

**Appendix C1c**  
**Preferred Alternative - Civil Plans**

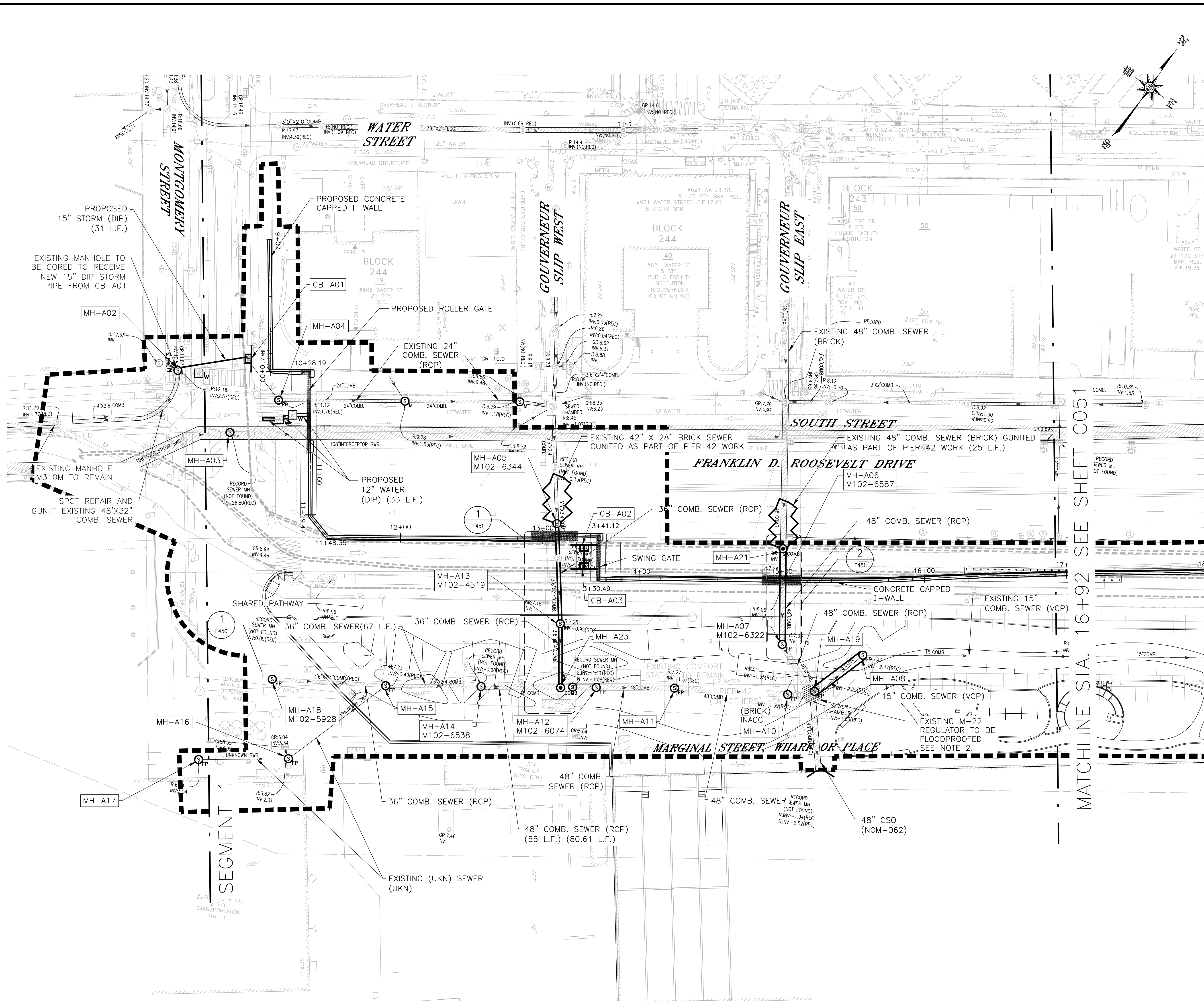
**Appendix C1c**  
**Civil Plans**

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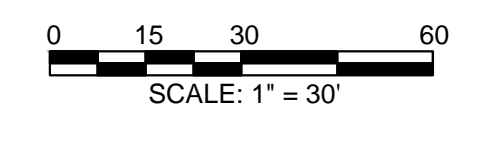


REVISED MASS MAILING # 1 SUBMISSION 7/18/2019



- NOTES:**
- ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
  - FOR REGULATOR STRENGTHENING, AND MODIFICATION SCHEDULE SEE SHEETS C109 THROUGH C112.
  - FOR MANHOLE FLOOD PROOFING DETAILS SEE SHEETS C101 THROUGH C102.
  - SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
  - PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
  - FOR MANHOLE FLOOD PROOFING SCHEDULE SEE SHEETS C103 THROUGH C104.
  - CONTRACTOR SHALL PROTECT IN-PLACE ANY STREET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
  - REPLACED/REPAIRED AS PART OF PIER 42 WORKS.
  - REFER TO SHEETS D301 - D310 FOR PARK DRAINAGE PLAN.
  - EXTENT OF PIER 42 WORK INCLUDED GUNITING OF EXISTING BRICK SEWERS 25 FEET IN SECTIONS TO BE REPLACED AND SECTIONS TO REMAIN.

- LEGEND:**
- INT. SWR. INTERCEPTOR SEWER
  - STORM SEWER
  - VCP VITREOUS CLAY PIPE
  - RCP REINFORCED CONCRETE PIPE
  - RCFT REINFORCED CONCRETE (FLAT TOP)
  - COMB. SEWER COMBINED SEWER
  - UKN UNKNOWN MATERIAL
  - INACC MANHOLE WAS INACCESSIBLE
  - CSO COMBINED SEWER OVERFLOW
  - SWO STORM WATER OUTFALL
  - DIP DUCTILE IRON PIPE
  - MANHOLE FLOODPROOFED AS PART OF PIER 42 WORK
  - EXISTING MANHOLE TO BE FLOODPROOFED. SEE SHEETS C100-C104
  - EXISTING MANHOLE COVER FRAME TO RESET TO FINAL GRADE
  - EXISTING CATCH BASIN AND TYPE TO BE RESET TO FINAL GRADE
  - PROPOSED WATER VALVEBOX
  - WATER MAIN OR SEWER TO BE REPLACED
  - DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED
  - LIMIT OF WORK
  - PROPOSED CATCH BASIN AND TYPE
  - CSO OPENING
  - PROPOSED MANHOLE INSTALLED AS PART OF PIER 42 WORK.
  - GUNITED BRICK SEWER
  - ABDN ABANDONED



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET SU100 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:  
  
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:  
  
CH2M HILL NEW YORK, INC.  
 NAME OF CONSULTANT

SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
 DEPARTMENT OF DESIGN + CONSTRUCTION  
 DIVISION OF INFRASTRUCTURE  
 BUREAU OF DESIGN

CIVIL PLAN  
 SEGMENT 1 - REACH A  
 STA. 9+07 - 16+92

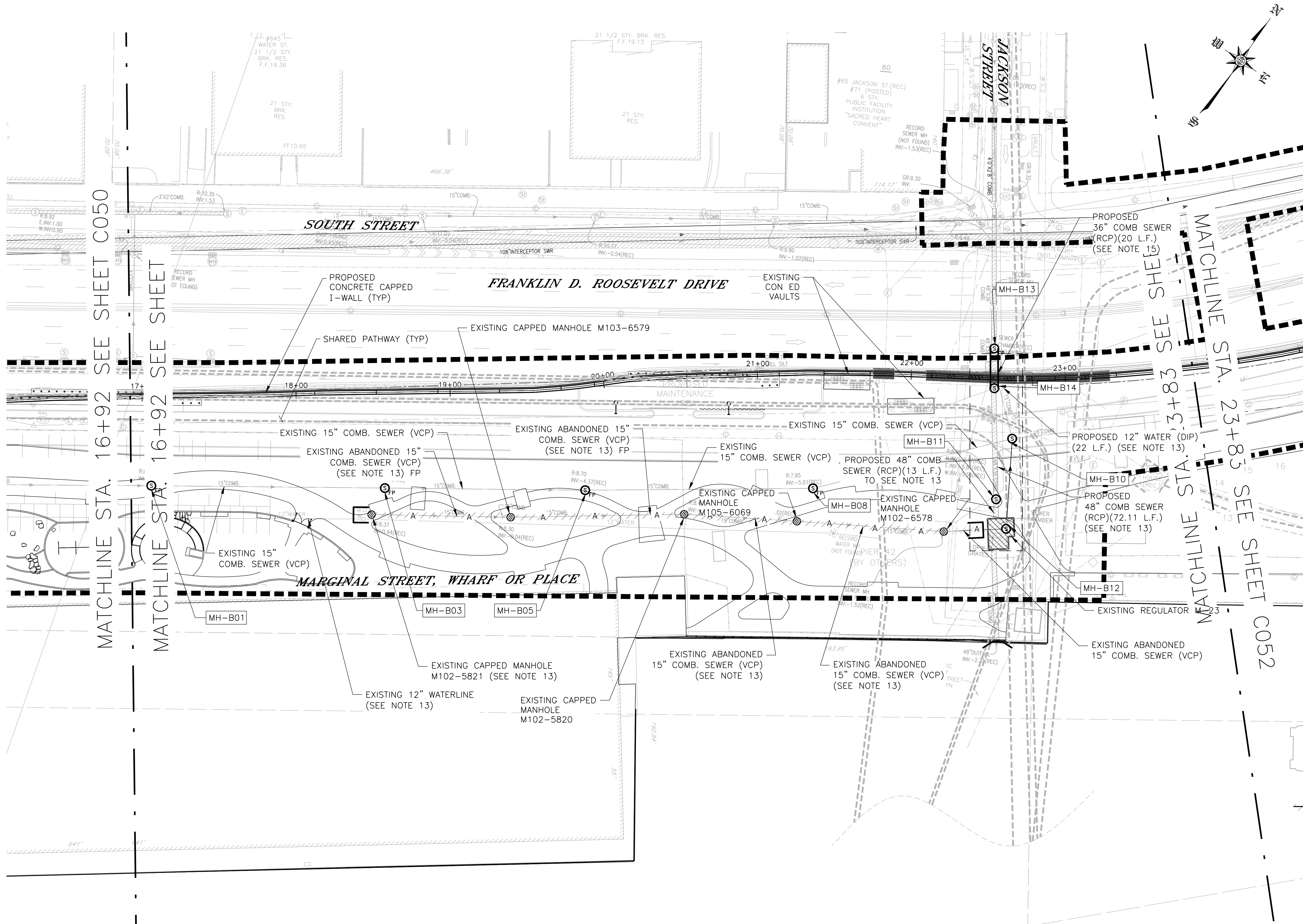
CH2M DRAWN BY \_\_\_\_\_ SANDRESM1-C050-00.DWG CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 227 OF 1594 C050

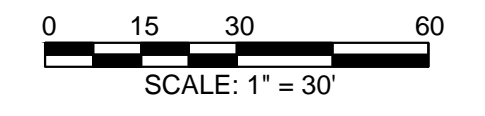


REVISED MASS MAILING #1 SUBMISSION 7/18/2019



- NOTES:**
1. ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
  2. FOR REGULATOR STRENGTHENING, AND MODIFICATION SCHEDULE SEE SHEETS C109 THROUGH C112.
  3. FOR MANHOLE FLOOD PROOFING DETAILS SEE SHEETS C101 THROUGH C102.
  4. SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
  5. PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
  6. FOR MANHOLE FLOOD PROOFING SCHEDULE SEE SHEETS C103 THROUGH C104.
  7. CONTRACTOR SHALL PROTECT IN-PLACE ANY HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
  8. REPLACED/REPAIRED AS PART OF PIER 42 WORKS.
  9. REFER TO SHEETS D301 - D310 FOR PARK DRAINAGE PLAN.
  10. EXTENT OF PIER 42 WORK INCLUDED GUNTING OF EXISTING BRICK SEWERS 25 FEET IN SECTIONS TO BE REPLACED AND SECTIONS TO REMAIN.

- LEGEND:**
- INT. SWR. INTERCEPTOR SEWER
  - STORM STORM SEWER
  - VCP VITREOUS CLAY PIPE
  - RCP REINFORCED CONCRETE PIPE
  - RCFT REINFORCED CONCRETE (FLAT TOP)
  - COMB. SEWER COMBINED SEWER
  - UKN UNKNOWN MATERIAL
  - INACC MANHOLE WAS INACCESSIBLE
  - CSO COMBINED SEWER OVERFLOW
  - SWO STORM WATER OUTFALL
  - VELP VERTICAL ELLIPTICAL PIPE
  - DIP DUCTILE IRON PIPE
- MH-XXX EXISTING MANHOLE TO BE FLOODPROOFED. SEE SHEETS C100-C104
  - COMB MANHOLE FLOODPROOFED AS PART OF PIER 42 WORK
  - Water Main or Sewer to be Replaced
  - DEP SEWER REGULATOR STRUCTURE FLOODPROOFED AS PART OF PIER 42 WORK
  - LIMIT OF WORK
  - CAPPED MANHOLE
  - EXISTING ABANDONED SEWER
  - CSO OPENING
  - SEWER BULKHEAD



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR  
INFORMATION SEE SURVEY SET SU100 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:  
**AKRF KSE**  
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:  
**ch2m**  
CH2M HILL NEW YORK, INC.  
NAME OF CONSULTANT

SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 1 - REACH B  
STA. 16+92 - 23+83

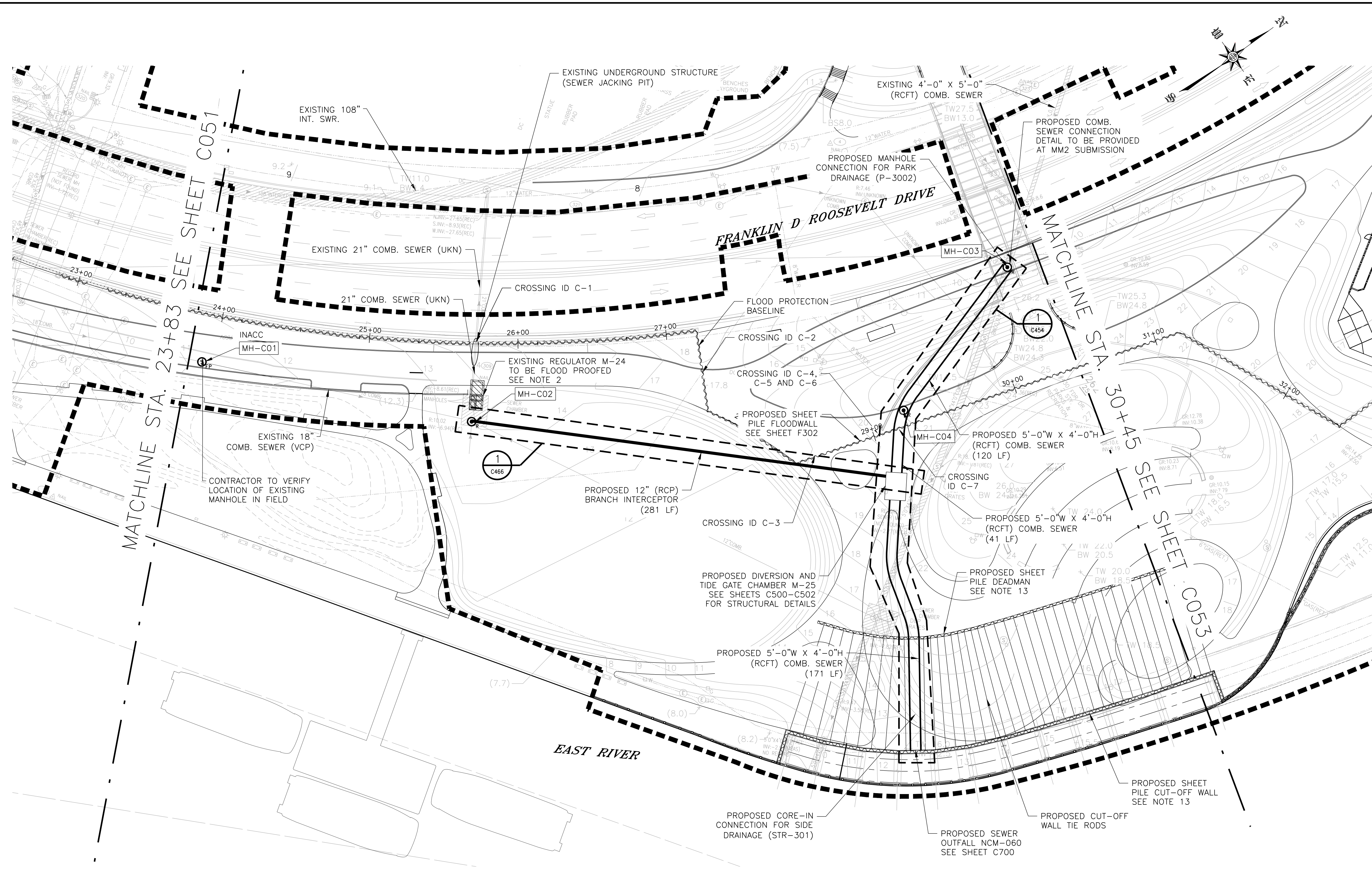
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NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 7/18/2019    SHEET 228 OF 1594    COS 1



REVISED MASS MAILING #1 SUBMISSION 7/18/2019



**NOTES:**

1. ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR REGULATOR STRENGTHENING, AND MODIFICATION SCHEDULE SEE SHEETS F764 THROUGH F766.
3. FOR MANHOLE FLOOD PROOFING DETAILS SEE SHEETS C101 THROUGH C102.
4. FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F705 THROUGH F710.
5. COMBINED SEWER MANHOLES ON THE FLOOD SIDE SHALL BE OUTFITTED WITH WATER-TIGHT MANHOLES COVERS AND FRAMES.
6. ALL EXISTING REGULATOR TIDE GATES SHALL BE REPLACED.
7. SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
8. PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
9. FOR MANHOLE FLOOD PROOFING SCHEDULE SEE SHEETS C103 THROUGH C104.
10. FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS C450 THROUGH C481.
11. CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
12. FOR PARK DRAINAGE AND SANITARY PLAN SEE SHEETS D300 THROUGH D320.
13. FOR ESPLANADE STRUCTURAL PLANS SEE SHEETS F500 THROUGH F507.

**LEGEND:**

- |             |                                |   |   |
|-------------|--------------------------------|---|---|
| INT. SWR.   | INTERCEPTOR SEWER              | — | PROPOSED COMB. SEWER                                      |
| STORM       | STORM SEWER                    | ▨ | DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED          |
| VCP         | VITREOUS CLAY PIPE             | — | LIMIT OF WORK   |
| RCP         | REINFORCED CONCRETE PIPE       | ○ | EXISTING MANHOLE TO BE FLOODPROOFED, SEE SHEETS C101-C104 |
| RCFT        | REINFORCED CONCRETE (FLAT TOP) | ○ | PROPOSED MANHOLE  |
| COMB. SEWER | COMBINED SEWER                 |   |   |
| UKN         | UNKNOWN MATERIAL               |   |   |
| INACC       | MANHOLE WAS INACCESSIBLE       |   |   |
| CSO         | COMBINED SEWER OVERFLOW        |   |   |
| SWO         | STORM WATER OUTFALL            |   |   |

**MANHOLE LOCATIONS**

MANHOLE ID	TYPE	NORTHING	EASTING	RIM	INV.
MH-C01	FLOODPROOF			UNKNOWN	UNKNOWN
MH-C02	STD. PRECAST			14.06	-4.57
MH-C03	TYPE-R			9.71	N/A
MH-C04	TYPE-R			21.75	N/A



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR  
INFORMATION SEE SURVEY SET S0100 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:



FINAL DESIGN PREPARED BY:



SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

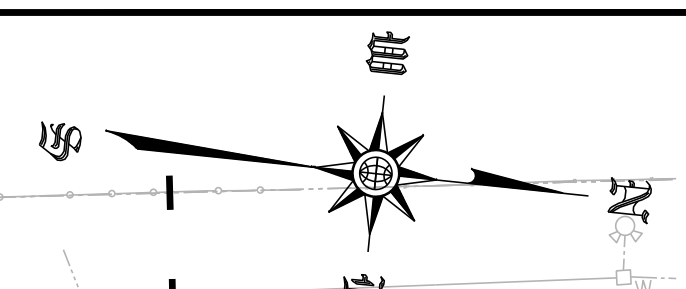
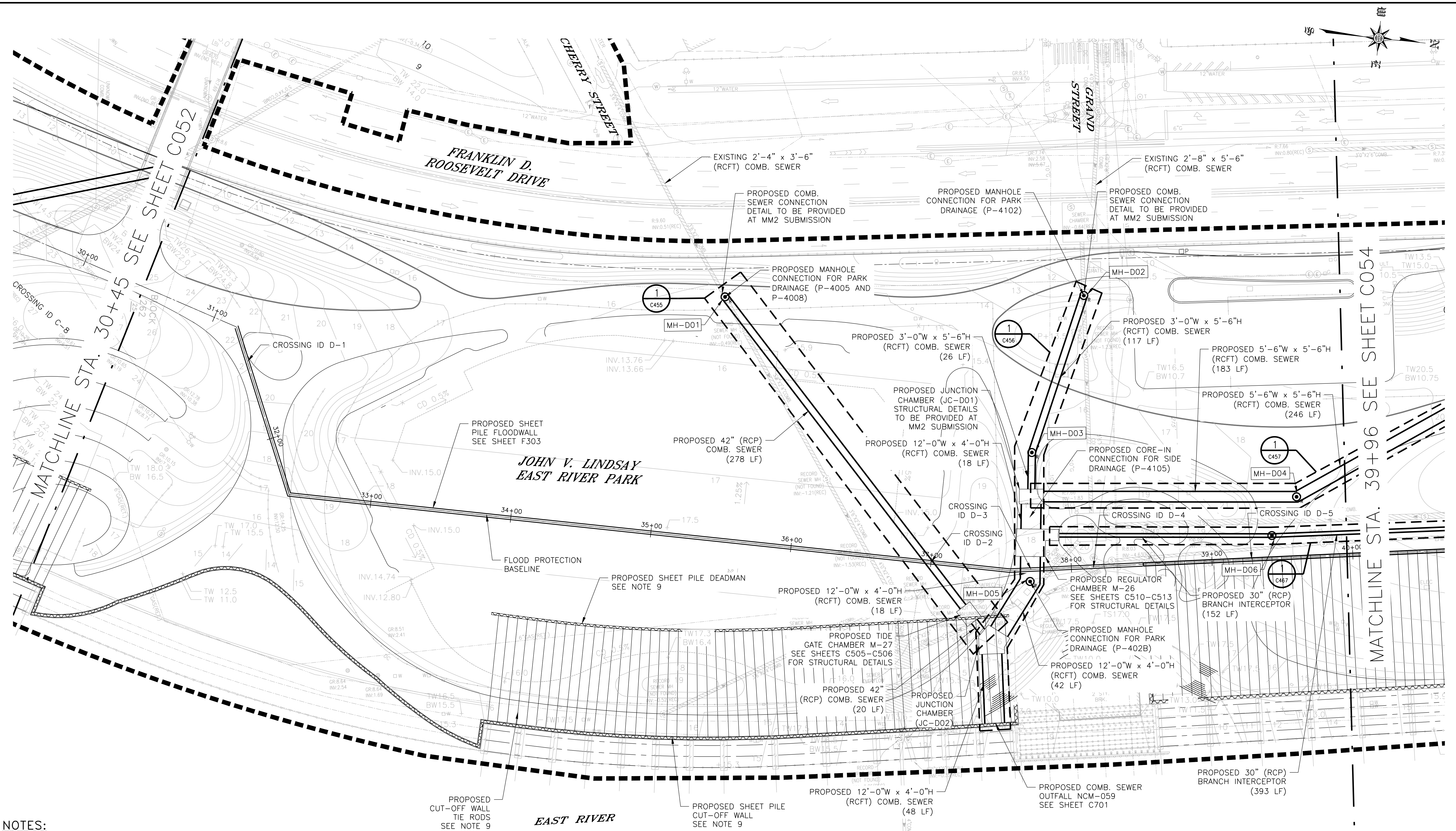
CIVIL PLAN  
SEGMENT 1 - REACH C  
STA. 23+83 - 30+45  
ARCADIS DRAWN BY \_\_\_\_\_ SANDRESM1-C052-00.DWG  
CADD FILE

INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 229 OF 1594 C052



REVISED MASS MAILING #1 SUBMISSION 7/18/2019



**NOTES:**

1. ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F705 THROUGH F710.
3. SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
4. MANHOLES IDENTIFIED AS 'TO BE MODIFIED' WILL NOT RECEIVE FLOOD PROOFING.
5. PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
6. FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS C450 THROUGH C481.
7. CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
8. FOR PARK DRAINAGE AND SANITARY PLAN SEE SHEETS D300 THROUGH D320.
9. FOR ESPLANADE STRUCTURAL PLANS SEE SHEETS F500 THROUGH F507.

**LEGEND:**

- |             |                                |  |                        |
|-------------|--------------------------------|--|------------------------|
| INT. SWR.   | INTERCEPTOR SEWER              |  | PROPOSED COMB. SEWER   |
| STORM       | STORM SEWER                    |  | LIMIT OF WORK          |
| VCP         | VITREOUS CLAY PIPE             |  | PROPOSED MANHOLE RISER |
| RCP         | REINFORCED CONCRETE PIPE       |  | PROPOSED MANHOLE       |
| RCFT        | REINFORCED CONCRETE (FLAT TOP) |  |                        |
| COMB. SEWER | COMBINED SEWER                 |  |                        |
| UKN         | UNKNOWN MATERIAL               |  |                        |
| INACC       | MANHOLE WAS INACCESSIBLE       |  |                        |
| CSO         | COMBINED SEWER OVERFLOW        |  |                        |
| DIP         | DUCTILE IRON PIPE              |  |                        |

**MANHOLE LOCATIONS**

MANHOLE ID	TYPE	NORTHING	EASTING	RIM	INV.
MH-D01	TYPE R			15.19	N/A
MH-D02	TYPE R			13.25	N/A
MH-D03	TYPE R			15.98	N/A
MH-D04	TYPE R			18.63	N/A
MH-D05	TYPE R			17.97	N/A
MH-D06	STD. PRECAST			18.90	-3.48



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR  
INFORMATION SEE SURVEY SET SUI00 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:



FINAL DESIGN PREPARED BY:



SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 1 - REACH D  
STA. 30+45 - 39+96

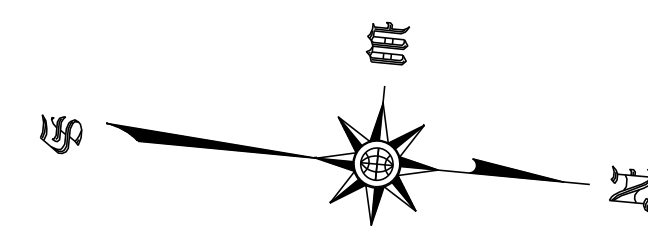
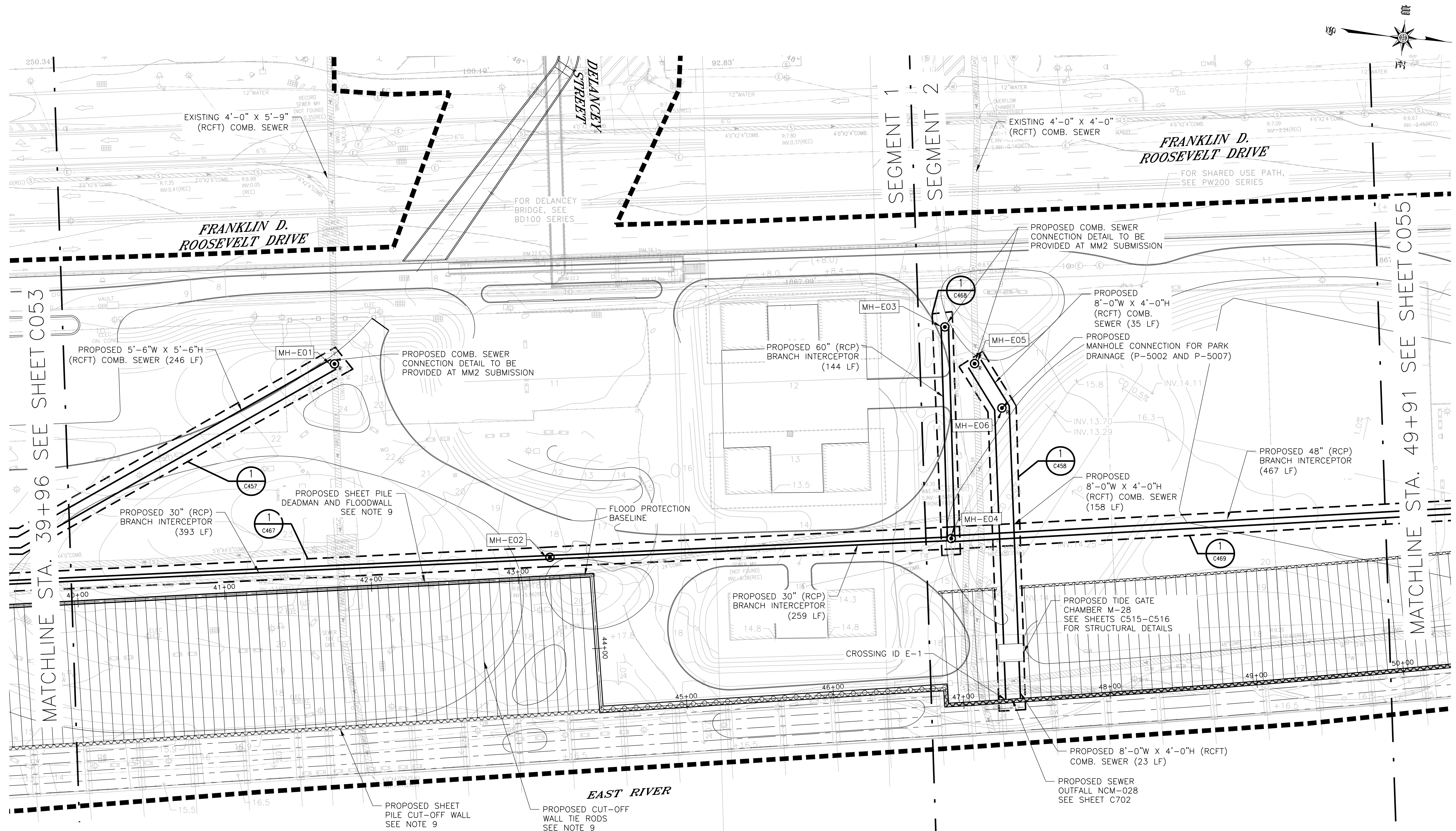
ARCADIS DRAWN BY \_\_\_\_\_ SANDRESM1-C053-00.DWG  
CADD FILE

INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 230 OF 1594 C053



REVISED MASS MAILING #1 SUBMISSION 7/18/2019



**NOTES:**

1. ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F705 THROUGH F710.
3. SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
4. MANHOLES IDENTIFIED AS 'TO BE MODIFIED' WILL NOT RECEIVE FLOOD PROOFING.
5. PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
6. FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS C450 THROUGH C481.
7. CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
8. FOR PARK DRAINAGE AND SANITARY PLAN SEE SHEETS D300 THROUGH D320.
9. FOR ESPLANADE STRUCTURAL PLANS SEE SHEETS F500 THROUGH F507.

**LEGEND:**

- |             |                                |  |                        |
|-------------|--------------------------------|--|------------------------|
| INT. SWR.   | INTERCEPTOR SEWER              |  | PROPOSED COMB. SEWER   |
| STORM       | STORM SEWER                    |  | LIMIT OF WORK          |
| VCP         | VITREOUS CLAY PIPE             |  | PROPOSED MANHOLE RISER |
| RCP         | REINFORCED CONCRETE PIPE       |  | PROPOSED MANHOLE       |
| RCFT        | REINFORCED CONCRETE (FLAT TOP) |  |                        |
| COMB. SEWER | COMBINED SEWER                 |  |                        |
| UNK         | UNKNOWN MATERIAL               |  |                        |
| INACC       | MANHOLE WAS INACCESSIBLE       |  |                        |
| CSO         | COMBINED SEWER OVERFLOW        |  |                        |
| DIP         | DUCTILE IRON PIPE              |  |                        |

**MANHOLE LOCATIONS**

MANHOLE ID	TYPE	NORTHING	EASTING	RIM	INV.
MH-E01	TYPE R			23.87	N/A
MH-E02	STD. PRECAST			16.95	-4.43
MH-E03	STD. PRECAST			10.93	-11.06
MH-E04	STD. PRECAST			14.16	-10.92
MH-E05	TYPE R			11.44	N/A
MH-E06	TYPE R			12.05	N/A



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR  
INFORMATION SEE SURVEY SET SU100 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:  
**AKRF KSE**  
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:  
**ARCADIS**  
ARCADIS OF NEW YORK, INC.  
NAME OF CONSULTANT

SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 1 - REACH E  
STA. 39+96 - 49+91  
ARCADIS DRAWN BY \_\_\_\_\_  
SANDRESM1-C054-00.DWG  
CADD FILE

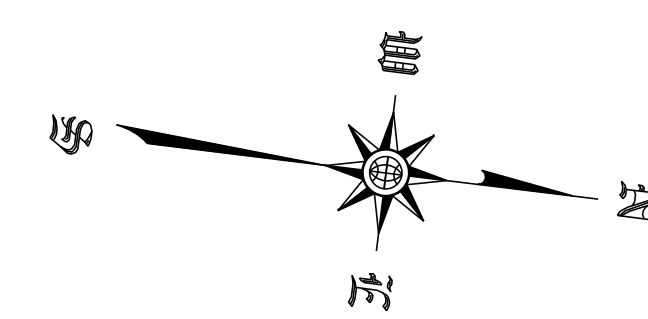
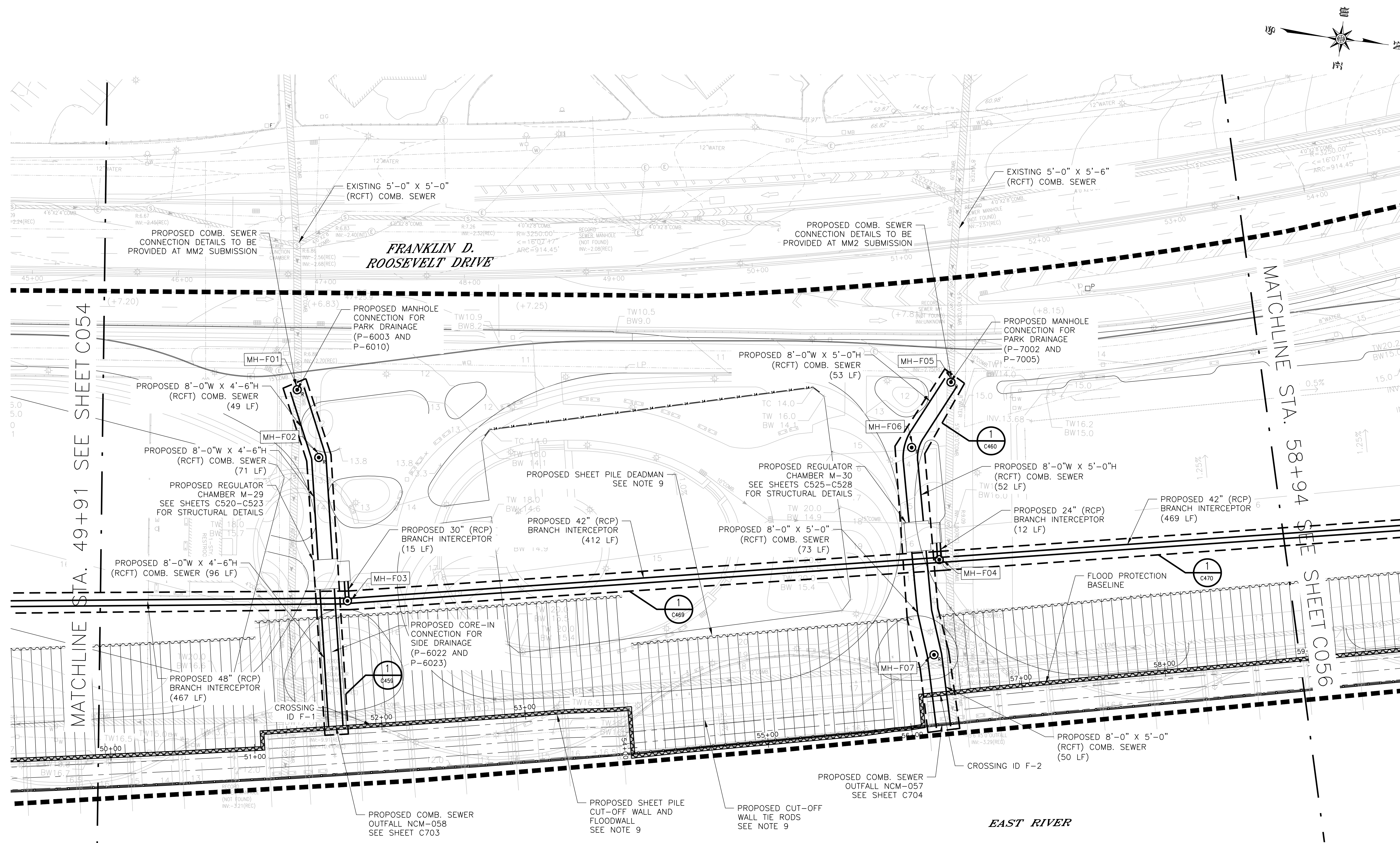
NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

**INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY**  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019    SHEET 231 OF 1594    C054



REVISED MASS MAILING #1 SUBMISSION 7/18/2019



**NOTES:**

- ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
- FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F705 THROUGH F710.
- SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
- MANHOLES IDENTIFIED AS 'TO BE MODIFIED' WILL NOT RECEIVE FLOOD PROOFING.
- PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
- FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS C450 THROUGH C481.

- CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
- FOR PARK DRAINAGE AND SANITARY PLAN SEE SHEETS D300 THROUGH D320.
- FOR ESPLANADE STRUCTURAL PLANS SEE SHEETS F500 THROUGH F507.

**LEGEND:**

- |             |                                |
|-------------|--------------------------------|
| INT. SWR.   | INTERCEPTOR SEWER              |
| STORM       | STORM SEWER                    |
| VCP         | VITREOUS CLAY PIPE             |
| RCP         | REINFORCED CONCRETE PIPE       |
| RCFT        | REINFORCED CONCRETE (FLAT TOP) |
| COMB. SEWER | COMBINED SEWER                 |
| UKN         | UNKNOWN MATERIAL               |
| INACC       | MANHOLE WAS INACCESSIBLE       |
| CSO         | COMBINED SEWER OVERFLOW        |
| DIP         | DUCTILE IRON PIPE              |

**MANHOLE LOCATIONS**

MANHOLE ID	TYPE	NORTHING	EASTING	RIM	INV.
MH-F01	TYPE R			12.68	N/A
MH-F02	TYPE R			12.64	N/A
MH-F03	STD. PRECAST			15.57	-9.60
MH-F04	STD. PRECAST			16.52	-8.57
MH-F05	TYPE R			13.41	N/A
MH-F06	TYPE R			13.89	N/A
MH-F07	TYPE R			17.22	N/A

- PROPOSED COMB. SEWER
- LIMIT OF WORK
- MH-XXX PROPOSED MANHOLE RISER
- MH-XXX PROPOSED MANHOLE



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET SU100 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:



FINAL DESIGN PREPARED BY:



SIGNATURE  
DATE

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

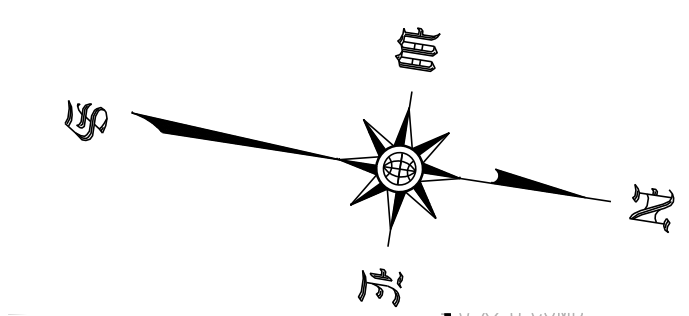
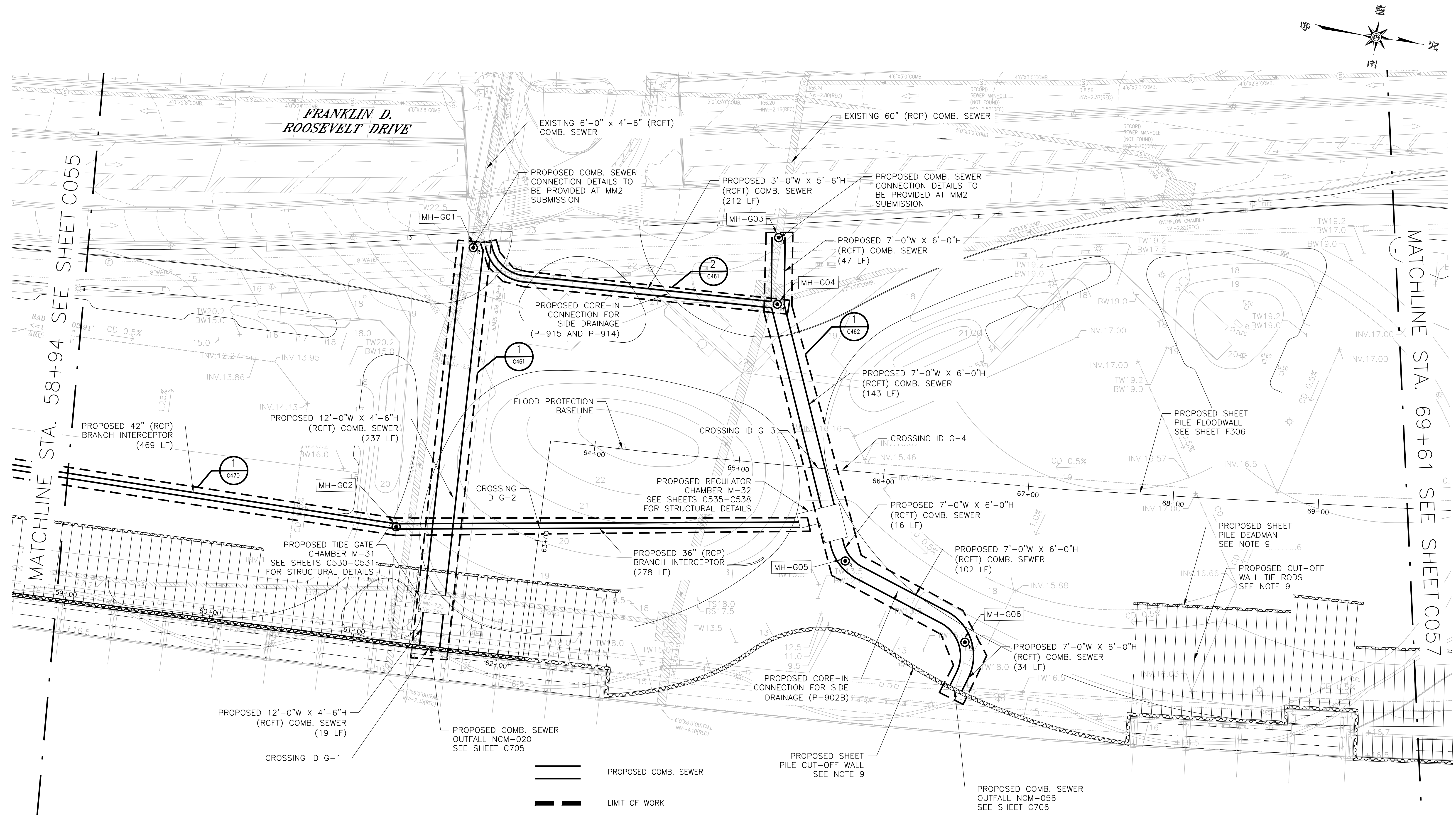
CIVIL PLAN  
SEGMENT 2 - REACH F  
STA. 49+91 - 58+94  
ARCADIS DRAWN BY SANDRESM1-C055-00.DWG  
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 232 OF 1594 C055



REVISED MASS MAILING #1 SUBMISSION 7/18/2019



MATCHLINE STA. 58+94 SEE SHEET C055

MATCHLINE STA. 69+61 SEE SHEET C057

**NOTES:**

- ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
- FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F705 THROUGH F710.
- SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
- MANHOLES IDENTIFIED AS 'TO BE MODIFIED' WILL NOT RECEIVE FLOOD PROOFING.
- PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
- FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS C450 THROUGH C481.

- CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
- FOR PARK DRAINAGE AND SANITARY PLAN SEE SHEETS D300 THROUGH D320.
- FOR ESPLANADE STRUCTURAL PLANS SEE SHEETS F500 THROUGH F507.

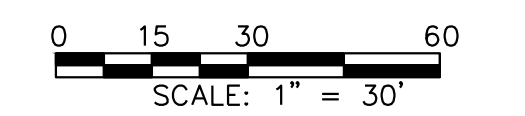
**LEGEND:**

- |             |                                |
|-------------|--------------------------------|
| INT. SWR.   | INTERCEPTOR SEWER              |
| STORM       | STORM SEWER                    |
| VCP         | VITREOUS CLAY PIPE             |
| RCP         | REINFORCED CONCRETE PIPE       |
| RCFT        | REINFORCED CONCRETE (FLAT TOP) |
| COMB. SEWER | COMBINED SEWER                 |
| UKN         | UNKNOWN MATERIAL               |
| INACC       | MANHOLE WAS INACCESSIBLE       |
| CSO         | COMBINED SEWER OVERFLOW        |
| DIP         | DUCTILE IRON PIPE              |

- MH-XXX PROPOSED MANHOLE RISER
- MH-XXX PROPOSED MANHOLE

**MANHOLE LOCATIONS**

MANHOLE ID	TYPE	NORTHING	EASTING	RIM	INV.
MH-G01	TYPE R			22.03	N/A
MH-G02	STD. PRECAST			18.94	-7.41
MH-G03	TYPE R			22.07	N/A
MH-G04	TYPE R			19.24	N/A
MH-G05	TYPE R			17.32	N/A
MH-G06	TYPE R			15.65	N/A



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

NO.	DATE	DESCRIPTIONS	BY	APPR'D

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET SU100 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:



FINAL DESIGN PREPARED BY:



SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 2 - REACH G  
STA. 58+94 - 69+61

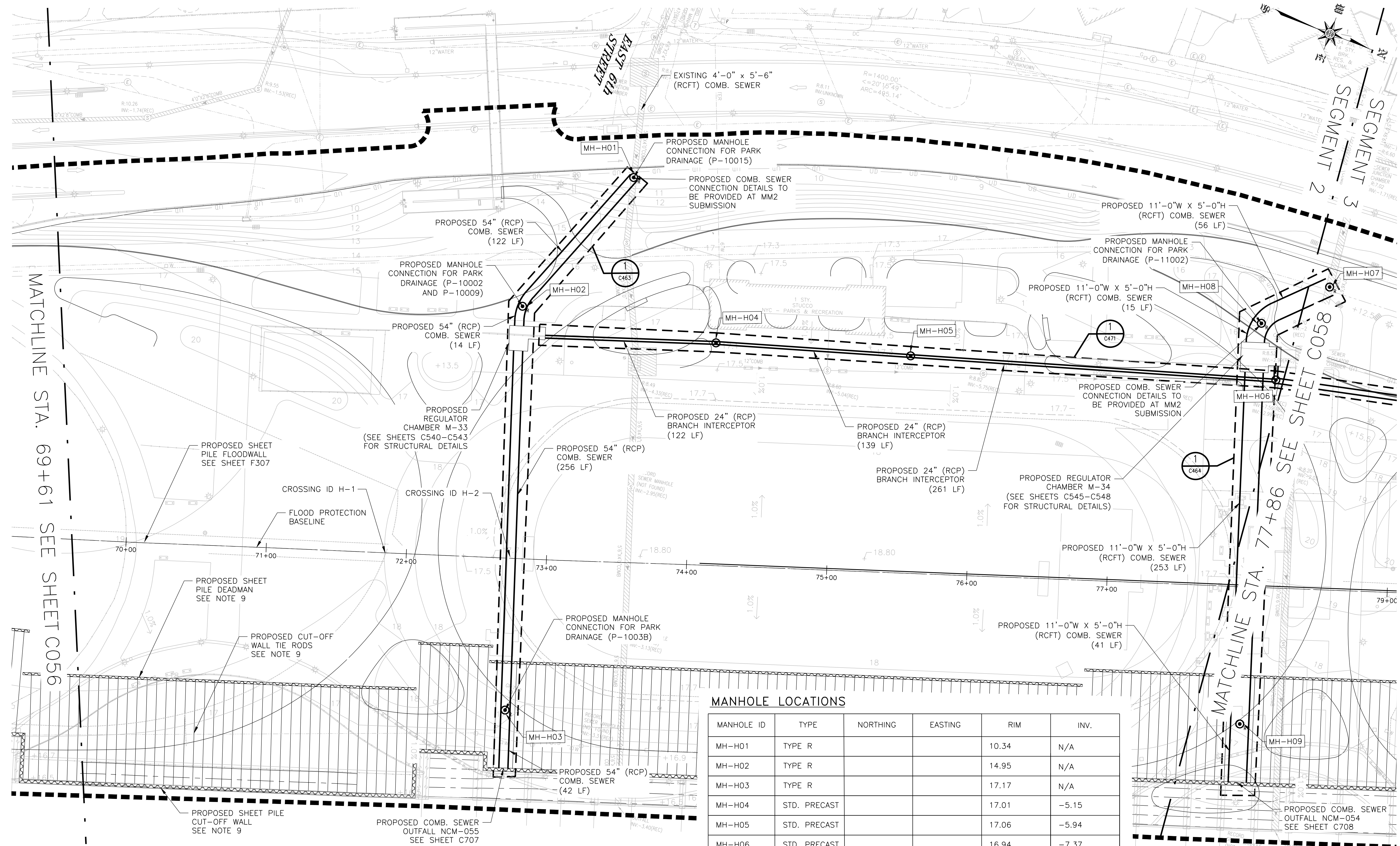
ARCADIS DRAWN BY \_\_\_\_\_ SANDRESM1-C056-00.DWG  
CADD FILE

INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 233 OF 1594 C056

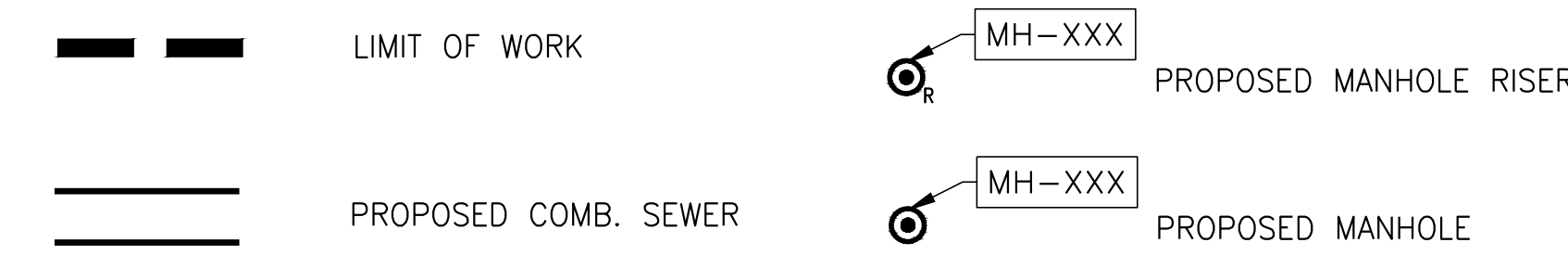


REVISED MASS MAILING #1 SUBMISSION 7/18/2019



**MANHOLE LOCATIONS**

MANHOLE ID	TYPE	NORTHING	EASTING	RIM	INV.
MH-H01	TYPE R			10.34	N/A
MH-H02	TYPE R			14.95	N/A
MH-H03	TYPE R			17.17	N/A
MH-H04	STD. PRECAST			17.01	-5.15
MH-H05	STD. PRECAST			17.06	-5.94
MH-H06	STD. PRECAST			16.94	-7.37
MH-H07	EXISTING CON.			12.22	-2.46
MH-H08	TYPE R			17.00	N/A
MH-H09	TYPE R			17.25	N/A

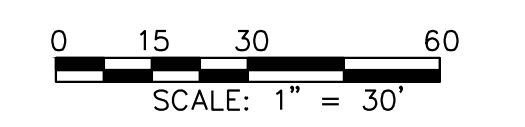


**NOTES:**

- ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
- FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F705 THROUGH F710.
- SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
- MANHOLES IDENTIFIED AS 'TO BE MODIFIED' WILL NOT RECEIVE FLOOD PROOFING.
- PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
- FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS C450 THROUGH C481.
- CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
- FOR PARK DRAINAGE AND SANITARY PLAN SEE SHEETS D300 THROUGH D320.
- FOR ESPLANADE STRUCTURAL PLANS SEE SHEETS F500 THROUGH F507.

**LEGEND:**

- |             |                                |
|-------------|--------------------------------|
| INT. SWR.   | INTERCEPTOR SEWER              |
| STORM       | STORM SEWER                    |
| VCP         | VITREOUS CLAY PIPE             |
| RCP         | REINFORCED CONCRETE PIPE       |
| RCFT        | REINFORCED CONCRETE (FLAT TOP) |
| COMB. SEWER | COMBINED SEWER                 |
| UKN         | UNKNOWN MATERIAL               |
| INACC       | MANHOLE WAS INACCESSIBLE       |
| CSO         | COMBINED SEWER OVERFLOW        |
| DIP         | DUCTILE IRON PIPE              |



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET SU100 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:



FINAL DESIGN PREPARED BY:



SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 2 - REACH H  
STA. 69+61 - 77+86

ARCADIS DRAWN BY \_\_\_\_\_ SANDRESM1-C057-00.DWG  
CADD FILE

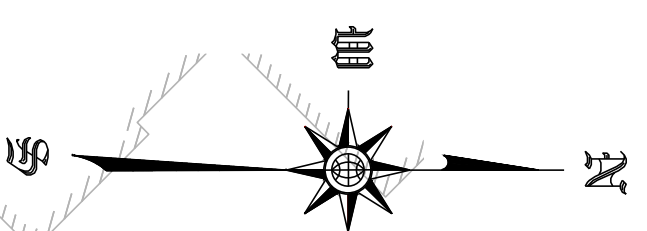
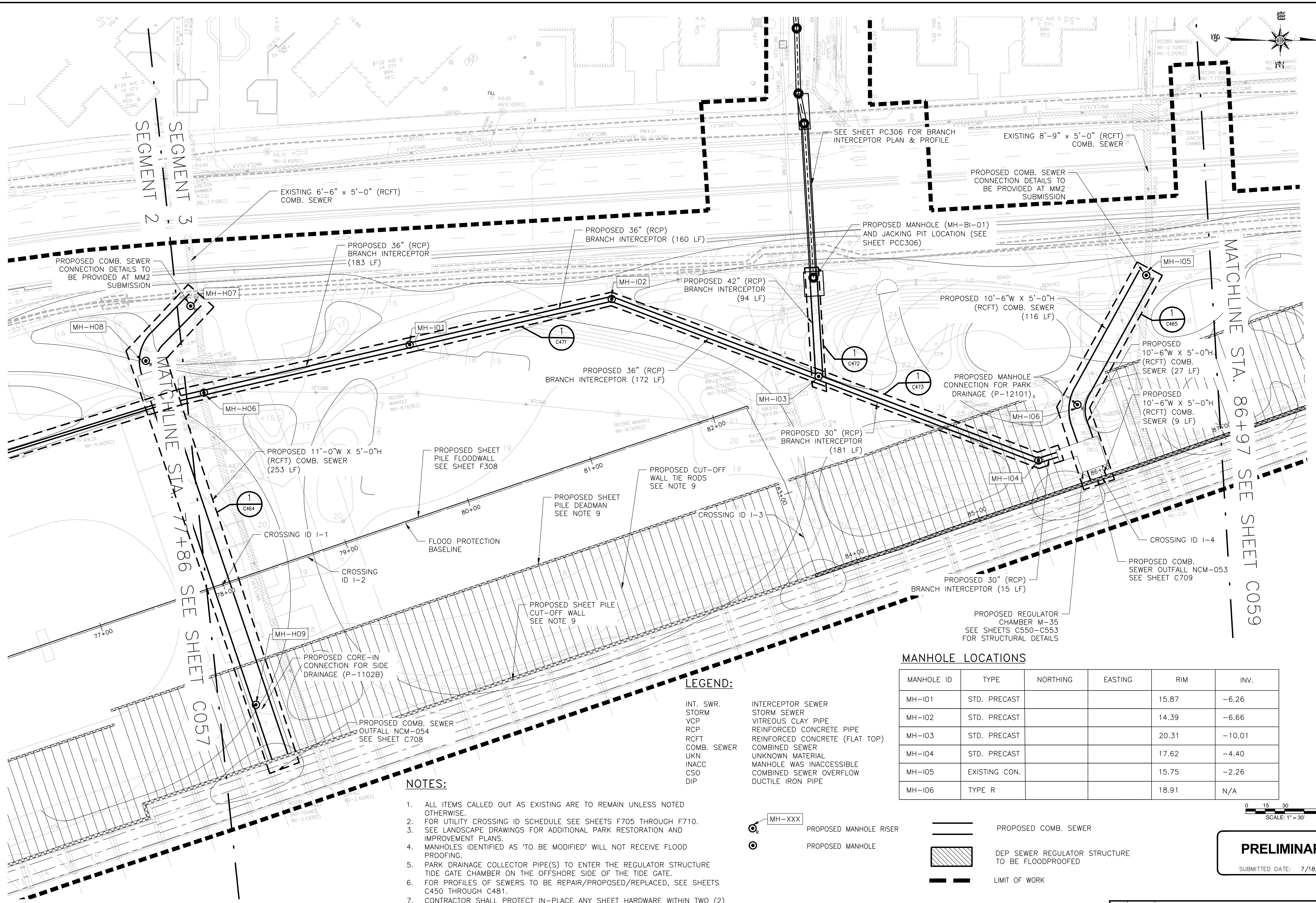
NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 234 OF 1594 C057



REVISED MASS MAILING #1 SUBMISSION 7/18/2019



**LEGEND:**

- INT. SWR. INTERCEPTOR SEWER
- STORM STORM SEWER
- VCP VITREOUS CLAY PIPE
- RCP REINFORCED CONCRETE PIPE
- RCFT REINFORCED CONCRETE (FLAT TOP)
- COMB. SEWER COMBINED SEWER
- UKN UNKNOWN MATERIAL
- INACC MANHOLE WAS INACCESSIBLE
- CSO COMBINED SEWER OVERFLOW
- DIP DUCTILE IRON PIPE

- PROPOSED MANHOLE RISER
- PROPOSED MANHOLE

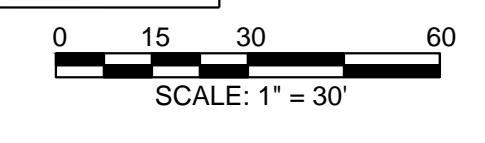
- PROPOSED COMB. SEWER
- DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED
- LIMIT OF WORK

**NOTES:**

1. ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F705 THROUGH F710.
3. SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
4. MANHOLES IDENTIFIED AS 'TO BE MODIFIED' WILL NOT RECEIVE FLOOD PROOFING.
5. PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
6. FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS C450 THROUGH C481.
7. CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
8. FOR PARK DRAINAGE AND SANITARY PLAN SEE SHEETS D300 THROUGH D320.
9. FOR ESPLANADE STRUCTURAL PLANS SEE SHEETS F500 THROUGH F507.

**MANHOLE LOCATIONS**

MANHOLE ID	TYPE	NORTHING	EASTING	RIM	INV.
MH-101	STD. PRECAST			15.87	-6.26
MH-102	STD. PRECAST			14.39	-6.66
MH-103	STD. PRECAST			20.31	-10.01
MH-104	STD. PRECAST			17.62	-4.40
MH-105	EXISTING CON.			15.75	-2.26
MH-106	TYPE R			18.91	N/A



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET SUI00 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:



FINAL DESIGN PREPARED BY:



SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 3 - REACH 1  
STA. 77+86 - 86+97

ARCADIS DRAWN BY \_\_\_\_\_ SANDRESM1-C058-00.DWG  
CADD FILE

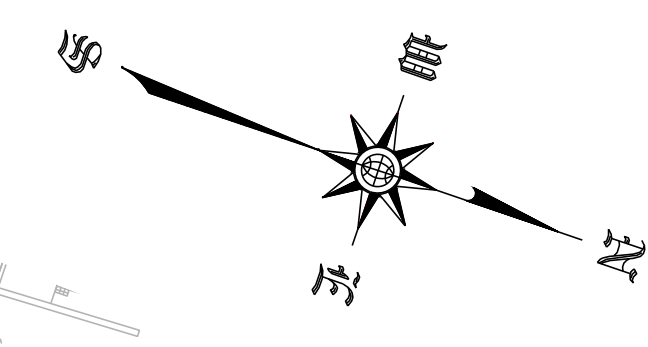
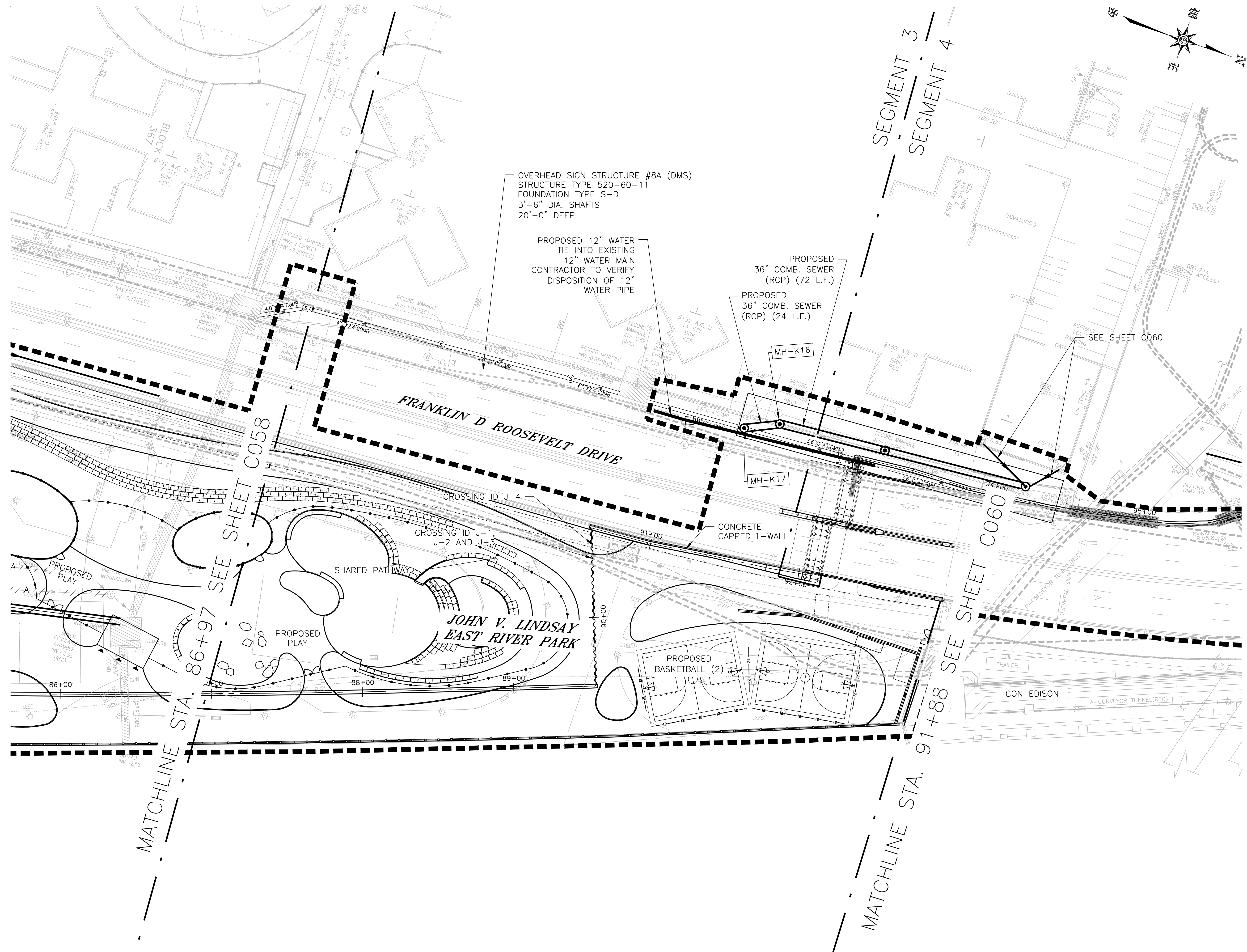
NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 235 OF 1594 C058



REVISED MASS MAILING #1 SUBMISSION 7/18/2019



**NOTES:**

1. ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR REGULATOR STRENGTHENING, AND MODIFICATION SCHEDULE SEE SHEETS C109 THROUGH C112.
3. FOR MANHOLE FLOOD PROOFING DETAILS SEE SHEETS C101 THROUGH C102.
4. FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F700 THROUGH F703.
5. COMBINED SEWER MANHOLES ON THE FLOOD SIDE SHALL BE OUTFITTED WITH WATER-TIGHT MANHOLES COVERS AND FRAMES.
6. ALL EXISTING REGULATOR TIDE GATES SHALL BE REPLACED.
7. SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
8. PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
9. FOR MANHOLE FLOOD PROOFING SCHEDULE SEE SHEETS C103 THROUGH C104.
10. FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS F450 THROUGH F475.
11. CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
12. USE FERNCO SERIES S006RC COUPLINGS OR APPROVED EQUAL TO JOIN EXISTING CATCH BASIN PIPING TO PROPOSED DIP.
13. REFER TO SHEETS D301 - D310 FOR PARK DRAINAGE PLAN.

**LEGEND:**

- INT. SWR. INTERCEPTOR SEWER
  - STORM STORM SEWER
  - VCP VITREOUS CLAY PIPE
  - RCP REINFORCED CONCRETE PIPE
  - RCFT REINFORCED CONCRETE (FLAT TOP)
  - COMB. SEWER COMBINED SEWER
  - UKN UNKNOWN MATERIAL
  - INACC MANHOLE WAS INACCESSIBLE
  - CSO COMBINED SEWER OVERFLOW
  - SWO STORM WATER OUTFALL
  - DIP DUCTILE IRON PIPE
- 
- WATER MAIN OR SEWER TO BE REPLACED
  - DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED
  - LIMIT OF WORK
  - MH-XXX NEW MANHOLE TO BE INSTALLED



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

NO.	DATE	DESCRIPTIONS	BY	APPR'D

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR  
INFORMATION SEE SURVEY SET SU100 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:  
**AKRF KSE**  
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:  
**ch2m**  
CH2M HILL NEW YORK, INC.  
NAME OF CONSULTANT

SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 3 - REACH J  
STA. 86+97 - 91+88

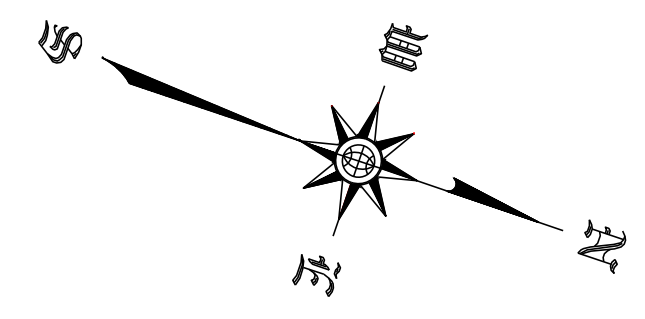
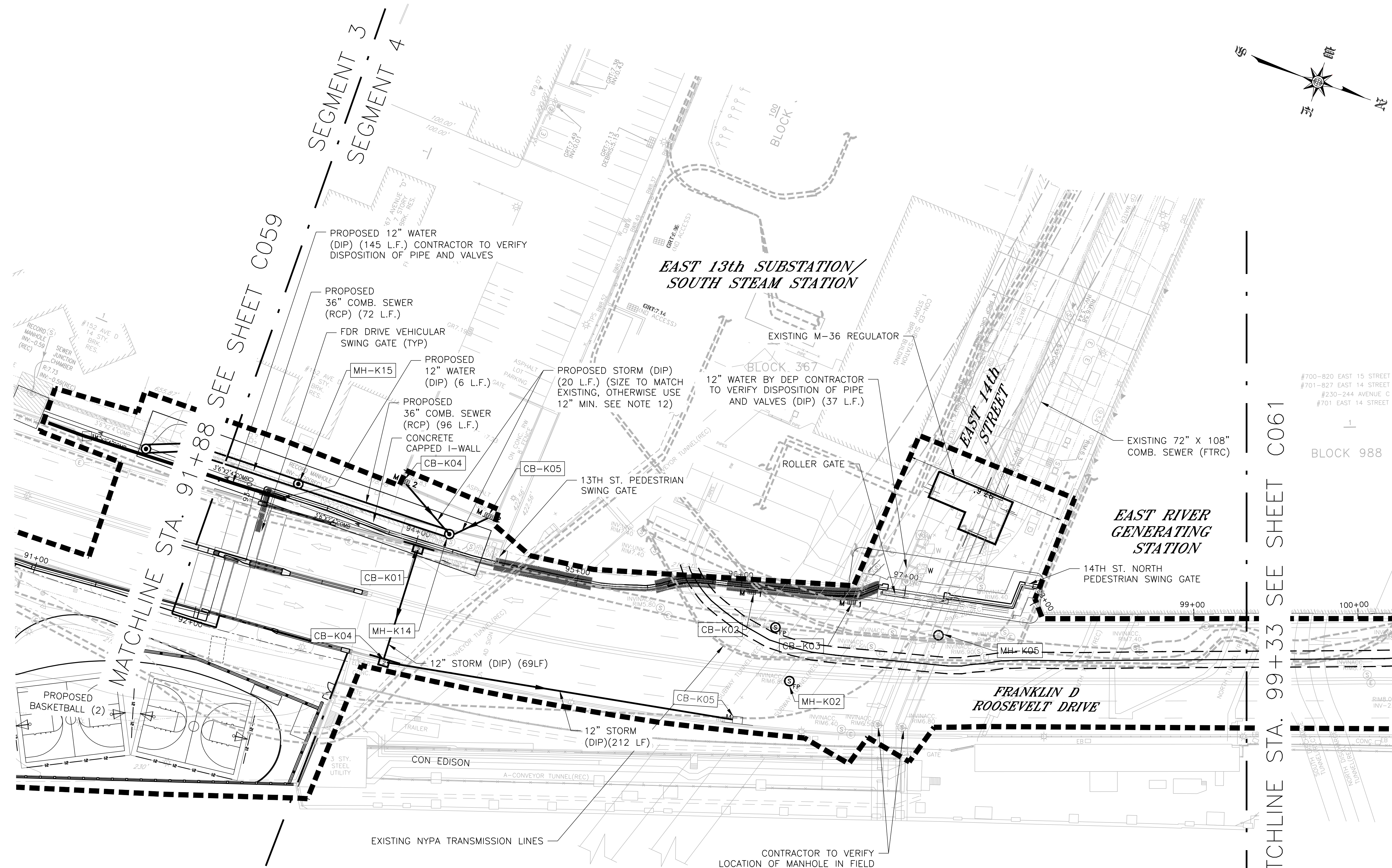
CH2M DRAWN BY \_\_\_\_\_ SANDRESM1-C059-00.DWG  
CADD FILE

INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 236 OF 1594 C059



REVISED MASS MAILING # 1 SUBMISSION 7/18/2019



**NOTES:**

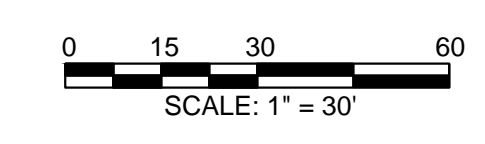
1. ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR REGULATOR STRENGTHENING, AND MODIFICATION SCHEDULE SEE SHEETS C109 THROUGH C112.
3. FOR MANHOLE FLOOD PROOFING DETAILS SEE SHEETS C101 THROUGH C102.
4. SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
5. PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
6. FOR MANHOLE FLOOD PROOFING SCHEDULE SEE SHEETS C103 THROUGH C104.
7. CONTRACTOR SHALL PROTECT IN-PLACE ANY HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
8. REPLACED/REPAIRED AS PART OF PIER 42 WORKS.
9. REFER TO SHEETS D301 - D310 FOR PARK DRAINAGE PLAN.
10. EXTENT OF PIER 42 WORK INCLUDED GUNITING OF EXISTING BRICK SEWERS 25 FEET IN SECTIONS TO BE REPLACED AND SECTIONS TO REMAIN.

**LEGEND:**

- INT. SWR. INTERCEPTOR SEWER
  - STORM STORM SEWER
  - VCP VITREOUS CLAY PIPE
  - RCP REINFORCED CONCRETE PIPE
  - RCFT REINFORCED CONCRETE (FLAT TOP)
  - COMB. SEWER COMBINED SEWER
  - UKN UNKNOWN MATERIAL
  - INACC MANHOLE WAS INACCESSIBLE
  - CSO COMBINED SEWER OVERFLOW
  - SWO STORM WATER OUTFALL
  - DIP DUCTILE IRON PIPE
- MH-XXX EXISTING MANHOLE TO BE FLOODPROOFED. SEE SHEETS C100-C104
  - MANHOLE TO BE CAPPED
  - MH-XXX NEW MANHOLE TO BE INSTALLED

ADDRESS NOT FOUND

- CB-XXX NEW CATCH BASIN
- CB-XXX EXISTING CATCH BASIN AND TYPE TO BE RE-SET TO FINAL GRADE
- w EXISTING WATER VALVEBOX TO BE REPLACED
- WATER MAIN OR SEWER TO BE REPLACED
- ▨ DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED
- LIMIT OF WORK



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR  
INFORMATION SEE SURVEY SET SUI00 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:  
**AKRF KSE**  
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:  
**ch2m**  
CH2M HILL NEW YORK, INC.  
NAME OF CONSULTANT

SIGNATURE  
DATE

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 4 - REACH K  
STA. 91+88 - 99+33  
CH2M DRAWN BY  
SANDRESM1-C060-00.DWG  
CADD FILE

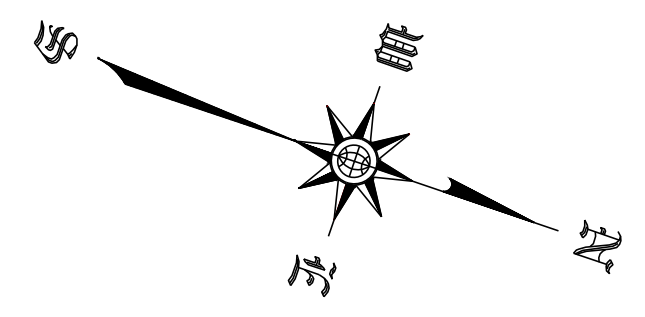
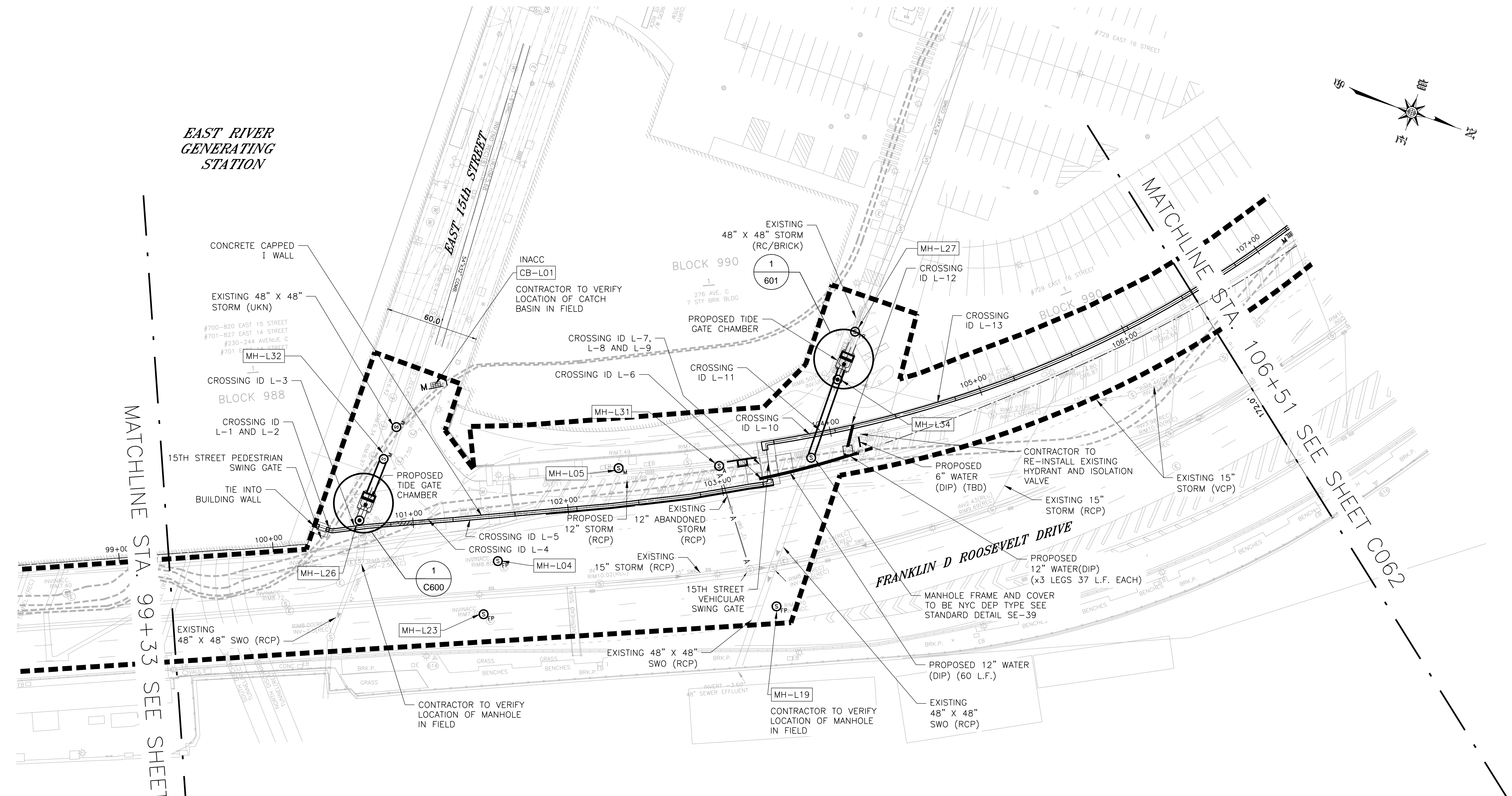
NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 237 OF 1594 C060

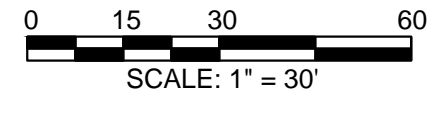
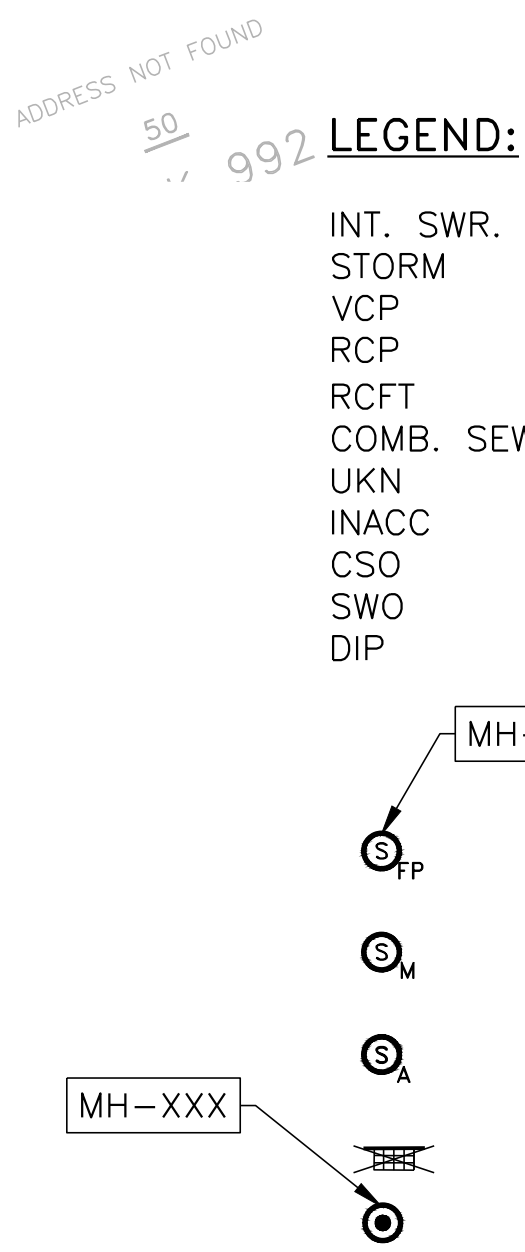


REVISED MASS MAILING # 1 SUBMISSION 7/18/2019



**NOTES:**

1. ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR REGULATOR STRENGTHENING, AND MODIFICATION SCHEDULE SEE SHEETS C109 THROUGH C112.
3. FOR MANHOLE FLOOD PROOFING DETAILS SEE SHEETS C101 THROUGH C102.
4. FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F700 THROUGH F703.
5. COMBINED SEWER MANHOLES ON THE FLOOD SIDE SHALL BE OUTFITTED WITH WATER-TIGHT MANHOLES COVERS AND FRAMES.
6. ALL EXISTING REGULATOR TIDE GATES SHALL BE REPLACED.
7. SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
8. PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
9. FOR MANHOLE FLOOD PROOFING SCHEDULE SEE SHEETS C103 THROUGH C104.
10. FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS F450 THROUGH F475.
11. CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
12. REFER TO SHEETS D301 - D310 FOR PARK DRAINAGE PLAN.



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET SUI00 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:  
**AKRF KSE**  
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:  
**ch2m**  
CH2M HILL NEW YORK, INC.  
NAME OF CONSULTANT

SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 4 - REACH L  
STA. 99+33 - 106+51

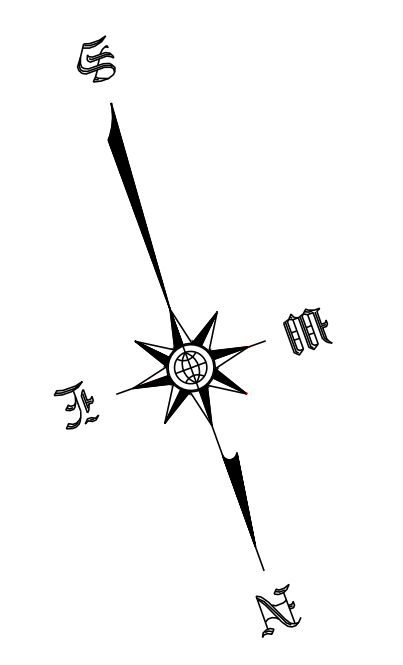
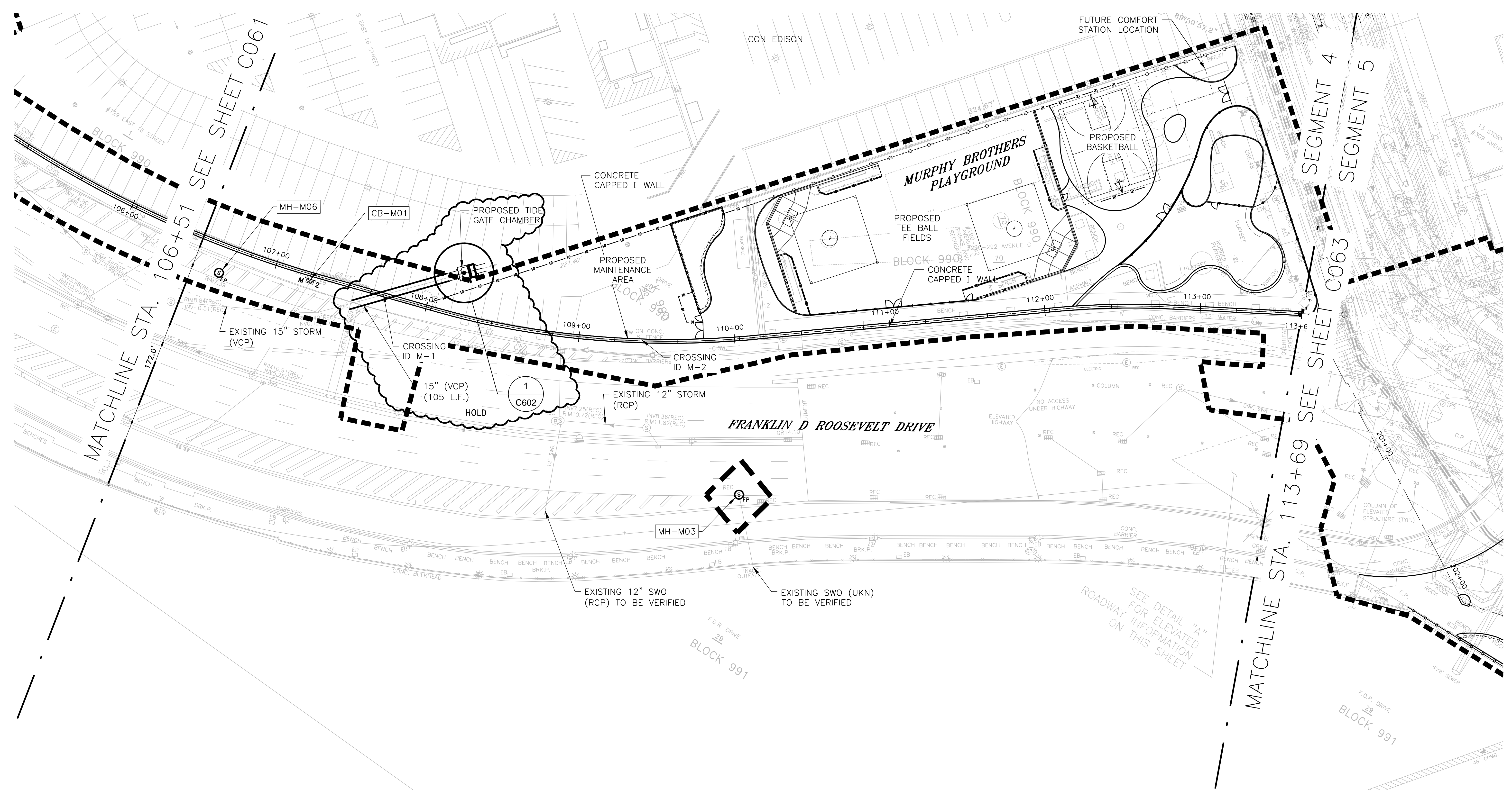
CH2M DRAWN BY \_\_\_\_\_ SANDRESM1-C061-00.DWG CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 238 OF 1594 C061



REVISED MASS MAILING # 1 SUBMISSION 7/18/2019



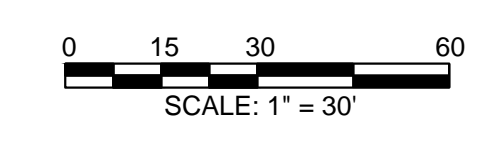
**NOTES:**

1. ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR REGULATOR STRENGTHENING, AND MODIFICATION SCHEDULE SEE SHEETS C109 THROUGH C112.
3. FOR MANHOLE FLOOD PROOFING DETAILS SEE SHEETS C101 THROUGH C102.
4. FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F700 THROUGH F703.
5. COMBINED SEWER MANHOLES ON THE FLOOD SIDE SHALL BE OUTFITTED WITH WATER-TIGHT MANHOLES COVERS AND FRAMES.
6. ALL EXISTING REGULATOR TIDE GATES SHALL BE REPLACED.
7. SEE LANDSCAPE DRAWINGS FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
8. PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
9. FOR MANHOLE FLOOD PROOFING SCHEDULE SEE SHEETS C103 THROUGH C104.
10. FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS F450 THROUGH F475.
11. CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.
12. REFER TO SHEETS D301 - D310 FOR PARK DRAINAGE PLAN.

**LEGEND:**

- INT. SWR. STORM VCP RCP RCFT COMB. SEWER UKN INACC CSO SWO
- INTERCEPTOR SEWER STORM SEWER VITREOUS CLAY PIPE REINFORCED CONCRETE PIPE REINFORCED CONCRETE (FLAT TOP) COMBINED SEWER UNKNOWN MATERIAL MANHOLE WAS INACCESSIBLE COMBINED SEWER OVERFLOW STORM WATER OUTFALL
- MH-XXX
- EXISTING MANHOLE TO BE FLOODPROOFED. SEE SHEETS C100-C104

- CB-XXX
- EXISTING CATCH BASIN TO BE MODIFIED AND TYPE
- 
- WATER MAIN OR SEWER TO BE REPLACED
- ▨
- DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED
- 
- LIMIT OF WORK



**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET SU100 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:  
**AKRF KSE**  
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:  
**ch2m**  
CH2M HILL NEW YORK, INC.  
NAME OF CONSULTANT

SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 4 - REACH M  
STA. 106+51 - 113+69

CH2M DRAWN BY \_\_\_\_\_  
SANDRESM1-C062-00.DWG  
CADD FILE

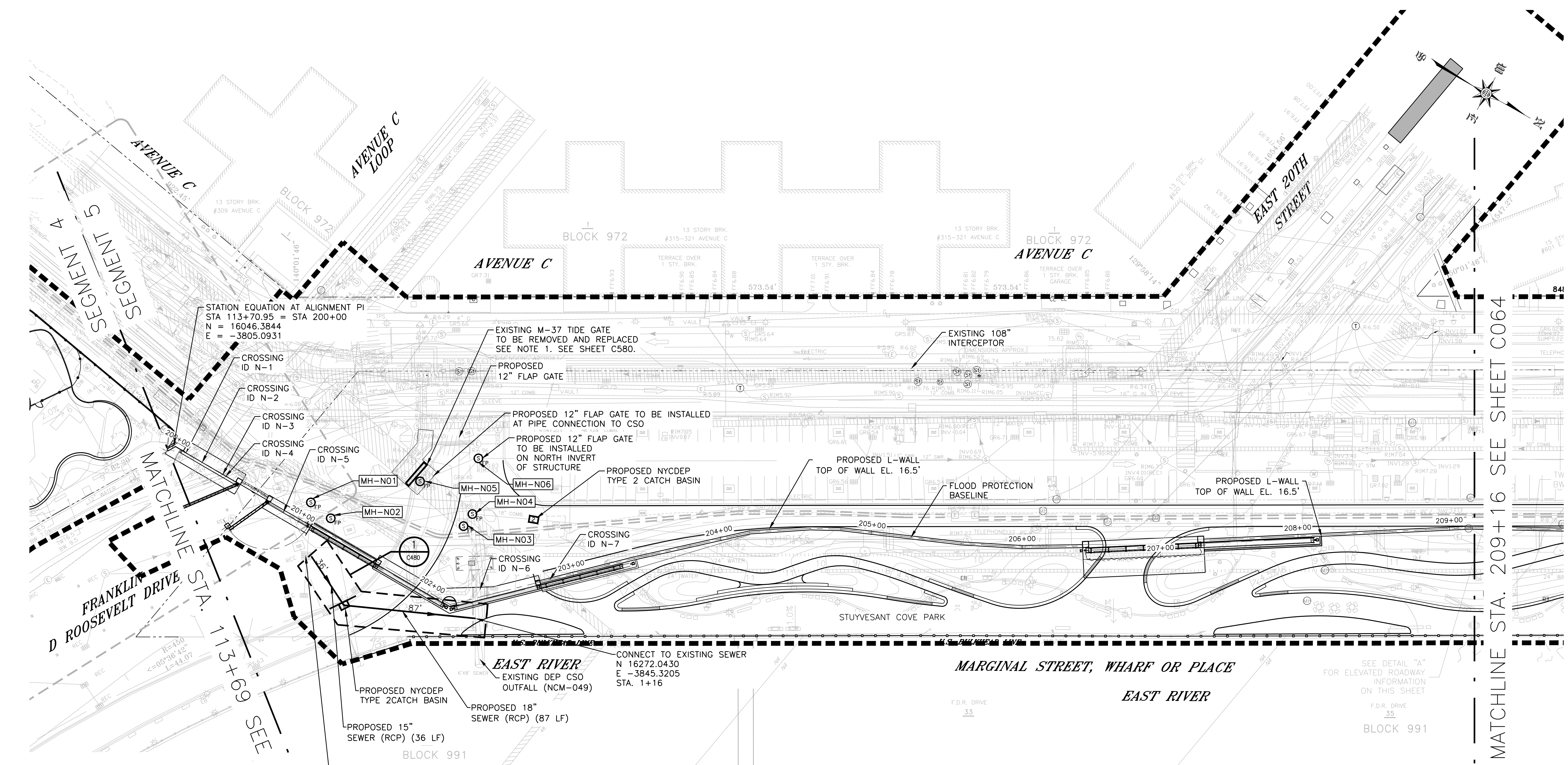
NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

**INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN**

CAPITAL PROJECT NO. SANDRESM1 7/18/2019    SHEET 239 OF 1594    C062



REVISED MASS MAILING #1 SUBMISSION 7/18/2019



- LEGEND:**
- INT. SWR. INTERCEPTOR SEWER
  - STORM STORM SEWER
  - VCP VITREOUS CLAY PIPE
  - RCP REINFORCED CONCRETE PIPE
  - RCFT REINFORCED CONCRETE (FLAT TOP)
  - COMB. SEWER COMBINED SEWER
  - UKN UNKNOWN MATERIAL
  - INACC MANHOLE WAS INACCESSIBLE
  - CSO COMBINED SEWER OVERFLOW
  - SWO STORM WATER OUTFALL

- MH-XXX MANHOLE TO BE FLOODPROOFED. SEE SHEETS F750-F757
- MH-XXX PROPOSED MANHOLE TO BE INSTALLED
- SEWER TO BE REPLACED
- DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED
- LIMIT OF WORK
- PROPOSED CATCH BASIN AND TYPE
- PROPOSED SEWER

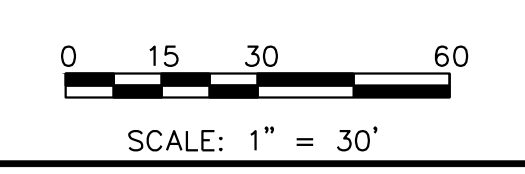
TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET S0100 DRAWINGS SERIES

- NOTES:**
- ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
  - FOR REGULATOR STRENGTHENING, FLOOD PROOFING DETAILS AND MODIFICATION SCHEDULE SEE SHEETS F759 THROUGH F766.
  - FOR MANHOLE FLOOD PROOFING DETAILS SEE SHEETS F752 THROUGH F753.
  - FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F705 THROUGH F710.
  - COMBINED SEWER MANHOLES ON THE FLOOD SIDE SHALL BE OUTFITTED WITH WATER-TIGHT MANHOLES COVERS AND FRAMES.
  - ALL EXISTING REGULATOR TIDE GATES SHALL BE REPLACED.
  - SEE SHEETS LG313 THROUGH LG315, LL313 THROUGH LL315, AND LM313 THROUGH LM315 FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
  - MANHOLES IDENTIFIED AS 'TO BE MODIFIED' WILL NOT RECEIVE FLOOD PROOFING.
  - PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
  - FOR MANHOLE FLOOD PROOFING SCHEDULE SEE SHEETS F754 THROUGH F757.
  - FOR PROFILES OF SEWERS TO BE REQUIRED, PROPOSED, OR TO BE REPLACED, SEE SHEETS C450 THROUGH C481.
  - CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.

**MANHOLE LOCATIONS**

MANHOLE ID	TYPE	NORTHING	EASTING	RIM EL.	INV EL.
MH-N01	FLOODPROOFED	16139.7953	-3834.3102	UKN	UKN
MH-N02	FLOODPROOFED	16156.5342	-3834.7367	UKN	UKN
MH-N03	FLOODPROOFED	16226.9910	-3886.9600	6.79	UKN
MH-N04	FLOODPROOFED	16226.2980	-3896.7090	6.87	UKN
MH-N05	FLOODPROOFED	16186.0580	-3891.1650	6.55	UKN
MH-N06	FLOODPROOFED	16205.7710	-3927.4140	7.03	0.83

**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019



NO.	DATE	DESCRIPTIONS	BY	APPR'D

FINAL DESIGN SUBMITTED BY:  
**AKRF KSE**  
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:  
**ARCADIS**  
ARCADIS OF NEW YORK, INC.  
NAME OF CONSULTANT

SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 5 - REACH N  
STA. 113+69 - 209+16

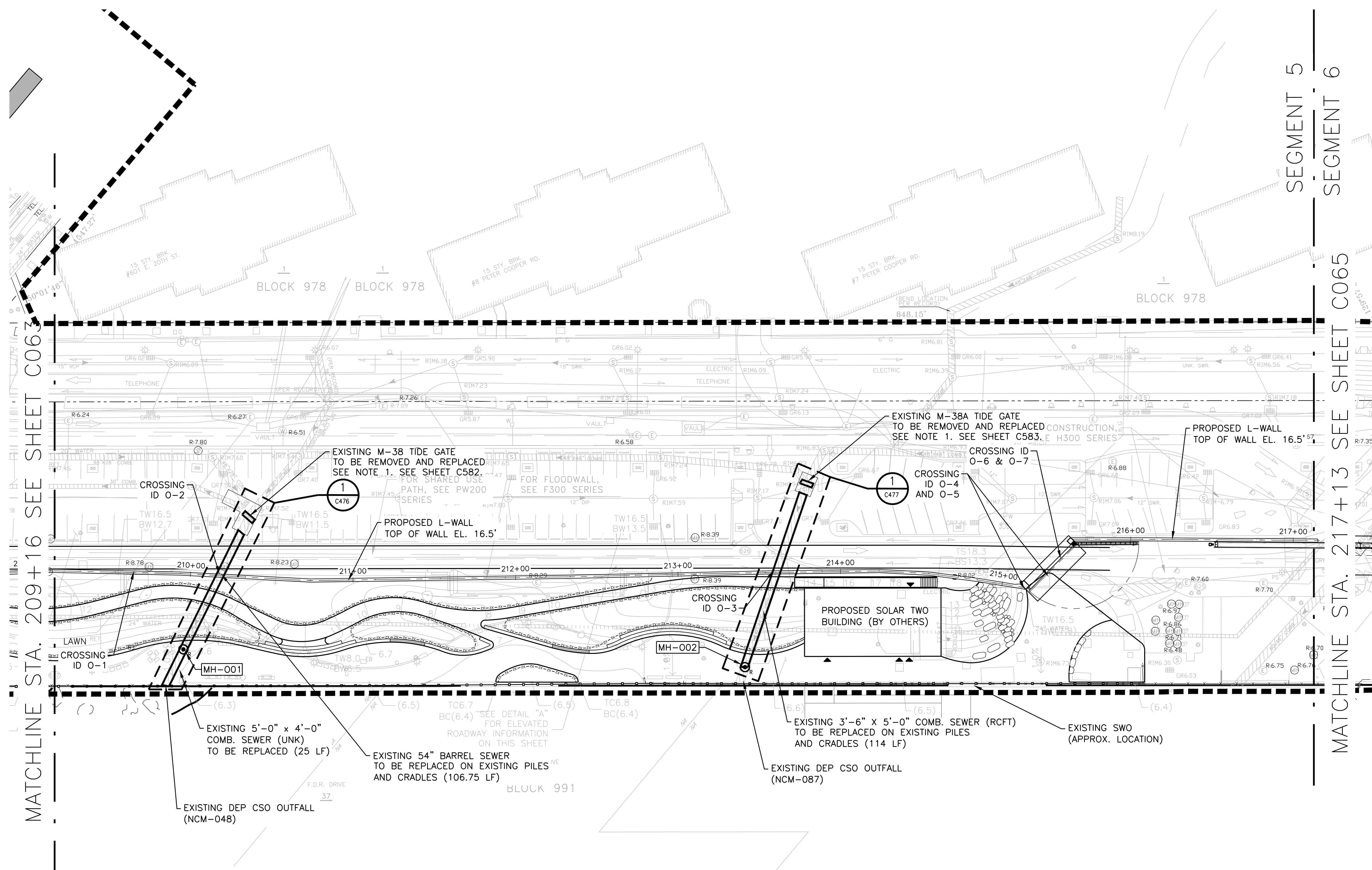
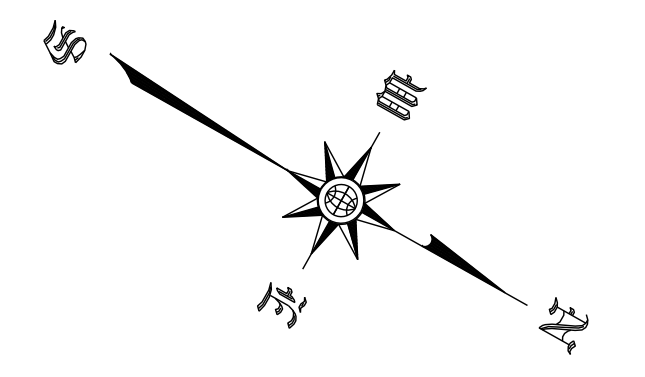
ARCADIS DRAWN BY \_\_\_\_\_ SANDRESM1-C063-00.DWG  
CADD FILE

INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 240 OF 1594 C063



REVISED MASS MAILING #1 SUBMISSION 7/18/2019



MATCHLINE STA. 209+16 SEE SHEET C063

MATCHLINE STA. 217+13 SEE SHEET C065

SEGMENT 5  
SEGMENT 6

**LEGEND:**

- |             |                                |  |                        |
|-------------|--------------------------------|--|------------------------|
| INT. SWR.   | INTERCEPTOR SEWER              |  |                        |
| STORM       | STORM SEWER                    |  |                        |
| VCP         | VITREOUS CLAY PIPE             |  | PROPOSED MANHOLE RISER |
| RCP         | REINFORCED CONCRETE PIPE       |  |                        |
| RCFT        | REINFORCED CONCRETE (FLAT TOP) |  | SEWER TO BE REPLACED   |
| COMB. SEWER | COMBINED SEWER                 |  | LIMIT OF WORK          |
| UKN         | UNKNOWN MATERIAL               |  |                        |
| INACC       | MANHOLE WAS INACCESSIBLE       |  |                        |
| CSO         | COMBINED SEWER OVERFLOW        |  |                        |
| SWO         | STORMWATER OUTFALL             |  |                        |

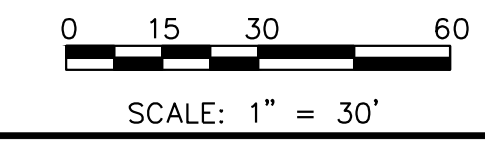
**NOTES:**

- ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
- FOR REGULATOR STRENGTHENING, FLOOD PROOFING DETAILS AND MODIFICATION SCHEDULE SEE SHEETS F759 THROUGH F766.
- FOR MANHOLE FLOOD PROOFING DETAILS SEE SHEETS F752 THROUGH F753.
- FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F705 THROUGH F710.
- COMBINED SEWER MANHOLES ON THE FLOOD SIDE SHALL BE OUTFITTED WITH WATER-TIGHT MANHOLES COVERS AND FRAMES.
- ALL EXISTING REGULATOR TIDE GATES SHALL BE REPLACED.
- SEE SHEETS LG313 THROUGH LG315, LL313 THROUGH LL315, AND LM313 THROUGH LM315 FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
- MANHOLES IDENTIFIED AS 'TO BE MODIFIED' WILL NOT RECEIVE FLOOD PROOFING.
- PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
- FOR MANHOLE FLOOD PROOFING SCHEDULE SEE SHEETS F754 THROUGH F757.
- FOR PROFILES OF SEWERS TO BE REQUIRED, PROPOSED, OR TO BE REPLACED, SEE SHEETS C450 THROUGH C481.
- CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.

**MANHOLE LOCATIONS**

MANHOLE ID	TYPE	NORTHING	EASTING	RIM EL.	INV EL.
MH-001	TYPE R	16830.5122	-4327.4258	6.45	N/A
MH-002	TYPE R	17102.4976	-4540.6952	7.54	N/A

**PRELIMINARY**  
SUBMITTED DATE: 7/18/2019



TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR  
INFORMATION SEE SURVEY SET SUI00 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:  
**AKRF KSE**  
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:  
**ARCADIS**  
ARCADIS OF NEW YORK, INC.  
NAME OF CONSULTANT

SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 5 - REACH 0  
STA. 209+16 - 217+13

ARCADIS DRAWN BY \_\_\_\_\_ SANDRESM1-C064-00.DWG  
CADD FILE

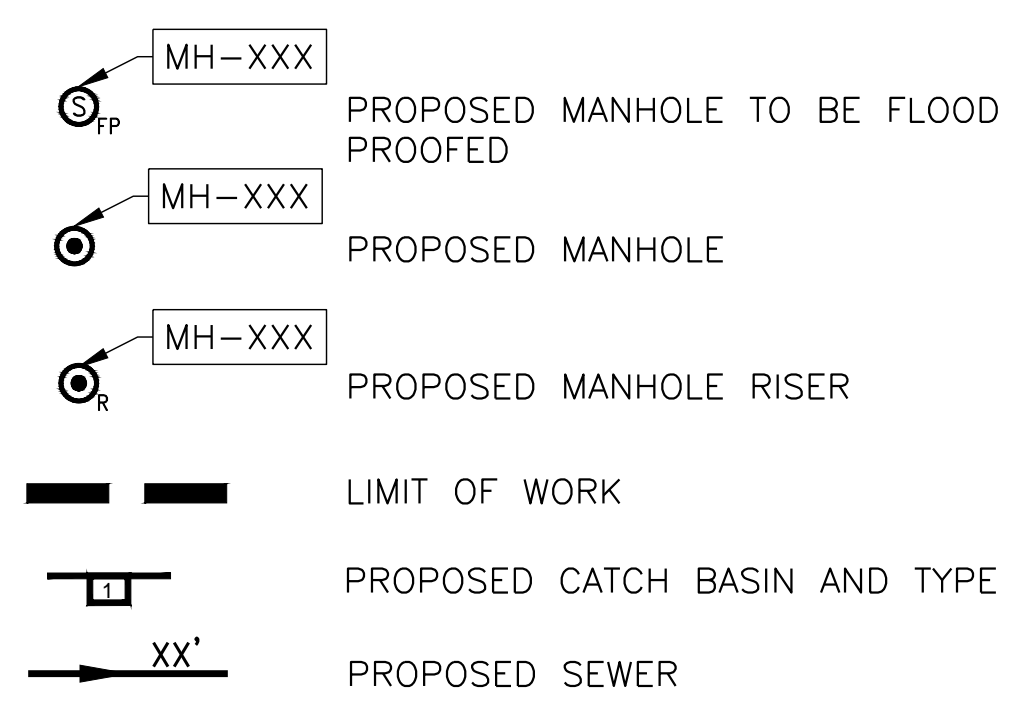
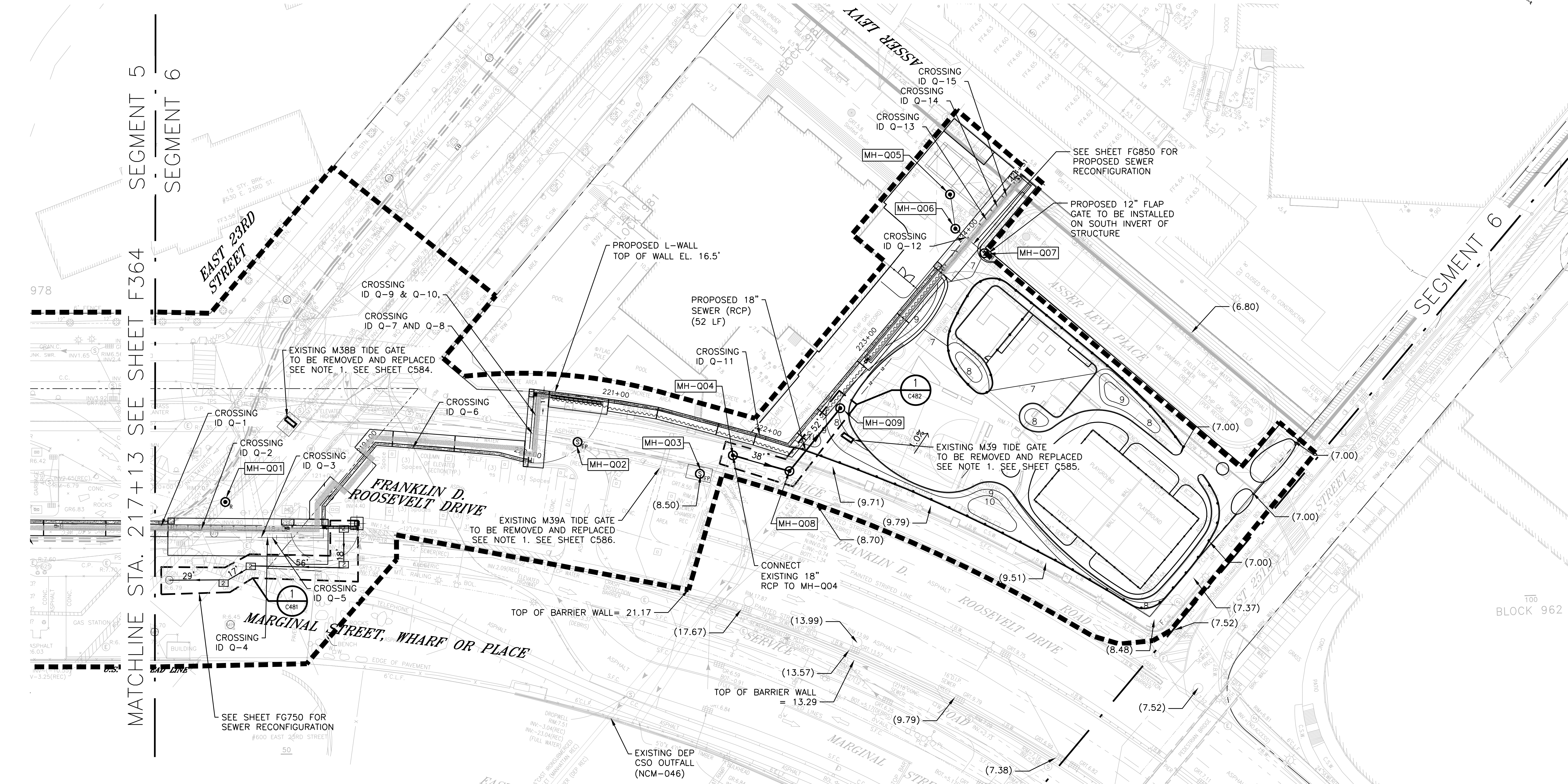
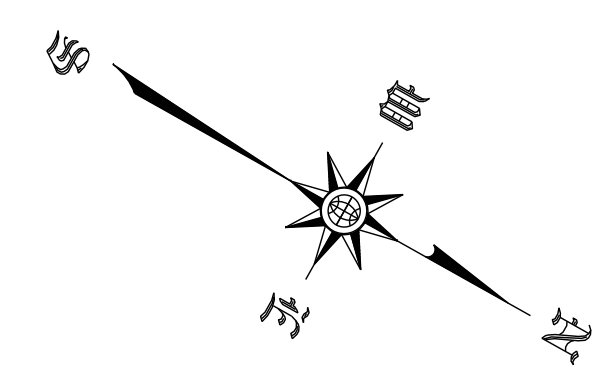
NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 241 OF 1594 C064



REVISED MASS MAILING #1 SUBMISSION 7/18/2019



- NOTES:**
1. ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
  2. FOR REGULATOR STRENGTHENING, FLOOD PROOFING DETAILS AND MODIFICATION SCHEDULE SEE SHEETS F759 THROUGH F766.
  3. FOR MANHOLE FLOOD PROOFING DETAILS SEE SHEETS F752 THROUGH F753.
  4. FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F705 THROUGH F710.
  5. COMBINED SEWER MANHOLES ON THE FLOOD SIDE SHALL BE OUTFITTED WITH WATER-TIGHT MANHOLES COVERS AND FRAMES.
  6. ALL EXISTING REGULATOR TIDE GATES SHALL BE REPLACED.
  7. SEE SHEETS LG313 THROUGH LG315, LL313 THROUGH LL315, AND LM313 THROUGH LM315 FOR ADDITIONAL PARK RESTORATION AND IMPROVEMENT PLANS.
  8. MANHOLES IDENTIFIED AS 'TO BE MODIFIED' WILL NOT RECEIVE FLOOD PROOFING.
  9. PARK DRAINAGE COLLECTOR PIPE(S) TO ENTER THE REGULATOR STRUCTURE TIDE GATE CHAMBER ON THE OFFSHORE SIDE OF THE TIDE GATE.
  10. FOR MANHOLE FLOOD PROOFING SCHEDULE SEE SHEETS F754 THROUGH F757.
  11. FOR PROFILES OF SEWERS TO BE REQUIRED, PROPOSED, OR TO BE REPLACED, SEE SHEETS F450 THROUGH F470.
  12. CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.

**MANHOLE LOCATIONS**

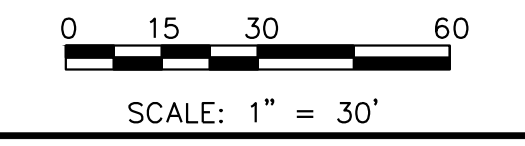
MANHOLE ID	TYPE	NORTHING	EASTING	RIM EL.	INV EL.
MH-Q01	TYPE R	17347.1765	-4864.2039	6.85	N/A
MH-Q02	FLOODPROOFED	17482.0749	-5031.9765	7.84	-2.92
MH-Q03	FLOODPROOFED	17569.4898	-5074.2506	8.61	-3.07
MH-Q04	STD. PRECAST	17578.1504	-5096.8186	8.23	-2.79
MH-Q05	STD. PRECAST	17577.6234	-5315.2397	UKN	UKN
MH-Q06	STD. PRECAST	17594.1696	-5300.4737	7.70	UKN
MH-Q07	FLOODPROOFED	17618.8191	-5300.4737	UKN	UKN
MH-Q08	STD. PRECAST	17612.4918	-5112.4557	8.83	-2.95
MH-Q09	STD. PRECAST	17611.5405	-5164.4470	8.00	-3.19

**LEGEND:**

- INT. SWR. STORM
- VCP
- RCP
- RCFT
- COMB. SEWER
- UKN
- INACC
- CSO
- SWO
- INTERCEPTOR SEWER
- STORM SEWER
- VITREOUS CLAY PIPE
- REINFORCED CONCRETE PIPE
- REINFORCED CONCRETE (FLAT TOP)
- COMBINED SEWER
- UNKNOWN MATERIAL
- MANHOLE WAS INACCESSIBLE
- COMBINED SEWER OVERFLOW
- STORMWATER OUTFALL

**PRELIMINARY**

SUBMITTED DATE: 7/18/2019



TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET SUI00 DRAWINGS SERIES



SIGNATURE \_\_\_\_\_  
DATE \_\_\_\_\_

CITY OF NEW YORK  
DEPARTMENT OF DESIGN + CONSTRUCTION  
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

CIVIL PLAN  
SEGMENT 6 - REACH Q  
STA. 217+13 - 224+51

ARCADIS DRAWN BY \_\_\_\_\_ SANDRESM1-C065-00.DWG  
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 7/18/2019    SHEET 242 OF 1594    C065