

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER AND SEWER OPERATIONS
WATER AND SEWER PLANNING

AMENDED DRAINAGE PLAN
LONG ISLAND CITY

THIS DRAINAGE PLAN AMENDS PARTS OF PREVIOUSLY DESIGNED/ADOPTED DRAINAGE PLAN 3H'5(R-1)-28'47(R-1)
SHOWING LOCATION, SIZES AND GRADES OF COMBINED SEWERS IN AN AREA BOUNDED BY 48TH STREET BETWEEN 39TH AVE AND
NORTHERN BOULEVARD

BOROUGH OF QUEENS

This plan was prepared by The Department of Environmental Protection under Section 24-503 of The Administrative Code of The City of New York

APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPROVED BY THE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

P.E. _____ DATE _____
SECTION CHIEF, DRAINAGE AND MODELING
BUREAU OF WATER AND SEWER OPERATIONS

P.E. _____ DATE _____
DIRECTOR
BUREAU OF PUBLIC HEALTH AND HYGIENE

APPROVED BY THE DEPARTMENT OF CITY PLANNING

P.E. _____ DATE _____
DIRECTOR, ENGINEERING
BUREAU OF WATER AND SEWER OPERATIONS

P.E. _____ DATE _____
DIRECTOR OF CITY PLANNING

P.E. _____ DATE _____
EXECUTIVE DIRECTOR, ENGINEERING AND PLANNING
BUREAU OF WATER AND SEWER OPERATIONS

P.E. _____ DATE _____
DEPUTY COMMISSIONER
BUREAU OF WATER AND SEWER OPERATIONS

P.E. _____ DATE _____
COMMISSIONER
BUREAU OF WATER AND SEWER OPERATIONS

SEWER SYMBOLS

BULKHEAD LINE U.S. BULKHEAD

BOUNDARIES OF DRAINAGE AREA

SEWERS HEREWITH ESTABLISHED:

SANITARY 10" -10.60 15"

STORM WATER 12" -10.60 15"

HIGH LEVEL STORM WATER 12" -10.60 15"

COMBINED 15" -10.60 15"

FORCE MAIN 2.00 -20' F.M. -20.20

EXISTING SEWERS:

BUILT (S, SW, HLS, C) (12"SW) (-10.60) (15"SW)

BUILT (FORCE MAIN) (2.00) (-20' F.M.) (-20.20)

BUILT (WATER MAIN GREATER THAN OR EQUAL TO 48") (48" W.M.)

EXISTING SEWERS NEVER LEGALIZED (S, SW, HLS, C) (12"C) (-10.60) (15"C)

EXISTING SEWERS NEVER LEGALIZED (S, SW, HLS, C) (12"S) (-10.60) (15"S)

DEAD END 10" -10.60 15"

SEWER SUMMIT 12" -15" -5.20 24"

UNIFORM SEWER GRADIENT 12" -15" -5.20 24"

DROP MANHOLE +10.61 -15.20

INTERSECTING SEWERS HAVE MATCHING INNER TOP ELEV. 15" -12.34 24"

INTERSECTING SEWERS AT VARIOUS INNER TOP ELEV. +8.00 -17.89 24"

RAILROAD

SUBWAY

PROPOSED DRAINAGE EASEMENT/CORRIDOR

ADOPTED/MAPPED/RECORD STREET

UNMAPPED STREET

PARK

STEP STREET

TYPICAL STREAM CROSS SECTION

PARALLEL RELIEF SEWER (60"SW) 30"

SEWER STRUCTURES:

MANHOLE O PUMP STATION

CHAMBER □ OUTFALL

REGULATOR CHAMBER △ BULKHEAD

DIVERSION CHAMBER ⊠ TIDE GATE

FOR SEWERS OTHER THAN CIRCULAR SECTION, SHOW THE WIDTH AND HEIGHT IN THIS MANNER:

FLAT TOP SEWER

EXISTING:

SINGLE BARREL (10'-6"W X 8'-0"H-SW)

DOUBLE BARREL (10'-6"W X 8'-0"H-SW-DB)

TRIPLE BARREL (10'-6"W X 8'-0"H-SW-TB)

QUADRUPLE BARREL (10'-6"W X 8'-0"H-SW-OB)

PROPOSED:

SINGLE BARREL 10'-6"W X 8'-0"H

DOUBLE BARREL 10'-6"W X 8'-0"H-DB

TRIPLE BARREL 10'-6"W X 8'-0"H-TB

QUADRUPLE BARREL 10'-6"W X 8'-0"H-OB

ELLIPTICAL SEWER

EXISTING:

(76"W X 48"H-SW)

PROPOSED:

76"W X 48"H

ALSO SHOW THE TYPICAL CROSS SECTIONS IN THE COMPUTATION SHEETS.

STREET GRADE ELEVATION

ADOPTED 12.34

EXISTING (12.34)

LOWER ELEVATION AT GRADE SEPARATION +12.34

MODIFIED (12.34)

MEAN HIGH WATER (12.34)

TAX BLOCK NUMBER -1234-

ALL SEWER ELEVATIONS SHOWN ARE INNER TOP ELEVATIONS

A = TOTAL TRIBUTARY AREA IN ACRES

A_H = TOTAL TRIBUTARY AREA IN ACRES FOR HIGH LEVEL STORM SEWER (A_H = 0.5A)

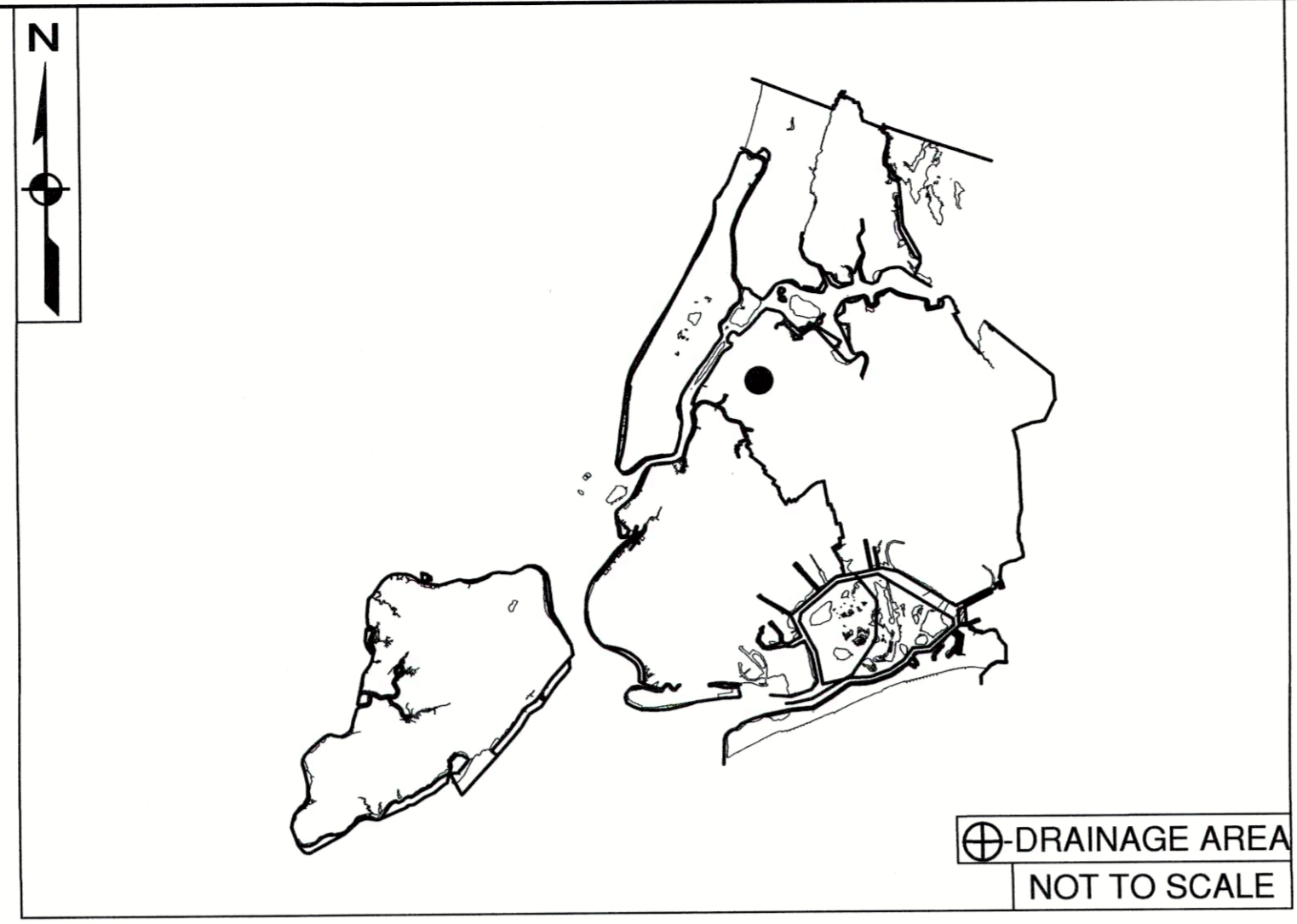
R = RAINFALL INTENSITY IN in/hr COMPUTED BY THE FORMULA $R = \frac{120}{1 + 1.5S}$

T = TIME OF CONCENTRATION IN MINUTES COMPUTED BY THE FORMULA $T = t + e$

t = INITIAL ENTRANCE TIME IN MINUTES

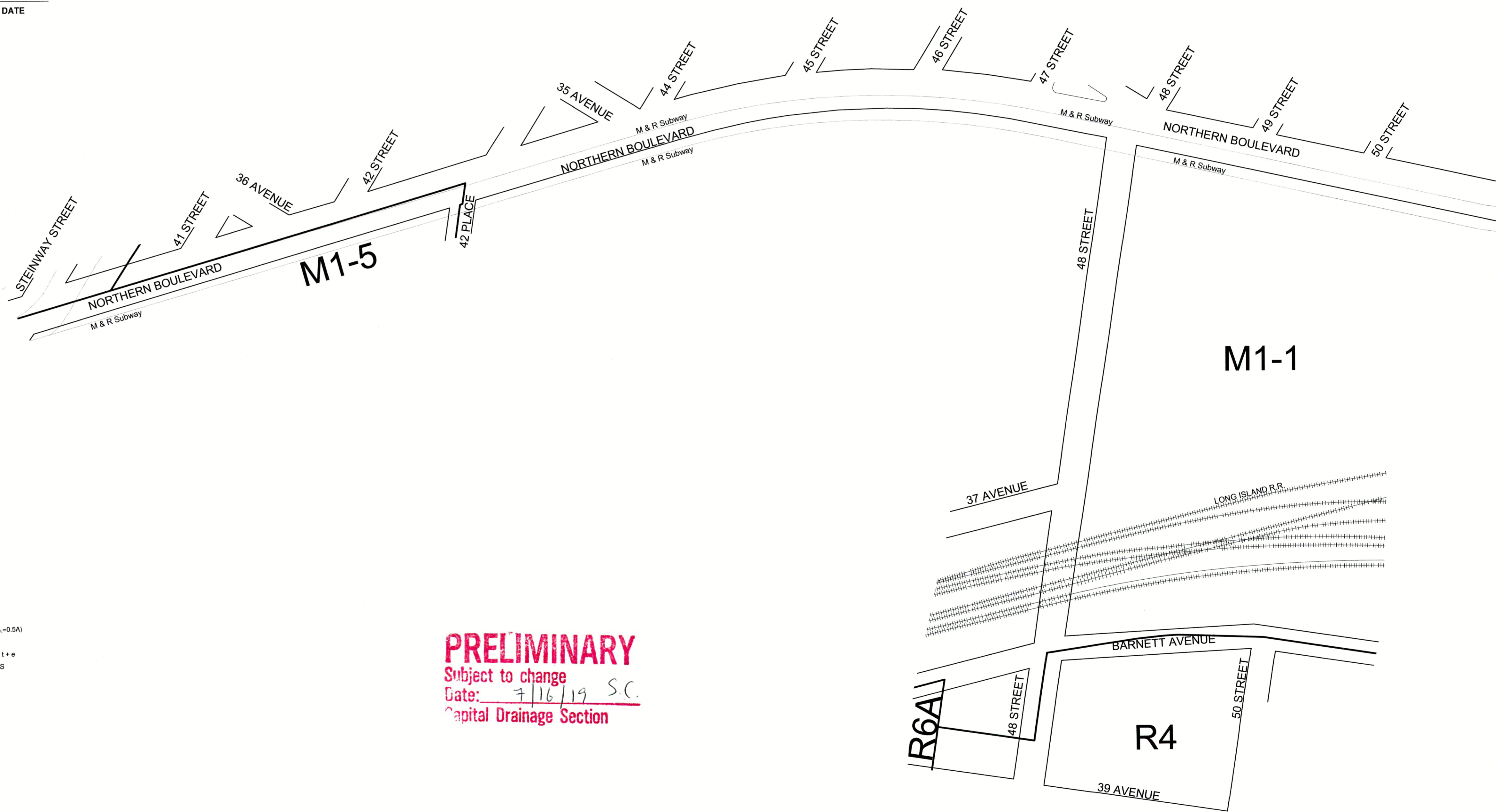
E = ACCUMULATIVE SEWER TRAVEL TIME IN MINUTES BETWEEN MANHOLES

C = COEFFICIENT OF RUNOFF



⊕ DRAINAGE AREA
NOT TO SCALE

- NOTES**
- UNLESS THE DEPARTMENT OF HEALTH AND MENTAL HYGIENE (DOHMH) AND DEPARTMENT OF CITY PLANNING (DCP) SHALL FILE A STATEMENT WITH SUCH NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NYCDEP) COMMISSIONER IN RELATION TO SUCH PLAN WITHIN 30 DAYS SUBSEQUENT TO THE SUBMISSION OF SAID PLAN, SUCH PLAN SHALL BE DEEMED TO CONFORM WITH THE CITY MAP AND SHALL CONSTITUTE THE CERTIFICATION THEREOF.
 - THE SEWERS SHOWN ON THIS DRAINAGE PLAN ARE INTENDED TO HAVE A CAPACITY ADEQUATE TO THE REASONABLE NEEDS OF THE DRAINAGE DISTRICT FOR A LIMITED PERIOD AND ARE NOT INTENDED TO BE OF SUFFICIENT CAPACITY TO IMMEDIATELY REMOVE STORM WATER WHEN THE RATE OF PRECIPITATION EXCEEDS AN INTENSITY OF "R" INCHES PER HOUR CONTINUING THROUGH "T" MINUTES, "C" PERCENT OF WHICH WILL REACH THE SEWERS WITHIN THAT TIME AS SHOWN FOR SEWER SEGMENTS. THE CAPACITY OF THE SYSTEM HAS BEEN RESTRICTED PER NYCDEP DRAINAGE PLAN DESIGN CRITERIA FOR THE PURPOSE OF KEEPING THE COST WITHIN LIMITS WHICH ARE DEEMED ECONOMICALLY REASONABLE.
 - THE CITY OF NEW YORK ASSUMES NO LIABILITY FOR DAMAGES DUE TO SURCHARGING OF "BUILT SEWERS PREVIOUSLY AND HEREWITH ESTABLISHED" WHICH MAY OCCUR BEFORE THE FUTURE ESTABLISHED OUTLET SEWERS, DESIGNED ON THE BASIS OF ESTABLISHED ZONING HAVE BEEN BUILT, UNTIL THE FUTURE OUTLET SEWERS ARE ESTABLISHED AND BUILT, ALLOWABLE FLOWS INTO THE "HEREWITH ESTABLISHED SEWERS" ARE LIMITED TO THE FLOW VALUES WHICH THE EXISTING OUTLET SEWERS WERE DESIGNED TO ACCEPT.
 - THE CITY OF NEW YORK WILL NOT BE RESPONSIBLE FOR DAMAGES BY SURCHARGING IN ANY CASE IN WHICH THE INVERT ELEVATION OF THE HOUSE CONNECTION AT THE CURB LINE IS LESS THAN THE HYDRAULIC GRADE OF ANY SEWER THROUGH WHICH IT OUTLETS.
 - THE ELEVATIONS SHOWN ON THIS MAP REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
 - ZONING BOUNDARIES SHOWN ON THIS MAP ARE CURRENT AS OF DATE PREPARED.



PRELIMINARY
Subject to change
Date: 7/16/19 S.C.
Capital Drainage Section

No.	Date	Revisions	By

WARNING
IT IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF AN ITEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THE ITEM HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

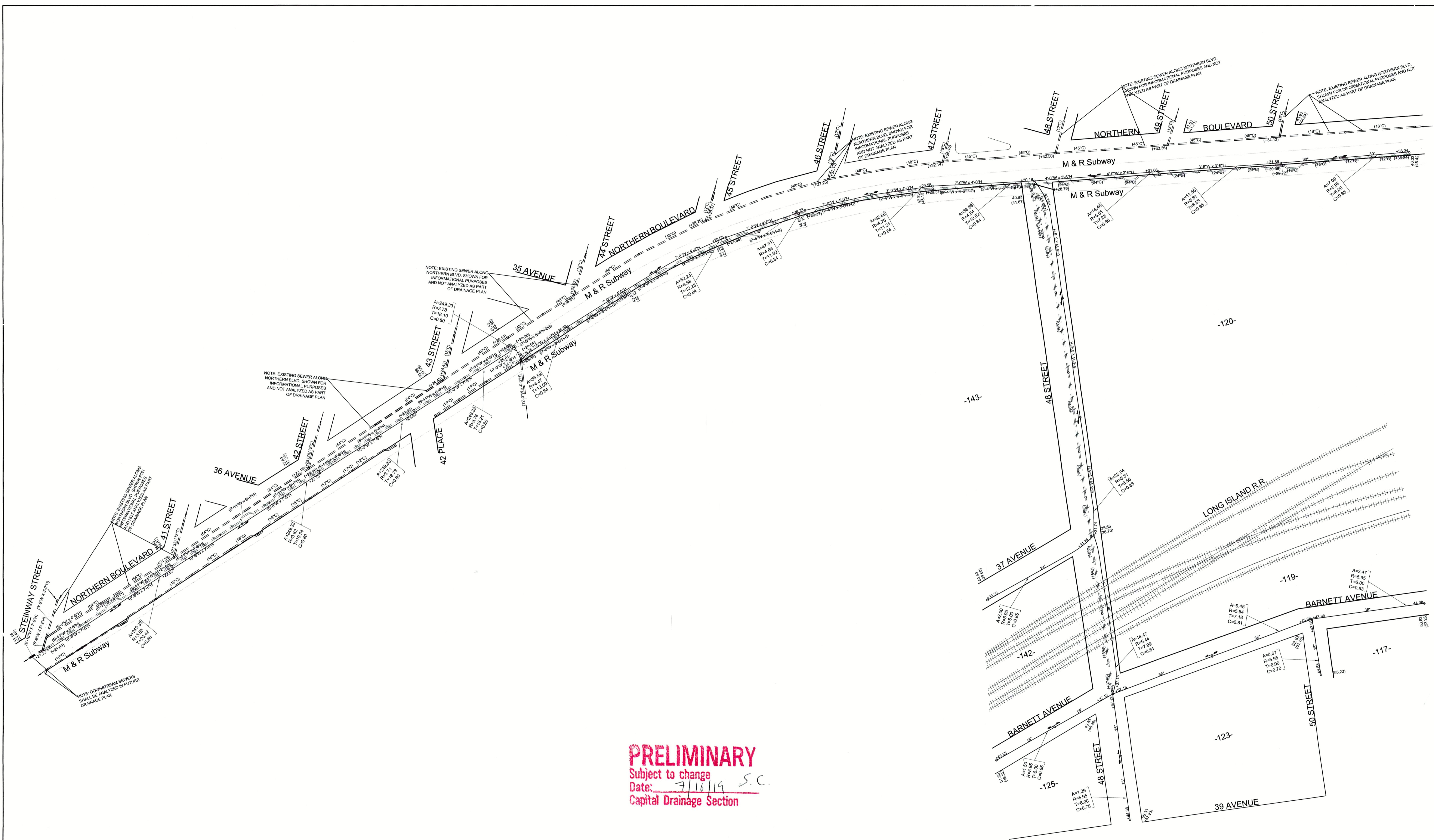
LONG ISLAND CITY
"KEY-MAP"



ENGINEER-IN-CHARGE _____
DATE _____

Designed by: E. ECOCK
Checked by: S. CARREA, P.E.
Drawn by: E. ECOCK
Checked by: S. CARREA, P.E.

Date Prepared: July 12, 2019
N.T.S.
Sheet 1 of 2



PRELIMINARY
 Subject to change
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LONG ISLAND CITY



ENGINEER-IN-CHARGE
 DATE

Designed by: E. ECOCK
 Checked by: S. CARREA, P.E.
 Drawn by: E. ECOCK
 Checked by: S. CARREA, P.E.

Date Prepared: July 12, 2019

0' 100' 200'
 Scale

Sheet 2 of 2

Revised October 23, 2018