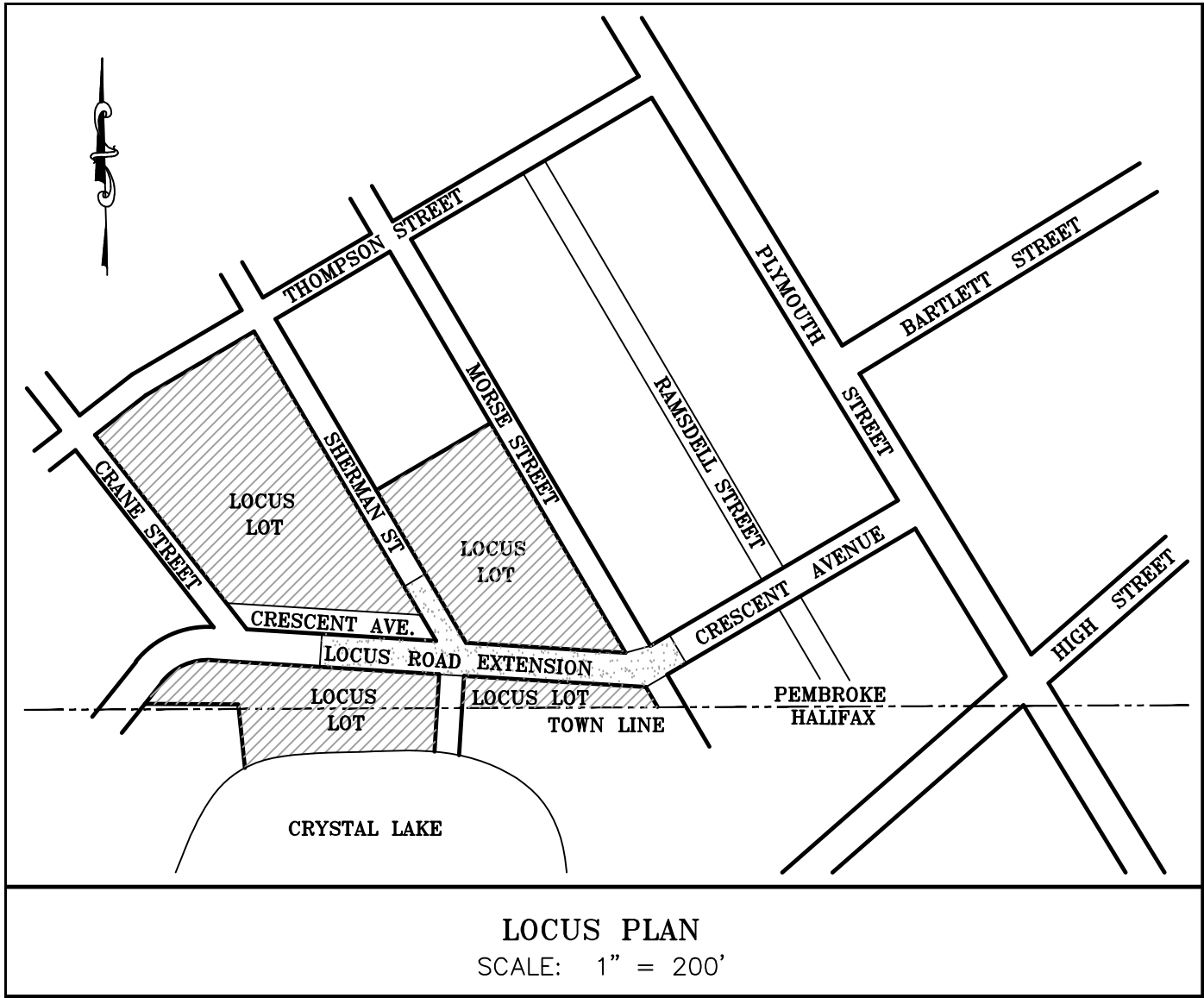
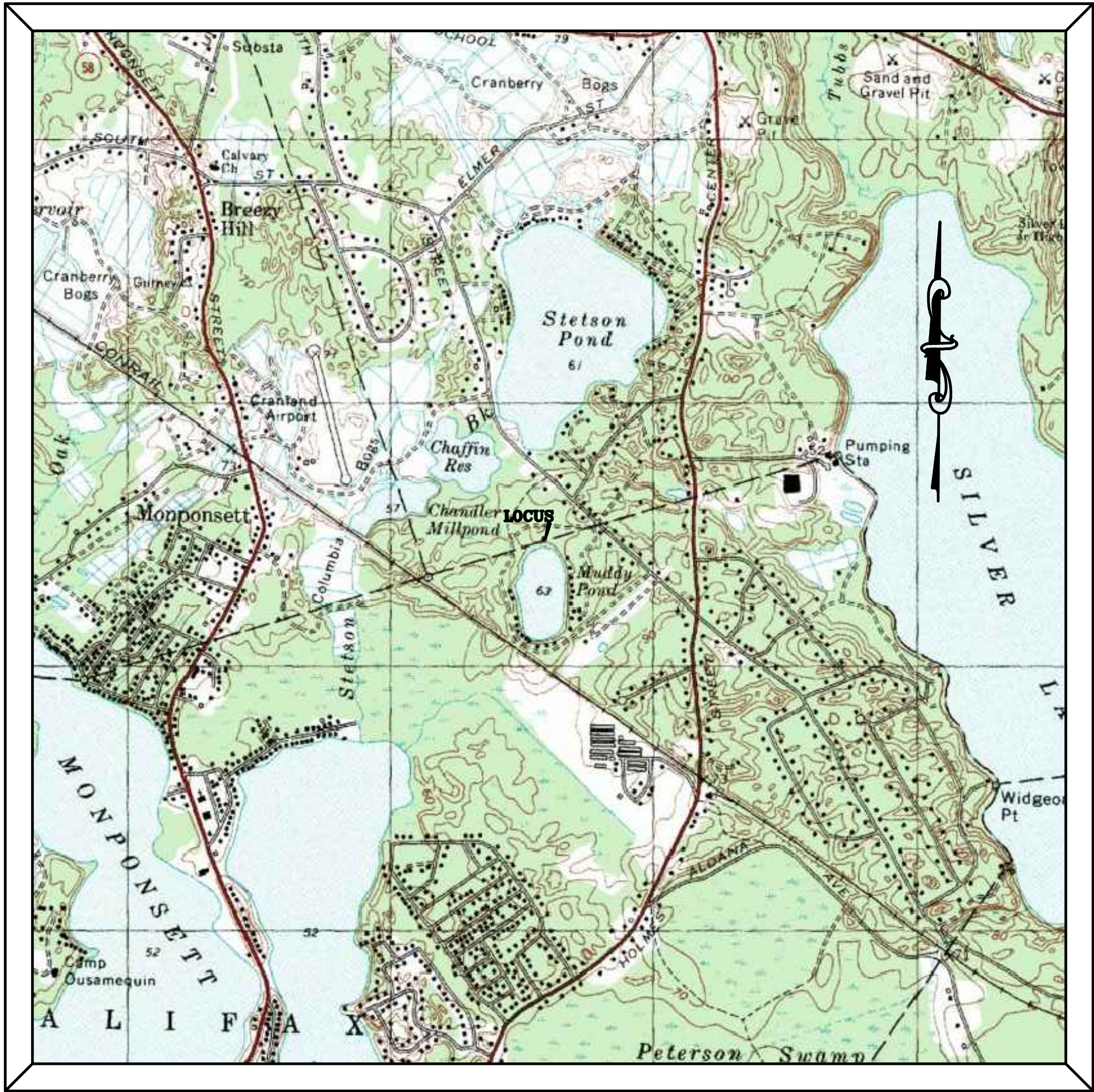




CRESCENT AVENUE IMPROVEMENTS & EXTENSION DETERMINATION OF ADEQUACY PLAN OF LAND IN PEMBROKE PLYMOUTH COUNTY, MASSACHUSETTS

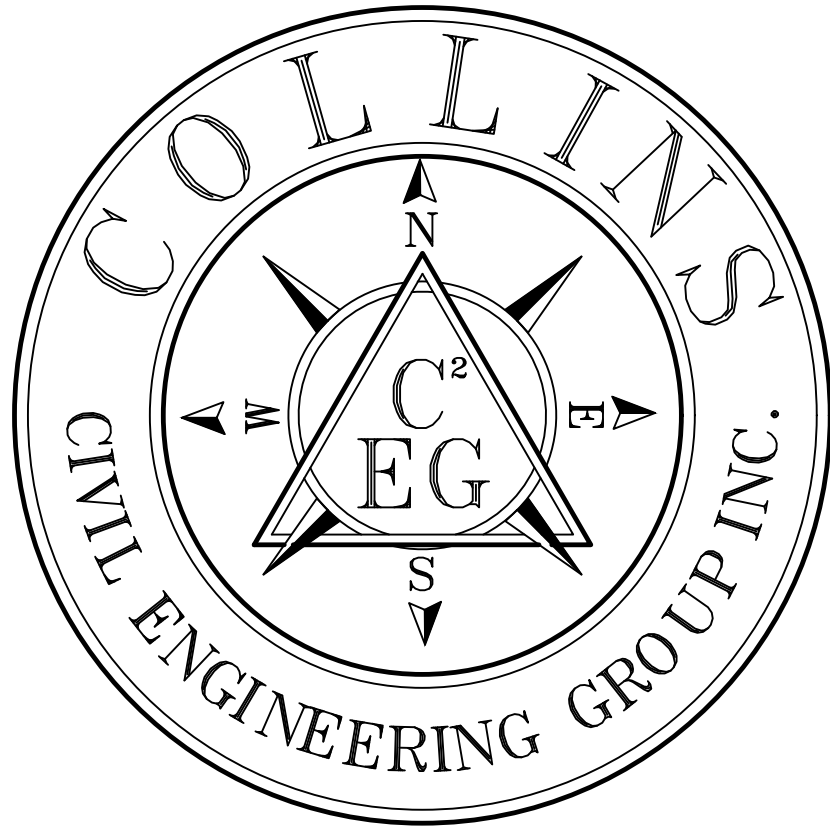
APPROVAL UNDER SECTION V SPECIAL PROVISIONS, STANDARDS AND PROCEDURES 9. DETERMINATION OF ADEQUACY OF THE WAY POLICY AND PROCEDURES REQUIRED.

DATE: _____
TOWN OF PEMBROKE PLANNING BOARD



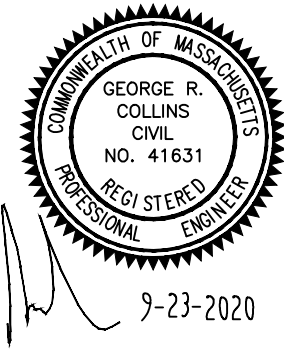
SHEET INDEX

- SHEET 1 OF 7 ---- COVER & INDEX PLAN 1 OF 1
- SHEET 2 OF 7 ---- EXISTING CONDITIONS PLAN 1 OF 1
- SHEET 3 OF 7 ---- EASEMENT PLAN 1 OF 1
- SHEET 4 OF 7 ---- GRADING, DRAINAGE & INTERSECTION DETAIL PLAN 1 OF 1
- SHEET 5 OF 7 ---- ROAD PLAN, PROFILE & DETAILS 1 OF 1
- SHEET 6 OF 7 ---- CROSS-SECTIONS & DETAIL PLAN 1 OF 2
- SHEET 7 OF 7 ---- PIERCE ANALYSIS & DETAIL PLAN 2 OF 2

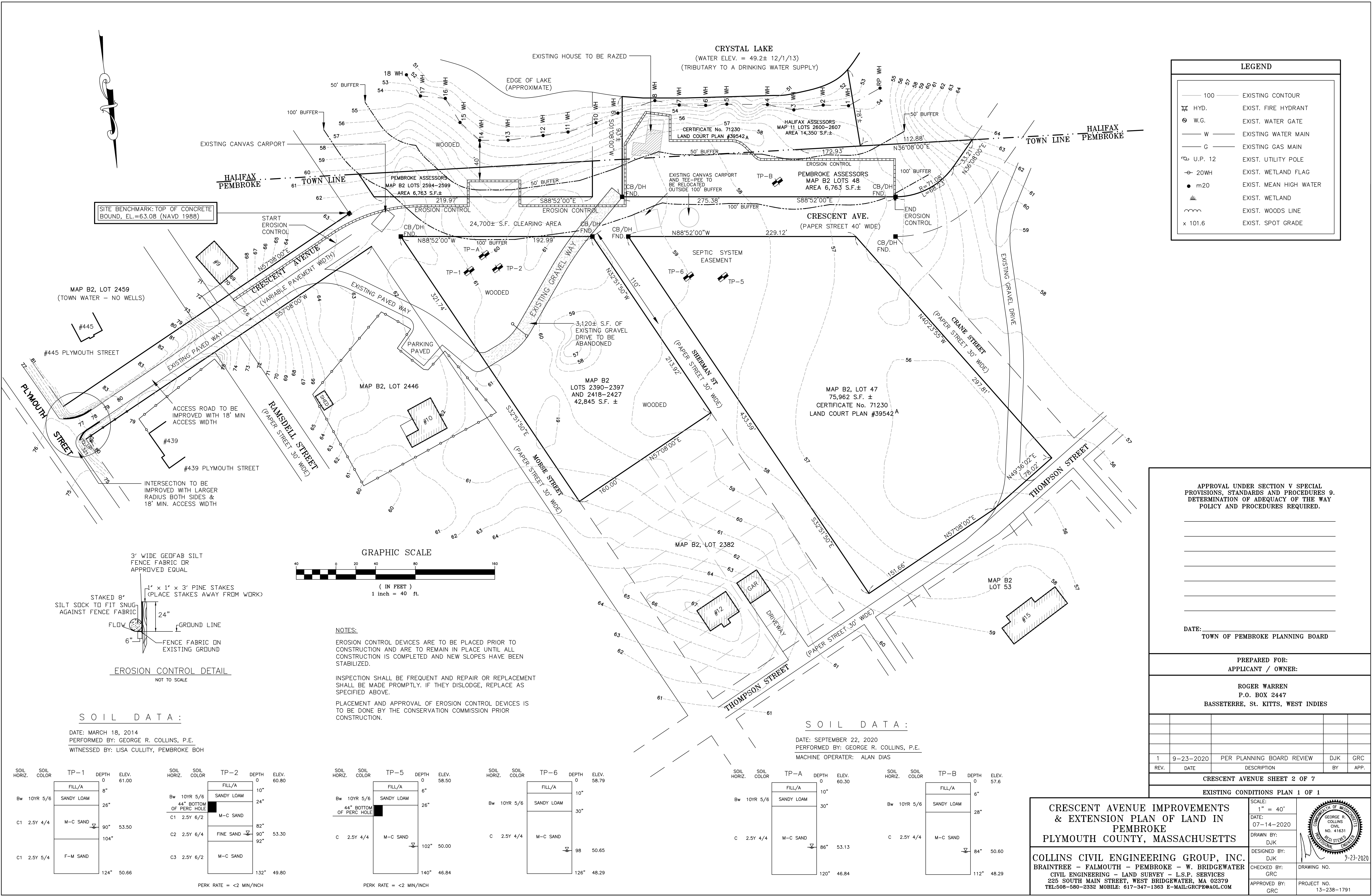


PREPARED BY:
COLLINS CIVIL ENGINEERING GROUP, INC.
BRAINTREE – FALMOUTH – PEMBROKE – W. BRIDGEWATER
CIVIL ENGINEERING – LAND SURVEY – L.S.P. SERVICES
225 SOUTH MAIN STREET, WEST BRIDGEWATER, MA 02379
TEL:508-580-2332 MOBILE: 617-347-1363 E-MAIL:GRCPE@AOL.COM

DATE: JULY 14, 2020
REVISED: SEPTEMBER 23, 2020



APPLICANT / OWNER:
ROGER WARREN
P.O. BOX 2447
BASSETTERRE, St. KITTS, WEST INDIES



LEGEND	
100	EXISTING CONTOUR
HYD.	EXIST. FIRE HYDRANT
W.G.	EXIST. WATER GATE
W	EXISTING WATER MAIN
G	EXISTING GAS MAIN
U.P. 12	EXIST. UTILITY POLE
20WH	EXIST. WETLAND FLAG
m20	EXIST. MEAN HIGH WATER
	EXIST. WETLAND
	EXIST. WOODS LINE
x 101.6	EXIST. SPOT GRADE

APPROVAL UNDER SECTION V SPECIAL PROVISIONS, STANDARDS AND PROCEDURES 9. DETERMINATION OF ADEQUACY OF THE WAY POLICY AND PROCEDURES REQUIRED.

DATE: _____
TOWN OF PEMBROKE PLANNING BOARD

PREPARED FOR:
APPLICANT / OWNER:

ROGER WARREN
P.O. BOX 2447
BASSETTERRE, St. KITTS, WEST INDIES

1	9-23-2020	PER PLANNING BOARD REVIEW	DJK	GRC
REV.	DATE	DESCRIPTION	BY	APP.

CRESCENT AVENUE SHEET 2 OF 7

EXISTING CONDITIONS PLAN 1 OF 1

CRESCENT AVENUE IMPROVEMENTS
& EXTENSION PLAN OF LAND IN
PEMBROKE
PLYMOUTH COUNTY, MASSACHUSETTS

COLLINS CIVIL ENGINEERING GROUP, INC.
BRAINTREE - FALMOUTH - PEMBROKE - W. BRIDGEWATER
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TEL:508-680-2332 MOBILE: 617-347-1363 E-MAIL:GRCPE@AOL.COM

SCALE:
1" = 40'
DATE:
07-14-2020
DRAWN BY:
DJK
DESIGNED BY:
DJK
CHECKED BY:
GRC
APPROVED BY:
GRC

GEORGE R. COLLINS
CIVIL
NO. 41631
PROFESSIONAL ENGINEER

9-23-2020

DRAWING NO.
PROJECT NO.
13-238-1791

NOTES:
EROSION CONTROL DEVICES ARE TO BE PLACED PRIOR TO CONSTRUCTION AND ARE TO REMAIN IN PLACE UNTIL ALL CONSTRUCTION IS COMPLETED AND NEW SLOPES HAVE BEEN STABILIZED.
INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY. IF THEY DISLODGE, REPLACE AS SPECIFIED ABOVE.
PLACEMENT AND APPROVAL OF EROSION CONTROL DEVICES IS TO BE DONE BY THE CONSERVATION COMMISSION PRIOR CONSTRUCTION.

SOIL DATA :

DATE: MARCH 18, 2014
PERFORMED BY: GEORGE R. COLLINS, P.E.
WITNESSED BY: LISA CULLITY, PEMBROKE BOH

SOIL HORIZ.	SOIL COLOR	TP-1	DEPTH	ELEV.	SOIL HORIZ.	SOIL COLOR	TP-2	DEPTH	ELEV.
		FILL/A	0	61.00			FILL/A	0	60.80
Bw	10YR 5/6	SANDY LOAM	8"		Bw	10YR 5/6	SANDY LOAM	10"	
			26"				44" BOTTOM OF PERC HOLE	24"	
C1	2.5Y 4/4	M-C SAND	90"	53.50	C1	2.5Y 6/2	M-C SAND	82"	
			104"		C2	2.5Y 6/4	FINE SAND	90"	53.30
C1	2.5Y 5/4	F-M SAND	124"	50.66	C3	2.5Y 6/2	M-C SAND	92"	
								132"	49.80

PERK RATE = <2 MIN/INCH

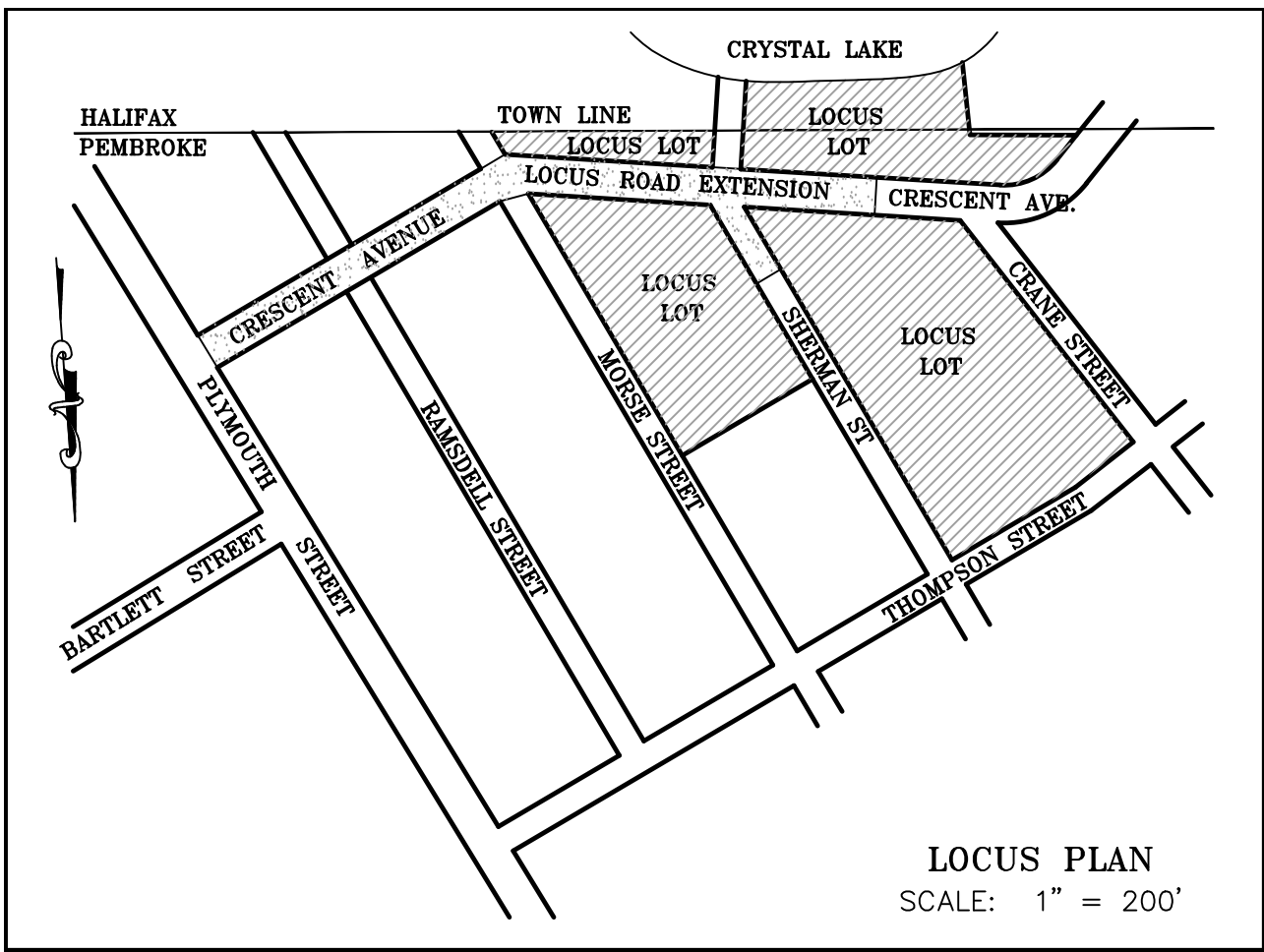
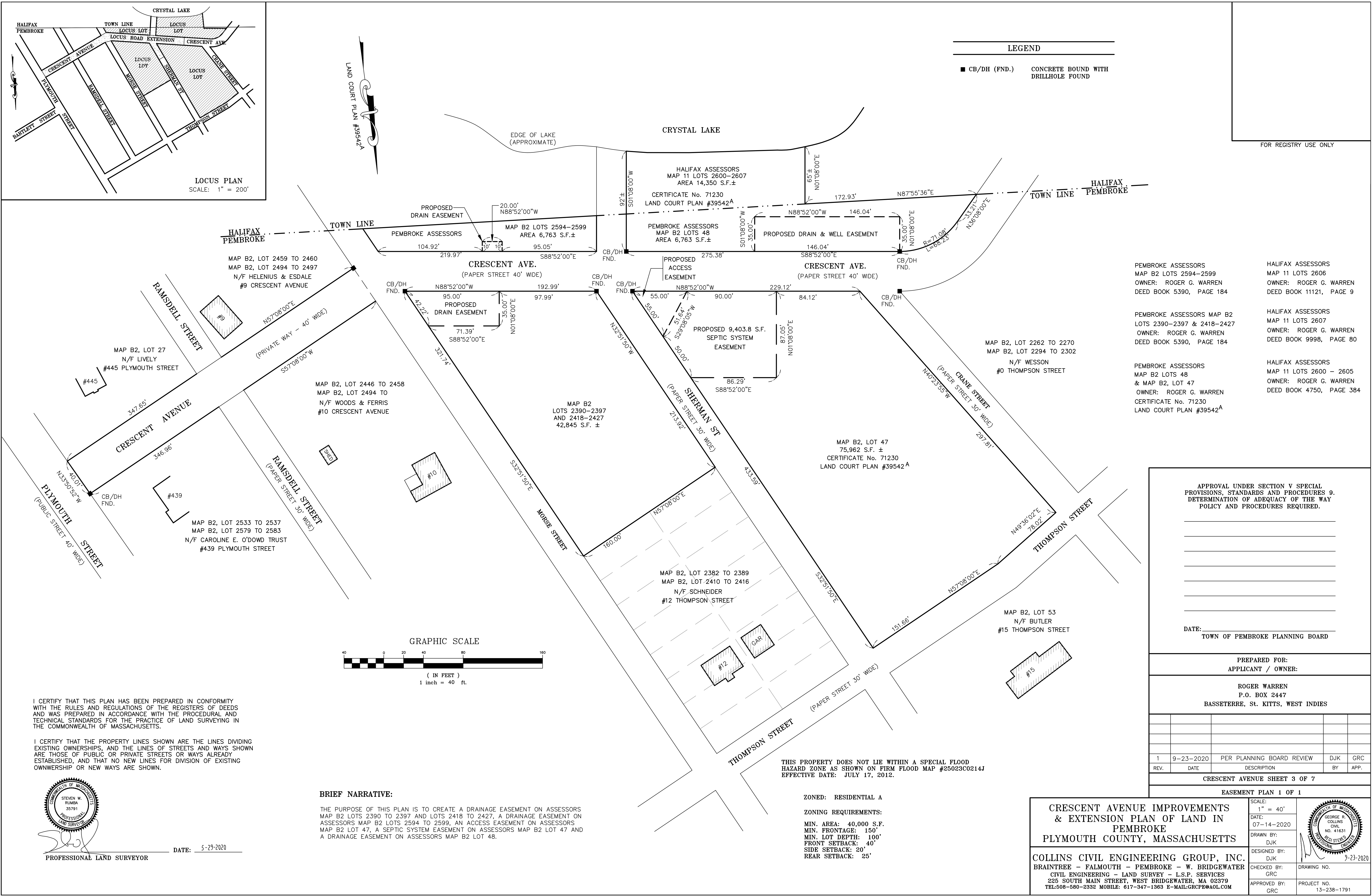
SOIL HORIZ.	SOIL COLOR	TP-5	DEPTH	ELEV.	SOIL HORIZ.	SOIL COLOR	TP-6	DEPTH	ELEV.
		FILL/A	0	58.50			FILL/A	0	58.79
Bw	10YR 5/6	SANDY LOAM	6"		Bw	10YR 5/6	SANDY LOAM	10"	
			26"					30"	
		44" BOTTOM OF PERC HOLE			C	2.5Y 4/4	M-C SAND	98"	50.65
C	2.5Y 4/4	M-C SAND	102"	50.00				126"	48.29

PERK RATE = <2 MIN/INCH

SOIL DATA :

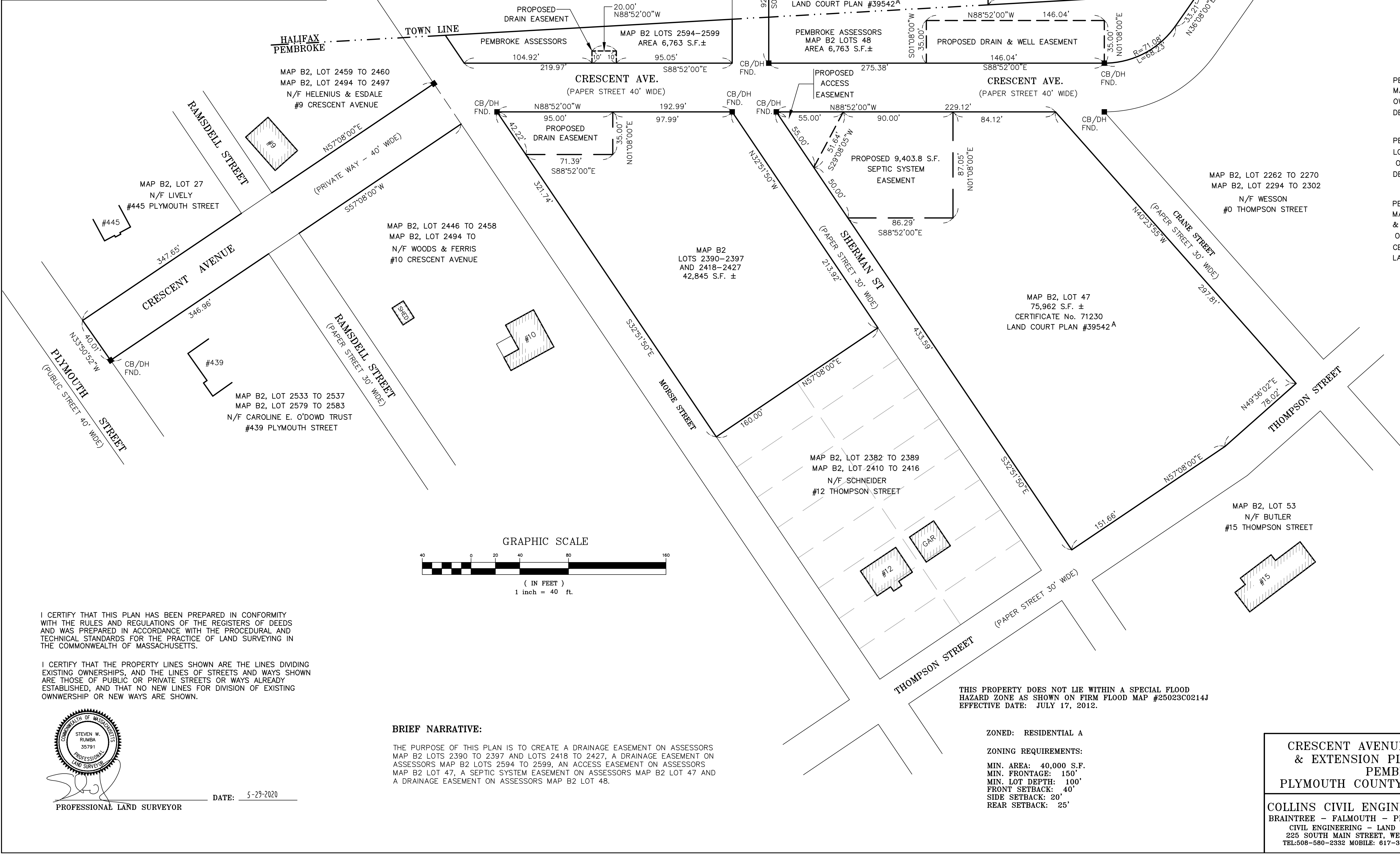
DATE: SEPTEMBER 22, 2020
PERFORMED BY: GEORGE R. COLLINS, P.E.
MACHINE OPERATOR: ALAN DIAS

SOIL HORIZ.	SOIL COLOR	TP-A	DEPTH	ELEV.	SOIL HORIZ.	SOIL COLOR	TP-B	DEPTH	ELEV.
		FILL/A	0	60.30			FILL/A	0	57.6
Bw	10YR 5/6	SANDY LOAM	10"		Bw	10YR 5/6	SANDY LOAM	6"	
			30"					28"	
C	2.5Y 4/4	M-C SAND	86"	53.13	C	2.5Y 4/4	M-C SAND	84"	50.60
			120"	46.84				112"	48.29



LEGEND	
■ CB/DH (FND.)	CONCRETE BOUND WITH DRILLHOLE FOUND

FOR REGISTRY USE ONLY



PEMBROKE ASSESSORS MAP B2 LOTS 2594-2599 OWNER: ROGER G. WARREN DEED BOOK 5390, PAGE 184	HALIFAX ASSESSORS MAP 11 LOTS 2606 OWNER: ROGER G. WARREN DEED BOOK 11121, PAGE 9
PEMBROKE ASSESSORS MAP B2 LOTS 2390-2397 & 2418-2427 OWNER: ROGER G. WARREN DEED BOOK 5390, PAGE 184	HALIFAX ASSESSORS MAP 11 LOTS 2607 OWNER: ROGER G. WARREN DEED BOOK 9998, PAGE 80
PEMBROKE ASSESSORS MAP B2 LOTS 48 & MAP B2, LOT 47 OWNER: ROGER G. WARREN CERTIFICATE No. 71230 LAND COURT PLAN #39542A	HALIFAX ASSESSORS MAP 11 LOTS 2605 OWNER: ROGER G. WARREN DEED BOOK 4750, PAGE 384

APPROVAL UNDER SECTION V SPECIAL PROVISIONS, STANDARDS AND PROCEDURES 9. DETERMINATION OF ADEQUACY OF THE WAY POLICY AND PROCEDURES REQUIRED.

DATE: _____
TOWN OF PEMBROKE PLANNING BOARD

PREPARED FOR:
APPLICANT / OWNER:

ROGER WARREN
P.O. BOX 2447
BASSETTERRE, St. KITTS, WEST INDIES

1	9-23-2020	PER PLANNING BOARD REVIEW	DJK	GRC
REV.	DATE	DESCRIPTION	BY	APP.

CRESCENT AVENUE SHEET 3 OF 7

EASEMENT PLAN 1 OF 1

CRESCENT AVENUE IMPROVEMENTS
& EXTENSION PLAN OF LAND IN
PEMBROKE
PLYMOUTH COUNTY, MASSACHUSETTS

COLLINS CIVIL ENGINEERING GROUP, INC.
BRAINTREE - FALMOUTH - PEMBROKE - W. BRIDGEWATER
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SCALE:
1" = 40'
DATE:
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DRAWN BY:
DJK
DESIGNED BY:
DJK
CHECKED BY:
GRC
APPROVED BY:
GRC

9-23-2020
DRAWING NO.
PROJECT NO.
13-238-1791

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS AND WAS PREPARED IN ACCORDANCE WITH THE PROCEDURAL AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS.

I CERTIFY THAT THE PROPERTY LINES SHOWN ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR NEW WAYS ARE SHOWN.

DATE: 5-29-2020

PROFESSIONAL LAND SURVEYOR

BRIEF NARRATIVE:

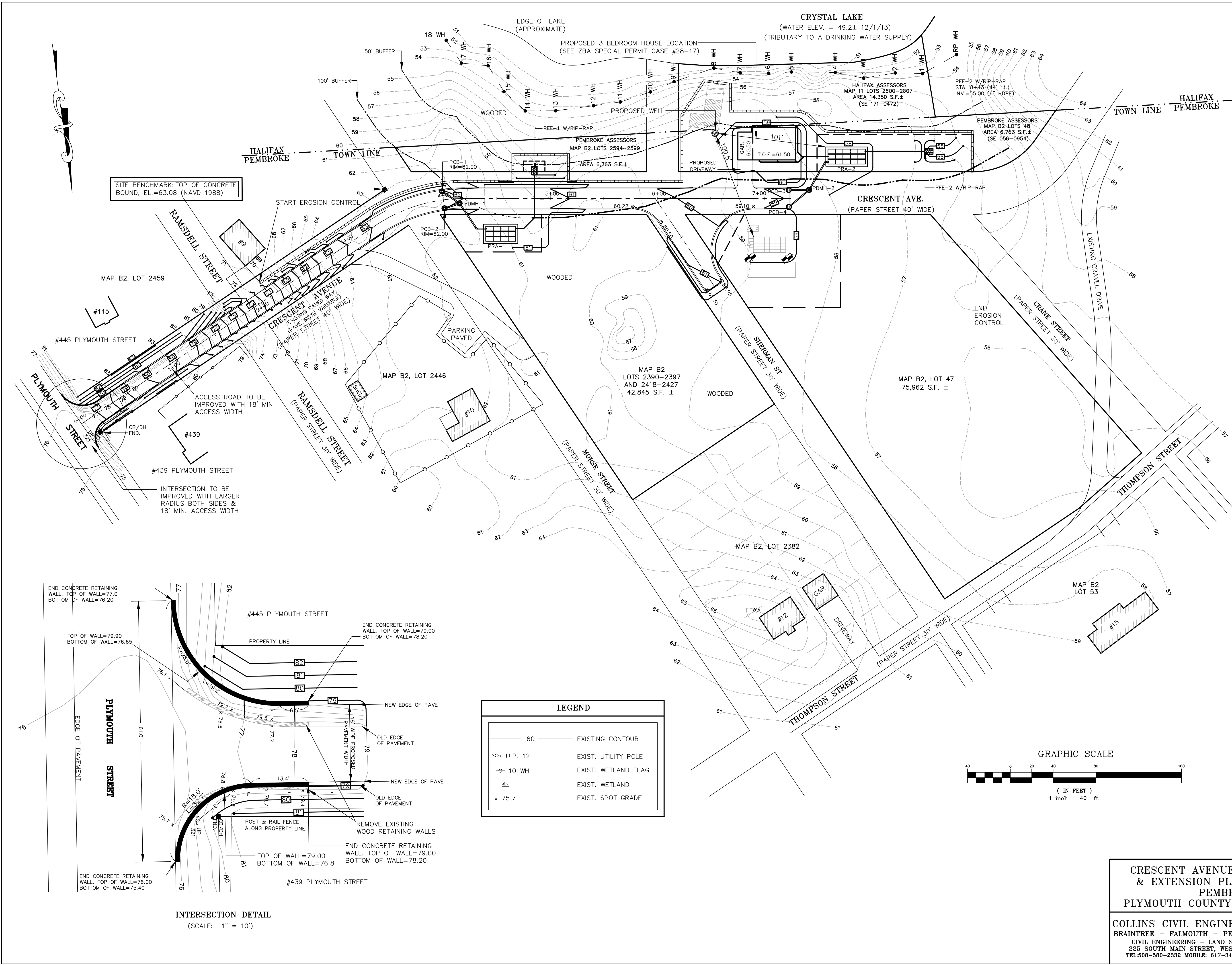
THE PURPOSE OF THIS PLAN IS TO CREATE A DRAINAGE EASEMENT ON ASSESSORS MAP B2 LOTS 2390 TO 2397 AND LOTS 2418 TO 2427, A DRAINAGE EASEMENT ON ASSESSORS MAP B2 LOTS 2594 TO 2599, AN ACCESS EASEMENT ON ASSESSORS MAP B2 LOT 47, A SEPTIC SYSTEM EASEMENT ON ASSESSORS MAP B2 LOT 47 AND A DRAINAGE EASEMENT ON ASSESSORS MAP B2 LOT 48.

THIS PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD ZONE AS SHOWN ON FIRM FLOOD MAP #25023C0214J EFFECTIVE DATE: JULY 17, 2012.

ZONED: RESIDENTIAL A

ZONING REQUIREMENTS:

MIN. AREA: 40,000 S.F.
MIN. FRONTAGE: 150'
MIN. LOT DEPTH: 100'
FRONT SETBACK: 40'
SIDE SETBACK: 20'
REAR SETBACK: 25'



PFE-1 W/RIP-RAP @ STA. 4+85 (22' Lt.)
INV. IN=57.40 (6" HDPE FROM PRA-1)

PFE-2 W/RIP-RAP @ STA. 8+43 (44' Lt.)
INV. IN=55.00 (6" HDPE FROM PRA-2)

PCB-1 @ STA. 4+00 (9' Lt.)
RIM=62.00 (FLAT TOP STRUCTURE)
INV. OUT=58.60 (12" HDPE TO PDMH-1)
WITH 4' DEEP SUMP AND HOOD
& ULTRA URBAN FILTER

PCB-2 @ STA. 4+00 (9' Lt.)
RIM=62.00 (FLAT TOP STRUCTURE)
INV. OUT=58.60 (12" HDPE TO PDMH-1)
WITH 4' DEEP SUMP AND HOOD
& ULTRA URBAN FILTER

PCB-3 @ STA. 7+25 (9' Lt.)
RIM=58.75 (FLAT TOP STRUCTURE)
INV. OUT=56.25 (12" HDPE TO PDMH-2)
WITH 4' DEEP SUMP AND HOOD
& ULTRA URBAN FILTER

PCB-4 @ STA. 7+25 (9' Lt.)
RIM=58.75 (FLAT TOP STRUCTURE)
INV. OUT=56.25 (12" HDPE TO PDMH-2)
WITH 4' DEEP SUMP AND HOOD
& ULTRA URBAN FILTER

PDMH-1 @ STA. 4+15 (4.5' Rt.)
RIM=61.95 (FLAT TOP STRUCTURE)
INV. IN=58.45 (12" HDPE FROM PCB-1)
INV. IN=58.45 (12" HDPE FROM PCB-2)
INV. OUT=58.35 (12" HDPE TO PRA-1)

PDMH-2 @ STA. 7+42 (8' Lt.)
RIM=58.75 (FLAT TOP STRUCTURE)
INV. IN=56.05 (12" HDPE FROM PCB-3)
INV. IN=56.05 (12" HDPE FROM PCB-4)
INV. OUT=55.95 (12" HDPE TO PRA-2)

PCB PROPOSED CATCH BASIN
PDMH PROPOSED DRAIN MANHOLE
PFE PROPOSED FLARED END

APPROVAL UNDER SECTION V SPECIAL PROVISIONS, STANDARDS AND PROCEDURES 9. DETERMINATION OF ADEQUACY OF THE WAY POLICY AND PROCEDURES REQUIRED.

DATE: TOWN OF PEMBROKE PLANNING BOARD

PREPARED FOR:
APPLICANT / OWNER:

ROGER WARREN
P.O. BOX 2447
BASSETTERRE, St. KITTS, WEST INDIES

REV.	DATE	DESCRIPTION	BY	APP.
1	9-23-2020	PER PLANNING BOARD REVIEW	DJK	GRC

CRESCENT AVENUE SHEET 4 OF 7

GRADING, DRAINAGE & INTERSECTION DETAIL PLAN 1 OF 1

CRESCENT AVENUE IMPROVEMENTS
& EXTENSION PLAN OF LAND IN
PEMBROKE
PLYMOUTH COUNTY, MASSACHUSETTS

COLLINS CIVIL ENGINEERING GROUP, INC.
BRAINTREE - FALMOUTH - PEMBROKE - W. BRIDGEWATER
CIVIL ENGINEERING - LAND SURVEY - L.S.P. SERVICES
225 SOUTH MAIN STREET, WEST BRIDGEWATER, MA 02379
TEL:508-680-2332 MOBILE: 617-347-1363 E-MAIL:GRCPE@AOL.COM

SCALE:
1" = 40'
DATE:
07-14-2020
DRAWN BY:
DJK
DESIGNED BY:
DJK
CHECKED BY:
GRC
APPROVED BY:
GRC

GEORGE R. COLLINS
CIVIL
NO. 41631
PROFESSIONAL ENGINEER

9-23-2020

DRAWING NO.
PROJECT NO.
13-238-1791

INTERSECTION DETAIL
(SCALE: 1" = 10')

LEGEND

60

EXISTING CONTOUR

U.P. 12

EXIST. UTILITY POLE

10 WH

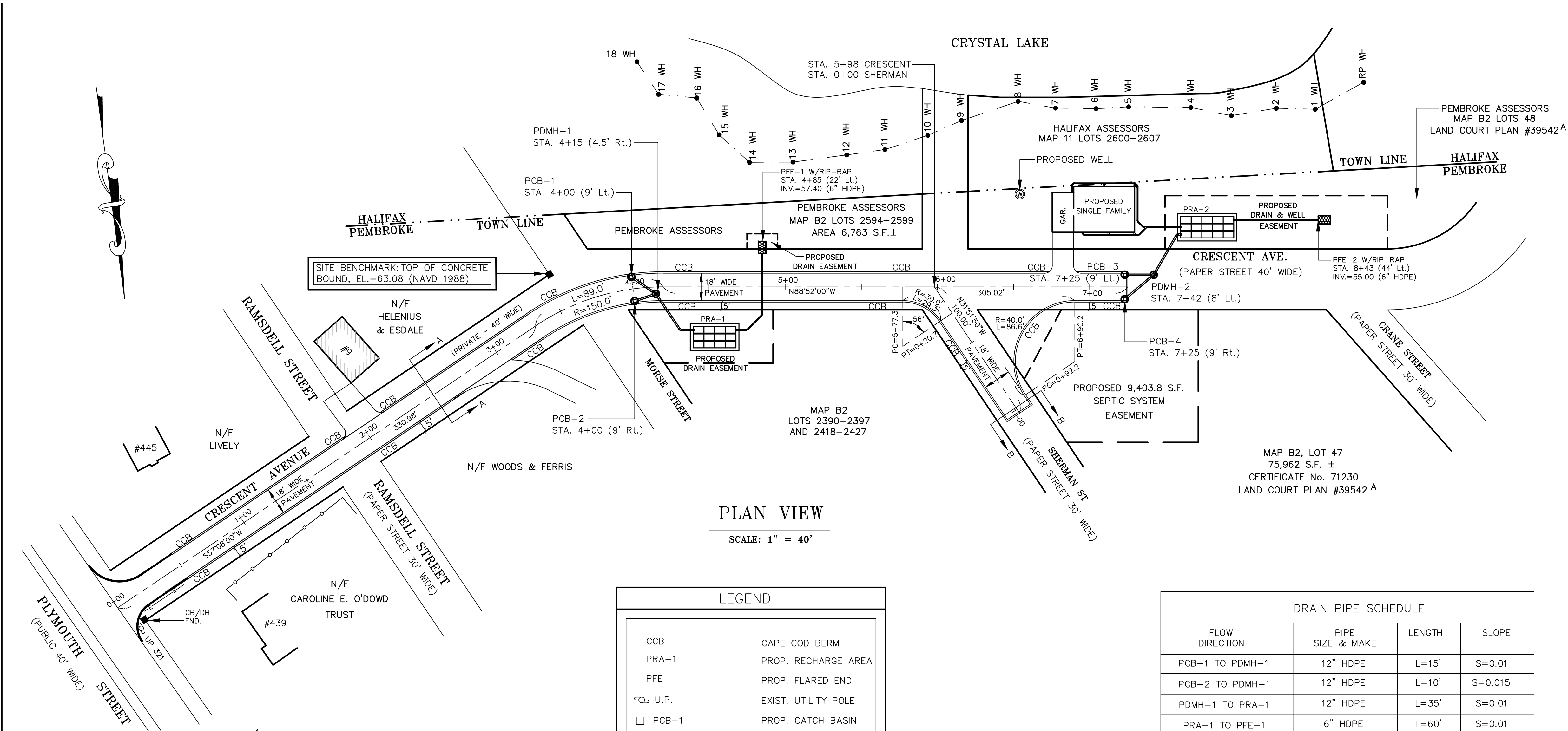
EXIST. WETLAND FLAG

WH

EXIST. WETLAND

x 75.7

EXIST. SPOT GRADE

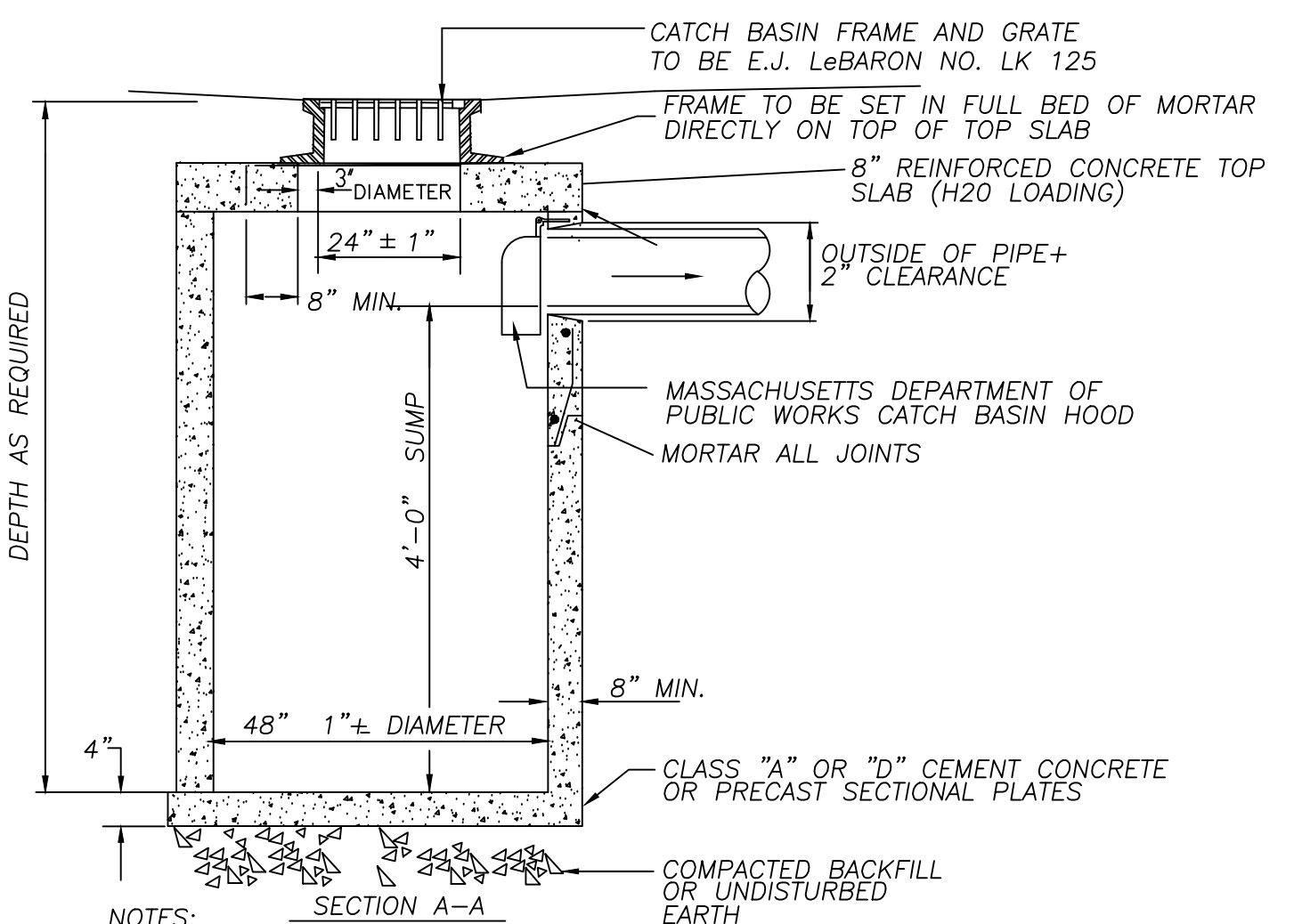


PLAN VIEW

SCALE: 1" = 40'

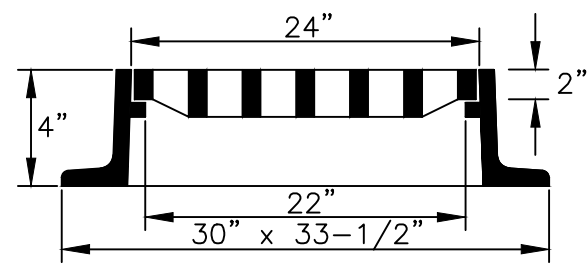
LEGEND	
CCB	CAPE COD BERM
PRA-1	PROP. RECHARGE AREA
PFE	PROP. FLARED END
U.P.	EXIST. UTILITY POLE
PCB-1	PROP. CATCH BASIN
PDMH-1	PROP. DRAIN MANHOLE

DRAIN PIPE SCHEDULE			
FLOW DIRECTION	PIPE SIZE & MAKE	LENGTH	SLOPE
PCB-1 TO PDMH-1	12" HDPE	L=15'	S=0.01
PCB-2 TO PDMH-1	12" HDPE	L=10'	S=0.015
PDMH-1 TO PRA-1	12" HDPE	L=35'	S=0.01
PRA-1 TO PFE-1	6" HDPE	L=60'	S=0.01
PCB-3 TO PDMH-2	12" HDPE	L=15'	S=0.013
PCB-4 TO PDMH-2	12" HDPE	L=20'	S=0.01
PDMH-2 TO PRA-2	12" HDPE	L=30'	S=0.01
PRA-2 TO PFE-2	6" HDPE	L=65'	S=0.01



TYPICAL FLAT TOP CATCH BASIN

(NOT TO SCALE)

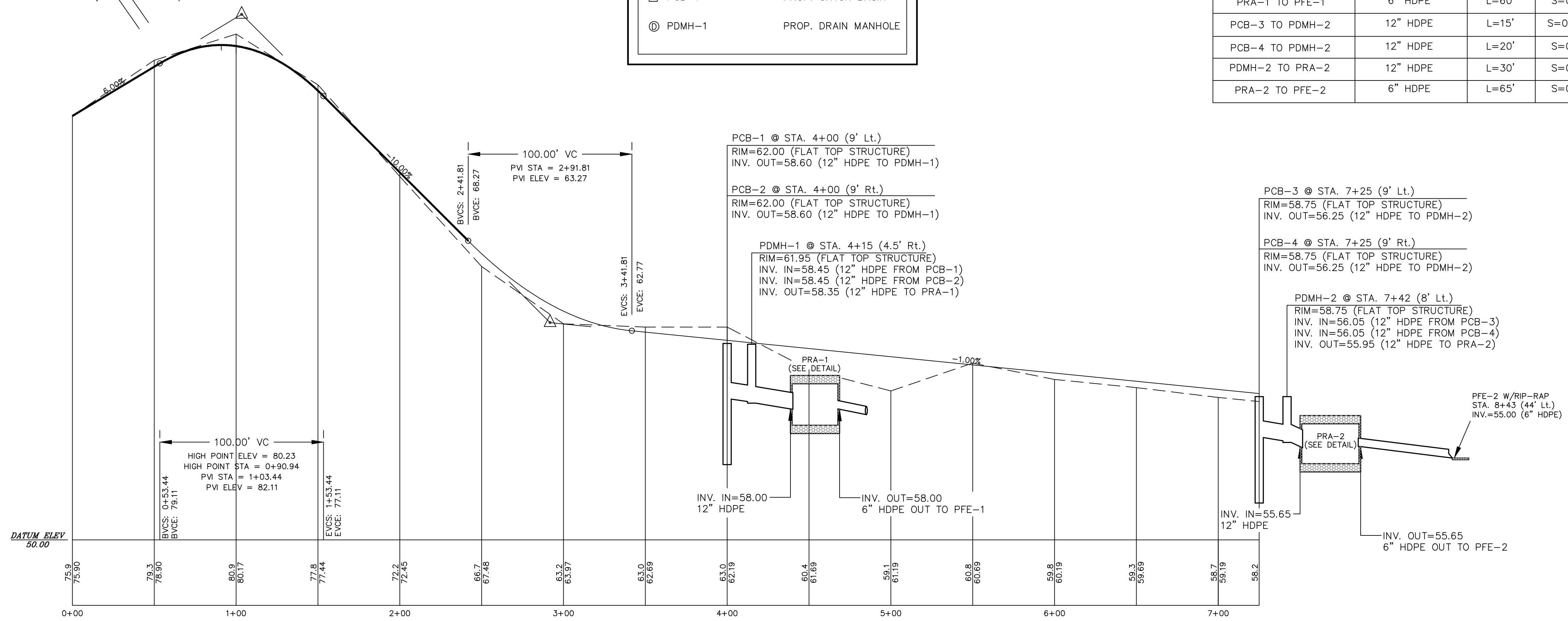


* 3 OR 4 FLANGE FRAME AS REQUIRED

CATCH BASIN FRAME & GRATE

LEBARON TYPE LF 248-2 480 LB. OR APPROVED EQUAL

(NOT TO SCALE)



PROFILE VIEW

SCALE: 1" = 40' (HORIZONTAL)
SCALE: 1" = 4' (VERTICAL)

APPROVAL UNDER SECTION V SPECIAL PROVISIONS, STANDARDS AND PROCEDURES 9. DETERMINATION OF ADEQUACY OF THE WAY POLICY AND PROCEDURES REQUIRED.

DATE: TOWN OF PEMBROKE PLANNING BOARD

PREPARED FOR: APPLICANT / OWNER:

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P.O. BOX 2447
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REV.	DATE	DESCRIPTION	BY	APP.
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CRESCENT AVENUE SHEET 5 OF 7

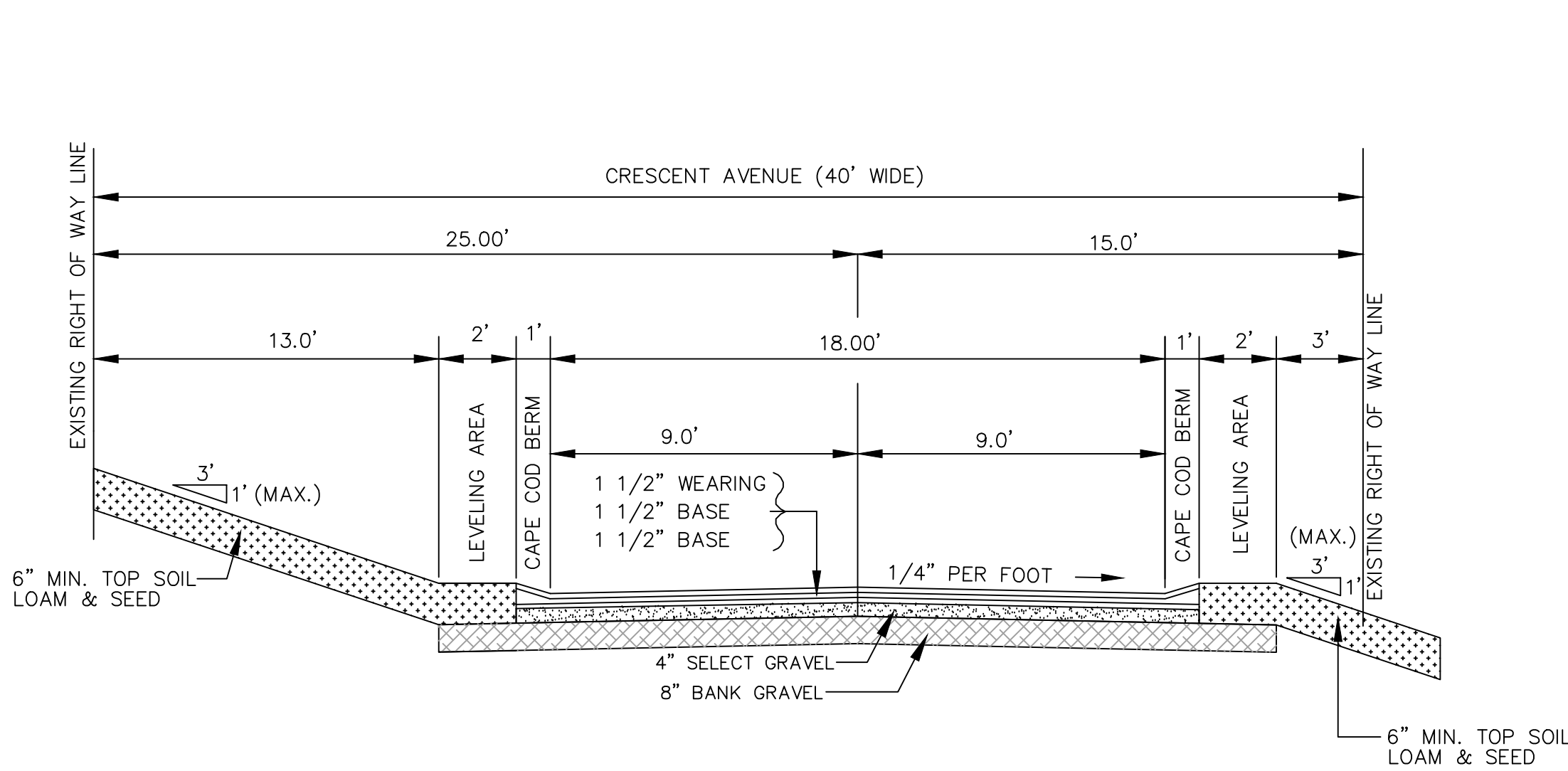
ROAD PLAN, PROFILE & DETAIL 1 OF 1

CRESCENT AVENUE IMPROVEMENTS
& EXTENSION PLAN OF LAND IN
PEMBROKE
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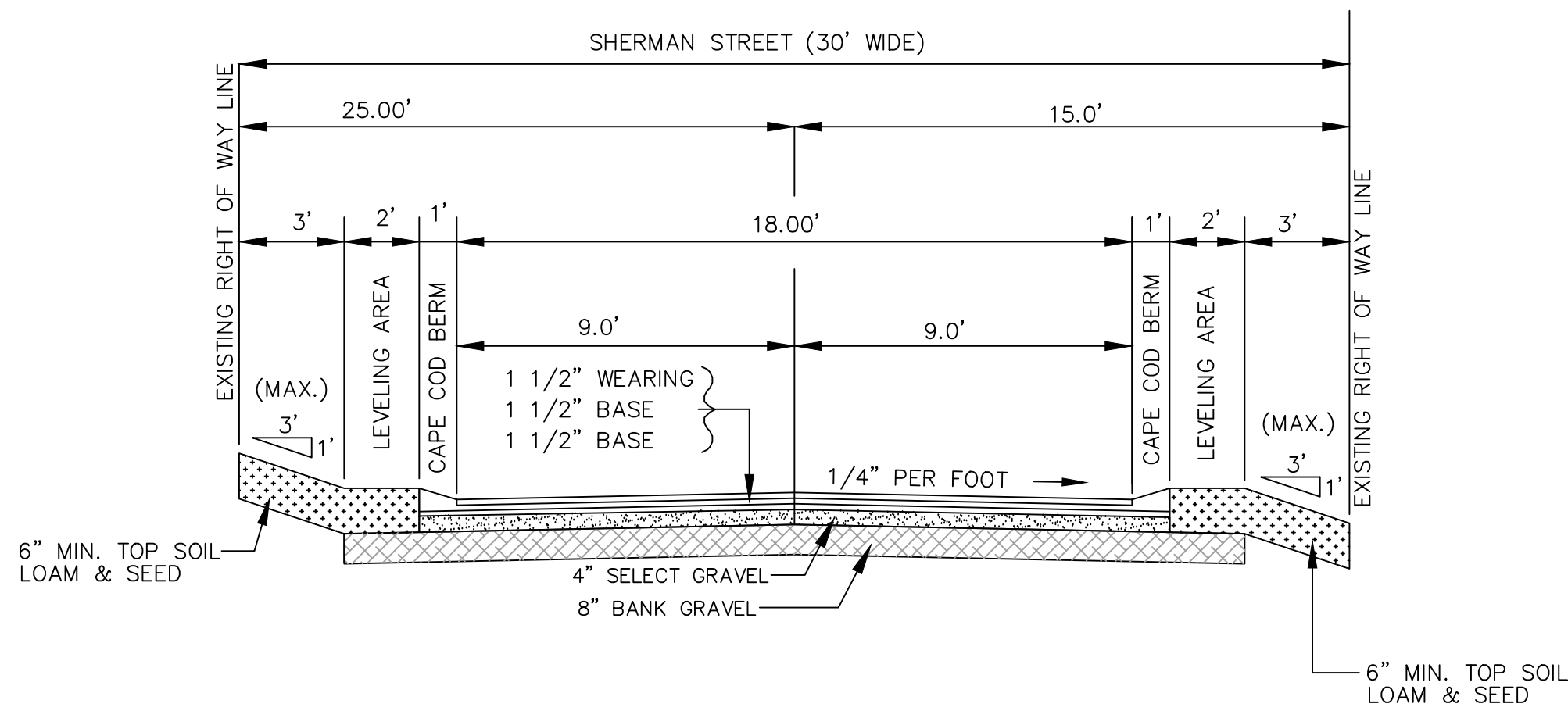
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SCALE: AS NOTED	
DATE: 07-14-2020	
DRAWN BY: DJK	
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CHECKED BY: GRC	DRAWING NO.
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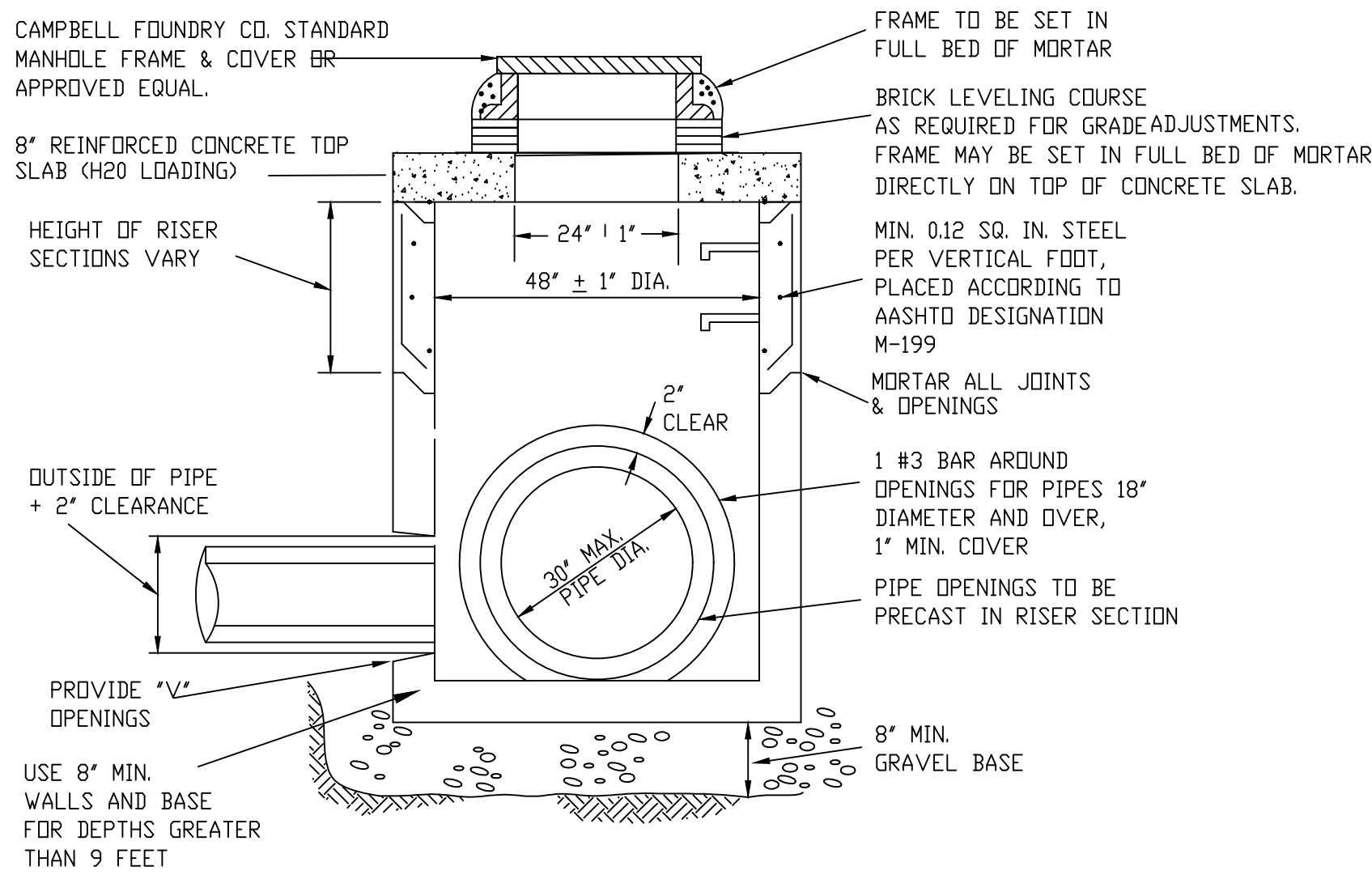
9-23-2020



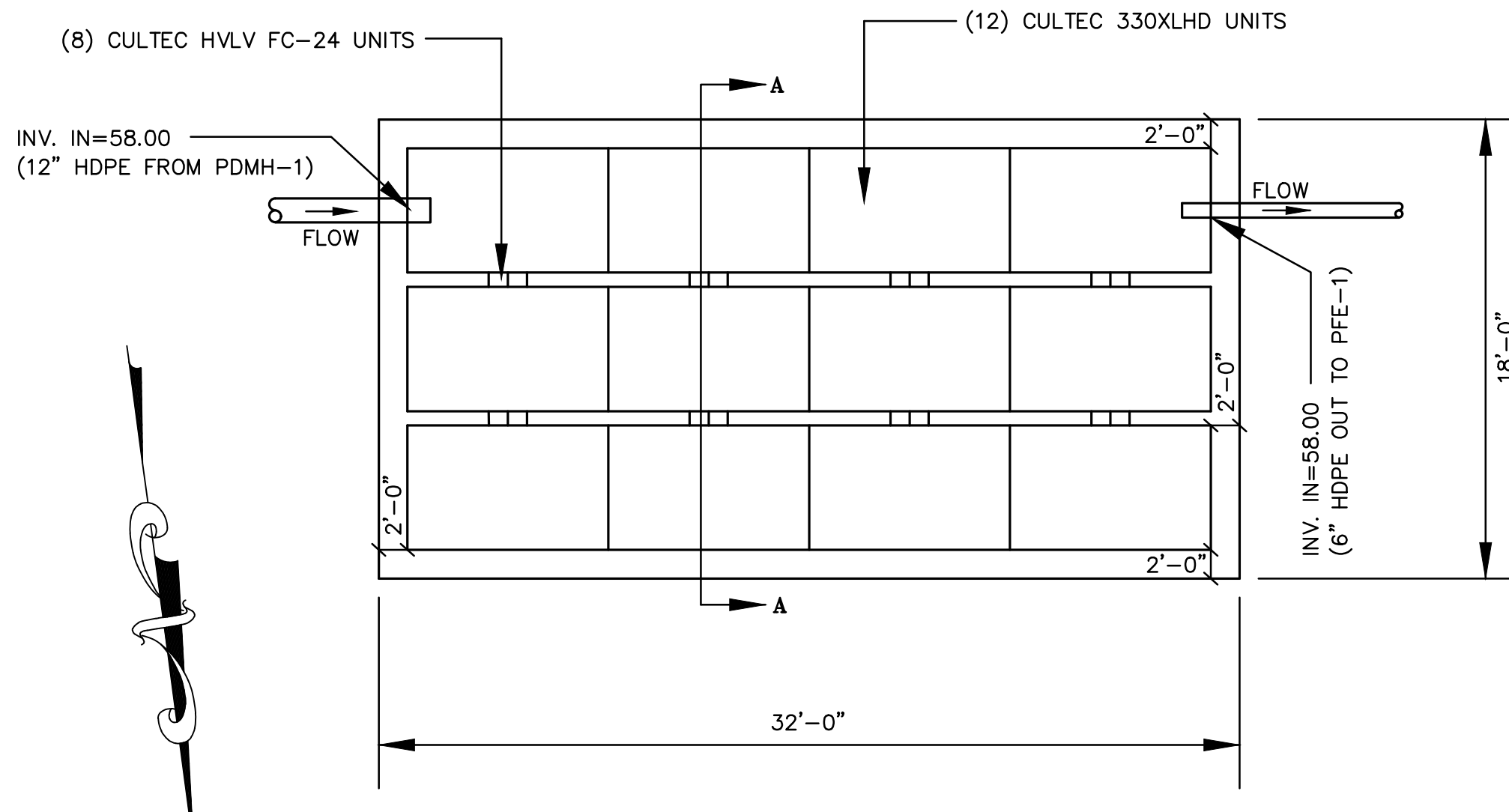
ROAD CROSS SECTION A-A
STA. 2+50 CRESCENT AVENUE
(NOT TO SCALE)



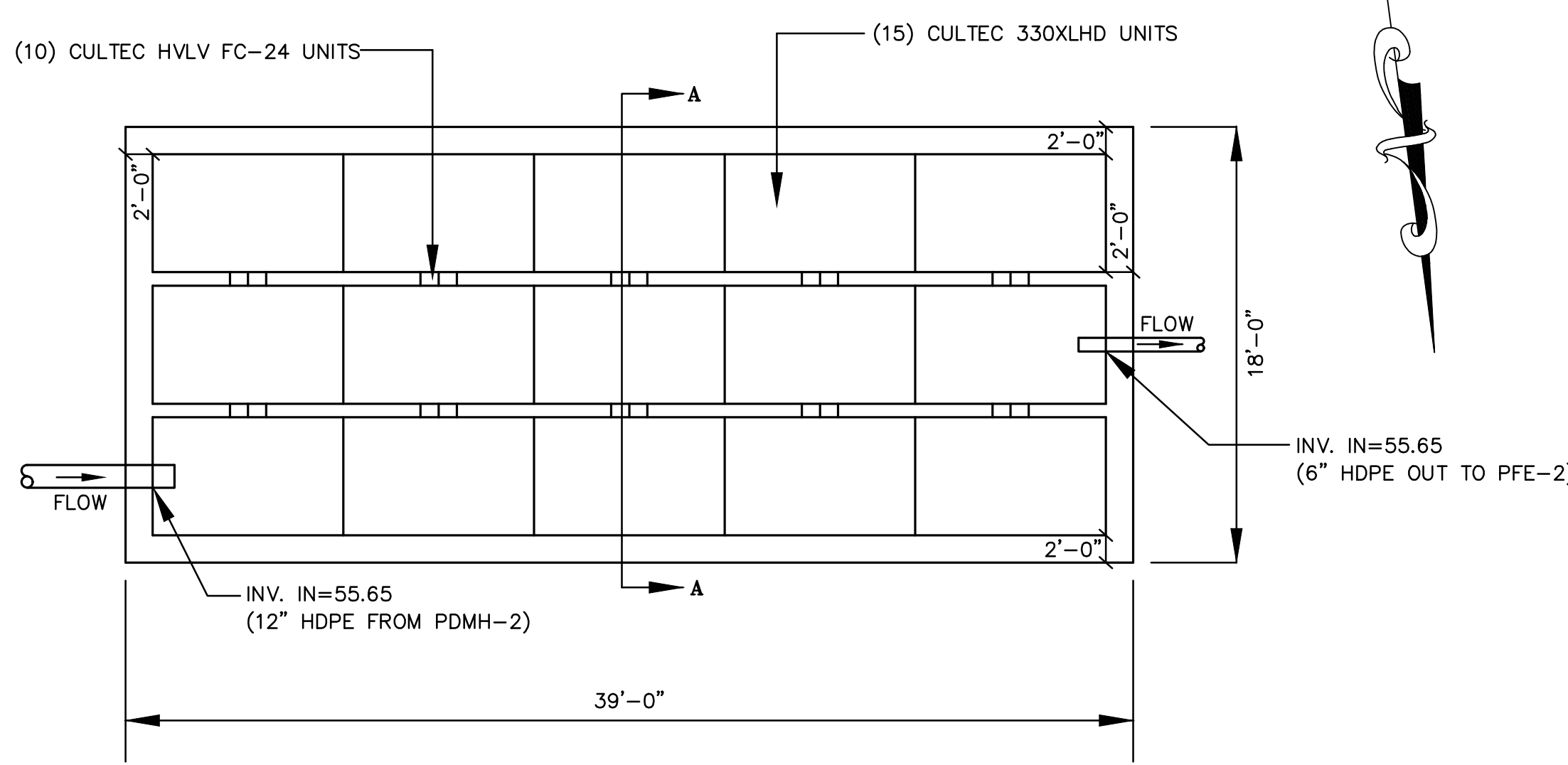
ROAD CROSS SECTION B-B
STA. 0+90 SHERMAN STREET
(NOT TO SCALE)



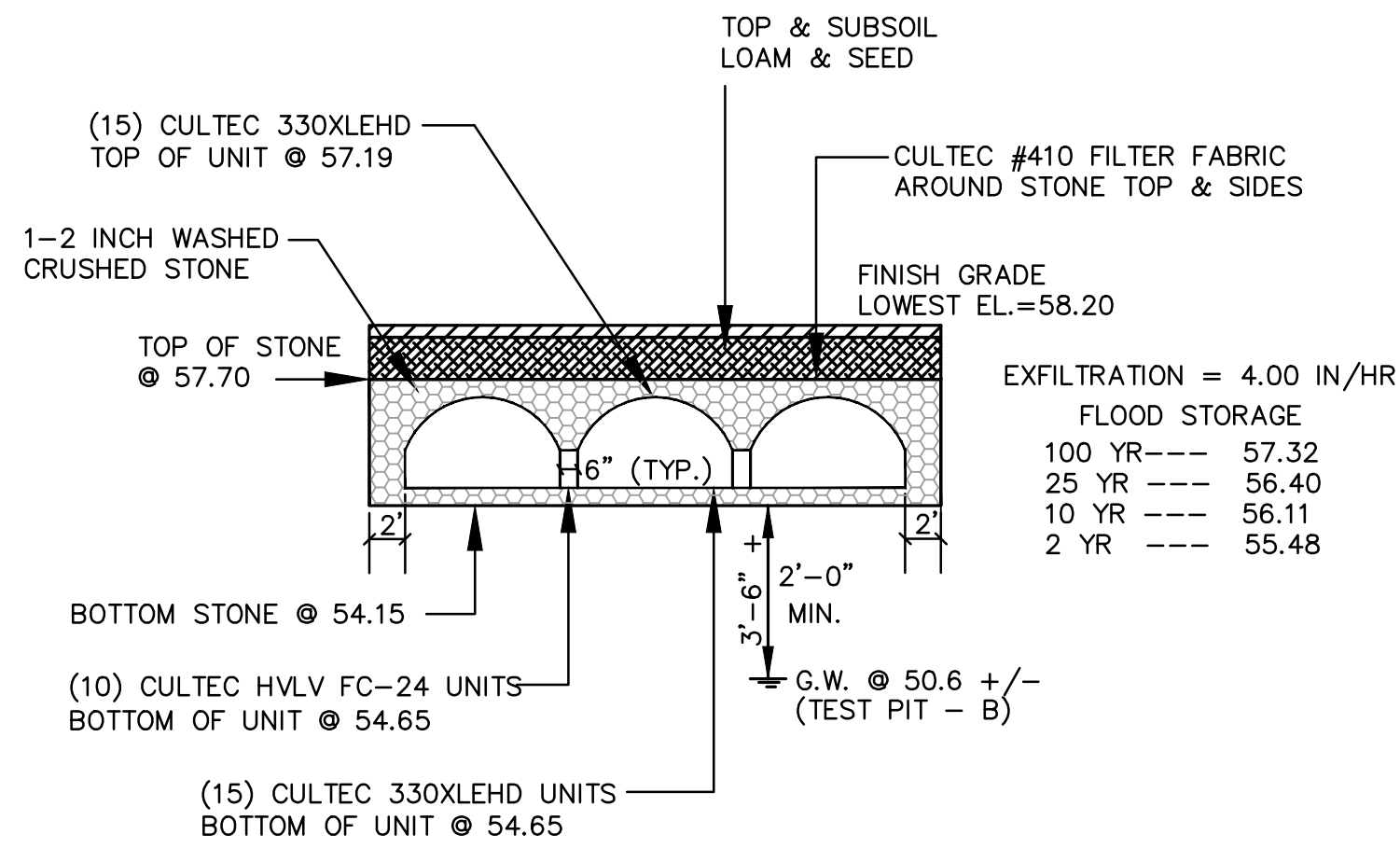
PRECAST CONCRETE FLAT TOP DRAIN MANHOLE
(NOT TO SCALE)



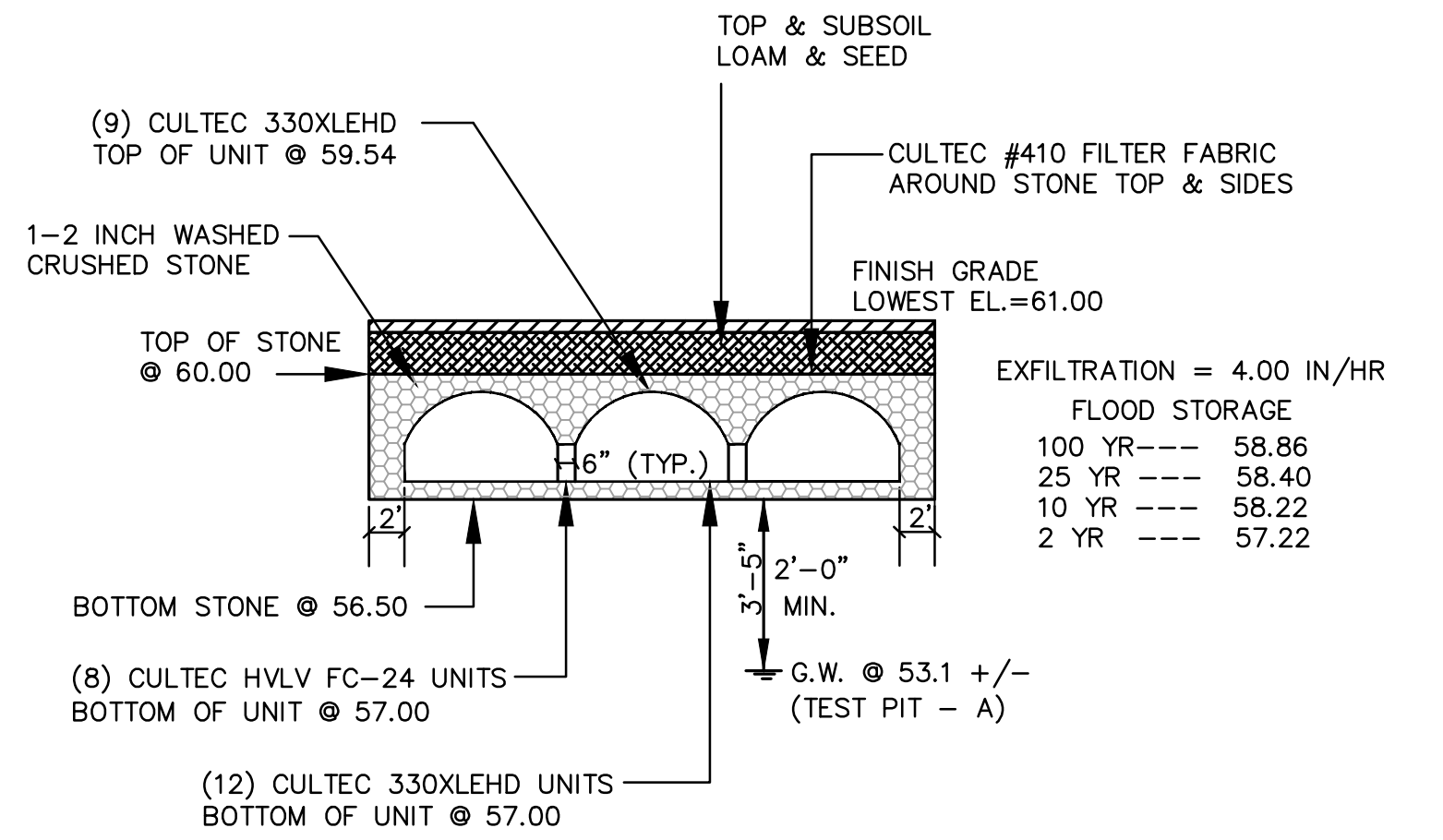
PLAN VIEW RECHARGE AREA 1 (PRA-1)
(NOT TO SCALE)



PLAN VIEW RECHARGE AREA 2 (PRA-2)
(NOT TO SCALE)



SECTION A-A RECHARGE AREA 2 (PRA-2)
(NOT TO SCALE)



SECTION A-A RECHARGE AREA 1 (PRA-1)
(NOT TO SCALE)

THE ROADWAY SHOWN HEREON, CRESCENT AVENUE EXTENSION, SHALL REMAIN A PRIVATE WAY IN PERPETUITY. ITS MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE OWNERS ABUTTING THE STREET.

OPERATION AND MAINTENANCE PLAN

NOTE: IN CASE OF TRANSFER OF PROPERTY, THE NEW OWNERS WILL BECOME THE RESPONSIBLE PARTY FOR THE OPERATION AND MAINTNANCE POST CONSTRUCTION.

NON STRUCTURAL METHODS

- A COMPREHENSIVE CONTROL PROGRAM WILL BE IMPLEMENTED AT THE SITE WHICH INCLUDES REGULAR PAVEMENT SWEEPING, CATCH BASIN CLEANING, AND RESTRICTIONS ON THE USE OF PESTICIDES, FERTILIZERS, SALT AND OTHER DEICING AGENTS.

STRUCTURAL METHODS

PROPOSED DEEP SUMP CATCH BASINS FITTED WITH HOODS
CATCH BASINS WILL BE INSPECTED 4 TIMES PER YEAR AND CLEANED TWICE ANNUALLY OR WHENEVER THE DEPTH OF DEPOSITS IS GRATER THAN OR EQUAL TO ONE HALF THE DEPTH FROM THE BOTTOM OF THE INVERT OF THE LOWEST PIPE IN THE BASIN.

PROPOSED CULTEC RECHARGE AREAS
INSPECT INLETS AT LEAST TWICE A YEAR. REMOVE ANY DEBRIS THAT MIGHT CLOG THE THE SYSTEM.

APPROVAL UNDER SECTION V SPECIAL PROVISIONS, STANDARDS AND PROCEDURES 9. DETERMINATION OF ADEQUACY OF THE WAY POLICY AND PROCEDURES REQUIRED.

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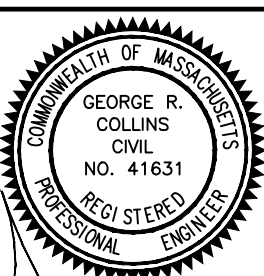
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CRESCENT AVENUE SHEET 6 OF 7

CROSS SECTIONS & DETAIL PLAN 1 OF 2

CRESCENT AVENUE IMPROVEMENTS
& EXTENSION PLAN OF LAND IN
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