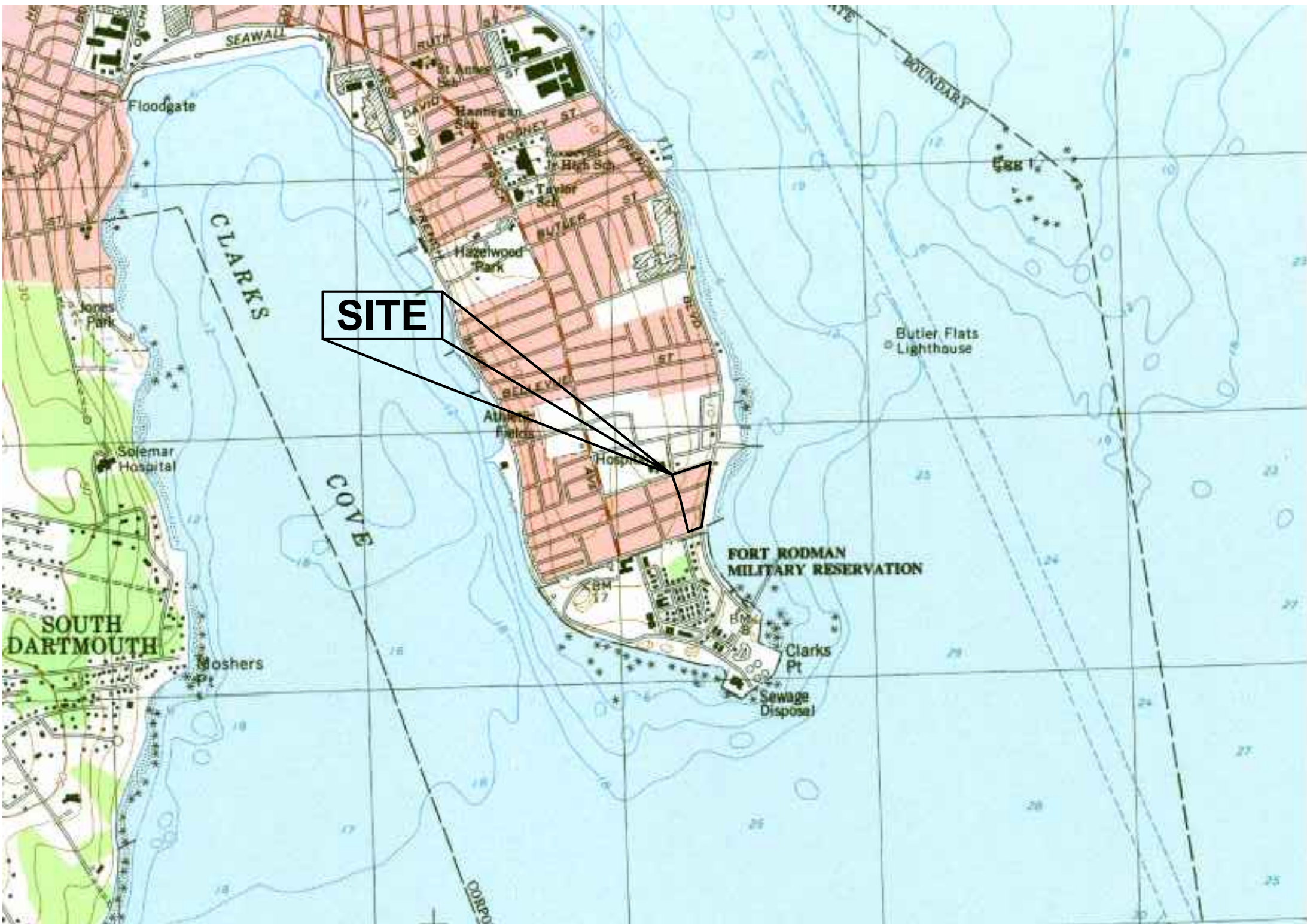


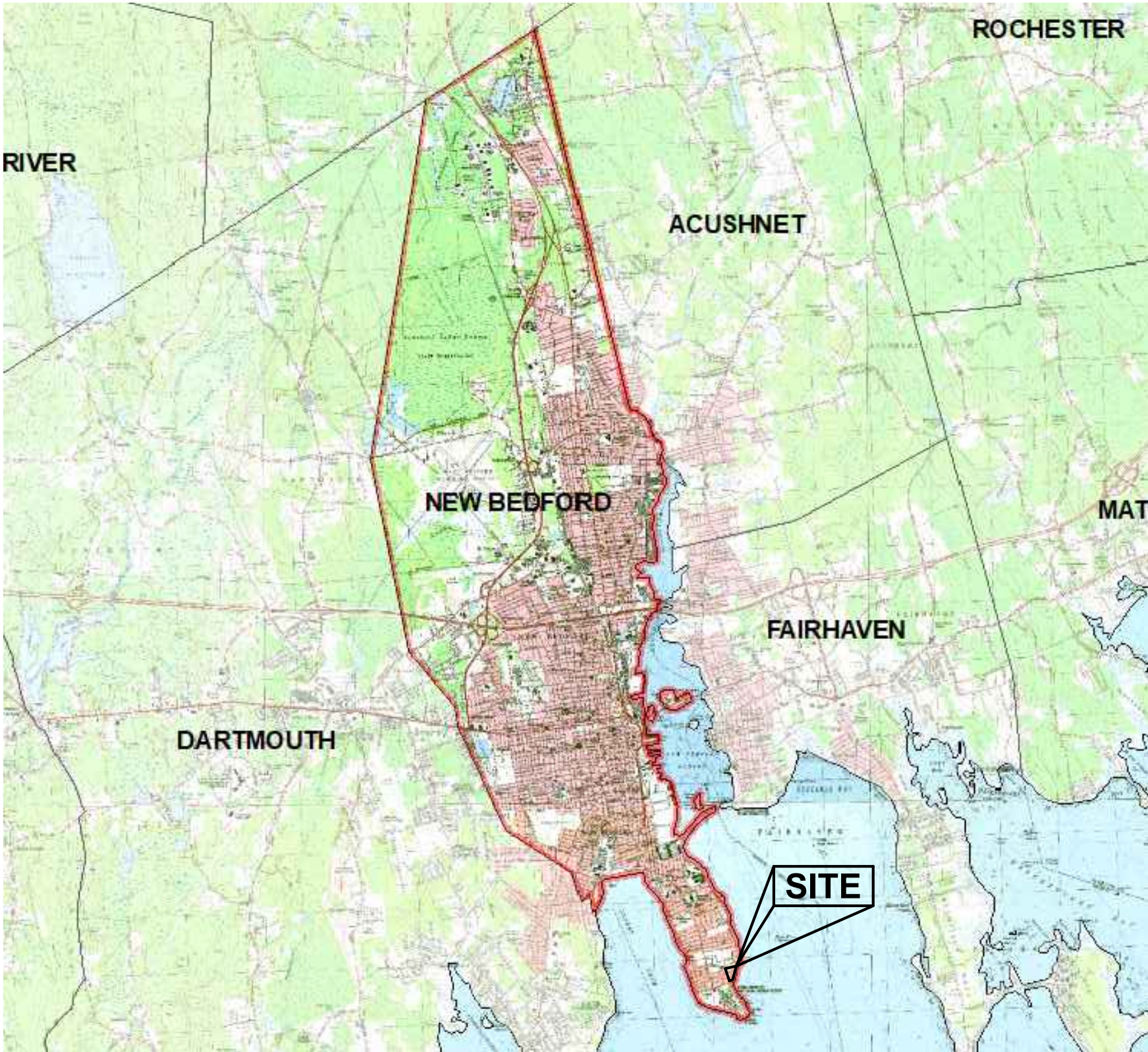
FINAL DESIGN DRAWINGS JULY 21, 2022

EAST BEACH PARK  
PARKING LOT  
GREEN INFRASTRUCTURE RETROFIT

NEW BEDFORD, MA



LOCUS MAP - NOT TO SCALE



NEW BEDFORD MA GIS LOCUS MAP

LIST OF DRAWINGS

- C0.0 COVER SHEET
- EX-1 EXISTING CONDITIONS NOTES AND LEGEND - 1 OF 3
- EX-2 EXISTING CONDITIONS PLAN - 2 OF 3
- EX-3 EXISTING CONDITIONS PLAN - 3 OF 3
- C1.0 CIVIL NOTES, ABBREVIATIONS, & LEGENDS
- C2.0 SITE DEMOLITION PLAN
- C2.1 SITE EROSION & SEDIMENT CONTROL PLAN
- C2.2 SITE PHASING PLAN
- C3.0 SITE LAYOUT PLAN - OVERALL
- C3.1 SITE LAYOUT PLAN - SOUTH LOT
- C3.2 SITE LAYOUT PLAN - MIDDLE LOT
- C3.3 SITE LAYOUT PLAN - NORTH LOT
- C4.1 SITE GRADING PLAN - SOUTH LOT
- C4.2 SITE GRADING PLAN - MIDDLE LOT
- C4.3 SITE GRADING PLAN - NORTH LOT
- C5.0 SITE DRAINAGE PLAN - OVERALL
- C5.1 SITE DRAINAGE PLAN - SOUTH LOT
- C5.2 SITE DRAINAGE PLAN - MIDDLE LOT
- C5.3 SITE DRAINAGE PLAN - NORTH LOT
- C6.0 EROSION & SEDIMENT CONTROL DETAILS
- C6.1 CIVIL DETAILS
- C6.2 SITE DETAILS SHEET II
- C6.3 SITE LAYOUT DETAILS
- C7.0 PLANTING PLAN

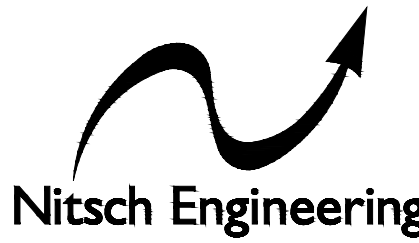
CONSULTANTS

CIVIL ENGINEER  
NITSCH ENGINEERING  
2 CENTER PLAZA, SUITE 430  
BOSTON, MA 02108  
PHONE: (617) 338-0063

CLIENT / OWNER  
CITY OF NEW BEDFORD  
181 HILLMAN STREET #3  
NEW BEDFORD, MA 02740  
PHONE: (508) 979-1400

WETLAND BOUNDARY DELINEATION  
LEC ENVIRONMENTAL CONSULTANTS INC.  
100 GROVE STREET  
WORCESTER, MA 01605  
PHONE: (508) 753-3077

COST ESTIMATION  
PM&C COST ESTIMATION, PROJECT  
MANAGEMENT & CONSTRUCTION MONITORING  
20 DOWNER AVENUE STE 5  
HINGHAM, MA 02043  
PHONE: (781) 740-8007



www.nitscheng.com  
2 Center Plaza, Suite 430  
Boston, MA 02108  
T: (617) 338-0063  
F: (617) 338-6472

- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

FINAL COST  
ESTIMATE SET  
7/21/2022

COVER SHEET  
EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT  
NEW BEDFORD, MA 02744  
PREPARED FOR:  
CITY OF NEW BEDFORD  
181 HILLMAN STREET #3, NEW BEDFORD, MA 02740

REV.	COMMENTS	DATE

NITSCH PROJECT # 14850  
FILE: 14850-CLO.DWG  
SCALE: NTS  
DATE: 06/30/2022  
PROJECT MANAGER: BFC  
SURVEYOR: NITSCH  
DRAFTED BY: KEW  
CHECKED BY: JLW/BFC

SHEET:

C0.0

DEP FILE  
#049-0893

OF REV.



CITY OF NEW BEDFORD  
RODNEY FRENCH BOULEVARD (EAST)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA		1	3
PROJECT FILE NO.		14850	

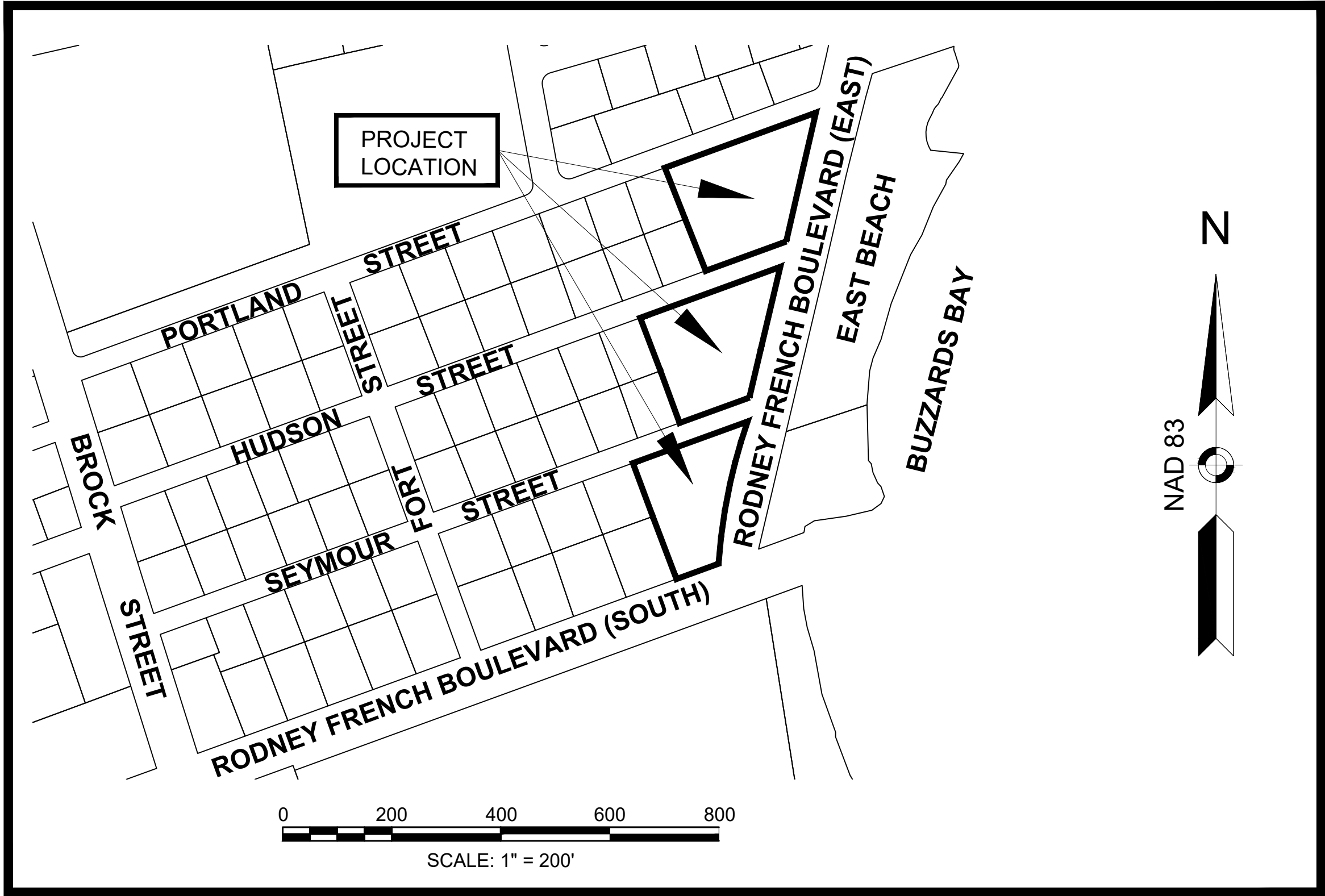
TITLE SHEET, LEGEND &  
ABBREVIATIONS

NOTES

1. THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF NITSCH ENGINEERING. IT IS ISSUED TO THE CITY OF NEW BEDFORD, PARKS RECREATION & BEACHES FOR PURPOSES RELATED DIRECTLY AND SOLELY TO NITSCH ENGINEERING'S SCOPE OF SERVICES UNDER CONTRACT WITH CITY OF NEW BEDFORD, PARKS RECREATION & BEACHES FOR EAST BEACH PARKING LOT REDESIGN PROJECT. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY REASON BY ANY PARTY FOR PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT AND PROJECT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN AUTHORIZATION IS GIVEN THEREFOR BY NITSCH ENGINEERING.
2. THE PURPOSE OF THIS PLAN IS TO SHOW TOPOGRAPHIC SURVEY AS THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY WHICH OCCURRED DECEMBER 29, 2021.
3. HORIZONTAL COORDINATES REFER TO MASSACHUSETTS STATE PLANE COORDINATE (NAD83), MAINLAND ZONE, U.S. SURVEY FEET BASED ON GPS RTK OBSERVATIONS.
4. ELEVATION REFERS TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) BASED ON GPS RTK OBSERVATIONS.
5. THE PARCELS SHOWN HEREON LIE WITHIN A ZONE AE (ELEVATION 17) AND VE (ELEVATIONS 18 & 19), SPECIAL FLOOD HAZARD AREA SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD, BASE FLOOD ELEVATIONS DETERMINED; AS GRAPHICALLY SHOWN ON FEMA FLOOD INSURANCE RATE MAP NUMBER 250500482G, MAP REVISED DATE: JULY 16, 2014 FOR THE COUNTY OF BRISTOL, MASSACHUSETTS.
6. THE INFORMATION CONTAINED ON THE DISK OR ELECTRONIC DRAWING FILE ACCOMPANYING THIS PLAN MUST BE COMPARED TO THE SEALED AND SIGNED HARD COPY OF THE PLAN TO ENSURE THE ACCURACY OF ALL INFORMATION AND TO ENSURE NO CHANGES, ALTERATIONS, OR MODIFICATIONS HAVE BEEN MADE. RELIANCE SHALL NOT BE MADE ON A DOCUMENT TRANSMITTED BY COMPUTER OR OTHER ELECTRONIC MEANS UNLESS FIRST COMPARED TO THE ORIGINAL SEALED DOCUMENT ISSUED AT THE TIME OF THE SURVEY, DUE TO THE CRITICAL NATURE OF SURVEYING, DATA ACQUISITION, AND AUTOCAD PLAN DEVELOPMENT. IF CRITICAL DIMENSIONAL INFORMATION IS NEEDED AND IS NOT SPECIFICALLY SHOWN ON THE ELECTRONIC DRAWING FILE, PLEASE CONTACT NITSCH ENGINEERING.

PLAN REFERENCES

1. PLAN BOOK 44 PAGE 82  
2. PLAN BOOK 178 PAGE 1  
3. HUDSON STREET CITY LAYOUT #4285  
4. PORTLAND STREET CITY LAYOUT #4286



ABBREVIATIONS

AUX	AUXILIARY	GMH	GAS MANHOLE	SHLD	SHOULDER
BD	BOUND	GRN	GRANITE	SHLO	STATE HIGHWAY LAYOUT
BIT	BITUMINOUS	GRAV	GRAVEL	SK	SKEW
BLDG	BUILDING	GRD	GUARD	SL	STOP LINE
BM	BENCHMARK	GRL	GUARDRAIL	SMH	SEWER MANHOLE
BR	BRIDGE	HDW	HEADWALL	SPK	SPIKE
BRK	BRICK	HYD	HYDRANT	STA	STATION
BWL	BROKEN WHITE LINE	INV	INVERT	STN	STONE
BYL	BROKEN YELLOW LINE	IP	IRON PIPE	SW	SIDEWALK
CAB	CABINET	JB	JERSEY BARRIER	SWL	SOLID WHITE LINE
CB	CATCH BASIN	L	LENGTH OF CURVE	SYL	SOLID YELLOW LINE
CC	CEMENT CONCRETE	LB	LEACHING BASIN	T	TANGENT DISTANCE
CCB	CAPE COD BERM	LC	LAND COURT	TAN	TANGENT
CEN	CENTER	LCB	LAND COURT BOUND	TEMP	TEMPORARY
CI	CURB INLET	LCD	LAND COURT DISK	TMH	TELEPHONE MANHOLE
CIP	CAST IRON PIPE	LO	LAYOUT	TR	TOP OF RAIL
CL	CENTER LINE	LP	LIGHT POLE	TSC	TRAFFIC SIGNAL CONDUIT
CLF	CHAIN LINK FENCE	LPD	LIGHT POLE DOUBLE LIGHT	TYP	TYPICAL
CMH	CABLE MANHOLE	LSA	LANDSCAPED AREA	VAR	VARIABLE
CMP	CORRUGATED METAL PIPE	MAG	MAG NAIL	VCP	VITRIFIED CLAY PIPE
CO	COUNTY	MBE	MIDDLE BACK EDGE	VGC	VERTICAL GRANITE CURB
CO BD	COUNTY BOUND	MED	MEDIAN	VL	VAULT
CON	CONIFEROUS	MH	MANHOLE	WB	WESTBOUND
CONC	CONCRETE	MP	MILE POST	WCR	WHEELCHAIR RAMP
CPP	CORRUGATED PLASTIC PIPE	MTL	METAL	WD	WOOD
CSP	CORRUGATED STEEL PIPE	N/F	NOW OR FORMERLY	WIP	WROUGHT IRON PIPE
CULV	CULVERT	NB	NORTHBOUND	TW	TOP OF WALL
CW	CROSSWALK	OH	OVERHANG		
DBWL	DOUBLE WHITE LINE	OHV	OVERHEAD WIRE		
DBYL	DOUBLE YELLOW LINE	PC	POINT OF CURVATURE		
DEC	DECIDUOUS	PCC	POINT OF COMPOUND CURVATURE		
DH	DRILL HOLE	PE	PEDESTRIAN		
DI	DROP INLET	PI	POINT OF INTERSECTION		
DIA	DIAMETER	PK	PK NAIL		
DIP	DUCTILE IRON PIPE	ℓ	PROPERTY LINE		
DMH	DRAIN MANHOLE	PP	PRICK PUNCH		
DSK	DISK	PRC	POINT OF REVERSE CURVATURE		
DWL	DOTTED WHITE LINE	PT	POINT OF TANGENCY		
DYL	DOTTED YELLOW LINE	PVC	POLYVINYL CHLORIDE PIPE		
EB	EASTBOUND	PVMT	PAVEMENT		
EL	ELEVATION	PWW	PAVED WATERWAY		
EMH	ELECTRIC MANHOLE	PZ	PIEZOMETER		
EP	EDGE OF PAVEMENT	R	RADIUS OF CURVATURE		
EPLP	ESCUTCHEON PIN IN LEAD PLUG	RB	REBAR		
ETW	EDGE OF TRAVELED WAY	RC	REINFORCED CONCRETE		
EX	EXISTING	RCP	REINFORCED CONCRETE PIPE		
FF	FINISH FLOOR	RET	RETAINING		
FGS	FLAGSTONE	ROW	RIGHT OF WAY		
FL	FLOWLINE	RR	RAILROAD		
FLDSTN	FIELDSTONE	RRS	RAILROAD SPIKE		
GAR	GARAGE	S BD	SOUTHBOUND		
GD	GROUND	SB	STONE BOUND		
GIP	GALVANIZED IRON PIPE	SD	SUBDRAIN		
		SGE	SLOPED GRANITE EDGING		

LEGEND

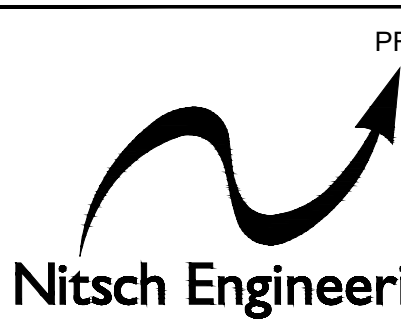
● BF#	BANK FLAG	● MAG	MAG NAIL
● BHL #	BORE HOLE	□ MB	MAIL BOX
● BM #	BUSH	■ MHB	MASSACHUSETTS HIGHWAY BOUND
□	BENCHMARK	⊕ MW	MONITORING WELL
⊙	BOUND (CONC, STONE, LAND COURT, ETC.)	○ OIL	OIL FILL
⊙ CB	CABLE MANHOLE	⊕	OTHER MANHOLE
⊙ CB	CATCH BASIN - SQUARE	□ PB	PULL BOX
⊙ CB	CATCH BASIN - D-FRAME	⚡ PED	PEDESTRIAN SIGNAL
⊙ CB	CATCH BASIN - ROUND	⚡	PHOTO CONTROL - H & V
● DSK	DISK (CA/T, USC&GS, LAND COURT, ETC.)	⚡	PHOTO CONTROL - V ONLY
● DH	DRILL HOLE	● PK	PK NAIL
⊙	DRAIN MANHOLE	○ PM	PARKING METER
□ EHH	ELECTRIC HANDHOLE	○ POST	CIRCULAR POST
⊙	ELECTRIC MANHOLE	□ POST	SQUARE POST
⊙	ELECTRIC METER	● RB	REBAR/IRON PIN
● EPLP	ESCUTCHEON PIN IN LEAD PLUG	⚡ RRS	RAILROAD SPIKE
⊙ FB	FLASHING BEACON	⚡ RRSW	RAILROAD SIGNAL
△ FES	FLARED END SECTION	⚡ SN	RAILROAD SWITCH
⊙ FP	FLAG POLE	⚡ SP	STAKE AND NAIL
○ GF	GAS FILL	⊙	STAND PIPE
○ GG	GAS GATE	⊙	SEWER MANHOLE
⊙ GM	GAS METER	⊙	STEAM MANHOLE
⊙ GP	GAS PUMP	○	STUMP
○ GPL	GAS MANHOLE	■ TB	TOWN LINE BOUND (CORNER)
○ HTP	GUY POLE	⊙ TCB	TRAFFIC SIGNAL CONTROL CABINET
○ IP	HANDICAP SYMBOL	⊙ TLRS	TELEPHONE MANHOLE
○	GUY WIRE ANCHOR	⊙ TLMR	TRANSFORMER
○	HIGH TENSION POWER POLE	⊙ TPLS	TOWN LINE ROAD STONE
○	FIRE HYDRANT	⊙ TPT #	TEST PIT
○	IRON PIPE	○ TPL	TROLLEY POLE
○	LIGHT POLE	△	TRAVERSE POINT
○	LIGHT POLE DOUBLE LIGHT	● 22" M	TREE

⊙ TS	TRAFFIC SIGNAL
○ TS	TRAFFIC SIGNAL MAST ARM/SPAN WIRE POLE
⊙	SIGN
⊙	SIGN - DOUBLE POST
⊙ UFB#	UTILITY POLE W/ FIRE PULL BOX
⊙ ULT#	UTILITY POLE W/ LIGHT
⊙ UPDL#	UTILITY POLE W/ DOUBLE LIGHT
⊙ UPL#	UTILITY POLE
○ VP	VENT PIPE
⊙	WATER MANHOLE
○ WG	WATER GATE
⊙ WM	WATER METER
○ WSO	WATER SHUTOFF
⊙ WELL	WELL (POTABLE)
⊙ WF#	WETLAND FLAG
✕ X-CUT	X-CUT


UTILITY INFORMATION STATEMENT

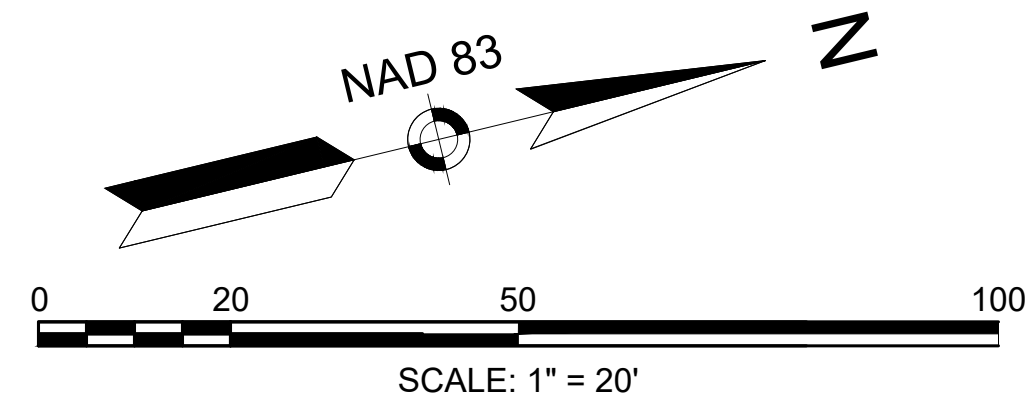
1. THE SUB-SURFACE UTILITY INFORMATION SHOWN HEREON IS COMPILED BASED ON FIELD SURVEY INFORMATION, RECORD INFORMATION AS SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES, AND PLAN INFORMATION SUPPLIED BY THE CLIENT, IF ANY; THEREFORE WE CANNOT GUARANTEE THE ACCURACY OF SAID COMPILED SUB-SURFACE INFORMATION TO ANY CERTAIN DEGREE OF STATED TOLERANCE. ONLY PHYSICALLY LOCATED SUB-SURFACE UTILITY FEATURES FALL WITHIN NORMAL STANDARD OF CARE ACCURACIES.
2. THE LOCATIONS OF UNDERGROUND PIPES, CONDUITS, AND STRUCTURES HAVE BEEN DETERMINED FROM SAID INFORMATION, AND ARE APPROXIMATE ONLY. COMPILED LOCATIONS OF ANY UNDERGROUND STRUCTURES, NOT VISIBLY OBSERVED AND LOCATED, CAN VARY FROM THEIR ACTUAL LOCATIONS.
3. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED.
4. THE STATUS OF UTILITIES, WHETHER ACTIVE, ABANDONED, OR REMOVED, IS AN UNKNOWN CONDITION AS FAR AS OUR COMPILED OF THIS INFORMATION.
5. IT IS INCUMBENT UPON INDIVIDUALS USING THIS INFORMATION TO UNDERSTAND THAT COMPILING UTILITY INFORMATION IS NOT EXACT, AND IS SUBJECT TO CHANGE BASED UPON VARYING PLAN INFORMATION RECEIVED AND ACTUAL LOCATIONS.
6. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES IS SUBJECT TO FIELD CONDITIONS, THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS AND OTHER MATTERS.
7. THE PROPER UTILITY ENGINEERING/COMPANY SHOULD BE CONSULTED AND THE ACTUAL LOCATIONS OF SUBSURFACE STRUCTURES SHOULD BE VERIFIED IN THE FIELD (V.I.F.) BEFORE PLANNING FUTURE CONNECTIONS. CONTACT THE DIG SAFE CALL CENTER AT 1-888-344-7233, SEVENTY-TWO HOURS PRIOR TO EXCAVATION, BLASTING, GRADING, AND/OR PAVING.
8. AS OF THE DATE OF THIS PLAN RECORD INFORMATION HAS NOT BEEN RECEIVED BY NITSCH ENGINEERING FOR THE FOLLOWING UTILITIES:ENBRIDGE

PREPARED BY:



NITSCH ENGINEERING  
2 CENTER PLAZA, STE. 430  
BOSTON, MA 02108  
P# 617-338-0063

			<div>PREPARED BY:</div> <div><div>Nitsch Engineering</div></div> <div>NITSCH ENGINEERING 2 CENTER PLAZA, STE. 430 BOSTON, MA 02108 P# 617-338-0063</div>		<div>PLAN OF TOPOGRAPHIC SURVEY OF EAST BEACH PARKING LOT RODNEY FRENCH BOULEVARD (EAST) THE CITY OF NEW BEDFORD AS ORDERED BY THE CITY OF NEW BEDFORD PARKS RECREATION &amp; BEACHES</div>			
REVISIONS			SCALE: 20 FEET TO THE INCH					
REV.	COMMENTS	DATE						
			FILE NAME: 14850_TOPO1.dwg					
			FIELD BOOK NO: 786					
			DRAWN BY: JLB	CHECKED BY: IOS				
			FIELD CHIEF: CC	PARS. NO:				
					DATE: 01/27/2022		SHEET 1 OF 3	

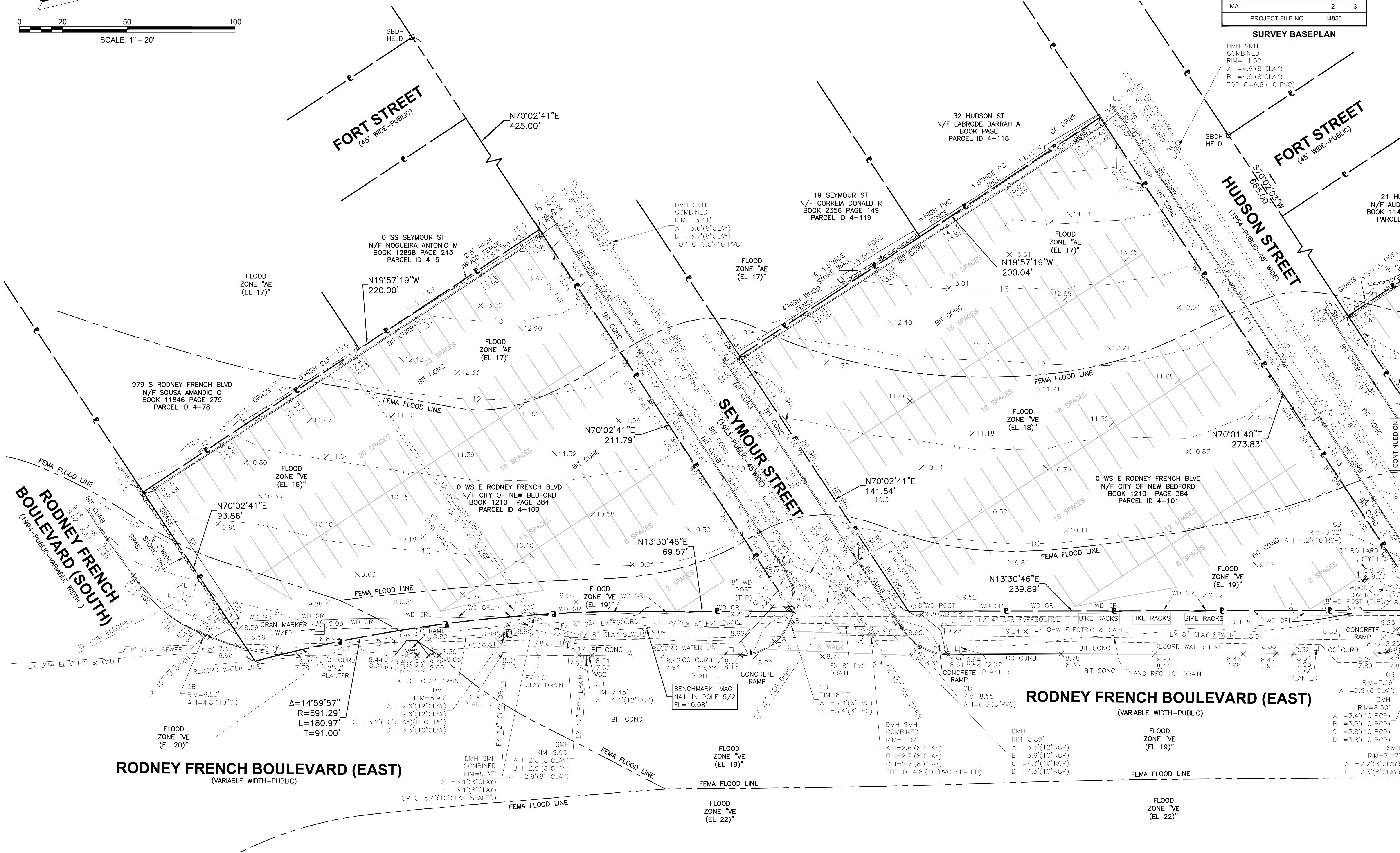


CITY OF NEW BEDFORD  
RODNEY FRENCH BOULEVARD (EAST)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA		2	3
PROJECT FILE NO.		14850	

SURVEY BASEPLAN

DMH SMH  
COMBINED  
RIM=14.52  
A I=4.6'(8"CLAY)  
B I=4.6'(8"CLAY)  
TOP C=6.8'(10"PVC)



CONTINUED ON  
SHEET NO. 3

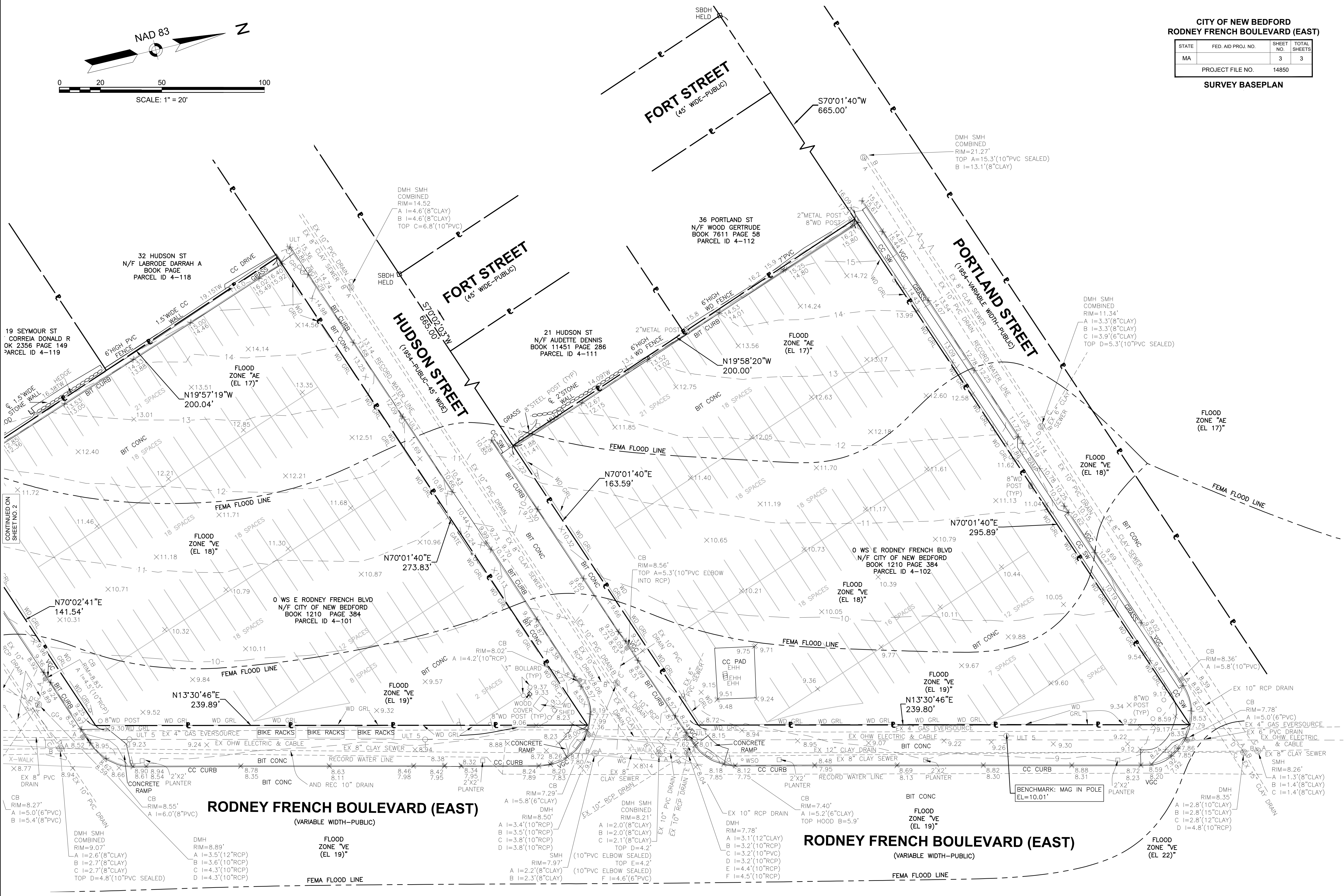


CITY OF NEW BEDFORD  
RODNEY FRENCH BOULEVARD (EAST)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA		3	3

PROJECT FILE NO. 14850

SURVEY BASEPLAN



CONTINUED ON  
SHEET NO. 2







**SITE DEMOLITION PLAN**  
EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT  
181'S EAST BEACH RODNEY FRENCH BOULEVARD, NEW BEDFORD, MA 02744

---

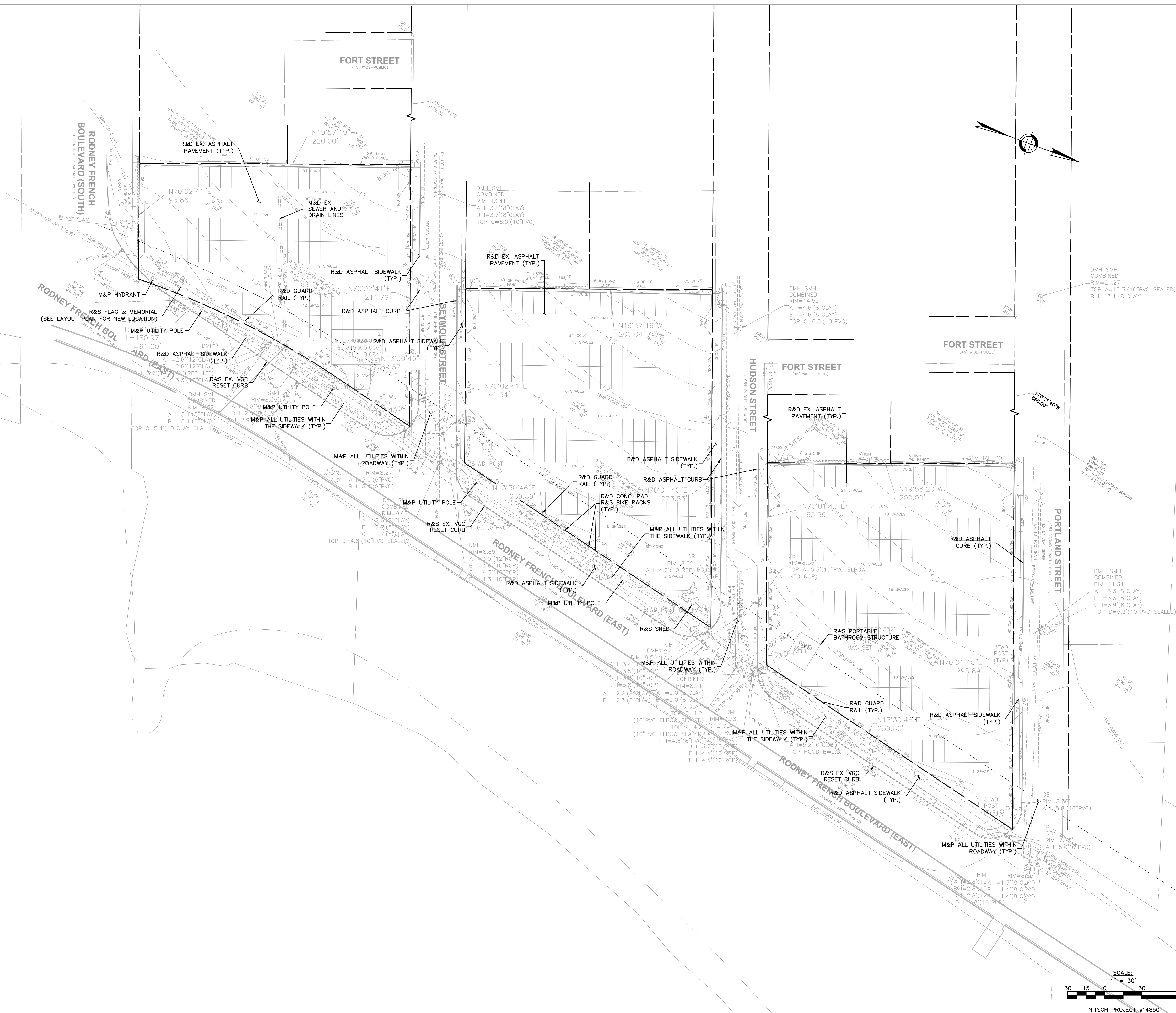
PREPARED FOR:

**CITY OF NEW BEDFORD**  
181 HILLMAN STREET #3, NEW BEDFORD, MA 02740

SHEET:

C2.0

OF REV.





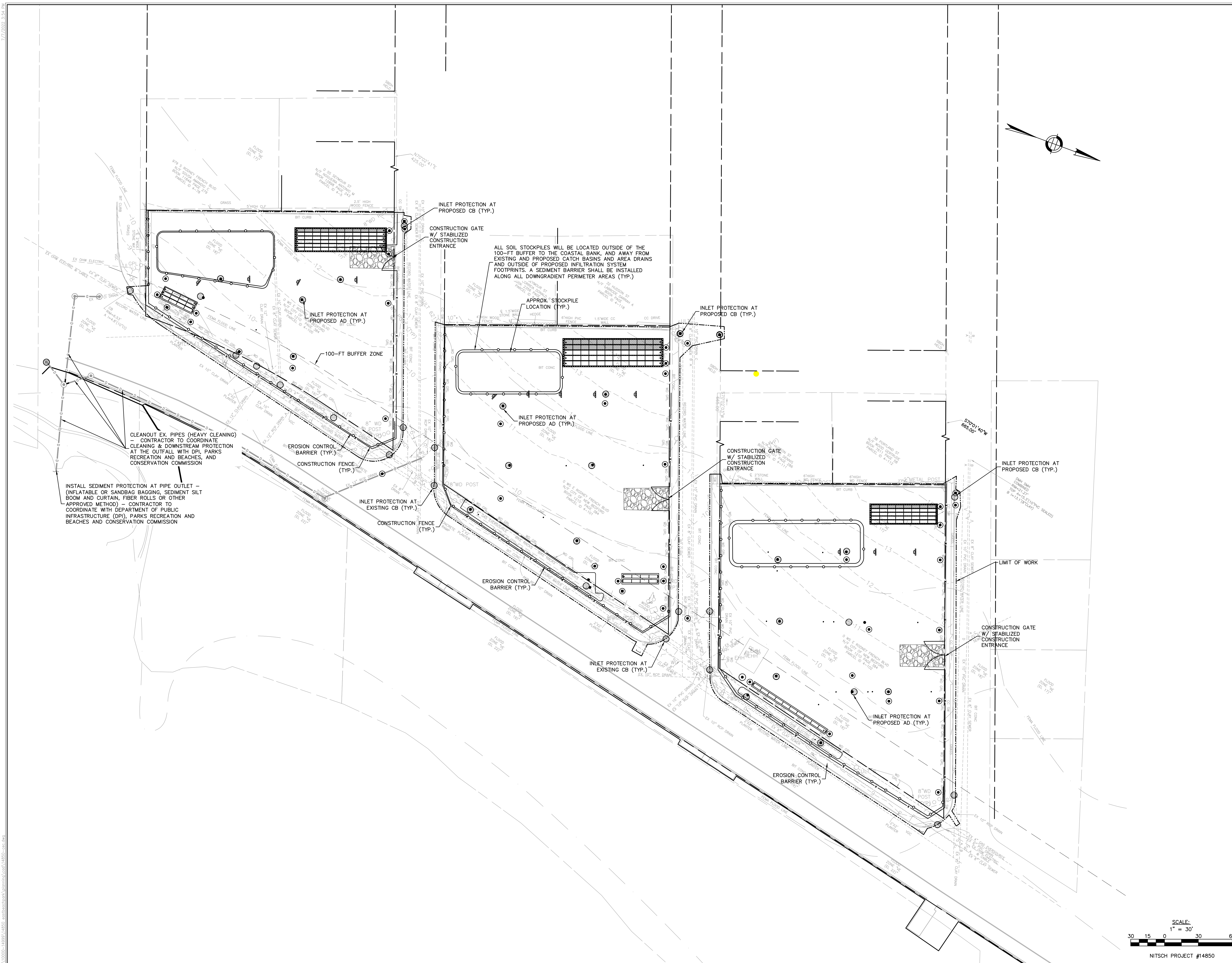
PREPARED FOR:

**CITY OF NEW BEDFORD**  
181 HILLMAN STREET #3, NEW BEDFORD, MA 02740

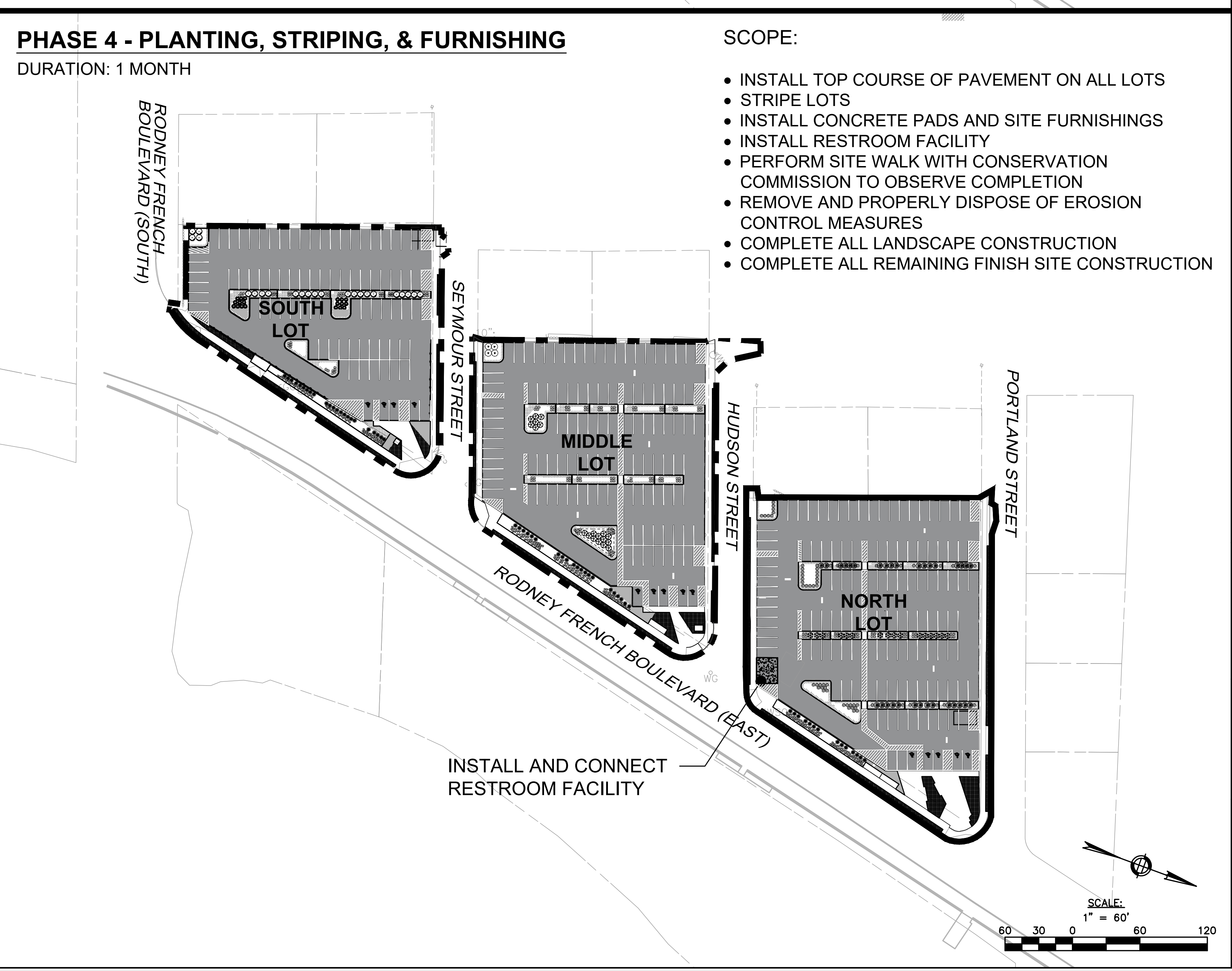
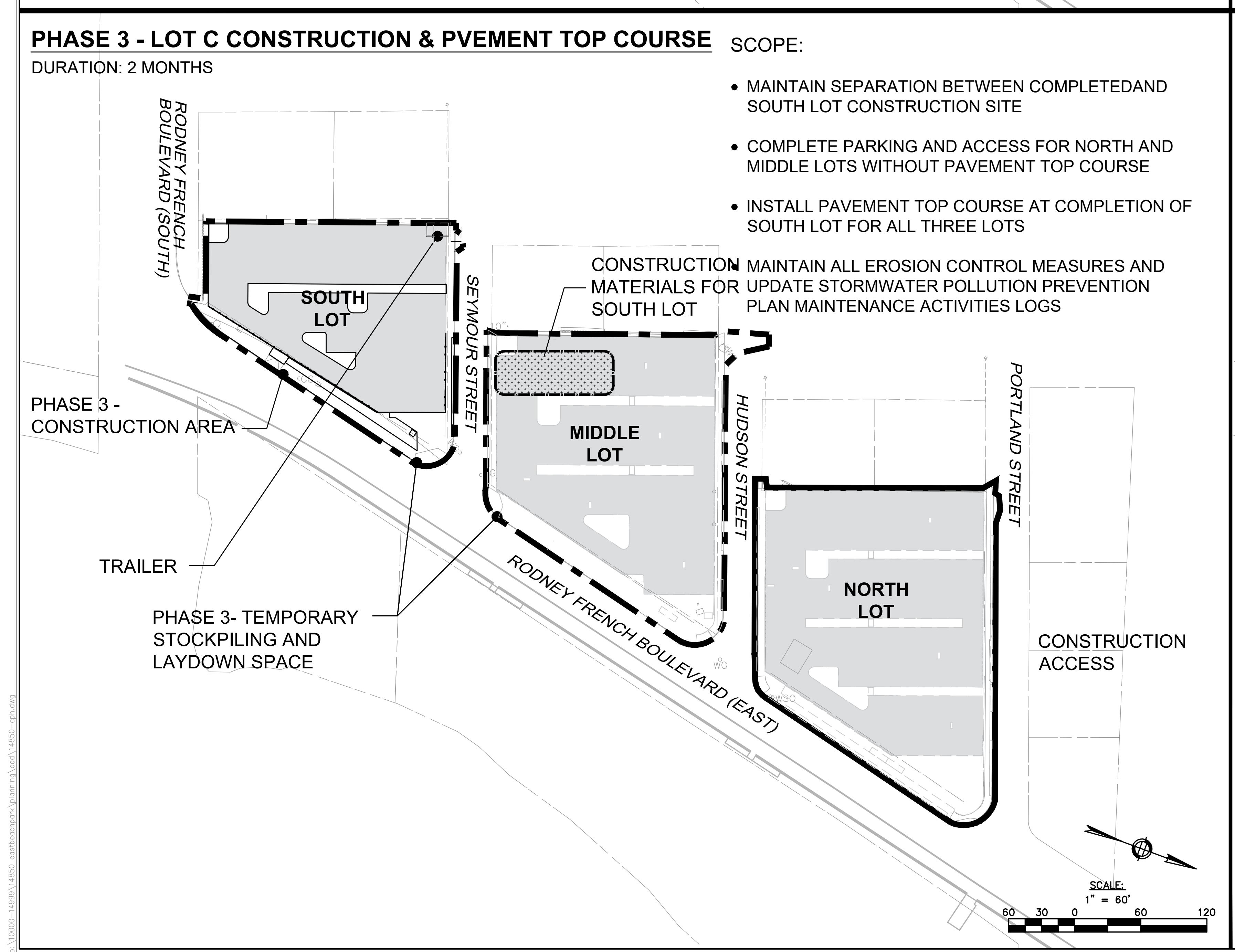
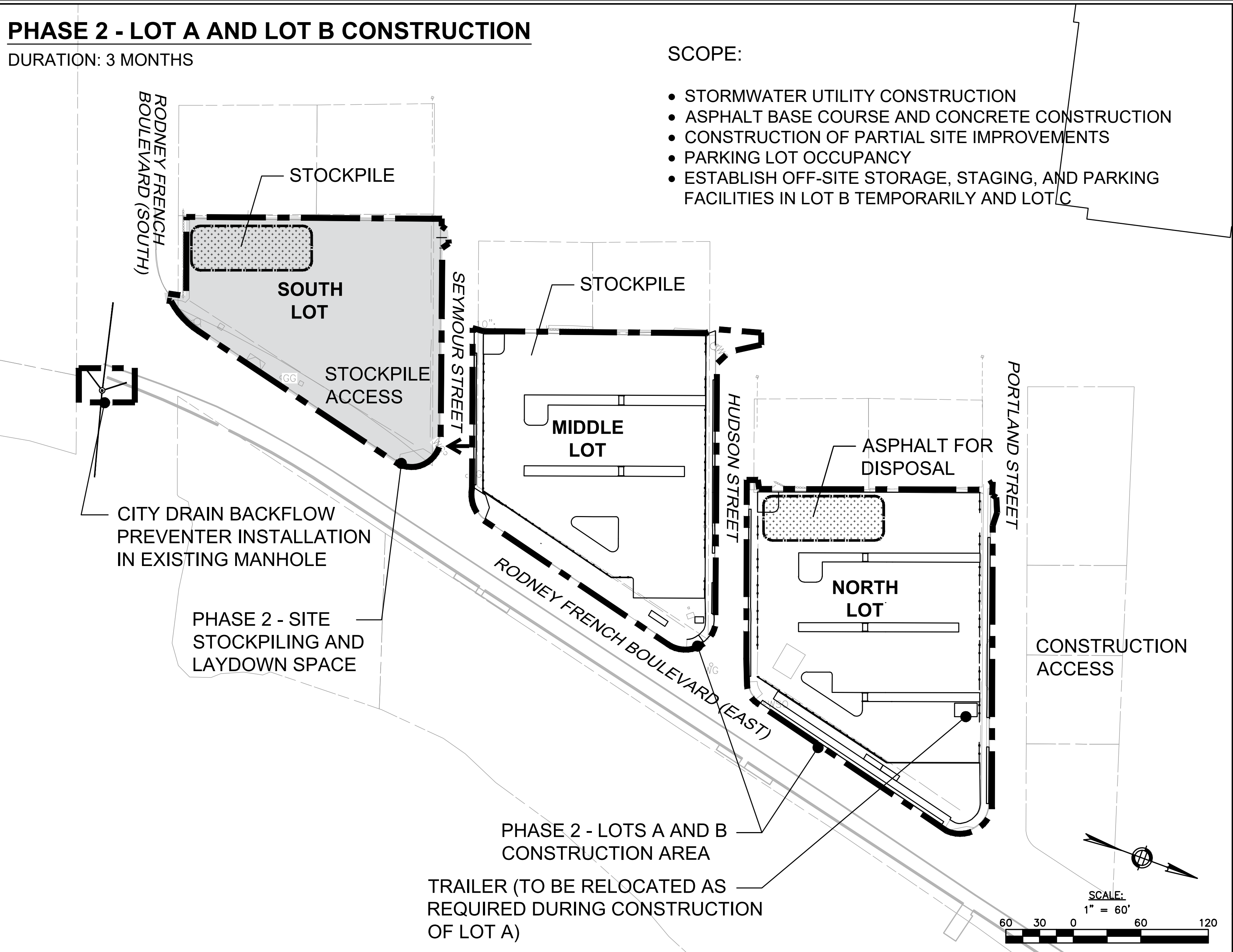
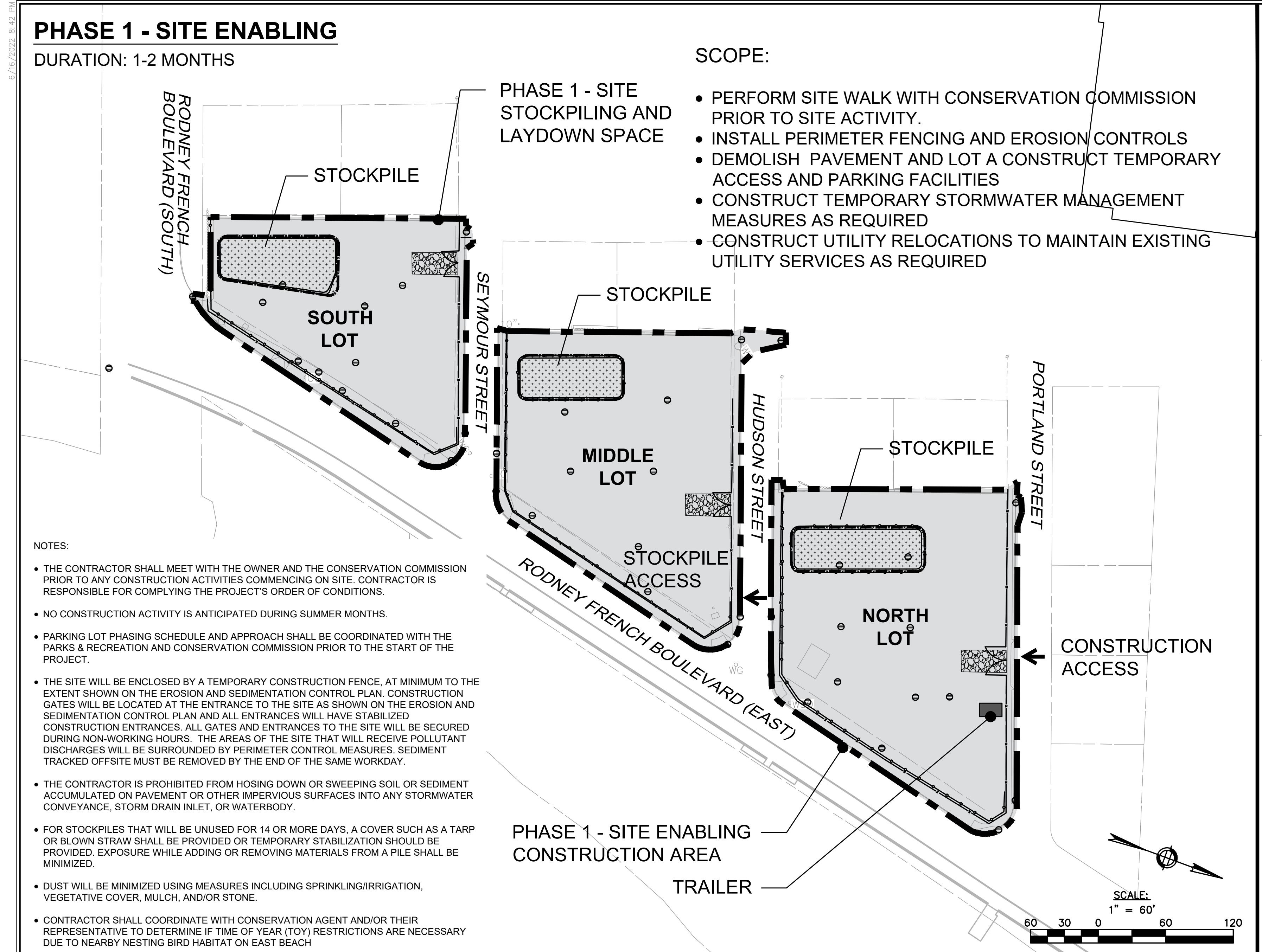
SHEET:

## C2.1

OF REV







**Nitsch Engineering**  
www.nitscheng.com  
2 Center Plaza, Suite 430  
Boston, MA 02108  
T: (617) 338-0063  
F: (617) 338-6472

- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

**FINAL COST ESTIMATE SET**  
7/21/2022

**CONSTRUCTION PHASING PLAN**  
EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT  
WS EAST BEACH RODNEY FRENCH BOULEVARD, NEW BEDFORD, MA 02744

PREPARED FOR:  
**CITY OF NEW BEDFORD**  
181 HILLMAN STREET #3, NEW BEDFORD, MA 02740

REV.	COMMENTS	DATE

NITSCH PROJECT # 14850  
FILE: 14850-CPH.DWG  
SCALE: 1"=10'  
DATE: 06/14/2022  
PROJECT MANAGER: BFC  
SURVEYOR: NITSCH  
DRAFTED BY: BFC  
CHECKED BY: JLW/BFC

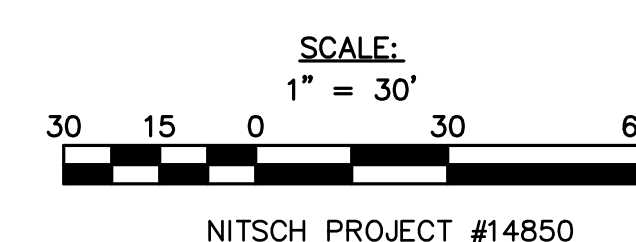
SHEET:  
**C2.2**  
OF REV.



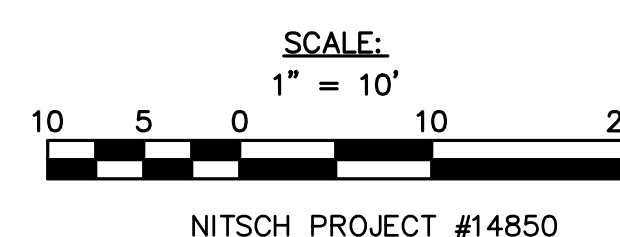
PREPARED FOR:  
**CITY OF NEW BEDFORD**  
181 HILLMAN STREET #3, NEW BEDFORD, MA 02

SHEET:

OF REV









**www.nitscheng.com**  
Center Plaza, Suite 430  
Boston, MA 02108  
(617) 338-0063  
(617) 338-6472

- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- S

**ANAL COST  
ESTIMATE SET  
7/21/2022**

WS EAST BEACH RODNEY FRENCH BOULEVARD, NEW BEDFORD, MA 02744

---

PREPARED FOR:

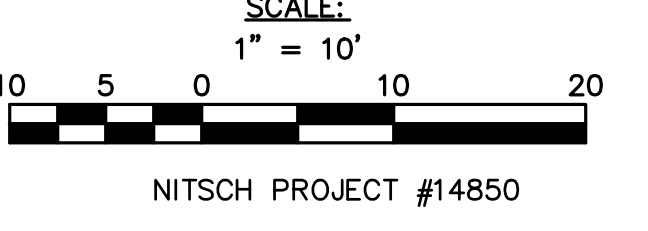
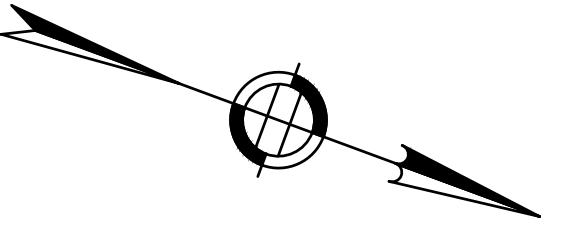
**CITY OF NEW BEDFORD**  
191 HILLMAN STREET #3 NEW BEDFORD, MA 02740

COMMENTS	D.
REVISIONS	

PROJECT #	14850
	14850-CLO.DW
	I"=10'
	06/30/2022
PROJECT MANAGER:	BFC
DR:	NITSCH
DO BY:	KEW
DO BY:	JLW/BFC

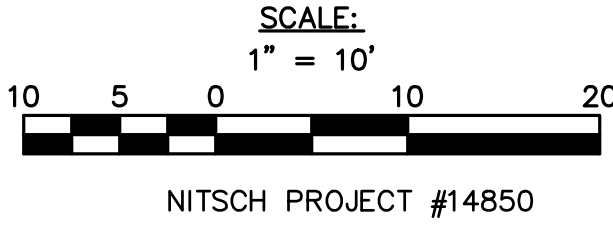
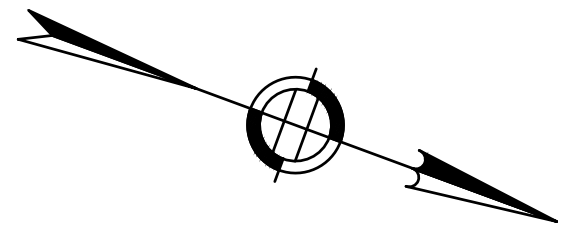
## C3.2

REV.





7/21/2022 3:54 PM  
C:\Users\j14852\appdata\local\temp\AutoCAD\14852-14852.dwg  
C:\Users\j14852\appdata\local\temp\AutoCAD\14852-14852.dwg



**Nitsch Engineering**  
[www.nitscheng.com](http://www.nitscheng.com)  
2 Center Plaza, Suite 430  
Boston, MA 02108  
T: (617) 338-0063  
F: (617) 338-6472

- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

**FINAL COST  
ESTIMATE SET  
7/21/2022**

**SITE LAYOUT PLAN - NORTH LOT**  
EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT  
WS EAST BEACH RODNEY FRENCH BOULEVARD, NEW BEDFORD, MA 02744  
PREPARED FOR:  
**CITY OF NEW BEDFORD**  
181 HILLMAN STREET #3, NEW BEDFORD, MA 02740

REV.	COMMENTS	DATE

NITSCH PROJECT #	14850
FILE:	14850-CLO.DWG
SCALE:	1"=10'
DATE:	06/30/2022
PROJECT MANAGER:	BFC
SURVEYOR:	NITSCH
DRAFTED BY:	KEW
CHECKED BY:	JLW/BFC

SHEET:  
**C3.3**  
OF  
REV.



- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

**FINAL COST  
ESTIMATE SET  
7/21/2022**

**SITE GRADING PLAN - SOUTH LOT**

EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT  
SUNSHINE EAST BEACH RODNEY FRENCH BOULEVARD, NEW BEDFORD, MA 02744

PREPARED FOR:

CITY OF NEW BEDFORD  
PREPARED FOR:

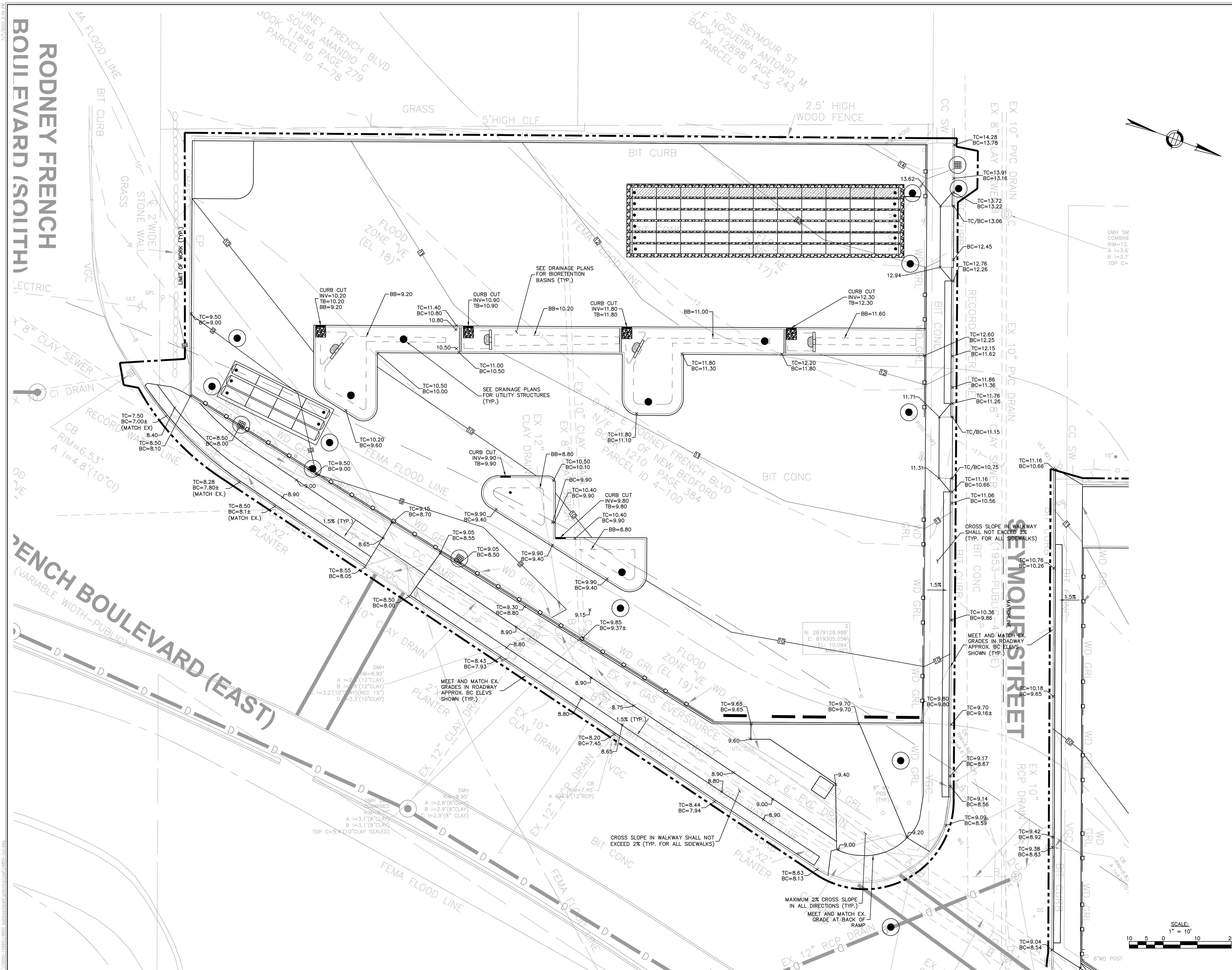
181 HILLMAN STREET #3, NEW BEDFORD, MA 02740

REV.	COMMENTS	DATE	
REVISIONS			
NITSCH PROJECT # 14850			
FILE: 14850-CUT.DWG			
SCALE: 1"=10'			
DATE: 06/30/2022			
PROJECT MANAGER: BFC			
SURVEYOR: NITSCH			
DRAFTED BY: KEW			
CHECKED BY: JLW/BFC			

SHEET:

## C4.1

OF REV







- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

**FINAL COST  
ESTIMATE SET  
7/21/2022**

**SITE GRADING PLAN - MIDDLE LOT**  
EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT  
WS EAST BEACH RODNEY FRENCH BOULEVARD, NEW BEDFORD, MA 02770

PREPARED FOR:  
**CITY OF NEW BEDFORD**  
181 HILLMAN STREET #3, NEW BEDFORD, MA 02

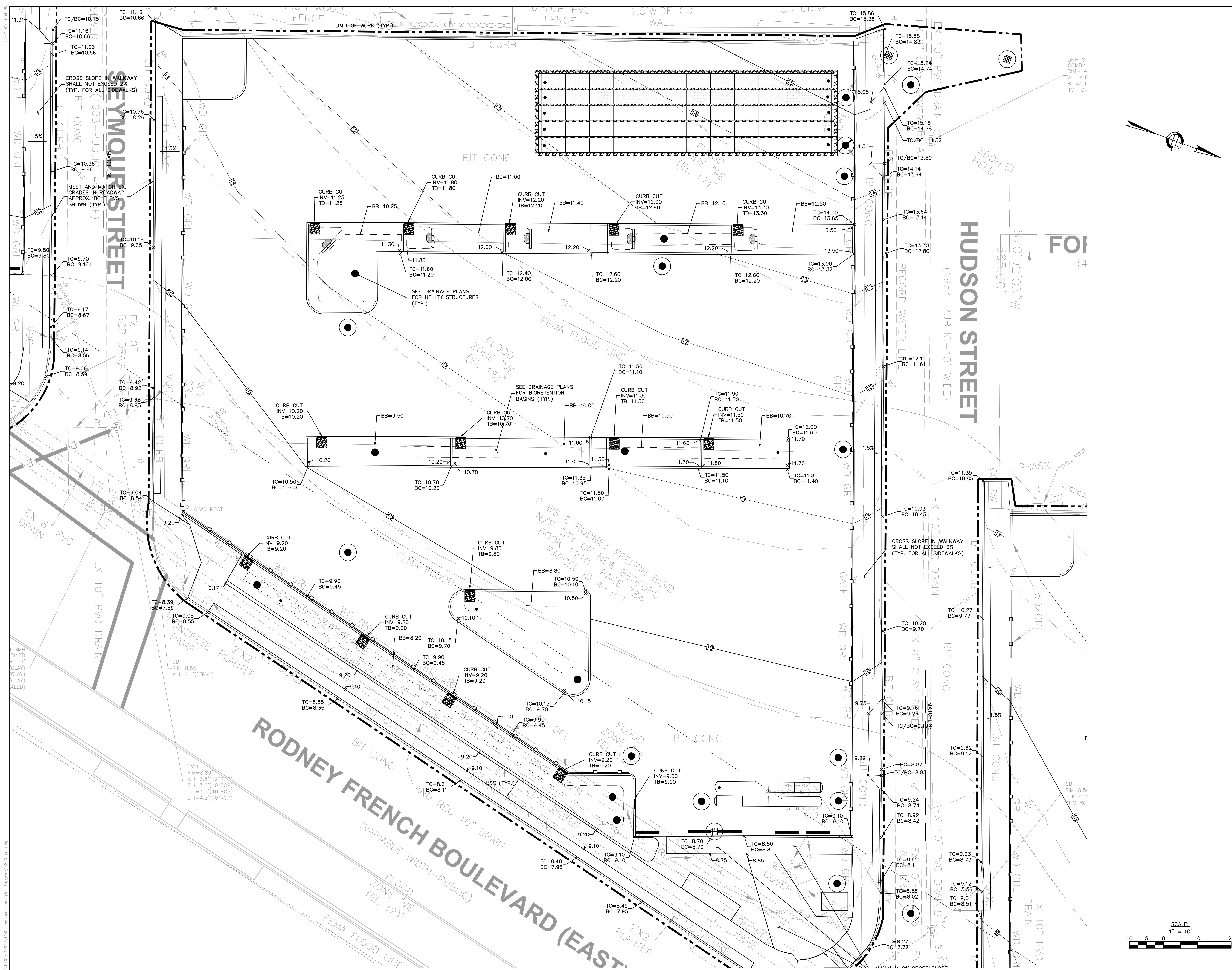
REV.	COMMENTS	DATE
REVISIONS		

NITSCH PROJECT #	I4850
FILE:	I4850-CUT.DWG
SCALE:	1"=10'
DATE:	06/30/2022
PROJECT MANAGER:	BFC
SURVEYOR:	NITSCH
DRAFTED BY:	KEW
CHECKED BY:	JLW/BFC

SHEET:

## C4.2

OF REV





- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

**FINAL COST  
ESTIMATE SET  
7/21/2022**

**SITE GRADING PLAN - NORTH LOT**  
EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT

W'S EAST BEACH RODNEY FRENCH BOULEVARD, NEW BEDFORD, MA 02744

PREPARED FOR:  
**CITY OF NEW BEDFORD**

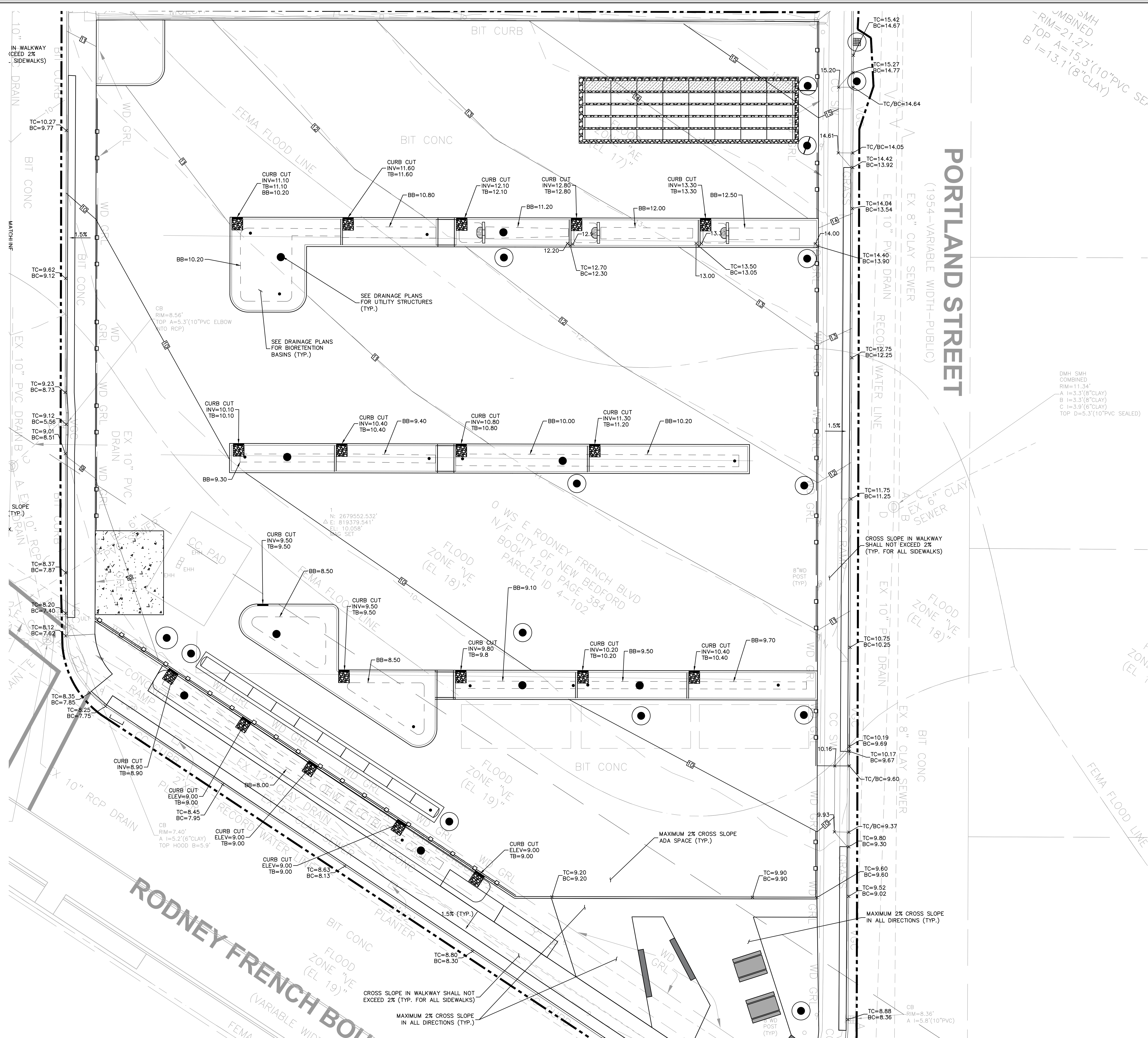
REV.	COMMENTS	DATE
	REVISIONS	

NITSCH PROJECT #	I4850
FILE:	I4850-CUT.DWG
SCALE:	1"=10'
DATE:	06/30/2022
PROJECT MANAGER:	BFC
SURVEYOR:	NITSCH
DRAFTED BY:	KEW
CHECKED BY:	JLW/BFC

SHEET:

## C4.3

OF REV



SCALE:  
1" = 10'

A horizontal scale bar with alternating black and white segments. Above the bar, the numbers 10, 5, 0, 10, and 2 are marked. The bar is divided into segments of 10, 5, 0, 10, and 2 units, totaling 37 units.



- ▶ Civil Engineering
- ▶ Land Surveying
- ▶ Transportation Engineering
- ▶ Structural Engineering
- ▶ Green Infrastructure
- ▶ Planning
- ▶ GIS

**FINAL COST  
ESTIMATE SET  
7/21/2022**

**SITE DRAINAGE PLAN - OVERALL**  
EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT  
WS EAST BEACH RODNEY FRENCH BOULEVARD, NEW BEDFORD, MA 02744

PREPARED FOR:  
**CITY OF NEW BEDFORD**  
181 HILLMAN STREET #3, NEW BEDFORD, MA 02

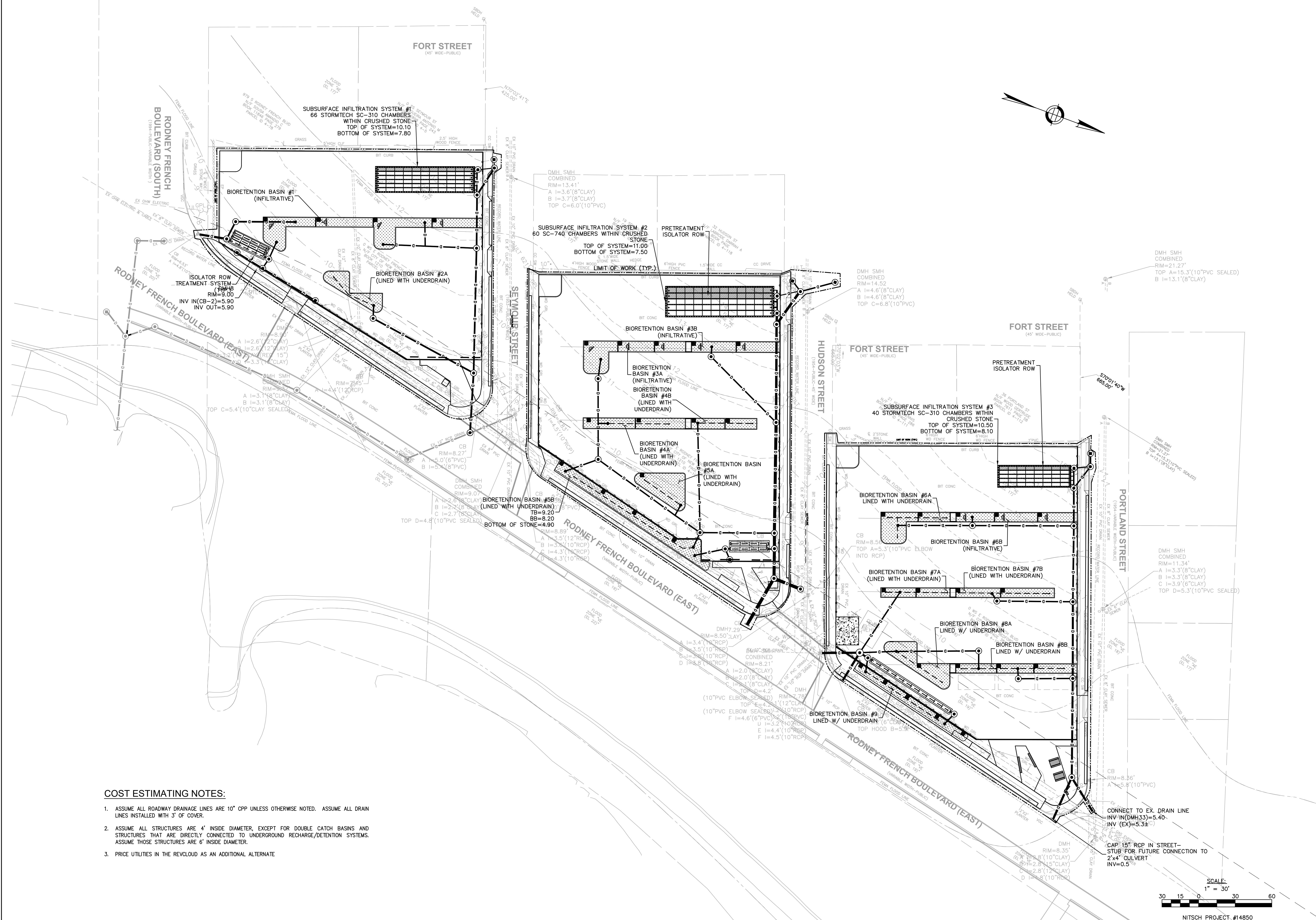
REV.	COMMENTS	DATE
	REVISIONS	

NITSCH PROJECT #	I4850
FILE:	I4850-CLO.DWG
SCALE:	1"=30'
DATE:	06/30/2022
PROJECT MANAGER:	BFC
SURVEYOR:	NITSCH
DRAFTED BY:	KEW
CHECKED BY:	JLW/BFC

SHEET:

C5.0

OF REV



## COST ESTIMATING NOTES:

1. ASSUME ALL ROADWAY DRAINAGE LINES ARE 10" CPP UNLESS OTHERWISE NOTED. ASSUME ALL DRAIN LINES INSTALLED WITH 3" OF COVER.
2. ASSUME ALL STRUCTURES ARE 4' INSIDE DIAMETER, EXCEPT FOR DOUBLE CATCH BASINS AND STRUCTURES THAT ARE DIRECTLY CONNECTED TO UNDERGROUND RECHARGE/DETENTION SYSTEMS. ASSUME THOSE STRUCTURES ARE 6' INSIDE DIAMETER.
3. PRICE UTILITIES IN THE REVLQUD AS AN ADDITIONAL ALTERNATE





- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

**FINAL COST  
ESTIMATE SET  
7/21/2022**

SITE DRAINAGE PLAN - SOUTH LOT

# EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT

PREPARED FOR:  
CITY OF NEW BEDFORD

181 HILLMAN STREET #3 NEW BEDFORD, MA 02740

REV.	COMMENTS	DATE
REVISIONS		
NITSCH PROJECT # 14850		
FILE:	14850-CLO.DWG	
SCALE:	1"=10'	
DATE:	06/30/2022	
PROJECT MANAGER:	BFC	
SURVEYOR:	NITSCH	
DRAFTED BY:	KEW	
CHECKED BY:	JLW/BFC	

SHEET:

## C5.1

OF REV





- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

**FINAL COST  
ESTIMATE SET  
7/21/2022**

**SITE DRAINAGE PLAN - MIDDLE LOT**  
FAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT

W'S EAST BEACH RODNEY FRENCH BOULEVARD, NEW BEDFORD, MA 02744

PREPARED FOR:  
**CITY OF NEW BEDFORD**

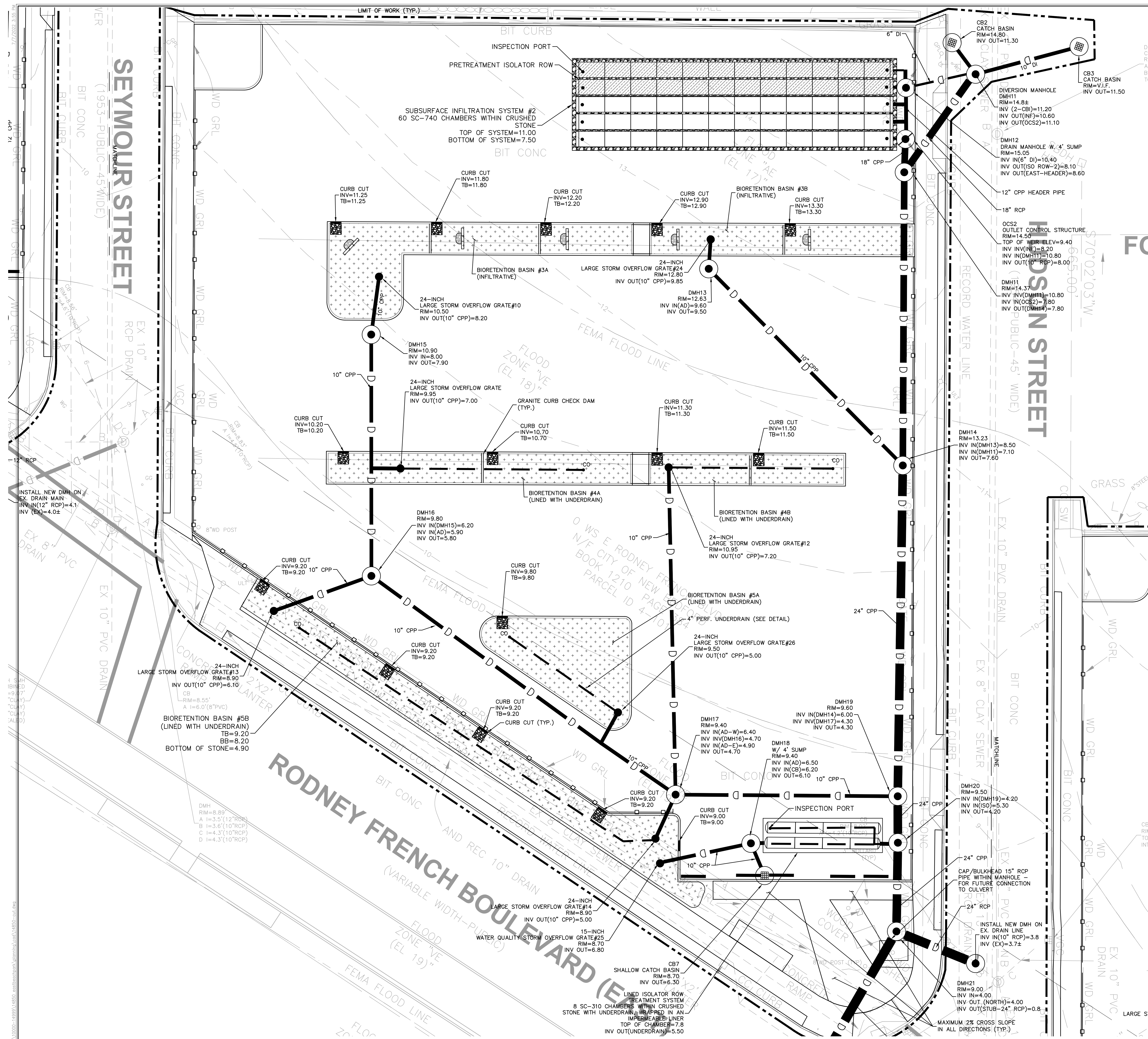
REV.	COMMENTS	DATE
	REVISIONS	

NITSCH PROJECT #	14850
FILE:	14850-CLO.DWG
SCALE:	1"=10'
DATE:	06/30/2022
PROJECT MANAGER:	BFC
SURVEYOR:	NITSCH
DRAFTED BY:	KEW
CHECKED BY:	JLW/BFC

SHEET:

## C5.2

OF REV





- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

**FINAL COST  
ESTIMATE SET  
7/21/2022**

**SITE DRAINAGE PLAN - NORTH LOT**  
EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT  
181 HILLMAN STREET #3, NEW BEDFORD, MA 02740  
MASS EAST BEACH RODNEY FRENCH BOULEVARD, NEW BEDFORD, MA 02740

---

PREPARED FOR:

**CITY OF NEW BEDFORD**  
181 HILLMAN STREET #3, NEW BEDFORD, MA 02740

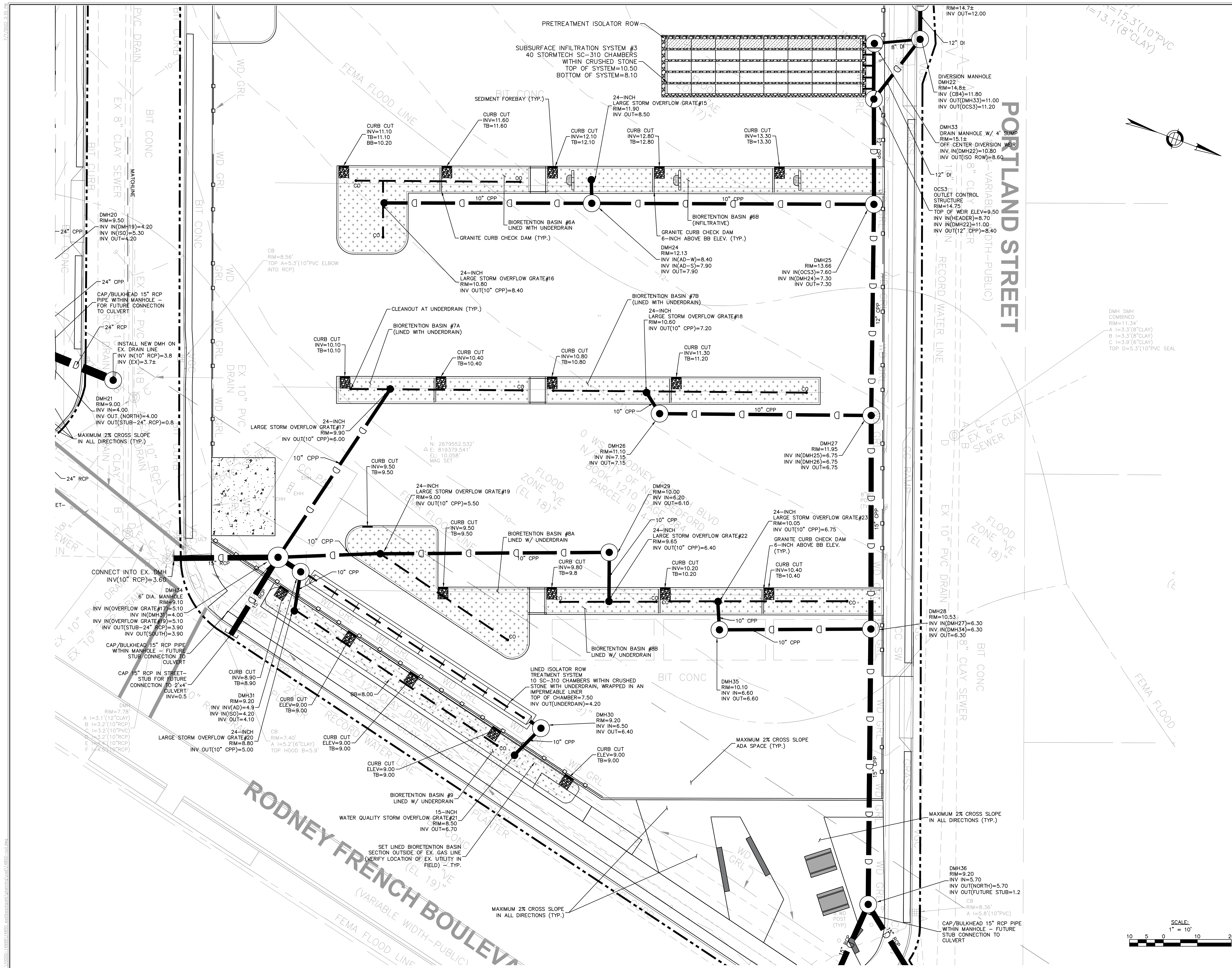
REV.	COMMENTS	DATE
	REVISIONS	

NITSCH PROJECT #	I4850
FILE:	I4850-CLO.DWG
SCALE:	1"=10'
DATE:	06/30/2022
PROJECT MANAGER:	BFC
SURVEYOR:	NITSCH
DRAFTED BY:	KEW
CHECKED BY:	JLW/BFC

SHEET-

## C5.3

OF REV





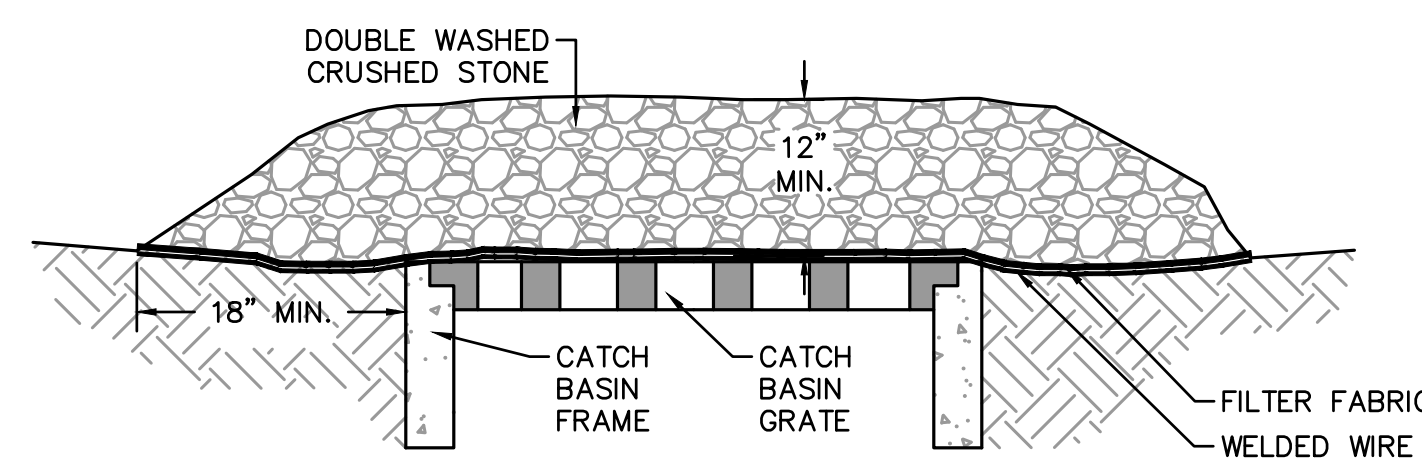
REV.	COMMENTS	DATE

NITSCH PROJECT #	14850
FILE:	14850-COT.DWG
SCALE:	NTS
DATE:	06/30/2022
PROJECT MANAGER:	BFC
SURVEYOR:	NITSCH
DRAWN BY:	KW
CHECKED BY:	JLW/BFC

SHEET:

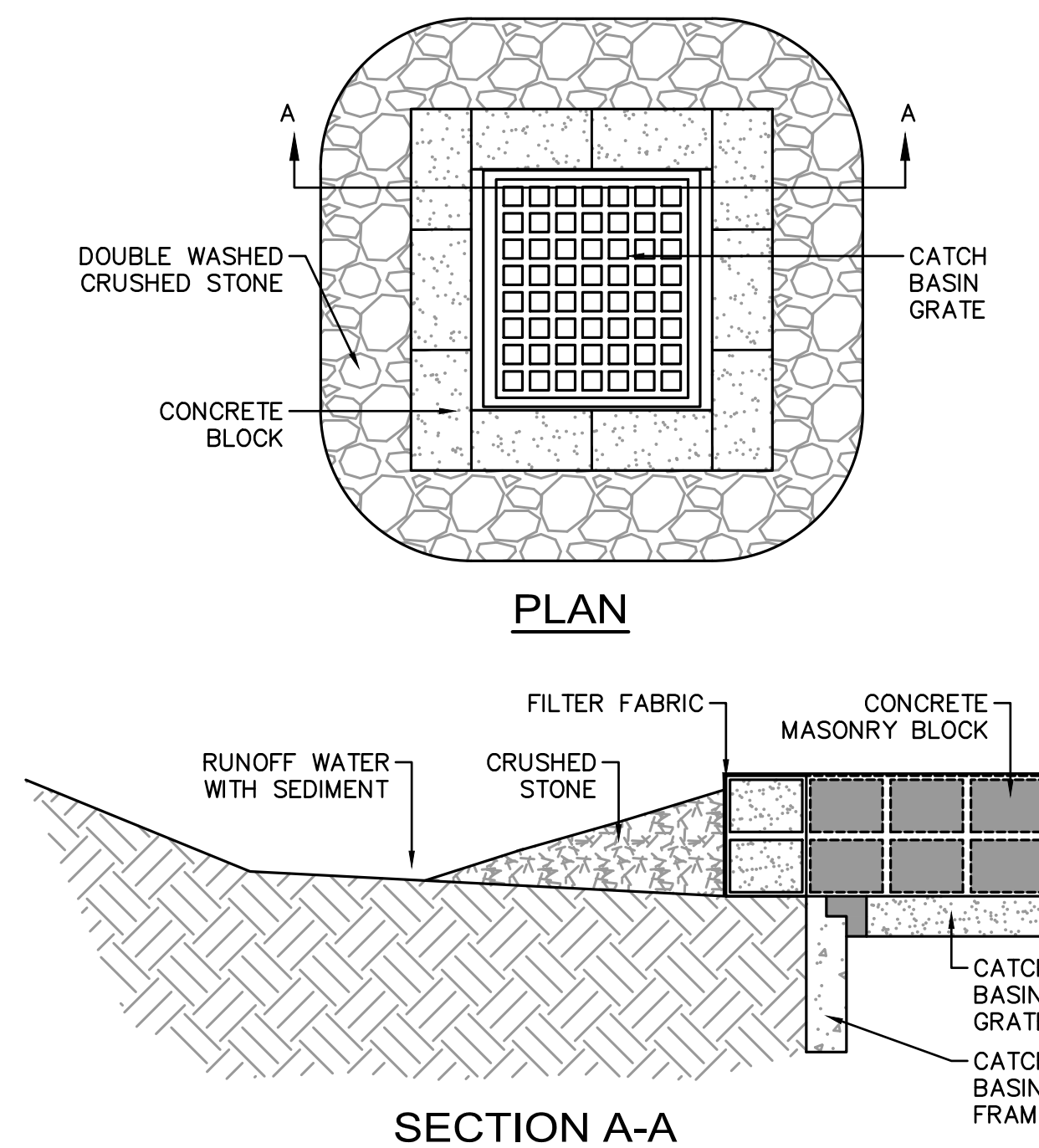
**C6.0**

OF REV.



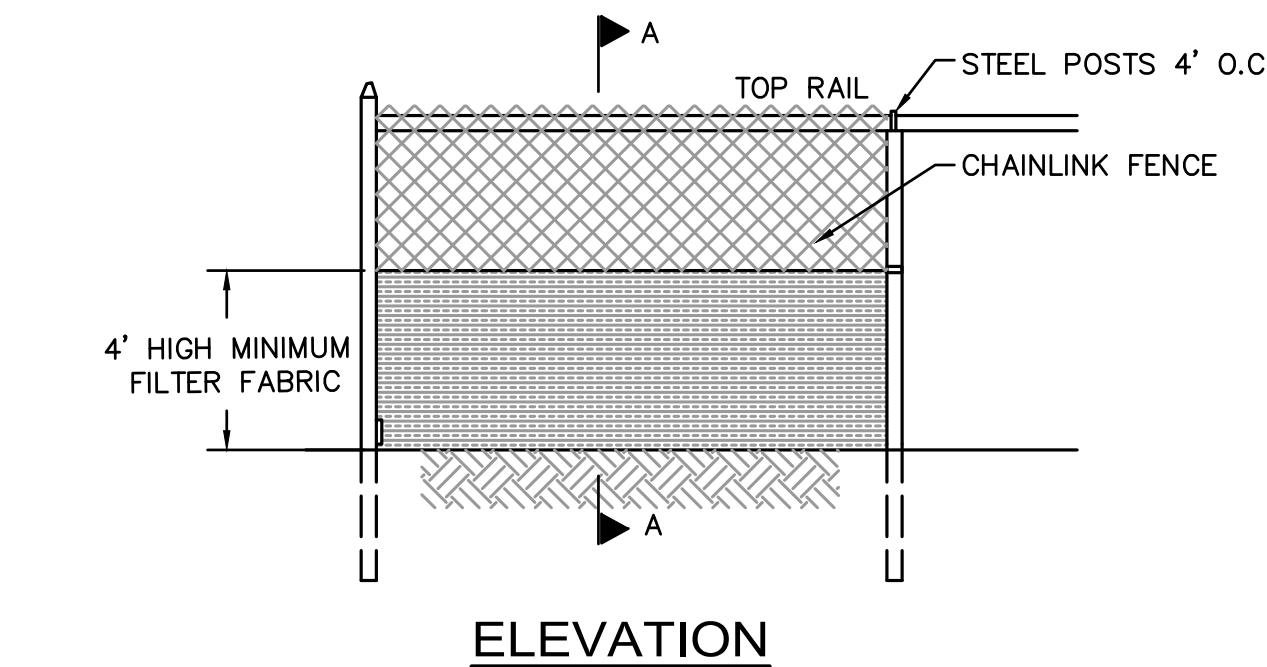
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS. THIS METHOD NOT ACCEPTABLE IN ACTIVE TRAFFIC AREAS.

**INLET PROTECTION DETAIL  
CATCH BASIN WITH GRAVEL**  
NOT TO SCALE

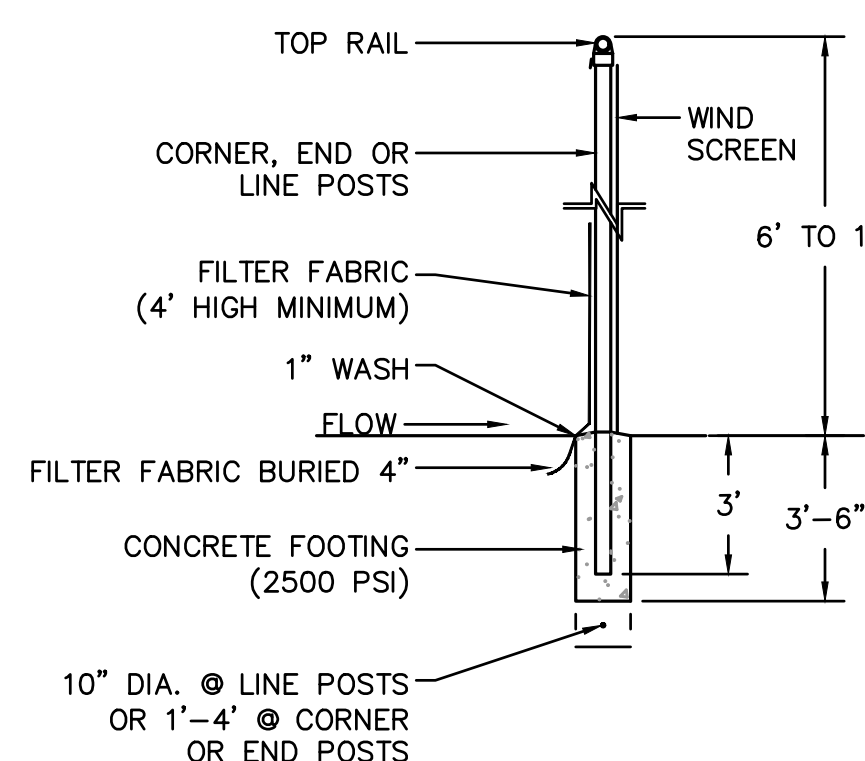


THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND STRUCTURE.

**INLET PROTECTION DETAIL  
CATCH BASIN W/ BLOCK AND GRAVEL**  
NOT TO SCALE



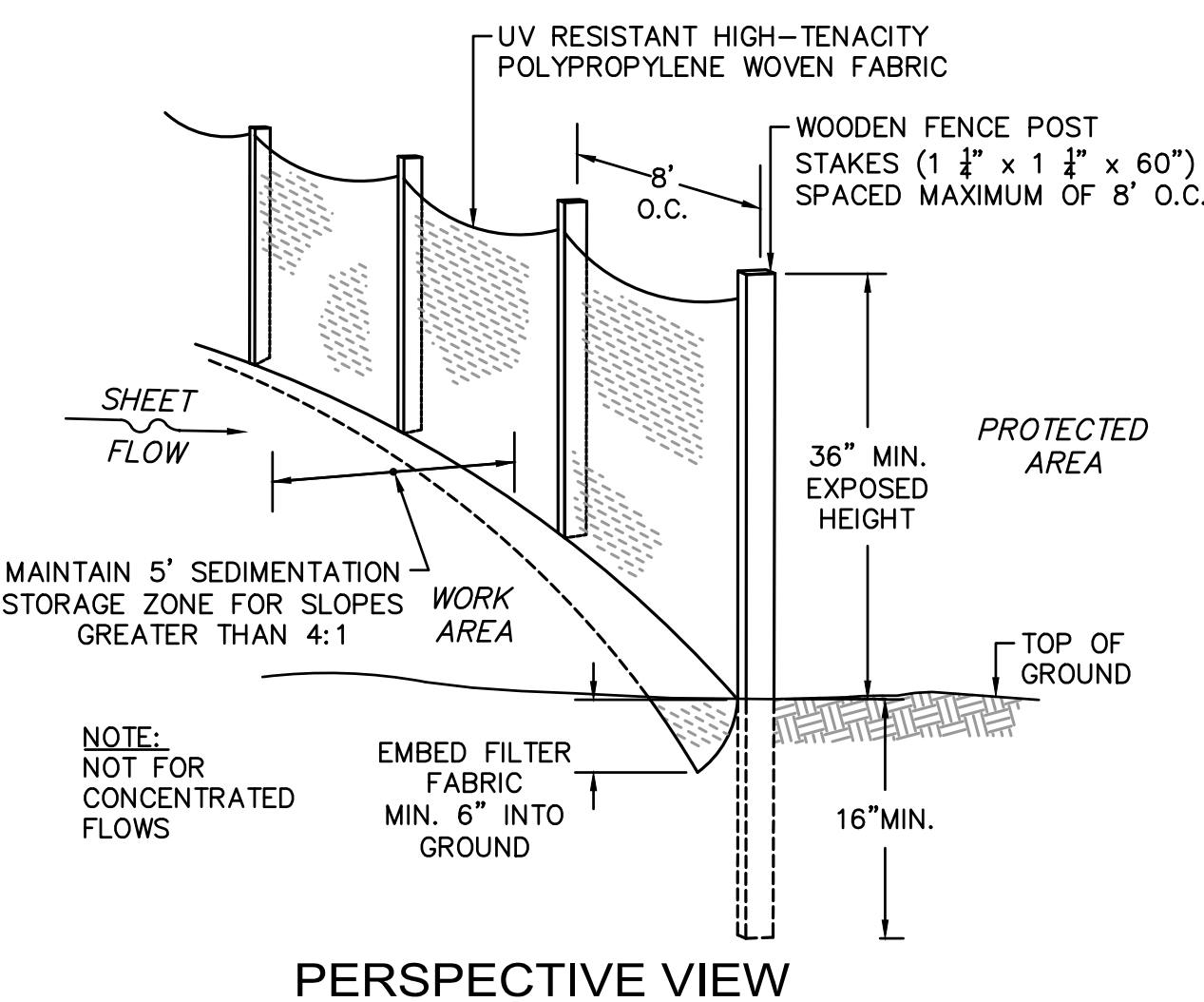
**ELEVATION**



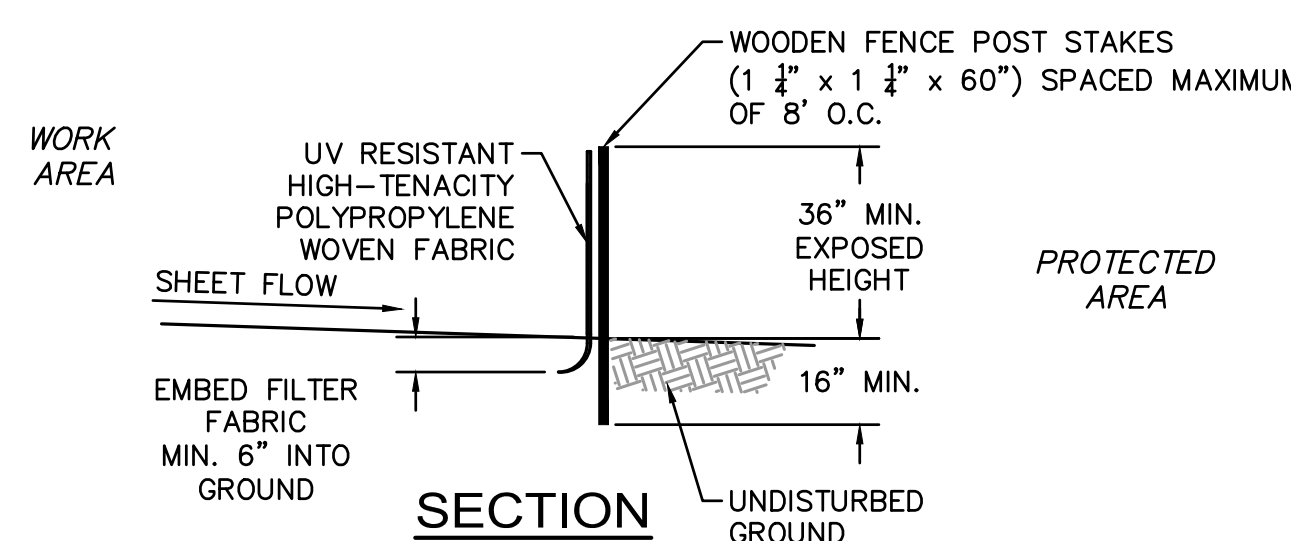
**SECTION**

- CHAINLINK FENCE SHALL BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES.
- FILTER FABRIC SHALL BE FASTENED SECURELY TO CHAINLINK FENCE WITH TIES SPACED HORIZONTALLY 24" AS THE TOP AND MIDSECTION.
- WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6"
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL SHALL BE REMOVED WHEN SEDIMENT BUILD-UP REACHES 50% OF THE HEIGHT OF THE FILTER FABRIC.
- MAINTENANCE OF SILT FENCE SHALL BE RECORDED TO IN THE SWPPP

**EROSION CONTROL BARRIER (D)  
SUPER SILT FENCE**  
NOT TO SCALE

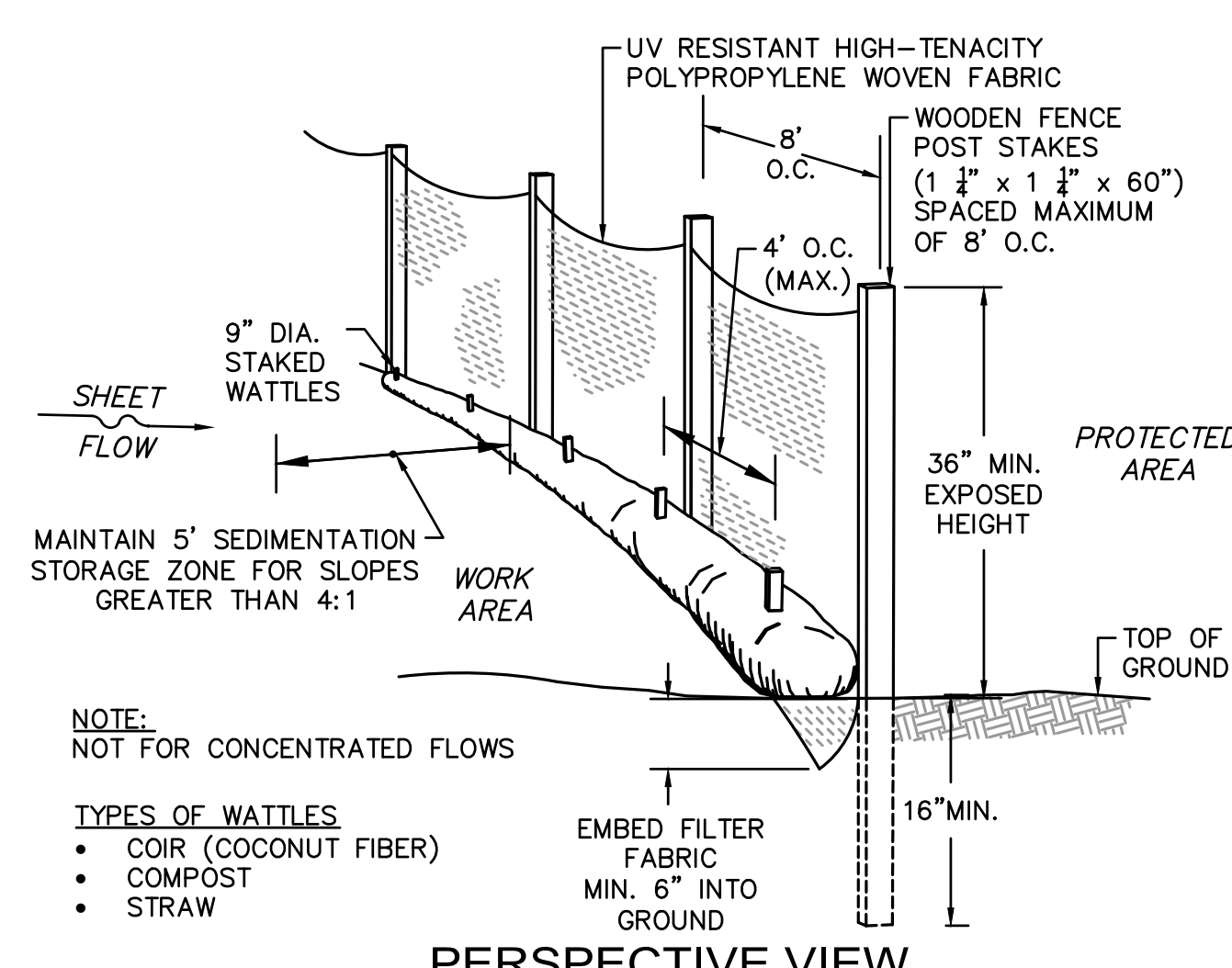


**PERSPECTIVE VIEW**

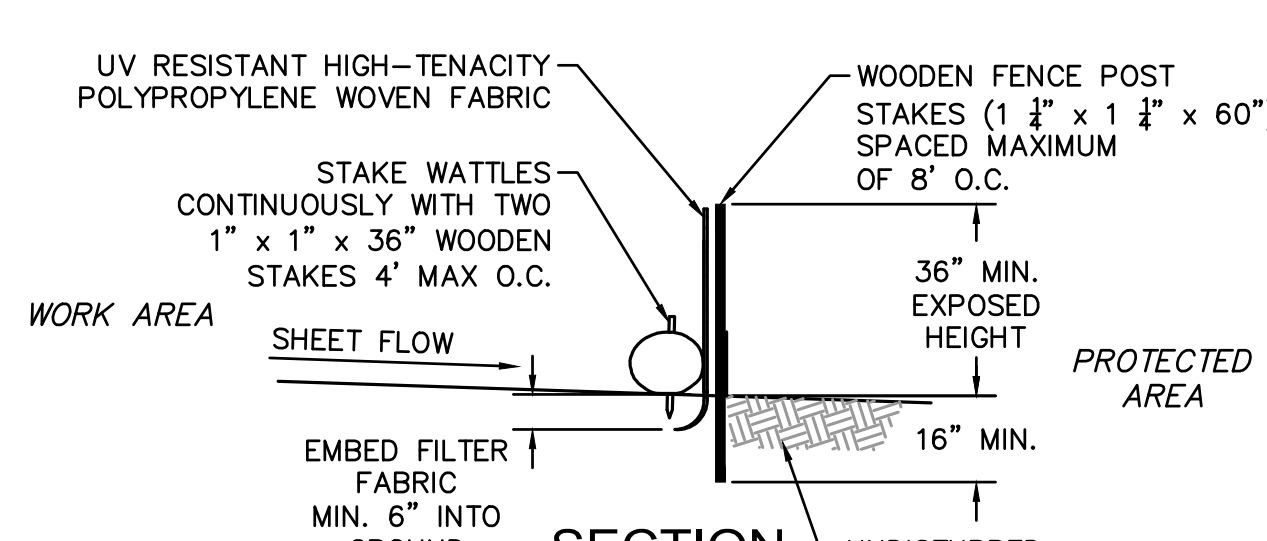


**SECTION**

**PERIMETER PROTECTION BARRIER (A)**

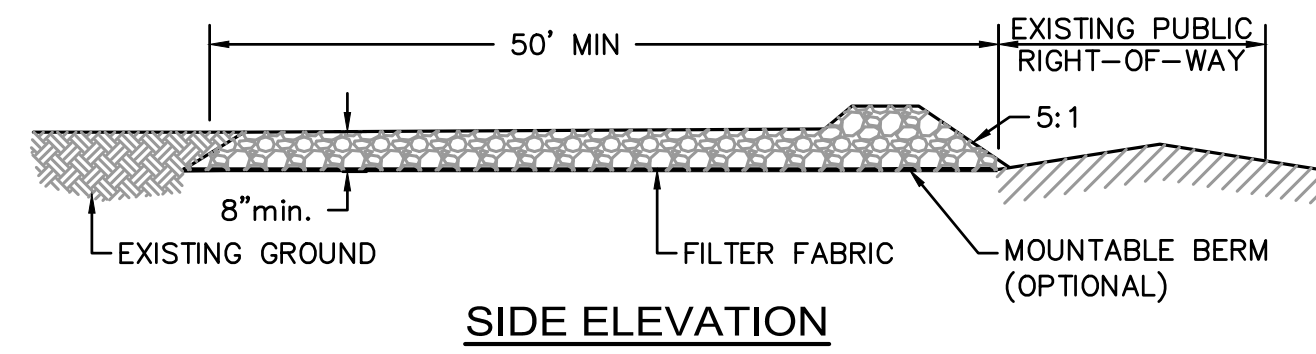


**PERSPECTIVE VIEW**

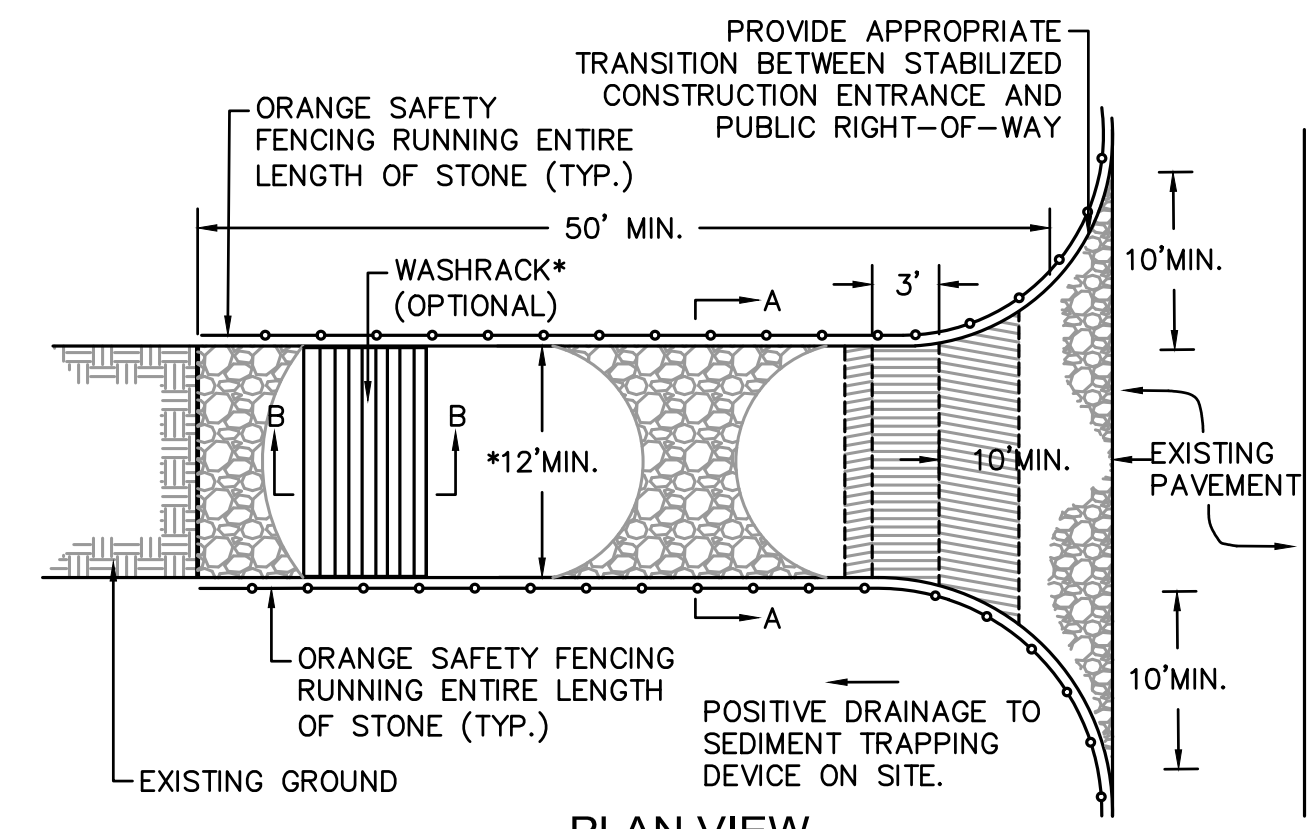


**SECTION**

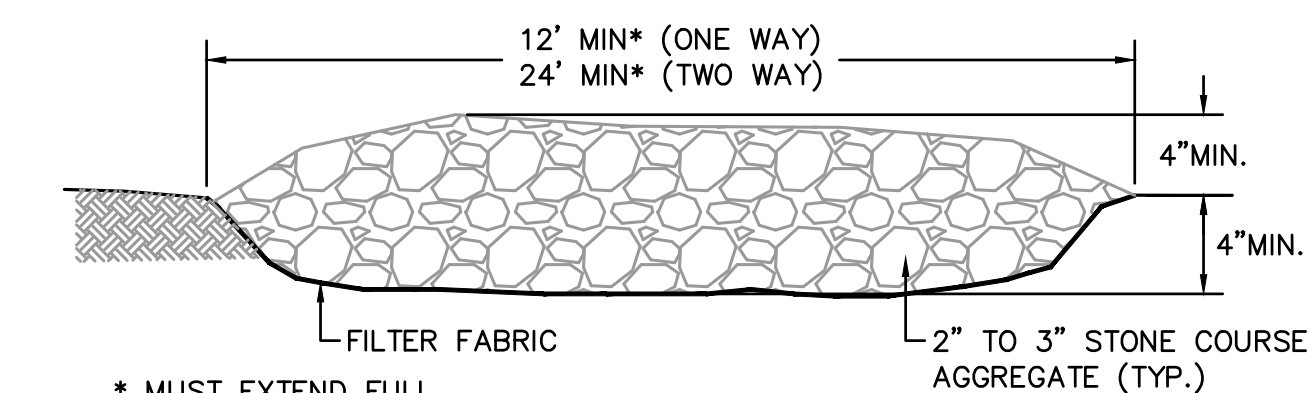
**PERIMETER PROTECTION BARRIER (B)  
SILT FENCE DETAIL WITH WATTLES**  
NOT TO SCALE



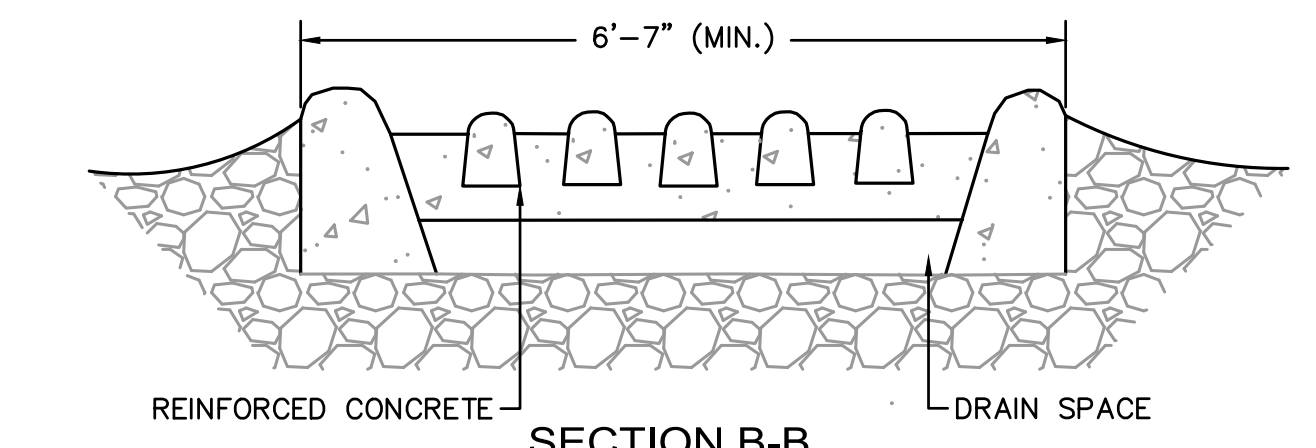
**SIDE ELEVATION**



**PLAN VIEW**



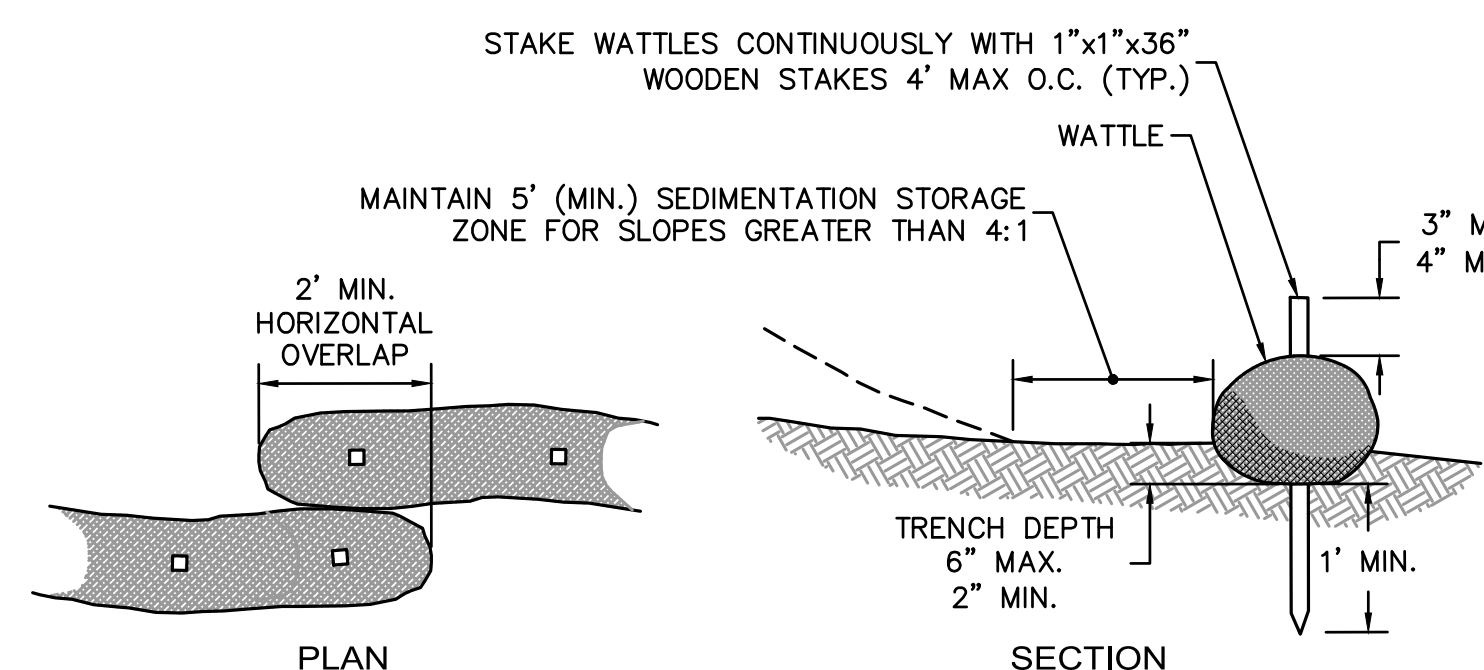
**SECTION A-A**



**SECTION B-B**

- CONSTRUCTION SPECIFICATIONS**
- LENGTH - GREATER THAN OR EQUAL TO 50 FEET
  - WIDTH - TWELVE FOOT MINIMUM (ONE WAY), TWENTY FOUR FOOT MINIMUM (TWO WAY), BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS
  - SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHALL BE PERMITTED.
  - THICKNESS - 8"
  - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
  - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED.

**STABILIZED CONSTRUCTION ENTRANCE**  
NOT TO SCALE

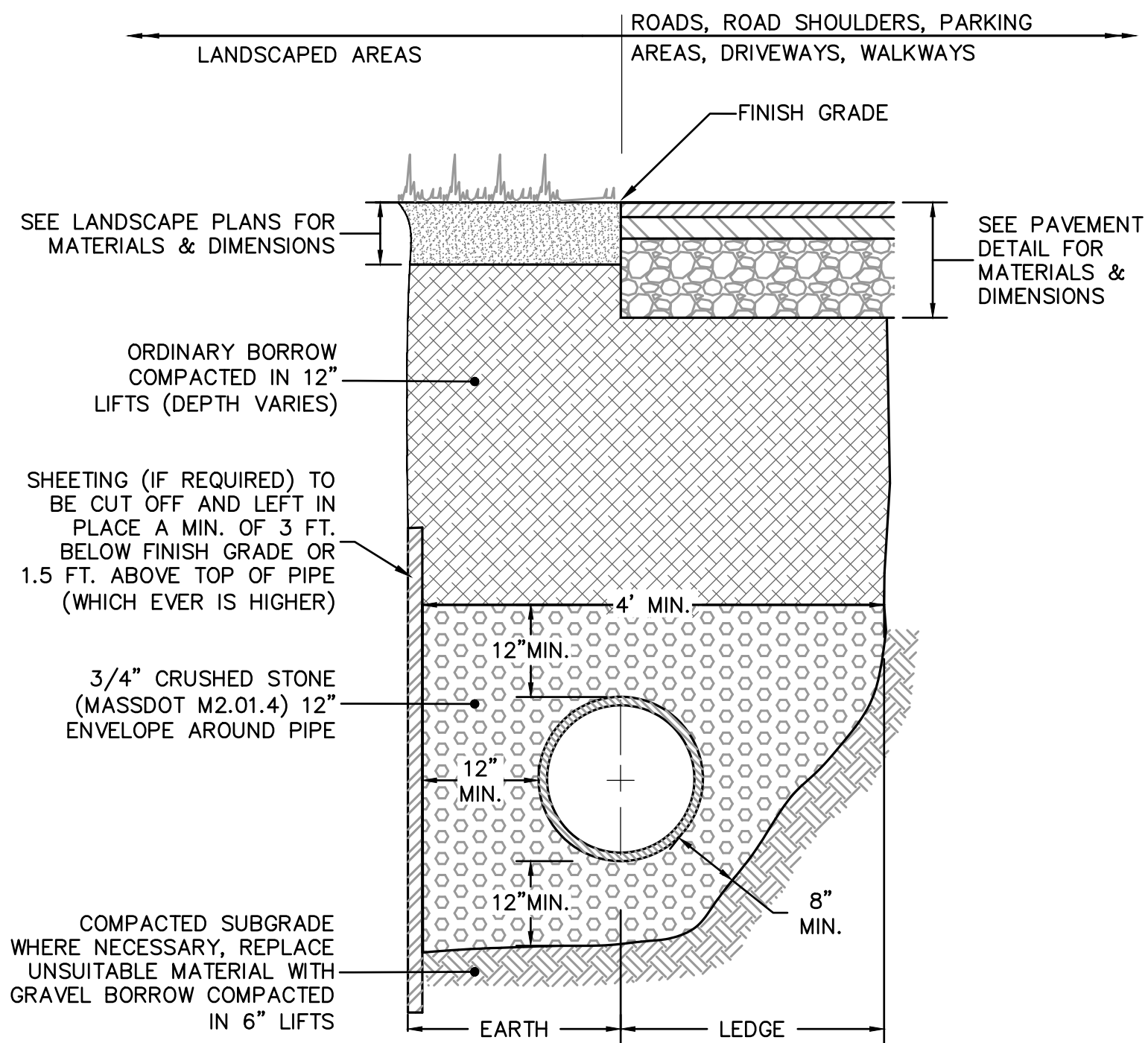


- NOTES:**
- ACCEPTABLE TYPES OF WATTLES ARE COIR (COCONUT FIBER), COMPOST, OR STRAW.
  - WATTLES MAY BE USED AS AN EROSION CONTROL BARRIER FOR SLOPES LESS THAN 10:1.

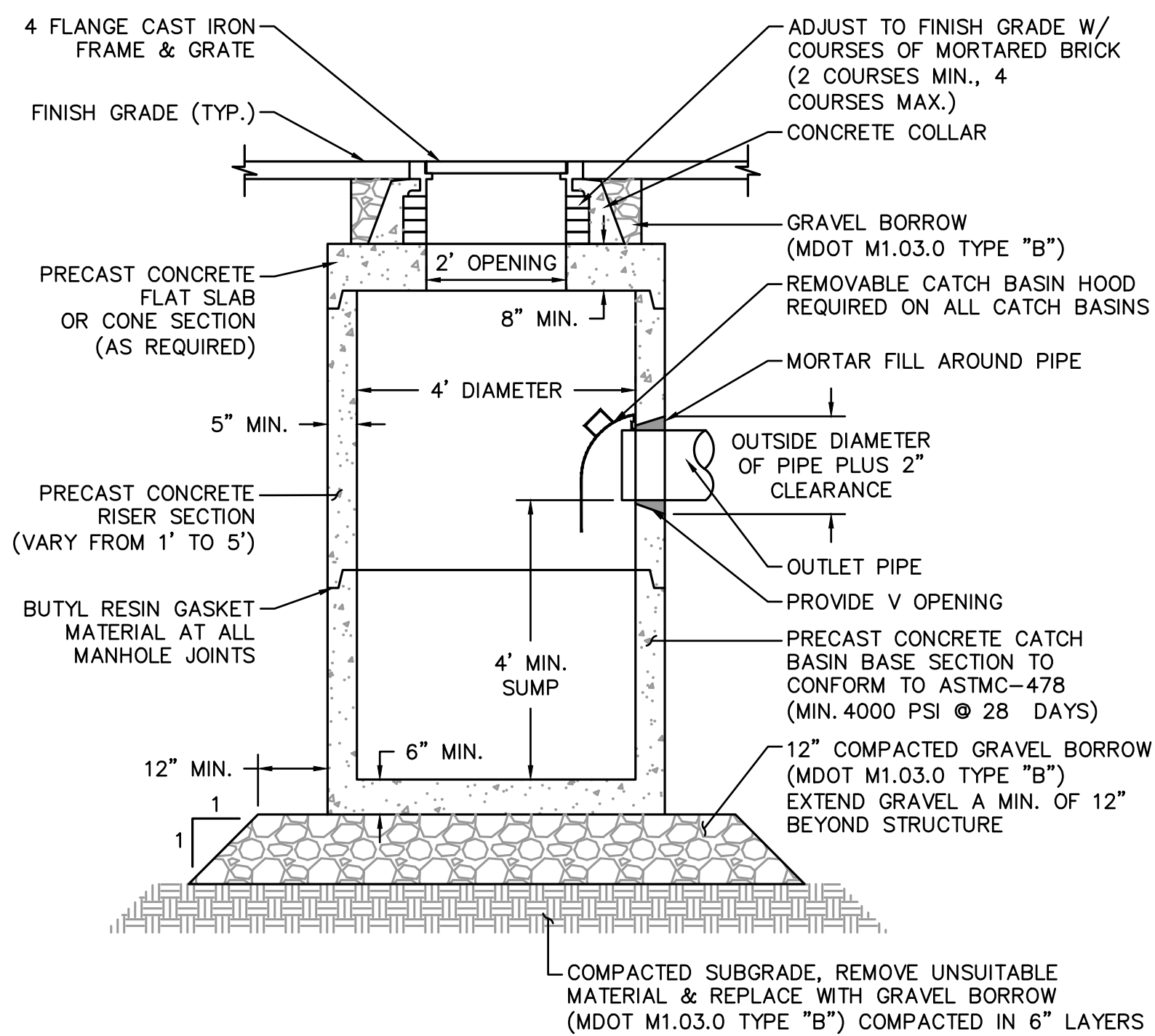
**WATTLES DETAIL**  
NOT TO SCALE



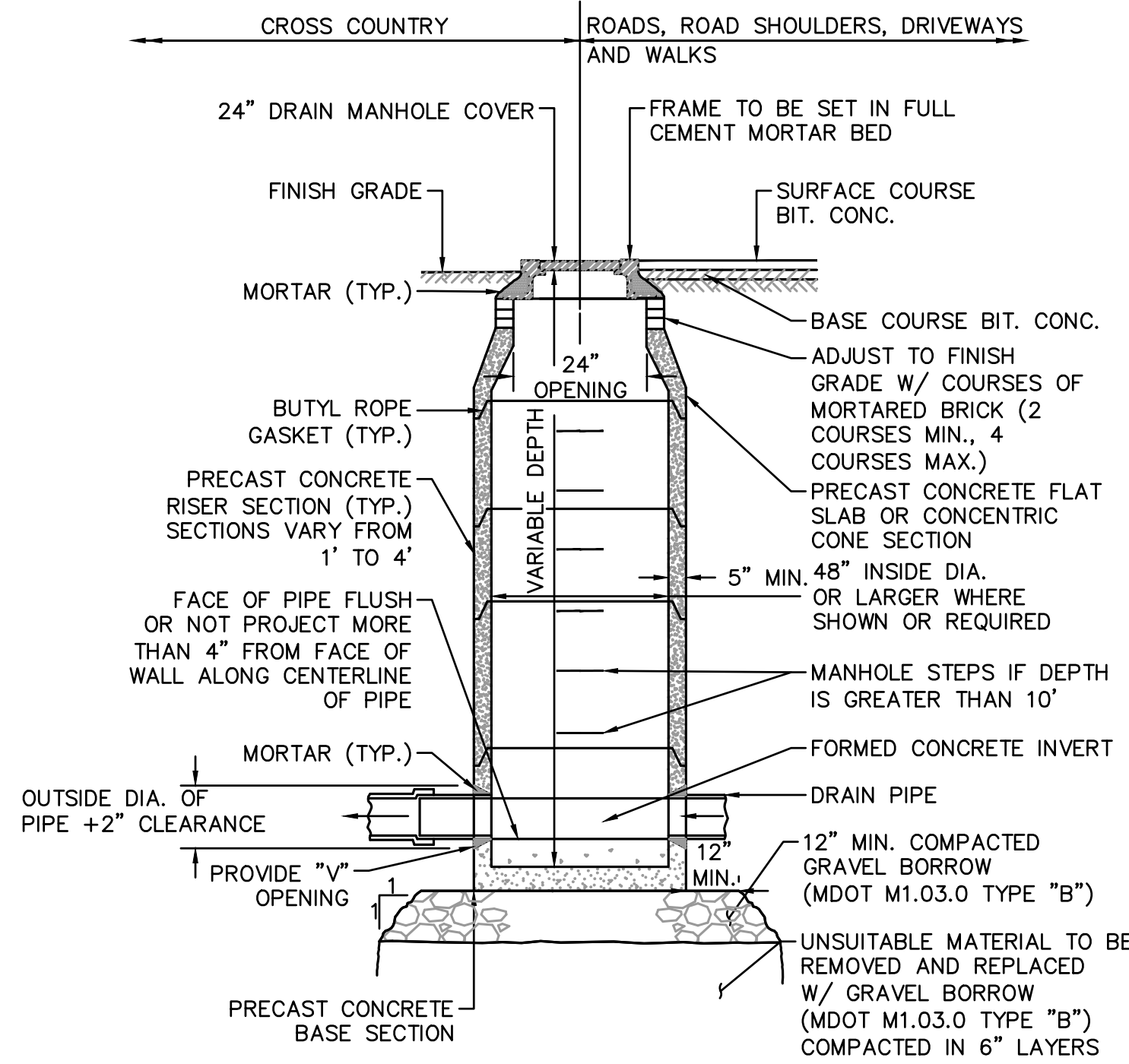
7/27/2022 3:55 PM  
\\V0200-1080\14850-arbitrator\arbitrator\dwg\14850-cdt.dwg



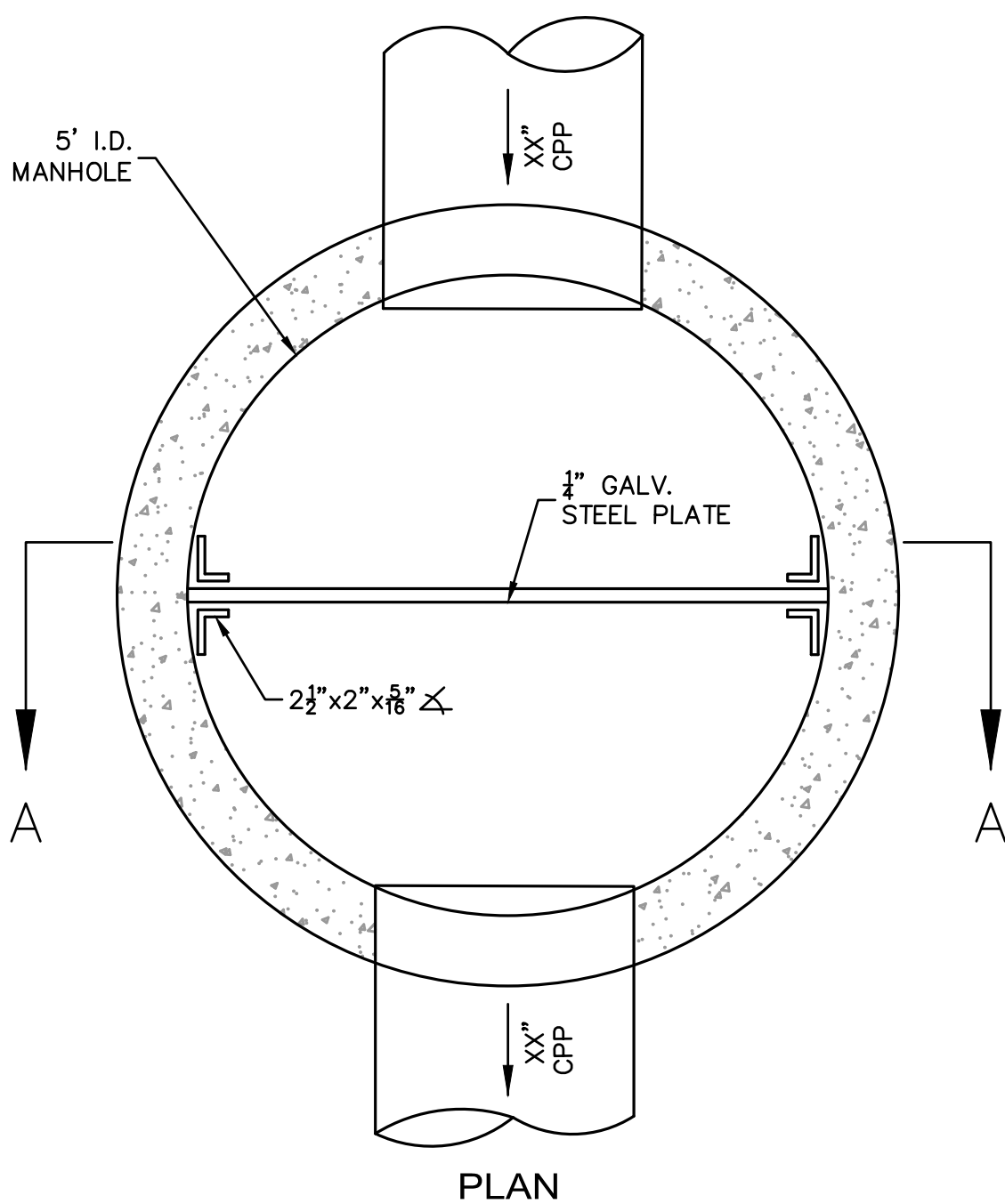
STANDARD TRENCH DETAIL FOR DRAIN AND SEWER PIPE  
NOT TO SCALE



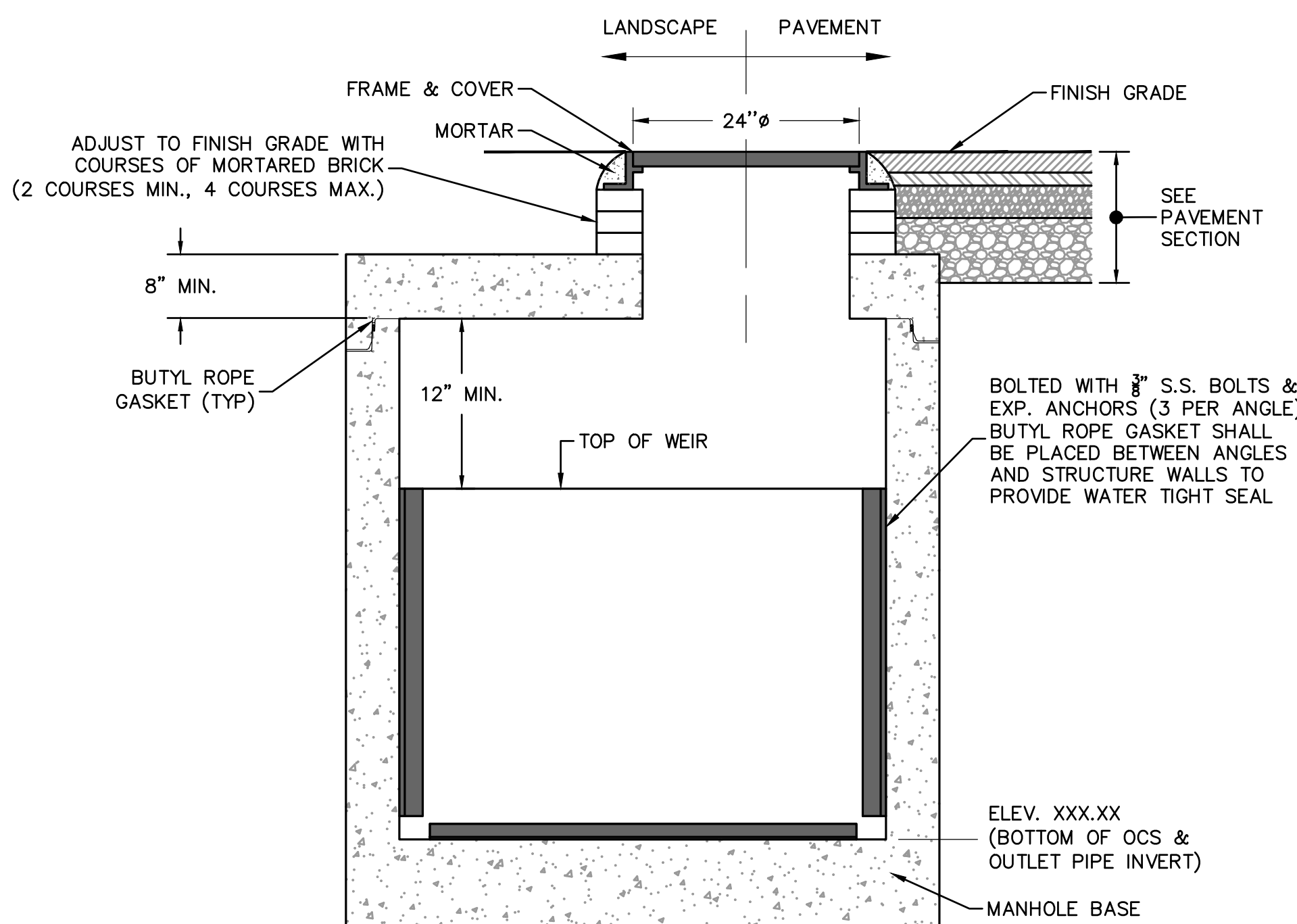
TYPICAL CATCH BASIN DETAIL  
NOT TO SCALE



TYPICAL SHALLOW DRAIN MANHOLE DETAIL  
NOT TO SCALE

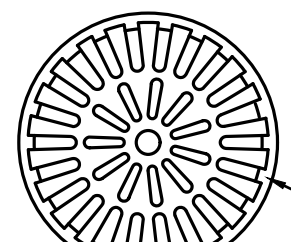
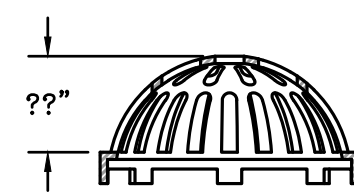


PLAN

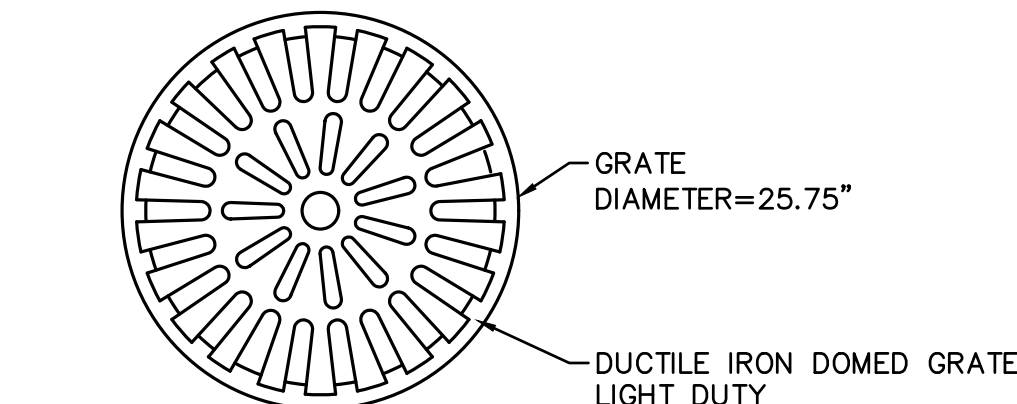
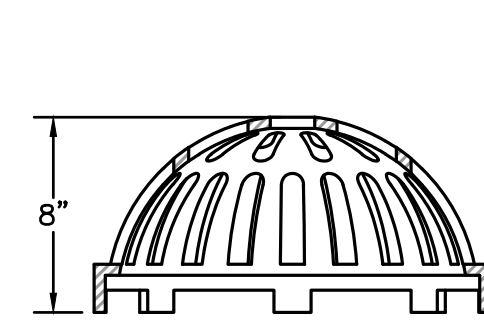


SECTION A-A

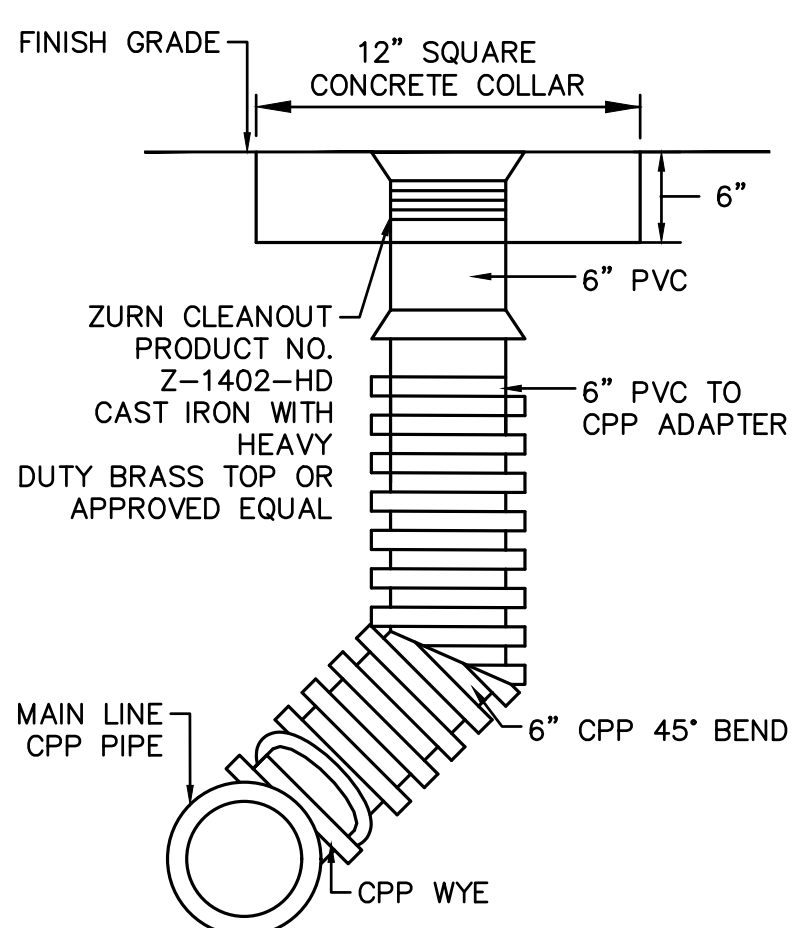
OUTLET CONTROL STRUCTURE  
NOT TO SCALE



DOMED GRATE

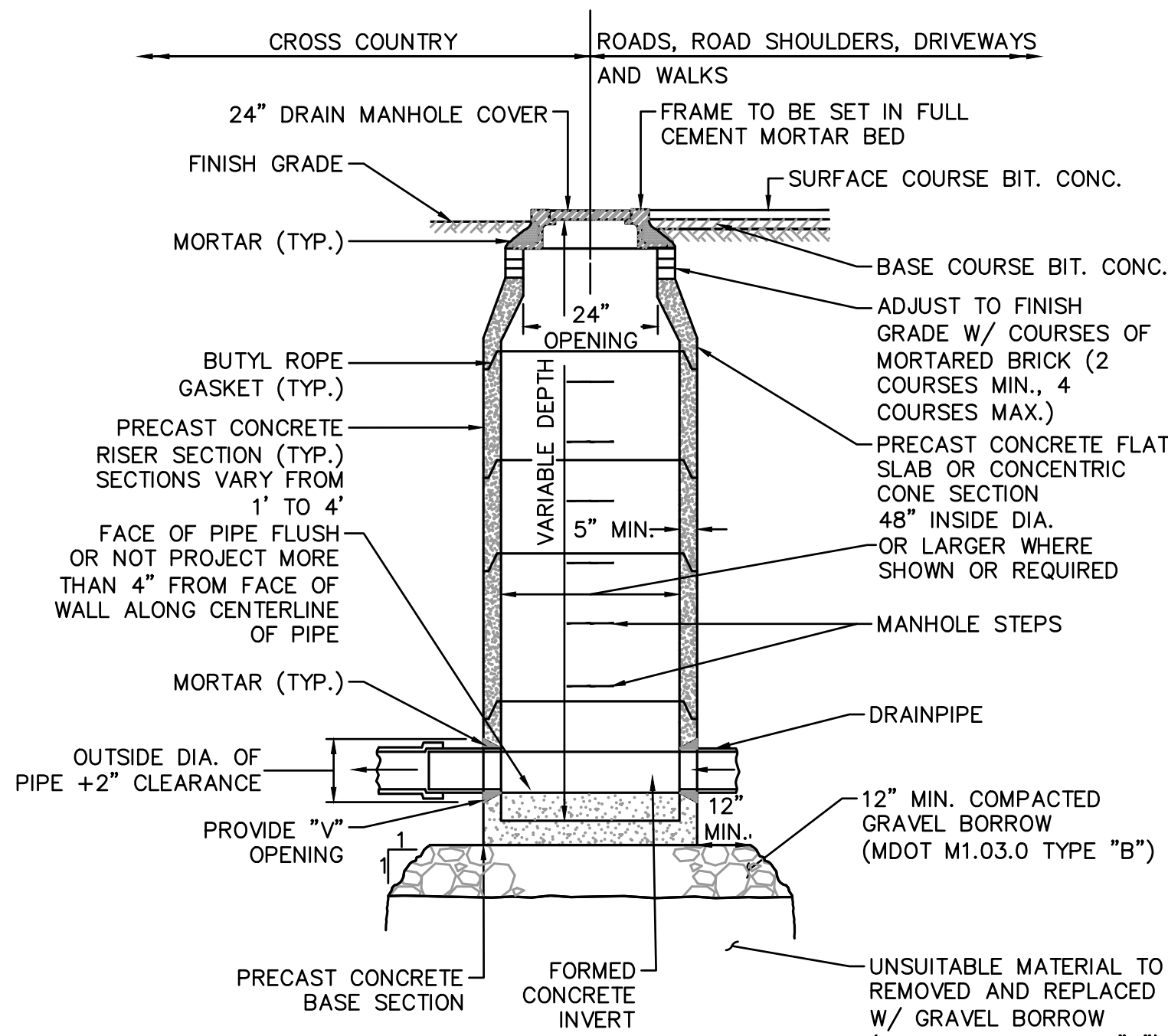


DOMED GRATE

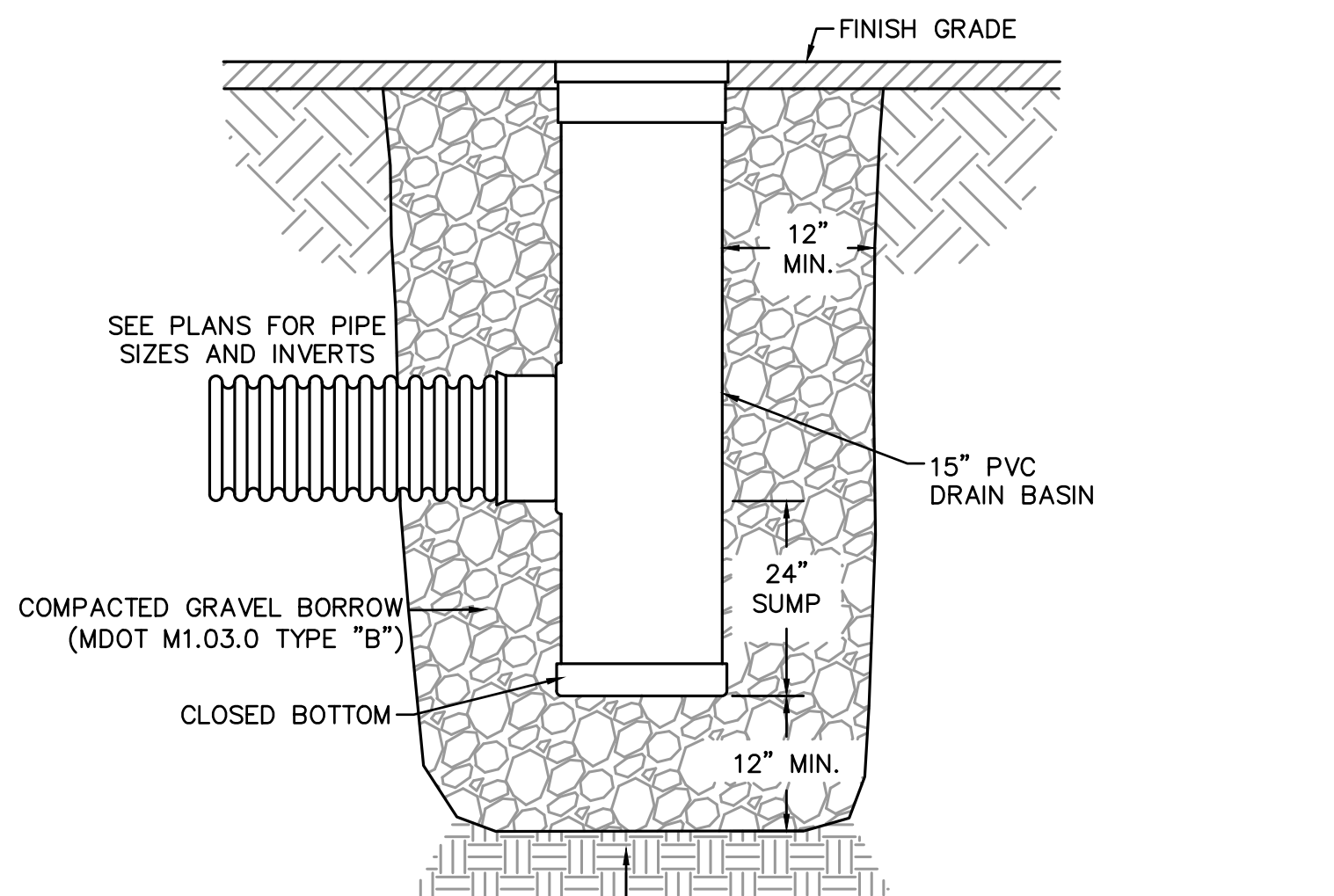


NOTE TO DESIGNER:  
FOR ASPHALT PVT - SET  
TOP OF CONCRETE COLLAR  
TO BINDER COURSE

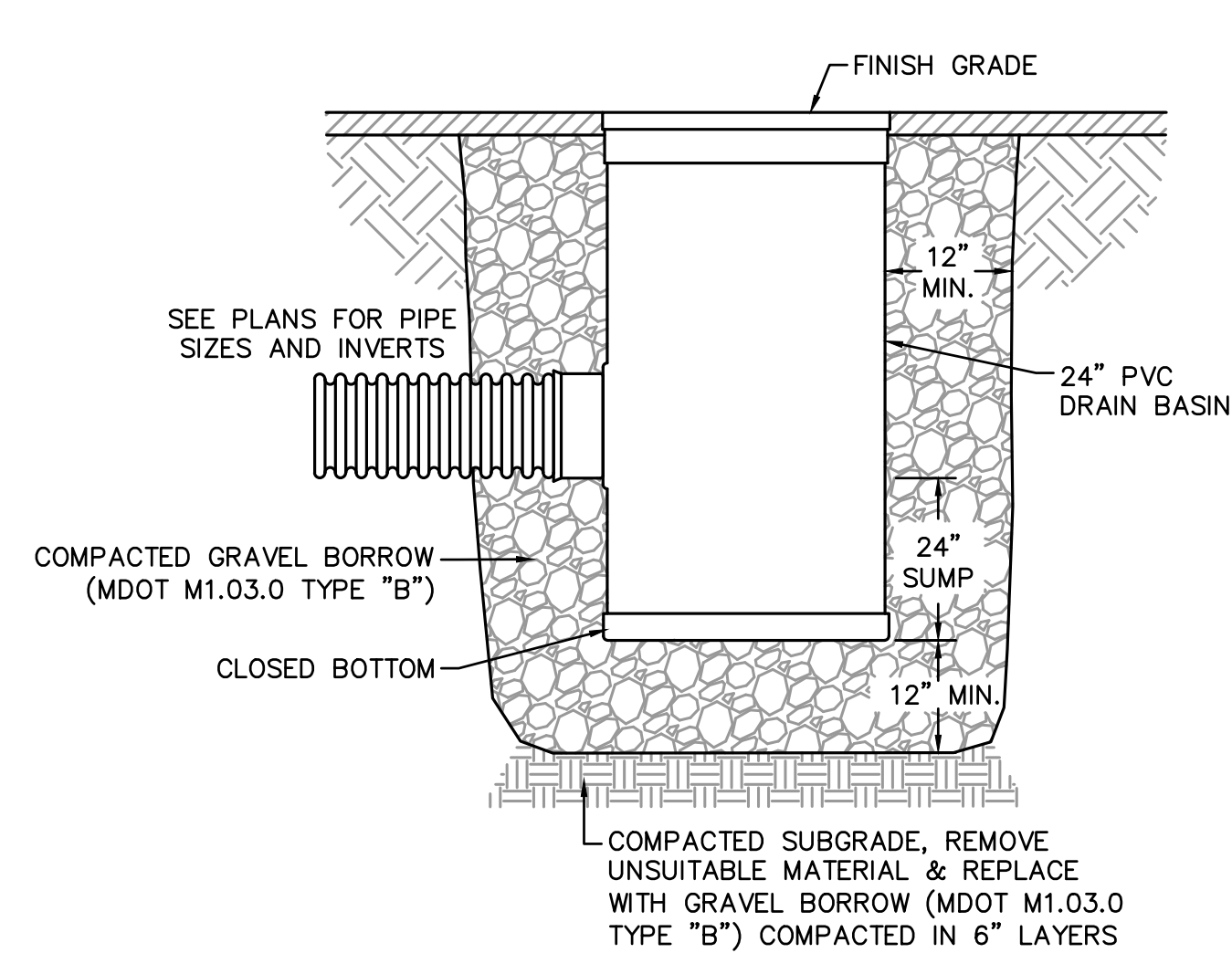
TYPICAL CLEANOUT DETAIL  
NOT TO SCALE



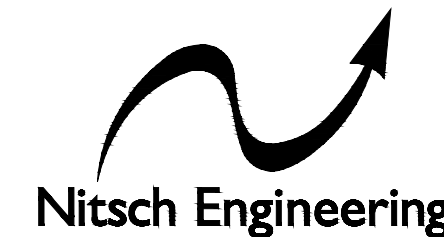
TYPICAL DRAIN MANHOLE DETAIL  
NOT TO SCALE



15\"/>



24\"/>



www.nitscheng.com

2 Center Plaza, Suite 430  
Boston, MA 02108  
T: (617) 338-0063  
F: (617) 338-6472

- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

FINAL COST  
ESTIMATE SET  
7/21/2022

CIVIL DETAILS

EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT  
WS EAST BEACH RODNEY FRENCH BOULEVARD, NEW BEDFORD, MA 02744

PREPARED FOR:

CITY OF NEW BEDFORD  
181 HILLMAN STREET #3, NEW BEDFORD, MA 02740

REV.	COMMENTS	DATE

NITSCH PROJECT # 14850  
FILE: 14850-CDT.DWG  
SCALE: NTS  
DATE: 06/30/2022  
PROJECT MANAGER: BFC  
SURVEYOR: NITSCH  
DRAFTED BY: KEW  
CHECKED BY: JLW/BFC

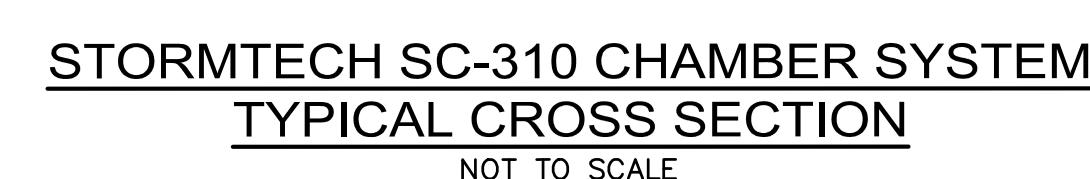
SHEET:

C6.1

OF

REV.





1. ALL DESIGN SPECIFICATIONS FOR STORMTECH CHAMBERS SHALL BE IN ACCORDANCE WITH THE STORMTECH DESIGN MANUAL
2. THE INSTALLATION OF STORMTECH CHAMBERS SHALL BE IN ACCORDANCE WITH THE LATEST STORMTECH INSTALLATION INSTRUCTIONS
3. THE CONTRACTOR IS ADVISED TO REVIEW AND UNDERSTAND THE INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION. CALL **1-888-892-2694** OR VISIT **[WWW.STORMTECH.COM](http://WWW.STORMTECH.COM)** TO RECEIVE A COPY OF THE LATEST STORMTECH INSTALLATION INSTRUCTIONS
4. CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND LOAD FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS





T. (017) 550-0472

- ▶ Civil Engineering
- ▶ Land Surveying
- ▶ Transportation Engineering
- ▶ Structural Engineering
- ▶ Green Infrastructure
- ▶ Planning
- ▶ GIS

**FINAL COST  
ESTIMATE SET  
7/21/2022**

## SITE LAYOUT DETAILS

## EAST BEACH PARKING LOT GREEN INFRASTRUCTURE RETROFIT

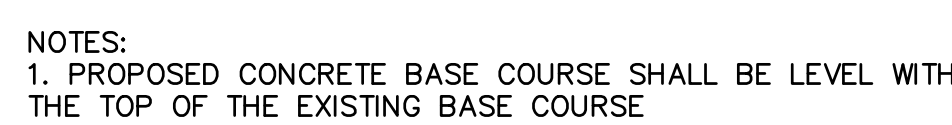
PREPARED FOR:

## CITY OF NEW BEDFORD

181 HILLMAN STREET #3, NEW BEDFORD, MA 02740



CHECK DAM FOR SEDIMENT FOREBAY  
NOT TO SCALE



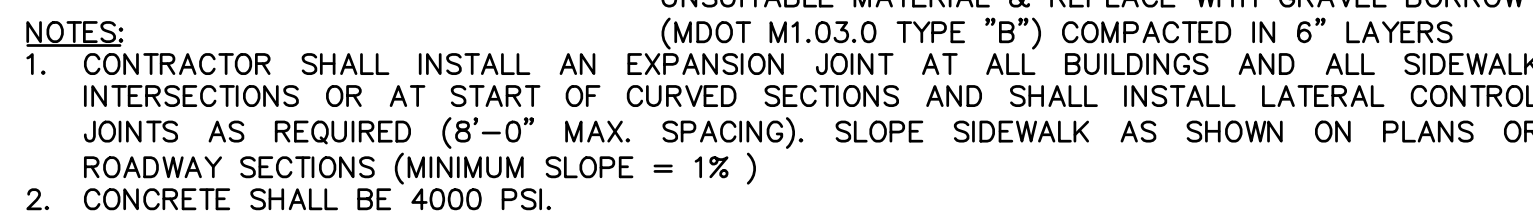
PAVEMENT RESTORATION OVER TRENCH DETAIL  
NOT TO SCALE



NOT TO SCALE  
A DERIVATIVE OF MDOT 106.4.0



TYPICAL DRIVEWAY WITH 3' CURB RETURN DETAIL  
NOT TO SCALE



CONCRETE WALKWAY DETAIL  
NOT TO SCALE



- NOTES:
1. ALL WOOD SHALL BE SELECT STRUCTURAL GRADE SOUTHERN YELLOW PINE OR DOUGLAS FIR, S-4-S.
  2. ALL WOOD SHALL BE FULL CELL PROCESS PRESSURE TREATED IN ACCORDANCE AWPB - LP33.
  3. SPACE POSTS 7'-9" O.C. MAXIMUM.
  4. RAIL ENDS SHALL BE BURIED OR HAVE A TERMINAL SECTION.
  5. GUARD RAIL AND POST SHALL COMPLY WITH MDOT STANDARD SPECIFICATIONS M8.07.0.

TIMBER GUARD RAIL DETAIL  
NOT TO SCALE



## C6.3

OF

REV



