6073 0.6348 0.6628 0.6913
0.7203 0.7496 0.7794 0.8096 0.8402
0.8711 0.9025 0.9343 0.9668 1.0000
Hrad:
0.0451 0.0901 0.1398 0.1923 0.2412
0.2899 0.3377 0.3838 0.4285 0.4737
0.5176 0.5606 0.6026 0.6435 0.6817
0.7195 0.7569 0.7939 0.8306 0.8670
0.9031 0.9390 0.9747 1.0109 1.0473
1.0834 1.1193 1.1550 1.1906 1.2260
1.2612 1.2964 1.3313 1.3662 1.4010
1.4356 1.4702 1.5050 1.5431 1.5809
1.6213 1.6633 1.7049 1.7462 1.7871
1.8279 1.8683 1.8978 1.9230 1.0000
Width:
0.1283 0.1844 0.2182 0.2395 0.2610
0.2801 0.2978 0.3155 0.3330 0.3490
0.3651 0.3811 0.3971 0.4134 0.4311
0.4488 0.4666 0.4843 0.5020 0.5197
0.5374 0.5552 0.5729 0.5901 0.6071
0.6242 0.6412 0.6582 0.6752 0.6922
0.7092 0.7262 0.7432 0.7603 0.7773
0.7943 0.8113 0.8281 0.8427 0.8574
0.8703 0.8821 0.8939 0.9057 0.9174
0.9292 0.9410 0.9589 0.9794 1.0000

Shape 1170_1
Area:
0.0018 0.0072 0.0137 0.0215 0.0304
0.0401 0.0506 0.0624 0.0759 0.0914
0.1075 0.1242 0.1414 0.1591 0.1773
0.1960 0.2153 0.2350 0.2553 0.2761
0.2975 0.3193 0.3417 0.3646 0.3881
0.4121 0.4366 0.4616 0.4882 0.5202
0.5669 0.6113 0.6533 0.6929 0.7301
0.7649 0.7973 0.8273 0.8548 0.8800
0.9028 0.9232 0.9412 0.9568 0.9700
0.9808 0.9892 0.9952 0.9988 1.0000
Hrad:
0.0375 0.1240 0.1851 0.2523 0.3182
0.3831 0.4393 0.4740 0.4912 0.5519
0.6223 0.6900 0.7553 0.8185 0.8798
0.9393 0.9973 1.0539 1.1093 1.1635
1.2166 1.2688 1.3201 1.3700 1.4193
1.4680 1.5160 1.5558 1.5322 0.9940
1.0362 1.0707 1.0984 1.1200 1.1364
1.1479 1.1552 1.1587 1.1586 1.1554
1.1494 1.1407 1.1297 1.1165 1.1013
1.0842 1.0654 1.0450 1.0232 1.0000
Width:
0.1024 0.1194 0.1520 0.1734 0.1922
0.2082 0.2276 0.2610 0.3080 0.3282
0.3390 0.3498 0.3606 0.3713 0.3821
0.3929 0.4037 0.4144 0.4252 0.4360
0.4468 0.4575 0.4684 0.4795 0.4906

0.5017 0.5128 0.5273 0.5728 0.9926
0.9429 0.8933 0.8437 0.7940 0.7444
0.6948 0.6452 0.5955 0.5459 0.4963
0.4467 0.3970 0.3474 0.2978 0.2481
0.1985 0.1489 0.0993 0.0496 0.0000

Shape 1170_2
Area:
0.0005 0.0018 0.0041 0.0074 0.0117
0.0169 0.0230 0.0298 0.0374 0.0459
0.0551 0.0652 0.0762 0.0879 0.1005
0.1144 0.1311 0.1544 0.1817 0.2092
0.2367 0.2642 0.2917 0.3192 0.3467
0.3742 0.4017 0.4292 0.4567 0.4842
0.5117 0.5393 0.5668 0.5943 0.6218
0.6493 0.6768 0.7043 0.7318 0.7593
0.7868 0.8143 0.8418 0.8693 0.8968
0.9244 0.9519 0.9780 0.9945 1.0000
Hrad:
0.0316 0.0626 0.0953 0.1241 0.1548
0.1901 0.2251 0.2588 0.2916 0.3223
0.3530 0.3837 0.4152 0.4465 0.4776
0.4832 0.4225 0.4104 0.4516 0.5088
0.5636 0.6161 0.6665 0.7149 0.7614
0.8061 0.8492 0.8907 0.9307 0.9692
1.0065 1.0424 1.0772 1.1108 1.1433
1.1747 1.2052 1.2347 1.2633 1.2911
1.3180 1.3441 1.3695 1.3942 1.4182
1.4415 1.4642 1.3515 1.1540 1.0000
Width:
0.0333 0.0679 0.0983 0.1370 0.1758
0.2064 0.2344 0.2623 0.2904 0.3214
0.3523 0.3833 0.4129 0.4424 0.4718
0.5431 0.7533 0.9431 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 0.8000 0.4000 0.0000

Shape 2961
Area:
0.0057 0.0121 0.0191 0.0264 0.0341
0.0422 0.0506 0.0593 0.0684 0.0778
0.0876 0.0978 0.1082 0.1257 0.1448
0.1647 0.1849 0.2052 0.2257 0.2463
0.2672 0.2881 0.3093 0.3306 0.3521
0.3741 0.4001 0.4262 0.4523 0.4784
0.5045 0.5305 0.5566 0.5827 0.6088
0.6349 0.6609 0.6870 0.7131 0.7392
0.7653 0.7914 0.8174 0.8435 0.8696
0.8957 0.9218 0.9478 0.9739 1.0000
Hrad:
0.0599 0.1132 0.1636 0.2129 0.2593
0.3031 0.3448 0.3846 0.4229 0.4598
0.4956 0.5303 0.5641 0.4010 0.4344
0.4810 0.5308 0.5795 0.6270 0.6734
0.7189 0.7633 0.8069 0.8496 0.8908
0.8013 0.8477 0.8930 0.9374 0.9808
1.0233 1.0649 1.1057 1.1456 1.1847
1.2230 1.2605 1.2973 1.3334 1.3688
1.4035 1.4375 1.4709 1.5037 1.5359
1.5674 1.5984 1.6289 1.6588 1.0000
Width:
0.2320 0.2558 0.2754 0.2887 0.3020
0.3153 0.3286 0.3419 0.3552 0.3685
0.3818 0.3951 0.4084 0.7054 0.7522
0.7696 0.7759 0.7822 0.7886 0.7949
0.8012 0.8075 0.8138 0.8201 0.8274
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000

Shape 3235
Area:
0.0097 0.0196 0.0299 0.0405 0.0513
0.0625 0.0740 0.0857 0.0978 0.1101
0.1228 0.1357 0.1490 0.1625 0.1764
0.1905 0.2141 0.2379 0.2617 0.2855
0.3094 0.3332 0.3570 0.3808 0.4046
0.4284 0.4523 0.4761 0.4999 0.5237
0.5475 0.5713 0.5951 0.6190 0.6428
0.6666 0.6904 0.7142 0.7380 0.7618
0.7857 0.8095 0.8333 0.8571 0.8809
0.9047 0.9286 0.9524 0.9762 1.0000
Hrad:
0.0581 0.1132 0.1656 0.2157 0.2636
0.3097 0.3541 0.3970 0.4385 0.4788
0.5179 0.5560 0.5931 0.6294 0.6648
0.6995 0.4904 0.5388 0.5861 0.6324
0.6776 0.7219 0.7652 0.8076 0.8492
0.8898 0.9296 0.9687 1.0069 1.0444
1.0811 1.1171 1.1525 1.1871 1.2211
1.2545 1.2872 1.3193 1.3509 1.3819
1.4123 1.4422 1.4715 1.5003 1.5287
1.5565 1.5839 1.6108 1.6373 1.0000
Width:
0.4124 0.4250 0.4375 0.4500 0.4625
0.4750 0.4875 0.5000 0.5125 0.5250
0.5375 0.5500 0.5625 0.5750 0.5876
0.6001 1.0000 1.0000 1.0000 1.0000
1.0000 1.0000 1.0000 1.0000 1.0000

1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	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 ..... YES
  Water Quality ..... NO
Infiltration Method ..... HORTON
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date 07/23/2009 00:01:00
Ending Date 07/24/2009 00:01:00
Antecedent Dry Days 0.0
Report Time Step 00:05:00
Wet Time Step 00:05:00
Dry Time Step 00:05:00
Routing Time Step ..... 1.00 sec
Variable Time Step ..... YES
Maximum Trials 20
Number of Threads 2
Head Tolerance ..... 0.001500 m

Runoff Quantity Continuity	Volume hectare-m	Depth mm
Total Precipitation	0.687	42.514
Evaporation Loss	0.000	0.000
Infiltration Loss	0.165	10.205
Surface Runoff	0.507	31.351
Final Storage	0.020	1.228
Continuity Error (%)	-0.634	

Flow Routing Continuity	Volume hectare-m	Volume 10^6 ltr
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.507	5.068
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.283	2.828
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.001	0.007
Final Stored Volume	0.224	2.235
Continuity Error (%)	0.232	

Highest Continuity Errors

Node J12 (2.51%)
Node J16 (1.90%)
Node BASIN1 (-1.84%)
Node J49 (1.42%)
Node J44 (1.28%)

Time-Step Critical Elements

None

Highest Flow Instability Indexes

Link C27_1 (106)
Link OR2 (39)
Link W1 (34)
Link W3 (33)
Link C28 (20)

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	:	2.09
Percent Not Converging	:	0.06

Time Step Frequencies :

1.000 - 0.871 sec	:	99.16 %
0.871 - 0.758 sec	:	0.17 %
0.758 - 0.660 sec	:	0.14 %
0.660 - 0.574 sec	:	0.14 %
0.574 - 0.500 sec	:	0.39 %

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS	Runoff Coeff
102	42.51	0.00	0.00	18.15	26.53	10.41	23.68	0.11	0.05	0.557
107AA	42.51	0.00	0.00	4.97	35.58	0.92	36.50	0.10	0.07	0.858
108	42.51	0.00	0.00	11.76	28.25	1.70	29.95	0.10	0.08	0.705
109	42.51	0.00	0.00	4.61	36.14	0.76	36.90	0.11	0.08	0.868
A	42.51	0.00	0.00	31.60	17.87	10.43	10.43	0.08	0.02	0.245
A1	42.51	0.00	0.00	0.52	40.72	0.11	40.83	0.42	0.29	0.960
A2	42.51	0.00	0.00	0.75	40.46	0.15	40.61	0.64	0.45	0.955
A3	42.51	0.00	0.00	0.00	41.32	0.00	41.32	0.32	0.22	0.972
A4	42.51	0.00	0.00	0.00	41.26	0.00	41.26	0.26	0.18	0.970
A5	42.51	0.00	0.00	0.02	41.27	0.01	41.28	0.10	0.07	0.971
AA	42.51	0.00	0.00	21.24	22.47	9.50	20.73	0.08	0.04	0.488
BB	42.51	0.00	0.00	32.15	16.96	9.91	9.91	0.09	0.02	0.233
BLDG-A	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.10	0.07	0.968
BLDG-B	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.15	0.10	0.968
BLDG-C	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.12	0.09	0.968
BLDG-D	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.06	0.04	0.968
BLDGG	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.10	0.07	0.968
BLDGH	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.15	0.11	0.968
BLDG-I	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.09	0.07	0.968
BLDG-J	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.25	0.17	0.968
BLDG-J1	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.04	0.03	0.968
BLDG-J2	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.04	0.03	0.968
BLDG-K	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.10	0.07	0.968
BLDG-L	42.51	0.00	0.00	0.01	41.15	0.00	41.16	0.05	0.03	0.968
BLDG-L1	42.51	0.00	0.00	0.00	41.16	0.00	41.16	0.03	0.02	0.968
D	42.51	0.00	0.00	32.25	14.89	9.90	9.90	0.04	0.01	0.233
D1	42.51	0.00	0.00	27.96	13.34	7.60	14.28	0.07	0.05	0.336
EE	42.51	0.00	0.00	38.27	6.31	4.08	4.08	0.01	0.01	0.096
Great-Lawn	42.51	0.00	0.00	35.08	9.68	7.21	7.21	0.06	0.02	0.169
NEC	42.51	0.00	0.00	5.08	35.36	0.98	36.35	0.41	0.30	0.855
NSTANDS	42.51	0.00	0.00	0.01	41.32	0.00	41.32	0.20	0.14	0.972
OPGG	42.51	0.00	0.00	14.65	25.78	1.37	27.15	0.20	0.14	0.639
SSTANDS	42.51	0.00	0.00	0.00	41.17	0.00	41.17	0.32	0.23	0.968
T	42.51	0.00	0.00	27.60	11.41	3.23	14.64	0.02	0.01	0.344
V	42.51	0.00	0.00	1.22	39.75	0.25	40.00	0.06	0.05	0.941

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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	0.09	0.67	64.23	0	01:10	0.65
J10	JUNCTION	0.39	0.87	64.01	0	01:10	0.87
J11	JUNCTION	1.49	1.93	63.93	0	01:22	1.92
J12	JUNCTION	0.43	0.86	63.95	0	01:09	0.84
J13	JUNCTION	0.03	0.44	64.21	0	01:10	0.44
J14	JUNCTION	0.02	0.28	64.23	0	01:10	0.27
J15	JUNCTION	0.25	0.98	64.26	0	01:10	0.97
J16	JUNCTION	0.49	0.90	63.93	0	01:09	0.90
J17	JUNCTION	0.22	0.99	64.31	0	01:10	0.99
J18	JUNCTION	0.17	0.74	64.10	0	01:11	0.72
J19	JUNCTION	0.07	1.08	64.70	0	01:06	0.46
J2	JUNCTION	0.01	1.29	65.55	0	01:10	1.28
J20	JUNCTION	0.79	1.21	63.93	0	01:22	1.21
J21	JUNCTION	0.22	0.69	64.00	0	01:10	0.68
J22	JUNCTION	0.06	0.56	64.24	0	01:10	0.56
J23	JUNCTION	0.91	1.35	63.94	0	01:21	1.33
J24	JUNCTION	0.96	1.54	64.07	0	01:04	1.39
J25	JUNCTION	1.13	1.58	63.93	0	01:21	1.58
J26	JUNCTION	1.19	1.64	63.93	0	01:21	1.64
J27	JUNCTION	1.22	1.69	63.94	0	01:04	1.68
J29	JUNCTION	0.99	1.55	64.04	0	01:04	1.43
J3	JUNCTION	0.03	1.44	65.55	0	01:10	1.43
J30	JUNCTION	0.40	0.74	63.86	0	07:36	0.74
J31	JUNCTION	0.00	0.00	64.13	0	00:00	0.00
J32	JUNCTION	0.75	1.17	63.93	0	01:21	1.17
J34	JUNCTION	0.19	0.57	63.92	0	01:12	0.53
J35	JUNCTION	0.02	0.53	64.32	0	01:10	0.52
J36	JUNCTION	0.03	0.56	64.32	0	01:10	0.55
J37	JUNCTION	0.05	0.64	64.32	0	01:10	0.63
J38	JUNCTION	0.08	0.40	63.96	0	01:12	0.35
J39	JUNCTION	0.13	0.51	63.95	0	01:11	0.44
J4	JUNCTION	0.02	0.44	64.40	0	01:10	0.44
J40	JUNCTION	0.66	1.08	63.93	0	01:22	1.07
J41	JUNCTION	0.90	1.35	63.94	0	01:22	1.34
J42	JUNCTION	0.01	0.24	64.31	0	01:10	0.23
J43	JUNCTION	0.01	0.23	64.12	0	01:10	0.23
J44	JUNCTION	0.03	0.31	64.07	0	01:09	0.29
J45	JUNCTION	0.08	0.46	64.03	0	01:08	0.40
J46	JUNCTION	0.13	0.56	63.98	0	01:08	0.54
J47	JUNCTION	0.40	0.85	63.97	0	01:09	0.81
J48	JUNCTION	0.00	0.07	64.76	0	01:33	0.07
J49	JUNCTION	0.46	0.53	64.35	0	01:33	0.53

J5	JUNCTION	0.02	0.44	64.35	0	01:10	0.44
J50	JUNCTION	0.00	0.00	65.08	0	00:00	0.00
J51	JUNCTION	0.00	0.00	64.88	0	00:00	0.00
J52	JUNCTION	0.00	0.00	65.31	0	00:00	0.00
J53	JUNCTION	0.00	0.00	65.25	0	00:00	0.00
J54	JUNCTION	0.00	0.00	65.25	0	00:00	0.00
J55	JUNCTION	0.00	0.00	65.20	0	00:00	0.00
J56	JUNCTION	0.00	0.00	64.95	0	00:00	0.00
J57	JUNCTION	0.00	0.00	65.30	0	00:00	0.00
J58	JUNCTION	0.00	0.00	65.35	0	00:00	0.00
J59	JUNCTION	0.00	0.00	65.58	0	00:00	0.00
J6	JUNCTION	0.14	0.67	64.09	0	01:11	0.66
J60	JUNCTION	0.00	0.00	64.65	0	00:00	0.00
J61	JUNCTION	0.00	0.00	64.30	0	00:00	0.00
J62	JUNCTION	0.00	0.00	64.70	0	00:00	0.00
J63	JUNCTION	0.00	0.00	64.50	0	00:00	0.00
J64	JUNCTION	0.00	0.00	64.65	0	00:00	0.00
J65	JUNCTION	0.00	0.00	65.10	0	00:00	0.00
J66	JUNCTION	0.00	0.00	64.50	0	00:00	0.00
J67	JUNCTION	0.00	0.00	65.17	0	00:00	0.00
J68	JUNCTION	0.00	0.00	65.00	0	00:00	0.00
J69	JUNCTION	0.00	0.00	65.43	0	00:00	0.00
J7	JUNCTION	0.09	0.57	64.13	0	01:10	0.57
J70	JUNCTION	0.00	0.00	65.20	0	00:00	0.00
J71	JUNCTION	0.16	0.68	64.06	0	01:11	0.67
J73	JUNCTION	0.26	0.67	63.94	0	01:12	0.65
J74	JUNCTION	0.31	0.68	63.90	0	01:12	0.65
J75	JUNCTION	0.41	0.74	63.86	0	07:37	0.74
J8	JUNCTION	0.23	0.61	63.91	0	01:12	0.57
J9	JUNCTION	0.61	1.02	63.93	0	01:10	1.02
ST202	JUNCTION	0.21	0.68	64.01	0	01:11	0.66
J28	OUTFALL	1.60	2.98	65.20	0	03:00	2.98
J72	OUTFALL	1.50	1.50	64.08	0	00:00	1.50
BASIN1	STORAGE	0.69	1.12	63.93	0	01:22	1.12
BASIN2	STORAGE	0.55	0.91	63.86	0	07:33	0.91
BASIN3	STORAGE	0.42	0.77	63.86	0	07:35	0.77
S-BLDG-A	STORAGE	0.01	0.05	100.05	0	01:33	0.05
S-BLDG-B	STORAGE	0.01	0.06	100.06	0	01:35	0.06
S-BLDG-C	STORAGE	0.01	0.05	100.05	0	01:33	0.05
S-BLDG-D	STORAGE	0.01	0.05	100.05	0	01:34	0.05
S-BLDG-G	STORAGE	0.01	0.07	100.07	0	01:44	0.07
S-BLDG-H	STORAGE	0.01	0.06	100.06	0	01:34	0.06
S-BLDG-I	STORAGE	0.01	0.05	100.05	0	01:33	0.05
S-BLDG-J1	STORAGE	0.01	0.08	100.08	0	01:23	0.08
S-BLDG-J2	STORAGE	0.01	0.08	100.08	0	01:24	0.08
S-BLDG-K	STORAGE	0.01	0.07	100.07	0	01:51	0.07
S-BLDG-L	STORAGE	0.01	0.08	100.08	0	01:23	0.08

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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	0.042	0	01:10	0	0.0769	0.064	
J10	JUNCTION	0.035	0.525	0	01:09	0.0497	1.08	0.048	
J11	JUNCTION	0.137	0.547	0	01:05	0.197	4.01	1.046	
J12	JUNCTION	0.045	0.278	0	01:06	0.0631	0.352	2.572	
J13	JUNCTION	0.220	0.295	0	01:10	0.317	0.614	0.160	
J14	JUNCTION	0.067	0.079	0	01:10	0.102	0.296	-0.066	
J15	JUNCTION	0.000	0.488	0	01:09	0	1	0.257	
J16	JUNCTION	0.014	0.291	0	01:06	0.0191	0.391	1.937	
J17	JUNCTION	0.465	0.491	0	01:10	0.667	1	0.053	
J18	JUNCTION	0.000	0.040	0	01:10	0	0.0786	-0.059	
J19	JUNCTION	0.000	0.012	0	01:06	0	0.000588	-1.129	
J2	JUNCTION	0.000	0.028	0	01:02	0	0.00944	0.024	
J20	JUNCTION	0.000	0.548	0	01:10	0	4.08	0.287	
J21	JUNCTION	0.000	0.470	0	01:09	0	1.07	-0.583	
J22	JUNCTION	0.446	0.478	0	01:10	0.641	1.08	0.946	
J23	JUNCTION	0.073	0.399	0	08:00	0.0986	3.13	0.528	
J24	JUNCTION	0.000	0.409	0	08:00	0	2.97	0.986	
J25	JUNCTION	0.000	0.423	0	08:00	0	2.91	1.208	
J26	JUNCTION	0.000	0.424	0	08:00	0	2.86	0.273	
J27	JUNCTION	0.000	0.424	0	08:00	0	2.84	0.149	
J29	JUNCTION	0.000	0.417	0	08:00	0	2.94	1.142	
J3	JUNCTION	0.408	0.408	0	01:10	0.58	0.59	0.055	
J30	JUNCTION	0.000	0.004	0	01:11	0	0.00743	61.647	
J31	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J32	JUNCTION	0.000	0.962	0	01:10	0	4.75	1.044	
J34	JUNCTION	0.047	0.119	0	01:07	0.0684	0.225	0.108	
J35	JUNCTION	0.000	0.011	0	01:24	0	0.0797	0.095	
J36	JUNCTION	0.000	0.007	0	01:06	0	0.00122	0.139	
J37	JUNCTION	0.042	0.042	0	01:10	0.0767	0.0769	0.370	
J38	JUNCTION	0.019	0.059	0	01:08	0.0764	0.0868	0.325	
J39	JUNCTION	0.000	0.100	0	01:07	0	0.127	-0.114	
J4	JUNCTION	0.000	0.398	0	01:10	0	0.58	-0.000	
J40	JUNCTION	0.000	0.611	0	01:10	0	4.63	0.853	
J41	JUNCTION	0.000	0.402	0	08:00	0	3	1.199	
J42	JUNCTION	0.050	0.050	0	01:10	0.105	0.105	0.725	
J43	JUNCTION	0.000	0.049	0	01:10	0	0.104	-0.564	
J44	JUNCTION	0.000	0.054	0	01:10	0	0.106	1.294	
J45	JUNCTION	0.000	0.138	0	01:07	0	0.113	-1.118	
J46	JUNCTION	0.023	0.144	0	01:06	0.0882	0.222	0.154	
J47	JUNCTION	0.005	0.197	0	01:06	0.0141	0.264	1.180	
J48	JUNCTION	0.013	0.013	0	01:20	0.0396	0.0396	-0.012	
J49	JUNCTION	0.000	0.011	0	01:33	0	0.0396	1.437	
J5	JUNCTION	0.000	0.398	0	01:10	0	0.58	-0.000	
J50	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J51	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J52	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr

J53	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J54	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J55	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J56	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J57	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J58	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J59	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J6	JUNCTION	0.000	0.813	0	01:10	0	1.39	-0.084	
J60	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J61	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J62	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J63	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J64	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J65	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J66	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J67	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J68	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J69	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J7	JUNCTION	0.138	0.423	0	01:10	0.2	0.813	0.068	
J70	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J71	JUNCTION	0.000	0.808	0	01:10	0	1.39	0.048	
J73	JUNCTION	0.000	0.805	0	01:11	0	1.39	0.224	
J74	JUNCTION	0.000	0.861	0	01:12	0	1.62	0.199	
J75	JUNCTION	0.302	1.066	0	01:12	0.405	1.98	0.360	
J8	JUNCTION	0.000	0.139	0	01:16	0	0.271	0.224	
J9	JUNCTION	0.076	0.598	0	01:09	0.106	1.19	0.674	
ST202	JUNCTION	0.000	0.806	0	01:10	0	1.39	0.122	
J28	OUTFALL	0.000	0.425	0	08:00	0	2.83	0.000	
J72	OUTFALL	0.000	0.000	0	00:00	0	0	0.000	ltr
BASIN1	STORAGE	0.076	1.031	0	01:10	0.103	1.16	-1.803	
BASIN2	STORAGE	0.000	0.788	0	01:23	0	3.74	-0.272	
BASIN3	STORAGE	0.025	1.086	0	01:12	0.06	2.64	0.136	
S-BLDG-A	STORAGE	0.074	0.074	0	01:10	0.105	0.105	0.005	
S-BLDG-B	STORAGE	0.105	0.105	0	01:10	0.149	0.149	0.005	
S-BLDG-C	STORAGE	0.087	0.087	0	01:10	0.123	0.123	0.005	
S-BLDG-D	STORAGE	0.040	0.040	0	01:10	0.0568	0.0568	0.005	
S-BLDG-G	STORAGE	0.070	0.070	0	01:10	0.1	0.1	0.006	
S-BLDG-H	STORAGE	0.107	0.107	0	01:10	0.153	0.153	0.005	
S-BLDG-I	STORAGE	0.065	0.065	0	01:10	0.0929	0.0929	0.005	
S-BLDG-J1	STORAGE	0.030	0.030	0	01:10	0.0428	0.0428	0.005	
S-BLDG-J2	STORAGE	0.026	0.026	0	01:10	0.0367	0.0367	0.005	
S-BLDG-K	STORAGE	0.072	0.072	0	01:10	0.102	0.102	0.006	
S-BLDG-L	STORAGE	0.022	0.022	0	01:10	0.0308	0.0308	0.004	

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	5.41	0.880	0.000
J24	JUNCTION	6.84	0.550	1.495
J25	JUNCTION	22.94	0.580	1.065
J26	JUNCTION	22.95	0.629	1.196
J27	JUNCTION	22.96	0.693	1.192
J29	JUNCTION	6.87	0.544	1.331
J37	JUNCTION	0.47	0.387	0.783
J41	JUNCTION	6.79	0.344	0.954

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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
BASIN1	0.332	52	0	0	0.539	85	0 01:22	0.135
BASIN2	0.987	44	0	0	1.617	72	0 07:33	0.235
BASIN3	1.210	23	0	0	2.191	42	0 07:35	0.265
S-BLDG-A	0.006	1	0	0	0.062	12	0 01:33	0.009
S-BLDG-B	0.010	1	0	0	0.091	14	0 01:35	0.011
S-BLDG-C	0.007	1	0	0	0.073	12	0 01:33	0.011
S-BLDG-D	0.003	1	0	0	0.034	13	0 01:34	0.005
S-BLDG-G	0.008	3	0	0	0.065	20	0 01:44	0.006
S-BLDG-H	0.009	1	0	0	0.092	14	0 01:34	0.012
S-BLDG-I	0.005	1	0	0	0.055	12	0 01:33	0.008
S-BLDG-J1	0.001	2	0	0	0.021	28	0 01:23	0.006
S-BLDG-J2	0.001	2	0	0	0.019	28	0 01:24	0.005
S-BLDG-K	0.009	3	0	0	0.067	22	0 01:51	0.005
S-BLDG-L	0.001	1	0	0	0.015	26	0 01:23	0.005

****
Outfall Loading Summary
****

Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr

J28	21.80	0.151	0.425	2.828
J72	0.00	0.000	0.000	0.000
System	10.90	0.151	0.425	2.828

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days	hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	0.080	0	01:11	0.54	0.12	0.41
C10_1	CONDUIT	0.136	0	01:16	0.61	0.71	0.96
C11	CONDUIT	0.153	0	01:16	0.41	0.18	0.71
C12_2	CONDUIT	0.000	0	00:00	0.00	0.00	0.50
C13	CONDUIT	0.013	0	01:13	0.60	0.32	1.00
C14	CONDUIT	0.007	0	01:06	0.18	0.16	1.00
C15	CONDUIT	0.488	0	01:09	1.73	1.72	1.00
C16	CONDUIT	0.486	0	01:09	1.72	1.50	1.00
C17	CONDUIT	0.523	0	01:09	1.85	2.02	1.00
C18	CONDUIT	0.196	0	01:06	0.37	0.34	0.95
C18_1	CONDUIT	0.611	0	01:10	0.68	0.23	0.76
C18_2	CONDUIT	0.367	0	01:23	0.51	0.37	0.81
C19	CONDUIT	0.234	0	01:06	0.44	0.56	0.96
C2	CONDUIT	0.028	0	01:02	0.25	0.22	1.00
C20	CONDUIT	0.279	0	01:06	0.45	0.06	1.00
C21	CONDUIT	0.140	0	01:06	0.71	0.69	1.00
C21_1	CONDUIT	0.440	0	01:09	0.53	0.34	0.85
C21_2	CONDUIT	0.555	0	01:10	0.56	0.44	0.87
C22	CONDUIT	0.012	0	01:06	0.45	0.50	1.00
C23	CONDUIT	0.040	0	01:11	0.82	0.95	1.00
C24	CONDUIT	0.470	0	01:09	1.63	0.91	0.91
C25	CONDUIT	0.476	0	01:10	1.64	0.90	1.00
C26	CONDUIT	0.399	0	08:00	0.81	0.18	0.91
C27	CONDUIT	0.111	0	01:07	0.62	0.53	0.93
C27_2	CONDUIT	0.409	0	08:00	0.79	0.63	1.00
C28	CONDUIT	0.417	0	08:00	0.85	0.70	1.00
C29	CONDUIT	0.423	0	08:00	0.61	0.51	1.00
C3	CONDUIT	0.398	0	01:10	2.53	3.14	0.96
C30	CONDUIT	0.424	0	08:00	0.57	0.56	1.00
C31	CONDUIT	0.424	0	08:00	0.57	0.29	1.00
C32	CONDUIT	0.425	0	08:00	0.57	0.31	1.00
C33	CONDUIT	0.042	0	01:10	0.97	1.04	1.00
C34	CONDUIT	0.040	0	01:10	0.92	0.94	1.00
C35	CONDUIT	0.053	0	01:08	0.43	0.27	0.74
C36	CONDUIT	0.100	0	01:07	0.53	0.59	0.89
C38	CONDUIT	0.062	0	01:10	0.62	0.56	0.70
C39	CONDUIT	0.054	0	01:10	0.91	0.82	0.58
C4	CONDUIT	0.398	0	01:10	1.85	1.36	0.71
C40	CONDUIT	0.049	0	01:10	0.79	0.71	0.57
C41	CONDUIT	0.011	0	01:33	0.21	0.00	0.05
C43	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C44	CONDUIT	0.000	0	00:00	0.00	0.00	0.14
C45	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C46	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C47	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C48	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C49	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C5	CONDUIT	0.398	0	01:10	1.85	1.67	0.71
C50	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C51	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C52	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C53	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C54	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C55	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C56	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C57	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C58	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C59	CONDUIT	0.806	0	01:10	1.39	0.97	0.64
C6	CONDUIT	0.415	0	01:10	0.85	0.49	0.55
C60	CONDUIT	0.805	0	01:11	1.41	0.96	0.63
C61	CONDUIT	0.800	0	01:11	1.42	0.91	0.64
C62	CONDUIT	0.869	0	01:12	1.55	0.99	0.63
C63	CONDUIT	1.067	0	01:12	2.01	1.26	0.69
C7	CONDUIT	0.288	0	01:10	0.91	0.45	0.57
C8	CONDUIT	0.808	0	01:10	1.41	0.90	0.63
C9	CONDUIT	0.004	0	01:11	0.12	0.03	1.00
W4	CONDUIT	0.265	0	01:28	1.62	0.66	1.00
C12_1	ORIFICE	0.000	0	00:00			0.00
C27_1	ORIFICE	0.402	0	08:00			1.00
OR1	ORIFICE	0.205	0	08:33			1.00
OR2	ORIFICE	0.058	0	08:12			1.00
W1	WEIR	0.122	0	01:25			0.50
W10	WEIR	0.000	0	00:00			0.00
W11	WEIR	0.000	0	00:00			0.00
W12	WEIR	0.000	0	00:00			0.00
W13	WEIR	0.000	0	00:00			0.00
W14	WEIR	0.000	0	00:00			0.00
W15	WEIR	0.000	0	00:00			0.00
W16	WEIR	0.000	0	00:00			0.00
W17	WEIR	0.000	0	00:00			0.00
W18	WEIR	0.000	0	00:00			0.00
W19	WEIR	0.000	0	00:00			0.00
W2	WEIR	0.543	0	01:22			0.29
W20	WEIR	0.000	0	00:00			0.00
W21	WEIR	0.000	0	00:00			0.00
W22	WEIR	0.000	0	00:00			0.00
W23	WEIR	0.000	0	00:00			0.00
W24	WEIR	0.000	0	00:00			0.00
W25	WEIR	0.000	0	00:00			0.00

W27	WEIR	0.000	0	00:00	0.00
W28	WEIR	0.000	0	00:00	0.00
W29	WEIR	0.000	0	00:00	0.00
W3	WEIR	0.958	0	01:10	0.51
W30	WEIR	0.000	0	00:00	0.00
W31	WEIR	0.000	0	00:00	0.00
W32	WEIR	0.000	0	00:00	0.00
W33	WEIR	0.000	0	00:00	0.00
W34	WEIR	0.000	0	00:00	0.00
W35	WEIR	0.000	0	00:00	0.00
W36	WEIR	0.000	0	00:00	0.00
W37	WEIR	0.000	0	00:00	0.00
W38	WEIR	0.000	0	00:00	0.00
W39	WEIR	0.000	0	00:00	0.00
W40	WEIR	0.000	0	00:00	0.00
W6	WEIR	0.000	0	00:00	0.00
W7	WEIR	0.000	0	00:00	0.00
W8	WEIR	0.000	0	00:00	0.00
C42	DUMMY	0.011	0	01:33	
OL1	DUMMY	0.000	0	00:00	
OL10	DUMMY	0.012	0	01:12	
OL11	DUMMY	0.006	0	01:08	
OL12	DUMMY	0.008	0	01:20	
OL13	DUMMY	0.005	0	01:08	
OL14	DUMMY	0.006	0	01:23	
OL15	DUMMY	0.005	0	01:24	
OL16	DUMMY	0.005	0	01:23	
OL2	DUMMY	0.000	0	00:00	
OL3	DUMMY	0.000	0	00:00	
OL4	DUMMY	0.000	0	00:00	
OL5	DUMMY	0.000	0	00:00	
OL6	DUMMY	0.009	0	01:16	
OL7	DUMMY	0.011	0	01:12	
OL8	DUMMY	0.011	0	01:16	
OL9	DUMMY	0.005	0	01:14	

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Flow Classification Summary
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	Adjusted	Fraction of Time in Flow Class								
Conduit	/Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.02	0.00	0.00	0.25	0.00	0.00	0.73	0.17	0.00
C10_1	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C11	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C12_2	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C13	1.00	0.02	0.00	0.00	0.29	0.00	0.00	0.68	0.09	0.00
C14	1.00	0.04	0.00	0.00	0.29	0.00	0.00	0.66	0.01	0.00
C15	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C16	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C17	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C18	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.00	0.00
C18_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.01	0.00
C18_2	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C19	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C2	1.00	0.02	0.01	0.00	0.12	0.00	0.00	0.85	0.93	0.00
C20	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.02	0.00
C21	1.00	0.03	0.00	0.00	0.96	0.00	0.00	0.01	0.57	0.00
C21_1	1.00	0.02	0.01	0.00	0.97	0.00	0.00	0.00	0.00	0.00
C21_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C22	1.00	0.04	0.00	0.00	0.35	0.00	0.00	0.60	0.66	0.00
C23	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C24	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.67	0.00
C25	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C26	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C27	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.33	0.00
C27_2	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C28	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C29	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C3	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00
C30	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C31	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.00
C32	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C33	1.00	0.02	0.00	0.00	0.30	0.00	0.00	0.68	0.01	0.00
C34	1.00	0.02	0.00	0.00	0.42	0.00	0.00	0.56	0.15	0.00
C35	1.00	0.04	0.00	0.00	0.42	0.00	0.00	0.54	0.08	0.00
C36	1.00	0.02	0.38	0.00	0.59	0.00	0.00	0.00	0.54	0.00
C38	1.00	0.02	0.00	0.00	0.29	0.00	0.00	0.68	0.01	0.00
C39	1.00	0.02	0.00	0.00	0.13	0.00	0.00	0.85	0.11	0.00
C4	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00
C40	1.00	0.02	0.00	0.00	0.02	0.00	0.00	0.96	0.00	0.00
C41	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00
C43	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C44	1.00	0.13	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C45	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C46	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C47	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C48	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C49	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C5	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00
C50	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C51	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C52	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C53	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C54	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C55	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C56	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C57	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C58	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C59	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C6	1.00	0.02	0.00	0.00	0.41	0.00	0.00	0.57	0.03	0.00

C60	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C61	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C62	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C63	1.00	0.02	0.00	0.00	0.94	0.00	0.00	0.04	0.00	0.00
C7	1.00	0.02	0.00	0.00	0.33	0.00	0.00	0.65	0.13	0.00
C8	1.00	0.02	0.00	0.00	0.48	0.00	0.00	0.50	0.02	0.00
C9	1.00	0.02	0.02	0.00	0.96	0.00	0.00	0.00	0.00	0.00
W4	1.00	0.02	0.00	0.00	0.94	0.00	0.00	0.04	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
C13	0.12	0.12	0.37	0.01	0.01
C14	0.13	0.13	0.37	0.01	0.01
C15	0.37	0.37	0.45	0.19	0.13
C16	0.56	0.57	6.83	0.16	0.12
C17	6.88	6.89	6.92	0.21	0.14
C2	0.19	0.19	0.21	0.01	0.01
C20	0.03	0.03	23.27	0.01	0.01
C21	0.06	0.06	5.03	0.01	0.01
C22	5.41	5.41	7.02	0.01	0.01
C23	7.13	7.13	10.54	0.01	0.01
C25	0.02	0.02	0.38	0.01	0.01
C27	0.01	0.01	0.06	0.01	0.01
C27_2	6.79	6.79	6.84	0.01	0.01
C28	6.86	6.86	6.87	0.01	0.01
C29	6.90	6.90	22.94	0.01	0.01
C3	0.01	0.22	0.01	0.32	0.01
C30	22.95	22.95	22.95	0.01	0.01
C31	22.96	22.96	22.96	0.01	0.01
C32	22.97	22.97	24.00	0.01	0.01
C33	0.47	0.47	4.02	0.02	0.02
C34	6.55	6.55	7.02	0.01	0.01
C4	0.01	0.01	0.01	0.15	0.01
C5	0.01	0.01	0.01	0.18	0.01
C63	0.01	0.01	0.01	0.14	0.01
C9	5.98	5.98	6.39	0.01	0.01
W4	6.39	6.39	6.89	0.01	0.01

Analysis begun on: Thu May 11 15:41:47 2023
Analysis ended on: Thu May 11 15:41:54 2023
Total elapsed time: 00:00:07

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)

****
Element Count
****
Number of rain gages 18
Number of subcatchments ... 35
Number of nodes 89
Number of links 124
Number of pollutants 0
Number of land uses 0

****
Raingage Summary
****

Name	Data Source	Data Type	Recording Interval
100yr_3hr_Chicago	100yr_3hr_Chicago	INTENSITY	10 min.
100yr_3hr_Chicago_Climate_Change	100yr_3hr_Chicago_Increase_20percent	INTENSITY	10 min.
100yr_6hr_Chicago	100yr_6hr_Chicago	INTENSITY	10 min.
100yr_6hr_Chicago_Climate_Change	100yr_6hr_Chicago_Increase_20percent	INTENSITY	10 min.
100yr-SCS_12hr_Type_II	100yr-SCS_12hr_Type_II	INTENSITY	6 min.
100yr-SCS_24hr_Type_II	100yr-SCS_24hr_Type_II	INTENSITY	15 min.
10yr_3hr_Chicago	10yr_3hr_Chicago	INTENSITY	10 min.
10yr_6hr_Chicago	10yr_6hr_Chicago	INTENSITY	10 min.
25mm_3hr_Chicago	25mm_3hr_Chicago	INTENSITY	10 min.
25mm_4hr_Chicago	25mm_4hr_Chicago	INTENSITY	10 min.
25yr_3hr_Chicago	25yr_3hr_Chicago	INTENSITY	10 min.
25yr_6hr_Chicago	25yr_6hr_Chicago	INTENSITY	10 min.
2yr_3hr_Chicago	2yr_3hr_Chicago	INTENSITY	10 min.
2yr_6hr_Chicago	2yr_6hr_Chicago	INTENSITY	10 min.
50yr_3hr_Chicago	50yr_3hr_Chicago	INTENSITY	10 min.
50yr_6hr_Chicago	50yr_6hr_Chicago	INTENSITY	10 min.
5yr_3hr_Chicago	5yr_3hr_Chicago	INTENSITY	10 min.
5yr_6hr_Chicago	5yr_6hr_Chicago	INTENSITY	10 min.

****
Subcatchment Summary
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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
102	0.44	44.37	64.22	0.5000	100yr_3hr_Chicago	J42
107AA	0.27	176.73	86.34	0.5000	100yr_3hr_Chicago	J23
108	0.34	162.73	68.53	0.5000	100yr_3hr_Chicago	BASIN1
109	0.29	88.92	87.49	0.5000	100yr_3hr_Chicago	J9
A	0.73	37.91	43.28	0.5000	100yr_3hr_Chicago	J38
A1	1.02	234.86	98.54	0.5000	100yr_3hr_Chicago	J17
A2	1.58	358.18	97.91	0.5000	100yr_3hr_Chicago	J22
A3	0.77	217.10	100.00	0.5000	100yr_3hr_Chicago	J13
A4	0.62	170.22	100.00	2.0000	100yr_3hr_Chicago	J3
A5	0.25	30.92	99.94	0.5000	100yr_3hr_Chicago	J14
AA	0.37	72.80	54.39	0.5000	100yr_3hr_Chicago	J37
BB	0.89	50.53	41.05	0.5000	100yr_3hr_Chicago	J46
BLDG-A	0.25	254.20	100.00	0.5000	100yr_3hr_Chicago	S-BLDG-A
BLDG-B	0.36	362.60	100.00	0.5000	100yr_3hr_Chicago	S-BLDG-B
BLDG-C	0.30	299.30	100.00	0.5000	100yr_3hr_Chicago	S-BLDG-C
BLDG-D	0.14	138.00	100.00	0.5000	100yr_3hr_Chicago	S-BLDG-D
BLDGG	0.24	242.90	100.00	0.5000	100yr_3hr_Chicago	S-BLDG-G
BLDGH	0.37	370.90	100.00	0.5000	100yr_3hr_Chicago	S-BLDG-H
BLDG-I	0.23	225.60	100.00	0.5000	100yr_3hr_Chicago	S-BLDG-I
BLDG-J	0.60	604.40	100.00	0.5000	100yr_3hr_Chicago	J17
BLDG-J1	0.10	103.90	100.00	0.5000	100yr_3hr_Chicago	S-BLDG-J1
BLDG-J2	0.09	89.20	100.00	0.5000	100yr_3hr_Chicago	S-BLDG-J2
BLDG-K	0.25	247.30	99.99	0.5000	100yr_3hr_Chicago	S-BLDG-K
BLDG-L	0.12	120.70	99.98	0.5000	100yr_3hr_Chicago	J10
BLDG-L1	0.07	74.90	100.00	0.5000	100yr_3hr_Chicago	S-BLDG-L
D	0.40	38.69	36.04	0.5000	100yr_3hr_Chicago	J48
D1	0.48	271.32	32.46	0.5000	100yr_3hr_Chicago	J34
EE	0.35	38.57	15.30	0.5000	100yr_3hr_Chicago	J47
Great-Lawn	0.83	135.11	23.48	0.5000	100yr_3hr_Chicago	BASIN3
NEC	1.11	247.73	85.95	10.0000	100yr_3hr_Chicago	J75
NSTANDS	0.48	62.16	99.98	2.0000	100yr_3hr_Chicago	J7
OPGG	0.72	131.24	62.40	0.5000	100yr_3hr_Chicago	J11
SSTANDS	0.79	162.57	99.99	10.0000	100yr_3hr_Chicago	J3
T	0.13	75.86	27.76	0.5000	100yr_3hr_Chicago	J16
V	0.16	167.82	96.59	0.5000	100yr_3hr_Chicago	J12

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Node Summary
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	63.56	2.79	0.0	
J10	JUNCTION	63.14	3.10	0.0	
J11	JUNCTION	62.00	3.95	0.0	
J12	JUNCTION	63.09	2.82	0.0	
J13	JUNCTION	63.77	2.28	0.0	
J14	JUNCTION	63.95	3.10	0.0	
J15	JUNCTION	63.28	3.17	0.0	
J16	JUNCTION	63.03	2.85	0.0	
J17	JUNCTION	63.32	3.03	0.0	
J18	JUNCTION	63.36	2.64	0.0	
J19	JUNCTION	63.62	1.08	720.0	
J2	JUNCTION	64.26	3.14	0.0	
J20	JUNCTION	62.72	3.53	0.0	
J21	JUNCTION	63.31	2.94	0.0	
J22	JUNCTION	63.68	2.63	0.0	
J23	JUNCTION	62.59	2.30	1000.0	
J24	JUNCTION	62.53	3.04	0.0	
J25	JUNCTION	62.35	2.65	0.0	
J26	JUNCTION	62.29	2.84	0.0	
J27	JUNCTION	62.25	2.88	0.0	
J29	JUNCTION	62.49	2.88	0.0	
J3	JUNCTION	64.11	3.34	0.0	
J30	JUNCTION	63.12	1.78	0.0	
J31	JUNCTION	64.13	0.75	0.0	
J32	JUNCTION	62.76	3.44	0.0	
J34	JUNCTION	63.35	2.21	0.0	
J35	JUNCTION	63.79	2.79	0.0	
J36	JUNCTION	63.76	2.54	0.0	
J37	JUNCTION	63.68	1.42	466.0	
J38	JUNCTION	63.56	2.58	0.0	
J39	JUNCTION	63.44	2.58	0.0	
J4	JUNCTION	63.96	3.54	0.0	
J40	JUNCTION	62.85	2.26	0.0	
J41	JUNCTION	62.59	2.30	1000.0	
J42	JUNCTION	64.07	1.93	0.0	
J43	JUNCTION	63.89	2.31	0.0	
J44	JUNCTION	63.76	2.64	0.0	
J45	JUNCTION	63.57	2.83	0.0	
J46	JUNCTION	63.42	2.78	0.0	
J47	JUNCTION	63.12	2.93	0.0	
J48	JUNCTION	64.69	3.00	0.0	
J49	JUNCTION	63.82	3.58	0.0	
J5	JUNCTION	63.91	3.49	0.0	
J50	JUNCTION	65.08	3.00	0.0	
J51	JUNCTION	64.88	3.47	0.0	
J52	JUNCTION	65.31	3.00	0.0	
J53	JUNCTION	65.25	3.00	0.0	
J54	JUNCTION	65.25	3.00	0.0	
J55	JUNCTION	65.20	3.00	0.0	
J56	JUNCTION	64.95	3.00	0.0	
J57	JUNCTION	65.30	3.00	0.0	
J58	JUNCTION	65.35	3.00	0.0	
J59	JUNCTION	65.58	3.00	0.0	
J6	JUNCTION	63.42	4.08	0.0	
J60	JUNCTION	64.65	3.00	0.0	
J61	JUNCTION	64.30	3.00	0.0	
J62	JUNCTION	64.70	3.00	0.0	
J63	JUNCTION	64.50	3.00	0.0	
J64	JUNCTION	64.65	3.00	0.0	
J65	JUNCTION	65.10	3.00	0.0	
J66	JUNCTION	64.50	3.00	0.0	
J67	JUNCTION	65.17	3.00	0.0	
J68	JUNCTION	65.00	3.00	0.0	
J69	JUNCTION	65.43	3.00	0.0	
J7	JUNCTION	63.56	1.84	0.0	
J70	JUNCTION	65.20	3.00	0.0	
J71	JUNCTION	63.38	3.12	0.0	
J73	JUNCTION	63.27	3.23	0.0	
J74	JUNCTION	63.22	3.28	0.0	
J75	JUNCTION	63.12	3.38	0.0	
J8	JUNCTION	63.30	2.60	0.0	
J9	JUNCTION	62.91	3.32	0.0	
ST202	JUNCTION	63.33	3.17	0.0	
J28	OUTFALL	62.22	0.97	0.0	
J72	OUTFALL	62.58	0.60	0.0	
BASIN1	STORAGE	62.81	2.39	0.0	
BASIN2	STORAGE	62.95	2.19	0.0	
BASIN3	STORAGE	63.09	1.81	0.0	
S-BLDG-A	STORAGE	100.00	0.15	0.0	
S-BLDG-B	STORAGE	100.00	0.15	0.0	
S-BLDG-C	STORAGE	100.00	0.15	0.0	
S-BLDG-D	STORAGE	100.00	0.15	0.0	
S-BLDG-G	STORAGE	100.00	0.15	0.0	
S-BLDG-H	STORAGE	100.00	0.15	0.0	
S-BLDG-I	STORAGE	100.00	0.15	0.0	

S-BLDG-J1	STORAGE	100.00	0.15	0.0
S-BLDG-J2	STORAGE	100.00	0.15	0.0
S-BLDG-K	STORAGE	100.00	0.15	0.0
S-BLDG-L	STORAGE	100.00	0.15	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J14	J13	CONDUIT	75.0	0.2001	0.0130
C10_1	J34	J8	CONDUIT	25.1	0.0954	0.0130
C11	J8	J74	CONDUIT	26.1	0.2298	0.0130
C12_2	J31	J72	CONDUIT	24.9	6.5133	0.0130
C13	J35	J17	CONDUIT	24.3	0.4946	0.0130
C14	J36	J17	CONDUIT	17.9	0.5037	0.0130
C15	J17	J15	CONDUIT	9.4	0.2126	0.0130
C16	J15	J10	CONDUIT	39.5	0.2785	0.0130
C17	J10	J9	CONDUIT	11.3	0.1770	0.0130
C18	J47	J12	CONDUIT	30.2	0.0992	0.0130
C18_1	J9	J40	CONDUIT	43.3	0.2542	0.0130
C18_2	J40	J11	CONDUIT	59.3	0.0337	0.0130
C19	J12	J16	CONDUIT	57.0	0.0526	0.0130
C2	J2	J3	CONDUIT	60.8	0.1975	0.0130
C20	J16	J11	CONDUIT	16.7	6.1921	0.0130
C21	J46	J47	CONDUIT	53.4	0.2247	0.0130
C21_1	J11	J32	CONDUIT	70.1	0.0599	0.0130
C21_2	J32	J20	CONDUIT	14.2	0.0565	0.0130
C22	J19	J18	CONDUIT	31.8	0.5029	0.0130
C23	J18	J11	CONDUIT	41.5	0.5054	0.0130
C24	J22	J21	CONDUIT	90.6	0.3752	0.0130
C25	J21	J20	CONDUIT	25.4	0.3937	0.0130
C26	J20	J23	CONDUIT	23.5	0.1703	0.0130
C27	J45	J46	CONDUIT	63.9	0.2347	0.0130
C27_2	J41	J24	CONDUIT	82.3	0.0850	0.0130
C28	J24	J29	CONDUIT	14.1	0.0711	0.0130
C29	J29	J25	CONDUIT	78.9	0.1394	0.0130
C3	J3	J4	CONDUIT	60.7	0.1976	0.0130
C30	J25	J26	CONDUIT	17.8	0.1125	0.0130
C31	J26	J27	CONDUIT	4.6	0.4383	0.0130
C32	J27	J28	CONDUIT	8.1	0.3695	0.0130
C33	J37	J1	CONDUIT	20.0	0.4509	0.0130
C34	J1	J18	CONDUIT	29.0	0.5178	0.0130
C35	J38	J39	CONDUIT	100.1	0.0999	0.0130
C36	J39	J34	CONDUIT	105.1	0.0761	0.0130
C38	J44	J45	CONDUIT	73.4	0.1498	0.0130
C39	J43	J44	CONDUIT	35.7	0.1400	0.0130
C4	J4	J5	CONDUIT	8.8	0.2278	0.0130
C40	J42	J43	CONDUIT	92.3	0.1517	0.0130
C41	J48	J49	CONDUIT	88.2	0.3287	0.0350
C43	J50	J51	CONDUIT	105.0	0.1904	0.0350
C44	J51	J48	CONDUIT	21.6	0.8797	0.0240
C45	J52	J53	CONDUIT	90.8	0.0661	0.0130
C46	J53	J54	CONDUIT	22.0	0.0014	0.0130
C47	J54	J55	CONDUIT	7.7	0.6525	0.0130
C48	J55	J56	CONDUIT	65.7	0.3804	0.0130
C49	J59	J58	CONDUIT	18.0	1.2770	0.0130
C5	J5	J6	CONDUIT	6.7	0.1504	0.0130
C50	J58	J57	CONDUIT	14.2	0.3521	0.0130
C51	J57	J52	CONDUIT	47.6	-0.0210	0.0130
C52	J60	J61	CONDUIT	70.3	0.4980	0.0350
C53	J62	J63	CONDUIT	26.8	0.7450	0.0350
C54	J64	J63	CONDUIT	37.1	0.4039	0.0350
C55	J65	J66	CONDUIT	51.5	1.1643	0.0350
C56	J67	J68	CONDUIT	10.1	1.6809	0.0350
C57	J69	J68	CONDUIT	52.1	0.8247	0.0350
C58	J69	J70	CONDUIT	39.7	0.5794	0.0350
C59	J71	ST202	CONDUIT	32.1	0.0934	0.0130
C6	J7	J6	CONDUIT	63.3	0.0947	0.0130
C60	ST202	J73	CONDUIT	42.4	0.0943	0.0130
C61	J73	J74	CONDUIT	28.8	0.1043	0.0130
C62	J74	J75	CONDUIT	48.2	0.1037	0.0130
C63	J75	BASIN3	CONDUIT	31.2	0.0961	0.0130
C7	J13	J7	CONDUIT	74.9	0.2004	0.0130
C8	J6	J71	CONDUIT	18.6	0.1073	0.0130
C9	J30	BASIN3	CONDUIT	44.8	0.0670	0.0130
W4	BASIN2	BASIN3	CONDUIT	9.3	-0.4287	0.0130
C12_1	J30	J31	ORIFICE			
C27_1	J23	J41	ORIFICE			
OR1	BASIN2	J40	ORIFICE			
OR2	BASIN1	J32	ORIFICE			
W1	BASIN1	J32	WEIR			
W10	J39	J48	WEIR			
W11	J34	J49	WEIR			
W12	J38	J50	WEIR			
W13	J15	BASIN3	WEIR			
W14	J8	J60	WEIR			

W15	J47	BASIN3	WEIR
W16	J22	J52	WEIR
W17	J21	J53	WEIR
W18	J20	J54	WEIR
W19	J32	J55	WEIR
W2	J40	BASIN2	WEIR
W20	J11	J56	WEIR
W21	J35	J59	WEIR
W22	J17	J58	WEIR
W23	J36	J57	WEIR
W24	J14	J13	WEIR
W25	J13	J7	WEIR
W27	J2	J3	WEIR
W28	J3	J4	WEIR
W29	J4	J5	WEIR
W3	J32	BASIN1	WEIR
W30	J5	J6	WEIR
W31	J6	J7	WEIR
W32	J10	BASIN3	WEIR
W33	J44	J65	WEIR
W34	J45	J64	WEIR
W35	J46	J62	WEIR
W36	J1	J55	WEIR
W37	J18	J56	WEIR
W38	J42	J68	WEIR
W39	J43	J70	WEIR
W40	J9	BASIN3	WEIR
W6	J12	BASIN3	WEIR
W7	J16	BASIN3	WEIR
W8	J11	BASIN3	WEIR
C42	J49	J8	OUTLET
OL1	J61	J34	OUTLET
OL10	S-BLDG-H	J17	OUTLET
OL11	S-BLDG-G	J17	OUTLET
OL12	S-BLDG-I	J14	OUTLET
OL13	S-BLDG-K	J14	OUTLET
OL14	S-BLDG-J1	J35	OUTLET
OL15	S-BLDG-J2	J35	OUTLET
OL16	S-BLDG-L	J10	OUTLET
OL2	J63	J46	OUTLET
OL3	J66	J45	OUTLET
OL4	J68	J42	OUTLET
OL5	J70	J43	OUTLET
OL6	S-BLDG-A	J22	OUTLET
OL7	S-BLDG-B	J22	OUTLET
OL8	S-BLDG-C	J22	OUTLET
OL9	S-BLDG-D	J22	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	CIRCULAR	0.82	0.53	0.21	0.82	1	0.64
C10_1	CIRCULAR	0.60	0.28	0.15	0.60	1	0.19
C11	CIRCULAR	0.90	0.64	0.23	0.90	1	0.87
C12_2	CIRCULAR	0.60	0.28	0.15	0.60	1	1.57
C13	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C14	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C15	CIRCULAR	0.60	0.28	0.15	0.60	1	0.28
C16	CIRCULAR	0.60	0.28	0.15	0.60	1	0.32
C17	CIRCULAR	0.60	0.28	0.15	0.60	1	0.26
C18	CIRCULAR	0.90	0.64	0.23	0.90	1	0.57
C18_1	CIRCULAR	1.35	1.43	0.34	1.35	1	2.69
C18_2	CIRCULAR	1.35	1.43	0.34	1.35	1	0.98
C19	CIRCULAR	0.90	0.64	0.23	0.90	1	0.42
C2	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
C20	CIRCULAR	0.90	0.64	0.23	0.90	1	4.51
C21	CIRCULAR	0.53	0.22	0.13	0.53	1	0.20
C21_1	CIRCULAR	1.35	1.43	0.34	1.35	1	1.31
C21_2	CIRCULAR	1.35	1.43	0.34	1.35	1	1.27
C22	CIRCULAR	0.20	0.03	0.05	0.20	1	0.02
C23	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C24	CIRCULAR	0.68	0.36	0.17	0.68	1	0.51
C25	CIRCULAR	0.68	0.36	0.17	0.68	1	0.53
C26	CIRCULAR	1.35	1.43	0.34	1.35	1	2.20
C27	CIRCULAR	0.53	0.22	0.13	0.53	1	0.21
C27_2	CIRCULAR	0.97	0.75	0.24	0.97	1	0.65
C28	CIRCULAR	0.97	0.75	0.24	0.97	1	0.60
C29	CIRCULAR	0.97	0.75	0.24	0.97	1	0.84
C3	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
C30	CIRCULAR	0.97	0.75	0.24	0.97	1	0.75
C31	CIRCULAR	0.97	0.75	0.24	0.97	1	1.48
C32	CIRCULAR	0.97	0.75	0.24	0.97	1	1.36
C33	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04
C34	CIRCULAR	0.25	0.05	0.06	0.25	1	0.04

C35	CIRCULAR	0.60	0.28	0.15	0.60	1	0.19
C36	CIRCULAR	0.60	0.28	0.15	0.60	1	0.17
C38	CIRCULAR	0.45	0.16	0.11	0.45	1	0.11
C39	CIRCULAR	0.38	0.11	0.09	0.38	1	0.07
C4	CIRCULAR	0.60	0.28	0.15	0.60	1	0.29
C40	CIRCULAR	0.38	0.11	0.09	0.38	1	0.07
C41	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	4.38
C43	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	3.33
C44	CIRCULAR	0.25	0.05	0.06	0.25	1	0.03
C45	RECT_OPEN	1.00	8.00	0.80	8.00	1	13.63
C46	RECT_OPEN	1.00	8.00	0.80	8.00	1	1.98
C47	RECT_OPEN	1.00	8.00	0.80	8.00	1	42.85
C48	RECT_OPEN	1.00	8.00	0.80	8.00	1	32.71
C49	RECT_OPEN	1.00	8.00	0.80	8.00	1	59.94
C5	CIRCULAR	0.60	0.28	0.15	0.60	1	0.24
C50	RECT_OPEN	1.00	8.00	0.80	8.00	1	31.48
C51	RECT_OPEN	1.00	8.00	0.80	8.00	1	7.69
C52	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	5.39
C53	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	6.59
C54	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	4.85
C55	TRAPEZOIDAL	1.00	4.00	0.55	7.00	1	8.24
C56	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	6.76
C57	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	4.74
C58	TRAPEZOIDAL	1.00	3.00	0.47	6.00	1	3.97
C59	CIRCULAR	1.05	0.87	0.26	1.05	1	0.83
C6	CIRCULAR	1.05	0.87	0.26	1.05	1	0.84
C60	CIRCULAR	1.05	0.87	0.26	1.05	1	0.84
C61	CIRCULAR	1.05	0.87	0.26	1.05	1	0.88
C62	CIRCULAR	1.05	0.87	0.26	1.05	1	0.88
C63	CIRCULAR	1.05	0.87	0.26	1.05	1	0.85
C7	CIRCULAR	0.82	0.53	0.21	0.82	1	0.64
C8	CIRCULAR	1.05	0.87	0.26	1.05	1	0.89
C9	CIRCULAR	0.60	0.28	0.15	0.60	1	0.16
W4	CIRCULAR	0.60	0.28	0.15	0.60	1	0.40

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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.
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Analysis Options
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Flow Units ..... CMS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... YES
  Ponding Allowed ..... YES
  Water Quality ..... NO
Infiltration Method ..... HORTON
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date 07/23/2009 00:01:00
Ending Date 07/24/2009 00:01:00
Antecedent Dry Days 0.0
Report Time Step 00:05:00
Wet Time Step 00:05:00
Dry Time Step 00:05:00
Routing Time Step ..... 1.00 sec
Variable Time Step ..... YES
Maximum Trials 20
Number of Threads 2
Head Tolerance ..... 0.001500 m

********** Runoff Quantity Continuity **********	Volume hectare-m	Depth mm
Total Precipitation	1.159	71.677
Evaporation Loss	0.000	0.000
Infiltration Loss	0.192	11.853
Surface Runoff	0.955	59.069
Final Storage	0.020	1.228
Continuity Error (%)	-0.661	

********** Flow Routing Continuity **********	Volume hectare-m	Volume 10^6 ltr
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.955	9.549
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000

External Inflow	0.000	0.000
External Outflow	0.696	6.963
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.001	0.007
Final Stored Volume	0.224	2.235
Continuity Error (%)	3.743	

****
Highest Continuity Errors
****
Node BASIN1 (7.39%)
Node J40 (4.41%)
Node J48 (2.03%)
Node J61 (-1.73%)
Node J49 (-1.35%)

****
Time-Step Critical Elements
****
None

****
Highest Flow Instability Indexes
****
Link C27_1 (88)
Link C33 (33)
Link C26 (29)
Link C31 (27)
Link C27_2 (26)

****
Routing Time Step Summary
****

Minimum Time Step	:	0.04 sec
Average Time Step	:	1.00 sec
Maximum Time Step	:	1.00 sec
Percent in Steady State	:	-0.00
Average Iterations per Step	:	5.16
Percent Not Converging	:	9.45
Time Step Frequencies	:	
1.000 - 0.871 sec	:	98.97 %
0.871 - 0.758 sec	:	0.29 %
0.758 - 0.660 sec	:	0.20 %
0.660 - 0.574 sec	:	0.13 %
0.574 - 0.500 sec	:	0.41 %

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS	Runoff Coeff
102	71.68	0.00	0.00	20.12	45.43	28.48	51.20	0.23	0.11	0.714
107AA	71.68	0.00	0.00	5.97	60.78	4.19	64.97	0.18	0.13	0.906
108	71.68	0.00	0.00	14.03	48.26	8.93	57.20	0.20	0.15	0.798
109	71.68	0.00	0.00	5.52	61.79	3.68	65.47	0.19	0.14	0.913
A	71.68	0.00	0.00	36.15	30.61	35.26	35.26	0.26	0.07	0.492
A1	71.68	0.00	0.00	0.63	69.69	0.48	70.16	0.72	0.50	0.979
A2	71.68	0.00	0.00	0.91	69.24	0.67	69.91	1.10	0.78	0.975
A3	71.68	0.00	0.00	0.00	70.68	0.00	70.68	0.54	0.38	0.986
A4	71.68	0.00	0.00	0.00	70.50	0.00	70.50	0.44	0.31	0.984
A5	71.68	0.00	0.00	0.03	70.69	0.02	70.71	0.17	0.12	0.987
AA	71.68	0.00	0.00	23.96	38.42	28.30	47.51	0.18	0.10	0.663
BB	71.68	0.00	0.00	36.89	29.04	34.55	34.55	0.31	0.08	0.482
BLDG-A	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.18	0.13	0.981
BLDG-B	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.25	0.18	0.981
BLDG-C	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.21	0.15	0.981
BLDG-D	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.10	0.07	0.981
BLDGG	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.17	0.12	0.981
BLDGH	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.26	0.18	0.981
BLDG-I	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.16	0.11	0.981
BLDG-J	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.43	0.30	0.981
BLDG-J1	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.07	0.05	0.981
BLDG-J2	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.06	0.04	0.981
BLDG-K	71.68	0.00	0.00	0.00	70.31	0.00	70.32	0.17	0.12	0.981
BLDG-L	71.68	0.00	0.00	0.01	70.30	0.01	70.31	0.08	0.06	0.981
BLDG-L1	71.68	0.00	0.00	0.00	70.32	0.00	70.32	0.05	0.04	0.981
D	71.68	0.00	0.00	36.75	25.48	34.80	34.80	0.14	0.05	0.485

D1	71.68	0.00	0.00	32.49	22.80	28.00	39.40	0.19	0.14	0.550
EE	71.68	0.00	0.00	46.41	10.77	25.25	25.25	0.09	0.03	0.352
Great-Lawn	71.68	0.00	0.00	40.73	16.53	30.94	30.94	0.26	0.10	0.432
NEC	71.68	0.00	0.00	6.13	60.41	4.42	64.83	0.72	0.54	0.904
NSTANDS	71.68	0.00	0.00	0.01	70.69	0.01	70.70	0.34	0.24	0.986
OPGG	71.68	0.00	0.00	17.59	44.10	9.55	53.66	0.39	0.27	0.749
SSTANDS	71.68	0.00	0.00	0.00	70.33	0.00	70.33	0.55	0.39	0.981
T	71.68	0.00	0.00	32.90	19.50	19.45	38.95	0.05	0.04	0.543
V	71.68	0.00	0.00	1.48	67.90	1.13	69.03	0.11	0.08	0.963

****
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	0.27	1.36	64.92	0 01:11	1.35
J10	JUNCTION	0.56	1.40	64.54	0 03:16	1.39
J11	JUNCTION	1.67	2.53	64.53	0 03:13	2.53
J12	JUNCTION	0.60	1.44	64.53	0 03:14	1.43
J13	JUNCTION	0.19	0.88	64.65	0 01:10	0.85
J14	JUNCTION	0.13	0.73	64.68	0 01:10	0.66
J15	JUNCTION	0.43	1.76	65.04	0 01:10	1.75
J16	JUNCTION	0.66	1.50	64.53	0 03:16	1.50
J17	JUNCTION	0.40	1.88	65.20	0 01:10	1.88
J18	JUNCTION	0.35	1.28	64.64	0 01:11	1.22
J19	JUNCTION	0.24	1.08	64.70	0 01:02	0.96
J2	JUNCTION	0.06	2.41	66.67	0 01:09	2.41
J20	JUNCTION	0.96	1.81	64.53	0 03:13	1.81
J21	JUNCTION	0.39	1.33	64.64	0 01:10	1.22
J22	JUNCTION	0.22	1.59	65.27	0 01:10	1.48
J23	JUNCTION	1.09	2.21	64.80	0 03:20	1.98
J24	JUNCTION	1.10	2.05	64.58	0 03:16	2.02
J25	JUNCTION	1.27	2.22	64.57	0 03:11	2.20
J26	JUNCTION	1.33	2.29	64.58	0 03:11	2.26
J27	JUNCTION	1.37	2.32	64.57	0 03:09	2.30
J29	JUNCTION	1.14	2.07	64.56	0 03:00	2.06
J3	JUNCTION	0.11	2.56	66.67	0 01:10	2.56
J30	JUNCTION	0.58	1.38	64.50	0 03:14	1.38
J31	JUNCTION	0.09	0.19	64.32	0 03:14	0.19
J32	JUNCTION	0.92	1.77	64.53	0 03:13	1.77
J34	JUNCTION	0.37	1.18	64.53	0 03:13	1.17
J35	JUNCTION	0.18	1.43	65.22	0 01:10	1.42
J36	JUNCTION	0.19	1.45	65.21	0 01:10	1.44
J37	JUNCTION	0.23	1.45	65.13	0 01:19	1.45
J38	JUNCTION	0.26	0.96	64.52	0 03:18	0.96
J39	JUNCTION	0.31	1.08	64.52	0 03:19	1.08
J4	JUNCTION	0.13	0.75	64.71	0 01:10	0.75
J40	JUNCTION	0.84	1.70	64.55	0 03:21	1.69
J41	JUNCTION	1.05	2.30	64.89	0 03:23	2.02
J42	JUNCTION	0.10	0.81	64.88	0 01:13	0.71
J43	JUNCTION	0.14	0.73	64.62	0 01:12	0.64
J44	JUNCTION	0.18	0.77	64.53	0 01:12	0.77
J45	JUNCTION	0.25	0.96	64.53	0 03:11	0.96
J46	JUNCTION	0.30	1.11	64.53	0 03:14	1.11
J47	JUNCTION	0.57	1.41	64.53	0 03:14	1.41
J48	JUNCTION	0.01	0.14	64.83	0 01:24	0.14
J49	JUNCTION	0.49	0.71	64.53	0 03:18	0.70
J5	JUNCTION	0.14	0.69	64.60	0 01:10	0.69
J50	JUNCTION	0.00	0.00	65.08	0 00:00	0.00
J51	JUNCTION	0.00	0.00	64.88	0 00:00	0.00
J52	JUNCTION	0.00	0.00	65.31	0 00:00	0.00
J53	JUNCTION	0.00	0.00	65.25	0 00:00	0.00
J54	JUNCTION	0.00	0.00	65.25	0 00:00	0.00
J55	JUNCTION	0.00	0.00	65.20	0 00:00	0.00
J56	JUNCTION	0.00	0.00	64.95	0 00:00	0.00
J57	JUNCTION	0.00	0.00	65.30	0 00:00	0.00
J58	JUNCTION	0.00	0.00	65.35	0 00:00	0.00
J59	JUNCTION	0.00	0.00	65.58	0 00:00	0.00
J6	JUNCTION	0.33	1.11	64.53	0 01:10	1.10
J60	JUNCTION	0.00	0.00	64.65	0 00:00	0.00
J61	JUNCTION	0.03	0.22	64.52	0 03:18	0.22
J62	JUNCTION	0.00	0.00	64.70	0 00:00	0.00
J63	JUNCTION	0.00	0.03	64.53	0 03:14	0.03
J64	JUNCTION	0.00	0.00	64.65	0 00:00	0.00
J65	JUNCTION	0.00	0.00	65.10	0 00:00	0.00
J66	JUNCTION	0.00	0.03	64.53	0 03:12	0.03
J67	JUNCTION	0.00	0.00	65.17	0 00:00	0.00
J68	JUNCTION	0.00	0.00	65.00	0 00:00	0.00
J69	JUNCTION	0.00	0.00	65.43	0 00:00	0.00
J7	JUNCTION	0.26	1.01	64.57	0 01:10	0.99
J70	JUNCTION	0.00	0.00	65.20	0 00:00	0.00
J71	JUNCTION	0.35	1.17	64.55	0 03:23	1.15
J73	JUNCTION	0.45	1.28	64.55	0 03:13	1.26

J74	JUNCTION	0.50	1.33	64.55	0	03:13	1.30	
J75	JUNCTION	0.60	1.43	64.55	0	03:21	1.40	
J8	JUNCTION	0.42	1.23	64.53	0	03:18	1.23	
J9	JUNCTION	0.78	1.63	64.54	0	03:15	1.62	
ST202	JUNCTION	0.40	1.22	64.55	0	03:17	1.19	
J28	OUTFALL	1.60	2.98	65.20	0	03:00	2.98	
J72	OUTFALL	1.50	1.50	64.08	0	00:00	1.50	
BASIN1	STORAGE	0.86	1.72	64.53	0	03:14	1.72	
BASIN2	STORAGE	0.74	1.59	64.54	0	03:15	1.58	
BASIN3	STORAGE	0.61	1.43	64.52	0	03:14	1.43	
S-BLDG-A	STORAGE	0.01	0.07	100.07	0	01:52	0.07	
S-BLDG-B	STORAGE	0.02	0.08	100.08	0	01:54	0.08	
S-BLDG-C	STORAGE	0.01	0.07	100.07	0	01:52	0.07	
S-BLDG-D	STORAGE	0.01	0.08	100.08	0	01:53	0.08	
S-BLDG-G	STORAGE	0.02	0.09	100.09	0	02:11	0.09	
S-BLDG-H	STORAGE	0.02	0.08	100.08	0	01:54	0.08	
S-BLDG-I	STORAGE	0.01	0.07	100.07	0	01:50	0.07	
S-BLDG-J1	STORAGE	0.01	0.11	100.11	0	01:30	0.11	
S-BLDG-J2	STORAGE	0.01	0.11	100.11	0	01:31	0.11	
S-BLDG-K	STORAGE	0.03	0.10	100.10	0	02:20	0.10	
S-BLDG-L	STORAGE	0.01	0.11	100.11	0	01:24	0.11	

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Node Inflow Summary
****

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	0.075	0	01:06	0	0.183	-0.032	
J10	JUNCTION	0.060	0.888	0	01:10	0.0849	1.85	0.052	
J11	JUNCTION	0.266	1.428	0	01:11	0.388	7.85	0.543	
J12	JUNCTION	0.078	0.270	0	01:13	0.109	0.853	1.034	
J13	JUNCTION	0.380	0.498	0	01:08	0.543	1.05	0.124	
J14	JUNCTION	0.119	0.132	0	01:10	0.174	0.506	-0.095	
J15	JUNCTION	0.000	0.828	0	01:10	0	1.71	0.126	
J16	JUNCTION	0.039	0.322	0	01:13	0.0509	0.943	0.801	
J17	JUNCTION	0.804	0.833	0	01:10	1.14	1.73	0.027	
J18	JUNCTION	0.000	0.068	0	01:07	0	0.191	0.046	
J19	JUNCTION	0.000	0.007	0	01:02	0	0.000653	-2.128	
J2	JUNCTION	0.000	0.080	0	01:05	0	0.0278	0.722	
J20	JUNCTION	0.000	0.908	0	01:08	0	7.39	0.147	
J21	JUNCTION	0.000	0.792	0	01:10	0	1.84	-0.257	
J22	JUNCTION	0.776	0.812	0	01:10	1.1	1.84	0.325	
J23	JUNCTION	0.131	0.578	0	08:00	0.175	5.83	0.739	
J24	JUNCTION	0.000	0.582	0	08:00	0	5.64	0.538	
J25	JUNCTION	0.000	0.593	0	08:00	0	5.57	0.628	
J26	JUNCTION	0.000	0.593	0	08:00	0	5.54	0.152	
J27	JUNCTION	0.000	0.593	0	08:00	0	5.53	0.093	
J29	JUNCTION	0.000	0.588	0	08:00	0	5.61	0.609	
J3	JUNCTION	0.699	0.751	0	01:07	0.992	1.02	0.243	
J30	JUNCTION	0.000	0.131	0	03:14	0	1.46	0.193	
J31	JUNCTION	0.000	0.131	0	03:14	0	1.45	0.010	
J32	JUNCTION	0.000	1.461	0	01:07	0	8.12	-1.059	
J34	JUNCTION	0.143	0.218	0	01:06	0.189	0.599	0.329	
J35	JUNCTION	0.000	0.020	0	01:01	0	0.144	0.063	
J36	JUNCTION	0.000	0.016	0	01:01	0	0.0141	-0.011	
J37	JUNCTION	0.102	0.102	0	01:10	0.176	0.176	0.103	
J38	JUNCTION	0.066	0.096	0	01:06	0.258	0.274	0.000	
J39	JUNCTION	0.000	0.171	0	01:07	0	0.323	-0.086	
J4	JUNCTION	0.000	0.698	0	01:08	0	0.995	-0.124	
J40	JUNCTION	0.000	2.348	0	01:11	0	9.32	4.616	
J41	JUNCTION	0.000	0.578	0	08:00	0	5.68	0.625	
J42	JUNCTION	0.113	0.113	0	01:10	0.227	0.241	1.336	
J43	JUNCTION	0.000	0.103	0	01:10	0	0.254	0.004	
J44	JUNCTION	0.000	0.109	0	01:13	0	0.257	-0.017	
J45	JUNCTION	0.000	0.115	0	01:12	0	0.266	-0.396	
J46	JUNCTION	0.082	0.192	0	01:15	0.308	0.589	0.056	
J47	JUNCTION	0.027	0.226	0	01:15	0.0875	0.705	0.428	
J48	JUNCTION	0.047	0.047	0	01:20	0.139	0.139	2.067	
J49	JUNCTION	0.000	0.118	0	02:39	0	0.149	-1.334	
J5	JUNCTION	0.000	0.697	0	01:08	0	1	0.009	
J50	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J51	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J52	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J53	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J54	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J55	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J56	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J57	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J58	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J59	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J6	JUNCTION	0.000	1.359	0	01:08	0	2.39	-0.193	
J60	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr

J61	JUNCTION	0.000	0.170	0	03:18	0	0.0639	-1.698	
J62	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J63	JUNCTION	0.000	0.006	0	03:14	0	0.0013	-0.107	
J64	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J65	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J66	JUNCTION	0.000	0.006	0	03:11	0	0.000972	-0.195	
J67	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J68	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J69	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J7	JUNCTION	0.239	0.702	0	01:08	0.342	1.39	-0.081	
J70	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J71	JUNCTION	0.000	1.350	0	01:11	0	2.39	-0.026	
J73	JUNCTION	0.000	1.358	0	01:11	0	2.39	-0.063	
J74	JUNCTION	0.000	1.557	0	01:10	0	3.02	0.028	
J75	JUNCTION	0.541	2.063	0	01:10	0.723	3.7	0.161	
J8	JUNCTION	0.000	0.262	0	01:15	0	0.682	0.184	
J9	JUNCTION	0.138	1.020	0	01:10	0.189	2.05	0.390	
ST202	JUNCTION	0.000	1.351	0	01:11	0	2.39	-0.044	
J28	OUTFALL	0.000	0.594	0	08:00	0	5.51	0.000	
J72	OUTFALL	0.000	0.131	0	03:14	0	1.45	0.000	
BASIN1	STORAGE	0.151	1.596	0	01:07	0.197	1.54	7.982	
BASIN2	STORAGE	0.000	2.617	0	01:11	0	7.31	-0.616	
BASIN3	STORAGE	0.100	2.146	0	01:10	0.258	5.69	-0.014	
S-BLDG-A	STORAGE	0.126	0.126	0	01:10	0.179	0.179	0.014	
S-BLDG-B	STORAGE	0.180	0.180	0	01:10	0.255	0.255	0.014	
S-BLDG-C	STORAGE	0.148	0.148	0	01:10	0.21	0.21	0.014	
S-BLDG-D	STORAGE	0.068	0.068	0	01:10	0.097	0.097	0.014	
S-BLDG-G	STORAGE	0.120	0.120	0	01:10	0.171	0.171	0.013	
S-BLDG-H	STORAGE	0.184	0.184	0	01:10	0.261	0.261	0.014	
S-BLDG-I	STORAGE	0.112	0.112	0	01:10	0.159	0.159	0.014	
S-BLDG-J1	STORAGE	0.052	0.052	0	01:10	0.0731	0.0731	0.015	
S-BLDG-J2	STORAGE	0.044	0.044	0	01:10	0.0627	0.0627	0.015	
S-BLDG-K	STORAGE	0.123	0.123	0	01:10	0.174	0.174	0.013	
S-BLDG-L	STORAGE	0.037	0.037	0	01:10	0.0527	0.0527	0.015	

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J19	JUNCTION	7.72	0.880	0.000
J23	JUNCTION	6.78	0.775	0.085
J24	JUNCTION	6.98	1.059	0.986
J25	JUNCTION	23.06	1.218	0.427
J26	JUNCTION	23.07	1.271	0.554
J27	JUNCTION	23.08	1.326	0.559
J29	JUNCTION	7.00	1.069	0.806
J37	JUNCTION	7.40	1.201	0.000
J40	JUNCTION	4.85	0.202	0.560
J41	JUNCTION	6.94	1.295	0.003
J71	JUNCTION	1.65	0.096	1.954
J73	JUNCTION	4.95	0.213	1.947
J74	JUNCTION	5.27	0.259	1.951
J75	JUNCTION	5.61	0.327	1.953
ST202	JUNCTION	2.87	0.145	1.955

****
Node Flooding Summary
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Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CMS	Time of Max Occurrence days hr:min	Total Flood Volume 10^6 ltr	Maximum Ponded Depth Meters
J37	0.42	0.038	0 01:10	0.014	0.031

****
Storage Volume Summary
****

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
BASIN1	0.382	60	0	0	0.631	99	0 03:14	0.519
BASIN2	1.237	55	0	0	2.237	100	0 03:15	0.752

BASIN3	1.742	34	0	0	4.084	79	0	03:14	0.429
S-BLDG-A	0.018	4	0	0	0.121	24	0	01:52	0.009
S-BLDG-B	0.028	4	0	0	0.176	27	0	01:54	0.011
S-BLDG-C	0.021	4	0	0	0.142	24	0	01:52	0.011
S-BLDG-D	0.010	4	0	0	0.066	25	0	01:53	0.005
S-BLDG-G	0.025	8	0	0	0.125	38	0	02:11	0.006
S-BLDG-H	0.028	4	0	0	0.179	27	0	01:54	0.012
S-BLDG-I	0.015	3	0	0	0.106	23	0	01:50	0.008
S-BLDG-J1	0.003	4	0	0	0.040	52	0	01:30	0.008
S-BLDG-J2	0.003	4	0	0	0.036	53	0	01:31	0.006
S-BLDG-K	0.028	9	0	0	0.130	42	0	02:20	0.005
S-BLDG-L	0.002	4	0	0	0.028	50	0	01:24	0.006

****
Outfall Loading Summary
****

Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
J28	28.63	0.225	0.594	5.510
J72	23.69	0.071	0.131	1.453
System	26.16	0.296	0.594	6.963

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days	hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	0.160	0	01:12	0.49	0.25	0.94
C10_1	CONDUIT	0.234	0	01:15	0.83	1.23	1.00
C11	CONDUIT	0.282	0	01:15	0.52	0.32	1.00
C12_2	CONDUIT	0.131	0	03:14	0.75	0.08	0.60
C13	CONDUIT	0.020	0	01:11	0.63	0.48	1.00
C14	CONDUIT	0.016	0	01:01	0.39	0.38	1.00
C15	CONDUIT	0.828	0	01:10	2.93	2.93	1.00
C16	CONDUIT	0.822	0	01:10	2.91	2.54	1.00
C17	CONDUIT	0.882	0	01:09	3.12	3.41	1.00
C18	CONDUIT	0.238	0	01:14	0.37	0.42	1.00
C18_1	CONDUIT	1.009	0	01:08	0.80	0.38	1.00
C18_2	CONDUIT	1.450	0	01:10	1.01	1.48	1.00
C19	CONDUIT	0.294	0	01:13	0.46	0.71	1.00
C2	CONDUIT	0.070	0	01:04	0.44	0.55	1.00
C20	CONDUIT	0.328	0	01:13	0.52	0.07	1.00
C21	CONDUIT	0.200	0	01:15	0.93	0.98	1.00
C21_1	CONDUIT	0.945	0	01:11	0.66	0.72	1.00
C21_2	CONDUIT	0.896	0	01:08	0.65	0.71	1.00
C22	CONDUIT	0.007	0	01:02	0.25	0.32	1.00
C23	CONDUIT	0.066	0	01:25	1.34	1.56	1.00
C24	CONDUIT	0.792	0	01:10	2.21	1.54	1.00
C25	CONDUIT	0.836	0	01:10	2.33	1.58	1.00
C26	CONDUIT	0.578	0	08:00	0.83	0.26	1.00
C27	CONDUIT	0.123	0	01:12	0.57	0.59	1.00
C27_2	CONDUIT	0.582	0	08:00	0.81	0.89	1.00
C28	CONDUIT	0.588	0	08:00	0.87	0.98	1.00
C29	CONDUIT	0.593	0	08:00	0.79	0.71	1.00
C3	CONDUIT	0.523	0	01:08	3.29	4.12	1.00
C30	CONDUIT	0.593	0	08:00	0.79	0.79	1.00
C31	CONDUIT	0.593	0	08:00	0.79	0.40	1.00
C32	CONDUIT	0.594	0	08:00	0.79	0.44	1.00
C33	CONDUIT	0.075	0	01:06	1.53	1.88	1.00
C34	CONDUIT	0.068	0	01:07	1.39	1.60	1.00
C35	CONDUIT	0.085	0	01:16	0.38	0.44	1.00
C36	CONDUIT	0.171	0	01:07	0.62	1.01	1.00
C38	CONDUIT	0.115	0	01:12	0.72	1.04	1.00
C39	CONDUIT	0.109	0	01:13	0.99	1.66	1.00
C4	CONDUIT	0.697	0	01:08	2.48	2.38	1.00
C40	CONDUIT	0.103	0	01:10	0.93	1.51	1.00
C41	CONDUIT	0.043	0	01:25	0.34	0.01	0.10
C43	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C44	CONDUIT	0.000	0	00:00	0.00	0.00	0.28
C45	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C46	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C47	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C48	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C49	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C5	CONDUIT	0.697	0	01:08	2.52	2.93	1.00
C50	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C51	CONDUIT	0.000	0	00:00	0.00	0.00	0.00

C52	CONDUIT	0.000	0	00:00	0.00	0.00	0.11
C53	CONDUIT	0.000	0	00:00	0.00	0.00	0.01
C54	CONDUIT	0.000	0	00:00	0.00	0.00	0.01
C55	CONDUIT	0.000	0	00:00	0.00	0.00	0.01
C56	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C57	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C58	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C59	CONDUIT	1.351	0	01:11	1.59	1.62	1.00
C6	CONDUIT	0.735	0	01:11	0.92	0.87	0.97
C60	CONDUIT	1.358	0	01:11	1.60	1.62	1.00
C61	CONDUIT	1.362	0	01:11	1.62	1.54	1.00
C62	CONDUIT	1.564	0	01:11	1.91	1.78	1.00
C63	CONDUIT	2.063	0	01:10	2.65	2.44	1.00
C7	CONDUIT	0.500	0	01:11	0.96	0.78	1.00
C8	CONDUIT	1.350	0	01:11	1.60	1.51	1.00
C9	CONDUIT	0.131	0	03:14	0.47	0.83	1.00
W4	CONDUIT	0.423	0	01:13	1.92	1.05	1.00
C12_1	ORIFICE	0.131	0	03:14			0.55
C27_1	ORIFICE	0.578	0	08:00			1.00
OR1	ORIFICE	0.206	0	09:37			1.00
OR2	ORIFICE	0.070	0	01:10			1.00
W1	WEIR	0.486	0	01:13			1.00
W10	WEIR	0.000	0	00:00			0.00
W11	WEIR	0.000	0	00:00			0.00
W12	WEIR	0.000	0	00:00			0.00
W13	WEIR	0.000	0	00:00			0.00
W14	WEIR	0.000	0	00:00			0.00
W15	WEIR	0.000	0	00:00			0.00
W16	WEIR	0.000	0	00:00			0.00
W17	WEIR	0.000	0	00:00			0.00
W18	WEIR	0.000	0	00:00			0.00
W19	WEIR	0.000	0	00:00			0.00
W2	WEIR	2.343	0	01:11			1.00
W20	WEIR	0.000	0	00:00			0.00
W21	WEIR	0.000	0	00:00			0.00
W22	WEIR	0.000	0	00:00			0.00
W23	WEIR	0.000	0	00:00			0.00
W24	WEIR	0.000	0	00:00			0.00
W25	WEIR	0.000	0	00:00			0.00
W27	WEIR	0.054	0	01:07			0.27
W28	WEIR	0.185	0	01:10			0.22
W29	WEIR	0.000	0	00:00			0.00
W3	WEIR	1.457	0	01:07			1.00
W30	WEIR	0.000	0	00:00			0.00
W31	WEIR	0.000	0	00:00			0.00
W32	WEIR	0.000	0	00:00			0.00
W33	WEIR	0.000	0	00:00			0.00
W34	WEIR	0.000	0	00:00			0.00
W35	WEIR	0.000	0	00:00			0.00
W36	WEIR	0.000	0	00:00			0.00
W37	WEIR	0.000	0	00:00			0.00
W38	WEIR	0.000	0	00:00			0.00
W39	WEIR	0.000	0	00:00			0.00
W40	WEIR	0.000	0	00:00			0.00
W6	WEIR	0.000	0	00:00			0.00
W7	WEIR	0.000	0	00:00			0.00
W8	WEIR	0.000	0	00:00			0.00
C42	DUMMY	0.117	0	02:39			
OL1	DUMMY	0.170	0	03:18			
OL10	DUMMY	0.012	0	01:06			
OL11	DUMMY	0.006	0	01:04			
OL12	DUMMY	0.008	0	01:07			
OL13	DUMMY	0.005	0	01:03			
OL14	DUMMY	0.008	0	01:13			
OL15	DUMMY	0.006	0	01:12			
OL16	DUMMY	0.006	0	01:13			
OL2	DUMMY	0.006	0	03:14			
OL3	DUMMY	0.006	0	03:11			
OL4	DUMMY	0.000	0	00:00			
OL5	DUMMY	0.000	0	00:00			
OL6	DUMMY	0.009	0	01:07			
OL7	DUMMY	0.011	0	01:06			
OL8	DUMMY	0.011	0	01:07			
OL9	DUMMY	0.005	0	01:06			

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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	0.36	0.00	0.00	0.63	0.05	0.00
C10_1	1.00	0.01	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C11	1.00	0.01	0.00	0.00	0.98	0.00	0.00	0.01	0.00	0.00

C12_2	1.00	0.00	0.76	0.00	0.24	0.00	0.00	0.00	0.91	0.00
C13	1.00	0.01	0.00	0.00	0.34	0.00	0.00	0.65	0.01	0.00
C14	1.00	0.04	0.00	0.00	0.34	0.00	0.00	0.62	0.01	0.00
C15	1.00	0.01	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C16	1.00	0.01	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C17	1.00	0.01	0.00	0.00	0.96	0.00	0.00	0.03	0.00	0.00
C18	1.00	0.01	0.01	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C18_1	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C18_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.01	0.00	0.00
C19	1.00	0.01	0.00	0.00	0.97	0.00	0.00	0.02	0.00	0.00
C2	1.00	0.02	0.01	0.00	0.31	0.00	0.00	0.67	0.02	0.00
C20	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.02	0.00
C21	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.01	0.52	0.00
C21_1	1.00	0.02	0.01	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C21_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C22	1.00	0.04	0.00	0.00	0.40	0.00	0.00	0.56	0.62	0.00
C23	1.00	0.02	0.00	0.00	0.96	0.00	0.00	0.02	0.00	0.00
C24	1.00	0.01	0.00	0.00	0.96	0.00	0.00	0.03	0.62	0.00
C25	1.00	0.01	0.00	0.00	0.96	0.00	0.00	0.03	0.00	0.00
C26	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C27	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.29	0.00
C27_2	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C28	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C29	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C3	1.00	0.01	0.00	0.00	0.28	0.00	0.00	0.70	0.02	0.00
C30	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.01	0.00	0.00
C31	1.00	0.02	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.00
C32	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C33	1.00	0.01	0.00	0.00	0.35	0.00	0.00	0.64	0.01	0.00
C34	1.00	0.02	0.00	0.00	0.47	0.00	0.00	0.52	0.16	0.00
C35	1.00	0.04	0.01	0.00	0.46	0.00	0.00	0.50	0.05	0.00
C36	1.00	0.02	0.34	0.00	0.65	0.00	0.00	0.00	0.50	0.00
C38	1.00	0.02	0.00	0.00	0.34	0.00	0.00	0.64	0.01	0.00
C39	1.00	0.02	0.00	0.00	0.32	0.00	0.00	0.66	0.01	0.00
C4	1.00	0.01	0.00	0.00	0.29	0.00	0.00	0.69	0.00	0.00
C40	1.00	0.01	0.00	0.00	0.31	0.00	0.00	0.68	0.03	0.00
C41	1.00	0.43	0.00	0.00	0.12	0.00	0.00	0.45	0.12	0.00
C43	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C44	1.00	0.43	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C45	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C46	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C47	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C48	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C49	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C5	1.00	0.02	0.00	0.00	0.30	0.00	0.00	0.69	0.00	0.00
C50	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C51	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C52	1.00	0.77	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C53	1.00	0.96	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C54	1.00	0.96	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C55	1.00	0.96	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C56	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C57	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C58	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C59	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.01	0.00	0.00
C6	1.00	0.01	0.00	0.00	0.46	0.00	0.00	0.53	0.03	0.00
C60	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.01	0.00	0.00
C61	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C62	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00
C63	1.00	0.02	0.00	0.00	0.94	0.00	0.00	0.04	0.00	0.00
C7	1.00	0.01	0.00	0.00	0.40	0.00	0.00	0.58	0.05	0.00
C8	1.00	0.01	0.00	0.00	0.53	0.00	0.00	0.45	0.02	0.00
C9	1.00	0.02	0.02	0.00	0.97	0.00	0.00	0.00	0.00	0.00
W4	1.00	0.02	0.00	0.00	0.95	0.00	0.00	0.03	0.00	0.00

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Conduit Surcharge Summary
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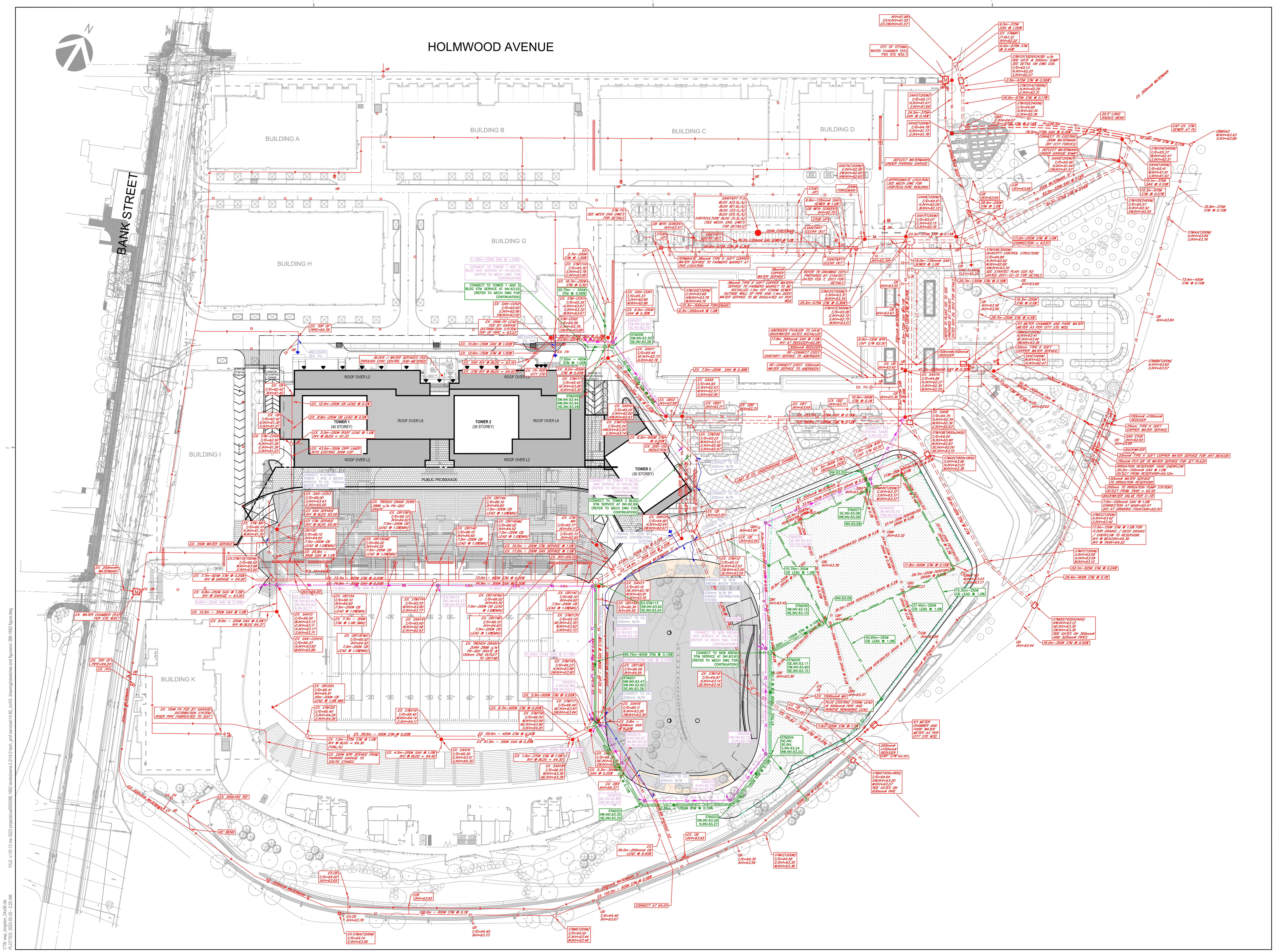
Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
C1	0.01	0.01	0.02	0.01	0.01
C10_1	7.22	7.22	7.33	0.13	0.11
C11	5.79	5.79	6.16	0.01	0.01
C12_2	0.01	0.01	21.94	0.01	0.01
C13	7.10	7.10	7.46	0.01	0.01
C14	7.19	7.19	7.46	0.01	0.01
C15	7.46	7.46	7.52	0.32	0.30
C16	7.58	7.58	7.88	0.23	0.23
C17	7.96	7.96	8.00	0.35	0.41
C18	7.04	7.04	7.18	0.01	0.01
C18_1	5.14	5.14	5.66	0.01	0.01
C18_2	5.66	5.66	5.81	0.09	0.13
C19	7.18	7.18	7.27	0.01	0.02

C2	0.28	0.28	0.35	0.01	0.01
C20	7.37	7.37	23.41	0.01	0.01
C21	7.33	7.33	7.71	0.01	0.02
C21_1	5.99	5.99	6.23	0.01	0.01
C21_2	6.23	6.23	6.28	0.01	0.42
C22	7.72	7.72	8.14	0.01	0.01
C23	8.27	8.27	11.75	0.49	0.49
C24	4.74	4.74	7.11	0.17	0.16
C25	7.20	7.20	7.50	0.16	0.16
C26	6.48	6.48	6.78	0.01	0.55
C27	6.61	6.61	7.33	0.01	0.01
C27_2	6.94	6.94	6.98	0.01	0.26
C28	7.00	7.00	7.00	0.01	1.18
C29	7.04	7.04	23.06	0.01	0.01
C3	0.15	0.36	2.00	0.52	0.15
C30	23.06	23.06	23.07	0.01	0.27
C31	23.08	23.08	23.08	0.01	0.51
C32	23.09	23.09	24.00	0.01	0.01
C33	7.40	7.40	7.67	0.49	0.49
C34	7.75	7.75	8.14	0.48	0.48
C35	6.10	6.10	6.66	0.01	0.01
C36	6.76	6.76	7.17	0.01	0.01
C38	5.80	5.80	6.57	0.02	0.03
C39	5.59	5.61	5.77	0.30	0.19
C4	0.04	0.11	0.04	0.23	0.04
C40	2.02	2.07	5.37	0.30	0.19
C5	0.52	0.59	0.73	0.27	0.02
C59	2.06	2.10	2.87	0.18	0.01
C60	3.42	3.45	4.95	0.18	0.01
C61	5.10	5.10	5.27	0.17	0.01
C62	5.37	5.37	5.61	0.20	0.01
C63	5.72	5.72	5.90	0.27	0.01
C7	0.03	0.03	1.81	0.01	0.01
C8	1.28	1.30	1.65	0.17	0.03
C9	8.38	8.38	8.61	0.01	0.01
W4	8.61	8.61	8.91	0.01	0.01

Analysis begun on: Thu May 11 15:43:58 2023
Analysis ended on: Thu May 11 15:44:08 2023
Total elapsed time: 00:00:10

APPENDIX



CLIENT:

CLIENT REF. #:

WSP CANADA INC.
2611 QUEENSVIEW DR #300,
OTTAWA, ONTARIO
CANADA K2B 8K2
PHONE: 613-829-2800
WWW.WSP.COM

PROJECT NUMBER: CA0000286.1662

CONSULTANT TEAM:

KEY PLAN:

REVISION:

REV	DATE	DESCRIPTION	BY
1	2023-05-25	ISSUED FOR CITY REIVEW	DY

ORIGINAL SCALE: 1:750
DATE: 2023-05-19
DRAWN BY: JT
CHECKED BY: DY
APPROVED BY: DY
CA0000286.1662

IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

TITLE:
CONCEPTUAL OVERALL SERVICING

PROJECT:
LANDSDOWN PARK REDEVELOPMENT
EXHIBITION WAY
OTTAWA, ONTARIO

DRAWING NUMBER: F4
REV. 0A

FILE: v:\10-13 me 2023 projects\ca0000286.1662 landsdowne 2.0\14.0 tech_prof services\14.60_civil\3. drawings\sketches and figures\xr 286-1662 figure.dwg
CTB: wsp_kingston_24x36.ctb
PLOTTED: 2023-05-25 - 2:20 AM