City of Portland
Development Review Application
Planning Division Transmittal form

Application Number: 10-79900030 **Application Date:** 9/03/10
Circulated 9.8.10
Revision 1: 10.12.2010
Circulated 10.13.2010

Project Name: DOUGHERTY FLD. IMPROV.

Address: 91 Douglass St **CBL:** 066 - A-002-001

Project Description: Dougherty Field Improvements Phase 1; Douglass/St. James Street; City Of Portland, Applicant.

Zoning: ROS

Other Reviews Required:

Review Type: LEVEL II subject to rec'ing add'l information that confirms (has been re'cd 9.22.2010)

Applicant:
Troy Moon, DPS
55 Portland Street

Portland Me 04101

Applicant:
Woodard & Curran, David Senus
41 Hutchins Drive
Portland Me 04101

Distribution List:

☒ Planner	Jean Fraser	☐ Parking	John Peverada
☐ ZoningAdministrator	Marge Schmuckal	☐ Design Review	Alex Jaegerman
☐ Traffic	Tom Errico	☐ Corporation Counsel	Danielle West-Chuhta
☐ Stormwater	Dan Goyette	☐ Sanitary Sewer	John Emerson
☐ Fire Department	Keith Gautreau	☐ Inspections	Tammy Munson
☐ City Arborist	Jeff Tarling	☐ Historic Preservation	Deb Andrews
☐ Engineering	David Margolis-Pineo	☐ Outside Agency	
		☐ DRC Coordinator	Phil DiPierro

Project has been fine-tuned in conjunction with DPS and Rec & Arts and these plans reflect their updates as well as responses to our comments. This is an Administrative Review.

Comments (as final as poss) by: October 20th, 2010 please.

test fit plans on skate park

Strengthening a Remarkable City, Building a Community for Life www.portlandmaine.gov

Planning & Urban Development Department
Penny St. Louis Littell, Director

Planning Division
Alexander Jaegerman, Director

November 19, 2010

Ethan Owens
Recreation and Facilities Management
City of Portland
134 Congress Street
Portland ME 04101

Project Name: Dougherty Field Improvements Phase 1
City of Portland, Applicant.
Project ID: 10-79900030 **CBL:** 066-A-002-001
Project Address: Douglas Street/ St. James Street
Planner: Jean Fraser

Dear Ethan:

On November 18, 2010, the Portland Planning Authority approved a Level II site plan for the Dougherty Field Improvements Phase 1, comprising realignment and rehabilitation of existing baseball and softball fields; parking lot redevelopment; path and sidewalk installation; playground installation; landscaping improvements; and interim and final stabilization of the Skate Park perimeter area.

The Dougherty Field Improvements Phase 1 are detailed in the approved plans as submitted by the applicant and prepared by Woodard & Curran: *Grading and Utility Plan* Sheet 2 11/09/2010; *Skate Park Area Grading and Drainage Plan* Sheet 3 11/09/2010; *Layout Plan* Sheet 4 11/09/2010; *Landscape Plan* Sheet 5 10/12/2010; *Details – 1* Sheet 6 10/12/2010; *Details – 2* Sheet 7 11/09/2010 and *Details – 3* Sheet 8 10/12/2010. + Sheet 9 of 9 9-3-10

The proposals described above are approved with the following conditions:

i. That the applicant shall file a Stormwater Permit by Rule and Notice of Intent to Comply with the Maine Construction General Permit to the MaineDEP for disturbance of over an acre prior to any work commencing on site; and

ii. That if the final grading in the vicinity of the SkatePark associated with the Dougherty Field Improvements Phase 1 is not commenced by April 15, 2010, then all exposed soil areas shall be treated with temporary seeding and additional straw mulch and matting, as necessary to stabilize the area around the SkatePark; and

iii. That a final placement and density of the proposed trees and planting (as shown on *Landscape Plan* Sheet 5 of 9) in the vicinity of the SkatePark shall be agreed with the City Arborist "in-the-field" once the SkatePark is constructed, and

does not include parking lot - 3 trees lost - at end then need relocation.

iv. That if any new lighting or buildings are proposed, an amended site plan shall be submitted for review and approval by the Planning Authority prior to the issuance of any applicable city permits, and separate permits are required for any new signage.

The approval is based on the submitted site plan. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

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The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning Division at 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Jean Fraser at (207) 874- 8728.

Sincerely,

Alexander Jaegerman

Alexander Jaegerman
Planning Division Director

Electronic Distribution:
Penny St. Louis Littell, Director of Planning and Urban Development
Alexander Jaegerman, Planning Division Director
Barbara Barhydt, Development Review Services Manager
Jean Fraser, Planner
Philip DiPierro, Development Review Coordinator
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Gayle Guertin, Inspections Division
Lannie Dobson, Inspections Division
Michael Bobinsky, Public Services Director
Katherine Earley, Public Services
Bill Clark, Public Services
David Margolis-Pineo, Deputy City Engineer
Greg Vining, Public Services
John Low, Public Services
Jane Ward, Public Services
Keith Gautreau, Fire
Jeff Tarling, City Arborist
Tom Errico, TY Lin
Dan Goyette, Woodard & Curran
Assessor's Office
Approval Letter File

Hard Copy: Project File
David Senus, Woodard & Curran

Jean Fraser - Re: Dougherty Field

From: Ethan Owens
To: Barbara Barhydt; Sally Deluca
Date: 9/8/2011 10:08 AM
Subject: Re: Dougherty Field
CC: Eric Labelle; Jean Fraser; Thomas Errico

Hi Jean and Barbra,
Thank you for the offer to assist in the parking lot review but upon further reflection, I think we will just go on as the plan is currently drawn. We have so much on our plates and I know the construction company does too so I don't want to hold things up. After the completion of this phase, maybe we will enlarge it further in some other phases. But thanks again.

Have a great day,

Ethan Owens
Certified Playground Safety Inspector
Athletic Facilities, Playground & Courts Manager
Recreation Department ~ City of Portland
134 Congress St
Portland, Maine 04103 ~ USA
207-756-8275/Fax 207-756-8279
eowens@portlandmaine.gov

>>> Barbara Barhydt 9/8/2011 8:59 AM >>>
Hi:

Jean gave me an update on your project yesterday. I understand that revisions to the parking lot are being considered. The proposed changes appear to be more than a minor adjustment. We are willing to consider those changes, but we do need to have a revised plan so it can be reviewed for safety, circulation and landscaping by the traffic engineer, DPS and Planning. We are willing to schedule a meeting to discuss the options, prior to revising the plans, if you would like. Just let us know.

Thank you.

Barbara

Barbara Barhydt
Development Review Services Manager
Planning Division
389 Congress Street 4th Floor
Portland, ME 04101
(207) 874-8699
Fax: (207) 756-8256
bab@portlandmaine.gov

Jean Fraser - Re: Dougherty Field Alterations

From: Jean Fraser
To: Owens, Ethan
Date: 9/7/2011 12:19 PM
Subject: Re: Dougherty Field Alterations
CC: Deluca, Sally; Labelle, Eric

Ethan

The proposed changes to the parking lot - (2) below are not "small" - they are quite substantial and cannot be dealt with by e-mails. Please do not proceed with any changes to the approved plans until you have submitted another (revised) plan and it has received formal approval.

We need a detailed plan (prepared by an engineer and to scale) that shows the revised parking layout, that it meets the city's technical standards (section 1- its on the city's website), indicates how the drainage will be revised, and shows the locations of trees and how they will protected if within a paved area. It should also show how pedestrians will be protected from cars ie there may need to be a guardrail alongside the sidewalk -- and there are other questions that must be clarified to ensure this meets safety and other site plan requirements (including re trees).

I don't believe that parallel parking along the side of the drive aisle will be allowed as it is not safe- but angled parking may work here (because its one way) and give more additional parking. If angled parking can fit here then islands at the ends/between the parking spaces could be introduced for some trees. You need to arrange for someone to do a scaled detailed drawing and get it sent to me by pdf.

Otherwise it may be best to leave the plan as is and add in the trees in the esplanade- I understand there is considerable street parking in this area.

Jeff has sent the following comments on 9.2.2011 before he left for vacation-- he would also review any plan of the revised parking lot (along with the traffic engineer who reviews site plans):
Hi Jean -

Wanted to weigh in on the Dougherty Field parking lot discussion, we have talked about a few options recently 'in-the-field' between Public Services Construction, Ethan Owens from Recreation, Eric Labelle and myself about parking lot adjustment.

My preference would be to have street-trees along the parking lot between the street and parking area. Ideal spacing would be roughly 45'. This would continue the existing tree line that starts at Douglas Street to the Skatepark. These trees would help screen the industrial / commercial use across the street to the existing residential homes on Douglas Street.

While I do see the value in the added parking spaces for this busy site, street-trees should be included in this plan. Currently I do not have a copy of the original landscape plan, so I would refer to the landscape plan as approved or to add street trees into any changes.

Thanks, I am on vacation until the 12th -

Jeff Tarling

I am wondering if we need to get everyone in the same room on this to resolve a final solution as public safety and a park amenity is at issue- to include me, you and others from your department - plus Eric Labelle, Jeff Tarling, Phil diPierro, the Traffic Engineer Reviewer and others ... I am happy to do what I can to get this resolved quickly.

Please call if you want to discuss

thanks
Jean

874 8728
PS Your (1) is OK and I will send a separate e-mail re that.

>>> Ethan Owens 9/7/2011 11:36 AM >>>
Hi Jean,
Here is a break down of some small changes at the Dougherty Field project.

1) The 10' wide grass path from the parking lot down to the fields will just eliminated and the same smooth contour or slope all the way across will be applied. It looks better and functions better for maintenance. I don't want to encourage anyone to drive down there either. The sloped bank makes a very nice perch for families to sit and watch the games so I don't want to break that up.

2) The parking issue is a monster here, the need for parking is a large one. There is other parking lots planned in later phases but by eliminating a 8 foot strip of "never going to grow' grass and extend the asphalt to the edge of the new sidewalk we can add 8 to 10 more spaces. We will also add two maybe three new trees in that space - one on each end and maybe one in the middle.

Have a great day,

Ethan Owens
Certified Playground Safety Inspector
Athletic Facilities, Playground & Courts Manager
Recreation Department ~ City of Portland
134 Congress St
Portland, Maine 04103 ~ USA
207-756-8275/Fax 207-756-8279
eowens@portlandmaine.gov

Jean Fraser - Re: Dougherty Fields- 10 ft grass access walkway

From: Ethan Owens
To: Jean Fraser
Date: 8/31/2011 2:18 PM
Subject: Re: Dougherty Fields- 10 ft grass access walkway
CC: Eric Labelle; Gordon Greenlaw; Jeff Tarling; Philip DiPierro; Sally ...

I see Jean.

1) No - the grass path down from the parking lot was a mistake form the beginning. But it kept showing up on the new and then the new and then the new drawings. From a maintenance, construction and functionality point of view it is useless. To keep the same taper and slope all across that plane from the parking lot down to the fields, will provide a pleasant seating area, easy grass growing and maintaining location with less contours to scalp and after talking with Jeff yesterday - a nice platform to install a few shade tress.
2) The main problem I see with the spit of grass between the parking lot and the sidewalk is maintenance and wasted parking space. Jeff and I designed a simple system for that edge after talking with Gordie and I will send that to you and Phil shortly. Basically you would have a the parking lot go right to the sidewalk with several protective tree wells installed.

After walking the site with my dept folks this afternoon, we are in agreement so I will get the proper paperwork to you.

Have a great day,

Ethan Owens
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>>> Jean Fraser 8/31/2011 10:48 AM >>>
Ethan

I was not referring to this area; I was referring to the sketch attached in an e-mail to Molly Casto dated 8.23.2011 regarding a curved walkway that goes out from the parking lot towards the ball fields- in that e-mail you stated: ""Nor do we want that 10' road from the parking lot. It was never suppose to be there and..."

David Senus confirmed this morning that this walkway was requested by you during the design development to allow maintenance for the ball fields- he will call you re that.

So I think there are 2 revisions to the plan that need to be clarified and documented:

1. the curved grassed walkway
2. area between parking lot and sidewalk that you have been discussing with Jeff

Thanks
Jean

>>> Ethan Owens 8/30/2011 10:33 PM >>>
Jean, it has been just conversation to this point as I mentioned on the voicemail. But as the manger of this project and the public services construction crew working for us on this, we are not happy with that detail between the parking lot and sidewalk. Jeff Tarling and I have been discussing a change of the 9' swath of grass that would never live or grow and just extend the parking lot to the sidewalk. Also adding tree wells along the edge of the parking lot.
Once we have made a decision I will get in touch with you just like I did about the path surface change. I didnt want to be premature with this.

Have a great day,

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>>> Jean Fraser 08/30/11 15:30 PM >>>
Ethan

It has been brought to my attention that you do not want to implement a feature shown on the approved site plans (shown on 3 plans within the approved plan set, marked as "10 ' wide grass access" leading from the parking lot on St James towards the baseball diamonds).

This would be considered a "di minimus" change to the approved site plan and just be documented with an e-mail from me confirming the Planning authority approval. It would be good if someone could send a sketch of the final grading for the record or in case there is an objection from the public (several members of the public viewed these site plans).

We are happy to send that e-mail, but I just want to clarify- it was my understanding that this "walkway" (flatter width of grass with a more gentle slope) would create areas for easier viewing of the baseball diamonds (by sitting on the grass on the slope) and make it more accessible for people pushing baby buggies/pushchairs coming from the parking lot to watch a game. It seems to be quite purposeful in design. However, I understand you may feel this benefit is outweighed by the future mowing issues or the re-grading bringing it too near the baseball.

Please confirm or send a sketch of the revised grading and I will confirm re the site plan di minimus approval.

Jean Fraser - Re: Dougherty Fields- 10 ft grass access walkway

From: Jean Fraser
To: Owens, Ethan
Date: 8/31/2011 10:48 AM
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CC: DiPierro, Philip; Greenlaw, Gordon; Labelle, Eric; Tarling, Jeff

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Please confirm or send a sketch of the revised grading and I will confirm re the site plan di minimus approval.

thanks
Jean

Jean Fraser, Planner
City of Portland
874 8728

Molly Casto - Structure

From: Ethan Owens
To: Eric Labelle; Gordon Greenlaw
Date: 8/23/2011 11:15 AM
Subject: Structure
Attachments: IMG_1058.JPG; IMG_1059.JPG; For PS 1.png

Guys,
I do not want that structure over the survey mark. Nor do we want that 10' road down from the parking lot. It was never suppose to be there and I was told instead of changing the drawings it would be an infield decision.

The way the dirt from the enlarged parking lot is now - it actually pretty good. Maybe a little more and a smooth out but it doesn't need to be graded back anymore. The end line now is good enough. It will make a good hill to sit on, will drain well and won't encroach out to the baseball field area too much. Please see the drawings.

Gordie - please give me shout first thing Monday when your back and we can go over these things.

The roughing out of the baseball field is going well so far and we have trucks of materials coming over from Ocean Ave.

Have a great day,

Ethan Owens
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207-756-8275/Fax 207-756-8279
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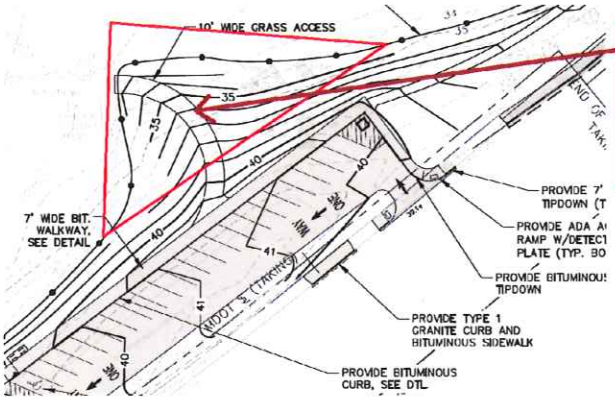
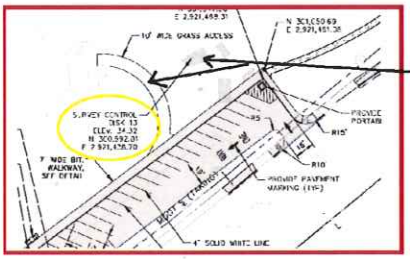


Do not creat this grass walk way. It will be a mowing night mare and no one will use it anyway. I don't want dirt grade out too far from the parking lot because you will start interfering with the area round the baseball field.



This survey control should not be covered by dirt so there is no reason for the structure. The 10' grass access road is not needed and should not be put in.

Jean Fraser - Dougherty Fields approval & Inspection fee

From: Jean Fraser
To: Barhydt, Barbara; DiPierro, Philip
Date: 12/16/2010 11:56 AM
Subject: Dougherty Fields approval & Inspection fee
Attachments: APP LTR Dougherty Field Imp. Phase 1 #10-79900030.pdf

Barbara and Phil

I recall that the Skate Board park did not have a precon meeting and there have been issues.

So I am being a bit cautious re this other part of the project, especially as it affects the ROW and covers a large part of the fields in terms of impacts.

We had requested a $300 Inspection Fee for Planning Inspections in the approval letter (copy attached) but it does not say when that needs to be paid. NO PG.

Anyway, I suggest that I circulate the Stamped Approved Plans to all as usual but add a note on them saying that start on site is subject to BP, payment of Inspection Fee and completion of precon meeting so all are alerted to status.

DPS will be doing the work in the spring; apparently they have funding.

OK???

Jean

Circulation - this not urgent as understood work to start Spring 2011.

1g ✓ Phil DiPierro
1g DPS - Reviewer / Inspector
1g - Archives

1g Assessors
1g Inspections
1 ✓ Planning file
11x17 Jeff Tarling
11x17. File ✓

awaiting Ins. fee

Planning & Urban Development Department
Penny St. Louis Littell, Director

Planning Division
Alexander Jaegerman, Director

November 19, 2010

Ethan Owens
Recreation and Facilities Management
City of Portland
134 Congress Street
Portland ME 04101

Project Name: Dougherty Field Improvements Phase 1
City of Portland, Applicant.
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If there are any questions, please contact Jean Fraser at (207) 874- 8728.

Sincerely,

Alexander Jaegerman

Alexander Jaegerman
Planning Division Director

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Hard Copy: Project File
David Senus, Woodard & Curran

Jean Fraser - Plans re Dougherty Fields Improvements

From: Jean Fraser
To: DSenus@woodardcurran.com
Date: 11/24/2010 12:38 PM
Subject: Plans re Dougherty Fields Improvements
CC: Owens, Ethan

David,

The approval letter should have included Sheet #9 (9/3/2010) but because it was not in the October submission I missed it out. We don't always reference each plan in the approval letter and I will include that for "stamping" when I circulate the approved plan sets. Its important because it is referred to in the note on sheet 3.

Although the approval letter mentions 7 sets of plans, please send 5 scaled paper sets of the final plans (ie 5 plan sets with sheets 1-9 included, each being the final approved version plus sheet 9)- also could you send me Sheets 1, 5, 6, 8, and 9 by pdf, same latest (as approved) revisions.

These will be stamped and circulated to the 3 Inspectors, planning file, and one goes to archives and assessors, etc.

thank you
Jean

City Project

MINOR SITE PLAN DEVELOPMENT REVIEW
Final review and sign off Phase I (Excl Skate Park - it has separate approval)

PROJECT: Dougherty Fields Imps **Application #:** HTE 10-799000030
Date of completion: Nov 17, 2010

Review item	*Status*	*Who signed off on this*
Evidence of Right, Title & Interest	Deeds and Stamped Survey submitted.	—
MDEP/MP etc issues	needs Stormwater PBR.	
Additional info provided as requested:	disturbance totals improved sidewalks (links/materials) widths.	rec'd 11-9-10
Access and parking layout (including contributions)	Extensive improvements to plg area incl. drainage + ped access.	Tom Errico emails + Dec Lee 11-17-10
Bicycle parking	4 sets of bike racks incorporated - inc std re RoS	JF
Stormwater Management	all OK; Al Palmer reviewed + signed off	AP 11-17-10
Other engineering issues	DPS has signed off since plans now revised to address comments	David M-P 11-09-10.
Zoning	OK	MS 11-16-10.
Fire Department	OK	11-16-10
Building materials etc	N/R - no buildings	
Landscape	OK - Rev. by Jeff Tarling	11-4-10
Two trees/lot; two foundation plantings per lot	N/R.	
Lighting	none proposed.	
Letter of financial capability	City Project	
Capacity letter water	Not Relevant	
Capacity letter sewer	not relevant	
Sidewalk/Curbing	new section of concrete sidewalk included to fill gaps	
Dumpster location and enclosure/waste collection	none shown.	
Other issues	Link to Skate Park area since final grading + drainage for that area is included.	

Jean Fraser - RE: Final check re Dougherty Fields

From: Al Palmer <APalmer@gorrillpalmer.com>
To: Jean Fraser <JF@portlandmaine.gov>
Date: 11/17/2010 5:56 PM
Subject: RE: Final check re Dougherty Fields

I don't see the need for any special conditions of approval.

Thanks,

Al

From: Jean Fraser [mailto:JF@portlandmaine.gov]
Sent: Wednesday, November 17, 2010 4:53 PM
To: Al Palmer
Subject: Final check re Dougherty Fields

Al

On Nov 15th I sent you the final revisions on this project; I am not sure it warrants a full paper set being sent but the cover letter (which you saw last week) addresses your 11.3.2010 comments.

I just wanted to check (approval letter going out tomorrow-ish) whether you felt there needed to be any conditions of approval included ...

thanks
Jean

Jean Fraser - RE: Dougherty Field Site Plan Comments / Response Letter

From: Al Palmer <APalmer@gorrillpalmer.com>
To: Jean Fraser <JF@portlandmaine.gov>, David Margolis-Pineo <DMP@portlandma...
Date: 11/9/2010 2:55 PM
Subject: RE: Dougherty Field Site Plan Comments / Response Letter
CC: Barbara Barhydt <BAB@portlandmaine.gov>, Michael Farmer <Mfarmer@portlan...

The response relative to the running slope of the walkway and it's width is acceptable to us.

Thanks,

Al Palmer

From: Jean Fraser [mailto:JF@portlandmaine.gov]
Sent: Tuesday, November 09, 2010 1:41 PM
To: Al Palmer; David Margolis-Pineo; Marge Schmuckal; Thomas.Errico@tylin.com
Cc: Barbara Barhydt; Michael Farmer
Subject: Fwd: Dougherty Field Site Plan Comments / Response Letter

To all reviewers:

Tomorrow is the final review on this; I have agreed with David Senus that he will send the "final" revised plans after I get final comments from David Margolis-Pineo and Marge Schmuckal.

In the meantime I am forwarding David Senus' letter where he responds to Al Palmer's comments about the grade where the trail goes up to the play equipment- I would like to discuss this at tomorrow's Dev Rev (where we will have a scaled plan of the other revisions for reference if needed.

Al- pl let me know if you are convinced.....

thanks
Jean

>>> "David Senus" <dsenus@woodardcurran.com> 11/9/2010 12:58 PM >>>

Hello Jean:

Per our discussion, attached is a comment / response letter addressing the latest comments received from Site Plan review of the Dougherty Field Improvements Project. I will send one full size set of updated plans with Dan Goyette for tomorrow's meeting. I will only send plans that have new info. We have put REV clouds around all new/updated info, and we've explained each plan edit in the attached letter.

Please don't hesitate to call if you have any questions.

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Dave Senus

David Senus, PE, Project Manager
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WOODARD &CURRAN

November 9, 2010

Jean Fraser, Planner
City of Portland Planning Office
389 Congress Street
Portland, ME 04101

Re: Dougherty Field Improvements Level II Site Plan Application Response to Comments

Dear Jean:

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plans for zoning & DRB

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+ maintenance access

Additional review comment relayed to Design Team

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We look forward to working with you and receiving Site Plan approval for the Dougherty Field Improvement project. Please feel free to call at anytime if you have any questions or comments.

Sincerely,

WOODARD & CURRAN INC.

David Senus, PE
Project Manager

DAS/
203939.65

Enclosures – Dougherty Field Improvements Site Plan Application Drawings, Sheets 2, 3, 4 and 7

cc: Ethan Owens, Sally Deluca, Troy Moon; City of Portland

Zoning Administrator Marge Schmuckal

See Zoning Assessment

November 10, 2010

This project is located within the ROS or Recreational Open Space Zone. That zone permits municipal parks, public open spaces, picnic areas, playgrounds and play lots, along with outdoor ball fields and public athletic fields. The proposed uses are meeting the listed permitted uses of the ROS.

There are no new structures that I have seen on the proposal. There are no specific setbacks for the above listed uses.

All the zoning requirements of the ROS zone are being met.

Jean Fraser - Re: Dougherty Field Site Plan Comments / Response Letter

From: Jean Fraser
To: Senus, David
Date: 11/10/2010 5:05 PM
Subject: Re: Dougherty Field Site Plan Comments / Response Letter

David,

At the Development Review discussion this AM we considered the comments in your letter re the path and that is acceptable; we did not look at every detail so I suggest you send the letter formally with another 2 sets of scaled plans so I can formally complete the review and hopefully issue the approval letter.

I personally (as a mother) do not understand (since a pine tree is being taken as part of the regrading anyway) why the path near the play area could not follow the contours and be gentler so that people with strollers and babies in arms (elderly!) do not have to negotiate that steep slope when they want to stroll from the play area around the inner walkway. Also anyone who wants to get from that end of St James to the inner walkway would have to use that path and it seems an unnecessary danger for folks, particularly in the colder months. But this is not a formal comment just an personal aside.

I am not in on Friday but the plans can be left for me then. The offices are closed tomorrow.

Jean

>>> "David Senus" <dsenus@woodardcurran.com> 11/9/2010 12:58 PM >>>

Hello Jean:

Per our discussion, attached is a comment / response letter addressing the latest comments received from Site Plan review of the Dougherty Field Improvements Project. I will send one full size set of updated plans with Dan Goyette for tomorrow's meeting. I will only send plans that have new info. We have put REV clouds around all new/updated info, and we've explained each plan edit in the attached letter.

Please don't hesitate to call if you have any questions.

Thanks,
Dave Senus

David Senus, PE, Project Manager
Woodard & Curran, Inc.
41 Hutchins Drive
Portland, ME 04102
Phone: (800) 426-4262 x3241
Fax: (207) 774-6635

-----Original Message-----
From: Jean Fraser [mailto:JF@portlandmaine.gov]
Sent: Wednesday, October 27, 2010 3:39 PM
To: David Senus
Cc: Regina S. Leonard; Tom Errico (TY Lin); Dan Goyette
Subject: Re: Dougherty Field Comment - Sidewalk on south edge of parking lot

David,

It seems to me there would be a desire line at this point and best to address it ....I think a widened access drive with a striped "sidewalk" into the park might be adequate but will let Tom comment on that re safety.

Tom- what do you think? I suggest you discuss the issues and constraints etc with David and bring it back to Dev Rev next week with a recommendation.

Also this is a good opportunity for me to mention that if any new sections of sidewalk are proposed to be asphalt, the waiver from concrete material needs to be determined by the City Council. Also, as per our usual protocol, I will be writing a comprehensive review letter next week that will confirm the final comments on all issues; it will include Tom Errico's request for a STOP sign to be added for movements exiting the parking lot and truncated domes to be installed on each sidewalk ramp at each driveway to the parking lot.

Jean

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From: "David Senus" <dsenus@woodardcurran.com>
To: "Jean Fraser" <JF@portlandmaine.gov>
CC: "Sally Deluca" <SLD@portlandmaine.gov>, "Ethan Owens" <EOWENS@portlandma...
Date: 11/9/2010 12:57 PM
Subject: Dougherty Field Site Plan Comments / Response Letter
Attachments: 2010.11.09 Planning Comments Response, Ltr.pdf

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November 9, 2010

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Enclosures – Dougherty Field Improvements Site Plan Application Drawings, Sheets 2, 3, 4 and 7

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Project Manager

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203939.65

Enclosures – Dougherty Field Improvements Site Plan Application Drawings, Sheets 2, 3, 4 and 7

cc: Ethan Owens, Sally Deluca, Troy Moon; City of Portland

Jean Fraser - RE: Dougherty Field Comment - Sidewalk on south edge of parking lot

From: Thomas Errico <Thomas.Errico@tylin.com>
To: Jean Fraser <JF@portlandmaine.gov>, David Senus <dsenus@woodardcurran.com>
Date: 10/28/2010 8:38 AM
Subject: RE: Dougherty Field Comment - Sidewalk on south edge of parking lot
CC: "Regina S. Leonard" <regina@rsldesign.com>, Dan Goyette <DGoyette@woodar...

Jean/David – I also believe that there will be a desire path from the St. James Street sidewalk to areas of Dougherty Field near the skateboard park. I'm not supportive of a painted sidewalk in the parking lot.

I'd be glad to chat with you if you want to discuss options.

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
T·Y·LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
207.347.4354 direct
207.400.0719 mobile
207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com

"One Vision, One Company"
Please consider the environment before printing.

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It seems to me there would be a desire line at this point and best to address it ....I think a widened access drive with a striped "sidewalk" into the park might be adequate but will let Tom comment on that re safety.

Tom- what do you think? I suggest you discuss the issues and constraints etc with David and bring it back to Dev Rev next week with a recommendation.

Also this is a good opportunity for me to mention that if any new sections of sidewalk are proposed to be asphalt, the waiver from concrete material needs to be determined by the City Council. Also, as per our usual protocol, I will be writing a comprehensive review letter next week that will confirm the final comments on all issues; it will include Tom Errico's request for a STOP sign to be added for movements exiting the parking lot and truncated domes to be installed on each sidewalk ramp at each driveway to the parking lot.

Jean

>>> "David Senus" <dsenus@woodardcurran.com> 10/27/2010 2:13 PM >>>

Hi Jean:

Dan Goyette passed along the comment regarding a lack of sidewalk at the south edge of the parking lot area connecting St. James street to the parking lot sidewalk. The parking lot is designed with a reverse crown (center drainage) and stormwater will flow across this proposed sidewalk location. To provide a raised sidewalk in this area, we would need to install a catch basin with piping to an outfall beyond the sidewalk or a sidewalk culvert (see attached photo), which has some winter maintenance concerns. Ledge is high in this area, and therefore I am concerned about a catch basin and piping at this location. The other option is to offset the sidewalk to the south from the parking lot, and install a culvert below the sidewalk. And then there is yet another option for an 'at-grade' sidewalk delineated by pavement markings. This would cross the drainage point for the parking lot. Should I discuss the topic & options directly with Tom Errico?

Thanks
Dave Senus

David Senus, PE, Project Manager
Woodard & Curran, Inc.
41 Hutchins Drive
Portland, ME 04102
Phone: (800) 426-4262 x3241
Fax: (207) 774-6635

Jean Fraser - Doughty Field

From: Thomas Errico <Thomas.Errico@tylin.com>
To: Jean Fraser <JF@portlandmaine.gov>
Date: 10/21/2010 11:33 AM
Subject: Doughty Field
CC: Katherine Earley <KAS@portlandmaine.gov>, David Margolis-Pineo <DMP@port...

Jean – I have reviewed the revised plan set transmitted on October 12, 2010 by Woodard & Curran and find the plans to be acceptable with the following comments.

- A STOP sign should be added for movements exiting the parking lot.
- Truncated domes shall be installed on each sidewalk ramp at each driveway to the parking lot.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TY LIN INTERNATIONAL
12 Northbrook Drive
Falmouth, ME 04105
207.347.4354 direct
207.400.0719 mobile
207.781.4753 fax
thomas.errico@tylin.com
Visit us online at www.tylin.com

Tom OK -
add ui sidewalk link

Parking
Ch m to JP's question re
re parking on res. side -
enforcement

Jean Fraser - Doherty Field Revisions

From: Michael Farmer
To: Fraser, Jean
Date: 10/20/2010 2:08 PM
Subject: Doherty Field Revisions
CC: Bobinsky, Michael; Earley, Katherine; Margolis-Pineo, David; Moon, Troy

Jean:

The City Sidewalk Materials Policy Map for District 3 calls for concrete sidewalks on St. James Street (and Douglass Street). Whereas the current plans for this project indicate that hot mix asphalt sidewalk construction is proposed along St. James Street, the plans would have to be changed to conform to the Sidewalk Materials Policy.

Michael Farmer, Project Engineer
Dept. of Public Services
55 Portland Street
Portland, ME 04101
phone: 207-874-8845
fax: 207-874-8852

Jean Fraser - Dougherty Field Improvements

From: Al Palmer <APalmer@gorrillpalmer.com>
To: Jean Fraser <JF@portlandmaine.gov>, David Margolis-Pineo <DMP@portlandma...
Date: 11/3/2010 8:22 AM
Subject: Dougherty Field Improvements
CC: William Haskell <WHaskell@gorrillpalmer.com>

Hi Jean,

Our office has received the Planning Packet for Application Number 10-79900033, Dougherty Field Phase 1, and offer the following preliminary comments relative to the review of the storm water provisions of the Minor Site Plan Application:

- While no storm water calculations were provided, it is noted that the only increase in non-vegetated surface is associated with stone dust walkway. Therefore, no significant increase in impervious surfaces will result from the project, and we would not anticipate that any increase in storm water runoff would occur.
- The 4' wide walkway from the main trail to the "play equip" area near the pool appears to be graded in excess of a 8% running slope. Could this walkway be flattened to less than 5% to provide improved access?
- There is minimal proposed grading in the outfield areas of the baseball and softball field. It was unclear to our office if this area would be seeded or sodded based on Sheet 4? Based on Sheet 5, it would be seeded. Would sod be appropriate given the intensity of use of these fields?

Please contact us with any questions.

Thanks,

Al Palmer
Senior Vice President
Gorrill-Palmer Consulting Engineers, Inc.
15 Shaker Road
PO Box 1237
Gray, ME 04039
(207) 657-6910
(207) 415-5903 mobile
(207) 657-6912 fax
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x3241

RECEIVED

OCT 12 2010

City of Portland
Planning Division

WOODARD &CURRAN

October 12, 2010

Jean Fraser, Planner
City of Portland Planning Office
389 Congress Street
Portland, ME 04101

Re: Dougherty Field Improvements Level II Site Plan Application Response to Comments

Dear Jean:

Thank you for coordinating Site Plan review of the Dougherty Field Improvements project. Woodard & Curran received comments from the City of Portland Planning Division via email from Jean Fraser to Dave Senus dated September 20, 2010. The purpose of this letter is to address these written comments, and to provide additional information to help facilitate the review of the Site Plan application.

Comments from Jean Fraser, City of Portland, Planning Division, email dated September 20, 2010

1. Info needed: At the meeting on 9.8.2010 Barbara asked for the actual figure for the area to be disturbed in order to confirm whether or not this needs to go to the Planning Board. Could you please send us that figure?

   The following square footage numbers were previously sent by email dated September 21, 2010;

   New trail system: 36,000 sq ft (trail = 16,000 sq ft; grading = 20,000 sq ft)
   New parking lot: 10,750 sq ft (existing lot = 7,900 sq ft; expansion of 2,850 sq ft)
   New play area at Kiwanis: 1,400 sq ft
   New sidewalk along St. James: 2,000 sq ft
   Skate park footprint: 8,200 sq ft
   Area of re-grading around Skate Park: 50,000 sq ft

   Total disturbance for park improvements: 108,350 sq ft or 2.5 acres*

   **Ball field work considered revitalization of existing fields - existing softball field & baseball field reoriented to maximize field space; leveling of any low spots in outfields.*

2. Maintenance route: DPS are looking for a maintenance route between the site and the street for maintenance of catch basins and landscape at least. I think the view will be that the path between the parking lot and the Skate Park needs to be widened enough to take those vehicles (and maybe needs to be constructed differently too) so it would read as a pedestrian path but be a route for maintenance.

   Woodard & Curran has discussed the maintenance route with the Recreation Department (Ethan Owens and Sally Deluca) and the Department of Public Service (John Emerson and Mike Bobinsky). Recreation and DPS indicated the preferred maintenance access route would be the existing bituminous sidewalk located on adjacent Maine Department of Transportation property (via West School). Recreation anticipates that maintenance of the skate park surface can be performed with hand tools (blowers, power washers, and power broom) or light truck

WOODARD &CURRAN

mounted equipment (compressors). DPS anticipates storm drain maintenance on and around the skate park will be infrequently needed and can be performed using hand tools and light weight vehicles (tractors or light weight trucks). Routine maintenance will be performed during dry conditions only. No separate maintenance road was determined to be needed.

3. Revisions to plans: You mentioned you need to change Sheet 2 to be consistent with what was updated regarding the Skate Park. If you have any revisions to the Sheets 1-9 it would be helpful to have them by the end of Tuesday so I can circulate them on Wednesday morning at our regular meeting.

   The enclosed copies of Sheet 2 have been updated to reflect Site Plan Approval of the Skate Park. Additionally, the following sheets and revisions have been enclosed for review:

   Sheet 2 & 4 – Revisions to St. James Street off-street parking including adding 'Do Not Enter' signs; adding 'Reserved Parking' signs; adding 'One Way' lettering and arrow pavement markings; and adjusting parking spaces to meet City Standards.

   Sheet 3 – Revisions to Skate Park drainage to reflect Skate Park Site Plan Approval.

   Sheet 5 – Revisions to Landscaping Plan including adjustments to St. James Street parking lot and labeling of bench and picnic table locations.

   Sheet 6 – Revisions to the fencing layout details for the baseball and softball field including increasing player's bench from 15' to 21' long; providing concrete pad beneath all player benches; revision to field fences; and providing continuous pressure treated wood along base of all backstops.

   Sheet 7 – Revisions to standard details to include pyromat permanent turf reinforcing detail per Skate Park Site Plan Approval.

   Sheet 8 - Revisions to standard details to include traffic sign installation detail.

4. Sidewalk: You mentioned you were looking at the issue of the sidewalk and internal path being parallel and wondered if both were needed. I will be discussing this with reviewers, but bear in mind that usually site plan applicants are requested (per the ordinance) to provide sidewalks along the frontage of their sites and I sense that removal of any sidewalk would not be supported. Regarding the location and number of internal paths, I guess that may relate more to desire lines (e.g. to from ball field viewing areas) and what the public had said they wanted.

   Currently St. James Street has two sections of existing bituminous sidewalk which terminate approximately 450 feet apart and a worn grass pathway connecting these two sections of sidewalk has developed. The site plan proposes to provide 450 linear feet of sidewalk to provide connectivity between the two sidewalk dead ends. Per discussions with the Recreation Department and DPS, the applicant proposes to provide the St. James Street sidewalk in addition to the internal stone dust paths as shown on the plans.

   Per the City of Portland's Sidewalk Materials Policy, St. James Street sidewalk replacement material is specified to be concrete. The applicant is requesting a wavier to construct a bituminous sidewalk along St. James Street, which would match the material of the existing sidewalks on the street.

WOODARD &CURRAN

5. Info to include: The plans should show all of the structures intended including permanent fencing, toilets and other amenities (e.g. benches).

   Enclosed are revised Sheets 4 and 5 identifying the location of all fencing, benches, picnic tables and waste receptacles. A temporary seasonal portable toilet is shown in the St. James Street parking lot on Sheet 4. Permanent restroom facilities will be constructed between the basketball courts and the little league fields as part of Phase 5 of the Dougherty Field Master Plan. Phase 5 is currently not been funded, therefore, permanent restroom facilities are not proposed at this time.

Additional Comments for Dougherty Field Improvements Site Plan Application

Dougherty Field Improvements Site Plan Application was originally submitted in conjunction with the Skate Park Site Plan Application. The applicant was listed as Ethan Owens, City of Portland, for both projects. The Skate Park has received Site Plan Approval. The applicant for the remaining Dougherty Field Improvement project should be changed to:

Troy Moon, City of Portland
55 Portland Street
Portland, Maine 04101
Work #: 207.874.8467
Fax #: 207.874.8816
E-mail: THM@portlandmaine.gov

We look forward to working with you and receiving Site Plan approval for the Dougherty Field Improvement project. Please feel free to call at anytime if you have any questions or comments.

Sincerely,

WOODARD & CURRAN INC.

David Senus, PE
Project Manager

STATE OF MAINE
DAVID A. SENUS
No. 10791
LICENSED PROFESSIONAL ENGINEER

DAS/MDL
203939.65

Enclosures – Dougherty Field Improvements Site Plan Application Drawings, Sheets 2-8
(7 copies full size, 1 copy 11"x17")

cc: Ethan Owens, Sally Deluca, Troy Moon; City of Portland

From: "David Senus" <dsenus@woodardcurran.com>
To: "Jean Fraser" <JF@portlandmaine.gov>
CC: "Barbara Barhydt" <BAB@portlandmaine.gov>, "Ethan Owens" <EOWENS@portlan...
Date: 9/21/2010 6:19 PM
Subject: RE: Dougherty Field Site Plan

Hi Jean:

Per our phone call earlier today, the critical path item was the skate park approval, which has been granted. We thank you & the rest of the review team for the quick turn around of comments and approval.

With regard to the rest of the park improvements, we request the opportunity for Regina and I to meet with DPS & Recreation to review the items listed in your email, to evaluate the costs associated with the improvements against available funding, and to refine our design plans as necessary. I don't foresee significant changes from what has been submitted to date, but we would like the opportunity to revisit the design plans one last time prior to final review. I envision we can get any edits / final plans to you in around 2 or 3 weeks (time to estimate costs, meet, and draft any final edits).

In the meantime, I can answer question #1 regarding disturbance associated with the park improvements:

>New trail system: 36,000 sq ft (trail = 16,000 sq ft; grading = 20,000 sq ft)
>New parking lot: 10,750 sq ft (existing lot = 7,900 sq ft; expansion of 2,850 sq ft)
>New play area at Kiwanis: 1,400 sq ft
>New sidewalk along St. James: 2,000 sq ft
>Skate park footprint: 8,200 sq ft
>Area of regrading around skate park: 50,000 sq ft

Total disturbance for park improvements: 108,350 sq ft* or 2.5 acres

*Ball field work considered revitalization of existing fields - existing softball field & baseball field reoriented to maximize field space; leveling of any low spots in outfields.

Based on this total area of disturbance, I believe this project falls under a Level II Site Plan review. Being over 1 acre of disturbance, we will submit a Stormwater PBR & Notice of Intent to Comply with the Maine Construction General Permit to DEP in advance of work. The current skate park project is much less than 1 acre so this is not a requirement for Hardcore's work.

I will be in touch to let you know what if any changes we anticipate and when we will submit final plans.

Please don't hesitate to call if you have any questions.

Thanks,
Dave Senus

David Senus, PE, Project Manager
Woodard & Curran, Inc.
41 Hutchins Drive
Portland, ME 04102
Phone: (800) 426-4262 x3241
Fax: (207) 774-6635

Woodard & Curran
www.woodardcurran.com
Commitment & Integrity Drive Results

-----Original Message-----
From: Jean Fraser [mailto:JF@portlandmaine.gov]
Sent: Monday, September 20, 2010 2:15 PM
To: David Senus
Subject: Dougherty Fields Site Plan

David,

As you know the Skatepark site plan has been approved.

So I am writing to recap on where things stand regarding the Dougherty Fields Site Plan application which was logged on Sept 3, 2010 and at this stage is being considered a Level II application. There are a few issues:

1. Info needed: At the meeting on 9.8.2010 Barbara asked for the actual figure for the area to be disturbed in order to confirm whether or not this needs to go to the Planning Board. Could you please send us that figure.

2. Maintenance route: DPS are looking for a maintenance route between the site and the street for maintenance of catchbasins and landscape at least. I think the view will be (we are discussing this on Wed AM) that the path between the parking lot and the Skatepark needs to be widened enough to take those vehicles (and maybe needs to be constructed differently too) so it would read as a pedestrian path but be a route for maintenance. Probably needs further discussion- there is already a wide "access" there.

3. Revisions to plans: You mentioned you need to change Sheet 2 to be consistent with what was updated re the Skatepark and if you have any revisions to the Sheets 1-9 it would be helpful to have them (7 copies) by the end of tomorrow so I can circulate (maybe discuss) them on Wed AM at our regular Dev Rev meeting.

4. Sidewalk: You mentioned you were looking at the issue of the sidewalk and internal path being parallel and wondered if both were needed. I will be discussing this with reviewers, but bear in mind that usually site plan applicants are requested (per the ordinance) to provide sidewalks along the frontage of their sites and I sense that removal of any sidewalk would not be supported. Re the location and

number of internal paths, I guess that may relate more to desire lines (eg to from ball field viewing areas) and what the public had said they wanted....

5. Info to include: The plans should show all of the structures intended including permanent fencing, toilets and other amenities (eg benches).

I will get back to you after our meeting on Wednesday to let you know if any other review issues have come up (final comments on the submitted plans are due on Wed).

thank you
Jean

Jean Fraser, Planner
City of Portland
874 8728

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T 800.426.4262
T 207.774.2112
F 207.774.6635

WOODARD &CURRAN

November 9, 2010

Circ by email + hard copy to all reviewers 9-11-10 — 17-11-10

Jean Fraser, Planner
City of Portland Planning Office
389 Congress Street
Portland, ME 04101

Re: Dougherty Field Improvements Level II Site Plan Application Response to Comments

Dear Jean:

Thank you for coordinating Site Plan review of the Dougherty Field Improvements project. Woodard & Curran received comments from the City of Portland Planning Division via email from Jean Fraser to Dave Senus dated October 27, 2010, along with additional comments relayed by way of our attendance at weekly development review meetings. The purpose of this letter is to address these comments, and to provide any additional information necessary to help facilitate the review and approval of the Site Plan application.

Comments in email from Jean Fraser, City of Portland Planning Division; dated October 27, 2010

1. **Comment:** Suggest providing sidewalk connection at south end of St James parking lot, between St. James Street and parking lot sidewalk; apparent desire line.

   Response: *A walkway will be constructed offset from the south end of the St. James Street parking lot with a culvert to pass drainage below the proposed walkway, providing a connection from St. James Street to the park path. See Sheets 2, 3 and 4.*

2. **Comment:** Proposed sidewalk at "missing" section of sidewalk, west edge of St. James Street (approximately 400'); material change from asphalt to concrete.

   Response: *Per the City of Portland's Sidewalk Materials Policy, St. James Street sidewalk material shall be concrete. The applicant and design team initially requested a waiver to provide asphalt sidewalk to match the existing material at each end; however, this waiver request would require City Council approval (per email). The applicant and design team are not opposed to the use of concrete for this sidewalk surface, and therefore have updated the material of this sidewalk to concrete, see Sheets 2, 4 and 7.*

3. **Comment:** STOP sign to be added for movements exiting the parking lot.

   Response: *Stop sign added at exit of parking lot, see Sheet 4.*

4. **Comment:** Truncated domes to be installed on each sidewalk ramp at each driveway to the parking lot.

   Response: *City Standard truncated domes were included on the ADA Pedestrian Ramp detail (Sheet 7). To further clarify the plans, specific call outs were added to Sheet 2.*

Additional review comment relayed to Design Team

- **Comment:** The plans called for a 5' wide sidewalk along the edge of the St. James Street parking lot. Angled-in vehicle parking may overlap this sidewalk by a couple feet, reducing the passable sidewalk area to only 3' in width. Suggest widening sidewalk to 7' to account for vehicle overhang.

  Response: *Plans have been updated to include a 7' wide sidewalk in this area, see Sheets 2 and 4.*

- **Comment:** The plans include two 4' wide stone dust paths connecting the main trail & St. James Street sidewalk to the playground area near Kiwanis Pool. The path connecting the main trail to the playground area is graded at 8%. Recommend reducing slope to 5% and widening both paths to 5'.

  Response: *The design intent of these pathways is to blend in with existing topography to the maximum extent practical while limiting impact to the adjacent, existing trees. We feel that an 8% grade on a non-hardened, internal park path provides an acceptable means of egress to the playground area, especially considering that this is one of two proposed connections to the playground area. Modifying this connection to a 5% grade would impact adjacent, existing trees and would create an unnatural, raised pathway, which goes against the design intent. The design meets the guidelines set forth under the U.S. Architectural and Transportation Barriers Compliance Board's Draft Final Accessibility Guidelines for Outdoor Developed Areas, Section 1017.7.1 – Running Slope. In addition, the second proposed connection from St. James Street provides egress with slopes of less than 5% from the parking lot to the playground.*

  With regard to the concern over pathway width, we feel that the proposed 4' wide path is appropriate for these connections. It differentiates these connections from the interior main pathway, which is designed at 5' wide. The intent is to provide a visible entry path to the playground that blends well with the surrounding landscape and that has a "spur trail" look, as compared with the main pathway.

We look forward to working with you and receiving Site Plan approval for the Dougherty Field Improvement project. Please feel free to call at anytime if you have any questions or comments.

Sincerely,

WOODARD & CURRAN INC.

David Senus, PE
Project Manager

DAS/
203939.65

Enclosures – Dougherty Field Improvements Site Plan Application Drawings, Sheets 2, 3, 4 and 7

cc: Ethan Owens, Sally Deluca, Troy Moon; City of Portland

Development Review Application
PORTLAND, MAINE
Planning and Urban Development Department
Planning Division and Planning Board

PROJECT NAME: *Dougherty Field Improvements*

PROPOSED DEVELOPMENT ADDRESS:

Between Douglass Street and St. James Street

PROJECT DESCRIPTION:

Improvements to Dougherty Field include realignment and rehabilitation of existing baseball and softball fields; parking lot redevelopment; sidewalk installation; landscaping improvements; skate park construction; and playground installation.

CHART/BLOCK/LOT: *066-A-002, 078-B-007, 079-B-001, 080-L-001*

PRELIMINARY PLAN _____
FINAL PLAN *X*

CONTACT INFORMATION:

APPLICANT

Name: *Ethan Owens, City of Portland*
Address: *134 Congress Street*
Portland, Maine
Zip Code: *04101*
Work #: *207.874.8936*
Cell #:
Fax #: *207.756.8279*
Home:
E-mail: *eowens@portlandmaine.gov*

PROPERTY OWNER

Name: *City of Portland*
Address: *389 Congress Street*
Portland, Maine
Zip Code: *04101*
Work #:
Cell #:
Fax #:
Home:
E-mail:

BILLING ADDRESS

Name:
Address:
Zip:
Work #:
Cell #:
Fax #:
Home:
E-mail:

**It should be noted that application fees are not applicable because Dougherty Field is a City of Portland project.*

~As applicable, please include additional contact information on the next page~

AGENT/REPRESENTATIVE

Name: David Senus, Woodard & Curran
Address: 41 Hutchins Drive
Portland, Maine
Zip Code: 04101
Work #: 207.774.2112
Cell #:
Fax #: 207.774.6635
Home:
E-mail: dsenus@woodardcurran.com

ENGINEER

Name: David Senus, Woodard & Curran
Address: 41 Hutchins Drive
Portland, Maine
Zip Code: 04101
Work #: 207.774.2112
Cell #:
Fax #: 207.774.6635
Home:
E-mail: dsenus@woodardcurran.com

LANDSCAPE ARCHITECT

Name: Regina S. Leonard
Address: 29 Bridge Street
Topsham, Maine
Zip Code: 04086
Work #: 207.450.9700
Cell #:
Fax #: 800.606.4306
Home:
E-mail: regina@rsldesign.com

CONSULTANT

Name:
Address:
Zip Code:
Work #:
Cell #:
Fax #:
Home:
E-mail:

SURVEYOR

Name:
Address:
Zip Code:
Work #:
Cell #:
Fax #:
Home:
E-mail:

ATTORNEY

Name:
Address:
Zip Code:
Work #:
Cell #:
Fax #:
Home:
E-mail:

PROJECT DATA

The following information is required where applicable, in order complete the application

Total Site Area	846,064	sq. ft.
Proposed Total Disturbed Area of the Site	578,800*	sq. ft.

*Most of area for realignment of ball fields

(If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland)

IMPERVIOUS SURFACE AREA

Proposed Total Paved Area	12,840	sq. ft.
Existing Total Impervious Area	32,330	sq. ft.
Proposed Total Impervious Area	35,305	sq. ft.
Proposed Impervious Net Change	2,975	sq. ft.

BUILDING AREA

Existing Building Footprint	N/A	sq. ft.
Proposed Building Footprint	N/A	sq. ft.
Proposed Building Footprint Net change	N/A	sq. ft.
Existing Total Building Floor Area	N/A	sq. ft.
Proposed Total Building Floor Area	N/A	sq. ft.
Proposed Building Floor Area Net Change	N/A	sq. ft.
New Building	NO	(yes or no)

ZONING

Existing	ROS
Proposed, if applicable	ROS

LAND USE

Existing	RECREATIONAL
Proposed	RECREATIONAL

RESIDENTIAL, IF APPLICABLE

Proposed Number of Affordable Housing Units	N/A
Proposed Number of Residential Units to be Demolished	N/A
Existing Number of Residential Units	N/A
Proposed Number of Residential Units	N/A
Subdivision, Proposed Number of Lots	N/A

PARKING SPACES

Existing Number of Parking Spaces	Undefined
Proposed Number of Parking Spaces	24
Number of Handicapped Parking Spaces	2
Proposed Total Parking Spaces	24

BICYCLE PARKING SPACES

Existing Number of Bicycle Parking Spaces	0
Proposed Number of Bicycle Parking Spaces	16
Total Bicycle Parking Spaces	16

ESTIMATED COST OF PROJECT

$240,000 (Skate Park Only)
$375,000 (All other improvements)

Please answer the following with a Yes/No response on all that apply to the proposed development

Institutional	NO	Design Review	NO	
Parking Lot	YES	Flood Plain Review	NO	
Manufacturing	NO	Historic Preservation	NO	
Office	NO	Housing Replacement	NO	
Residential	NO	14-403 Street Review	NO	
Retail/Business	NO	Shoreland	NO	
Warehouse	NO	Site Location	NO	
Single Family Dwelling	NO	Stormwater Quality	NO	
2 Family Dwelling	NO	Traffic Movement	NO	
Multi-Family Dwelling	NO	Zoning Variance	NO	(or date)
B-3 Ped Activity Review	NO	Historic Dist./Landmark	NO	
Change of Use	NO	Off Site Parking	NO	

APPLICATION FEES:

Check all reviews that apply. Payment may be made in cash or check to the City of Portland.

Level II Development* ___ Less than 10,000 sq. ft. ($400.00) ___ After-the-fact Review ($1,000.00 plus applicable application fee) **It should be noted that application fees are not applicable because Dougherty Field is a City of Portland project.*	**Plan Amendments** ___ Planning Staff Review ($250) ___ Planning Board Review ($500) **Subdivision** ___ Subdivision ($500) + amount of lots____ ($25/lot) $_____ + (applicable + Major site plan fee)
Level III Development ___ Under 50,000 sq. ft. ($500) ___ 50,000 - 100,000 sq. ft. ($1,000) ___ Parking Lots over 100 spaces ($1,000) ___ 100,000 - 200,000 sq. ft. ($2,000) ___ 200,000 - 300,000 sq. ft. ($3,000) ___ Over 300,000 sq. ft. ($5,000) ___ Parking lots over 100 spaces ($1,000) ___ After-the-fact Review ($1,000 plus applicable application fee)	**Other Reviews** ___ Site Location of Development ($3,000) (except for residential projects which shall be $200 per lot_____) ___ Traffic Movement ($1,000) ___ Stormwater Quality ($250) ___ Section 14-403 Review ($400 + $25/lot) ___ Other_____

LEVEL II AND LEVEL III REVIEW APPLICATION SUBMISSION

Submissions shall include seven (7) packets with folded plans containing the following materials:

1. **Seven (7) full size site plans** that must be **folded.**
2. Seven (7) copies of all written materials as follows, unless otherwise noted:
   a. Application form that is completed and signed.
   b. Cover letter stating the nature of the project.
   c. All Written Submittals (Sec. 14-525 2. (c), including evidence of right, title and interest.
5. A stamped standard boundary survey prepared by a registered land surveyor at a scale not less than one inch to 100 feet.
6. Plans and maps based upon the boundary survey and containing the information found in the attached sample plan checklist.
7. Copy of the checklist completed for the proposal listing the material contained in the submitted application.
8. One (1) set of plans reduced to 11 x 17.

Refer to the application checklist (page 7) for a detailed list of submittal requirements.

Portland's development review process and requirements are outlined in the Land Use Code (Chapter 14), which includes the Subdivision Ordinance (Section 14-491) and the Site Plan Ordinance (Section 14-521). Portland's Land Use Code is on the City's web site: www.portlandmaine.gov Copies of the ordinances may be purchased through the Planning Division.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Planning Authority and Code Enforcement's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for a Site Plan review only. A Performance Guarantee, Inspection Fee, Building Permit Application and associated fees will be required prior to construction.

Signature of Applicant:	**Date:**
	9/3/2010

Please refer to Article V, Site Plan of the City of Portland Land Use Code for detailed information concerning the City's site plan review process, thresholds and standards. Should you have any questions regarding the submittal requirements or any other aspect of the site plan review process, please contact the Planning Division.

City of Portland Planning Division
389 Congress Street
Portland, Maine 04101
(207) 874-8719
www.portlandmaine.gov

Office Hours:
Unless noted, office hours are
Monday thru Friday
8:00 a.m. – 4:30 p.m.

General Submittal Requirements – Level II and Level III Site Plan

Preliminary Plan Phase (if elected by applicant)

Applicant Checklist	Planner Checklist	Number of Copies	Submittal Requirement
✓	☐	7	Completed application form
N/A	☐	1	Application fees
✓	☐	7	Written description of project
✓	☐	7	Evidence of right, title and interest.
✓	☐	7	Copies of required State and/or Federal permits.
✓	☐	7	Written assessment of zoning.
✓	☐	7	Written description of existing and proposed easements or other burdens.
N/A	☐	7	Written requests for waivers from individual site plan and/or technical standards, where applicable.
N/A	☐	7	Traffic analysis (may be preliminary, in nature, during the preliminary plan phase).
✓	☐	7	Written summary of significant natural features located on the site.
✓	☐	7	Written summary of project's consistency with related city master plans.

Final Plan Phase (including items listed above if no preliminary plan review)

Applicant Checklist	Planner Checklist	Number of Copies	Submittal Requirement
✓	☐	1	Evidence of financial and technical capacity.
N/A	☐	1	Evidence of utilities' capacity to serve the development.
N/A	☐	1	Written summary of fire safety (referencing NFPA fire code and Section 3 of the City of Portland Technical Manual).
✓	☐	1	Construction management plan.
N/A	☐	1	Traffic Plan (if development will (1) generate 100 or more PCE or (2) generate 25 or more PCE and is located on an arterial, within 1/2 mile of a high crash location, and/or within ¼ mile of an intersection identified in a previous traffic study as a failing intersection).
✓	☐	1	Stormwater management plan.
✓	☐	1	Written summary of solid waste generation and proposed management of solid waste.
✓	☐	1	Written assessment of conformity with applicable design standards.
N/A	☐	1	Manufacturer's verification that HVAC and manufacturing equipment meets applicable state and federal emissions requirements.

Site Plans and Boundary Survey Requirements – Level II and Level III Site Plan

Applicant Checklist	Planner Checklist	Number of Copies	Submittal Requirement
Preliminary Plan Phase (if elected by applicant)			
✓	☐	7	Boundary Survey meeting the requirements of Section 13 of the City of Portland Technical Manual.
✓	☐	7	**Preliminary Site Plan Including the following:** ***(*information provided may be preliminary in nature during the preliminary plan phase):***
✓	☐		▪ *Existing and proposed structures with distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone).*
✓	☐		▪ *Location of adjacent streets and intersections and approximate location of structures on abutting properties..*
✓	☐		▪ *Proposed site access and circulation.*
✓	☐		▪ *Proposed grading and contours.*
✓	☐		▪ *Location and dimension of existing and proposed paved areas including all parking areas and vehicle, bicycle and pedestrian access ways.*
✓	☐		▪ *Preliminary landscape plan including existing vegetation to be preserved, proposed site landscaping and street trees.*
✓	☐		▪ *Existing and proposed utilities (preliminary layout).*
✓	☐		▪ *Preliminary infrastructure improvements (e.g. - curb and sidewalk improvements, roadway intersection modifications, utility connections, transit infrastructure, roadway improvements).*
✓	☐		▪ *Preliminary stormwater management and erosion control plan.*
N/A	☐		▪ *Existing significant natural features located on the site (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features listed in Section 14-526 (b) 1. of the Land Use Code).*
N/A	☐		▪ *Proposed alterations to and protection measures for significant natural features located on the site (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features listed in Section 14-526 (b)1. of the Land Use Code).*
✓	☐		▪ *Existing and proposed easements or public or private rights of way.*
Final Plan Phase			
✓	☐	7	**Final Site Plan Including the following**
✓	☐		▪ *Existing and proposed structures on the site with distance from property line (including location of proposed piers, docks or wharves if in Shoreland Zone).*
✓	☐		▪ *Location of adjacent streets and intersections and approximate location of structures on abutting properties.*
✓	☐		▪ *Proposed site access and circulation.*
✓	☐		▪ *Proposed grading and contours.*
✓	☐		▪ *Location and dimension of existing and proposed paved areas including all parking areas and vehicle, bicycle and pedestrian access ways. Proposed curb lines must be shown.*
N/A	☐		▪ *Proposed loading and servicing areas, including applicable turning templates for delivery vehicles*

N/A	☐	▪ *Proposed snow storage areas or snow removal plan.*
✓	☐	▪ *Proposed trash and recycling facilities.*
✓	☐	▪ *Landscape plan including existing vegetation to be preserved, proposed site landscaping and street trees.*
✓	☐	▪ *Existing and proposed utilities.*
✓	☐	▪ *Location and details of proposed infrastructure improvements (e.g. - curb and sidewalk improvements, roadway intersection modifications, utility connections, public transit infrastructure, roadway improvements).*
N/A	☐	▪ *Proposed septic system, if not connecting to municipal sewer. (Portland Waste Water Application included in this application)*
N/A	☐	▪ *Proposed finish floor elevation (FFE).*
N/A	☐	▪ *Exterior building elevation(s) (showing all 4 sides).*
✓	☐	▪ *Proposed stormwater management and erosion controls.*
N/A	☐	▪ *Exterior lighting plan, including street lighting improvements..*
✓	☐	▪ *Proposed signage.*
N/A	☐	▪ *Identification of existing significant natural features located on the site (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features listed in Section 14-526 (b)1. of the Land Use Code). Wetlands must be delineated.*
N/A	☐	▪ *Proposed alterations to and protection measures for of existing significant natural features located on the site (including wetlands, ponds, watercourses, floodplains, significant wildlife habitats and fisheries or other important natural features listed in Section 14-526 (b)1. of the Land Use Code).*
✓	☐	▪ *Total area and limits of proposed land disturbance.*
✓	☐	▪ *Soil type and location of test pits and borings.*
N/A	☐	▪ *Details of proposed pier rehabilitation (Shoreland areas only).*
N/A	☐	▪ *Proposed snow storage areas or method of snow removal.*
✓	☐	▪ *Existing and proposed easements or public or private rights of way.*

Written Statement for Dougherty Field Improvements Site Plan Application

City of Portland

Written description of project:
Dougherty Field Improvements includes realignment of existing high school baseball and softball fields; providing new backstop fencing for high school baseball and softball fields; removal of existing outfield fencing from two little league fields and providing removable outfield fencing; removal and redevelopment of existing St. James Street parking lot; providing new bituminous sidewalks throughout park; providing new landscaping; and constructing new concrete skate park.

Evidence of right, title and interest:
See Appendix A for property deeds.

Copies of required state and/or federal permits:
See Appendix B for Stormwater Permit By Rule (to be filed)

Written assessment of zoning:
1. Property is located in ROS Zone (Recreation Open Space)
2. Parcel Acreage: 19.4 Acres
3. Regulations:

§14-157 Space & Bulk Requirements	Required	Provided
(a) Minimum Front Yard	25 Feet	N/A - no proposed buildings
(b) Minimum Rear Yard	25 Feet	N/A – no proposed buildings
(c) Minimum Side Yard	12 Feet	N/A – no proposed buildings
(d) Minimum Lot Size	2 Acres	19.4 Acres
(e) Maximum Building Height	45 Feet	N/A – no proposed buildings
(f) Maximum Coverage of Lot	25%	10%
(g) Maximum Floor Area Ration	0.5	N/A – no proposed buildings

Written description of existing and proposed easements or other burdens:
No proposed easements. Refer to deeds and boundary survey contained in Appendix A for existing easements.

Written requests for waivers from individual site plan and/or technical standards, where applicable:
Not Applicable

Traffic analysis:
Not Applicable – no changes to existing traffic pattern

Written summary of significant natural features located on the site:
Not Applicable – no natural features on site. Existing developed park land.

Written summary of project's consistency with related city master plans:
The proposed Dougherty Field improvements are based on the Dougherty Field Master Plan approved by the City Council. This project implements elements of Phases 1, 2 and 3 of the Master Plan. The proposed improvements breakdown into the following phases of the Master Plan:

Phase 1: Sports field realignment and revitalization, walking path improvements and landscape improvements.
Phase 2: St James Street parking lot redevelopment, new bituminous sidewalk and landscape improvements.
Phase 3: New playground equipment, walking paths and landscape improvements.

The skate park was integrated into the Dougherty Field Master Plan but not included in the construction phasing. A Request for Proposal was issued by the City, and the final design, permitting and construction of the skate park will be completed by Hardcore Shotcrete Skateparks, Inc.

Evidence of financial and technical capacity:
Funding has been allocated by the City of Portland for the proposed Dougherty Field Improvement project. The funding approved for design, permitting and construction of Phase 1 of the Dougherty Field Master Plan is $376,663. The funding approved for design, permitting and construction of Phase 2 and elements of Phase 3 is $109,006. The City Council allocated $75,000 in capital funds for the skate park. These funds, in addition to the money fundraised by the Skate Park Committee, totals $240,000 for the skate park design, permitting and construction.

Woodard & Curran and Regina S. Leonard Landscape Architecture have the technical expertise and capacity to appropriately serve the City of Portland during the Dougherty Field Improvement project design and permitting process. We have attached an overall profile of the firm as well as an overview of our Civil Engineering services in addition to a resume and qualifications for Regina S. Leonard Landscape Architecture, see Appendix C.

Evidence of utilities capacity to serve the development:
Not Applicable – no proposed buildings

Written summary of fire safety:
Not Applicable – no proposed buildings

Construction Management Plan:
Construction for the Dougherty Field Improvements will be completed by three separate crews; Hardcore Shotcrete Skateparks, Inc; City or Portland Construction Company crew; and Contractors selected through the public bid process.

Hardcore Shotcrete Skateparks, Inc anticipates starting and completing construction of the skate park in fall 2010.

City of Portland Construction Company crews anticipate starting and completing realignment of the existing baseball and softball fields, redevelopment of the St James Street parking lot, and installation of new sidewalks and landscaping in the spring and summer of 2011 (portions of work potentially as early as Fall 2010).

Bid documents will be developed for ball fields fencing and playground equipment and will be publicly bid in spring of 2011. The winning contractors are anticipated to start and complete construction in the spring and summer of 2011.

Traffic Plan:
Not Applicable – no changes to existing traffic pattern

Stormwater Management Plan:
See Appendix D for Stormwater Management Plan

Written summary of solid waste generation and proposed management of solid waste:
Construction Debris: During construction, any soils excavated will be reused on site as part of the grading and site improvements around the skate park. Refer to recommendations for soils management contained in the letter from the City of Portland to Maine DEP dated January 9, 2001 and report by Peterson-Rabasca dated January 2, 2001 (Appendix E).

Materials demolished and removed from the site will be recycled to the greatest extent possible. The materials to be recycled include, but are not limited to fencing, concrete and asphalt. Any remaining construction debris will be brought to the Riverside Transfer Station.

Municipal Waste: The proposed improvements to the baseball and softball field will not increase the amount of daily solid waste generated at the site. Any existing waste receptacles removed during construction will be returned upon completion. Two new waste receptacles are proposed on site, one adjacent to the new skate park and one adjacent to the new playground (see Landscape Plan). Maintenance of the proposed waste receptacles will become part of the regular maintenance of Dougherty Field by the City's park crews.

Written assessment of conformity with applicable design standards:
Dougherty Field Improvements have been designed in conformance with the City of Portland's Technical Manual and Land Use Code.

Manufacturer's verification that HVAC and manufacturing equipment meets applicable state and federal emissions requirements:
Not Applicable – no proposed buildings

1. Name of Applicant:	Ethan Owens, Athletics Facility Manager City of Portland	5. Name of Agent: (if applicable)	David Senus, P.E. Project Manager Woodard & Curran
2. Applicant's Mailing Address:	134 Congress Street Portland, Maine 04101	6. Agent's Mailing Address:	41 Hutchins Drive Portland, Maine 04101
3. Applicant's Daytime Phone #:	207.874.8936	7. Agent's Daytime Phone #:	207.774.2112
4. Applicant's Fax #: (if available)	207.756.8279	8. Agent's Fax # and email address:	207.774.6635
9. Location of Project: (Road, Street, Rt.#)	Between Douglass Street and St. James Street	10. Town:	Portland
		11. County:	Cumberland

12. Is this PBR for renewal of an individual stormwater permit? If yes, skip to Block 27 and signature page. ☐ Yes ☑ No

13. Type of Direct Watershed: (Check all that apply)	☐ Lake not most at risk ☐ Lake most at risk ☐ Lake most at risk, severely blooming ☐ River, stream or brook ☐ Urban impaired stream ☐ Freshwater wetland ☑ Coastal wetland ☐ Wellhead of public water supply	14. Amount of Developed Area:	☑ Total # of 3.2 acres OR ☐ Total # of _____ square feet
		15. Amount of Impervious Area:	☑ Total # of 0.07 acres OR ☐ Total # of _____ square feet

16. Creating a common plan of development or sale?	☐ Yes ☑ No	17. Is this activity part of a larger project?	☐ Yes ☑ No
18. Name of waterbody (ies) to which the disturbed area drains, or name of municipality if drains to an MS4:	Back Cove	19. If site drains to an Impaired Waterbody (C), please identify:	N/A
20. Brief Project Description:	Dougherty Field Improvements include realignment of ball fields, installation of new ball field fencing, replacement of existing parking lot, installation of new sidewalks and landscaping, installation of new playground equipment, and construction of new skate park.		
21. Size of Lot or Parcel and UTM locations, if known:	☐ _____ square feet OR ☐ 19.4 acres	UTM Northing, if known: Unknown	UTM Easting, if known: Unknown

22. Deed Reference Numbers:	Book#: 1663	Page#: 425	23. Map and Lot Numbers:	Map #: 066	Lot #: A-002
	1667	157-159		078	B-007
	1659	6		079	B-001
	1573	98		080	L-001
	1813	154			
	1815	84			

24. DEP Staff Previously contacted	N/A		25. Project started prior to application?	☐ Yes ☑ No	If yes, Completed?: ☐ Yes ☐ No
26. Resubmission of Application?	☐ Yes ☑ No	If yes, prior application #: N/A		27. Prior project manager: N/A	
28. Written Notice of Violation?	☐ Yes→ ☑ No	If yes, name of DEP enforcement staff involved: N/A			
29. Detailed Directions to the Project Site: (Attach separate sheet if necessary)	From Southern DEP Office, head southwest on Canco Road. Turn left at Read Street. Turn right at Ocean Ave. Turn left at Forest Ave. Turn right at Dartmouth Street. Turn right at Brighton Ave. Turn left on Douglass Street. Dougherty Field will be on the left.				

30. SUBMISSIONS ▼

☑ This form (signed and dated) ☑ Fee	☐ Dept. of Inland Fisheries and Wildlife Approval (if in Essential Habitat)	☑ Photos of Area ☑ ESC Plan ☑ Location Map ☑ Site Plan	For Renewal of an individual Stormwater permit only: ☐ This form (signed and dated) ☐ Copy of original stormwater permit ☐ Fee

Does the agent have an interest in this project? If yes, what is the interest?	

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

CERTIFICATIONS / SIGNATURES

Applicant's Statement:

I am applying for a Stormwater PBR and have attached the required PBR submissions. I have read the requirements herein and I affirm that my project satisfies the applicable stormwater management standards. I authorize staff of State and Federal agencies having jurisdiction over this activity, to access the project site for the purpose of determining compliance with the rules.

Signed:_____ **Date:**_____

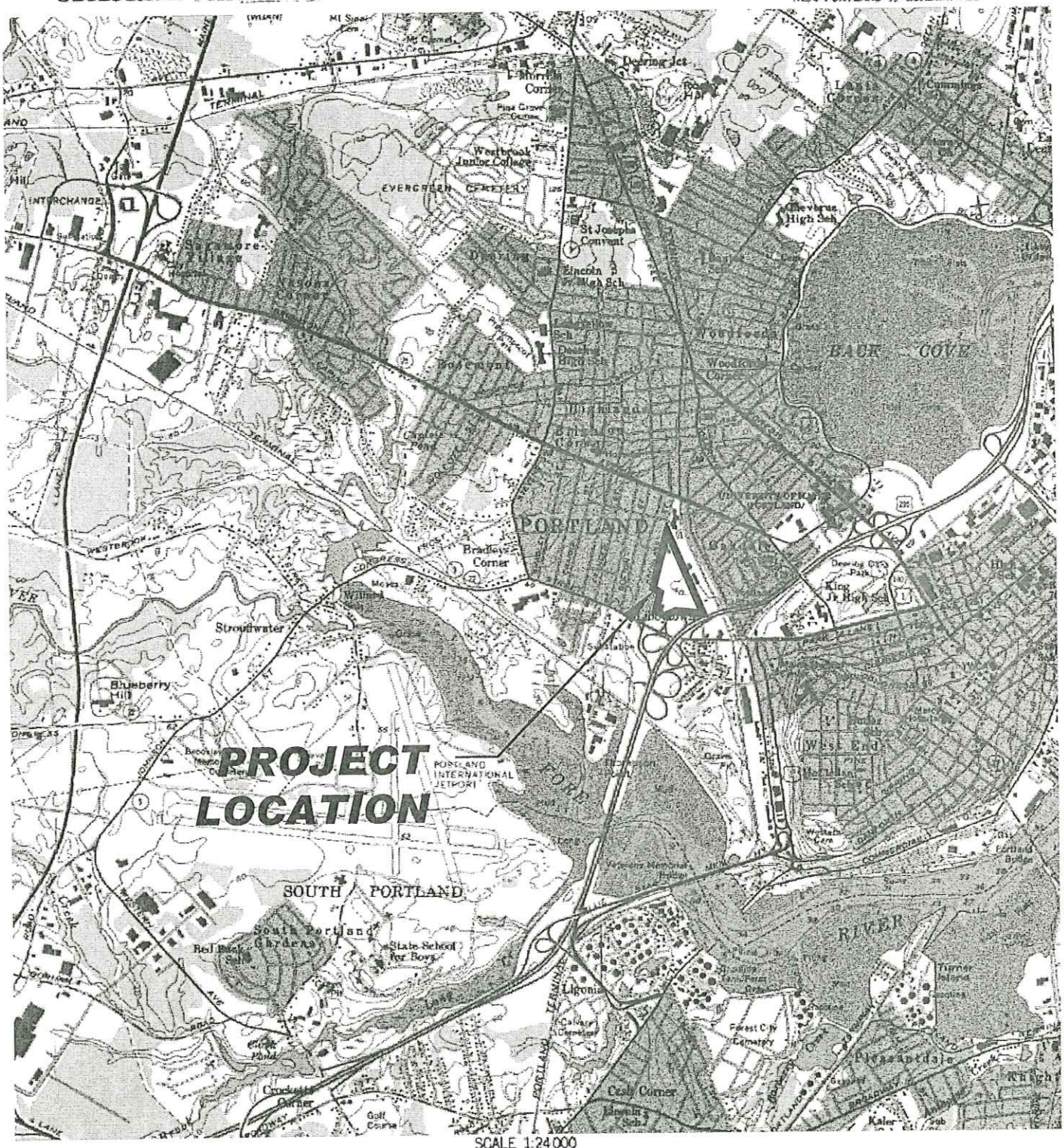
Notice of Intent to Comply with Maine Construction General Permit	With this Stormwater PBR notification form and my signature below, I am filing notice of my intent to carry out work which meets the requirements of the Maine Construction General Permit. I have read and will comply with all of the MCGP standards. In addition, I will file a Notice of Termination (NOT) within 20 days of project completion. If this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign. Signed_____ Date:_____

TO BE SUBMITTED PRIOR TO CONSTRUCTION

1. Location Map

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PORTLAND WEST QUADRANGLE
MAINE -CUMBERLAND CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
NE/4 PORTLAND 15' QUADRANGLE



SCALE 1:24000

1 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 8.5 FEET

WOODARD &CURRAN
41 Hutchins Drive
PORTLAND, ME 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

DOUGHERTY FIELD LOCATION MAP

DESIGNED BY: N/A	CHECKED BY: DAS
DRAWN BY: MDL	Field Location Map.dwg

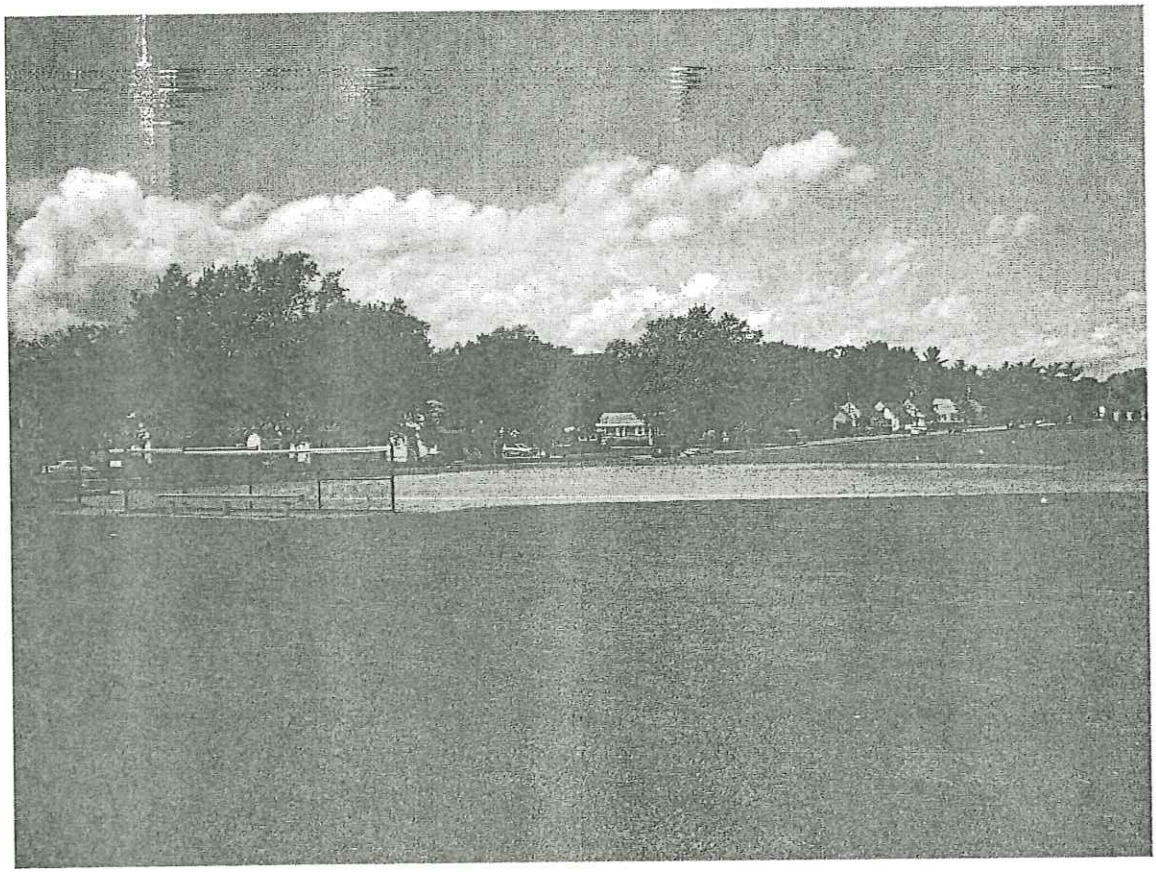
CITY OF PORTLAND
PORTLAND, MAINE

DOUGHERTY FIELD IMPROVEMENTS

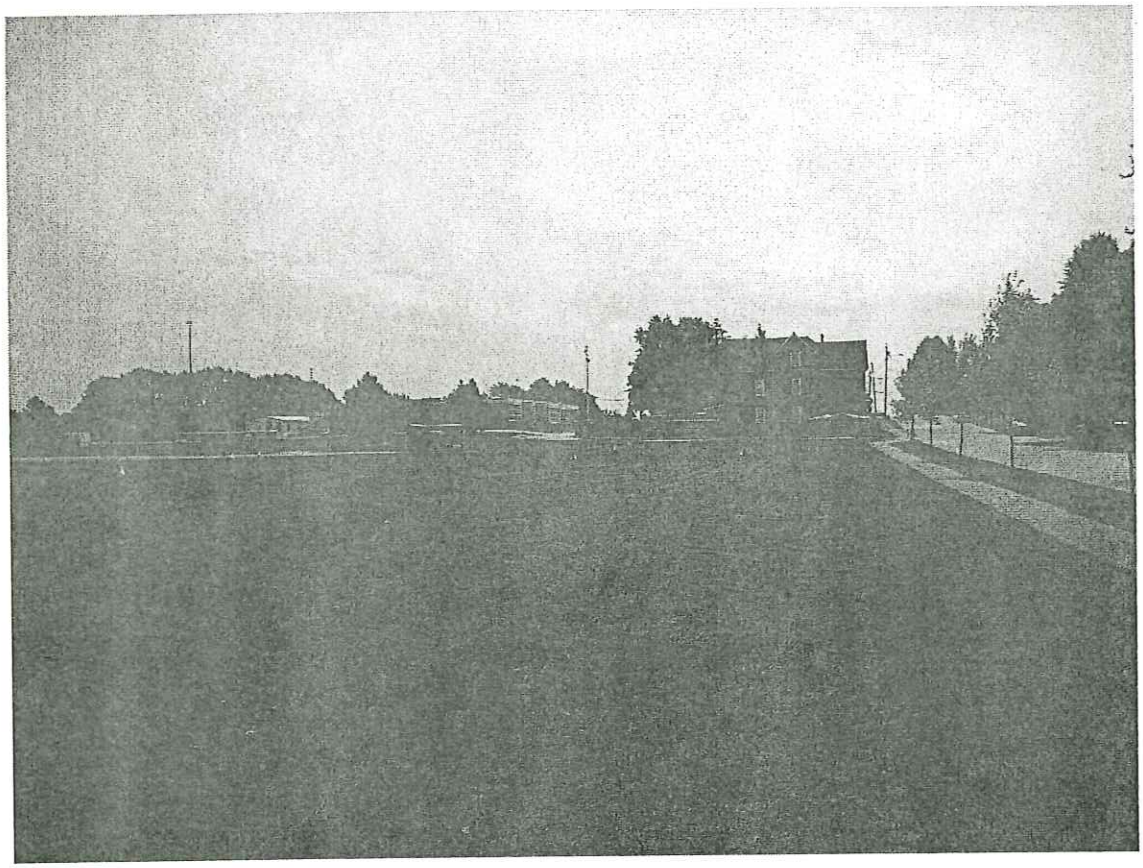
JOB NO:	203939.65
DATE:	SEPT 2010
SCALE:	NOTED

MAP-1

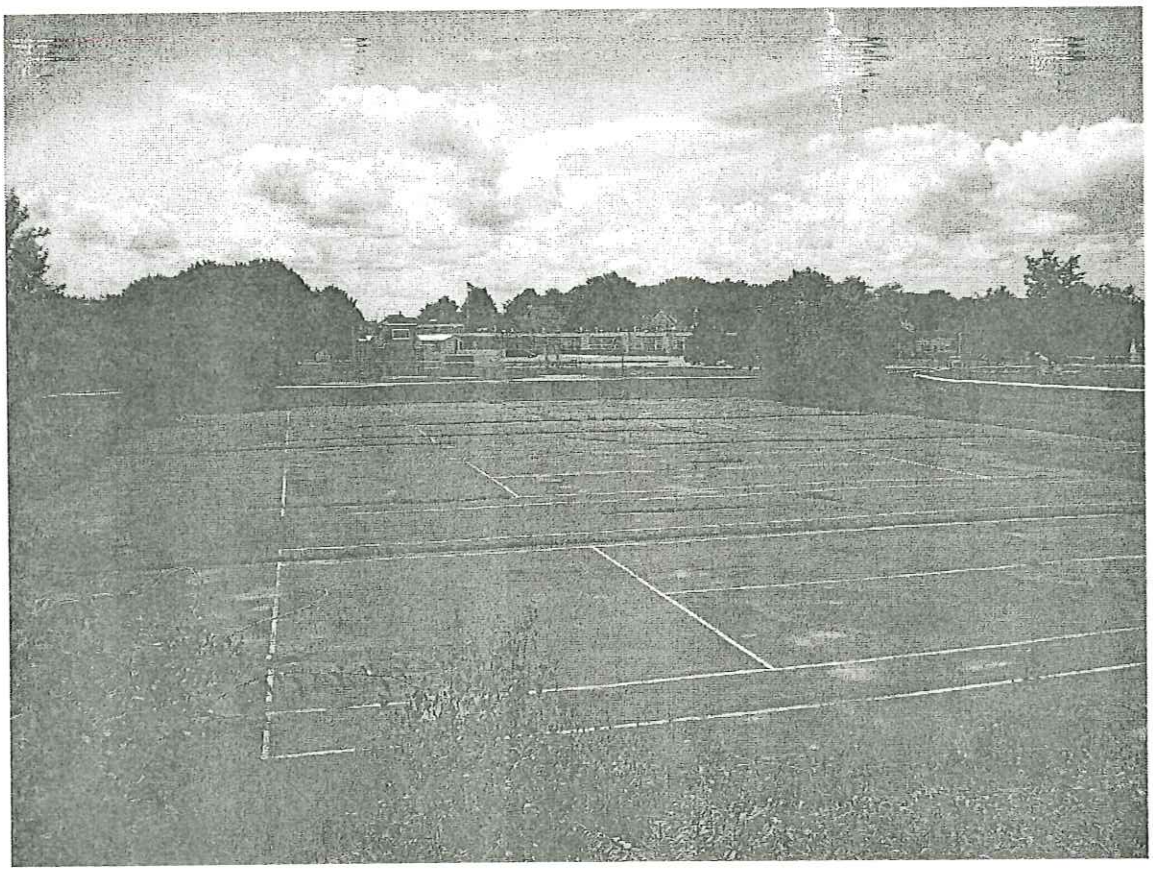
2. Photograpghs



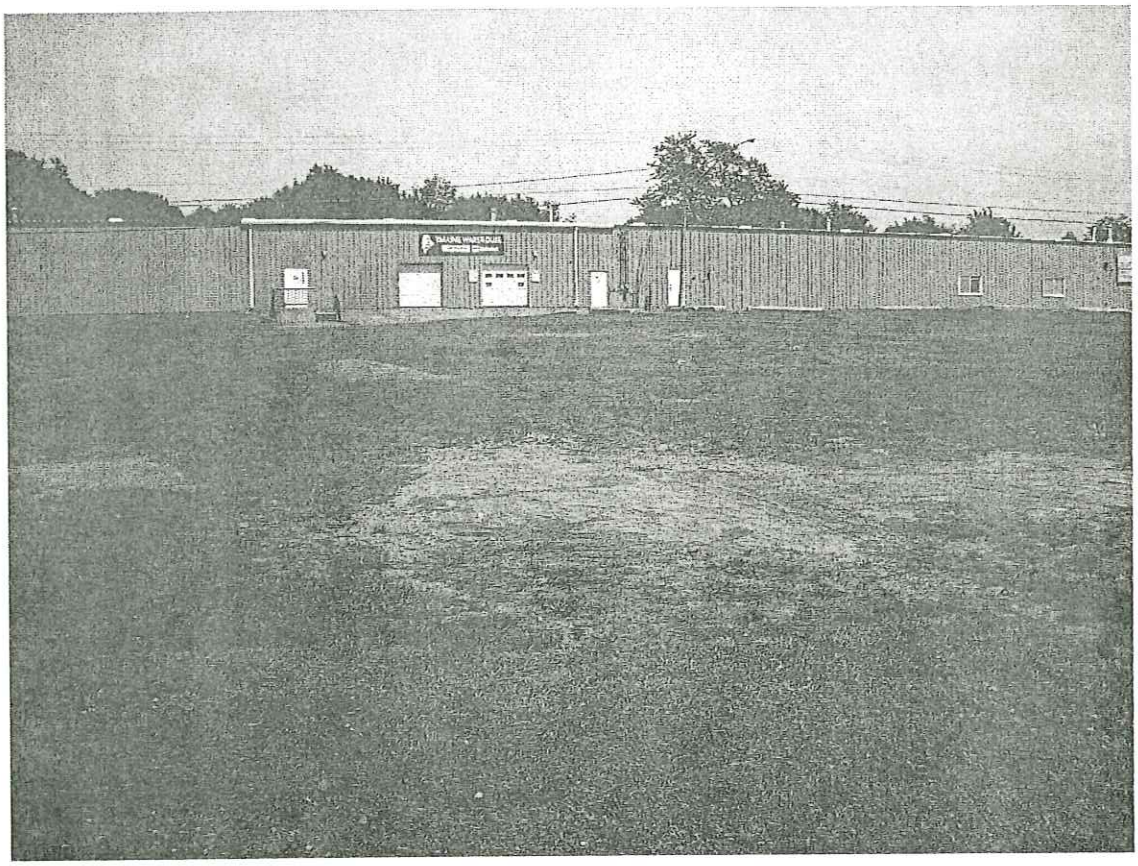
Doughtery Field Photo: Existing ball fields to be realigned



Dougherty Field Photo: Existing ball fields along Douglass Street

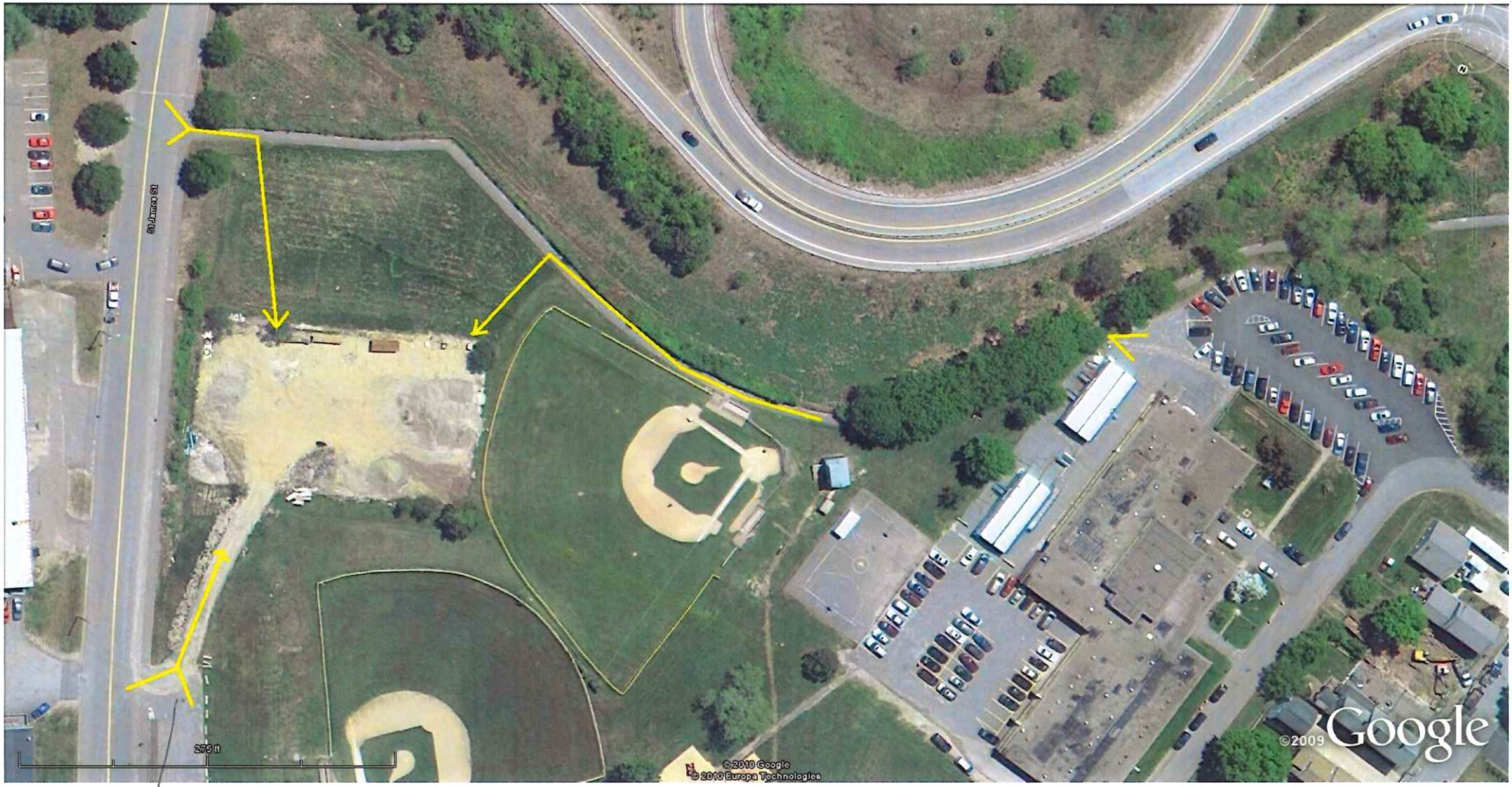


Dougherty Field Photo: Proposed location of skate park

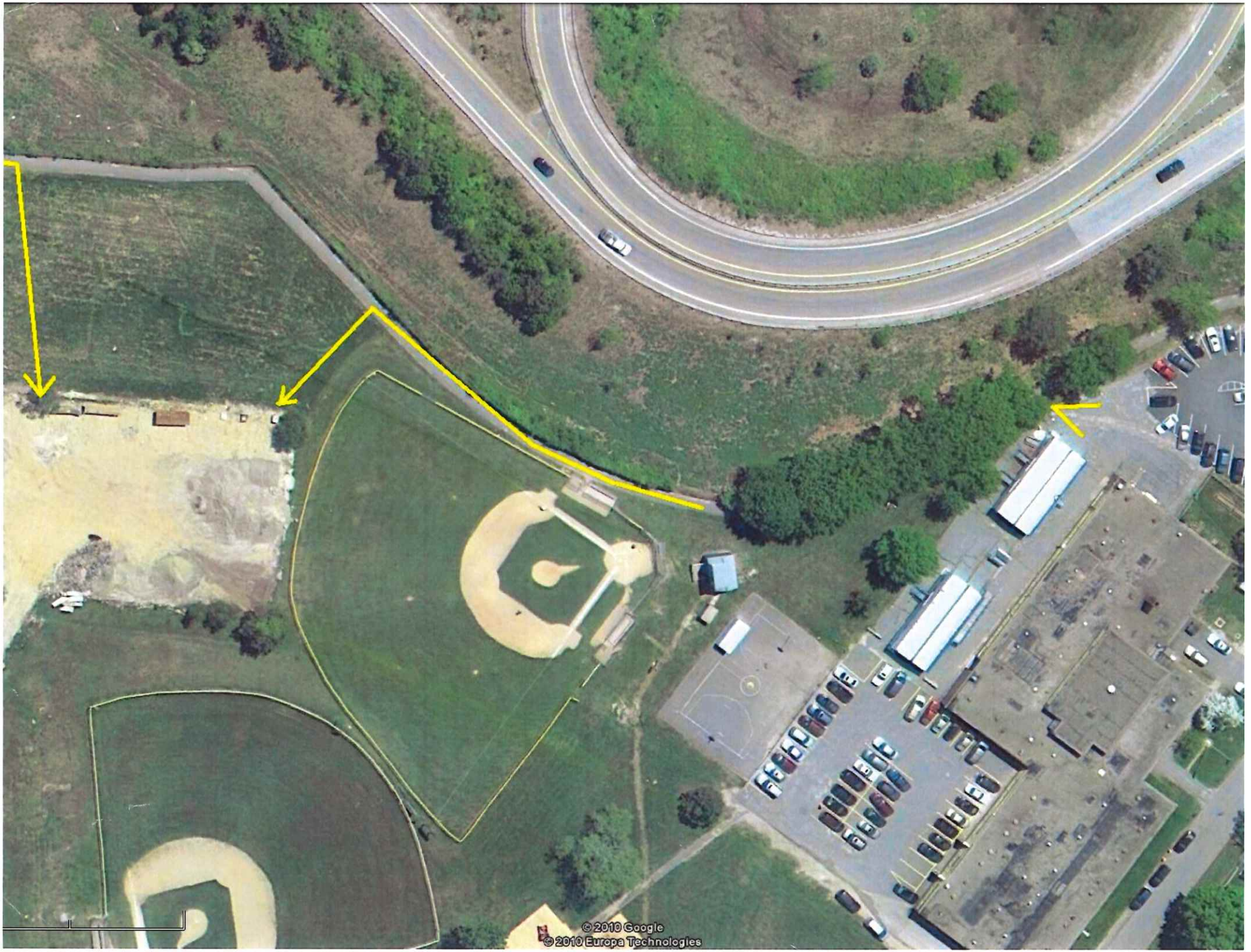


Dougherty Field Photo: St. James Steet parking lot (to the right)

from Ethan re discussion of construction access for current skatepark work and future maintenance



agreed this being used now +
comments on Dougherty field imps will seek the
new path at this location to be wide enough for future maint. access
SF 9.15.10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COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

WOODARD &CURRAN

Date September 3, 2010

Jean Fraser, Planner
City of Portland Planning Office
389 Congress Street
Portland, ME 04101

Re: Dougherty Field Improvements Level II Site Plan Application

Dear Jean:

On behalf of the City of Portland, we submit seven (7) copies of the Level II Site Plan Application for the Dougherty Field Improvements project, with supporting documentation, to be used in Planning Staff review.

These documents were prepared in accordance with Chapter 14, Land Use Code or Ordinances of the City of Portland, Maine and meet the applicable sections of the City of Portland Technical Manual adopted May 11, 2010.

The proposed project involves improvements to Dougherty Field including realignment and revitalization of existing ball fields; new backstop and removable fencing for the ball fields; new stone dust walking paths throughout the park; redevelopment of the St. James Street parking lot; new playground equipment; and landscape improvements. The project also includes the construction of a new skate park in the location of the existing tennis courts by Hardcore Shotcrete Skateparks, Inc. Construction of the skate park by Hardcore is anticipated to begin and be completed in the fall of 2010. Construction of all other improvements is anticipated to begin in the fall or spring and be completed in the spring and summer of 2011.

We look forward to working with your office on this project. Please do not hesitate to contact Woodard & Curran if you have any questions or comments.

Sincerely,

WOODARD & CURRAN INC.

David Senus, PE
Project Manager

STATE OF MAINE
DAVID A. SENUS
No. 10791
LICENSED PROFESSIONAL ENGINEER

DAS/MDL
20393.65

Enclosure(s)

cc: Ethan Owens, Sally Deluca, Troy Moon; City of Portland

RECEIVED
SEP 7 2010
City of Portland
Planning Division

CITY OF PORTLAND, GRANTEE

J. Hopkins Smith

to

City of Portland

1815 - 84

Warranty

Beginning at a stake on the southerly side of a street sixty (60) feet wide defined and agreed upon in partition of the Smith and Brown farm so-called, of which plan and report of Commissioners is recorded in Cumberland County Registry of Deeds in Book 958, Page 83, said street extending westerly from St. James Street to Douglass Street and said stake being at the westerly corner of a lot of land of Portland Gas Company on the southerly side of said street; thence westerly by said street about seven-hundred seven (707) feet to a point within one-hundred six and five-tenths (106.5) feet of Douglass Street and to the northeasterly corner of land St. John Smith and J. B. Brown conveyed to George L. Hodgdon July 6, 1865; thence southerly by said Hodgdon lot and by land, said Smith and Brown conveyed to G. W. Burnham, June 17, 1865, a total distance of about one-hundred and forty-one and five-tenths (141.5) feet; thence easterly by rear of lots fronting on Congress Street as now or formerly shown by an old fence line indicating what was formerly known as the division line between the City of Portland and the City of Deering about seven-hundred twelve (712) feet to a stone monument at the southwesterly corner of a lot of land owned by the Portland Gass Light Company on the southerly side of said street above mentioned, said monument being located by a right angle to said street from the stake at the point of beginning of this description and a distance of about ninety-five (95) feet from said stake; thence northeasterly about ninety-five (95) feet to the point of beginning.

Being lot "L" as shown on said plan and the 6th parcel conveyed by deed of Henry St. John Smith, et als, to J. Hopkins Smith dated September 11, 1916, and recorded in said Registry of Deeds in Book 975, Page 407.

Together with all my right title and interest in and to said street sixty (60) feet wide.

March 27, 1946

J. Hopkins Smith

March 27, 1946

April 8, 1946

CITY OF PORTLAND, GRANTEE

Helen S. Beyer

To

City of Portland

1667-158

Warranty

One-half in common and undivided in the following described real estate situated in said City of Portland, namely:

Lots I and J on a "plan of property in Portland, Maine belonging to the J. B. Brown & Sons Corporation and the Heirs of St. John Smith" incorporated in the Partition Proceedings recorded in the Cumberland County Registry of Deeds in Book 958, at Pages 83 to 99, together with all my rights, title and interest in and to any land covered by proposed streets delineated on said plan and which lie within the boundaries of the lots above named, and which lie between Lots C and K and Lots C and D on said plan.

Also all the right, title and interest of the Grantor in and to the land marked Douglass Street between Congress Street and Brighton Ave, so-called, as delineated on a"plan of property in Portland Maine belonging to the J. B. Brown & Sons Corporation and the Heirs of St. John Smith" said plan being a part of Partition Proceedings recorded in the Cumberland County Registry of Deeds, Book 958, Pages 83 to 99. This conveyance of land marked Douglass Street is made upon the express condition that such land hereby conveyed shall be used only as a public street, as delineated on the aforesaid plan.

Helen S. Beyer
Widow

November 29, 1941

November 29, 1941

January 23, 1942

C I T Y O F P O R T L A N D, G R A N T E E

J. B. Brown & Sons

to

City of Portland

1573 - 98

Warranty

A certain lot or parcel of land situated northerly of Congress Street and easterly of Douglass Street, in said City of Portland, and bounded and described as follows:

Beginning at a point in the northerly side line of a proposed Street running easterly from Douglass Street to the Right of Way of the Portland Gas Light Company as shown on a plan of property of J. B. Brown & Sons and the heirs of St. John Smith, recorded in the Cumberland County Registry of Deeds in Book 958 at Pages 83 to 99, (said northerly side line ~~of~~ intersecting the easterly side line of said Douglass Street two hundred seventy-one and thirty-two hundredths (271.32) feet northerly along said easterly side line from the northerly side line of Congress Street aforesaid), which point is one hundred (100) feet easterly along said northerly side line of said proposed street from the easterly side line of Douglass Street aforesaid; thence running northeasterly parallel with said easterly side line of said Douglass Street seven hundred and six (706) feet, more or less, to the point of intersection with the westerly side line of another proposed street, shown on said plan, which said second proposed street runs from said Douglass Street southerly to the first mentioned proposed street; thence southerly along the said westerly side line of said second proposed street a distance of nine hundred eighty (980) feet, more or less, to the point of intersection with the northerly side line of said first proposed street; thence easterly along said northerly side line of said first proposed street to the point of beginning, being a triangular lot of land shown on said plan and marked "C to J. B. Brown & Sons" on said plan, containing two hundred twenty-two thousand, eight hundred fifty-seven (222,857) square feet, more or less, and being the lot now used by said City of Portland, in part as a dump.

J. B. Brown & Sons
By Harold Lee Berry and
Phillip G. Clifford

February 20, 1939

February 20, 1939

March 15, 1939

CITY OF PORTLAND, GRANTEE

Nancy Smith Saltonstall
(formerly Nancy Smith) of Boston

1667-157

Warranty

To

City of Portland

One-quarter in common and undivided in the following described real estate situated in said City of Portland, namely:

Lots I and J on a "plan of property in Portland, Maine belonging to the J. B. Brown & Sons, Corporation and the Heirs of St. John Smith", incorporated in the Partition Proceedings recorded in the Cumberland County Registry of Deeds in Book 958, at Pages 83 to 99, together with all my right and interest in and to any land covered by proposed streets delineated on said plan and which lie within the boundaries of the lots above named, and which lie between Lots C and K and Lots C and D on said plan.

Reference is made to deed of William Andros Barron, Jr., Trustee to Nancy Smith and Henry St. John Smith, Jr. dated August 31, 1936, recorded in said Registry in Book 1508, Page 83.

Also all the right, title and interest of the Grantor in and to the land marked Douglass Street between Congress Street and Brighton Ave, so-called, as delineated on a "plan of property in Portland Maine belonging to the J. B. Brown & Sons Corporation and the Heirs of St. John Smith" said plan being a part of Partition Proceedings recorded in the Cumberland County Registry of Deeds in Book 958 at Pages 83 to 99. This conveyance of land marked Douglass Street is made upon the express condition that such land hereby conveyed shall be used only as a public street, as delineated on the aforesaid plan.

Nancy Smith Saltonstall

Leverett Saltonstall Jr.

January 5, 1942

January 5, 1942

January 28, 1942

CITY OF PORTLAND, GRANTEE

Constance W. Smith, of Groton, Mass.,
Guardian of Henry St. John Smith, Jr.,
of Cape Elizabeth

1663-425

Guardian's Deed

to

City of Portland

One-quarter in common and undivided in the following described real estate situated in said City of Portland, namely:

Lots I and J on a "plan of property in Portland, Me. belonging to the J. B. Brown & Sons, Corp.and the Heirs of St. John Smith" incorporated in the Partition Proceedings recorded in the Cumberland County Registry of Deeds in Book 958, at Pages 83 to 99, together with all right, title and interest of said Henry St. John Smith, Jr, in and to any land covered by proposed streets delineated on said plan and which lie within the boundaries of the lots above named, and which lie between Lots C and K and Lots C and D on said plan.

Reference is made to deed of William Andros Barron, Jr., Trustee to Nancy Smith and Henry St. John Smith, Jr., dated Aug. 31, 1936, recorded in said Registry in Book 1508, Page 83.

Also all the right, title and interest of said Henry St. John Smith, Jr. in and to the land, marked Douglass St. between Congress St. and Brighton Ave., so-called, as delineated on a "plan of property in Portland, Me. belonging to the J. B. Brown & Sons Corp. and the Heirs of St. John Smith," said plan being a part of Partition Proceedings recorded in the Cumberland County Registry of Deeds in Book 958 at Pages 83 to 99.

This conveyance of land marked Douglass St. is made upon the express condition that such land hereby conveyed shall be used only as a public street, as delineated on the aforesaid plan.

Constance W. Smith,
Guardian.

January 26, 1942
January 26, 1942
January 28, 1942

C I T Y O F P O R T L A N D, G R A N T E E

J. B. Brown & Sons

To

City of Portland

1659-6

Warranty

$ 2,100.00

Lots B. D. and E all being marked "To J.B.Brown & Sons" on a "plan of property in Portland, Maine belonging to the J. B. Brown & Sons and Heirs of St. John Smith" incorporated in Partition Proceedings recorded in Cumberland County Registry of Deeds in Book 958 at Pages 83 to 99, together with all the Grantors right, title and interest in and to any land covered by proposed streets delineated on said plan and which lie within the boundaries of the lots above enumerated, and which lie between lots C and K and lots C and D on said plan.

J. B. Brown & Sons
by Harold Lee Berry, Pres.
Philip G. Clifford, Treas.

November 4, 1941

November 4, 1941

November 7, 1941

CITY OF PORTLAND, GRANTEE

Landon P. Marvin
Executor of the Will of
St. John Smith

1813 - 154

Executors

To

City of Portland

Beginning at a stake on the southerly side of a street sixty (60) feet wide defined and agreed upon in partition of the Smith and Brown farm so-called , of which plan and report of Commissioners is recorded in Cumberland County Registry of Deeds in Book 958, Page 83, said street extending westerly from St. James Street to Douglass Street and said stake being at the westerly corner of a lot of land of Portland Gas Company on the southerly side of said street; thence westerly by said street about seven-hundred seven (707) feet to a point within one-hundred six and five-tenths (106.5) feet of Douglass Street and to the northeasterly corner of land St. John Smith and J. B. Brown conveyed to George L. Hodgdon July 6, 1865; thence southerly by said Hodgdon lot and by land, said Smith and Brown conveyed to G. W. Burnham, June 17, 1865, a total distance of about one-hundred and forty-one and five-tenths (141.5) feet; thence easterly by rear of lots fronting on Congress Street as now or formerly shown by an old fence line indicating what was formerly known as the division line between the City of Portland and the City of Deering about seven-hundred twelve (712) feet to a stone monument at the southwesterly corner of a lot of land owned by the Portland Gas Light Company on the southerly side of said street above mentioned, said monument being located by a right angle to said street from the stake at the point of beginning of this description and a distance of about ninety-five (95) feet from said stake; thence northeasterly about ninety-five (95) feet to the point of beginning.

Being lot "L" as shown on said plan and the 6th parcel conveyed by deed of Henry St. John Smith, et als, to J. Hopkins Smith dated September 11, 1916, and recorded in said Registry of Deeds in Book 975, Page 407.

Together with all my right title and interest in and to said street sixty (60) feet wide.

March 21, 1946

March 21, 1946

April 8, 1946

Langdon P. Marvin
Executor of the Will of
St. John Smith

C I T Y O F P O R T L A N D, G R A N T E E

St. John Smith of New York
and James Hopkins Smith (formerly
known as James Hopkins Smith, Jr)
of Falmouth

1667 - 159

Warranty

To

City of Portland

The following described real estate situated in said Portland, namely:

Lot K on a"plan of property in Portland Maine belonging to the J. B. Brown & Sons Corporation and the Heirs of St. John Smith" incorporated in the Partition Proceedings recorded in the Cumberland County Registry of Deeds in Book 958, at Pages 83 to 99, together with all our right, title and interest in and to any land covered by proposed streets delineated on said plan and which lie within the boundaries of the lot above named, and which lie between Lots C and K and Lots C and D on said plan.

Said Grantors are devisess under the last will and testament of James Hopkins Smith, late of said Falmouth, deceased.

Also all the right title and interest of the Grantors in and to the land marked Douglass Street between Congress Street and Brighton Avenue so-called, as delineated on a"plan of property in Portland, Maine belonging to the J. B. Brown & Sons Corporation and the Heirs of St. John Smith" said plan being a part of Partition Proceedings recorded in the Cumberland County Registry of Deeds in Book 958 at Pages 83 to 99.

This conveyance of land marked Douglass Street is made upon the express condition that such land hereby conveyed shall be used only as a public street, as delineated on the aforesaid plan.

St. John Smith

James Hopkins Smith

November 29, 1941

November 29, 1941

January 28, 1942

Barbara Barhydt - Re: Agenda for Tuesday 9/14 DPS Development Review - Dougherty Field - Bike Racks

From: Bruce Hyman
To: Barbara Barhydt; Katherine Earley; Tom Errico
Date: Tuesday, September 14, 2010 10:35 AM
Subject: Re: Agenda for Tuesday 9/14 DPS Development Review - Dougherty Field - Bike Racks
Attachments: Bike Rack Placement Guidelines_Aug20-10.pdf

I did take a quick look at the Dougherty Field project. The Tech Stds aren't specific enough on several types of bike rack installations and configurations. I've started to work up a graphic that is much more specific (that we'll probably want a 'real' drafter to draw when completed). I've been seeing a bunch of racks installed in the public ROW w/o the correct clearances from the street, walls and from each other when multiple racks are installed.

Now, for Dougherty field, the spacing between the racks is not sufficient to meet good guidelines, but I think the Tech Stds are vague in this respect. Meeting the spacing requirements below would require the concrete pad to be enlarged slightly.

For the types of racks being specified (inverted U-rack) the clearances should be:

- for racks placed side by side, the min. distance should be 2'6"; recommended is 3' (to allow for bikes to be parked next to each other)
- for racks placed end to end, the min. distance on center from the racks should be 6'; 8' recommended (this allows bikes to be parked end to end without getting tangled up in each other) - **the Dougherty plan shown meets the 6' min.**

If both of the concrete pads/slabs specified was 5'x6' instead of 4'x6' and the spacing between racks increased slightly, it would be a better installation.

I've attached my fledgling graphic that illustrates the min. and desired spacings between different types of racks. I should add a detail for the type of installation envisioned at Dougherty.

Bruce

Bruce Hyman, AICP
Bicycle & Pedestrian Program Coordinator

City of Portland
55 Portland Street
Portland, Maine 04101
(207) 874-8833 office
(207) 400-9243 cell

bhyman@portlandmaine.gov
www.portlandmaine.gov
www.healthyportland.org

>>> Katherine Earley 9/14/2010 9:40 AM >>>
Got it - you have far more vital work to do in that time span today I'm sure! ;-))

>>> Bruce Hyman 9/14/2010 9:13 AM >>>
Other than Bayside TDM funds I don't see much that I might add value to or adds value to me.

From: "David Senus" <dsenus@woodardcurran.com>
To: "Jean Fraser" <JF@portlandmaine.gov>
CC: "Barbara Barhydt" <BAB@portlandmaine.gov>, "Ethan Owens" <EOWENS@portlandmaine.gov>, "Troy Moon" <THM@portlandmaine.gov>, "Sally Deluca" <SLD@portlandmaine.gov>
Date: 9/9/2010 4:15 PM
Subject: RE: Dougherty Fields Site plan application

Thanks Jean.

As you mentioned, the Skate Park is and should continue to be under Ethan's name as applicant.

You can identify Troy Moon with DPS as the applicant for the full park improvements submission.

Troy Moon, Environmental Programs Manager
City of Portland DPS
55 Portland Street
Portland, Maine 04101

207-874-8467 (office)
207-874-8816 (fax)

THM@portlandmaine.gov

With regard to review comments, yes, that is me.

Thanks,
Dave

application w/ fee & ltr 9.9.10.

DRAFT
8/20/10

Typical Rack Types

Inverted U rack

Hitching post rack

Wave rack

Post or Inverted U rack when parallel to street.

Street Curb

2' min; 3' desired

6' min. on center; 8' desired when placed end to end

Post or Inverted U rack when parallel to wall.

Wall

2'6" min; 3' desired

6' min. on center; 8' desired when placed end to end

Post or Inverted U rack when perpendicular to curb/wall.

Street Curb or Wall

6' min; 8' desired

2'6" min; 3' desired on center when side-by-side

Wave rack when placed near wall.

Wall

2'6" min; 3' desired

6' min; 8' desired

Wave rack when parallel to wall.

When wave racks placed end-to-end, min. spacing is 24", 36" recommended

8' min.; 10' desired Wave racks side by side

Bicycle Rack Placement Guidelines

Appendix A

Property Deeds

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102-
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

MEMORANDUM

TO: Jean Fraser, Planner
FROM: David Senus, P.E.
DATE: September 3, 2010
RE: Stormwater Analysis for Dougherty Field Improvement Project in Portland, Maine

---

Woodard & Curran has analyzed the stormwater drainage of the Dougherty Field Improvements project, located in Portland, Maine, as part of the Level II Site Plan Application submission to the City of Portland. The following memo summarizes the existing drainage, proposed drainage infrastructure, and the results of our stormwater modeling. A HydroCAD model and Post-development Stormwater Plan of the site is attached.

The property is located between Douglass Street and St. James Street. Approximately 15-acres of the site is currently used as athletic fields with relatively flat slopes. The proposed realignment of the existing softball and baseball fields will not greatly affect the existing grading and drainage patterns, therefore these areas were not included in the stormwater analysis.

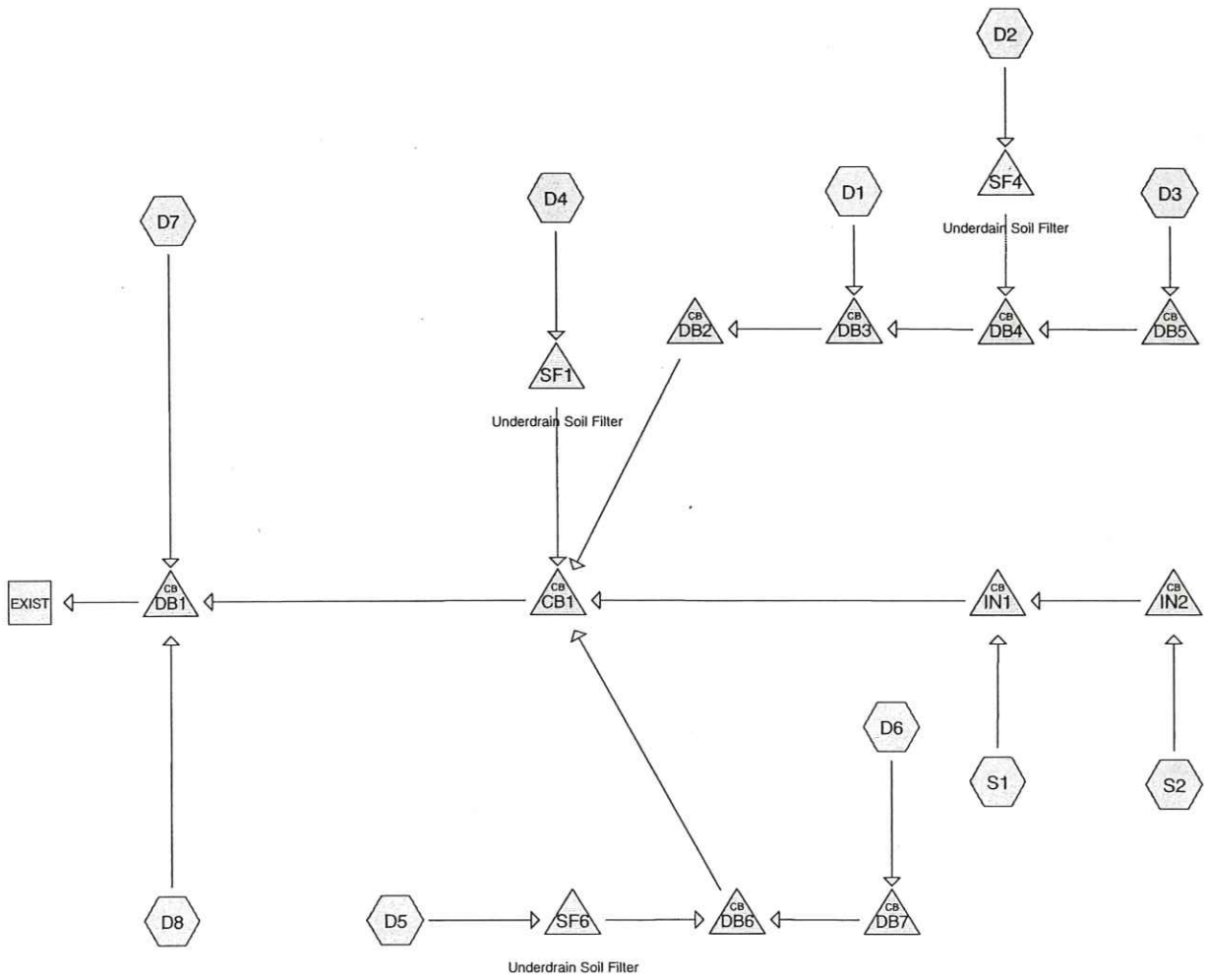
Overall, the project proposes a net increase in impervious area of approximately 3,000 sq ft. This considers the proposed trail network (stone dust & paved), skate park and expanded parking lot area, offset by the removal of the tennis court area. This small overall increase in impervious area spread across the 15 acre park site does not present a concern for a significant increase in runoff as a result of the project. We prepared a post development stormwater model to evaluate the flow that will enter the Edwards Street Sewer Interceptor, and not as a means of comparing pre and post conditions, an exercise which would require a broader and more detailed stormwater model which we felt to be unnecessary given the minor overall change to impervious area across the park.

The stormwater analysis focused on the area surrounding and including the new concrete skate park and redeveloped parking lot along St. James Street. The existing drainage infrastructure in this area consists of two 12-inch culverts, which discharge onto the adjacent Maine Department of Transportation (MDOT) property, and a field inlet, which connects to the Edwards Street Combined Sewer Interceptor.

The proposed drainage infrastructure includes seven area drains and one catch basin located at low spots surrounding the skate park. The area drains and catch basin are interconnected with 10-inch diameter SDR-35 pipe, the City of Portland's standard minimum pipe size for stormwater infrastructure. The proposed drainage infrastructure will tie into an existing buried manhole located along the property line between Dougherty Field and the MDOT property. The existing manhole is part of the Edwards Street Interceptor, which flows into the Old Almshouse Sewer. During high flow events, the overflow in the Edwards Street Interceptor and Old Almshouse Sewer discharges into Back Cove by way of the Preble Street Outfall (CSO 017). Initial discussions with John Emerson, City of Portland Wastewater Facilities Coordinator, indicated that the Edwards Street sewer interceptor had capacity to accept the project's drainage.

The proposed drainage improvements also include three small underdrain soil filters surrounding drain basins DB4, DB6 and catch basin CB1. These proposed soil filters will provide stormwater quality treatment and detain small volumes of runoff during storm events.

The site can be divided into eight subcatchment areas surrounding the skate park, each draining to a proposed drainage structure, and two small subcatchment areas within the skate park. The percentage of impervious surface area in each subcatchment ranges from 2.31% to 38.82%, excluding the two subcatchments within the skate park, which are 100% impervious. Impervious surfaces within the



Subcat Reach Pond Link

Drainage Diagram for 2010.08.31 Dougherty Field
Prepared by Woodard & Curran, Printed 9/2/2010
HydroCAD® 8.50 s/n 001204 © 2007 HydroCAD Software Solutions LLC

Soil Listing (all nodes)

Area (acres)	Soil Goup	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.297	HSG C	D1, D2, D3, D4, D5, D6, D7, D8
0.000	HSG D	
0.478	Other	D1, D2, D3, D4, D5, D6, D7, D8, S1, S2
2.775		**TOTAL AREA**

Pond DB5: Peak Elev=27.27' Inflow=0.16 cfs 0.012 af
10.0" x 65.0' Culvert Outflow=0.16 cfs 0.012 af

Pond DB6: Peak Elev=28.64' Inflow=0.92 cfs 0.062 af
10.0" x 114.0' Culvert Outflow=0.92 cfs 0.062 af

Pond DB7: Peak Elev=28.60' Inflow=0.37 cfs 0.025 af
10.0" x 42.0' Culvert Outflow=0.37 cfs 0.025 af

Pond IN1: Peak Elev=27.15' Inflow=0.05 cfs 0.003 af
6.0" x 100.0' Culvert Outflow=0.05 cfs 0.003 af

Pond IN2: Peak Elev=30.09' Inflow=0.02 cfs 0.001 af
6.0" x 65.0' Culvert Outflow=0.02 cfs 0.001 af

Pond SF1: Underdrain Soil Filter Peak Elev=30.02' Storage=161 cf Inflow=0.21 cfs 0.014 af
Primary=0.01 cfs 0.008 af Secondary=0.03 cfs 0.000 af Outflow=0.04 cfs 0.008 af

Pond SF4: Underdain Soil Filter Peak Elev=30.06' Storage=221 cf Inflow=0.43 cfs 0.037 af
Primary=0.03 cfs 0.019 af Secondary=0.29 cfs 0.008 af Outflow=0.33 cfs 0.027 af

Pond SF6: Underdrain Soil Filter Peak Elev=30.59' Storage=599 cf Inflow=0.78 cfs 0.047 af
Primary=0.03 cfs 0.016 af Secondary=0.54 cfs 0.021 af Outflow=0.56 cfs 0.037 af

Total Runoff Area = 2.775 ac Runoff Volume = 0.245 af Average Runoff Depth = 1.06"
82.77% Pervious = 2.297 ac 17.23% Impervious = 0.478 ac

Summary for Subcatchment D2:

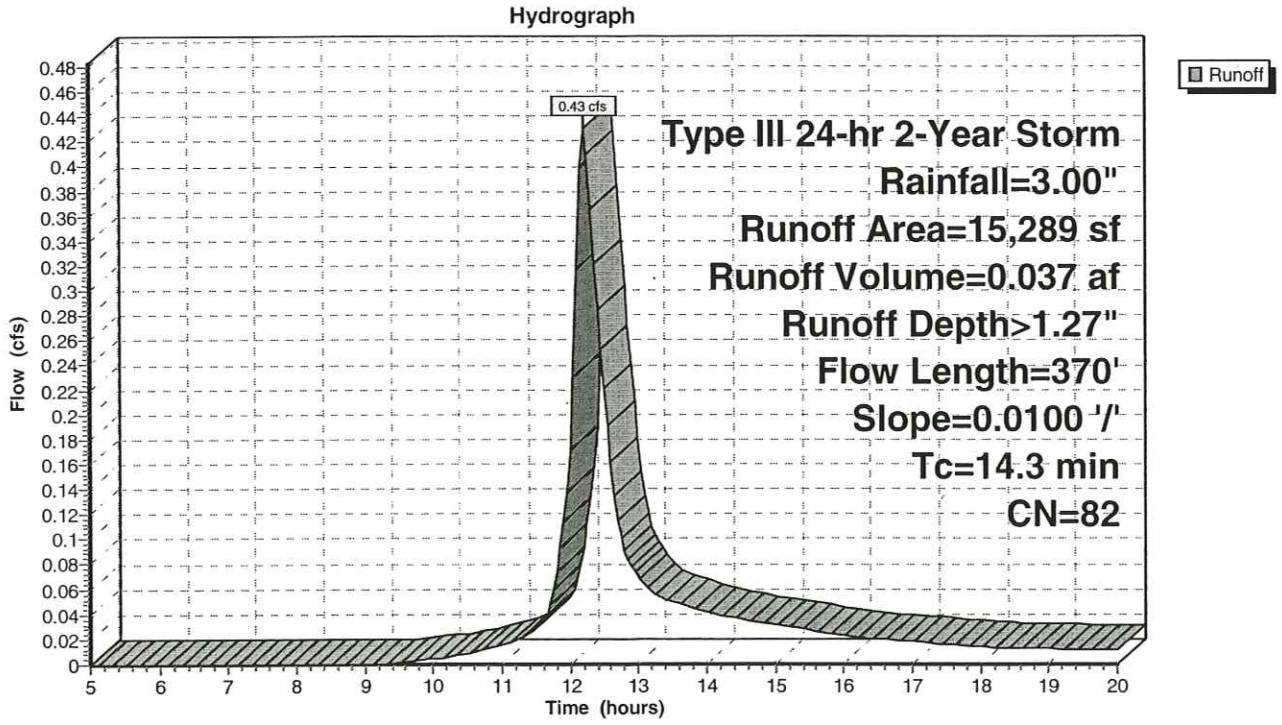
Runoff = 0.43 cfs @ 12.21 hrs, Volume= 0.037 af, Depth> 1.27"

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 Rainfall=3.00"

Area (sf)	CN	Description
9,894	74	>75% Grass cover, Good, HSG C
5,395	98	Paved parking & roofs
15,289	82	Weighted Average
9,894		Pervious Area
5,395		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	40	0.0100	0.10		**Sheet Flow, A to B** Grass: Short n= 0.150 P2= 3.00"
7.9	330	0.0100	0.70		**Shallow Concentrated Flow, B to C** Short Grass Pasture Kv= 7.0 fps
14.3	370	Total			

Subcatchment D2:



Summary for Subcatchment D4:

[49] Hint: Tc<2dt may require smaller dt

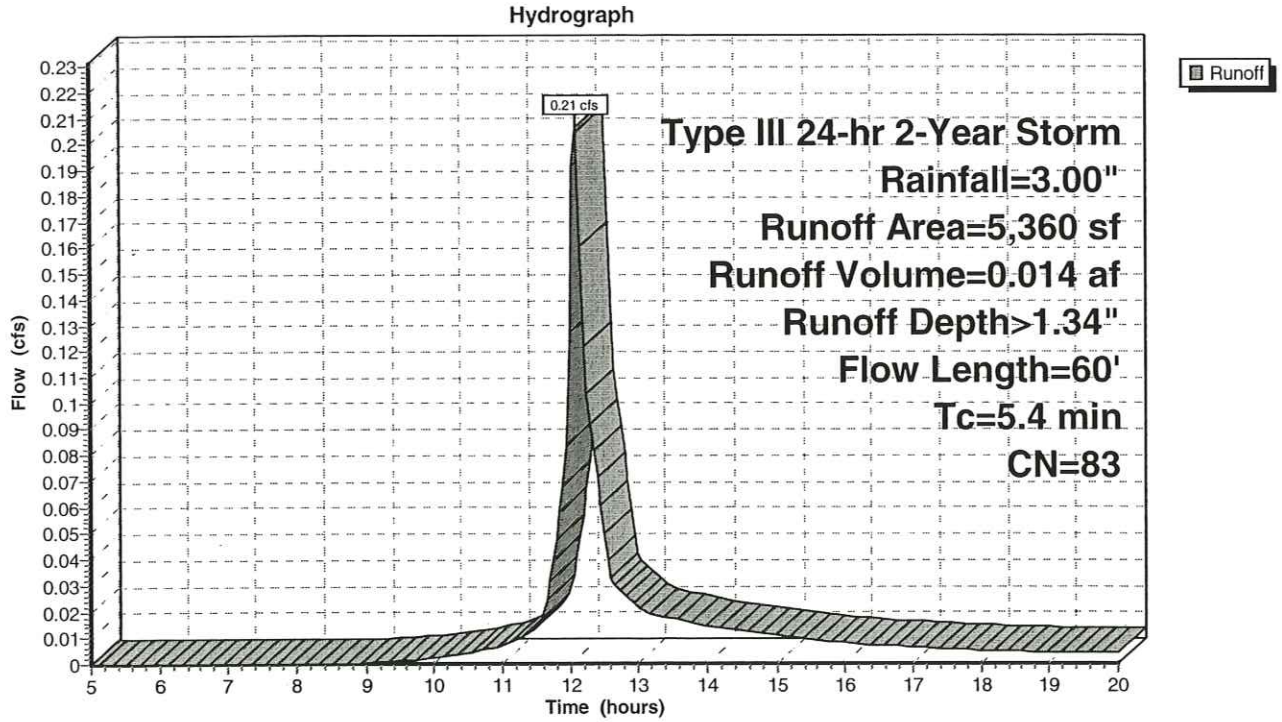
Runoff = 0.21 cfs @ 12.09 hrs, Volume= 0.014 af, Depth> 1.34"

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 Rainfall=3.00"

Area (sf)	CN	Description
3,279	74	>75% Grass cover, Good, HSG C
2,081	98	Paved parking & roofs
5,360	83	Weighted Average
3,279		Pervious Area
2,081		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	33	0.0450	0.18		**Sheet Flow, A to B** Grass: Short n= 0.150 P2= 3.00"
2.4	27	0.0550	0.19		**Sheet Flow, B to C** Grass: Short n= 0.150 P2= 3.00"
5.4	60	Total			

Subcatchment D4:



Summary for Subcatchment D6:

[49] Hint: Tc<2dt may require smaller dt

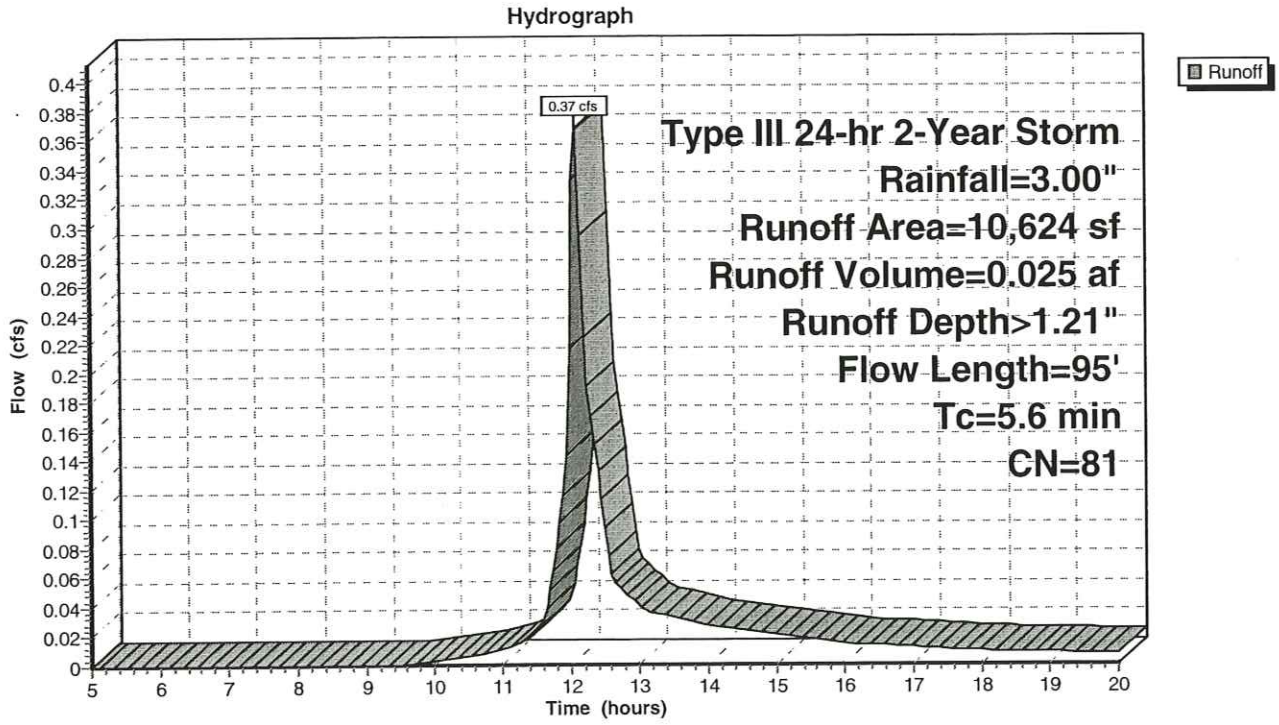
Runoff = 0.37 cfs @ 12.09 hrs, Volume= 0.025 af, Depth> 1.21"

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 Rainfall=3.00"

Area (sf)	CN	Description
7,320	74	>75% Grass cover, Good, HSG C
3,304	98	Paved parking & roofs
10,624	81	Weighted Average
7,320		Pervious Area
3,304		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	45	0.0200	1.14		**Sheet Flow, A to B** Smooth surfaces n= 0.011 P2= 3.00"
4.9	50	0.0300	0.17		**Sheet Flow, B to C** Grass: Short n= 0.150 P2= 3.00"
5.6	95	Total			

Subcatchment D6:



Summary for Subcatchment D8:

Runoff = 0.24 cfs @ 12.20 hrs, Volume= 0.021 af, Depth> 0.87"

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 Rainfall=3.00"

Area (sf)	CN	Description
12,240	74	>75% Grass cover, Good, HSG C
490	98	Paved parking & roofs
12,730	75	Weighted Average
12,240		Pervious Area
490		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	50	0.0100	0.11		**Sheet Flow, A to B** Grass: Short n= 0.150 P2= 3.00"
3.3	50	0.0800	0.25		**Sheet Flow, B to C** Grass: Short n= 0.150 P2= 3.00"
1.2	100	0.0400	1.40		**Shallow Concentrated Flow, C to D** Short Grass Pasture Kv= 7.0 fps
0.2	50	0.0050	3.36	1.83	**Circular Channel (pipe), D to E** Diam= 10.0" Area= 0.5 sf Perim= 2.6' r= 0.21' n= 0.011 Concrete pipe, straight & clean
0.8	40	0.0147	0.85		**Shallow Concentrated Flow, E to F** Short Grass Pasture Kv= 7.0 fps
13.2	290	Total			

Summary for Subcatchment S1:

[49] Hint: Tc<2dt may require smaller dt

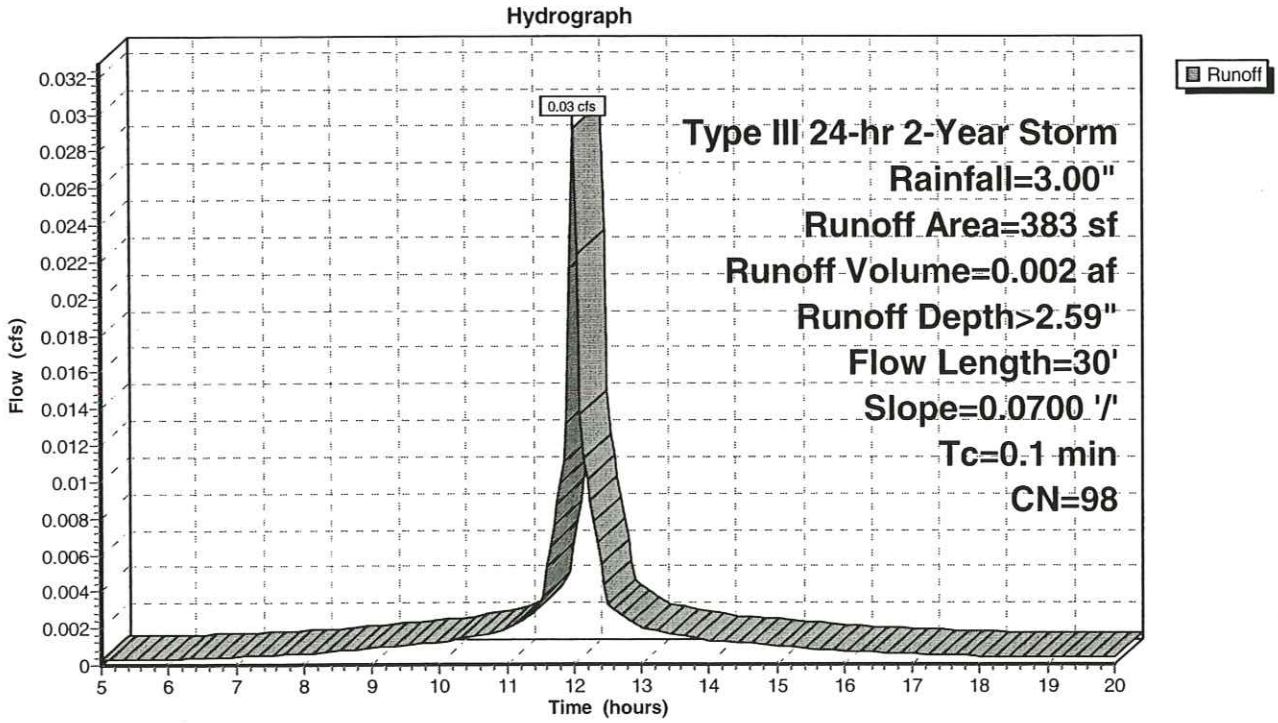
Runoff = 0.03 cfs @ 12.00 hrs, Volume= 0.002 af, Depth> 2.59"

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 Rainfall=3.00"

Area (sf)	CN	Description
383	98	Paved parking & roofs
383		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	30	0.0700	5.37		**Shallow Concentrated Flow, A to B** Paved Kv= 20.3 fps

Subcatchment S1:



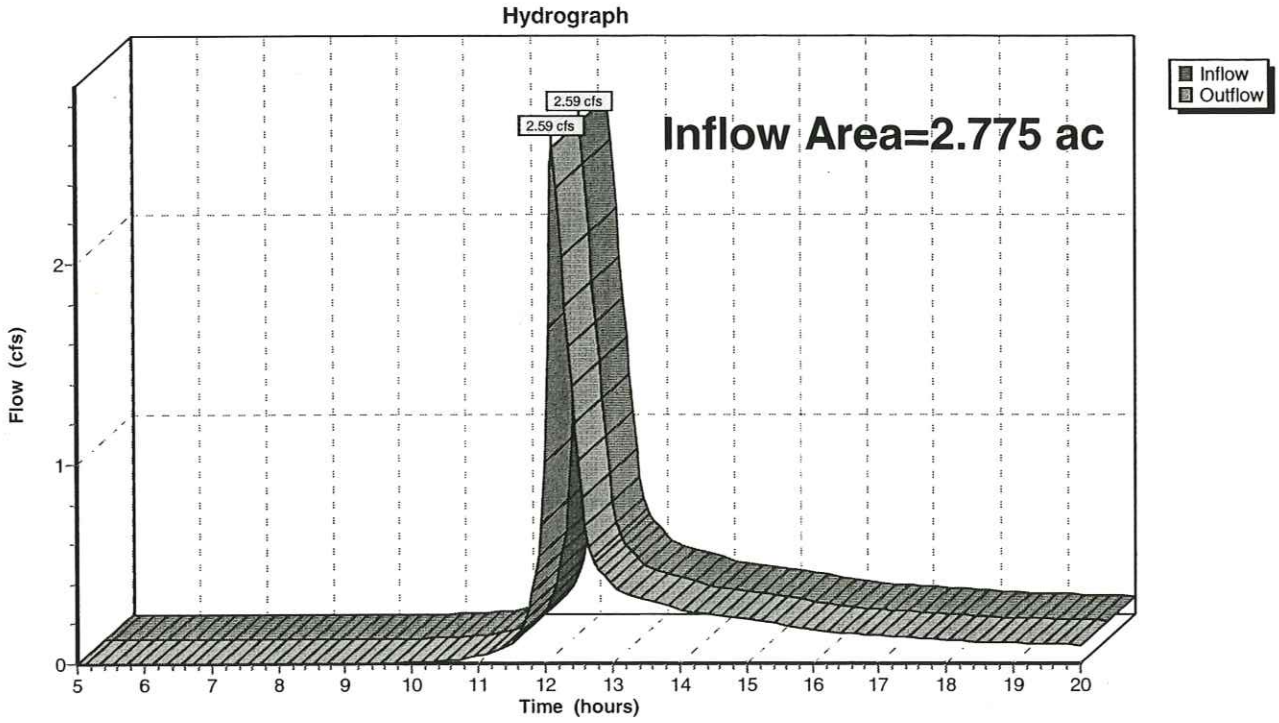
Summary for Reach EXIST:

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.775 ac, 17.23% Impervious, Inflow Depth > 0.95" for 2-Year Storm event
Inflow = 2.59 cfs @ 12.12 hrs, Volume= 0.220 af
Outflow = 2.59 cfs @ 12.12 hrs, Volume= 0.220 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach EXIST:



Summary for Pond DB1:

[57] Hint: Peaked at 22.11' (Flood elevation advised)
[79] Warning: Submerged Pond CB1 Primary device # 1 OUTLET by 1.76'

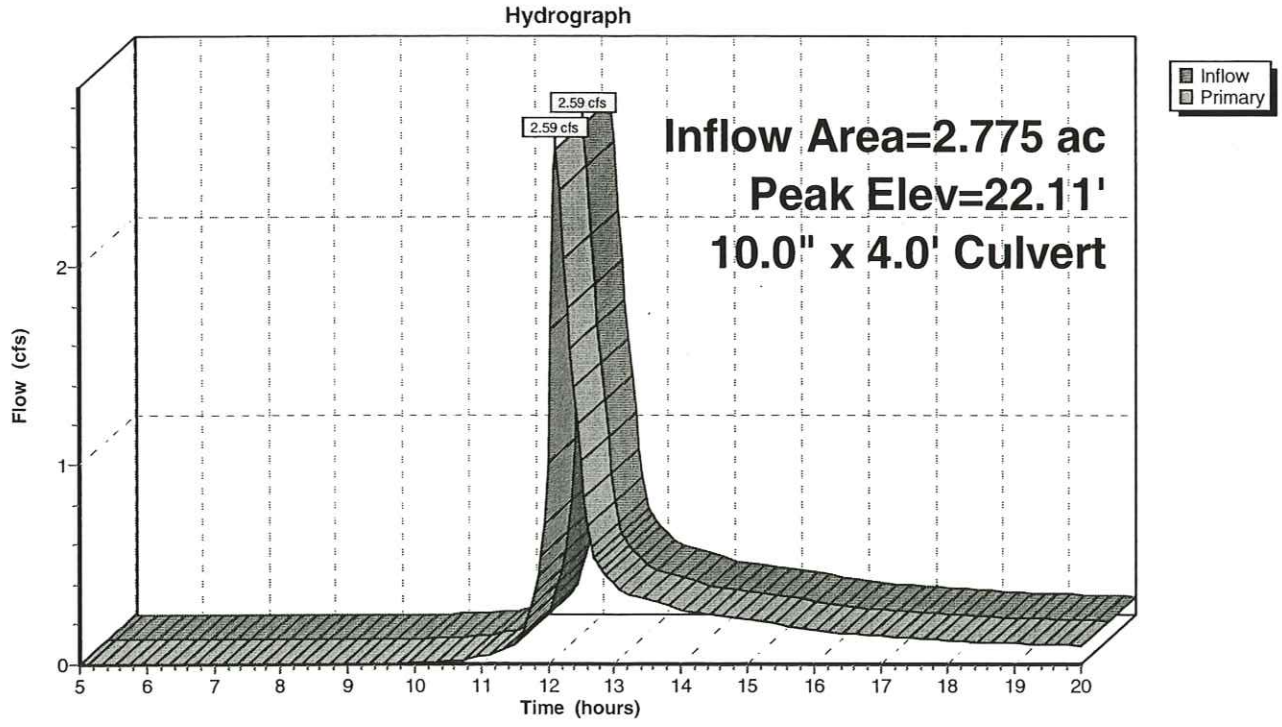
Inflow Area =	2.775 ac, 17.23% Impervious, Inflow Depth >	0.95"	for 2-Year Storm event	
Inflow =	2.59 cfs @	12.12 hrs, Volume=	0.220 af	
Outflow =	2.59 cfs @	12.12 hrs, Volume=	0.220 af, Atten= 0%, Lag= 0.0 min	
Primary =	2.59 cfs @	12.12 hrs, Volume=	0.220 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 22.11' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	20.16'	**10.0" x 4.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 20.12' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=2.49 cfs @ 12.12 hrs HW=22.01' (Free Discharge)
1=Culvert (Inlet Controls 2.49 cfs @ 4.56 fps)

Pond DB1:



Summary for Pond DB3:

[81] Warning: Exceeded Pond DB4 by 0.09' @ 12.15 hrs

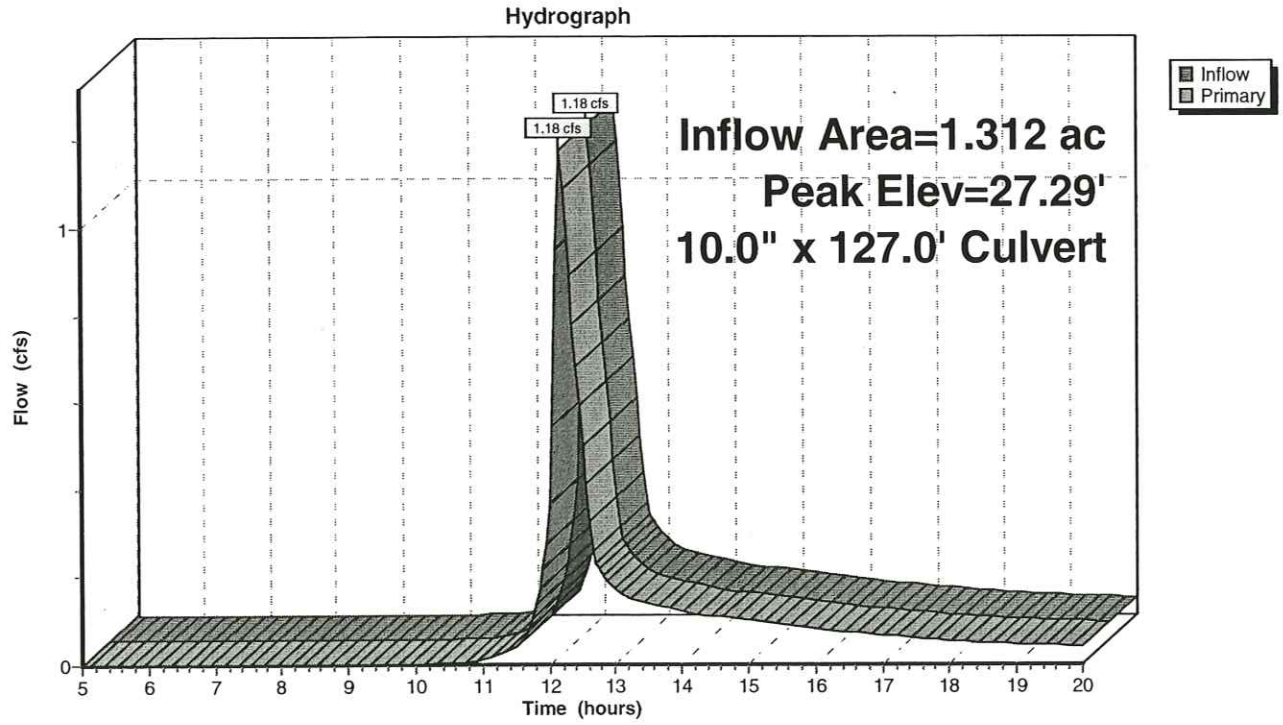
Inflow Area =	1.312 ac,	12.09% Impervious,	Inflow Depth >	0.90" for 2-Year Storm event
Inflow =	1.18 cfs @	12.17 hrs, Volume=	0.098 af	
Outflow =	1.18 cfs @	12.17 hrs, Volume=	0.098 af,	Atten= 0%, Lag= 0.0 min
Primary =	1.18 cfs @	12.17 hrs, Volume=	0.098 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 27.29' @ 12.17 hrs
Flood Elev= 29.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.51'	**10.0" x 127.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 26.15' S= 0.0028 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=1.15 cfs @ 12.17 hrs HW=27.28' (Free Discharge)
↑**1=Culvert** (Barrel Controls 1.15 cfs @ 2.87 fps)

Pond DB3:



Summary for Pond DB5:

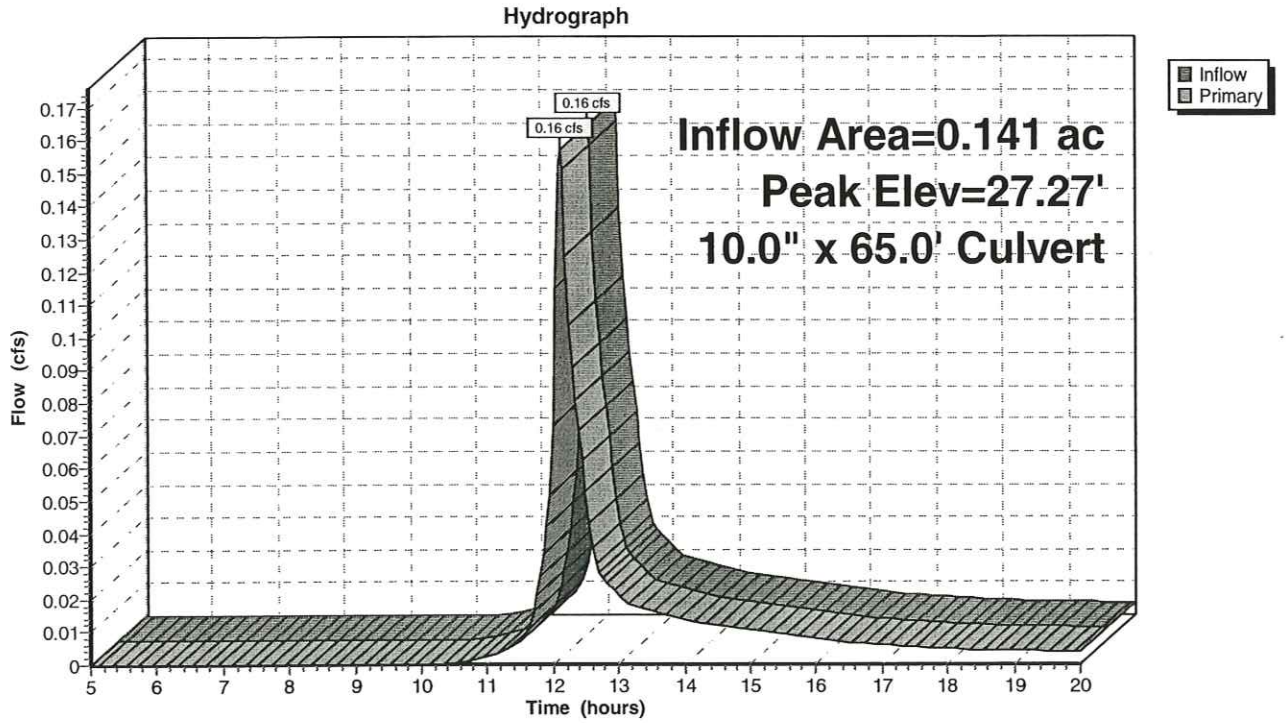
Inflow Area = 0.141 ac, 11.23% Impervious, Inflow Depth > 0.98" for 2-Year Storm event
Inflow = 0.16 cfs @ 12.12 hrs, Volume= 0.012 af
Outflow = 0.16 cfs @ 12.12 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min
Primary = 0.16 cfs @ 12.12 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 27.27' @ 12.12 hrs
Flood Elev= 29.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	27.02'	**10.0" x 65.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 26.84' S= 0.0028 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=0.15 cfs @ 12.12 hrs HW=27.27' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.15 cfs @ 1.68 fps)

Pond DB5:



Summary for Pond DB7:

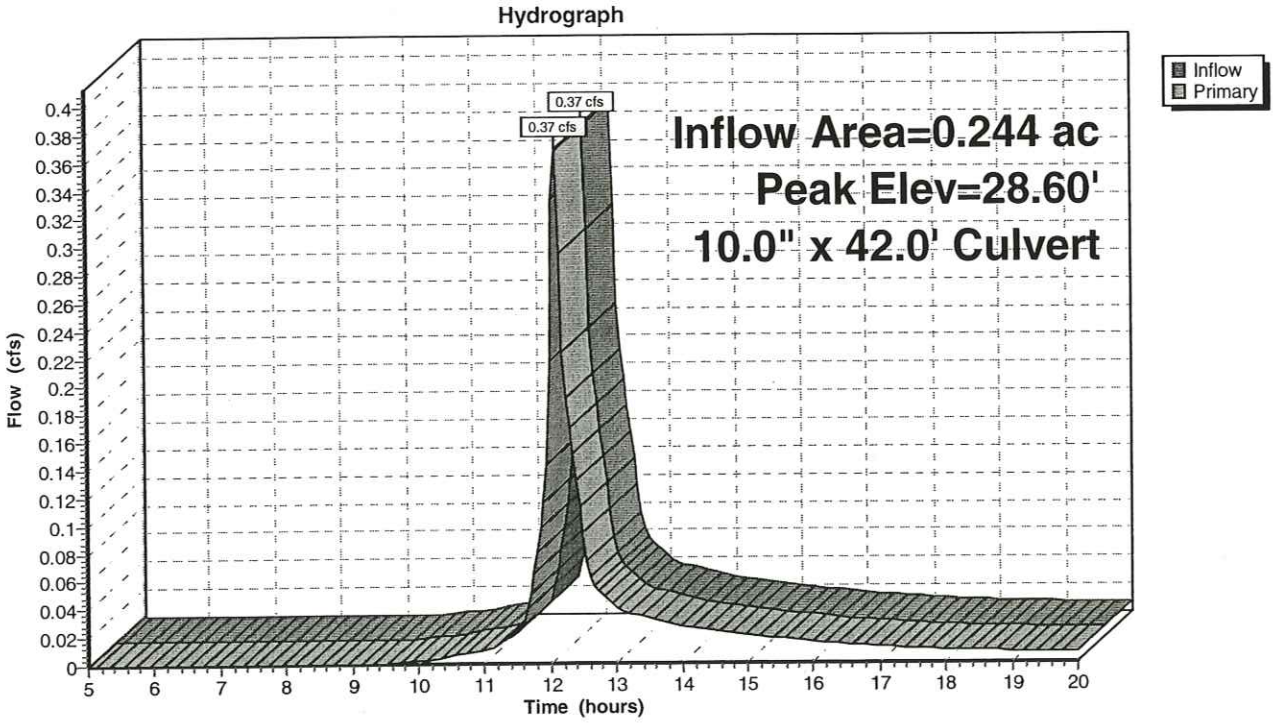
Inflow Area = 0.244 ac, 31.10% Impervious, Inflow Depth > 1.21" for 2-Year Storm event
Inflow = 0.37 cfs @ 12.09 hrs, Volume= 0.025 af
Outflow = 0.37 cfs @ 12.09 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min
Primary = 0.37 cfs @ 12.09 hrs, Volume= 0.025 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 28.60' @ 12.09 hrs
Flood Elev= 29.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	28.20'	**10.0" x 42.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 28.08' S= 0.0029 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=0.36 cfs @ 12.09 hrs HW=28.59' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.36 cfs @ 2.07 fps)

Pond DB7:



Summary for Pond IN2:

[82] Warning: Early inflow requires earlier time span

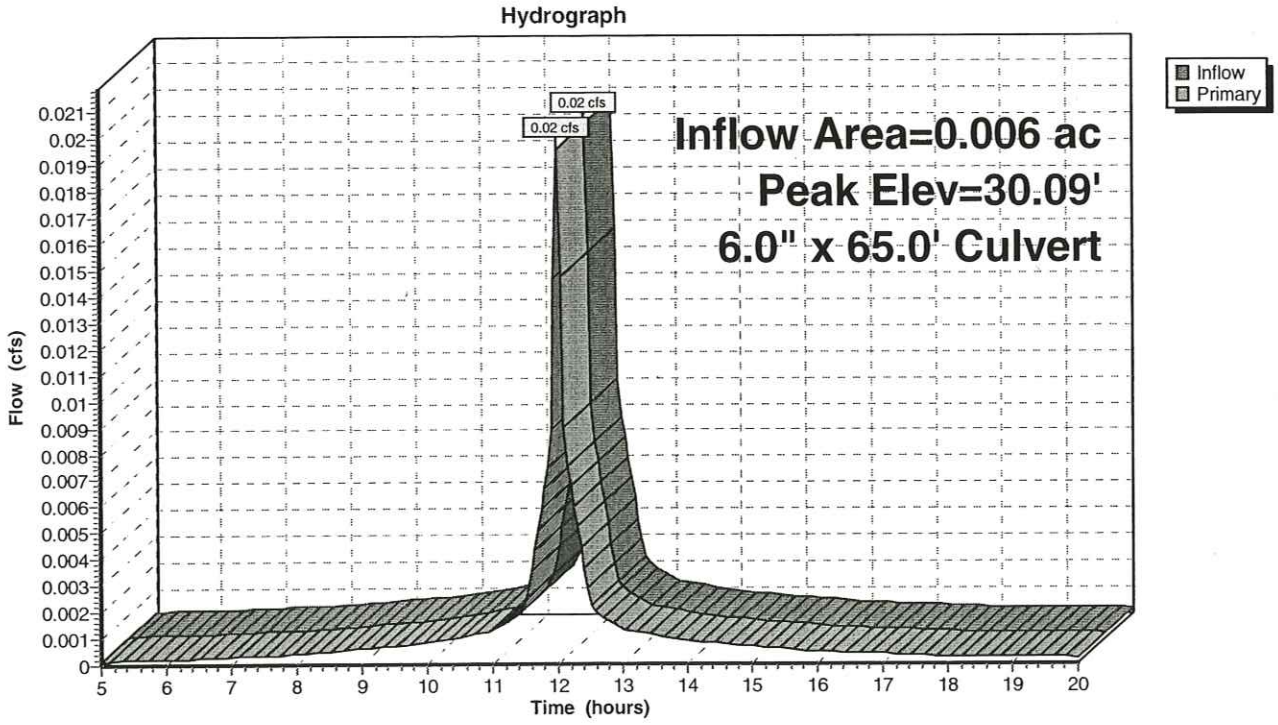
Inflow Area = 0.006 ac,100.00% Impervious, Inflow Depth > 2.59" for 2-Year Storm event
Inflow = 0.02 cfs @ 12.00 hrs, Volume= 0.001 af
Outflow = 0.02 cfs @ 12.00 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min
Primary = 0.02 cfs @ 12.00 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 30.09' @ 12.00 hrs
Flood Elev= 31.50'

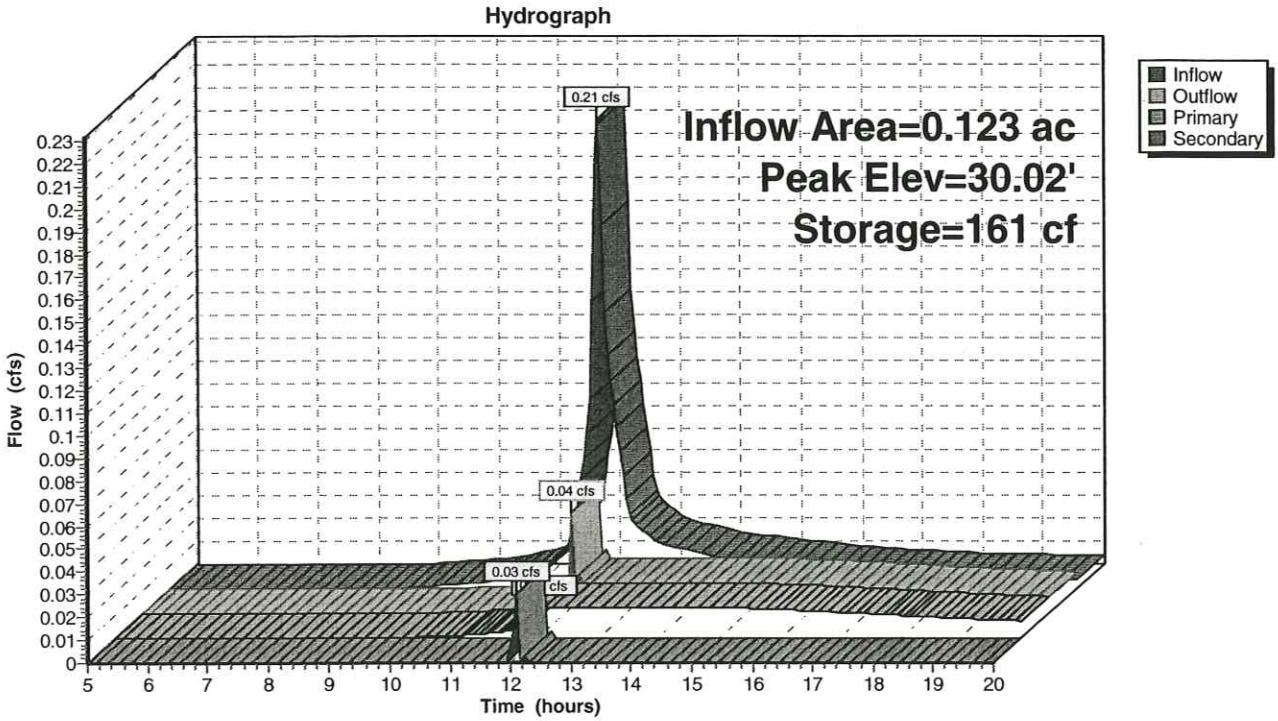
Device	Routing	Invert	Outlet Devices
#1	Primary	30.00'	**6.0" x 65.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 27.00' S= 0.0462 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=0.02 cfs @ 12.00 hrs HW=30.09' (Free Discharge)
↑**1=Culvert** (Inlet Controls 0.02 cfs @ 0.81 fps)

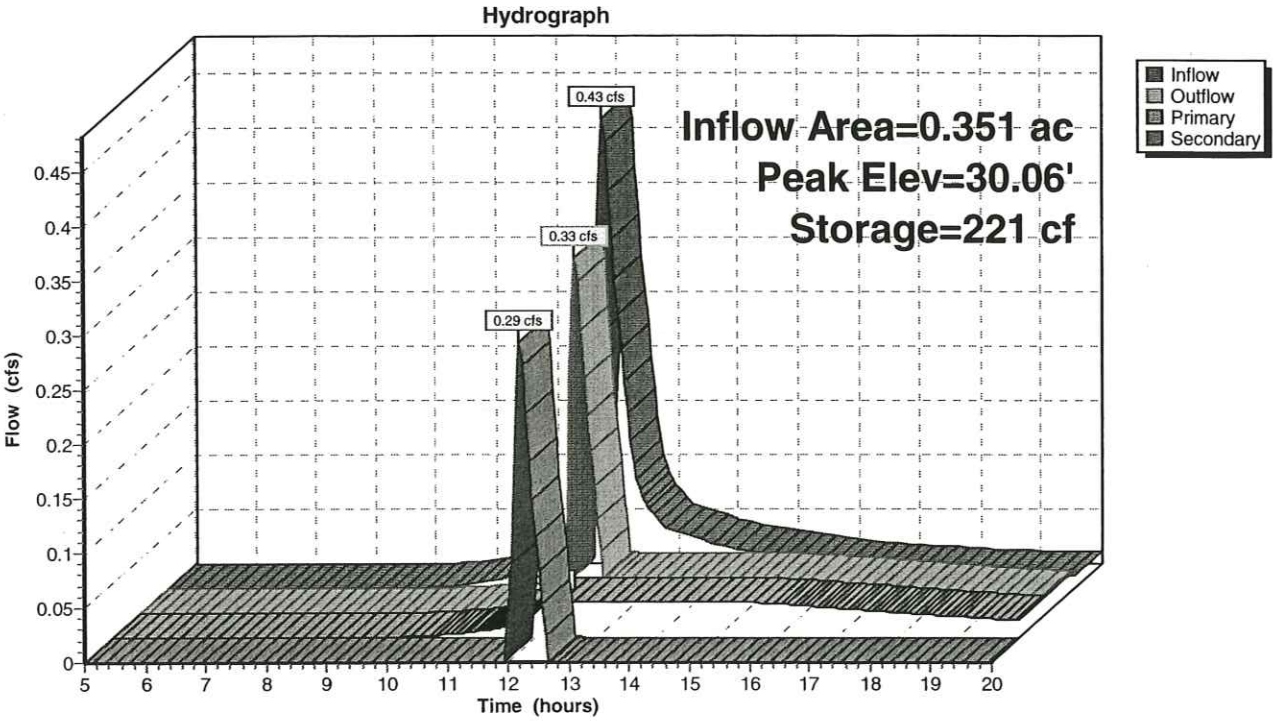
Pond IN2:



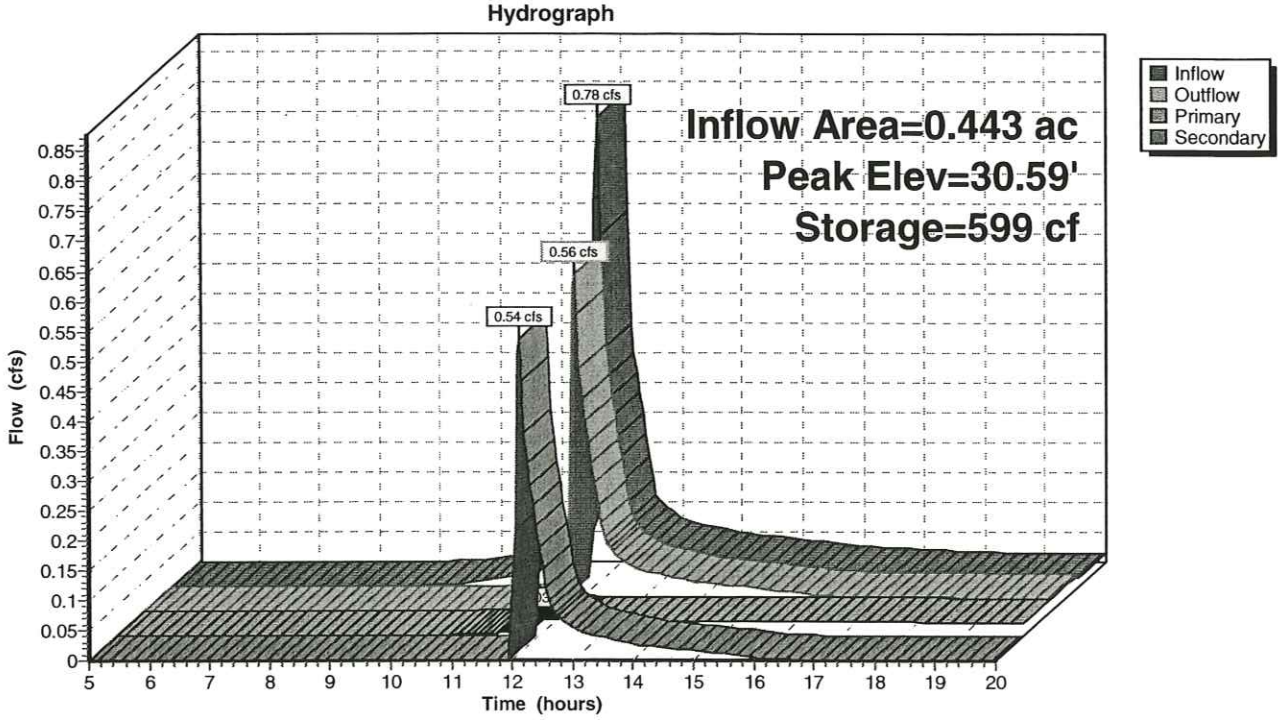
Pond SF1: Underdrain Soil Filter



Pond SF4: Underdain Soil Filter



Pond SF6: Underdrain Soil Filter



Pond DB5: Peak Elev=27.41' Inflow=0.36 cfs 0.026 af
10.0" x 65.0' Culvert Outflow=0.36 cfs 0.026 af

Pond DB6: Peak Elev=29.65' Inflow=2.20 cfs 0.138 af
10.0" x 114.0' Culvert Outflow=2.20 cfs 0.138 af

Pond DB7: Peak Elev=28.81' Inflow=0.77 cfs 0.052 af
10.0" x 42.0' Culvert Outflow=0.77 cfs 0.052 af

Pond IN1: Peak Elev=27.19' Inflow=0.08 cfs 0.005 af
6.0" x 100.0' Culvert Outflow=0.08 cfs 0.005 af

Pond IN2: Peak Elev=30.11' Inflow=0.03 cfs 0.002 af
6.0" x 65.0' Culvert Outflow=0.03 cfs 0.002 af

Pond SF1: Underdrain Soil Filter Peak Elev=30.05' Storage=161 cf Inflow=0.41 cfs 0.028 af
Primary=0.01 cfs 0.010 af Secondary=0.47 cfs 0.023 af Outflow=0.49 cfs 0.033 af

Pond SF4: Underdain Soil Filter Peak Elev=30.13' Storage=221 cf Inflow=0.89 cfs 0.077 af
Primary=0.03 cfs 0.025 af Secondary=0.91 cfs 0.064 af Outflow=0.95 cfs 0.088 af

Pond SF6: Underdrain Soil Filter Peak Elev=30.67' Storage=703 cf Inflow=1.60 cfs 0.097 af
Primary=0.03 cfs 0.019 af Secondary=1.41 cfs 0.068 af Outflow=1.44 cfs 0.086 af

Total Runoff Area = 2.775 ac Runoff Volume = 0.535 af Average Runoff Depth = 2.31"
82.77% Pervious = 2.297 ac 17.23% Impervious = 0.478 ac

Summary for Subcatchment D2:

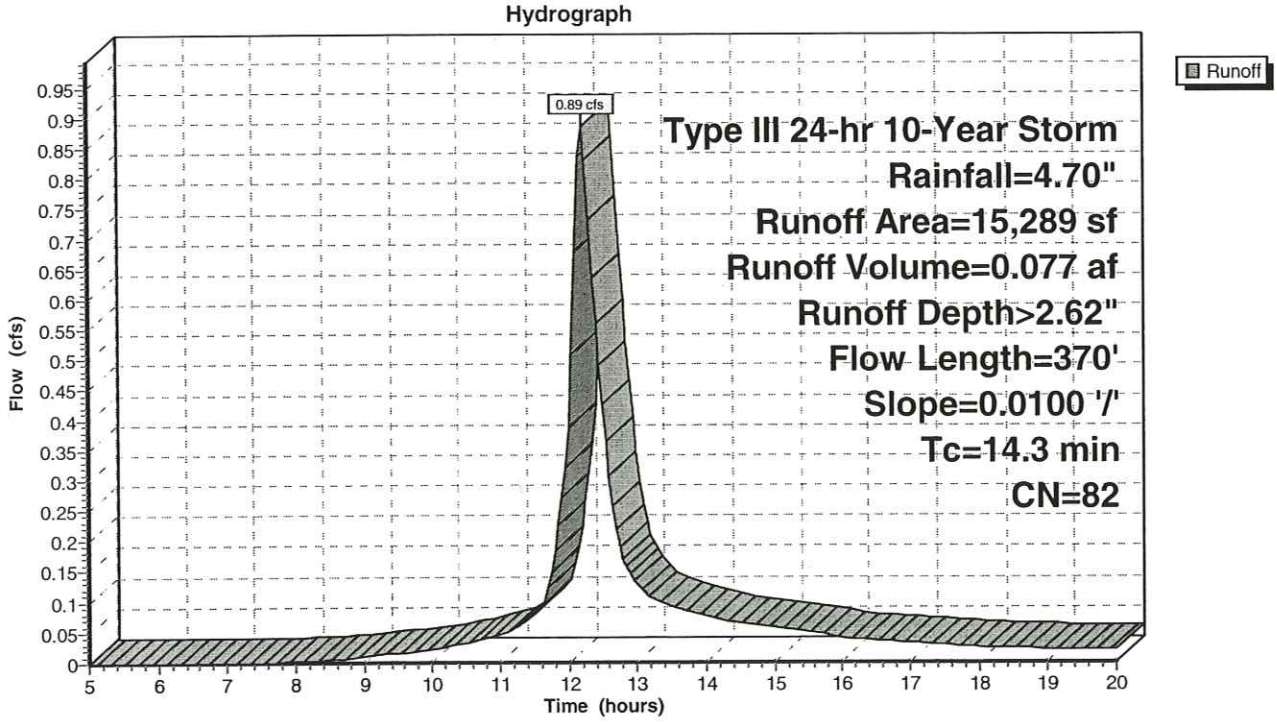
Runoff = 0.89 cfs @ 12.20 hrs, Volume= 0.077 af, Depth> 2.62"

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 Rainfall=4.70"

Area (sf)	CN	Description
9,894	74	>75% Grass cover, Good, HSG C
5,395	98	Paved parking & roofs
15,289	82	Weighted Average
9,894		Pervious Area
5,395		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	40	0.0100	0.10		**Sheet Flow, A to B** Grass: Short n= 0.150 P2= 3.00"
7.9	330	0.0100	0.70		**Shallow Concentrated Flow, B to C** Short Grass Pasture Kv= 7.0 fps
14.3	370	Total			

Subcatchment D2:



Summary for Subcatchment D4:

[49] Hint: Tc<2dt may require smaller dt

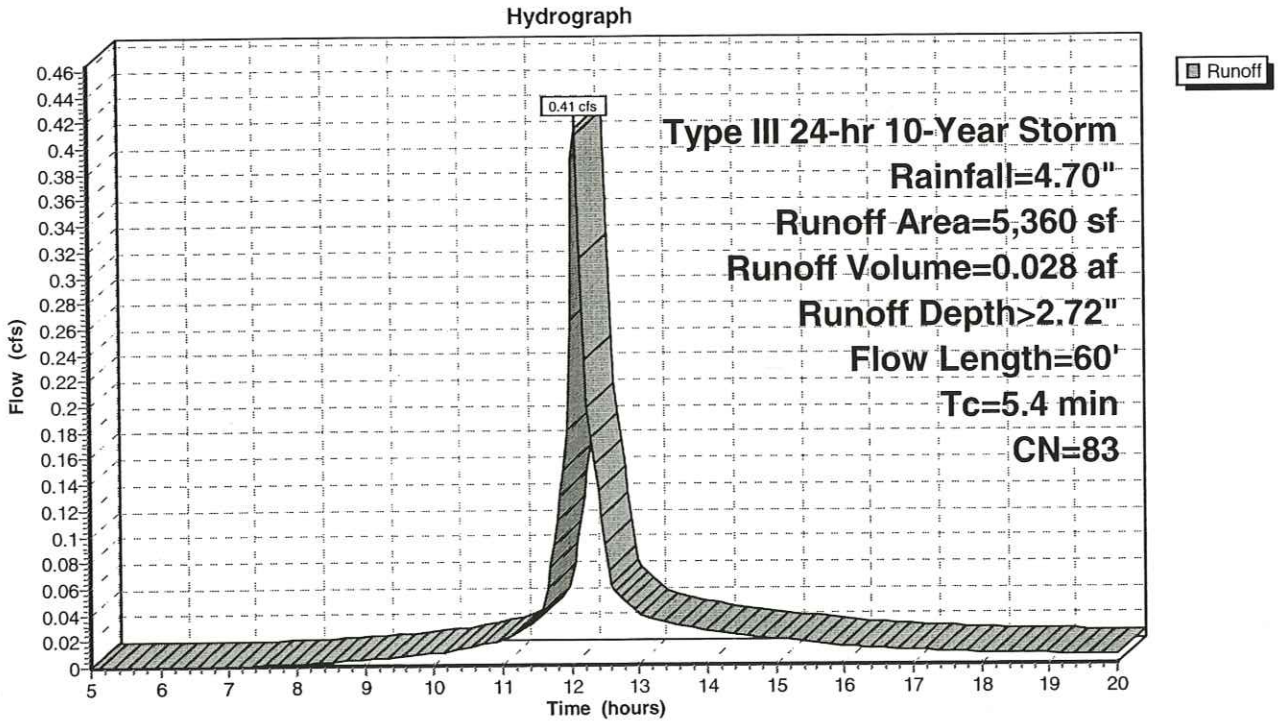
Runoff = 0.41 cfs @ 12.08 hrs, Volume= 0.028 af, Depth> 2.72"

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 Rainfall=4.70"

Area (sf)	CN	Description
3,279	74	>75% Grass cover, Good, HSG C
2,081	98	Paved parking & roofs
5,360	83	Weighted Average
3,279		Pervious Area
2,081		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	33	0.0450	0.18		**Sheet Flow, A to B** Grass: Short n= 0.150 P2= 3.00"
2.4	27	0.0550	0.19		**Sheet Flow, B to C** Grass: Short n= 0.150 P2= 3.00"
5.4	60	Total			

Subcatchment D4:



Summary for Subcatchment D6:

[49] Hint: Tc<2dt may require smaller dt

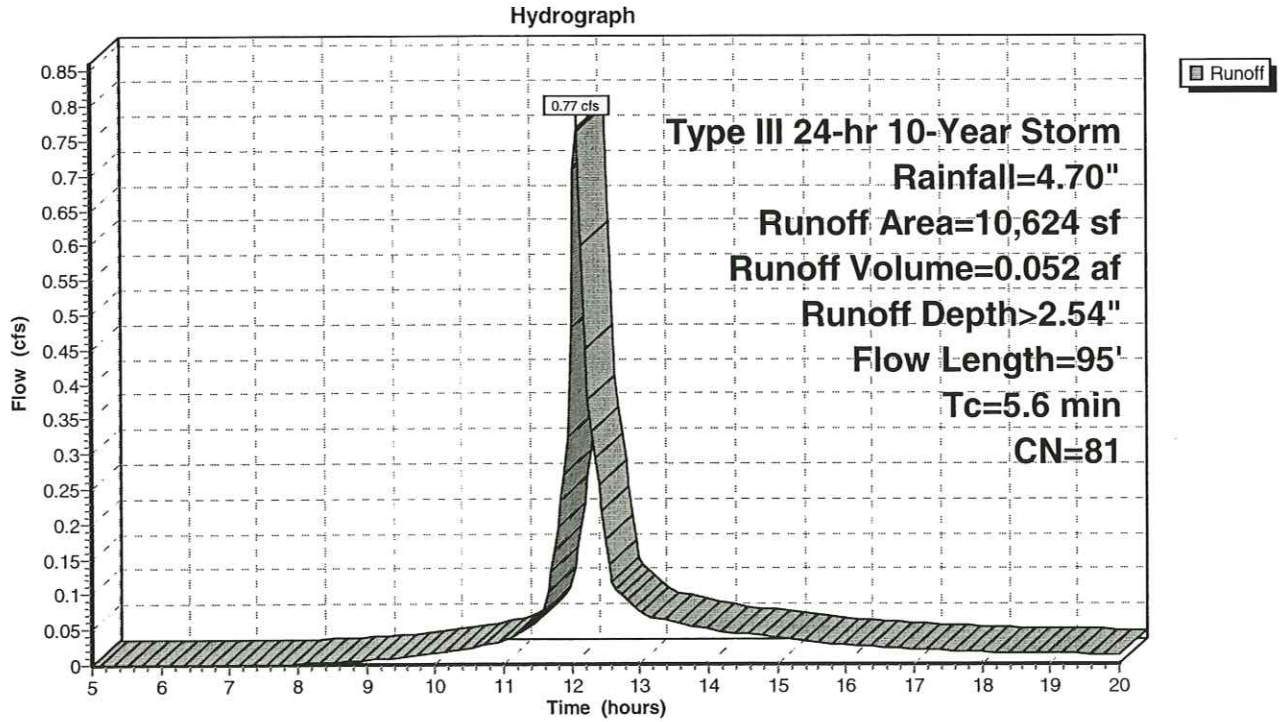
Runoff = 0.77 cfs @ 12.09 hrs, Volume= 0.052 af, Depth> 2.54"

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 Rainfall=4.70"

Area (sf)	CN	Description
7,320	74	>75% Grass cover, Good, HSG C
3,304	98	Paved parking & roofs
10,624	81	Weighted Average
7,320		Pervious Area
3,304		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	45	0.0200	1.14		**Sheet Flow, A to B** Smooth surfaces n= 0.011 P2= 3.00"
4.9	50	0.0300	0.17		**Sheet Flow, B to C** Grass: Short n= 0.150 P2= 3.00"
5.6	95	Total			

Subcatchment D6:



Summary for Subcatchment D8:

Runoff = 0.59 cfs @ 12.19 hrs, Volume= 0.050 af, Depth> 2.04"

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 Rainfall=4.70"

Area (sf)	CN	Description
12,240	74	>75% Grass cover, Good, HSG C
490	98	Paved parking & roofs
12,730	75	Weighted Average
12,240		Pervious Area
490		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	50	0.0100	0.11		**Sheet Flow, A to B** Grass: Short n= 0.150 P2= 3.00"
3.3	50	0.0800	0.25		**Sheet Flow, B to C** Grass: Short n= 0.150 P2= 3.00"
1.2	100	0.0400	1.40		**Shallow Concentrated Flow, C to D** Short Grass Pasture Kv= 7.0 fps
0.2	50	0.0050	3.36	1.83	**Circular Channel (pipe), D to E** Diam= 10.0" Area= 0.5 sf Perim= 2.6' r= 0.21' n= 0.011 Concrete pipe, straight & clean
0.8	40	0.0147	0.85		**Shallow Concentrated Flow, E to F** Short Grass Pasture Kv= 7.0 fps
13.2	290	Total			

Summary for Subcatchment S1:

[49] Hint: Tc<2dt may require smaller dt

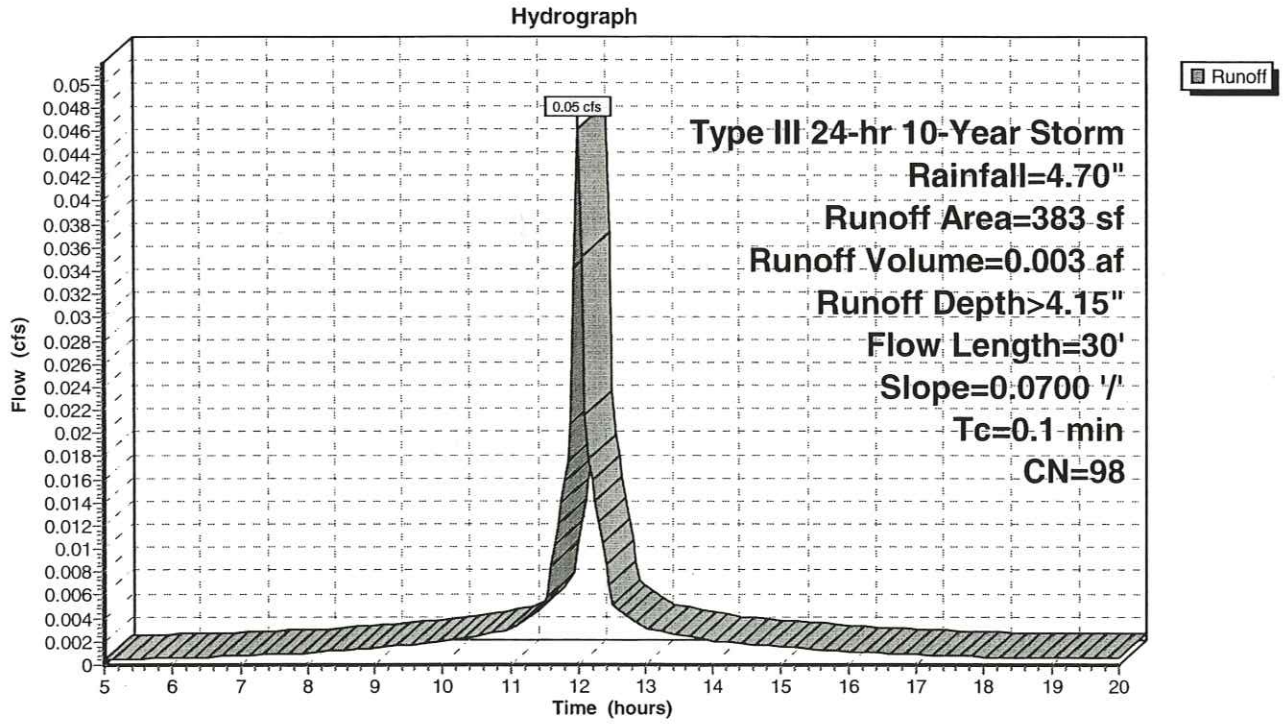
Runoff = 0.05 cfs @ 12.00 hrs, Volume= 0.003 af, Depth> 4.15"

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 Rainfall=4.70"

Area (sf)	CN	Description
383	98	Paved parking & roofs
383		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	30	0.0700	5.37		**Shallow Concentrated Flow, A to B** Paved Kv= 20.3 fps

Subcatchment S1:



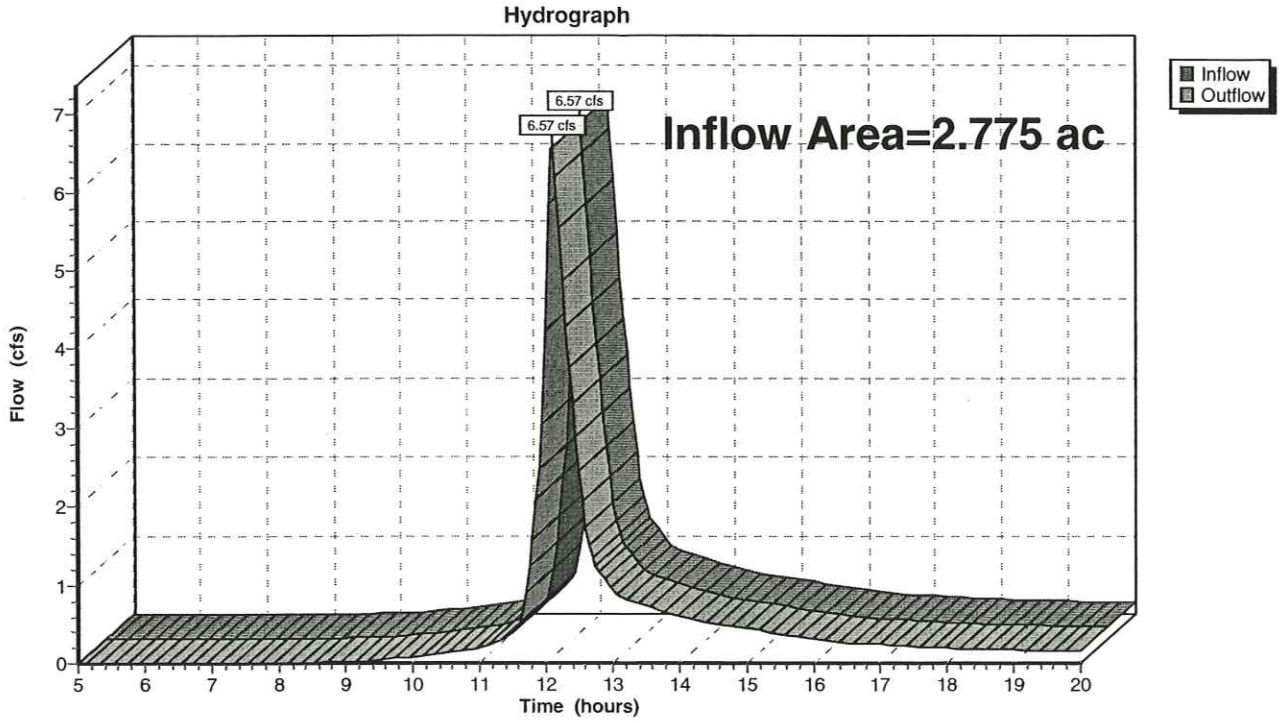
Summary for Reach EXIST:

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.775 ac, 17.23% Impervious, Inflow Depth > 2.34" for 10-Year Storm event
Inflow = 6.57 cfs @ 12.11 hrs, Volume= 0.541 af
Outflow = 6.57 cfs @ 12.11 hrs, Volume= 0.541 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach EXIST:



Summary for Pond DB1:

[57] Hint: Peaked at 30.62' (Flood elevation advised)
[79] Warning: Submerged Pond CB1 Primary device # 1 INLET by 4.86'

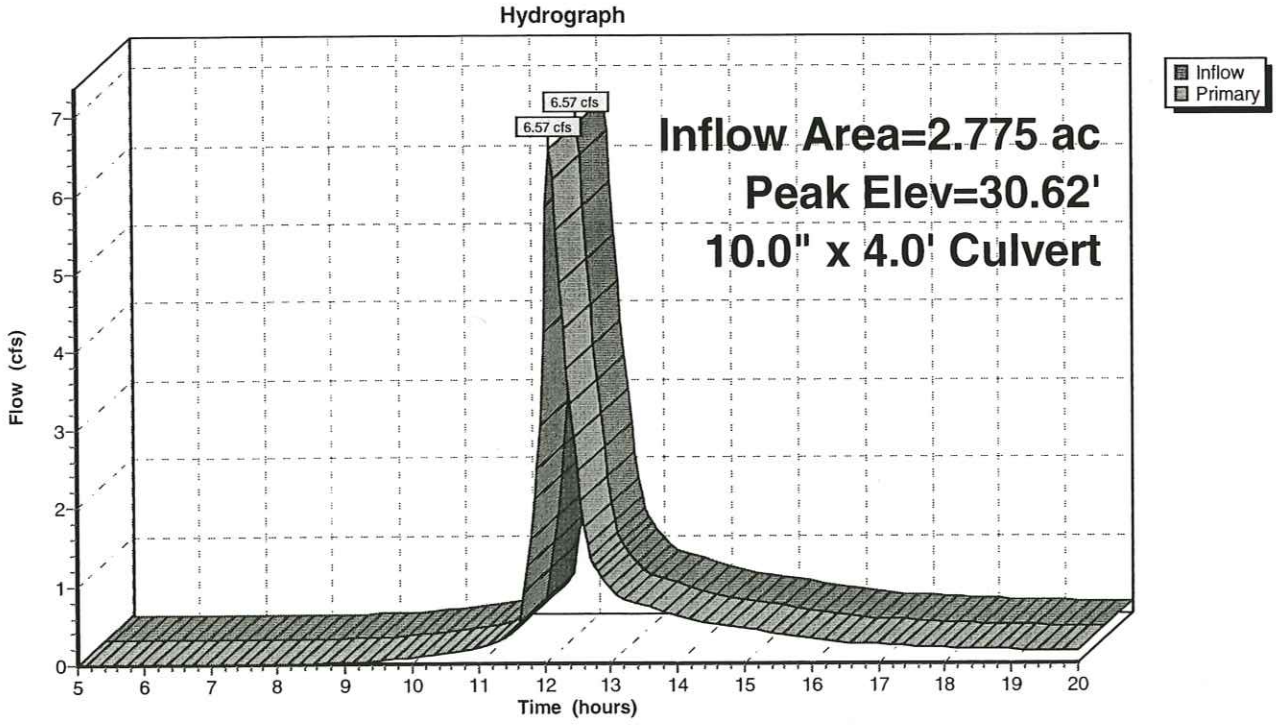
Inflow Area =	2.775 ac,	17.23% Impervious,	Inflow Depth >	2.34" for 10-Year Storm event
Inflow =	6.57 cfs @	12.11 hrs, Volume=	0.541 af	
Outflow =	6.57 cfs @	12.11 hrs, Volume=	0.541 af,	Atten= 0%, Lag= 0.0 min
Primary =	6.57 cfs @	12.11 hrs, Volume=	0.541 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 30.62' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	20.16'	**10.0" x 4.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 20.12' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=6.50 cfs @ 12.11 hrs HW=30.41' (Free Discharge)
↑**1=Culvert** (Inlet Controls 6.50 cfs @ 11.92 fps)

Pond DB1:



Summary for Pond DB3:

[81] Warning: Exceeded Pond DB4 by 1.68' @ 12.15 hrs

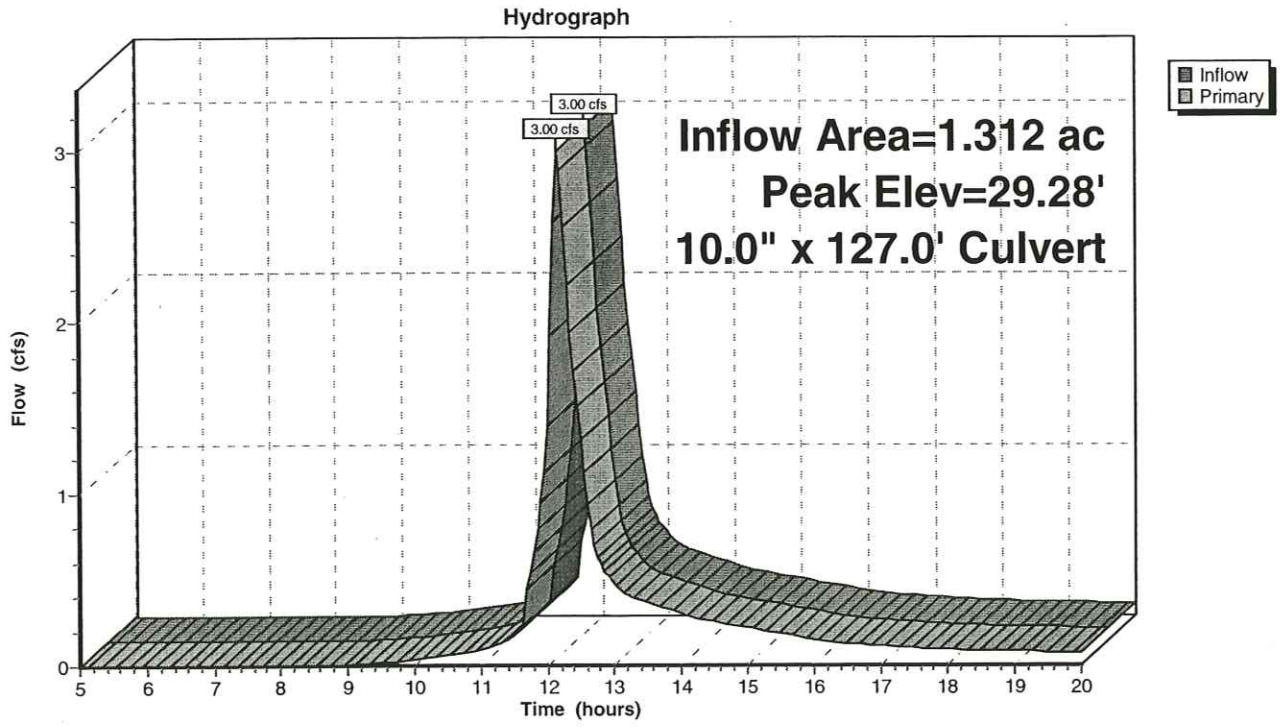
Inflow Area = 1.312 ac, 12.09% Impervious, Inflow Depth > 2.32" for 10-Year Storm event
Inflow = 3.00 cfs @ 12.17 hrs, Volume= 0.254 af
Outflow = 3.00 cfs @ 12.17 hrs, Volume= 0.254 af, Atten= 0%, Lag= 0.0 min
Primary = 3.00 cfs @ 12.17 hrs, Volume= 0.254 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 29.28' @ 12.17 hrs
Flood Elev= 29.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.51'	**10.0" x 127.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 26.15' S= 0.0028 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=2.95 cfs @ 12.17 hrs HW=29.21' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 2.95 cfs @ 5.40 fps)

Pond DB3:



Summary for Pond DB5:

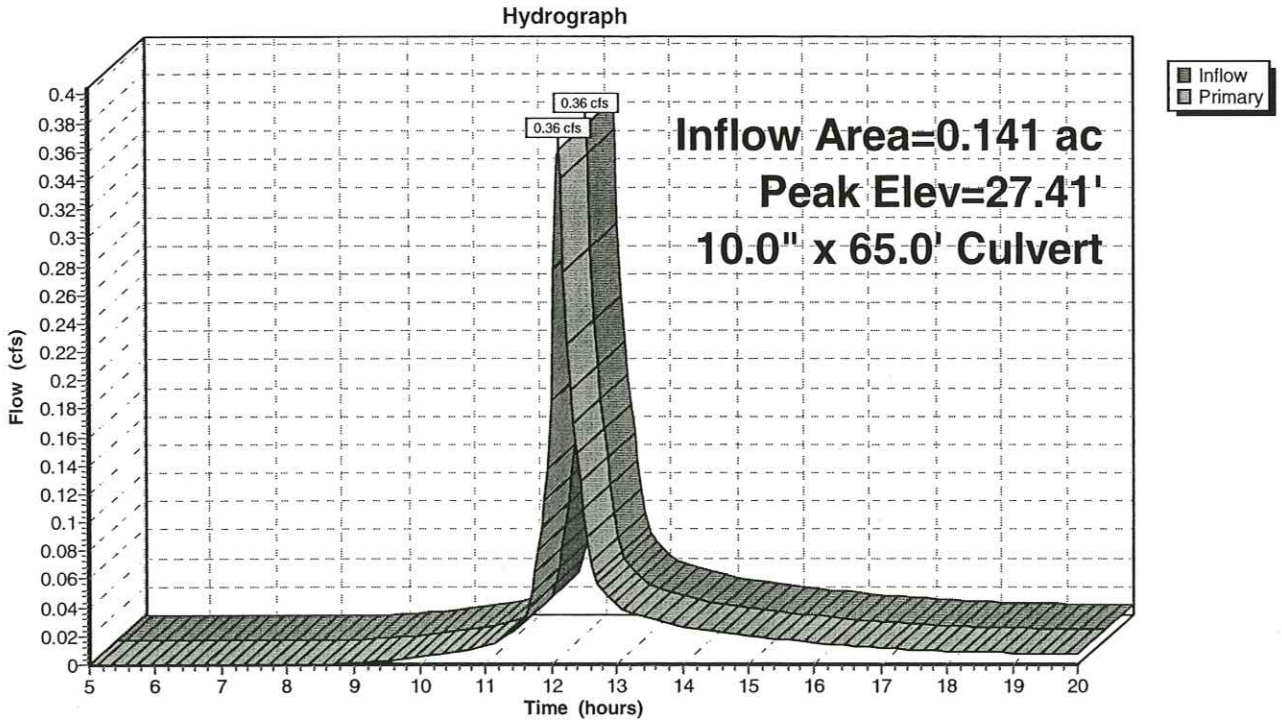
Inflow Area = 0.141 ac, 11.23% Impervious, Inflow Depth > 2.20" for 10-Year Storm event
Inflow = 0.36 cfs @ 12.12 hrs, Volume= 0.026 af
Outflow = 0.36 cfs @ 12.12 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min
Primary = 0.36 cfs @ 12.12 hrs, Volume= 0.026 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 27.41' @ 12.12 hrs
Flood Elev= 29.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	27.02'	**10.0" x 65.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 26.84' S= 0.0028 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=0.35 cfs @ 12.12 hrs HW=27.41' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.35 cfs @ 2.09 fps)

Pond DB5:



Summary for Pond DB7:

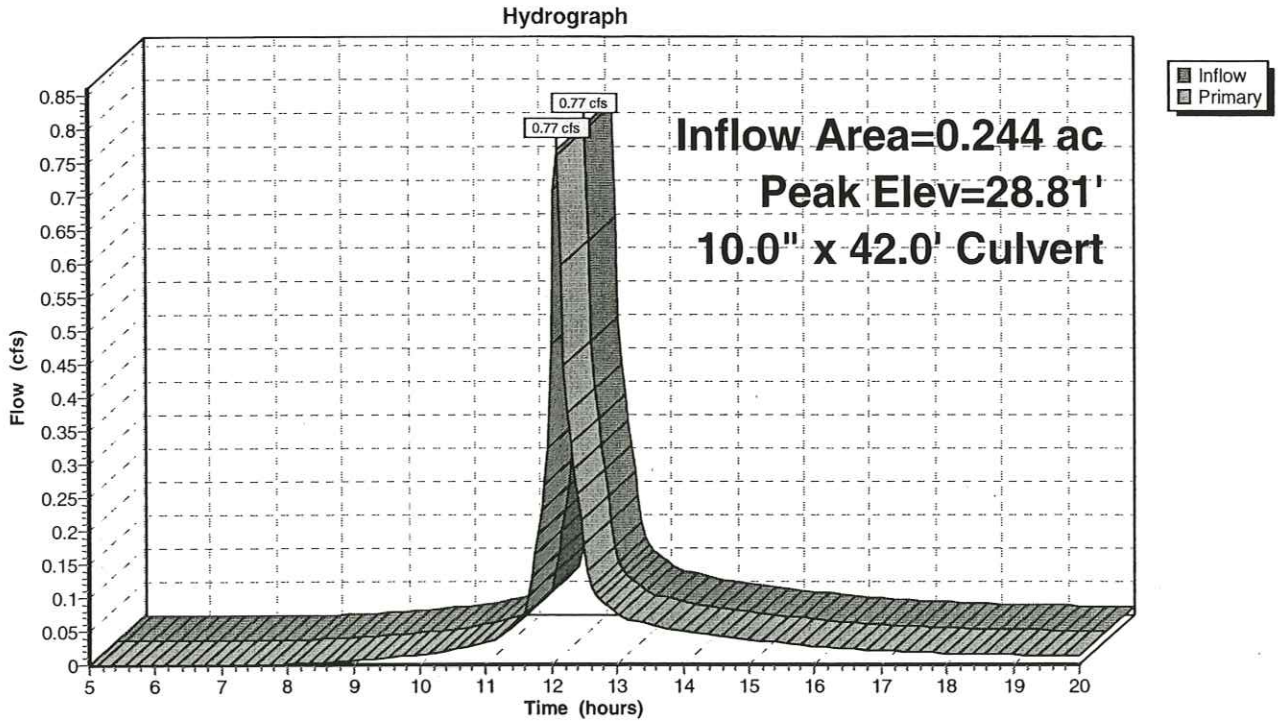
Inflow Area = 0.244 ac, 31.10% Impervious, Inflow Depth > 2.54" for 10-Year Storm event
Inflow = 0.77 cfs @ 12.09 hrs, Volume= 0.052 af
Outflow = 0.77 cfs @ 12.09 hrs, Volume= 0.052 af, Atten= 0%, Lag= 0.0 min
Primary = 0.77 cfs @ 12.09 hrs, Volume= 0.052 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 28.81' @ 12.09 hrs
Flood Elev= 29.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	28.20'	**10.0" x 42.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 28.08' S= 0.0029 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=0.75 cfs @ 12.09 hrs HW=28.80' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.75 cfs @ 2.48 fps)

Pond DB7:



Summary for Pond IN2:

[82] Warning: Early inflow requires earlier time span

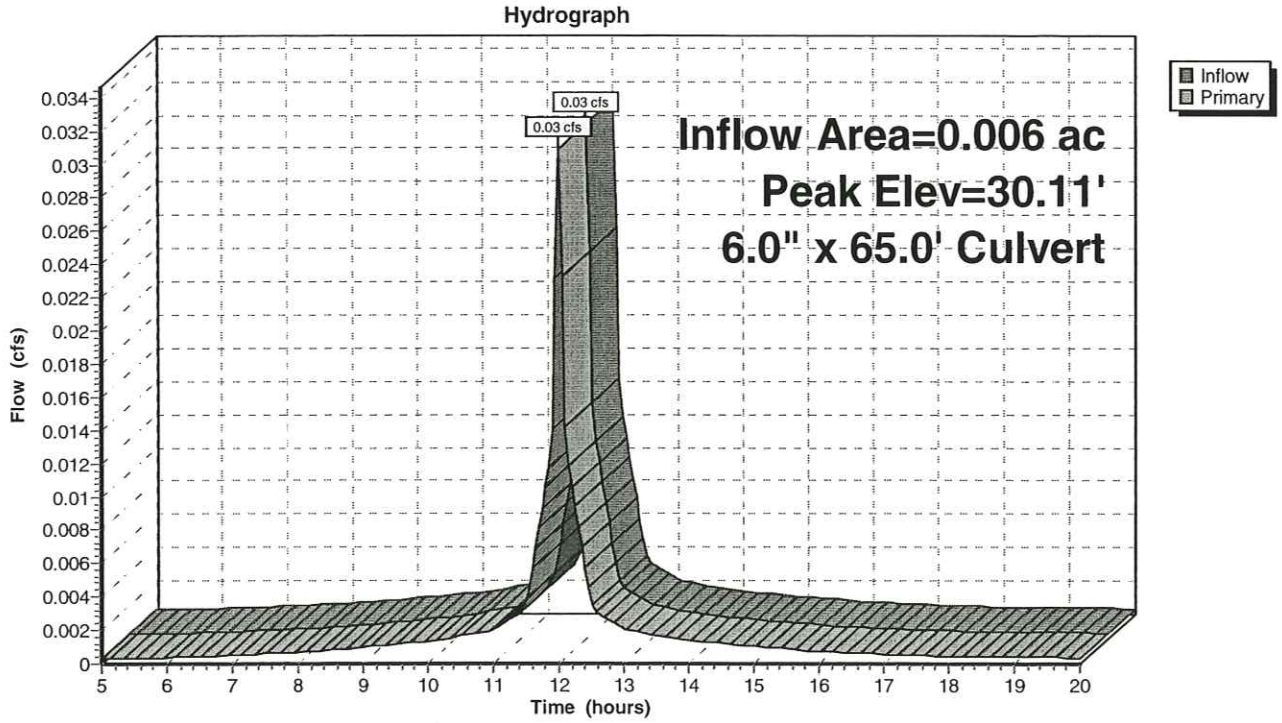
Inflow Area = 0.006 ac,100.00% Impervious, Inflow Depth > 4.15" for 10-Year Storm event
Inflow = 0.03 cfs @ 12.00 hrs, Volume= 0.002 af
Outflow = 0.03 cfs @ 12.00 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min
Primary = 0.03 cfs @ 12.00 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 30.11' @ 12.00 hrs
Flood Elev= 31.50'

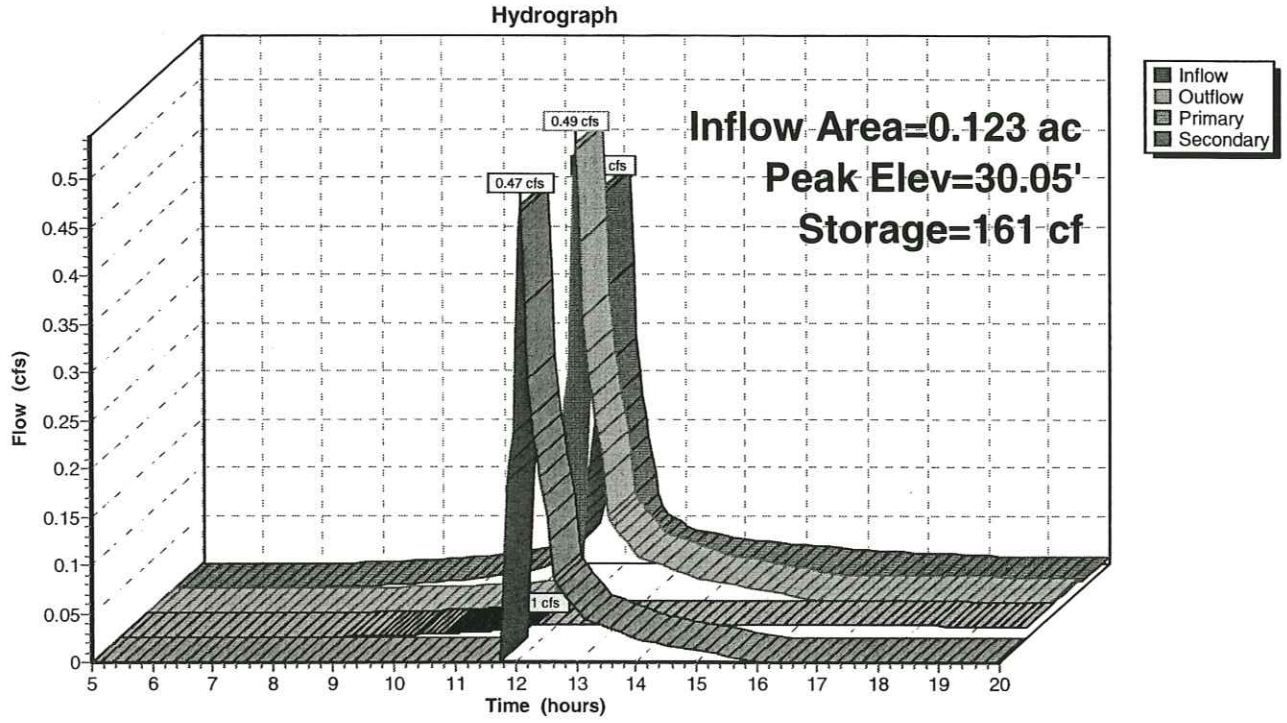
Device	Routing	Invert	Outlet Devices
#1	Primary	30.00'	**6.0" x 65.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 27.00' S= 0.0462 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=0.03 cfs @ 12.00 hrs HW=30.11' (Free Discharge)
↑**1=Culvert** (Inlet Controls 0.03 cfs @ 0.91 fps)

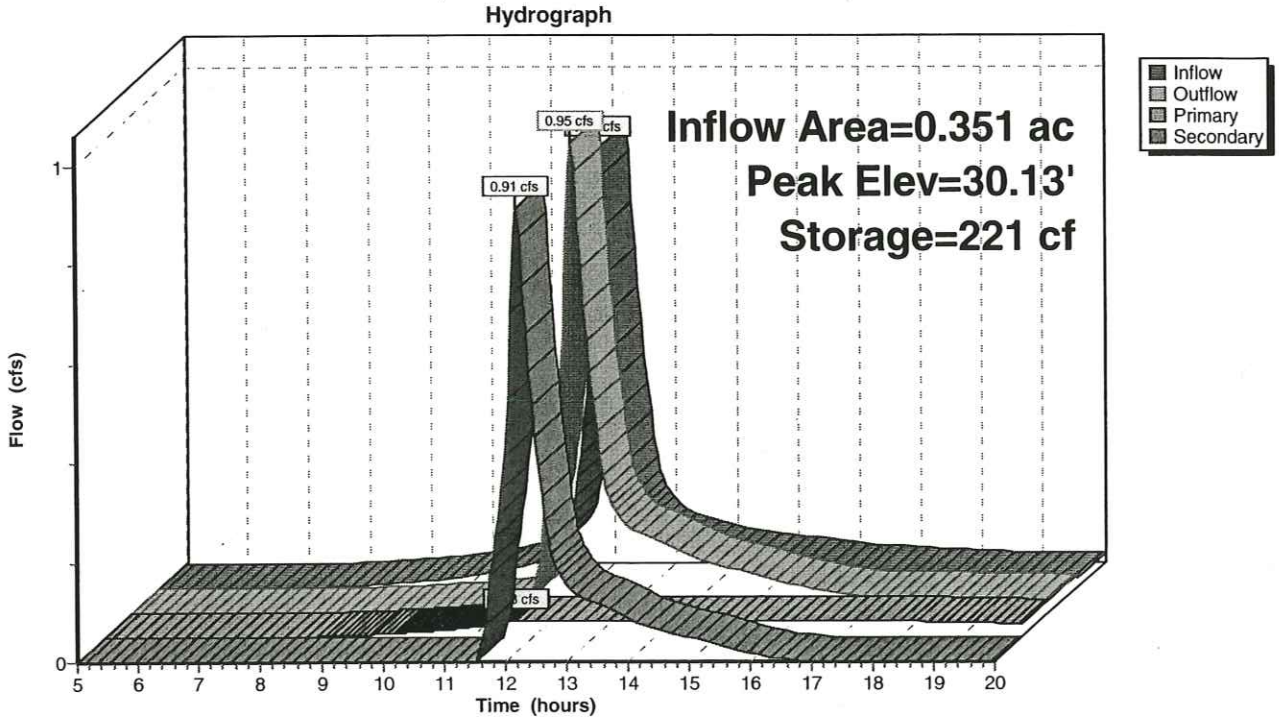
Pond IN2:



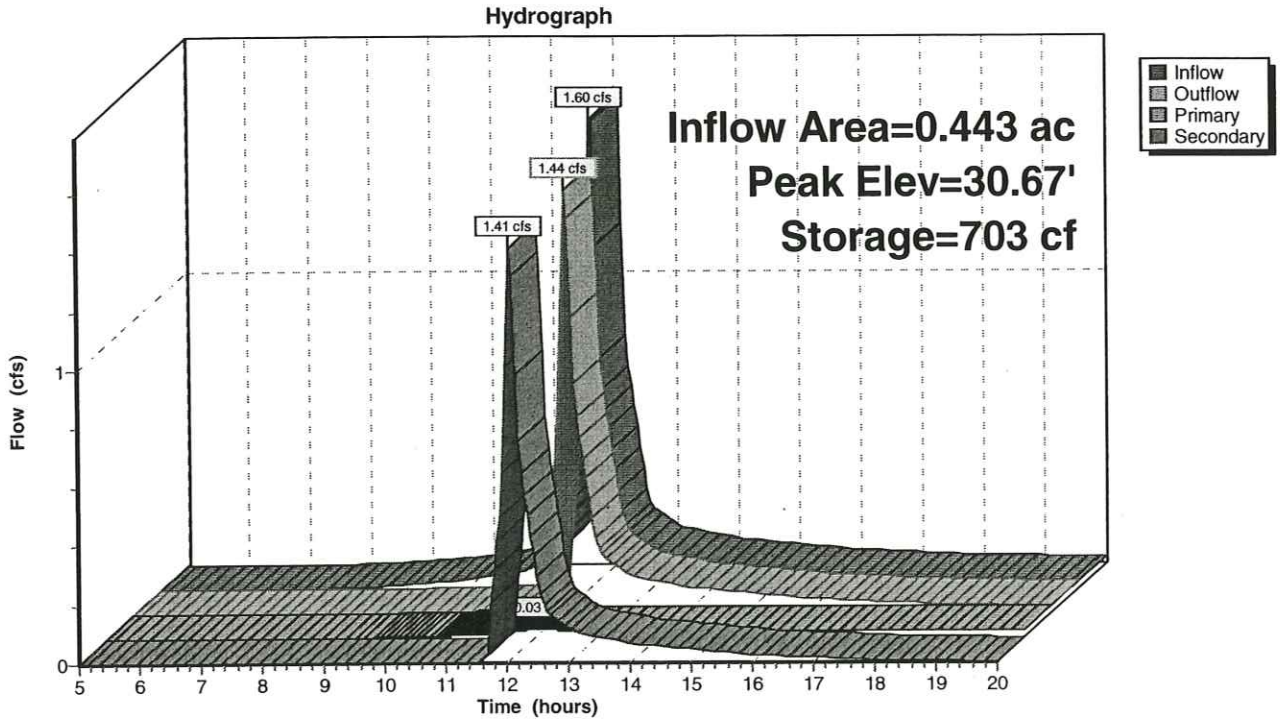
Pond SF1: Underdrain Soil Filter



Pond SF4: Underdain Soil Filter



Pond SF6: Underdrain Soil Filter



Pond DB5: Peak Elev=27.47' Inflow=0.46 cfs 0.033 af
10.0" x 65.0' Culvert Outflow=0.46 cfs 0.033 af

Pond DB6: Peak Elev=30.31' Inflow=2.76 cfs 0.176 af
10.0" x 114.0' Culvert Outflow=2.76 cfs 0.176 af

Pond DB7: Peak Elev=28.91' Inflow=0.97 cfs 0.065 af
10.0" x 42.0' Culvert Outflow=0.97 cfs 0.065 af

Pond IN1: Peak Elev=27.20' Inflow=0.09 cfs 0.006 af
6.0" x 100.0' Culvert Outflow=0.09 cfs 0.006 af

Pond IN2: Peak Elev=30.12' Inflow=0.04 cfs 0.002 af
6.0" x 65.0' Culvert Outflow=0.04 cfs 0.002 af

Pond SF1: Underdrain Soil Filter Peak Elev=30.05' Storage=161 cf Inflow=0.51 cfs 0.035 af
Primary=0.01 cfs 0.011 af Secondary=0.49 cfs 0.016 af Outflow=0.50 cfs 0.027 af

Pond SF4: Underdain Soil Filter Peak Elev=30.14' Storage=221 cf Inflow=1.11 cfs 0.097 af
Primary=0.03 cfs 0.027 af Secondary=1.05 cfs 0.056 af Outflow=1.09 cfs 0.083 af

Pond SF6: Underdrain Soil Filter Peak Elev=30.70' Storage=741 cf Inflow=2.00 cfs 0.122 af
Primary=0.03 cfs 0.020 af Secondary=1.78 cfs 0.091 af Outflow=1.82 cfs 0.111 af

Total Runoff Area = 2.775 ac Runoff Volume = 0.684 af Average Runoff Depth = 2.96"
82.77% Pervious = 2.297 ac 17.23% Impervious = 0.478 ac

Summary for Subcatchment D2:

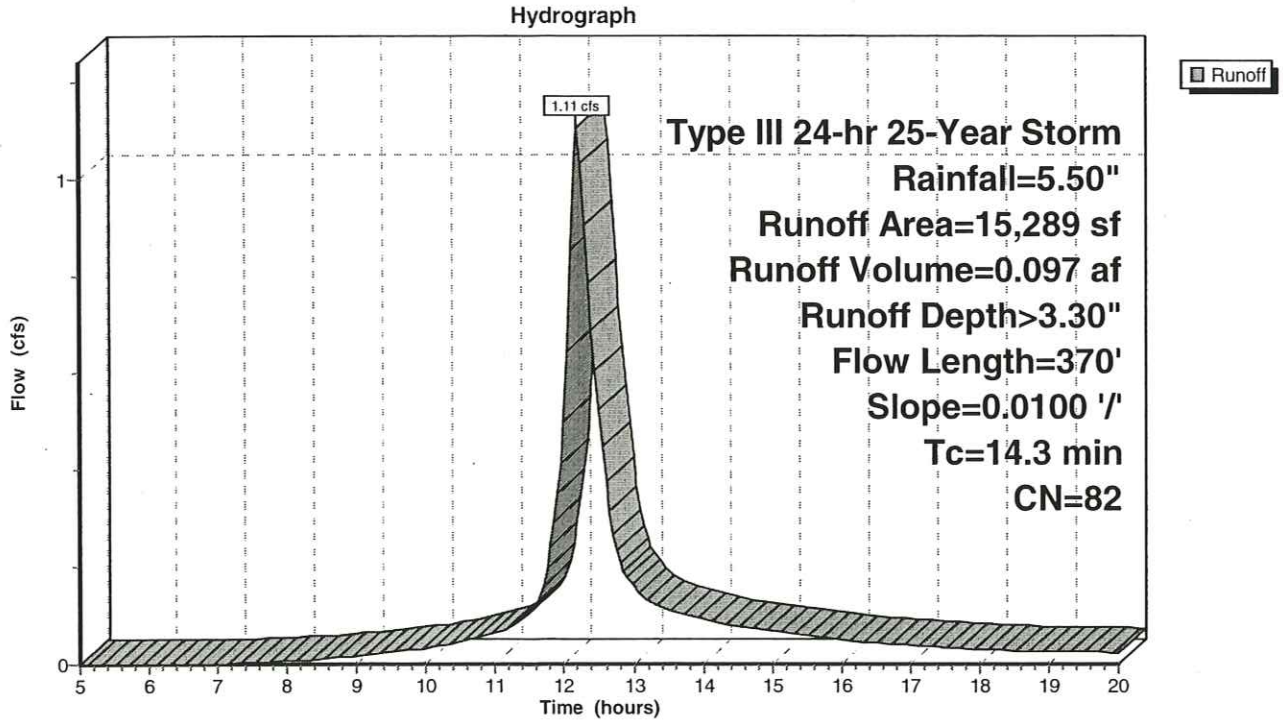
Runoff = 1.11 cfs @ 12.20 hrs, Volume= 0.097 af, Depth> 3.30"

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 Rainfall=5.50"

Area (sf)	CN	Description
9,894	74	>75% Grass cover, Good, HSG C
5,395	98	Paved parking & roofs
15,289	82	Weighted Average
9,894		Pervious Area
5,395		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	40	0.0100	0.10		**Sheet Flow, A to B** Grass: Short n= 0.150 P2= 3.00"
7.9	330	0.0100	0.70		**Shallow Concentrated Flow, B to C** Short Grass Pasture Kv= 7.0 fps
14.3	370	Total			

Subcatchment D2:



Summary for Subcatchment D4:

[49] Hint: Tc<2dt may require smaller dt

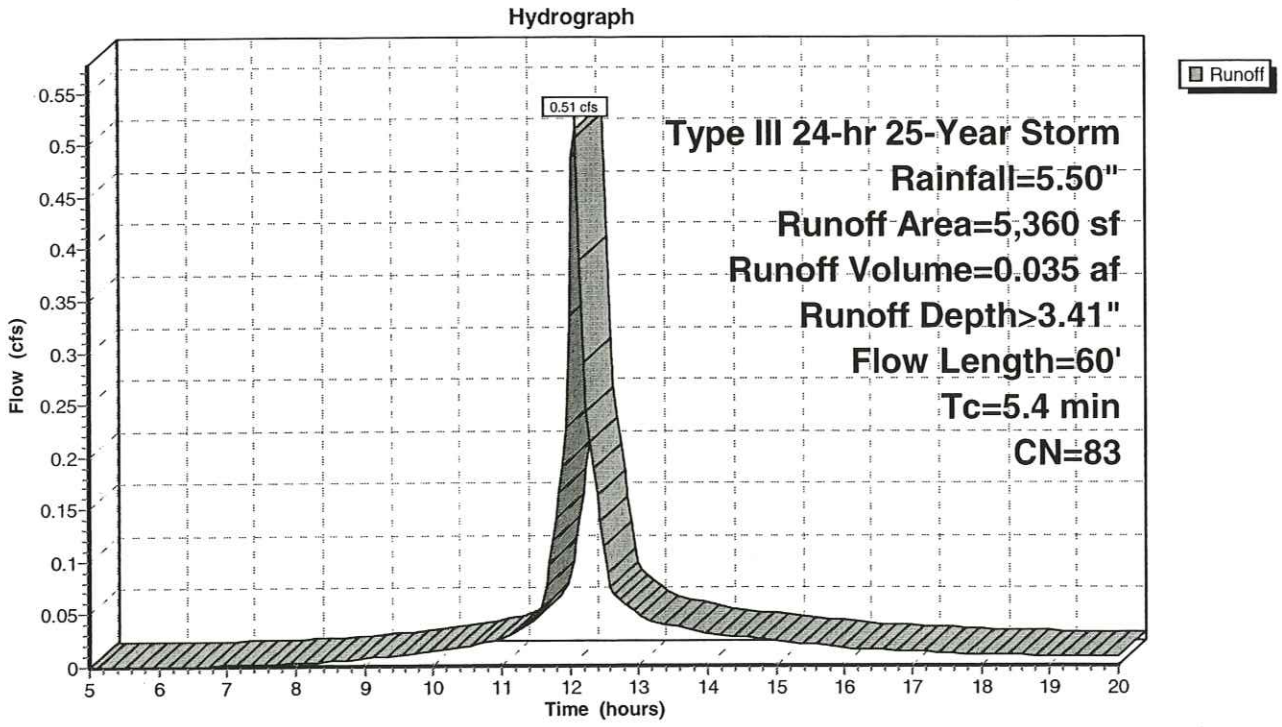
Runoff = 0.51 cfs @ 12.08 hrs, Volume= 0.035 af, Depth> 3.41"

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 Rainfall=5.50"

Area (sf)	CN	Description
3,279	74	>75% Grass cover, Good, HSG C
2,081	98	Paved parking & roofs
5,360	83	Weighted Average
3,279		Pervious Area
2,081		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	33	0.0450	0.18		**Sheet Flow, A to B** Grass: Short n= 0.150 P2= 3.00"
2.4	27	0.0550	0.19		**Sheet Flow, B to C** Grass: Short n= 0.150 P2= 3.00"
5.4	60	Total			

Subcatchment D4:



Summary for Subcatchment D6:

[49] Hint: Tc<2dt may require smaller dt

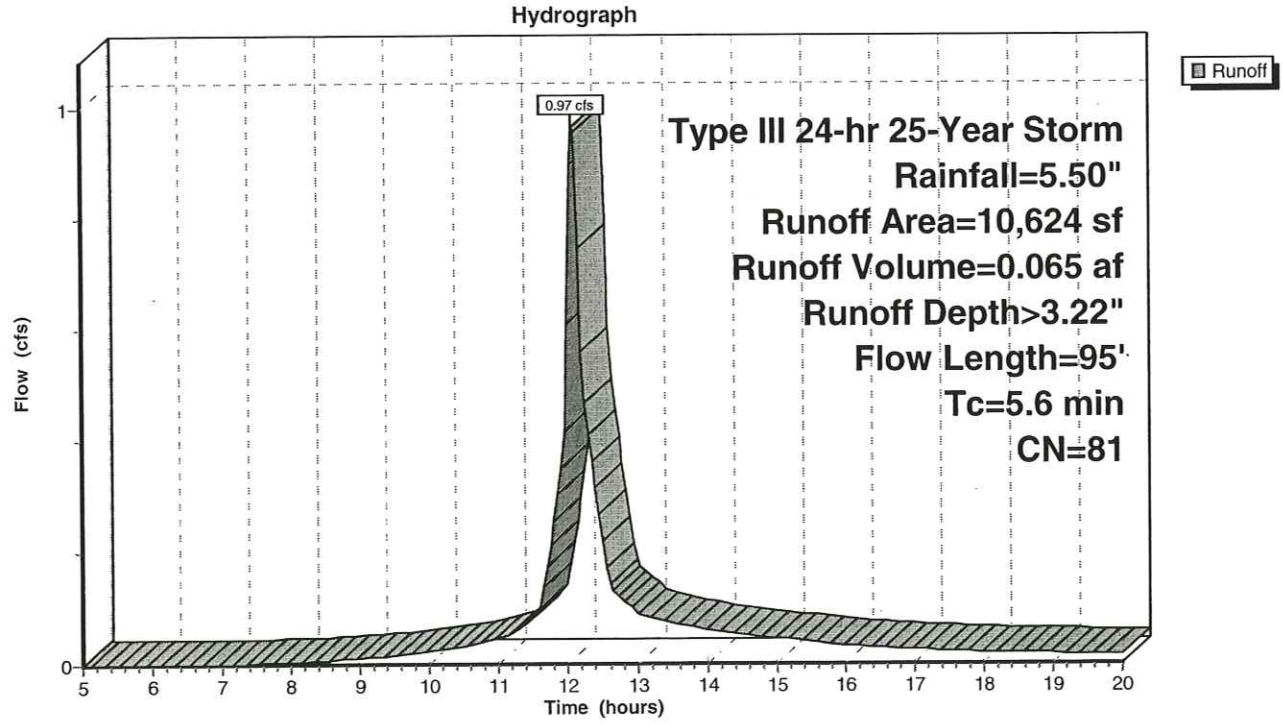
Runoff = 0.97 cfs @ 12.09 hrs, Volume= 0.065 af, Depth> 3.22"

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 Rainfall=5.50"

Area (sf)	CN	Description
7,320	74	>75% Grass cover, Good, HSG C
3,304	98	Paved parking & roofs
10,624	81	Weighted Average
7,320		Pervious Area
3,304		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	45	0.0200	1.14		**Sheet Flow, A to B** Smooth surfaces n= 0.011 P2= 3.00"
4.9	50	0.0300	0.17		**Sheet Flow, B to C** Grass: Short n= 0.150 P2= 3.00"
5.6	95	Total			

Subcatchment D6:



Summary for Subcatchment D8:

Runoff = 0.77 cfs @ 12.19 hrs, Volume= 0.065 af, Depth> 2.65"

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 Rainfall=5.50"

Area (sf)	CN	Description
12,240	74	>75% Grass cover, Good, HSG C
490	98	Paved parking & roofs
12,730	75	Weighted Average
12,240		Pervious Area
490		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	50	0.0100	0.11		**Sheet Flow, A to B** Grass: Short n= 0.150 P2= 3.00"
3.3	50	0.0800	0.25		**Sheet Flow, B to C** Grass: Short n= 0.150 P2= 3.00"
1.2	100	0.0400	1.40		**Shallow Concentrated Flow, C to D** Short Grass Pasture Kv= 7.0 fps
0.2	50	0.0050	3.36	1.83	**Circular Channel (pipe), D to E** Diam= 10.0" Area= 0.5 sf Perim= 2.6' r= 0.21' n= 0.011 Concrete pipe, straight & clean
0.8	40	0.0147	0.85		**Shallow Concentrated Flow, E to F** Short Grass Pasture Kv= 7.0 fps
13.2	290	Total			

Summary for Subcatchment S1:

[49] Hint: Tc<2dt may require smaller dt

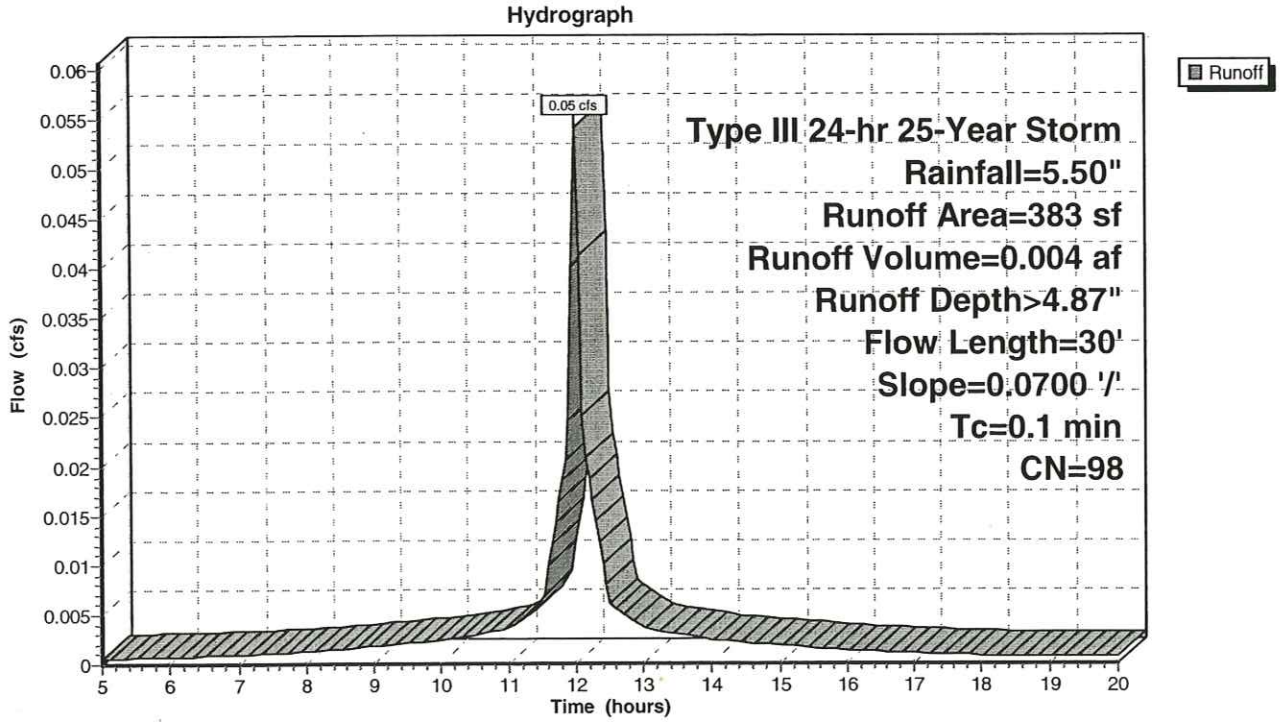
Runoff = 0.05 cfs @ 12.00 hrs, Volume= 0.004 af, Depth> 4.87"

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 Rainfall=5.50"

Area (sf)	CN	Description
383	98	Paved parking & roofs
383		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	30	0.0700	5.37		**Shallow Concentrated Flow, A to B** Paved Kv= 20.3 fps

Subcatchment S1:



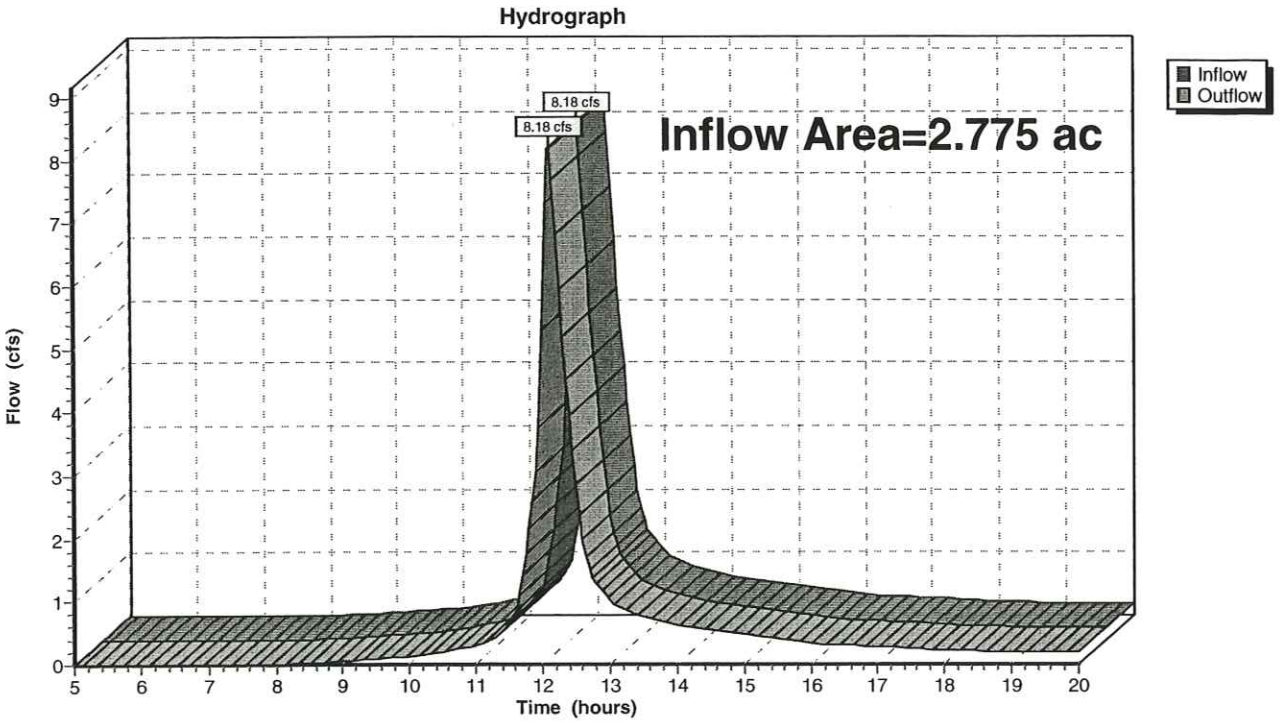
Summary for Reach EXIST:

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.775 ac, 17.23% Impervious, Inflow Depth > 2.82" for 25-Year Storm event
Inflow = 8.18 cfs @ 12.11 hrs, Volume= 0.651 af
Outflow = 8.18 cfs @ 12.11 hrs, Volume= 0.651 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach EXIST:



Summary for Pond DB1:

[57] Hint: Peaked at 36.15' (Flood elevation advised)
[81] Warning: Exceeded Pond CB1 by 0.37' @ 12.10 hrs

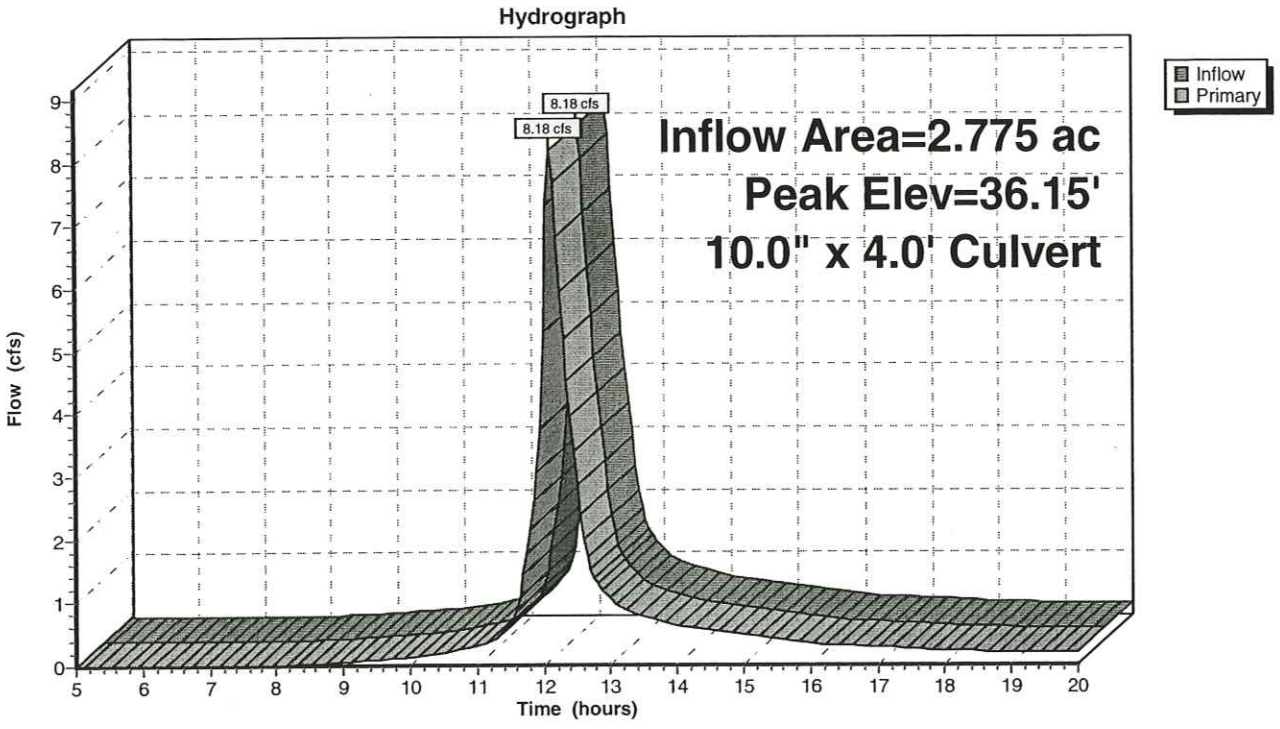
Inflow Area =	2.775 ac,	17.23% Impervious,	Inflow Depth >	2.82" for 25-Year Storm event
Inflow =	8.18 cfs @	12.11 hrs, Volume=	0.651 af	
Outflow =	8.18 cfs @	12.11 hrs, Volume=	0.651 af,	Atten= 0%, Lag= 0.0 min
Primary =	8.18 cfs @	12.11 hrs, Volume=	0.651 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 36.15' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	20.16'	**10.0" x 4.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 20.12' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=8.11 cfs @ 12.11 hrs HW=35.86' (Free Discharge)
↑**1=Culvert** (Inlet Controls 8.11 cfs @ 14.86 fps)

Pond DB1:



Summary for Pond DB3:

[58] Hint: Peaked 0.85' above defined flood level
[81] Warning: Exceeded Pond DB4 by 2.86' @ 12.15 hrs

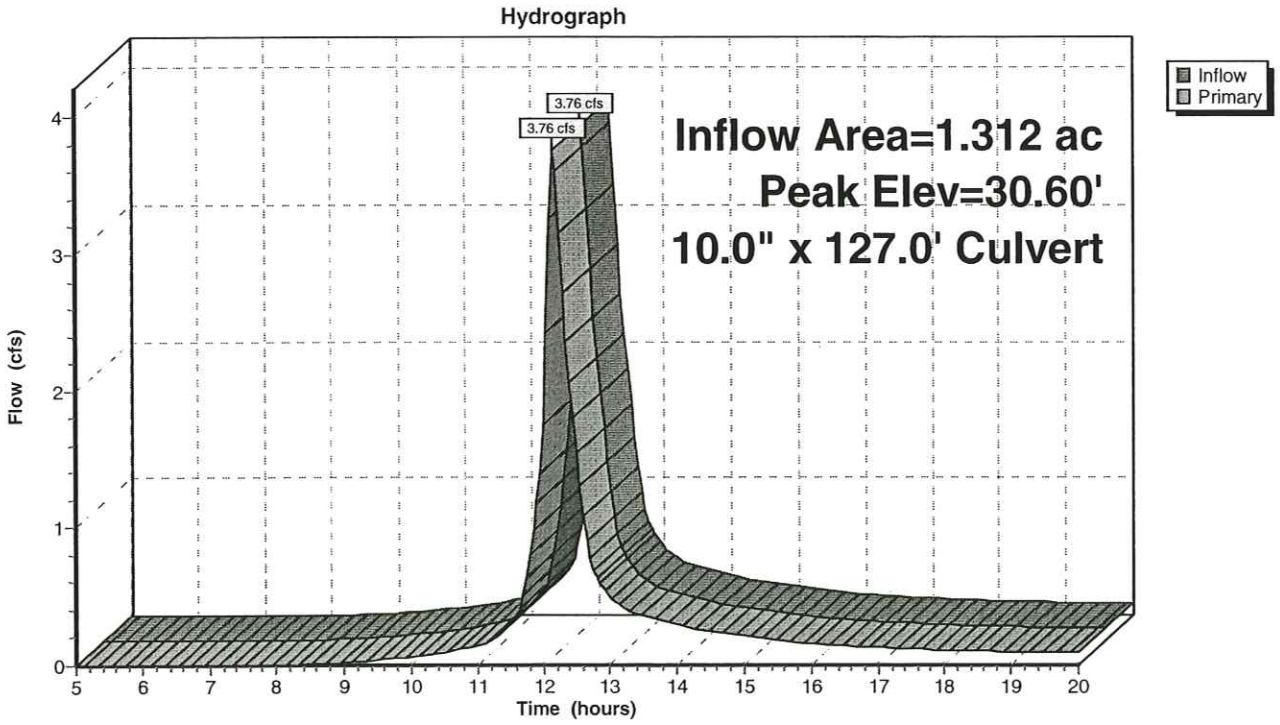
Inflow Area =	1.312 ac,	12.09% Impervious,	Inflow Depth >	2.72" for 25-Year Storm event
Inflow =	3.76 cfs @	12.16 hrs, Volume=	0.298 af	
Outflow =	3.76 cfs @	12.16 hrs, Volume=	0.298 af,	Atten= 0%, Lag= 0.0 min
Primary =	3.76 cfs @	12.16 hrs, Volume=	0.298 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 30.60' @ 12.16 hrs
Flood Elev= 29.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.51'	**10.0" x 127.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 26.15' S= 0.0028 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=3.70 cfs @ 12.16 hrs HW=30.49' (Free Discharge)
↑**1=Culvert** (Barrel Controls 3.70 cfs @ 6.78 fps)

Pond DB3:



Summary for Pond DB5:

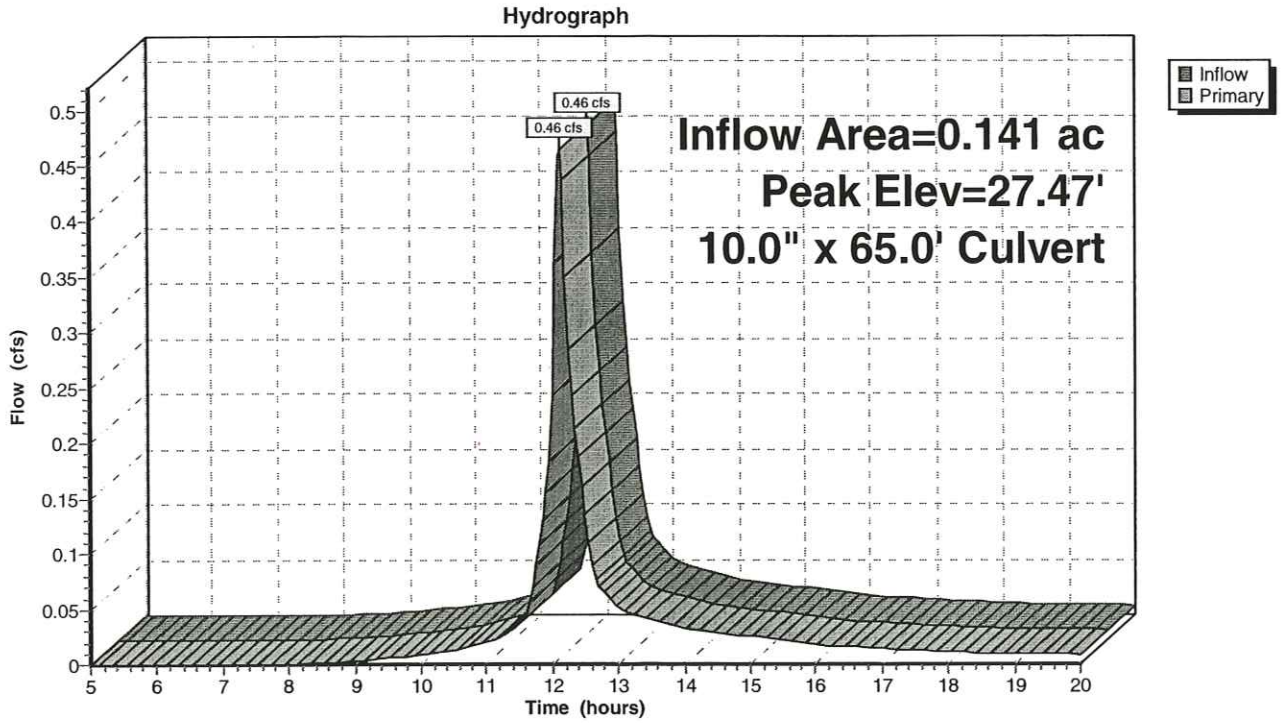
Inflow Area = 0.141 ac, 11.23% Impervious, Inflow Depth > 2.84" for 25-Year Storm event
Inflow = 0.46 cfs @ 12.12 hrs, Volume= 0.033 af
Outflow = 0.46 cfs @ 12.12 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.0 min
Primary = 0.46 cfs @ 12.12 hrs, Volume= 0.033 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 27.47' @ 12.12 hrs
Flood Elev= 29.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	27.02'	**10.0" x 65.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 26.84' S= 0.0028 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=0.45 cfs @ 12.12 hrs HW=27.46' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.45 cfs @ 2.22 fps)

Pond DB5:



Summary for Pond DB7:

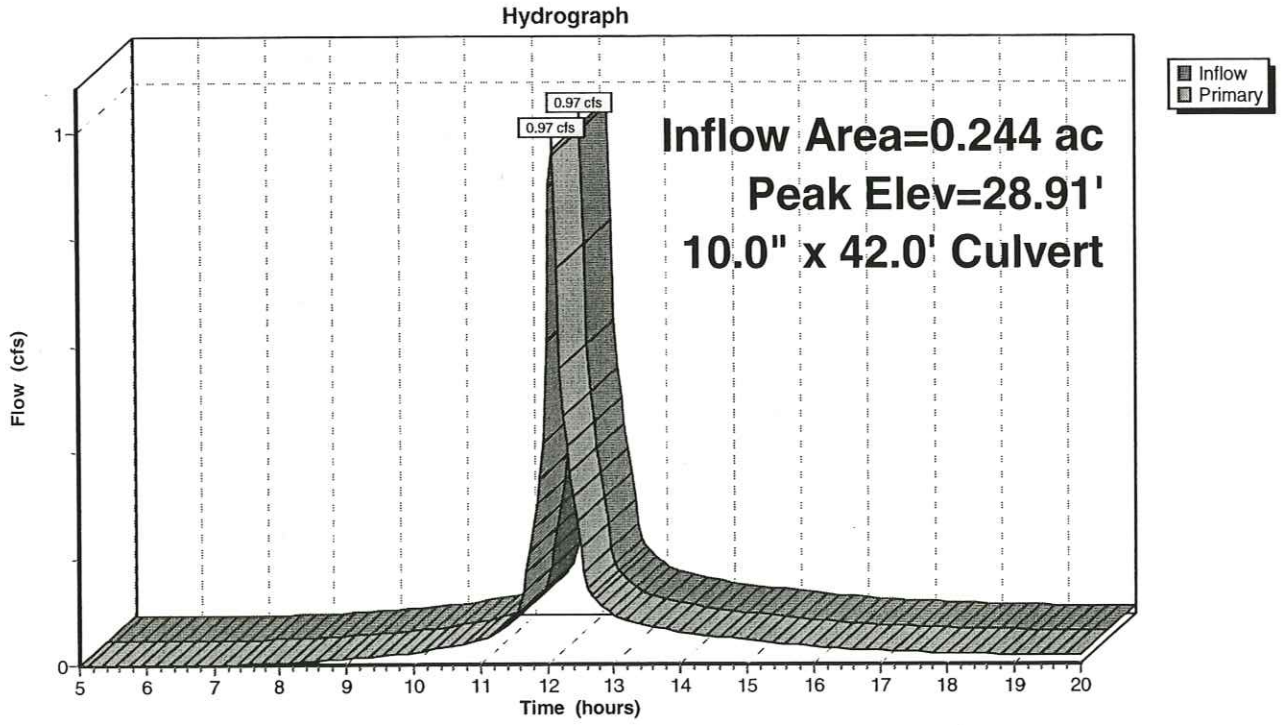
Inflow Area = 0.244 ac, 31.10% Impervious, Inflow Depth > 3.22" for 25-Year Storm event
Inflow = 0.97 cfs @ 12.09 hrs, Volume= 0.065 af
Outflow = 0.97 cfs @ 12.09 hrs, Volume= 0.065 af, Atten= 0%, Lag= 0.0 min
Primary = 0.97 cfs @ 12.09 hrs, Volume= 0.065 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 28.91' @ 12.09 hrs
Flood Elev= 29.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	28.20'	**10.0" x 42.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 28.08' S= 0.0029 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=0.94 cfs @ 12.09 hrs HW=28.89' (Free Discharge)
1=Culvert (Barrel Controls 0.94 cfs @ 2.62 fps)

Pond DB7:



Summary for Pond IN2:

[82] Warning: Early inflow requires earlier time span

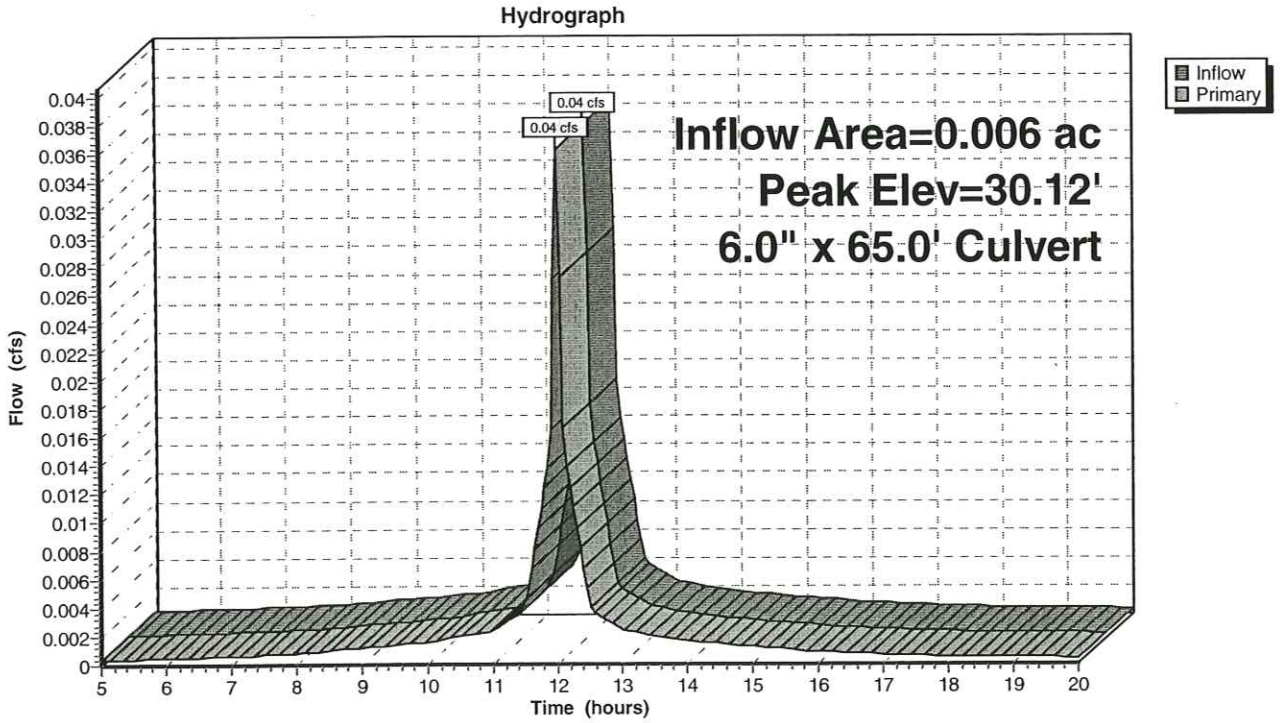
Inflow Area = 0.006 ac,100.00% Impervious, Inflow Depth > 4.87" for 25-Year Storm event
Inflow = 0.04 cfs @ 12.00 hrs, Volume= 0.002 af
Outflow = 0.04 cfs @ 12.00 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min
Primary = 0.04 cfs @ 12.00 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 30.12' @ 12.00 hrs
Flood Elev= 31.50'

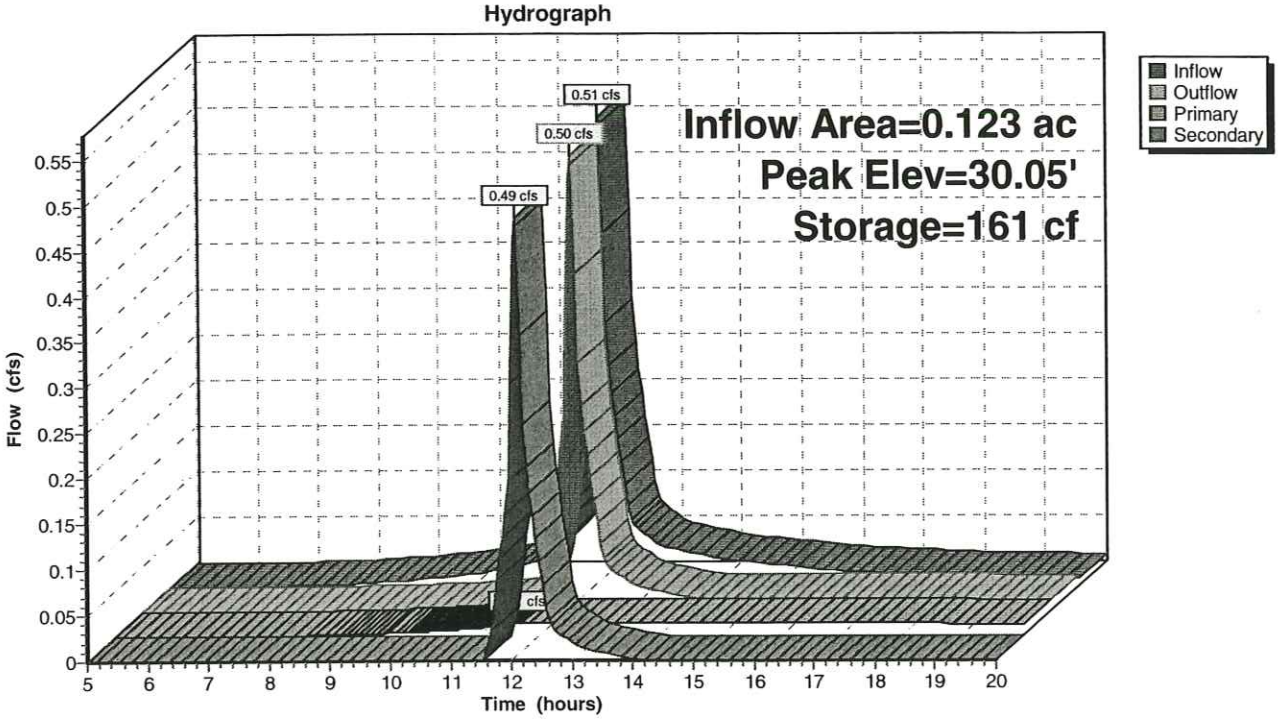
Device	Routing	Invert	Outlet Devices
#1	Primary	30.00'	**6.0" x 65.0' long Culvert** CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 27.00' S= 0.0462 '/' Cc= 0.900 n= 0.010 PVC, smooth interior

Primary OutFlow Max=0.04 cfs @ 12.00 hrs HW=30.12' (Free Discharge)
↑**1=Culvert** (Inlet Controls 0.04 cfs @ 0.95 fps)

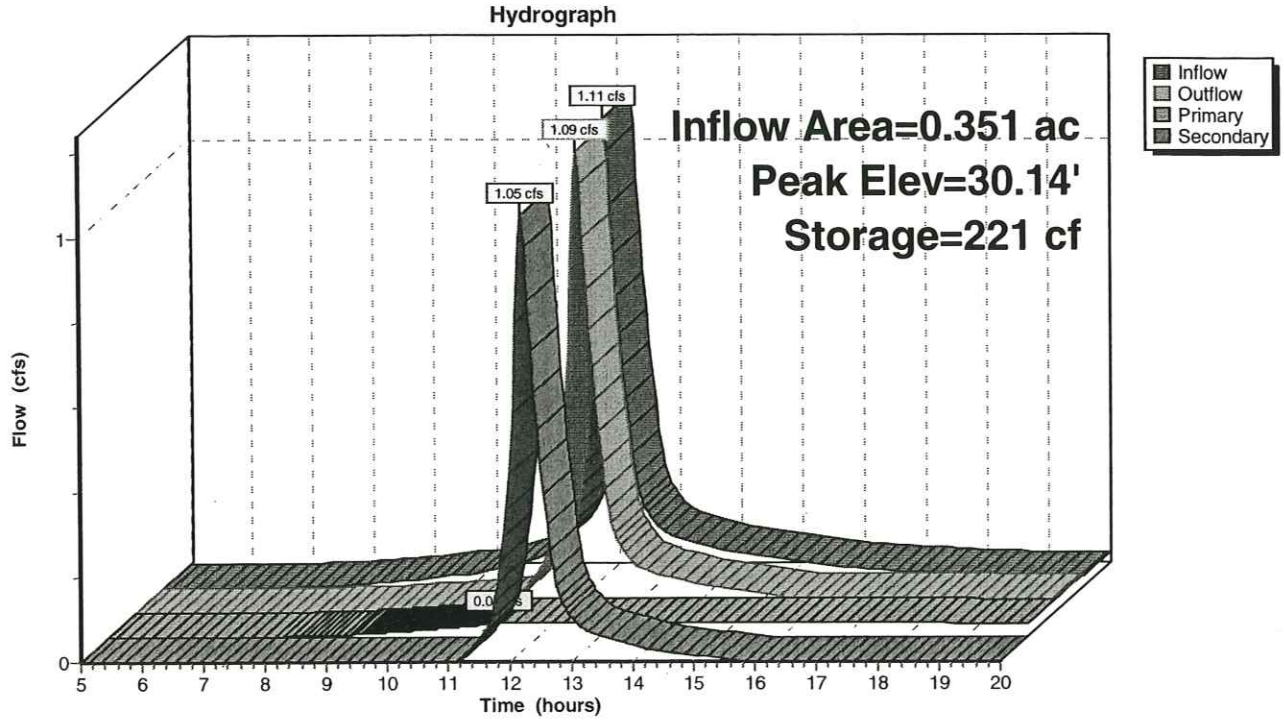
Pond IN2:



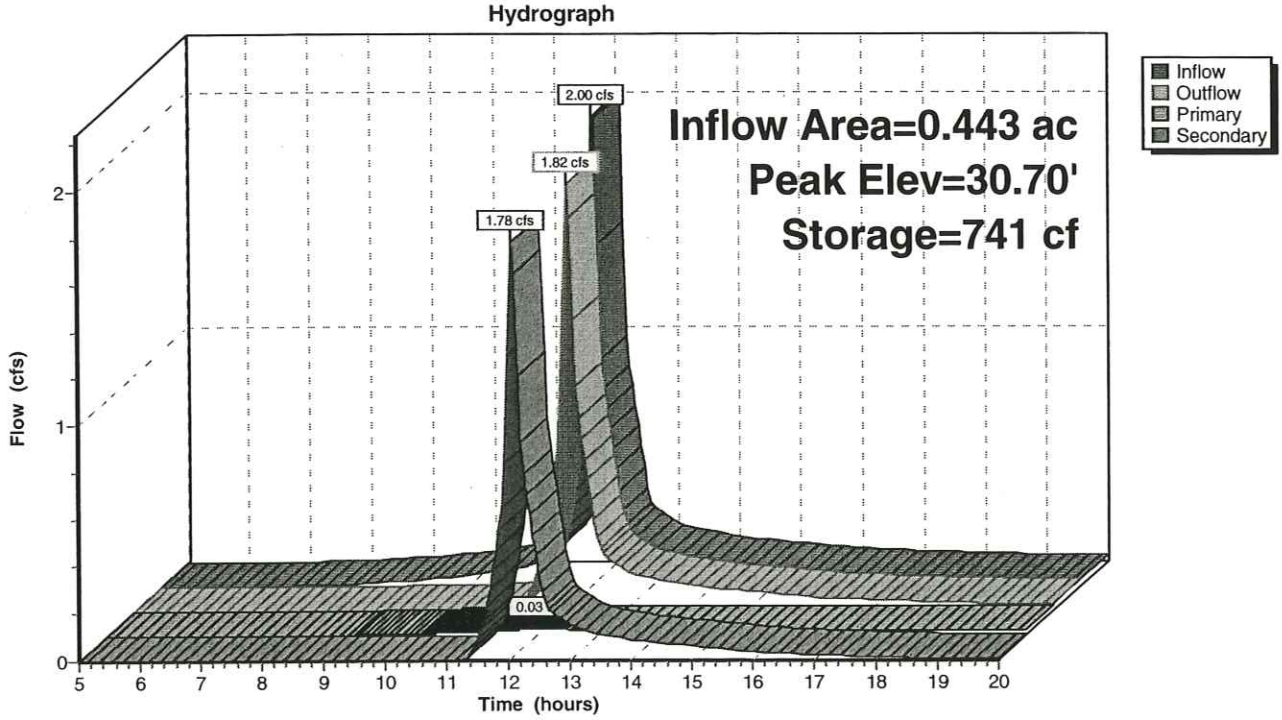
Pond SF1: Underdrain Soil Filter



Pond SF4: Underdain Soil Filter



Pond SF6: Underdrain Soil Filter



Appendix E

Communications with DEP & Soils Report from Peterson Rabasca

Dana Souza
Director

Robert B. Ganley
City Manager

CITY OF PORTLAND
Parks & Recreation Department

Nancy A. Geer
Recreation Administrator

Carol McClure
Operations Manager

Donn Mathews
Parks Coordinator

Jeff Tarling
City Arborist

Christopher DiMatteo
Landscape Architect

James E. Kelley
Principal Financial Officer

Cemetery Coordinator
797-4597

John Wone
Athletic Facilities
Coordinator

Sally DeLuca
Program Coordinator

Marie Davis Sweatt
Aquatics Supervisor
874-8456

Keith Hansen
Adult & Senior
Program Coordinator

Gina L. Ripley
Safety Coordinator

David Venditti
Portland Ice Arena
774-8553

Riverside Municipal
Golf Course 797-3524

Dan Brown
P.D.D. Coordinator

Reiche Community
Center 874-8873

Riverton Community
Center 874-8455

Cummings Community
Center 874-8870

Peaks Island Community
Center 766-2970

January 9, 2001

Mr. Randy McMullin
Maine Department of Environmental Protection
312 Canco Road
Portland, ME 04103

RE: Dougherty Field - Master Plan

Dear Mr. McMullin:

Please review the enclosed project summary of the proposed improvements at Dougherty Field. This summary, prepared by our consultant Peterson-Rabasca Geoengineers, is being forwarded in response to our December 14, 2000 meeting.

The proposed improvements are being planned in direct response to the deteriorating condition of these facilities and the growing demand for athletic facilities. Local residents and area athletic program leaders participated in the planning process for the reconstruction of this facility and endorse the proposed improvements.

The subsurface investigations conducted on this site show that the existing conditions are not appreciably different from other park properties in the City of Portland, and our Department is prepared to utilize appropriate construction methods in handling any exposed ash materials.

If you have any questions please feel free to contact me at 874-8793 or by email at *sch@ci.portland.me.us*.

Sincerely,

Stephan C. Howick

Enc.

cc.
Gloria Thomas, Portland Parks and Recreation
Christopher DiMatteo, Portland Parks and Recreation

Proposed Master Plan Improvements:

The proposed master planning will re-arrange and re-orient the athletic fields and tennis courts into a more efficient use. The proposed structural changes will be to improve the site runoff drainage by raising the site grade on the east side of the site next to St James Street by 2 to 4 feet, and slightly lowering the grade along Douglas Street by 1 to 1.5 feet. The desired final slope across the site will be about 2 percent.

The proposed layout of the new fields and courts is shown on Figure 3. Final grades are not shown on this plan. The tennis courts will be moved from the southern end of the site to the northern end, just south of the existing pool. The pool will remain as is, however a small wading pool will be added to the east side between St. James street and the existing pool.

The majority of the work will involve reconstruction and re-grading of the athletic fields. The typical turf section will consist of 6-inches of topsoil, 6-inches of drainage sand, and a series of new underdrains. The underdrain spacing has not been selected at this time, however they are expected to be 2 to 4 feet below the final grade.

2.0 Historical Site Use and Subsurface Conditions

Historical Site Use:

As part of our investigation we obtained topographic plans from the late 1800s, and 1950s, as well as aerial photographs taken in 1953 and 1964. Based on this historical data and additional information from an investigation by Sebago Techniques related to the West Elementary School, and information summarized by the Parks and Recreation Department in their Project Scope dated August 11, 2000, the site history is summarized as follows:

1. The earliest data available indicates that in 1876 the site contained no buildings and a 1882 map shows the Smith and Brown farm occupied the site. Topographic contours of the site were obtained from the City of Portland survey archives for conditions in the late 1890s. Comparing these contours with the existing contours shows an apparent low swale running from Douglas Street in a southeasterly direction toward what is now the I-295 off ramp for Congress Street Westbound. The center of the swale appears to be in the approximate location of the two sewer lines running across the site. The plan also shows that the ground surface on the eastern and northern portions of the site was higher than the present elevation by 12 to 14 feet.
2. In the early 1900s (1909 to 1914), the site was occupied by the SB Densmore and Melvin Hamblet brick manufacturers. Based on anecdotal information, we understand that the brick company excavated the site clay and used it to manufacture bricks. Specific details as to the extent of the excavation made by the brick company are not available. It is evident that the brick company excavated soils to at least the current grade. Evidence from the aerial photographs (as discussed in Item 5 below) indicates that the excavation extended below the existing grades
3. The site was used as a municipal landfill from the 1920s through the 1940s. There was no information available as to the nature of the waste disposed at the site except that noted in a Sebago

James Street. Borings where ash was encountered are noted on Figure 2 along with the depth below ground surface to the top of ash. We tested six of the ash samples for total lead concentrations with the following results:

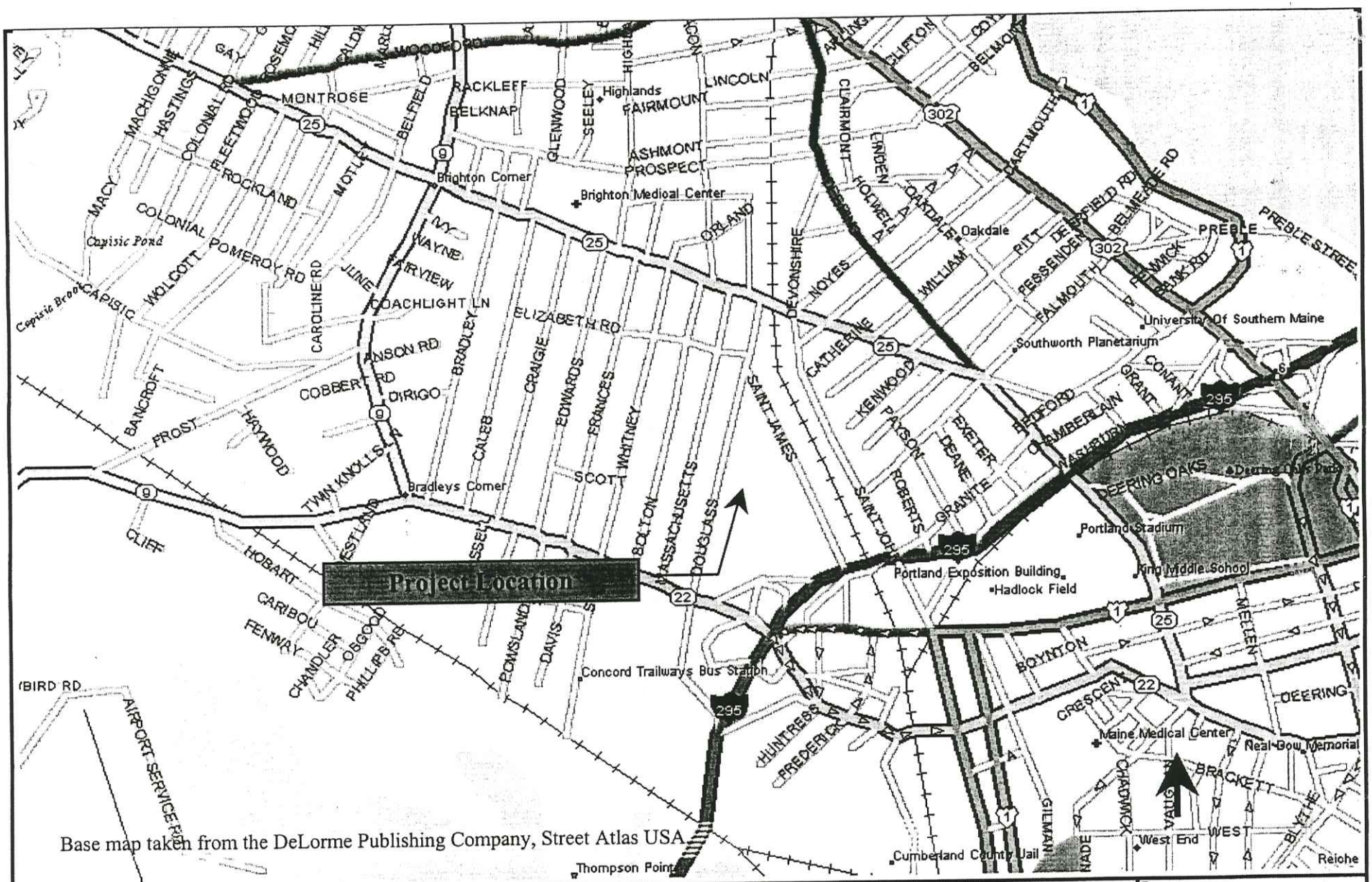
Sample Number	Total Lead Concentration (mg/kg)
B13, S2	373
B7, S7	79
B1, S2	544
B22, S2	1910
B12, S2	1600
B2, S2	227

The total lead analyses were conducted by Maine Environmental Laboratory and are included in Appendix A. The results are indicated on Figure 2 along with the depth of the sample. As shown on the figure, the results show a substantial variation in the total lead concentration.

Subsurface Conditions in Existing Tennis Court Area: Two borings were drilled within the footprint of the existing tennis courts, B-19 and B-20. These borings encountered approximately 2.5 inches of asphalt pavement underlain by 0.7 to 0.9 feet of brown silty sand fill (base soils). At boring B20, a 0.2 foot thick layer of black ash fill was encountered. Beneath the base fill and ash, a gray silty clay fill was encountered to depths of about 5-feet. The clay was medium stiff based on N-values ranging from 13 to 22 blows per foot. At approximately 5-feet, the borings encountered a gray and brown silty sand with clay layers and trace silt and fine gravel. This zone appeared to be native soils. These native soils were loose to medium dense based on N-values ranging from 4 to 20 blows per foot. Groundwater was encountered at about 4.0 to 5.0 feet bgs.

Subsurface Conditions in Proposed Tennis Court Area Adjacent to Pool: Borings B-6 and B-8 were drilled within the general area of the proposed tennis court, south of the existing pool. The borings encountered approximately 0.5 to 0.6 inches of topsoil. Boring B-6 encountered 1.5 feet of stiff silty clay fill overlying 3-feet of clean sand fill, and 1.3 feet of brown silty sand, that appeared to be native soil. An auger refusal was encountered at 8.9 feet bgs. Boring B-8 encountered 3.5 feet of stiff silty clay fill, changing to a gray soft silty clay at about 5-feet. This gray clay extended to about 8 to 10 feet, where it transitioned to a gray fine silty sand with increasing density. An auger refusal was encountered at 13.4 feet in Boring B-8. Groundwater was encountered at about 6.0 to 8.0 feet bgs at this location.

Subsurface Conditions in the Vicinity of the Proposed Wading Pool: Borings B-7 was drilled in the vicinity of the pool, and encountered 0.5 feet of topsoil, 1.5 feet of fine to coarse silty sand, overlying 2.0 feet of loose gray sandy fill soil (native), with a substantial ash content, 4-feet of soft silty clay soil with numerous sand layers grading to a gray silty gravelly sand at 9.5 feet bgs. Refusal was encountered at 11.5 feet bgs. The groundwater was encountered at 5.0 feet bgs.



PETERSON-RABASCA GEOENGINEERS *Yarmouth, Maine*	Project: **Dougherty Field Site Improvements**	Title: **Project Location Map**		By:	**SJR**
				Date:	**12/12/00**
	Client: **DHA/City of Portland**	Proj. No: **10021**	Scale: **nts**	Fig. No:	**1**