

FUNCTIONAL SERVICING REPORT

BARRIE CENTRAL REDEVELOPMENT

**CITY OF BARRIE
COUNTY OF SIMCOE**

PREPARED FOR:
BARRIE CENTRAL DEVELOPMENTS INC.
700 RUPERT STREET
WATERLOO, ONTARIO
N2V 2B5



February 2022
19051

City of Barrie File No.
D28-048-2018



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FUNCTIONAL SERVICING REPORT

BARRIE CENTRAL DEVELOPMENTS INC., BARRIE

1. INTRODUCTION

PEARSON Engineering Ltd. has been retained by Barrie Central Developments Inc. (Client) to prepare a Functional Servicing Report in support of the proposed Barrie Central development (Project) in the City of Barrie (City). The subject lands are located on the west side of Bradford Street, east of Eccles Street, and north of an existing commercial development. The location of the site can be seen on Figure 1.

The subject property is approximately 2.99 ha in size, currently consisting of part of the previously demolished Barrie Central Collegiate Institute including track and football field, Prince of Wales Elementary School and residential lots. The Project site generally slopes from west to east towards Bradford Street. The Project proposes the development of two apartment buildings with 30 storeys and 26 storeys, with a central 6 storey podium connecting the two towers, as well as a future Phase 2 development.

This Report assesses the existing municipal infrastructure in the vicinity of the Project and the onsite Stormwater Management (SWM) facilities and internal services required to service the proposed Project. The report also includes preliminary design calculations and a brief outline of the proposed internal services, as well as comments regarding the ability of the various secondary utilities to service the site.

2. SUPPORTING DOCUMENTS

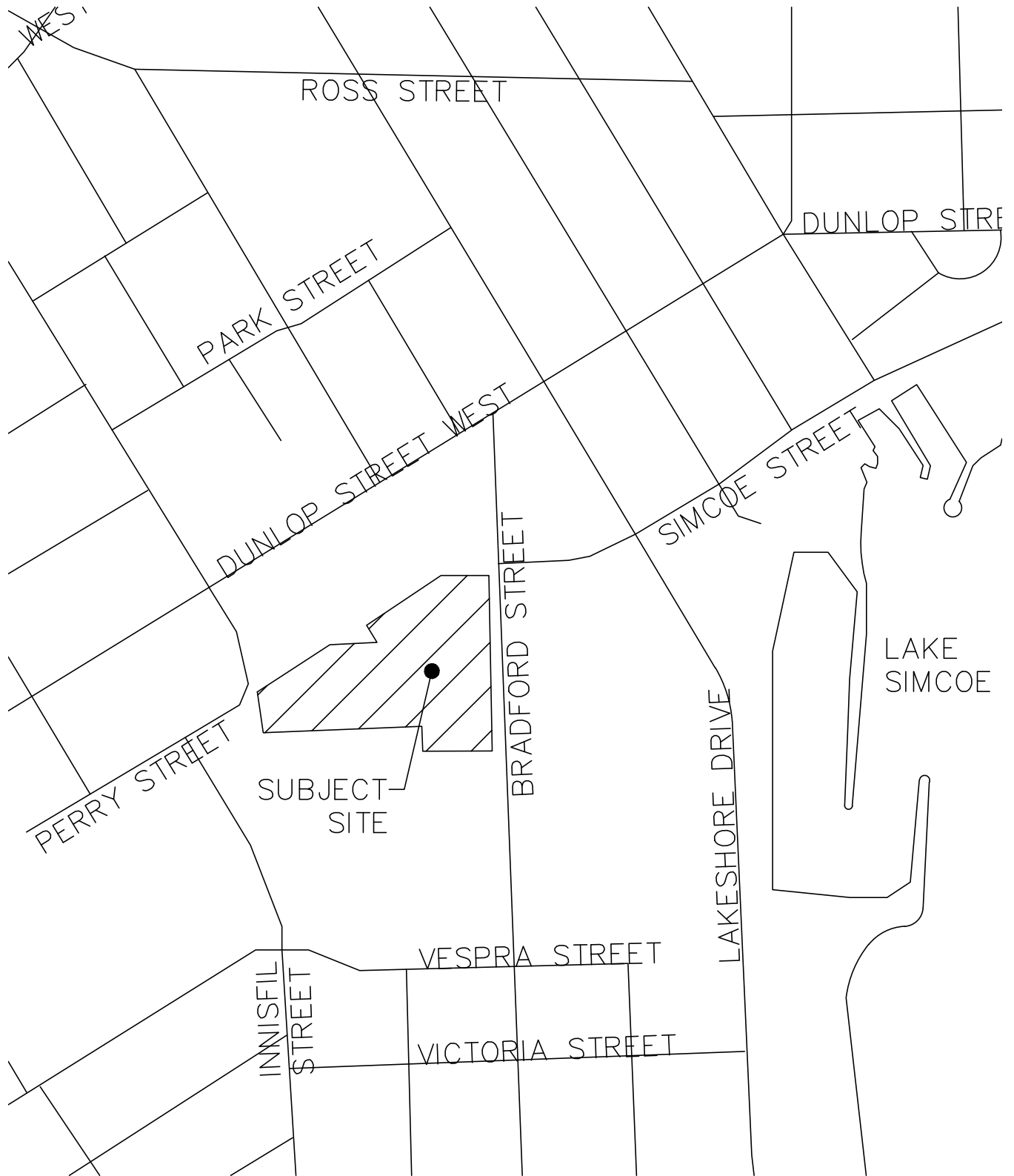
The following documents have been referenced in the preparation of this report:

- Ministry of the Environment, Design Guidelines for Sewage Works – 2008
- Ministry of the Environment, Design Guidelines for Drinking-Water Systems - 2008
- Ministry of the Environment, Stormwater Management Planning and Design Manual, March 2003
- City of Barrie, Sanitary Design Policy and Guidelines
- City of Barrie, Storm Drainage and Stormwater Management Policies and Design Guidelines.

3. DESIGN POPULATION

The proposed development consists of a 30 storey apartment building, 26 storey apartment building, and central 6 storey podium connecting the two towers. The apartment buildings are designed with one and two bedroom apartments for a total of 630 units for the Phase 1 development. A total of 1000 units has been assumed for the future Phase 2 development, for a total of 1,630 units for the site.

Based on a population density of 1.67 people per unit (ppu) as per City of Barrie guidelines, this results in a design population of 2,722 persons is estimated for the residential portion of the project. Peak flow and population calculations can be seen in Appendix A and B.



BARRIE CENTRAL DEVELOPMENTS INC.
34-50 BRADFORD STREET
BARRIE, ONTARIO

SITE LOCATION PLAN



PEARSON
ENGINEERING
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DESIGNED BY	AMC	HORIZ SCALE	NTS	PROJECT #	19051
DRAWN BY	AMC	VERT SCALE	NTS	DRAWING #	FIG-1
CHECKED BY	MWD	DATE	MAY 2019	REVISION #	0



4. WATER SUPPLY AND DISTRIBUTION

4.1. WATER SERVICING DESIGN CRITERIA

The site is to have a total population of 2,722 persons. Utilizing the City of Barrie Guidelines for domestic water use of 225 L/capita/day and a commercial area of 359 m², the required Average Day Demand (ADD) is 7.09 L/s. A Peak Rate factor of 3.38 was used in calculating a Peak Hour Demand of 23.96 L/s for the development. Calculations for the domestic water requirements for the site can be found in Appendix A.

4.2. INTERNAL WATER DISTRIBUTION SYSTEM

To service the project, a 300 mm diameter watermain will extend into the project from a connection to the existing 300 mm watermain on Bradford Street fronting the site. A 100 mm diameter domestic service and 200 mm diameter fire service will be provided for the Phase 1 buildings, and the 300 mm watermain will extend west and terminate for future connection to the Phase 2 project. Refer to drawing SS-1 in Appendix G for the proposed watermain layout.

4.3. FIRE FIGHTING REQUIREMENTS

The 200 mm water service to the Phase 1 buildings will provide water supply for internal fire suppression and the existing fire hydrants located on Bradford Street will provide adequate firefighting coverage for the proposed buildings as per City Standards. A hydrant is proposed southwest of the building.

A flow test was completed on the municipal water system fronting the site by Vipond which produced a discharge of 1686 gallons per minute (GPM) with a residual pressure of 64 psi. Therefore, the existing watermain's flow availability and residual pressures appear sufficient to service the proposed development. A detailed water pressure model will be completed at the detailed design stage of the project by the fire protection consultant, if required.

5. SANITARY SERVICING

5.1. SANITARY DESIGN CRITERIA

The site is to have a total population of 2,722 persons. Utilizing the City of Barrie flow value for domestic sewer use of 225 L/capita/day and a commercial area of 359 m², an Average Daily Flow (ADF) of 7.09 L/s was calculated. Using a Peaking Factor of 3.48 for this project and an infiltration allowance of 0.30 L/s, a peak flow of 24.98 L/s was calculated for the entire development. The proposed internal 250 mm sanitary sewer has a capacity of 42 L/sec at 1.0% and is sufficient to convey the sanitary design flows. Sanitary design flow calculations can be found in Appendix B.

5.2. SANITARY SEWER SYSTEM

The sites proposed 250 mm sanitary sewer will connect to the existing sanitary manhole SAC01027 on Bradford Street fronting the site. The internal sanitary sewer will connect to the proposed Phase 1 building and a stub will be provided for a future Phase 2 connection. Refer to drawing SS-1 in Appendix G for the proposed sanitary sewer layout.



5.3. EXTERNAL SANITARY SEWER ANALYSIS

The municipal sanitary system located on Bradford Street consists of a 300 mm gravity sewer which drains north and connects to the existing 750 mm trunk sewer on Simcoe Street which flows east towards Lakeshore Drive and then southerly to the City's Wastewater Treatment Facility (WWTF). As per Section 5.1, the proposed Project will produce 24.98 L/s of flow to the existing Bradford Street sanitary sewer and into the trunk system on Simcoe Street.

As per the City's Wastewater Collection Master Plan, the Project site is located within two sanitary catchment areas (Bradford Street and Eccles Street). The Projects proposed population of 2,722 exceeds City's estimated population allowed for in the Master Plan. Therefore, the City has advised they will review their trunk sewer analysis using the proposed population of 2,722.

City staff have indicated the local sewer on Bradford Street should be analyzed for the proposed flow from the site. The existing 300 mm Bradford Street sanitary sewer currently flows at 1-5% capacity based on the City's "Bradford Street Reconstruction Sanitary Drainage Plan drawing SAN-1. An external sanitary flow of 26.5 L/s from the upstream mixed used development at 51, 53, 55 & 75 Bradford Street and 20 Checkley Street was added to the sewer design sheet along with the Project's sanitary flow of 24.98 L/s for a total flow of approximately 52.15 L/s. The existing sewer has a capacity of 53 L/s, resulting in a percent full of 98%. Therefore, the existing Bradford Street sewer can sufficiently convey the proposed development's peak flow to the Simcoe Street trunk sewer. Detailed calculations can be seen in Appendix B.

6. STORMWATER MANAGEMENT

A key component of the development is the need to address environmental and related SWM issues. These are examined in a framework aimed at meeting the City, Lake Simcoe Region Conservation Authority (LSRCA) and Ministry of the Environment, Conservation and Parks (MECP) requirements. This FSR focuses on the necessary measures to satisfy the approval agencies' SWM requirements.

It is understood the objectives of the SWM plan are to:

- Protect life and property from flooding and erosion
- Maintain water quality for ecological integrity, recreational opportunities etc.
- Protect and maintain groundwater flow regime(s).
- Protect aquatic and fishery communities and habitats.
- Maintain and protect significant natural features.

6.1. ANALYSIS METHODOLOGY

The design of the SWM Facilities for this site has been conducted in accordance with:

- The Ministry of the Environment Stormwater Management Planning and Design Manual, March 2003
- City of Barrie, Storm Drainage and Stormwater Management Policies and Design Guidelines, August 11, 2020
- LSRCA Technical Guidelines for Stormwater Management Submissions, September 1, 2016



6.2. EXISTING CONDITIONS

The existing project site is comprised of the previously demolished Prince of Wales Elementary School complete with track and sports field. Based on a review of the topographic survey of the site, the majority of the site drains easterly via sheet flow towards Bradford Street. The minor storm is then conveyed southerly via the existing catchbasin and storm sewer on Bradford Street, and the major storm will flow overland on Bradford Street ultimately outletting towards Bunker's Creek. Details of existing drainage conditions are shown on Drawing STM-1.

While the majority of the project site is located within Bunker's Creek, it is adjacent to the watershed boundary between Kidd's Creek to the north and Bunker's Creek. It is our understanding that during a Regional Storm event the conveyance capacity of Dymont's Creek, Bunker's Creek, and Kidd's Creek are all exceeded and create a large interconnected system of spills on Bradford Street.

Pre-development peak flows for the site were calculated using the site's conditions prior to the demolition of the two schools. A summary of peak flows calculated using the computer software Visual OTTHYMO can be seen in Table 1A and Table 1B below. Detailed output for the existing drainage conditions can be found in Appendix C.

Table 1A: Pre-Development Peak Flows – Area Draining to Kidd's Creek

	2 Year Storm	5 Year Storm	10 Year Storm	25 Year Storm	50 Year Storm	100 Year Storm	Regional Storm Timmins	Regional Storm Hazel
4-Hour Chicago Storm (m ³ /s)	0.02	0.03	0.03	0.04	0.05	0.05	0.02	0.01
12-Hour SCS Storm (m ³ /s)	0.02	0.02	0.03	0.04	0.04	0.05	-	-
24-Hour SCS Storm (m ³ /s)	0.01	0.02	0.03	0.03	0.04	0.04	-	-

Table 1B: Pre-Development Peak Flows – Area Draining to Bunker's Creek

	2 Year Storm	5 Year Storm	10 Year Storm	25 Year Storm	50 Year Storm	100 Year Storm	Regional Storm Timmins	Regional Storm Hazel
4-Hour Chicago Storm (m ³ /s)	0.29	0.39	0.47	0.56	0.63	0.71	0.36	0.27
12-Hour SCS Storm (m ³ /s)	0.24	0.36	0.44	0.55	0.64	0.76	-	-
24-Hour SCS Storm (m ³ /s)	0.21	0.31	0.39	0.48	0.55	0.62	-	-



6.3. KIDD'S CREEK MODELING METHODOLOGY

As previously discussed in Section 6.2, the project site is located adjacent to the drainage boundary between Kidd's Creek and Bunker's Creek. Under pre-development conditions, the majority of the site is within the Bunker's Creek watershed. In order to drain the Project southerly to Bunker's Creek, the property would connect to the existing storm sewer on Bradford Street which currently has a diameter of 300 mm and is insufficient to convey the site's existing peak flow. Therefore, either approximately 200 m of the existing storm sewer would need to be upgraded, or on-site quantity controls would be required to reduce peak flows.

Following discussions with the City of Barrie, the City advised that the Kidd's Creek culvert crossing at Bradford Street is currently being designed and the proposed development's peak flows could potentially be accommodated within the new culvert design with supporting calculations. The Bunker's Creek culvert crossing Bradford Street is also slated to be replaced in the future, but the City currently does not have an anticipate completion date for the upgrades.

Therefore, it would be preferred if the site were to drain northerly to Kidd's Creek. The following sections detail the stormwater modeling that was completed to support modifying the current watershed boundaries.

6.3.1. HYDROLOGIC MODELING

The LSRCA's Visual OTTHYMO model for the Kidd's Creek watershed was obtained. The LSRCA's model was run without changes in order to establish existing conditions for the Kidd's Creek peak flows.

A Master Drainage Plan Class Environmental Assessment Report (MDPCEA) was completed by Oliver, Mangione, McCalla & Associated (OMM) in December 2001 for the Kidd's Creek watershed. This report was reviewed, and it was determined that the proposed development is located within catchment area 8000. This catchment was modified to account for the additional area and imperviousness draining to Kidd's Creek. As Hydrograph 8000 is the final catchment area in the model, the only downstream Hydrograph 8009 was selected as a comparison point. The same storm events from the MDPCEA were utilized under post-development conditions in order to obtain an accurate comparison. The peak flows to Kidd's Creek for pre and post-development can be seen in Table 2 below.

**Table 2: Kidd's Creek Visual OTTHYMO Modeling
Pre and Post-Development Peak Flows at Kidd's Creek Outlet (Hydrograph 8009)**

	2 Year Storm	5 Year Storm	10 Year Storm	25 Year Storm	100 Year Storm	Regional Storm
Pre-Development Peak Flow 24 Hour SCS Storm (m ³ /s)	5.96	8.54	10.50	11.94	15.54	64.02
Post-Development Peak Flow 24 Hour SCS Storm (m ³ /s)	6.14	8.82	10.87	12.33	16.06	64.31



6.3.2. CULVERT ANALYSIS

The pre and post-development peak flows were then utilized to calculate the depth of flow in the culvert crossing Bradford Street. The culvert parameters were obtained from as-built drawings and the City's PCSWMM model and was modeled using the computer software HY-8 developed by the U.S. Department of Transportation. A tailwater elevation of 219.50 was utilized as per the LSRCA's modeling for Lake Simcoe during a Regional storm event. Even though post-development peak flows are greater than pre-development, the calculations demonstrate that the headwater elevation rises by a maximum of 0.03 m under post-development conditions to an elevation of 220.59 which is still located below the obvert of the culvert. Additionally, the percentage full within the barrel of the culvert increases from 58% in pre-development to 60% under post-development conditions. Detailed culvert calculations can be seen in Appendix C.

6.3.3. FLOODLINE ANALYSIS

As per Section 6.3.2, the culvert crossing Bradford Street was designed to convey the 100 Year storm. During a Regional Storm event, stormwater will overtop the road and drain southerly on Bradford Street to the intersection with Simcoe Street. The LSRCA's HEC-RAS model was obtained and reviewed for accuracy. It was found that three cross sections near the outlet channel to Kempenfelt Bay (Cross Sections 163.5, 160.2, 157.2) do not represent current channel geometry and were removed from the modeling. The LSRCA's model was re-run using a pre-development peak flow 64.02 m³/s which was added to cross section 451.0.

A post-development model was then created and established a slightly increased peak flow of 64.3 m³/s. Results for the water surface elevation and overbank velocities can be seen below which demonstrate that the majority of cross sections have no change from pre-development to post-development. A nominal change of 0.01 m and 0.01 m/s for the water surface elevation and velocity respectively can be seen in a small number of cross sections, however as the Regional Flow is increasing by only 0.4% this was attributed to likely be a rounding issue in the modeling as the increase is not consistent in the downstream cross sections. The results demonstrate that the proposed site will have a negligible impact, if any on the downstream floodline and is not expected to negatively impact any existing structures. Detailed HEC-RAS output can be seen in Appendix C.

**Table 3A: Kidd's Creek HEC-RAS Modeling
Pre-Development Hydraulic Modeling Results**

Cross-Section	Water Surface Elevation	Left Overbank Velocity	Right Overbank Velocity
451.0	222.68	0.85	0.92
388.8	222.24	2.35	1.89
318.5	221.34	1.09	0.8
278.8	221.06	1.4	1.24
234.1	220.76	1.96	1.46
211.5	220.13	0.98	
201.3	220.26		
172.3	220.28		0.08
131.6	220.25	0.22	0.44
113.3	220.17	0.31	0.37
102.7	220.05	0.52	0.53



**Table 3B: Kidd's Creek HEC-RAS Modeling
Post-Development Hydraulic Modeling Results**

Cross-Section	Water Surface Elevation	Left Overbank Velocity	Right Overbank Velocity
451.0	222.69	0.86	0.92
388.8	222.24	2.35	1.9
318.5	221.35	1.09	0.8
278.8	221.06	1.4	1.24
234.1	220.77	1.97	1.47
211.5	220.13	0.98	
201.3	220.26		
172.3	220.28		0.08
131.6	220.25	0.22	0.44
113.3	220.17	0.31	0.37
102.7	220.05	0.52	0.53

The required flow depth through the Simcoe Street right-of-way was calculated assuming a rectangular channel starting from the top of curb elevation for the Regional storm peak flow of 64.3 m³/s which resulted in a depth of 0.67 m.

As the high point on Bradford Street is only 0.15 m higher than the intersection, a portion of the flow will be conveyed easterly down Simcoe Street with the remaining flow being conveyed southerly down Bradford Street. The depth was calculated iteratively until a corresponding depth of 0.41 m down both streets was found.

The overtopping elevation at the Bunker's Creek culvert crossing Bradford Street (south of the proposed project) was reviewed and found to extend approximately 50 m north on Bradford Street which is still located south of the project site. Therefore, the floodline adjacent to the site was determined to be related to conveyance and would not experience any backwater effects from the downstream Bunker's Creek floodline elevation.

As the calculated depth is for conveyance, several points on Bradford Street adjacent to the site were selected and the floodline location was shown. Refer to drawing SG-1 in Appendix G.

6.4. PROPOSED STORM DRAINAGE SYSTEM

Due to the layout of the site plan and existing topography of the site, the project will be serviced by two separate storm sewer systems outletting to two different locations. Approximately half of the Phase 1 site will be conveyed northerly to Kidd's Creek as discussed in the previous section. It was also assumed that the entire future Phase 2 site will be draining north to Kidd's Creek. The rooftop area of the buildings is proposed to be conveyed to underground storage chambers sized to infiltrate the 25 mm storm. In the event of a storm greater than the 25 mm storm, the underground chambers will surcharge and overflow to the site's storm sewer.

The majority of the parking lot area will drain to a storm sewer system which has been sized to convey the 100-year storm. The area draining to Kidd's Creek has been graded to include an overland flow route through the site's northeastern driveway to the proposed Simcoe Street extension and ultimately to Kidd's Creek.



The remaining 0.83 ha of the site is proposed to drain easterly to Bradford Street, ultimately draining to Bunker's Creek. A second catchbasin and storm sewer system has been designed to convey the 5-year flow which extends through the laneway south of the proposed parking structure. Stormwater will pass through an OGS unit sized to provide quality control for the drainage area. In the event of a storm greater than the 5-year storm, the laneway has been graded with an overland flow route which will convey the major storm easterly through the driveway entrance to Bradford Street.

Bioretention areas are proposed throughout the project site which will capture and treat drainage from landscaped areas. The bioretention areas have been designed with a filter media layer and will not include an underdrain which together will help promote phosphorous removal and infiltration. The amenity space and landscape area east of the buildings will drain via sheet flow directly to Bradford Street. Post-development storm drainage patterns are shown on Drawing STM-2 in Appendix G. The post-development peak flows for the project site were calculated using Visual OTTHYMO and can be seen in Table 4A and Table 4B below.

Table 4A: Post-Development Peak Flows – Area Draining to Kidd's Creek

	2 Year Storm	5 Year Storm	10 Year Storm	25 Year Storm	50 Year Storm	100 Year Storm	Regional Storm Timmins	Regional Storm Hazel
4-Hour Chicago Storm (m ³ /s)	0.32	0.44	0.52	0.63	0.71	0.79	0.30	0.23
12-Hour SCS Storm (m ³ /s)	0.25	0.39	0.47	0.57	0.66	0.74	-	-
24-Hour SCS Storm (m ³ /s)	0.23	0.35	0.43	0.53	0.60	0.68	-	-

Table 4B: Post -Development Peak Flows – Area Draining to Bunker's Creek

	2 Year Storm	5 Year Storm	10 Year Storm	25 Year Storm	50 Year Storm	100 Year Storm	Regional Storm Timmins	Regional Storm Hazel
4-Hour Chicago Storm (m ³ /s)	0.12	0.17	0.20	0.24	0.27	0.30	0.12	0.09
12-Hour SCS Storm (m ³ /s)	0.10	0.14	0.18	0.22	0.26	0.29	-	-
24-Hour SCS Storm (m ³ /s)	0.09	0.13	0.15	0.20	0.23	0.26	-	-



6.5. STORMWATER QUANTITY CONTROL

The proposed development will increase the imperviousness of the site and as such the post-development peak flows will increase. It is important to quantify the increase in stormwater runoff rates. The calculated post-development runoff coefficient of 0.80 is greater than the pre-development runoff coefficient of 0.63. Runoff coefficient calculations can be found in Appendix C.

While the Project site is located within the watershed for Bunker's Creek, as discussed in the previous sections the majority of the proposed development will be conveyed to Kidd's Creek. Based on the calculations and modeling completed, no downstream impacts are anticipated by allowing the site to drain uncontrolled and therefore no quantity control has been proposed.

6.6. VOLUME CONTROL

The project site meets the definition of Major Development as per LSRCA Guidelines. As such, considerations were taken to meet the volume control criteria detailed in Section 2.2.2. The LSRCA guidelines state that the 25 mm storm event from the total impervious area of the site is to be retained and treated, with flexible alternatives if this criteria cannot be met. The Phase 1 site has an impervious area of 1.15 ha, resulting in a required storage volume of 288 m³.

As the site is located within a highly vulnerable aquifer area, storm runoff from the parking lot area cannot be infiltrated. Therefore, it is proposed to infiltrate the rooftop area in underground infiltration galleries which have been sized for the 25 mm storm, which accounts for 95% of all storm events. This results in a total volume of infiltration of 149 m³, which is equivalent to the 13 mm storm over the site's total impervious area.

This results in a remaining 139 m³ to infiltrate to meet the LSRCA's preferred criteria. However, parking lot runoff cannot be infiltrated due to the highly vulnerable aquifer and sufficient separation from the water table could not be achieved throughout the majority of the site. As such this criteria was deemed infeasible for this site. Volume control for the project has been maximized as much as possible given the site's constraints.

6.7. STREAM EROSION CONTROL

As the site is located near an existing watercourse, considerations were taken to protect against stream erosion. As per LSRCA Guidelines, erosion control is typically completed for:

- Sites located upstream of a known erosion site.
- Sites draining to a first or second order headwater stream.
- As part of Master Drainage Plan for a Secondary Planning Area.
- Flow diversions are proposed.

A Master Drainage Plan (MDP) was completed by Oliver, Mangione, McCalla & Associates (OMM) for the Kidd's Creek Watershed. Section 3.6 of the MDP lists known erosion sites along the channel. None of these erosion locations can be found downstream of the Project site, and no specific recommendations are included in the MDP in regards to reducing erosion. Therefore, no stream erosion control is required for the site.



6.8. STORMWATER QUALITY CONTROL

The MECP in March 2003 issued a “Stormwater Management Planning and Design Manual”. This manual has been adopted by a variety of agencies including the City of Barrie. The objective of our Stormwater Quality Control will be to ensure Enhanced Protection quality control as stated in the MECP manual. To achieve enhanced protection, permanent and temporary control of erosion and sediment transport are proposed and are discussed in the following sections.

6.8.1. PERMANENT QUALITY CONTROL

The development's parking facilities and paved surfaces pose a risk to stormwater quality through the collection of grit, sand, and oils on the paved surface. As the site has two storm sewer outlets, two OGS units are proposed. A CDS treatment unit or equivalent is the proposed oil/grit separator to treat the storm water released from this site to the MECP's Enhanced Protection standard. This MECP standard stipulates a Total Suspended Solids (TSS) removal of at least 80%. The CDS unit will treat the post development flows to the required MECP Enhanced Level TSS Removal.

Regular inspections and proper maintenance of the proposed OGS unit will ensure the TSS removal rate will be achieved as well as protect the downstream watercourse from oil, grease, and heavy metals.

The OGS units will be sized using the ETV particle size distribution and will provide approximately 60% TSS removal. As such, the proposed rooftop infiltration and bioretention trenches will be sized to provide the remaining 20% TSS removal. Table 3.2 from the MECP SWM guidelines will be utilized to calculate the required water quality storage volume required to achieve 80% TSS removal with infiltration.

6.8.2. DURING CONSTRUCTION ACTIVITIES

During construction, earth grading and excavation will create the potential for soil erosion and sedimentation. It is imperative that effective environmental and sedimentation controls are in place and maintained throughout the duration of construction activities to ensure stormwater runoff's quality.

Therefore, the following recommendations shall be implemented and maintained during construction to achieve acceptable stormwater runoff quality:

- Installation of silt fence along the entire perimeter of the site to reduce sediment migration onto surrounding properties.
- Installation of a construction entrance mat to minimize transportation of sediment onto roadways.
- Restoration of exposed surfaces with vegetative and non-vegetative material as soon as construction schedules permit, the duration of which is not to exceed 30 days.
- Reduce stormwater drainage velocities where possible.
- Minimize the amount of existing vegetation removed.



6.9. WATER BALANCE

Since the post development state will increase the imperviousness of the site, considerations were taken in regard to groundwater recharge. Under pre-development conditions, the Phase 1 site consists mostly of building and paved areas, with a large grassed sports field on the future Phase 2 portion of the site. A water budget was completed as per LSRCA guidelines for the Phase 1 site which infiltrates approximately 663 m³ annually. With the increased imperviousness of the site, this recharge will be increased to 1,328 m³, resulting in a surplus volume of 665 m³.

However, City of Barrie Guidelines state that a minimum volume equivalent to 5 mm over the entire site area is to be infiltrated which results in a total volume of 82 m³. Rooftop infiltration has been proposed to infiltrate the 25 mm storm event in order to meet the LSRCA volume control criteria which results in a volume of 149 m³, exceeding the City's minimum criteria. Detailed calculations can be seen in Appendix D.

6.10. PHOSPHORUS

Local conservation authorities have determined the importance of reducing phosphorus levels in water courses in this area. Best efforts are to be employed in order to reduce phosphorus levels being contributed from the site.

The existing site is comprised of mostly institutional lands with some undeveloped residential lots. The proposed development will mostly consist of high intensity residential and commercial areas with an amenity space on the east side of the site fronting Bradford Street. A treatment train approach is proposed to reduce phosphorus levels from the site.

The rooftop area will be conveyed to underground storage chambers for infiltration, sized for the 25 mm storm event. In the event of a storm greater than the 25 mm storm, the storage chambers will overflow to the site's storm sewer. A portion of the site's landscaped areas will drain to bioretention trenches.

Typical phosphorus removal efficiencies are 87% for rooftop infiltration and 45% for bioretention trenches. As no parking lot water can be infiltrated due to a highly vulnerable aquifer and high groundwater on the project site, the phosphorous has been reduced as much as possible given the constraints. The following chart details the anticipated phosphorus loadings for the pre and post-development conditions.

Table 5: Phosphorus Loadings

	Total P (kg)
Uncontrolled Post Development	1.96
Controlled Post Development	1.23

Detailed calculations can be found in Appendix E.



7. GRADING

A preliminary grading plan has been completed for the development. The majority of the site was graded from west to east. The site has been graded to include two emergency overland flow routes. In the event of a major storm, approximately half the Phase 1 site will drain along the south side of the site and through the southern driveway entrance. The remaining area will be conveyed through the laneways and parking lot and to the Simcoe Street extension. Preliminary grading can be seen on drawing SG-1 in Appendix G.

8. SECONDARY UTILITIES

Letters have previously been sent to all secondary utilities to notify them of the proposed development with the previous design concept. Discussions with utilities will continue with the revised design to ensure they are able to adequately support the proposed development. Copies of these letters have been included in Appendix F.



9. CONCLUSIONS

The project site is proposed to drain in two directions. The southern portion of the site will drain easterly to Bradford Street, ultimately outletting to Bunker's Creek. An OGS unit has been provided to meet quality control for this drainage area prior to leaving the site.

The post-development peak flow for the area draining to Bunker's Creek has been reduced below pre-development and therefore no quantity control is proposed.

The remainder of the site will drain northerly to Kidd's Creek including the future Phase 2 development. A second OGS unit is proposed to provide quality control for the site.

The Kidd's Creek culvert conveys the pre-development 100-year peak flow at a percent full of 58% to Kempenfelt Bay approximately 215 m to the east. Under post-development conditions, the depth in the culvert will increase by 0.05 m with a percent full of 60%.

The LSRCA's HEC-RAS model was revised to include the proposed site and the regulatory floodline did not increase. Therefore, no downstream impacts are anticipated by conveying the proposed development uncontrolled to Kidd's Creek.

LID measures such as rooftop infiltration and bioretention trenches will be implemented in order to reduce the post development phosphorous loading as well as achieve water balance for the site.

The analysis and conceptual design outlined in this report demonstrates that the servicing is feasible.

All of which is respectfully submitted,

PEARSON ENGINEERING LTD.

Taylor Arkell, P. Eng
Senior Project Manager

Gary Pearson, P.Eng.
Principal

Mike Dejean, P. Eng
Partner, Manager of Engineering Services



APPENDIX A

WATER SERVICING CALCULATIONS

Barrie Central Developments Inc. Water Flow Calculations

Residential Design Criteria:

Demand per capita (Q):	225	L/cap/day
Peak Rate Factor (Max. Hour)	3.38	(Table 3-1: Peaking Factors, MECP Design Guidelines for Drinking-Water Systems)
Max. Day Factor	2.25	(Table 3-1: Peaking Factors, MECP Design Guidelines for Drinking-Water Systems)
*From MECP Manual based on Population of 2001-3000		

Commerical Design Criteria

Demand per capita (Q):	28	m3 / (ha x day)
Peak Rate Factor (Max. Hour)	2.00	
Max. Day Factor	1.50	

Site Data:

Description	Density	Units	Flow Rate
High Density Residential	1.67	people/unit	225 L/cap/d
Commercial	359.0	m2	28,000 L/day/ha

*630 units Phase 1 and estimated 1000 units phase 2

Calculate Residential Population

Pop. Apartments - Building 1	=	1.67	x	1,630
	=	2722	people	

Water Demand Calculations

Average Day Demand (ADD)	=	Q	x	Population
Max Day Flow (MDF)	=	ADD	x	Max Day Factor
Peak Hour Demand (PHD)	=	ADD	x	Peak Rate Factor

Apartment Building

ADD	=	225.0	x	2722	/	86400
	=	7.09	L/s			
MDF	=	7.09	x	2.25		
	=	15.95	L/s			
PHD	=	7.09	x	3.38		
	=	23.96	L/s			

Commercial Units

ADD	=	28000	x	359	/	86400	x	10000
	=	0.01	L/s					
MDF	=	0.01	x	1.50				
	=	0.02	L/s					
PHD	=	0.01	x	2.00				
	=	0.02	L/s					

Total

ADD	=	7.09	+	0.01
	=	7.10	L/s	
MDF	=	15.95	+	0.02
	=	15.97	L/s	
PHD	=	23.96	+	0.02
	=	23.98	L/s	

FLOW TEST RESULTS



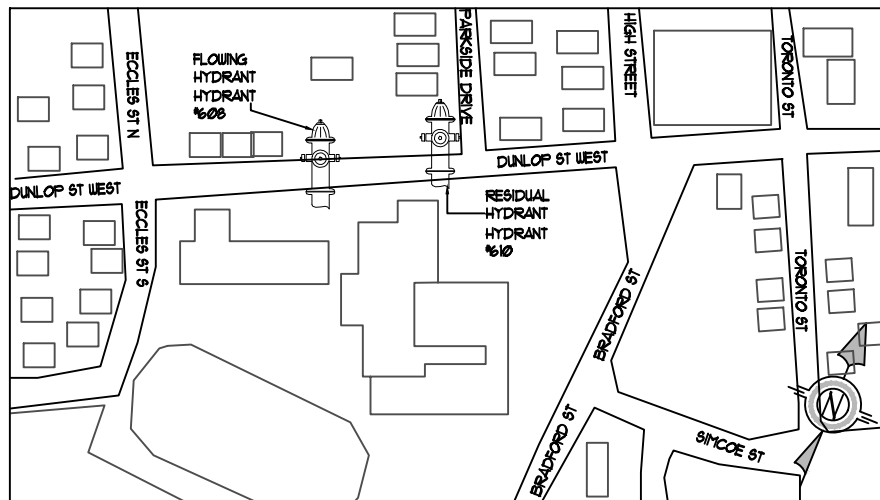
DATE : MAY 29, 2019 TIME : 10:30 AM

LOCATION : DUNLOP STREET WEST & BRADFORD STREET

BARRIE

ONTARIO

TEST BY : VIPOND FIRE PROTECTION AND LOCAL PUC



STATIC PRESSURE : 68 PSI

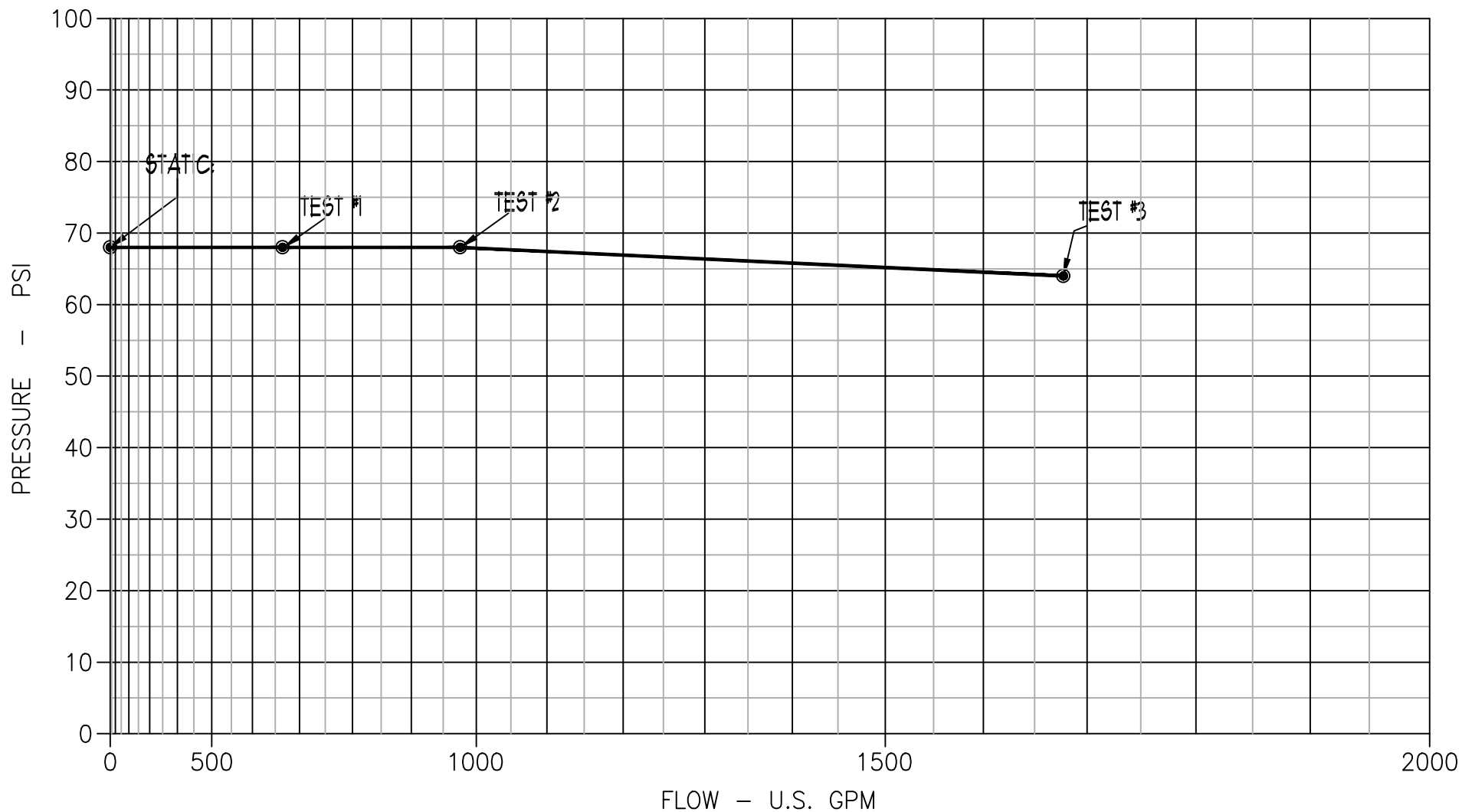
UNDERGROUND TYPE & SIZE : 300 mm D.I.

TEST NO.	NO. OF NOZZLES	NOZZLE DIAMETER (INCHES)	DISCHARGE CO-EFFICIENT	RESIDUAL PRESSURE (PSI)	PITOT PRESSURE (PSI)	DISCHARGE (U.S.GPM)
1	1	1 3/4"	0.995	68	55	660
2	1	2 1/2"	0.90	68	33	969
3	2	2 1/2"	0.90	64	25	1686



DUNLOP STREET WEST & BRADFORD STREET	BY :	LEN K.
BARRIE	VIPOND OFFICE :	BARRIE
ONTARIO	TEST BY :	VIPOND & PUC
	DATE :	MAY 29, 2019

STATIC:		RESIDUAL:		FLOW:
<u>68</u> PSI	TEST#1	<u>68</u> PSI	@	<u>660</u> GPM
	TEST#2	<u>68</u> PSI	@	<u>969</u> GPM
	TEST#3	<u>64</u> PSI	@	<u>1686</u> GPM





APPENDIX B

SANITARY SERVICING CALCULATIONS



Barrie Central Developments Inc. Sanitary Flow Calculations

Design Criteria

Flow per capita (Q):	225	L/cap/day	
Peak Flow	$Q_p = P * Q * M / 86400 + I * A$		
Peaking Factor (Harmon Formula)	$M = 1 + (14 / (4 + (P / 1000) ^ { 0.5 }))$		
Infiltration Allowance	0.1	L/s/ha	Where: $2 \leq "M" \leq 4$

Site Data

Description	Density		Units		Flow Rate
High Density Residential	1.67	people/unit	1,630	units	225 L/cap/d

*630 units Phase 1 and estimated 1000 units phase 2

Calculate Residential Population

Pop. Apartments	=	1.67	x	1,630
Pop. Total	=	2,722	people	

Apartment Building

Calculate Average Daily Flows

ADF (L/s)	=	225	x	2,722
ADF (L/s)	=	612,473	L/day	
ADF (L/s)	=	7.09	L/s	

Calculate Residential Peaking Factor

M	=	1	+	$\frac{14}{4 + \frac{2,722}{1,000}^{0.5}}$
M	=	3.48		

Calculate Residential Peak Flow

Qp	=	7.09	x	3.48
	=	24.65	L/s	

Commercial Units

Calculate Average Daily Flows

ADF (L/s)	=	359	x	28,000	/	10000
ADF (L/s)	=	1,005	L/day			
ADF (L/s)	=	0.01	L/s			

Peaking Factor

M	=	2.00	As per 3.3.2.2. of Barrie's Sanitary Sewage Collection System Policies and Design Guidelines		
---	---	------	--	--	--

Calculate Peak Flow

Qp	=	0.01	x	2.00
	=	0.02	L/s	

Infiltration Allowance

Infiltration Allowance	=	0.10	x	2.99
	=	0.30	L/s	

Total Peak Flow	=	24.65	+	0.02	+	0.30
	=	24.98	L/s			

$n=0.013$

$M=1+(14/(4+(P/1000)^{0.5}))$ ($2 \leq M \leq 4$)

$Q_p=P*Q*M/86400$ ($Q=450$ l/day/person)

$Q_i=0.23$ L/s/ha

$Q_{tot}=Q_p+Q_i$

Barrie Central Developments Inc.
Sanitary Sewer Design Sheet
Proposed Development

25-Feb-2022

19051

BARRIE CENTRAL

AREA ID	MANHOLE		LENGTH	LAND	INCREMENT			TOTAL	D	S	Q	V	Q
	FROM	TO	(ha)	USE	q	AREA	Q (qA)	Q	(mm)	(%)	FULL	FULL	FULL
					(L/ha/day)		(L/s)	(L/s)			(L/s)	(m/s)	(%)
BRADFORD STREET													
1A	SAC01029	SAC01028	29.00	C4	28000	0.834	0.27	0.270	300	0.30	53.0	0.75	1%
2A	SAC01028	SAC01027	85.00	C4	28000	5.526	1.79	2.06	300	0.30	53.0	0.75	4%
PROPOSED DEVELOPMENT	SAN MH1	SAC01027					24.98	24.98					
FUTURE DEVELOPMENT							26.50	26.50					
3A	SAC01027	SAC01026	77.40	C4	28000	1.318	0.43	51.91	300	0.30	53.0	0.75	98%
4A	SAC01026	SAC01025	75.00	C2	28000	0.527	0.17	52.08	300	0.30	53.0	0.75	98%
5A	SAC01025	SAC01024	67.60	C2	28000	0.142	0.05	52.12	300	0.30	53.0	0.75	98%
	SAC01024	SAC01023	11.20					52.12	300	0.30	53.0	0.75	98%

Notes:

- Sanitary catchment areas taken from "Bradford Street Reconstruction - Sanitary Drainage Plan" drawing, dated May 2003.
- Sanitary sewer pipe lengths and slopes taken from "Bradford Street Reconstruction" PP1, PP2, and PP3 drawings, dated May 2003.
- Sanitary flow for Future Development taken from Function Servicing and Stormwater Management Report by SCS Consulting Group Ltd. for 51, 53, 55 & 75 Bradford Street and 20 Checkley Street development.



APPENDIX C

STORMWATER MANAGEMENT CALCULATIONS

Barrie Central Developments Inc.
Calculation of Runoff Coefficients - Visual OTTHYMO Modeling

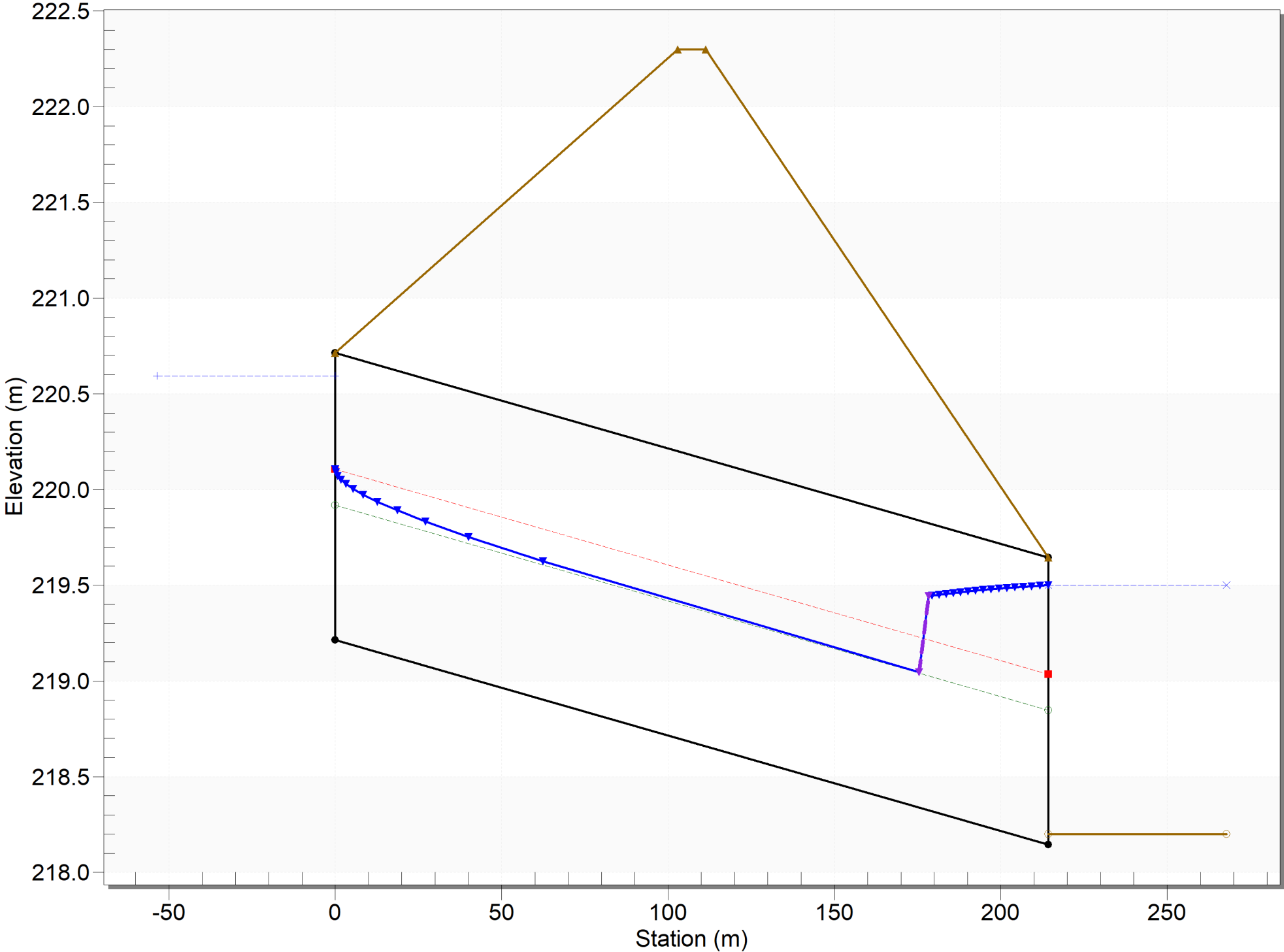
PRE-DEVELOPMENT

Runoff Coefficient	=	0.25	0.6	0.95	0.95	0.95		Weighted Runoff Coefficient	Total Impervious (%)
Surface Cover	=	Grass	Gravel	Asphalt	Building	Conc.			
	Total Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)			
100	1290	215	0	1075	0	0		0.83	83.3%
101	28572	12624	1859	12020	2069	0		0.62	55.8%
Total	29862	12839	1859	13095	2069	0		0.63	57.0%

POST-DEVELOPMENT

	Total Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)	Area (m ²)			
201	8314	4324	0	3134	0	856		0.59	48.0%
202	8166	612	0	1262	5976	316		0.90	92.5%
203	13382	2942	0	3500	6000	940		0.80	78.0%
Total	29862	7878	0	7896	11976	2112		0.77	73.6%

Crossing - Crossing 1, Design Discharge - 16.06 cms
Culvert - Culvert 1, Culvert Discharge - 16.06 cms



HY-8 Culvert Analysis Report

Crossing Discharge Data

Discharge Selection Method: User Defined

Table 1 - Summary of Culvert Flows at Crossing: Crossing 1

Headwater Elevation (m)	Discharge Names	Total Discharge (cms)	Culvert 1 Discharge (cms)	Roadway Discharge (cms)	Iterations
220.56	100yr (Existing)	15.54	15.54	0.00	1
220.59	100yr (Proposed)	16.06	16.06	0.00	1
222.30	Overtopping	37.36	37.36	0.00	Overtopping

Culvert Data: Culvert 1

Table 2 - Culvert Summary Table: Culvert 1

Discharge Names	Total Discharge (cms)	Culvert Discharge (cms)	Headwater Elevation (m)	Inlet Control Depth (m)	Outlet Control Depth (m)	Normal Depth (m)	Critical Depth (m)	Outlet Depth (m)
100yr (Existing)	15.54 cms	15.54 cms	220.56	1.35	0.696	0.69	0.87	1.36
100yr (Proposed)	16.06 cms	16.06 cms	220.59	1.38	0.724	0.70	0.89	1.36

Culvert Barrel Data

Culvert Barrel Type Straight Culvert

Inlet Elevation (invert): 219.22 m,

Outlet Elevation (invert): 218.14 m

Culvert Length: 214.25 m,

Culvert Slope: 0.0050

Site Data - Culvert 1

Site Data Option: Culvert Invert Data

Inlet Station: 0.00 m

Inlet Elevation: 219.22 m

Outlet Station: 214.25 m

Outlet Elevation: 218.14 m

Number of Barrels: 1

Culvert Data Summary - Culvert 1

Barrel Shape: Concrete Box

Barrel Span: 6096.00 mm

Barrel Rise: 1500.00 mm

Barrel Material: Concrete

Embedment: 0.00 mm

Barrel Manning's n: 0.0130

Culvert Type: Straight

Inlet Configuration: Square Edge (30-75° flare) Wingwall (Ke=0.4)

Inlet Depression: None

Tailwater Data for Crossing: Crossing 1

Table 3 - Downstream Channel Rating Curve (Crossing: Crossing 1)

Flow (cms)	Water Surface Elev (m)	Depth (m)
15.54	219.50	1.30
16.06	219.50	1.30

Tailwater Channel Data - Crossing 1

Tailwater Channel Option: Enter Constant Tailwater Elevation

Constant Tailwater Elevation: 219.50 m

Roadway Data for Crossing: Crossing 1

Roadway Profile Shape: Constant Roadway Elevation

Crest Length: 214.25 m

Crest Elevation: 222.30 m

Roadway Surface: Paved

Roadway Top Width: 8.50 m

Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Friday, Dec 18 2020

Bradford Street - 27.0 m ROW at 0.4%

Rectangular

Bottom Width (m) = 27.0000

Total Depth (m) = 0.7000

Invert Elev (m) = 222.0000

Slope (%) = 0.4000

N-Value = 0.013

Calculations

Compute by: Known Depth

Known Depth (m) = 0.4100

Highlighted

Depth (m) = 0.4100

Q (cms) = 29

Area (sqm) = 11.0700

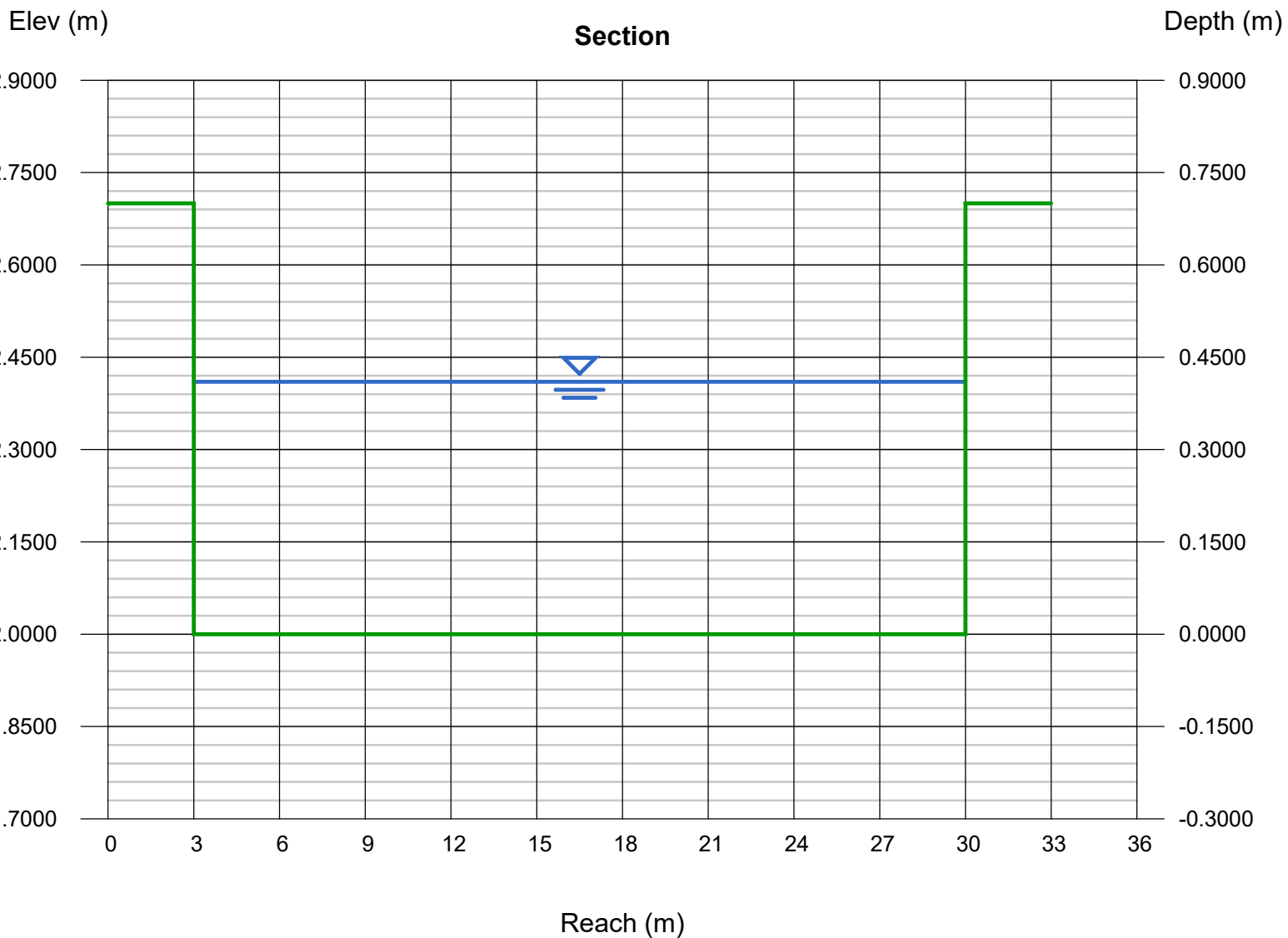
Velocity (m/s) = 2.6323

Wetted Perim (m) = 27.8200

Crit Depth, Yc (m) = 0.4938

Top Width (m) = 27.0000

EGL (m) = 0.7634



Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Friday, Dec 18 2020

Simcoe Street - 23.0 m ROW at 0.5%

Rectangular

Bottom Width (m) = 23.0000
Total Depth (m) = 0.7000

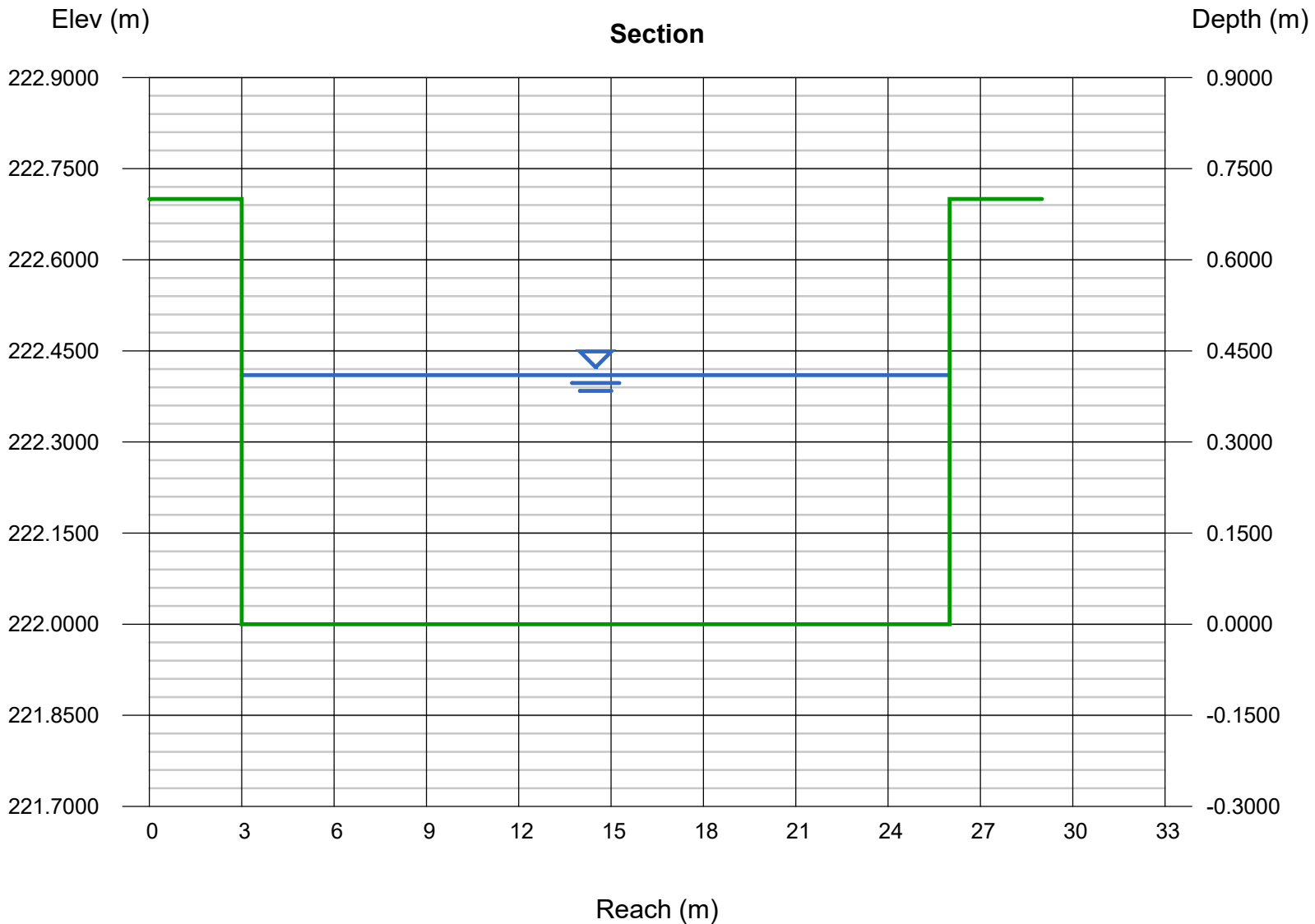
Invert Elev (m) = 222.0000
Slope (%) = 0.5000
N-Value = 0.013

Calculations

Compute by: Known Depth
Known Depth (m) = 0.4100

Highlighted

Depth (m) = 0.4100
Q (cms) = 27.6586
Area (sqm) = 9.4300
Velocity (m/s) = 2.9330
Wetted Perim (m) = 23.8200
Crit Depth, Yc (m) = 0.5304
Top Width (m) = 23.0000
EGL (m) = 0.8488





PROJECT SITE PRE-DEVELOPMENT OTTHYMO MODELING RESULTS

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A L
VV      I   SSSSS UUUUU A   A LLLLL

    000   TTTTT TTTTT H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y Y   MM MM O   O
O   O   T   T   H   H   Y   M   M O   O
    000   T   T   H   H   Y   M   M   000

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DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

 ** SIMULATION : Run 01 **

READ STORM	Filename: C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\55885f32
Ptotal= 38.62 mm	Comments: 2yr_4hr_chi

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	10.00	1.33	7.98	2.50	5.73	3.67	2.72
0.33	0.00	1.50	18.78	2.67	4.89	3.83	2.55
0.50	2.47	1.67	83.11	2.83	4.28	4.00	2.39
0.67	2.82	1.83	24.57	3.00	3.82	4.17	2.26
0.83	3.31	2.00	13.01	3.17	3.46	4.33	2.15
1.00	4.05	2.17	9.01	3.33	3.17		
1.17	5.30	2.33	6.97	3.50	2.93		

CALIB STANDHYD (0100) ID= 1 DT= 5.0 min	Area (ha)= 0.13 Total Imp(%)= 83.30 Dir. Conn.(%)= 62.50
--	--

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.11	0.02
Dep. Storage (mm)=	1.00	5.00
Average Slope (%)=	1.00	2.00
Length (m)=	29.44	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	10.00	1.167	5.30	2.250	6.97	3.33	3.17
0.167	10.00	1.250	7.98	2.333	6.97	3.42	2.93
0.250	0.00	1.333	7.98	2.417	5.73	3.50	2.93
0.333	0.00	1.417	18.78	2.500	5.73	3.58	2.72
0.417	2.47	1.500	18.78	2.583	4.89	3.67	2.72
0.500	2.47	1.583	83.11	2.667	4.89	3.75	2.55
0.583	2.82	1.667	83.11	2.750	4.28	3.83	2.55
0.667	2.82	1.750	24.57	2.833	4.28	3.92	2.39

0.750	3.31	1.833	24.57	2.917	3.82	4.00	2.39
0.833	3.31	1.917	13.01	3.000	3.82	4.08	2.26
0.917	4.05	2.000	13.01	3.083	3.46	4.17	2.26
1.000	4.05	2.083	9.01	3.167	3.46	4.25	2.15
1.083	5.30	2.167	9.01	3.250	3.17	4.33	2.15

Max.Eff.Inten.(mm/hr)= 83.11 50.87
over (min) 5.00 10.00
Storage Coeff. (min)= 1.32 (ii) 5.80 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.33 0.15

TOTALS

PEAK FLOW (cms)= 0.02 0.00 0.021 (iii)
TIME TO PEAK (hrs)= 1.67 1.75 1.67
RUNOFF VOLUME (mm)= 37.62 11.52 27.81
TOTAL RAINFALL (mm)= 38.62 38.62 38.62
RUNOFF COEFFICIENT = 0.97 0.30 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 59.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0101)
ID= 1 DT= 5.0 min
Area (ha)= 2.86
Total Imp(%)= 55.80 Dir. Conn.(%)= 44.10

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.60	1.26
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	138.08	40.00
Mannings n	=	0.013	0.250

Max.Eff.Inten.(mm/hr)= 83.11 11.76
over (min) 5.00 20.00
Storage Coeff. (min)= 3.34 (ii) 19.95 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.26 0.06

TOTALS

PEAK FLOW (cms)= 0.28 0.02 0.288 (iii)
TIME TO PEAK (hrs)= 1.67 1.92 1.67
RUNOFF VOLUME (mm)= 37.62 6.90 20.44
TOTAL RAINFALL (mm)= 38.62 38.62 38.62
RUNOFF COEFFICIENT = 0.97 0.18 0.53

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 59.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0400)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0100): 0.13 0.021 1.67 27.81
+ ID2= 2 (0101): 2.86 0.288 1.67 20.44
=====

ID = 3 (0400): 2.99 0.308 1.67 20.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM O   O
O   O   T   T   H   H   Y   Y   M   M O   O
    000   T   T   H   H   Y   Y   M   M   000

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***** S U M M A R Y O U T P U T *****

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DATE: 02-25-2022 TIME: 08:56:53

USER:

COMMENTS: _____

 ** SIMULATION : Run 02 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	--------	---------	-----------	-----------	---------	------	-----------

START @ 0.00 hrs

 READ STORM 10.0
 [Ptot= 52.18 mm]
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 remark: 5yr_4hr_chi

* CALIB STANDHYD	0100	1	5.0	0.13	0.03	1.67	39.24	0.75	0.000
[I%=62.5:S%= 2.00]									
* CALIB STANDHYD	0101	1	5.0	2.86	0.39	1.67	29.49	0.57	0.000
[I%=44.1:S%= 2.00]									
* ADD [0100+ 0101]	0400	3	5.0	2.99	0.42	1.67	29.92	n/a	0.000

(v 6.0.2001)

TM

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***** SUMMARY OUTPUT *****

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Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voim.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\40ff7ef4-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\40ff7ef4-
```

DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 03                               **
*****
```

HYD ID

DT
minAREA
ha

' Qpeak Tpeak
' cms hrs

R.V
mm

R.C.

Qbase
cms

START @ 0.00 hrs

10.0

[Ptot= 61.36 mm]

```
fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\8860b67d-7c1a-45f2-b486
remark: 10yr_4hr_chi
```

**	CALIB STANDHYD	0100	1	5.0	0.13	0.03	1.67	47.23	0.77	0.000
**	[I%=62.5:S%= 2.00]									
**	CALIB STANDHYD	0101	1	5.0	2.86	0.47	1.67	35.97	0.59	0.000
**	[I%=44.1:S%= 2.00]									
**	ADD [0100+ 0101]	0400	3	5.0	2.99	0.50	1.67	36.46	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS   U   U   A A   L
V   V   I   SS   U   U   AAAAA L
V   V   I   SS   U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\b5f6f749-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\b5f6f749-

DATE: 02-25-2022 TIME: 08:56:53

USER:

COMMENTS: _____

 ** SIMULATION : Run 04 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
START @ 0.00 hrs								

READ STORM	10.0							
[Ptot= 72.90 mm]								
fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\728106dd-7b98-44c6-a0d6								
remark: 25yr_4hr_chi								
* CALIB STANDHYD	0100	1	5.0	0.13	0.04	1.67	57.47	0.79
[I%=62.5:S%= 2.00]								
* CALIB STANDHYD	0101	1	5.0	2.86	0.56	1.67	44.45	0.61
[I%=44.1:S%= 2.00]								
* ADD [0100+ 0101]	0400	3	5.0	2.99	0.61	1.67	45.02	n/a
0.000								

(v 6.0.2001)

TM

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voim.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\02580221-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\02580221-
```

DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 05                               **
*****
```

HYD ID

DT
minAREA
ha

' Qpeak Tpeak
' cms hrs

R.V
mm

R.C.

Qbase
cms

START @ 0.00 hrs

10.0

[Ptot= 81.12 mm]

```
fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\7d8c6193-475e-4ef9-afb3
remark: 50yr_4hr_chi
```

**	CALIB STANDHYD	0100	1	5.0	0.13	0.05	1.67	64.88	0.80	0.000
**	[I%=62.5:S%= 2.00]									
**	CALIB STANDHYD	0101	1	5.0	2.86	0.63	1.67	50.69	0.62	0.000
**	[I%=44.1:S%= 2.00]									
**	ADD [0100+ 0101]	0400	3	5.0	2.99	0.68	1.67	51.31	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS   U   U   A A   L
V   V   I   SS   U   U   AAAAA L
V   V   I   SS   U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTTT   TTTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   M   M   O   O
    000   T   T   H   H   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\02454fa4-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\02454fa4-

DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

 ** SIMULATION : Run 06 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 10.0
 [Ptot= 89.24 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\57bcb0b3-71d9-4651-bf2e
 remark: 100yr_4hr_chi

* CALIB STANDHYD	0100	1	5.0	0.13	0.05	1.67	72.28	0.81	0.000
[I%=62.5:S%= 2.00]									
* CALIB STANDHYD	0101	1	5.0	2.86	0.71	1.67	57.00	0.64	0.000
[I%=44.1:S%= 2.00]									
* ADD [0100+ 0101]	0400	3	5.0	2.99	0.76	1.67	57.66	n/a	0.000

(v 6.0.2001)

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat

```
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\7fbd62bd-
```

Summary filename: C:\Users\avarghese\AppData\Local\Civica\vh5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\7fbd62bd-

DATE: 02-25-2022

TIME: 08:56:52

USER:

COMMENTS: _____

```

** SIMULATION : Run 07                                     **

```

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

READ STORM	15.0
------------	------

[Ptot= 46.70 mm]

fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\5f4eca77-94b8-47da-9395

remark: 2yr_12hr_scs

```
*
* CALIB STANDHYD      0100  1  5.0    0.13    0.02  6.00  34.54 0.74    0.000
* [I%=62.5:S%= 2.00]
```

```
*
* CALIB STANDHYD      0101  1  5.0    2.86    0.24  6.00  25.75 0.55    0.000
* [I%=44.1:S%= 2.00]
```

ADD [0100+ 0101]	0400	3	5.0	2.99	0.25	6.00	26.13	n/a	0.000
-------------------	------	---	-----	------	------	------	-------	-----	-------

(v 6.0.2001)

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\58f153ce-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\58f153ce-
```

DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 08                               **
*****
```

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

```

READ STORM                                15.0
[ Ptot= 64.30 mm ]
fname : C:\Users\avarghese\AppData
remark: 5yr_12hr_scs

```

*	CALIB STANDHYD	0100	1	5.0	0.13	0.02	6.00	49.80	0.77	0.000
*	[I%=62.5:S%= 2.00]									
*	CALIB STANDHYD	0101	1	5.0	2.86	0.36	6.00	38.10	0.59	0.000
*	[I%=44.1:S%= 2.00]									
*	ADD [0100+ 0101]	0400	3	5.0	2.99	0.38	6.00	38.60	n/a	0.000

(v 6.0.2001)

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voim.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\198a7fa0-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\198a7fa0-
```

DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 09                               **
*****
```

HYD ID

DT
minAREA
ha

' Qpeak Tpeak
' cms hrs

R.V
mm

R.C.

Qbase
cms

START @ 0.00 hrs

15.0

[Ptot= 76.00 mm]

```
fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\a6c6ab75-b014-4243-8a3e
remark: 10yr_12hr_scs
```

**	CALIB STANDHYD	0100	1	5.0	0.13	0.03	6.00	60.25	0.79	0.000
**	[I%=62.5:S%= 2.00]									
**	CALIB STANDHYD	0101	1	5.0	2.86	0.44	6.00	46.78	0.62	0.000
**	[I%=44.1:S%= 2.00]									
**	ADD [0100+ 0101]	0400	3	5.0	2.99	0.47	6.00	47.37	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM  MM  O   O
O   O   T   T   H   H   Y   Y   M   M  O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\4010559b-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\4010559b-

DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

 ** SIMULATION : Run 10 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 15.0
 [Ptot= 90.70 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\c53b5537-ad4a-4a95-9c51
 remark: 25yr_12hr_scs

* CALIB STANDHYD	0100	1	5.0	0.13	0.04	6.00	73.61	0.81	0.000
[I%=62.5:S%= 2.00]									
* CALIB STANDHYD	0101	1	5.0	2.86	0.55	6.00	58.14	0.64	0.000
[I%=44.1:S%= 2.00]									
* ADD [0100+ 0101]	0400	3	5.0	2.99	0.59	6.00	58.81	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\f8f3c35f-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\f8f3c35f-

DATE: 02-25-2022 TIME: 08:56:53

USER:

COMMENTS: _____

 ** SIMULATION : Run 11 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 15.0
 [Ptot=101.70 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\23cd38b-ee31-4d7d-bd73
 remark: 50yr_12hr_scs

* CALIB STANDHYD	0100	1	5.0	0.13	0.04	6.00	83.75	0.82	0.000
[I%=62.5:S%= 2.00]									
* CALIB STANDHYD	0101	1	5.0	2.86	0.64	6.00	66.91	0.66	0.000
[I%=44.1:S%= 2.00]									
* ADD [0100+ 0101]	0400	3	5.0	2.99	0.68	6.00	67.64	n/a	0.000

FINISH

=====

(v 6.0.2001)

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voim.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\f4843611-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\f4843611-
```

DATE: 02-25-2022 TIME: 08:56:53

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 12                               **
*****
```

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

```

READ STORM                                     15.0
[ Ptot=112.50 mm ]
fname : C:\Users\avarghese\AppData
remark: 100yr_12hr_scs

```

**	CALIB STANDHYD	0100	1	5.0	0.13	0.05	6.00	93.80	0.83	0.000
**	[I%=62.5:S%= 2.00]									
**	CALIB STANDHYD	0101	1	5.0	2.86	0.76	6.00	75.71	0.67	0.000
**	[I%=44.1:S%= 2.00]									
**	ADD [0100+ 0101]	0400	3	5.0	2.99	0.81	6.00	76.50	n/a	0.000

(v 6.0.2001)

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat

```
Output filename: C:\Users\avarghese\AppData\Local\Civica\vh5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\862ab985-
```

Summary filename: C:\Users\avarghese\AppData\Local\Civica\H5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\862ab985-

DATE: 02-25-2022

TIME: 08:56:52

USER:

COMMENTS: _____

```
** SIMULATION : Run 13 **
```

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

READ STORM	10.0
------------	------

[Ptot= 39.17 mm]

fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\b0cb1ea5-77d9-4c87-8abb

remark: 2yr_24hr_scs

* LIFE	0100	1	5	0	0	13	0	01	0	17	39	35	0	73	0	000
-----------	------	---	---	---	---	----	---	----	---	----	----	----	---	----	---	-----

* CALIB STANDHYD	0100	1	5.0	0.13	0.01	8.17	28.25	0.72	0.000
[I%=62.5:S%= 2.00]									

* CALIB STANDBY	0101	1	5	0	2	86	0	31	8	17	20	70	0	53	0	000
-----------------	------	---	---	---	---	----	---	----	---	----	----	----	---	----	---	-----

* CALIB STANDHYD	0101	1	5.0	2.86	0.21	8.17	20.79	0.53	0.000
[I%=44.1:S%= 2.00]									

ADD	[	0100+	0101]	0400	3	5.0	2.99	0.23	8.17	21.12	n/a	0.000
-----	---	-------	-------	------	---	-----	------	------	------	-------	-----	-------

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\c9542224-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\c9542224-

DATE: 02-25-2022 TIME: 08:56:53

USER:

COMMENTS: _____

 ** SIMULATION : Run 14 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 10.0
 [Ptot= 53.17 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\09837084-9e2e-4d6e-8076
 remark: 5yr_24hr_scs

* CALIB STANDHYD	0100	1	5.0	0.13	0.02	8.17	40.09	0.75	0.000
[I%=62.5:S%= 2.00]									
* CALIB STANDHYD	0101	1	5.0	2.86	0.31	8.17	30.17	0.57	0.000
[I%=44.1:S%= 2.00]									
* ADD [0100+ 0101]	0400	3	5.0	2.99	0.33	8.17	30.61	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\41eab689-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\41eab689-

DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

 ** SIMULATION : Run 15 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 10.0
 [Ptot= 62.43 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\6a34da09-b297-41d0-aa93
 remark: 10yr_24hr_scs

* CALIB STANDHYD	0100	1	5.0	0.13	0.03	8.17	48.16	0.77	0.000
[I%=62.5:S%= 2.00]									
* CALIB STANDHYD	0101	1	5.0	2.86	0.39	8.17	36.74	0.59	0.000
[I%=44.1:S%= 2.00]									
* ADD [0100+ 0101]	0400	3	5.0	2.99	0.41	8.17	37.24	n/a	0.000

(v 6.0.2001)

TM

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\vojn.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\7736a4cd-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\7736a4cd-
```

DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

```

*****
** SIMULATION : Run 16                               **
*****

```

HYD ID

DT
min

AREA
ha

' Qpeak Tpeak
' cms hrs

R.V
mm

R.C.

Qbase
cms

START @ 0.00 hrs

READ STORM

10.0

[Ptot= 74.17 mm]

```
fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\642e555d-68fb-4b3e-ae06
remark: 25yr_24hr_scs
```

**	CALIB STANDHYD	0100	1	5.0	0.13	0.03	8.17	58.61	0.79	0.000
**	[I%=62.5:S%= 2.00]									
**	CALIB STANDHYD	0101	1	5.0	2.86	0.48	8.17	45.40	0.61	0.000
**	[I%=44.1:S%= 2.00]									
**	ADD [0100+ 0101]	0400	3	5.0	2.99	0.51	8.17	45.98	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS   U   U   A A   L
V   V   I   SS   U   U   AAAAA L
V   V   I   SS   U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\37c49504-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\37c49504-

DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

 ** SIMULATION : Run 17 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 10.0
 [Ptot= 82.90 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\48bb3290-94e2-4270-8ab1
 remark: 50yr_24hr_scs

* CALIB STANDHYD	0100	1	5.0	0.13	0.04	8.17	66.49	0.80	0.000
[I%=62.5:S%= 2.00]									
* CALIB STANDHYD	0101	1	5.0	2.86	0.55	8.17	52.06	0.63	0.000
[I%=44.1:S%= 2.00]									
* ADD [0100+ 0101]	0400	3	5.0	2.99	0.59	8.17	52.69	n/a	0.000

(v 6.0.2001)

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\3f4bd62f-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\3f4bd62f-
```

DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 18                               **
*****
```

HYD ID

DT
minAREA
ha

' Qpeak Tpeak
' cms hrs

R.V
mm

R.C.

Qbase
cms

START @ 0.00 hrs

10.0

[Ptot= 91.57 mm]

```
fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\7a4f4ff1-5a92-43c3-b9c0
remark: 100yr_24hr_scs
```

**	CALIB STANDHYD	0100	1	5.0	0.13	0.04	8.17	74.41	0.81	0.000
**	[I%=62.5:S%= 2.00]									
**	CALIB STANDHYD	0101	1	5.0	2.86	0.62	8.17	58.83	0.64	0.000
**	[I%=44.1:S%= 2.00]									
**	ADD [0100+ 0101]	0400	3	5.0	2.99	0.67	8.17	59.50	n/a	0.000

(v 6.0.2001)

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\5fefbd47-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\5fefbd47-
```

DATE: 02-25-2022 TIME: 08:56:52

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 19                               **
*****
```

HYD ID

DT
min

AREA
ha

' Qpeak Tpeak
' cms hrs

R.V.
mm

R.C.

Qbase
cms

START @ 0.00 hrs

READ STORM

60.0

[Ptot=212.00 mm]

```
fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\4a48a8af3-1276-42ae-9110
remark: hazel-hr
```

*	CALIB STANDHYD	0100	1	5.0	0.13	0.02	10.00	189.06	0.89	0.000
*	[I%=62.5:S%= 2.00]									
*	CALIB STANDHYD	0101	1	5.0	2.86	0.36	10.00	162.65	0.77	0.000
*	[I%=44.1:S%= 2.00]									
*	ADD [0100+ 0101]	0400	3	5.0	2.99	0.38	10.00	163.80	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\9399f51c-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\9399f51c-

DATE: 02-25-2022 TIME: 08:56:53

USER:

COMMENTS: _____

 ** SIMULATION : Run 20 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 60.0
 [Ptot=193.00 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\fb8311cb-8658-422f-a47e-e549d270a4b2\6f4c0b8b-2e9f-4473-a549
 remark: Timmins

* CALIB STANDHYD	0100	1	5.0	0.13	0.01	7.00	170.61	0.88	0.000
[I%=62.5:S%= 2.00]									
* CALIB STANDHYD	0101	1	5.0	2.86	0.27	7.00	145.46	0.75	0.000
[I%=44.1:S%= 2.00]									
* ADD [0100+ 0101]	0400	3	5.0	2.99	0.29	7.00	146.56	n/a	0.000



**PROJECT SITE
POST-DEVELOPMENT OTTHYMO MODELING
RESULTS**

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS   U   U   A A   L
V   V   I   SS   U   U   AAAAA L
V   V   I   SS   U   U   A   A L
VV    I   SSSSS UUUUU A   A LLLLL

    000   TTTTT TTTTT H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y Y   MM MM O   O
O   O   T   T   H   H   Y   M   M O   O
    000   T   T   H   H   Y   M   M   000

```

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\vo2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\8ee1f3f0-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\8ee1f3f0-

DATE: 02-25-2022 TIME: 09:08:50
 USER:

COMMENTS: _____

 ** SIMULATION : Run 01 **

READ STORM	Filename: C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\55885f32
Ptotal= 38.62 mm	Comments: 2yr_4hr_chi

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	10.00	1.33	7.98	2.50	5.73	3.67	2.72
0.33	0.00	1.50	18.78	2.67	4.89	3.83	2.55
0.50	2.47	1.67	83.11	2.83	4.28	4.00	2.39
0.67	2.82	1.83	24.57	3.00	3.82	4.17	2.26
0.83	3.31	2.00	13.01	3.17	3.46	4.33	2.15
1.00	4.05	2.17	9.01	3.33	3.17		
1.17	5.30	2.33	6.97	3.50	2.93		

CALIB STANDHYD (0200) ID= 1 DT= 5.0 min	Area (ha)= 2.11 Total Imp(%)= 83.10	Dir. Conn.(%)= 62.30
--	--	----------------------

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.75	0.36
Dep. Storage (mm)=	1.00	5.00
Average Slope (%)=	1.00	2.00
Length (m)=	118.60	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	10.00	1.167	5.30	2.250	6.97	3.33	3.17
0.167	10.00	1.250	7.98	2.333	6.97	3.42	2.93
0.250	0.00	1.333	7.98	2.417	5.73	3.50	2.93
0.333	0.00	1.417	18.78	2.500	5.73	3.58	2.72
0.417	2.47	1.500	18.78	2.583	4.89	3.67	2.72
0.500	2.47	1.583	83.11	2.667	4.89	3.75	2.55
0.583	2.82	1.667	83.11	2.750	4.28	3.83	2.55
0.667	2.82	1.750	24.57	2.833	4.28	3.92	2.39

0.750	3.31	1.833	24.57	2.917	3.82	4.00	2.39
0.833	3.31	1.917	13.01	3.000	3.82	4.08	2.26
0.917	4.05	2.000	13.01	3.083	3.46	4.17	2.26
1.000	4.05	2.083	9.01	3.167	3.46	4.25	2.15
1.083	5.30	2.167	9.01	3.250	3.17	4.33	2.15

Max.Eff.Inten.(mm/hr)= 83.11 50.23
over (min) 5.00 10.00
Storage Coeff. (min)= 3.05 (ii) 7.56 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.27 0.13

TOTALS

PEAK FLOW (cms)= 0.29 0.04 0.323 (iii)
TIME TO PEAK (hrs)= 1.67 1.75 1.67
RUNOFF VOLUME (mm)= 37.62 11.46 27.76
TOTAL RAINFALL (mm)= 38.62 38.62 38.62
RUNOFF COEFFICIENT = 0.97 0.30 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 59.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0201)
ID= 1 DT= 5.0 min
Area (ha)= 0.88
Total Imp(%)= 75.40 Dir. Conn.(%)= 56.60

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.66	0.22
Dep. Storage (mm)=	1.00	5.00
Average Slope (%)=	1.00	2.00
Length (m)=	76.59	40.00
Mannings n =	0.013	0.250

Max.Eff.Inten.(mm/hr)= 83.11 25.79
over (min) 5.00 15.00
Storage Coeff. (min)= 2.34 (ii) 14.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.08

TOTALS

PEAK FLOW (cms)= 0.11 0.01 0.119 (iii)
TIME TO PEAK (hrs)= 1.67 1.83 1.67
RUNOFF VOLUME (mm)= 37.62 9.43 25.38
TOTAL RAINFALL (mm)= 38.62 38.62 38.62
RUNOFF COEFFICIENT = 0.97 0.24 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 59.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0400)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0200): 2.11 0.323 1.67 27.76
+ ID2= 2 (0201): 0.88 0.119 1.67 25.38
=====

ID = 3 (0400): 2.99 0.442 1.67 27.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

(v 6.0.2001)

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voim.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\b7cdc6a2-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\b7cdc6a2-
```

DATE: 02-25-2022 TIME: 09:08:51

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 02                               **
*****
```

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

```

READ STORM                                10.0
[ Ptot= 52.18 mm ]
fname : C:\Users\avarghese\AppData
remark: 5yr_4hr_chi

```

*	CALIB STANDHYD	0200	1	5.0	2.11	0.44	1.67	39.17	0.75	0.000
*	[I%=62.3:S%= 2.00]									
*	CALIB STANDHYD	0201	1	5.0	0.88	0.17	1.67	36.04	0.69	0.000
*	[I%=56.6:S%= 2.00]									
*	ADD [0200+ 0201]	0400	3	5.0	2.99	0.61	1.67	38.25	n/a	0.000

(v 6.0.2001)

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\b7e8517c-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\b7e8517c-
```

DATE: 02-25-2022 TIME: 09:08:51

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 03                               **
*****
```

HYD ID

DT
minAREA
ha

' Qpeak Tpeak
' cms hrs

R.V
mm

R.C.

Qbase
cms

START @ 0.00 hrs

10.0

[Ptot= 61.36 mm]

```
fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\8860b67d-7c1a-45f2-b486
remark: 10yr_4hr_chi
```

**	CALIB_STANDHYD	0200	1	5.0	2.11	0.52	1.67	47.13	0.77	0.000
**	[I%=62.3:S%= 2.00]									
**	CALIB_STANDHYD	0201	1	5.0	0.88	0.20	1.67	43.53	0.71	0.000
**	[I%=56.6:S%= 2.00]									
**	ADD [0200+ 0201]	0400	3	5.0	2.99	0.73	1.67	46.07	n/a	0.000

(v 6.0.2001)

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\13516135-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\13516135-
```

DATE: 02-25-2022 TIME: 09:08:50

USER:

COMMENTS: _____

```

*****
** SIMULATION : Run 04                               **
*****

```

W/E COMMAND

HYD ID

DT
minAREA
ha

' Qpeak Tpeak
' cms hrs

R.V
mm

R.C.

Qbase
cms

START @ 0.00 hrs

READ STORM

10.0

[Ptot= 72.90 mm]

```
fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\728106dd-7b98-44c6-a0d6
remark: 25yr_4hr_chi
```

**	CALIB STANDHYD	0200	1	5.0	2.11	0.63	1.67	57.36	0.79	0.000
**	[I%=62.3:S%= 2.00]									
**	CALIB STANDHYD	0201	1	5.0	0.88	0.24	1.67	53.22	0.73	0.000
**	[I%=56.6:S%= 2.00]									
**	ADD [0200+ 0201]	0400	3	5.0	2.99	0.87	1.67	56.14	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM  MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\f6df8891-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\f6df8891-

DATE: 02-25-2022 TIME: 09:08:51

USER:

COMMENTS: _____

 ** SIMULATION : Run 05 **

W/E COMMAND

HYD ID DT AREA ' Qpeak Tpeak R.V. R.C. Qbase
 min ha ' cms hrs mm cms

START @ 0.00 hrs

 READ STORM

10.0

[Ptot= 81.12 mm]

fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\7d8c6193-475e-4ef9-afb3

remark: 50yr_4hr_chi

```

*
* CALIB STANDHYD      0200  1  5.0    2.11    0.71  1.67  64.76  0.80    0.000
* [I%=62.3:S%= 2.00]
*
* CALIB STANDHYD      0201  1  5.0    0.88    0.27  1.67  60.26  0.74    0.000
* [I%=56.6:S%= 2.00]
*
* ADD [ 0200+ 0201]  0400  3  5.0    2.99    0.98  1.67  63.43  n/a    0.000
*

```

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV      I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTTT TTTTT H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM O   O
O   O   T   T   H   H   Y   M   M   O   O
    000   T   T   H   H   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\46dea6c1-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\46dea6c1-

DATE: 02-25-2022 TIME: 09:08:50

USER:

COMMENTS: _____

 ** SIMULATION : Run 06 **

W/E COMMAND

HYD ID	DT min	AREA ha	Qpeak ' cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
--------	-----------	------------	-------------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM

10.0

[Ptot= 89.24 mm]

fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\57bcb0b3-71d9-4651-bf2e

remark: 100yr_4hr_chi

* CALIB STANDHYD	0200	1	5.0	2.11	0.79	1.67	72.15	0.81	0.000
[I%=62.3:S%= 2.00]									
* CALIB STANDHYD	0201	1	5.0	0.88	0.30	1.67	67.32	0.75	0.000
[I%=56.6:S%= 2.00]									
* ADD [0200+ 0201]	0400	3	5.0	2.99	1.09	1.67	70.73	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM  MM  O   O
O   O   T   T   H   H   Y   Y   M   M  O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\c8cbfdcc-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\c8cbfdcc-

DATE: 02-25-2022 TIME: 09:08:51

USER:

COMMENTS: _____

 ** SIMULATION : Run 07 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 15.0
 [Ptot= 46.70 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\5f4eca77-94b8-47da-9395
 remark: 2yr_12hr_scs

* CALIB STANDHYD	0200	1	5.0	2.11	0.25	6.00	34.50	0.74	0.000
[I%=62.3:S%= 2.00]									
* CALIB STANDHYD	0201	1	5.0	0.88	0.10	6.00	31.66	0.68	0.000
[I%=56.6:S%= 2.00]									
* ADD [0200+ 0201]	0400	3	5.0	2.99	0.35	6.00	33.66	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\2c78dc0d-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\2c78dc0d-

DATE: 02-25-2022 TIME: 09:08:50

USER:

COMMENTS: _____

 ** SIMULATION : Run 08 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 15.0
 [Ptot= 64.30 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\dca4a219-fbeb-44ba-8729
 remark: 5yr_12hr_scs

* CALIB STANDHYD	0200	1	5.0	2.11	0.39	6.00	49.72	0.77	0.000
[I%=62.3:S%= 2.00]									
* CALIB STANDHYD	0201	1	5.0	0.88	0.14	6.00	45.97	0.71	0.000
[I%=56.6:S%= 2.00]									
* ADD [0200+ 0201]	0400	3	5.0	2.99	0.53	6.00	48.62	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV      I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\27d8fc7-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\27d8fc7-

DATE: 02-25-2022 TIME: 09:08:50

USER:

COMMENTS: _____

 ** SIMULATION : Run 09 **

W/E COMMAND

HYD ID DT AREA ' Qpeak Tpeak R.V. R.C. Qbase
 min ha ' cms hrs mm cms

START @ 0.00 hrs

 READ STORM

15.0

[Ptot= 76.00 mm]

fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\27d8fc7-27d8fc7-

remark: 10yr_12hr_scs

```

*
* CALIB STANDHYD      0200  1  5.0    2.11    0.47  6.00  60.14  0.79    0.000
* [I%=62.3:S%= 2.00]
*
* CALIB STANDHYD      0201  1  5.0    0.88    0.18  6.00  55.86  0.73    0.000
* [I%=56.6:S%= 2.00]
*
* ADD [ 0200+ 0201]  0400  3  5.0    2.99    0.64  6.00  58.88  n/a    0.000
*

```

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\f70ba110-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\f70ba110-

DATE: 02-25-2022 TIME: 09:08:51

USER:

COMMENTS: _____

 ** SIMULATION : Run 10 **

W/E	COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms	
START @ 0.00 hrs										

READ STORM 15.0										
[Ptot= 90.70 mm]										
fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\c53b5537-ad4a-4a95-9c51										
remark: 25yr_12hr_scs										
*										
*	CALIB STANDHYD	0200	1	5.0	2.11	0.57	6.00	73.48	0.81	0.000
	[I%=62.3:S%= 2.00]									
*										
*	CALIB STANDHYD	0201	1	5.0	0.88	0.22	6.00	68.60	0.76	0.000
	[I%=56.6:S%= 2.00]									
*										
*	ADD [0200+ 0201]	0400	3	5.0	2.99	0.80	6.00	72.05	n/a	0.000
*										
FINISH										

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV      I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTTT TTTTT H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM O   O
O   O   T   T   H   H   Y   M   M O   O
    000   T   T   H   H   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\92f24ce-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\92f24ce-

DATE: 02-25-2022 TIME: 09:08:50

USER:

COMMENTS: _____

 ** SIMULATION : Run 11 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 15.0
 [Ptot=101.70 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\23cd38b-ee31-4d7d-bd73
 remark: 50yr_12hr_scs

* CALIB STANDHYD	0200	1	5.0	2.11	0.66	6.00	83.62	0.82	0.000
[I%=62.3:S%= 2.00]									
* CALIB STANDHYD	0201	1	5.0	0.88	0.26	6.00	78.32	0.77	0.000
[I%=56.6:S%= 2.00]									
* ADD [0200+ 0201]	0400	3	5.0	2.99	0.91	6.00	82.06	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS   U   U   A A   L
V   V   I   SS   U   U   AAAAA L
V   V   I   SS   U   U   A   A   L
VV      I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTTT TTTTT H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM O   O
O   O   T   T   H   H   Y   M   M   O   O
    000   T   T   H   H   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\723cb9de-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\723cb9de-

DATE: 02-25-2022 TIME: 09:08:50

USER:

COMMENTS: _____

 ** SIMULATION : Run 12 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 15.0
 [Ptot=112.50 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\1af55e13-9ce4-4e79-b1df
 remark: 100yr_12hr_scs

* CALIB STANDHYD	0200	1	5.0	2.11	0.74	6.00	93.66	0.83	0.000
[I%=62.3:S%= 2.00]									
* CALIB STANDHYD	0201	1	5.0	0.88	0.29	6.00	87.99	0.78	0.000
[I%=56.6:S%= 2.00]									
* ADD [0200+ 0201]	0400	3	5.0	2.99	1.02	6.00	92.00	n/a	0.000

(v 6.0.2001)

TM

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\6630ee7c-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\6630ee7c-
```

DATE: 02-25-2022 TIME: 09:08:50

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 13                               **
*****
```

HYD ID

DT
minAREA
ha

' Qpeak Tpeak
' cms hrs

R.V
mm

R.C.

Qbase
cms

START @ 0.00 hrs

10.0

[Ptot= 39.17 mm]

```
fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\b0cb1ea5-77d9-4c87-8abb
remark: 2yr_24hr_scs
```

**	CALIB STANDHYD	0200	1	5.0	2.11	0.23	8.17	28.20	0.72	0.000
**	[I%=62.3:S%= 2.00]									
**	CALIB STANDHYD	0201	1	5.0	0.88	0.09	8.17	25.79	0.66	0.000
**	[I%=56.6:S%= 2.00]									
**	ADD [0200+ 0201]	0400	3	5.0	2.99	0.32	8.17	27.49	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\0c3660fa-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\0c3660fa-

DATE: 02-25-2022 TIME: 09:08:50

USER:

COMMENTS: _____

 ** SIMULATION : Run 14 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 10.0
 [Ptot= 53.17 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\09837084-9e2e-4d6e-8076
 remark: 5yr_24hr_scs

* CALIB STANDHYD	0200	1	5.0	2.11	0.35	8.17	40.02	0.75	0.000
[I%=62.3:S%= 2.00]									
* CALIB STANDHYD	0201	1	5.0	0.88	0.13	8.17	36.83	0.69	0.000
[I%=56.6:S%= 2.00]									
* ADD [0200+ 0201]	0400	3	5.0	2.99	0.48	8.17	39.08	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM  MM  O   O
O   O   T   T   H   H   Y   Y   M   M  O   O
    000   T   T   H   H   Y   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\d5b7c2e2-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\d5b7c2e2-

DATE: 02-25-2022 TIME: 09:08:51

USER:

COMMENTS: _____

 ** SIMULATION : Run 15 **

W/E COMMAND

HYD ID DT AREA ' Qpeak Tpeak R.V. R.C. Qbase
 min ha ' cms hrs mm cms

START @ 0.00 hrs

 READ STORM

10.0

[Ptot= 62.43 mm]

fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\6a34da09-b297-41d0-aa93

remark: 10yr_24hr_scs

```

*
* CALIB STANDHYD      0200  1  5.0    2.11    0.43  8.17  48.08  0.77    0.000
* [I%=62.3:S%= 2.00]
*
* CALIB STANDHYD      0201  1  5.0    0.88    0.15  8.17  44.42  0.71    0.000
* [I%=56.6:S%= 2.00]
*
* ADD [ 0200+ 0201]  0400  3  5.0    2.99    0.58  8.17  47.00  n/a    0.000
*

```

(v 6.0.2001)

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voim.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\d222c000-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\d222c000-
```

DATE: 02-25-2022 TIME: 09:08:51

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 16                               **
*****
```

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

```

READ STORM                                     10.0
[ Ptot= 74.17 mm ]
fname : C:\Users\avarghese\AppData
remark: 25yr_24hr_scs

```

*	CALIB STANDHYD	0200	1	5.0	2.11	0.53	8.17	58.49	0.79	0.000
*	[I%=62.3:S%= 2.00]									
*	CALIB STANDHYD	0201	1	5.0	0.88	0.20	8.17	54.29	0.73	0.000
*	[I%=56.6:S%= 2.00]									
*	ADD [0200+ 0201]	0400	3	5.0	2.99	0.73	8.17	57.26	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTTT TTTTT H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM O   O
O   O   T   T   H   H   Y   M   M   O   O
    000   T   T   H   H   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\f666723a-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\f666723a-

DATE: 02-25-2022 TIME: 09:08:51

USER:

COMMENTS: _____

 ** SIMULATION : Run 17 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 10.0
 [Ptot= 82.90 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\48bb3290-94e2-4270-8ab1
 remark: 50yr_24hr_scs

* CALIB STANDHYD	0200	1	5.0	2.11	0.60	8.17	66.37	0.80	0.000
[I%=62.3:S%= 2.00]									
* CALIB STANDHYD	0201	1	5.0	0.88	0.23	8.17	61.80	0.75	0.000
[I%=56.6:S%= 2.00]									
* ADD [0200+ 0201]	0400	3	5.0	2.99	0.84	8.17	65.03	n/a	0.000

(v 6.0.2001)

TM

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***** SUMMARY OUTPUT *****

```
Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat
Output  filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\b0aa132f-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\b0aa132f-
```

DATE: 02-25-2022 TIME: 09:08:50

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 18                               **
*****
```

HYD ID

DT
min

AREA
ha

' Qpeak Tpeak
' cms hrs

R.V
mm

R.C.

Qbase
cms

START @ 0.00 hrs

10.0

[Ptot= 91.57 mm]

```
fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\7a4f4ff1-5a92-43c3-b9c0
remark: 100yr_24hr_scs
```

**	CALIB STANDHYD	0200	1	5.0	2.11	0.68	8.17	74.28	0.81	0.000
**	[I%=62.3:S%= 2.00]									
**	CALIB STANDHYD	0201	1	5.0	0.88	0.26	8.17	69.36	0.76	0.000
**	[I%=56.6:S%= 2.00]									
**	ADD [0200+ 0201]	0400	3	5.0	2.99	0.94	8.17	72.83	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS   U   U   A A   L
V   V   I   SS   U   U   AAAAA L
V   V   I   SS   U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTTT TTTTT H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y Y   MM MM   O   O
O   O   T   T   H   H   Y   M   M   O   O
    000   T   T   H   H   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\38c634e2-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\38c634e2-

DATE: 02-25-2022 TIME: 09:08:50

USER:

COMMENTS: _____

 ** SIMULATION : Run 19 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 60.0
 [Ptot=212.00 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\48a8af3-1276-42ae-9110
 remark: hazel-hr

* CALIB STANDHYD	0200	1	5.0	2.11	0.30	10.00	188.87	0.89	0.000
[I%=62.3:S%= 2.00]									
* CALIB STANDHYD	0201	1	5.0	0.88	0.12	10.00	180.83	0.85	0.000
[I%=56.6:S%= 2.00]									
* ADD [0200+ 0201]	0400	3	5.0	2.99	0.42	10.00	186.50	n/a	0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

```

```

    000   TTTTT TTTTT H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM O   O
O   O   T   T   H   H   Y   M   M   O   O
    000   T   T   H   H   Y   M   M   000

```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\7cbede61-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\84af4ff1-7732-4490-8c7c-219f1cb5f24e\7cbede61-

DATE: 02-25-2022 TIME: 09:08:50

USER:

COMMENTS: _____

 ** SIMULATION : Run 20 **

W/E COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms
-------------	--------	-----------	------------	--------------	--------------	------------	------	--------------

START @ 0.00 hrs

 READ STORM 60.0
 [Ptot=193.00 mm]
 fname : C:\Users\avarghese\AppData\Local\Temp\8400db0f-b289-4dde-983a-33c394b890d1\6f4c0b8b-2e9f-4473-a549
 remark: Timmins

* CALIB STANDHYD	0200	1	5.0	2.11	0.23	7.00	170.44	0.88	0.000
[I%=62.3:S%= 2.00]									
* CALIB STANDHYD	0201	1	5.0	0.88	0.09	7.00	162.74	0.84	0.000
[I%=56.6:S%= 2.00]									
* ADD [0200+ 0201]	0400	3	5.0	2.99	0.33	7.00	168.18	n/a	0.000



KIDD'S CREEK WATERSHED PRE-DEVELOPMENT OTTHYMO MODELING RESULTS

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS    U   U   A A   L
V   V   I   SS    U   U   AAAAA L
V   V   I   SS    U   U   A   A L
VV      I   SSSSS UUUUU A   A LLLLL

```

```

    000   TTTTT TTTTT H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM O   O
O   O   T   T   H   H   Y   M   M O   O
    000   T   T   H   H   Y   M   M   000

```

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\vo2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\3f0d7061-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\3f0d7061-

DATE: 02-25-2022 TIME: 09:20:32

USER:

COMMENTS: _____

 ** SIMULATION : Run 01 **

READ STORM	Filename: C:\Users\avarghese\AppData\Local\Temp\edb2042d-170e-44d8-9ba1-86782d6d6992\eff68d23
Ptotal= 46.11 mm	Comments: B-scs2

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.20	0.46	6.20	0.92	12.20	9.18	18.20	0.92
0.40	0.46	6.40	0.92	12.40	5.74	18.40	0.92
0.60	0.46	6.60	0.92	12.60	4.13	18.60	0.92
0.80	0.46	6.80	0.92	12.80	3.90	18.80	0.92
1.00	0.46	7.00	0.92	13.00	2.75	19.00	0.92
1.20	0.46	7.20	0.92	13.20	2.30	19.20	0.69
1.40	0.46	7.40	0.92	13.40	2.30	19.40	0.69
1.60	0.46	7.60	0.92	13.60	2.30	19.60	0.69
1.80	0.46	7.80	0.92	13.80	2.30	19.80	0.69
2.00	0.46	8.00	0.92	14.00	2.30	20.00	0.69
2.20	0.46	8.20	1.38	14.20	1.38	20.20	0.69
2.40	0.46	8.40	1.38	14.40	1.38	20.40	0.69
2.60	0.46	8.60	1.38	14.60	1.38	20.60	0.69
2.80	0.46	8.80	1.38	14.80	1.38	20.80	0.69
3.00	0.46	9.00	1.38	15.00	1.38	21.00	0.69
3.20	0.46	9.20	1.38	15.20	1.38	21.20	0.46
3.40	0.46	9.40	1.38	15.40	1.38	21.40	0.46
3.60	0.46	9.60	1.38	15.60	1.38	21.60	0.46
3.80	0.46	9.80	1.38	15.80	1.38	21.80	0.46
4.00	0.46	10.00	1.38	16.00	1.38	22.00	0.46
4.20	0.92	10.20	2.52	16.20	0.92	22.20	0.46
4.40	0.92	10.40	2.52	16.40	0.92	22.40	0.46
4.60	0.92	10.60	2.52	16.60	0.92	22.60	0.46
4.80	0.92	10.80	2.52	16.80	0.92	22.80	0.46
5.00	0.92	11.00	2.52	17.00	0.92	23.00	0.46
5.20	0.92	11.20	3.44	17.20	0.92	23.20	0.46
5.40	0.92	11.40	5.05	17.40	0.92	23.40	0.46
5.60	0.92	11.60	11.47	17.60	0.92	23.60	0.46
5.80	0.92	11.80	25.20	17.80	0.92	23.80	0.46
6.00	0.92	12.00	52.80	18.00	0.92	24.00	0.46

CALIB NASHYD (1000)	Area (ha)= 44.18	Curve Number (CN)= 58.6
-------------------------	------------------	-------------------------

|ID= 1 DT= 5.0 min | Ia (mm)= 1.50 # of Linear Res.(N)= 3.00
 ----- U.H. Tp(hrs)= 0.30

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Unit Hyd Qpeak (cms)= 5.625

PEAK FLOW (cms)= 0.696 (i)
 TIME TO PEAK (hrs)= 12.167
 RUNOFF VOLUME (mm)= 8.879
 TOTAL RAINFALL (mm)= 46.112
 RUNOFF COEFFICIENT = 0.193

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (1410) ID= 1 DT= 5.0 min				
Area	(ha)=	1.92		
Total Imp	(%)=	37.60	Dir. Conn.(%)=	30.10
Surface Area	(ha)=	IMPERVIOUS 0.72	PERVIOUS (i) 1.20	
Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	1.77	1.77	
Length	(m)=	113.14	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		52.80	9.42	
over (min)		5.00	25.00	
Storage Coeff. (min)=		2.99 (ii)	21.83 (ii)	
Unit Hyd. Tpeak (min)=		5.00	25.00	
Unit Hyd. peak (cms)=		0.28	0.05	
				TOTALS
PEAK FLOW (cms)=		0.08	0.02	0.094 (iii)
TIME TO PEAK (hrs)=		12.00	12.25	12.00
RUNOFF VOLUME (mm)=		44.61	8.68	19.49
TOTAL RAINFALL (mm)=		46.11	46.11	46.11
RUNOFF COEFFICIENT =		0.97	0.19	0.42

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

DUHYD (0001) Inlet Cap.= 0.120 #of Inlets= 1 Total(cms)= 0.1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
TOTAL HYD.(ID= 1):	1.92	0.09	12.00	19.49
=====				
MAJOR SYS.(ID= 2):	0.00	0.00	0.00	0.00
MINOR SYS.(ID= 3):	1.92	0.09	12.00	19.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (1420) ID= 1 DT= 5.0 min				
Area	(ha)=	12.97		
Total Imp	(%)=	39.90	Dir. Conn.(%)=	33.20
Surface Area	(ha)=	IMPERVIOUS 5.18	PERVIOUS (i) 7.79	
Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	0.60	0.60	
Length	(m)=	294.05	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		52.80	5.41	
over (min)		5.00	40.00	
Storage Coeff. (min)=		7.34 (ii)	39.88 (ii)	
Unit Hyd. Tpeak (min)=		5.00	40.00	
Unit Hyd. peak (cms)=		0.17	0.03	
				TOTALS
PEAK FLOW (cms)=		0.56	0.07	0.580 (iii)
TIME TO PEAK (hrs)=		12.00	12.58	12.00
RUNOFF VOLUME (mm)=		44.61	7.21	19.62
TOTAL RAINFALL (mm)=		46.11	46.11	46.11
RUNOFF COEFFICIENT =		0.97	0.16	0.43

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 53.5 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
-----
| ADD HYD ( 1429) |
| 1 + 2 = 3 |
|-----|
*** W A R N I N G : HYDROGRAPH 0001 <ID= 1> IS DRY.
*** W A R N I N G : HYDROGRAPH 1429 = HYDROGRAPH 1420
ID1= 1 ( 0001): 0.00 0.000 0.00 0.00
+ ID2= 2 ( 1420): 12.97 0.580 12.00 19.62
=====
ID = 3 ( 1429): 12.97 0.580 12.00 19.62
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| CALIB |
| STANDHYD ( 1430) |
| ID= 1 DT= 5.0 min |
|-----|
Area (ha)= 10.37
Total Imp(%)= 40.50 Dir. Conn.(%)= 33.20

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.20 6.17
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 3.12 3.12
Length (m)= 262.93 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 52.80 7.85
over (min) 5.00 25.00
Storage Coeff. (min)= 4.19 (ii) 21.28 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.24 0.05

*TOTALS*
PEAK FLOW (cms)= 0.49 0.08 0.532 (iii)
TIME TO PEAK (hrs)= 12.00 12.25 12.00
RUNOFF VOLUME (mm)= 44.61 7.28 19.67
TOTAL RAINFALL (mm)= 46.11 46.11 46.11
RUNOFF COEFFICIENT = 0.97 0.16 0.43
```

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
-----
| ADD HYD ( 1439) |
| 1 + 2 = 3 |
|-----|
ID1= 1 ( 1429): 12.97 0.580 12.00 19.62
+ ID2= 2 ( 1430): 10.37 0.532 12.00 19.67
=====
ID = 3 ( 1439): 23.34 1.112 12.00 19.65
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| CALIB |
| STANDHYD ( 1440) |
| ID= 1 DT= 5.0 min |
|-----|
Area (ha)= 7.23
Total Imp(%)= 32.90 Dir. Conn.(%)= 26.80

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.38 4.85
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 2.89 2.89
Length (m)= 219.54 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 52.80 7.39
over (min) 5.00 25.00
Storage Coeff. (min)= 3.85 (ii) 21.76 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.25 0.05

*TOTALS*
PEAK FLOW (cms)= 0.28 0.06 0.309 (iii)
TIME TO PEAK (hrs)= 12.00 12.33 12.00
RUNOFF VOLUME (mm)= 44.61 7.07 17.13
```

TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.15	0.37

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1449)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1439):	23.34	1.112	12.00	19.65
+ ID2= 2 (1440):	7.23	0.309	12.00	17.13
=====				
ID = 3 (1449):	30.57	1.421	12.00	19.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0002)				
IN= 2---> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.2300	0.4435
	0.1000	0.0442	0.5800	0.6310
	0.1600	0.1450	1.1000	0.7580
	0.2000	0.2795	1.5100	0.8440
	0.2100	0.3615	3.8100	0.9587
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (1449)	30.570	1.421	12.00	19.05
OUTFLOW: ID= 1 (0002)	30.570	0.185	13.00	19.05
PEAK FLOW REDUCTION [Qout/Qin](%)= 13.02				
TIME SHIFT OF PEAK FLOW (min)= 60.00				
MAXIMUM STORAGE USED (ha.m.)= 0.2292				

CALIB				
STANDHYD (1450)				
ID= 1 DT= 5.0 min				
	Area (ha)=	1.72		
	Total Imp(%)=	36.80	Dir. Conn.(%)=	29.50
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.63	1.09		
Dep. Storage (mm)=	1.50	5.00		
Average slope (%)=	1.32	1.32		
Length (m)=	107.08	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	52.80	10.70		
over (min)=	5.00	25.00		
Storage Coeff. (min)=	3.16 (ii)	22.71 (ii)		
Unit Hyd. Tpeak (min)=	5.00	25.00		
Unit Hyd. peak (cms)=	0.27	0.05		
TOTALS				
PEAK FLOW (cms)=	0.07	0.02	0.084 (iii)	
TIME TO PEAK (hrs)=	12.00	12.33	12.00	
RUNOFF VOLUME (mm)=	44.61	9.82	20.07	
TOTAL RAINFALL (mm)=	46.11	46.11	46.11	
RUNOFF COEFFICIENT =	0.97	0.21	0.44	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.8 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1459)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1450):	1.72	0.084	12.00	20.07

+ ID2= 2 (0002):	30.57	0.185	13.00	19.05
=====				
ID = 3 (1459):	32.29	0.244	12.00	19.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0003)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0001):	1.92	0.094	12.00	19.49
+ ID2= 2 (1459):	32.29	0.244	12.00	19.10
=====				
ID = 3 (0003):	34.21	0.338	12.00	19.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (1509)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1000):	44.18	0.696	12.17	8.88
+ ID2= 2 (0003):	34.21	0.338	12.00	19.12
=====				
ID = 3 (1509):	78.39	0.935	12.17	13.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (1500)				
ID= 1 DT= 5.0 min				

	Area	(ha)=	17.89	
	Total Imp	(%)=	22.10	Dir. Conn.(%)= 19.90

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	3.95	13.94	
Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	3.38	3.38	
Length	(m)=	345.35	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		52.80	6.53	
over (min)		5.00	25.00	
Storage Coeff. (min)=		4.81 (ii)	22.77 (ii)	
Unit Hyd. Tpeak (min)=		5.00	25.00	
Unit Hyd. peak (cms)=		0.22	0.05	
PEAK FLOW (cms)=		0.50	0.15	*TOTALS* 0.576 (iii)
TIME TO PEAK (hrs)=		12.00	12.33	12.00
RUNOFF VOLUME (mm)=		44.61	6.65	14.20
TOTAL RAINFALL (mm)=		46.11	46.11	46.11
RUNOFF COEFFICIENT =		0.97	0.14	0.31

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
 ***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
 YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 53.5 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1510)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1500):	17.89	0.576	12.00	14.20
+ ID2= 2 (1509):	78.39	0.935	12.17	13.35
=====				
ID = 3 (1510):	96.28	1.430	12.00	13.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (1200)				
ID= 1 DT= 5.0 min				

	Area	(ha)=	4.03	Curve Number (CN)= 62.8
	Ia	(mm)=	5.00	# of Linear Res.(N)= 3.00
	U.H. Tp	(hrs)=	0.15	

Unit Hyd Qpeak (cms)= 1.026

PEAK FLOW (cms)= 0.094 (i)
 TIME TO PEAK (hrs)= 12.000
 RUNOFF VOLUME (mm)= 8.772
 TOTAL RAINFALL (mm)= 46.112
 RUNOFF COEFFICIENT = 0.190

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```

-----
| CALIB |
| STANDHYD ( 1300) |
| ID= 1 DT= 5.0 min |
|-----|
Area (ha)= 8.16
Total Imp(%)= 31.50 Dir. Conn.(%)= 25.40

      IMPERVIOUS      PERVIOUS (i)
Surface Area (ha)= 2.57      5.59
Dep. Storage (mm)= 1.50      5.00
Average Slope (%)= 1.46      1.46
Length (m)= 233.24      40.00
Mannings n = 0.013      0.250

Max.Eff.Inten.(mm/hr)= 52.80      10.19
over (min) 5.00      25.00
Storage Coeff. (min)= 4.89 (ii) 24.23 (ii)
Unit Hyd. Tpeak (min)= 5.00      25.00
Unit Hyd. peak (cms)= 0.22      0.05

      *TOTALS*
PEAK FLOW (cms)= 0.29      0.09      0.337 (iii)
TIME TO PEAK (hrs)= 12.00      12.33      12.00
RUNOFF VOLUME (mm)= 44.61      9.59      18.49
TOTAL RAINFALL (mm)= 46.11      46.11      46.11
RUNOFF COEFFICIENT = 0.97      0.21      0.40
  
```

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 62.8 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```

-----
| ADD HYD ( 1309) |
| 1 + 2 = 3 |
|-----|
      AREA      QPEAK      TPEAK      R.V.
      (ha)      (cms)      (hrs)      (mm)
ID1= 1 ( 1200): 4.03      0.094      12.00      8.77
+ ID2= 2 ( 1300): 8.16      0.337      12.00      18.49
=====
ID = 3 ( 1309): 12.19      0.431      12.00      15.28
  
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| CALIB |
| STANDHYD ( 1100) |
| ID= 1 DT= 5.0 min |
|-----|
Area (ha)= 26.23
Total Imp(%)= 25.20 Dir. Conn.(%)= 20.60

      IMPERVIOUS      PERVIOUS (i)
Surface Area (ha)= 6.61      19.62
Dep. Storage (mm)= 1.50      5.00
Average Slope (%)= 1.66      1.66
Length (m)= 418.17      40.00
Mannings n = 0.013      0.250

Max.Eff.Inten.(mm/hr)= 52.80      9.67
over (min) 5.00      30.00
Storage Coeff. (min)= 6.68 (ii) 25.68 (ii)
Unit Hyd. Tpeak (min)= 5.00      30.00
Unit Hyd. peak (cms)= 0.18      0.04

      *TOTALS*
PEAK FLOW (cms)= 0.71      0.28      0.845 (iii)
TIME TO PEAK (hrs)= 12.00      12.33      12.00
RUNOFF VOLUME (mm)= 44.61      9.36      16.62
TOTAL RAINFALL (mm)= 46.11      46.11      46.11
RUNOFF COEFFICIENT = 0.97      0.20      0.36
  
```

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 62.8 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(1109)		OVERFLOW IS OFF			
IN= 2---> OUT= 1					
DT= 5.0 min					
		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	10.0000	0.4000
		0.8300	0.2553	0.0000	0.0000
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (1100)		26.230	0.845	12.00	16.62
OUTFLOW: ID= 1 (1109)		26.230	0.334	12.50	16.62
PEAK FLOW REDUCTION [Qout/Qin](%)= 39.59					
TIME SHIFT OF PEAK FLOW (min)= 30.00					
MAXIMUM STORAGE USED (ha.m.)= 0.1029					

CALIB					
STANDHYD (1600)					
ID= 1 DT= 5.0 min					
		Area (ha)=	4.96		
		Total Imp(%)=	41.10	Dir. Conn.(%)=	34.00
		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	2.04	2.92		
Dep. Storage	(mm)=	1.50	5.00		
Average Slope	(%)=	0.82	0.82		
Length	(m)=	181.84	40.00		
Mannings n	=	0.013	0.250		
Max.Eff.Inten.(mm/hr)=		52.80	9.37		
over (min)		5.00	30.00		
Storage Coeff. (min)=		5.01 (ii)	28.78 (ii)		
Unit Hyd. Tpeak (min)=		5.00	30.00		
Unit Hyd. peak (cms)=		0.21	0.04		

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.8 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1609)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1109):		26.23	0.334	12.50	16.62
+ ID2= 2 (1600):		4.96	0.254	12.00	21.67
		=====			
ID = 3 (1609):		31.19	0.485	12.00	17.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (1610)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1309):		12.19	0.431	12.00	15.28
+ ID2= 2 (1609):		31.19	0.485	12.00	17.42
		=====			
ID = 3 (1610):		43.38	0.916	12.00	16.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (1611)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1510):		96.28	1.430	12.00	13.51
+ ID2= 2 (1610):		43.38	0.916	12.00	16.82

=====

ID = 3 (1611): 139.66 2.347 12.00 14.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (2100) ID= 1 DT= 5.0 min	Area (ha)= 26.53 Total Imp(%)= 36.70	Dir. Conn.(%)= 30.70
--	---	----------------------

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	9.74	16.79	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.58	0.58	
Length (m)=	420.56	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	52.80	5.24	
over (min)	10.00	45.00	
Storage Coeff. (min)=	9.20 (ii)	42.48 (ii)	
Unit Hyd. Tpeak (min)=	10.00	45.00	
Unit Hyd. peak (cms)=	0.12	0.03	
PEAK FLOW (cms)=	0.91	0.13	*TOTALS* 0.949 (iii)
TIME TO PEAK (hrs)=	12.00	12.67	12.00
RUNOFF VOLUME (mm)=	44.61	7.10	18.61
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.15	0.40

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
-

CALIB STANDHYD (2200) ID= 1 DT= 5.0 min	Area (ha)= 33.03 Total Imp(%)= 38.00	Dir. Conn.(%)= 32.30
--	---	----------------------

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	12.55	20.48	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.53	0.53	
Length (m)=	469.25	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	52.80	6.29	
over (min)	10.00	45.00	
Storage Coeff. (min)=	10.09 (ii)	41.88 (ii)	
Unit Hyd. Tpeak (min)=	10.00	45.00	
Unit Hyd. peak (cms)=	0.11	0.03	
PEAK FLOW (cms)=	1.15	0.20	*TOTALS* 1.214 (iii)
TIME TO PEAK (hrs)=	12.00	12.67	12.00
RUNOFF VOLUME (mm)=	44.61	8.46	20.14
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.18	0.44

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
-

ADD HYD (2209) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2100):	26.53	0.949	12.00	18.61
+ ID2= 2 (2200):	33.03	1.214	12.00	20.14
ID = 3 (2209):	59.56	2.163	12.00	19.46

=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0004) IN= 2---> OUT= 1	OVERFLOW IS OFF
--------------------------------------	-----------------

DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	1.3400	1.6751
	0.1100	0.8187	1.6400	2.1218
	0.3300	1.4265	1.7500	2.1654
	0.7800	1.5869	20.0000	2.4000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (2209)	59.560	2.163	12.00	19.46
OUTFLOW: ID= 1 (0004)	59.560	0.106	16.25	19.43

PEAK FLOW REDUCTION [Qout/Qin](%)=	4.90
TIME SHIFT OF PEAK FLOW (min)=	255.00
MAXIMUM STORAGE USED (ha.m.)=	0.7893

CALIB STANDHYD (2300) ID= 1 DT= 5.0 min	Area (ha)= 6.31 Total Imp(%)= 40.60	Dir. Conn.(%)= 33.50
--	--	----------------------

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.56	3.75
Dep. Storage (mm)=	1.50	5.00
Average slope (%)=	0.67	0.67
Length (m)=	205.10	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	52.80	7.26
over (min)=	5.00	35.00
Storage Coeff. (min)=	5.72 (ii)	33.70 (ii)
Unit Hyd. Tpeak (min)=	5.00	35.00
Unit Hyd. peak (cms)=	0.20	0.03
		TOTALS
PEAK FLOW (cms)=	0.29	0.04
TIME TO PEAK (hrs)=	12.00	12.50
RUNOFF VOLUME (mm)=	44.61	8.67
TOTAL RAINFALL (mm)=	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.19
		0.305 (iii)

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2309) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2300):	6.31	0.305	12.00	20.71
+ ID2= 2 (0004):	59.56	0.106	16.25	19.43
=====				
ID = 3 (2309):	65.87	0.353	12.00	19.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (2410) ID= 1 DT= 5.0 min	Area (ha)= 23.41 Total Imp(%)= 36.00	Dir. Conn.(%)= 30.50
--	---	----------------------

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.43	14.98
Dep. Storage (mm)=	1.50	5.00
Average slope (%)=	0.56	0.56
Length (m)=	395.05	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	52.80	6.22
over (min)=	10.00	45.00
Storage Coeff. (min)=	8.95 (ii)	40.36 (ii)
Unit Hyd. Tpeak (min)=	10.00	45.00
Unit Hyd. peak (cms)=	0.12	0.03
		TOTALS
PEAK FLOW (cms)=	0.80	0.14
TIME TO PEAK (hrs)=	12.00	12.67
RUNOFF VOLUME (mm)=	44.61	8.42
TOTAL RAINFALL (mm)=	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.18
		0.848 (iii)

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2419)					
1 + 2 = 3					
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2309):		65.87	0.353	12.00	19.55
+ ID2= 2 (2410):		23.41	0.848	12.00	19.45
=====					
ID = 3 (2419):		89.28	1.201	12.00	19.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0005)					
1 + 2 = 3					
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1611):		139.66	2.347	12.00	14.54
+ ID2= 2 (2419):		89.28	1.201	12.00	19.52
=====					
ID = 3 (0005):		228.94	3.548	12.00	16.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (2420) ID= 1 DT= 5.0 min		Area (ha)= 6.14 Total Imp(%)= 33.80	Dir. Conn.(%)= 27.50
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.08	4.06
Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	3.35	3.35
Length	(m)=	202.32	40.00
Mannings n	=	0.013	0.250
Max.Eff.Inten.(mm/hr)=		52.80	12.23
over (min)		5.00	20.00
Storage Coeff. (min)=		3.50 (ii)	17.52 (ii)
Unit Hyd. Tpeak (min)=		5.00	20.00
Unit Hyd. peak (cms)=		0.26	0.06
		TOTALS	
PEAK FLOW	(cms)=	0.24	0.08
TIME TO PEAK	(hrs)=	12.00	12.17
RUNOFF VOLUME	(mm)=	44.61	9.65
TOTAL RAINFALL	(mm)=	46.11	46.11
RUNOFF COEFFICIENT	=	0.97	0.21
			0.42
			0.295 (iii)
			12.00
			19.26
			46.11
			0.42

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.8 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2429)					
1 + 2 = 3					
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2420):		6.14	0.295	12.00	19.26
+ ID2= 2 (0005):		228.94	3.548	12.00	16.48
=====					
ID = 3 (2429):		235.08	3.842	12.00	16.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (2430) ID= 1 DT= 5.0 min		Area (ha)= 10.62			
Total	Imp(%)= 31.50		Dir. Conn.(%)= 25.70		
		IMPERVIOUS	PERVIOUS (i)		

CALIB		Area (ha)= 40.64		Dir. Conn.(%)= 40.10	
STANDHYD (2500)		Total Imp(%)= 44.70			
ID= 1 DT= 5.0 min					
		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	18.17		22.47	
Dep. Storage	(mm)=	1.50		5.00	
Average Slope	(%)=	2.04		2.04	
Length	(m)=	520.51		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		52.80		6.31	
over (min)		5.00		30.00	
Storage Coeff.	(min)=	7.17	(ii)	28.35	(ii)
Unit Hyd. Tpeak	(min)=	5.00		30.00	
Unit Hyd. peak	(cms)=	0.17		0.04	
TOTALS					
PEAK FLOW	(cms)=	2.12		0.23	2.224 (iii)
TIME TO PEAK	(hrs)=	12.00		12.42	12.00
RUNOFF VOLUME	(mm)=	44.61		7.02	22.09
TOTAL RAINFALL	(mm)=	46.11		46.11	46.11
RUNOFF COEFFICIENT	=	0.97		0.15	0.48

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2509)					
1 + 2 = 3					

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2500):		40.64	2.224	12.00	22.09
+ ID2= 2 (0006):		245.70	2.789	12.17	16.56
=====					
ID = 3 (2509):		286.34	4.653	12.00	17.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (3000)		Area (ha)= 24.81			
ID= 1 DT= 5.0 min		Total Imp(%)= 26.40		Dir. Conn.(%)= 22.90	
		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	6.55		18.26	
Dep. Storage	(mm)=	1.50		5.00	
Average Slope	(%)=	1.94		1.94	
Length	(m)=	406.69		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		52.80		5.88	
over (min)		5.00		30.00	
Storage Coeff. (min)=		6.27 (ii)		28.40 (ii)	
Unit Hyd. Tpeak (min)=		5.00		30.00	
Unit Hyd. peak (cms)=		0.19		0.04	
					TOTALS
PEAK FLOW (cms)=		0.76		0.17	0.839 (iii)
TIME TO PEAK (hrs)=		12.00		12.42	12.00
RUNOFF VOLUME (mm)=		44.61		6.78	15.44
TOTAL RAINFALL (mm)=		46.11		46.11	46.11
RUNOFF COEFFICIENT =		0.97		0.15	0.33

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3009)					
1 + 2 = 3					

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2509):		286.34	4.653	12.00	17.35
+ ID2= 2 (3000):		24.81	0.839	12.00	15.44
=====					
ID = 3 (3009):		311.15	5.492	12.00	17.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (3100)		Area (ha)= 8.84			
ID= 1 DT= 5.0 min		Total Imp(%)= 48.20		Dir. Conn.(%)= 44.10	
		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	4.26		4.58	
Dep. Storage	(mm)=	1.50		5.00	
Average Slope	(%)=	3.25		3.25	
Length	(m)=	242.76		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		52.80		8.73	
over (min)		5.00		25.00	
Storage Coeff. (min)=		3.94 (ii)		20.13 (ii)	
Unit Hyd. Tpeak (min)=		5.00		25.00	
Unit Hyd. peak (cms)=		0.24		0.05	
				TOTALS	
PEAK FLOW (cms)=		0.55		0.07	0.593 (iii)
TIME TO PEAK (hrs)=		12.00		12.25	12.00

RUNOFF VOLUME	(mm)=	44.61	8.36	24.35
TOTAL RAINFALL	(mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT	=	0.97	0.18	0.53

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3109)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (3009):	311.15	5.492	12.00	17.19
+ ID2= 2 (3100):	8.84	0.593	12.00	24.35
=====				
ID = 3 (3109):	319.99	6.084	12.00	17.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (3200)				
ID= 1 DT= 5.0 min				

	Area	(ha)=	18.79	
	Total Imp(%)=	73.90	Dir. Conn.(%)=	73.00

	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	13.89	4.90	
Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	2.39	2.39	
Length	(m)=	353.93	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	52.80	9.18		
over (min)	5.00	25.00		
Storage Coeff. (min)=	5.42 (ii)	22.81 (ii)		
Unit Hyd. Tpeak (min)=	5.00	25.00		
Unit Hyd. peak (cms)=	0.20	0.05		
				TOTALS
PEAK FLOW	(cms)=	1.88	0.07	1.918 (iii)
TIME TO PEAK	(hrs)=	12.00	12.33	12.00
RUNOFF VOLUME	(mm)=	44.61	9.13	35.03
TOTAL RAINFALL	(mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT	=	0.97	0.20	0.76

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 62.8 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3209)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (3109):	319.99	6.084	12.00	17.39
+ ID2= 2 (3200):	18.79	1.918	12.00	35.03
=====				
ID = 3 (3209):	338.78	8.003	12.00	18.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (3300)				
ID= 1 DT= 5.0 min				

	Area	(ha)=	13.67	
	Total Imp(%)=	76.60	Dir. Conn.(%)=	76.40

	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	10.47	3.20	
Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	2.99	2.99	
Length	(m)=	301.88	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	52.80	7.59		
over (min)	5.00	25.00		
Storage Coeff. (min)=	4.61 (ii)	22.16 (ii)		

Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.23	0.05	
			TOTALS
PEAK FLOW (cms)=	1.46	0.04	1.484 (iii)
TIME TO PEAK (hrs)=	12.00	12.33	12.00
RUNOFF VOLUME (mm)=	44.61	7.81	35.93
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.17	0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3309)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (3209):	338.78	8.003	12.00	18.37
+ ID2= 2 (3300):	13.67	1.484	12.00	35.93
=====				
ID = 3 (3309):	352.45	9.487	12.00	19.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (3400)		Area (ha)= 24.09	
ID= 1 DT= 5.0 min		Total Imp(%)= 33.70	Dir. Conn.(%)= 30.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.12	15.97
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	3.13	3.13
Length (m)=	400.75	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	52.80	8.34
over (min)	5.00	25.00
Storage Coeff. (min)=	5.39 (ii)	22.05 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.21	0.05
		TOTALS
PEAK FLOW (cms)=	0.99	1.111 (iii)
TIME TO PEAK (hrs)=	12.00	12.00
RUNOFF VOLUME (mm)=	44.61	19.11
TOTAL RAINFALL (mm)=	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.41

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3409)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (3309):	352.45	9.487	12.00	19.05
+ ID2= 2 (3400):	24.09	1.111	12.00	19.11
=====				
ID = 3 (3409):	376.54	10.598	12.00	19.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (3500)		Area (ha)= 48.32	Curve Number (CN)= 43.8
ID= 1 DT= 5.0 min		Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
		U.H. Tp(hrs)= 0.25	

Unit Hyd Qpeak (cms)= 7.382

PEAK FLOW (cms)= 0.428 (i)
 TIME TO PEAK (hrs)= 12.167

RUNOFF VOLUME (mm)= 4.602
TOTAL RAINFALL (mm)= 46.112
RUNOFF COEFFICIENT = 0.100

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3509)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (3409):		376.54	10.598	12.00	19.05
+ ID2= 2 (3500):		48.32	0.428	12.17	4.60
=====		=====			
ID = 3 (3509):		424.86	10.942	12.00	17.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(3519)		OVERFLOW IS OFF			
IN= 2---> OUT= 1					
DT= 5.0 min					
		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	2.4000	11.7420
		1.1000	0.0016	3.7300	12.7680
		1.3500	0.0186	6.1500	13.8420
		1.5700	0.3486	9.4000	14.9640
		1.7700	1.3936	13.5000	16.1330
		1.9600	3.3840	20.0000	17.3570
		2.1200	6.5140	43.0000	18.6440
		2.2800	10.7640	63.0000	19.3100
		2.2900	11.2470	0.0000	0.0000
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (3509)		424.860	10.942	12.00	17.41
OUTFLOW: ID= 1 (3519)		424.860	1.820	13.25	17.41
PEAK FLOW REDUCTION [Qout/Qin](%)=		16.64			
TIME SHIFT OF PEAK FLOW (min)=		75.00			
MAXIMUM STORAGE USED (ha.m.)=		1.9199			

CALIB					
STANDHYD (4000)		Area (ha)= 11.35			
ID= 1 DT= 5.0 min		Total Imp(%)= 33.30		Dir. Conn.(%)= 33.30	

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	3.78		7.57	
Dep. Storage	(mm)=	1.50		5.00	
Average Slope	(%)=	2.38		2.38	
Length	(m)=	275.08		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		52.80		7.45	
over (min)		5.00		25.00	
Storage Coeff. (min)=		4.67 (ii)		23.59 (ii)	
Unit Hyd. Tpeak (min)=		5.00		25.00	
Unit Hyd. peak (cms)=		0.22		0.05	
		TOTALS			
PEAK FLOW (cms)=		0.53		0.09	0.577 (iii)
TIME TO PEAK (hrs)=		12.00		12.33	12.00
RUNOFF VOLUME (mm)=		44.61		7.74	20.02
TOTAL RAINFALL (mm)=		46.11		46.11	46.11
RUNOFF COEFFICIENT =		0.97		0.17	0.43

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4009)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (3519):		424.86	1.820	13.25	17.41
+ ID2= 2 (4000):		11.35	0.577	12.00	20.02

=====

ID = 3 (4009):	436.21	2.234	12.00	17.48
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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (4100) ID= 1 DT= 5.0 min	Area (ha)= 14.42 Total Imp(%)= 37.70	Dir. Conn.(%)= 35.50
--	---	----------------------

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.44	8.98
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	3.20	3.20
Length (m)=	310.05	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	52.80	8.01
over (min)	5.00	25.00
Storage Coeff. (min)=	4.59 (ii)	21.41 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.23	0.05
PEAK FLOW (cms)=	0.72	0.12
TIME TO PEAK (hrs)=	12.00	12.33
RUNOFF VOLUME (mm)=	44.61	8.02
TOTAL RAINFALL (mm)=	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.17

TOTALS
0.783 (iii)

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
-

ADD HYD (4109) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (4009):	436.21	2.234	12.00	17.48
+ ID2= 2 (4100):	14.42	0.783	12.00	21.01
=====				
ID = 3 (4109):	450.63	3.017	12.00	17.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (4200) ID= 1 DT= 5.0 min	Area (ha)= 1.06 Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30
--	--	----------------------

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.48	0.58
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.56	2.56
Length (m)=	84.06	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	52.80	9.45
over (min)	5.00	20.00
Storage Coeff. (min)=	2.24 (ii)	19.08 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.30	0.06
PEAK FLOW (cms)=	0.06	0.01
TIME TO PEAK (hrs)=	12.00	12.25
RUNOFF VOLUME (mm)=	44.61	8.69
TOTAL RAINFALL (mm)=	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.19

TOTALS
0.066 (iii)

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
-

ADD HYD (4209)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (4109):	450.63	3.017	12.00	17.59
+ ID2= 2 (4200):	1.06	0.066	12.00	22.44
=====				
ID = 3 (4209):	451.69	3.083	12.00	17.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (4300)					
ID= 1 DT= 5.0 min					
		Area	(ha)=	0.95	
		Total	Imp(%)=	45.00	Dir. Conn.(%)= 38.30

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	0.43		0.52	
Dep. Storage	(mm)=	1.50		5.00	
Average Slope	(%)=	1.63		1.63	
Length	(m)=	79.58		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		52.80		9.45	
over (min)		5.00		25.00	
Storage Coeff. (min)=		2.48	(ii)	21.77	(ii)
Unit Hyd. Tpeak (min)=		5.00		25.00	
Unit Hyd. peak (cms)=		0.29		0.05	
PEAK FLOW	(cms)=	0.05		0.01	*TOTALS* 0.058 (iii)
TIME TO PEAK	(hrs)=	12.00		12.25	12.00
RUNOFF VOLUME	(mm)=	44.61		8.69	22.43
TOTAL RAINFALL	(mm)=	46.11		46.11	46.11
RUNOFF COEFFICIENT	=	0.97		0.19	0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4309)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (4209):	451.69	3.083	12.00	17.60
+ ID2= 2 (4300):	0.95	0.058	12.00	22.43
=====				
ID = 3 (4309):	452.64	3.141	12.00	17.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (4400)		Area (ha)= 1.19			
ID= 1 DT= 5.0 min		Total Imp(%)= 45.00		Dir. Conn.(%)= 38.30	
		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	0.54		0.65	
Dep. Storage	(mm)=	1.50		5.00	
Average Slope	(%)=	2.86		2.86	
Length	(m)=	89.07		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		52.80		9.45	
over (min)		5.00		20.00	
Storage Coeff. (min)=		2.24	(ii)	18.53	(ii)
Unit Hyd. Tpeak (min)=		5.00		20.00	
Unit Hyd. peak (cms)=		0.30		0.06	
PEAK FLOW	(cms)=	0.07		0.01	*TOTALS* 0.074 (iii)
TIME TO PEAK	(hrs)=	12.00		12.25	12.00
RUNOFF VOLUME	(mm)=	44.61		8.69	22.44
TOTAL RAINFALL	(mm)=	46.11		46.11	46.11
RUNOFF COEFFICIENT	=	0.97		0.19	0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)

- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4409)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (4309):	452.64	3.141	12.00	17.61
+ ID2= 2 (4400):	1.19	0.074	12.00	22.44
=====				
ID = 3 (4409):	453.83	3.215	12.00	17.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (5000) ID= 1 DT= 5.0 min				
Area (ha)=	15.67			
Total Imp(%)=	47.70	Dir. Conn.(%)=	43.60	
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	7.47	8.20		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	3.10	3.10		
Length (m)=	323.21	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	52.80	8.72		
over (min)	5.00	25.00		
Storage Coeff. (min)=	4.75 (ii)	21.17 (ii)		
Unit Hyd. Tpeak (min)=	5.00	25.00		
Unit Hyd. peak (cms)=	0.22	0.05		
			TOTALS	
PEAK FLOW (cms)=	0.95	0.12	1.019 (iii)	
TIME TO PEAK (hrs)=	12.00	12.25	12.00	
RUNOFF VOLUME (mm)=	44.61	8.36	24.16	
TOTAL RAINFALL (mm)=	46.11	46.11	46.11	
RUNOFF COEFFICIENT =	0.97	0.18	0.52	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (5009)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (4409):	453.83	3.215	12.00	17.63
+ ID2= 2 (5000):	15.67	1.019	12.00	24.16
=====				
ID = 3 (5009):	469.50	4.234	12.00	17.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (6000) ID= 1 DT= 5.0 min				
Area (ha)=	1.00			
Total Imp(%)=	45.00	Dir. Conn.(%)=	38.30	
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.45	0.55		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	0.88	0.88		
Length (m)=	81.65	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	52.80	8.20		
over (min)	5.00	30.00		
Storage Coeff. (min)=	3.03 (ii)	27.59 (ii)		
Unit Hyd. Tpeak (min)=	5.00	30.00		
Unit Hyd. peak (cms)=	0.27	0.04		
			TOTALS	
PEAK FLOW (cms)=	0.06	0.01	0.059 (iii)	
TIME TO PEAK (hrs)=	12.00	12.42	12.00	
RUNOFF VOLUME (mm)=	44.61	8.69	22.43	
TOTAL RAINFALL (mm)=	46.11	46.11	46.11	

RUNOFF COEFFICIENT = 0.97 0.19 0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6009)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5009):		469.50	4.234	12.00	17.84
+ ID2= 2 (6000):		1.00	0.059	12.00	22.43
ID = 3 (6009):		470.50	4.293	12.00	17.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (6100)		Area			
ID= 1 DT= 5.0 min		(ha)=	Imp(%)=	Dir. Conn.(%)=	
		0.94	45.00	38.30	
		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	0.42	0.52		
Dep. Storage	(mm)=	1.50	5.00		
Average Slope	(%)=	2.41	2.41		
Length	(m)=	79.16	40.00		
Mannings n	=	0.013	0.250		
Max.Eff.Inten.(mm/hr)=		52.80	9.45		
over (min)		5.00	20.00		
Storage Coeff. (min)=		2.20 (ii)	19.35 (ii)		
Unit Hyd. Tpeak (min)=		5.00	20.00		
Unit Hyd. peak (cms)=		0.30	0.06		
PEAK FLOW (cms)=		0.05	0.01	0.058 (iii)	
TIME TO PEAK (hrs)=		12.00	12.25	12.00	
RUNOFF VOLUME (mm)=		44.61	8.69	22.44	
TOTAL RAINFALL (mm)=		46.11	46.11	46.11	
RUNOFF COEFFICIENT =		0.97	0.19	0.49	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6109)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6009):		470.50	4.293	12.00	17.85
+ ID2= 2 (6100):		0.94	0.058	12.00	22.44
ID = 3 (6109):		471.44	4.351	12.00	17.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (6200)		Area			
ID= 1 DT= 5.0 min		(ha)=	Imp(%)=	Dir. Conn.(%)=	
		2.11	45.00	38.30	
		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	0.95	1.16		
Dep. Storage	(mm)=	1.50	5.00		
Average Slope	(%)=	0.75	0.75		
Length	(m)=	118.60	40.00		
Mannings n	=	0.013	0.250		
Max.Eff.Inten.(mm/hr)=		52.80	7.29		
over (min)		5.00	35.00		
Storage Coeff. (min)=		3.98 (ii)	30.99 (ii)		
Unit Hyd. Tpeak (min)=		5.00	35.00		

Unit Hyd. peak (cms)=	0.24	0.03	
			TOTALS
PEAK FLOW (cms)=	0.11	0.01	0.121 (iii)
TIME TO PEAK (hrs)=	12.00	12.50	12.00
RUNOFF VOLUME (mm)=	44.61	8.69	22.44
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.19	0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6209)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6109):	471.44	4.351	12.00	17.86
+ ID2= 2 (6200):	2.11	0.121	12.00	22.44
=====				
ID = 3 (6209):	473.55	4.472	12.00	17.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6300)	Area (ha)= 1.06			
ID= 1 DT= 5.0 min	Total Imp(%)= 47.60	Dir. Conn.(%)= 41.40		
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.50	0.56		
Dep. Storage (mm)=	1.50	5.00		
Average slope (%)=	0.85	0.85		
Length (m)=	84.06	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	52.80	8.15		
over (min)=	5.00	30.00		
Storage Coeff. (min)=	3.12 (ii)	28.00 (ii)		
Unit Hyd. Tpeak (min)=	5.00	30.00		
Unit Hyd. peak (cms)=	0.27	0.04		
			TOTALS	
PEAK FLOW (cms)=	0.06	0.01	0.067 (iii)	
TIME TO PEAK (hrs)=	12.00	12.42	12.00	
RUNOFF VOLUME (mm)=	44.61	8.66	23.53	
TOTAL RAINFALL (mm)=	46.11	46.11	46.11	
RUNOFF COEFFICIENT =	0.97	0.19	0.51	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6309)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6209):	473.55	4.472	12.00	17.88
+ ID2= 2 (6300):	1.06	0.067	12.00	23.53
=====				
ID = 3 (6309):	474.61	4.538	12.00	17.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6400)	Area (ha)= 1.88			
ID= 1 DT= 5.0 min	Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30		
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.85	1.03		
Dep. Storage (mm)=	1.50	5.00		
Average slope (%)=	1.92	1.92		
Length (m)=	111.95	40.00		

Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		52.80	9.45	
over (min)		5.00	25.00	
Storage Coeff. (min)=		2.90 (ii)	21.26 (ii)	
Unit Hyd. Tpeak (min)=		5.00	25.00	
Unit Hyd. peak (cms)=		0.28	0.05	
				TOTALS
PEAK FLOW (cms)=		0.10	0.02	0.113 (iii)
TIME TO PEAK (hrs)=		12.00	12.25	12.00
RUNOFF VOLUME (mm)=		44.61	8.69	22.44
TOTAL RAINFALL (mm)=		46.11	46.11	46.11
RUNOFF COEFFICIENT =		0.97	0.19	0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6409)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6309):	474.61	4.538	12.00	17.90
+ ID2= 2 (6400):	1.88	0.113	12.00	22.44
=====				
ID = 3 (6409):	476.49	4.652	12.00	17.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (7000)				
ID= 1 DT= 5.0 min	Area (ha)= 4.56			
	Total Imp(%)= 54.40	Dir. Conn.(%)= 49.40		
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	2.48	2.08		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	1.68	1.68		
Length (m)=	174.36	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	52.80	9.24		
over (min)	5.00	25.00		
Storage Coeff. (min)=	3.94 (ii)	23.22 (ii)		
Unit Hyd. Tpeak (min)=	5.00	25.00		
Unit Hyd. peak (cms)=	0.24	0.05		
				TOTALS
PEAK FLOW (cms)=	0.32	0.03	0.337 (iii)	
TIME TO PEAK (hrs)=	12.00	12.33	12.00	
RUNOFF VOLUME (mm)=	44.61	8.60	26.39	
TOTAL RAINFALL (mm)=	46.11	46.11	46.11	
RUNOFF COEFFICIENT =	0.97	0.19	0.57	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (7009)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6409):	476.49	4.652	12.00	17.91
+ ID2= 2 (7000):	4.56	0.337	12.00	26.39
=====				
ID = 3 (7009):	481.05	4.989	12.00	17.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (8000)				
ID= 1 DT= 5.0 min	Area (ha)= 11.23			
	Total Imp(%)= 65.00	Dir. Conn.(%)= 63.80		

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	7.30	3.93	
Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	0.87	0.87	
Length	(m)=	273.62	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		52.80	6.16	
over (min)		5.00	35.00	
Storage Coeff. (min)=	6.29 (ii)		33.91 (ii)	
Unit Hyd. Tpeak (min)=		5.00	35.00	
Unit Hyd. peak (cms)=		0.19	0.03	
PEAK FLOW (cms)=		0.96	0.04	*TOTALS*
TIME TO PEAK (hrs)=		12.00	12.50	0.972 (iii)
RUNOFF VOLUME (mm)=		44.61	8.01	12.00
TOTAL RAINFALL (mm)=		46.11	46.11	31.36
RUNOFF COEFFICIENT =		0.97	0.17	46.11
				0.68

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (8009)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (7009):		481.05	4.989	12.00	17.99
+ ID2= 2 (8000):		11.23	0.972	12.00	31.36
=====					
ID = 3 (8009):		492.28	5.962	12.00	18.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS   U   U   A A   L
V   V   I   SS   U   U   AAAAA L
V   V   I   SS   U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

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    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\ea7aed0-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\ea7aed0-

DATE: 02-25-2022 TIME: 09:20:35

USER:

COMMENTS: _____

 ** SIMULATION : Run 02 **

W/E	COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms	
START @ 0.00 hrs										

READ STORM 12.0										
[Ptot= 66.81 mm]										
fname : C:\Users\avarghese\AppData\Local\Temp\edb2042d-170e-44d8-9ba1-86782d6d6992\56138542-ad35-4bb2-854a										
remark: B-scs5										
*										
**	CALIB NASHYD	1000	1	5.0	44.18	1.38	12.17	17.42	0.26	0.000
	[CN=58.6									
	[N = 3.0:Tp 0.30]									
*										
*	CALIB STANDHYD	1410	1	5.0	1.92	0.15	12.00	31.97	0.48	0.000
	[I%=30.1:S%= 1.77]									
*										
	DUHYD	0001	1	5.0	1.92	0.15	12.00	31.97	n/a	0.000
	MAJOR SYSTEM:	0001	2	5.0	0.05	0.03	12.00	31.97	n/a	0.000
	MINOR SYSTEM:	0001	3	5.0	1.87	0.12	11.92	31.97	n/a	0.000
*										
*	CALIB STANDHYD	1420	1	5.0	12.97	0.92	12.00	31.62	0.47	0.000
	[I%=33.2:S%= 0.60]									
*										
*	ADD [0001+ 1420]	1429	3	5.0	13.02	0.95	12.00	31.62	n/a	0.000
*										
*	CALIB STANDHYD	1430	1	5.0	10.37	0.85	12.00	31.71	0.47	0.000
	[I%=33.2:S%= 3.12]									
*										
*	ADD [1429+ 1430]	1439	3	5.0	23.39	1.80	12.00	31.66	n/a	0.000
*										
*	CALIB STANDHYD	1440	1	5.0	7.23	0.51	12.00	28.21	0.42	0.000
	[I%=26.8:S%= 2.89]									
*										
*	ADD [1439+ 1440]	1449	3	5.0	30.62	2.31	12.00	30.85	n/a	0.000
*										
**	Reservoir									
	OUTFLOW:	0002	1	5.0	30.62	0.22	13.25	30.84	n/a	0.000
*										
*	CALIB STANDHYD	1450	1	5.0	1.72	0.14	12.00	33.15	0.50	0.000
	[I%=29.5:S%= 1.32]									
*										
*	ADD [1450+ 0002]	1459	3	5.0	32.34	0.33	12.00	30.96	n/a	0.000
*										
*	ADD [0001+ 1459]	0003	3	5.0	34.21	0.45	12.00	31.02	n/a	0.000
*										

* ADD [1000+ 0003]	1509	3	5.0	78.39	1.72	12.17	23.35	n/a	0.000
* CALIB STANDHYD [I%=19.9:S%= 3.38]	1500	1	5.0	17.89	0.98	12.00	24.10	0.36	0.000
* ADD [1500+ 1509]	1510	3	5.0	96.28	2.47	12.00	23.49	n/a	0.000
* CALIB NASHYD [CN=62.8 [N = 3.0:Tp 0.15]	1200	1	5.0	4.03	0.20	12.00	17.89	0.27	0.000
* CALIB STANDHYD [I%=25.4:S%= 1.46]	1300	1	5.0	8.16	0.57	12.00	31.00	0.46	0.000
* ADD [1200+ 1300]	1309	3	5.0	12.19	0.77	12.00	26.66	n/a	0.000
* CALIB STANDHYD [I%=20.6:S%= 1.66]	1100	1	5.0	26.23	1.54	12.00	28.47	0.43	0.000
** Reservoir OUTFLOW:	1109	1	5.0	26.23	0.63	12.42	28.47	n/a	0.000
* CALIB STANDHYD [I%=34.0:S%= 0.82]	1600	1	5.0	4.96	0.41	12.00	35.25	0.53	0.000
* ADD [1109+ 1600]	1609	3	5.0	31.19	0.81	12.00	29.55	n/a	0.000
* ADD [1309+ 1609]	1610	3	5.0	43.38	1.58	12.00	28.74	n/a	0.000
* ADD [1510+ 1610]	1611	3	5.0	139.66	4.05	12.00	25.12	n/a	0.000
* CALIB STANDHYD [I%=30.7:S%= 0.58]	2100	1	5.0	26.53	1.52	12.00	30.22	0.45	0.000
* CALIB STANDHYD [I%=32.3:S%= 0.53]	2200	1	5.0	33.03	1.97	12.00	32.77	0.49	0.000
* ADD [2100+ 2200]	2209	3	5.0	59.56	3.49	12.00	31.63	n/a	0.000
** Reservoir OUTFLOW:	0004	1	5.0	59.56	0.25	14.50	31.60	n/a	0.000
* CALIB STANDHYD [I%=33.5:S%= 0.67]	2300	1	5.0	6.31	0.49	12.00	33.59	0.50	0.000
* ADD [2300+ 0004]	2309	3	5.0	65.87	0.57	12.00	31.79	n/a	0.000
* CALIB STANDHYD [I%=30.5:S%= 0.56]	2410	1	5.0	23.41	1.40	12.00	31.85	0.48	0.000
* ADD [2309+ 2410]	2419	3	5.0	89.28	1.97	12.00	31.81	n/a	0.000
* ADD [1611+ 2419]	0005	3	5.0	228.94	6.02	12.00	27.73	n/a	0.000
* CALIB STANDHYD [I%=27.5:S%= 3.35]	2420	1	5.0	6.14	0.51	12.00	32.03	0.48	0.000
* ADD [2420+ 0005]	2429	3	5.0	235.08	6.53	12.00	27.84	n/a	0.000
* CALIB STANDHYD [I%=25.7:S%= 2.02]	2430	1	5.0	10.62	0.70	12.00	27.60	0.41	0.000
* ADD [2429+ 2430]	2439	3	5.0	245.70	7.23	12.00	27.83	n/a	0.000
** Reservoir OUTFLOW:	0006	1	5.0	245.70	5.24	12.17	27.83	n/a	0.000
* CALIB STANDHYD [I%=40.1:S%= 2.04]	2500	1	5.0	40.64	3.50	12.00	34.90	0.52	0.000
* ADD [2500+ 0006]	2509	3	5.0	286.34	6.91	12.08	28.83	n/a	0.000
* CALIB STANDHYD [I%=22.9:S%= 1.94]	3000	1	5.0	24.81	1.44	12.00	25.83	0.39	0.000
* ADD [2509+ 3000]	3009	3	5.0	311.15	8.24	12.00	28.59	n/a	0.000
* CALIB STANDHYD [I%=44.1:S%= 3.25]	3100	1	5.0	8.84	0.95	12.00	38.34	0.57	0.000
* ADD [3009+ 3100]	3109	3	5.0	319.99	9.20	12.00	28.86	n/a	0.000
* CALIB STANDHYD [I%=73.0:S%= 2.39]	3200	1	5.0	18.79	3.02	12.00	52.67	0.79	0.000

**	ADD	[	3109+	3200]	3209	3	5.0	338.78	12.21	12.00	30.18	n/a	0.000
**	CALIB	STANDHYD			3300	1	5.0	13.67	2.29	12.00	53.69	0.80	0.000
**		[I%=76.4:S%=	2.99]										
**	ADD	[	3209+	3300]	3309	3	5.0	352.45	14.50	12.00	31.10	n/a	0.000
**	CALIB	STANDHYD			3400	1	5.0	24.09	1.83	12.00	31.32	0.47	0.000
**		[I%=30.0:S%=	3.13]										
**	ADD	[	3309+	3400]	3409	3	5.0	376.54	16.34	12.00	31.11	n/a	0.000
**	CALIB	NASHYD			3500	1	5.0	48.32	0.93	12.17	9.84	0.15	0.000
**		[CN=43.8											
**		[N = 3.0:Tp	0.25]										
**	ADD	[	3409+	3500]	3509	3	5.0	424.86	17.10	12.00	28.69	n/a	0.000
**	Reservoir												
**	OUTFLOW:				3519	1	5.0	424.86	1.99	14.17	28.70	n/a	0.000
**	CALIB	STANDHYD			4000	1	5.0	11.35	0.93	12.00	32.40	0.49	0.000
**		[I%=33.3:S%=	2.38]										
**	ADD	[	3519+	4000]	4009	3	5.0	436.21	2.70	12.00	28.80	n/a	0.000
**	CALIB	STANDHYD			4100	1	5.0	14.42	1.26	12.00	33.81	0.51	0.000
**		[I%=35.5:S%=	3.20]										
**	ADD	[	4009+	4100]	4109	3	5.0	450.63	3.96	12.00	28.96	n/a	0.000
**	CALIB	STANDHYD			4200	1	5.0	1.06	0.11	12.00	35.89	0.54	0.000
**		[I%=38.3:S%=	2.56]										
**	ADD	[	4109+	4200]	4209	3	5.0	451.69	4.07	12.00	28.97	n/a	0.000
**	CALIB	STANDHYD			4300	1	5.0	0.95	0.09	12.00	35.89	0.54	0.000
**		[I%=38.3:S%=	1.63]										
**	ADD	[	4209+	4300]	4309	3	5.0	452.64	4.16	12.00	28.99	n/a	0.000
**	CALIB	STANDHYD			4400	1	5.0	1.19	0.12	12.00	35.89	0.54	0.000
**		[I%=38.3:S%=	2.86]										
**	ADD	[	4309+	4400]	4409	3	5.0	453.83	4.28	12.00	29.01	n/a	0.000
**	CALIB	STANDHYD			5000	1	5.0	15.67	1.60	12.00	38.10	0.57	0.000
**		[I%=43.6:S%=	3.10]										
**	ADD	[	4409+	5000]	5009	3	5.0	469.50	5.88	12.00	29.31	n/a	0.000
**	CALIB	STANDHYD			6000	1	5.0	1.00	0.09	12.00	35.89	0.54	0.000
**		[I%=38.3:S%=	0.88]										
**	ADD	[	5009+	6000]	6009	3	5.0	470.50	5.98	12.00	29.32	n/a	0.000
**	CALIB	STANDHYD			6100	1	5.0	0.94	0.09	12.00	35.89	0.54	0.000
**		[I%=38.3:S%=	2.41]										
**	ADD	[	6009+	6100]	6109	3	5.0	471.44	6.07	12.00	29.34	n/a	0.000
**	CALIB	STANDHYD			6200	1	5.0	2.11	0.19	12.00	35.89	0.54	0.000
**		[I%=38.3:S%=	0.75]										
**	ADD	[	6109+	6200]	6209	3	5.0	473.55	6.26	12.00	29.37	n/a	0.000
**	CALIB	STANDHYD			6300	1	5.0	1.06	0.10	12.00	37.34	0.56	0.000
**		[I%=41.4:S%=	0.85]										
**	ADD	[	6209+	6300]	6309	3	5.0	474.61	6.36	12.00	29.38	n/a	0.000
**	CALIB	STANDHYD			6400	1	5.0	1.88	0.18	12.00	35.89	0.54	0.000
**		[I%=38.3:S%=	1.92]										
**	ADD	[	6309+	6400]	6409	3	5.0	476.49	6.54	12.00	29.41	n/a	0.000
**	CALIB	STANDHYD			7000	1	5.0	4.56	0.52	12.00	41.10	0.62	0.000
**		[I%=49.4:S%=	1.68]										
**	ADD	[	6409+	7000]	7009	3	5.0	481.05	7.06	12.00	29.52	n/a	0.000
**	CALIB	STANDHYD			8000	1	5.0	11.23	1.48	12.00	47.62	0.71	0.000
**		[I%=63.8:S%=	0.87]										

*
* ADD [7009+ 8000] 8009 3 5.0 492.28 8.54 12.00 29.93 n/a 0.000

FINISH

=====

(v 6.0.2001)

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```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\VO2\voin.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\1370f625-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\1370f625-
```

COMMENTS: _____

**	CALIB NASHYD [CN=58.6 [N = 3.0:Tp 0.30]	1000	1	5.0	44.18	1.94	12.17	24.17	0.30	0.000
*	CALIB STANDHYD [I%=30.1:S%= 1.77]	1410	1	5.0	1.92	0.21	12.00	41.06	0.51	0.000
*	DUHYD	0001	1	5.0	1.92	0.21	12.00	41.06	n/a	0.000
	MAJOR SYSTEM:	0001	2	5.0	0.11	0.09	12.00	41.06	n/a	0.000
	MINOR SYSTEM:	0001	3	5.0	1.81	0.12	11.83	41.06	n/a	0.000
*	CALIB STANDHYD [I%=33.2:S%= 0.60]	1420	1	5.0	12.97	1.18	12.00	40.31	0.50	0.000
*	ADD [0001+ 1420]	1429	3	5.0	13.08	1.27	12.00	40.32	n/a	0.000
*	CALIB STANDHYD [I%=33.2:S%= 3.12]	1430	1	5.0	10.37	1.13	12.00	40.43	0.50	0.000
*	ADD [1429+ 1430]	1439	3	5.0	23.45	2.40	12.00	40.37	n/a	0.000
*	CALIB STANDHYD [I%=26.8:S%= 2.89]	1440	1	5.0	7.23	0.68	12.00	36.36	0.45	0.000
*	ADD [1439+ 1440]	1449	3	5.0	30.68	3.08	12.00	39.42	n/a	0.000
**	Reservoir OUTFLOW:	0002	1	5.0	30.68	0.39	12.92	39.42	n/a	0.000
*	CALIB STANDHYD [I%=29.5:S%= 1.32]	1450	1	5.0	1.72	0.19	12.00	42.65	0.53	0.000
*	ADD [1450+ 0002]	1459	3	5.0	32.40	0.42	12.83	39.59	n/a	0.000
*	ADD [0001+ 1459]	0003	3	5.0	34.21	0.51	12.00	39.67	n/a	0.000

* ADD [1000+ 0003]	1509	3	5.0	78.39	2.36	12.17	30.93	n/a	0.000
* CALIB STANDHYD [I%=19.9:S%= 3.38]	1500	1	5.0	17.89	1.36	12.00	31.53	0.39	0.000
* ADD [1500+ 1509]	1510	3	5.0	96.28	3.34	12.00	31.04	n/a	0.000
* CALIB NASHYD [CN=62.8 [N = 3.0:Tp 0.15]	1200	1	5.0	4.03	0.28	12.00	25.11	0.31	0.000
* CALIB STANDHYD [I%=25.4:S%= 1.46]	1300	1	5.0	8.16	0.74	12.00	40.18	0.50	0.000
* ADD [1200+ 1300]	1309	3	5.0	12.19	1.02	12.00	35.20	n/a	0.000
* CALIB STANDHYD [I%=20.6:S%= 1.66]	1100	1	5.0	26.23	2.02	12.00	37.27	0.46	0.000
** Reservoir OUTFLOW:	1109	1	5.0	26.23	0.94	12.42	37.27	n/a	0.000
* CALIB STANDHYD [I%=34.0:S%= 0.82]	1600	1	5.0	4.96	0.54	12.00	45.04	0.56	0.000
* ADD [1109+ 1600]	1609	3	5.0	31.19	1.11	12.42	38.51	n/a	0.000
* ADD [1309+ 1609]	1610	3	5.0	43.38	2.08	12.00	37.58	n/a	0.000
* ADD [1510+ 1610]	1611	3	5.0	139.66	5.42	12.00	33.07	n/a	0.000
* CALIB STANDHYD [I%=30.7:S%= 0.58]	2100	1	5.0	26.53	2.11	12.00	38.68	0.48	0.000
* CALIB STANDHYD [I%=32.3:S%= 0.53]	2200	1	5.0	33.03	2.56	12.00	41.93	0.52	0.000
* ADD [2100+ 2200]	2209	3	5.0	59.56	4.67	12.00	40.48	n/a	0.000
** Reservoir OUTFLOW:	0004	1	5.0	59.56	0.47	13.83	40.45	n/a	0.000
* CALIB STANDHYD [I%=33.5:S%= 0.67]	2300	1	5.0	6.31	0.62	12.00	42.90	0.53	0.000
* ADD [2300+ 0004]	2309	3	5.0	65.87	0.72	12.00	40.69	n/a	0.000
* CALIB STANDHYD [I%=30.5:S%= 0.56]	2410	1	5.0	23.41	1.97	12.00	40.87	0.51	0.000
* ADD [2309+ 2410]	2419	3	5.0	89.28	2.69	12.00	40.74	n/a	0.000
* ADD [1611+ 2419]	0005	3	5.0	228.94	8.11	12.00	36.06	n/a	0.000
* CALIB STANDHYD [I%=27.5:S%= 3.35]	2420	1	5.0	6.14	0.66	12.00	41.36	0.51	0.000
* ADD [2420+ 0005]	2429	3	5.0	235.08	8.77	12.00	36.20	n/a	0.000
* CALIB STANDHYD [I%=25.7:S%= 2.02]	2430	1	5.0	10.62	0.90	12.00	35.65	0.44	0.000
* ADD [2429+ 2430]	2439	3	5.0	245.70	9.67	12.00	36.18	n/a	0.000
** Reservoir OUTFLOW:	0006	1	5.0	245.70	7.52	12.17	36.18	n/a	0.000
* CALIB STANDHYD [I%=40.1:S%= 2.04]	2500	1	5.0	40.64	4.49	12.00	44.05	0.55	0.000
* ADD [2500+ 0006]	2509	3	5.0	286.34	10.33	12.00	37.29	n/a	0.000
* CALIB STANDHYD [I%=22.9:S%= 1.94]	3000	1	5.0	24.81	1.86	12.00	33.55	0.42	0.000
* ADD [2509+ 3000]	3009	3	5.0	311.15	12.19	12.00	36.99	n/a	0.000
* CALIB STANDHYD [I%=44.1:S%= 3.25]	3100	1	5.0	8.84	1.20	12.00	48.28	0.60	0.000
* ADD [3009+ 3100]	3109	3	5.0	319.99	13.39	12.00	37.31	n/a	0.000
* CALIB STANDHYD [I%=73.0:S%= 2.39]	3200	1	5.0	18.79	3.73	12.00	64.71	0.80	0.000

**	ADD	[	3109+	3200]	3209	3	5.0	338.78	17.12	12.00	38.83	n/a	0.000
*	CALIB	STANDHYD			3300	1	5.0	13.67	2.81	12.00	65.76	0.82	0.000
*		[I%=76.4:S%=	2.99]										
**	ADD	[	3209+	3300]	3309	3	5.0	352.45	19.94	12.00	39.87	n/a	0.000
*	CALIB	STANDHYD			3400	1	5.0	24.09	2.48	12.00	40.23	0.50	0.000
*		[I%=30.0:S%=	3.13]										
**	ADD	[	3309+	3400]	3409	3	5.0	376.54	22.42	12.00	39.89	n/a	0.000
*	CALIB	NASHYD			3500	1	5.0	48.32	1.35	12.17	14.21	0.18	0.000
*		[CN=43.8											
*		[N=3.0:Tp	0.25]										
**	ADD	[	3409+	3500]	3509	3	5.0	424.86	23.53	12.00	36.97	n/a	0.000
*	Reservoir												
*	OUTFLOW:				3519	1	5.0	424.86	2.09	14.83	36.97	n/a	0.000
**	CALIB	STANDHYD			4000	1	5.0	11.35	1.18	12.00	41.38	0.51	0.000
*		[I%=33.3:S%=	2.38]										
**	ADD	[	3519+	4000]	4009	3	5.0	436.21	3.00	12.00	37.09	n/a	0.000
*	CALIB	STANDHYD			4100	1	5.0	14.42	1.67	12.00	43.04	0.53	0.000
*		[I%=35.5:S%=	3.20]										
**	ADD	[	4009+	4100]	4109	3	5.0	450.63	4.67	12.00	37.28	n/a	0.000
*	CALIB	STANDHYD			4200	1	5.0	1.06	0.14	12.00	45.53	0.57	0.000
*		[I%=38.3:S%=	2.56]										
**	ADD	[	4109+	4200]	4209	3	5.0	451.69	4.81	12.00	37.30	n/a	0.000
*	CALIB	STANDHYD			4300	1	5.0	0.95	0.12	12.00	45.53	0.57	0.000
*		[I%=38.3:S%=	1.63]										
**	ADD	[	4209+	4300]	4309	3	5.0	452.64	4.92	12.00	37.31	n/a	0.000
*	CALIB	STANDHYD			4400	1	5.0	1.19	0.15	12.00	45.53	0.57	0.000
*		[I%=38.3:S%=	2.86]										
**	ADD	[	4309+	4400]	4409	3	5.0	453.83	5.08	12.00	37.34	n/a	0.000
*	CALIB	STANDHYD			5000	1	5.0	15.67	2.09	12.00	47.99	0.60	0.000
*		[I%=43.6:S%=	3.10]										
**	ADD	[	4409+	5000]	5009	3	5.0	469.50	7.16	12.00	37.69	n/a	0.000
*	CALIB	STANDHYD			6000	1	5.0	1.00	0.12	12.00	45.53	0.57	0.000
*		[I%=38.3:S%=	0.88]										
**	ADD	[	5009+	6000]	6009	3	5.0	470.50	7.28	12.00	37.71	n/a	0.000
*	CALIB	STANDHYD			6100	1	5.0	0.94	0.12	12.00	45.53	0.57	0.000
*		[I%=38.3:S%=	2.41]										
**	ADD	[	6009+	6100]	6109	3	5.0	471.44	7.40	12.00	37.72	n/a	0.000
*	CALIB	STANDHYD			6200	1	5.0	2.11	0.24	12.00	45.53	0.57	0.000
*		[I%=38.3:S%=	0.75]										
**	ADD	[	6109+	6200]	6209	3	5.0	473.55	7.65	12.00	37.76	n/a	0.000
*	CALIB	STANDHYD			6300	1	5.0	1.06	0.13	12.00	47.18	0.59	0.000
*		[I%=41.4:S%=	0.85]										
**	ADD	[	6209+	6300]	6309	3	5.0	474.61	7.78	12.00	37.78	n/a	0.000
*	CALIB	STANDHYD			6400	1	5.0	1.88	0.24	12.00	45.54	0.57	0.000
*		[I%=38.3:S%=	1.92]										
**	ADD	[	6309+	6400]	6409	3	5.0	476.49	8.01	12.00	37.81	n/a	0.000
*	CALIB	STANDHYD			7000	1	5.0	4.56	0.67	12.00	51.46	0.64	0.000
*		[I%=49.4:S%=	1.68]										
**	ADD	[	6409+	7000]	7009	3	5.0	481.05	8.68	12.00	37.94	n/a	0.000
*	CALIB	STANDHYD			8000	1	5.0	11.23	1.82	12.00	58.83	0.73	0.000
*		[I%=63.8:S%=	0.87]										

*
*
*

ADD [7009+ 8000] 8009 3 5.0 492.28 10.50 12.00 38.42 n/a 0.000

(v 6.0.2001)

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```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\vo2\voin.dat
Output filename: C:\Users\avarghese\AppData\Local\Civica\vh5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\4c23dbcf-
Summary filename: C:\Users\avarghese\AppData\Local\Civica\vh5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\4c23dbcf-
```

**	CALIB NASHYD [CN=58.6 [N = 3.0:Tp 0.30]	1000	1	5.0	44.18	2.50	12.17	32.33	0.34	0.000
*	CALIB STANDHYD [I%=30.1:S%= 1.77]	1410	1	5.0	1.92	0.24	12.00	51.56	0.54	0.000
*	DUHYD	0001	1	5.0	1.92	0.24	12.00	51.56	n/a	0.000
	MAJOR SYSTEM:	0001	2	5.0	0.16	0.12	12.00	51.56	n/a	0.000
	MINOR SYSTEM:	0001	3	5.0	1.76	0.12	11.83	51.56	n/a	0.000
*	CALIB STANDHYD [I%=33.2:S%= 0.60]	1420	1	5.0	12.97	1.36	12.00	50.34	0.53	0.000
*	ADD [0001+ 1420]	1429	3	5.0	13.13	1.48	12.00	50.35	n/a	0.000
*	CALIB STANDHYD [I%=33.2:S%= 3.12]	1430	1	5.0	10.37	1.31	12.00	50.49	0.53	0.000
*	ADD [1429+ 1430]	1439	3	5.0	23.50	2.80	12.00	50.41	n/a	0.000
*	CALIB STANDHYD [I%=26.8:S%= 2.89]	1440	1	5.0	7.23	0.81	12.00	45.85	0.48	0.000
*	ADD [1439+ 1440]	1449	3	5.0	30.73	3.60	12.00	49.34	n/a	0.000
**	Reservoir OUTFLOW:	0002	1	5.0	30.73	0.60	12.75	49.34	n/a	0.000
*	CALIB STANDHYD [I%=29.5:S%= 1.32]	1450	1	5.0	1.72	0.22	12.00	53.61	0.56	0.000
*	ADD [1450+ 0002]	1459	3	5.0	32.45	0.63	12.75	49.56	n/a	0.000
*	ADD [0001+ 1459]	0003	3	5.0	34.21	0.67	12.42	49.67	n/a	0.000

*	ADD [1000+ 0003]	1509	3	5.0	78.39	3.13	12.17	39.89	n/a	0.000
*	CALIB STANDHYD [I%=19.9:S%= 3.38]	1500	1	5.0	17.89	1.65	12.00	40.28	0.42	0.000
*	ADD [1500+ 1509]	1510	3	5.0	96.28	4.17	12.17	39.97	n/a	0.000
*	CALIB NASHYD [CN=62.8 [N = 3.0:Tp 0.15]	1200	1	5.0	4.03	0.35	12.00	33.82	0.35	0.000
*	CALIB STANDHYD [I%=25.4:S%= 1.46]	1300	1	5.0	8.16	0.94	12.00	50.82	0.53	0.000
*	ADD [1200+ 1300]	1309	3	5.0	12.19	1.30	12.00	45.20	n/a	0.000
*	CALIB STANDHYD [I%=20.6:S%= 1.66]	1100	1	5.0	26.23	2.44	12.00	47.54	0.50	0.000
**	Reservoir OUTFLOW:	1109	1	5.0	26.23	1.76	12.25	47.54	n/a	0.000
*	CALIB STANDHYD [I%=34.0:S%= 0.82]	1600	1	5.0	4.96	0.62	12.00	56.27	0.59	0.000
*	ADD [1109+ 1600]	1609	3	5.0	31.19	2.06	12.25	48.93	n/a	0.000
*	ADD [1309+ 1609]	1610	3	5.0	43.38	2.89	12.17	47.88	n/a	0.000
*	ADD [1510+ 1610]	1611	3	5.0	139.66	7.06	12.17	42.42	n/a	0.000
*	CALIB STANDHYD [I%=30.7:S%= 0.58]	2100	1	5.0	26.53	2.52	12.00	48.47	0.51	0.000
*	CALIB STANDHYD [I%=32.3:S%= 0.53]	2200	1	5.0	33.03	3.11	12.00	52.49	0.55	0.000
*	ADD [2100+ 2200]	2209	3	5.0	59.56	5.62	12.00	50.70	n/a	0.000
**	Reservoir OUTFLOW:	0004	1	5.0	59.56	1.16	12.92	50.67	n/a	0.000
*	CALIB STANDHYD [I%=33.5:S%= 0.67]	2300	1	5.0	6.31	0.75	12.00	53.62	0.56	0.000
*	ADD [2300+ 0004]	2309	3	5.0	65.87	1.27	12.92	50.95	n/a	0.000
*	CALIB STANDHYD [I%=30.5:S%= 0.56]	2410	1	5.0	23.41	2.30	12.00	51.30	0.54	0.000
*	ADD [2309+ 2410]	2419	3	5.0	89.28	3.21	12.00	51.04	n/a	0.000
*	ADD [1611+ 2419]	0005	3	5.0	228.94	9.94	12.00	45.79	n/a	0.000
*	CALIB STANDHYD [I%=27.5:S%= 3.35]	2420	1	5.0	6.14	0.79	12.00	52.14	0.55	0.000
*	ADD [2420+ 0005]	2429	3	5.0	235.08	10.73	12.00	45.95	n/a	0.000
*	CALIB STANDHYD [I%=25.7:S%= 2.02]	2430	1	5.0	10.62	1.12	12.00	45.03	0.47	0.000
*	ADD [2429+ 2430]	2439	3	5.0	245.70	11.84	12.00	45.91	n/a	0.000
**	Reservoir OUTFLOW:	0006	1	5.0	245.70	10.24	12.08	45.91	n/a	0.000
*	CALIB STANDHYD [I%=40.1:S%= 2.04]	2500	1	5.0	40.64	5.17	12.00	54.52	0.57	0.000
*	ADD [2500+ 0006]	2509	3	5.0	286.34	13.61	12.08	47.13	n/a	0.000
*	CALIB STANDHYD [I%=22.9:S%= 1.94]	3000	1	5.0	24.81	2.20	12.00	42.61	0.45	0.000
*	ADD [2509+ 3000]	3009	3	5.0	311.15	15.72	12.00	46.77	n/a	0.000
*	CALIB STANDHYD [I%=44.1:S%= 3.25]	3100	1	5.0	8.84	1.38	12.00	59.58	0.62	0.000
*	ADD [3009+ 3100]	3109	3	5.0	319.99	17.10	12.00	47.13	n/a	0.000
*	CALIB STANDHYD [I%=73.0:S%= 2.39]	3200	1	5.0	18.79	4.17	12.00	78.06	0.82	0.000

**	ADD	[	3109+	3200]	3209	3	5.0	338.78	21.28	12.00	48.84	n/a	0.000
*	CALIB	STANDHYD			3300	1	5.0	13.67	3.13	12.00	79.12	0.83	0.000
*		[I%=76.4:S%=	2.99]										
**	ADD	[	3209+	3300]	3309	3	5.0	352.45	24.41	12.00	50.02	n/a	0.000
*	CALIB	STANDHYD			3400	1	5.0	24.09	2.92	12.00	50.53	0.53	0.000
*		[I%=30.0:S%=	3.13]										
**	ADD	[	3309+	3400]	3409	3	5.0	376.54	27.33	12.00	50.05	n/a	0.000
*	CALIB	NASHYD			3500	1	5.0	48.32	1.79	12.08	19.67	0.21	0.000
*		[CN=43.8											
*		[N = 3.0:Tp	0.25]										
**	ADD	[	3409+	3500]	3509	3	5.0	424.86	28.84	12.00	46.59	n/a	0.000
*	Reservoir												
*	OUTFLOW:				3519	1	5.0	424.86	2.20	16.08	46.60	n/a	0.000
**	CALIB	STANDHYD			4000	1	5.0	11.35	1.44	12.00	51.74	0.54	0.000
*		[I%=33.3:S%=	2.38]										
**	ADD	[	3519+	4000]	4009	3	5.0	436.21	3.33	12.00	46.73	n/a	0.000
*	CALIB	STANDHYD			4100	1	5.0	14.42	1.94	12.00	53.65	0.56	0.000
*		[I%=35.5:S%=	3.20]										
**	ADD	[	4009+	4100]	4109	3	5.0	450.63	5.27	12.00	46.95	n/a	0.000
*	CALIB	STANDHYD			4200	1	5.0	1.06	0.16	12.00	56.57	0.59	0.000
*		[I%=38.3:S%=	2.56]										
**	ADD	[	4109+	4200]	4209	3	5.0	451.69	5.42	12.00	46.98	n/a	0.000
*	CALIB	STANDHYD			4300	1	5.0	0.95	0.14	12.00	56.56	0.59	0.000
*		[I%=38.3:S%=	1.63]										
**	ADD	[	4209+	4300]	4309	3	5.0	452.64	5.56	12.00	47.00	n/a	0.000
*	CALIB	STANDHYD			4400	1	5.0	1.19	0.18	12.00	56.57	0.59	0.000
*		[I%=38.3:S%=	2.86]										
**	ADD	[	4309+	4400]	4409	3	5.0	453.83	5.74	12.00	47.02	n/a	0.000
*	CALIB	STANDHYD			5000	1	5.0	15.67	2.40	12.00	59.26	0.62	0.000
*		[I%=43.6:S%=	3.10]										
**	ADD	[	4409+	5000]	5009	3	5.0	469.50	8.13	12.00	47.43	n/a	0.000
*	CALIB	STANDHYD			6000	1	5.0	1.00	0.14	12.00	56.56	0.59	0.000
*		[I%=38.3:S%=	0.88]										
**	ADD	[	5009+	6000]	6009	3	5.0	470.50	8.27	12.00	47.45	n/a	0.000
*	CALIB	STANDHYD			6100	1	5.0	0.94	0.14	12.00	56.57	0.59	0.000
*		[I%=38.3:S%=	2.41]										
**	ADD	[	6009+	6100]	6109	3	5.0	471.44	8.40	12.00	47.47	n/a	0.000
*	CALIB	STANDHYD			6200	1	5.0	2.11	0.28	12.00	56.57	0.59	0.000
*		[I%=38.3:S%=	0.75]										
**	ADD	[	6109+	6200]	6209	3	5.0	473.55	8.69	12.00	47.51	n/a	0.000
*	CALIB	STANDHYD			6300	1	5.0	1.06	0.15	12.00	58.40	0.61	0.000
*		[I%=41.4:S%=	0.85]										
**	ADD	[	6209+	6300]	6309	3	5.0	474.61	8.84	12.00	47.53	n/a	0.000
*	CALIB	STANDHYD			6400	1	5.0	1.88	0.27	12.00	56.57	0.59	0.000
*		[I%=38.3:S%=	1.92]										
**	ADD	[	6309+	6400]	6409	3	5.0	476.49	9.11	12.00	47.57	n/a	0.000
*	CALIB	STANDHYD			7000	1	5.0	4.56	0.76	12.00	63.18	0.66	0.000
*		[I%=49.4:S%=	1.68]										
**	ADD	[	6409+	7000]	7009	3	5.0	481.05	9.87	12.00	47.72	n/a	0.000
*	CALIB	STANDHYD			8000	1	5.0	11.23	2.07	12.00	71.37	0.75	0.000
*		[I%=63.8:S%=	0.87]										

*
*
*

ADD [7009+ 8000] 8009 3 5.0 492.28 11.94 12.00 48.26 n/a 0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS   U   U   A A   L
V   V   I   SS   U   U   AAAAA L
V   V   I   SS   U   U   A   A   L
VV    I   SSSSS UUUUU A   A   LLLLL

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    000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   MM MM   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
    000   T   T   H   H   Y   Y   M   M   000

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\visual OTTHYMO 6.0\VO2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\5d0ec2e3-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\5d0ec2e3-

DATE: 02-25-2022 TIME: 09:20:34

USER:

COMMENTS: _____

 ** SIMULATION : Run 05 **

W/E	COMMAND	HYD ID	DT min	AREA ha	Qpeak cms	Tpeak hrs	R.V. mm	R.C.	Qbase cms	
START @ 0.00 hrs										

READ STORM 12.0										
[Ptot=120.68 mm]										
fname : C:\Users\avarghese\AppData\Local\Temp\edb2042d-170e-44d8-9ba1-86782d6d6992\ee6a3d80-ae4b-44bd-bedc										
remark: B-scs100										
*										
**	CALIB NASHYD	1000	1	5.0	44.18	3.71	12.17	47.54	0.39	0.000
	[CN=58.6									
	[N = 3.0:Tp 0.30]									
*										
*	CALIB STANDHYD	1410	1	5.0	1.92	0.33	12.00	70.27	0.58	0.000
	[I%=30.1:S%= 1.77]									
*										
	DUHYD	0001	1	5.0	1.92	0.33	12.00	70.27	n/a	0.000
	MAJOR SYSTEM:	0001	2	5.0	0.29	0.21	12.00	70.27	n/a	0.000
	MINOR SYSTEM:	0001	3	5.0	1.63	0.12	11.67	70.27	n/a	0.000
*										
*	CALIB STANDHYD	1420	1	5.0	12.97	1.91	12.00	68.21	0.57	0.000
	[I%=33.2:S%= 0.60]									
*										
*	ADD [0001+ 1420]	1429	3	5.0	13.26	2.13	12.00	68.25	n/a	0.000
*										
*	CALIB STANDHYD	1430	1	5.0	10.37	1.79	12.00	68.41	0.57	0.000
	[I%=33.2:S%= 3.12]									
*										
*	ADD [1429+ 1430]	1439	3	5.0	23.63	3.92	12.00	68.32	n/a	0.000
*										
*	CALIB STANDHYD	1440	1	5.0	7.23	1.12	12.00	62.92	0.52	0.000
	[I%=26.8:S%= 2.89]									
*										
*	ADD [1439+ 1440]	1449	3	5.0	30.86	5.03	12.00	67.06	n/a	0.000
*										
**	Reservoir									
	OUTFLOW:	0002	1	5.0	30.86	1.32	12.42	67.05	n/a	0.000
*										
*	CALIB STANDHYD	1450	1	5.0	1.72	0.31	12.00	73.06	0.61	0.000
	[I%=29.5:S%= 1.32]									
*										
*	ADD [1450+ 0002]	1459	3	5.0	32.58	1.40	12.42	67.37	n/a	0.000
*										
*	ADD [0001+ 1459]	0003	3	5.0	34.21	1.50	12.33	67.51	n/a	0.000
*										

* ADD [1000+ 0003]	1509	3	5.0	78.39	5.02	12.17	56.26	n/a	0.000
* CALIB STANDHYD [I%=19.9:S%= 3.38]	1500	1	5.0	17.89	2.34	12.00	56.22	0.47	0.000
* ADD [1500+ 1509]	1510	3	5.0	96.28	6.56	12.17	56.25	n/a	0.000
* CALIB NASHYD [CN=62.8 [N = 3.0:Tp 0.15]	1200	1	5.0	4.03	0.53	12.00	49.99	0.41	0.000
* CALIB STANDHYD [I%=25.4:S%= 1.46]	1300	1	5.0	8.16	1.33	12.00	69.81	0.58	0.000
* ADD [1200+ 1300]	1309	3	5.0	12.19	1.86	12.00	63.26	n/a	0.000
* CALIB STANDHYD [I%=20.6:S%= 1.66]	1100	1	5.0	26.23	3.80	12.00	65.99	0.55	0.000
** Reservoir OUTFLOW:	1109	1	5.0	26.23	3.47	12.08	65.98	n/a	0.000
* CALIB STANDHYD [I%=34.0:S%= 0.82]	1600	1	5.0	4.96	0.90	12.00	76.11	0.63	0.000
* ADD [1109+ 1600]	1609	3	5.0	31.19	4.07	12.08	67.59	n/a	0.000
* ADD [1309+ 1609]	1610	3	5.0	43.38	5.55	12.08	66.37	n/a	0.000
* ADD [1510+ 1610]	1611	3	5.0	139.66	11.90	12.08	59.39	n/a	0.000
* CALIB STANDHYD [I%=30.7:S%= 0.58]	2100	1	5.0	26.53	3.58	12.00	65.99	0.55	0.000
* CALIB STANDHYD [I%=32.3:S%= 0.53]	2200	1	5.0	33.03	4.51	12.00	71.27	0.59	0.000
* ADD [2100+ 2200]	2209	3	5.0	59.56	8.08	12.00	68.92	n/a	0.000
** Reservoir OUTFLOW:	0004	1	5.0	59.56	1.62	12.92	68.89	n/a	0.000
* CALIB STANDHYD [I%=33.5:S%= 0.67]	2300	1	5.0	6.31	1.01	12.00	72.64	0.60	0.000
* ADD [2300+ 0004]	2309	3	5.0	65.87	1.94	12.25	69.25	n/a	0.000
* CALIB STANDHYD [I%=30.5:S%= 0.56]	2410	1	5.0	23.41	3.31	12.00	69.88	0.58	0.000
* ADD [2309+ 2410]	2419	3	5.0	89.28	4.62	12.00	69.41	n/a	0.000
* ADD [1611+ 2419]	0005	3	5.0	228.94	16.21	12.00	63.30	n/a	0.000
* CALIB STANDHYD [I%=27.5:S%= 3.35]	2420	1	5.0	6.14	1.19	12.00	71.33	0.59	0.000
* ADD [2420+ 0005]	2429	3	5.0	235.08	17.40	12.00	63.51	n/a	0.000
* CALIB STANDHYD [I%=25.7:S%= 2.02]	2430	1	5.0	10.62	1.56	12.00	61.95	0.51	0.000
* ADD [2429+ 2430]	2439	3	5.0	245.70	18.96	12.00	63.44	n/a	0.000
** Reservoir OUTFLOW:	0006	1	5.0	245.70	17.88	12.08	63.44	n/a	0.000
* CALIB STANDHYD [I%=40.1:S%= 2.04]	2500	1	5.0	40.64	7.25	12.00	73.02	0.61	0.000
* ADD [2500+ 0006]	2509	3	5.0	286.34	22.72	12.08	64.80	n/a	0.000
* CALIB STANDHYD [I%=22.9:S%= 1.94]	3000	1	5.0	24.81	3.31	12.00	59.00	0.49	0.000
* ADD [2509+ 3000]	3009	3	5.0	311.15	25.45	12.00	64.34	n/a	0.000
* CALIB STANDHYD [I%=44.1:S%= 3.25]	3100	1	5.0	8.84	1.95	12.00	79.41	0.66	0.000
* ADD [3009+ 3100]	3109	3	5.0	319.99	27.40	12.00	64.76	n/a	0.000
* CALIB STANDHYD [I%=73.0:S%= 2.39]	3200	1	5.0	18.79	5.43	12.00	100.87	0.84	0.000

*												
*	ADD [3109+ 3200]	3209	3	5.0	338.78	32.82	12.00	66.76	n/a	0.000		
*	CALIB STANDHYD [I%=76.4:S%= 2.99]	3300	1	5.0	13.67	4.05	12.00	101.89	0.84	0.000		
*												
*	ADD [3209+ 3300]	3309	3	5.0	352.45	36.87	12.00	68.12	n/a	0.000		
*	CALIB STANDHYD [I%=30.0:S%= 3.13]	3400	1	5.0	24.09	4.03	12.00	68.91	0.57	0.000		
*												
*	ADD [3309+ 3400]	3409	3	5.0	376.54	40.91	12.00	68.17	n/a	0.000		
*	CALIB NASHYD [CN=43.8 [N = 3.0:Tp 0.25]	3500	1	5.0	48.32	2.79	12.08	30.28	0.25	0.000		
*												
*	ADD [3409+ 3500]	3509	3	5.0	424.86	43.27	12.00	63.86	n/a	0.000		
**	Reservoir OUTFLOW:	3519	1	5.0	424.86	3.73	15.42	63.88	n/a	0.000		
*												
*	CALIB STANDHYD [I%=33.3:S%= 2.38]	4000	1	5.0	11.35	1.97	12.00	70.16	0.58	0.000		
*												
*	ADD [3519+ 4000]	4009	3	5.0	436.21	3.96	12.00	64.05	n/a	0.000		
*	CALIB STANDHYD [I%=35.5:S%= 3.20]	4100	1	5.0	14.42	2.64	12.00	72.47	0.60	0.000		
*												
*	ADD [4009+ 4100]	4109	3	5.0	450.63	6.60	12.00	64.31	n/a	0.000		
*	CALIB STANDHYD [I%=38.3:S%= 2.56]	4200	1	5.0	1.06	0.22	12.00	76.03	0.63	0.000		
*												
*	ADD [4109+ 4200]	4209	3	5.0	451.69	6.83	12.00	64.34	n/a	0.000		
*	CALIB STANDHYD [I%=38.3:S%= 1.63]	4300	1	5.0	0.95	0.19	12.00	76.03	0.63	0.000		
*												
*	ADD [4209+ 4300]	4309	3	5.0	452.64	7.01	12.00	64.37	n/a	0.000		
*	CALIB STANDHYD [I%=38.3:S%= 2.86]	4400	1	5.0	1.19	0.25	12.00	76.03	0.63	0.000		
*												
*	ADD [4309+ 4400]	4409	3	5.0	453.83	7.26	12.00	64.40	n/a	0.000		
*	CALIB STANDHYD [I%=43.6:S%= 3.10]	5000	1	5.0	15.67	3.21	12.00	79.05	0.66	0.000		
*												
*	ADD [4409+ 5000]	5009	3	5.0	469.50	10.48	12.00	64.89	n/a	0.000		
*	CALIB STANDHYD [I%=38.3:S%= 0.88]	6000	1	5.0	1.00	0.19	12.00	76.03	0.63	0.000		
*												
*	ADD [5009+ 6000]	6009	3	5.0	470.50	10.67	12.00	64.91	n/a	0.000		
*	CALIB STANDHYD [I%=38.3:S%= 2.41]	6100	1	5.0	0.94	0.20	12.00	76.03	0.63	0.000		
*												
*	ADD [6009+ 6100]	6109	3	5.0	471.44	10.87	12.00	64.93	n/a	0.000		
*	CALIB STANDHYD [I%=38.3:S%= 0.75]	6200	1	5.0	2.11	0.39	12.00	76.03	0.63	0.000		
*												
*	ADD [6109+ 6200]	6209	3	5.0	473.55	11.26	12.00	64.98	n/a	0.000		
*	CALIB STANDHYD [I%=41.4:S%= 0.85]	6300	1	5.0	1.06	0.21	12.00	78.14	0.65	0.000		
*												
*	ADD [6209+ 6300]	6309	3	5.0	474.61	11.47	12.00	65.01	n/a	0.000		
*	CALIB STANDHYD [I%=38.3:S%= 1.92]	6400	1	5.0	1.88	0.37	12.00	76.04	0.63	0.000		
*												
*	ADD [6309+ 6400]	6409	3	5.0	476.49	11.84	12.00	65.05	n/a	0.000		
*	CALIB STANDHYD [I%=49.4:S%= 1.68]	7000	1	5.0	4.56	1.01	12.00	83.62	0.69	0.000		
*												
*	ADD [6409+ 7000]	7009	3	5.0	481.05	12.85	12.00	65.23	n/a	0.000		
*	CALIB STANDHYD [I%=63.8:S%= 0.87]	8000	1	5.0	11.23	2.70	12.00	92.95	0.77	0.000		

*
*
*

ADD [7009+ 8000] 8009 3 5.0 492.28 15.54 12.00 65.86 n/a 0.000

```

=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS   U   U   A A   L
V   V   I   SS   U   U   AAAAA L
V   V   I   SS   U   U   A   A L
VV      I   SSSSS UUUUU A   A LLLLL

    000   TTTTT TTTTT H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y Y   MM MM O   O
O   O   T   T   H   H   Y   M   M   O   O
000   T   T   H   H   Y   M   M   000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\vo2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\vh5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\576c50b9-b865bcde-b7eb-49a8-97a1-6bada5f80bff\b6b1f300
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\vh5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\576c50b9-b865bcde-b7eb-49a8-97a1-6bada5f80bff\b6b1f300

DATE: 02-25-2022 TIME: 09:27:49

USER:

COMMENTS: _____

 ** SIMULATION : Run 01 **

READ STORM	Filename: C:\Users\avarghese\AppData\Local\Temp\b865bcde-b7eb-49a8-97a1-6bada5f80bff\b6b1f300
Ptotal=212.00 mm	Comments: hazel-hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
1.00	6.00	4.00	13.00	7.00	23.00	10.00	53.00
2.00	4.00	5.00	17.00	8.00	13.00	11.00	38.00
3.00	6.00	6.00	13.00	9.00	13.00	12.00	13.00

CALIB NASHYD (1000) ID= 1 DT= 5.0 min	Area (ha)= 44.18 Ia (mm)= 1.50 U.H. Tp(hrs)= 0.30	Curve Number (CN)= 77.8 # of Linear Res.(N)= 3.00
--	---	--

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00

1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 5.625

PEAK FLOW (cms)= 5.597 (i)

TIME TO PEAK (hrs)= 10.000

RUNOFF VOLUME (mm)= 156.525

TOTAL RAINFALL (mm)= 212.000

RUNOFF COEFFICIENT = 0.738

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (1410) ID= 1 DT= 5.0 min		Area (ha)= 1.92 Total Imp(%)= 37.60	Dir. Conn.(%)= 30.10
Surface Area	(ha)=	IMPERVIOUS 0.72	PERVIOUS (i) 1.20
Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	1.77	1.77
Length	(m)=	113.14	40.00
Mannings n	=	0.013	0.250
Max.Eff.Inten.(mm/hr)=		53.00	54.21
over (min)		5.00	15.00
Storage Coeff. (min)=	2.99 (ii)		12.34 (ii)
Unit Hyd. Tpeak (min)=	5.00		15.00
Unit Hyd. peak (cms)=	0.28		0.08
TOTALS			
PEAK FLOW (cms)=	0.09	0.18	0.262 (iii)
TIME TO PEAK (hrs)=	9.75	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	158.87	174.40
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 78.1 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

DUHYD (0001) Inlet Cap.= 0.120 #of Inlets= 1 Total(cms)= 0.1		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
TOTAL HYD.(ID= 1):		1.92	0.26	10.00	174.40
MAJOR SYS.(ID= 2):		0.40	0.14	10.00	174.40
MINOR SYS.(ID= 3):		1.52	0.12	9.08	174.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (1420) ID= 1 DT= 5.0 min		Area (ha)= 12.97 Total Imp(%)= 39.90	Dir. Conn.(%)= 33.20
Surface Area	(ha)=	IMPERVIOUS 5.18	PERVIOUS (i) 7.79

Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	0.60	0.60	
Length	(m)=	294.05	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		53.00	51.78	
over (min)		5.00	25.00	
Storage Coeff. (min)=		7.33 (ii)	20.51 (ii)	
Unit Hyd. Tpeak (min)=		5.00	25.00	
Unit Hyd. peak (cms)=		0.17	0.05	
				TOTALS
PEAK FLOW (cms)=		0.63	1.02	1.644 (iii)
TIME TO PEAK (hrs)=		10.00	10.17	10.00
RUNOFF VOLUME (mm)=		210.50	149.83	169.97
TOTAL RAINFALL (mm)=		212.00	212.00	212.00
RUNOFF COEFFICIENT =		0.99	0.71	0.80

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1429)				
1 + 2 = 3				
ID1= 1 (0001):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (1420):	0.40	0.142	10.00	174.40
	12.97	1.644	10.00	169.97
ID = 3 (1429):	13.37	1.786	10.00	170.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (1430)	Area (ha)=	10.37		
ID= 1 DT= 5.0 min	Total Imp(%)=	40.50	Dir. Conn.(%)=	33.20
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	4.20	6.17		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	3.12	3.12		
Length (m)=	262.93	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	53.00	52.54		
over (min)	5.00	15.00		
Storage Coeff. (min)=	4.18 (ii)	12.17 (ii)		
Unit Hyd. Tpeak (min)=	5.00	15.00		
Unit Hyd. peak (cms)=	0.24	0.09		
			TOTALS	
PEAK FLOW (cms)=	0.51	0.88	1.386 (iii)	
TIME TO PEAK (hrs)=	10.00	10.00	10.00	
RUNOFF VOLUME (mm)=	210.50	150.29	170.28	
TOTAL RAINFALL (mm)=	212.00	212.00	212.00	
RUNOFF COEFFICIENT =	0.99	0.71	0.80	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1439)				
1 + 2 = 3				
ID1= 1 (1429):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (1430):	13.37	1.786	10.00	170.10
	10.37	1.386	10.00	170.28
ID = 3 (1439):	23.74	3.171	10.00	170.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
-------	--

STANDHYD (1440)	Area (ha)= 7.23	
ID= 1 DT= 5.0 min	Total Imp(%)= 32.90	Dir. Conn.(%)= 26.80

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.38	4.85	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	2.89	2.89	
Length (m)=	219.54	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	50.79	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.84 (ii)	12.13 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.25	0.09	
			TOTALS
PEAK FLOW (cms)=	0.29	0.67	0.953 (iii)
TIME TO PEAK (hrs)=	10.00	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	148.97	165.46
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.70	0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1449)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1439):	23.74	3.171	10.00	170.18
+ ID2= 2 (1440):	7.23	0.953	10.00	165.46
=====				
ID = 3 (1449):	30.97	4.125	10.00	169.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (1450)	Area (ha)= 1.72	
ID= 1 DT= 5.0 min	Total Imp(%)= 36.80	Dir. Conn.(%)= 29.50

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.63	1.09	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	1.32	1.32	
Length (m)=	107.08	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	54.92	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.16 (ii)	13.32 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.27	0.08	
			TOTALS
PEAK FLOW (cms)=	0.07	0.16	0.237 (iii)
TIME TO PEAK (hrs)=	9.75	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	164.38	177.98
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.78	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1459)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1449):	30.97	4.125	10.00	169.08
+ ID2= 2 (1450):	1.72	0.237	10.00	177.98
=====				

ID = 3 (1459): 32.69 4.361 10.00 169.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0002)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0001):	1.52	0.120	9.08	174.40
+ ID2= 2 (1459):	32.69	4.361	10.00	169.54
=====				
ID = 3 (0002):	34.21	4.481	10.00	169.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (1509)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (1000):	44.18	5.597	10.00	156.52
+ ID2= 2 (0002):	34.21	4.481	10.00	169.76
=====				
ID = 3 (1509):	78.39	10.078	10.00	162.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (1500)	Area (ha)=	IMPERVIOUS	PERVIOUS (i)
ID= 1 DT= 5.0 min	Total Imp(%)= 22.10		Dir. Conn.(%)= 19.90
Surface Area (ha)=	3.95		13.94
Dep. Storage (mm)=	1.50		5.00
Average Slope (%)=	3.38		3.38
Length (m)=	345.35		40.00
Mannings n =	0.013		0.250
Max.Eff.Inten.(mm/hr)=	53.00		47.33
over (min)=	5.00		15.00
Storage Coeff. (min)=	4.81 (ii)		12.94 (ii)
Unit Hyd. Tpeak (min)=	5.00		15.00
Unit Hyd. peak (cms)=	0.22		0.08
TOTALS			
PEAK FLOW (cms)=	0.52		2.303 (iii)
TIME TO PEAK (hrs)=	10.00		10.00
RUNOFF VOLUME (mm)=	210.50		158.99
TOTAL RAINFALL (mm)=	212.00		212.00
RUNOFF COEFFICIENT =	0.99		0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1510)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (1500):	17.89	2.303	10.00	158.99
+ ID2= 2 (1509):	78.39	10.078	10.00	162.30
=====				
ID = 3 (1510):	96.28	12.381	10.00	161.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (1200)	Area (ha)=	Curve Number (CN)=
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.15	

Unit Hyd Qpeak (cms)= 1.026

PEAK FLOW (cms)= 0.539 (i)

TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 159.113
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.751

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
-----
| CALIB
| STANDHYD ( 1300) |
| ID= 1 DT= 5.0 min |
|-----|
Area (ha)= 8.16
Total Imp(%)= 31.50 Dir. Conn.(%)= 25.40

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.57 5.59
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 1.46 1.46
Length (m)= 233.24 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 53.00 53.56
over (min) 5.00 15.00
Storage Coeff. (min)= 4.89 (ii) 14.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

PEAK FLOW (cms)= 0.31 0.81
TIME TO PEAK (hrs)= 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 163.45
TOTAL RAINFALL (mm)= 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.77

*TOTALS*
1.111 (iii)
10.00
175.40
212.00
0.83
```

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
-----
| ADD HYD ( 1309) |
| 1 + 2 = 3 |
|-----|
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 ( 1200): 4.03 0.539 10.00 159.11
+ ID2= 2 ( 1300): 8.16 1.111 10.00 175.40
=====
ID = 3 ( 1309): 12.19 1.649 10.00 170.02
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| CALIB
| STANDHYD ( 1100) |
| ID= 1 DT= 5.0 min |
|-----|
Area (ha)= 26.23
Total Imp(%)= 25.20 Dir. Conn.(%)= 20.60

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.61 19.62
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 1.66 1.66
Length (m)= 418.17 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 53.00 52.04
over (min) 5.00 20.00
Storage Coeff. (min)= 6.67 (ii) 16.37 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.18 0.06

PEAK FLOW (cms)= 0.80 2.70
TIME TO PEAK (hrs)= 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 162.44
TOTAL RAINFALL (mm)= 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.77

*TOTALS*
3.492 (iii)
10.00
172.34
212.00
0.81
```

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (1600)	Area (ha)=	4.96		
ID= 1 DT= 5.0 min	Total Imp(%)=	41.10	Dir. Conn.(%)=	34.00

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.04	2.92	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.82	0.82	
Length (m)=	181.84	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	55.20	
over (min)	5.00	20.00	
Storage Coeff. (min)=	5.00 (ii)	16.70 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.21	0.06	
			TOTALS
PEAK FLOW (cms)=	0.25	0.43	0.674 (iii)
TIME TO PEAK (hrs)=	10.00	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	164.55	180.17
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.78	0.85

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1609)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	26.23	3.492	10.00	172.34
+ ID2= 2 (1600):	4.96	0.674	10.00	180.17
ID = 3 (1609):	31.19	4.166	10.00	173.59
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

ADD HYD (1610)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1309):	12.19	1.649	10.00	170.02
+ ID2= 2 (1609):	31.19	4.166	10.00	173.59
ID = 3 (1610):	43.38	5.816	10.00	172.58
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

ADD HYD (1611)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1510):	96.28	12.381	10.00	161.69
+ ID2= 2 (1610):	43.38	5.816	10.00	172.58
ID = 3 (1611):	139.66	18.197	10.00	165.07
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

CALIB				
STANDHYD (2100)	Area (ha)=	26.53		
ID= 1 DT= 5.0 min	Total Imp(%)=	36.70	Dir. Conn.(%)=	30.70
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	9.74	16.79		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	0.58	0.58		
Length (m)=	420.56	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	53.00	50.86		
over (min)	10.00	25.00		
Storage Coeff. (min)=	9.18 (ii)	22.59 (ii)		

Unit Hyd. Tpeak (min)=	10.00	25.00	
Unit Hyd. peak (cms)=	0.12	0.05	
			TOTALS
PEAK FLOW (cms)=	1.20	2.14	3.292 (iii)
TIME TO PEAK (hrs)=	10.00	10.17	10.00
RUNOFF VOLUME (mm)=	210.50	149.13	167.97
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.70	0.79

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (2200) ID= 1 DT= 5.0 min	Area (ha)= 33.03 Total Imp(%)= 38.00	Dir. Conn.(%)= 32.30	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	12.55	20.48	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.53	0.53	
Length (m)=	469.25	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	52.54	
over (min)=	10.00	25.00	
Storage Coeff. (min)=	10.07 (ii)	23.67 (ii)	
Unit Hyd. Tpeak (min)=	10.00	25.00	
Unit Hyd. peak (cms)=	0.11	0.05	
		TOTALS	
PEAK FLOW (cms)=	1.57	2.68	4.194 (iii)
TIME TO PEAK (hrs)=	10.00	10.17	10.00
RUNOFF VOLUME (mm)=	210.50	157.80	174.82
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.74	0.82

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2209) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2100):	26.53	3.292	10.00	167.97
+ ID2= 2 (2200):	33.03	4.194	10.00	174.82
=====				
ID = 3 (2209):	59.56	7.486	10.00	171.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (2300) ID= 1 DT= 5.0 min	Area (ha)= 6.31 Total Imp(%)= 40.60	Dir. Conn.(%)= 33.50	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.56	3.75	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.67	0.67	
Length (m)=	205.10	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	54.06	
over (min)=	5.00	20.00	
Storage Coeff. (min)=	5.71 (ii)	18.25 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.20	0.06	
		TOTALS	
PEAK FLOW (cms)=	0.31	0.53	0.839 (iii)
TIME TO PEAK (hrs)=	10.00	10.08	10.00
RUNOFF VOLUME (mm)=	210.50	158.84	176.15
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.83

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2309)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2209):	59.56	7.486	10.00	171.77
+ ID2= 2 (2300):	6.31	0.839	10.00	176.15
=====				
ID = 3 (2309):	65.87	8.324	10.00	172.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (2410)		Area (ha)= 23.41			
ID= 1 DT= 5.0 min		Total Imp(%)= 36.00		Dir. Conn.(%)= 30.50	

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	8.43		14.98	
Dep. Storage	(mm)=	1.50		5.00	
Average Slope	(%)=	0.56		0.56	
Length	(m)=	395.05		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		53.00		52.21	
over (min)		10.00		25.00	
Storage Coeff. (min)=		8.94	(ii)	22.35	(ii)
Unit Hyd. Tpeak (min)=		10.00		25.00	
Unit Hyd. peak (cms)=		0.12		0.05	
PEAK FLOW	(cms)=	1.05		1.97	*TOTALS*
TIME TO PEAK	(hrs)=	10.00		10.17	2.984 (iii)
RUNOFF VOLUME	(mm)=	210.50		157.57	10.00
TOTAL RAINFALL	(mm)=	212.00		212.00	173.71
RUNOFF COEFFICIENT	=	0.99		0.74	212.00
					0.82

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2419)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2309):	65.87	8.324	10.00	172.19
+ ID2= 2 (2410):	23.41	2.984	10.00	173.71
=====				
ID = 3 (2419):	89.28	11.309	10.00	172.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0003)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1611):	139.66	18.197	10.00	165.07
+ ID2= 2 (2419):	89.28	11.309	10.00	172.59
=====				
ID = 3 (0003):	228.94	29.506	10.00	168.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (2420)				
ID= 1 DT= 5.0 min				
Area (ha)=	6.14			
Total Imp(%)=	33.80	Dir. Conn.(%)=	27.50	
=====				
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	2.08	4.06		

Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	3.35	3.35	
Length	(m)=	202.32	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		53.00	53.89	
over (min)		5.00	15.00	
Storage Coeff. (min)=		3.50 (ii)	11.24 (ii)	
Unit Hyd. Tpeak (min)=		5.00	15.00	
Unit Hyd. peak (cms)=		0.26	0.09	
				TOTALS
PEAK FLOW (cms)=		0.25	0.60	0.848 (iii)
TIME TO PEAK (hrs)=		9.92	10.00	10.00
RUNOFF VOLUME (mm)=		210.50	163.67	176.55
TOTAL RAINFALL (mm)=		212.00	212.00	212.00
RUNOFF COEFFICIENT =		0.99	0.77	0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 80.7 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2429)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (2420):	6.14	0.848	10.00	176.55
+ ID2= 2 (0003):	228.94	29.506	10.00	168.00
=====				
ID = 3 (2429):	235.08	30.353	10.00	168.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (2430)	Area (ha)=	IMPERVIOUS	PERVIOUS (i)
ID= 1 DT= 5.0 min	Total Imp(%)= 31.50		
			Dir. Conn.(%)= 25.70
Surface Area (ha)=	3.35		7.27
Dep. Storage (mm)=	1.50		5.00
Average Slope (%)=	2.02		2.02
Length (m)=	266.08		40.00
Mannings n =	0.013		0.250
Max.Eff.Inten.(mm/hr)=	53.00		50.44
over (min)	5.00		15.00
Storage Coeff. (min)=	4.80 (ii)		14.05 (ii)
Unit Hyd. Tpeak (min)=	5.00		15.00
Unit Hyd. peak (cms)=	0.22		0.08
			TOTALS
PEAK FLOW (cms)=	0.40		1.387 (iii)
TIME TO PEAK (hrs)=	10.00		10.00
RUNOFF VOLUME (mm)=	210.50		164.58
TOTAL RAINFALL (mm)=	212.00		212.00
RUNOFF COEFFICIENT =	0.99		0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 74.1 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2439)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (2429):	235.08	30.353	10.00	168.23
+ ID2= 2 (2430):	10.62	1.387	10.00	164.58
=====				
ID = 3 (2439):	245.70	31.740	10.00	168.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (2500)	Area (ha)=	40.64		
ID= 1 DT= 5.0 min	Total Imp(%)=	44.70	Dir. Conn.(%)=	40.10

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	18.17	22.47	
Dep. Storage	(mm)=	1.50	5.00	
Average slope	(%)=	2.04	2.04	
Length	(m)=	520.51	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		53.00	50.36	
over (min)		5.00	20.00	
Storage Coeff. (min)=		7.15 (ii)	16.39 (ii)	
Unit Hyd. Tpeak (min)=		5.00	20.00	
Unit Hyd. peak (cms)=		0.17	0.06	
				TOTALS
PEAK FLOW (cms)=		2.40	2.97	5.364 (iii)
TIME TO PEAK (hrs)=		10.00	10.08	10.00
RUNOFF VOLUME (mm)=		210.50	148.64	173.45
TOTAL RAINFALL (mm)=		212.00	212.00	212.00
RUNOFF COEFFICIENT =		0.99	0.70	0.82

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2509)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2439):	245.70	31.740	10.00	168.07
+ ID2= 2 (2500):	40.64	5.364	10.00	173.45
=====				
ID = 3 (2509):	286.34	37.104	10.00	168.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (3000)	Area (ha)=	24.81		
ID= 1 DT= 5.0 min	Total Imp(%)=	26.40	Dir. Conn.(%)=	22.90

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	6.55	18.26	
Dep. Storage	(mm)=	1.50	5.00	
Average slope	(%)=	1.94	1.94	
Length	(m)=	406.69	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		53.00	48.39	
over (min)		5.00	20.00	
Storage Coeff. (min)=		6.26 (ii)	15.79 (ii)	
Unit Hyd. Tpeak (min)=		5.00	20.00	
Unit Hyd. peak (cms)=		0.19	0.07	
				TOTALS
PEAK FLOW (cms)=		0.84	2.32	3.159 (iii)
TIME TO PEAK (hrs)=		10.00	10.08	10.00
RUNOFF VOLUME (mm)=		210.50	147.08	161.60
TOTAL RAINFALL (mm)=		212.00	212.00	212.00
RUNOFF COEFFICIENT =		0.99	0.69	0.76

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3009)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2509):	286.34	37.104	10.00	168.83
+ ID2= 2 (3000):	24.81	3.159	10.00	161.60
=====				
ID = 3 (3009):	311.15	40.263	10.00	168.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (3100)
ID= 1 DT= 5.0 min

Area (ha)= 8.84
Total Imp(%)= 48.20 Dir. Conn.(%)= 44.10

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.26	4.58
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	3.25	3.25
Length (m)=	242.76	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	53.00	51.95
over (min)	5.00	15.00
Storage Coeff. (min)=	3.94 (ii)	11.87 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.24	0.09
PEAK FLOW (cms)=	0.57	0.65
TIME TO PEAK (hrs)=	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	157.30
TOTAL RAINFALL (mm)=	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.74

TOTALS
1.221 (iii)

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3109)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (3009):	311.15	40.263	10.00	168.26
+ ID2= 2 (3100):	8.84	1.221	10.00	180.76
ID = 3 (3109):	319.99	41.485	10.00	168.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (3200)
ID= 1 DT= 5.0 min

Area (ha)= 18.79
Total Imp(%)= 73.90 Dir. Conn.(%)= 73.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	13.89	4.90
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.39	2.39
Length (m)=	353.93	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	53.00	50.56
over (min)	5.00	15.00
Storage Coeff. (min)=	5.41 (ii)	14.20 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.20	0.08
PEAK FLOW (cms)=	2.02	0.67
TIME TO PEAK (hrs)=	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	161.41
TOTAL RAINFALL (mm)=	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.76

TOTALS
2.688 (iii)

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3209)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
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              (ha)      (cms)      (hrs)      (mm)
ID1= 1 ( 3109):  319.99  41.485    10.00    168.60
+ ID2= 2 ( 3200):   18.79   2.688    10.00    197.25
=====
ID = 3 ( 3209):  338.78  44.173    10.00    170.19
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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
| CALIB
| STANDHYD ( 3300) |
| ID= 1 DT= 5.0 min |
-----
Area      (ha)= 13.67
Total Imp(%)= 76.60   Dir. Conn.(%)= 76.40

              IMPERVIOUS      PERVIOUS (i)
Surface Area  (ha)= 10.47      3.20
Dep. Storage  (mm)= 1.50      5.00
Average Slope (%)= 2.99      2.99
Length        (m)= 301.88     40.00
Mannings n    = 0.013        0.250

Max.Eff.Inten.(mm/hr)= 53.00      48.05
over (min)      5.00      15.00
Storage Coeff. (min)= 4.60 (ii)  12.99 (ii)
Unit Hyd. Tpeak (min)= 5.00      15.00
Unit Hyd. peak (cms)= 0.23      0.08

PEAK FLOW      (cms)= 1.54      0.42      *TOTALS*
TIME TO PEAK   (hrs)= 10.00     10.00      1.954 (iii)
RUNOFF VOLUME   (mm)= 210.50    154.38      10.00
TOTAL RAINFALL  (mm)= 212.00    212.00      197.26
RUNOFF COEFFICIENT = 0.99      0.73      212.00
                                           0.93

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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-----
| ADD HYD ( 3309) |
| 1 + 2 = 3 |
-----
              AREA      QPEAK      TPEAK      R.V.
              (ha)      (cms)      (hrs)      (mm)
ID1= 1 ( 3209):  338.78  44.173    10.00    170.19
+ ID2= 2 ( 3300):   13.67   1.954    10.00    197.26
=====
ID = 3 ( 3309):  352.45  46.127    10.00    171.24
-----

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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
| CALIB
| STANDHYD ( 3400) |
| ID= 1 DT= 5.0 min |
-----
Area      (ha)= 24.09
Total Imp(%)= 33.70   Dir. Conn.(%)= 30.00

              IMPERVIOUS      PERVIOUS (i)
Surface Area  (ha)= 8.12      15.97
Dep. Storage  (mm)= 1.50      5.00
Average Slope (%)= 3.13      3.13
Length        (m)= 400.75     40.00
Mannings n    = 0.013        0.250

Max.Eff.Inten.(mm/hr)= 53.00      50.66
over (min)      5.00      15.00
Storage Coeff. (min)= 5.38 (ii)  13.48 (ii)
Unit Hyd. Tpeak (min)= 5.00      15.00
Unit Hyd. peak (cms)= 0.21      0.08

PEAK FLOW      (cms)= 1.06      2.19      *TOTALS*
TIME TO PEAK   (hrs)= 10.00     10.00      3.250 (iii)
RUNOFF VOLUME   (mm)= 210.50    156.37      10.00
TOTAL RAINFALL  (mm)= 212.00    212.00      172.61
RUNOFF COEFFICIENT = 0.99      0.74      212.00
                                           0.81

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- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-----
| ADD HYD ( 3409) |
| 1 + 2 = 3 |
-----
ID1= 1 ( 3309): 352.45 46.127 10.00 171.24
+ ID2= 2 ( 3400): 24.09 3.250 10.00 172.61
=====
ID = 3 ( 3409): 376.54 49.377 10.00 171.33

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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-----
| CALIB |
| NASHYD ( 3500) |
| ID= 1 DT= 2.0 min |
-----
Area (ha)= 48.32 Curve Number (CN)= 66.6
Ia (mm)= 5.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.25

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NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

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----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.033 6.00 3.033 13.00 6.033 23.00 9.03 53.00
0.067 6.00 3.067 13.00 6.067 23.00 9.07 53.00
0.100 6.00 3.100 13.00 6.100 23.00 9.10 53.00
0.133 6.00 3.133 13.00 6.133 23.00 9.13 53.00
0.167 6.00 3.167 13.00 6.167 23.00 9.17 53.00
0.200 6.00 3.200 13.00 6.200 23.00 9.20 53.00
0.233 6.00 3.233 13.00 6.233 23.00 9.23 53.00
0.267 6.00 3.267 13.00 6.267 23.00 9.27 53.00
0.300 6.00 3.300 13.00 6.300 23.00 9.30 53.00
0.333 6.00 3.333 13.00 6.333 23.00 9.33 53.00
0.367 6.00 3.367 13.00 6.367 23.00 9.37 53.00
0.400 6.00 3.400 13.00 6.400 23.00 9.40 53.00
0.433 6.00 3.433 13.00 6.433 23.00 9.43 53.00
0.467 6.00 3.467 13.00 6.467 23.00 9.47 53.00
0.500 6.00 3.500 13.00 6.500 23.00 9.50 53.00
0.533 6.00 3.533 13.00 6.533 23.00 9.53 53.00
0.567 6.00 3.567 13.00 6.567 23.00 9.57 53.00
0.600 6.00 3.600 13.00 6.600 23.00 9.60 53.00
0.633 6.00 3.633 13.00 6.633 23.00 9.63 53.00
0.667 6.00 3.667 13.00 6.667 23.00 9.67 53.00
0.700 6.00 3.700 13.00 6.700 23.00 9.70 53.00
0.733 6.00 3.733 13.00 6.733 23.00 9.73 53.00
0.767 6.00 3.767 13.00 6.767 23.00 9.77 53.00
0.800 6.00 3.800 13.00 6.800 23.00 9.80 53.00
0.833 6.00 3.833 13.00 6.833 23.00 9.83 53.00
0.867 6.00 3.867 13.00 6.867 23.00 9.87 53.00
0.900 6.00 3.900 13.00 6.900 23.00 9.90 53.00
0.933 6.00 3.933 13.00 6.933 23.00 9.93 53.00
0.967 6.00 3.967 13.00 6.967 23.00 9.97 53.00
1.000 6.00 4.000 13.00 7.000 23.00 10.00 52.99
1.033 4.00 4.033 17.00 7.033 13.00 10.03 38.00
1.067 4.00 4.067 17.00 7.067 13.00 10.07 38.00
1.100 4.00 4.100 17.00 7.100 13.00 10.10 38.00
1.133 4.00 4.133 17.00 7.133 13.00 10.13 38.00
1.167 4.00 4.167 17.00 7.167 13.00 10.17 38.00
1.200 4.00 4.200 17.00 7.200 13.00 10.20 38.00
1.233 4.00 4.233 17.00 7.233 13.00 10.23 38.00
1.267 4.00 4.267 17.00 7.267 13.00 10.27 38.00
1.300 4.00 4.300 17.00 7.300 13.00 10.30 38.00
1.333 4.00 4.333 17.00 7.333 13.00 10.33 38.00
1.367 4.00 4.367 17.00 7.367 13.00 10.37 38.00
1.400 4.00 4.400 17.00 7.400 13.00 10.40 38.00
1.433 4.00 4.433 17.00 7.433 13.00 10.43 38.00
1.467 4.00 4.467 17.00 7.467 13.00 10.47 38.00
1.500 4.00 4.500 17.00 7.500 13.00 10.50 38.00
1.533 4.00 4.533 17.00 7.533 13.00 10.53 38.00
1.567 4.00 4.567 17.00 7.567 13.00 10.57 38.00
1.600 4.00 4.600 17.00 7.600 13.00 10.60 38.00
1.633 4.00 4.633 17.00 7.633 13.00 10.63 38.00
1.667 4.00 4.667 17.00 7.667 13.00 10.67 38.00
1.700 4.00 4.700 17.00 7.700 13.00 10.70 38.00
1.733 4.00 4.733 17.00 7.733 13.00 10.73 38.00
1.767 4.00 4.767 17.00 7.767 13.00 10.77 38.00
1.800 4.00 4.800 17.00 7.800 13.00 10.80 38.00
1.833 4.00 4.833 17.00 7.833 13.00 10.83 38.00
1.867 4.00 4.867 17.00 7.867 13.00 10.87 38.00
1.900 4.00 4.900 17.00 7.900 13.00 10.90 38.00
1.933 4.00 4.933 17.00 7.933 13.00 10.93 38.00
1.967 4.00 4.967 17.00 7.967 13.00 10.97 38.00

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2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Unit Hyd Qpeak (cms)= 7.382

PEAK FLOW (cms)= 5.427 (i)
TIME TO PEAK (hrs)= 10.033
RUNOFF VOLUME (mm)= 128.140
TOTAL RAINFALL (mm)= 211.999
RUNOFF COEFFICIENT = 0.604

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3520)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1	2 = 3				
ID1= 1 (3409):		376.54	49.377	10.00	171.33
+ ID2= 2 (3500):		48.32	5.427	10.03	128.14
=====		=====			
ID = 3 (3520):		424.86	54.784	10.00	166.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (4000)		Area (ha)=	11.35	
ID= 1 DT= 5.0 min		Total Imp(%)=	33.30	Dir. Conn.(%)= 33.30
		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	3.78	7.57	
Dep. Storage	(mm)=	1.50	5.00	
Average slope	(%)=	2.38	2.38	
Length	(m)=	275.08	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00

1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Max.Eff.Inten.(mm/hr)= 53.00 47.58
over (min) 5.00 15.00
Storage Coeff. (min)= 4.66 (ii) 13.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

TOTALS
PEAK FLOW (cms)= 0.56 0.97 1.528 (iii)
TIME TO PEAK (hrs)= 10.00 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 154.01 172.82
TOTAL RAINFALL (mm)= 212.00 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.73 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4009)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (3520):	424.86	54.784	10.00	166.42
+ ID2= 2 (4000):	11.35	1.528	10.00	172.82
=====				
ID = 3 (4009):	436.21	56.312	10.00	166.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)= 14.42		
STANDHYD (4100)	Total Imp(%)= 37.70	Dir. Conn.(%)= 35.50	
ID= 1 DT= 5.0 min			
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	5.44	8.98	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	3.20	3.20	
Length (m)=	310.05	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	49.53	
over (min)	5.00	15.00	
Storage Coeff. (min)=	4.58 (ii)	12.70 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.23	0.08	
			TOTALS
PEAK FLOW (cms)=	0.75	1.21	1.960 (iii)
TIME TO PEAK (hrs)=	10.00	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	155.53	175.04
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.73	0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4109)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (4009):	436.21	56.312	10.00	166.58
+ ID2= 2 (4100):	14.42	1.960	10.00	175.04
=====				
ID = 3 (4109):	450.63	58.272	10.00	166.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (4200)				
ID= 1 DT= 5.0 min				
Area (ha)=	1.06			
Total Imp(%)=	45.00	Dir. Conn.(%)=	38.30	
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.48	0.58		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	2.56	2.56		
Length (m)=	84.06	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	53.00	54.30		
over (min)=	5.00	15.00		
Storage Coeff. (min)=	2.24 (ii)	10.61 (ii)		
Unit Hyd. Tpeak (min)=	5.00	15.00		
Unit Hyd. peak (cms)=	0.30	0.09		
			TOTALS	
PEAK FLOW (cms)=	0.06	0.09	0.146 (iii)	
TIME TO PEAK (hrs)=	9.58	10.00	10.00	
RUNOFF VOLUME (mm)=	210.50	158.93	178.67	
TOTAL RAINFALL (mm)=	212.00	212.00	212.00	
RUNOFF COEFFICIENT =	0.99	0.75	0.84	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4209)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (4109):	450.63	58.272	10.00	166.85
+ ID2= 2 (4200):	1.06	0.146	10.00	178.67
=====				
ID = 3 (4209):	451.69	58.418	10.00	166.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (4300)				
ID= 1 DT= 5.0 min				
Area (ha)=	0.95			
Total Imp(%)=	45.00	Dir. Conn.(%)=	38.30	
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.43	0.52		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	1.63	1.63		
Length (m)=	79.58	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	53.00	54.30		
over (min)=	5.00	15.00		
Storage Coeff. (min)=	2.48 (ii)	12.06 (ii)		
Unit Hyd. Tpeak (min)=	5.00	15.00		
Unit Hyd. peak (cms)=	0.29	0.09		
			TOTALS	
PEAK FLOW (cms)=	0.05	0.08	0.131 (iii)	

TIME TO PEAK	(hrs)=	9.67	10.00	10.00
RUNOFF VOLUME	(mm)=	210.50	158.93	178.67
TOTAL RAINFALL	(mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT	=	0.99	0.75	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 78.1 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4309)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (4209):	451.69	58.418	10.00	166.88
+ ID2= 2 (4300):	0.95	0.131	10.00	178.67
=====				
ID = 3 (4309):	452.64	58.549	10.00	166.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (4400)		Area (ha)= 1.19	
ID= 1 DT= 5.0 min		Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.54	0.65	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	2.86	2.86	
Length (m)=	89.07	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	54.30	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.24 (ii)	10.34 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.30	0.09	
			TOTALS
PEAK FLOW (cms)=	0.07	0.10	0.164 (iii)
TIME TO PEAK (hrs)=	9.58	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	158.93	178.67
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 78.1 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4409)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (4309):	452.64	58.549	10.00	166.91
+ ID2= 2 (4400):	1.19	0.164	10.00	178.67
=====				
ID = 3 (4409):	453.83	58.713	10.00	166.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (5000)		Area (ha)= 15.67	
ID= 1 DT= 5.0 min		Total Imp(%)= 47.70	Dir. Conn.(%)= 43.60

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	7.47	8.20
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	3.10	3.10
Length (m)=	323.21	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	53.00	51.91

over (min)	5.00	15.00	
Storage Coeff. (min)=	4.74 (ii)	12.79 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.22	0.08	
			TOTALS
PEAK FLOW (cms)=	1.01	1.15	2.159 (iii)
TIME TO PEAK (hrs)=	10.00	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	157.27	180.48
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.74	0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (5009)				
1 + 2 = 3				
ID1= 1 (4409):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (5000):	453.83	58.713	10.00	166.94
	15.67	2.159	10.00	180.48
ID = 3 (5009):	469.50	60.873	10.00	167.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (6000) ID= 1 DT= 5.0 min	Area (ha)= 1.00 Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.45	0.55
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	0.88	0.88
Length (m)=	81.65	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	53.00	54.19
over (min)	5.00	15.00
Storage Coeff. (min)=	3.03 (ii)	14.57 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.27	0.08
		TOTALS
PEAK FLOW (cms)=	0.06	0.137 (iii)
TIME TO PEAK (hrs)=	9.75	10.00
RUNOFF VOLUME (mm)=	210.50	158.93
TOTAL RAINFALL (mm)=	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6009)				
1 + 2 = 3				
ID1= 1 (5009):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (6000):	469.50	60.873	10.00	167.39
	1.00	0.137	10.00	178.67
ID = 3 (6009):	470.50	61.009	10.00	167.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (6100) ID= 1 DT= 5.0 min	Area (ha)= 0.94 Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.42	0.52

Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	2.41	2.41	
Length	(m)=	79.16	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		53.00	54.30	
over (min)		5.00	15.00	
Storage Coeff. (min)=		2.20 (ii)	10.72 (ii)	
Unit Hyd. Tpeak (min)=		5.00	15.00	
Unit Hyd. peak (cms)=		0.30	0.09	
				TOTALS
PEAK FLOW (cms)=		0.05	0.08	0.130 (iii)
TIME TO PEAK (hrs)=		9.58	10.00	10.00
RUNOFF VOLUME (mm)=		210.50	158.93	178.67
TOTAL RAINFALL (mm)=		212.00	212.00	212.00
RUNOFF COEFFICIENT =		0.99	0.75	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6109)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6009):	470.50	61.009	10.00	167.41
+ ID2= 2 (6100):	0.94	0.130	10.00	178.67
ID = 3 (6109):	471.44	61.139	10.00	167.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6200)				
ID= 1 DT= 5.0 min	Area (ha)= 2.11			
	Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30		
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.95	1.16		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	0.75	0.75		
Length (m)=	118.60	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	53.00	54.19		
over (min)	5.00	20.00		
Storage Coeff. (min)=	3.98 (ii)	16.08 (ii)		
Unit Hyd. Tpeak (min)=	5.00	20.00		
Unit Hyd. peak (cms)=	0.24	0.06		
				TOTALS
PEAK FLOW (cms)=	0.12	0.17		0.285 (iii)
TIME TO PEAK (hrs)=	10.00	10.00		10.00
RUNOFF VOLUME (mm)=	210.50	158.93		178.67
TOTAL RAINFALL (mm)=	212.00	212.00		212.00
RUNOFF COEFFICIENT =	0.99	0.75		0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6209)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6109):	471.44	61.139	10.00	167.43
+ ID2= 2 (6200):	2.11	0.285	10.00	178.67
ID = 3 (6209):	473.55	61.425	10.00	167.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6300)	Area (ha)=	1.06		
ID= 1 DT= 5.0 min	Total Imp(%)=	47.60	Dir. Conn.(%)=	41.40

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.50	0.56	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.85	0.85	
Length (m)=	84.06	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	54.00	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.12 (ii)	14.79 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.27	0.08	
			TOTALS
PEAK FLOW (cms)=	0.06	0.08	0.145 (iii)
TIME TO PEAK (hrs)=	9.75	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	158.80	180.19
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6309)				
1 + 2 = 3				
ID1= 1 (6209):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (6300):	1.06	0.145	10.00	180.19
ID = 3 (6309):	474.61	61.570	10.00	167.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6400)	Area (ha)=	1.88		
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)=	38.30

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.85	1.03	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	1.92	1.92	
Length (m)=	111.95	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	54.30	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.90 (ii)	12.02 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.28	0.09	
			TOTALS
PEAK FLOW (cms)=	0.11	0.15	0.259 (iii)
TIME TO PEAK (hrs)=	9.75	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	158.93	178.67
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6412)				
1 + 2 = 3				
ID1= 1 (6309):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (6400):	1.88	0.259	10.00	178.67

=====

ID = 3 (6412):	476.49	61.829	10.00	167.56
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NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (7000) ID= 1 DT= 5.0 min	Area (ha)= 4.56 Total Imp(%)= 54.40	Dir. Conn.(%)= 49.40
--	--	----------------------

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.48	2.08	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	1.68	1.68	
Length (m)=	174.36	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	53.63	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.93 (ii)	13.48 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.24	0.08	
PEAK FLOW (cms)=	0.33	0.30	*TOTALS* 0.633 (iii)
TIME TO PEAK (hrs)=	10.00	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	158.47	184.17
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
-

ADD HYD (7012) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6412):	476.49	61.829	10.00	167.56
+ ID2= 2 (7000):	4.56	0.633	10.00	184.17
=====				
ID = 3 (7012):	481.05	62.462	10.00	167.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (8000) ID= 1 DT= 5.0 min	Area (ha)= 11.23 Total Imp(%)= 65.00	Dir. Conn.(%)= 63.80
--	---	----------------------

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	7.30	3.93	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.87	0.87	
Length (m)=	273.62	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	49.36	
over (min)	5.00	20.00	
Storage Coeff. (min)=	6.28 (ii)	18.30 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.19	0.06	
PEAK FLOW (cms)=	1.05	0.51	*TOTALS* 1.559 (iii)
TIME TO PEAK (hrs)=	10.00	10.08	10.00
RUNOFF VOLUME (mm)=	210.50	155.48	190.58
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.73	0.90

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
-
-

ADD HYD (8011)					
1 + 2 = 3					

		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (7012):	481.05	62.462	10.00	167.71
+	ID2= 2 (8000):	11.23	1.559	10.00	190.58
=====					
	ID = 3 (8011):	492.28	64.021	10.00	168.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

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**KIDD'S CREEK WATERSHED
POST-DEVELOPMENT OTTHYMO MODELING
RESULTS**

V V I SSSSS U U A L (v 6.2.2005)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSSS UUUUU A A LLLLL

000 TTTTT TTTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\vo2\voin.dat
Output filename: C:\Users\tarkell\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\7db9a057-94
Summary filename: C:\Users\tarkell\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\7db9a057-94

DATE: 02-25-2022 TIME: 08:32:03

USER:

COMMENTS: _____

** SIMULATION : Run 01 **

READ STORM	Filename: C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\eff68d23
Ptotal= 46.11 mm	Comments: B-scs2

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.20	0.46	6.20	0.92	12.20	9.18	18.20	0.92
0.40	0.46	6.40	0.92	12.40	5.74	18.40	0.92
0.60	0.46	6.60	0.92	12.60	4.13	18.60	0.92
0.80	0.46	6.80	0.92	12.80	3.90	18.80	0.92
1.00	0.46	7.00	0.92	13.00	2.75	19.00	0.92
1.20	0.46	7.20	0.92	13.20	2.30	19.20	0.69
1.40	0.46	7.40	0.92	13.40	2.30	19.40	0.69
1.60	0.46	7.60	0.92	13.60	2.30	19.60	0.69
1.80	0.46	7.80	0.92	13.80	2.30	19.80	0.69
2.00	0.46	8.00	0.92	14.00	2.30	20.00	0.69
2.20	0.46	8.20	1.38	14.20	1.38	20.20	0.69
2.40	0.46	8.40	1.38	14.40	1.38	20.40	0.69
2.60	0.46	8.60	1.38	14.60	1.38	20.60	0.69
2.80	0.46	8.80	1.38	14.80	1.38	20.80	0.69
3.00	0.46	9.00	1.38	15.00	1.38	21.00	0.69
3.20	0.46	9.20	1.38	15.20	1.38	21.20	0.46
3.40	0.46	9.40	1.38	15.40	1.38	21.40	0.46
3.60	0.46	9.60	1.38	15.60	1.38	21.60	0.46
3.80	0.46	9.80	1.38	15.80	1.38	21.80	0.46
4.00	0.46	10.00	1.38	16.00	1.38	22.00	0.46
4.20	0.92	10.20	2.52	16.20	0.92	22.20	0.46
4.40	0.92	10.40	2.52	16.40	0.92	22.40	0.46
4.60	0.92	10.60	2.52	16.60	0.92	22.60	0.46
4.80	0.92	10.80	2.52	16.80	0.92	22.80	0.46
5.00	0.92	11.00	2.52	17.00	0.92	23.00	0.46
5.20	0.92	11.20	3.44	17.20	0.92	23.20	0.46
5.40	0.92	11.40	5.05	17.40	0.92	23.40	0.46
5.60	0.92	11.60	11.47	17.60	0.92	23.60	0.46
5.80	0.92	11.80	25.20	17.80	0.92	23.80	0.46
6.00	0.92	12.00	52.80	18.00	0.92	24.00	0.46

CALIB NASHYD (1000)	Area (ha)= 44.18	Curve Number (CN)= 58.6
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|ID= 1 DT= 5.0 min | Ia (mm)= 1.50 # of Linear Res.(N)= 3.00
 ----- U.H. Tp(hrs)= 0.30

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Unit Hyd Qpeak (cms)= 5.625

PEAK FLOW (cms)= 0.696 (i)
 TIME TO PEAK (hrs)= 12.167
 RUNOFF VOLUME (mm)= 8.879
 TOTAL RAINFALL (mm)= 46.112
 RUNOFF COEFFICIENT = 0.193

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 CALIB
 STANDHYD (1410)
 ID= 1 DT= 5.0 min

Area (ha)= 1.92
 Total Imp(%)= 37.60 Dir. Conn.(%)= 30.10

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.72	1.20
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	1.77	1.77
Length (m)=	113.14	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46

4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	9.42
over (min)	5.00	25.00
Storage Coeff. (min)=	2.99 (ii)	21.83 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.28	0.05

PEAK FLOW (cms)=	0.08	0.02	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.25	0.094 (iii)
RUNOFF VOLUME (mm)=	44.61	8.68	12.00
TOTAL RAINFALL (mm)=	46.11	46.11	19.49
RUNOFF COEFFICIENT =	0.97	0.19	46.11
			0.42

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

DUHYD (0001)				
Inlet Cap.= 0.120				
#of Inlets= 1				
Total(cms)= 0.1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
TOTAL HYD.(ID= 1):	1.92	0.09	12.00	19.49
MAJOR SYS.(ID= 2):	0.00	0.00	0.00	0.00
MINOR SYS.(ID= 3):	1.92	0.09	12.00	19.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (1420)	Area (ha)= 12.97		
ID= 1 DT= 5.0 min	Total Imp(%)= 39.90	Dir. Conn.(%)= 33.20	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.18	7.79
Dep. Storage (mm)=	1.50	5.00
Average slope (%)=	0.60	0.60
Length (m)=	294.05	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69

1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 5.41
over (min) 5.00 40.00
Storage Coeff. (min)= 7.34 (ii) 39.88 (ii)
Unit Hyd. Tpeak (min)= 5.00 40.00
Unit Hyd. peak (cms)= 0.17 0.03

TOTALS

PEAK FLOW (cms)= 0.56 0.07 0.580 (iii)
TIME TO PEAK (hrs)= 12.00 12.58 12.00
RUNOFF VOLUME (mm)= 44.61 7.21 19.62
TOTAL RAINFALL (mm)= 46.11 46.11 46.11
RUNOFF COEFFICIENT = 0.97 0.16 0.43

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1429)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

*** W A R N I N G : HYDROGRAPH 0001 <ID= 1> IS DRY.

*** W A R N I N G : HYDROGRAPH 1429 = HYDROGRAPH 1420
 ID1= 1 (0001): 0.00 0.000 0.00 0.00
 + ID2= 2 (1420): 12.97 0.580 12.00 19.62
 =====
 ID = 3 (1429): 12.97 0.580 12.00 19.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (1430)	Area (ha)= 10.37
ID= 1 DT= 5.0 min	Total Imp(%)= 40.50 Dir. Conn.(%)= 33.20

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.20	6.17
Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	3.12	3.12
Length	(m)=	262.93	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46

4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 7.85
over (min) 5.00 25.00
Storage Coeff. (min)= 4.19 (ii) 21.28 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.24 0.05

TOTALS

PEAK FLOW (cms)= 0.49 0.08 0.532 (iii)
TIME TO PEAK (hrs)= 12.00 12.25 12.00
RUNOFF VOLUME (mm)= 44.61 7.28 19.67
TOTAL RAINFALL (mm)= 46.11 46.11 46.11
RUNOFF COEFFICIENT = 0.97 0.16 0.43

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1439)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1429):		12.97	0.580	12.00	19.62
+ ID2= 2 (1430):		10.37	0.532	12.00	19.67
=====					
ID = 3 (1439):		23.34	1.112	12.00	19.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)= 7.23	
STANDHYD (1440)	Total Imp(%)= 32.90	Dir. Conn.(%)= 26.80
ID= 1 DT= 5.0 min		

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.38	4.85
Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	2.89	2.89
Length	(m)=	219.54	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69

1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	7.39	
over (min)	5.00	25.00	
Storage Coeff. (min)=	3.85 (ii)	21.76 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.25	0.05	
			TOTALS
PEAK FLOW (cms)=	0.28	0.06	0.309 (iii)
TIME TO PEAK (hrs)=	12.00	12.33	12.00
RUNOFF VOLUME (mm)=	44.61	7.07	17.13
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.15	0.37

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1449)				
1 + 2 = 3				
ID1= 1 (1439):	23.34	1.112	12.00	19.65
+ ID2= 2 (1440):	7.23	0.309	12.00	17.13

ID = 3 (1449): 30.57 1.421 12.00 19.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0002)		OVERFLOW IS OFF			
IN= 2---> OUT= 1					
DT= 5.0 min					
		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	0.2300	0.4435
		0.1000	0.0442	0.5800	0.6310
		0.1600	0.1450	1.1000	0.7580
		0.2000	0.2795	1.5100	0.8440
		0.2100	0.3615	3.8100	0.9587
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (1449)		30.570	1.421	12.00	19.05
OUTFLOW: ID= 1 (0002)		30.570	0.185	13.00	19.05
		PEAK FLOW REDUCTION [Qout/Qin](%)= 13.02			
		TIME SHIFT OF PEAK FLOW (min)= 60.00			
		MAXIMUM STORAGE USED (ha.m.)= 0.2292			

CALIB					
STANDHYD (1450)					
ID= 1 DT= 5.0 min					
		Area (ha)=	1.72		
		Total Imp(%)=	36.80	Dir. Conn.(%)=	29.50
		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	0.63	1.09		
Dep. Storage	(mm)=	1.50	5.00		
Average slope	(%)=	1.32	1.32		
Length	(m)=	107.08	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46

3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	10.70	
over (min)	5.00	25.00	
Storage Coeff. (min)=	3.16 (ii)	22.71 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.27	0.05	
			TOTALS
PEAK FLOW (cms)=	0.07	0.02	0.084 (iii)
TIME TO PEAK (hrs)=	12.00	12.33	12.00
RUNOFF VOLUME (mm)=	44.61	9.82	20.07
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.21	0.44

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.8 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1459)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1450):	1.72	0.084	12.00	20.07
+ ID2= 2 (0002):	30.57	0.185	13.00	19.05
ID = 3 (1459):	32.29	0.244	12.00	19.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0003)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0001):	1.92	0.094	12.00	19.49
+ ID2= 2 (1459):	32.29	0.244	12.00	19.10
ID = 3 (0003):	34.21	0.338	12.00	19.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (1509)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1000):	44.18	0.696	12.17	8.88
+ ID2= 2 (0003):	34.21	0.338	12.00	19.12

=====

ID = 3 (1509): 78.39 0.935 12.17 13.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (1500)	Area (ha)= 17.89		
ID= 1 DT= 5.0 min	Total Imp(%)= 22.10	Dir. Conn.(%)= 19.90	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.95	13.94
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	3.38	3.38
Length (m)=	345.35	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46

5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 6.53
over (min) 5.00 25.00
Storage Coeff. (min)= 4.81 (ii) 22.77 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.22 0.05

PEAK FLOW (cms)= 0.50 0.15 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.33 0.576 (iii)
RUNOFF VOLUME (mm)= 44.61 6.65 12.00
TOTAL RAINFALL (mm)= 46.11 46.11 14.20
RUNOFF COEFFICIENT = 0.97 0.14 46.11
0.31

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1510)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (1500):	17.89	0.576	12.00	14.20
+ ID2= 2 (1509):	78.39	0.935	12.17	13.35
=====				
ID = 3 (1510):	96.28	1.430	12.00	13.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	4.03	Curve Number (CN)=	62.8
NASHYD (1200)	Ia (mm)=	5.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.15		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69

2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Unit Hyd Qpeak (cms)= 1.026

PEAK FLOW (cms)= 0.094 (i)
TIME TO PEAK (hrs)= 12.000
RUNOFF VOLUME (mm)= 8.772
TOTAL RAINFALL (mm)= 46.112
RUNOFF COEFFICIENT = 0.190

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (1300)	Area (ha)= 8.16		
ID= 1 DT= 5.0 min	Total Imp(%)= 31.50	Dir. Conn.(%)= 25.40	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.57	5.59
Dep. Storage	(mm)=	1.50	5.00
Average slope	(%)=	1.46	1.46
Length	(m)=	233.24	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92

0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	10.19
over (min)	5.00	25.00
Storage Coeff. (min)=	4.89 (ii)	24.23 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.22	0.05

TOTALS

PEAK FLOW (cms)=	0.29	0.09	0.337 (iii)
TIME TO PEAK (hrs)=	12.00	12.33	12.00
RUNOFF VOLUME (mm)=	44.61	9.59	18.49
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.21	0.40

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.8 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1309)				
1 + 2 = 3				
ID1= 1 (1200):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (1300):	4.03	0.094	12.00	8.77
	8.16	0.337	12.00	18.49
=====				
ID = 3 (1309):	12.19	0.431	12.00	15.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (1100)	Area (ha)=	26.23		
ID= 1 DT= 5.0 min	Total Imp(%)=	25.20	Dir. Conn.(%)=	20.60
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	6.61	19.62		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	1.66	1.66		
Length (m)=	418.17	40.00		
Mannings n =	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46

4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 9.67
over (min) 5.00 30.00
Storage Coeff. (min)= 6.68 (ii) 25.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.18 0.04

TOTALS

PEAK FLOW (cms)= 0.71 0.28 0.845 (iii)
TIME TO PEAK (hrs)= 12.00 12.33 12.00
RUNOFF VOLUME (mm)= 44.61 9.36 16.62
TOTAL RAINFALL (mm)= 46.11 46.11 46.11
RUNOFF COEFFICIENT = 0.97 0.20 0.36

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(1109)		OVERFLOW IS OFF			
IN= 2---> OUT= 1					
DT= 5.0 min					

		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	10.0000	0.4000
		0.8300	0.2553	0.0000	0.0000
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (1100)		26.230	0.845	12.00	16.62
OUTFLOW: ID= 1 (1109)		26.230	0.334	12.50	16.62
		PEAK FLOW REDUCTION [Qout/Qin](%)= 39.59			
		TIME SHIFT OF PEAK FLOW (min)= 30.00			
		MAXIMUM STORAGE USED (ha.m.)= 0.1029			

CALIB					
STANDHYD (1600)		Area (ha)= 4.96			
ID= 1 DT= 5.0 min		Total Imp(%)= 41.10		Dir. Conn.(%)= 34.00	

		IMPERVIOUS		PERVIOUS (i)	
Surface Area		(ha)= 2.04	2.92		
Dep. Storage		(mm)= 1.50	5.00		
Average Slope		(%)= 0.82	0.82		
Length		(m)= 181.84	40.00		
Mannings n		= 0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92

0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 9.37
over (min) 5.00 30.00
Storage Coeff. (min)= 5.01 (ii) 28.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.21 0.04

TOTALS

PEAK FLOW (cms)= 0.23 0.04 0.254 (iii)
TIME TO PEAK (hrs)= 12.00 12.42 12.00
RUNOFF VOLUME (mm)= 44.61 9.86 21.67
TOTAL RAINFALL (mm)= 46.11 46.11 46.11
RUNOFF COEFFICIENT = 0.97 0.21 0.47

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 62.8 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1609)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1109):		26.23	0.334	12.50	16.62
+ ID2= 2 (1600):		4.96	0.254	12.00	21.67
ID = 3 (1609):		31.19	0.485	12.00	17.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (1610)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1309):		12.19	0.431	12.00	15.28
+ ID2= 2 (1609):		31.19	0.485	12.00	17.42
ID = 3 (1610):		43.38	0.916	12.00	16.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (1611)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1510):		96.28	1.430	12.00	13.51
+ ID2= 2 (1610):		43.38	0.916	12.00	16.82
ID = 3 (1611):		139.66	2.347	12.00	14.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (2100)		Area (ha)=	26.53	
ID= 1 DT= 5.0 min		Total Imp(%)=	36.70	Dir. Conn.(%)= 30.70
		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	9.74	16.79	
Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	0.58	0.58	
Length	(m)=	420.56	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69

2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	5.24	
over (min)	10.00	45.00	
Storage Coeff. (min)=	9.20 (ii)	42.48 (ii)	
Unit Hyd. Tpeak (min)=	10.00	45.00	
Unit Hyd. peak (cms)=	0.12	0.03	
			TOTALS
PEAK FLOW (cms)=	0.91	0.13	0.949 (iii)
TIME TO PEAK (hrs)=	12.00	12.67	12.00
RUNOFF VOLUME (mm)=	44.61	7.10	18.61
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.15	0.40

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (2200)	Area (ha)= 33.03		
ID= 1 DT= 5.0 min	Total Imp(%)= 38.00	Dir. Conn.(%)= 32.30	

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	12.55		20.48
Dep. Storage (mm)=	1.50		5.00
Average slope (%)=	0.53		0.53
Length (m)=	469.25		40.00
Mannings n =	0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	6.29
over (min)	10.00	45.00
Storage Coeff. (min)=	10.09 (ii)	41.88 (ii)
Unit Hyd. Tpeak (min)=	10.00	45.00
Unit Hyd. peak (cms)=	0.11	0.03

PEAK FLOW (cms)=	1.15	0.20	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.67	1.214 (iii)
RUNOFF VOLUME (mm)=	44.61	8.46	20.14
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.18	0.44

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2209)				
1 + 2 = 3				
ID1= 1 (2100):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (2200):	26.53	0.949	12.00	18.61
	33.03	1.214	12.00	20.14
ID = 3 (2209):	59.56	2.163	12.00	19.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0004)	OVERFLOW IS OFF			
IN= 2---> OUT= 1				
DT= 5.0 min				
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	1.3400	1.6751
	0.1100	0.8187	1.6400	2.1218
	0.3300	1.4265	1.7500	2.1654
	0.7800	1.5869	20.0000	2.4000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (2209)	59.560	2.163	12.00	19.46
OUTFLOW: ID= 1 (0004)	59.560	0.106	16.25	19.43
PEAK FLOW REDUCTION [Qout/Qin](%)= 4.90				
TIME SHIFT OF PEAK FLOW (min)=255.00				
MAXIMUM STORAGE USED (ha.m.)= 0.7893				

CALIB				
STANDHYD (2300)	Area (ha)= 6.31			
ID= 1 DT= 5.0 min	Total Imp(%)= 40.60	Dir. Conn.(%)= 33.50		
	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)= 2.56	3.75		
Dep. Storage	(mm)= 1.50	5.00		
Average slope	(%)= 0.67	0.67		
Length	(m)= 205.10	40.00		
Mannings n	= 0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69

2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	7.26	
over (min)	5.00	35.00	
Storage Coeff. (min)=	5.72 (ii)	33.70 (ii)	
Unit Hyd. Tpeak (min)=	5.00	35.00	
Unit Hyd. peak (cms)=	0.20	0.03	
			TOTALS
PEAK FLOW (cms)=	0.29	0.04	0.305 (iii)
TIME TO PEAK (hrs)=	12.00	12.50	12.00
RUNOFF VOLUME (mm)=	44.61	8.67	20.71
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.19	0.45

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2309)				
1 + 2 = 3				
ID1= 1 (2300):	6.31	0.305	12.00	20.71
+ ID2= 2 (0004):	59.56	0.106	16.25	19.43
ID = 3 (2309):	65.87	0.353	12.00	19.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (2410)	Area (ha)=	23.41	
ID= 1 DT= 5.0 min	Total Imp(%)=	36.00	Dir. Conn.(%)= 30.50

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	8.43	14.98
Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	0.56	0.56
Length	(m)=	395.05	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46

5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	6.22	
over (min)	10.00	45.00	
Storage Coeff. (min)=	8.95 (ii)	40.36 (ii)	
Unit Hyd. Tpeak (min)=	10.00	45.00	
Unit Hyd. peak (cms)=	0.12	0.03	
			TOTALS
PEAK FLOW (cms)=	0.80	0.14	0.848 (iii)
TIME TO PEAK (hrs)=	12.00	12.67	12.00
RUNOFF VOLUME (mm)=	44.61	8.42	19.45
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.18	0.42

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2419)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2309):	65.87	0.353	12.00	19.55
+ ID2= 2 (2410):	23.41	0.848	12.00	19.45
=====				
ID = 3 (2419):	89.28	1.201	12.00	19.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0005)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1611):	139.66	2.347	12.00	14.54
+ ID2= 2 (2419):	89.28	1.201	12.00	19.52
=====				
ID = 3 (0005):	228.94	3.548	12.00	16.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (2420)	Area (ha)= 6.14		
ID= 1 DT= 5.0 min	Total Imp(%)= 33.80	Dir. Conn.(%)= 27.50	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.08	4.06	
Dep. Storage (mm)=	1.50	5.00	
Average slope (%)=	3.35	3.35	
Length (m)=	202.32	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69

1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 12.23
over (min) 5.00 20.00
Storage Coeff. (min)= 3.50 (ii) 17.52 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.26 0.06

TOTALS
PEAK FLOW (cms)= 0.24 0.08 0.295 (iii)
TIME TO PEAK (hrs)= 12.00 12.17 12.00
RUNOFF VOLUME (mm)= 44.61 9.65 19.26
TOTAL RAINFALL (mm)= 46.11 46.11 46.11
RUNOFF COEFFICIENT = 0.97 0.21 0.42

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2429)				
1 + 2 = 3				

ID1= 1 (2420):	6.14	0.295	12.00	19.26
+ ID2= 2 (0005):	228.94	3.548	12.00	16.48
=====				
ID = 3 (2429):	235.08	3.842	12.00	16.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (2430)
ID= 1 DT= 5.0 min

Area (ha)= 10.62
Total Imp(%)= 31.50 Dir. Conn.(%)= 25.70

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.35	7.27
Dep. Storage	(mm)=	1.50	5.00
Average slope	(%)=	2.02	2.02
Length	(m)=	266.08	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46

5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 6.33
over (min) 5.00 30.00
Storage Coeff. (min)= 4.80 (ii) 26.03 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.22 0.04

TOTALS

PEAK FLOW (cms)= 0.38 0.08 0.416 (iii)
TIME TO PEAK (hrs)= 12.00 12.42 12.00
RUNOFF VOLUME (mm)= 44.61 7.03 16.69
TOTAL RAINFALL (mm)= 46.11 46.11 46.11
RUNOFF COEFFICIENT = 0.97 0.15 0.36

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2439)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (2429):	235.08	3.842	12.00	16.55
+ ID2= 2 (2430):	10.62	0.416	12.00	16.69
=====				
ID = 3 (2439):	245.70	4.259	12.00	16.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0006)	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
IN= 2---> OUT= 1				
DT= 5.0 min				
	0.0000	0.0000	8.1100	0.4812
	1.8000	0.0289	12.7700	0.6017
	3.0000	0.1946	19.0500	0.7222
	3.3300	0.2777	27.4000	0.8427
	4.9500	0.3607	40.0000	0.9000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (2439)	245.700	4.259	12.00	16.56
OUTFLOW: ID= 1 (0006)	245.700	2.789	12.17	16.56

PEAK FLOW REDUCTION [Qout/Qin](%)= 65.50
TIME SHIFT OF PEAK FLOW (min)= 10.00
MAXIMUM STORAGE USED (ha.m.)= 0.1674

CALIB	Area (ha)= 40.64	
STANDHYD (2500)	Total Imp(%)= 44.70	Dir. Conn.(%)= 40.10
ID= 1 DT= 5.0 min		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	18.17	22.47
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.04	2.04
Length (m)=	520.51	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92

0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 6.31
 over (min) 5.00 30.00
 Storage Coeff. (min)= 7.17 (ii) 28.35 (ii)
 Unit Hyd. Tpeak (min)= 5.00 30.00
 Unit Hyd. peak (cms)= 0.17 0.04

TOTALS
 PEAK FLOW (cms)= 2.12 0.23 2.224 (iii)
 TIME TO PEAK (hrs)= 12.00 12.42 12.00
 RUNOFF VOLUME (mm)= 44.61 7.02 22.09
 TOTAL RAINFALL (mm)= 46.11 46.11 46.11
 RUNOFF COEFFICIENT = 0.97 0.15 0.48

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2509)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (2500):		40.64	2.224	12.00	22.09
+ ID2= 2 (0006):		245.70	2.789	12.17	16.56
=====		=====			
ID = 3 (2509):		286.34	4.653	12.00	17.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		Area	Imp	Dir. Conn.
STANDHYD (3000)		(ha)=	(%)=	(%)=
ID= 1 DT= 5.0 min		24.81	26.40	22.90

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.55	18.26
Dep. Storage	(mm)=	1.50	5.00
Average slope	(%)=	1.94	1.94
Length	(m)=	406.69	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46

4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 5.88
over (min) 5.00 30.00
Storage Coeff. (min)= 6.27 (ii) 28.40 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.19 0.04

TOTALS

PEAK FLOW (cms)= 0.76 0.17 0.839 (iii)
TIME TO PEAK (hrs)= 12.00 12.42 12.00
RUNOFF VOLUME (mm)= 44.61 6.78 15.44
TOTAL RAINFALL (mm)= 46.11 46.11 46.11
RUNOFF COEFFICIENT = 0.97 0.15 0.33

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 53.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3009)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (2509):		286.34	4.653	12.00	17.35
+ ID2= 2 (3000):		24.81	0.839	12.00	15.44
=====		=====			
ID = 3 (3009):		311.15	5.492	12.00	17.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)= 8.84
STANDHYD (3100)	Total Imp(%)= 48.20 Dir. Conn.(%)= 44.10
ID= 1 DT= 5.0 min	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.26	4.58
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	3.25	3.25
Length (m)=	242.76	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92

0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	8.73
over (min)	5.00	25.00
Storage Coeff. (min)=	3.94 (ii)	20.13 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.24	0.05

TOTALS	0.593 (iii)
PEAK FLOW (cms)=	0.55
TIME TO PEAK (hrs)=	12.00
RUNOFF VOLUME (mm)=	44.61
TOTAL RAINFALL (mm)=	46.11
RUNOFF COEFFICIENT =	0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3109)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (3009):	311.15	5.492	12.00	17.19	
+ ID2= 2 (3100):	8.84	0.593	12.00	24.35	
=====					
ID = 3 (3109):	319.99	6.084	12.00	17.39	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (3200)					
ID= 1 DT= 5.0 min		Area (ha)= 18.79			
		Total Imp(%)= 73.90	Dir. Conn.(%)= 73.00		

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	13.89	4.90
Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	2.39	2.39
Length	(m)=	353.93	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46

4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 9.18
over (min) 5.00 25.00
Storage Coeff. (min)= 5.42 (ii) 22.81 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.20 0.05

TOTALS

PEAK FLOW (cms)= 1.88 0.07 1.918 (iii)
TIME TO PEAK (hrs)= 12.00 12.33 12.00
RUNOFF VOLUME (mm)= 44.61 9.13 35.03
TOTAL RAINFALL (mm)= 46.11 46.11 46.11
RUNOFF COEFFICIENT = 0.97 0.20 0.76

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3209)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (3109):		319.99	6.084	12.00	17.39
+ ID2= 2 (3200):		18.79	1.918	12.00	35.03
=====					
ID = 3 (3209):		338.78	8.003	12.00	18.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (3300)			
ID= 1 DT= 5.0 min	Area (ha)= 13.67		
	Total Imp(%)= 76.60	Dir. Conn.(%)= 76.40	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.47	3.20
Dep. Storage (mm)=	1.50	5.00
Average slope (%)=	2.99	2.99
Length (m)=	301.88	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69

1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	7.59
over (min)	5.00	25.00
Storage Coeff. (min)=	4.61 (ii)	22.16 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.23	0.05

PEAK FLOW (cms)=	1.46	0.04	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.33	1.484 (iii)
RUNOFF VOLUME (mm)=	44.61	7.81	12.00
TOTAL RAINFALL (mm)=	46.11	46.11	35.93
RUNOFF COEFFICIENT =	0.97	0.17	46.11
			0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (3209):	338.78	8.003	12.00	18.37
+ ID2= 2 (3300):	13.67	1.484	12.00	35.93
=====				
ID = 3 (3309):	352.45	9.487	12.00	19.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (3400)	Area (ha)=	24.09		
ID= 1 DT= 5.0 min	Total Imp(%)=	33.70	Dir. Conn.(%)=	30.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	8.12	15.97
Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	3.13	3.13
Length	(m)=	400.75	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46

4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 8.34
 over (min) 5.00 25.00
 Storage Coeff. (min)= 5.39 (ii) 22.05 (ii)
 Unit Hyd. Tpeak (min)= 5.00 25.00
 Unit Hyd. peak (cms)= 0.21 0.05

 PEAK FLOW (cms)= 0.99 0.22 *TOTALS*
 TIME TO PEAK (hrs)= 12.00 12.33 1.111 (iii)
 RUNOFF VOLUME (mm)= 44.61 8.18 19.11
 TOTAL RAINFALL (mm)= 46.11 46.11 46.11
 RUNOFF COEFFICIENT = 0.97 0.18 0.41

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3409)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (3309):	352.45	9.487	12.00	19.05
+ ID2= 2 (3400):	24.09	1.111	12.00	19.11
=====				
ID = 3 (3409):	376.54	10.598	12.00	19.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (3500)				
ID= 1 DT= 5.0 min	Area	(ha)= 48.32	Curve Number (CN)= 43.8	
	Ia	(mm)= 5.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)=	0.25		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69

2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Unit Hyd Qpeak (cms)= 7.382

PEAK FLOW (cms)= 0.428 (i)
TIME TO PEAK (hrs)= 12.167
RUNOFF VOLUME (mm)= 4.602
TOTAL RAINFALL (mm)= 46.112
RUNOFF COEFFICIENT = 0.100

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3509)				
1 + 2 = 3				
ID1= 1 (3409):	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
+ ID2= 2 (3500):	48.32	0.428	12.17	4.60
=====				
ID = 3 (3509):	424.86	10.942	12.00	17.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(3519)		OVERFLOW IS OFF	
IN= 2---> OUT= 1			
DT= 5.0 min			
		OUTFLOW	STORAGE
		(cms)	(ha.m.)
		0.0000	0.0000
		1.1000	0.0016
		1.3500	0.0186
		1.5700	0.3486
		1.7700	1.3936
		1.9600	3.3840
		2.1200	6.5140
		OUTFLOW	STORAGE
		(cms)	(ha.m.)
		2.4000	11.7420
		3.7300	12.7680
		6.1500	13.8420
		9.4000	14.9640
		13.5000	16.1330
		20.0000	17.3570
		43.0000	18.6440

2.2800	10.7640	63.0000	19.3100
2.2900	11.2470	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (3509)	424.860	10.942	12.00	17.41
OUTFLOW: ID= 1 (3519)	424.860	1.820	13.25	17.41

PEAK FLOW REDUCTION [Qout/Qin](%)= 16.64
 TIME SHIFT OF PEAK FLOW (min)= 75.00
 MAXIMUM STORAGE USED (ha.m.)= 1.9199

CALIB STANDHYD (4000) ID= 1 DT= 5.0 min	Area (ha)= 11.35 Total Imp(%)= 33.30	Dir. Conn.(%)= 33.30
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	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.78	7.57
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.38	2.38
Length (m)=	275.08	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46

4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 7.45
 over (min) 5.00 25.00
 Storage Coeff. (min)= 4.67 (ii) 23.59 (ii)
 Unit Hyd. Tpeak (min)= 5.00 25.00
 Unit Hyd. peak (cms)= 0.22 0.05

 PEAK FLOW (cms)= 0.53 0.09 *TOTALS*
 TIME TO PEAK (hrs)= 12.00 12.33 0.577 (iii)
 RUNOFF VOLUME (mm)= 44.61 7.74 20.02
 TOTAL RAINFALL (mm)= 46.11 46.11 46.11
 RUNOFF COEFFICIENT = 0.97 0.17 0.43

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4009)				
1 + 2 = 3				
ID1= 1 (3519):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (4000):	11.35	0.577	12.00	20.02
ID = 3 (4009):	436.21	2.234	12.00	17.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (4100)	Area (ha)= 14.42		
ID= 1 DT= 5.0 min	Total Imp(%)= 37.70	Dir. Conn.(%)= 35.50	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.44	8.98
Dep. Storage (mm)=	1.50	5.00
Average slope (%)=	3.20	3.20
Length (m)=	310.05	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69

1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	8.01
over (min)	5.00	25.00
Storage Coeff. (min)=	4.59 (ii)	21.41 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.23	0.05

PEAK FLOW (cms)=	0.72	0.12	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.33	0.783 (iii)
RUNOFF VOLUME (mm)=	44.61	8.02	12.00
TOTAL RAINFALL (mm)=	46.11	46.11	21.01
RUNOFF COEFFICIENT =	0.97	0.17	46.11
			0.46

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (4009):	436.21	2.234	12.00	17.48
+ ID2= 2 (4100):	14.42	0.783	12.00	21.01
=====				
ID = 3 (4109):	450.63	3.017	12.00	17.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (4200) ID= 1 DT= 5.0 min	Area (ha)= 1.06 Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30
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	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.48	0.58
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.56	2.56
Length (m)=	84.06	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46

4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 9.45
 over (min) 5.00 20.00
 Storage Coeff. (min)= 2.24 (ii) 19.08 (ii)
 Unit Hyd. Tpeak (min)= 5.00 20.00
 Unit Hyd. peak (cms)= 0.30 0.06

 PEAK FLOW (cms)= 0.06 0.01 *TOTALS*
 TIME TO PEAK (hrs)= 12.00 12.25 0.066 (iii)
 RUNOFF VOLUME (mm)= 44.61 8.69 12.00
 TOTAL RAINFALL (mm)= 46.11 46.11 22.44
 RUNOFF COEFFICIENT = 0.97 0.19 46.11
 0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4209)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (4109):	450.63	3.017	12.00	17.59
+ ID2= 2 (4200):	1.06	0.066	12.00	22.44
=====				
ID = 3 (4209):	451.69	3.083	12.00	17.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (4300)	Area (ha)= 0.95		
ID= 1 DT= 5.0 min	Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.43	0.52
Dep. Storage (mm)=	1.50	5.00
Average slope (%)=	1.63	1.63
Length (m)=	79.58	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69

1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 9.45
over (min) 5.00 25.00
Storage Coeff. (min)= 2.48 (ii) 21.77 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

PEAK FLOW (cms)= 0.05 0.01
TIME TO PEAK (hrs)= 12.00 12.25
RUNOFF VOLUME (mm)= 44.61 8.69
TOTAL RAINFALL (mm)= 46.11 46.11
RUNOFF COEFFICIENT = 0.97 0.19

TOTALS

0.058 (iii)

12.00

22.43

46.11

0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4309)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (4209):	451.69	3.083	12.00	17.60
+ ID2= 2 (4300):	0.95	0.058	12.00	22.43

=====

ID = 3 (4309): 452.64 3.141 12.00 17.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (4400)	Area (ha)=	1.19		
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)=	38.30

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.54	0.65
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.86	2.86
Length (m)=	89.07	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46

5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 9.45
over (min) 5.00 20.00
Storage Coeff. (min)= 2.24 (ii) 18.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.30 0.06

PEAK FLOW (cms)= 0.07 0.01 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.25 0.074 (iii)
RUNOFF VOLUME (mm)= 44.61 8.69 12.00
TOTAL RAINFALL (mm)= 46.11 46.11 22.44
RUNOFF COEFFICIENT = 0.97 0.19 46.11
0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4409)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (4309):	452.64	3.141	12.00	17.61
+ ID2= 2 (4400):	1.19	0.074	12.00	22.44
ID = 3 (4409):	453.83	3.215	12.00	17.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)= 15.67	
STANDHYD (5000)	Total Imp(%)= 47.70	Dir. Conn.(%)= 43.60
ID= 1 DT= 5.0 min		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	7.47	8.20
Dep. Storage (mm)=	1.50	5.00
Average slope (%)=	3.10	3.10
Length (m)=	323.21	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69

1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 8.72
over (min) 5.00 25.00
Storage Coeff. (min)= 4.75 (ii) 21.17 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.22 0.05

PEAK FLOW (cms)= 0.95 0.12 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.25 1.019 (iii)
RUNOFF VOLUME (mm)= 44.61 8.36 24.16
TOTAL RAINFALL (mm)= 46.11 46.11 46.11
RUNOFF COEFFICIENT = 0.97 0.18 0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (5009)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (4409):	453.83	3.215	12.00	17.63
+ ID2= 2 (5000):	15.67	1.019	12.00	24.16
ID = 3 (5009):	469.50	4.234	12.00	17.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6000)
ID= 1 DT= 5.0 min

Area (ha)= 1.00
Total Imp(%)= 45.00 Dir. Conn.(%)= 38.30

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.45	0.55
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	0.88	0.88
Length (m)=	81.65	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46

5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	8.20
over (min)	5.00	30.00
Storage Coeff. (min)=	3.03 (ii)	27.59 (ii)
Unit Hyd. Tpeak (min)=	5.00	30.00
Unit Hyd. peak (cms)=	0.27	0.04

PEAK FLOW (cms)=	0.06	0.01	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.42	0.059 (iii)
RUNOFF VOLUME (mm)=	44.61	8.69	12.00
TOTAL RAINFALL (mm)=	46.11	46.11	22.43
RUNOFF COEFFICIENT =	0.97	0.19	46.11
			0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6009)				
1 + 2 = 3				
ID1= 1 (5009):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (6000):	469.50	4.234	12.00	17.84
	1.00	0.059	12.00	22.43
ID = 3 (6009):	470.50	4.293	12.00	17.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (6100)	Area (ha)=	0.94	
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)= 38.30

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.42	0.52
Dep. Storage (mm)=	1.50	5.00
Average slope (%)=	2.41	2.41
Length (m)=	79.16	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69

2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 9.45
over (min) 5.00 20.00
Storage Coeff. (min)= 2.20 (ii) 19.35 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.30 0.06

PEAK FLOW (cms)= 0.05 0.01 *TOTALS*
TIME TO PEAK (hrs)= 12.00 12.25 0.058 (iii)
RUNOFF VOLUME (mm)= 44.61 8.69 12.00
TOTAL RAINFALL (mm)= 46.11 46.11 22.44
RUNOFF COEFFICIENT = 0.97 0.19 46.11
0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6109)				
1 + 2 = 3				

ID1= 1 (6009):	470.50	4.293	12.00	17.85
+ ID2= 2 (6100):	0.94	0.058	12.00	22.44
=====				
ID = 3 (6109):	471.44	4.351	12.00	17.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| STANDHYD (6200) | Area (ha)= 2.11

|ID= 1 DT= 5.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 38.30

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.95	1.16
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	0.75	0.75
Length (m)=	118.60	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46

5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	7.29	
over (min)	5.00	35.00	
Storage Coeff. (min)=	3.98 (ii)	30.99 (ii)	
Unit Hyd. Tpeak (min)=	5.00	35.00	
Unit Hyd. peak (cms)=	0.24	0.03	
PEAK FLOW (cms)=	0.11	0.01	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.50	0.121 (iii)
RUNOFF VOLUME (mm)=	44.61	8.69	12.00
TOTAL RAINFALL (mm)=	46.11	46.11	22.44
RUNOFF COEFFICIENT =	0.97	0.19	46.11
			0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6209)				
1 + 2 = 3				
ID1= 1 (6109):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (6200):	2.11	0.121	12.00	17.86
ID = 3 (6209):	471.44	4.351	12.00	22.44
	2.11	0.121	12.00	22.44
	473.55	4.472	12.00	17.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (6300)	Area (ha)=	1.06	
ID= 1 DT= 5.0 min	Total Imp(%)=	47.60	Dir. Conn.(%)= 41.40
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.50	0.56	
Dep. Storage (mm)=	1.50	5.00	
Average slope (%)=	0.85	0.85	
Length (m)=	84.06	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69

2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 8.15
 over (min) 5.00 30.00
 Storage Coeff. (min)= 3.12 (ii) 28.00 (ii)
 Unit Hyd. Tpeak (min)= 5.00 30.00
 Unit Hyd. peak (cms)= 0.27 0.04

 PEAK FLOW (cms)= 0.06 0.01 *TOTALS*
 TIME TO PEAK (hrs)= 12.00 12.42 0.067 (iii)
 RUNOFF VOLUME (mm)= 44.61 8.66 23.53
 TOTAL RAINFALL (mm)= 46.11 46.11 46.11
 RUNOFF COEFFICIENT = 0.97 0.19 0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6309)				
1 + 2 = 3				

ID1= 1 (6209):	473.55	4.472	12.00	17.88
+ ID2= 2 (6300):	1.06	0.067	12.00	23.53
=====				
ID = 3 (6309):	474.61	4.538	12.00	17.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6400)				
ID= 1 DT= 5.0 min				

Area (ha)=	1.88			
Total Imp(%)=	45.00	Dir. Conn.(%)=	38.30	

Surface Area (ha)=	IMPERVIOUS 0.85	PERVIOUS (i)	1.03	

Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	1.92	1.92
Length	(m)=	111.95	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	9.45	
over (min)	5.00	25.00	
Storage Coeff. (min)=	2.90 (ii)	21.26 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.28	0.05	
			TOTALS
PEAK FLOW (cms)=	0.10	0.02	0.113 (iii)
TIME TO PEAK (hrs)=	12.00	12.25	12.00
RUNOFF VOLUME (mm)=	44.61	8.69	22.44
TOTAL RAINFALL (mm)=	46.11	46.11	46.11
RUNOFF COEFFICIENT =	0.97	0.19	0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6409)				
1	+	2	=	3
ID1= 1 (6309):		AREA (ha)	QPEAK (cms)	TPEAK (hrs)
+ ID2= 2 (6400):		1.88	0.113	12.00
				R.V. (mm)
				17.90
ID = 3 (6409):		476.49	4.652	12.00
				17.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (7000)	Area (ha)=	4.56	
ID= 1 DT= 5.0 min	Total Imp(%)=	54.40	Dir. Conn.(%)= 49.40
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.48	2.08	
Dep. Storage (mm)=	1.50	5.00	
Average slope (%)=	1.68	1.68	
Length (m)=	174.36	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69

2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)= 52.80 9.24
 over (min) 5.00 25.00
 Storage Coeff. (min)= 3.94 (ii) 23.22 (ii)
 Unit Hyd. Tpeak (min)= 5.00 25.00
 Unit Hyd. peak (cms)= 0.24 0.05

 PEAK FLOW (cms)= 0.32 0.03
 TIME TO PEAK (hrs)= 12.00 12.33
 RUNOFF VOLUME (mm)= 44.61 8.60
 TOTAL RAINFALL (mm)= 46.11 46.11
 RUNOFF COEFFICIENT = 0.97 0.19

TOTALS

0.337 (iii)

12.00

26.39

46.11

0.57

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 58.9 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (7009)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6409):	476.49	4.652	12.00	17.91
+ ID2= 2 (7000):	4.56	0.337	12.00	26.39
=====				
ID = 3 (7009):	481.05	4.989	12.00	17.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	13.26
STANDHYD (8000)	Total Imp(%)=	68.60	Dir. Conn.(%)= 64.20
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)= 9.10	4.16
Dep. Storage	(mm)= 1.50	5.00
Average slope	(%)= 0.87	0.87
Length	(m)= 297.32	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	0.46	6.083	0.92	12.083	9.18	18.08	0.92
0.167	0.46	6.167	0.92	12.167	9.18	18.17	0.92
0.250	0.46	6.250	0.92	12.250	7.12	18.25	0.92
0.333	0.46	6.333	0.92	12.333	5.74	18.33	0.92
0.417	0.46	6.417	0.92	12.417	5.42	18.42	0.92
0.500	0.46	6.500	0.92	12.500	4.13	18.50	0.92
0.583	0.46	6.583	0.92	12.583	4.13	18.58	0.92
0.667	0.46	6.667	0.92	12.667	3.95	18.67	0.92
0.750	0.46	6.750	0.92	12.750	3.90	18.75	0.92
0.833	0.46	6.833	0.92	12.833	3.44	18.83	0.92
0.917	0.46	6.917	0.92	12.917	2.75	18.92	0.92
1.000	0.46	7.000	0.92	13.000	2.75	19.00	0.92
1.083	0.46	7.083	0.92	13.083	2.30	19.08	0.69
1.167	0.46	7.167	0.92	13.167	2.30	19.17	0.69
1.250	0.46	7.250	0.92	13.250	2.30	19.25	0.69
1.333	0.46	7.333	0.92	13.333	2.30	19.33	0.69
1.417	0.46	7.417	0.92	13.417	2.30	19.42	0.69
1.500	0.46	7.500	0.92	13.500	2.30	19.50	0.69
1.583	0.46	7.583	0.92	13.583	2.30	19.58	0.69
1.667	0.46	7.667	0.92	13.667	2.30	19.67	0.69
1.750	0.46	7.750	0.92	13.750	2.30	19.75	0.69
1.833	0.46	7.833	0.92	13.833	2.30	19.83	0.69
1.917	0.46	7.917	0.92	13.917	2.30	19.92	0.69
2.000	0.46	8.000	0.92	14.000	2.30	20.00	0.69
2.083	0.46	8.083	1.38	14.083	1.38	20.08	0.69
2.167	0.46	8.167	1.38	14.167	1.38	20.17	0.69
2.250	0.46	8.250	1.38	14.250	1.38	20.25	0.69
2.333	0.46	8.333	1.38	14.333	1.38	20.33	0.69
2.417	0.46	8.417	1.38	14.417	1.38	20.42	0.69
2.500	0.46	8.500	1.38	14.500	1.38	20.50	0.69
2.583	0.46	8.583	1.38	14.583	1.38	20.58	0.69
2.667	0.46	8.667	1.38	14.667	1.38	20.67	0.69
2.750	0.46	8.750	1.38	14.750	1.38	20.75	0.69
2.833	0.46	8.833	1.38	14.833	1.38	20.83	0.69
2.917	0.46	8.917	1.38	14.917	1.38	20.92	0.69
3.000	0.46	9.000	1.38	15.000	1.38	21.00	0.69
3.083	0.46	9.083	1.38	15.083	1.38	21.08	0.46
3.167	0.46	9.167	1.38	15.167	1.38	21.17	0.46
3.250	0.46	9.250	1.38	15.250	1.38	21.25	0.46
3.333	0.46	9.333	1.38	15.333	1.38	21.33	0.46
3.417	0.46	9.417	1.38	15.417	1.38	21.42	0.46
3.500	0.46	9.500	1.38	15.500	1.38	21.50	0.46
3.583	0.46	9.583	1.38	15.583	1.38	21.58	0.46
3.667	0.46	9.667	1.38	15.667	1.38	21.67	0.46
3.750	0.46	9.750	1.38	15.750	1.38	21.75	0.46
3.833	0.46	9.833	1.38	15.833	1.38	21.83	0.46
3.917	0.46	9.917	1.38	15.917	1.38	21.92	0.46
4.000	0.46	10.000	1.38	16.000	1.38	22.00	0.46
4.083	0.92	10.083	2.52	16.083	0.92	22.08	0.46
4.167	0.92	10.167	2.52	16.167	0.92	22.17	0.46
4.250	0.92	10.250	2.52	16.250	0.92	22.25	0.46
4.333	0.92	10.333	2.52	16.333	0.92	22.33	0.46
4.417	0.92	10.417	2.52	16.417	0.92	22.42	0.46
4.500	0.92	10.500	2.52	16.500	0.92	22.50	0.46
4.583	0.92	10.583	2.52	16.583	0.92	22.58	0.46
4.667	0.92	10.667	2.52	16.667	0.92	22.67	0.46
4.750	0.92	10.750	2.52	16.750	0.92	22.75	0.46
4.833	0.92	10.833	2.52	16.833	0.92	22.83	0.46
4.917	0.92	10.917	2.52	16.917	0.92	22.92	0.46
5.000	0.92	11.000	2.52	17.000	0.92	23.00	0.46
5.083	0.92	11.083	3.44	17.083	0.92	23.08	0.46
5.167	0.92	11.167	3.44	17.167	0.92	23.17	0.46
5.250	0.92	11.250	4.41	17.250	0.92	23.25	0.46
5.333	0.92	11.333	5.05	17.333	0.92	23.33	0.46
5.417	0.92	11.417	6.33	17.417	0.92	23.42	0.46
5.500	0.92	11.500	11.47	17.500	0.92	23.50	0.46
5.583	0.92	11.583	11.47	17.583	0.92	23.58	0.46
5.667	0.92	11.667	22.45	17.667	0.92	23.67	0.46
5.750	0.92	11.750	25.20	17.750	0.92	23.75	0.46
5.833	0.92	11.833	36.24	17.833	0.92	23.83	0.46
5.917	0.92	11.917	52.80	17.917	0.92	23.92	0.46
6.000	0.92	12.000	52.80	18.000	0.92	24.00	0.46

Max.Eff.Inten.(mm/hr)=	52.80	8.47
over (min)	5.00	35.00
Storage Coeff. (min)=	6.61 (ii)	30.93 (ii)
Unit Hyd. Tpeak (min)=	5.00	35.00

Unit Hyd. peak (cms)=	0.18	0.04	
PEAK FLOW (cms)=	1.13	0.05	*TOTALS*
TIME TO PEAK (hrs)=	12.00	12.50	1.147 (iii)
RUNOFF VOLUME (mm)=	44.61	8.83	12.00
TOTAL RAINFALL (mm)=	46.11	46.11	31.80
RUNOFF COEFFICIENT =	0.97	0.19	46.11
			0.69

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (8009)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (7009):	481.05	4.989	12.00	17.99
+ ID2= 2 (8000):	13.26	1.147	12.00	31.80
=====				
ID = 3 (8009):	494.31	6.137	12.00	18.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

(v 6.2.2005)

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Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voim.dat
Output filename: C:\Users\tarkell\AppData\Local\Civica\vh5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\55ba5c4d-98
Summary filename: C:\Users\tarkell\AppData\Local\Civica\vh5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\55ba5c4d-98
```

COMMENTS: _____

ADD	[	1429+	1430]	1439	3	5.0	23.39	1.80	12.00	31.66	n/a	0.000
-----	---	-------	-------	------	---	-----	-------	------	-------	-------	-----	-------

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READ STORM                      12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD                1440  1  5.0    7.23    0.51 12.00   28.21 0.42    0.000
* [I%=26.8:S%= 2.89]
*
* ADD [ 1439+ 1440] 1449  3  5.0    30.62    2.31 12.00   30.85 n/a    0.000
*
** Reservoir
* OUTFLOW:                      0002  1  5.0    30.62    0.22 13.25   30.84 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD                1450  1  5.0    1.72    0.14 12.00   33.15 0.50    0.000
* [I%=29.5:S%= 1.32]
*
* ADD [ 1450+ 0002] 1459  3  5.0    32.34    0.33 12.00   30.96 n/a    0.000
*
* ADD [ 0001+ 1459] 0003  3  5.0    34.21    0.45 12.00   31.02 n/a    0.000
*
* ADD [ 1000+ 0003] 1509  3  5.0    78.39    1.72 12.17   23.35 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD                1500  1  5.0    17.89    0.98 12.00   24.10 0.36    0.000
* [I%=19.9:S%= 3.38]
*
* ADD [ 1500+ 1509] 1510  3  5.0    96.28    2.47 12.00   23.49 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB NASHYD                  1200  1  5.0     4.03    0.20 12.00   17.89 0.27    0.000
* [CN=62.8]
* [ N = 3.0:Tp 0.15]
*
READ STORM                      12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD                1300  1  5.0     8.16    0.57 12.00   31.00 0.46    0.000
* [I%=25.4:S%= 1.46]
*
* ADD [ 1200+ 1300] 1309  3  5.0    12.19    0.77 12.00   26.66 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD                1100  1  5.0    26.23    1.54 12.00   28.47 0.43    0.000
* [I%=20.6:S%= 1.66]
*
** Reservoir
* OUTFLOW:                      1109  1  5.0    26.23    0.63 12.42   28.47 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD                1600  1  5.0     4.96    0.41 12.00   35.25 0.53    0.000
* [I%=34.0:S%= 0.82]
*
* ADD [ 1109+ 1600] 1609  3  5.0    31.19    0.81 12.00   29.55 n/a    0.000
*
* ADD [ 1309+ 1609] 1610  3  5.0    43.38    1.58 12.00   28.74 n/a    0.000
*
* ADD [ 1510+ 1610] 1611  3  5.0   139.66    4.05 12.00   25.12 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9

```

```

*      remark: B-scs5
*
* CALIB STANDHYD      2100  1  5.0   26.53    1.52 12.00   30.22 0.45   0.000
* [I%=30.7:S%= 0.58]
*
*      READ STORM      12.0
*      [ Ptot= 66.81 mm ]
*      fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
*      remark: B-scs5
*
* CALIB STANDHYD      2200  1  5.0   33.03    1.97 12.00   32.77 0.49   0.000
* [I%=32.3:S%= 0.53]
*
* ADD [ 2100+ 2200]  2209  3  5.0   59.56    3.49 12.00   31.63 n/a   0.000
*
* ** Reservoir
* OUTFLOW:      0004  1  5.0   59.56    0.25 14.50   31.60 n/a   0.000
*
*      READ STORM      12.0
*      [ Ptot= 66.81 mm ]
*      fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
*      remark: B-scs5
*
* CALIB STANDHYD      2300  1  5.0    6.31    0.49 12.00   33.59 0.50   0.000
* [I%=33.5:S%= 0.67]
*
* ADD [ 2300+ 0004]  2309  3  5.0   65.87    0.57 12.00   31.79 n/a   0.000
*
*      READ STORM      12.0
*      [ Ptot= 66.81 mm ]
*      fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
*      remark: B-scs5
*
* CALIB STANDHYD      2410  1  5.0   23.41    1.40 12.00   31.85 0.48   0.000
* [I%=30.5:S%= 0.56]
*
* ADD [ 2309+ 2410]  2419  3  5.0   89.28    1.97 12.00   31.81 n/a   0.000
*
* ADD [ 1611+ 2419]  0005  3  5.0  228.94    6.02 12.00   27.73 n/a   0.000
*
*      READ STORM      12.0
*      [ Ptot= 66.81 mm ]
*      fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
*      remark: B-scs5
*
* CALIB STANDHYD      2420  1  5.0    6.14    0.51 12.00   32.03 0.48   0.000
* [I%=27.5:S%= 3.35]
*
* ADD [ 2420+ 0005]  2429  3  5.0  235.08    6.53 12.00   27.84 n/a   0.000
*
*      READ STORM      12.0
*      [ Ptot= 66.81 mm ]
*      fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
*      remark: B-scs5
*
* CALIB STANDHYD      2430  1  5.0   10.62    0.70 12.00   27.60 0.41   0.000
* [I%=25.7:S%= 2.02]
*
* ADD [ 2429+ 2430]  2439  3  5.0  245.70    7.23 12.00   27.83 n/a   0.000
*
* ** Reservoir
* OUTFLOW:      0006  1  5.0  245.70    5.24 12.17   27.83 n/a   0.000
*
*      READ STORM      12.0
*      [ Ptot= 66.81 mm ]
*      fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
*      remark: B-scs5
*
* CALIB STANDHYD      2500  1  5.0   40.64    3.50 12.00   34.90 0.52   0.000
* [I%=40.1:S%= 2.04]
*
* ADD [ 2500+ 0006]  2509  3  5.0  286.34    6.91 12.08   28.83 n/a   0.000
*
*      READ STORM      12.0
*      [ Ptot= 66.81 mm ]
*      fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
*      remark: B-scs5
*
* CALIB STANDHYD      3000  1  5.0   24.81    1.44 12.00   25.83 0.39   0.000
* [I%=22.9:S%= 1.94]
*
* ADD [ 2509+ 3000]  3009  3  5.0  311.15    8.24 12.00   28.59 n/a   0.000
*
*      READ STORM      12.0

```

```

[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      3100  1  5.0    8.84    0.95 12.00   38.34 0.57   0.000
[ I%=44.1:S%= 3.25]
*
* ADD [ 3009+ 3100]  3109  3  5.0   319.99    9.20 12.00   28.86 n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      3200  1  5.0   18.79    3.02 12.00   52.67 0.79   0.000
[ I%=73.0:S%= 2.39]
*
* ADD [ 3109+ 3200]  3209  3  5.0   338.78   12.21 12.00   30.18 n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      3300  1  5.0   13.67    2.29 12.00   53.69 0.80   0.000
[ I%=76.4:S%= 2.99]
*
* ADD [ 3209+ 3300]  3309  3  5.0   352.45   14.50 12.00   31.10 n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      3400  1  5.0   24.09    1.83 12.00   31.32 0.47   0.000
[ I%=30.0:S%= 3.13]
*
* ADD [ 3309+ 3400]  3409  3  5.0   376.54   16.34 12.00   31.11 n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB NASHYD        3500  1  5.0   48.32    0.93 12.17    9.84 0.15   0.000
[ CN=43.8
[ N = 3.0:Tp 0.25]
*
* ADD [ 3409+ 3500]  3509  3  5.0   424.86   17.10 12.00   28.69 n/a   0.000
*
** Reservoir
* OUTFLOW:            3519  1  5.0   424.86    1.99 14.17   28.70 n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      4000  1  5.0   11.35    0.93 12.00   32.40 0.49   0.000
[ I%=33.3:S%= 2.38]
*
* ADD [ 3519+ 4000]  4009  3  5.0   436.21    2.70 12.00   28.80 n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      4100  1  5.0   14.42    1.26 12.00   33.81 0.51   0.000
[ I%=35.5:S%= 3.20]
*
* ADD [ 4009+ 4100]  4109  3  5.0   450.63    3.96 12.00   28.96 n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      4200  1  5.0    1.06    0.11 12.00   35.89 0.54   0.000
[ I%=38.3:S%= 2.56]
*
* ADD [ 4109+ 4200]  4209  3  5.0   451.69    4.07 12.00   28.97 n/a   0.000
*
* READ STORM          12.0

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[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      4300  1  5.0    0.95    0.09 12.00  35.89 0.54   0.000
[ I%=38.3:S%= 1.63]
*
* ADD [  4209+  4300]  4309  3  5.0  452.64    4.16 12.00  28.99  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      4400  1  5.0    1.19    0.12 12.00  35.89 0.54   0.000
[ I%=38.3:S%= 2.86]
*
* ADD [  4309+  4400]  4409  3  5.0  453.83    4.28 12.00  29.01  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      5000  1  5.0   15.67    1.60 12.00  38.10 0.57   0.000
[ I%=43.6:S%= 3.10]
*
* ADD [  4409+  5000]  5009  3  5.0  469.50    5.88 12.00  29.31  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      6000  1  5.0    1.00    0.09 12.00  35.89 0.54   0.000
[ I%=38.3:S%= 0.88]
*
* ADD [  5009+  6000]  6009  3  5.0  470.50    5.98 12.00  29.32  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      6100  1  5.0    0.94    0.09 12.00  35.89 0.54   0.000
[ I%=38.3:S%= 2.41]
*
* ADD [  6009+  6100]  6109  3  5.0  471.44    6.07 12.00  29.34  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      6200  1  5.0    2.11    0.19 12.00  35.89 0.54   0.000
[ I%=38.3:S%= 0.75]
*
* ADD [  6109+  6200]  6209  3  5.0  473.55    6.26 12.00  29.37  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      6300  1  5.0    1.06    0.10 12.00  37.34 0.56   0.000
[ I%=41.4:S%= 0.85]
*
* ADD [  6209+  6300]  6309  3  5.0  474.61    6.36 12.00  29.38  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*
* CALIB STANDHYD      6400  1  5.0    1.88    0.18 12.00  35.89 0.54   0.000
[ I%=38.3:S%= 1.92]
*
* ADD [  6309+  6400]  6409  3  5.0  476.49    6.54 12.00  29.41  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 66.81 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
remark: B-scs5
*

```

```

* CALIB STANDHYD      7000  1  5.0    4.56    0.52 12.00  41.10 0.62    0.000
* [I%=49.4:S%= 1.68]
*
* ADD [  6409+  7000]  7009  3  5.0   481.05    7.06 12.00  29.52  n/a    0.000
*
* READ STORM          12.0
* [ Ptot= 66.81 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\56138542-ad35-4bb2-854a-9
* remark: B-scs5
*
* CALIB STANDHYD      8000  1  5.0    13.26    1.75 12.00  48.33 0.72    0.000
* [I%=64.2:S%= 0.87]
*
* ADD [  7009+  8000]  8009  3  5.0   494.31    8.82 12.00  30.03  n/a    0.000
*

```

(v 6.2.2005)

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```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voim.dat
Output filename: C:\Users\tarkell\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\5a56fcc4-bf
Summary filename: C:\Users\tarkell\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\5a56fcc4-bf
```

COMMENTS: _____

ADD	[	1429+	1430]	1439	3	5.0	23.45	2.40	12.00	40.37	n/a	0.000
-----	---	-------	-------	------	---	-----	-------	------	-------	-------	-----	-------

```

READ STORM                      12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD                1440  1  5.0    7.23    0.68 12.00   36.36 0.45    0.000
* [I%=26.8:S%= 2.89]
*
* ADD [ 1439+ 1440] 1449  3  5.0    30.68    3.08 12.00   39.42 n/a    0.000
*
** Reservoir
* OUTFLOW:                      0002  1  5.0    30.68    0.39 12.92   39.42 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD                1450  1  5.0    1.72    0.19 12.00   42.65 0.53    0.000
* [I%=29.5:S%= 1.32]
*
* ADD [ 1450+ 0002] 1459  3  5.0    32.40    0.42 12.83   39.59 n/a    0.000
*
* ADD [ 0001+ 1459] 0003  3  5.0    34.21    0.51 12.00   39.67 n/a    0.000
*
* ADD [ 1000+ 0003] 1509  3  5.0    78.39    2.36 12.17   30.93 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD                1500  1  5.0    17.89    1.36 12.00   31.53 0.39    0.000
* [I%=19.9:S%= 3.38]
*
* ADD [ 1500+ 1509] 1510  3  5.0    96.28    3.34 12.00   31.04 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB NASHYD                  1200  1  5.0     4.03    0.28 12.00   25.11 0.31    0.000
* [CN=62.8]
* [ N = 3.0:Tp 0.15]
*
READ STORM                      12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD                1300  1  5.0     8.16    0.74 12.00   40.18 0.50    0.000
* [I%=25.4:S%= 1.46]
*
* ADD [ 1200+ 1300] 1309  3  5.0    12.19    1.02 12.00   35.20 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD                1100  1  5.0    26.23    2.02 12.00   37.27 0.46    0.000
* [I%=20.6:S%= 1.66]
*
** Reservoir
* OUTFLOW:                      1109  1  5.0    26.23    0.94 12.42   37.27 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD                1600  1  5.0     4.96    0.54 12.00   45.04 0.56    0.000
* [I%=34.0:S%= 0.82]
*
* ADD [ 1109+ 1600] 1609  3  5.0    31.19    1.11 12.42   38.51 n/a    0.000
*
* ADD [ 1309+ 1609] 1610  3  5.0    43.38    2.08 12.00   37.58 n/a    0.000
*
* ADD [ 1510+ 1610] 1611  3  5.0   139.66    5.42 12.00   33.07 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2

```

```

remark: B-scs10
*
* CALIB STANDHYD      2100  1  5.0   26.53    2.11 12.00   38.68 0.48   0.000
* [I%=30.7:S%= 0.58]
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      2200  1  5.0   33.03    2.56 12.00   41.93 0.52   0.000
* [I%=32.3:S%= 0.53]
*
* ADD [ 2100+ 2200]  2209  3  5.0   59.56    4.67 12.00   40.48 n/a   0.000
*
** Reservoir
* OUTFLOW:            0004  1  5.0   59.56    0.47 13.83   40.45 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      2300  1  5.0    6.31    0.62 12.00   42.90 0.53   0.000
* [I%=33.5:S%= 0.67]
*
* ADD [ 2300+ 0004]  2309  3  5.0   65.87    0.72 12.00   40.69 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      2410  1  5.0   23.41    1.97 12.00   40.87 0.51   0.000
* [I%=30.5:S%= 0.56]
*
* ADD [ 2309+ 2410]  2419  3  5.0   89.28    2.69 12.00   40.74 n/a   0.000
*
* ADD [ 1611+ 2419]  0005  3  5.0  228.94    8.11 12.00   36.06 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      2420  1  5.0    6.14    0.66 12.00   41.36 0.51   0.000
* [I%=27.5:S%= 3.35]
*
* ADD [ 2420+ 0005]  2429  3  5.0  235.08    8.77 12.00   36.20 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      2430  1  5.0   10.62    0.90 12.00   35.65 0.44   0.000
* [I%=25.7:S%= 2.02]
*
* ADD [ 2429+ 2430]  2439  3  5.0  245.70    9.67 12.00   36.18 n/a   0.000
*
** Reservoir
* OUTFLOW:            0006  1  5.0  245.70    7.52 12.17   36.18 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      2500  1  5.0   40.64    4.49 12.00   44.05 0.55   0.000
* [I%=40.1:S%= 2.04]
*
* ADD [ 2500+ 0006]  2509  3  5.0  286.34   10.33 12.00   37.29 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      3000  1  5.0   24.81    1.86 12.00   33.55 0.42   0.000
* [I%=22.9:S%= 1.94]
*
* ADD [ 2509+ 3000]  3009  3  5.0  311.15   12.19 12.00   36.99 n/a   0.000
*
* READ STORM          12.0

```

```

[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD      3100  1  5.0    8.84    1.20 12.00  48.28 0.60   0.000
[ I%=44.1:S%= 3.25]
*
* ADD [ 3009+ 3100]  3109  3  5.0   319.99   13.39 12.00  37.31  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD      3200  1  5.0   18.79    3.73 12.00  64.71 0.80   0.000
[ I%=73.0:S%= 2.39]
*
* ADD [ 3109+ 3200]  3209  3  5.0   338.78   17.12 12.00  38.83  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD      3300  1  5.0   13.67    2.81 12.00  65.76 0.82   0.000
[ I%=76.4:S%= 2.99]
*
* ADD [ 3209+ 3300]  3309  3  5.0   352.45   19.94 12.00  39.87  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD      3400  1  5.0   24.09    2.48 12.00  40.23 0.50   0.000
[ I%=30.0:S%= 3.13]
*
* ADD [ 3309+ 3400]  3409  3  5.0   376.54   22.42 12.00  39.89  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB NASHYD        3500  1  5.0   48.32    1.35 12.17  14.21 0.18   0.000
[ CN=43.8
[ N = 3.0:Tp 0.25]
*
* ADD [ 3409+ 3500]  3509  3  5.0   424.86   23.53 12.00  36.97  n/a   0.000
*
** Reservoir
* OUTFLOW:            3519  1  5.0   424.86    2.09 14.83  36.97  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD      4000  1  5.0   11.35    1.18 12.00  41.38 0.51   0.000
[ I%=33.3:S%= 2.38]
*
* ADD [ 3519+ 4000]  4009  3  5.0   436.21    3.00 12.00  37.09  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD      4100  1  5.0   14.42    1.67 12.00  43.04 0.53   0.000
[ I%=35.5:S%= 3.20]
*
* ADD [ 4009+ 4100]  4109  3  5.0   450.63    4.67 12.00  37.28  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD      4200  1  5.0    1.06    0.14 12.00  45.53 0.57   0.000
[ I%=38.3:S%= 2.56]
*
* ADD [ 4109+ 4200]  4209  3  5.0   451.69    4.81 12.00  37.30  n/a   0.000
*
* READ STORM          12.0

```

```

[ Ptot= 80.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
remark: B-scs10
*
* CALIB STANDHYD      4300  1  5.0    0.95    0.12 12.00  45.53 0.57   0.000
* [I%=38.3:S%= 1.63]
*
* ADD [  4209+  4300]  4309  3  5.0  452.64    4.92 12.00  37.31  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      4400  1  5.0    1.19    0.15 12.00  45.53 0.57   0.000
* [I%=38.3:S%= 2.86]
*
* ADD [  4309+  4400]  4409  3  5.0  453.83    5.08 12.00  37.34  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      5000  1  5.0   15.67    2.09 12.00  47.99 0.60   0.000
* [I%=43.6:S%= 3.10]
*
* ADD [  4409+  5000]  5009  3  5.0  469.50    7.16 12.00  37.69  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      6000  1  5.0    1.00    0.12 12.00  45.53 0.57   0.000
* [I%=38.3:S%= 0.88]
*
* ADD [  5009+  6000]  6009  3  5.0  470.50    7.28 12.00  37.71  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      6100  1  5.0    0.94    0.12 12.00  45.53 0.57   0.000
* [I%=38.3:S%= 2.41]
*
* ADD [  6009+  6100]  6109  3  5.0  471.44    7.40 12.00  37.72  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      6200  1  5.0    2.11    0.24 12.00  45.53 0.57   0.000
* [I%=38.3:S%= 0.75]
*
* ADD [  6109+  6200]  6209  3  5.0  473.55    7.65 12.00  37.76  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      6300  1  5.0    1.06    0.13 12.00  47.18 0.59   0.000
* [I%=41.4:S%= 0.85]
*
* ADD [  6209+  6300]  6309  3  5.0  474.61    7.78 12.00  37.78  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*
* CALIB STANDHYD      6400  1  5.0    1.88    0.24 12.00  45.54 0.57   0.000
* [I%=38.3:S%= 1.92]
*
* ADD [  6309+  6400]  6409  3  5.0  476.49    8.01 12.00  37.81  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 80.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
* remark: B-scs10
*

```

```
* CALIB STANDHYD      7000  1  5.0    4.56    0.67 12.00  51.46 0.64   0.000
[I%=49.4:S%= 1.68]
*
* ADD [  6409+  7000]  7009  3  5.0   481.05    8.68 12.00  37.94  n/a   0.000
*
  READ STORM              12.0
  [ Ptot= 80.55 mm ]
  fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a72d3831-aeb5-45e6-a286-2
  remark: B-scs10
*
* CALIB STANDHYD      8000  1  5.0    13.26    2.19 12.00  59.72 0.74   0.000
[I%=64.2:S%= 0.87]
*
* ADD [  7009+  8000]  8009  3  5.0   494.31   10.87 12.00  38.52  n/a   0.000
*
  FINISH
=====
```

(v 6.2.2005)

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```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voim.dat
Output filename: C:\Users\tarkell\AppData\Local\Civica\vh5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\80a530b8-ca
Summary filename: C:\Users\tarkell\AppData\Local\Civica\vh5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\80a530b8-ca
```

COMMENTS: _____

ADD [1429+ 1430]	1439	3	5.0	23.50	2.80	12.00	50.41	n/a	0.000
-------------------	------	---	-----	-------	------	-------	-------	-----	-------

```

READ STORM                      12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD                1440  1  5.0    7.23    0.81 12.00  45.85 0.48    0.000
* [I%=26.8:S%= 2.89]
*
* ADD [ 1439+ 1440] 1449  3  5.0    30.73    3.60 12.00  49.34 n/a    0.000
*
** Reservoir
* OUTFLOW:                      0002  1  5.0    30.73    0.60 12.75  49.34 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD                1450  1  5.0    1.72    0.22 12.00  53.61 0.56    0.000
* [I%=29.5:S%= 1.32]
*
* ADD [ 1450+ 0002] 1459  3  5.0    32.45    0.63 12.75  49.56 n/a    0.000
*
* ADD [ 0001+ 1459] 0003  3  5.0    34.21    0.67 12.42  49.67 n/a    0.000
*
* ADD [ 1000+ 0003] 1509  3  5.0    78.39    3.13 12.17  39.89 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD                1500  1  5.0    17.89    1.65 12.00  40.28 0.42    0.000
* [I%=19.9:S%= 3.38]
*
* ADD [ 1500+ 1509] 1510  3  5.0    96.28    4.17 12.17  39.97 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB NASHYD                  1200  1  5.0     4.03    0.35 12.00  33.82 0.35    0.000
* [CN=62.8]
* [ N = 3.0:Tp 0.15]
*
READ STORM                      12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD                1300  1  5.0     8.16    0.94 12.00  50.82 0.53    0.000
* [I%=25.4:S%= 1.46]
*
* ADD [ 1200+ 1300] 1309  3  5.0    12.19    1.30 12.00  45.20 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD                1100  1  5.0    26.23    2.44 12.00  47.54 0.50    0.000
* [I%=20.6:S%= 1.66]
*
** Reservoir
* OUTFLOW:                      1109  1  5.0    26.23    1.76 12.25  47.54 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD                1600  1  5.0     4.96    0.62 12.00  56.27 0.59    0.000
* [I%=34.0:S%= 0.82]
*
* ADD [ 1109+ 1600] 1609  3  5.0    31.19    2.06 12.25  48.93 n/a    0.000
*
* ADD [ 1309+ 1609] 1610  3  5.0    43.38    2.89 12.17  47.88 n/a    0.000
*
* ADD [ 1510+ 1610] 1611  3  5.0   139.66    7.06 12.17  42.42 n/a    0.000
*
READ STORM                      12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a

```

```

remark: B-scs25
*
* CALIB STANDHYD      2100  1  5.0   26.53    2.52 12.00   48.47 0.51   0.000
* [I%=30.7:S%= 0.58]
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      2200  1  5.0   33.03    3.11 12.00   52.49 0.55   0.000
* [I%=32.3:S%= 0.53]
*
* ADD [ 2100+ 2200]  2209  3  5.0   59.56    5.62 12.00   50.70 n/a   0.000
*
** Reservoir
* OUTFLOW:            0004  1  5.0   59.56    1.16 12.92   50.67 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      2300  1  5.0    6.31    0.75 12.00   53.62 0.56   0.000
* [I%=33.5:S%= 0.67]
*
* ADD [ 2300+ 0004]  2309  3  5.0   65.87    1.27 12.92   50.95 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      2410  1  5.0   23.41    2.30 12.00   51.30 0.54   0.000
* [I%=30.5:S%= 0.56]
*
* ADD [ 2309+ 2410]  2419  3  5.0   89.28    3.21 12.00   51.04 n/a   0.000
*
* ADD [ 1611+ 2419]  0005  3  5.0  228.94    9.94 12.00   45.79 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      2420  1  5.0    6.14    0.79 12.00   52.14 0.55   0.000
* [I%=27.5:S%= 3.35]
*
* ADD [ 2420+ 0005]  2429  3  5.0  235.08   10.73 12.00   45.95 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      2430  1  5.0   10.62    1.12 12.00   45.03 0.47   0.000
* [I%=25.7:S%= 2.02]
*
* ADD [ 2429+ 2430]  2439  3  5.0  245.70   11.84 12.00   45.91 n/a   0.000
*
** Reservoir
* OUTFLOW:            0006  1  5.0  245.70   10.24 12.08   45.91 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      2500  1  5.0   40.64    5.17 12.00   54.52 0.57   0.000
* [I%=40.1:S%= 2.04]
*
* ADD [ 2500+ 0006]  2509  3  5.0  286.34   13.61 12.08   47.13 n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      3000  1  5.0   24.81    2.20 12.00   42.61 0.45   0.000
* [I%=22.9:S%= 1.94]
*
* ADD [ 2509+ 3000]  3009  3  5.0  311.15   15.72 12.00   46.77 n/a   0.000
*
* READ STORM          12.0

```

```

[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD      3100  1  5.0    8.84    1.38 12.00  59.58 0.62   0.000
[ I%=44.1:S%= 3.25]
*
* ADD [  3009+  3100]  3109  3  5.0   319.99   17.10 12.00  47.13  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD      3200  1  5.0   18.79    4.17 12.00  78.06 0.82   0.000
[ I%=73.0:S%= 2.39]
*
* ADD [  3109+  3200]  3209  3  5.0   338.78   21.28 12.00  48.84  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD      3300  1  5.0   13.67    3.13 12.00  79.12 0.83   0.000
[ I%=76.4:S%= 2.99]
*
* ADD [  3209+  3300]  3309  3  5.0   352.45   24.41 12.00  50.02  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD      3400  1  5.0   24.09    2.92 12.00  50.53 0.53   0.000
[ I%=30.0:S%= 3.13]
*
* ADD [  3309+  3400]  3409  3  5.0   376.54   27.33 12.00  50.05  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB NASHYD        3500  1  5.0   48.32    1.79 12.08  19.67 0.21   0.000
[ CN=43.8
[ N = 3.0:Tp 0.25]
*
* ADD [  3409+  3500]  3509  3  5.0   424.86   28.84 12.00  46.59  n/a   0.000
*
** Reservoir
* OUTFLOW:            3519  1  5.0   424.86    2.20 16.08  46.60  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD      4000  1  5.0   11.35    1.44 12.00  51.74 0.54   0.000
[ I%=33.3:S%= 2.38]
*
* ADD [  3519+  4000]  4009  3  5.0   436.21    3.33 12.00  46.73  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD      4100  1  5.0   14.42    1.94 12.00  53.65 0.56   0.000
[ I%=35.5:S%= 3.20]
*
* ADD [  4009+  4100]  4109  3  5.0   450.63    5.27 12.00  46.95  n/a   0.000
*
* READ STORM          12.0
[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD      4200  1  5.0    1.06    0.16 12.00  56.57 0.59   0.000
[ I%=38.3:S%= 2.56]
*
* ADD [  4109+  4200]  4209  3  5.0   451.69    5.42 12.00  46.98  n/a   0.000
*
* READ STORM          12.0

```

```

[ Ptot= 95.55 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
remark: B-scs25
*
* CALIB STANDHYD      4300  1  5.0    0.95    0.14 12.00  56.56 0.59   0.000
* [I%=38.3:S%= 1.63]
*
* ADD [  4209+  4300]  4309  3  5.0  452.64    5.56 12.00  47.00  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      4400  1  5.0    1.19    0.18 12.00  56.57 0.59   0.000
* [I%=38.3:S%= 2.86]
*
* ADD [  4309+  4400]  4409  3  5.0  453.83    5.74 12.00  47.02  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      5000  1  5.0   15.67    2.40 12.00  59.26 0.62   0.000
* [I%=43.6:S%= 3.10]
*
* ADD [  4409+  5000]  5009  3  5.0  469.50    8.13 12.00  47.43  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      6000  1  5.0    1.00    0.14 12.00  56.56 0.59   0.000
* [I%=38.3:S%= 0.88]
*
* ADD [  5009+  6000]  6009  3  5.0  470.50    8.27 12.00  47.45  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      6100  1  5.0    0.94    0.14 12.00  56.57 0.59   0.000
* [I%=38.3:S%= 2.41]
*
* ADD [  6009+  6100]  6109  3  5.0  471.44    8.40 12.00  47.47  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      6200  1  5.0    2.11    0.28 12.00  56.57 0.59   0.000
* [I%=38.3:S%= 0.75]
*
* ADD [  6109+  6200]  6209  3  5.0  473.55    8.69 12.00  47.51  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      6300  1  5.0    1.06    0.15 12.00  58.40 0.61   0.000
* [I%=41.4:S%= 0.85]
*
* ADD [  6209+  6300]  6309  3  5.0  474.61    8.84 12.00  47.53  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      6400  1  5.0    1.88    0.27 12.00  56.57 0.59   0.000
* [I%=38.3:S%= 1.92]
*
* ADD [  6309+  6400]  6409  3  5.0  476.49    9.11 12.00  47.57  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*

```

```

* CALIB STANDHYD      7000  1  5.0    4.56    0.76 12.00  63.18 0.66   0.000
* [I%=49.4:S%= 1.68]
*
* ADD [  6409+  7000]  7009  3  5.0   481.05    9.87 12.00  47.72  n/a   0.000
*
* READ STORM          12.0
* [ Ptot= 95.55 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\a9a49af1-9a8b-43af-99d8-a
* remark: B-scs25
*
* CALIB STANDHYD      8000  1  5.0    13.26    2.46 12.00  72.44 0.76   0.000
* [I%=64.2:S%= 0.87]
*
* ADD [  7009+  8000]  8009  3  5.0   494.31   12.33 12.00  48.38  n/a   0.000
*

```

(v 6.2.2005)

TM

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***** SUMMARY OUTPUT *****

```
Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voim.dat
Output filename: C:\Users\tarkell\AppData\Local\Civica\vh5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\37b262b6-13
Summary filename: C:\Users\tarkell\AppData\Local\Civica\vh5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\37b262b6-13
```

DATE: 02-25-2022 TIME: 08:32:02

USER:

COMMENTS: _____

```
*****
** SIMULATION : Run 05                               **
*****
```

HYD ID

DT
min

AREA
ha

Qpeak Tpeak
cms hrs

R. V.
mm

R.C.

Qbase
CMS

START @ 0.00 hrs

```

READ STORM                                     12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarke11\AppData
remark: B-scs100

```

```
*
** CALIB NASHYD      1000  1  5.0  44.18    3.71 12.17  47.54 0.39   0.000
   [CN=58.6          ]
   [ N = 3.0:Tp 0.30]
```

```

READ STORM                                12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarke11\AppData
remark: B-scs100

```

* CALIB STANDHYD	1410	1	5.0	1.92	0.33	12.00	70.27	0.58	0.000
[I%=30.1:S%= 1.77]									

DUHYD		0001	1	5.0	1.92	0.33	12.00	70.27	n/a	0.000
MAJOR SYSTEM:		0001	2	5.0	0.29	0.21	12.00	70.27	n/a	0.000
MINOR SYSTEM:		0001	3	5.0	1.63	0.12	11.67	70.27	n/a	0.000

```

READ STORM                                     12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarke11\AppData
remark: B-scs100

```

* CALIB STANDHYD	1420	1	5.0	12.97	1.91	12.00	68.21	0.57	0.000
[I%=33.2:S%= 0.60]									

ADD	[	0001+	1420]	1429	3	5.0	13.26	2.13	12.00	68.25	n/a	0.000
-----	---	-------	-------	------	---	-----	-------	------	-------	-------	-----	-------

```

READ STORM                      12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarke11\AppData
remark: B-scs100

```

* CALIB STANDHYD	1430	1	5.0	10.37	1.79	12.00	68.41	0.57	0.000
[I%=33.2;S%= 3.12]									

ADD	[	1429+	1430]	1439	3	5.0	23.63	3.92	12.00	68.32	n/a	0.000
-----	---	-------	-------	------	---	-----	-------	------	-------	-------	-----	-------

* $\chi^2 = 11.72$ (1 d.f.) $p = 0.0006$

```

READ STORM                      12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD                1440  1  5.0    7.23    1.12 12.00  62.92 0.52    0.000
* [I%=26.8:S%= 2.89]
*
* ADD [ 1439+ 1440] 1449  3  5.0    30.86    5.03 12.00  67.06 n/a    0.000
*
** Reservoir
* OUTFLOW:                      0002  1  5.0    30.86    1.32 12.42  67.05 n/a    0.000
*
READ STORM                      12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD                1450  1  5.0    1.72    0.31 12.00  73.06 0.61    0.000
* [I%=29.5:S%= 1.32]
*
* ADD [ 1450+ 0002] 1459  3  5.0    32.58    1.40 12.42  67.37 n/a    0.000
*
* ADD [ 0001+ 1459] 0003  3  5.0    34.21    1.50 12.33  67.51 n/a    0.000
*
* ADD [ 1000+ 0003] 1509  3  5.0    78.39    5.02 12.17  56.26 n/a    0.000
*
READ STORM                      12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD                1500  1  5.0    17.89    2.34 12.00  56.22 0.47    0.000
* [I%=19.9:S%= 3.38]
*
* ADD [ 1500+ 1509] 1510  3  5.0    96.28    6.56 12.17  56.25 n/a    0.000
*
READ STORM                      12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB NASHYD                  1200  1  5.0     4.03    0.53 12.00  49.99 0.41    0.000
* [CN=62.8]
* [ N = 3.0:Tp 0.15]
*
READ STORM                      12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD                1300  1  5.0     8.16    1.33 12.00  69.81 0.58    0.000
* [I%=25.4:S%= 1.46]
*
* ADD [ 1200+ 1300] 1309  3  5.0    12.19    1.86 12.00  63.26 n/a    0.000
*
READ STORM                      12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD                1100  1  5.0    26.23    3.80 12.00  65.99 0.55    0.000
* [I%=20.6:S%= 1.66]
*
** Reservoir
* OUTFLOW:                      1109  1  5.0    26.23    3.47 12.08  65.98 n/a    0.000
*
READ STORM                      12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD                1600  1  5.0     4.96    0.90 12.00  76.11 0.63    0.000
* [I%=34.0:S%= 0.82]
*
* ADD [ 1109+ 1600] 1609  3  5.0    31.19    4.07 12.08  67.59 n/a    0.000
*
* ADD [ 1309+ 1609] 1610  3  5.0    43.38    5.55 12.08  66.37 n/a    0.000
*
* ADD [ 1510+ 1610] 1611  3  5.0   139.66   11.90 12.08  59.39 n/a    0.000
*
READ STORM                      12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2

```

```

remark: B-scs100
*
* CALIB STANDHYD      2100  1  5.0   26.53    3.58 12.00   65.99 0.55   0.000
* [I%=30.7:S%= 0.58]
*
* READ STORM          12.0
* [ Ptot=120.68 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
* remark: B-scs100
*
* CALIB STANDHYD      2200  1  5.0   33.03    4.51 12.00   71.27 0.59   0.000
* [I%=32.3:S%= 0.53]
*
* ADD [ 2100+ 2200]  2209  3  5.0   59.56    8.08 12.00   68.92 n/a   0.000
*
** Reservoir
* OUTFLOW:            0004  1  5.0   59.56    1.62 12.92   68.89 n/a   0.000
*
* READ STORM          12.0
* [ Ptot=120.68 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
* remark: B-scs100
*
* CALIB STANDHYD      2300  1  5.0    6.31    1.01 12.00   72.64 0.60   0.000
* [I%=33.5:S%= 0.67]
*
* ADD [ 2300+ 0004]  2309  3  5.0   65.87    1.94 12.25   69.25 n/a   0.000
*
* READ STORM          12.0
* [ Ptot=120.68 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
* remark: B-scs100
*
* CALIB STANDHYD      2410  1  5.0   23.41    3.31 12.00   69.88 0.58   0.000
* [I%=30.5:S%= 0.56]
*
* ADD [ 2309+ 2410]  2419  3  5.0   89.28    4.62 12.00   69.41 n/a   0.000
*
* ADD [ 1611+ 2419]  0005  3  5.0  228.94   16.21 12.00   63.30 n/a   0.000
*
* READ STORM          12.0
* [ Ptot=120.68 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
* remark: B-scs100
*
* CALIB STANDHYD      2420  1  5.0    6.14    1.19 12.00   71.33 0.59   0.000
* [I%=27.5:S%= 3.35]
*
* ADD [ 2420+ 0005]  2429  3  5.0  235.08   17.40 12.00   63.51 n/a   0.000
*
* READ STORM          12.0
* [ Ptot=120.68 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
* remark: B-scs100
*
* CALIB STANDHYD      2430  1  5.0   10.62    1.56 12.00   61.95 0.51   0.000
* [I%=25.7:S%= 2.02]
*
* ADD [ 2429+ 2430]  2439  3  5.0  245.70   18.96 12.00   63.44 n/a   0.000
*
** Reservoir
* OUTFLOW:            0006  1  5.0  245.70   17.88 12.08   63.44 n/a   0.000
*
* READ STORM          12.0
* [ Ptot=120.68 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
* remark: B-scs100
*
* CALIB STANDHYD      2500  1  5.0   40.64    7.25 12.00   73.02 0.61   0.000
* [I%=40.1:S%= 2.04]
*
* ADD [ 2500+ 0006]  2509  3  5.0  286.34   22.72 12.08   64.80 n/a   0.000
*
* READ STORM          12.0
* [ Ptot=120.68 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
* remark: B-scs100
*
* CALIB STANDHYD      3000  1  5.0   24.81    3.31 12.00   59.00 0.49   0.000
* [I%=22.9:S%= 1.94]
*
* ADD [ 2509+ 3000]  3009  3  5.0  311.15   25.45 12.00   64.34 n/a   0.000
*
* READ STORM          12.0

```

```

[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      3100  1  5.0    8.84    1.95 12.00  79.41 0.66   0.000
[ I%=44.1:S%= 3.25]
*
* ADD [ 3009+ 3100]  3109  3  5.0   319.99   27.40 12.00  64.76 n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      3200  1  5.0   18.79    5.43 12.00 100.87 0.84   0.000
[ I%=73.0:S%= 2.39]
*
* ADD [ 3109+ 3200]  3209  3  5.0   338.78   32.82 12.00  66.76 n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      3300  1  5.0   13.67    4.05 12.00 101.89 0.84   0.000
[ I%=76.4:S%= 2.99]
*
* ADD [ 3209+ 3300]  3309  3  5.0   352.45   36.87 12.00  68.12 n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      3400  1  5.0   24.09    4.03 12.00  68.91 0.57   0.000
[ I%=30.0:S%= 3.13]
*
* ADD [ 3309+ 3400]  3409  3  5.0   376.54   40.91 12.00  68.17 n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB NASHYD        3500  1  5.0   48.32    2.79 12.08  30.28 0.25   0.000
[ CN=43.8
[ N = 3.0:Tp 0.25]
*
* ADD [ 3409+ 3500]  3509  3  5.0   424.86   43.27 12.00  63.86 n/a   0.000
*
** Reservoir
* OUTFLOW:          3519  1  5.0   424.86    3.73 15.42  63.88 n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      4000  1  5.0   11.35    1.97 12.00  70.16 0.58   0.000
[ I%=33.3:S%= 2.38]
*
* ADD [ 3519+ 4000]  4009  3  5.0   436.21    3.96 12.00  64.05 n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      4100  1  5.0   14.42    2.64 12.00  72.47 0.60   0.000
[ I%=35.5:S%= 3.20]
*
* ADD [ 4009+ 4100]  4109  3  5.0   450.63    6.60 12.00  64.31 n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      4200  1  5.0    1.06    0.22 12.00  76.03 0.63   0.000
[ I%=38.3:S%= 2.56]
*
* ADD [ 4109+ 4200]  4209  3  5.0   451.69    6.83 12.00  64.34 n/a   0.000
*
* READ STORM          12.0

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[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      4300  1  5.0    0.95    0.19 12.00  76.03 0.63   0.000
[ I%=38.3:S%= 1.63]
*
* ADD [  4209+  4300]  4309  3  5.0  452.64    7.01 12.00  64.37  n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      4400  1  5.0    1.19    0.25 12.00  76.03 0.63   0.000
[ I%=38.3:S%= 2.86]
*
* ADD [  4309+  4400]  4409  3  5.0  453.83    7.26 12.00  64.40  n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      5000  1  5.0   15.67    3.21 12.00  79.05 0.66   0.000
[ I%=43.6:S%= 3.10]
*
* ADD [  4409+  5000]  5009  3  5.0  469.50   10.48 12.00  64.89  n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      6000  1  5.0    1.00    0.19 12.00  76.03 0.63   0.000
[ I%=38.3:S%= 0.88]
*
* ADD [  5009+  6000]  6009  3  5.0  470.50   10.67 12.00  64.91  n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      6100  1  5.0    0.94    0.20 12.00  76.03 0.63   0.000
[ I%=38.3:S%= 2.41]
*
* ADD [  6009+  6100]  6109  3  5.0  471.44   10.87 12.00  64.93  n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      6200  1  5.0    2.11    0.39 12.00  76.03 0.63   0.000
[ I%=38.3:S%= 0.75]
*
* ADD [  6109+  6200]  6209  3  5.0  473.55   11.26 12.00  64.98  n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      6300  1  5.0    1.06    0.21 12.00  78.14 0.65   0.000
[ I%=41.4:S%= 0.85]
*
* ADD [  6209+  6300]  6309  3  5.0  474.61   11.47 12.00  65.01  n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*
* CALIB STANDHYD      6400  1  5.0    1.88    0.37 12.00  76.04 0.63   0.000
[ I%=38.3:S%= 1.92]
*
* ADD [  6309+  6400]  6409  3  5.0  476.49   11.84 12.00  65.05  n/a   0.000
*
* READ STORM          12.0
[ Ptot=120.68 mm ]
fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
remark: B-scs100
*

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* CALIB STANDHYD      7000  1  5.0    4.56    1.01 12.00  83.62 0.69   0.000
* [I%=49.4:S%= 1.68]
*
* ADD [  6409+  7000]  7009  3  5.0   481.05    12.85 12.00  65.23  n/a   0.000
*
* READ STORM          12.0
* [ Ptot=120.68 mm ]
* fname : C:\Users\tarkell\AppData\Local\Temp\59ffe564-d66a-429d-b715-613002108565\ee6a3d80-ae4b-44bd-bedc-2
* remark: B-scs100
*
* CALIB STANDHYD      8000  1  5.0    13.26    3.21 12.00  94.33 0.78   0.000
* [I%=64.2:S%= 0.87]
*
* ADD [  7009+  8000]  8009  3  5.0   494.31    16.06 12.00  66.01  n/a   0.000
*

```

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=====
V   V   I   SSSSS U   U   A   L           (v 6.0.2001)
V   V   I   SS   U   U   A A   L
V   V   I   SS   U   U   AAAAA L
V   V   I   SS   U   U   A   A L
VV      I   SSSSS UUUUU A   A LLLLL

    000   TTTTT TTTTT H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y Y   MM MM O   O
O   O   T   T   H   H   Y   M   M O   O
    000   T   T   H   H   Y   M   M   000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.0\vo2\voin.dat
 Output filename: C:\Users\avarghese\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\5f965cf9-
 Summary filename: C:\Users\avarghese\AppData\Local\Civica\XH5\d0e1b31e-a085-493e-b6d2-34e9e7d34b73\5f965cf9-

DATE: 02-25-2022 TIME: 09:27:55

USER:

COMMENTS: _____

 ** SIMULATION : Run 01 **

READ STORM	Filename: C:\Users\avarghese\AppData\Local\Temp\fff62ab2-bb9b-4ba0-bbd2-4a6a228007da\b6b1f300
Ptotal=212.00 mm	Comments: hazel-hr

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
1.00	6.00	4.00	13.00	7.00	23.00	10.00	53.00
2.00	4.00	5.00	17.00	8.00	13.00	11.00	38.00
3.00	6.00	6.00	13.00	9.00	13.00	12.00	13.00

CALIB NASHYD (1000) ID= 1 DT= 5.0 min	Area (ha)= 44.18 Ia (mm)= 1.50 U.H. Tp(hrs)= 0.30	Curve Number (CN)= 77.8 # of Linear Res.(N)= 3.00
--	---	--

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00
1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00

1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Unit Hyd Qpeak (cms)= 5.625

PEAK FLOW (cms)= 5.597 (i)

TIME TO PEAK (hrs)= 10.000

RUNOFF VOLUME (mm)= 156.525

TOTAL RAINFALL (mm)= 212.000

RUNOFF COEFFICIENT = 0.738

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (1410) ID= 1 DT= 5.0 min		Area (ha)= 1.92 Total Imp(%)= 37.60	Dir. Conn.(%)= 30.10
Surface Area	(ha)=	IMPERVIOUS 0.72	PERVIOUS (i) 1.20
Dep. Storage	(mm)=	1.50	5.00
Average Slope	(%)=	1.77	1.77
Length	(m)=	113.14	40.00
Mannings n	=	0.013	0.250
Max.Eff.Inten.(mm/hr)=		53.00	54.21
over (min)		5.00	15.00
Storage Coeff. (min)=	2.99 (ii)		12.34 (ii)
Unit Hyd. Tpeak (min)=	5.00		15.00
Unit Hyd. peak (cms)=	0.28		0.08
TOTALS			
PEAK FLOW (cms)=	0.09	0.18	0.262 (iii)
TIME TO PEAK (hrs)=	9.75	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	158.87	174.40
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 78.1 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

DUHYD (0001) Inlet Cap.= 0.120 #of Inlets= 1 Total(cms)= 0.1		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
TOTAL HYD.(ID= 1):		1.92	0.26	10.00	174.40
MAJOR SYS.(ID= 2):		0.40	0.14	10.00	174.40
MINOR SYS.(ID= 3):		1.52	0.12	9.08	174.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (1420) ID= 1 DT= 5.0 min		Area (ha)= 12.97 Total Imp(%)= 39.90	Dir. Conn.(%)= 33.20
Surface Area	(ha)=	IMPERVIOUS 5.18	PERVIOUS (i) 7.79

Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	0.60	0.60	
Length	(m)=	294.05	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		53.00	51.78	
over (min)		5.00	25.00	
Storage Coeff. (min)=		7.33 (ii)	20.51 (ii)	
Unit Hyd. Tpeak (min)=		5.00	25.00	
Unit Hyd. peak (cms)=		0.17	0.05	
				TOTALS
PEAK FLOW (cms)=		0.63	1.02	1.644 (iii)
TIME TO PEAK (hrs)=		10.00	10.17	10.00
RUNOFF VOLUME (mm)=		210.50	149.83	169.97
TOTAL RAINFALL (mm)=		212.00	212.00	212.00
RUNOFF COEFFICIENT =		0.99	0.71	0.80

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1429)				
1 + 2 = 3				
ID1= 1 (0001):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (1420):	0.40	0.142	10.00	174.40
	12.97	1.644	10.00	169.97
ID = 3 (1429):	13.37	1.786	10.00	170.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (1430)	Area (ha)=	10.37		
ID= 1 DT= 5.0 min	Total Imp(%)=	40.50	Dir. Conn.(%)=	33.20
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	4.20	6.17		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	3.12	3.12		
Length (m)=	262.93	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	53.00	52.54		
over (min)	5.00	15.00		
Storage Coeff. (min)=	4.18 (ii)	12.17 (ii)		
Unit Hyd. Tpeak (min)=	5.00	15.00		
Unit Hyd. peak (cms)=	0.24	0.09		
			TOTALS	
PEAK FLOW (cms)=	0.51	0.88	1.386 (iii)	
TIME TO PEAK (hrs)=	10.00	10.00	10.00	
RUNOFF VOLUME (mm)=	210.50	150.29	170.28	
TOTAL RAINFALL (mm)=	212.00	212.00	212.00	
RUNOFF COEFFICIENT =	0.99	0.71	0.80	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1439)				
1 + 2 = 3				
ID1= 1 (1429):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (1430):	13.37	1.786	10.00	170.10
	10.37	1.386	10.00	170.28
ID = 3 (1439):	23.74	3.171	10.00	170.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
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STANDHYD (1440) | Area (ha)= 7.23
ID= 1 DT= 5.0 min | Total Imp(%)= 32.90 Dir. Conn.(%)= 26.80

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.38	4.85	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	2.89	2.89	
Length (m)=	219.54	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	50.79	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.84 (ii)	12.13 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.25	0.09	
			TOTALS
PEAK FLOW (cms)=	0.29	0.67	0.953 (iii)
TIME TO PEAK (hrs)=	10.00	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	148.97	165.46
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.70	0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1449)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1439):	23.74	3.171	10.00	170.18
+ ID2= 2 (1440):	7.23	0.953	10.00	165.46
=====				
ID = 3 (1449):	30.97	4.125	10.00	169.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (1450) | Area (ha)= 1.72
ID= 1 DT= 5.0 min | Total Imp(%)= 36.80 Dir. Conn.(%)= 29.50

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.63	1.09	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	1.32	1.32	
Length (m)=	107.08	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	54.92	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.16 (ii)	13.32 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.27	0.08	
			TOTALS
PEAK FLOW (cms)=	0.07	0.16	0.237 (iii)
TIME TO PEAK (hrs)=	9.75	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	164.38	177.98
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.78	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1459)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1449):	30.97	4.125	10.00	169.08
+ ID2= 2 (1450):	1.72	0.237	10.00	177.98
=====				

ID = 3 (1459): 32.69 4.361 10.00 169.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0002)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0001):	1.52	0.120	9.08	174.40
+ ID2= 2 (1459):	32.69	4.361	10.00	169.54
=====				
ID = 3 (0002):	34.21	4.481	10.00	169.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (1509)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (1000):	44.18	5.597	10.00	156.52
+ ID2= 2 (0002):	34.21	4.481	10.00	169.76
=====				
ID = 3 (1509):	78.39	10.078	10.00	162.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (1500)	Area (ha)=	IMPERVIOUS	PERVIOUS (i)
ID= 1 DT= 5.0 min	Total Imp(%)= 22.10		Dir. Conn.(%)= 19.90
Surface Area (ha)=	3.95		13.94
Dep. Storage (mm)=	1.50		5.00
Average Slope (%)=	3.38		3.38
Length (m)=	345.35		40.00
Mannings n =	0.013		0.250
Max.Eff.Inten.(mm/hr)=	53.00		47.33
over (min)=	5.00		15.00
Storage Coeff. (min)=	4.81 (ii)		12.94 (ii)
Unit Hyd. Tpeak (min)=	5.00		15.00
Unit Hyd. peak (cms)=	0.22		0.08
TOTALS			
PEAK FLOW (cms)=	0.52		2.303 (iii)
TIME TO PEAK (hrs)=	10.00		10.00
RUNOFF VOLUME (mm)=	210.50		158.99
TOTAL RAINFALL (mm)=	212.00		212.00
RUNOFF COEFFICIENT =	0.99		0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1510)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (1500):	17.89	2.303	10.00	158.99
+ ID2= 2 (1509):	78.39	10.078	10.00	162.30
=====				
ID = 3 (1510):	96.28	12.381	10.00	161.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB NASHYD (1200)	Area (ha)=	Curve Number (CN)=
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.15	

Unit Hyd Qpeak (cms)= 1.026

PEAK FLOW (cms)= 0.539 (i)

TIME TO PEAK (hrs)= 10.000
RUNOFF VOLUME (mm)= 159.113
TOTAL RAINFALL (mm)= 212.000
RUNOFF COEFFICIENT = 0.751

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-----
| CALIB
| STANDHYD ( 1300) |
| ID= 1 DT= 5.0 min |
|-----|
Area (ha)= 8.16
Total Imp(%)= 31.50 Dir. Conn.(%)= 25.40

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.57 5.59
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 1.46 1.46
Length (m)= 233.24 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 53.00 53.56
over (min) 5.00 15.00
Storage Coeff. (min)= 4.89 (ii) 14.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

PEAK FLOW (cms)= 0.31 0.81
TIME TO PEAK (hrs)= 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 163.45
TOTAL RAINFALL (mm)= 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.77

*TOTALS*
1.111 (iii)
10.00
175.40
212.00
0.83
```

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-----
| ADD HYD ( 1309) |
| 1 + 2 = 3 |
|-----|
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 ( 1200): 4.03 0.539 10.00 159.11
+ ID2= 2 ( 1300): 8.16 1.111 10.00 175.40
=====
ID = 3 ( 1309): 12.19 1.649 10.00 170.02
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| CALIB
| STANDHYD ( 1100) |
| ID= 1 DT= 5.0 min |
|-----|
Area (ha)= 26.23
Total Imp(%)= 25.20 Dir. Conn.(%)= 20.60

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.61 19.62
Dep. Storage (mm)= 1.50 5.00
Average Slope (%)= 1.66 1.66
Length (m)= 418.17 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 53.00 52.04
over (min) 5.00 20.00
Storage Coeff. (min)= 6.67 (ii) 16.37 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.18 0.06

PEAK FLOW (cms)= 0.80 2.70
TIME TO PEAK (hrs)= 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 162.44
TOTAL RAINFALL (mm)= 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.77

*TOTALS*
3.492 (iii)
10.00
172.34
212.00
0.81
```

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (1600)	Area (ha)=	4.96		
ID= 1 DT= 5.0 min	Total Imp(%)=	41.10	Dir. Conn.(%)=	34.00

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.04	2.92	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.82	0.82	
Length (m)=	181.84	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	55.20	
over (min)	5.00	20.00	
Storage Coeff. (min)=	5.00 (ii)	16.70 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.21	0.06	
			TOTALS
PEAK FLOW (cms)=	0.25	0.43	0.674 (iii)
TIME TO PEAK (hrs)=	10.00	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	164.55	180.17
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.78	0.85

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (1609)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1100):	26.23	3.492	10.00	172.34
+ ID2= 2 (1600):	4.96	0.674	10.00	180.17
ID = 3 (1609):	31.19	4.166	10.00	173.59
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

ADD HYD (1610)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1309):	12.19	1.649	10.00	170.02
+ ID2= 2 (1609):	31.19	4.166	10.00	173.59
ID = 3 (1610):	43.38	5.816	10.00	172.58
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

ADD HYD (1611)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1510):	96.28	12.381	10.00	161.69
+ ID2= 2 (1610):	43.38	5.816	10.00	172.58
ID = 3 (1611):	139.66	18.197	10.00	165.07
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

CALIB				
STANDHYD (2100)	Area (ha)=	26.53		
ID= 1 DT= 5.0 min	Total Imp(%)=	36.70	Dir. Conn.(%)=	30.70
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	9.74	16.79		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	0.58	0.58		
Length (m)=	420.56	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	53.00	50.86		
over (min)	10.00	25.00		
Storage Coeff. (min)=	9.18 (ii)	22.59 (ii)		

Unit Hyd. Tpeak (min)=	10.00	25.00	
Unit Hyd. peak (cms)=	0.12	0.05	
			TOTALS
PEAK FLOW (cms)=	1.20	2.14	3.292 (iii)
TIME TO PEAK (hrs)=	10.00	10.17	10.00
RUNOFF VOLUME (mm)=	210.50	149.13	167.97
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.70	0.79

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (2200) ID= 1 DT= 5.0 min	Area (ha)= 33.03 Total Imp(%)= 38.00	Dir. Conn.(%)= 32.30	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	12.55	20.48	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.53	0.53	
Length (m)=	469.25	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	52.54	
over (min)=	10.00	25.00	
Storage Coeff. (min)=	10.07 (ii)	23.67 (ii)	
Unit Hyd. Tpeak (min)=	10.00	25.00	
Unit Hyd. peak (cms)=	0.11	0.05	
		TOTALS	
PEAK FLOW (cms)=	1.57	2.68	4.194 (iii)
TIME TO PEAK (hrs)=	10.00	10.17	10.00
RUNOFF VOLUME (mm)=	210.50	157.80	174.82
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.74	0.82

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2209) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2100):	26.53	3.292	10.00	167.97
+ ID2= 2 (2200):	33.03	4.194	10.00	174.82
=====				
ID = 3 (2209):	59.56	7.486	10.00	171.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (2300) ID= 1 DT= 5.0 min	Area (ha)= 6.31 Total Imp(%)= 40.60	Dir. Conn.(%)= 33.50	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.56	3.75	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.67	0.67	
Length (m)=	205.10	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	54.06	
over (min)=	5.00	20.00	
Storage Coeff. (min)=	5.71 (ii)	18.25 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.20	0.06	
		TOTALS	
PEAK FLOW (cms)=	0.31	0.53	0.839 (iii)
TIME TO PEAK (hrs)=	10.00	10.08	10.00
RUNOFF VOLUME (mm)=	210.50	158.84	176.15
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.83

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2309)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2209):	59.56	7.486	10.00	171.77
+ ID2= 2 (2300):	6.31	0.839	10.00	176.15
=====				
ID = 3 (2309):	65.87	8.324	10.00	172.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
STANDHYD (2410)		Area (ha)= 23.41			
ID= 1 DT= 5.0 min		Total Imp(%)= 36.00		Dir. Conn.(%)= 30.50	
		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	8.43		14.98	
Dep. Storage	(mm)=	1.50		5.00	
Average Slope	(%)=	0.56		0.56	
Length	(m)=	395.05		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		53.00		52.21	
over (min)		10.00		25.00	
Storage Coeff. (min)=		8.94 (ii)		22.35 (ii)	
Unit Hyd. Tpeak (min)=		10.00		25.00	
Unit Hyd. peak (cms)=		0.12		0.05	
PEAK FLOW (cms)=		1.05		1.97	*TOTALS*
TIME TO PEAK (hrs)=		10.00		10.17	2.984 (iii)
RUNOFF VOLUME (mm)=		210.50		157.57	10.00
TOTAL RAINFALL (mm)=		212.00		212.00	173.71
RUNOFF COEFFICIENT =		0.99		0.74	212.00
					0.82

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2419)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2309):	65.87	8.324	10.00	172.19
+ ID2= 2 (2410):	23.41	2.984	10.00	173.71
=====				
ID = 3 (2419):	89.28	11.309	10.00	172.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0003)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1611):	139.66	18.197	10.00	165.07
+ ID2= 2 (2419):	89.28	11.309	10.00	172.59
=====				
ID = 3 (0003):	228.94	29.506	10.00	168.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (2420)				
ID= 1 DT= 5.0 min				
Area (ha)=	6.14			
Total Imp(%)=	33.80	Dir. Conn.(%)=	27.50	
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	2.08	4.06		

Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	3.35	3.35	
Length	(m)=	202.32	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		53.00	53.89	
over (min)		5.00	15.00	
Storage Coeff. (min)=		3.50 (ii)	11.24 (ii)	
Unit Hyd. Tpeak (min)=		5.00	15.00	
Unit Hyd. peak (cms)=		0.26	0.09	
				TOTALS
PEAK FLOW (cms)=		0.25	0.60	0.848 (iii)
TIME TO PEAK (hrs)=		9.92	10.00	10.00
RUNOFF VOLUME (mm)=		210.50	163.67	176.55
TOTAL RAINFALL (mm)=		212.00	212.00	212.00
RUNOFF COEFFICIENT =		0.99	0.77	0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2429)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (2420):	6.14	0.848	10.00	176.55
+ ID2= 2 (0003):	228.94	29.506	10.00	168.00
ID = 3 (2429):	235.08	30.353	10.00	168.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	10.62		
STANDHYD (2430)	Total Imp(%)=	31.50	Dir. Conn.(%)=	25.70
ID= 1 DT= 5.0 min				
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	3.35	7.27		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	2.02	2.02		
Length (m)=	266.08	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	53.00	50.44		
over (min)	5.00	15.00		
Storage Coeff. (min)=	4.80 (ii)	14.05 (ii)		
Unit Hyd. Tpeak (min)=	5.00	15.00		
Unit Hyd. peak (cms)=	0.22	0.08		
				TOTALS
PEAK FLOW (cms)=	0.40	0.99		1.387 (iii)
TIME TO PEAK (hrs)=	10.00	10.00		10.00
RUNOFF VOLUME (mm)=	210.50	148.70		164.58
TOTAL RAINFALL (mm)=	212.00	212.00		212.00
RUNOFF COEFFICIENT =	0.99	0.70		0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2439)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (2429):	235.08	30.353	10.00	168.23
+ ID2= 2 (2430):	10.62	1.387	10.00	164.58
ID = 3 (2439):	245.70	31.740	10.00	168.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (2500)	Area (ha)=	40.64		
ID= 1 DT= 5.0 min	Total Imp(%)=	44.70	Dir. Conn.(%)=	40.10

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	18.17	22.47	
Dep. Storage	(mm)=	1.50	5.00	
Average slope	(%)=	2.04	2.04	
Length	(m)=	520.51	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		53.00	50.36	
over (min)		5.00	20.00	
Storage Coeff. (min)=		7.15 (ii)	16.39 (ii)	
Unit Hyd. Tpeak (min)=		5.00	20.00	
Unit Hyd. peak (cms)=		0.17	0.06	
				TOTALS
PEAK FLOW (cms)=		2.40	2.97	5.364 (iii)
TIME TO PEAK (hrs)=		10.00	10.08	10.00
RUNOFF VOLUME (mm)=		210.50	148.64	173.45
TOTAL RAINFALL (mm)=		212.00	212.00	212.00
RUNOFF COEFFICIENT =		0.99	0.70	0.82

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 74.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (2509)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2439):	245.70	31.740	10.00	168.07
+ ID2= 2 (2500):	40.64	5.364	10.00	173.45
=====				
ID = 3 (2509):	286.34	37.104	10.00	168.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (3000)	Area (ha)=	24.81		
ID= 1 DT= 5.0 min	Total Imp(%)=	26.40	Dir. Conn.(%)=	22.90

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	6.55	18.26	
Dep. Storage	(mm)=	1.50	5.00	
Average slope	(%)=	1.94	1.94	
Length	(m)=	406.69	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		53.00	48.39	
over (min)		5.00	20.00	
Storage Coeff. (min)=		6.26 (ii)	15.79 (ii)	
Unit Hyd. Tpeak (min)=		5.00	20.00	
Unit Hyd. peak (cms)=		0.19	0.07	
				TOTALS
PEAK FLOW (cms)=		0.84	2.32	3.159 (iii)
TIME TO PEAK (hrs)=		10.00	10.08	10.00
RUNOFF VOLUME (mm)=		210.50	147.08	161.60
TOTAL RAINFALL (mm)=		212.00	212.00	212.00
RUNOFF COEFFICIENT =		0.99	0.69	0.76

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 74.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3009)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (2509):	286.34	37.104	10.00	168.83
+ ID2= 2 (3000):	24.81	3.159	10.00	161.60
=====				
ID = 3 (3009):	311.15	40.263	10.00	168.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (3100)
ID= 1 DT= 5.0 min

Area (ha)= 8.84
Total Imp(%)= 48.20 Dir. Conn.(%)= 44.10

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.26	4.58
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	3.25	3.25
Length (m)=	242.76	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	53.00	51.95
over (min)	5.00	15.00
Storage Coeff. (min)=	3.94 (ii)	11.87 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.24	0.09
PEAK FLOW (cms)=	0.57	0.65
TIME TO PEAK (hrs)=	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	157.30
TOTAL RAINFALL (mm)=	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.74

TOTALS
1.221 (iii)

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3109)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (3009):	311.15	40.263	10.00	168.26
+ ID2= 2 (3100):	8.84	1.221	10.00	180.76
ID = 3 (3109):	319.99	41.485	10.00	168.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (3200)
ID= 1 DT= 5.0 min

Area (ha)= 18.79
Total Imp(%)= 73.90 Dir. Conn.(%)= 73.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	13.89	4.90
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	2.39	2.39
Length (m)=	353.93	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	53.00	50.56
over (min)	5.00	15.00
Storage Coeff. (min)=	5.41 (ii)	14.20 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.20	0.08
PEAK FLOW (cms)=	2.02	0.67
TIME TO PEAK (hrs)=	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	161.41
TOTAL RAINFALL (mm)=	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.76

TOTALS
2.688 (iii)

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 80.7 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3209)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
------	-------	-------	------

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-----
              (ha)      (cms)      (hrs)      (mm)
ID1= 1 ( 3109):  319.99  41.485    10.00    168.60
+ ID2= 2 ( 3200):   18.79   2.688    10.00    197.25
=====
ID = 3 ( 3209):  338.78  44.173    10.00    170.19
-----

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| CALIB
| STANDHYD ( 3300) |
| ID= 1 DT= 5.0 min |
-----
Area      (ha)= 13.67
Total Imp(%)= 76.60   Dir. Conn.(%)= 76.40

              IMPERVIOUS      PERVIOUS (i)
Surface Area  (ha)= 10.47      3.20
Dep. Storage  (mm)= 1.50      5.00
Average Slope (%)= 2.99      2.99
Length        (m)= 301.88     40.00
Mannings n    = 0.013        0.250

Max.Eff.Inten.(mm/hr)= 53.00      48.05
over (min)      5.00      15.00
Storage Coeff. (min)= 4.60 (ii)  12.99 (ii)
Unit Hyd. Tpeak (min)= 5.00      15.00
Unit Hyd. peak (cms)= 0.23      0.08

              *TOTALS*
PEAK FLOW      (cms)= 1.54      0.42      1.954 (iii)
TIME TO PEAK   (hrs)= 10.00     10.00     10.00
RUNOFF VOLUME  (mm)= 210.50     154.38    197.26
TOTAL RAINFALL (mm)= 212.00     212.00    212.00
RUNOFF COEFFICIENT = 0.99      0.73      0.93

```

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```

-----
| ADD HYD ( 3309) |
| 1 + 2 = 3 |
-----
              AREA      QPEAK      TPEAK      R.V.
              (ha)      (cms)      (hrs)      (mm)
ID1= 1 ( 3209):  338.78  44.173    10.00    170.19
+ ID2= 2 ( 3300):   13.67   1.954    10.00    197.26
=====
ID = 3 ( 3309):  352.45  46.127    10.00    171.24
-----

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| CALIB
| STANDHYD ( 3400) |
| ID= 1 DT= 5.0 min |
-----
Area      (ha)= 24.09
Total Imp(%)= 33.70   Dir. Conn.(%)= 30.00

              IMPERVIOUS      PERVIOUS (i)
Surface Area  (ha)= 8.12      15.97
Dep. Storage  (mm)= 1.50      5.00
Average Slope (%)= 3.13      3.13
Length        (m)= 400.75     40.00
Mannings n    = 0.013        0.250

Max.Eff.Inten.(mm/hr)= 53.00      50.66
over (min)      5.00      15.00
Storage Coeff. (min)= 5.38 (ii)  13.48 (ii)
Unit Hyd. Tpeak (min)= 5.00      15.00
Unit Hyd. peak (cms)= 0.21      0.08

              *TOTALS*
PEAK FLOW      (cms)= 1.06      2.19      3.250 (iii)
TIME TO PEAK   (hrs)= 10.00     10.00     10.00
RUNOFF VOLUME  (mm)= 210.50     156.37    172.61
TOTAL RAINFALL (mm)= 212.00     212.00    212.00
RUNOFF COEFFICIENT = 0.99      0.74      0.81

```

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```

-----
| ADD HYD ( 3409) |
| 1 + 2 = 3 |
-----
ID1= 1 ( 3309):   AREA   QPEAK   TPEAK   R.V.
+ ID2= 2 ( 3400):   (ha)   (cms)   (hrs)   (mm)
=====
ID = 3 ( 3409):   352.45  46.127  10.00  171.24
                  24.09   3.250   10.00  172.61
                  376.54  49.377  10.00  171.33
=====

```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

-----
| CALIB |
| NASHYD ( 3500) |
| ID= 1 DT= 2.0 min |
-----
Area (ha)= 48.32   Curve Number (CN)= 66.6
Ia (mm)= 5.00     # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.25

```

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 MIN. TIME STEP.

```

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.033 6.00 3.033 13.00 6.033 23.00 9.03 53.00
0.067 6.00 3.067 13.00 6.067 23.00 9.07 53.00
0.100 6.00 3.100 13.00 6.100 23.00 9.10 53.00
0.133 6.00 3.133 13.00 6.133 23.00 9.13 53.00
0.167 6.00 3.167 13.00 6.167 23.00 9.17 53.00
0.200 6.00 3.200 13.00 6.200 23.00 9.20 53.00
0.233 6.00 3.233 13.00 6.233 23.00 9.23 53.00
0.267 6.00 3.267 13.00 6.267 23.00 9.27 53.00
0.300 6.00 3.300 13.00 6.300 23.00 9.30 53.00
0.333 6.00 3.333 13.00 6.333 23.00 9.33 53.00
0.367 6.00 3.367 13.00 6.367 23.00 9.37 53.00
0.400 6.00 3.400 13.00 6.400 23.00 9.40 53.00
0.433 6.00 3.433 13.00 6.433 23.00 9.43 53.00
0.467 6.00 3.467 13.00 6.467 23.00 9.47 53.00
0.500 6.00 3.500 13.00 6.500 23.00 9.50 53.00
0.533 6.00 3.533 13.00 6.533 23.00 9.53 53.00
0.567 6.00 3.567 13.00 6.567 23.00 9.57 53.00
0.600 6.00 3.600 13.00 6.600 23.00 9.60 53.00
0.633 6.00 3.633 13.00 6.633 23.00 9.63 53.00
0.667 6.00 3.667 13.00 6.667 23.00 9.67 53.00
0.700 6.00 3.700 13.00 6.700 23.00 9.70 53.00
0.733 6.00 3.733 13.00 6.733 23.00 9.73 53.00
0.767 6.00 3.767 13.00 6.767 23.00 9.77 53.00
0.800 6.00 3.800 13.00 6.800 23.00 9.80 53.00
0.833 6.00 3.833 13.00 6.833 23.00 9.83 53.00
0.867 6.00 3.867 13.00 6.867 23.00 9.87 53.00
0.900 6.00 3.900 13.00 6.900 23.00 9.90 53.00
0.933 6.00 3.933 13.00 6.933 23.00 9.93 53.00
0.967 6.00 3.967 13.00 6.967 23.00 9.97 53.00
1.000 6.00 4.000 13.00 7.000 23.00 10.00 52.99
1.033 4.00 4.033 17.00 7.033 13.00 10.03 38.00
1.067 4.00 4.067 17.00 7.067 13.00 10.07 38.00
1.100 4.00 4.100 17.00 7.100 13.00 10.10 38.00
1.133 4.00 4.133 17.00 7.133 13.00 10.13 38.00
1.167 4.00 4.167 17.00 7.167 13.00 10.17 38.00
1.200 4.00 4.200 17.00 7.200 13.00 10.20 38.00
1.233 4.00 4.233 17.00 7.233 13.00 10.23 38.00
1.267 4.00 4.267 17.00 7.267 13.00 10.27 38.00
1.300 4.00 4.300 17.00 7.300 13.00 10.30 38.00
1.333 4.00 4.333 17.00 7.333 13.00 10.33 38.00
1.367 4.00 4.367 17.00 7.367 13.00 10.37 38.00
1.400 4.00 4.400 17.00 7.400 13.00 10.40 38.00
1.433 4.00 4.433 17.00 7.433 13.00 10.43 38.00
1.467 4.00 4.467 17.00 7.467 13.00 10.47 38.00
1.500 4.00 4.500 17.00 7.500 13.00 10.50 38.00
1.533 4.00 4.533 17.00 7.533 13.00 10.53 38.00
1.567 4.00 4.567 17.00 7.567 13.00 10.57 38.00
1.600 4.00 4.600 17.00 7.600 13.00 10.60 38.00
1.633 4.00 4.633 17.00 7.633 13.00 10.63 38.00
1.667 4.00 4.667 17.00 7.667 13.00 10.67 38.00
1.700 4.00 4.700 17.00 7.700 13.00 10.70 38.00
1.733 4.00 4.733 17.00 7.733 13.00 10.73 38.00
1.767 4.00 4.767 17.00 7.767 13.00 10.77 38.00
1.800 4.00 4.800 17.00 7.800 13.00 10.80 38.00
1.833 4.00 4.833 17.00 7.833 13.00 10.83 38.00
1.867 4.00 4.867 17.00 7.867 13.00 10.87 38.00
1.900 4.00 4.900 17.00 7.900 13.00 10.90 38.00
1.933 4.00 4.933 17.00 7.933 13.00 10.93 38.00
1.967 4.00 4.967 17.00 7.967 13.00 10.97 38.00

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2.000	4.00	5.000	17.00	8.000	13.00	11.00	37.98
2.033	6.00	5.033	13.00	8.033	13.00	11.03	13.00
2.067	6.00	5.067	13.00	8.067	13.00	11.07	13.00
2.100	6.00	5.100	13.00	8.100	13.00	11.10	13.00
2.133	6.00	5.133	13.00	8.133	13.00	11.13	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.200	6.00	5.200	13.00	8.200	13.00	11.20	13.00
2.233	6.00	5.233	13.00	8.233	13.00	11.23	13.00
2.267	6.00	5.267	13.00	8.267	13.00	11.27	13.00
2.300	6.00	5.300	13.00	8.300	13.00	11.30	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.367	6.00	5.367	13.00	8.367	13.00	11.37	13.00
2.400	6.00	5.400	13.00	8.400	13.00	11.40	13.00
2.433	6.00	5.433	13.00	8.433	13.00	11.43	13.00
2.467	6.00	5.467	13.00	8.467	13.00	11.47	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.533	6.00	5.533	13.00	8.533	13.00	11.53	13.00
2.567	6.00	5.567	13.00	8.567	13.00	11.57	13.00
2.600	6.00	5.600	13.00	8.600	13.00	11.60	13.00
2.633	6.00	5.633	13.00	8.633	13.00	11.63	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.700	6.00	5.700	13.00	8.700	13.00	11.70	13.00
2.733	6.00	5.733	13.00	8.733	13.00	11.73	13.00
2.767	6.00	5.767	13.00	8.767	13.00	11.77	13.00
2.800	6.00	5.800	13.00	8.800	13.00	11.80	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.867	6.00	5.867	13.00	8.867	13.00	11.87	13.00
2.900	6.00	5.900	13.00	8.900	13.00	11.90	13.00
2.933	6.00	5.933	13.00	8.933	13.00	11.93	13.00
2.967	6.00	5.967	13.00	8.967	13.00	11.97	13.00
3.000	6.00	6.000	13.00	9.000	13.01	12.00	12.98

Unit Hyd Qpeak (cms)= 7.382

PEAK FLOW (cms)= 5.427 (i)
TIME TO PEAK (hrs)= 10.033
RUNOFF VOLUME (mm)= 128.140
TOTAL RAINFALL (mm)= 211.999
RUNOFF COEFFICIENT = 0.604

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (3520)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1	2 = 3				
ID1= 1 (3409):		376.54	49.377	10.00	171.33
+ ID2= 2 (3500):		48.32	5.427	10.03	128.14
=====		=====			
ID = 3 (3520):		424.86	54.784	10.00	166.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (4000)		Area (ha)=	11.35	
ID= 1 DT= 5.0 min		Total Imp(%)=	33.30	Dir. Conn.(%)= 33.30
		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	3.78	7.57	
Dep. Storage	(mm)=	1.50	5.00	
Average slope	(%)=	2.38	2.38	
Length	(m)=	275.08	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	6.00	3.083	13.00	6.083	23.00	9.08	53.00
0.167	6.00	3.167	13.00	6.167	23.00	9.17	53.00
0.250	6.00	3.250	13.00	6.250	23.00	9.25	53.00
0.333	6.00	3.333	13.00	6.333	23.00	9.33	53.00
0.417	6.00	3.417	13.00	6.417	23.00	9.42	53.00
0.500	6.00	3.500	13.00	6.500	23.00	9.50	53.00
0.583	6.00	3.583	13.00	6.583	23.00	9.58	53.00
0.667	6.00	3.667	13.00	6.667	23.00	9.67	53.00
0.750	6.00	3.750	13.00	6.750	23.00	9.75	53.00
0.833	6.00	3.833	13.00	6.833	23.00	9.83	53.00
0.917	6.00	3.917	13.00	6.917	23.00	9.92	53.00

1.000	6.00	4.000	13.00	7.000	23.00	10.00	53.00
1.083	4.00	4.083	17.00	7.083	13.00	10.08	38.00
1.167	4.00	4.167	17.00	7.167	13.00	10.17	38.00
1.250	4.00	4.250	17.00	7.250	13.00	10.25	38.00
1.333	4.00	4.333	17.00	7.333	13.00	10.33	38.00
1.417	4.00	4.417	17.00	7.417	13.00	10.42	38.00
1.500	4.00	4.500	17.00	7.500	13.00	10.50	38.00
1.583	4.00	4.583	17.00	7.583	13.00	10.58	38.00
1.667	4.00	4.667	17.00	7.667	13.00	10.67	38.00
1.750	4.00	4.750	17.00	7.750	13.00	10.75	38.00
1.833	4.00	4.833	17.00	7.833	13.00	10.83	38.00
1.917	4.00	4.917	17.00	7.917	13.00	10.92	38.00
2.000	4.00	5.000	17.00	8.000	13.00	11.00	38.00
2.083	6.00	5.083	13.00	8.083	13.00	11.08	13.00
2.167	6.00	5.167	13.00	8.167	13.00	11.17	13.00
2.250	6.00	5.250	13.00	8.250	13.00	11.25	13.00
2.333	6.00	5.333	13.00	8.333	13.00	11.33	13.00
2.417	6.00	5.417	13.00	8.417	13.00	11.42	13.00
2.500	6.00	5.500	13.00	8.500	13.00	11.50	13.00
2.583	6.00	5.583	13.00	8.583	13.00	11.58	13.00
2.667	6.00	5.667	13.00	8.667	13.00	11.67	13.00
2.750	6.00	5.750	13.00	8.750	13.00	11.75	13.00
2.833	6.00	5.833	13.00	8.833	13.00	11.83	13.00
2.917	6.00	5.917	13.00	8.917	13.00	11.92	13.00
3.000	6.00	6.000	13.00	9.000	13.00	12.00	13.00

Max.Eff.Inten.(mm/hr)= 53.00 47.58
over (min) 5.00 15.00
Storage Coeff. (min)= 4.66 (ii) 13.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

TOTALS
PEAK FLOW (cms)= 0.56 0.97 1.528 (iii)
TIME TO PEAK (hrs)= 10.00 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 154.01 172.82
TOTAL RAINFALL (mm)= 212.00 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.73 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4009)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (3520):	424.86	54.784	10.00	166.42
+ ID2= 2 (4000):	11.35	1.528	10.00	172.82
=====				
ID = 3 (4009):	436.21	56.312	10.00	166.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)= 14.42	
STANDHYD (4100)	Total Imp(%)= 37.70	Dir. Conn.(%)= 35.50
ID= 1 DT= 5.0 min		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.44	8.98
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	3.20	3.20
Length (m)=	310.05	40.00
Mannings n =	0.013	0.250

Max.Eff.Inten.(mm/hr)= 53.00 49.53
over (min) 5.00 15.00
Storage Coeff. (min)= 4.58 (ii) 12.70 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

TOTALS
PEAK FLOW (cms)= 0.75 1.21 1.960 (iii)
TIME TO PEAK (hrs)= 10.00 10.00 10.00
RUNOFF VOLUME (mm)= 210.50 155.53 175.04
TOTAL RAINFALL (mm)= 212.00 212.00 212.00
RUNOFF COEFFICIENT = 0.99 0.73 0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4109)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (4009):	436.21	56.312	10.00	166.58
+ ID2= 2 (4100):	14.42	1.960	10.00	175.04
=====				
ID = 3 (4109):	450.63	58.272	10.00	166.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (4200)				
ID= 1 DT= 5.0 min				
Area (ha)=	1.06			
Total Imp(%)=	45.00	Dir. Conn.(%)=	38.30	
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.48	0.58		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	2.56	2.56		
Length (m)=	84.06	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	53.00	54.30		
over (min)=	5.00	15.00		
Storage Coeff. (min)=	2.24 (ii)	10.61 (ii)		
Unit Hyd. Tpeak (min)=	5.00	15.00		
Unit Hyd. peak (cms)=	0.30	0.09		
			TOTALS	
PEAK FLOW (cms)=	0.06	0.09	0.146 (iii)	
TIME TO PEAK (hrs)=	9.58	10.00	10.00	
RUNOFF VOLUME (mm)=	210.50	158.93	178.67	
TOTAL RAINFALL (mm)=	212.00	212.00	212.00	
RUNOFF COEFFICIENT =	0.99	0.75	0.84	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4209)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (4109):	450.63	58.272	10.00	166.85
+ ID2= 2 (4200):	1.06	0.146	10.00	178.67
=====				
ID = 3 (4209):	451.69	58.418	10.00	166.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (4300)				
ID= 1 DT= 5.0 min				
Area (ha)=	0.95			
Total Imp(%)=	45.00	Dir. Conn.(%)=	38.30	
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.43	0.52		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	1.63	1.63		
Length (m)=	79.58	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	53.00	54.30		
over (min)=	5.00	15.00		
Storage Coeff. (min)=	2.48 (ii)	12.06 (ii)		
Unit Hyd. Tpeak (min)=	5.00	15.00		
Unit Hyd. peak (cms)=	0.29	0.09		
			TOTALS	
PEAK FLOW (cms)=	0.05	0.08	0.131 (iii)	

TIME TO PEAK	(hrs)=	9.67	10.00	10.00
RUNOFF VOLUME	(mm)=	210.50	158.93	178.67
TOTAL RAINFALL	(mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT	=	0.99	0.75	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 78.1 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4309)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (4209):	451.69	58.418	10.00	166.88
+ ID2= 2 (4300):	0.95	0.131	10.00	178.67
=====				
ID = 3 (4309):	452.64	58.549	10.00	166.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (4400)		Area (ha)= 1.19	
ID= 1 DT= 5.0 min		Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.54	0.65	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	2.86	2.86	
Length (m)=	89.07	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	54.30	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.24 (ii)	10.34 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.30	0.09	
			TOTALS
PEAK FLOW (cms)=	0.07	0.10	0.164 (iii)
TIME TO PEAK (hrs)=	9.58	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	158.93	178.67
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 78.1 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (4409)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (4309):	452.64	58.549	10.00	166.91
+ ID2= 2 (4400):	1.19	0.164	10.00	178.67
=====				
ID = 3 (4409):	453.83	58.713	10.00	166.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (5000)		Area (ha)= 15.67	
ID= 1 DT= 5.0 min		Total Imp(%)= 47.70	Dir. Conn.(%)= 43.60

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	7.47	8.20
Dep. Storage (mm)=	1.50	5.00
Average Slope (%)=	3.10	3.10
Length (m)=	323.21	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	53.00	51.91

over (min)	5.00	15.00	
Storage Coeff. (min)=	4.74 (ii)	12.79 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.22	0.08	
			TOTALS
PEAK FLOW (cms)=	1.01	1.15	2.159 (iii)
TIME TO PEAK (hrs)=	10.00	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	157.27	180.48
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.74	0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (5009)				
1 + 2 = 3				
ID1= 1 (4409):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (5000):	453.83	58.713	10.00	166.94
	15.67	2.159	10.00	180.48
ID = 3 (5009):	469.50	60.873	10.00	167.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (6000)	Area (ha)= 1.00		
ID= 1 DT= 5.0 min	Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.45	0.55	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.88	0.88	
Length (m)=	81.65	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	54.19	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.03 (ii)	14.57 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.27	0.08	
			TOTALS
PEAK FLOW (cms)=	0.06	0.08	0.137 (iii)
TIME TO PEAK (hrs)=	9.75	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	158.93	178.67
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6009)				
1 + 2 = 3				
ID1= 1 (5009):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (6000):	469.50	60.873	10.00	167.39
	1.00	0.137	10.00	178.67
ID = 3 (6009):	470.50	61.009	10.00	167.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (6100)	Area (ha)= 0.94		
ID= 1 DT= 5.0 min	Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.42	0.52	

Dep. Storage	(mm)=	1.50	5.00	
Average Slope	(%)=	2.41	2.41	
Length	(m)=	79.16	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		53.00	54.30	
over (min)		5.00	15.00	
Storage Coeff. (min)=		2.20 (ii)	10.72 (ii)	
Unit Hyd. Tpeak (min)=		5.00	15.00	
Unit Hyd. peak (cms)=		0.30	0.09	
				TOTALS
PEAK FLOW (cms)=		0.05	0.08	0.130 (iii)
TIME TO PEAK (hrs)=		9.58	10.00	10.00
RUNOFF VOLUME (mm)=		210.50	158.93	178.67
TOTAL RAINFALL (mm)=		212.00	212.00	212.00
RUNOFF COEFFICIENT =		0.99	0.75	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6109)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6009):	470.50	61.009	10.00	167.41
+ ID2= 2 (6100):	0.94	0.130	10.00	178.67
ID = 3 (6109):	471.44	61.139	10.00	167.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6200)				
ID= 1 DT= 5.0 min	Area (ha)= 2.11			
	Total Imp(%)= 45.00	Dir. Conn.(%)= 38.30		
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.95	1.16		
Dep. Storage (mm)=	1.50	5.00		
Average Slope (%)=	0.75	0.75		
Length (m)=	118.60	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	53.00	54.19		
over (min)	5.00	20.00		
Storage Coeff. (min)=	3.98 (ii)	16.08 (ii)		
Unit Hyd. Tpeak (min)=	5.00	20.00		
Unit Hyd. peak (cms)=	0.24	0.06		
				TOTALS
PEAK FLOW (cms)=	0.12	0.17		0.285 (iii)
TIME TO PEAK (hrs)=	10.00	10.00		10.00
RUNOFF VOLUME (mm)=	210.50	158.93		178.67
TOTAL RAINFALL (mm)=	212.00	212.00		212.00
RUNOFF COEFFICIENT =	0.99	0.75		0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6209)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6109):	471.44	61.139	10.00	167.43
+ ID2= 2 (6200):	2.11	0.285	10.00	178.67
ID = 3 (6209):	473.55	61.425	10.00	167.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6300)	Area (ha)=	1.06		
ID= 1 DT= 5.0 min	Total Imp(%)=	47.60	Dir. Conn.(%)=	41.40

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.50	0.56	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.85	0.85	
Length (m)=	84.06	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	54.00	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.12 (ii)	14.79 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.27	0.08	
			TOTALS
PEAK FLOW (cms)=	0.06	0.08	0.145 (iii)
TIME TO PEAK (hrs)=	9.75	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	158.80	180.19
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6309)				
1 + 2 = 3				
ID1= 1 (6209):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (6300):	1.06	0.145	10.00	180.19
ID = 3 (6309):	474.61	61.570	10.00	167.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6400)	Area (ha)=	1.88		
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)=	38.30

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.85	1.03	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	1.92	1.92	
Length (m)=	111.95	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	54.30	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.90 (ii)	12.02 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.28	0.09	
			TOTALS
PEAK FLOW (cms)=	0.11	0.15	0.259 (iii)
TIME TO PEAK (hrs)=	9.75	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	158.93	178.67
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (6412)				
1 + 2 = 3				
ID1= 1 (6309):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (6400):	1.88	0.259	10.00	178.67

=====

ID = 3 (6412):	476.49	61.829	10.00	167.56
-----------------	--------	--------	-------	--------

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (7000) ID= 1 DT= 5.0 min	Area (ha)= 4.56 Total Imp(%)= 54.40	Dir. Conn.(%)= 49.40
--	--	----------------------

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.48	2.08	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	1.68	1.68	
Length (m)=	174.36	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	53.63	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.93 (ii)	13.48 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.24	0.08	
			TOTALS
PEAK FLOW (cms)=	0.33	0.30	0.633 (iii)
TIME TO PEAK (hrs)=	10.00	10.00	10.00
RUNOFF VOLUME (mm)=	210.50	158.47	184.17
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
-

ADD HYD (7012) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6412):	476.49	61.829	10.00	167.56
+ ID2= 2 (7000):	4.56	0.633	10.00	184.17
=====				
ID = 3 (7012):	481.05	62.462	10.00	167.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (8000) ID= 1 DT= 5.0 min	Area (ha)= 13.26 Total Imp(%)= 68.60	Dir. Conn.(%)= 64.20
--	---	----------------------

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	9.10	4.16	
Dep. Storage (mm)=	1.50	5.00	
Average Slope (%)=	0.87	0.87	
Length (m)=	297.32	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	53.00	55.20	
over (min)	5.00	20.00	
Storage Coeff. (min)=	6.60 (ii)	18.09 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.18	0.06	
			TOTALS
PEAK FLOW (cms)=	1.25	0.60	1.853 (iii)
TIME TO PEAK (hrs)=	10.00	10.08	10.00
RUNOFF VOLUME (mm)=	210.50	159.59	192.27
TOTAL RAINFALL (mm)=	212.00	212.00	212.00
RUNOFF COEFFICIENT =	0.99	0.75	0.91

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
-
-

ADD HYD (8011)					
1 + 2 = 3					

		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (7012):	481.05	62.462	10.00	167.71
+	ID2= 2 (8000):	13.26	1.853	10.00	192.27
=====					
	ID = 3 (8011):	494.31	64.314	10.00	168.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

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KIDD'S CREEK PRE-DEVELOPMENT HEC-RAS MODELING RESULTS

HEC-RAS Plan: KF2LiRASupdateGR River: RIVER-1 Reach: Reach-1 Profile: Hazel

Reach	River Sta	Profile	Q Total	W.S. Elev	Crit W.S.	E.G. Elev	Vel Left	Vel Right
			(m3/s)	(m)	(m)	(m)	(m/s)	(m/s)
Reach-1	3617	Hazel	31.00	273.07	273.07	273.45	1.04	1.06
Reach-1	3435	Hazel	31.00	270.45	270.45	270.82	0.99	1.44
Reach-1	3365	Hazel	31.00	269.86	268.40	269.88	0.28	0.31
Reach-1	3318	Hazel	31.00	269.86	268.97	269.87	0.31	0.28
Reach-1	3313	Hazel	31.00	269.86	268.97	269.87	0.28	0.26
Reach-1	3301		Bridge					
Reach-1	3289	Hazel	31.00	268.04	268.04	268.11	1.08	0.69
Reach-1	3284	Hazel	31.00	267.78		267.89	1.39	1.21
Reach-1	3226	Hazel	36.30	267.77		267.82	0.75	0.55
Reach-1	3180	Hazel	36.30	267.74	266.12	267.80	0.73	0.66
Reach-1	3131	Hazel	36.30	267.76	265.46	267.78	0.46	0.36
Reach-1	3128	Hazel	36.30	267.77	266.07	267.77	0.14	0.15
Reach-1	3098.5		Bridge					
Reach-1	3069	Hazel	36.30	263.83	263.83	265.22		
Reach-1	3066	Hazel	53.80	263.92	263.92	264.40	1.42	1.60
Reach-1	2981	Hazel	53.80	261.21	261.21	261.46	1.37	1.30
Reach-1	2902	Hazel	53.80	260.29	260.29	260.60	1.47	1.32
Reach-1	2702	Hazel	53.80	255.84	255.84	256.07	1.52	1.37
Reach-1	2447	Hazel	53.80	252.46	251.86	252.48	0.58	0.53
Reach-1	2327	Hazel	53.80	252.45	251.11	252.45	0.33	0.28
Reach-1	2234	Hazel	53.80	252.45	249.91	252.45	0.09	0.06
Reach-1	2209	Hazel	53.80	252.45	250.36	252.45	0.10	0.09
Reach-1	2051	Hazel	53.80	252.45	251.11	252.45	0.05	0.05
Reach-1	2010.5		Bridge					
Reach-1	1970	Hazel	53.80	252.24	245.22	252.24	0.03	0.03
Reach-1	1963	Hazel	53.80	252.24		252.24	0.03	0.03
Reach-1	1955	Hazel	55.20	252.24	246.51	252.24	0.05	0.04
Reach-1	1915		Bridge					
Reach-1	1875	Hazel	55.20	245.83	245.83	247.66		
Reach-1	1845	Hazel	55.20	243.17	243.17	243.40	1.15	1.07
Reach-1	1800	Hazel	57.20	242.61	242.61	242.84	0.69	1.32
Reach-1	1725	Hazel	57.20	241.80		241.89	1.05	0.95
Reach-1	1680	Hazel	57.20	241.82	240.83	241.83	0.44	0.49
Reach-1	1676	Hazel	57.20	241.82	240.79	241.83	0.42	0.45
Reach-1	1672.5		Bridge					
Reach-1	1669	Hazel	57.20	240.63	240.62	240.75	0.91	1.50
Reach-1	1658	Hazel	57.20	240.61	240.23	240.69	0.56	1.10
Reach-1	1586	Hazel	57.20	240.59		240.61	0.40	0.62
Reach-1	1535	Hazel	57.20	240.53	239.27	240.58	0.60	0.70
Reach-1	1531	Hazel	57.60	240.54	239.20	240.57	0.38	0.51
Reach-1	1499.5		Bridge					
Reach-1	1468	Hazel	57.60	238.99	238.99	239.22	1.02	0.59
Reach-1	1466	Hazel	57.60	238.72		238.87	1.16	0.55
Reach-1	1460	Hazel	57.60	238.74		238.82	0.92	0.70
Reach-1	1457	Hazel	57.60	238.47	238.47	238.75	1.28	0.85
Reach-1	1449	Hazel	57.60	238.35	238.35	238.63	1.27	0.85
Reach-1	1447	Hazel	57.60	238.23	237.76	238.36	0.92	0.33
Reach-1	1433	Hazel	57.60	238.26	237.43	238.30	0.60	0.32
Reach-1	1425	Hazel	57.60	238.15	237.84	238.27	0.44	0.44
Reach-1	1399		Bridge					
Reach-1	1373	Hazel	57.60	236.14	236.14	236.44	1.31	1.07

HEC-RAS Plan: KF2LiRASupdateGR River: RIVER-1 Reach: Reach-1 Profile: Hazel (Continued)

Reach	River Sta	Profile	Q Total	W.S. Elev	Crit W.S.	E.G. Elev	Vel Left	Vel Right
			(m3/s)	(m)	(m)	(m)	(m/s)	(m/s)
Reach-1	1371	Hazel	57.60	235.90	235.90	236.17	1.66	1.55
Reach-1	1367	Hazel	57.60	235.61	235.61	235.93	1.45	0.91
Reach-1	1359	Hazel	57.60	235.57	235.57	235.89	1.45	0.91
Reach-1	1302	Hazel	57.60	233.86	233.86	234.03	1.26	0.61
Reach-1	1262	Hazel	57.60	233.20		233.24	0.66	0.52
Reach-1	1256	Hazel	57.60	233.12		233.22	0.95	1.07
Reach-1	1234	Hazel	57.60	232.94	232.94	233.14	1.31	0.83
Reach-1	1225	Hazel	57.60	232.64	232.64	232.84	0.91	0.59
Reach-1	1222	Hazel	59.70	232.67	232.50	232.79	0.56	0.46
Reach-1	1211.5		Bridge					
Reach-1	1201	Hazel	59.70	232.05	232.05	232.31	0.97	0.33
Reach-1	1200	Hazel	59.70	231.96	231.96	232.19	1.26	0.35
Reach-1	1198	Hazel	59.70	231.80	231.80	231.97	1.57	0.49
Reach-1	1188	Hazel	59.70	231.56	231.56	231.87	1.99	1.15
Reach-1	1187	Hazel	59.70	231.46	231.46	231.66	1.50	0.91
Reach-1	1167	Hazel	59.70	231.17	231.17	231.36	1.29	0.04
Reach-1	1072	Hazel	59.70	228.99	228.99	229.25	1.69	1.32
Reach-1	1022	Hazel	59.70	228.88	228.71	229.03	1.21	1.16
Reach-1	1017	Hazel	61.30	228.91	228.60	228.97	1.03	0.65
Reach-1	1003		Bridge					
Reach-1	989	Hazel	61.30	228.32	227.82	228.45	0.97	0.67
Reach-1	986	Hazel	61.30	228.32	228.32	228.44	1.00	0.69
Reach-1	941	Hazel	61.30	228.07		228.17	0.67	0.71
Reach-1	913	Hazel	61.30	227.22	227.22	228.06	1.07	1.32
Reach-1	904	Hazel	61.30	226.81	226.81	227.64	1.25	1.32
Reach-1	898	Hazel	61.30	226.93		227.25	0.87	0.90
Reach-1	890	Hazel	61.30	226.94		227.22	0.73	0.46
Reach-1	886	Hazel	61.30	226.83		227.19	0.97	0.83
Reach-1	871	Hazel	61.30	226.98		227.10	0.85	0.66
Reach-1	855	Hazel	61.30	226.96	225.70	227.09	0.33	0.24
Reach-1	842.5		Culvert					
Reach-1	830	Hazel	61.30	226.80	226.38	226.98	0.32	0.45
Reach-1	828	Hazel	61.30	226.85		226.92	0.48	0.66
Reach-1	826	Hazel	61.30	226.85		226.92	0.39	0.81
Reach-1	824	Hazel	61.30	226.61		226.86	1.11	1.23
Reach-1	816	Hazel	61.30	226.40	226.34	226.79	1.05	1.24
Reach-1	813	Hazel	61.30	226.50		226.67	0.82	1.02
Reach-1	795	Hazel	61.30	226.58		226.62	0.39	0.54
Reach-1	775	Hazel	61.30	226.15	226.15	226.57	0.24	1.34
Reach-1	736	Hazel	61.30	226.03		226.11	0.40	1.05
Reach-1	735	Hazel	61.30	226.02	225.27	226.11	0.03	1.18
Reach-1	700	Hazel	61.30	226.00	224.86	226.07	0.30	1.08
Reach-1	697	Hazel	54.70	225.99		226.07	0.02	0.03
Reach-1	632	Hazel	54.70	225.93		225.94	0.02	0.20
Reach-1	610	Hazel	54.70	225.66		225.68	0.39	0.02
Reach-1	589	Hazel	54.70	224.30	224.30	224.55		0.04
Reach-1	501.1	Hazel	54.70	222.90	222.90	223.17	2.43	2.10
Reach-1	451.0	Hazel	64.00	222.68		222.73	0.85	0.92
Reach-1	388.8	Hazel	64.00	222.24	222.24	222.49	2.35	1.89
Reach-1	318.5	Hazel	64.00	221.34		221.41	1.09	0.80
Reach-1	278.8	Hazel	64.00	221.06	221.05	221.29	1.40	1.24

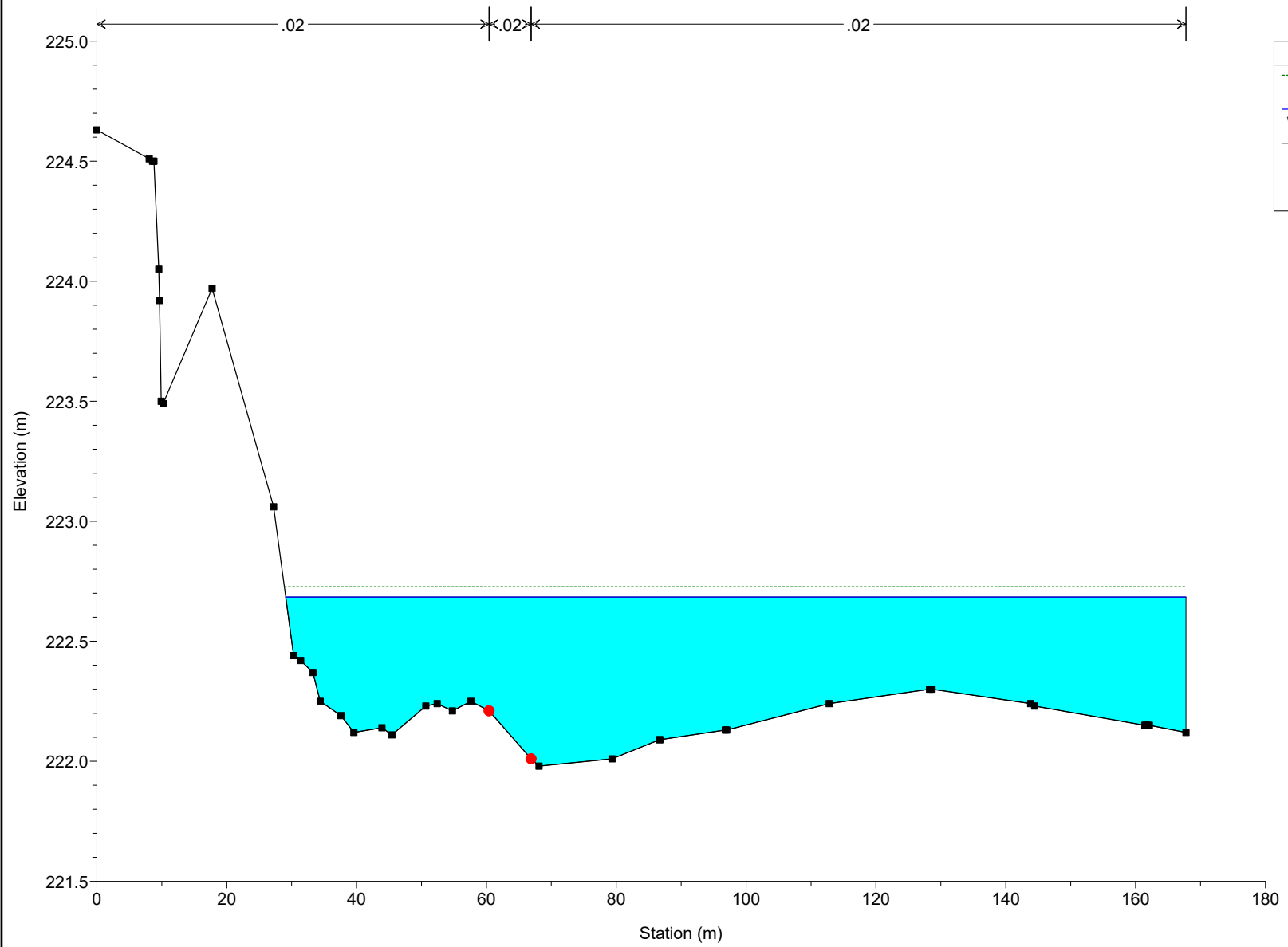
HEC-RAS Plan: KF2LiRASupdateGR River: RIVER-1 Reach: Reach-1 Profile: Hazel (Continued)

Reach	River Sta	Profile	Q Total	W.S. Elev	Crit W.S.	E.G. Elev	Vel Left	Vel Right
			(m3/s)	(m)	(m)	(m)	(m/s)	(m/s)
Reach-1	234.1	Hazel	64.00	220.76	220.76	220.95	1.96	1.46
Reach-1	211.5	Hazel	64.00	220.13		220.50	0.98	
Reach-1	201.3	Hazel	64.00	220.26		220.40		
Reach-1	172.3	Hazel	64.00	220.28		220.34		0.08
Reach-1	131.6	Hazel	64.00	220.25		220.30	0.22	0.44
Reach-1	113.3	Hazel	64.00	220.17	219.65	220.27	0.31	0.37
Reach-1	113		Culvert					
Reach-1	102.7	Hazel	64.00	220.05	220.05	220.21	0.52	0.53

KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR 2022-02-23

CCTA 2006 XS14



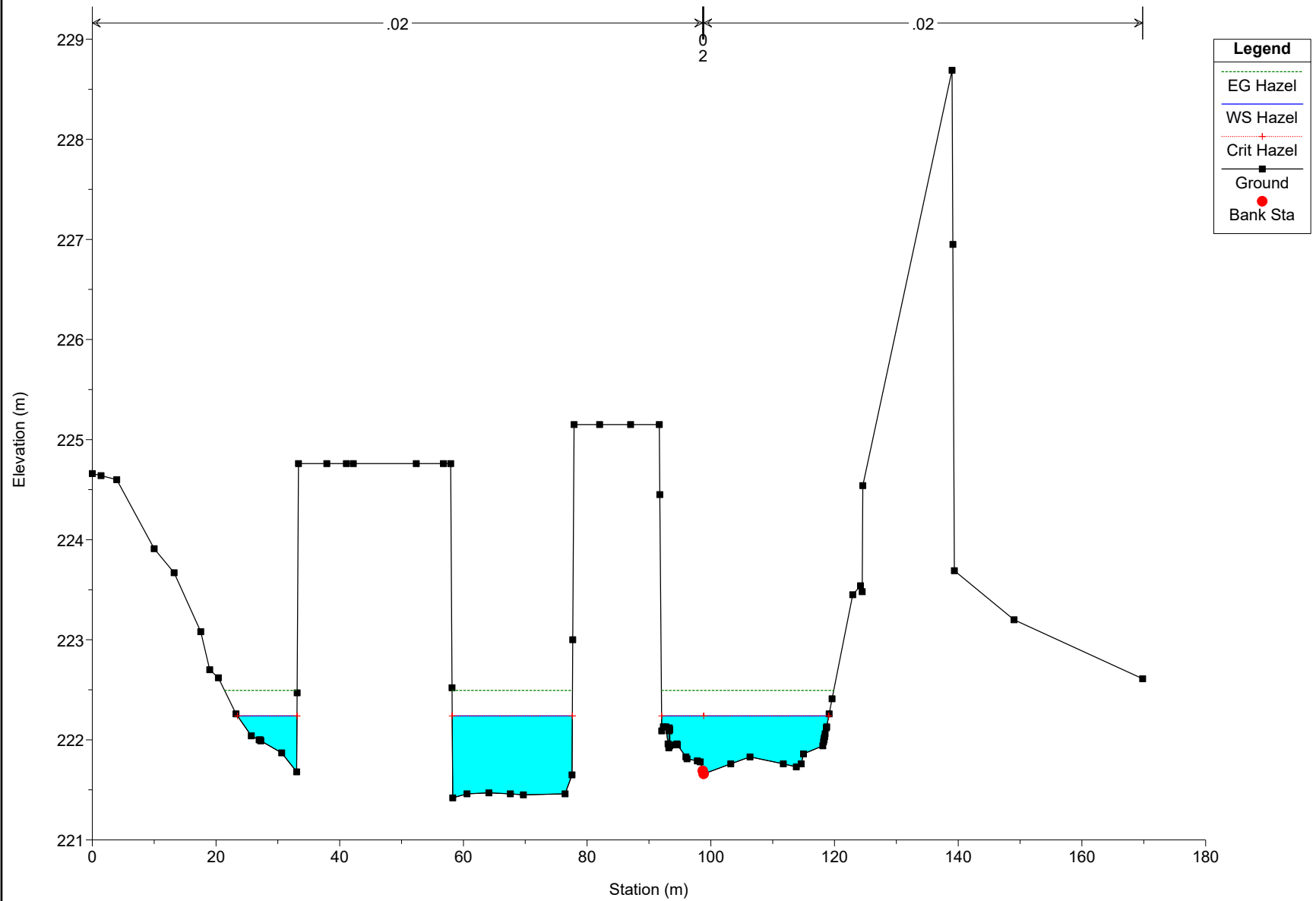
Legend	
EG Hazel	
WS Hazel	
Ground	
Bank Sta	

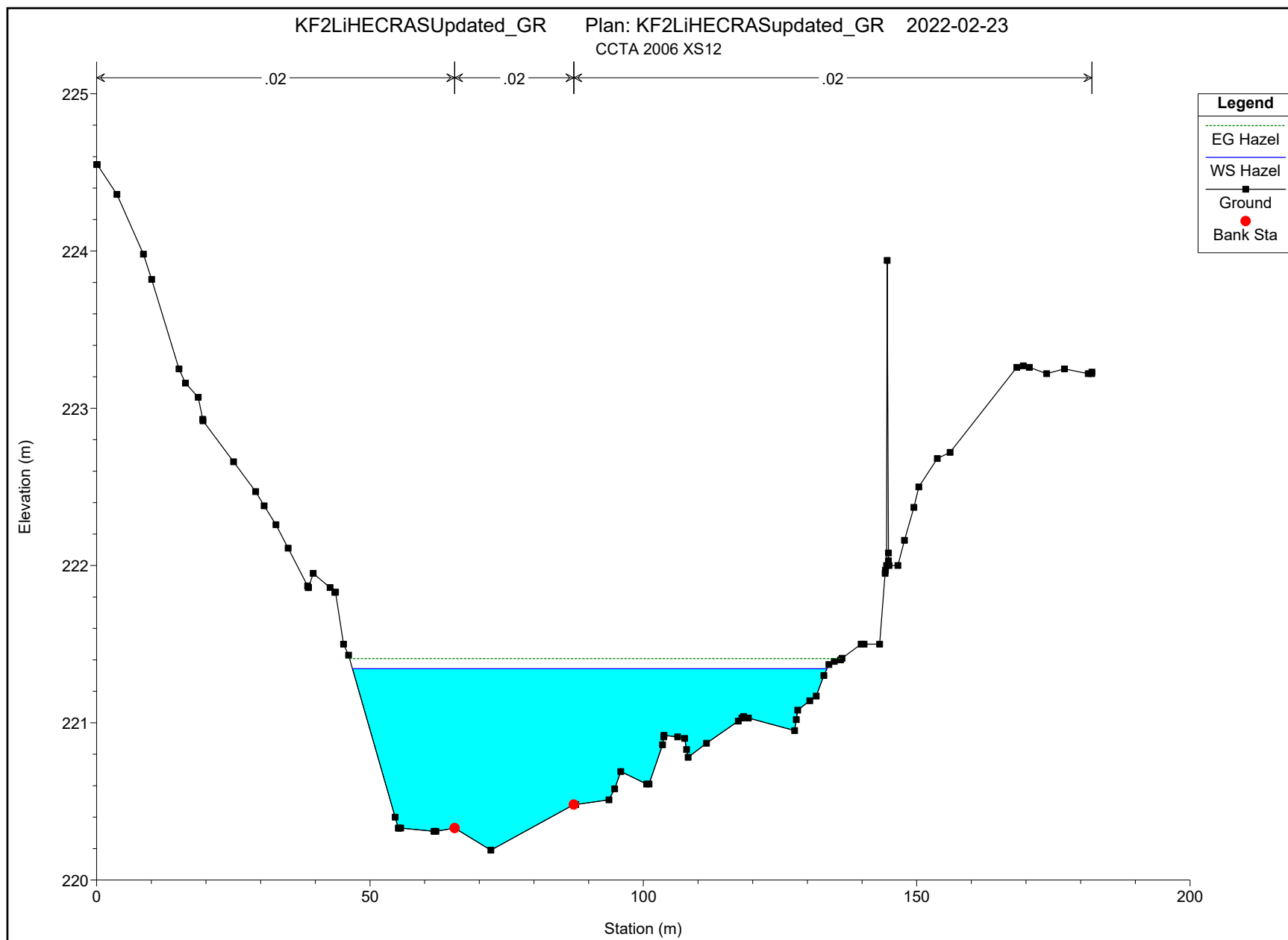
KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR

2022-02-23

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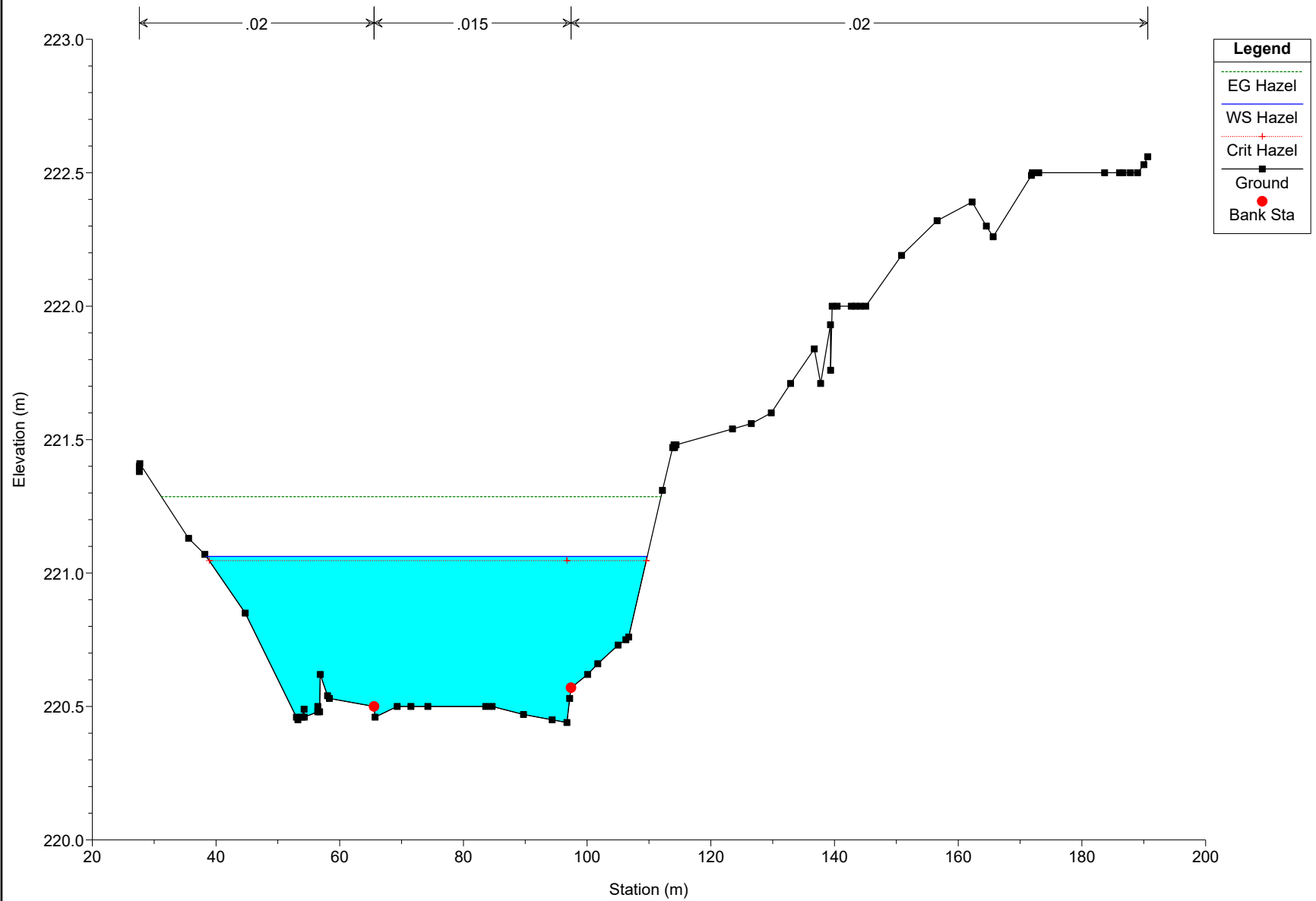




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Plan: KF2LiHECRASUpdated_GR 2022-02-23

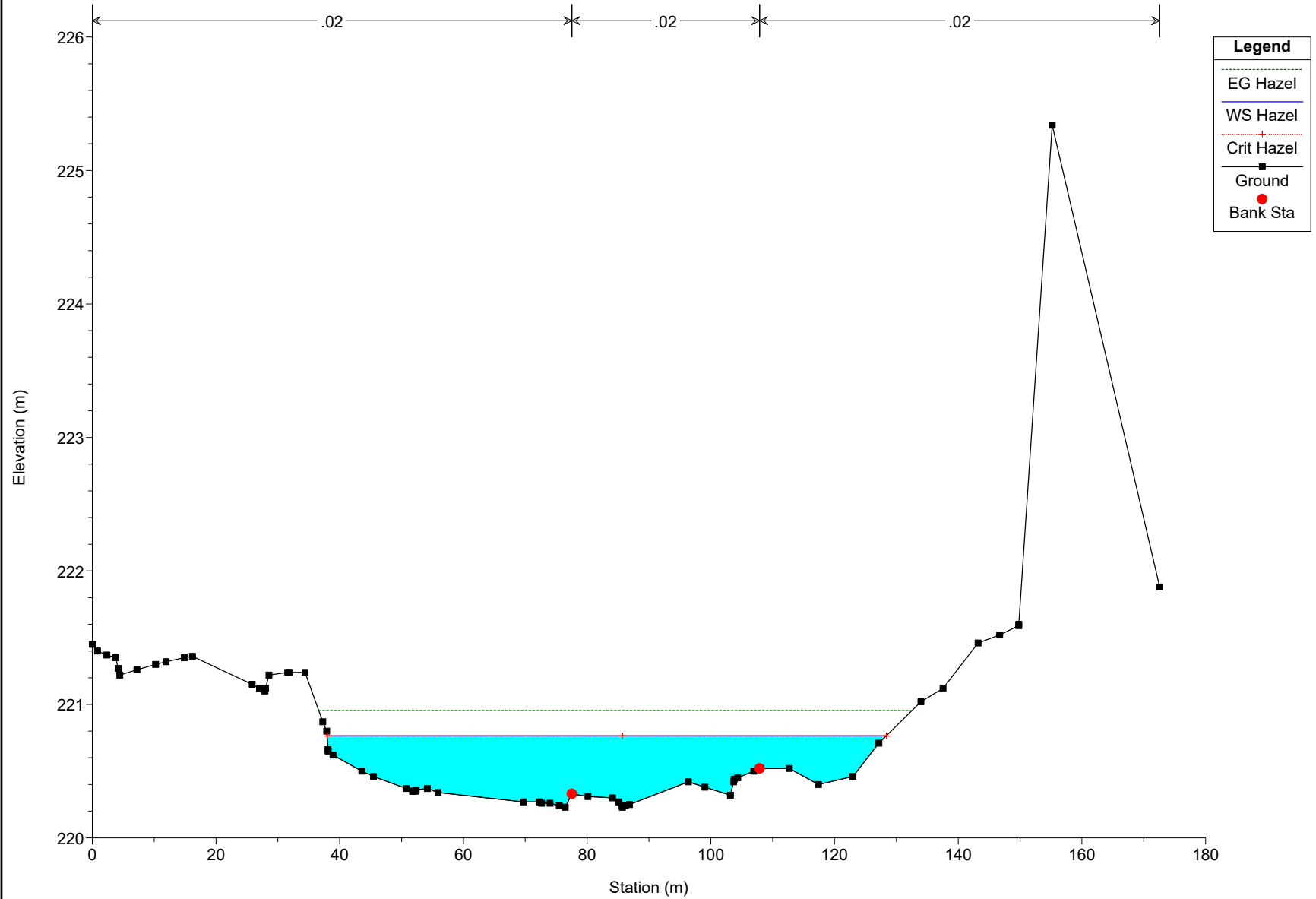
CCTA 2006 XS11



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Plan: KF2LiHECRASUpdated_GR 2022-02-23

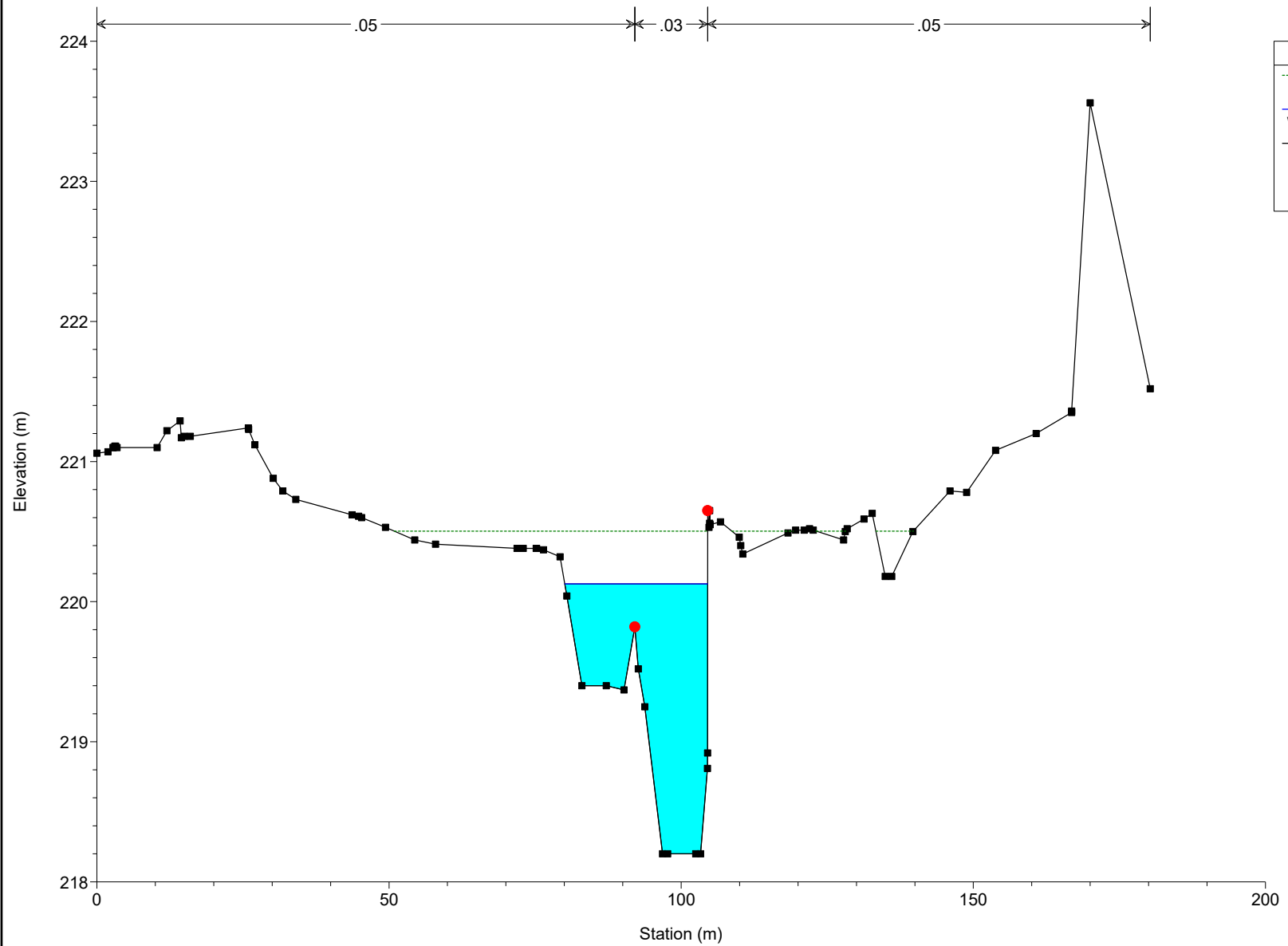
CCTA 2006 XS10

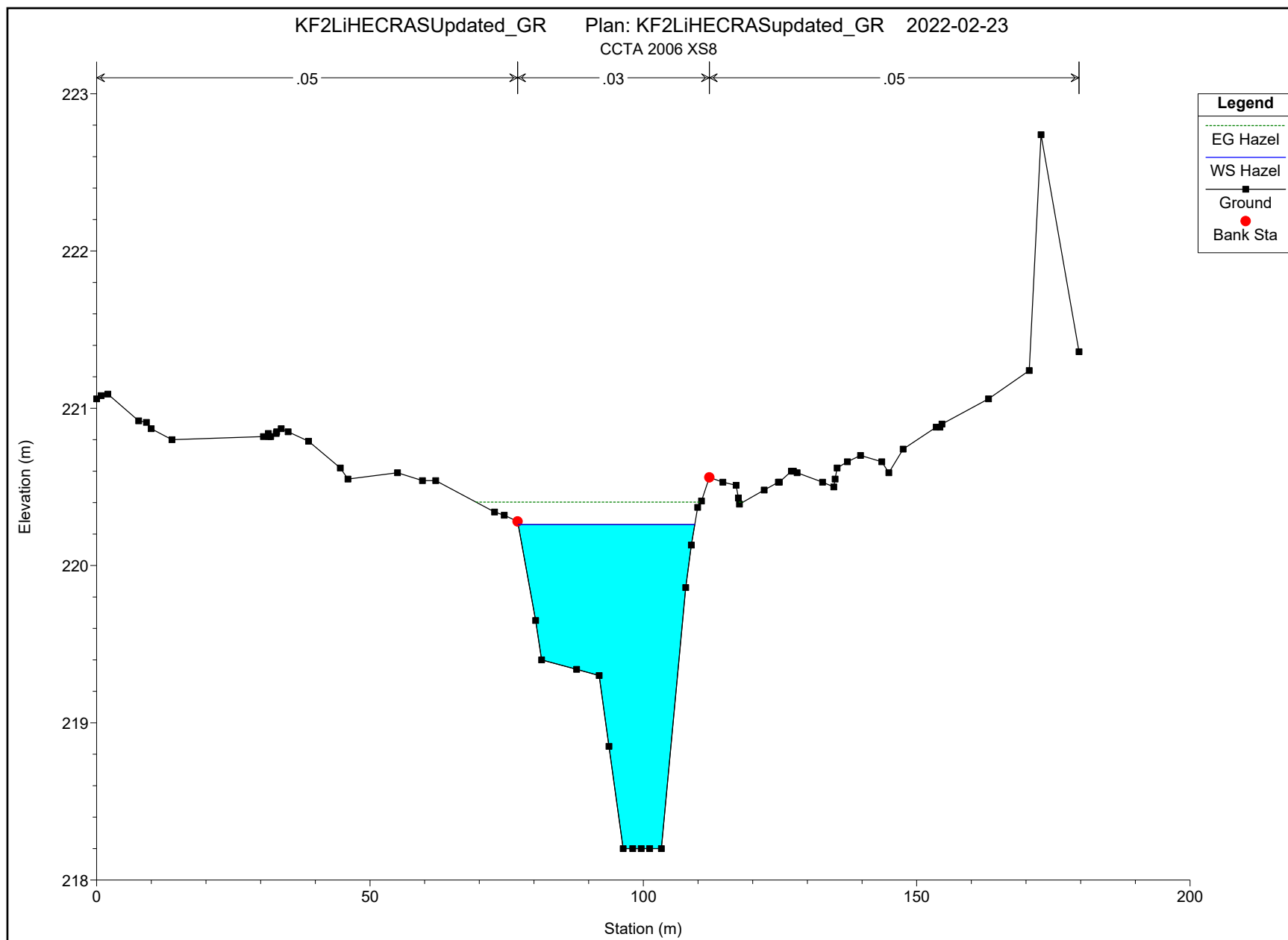


KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR 2022-02-23

CCTA 2006 XS9

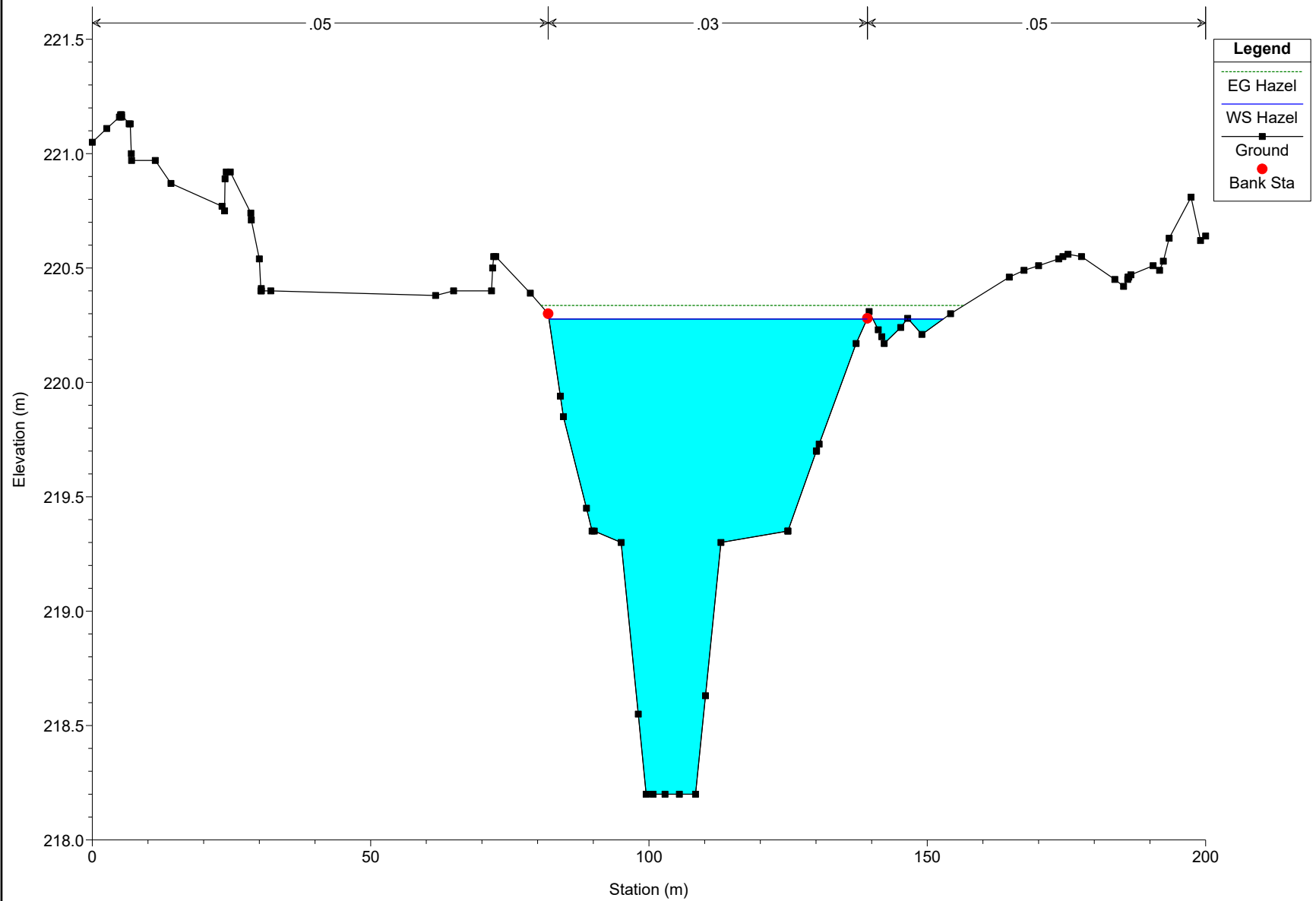




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Plan: KF2LiHECRASUpdated_GR 2022-02-23

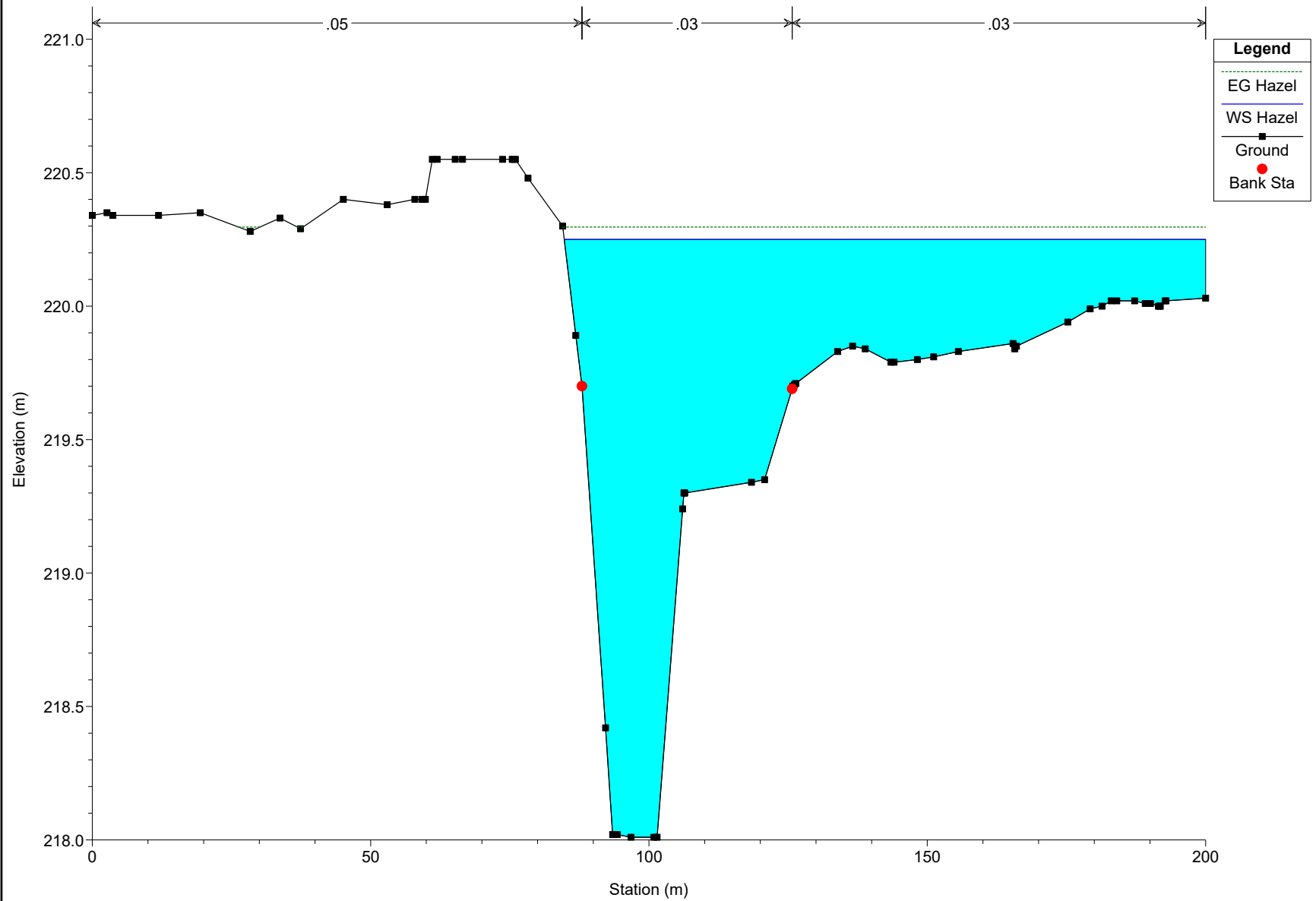
CCTA 2006 XS7



KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR 2022-02-23

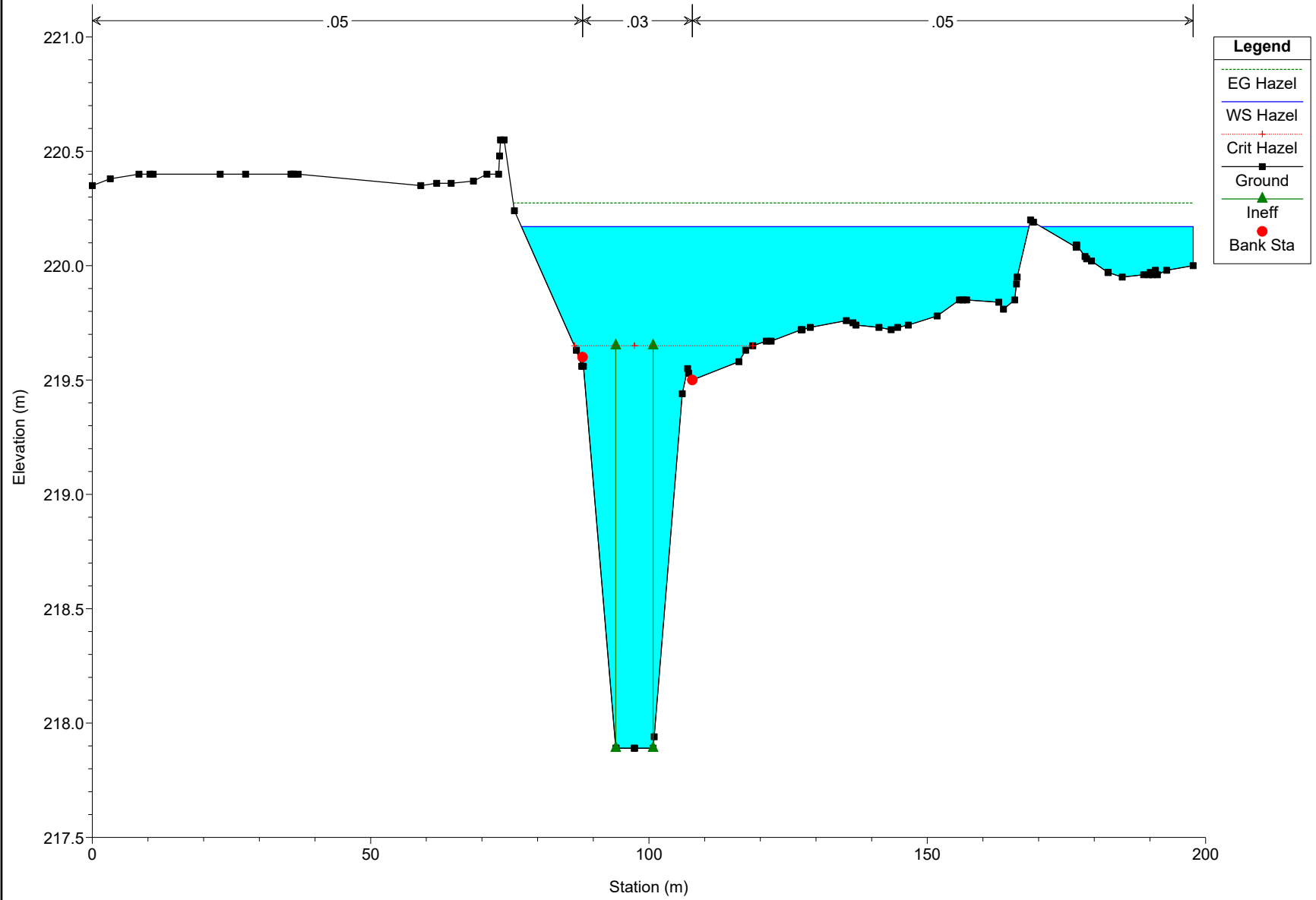
CCTA 2006 XS3

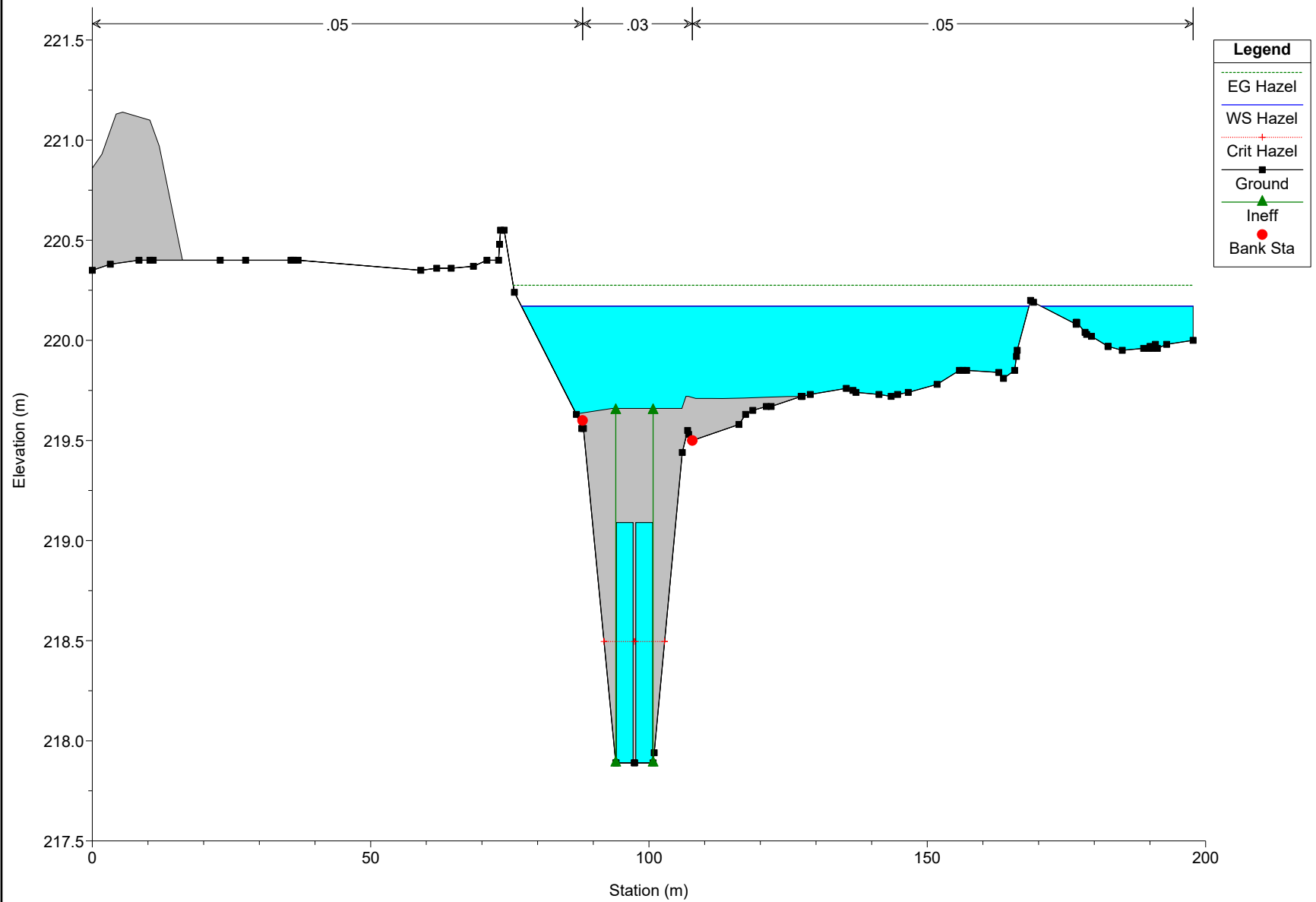


KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR 2022-02-23

CCTA 2006 XS2

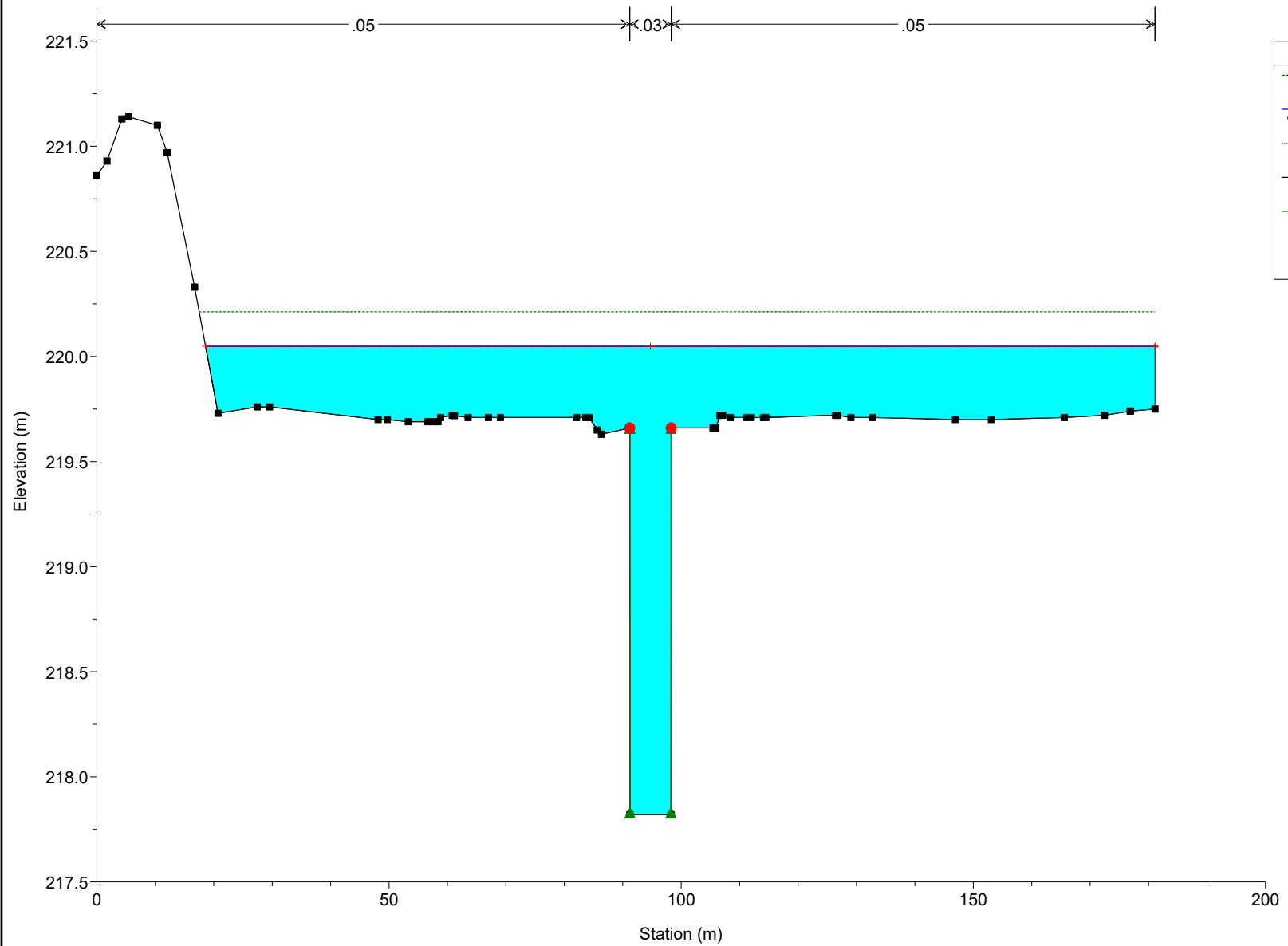




KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR 2022-02-23

CCTA 2006 XS1





**KIDD'S CREEK
POST-DEVELOPMENT HEC-RAS MODELING
RESULTS**

HEC-RAS Plan: KF2LiRASupdateGR River: RIVER-1 Reach: Reach-1 Profile: Hazel

Reach	River Sta	Profile	Q Total	W.S. Elev	Crit W.S.	E.G. Elev	Vel Left	Vel Right
			(m3/s)	(m)	(m)	(m)	(m/s)	(m/s)
Reach-1	3617	Hazel	31.00	273.07	273.07	273.45	1.04	1.06
Reach-1	3435	Hazel	31.00	270.45	270.45	270.82	0.99	1.44
Reach-1	3365	Hazel	31.00	269.86	268.40	269.88	0.28	0.31
Reach-1	3318	Hazel	31.00	269.86	268.97	269.87	0.31	0.28
Reach-1	3313	Hazel	31.00	269.86	268.97	269.87	0.28	0.26
Reach-1	3301		Bridge					
Reach-1	3289	Hazel	31.00	268.04	268.04	268.11	1.08	0.69
Reach-1	3284	Hazel	31.00	267.78		267.89	1.39	1.21
Reach-1	3226	Hazel	36.30	267.77		267.82	0.75	0.55
Reach-1	3180	Hazel	36.30	267.74	266.12	267.80	0.73	0.66
Reach-1	3131	Hazel	36.30	267.76	265.46	267.78	0.46	0.36
Reach-1	3128	Hazel	36.30	267.77	266.07	267.77	0.14	0.15
Reach-1	3098.5		Bridge					
Reach-1	3069	Hazel	36.30	263.83	263.83	265.22		
Reach-1	3066	Hazel	53.80	263.92	263.92	264.40	1.42	1.60
Reach-1	2981	Hazel	53.80	261.21	261.21	261.46	1.37	1.30
Reach-1	2902	Hazel	53.80	260.29	260.29	260.60	1.47	1.32
Reach-1	2702	Hazel	53.80	255.84	255.84	256.07	1.52	1.37
Reach-1	2447	Hazel	53.80	252.46	251.86	252.48	0.58	0.53
Reach-1	2327	Hazel	53.80	252.45	251.11	252.45	0.33	0.28
Reach-1	2234	Hazel	53.80	252.45	249.91	252.45	0.09	0.06
Reach-1	2209	Hazel	53.80	252.45	250.36	252.45	0.10	0.09
Reach-1	2051	Hazel	53.80	252.45	251.11	252.45	0.05	0.05
Reach-1	2010.5		Bridge					
Reach-1	1970	Hazel	53.80	252.24	245.22	252.24	0.03	0.03
Reach-1	1963	Hazel	53.80	252.24		252.24	0.03	0.03
Reach-1	1955	Hazel	55.20	252.24	246.51	252.24	0.05	0.04
Reach-1	1915		Bridge					
Reach-1	1875	Hazel	55.20	245.83	245.83	247.66		
Reach-1	1845	Hazel	55.20	243.17	243.17	243.40	1.15	1.07
Reach-1	1800	Hazel	57.20	242.61	242.61	242.84	0.69	1.32
Reach-1	1725	Hazel	57.20	241.80		241.89	1.05	0.95
Reach-1	1680	Hazel	57.20	241.82	240.83	241.83	0.44	0.49
Reach-1	1676	Hazel	57.20	241.82	240.79	241.83	0.42	0.45
Reach-1	1672.5		Bridge					
Reach-1	1669	Hazel	57.20	240.63	240.62	240.75	0.91	1.50
Reach-1	1658	Hazel	57.20	240.61	240.23	240.69	0.56	1.10
Reach-1	1586	Hazel	57.20	240.59		240.61	0.40	0.62
Reach-1	1535	Hazel	57.20	240.53	239.27	240.58	0.60	0.70
Reach-1	1531	Hazel	57.60	240.54	239.20	240.57	0.38	0.51
Reach-1	1499.5		Bridge					
Reach-1	1468	Hazel	57.60	238.99	238.99	239.22	1.02	0.59
Reach-1	1466	Hazel	57.60	238.72		238.87	1.16	0.55
Reach-1	1460	Hazel	57.60	238.74		238.82	0.92	0.70
Reach-1	1457	Hazel	57.60	238.47	238.47	238.75	1.28	0.85
Reach-1	1449	Hazel	57.60	238.35	238.35	238.63	1.27	0.85
Reach-1	1447	Hazel	57.60	238.23	237.76	238.36	0.92	0.33
Reach-1	1433	Hazel	57.60	238.26	237.43	238.30	0.60	0.32
Reach-1	1425	Hazel	57.60	238.15	237.84	238.27	0.44	0.44
Reach-1	1399		Bridge					
Reach-1	1373	Hazel	57.60	236.14	236.14	236.44	1.31	1.07

HEC-RAS Plan: KF2LiRASupdateGR River: RIVER-1 Reach: Reach-1 Profile: Hazel (Continued)

Reach	River Sta	Profile	Q Total	W.S. Elev	Crit W.S.	E.G. Elev	Vel Left	Vel Right
			(m3/s)	(m)	(m)	(m)	(m/s)	(m/s)
Reach-1	1371	Hazel	57.60	235.90	235.90	236.17	1.66	1.55
Reach-1	1367	Hazel	57.60	235.61	235.61	235.93	1.45	0.91
Reach-1	1359	Hazel	57.60	235.57	235.57	235.89	1.45	0.91
Reach-1	1302	Hazel	57.60	233.86	233.86	234.03	1.26	0.61
Reach-1	1262	Hazel	57.60	233.20		233.24	0.66	0.52
Reach-1	1256	Hazel	57.60	233.12		233.22	0.95	1.07
Reach-1	1234	Hazel	57.60	232.94	232.94	233.14	1.31	0.83
Reach-1	1225	Hazel	57.60	232.64	232.64	232.84	0.91	0.59
Reach-1	1222	Hazel	59.70	232.67	232.50	232.79	0.56	0.46
Reach-1	1211.5		Bridge					
Reach-1	1201	Hazel	59.70	232.05	232.05	232.31	0.97	0.33
Reach-1	1200	Hazel	59.70	231.96	231.96	232.19	1.26	0.35
Reach-1	1198	Hazel	59.70	231.80	231.80	231.97	1.57	0.49
Reach-1	1188	Hazel	59.70	231.56	231.56	231.87	1.99	1.15
Reach-1	1187	Hazel	59.70	231.46	231.46	231.66	1.50	0.91
Reach-1	1167	Hazel	59.70	231.17	231.17	231.36	1.29	0.04
Reach-1	1072	Hazel	59.70	228.99	228.99	229.25	1.69	1.32
Reach-1	1022	Hazel	59.70	228.88	228.71	229.03	1.21	1.16
Reach-1	1017	Hazel	61.30	228.91	228.60	228.97	1.03	0.65
Reach-1	1003		Bridge					
Reach-1	989	Hazel	61.30	228.32	227.82	228.45	0.97	0.67
Reach-1	986	Hazel	61.30	228.32	228.32	228.44	1.00	0.69
Reach-1	941	Hazel	61.30	228.07		228.17	0.67	0.71
Reach-1	913	Hazel	61.30	227.22	227.22	228.06	1.07	1.32
Reach-1	904	Hazel	61.30	226.81	226.81	227.64	1.25	1.32
Reach-1	898	Hazel	61.30	226.93		227.25	0.87	0.90
Reach-1	890	Hazel	61.30	226.94		227.22	0.73	0.46
Reach-1	886	Hazel	61.30	226.83		227.19	0.97	0.83
Reach-1	871	Hazel	61.30	226.98		227.10	0.85	0.66
Reach-1	855	Hazel	61.30	226.96	225.70	227.09	0.33	0.24
Reach-1	842.5		Culvert					
Reach-1	830	Hazel	61.30	226.80	226.38	226.98	0.32	0.45
Reach-1	828	Hazel	61.30	226.85		226.92	0.48	0.66
Reach-1	826	Hazel	61.30	226.85		226.92	0.39	0.81
Reach-1	824	Hazel	61.30	226.61		226.86	1.11	1.23
Reach-1	816	Hazel	61.30	226.40	226.34	226.79	1.05	1.24
Reach-1	813	Hazel	61.30	226.50		226.67	0.82	1.02
Reach-1	795	Hazel	61.30	226.58		226.62	0.39	0.54
Reach-1	775	Hazel	61.30	226.15	226.15	226.57	0.24	1.34
Reach-1	736	Hazel	61.30	226.03		226.11	0.40	1.05
Reach-1	735	Hazel	61.30	226.02	225.27	226.11	0.03	1.18
Reach-1	700	Hazel	61.30	226.00	224.86	226.07	0.30	1.08
Reach-1	697	Hazel	54.70	225.99		226.07	0.02	0.03
Reach-1	632	Hazel	54.70	225.93		225.94	0.02	0.20
Reach-1	610	Hazel	54.70	225.66		225.68	0.39	0.02
Reach-1	589	Hazel	54.70	224.30	224.30	224.55		0.04
Reach-1	501.1	Hazel	54.70	222.90	222.90	223.17	2.43	2.10
Reach-1	451.0	Hazel	64.30	222.69		222.73	0.86	0.92
Reach-1	388.8	Hazel	64.30	222.24	222.24	222.50	2.35	1.90
Reach-1	318.5	Hazel	64.30	221.35		221.41	1.09	0.80
Reach-1	278.8	Hazel	64.30	221.06	221.05	221.29	1.40	1.24

HEC-RAS Plan: KF2LiRASupdateGR River: RIVER-1 Reach: Reach-1 Profile: Hazel (Continued)

Reach	River Sta	Profile	Q Total	W.S. Elev	Crit W.S.	E.G. Elev	Vel Left	Vel Right
			(m3/s)	(m)	(m)	(m)	(m/s)	(m/s)
Reach-1	234.1	Hazel	64.30	220.77	220.77	220.96	1.97	1.47
Reach-1	211.5	Hazel	64.30	220.13		220.51	0.98	
Reach-1	201.3	Hazel	64.30	220.26		220.41		
Reach-1	172.3	Hazel	64.30	220.28		220.34		0.08
Reach-1	131.6	Hazel	64.30	220.25		220.30	0.22	0.44
Reach-1	113.3	Hazel	64.30	220.17	219.65	220.28	0.31	0.37
Reach-1	113		Culvert					
Reach-1	102.7	Hazel	64.30	220.05	220.05	220.21	0.52	0.53

KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR 2022-02-23

CCTA 2006 XS14

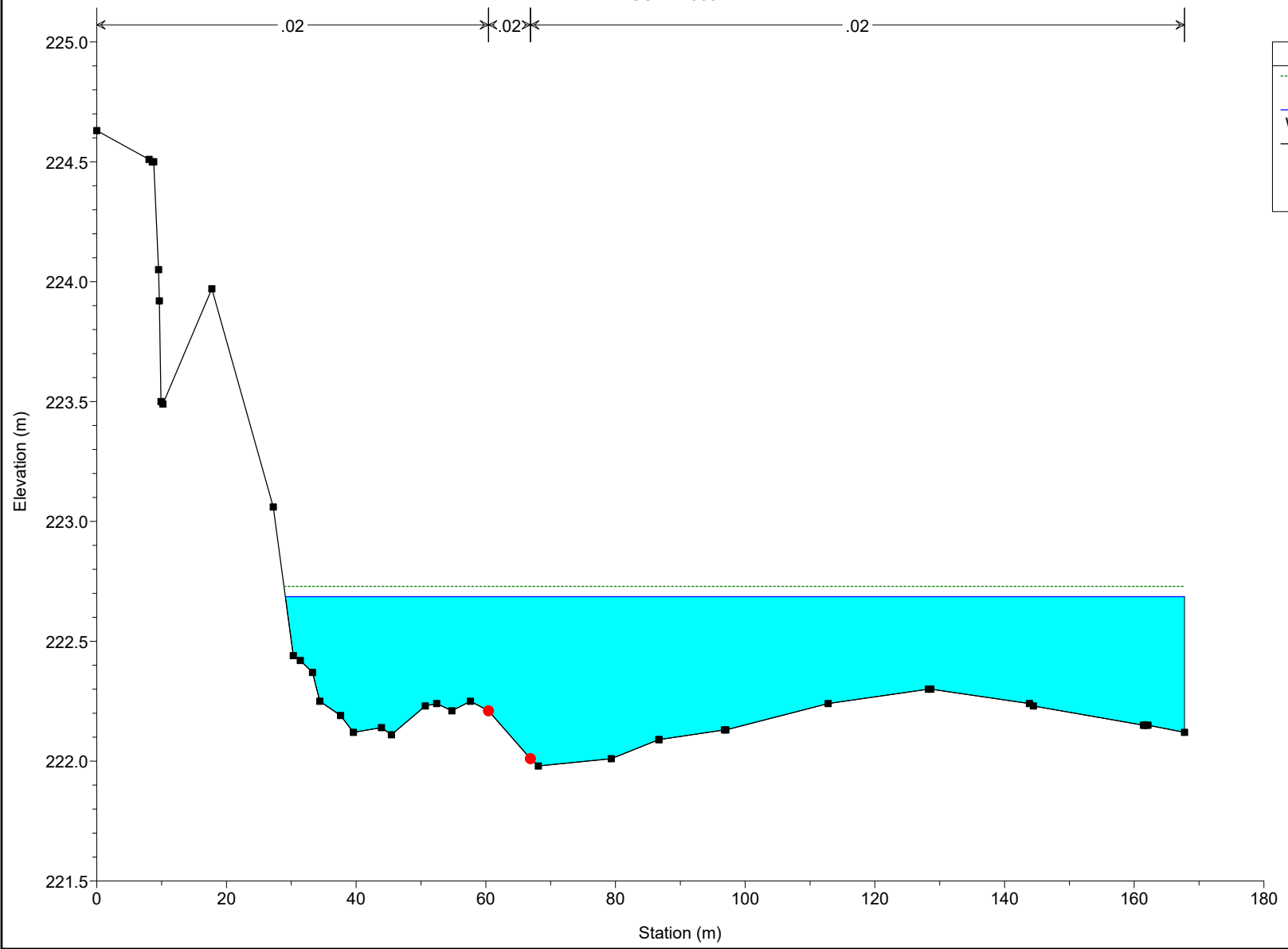
Legend

EG Hazel

WS Hazel

Ground

Bank Sta

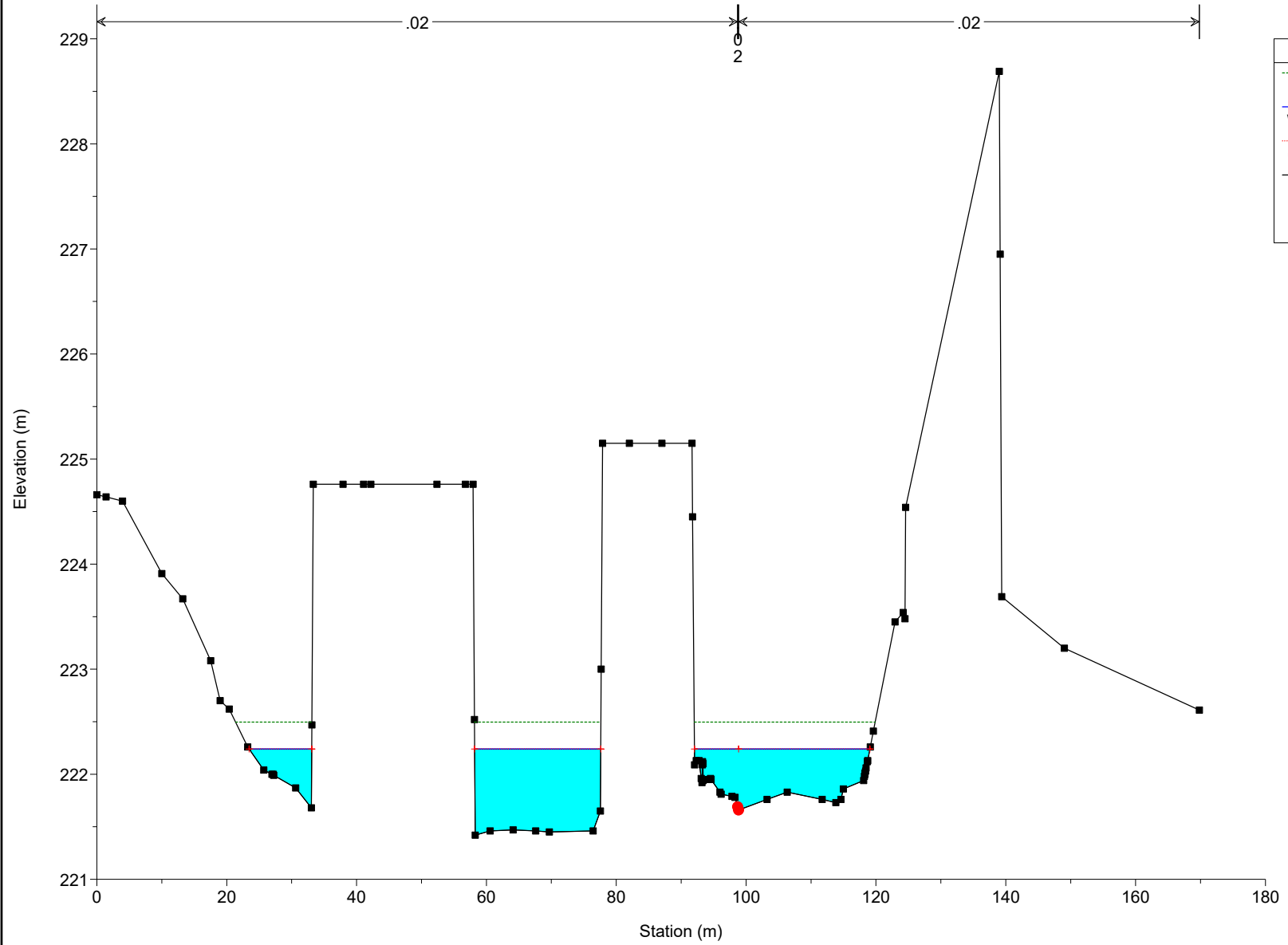


KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR

2022-02-23

CCTA 2006 XS13



KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR 2022-02-23

CCTA 2006 XS12

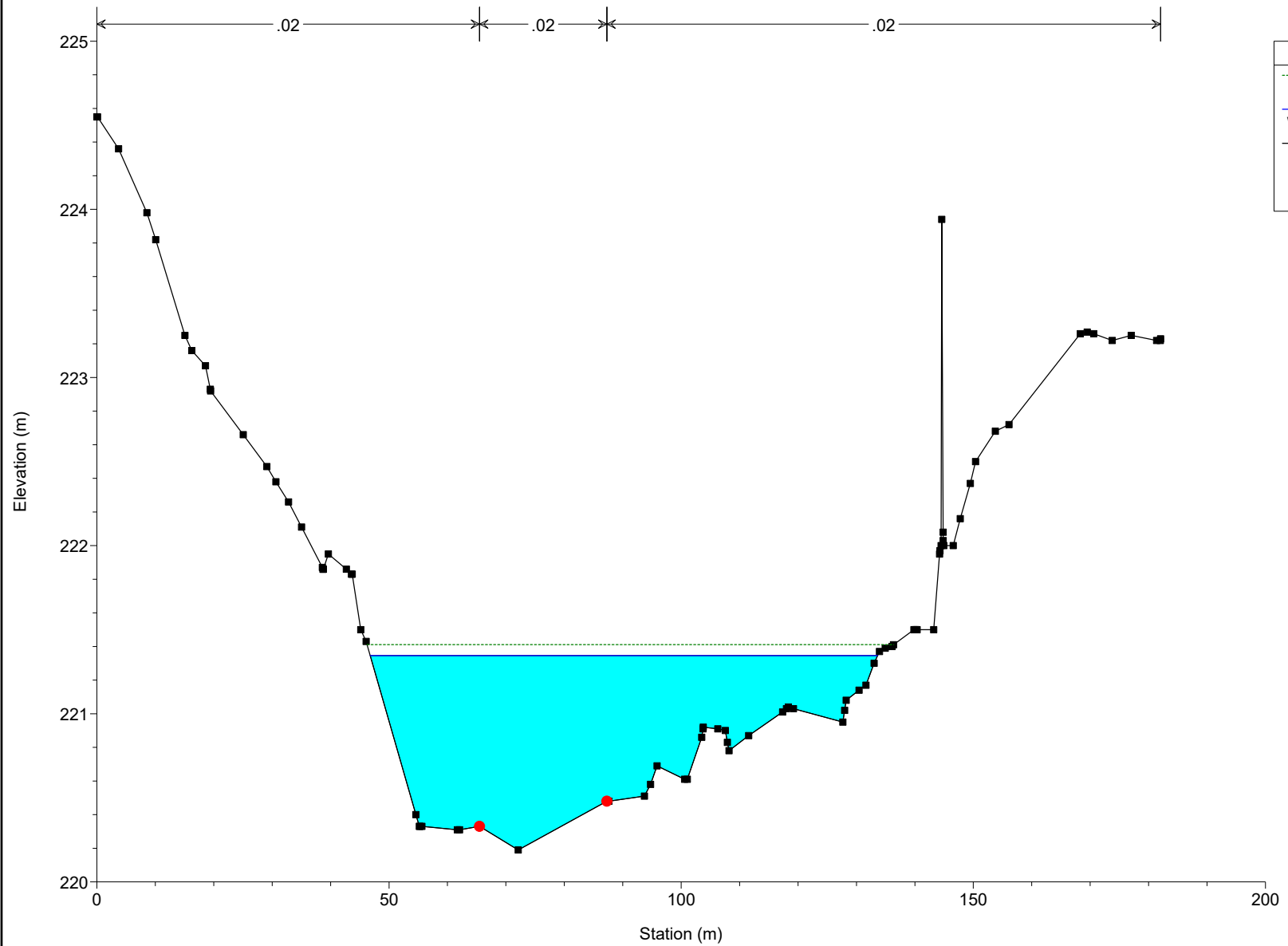
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EG Hazel

WS Hazel

Ground

Bank Sta



KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR 2022-02-23

CCTA 2006 XS11

Legend

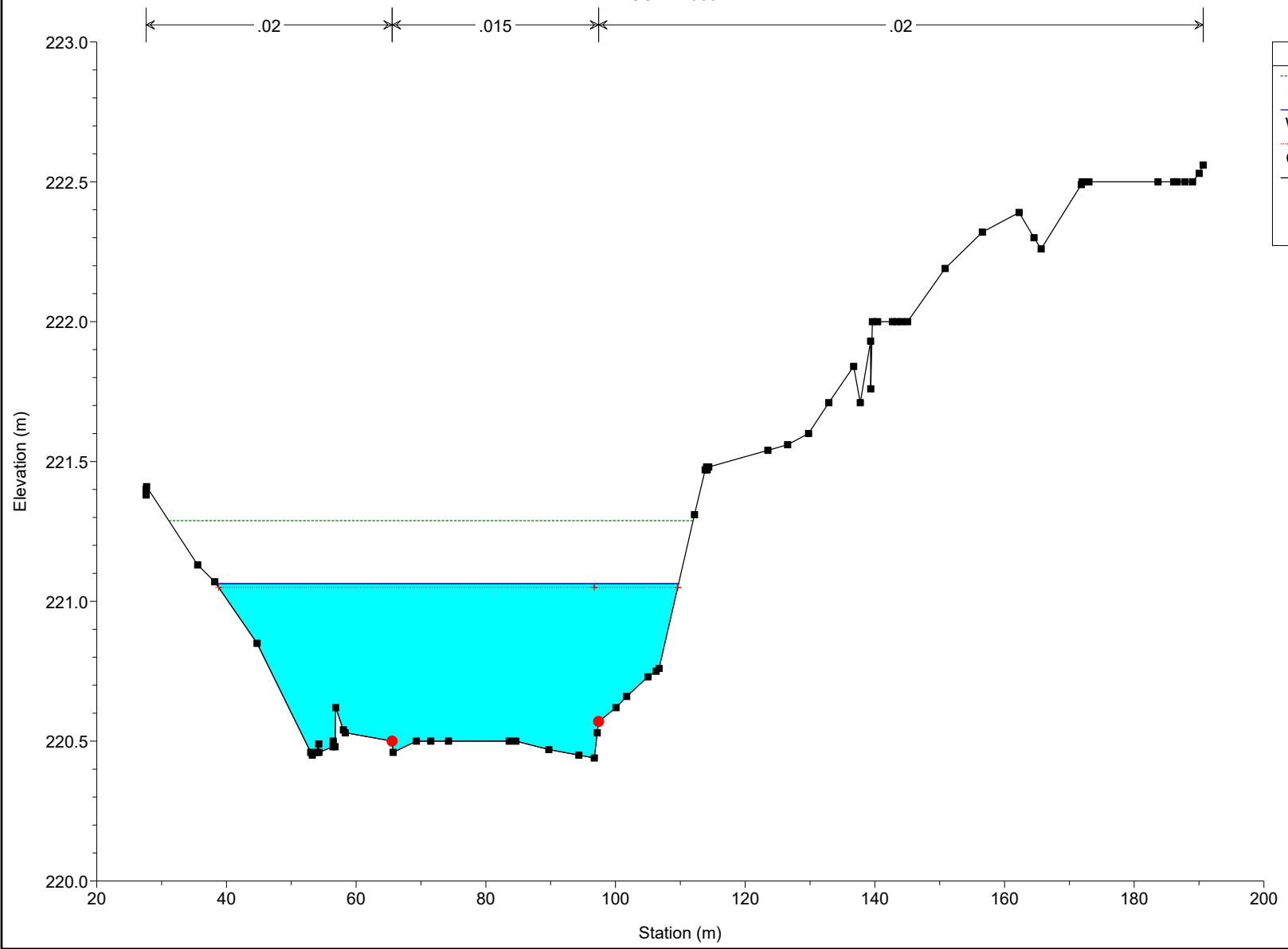
EG Hazel

WS Hazel

Crit Hazel

Ground

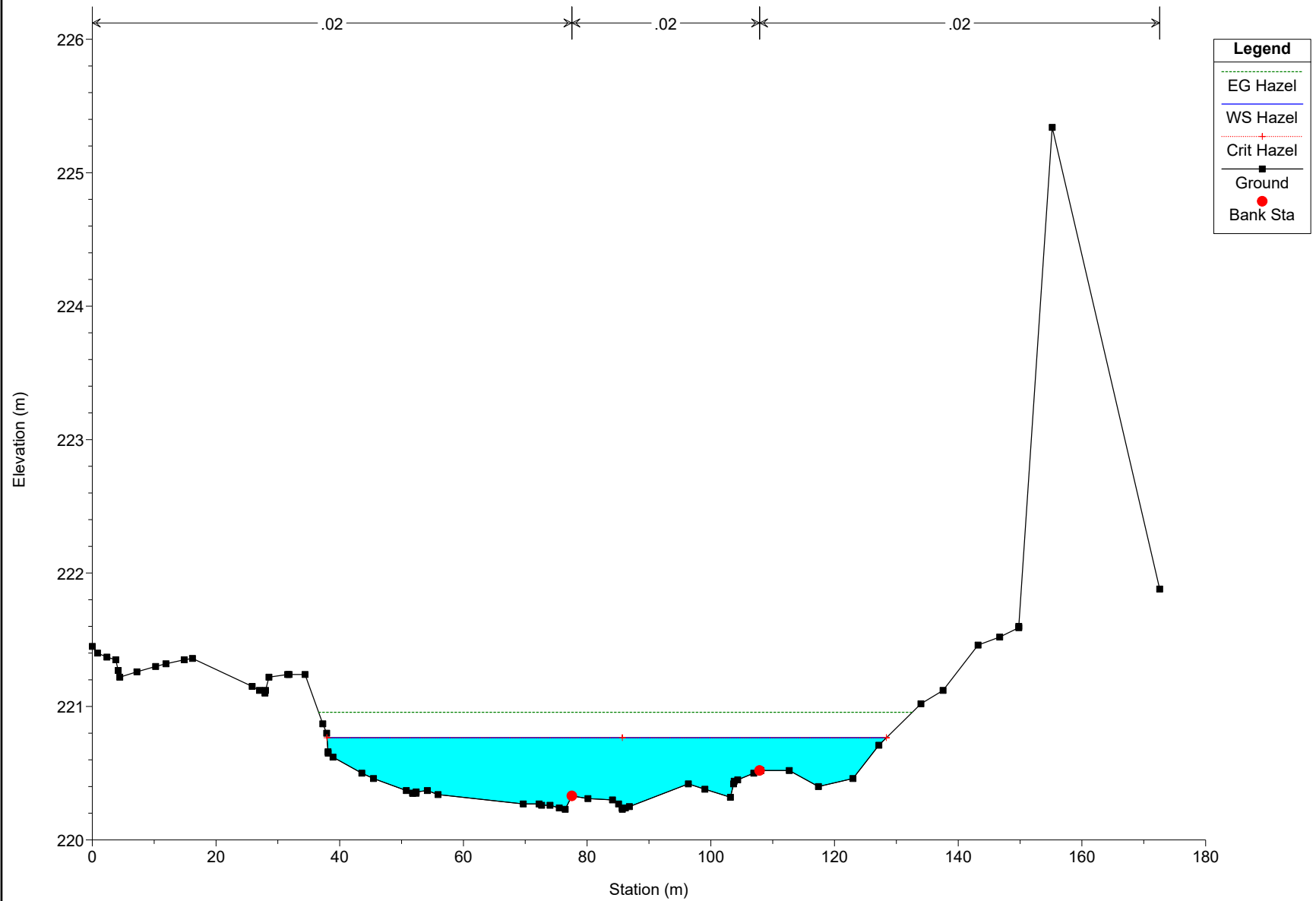
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KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR 2022-02-23

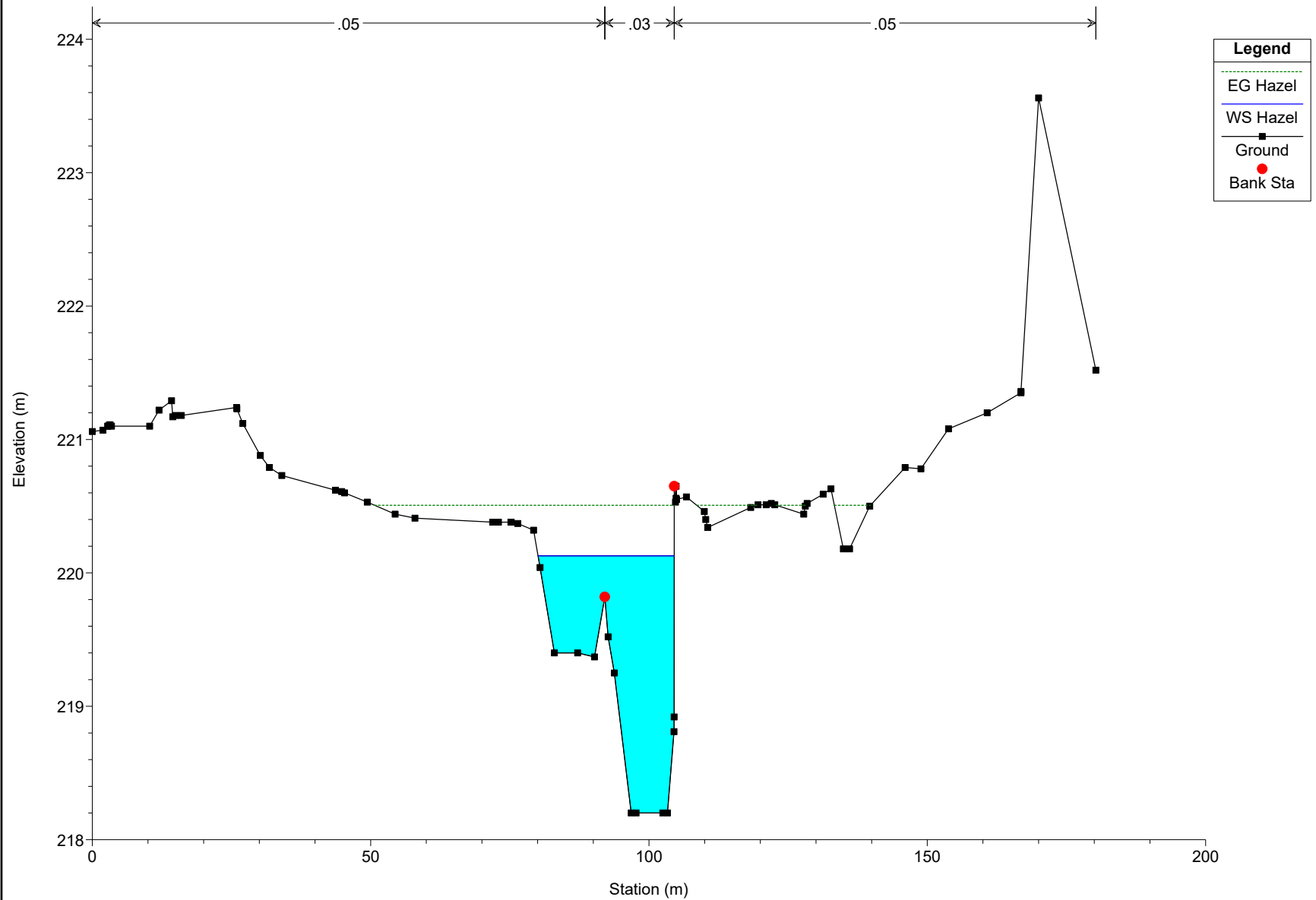
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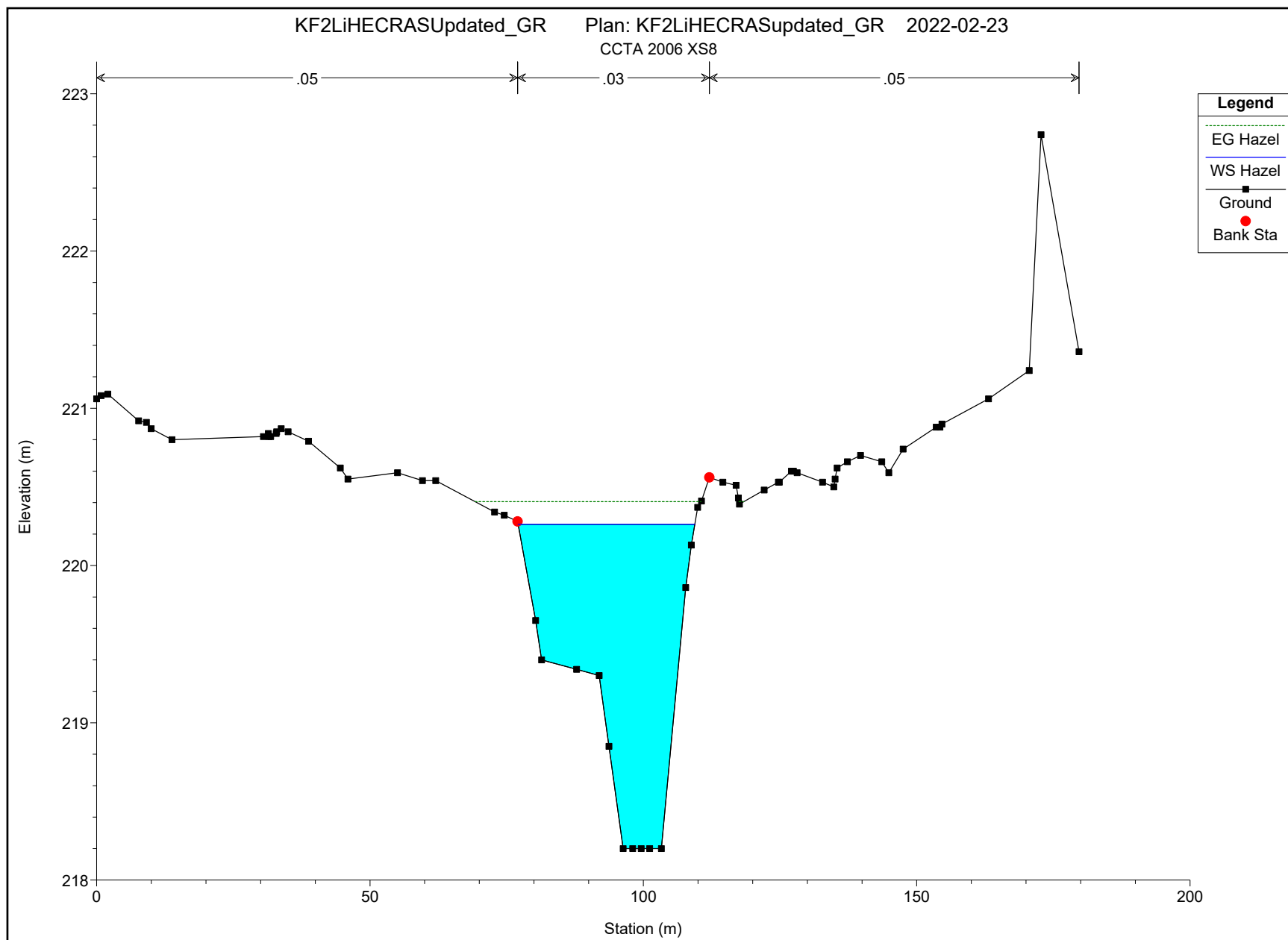


KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR 2022-02-23

CCTA 2006 XS9

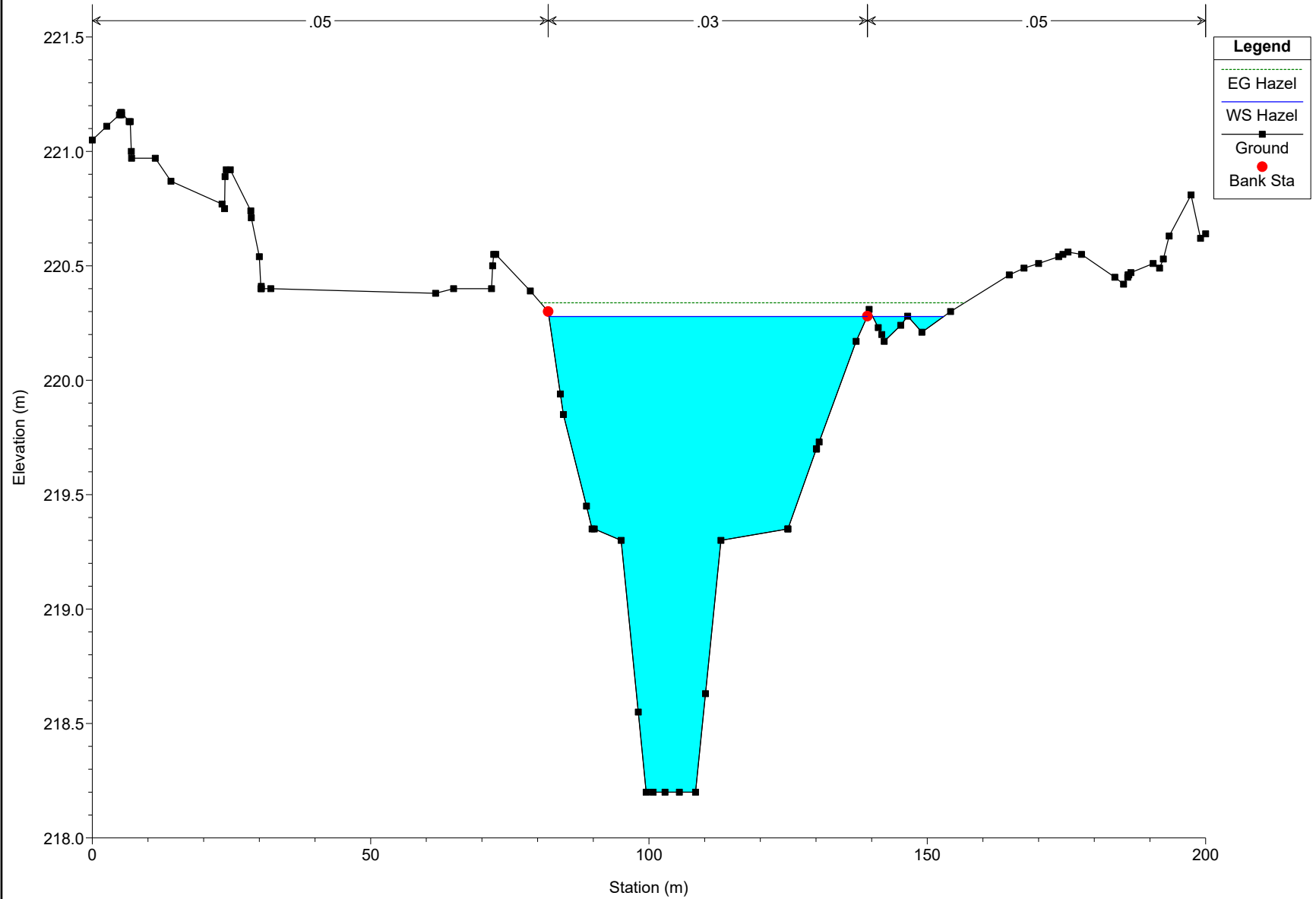




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Plan: KF2LiHECRASUpdated_GR 2022-02-23

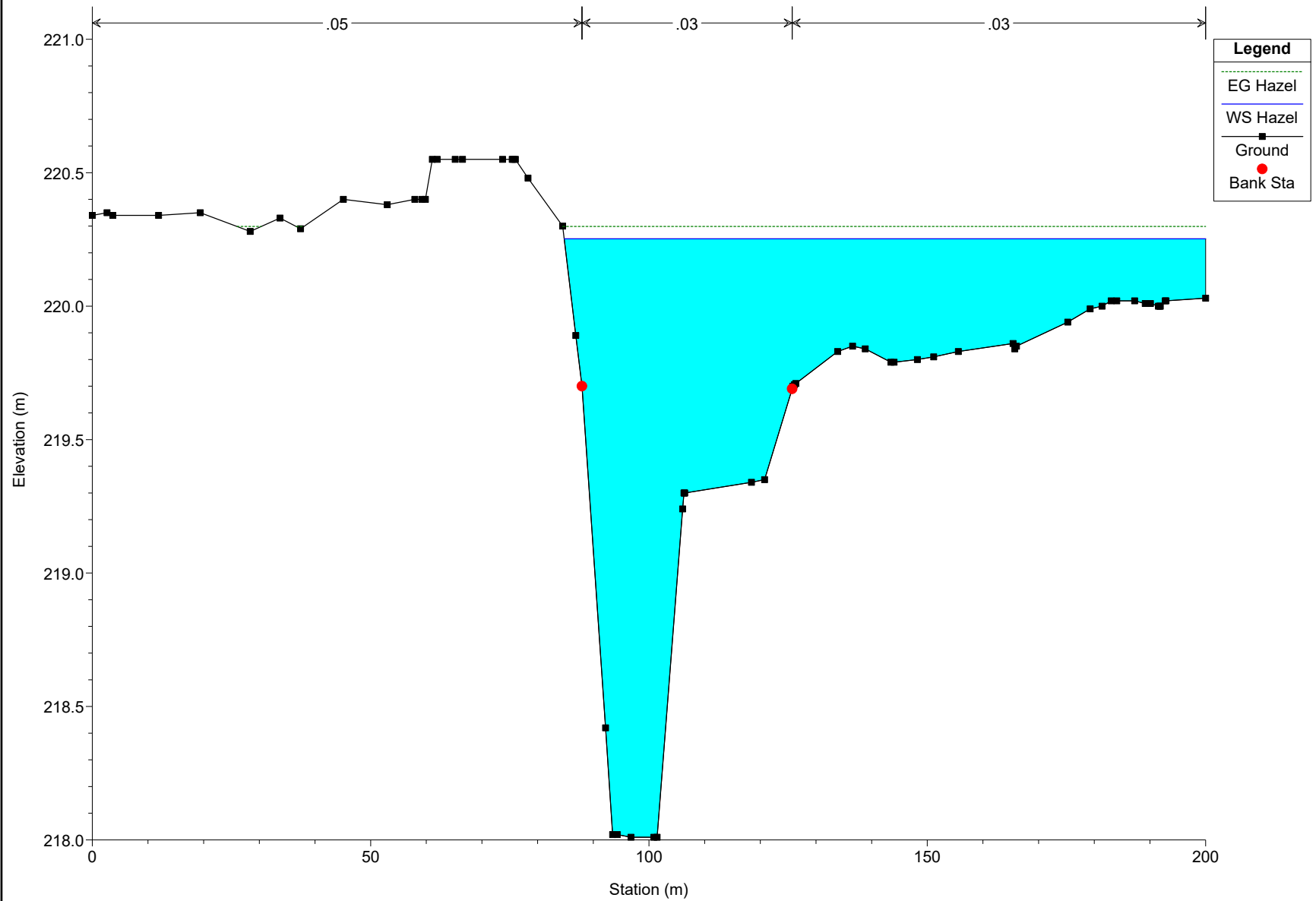
CCTA 2006 XS7



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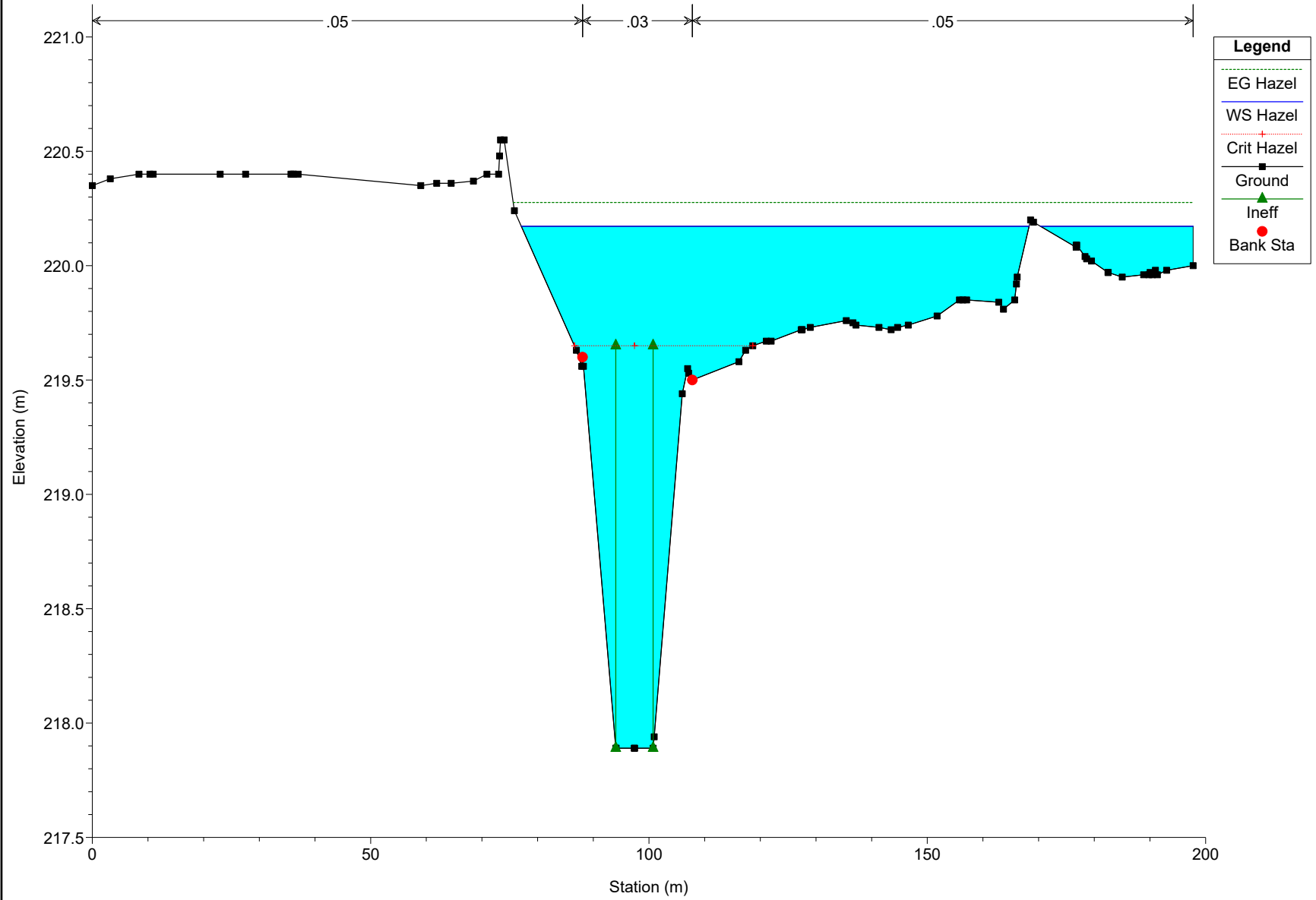
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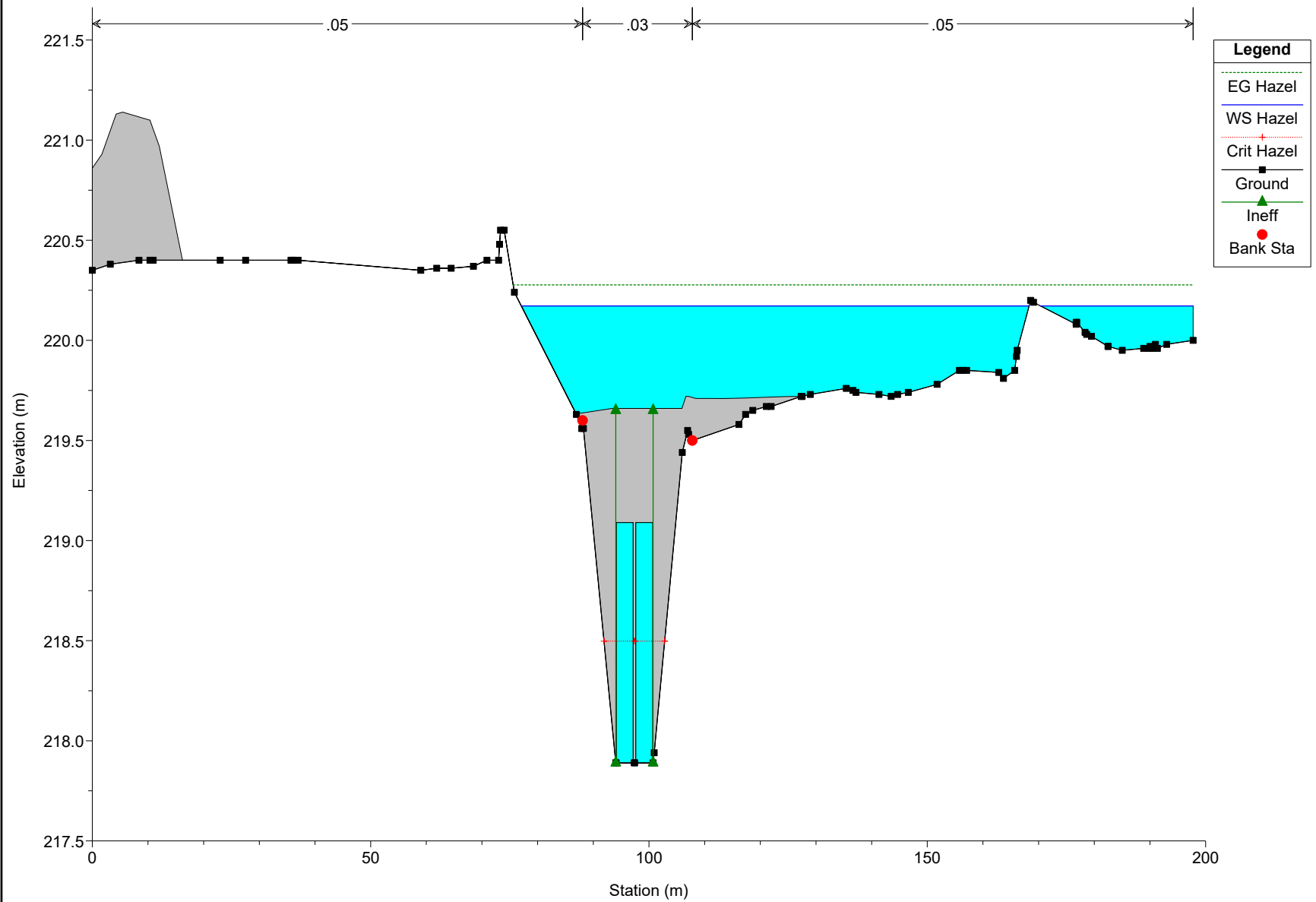


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Plan: KF2LiHECRASUpdated_GR 2022-02-23

CCTA 2006 XS2

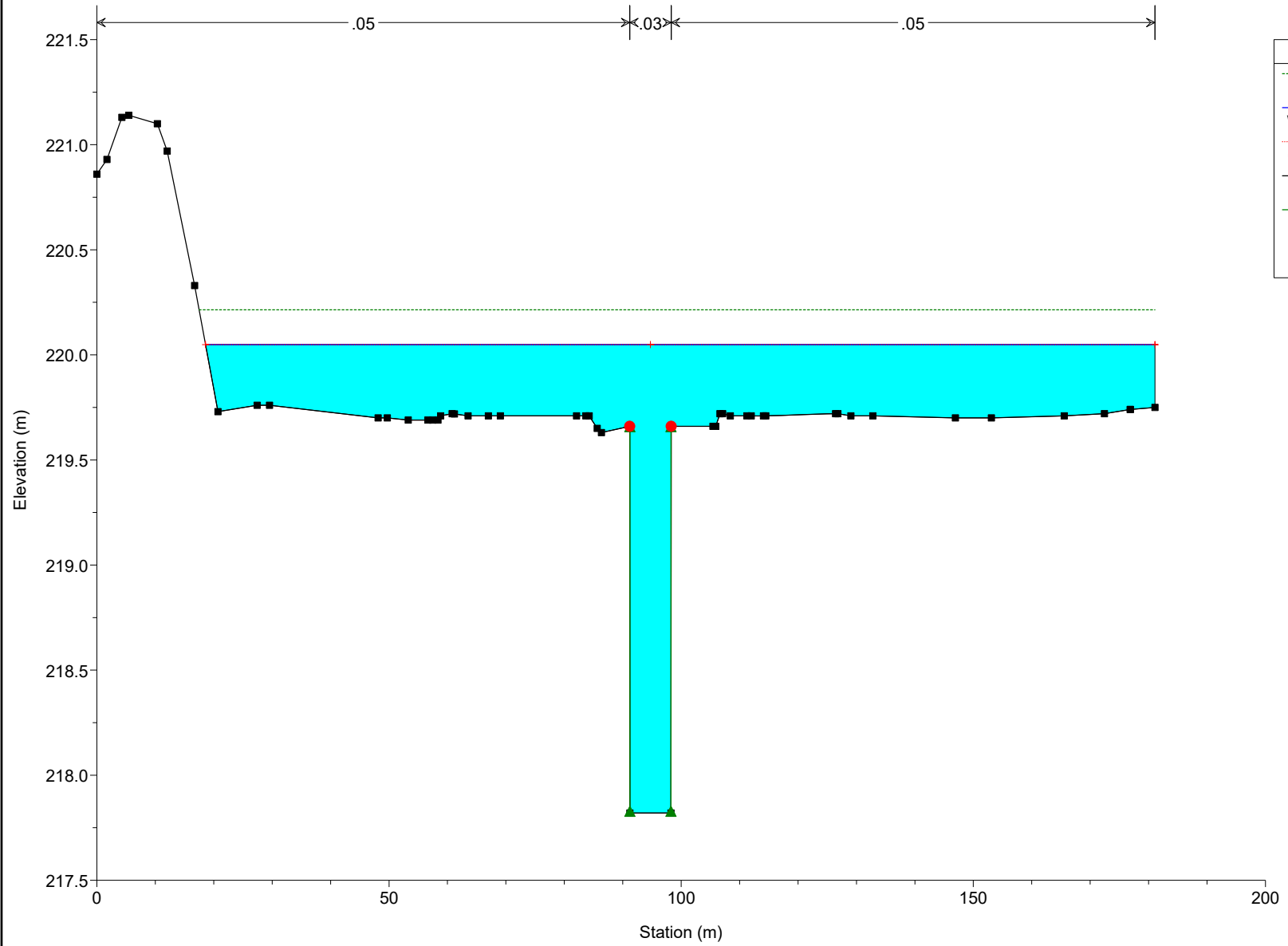




KF2LiHECRASUpdated_GR

Plan: KF2LiHECRASUpdated_GR 2022-02-23

CCTA 2006 XS1





APPENDIX D

WATER BALANCE CALCULATIONS

Table 3.1: Hydrologic Cycle Component Values

	Water Holding Capacity mm	Hydrologic Soil Group	Precipitation mm	Evapo- transpiration mm	Runoff mm	Infiltration* mm
Urban Lawns/Shallow Rooted Crops (spinach, beans, beets, carrots)						
Fine Sand	50	A	940	515	149	276
Fine Sandy Loam	75	B	940	525	187	228
Silt Loam	125	C	940	536	222	182
Clay Loam	100	CD	940	531	245	164
Clay	75	D	940	525	270	145
Moderately Rooted Crops (corn and cereal grains)						
Fine Sand	75	A	940	525	125	291
Fine Sandy Loam	150	B	940	539	160	241
Silt Loam	200	C	940	543	199	199
Clay Loam	200	CD	940	543	218	179
Clay	150	D	940	539	241	160
Pasture and Shrubs						
Fine Sand	100	A	940	531	102	307
Fine Sandy Loam	150	B	940	539	140	261
Silt Loam	250	C	940	546	177	217
Clay Loam	250	CD	940	546	197	197
Clay	200	D	940	543	218	179
Mature Forests						
Fine Sand	250	A	940	546	79	315
Fine Sandy Loam	300	B	940	548	118	274
Silt Loam	400	C	940	550	156	234
Clay Loam	400	CD	940	550	176	215
Clay	350	D	940	549	196	196
Notes: Hydrologic Soil Group A represents soils with low runoff potential and Soil Group D represents soils with high runoff potential. The evapotranspiration values are for mature vegetation. Streamflow is composed of baseflow and runoff.						
<i>*This is the total infiltration of which some discharges back to the stream as base flow. The infiltration factor is determined by summing a factor for topography, soils and cover.</i>						
<u>Topography</u>	Flat Land, average slope < 0.6 m/km	0.3				
	Rolling Land, average slope 2.8 m to 3.8 m/km	0.2				
	Hilly Land, average slope 28 m to 47 m/km	0.1				
<u>Soils</u>	Tight impervious clay	0.1				
	Medium combinations of clay and loam	0.2				
	Open Sandy loam	0.4				
<u>Cover</u>	Cultivated Land	0.1				
	Woodland	0.2				

Figure C.1 Annual Precipitation Event Distribution

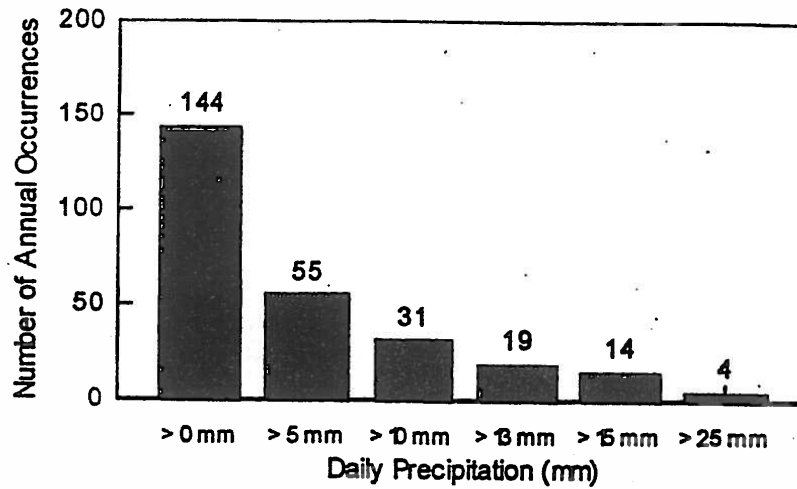
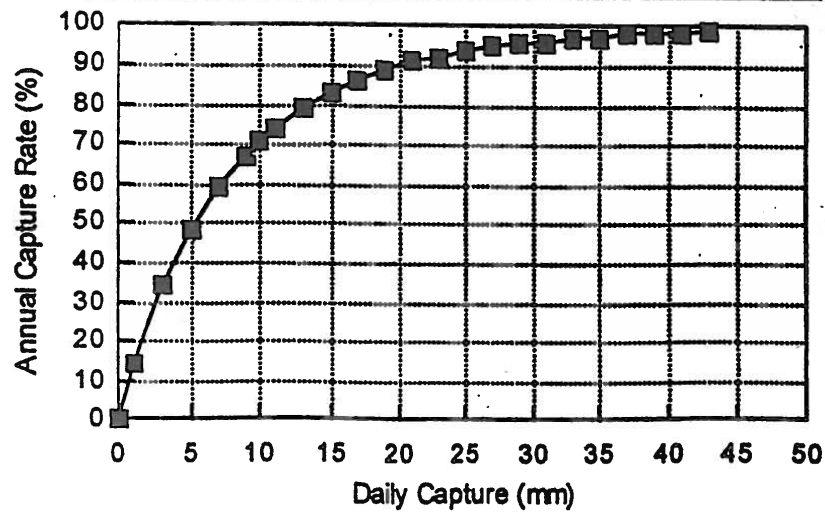


Figure C.2 Annual Capture Rate for Daily Capture Amounts





**Barrie Central Developments Inc.
Pre-Development Water Balance - Phase 1**

Catchment Designation	Site		
	Grassed	Impervious	Total
Area	2391	14089	16480
Pervious Area	2391	0	2391
Impervious Area	0	14089	14089
Infiltration Factors			
Topography Infiltration Factor	0.3	0	
Soil Infiltration Factor	0.4	0	
Land Cover Infiltration Factor	0.1	0	
MOE Infiltration Factor	0.8	0	
Actual Infiltration Factor	0.8	0	
Run-Off Coefficient	0.2	1	
Runoff from Impervious Surfaces*	0	0.95	
Inputs (per Unit Area)			
Precipitation	932.9	932.9	932.9
Run-On	0	0	0
Other Inputs	0	0	0
Total Inputs	932.9	932.9	932.9
Outputs (per Unit Area)			
Precipitation Surplus	346.7	886.3	808.0
Net Surplus	346.7	886.3	808.0
Evapotranspiration	586.2	46.6	124.9
Infiltration	277.4	0.0	40.2
Rooftop Infiltration	0.0	0.0	0.0
Total Infiltration	277.4	0.0	40.2
Runoff Pervious Areas	69.3	0.0	10.1
Runoff Impervious Areas	0.0	886.3	757.7
Total Runoff	69.3	886.3	767.7
Total Outputs	932.9	932.9	932.9
Difference (Inputs - Outputs)	0.0	0.0	0.0
Inputs (Volumes)			
Precipitation	2231	13144	15374
Run-On	0	0	0
Other Inputs	0	0	0
Total Inputs	2231	13144	15374
Outputs (Volumes)			
Precipitation Surplus	829	12486	13315
Net Surplus	829	12486	13315
Evapotranspiration	1402	657	2059
Infiltration	663	0	663
Bioretention Infiltration	0	0	0
Total Infiltration	663	0	663
Runoff Pervious Areas	166	0	166
Runoff Impervious Areas	0	12486	12486
Total Runoff	166	12486	12652
Total Outputs	2231	13144	15374
Difference (Inputs - Outputs)	0	0	0

(From MOE Table 3.1 for Flat Land)
(From MOE Table 3.1 for Open sandy loam)

(Precipitation values from Environment Canada)

Note: Highlighted cells are input cells.

Evaporation from impervious areas was assumed to be 5% of precipitation



**Barrie Central Developments Inc.
Post-Development Water Balance - Phase 1**

Catchment Designation	Site				
	Grassed	Impervious	Building	Total	
Area	4936	5568	5976	16480	
Pervious Area	4936	0	0	4936	
Impervious Area	0	5568	5976	11544	
Infiltration Factors					
Topography Infiltration Factor	0.3	0	0		(From MOE Table 3.1 for Flat Land)
Soil Infiltration Factor	0.4	0	0		(From MOE Table 3.1 for Open sandy loam)
Land Cover Infiltration Factor	0.1	0	0		
MOE Infiltration Factor	0.8	0	0		
Actual Infiltration Factor	0.8	0	0		
Run-Off Coefficient	0.2	1	1		
Runoff from Impervious Surfaces*	0	0.95	0.95		
Inputs (per Unit Area)					
Precipitation	932.9	932.9	932.9	932.9	(Precipitation values from Environment Canada)
Run-On	0	0	0	0	
Other Inputs	0	0	0	0	
Total Inputs	932.9	932.9	932.9	932.9	
Outputs (per Unit Area)					
Precipitation Surplus	336.2	886.3	886.3	721.5	
Net Surplus	336.2	886.3	886.3	721.5	
Evapotranspiration	596.7	46.6	46.6	211.4	
Infiltration	269.0	0.0	0.0	80.6	
Rooftop Infiltration	0.0	0.0	0.0	0.0	
Total Infiltration	269.0	0.0	0.0	80.6	
Runoff Pervious Areas	67.2	0.0	0.0	20.1	
Runoff Impervious Areas	0.0	886.3	886.3	620.8	
Total Runoff	67.2	886.3	886.3	640.9	
Total Outputs	932.9	932.9	932.9	932.9	
Difference (Inputs - Outputs)	0.0	0.0	0.0	0.0	
Inputs (Volumes)					
Precipitation	4605	5194	5575	15374	
Run-On	0	0	0	0	
Other Inputs	0	0	0	0	
Total Inputs	4605	5194	5575	15374	
Outputs (Volumes)					
Precipitation Surplus	1659	4935	5296	11890	
Net Surplus	1659	4935	5296	11890	
Evapotranspiration	2945	260	279	3484	
Infiltration	1328	0	0	1328	
Bioretention Infiltration	0	0	0	0	
Total Infiltration	1328	0	0	1328	
Runoff Pervious Areas	332	0	0	332	
Runoff Impervious Areas	0	4935	5296	10231	
Total Runoff	332	4935	5296	10563	
Total Outputs	4605	5194	5575	15374	
Difference (Inputs - Outputs)	0	0	0	0	

Note: Highlighted cells are input cells.

Evaporation from impervious areas was assumed to be 5% of precipitation

Barrie Central Developments Inc. Water Balance Calculations

The post development site provides a higher volume of infiltration than the pre-development site. However, City of Barrie guidelines are also to be considered.

Minimum Infiltration Volume as per City of Barrie Storm Drainage and Stormwater Management Policies and Design Guidelines Section 4.1.3 is as follows:

$$\begin{aligned}
 \text{Storage Volume Required} &= \text{Site Area} \times 5 \text{ mm} \\
 &= 16,480 \times 0.005 \\
 &= 82 \text{ m}^3
 \end{aligned}$$

Therefore, City of Barrie guidelines governs over water balance/infiltration requirements.

It is proposed to infiltrate the 25 mm storm over the rooftop area for phosphorous removal. Therefore, infiltration volumes are as follows:

$$\begin{aligned}
 \text{Roof Top Area} &= 5,976 \text{ m}^2 \\
 \text{Rainfall Depth} &= 25 \text{ mm} \\
 \text{Storage Volume Required} &= A \times D \\
 &= 5,976 \times 25 \\
 &= 149 \text{ m}^3
 \end{aligned}$$

It is proposed to infiltrate the 25 mm storm event over the rooftop area, resulting in a storage volume of 149 m³ exceeding the Water Balance criteria. Therefore, water balance for the site is achieved.



APPENDIX E

PHOSPHORUS CALCULATIONS

Table 2. Land-Use Specific Phosphorus Export Coefficients (kg/ha/yr) for Lake Simcoe Subwatersheds

Subwatershed	Phosphorus Export (kg/ha/yr)											
	Cropland	Hay-Pasture	Sod Farm/Golf Course	High Intensity Development		Low Intensity Development	Quarry	Unpaved Road	Forest	Transition	Wetland	Open Water
				Commercial /Industrial	Residential							
Monitored Subwatersheds												
Beaver River	0.22	0.04	0.01	1.82	1.32	0.19	0.06	0.83	0.02	0.04	0.02	0.26
Black River	0.23	0.08	0.02	1.82	1.32	0.17	0.15	0.83	0.05	0.06	0.04	0.26
East Holland River	0.36	0.12	0.24	1.82	1.32	0.13	0.08	0.83	0.10	0.16	0.10	0.26
Hawkestone Creek	0.19	0.10	0.06	1.82	1.32	0.09	0.10	0.83	0.03	0.04	0.03	0.26
Lovers Creek	0.16	0.07	0.17	1.82	1.32	0.07	0.06	0.83	0.06	0.06	0.05	0.26
Pefferlaw/Uxbridge Brook	0.11	0.06	0.02	1.82	1.32	0.13	0.04	0.83	0.03	0.04	0.04	0.26
Whites Creek	0.23	0.10	0.42	1.82	1.32	0.15	0.08	0.83	0.10	0.11	0.09	0.26
Unmonitored Subwatersheds												
Barrie Creeks	0.19	0.07	0.12	1.82	1.32	0.13	0.08	0.83	0.05	0.06	0.05	0.26
GeorginaCreeks	0.36	0.12	0.24	1.82	1.32	0.13	0.08	0.83	0.10	0.16	0.10	0.26
Hewitts Creek	0.19	0.07	0.12	1.82	1.32	0.13	0.08	0.83	0.05	0.06	0.05	0.26
Innisfil Creeks	0.19	0.07	0.12	1.82	1.32	0.13	0.08	0.83	0.05	0.06	0.05	0.26
Maskinonge River	0.19	0.07	0.12	1.82	1.32	0.13	0.08	0.83	0.05	0.06	0.05	0.26
Oro Creeks North	0.36	0.12	0.24	1.82	1.32	0.13	0.08	0.83	0.10	0.16	0.10	0.26
Oro Creeks South	0.19	0.07	0.12	1.82	1.32	0.13	0.08	0.83	0.05	0.06	0.05	0.26
Ramara Creeks	0.19	0.07	0.12	1.82	1.32	0.13	0.08	0.83	0.05	0.06	0.05	0.26
Talbot/Upper Talbot River	0.19	0.07	0.12	1.82	1.32	0.13	0.08	0.83	0.05	0.06	0.05	0.26
West Holland River	0.36	0.12	0.24	1.82	1.32	0.13	0.08	0.83	0.10	0.16	0.10	0.26

3.2.2 Methods - Calculating Pre-development Conditions

The pre-development or “existing conditions” phosphorus load is calculated through the following steps, by the user:

1. The user will rely on the information documented and detailed in the EIS for the development that will be used to support the planning application to the Municipality.
2. The user will choose the subwatershed or geographic area of the Lake Simcoe watershed in which the development is proposed from a drop down list provided by the database. If the development area spans two or more subwatersheds, the areas within each subwatershed should be modelled separately.
3. Specific land use classifications will be delineated and their boundaries overlain on an orthographic aerial photograph that shall be included in their submission.

that class of BMP. In two cases, (sorbitive media interceptors and soakways/infiltration trenches), although there are no Ontario phosphorus removal efficiencies reported in the review materials, the techniques are not limited by geography. The reported ranges in efficiency for these BMP classes are narrow so the median efficiency is chosen as a representative phosphorus removal efficiency. In all other cases, there are unacceptable regional differences and wide ranges in efficiencies that would not support the derivation of single representative phosphorus removal efficiencies. In the case of dry swales, the non-Ontario removal efficiencies may be usable, but the range of reported values is large such that it will be necessary to identify design criteria that will limit the range in efficiencies for this class of BMPs before a value can be chosen.

Table 3. Phosphorus Removal Efficiencies for Major Classes of BMPs Using the Decision Tree (Figure 5)

BMP Class	Reference IDs ¹	Reported Phosphorus Removal Efficiency (%)		Relevant to Ontario?	Range <40%?	Are Non-Ontario values acceptable?	Possible design criteria?	Median % Removal Efficiency
		Min	Max					
Post-development BMPs								
Bioretention Systems	8-10, 12,13, 34-38, 40	-1552	80	no	no	no	No	none
Constructed Wetlands	104, 106, 109	72	87	yes	yes			77
Dry Detention Ponds	104, 109	0	20	no	yes	yes		10
Dry Swales	24, 26-32	-216	94	no	no	no	possible	none
Enhanced Grass/Water Quality Swales	21, 104	34	55	no	yes	no	No	none
Flow Balancing Systems	106	77		no	?	yes	Min data	77
Green Roofs	2	-248		no	no	no	No	none
Hydrodynamic Devices	109	-8		no	?	yes		none
Perforated Pipe Infiltration/Exfiltration Systems	7, 4	81	93	yes	yes			87
Sand or Media Filters	104, 109	30	59	no	yes	yes		45
Soakaways - Infiltration Trenches	6, 104	50	70	no	yes	yes		60
Sorbitive Media Interceptors	111	78	80	no	yes	yes		79
Underground Storage	106	25		no	?	yes	Min data	25
Vegetated Filter Strips/Stream Buffers	6, 42, 104	60	70	no	yes	yes	Yes	65
Wet Detention Ponds	104-106, 109	42	85	yes	yes			63

Notes: ¹References associated with IDs are provided in Appendix 7.

Barrie Central Developments Inc. Phosphorus Budget Calculations

Barrie Creeks	Hay-Pasture	Low Intensity Development	High Intensity Residential	High Intensity Commercial
Phosphorus Export (kg/ha/year)	0.07	0.13	1.32	1.82

Post-Development Condition (Uncontrolled):

	Hay-Pasture	Low Intensity Development	High Intensity Residential	High Intensity Commercial
Area (ha):	0.00	0.18	1.47	0.00
Total P (kg) :	0.00	0.02	1.94	0.00
Total Post-Development (kg):		1.96		

Post-Development Condition (Controlled):

Area Draining to Rooftop Infiltration

	Hay-Pasture	Low Intensity Development	High Intensity Residential	High Intensity Commercial
Area (ha):	0.00	0.00	0.60	0.00
P (kg) :	0.00	0.00	0.79	0.00
Total P (kg):		0.79		
Rooftop Infiltration Proficiency (%):		87		
P Removed (kg):		0.69		
P Remaining (kg):		0.10		

Area Draining to Bioretention

	Hay-Pasture	Low Intensity Development	High Intensity Residential	High Intensity Commercial
Area (ha):	0.00	0.18	0.06	0.00
P (kg) :	0.00	0.02	0.08	0.00
Total P (kg):		0.10		
Permeable Pavers Proficiency (%):		45		
P Removed (kg):		0.04		
P Remaining (kg):		0.05		

Area Draining Uncontrolled

	Hay-Pasture	Low Intensity Development	High Intensity Residential	High Intensity Commercial
Area (ha):	0.00	0.00	0.81	0.00
P (kg) :	0.00	0.00	1.07	0.00
Total P (kg):		1.07		
Total Post-Development P (kg) :		1.23		



APPENDIX F

LETTERS TO UTILITIES



PEARSON ENGINEERING LTD.

June 18, 2019

File:19051

Attention: Lorraine Cibirka

Ms. Lorraine Cibirka
Access Network Design
2nd Floor, 136 Bayfield Street
Barrie, Ontario
L4M 3B1

Dear Lorraine,

**Re: Proposed Residential Apartments and YMCA Development
34-50 Bradford Street, Barrie
Request for Confirmation – Bell Servicing**

We are currently preparing a Functional Servicing Report to examine the infrastructure requirements for 3 residential apartment buildings and a YMCA development proposed at the 34-50 Bradford St, Barrie. The site was previously the Barrie Central Collegiate School. Two 20-storey and one 10-storey residential apartments are being proposed for the development along with provisions for a future YMCA.

We request that, if available, you provide us your existing servicing and plan in this area and we would appreciate any comments you could provide on the serviceability of the proposed development.

We thank you in advance for your assistance and co-operation in providing the background data. If you have any questions regarding the enclosed or require any additional information, please feel free to give me a call at (705) 719-4785.

Regards,

PEARSON ENGINEERING LTD.

April Cleaves, B.A. Tech., C.E.T.
Design Technologists



PEARSON ENGINEERING LTD.

June 18, 2019

File:19051

Attention: Don Jelly, Enbridge Gas

Don Jelly
Enbridge Gas
10 Churchhill Drive
Barrie, Ontario
L4N 8Z5

Dear Don,

**Re: Proposed Residential Apartments and YMCA Development
34-50 Bradford Street, Barrie
Request for Confirmation – Gas Servicing**

We are currently preparing a Functional Servicing Report to examine the infrastructure requirements for 3 residential apartment buildings and a YMCA development proposed at the 34-50 Bradford St, Barrie. The site was previously the Barrie Central Collegiate School. Two 20-storey and one 10-storey residential apartments are being proposed for the development along with provisions for a future YMCA.

We request that, if available, you provide us your existing servicing and plan in this area and we would appreciate any comments you could provide on the serviceability of the proposed development.

We thank you in advance for your assistance and co-operation in providing the background data. If you have any questions regarding the enclosed or require any additional information, please feel free to give me a call at (705) 719-4785.

Regards,

PEARSON ENGINEERING LTD.

April Cleaves, B.A. Tech., C.E.T.
Design Technologists



PEARSON ENGINEERING LTD.

June 18, 2019

File: 19051

Attention: Stephen Cranley

Stephen Cranley
Power Stream Inc.
55 Patterson Road
Barrie, Ontario
L4N 3W2

Dear Stephen,

**Re: Proposed Residential Apartments and YMCA Development
34-50 Bradford Street, Barrie
Request for Confirmation – Hydro Servicing**

We are currently preparing a Functional Servicing Report to examine the infrastructure requirements for 3 residential apartment buildings and a YMCA development proposed at the 34-50 Bradford St, Barrie. The site was previously the Barrie Central Collegiate School. Two 20-storey and one 10-storey residential apartments are being proposed for the development along with provisions for a future YMCA.

We request that, if available, you provide us your existing servicing and plan in this area and we would appreciate any comments you could provide on the serviceability of the proposed development.

We thank you in advance for your assistance and co-operation in providing the background data. If you have any questions regarding the enclosed or require any additional information, please feel free to give me a call at (705) 719-4785.

Regards,

PEARSON ENGINEERING LTD.

April Cleaves, B.A. Tech., C.E.T.
Design Technologists



PEARSON ENGINEERING LTD.

June 18, 2019

File: 19051

Attention: Graham McPherson - Rogers

Graham McPherson

Rogers Cable
1 Sperling Drive
Barrie, Ontario
L4M 6B8

Dear Granam,

**Re: Proposed Residential Apartments and YMCA Development
34-50 Bradford Street, Barrie
Request for Confirmation – Cable Servicing**

We are currently preparing a Functional Servicing Report to examine the infrastructure requirements for 3 residential apartment buildings and a YMCA development proposed at the 34-50 Bradford St, Barrie. The site was previously the Barrie Central Collegiate School. Two 20-storey and one 10-storey residential apartments are being proposed for the development along with provisions for a future YMCA.

We request that, if available, you provide us your existing servicing and plan in this area and we would appreciate any comments you could provide on the serviceability of the proposed development.

We thank you in advance for your assistance and co-operation in providing the background data. If you have any questions regarding the enclosed or require any additional information, please feel free to give me a call at (705) 719-4785.

Regards,

PEARSON ENGINEERING LTD.

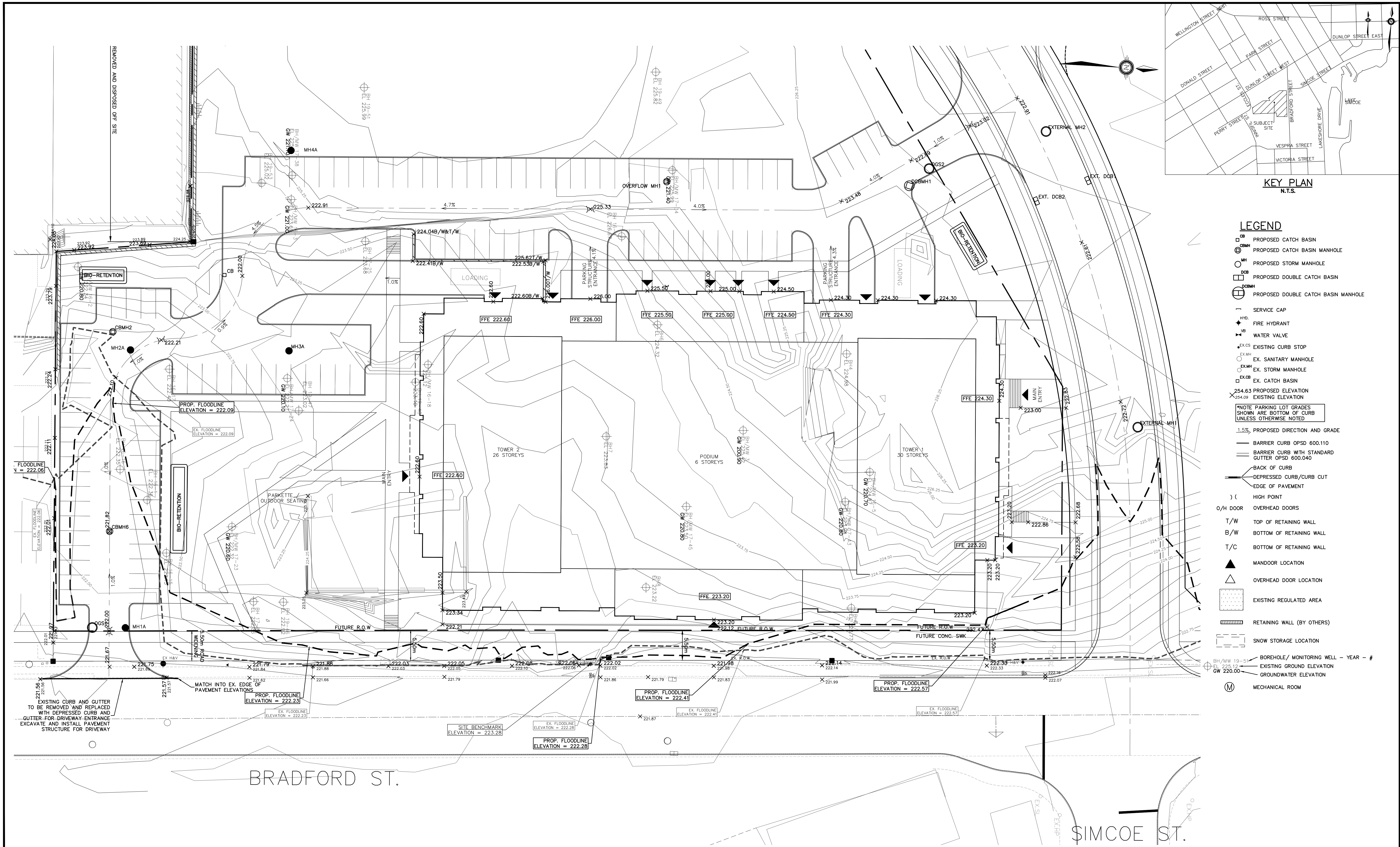
April Cleaves, B.A. Tech., C.E.T.
Design Technologists



APPENDIX G

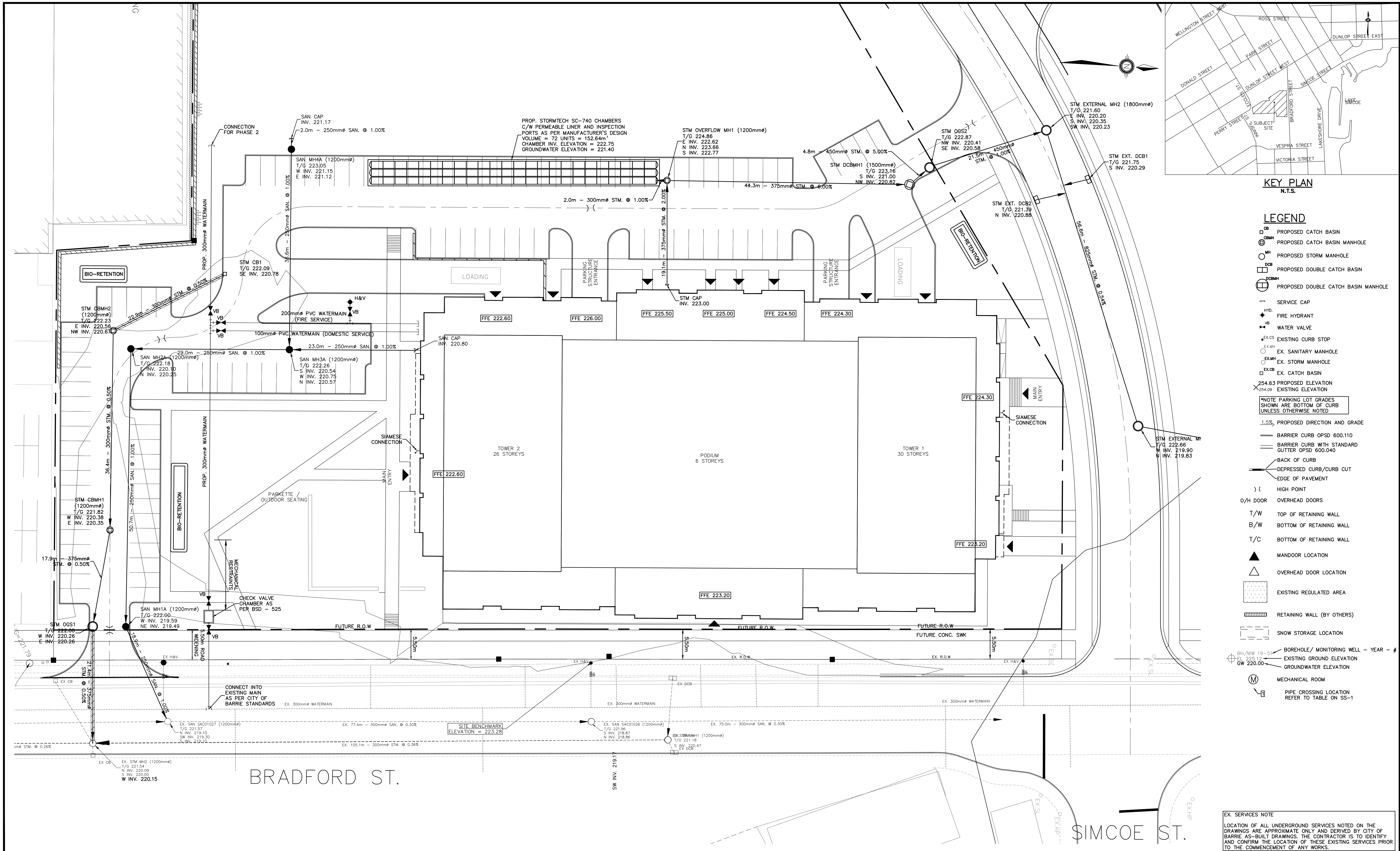
ENGINEERING DRAWINGS

G:\Users\adevea\AppData\Local\Temp\vePublish_19051\BASE - GRADING AND SERVICING.dwg Layout:SG-1 Plotted Feb. 25, 2022 @ 9:23am by adevea @ PEARSON ENGINEERING LTD.



HORIZONTAL CONTROL MONUMENTS MNR MONUMENT - 03120080022 MONUMENT IS LOCATED ON THE SOUTHEAST CORNER OF INNISFIL STREET AND VESPREA STREET APPROXIMATELY 18.5m FROM CENTERLINE OF INNISFIL STREET AND APPROXIMATELY 13m FROM THE CENTERLINE OF VESPREA STREET. NOTE: A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER THE MONUMENT CAP. MNR MONUMENT - 03120040059 MONUMENT IS LOCATED ON NORTH SIDE OF ESSA RD AND ON THE WEST SIDE OF THE WESTERLY ENTRANCE TO THE BARRIE AGRICULTURAL SOCIETY AND FAIRGROUNDS BETWEEN SIDEWALK AND THE FENCE. NOTE: A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER MONUMENT CAP. VERTICAL CONTROL MONUMENTS MNR MONUMENT - 03120080022 MONUMENT IS LOCATED ON THE SOUTHEAST CORNER OF INNISFIL STREET AND VESPREA STREET APPROXIMATELY 18.5m FROM CENTERLINE OF INNISFIL STREET AND APPROXIMATELY 13m FROM THE CENTERLINE OF VESPREA STREET. NOTE: A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER THE MONUMENT CAP.				BENCHMARK SITE BENCHMARK IS THE CENTER OF THE TOP NUT OF THE FIRE HYDRANT LOCATED ON THE WESTERN LIMIT AS SHOWN ON THE FACE OF THIS PLAN HAVING A GEODETIC ELEVATION OF 223.28				PEARSON ENGINEERING PEARSONENG.COM PH. 705.719.4785			
3	SITE PLAN REVISIONS	02/25/22	AMC					BARRIE CENTRAL DEVELOPMENTS INC. 34-50 BRADFORD STREET BARRIE, ONTARIO			
2	AS PER CITY OF BARRIE COMMENTS	12/18/20	PG								
1	AS PER REVISED SITE PLAN	06/12/20	AMC								
NO.	REVISION NOTE	DATE	BY	SITE GRADING				DESIGNED BY	AMC/IR	HORIZ SCALE	1:300
								DRAWN BY	IR	VERT SCALE	N/A
								CHECKED BY	GMP/MWD	DATE	MAY 2019
								PROJECT #	19051	DRAWING #	SG-1
								REVISION #	3		

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KEY PLAN
N.T.S.

LEGEND

- PROPOSED CATCH BASIN
- PROPOSED CATCH BASIN MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED DOUBLE CATCH BASIN
- PROPOSED DOUBLE CATCH BASIN MANHOLE
- SERVICE CAP
- FIRE HYDRANT
- WATER VALVE
- EXISTING CURB STOP
- EX. SANITARY MANHOLE
- EX. STORM MANHOLE
- EX. CATCH BASIN
- 254.63 PROPOSED ELEVATION
- 254.09 EXISTING ELEVATION
- NOTE PARKING LOT GRADES SHOWN ARE BOTTOM OF CURB UNLESS OTHERWISE NOTED
- 1.5% PROPOSED DIRECTION AND GRADE
- BARRIER CURB OPSD 600.110
- BARRIER CURB WITH STANDARD GUTTER OPSD 600.040
- BACK OF CURB
- DEPRESSED CURB/CURB CUT
- EDGE OF PAVEMENT
- HIGH POINT
- O/H DOOR OVERHEAD DOORS
- T/W TOP OF RETAINING WALL
- B/W BOTTOM OF RETAINING WALL
- T/C BOTTOM OF RETAINING WALL
- MANDOOR LOCATION
- OVERHEAD DOOR LOCATION
- EXISTING REGULATED AREA
- RETAINING WALL (BY OTHERS)
- SNOW STORAGE LOCATION
- BH/MW 19-51
- EXISTING GROUND ELEVATION
- GW 220.00
- GROUNDWATER ELEVATION
- MECHANICAL ROOM
- PIPE CROSSING LOCATION REFER TO TABLE ON SS-1

EX. SERVICES NOTE
LOCATION OF ALL UNDERGROUND SERVICES NOTED ON THE DRAWINGS ARE APPROXIMATE ONLY AND DERIVED BY CITY OF BARRIE AS-BUILT DRAWINGS. THE CONTRACTOR IS TO IDENTIFY AND CONFIRM THE LOCATION OF THESE EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORKS.

HORIZONTAL CONTROL MONUMENTS			
MNR MONUMENT - 03120080022 MONUMENT IS LOCATED ON THE SOUTHEAST CORNER OF INNISFIL STREET AND VESPREA STREET APPROXIMATELY 18.5m FROM CENTERLINE OF INNISFIL STREET AND APPROXIMATELY 13m FROM THE CENTERLINE OF VESPREA STREET. NOTE: A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER THE MONUMENT CAP			
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VERTICAL CONTROL MONUMENTS			
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3	SITE PLAN REVISIONS	02/25/22	AMC
2	AS PER CITY OF BARRIE COMMENTS	12/18/20	PG
1	AS PER REVISED SITE PLAN	06/12/20	AMC

BENCHMARK			
SITE BENCHMARK IS THE CENTER OF THE TOP NUT OF THE FIRE HYDRANT LOCATED ON THE WESTERN LIMIT AS SHOWN ON THE FACE OF THIS PLAN HAVING A GEODETIC ELEVATION OF 223.28			

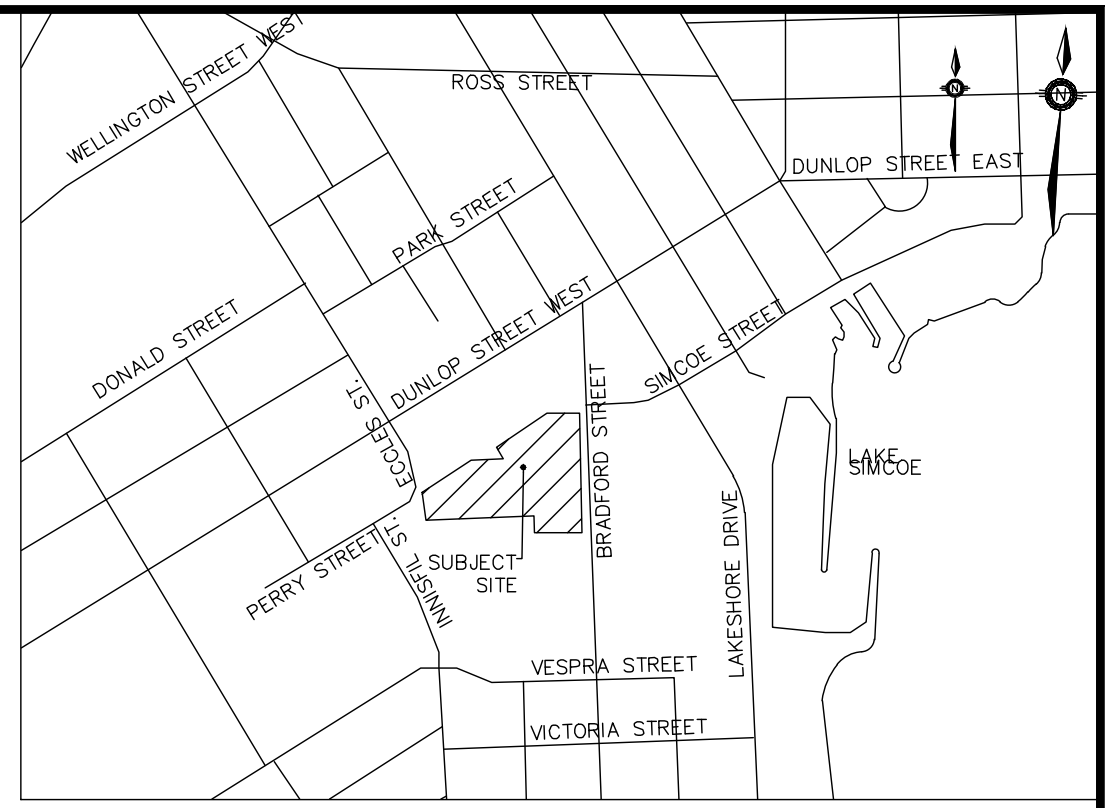
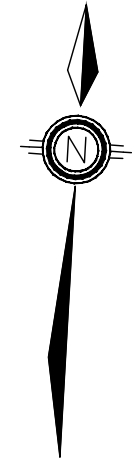
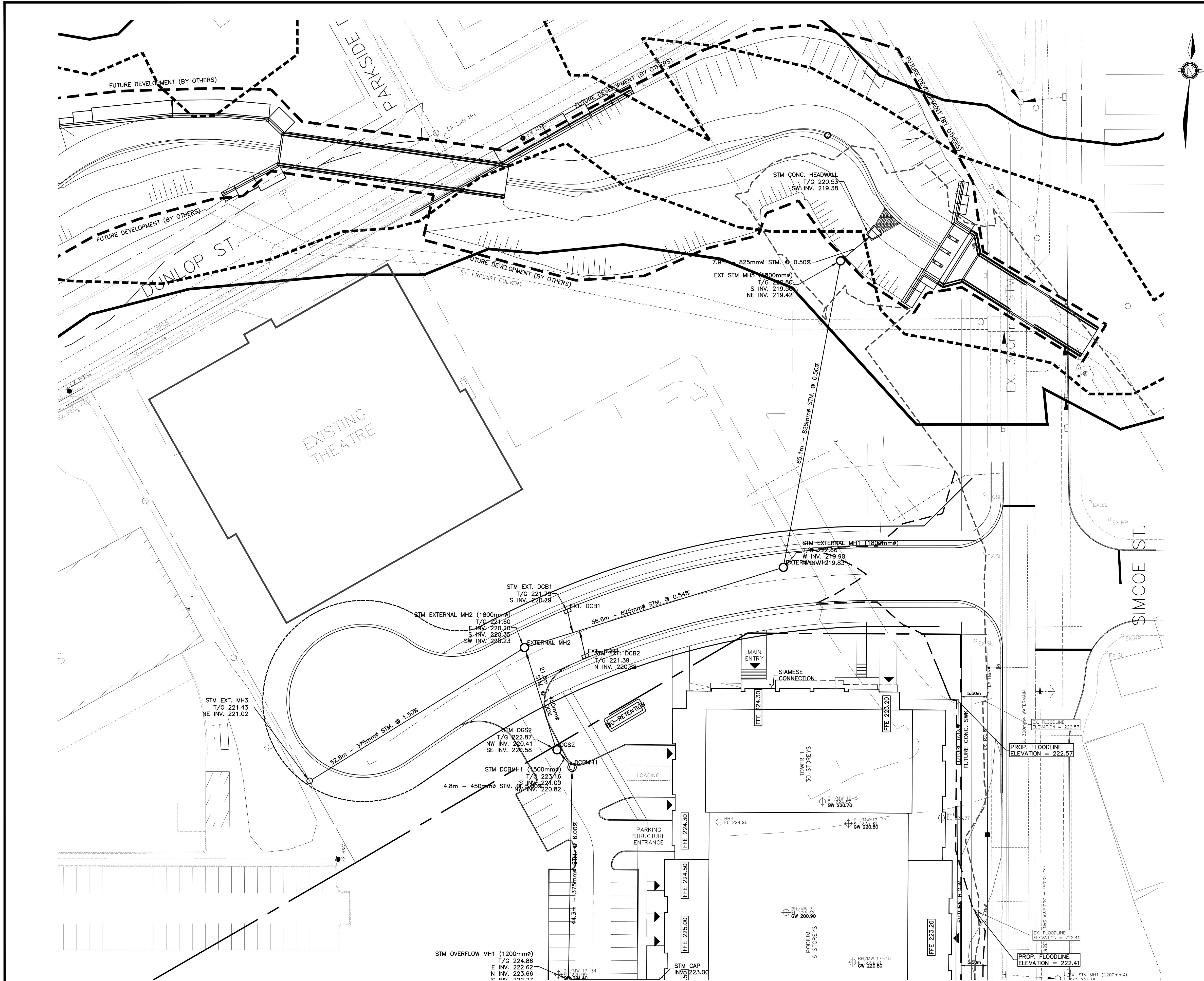


BARRIE CENTRAL DEVELOPMENTS INC.
34-50 BRADFORD STREET
BARRIE, ONTARIO

SITE SERVICING
(1 OF 2)

PEARSON ENGINEERING			
PEARSONENG.COM PH. 705.719.4785			
DESIGNED BY	AMC/IR	HORIZ SCALE	1:300
DRAWN BY	IR	VERT SCALE	N/A
CHECKED BY	GMP/MWD	DATE	MAY 2019
PROJECT #	19051	DRAWING #	SS-1
REVISION #	3		

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KEY PLAN
N.T.S.

LEGEND

- PROPOSED CATCH BASIN
- PROPOSED CATCH BASIN MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED DOUBLE CATCH BASIN
- PROPOSED DOUBLE CATCH BASIN MANHOLE
- SERVICE CAP
- FIRE HYDRANT
- WATER VALVE
- EXISTING CURB STOP
- EX. SANITARY MANHOLE
- EX. STORM MANHOLE
- EX. CATCH BASIN
- 254.63 PROPOSED ELEVATION
- 254.09 EXISTING ELEVATION
- NOTE PARKING LOT GRADES SHOWN ARE BOTTOM OF CURB UNLESS OTHERWISE NOTED
- PROPOSED DIRECTION AND GRADE
- BARRIER CURB OPSD 600.110
- BARRIER CURB WITH STANDARD GUTTER OPSD 600.040
- BACK OF CURB
- DEPRESSED CURB/CURB CUT
- EDGE OF PAVEMENT
- HIGH POINT
- OVERHEAD DOORS
- TOP OF RETAINING WALL
- BOTTOM OF RETAINING WALL
- BOTTOM OF RETAINING WALL
- MANDOOR LOCATION
- OVERHEAD DOOR LOCATION
- EXISTING REGULATED AREA
- RETAINING WALL (BY OTHERS)
- SNOW STORAGE LOCATION
- BOREHOLE/ MONITORING WELL - YEAR - #
- EXISTING GROUND ELEVATION
- GROUNDWATER ELEVATION
- MECHANICAL ROOM

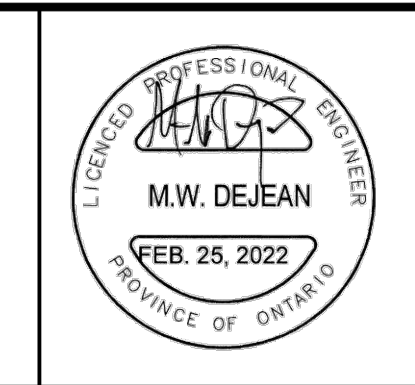
HORIZONTAL CONTROL MONUMENTS
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VERTICAL CONTROL MONUMENTS
MNR MONUMENT - 03120080022 MONUMENT IS LOCATED ON THE SOUTHEAST CORNER OF INNISFIL STREET AND VESPRE STREET APPROXIMATELY 18.5m FROM CENTERLINE OF INNISFIL STREET AND APPROXIMATELY 13m FROM THE CENTERLINE OF VESPRE STREET. NOTE: A PROTECTIVE WATER VALVE COVER HAS BEEN PLACED OVER THE MONUMENT CAP

NO.	REVISION NOTE	DATE	BY
3	SITE PLAN REVISIONS	02/25/22	AMC
2	AS PER CITY OF BARRIE COMMENTS	12/18/20	PG
1	AS PER REVISED SITE PLAN	06/12/20	AMC

BENCHMARK
SITE BENCHMARK IS THE CENTER OF THE TOP NUT OF THE FIRE HYDRANT LOCATED ON THE WESTERN LIMIT AS SHOWN ON THE FACE OF THIS PLAN HAVING A GEODETIC ELEVATION OF 223.28



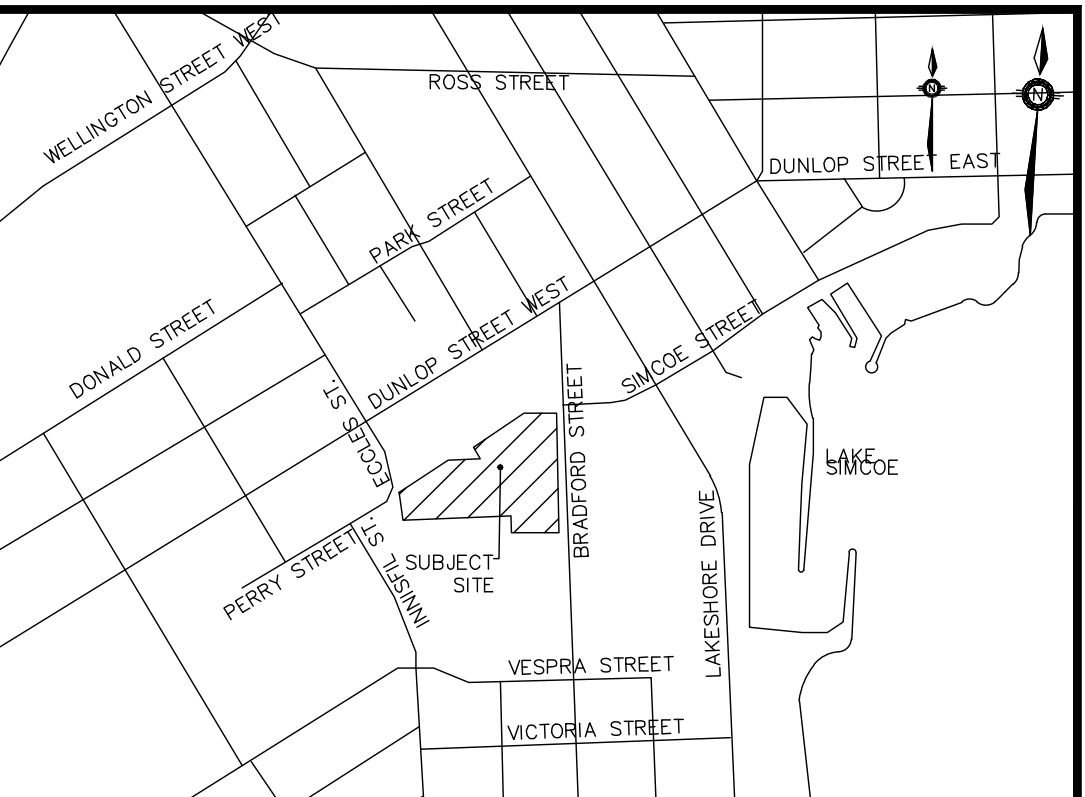
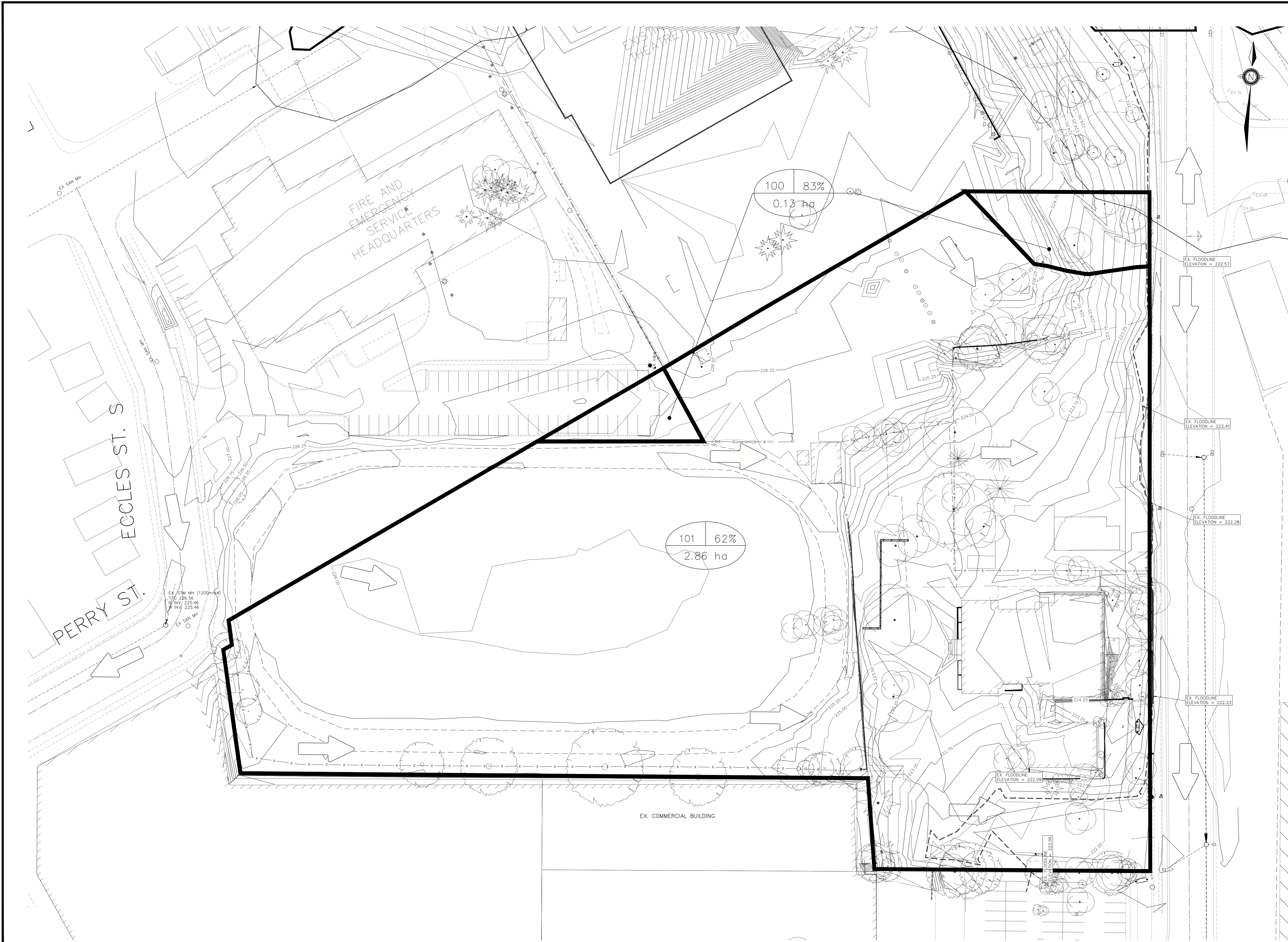
DESIGNED BY: AMC/IR
DRAWN BY: IR
CHECKED BY: GMP/MWD

BARRIE CENTRAL DEVELOPMENTS INC.
34-50 BRADFORD STREET
BARRIE, ONTARIO

SITE SERVICING
(2 OF 2)

DESIGNED BY	AMC/IR	HORIZ SCALE	1:400	PROJECT #	19051
DRAWN BY	IR	VERT SCALE	N/A	DRAWING #	SS-2
CHECKED BY	GMP/MWD	DATE	MAY 2019	REVISION #	3

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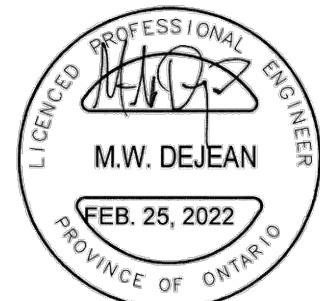
KEY PLAN
N.T.S.

LEGEND

- CB PROPOSED CATCH BASIN
- CBMH PROPOSED CATCH BASIN MANHOLE
- MH PROPOSED STORM MANHOLE
- DCB PROPOSED DOUBLE CATCH BASIN
- DCBMH PROPOSED DOUBLE CATCH BASIN MANHOLE
- SERVICE CAP
- HYD. FIRE HYDRANT
- WB WATER VALVE
- EX.CS EXISTING CURB STOP
- EX.MH EX. SANITARY MANHOLE
- EX.MH EX. STORM MANHOLE
- EX.CB EX. CATCH BASIN
- 254.63 PROPOSED ELEVATION
- 254.09 EXISTING ELEVATION
- NOTE PARKING LOT GRADES SHOWN ARE BOTTOM OF CURB UNLESS OTHERWISE NOTED
- 1.5% PROPOSED DIRECTION AND GRADE
- BARRIER CURB OPSD 600.110
- BARRIER CURB WITH STANDARD GUTTER OPSD 600.040
- BACK OF CURB
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- EDGE OF PAVEMENT
- HIGH POINT
- O/H DOOR OVERHEAD DOORS
- T/W TOP OF RETAINING WALL
- B/W BOTTOM OF RETAINING WALL
- T/C BOTTOM OF RETAINING WALL
- MANDOOR LOCATION
- OVERHEAD DOOR LOCATION
- EXISTING REGULATED AREA
- RETAINING WALL (BY OTHERS)
- SNOW STORAGE LOCATION
- BH/MW 19-51 BOREHOLE/ MONITORING WELL - YEAR - #
- EL 225.19 EXISTING GROUND ELEVATION
- GW 220.00 GROUNDWATER ELEVATION
- M MECHANICAL ROOM
- CATCHMENT BOUNDARY
- HYDROGRAPH NUMBER
- % IMPERVIOUSNESS
- 17140 15%
- 0.04 ha
- AREA IN ACRES

HORIZONTAL CONTROL MONUMENTS			
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3	SITE PLAN REVISIONS	02/25/22	AMC
2	AS PER CITY OF BARRIE COMMENTS	12/18/20	PG
1	AS PER REVISED SITE PLAN	06/12/20	AMC
NO.	REVISION NOTE	DATE	BY

BENCHMARK			
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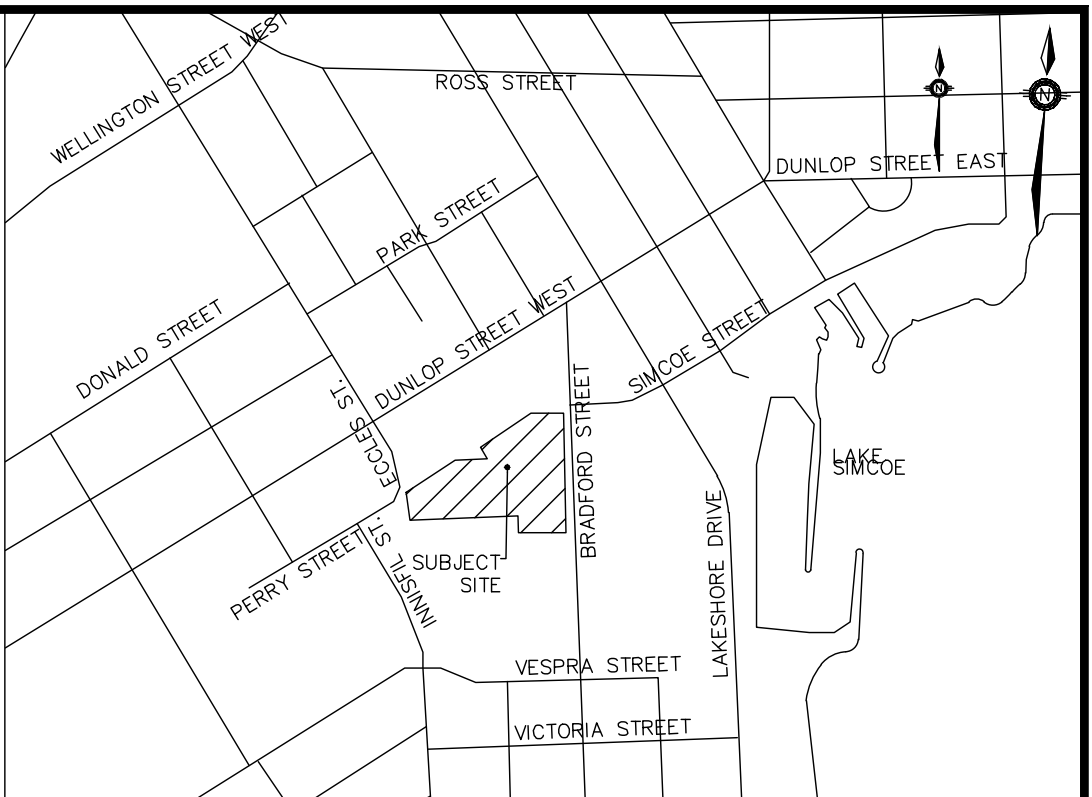
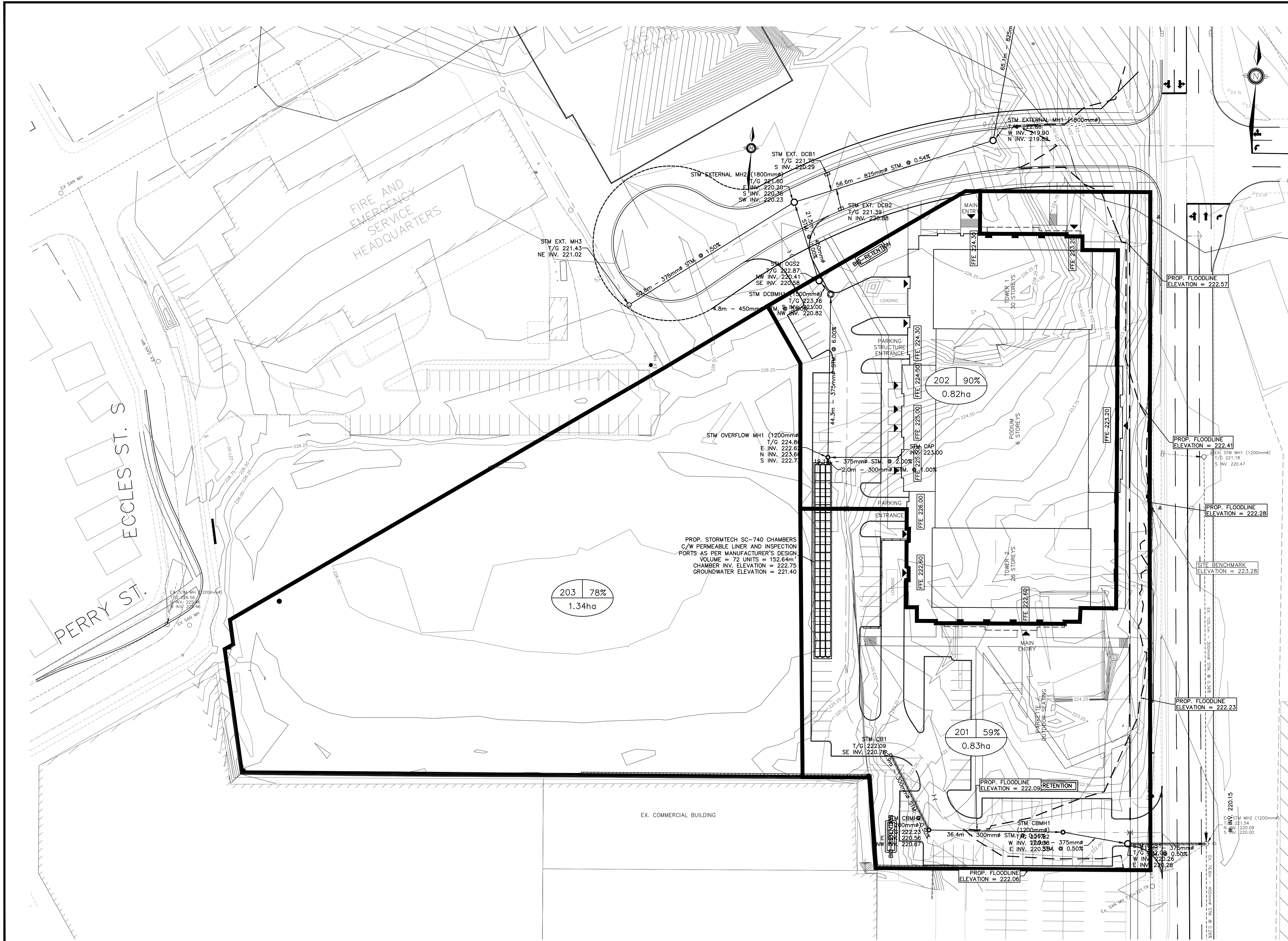
BARRIE CENTRAL DEVELOPMENTS INC.
34-50 BRADFORD STREET
BARRIE, ONTARIO

PRE-DEVELOPMENT STORM
CATCHMENT PLAN

PEARSON ENGINEERING
PEARSONENG.COM PH. 705.719.4785

DESIGNED BY	AMC/IR	HORIZ SCALE	1:500	PROJECT #	19051
DRAWN BY	IR	VERT SCALE	N/A	DRAWING #	STM-1
CHECKED BY	GMP/MWD	DATE	MAY 2019	REVISION #	3

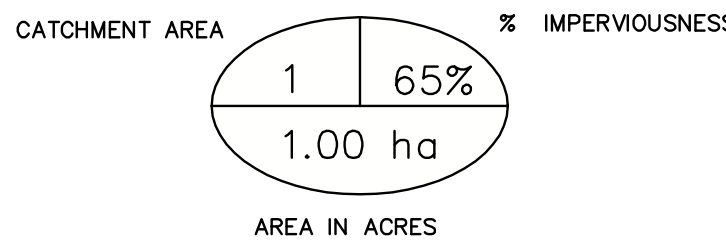
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KEY PLAN
N.T.S.

LEGEND

- CB PROPOSED CATCH BASIN
- CBMH PROPOSED CATCH BASIN MANHOLE
- MH PROPOSED STORM MANHOLE
- DCB PROPOSED DOUBLE CATCH BASIN
- DCBMH PROPOSED DOUBLE CATCH BASIN MANHOLE
- SERVICE CAP
- HYD. FIRE HYDRANT
- WV WATER VALVE
- EX.CS EXISTING CURB STOP
- EX.MH EX. SANITARY MANHOLE
- EX.MH EX. STORM MANHOLE
- EX.CB EX. CATCH BASIN
- 254.63 PROPOSED ELEVATION
- 254.09 EXISTING ELEVATION
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- BARRIER CURB OPSD 600.110
- BARRIER CURB WITH STANDARD GUTTER OPSD 600.040
- BACK OF CURB
- DEPRESSED CURB/CURB CUT
- EDGE OF PAVEMENT
-)(HIGH POINT
- O/H DOOR OVERHEAD DOORS
- T/W TOP OF RETAINING WALL
- B/W BOTTOM OF RETAINING WALL
- T/C BOTTOM OF RETAINING WALL
- ▲ MANDOOR LOCATION
- △ OVERHEAD DOOR LOCATION
- EXISTING REGULATED AREA
- RETAINING WALL (BY OTHERS)
- SNOW STORAGE LOCATION
- BH/MW 19-51 BOREHOLE/ MONITORING WELL - YEAR - #
- EXISTING GROUND ELEVATION
- GW 220.00 GROUNDWATER ELEVATION
- M MECHANICAL ROOM
- OVERLAND FLOW ROUTE
- CATCHMENT BOUNDARY



HORIZONTAL CONTROL MONUMENTS			
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1	AS PER REVISED SITE PLAN	06/12/20	AMC

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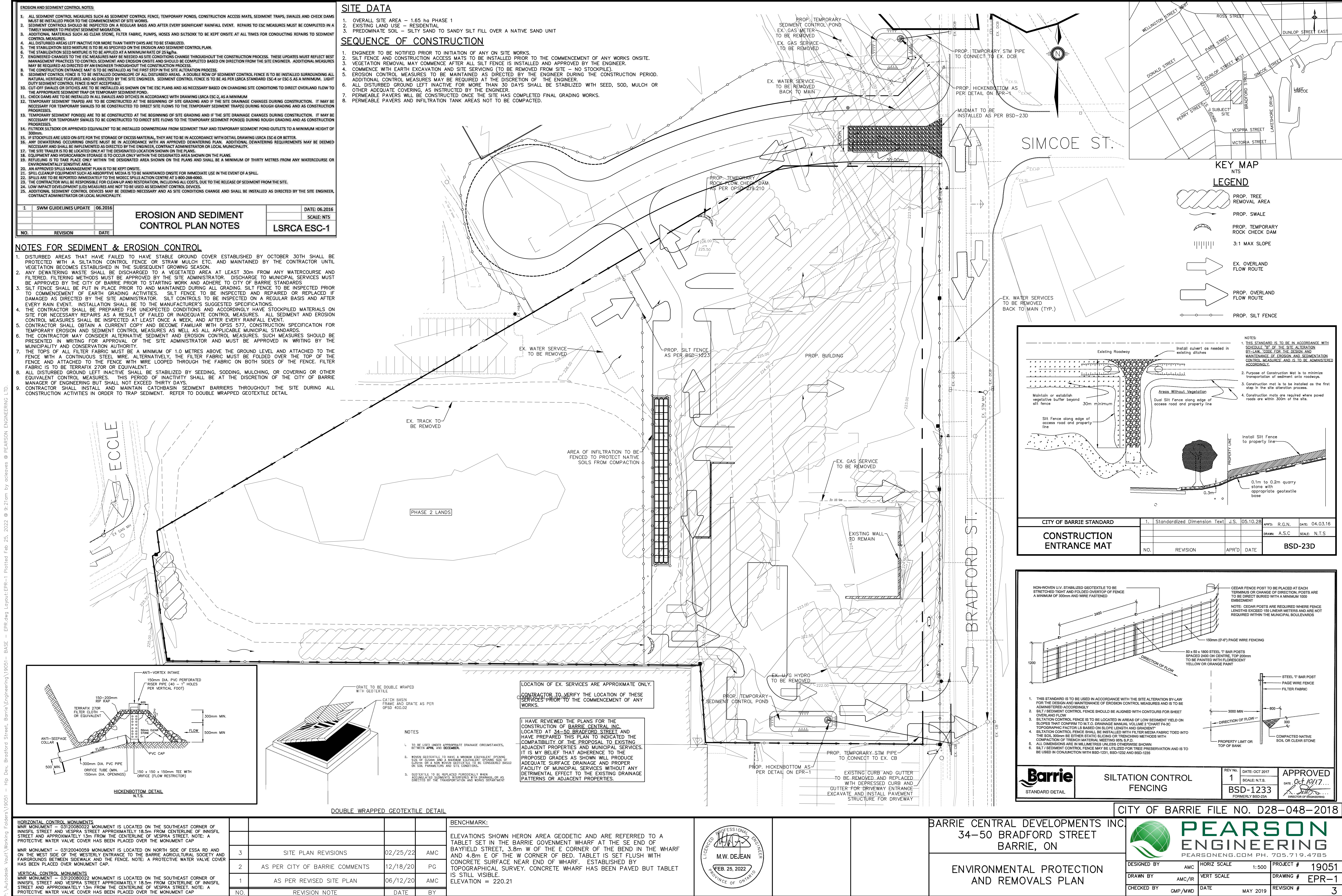


BARRIE CENTRAL DEVELOPMENTS INC.
34-50 BRADFORD STREET
BARRIE, ONTARIO

POST-DEVELOPMENT STORM
CATCHMENT PLAN

PEARSON
ENGINEERING
PEARSONENG.COM PH. 705.719.4785

DESIGNED BY	AMC/IR	HORIZ SCALE	1:500	PROJECT #	19051
DRAWN BY	IR	VERT SCALE	N/A	DRAWING #	STM-2
CHECKED BY	GMP/MWD	DATE	MAY 2019	REVISION #	3



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