

AUGUSTA MOTORSPORTS, INC.

for

NORTH COUNTRY HARLEY DAVIDSON EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA PLANNING BOARD

MINOR DEVELOPMENT REVIEW APPLICATION

by

Thayer Engineering Co., Inc.
17 Hasson Street, Farmingdale, Maine

July 10, 2015

Signatures

Applicant: <u>Trey R</u>	Date: <u>7/10/2015</u>
Owner: <u>Trey R</u>	Date: <u>7/10/2015</u>
Agent: <u>Allen Clayton</u>	Date: <u>7/10/15</u>

Checklist. The checklist below must be completed by the applicant. The required material or a written waiver request must be provided.

Information Required on Plan(s) See Augusta Land Use Ordinance for greater detail	Included	Waiver Requested
a. Name of Site Plan (Sec 4.5.2.1 of the Land Use Ordinance)	X	
b. Owner(s) name and address (4.5.2.2)	X	
c. Deed reference to subject parcel (4.5.2.3)	X	
d. Engineer's name, address, signature and seal (4.5.2.4)	X	
e. Surveyor's name, address, signature and seal (4.5.2.5)	X	
f. Scale, both in graphic and written form (4.5.2.6)	X	
g. Date and Revision box (4.5.2.7)	X	
h. Zoning designation(s) (4.5.2.8)	X	
i. North Arrow (true and magnetic, dated or grid) (4.5.2.9)	X	
j. Ownership, location and present use of abutting land (4.5.2.11)	X	
k. Location map (4.5.2.12)	X	
l. Streets, existing & proposed, with curve data (4.5.2.13 & 4.6.2.5)	X	
m. Drainage and erosion control (4.5.2.14)	X	
n. Utilities, existing and proposed (4.5.2.15)	X	
o. Topography, 2 foot contours (4.5.2.16)	X	
p. Parcel boundaries and dimensions (4.5.2.17)	X	
q. Proposed Use of the property (4.5.2.18)	X	
r. Proposed public or common areas (4.5.2.19)	NA	
s. Boundary Survey and associated information (4.5.2.20)	X	
t. Traffic controls, off-street parking and facilities (4.5.2.21)	X	
u. Proposed fire protection plans or needs (4.5.2.22)	X	
v. Landscaping and buffering (4.5.2.23)	X	
w. Outdoor lighting plan (4.5.2.24)	X	
x. Freshwater wetlands (4.4.1.14)	X	
y. River, stream or brook (4.4.1.15)	NA	
Information Required in Written Project Narrative See Augusta Land Use Ordinance for greater detail	Included	Waiver Requested
a. Pollution – Undue water or air pollution (4.4.1.1)	X	
b. Water – Sufficient potable water (4.4.1.2)	X	
c. Municipal Water – is there adequate supply (4.4.1.3)	X - NA	
d. Soil Erosion – unreasonable soil erosion (4.4.1.4)	X	
e. Road congestion and safety (4.4.1.5 & 4.5.2.21)	X	
f. Sewage waste disposal – adequate provisions (4.4.1.6)	X	
g. Solid waste – adequate provisions (4.4.1.7)	X	
h. Aesthetic, cultural, and natural values (4.4.1.8)	X	
i. Conformity with city ordinances and plans (4.4.1.9)	X	
j. Financial and technical ability (4.4.1.10)	X	
k. Surface water, shoreland, outstanding rivers (4.4.1.11)	X	
l. Ground water – negative impact (4.4.1.12)	X	
m. Flood areas (4.4.1.13)	X	
n. Freshwater wetlands – description of impact (4.4.1.14)	X - NA	
o. Stormwater – management plans (4.4.1.16)	X	
p. Access to direct sunlight (4.4.1.17)	X	
q. State Permits – description of requirements (4.4.1.18)	X - NA	
r. Outdoor lighting – description of lighting plans (4.4.1.20)	X	

Additional Information Required in Written Narrative See Augusta Land Use Ordinance for greater detail		
Where the items below duplicate the items above, identical responses are permitted and encouraged.	Included	Waiver Requested
s. Neighborhood Compatibility – description per ordinance (6.3.4.1)	X	
t. Compliance with Plans and Policies (6.3.4.2)	X	
u. Traffic Pattern, Flow, and Volume analysis (6.3.4.3)	X	
v. Public facilities – Utilities including stormwater (6.3.4.4)	X - NA	
w. Resource protection and the environment (6.3.4.5)	X	
x. Performance Standards (6.3.4.6)	X	
y. Financial and Technical Ability (6.3.4.7)	X	

Application Materials

The application materials that are required for a complete application are listed below:

Paper Copies	Included	Waiver Requested
10 copies of the application form and narrative	X	
10 copies of the deed, Purchase & Sale agreement, or other document to show standing	X	
3 copies of any stormwater report	X	
2 copies of any traffic report	NA	
6 reduced-sized copies of the complete plan set on 11" x 17" size paper	X	
4 full-sized copies of the complete plan set on ANSI D or E size paper	X	
10 copies of a letter authorizing the agent to represent the applicant	X	
Payment in full of application fee (Note: an abutter notification fee will be assessed after the application is determined to be complete. The fee is \$0.15 plus the cost of first class postage for each abutter that will be notified as required by the ordinance.)	X	
Electronic Copy		
1 CD that includes each of the application documents in Adobe PDF format	X	

For Official Use:		
[] \$ _____ Application Fee Paid.	Received By (Initials): _____	Date: _____
[] \$ _____ Abutter Notification Fee Paid.	Received By (Initials): _____	Date: _____

Augusta Motorsports, Inc.
d/b/a North Country Harley Davidson
3099 North Belfast Avenue
Augusta, ME 04330

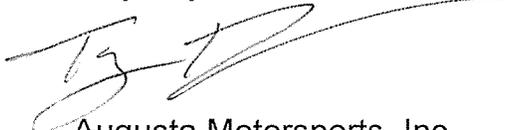
July 9, 2015

City of Augusta
16 Cony Street
Augusta, ME 04330

To Whom It May Concern:

Please be advised that Elliot B. Thayer, PE PLS of Thayer Engineering Company, Inc. has been engaged to provide all site engineering design services for North Country Harley Davidson's proposed warehouse expansion located at 3099 North Belfast Avenue in Augusta, Maine. As such, Elliot Thayer is authorized to act as agent on our behalf in the preparation, presentation, and administration of land use applications for the City of Augusta.

Sincerely,
Troy Reynolds, Vice President



Augusta Motorsports, Inc.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

RIGHT, TITLE AND INTEREST

The existing facility and land being developed is owned by Troy L. Reynolds and Diane M. Reynolds as described in a deed dated December 23, 2011, recorded in Kennebec County Registry of Deeds in Book 10929, Page 23. Troy Reynolds is Vice President of Augusta Motorsports, Inc. The address of the property is 3099 North Belfast Avenue and is Lot 98 on Augusta Tax Map 4.

Following is a copy of the deed.

**TRANSFER
TAX
PAID**

SHORT FORM QUITCLAIM DEED WITH COVENANT

MARIANNE M. REYNOLDS of Gorham, Maine, FOR CONSIDERATION PAID, grants to TROY L. REYNOLDS and DIANE M. REYNOLDS, both individuals whose mailing address is 93 Webber Pond Road, Vassalboro, Maine 04989, as joint tenants, with QUITCLAIM COVENANT, certain real property, together with any improvements thereon, located in Augusta, Kennebec County, Maine and more particularly described on Exhibit A attached hereto and made a part hereof.

WITNESS my hand and seal this 23RD day of December, 2011.

WITNESSETH:


Name: _____


Marianne M. Reynolds

State of ~~Florida~~ MAINE
County of CUMBERLAND, ss.

December 23, 2011

PERSONALLY APPEARED the above-named Marianne M. Reynolds and acknowledged the foregoing instrument to be her free act and deed.

Before me,


Name: William M. Welch
Notary Public ATTORNEY AT LAW

Received Kennebec SS.
01/03/2012 9:12AM
Pages 4 Attest:
BEVERLY BUSTIN-HATHENWAY
REGISTER OF DEEDS

④ MDBS

EXHIBIT A

Parcel 1:

A certain lot or parcel of land situate northerly of North Belfast Avenue, so-called, in the City of Augusta, Kennebec County, State of Maine, and being bounded and described as follows:

Beginning at a steel pin on the north side of State Route 3 at the southeasterly corner of W. Santerre; thence N 31° 47' E along a stone wall and land of W. Santerre and Henry Lord a distance of 757.8 feet to a 1 ½" pipe; thence S 12° 38' E along land of Rena Savage and Joseph Bradstreet a distance of 633.1 feet to an iron spike on boundary line of said Route 3; thence westerly along the boundary line of Route 3 a distance of 538.2 feet to point of beginning. Meaning and intending to convey a triangular lot of land of 3.85 acres. The above deed description was taken from survey plan of C.K. Archer, Palmero, Maine dated June, 1984.

The above-described premises are herein conveyed subject to:

1. Rights and easements granted by Harold L. Paradis to Central Maine Power Company and New England Telephone and Telegraph Company dated November 3, 1975 and recorded in the Kennebec County Registry of Deeds in Book 1872, Page 252; and
2. Layout and Notice of Taking by the State of Maine for highway purposes dated May 29, 1957 and recorded in said Registry of Deeds in Book 1082, Page 128.

Meaning and intending to convey the same premises conveyed to Marianne M. Reynolds by Warranty Deed of Barry Rudkin dated August 11, 1999, and recorded in the Kennebec County Registry of Deeds in Book 6024, Page 60.

Parcel 2:

A certain lot or parcel of land situate northerly of North Belfast Avenue, so-called, in the City of Augusta, Kennebec County, State of Maine, and being bounded and described as follows:

Beginning northerly of North Belfast Avenue at a 5/8-inch iron rod found on the northwesterly line of land of Marianne M. Reynolds, reference deed recorded in Kennebec County Registry of Deeds in Book 6024, Page 60, at the easterly corner of land now or formerly of one Warren V. Santerre and Linda R. Santerre, reference deed recorded in said Registry of Deeds in Book 2590, Page 277, said iron rod being N 31° 33' 43" E and 112.52 feet as measured along the northwesterly line of said land of Marianne M. Reynolds and the southeasterly line of said land of Santerre and marked in part by a stone wall from the northerly right-of-way line of North Belfast Avenue as shown on a plan entitled "Maine State Highway Commission, Right of Way Map, State Highway '210', Augusta, Kennebec County, Federal Aid

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Secondary Project S-0210 (12)", dated January 1957, S.H.C. File No. 6-83, all as shown on a plan entitled "Plan of Boundary Survey, Marianne M. Reynolds, northerly of North Belfast Avenue, Augusta, Maine", dated May 21, 2004 by Thayer Engineering Company, Inc., Farmingdale, Maine;

thence N 29° 46' 00" E along the northwesterly line of said land of Marianne M. Reynolds marked in part by said stone wall a distance of 658.90 feet to a ½-inch iron rod found and the northerly corner of said land of Marianne M. Reynolds and the westerly corner of land now or formerly of Crocker Brothers, LLC, reference deed recorded in said Registry of Deeds in Book 7865, Page 146;

thence N 30° 46' 00" E along the northwesterly line of said land of Crocker Brothers, LLC a distance of 961.80 feet to a ¾-inch iron rod in drill hole set capped "Thayer Engineering Company" and the westerly corner of land now or formerly of Nicholas T. Tavernakis and Patricia A. Tavernakis, reference deed recorded in said Registry of Deeds in Book 7694, Page 327;

thence N 43° 56' 51" E along the northwesterly line of said land of Tavernakis a distance of 523.44 feet to a ¾-inch iron rod set capped "Thayer Engineering Company" and the southerly corner of land now or formerly of Andrea Lord Simpson, reference deed recorded in said Registry of Deeds in Book 3420, Page 215;

thence N 67° 32' 00" W along the southerly line of said land of Simpson a distance of 651.87 feet to a ¾-inch iron rod set capped "Thayer Engineering Company" and the southeasterly edge of the cleared strip of land for the Mobil Oil Corp. pipeline, so-called;

thence S 53° 14' 15" W along a southeasterly line of land being retained by Trees' Ltd., reference deed recorded in said Registry of Deeds in Book 7632, Page 45, and in general along the southeasterly edge of the cleared strip of land for the Mobil Oil Corp. pipeline a distance of 2,061.51 feet;

thence S 54° 11' 13" W along a southeasterly line of said land being retained by Trees' Ltd. and in general along the southeasterly edge of the cleared strip of land for the Mobil Oil Corp. pipeline a distance of 174.78 feet to a ¾-inch iron rod set capped "Thayer Engineering Company" and the northeasterly line of land now or formerly of one Apex, Inc., reference deed recorded in said Registry of Deeds in Book 7420, Page 302;

thence S 60° 26' 00" E along the northeasterly line of said land of Apex, Inc. and along the northeasterly line of said land of Santerre a distance of 1,394.89 feet to the point of beginning, containing 45.95 acres, more or less.

Subject to rights that may exist for a right of way for the Mobil Oil Corp. pipeline along the northwesterly side of the above described premises, said right of way

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being as described in a deed of W.T. Reynolds, Jr. and Mary T. Reynolds to Socony-Vacuum Oil Company, Incorporated, dated October 20, 1947, recorded in said Registry of Deeds in Book 650, Page 354. Reference is also made to a deed of Socony Mobil Oil Company, Inc. to Magnolia Pipe Line Company, dated November 30, 1959, recorded in said Registry of Deeds in Book 1179, Page 290.

Bearings are based on a plan entitled "Parcel 'A', Standard Boundary Survey for Andrea Lord Simpson and Rebecca L. Henner on Route #3, Cross Hill Road & Prescott Road, in Augusta, Kennebec County, Maine", dated March 1987 - December 1987, by Michael S. Witham, a copy of which is on file at Thayer Engineering Company, Inc., Farmingdale, Maine; said bearings being oriented to a 1987 magnetic north observation.

Reference is made to said plan entitled "Plan of Boundary Survey, Marianne M. Reynolds, northerly of North Belfast Avenue, Augusta, Maine", dated May 21, 2004 by Thayer Engineering Company, Inc., Farmingdale, Maine.

Being a portion of the premises described in a deed of Rebecca Lord Hafey to Trees' Ltd., dated August 16, 2003, recorded in Kennebec County Registry of Deeds in Book 7632, Page 45.

The above-described premises are herein conveyed subject to:

1. A right-of-way for the benefit of Mobil Oil Corp. pipeline as set forth in deed from W.T. Reynolds, Jr. and Mary T. Reynolds to Socony-Vacuum Oil Company, Incorporated dated October 20, 1947 and recorded in said Registry of Deeds in Book 650, Page 354 and deed from Socony Mobil Oil Company, Inc. to Magnolia Pipe Line Company dated November 30, 1959 and recorded in Book 1179, Page 290; and
2. Possible water and well rights excepted and reserved in deed from Willington T. Reynolds, Jr. to Henry T. Lord et al dated May 19, 1961 and recorded in said Registry of Deeds in Book 1228, Page 262.

Meaning and intending to describe the same premises conveyed to Marianne M. Reynolds by Warranty Deed of Trees' Ltd., a Maine general partnership dated July 22, 2004 and recorded in the Kennebec County Registry of Deeds in Book 8046, Page 19.

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AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

DEVELOPMENT DESCRIPTION

The application is for the construction of a 5,000 square-foot warehouse addition onto the north side of the existing North Country Harley Davidson warehouse at 3099 North Belfast Avenue in Augusta, Maine. This \$125,000 warehouse expansion is necessary for inventory storage.

The property is located in the "RV" (Rural Village) District. The Augusta Land Use Ordinance describes the RV District as intended to foster commercial and service-oriented uses designed to support the surrounding rural population and to foster positive community identity in the rural parts of the City.

The existing facility consists of two (2) buildings, a showroom/service building and a warehouse building, on the northerly side of North Belfast Avenue. Surrounding properties are a commercial use and a mobile home park to the east, a residence and other vacant land of the applicant/owner to the west, and vacant land on the southerly side of North Belfast Avenue.

North Belfast Avenue is a state highway and more than adequate for safe ingress and egress to and from the site. The speed limit at this location is 55 miles per hour, and site distances in both directions exceed 600 feet.

A site modification in 2000 removed two (2) driveway entrances, and the third driveway entrance remains as the approved entrance. All interior driveways, maneuvering and parking areas meet standards.

There are currently 18 to 20 employees and 75 to 100 customers on-site per day. Both are expected to remain the same after the warehouse expansion. Delineated parking consists of 71 passenger car parking spaces including 3 handicap spaces, which will not change. Parking required is 62 spaces – 44 spaces for sales (4/GFA - 11,000sf + 0.5/vehicle displayed - 0), 14 spaces for service/repair (3/GFA - 4,500sf) and 2 spaces for warehousing (1/warehouse employee - 4). Traffic to and from the North Country Harley Davidson dealership is not expected to increase significantly as a result of the warehouse expansion.

Water and sewer are by private on-site systems. The septic system was improved during the 2000 renovations. Water used and wastewater generated will not significantly change as a result of this proposed building expansion.

The existing impervious areas on the subject lot encompass about 56,706 square feet, and the proposed expansion will increase that by about 7,365 square feet. The existing impervious areas were all created before November 16, 2005 and predate the current Maine Department of Environmental Protection (MDEP) stormwater management rules. The proposed 7,365-square foot impervious expansion is below the 20,000-square foot MDEP threshold that applies in a "watershed at risk", and therefore does not require a stormwater permit from MDEP.

Stormwater quantity control for the proposed expansion will be provided by a detention pond to be constructed westerly of the warehouse. The pond will provide quantity control for portions of the existing and expanded facility so that peak flows are not increased from the property, as shown in the attached stormwater calculations and report. Surface water from the detention pond will flow westerly as it does now onto other land of Troy and Diane Reynolds.

Wetland areas exist on westerly and southwesterly portions of the Reynolds property. The proposed improvements will not impact any wetland areas.

Before earth moving begins, the portion of the site being developed will be protected from erosion and sedimentation by the installation of a sediment barrier as shown on the attached plan entitled "Site Plan, North Augusta Harley Davidson, 3099 North Belfast Avenue, Augusta, Maine", dated July 10, 2015.

A 200-foot long vegetative buffer will be provided along the easterly boundary adjacent to the existing and extended warehouse. The adjoining property use is commercial, therefore a 15-foot wide "Bufferyard A" is required of existing/new plants which will consist of a minimum of four (4) canopy and evergreen trees, eight (8) understory trees and twelve (12) deciduous shrubs.

Proposed exterior lighting will be one (1) fully-shielded wall fixture.

Construction is expected to begin by September 1, 2015 with completion before November 1, 2015.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

POLLUTION
Review Criteria A.

The development will not result in undue water or air pollution.

Water supply and wastewater disposal for the existing facility is provided by on-site with a drilled well and septic system. Water used and wastewater generated will not significantly change as a result of this proposed warehouse expansion.

Stormwater quantity control will be accomplished with a stormwater detention pond as shown on the site plan. Erosion and Sedimentation Control during construction will be accomplished by the site contractor in accordance with specifications shown on the site plan and in this application.

According to the "Soil Survey of Kennebec County Maine" published by the USDA, Soil Conservation Service (see attachment), the soils on the development site are Woodbridge very stony fine sandy loam (WsB), 3 to 8 percent slopes, which are deep, moderately well soils.

No wetland areas will be impacted by this development.

Solid waste generated during construction will be removed from the site and disposed of at approved disposal facilities as part of the construction contract. Excavated soils will be used on site as appropriate wherever possible. Solid wastes generated from daily operations are recycled and/or disposed of at licensed facilities.

The existing North Country Harley Davidson operations generate no undue air pollution, and this proposal will cause no change.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

POTABLE AND MUNICIPAL WATER
Review Criteria B. and C.

Water is supplied by an on-site drilled well that has served the facility with sufficient potable water.

The proposed development expansion will not significantly increase water usage.

AUGUSTA MOTORSPORTS, INC.
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EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

SOIL EROSION
Review Criteria D.

This proposal is for the construction of a 5,000 square-foot warehouse building addition with approximately 2,365 square feet of additional paved/gravel maneuvering areas. Stormwater runoff will be directed to a stormwater detention pond that will maintain flows to or below pre-development levels. Erosion and Sedimentation Control measures are specified and will be implemented to ensure that the construction of this project will have minimal adverse impact on the adjacent resources. Reference is made to the attached plans for Erosion and Sedimentation Control Details.

The following plan for controlling sedimentation and erosion is based upon sound conservation practices including those outlined in the "Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices" by the Cumberland County Soil and Water Conservation District and the Maine Department of Environmental Protection, dated March 1991 (as revised) ("BMPs").

GENERAL CONSIDERATIONS

In areas where ground cover is removed between September 15th and May 1st, mulch shall be applied as called for in this plan within 2 days of the removal of the ground cover.

In areas where ground cover is removed, the area shall be stabilized as soon as is practical either by a structural method meeting the standards as called for in the BMPs or by permanent vegetative cover.

Any construction activities taking place between November 1st and April 15th shall adhere to the following Winter Construction Plan:

1. The interim period for any exposed area shall be limited to 2 calendar days;
2. No more than 1 acre of the site may be without stabilization at one time;

3. Where required, installation of filter barrier may be modified from detail on plans to substitute 6-inches of clean gravel over the bottom of the filter barrier in lieu of trenching and backfilling fabric. All areas within 100 feet of protected natural resource must be protected by a double row of filter barriers;
4. Mulching and seeding rates shall adhere to the Temporary Seeding and Mulching Schedule set forth herein. Note that all mulching rates shall be doubled as shown in Note 1 of the schedule and should follow the sensitive area schedule. At the end of each construction day, all areas that have been brought to final grade must be stabilized. Mulch may not be spread on top of snow;
5. All vegetated ditch lines that have not been stabilized by November 1, or will be worked during the winter, must be stabilized with an appropriate stone lining backed by an appropriate gravel bed or geotextile unless specifically released from this standard by the Department of Environmental Protection; and
6. Construction shall be planned to eliminate the need for seeding during the fall, winter or mud season.

CONSTRUCTION EROSION CONTROL MEASURES

PROPOSED SCHEDULE FOR IMPLEMENTATION OF EROSION & SEDIMENTATION CONTROL MEASURES

- (1) Prior to any earth-moving, grubbing or construction activities, filter barriers shall be installed in the locations shown on the accompanying "Site Plan" and as specified in this plan;
- (2) The topsoil shall be removed and stockpiled on-site. Filter barriers shall be installed around any stockpiles expected to remain longer than three days. Stockpiles expected to remain longer than 15 days shall be treated with mulch;
- (3) Stabilize areas within 100 feet of a wetland or water body within 7 days or prior to a predicted storm event, whichever comes first;
- (4) The site shall be rough-graded and stabilized against erosion as called for in this plan;
- (5) Immediately following final grading, all graded or disturbed areas not to be graveled, paved, ripped or otherwise built on are to be spread with a minimum compacted depth of 4 inches of topsoil, seeded and mulched to provide a permanent vegetative cover. The seeding will occur between April 15th and September 15th in order to ensure a successful germination. The permanent seeding shall be applied in accordance with this plan; and

- (6) The filter barriers shall remain in place until all areas have been permanently stabilized and an adequate grass catch has been achieved (>90% coverage with no evidence of washing or rilling of the topsoil). It will be the responsibility of the applicant to properly remove the filter barriers and to remove and properly dispose of the collected sediment once the site has been permanently stabilized.

MAINTENANCE OF EROSION & SEDIMENTATION CONTROL MEASURES

Inspections of disturbed and impervious areas, erosion and sedimentation control measures, and areas where vehicles enter or exit the site shall occur at least once a week and before and after a storm event, prior to completion of permanent stabilization. If best management practices need to be modified or if additional BMPs are necessary, implementation shall be completed within 7 calendar days and prior to any storm event. All measures must be maintained in effective operating condition until areas are permanently stabilized.

A log report shall be kept summarizing the scope of the inspection, name(s) and qualification of the inspector(s), the date(s) of the inspections and major observations relating to operation of erosion and sedimentation controls and pollution prevention measures. Follow-up to correct deficiencies or enhance controls shall also be indicated in the logbook.

- (1) Filter barriers shall be inspected weekly and/or after any sustained rainstorm for undercutting, overtopping, gaps, or sediment buildup. Should the barriers not be functioning properly they shall immediately be repaired or replaced and sediment removed as necessary. Any sediment removed shall be spread and stabilized in areas on the site not subject to erosion. If additional barriers are found to be necessary they shall be installed immediately;
- (2) Mulched areas shall be inspected weekly and prior to any storm event for insufficient coverage (less than 90% coverage) and, if necessary, immediately be brought into conformance with the specifications of this plan;
- (3) If germination of temporary seeding is unsuccessful (<90% catch) within 30 days of seeding, the area shall be reseeded; and
- (4) If germination of final seeding is unsuccessful (<90% catch) within 30 days of seeding, the area shall be reseeded.

DESCRIPTIONS OF EROSION CONTROL MEASURES

Filter Barrier

Description

Filter barrier shall be used as a sediment barrier to intercept and retain small amounts of sediment from disturbed or unprotected areas of limited extent. The filter barrier shall conform to the materials and installation specifications as set forth in the BMPs and shall be installed in the locations shown on the accompanying "Site Plan".

NOTE: Locations of filter barrier are shown for general purposes only on the "Site Plan". Final locations may be modified based on actual field conditions and as site conditions warrant. Such field changes or modifications shall be approved by the Engineer.

Maintenance

The filter barrier shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

The fabric shall be replaced promptly when it decomposes or becomes ineffective before the barrier is no longer necessary.

A second line of filter barrier shall be installed if the sediment level reaches one half the height of the first barrier.

The filter barrier shall be removed when no longer needed and the sediment collected shall be properly disposed of in a manner that will not damage adjacent properties or water bodies.

Mulch Matting Slope Protection

Description

Mulch Matting Slope Protection shall be used on newly constructed steep slopes to prevent erosion. The matting shall conform to the materials and installation specifications as set forth in the BMPs and shall be installed in the locations shown on the accompanying "Site Plan".

Maintenance

The matting slopes shall be inspected in the spring, in the fall and following severe storms for slumping, sliding or seepage problems. Any required repairs shall be made immediately.

Rip Rap Slope Protection

Description

Rip Rap Slope Protection shall be installed on prolonged steep slopes and in the areas shown on the Site Plan. The installation and materials of the Rip Rap Slope Protection shall be as set forth in the BMPs and as shown on the Details Plan.

Maintenance

The Rip Rap Slope Protection shall be inspected periodically and any problems shall be repaired as necessary. If any erosion or scouring is apparent, repairs will be made immediately.

Rip Rap Headwall and Rip Rap Apron

Description

Rip Rap headwalls shall be installed at the inlets and outlets of all culverts. The outlet of the culvert shall be further protected from erosion by the installation of a Rip Rap Apron. The installation and materials of the Rip Rap Headwall and Rip Rap Apron shall be as set forth in the BMPs and as shown on the Details Plan.

Maintenance

The Rip Rap Headwall and Rip Rap Apron shall be inspected periodically and any problems shall be repaired as necessary. If any erosion or scouring is apparent, repairs will be made immediately.

Temporary Seeding

Description

For areas in which permanent stabilization is not feasible within 90 days from the start of construction or when construction will be interrupted for longer than 2 months, the disturbed areas shall be stabilized with a temporary vegetative cover or with mulch secured with erosion control netting. The installation of temporary seeding (application

rates, depths and timing and fertilizer application) shall conform to the specifications as set forth in the BMPs.

Temporary Seeding and Mulching Schedule

April 1 to July 1: Annual Rye Grass at 0.90 pounds/1,000 square feet

July 7 to August 15: Sudan Grass at 0.90 pounds/1,000 square feet

August 15 to October 15: Winter Rye at 2.00 pounds/1,000 square feet

- (1) Mulching shall be applied at a rate of 90 pounds/1,000 square feet (180 pounds/1,000 square feet for winter construction).
- (2) Temporary seeding rates shall be as follows:
Conservation mix of perennial rye grass @ 1 pound/1,000 square feet
Fertilizer @ 25 pounds/1,000 square feet
Lime @ 100 pounds/1,000 square feet
Mulch @ 100 pounds/1,000 square feet
- (3) The time limit for mulching in sensitive areas maybe overridden by the most current weather forecast. All exposed soils in sensitive areas shall be mulched prior to every anticipated storm event.

Maintenance

Visual inspections shall be used to determine if an adequate catch has been achieved. Any areas with less than a 90% catch shall be reseeded.

Mulch

Description

Hay mulch shall be used to temporarily stabilize exposed soil and to aid in the establishment of temporary or permanent seeding.

Mulch shall be used on all areas of bare soil not brought to final grade within one week at a rate of not less than 1 bale per 1,000 square feet. On areas where slopes average greater than 8% and on all waterways and ditches, mulch shall be secured with anchored erosion control netting.

The installation of temporary mulching (application rates, depths and timing, quality standards and maintenance) shall conform to the specifications as set forth in the BMPs and as called for in this plan.

Mulch Matting

Description

Mulch matting shall consist of straw, coconut or excelsior sandwiched between photodegradable netting. Matting shall be used as follows:

- (1) in the base of swales with greater than 5% pitch;
- (2) on steep slopes where rilling may occur;
- (3) in any sensitive areas subject to erosion or as indicated on plans;
- (4) on any disturbed or newly graded slopes 2:1 and steeper that are to be vegetated; and
- (5) where straw mulch has been determined to be ineffective based on observations made in the field, or as directed by the Engineer.

The mulch matting shall be installed in accordance with the BMPs.

Grass Swale

Description

The installation of the grass swales shall conform to the specifications as set forth in the Typical Grass Swale Detail shown on the Site Plan and in the BMPs. Seeding of the swale shall be in conformance with specifications as set forth in the BMPs under Seed Mixtures for Permanent Seedings.

The following is a suggested schedule of application:

Loam: 4 inches evenly spread and raked

Seed Mixture: Creeping Red Fescue, 0.23 pounds/1,000 square feet

Crownvetch, 0.34 pounds/1,000 square feet

Tall Fescue, 0.34 pounds/1,000 square feet

Red Top, 0.05 pounds/1,000 square feet

Lime: 100 pounds/1,000 square feet

Fertilizer @ 25 pounds/1,000 square feet

Mulch @ 100 pounds/1,000 square feet

Seed and mulch will be applied not more than two days after preparation of the seedbed (loam). Fill-in seeding will be done in those areas where grass has not attained a sufficient catch of 90%.

A layer of hay mulch (or other appropriate mulch as specified by the BMPs) and jute erosion mesh will be used to help hold in moisture and protect the soil from erosion before the seed germinates.

Permanent Seeding

Description

Permanent seeding will be installed on all disturbed soils (except for those areas to be built on or ripped) to ensure stabilization of the soil and for aesthetic considerations.

The installation of permanent seeding (application rates, depths and timing and fertilizer application) shall conform to the specifications as set forth in the BMPs. All permanent seeding shall be completed by September 15th. Any work contemplated beyond September 15th shall adhere to the winter construction schedule.

The following is a suggested schedule of application:

Loam: 4 inches evenly spread and raked.

Seed Mixture: Creeping Red Fescue, 1.15 pounds/1,000 square feet.

Kentucky Bluegrass, 1.15 pounds/1,000 square feet.

Lime: 100 pounds/1,000 square feet

Fertilizer @ 25 pounds/1,000 square feet

Mulch @ 100 pounds/1,000 square feet

Seed and mulch shall be applied not more than two days after preparation of the seedbed (loam). Fill-in seeding shall be done in those areas where grass has not attained a sufficient catch of 90%.

A layer of hay mulch (or other appropriate mulch as specified by the BMPs) will be used to help hold in moisture and protect the soil from erosion before the seed germinates.

Maintenance

Planted areas shall be protected from damage by grazing, fire, traffic, and undesirable weed and wood growth as applicable. Visual inspections shall be used to determine if an adequate catch has been achieved. Any areas with less than a 90% catch shall be reseeded.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

ROAD CONGESTION AND SAFETY
Review Criteria E.

North Belfast Avenue is a state highway and more than adequate for safe ingress and egress to and from the site. The speed limit at this location is 55 miles per hour, and site distances in both directions exceed 600 feet.

A site modification in 2000 removed two (2) driveway entrances, and the third driveway entrance remains as the approved entrance. All interior driveways, maneuvering and parking areas meet standards.

There are currently 18 to 20 employees and 75 to 100 customers on-site per day, translating to approximately 20 vehicle trips per hour. A Traffic Movement Permit is not required under Title 23 M.R.S.A. §704-A, as the project generates fewer than 100 passenger car equivalents at peak hour.

Traffic to and from the North Country Harley Davidson dealership is not expected to increase significantly as a result of the warehouse expansion.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

SEWAGE WASTE DISPOSAL
Review Criteria F.

The proposed warehouse expansion will not result in an increase of wastewater. An existing on-site septic system sewer serves the North Country Harley Davidson facility.

The septic system was improved in 2000 and is functioning as designed.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

SOLID WASTE
Review Criteria G.

The proposed project is not expected to cause an unreasonable burden on the municipality. No significant change in the amount of solid waste is expected from the proposed warehouse addition.

Solid wastes that are generated from daily operations are recycled and/or disposed of at licensed facilities, with trash pickup by Central Maine Disposal occurring once per week.

Solid waste generated during construction will be removed from the site and disposed of at approved disposal facilities as part of the construction contract. Excavated soils will be used on site as appropriate wherever possible.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

AESTHETIC, CULTURAL, AND NATURAL VALUES
Review Criteria H.

The proposed warehouse addition will be extended behind the existing warehouse, partly over a gravel parking area and into a rough rocky wooded area. No natural, scenic or historic areas will be affected by the proposed warehouse expansion. There will be no undue adverse effects on the aesthetics of the area. No significant wildlife habitat has been identified within the project site.

The warehouse, existing and expanded, will be buffered from the adjoining commercial property to the east with a 200-foot long by 15-foot wide "Bufferyard A".

The warehouse addition will be nearly invisible from North Belfast Avenue.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
 Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

CONFORMITY WITH CITY ORDINANCES AND PLANS
Review Criteria I.

This proposal is for the construction of a 5,000 square-foot building addition for warehousing.

According to the City of Augusta Land Use Ordinance, the property is located in the “RV” or Rural Village District, in which an “automobile business, as defined” is a conditional use subject to performance zoning and site capacity analysis as follows:

SITE CAPACITY ANALYSIS

Table 3.7.1-A

Gross site area as determined by actual on-site survey within last 5 years	3.85
	<u>acres</u>
Subtract land constituting land within rights-of-ways of existing roads and/or access easements.	_____
	acres
Subtract land which is not contiguous: (1 and 2)	
(1) A separate parcel which does not abut, adjoin, or share common boundaries with the rest of the development.	_____
	acres
(2) Land which is cut off from the main parcel by a road, railroad existing land uses, or major stream, such that common use is hindered or that the land is unavailable for building purposes.	_____
	acres
Whenever both nonresidential and residential uses are proposed:	
Subtract land used or proposed for residential uses OR subtract land proposed for nonresidential use.	_____
	acres
(Base site area must be calculated for both uses individually)	
Subtract any land that consists of floodplain, wetland, lake or pond; associated lands zoned Resource Protection.	0.19
	<u>acres</u>
Equals Base Site Area	3.66
	<u>acres</u>

Table 3.7.3

BASE SITE AREA equals NET BUILDABLE SITE AREA **3.66 acres**

Take NET BUILDABLE SITE AREA **3.66 acres**
 Multiply by FLOOR AREA FACTOR x 0.63
 Equals MAXIMUM FLOOR AREA **2.31 acres**

EXISTING + PROPOSED FLOOR AREA PROVIDED **0.58 acres**

Take NET BUILDABLE SITE AREA **3.66 acres**
 Multiply by IMPERVIOUS SURFACE RATIO x 0.60
 Equals MAXIMUM IMPERVIOUS SURFACE **2.20 acres**

EXISTING + PROPOSED IMPERVIOUS AREA PROVIDED **1.47 acres**

Other dimensional statistics

Front setback to proposed warehouse – 35 feet required, 251 feet provided.
 Side setback to proposed warehouse – 15 feet required, 33 feet provided.
 Rear setback to proposed warehouse – 15 feet required, 137 feet provided.

Vegetative buffer easterly side of proposed warehouse – 15 feet required, 15 feet provided.

Vegetative buffer westerly side of proposed warehouse – 15 feet required, 47 feet provided.

Vegetative buffer northerly side of proposed warehouse – 15 feet required, 260 feet provided.

The proposed building and improvements conform with District Dimensional Requirements.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

FINANCIAL AND TECHNICAL ABILITY
Review Criteria J.

North Country Harley Davidson is well known and respected in the local community, the State of Maine and beyond. The facility has been established since 1968 at the current location, and was purchased by the Reynolds family in 1999.

Augusta Motorsports, Inc., dba North Country Harley Davidson, has adequate financial resources to complete the proposed development. The total estimated cost of the proposed warehouse expansion and site improvements is \$125,000, which will be paid from current cash accounts.

A certificate of good standing and the corporate information summary of Augusta Motorsports, Inc. is attached.

Thayer Engineering Company, Inc. has been retained by North Country Harley Davidson for the land surveying, civil engineering and site design of the proposed development, and for the preparation and administration of the City of Augusta site permit application. Thayer Engineering Company has successfully completed many similar projects in the City of Augusta and the State of Maine over the last 33 years.



MAINE

Department of the Secretary of State

Bureau of Corporations, Elections and Commissions

Corporate Name Search

Additional Addresses

[Subscriber activity report](#)

This record contains information from the CEC database and is accurate as of: Wed Jul 08 2015 15:09:27. Please print or save for your records.

Legal Name	Title	Name	Charter #	Status
AUGUSTA MOTORSPORTS, INC.	Clerk	WILLIAM M. WELCH	19992377 D	GOOD STANDING

Home Address (of foreign entity)	Other Mailing Address	Address in Maine
	100 MIDDLE STREET PORTLAND, ME 04101	

[Obtain a Certified Copy of this record](#)

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AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

SURFACE WATER, SHORELAND, OUTSTANDING RIVERS
Review Criteria K.

There are no rivers or brooks within the proposed area of development. Togus Pond is located southwesterly of the North Country Harley Davidson facility across North Belfast Avenue, and is buffered from the proposed developed area by more than 1,000 feet of woods and marsh.

Standard erosion and sedimentation control measures will be taken to ensure that the construction of this project will have minimal adverse impact on the adjacent resources.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

GROUNDWATER
Review Criteria L.

There are no identified significant sand and gravel aquifers on the North Country Harley Davidson subject property.

This proposal is for a warehouse addition. Stormwater will be controlled through a detention pond as described in this application.

No increase of usage of an existing subsurface septic disposal area is expected.

Solid waste is recycled, taken to Hatch Hill, and/or removed by a licensed contractor.

No adverse environmental effect on groundwater is expected from this project.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

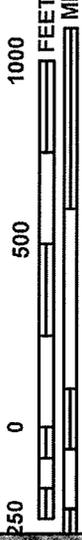
FLOOD AREAS
Review Criteria M.

There are no flood hazard areas at the proposed building addition location as defined by Federal Emergency Management Agency (FEMA) flood zone maps (see attached). A small area at the most southwesterly corner of the property is in a 100-year flood zone.

The proposed development will not cause any increase in off-site flooding. As summarized in the Stormwater section of this application, peak discharges of stormwater after development will be reduced to or below predevelopment levels.



MAP SCALE 1" = 500'



NFP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0533D

FIRM
FLOOD INSURANCE RATE MAP
KENNEBEC COUNTY,
MAINE
(ALL JURISDICTIONS)

PANEL 533 OF 775
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
COMMUNITY NUMBER 220067
AUGUSTA, CITY OF
PANEL SUFFIX 0333
D

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
23011C0533D
EFFECTIVE DATE
JUNE 16, 2011

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

FRESHWATER WETLANDS
Review Criteria N.

Two (2) forested wetland areas totaling approximately 7,000 square feet are located on the property away from the existing and proposed development, and will not be impacted by the proposed warehouse expansion project.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

STORMWATER
Review Criteria O.

This proposal is for the construction of a 5,000-square foot warehouse addition to the existing North Country Harley Davidson warehouse at 3099 North Belfast Avenue in Augusta. An expansion to the existing facility was approved by City of Augusta in 2000.

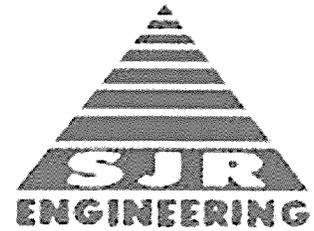
The proposed stormwater quantity control meets City of Augusta standards as presented in the attached Stormwater Management Report dated July 10, 2015.

A portion of stormwater runoff will be directed to a detention pond to control the stormwater flowing from the site, maintaining peak flows from the site to or below peak flows as now exist.

Standard erosion and sedimentation control measures will be taken to ensure that the construction of this project will have minimal adverse impact on the adjacent resources.

July 10, 2015

Mr. Elliot Thayer
Thayer Engineering
17 Hasson Street
Farmingdale, Maine 04344



Re: North Country Harley Davidson expansion, Augusta
Stormwater Analysis

Dear Elliot,

North Country Harley Davidson is proposing to construct a new 50' by 100' long building with an apron area along the sides of the new building. The 5,000 sf building is to be a combination retail/storage facility. It is anticipated that this project will be constructed during this construction season (2015).

We have prepared the plans and details in order to properly evaluate existing and proposed stormwater impacts from the development. Stormwater runoff enters into a wooded area adjacent to the site and eventually enters Togus Pond. In the proposed condition, stormwater flows will be attenuated by diverting and capturing stormwater flows from the new construction and portions of the existing impervious area. In summary, the proposed stormwater flows are less than the existing condition. No downstream impacts from stormwater flows are expected with this proposal.

Existing Site Conditions

The existing site being proposed for new construction is a mixture of undeveloped property consisting of woods and grass area, while the developed portion consists of an existing building and existing parking lot blending with the new construction of

the building expansion, gravel aprons, lawns, and pond. Existing conditions have been surveyed by Thayer Engineering. The topography of the proposed developed site is shown at a one foot contour interval. The slope of the property varies from 3% along the flatter areas to 10% along the steeper slopes.

Soils mapping was taken from Kennebec County Soil Survey medium intensity mapping. These soils have been overlaid onto the site development plan. Soils are identified as being Woodbridge very stony fine sandy loam (hydro group "C", K= 0.32-0.20).

The K number is an erodibility index number which is a value assigned to the soil based on a no erosion potential of .10 to a high erosion potential of .64. An index number greater than .32 indicates a high level of erosion control measures must be taken in order to control erosion of this soil. The hydrological group rating is a rating system of the relative permeability of the soil with Group "A" being extremely permeable such as a beach sand, to Group "D" being slow draining such as a wetland area.

I have reviewed the drainage characteristics of the site which includes proposed buildings and gravel aprons, future paved and lawn areas, and remaining woods. The analysis requires post construction stormwater flow rates to be approximately equal to or less than the existing stormwater rates.

I have used the SCS TR-20 (HydroCad 8.5 computer model) method of computing stormwater runoff peak flow rates. This method accounts for soil types, existing land uses, topography, vegetative cover, and proposed land use for the parcel to be developed. The proposed conditions were analyzed using data for a type III, 24 hour storm distribution with a design frequency of occurrence of 2/10/25 years. One day precipitation values of 3.0"/4.4"/5.1" have been used for each respective event. All supporting calculations and data are submitted with this report.

The existing and proposed site conditions were analyzed using information taken from the Thayer Engineering prepared plan of the parcel to be developed. Impervious areas, lawns, meadows, and woods areas for each hydrological soil condition were measured by planimeter in order to calculate a weighted curve number that typifies the drainage condition of the site.

We have calculated the existing stormwater flows to a common design point low point along the drainage swale (just beyond the proposed pond). Existing flows are calculated to be 0.74/1.64/1.94 cfs for the 2/10/25 year storm events.

In the proposed condition, we have broken the proposed watershed into two separate sub-areas. Region A includes the proposed building areas, some of the gravel aprons, and some existing buildings and existing parking lot pavement draining to a new detention pond. Region B is the remaining watershed area. Regions A and B stormwater flows are then hydraulically added together with respect to time in order to determine comparable flows at the Design Point.

A stormwater detention pond has been proposed to control flows to pre-development runoff conditions. We have calculated significant increases in flow rates in the developed portion of the project for the 2/10/25 year storm events. By constructing the detention pond and installing a 6" control pipe, stormwater flows are captured and contained. These increased flows can be reduced and stored (detained) within the pond area for short periods of time (less than 3 hours for 25 year storm event) allowing existing peak flow rates to be maintained. Our analysis indicates that the incoming flow rates to the pond (1.48/2.31/2.57 cfs) are reduced to 0.10/0.14/0.27 cfs at the culvert outlet from the pond. When these rates are hydraulically added to the Region B watershed, the proposed peak flow rates at Design Point 1 are calculated to be

0.72/1.35/1.56 cfs. These flows are numerically less than the existing condition peak flow rates.

The detention pond is designed to act in a similar fashion to that which currently occurs today. Our control structure is a 6" diameter culvert with a 6"X4"X6" Tee connection on the end of the pipe. The 4" inlet end is capped and a 2" diameter hole is drilled into the cap to allow small flows of water to be released from the pond. In addition, the "6" leg portion of the Tee will pass larger storm events with no increases to stormwater flows. The pipe outlet is to be riprapped with D50 6" angular riprap on a filter fabric. A 10' wide riprapped emergency spillway is to be constructed at elevation 98.5 as part of the detention pond for storm events larger than the 25 year event. This will act as the emergency overflow should the culverts become plugged or a larger storm event occur. We have run the 25 year storm event with all openings "plugged" to evaluate the impacts to the emergency spillway. Flows only rise to elevation 97.46, which is just below the lip of the spillway. The top of the berm is to be constructed to elevation 99.0.

Please feel free to contact me if you have any questions concerning the calculations of stormwater from this project. It is important to note that proper erosion control and revegetation of disturbed areas are essential for the proper operation of the stormwater facilities. Maintenance of the yard parking lot areas and careful attention to the pavement/seeded interface must be a top priority in order for the system to function properly. Thank you for involving this firm on your project.

Sincerely yours,



Stephen Roberge, PE
for SJR Engineering Inc.



North Country Harley Davidson Building Expansion

Project Summary

Stormwater Flows at Design Point

	<u>2 year</u>	<u>10 year</u>	<u>25 year</u>
Existing Conditions at Design Point	0.74 cfs	1.64 cfs	1.94 cfs
Proposed Conditions at Design Point	0.72 cfs	1.35 cfs	1.56 cfs
Detention Pond inflow/outflow	1.48/0.10 cfs	2.31/0.14 cfs	2.57/0.27 cfs
Elevation height of detained water in detention pond	96.07	96.52	96.59

The detention pond is expected to operate as a sediment pond during construction for water quality purposes. No water will flow from the pond until the water elevation reaches elevation 95.0 which is the inlet elevation of the 6" diameter pond outlet culvert. Culvert outlet from pond is to be fitted with a Tee connection that has been capped at the end; the vertical end is to have a 2" orifice drilled at elevation 95.0 and the horizontal Tee end a 6" orifice at elevation 96.50. A 10' wide rock lined emergency spillway has been provided at elevation 98.5. Pond bottom is a natural ground elevation sloping to elevation 94.5 at its lowest point. Top of berm elevation 99.0.

Maintenance Plan for Ponds & Best Management Practices

Site Inspection & Maintenance During Construction: Weekly inspections, as well as routine inspections following rainfalls, shall be conducted by the General Site Contractor of all temporary and permanent erosion control devices until final acceptance of the project (85% grass catch). Necessary repairs shall be made to correct undermining or deterioration. Final acceptance shall include a site inspection to verify the stability of all disturbed areas and slopes. Until final inspection, all erosion and sedimentation control measures shall immediately be cleaned, and repaired by the General Contractor as required. Disposal of all temporary erosion control devices shall be the responsibility of the General Contractor.

It is recommended that the Owner hire the services of the design engineer, or other qualified individual, to provide compliance inspections (during active construction) relative to implementation of the Stormwater and Erosion Control Plans. Such inspections should be limited to once a week or as necessary and be reportable to the Owner and City.

Maintenance Agreement: Short-term sedimentation maintenance shall be the responsibility of the Contractor to clean out all swales, structures and ponds prior to turning project over to the Owners. After project turnover, the Owner shall be the responsible party for inspecting and maintaining a pond and proper functioning of all stormwater conveyance practices and measures. The Owner may assign an environmental manager to carry out specific tasks identified below.

Ponds

Clearing Inlets and Outlets of Ponds (where applicable): The inlet and outlet of a pond shall be checked periodically to ensure that flow structures are not blocked by debris. All ditches and pipes connecting ponds in series shall be checked for debris that may obstruct flow. Inspections shall be conducted monthly during wet weather conditions from March to November.

Basin Inspections: Ponds shall be inspected on an annual basis for erosion, destabilization of side slopes, embankment settling, and other signs of structural failure. Brief inspections shall be conducted following major storms. Corrective action shall be taken immediately upon identification of problem area. Records shall be kept of all maintenance operations at jobsite to help plan future work and identify problem areas.

Maintenance Dredging: Wet ponds typically lose 1% of their volume annually due to sediment accumulation. Dredging is required when accumulated volume loss reaches 15% or approximately every 15-20 years.

Drainage Area Inspections: The owners' environmental manager shall inspect the basin's drainage area semi-annually for eroding soil and other sediment sources. Repair eroding areas using appropriate erosion control BMP's immediately. Control sediment sources, such as stockpiles of winter sand, by removing them from the basin's drainage area or surrounding them with sediment control BMP's.

Mowing: A basin with a turf lining shall have its side-slopes and top of berm mowed at least twice a year to prevent woody growth. Clippings shall be removed to minimize the amount of organic material accumulating in the basin.

Sediment Removal: Remove accumulated debris and sediments from the sediment forebays, inlet plunge pools, and pre-treatment BMP's at least annually.

Snow Storage: The ponds are not to be used for snow storage. Snow storage shall be sited so that snowmelt flows to a pre-treatment BMP before reaching the basin area.

Pedestrian Access: Limit access to ponds to passive recreational use.

Vehicle Access: Prohibit vehicle access to all ponds, except that authorized for maintenance.

Structures and Other Measures

Sweeping: Parking lots and streets shall be mechanically swept twice per year. The first shall take place in the fall. The second sweeping shall take place after winter sanding operations terminate, prior to May 1.

Ditches/Swales: Open swales and ditches need to be inspected on a monthly basis or after a major rainfall event to assure that debris or sediments do not reduce the effectiveness of the system. Debris needs to be removed at that time. Any sign of erosion or blockage shall be immediately repaired to assure a vigorous growth to vegetation for the stability of the structure and proper functioning.

Vegetated Ditches: Vegetation should be mowed at least monthly during the growing season to a height of not less than 4 inches. Larger brush or trees must not be allowed to become established in the channel. Unless finely mulched, clippings should be removed to minimize the amount of organic material accumulating in the swales. Any

areas where the vegetation fails will be subject to erosion and should be repaired and revegetated.

Stone Lined Channels: Where stone is displaced from constructed riprap areas, it should be replaced and chinked to assure stability. With time, riprap may need to be added. Vegetation growing through riprap should be removed on a yearly schedule.

Culverts: If sediment in culverts or piped drainage systems exceeds 20% of the diameter of the pipe, it should be removed. This may be accomplished by mechanical means or hydraulic flushing. Care should be taken to prevent the release of the sediments into the downstream receiving areas. All pipes should be inspected on an annual basis.

Catch Basin/Field Inlets: All catch basins, and any other field inlets throughout the collection system, need to be inspected on a monthly basis to assure that the inlet entry point is clear of debris and will allow the intended water entry. At that time, these will be cleared if necessary. On a yearly basis, or when sediment reaches two thirds of the total volume, catch basins need to be vacuumed and cleaned of all accumulated sediment. Work must be done by a vacuum truck. The removed material must be disposed of in accordance with State of Maine Solid Waste Disposal Rules.

Level Spreaders & Ditch Turnout Sediment Traps: Inspect and remove debris. Inspect for flow bypass or undermining. Repair any channelization if occurring and remove sediment build-up to assure potential storage volume and sheet flow characteristics of the discharge lip. Perform inspection on a semi-annual basis at a minimum. All work should be performed from the up gradient side, do not disturb the down gradient receiving area or discharge edge.

Soil Map—Kennebec County, Maine
(North Country Harley Davidson)



MAP LEGEND

	Area of Interest (AOI)		Spoil Area
	Soils		Stony Spot
	Soil Map Unit Polygons		Very Stony Spot
	Soil Map Unit Lines		Wet Spot
	Soil Map Unit Points		Other
	Special Point Features		Special Line Features
	Blowout		Water Features
	Borrow Pit		Streams and Canals
	Clay Spot		Transportation
	Closed Depression		Rails
	Gravel Pit		Interstate Highways
	Gravelly Spot		US Routes
	Landfill		Major Roads
	Lava Flow		Local Roads
	Marsh or swamp		Background
	Mine or Quarry		Aerial Photography
	Miscellaneous Water		
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kennebec County, Maine
Survey Area Data: Version 13, Sep 13, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 17, 2010—Aug 31, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Kennebec County, Maine (ME011)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HrC	Hollis fine sandy loam, 8 to 15 percent slopes	1.8	10.5%
PeB	Paxton-Chariton very stony fine sandy loams, 3 to 8 percent slopes	0.2	1.2%
RdA	Ridgebury very stony fine sandy loam	4.1	23.3%
TO	Togus fibrous peat	0.9	4.8%
WsB	Woodbridge very stony fine sandy loam, 3 to 8 percent slopes	10.6	60.1%
Totals for Area of Interest		17.6	100.0%

Existing Condition Stormwater Analysis

Existing Condition

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Type III 24-hr 2 Year Storm Event Rainfall=3.00"

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Page 1

Summary for Subcatchment 1S: Existing Condition

Runoff = 0.74 cfs @ 12.31 hrs, Volume= 0.076 af, Depth> 0.97"

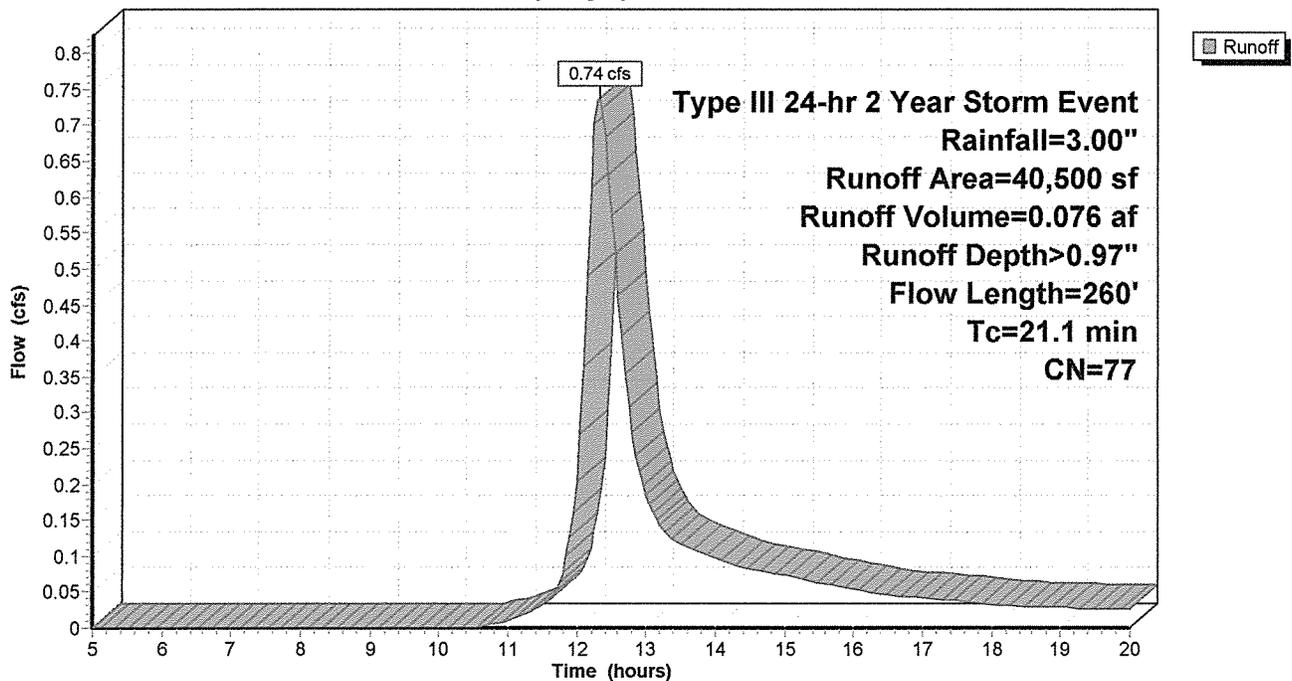
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year Storm Event Rainfall=3.00"

Area (sf)	CN	Description
9,600	98	Paved parking & roofs
4,000	74	>75% Grass cover, Good, HSG C
26,900	70	Woods, Good, HSG C
40,500	77	Weighted Average
30,900		Pervious Area
9,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.9	100	0.0300	0.09		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00"
2.2	160	0.0600	1.22		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
21.1	260	Total			

Subcatchment 1S: Existing Condition

Hydrograph



Existing Condition

Type III 24-hr 10 Year Storm Event Rainfall=4.60"

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Summary for Subcatchment 1S: Existing Condition

Runoff = 1.64 cfs @ 12.30 hrs, Volume= 0.164 af, Depth> 2.12"

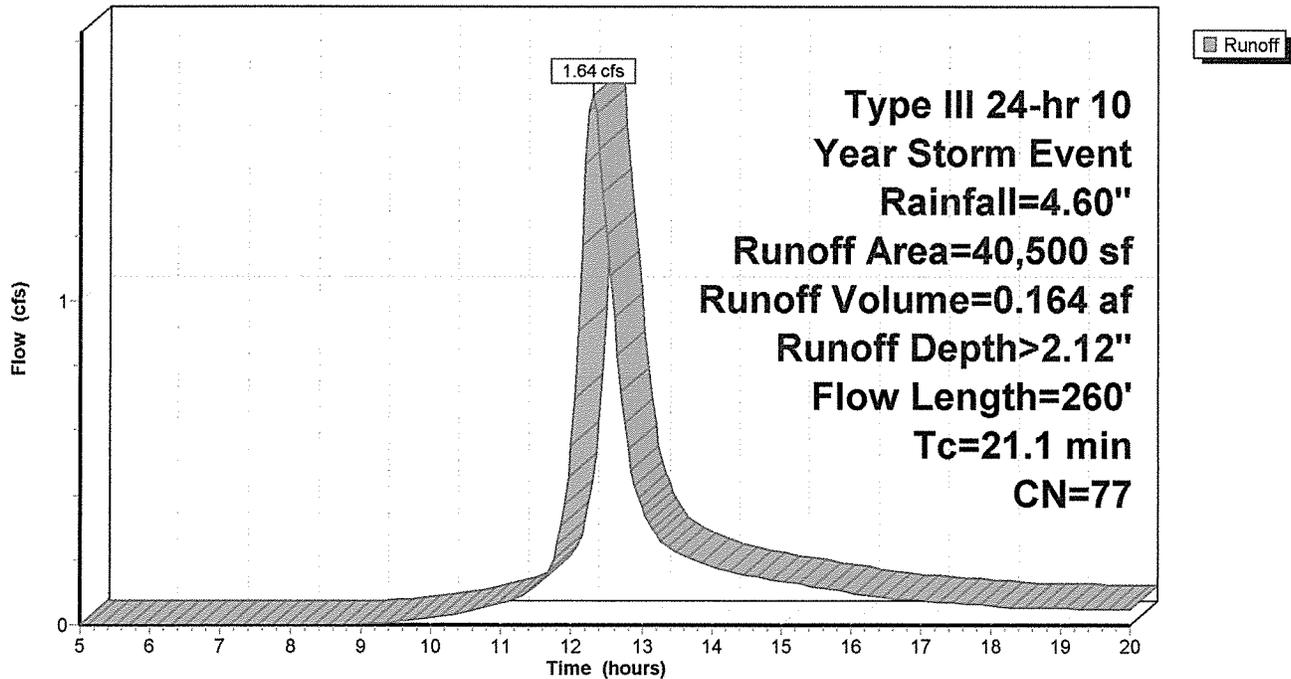
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10 Year Storm Event Rainfall=4.60"

Area (sf)	CN	Description
9,600	98	Paved parking & roofs
4,000	74	>75% Grass cover, Good, HSG C
26,900	70	Woods, Good, HSG C
40,500	77	Weighted Average
30,900		Pervious Area
9,600		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.9	100	0.0300	0.09		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00"
2.2	160	0.0600	1.22		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
21.1	260	Total			

Subcatchment 1S: Existing Condition

Hydrograph



Existing Condition

Type III 24-hr 25 Year Storm Event Rainfall=5.10"

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Summary for Subcatchment 1S: Existing Condition

Runoff = 1.94 cfs @ 12.30 hrs, Volume= 0.194 af, Depth> 2.51"

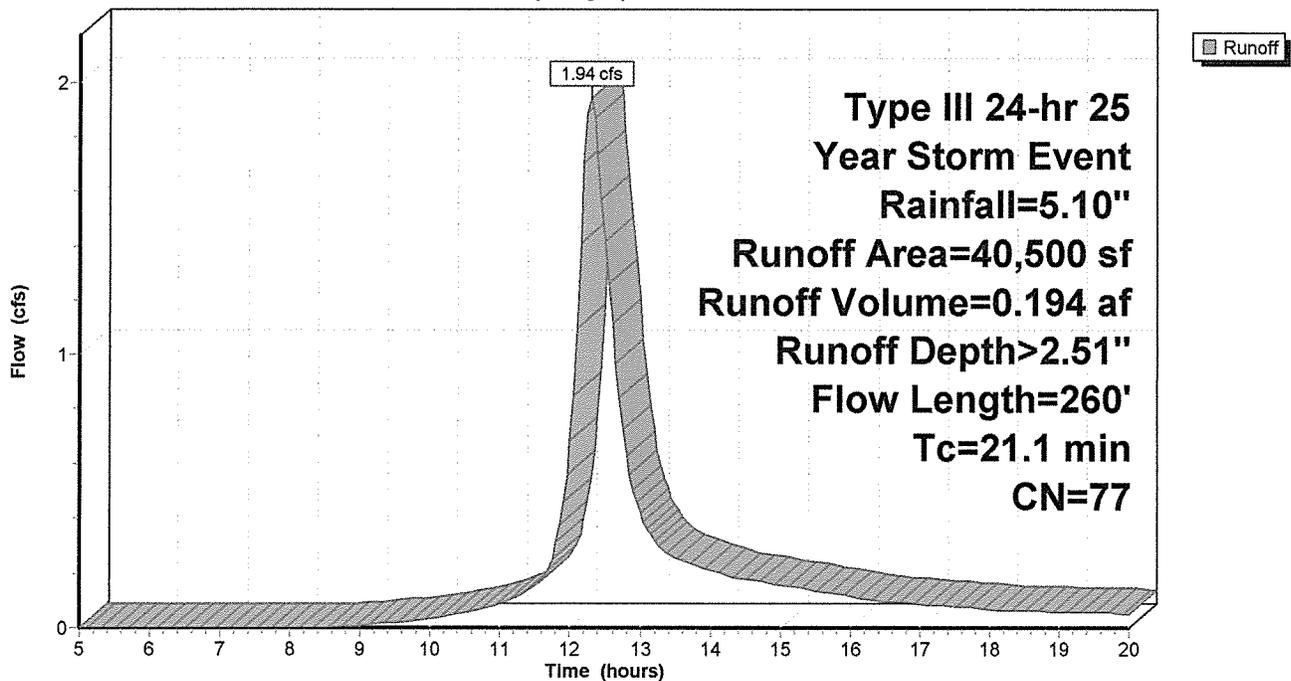
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25 Year Storm Event Rainfall=5.10"

Area (sf)	CN	Description
9,600	98	Paved parking & roofs
4,000	74	>75% Grass cover, Good, HSG C
26,900	70	Woods, Good, HSG C
40,500	77	Weighted Average
30,900		Pervious Area
9,600		Impervious Area

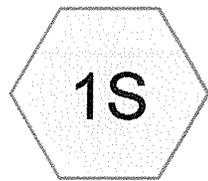
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.9	100	0.0300	0.09		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00"
2.2	160	0.0600	1.22		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
21.1	260	Total			

Subcatchment 1S: Existing Condition

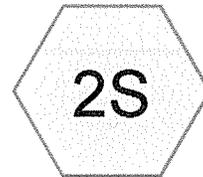
Hydrograph



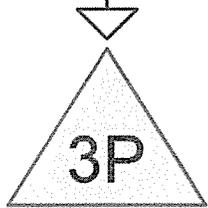
Proposed Condition Stormwater Analysis



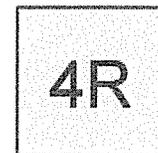
Region A



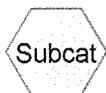
Remaining watershed area



Detention Pond



Design Point



Proposed Condition

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.317	74	>75% Grass cover, Good, HSG C (1S,2S)
0.613	98	Paved parking & roofs (1S,2S)

Proposed Condition

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Type III 24-hr 2 Year Storm Event Rainfall=3.00"

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Page 6

Summary for Subcatchment 1S: Region A

Runoff = 1.48 cfs @ 12.02 hrs, Volume= 0.099 af, Depth> 2.50"

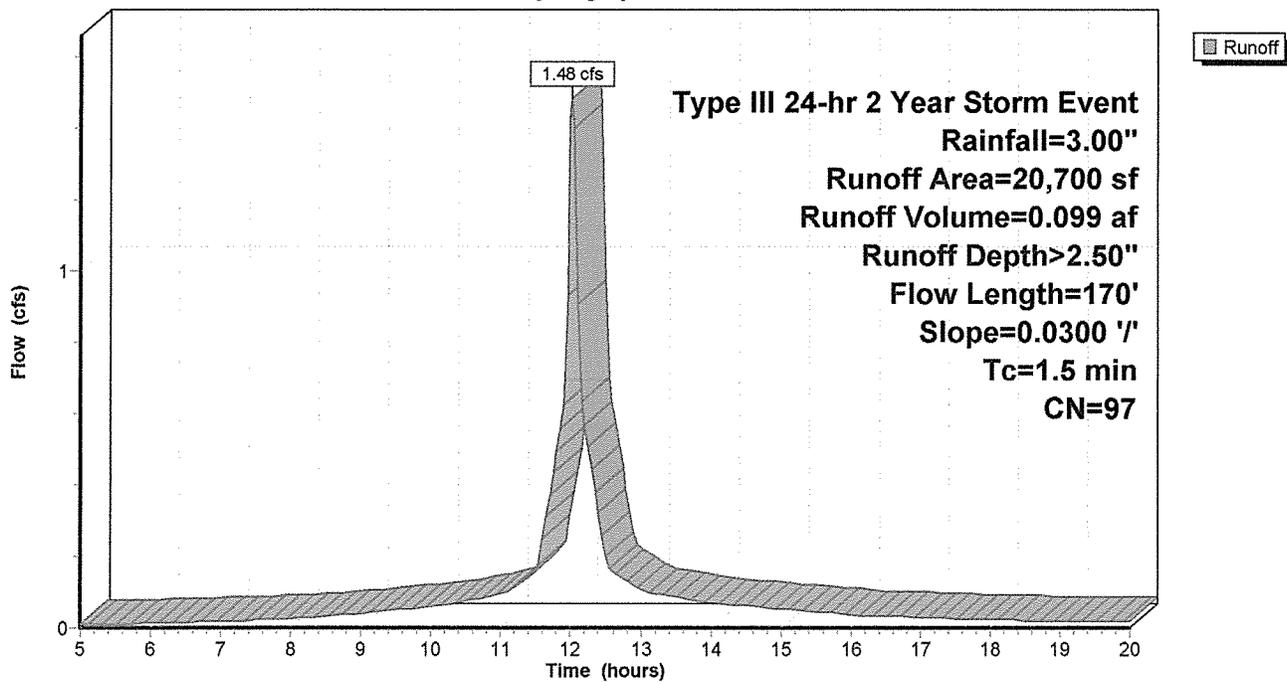
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2 Year Storm Event Rainfall=3.00"

Area (sf)	CN	Description
20,000	98	Paved parking & roofs
700	74	>75% Grass cover, Good, HSG C
20,700	97	Weighted Average
700		Pervious Area
20,000		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0300	1.57		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.00"
0.4	70	0.0300	2.60		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
1.5	170	Total			

Subcatchment 1S: Region A

Hydrograph



Proposed Condition

Type III 24-hr 2 Year Storm Event Rainfall=3.00"

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Summary for Subcatchment 2S: Remaining watershed area

Runoff = 0.63 cfs @ 12.15 hrs, Volume= 0.048 af, Depth> 1.27"

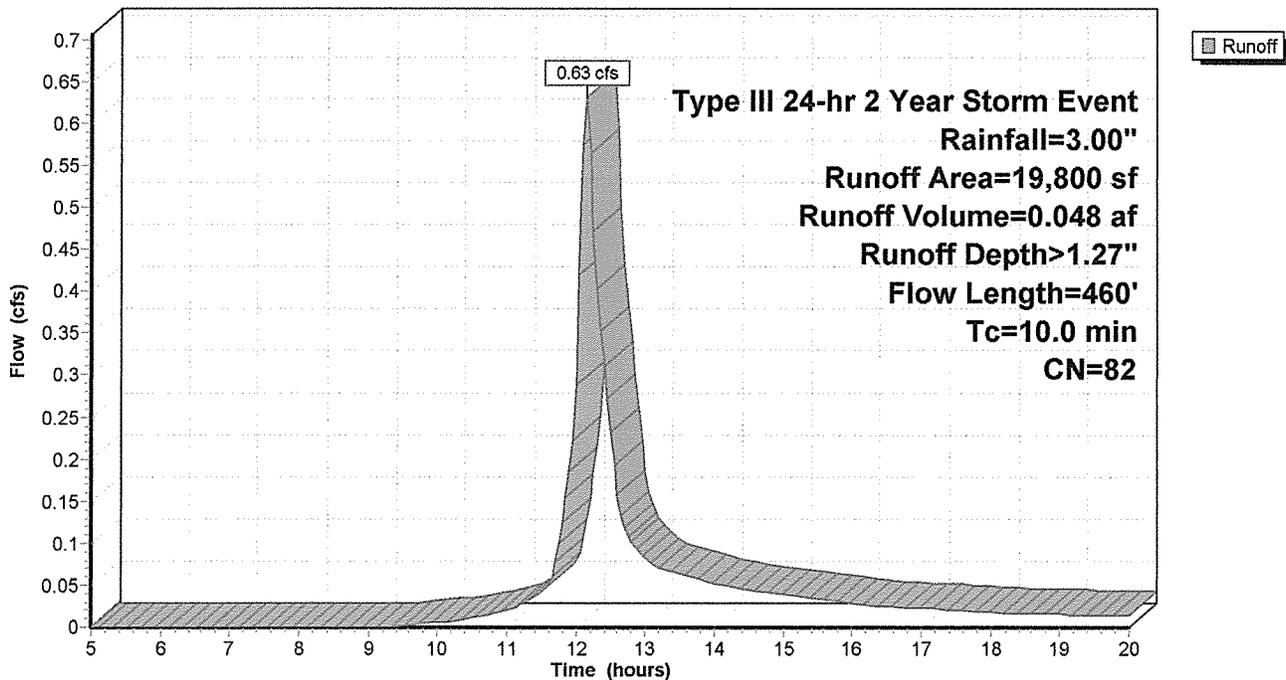
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2 Year Storm Event Rainfall=3.00"

Area (sf)	CN	Description
6,700	98	Paved parking & roofs
13,100	74	>75% Grass cover, Good, HSG C
19,800	82	Weighted Average
13,100		Pervious Area
6,700		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	60	0.0100	0.11		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
0.7	200	0.0100	4.47	89.47	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 4.0 '/' Top.W=18.00' n= 0.035 Earth, dense weeds
0.4	200	0.0400	8.95	178.94	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 4.0 '/' Top.W=18.00' n= 0.035 Earth, dense weeds
10.0	460	Total			

Subcatchment 2S: Remaining watershed area

Hydrograph



Proposed Condition

Type III 24-hr 2 Year Storm Event Rainfall=3.00"

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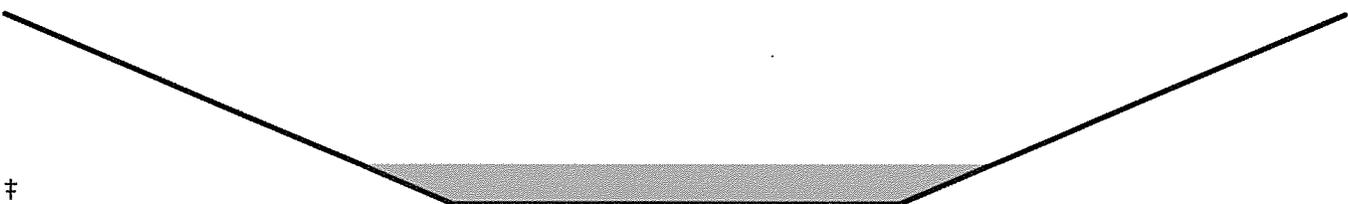
Summary for Reach 4R: Design Point

Inflow Area = 0.930 ac, 65.93% Impervious, Inflow Depth > 1.61" for 2 Year Storm Event event
Inflow = 0.73 cfs @ 12.15 hrs, Volume= 0.125 af
Outflow = 0.72 cfs @ 12.16 hrs, Volume= 0.125 af, Atten= 1%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.29 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 0.13 fps, Avg. Travel Time= 1.3 min

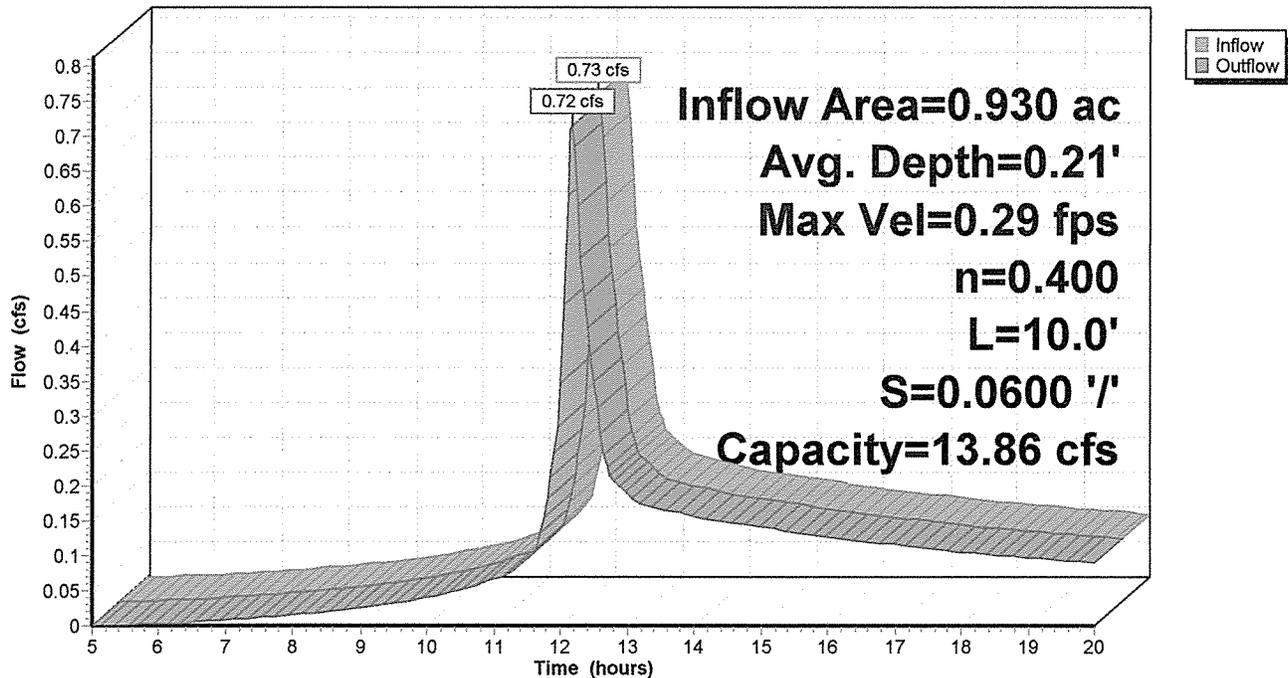
Peak Storage= 25 cf @ 12.16 hrs, Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 1.00', Capacity at Bank-Full= 13.86 cfs

10.00' x 1.00' deep channel, n= 0.400 Sheet flow: Woods+light brush
Side Slope Z-value= 10.0 '/' Top Width= 30.00'
Length= 10.0' Slope= 0.0600 '/'
Inlet Invert= 0.00', Outlet Invert= -0.60'



Reach 4R: Design Point

Hydrograph



Proposed Condition

Type III 24-hr 2 Year Storm Event Rainfall=3.00"

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Summary for Pond 3P: Detention Pond

Inflow Area = 0.475 ac, 96.62% Impervious, Inflow Depth > 2.50" for 2 Year Storm Event event
 Inflow = 1.48 cfs @ 12.02 hrs, Volume= 0.099 af
 Outflow = 0.10 cfs @ 13.03 hrs, Volume= 0.077 af, Atten= 93%, Lag= 60.6 min
 Primary = 0.10 cfs @ 13.03 hrs, Volume= 0.077 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 96.07' @ 13.03 hrs Surf.Area= 3,228 sf Storage= 2,278 cf

Plug-Flow detention time= 203.8 min calculated for 0.077 af (77% of inflow)
 Center-of-Mass det. time= 145.1 min (886.3 - 741.1)

Volume	Invert	Avail.Storage	Storage Description
#1	95.00'	15,656 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
95.00	972	0	0
96.00	3,168	2,070	2,070
97.00	4,086	3,627	5,697
98.00	4,932	4,509	10,206
99.00	5,967	5,450	15,656

Device	Routing	Invert	Outlet Devices
#1	Primary	95.00'	2.0" Vert. Orifice/Grate C= 0.600
#2	Primary	96.50'	6.0" Horiz. Orifice/Grate Limited to weir flow C= 0.600

Primary OutFlow Max=0.10 cfs @ 13.03 hrs HW=96.07' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 0.10 cfs @ 4.77 fps)
- 2=Orifice/Grate (Controls 0.00 cfs)

Proposed Condition

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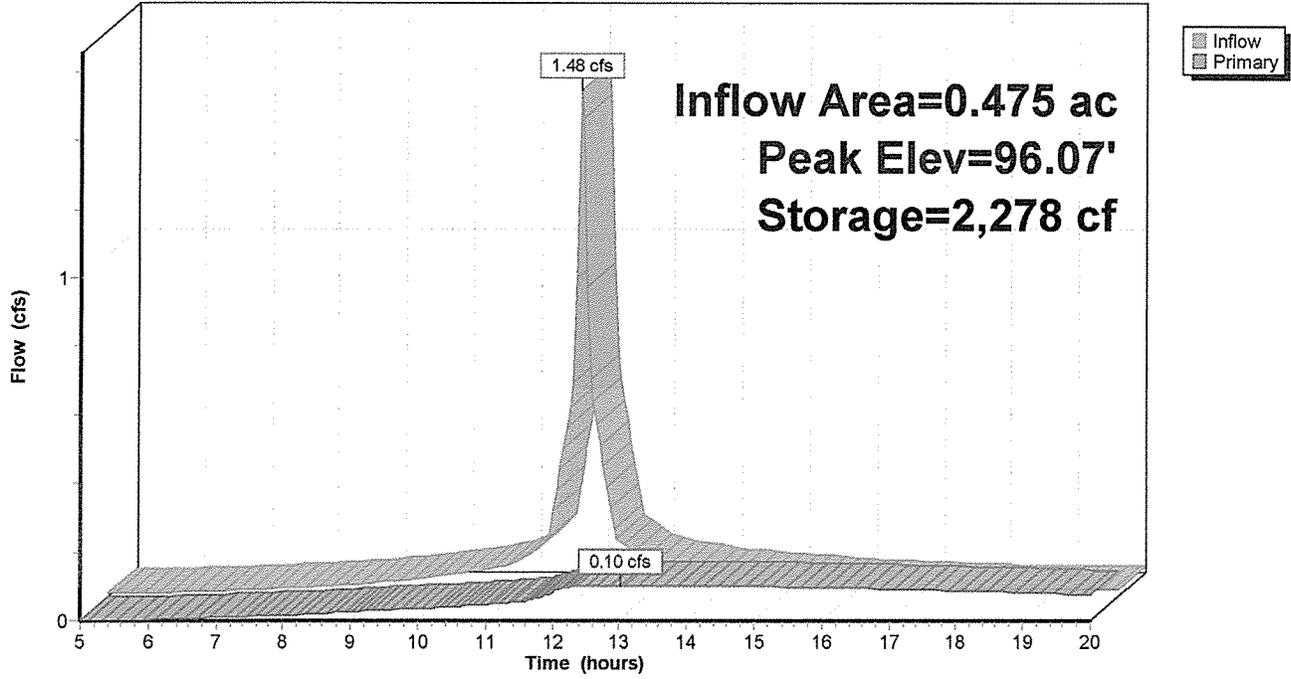
Type III 24-hr 2 Year Storm Event Rainfall=3.00"

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Pond 3P: Detention Pond

Hydrograph



Proposed Condition

Type III 24-hr 10 Year Storm Event Rainfall=4.60"

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Summary for Subcatchment 1S: Region A

Runoff = 2.31 cfs @ 12.02 hrs, Volume= 0.157 af, Depth> 3.98"

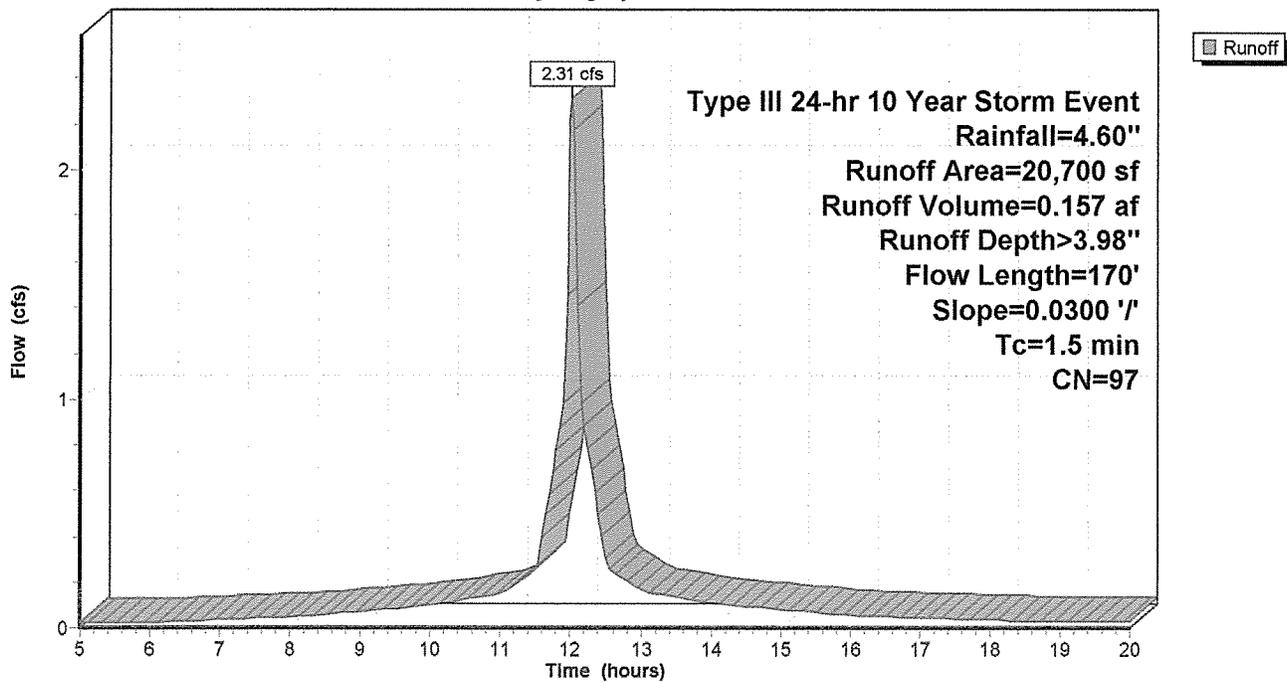
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Event Rainfall=4.60"

Area (sf)	CN	Description
20,000	98	Paved parking & roofs
700	74	>75% Grass cover, Good, HSG C
20,700	97	Weighted Average
700		Pervious Area
20,000		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0300	1.57		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.00"
0.4	70	0.0300	2.60		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
1.5	170	Total			

Subcatchment 1S: Region A

Hydrograph



Proposed Condition

Type III 24-hr 10 Year Storm Event Rainfall=4.60"

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Summary for Subcatchment 2S: Remaining watershed area

Runoff = 1.25 cfs @ 12.14 hrs, Volume= 0.096 af, Depth> 2.54"

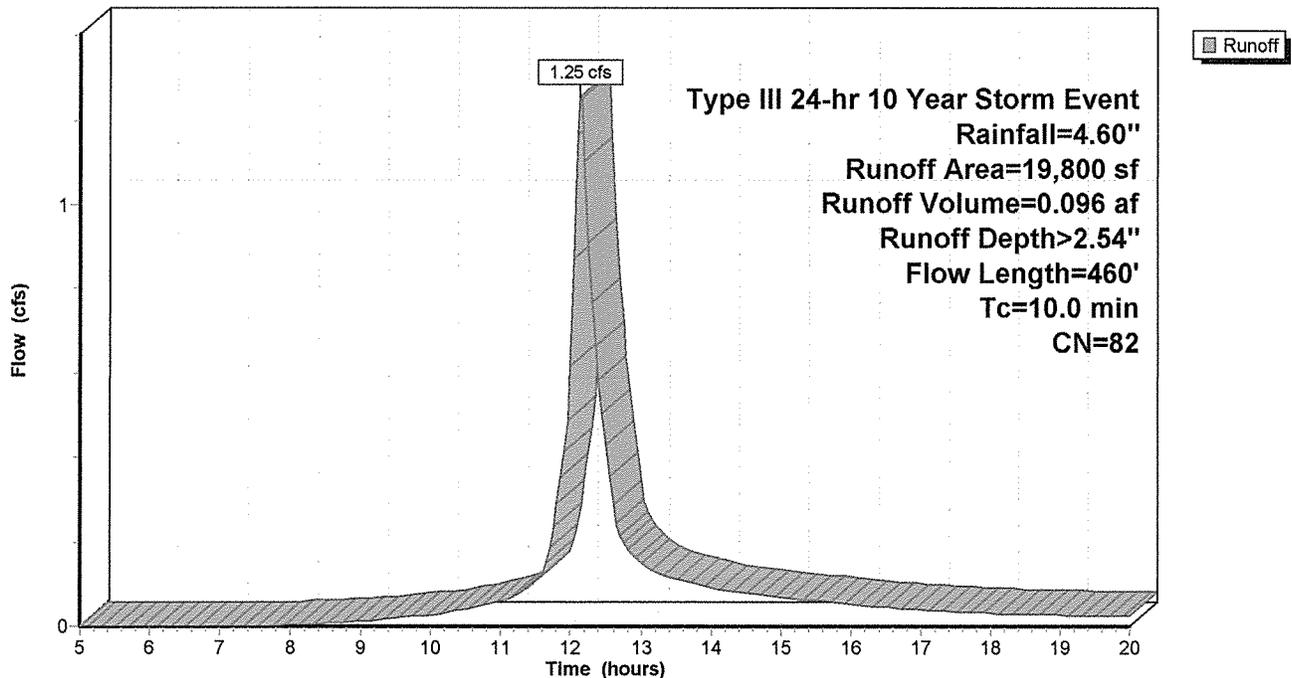
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year Storm Event Rainfall=4.60"

Area (sf)	CN	Description
6,700	98	Paved parking & roofs
13,100	74	>75% Grass cover, Good, HSG C
19,800	82	Weighted Average
13,100		Pervious Area
6,700		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	60	0.0100	0.11		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
0.7	200	0.0100	4.47	89.47	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 4.0 '/' Top.W=18.00' n= 0.035 Earth, dense weeds
0.4	200	0.0400	8.95	178.94	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 4.0 '/' Top.W=18.00' n= 0.035 Earth, dense weeds
10.0	460	Total			

Subcatchment 2S: Remaining watershed area

Hydrograph



Proposed Condition

Type III 24-hr 10 Year Storm Event Rainfall=4.60"

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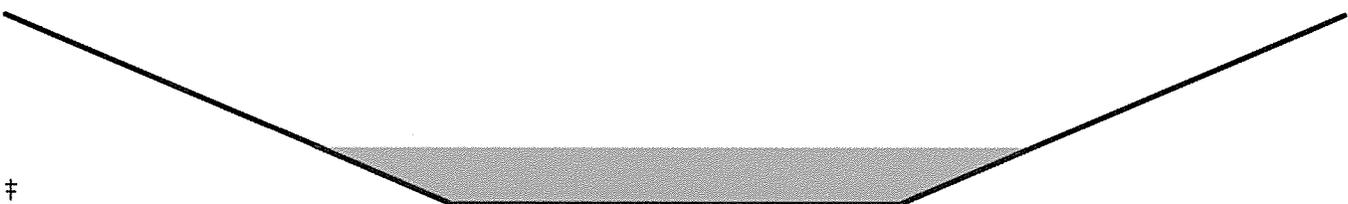
Summary for Reach 4R: Design Point

Inflow Area = 0.930 ac, 65.93% Impervious, Inflow Depth > 2.56" for 10 Year Storm Event event
Inflow = 1.37 cfs @ 12.14 hrs, Volume= 0.198 af
Outflow = 1.35 cfs @ 12.16 hrs, Volume= 0.198 af, Atten= 1%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.35 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.15 fps, Avg. Travel Time= 1.1 min

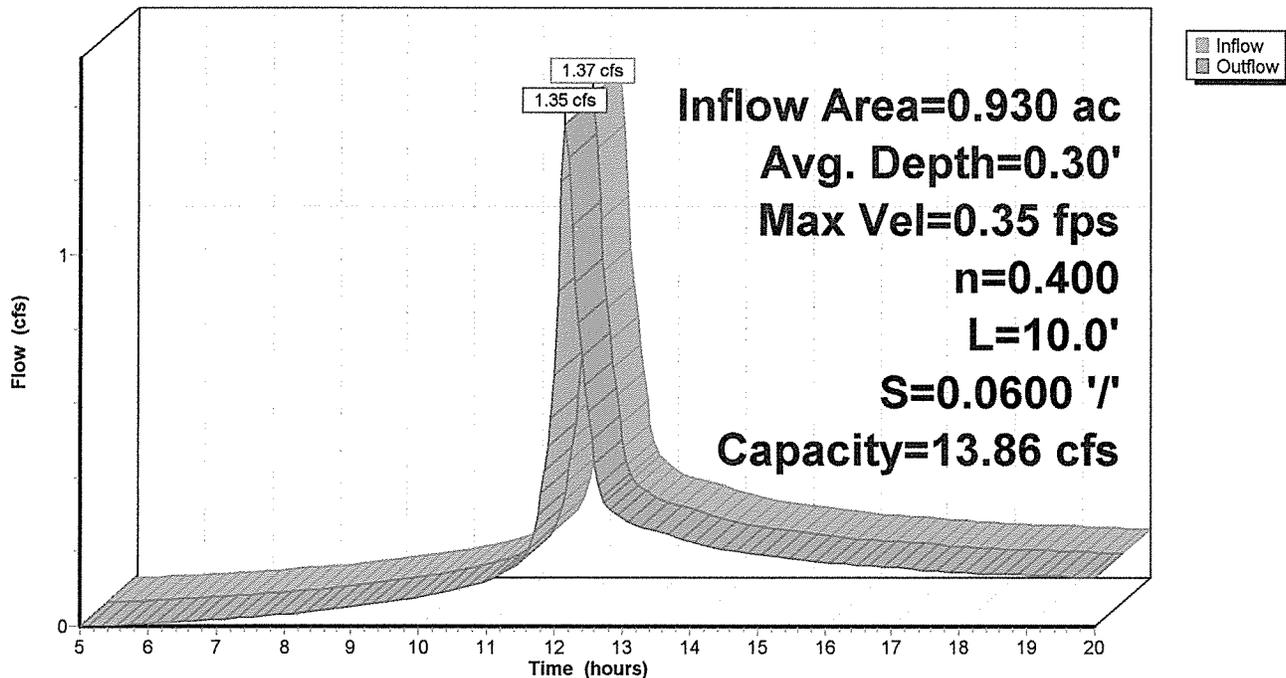
Peak Storage= 39 cf @ 12.15 hrs, Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00', Capacity at Bank-Full= 13.86 cfs

10.00' x 1.00' deep channel, n= 0.400 Sheet flow: Woods+light brush
Side Slope Z-value= 10.0 '/' Top Width= 30.00'
Length= 10.0' Slope= 0.0600 '/'
Inlet Invert= 0.00', Outlet Invert= -0.60'



Reach 4R: Design Point

Hydrograph



Proposed Condition

Type III 24-hr 10 Year Storm Event Rainfall=4.60"

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Summary for Pond 3P: Detention Pond

Inflow Area = 0.475 ac, 96.62% Impervious, Inflow Depth > 3.98" for 10 Year Storm Event event
 Inflow = 2.31 cfs @ 12.02 hrs, Volume= 0.157 af
 Outflow = 0.14 cfs @ 13.31 hrs, Volume= 0.102 af, Atten= 94%, Lag= 77.2 min
 Primary = 0.14 cfs @ 13.31 hrs, Volume= 0.102 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 96.52' @ 13.31 hrs Surf.Area= 3,648 sf Storage= 3,852 cf

Plug-Flow detention time= 214.3 min calculated for 0.102 af (65% of inflow)
 Center-of-Mass det. time= 140.6 min (876.3 - 735.7)

Volume	Invert	Avail.Storage	Storage Description
#1	95.00'	15,656 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
95.00	972	0	0
96.00	3,168	2,070	2,070
97.00	4,086	3,627	5,697
98.00	4,932	4,509	10,206
99.00	5,967	5,450	15,656

Device	Routing	Invert	Outlet Devices
#1	Primary	95.00'	2.0" Vert. Orifice/Grate C= 0.600
#2	Primary	96.50'	6.0" Horiz. Orifice/Grate Limited to weir flow C= 0.600

Primary OutFlow Max=0.14 cfs @ 13.31 hrs HW=96.52' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 0.13 cfs @ 5.78 fps)
- 2=Orifice/Grate (Weir Controls 0.02 cfs @ 0.49 fps)

Proposed Condition

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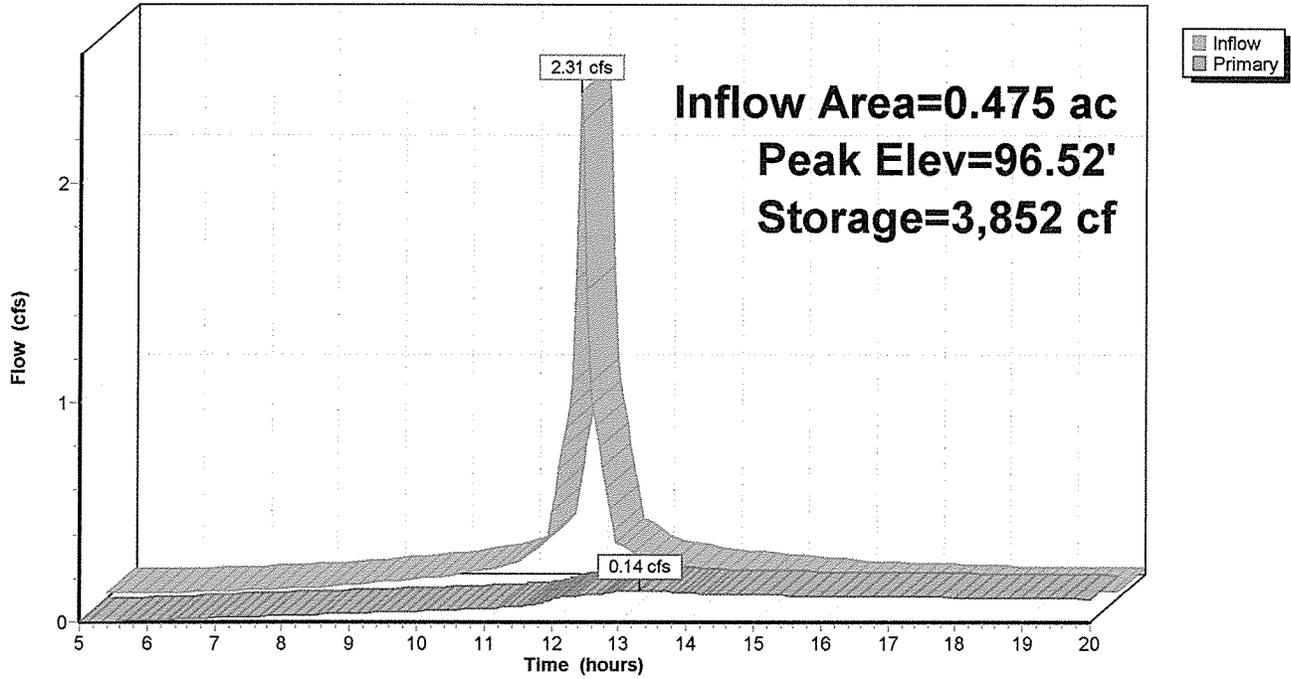
Type III 24-hr 10 Year Storm Event Rainfall=4.60"

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Pond 3P: Detention Pond

Hydrograph



Proposed Condition

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Type III 24-hr 25 Year Storm Event Rainfall=5.10"

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Summary for Subcatchment 1S: Region A

Runoff = 2.57 cfs @ 12.02 hrs, Volume= 0.176 af, Depth> 4.43"

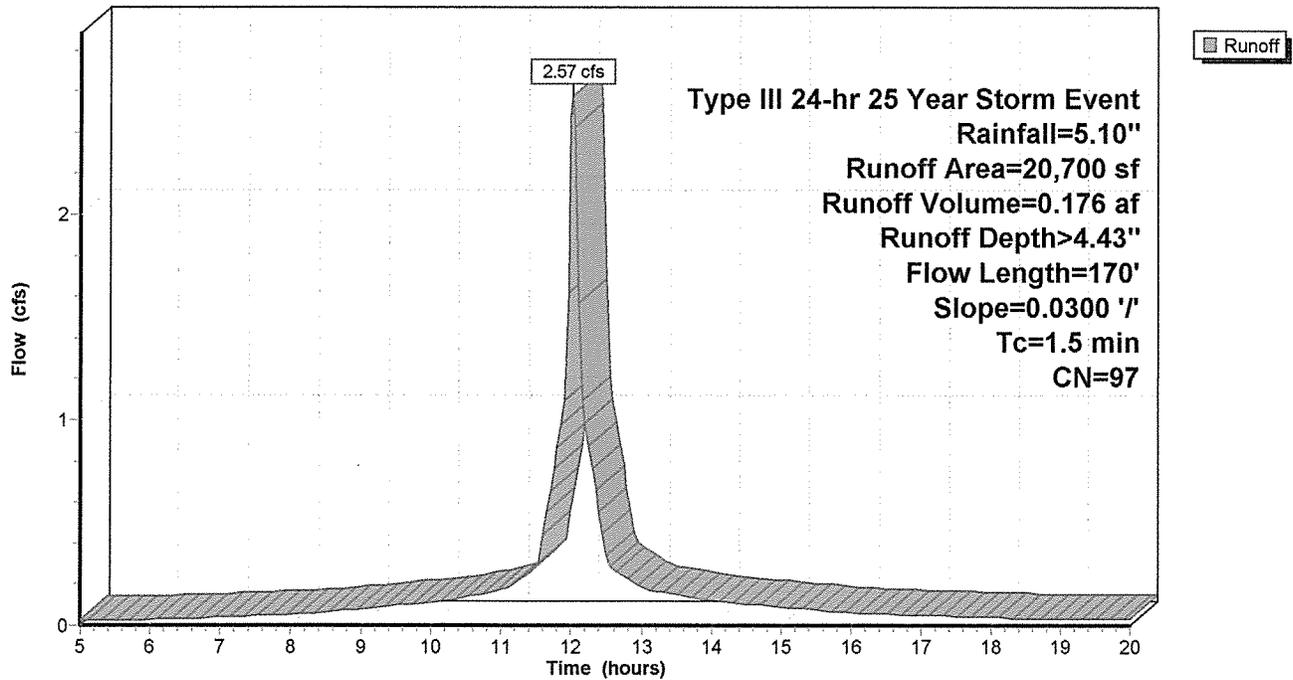
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25 Year Storm Event Rainfall=5.10"

Area (sf)	CN	Description
20,000	98	Paved parking & roofs
700	74	>75% Grass cover, Good, HSG C
20,700	97	Weighted Average
700		Pervious Area
20,000		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0300	1.57		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.00"
0.4	70	0.0300	2.60		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
1.5	170	Total			

Subcatchment 1S: Region A

Hydrograph



Proposed Condition

Type III 24-hr 25 Year Storm Event Rainfall=5.10"

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Summary for Subcatchment 2S: Remaining watershed area

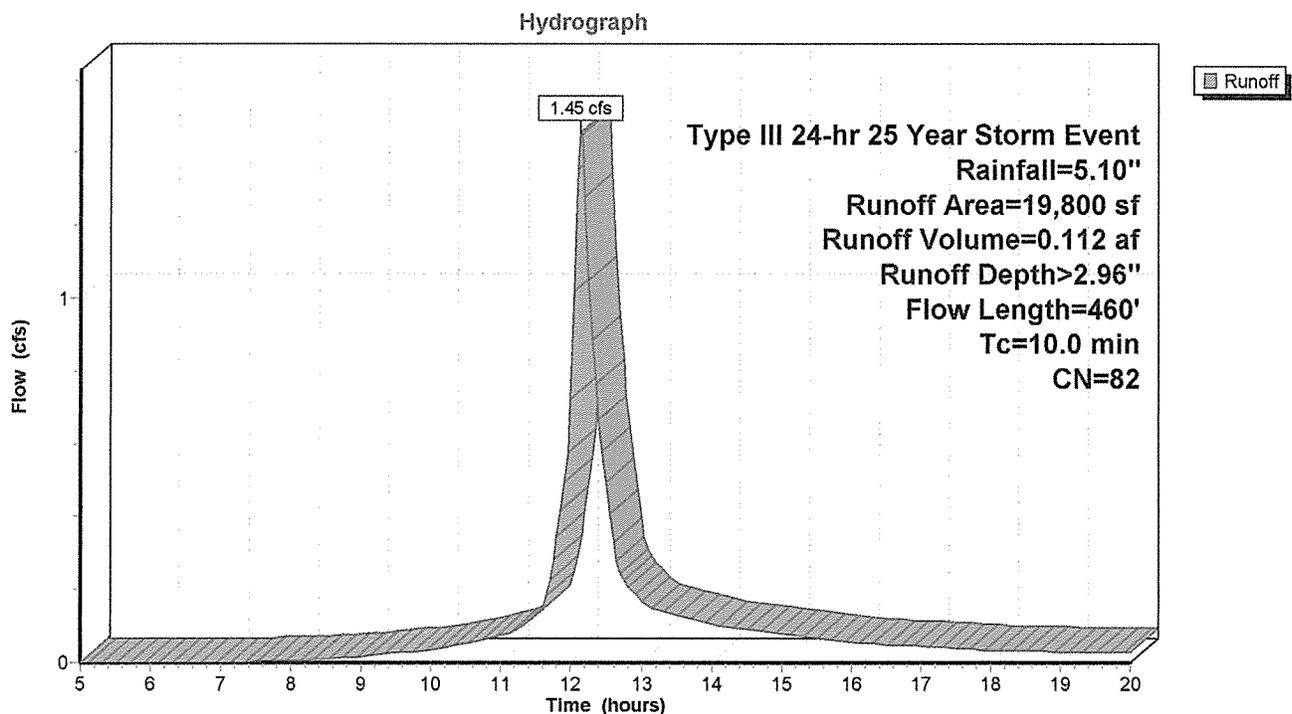
Runoff = 1.45 cfs @ 12.14 hrs, Volume= 0.112 af, Depth> 2.96"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25 Year Storm Event Rainfall=5.10"

Area (sf)	CN	Description
6,700	98	Paved parking & roofs
13,100	74	>75% Grass cover, Good, HSG C
19,800	82	Weighted Average
13,100		Pervious Area
6,700		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	60	0.0100	0.11		Sheet Flow, Grass: Short n= 0.150 P2= 3.00"
0.7	200	0.0100	4.47	89.47	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 4.0 '/' Top.W=18.00' n= 0.035 Earth, dense weeds
0.4	200	0.0400	8.95	178.94	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 4.0 '/' Top.W=18.00' n= 0.035 Earth, dense weeds
10.0	460	Total			

Subcatchment 2S: Remaining watershed area



Proposed Condition

Type III 24-hr 25 Year Storm Event Rainfall=5.10"

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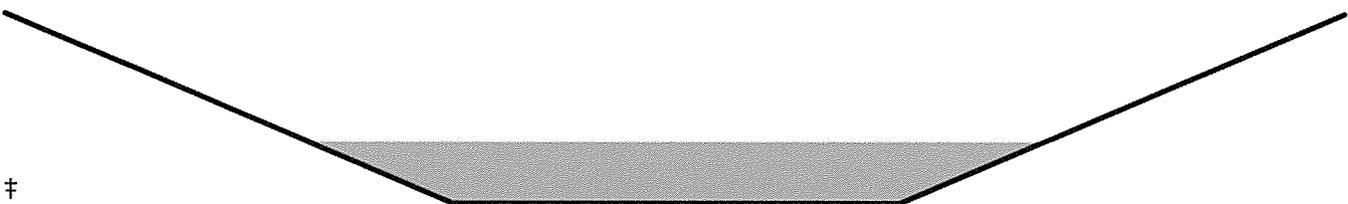
Summary for Reach 4R: Design Point

Inflow Area = 0.930 ac, 65.93% Impervious, Inflow Depth > 2.96" for 25 Year Storm Event event
Inflow = 1.57 cfs @ 12.14 hrs, Volume= 0.229 af
Outflow = 1.56 cfs @ 12.16 hrs, Volume= 0.229 af, Atten= 1%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.37 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.16 fps, Avg. Travel Time= 1.1 min

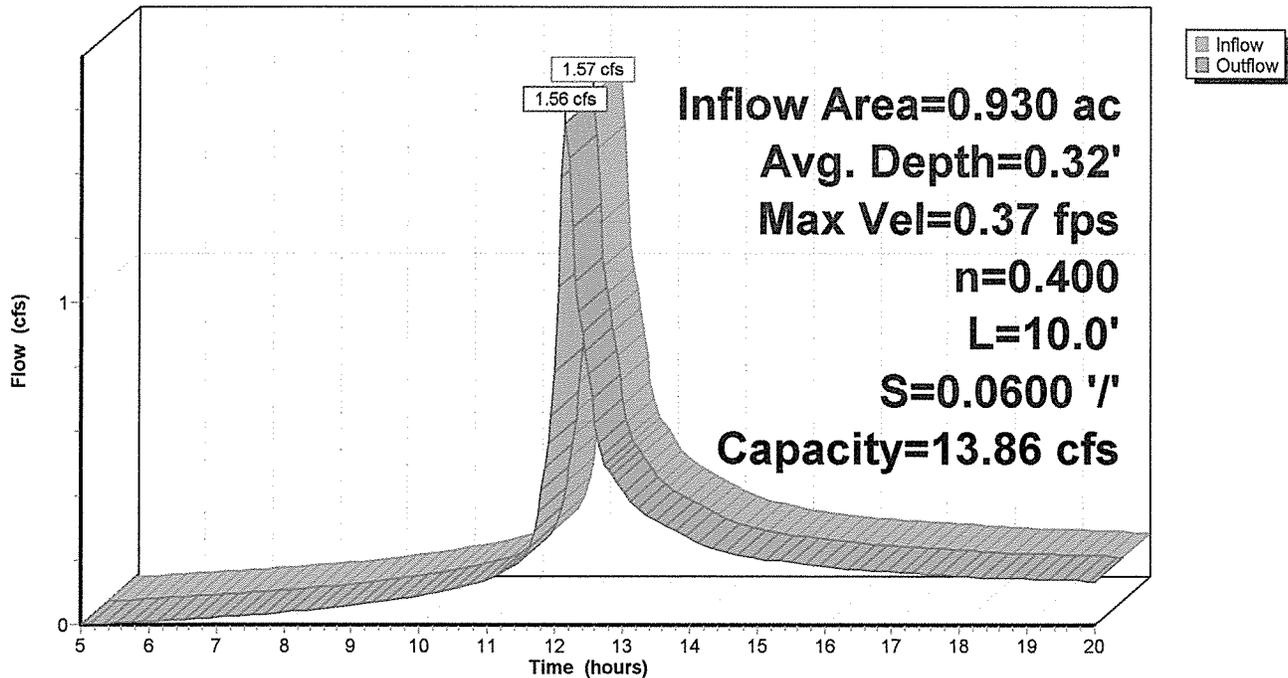
Peak Storage= 43 cf @ 12.15 hrs, Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.00', Capacity at Bank-Full= 13.86 cfs

10.00' x 1.00' deep channel, n= 0.400 Sheet flow: Woods+light brush
Side Slope Z-value= 10.0 '/' Top Width= 30.00'
Length= 10.0' Slope= 0.0600 '/'
Inlet Invert= 0.00', Outlet Invert= -0.60'



Reach 4R: Design Point

Hydrograph



Proposed Condition

Type III 24-hr 25 Year Storm Event Rainfall=5.10"

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Summary for Pond 3P: Detention Pond

Inflow Area = 0.475 ac, 96.62% Impervious, Inflow Depth > 4.43" for 25 Year Storm Event event
 Inflow = 2.57 cfs @ 12.02 hrs, Volume= 0.176 af
 Outflow = 0.27 cfs @ 12.60 hrs, Volume= 0.117 af, Atten= 89%, Lag= 34.8 min
 Primary = 0.27 cfs @ 12.60 hrs, Volume= 0.117 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 96.59' @ 12.60 hrs Surf.Area= 3,711 sf Storage= 4,103 cf

Plug-Flow detention time= 199.5 min calculated for 0.117 af (67% of inflow)
 Center-of-Mass det. time= 127.2 min (861.9 - 734.7)

Volume	Invert	Avail.Storage	Storage Description
#1	95.00'	15,656 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
95.00	972	0	0
96.00	3,168	2,070	2,070
97.00	4,086	3,627	5,697
98.00	4,932	4,509	10,206
99.00	5,967	5,450	15,656

Device	Routing	Invert	Outlet Devices
#1	Primary	95.00'	2.0" Vert. Orifice/Grate C= 0.600
#2	Primary	96.50'	6.0" Horiz. Orifice/Grate Limited to weir flow C= 0.600

Primary OutFlow Max=0.27 cfs @ 12.60 hrs HW=96.59' (Free Discharge)

- 1=Orifice/Grate (Orifice Controls 0.13 cfs @ 5.91 fps)
- 2=Orifice/Grate (Weir Controls 0.14 cfs @ 0.99 fps)

Proposed Condition

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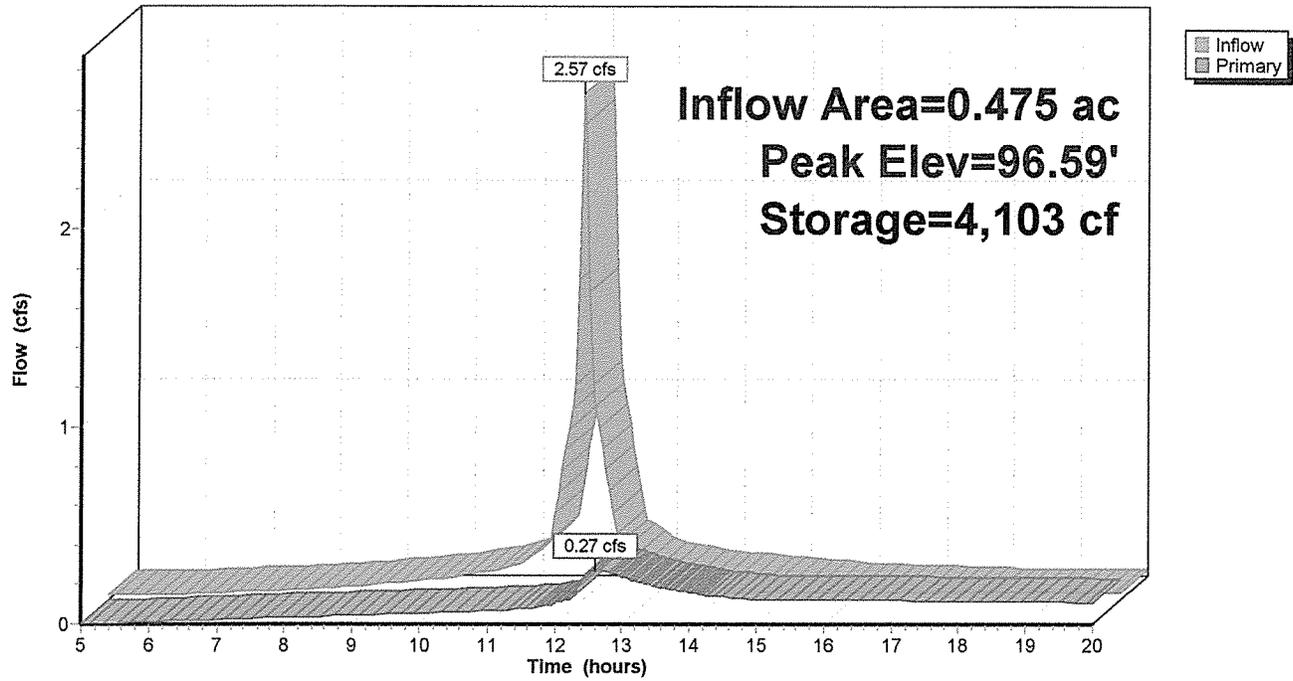
Type III 24-hr 25 Year Storm Event Rainfall=5.10"

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Pond 3P: Detention Pond

Hydrograph



Proposed Condition Stormwater Analysis
(all outlets plugged)

Proposed 25 Year Plugged

Type III 24-hr 25 Year Storm Event Rainfall=5.10"

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Summary for Pond 3P: Detention Pond

Inflow Area = 0.475 ac, 96.62% Impervious, Inflow Depth > 4.43" for 25 Year Storm Event event
 Inflow = 2.57 cfs @ 12.02 hrs, Volume= 0.176 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 97.46' @ 20.00 hrs Surf.Area= 4,471 sf Storage= 7,646 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	95.00'	15,656 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
95.00	972	0	0
96.00	3,168	2,070	2,070
97.00	4,086	3,627	5,697
98.00	4,932	4,509	10,206
99.00	5,967	5,450	15,656

Device	Routing	Invert	Outlet Devices
#1	Primary	97.50'	10.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=95.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Proposed 25 Year Plugged

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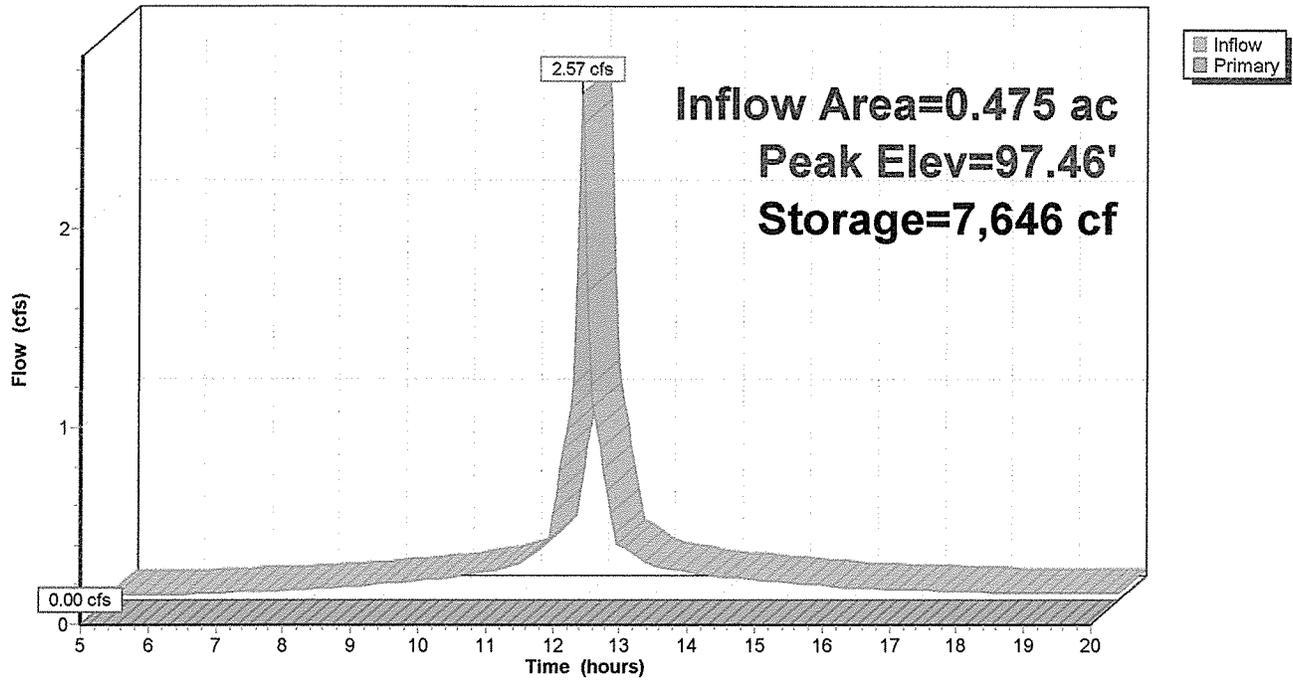
Type III 24-hr 25 Year Storm Event Rainfall=5.10"

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Pond 3P: Detention Pond

Hydrograph



AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

ACCESS TO DIRECT SUNLIGHT
Review Criteria P.

The existing building does not block access to direct sunlight for structures utilizing solar energy through active or passive systems.

This proposal is for a building expansion, which will not block access to direct sunlight for structures utilizing solar energy through active or passive systems.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

STATE PERMITS
Review Criteria Q.

This proposal requires no State Permits.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

OUTDOOR LIGHTING
Review Criteria R.

Proposed exterior lighting will be a single shielded wall-pack security light fixture with a full cutoff visor at the doors at the southwesterly corner of the proposed warehouse addition.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

NEIGHBORHOOD COMPATIBILITY
Review Criteria S.

North Country Harley Davidson is a motorcycle and recreational vehicle sales and repair facility. The property is located in the "RV" (Rural Village) District. The Augusta Land Use Ordinance describes the RV District as intended to foster commercial and service-oriented uses designed to support the surrounding rural population and to foster positive community identity in the rural parts of the City.

The existing facility consists of a showroom/service building and a warehouse building on the northerly side of North Belfast Avenue. Surrounding properties are a commercial use and a mobile home park to the east, a residence and other vacant land of the applicant/owner to the west, and vacant land on the southerly side of North Belfast Avenue.

The proposed warehouse addition will be the same type and design as the existing building. Noise and lighting impacts are minimized by the buffers and the separation from residential properties and from North Belfast Avenue.

The visual impact of the development on the neighborhood will be minimal considering the warehouse addition will be on the northerly side of and behind the existing warehouse about 280 feet away from North Belfast Avenue and will be inconspicuous or invisible to abutters.

Along the easterly property line adjoining the proposed expansion, a Bufferyard "A" is specified. New plantings that are needed to bring the buffer up to the standards required for Bufferyard "A" will be installed as soon as practical after final grading and the season permit. Maintenance of the vegetated buffer will be provided by the owner.

A stormwater control pond to be constructed as part of this expansion will limit stormwater flows from the site to levels that will be the same or less than predevelopment levels.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

PLANS AND POLICIES
Review Criteria T.

The New North Augusta Trust proposed building expansion is in accordance with the adopted elements of the 1988 Growth Management Plan and the 2007 Augusta Comprehensive Plan.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

REVIEW CRITERIA U.
TRAFFIC PATTERN, FLOW AND VOLUME

North Belfast Avenue is a state highway and more than adequate for safe ingress and egress to and from the site. The speed limit at this location is 55 miles per hour, and site distances in both directions exceed 600 feet.

A site modification in 2000 removed two (2) driveway entrances, and the third driveway entrance remains as the approved entrance. All interior driveways, maneuvering and parking areas meet standards.

There are currently 18 to 20 employees and 75 to 100 customers on-site per day, translating to approximately 20 vehicle trips per hour. A Traffic Movement Permit is not required under Title 23 M.R.S.A. §704-A, as the project generates fewer than 100 passenger car equivalents at peak hour.

Traffic to and from the North Country Harley Davidson dealership is not expected to increase significantly as a result of the warehouse expansion.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

PUBLIC FACILITIES
Review Criteria V.

The North Country Harley Davidson dealership is served by electric and communication utilities that have adequate capacity to serve the proposed expansion for.

No other service is provided by public facilities.

See Review Criteria B, C, F, G and O for relevant information.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

RESOURCE PROTECTION AND ENVIRONMENT
Review Criteria W.

The proposed North Country Harley Davidson warehouse addition is an expansion of the existing operations at an established location.

There are no identified areas of resource protection or environmental significance that will be affected by this project.

Stormwater runoff will be controlled with a detention pond that will control the stormwater flow to pre-development conditions. The outlet of the pond flows to other land of the applicant/owner.

Standard erosion and sedimentation control measures will be taken to ensure that the construction of this project will have minimal adverse impact on any adjacent resources.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

PERFORMANCE STANDARDS
Review Criteria X.

The proposed North Country Harley Davidson warehouse expansion complies with all applicable performance and dimensional standards as outlined in the Augusta ordinances. This proposal is an expansion of the existing conditional use that has been established at this location since 19xx.

According to the City of Augusta Land Use Ordinance, the property is located in the "RV" or Rural Village District, in which an "automobile business, as defined" is a conditional use subject to performance zoning and site capacity analysis. This proposal conforms with all dimensional standards as described in **Review Criteria T., Conformity with City Ordinances and Plans**, attached hereto.

The existing facility consists of a showroom/service building and a warehouse building on the northerly side of North Belfast Avenue. Surrounding properties are a commercial use and a mobile home park to the east, a residence and other vacant land of the applicant/owner to the west, and vacant land on the southerly side of North Belfast Avenue.

The proposed warehouse addition will be the same type and design as the existing building. Noise and lighting impacts are minimized by vegetative buffers and the separation from residential properties and from North Belfast Avenue.

The visual impact of the development on the neighborhood will be minimal considering the warehouse addition will be on the northerly side of and behind the existing warehouse about 280 feet away from North Belfast Avenue and will be inconspicuous or invisible to abutters.

Along the easterly property line adjoining the proposed expansion, a Bufferyard "A" is specified. New plantings that are needed to bring the buffer up to the standards required for Bufferyard "A" will be installed as soon as practical after final grading and the season permit. Maintenance of the vegetated buffer will be provided by the owner.

A stormwater control pond to be constructed as part of this expansion will limit stormwater flows from the site to levels that will be the same or less than predevelopment levels.

Noise, exterior lighting and buffering are described in this application, and will be in compliance with the performance standards of the Augusta ordinances.

There are no new signs proposed as part of this project.

AUGUSTA MOTORSPORTS, INC.
for
NORTH COUNTRY HARLEY DAVIDSON
EXPANSION

3099 North Belfast Avenue
Augusta, Maine

CITY OF AUGUSTA
MINOR DEVELOPMENT REVIEW APPLICATION

FINANCIAL AND TECHNICAL ABILITY
Review Criteria Y.

North Country Harley Davidson is well known and respected in the local community, the State of Maine and beyond. The facility has been established since 1968 at the current location, and was purchased by the Reynolds family in 1999.

Augusta Motorsports, Inc., dba North Country Harley Davidson, has adequate financial resources to complete the proposed development. The total estimated cost of the proposed warehouse expansion and site improvements is \$125,000, which will be paid from current cash accounts.

A certificate of good standing and the corporate information summary of Augusta Motorsports, Inc. is attached.

Thayer Engineering Company, Inc. has been retained by North Country Harley Davidson for the land surveying, civil engineering and site design of the proposed development, and for the preparation and administration of the City of Augusta site permit application. Thayer Engineering Company has successfully completed many similar projects in the City of Augusta and the State of Maine over the last 33 years.