## CELEBRATING150 YEARS

## VOLUME CLI NUMBER 103

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## THE CITY RECORD

## ERIC L. ADAMS

Mayor
DAWN M. PINNOCK
Commissioner, Department of Citywide Administrative Services

## JANAE C. FERREIRA <br> Editor, The City Record

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## PUBLIC HIFARINGS AND MPHITINGS

See Also: Procurement; Agency Rules

## BOROUGH PRESIDENT - BROOKLYN

■ PUBLIC HEARINGS

NOTICE IS HEREBY GIVEN that the Brooklyn Borough President, on behalf of the Brooklyn Borough Board and in accordance with Chapter 10, Section 241 of the New York City Charter, has scheduled an in-person public hearing for Tuesday, June 4, 6:00 P.M. at Brooklyn Borough Hall, 209 Joralemon Street to review City of Yes for Housing

Opportunity; a proposed Citywide zoning text amendment to expand opportunities for housing within all zoning districts, and across all 59 of the City's Community Districts. These changes to the City's Zoning Resolution would enable more housing and a wider variety of housing types in every neighborhood, from the lowest-density districts to the highest, to address the housing shortage and high cost of housing in New York City.
Public testimony is limited to two (2) minutes per person. Preregistration is not required. Written testimony can be emailed to testimony@brooklynbp.nyc.gov until Friday, June 7 at 5:00 P.M.
Accessibility questions: Corina Lozada, (718) 802-3883, corina.lozada@ brooklynbp.nyc.gov, by: Wednesday, May 29, 2024, 3:00 P.M.
页
my22-j4

## CITY PLANNING COMIMISSION

## - PUBLIC HEARINGS

The City Planning Commission will hold a public hearing accessible both in-person and remotely via the teleconferencing application Zoom, at 10:00 A.M. Eastern Daylight Time, on Wednesday, May 29, 2024, regarding the calendar items listed below. The public hearing will be held in person in the NYC City Planning Commission Hearing Room, Lower Concourse, 120 Broadway, New York, NY. Anyone attending the meeting in-person is encouraged to wear a mask.
The meeting will be live streamed through Department of City Planning's (DCP's) website and accessible from the following webpage, which contains specific instructions on how to observe and participate, as well as materials relating to the meeting: https://www.nyc.gov/site/ nycengage/events/city-planning-commission-public-meeting/461633/1
Members of the public attending remotely should observe the meeting through DCP's website. Testimony can be provided verbally by joining
the meeting using either Zoom or by calling the following number and entering the information listed below:

```
877 8535247 US Toll-free
888788 0099 US Toll-free
253 215 8782 US Toll Number
213338 8477 US Toll Number
Meeting ID: 618 2377396
[Press # to skip the Participation ID]
Password: 1
```

To provide verbal testimony via Zoom please follow the instructions available through the above webpage (link above).
Written comments will also be accepted until 11:59 PM, one week before the date of the vote. Please use the CPC Comments form that is accessible through the above webpage.
Please inform the Department of City Planning if you need a reasonable accommodation, such as a sign language interpreter, in order to participate in the meeting. The submission of testimony, verbal or written, in a language other than English, will be accepted, and real time interpretation services will be provided based on available resources. Requests for a reasonable accommodation or foreign language assistance during the meeting should be emailed to [AccessibilityInfo@ planning.nyc.gov] or made by calling 212-720-3508. Requests must be submitted at least five business days before the meeting.

## BOROUGH OF BROOKLYN <br> Nos. 1-2 <br> 3033 AVENUE V REZONING <br> No. 1

## CD 15

C 240131 ZMK
IN THE MATTER OF an application submitted by Ford Coyle Properties Inc. pursuant to Sections 197-c and 201 of the New York City Charter for the amendment of the Zoning Map, Section No. 29a:

1. eliminating from within an existing R4 District a C1-2 District bounded by a line 100 feet northerly of Avenue V, Coyle Street, Avenue V, and Ford Street;
2. changing from an R4 District to an R7D District property bounded by a line 100 feet northerly of Avenue V, Coyle Street, Avenue V, and Ford Street; and
3. establishing within the proposed R7D District a C2-4 District bounded by a line 100 feet northerly of Avenue V, Coyle Street, Avenue V, and Ford Street;
as shown on a diagram (for illustrative purposes only) dated March 18, 2024, and subject to the conditions of the CEQR Declaration E-752.

## No. 2

CD 15
N 240132 ZRK
IN THE MATTER OF an application submitted by Ford Coyle Properties Inc., pursuant to Section 201 of the New York City Charter, for an amendment of the Zoning Resolution of the City of New York, modifying APPENDIX F for the purpose of establishing a Mandatory Inclusionary Housing area.
Matter underlined is new, to be added;
Matter struek out is to be deleted;
Matter within \# \# is defined in Section 12-10;
*** indicates where unchanged text appears in the Zoning Resolution.

## APPENDIX F

Inclusionary Housing Designated Areas and Mandatory
Inclusionary Housing Areas
BROOKLYN
***

Brooklyn Community District 15
Map 4 - [date of adoption]
[EXISTING MAP]

[PROPOSED MAP]


Mandatory inclusionary Housing Program Area see Section 23-154(d)(3)
Area 4 -2/24/22 MIH Program Option 1 and Deep Affordability Option Area \# - [date of adoption] MIH Program Option 1 and Option 2

Portion of Community District 15, Brooklyn

No. 3
197 BERRY ST REZONING

## CD 1

C 240072 ZMK
IN THE MATTER OF an application submitted by Bensing 250 LLC pursuant to Sections 197-c and 201 of the New York City Charter for an amendment of the Zoning Map, Section Nos. 12c and 12d, by changing from an M1-2/R6B District to an M1-4/R6B District property bounded by Berry Street, a line midway between North $4^{\text {th }}$ Street and North $3^{\text {rd }}$ Street, Bedford Avenue, and North $3^{\text {rd }}$ Street, as shown on a diagram (for illustrative purposes only) dated February 20, 2024.
Sara Avila, Calendar Officer
City Planning Commission
120 Broadway, 31 ${ }^{\text {st }}$ Floor, New York, N.Y. 10271
Telephone (212) 720-3366
Accessibility questions: 212-720-3508, AccessibilityInfo@planning.nyc. gov, by: Tuesday, May 21, 2024, 5:00 P.M.


## COMIMUNITY BOARDS

■ PUBLIC HEARINGS

NOTICE IS HEREBY GIVEN that the following matters have been scheduled for public hearing by Community Board:

## BOROUGH OF QUEENS

COMMUNITY BOARD NO. 11 - Monday, June 3, 2024 7:30 P.M. Korean Community Services, 203-05 32 Avenue, Bayside, NY 11361.

## N 240290 ZRY

A proposal from the New York City Department of City Planning for a Citywide zoning text amendment to the NYC Zoning Resolution to enable more housing and a wider variety of housing types in all neighborhoods citywide from the lowest-density to the highest to address the housing shortage and high cost of housing in New York City.

## \#624-68BZ

An application to the NYC Board of Standards and Appeals for an extension of term of a variance permitting a two-story enlargement to an existing building occupied as a wholesale plumbing supply house, stores and office in an R3-2 zoning district.
Accessibility questions: Joseph Marziliano, (718) 225-1054, QN11@cb. nyc.gov, by: Friday, May 31, 2024, 5:00 P.M.
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## BOARD OF EDUCATION RETIREIVENT SYSTEMM

■ NOTICE

The Board of Education Retirement System Board of Trustees Meeting will be held in-person at our 55 Water Street office, 50th Floor on Thursday, May 30, 2024, from 4:00 P.M. - 6:00 P.M. If you would like to attend this meeting, please contact BERS Executive Director, Sanford Rich, at Srich4@bers.nyc.gov.
my21-30

Our next Executive Committee Meeting will be held in-person at our 55 Water Street office (50th floor) Thursday, May 30, 2024, from 11:45 A.M. - 2:15 P.M. If you would like to attend this meeting, please reach out to Salil Mehta at smehta8@bers.nyc.gov.
my21-30

Our next Audit Committee Meeting will be held in-person at 55 Water Street, 50th Floor on Thursday, May 30, 2024 from 2:30 P.M. - 4:00 P.M. If you would like to attend this meeting, please reach out to Iyekeze Ezefili at iezefili@bers.nyc.gov.
my21-30

## EQUAL EIVIPLOYIMENT PRACTICES COMIMISSION

## ■ MEETING

## Notice of NYC Equal Employment Practices Commission Meeting

When and where is the Commission Meeting? The Equal
Employment Practices Commission's $273^{\text {rd }}$ Commission Meeting will take place at 10:15 A.M. on Thursday, May 30, 2024, in the
Commission's Conference Room/Library located at 253 Broadway, Suite 602, New York, NY 10007. The meeting will also be conducted by video conference via Microsoft Teams and streamed live via YouTube using the details below:
Microsoft Teams Details
Meeting ID: 295347682661
Meeting passcode: 2Tbqjd

- Join by internet
https://teams.microsoft.com/v2/


## - Join by phone

(646) 893-7101 United States Toll (New York City)

Phone Conference ID: 263729 779\#

## YouTube Details

- Live Stream video link
https://youtube.com/live/7lEMKz9IPBI

How do I ask questions during the Commission meeting?
Anyone can ask questions during the Commission meeting by:

- Microsoft Teams - You can submit your questions directly through the chat panel of Microsoft Teams once joined via the internet option above
- Email - You can email questions to ibowen@eepc.nyc.gov

Is there a deadline to submit questions? Yes, you must submit all questions during the meeting session on May 30, 2024.
Can I review the recording of the Commission Meeting? Yes, you can review the recorded Commission meeting, which will be made available online by going to the Equal Employment Practices Commission's YouTube page https://www.youtube.com/channel/ UCdgAeD4p-esdjymDTdGScfA/featured.
Accessibility questions: Imani Bowen, ibowen@eepc.nyc.gov, by: Tuesday, May 28, 2024, 4:00 P.M.
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my21-30

## FRANCHISE AND CONCESSION REVIEW COMIMITTEE

$\square$ PUBLIC HEARINGS

Notice of a Franchise and Concession Review Committee (FCRC) Public Hearing on Agency Annual Concession Plans for Fiscal Year 2025 pursuant to Section 1-10 of the Concession Rules of the City of New York (Concession Rules), to be held on Monday, June 10, 2024, at 2 Lafayette Street, Room 1412, New York, NY 10007, commencing at 2:30 P.M.
At this hearing, the FCRC will further solicit comments about the provisions of the Concession Rules from the vendor community, civic groups and the public at large. The FCRC shall consider the issues raised at the Public Hearing in accordance with the procedures set forth in the New York City Charter under the City Administrative Procedure Act.

The following agencies submitted an Annual Concession Plan for Fiscal Year 2025: the Department of Parks and Recreation; the Department of Citywide Administration Services; the Department of Environmental Protection; the Department of Corrections; the Department of Health and Mental Hygiene; the Department of Transportation; the New York City Fire Department; the Department of Housing Preservation and Development; NYC Tourism + Conventions on behalf of the
Department of Small Business Services; the New York City Economic Development Corporation on behalf of the Department of Small Business Services; the New York City Administration for Children's Services; the New York City Department of Records and Information Services; and the New York City Police Department.
The portfolio of Agency Annual Concession Plans covers significant and non-significant concessions expiring, continuing and anticipated for solicitation or initiation in Fiscal Year 2025. Furthermore, the portfolio covers, inter alia:

- Department of Parks and Recreation: mobile food units, food service facilities, golf courses, driving ranges, marinas, tennis professionals, athletic facilities, Christmas trees, parking lots, markets, fairs, restaurants, concerts, newsstands, stables, gas stations, amusement venues, ice skating rinks, carousels, ferry services, bike rentals, sailboat rentals, souvenirs and gifts, beach equipment, and event programming.
- Department of Citywide Administrative Services: maritime/ non-maritime occupancy permits, merchandise and marketing, vending machines and restaurants.
- Department of Environmental Protection: gas purification.
- Department of Corrections: commissary services and vending machines.
- Department of Health and Mental Hygiene: drug discount card program.
- Department of Transportation: vending machines, pedestrian plazas, food courts, café, markets.
- New York City Fire Department: fire museum.
－Department of Housing Preservation and Development：café．
－NYC Tourism＋Conventions on behalf of the Department of Small Business Services：marketing，advertising，intellectual property and trademark merchandising．
－New York City Economic Development Corporation on behalf of the Department of Small Business Service：events／installations， parking lots，maritime and non－maritime occupancy permits．
－New York City Administration for Children＇s Services：vending machines．
－New York City Department of Records and Information Services： licensing representation．
－New York City Police Department：vending machines and cafeteria．
Written testimony may be submitted in advance of the hearing electronically to fcrc＠mocs．nyc．gov．All written testimony can be submitted up until the close of the public hearing and will be distributed to the FCRC after the hearing．
Interested parties may obtain a copy of the Agency Annual Concession Plans by contacting MOCS＇FCRC Team via email at fcrc＠mocs．nyc． gov．Upon request，a PDF version of the Agency Annual Concession Plans is available free of cost．
A record of the hearing will be posted on the FCRC website at：https：／／ www．nyc．gov／site／mocs／opportunities／franchises－concessions．page．
For further information on accessibility or to make a request for accommodations，such as sign language interpretation services，please contact the Mayor＇s Office of Contract Services（MOCS）via e－mail at DisabilityAffairs＠mocs．nyc．gov or via phone at（212）298－0800．Any person requiring reasonable accommodation for the public hearing should contact MOCS at least five（5）business days in advance of the hearing to ensure availability．
Accessibility questions：（212）298－0800，by：Monday，June 3，2024，2：30 P．M．


## HOUSING AUTHORITY

■ NOTICE
The next Board Meeting of the New York City Housing Authority is scheduled for Wednesday，May 29， 2024 at 10：00 A．M．in the
Ceremonial Room on the 5th Floor of 90 Church Street，New York，New York（unless otherwise noted）．Copies of the Calendar will be available on NYCHA＇s Website or may be picked up at the Office of the Corporate Secretary at 90 Church Street，5th Floor，New York，New York，no earlier than 24 hours before the upcoming Board Meeting．Copies of the Draft Minutes will also be available on NYCHA＇s Website or may be picked up at the Office of the Corporate Secretary no earlier than 3：00 P．M．on the Thursday following the Board Meeting．
Any changes to the schedule will be posted here and on NYCHA＇s Website at https：／／www1．nyc．gov／site／nycha／about／board－meetings．page to the extent practicable at a reasonable time before the meeting．
The meeting is open to the public．Pre－registration，at least 45 minutes before the scheduled Board Meeting，is required by all speakers． Comments are limited to the items on the Calendar．Speaking time will be limited to three minutes．The public comment period will conclude upon all speakers being heard or at the expiration of 30 minutes allotted by law for public comment，whichever occurs first．
Accessibility questions：（212）306－3429，by：Wednesday，May 15，2024， 5：00 P．M．
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my9－29

The next Audit \＆Finance Committee Meeting of the New York City Housing Authority is scheduled for Tuesday，June 11，2024，at 10：00 A．M．in the Ceremonial Room on the 5th Floor of 90 Church Street， New York，New York．Copies of the Agenda will be available on NYCHA＇s Website or may be picked up at the Department of Internal Audit and Assessment at 90 Church Street，9th Floor，New York，NY， no earlier than twenty－four（24）hours before the upcoming Audit \＆ Finance Committee Meeting．Copies of the draft Minutes are available on this web page or can be picked up at the Department of Internal Audit and Assessment no earlier than 3：00 P．M．on Tuesday，two weeks after the Audit \＆Finance Committee Meeting．
Any changes to the schedule will be posted here and on NYCHA＇s website at https：／／www1．nyc．gov／site／nycha／about／audit－committee－ meetings．page to the extent practicable at a reasonable time before the meeting．

The meeting will be streamed live on YouTube Channel and on NYCHA＇s Website，at https：／／www1．nyc．gov／site／nycha／about／audit－ committee－meetings．page for public access．
The meeting is open to the public．For those wishing to provide public comment，pre－registration is required，at least 45 minutes before the scheduled Committee Meeting．Comments are limited to the items on the agenda．
Speaking time will be limited to three minutes．Speakers will provide comments in the order in which the requests to comment are received． The public comment period will conclude upon all speakers being heard or at the expiration of 30 minutes allotted for public comment， whichever occurs first．
Any person requiring a reasonable accommodation in order to participate in the Audit \＆Finance Committee Meeting should contact the Department of Internal Audit and Assessment by phone at 212－306－3441 or by e－mail at audit＠nycha．nyc．gov，no later than Tuesday，May 28， 2024 at 5：00 P．M．
For additional information regarding the Audit \＆Finance Committee Meeting，please visit NYCHA＇s Website，contact by phone，at（212）306－3441， or by email，at audit＠nycha．nyc．gov．
Accessibility questions：Kenichi Mitchell（212）306－3441，by：Tuesday， May 28，2024，5：00 P．M．
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my23－j11

## LANDMARKS PRESERVATION COMIMISSION

## $\square$ PUBLIC HEARINGS

NOTICE IS HEREBY GIVEN that pursuant to the provisions of Title 25，Chapter 3 of the Administrative Code of the City of New York （Sections 25－303，25－307，25－308，25－309，25－313，25－318，25－320）on Tuesday，June 4，2024，at 9：30 A．M．，a public hearing will be held in the public hearing room at 1 Centre Street，9th Floor，Borough of Manhattan，with respect to the following properties，and then followed by a public meeting．Participation by videoconference may be available as well．Please check the hearing page on LPC＇s website（https：／／www． nyc．gov／site／lpc／hearings／hearings．page）for updated hearing information．The final order and estimated times for each application will be posted on the Landmarks Preservation Commission website the Friday before the hearing．Please note that the order and estimated times are subject to change．An overflow room is located outside of the primary doors of the public hearing room．Any person requiring reasonable accommodation in order to participate in the hearing or attend the meeting should contact Gregory Cala，Community and Intergovernmental Affairs Coordinator，at gcala＠lpc．nyc．gov or 212－602－7254 no later than five（5）business days before the hearing or meeting．Members of the public not attending in person can observe the meeting on LPC＇s YouTube channel at www．youtube．com／nyclpc and may testify on particular matters by joining the meeting using either the Zoom app or by calling in from any phone．Specific instructions on how to observe and testify，including the meeting ID and password，and the call－in number，will be posted on the agency＇s website，on the Monday before the public hearing．
116 Pierrepont Street－Brooklyn Heights Historic District LPC－24－07987－Block 243－Lot 41－Zoning：R7－1
CERTIFICATE OF APPROPRIATENESS
A Greek Revival style rowhouse built in 1844．Application is to install rooftop mechanical equipment and skylights，raise the rear façade and infill window openings．
346 Broadway（aka 108 Leonard Street， 50 Lafayette Street）－ Individual and Interior Landmark
LPC－24－09650－Block 170 －Lot 7501－Zoning：C6－4A CERTIFICATE OF APPROPRIATENESS
A neo－Italian Renaissance style monumental skyscraper with neo－ Italian Renaissance style interiors designed by Stephen D．Hatch and McKim，Mead \＆White and built in 1894－98．Application is to legalize alterations to the designated interior lobby space in non－compliance with Landmarks Preservation Commission permit（s）．

## Governors Island－Governors Island Historic District

## LPC－24－07729－Block 1－Lot 111 －Zoning：R3－2，C4－1

## BINDING REPORT

A Romanesque Revival style storehouse／arsenal building built in 1875 and altered in 1938．Application is to modify entrances；install a
barrier－free access lift，signage，and rooftop mechanical equipment，and establish a master plan governing temporary site installations．
109 West Broadway－Tribeca South Historic District
LPC－24－09233－Block 146 －Lot 11 －Zoning：C6－2A
CERTIFICATE OF APPROPRIATENESS

An Italianate style store and loft building, built in 1860. Application is to establish a Master Plan governing the future installation of painted wall signs.

## 44 West 8th Street - Greenwich Village Historic District LPC-24-09252 - Block 553 - Lot 19 - Zoning: C4-5 <br> CERTIFICATE OF APPROPRIATENESS

An apartment building built in 1956. Application is to demolish the existing building and construct a new building.
256 West 75th Street - West End - Collegiate Historic District Extension
LPC-24-08232 - Block 1166 - Lot 161 - Zoning: R10A

## CERTIFICATE OF APPROPRIATENESS

A Queen Anne style rowhouse designed by William J. Merritt, and built in 1885-1886. Application is to legalize the installation of doors and cladding of the stoop without Landmarks Preservation Commission permit(s), and installation of windows and modification to the rear façade in non-compliance with Certificate of Appropriateness 20-06470.
my21-j4

NOTICE IS HEREBY GIVEN that pursuant to the provisions of Title 25, chapter 3 of the Administrative Code of the City of New York(Sections 25-303, 25-307, 25-308, 25-309, 25-313, 25-318, 25-320) on Tuesday, June 4, 2024, at 9:30 A.M., a public hearing will be held in the public hearing room at 1 Centre Street, 9th Floor, Borough of Manhattan, with respect to the following properties, and then followed by a public meeting. Participation by videoconference may be available as well. Please check the hearing page on LPC's website (https://www. nyc.gov/site/lpc/hearings/hearings.page) for updated hearing information. The final order and estimated times for each application will be posted on the Landmarks Preservation Commission website the Friday before the hearing. Please note that the order and estimated times are subject to change. An overflow room is located outside of the primary doors of the public hearing room. Any person requiring reasonable accommodation in order to participate in the hearing or attend the meeting should contact Gregory Cala, Community and Intergovernmental Affairs Coordinator, at gcala@lpc.nyc.gov or 212-602-7254 no later than five (5) business days before the hearing or meeting. Members of the public not attending in person can observe the meeting on LPC's YouTube channel at www.youtube.com/nyclpc and may testify on particular matters by joining the meeting using either the Zoom app or by calling in from any phone. Specific instructions on how to observe and testify, including the meeting ID and password, and the call-in number, will be posted on the agency's website, on the Monday before the public hearing.
345 Adams Street, Brooklyn (aka 372-392 Pearl Street, 11-17 Willoughby Street)

## LP-2680 - Block 140 - Lot 7503

## ITEM PROPOSED FOR PUBLIC HEARING

A renaissance Revival style commercial building designed by McKenzie, Voorhees \& Gmelin and built in 1922-1926 for the Brooklyn Edison Company.
my21-j4

NOTICE IS HEREBY GIVEN that pursuant to the provisions of Title 25, Chapter 3 of the Administrative Code of the City of New York (Sections 25-303, 25-307, 25-308, 25-309, 25-313, 25-318, 25-320) on Tuesday, June 11, 2024, at 9:30 A.M., a public hearing will be held in the public hearing room at 1 Centre Street, 9th Floor, Borough of Manhattan, with respect to the following properties, and then followed by a public meeting. Participation by videoconference may be available as well. Please check the hearing page on LPC's website (https://www. nyc.gov/site/lpc/hearings/hearings.page) for updated hearing information. The final order and estimated times for each application will be posted on the Landmarks Preservation Commission website the Friday before the hearing. Please note that the order and estimated times are subject to change. An overflow room is located outside of the primary doors of the public hearing room. Any person requiring reasonable accommodation in order to participate in the hearing or attend the meeting should contact Gregory Cala, Community and Intergovernmental Affairs Coordinator, at gcala@lpc.nyc.gov or 212-602-7254 no later than five (5) business days before the hearing or meeting. Members of the public not attending in person can observe the meeting on LPC's YouTube channel at www.youtube.com/nyclpc and may testify on particular matters by joining the meeting using either the Zoom app or by calling in from any phone. Specific instructions on how to observe and testify, including the meeting ID and password, and the call-in number, will be posted on the agency's website, on the Monday before the public hearing.
Willoughby-Hart Historic District

## LP-2683

ITEM PROPOSED FOR PUBLIC HEARING

The proposed designation of the Willoughby-Hart Historic District consists of the properties bounded by a line beginning at the northwest corner of the property line of 445 Willoughby Avenue, and extending easterly along the northern property lines of 445 through 507 Willoughby Avenue, southerly along the eastern property line of 507 Willoughby Avenue, across Willoughby Avenue and along the eastern property lines of 510 Willoughby Avenue and 75 Hart Street to the northern curbline of Hart Street, westerly along said curbline to a point on a line extending northerly from the eastern property line of 72 Hart Street, southerly along said line and the eastern property line of 72 Hart Street, westerly along the southern property lines of 72 through 12 Hart Street, northerly along a portion of the western property line of 12 Hart Street, westerly along the southern property lines of 10 through 2 Hart Street, to the eastern curbline of Nostrand Avenue, northerly along said curbline, across Hart Street and along the eastern curbline of Nostrand Avenue to a point on a line extending westerly from the northern property line of 1 Hart Street, easterly along said line and the northern property lines of 1 through 9 Hart Street, northerly along the western property lines of 11 Hart Street and 446 Willoughby Avenue, across Willoughby Avenue and along the western property line of 445 Willoughby Avenue to the point of beginning.

- my28-j10


## RENT GUIDELINES BOARD

■ NOTICE

## NOTICE IS HEREBY GIVEN THAT THE NEW YORK CITY

RENT GUIDELINES BOARD (RGB) will hold a public hearing on June 5, 2024 at Founders Auditorium, Medgar Evers College, 1650 Bedford Ave, 1st Floor, Brooklyn, NY 11225 from 5:00 P.M. to 8:00 P.M. to consider public comments concerning proposed rent adjustments on leases for apartments, lofts, hotels (including class A and class B hotels, SROs, rooming houses and lodging houses) and other housing units subject to the Rent Stabilization Law of 1969 and the Emergency Tenant Protection Act of 1974. These adjustments will affect leases commencing between October 1, 2024 through September 30, 2025.
Anyone who wants to comment on the proposed rule at a public hearing must sign up to speak. People wishing to speak at the public hearings can pre-register in advance. Pre-registration of speakers is advised. You can pre-register online through our website, nyc.gov/rgb, or you can sign up to speak by calling 212-669-7480 from 9:00 A.M. till 5:00 P.M., Monday through Friday. Pre-registration requests for the hearing must be received before 12:00 P.M. one business day prior to the public hearing date. For those who do not pre-register, registration is also available at the public hearings. You can register in-person from 5:00 P.M. to 8:00 P.M. on June 5. You will have two minutes to speak. For further information and to pre-register for a public hearing, call the RGB at (212) 669-7480.
Written requests for pre-registration must be received at the office of the Board at 1 Centre Street, Suite 2210, New York, NY, 10007 by 12:00 P.M. on the business day prior to the public hearing date. Written requests for registration can be emailed to csuperville@rgb.nyc.gov or mailed to the Rent Guidelines Board at the address listed above.
This hearing is wheelchair accessible and Spanish interpretation will be provided. Persons who request that a language interpreter, other than Spanish, or a sign language interpreter or other form of reasonable accommodation for a disability be provided at any of the scheduled hearings must notify Ms. Charmaine Superville at the NYC Rent Guidelines Board at (212) 669-7480 or via email at csuperville@ rgb.nyc.gov by May 24, 2024 no later than 4:30 P.M.
The public is invited to observe all public meetings and public hearings but is invited to speak only at the public hearings. All public hearings may be livestreamed from YouTube at: https://www.youtube.com/ RentGuidelinesBoard. Members of the public must be present at the public hearing location in order to testify.
Proposed rent guidelines for all of the above classes of stabilized housing units were adopted on April 30, 2024. Copies of the proposed guidelines are available from the NYC Rent Guidelines Board office at the above listed address, at the Board's website nyc.gov/rgb, or at rules. cityofnewyork.us.

## NOTICE IS HEREBY GIVEN that the New York City Rent

Guidelines Board (RGB) will hold a public hearing on May 30, 2024 at the Jamaica Performing Arts Center, Auditorium, 153-10 Jamaica Avenue, Jamaica, NY from 5:00 P.M. to 8:00 P.M. to consider public comments concerning proposed rent adjustments on leases for
apartments, lofts, hotels (including class A and class B hotels, SROs, rooming houses and lodging houses) and other housing units subject to the Rent Stabilization Law of 1969 and the Emergency Tenant Protection Act of 1974. These adjustments will affect leases commencing between October 1, 2024 through September 30, 2025.
Anyone who wants to comment on the proposed rule at a public hearing must sign up to speak. People wishing to speak at the public hearings can pre-register in advance. Pre-registration of speakers is advised. You can pre-register online through our website, nyc.gov/rgb, or you can sign up to speak by calling 212-669-7480 from 9:00 A.M. till 5:00 P.M., Monday through Friday. Pre-registration requests for the hearing must be received before 12:00 P.M. one business day prior to the public hearing date. For those who do not pre-register, registration is also available at the public hearings. You can register in-person from 5:00 P.M. to 8:00 P.M. on May 30. You will have two minutes to speak. For further information and to pre-register for a public hearing, call the RGB at (212) 669-7480.
Written requests for pre-registration must be received at the office of the Board at 1 Centre Street, Suite 2210, New York, NY, 10007 by 12:00 P.M. on the business day prior to the public hearing date. Written requests for registration can be emailed to csuperville@rgb.nyc.gov or mailed to the Rent Guidelines Board at the address listed above.
This hearing is wheelchair accessible and Spanish interpretation will be provided. Persons who request that a language interpreter, other than Spanish, or a sign language interpreter or other form of reasonable accommodation for a disability be provided at any of the scheduled hearings must notify Ms. Charmaine Superville at the NYC Rent Guidelines Board at (212) 669-7480 or via email at csuperville@ rgb.nyc.gov by May 24, 2024 no later than 4:30 P.M.
The public is invited to observe all public meetings and public hearings but is invited to speak only at the public hearings. All public hearings may be livestreamed from YouTube at: https://www.youtube.com/ RentGuidelinesBoard. Members of the public must be present at the public hearing location in order to testify.
Proposed rent guidelines for all of the above classes of stabilized housing units were adopted on April 30, 2024. Copies of the proposed guidelines are available from the NYC Rent Guidelines Board office at the above listed address, at the Board's website nyc.gov/rgb, or at rules.cityofnewyork.us.
my17-29

NOTICE IS HEREBY GIVEN that the New York City rent
guidelines board (RGB) will hold a public hearing on June 3, 2024 at the Main Theatre of Hostos Community College/CUNY, 450 Grand Concourse, Bronx, NY from 5:00 P.M. to 8:00 P.M. to consider public comments concerning proposed rent adjustments on leases for apartments, lofts, hotels (including class A and class B hotels, SROs, rooming houses and lodging houses) and other housing units subject to the Rent Stabilization Law of 1969 and the Emergency Tenant Protection Act of 1974. These adjustments will affect leases commencing between October 1, 2024 through September 30, 2025.
Anyone who wants to comment on the proposed rule at a public hearing must sign up to speak. People wishing to speak at the public hearings can pre-register in advance. Pre-registration of speakers is advised. You can pre-register online through our website, nyc.gov/rgb, or you can sign up to speak by calling 212-669-7480 from 9:00 A.M. till 5:00 P.M., Monday through Friday. Pre-registration requests for the hearing must be received before 12:00 P.M. one business day prior to the public hearing date. For those who do not pre-register, registration is also available at the public hearings. You can register in-person from 5:00 P.M. to 8:00 P.M. on June 3. You will have two minutes to speak. For further information and to pre-register for a public hearing, call the RGB at (212) 669-7480.
Written requests for pre-registration must be received at the office of the Board at 1 Centre Street, Suite 2210, New York, NY 10007 by 12:00 P.M. on the business day prior to the public hearing date. Written requests for registration can be emailed to csuperville@rgb.nyc.gov or mailed to the Rent Guidelines Board at the address listed above.
This hearing is wheelchair accessible and Spanish interpretation will be provided. Persons who request that a language interpreter, other than Spanish, or a sign language interpreter or other form of reasonable accommodation for a disability be provided at any of the scheduled hearings must notify Ms. Charmaine Superville at the NYC Rent Guidelines Board at (212) 669-7480 or via email at csuperville@ rgb.nyc.gov by May 24, 2024 no later than 4:30 P.M.
The public is invited to observe all public meetings and public hearings but is invited to speak only at the public hearings. All public hearings may be livestreamed from YouTube at: https://www.youtube.com/ RentGuidelinesBoard. Members of the public must be present at the public hearing location in order to testify.

Proposed rent guidelines for all of the above classes of stabilized housing units were adopted on April 30, 2024. Copies of the proposed guidelines are available from the NYC Rent Guidelines Board office at the above listed address, at the Board's website nyc.gov/rgb, or at rules. cityofnewyork.us.

> my21-31

## COURT NOTICES

## SUPREIVE COURT

## QUEENS COUNTY

- PUBLIC HEARINGS


## QUEENS COUNTY NOTICE OF PETITION INDEX NUMBER 709749/2024 CONDEMNATION PROCEEDING

In the Matter of the Application of the CITY OF NEW YORK, Relative to Acquiring Title in Fee Simple Absolute to Certain real property in Queens where not heretofore acquired for the same purpose, for

## ROADWAY IMPROVEMENTS IN ROSEDALE AREA STREETS STAGE 2

in the Borough of Queens, City and State of New York.
PLEASE TAKE NOTICE that the City of New York ("City") intends to make an application to the Supreme Court of the State of New York, Queens County, IA Part 38, for certain relief
The application will be made at the Queens County Courthouse, located at 88-11 Sutphin Boulevard, Part 38, Courtroom 116, in the Borough of Queens, City and State of New York. The Court has advised that the application will be taken on submission on June 6, 2024 at 10:00 A.M. If you would like an opportunity to be heard, please contact Richard Chase at rchase@nycourts.gov with a carbon copy to mkeenan@law.nyc.gov on or before June 4, 2024, and the court will schedule a hearing if needed.
The application is for an order:

1) authorizing the City to file an acquisition map in the Office of the City Register;
2) directing that upon the filing of the order granting the relief sought in this petition, together with the filing of the map in the Office of the City Register, title to the property shown on said map and sought to be acquired and more particularly described in this petition shall vest in the City in fee simple absolute;
3) providing that the just compensation that should be made to the owners of the real property sought to be acquired and described in this petition be ascertained and determined by the Court without a jury;
4) directing that within thirty days of entry of the order granting the relief sought in this petition, the City shall cause a Notice of Acquisition to be published in at least ten successive issues of The City Record, an official newspaper published in the City of New York, and shall serve a copy of such notice by first class mail on each condemnee or his, her, or its attorney of record; and
5) directing that each condemnee shall have a period of one calendar year from the vesting date for this proceeding in which to file a written claim, demand, or notice of appearance with the Clerk of this Court and to serve a copy of the same upon the Corporation Counsel of the City of New York, 100 Church Street, New York, New York, 10007.
The City of New York, in this proceeding, intends to acquire title in fee simple absolute to certain real property where not heretofore acquired for the same purpose, for the full reconstruction of roadways, sidewalks and curbs, pedestrian ramps, storm sewers, sanitary sewers, and water mains in the Rosedale neighborhood in the Borough of Queens, City and State of New York. This application is for the acquisition of
properties within the second stage of the Roadway Improvements in Rosedale Area Streets project.
The description of the real property to be acquired is as follows:

## Site 1

ALL that certain plot, piece or parcel of land, with buildings and improvements thereon erected, situate, lying and being in the Borough and County of Queens, City and State of New York, as bounded and described as follows:
BEGINNING at a point formed by the intersection of the northeasterly line of Hook Creek Boulevard (100 feet wide) with the northwesterly line of Frankton Street, ( 50 feet wide);
RUNNING THENCE northeasterly, along the northwesterly line of Frankton Street, a distance of 201.39 feet to a point on the Nassau County Line;
THENCE southeasterly, deflecting to the right $90^{\circ} 32^{\prime} 22.5^{\prime \prime}$ from the last mentioned course and along the Nassau County Line, a distance of 50.00 feet to a point on the southeasterly line of Frankton Street; THENCE southwesterly, along the southeasterly line of Frankton Street, deflecting to the right $89^{\circ} 27^{\prime} 37.5^{\prime \prime}$ from the last mentioned course, a distance of 200.01 feet to a corner formed by the intersection of the northeasterly line of Hook Creek Boulevard Street with the southeasterly line of Frankton Street;
THENCE southeasterly, deflecting to the left $89^{\circ} 27^{\prime} 37.5^{\prime \prime}$ from the last mentioned course and along the northeasterly line of Hook Creek Boulevard, a distance of 200.01 feet to a corner formed by the intersection of the northwesterly line of $145^{\text {th }}$ Avenue ( 50 feet wide) with the northeasterly line Hook Creek Boulevard;
THENCE northeasterly, deflecting to the left $90^{\circ} 32^{\prime} 22.5^{\prime \prime}$ from the last mentioned course and along the northwesterly line of 145th Avenue, a distance of 200.01 feet to a point on the Nassau County Line; THENCE southeasterly, deflecting to the right $90^{\circ} 32^{\prime} 22.5^{\prime \prime}$ from the last mentioned course and along the Nassau County Line, a distance of 60.00 feet to a point on the southeasterly line of 145 th Avenue;

THENCE southwesterly, deflecting to the right $89^{\circ} 27^{\prime} 37.5^{\prime \prime}$ from the last mentioned course and along 145th Avenue, a distance of 200.01 feet to a corner formed by the intersection of the northeasterly line of Hook Creek Boulevard with the southeasterly line of 145th Avenue; THENCE southeasterly, deflecting to the left $89^{\circ} 27^{\prime} 37.5^{\prime \prime}$ from the last mentioned course, and along the northeasterly line of Hook Creek Boulevard, a distance of 395.81 feet to a point;
THENCE southeasterly, deflecting to the right $12^{\circ} 36^{\prime} 27.9^{\prime \prime}$ from the last mentioned course, a distance of 200.83 feet to a point;
THENCE southeasterly, deflecting to the left $1^{\circ} 15^{\prime} 50^{\prime \prime}$ from the last mentioned course a distance of 416.32 feet to a point;
THENCE southeasterly, deflecting to the right $00^{\circ} 01^{\prime} 23.1^{\prime \prime}$ from the last mentioned course, a distance of 500.96 feet to a point;
THENCE easterly, deflecting to the left $54^{\circ} 15^{\prime} 17^{\prime \prime}$ from the last mentioned course and, a distance of 387.13 feet to a point on the Nassau County Line;
THENCE southerly, deflecting to the right $59^{\circ} 35^{\prime} 43^{\prime \prime}$ from the last mentioned course and along the Nassau County Line, a distance of 75.36 feet to a point on the southerly line of Hungry Harbor Road ( 80 feet wide);
THENCE westerly, deflecting to the right $120^{\circ} 24^{\prime} 17^{\prime \prime}$ from the last mentioned course and along the southerly line of Hungry Harbor Road, a distance of 245.72 feet to a point of tangency;
THENCE westerly, along an arc of circle with radius of 426.749 feet and a central angle of $14^{\circ} 12^{\prime} 24.6^{\prime \prime}$, deflecting to the right, a distance of 105.81 feet to a point;

THENCE southeasterly, deflecting to the left $13^{\circ} 56^{\prime} 17.6^{\prime \prime}$ from the tangent of the previous curve, a distance of 45.36 feet to a point on northeasterly prolongation of the southeasterly line of Hook Creek Boulevard;
THENCE southwesterly, deflecting to the left $62^{\circ} 57^{\prime} 30^{\prime \prime}$ from the last mentioned course and along the southeasterly line of Hook Creek Boulevard and its northeasterly prolongation, a distance of 41.71 feet to an angle point;
THENCE southwesterly, deflecting to the left $57^{\circ} 15^{\prime} 00$ " from the last mentioned course and along the northeasterly line of Hook Creek Boulevard, a distance of 385.92 feet to a point;
THENCE southwesterly, deflecting to the right $90^{\circ} 18^{\prime} 30^{\prime \prime}$ from the last mentioned course, a distance of 56.50 feet to a point;
THENCE northwesterly, deflecting to the right $89^{\circ} 41^{\prime} 30^{\prime \prime}$ from the last mentioned course, a distance of 191.51 feet to a point; THENCE westerly, deflecting to the left $44^{\circ} 52^{\prime} 37.5^{\prime \prime}$ from the last mentioned course, a distance of 12.05 ' feet to a point on the northeasterly prolongation of the southeasterly line of $148^{\text {th }}$ Drive (60 feet wide);
THENCE southwesterly, deflecting to the left $44^{\circ} 48^{\prime} 52.5^{\prime \prime}$ from the last mentioned course and along the southeasterly line of 148th Drive and its northeasterly prolongation, a distance of 832.97 feet to a corner formed by the intersection of the southeasterly line of 148 th Drive with the northeasterly line of 259 th Street ( 60 feet wide);
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 60.00 feet to a corner formed by
the intersection of northwesterly line of 148th Drive with the northeasterly line of 259th Street;
THENCE northeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course and along the northwesterly line of 148th Drive and its northeasterly prolongation, a distance of 832.65 feet to a point;
THENCE northerly, deflecting to the left $45^{\circ} 11^{\prime} 07.5^{\prime \prime}$ from the last mentioned course, a distance of 7.06 feet to a point;
THENCE northwesterly, deflecting to the left $45^{\circ} 07^{\prime} 22.5^{\prime \prime}$ from the last mentioned course, a distance of 195.00 feet to a point on northeasterly prolongation of the southeasterly line of 48th Road (60 feet wide);
THENCE northeasterly, deflecting to the right $90^{\circ} 18^{\prime} 30^{\prime \prime}$ from the last mentioned course and along the northeasterly prolongation of the southeasterly line of 148 th Road, a distance of 33.04 feet to a point; THENCE northwesterly, deflecting to the left $87^{\circ} 11^{\prime} 37.7^{\prime \prime}$ from the last mentioned course, a distance of 60.07 feet to a point on the northeasterly prolongation of the northwesterly line of 148th Road; THENCE southwesterly, deflecting to the left $92^{\circ} 48^{\prime} 22.3^{\prime \prime}$ from the last mentioned course and along the northeasterly prolongation of northwesterly line of 148 th Road, a distance of 28.14 feet to a point; THENCE northwesterly, deflecting to the right $86^{\circ} 41^{\prime} 32^{\prime \prime}$ from the last mentioned course, a distance of 200.33 feet to a point on northeasterly prolongation of southeasterly line of 148 th Avenue ( 60 feet wide);
THENCE southwesterly, deflecting to the left $86^{\circ} 41^{\prime} 32^{\prime \prime}$ from the last mentioned course and along the southeasterly line of 148th Avenue and its northeasterly prolongation, a distance of 832.85 feet to a corner formed by the intersection of the northeasterly line of 259th Street with the southeasterly line of 148th Avenue;
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00$ " from the last mentioned course, a distance of 60.00 feet to a corner formed by the intersection of the northeasterly line of 259 th Street with the northwesterly line of 148th Avenue;
THENCE northeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course and along the northwesterly line of 148th Avenue and its northeasterly prolongation, a distance of 847.24 feet to a point; THENCE northwesterly, deflecting to the left $95^{\circ} 15^{\prime} 00.8^{\prime \prime}$ from the last mentioned course, a distance of 52.48 feet to a point;
THENCE westerly, deflecting to the left $44^{\circ} 32^{\prime} 07.6^{\prime \prime}$ from the last mentioned course, a distance of 7.24 feet to a point;
THENCE northwesterly, deflecting to the right $43^{\circ} 41^{\prime} 55.6^{\prime \prime}$ from the last mentioned course, a distance of 130.49 feet to a point on the northeasterly prolongation of the southeasterly line of 147th Drive (60

## feet wide);

THENCE northeasterly, deflecting to the right $96^{\circ} 08^{\prime} 50.9^{\prime \prime}$ from the last mentioned course and along the northeasterly prolongation of the southeasterly line of $147^{\text {th }}$ Drive, a distance of 5.03 feet to a point; THENCE northwesterly, deflecting to the left $96^{\circ} 08^{\prime} 50.9^{\prime \prime}$ from the last mentioned course, a distance of 60.35 feet to a point on northeasterly prolongation of the northwesterly line of $147^{\text {th }}$ Drive; THENCE southwesterly, deflecting to the left $83^{\circ} 51^{\prime} 00^{\prime \prime}$ from the last mentioned course and along the northeasterly prolongation of the northwesterly line of 147 th Drive, a distance of 5.03 feet to a point; THENCE northwesterly, deflecting to the right $83^{\circ} 51^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 186.07 feet to a point;
THENCE northeasterly, deflecting to the right $96^{\circ} 09^{\prime} 00^{\prime \prime}$ from the last mentioned course; a distance of 4.31 feet to a point;
THENCE northwesterly, deflecting to the left $95^{\circ} 27^{\prime} 04^{\prime \prime}$ from the last mentioned course, a distance of 59.33 feet to a point;
THENCE northwesterly, deflecting to the left $00^{\circ} 47$, 33.2 " from the last mentioned course, a distance of 105.71 feet to a point;
THENCE northwesterly, deflecting to the right $01^{\circ} 14^{\prime} 52.2^{\prime \prime}$ from the last mentioned course, a distance of 173.85 feet to a point;
THENCE northwesterly, deflecting to the left $11^{\circ} 55^{\prime} 41.1^{\prime \prime}$ from the last mentioned course, a distance of 84.13 feet to a point;
THENCE northwesterly, deflecting to the left $01^{\circ} 48$ ' $54.1^{\prime \prime}$ from the last mentioned course, a distance of 165.81 feet to a point;
THENCE northwesterly, deflecting to the left $00^{\circ} 56^{\prime} 59.9^{\prime \prime}$ from the last mentioned course, a distance of 123.22 feet to a point on the northeasterly prolongation of the southeasterly line of 145 th Avenue (50 feet wide);
THENCE southwesterly, deflecting to the left $68^{\circ} 32^{\prime} 37.9^{\prime \prime}$ from the last mentioned course and along the southeasterly line of 145th Avenue and its northeasterly prolongation, a distance of 107.07 feet to a point;
THENCE northwesterly, deflecting to the right $77^{\circ} 46^{\prime} 48^{\prime \prime}$ from the last mentioned course, a distance of 11.60 feet to a point;
THENCE northwesterly, deflecting to the right $11^{\circ} 58^{\prime} 57.5^{\prime \prime}$ from the last mentioned course, a distance of 11.57 feet to a point;
THENCE northeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 9.58 feet to a point;
THENCE northwesterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 11.60 feet to a point;
THENCE northwesterly, deflecting to the left $19^{\circ} 04$ ' 15.5 " from the last mentioned course, a distance of 16.37 feet to a point on the northwesterly line of 145 th Avenue;

THENCE northeasterly, deflecting to the right $109^{\circ} 18^{\prime} 30^{\prime \prime}$ from the last mentioned course and along the northwesterly line of 145 th Avenue and its northeasterly prolongation, a distance of 81.49 feet to a point;
THENCE northwesterly, deflecting to the left $110^{\circ} 34^{\prime} 48^{\prime \prime}$ from the last mentioned course, a distance of 234.29 feet to a point on the northeasterly prolongation of the southeasterly line of Frankton Street; THENCE southwesterly, deflecting to the left $107^{\circ} 43$ ' $42^{\prime \prime}$ from the last mentioned course and along the northeasterly prolongation of the southeasterly line of Frankton Street, a distance of 28.23 feet to a point;
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 25.00 feet to a point; THENCE southwesterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 18.39 feet to a point;
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 25.00 feet to a point on the northwesterly line of Frankton Street;
THENCE northeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course and along the northwesterly line of Frankton Street and its northeasterly prolongation, a distance of 68.90 feet to a point; THENCE northwesterly, deflecting to the left $78^{\circ} 05^{\prime} 07.2^{\prime \prime}$ from the last mentioned course, a distance of 102.20 feet to a point;
THENCE northeasterly, deflecting to the right $80^{\circ} 49^{\prime} 10.7^{\prime \prime}$ from the last mentioned course, a distance of 21.41 feet to a point; THENCE southeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 16.09 feet to a point;
THENCE northeasterly, deflecting to the left $90^{\circ} 00^{\prime} 38.1^{\prime \prime}$ from the last mentioned course, a distance of 21.83 feet to a point;
THENCE northeasterly, deflecting to the right $6^{\circ} 27$ ' $36.3^{\prime \prime}$ from the last mentioned course, a distance of 17.26 feet to a point on the northeasterly line of Hook Creek Boulevard;
THENCE southwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course and along the northeasterly line of Hook Creek Boulevard, a distance of 98.06 feet to the point or place of BEGINNING.
Above described parcel consists of beds of Hook Creek Boulevard, Frankton Street, $145^{\text {th }}$ Avenue, 148 th Avenue, Hungry Harbor Road and 148 th Drive as laid out on "City Map" of the City of New York, Borough of Queens and comprises an area of $298,086 \mathrm{Sq}$. Ft. or 6.84311 acres.

Site 2
ALL that certain plot, piece or parcel of land, with buildings and improvements thereon erected, situate, lying and being in the Borough and County of Queens, City and State of New York, as bounded and described as follows:
BEGINNING at a point formed by the intersection of the northwesterly line of $145^{\text {th }}$ Avenue ( 50 feet wide) with the northwesterly line of Frankton Street ( 50 feet wide);
RUNNING THENCE northeasterly, along the northwesterly line of Frankton Street, a distance of 370.52 feet to a point;
THENCE southeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00.0^{\prime \prime}$ from the last mentioned course, a distance of 25.00 feet to a point;
THENCE northeasterly, deflecting to the to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 18.39 feet to a point;
THENCE southeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 25.00 feet to a point on the southeasterly line of Frankton Street;
THENCE southwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course and along the southeasterly line of Frankton Street, a distance of 312.94 feet to a corner formed by the intersection of the northeasterly line of $145^{\text {th }}$ Avenue with the southeasterly line of Frankton Street;
THENCE southeasterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, and along the northeasterly line of 145 th Avenue, a distance of 10.00 feet to an angle point;
THENCE northeasterly, deflecting to the left $51^{\circ} 41^{\prime} 30$ " from the last mentioned course, and along the northeasterly line of 145 th Avenue, a distance of 262.39 feet to a point;
THENCE southeasterly, deflecting to the right $70^{\circ} 41^{\prime} 30$ " from the last mentioned course, a distance of 16.37 feet to a point;
THENCE southeasterly, deflecting to the right $19^{\circ} 04^{\prime} 15.5^{\prime \prime}$ from the last mentioned course, a distance of 11.60 feet to a point;
THENCE southwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 9.58 feet to a point;
THENCE southeasterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 11.57 feet to a point;
THENCE southeasterly, deflecting to the left $11^{\circ} 58^{\prime} 57.5^{\prime \prime}$ from the last mentioned course, a distance of 11.60 feet to a point to point on the southeasterly line of 145 th Avenue;
THENCE southwesterly, deflecting to the right $102^{\circ} 13$ ' 12 " from the last mentioned course and along the southeasterly line of 145 th Avenue, a distance of 340.20 feet to an angle point;
THENCE southwesterly, deflecting to the left $38^{\circ} 18^{\prime} 30^{\prime \prime}$ from the last mentioned course and along the southeasterly line of 145 th Avenue, a distance of 43.45 feet to a corner formed by the intersection of
southeasterly line of 145th Avenue with the northeasterly line of Francis Lewis Boulevard (80 feet wide);
THENCE southeasterly, deflecting to the left $86^{\circ} 12^{\prime} 06.6^{\prime \prime}$ from the last mentioned course and along the northeasterly line of Francis Lewis Boulevard, a distance of 366.49 feet to an angle point;
THENCE southeasterly, deflecting to the right $03^{\circ} 19$ ' $16.2^{\prime \prime}$ from the last mentioned course, a distance of 425.39 feet to a point;
THENCE southeasterly, deflecting to the left $01^{\circ} 36^{\prime} 49.3^{\prime \prime}$ from the last mentioned course, a distance of 351.14 feet to a point; THENCE southeasterly, deflecting to the left $13^{\circ} 28^{\prime} 19.3^{\prime \prime}$ from the last mentioned course, a distance of 24.55 feet to a point on the northeasterly line of Francis Lewis Boulevard;
THENCE southeasterly, deflecting to the right $14^{\circ} 43^{\prime} 02.4^{\prime \prime}$ from the last mentioned course, and along the northeasterly line of Francis Lewis Boulevard, a distance of 14.56 feet to a point of tangency;
THENCE southeasterly, along an arc of a circle with radius of 15.00 feet and central angle of $63^{\circ} 54^{\prime} 24.7^{\prime \prime}$, deflecting to the left, and along the northeasterly line of Francis Lewis Boulevard, a distance of 16.73 feet to a point;
THENCE southeasterly, deflecting to the right $43^{\circ} 51^{\prime} 03.9^{\prime \prime}$ from the tangent of the previous curve, a distance of 63.39 feet to a point;
THENCE southeasterly, deflecting to the right $44^{\circ} 32^{\prime} 07.6^{\prime \prime}$ from the last mentioned course, a distance of 52.48 feet to a point on the northeasterly prolongation of the northwesterly line of the 148th Avenue ( 60 feet wide);
THENCE southwesterly, deflecting to the right $95^{\circ} 15^{\prime} 00.8^{\prime \prime}$ from the last mentioned course, and along northeasterly prolongation of the northwesterly line of 148th Avenue, a distance of 101.80 feet to a corner formed by the intersection of the northwesterly line of 148 th Avenue with the southwesterly line of Francis Lewis Boulevard; THENCE northwesterly, deflecting to the right $60^{\circ} 16$ ' 12.4 " from the last mentioned course and along the southwesterly line of Francis Lewis Boulevard, a distance of 215.21. feet to a corner formed be the intersection of the southeasterly line of 147 th Drive ( 60 feet wide) with the southwesterly line Francis Lewis Boulevard;
THENCE southwesterly, deflecting to the left $60^{\circ} 12$ ' $35.4 "$ from the last mentioned course, and along southeasterly line of 147 th Drive, a distance of 19.28 feet to a point;
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 30.00 feet to a point;
THENCE southwesterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 95.95 feet to a point;
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 30.00 feet to a point on the northwesterly line of 147th Drive;
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00$ "from the last mentioned course, and along the northwesterly line of 147 th Drive, a distance of 80.93 feet to a corner formed by the intersection of the southwesterly line of Francis Lewis Boulevard with the northwesterly line of 147th Drive;
THENCE northeasterly, deflecting to the left $119^{\circ} 47^{\prime} 24.6^{\prime \prime}$ from the last mentioned course and along the southwesterly line of Francis Lewis Boulevard, a distance of 212.02 feet to a corner formed by the intersection of the southwesterly line of Francis Lewis Boulevard with the southeasterly line of 147th Road ( 60 feet wide);
THENCE southwesterly, deflecting to the left $60^{\circ} 12^{\prime} 35.4^{\prime \prime}$ from the last mentioned course and along the southeasterly line of $147^{\text {th }}$ Road, a distance of 24.10 feet to a point;
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 31.00 feet to a point;
THENCE northeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 6.35 feet to a point on the southeasterly prolongation of the southwesterly line of Francis Lewis Boulevard;
THENCE northwesterly, deflecting to the left $119^{\circ} 47$ ' $24.6^{\prime \prime}$ from the last mentioned course, and along the southwesterly line of Francis Lewis Boulevard and its southeasterly prolongation, a distance of 135.06 feet to an angle point;

THENCE northwesterly, deflecting to the left $02^{\circ} 57 \prime 10$ " from the last mentioned course, and along the southwesterly line of Francis Lewis Boulevard, a distance of 279.53 feet to a corner formed by the intersection of 147 th Avenue with the southwesterly line of Francis Lewis Boulevard;
THENCE northeasterly, deflecting to the right $122^{\circ} 36$ ' 49.6 " from the last mentioned course, and along the northeasterly prolongation of the southeasterly line of 147 th Avenue, a distance of 47.49 feet to a point; THENCE northwesterly, deflecting to the left $122^{\circ} 36^{\prime} 19.6^{\prime \prime}$ from the last mentioned course, a distance of 94.98 feet to a point on the northeasterly prolongation of the northwesterly line of 147th Avenue; THENCE southwesterly, deflecting to the left $57^{\circ} 23^{\prime} 10.4^{\prime \prime}$ from the last mentioned course, and along northeasterly prolongation of the northwesterly line of 147th Avenue, a distance of 33.71 . feet to a point; THENCE northwesterly, deflecting to the right $72^{\circ} 23^{\prime} 23.8^{\prime \prime}$ from the last mentioned course, a distance of 42.32 feet to a point;
THENCE northwesterly, deflecting to the left $15^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 84.44 feet to a point;

THENCE northwesterly, deflecting to the left $05^{\circ} 04^{\prime} 32.4^{\prime \prime}$ from the last mentioned course, a distance of 93.31 feet to a point on the northeasterly prolongation of the southeasterly line of 145th Avenue; THENCE southwesterly, deflecting to the left $52^{\circ} 18^{\prime} 41.4 "$ from the last mentioned course, a distance of 17.00 feet to a corner formed by the intersection of the southeasterly line of 145 th Avenue with the southwesterly line of Francis Lewis Boulevard;
THENCE northwesterly, deflecting to the right $57^{\circ} 23^{\prime} 00.4^{\prime \prime}$ from the last mentioned course, and along the northwesterly prolongation of the southwesterly line of Francis Lewis Boulevard, a distance of 2.61 feet to a point on the southeasterly prolongation of the southwesterly line of Francis Lewis Boulevard;
THENCE northwesterly, deflecting to the left $00^{\circ} 47$ ' $06.7^{\prime \prime}$ from the last mentioned course, and along the southwesterly line of Francis Lewis Boulevard and its southeasterly prolongation, a distance of 165.31 feet to a point;

THENCE northeasterly, deflecting to the right $122^{\circ} 01^{\prime} 06.3^{\prime \prime}$ from the last mentioned course, a distance of 50.52 feet to a point;
THENCE southeasterly, deflecting to the right $54^{\circ} 58^{\prime} 07^{\prime \prime}$ from the last mentioned course, a distance of 7.89 feet to a point;
THENCE northeasterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 36.80 feet to a point on the northeasterly line of the Francis Lewis Boulevard;
THENCE southeasterly, deflecting to the right $93^{\circ} 00^{\prime} 46.7^{\prime \prime}$ from the last mentioned course, and along the northeasterly line of the Francis Lewis Boulevard, a distance of 56.13 feet to a corner formed by the intersection of the northeasterly line of Francis Lewis Boulevard with the northwesterly line of 145 th Avenue;
THENCE northeasterly, deflecting to the left $54^{\circ} 42^{\prime} 16.7^{\prime \prime}$ from the last mentioned course, and along the northwesterly line of $145^{\text {th }}$ Avenue, a distance of 70.90 feet to point or place of BEGINNING.
Above described parcel consists of beds of Francis Lewis Boulevard, Frankton Street, 147th Road, 147th Drive and 145th Avenue as they are laid out on the "City Map" for the City of New York, Borough of Queens and comprises an area of $143,096 \mathrm{Sq}$. Ft. or 3.28503 acres.

## Site 3

ALL that certain plot, piece or parcel of land, with buildings and improvements thereon erected, situate, lying and being in the Borough and County of Queens, City and State of New York, as bounded and described as follows:
BEGINNING at a point formed by the intersection of the northeasterly line of 259 th $\operatorname{Street}$ ( 60 feet wide) with the southeasterly line of 147th Avenue ( 80 feet wide);
RUNNING THENCE southeasterly, along the northeasterly line of 259th Street, a distance of 322.72 feet to a corner formed by the intersection of the northeasterly line of 259 th Street with the northwesterly line of 147 th Road ( 60 feet wide);
THENCE northeasterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course along the northwesterly line of $147^{\text {th }}$ Road, a distance of 466.25 feet to a corner formed by the intersection of the southeasterly line of Francis Lewis Boulevard ( 80 feet wide) with the northwesterly line of $147^{\text {th }}$ Road;
THENCE northeasterly, deflecting to the to the right $60^{\circ} 12^{\prime} 35.4^{\prime \prime}$ from the last mentioned course along the southeasterly prolongation of the southwesterly line of Francis Lewis Boulevard, a distance of 33.42 feet to a point;
THENCE southwesterly, deflecting to the right $119^{\circ} 47^{\prime} 24.6^{\prime \prime}$ from the last mentioned course, a distance of 6.35 feet to a point;
THENCE southeasterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 31.00 feet to a point on the southeasterly line of $147^{\text {th }}$ Road;
THENCE southwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course along the southeasterly line of $147^{\text {th }}$ Road, a distance of 476.50 feet to a corner formed by the intersection of the southeasterly line of the $147^{\text {th }}$ Road with the northeasterly line of $259^{\text {th }}$ Street;
THENCE southeasterly, deflecting to left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course along the northeasterly line of $259^{\text {th }}$ Street, a distance of 184.00 feet to a corner formed by the intersection of the northeasterly line of $259^{\text {th }}$ Street with the northwesterly line of $147^{\text {th }}$ Drive ( 60 feet wide);
THENCE northeasterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course along the northwesterly line of $147^{\text {th }}$ Drive, a distance of 525.00 feet to a point;
THENCE southeasterly, deflecting to the to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 30.00 feet to a point;
THENCE northeasterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 96.00 feet to a point;
THENCE southeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 30.00 feet to a point on the southeasterly line of $147^{\text {th }}$ Drive;
THENCE southwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course along the southeasterly line of 147 th Drive, a distance of 619.44 feet to a corner formed by the intersection of the
southeasterly line of 147 th Drive with the northeasterly line of 259th Street;
THENCE southeasterly, deflecting to the left $90^{\circ} 03^{\prime} 37^{\prime \prime}$ from the last mentioned course along the northeasterly line of 259th Street, a distance of 187.55 feet to a corner formed by the intersection of the northeasterly line of 259th Street with the northwesterly line of 148 th Avenue (60 feet wide);
THENCE southwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 60.00 feet to a corner formed by the intersection of the southwesterly line of 259 th Street with the northwesterly line of 148 th Avenue;
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course along the southwesterly line of 259 th Street, a distance of 187.62 feet to a corner formed by the intersection of the southwesterly line of 259th Street with the southeasterly line of 147th Drive;
THENCE southwesterly, deflecting to the left $89^{\circ} 56^{\prime} 23^{\prime \prime}$ from the last mentioned course along the southeasterly line of 147 th Drive, a distance of 585.00 feet to a point;
THENCE northwesterly, deflecting to the right $89^{\circ} 56^{\prime} 23^{\prime \prime}$ from the last mentioned course, a distance of 7.50 feet to a point;
THENCE northeasterly, deflecting to the right $90^{\circ} 03^{\prime} 37^{\prime \prime}$ from the last mentioned course, a distance of 5.01 feet to a point;
THENCE northwesterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 45.00 feet to a point;
THENCE southwesterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 6.56 feet to a point;
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 7.50 feet to a point on the southwesterly prolongation of the northwesterly line of 147th Drive; THENCE northeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course along the northwesterly line of 147 th Drive and its southwesterly prolongation, a distance of 585.00 feet to a corner formed by the intersection of the southwesterly line of 259 th Street with the northwesterly line of 147 th Drive;
THENCE northwesterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course along the southwesterly line of 259 th Street, a distance of 184.00 feet to a corner formed by the intersection of the southwesterly line of 259th Street with the southeasterly line of 147 th Road;
THENCE southwesterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course along the southeasterly line of 147 th Road, a distance of 260.00 feet to a point;
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 5.00 feet to a point;
THENCE northeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 30.00 feet to a point;
THENCE northwesterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 3.50 feet to a point;
THENCE northeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 20.00 feet to a point;
THENCE northwesterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last
mentioned course, a distance of 46.50 feet to a point;
THENCE southwesterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 55.00 feet to a point;
THENCE northwesterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course, a distance of 5.00 feet to a point on the southwesterly prolongation of the northwesterly line of 147 th Road;
THENCE northeasterly, deflecting to the right $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course along the northwesterly line of $147^{\text {th }}$ Road and its southwesterly prolongation, a distance of 265.00 feet to a corner formed by the intersection of the southwesterly line of $259^{\text {th }}$ Street with the northwesterly line of $147^{\text {th }}$ Road;
THENCE northwesterly, deflecting to the left $90^{\circ} 00^{\prime} 00^{\prime \prime}$ from the last mentioned course along the southwesterly line of 259 th Street, a distance of 322.59 feet to a corner formed by the intersection of the southwesterly line of $259^{\text {th }}$ Street with the southeasterly line of $147^{\text {th }}$ Avenue;
THENCE northeasterly, deflecting to the right $89^{\circ} 52^{\prime} 15 "$ from the last mentioned course, and along the northeasterly prolongation of the southeasterly line of $147^{\text {th }}$ Avenue, a distance of 60.00 feet to point or place of BEGINNING;
Above described parcel consists of beds of $259^{\text {th }}$ Street, 147 th road and 147th Drive as laid out on the "City Map" for the City of New York, Borough of Queens and comprises an area of 159,757 Sq. Ft. or 3.66752 acres.

## Site 4

ALL that certain plot, piece or parcel of land, with buildings and improvements thereon erected, situate, lying and being in the Borough and County of Queens, City and State of New York, as bounded and described as follows:
BEGINNING at a point formed by the intersection of the
southeasterly line of $149^{\text {th }}$ Road ( 60 feet wide) with the southwesterly line of 262 nd Street (Irregular Width);

RUNNING THENCE southwesterly, along the southeasterly line of 149th Road, a distance of 133.08 feet to a point;
THENCE northwesterly, deflecting to the right $89^{\circ} 41^{\prime} 12^{\prime \prime}$ from the last mentioned course, a distance of 60.00 feet to a point on the northwesterly line of $149^{\text {th }}$ Road;
THENCE northeasterly, deflecting to the to the right $90^{\circ} 18^{\prime} 48^{\prime \prime}$ from the last mentioned course along the northwesterly line of $149^{\text {th }}$ Road, a distance of 133.08 feet to a corner formed by the intersection of the southwesterly line of 262 nd Street with the northwesterly line of 149 th Road;
THENCE southwesterly, deflecting to the right $89^{\circ} 41^{\prime} 12^{\prime \prime}$ from the last mentioned course, a distance of 60.00 feet to point or place of BEGINNING;

Above described parcel consists of bed of 149th Road as laid out on the "City Map" of the City of New York, Borough of Queens and comprises an area of $7,985 \mathrm{Sq}$. Ft. or 0.18331 acres.

The above-described property shall be acquired subject to encroachments, if any, so long as said encroachments shall stand, as delineated on Damage and Acquisition Map No. 5867, dated April 10, 2020, last revised June 22, 2023.

Surveys, maps or plans of the property to be acquired are on file in the office of the Corporation Counsel of the City of New York, 100 Church Street, New York, New York 10007.
PLEASE TAKE FURTHER NOTICE, pursuant to EDPL § 402(B)(4), any party seeking to oppose the acquisition must interpose a verified answer, which must contain specific denial of each material allegation of the petition controverted by the opponent, or any statement of new matter deemed by the opponent to be a defense to the proceeding. Pursuant to CPLR 403, said answer must be served upon the office of the Corporation Counsel at least seven (7) days before the date that the petition is noticed to be heard.
Dated: New York, New York
May 7, 2024
HON. SYLVIA O. HINDS-RADIX
Corporation Counsel of the City of New York
100 Church Street
New York, New York 10007
Tel. (212) 356-2667
By: Meagan Keenan
Assistant Corporation Counsel
SEE MAP(S) IN BACK OF PAPER
m23-j6

## PROPERTY DISPOSITION

## The City of New York in partnership with PublicSurplus.com posts online auctions. All auctions are open to the public.

Registration is free and new auctions are added daily. To review auctions or register visit https://publicsurplus.com

## CITYWIDE ADMIINISTRATIVE SERVICES

- SALE

The City of New York in partnership with IAAI.com posts vehicle and heavy machinery auctions online every week at: https://iaai.com/ search?keyword=dcas+public.

All auctions are open to the public and registration is free.
Vehicles can be viewed in person at:
Insurance Auto Auctions, Green Yard
137 Peconic Ave., Medford, NY 11763
Phone: (631) 207-3477
No previous arrangements or phone calls are needed to preview. Hours are Monday from 10:00 A.M. - 2:00 P.M.

## ENVIRONMENTAL PROTECTION

- SALE


## CARPENTERS EDDY EAST FOREST MANAGEMENT PROJECT \# 5116

## NOTICE OF PROJECT AVAILABILITY

Description: The City of New York will sell an estimated 187 MBF (International $1 / 4$ " Rule) of hardwood sawtimber and 89 cords of hardwood pulp through Carpenters Eddy East Forest Management Project \#5116. The products included in this sale are located on the west side of Dryden Road accessed approximately one mile north of the intersection of with NYS Highway 10.
Summary: This sale is comprised of mostly mature red oak and white ash and will be the first entry to the area for management in nearly 80 years. The project includes a pre-approved NYSDEC Article 15 stream crossing permit, a pre-approved NYSEG natural gas pipeline crossing within a public utility corridor, approximately 2.5 miles of trail construction on steep terrain and 27 acres of shelterwood and irregular shelterwood regeneration (21 acres will require pre-treatment with DEP approved herbicide).

Project Area: 103 ac +/-
Total Volume: $187 \mathrm{MBF}+/-$ sawtimber (Int. 1/4" Rule) \& 89 cords hardwood pulp
Species as a percent of total sawtimber volume: 49\% Red Oak, $22 \%$ White Ash, $14 \%$ Red Maple, $9 \%$ Chestnut Oak. 6\% is comprised by five other hardwood species.

Show Dates: Prospective bidders should attend one of the public showings in order to receive the full bid package necessary to submit a valid bid. However, attendance at the public showings is not mandatory and the full bid package can be obtained from the DEP Forester with prior arrangement. The showings will be held Wednesday, May 22, 2024 at 9:00 A.M., and Thursday, May 23, 2024 at 11:00 A.M. local time. Please RSVP by phone or email if you plan to attend (see contact information below).
Directions: Showing attendees should park and gather roadside near the Dryden Road crossing of Dryden Brook as shown on the map on page three (42.118539, -75.250051). This point is approximately one mile north of the intersection with NYS Highway 10 near the Cannonsville Reservoir and north of the intersection with Faulkner Road.
Bidding: All bid proposals must be received in mail or in person by Collin Miller, 20 NYC Hwy 30A, Downsville, NY 13755, NO LATER THAN Monday, June 17, 2024 AT 3:00 P.M., local time. Sealed bids will be publicly opened at the DEP office located at 22 NYC Hwy 30A, Downsville, NY on Tuesday, June 18, 2024 at 8:00 A.M. local time. Bid award/rejection will be made as soon after the bid opening as possible and not later than 30 days of the bid opening.
Contact information: Collin Miller, CF
607-363-9010
comiller@dep.nyc.gov

| NEW YORK CITY - DEPCARPENTERS EDDY EAST FMP \#5116 - TIMBER VOLUME REPORT |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DBH | RED OAK | $\underset{\text { MAPLE }}{\text { RED }}$ | WHITE ASH | $\begin{gathered} \text { CHESTNUT } \\ \text { OAK } \\ \hline \end{gathered}$ | $\begin{gathered} \text { BL. } \\ \text { CHERRY } \end{gathered}$ | SUGAR MAPLE | B.t. ASPEN | AM. BEECH | BLACK BIRCH |
|  | Volume | Volume | Volume | Volume | Volume | Volume | Volume | Volume | Volume |
|  | /\#trees | /\# trees | /\# trees | /\# trees | /\#trees | /\#trees | /\#trees | / \# trees | /\#trees |
| 14 | 4,822 | 7,682 | 6,908 | 2,377 | 46 | 938 | 237 | 0 | 1,518 |
|  | 52 | 107 | 81 | 31 | 1 | 14 | 3 | 0 | 19 |
| 16 | 10,261 | 8,369 | 10,312 | 3,815 | 0 | 552 | 106 | 0 | 1,498 |
|  | 75 | 65 | 69 | 28 | 0 | 6 | 1 | 0 | 12 |
| 18 | 12,087 | 5,954 | 8,554 | 3,438 | 144 | 240 | 1,202 | 0 | 908 |
|  | 65 | 33 | 39 | 20 | 1 | 1 | 5 | 0 | 5 |
| 20 | 14,457 | 4,029 | 8,238 | 2,210 | 0 | 90 | 980 | 405 | 0 |
|  | 58 | 15 | 25 | 11 | 0 | 1 | 5 | 2 | 0 |
| 22 | 14,136 | 675 | 2,626 | 1,728 | 0 | 0 | 1,230 | 0 | 366 |
|  | 44 | 2 | 8 | 6 | 0 | 0 | 3 | 0 | 1 |
| 24 | 14,489 | 987 | 2,322 | 1,137 | 0 | 0 | 443 | 0 | 252 |
|  | 39 | 2 | 5 | 3 | 0 | 0 | 1 | 0 | 1 |
| 26 | 8,383 | 0 | 0 | 1,949 | 0 | 0 | 0 | 0 | 0 |
|  | 16 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| 28 | 5,589 | 0 | 1,165 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 10 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 3,653 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 2,449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 1,121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VOLUME | 91,447 | 27,696 | 40,125 | 16,654 | 190 | 1,820 | 4,198 | 405 | 4,542 |
| $\begin{aligned} & \text { \% OF } \\ & \text { VOL. } \end{aligned}$ | 49\% | 14\% | 22\% | 9\% | <1\% | 1\% | 2\% | <1\% | 2\% |
| $\begin{array}{\|c\|} \hline \text { Total } \\ \text { \# TREES } \\ \hline \end{array}$ | 369 | 224 | 229 | 104 | 2 | 22 | 18 | 2 | 38 |
| SawtimberTotal | $187,077$ | Inter. 1/4" <br> BD.FT* | \# <br> Sawtimber <br> Trees | 1,008 |  | Firewood cords | 89 | \# Cull |  |
|  |  |  |  |  |  | \# Trees | 442 | Trees | 565 |
| *FORM CLA | ASS: 80 for as | sh, birch, ch | erry; 79 for | maples, 78 fo | rall other s | pecies |  | $\begin{array}{\|l\|} \hline \text { Total \# } \\ \text { Trees } \\ \hline \end{array}$ | 2,015 |



HOUSING PRESERVATION AND DEVELOPIMENT
$\square$ PUBLIC HEARINGS
All Notices Regarding Housing Preservation and Development Dispositions of City-Owned Property, appear in the Public Hearing Section.

## PROCUREMMENT

## "Compete To Win" More Contracts!

Thanks to a new City initiative - "Compete To Win" - the NYC Department of Small Business Services offers a new set of FREE services to help create more opportunities for minority and Women-Owned Businesses to compete, connect and grow their business with the City. With NYC Construction Loan, Technical Assistance, NYC Construction Mentorship, Bond Readiness, and NYC Teaming services, the City will be able to help even more small businesses than before.

- Win More Contracts, at nyc.gov/competetowin
"The City of New York is committed to achieving excellence in the design and construction of its capital program, and building on the tradition of innovation in architecture and engineering that has contributed,, to the City's prestige as a global destination. The contracting opportunities for construction/construction services and construction-related services that appear in the individual agency listings below reflect that commitment to excellence."


## HHS ACCELERATOR PREQUALIFICATION

To respond to human services Requests for Proposals (RFPs), in accordance with Section 3-16 of the Procurement Policy Board Rules of the City of New York ("PPB Rules"), vendors must first complete and submit an electronic HHS Accelerator Prequalification Application using the City's PASSPort system. The PASSPort system is a webbased system maintained by the City of New York for use by its Mayoral Agencies to manage procurement. Important business information collected in the Prequalification Application is required every three years. Documents related to annual corporate filings must be submitted on an annual basis to remain eligible to compete. Prequalification applications will be reviewed to validate compliance with corporate filings and organizational capacity. Approved organizations will be eligible to compete and would submit electronic proposals through the PASSPort system. The PASSPort Public Portal, which lists all RFPs, including HHS RFPs that require HHS Accelerator Prequalification, may be viewed, at https://passport. cityofnewyork.us/page.aspx/en/rfp/request_browse_public
All current and prospective vendors should frequently review information listed on roadmap to take full advantage of upcoming opportunities for funding. For additional information about HHS Accelerator Prequalification and PASSPort, including background materials, user guides and video tutorials, please visit https://www.nyc. gov/site/mocs/hhsa/hhs-accelerator-guides.page

## ADMIINISTRATION FOR CHIIDREN'S SERVICES

## CHILD AND FAMILY WELL-BEING

■ AWARD

## Human Services/Client Services

FAMIILY ENRICHMENT CENTERS - Competitive Sealed Proposals/ Pre-Qualified List - PIN\# 06823 P0010001 - AMT: $\$ 2,187,500.00$ - TO: Center for Family Life in Sunset Park Inc, 443 39th Street, Brooklyn, NY 11232.

Special Case Determination not required because procurement is for Client/Human Services and is the preferred method under PPB Rule 3-01 (c)

* my28


## OFFICE OF INFORMATION TECHNOLOGY

- AWARD

Services (other than human services)
DYNAMICS DEVELOPER - PPS - M/WBE Noncompetitive Small Purchase - PIN\# $06824 W 0028001$ - AMT: $\$ 198,450.00$ - TO: Unique Comp Inc, 27-08 42nd Road, Long Island City, NY 11101.

- my28


## ADMIINISTRATIVE TRIALS AND HEARINGS

INFORMATION TECHNOLOGY
■ AWARD

## Goods

OPTIPLEX SMALL FORM FACTOR PLUS 7020 - M/WBE
Noncompetitive Small Purchase - PIN\# 82024W0005001 - AMT: $\$ 99,329.00$ - TO: Compulink Technologies Inc, 260 W 39th St, Rm 302, New York, NY 10018-4434.
Delivery must be made on or before June 30, 2024. Please contact either Shadyea-Sciré Adams or Keilanny Meyreles when you are delivering. (212) 436-0702 or (212) 436-0707. Delivery is to be made inside on the 9th Floor.

- my28


## BROOKLYN NAVY YARD DEVELOPMENT CORP.

■ SOLICITATION

## Services (other than human services)

PRE-QUALIFIED ELECTRICAL, PLUMBING WINDOWS, DOORS, HVAC AND TRASH REMOVAL SERVICES - ON CALL REPAIR AND MAINTENANCE - Request for Proposals PIN\# 000222 - Due 7-17-24 at 5:00 P.M.
The Brooklyn Navy Yard Development Corporation "BNYDC" is issuing this request for Proposal (this "RFP") to seek proposals ("Proposals") from entities ("Respondents") interested in performing on-call, Yard-wide repair and maintenance services for the following catergories of services (the "Services" or "Service Area": 1) Electrical, 2) Plumbing, 3) Windows, 4)Doors, 5) HVAC, 6) Trash Removal
Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor prequalification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.
Brooklyn Navy Yard Development Corp., 141 Flushing Avenue, Building 77, Suite 801, Brooklyn, NY11205. Minden Koopmans (718) 907-5900; mkoopmans@bnydc.org

- my28


## CITYWIDE ADMIINISTRATIVE SERVICES

■ AWARD

## Construction / Construction Services

GENERAL CONSTRUCTION IN DCAS BUILDINGS- BK, QU
AND SI - Competitive Sealed Bids - PIN\# 85623B0010001 - AMT: \$14,979,920.00 - TO: Ashnu International Inc, 5809 28th Ave, Woodside, NY 11377-7831.

* my28

Goods
MOBILE LIFT SYSTEM (SIX POST) FOR THE CITY OF NEW
YORK - Competitive Sealed Bids - PIN\# 85723B0142001 - AMT:
\$1,289,880.00 - TO: Stertil Koni USA Inc, 200 Log Canoe Circle, Stevensville, MD 21666.

- my28


## COUNTERTERRORISM/INTELLIGENCE

$\square$ AWARD

## Goods

BOAT, 41 FT EXTENDED WALK AROUND CABIN SAFEBOAT

- NYPD-GSA - Intergovernmental Purchase - PIN\# 05623G0007001 AMT: $\$ 1,053,785.65$ - TO: Safe Boats International LLC, 8800 SW Barney White Rd, Bremerton, WA 98312.
Boat, 41 Ft Extended Walk Around Cabin Safeboat - NYPD-GSA. For a new vessel for NYPD Counterterrorism Division ("CTD") to sustain current Chemical, Biological, Radiation, Nuclear and Explosive ("CBRNE") detection capabilities to conduct specific, focused counterterrorism missions within the Port of NY/NJ. (Federal GSA Contract \# 47QSWA18D005J. Suppliers wishing to be considered for a contract with the General Services Administration of the Federal Government are advised to contact the GSA National Customer Service Center via email at: mashelpdesk@gsa.gov, or by phone at: 800-488-3111.)


## CORRECTION

FINANCIAL FACILITY AND FLEET ADMINISTRATION

- AWARD

Services (other than human services)
ON-CALL NON-REFRIGERATED FOOD SERVICE EQUIPMENT - Competitive Sealed Bids - PIN\# 07223B0004001 - AMT: \$6,294,000.00 - TO: Tek Express Inc, 25 Hutcheson Pl, Lynbrook, NY 11563-2738.

The Department of Correction seeks the service of a qualified vendor to provide on-call service and repair on non-refrigerated food service equipment on an as-needed basis.

> my28

## DESIGN AND CONSTRUCTION

## PROGRAM MANAGEMENT

■ VENDOR LIST

> Construction / Construction Services

## PQL LABEL: GENERAL CONSTRUCTION LARGE PROJECTS

NYC DDC IS CERTIFYING THE GENERAL CONSTRUCTION
LARGE PQL WITH THE FOLLOWING APPROVED VENDORS:
ANDRON CONSTRUCTION CORP
ASHNU INTERNATIONAL INC
C\&L CONTRACTING CORP
CDE AIR CONDITIONING CO INC
CITNALTA CONSTRUCTION CORP
E\&A RESTORATION INC
EW HOWELL CO LLC
FRATELLO CONSTRUCTION CORP
FORTE CONSTRUCTION CORP
IANNELLI CONSTRUCTION CO INC
11. INFINITY CONTRACTING SERVICES, CORP
12. LANMARK GROUP, INC
13. LEON D. DEMATTEIS CONSTRUCTION CORP
14. LITEHOUSE BUILDERS, INC
15. LOSARDO GENERAL CONSTRUCTION CORP
16. MPCC CORP
17. N.S.P. ENTERPRISES, INC
18. NEELAM CONSTRUCTION CORP
19. NICHOLSON \& GALLAWAY INC
20. PADILLA CONSTRUCTION SERVICES, INC
21. PAUL J.SCARIANO INC
22. PETER SCALAMANDRE \& SONS INC
23. PLAZA CONSTRUCTION LLC
24. PRISMATIC DEVELOPMENT CORP
25. SEA BREEZE GENERAL CONSTRUCTION, INC
26. SLSCO LP STALCO CONSTRUCTION INC
27. STALCO CONSTRUCTION
28. TECHNICO CONSTRUCTION SERVICES INC
29. TISHMAN CONSTRUCTION CORPORATION OF NY
30. TRITON CONSTRUCTION COMPANY LLC
31. VOLMAR CONSTRUCTION
32. WHITESTONE CONSTRUCTION CORP
33. XBR, INC
34. ZHL'GROUP INC
35. ZORIA HOUSING LLC

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor prequalification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.
Design and Construction, Lorraine Holley (718) 391-2601; csb_ projectinquiries@ddc.nyc.gov

## DISTRICT ATTORNEY - BRONX COUNTY

- INTENT TO AWARD


## Goods and Services

198 EAST 161ST STREET, 4TH FLOOR, ROOM 426, BRONX, NY 10451 - Negotiated Acquisition - Judgment required in evaluating proposals - PIN\# 90225N8001KX - Due 6-3-24 at 5:00 P.M.
Pursuant to Procurement Policy Board Rules, Section 3-04, The Bronx District Attorney's Office (BXDA) seeks proposals to implement a user friendly and easy-to-use cloud-based case management tool to aid users in the intake, tracking, and organization of investigations and criminal cases across BXDA divisions and bureaus. The organization currently leverages a legacy, end-of-life collection of siloed applications. The tool will serve $1,000+$ BXDA users and the delivered solution should include:

- Case setup module with via intelligent automation that has the capability to build cases based on a data feed from NYPD. Case builds will leverage auto match multiple arrests for defendants and co-defendants for related arrests, and enable the following functionality case assignments, manage witnesses (police + civilians/corporate), victims, evidence (vouchers, NYPD Crime Lab etc.), defendant statements/ identifications, generate associated documents or integrate with external document assembly tool, case summary, affidavits, Decline to Prosecute (DP), data integrations (NYPD ECMS/Arrest Portal, NICE E911, Evidence.com, NICE eJustice, DOC Rikers)
- Case management module with intelligent automation tracking events associated with a case (ex. Investigation, Arrest, screening, Arraignment, Grand Jury, Trial etc.), charges associated with a case, case sentences, case details processed by intake, case assignments to Assistant District Attorneys (ADAs) and Trial Preparation Assistants (TPAs), Multiple case status levels - Open, Closed, Warrant, Reopened, Sealing restrictions - in line with OCA requirements, Case Status tied to transactions - ex. when a disposition occurs, the case would be "Pending Sentence", Seal cases automatically - OCA sends sealing codes in the feed, cases can be sealed automatically with these codes, manage motion process via easily accessible portal (for defense attorneys (Public) and internal ADAs) manage witness letters/notifications (police + civilians), manage case flags (ex. Alternative to Incarceration (ATI), 730 etc.), manage documents and attachments associated with case including electronic status sheets for attorneys to reference in court with ability to integrate with external document assembly tool, manage motion intake and responses, reporting (selfserve based on user needs), integration with NYS Office of Court Administration (OCA) digital/paper calendars with verification and review capabilities, NYPD ECMS/eSubpoena/ Arrest Portal, Comprehensive financial tracking (Asset Forfeiture/Victim Services), Evidence management platforms including (Evidence.com), discovery platform (NICE Justice), RAP Sheets \& Mugshots integration, NYC Department of Correction (DOC) Rikers calls etc. Delivered solution will also include:
* Pretrial events interface to track/file motions and responses, case conferences.
* Calendar management interface to schedule hearings, meetings and manage ADA calendars.
* Evidence interface to catalog physical/digital evidence received from law enforcement partners.
* Victim services interface and external community portal to manage victim details and contact information, offer, and receive acknowledgement of services available and rendered to crime victims.
* Appeal/Post-Conviction interface to enable the transfer of cases from the trial bureaus to the appellate bureau when appeals are filed.
- Customizable dashboard with caseload summaries for ADAs, upcoming events, tasks due, analytics and reporting, ability to create and generate canned/ad-hoc reports, customized templates to generate prescribed reports, customized performance measures reporting. Management dashboard displaying performance metrics, bureau wide caseloads, and conviction rates.
- Data Connectivity Interfaces, out of the box API's available for external system integrations, data visibility for external tool (ex. Power BI), integrate with Microsoft Outlook/ Exchange/Office365 for email and calendaring, offer easy drag \& drop from Windows and Outlook, integrate with Westlaw Legal Research, ability to send SMS/texts without any additional fees, inbuilt IVR or ability to integrate. Integration with Microsoft Copilot for enhanced querying of the O365 tools (Outlook, Teams, OneDrive, etc.) and workflows of the ADAs and TPAs. Also, the ability to query O365 historical data (Vault) in the archives that have the appropriate labeling from a compliance.microsoft.com (purview) standpoint.
- Application/Portal branding conforming to NYC/Bronx DA standards, consistent, easy to use \& understand, American Disabilities Act (ADA) friendly with voice interfaces, customizable user interface, allow for easy use in the courtroom, full site-wide natural language search based on user access and role (for criteria such as defendant name, case number, or status), document content search, ability to build charge language automatically, customizable pick lists, customizable dashboards/landing page.
- Integration w/External Document Assembly Tool, Legito, with SSO based, secure, role-based accessibility of content in the Document Assembly platform leveraging a familiar Windows-type interface, OCR and index scanned documents and other files that are in the case.
- Integration w/Discovery platform, NICE Justice, with SSO based, secure, role-based accessibility of content in the discovery platform leveraging a familiar Windows-type interface.
- Ability to configure complex workflows easily, ability to configure workflow approvers, ability to configure notifications on workflow phases, RAP Sheets \& Mugshots integration.
- Single Sign On (SSO) with MFA and role-based Authorization segregated on organizational hierarchy, audit trail for all logins and version history/control with rollback for all updates/deletes, data masking/anonymization at reporting level, encryption at rest and in transit.
- Full data migration ( $\sim 3-5 \mathrm{~TB}$ ) from current, legacy platform with verification of content import and accuracy, CJIS/ FedRamp compliant cloud platform, Sandbox/Staging \& Production environments. Administration dashboards to manage access roles, privileges, user customizations, charge library, application registrations, platform health diagnostics, screen configuration changes.
Any qualified vendor that wishes to express interest in providing such product and believes that at present or in the future it can also provide related software, and services is invited to do so by submitting an expression of interest to Darryl Rodney (RodneyD@bronxda.nyc.gov), Jonathan Demera (DemeraJ@bronxda.nyc.gov), and Christopher Spies (SpiesCh@Bronxda.nyc.gov).
Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor prequalification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.
District Attorney - Bronx County, 198 East 161st Street, 4th Floor, Room 426, Bronx, NY 10451. Darryl Rodney, Jonathan Demera, Christopher Spies, RodneyD@bronxda.nyc.gov; DemeraJ@bronxda,nyc.gov; SpiesCh@Bronxda.nyc.gov


## ENVIRONMENTAL PROTECTION

BUSINESS INFORMATION TECHNOLOGY

- AWARD

Goods
BIT CALABRIO SOFTWARE \& SUPPORT 4300097X - M/WBE
Noncompetitive Small Purchase - PIN\# 82624W0071001 - AMT:
$\$ 593,051.17$ - TO: Kambrian Corporation, 2707 E Valley Blvd, Ste 312, West Covina, CA 91792.

- my28


## WASTEWATER TREATMENT

- AWARD


## Services (other than human services)

REMOVAL, TRANSPORTATION AND DISPOSAL OF RESIDUALS VAR LOCATIONS - Renewal -
PIN\# 82621B8091KXLR001 - AMT: \$15,906,667.00 - TO:
Environmental Protection \& Improvement Company LLC, 227 US Highway 206, Bldg. 1, 2nd Floor, Box 31, Flanders, NJ 07836-0031.
The uninterrupted continuation of this contract is needed to keep providing Removal, Transportation and Disposal of Residuals from various DEP Wastewater Treatment Plant, Facilities.
$\checkmark$ my28

## FINANCIAL INFORMATION SERVICES AGENCY

- AWARD


## Services (other than human services)

## EMERGENCY - INFORMATION TECHNOLOGY AND OTHER

 CONSULTANT SERVICES CONTRACT - Emergency Purchase PIN\# 127FY2300031 - AMT: \$502,320.00-TO: Trigyn Technologies, Inc., 100 Metroplex Drive, Edison, NJ 08817.Two vendors have been awarded an agreement in response to an Emergency Declaration Procurement under the Information Technology and Other Consultant Services Contract. The term for this award is May 13, 2024 to May 12, 2025.
*For Information Purposes Only*
Orion Systems Integrators LLC (Class A, E, F)
333 Thronall Street, 7th Floor Edison, NJ 08837
Allocated Amount: \$240,240.00
Trigyn Technologies, Inc. (Class A, B, C, E)
100 Metroplex Drive, Ste \# 101 Edison, NJ 08817
Allocated Amount: $\$ 262,080.00$

- my28


## FIRE DEPARTIMENT

## FLEET MAINTENANCE

■ AWARD

## Services (other than human services)

HEAVY DUTY TOWING \& RECOVERY, TRANSPORT OF MATERIALS - M/WBE Noncompetitive Small Purchase PIN\# 05724 W0040001 - AMT: $\$ 100,000.00$ - TO: Breen Brothers Towing, 566 Industrial Loop, Staten Island, NY 10309.

Open order to provide all labor, equipment, tools, parts, materials, and supplies required for towing and recovery, including lowboy and rotating wrecker services and transportation of materials for heavy duty FDNY vehicles. For 5 consecutive years.

## HEALTH AND MENTAL HYGIENE

## EPIDEMIOLOGY

$\square$ INTENT TO AWARD

## Services (other than human services)

## 81624Y0554-AUTHORIZED DOHMH ANALYSTS TRAINING

 - Request for Information - PIN\# 81624Y0554-Due 6-7-24 at 2:00 P.M.DOHMH intends to enter into a Sole Source contract with Salient Corporation to provide authorized DOHMH analysts training and therefore access to Salient Interactive Miner (SIM), which is a software that is the primary source of Medicaid data for analysts at DOHMH. The anticipated term of this contract is for 6 years. DOHMH determined that Salient Corporation is a Sole Source provider as they are the owner and manufacturer of the this software, maintenance and support services (technical support; plus software updates/upgrades; plus User Training) for Salient products in the United States. The Salient Medicaid Enterprise System in place with New York State Department of Health is owned by Salient Corporation. There are no other vendors authorized or capable of providing these services in the United States.
If there are any vendors who believes they legally provide this software, please submit an expression of interest to the RFX 81624Y0554.
Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor prequalification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.
Health and Mental Hygiene, Shamecka Williams (347) 396-6656;
swillia9@health.nyc.gov

## MENTAL HYGIENE

- AWARD


## Human Services / Client Services

FY25 RENEWAL \#1 - NY 15/15 SCATTERED-SITE SUPPORTIVE HOUSING - Renewal - PIN\# 81620P8177KXLR001 - AMT:
$\$ 7,756,128.00$ - TO: UNDER 21, 460 West 41 Street, New York, NY 10036.

Mental Health Services, Supported Housing for young adults families with children ages 18-25 in a scattered-site model.

FY 25 RENEWAL FOR SUPPORTIVE HOUSING - Renewal -
PIN\# 81620P8173KXLR001 - AMT: \$6,499,857.00 - TO: Bridging Access to Care Inc, 2261 Church Ave., Fl. 3, Brooklyn, NY 11226.
Brinding Access to Care, Inc. will continue to provide supportive
housing services during the renewal term. CT1-816-20201403421.

> my28

FY25 RENEWAL \#2 - MENTAL HEALTH SERVICES FOR
YOUTH AGE18-21 - Renewal - PIN\# 81619R8269KXLR002 - AMT:
\$634,875.00-TO: Under 21, 460 West 41 Street, New York, NY 10036.
FY25 RENEWAL \#2 19AZ005001R2X00 The vendor has provided and will continue to provide during the renewal term mental health services for youth.
my28

## HOUSING AUTHORITY

## PROCUREMENT

■ VENDOR LIST

## Goods and Services

## PRE-QUALIFIED LIST (PQL) PROGRAM FOR VARIOUS

 TRADESNYCHA is currently accepting applications for Pre-Qualified List
( PQL ) program for various trades.
A PQL is a tool that NYCHA will use to qualify vendors and contract goods or services for its developments, streamlining the process for both vendors and NYCHA. NYCHA will publish contracting opportunities, and the PQL will predominantly be used to procure
goods or services for those contracts. Vendors who apply to those bids must pre-qualify according to specific criteria, and vendors who are admitted to the PQL can bid on contracts.
Currently NYCHA has established six (6) PQL lists for the ClosedCircuit Television (CCTV), Carpentry, Painting, Lead Based Paint (Assessment and Abatement, Inspection and Assessment \& Lab Analysis), Plumbing and Electrical.
All vendors interested in NYCHA's PQLs must follow two (2) important steps:
First, vendors must prepare and submit applications to the PQL: To pre-qualify, vendors must meet the minimum requirements listed on the Request for Qualification of the select PQL. Applications will be evaluated by NYCHA on a rolling basis.
Second, vendors who are admitted to the PQL can then bid on solicitations for services on the PQL: Vendors must bid on each contract award, as these are not guaranteed.
For more information regarding PQL's and to obtain applications, please visit NYCHA's website at: https://www.nyc.gov/site/nycha/ business/nycha-pql.page
Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor prequalification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.
Housing Authority, 90 Church Street, 6th Floor, New York, New York, 10007. PQL@nycha.nyc.gov (929) 502-6107; PQL@nycha.nyc.gov
j9-my30

## HUMAN RESOURCES ADMINISTRATION

■ AWARD

## Goods

PURCHASE OF FIVE IDENTOGO GEN II TABLETS, VIRTUAL
BACKDROP - Sole Source - Other - PIN\# 06923S0016001 - AMT: $\$ 83,125.00-$ TO: Idemia Identity \& Security USA LLC, 14 Cosby Drive, 2nd Floor, Bedford, MA 01730.
Pursuant to Section 3-04 of the PPB Rules, HRA/IDNYC would like to enter into a Sole Source contract to purchase five (5) Idento Go Gen II Tablets from Idemia Identity \& Security USA LLC. IDNYC intends to use the "tablets" as part of a pilot program for enrolling clients, that would allow us to perform and complete enrollments solely from IdentoGo Gen II Tablets. The tablets will be put to immediate use at Department of Education (DOE) facilities, at our "pop-ups" and onboard our Mobile Command Center. By introducing this custom designed enrollment tablet, IDNYC hope to resolve issues with flexibility, lack of space, mobility, and ease. The tablet is an all-in-one wireless unit, that can replace our desktop computers. Use of the tablet can relieve enrollment centers from being confined to other peripheral like B-5000's, camera towers and signature pads. The plan is to first host a pilot for testing the solution before a commitment is made. The tablets serve as a useful piece of hardware to integrate with IDNYC Web Enrolment initiative currently in development. IDNYC is willing to invest $\$ 83,125.00$ to acquire the five (5) tablets.
Idemia is the provider of the ID card product and hardware that enrolls' applications. The tablets serve as a useful piece of hardware to integrate with IDNYC Web Enrolment initiative currently in development. Idemia's the developer for the hardware and software that process IDNYC enrollment applications. Since the technology is their proprietary work, they are the only vendor that provide these enrollment tablets.

## Services (other than human services)

INTERIOR/EXTERIOR SIGNAGE - M/WBE Noncompetitive Small Purchase - PIN\# 06924W0025001 - AMT: \$200,000.00 - TO: Big Apple Sign Corporation, 247 W 35th St, New York, NY 10001.
The Fabrication and Installation of Interior/Exterior Signage, Aluminum Plaques and Stenciling Services at various HRA facilities citywide, on an as needed basis. The assignment of work may involve working on multiple sites simultaneously as well as coordinating with other trade contractors. The work site may or may not be occupied by HRA staff.

- my28


## LAW DEPARTMENT

## LAW DEPARTMENT

- AWARD


## Services (other than human services)

## 5YR PROCESS AUTOMATION PROJECT CONTINUATION

- Sole Source - Other - PIN\# 02524S0003001 - AMT: \$655,000.00 - TO: Instaknow Com Inc, 180 Talmadge Road, Suite 32, Edison, NJ 08817.
This contract pertains to a 5 year contract for Instaknow Annual License and Professional Services for the Law Department Process Automation Project continuation. This procurement is a Sole Source being Instaknow is the sole proprietor of the software. The term of this contract is from $7 / 1 / 2023$ to $6 / 30 / 2028$. PIN 02523X001167.
The sole source method is the most competitive method that is
appropriate under the circumstances since there is only one source available.
- my28


## PARKS AND RECREATION

## CENTRAL FORESTRY

- AWARD

Services (other than human services)

## URBAN TREE CARE TRAINING FOR PARKS EMPLOYEES

- Other - PIN\# 84624U0004001 - AMT: $\$ 24,975.00$ - TO: The New York Botanical Garden, 2900 Southern Blvd, Bronx, NY 10458.
To purchase training for advanced principles of urban tree care training for 25 park employees
REQUESTER: Oneika Myers/(718) 760-6667
CONTACT: Abeni Edwards/(212) 830-7959
RECEIVER: Andrew Lindemann/(718) 760-6422
Service Location The New York Botanical Garden, 2900 Southern Blvd, Bronx, NY 10458

> my28

## PROBATION

## ADMINISTRATION

- AWARD


## Goods

DUTY HOLSTERS FOR OFFICERS - Intergovernmental Purchase - PIN\# 7812400003001 - AMT: \$94,117.50 - TO: Atlantic Tactical Inc, 763 Corporate Circle, New Cumberland, PA 17070.

> my28

## SCHOOL CONSTRUCTION AUTHORITY

## CONTRACT ADMINISTRATION

- SOLICITATION


## Construction/Construction Services

ROOFS / EXTERIOR MASONRY - Competitive Sealed Bids -PIN\#SCA24-22192D-1 - Due 5-31-24 at 11:00 A.M.
PS 207 (Queens)
SCA System-generated category: $\$ 3,000,001$ to $\$ 10,000,000$
Pre-Bid walk-through Date and Time: May 31, 2024 at 11:00 A.M.
at: 159-15 88th Street, Howard Beach, NY 11414.
ALL BIDDERS MUST BE PRE-QUALIFIED AT THE TIME OF BID OPENING.
Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor prequalification and other forms; specifications/blueprints; other
information; and for opening and reading of bids at date and time specified above.
School Construction Authority, 25-01 Jackson Avenue, Long Island City,
NY 11101. Raymond Lewis (718) 472-8367; RLewis@nycsca.org

* my28


## ELEVATOR MODERNIZATION / FIRE ALARM

REPLACEMENT/ELECTRICAL SYSTEMS - Competitive Sealed
Bids - PIN\# 24-21706D-1 - Due 6-7-24 at 11:00 A.M.
PS 36/K036 (SPED) K857 (Brooklyn)
SCA System-generated category: $\$ 3,000,001$ to $\$ 10,000,000$
Pre-Bid walk-through Date and Time: May 30, 2024 at 11:00 A.M. at:
2045 Linden Blvd., Brooklyn, NY 11207.
ALL BIDDERS MUST BE PRE-QUALIFIED AT THE TIME OF BID OPENING.
Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor prequalification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.
School Construction Authority, 25-01 Avenue, Long Island City, NY
11101. Raymond Lewis (718)472-8367; RLewis@nycsca.org

- my28


## PROCUREMENT

■ SOLICITATION

## Construction Related Services

VENTILATION/FIRE ALARM SYSTEM REPLACEMENT/BMS
UPGRADE - Competitive Sealed Bids - PIN\# SCA24-21114D-1 Due 6-4-24 at 12:00 P.M.
PS 94 (Brooklyn)
SCA system-generated category: $\$ 3,000,001$ to $\$ 10,000,000$
Pre-Bid Walk through Date and Time: May 29, 2024 at 11:00 A.M. at: 5010 6th Avenue, Brooklyn, NY 11220.
ALL BIDDERS MUST BE PRE-QUALIFIED AT THE TIME OF THE BID OPENING.
Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor prequalification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.
School Construction Authority, 25-01 Jackson Avenue, 16th Floor, Long Island City, NY 11101. Kenyatta Thorne (718) 472-8641; kthorne@nycsca.org

## YOUTH AND COMIMUNITY DEVELOPMENT

## ADMINISTRATION

- AWARD

Goods
SAMSUNG TABLETS - M/WBE Noncompetitive Small Purchase PIN\# 26024W0024001 - AMT: $\$ 25,500.00$ - TO: Itegix LLC, 775 Park Avenue, Suite 255, Huntington, NY 11743.

- my28

SP BRANDED/SWAG PROMOTIONAL ITEMS - M/WBE
Noncompetitive Small Purchase - PIN\# 26024W0025001 - AMT:
$\$ 42,165.00$ - TO: Active World Solutions Inc, 609A Fountain Ave.,
Brooklyn, NY 11208.

- my28

PROMO ITEMS-PO202400295 - M/WBE Noncompetitive Small
Purchase - PIN\# 26024W0026001 - AMT: \$40,643.30 - TO: Active World Solutions Inc, 609A Fountain Ave., Brooklyn, NY 11208.

- my28


## CONTRACT AWARD HEARINGS

NOTE: LOCATION(S) ARE ACCESSIBLE TO INDIVIDUALS USING WHEELCHAIRS OR OTHER MOBILITY DEVICES. FOR FURTHER INFORMATION ON ACCESSIBILITY OR TO

MAKE A REQUEST FOR ACCOMMODATIONS, SUCH AS SIGN LANGUAGE INTERPRETATION SERVICES, PLEASE CONTACT THE MAYOR'S OFFICE OF CONTRACT SERVICES (MOCS) VIA E-MAIL AT DISABILITYAFFAIRS@MOCS.NYC.GOV OR VIA PHONE AT (212) 298-0734. ANY PERSON REQUIRING REASONABLE ACCOMMODATION FOR THE PUBLIC HEARING SHOULD CONTACT MOCS AT LEAST THREE (3) BUSINESS DAYS IN ADVANCE OF THE HEARING TO ENSURE AVAILABILITY.条

## ENVIRONMENTAL PROTECTION

$\square$ PUBLIC HEARINGS
NOTICE IS HEREBY GIVEN that a Public Hearing will be held by the Department of Environmental Protection via conference call on June 12, 2024, commencing at 10:00 A.M. on the following:
IN THE MATTER OF a proposed Purchase Order/Contract between the Department of Environmental Protection and SVAM International Inc. located at 233 East Shore Road, Suite 201, Great Neck, NY 11023 for Robotic Process Automation. The Contract term shall be two calendar years from the date of the written notice to proceed. The Contract amount shall be \$348,993.00 Location: 59-17 Junction Blvd, Flushing, NY 11373 PIN\# 4300008X.
The Vendor was selected by MWBE Noncompetitive Small Purchase pursuant to Section 3-08(c)(1)(iv) of the PPB Rules.
In order to access the Public Hearing and testify, please call 1-347-9215612, Access Code: $171180491 \#$ no later than $9: 55 \mathrm{~A}$. M. If you need further accommodations, please let us know at least five business days in advance of the Public Hearing via e-mail at noahs@dep.nyc.gov.
Pursuant to Section 2-11(c)(3) of the Procurement Policy Board Rules, if DEP does not receive, by June 4, 2024, from any individual a written request to speak at this hearing, then DEP need not conduct this hearing. Requests should be made to Mr. Noah Shieh via email at noahs@dep.nyc.gov.

## HOMELLESS SERVICES

## ■ PUBLIC HEARINGS

NOTICE IS HEREBY GIVEN that a Contract Public Hearing will be held on Tuesday, June 4, 2024 at 10:00 A.M. via Conference Call. Call-in \#: 1-929-221-0010, ACCESS CODE: 6347.
IN THE MATTER OF one (1) proposed contract between the Department of Homeless Services of the City of New York and the contractor listed below, for the provision of Safe Haven for Street Homeless clients, located at 1660 Monroe Avenue, Bronx, NY 10457. The contract term shall be from July 1, 2024 to June 30, 2029 with one (1) option to renew for 4 years from July 1, 2029 to June 30, 2033.

Contractor/Address
E-PIN
Amount Service
Comunilife, Inc. $\quad$ 07121P0125010 $\$ 16,530,850.00$ Bronx/4
462 7th Avenue, 3rd Floor
New York, NY 10018
The proposed contractor has been selected by means of the Competitive Sealed Proposal method, pursuant to Section 3-03 of the Procurement Policy Board (PPB) Rules.
A draft copy of the proposed contract is available for public inspection at the Human Resources Administration of the City of New York, Office of Contracts, 150 Greenwich Street, 37th Floor, New York, NY 10007, on business days, from May 28, 2024 to June 4, 2024, Monday through Friday, excluding Holidays, from 10:00 A.M. to 5:00 P.M.
If you need to schedule an inspection appointment and/or need additional information, please contact Sarah Haas at (929) 221-7305 or via email at haass@dss.nyc.gov.

NOTICE IS HEREBY GIVEN that a Contract Public Hearing will be held on Tuesday, June 4, 2024 at 10:00 A.M. via Conference Call. Call-in \#: 1-929-221-0010, ACCESS CODE: 6347.
IN THE MATTER OF one (1) proposed contract between the Department of Homeless Services of the City of New York and the contractor listed below, for the Provision of Shelter Services for Homeless Families with Children including allowance at Rose McCarthy Residence. The contract term shall be from July 1, 2024 to June 30, 2025.
Contractor/Address Site Addresses CB E-PIN Amount

## Services For The

Underserved Inc 463 7th Avenue, 17th FL
New York, NY 10018

| Site Addresses | CB | E-PIN | Amount |
| :---: | :---: | :---: | :---: |
| 882 Dumont | 5 | 07124N0011001 | \$4,523,628.00 |
| Avenue |  |  |  |
| Brooklyn, NY |  |  |  |
| 11207 |  |  |  |
| 433 Van Siclen | 5 |  |  |
| Avenue |  |  |  |
| Brooklyn, NY |  |  |  |
| 11207 |  |  |  |

The proposed contractor has been selected by means of the Negotiated Acquisition Extension method, pursuant to Section 3-04 (b)(2)(iii) of the Procurement Policy Board (PPB) Rules.
A draft copy of the proposed contract is available for public inspection at the Human Resources Administration of the City of New York, Office of Contracts, 150 Greenwich Street, 37th Floor, New York, NY 10007, on business days, from May 28, 2024 to June 4, 2024, Monday through Friday, excluding Holidays, from 10:00 A.M. to 5:00 P.M.
If you need to schedule an inspection appointment and/or need additional information, please contact Sarah Haas at (929) 221-7305 or via email at haass@dss.nyc.gov.

NOTICE IS HEREBY GIVEN that a Contract Public Hearing will be held on Tuesday, June 4, 2024 at 10:00 A.M. via Conference Call. Call-in \#: 1-929-221-0010, ACCESS CODE: 6347.
IN THE MATTER OF one (1) proposed contract between the Department of Homeless Services of the City of New York and the contractor listed below, for the Provision of Girl Scout membership and related costs for Families with Children at Troop 6000. The contract term shall be from May 1, 2024 to June 30, 2025.

$\begin{array}{lllll}\text { Contractor/Address } & \frac{\text { Site Address }}{\text { Girl Scout Council of }} & \quad \frac{\text { CB }}{01} & \frac{\text { E-PIN }}{07124 N 0018001 ~ S t r e e t ~} &$|  Amount  |
| :--- |
| $466,849.00$ |\end{array} York, NY

## 40 Wall Street, Suite 70810005

New York, NY 10005
The proposed contractor has been selected by means of the Negotiated Acquisition Extension method, pursuant to Section 3-04 (b)(2)(iii) of the Procurement Policy Board (PPB) Rules.
A draft copy of the proposed contract is available for public inspection at the Human Resources Administration of the City of New York, Office of Contracts, 150 Greenwich Street, 37th Floor, New York, NY 10007, on business days, from May 28, 2024 to June 4, 2024, Monday through Friday, excluding Holidays, from 10:00 A.M. to 5:00 P.M.
If you need to schedule an inspection appointment and/or need additional information, please contact Sarah Haas at (929) 221-7305 or via email at haass@dss.nyc.gov.

- my28


## HUMAN RESOURCES ADMINISTRATION

- PUBLIC HEARINGS

NOTICE IS HEREBY GIVEN that a Contract Public Hearing will be held on Tuesday, June 4, 2024 at 10:00 A.M. via Conference Call. Call-in \#: 1-929-221-0010, ACCESS CODE: 6347.
IN THE MATTER OF one (1) proposed contract between the Human Resources Administration of the City of New York and the contractor listed below, for the Provision of Affordable Housing Program for DSS Referred Households. The contract term shall be from July 1, 2024 to June 30, 2064.

Contractor/Address
MBD Community
Housing Corp
1789 Southern
Boulevard
Bronx, NY 10460
The proposed contractor has been selected by means of the Competitive Sealed Proposal method, pursuant to Section 3-03 of the Procurement Policy Board (PPB) Rules.
A Draft copy of the proposed contract is available for public inspection at the Human Resources Administration of the City of New York, Office of Contracts, 150 Greenwich Street, 37th Floor, New York, NY 10007, on business days, from May 28, 2024 to June 4, 2024, Monday through Friday, excluding Holidays, from 10:00 A.M. to 5:00 P.M. If you need to schedule an inspection appointment and/or need additional information, please contact Donna Wilson at (929) 221-6353 or via email at wilsond@dss.nyc.gov.

## AGENCY RULES

## ENVIRONIMENTAL PROTECTION

■ NOTICE

## Notice of Public Hearing and Opportunity to Comment on Proposed Rules

What are we proposing? The Department of Environmental Protection ("Department" or "DEP") is proposing to amend its rules governing management of construction and post-construction stormwater sources (Title 15, chapter 19.1 of the Rules of the City of New York ("RCNY")).
When and where is the hearing? The Department will hold a public hearing on the proposed rule amendments. The public hearing will take place at 11 am on Monday, July 1, 2024. To participate in the public hearing, please follow these instructions:

## Microsoft Teams

Join the meeting now
Meeting ID: 225027909625
Passcode: cZPqCu

## Dial in by phone

+1 347-921-5612,,765304382\#
Find a local number
Phone conference ID: 765304 382\#
How do I comment on the proposed rules? Anyone can comment on the proposed rules by:

- Website. You can submit comments to the Department through the NYC rules web site at http://rules.cityofnewyork.us.
- Email. You can email written comments to nycrules@dep.nyc.gov.
- Mail. You can mail written comments to the Department, Bureau of Legal Affairs, 59-17 Junction Boulevard, $19^{\text {th }}$ Floor, Flushing, NY 11373.
- Fax. You can fax written comments to the Department, Bureau of Legal Affairs, at 718-595-6543.
- By speaking at the hearing. Anyone who wants to comment on the proposed rule at the public hearing must sign up to speak. You can sign up before the hearing by calling 718-595-6531. You can speak for up to three minutes.
Is there a deadline to submit written comments? Yes, you must submit written comments by July 1, 2024.
What if I need assistance to participate in the hearing? You must tell the Department's Bureau of Legal Affairs if you need a reasonable accommodation of a disability at the hearing. You must tell
us if you need a sign language interpreter. You can tell us by postal mail or email to the addresses given above. You may also tell us by telephone at 718-595-6531. You must tell us by June 24, 2024.
Can I review the comments made on the proposed rules? You can review the comments made online on the proposed rules by going to the website at http://rules.cityofnewyork.us/. A few days after the hearing, a transcript of the hearing and copies of the written comments will be available to the public at the Bureau of Legal Affairs.
What authorizes the Department to make these rules? Section 1043(b-1) of the New York City Charter ("City Charter") and section 24-553 of the Administrative Code of the City of New York authorize the Department to make these proposed rules which were included in the Department's regulatory agenda for fiscal year 2023.
Where can I find the Department's rules? The Department's rules are in Title 15 of the Rules of the City of New York.
What laws govern the rulemaking process? The Department must meet the requirements of Section 1043 of the City Charter when creating or changing rules. This notice is made according to the requirements of Section 1043(b) of the City Charter.


## Statement of Basis and Purpose

The New York City Department of Environmental Protection ("DEP" or "Department") proposes to amend its rules governing management of construction and post-construction stormwater sources (Title 15, chapter 19.1 of the Rules of the City of New York ("RCNY")).
Section 1403(b-1) of the Charter of the City of New York provides that the Commissioner of Environmental Protection ("Commissioner") has "the power to administer and enforce provisions of law, rules and regulations relating to the management and control of discharges and runoff from public and private property, including but not limited to stormwater discharges, which may convey pollutants and other materials that may enter and have an adverse impact on the waters of the state." Title 24 of the Administrative Code of the city of New York, Chapter 5-A establishes stormwater management controls for construction projects to reduce the flow of stormwater runoff and water borne pollutants into sewers that empty directly into the waters of the state or that overflow into such waters because of rain or snowmelt that exceeds the design capacity of wastewater treatment plants.
The proposed amendments to Chapter 19.1 would revise several Appendices to the NYC Stormwater Manual, which provide additional procedural and technical guidance to owners, developers and applicants.
The proposed amendments are minor corrections or clarifications made in Appendix D Stormwater Management Practice Sizing Examples, Appendix E Site Design Example, Appendix F Controlled Flow Pump Workbook, and Appendix G Detention in Series Examples.
New material is underlined. Deleted material is shown in [brackets].
"Shall" and "must" denote mandatory requirements and may be used interchangeably in the rules of the department, unless otherwise specified or unless the context clearly indicates otherwise.

## APPENDIX D

## Stormwater Management Practice Sizing Examples <br> WATER QUALITY VOLUME SIZING EXAMPLES

## Infiltration (vegetated)

## Stormwater Planter

Design a stormwater planter that will treat the water quality volume from an impervious area of 3,000 square feet, with a runoff coefficient of 0.95 . Assume a media saturated hydraulic conductivity of $2 \mathrm{in} / \mathrm{hr}$ and an infiltration rate of $2 \mathrm{in} / \mathrm{hr}$.
Step 1: Calculate the $\mathbf{W Q}_{\mathbf{v}}$.
$W Q_{V}=\frac{1.5 \mathrm{in}}{12} * A * R_{V}$
where:
$\mathrm{WQ}_{\mathrm{V}}=$ water quality volume (cf)
$\mathrm{A}=$ contributing area (sf) $=3,000 \mathrm{sf}$
$\mathrm{R}_{\mathrm{V}}=$ runoff coefficient relating total rainfall and runoff
$\mathrm{R}_{\mathrm{v}}=0.05+0.009(\mathrm{I})=0.95$
$\mathrm{I}=$ percent impervious cover $=100 \%$

$$
W Q_{V}=\frac{1.5 \mathrm{in}}{12} * 3,000 \mathrm{sf} * 0.95
$$

$$
W Q_{V}=356.25 c f
$$

Step 2: Calculate the SMP area assuming a maximum loading ratio of $1: 20$ for a stormwater planter practice. Use the area to set the initial length and width of the practice.

$$
A_{S M P}=\frac{A}{20}
$$

where:
$\mathrm{A}_{\text {SMP }}=$ area at the base of infiltration SMP (sf)
$\mathrm{A}=$ contributing area $(\mathrm{sf})=3,000 \mathrm{sf}$

$$
\begin{aligned}
& A_{S M P}=\frac{3,000 s f}{20} \\
& A_{S M P}=150 \mathrm{sf}
\end{aligned}
$$

Assume a 15 ft by 10 ft practice.
Step 3: Calculate the volume of surface ponding assuming a surface ponding depth of 0.5 ft , which is less than the maximum surface ponding depth of 1 ft for a stormwater planter practice.

$$
V_{P}=A_{S M P} * D_{P}
$$

$$
\mathrm{D}-1
$$

where:
$V_{P}=$ volume of surface ponding (cf)
$\mathrm{A}_{\mathrm{SMP}}=$ area of the $\operatorname{SMP}(\mathrm{sf})=150 \mathrm{sf}$
$\mathrm{D}_{\mathrm{P}}^{\text {SMP }}=$ depth of ponding $(\mathrm{ft})=0.5 \mathrm{ft}$
$V_{p}=150 \mathrm{sf} * 0.5 \mathrm{ft}$

$$
V_{P}=75 c f
$$

In this case, the designer has chosen to use a hydraulic connection between the ponding zone and the stone base. Therefore, the ponding zone does not need to temporarily store $75 \%$ of the water quality volume.
Step 4: Calculate the volume of voids in the soil media layer assuming a soil media depth of 1.5 ft equal to the minimum soil media depth of 1.5 ft for a stormwater planter practice.

$$
V_{S}=A_{S M P} * D_{S} * n_{S}
$$

$\mathrm{V}_{\mathrm{S}}=$ volume of voids in the soil media layer (cf)
$\mathrm{A}_{\text {SMP }}=$ area of the SMP $(\mathrm{sf})=150 \mathrm{sf}$
$\mathrm{D}_{\mathrm{S}}^{\mathrm{SMP}}=$ depth of soil media layer $(\mathrm{ft})=1.5 \mathrm{ft}$
$\mathrm{n}_{\mathrm{S}}=$ available porosity of soil media $(\mathrm{cf} / \mathrm{cf})=0.2 \mathrm{cf} / \mathrm{cf}$

$$
V_{S}=150 \mathrm{sf} * 1.5 \mathrm{ft} * 0.2 \frac{c f}{c f}
$$

$$
V_{S}=45 c f
$$

Step 5: Calculate the volume of voids created by internal structures.
Assume there are no internal structures in this stormwater planter practice, so the volume is 0 .

$$
V_{l}=0 c f
$$

Step 6: Calculate the volume of voids in the drainage layer assuming a drainage media depth of 1 ft , which is equal to the minimum drainage media depth of 1 ft for a stormwater planter practice.

$$
V_{D}=\left(A_{S M P} * D_{D}-V_{1, d}\right) * n_{D}
$$

where:
$\mathrm{V}_{\mathrm{D}}=$ volume of voids in the drainage layer (cf)
$\mathrm{A}_{\mathrm{SMP}}^{\mathrm{D}}=$ area of the SMP $(\mathrm{sf})=150 \mathrm{cf}$
$\mathrm{D}_{\mathrm{D}}=$ depth of the drainage layer $(\mathrm{ft})=1 \mathrm{ft}$
$\mathrm{V}_{\mathrm{I}, \mathrm{d}}^{\mathrm{D}}=$ volume of voids created by internal structures within the
drainage layer (cf) $=0 \mathrm{cf}$
$\mathrm{n}_{\mathrm{D}}=$ porosity of drainage layer media $(\mathrm{cf} / \mathrm{cf})=0.4 \mathrm{cf} / \mathrm{cf}$
D-2

$$
\begin{aligned}
& V_{D}=(150 s f * 1 \mathrm{ft}-0 \mathrm{cf}) * 0.4 \frac{c f}{c f} \\
& V_{D}=60 \mathrm{cf}
\end{aligned}
$$

Step 7: Calculate the total SMP volume from the individual component volumes and compare to the $\mathrm{WQ}_{\mathrm{v}}$.

$$
V_{S M P}=V_{P}+V_{S}+V_{l}+V_{D}
$$

where:
$\mathrm{V}_{\text {SMP }}=$ storage volume of SMP (cf)
$\mathrm{V}_{\mathrm{P}}^{\text {SMP }}=$ volume of surface ponding $(\mathrm{cf})=150 \mathrm{cf}$
$\mathrm{V}_{\mathrm{S}}^{\mathrm{P}}=$ volume of voids in the soil media layer (cf) $=90 \mathrm{cf}$
$\mathrm{V}_{\mathrm{I}}=$ volume of voids created by internal structures such as
chambers or pipes (cf) $=0 \mathrm{cf}$
$\mathrm{V}_{\mathrm{D}}=$ volume of voids in the drainage layer (cf) = 120 cf

$$
\begin{aligned}
& V_{S M P}=150 c f+45 c f+0 c f+60 c f \\
& V_{S M P}=255 c f<W Q_{V}=356.25 c f \quad N O
\end{aligned}
$$

Practice does not manage the entire WQv . Reconfigure the practice to increase the storage volume and return to associated step. In this case, the practice area will be increased, and Steps 2-8 are repeated.
Step 2: Calculate the SMP area assuming a loading ratio of $1: 10$, which is less than the maximum loading ratio of $1: 20$ for a stormwater planter practice. Use the area to set the initial length and width of the practice.

$$
A_{S M P}=\frac{A}{10}
$$

where:
$\underset{\mathrm{A}}{\mathrm{A}_{\text {SMP }}=\text { area at the base of infiltration SMP (sf) }}$
$\mathrm{A}=$ contributing area $(\mathrm{sf})=3,000 \mathrm{sf}$

$$
\begin{aligned}
& A_{S M P}=\frac{3,000 \mathrm{sf}}{10} \\
& A_{S M P}=300 \mathrm{sf}
\end{aligned}
$$

Assume a 30 ft by 10 ft practice.
Step 3: Calculate the volume of surface ponding assuming a surface ponding depth of 0.5 ft , which is less than the maximum surface ponding depth of $1 \mathbf{f t}$ for a stormwater planter practice.

$$
\begin{aligned}
& V_{P}=A_{S M P} * D_{P} \\
& \text { D-3 } \\
& \text { where: } \\
& \mathrm{V}_{\mathrm{P}}=\text { volume of surface ponding }(\mathrm{cf}) \\
& \mathrm{A}_{\mathrm{SMP}}=\text { area of the } \mathrm{SMP}(\mathrm{sf})=300 \mathrm{sf} \\
& \mathrm{D}_{\mathrm{P}}=\text { depth of ponding }(\mathrm{ft})=0.5 \mathrm{ft} \\
& V_{P}=300 \mathrm{sf} * 0.5 \mathrm{ft} \\
& \\
& V_{P}=150 \mathrm{cf}
\end{aligned}
$$

In this case, the designer has chosen to use a hydraulic connection between the ponding zone and the stone base. Therefore, the ponding zone does not need to temporarily store $75 \%$ of the water quality volume.
Step 4: Calculate the volume of voids in the soil media layer assuming a soil media depth of 1.5 ft equal to the minimum soil media depth of 1.5 ft for a stormwater planter practice.

$$
V_{S}=A_{S M P} * D_{S} * n_{S}
$$

$\mathrm{V}_{\mathrm{s}}=$ volume of voids in the soil media layer (cf)
$\mathrm{A}_{\text {SMP }}^{\mathrm{S}}=$ area of the SMP $(\mathrm{sf})=300 \mathrm{sf}$
$\mathrm{D}_{\mathrm{S}}^{\text {sMp }}=$ depth of soil media layer $(\mathrm{ft})=1.5 \mathrm{ft}$
$\mathrm{n}_{\mathrm{S}}=$ available porosity of soil media (cf/cf) $=0.2 \mathrm{cf} / \mathrm{cf}$

$$
\begin{aligned}
& V_{S}=300 \mathrm{sf} * 1.5 \mathrm{ft} * 0.2 \frac{c f}{c f} \\
& V_{S}=90 \mathrm{cf}
\end{aligned}
$$

Step 5: Calculate the volume of voids created by internal

## structures.

Assume there are no internal structures in this stormwater planter practice, so the volume is 0 .

$$
V_{l}=0 c f
$$

Step 6: Calculate the volume of voids in the drainage layer assuming a drainage media depth of 1 ft , which is equal to the minimum drainage media depth of 1 ft for a stormwater planter practice.

$$
V_{D}=\left(A_{S M P} * D_{D}-V_{l, d}\right) * n_{D}
$$

where:
$\mathrm{V}_{\mathrm{D}}=$ volume of voids in the drainage layer (cf)
$\mathrm{A}_{\text {SMP }}^{\mathrm{D}}=$ area of the SMP (sf) $=300 \mathrm{cf}$
$\mathrm{D}_{\mathrm{D}}=$ depth of the drainage layer $(\mathrm{ft})=1 \mathrm{ft}$
$\mathrm{V}_{\mathrm{Id}}^{\mathrm{D}}=$ volume of voids created by internal structures within the drainage layer (cf) $=0 \mathrm{cf}$
$\mathrm{n}_{\mathrm{D}}=$ porosity of drainage layer media $(\mathrm{cf} / \mathrm{cf})=0.4 \mathrm{cf} / \mathrm{cf}$
D-4

$$
\begin{aligned}
& V_{D}=(300 s f * 1 f t-0 c f) * 0.4 \frac{c f}{c f} \\
& V_{D}=120 c f
\end{aligned}
$$

Step 7: Calculate the total SMP volume from the individual component volumes and compare to the $\mathbf{W Q}_{\mathbf{v}}$.

$$
V_{S M P}=V_{P}+V_{S}+V_{l}+V_{D}
$$

where:
$\mathrm{V}_{\text {SMP }}$ = storage volume of SMP (cf)
$\mathrm{V}_{\mathrm{P}}=$ volume of surface ponding $(\mathrm{cf})=150 \mathrm{cf}$
$\mathrm{V}_{\mathrm{S}}^{\mathrm{P}}=$ volume of voids in the soil media layer (cf) $=90 \mathrm{cf}$
$\mathrm{V}_{\mathrm{I}}=$ volume of voids created by internal structures such as
chambers or pipes (cf) $=0$ cf
$\mathrm{V}_{\mathrm{D}}=$ volume of voids in the drainage layer (cf) = 120 cf

$$
\begin{aligned}
& V_{S M P}=150 c f+90 c f+0 c f+120 c f \\
& V_{S M P}=360 c f>W Q_{V}=356.25 c f \quad O K
\end{aligned}
$$

Step 8: Check the ponding and infiltration drawdown times of the practice do not exceed the required times of 12 hours and 48 hours, respectively.
Infiltration drawdown time:

$$
d t_{S M P}=\frac{V_{S M P}}{\left(\frac{i}{12}\right) * A_{S M P}}
$$

where:
$\mathrm{dt}_{\text {SMP }}=$ drawdown time of infiltration SMP ( hr )
$\mathrm{V}_{\text {SMP }}=$ volume of infiltration SMP $(\mathrm{cf})=\mathrm{WQ}_{\mathrm{V}}=360 \mathrm{cf}$
$i=$ field measured infiltration rate $(\mathrm{in} / \mathrm{hr})=2 \mathrm{in} / \mathrm{hr}$
$\mathrm{A}_{\text {SMP }}=$ area at the base of infiltration SMP (sf) $=300 \mathrm{sf}$
$d t_{S M P}=\frac{360 c f}{\left(\frac{2 \text { in } / h r}{12}\right) * 300 s f}$

$$
d t_{S M P}=7.2 \mathrm{hr}<48 \mathrm{hr} \quad O \mathrm{~K}
$$

Surface ponding drawdown time:

$$
d t_{p}=\frac{V_{p}}{\left(\frac{K_{S}}{12}\right) *\left(1+\frac{0.5 D_{p}}{D_{m}}\right) *\left(\frac{A_{P_{1}}+A_{p 2}}{2}\right)}
$$

## D-5

where:
$\mathrm{dt}_{\mathrm{P}}=\mathrm{drawdown}$ time of surface ponding ( hr )
$\mathrm{V}_{\mathrm{P}}^{\mathrm{P}}=$ volume of surface ponding (cf) $=75 \mathrm{cf}$
$\mathrm{K}_{\mathrm{S}}^{\mathrm{p}}=$ saturated hydraulic conductivity of media below the surface ponding area $(\mathrm{in} / \mathrm{hr})=2 \mathrm{in} / \mathrm{hr}$
$\mathrm{D}_{\mathrm{p}}=$ maximum depth of ponding $(\mathrm{ft})=0.5 \mathrm{ft}$
$D_{m}^{p}=$ depth of media below surface ponding area (ft) $=1.5 \mathrm{ft}$
$A_{P 1}^{m}=$ area at the base of surface ponding zone (sf) $=300 \mathrm{sf}$
$\mathrm{A}_{\mathrm{P} 2}^{\mathrm{P}}=$ area at the top of surface ponding zone $(\mathrm{sf})=300 \mathrm{sf}$

$$
\begin{aligned}
& d t_{p}=\frac{150 c f}{\left(\frac{2 \frac{\mathrm{~h}}{\mathrm{hr}}}{12}\right) *\left(1+\frac{0.5 * 0.5 \mathrm{ft}}{1.5 \mathrm{ft}}\right) *\left(\frac{300 \mathrm{sf}+300 \mathrm{sf}}{2}\right)} \\
& d t_{p}=2.57 \mathrm{hr}<12 \mathrm{hr} \quad O K
\end{aligned}
$$

Note: A portion of the SMP volume for this practice may be applied towards meeting the $V_{V}$ requirements, see Chapter 4 and Appendix $C$. D-6

## Evapotranspiration

## Green Roof

Design a green roof that will treat the water quality volume from a 1,100 square foot rooftop with a runoff coefficient of 0.95 . Assume that the green roof will cover 900 square feet ( $82 \%$ ) of the rooftop due to required setbacks and/or equipment.
Step 1: Calculate the $W_{V} \mathbf{V}^{*}$

$$
W Q_{V}=\frac{1.5 \mathrm{in}}{12} * A * R_{V}
$$

where:
$\mathrm{WQ}_{\mathrm{V}}=$ water quality volume (cf)
$\mathrm{A}=$ contributing area $(\mathrm{sf})=1,100 \mathrm{sf}$
$\mathrm{R}_{\mathrm{V}}=$ runoff coefficient relating total rainfall and runoff
$\mathrm{R}_{\mathrm{v}}=0.05+0.009(\mathrm{I})=0.95$
$\mathrm{I}=$ percent impervious cover $=100 \%$

$$
W Q_{V}=\frac{1.5 \mathrm{in}}{12} * 1,100 s f * 0.95
$$

$$
W Q_{V}=130.63 c f
$$

Note: Since the green roof will cover 900 square feet ( $82 \%$ of the total area) and the maximum loading ratio $1: 1$, the green roof may only treat up to $106.88 \mathrm{cf}(82 \%)$ of the 130.63 cf water quality volume.

## Step 2: Calculate the volume of surface ponding.

Green roofs are fast draining and typically do not pond water.
Any ponding that does occur would not be stored long enough for evapotranspiration. Therefore, the volume of surface ponding is zero.

$$
V_{P}=0 c f
$$

Step 3: Calculate the volume of voids in the soil media layer assuming a soil media depth of 0.33 ft , which is equal to the minimum soil media depth of $0.33 \mathbf{f t}$ for a green roof.

$$
\begin{aligned}
& V_{S}=A_{S M P} * D_{S} * n_{S} \\
& \mathrm{~V}_{\mathrm{S}}=\text { volume of voids in the soil media layer }(\mathrm{cf}) \\
& \mathrm{A}_{\mathrm{SMP}}=\text { area of the } \mathrm{SMP}(\mathrm{sf})=900 \mathrm{sf} \\
& \mathrm{D}_{\mathrm{S}}=\text { depth of soil media layer }(\mathrm{ft})=0.33 \mathrm{ft} \\
& \mathrm{n}_{\mathrm{S}}=\text { available porosity of soil media }(\mathrm{cf} / \mathrm{cf})=0.2 \mathrm{cf} / \mathrm{cf} \\
& V_{S}=900 \mathrm{sf} * 0.33 \mathrm{ft} * 0.2 \frac{\mathrm{cf}}{\mathrm{cf}}
\end{aligned}
$$

$$
V_{S}=59.4 c f
$$

D-7
Step 4: Calculate the volume of voids created by internal structures.
Assume there are no internal structures in this green roof practice, so the volume is 0 .

$$
V_{l}=0 c f
$$

Step 5: Calculate the volume of voids in the drainage layer. The active storage zone for a green roof is considered from the base of the soil media up, so the storage volume of the drainage layer is zero.

$$
V_{D}=0 c f
$$

Step 6: Calculate the total SMP volume from the individual component volumes and compare to the $W_{V}$.

$$
V_{S M P}=V_{P}+V_{S}+V_{I}+V_{D}
$$

where:
$\mathrm{V}^{\text {SMP }}=$ storage volume of SMP (cf)
$\mathrm{V}_{\mathrm{P}}=$ volume of surface ponding (cf) $=0 \mathrm{cf}$
$\mathrm{V}_{\mathrm{S}}^{\mathrm{P}}=$ volume of voids in the soil media layer $(\mathrm{cf})=59.4 \mathrm{cf}$
$\mathrm{V}_{\mathrm{I}}^{\mathrm{S}}=$ volume of voids created by internal structures such as
chambers or pipes (cf) $=0 \mathrm{cf}$
$\mathrm{V}_{\mathrm{D}}=$ volume of voids in the drainage layer $(\mathrm{cf})=0 \mathrm{cf}$

$$
\begin{aligned}
& V_{S M P}=0 c f+59.4 c f+0 c f+0 c f \\
& V_{S M P}=59.4 c f<W Q_{V}=130.63 c f \quad \text { NOTMET }
\end{aligned}
$$

Since the SMP volume is less than the $W_{V}$, other practices must be used to treat the remaining $W_{V}$.
D-8
Infiltration (unvegetated)

## Subsurface Gallery

Design a subsurface gallery that will treat the water quality volume from an impervious area of 90,000 square feet ( 2.07 acres) with a runoff coefficient of 0.95 . Assume an infiltration rate of $1 \mathrm{in} / \mathrm{hr}$.

## Step 1: Calculate the $W_{V}$.

$$
W Q_{V}=\frac{1.5 \mathrm{in}}{12} * A * R_{V}
$$

where:
$\mathrm{WQ}_{\mathrm{V}}=$ water quality volume (cf)
$\mathrm{A}=$ contributing area $(\mathrm{sf})=90,000 \mathrm{sf}$
$\mathrm{R}_{\mathrm{V}}=$ runoff coefficient relating total rainfall and runoff
$\mathrm{R}_{\mathrm{V}}=0.05+0.009(\mathrm{I})=0.95$
$\mathrm{I}=$ percent impervious cover $=100 \%$

$$
\begin{aligned}
& W Q_{V}=\frac{1.5 \mathrm{in}}{12} * 90,000 \mathrm{sf} * 0.95 \\
& W Q_{V}=10,687.5 \mathrm{cf}
\end{aligned}
$$

Step 2: Calculate the SMP area assuming a loading ratio of 1:10. Note that the subsurface gallery does not have a maximum loading ratio. Use the area to set the initial length and width of the practice.

$$
A_{S M P}=\frac{A}{10}
$$

where:
$\mathrm{A}_{\text {SMP }}=$ area at the base of infiltration SMP (sf)
$\mathrm{A}=$ contributing area $(\mathrm{sf})=90,000 \mathrm{sf}$
$A_{S M P}=\frac{90,000 \mathrm{sf}}{10}$
$A_{S M P}=9,000 \mathrm{sf}$

## Assume a $90 \mathrm{ft} \times 100 \mathrm{ft}$ practice.

Step 3: Calculate the volume of surface ponding.
There is no surface ponding associated with a subsurface gallery since the SMP is below ground level, so the volume is 0 .

$$
V_{P}=0
$$

## D-9

Step 4: Calculate the volume of voids in the soil media layer.
There is no soil media associated with a subsurface gallery, so the volume is 0 .

$$
V_{S}=0
$$

Step 5: Calculate the volume of voids created by internal structures.
Assume 300 ft of 12 " distribution pipe will be placed within the system in a grid pattern.

$$
\begin{aligned}
& V_{l}=A_{P} * L_{P} \\
& \text { where: } \\
& \mathrm{V}_{\mathrm{I}}=\text { volume of voids created by internal structure }(\mathrm{cf}) \\
& \mathrm{A}_{\mathrm{P}}=\text { area of pipe }(\mathrm{sf})=(\pi) *(0.5)^{2}=0.79 \mathrm{sf} \\
& \mathrm{~L}_{\mathrm{P}}=\text { total length of pipe }(\mathrm{ft})=300 \mathrm{ft} \\
& V_{l}=0.79 \mathrm{sf} * 300 \mathrm{ft} \\
& V_{l}=237 \mathrm{cf}
\end{aligned}
$$

Step 6: Calculate the volume of voids in the drainage layer assuming a drainage media depth of 3 ft , which is greater than the minimum drainage media depth of 1 ft for a subsurface gallery practice.

$$
V_{D}=\left(A_{S M P} * D_{D}-V_{1, d}\right) * n_{D}
$$

where:
$\mathrm{V}_{\mathrm{D}}=$ volume of voids in the drainage layer (cf)
$\mathrm{A}_{\text {SMP }}^{\mathrm{D}}=$ area of the SMP $(\mathrm{sf})=9,000 \mathrm{sf}$
$\mathrm{D}_{\mathrm{D}}=$ depth of the drainage layer $(\mathrm{ft})=2 \mathrm{ft}$
$\mathrm{V}_{\mathrm{I}, \mathrm{d}}^{\mathrm{D}}=$ volume of voids created by internal structures within the
drainage layer $(\mathrm{cf})=273 \mathrm{cf}$
$\mathrm{n}_{\mathrm{D}}=$ porosity of drainage layer media $(\mathrm{cf} / \mathrm{cf})=0.4 \mathrm{cf} / \mathrm{cf}$

$$
V_{D}=(9,000 s f * 3 f t-273 c f) * 0.4 \frac{c f}{c f}
$$

$$
V_{D}=10,690.8 c f
$$

Step 7: Calculate the total SMP volume from the individual component volumes and compare to the $W_{V} \mathbf{V}^{\text {. }}$

$$
V_{S M P}=V_{P}+V_{S}+V_{l}+V_{D}
$$

where:
$\mathrm{V}_{\text {SMP }}=$ storage volume of SMP (cf)
$V_{P}^{\text {SMP }}=$ volume of surface ponding $(c f)=0 \mathrm{cf}$
$\mathrm{V}_{\mathrm{S}}^{\mathrm{P}}=$ volume of voids in the soil media layer $(\mathrm{cf})=0 \mathrm{cf}$
$\mathrm{V}_{\mathrm{I}}=$ volume of voids created by internal structures such as
chambers or pipes (cf) $=273 \mathrm{cf}$
$\mathrm{V}_{\mathrm{D}}=$ volume of voids in the drainage layer $(\mathrm{cf})=10,690.8 \mathrm{cf}$
D-10
$V_{S M P}=0 c f+0 c f+273 c f+10,690.8 c f$

$$
V_{S M P}=10,963.8 c f>W Q_{V}=10,687.5 c f
$$

OK
Step 8: Check the infiltration drawdown time does not exceed the required time of 48 hours.
$d t_{S M P}=\frac{V_{S M P}}{\left(\frac{i}{12}\right) * A_{S M P}}$
where:
$\mathrm{dt}_{\text {SMP }}=$ drawdown time of infiltration SMP (hr)
$\mathrm{V}_{\mathrm{SMP}}=$ volume of infiltration $\mathrm{SMP}(\mathrm{cf})=\mathrm{WQ}_{\mathrm{V}}=10,963.8 \mathrm{cf}$
$i=$ field measured infiltration rate $(\mathrm{in} / \mathrm{hr})=1 \mathrm{in} / \mathrm{hr}$
$\mathrm{A}_{\mathrm{SMP}}=$ area at the base of infiltration $\operatorname{SMP}(\mathrm{sf})=9,000 \mathrm{sf}$
$d t_{S M P}=\frac{10,963.8 \mathrm{cf}}{\left(\frac{1 \mathrm{in} / h r}{12}\right) * 9,000 \mathrm{sf}}$

$$
d t_{S M P}=14.62 h r<48 \mathrm{hr} \quad O K
$$

Note: A portion of the SMP volume for this practice may be applied towards meeting the $V_{V}$ requirements, see Chapter 4 and Appendix C.

## D-11

## Reuse

## Cistern

Design a reuse system to treat the water quality volume from a
3,000 square foot impervious surface with a runoff coefficient of 0.95 . Designers must additionally show that water will be reused for nonirrigation purposes.

## Step 1: Calculate the $W_{V}{ }^{*}$

$$
W Q_{V}=\frac{1.5 \mathrm{in}}{12} * A * R_{V}
$$

where:
$\mathrm{WQ}_{\mathrm{V}}=$ water quality volume (cf)
$\mathrm{A}=$ contributing area $(\mathrm{sf})=3,000 \mathrm{sf}$
$\mathrm{R}_{\mathrm{v}}=$ runoff coefficient relating total rainfall and runoff
$\mathrm{R}_{\mathrm{V}}=0.05+0.009(\mathrm{I})=0.95$
$\mathrm{I}=$ percent impervious cover $=100 \%$

$$
\begin{aligned}
& W Q_{V}=\frac{1.5 \mathrm{in}}{12} * 3,000 \mathrm{sf} * 0.95 \\
& W Q_{V}=356.25 \mathrm{cf}
\end{aligned}
$$

Step 2: Calculate the total SMP volume from unit conversion of the $W_{V}$.

$$
\begin{aligned}
& V_{S M P}=W Q_{V} *\left(7.5 \frac{g a l}{c f}\right) \\
& V_{S M P}=356.25 c f *\left(7.5 \frac{g a l}{c f}\right) \\
& V_{S M P}=2,671.88 \mathrm{gal}
\end{aligned}
$$

Therefore, to treat the water quality volume for the area draining to the practice, a 2,700-gallon cistern is required.
Note: The system may be designed larger if more water is needed for the intended reuse application.
D-12

## Filtration

## Bioretention

Design a bioretention practice that will treat the water quality volume from an impervious area of 21,780 square feet ( 0.5 acres), with a runoff coefficient of 0.95 . Note that filtration system may only be used to treat the water quality volume in separate storm sewer areas. Assume a soil media saturated hydraulic conductivity of $2 \mathrm{in} / \mathrm{hr}$.

## Step 1: Calculate the $\mathbf{W Q}_{\mathbf{V}}$.

$W Q_{V}=\frac{1.5 \mathrm{in}}{12} * A * R_{V}$
where:
$\mathrm{WQ}_{\mathrm{V}}=$ water quality volume (cf)
$\mathrm{A}=$ contributing area $(\mathrm{sf})=21,780 \mathrm{sf}$
$\mathrm{R}_{\mathrm{v}}=$ runoff coefficient relating total rainfall and runoff
$\mathrm{R}_{\mathrm{v}}=0.05+0.009(\mathrm{I})=0.95$
$\mathrm{I}=$ percent impervious cover $=100 \%$

$$
\begin{aligned}
& W Q_{V}=\frac{1.5 \mathrm{in}}{12} * 21,780 \mathrm{sf} * 0.95 \\
& W Q_{V}=2,586.38 \mathrm{cf}
\end{aligned}
$$

Step 2: Calculate the SMP area assuming a loading ratio of $1: 8$, which is less than the maximum loading ratio of $1: 20$ for a bioretention practice. Use the area to set the initial length and width of the practice.

$$
A_{S M P}=\frac{A}{8}
$$

where:
$\mathrm{A}_{\text {SNP }}=$ area at the base of infiltration SMP (sf)
$\mathrm{A}=$ contributing area (sf) $=21,780 \mathrm{sf}$

$$
\begin{aligned}
& A_{S M P}=\frac{21,780 s f}{8} \\
& A_{S M P}=2,722.5 s f
\end{aligned}
$$

Round the SMP area up to 2,730 sf. Assume a $65 \mathrm{ft} \times 42 \mathrm{ft}$ practice.
Step 3: Calculate the volume of surface ponding assuming the maximum surface ponding depth of 1 ft for a bioretention practice.
Assume the ponding zone is uniformly sloped. Use the SMP area and grading of the practice to determine the area at the base and top of the surface ponding zone.
D-13

$$
V_{P}=\frac{1}{3}\left(A_{P_{1}}+\sqrt{A_{P 1} * A_{P 2}}+A_{P 2}\right) * D_{p}
$$

where:
$\mathrm{V}_{\mathrm{P}}=$ volume of surface ponding (cf)
$\mathrm{A}_{\mathrm{p}_{1}}^{\mathrm{p}}=$ area at the base of surface ponding zone ( sf ) $=1,400$ sf
$\mathrm{A}_{\mathrm{P}_{2}}=$ area at the top of surface ponding zone (sf) $=2,600$ sf
$\mathrm{D}_{\mathrm{p}}^{\mathrm{p} 2}=$ depth of ponding (ft) $=1 \mathrm{ft}$

$$
\begin{aligned}
& V_{p}=\frac{1}{3}(1,400 s f+\sqrt{1,400 s f * 2,600 s f}+2,600 s f) * 1 f t \\
& V_{P}=1,969.29 c f
\end{aligned}
$$

Since a hydraulic connection is not being used, confirm that the volume of surface ponding is greater than $75 \%$ of the water quality volume.

$$
V_{P}=1,969.29 \mathrm{cf}<75 \% \text { of } W Q_{V}=1,939.79 \mathrm{cf} \quad O K
$$

Step 4: Calculate the volume of voids in the soil media layer assuming a soil media depth of 3.5 ft , which is greater than the minimum soil media depth of $2.5 \mathbf{f t}$ for bioretention practices.

$$
\begin{aligned}
& V_{S}=A_{S M P} * D_{S} * n_{S} \\
& V_{\mathrm{S}}=\text { volume of voids in the soil media layer }(\mathrm{cf}) \\
& \mathrm{A}_{\mathrm{SMP}}=\text { area of the SMP }(\mathrm{sf})=2,730 \mathrm{sf} \\
& \mathrm{D}_{\mathrm{S}}=\text { depth of soil media layer }(\mathrm{ft})=3.5 \mathrm{ft} \\
& \mathrm{n}_{\mathrm{S}}=\text { available porosity of soil media }(\mathrm{cf} / \mathrm{cf})=0.2 \mathrm{cf} / \mathrm{cf} \\
& V_{\mathrm{S}}=2,730 \mathrm{sf} * 3.5 \mathrm{ft} * 0.2 \frac{\mathrm{cf}}{\mathrm{cf}} \\
& V_{S}=1,911 \mathrm{cf}
\end{aligned}
$$

Step 5: Calculate the volume of voids created by internal structures.
Assume 92 ft of 12 " distribution pipe will be placed within the system in a grid pattern.

$$
V_{l}=A_{p} * L_{p}
$$

where:
$\mathrm{V}_{\mathrm{I}}=$ volume of voids created by internal structure (cf)
$\mathrm{A}_{\mathrm{p}}=$ area of pipe $(\mathrm{sf})=(\pi) *(0.5)^{2}=0.79 \mathrm{sf}$
$\mathrm{L}_{\mathrm{P}}=$ total length of pipe $(\mathrm{ft})=92 \mathrm{ft}$
D-14
$V_{l}=0.79 s f * 92 s f$

$$
V_{l}=72.68 c f
$$

Step 6: Calculate the volume of voids in the drainage layer assuming a drainage media depth of 3 ft , which is greater than the minimum drainage media depth of 1 ft for bioretention practices.

$$
V_{D}=\left(A_{S M P} * D_{D}-V_{l, d}\right) * n_{D}
$$

where:
$\mathrm{V}_{\mathrm{D}}=$ volume of voids in the drainage layer (cf)
$\mathrm{A}_{\text {SMP }}^{\mathrm{D}}=$ area of the SMP ( sf ) $=2,730 \mathrm{cf}$
$\mathrm{D}_{\mathrm{D}}=$ depth of the drainage layer $(\mathrm{ft})=3 \mathrm{ft}$
$\mathrm{V}_{\mathrm{Id}}^{\mathrm{D}}=$ volume of voids created by internal structures within the drainage layer (cf) $=72.68 \mathrm{cf}$

$$
\mathrm{n}_{\mathrm{D}}=\text { porosity of drainage layer media }(\mathrm{cf} / \mathrm{cf})=0.4 \mathrm{cf} / \mathrm{cf}
$$

$$
\begin{aligned}
& V_{D}=(2,730 s f * 3 f t-72.68 c f) * 0.4 \frac{f t^{3}}{f t^{3}} \\
& V_{D}=3,246.93 c f
\end{aligned}
$$

Step 7: Calculate the total SMP volume from the individual component volumes and compare to the $W Q_{V}$.

$$
V_{S M P}=V_{P}+V_{S}+V_{l}+V_{D}
$$

where:
$\mathrm{V}_{\text {SMP }}=$ storage volume of SMP (cf)
$\mathrm{V}_{\mathrm{P}}^{\mathrm{SMP}}=$ volume of surface ponding $(\mathrm{cf})=1,969.29 \mathrm{cf}$
$\mathrm{V}_{\mathrm{S}}^{\mathrm{P}}=$ volume of voids in the soil media layer $(\mathrm{cf})=1,911 \mathrm{cf}$
$\mathrm{V}_{\mathrm{I}}=$ volume of voids created by internal structures such as chambers or pipes (cf) $=72.68 \mathrm{cf}$
$\mathrm{V}_{\mathrm{D}}=$ volume of voids in the drainage layer $(\mathrm{cf})=3,246.93 \mathrm{cf}$

$$
\begin{aligned}
& V_{S M P}=1,969.29 c f+1,911 c f+72.68 c f+3,246.93 c f \\
& V_{S M P}=7,199.9 c f>W Q_{V}=2,586.38 c f \quad O K
\end{aligned}
$$

Step 8: Check the ponding and filtration drawdown times of the practice do not exceed the required times of 24 hours and 48 hours, respectively.
Filtration drawdown time:

$$
d t_{S M P}=\frac{V_{S M P}}{\left(\frac{K_{S}}{12}\right) *\left(1+\frac{0.5 D_{p f}}{D_{f}}\right) * A_{f}}
$$

D-15
where:
$\mathrm{dt}_{\text {SMP }}=$ drawdown time of filtration SMP (hr)
$\mathrm{V}_{\text {SMP }}=$ volume of filtration SMP $(\mathrm{cf})=7,199.9 \mathrm{cf}$
$\mathrm{K}_{\mathrm{S}}^{\mathrm{SNP}}=$ saturated hydraulic conductivity of filter media (in/hr) $=2 \mathrm{in} / \mathrm{hr}$
$\mathrm{D}_{\mathrm{pf}}=$ maximum depth of ponding above filter media $(\mathrm{ft})=1 \mathrm{ft}$
$\mathrm{D}_{\mathrm{f}}^{\mathrm{pf}}=$ depth of filter media $(\mathrm{ft})=3.5 \mathrm{ft}$
$\mathrm{A}_{\mathrm{f}}^{\mathrm{f}}=$ area of filter bed $(\mathrm{sf})=2,730 \mathrm{sf}$

$$
\begin{aligned}
& d t_{S M P}=\frac{7,199.9 \mathrm{cf}}{\left(\frac{2 \frac{\mathrm{~h}}{\mathrm{hr}}}{12}\right) *\left(1+\frac{0.5 * 1 \mathrm{ft}}{3.5 f t}\right) * 2,730 \mathrm{sf}} \\
& d t_{S M P}=13.85 \mathrm{hr}<48 \mathrm{hr} \quad O K
\end{aligned}
$$

Surface ponding drawdown time:
$d t_{p}=\frac{V_{p}}{\left(\frac{K_{S}}{12}\right) *\left(1+\frac{0.5 D_{p}}{D_{m}}\right) *\left(\frac{A_{P_{1}}+A_{p_{2}}}{2}\right)}$
where:
$\mathrm{dt}_{\mathrm{p}}=$ drawdown time of surface ponding (hr)
$\mathrm{V}_{\mathrm{P}}=$ volume of surface ponding (cf) $=1,969.29 \mathrm{cf}$
$\mathrm{K}_{\mathrm{S}}=$ saturated hydraulic conductivity of media below the surface ponding area $(\mathrm{in} / \mathrm{hr})=2 \mathrm{in} / \mathrm{hr}$
$\mathrm{D}_{\mathrm{p}}=$ maximum depth of ponding $(\mathrm{ft})=1 \mathrm{ft}$
$\mathrm{D}_{\mathrm{m}}=$ depth of media below surface ponding area $(\mathrm{ft})=3.5 \mathrm{ft}$
$\mathrm{A}_{\mathrm{P} 1}=$ area at the base of surface ponding zone ( sf ) $=1,400 \mathrm{sf}$
$\mathrm{A}_{\mathrm{P} 2}=$ area at the top of surface ponding zone $(\mathrm{sf})=2,600 \mathrm{sf}$

$$
d t_{p}=\frac{1,969.29 c f}{\left(\frac{2 \frac{i n}{h r}}{12}\right) *\left(1+\frac{0.5 * 1 f t}{3.5 f t}\right) *\left(\frac{1,400 s f+2,600 s f}{2}\right)}
$$

$$
d t_{p}=5.17 h r<24 h r \quad O K
$$

D-16

## SEWER OPERATIONS VOLUME SIZING EXAMPLES

D-17

## Detention

Detention Tank - CSS with SCP
A $93,200 \mathrm{sf}$ site in the Bronx consists of a multistory commercial building. The site was proposed to connect to a 15 in . combined sewer. Design a detention tank to treat the sewer operations volume $\left(\mathrm{V}_{\mathrm{v}}\right)$, given the following:

> Area $=93,200 \mathrm{sf}$
> Roof $=29,000 \mathrm{sf} @ 0.95$ runoff coefficient
> Paved $=48,000 \mathrm{sf} @ 0.85$ runoff coefficient
> Grass $=16,200 \mathrm{sf} @ 0.20$ runoff coefficient


Figure [F]D.1. Schematic of Site (Not to Scale)
D-18
Step 1: Identify the rainfall depth $\left(R_{D}\right)$ based on the sewershed type and connection proposal type for the project. Use Table 2.7 in Chapter 2.
Since the project is $20,000 \mathrm{sf}$ or more, and consists of a multistory commercial building, this project requires a site connection permit (SCP). In addition, the site is connecting to a 15 in. combined sewer.
Table 2.7. Applied rainfall depth by sewershed type and connection proposal type.

| $\mathbf{R}_{\mathbf{D}}$ | Description |
| :---: | :--- |
| 1.85 | CSS areas with SCP |
| 1.50 | CSS areas with HCP |
| 1.50 | MS4 areas wiith SCP |
| 1.10 | MS4 areas with HCP |

According to Table 2.7, $R_{D}=1.85 \mathrm{in}$.
Step 2: Calculate the runoff coefficient $\left(C_{w}\right)$ using the weighted area approach.

$$
C_{W}=\frac{\left(C_{1} A_{1}+C_{2} A_{2}+\cdots \text { etc. }\right)}{A_{t}}
$$

where:
$\mathrm{C}_{\mathrm{w}}=$ weighted runoff coefficient relating peak rate of rainfall and runoff
$\mathrm{C}_{1}=$ the runoff coefficient for the area classified as roof $=0.95$
$\mathrm{A}_{1}=$ the area classified as roof $(\mathrm{sf})=29,000 \mathrm{sf}$
$\mathrm{C}_{2}^{1}=$ the runoff coefficient for the area classified as paved $=0.85$
$\mathrm{A}_{2}=$ the area classified as paved (sf) $=48,000 \mathrm{sf}$
$\mathrm{C}_{3}=$ the runoff coefficient for the area classified as grass $=0.20$
$\mathrm{A}_{3}=$ the area classified as grass $(\mathrm{sf})=16,200 \mathrm{sf}$
$A_{t}=$ contributing area (sf) $=93,200 \mathrm{sf}$
$C_{W}=\frac{(0.95 * 29,000 s f)+(0.85 * 48,000 s f)+(0.20 * 16,200 s f)}{93,200 s f}$

$$
C_{W}=0.768
$$

## Step 3: Calculate $\mathbf{V}_{\mathbf{v}}$.

$$
V_{V}=\frac{R_{D}}{12} * A * C_{W}
$$

## where:

$\mathrm{V}_{\mathrm{V}}=$ sewer operations volume (cf)
$\mathrm{R}_{\mathrm{D}}^{\mathrm{V}}=$ rainfall depth (in) $=1.85$ in
$\mathrm{A}^{\mathrm{D}}=$ contributing area $(\mathrm{sf})=93,200 \mathrm{sf}$
$\mathrm{C}_{\mathrm{W}}=$ weighted runoff coefficient relating peak rate of rainfall and runoff $=0.768$

$$
V_{V}=\frac{1.85 \mathrm{in}}{12} * 93,200 \mathrm{sf} * 0.768
$$

D-19

$$
V_{V}=11,035 c f
$$

Step 4: Calculate the release rate to be maintained by the controlled-flow orifice. Use the maximum release rate per acre (q) shown in Table 2.9, Chapter 2.

The site is connecting to a 15 in. combined sewer.
Table 2.9. Maximum release rate per acre (cfs/acre) by sewershed type.

| $\mathbf{q}$ <br> (cfs/acre) | Description |
| :---: | :--- |
| 1.0 | MS4 areas |
| 0.1 | CSS areas |

According to Table 2.9, $q=0.1 \frac{\mathrm{cfs}}{\text { acre }}$.
$Q_{D R R}=\frac{q * A}{43560}$ or 0.046 [whichever is greater]
where:
$\mathrm{Q}_{\mathrm{DRR}}=$ maximum release rate for the site (cfs)
$\mathrm{q}=$ maximum release rate per acre (cfs/acre) $=0.1 \mathrm{cfs} /$ acre
$\mathrm{A}=$ contributing area $(\mathrm{sf})=93,200 \mathrm{sf}$
$Q_{D R R}=\frac{0.1 \frac{\mathrm{cfs}}{\text { acre }} * 93,200 \mathrm{sf}}{43560}$ or 0.046 [whichever is greater]
$Q_{D R R}=0.214 c f s>0.046 \mathrm{cfs}$

The maximum release rate is 0.214 cfs .
Step 5: Use the controlled-flow orifice equation to determine an appropriate orifice area by assuming the active storage depth. In order to minimize the area required for the detention tank, choose the maximum depth that is still feasible according to site limitations and use a re-entrant orifice. In this case, the designer has chosen an active storage depth of 4 ft .

$$
Q_{0}=C_{D} * A_{0} * \sqrt{2 g H}
$$

where:
$\mathrm{Q}_{\mathrm{O}}=$ maximum release rate of orifice (cfs) $=0.214 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$\mathrm{A}_{\mathrm{O}}^{\mathrm{D}}=$ area of orifice ( sf )
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\mathrm{H}=$ maximum hydraulic head above the centerline of the orifice
$(\mathrm{ft})=4 \mathrm{ft}$

$$
\begin{aligned}
& 0.214 \text { cfs }=0.52 * A_{0} * \sqrt{2 * 32.2\left(\frac{f t}{s^{2}}\right) * 4 f t} \\
& A_{0}=0.026 \mathrm{sf}
\end{aligned}
$$

D-20
Step 6: Translate the area of the controlled-flow orifice ( $A_{0}$ ) into a diameter and check that it is greater than the minimum diameter of 1 in .

$$
A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

where:
$\mathrm{A}_{\mathrm{O}}=$ area of orifice ( sf ) $=0.026 \mathrm{sf}$
$\mathrm{D}_{\mathrm{O}}=$ diameter of orifice (in)

$$
\begin{aligned}
& 0.026 \mathrm{sf}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144} \\
& D_{0}=2.18 \mathrm{in}>1 \mathrm{in} \quad O K
\end{aligned}
$$

Set the orifice diameter to the nearest 0.25 -inch interval rounding down, with a minimum orifice diameter of one-inch. In this case, use an orifice diameter of 2.00 inches.
Step 7: Confirm the orifice area of the selected orifice diameter from Step 6.

$$
A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

where:
$\mathrm{A}_{\mathrm{O}}=$ area of orifice (sf)
$\mathrm{D}_{\mathrm{O}}^{\mathrm{O}}=$ diameter of orifice (in) $=2$ in

$$
\begin{aligned}
& A_{0}=\frac{\left[\pi *\left(\frac{2 \mathrm{in}}{2}\right)^{2}\right]}{144} \\
& A_{0}=0.022 \mathrm{sf}
\end{aligned}
$$

Step 8: Confirm the required active storage depth in the tank using the orifice area from Step 7.

Compute the maximum storage depth in ft . of a detention facility with a Re-entrant orifice tube outlet, SDR, with a CD of 0.52 , by the equation:

$$
S_{D R}=1,930\left(Q_{D R R}\right)^{2} /\left(d_{O}\right)^{4}+d_{O} / 24
$$

where:
$\left[\mathrm{Q}_{\mathrm{O}}=\right.$ maximum release rate of orifice $(\mathrm{cfs})=0.214 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$\mathrm{A}_{\mathrm{O}}=$ area of orifice $(\mathrm{sf})=0.022 \mathrm{sf}$
D-21
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\mathrm{H}=$ maximum hydraulic head above the centerline of the orifice ( ft )]
$\underline{S}_{\mathrm{DR}}=$ the maximum storage depth in ft. for a Re-entrant orifice tube outlet
$Q_{\mathrm{DRR}}=$ the detention facility maximum release rate in cfs do $=$ the nominal dia. of the orifice tube outlet in in.

$$
S_{D R}=1,930(0.214)^{2} /(2)^{4}+2 / 24
$$

## $\mathrm{H}=5.6 \mathrm{ft}$

If the active storage depth is too high, then increase the orifice size by 0.25 inches and re-run Steps 7-8 until a suitable depth is identified. If the active storage depth is too low, then decrease the orifice size by 0.25 inches (but not less than 1 inch) and re-run Steps 7-8. Alternatively, the designer can choose a different orifice configuration as needed to modify the active storage depth.
In this case, the depth is feasible.

## Step 9: Set the dimensions of the detention tank's active

 storage zone.Based on the active storage depth of [5.4] 5.6 ft and the $\mathrm{V}_{\mathrm{V}}$ of 11,035 cfs, set the interior detention tank dimensions to L: [45.5] 44.5 ft and W : [45.5] 44.5 ft . The resulting detention tank has an active storage volume of $[11,179] 11,089 \mathrm{cf}$. Note that the exterior dimensions of the detention tank will be larger than the dimensions of the active storage zone ([45.5] 44.5’L x [45.5] 44.5’W x [5.4] 5.6’D) to accommodate wall thickness, bypass structures, and/or other internal features.

## D-22

## Detention Tank - CSS with HCP

A $15,000 \mathrm{sf}$ site in the Bronx consists of a two-family (no-fee) residence. The site was proposed to connect to a 15 in . combined sewer. Design a detention tank to treat the sewer operations volume $\left(\mathrm{V}_{\mathrm{v}}\right)$, given the following:

Area $=15,000 \mathrm{sf}$
Roof $=2,000 \mathrm{sf} @ 0.95$ runoff coefficient
Paved $=7,000 \mathrm{sf}$ @ 0.85 runoff coefficient
Grass $=6,000$ sf @ 0.20 runoff coefficient


Figure [F]D.2. Schematic of Site (Not to Scale)

## D-23

Step 1: Identify the rainfall depth $\left(R_{D}\right)$ based on the sewershed type and connection proposal type for the project. Use Table 2.7 in Chapter 2.
Since the project is less than 20,000 sf and consists of a two-family (no fee) residence, this project requires a house connection permit (HCP).
In addition, the site is connecting to a 15 in . combined sewer.
Table 2.7. Applied rainfall depth by sewershed type and connection proposal type.

| $\mathbf{R}_{\mathbf{D}}$ | Description |
| :---: | :--- |
| 1.85 | CSS areas with SCP |
| 1.50 | CSS areas with HCP |
| 1.50 | MS4 areas wiith SCP |
| 1.10 | MS4 areas with HCP |

According to Table 2.7, $R_{D}=1.50 \mathrm{in}$.
Step 2: Calculate the runoff coefficient ( $\mathrm{C}_{\mathrm{w}}$ ) using the weighted area approach.

$$
C_{W}=\frac{\left(C_{1} A_{1}+C_{2} A_{2}+\cdots \text { etc. }\right)}{A_{\mathrm{t}}}
$$

where:
$\mathrm{C}_{\mathrm{w}}=$ weighted runoff coefficient relating peak rate of rainfall and runoff
$\mathrm{C}_{1}=$ the runoff coefficient for the area classified as roof $=0.95$
$\mathrm{A}_{1}^{1}=$ the area classified as roof $(\mathrm{sf})=2,000 \mathrm{sf}$
$\mathrm{C}_{2}^{1}=$ the runoff coefficient for the area classified as paved $=0.85$
$\mathrm{A}_{2}=$ the area classified as paved ( sf ) $=7,000 \mathrm{sf}$
$\mathrm{C}_{3}=$ the runoff coefficient for the area classified as grass $=0.20$
$\mathrm{A}_{3}^{3}=$ the area classified as grass ( sf ) $=6,000 \mathrm{sf}$
$\mathrm{A}_{\mathrm{t}}=$ contributing area $(\mathrm{sf})=15,000 \mathrm{sf}$
$C_{W}=\frac{(0.95 * 2,000 s f)+(0.85 * 7,000 s f)+(0.20 * 6,000 s f)}{15,000 s f}$
$C_{W}=0.603$

## Step 3: Calculate $\mathbf{V}_{\mathbf{v}}$.

$$
V_{V}=\frac{R_{D}}{12} * A * C_{W}
$$

where:
$\mathrm{V}_{\mathrm{v}}=$ sewer operations volume (cf)
$\mathrm{R}_{\mathrm{D}}=$ rainfall depth (in) $=1.50$ in
$\mathrm{A}^{\mathrm{D}}=$ contributing area $(\mathrm{sf})=15,000 \mathrm{sf}$
$\mathrm{C}_{\mathrm{w}}=$ weighted runoff coefficient relating peak rate of rainfall and runoff $=0.603$

$$
\begin{aligned}
& V_{V}=\frac{1.50 \mathrm{in}}{12} * 15,000 \mathrm{sf} * 0.603 \\
& V_{V}=1,131 \mathrm{cf}
\end{aligned}
$$

D-24
Step 4: Calculate the release rate to be maintained by the controlled-flow orifice. Use the maximum release rate per acre (q) shown in Table 2.9, Chapter 2.

The site is connecting to a 15 in . combined sewer.
Table 2.9. Maximum release rate per acre (cfs/acre) by sewershed type.


According to Table 2.9, $q=0.1 \frac{\mathrm{cfs}}{\text { acre }}$.
$Q_{D R R}=\frac{q * A}{43560}$ or 0.046 [whichever is greater]
where:
$\mathrm{Q}_{\mathrm{DRR}}=$ maximum release rate for the site (cfs)
$\mathrm{q}=$ maximum release rate per acre $(\mathrm{cfs} / \mathrm{acre})=0.1 \mathrm{cfs} /$ acre
$\mathrm{A}=$ contributing area $(\mathrm{sf})=15,000 \mathrm{sf}$
$Q_{D R R}=\frac{0.1 \frac{\mathrm{cfs}}{\text { acre }} * 15,000 \mathrm{sf}}{43560}$ or 0.046 [whichever is greater]

$$
Q_{D R R}=0.034 \mathrm{cfs}<0.046 \mathrm{cfs}
$$

The maximum release rate is 0.046 cfs .
Step 5: Use the controlled-flow orifice equation to determine an appropriate orifice area by assuming the active storage depth. In order to minimize the area required for the detention tank, choose the maximum depth that is still feasible according to site limitations and use a re-entrant orifice. In this case, the designer has chosen an active storage depth of 4 ft .

$$
Q_{0}=C_{D} * A_{0} * \sqrt{2 g H}
$$

## where:

$\mathrm{Q}_{\mathrm{o}}=$ maximum release rate of orifice $(\mathrm{cfs})=0.046 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$\mathrm{A}_{\mathrm{o}}^{\mathrm{D}}=$ area of orifice (sf)
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\mathrm{H}=$ maximum hydraulic head above the centerline of the orifice
$(\mathrm{ft})=4 \mathrm{ft}$

$$
\begin{aligned}
& 0.046 \mathrm{cfs}=0.52 * A_{0} * \sqrt{2 * 32.2\left(\frac{f t}{s^{2}}\right) * 4 \mathrm{ft}} \\
& A_{0}=0.006 \mathrm{sf}
\end{aligned}
$$

D-25
Step 6: Translate the area of the controlled-flow orifice ( $A_{0}$ ) into a diameter and check that it is greater than the minimum diameter of 1 in .

$$
A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

where:
$\mathrm{A}_{\mathrm{o}}=$ area of orifice $(\mathrm{sf})=0.006 \mathrm{sf}$
$\mathrm{D}_{\mathrm{o}}=$ diameter of orifice (in)

$$
0.006 \text { sf }=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

$$
D_{0}=1.05 \mathrm{in}>1 \mathrm{in} \quad O K
$$

Set the orifice diameter to the nearest 0.25 -inch interval rounding down, with a minimum orifice diameter of one-inch. In this case, use an orifice diameter of 1.00 inch.
Step 7: Confirm the orifice area of the selected orifice diameter from Step 6.

$$
A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

where:
$\mathrm{A}_{\mathrm{o}}=$ area of orifice (sf)
$\mathrm{D}_{\mathrm{O}}=\operatorname{diameter}$ of orifice (in) $=1$ in

$$
\begin{aligned}
& A_{0}=\frac{\left[\pi *\left(\frac{1 \mathrm{in}}{2}\right)^{2}\right]}{144} \\
& A_{0}=0.005 \mathrm{sf}
\end{aligned}
$$

Step 8: Confirm the required active storage depth in the tank using the orifice area from Step 7.

Compute the maximum storage depth in ft . of a detention facility with a Re-entrant orifice tube outlet, SDR, with a CD of 0.52 , by the equation:

$$
S_{D R}=1,930\left(Q_{D R R}\right)^{2} /\left(d_{O}\right)^{4}+d_{O} / 24
$$

where:
D-26
$\mathrm{SDR}=$ the maximum storage depth in ft . for a Re-entrant orifice tube outlet
$\mathrm{QDRR}=$ the detention facility maximum release rate in cfs $\mathrm{dO}=$ the nominal dia. of the orifice tube outlet in in.

$$
S_{D R}=1,930(0.046)^{2} /(1)^{4}+1 / 24
$$

$$
\mathrm{H}=[5.6 \mathrm{ft}] \underline{4.13 \mathrm{ft}}
$$

[where:
$\mathrm{Q}_{\mathrm{O}}=$ maximum release rate of orifice $(\mathrm{cfs})=0.046 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$\mathrm{A}_{\mathrm{O}}^{\mathrm{D}}=$ area of orifice ( sf ) $=0.005 \mathrm{sf}$
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\mathrm{H}=$ maximum hydraulic head above the centerline of the orifice (ft)]
If the active storage depth is too high, then increase the orifice size by 0.25 inches and re-run Steps 7-8 until a suitable depth is identified. If the active storage depth is too low, then decrease the orifice size by 0.25 inches (but not less than 1 inch) and re-run Steps 7-8. Alternatively, the designer can choose a different orifice configuration as needed to modify the active storage depth.
In this case, the depth is feasible.

## Step 9: Set the dimensions of the detention tank's active storage zone.

Based on the active storage depth of [4.9] 4.13 ft and the $\mathrm{V}_{\mathrm{V}}$ of 1,131 cf , set the interior detention tank dimensions to $\mathrm{L}:[15.5] 6.6 \mathrm{ft}$ and W: [15.5] 6.6 ft . The resulting detention tank has an active storage volume of $[1,177] 1,138 \mathrm{cf}$. Note that the exterior dimensions of the detention tank will be larger than the dimensions of the active storage zone ([15.5] $\left.16.6^{\prime} \mathrm{L} \times[15.5] \underline{16.6}{ }^{\prime} \mathrm{W} \times[4.9] 4.13^{\prime} \mathrm{D}\right)$ to accommodate wall thickness, bypass structures, and/or other internal features.

## D-27

## Detention Tank - MS4 with SCP

A 25,050sf site consists of a multistory commercial building. The site was proposed to connect to a 12 in. storm sewer that eventually discharges into Gravesend Bay via an MS4 outfall. Design a detention tank to treat the sewer operations volume $\left(\mathrm{V}_{\mathrm{V}}\right)$, given the following:

Area $=25,050 \mathrm{sf}$
Roof $=16,000$ sf @ 0.95 runoff coefficient
Paved $=6,100$ sf @ 0.85 runoff coefficient
Grass $=2,950$ sf @ 0.20 runoff coefficient


Figure [F]D.3. Schematic of Site (Not to Scale)
D-28
Step 1: Identify the rainfall depth $\left(R_{D}\right)$ based on the sewershed type and connection proposal type for the project. Use Table 2.7 in Chapter 2.
Since the project is $20,000 \mathrm{sf}$ or more, and consists of a multistory commercial building, this project requires a site connection permit (SCP). In addition, the site is connecting to a 12 in . storm sewer that discharges through an MS4 outfall.
Table 2.7. Applied rainfall depth by sewershed type and connection proposal type.

| $\mathbf{R}_{\mathbf{D}}$ | Description |
| :---: | :--- |
| 1.85 | CSS areas with SCP |
| 1.50 | CSS areas with HCP |
| 1.50 | MS4 areas wiith SCP |
| 1.10 | MS4 areas with HCP |

According to Table 2.7, $R_{D}=1.50 \mathrm{in}$.
Step 2: Calculate the runoff coefficient $\left(C_{w}\right)$ using the weighted area approach.

$$
C_{W}=\frac{\left(C_{1} A_{1}+C_{2} A_{2}+\cdots \text { etc. }\right)}{A_{\mathrm{t}}}
$$

where:
$\mathrm{C}_{\mathrm{W}}=$ weighted runoff coefficient relating peak rate of rainfall and runoff
$\mathrm{C}_{1}=$ the runoff coefficient for the area classified as roof $=0.95$
$\mathrm{A}_{1}=$ the area classified as roof $(\mathrm{sf})=16,000 \mathrm{sf}$
$\mathrm{C}_{2}^{1}=$ the runoff coefficient for the area classified as paved $=0.85$
$\mathrm{A}_{2}=$ the area classified as paved ( sf ) $=6,100 \mathrm{sf}$
$\mathrm{C}_{3}^{2}=$ the runoff coefficient for the area classified as grass $=0.20$
$\mathrm{A}_{3}^{3}=$ the area classified as grass $(\mathrm{sf})=2,950 \mathrm{sf}$
$\mathrm{A}_{\mathrm{t}}^{3}=$ contributing area $(\mathrm{sf})=25,050 \mathrm{sf}$
$C_{W}=\frac{(0.95 * 16,000 s f)+(0.85 * 6,100 s f)+(0.20 * 2,950 s f)}{25,050 s f}$

$$
C_{W}=0.837
$$

Step 3: Calculate $V_{v}$.

$$
V_{V}=\frac{R_{D}}{12} * A * C_{W}
$$

## where:

$\mathrm{V}_{\mathrm{V}}=$ sewer operations volume (cf)
$\mathrm{R}_{\mathrm{D}}^{\mathrm{V}}=$ rainfall depth (in) $=1.50$ in
$\mathrm{A}=$ contributing area $(\mathrm{sf})=25,050 \mathrm{sf}$
$\mathrm{C}_{\mathrm{w}}=$ weighted runoff coefficient relating peak rate of rainfall and runoff $=0.837$

$$
V_{V}=\frac{1.50 \mathrm{in}}{12} * 25,050 \text { sf } * 0.837
$$

D-29

$$
V_{V}=2,621 \mathrm{cf}
$$

Step 4: Calculate the release rate to be maintained by the controlled-flow orifice. Use the maximum release rate per acre (q) shown in Table 2.9, Chapter 2.

The site is connecting to a 12 in . storm sewer that discharges through an MS4 outfall.
Table 2.9. Maximum release rate per acre (cfs/acre) by sewershed type.

| $\mathbf{q}$ <br> (cfs/acre) | Description |
| :---: | :--- |
| 1.0 | MS4 areas |
| 0.1 | CSS areas |

According to Table 2.9, $q=1.0 \frac{\mathrm{cfs}}{\text { acre }}$.
$Q_{D R R}=\frac{q * A}{43560}$ or $0.046[$ whichever is greater]
where:
$\mathrm{Q}_{\mathrm{DRR}}=$ maximum release rate for the site (cfs)
$\mathrm{q}=\mathrm{maximum}$ release rate per acre (cfs/acre) $=1.0 \mathrm{cfs} /$ acre
$\mathrm{A}=$ contributing area $(\mathrm{sf})=25,050 \mathrm{sf}$
$Q_{D R R}=\frac{1.0 \frac{\mathrm{cfs}}{\text { acre }} * 25,050 \mathrm{sf}}{43560}$ or 0.046 [whichever is greater]

$$
Q_{D R R}=0.575 \mathrm{cfs}>0.046 \mathrm{cfs}
$$

The maximum release rate is 0.575 cfs .
Step 5: Use the controlled-flow orifice equation to determine an appropriate orifice area by assuming the active storage depth. In order to minimize the area required for the detention tank, choose the maximum depth that is still feasible according to site limitations and use a re-entrant orifice. In this case, the designer has chosen an active storage depth of 4 ft .

$$
Q_{0}=C_{D} * A_{0} * \sqrt{2 g H}
$$

where:
$\mathrm{Q}_{\mathrm{O}}=$ maximum release rate of orifice $(\mathrm{cfs})=0.575 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$\mathrm{A}_{0}^{\mathrm{D}}=$ area of orifice (sf)
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\mathrm{H}=$ maximum hydraulic head above the centerline of the orifice
$(\mathrm{ft})=4 \mathrm{ft}$
D-30

$$
\begin{aligned}
& 0.575 \mathrm{cfs}=0.52 * A_{0} * \sqrt{2 * 32.2\left(\frac{f t}{s^{2}}\right) * 4 f t} \\
& A_{0}=0.069 \mathrm{sf}
\end{aligned}
$$

Step 6: Translate the area of the controlled-flow orifice ( $A_{0}$ ) into a diameter and check that it is greater than the minimum diameter of 1 in.

$$
A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

where:
$\mathrm{A}_{\mathrm{O}}=$ area of orifice $(\mathrm{sf})=0.069 \mathrm{sf}$
$\mathrm{D}_{\mathrm{O}}=$ diameter of orifice (in)

$$
\begin{aligned}
& 0.069 s f=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144} \\
& D_{0}=3.56 \mathrm{in}>1 \mathrm{in} \quad O K
\end{aligned}
$$

Set the orifice diameter to the nearest 0.25 -inch interval rounding down, with a minimum orifice diameter of one-inch. In this case, use an orifice diameter of 3.50 inches.
Step 7: Confirm the orifice area of the selected orifice diameter from Step 6.

$$
A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

where:
$\mathrm{A}_{\mathrm{o}}=$ area of orifice (sf)
$\mathrm{D}_{\mathrm{o}}^{\mathrm{o}}=$ diameter of orifice (in) $=3.50$ inches
$A_{O}=\frac{\left[\pi *\left(\frac{3.50 \mathrm{in}}{2}\right)^{2}\right]}{144}$

$$
A_{0}=0.067 s f
$$

Step 8: Confirm the required active storage depth in the tank using the orifice area from Step 7.
D-31
[where:
$\mathrm{Q}_{\mathrm{O}}=$ maximum release rate of orifice $(\mathrm{cfs})=0.575 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$\mathrm{A}_{\mathrm{O}}^{\mathrm{D}}=$ area of orifice $(\mathrm{sf})=0.067 \mathrm{sf}$
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\stackrel{\mathrm{H}}{\mathrm{H}}=$ maximum hydraulic head above the centerline of the orifice ( ft )]
Compute the maximum storage depth in ft . of a detention
facility with a Re-entrant orifice tube outlet, SDR, with a CD of 0.52 , by the equation:

$$
S_{D R}=1,930\left(Q_{D R R}\right)^{2} /\left(d_{O}\right)^{4}+d_{O} / 24
$$

where:
$\overline{\mathrm{S}}_{\mathrm{DR}}=$ the maximum storage depth in ft. for a Re-entrant orifice tube outlet
$Q_{D R R}=$ the detention facility maximum release rate in cfs $\underline{d_{0}=}$ the nominal dia. of the orifice tube outlet in in.

$$
S_{D R}=1,930(0.575)^{2} /(3.5)^{4}+3.5 / 24
$$

$\underline{H}=4.4 \mathrm{ft}$
If the active storage depth is too high, then increase the orifice size by 0.25 inches and re-run Steps 7-8 until a suitable depth is identified. If the active storage depth is too low, then decrease the orifice size by 0.25 inches (but not less than 1 inch) and re-run Steps 7-8. Alternatively, the designer can choose a different orifice configuration as needed to modify the active storage depth.
In this case, the depth is feasible.

## Step 9: Set the dimensions of the detention tank's active

## storage zone.

Based on the active storage depth of [4.2]4.4 ft and the $\mathrm{V}_{\mathrm{V}}$ of 2,621
 [25] 24.5 ft . The resulting detention tank has an active storage volume of $[2,625] \underline{2,641} \mathrm{cf}$. Note that the exterior dimensions of the detention tank will be larger than the dimensions of the active storage zone ([25]24.5'L $\mathrm{x}[25] \underline{24.5}{ }^{\prime} \mathrm{W} \times[4.2] \underline{4.4}^{\prime} \mathrm{D}$ ) to accommodate wall thickness, bypass structures, and/or other internal features.

## D-32

## Detention Tank - MS4 with HCP

A 3,000 sf site consists of a one-family (no-fee) residence. The site was proposed to connect to a 12 in . storm sewer that eventually discharges into East River via an MS4 outfall. Design a detention tank to treat the sewer operations volume $\left(\mathrm{V}_{\mathrm{v}}\right)$, given the following:

Area $=3,000 \mathrm{sf}$
Roof $=2,100$ sf @ 0.95 runoff coefficient
Paved $=500$ sf @ 0.85 runoff coefficient
Grass $=400$ sf @ 0.20 runoff coefficient


Figure [F]D.4. Schematic of Site (Not to Scale)
D-33
Step 1: Identify the rainfall depth $\left(\mathrm{R}_{\mathrm{D}}\right)$ based on the sewershed type and connection proposal type for the project. Use Table 2.7 in Chapter 2.
Since the project is less than $20,000 \mathrm{sf}$ and consists of a one-family (no fee) residence, this project requires a house connection permit (HCP). In addition, the site is connecting to a 12 in . storm sewer that discharges through an MS4 outfall.

Table 2.7. Applied rainfall depth by sewershed type and connection proposal type.

| $\mathbf{R}_{\mathbf{D}}$ | Description |
| :---: | :--- |
| 1.85 | CSS areas with SCP |
| 1.50 | CSS areas with HCP |
| 1.50 | MS4 areas wiith SCP |
| 1.10 | MS4 areas with HCP |

According to Table 2.7, $R_{D}=1.10 \mathrm{in}$.
Step 2: Calculate the runoff coefficient $\left(C_{w}\right)$ using the weighted area approach.

$$
C_{W}=\frac{\left(C_{1} A_{1}+C_{2} A_{2}+\cdots \text { etc. }\right)}{A_{t}}
$$

where:
$\mathrm{C}_{\mathrm{w}}=$ weighted runoff coefficient relating peak rate of rainfall and runoff
$\mathrm{C}_{1}=$ the runoff coefficient for the area classified as roof $=0.95$
$\mathrm{A}_{1}=$ the area classified as roof $(\mathrm{sf})=2,100 \mathrm{sf}$
$\mathrm{C}_{2}=$ the runoff coefficient for the area classified as paved $=0.85$
$\mathrm{A}_{2}=$ the area classified as paved ( sf ) $=500 \mathrm{sf}$
$\mathrm{C}_{3}=$ the runoff coefficient for the area classified as grass $=0.20$
$\mathrm{A}_{3}=$ the area classified as grass $(\mathrm{sf})=400 \mathrm{sf}$
$\mathrm{A}_{\mathrm{t}}=$ contributing area $(\mathrm{sf})=3,000 \mathrm{sf}$

$$
C_{W}=\frac{(0.95 * 2,100 s f)+(0.85 * 500 s f)+(0.20 * 400 s f)}{3,000 s f}
$$

$$
C_{W}=0.833
$$

Step 3: Calculate $\mathbf{V}_{\mathbf{v}}$.
$V_{V}=\frac{R_{D}}{12} * A * C_{W}$
where:
$\mathrm{V}_{\mathrm{V}}=$ sewer operations volume (cf)
$\mathrm{R}_{\mathrm{D}}=$ rainfall depth (in) $=1.10$ in
$A=$ contributing area ( sf ) $=3,000 \mathrm{sf}$
$\mathrm{C}_{\mathrm{W}}=$ weighted runoff coefficient relating peak rate of rainfall and runoff $=0.833$

$$
V_{V}=\frac{1.10 \mathrm{in}}{12} * 3,000 \mathrm{sf} * 0.833
$$

$$
V_{V}=229 c f
$$

D-34
Step 4: Calculate the release rate to be maintained by the controlled-flow orifice. Use the maximum release rate per acre (q) shown in Table 2.9, Chapter 2.

The site is connecting to a 12 in . storm sewer that discharges through an MS4 outfall.
Table 2.9. Maximum release rate per acre (cfs/acre) by sewershed type.

| $\mathbf{q}$ <br> (cfs/acre) | Description |
| :---: | :--- |
| 1.0 | MS4 areas |
| 0.1 | CSS areas |

According to Table 2.9, $q=1.0 \frac{c f s}{a c r e}$.
$Q_{D R R}=\frac{q * A}{43560}$ or $0.046[$ whichever is greater $]$
where:
$Q_{D R R}=$ maximum release rate for the site (cfs)
$\mathrm{q}=$ maximum release rate per acre (cfs/acre) $=1.0 \mathrm{cfs} /$ acre
$\mathrm{A}=$ contributing area $(\mathrm{sf})=3,000 \mathrm{sf}$

$$
\begin{aligned}
& Q_{D R R}=\frac{1.0 \frac{\mathrm{cfs}}{\text { acre }} * 3,000 \mathrm{sf}}{43560} \text { or } 0.046[\text { whichever is greater }] \\
& Q_{D R R}=0.069 \mathrm{cfs}>0.046 \mathrm{cfs}
\end{aligned}
$$

The maximum release rate is 0.069 cfs .
Step 5: Use the controlled-flow orifice equation to determine an appropriate orifice area by assuming the active storage depth. In order to minimize the area required for the detention tank, choose the maximum depth that is still feasible according to site limitations and use a re-entrant orifice. In this case, the designer has chosen an active storage depth of 4 ft .

$$
Q_{0}=C_{D} * A_{0} * \sqrt{2 g H}
$$

where:
$\mathrm{Q}_{\mathrm{O}}=$ maximum release rate of orifice $(\mathrm{cfs})=0.069 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$\mathrm{A}_{0}^{\mathrm{D}}=$ area of orifice (sf)
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\underset{(\mathrm{ft})=}{\mathrm{H}}=$ maximum hydraulic head above the centerline of the orifice $(\mathrm{ft})=4 \mathrm{ft}$

$$
0.069 \text { cfs }=0.52 * A_{0} * \sqrt{2 * 32.2\left(\frac{f t}{s^{2}}\right) * 4 f t}
$$

D-35

$$
A_{0}=0.008 \mathrm{sf}
$$

Step 6: Translate the area of the controlled-flow orifice ( $A_{0}$ ) into a diameter and check that it is greater than the minimum diameter of 1 in .

$$
A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

where:
$\mathrm{A}_{\mathrm{O}}=$ area of orifice (sf) $=0.008 \mathrm{sf}$
$\mathrm{D}_{\mathrm{O}}=$ diameter of orifice (in)

$$
\begin{aligned}
& 0.008 \text { sf }=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144} \\
& D_{0}=1.21 \mathrm{in}>1 \mathrm{in} \quad O K
\end{aligned}
$$

Set the orifice diameter to the nearest 0.25 -inch interval rounding down, with a minimum orifice diameter of one-inch. In this case, use an orifice diameter of 1 inch.
Step 7: Confirm the orifice area of the selected orifice diameter from Step 6.

$$
A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

where:
$\mathrm{A}_{\mathrm{O}}=$ area of orifice (sf)
$\mathrm{D}_{\mathrm{O}}^{\mathrm{o}}=$ diameter of orifice (in) $=1$ inch

$$
\begin{aligned}
& A_{0}=\frac{\left[\pi *\left(\frac{1 \mathrm{in}}{2}\right)^{2}\right]}{144} \\
& A_{0}=0.005 \mathrm{sf}
\end{aligned}
$$

Step 8: Confirm the required active storage depth in the tank using the orifice area from Step 7.

$$
S_{D R}=1,930\left(Q_{D R R}\right)^{2} /\left(d_{0}\right)^{4}+d_{0} / 24
$$

Compute the maximum storage depth in ft . of a detention facility with a Re-entrant orifice tube outlet, SDR, with a CD of 0.52 , by the equation:

$$
S_{D R}=1,930\left(Q_{D R R}\right)^{2} /\left(d_{0}\right)^{4}+d_{0} / 24
$$

D-36
where:
$\mathrm{SDR}=$ the maximum storage depth in ft . for a Re-entrant orifice tube outlet
$\mathrm{QDRR}=$ the detention facility maximum release rate in cfs $\mathrm{dO}=$ the nominal dia. of the orifice tube outlet in in.

$$
S_{D R}=1,930(0.069)^{2} /(1)^{4}+1 / 24
$$

## $\mathrm{H}=[4.4] \underline{9.23 \mathrm{ft}}$

[where:
$\mathrm{Q}_{\mathrm{O}}=$ maximum release rate of orifice (cfs) $=0.069 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$\mathrm{A}_{\mathrm{O}}^{\mathrm{D}}=$ area of orifice ( sf ) $=0.005 \mathrm{sf}$
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\stackrel{\mathrm{H}}{\mathrm{H}}=$ maximum hydraulic head above the centerline of the orifice ( ft )]
If the active storage depth is too high, then increase the orifice size by 0.25 inches and re-run Steps 7-8 until a suitable depth is identified. If the active storage depth is too low, then decrease the orifice size by 0.25 inches (but not less than 1 inch) and re-run Steps 7-8. Alternatively, the designer can choose a different orifice configuration as needed to modify the active storage depth.
In this case, the depth is too high to drain via gravity connection to the storm sewer. Using an orifice size of 1.25 inches results in an active storage depth of [3.4]3.8 ft.

## Step 9: Set the dimensions of the detention tank's active

 storage zone.Based on the active storage depth of [3.4] 3.8 ft and the $\mathrm{V}_{\mathrm{y}}$ of 229 cf , set the interior detention tank dimensions to $\mathrm{L}:[8.5] 7.8 \mathrm{ft}$ and W : [8.5] 7.8 ft . The resulting detention tank has an active storage volume of [246] 231 cf . Note that the exterior dimensions of the detention tank will be larger than the dimensions of the active storage zone ([8.5]7.8' L $\left.\mathrm{x}[8.5] 7.8^{\prime} \mathrm{W} \mathrm{x}[3.4] 3.8^{\prime} \mathrm{D}\right)$ to accommodate wall thickness, bypass structures, and/or other internal features.
D-37
[


Figure [F]D.5. Outdoor Detention Tank with Re-Entrant Orifice D-38

## APPENDIX E

## Site Design Example

## Site Design Example

Design stormwater management practices for a 21,545 square foot commercial development that proposes a new site connection. This site is located within the sewershed of a combined sewer system and has no site constraints. Based on geotechnical investigations, the soil permeability rate across the site is at least $0.5 \mathrm{in} / \mathrm{hr}$.
Step 1: Determine applicable permit requirements for the site. Since the project disturbs more than 20,000 square feet and involves commercial development, a Stormwater Construction Permit is applicable. As shown in Table 2.3 of Chapter 2, commercial development is a covered development activity that requires the preparation of a SWPPP meeting erosion and sediment control (ESC), water quality $\left(\mathrm{WQ}_{\mathrm{v}}\right)$, and runoff reduction $(\mathrm{RR})$ requirements. The nonet increase (NNI) requirement is not applicable because the project is not located in an MS4 sewershed area and does not discharge into an impaired water body.
The project proposes a new site connection and is located within the sewershed of a combined sewer system. Therefore, a Site Connection Permit is also applicable. A connection proposal must be prepared to meet the sewer operations $\left(\mathrm{V}_{\mathrm{v}}\right)$ requirements.
Step 2: Use Appendix $C$ to select appropriate practices for meeting the $W_{v}, R R$, and $V_{y}$ requirements. The ESC requirements should be met using best practices in accordance with the NYS Standards and Specifications for Erosion and Sediment Control (The Blue Book).
Since the site has no constraints and the soil permeability rate is at least $0.5 \mathrm{in} / \mathrm{hr}$, an infiltration practice is preferred. To meet the $W_{V}$ and $R R$ requirements, the designer has chosen to use a bioretention practice for each of the four drainage areas. The designer has chosen to use a detention tank to meet the $\mathrm{V}_{\mathrm{V}}$ requirements.

Figure [G]E.1. Schematic of Scenario 1
E-1


## Legend

| $\square$ | Lot Boundary | $\square$ |
| :--- | :--- | :--- |
|  | Bioretention |  |
| --- | Drainage Area | $\bullet$ |
|  | Manhole |  |
|  | Detention Tank | $\circ$ |

## SMP 1: Bioretention

Design a bioretention practice (SMP 1) that will treat the water quality volume from an impervious area of 2,976 square feet with a runoff coefficient of 0.95. This example assumes a soil media saturated hydraulic conductivity of $2 \mathrm{in} / \mathrm{hr}$, and an infiltration rate of $1.5 \mathrm{in} / \mathrm{hr}$. Note: If a bioretention practice is designed to meet the water quality volume, the practice will, by default, also meet the runoff reduction criteria.
Step 3.1: Calculate the $W_{\mathbf{V}}{ }^{\text {. }}$

$$
W Q_{V}=\frac{1.5 \mathrm{in}}{12} * A * R_{V}
$$

E-2
where:
$\mathrm{WQ}_{\mathrm{V}}=$ water quality volume (cf)
$\mathrm{A}=$ contributing area (sf) $=2,976 \mathrm{sf}$
$\mathrm{R}_{\mathrm{v}}=$ runoff coefficient relating total rainfall and runoff
$\mathrm{R}_{\mathrm{v}}=0.05+0.009(\mathrm{I})=0.95$
$\mathrm{I}=$ percent impervious cover $=100 \%$
$W Q_{V}=\frac{1.5 \mathrm{in}}{12} * 2,976$ sf $* 0.95$

$$
W Q_{V}=353.4 c f
$$

Step 3.2: Calculate the minimum SMP area using the maximum loading ratio of $1: 20$ for a bioretention practice. Use the minimum area to set the initial length and width of the practice.

$$
A_{S M P}=\frac{A}{20}
$$

where:
$\mathrm{A}_{\text {SMP }}=$ area at the base of infiltration SMP (sf)
$\mathrm{A}=$ contributing area $(\mathrm{sf})=2,976 \mathrm{sf}$

$$
\begin{aligned}
& A_{S M P}=\frac{2,976 s f}{20} \\
& A_{S M P}=148.8 \mathrm{sf}
\end{aligned}
$$

Round the SMP area up to 150 sf . Assume a 30 ft by 5 ft practice.
Step 3.3: Calculate the volume of surface ponding assuming the maximum surface ponding depth of 1 ft for a bioretention practice.
Assume the ponding zone is relatively flat.

$$
V_{P}=A_{S M P} * D_{P}
$$

where:
$\mathrm{V}_{\mathrm{P}}=$ volume of surface ponding (cf)
$\mathrm{A}_{\text {SMP }}^{\mathrm{P}}=$ area of the $\operatorname{SMP}(\mathrm{sf})=150 \mathrm{sf}$
$\mathrm{D}_{\mathrm{P}}^{\mathrm{SMP}}=$ depth of ponding $(\mathrm{ft})=1 \mathrm{ft}$

$$
V_{P}=150 \mathrm{sf} * 1 \mathrm{ft}
$$

$$
V_{P}=150 c f
$$

E-3
Since the bioretention practice uses engineered soil media, confirm that the volume of surface ponding is at least $10 \%$ of the water quality volume.

$$
V_{P}=150 c f>10 \% \text { of } W Q_{V}=35.3 c f \quad O K
$$

In this case, the designer has also chosen to use a hydraulic connection between the ponding zone and the stone base. Therefore, the ponding zone does not need to temporarily store $75 \%$ of the water quality volume.
Step 3.4: Calculate the volume of voids in the soil media layer assuming a soil media depth of 2.5 ft , equal to the minimum soil media depth of 2.5 ft for a bioretention practice.

$$
V_{S}=A_{S M P} * D_{S} * n_{S}
$$

$\mathrm{V}_{\mathrm{S}}=$ volume of voids in the soil media layer (cf)
$\mathrm{A}_{\text {SMP }}^{\mathrm{S}}=$ area of the SMP $(\mathrm{sf})=150 \mathrm{sf}$
$\mathrm{D}_{\mathrm{S}}=$ depth of soil media layer $(\mathrm{ft})=2$
$\mathrm{D}_{\mathrm{S}}^{\mathrm{SMP}}=$ depth of soil media layer (ft) $=2.5 \mathrm{ft}$
$\mathrm{D}_{\mathrm{s}}=$ available porosity of soil media (cf/cf) $=0.2 \mathrm{cf} / \mathrm{cf}$

$$
\begin{aligned}
& V_{S}=150 s f * 2.5 \mathrm{ft} * 0.2 \frac{c f}{c f} \\
& V_{S}=75 \mathrm{cf}
\end{aligned}
$$

Step 3.5: Calculate the volume of voids created by internal structures.
Assume there are no internal structures in this bioretention practice, so the volume is 0 .

$$
V_{l}=0 c f
$$

Step 3.6: Calculate the volume of voids in the drainage layer assuming a drainage media depth of 2.5 ft , which is greater than the minimum drainage media depth of $1 \mathbf{f t}$ for a bioretention practice.

$$
V_{D}=\left(A_{S M P} * D_{D}-V_{l, d}\right) * n_{D}
$$

where:
$\mathrm{V}_{\mathrm{D}}=$ volume of voids in the drainage layer (cf)
$\mathrm{A}_{\mathrm{SWP}}^{\mathrm{D}}=$ area of the SMP (sf) $=150 \mathrm{cf}$
$\mathrm{D}_{\mathrm{D}}^{\mathrm{SMP}}=$ depth of the drainage layer $(\mathrm{ft})=2.5 \mathrm{ft}$
$\mathrm{V}_{\mathrm{Id}}^{\mathrm{D}}=$ volume of voids created by internal structures within the drainage layer (cf) $=0 \mathrm{cf}$
$n_{D}=$ porosity of drainage layer media ( $\mathrm{cf} / \mathrm{cf}$ ) $=0.4 \mathrm{cf} / \mathrm{cf}$

$$
\begin{aligned}
& V_{D}=(150 s f * 2.5 f t-0 c f) * 0.4 \frac{c f}{c f} \\
& V_{D}=150 c f
\end{aligned}
$$

E-4
Step 3.7: Calculate the total SMP volume from the individual component volumes and compare to the $\mathbf{W Q}_{\mathbf{v}}$.

$$
V_{S M P}=V_{P}+V_{S}+V_{l}+V_{D}
$$

where:
$\mathrm{V}_{\text {SMP }}=$ storage volume of SMP (cf)
$\mathrm{V}_{\mathrm{P}}^{\text {SMP }}=$ volume of surface ponding $(\mathrm{cf})=150 \mathrm{cf}$
$\mathrm{V}_{\mathrm{S}}^{\mathrm{P}}=$ volume of voids in the soil media layer (cf) $=75 \mathrm{cf}$
$\mathrm{V}_{\mathrm{I}}^{\mathrm{S}}=$ volume of voids created by internal structures such as chambers or pipes (cf) $=0$ cf
$\mathrm{V}_{\mathrm{D}}=$ volume of voids in the drainage layer (cf) = 150 cf

$$
\begin{aligned}
& V_{S M P}=150 c f+75 c f+0 c f+150 c f \\
& V_{S M P}=375 c f>W Q_{V}=353.4 c f \quad O K
\end{aligned}
$$

Step 3.8: Check that the ponding and infiltration drawdown times of the practice do not exceed the required times of 24 hours and 48 hours, respectively.
Infiltration drawdown time:

$$
d t_{S M P}=\frac{V_{S M P}}{\left(\frac{i}{12}\right) * A_{S M P}}
$$

where:
$\mathrm{dt}_{\text {SMP }}=$ drawdown time of infiltration SMP (hr)
$\mathrm{V}_{\mathrm{SMP}}=$ volume of infiltration SMP (cf) $=\mathrm{WQ}_{\mathrm{V}}=375 \mathrm{cf}$
$i=$ SMP
$\mathrm{A}_{\text {SMP }}=$ area at the base of infiltration SMP ( sf ) $=150 \mathrm{sf}$
$d t_{S M P}=\frac{375 \mathrm{cf}}{\left(\frac{1.5 \mathrm{in} / \mathrm{hr}}{12}\right) * 150 \mathrm{sf}}$
$d t_{S M P}=20 \mathrm{hr}<48 \mathrm{hr} \quad O \mathrm{~K}$
Surface ponding drawdown time:
$d t_{p}=\frac{V_{p}}{\left(\frac{K_{S}}{12}\right) *\left(1+\frac{0.5 D_{p}}{D_{m}}\right) *\left(\frac{A_{p_{1}}+A_{P_{2}}}{2}\right)}$

## E-5

where:
$\mathrm{dt}_{\mathrm{p}}=$ drawdown time of surface ponding (hr)
$\mathrm{V}_{\mathrm{P}}=$ volume of surface ponding $(\mathrm{cf})=150 \mathrm{cf}$
$\mathrm{K}_{\mathrm{S}}=$ saturated hydraulic conductivity of media below the surface ponding area $(\mathrm{in} / \mathrm{hr})=2 \mathrm{in} / \mathrm{hr}$
$\mathrm{D}_{\mathrm{p}}=$ maximum depth of ponding $(\mathrm{ft})=1 \mathrm{ft}$
$\mathrm{D}_{\mathrm{m}}^{\mathrm{p}}=$ depth of media below surface ponding area $(\mathrm{ft})=2.5 \mathrm{ft}$
$A_{P 1}^{m}=$ area at the base of surface ponding zone (sf) $=150 \mathrm{sf}$
$\mathrm{A}_{\mathrm{P} 2}=$ area at the top of surface ponding zone $(\mathrm{sf})=150 \mathrm{sf}$

$$
\begin{aligned}
& d t_{p}=\frac{150 c f}{\left(\frac{2 \frac{i n}{h r}}{12}\right) *\left(1+\frac{0.5 * 1 f t}{2.5 f t}\right) *\left(\frac{150 s f+150 s f}{2}\right)} \\
& d t_{p}=5 h r<24 h r \quad \text { OK }
\end{aligned}
$$

## SMP 2-4: Bioretention

Steps 4-6: Design bioretention practices (SMP 2, SMP 3, and SMP 4) for the other three drainage areas by running through the same steps as for SMP 1. Assume a soil media saturated hydraulic conductivity of $2 \mathrm{in} / \mathrm{hr}$, and an infiltration rate of 1.5 in/hr.
Table [G]E. 1 shows the final dimensions, SMP volume, and required water quality volume for each bioretention practice.

## Table [G]E.1. Summary of WQ ${ }_{v}$ Design

| SMIP \# | Drainage <br> Area (sf) | Dimensions (L' <br> $\times W^{\prime} \times$ D' $\left.^{\prime}\right)$ | SMIP Volume <br> $(\mathrm{cf})$ | WQ $_{\mathrm{V}}(\mathrm{cf})$ |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 2,976 | $30 \times 5 \times 6$ | 375 | 353.4 |
| 2 | 4,714 | $48 \times 5 \times 6$ | 600 | 559.8 |
| 3 | 3,895 | $39 \times 5 \times 6$ | 487.5 | 462.5 |
| 4 | 9,960 | $100 \times 5 \times 6$ | 1,250 | $1,182.8$ |

## SMP 5: Detention Tank

Design a detention tank (SMP 5) that will treat the sewer operations volume from an impervious area of 21,545 square feet with a weighted runoff coefficient of 0.88 .
Step 7.1: Identify the rainfall depth $\left(R_{D}\right)$ based on the sewershed type and connection proposal type for the project. Use Table 2.7 in Chapter 2.
As determined in Step 1, the project requires a site connection permit (SCP). In addition, the project is located within the sewershed of a combined sewer system.
Table 2.7. Applied rainfall depth by sewershed type and connection proposal type.
E-6

| $\mathbf{R}_{\mathbf{D}}$ | Description |
| :---: | :--- |
| 1.85 | CSS areas with SCP |
| 1.50 | CSS areas with HCP |
| 1.50 | MS4 areas wiith SCP |
| 1.10 | MS4 areas with HCP |

According to Table 2.7, $R_{D}=1.85 \mathrm{in}$.
Step 7.2: Calculate the total $V_{V}$.
$V_{V}=\frac{R_{D}}{12} * A * C_{W}$
where:
$\mathrm{V}_{\mathrm{V}}=$ sewer operations volume (cf)
$\mathrm{R}_{\mathrm{D}}=$ rainfall depth (in) $=1.85$ in
$\mathrm{A}=$ contributing area $(\mathrm{sf})=21,545 \mathrm{sf}$
$\mathrm{C}_{\mathrm{w}}=$ weighted runoff coefficient relating peak rate of rainfall and runoff $=0.88$

$$
\begin{aligned}
& V_{V}=\frac{1.85 \mathrm{in}}{12} * 21,545 \text { sf } * 0.88 \\
& V_{V}=2,922.9 \mathrm{cf}
\end{aligned}
$$

Step 7.3: Subtract the amount of SMP volume that may be credited towards meeting the total $\mathrm{V}_{\mathrm{v}}$ from Step 7.2. The remaining volume ( $V_{V, T a n k}$ ) must be managed by the detention tank.
$50 \%$ of the $\mathrm{V}_{\mathrm{SMP}}$ from each bioretention practice can be credited towards the $\mathrm{V}_{\mathrm{V}}$.
Total creditable $\mathrm{V}_{\mathrm{SMP}}$ :

$$
V_{S M P, T C}=0.5\left(V_{S M P, 1}+V_{S M P, 2}+V_{S M P, 3}+V_{S M P, 4}\right)
$$

where:
$\mathrm{V}_{\text {SMPTC }}=$ total creditable SMP volume (cf)
$\mathrm{V}_{\text {SMP }, 1}^{\mathrm{SMP}, \mathrm{TC}}=$ volume from SMP $1(\mathrm{cf})=375 \mathrm{cf}$
$\mathrm{V}_{\mathrm{SMP}, 2}^{\mathrm{SMP},}=$ volume from SMP $2(\mathrm{cf})=600 \mathrm{cf}$
$\mathrm{V}_{\mathrm{SMP}, 3}^{\mathrm{SMP}, 2}=$ volume from SMP $3(\mathrm{cf})=487.5 \mathrm{cf}$
$\mathrm{V}_{\mathrm{SMP}, 4}^{\mathrm{SMP}, 3}=$ volume from SMP $4(\mathrm{cf})=1,250 \mathrm{cf}$

$$
\begin{aligned}
& V_{S M P, T c}=0.5(375 c f+600 c f+487.5 c f+1,250 c f) \\
& V_{S M P, T c}=1,356.25 c f
\end{aligned}
$$

## E-7

Remaining volume managed by the detention tank:

$$
\begin{aligned}
& V_{V, T a n k}=2,922.9 c f-1,356.25 c f \\
& V_{V, T a n k}=1,566.65 c f
\end{aligned}
$$

Step 7.4: Calculate the release rate to be maintained by the controlled-flow orifice. Use the maximum release rate per acre (q) shown in Table 2.9, Chapter 2.

The project is located within the sewershed of a combined sewer system.
Table 2.9. Maximum release rate per acre (cfs/acre) by sewershed type.

| $\mathbf{q}$ <br> (cfs/acre) | Description |
| :---: | :--- |
| 1.0 | MS4 areas |
| 0.1 | CSS areas |

According to Table 2.9, $q=0.1 \frac{c f s}{\text { acre }}$.

$$
Q_{D R R}=\frac{q * A}{43560} \text { or } 0.046[\text { whichever is greater }]
$$

where:
$\mathrm{Q}_{\mathrm{DRR}}=$ maximum release rate for the site (cfs)
$q=$ maximum release rate per acre (cfs/acre) $=0.1 \mathrm{cfs} /$ acre
$\mathrm{A}=$ contributing area $(\mathrm{sf})=93,200 \mathrm{sf}$

$$
\begin{aligned}
Q_{D R R} & =\frac{0.1 \frac{c f s}{\text { acre }} * 21,545 \mathrm{sf}}{43560} \text { or } 0.046[\text { whichever is greater }] \\
Q_{D R R} & =0.049 \mathrm{cfs}>0.046 \mathrm{cfs}
\end{aligned}
$$

The maximum release rate is 0.049 cfs .
Step 7.5: Use the controlled-flow orifice equation to determine an appropriate orifice area by assuming the active storage depth.
In order to minimize the area required for the detention tank, choose the maximum depth that is still feasible according to site limitations and use a re-entrant orifice. In this case, the designer has chosen an active storage depth of 4 ft .

$$
Q_{0}=C_{D} * A_{0} * \sqrt{2 g H}
$$

where:
$\mathrm{Q}_{\mathrm{O}}=$ maximum release rate of orifice $(\mathrm{cfs})=0.049 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$\mathrm{A}_{\mathrm{O}}^{\mathrm{D}}=$ area of orifice ( sf )
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\mathrm{H}=$ maximum hydraulic head above the centerline of the orifice
$(\mathrm{ft})=4 \mathrm{ft}$
E-8

$$
\begin{aligned}
& 0.049 \mathrm{cfs}=0.52 * A_{0} * \sqrt{2 * 32.2\left(\frac{f t}{s^{2}}\right) * 4 \mathrm{ft}} \\
& A_{0}=0.006 \mathrm{sf}
\end{aligned}
$$

Step 7.6: Translate the area of the controlled-flow orifice ( $\mathrm{A}_{0}$ ) into a diameter and check that it is greater than the minimum diameter of 1 in .

$$
A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

where:
$\mathrm{A}_{\mathrm{o}}=$ area of orifice $(\mathrm{sf})=0.006 \mathrm{sf}$
$\mathrm{D}_{\mathrm{o}}^{\mathrm{o}}=$ diameter of orifice (in)

$$
\begin{aligned}
& 0.006 \mathrm{sf}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144} \\
& D_{0}=1.05 \mathrm{in}>1 \mathrm{in} \quad O K
\end{aligned}
$$

Set the orifice diameter to the nearest 0.25 -inch interval rounding down, with a minimum orifice diameter of one-inch. In this case, use an orifice diameter of 1.00 inch.
Step 7.7: Confirm the orifice area of the selected orifice diameter from Step 7.6.

$$
A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

where:
$\mathrm{A}_{\mathrm{o}}=$ area of orifice (sf)
$\mathrm{D}_{\mathrm{O}}^{\circ}=$ diameter of orifice (in) $=1$ in

$$
\begin{aligned}
& A_{0}=\frac{\left[\pi *\left(\frac{1 \mathrm{in}}{2}\right)^{2}\right]}{144} \\
& A_{0}=0.005 \mathrm{sf}
\end{aligned}
$$

Step 7.8: Confirm the required active storage depth in the tank using the orifice area from Step 7.7.

Compute the maximum storage depth in ft . of a detention facility with a Re-entrant orifice tube outlet, SDR, with a CD of 0.52 , by the equation:

$$
S_{D R}=1,930\left(Q_{D R R}\right)^{2} /\left(d_{0}\right)^{4}+d_{0} / 24
$$

E-9
where:
$\left[Q_{0}=\right.$ maximum release rate of orifice $(\mathrm{cfs})=0.049 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$\mathrm{A}_{\mathrm{o}}^{\mathrm{D}}=$ area of orifice $(\mathrm{sf})=0.005 \mathrm{sf}$
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\mathrm{H}=$ maximum hydraulic head above the centerline of the orifice (ft)]
$\mathrm{S}_{\mathrm{DR}}=$ the maximum storage depth in ft. for a Re-entrant orifice
tube outlet.
$Q_{\mathrm{DRR}}=$ the maximum storage depth in ft. for a Re-entrant orifice tube outlet.
do = the nominal dia. Of the orifice tube outlet in in.

$$
\begin{gathered}
S_{D R}=1,930(0.049)^{2} /(1)^{4}+1 / 24 \\
H=4.68 \mathrm{ft}
\end{gathered}
$$

If the active storage depth is too high, then increase the orifice size by 0.25 inches and re-run Steps 7.7-7.8 until a suitable depth is identified. If the active storage depth is too low, then decrease the orifice size by 0.25 inches (but not less than 1 inch) and re-run Steps 7.7-7.8. Alternatively, the designer can choose a different orifice configuration as needed to modify the active storage depth.

In this case, the depth is feasible.
Step 7.9: Set the dimensions of the detention tank's active storage zone.
Based on the active storage depth of [5.5]4.68 ft and the $\mathrm{V}_{\mathrm{V}, \text { Tank }}$ of $1,566.65 \mathrm{cf}$, set the interior detention tank dimensions to $\mathrm{L}: 18.5[17] \mathrm{ft}$ and W : $[17] 18.5 \mathrm{ft}$. The resulting detention tank has an active storage volume of $[1,589.5] 1,601.7 \mathrm{cf}$. Note that the exterior dimensions of the detention tank will be larger than the dimensions of the active storage zone ( $\left.18.5[7]^{\prime} \mathrm{L} \times 18.5[7]^{\prime} \mathrm{W} \times[5.5] 4.68^{\prime} \mathrm{D}\right)$ to accommodate wall thickness, bypass structures, and/or other internal features.
Table [G]E. 2 summarizes the final designs for the bioretention practices and the detention tank.

Table [G]E.2. Summary of $W Q_{v}$ and $V_{v}$ Design

| SMIP \#\# | Drainage <br> Area (sf) | Dimensions <br> $\left(\mathbf{L}^{\prime} \times W^{\prime} \times\right.$ <br> $\left.\mathbf{D}^{\prime}\right)$ | SMIP <br> Volume (cf) | WQ $_{\mathrm{V}}(\mathrm{cf})$ | $\mathbf{V}_{\mathrm{v}}(\mathrm{cff})$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2,976 | $30 \times 5 \times 6$ | 375 | 353.4 | 187.5 |
| 2 | 4,714 | $48 \times 5 \times 6$ | 600 | 559.8 | 300 |
| 3 | 3,895 | $39 \times 5 \times 6$ | 487.5 | 462.5 | 243.75 |
| 4 | 9,960 | $100 \times 5 \times 6$ | 1,250 | $1,182.8$ | 625 |
| 5 | 21,545 | $18.5[7] \times$ <br> $18.5[7] \times$ <br> $4.68[5.5]$ | $1,[589.5] 601.7$ | 0 | $1,589.5$ |
| Total | $\mathbf{2 1 , 5 4 5}$ | - | - | $\mathbf{2 , 5 5 8 . 5}$ | $\mathbf{2 , 9 4 5 . 7 5}$ |

## E-10

## APPENDIX G

Detention in Series Workbook and Examples

## Detention in Series Example

A site in Queens consists of a multistory office building and a parking lot for its tenants. The site was proposed to connect to a 15 in . combined sewer. The building owner intends to use a blue roof and detention tank in series to meet the stormwater management requirement. The total roof area will be used for detention. Design a blue roof and a downstream detention system that treats runoff from the roof and the parking lot, given the following:

Total Contributing Area $=40,000$ sf
Roof (sloped $1 / 8$ in per ft) $=20,000 \mathrm{sf} @ 0.95$ runoff coefficient.
Paved = 20,000 sf @ 0.85 runoff coefficient
Use the Detention In Series Workbook provided in the accompanying Appendix [I]G workbook Excel file.


Figure [I]G.1. Schematic of Example 1 (Not to Scale)
G-1
Step 1: Input the properties of the blue roof that will drain into the downstream detention system.
The first upstream area that drains to the downstream detention system is the 20,000 sf blue roof.


Figure [I]G.2. Inputs for the Blue Roof Properties
Step 2: Design the maximum release rate to be maintained by the blue roof.
Identify a controlled-flow roof drain by an approved manufacturer. In this case, the designer has selected a controlled-flow roof drain that restricts flow to $10 \mathrm{gpm} / \mathrm{in}$. Controlled flow roof drains may have a standard flow rate per unit depth, controlled by a parabolic weir, or may have a flow rate through a custom orifice, which has different design requirements.
The roof has an area of 20,000 sf. According to the 2014 Plumbing Code by the NYC Department of Buildings, not less than four roof drains shall be installed in roofs over 10,000 sf in area. In this case, the designer has chosen to install four roof drains.
Ponding depths should not exceed 4 inches above the low point (or as specified in the current Construction Codes). The designer has chosen to use a ponding depth of 2 inches.

$$
Q_{R O O F}=\frac{Q_{\mathrm{i}} N_{R D} d_{\max }}{449}
$$

where:
$\mathrm{Q}_{\text {Roof }}=$ maximum release rate from rooftop detention (cfs)
$\mathrm{Q}_{\mathrm{i}}=$ maximum release rate from each drain (gpm/in) $=10 \mathrm{gpm} / \mathrm{in}$
$\mathrm{N}_{\mathrm{RD}}=$ number of roof drains = 4
$d_{R}^{R D}=$ the roof drain depth of flow (in) $=2$ in

$$
\begin{aligned}
& Q_{\text {ROOF }}=\frac{10 \frac{\mathrm{gpm}}{\mathrm{in}} * 4 * 2 \mathrm{in}}{449} \\
& Q_{\text {ROOF }}=0.18 \mathrm{cfs}
\end{aligned}
$$

The blue roof can maintain a maximum release rate of approximately 0.2 cfs . Input this maximum release rate into the workbook.


Figure [I]G.3. Input for the Maximum Release Rate Maintained by the Blue Roof
Step 3: Based on the inputs from Steps 1 and 2, the workbook will automatically calculate the duration of a storm (min) with a 10-year return frequency. This calculation is shown below. The total roof area will be used for detention. Therefore, the available area is the entire $20,000 \mathrm{sf}$.

$$
t_{V}=0.27\left(\frac{C_{W T} A_{t}}{Q_{D R R}}\right)^{0.5}-15
$$

## G-2

where:
$\mathrm{tv}_{\mathrm{v}}=$ the duration of the storm with a 10 yr . return frequency requiring the maximum detention volume with a variable outflow (min)
$\mathrm{C}_{\mathrm{WT}}=$ the weighted runoff coefficient for the contributing area $=0.95$ $\mathrm{A}_{\mathrm{t}}=$ contributing area (sf) $=20,000 \mathrm{sf}$
$\mathrm{Q}_{\mathrm{DRR}}=$ maximum release rate for the site $(\mathrm{cfs})=0.2 \mathrm{cfs}$

$$
\begin{aligned}
& t_{V}=0.27\left(\frac{0.95 * 20.000 s f}{0.2 c f s}\right)^{0.5}-15 \\
& t_{V}=68.2 \mathrm{~min}
\end{aligned}
$$

Step 4: Based on the inputs from Steps 1 and 2, the workbook will automatically calculate the required detention volume through the blue roof. This calculation is shown below.

$$
V_{V}=\left(\frac{0.19 C_{W T} A_{t}}{t_{V}+15}-40 Q_{D R R}\right) t_{V}
$$

where:
$\mathrm{V}_{\mathrm{v}}=$ the maximum required detention volume (cf)
$\mathrm{C}_{\mathrm{WT}}=$ the weighted runoff coefficient for the contributing area $=0.95$
$\mathrm{A}_{\mathrm{t}}=$ contributing area $(\mathrm{sf})=20,000 \mathrm{sf}$
$\mathrm{t}_{\mathrm{v}}=$ the duration of the storm with a 10 yr . return frequency requiring the maximum detention volume with a variable outflow $(\min )=68.2 \mathrm{~min}$
$\mathrm{Q}_{\mathrm{DRR}}=$ maximum release rate for the site $(\mathrm{cfs})=0.2 \mathrm{cfs}$
$V_{V}=\left[\frac{0.19 * 0.95 * 20,000 \mathrm{sf}}{68.2 \mathrm{~min}+15}-(40 * 0.2 \mathrm{cfs})\right](68.2 \mathrm{~min})$
$V_{V}=2,414 c f$

UPSTREAM SYSTEM

| INPUTS |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| TDA ID | TDA Area | C-value | Detention <br> System Type | Maximum Release <br> Rate | Required <br> Detention Volume | Effective C-value |
| name | sf | $\#$ | name | cfs | cf | cf |
| 1 | 20000 | 0.95 | Blue Roof | 0.2 | (2414) |  |

Figure [I]G.4. Output for the Required Detention Volume Through the Blue Roof
Step 5: Check that the available storage volume of the roof is greater than the required detention volume.
The total roof area [will be used for detention] cannot be used for detention, because some roof area tributary to the system will be a bulkhead or parapet, and volume can't be provided in those. Therefore, the available area is [the entire $20,000 \mathrm{sf}$ ] set by the designer and must be less than $20,000 \mathrm{sf}$. For the purpose of this example, it will be assumed that the available area is $19,000 \mathrm{sf}$.
The designer has considered [two different roof configurations: 1) a uni-directionally sloped roof, as shown in Figure I. 5 and 2)] a multidirectionally sloped roof configuration, as shown in Figure [I.6]I.5.
G-3
[Uni-directionally Sloped Roof:


Figure I.5. Plan View of Uni-Directionally Sloped Blue Roof
The lengths and widths of each drainage area are as follows:
Drainage Area 1: $125^{\prime} \mathrm{L} \times 80^{\prime} \mathrm{W}$
Drainage Area 2: $125^{\circ} \mathrm{L} \times 80^{\prime} \mathrm{W}$
If the roof is sloped $1 / 8$ in per ft , the height difference between the high and low points of each drainage area is 5 inches. The ponding depth is 2 inches. Therefore, the high point of each drainage area will not be inundated.
Calculate the available storage volume of each drainage area, using the volume of a triangular prism.
$V_{A}=\frac{1}{2} L W * \frac{d_{R}}{12}$
where:
$\mathrm{V}_{\mathrm{A}}=$ the available storage volume of each drainage area (cf)
$\mathrm{L}=$ the length of each drainage area $(\mathrm{ft})=125 \mathrm{ft}$
$\mathrm{W}=$ the width of each drainage area $(\mathrm{ft}=80 \mathrm{ft}$
$d_{R}=$ the roof drain depth of flow (in) $=2$ in

$$
\begin{gathered}
V_{A}=\frac{1}{2} * 125 \mathrm{ft} * 80 \mathrm{ft} * \frac{2 \mathrm{in}}{12} \\
V_{A}=833 \mathrm{cf}
\end{gathered}
$$

The total available storage volume is:

$$
V_{T}=V_{1}+V_{2}
$$

where:
$\mathrm{V}_{\mathrm{T}}=$ the total available storage volume (cf)
$\mathrm{V}^{\mathrm{T}}=$ the available storage volume of Drainage Area $1(\mathrm{cf})=833 \mathrm{cf}$ $\mathrm{V}_{2}^{1}=$ the available storage volume of Drainage Area $2(\mathrm{cf})=833 \mathrm{cf}$

$$
\begin{aligned}
& V_{T}=833 c f+833 c f \\
& V_{T}=1,666 c f \leq V_{V}=2,414 c f \quad \text { NOT MET }
\end{aligned}
$$

Since the required detention volume is greater than the available storage volume, select a different controlled-flow roof drain or design depth of flow and re-run Steps 2-4.

In this case, the designer has chosen 3 inches as the new design depth of flow. The new ponding depth results in a maximum release rate of 0.27 cfs , a required detention volume of $2,242 \mathrm{cf}$, and a total available storage volume of $2,500 \mathrm{cf}$.]

## [Multi-directionally Sloped Roof:]



Figure [I.6.]G.5. Plan View of Multi-Directionally Sloped Blue Roof
To calculate the provided volume to meet the operations volume requirement, Vv , BWSO does not analyze the volumes of the tributary areas individually and assumes a best-case scenario for tributary areas. The area available for detention is always less than the
tributary area, and it is assumed that the area available for detention

## here is 18,000 sf.

For the example above, the best case scenario is reflected by
determining the[The] weighted average of the length[s] and width[s] of [each]a typical drainage area[are], as follows, assuming a L:W ratio of 1.25:1:

Drainage Area[ 1]: [75]75' L [ [80] $60^{\prime} \mathrm{W}$
[Drainage Area 2: $75^{\prime} \mathrm{L} \times 80^{\prime} \mathrm{W}$
Drainage Area 3: $50^{\prime} \mathrm{L} \times 80^{\circ} \mathrm{W}$
Drainage Area 4: $50^{\prime} \mathrm{L} \times 80^{\prime} \mathrm{W}$ ]
If the roof is sloped $1 / 8$ in per ft , or about $1 \%$ the height [difference between the high and low points is 6.9 inches for drainage areas 1 and 2 , and 5.9 inches for drainage areas 3 and 4 . The ponding depth is 2 inches. Therefore, the high point of each drainage area will not be inundated.]of the short edge of an average drainage area, $\mathrm{d}_{\mathrm{S}}$ is 3.6 " above the center drain, and the depth to the long edge $d_{L}$ is 4.5 " above a center drain. The roof slope for roof detention should not be less than $0.5 \%$, or 0.0625 in per ft .
Note: the height of any overflow must be between 2" and 4" above the primary drain to meet requirements from the NYC Department of Buildings.
Calculate the available storage volume of [each]an average drainage area, accounting for the best-case scenario and a constant roof slope. There are three components to the volume provided for an average drain area, depending on the depth of flow.

1) If the depth of flow will be less than or equal to the shortest overflow height, the volume provided is calculated by checking the volume of an inverted pyramid[, using the volume of a pyramid] with base width equal to the width specified above, for example 61.6'.
[Drainage Areas 1 and 2]Typical Drainage Area, Inverted Pyramid:

$$
V_{A}=\frac{1}{3} W^{2} * \frac{d_{R}}{12}
$$

where:
$\mathrm{V}_{\mathrm{A}}=$ the available storage volume of a typical[each] drainage area (cf)
[ $\mathrm{L}=$ the length of each drainage area $(\mathrm{ft})=75 \mathrm{ft}]$
$\mathrm{W}=$ the width of [each] a typical drainage area ( ft ) [ $=80 \mathrm{ft}]$
$\mathrm{d}_{\mathrm{R}}=$ the roof drain depth of flow (in) [=2 in]
2) If the depth of flow, $d_{R}=$ the roof drain depth of flow (in) will be between the shortest overflow height and the longest overflow height, the volume provided includes the full inverted pyramid, calculated using 1), and adding the volume in an inverted trapezoidal prism up to the long overflow depth. The volume up to this depth is calculated with the formula:

$$
V_{A}=\frac{1}{3} W^{2} \cdot \frac{d_{S}}{12}+\frac{\left(16.67 \cdot \frac{d_{R}}{S}+W\right)}{2} W \cdot \frac{\left(d_{R}-d_{S}\right)}{12}
$$

where:
$\mathrm{V}_{\mathrm{A}}=$ the available storage volume of a typical drainage area (cf) $\mathrm{W}=$ the width of a typical drainage area (ft)
$\mathrm{L}=$ the length of a typical drainage area ( ft )
$\mathrm{d}_{\mathrm{R}}=$ the roof drain depth of flow (in)
$\mathrm{d}_{\mathrm{s}}=$ the depth to the short overflow height (in)
$\mathrm{S}=$ the roof slope, in units of percentage (between 0 and $100 \%$ )
3) If the depth of flow, $d_{R}=$ the roof drain depth of flow (in) will be above the longest overflow height, the volume provided includes 1), 2) and adds the volume of a rectangular prism up to the maximum overflow height.
$V_{A}=\frac{1}{3} W^{2} \cdot \frac{d_{S}}{12}+\frac{(L+W)}{2} W \cdot \frac{\left(d_{L}-d_{S}\right)}{12}+(L \cdot W) \frac{\left(d_{R}-\left(d_{L}+d_{S}\right)\right)}{12}$
where:
$\mathrm{V}_{A}=$ the available storage volume of a typical drainage area (cf)
$\overline{\mathrm{W}}=$ the width of a typical drainage area (ft)
$\mathrm{L}=$ the length of a typical drainage area (ft)
$\mathrm{d}_{\mathrm{R}}=$ the roof drain depth of flow (in)
$\frac{\mathrm{d}_{\mathrm{R}}^{\mathrm{R}}}{\underline{\mathrm{S}}}=$ the depth to the short overflow height (in)
$\mathrm{d}_{\mathrm{L}}^{\mathrm{s}}=$ the depth to the long overflow height (in)
In the example, using the assumed roof drain of $10 \mathrm{GPM} / \mathrm{in} /$ weir, the depth must not exceed 2.0 inches to correctly restrict flow from the facility to 0.18 cfs . Because the depth will not exceed 2.0 inches, the first equation applies:

$$
V_{A}=\frac{1}{3} * 60^{2} \mathrm{ft}^{2} * \frac{2.0 \mathrm{in}}{12}=200 \mathrm{cf}
$$

This indicates that only 200 cf of volume will be provided in the area of an average inverted pyramid, so with four drains the provided volume would be 800 cf , but the volume required is 2414. This demonstrates that the volume requirements are not being met by the proposed drain system, and as a result, another drain configuration is required.
Since the maximum overflow height is known to be 4 " above the primary drain, it is possible to set this as the depth of flow $\mathrm{d}_{\mathrm{R}}$ to determine a more appropriate drain. With the depth of flow not to exceed 4", and the release rate from all drains not to exceed 0.2 cfs at this depth, a target drain flow rate can be determined:

$$
Q_{\frac{G P M}{\text { in }}, \text { max }}=\frac{\left(Q_{\text {drr }}(c f s) \cdot 448 \frac{g p m}{c f s}\right)}{\# \text { Drains } \cdot \text { Depth of flow }(\text { in })}
$$

In this example, the maximum flow rate for an individual drain at a depth of 4" should not exceed 5.6 GPM/inch.
With this drain, the provided volume can be calculated using the above relationships, with a flow depth of 4". This is scenario 2) above, as the flow depth is between the short overflow height and the long overflow height.
$V_{A}=\frac{1}{3}(60)^{2} \cdot \frac{3.6}{12}+\frac{\left(16.67 \cdot \frac{4}{1}+60\right)}{2} 60 \cdot \frac{(4-3.6)}{12}=486.7 \mathrm{cf}$
For a system with four drains, this has a provided volume of $\sim 1,946 \mathrm{cf}$, which is less than the required volume of 2,414 .
[Drainage Areas 3 and 4:
where:
$\mathrm{V}_{\mathrm{A}}=$ the available storage volume of each drainage area (cf)
$\mathrm{L}=$ the length of each drainage area $(\mathrm{ft})=50 \mathrm{ft}$
$\mathrm{W}=$ the width of each drainage area ( $\mathrm{ft}=80 \mathrm{ft}$
$d_{R}=$ the roof drain depth of flow (in) $=2$ in
The total available storage volume is:
where:
$\mathrm{V}_{\mathrm{T}}=$ the total available storage volume (cf)
$\mathrm{V}_{1}=$ the available storage volume of Drainage Area $1(\mathrm{cf})=333 \mathrm{cf}$
$\mathrm{V}_{2}=$ the available storage volume of Drainage Area $2(\mathrm{cf})=333 \mathrm{cf}$
$\mathrm{V}_{3}=$ the available storage volume of Drainage Area $3(\mathrm{cf})=222 \mathrm{cf}$
$\mathrm{V}_{4}=$ the available storage volume of Drainage Area $\left.4(\mathrm{cf})=222 \mathrm{cf}\right]$
Since the required detention volume is greater than the available storage volume, the user may select a different controlled-flow roof drain or design depth of flow and re-run Steps 2-4.
In this case, there is no circumstance where a drain can restrict flow sufficiently below the overflow to meet the volume requirements, so the designer has must choose a different drain, roof slope, or release rate from the roof detention system. With a roof slope of $0.5 \%$, the system has enough volume, but the roof slope is not always easily adjusted. In the case when the roof slope may not be adjusted: If the flow depth is chosen to be [3]4 inches as the new design depth of flow, a drain that discharges at a flow rate of $5 \mathrm{GPM} / \mathrm{in}$ is selected. The new ponding depth results in a maximum release rate of $0 .[27] 43 \mathrm{cfs}$, a required detention volume of $[2,242] 1,938 \mathrm{cf}$, and a total available storage volume of $[1,666] 1,947 \mathrm{cf}$.
[A uni-directionally sloped roof provides sufficient storage volume for a ponding depth of 3 inches. The multi-directionally sloped roof does not provide enough storage volume for the same depth. Therefore, the designer has chosen to use a uni-directionally sloped roof, with a ponding depth of 3 inches.]
The inputs have been updated, and the workbook automatically outputs the new required detention volume of $[2,242] \underline{1,938} \mathrm{cf}$.
[ $\begin{gathered}\text { UPSTREAM SYSTEM } \\ \text { INPUTS }\end{gathered}$

| INPUTS |  |  | OUTPUTS |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TDAID | TDA Area | C-value | Detention System Type | Maximum Release Rate | Required Detention Volume | Effective C-value |
| name | sf | \# | name | cfs | cf | \# |
| 1 | 20000 | 0.95 | Blue Roof | 10.27 | 2242 |  |
| ] |  |  |  |  |  |  |
| UPSTREAM SYSTEM |  |  |  |  |  |  |
| INPUTS |  |  |  |  | OUTPUTS |  |
| TDA ID | TDA Area | C-value | Detention System Type | Maximum Release Rate | Required Detention Volume | Effective C-value |
| name | sf | \# | name | cts | cf | \# |
| 1 | 20000 | 0.95 | Blue Roof | 0.43 | 1938 |  |

Figure [I.7.]G.6. Inputs and Output for the Required Detention Volume Through the Blue Roof, Using a Ponding Depth of 3"
Step 6: Based on the inputs from Steps 1 and 2, the workbook will automatically calculate the effective weighted runoff coefficient for the blue roof. This calculation is shown below.

$$
C_{W E}=\frac{311 Q_{D R R}\left(t_{V}+15\right)}{A_{\mathrm{t}}}
$$

where:
$\mathrm{C}_{\mathrm{WE}}=$ the effective weighted runoff coefficient for the roof with runoff restricted by controlled-flow roof drains
$\mathrm{Q}_{\mathrm{DRR}}=$ maximum release rate for the site $(\mathrm{cfs})=0.27 \mathrm{cfs}$
$\mathrm{t}_{\mathrm{v}}=$ the duration of the storm with a 10 yr . return frequency requiring the maximum detention volume with a variable outflow $(\mathrm{min})=56.6 \mathrm{~min}$
$A_{t}=$ contributing area $(s f)=20,000 \mathrm{sf}$

$$
\begin{gathered}
C_{W E}=\frac{311 * 0.43 c f s *(56.6 \mathrm{~min}+15)}{20,000 \mathrm{sf}} \\
C_{W E}=0.380
\end{gathered}
$$



Figure [I.8.]G.7. Output for the Effective C-Value
Step 7: Input the properties of the parking lot that will drain into the downstream detention system.
The second upstream area that drains to the downstream detention system is the 20,000 sf parking lot. Since there is no detention system specifically for the parking lot, the effective weighted runoff coefficient remains as 0.85 . The workbook will automatically output this value.


Figure [I.9.]G.8. Inputs and Output for the Parking Lot
Step 8: Calculate the release rate to be maintained by the controlled-flow orifice for the downstream detention system.
Use the maximum release rate per acre (q) shown in Table 2.9, Chapter 2.
Since the project is $20,000 \mathrm{sf}$ or more, and consists of a multistory office building, this project requires a site connection permit (SCP). In addition, the site is connecting to a 15 in . combined sewer.
Table 2.9. Maximum release rate per acre (cfs/acre) by sewershed type.

| $\mathbf{q}$ <br> (cfs/acre) | Description |
| :---: | :--- |
| 1.0 | MS4 areas |
| 0.1 | CSS areas |

According to Table 2.9, $q=0.1 \frac{\mathrm{cfs}}{\text { acre }}$.

$$
Q_{D R R}=\frac{q * A}{43560} \text { or } 0.046[\text { whichever is greater }]
$$

where:
$Q_{\mathrm{DRR}}=$ maximum release rate for the site (cfs)
$\mathrm{q}=$ maximum release rate per acre $(\mathrm{cfs} / \mathrm{acre})=0.1 \mathrm{cfs} /$ acre
$\mathrm{A}=$ contributing area $(\mathrm{sf})=40,000 \mathrm{sf}$

$$
Q_{D R R}=0.092 \mathrm{cfs}>0.046 \mathrm{cfs}
$$

The maximum release rate is 0.092 cfs .
Step 9: Input the properties of the downstream detention system. Use the maximum release rate from Step 8.
Since the project is $20,000 \mathrm{sf}$ or more, and consists of a multistory office building, this project requires a site connection permit (SCP). The site has a total contributing area of $40,000 \mathrm{sf}$.

DOWNSTREAM SYSTEM

| INPUTS |
| :--- |
| Total Contributing Maximum <br> Release Rate Required <br> Detention Volume Effective C-value |
| Permit Type |

Figure [I.10.]G.9. Inputs for the Downstream Detention System
Step 10: Based on the inputs from Step 9, the workbook will automatically calculate the effective weighted runoff coefficient for the downstream detention system. This calculation is shown below.

$$
C_{W}=\frac{\left(C_{1} A_{1}+C_{2} A_{2}+\cdots \text { etc. }\right)}{A_{t}}
$$

where:
$\mathrm{C}_{\mathrm{w}}=$ weighted runoff coefficient relating peak rate of rainfall and runoff
$\mathrm{C}_{1}=$ the effective weighted runoff coefficient for the area classified as roof $=0.3[0] \underline{8}$
$\mathrm{A}_{1}=$ the area classified as roof ( sf ) $=20,000 \mathrm{sf}$
$\mathrm{C}_{2}$ = the effective weighted runoff coefficient for the area classified
as paved $=0.85$
$\mathrm{A}_{2}=$ the area classified as paved $(\mathrm{sf})=20,000 \mathrm{sf}$
$\mathrm{A}_{\mathrm{t}}^{2}=$ contributing area $(\mathrm{sf})=40,000 \mathrm{sf}$

$$
\begin{gathered}
C_{W}=\frac{(0.38 * 20,000 s f)+(0.85 * 20,000 s f)}{40,000 s f} \\
C_{W}=0.61
\end{gathered}
$$

| DOWNSTREA INPUTS | OUTPUTS |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Permit Type | Total Contributing Area | Maximum Release Rate | Required Detention Volume | Effective C-value |
| name | sf | cfs | cf | \# |
| CSS - SCP | 40000 | 0.092 |  | 0.575 |
| DOWNSTREAM SYSTEM |  |  |  |  |
| Permit Type | Total Contributing Area | Maximum Release Rate | Required <br> Detention Volume | Effective C-value |
| name | sf | cis | cf | \# |
| CSS - SCP | 40000 | 0.092 |  | (0.61) |

Figure [I.11.]G.10. Output for the Effective C-Value of the Downstream Detention System
Step 11: Identify the rainfall depth $\left(R_{D}\right)$ based on the sewershed type and connection proposal type for the project. Use Table 2.7 in Chapter 2.
Since the project is 20,000 sf or more, and consists of a multistory
office building, this project requires a site connection permit (SCP). In addition, the site is connecting to a 15 in . combined sewer. Table 2.7. Applied rainfall depth by sewershed type and connection proposal type.

| $\mathbf{R}_{\boldsymbol{D}}$ | Description |
| :---: | :--- |
| 1.85 | CSS areas with SCP |
| 1.50 | CSS areas with HCP |
| 1.50 | MS4 areas wiith SCP |
| 1.10 | MS4 areas with HCP |

According to Table 2.7, $R_{D}=1.85 \mathrm{in}$.
Step 12: Based on the inputs from Step 9, the workbook will automatically calculate the required detention volume through the detention tank. This calculation is shown below.
$V_{V}=\frac{R_{D}}{12} * A * C_{W}$
where:
$\mathrm{V}_{\mathrm{V}}=$ the maximum required detention volume (or sewer
operations volume) (cf)
$\mathrm{R}_{\mathrm{D}}=$ rainfall depth (in) $=1.85 \mathrm{in}$
$\mathrm{A}=$ contributing area $(\mathrm{sf})=40,000 \mathrm{sf}$
$\mathrm{C}_{\mathrm{w}}=$ weighted runoff coefficient relating peak rate of rainfall and runoff $=0 .[575] \underline{61}$

$$
\begin{gathered}
V_{V}=\frac{1.85 \mathrm{in}}{12} * 40,000 \mathrm{sf} * 0.61 \\
V_{V}=3,791 \mathrm{cf}
\end{gathered}
$$

DOWNSTREAM SYSTEM

| INPUTS |
| :--- |
| Permit Type Total Contributing <br> Area Maximum Release <br> Rate Required <br> Detention Volume Effective C-value |
| name |
| sf |

Figure [I.12.]G.11. Output for the Required Detention Volume Through the Downstream Detention System
Step 13: Use the controlled-flow orifice equation to determine an appropriate orifice area for the detention tank, by assuming the active storage depth.
In order to minimize the area required for the detention tank, choose the maximum depth that is still feasible according to site limitations and use a re-entrant orifice. In this case, the designer has chosen an active storage depth of 4 ft .

$$
Q_{0}=C_{D} * A_{0} * \sqrt{2 g H}
$$

where:
$\mathrm{Q}_{\mathrm{O}}=$ maximum release rate of orifice $(\mathrm{cfs})=0.092 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$A_{0}=$ area of orifice (sf)
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\mathrm{H}=$ maximum hydraulic head above the centerline of the orifice $(\mathrm{ft})=4 \mathrm{ft}$

$$
\begin{aligned}
& 0.092 \text { cfs }=0.52 * A_{0} * \sqrt{2 * 32.2\left(\frac{f t}{s^{2}}\right) * 4 f t} \\
A_{0} & =0.011 \mathrm{sf}
\end{aligned}
$$

Step 14: Translate the area of the controlled-flow orifice $\left(A_{o}\right)$ into a diameter and check that it is greater than the minimum diameter of 1 in .

$$
A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}
$$

where:
$\mathrm{A}_{\mathrm{o}}=$ area of orifice $(\mathrm{sf})=0.011 \mathrm{sf}$
$\mathrm{D}_{\mathrm{O}}=$ diameter of orifice (in)

$$
\begin{aligned}
& 0.011 \text { sf }=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144} \\
& D_{0}=1.42 \mathrm{in}>1 \mathrm{in} \quad O K
\end{aligned}
$$

Set the orifice diameter to the nearest 0.25 -inch interval rounding down, with a minimum orifice diameter of one-inch. In this case, use an orifice diameter of 1.25 inches.
Step 15: Confirm the orifice area of the selected orifice diameter from Step 14.
$A_{0}=\frac{\left[\pi *\left(\frac{D_{0}}{2}\right)^{2}\right]}{144}$
where:
$\mathrm{A}_{\mathrm{o}}=$ area of orifice (sf)
$\mathrm{D}_{\mathrm{O}}=$ diameter of orifice (in) $=1.25$ inches
$A_{0}=\frac{\left[\pi *\left(\frac{1.25 \mathrm{in}}{2}\right)^{2}\right]}{144}$

$$
A_{0}=0.009 \mathrm{sf}
$$

Step 16: Confirm the required active storage depth in the tank using the orifice area from Step 15.

Compute the maximum storage depth in ft . of a detention facility with a Re-entrant orifice tube outlet, $\mathrm{S}_{\underline{\mathrm{DR}}}$, with a $\mathrm{C}_{\mathrm{D}}$ of 0.52 , by the equation:

$$
S_{D R}=1,930\left(Q_{D R R}\right)^{2} /\left(d_{\circ}\right)^{4}+d_{\circ} / 24
$$

where:
$\left[Q_{0}=\right.$ maximum release rate of orifice $(\mathrm{cfs})=0.092 \mathrm{cfs}$
$\mathrm{C}_{\mathrm{D}}=$ coefficient of discharge, 0.52 for re-entrant orifice
$\mathrm{A}_{\mathrm{o}}=$ area of orifice $(\mathrm{sf})=0.009 \mathrm{sf}$
$\mathrm{g}=$ acceleration due to gravity, $32.2\left(\mathrm{ft} / \mathrm{s}^{2}\right)$
$\mathrm{H}=$ maximum hydraulic head above the centerline of the orifice (ft)] $\mathrm{S}_{\mathrm{DR}}[\mathrm{S}]=$ the maximum storage depth in ft. For a Re-entrant orifice tube outlet
$Q_{D R R}=$ the detention facility maximum release rate in cfs.
$\left[Q_{D R R}\right] d_{0}=$ the [detention facility maximum release rate in cfs.] nominal dia. of the orifice tube outlet in in.

$$
\begin{gathered}
S_{D R}=1,930(0.092)^{2} /(1.25)^{4}+1.25 / 24 \\
H=6.74 \mathrm{ft}
\end{gathered}
$$

If the active storage depth is too high, then increase the orifice size by 0.25 inches and re-run Steps 13-14 until a suitable depth is identified. If the active storage depth is too low, then decrease the orifice size by 0.25 inches (but not less than 1 inch) and re-run Steps 13-14. Alternatively, the designer can choose a different orifice configuration as needed to modify the active storage depth.
In this case, the depth is too high to drain via gravity connection to the storm sewer. Using a flush orifice, which has a coefficient of discharge of 0.61 , results in an active storage depth of $4 .[4] \underline{91} \mathrm{ft}$.
Step 17: Set the dimensions of the detention tank's active storage zone.
Based on the active storage depth of $4.91[4] \mathrm{ft}$ and the $\mathrm{V}_{\mathrm{v}}$ of $3,[548] 791$ cf , set the interior detention tank dimensions to $\mathrm{L}: 28 .[5] \underline{0} \mathrm{ft}$ and W : $2[8.5] 0 \mathrm{ft}$. The resulting detention tank has an active storage volume of $3,[574] 849.44 \mathrm{cf}$. Note that the exterior dimensions of the detention tank will be larger than the dimensions of the active storage zone ( 28. [5] $\underline{0}^{\prime} \mathrm{L} \times 28$.[5] $\underline{0^{\prime}} \mathrm{W} \times 4$. [4] $\underline{91}$ 'D) to accommodate wall thickness, bypass structures, and/or other internal features.

## NEW YORK CITY MAYOR'S OFFICE OF OPERATIONS 253 BROADWAY, $10^{\text {th }}$ FLOOR NEW YORK, NY 10007 212-788-1400 <br> CERTIFICATION / ANALYSIS <br> PURSUANT TO CHARTER SECTION 1043(d)

RULE TITLE: Amendment of Stormwater Manual Appendices REFERENCE NUMBER: DEP-98
RULEMAKING AGENCY: Department of Environmental Protection
I certify that this office has analyzed the proposed rule referenced above as required by Section 1043(d) of the New York City Charter, and that the proposed rule referenced above:
(i) Is understandable and written in plain language for the discrete regulated community or communities;
(ii) Minimizes compliance costs for the discrete regulated community or communities consistent with achieving the stated purpose of the rule; and
(iii) Does not provide a cure period because it does not establish a violation, modification of a violation, or modification of the penalties associated with a violation.
/s/ Francisco X. Navarro
May 3, 2024
Mayor's Office of Operations
Date

## NEW YORK CITY LAW DEPARTMENT DIVISION OF LEGAL COUNSEL 100 CHURCH STREET NEW YORK, NY 10007 212-356-4028 <br> CERTIFICATION PURSUANT TO CHARTER §1043(d)

RULE TITLE: Amendment of Stormwater Manual Appendices

## REFERENCE NUMBER: 2024 RG 052

RULEMAKING AGENCY: Department of Environmental Protection
I certify that this office has reviewed the above-referenced proposed rule as required by section 1043(d) of the New York City Charter, and that the above-referenced proposed rule:
(i) is drafted so as to accomplish the purpose of the authorizing provisions of law;
(ii) is not in conflict with other applicable rules;
(iii) to the extent practicable and appropriate, is narrowly drawn to achieve its stated purpose; and
(iv) to the extent practicable and appropriate, contains a statement of basis and purpose that provides a clear explanation of the rule and the requirements imposed by the rule.
/s/ STEVEN GOULDEN
Date: May 2, 2024
Senior Counsel

- m28

SPECIAL MATPRIALS

## CHANGES IN PERSONNEL

| NAME | BOARD OF ELECTION POLL WORKERS FOR PERIOD ENDING 04/12/24 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TITLE |  |  |  |  | PROV | EFF DATE | AGENCY |
|  |  |  | NUM | SALARY | ACTION |  |  |  |
| FRANKLYN | BRENDA |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| FRANZ | JOY |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| FRAZIER | DONNA | E | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/23 | 300 |
| FRIDKIS | GILA |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| FRIERSON | GLENDA |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| FUREY | DIANE |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GABRIEL | GLORIA |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GADPAILLE | DOLLY |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GAO | SHAN |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GAP | HOUKE |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GARCIA | DEREK |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GARCIA | JANISHA | M | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
|  | BOARD OF ELECTION POLL WORKERS FOR PERIOD ENDING 04/12/24 |  |  |  |  |  |  |  |
|  | TITLE |  |  |  |  |  |  |  |
| NAME |  |  | NUM | SALARY | ACTION | PROV | EFF DATE | AGENCY |
| GARCIA | URIEL | F | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GASKIN | NASIYA | M | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GELPERN | YELENA |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GIBBS | MAYA |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GILCHRIST | ANDRE |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GIRALDO | ANDREW |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GIVENS | KENNETH | E | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |
| GLOTZER | PAUL |  | 9POLL | \$1.0000 | APPOINTED | YES | 01/01/24 | 300 |

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GUTIN
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GUZMAN
HACKETT HADLEY BELL
HANSRAJ HARLEQUIN HARRISON HARVEY HASLEY
HAYAT
HAYAT
HEATH
HELLWIG
HENDERSON
HENNEGEN
HENRY
HEREDIA
HERIVAUX
HERNAN
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HERNAND
HEWITT
HIBART

| JACOB | R | 9POLL |
| :---: | :---: | :---: |
| MICHELLE |  | 9POLL |
| KHATERIN | E | 9POLL |
| LISA |  | 9POLL |
| JANSY | J | 9POLL |
| DANTIA | D | 9POLL |
| JULIO | C | 9POLL |
| KADENCE | R | 9POLL |
| VICTOR | M | 9POLL |
| YAZMIN | M | 9POLL |
| AMARILYS |  | 9POLL |
| MONICA | J | 9POLL |
| LYNNETTE |  | 9POLL |
| DIAMOND |  | 9POLL |
| HELENA | E | 9POLL |
| GEORGE |  | 9POLL |
| VICTOR |  | 9POLL |
| ABDELHAK |  | 9POLL |
| DANIEL | J | 9POLL |
| VALENTIN |  | 9POLL |
| MYRA |  | 9POLL |
| MIKHAIL |  | 9POLL |
| AHSAN |  | 9POLL |
| BRYANT |  | 9POLL |
| CHRISTIN |  | 9POLL |
| MARGO |  | 9POLL |
| BHANMATI |  | 9POLL |
| BREANNA | E | 9POLL |
| CLAUDINE |  | 9POLL |
| TERAYNE |  | 9POLL |
| CHANDREE | S | 9POLL |
| AHMAD |  | 9POLL |
| ALTHEA |  | 9POLL |
| EMILY |  | 9POLL |
| ANNA | T | 9POLL |
| YVONNE |  | 9POLL |
| ANNE | M | 9POLL |
| YESHUA |  | 9POLL |
| NICHOLAS |  | 9POLL |
| MELISSA |  | 9POLL |
| NORMA | I | 9POLL |
| JASMINE | C | 9POLL |
| DANISE |  | 9POLL |


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Project Identification
CEQR No. 24DME011X
SEQRA Classification: Type I
Bronx, Community District 10

Lead Agency
Office of the Deputy Mayor for
Housing,
Economic Development and Workforce 100 Gold Street, $2^{\text {nd }}$ Floor New York, NY 10038

NOTICE IS HEREBY GIVEN that a public scoping meeting for the Bally's Bronx Project (the proposed project) will be held on Tuesday, June 25, 2024, at 4:00 P.M. The Office of the Deputy Mayor for Housing, Economic Development and Workforce (the lead agency) will hold the public scoping meeting remotely (register here: https://forms. office.com/r/XHSQQsvzVW). The purpose of the scoping meeting is to provide the public with the opportunity to comment on the Draft Scope of Work proposed to be used to develop an Environmental Impact Statement (EIS) for the proposed project. If you need reasonable accommodation such as a sign language interpreter or foreign language assistance in order to participate in the meeting, please call or email the contact person below. Requests must be submitted at least ten business days before the meeting and can also be requested through the virtual meeting registration.
Written comments on the Draft Scope of Work will be accepted by the lead agency until Friday, July 12, 2024, at 5:00 P.M. at the contact address below.

Directing that an Environmental Impact Statement (EIS) be prepared, the lead agency issued an Environmental Assessment Statement (EAS), Positive Declaration, and Draft Scope of Work on May 22, 2024. These documents are available for review on CEQR Access, see https:// a002-ceqraccess.nyc.gov/ceqril (search CEQR \# 24DME011X) and from the contact person listed below.
The Applicant, Bally's New York Operating Company, LLC, seeks a series of discretionary land use actions as described below to facilitate the "Bally's Bronx" gaming and recreation facility (the "Proposed Facility") in the Throggs Neck neighborhood of Bronx Community District 10. The Proposed Facility would contain gaming space with food and beverage services, a hotel, an event center, retail, and a 4,660-space "parking garage, located on an approximately 19-acre parcel (the
"Development Site") within Bally's Golf Links at Ferry Point, a 222 -acre public golf course in the Bronx (the "Golf Course"). The Golf Course is a part of Ferry Point Park (the "Park"). The Applicant has operated the Golf Course since September 2023 pursuant to a license agreement with the New York City Department of Parks and Recreation (NYC Parks) and intends to construct the Proposed Facility within a portion of the Golf Course that is currently used for parking, the course clubhouse, and a portion of the practice area.
In connection with the Proposed Facility, the uninterrupted circular roadway within the Park that connects the southbound and northbound Hutchinson River Expressway service roads (the "Ring Road") would be widened and improved in coordination with the New York City Department of Transportation (NYCDOT). Supplemental roadway improvements would be undertaken to improve circulation near the Development Site. Additionally, the Applicant intends to design and construct improvements to the Park and adjacent roadways in coordination with the City of New York. Collectively, the Development Site and the Ring Road comprise the" Affected Area." The "Proposed Facility and improvements to Ring Road comprise the "Proposed Development."
The Proposed Actions would facilitate the Proposed Development, including an approximately 3,134,040-gross-square-foot (gsf) gaming facility and the widening and mapping of Ring Road as a city street. The Proposed Facility would include 561,320 gsf of gaming space and a variety of food and beverage services; a 509,330 gsf, 500 -key hotel with a spa and meeting space; 6,100 gsf for sundry retail; a 2,000 -seat event center; and a $1,941,910 \mathrm{gsf}$ parking garage for 4,660 vehicles. During peak business hours at the Proposed Facility there would be 5,800 visitors and up to 650 employees. The Proposed Development is expected to generate 3,500 jobs. As part of the Proposed Development, the Applicant would construct a replacement standalone clubhouse for the Golf Course in the northern portion of the Development Site. The remainder of the Golf Course would remain as currently configured and would continue to be open to the public during the entire construction time period.

## Required City Approvals

The Proposed Development is anticipated to require approval of the following discretionary actions:

- City Map Amendments:
o Demap the Development Site as parkland.
o Map Ring Road, proposed to be widened, as a City Street.
- Zoning Map Amendment:
o Designate 19 acres of alienated parkland as a C8-4 commercial zoning district, in which gaming facilities are permitted pursuant to NYC Zoning Resolution Sections 32-10 (32-18, 32-181, 32-283) and 42-10 (42-18, 42-181, 42-183).
- Disposition of Real Property:
o Disposition of non-residential, city-owned property to the Applicant.
- Acquisition of Real Property:
o Acquisition of replacement parkland by the City of New York from the Applicant.
- Modification of Existing Concession License:
o Renewal and amendment of the existing Concession License between the Applicant and NYC Parks to facilitate the long-term operation of the public Golf Course by Applicant.
Other City approvals may include approval from the Public Design Commission (PDC) and amendments to the City map and/or zoning map to show replacement parkland areas as "Park". In addition, to facilitate the Proposed Development, coordination (or approvals for public improvements) will be required with the NYC Department of Transportation (NYCDOT).


## Required State Approvals

- State Legislation and Governor's Approval authorizing the Alienation of Parkland
o To facilitate the disposition of the 19-acre Development Site to develop the Proposed Facility and the use of Ring Road as a mapped City street.
The Proposed Development is anticipated to require approval of the following discretionary actions:
- Approval by the Gaming Facility Location Board and issuance of a gaming license from the New York State Gaming Commission
o To allow the operation of the Proposed Facility.


## - Approval from New York State Department of Environmental Conservation (NYSDEC)

o To allow the use of and construction on the Affected Area.
Other State approvals may include approval from the New York State Department of Transportation (NYSDOT) and potentially other State agencies to facilitate certain street improvements in the area of the Hutchinson River Parkway, the issuance of wetland permits from NYSDEC and the United States Army Corps of Engineers (USACE), and potentially other NYSDEC permits. In addition, to facilitate the Proposed Development, coordination (or approvals for public improvements) may be required with the Metropolitan Transportation Authority (MTA) and MTA Bridges and Tunnels (MBT).
Copies of the EAS, Positive Declaration, and Draft Scope of Work for the project may be obtained by any member of the public from: CEQR Access, https://a002-ceqraccess.nyc.gov/ceqr/ (search CEQR \# 24DME011X).

## Contact:

Mayor's Office of Environmental Coordination
Attn: Esther Brunner, Deputy Director
100 Gold Street, 2nd Floor
New York, New York 10038
Telephone: (212) 788-6822
Email: ebrunner@cityhall.nyc.gov
This Notice of Public Meeting has been prepared pursuant to Article 8 of the New York State Environmental Conservation Law (the State Environmental Quality Review Act (SEQRA)), its implementing regulations found at 6 NYCRR Part 617, and the Rules of Procedure for City Environmental Quality Review found at 62 RCNY Chapter 5, and Mayoral Executive Order 91 of 1977, as amended (CEQR).
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## ROADWAY IMPROVEMENTS IN ROSEDALE AREA STREETS - STAGE 2



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