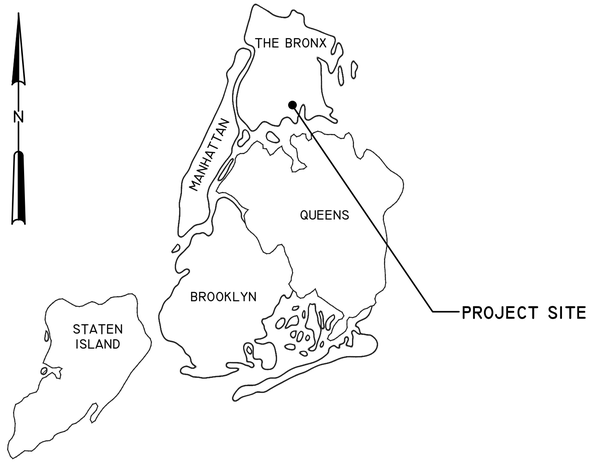
NYC Environmental Protection

# NEW YORK CITY ENVIRONMENTAL PROTECTION
# BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS

NYC Parks

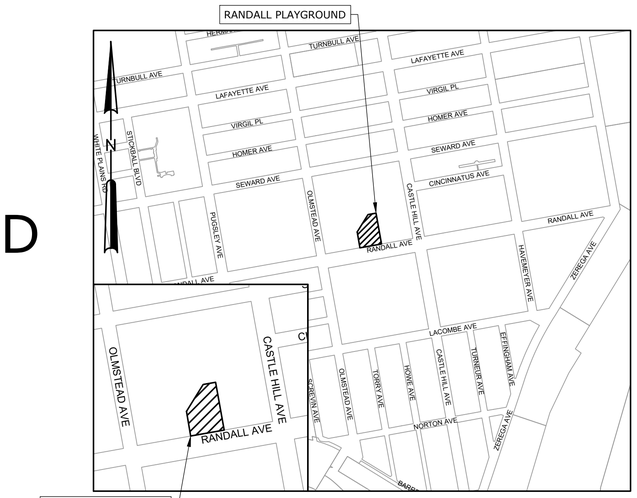
## ON-SITE GREEN INFRASTRUCTURE
## EAST RIVER CSO TRIBUTARY AREA
## OUTFALL HP-013
## DEP CAPITAL CONTRACT NO. GX-P-RAND




## X203 - RANDALL PLAYGROUND
## BBL 2035700100

## BRONX, NY

### BID SUBMISSION
### NOVEMBER 2026




LOCATION PLAN

| SHEET LIST | |
|---|---|
| Sheet Number | Sheet Title |
| G001 | COVER SHEET |
| S001 | TOPOGRAPHIC SURVEY PLAN |
| C100 | TREE PROTECTION, STAGING, AND ACCESS PLAN |
| C101 | REMOVAL / DEMOLITION PLAN |
| C200 | PROPOSED GREEN INFRASTRUCTURE LAYOUT PLAN |
| C201 | MATERIALS PLAN |
| C300 | SECTIONS AND PROFILES - 1 |
| C301 | SECTIONS AND PROFILES - 2 |
| C500 | DETAILS |
| C600 | SITE DETAILS - 1 |
| C601 | SITE DETAILS - 2 |
| C602 | SITE DETAILS - 3 |

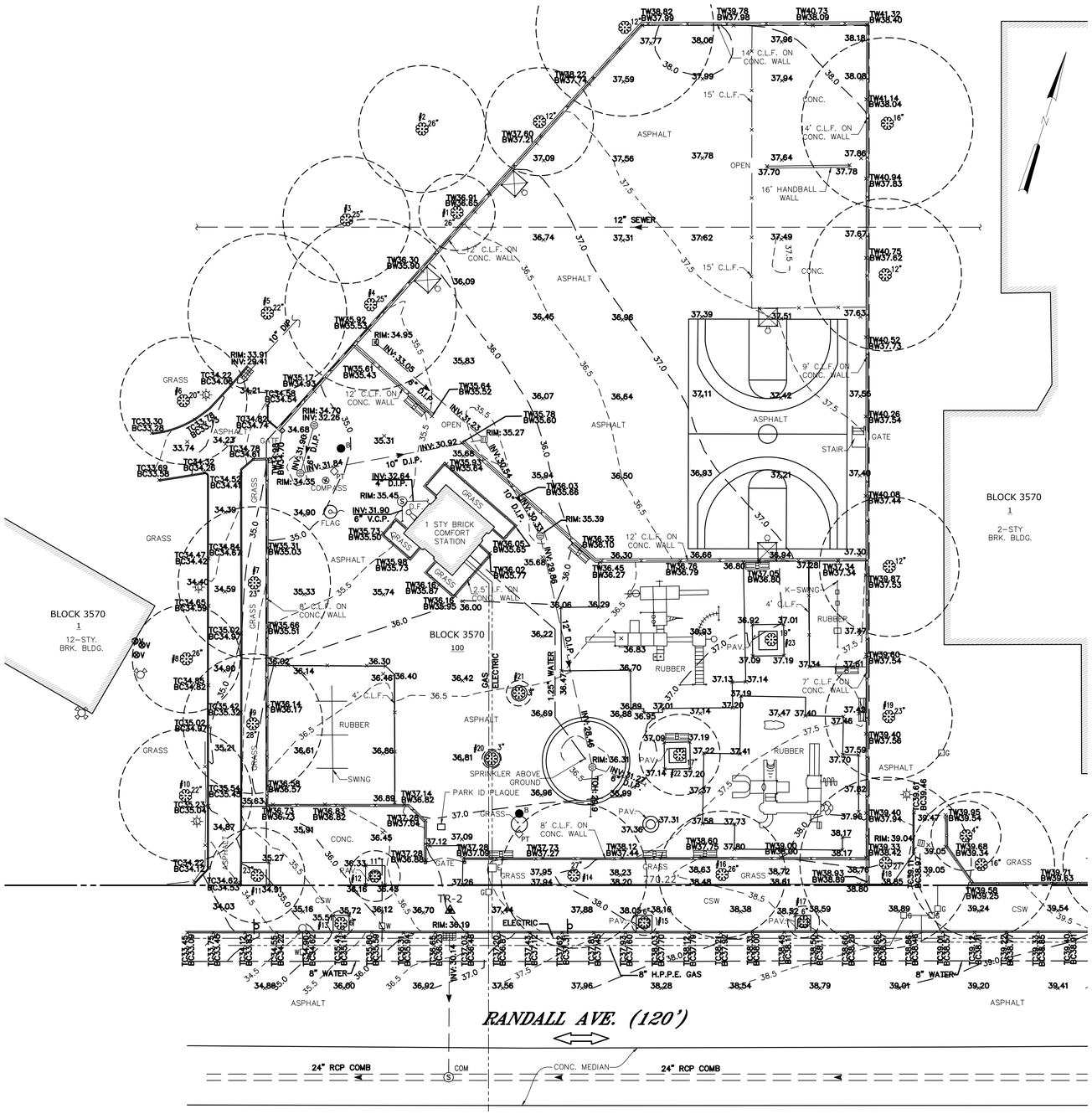
John McLaughlin — Digitally signed by John McLaughlin, Date: 2026.11.02 10:07:26 -05'00'

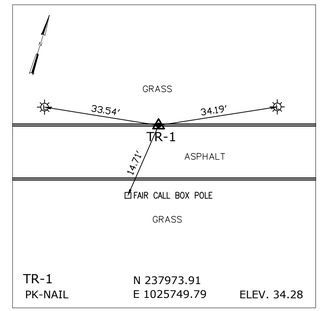
JOHN MCLAUGHLIN
MANAGING DIRECTOR
OFFICE OF ECOSYSTEM SERVICES, GREEN INFRASTRUCTURE AND RESEARCH
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS, NYCDEP

Lisa F. Garcia — Digitally signed by Lisa F. Garcia, Date: 2026.10.30 14:04:54 -04'00'

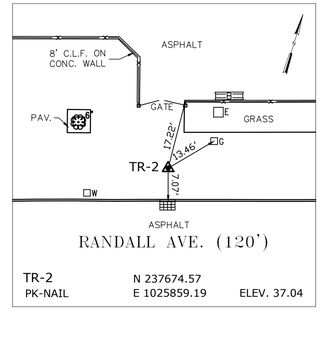
LISA F. GARCIA
COMMISSIONER
NYCDEP

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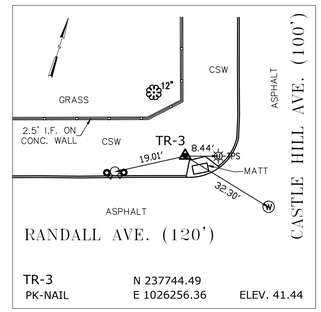



TR-1 PK-NAIL — N 237973.91 E 1025749.79 ELEV. 34.28




TR-2 PK-NAIL — N 237674.57 E 1025859.19 ELEV. 37.04




TR-3 PK-NAIL — N 237744.49 E 1026256.36 ELEV. 41.44

## TIES
N.T.S.

NOTES:

1. HORIZONTAL CONTROL REFERS TO THE NEW YORK STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 NAD83, ZONE N.Y.L.I. 3104.
2. ALL ELEVATIONS SHOWN HEREON REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. THIS MAP WAS PREPARED FROM DATA COLLECTED BY AN ACTUAL FIELD SURVEY CONDUCTED DURING JANUARY 2020 BY MUNOZ ENGINEERING & LAND SURVEY D.P.C.
4. NAVD88 IS 1.508 FEET BELOW BRONX DATUM
5. LOCATIONS, EXTENT AND SIZES OF UNDERGROUND UTILITIES AND SUBSTRUCTURES HAVE BEEN DETERMINED FROM RECORD INFORMATION, SUPPLEMENTED BY DATA OBTAINED IN THE FIELD. ACCURACY OF THIS UTILITY DATA IS NOT GUARANTEED, NOR IS THERE ANY GUARANTEE THAT ALL EXISTING UTILITIES AND SUBSTRUCTURES, WHETHER FUNCTIONAL OR ABANDONED, ARE SHOWN ON THIS MAP.

"UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF ARTICLE 134 SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW"

"Copies from the original of this survey map not marked with an original of the land surveyor's inked seal or his embossed seal shall not be considered a valid true copy."

0 10' 20' 40' 60'
1" = 20'

| NO. | DATE | ISSUED FOR | BY |
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NYC Environmental Protection

CITY OF NEW YORK
ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis

NYC Parks

CITY OF NEW YORK
PARKS & RECREATION
Forestry, Horticulture and Natural Resources

SEAL — STATE OF NEW YORK — MATTHEW ZIONKOWSKI — 050563-1 — LICENSED LAND SURVEYOR

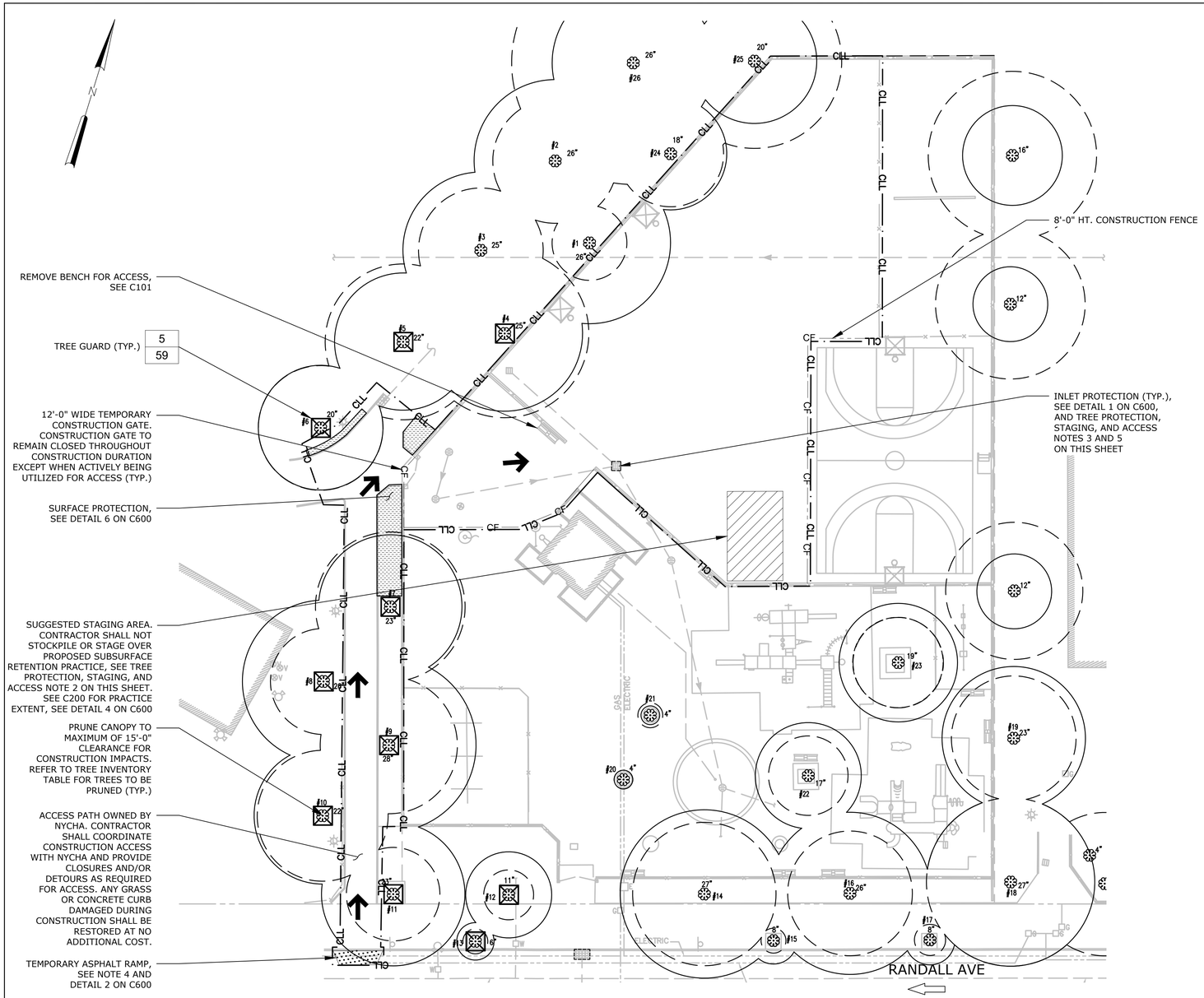
BLOCK 3570
LOT 100

PROJECT TITLE
GREEN INFRASTRUCTURE RETROFIT OF RANDALL PLAYGROUND
EAST RIVER CSO TRIBUTARY AREA
RANDALL AVENUE BETWEEN OLMSTEAD AVENUE AND CASTLE HILL AVENUE

DRAWING TITLE
TOPOGRAPHIC SURVEY PLAN

| DESIGNED BY | DRAWN BY | CHECKED BY |
|---|---|---|
| N/A | M.A. | J.J. |

| B-SCAN | SCALE | DRAWING NO. | CONTRACT NO. |
|---|---|---|---|
| | 1" = 20' | S001 | GX-P-RAND |
| | DATE FEBRUARY 2020 | | SHEET No. 2 OF 11 SHEETS |




| TREE # | SPECIES (common name) | DBH (inches) | CTLA CONDITION RATING | ISA CRITICAL ROOTZONE (CRZ) RADIUS (ft.) | TREE REMOVAL | STUMP REMOVAL | TRANSPLANT TREE | PREPARATORY PRUNING | | | | | | TREE PROTECTION | | | | | | | DECOMPACT | | | | PREPARATORY FERTILIZE | TREE GROWTH REGULATOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | ANSI A-300 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | Cleaning | Raising | Reducing | Restoring | Structural | Thinning | Limb Tying | Temporary Wooden Tree Guard | Temporary Wooden Tree Guard For Groves | Temporary Fence | Boundary | Protect Existing Tree Roots w/ Woodchips | Protect Ex. Tree Roots w/ Plywood or Mats | Air-Tilling 3 Ft Radius | Air-Tilling 5 Ft Radius | Radial Trench | Vertical Mulch | | |
| 1 | LONDON PLANETREE | 26 | 100% | 26.0 | | | | | X | | | | | | | | | | | | | | | | | |
| 2 | LONDON PLANETREE | 26 | 100% | 26.0 | | | | | | | | | | | | | | | | | | | | | | |
| 3 | LONDON PLANETREE | 25 | 100% | 25.0 | | | | | X | | | | | | | | | | | | | | | | | |
| 4 | LONDON PLANETREE | 25 | 100% | 25.0 | | | | | | | | | | X | | | | | | | | | | | | |
| 5 | LONDON PLANETREE | 22 | 100% | 22.0 | | | | | X | | | | | X | | | | | | | | | | | | |
| 6 | LONDON PLANETREE | 20 | 100% | 20.0 | | | | | X | | | | | X | | | | | | | | | | | | |
| 7 | LONDON PLANETREE | 23 | 100% | 23.0 | | | | | X | | | | | X | | | | | | | | | | | | |
| 8 | LONDON PLANETREE | 26 | 100% | 26.0 | | | | | X | | | | | X | | | | | | | | | | | | |
| 9 | LONDON PLANETREE | 28 | 100% | 28.0 | | | | | X | | | | | X | | | | | | | | | | | | |
| 10 | LONDON PLANETREE | 22 | 100% | 22.0 | | | | | X | | | | | X | | | | | | | | | | | | |
| 11 | LONDON PLANETREE | 23 | 100% | 23.0 | | | | | X | | | | | X | | | | | | | | | | | | |
| 12 | ZELKOVA | 11 | 100% | 13.8 | | | | | | | | | | X | | | | | | | | | | | | |
| 13 | ZELKOVA | 6 | 100% | 6.0 | | | | | | | | | | X | | | | | | | | | | | | |
| 14 | LONDON PLANETREE | 27 | 100% | 27.0 | | | | | | | | | | | | | | | | | | | | | | |
| 15 | ZELKOVA | 8 | 100% | 7.5 | | | | | | | | | | | | | | | | | | | | | | |
| 16 | LONDON PLANETREE | 26 | 100% | 26.0 | | | | | | | | | | | | | | | | | | | | | | |
| 17 | ZELKOVA | 8 | 75% | 8.0 | | | | | | | | | | | | | | | | | | | | | | |
| 18 | LONDON PLANETREE | 27 | 100% | 27.0 | | | | | | | | | | | | | | | | | | | | | | |
| 19 | LONDON PLANETREE | 23 | 100% | 23.0 | | | | | | | | | | | | | | | | | | | | | | |
| 20 | ELM, AMERICAN | 4 | 75% | 3.0 | | | | | | | | | | | | | | | | | | | | | | |
| 21 | ELM, AMERICAN | 4 | 75% | 3.0 | | | | | | | | | | | | | | | | | | | | | | |
| 22 | LONDON PLANETREE | 17 | 100% | 17.0 | | | | | | | | | | | | | | | | | | | | | | |
| 23 | LONDON PLANETREE | 19 | 100% | 19.0 | | | | | | | | | | | | | | | | | | | | | | |
| 24 | LONDON PLANETREE | 18 | 100% | 18.0 | | | | | | | | | | | | | | | | | | | | | | |
| 25 | LONDON PLANETREE | 20 | 100% | 20.0 | | | | | | | | | | | | | | | | | | | | | | |
| 26 | LONDON PLANETREE | 26 | 94% | 26.0 | | | | | | | | | | | | | | | | | | | | | | |

## TREE PROTECTION, STAGING, AND ACCESS NOTES

1. THE TREE PROTECTION ZONE (T.P.Z.) SHALL CONSIST OF THE CRITICAL ROOT ZONE AND/OR THE CANOPY DRIPLINE; WHICHEVER EXTENT IS GREATER.
2. NO HEAVY EQUIPMENT, MACHINERY, OR STOCKPILING OF MATERIALS IS PERMITTED WITHIN THE T.P.Z. OF ANY EXISTING TREES THROUGHOUT THE COURSE OF THE CONTRACT.
3. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL REMAIN UNTIL ALL EXCAVATED AREAS ARE STABILIZED AND FINAL PAVEMENT HAS BEEN PLACED.
4. IF EXISTING CURB AT THE TEMPORARY ASPHALT RAMP IS DAMAGED, EXISTING ROADWAY PAVEMENT ENVELOPE (TOP COURSE AND BASE COURSE) SHALL BE REMOVED, SAWCUT, AND REPLACED A MINIMUM OF 1'-6" WIDTH WITH NEW PAVEMENT TO MATCH EXISTING PAVEMENT ENVELOPE.
5. INSTALL INLET PROTECTION ON ALL DRAINAGE STRUCTURES WITHIN THE CONTRACT LIMIT LINE AND WHERE SPECIFIED IN THE PLAN.
6. SEE GENERAL NOTES FOR TREE PROTECTION NOTES.
7. TREE PROTECTION PLAN BASED ON UPDATED TREE INVENTORY PERFORMED BY SITEWORKS IN JULY 2025.
8. TREE PROTECTION SHALL BE CONFIRMED BY NYC PARKS DURING PRE-CONSTRUCTION WALKTHROUGH. CONTRACTOR SHALL NOT INSTALL TREE PROTECTION MEASURES UNTIL APPROVED BY NYC PARKS.

## LEGEND

TREE GUARD
STAGING AREA
TREE DRIPLINE
TREE CRITICAL ROOT ZONE
INLET PROTECTION
CF — CF — 8'-0" HEIGHT CONSTRUCTION FENCE
CONSTRUCTION ACCESS/ENTRANCE
SURFACE PROTECTION

20 10 0 20'
1"=20'

## MAINTENANCE AND PROTECTION OF TRAFFIC NOTES

1. SEE COMPLETE LIST OF SPECIAL STIPULATIONS AND GENERAL NOTES IN THE OCMC FILE NO. CEC-24-336.
2. WORK HOURS ARE 7A.M.-6P.M., MONDAY THROUGH FRIDAY. THE CONTRACTOR MUST NOTIFY LEARNING CENTER RICHARD GREEN A MINIMUM OF FOUR (4) WEEKS PRIOR TO MOBILIZING.
3. THE CONTRACTOR MAY OCCUPY 20 L.F. OF NORTH PARKING 8 FEET ADJACENT TO NORTH CURB TO STORE MATERIALS. THE STORAGE AREA MAY STAY AFTER WORK HOURS.
4. THE CONTRACTOR MUST MAINTAIN AN 8'-0" WIDE WALKWAY ON NORTH SIDEWALK AT ALL TIMES.
5. THERE SHALL BE NO IMPACT AT ANY TIME ON WESTBOUND RANDALL AVENUE MOVING LANE OR EASTBOUND RANDALL AVENUE MOVING AND PARKING LANES.
6. THE CONTRACTOR MUST MAINTAIN ACCESS TO FIRE HYDRANT AT ALL TIMES.
7. A CERTIFIED FLAG PERSON MUST BE PROVIDED TO STOP PEDESTRIAN AND/OR VEHICULAR TRAFFIC WHEN CONSTRUCTION VEHICLES ARE CROSSING THE SIDEWALK.
8. NO CONNEX BOX IS ALLOWED ON CITY SIDEWALKS AT ANY TIME.

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STATE OF NEW YORK · MICHAEL DAVID BRAUN · LICENSED PROFESSIONAL ENGINEER · 101288
HDR

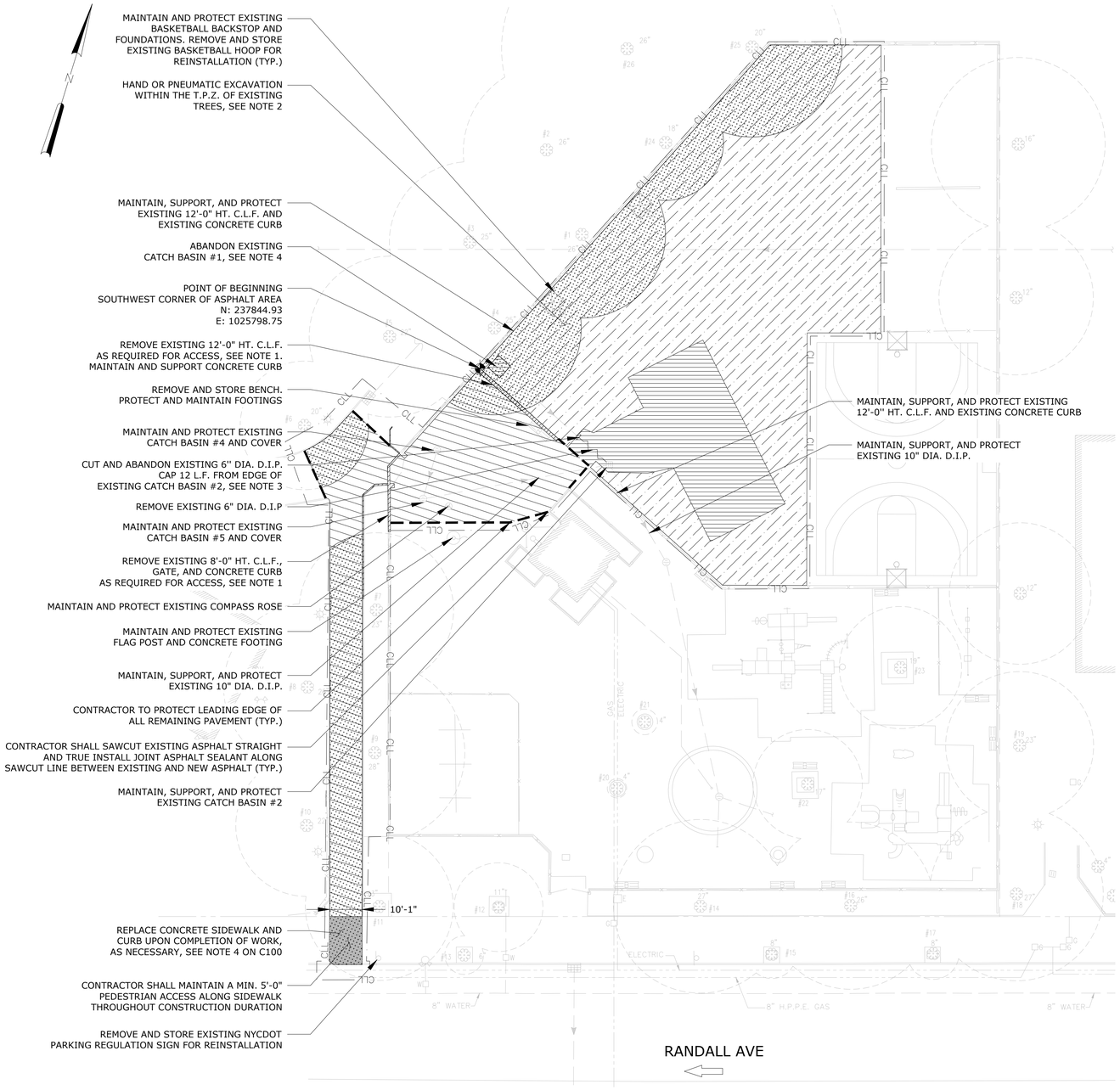
BLOCK 3570
LOT 100

PROJECT TITLE
GREEN INFRASTRUCTURE RETROFIT OF RANDALL PLAYGROUND
EAST RIVER CSO TRIBUTARY AREA
RANDALL AVENUE BETWEEN OLMSTEAD AVENUE AND CASTLE HILL AVENUE

DRAWING TITLE
TREE PROTECTION, STAGING, AND ACCESS PLAN

| DESIGNED BY | DRAWN BY | CHECKED BY |
|---|---|---|
| J. GUERRERO | J. GUERRERO | M. BRODERICK |

| B-SCAN | SCALE | DRAWING NO. | CONTRACT NO. |
|---|---|---|---|
| | 1" = 20' | C100 | GX-P-RAND |
| | DATE JUNE 2026 | | SHEET No. 3 OF 9 SHEETS |

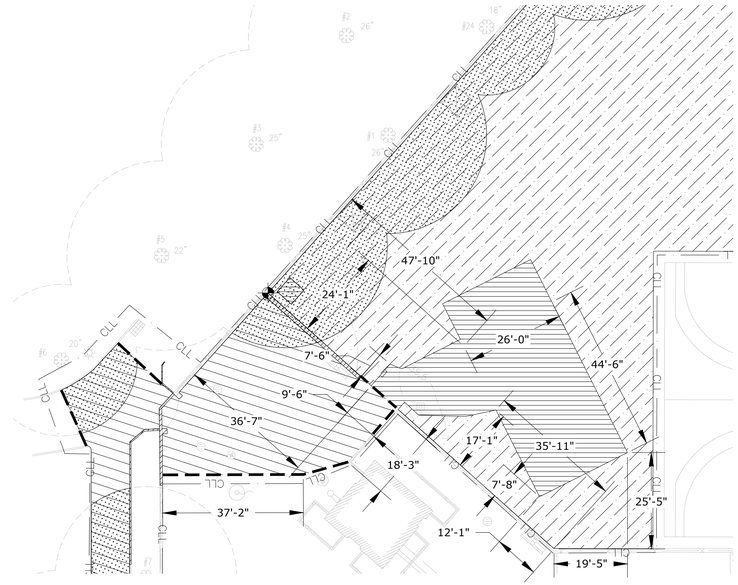



## NOTES

1. REMOVE, STORE, AND MAINTAIN ALL CHAIN LINK FENCE COMPONENTS. REMOVE THE MINIMUM EXTENT OF FENCING AS NECESSARY TO ALLOW ACCESS. CONTRACTOR SHALL STORE ALL MATERIAL OFF-SITE.
2. ALL EXCAVATION WITHIN THE T.P.Z. SHALL BE PERFORMED BY HAND OR PNEUMATICALLY, WITH MINIMUM SOIL DISTURBANCE, AND UNDER THE SUPERVISION OF THE DIRECTOR OF LANDSCAPE CONSTRUCTION OR THEIR AUTHORIZED REPRESENTATIVE.
3. EXISTING 6" DIA. D.I.P. SHALL BE PLUGGED OR CAPPED WITH CONCRETE FOR A MINIMUM OF 12" TO FACILITATE THE INSTALLATION OF NYC PARKS TYPE C-1 CATCH BASIN. REFER TO SPECIFICATION 02 41 10 - DEMOLITION AND REMOVALS, SECTION 3.02 UTILITY SERVICES.
4. CONTRACTOR SHALL ABANDON EXISTING CATCH BASIN #1 PER NYC DEP BUREAU OF WATER AND SEWER OPERATIONS (BWSO) STANDARD SEWER AND WATER MAIN SPECIFICATIONS SECTIONS 10.13 REMOVING AND ABANDONING SEWERS, WATER MAINS, ETC. AND 55.11 ABANDONING BASINS AND INLETS. PAYMENT SHALL BE MADE UNDER SPECIFICATION SECTION 31 23 16 EXCAVATION, ITEM EXCAVATION OF MAN-MADE MATERIAL. IF PIPING MUST BE REMOVED, PAYMENT SHALL BE MADE UNDER SPECIFICATION SECTION 02 41 10 DEMOLITION AND REMOVALS, ITEM REMOVE ABANDONED UTILITY PIPING.

## LEGEND

- EXCAVATION - FULL DEPTH SUBSURFACE RETENTION PRACTICE/EXISTING CATCH BASIN #1
- EXCAVATION - FULL DEPTH ASPHALT REMOVAL
- EXCAVATION - CURB AND/OR FENCE REMOVAL
- MILL EXISTING PAVEMENT - 1.5" ASPHALT TOP COURSE REMOVAL
- HAND EXCAVATION (VERIFY LIMITS IN FIELD BASED ON CONFIRMED T.P.Z.)
- SIDEWALK AND CURB REMOVAL
- SAWCUT PAVEMENT AND CONCRETE
- POINT OF BEGINNING
- PIPE REMOVAL
- CAP EXISTING PIPE, SEE NOTE 3




ABOVE DIMENSIONS SHOWN FROM EDGE TO INSIDE FACE OF EXISTING PERIMETER CURB

## REMOVALS LOCATION PLAN

1"=20' (20 10 0 20')

NYC Environmental Protection

# CITY OF NEW YORK ENVIRONMENTAL PROTECTION

Bureau of Environmental Planning and Analysis

NYC Parks

# CITY OF NEW YORK PARKS & RECREATION

Forestry, Horticulture and Natural Resources

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SEAL: STATE OF NEW YORK · MICHAEL DAVID BRAUN · 101288 · LICENSED PROFESSIONAL ENGINEER

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BLOCK 3570

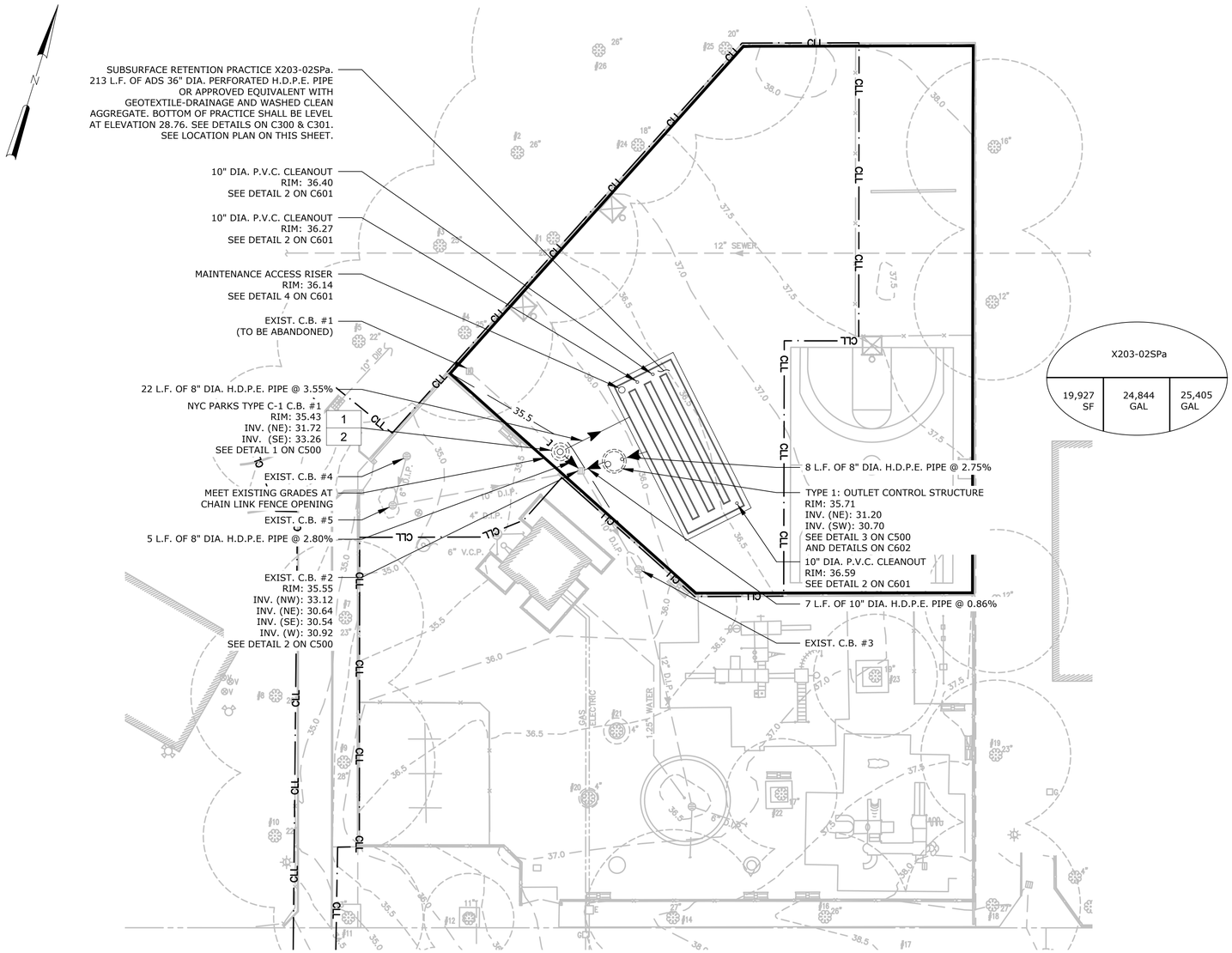
LOT 100

PROJECT TITLE
GREEN INFRASTRUCTURE RETROFIT OF RANDALL PLAYGROUND
EAST RIVER CSO TRIBUTARY AREA
RANDALL AVENUE BETWEEN OLMSTEAD AVENUE AND CASTLE HILL AVENUE

DRAWING TITLE
REMOVAL / DEMOLITION PLAN

| DESIGNED BY | DRAWN BY | CHECKED BY |
|---|---|---|
| J. FERNER | G. GIDICSIN | M. BRODERICK |

| B-SCAN | SCALE | DRAWING NO. | CONTRACT NO. |
|---|---|---|---|
| | 1" = 20' | C101 | GX-P-RAND |
| | DATE JUNE 2026 | | SHEET No. 4 OF 9 SHEETS |



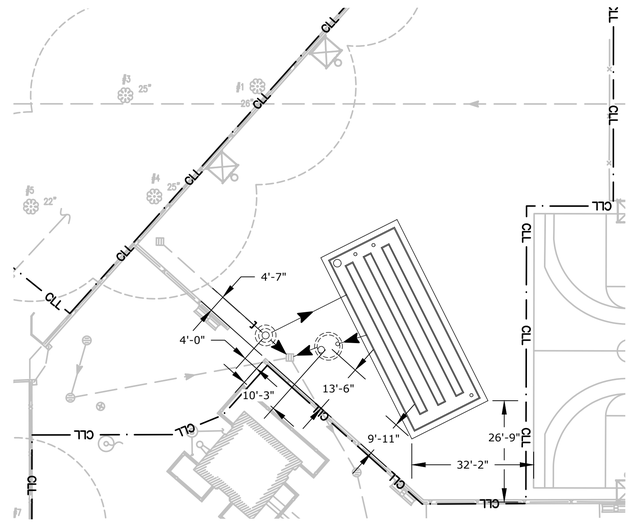

## NOTES

1. SEE C300 FOR PROFILE OF DRAINAGE SYSTEM.
2. CONTRACTOR TO MATCH FINISHED GRADE OVER ENTIRE PROJECT AREA EXCEPT NEAR EXISTING CATCH BASINS 1 AND 2, AND NYC PARKS TYPE C-1 C.B. #1. CONTRACTOR SHALL ADJUST GRADES SUCH THAT RUNOFF DRAINS TO NYC PARKS TYPE C-1 C.B. #1. CONTRACTOR SHALL MAINTAIN EXISTING GRADES ALONG THE PERIMETER OF SURFACE RESTORATION.
3. IF PONDING AREAS ARE ENCOUNTERED, CONTRACTOR TO ADJUST GRADING MINIMALLY TO PROVIDE POSITIVE DRAINAGE WHILE MAINTAINING EXISTING ELEVATIONS OF ALL FIXED STRUCTURES AND ELEVATIONS AT PERIMETER FENCELINE.

## LEGEND

- GREEN INFRASTRUCTURE PRACTICE DRAINAGE AREA
- OUTLET CONTROL STRUCTURE
- NYC PARKS TYPE C-1 CATCH BASIN
- CLEANOUT
- MAINTENANCE ACCESS RISER
- DRAINAGE PIPE
- CAP EXISTING PIPE

| GREEN INFRASTRUCTURE TYPE | | |
|---|---|---|
| TRIBUTARY AREA | CAPACITY OF 2.0" EVENT CAPTURE | TOTAL CAPACITY OF GI |




ABOVE DIMENSIONS SHOWN FROM EDGE OF PRACTICE TO INSIDE FACE OF EXISTING PERIMETER CURB

## GREEN INFRASTRUCTURE LOCATION PLAN

| GI ID | GI Asset Data | | | | | Stormwater Storage Calculations | | | | Total Stormwater Managed (Infiltration + Storage) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Stone Subbase | | | | | | | |
| | Managed Impervious Tributary Area | Volume 2 in. Rainfall on Impervious Area | GI Footprint Surface Area | GI Perimeter | Permeability Coefficient | Subsurface 36 in. Dia. Perforated Stormwater Pipes (7.07 CF/LF) | Stone Depth | Stone Voids | Stormwater Captured by Stone Layer* | Estimated Total Infiltration Volume | Estimated Total Storage Volume | % Impervious Surface Managed | Calculated Volume of Rainfall Captured | Calculated Volume of Rainfall Captured |
| | sf | cf | sf | ft | in/hr | cf | ft | % | cf | cf | cf | % | cf | gal |
| X203-02SPa | 19927 | 3321.2 | 1204 | 152 | 0.50 | 2049.1 | 4.50 | 40 | 1347.1 | 629.3 | 3396.2 | 102% | 4025.4 | 30110.3 |

1"=20' (20 10 0 20')

| NO. | DATE | ISSUED FOR | BY |
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Forestry, Horticulture and Natural Resources

SEAL: STATE OF NEW YORK · MICHAEL DAVID BRAUN · 101288 · LICENSED PROFESSIONAL ENGINEER · FDR

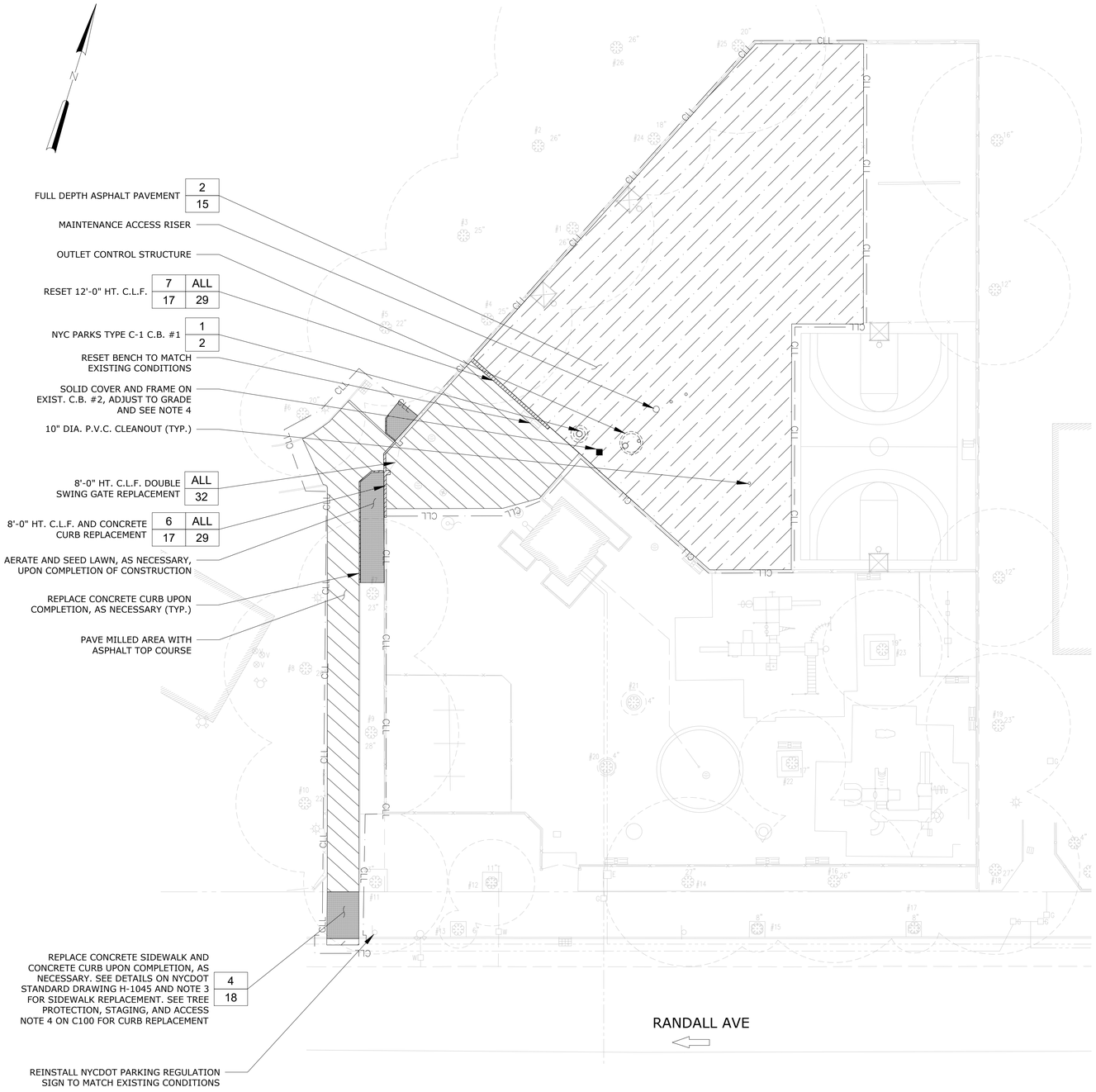
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DRAWING TITLE
PROPOSED GREEN INFRASTRUCTURE LAYOUT PLAN

| DESIGNED BY | DRAWN BY | CHECKED BY |
|---|---|---|
| J. FERNER | G. GIDICSIN | M. BRODERICK |

| B-SCAN | SCALE | DRAWING NO. | CONTRACT NO. |
|---|---|---|---|
| | 1" = 20' | C200 | GX-P-RAND |
| | DATE: JUNE 2026 | | SHEET No. 5 OF 9 SHEETS |




## NOTES

1. SEE C200 FOR ELEVATIONS OF DRAINAGE STRUCTURES.
2. CONTRACTOR SHALL STOCKPILE ALL CHAIN LINK FENCE COMPONENTS REMOVED TO FACILITATE CONSTRUCTION. LOST OR DAMAGED COMPONENTS SHALL BE REPLACED TO NYC PARKS STANDARDS AT NO ADDITIONAL COST TO THE AGENCY.
3. THE SIDEWALK TYPE TO BE DETERMINED AFTER EXCAVATION TO VERIFY IT IS REINFORCED (TYPE III) OR UNREINFORCED (TYPE I).
4. EXISTING ADA COMPLIANT CATCH BASIN GRATE TO BE RETROFITTED TO SOLID COVER WITH SLIP RESISTANT STEEL PLATE.

## LEGEND

- FULL DEPTH ASPHALT PAVEMENT
- ASPHALT TOP COURSE
- CURB AND/OR FENCE REPLACEMENT
- SIDEWALK, GRASS AREA, AND CURB REPLACEMENT
- OUTLET CONTROL STRUCTURE
- NYC PARKS TYPE C-1 CATCH BASIN
- CLEANOUT
- MAINTENANCE ACCESS RISER
- SOLID COVER AND FRAME

20 10 0 20'
1"=20'

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PARKS & RECREATION
Forestry, Horticulture and Natural Resources

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STATE OF NEW YORK · MICHAEL DAVID BRAUN · 101288 · LICENSED PROFESSIONAL ENGINEER

HDR

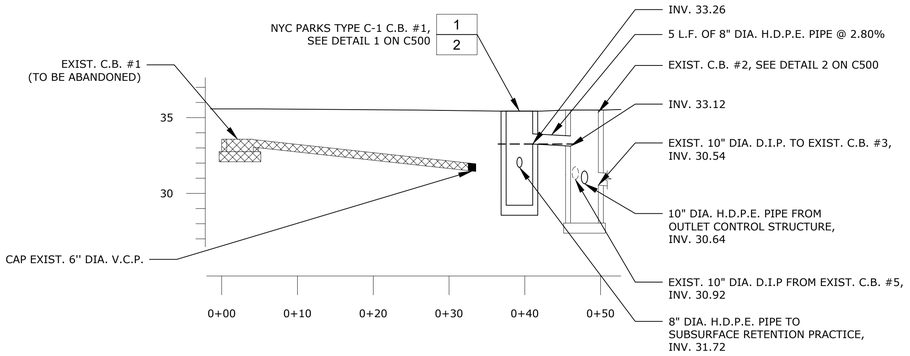
BLOCK 3570
LOT 100

PROJECT TITLE
GREEN INFRASTRUCTURE RETROFIT OF RANDALL PLAYGROUND
EAST RIVER CSO TRIBUTARY AREA
RANDALL AVENUE BETWEEN OLMSTEAD AVENUE AND CASTLE HILL AVENUE

DRAWING TITLE
MATERIALS PLAN

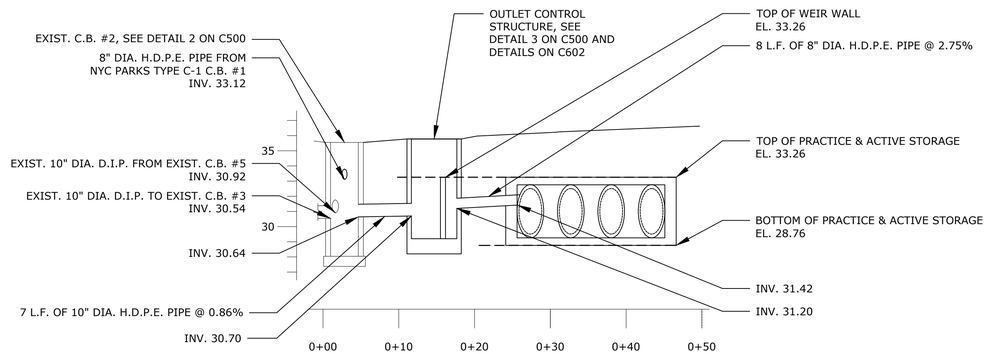
| DESIGNED BY | DRAWN BY | CHECKED BY |
|---|---|---|
| J. FERNER | G. GIDICSIN | M. BRODERICK |

| B-SCAN | SCALE | DRAWING NO. | CONTRACT NO. |
|---|---|---|---|
| | 1" = 20' | C201 | GX-P-RAND |
| | DATE JUNE 2026 | | SHEET No. 6 OF 9 SHEETS |



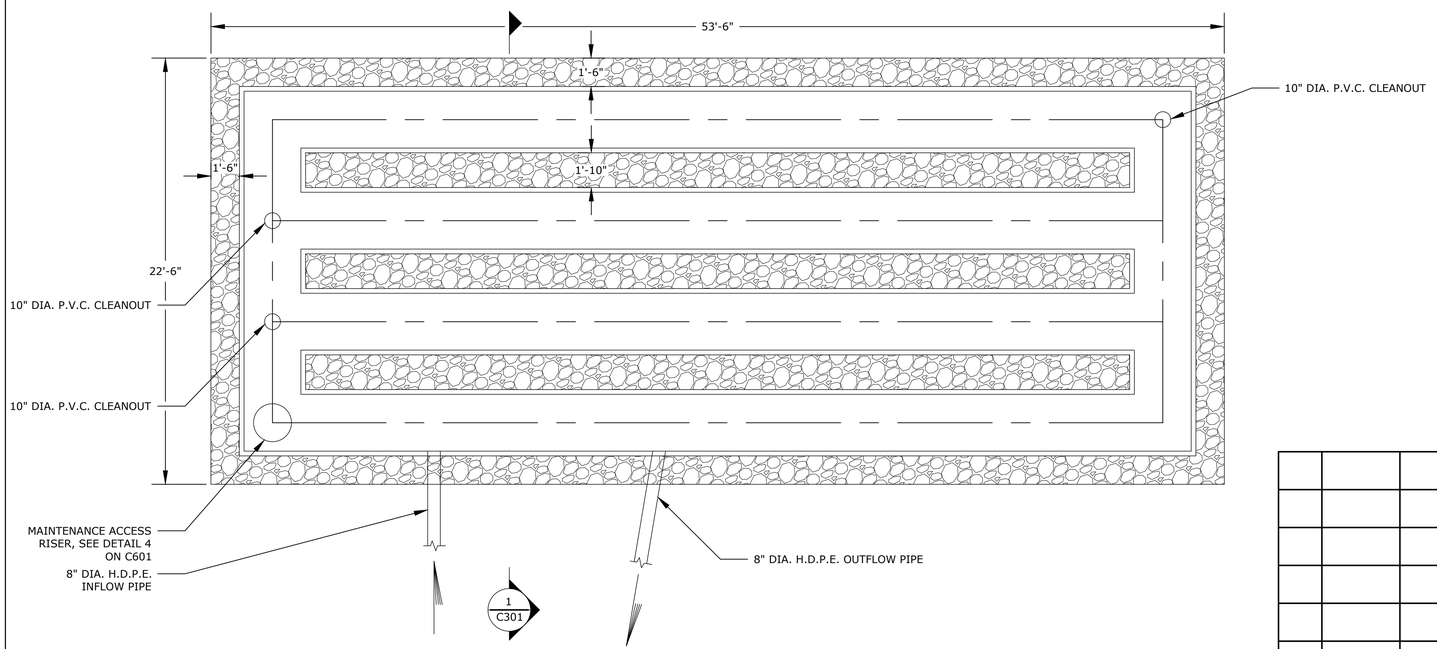

1 DRAINAGE PROFILE - EXIST. CATCH BASIN 1 TO EXIST. CATCH BASIN 2

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 10'



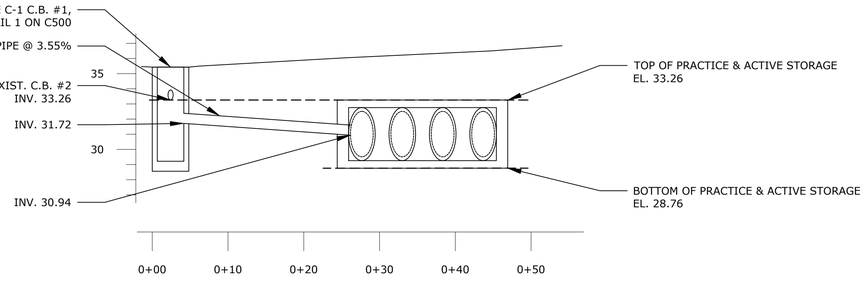

3 DRAINAGE PROFILE - SUBSURFACE RETENTION PRACTICE TO EXIST. CATCH BASIN 2

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 10'




4 SUBSURFACE RETENTION PRACTICE - LAYOUT

SCALE 1" = 4'




2 DRAINAGE PROFILE - NYC PARKS TYPE C-1 CATCH BASIN 1 TO SUBSURFACE RETENTION PRACTICE

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 10'

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HDR

BLOCK 3570
LOT 100

PROJECT TITLE
GREEN INFRASTRUCTURE RETROFIT OF RANDALL PLAYGROUND
EAST RIVER CSO TRIBUTARY AREA
RANDALL AVENUE BETWEEN OLMSTEAD AVENUE AND CASTLE HILL AVENUE

DRAWING TITLE
SECTIONS AND PROFILES - 1

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|---|---|---|
| J. FERNER | G. GIDICSIN | M. BRODERICK |

B-SCAN

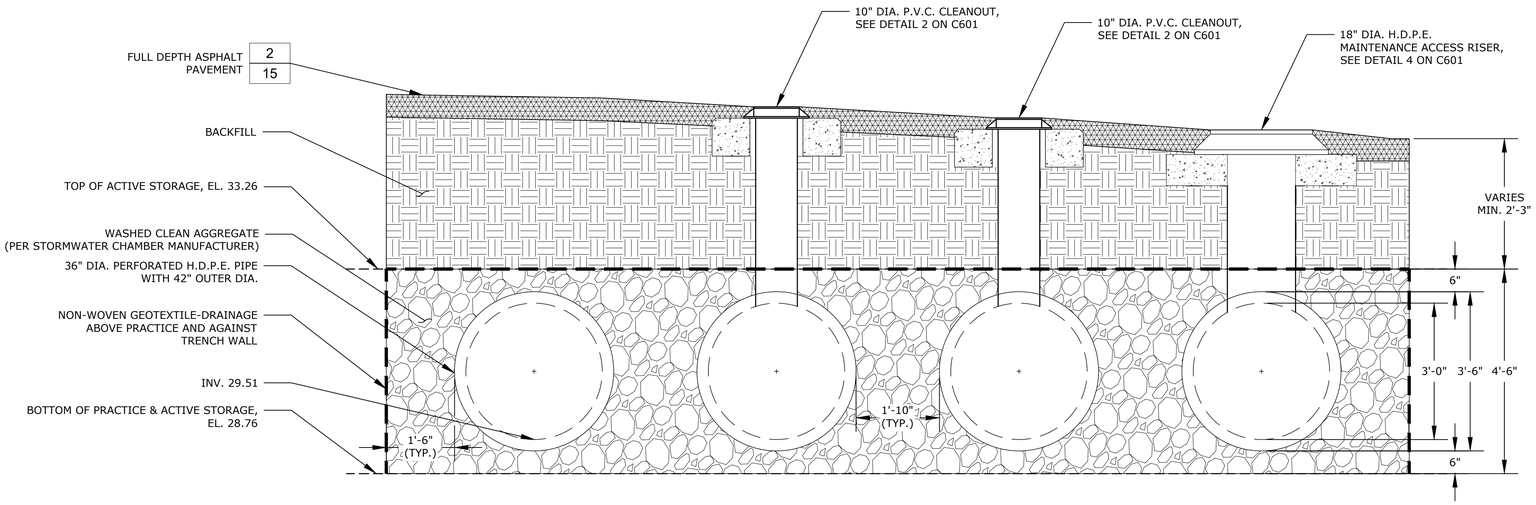
SCALE N.T.S.

DATE JUNE 2026

DRAWING NO. C300

CONTRACT NO. GX-P-RAND

SHEET No. 7 OF 9 SHEETS




1 SUBSURFACE RETENTION PRACTICE CROSS-SECTION INSTALLATION
NOT TO SCALE

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101288
LICENSED PROFESSIONAL ENGINEER

BLOCK 3570
LOT 100

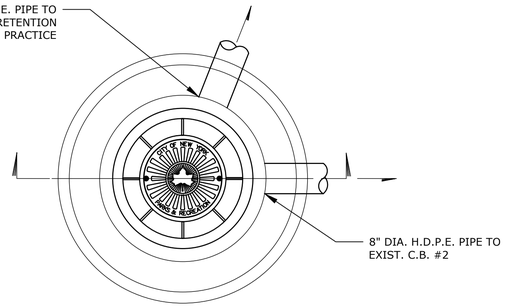
PROJECT TITLE
GREEN INFRASTRUCTURE RETROFIT OF RANDALL PLAYGROUND
EAST RIVER CSO TRIBUTARY AREA
RANDALL AVENUE BETWEEN OLMSTEAD AVENUE AND CASTLE HILL AVENUE

DRAWING TITLE
SECTIONS AND PROFILES - 2

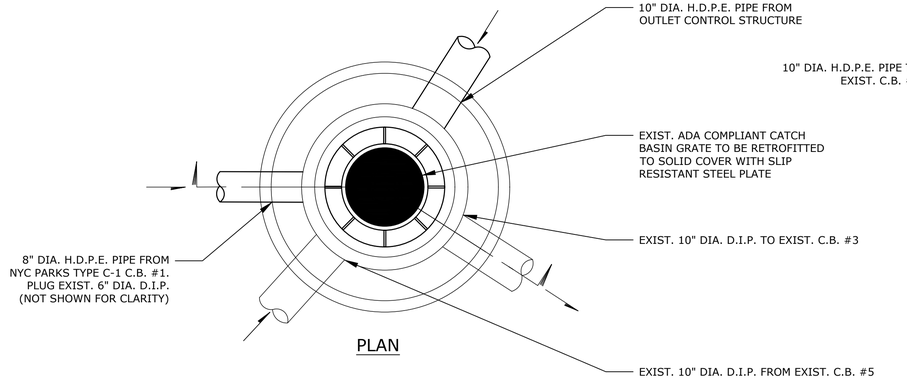
| DESIGNED BY | DRAWN BY | CHECKED BY |
|---|---|---|
| J. FERNER | G. GIDICSIN | M. BRODERICK |

B-SCAN

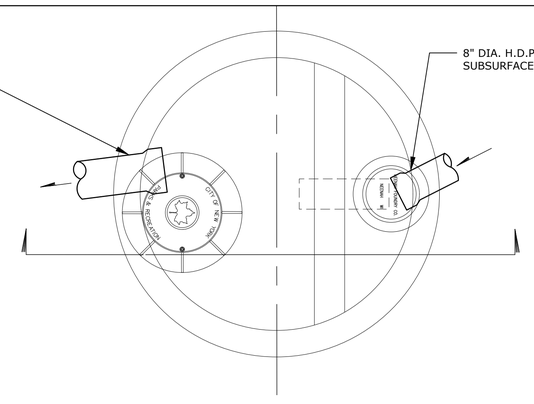
SCALE: N.T.S.
DATE: JUNE 2026
DRAWING NO.: C301
CONTRACT NO.: GX-P-RAND
SHEET No. 8 OF 9 SHEETS



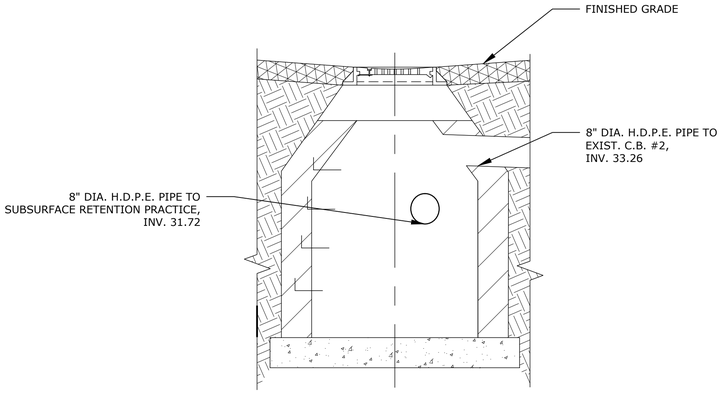

PLAN




PLAN



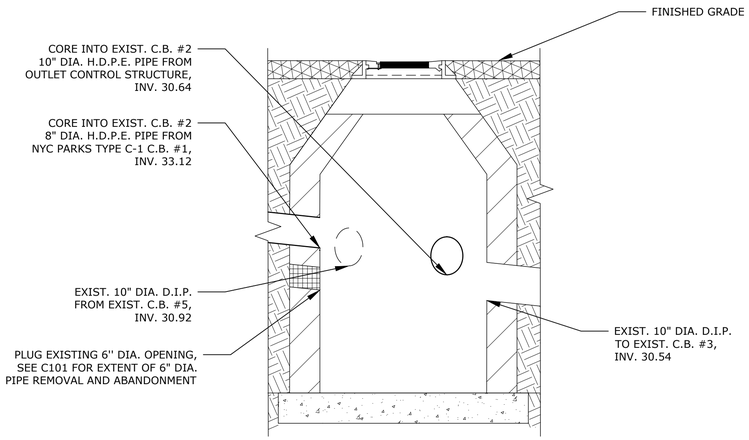

PLAN




SECTION

NOTES:
1. SEE DETAIL 1 ON NYC PARKS STANDARD DETAIL SHEET 2 FOR DRAINAGE STRUCTURE DIMENSIONS.

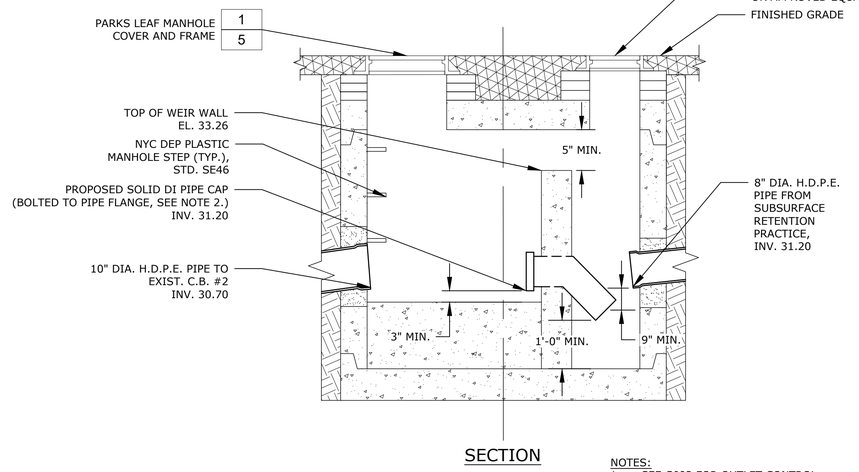
1 NYC PARKS TYPE C-1 CATCH BASIN #1
NOT TO SCALE




SECTION

NOTES:
1. NYC PARKS STANDARD DETAIL SHEET 2 PROVIDED FOR REFERENCE ONLY.

2 EXISTING CATCH BASIN #2
NOT TO SCALE




SECTION

NOTES:
1. SEE C602 FOR OUTLET CONTROL STRUCTURE REINFORCEMENT DETAILS.
2. BOLTS SHALL BE INSTALLED SO THAT THE BOLT HEAD IS ON THE WEIR WALL SIDE.

3 TYPE 1: OUTLET CONTROL STRUCTURE
NOT TO SCALE

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FDR

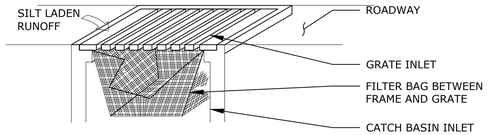
BLOCK 3570
LOT 100

PROJECT TITLE
GREEN INFRASTRUCTURE RETROFIT OF RANDALL PLAYGROUND
EAST RIVER CSO TRIBUTARY AREA
RANDALL AVENUE BETWEEN OLMSTEAD AVENUE AND CASTLE HILL AVENUE

DRAWING TITLE
DETAILS

| DESIGNED BY | DRAWN BY | CHECKED BY |
|---|---|---|
| J. FERNER | G. GIDICSIN | M. BRODERICK |

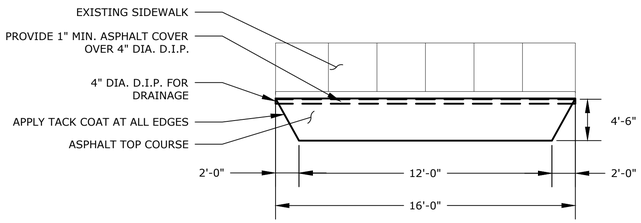
| B-SCAN | SCALE | DRAWING NO. | CONTRACT NO. |
|---|---|---|---|
| | N.T.S. | C500 | GX-P-RAND |
| | DATE JUNE 2026 | | SHEET No. 9 OF 9 SHEETS |




NOTE:
1. IN PAVED AREAS, USE FILTER BAG FOR INLET PROTECTION (NO MESH, BOX STONE REQUIRED).
2. FILTER BAG SHALL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE GEOTEXTILE AND SEWN BY A DOUBLE NEEDLE MACHINE USING A HIGH STRENGTH NYLON THREAD.
3. BAG SHALL BE SILTSACK® BY ACF ENVIRONMENTAL, OR EQUAL, AS APPROVED BY THE ENGINEER.

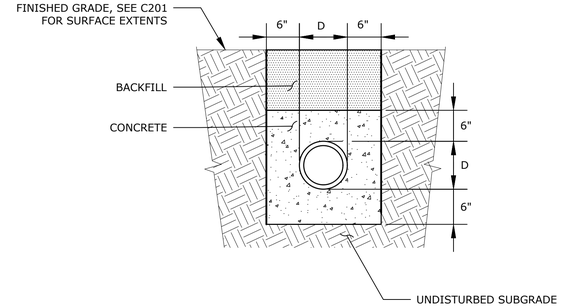
MAINTENANCE REQUIREMENTS:
1. INSPECT GRATE AND BAG ON A WEEKLY BASIS AND AFTER EACH RAINFALL EVENT PRODUCING ½ INCH OR MORE OR RAIN. ANY DEBRIS OR SEDIMENT VISIBLE SHALL BE REMOVED IMMEDIATELY.
2. DAMAGE TO THE BAG SHALL BE REPAIRED IMMEDIATELY.
3. WHEN THE RESTRAINT CORD IS NO LONGER VISIBLE, THE BAG IS FULL AND SHOULD BE EMPTIED.
4. USE 1" DIAMETER REBAR TO SLIDE THROUGH THE LIFTING LOOPS/POCKETS ON EACH SIDE OF THE BAG TO FACILITATE LIFTING.
5. REMOVE SEDIMENT FROM BAG AND DISPOSE OF OFF-SITE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS.

## 1 INLET PROTECTION
NOT TO SCALE




TEMPORARY ASPHALT RAMP NOTE:
1. UPON COMPLETION OF CONSTRUCTION, DAMAGED SIDEWALK FLAGS, CURBS AND/OR ROADWAY SHALL BE REPLACED IN KIND.

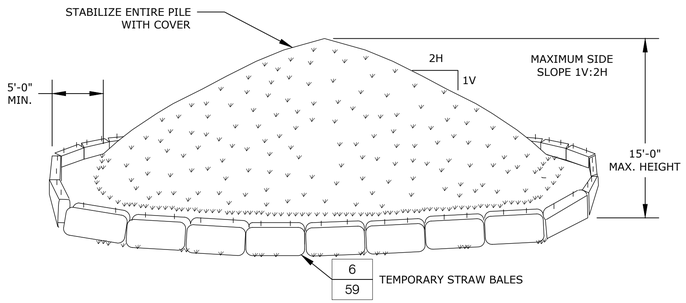
## 2 TEMPORARY ASPHALT RAMP
NOT TO SCALE




D = OUTSIDE DIAMETER OF PIPE

NOTES:
1. APPLIES TO CATCH BASIN CHUTE CONNECTIONS WITH LESS THAN 4FT COVER FROM FINAL GRADE TO OUTER TOP OF THE PIPE.

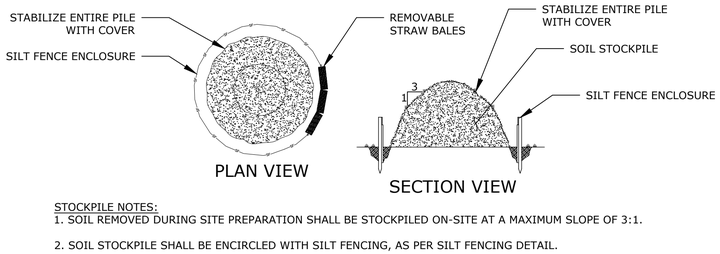
## 3 CONCRETE ENCASEMENT DETAIL
NOT TO SCALE




STOCKPILE NOTES:
1. THE GROUND SURFACE WHERE SOIL WILL BE STOCKPILED SHALL BE COVERED WITH A MINIMUM OF .25MM OR 2 LAYERS OF .15 MM H.D.P.E. BARRIER, OR AN EQUIVALENT MATERIAL. IN ADDITION, PRIOR TO THE END OF EACH WORK DAY, STOCKPILES SHALL BE COMPLETELY COVERED WITH THE H.D.P.E. BARRIER. STOCKPILE COVERS SHALL BE WEIGHTED OR SECURED BY APPROPRIATE MEANS. ALL SEAMS SHALL BE OVERLAPPED AND SEALED TO PREVENT THE LEACHING OF CONTAMINANTS. DAMAGED COVERS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR WITHIN 24 HOURS AFTER NOTIFICATION.

2. SEE TREE PROTECTION, STAGING, AND ACCESS PLAN FOR SUGGESTED STAGING AREA.

## 4 STOCKPILE ON PAVEMENT
NOT TO SCALE



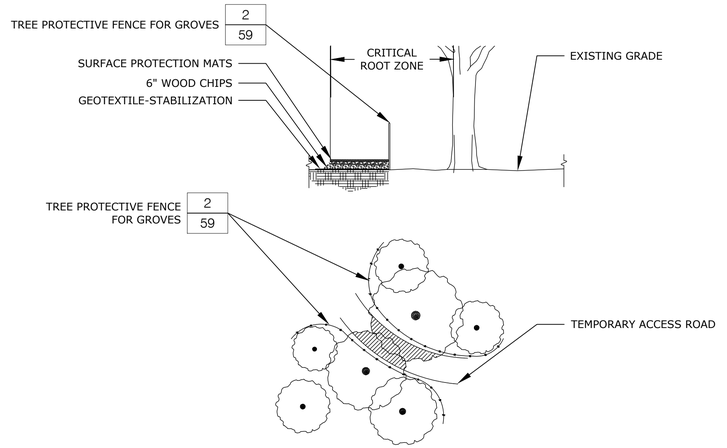

STOCKPILE NOTES:
1. SOIL REMOVED DURING SITE PREPARATION SHALL BE STOCKPILED ON-SITE AT A MAXIMUM SLOPE OF 3:1.

2. SOIL STOCKPILE SHALL BE ENCIRCLED WITH SILT FENCING, AS PER SILT FENCING DETAIL.

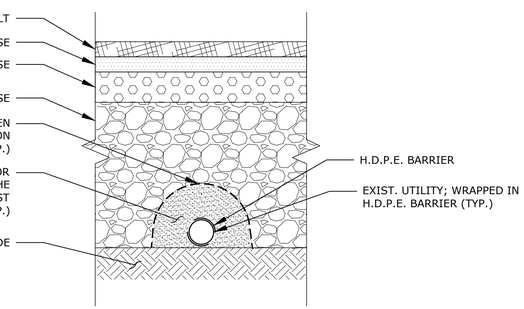
3. THE GROUND SURFACE WHERE SOIL WILL BE STOCKPILE SHALL BE COVERED WITH A MINIMUM OF .25MM OR 2 LAYERS OF .15 MM H.D.P.E. BARRIER, OR AN EQUIVALENT MATERIAL. IN ADDITION, PRIOR TO THE END OF EACH WORK DAY, STOCKPILES SHALL BE COMPLETELY COVERED WITH THE H.D.P.E. BARRIER. STOCKPILE COVERS SHALL BE WEIGHTED OR SECURED BY APPROPRIATE MEANS. ALL SEAM SHALL BE OVERLAPPED AND SEALED TO PREVENT THE LEACHING OF CONTAMINANTS. DAMAGED COVERS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR WITHIN 24 HOURS AFTER NOTIFICATION.

4. SEE TREE PROTECTION, STAGING, AND ACCESS PLAN FOR SUGGESTED STAGING AREA.

## 5 STOCKPILE ON GRASS
NOT TO SCALE




## 6 SURFACE PROTECTION
NOT TO SCALE




## 7 UTILITY PROTECTION
NOT TO SCALE

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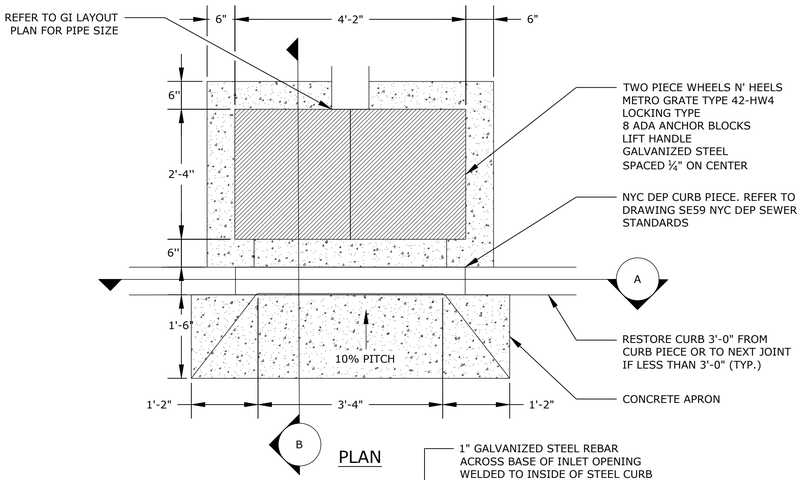
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PROJECT TITLE
GREEN INFRASTRUCTURE RETROFIT OF MULTIPLE SITES

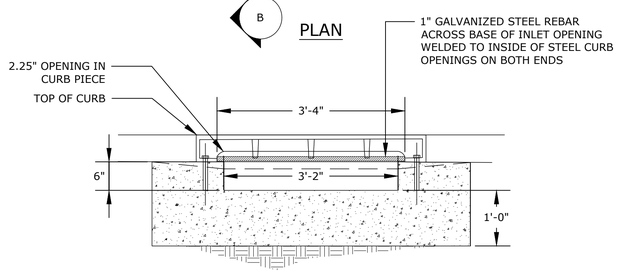
DRAWING TITLE
SITE DETAILS - 1

| DESIGNED BY | DRAWN BY | CHECKED BY |
|---|---|---|
| S. RANA | S. RANA | M. BRODERICK |

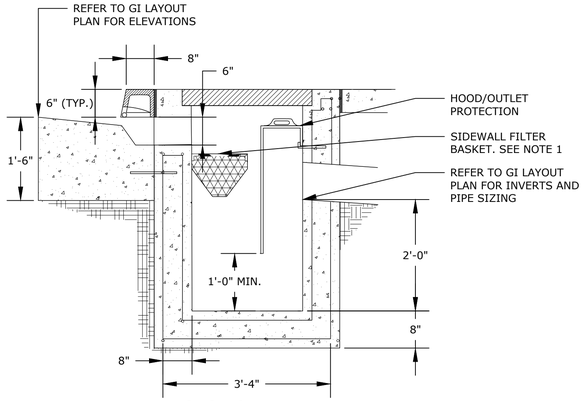
| B-SCAN | SCALE | DRAWING NO. | CONTRACT NO. |
|---|---|---|---|
| | N.T.S. | C600 | |
| | DATE | | SHEET No. 1 OF 3 SHEETS |




PLAN



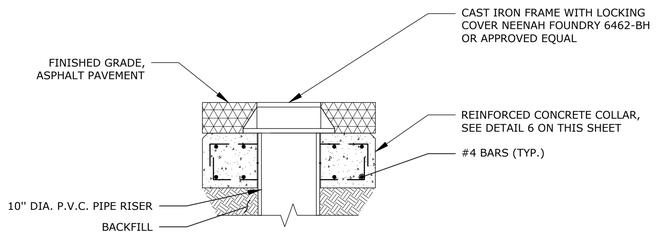

SECTION - A



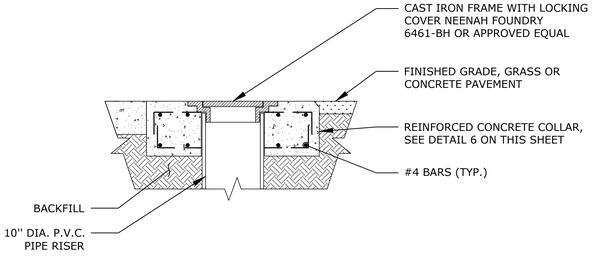

SECTION - B

NOTES:
1. ATTACH SIDEWALL FILTER 2" BELOW OPENING WITH BOLTS, OR PER MANUFACTURER INSTRUCTIONS.

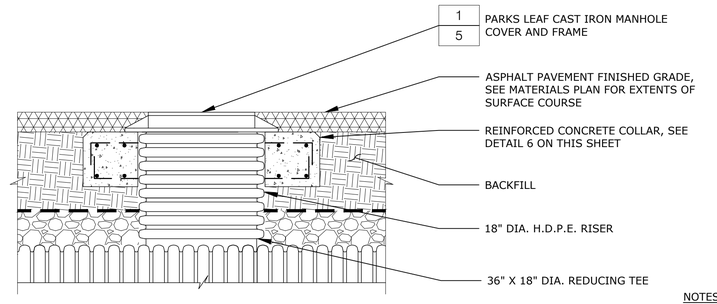
1 MODIFIED CURB INLET TYPE A
NOT TO SCALE




2 10" DIA. P.V.C. CLEANOUT WITH CONCRETE COLLAR BELOW GRADE
NOT TO SCALE

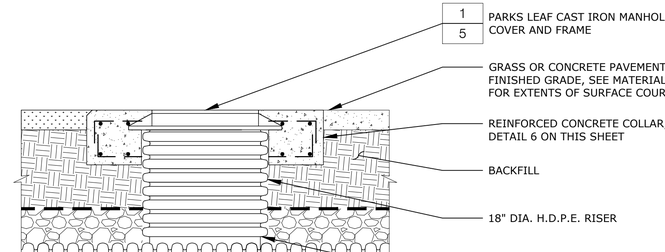



3 10" DIA. P.V.C. CLEANOUT WITH CONCRETE COLLAR AT GRADE
NOT TO SCALE



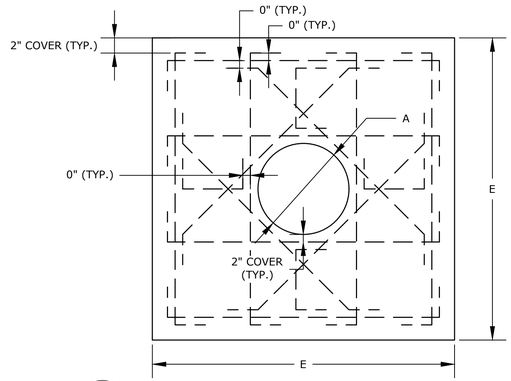

NOTES
CONCRETE COLLAR SHALL BE CONSTRUCTED SUCH THAT THE LIVE LOAD IS TRANSMITTED TO THE SURROUNDING SOIL AND NOT DIRECTLY TO THE RISER BASED ON ANTICIPATED LOADING.

4 MAINTENANCE ACCESS RISER WITH CONCRETE COLLAR BELOW GRADE
NOT TO SCALE

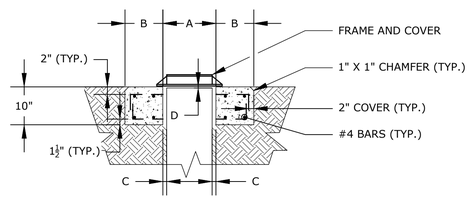



NOTES
CONCRETE COLLAR SHALL BE CONSTRUCTED SUCH THAT THE LIVE LOAD IS TRANSMITTED TO THE SURROUNDING SOIL AND NOT DIRECTLY TO THE RISER BASED ON ANTICIPATED LOADING.

5 MAINTENANCE ACCESS RISER WITH CONCRETE COLLAR AT GRADE
NOT TO SCALE




6 CONCRETE COLLAR REINFORCEMENT DETAIL
NOT TO SCALE




| | DIMENSION | | | | |
|---|---|---|---|---|---|
| CLEANOUT / RISER DIA. | A | B | C | D | E |
| 18" | 1'-11" | 10" | 1" | ½" | 3'-7" |
| 10" | 11" | 10" | ⅛" | 0" | 2'-7" |

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HDR

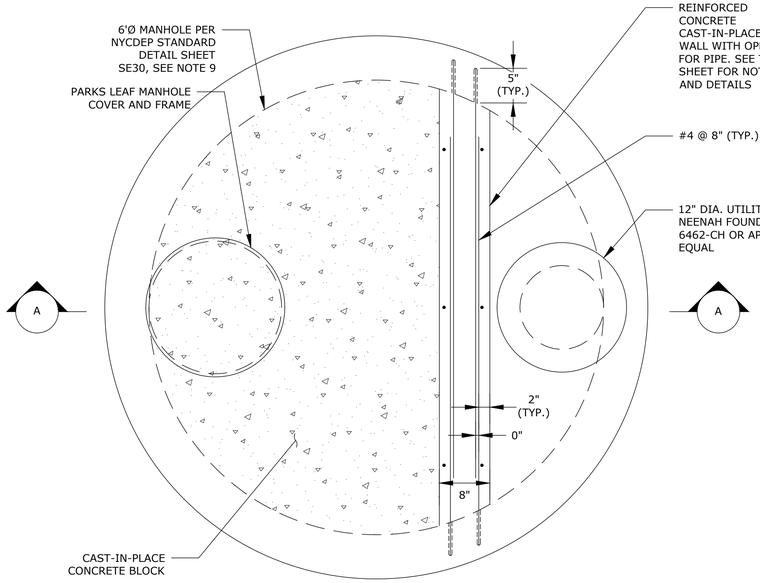
BLOCK
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PROJECT TITLE
GREEN INFRASTRUCTURE RETROFIT OF MULTIPLE SITES

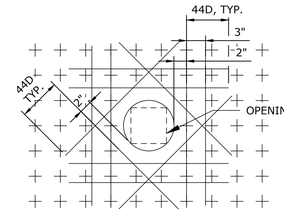
DRAWING TITLE
SITE DETAILS - 2

| DESIGNED BY | DRAWN BY | CHECKED BY |
|---|---|---|
| S. RANA | S. RANA | M. BRODERICK |

| B-SCAN | SCALE | DRAWING NO. | CONTRACT NO. |
|---|---|---|---|
| | N.T.S. | C601 | |
| | DATE | | SHEET No. 2 OF 3 SHEETS |



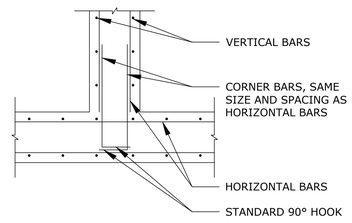

PLAN



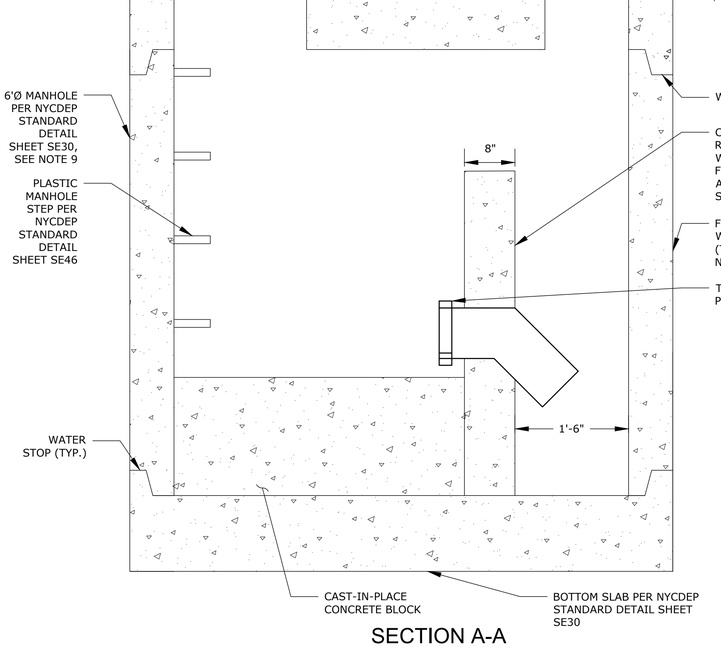

## NOTES:

1. THIS DETAIL APPLIES TO OPENINGS 8"Ø AND LARGER. FOR SMALLER OPENINGS, BEND BARS OR ADJUST SPACING OF REINFORCEMENT TO CLEAR OPENING.
2. PLACE ADDITIONAL BARS OF THE SAME SIZE AT THE INTERRUPTED BARS ON EACH SIDE OF OPENING. QUANTITY OF ADDITIONAL BARS ON EACH SIDE SHALL EQUAL HALF THE QUANTITY OF INTERRUPTED BARS EXCEPT WHERE NOTED OTHERWISE.
3. PROVIDE ONE DIAGONAL BAR ON EACH SIDE OF OPENING OF THE SAME SIZE EQUAL TO MAIN REINFORCEMENT, TYPICAL ON EACH FACE.
4. WHERE INVERT OF OPENING IN WALL IS LESS THAN 44 BAR DIAMETERS FROM TOP OF SLAB, ADDITIONAL REINFORCEMENT ON EACH SIDE SHALL INCLUDE DOWELS EMBEDDED INTO SLAB WITH STANDARD 90 DEGREE HOOKS TO SPLICE WITH ADDITIONAL VERTICAL REINFORCEMENT. DOWELS SHALL ALSO STILL BE PROVIDED BELOW OPENING.
5. WHERE INVERT OF OPENING IN WALL OR SLAB IS CLOSER THAN 44 BAR DIAMETERS TO EDGE OF SLAB OR BOTTOM OF WALL, ADDITIONAL DIAGONAL BARS MAY BE TERMINATED TWO INCHES FROM EDGE OF SLAB OR BOTTOM OF WALL. DOWELS DO NOT HAVE TO BE PROVIDED TO SPLICE WITH DIAGONAL BARS.

2 TYPICAL REINFORCEMENT AT OPENINGS
N.T.S.




3 INTERSECTION TYPICAL WALL REINFORCING
N.T.S.

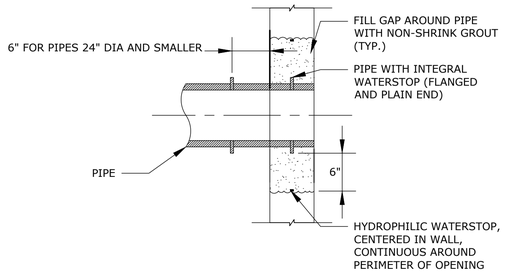



SECTION A-A

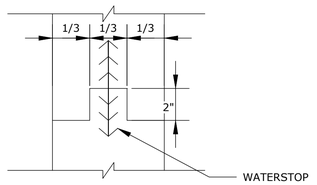
1 OUTLET CONTROL STRUCTURE DETAIL
1"=1' 0 6" 1' 2'

## NOTES:

1. CUT AND BEND BARS AT ALL OPENINGS AND PENETRATIONS (TYP.).
2. TILT HOOKS AS REQUIRED TO MAINTAIN REQUIRED COVER.
3. PROVIDE STANDARD HOOK AT END OF ALL INTERRUPTED BARS.
4. PROVIDE 1 - #5 ADDITIONAL BAR ON EACH SIDE OF WALL OPENINGS.
5. REFER TO GREEN INFRASTRUCTURE LAYOUT PLAN FOR PIPE DIMENSIONS AND INVERTS.
6. REFER TO GREEN INFRASTRUCTURE LAYOUT PLAN FOR LOCATION OF OUTLET CONTROL STRUCTURE.
7. ALL REINFORCING BARS SHALL BE HOT-DIPPED GALVANIZED GRADE 60.
8. THE CONTRACTOR SHALL PROVIDE AND LOCATE THE LIFTING HOOKS.
9. 6'Ø MANHOLE PER NYCDEP STANDARD DETAIL SHEET SE30 SHALL NOT INCLUDE RISER SECTION.




4 TYPICAL WALL PIPE
N.T.S.




5 TYPICAL KEYWAY
N.T.S.

## BASIC DEVELOPMENT LENGTH AND SPLICE LENGTH

FOR UNCOATED BARS IN TENSION

** BASED ON MATERIALS AND CONDITIONS AS FOLLOWS:
fy = 60,000 psi fc' = 5000 psi OR GREATER
CLEAR COVER≥ 1.5 INCHES NORMAL WEIGHT CONCRETE

| BASIC DEVELOPMENT LENGTH $\ell_d$ | | | | BAR SIZE | CLASS B SPLICE LENGTH 1.3 x $\ell_d$ | | | |
|---|---|---|---|---|---|---|---|---|
| CLEAR SPACING≥ 3" | | CLEAR SPACING <3" | | | CLEAR SPACING≥ 3" | | CLEAR SPACING <3" | |
| BASIC | TOP * | BASIC | TOP * | | BASIC | TOP * | BASIC | TOP * |
| 1'-0" | 1'-0" | 1'-0" | 1'-4" | # 3 | 1'-0" | 1'-3" | 1'-4" | 1'-8" |
| 1'-0" | 1'-3" | 1'-7" | 2'-1" | # 4 | 1'-3" | 1'-8" | 2'-1" | 2'-9" |
| 1'-3" | 1'-7" | 2'-4" | 3'-0" | # 5 | 1'-7" | 2'-0" | 3'-0" | 3'-11" |
| 1'-6" | 1'-11" | 3'-1" | 4'-0" | # 6 | 1'-11" | 2'-5" | 4'-0" | 5'-2" |
| 2'-5" | 3'-1" | 4'-11" | 6'-4" | # 7 | 3'-1" | 4'-0" | 6'-4" | 8'-3" |
| 3'-0" | 3'-11" | 6'-0" | 7'-9" | # 8 | 3'-11" | 5'-1" | 7'-9" | 10'-1" |
| 3'-8" | 4'-9" | 6'-9" | 8'-9" | # 9 | 4'-9" | 6'-3" | 8'-9" | 11'-4" |
| 4'-6" | 5'-10" | 7'-7" | 9'-10" | # 10 | 5'-10" | 7'-7" | 9'-10" | 12'-9" |
| 5'-5" | 7'-0" | 8'-5" | 10'-11" | # 11 | 7'-0" | 9'-1" | 10'-11" | 14'-2" |

* TOP REINFORCEMENT IS ANY HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.

**FOR MATERIALS OR CONDITIONS DIFFERENT FROM THOSE STATED, LENGTHS SHOWN IN CHART SHALL BE MODIFIED TO CONFORM TO THE PROVISIONS OF ACI 318-14, SECTION 25.3.

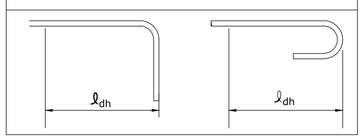
## DEVELOPMENT LENGTH OF STANDARD HOOKS

FOR UNCOATED BARS IN TENSION

fy = 60,000 psi fc' = 5000 psi OR GREATER

| BAR SIZE | DEVELOPMENT LENGTH, $\ell_{dh}$ | |
|---|---|---|
| | BASIC | W/ CONC. COVER * |
| #3 | 8" | 6" |
| #4 | 10" | 7" |
| #5 | 1'-0" | 9" |
| #6 | 1'-3" | 11" |
| #7 | 1'-5" | 1'-0" |
| #8 | 1'-7" | 1'-2" |
| #9 | 1'-10" | 1'-4" |
| #10 | 2'-1" | 1'-6" |
| #11 | 2'-3" | 1'-7" |

* SIDE COVER NORMAL TO PLANE OF HOOK AT LEAST 2 1/2"; AND FOR 90° HOOK, END COVER BEYOND OUTSIDE END OF HOOK AT LEAST 2".




## GENERAL STRUCTURAL NOTES:

1. THESE NOTES ARE GENERAL AND SUPPLEMENT THE SPECIFICATIONS. THESE NOTES APPLY TO THE ENTIRE PROJECT UNLESS MODIFIED OR NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.
2. STANDARD DETAILS SHALL BE USED WHEN REFERRED TO OR WHEN NO MORE RESTRICTIVE OR DIFFERENT DETAILS ARE SHOWN ON THE DRAWINGS.
3. DESIGN SHALL BE ACCORDANCE WITH AND CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF NEW YORK CITY BUILDING CODE. THE DESIGN LOADS AND OTHER DESIGN VALUES GIVEN IN NOTES WERE USED FOR DESIGN OF STRUCTURES UNLESS NOTED OTHERWISE ON THE DRAWINGS.
4. LIVE LOAD:

| STRUCTURE | ROOF |
|---|---|
| MANHOLE | HS-20 |

5. STRUCTURAL DIMENSIONS NOT SHOWN BUT CONTROLLED BY OR RELATED TO EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR WITH THE MANUFACTURER PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION IN THE FIELD AS REQUIRED FOR NEW WORK. IF A CONFLICT IS FOUND BETWEEN DIFFERENT PORTIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. CONTINUED CONSTRUCTION OF THE AREA IN CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK UNTIL THE CONFLICT IS RESOLVED.
7. EQUIPMENT ANCHOR BOLT SIZES, TYPES, EMBEDMENT AND PATTERNS SHALL BE VERIFIED WITH THE MANUFACTURER. ALL BOLT PATTERNS SHALL BE TEMPLATED TO INSURE ACCURACY OF PLACEMENT.
8. STRUCTURAL DRAWINGS SHALL BE USED IN COORDINATION WITH OTHER CONTRACT DRAWINGS AND MANUFACTURER'S SHOP DRAWINGS.
9. STRUCTURES SHALL BE DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURE. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND TEMPORARY SUPPORTS WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR. OVERSTRESSING ANY STRUCTURAL ELEMENT IS PROHIBITED.
10. IF CONTRACTOR DESIRES TO TEMPORARILY PLACE OR MOVE LOADS ON OR ADJACENT TO EXISTING STRUCTURES OR UTILITIES DURING CONSTRUCTION PROCESS, CONTRACTOR IS EXCLUSIVELY RESPONSIBLE FOR MAINTAINING STRUCTURAL INTEGRITY AND AVOIDING OVERSTRESSING AND DAMAGING EXISTING STRUCTURES AND UTILITIES. CONTRACTOR SHALL SUBMIT STRUCTURAL CALCULATIONS AND DRAWINGS VERIFYING PROPOSED CONSTRUCTION INCLUDING APPLICATION OF TEMPORARY CONSTRUCTION LOADS WILL NOT OVERSTRESS OR DAMAGE EXISTING STRUCTURES AND UTILITIES. DRAWINGS AND CALCULATIONS SHALL BE SEALED BY A PROFESSIONAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF NEW YORK.
11. NO BACKFILL SHALL BE PLACED AGAINST ANY SUBSTRUCTURE WALLS UNLESS ALL ADJACENT SUPPORTING ELEMENTS HAVE ACHIEVED DESIGN STRENGTH, OR WALLS HAVE BEEN PROPERLY BRACED, AND IN ANY CASE NOT SOONER THAN 28 DAYS AFTER THE PLACING OF CONCRETE UNLESS APPROVED BY THE ENGINEER. SUPPORTING ELEMENTS SHALL INCLUDE ADJACENT WALLS, SLABS, BEAMS AND COLUMNS.
12. LEAKAGE TESTING OF HYDRAULIC STRUCTURES SHALL NOT BEGIN UNTIL ALL STRUCTURAL ELEMENTS HAVE REACHED THE SPECIFIED MINIMUM CONCRETE STRENGTH. BACKFILL SHALL NOT BE PLACED AROUND ANY HYDRAULIC STRUCTURE UNTIL THE LEAKAGE TEST HAS BEEN COMPLETED UNLESS APPROVED BY THE ENGINEER.

## PRECAST CONCRETE:

1. PRECAST VAULTS AND MANHOLES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK. STRUCTURAL DRAWINGS SHALL INDICATE DESIGN IS IN COMPLIANCE WITH THE NEW YORK CITY BUILDING CODE.
2. PRECAST CONCRETE STRUCTURES SHALL BE IN ACCORDANCE WITH THE CONTRACT SPECIFICATION 33 05 61, 03 04 00, 03 48 00, AND 33 46 16. ALL JOINTS SHALL BE SEALED IN ACCORDANCE TO SPECIFICATION.

## CONCRETE

1. DESIGN OF CONCRETE ELEMENTS INCLUDING WALLS, FORMED SLABS, BEAMS, AND COLUMNS IS IN ACCORDANCE WITH ACI 318 (CODE REQUIREMENTS FOR STRUCTURAL CONCRETE) AND 350 (CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES).
2. FOR CONCRETE MIX DESIGN SEE SPECIFICATION SECTION 03300.
3. CONCRETE STRENGTH CLASSES (28-DAY COMPRESSIVE STRENGTH):
   A. CLASS 50 PRECAST (5,000 PSI) : ALL PRECAST ELEMENTS AND STRUCTURES.
   B. CLASS 45 CONCRETE (5,000 PSI): NORMAL WEIGHT STRUCTURAL CONCRETE USED FOR CONCRETE FILL. ALL BAR REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60. WHERE REINFORCEMENT IS TO BE WELDED IN ACCORDANCE WITH AWS D1.4, ASTM A706 GRADE 60 SHALL BE USED. WELDED WIRE FABRIC 4. SHALL CONFORM TO ASTM A185.
5. CONCRETE COVER FOR REINFORCING (UNLESS NOTED OTHERWISE ON THE DRAWINGS):
   A. CONCRETE DEPOSITED DIRECTLY AGAINST SOIL: 3"
   B. ALL OTHER LOCATIONS: 2"
6. SPLICES SHALL B CLASS "B" CONFORMING TO THE PROVISIONS OF ACI 318 UNLESS NOTED OTHERWISE. SPLICE LENGTH FOR TWO DIFFERENT SIZED BARS TO BE LAP SPLICED TOGETHER SHALL BE THE LENGTH OF THE LARGER BAR UNLESS NOTED OTHERWISE.
7. CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. CONSTRUCTION JOINTS NOT SHOWN SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE APPROVAL OF THE ENGINEER PRIOR TO SUBMITTING REBAR SHOP DRAWINGS.
8. ALL JOINTS WHICH ARE IN MEMBERS IN CONTACT WITH LIQUID OR BELOW GRADE SHALL HAVE A WATERSTOP. CONSTRUCTION JOINTS SHALL HAVE A 6" PVC RIBBED WATERSTOP.
9. SLABS WITH SLOPING SURFACES SHALL HAVE THE INDICATED SLAB THICKNESS MAINTAINED AS THE MINIMUM SLAB BOTTOMS CAN EITHER SLOPE WITH THE TOP SURFACE OR BE LEVEL. REINFORCEMENT IN SLABS WITH SLOPING SURFACES SHALL BE PLACED AT THE REQUIRED CLEARANCE FROM THE SLAB SURFACE.
10. ALL EXPOSED CORNERS SHALL HAVE A ¾" CHAMFER OR A ½" RADIUS TOOLED CORNER.
11. EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DOCUMENTS, SHALL BE PROVIDED FOR PRIOR TO PLACING CONCRETE.
12. REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY MENTAL PIPE, PIPE FLANGE, METAL CONDUIT, OR OTHER METAL PARTS EMBEDDED IN CONCRETE. A MINIMUM CLEARANCE OF 2" SHALL BE PROVIDED.
13. DOWELS, ANCHOR BOLTS, PIPES, WATERSTOPS AND OTHER EMBEDDED ITEMS SHALL BE HELD SECURELY IN POSITION WHILE CONCRETE IS BEING PLACED.
14. CONDUITS AND OTHER SIMILAR ITEMS EMBEDDED IN OR PENETRATING THROUGH CONCRETE SHALL BE SPACED ON CENTER NOT LESS THAN 3 TIMES THEIR OUTSIDE DIMENSION, NOT LESS THAN 2 ½" CLEAR. WHEN SUCH ITEMS ARE EMBEDDED IN WALLS OR SLABS, THEY SHALL NOT OCCUPY MORE THAN 1/3 OF THE MEMBER THICKNESS.
15. DRILL IN ADHESIVE DOWELS AND CONCRETE ANCHORS (WHERE DOWELS OR ANCHORS ARE SHOWN TO BE PLACED INTO HARDENED CONCRETE):
   A. THE DRILL HOLE DIAMETER SHALL BE NO LARGER THAN 1/8" GREATER THAN THE DIAMETER OF THE REINFORCING BAR AT THE DEFORMATIONS FOR DOWELS. THE HOLE DIAMETER SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS FOR ANCHORS.
   B. THE MINIMUM EMBEDMENT SHALL BE 12 BAR DIAMETERS, UNLESS NOTED OTHERWISE.
   C. ADJUST THE LOCATION OF THE DOWEL OR ANCHOR AS NEEDED TO AVOID DRILLING THROUGH ANY REINFORCING BARS. IF THE LOCATION NEEDS TO BE MODIFIED, CONTACT THE ENGINEER. CONTRACTOR SHALL USE NON-DESTRUCTIVE MEANS TO FIELD LOCATE REINFORCEMENT PRIOR TO DRILLING HOLES FOR DOWELS OR ANCHORS.
16. CLEAR DISTANCE FROM ANCHOR RODS TO ANY CONCRETE EDGE SHALL BE 4" MINIMUM UNLESS NOTED OTHERWISE.
17. CONCRETE COMPRESSIVE STRENGTH TESTS SHALL BE AVAILABLE ON THE JOB SITE FOR REVIEW BY THE ENGINEER.

NYC Environmental Protection

CITY OF NEW YORK
ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis

NYC Parks

CITY OF NEW YORK
PARKS & RECREATION
Forestry, Horticulture and Natural Resources

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SEAL
STATE OF NEW YORK · MICHAEL DAVID BRAUN · 101288 · LICENSED PROFESSIONAL ENGINEER

HDR

BLOCK

LOT

PROJECT TITLE
GREEN INFRASTRUCTURE RETROFIT OF MULTIPLE SITES

DRAWING TITLE
SITE DETAILS - 3

| DESIGNED BY | DRAWN BY | CHECKED BY |
|---|---|---|
| F. NOORAI | S. KUMAR | J. PARK |

B-SCAN

SCALE: N.T.S.

DATE

DRAWING NO.: C602

CONTRACT NO.

SHEET No. 3 OF 3 SHEETS