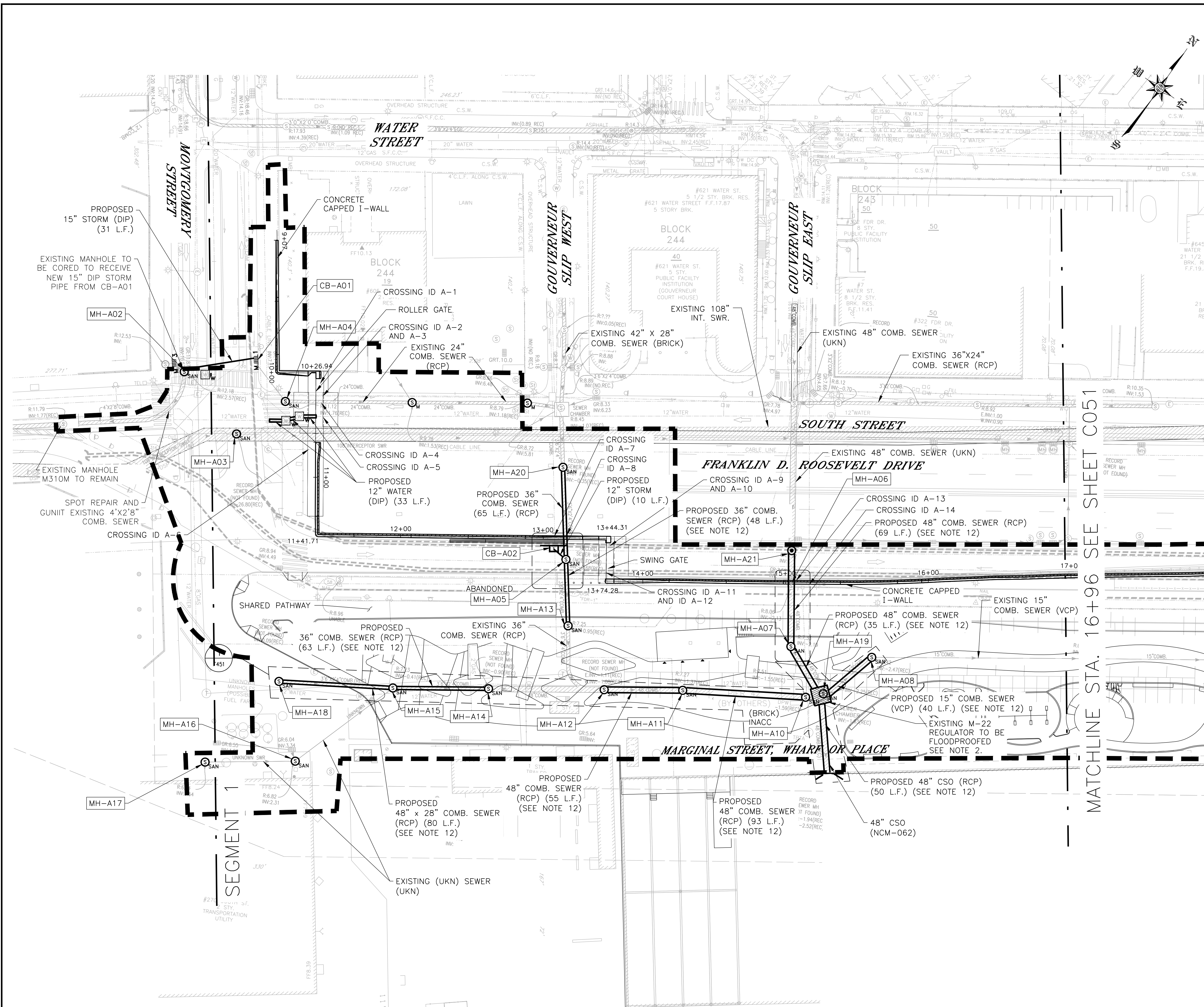


Appendix C1c
Preferred Alternative - Civil Plans

TABLE OF CONTENTS
SHEET TITLE

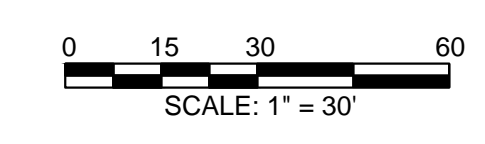
SHEET NO.	DRAWING NO.	SHEET TITLE
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C051	SANDRESM1-C051-00.DWG	CIVIL PLAN SEGMENT 1 - REACH B STA. 16+96 - 23+86
C052	SANDRESM1-C052-00.DWG	CIVIL PLAN SEGMENT 1 - REACH C STA. 23+86 - 30+36
C053	SANDRESM1-C053-00.DWG	CIVIL PLAN SEGMENT 1 - REACH D STA. 30+36 - 41+07
C054	SANDRESM1-C054-00.DWG	CIVIL PLAN SEGMENT 1 - REACH E STA. 41+07 - 50+53
C055	SANDRESM1-C055-00.DWG	CIVIL PLAN SEGMENT 2 - REACH F STA. 50+53 - 59+63
C056	SANDRESM1-C056-00.DWG	CIVIL PLAN SEGMENT 2 - REACH G STA. 59+63 - 69+75
C057	SANDRESM1-C057-00.DWG	CIVIL PLAN SEGMENT 2 - REACH H STA. 69+75 - 78+00
C058	SANDRESM1-C058-00.DWG	CIVIL PLAN SEGMENT 3 - REACH I STA. 78+00 - 86+14
C059	SANDRESM1-C059-00.DWG	CIVIL PLAN SEGMENT 3 - REACH J STA. 86+14 - 89+93
C060	SANDRESM1-C060-00.DWG	CIVIL PLAN SEGMENT 4 - REACH K STA. 89+93 - 97+39
C061	SANDRESM1-C061-00.DWG	CIVIL PLAN SEGMENT 4 - REACH L STA. 97+39 - 104+57
C062	SANDRESM1-C062-00.DWG	CIVIL PLAN SEGMENT 4 - REACH M STA. 104+57 - 111+72
C063	SANDRESM1-C063-00.DWG	CIVIL PLAN SEGMENT 5 - REACH N STA. 111+72 - 120+87
C064	SANDRESM1-C064-00.DWG	CIVIL PLAN SEGMENT 5 - REACH O STA. 120+87 - 128+83
C065	SANDRESM1-C065-00.DWG	CIVIL PLAN SEGMENT 6 - REACH Q STA. 128+83 - 136+21

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



- 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 FERRO SERIES S006RC COUPLINGS OR APPROVED EQUAL TO JOIN EXISTING CATCH BASIN PIPING TO PROPOSED DIP.

- 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
 - ⊙ EXISTING MANHOLE TO BE ALTERED
 - CB-XXX EXISTING CATCH BASIN TO BE MODIFIED AND TYPE
 - W EXISTING WATER VALVEBOX TO BE REPLACED
 - || WATER MAIN OR SEWER TO BE REPLACED
 - ▨ DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED
 - - - LIMIT OF WORK
 - CB-XXX PROPOSED CATCH BASIN AND TYPE
 - CSO CSO OPENING
 - MH-XXX NEW MANHOLE TO BE INSTALLED



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

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

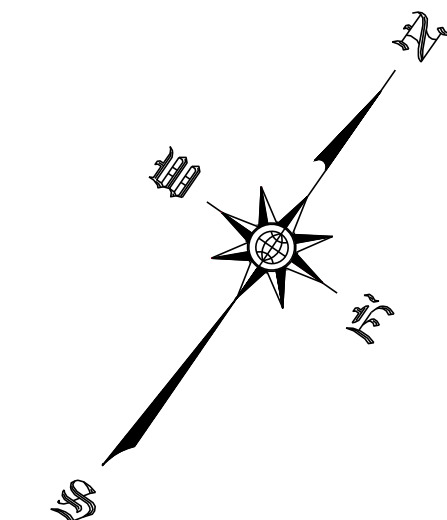
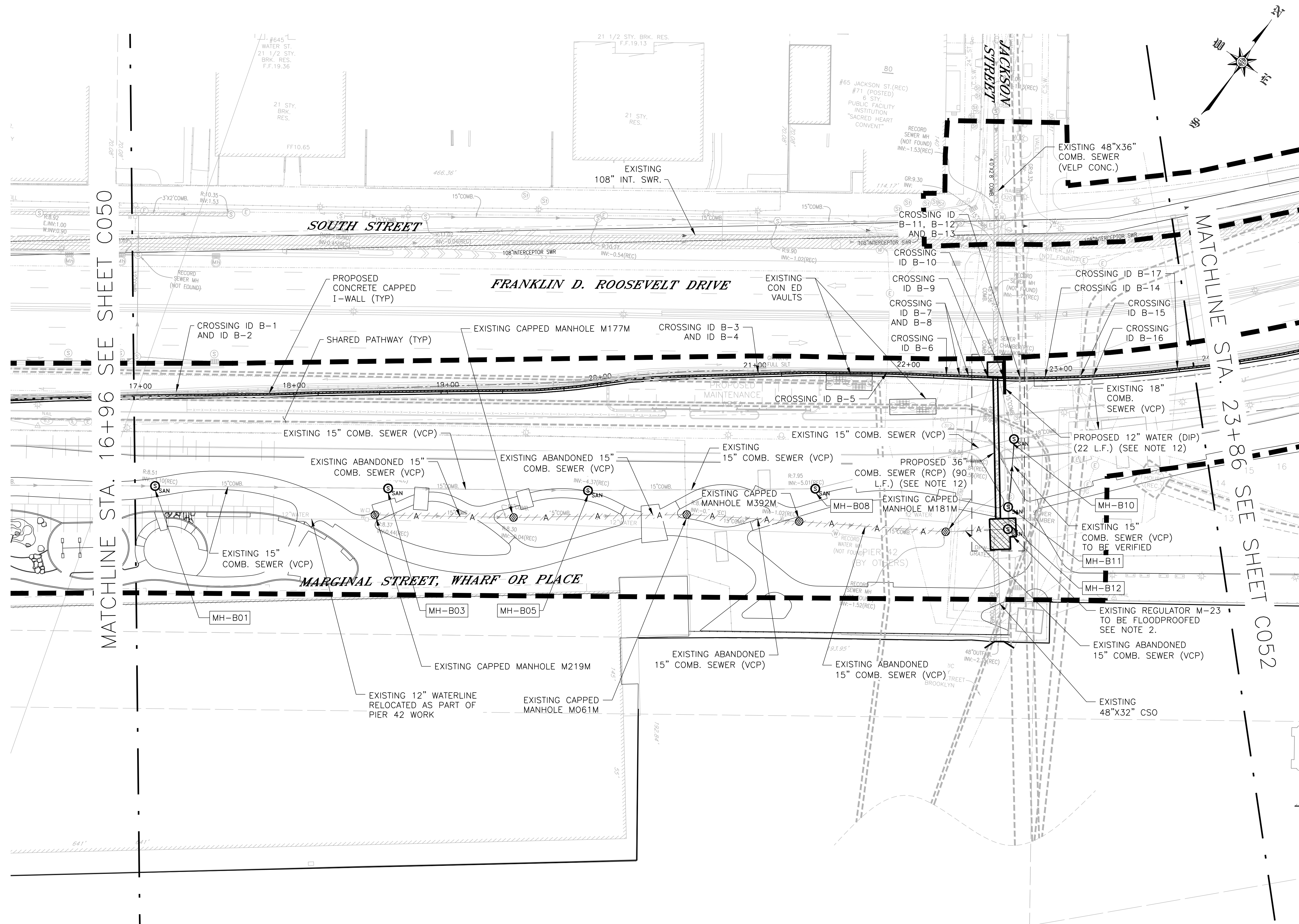
CIVIL PLAN
SEGMENT 1 - REACH A
STA. 9+06 - 16+96

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

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 81 OF 811 C050

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019

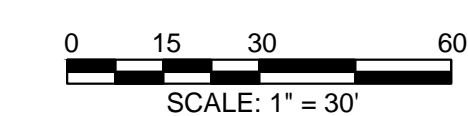


NOTES:

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 FERROCEMENT S006RC COUPLINGS OR APPROVED EQUAL TO JOIN EXISTING CATCH BASIN PIPING TO PROPOSED DIP.

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
 - Water main or sewer to be replaced
 - DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED
 - LIMIT OF WORK
 - CAPPED MANHOLE
 - EXISTING ABANDONED SEWER
 - CSO OPENING



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

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 B
STA. 16+96 - 23+86

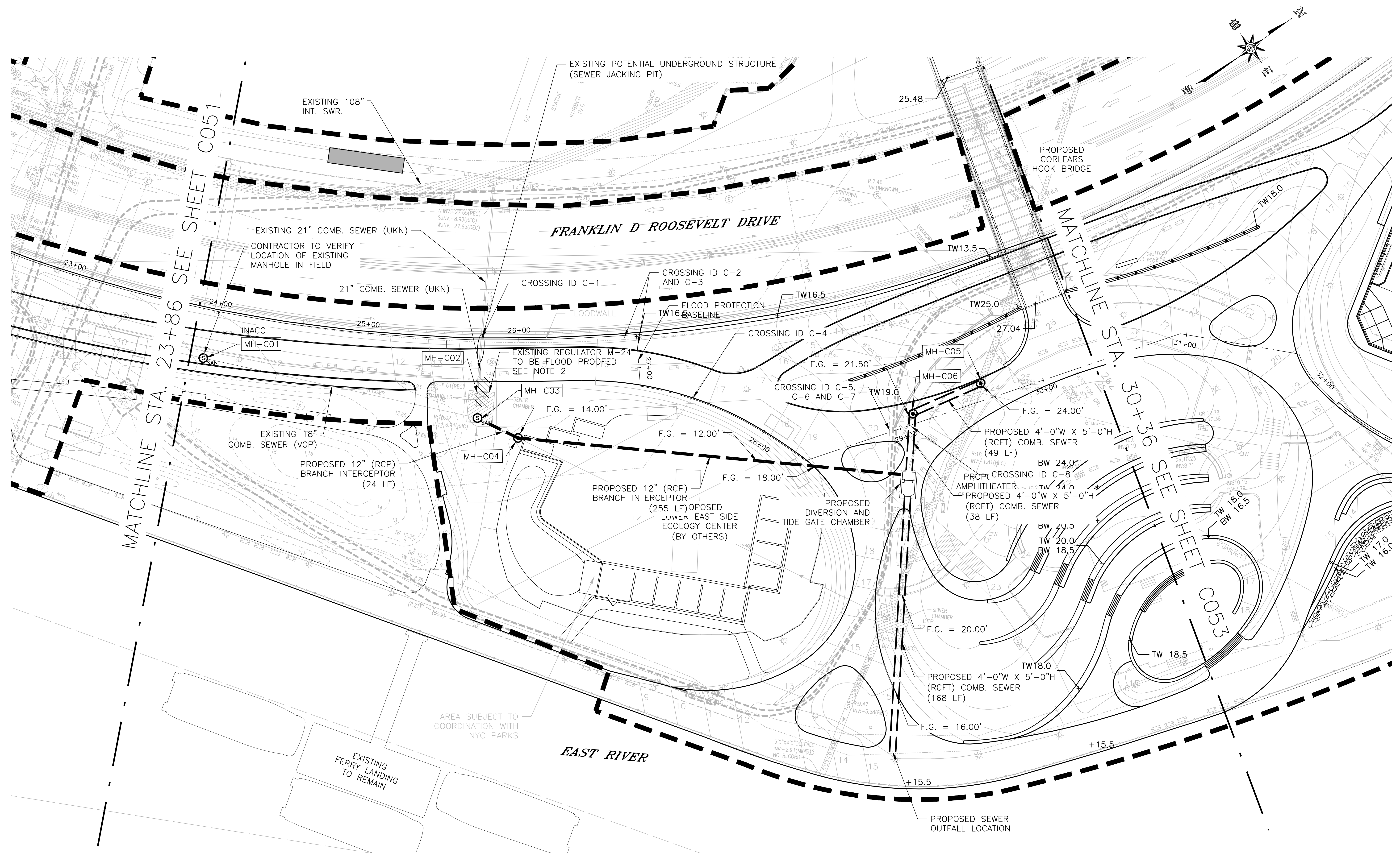
CH2M
DRAWN BY

SANDRESM1-C051-00.DWG
CADD FILE

INSTALLATION OF
EAST SIDE COASTAL RESILIENCY
BOROUGH OF MANHATTAN

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 82 OF 811 COS1



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 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 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 F754 THROUGH F757.
10. FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS F450 THROUGH F470.
11. CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.

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 | --- | MH-XXX |
| RCFT | REINFORCED CONCRETE (FLAT TOP) | --- | EXISTING MANHOLE TO BE FLOODPROOFED. SEE SHEETS F750-F757 |
| COMB. SEWER | COMBINED SEWER | --- | EXISTING MANHOLE FRAME TO BE RE-SET |
| UKN | UNKNOWN MATERIAL | --- | |
| INACC | MANHOLE WAS INACCESSIBLE | --- | |
| CSO | COMBINED SEWER OVERFLOW | --- | |
| SWO | STORM SEWER OUTFALL | --- | |



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

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

FINAL DESIGN SUBMITTED BY:
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

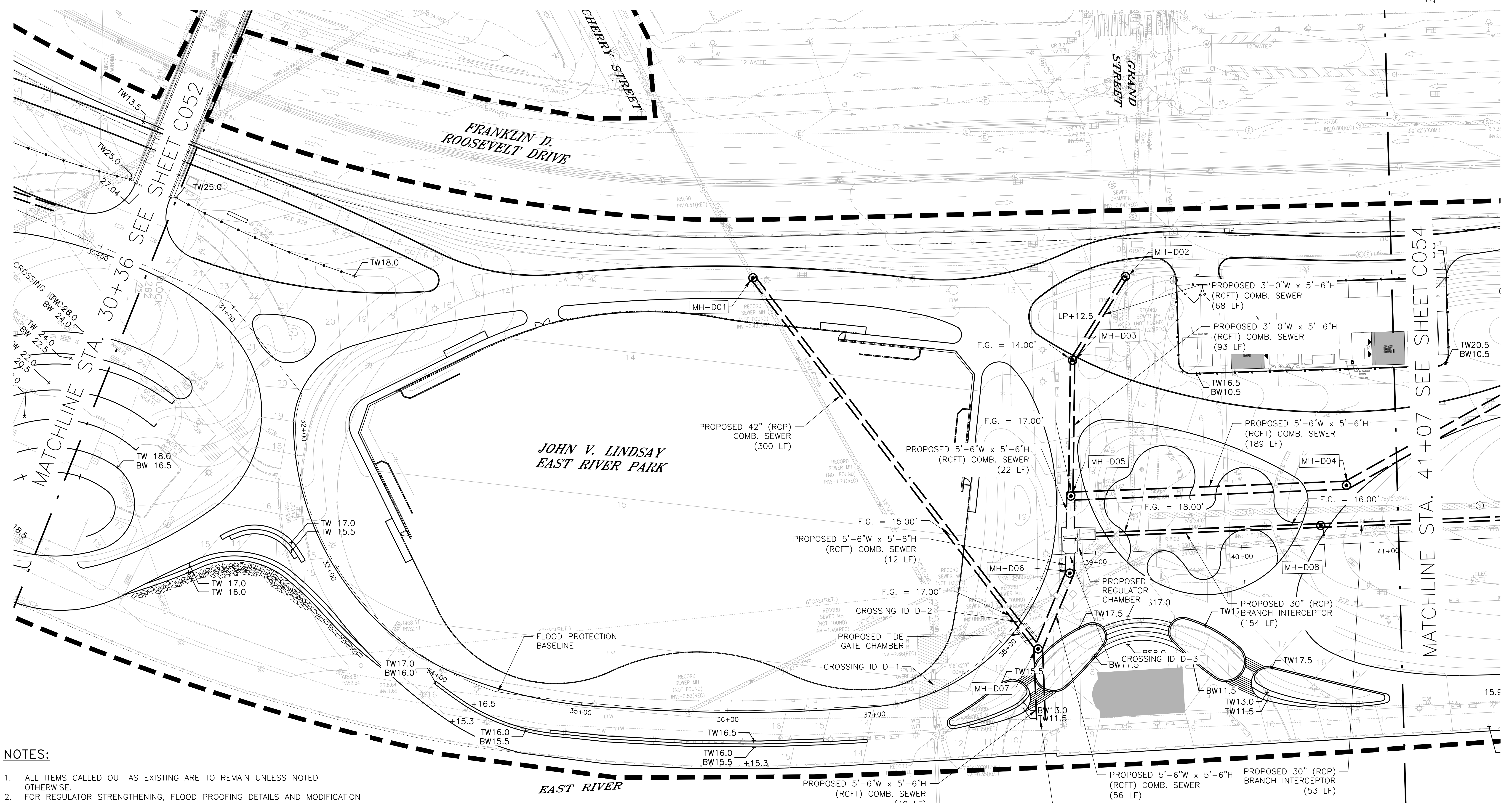
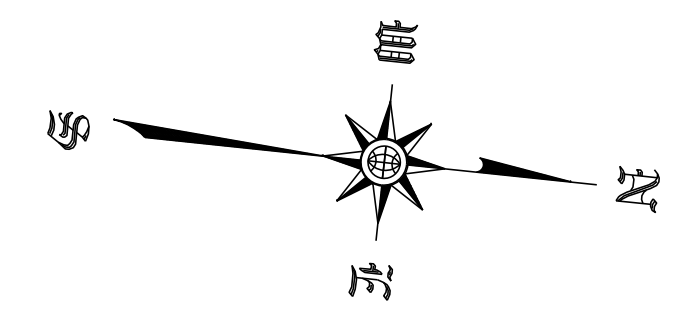
CIVIL PLAN
SEGMENT 1 - REACH C
STA. 23+86 - 30+36

ARCADIS DRAWN BY _____ SANDRESM1-C052-00.DWG
CADD FILE

INSTALLATION OF
EAST SIDE COASTAL RESILIENCY
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 83 OF 811 C052

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



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 LANDSCAPE DRAWINGS 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 REPAIR/PROPOSED/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.

LEGEND:

- | | | | |
|-------------|--------------------------------|-----|-----------------------------|
| INT. SWR. | INTERCEPTOR SEWER | --- | PROPOSED COMB. SEWER |
| STORM | STORM SEWER | --- | LIMIT OF WORK |
| VCP | VITREOUS CLAY PIPE | ⊙ | MH-XXX |
| RCP | REINFORCED CONCRETE PIPE | | NEW MANHOLE TO BE INSTALLED |
| 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 | | |



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

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 1 - REACH D
STA. 30+36 - 41+07

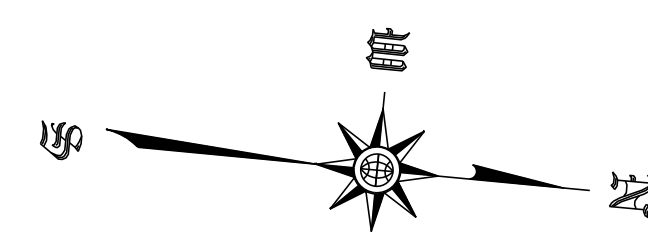
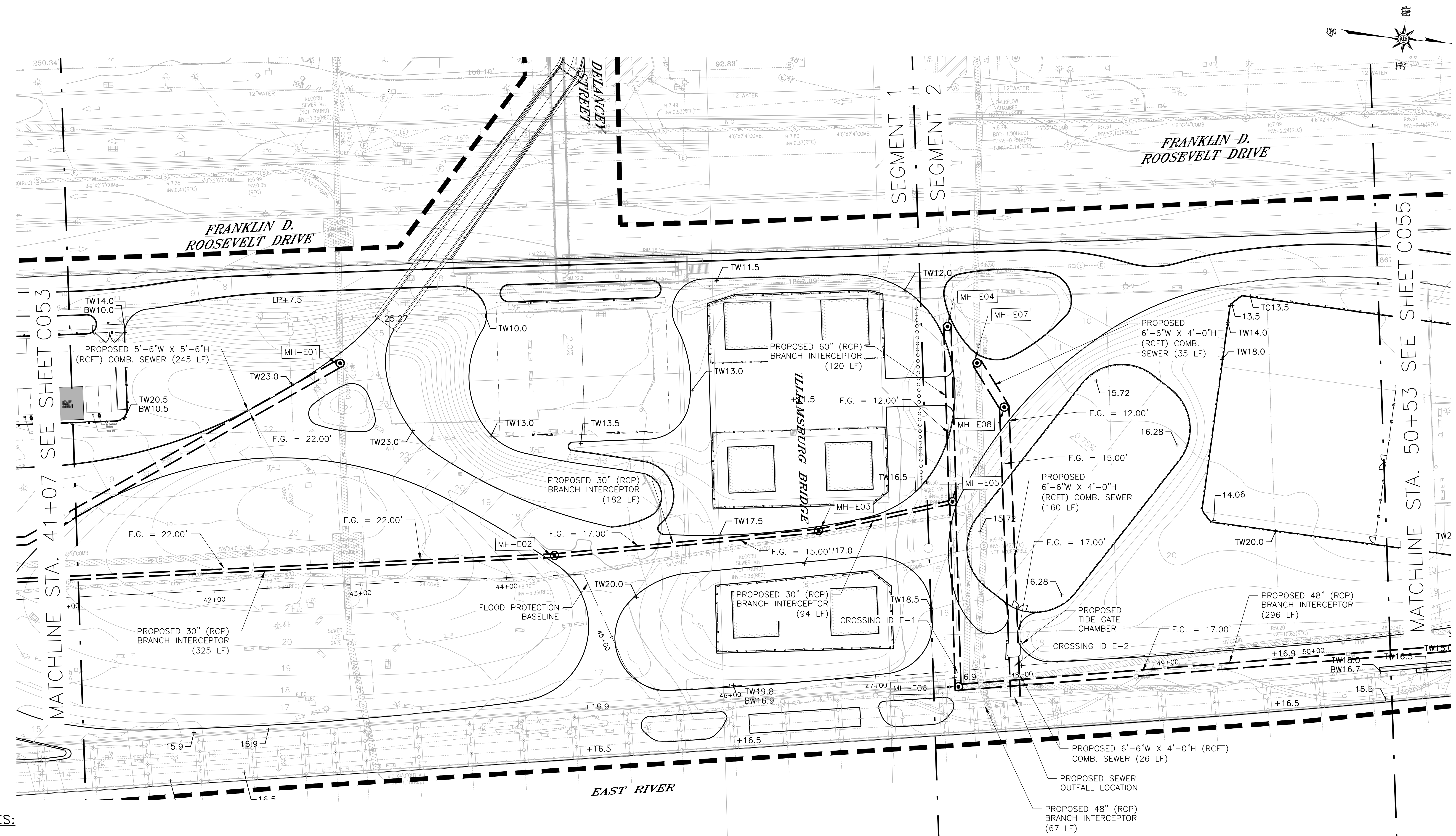
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CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

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

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 84 OF 811 C053

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



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 LANDSCAPE DRAWINGS 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 REPAIR/PROPOSED/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.

LEGEND:

- | | | | |
|-------------|--------------------------------|----------|-----------------------------|
| INT. SWR. | INTERCEPTOR SEWER | --- | PROPOSED COMB. SEWER |
| STORM | STORM SEWER | --- | LIMIT OF WORK |
| VCP | VITREOUS CLAY PIPE | ⊙ MH-XXX | NEW MANHOLE TO BE INSTALLED |
| 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 | | |



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

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:

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. 41+07 - 50+53

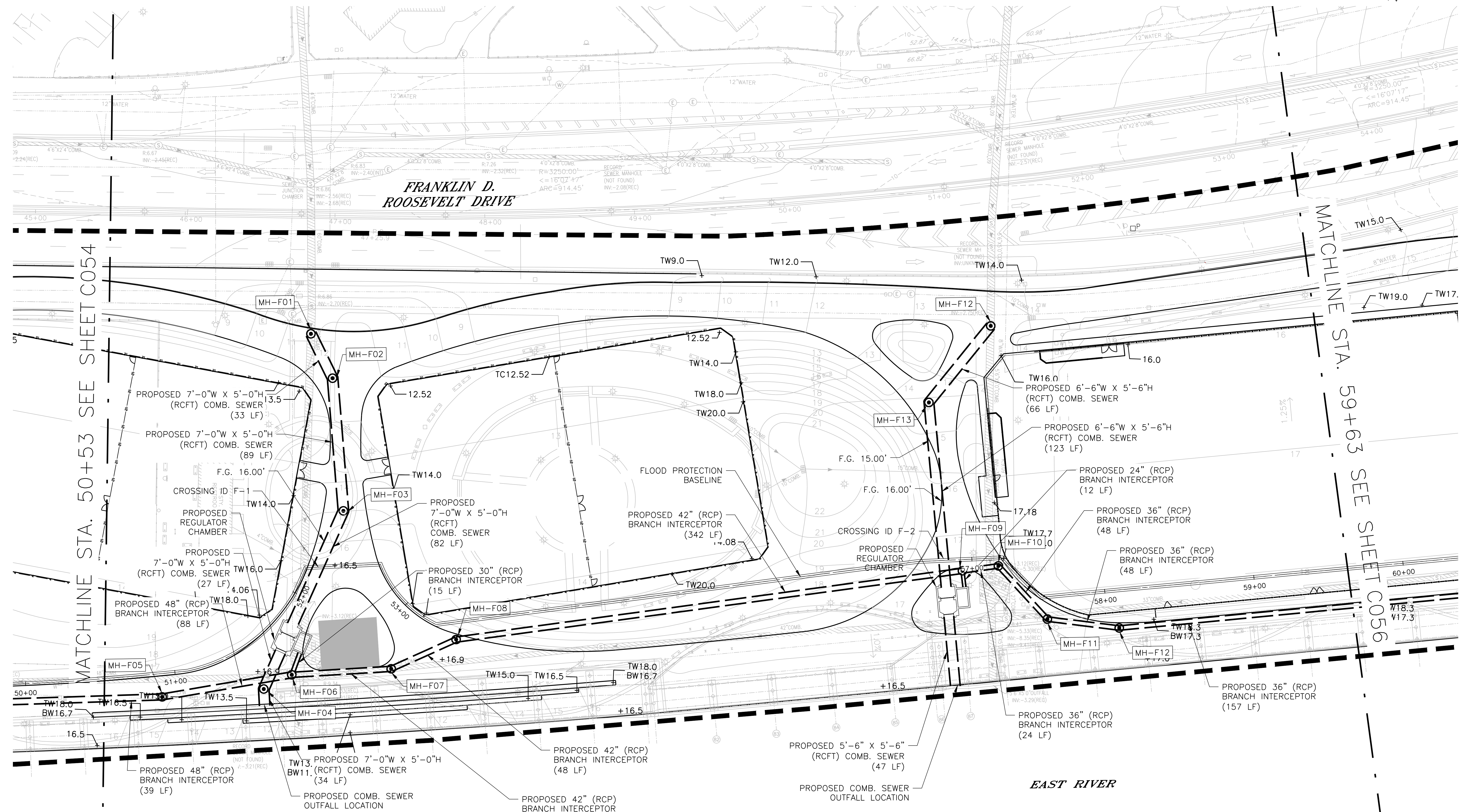
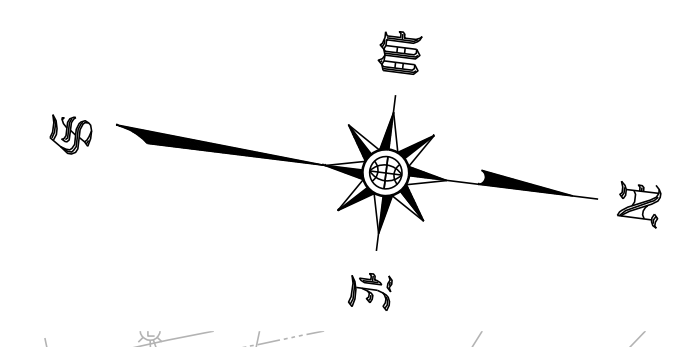
ARCADIS DRAWN BY _____
SANDRESM1-C054-00.DWG
CADD FILE

INSTALLATION OF
EAST SIDE COASTAL RESILIENCY
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 1/31/19

SHEET 85 OF 811
COS4

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



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 LANDSCAPE DRAWINGS 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 REPAIR/PROPOSED/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.

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 |
| --- | PROPOSED COMB. SEWER |
| --- | LIMIT OF WORK |
| ⊙ | NEW MANHOLE TO BE INSTALLED |



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

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

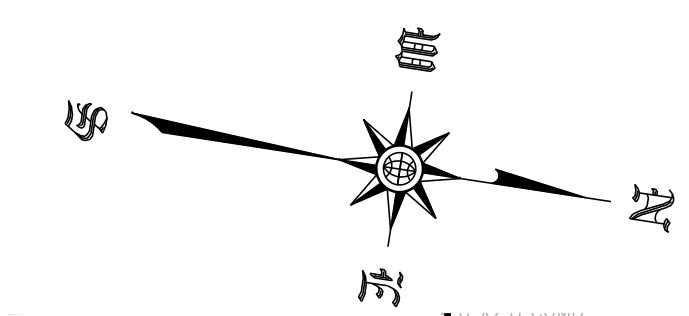
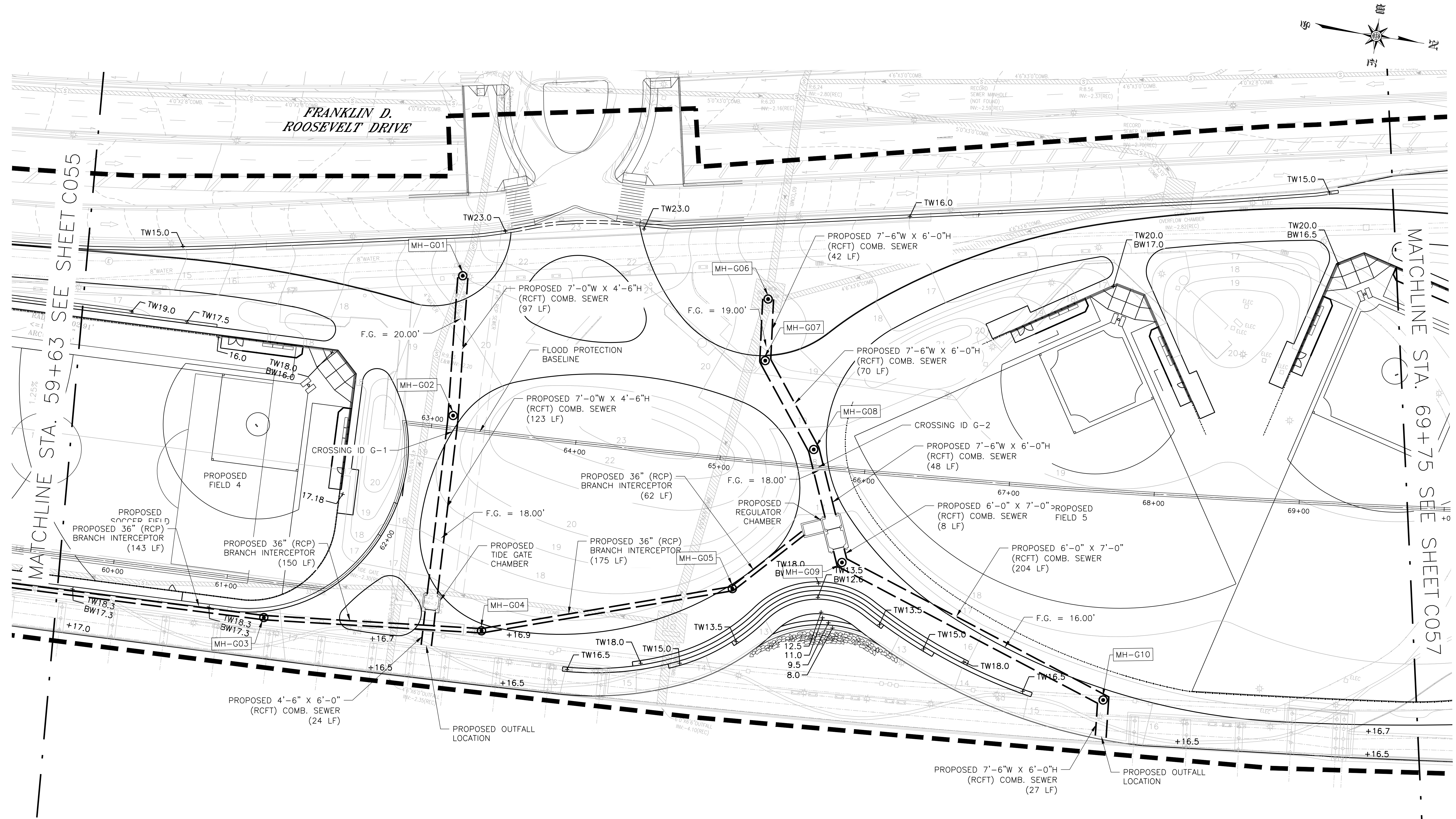
CIVIL PLAN
SEGMENT 2 - REACH F
STA. 50+53 - 59+63
ARCADIS DRAWN BY _____ SANDRESM1-C055-00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

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

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 86 OF 811 C055

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



MATCHLINE STA. 59+63 SEE SHEET C055

MATCHLINE STA. 69+75 SEE SHEET C057

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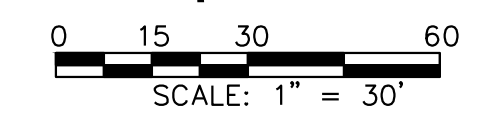
1. ALL ITEMS CALLED OUT AS EXISTING ARE TO REMAIN UNLESS NOTED OTHERWISE.
2. FOR REGULATOR STRENGTHENING, FLOOD PROOFING DETAILS AND MODIFICATION SCHEDULE SEE SHEETS F759 THROUGH F766.
3. FOR MANHOLE FLOOD PROOFING DETAILS SEE SHEETS F752 THROUGH F753.
4. FOR UTILITY CROSSING ID SCHEDULE SEE SHEETS F705 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 LANDSCAPE DRAWINGS 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 REPAIR/PROPOSED/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.

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 |

- | | |
|--|-----------------------------|
| | PROPOSED COMB. SEWER |
| | LIMIT OF WORK |
| | NEW MANHOLE TO BE INSTALLED |



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

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

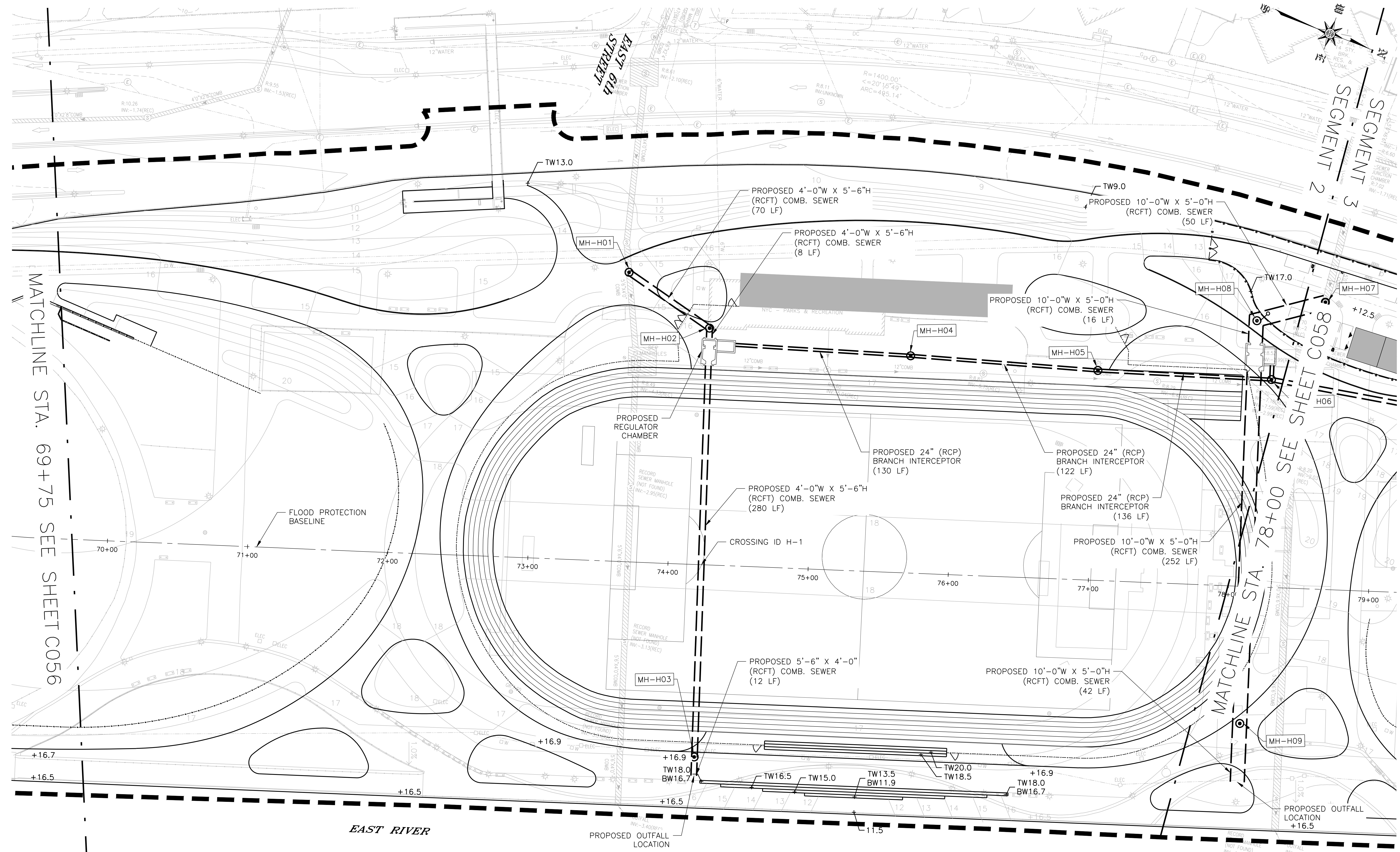
CIVIL PLAN
SEGMENT 2 - REACH G
STA. 59+63 - 69+75
ARCADIS DRAWN BY _____ SANDRESM1-C056-00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

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

CAPITAL PROJECT NO. SANDRESM1 1/31/19	SHEET 87 OF 811	C056
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CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



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 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 MANHOLE FLOOD PROOFING SCHEDULE SEE SHEETS F754 THROUGH F757.
- FOR PROFILES OF SEWERS TO BE REPAIR/PROPOSED/REPLACED, SEE SHEETS F450 THROUGH F470.
- CONTRACTOR SHALL PROTECT IN-PLACE ANY SHEET HARDWARE WITHIN TWO (2) FEET OF THE EDGE OF NEW PAVEMENT UNLESS OTHERWISE NOTED.

LEGEND:

- | | | | |
|-------------|--------------------------------|----------|-----------------------------|
| INT. SWR. | INTERCEPTOR SEWER | — — | PROPOSED COMB. 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 | NEW MANHOLE TO BE INSTALLED |



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

TOPOGRAPHIC SURVEY PREPARED BY: FUR 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 2 - REACH H
STA. 69+75 - 78+00

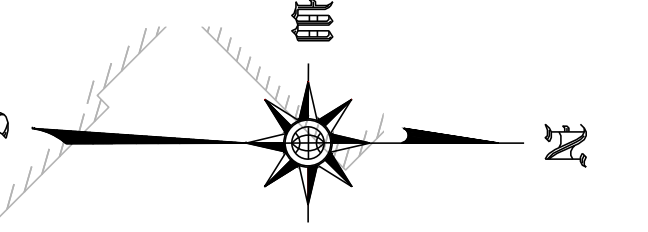
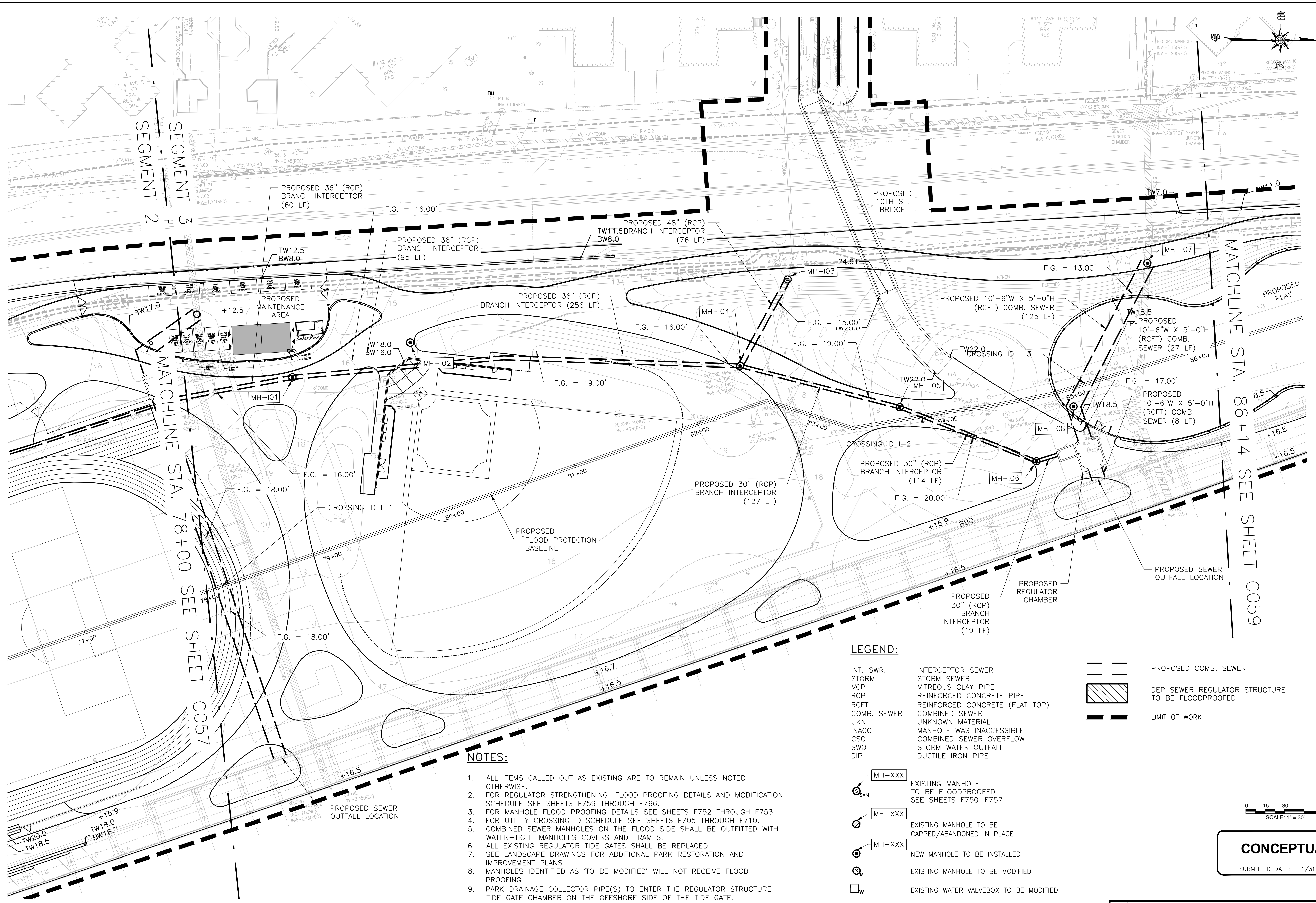
ARCADIS DRAWN BY _____ SANDRESM1-C057-00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

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

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 88 OF 811 C057

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

LEGEND:

- | | | | |
|-------------|--------------------------------|---------|--|
| INT. SWR. | INTERCEPTOR SEWER | --- --- | PROPOSED COMB. SEWER |
| STORM | STORM SEWER | --- --- | |
| VCP | VITREOUS CLAY PIPE | --- --- | DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED |
| 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 F750-F757 |
| | MH-XXX | EXISTING MANHOLE TO BE CAPPED/ABANDONED IN PLACE |
| | MH-XXX | NEW MANHOLE TO BE INSTALLED |
| | MH-XXX | EXISTING MANHOLE TO BE MODIFIED |
| | W | EXISTING WATER VALVEBOX TO BE MODIFIED |

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 LANDSCAPE DRAWINGS 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 REPAIR/PROPOSED/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.

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 _____

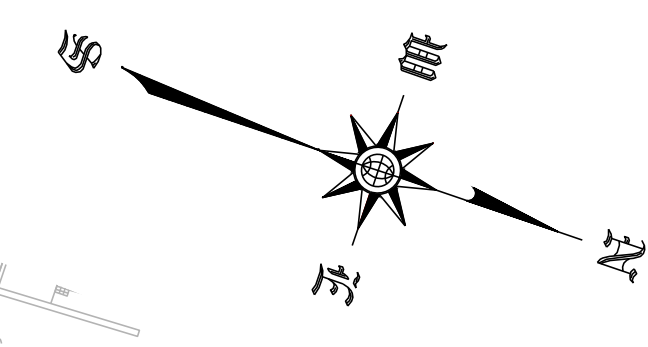
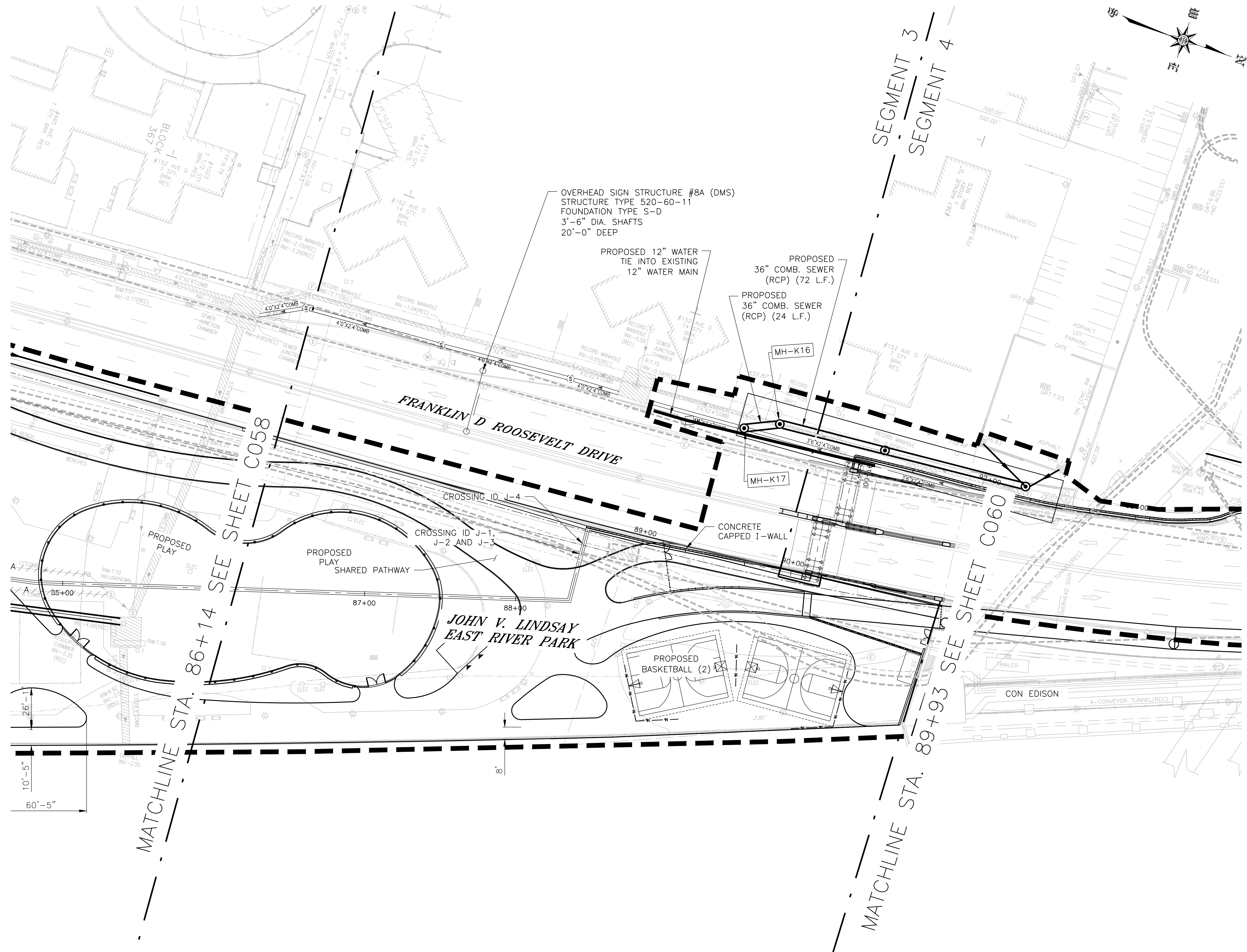
CITY OF NEW YORK
DEPARTMENT OF DESIGN + CONSTRUCTION
DIVISION OF INFRASTRUCTURE
BUREAU OF DESIGN

CIVIL PLAN
SEGMENT 3 - REACH 1
STA. 78+00 - 86+14
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 1/31/19 SHEET 89 OF 811 C058

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



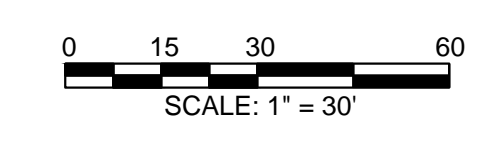
NOTES:

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 FERROCEMENT S006RC COUPLINGS OR APPROVED EQUAL TO JOIN EXISTING CATCH BASIN PIPING TO PROPOSED DIP.

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 |

- 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
- MH-XXX
NEW MANHOLE TO BE INSTALLED



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

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 3 - REACH J
STA. 86+14 - 89+93

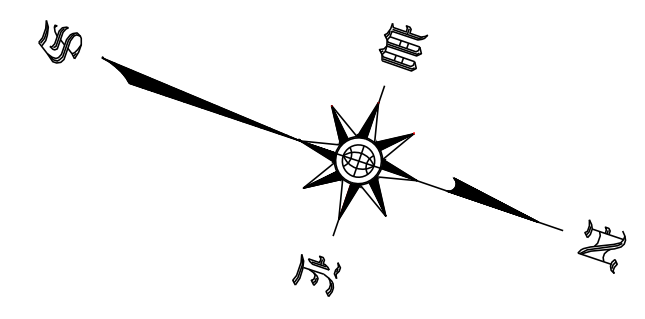
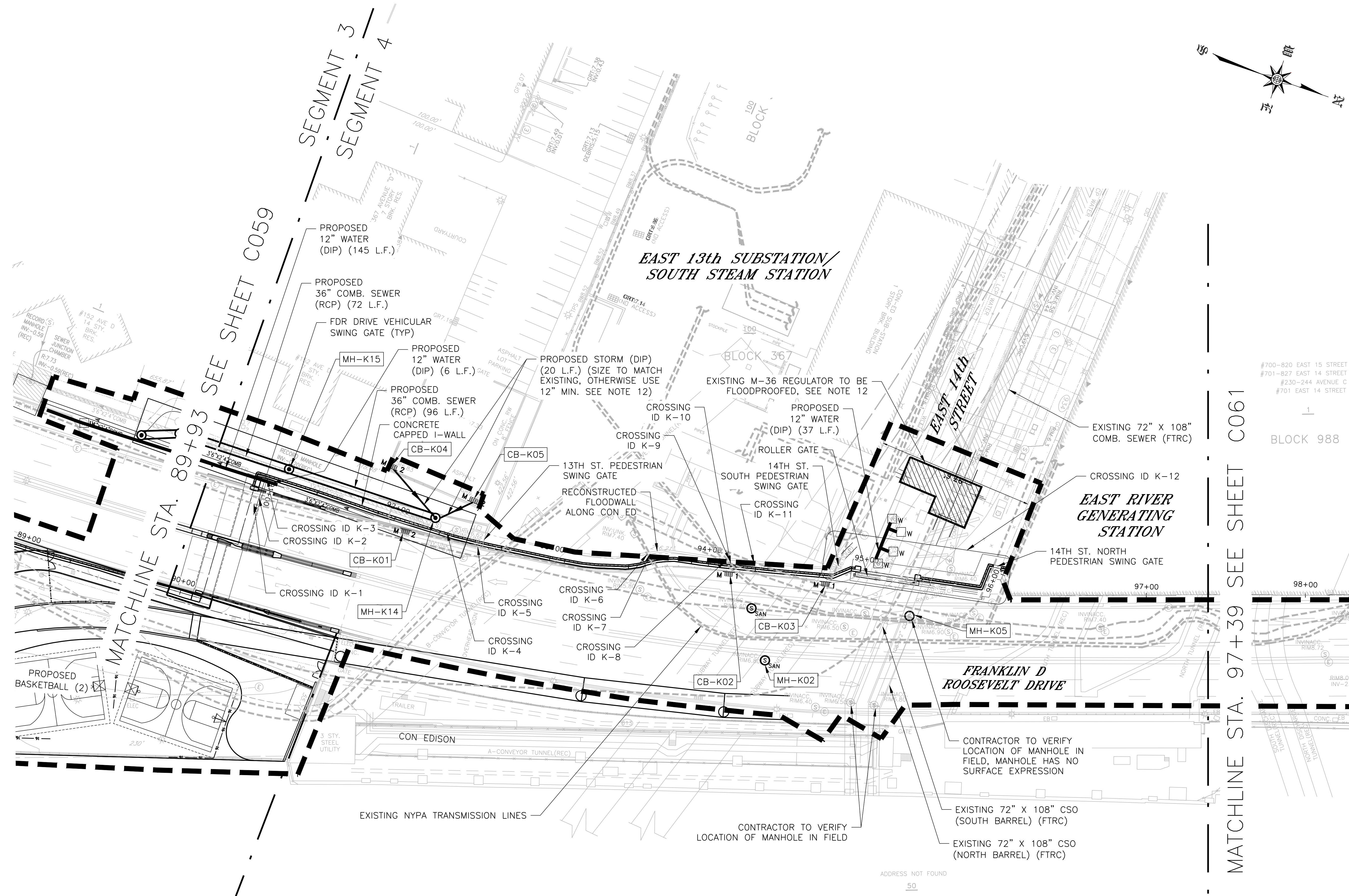
CH2M DRAWN BY _____
SANDRESM1-C059-00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

INSTALLATION OF
EAST SIDE COASTAL RESILIENCY
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 90 OF 811 C059

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019

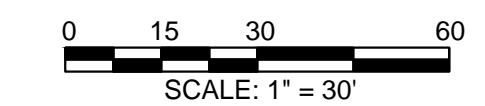


NOTES:

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 F705.
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.

LEGEND:

- | | | | |
|-------------|---|--|--|
| INT. SWR. | INTERCEPTOR SEWER | | EXISTING CATCH BASIN TO BE RE-SET AND TYPE |
| STORM | STORM SEWER | | EXISTING WATER VALVEBOX TO BE REPLACED |
| VCP | VITREOUS CLAY PIPE | | WATER MAIN OR SEWER TO BE REPLACED |
| RCP | REINFORCED CONCRETE PIPE | | DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED |
| RCFT | REINFORCED CONCRETE (FLAT TOP) | | LIMIT OF WORK |
| COMB. SEWER | COMBINED SEWER | | |
| UKN | UNKNOWN MATERIAL | | |
| INACC | MANHOLE WAS INACCESSIBLE | | |
| CSO | COMBINED SEWER OVERFLOW | | |
| SWO | STORM WATER OUTFALL | | |
| DIP | DUCTILE IRON PIPE | | |
| | EXISTING MANHOLE TO BE FLOODPROOFED. SEE SHEETS C100-C104 | | |
| | MANHOLE TO BE CAPPED | | |
| | NEW MANHOLE TO BE INSTALLED | | |



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

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 4 - REACH K
STA. 89+93 - 97+39

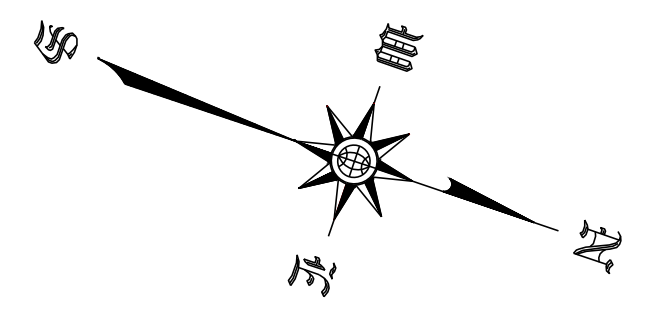
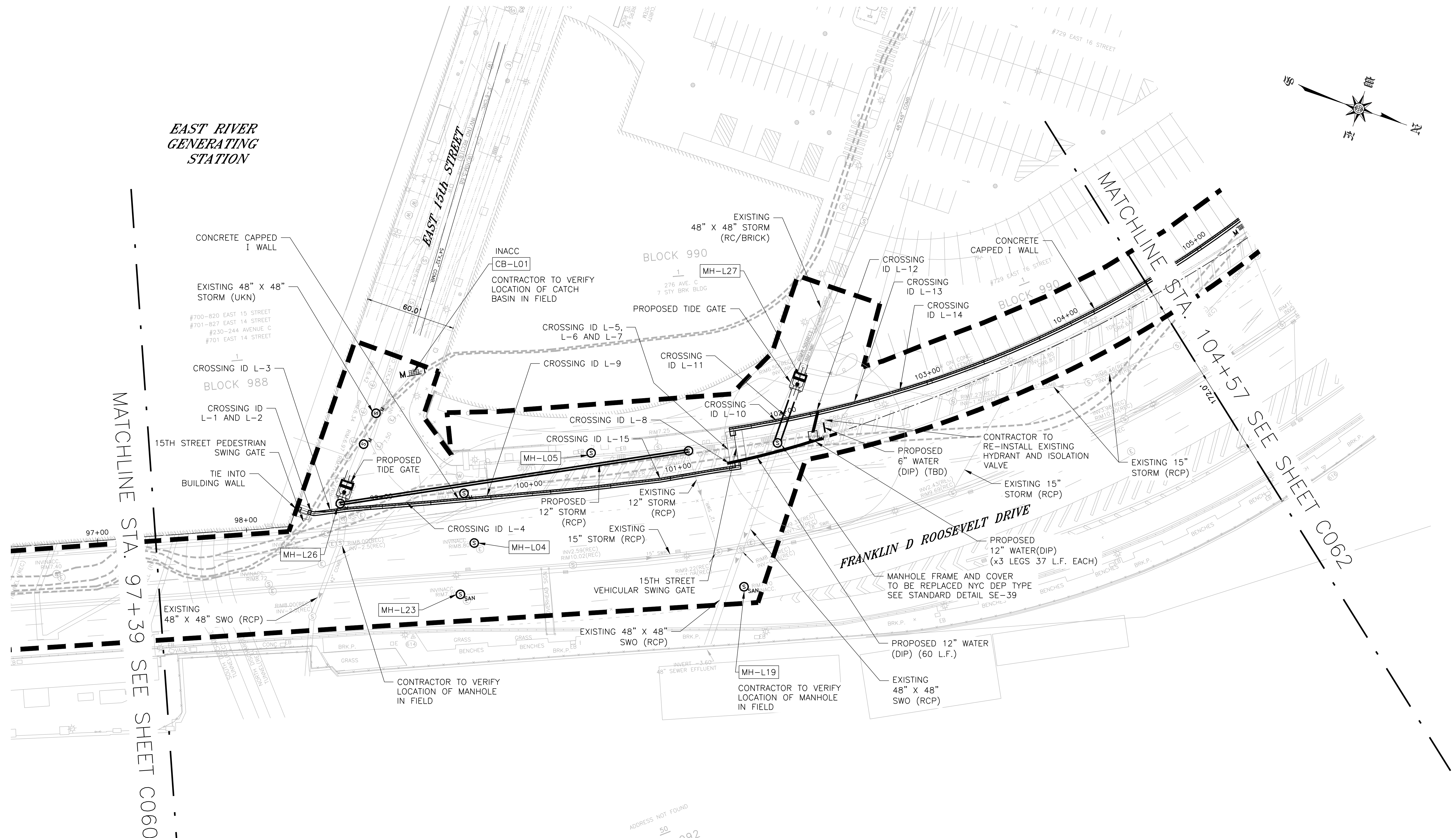
CH2M
DRAWN BY _____

SANDRESM1-C060-00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 91 OF 811 C060

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



**EAST RIVER
GENERATING
STATION**

MATCHLINE STA. 97+39 SEE SHEET C060

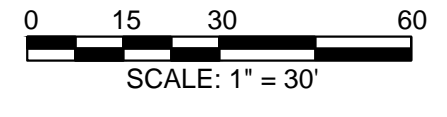
MATCHLINE STA. 104+57 SEE SHEET C062

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.

LEGEND:

- | | | |
|---|---|---|
| <p>INT. SWR.
STORM
VCP
RCP
RCFT
COMB. SEWER
UKN
INACC
CSO
SWO
DIP</p> | <p>INTERCEPTOR SEWER
STORM SEWER
VITREOUS CLAY PIPE
REINFORCED CONCRETE PIPE
REINFORCED CONCRETE (FLAT TOP)
COMBINED SEWER
UNKNOWN MATERIAL
MANHOLE WAS INACCESSIBLE
COMBINED SEWER OVERTFLOW
STORM WATER OUTFALL
DUCTILE IRON PIPE</p> | <p> CB-XXX
EXISTING CATCH BASIN TO BE MODIFIED AND TYPE</p> <p> W
EXISTING WATER VALVEBOX TO BE REPLACED</p> <p> ———
WATER MAIN OR SEWER TO BE REPLACED</p> <p> [Hatched Box]
DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED</p> <p> - - - - -
LIMIT OF WORK</p> <p> [Box with Arrow]
PROPOSED CATCH BASIN AND TYPE</p> |
| <p> MH-XXX
EXISTING MANHOLE TO BE FLOODPROOFED. SEE SHEETS C100-C104</p> <p> [Circle with X]
EXISTING MANHOLE FRAME TO BE RE-SET</p> <p> [Crossed Box]
EXISTING CATCH BASIN TO BE REMOVED</p> | | |



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

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 4 - REACH L
STA. 97+39 - 104+57

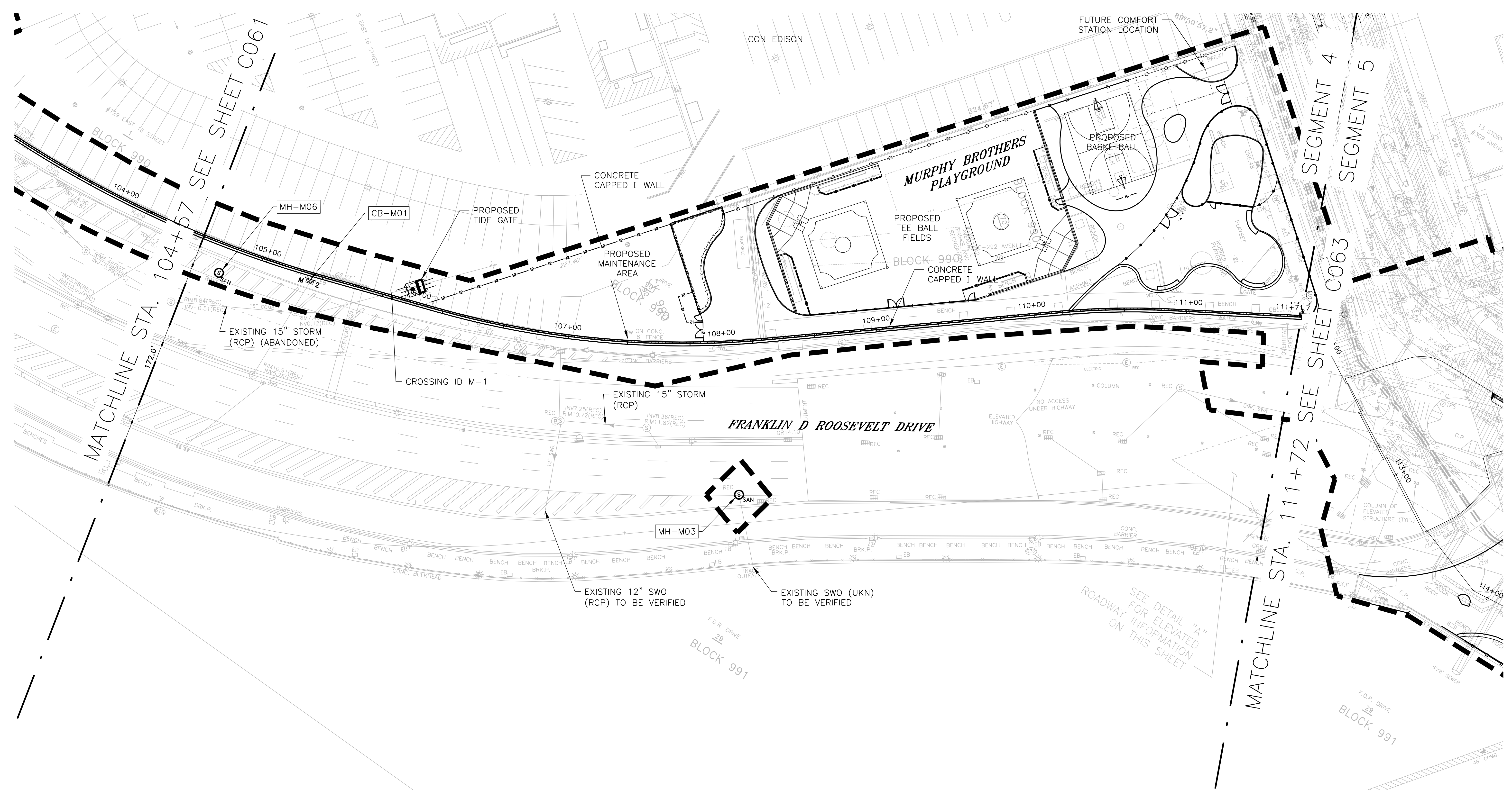
CH2M DRAWN BY _____ SANDRESM1-C061-00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

INSTALLATION OF
EAST SIDE COASTAL RESILIENCY
BOROUGH OF MANHATTAN

SHEET 92 OF 811 C061
CAPITAL PROJECT NO. SANDRESM1 1/31/19

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019

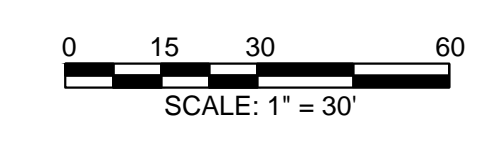


NOTES:

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.

LEGEND:

- | | | | |
|-------------|---|--------|--|
| INT. SWR. | INTERCEPTOR SEWER | CB-XXX | EXISTING CATCH BASIN TO BE MODIFIED AND TYPE |
| STORM | STORM SEWER | M-XXX | EXISTING WATER MAIN OR SEWER TO BE REPLACED |
| VCP | VITREOUS CLAY PIPE | --- | WATER MAIN OR SEWER TO BE REPLACED |
| RCPT | REINFORCED CONCRETE PIPE | ▨ | DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED |
| RCFT | REINFORCED CONCRETE (FLAT TOP) | --- | LIMIT OF WORK |
| COMB. SEWER | COMBINED SEWER | | |
| UKN | UNKNOWN MATERIAL | | |
| INACC | MANHOLE WAS INACCESSIBLE | | |
| CSO | COMBINED SEWER OVERFLOW | | |
| SWO | STORM WATER OUTFALL | | |
| MH-XXX | EXISTING MANHOLE TO BE FLOODPROOFED. SEE SHEETS C100-C104 | | |



CONCEPTUAL
SUBMITTED DATE: 1/31/2019

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. 104+57 - 111+72

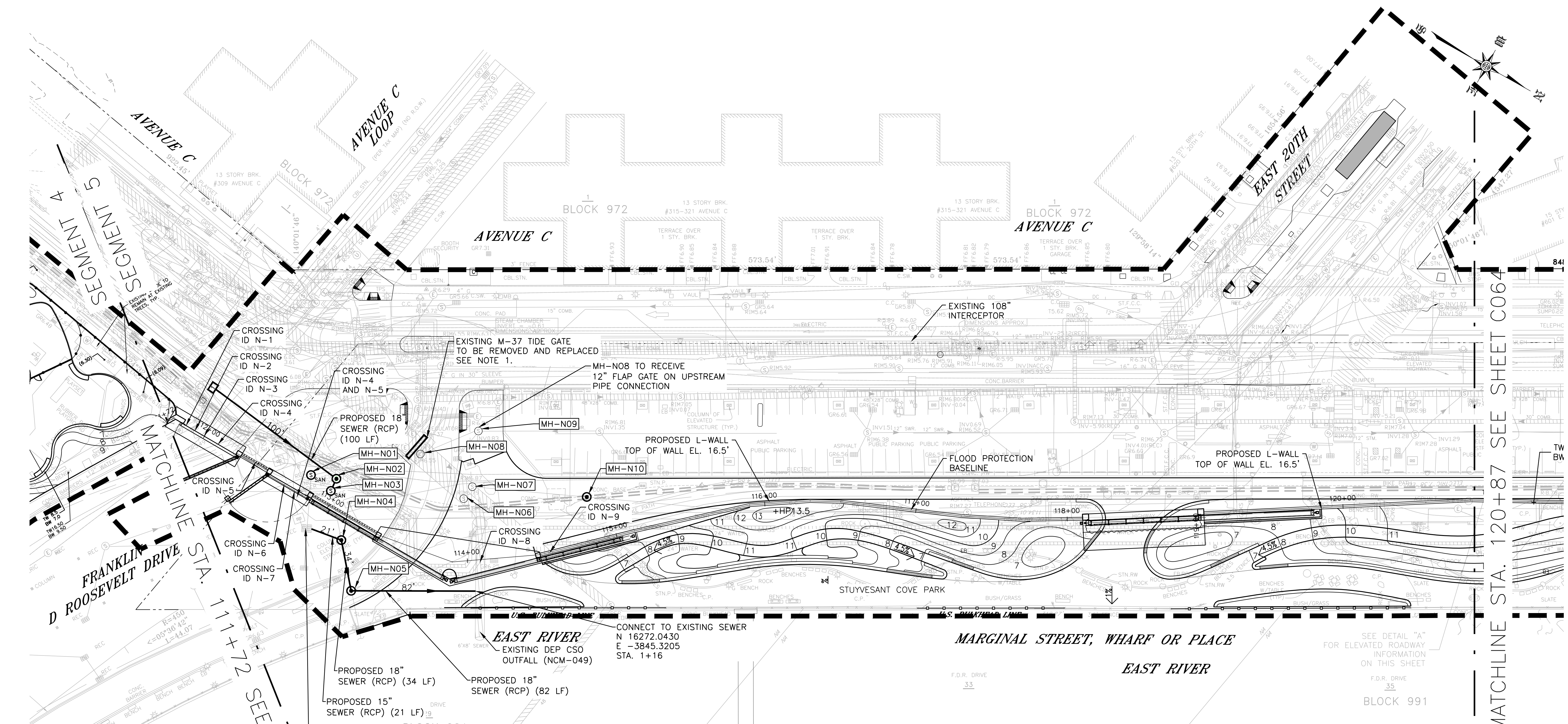
CH2M DRAWN BY _____ SANDRESM1-C062-00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

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

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 93 OF 811 C062

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



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

- 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

FINAL DESIGN SUBMITTED BY:



FINAL DESIGN PREPARED BY:



SIGNATURE _____
DATE _____

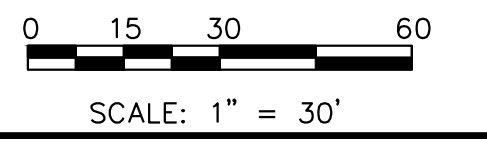
NOTES:

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	NORTHING	EASTING
MH-N01	16139.9024	-3834.3881
MH-N02	16154.2357	-3843.2033
MH-N03	16156.5342	-3834.7367
MH-N04	16182.6999	-3814.3160
MH-N05	16209.0315	-3792.8462
MH-N06	16226.9910	-3886.9600
MH-N07	16226.2630	-3896.8308
MH-N08	16186.0580	-3891.1650
MH-N09	16205.8494	-3927.6011
MH-N10	16288.4859	-3939.9159

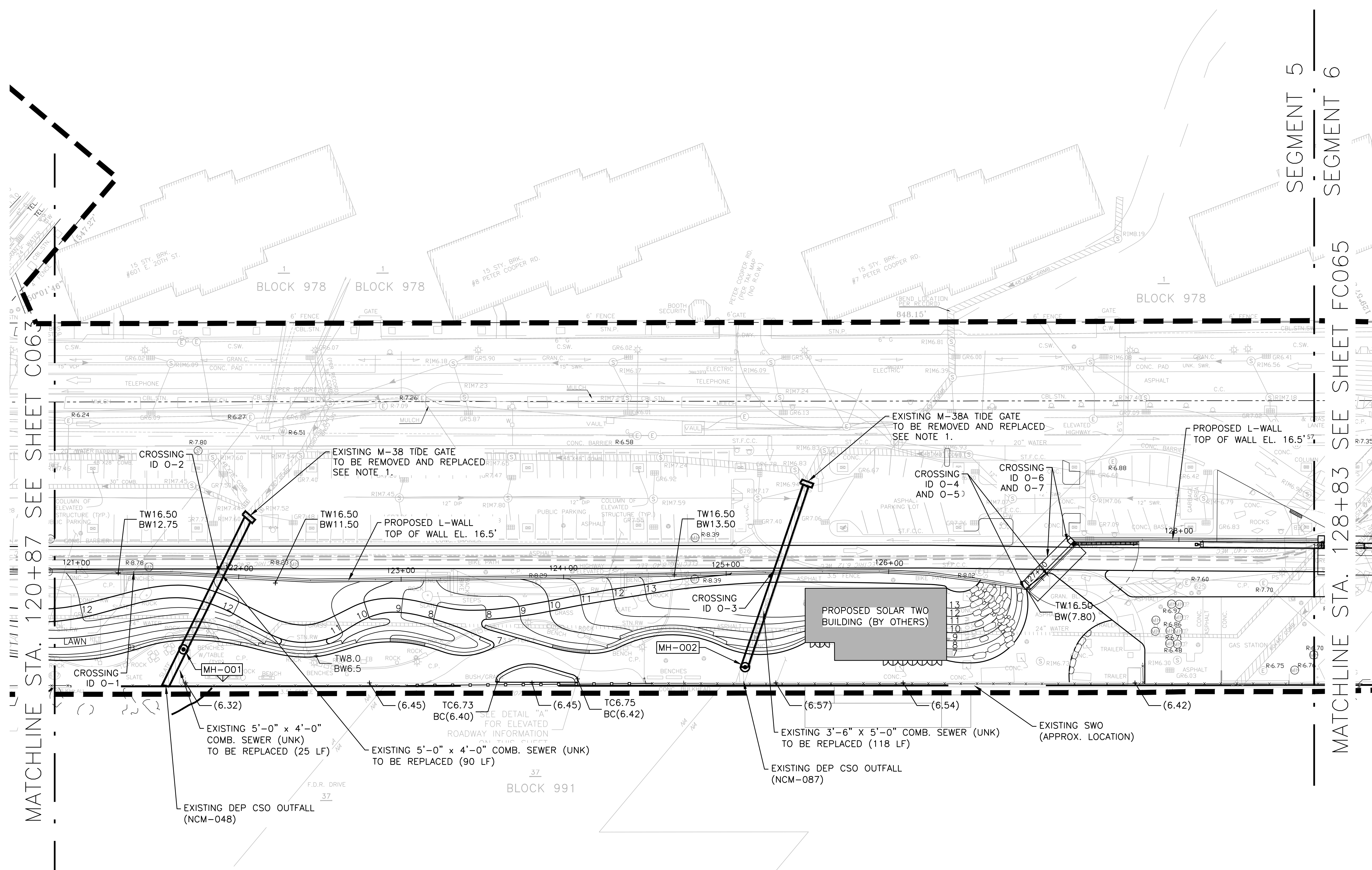
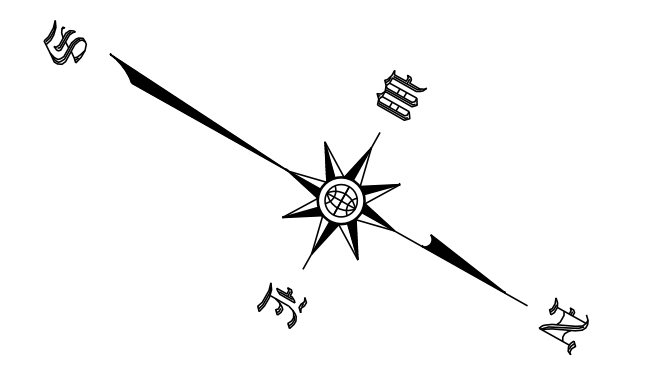
CONCEPTUAL
SUBMITTED DATE: 1/31/2019



NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

CITY OF NEW YORK DEPARTMENT OF DESIGN + CONSTRUCTION DIVISION OF INFRASTRUCTURE BUREAU OF DESIGN	CIVIL PLAN SEGMENT 5 - REACH N STA. 111+72 - 120+87 SANDRESM1-C063-00.DWG CADD FILE	INSTALLATION OF EAST SIDE COASTAL RESILIENCY BOROUGH OF MANHATTAN CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 94 OF 811 C063
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CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



MATCHLINE STA. 120+87 SEE SHEET C067

MATCHLINE STA. 128+83 SEE SHEET FC065

SEGMENT 5
SEGMENT 6

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 STORMWATER OUTFALL
-
- MH-XXX MANHOLE TO BE FLOODPROOFED. SEE SHEETS F750-F757
 - MH-XXX EXISTING MANHOLE TO BE CAPPED/ABANDONED IN PLACE

- MH-XXX PROPOSED MANHOLE TO BE INSTALLED
- EXISTING MANHOLE TO BE RE-SET
- SEWER TO BE REPLACED
- DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED
- LIMIT OF WORK
- PROPOSED SEWER

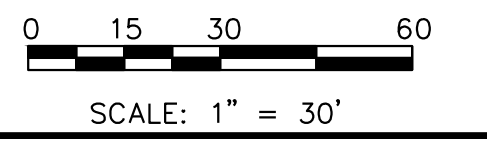
NOTES:

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	NORTHING	EASTING
MH-001	16830.5122	-4327.4258
MH-002	17102.4976	-4540.6952

CONCEPTUAL
SUBMITTED DATE: 1/31/2019



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:

ARCADIS OF NEW YORK, INC. NAME OF CONSULTANT
 SIGNATURE _____
 DATE _____

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

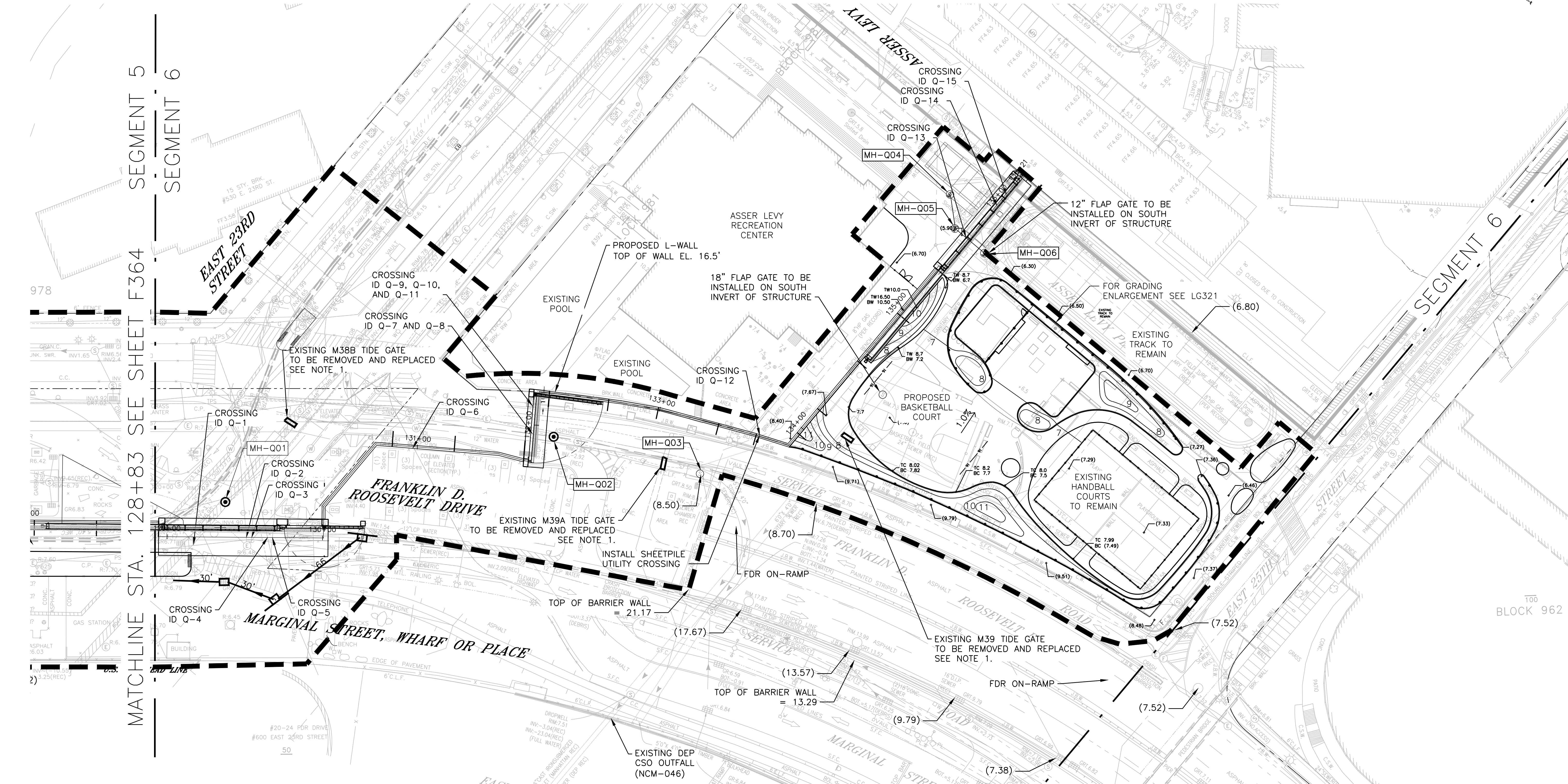
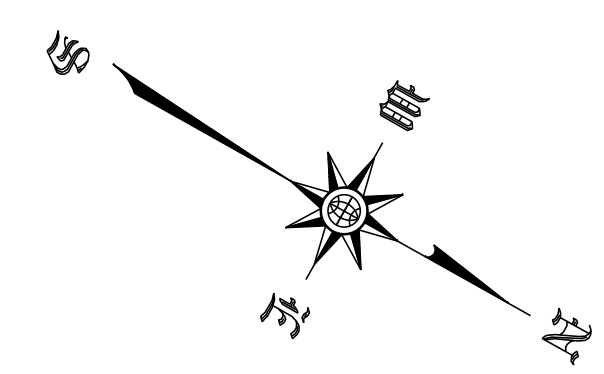
CIVIL PLAN
 SEGMENT 5 - REACH 0
 STA. 120+87 - 128+83
 ARCADIS DRAWN BY _____ SANDRESM1-C064-00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

INSTALLATION OF
 EAST SIDE COASTAL RESILIENCY
 BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 95 OF 811 C064

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



LEGEND:

- INT. SWR. STORM VCP RCP RCFI 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

- MH-XXX PROPOSED MANHOLE TO BE INSTALLED
- LIMIT OF WORK
- PROPOSED CATCH BASIN AND TYPE
- XX' PROPOSED SEWER

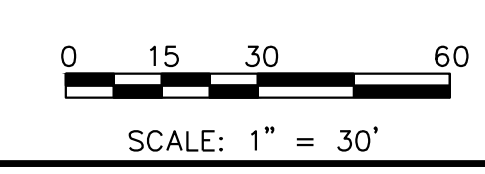
NOTES:

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.
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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.
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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	NORTHING	EASTING
MH-Q01	17347.1765	-4864.2039
MH-Q02	17482.0749	-5031.9765
MH-Q03	17569.4898	-5074.2506
MH-Q04	17577.6234	-5315.2397
MH-Q05	17594.1696	-5300.4737
MH-Q06	17618.8191	-5300.4737

CONCEPTUAL
SUBMITTED DATE: 1/31/2019



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 6 - REACH Q
STA. 128+83 - 136+21

ARCADIS DRAWN BY _____ SANDRESM1-C065-00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

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

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 96 OF 811 C065