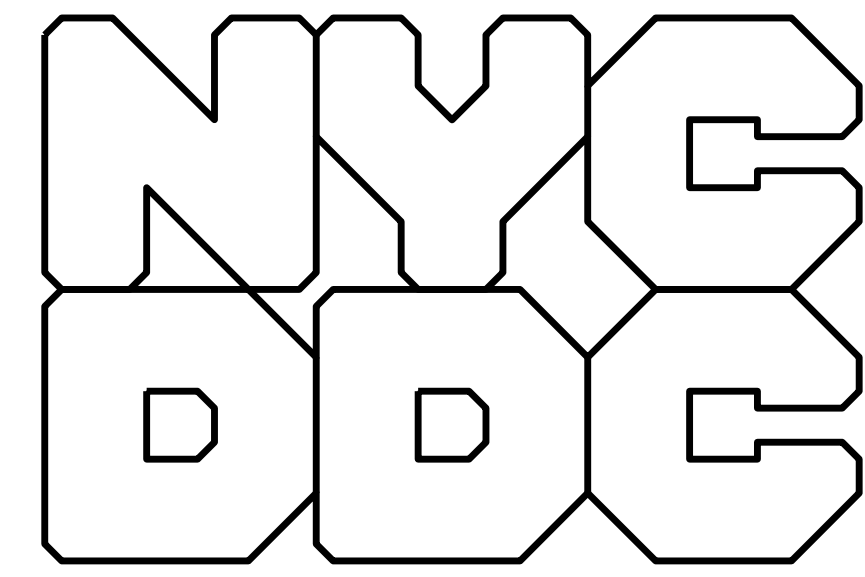


**Appendix C1a**  
**Preferred Alternative - Title, Legend, and Key Map**

**TABLE OF CONTENTS**  
**SHEET TITLE**

<b>SHEET NO.</b>	<b>DRAWING NO.</b>	<b>TITLE SHEET</b>
T001	SANDRESM1-T001-00.DWG	TITLE SHEET
T006	SANDRESM1-T006-00.DWG	LEGEND AND ABBREVIATIONS SHEET 1 OF 2
T007	SANDRESM1-T007-00.DWG	LEGEND AND ABBREVIATIONS SHEET 2 OF 2
T008	SANDRESM1-T008-00.DWG	KEY MAP SHEET 1 OF 2
T009	SANDRESM1-T009-00.DWG	KEY MAP SHEET 2 OF 2

CONCEPTUAL REDESIGN



Department of Design and Construction

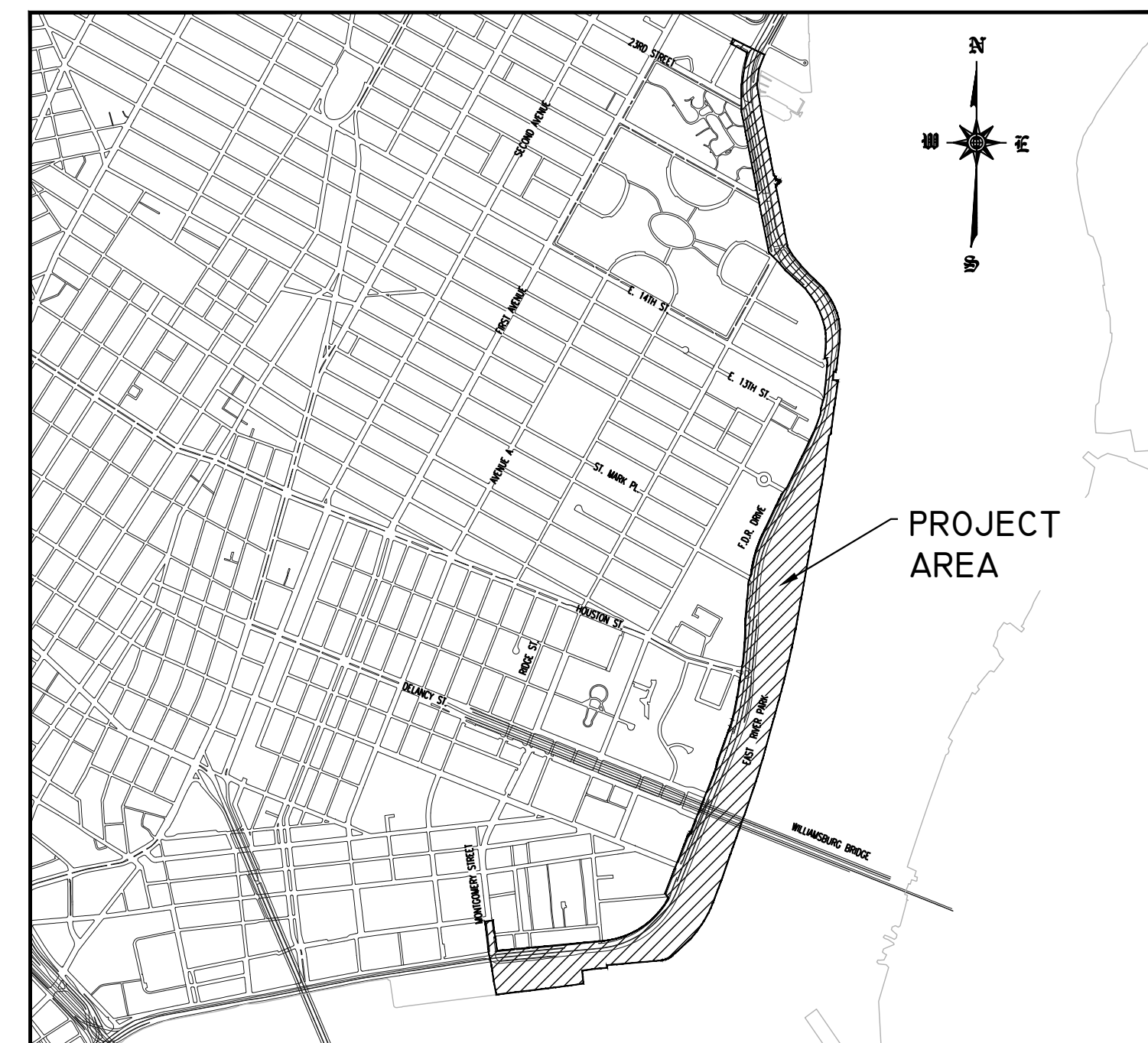
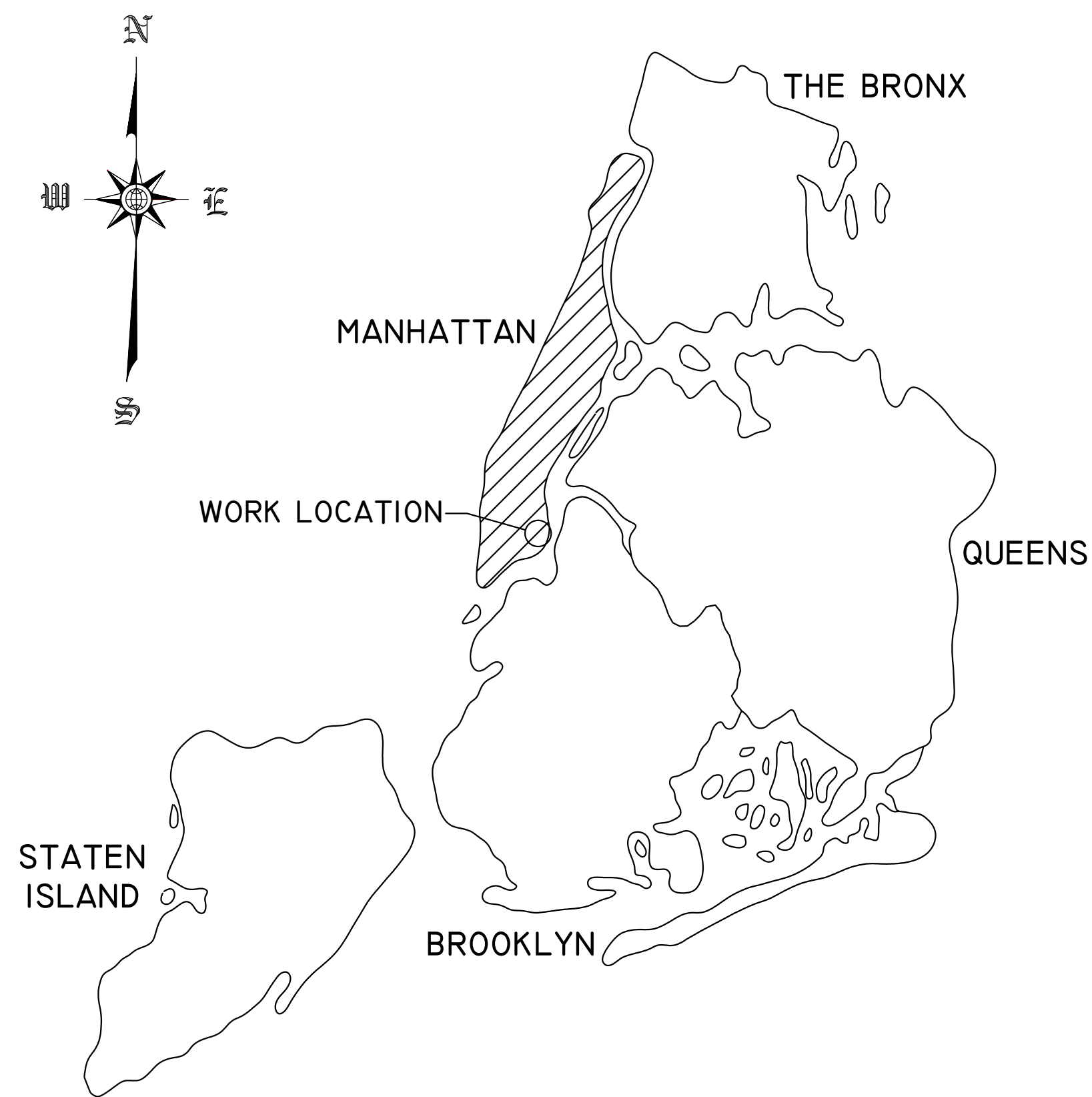
DIVISION OF INFRASTRUCTURE  
BUREAU OF DESIGN

PROJECT ID: SANDRESMI

INSTALLATION OF EAST SIDE COASTAL RESILIENCY  
FROM MONTGOMERY STREET TO EAST 25TH STREET  
TOGETHER WITH ALL WORK INCIDENTAL THERETO

INCLUDING SEWER, WATER MAIN, STREET LIGHTING, AND TRAFFIC  
WORK TOGETHER WITH ALL WORK INCIDENTAL THERETO

BOROUGH OF MANHATTAN  
PART 1 OF 2



LOCATION PLAN  
N.T.S.  
COMMUNITY BOARD NO. 3 AND NO. 6

ERIC MACFARLANE, P. E.  
DEPUTY COMMISSIONER

DATE

MOHSEN ZARGARELAHI, P. E.  
ASSOCIATE COMMISSIONER

DATE

HOW SHEEN PAU, P. E.  
ASSISTANT COMMISSIONER

DATE

REVIEWED AND APPROVED BY:

THU-LOAN DINH, P. E.  
DIRECTOR

DATE

NAME  
ENGINEER-IN-CHARGE

DATE

FINAL DESIGN PREPARED BY:

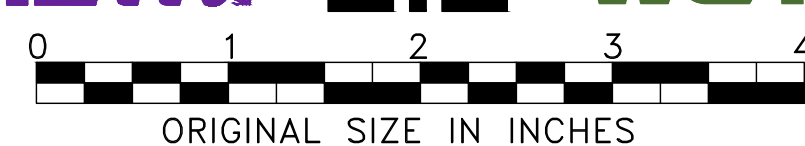
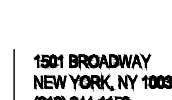
PREPARED BY:

P.E. NO. DATE

SUBMITTED BY:



The AKRF-KSE JV



ORIGINAL SIZE IN INCHES

NO.	DATE	DESCRIPTIONS	BY	APPR'D
REVISIONS				
PROJECT ID: SANDRESM1		DATE: 1/31/2019	SHEET 001	OF 811 T001

PROJECT ID

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019

ABBREVIATIONS

Table of abbreviations including ABANDONED, APARTMENT, ASPHALT, BASEMENT, BITUMINOUS, BLOCK, BLUESTONE, BLUESTONE CURB, BLUESTONE WALK, BOTTOM OF CURB, BRICK, BUILDING, BUILT, CAST IRON, CENTER LINE, CHAIN LINK FENCE, CHAMBER, CLASS NUMBER, COMBINED, COMMERCIAL, CONCRETE, CONCRETE CURB, CONCRETE WALK, DIAMETER, DOUBLE BARREL, DOWN, DRAWING, DUCTILE IRON PIPE, EXISTING, EXTRA STRENGTH VITRIFIED PIPE, FIRE ALARM, FIRE DEPARTMENT, FLAT TOP REINFORCED CONCRETE, FRAME, GRANITE, GRANITE CURB, INTERCEPTOR, INVERT ELEVATION, IRREGULAR, MANHOLE, NOT IN CONTRACT, NOT TO SCALE, PAVEMENT, POINT OF CURVATURE, POINT OF INTERSECTION, POINT OF TANGENCY, PRECAST REINFORCED CONCRETE, RADIUS, REINFORCED CONCRETE PIPE, ROADWAY, SANITARY, SEWER, SIDEWALK, STANDARD, STEAM, STEEL, STEEL FACED, STEEL FACED CONCRETE CURB, STONE, STORM, STORY, TOP OF CURB, TRAFFIC SIGN, TOP OF WALL, VACANT, WORKING POINT.

MANHOLES

Table of manhole types: ELECTRIC, CABLE TV, TELEPHONE, TRAFFIC, NYC MH, GAS, WATER, FIRE DEPT., SUBWAY, COAL CHUTE, STORM SEWER, STORM CHAMBER, COMBINED SEWER, SANITARY SEWER, INTERCEPTOR SEWER, UNIDENTIFIED MANHOLE (NO RECORD AVAILABLE), BUILT MANHOLE REPLACED BY NEW MANHOLE, RECORD MANHOLE, HARDWARE RIM EL. & INV. EL. (SEWER, ETC.).

BASINS

Table of basin types: CATCH BASIN WITH CURB PIECE - TYPE 1, CATCH BASIN WITHOUT CURB PIECE - TYPE 2, CATCH BASIN WITHOUT CURB PIECE - TYPE 3, EXISTING CATCH BASIN TO BE REMOVED, TO BE ABANDONED, TO BE MODIFIED, TO BE ADJUSTED.

Table of non-standard catch basins: CATCH BASIN - NON-STANDARD, NEW CATCH BASIN TO BE CONSTRUCTED IN SAME LOCATION AS OLD BASIN.

HYDRANTS

Table of hydrant types: LOW PRESSURE HYDRANT, HIGH PRESSURE HYDRANT, LOW PRESSURE HYDRANT TO BE REMOVED, HIGH PRESSURE HYDRANT TO BE RELOCATED, LOW PRESSURE HYDRANT TO BE ADJUSTED (VERTICALLY), HIGH PRESSURE HYDRANT TO BE ADJUSTED (VERTICALLY), SIAMESE CONNECTION.

STREET LIGHTING AND TRAFFIC SIGNALS

Table of street lighting and traffic signals: WOOD UTILITY POLE, WOOD UTILITY POLE TO BE REMOVED, WOOD UTILITY POLE WITH STREET LIGHT, WOOD UTILITY POLE WITH STREET LIGHT TO BE REMOVED, WOOD UTILITY POLE WITH TRAFFIC SIGNAL, WOOD UTILITY POLE WITH STREET LIGHT AND FIRE ALARM BOX, WOOD UTILITY POLE WITH STREET LIGHT AND FIRE ALARM BOX TO BE REMOVED, WOOD UTILITY POLE WITH FIRE ALARM BOX, WOOD UTILITY POLE WITH PEDESTRIAN SIGNAL, WOOD UTILITY POLE WITH TRAFFIC AND PEDESTRIAN SIGNAL, WOOD UTILITY POLE WITH STREET LIGHT AND TRAFFIC AND PEDESTRIAN SIGNAL, STREET LIGHT (METAL POLE), TRAFFIC SIGNAL CONTROL BOX, TRAFFIC SIGNAL POST W/PEDESTRIAN SIGNAL.

LEGEND

EXISTING PROPOSED

Legend symbols for existing and proposed items: MANHOLES, BASINS, HYDRANTS, STREET LIGHTING AND TRAFFIC SIGNALS, VALVE BOXES, TREES, MISCELLANEOUS, BARRIERS, FENCE (WITH HEIGHT AND TYPE), BUILDINGS.

VALVE BOXES

Table of valve box types: GAS, WATER, STEAM.

TREES

Table of tree types: EXISTING TREE (SIZE AS LABELED), EXISTING TREE TO BE REMOVED, NEW TREE TO BE PLANTED, SHRUB, HEDGE (HEIGHT AS LABELED).

MISCELLANEOUS

Table of miscellaneous items: VAULT (SIDEWALK), CELLAR WINDOW GRATING, CELLAR DOOR, SUBWAY GRATING, SURFACE WATER FLOW, TRAFFIC DIRECTION, PARKING METER, OIL FILL CAP OR OIL VENT, FIRE ALARM BOX, POLICE CALL BOX, MAIL BOX, PUBLIC PHONE, COLUMN - FOUNDATION (OF ELEVATED STRUCTURES), HEADER, AREA OF ADJUSTMENT, LIMIT OF NEW PAVEMENT, BUS PAD, SIGN (GROUND MOUNTED, SINGLE SIGN), SIGN (GROUND MOUNTED, MULTIPLE SIGNS), SIGN (GROUND MOUNTED, MULTIPLE SIGNS), SIGN (OVERHEAD), TRAIN STATION ENTRANCE, SHAFT TO BUILDING BASEMENT, PEDESTRIAN RAMP, CURB (CONCRETE UNLESS OTHERWISE INDICATED), CURB WITH DROP CURB (DRIVEWAY), EDGE OF PAVEMENT WITHOUT CURB, PROPOSED CONSTRUCTION (TOP OF CURB) ELEVATION AND STATION, ROCK OUTCROP.

BARRIERS

Table of barrier types: BEAM TYPE MALL BARRIER, PORTABLE PRECAST CONCRETE BARRIER, CAST IN PLACE CONCRETE BARRIER, RETAINING WALL (W/TYPE), RAILROAD/TROLLEY TRACK.

FENCE (WITH HEIGHT AND TYPE)

Table of fence types: CHAIN LINK FENCE, IRON PICKET FENCE, WIRE FENCE, IRON ON CONCRETE COPING, WOOD PICKET FENCE, GUARD POST.

BUILDINGS

Table of building types: HOUSE INFORMATION (HOUSE NUMBER, BLDG TYPE, FIRST FLOOR ELEV., (CE) CELLAR ENTR., (GE) GARAGE ENTR.), STAIRS OR STOOPS, CANOPY.

LEGEND

EXISTING PROPOSED

Legend symbols for existing and proposed items: VALVE BOXES, TREES, MISCELLANEOUS, BARRIERS, FENCE (WITH HEIGHT AND TYPE), BUILDINGS, CONDUITS.

CONDUITS

Table of conduit types: 6" WATER MAIN, 8" WATER MAIN, 12" WATER MAIN, 16" WATER MAIN, 20" WATER MAIN, 24" WATER MAIN, 30" WATER MAIN, 36" WATER MAIN, 42" WATER MAIN, 48" WATER MAIN, 54" WATER MAIN, 60" WATER MAIN, 66" WATER MAIN, 72" WATER MAIN, 84" WATER MAIN, 96" WATER MAIN, STORM SEWER (WITH SIZE - LESS THAN 24"), STORM SEWER (WITH SIZE - 24" AND GREATER), SANITARY SEWER (WITH SIZE - LESS THAN 24"), SANITARY SEWER (WITH SIZE - 24" AND GREATER), COMBINED SEWER (WITH SIZE - LESS THAN 24"), COMBINED (WITH SIZE - 24" AND GREATER), INTERCEPTOR SEWER (WITH SIZE - LESS THAN 24"), INTERCEPTOR SEWER (WITH SIZE - 24" AND GREATER), CATCH BASIN CONNECTION, GAS LINE (WITH SIZE), STEAM (WITH SIZE), ELECTRIC, TELEPHONE, FIRE ALARM, OVERHEAD (AERIAL) UTILITY LINE, TA SUBWAY CONDUIT.

LEGAL DATA

Table of legal data: LOT & BLOCK NUMBER, ESTABLISHED/LEGAL GRADE, ANGLE, BLOCK LENGTH, INTERPOLATED/CALCULATED ANGLE OR LENGTH, PROPERTY POSSESSION LINE, MAPPED PROPERTY LINE (RIGHT-OF-WAY LINE), LOT LINE, SURVEY MONUMENT (CITY) - IDENTIFY BY TOPO NUMBER, BENCH MARK (LABEL), SURVEY CONTROLS, CONTROL SURVEY TRAVERSE, CENTER LINE BASE LINE.

LEGEND

EXISTING PROPOSED

Legend symbols for existing and proposed items: CONDUITS, LEGAL DATA.



CONCEPTUAL

SUBMITTED DATE: 1/31/2019

\* LINE SPACING IN SYMBOL TO BE SCALED TO CONDUIT SIZE

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

FINAL DESIGN SUBMITTED BY:



FINAL DESIGN PREPARED BY:



AKRF ENGINEERING, P.C. NAME OF CONSULTANT

SIGNATURE DATE

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

LEGENDS AND ABBREVIATIONS SHEET 1 OF 2

AKRF DRAWN BY

SANDRESM1-T006-00.DWG CADD FILE

Table with columns: NO., DATE, DESCRIPTIONS, REVISIONS, BY, APPR'D.

INSTALLATION OF EAST SIDE COASTAL RESILIENCY BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 006 OF 811 T006

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019

LEGEND

FLOODWALL

LIMIT OF WORK	
TO BE REMOVED AND REPLACED (U.N.O.)	
DEMO-CLEAR AND GRUB	
DEMO-MISCELLANEOUS PAVING, CONCRETE CURB, CURB INLETS, AND RELATED DRAINAGE	
SALVAGE-UNMORTARED COBBLESTONE	
TO BE MODIFIED	
FIRE HYDRANT TO BE PROTECTED IN PLACE	
EXISTING MANHOLE AND FRAME TO BE REMOVED	
EXISTING CATCH BASIN TO BE MODIFIED	
EXISTING CSO MANHOLE AND FRAME TO BE REMOVED	
EXISTING MANHOLE AND FRAME TO BE MODIFIED	
EXISTING WATER VALVE BOX TO BE MODIFIED	
UTILITY TUNNEL INTEGRATED WITH FLOODWALL	
UTILITY TUNNEL INDEPENDENT FROM FLOODWALL	
UTILITY TUNNEL WITHIN LEVEE	
CARBON FIBER WRAPPING	
MANHOLE TO BE FLOODPROOFED	
EXISTING MANHOLE	
EXISTING MANHOLE TO BE MODIFIED	
EXISTING CATCH BASIN TO BE MODIFIED AND TYPE	
EXISTING VALVEBOX TO BE MODIFIED	
EXISTING CSO TO BE FLOODPROOFED	
DEP SEWER REGULATOR STRUCTURE TO BE FLOODPROOFED	

ROADWAY

PROPOSED PEDESTRIAN RAMP	
PROPOSED DETECTABLE WARNING UNITS	
PROPOSED PARKING LOT CONCRETE CURB	
PROPOSED WHEEL STOP	
PROPOSED FENCE	
PROPOSED MILLING AND RESURFACING	
PROPOSED FULL DEPTH ASPHALT PAVEMENT	

SHARED USE PATH

CURVE DATA TAG	
TANGENT DATA TAG	
ASPHALT BIKE PATH	
YIELD BAR LINE	
SINGLE BROKEN SKIP LINE - WHITE (PEG-A-TRAK) (TYP.) (SEE NYCDOT STD. DWG. TCW-1)	
SINGLE BROKEN SKIP LINE - YELLOW (PEG-A-TRAK) (TYP.) (SEE NYCDOT STD. DWG. TCW-1)	

PARK DRAINAGE

ABANDON EXISTING DRAINAGE STRUCTURE IN PLACE (CAP AND ABANDON ANY EXISTING CONNECTED PIPES)	
CAP AND ABANDON PIPE IN PLACE	
REMOVE PIPE	
CATCH BASIN	
CATCH BASIN ID NUMBER	
MANHOLE	
MANHOLE ID NUMBER	
STORM SEWER PIPE WITH FLOW DIRECTION	
STORM SEWER PIPE ID NUMBER	

LEGEND

LANDSCAPE

LIMIT OF WORK	
APPROXIMATE LIMIT OF SUBSURFACE ESPLANADE STRUCTURE	
REMOVE AND SALVAGE UNMORTARED COBBLESTONE FOR REUSE ON SITE	
REMOVE AND SALVAGE TABLES RETURN TO OWNER	
REMOVE AND SALVAGE BENCH RETURN TO OWNER	
PROTECT IN PLACE- EXISTING TREE	
EXISTING TREE TO TRANSPLANT	
REMOVE EXISTING TREE (SEE LT100 DRAWINGS)	
DEMO-FENCE	
DEMO-ARTIFICIAL TURF	
DEMO-CLEAR AND GRUB	
DEMO-HAND/PNEUMATIC EXCAVATION	
DEMO-MISCELLANEOUS PAVING	
DEMO- ASPHALT HEX PAVERS	
DEMO- ASPHALT SQUARE PAVERS	
TREE GUARD FOR GROVES	
DEMO-CURB	
TREE REMOVAL	
DEAD TREE/STUMP REMOVAL	
TRANSPLANT TREE	
TREE TO REMAIN	
TREE PROTECTION BOX	
TREE GUARD FOR GROVES	
5' CONTOUR INTERVAL	
1' CONTOUR INTERVAL	
EXISTING CONTOUR	
PROPOSED SPOT ELEVATION	
EXISTING SPOT ELEVATION	
SLOPE	
UNDERDRAIN-ATHLETIC FIELD	
UNDERDRAIN-LANDSCAPE	
DEP CATCH BASIN	
DPR CATCH BASIN	
DEP MANHOLE	
DPR MANHOLE	
EXISTING TREE TO REMAIN	
ASPHALT BLOCK(HEXAGON) - PROPOSED TO MATCH	
ASPHALT BLOCK(RECTANGLE)	
ASPHALT PAVEMENT - BIKE LANE	
ASPHALT PAVEMENT	
ASPHALT PAVEMENT W. SURFACE PAINT	
CONCRETE PAVEMENT - 6" EXPOSED AGGREGATE W. SAW CUT JOINTS	
CONCRETE PAVEMENT - 6" EXPOSED AGGREGATE W. SAW CUT JOINTS	
CONCRETE PAVEMENT	
COBBLESTONE	
ARTIFICIAL TURF	
BROWN ARTIFICIAL TURF	
SAFETY SURFACE	
PICNIC TABLE	
ACCESSIBLE PICNIC TABLE	
TABLE AND CHAIRS	
ACCESSIBLE TABLE AND CHAIRS	
1964 WORLD'S FAIR BENCH WITH ARMS	

LEGEND

LANDSCAPE

1964 WORLD'S FAIR BENCH ARMLESS	
1964 WORLD'S FAIR BENCH BACKLESS	
SPORTS FIELD/COURT BENCH	
PUBLIC SPACE WASTE + RECYCLING RECEPTACLES (2 UNITS)	
BICYCLE RACK LOOP	
STEEL BOTTLE FILLING STATION W. HI-LO DRINKING FOUNTAIN	
BBQ GRILLS	
STONE EDGE	
PIPE RAIL FENCE	
4' CHAIN LINK FENCE	
8' CHAIN LINK FENCE	
12' CHAIN LINK FENCE	
16' CHAIN LINK FENCE	
ESPLANADE RAIL	
STEEL EDGE	
SPRAY SHOWER	
EXISTING TREE TO REMAIN	
PLANTING SOIL - 15' MIN. DEPTH	
PLANTING SOIL - 24' MIN. DEPTH	
PLANTING SOIL - 36' MIN. DEPTH	
SOIL AMENDMENT ZONE - 3-6" DEPTH	
CRUSHED STONE AT ARTIFICIAL TURF FIELDS	
STRUCTURAL SOIL - 36" DEPTH	
INFIELD CLAY	
NATURAL TURF SOIL - 14" DEPTH	
PERENNIAL, ORNAMENTAL GRASSES, GROUND COVER PLANTING MIX	
SEEDED MEADOW	
SEEDED LAWN	
EXISTING TREE TO REMAIN	
CANOPY TREE	
SMALL TREE	
EVERGREEN TREE	
FLUSHING MEADOW 12" WALKWAY POLE & LED LUMINAIRE (DOT DSL MAINTAINED)	
SPORTS FLOODLIGHTS 80-80FT POLE & LED FLOODLIGHTS (DPR MAINTAINED) A1 = POLE DESIGNATION	
30' POLE & LED COBRAHEAD LUMINAIRE (DOT DSL MAINTAINED)	
30' POLE & LED SECURITY FLOODLIGHTS (DOT DSL MAINTAINED)	
ELECTRICAL PULLBOX WITH ROADWAY TYPE CAST IRON FRAME AND COVER	
ELECTRICAL CONDUIT & WIRE	
TELEPHONE 4" EMPTY CONDUIT	

LEGEND

PARK PLUMBING

EXISTING WATER PIPE	
NEW WATER PIPE	
VALVE IN VALVE BOX	
PIPE REDUCER	
PIPE RISER	



**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:



AKRF ENGINEERING, P.C.  
NAME OF CONSULTANT

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

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LEGENDS AND ABBREVIATIONS  
SHEET 2 OF 2

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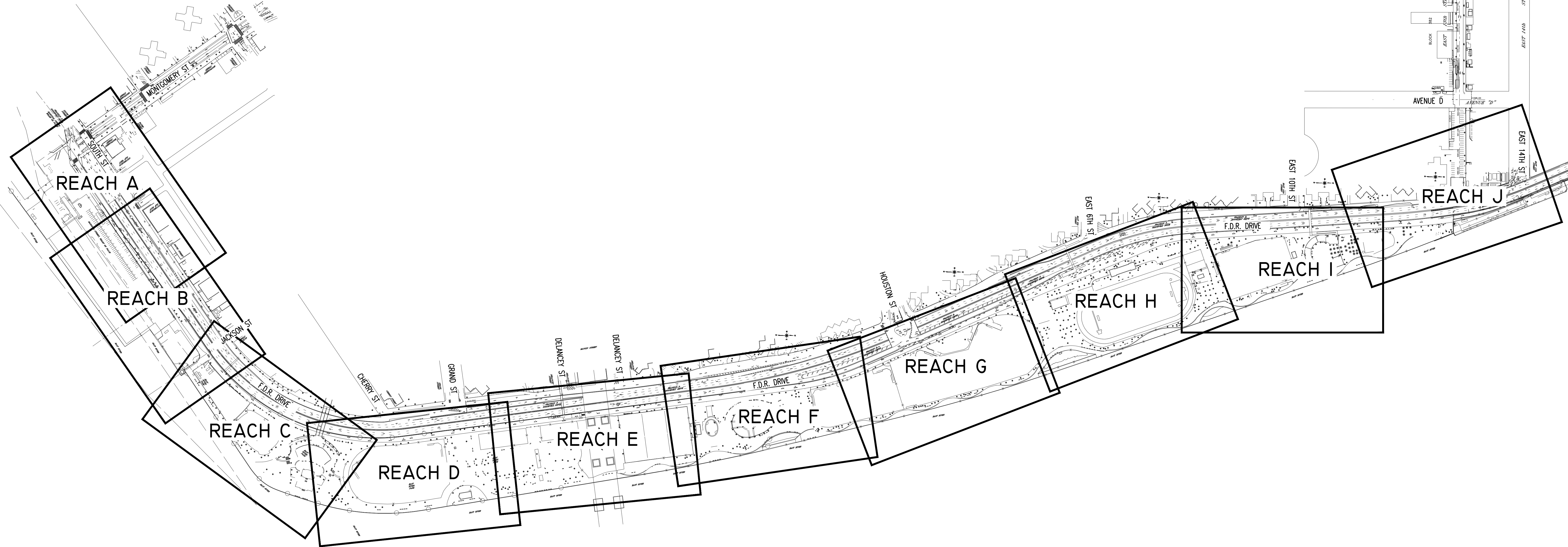
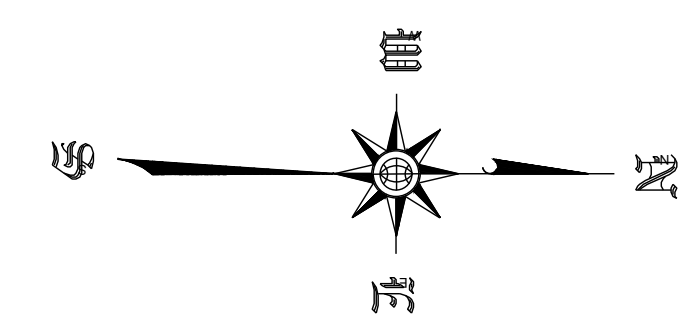
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NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 1/31/19 SHEET 007 OF 811 T007

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



**CONCEPTUAL**  
SUBMITTED DATE: 1/31/2019

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NAME OF CONSULTANT

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KEY MAP  
SHEET 1 OF 2

AKRF  
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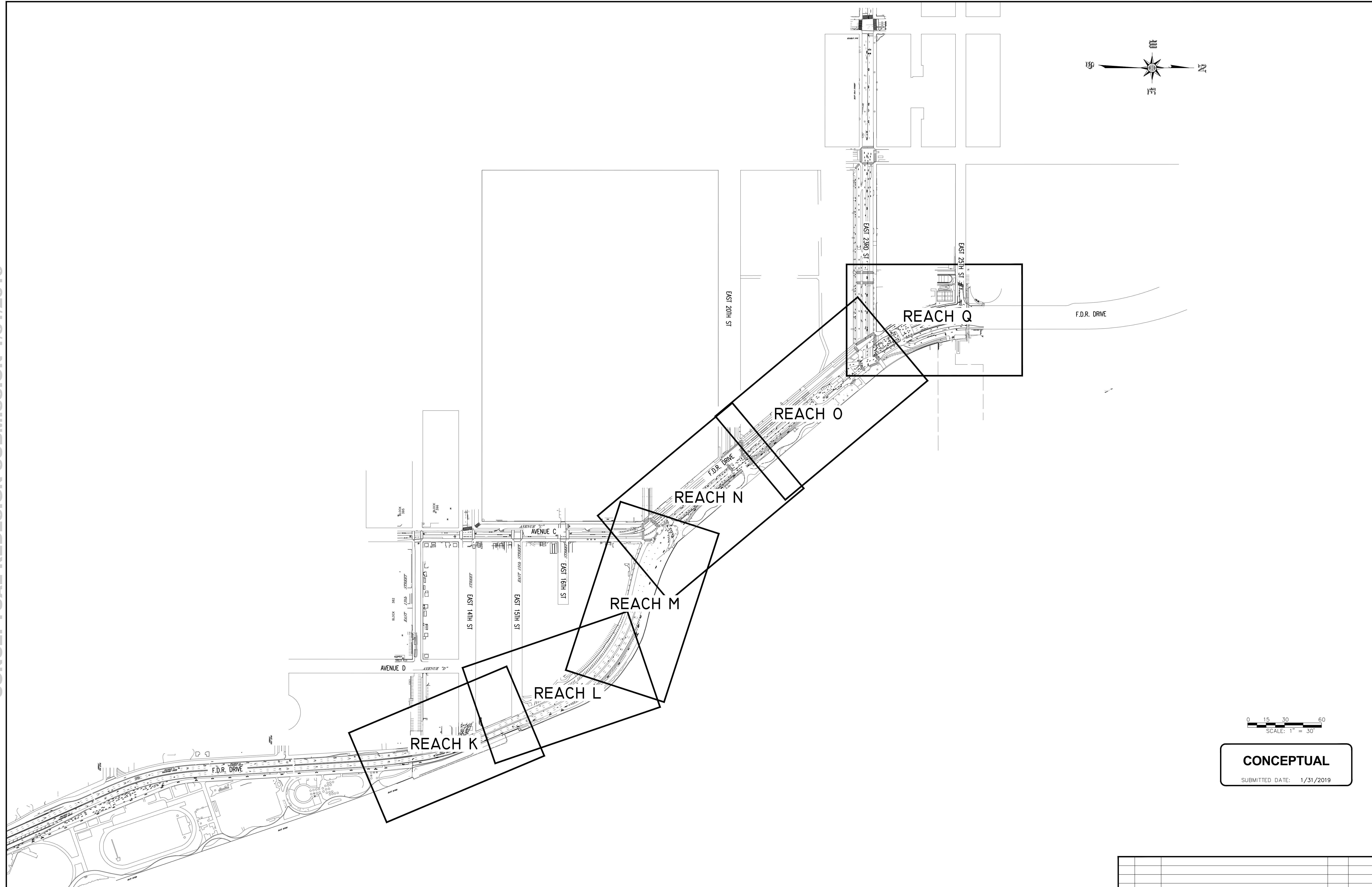
NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

INSTALLATION OF  
EAST SIDE COASTAL RESILIENCY  
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 1/31/19

SHEET 008 OF 811 T008

CONCEPTUAL REDESIGN SUBMISSION 1/31/2019



**CONCEPTUAL**  
SUBMITTED DATE: 1/31/2019

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FINAL DESIGN PREPARED BY:



AKRF ENGINEERING, P.C.  
NAME OF CONSULTANT

SIGNATURE

DATE

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

KEP MAP  
SHEET 2 OF 2

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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 009 OF 811 T009