FARLAND CORP.

ENGINEERING A BETTER TOMORROW

ENGINEERING | SITE WORK | LAND SURVEYING

May 11, 2018

Mr. Craig Dixon., Chairman
New Bedford Conservation Commission
New Bedford City Hall
133 Williams Street
New Bedford, MA 02740

RE: Response Letter
61 John Vertente Boulevard – New Bedford, MA
SE 049-0791

Dear Mr. Dixon and Commission members:

On behalf of the applicant, Tim Cusson and 61 SMRE, LLC, please find revised Site Plans and HydroCAD© calculations enclosed with this letter. Revisions have been made in response to the comment email prepared by the Nitsch Engineering dated May 11, 2018 in regards to their review of the Site Plans. Our responses to the comments provided in the review letter are provided on the following pages.

We trust the attachments noted above and included herewith will provide the necessary documentation to address their comments. If you should have any questions, please feel free to contact us.

Very truly yours,

FARLAND CORP., INC.

Christian A. Farland

Christian A. Farland, P.E., LEED AP
Principal Engineer and President

Nitsch Comments

STORMWATER MANAGEMENT

Comment #1:

The drainage calculations show the bottom of the rain garden to be elevation 84. The site plans, and the rain garden detail, show the bottom of the rain garden at elevation 85. The broad crested stone outlet implies the bottom of the rain garden is 84. The calculations and the plans need to be consistent.

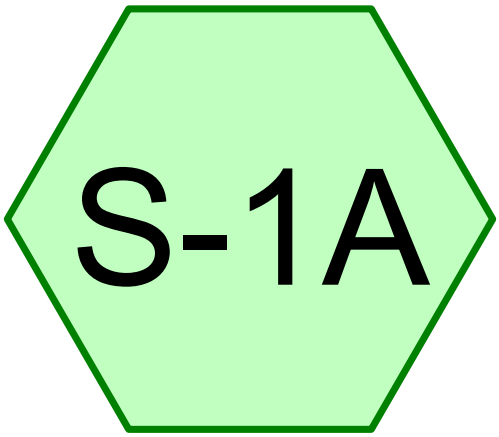
The HydroCAD calculations have been revised to be consistent with the Site Plan and Details.

Comment #2:

The rain garden detail shows two feet of depth of planting soil. The Stormwater Management Standards recommend 2.5 feet to four feet of planting soil in rain gardens. The response to comments states that the rain garden has been designed to meet the Standards to the maximum extent practicable and the Applicant is requesting relief from providing the depth of planting soil described in the Standards. The Standards also require that two feet of groundwater separation be provided between the bottom of the raingarden and seasonal high groundwater. The plans show 1.2 feet of separation between the bottom of the planting soil and seasonal high groundwater. We consider the bottom of the raingarden to be the stone layer below the planting soil. Therefore, the separation is effectively less than the 1.2 feet shown on the plans. The depth of the stone is unlabeled. However, it is likely to be a minimum of six inches, which results in less than one foot of separation between seasonal high groundwater and the bottom of the rain garden. Given the site conditions it is unlikely that the rain garden can be built to comply with this requirement. Groundwater elevations are simply too high.

Due to the restrictive conditions of the site, Farland Corp. will defer to the conditions of the commission to the appropriate depths of both the planting media and separation from groundwater.

If you have any questions or require any further information please contact this office at (508) 717-3479.



Uncontrolled to BVW

Subcat Reach Pond Link

Drainage Diagram for 17-413.1 PRE
Prepared by Farland Corp.

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.402	70	Woods, Good, HSG C (S-1A)
0.041	74	>75% Grass cover, Good, HSG C (S-1A)
0.443		**TOTAL AREA**

Summary for Subcatchment S-1A: Uncontrolled to BVW

Runoff = 0.30 cfs @ 12.30 hrs, Volume= 0.035 af, Depth= 0.95"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

Area (sf)	CN	Description
17,510	70	Woods, Good, HSG C
1,780	74	>75% Grass cover, Good, HSG C
19,290	70	Weighted Average
19,290		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	50	0.0400	0.05		**Sheet Flow, First 50'** Woods: Dense underbrush n= 0.800 P2= 3.40"
3.4	216	0.0460	1.07		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
19.2	266	Total			

Summary for Subcatchment S-1A: Uncontrolled to BVW

Runoff = 0.65 cfs @ 12.28 hrs, Volume= 0.070 af, Depth= 1.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

Area (sf)	CN	Description
17,510	70	Woods, Good, HSG C
1,780	74	>75% Grass cover, Good, HSG C
19,290	70	Weighted Average
19,290		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	50	0.0400	0.05		**Sheet Flow, First 50'** Woods: Dense underbrush n= 0.800 P2= 3.40"
3.4	216	0.0460	1.07		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
19.2	266	Total			

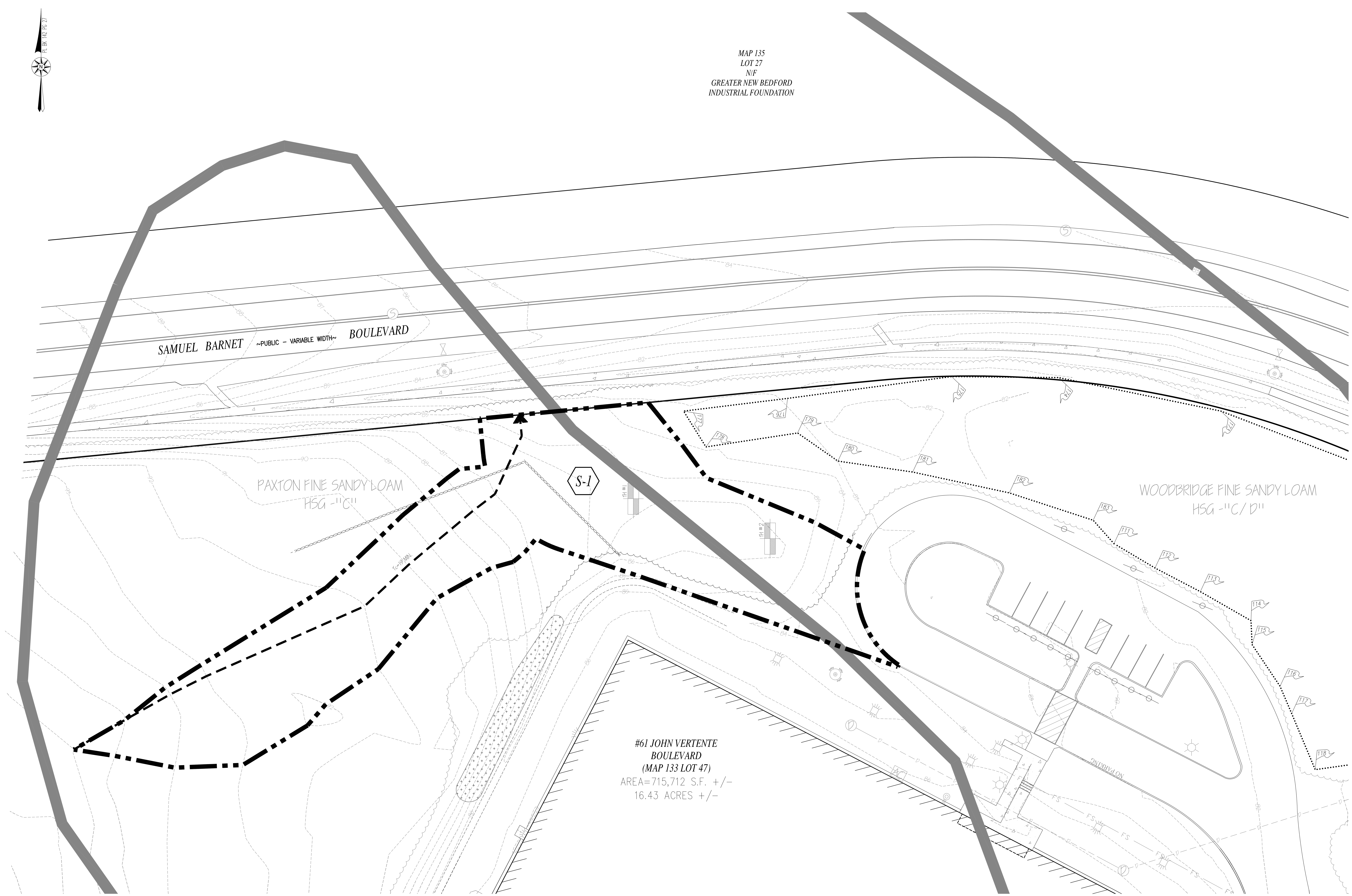
Summary for Subcatchment S-1A: Uncontrolled to BVW

Runoff = 1.28 cfs @ 12.27 hrs, Volume= 0.134 af, Depth= 3.62"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

Area (sf)	CN	Description
17,510	70	Woods, Good, HSG C
1,780	74	>75% Grass cover, Good, HSG C
19,290	70	Weighted Average
19,290		Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	50	0.0400	0.05		**Sheet Flow, First 50'** Woods: Dense underbrush n= 0.800 P2= 3.40"
3.4	216	0.0460	1.07		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
19.2	266	Total			



REVISIONS

1	4/2/18	CONSERVATION COMMENTS
2	4/30/18	CONSERVATION COMMENTS
3	5/7/18	CONSERVATION COMMENTS

COMMONWEALTH OF MASSACHUSETTS
CHRISTIAN ALBERT FARLAND
No. 47544
CIVIL
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P.508.717.3479
OFFICES IN:
- TAUNTON
- MARLBOROUGH
- WARWICK, RI

DRAWN BY: MJW
DESIGNED BY: MJW
CHECKED BY: CAF

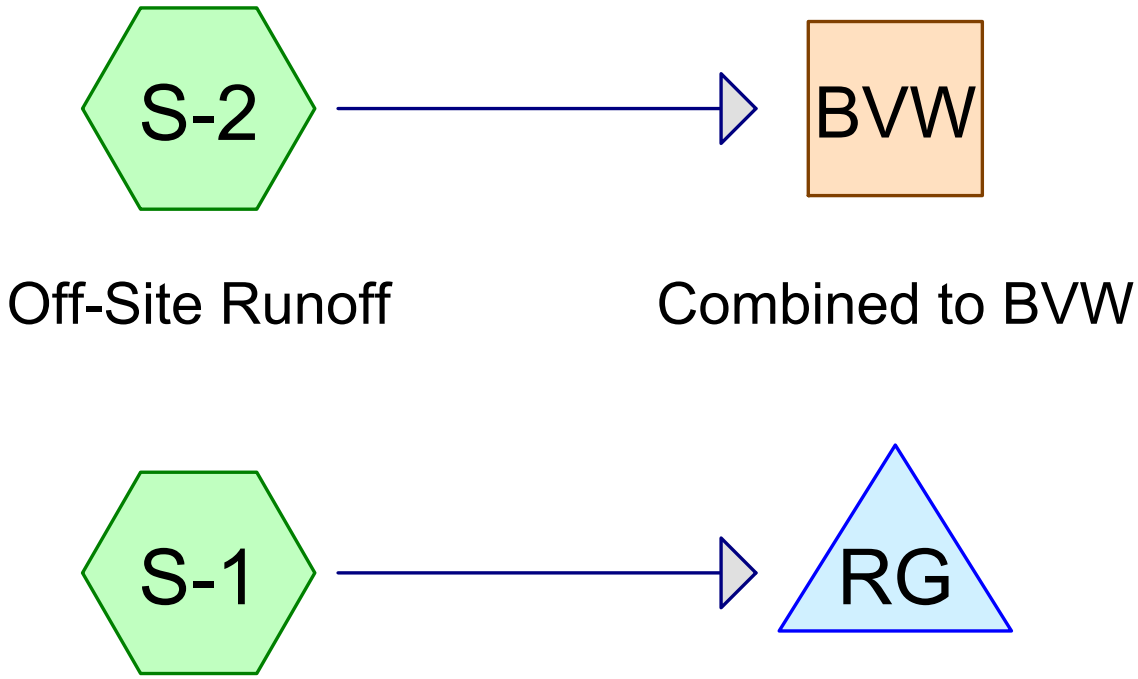
SITE PLAN

61 JOHN VERTENTE BOULEVARD
ASSESSORS MAP 133 LOT 47
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR: SMRE 61, LLC
100 DUCHAINE BOULEVARD
NEW BEDFORD, MA 02745

FEBRUARY 21, 2018
SCALE: 1"=20'
JOB NO. 17-413.1
LATEST REVISION: MAY 7, 2018

PRE-DEVELOPMENT MAP
SHEET 3A OF 5



Subcat Reach Pond Link

Drainage Diagram for 17-413.1 POST
Prepared by Farland Corp.

Summary for Subcatchment S-1: Runoff to RG

Runoff = 0.46 cfs @ 12.27 hrs, Volume= 0.048 af, Depth= 1.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

Area (sf)	CN	Description
4,028	98	Paved parking & roofs
3,570	79	50-75% Grass cover, Fair, HSG C
300	89	Gravel roads, HSG C
8,990	70	Woods, Good, HSG C
16,888	79	Weighted Average
12,860		Pervious Area
4,028		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	50	0.0400	0.05		**Sheet Flow, First 50** Woods: Dense underbrush n= 0.800 P2= 3.40"
2.8	176	0.0426	1.03		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
0.1	25	0.0280	3.40		**Shallow Concentrated Flow, Driveway** Paved Kv= 20.3 fps
0.0	8	0.2250	7.12		**Shallow Concentrated Flow, Filter Strip** Grassed Waterway Kv= 15.0 fps
18.7	259	Total			

Summary for Subcatchment S-2: Off-Site Runoff

Runoff = 0.14 cfs @ 12.09 hrs, Volume= 0.010 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

Area (sf)	CN	Description
1,170	98	Paved parking & roofs
87	89	Gravel roads, HSG C
1,145	79	50-75% Grass cover, Fair, HSG C
2,402	89	Weighted Average
1,232		Pervious Area
1,170		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	49		0.14		**Direct Entry, Min. Tc**

Summary for Reach BVW: Combined to BVW

Inflow Area = 0.055 ac, 48.71% Impervious, Inflow Depth = 2.26" for 2-Year event
Inflow = 0.14 cfs @ 12.09 hrs, Volume= 0.010 af
Outflow = 0.14 cfs @ 12.09 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Pond RG: Rain Garden

Inflow Area = 0.388 ac, 23.85% Impervious, Inflow Depth = 1.49" for 2-Year event
Inflow = 0.46 cfs @ 12.27 hrs, Volume= 0.048 af
Outflow = 0.46 cfs @ 12.27 hrs, Volume= 0.048 af, Atten= 0%, Lag= 0.4 min
Discarded = 0.46 cfs @ 12.27 hrs, Volume= 0.048 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 85.00' @ 12.27 hrs Surf.Area= 2,590 sf Storage= 12 cf

Plug-Flow detention time= 0.4 min calculated for 0.048 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (855.0 - 854.6)

Volume	Invert	Avail.Storage	Storage Description
#1	85.00'	1,401 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
85.00	2,586	0	0
85.50	3,019	1,401	1,401

Device	Routing	Invert	Outlet Devices
#1	Discarded	85.00'	**8.270 in/hr Exfiltration over Surface area**
#2	Primary	85.50'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.50 cfs @ 12.27 hrs HW=85.00' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.50 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=85.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment S-1: Runoff to RG

Runoff = 0.83 cfs @ 12.26 hrs, Volume= 0.085 af, Depth= 2.63"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

Area (sf)	CN	Description
4,028	98	Paved parking & roofs
3,570	79	50-75% Grass cover, Fair, HSG C
300	89	Gravel roads, HSG C
8,990	70	Woods, Good, HSG C
16,888	79	Weighted Average
12,860		Pervious Area
4,028		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	50	0.0400	0.05		**Sheet Flow, First 50** Woods: Dense underbrush n= 0.800 P2= 3.40"
2.8	176	0.0426	1.03		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
0.1	25	0.0280	3.40		**Shallow Concentrated Flow, Driveway** Paved Kv= 20.3 fps
0.0	8	0.2250	7.12		**Shallow Concentrated Flow, Filter Strip** Grassed Waterway Kv= 15.0 fps
18.7	259	Total			

Summary for Subcatchment S-2: Off-Site Runoff

Runoff = 0.22 cfs @ 12.09 hrs, Volume= 0.016 af, Depth= 3.58"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

Area (sf)	CN	Description
1,170	98	Paved parking & roofs
87	89	Gravel roads, HSG C
1,145	79	50-75% Grass cover, Fair, HSG C
2,402	89	Weighted Average
1,232		Pervious Area
1,170		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	49		0.14		**Direct Entry, Min. Tc**

Summary for Reach BVW: Combined to BVW

Inflow Area = 0.055 ac, 48.71% Impervious, Inflow Depth = 3.58" for 10-Year event
Inflow = 0.22 cfs @ 12.09 hrs, Volume= 0.016 af
Outflow = 0.22 cfs @ 12.09 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Pond RG: Rain Garden

Inflow Area = 0.388 ac, 23.85% Impervious, Inflow Depth = 2.63" for 10-Year event
Inflow = 0.83 cfs @ 12.26 hrs, Volume= 0.085 af
Outflow = 0.51 cfs @ 12.52 hrs, Volume= 0.085 af, Atten= 38%, Lag= 15.3 min
Discarded = 0.51 cfs @ 12.52 hrs, Volume= 0.085 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 85.11' @ 12.52 hrs Surf.Area= 2,683 sf Storage= 295 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 2.6 min (840.7 - 838.1)

Volume	Invert	Avail.Storage	Storage Description
#1	85.00'	1,401 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
85.00	2,586	0	0
85.50	3,019	1,401	1,401

Device	Routing	Invert	Outlet Devices
#1	Discarded	85.00'	**8.270 in/hr Exfiltration over Surface area**
#2	Primary	85.50'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.51 cfs @ 12.52 hrs HW=85.11' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.51 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=85.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment S-1: Runoff to RG

Runoff = 1.43 cfs @ 12.26 hrs, Volume= 0.148 af, Depth= 4.58"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

Area (sf)	CN	Description
4,028	98	Paved parking & roofs
3,570	79	50-75% Grass cover, Fair, HSG C
300	89	Gravel roads, HSG C
8,990	70	Woods, Good, HSG C
16,888	79	Weighted Average
12,860		Pervious Area
4,028		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8	50	0.0400	0.05		**Sheet Flow, First 50** Woods: Dense underbrush n= 0.800 P2= 3.40"
2.8	176	0.0426	1.03		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
0.1	25	0.0280	3.40		**Shallow Concentrated Flow, Driveway** Paved Kv= 20.3 fps
0.0	8	0.2250	7.12		**Shallow Concentrated Flow, Filter Strip** Grassed Waterway Kv= 15.0 fps
18.7	259	Total			

Summary for Subcatchment S-2: Off-Site Runoff

Runoff = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Depth= 5.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

Area (sf)	CN	Description
1,170	98	Paved parking & roofs
87	89	Gravel roads, HSG C
1,145	79	50-75% Grass cover, Fair, HSG C
2,402	89	Weighted Average
1,232		Pervious Area
1,170		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	49		0.14		**Direct Entry, Min. Tc**

Summary for Reach BVW: Combined to BVW

Inflow Area = 0.055 ac, 48.71% Impervious, Inflow Depth = 5.71" for 100-Year event
Inflow = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af
Outflow = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Pond RG: Rain Garden

Inflow Area = 0.388 ac, 23.85% Impervious, Inflow Depth = 4.58" for 100-Year event
Inflow = 1.43 cfs @ 12.26 hrs, Volume= 0.148 af
Outflow = 0.57 cfs @ 12.66 hrs, Volume= 0.148 af, Atten= 61%, Lag= 24.3 min
Discarded = 0.57 cfs @ 12.66 hrs, Volume= 0.148 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 85.42' @ 12.66 hrs Surf.Area= 2,954 sf Storage= 1,177 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 11.1 min (833.3 - 822.2)

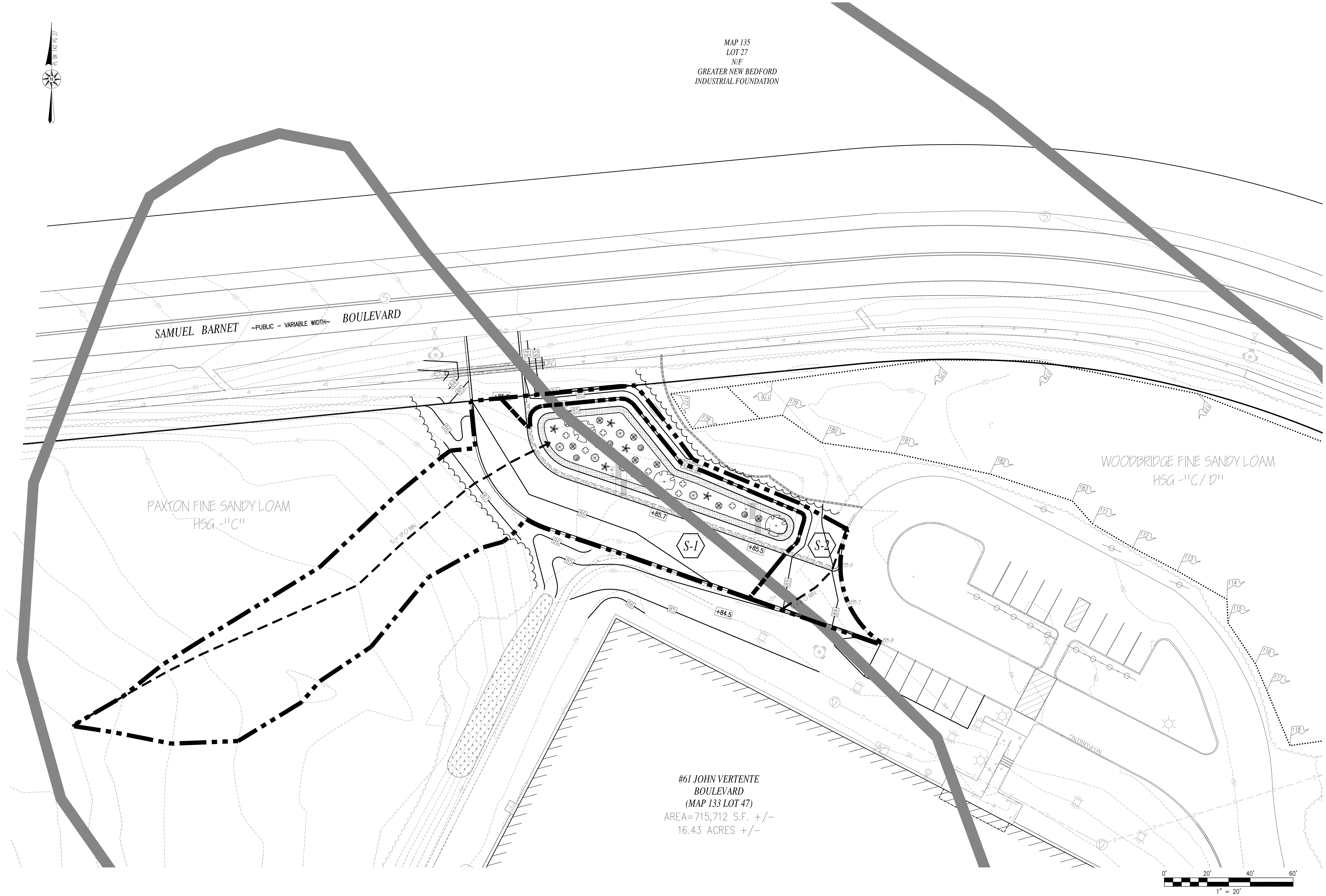
Volume	Invert	Avail.Storage	Storage Description
#1	85.00'	1,401 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
85.00	2,586	0	0
85.50	3,019	1,401	1,401

Device	Routing	Invert	Outlet Devices
#1	Discarded	85.00'	**8.270 in/hr Exfiltration over Surface area**
#2	Primary	85.50'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.57 cfs @ 12.66 hrs HW=85.42' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.57 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=85.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)



REVISIONS

1	4/2/18	CONSERVATION COMMENTS
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COMMONWEALTH OF MASSACHUSETTS
CHRISTIAN ALBERT FARLAND
No. 47544
CIVIL
REGISTERED PROFESSIONAL ENGINEER

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- WARWICK, RI

DRAWN BY: MJW
DESIGNED BY: MJW
CHECKED BY: CAF

SITE PLAN
61 JOHN VERTENTE BOULEVARD
ASSESSORS MAP 133 LOT 47
NEW BEDFORD, MASSACHUSETTS

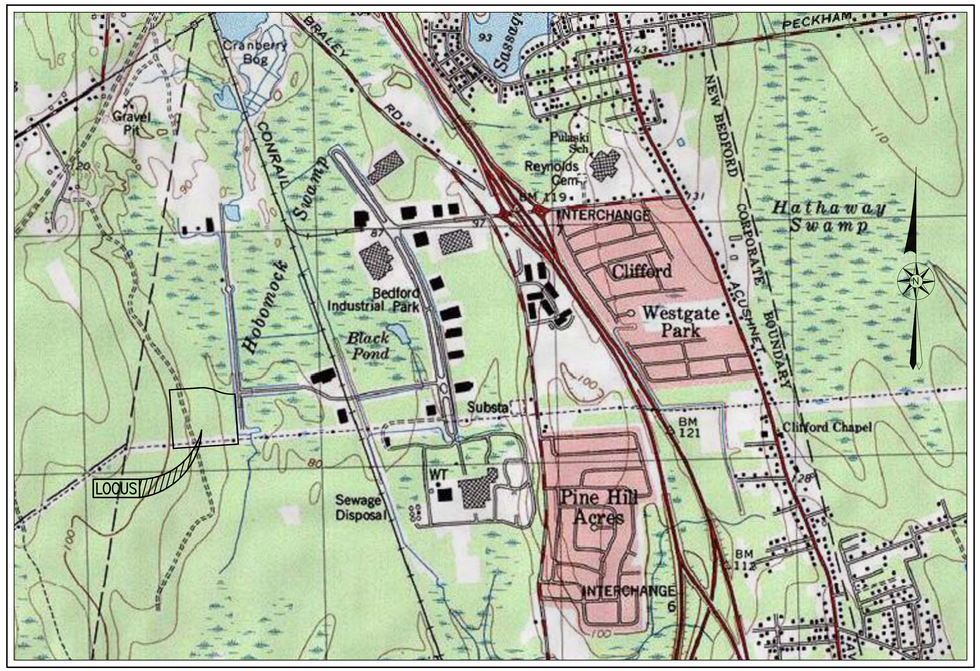
PREPARED FOR: SMRE 61, LLC
100 DUCHAINE BOULEVARD
NEW BEDFORD, MA 02745

FEBRUARY 21, 2018
SCALE: 1"=20'
JOB NO. 17-413.1
LATEST REVISION: MAY 7, 2018

POST-DEVELOPMENT MAP
SHEET 3A OF 5

SITE PLAN

61 JOHN VERTENTE BOULEVARD
ASSESSORS MAP #133 LOT #47
NEW BEDFORD, MASSACHUSETTS



AREA MAP

SCALE: 1"=1,000'±

– ZONING DATA –

DISTRICT: INDUSTRIAL C

DESCRIPTION	REQUIRED	EXISTING	PROVIDED
LOT AREA	0 S.F.	16.45 AC	16.43 AC
UPLAND AREA	0 S.F.	13.5± AC	13.5± AC
UPLAND AREA PERCENTAGE	0 %	82.2± %	82.2± %
LOT FRONTAGE	0 FT	1478.82 FT	1478.82 FT
FRONT SETBACK	*25 FT	107.3 FT	107.3 FT
SIDE SETBACK	*25 FT	203.3 FT	203.3 FT
REAR SETBACK	*25 FT	241.3 FT	241.3 FT
BUILDING HEIGHT (MAXIMUM)	100 FT	24.7± FT	24.7± FT
BUILDING COVERAGE (MAXIMUM)	**50 %	11.7 %	11.7 %
LOT COVERAGE (MAXIMUM)	***80 %	35.6 %	36.4 %

*PER GNBIF REGULATIONS, SETBACKS OF FIFTY (50) FEET FROM ANY STREET OR LOT LINE ARE REQUIRED
**PER GNBIF REGULATIONS, FIRST FLOOR BUILDING COVERAGE SHALL NOT EXCEED 40% OF THE PREMISES
***PER GNBIF REGULATIONS, LOT COVERAGE SHALL NOT COVER MORE THAN 65% OF THE PREMISES

RECORD OWNER:
ASSESSORS MAP 133 LOT 47
SMRE 61, LLC
100 DUCHAINE BOULEVARD
NEW BEDFORD, MA 02745
DEED BOOK 12559 PAGE 127

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SHEET	DESCRIPTION
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2	EXISTING CONDITIONS
3	LAYOUT & GRADING
4	DETAILS
5	NOTES & LEGEND

REVISIONS

1	4/2/18	CONSERVATION COMMENTS
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3	5/7/18	CONSERVATION COMMENTS
4	5/11/18	CONSERVATION COMMENTS

CHRISTIAN ALBERT FARLAND No. 47544 CIVIL REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

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SITE PLAN
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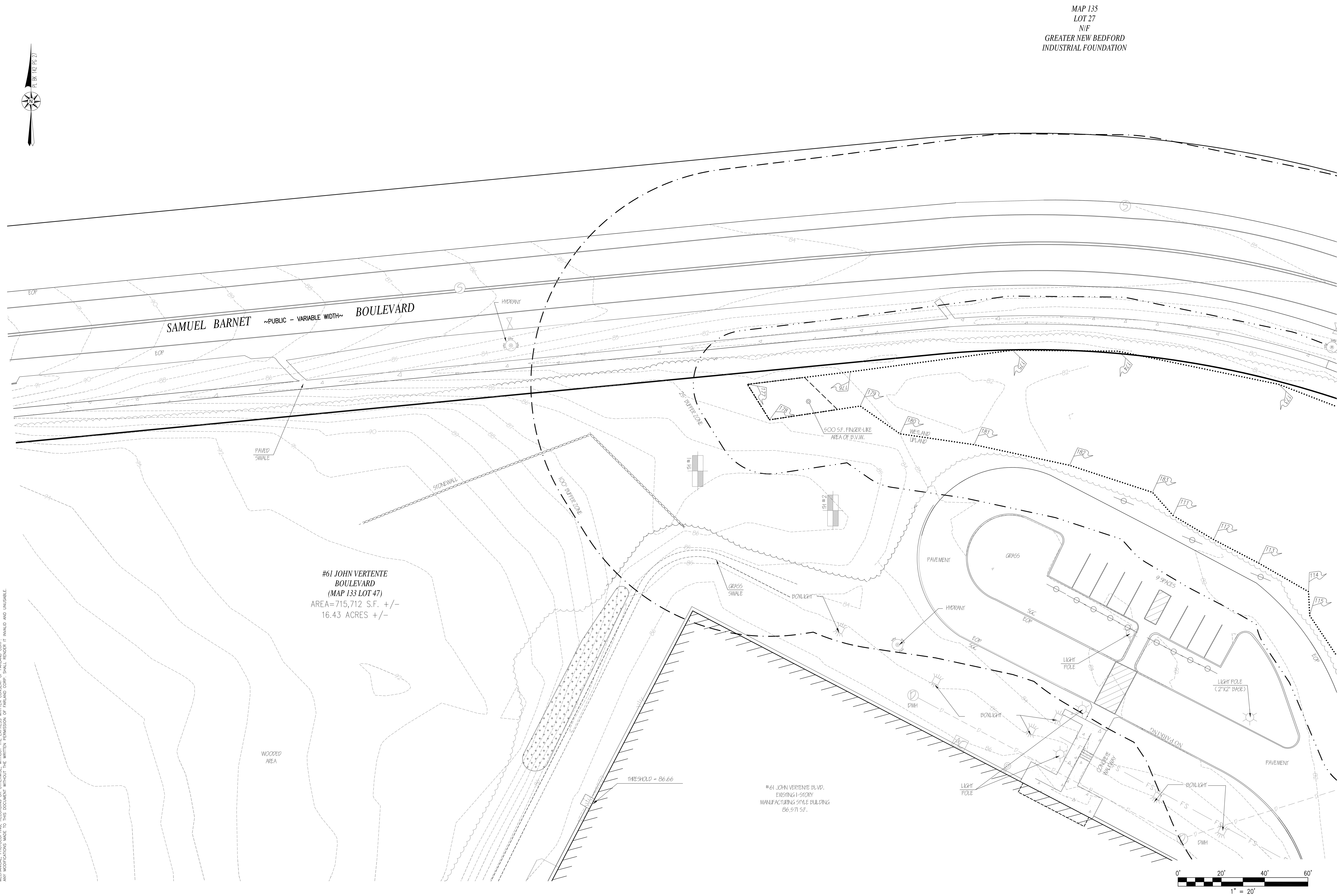
PREPARED FOR: SMRE 61, LLC
100 DUCHAINE BOULEVARD
NEW BEDFORD, MA 02745

FEBRUARY 21, 2018
SCALE: AS NOTED
JOB NO. 17-413.1
LATEST REVISION: MAY 11, 2018

COVER SHEET
SHEET 1 OF 5



REVISIONS

1	4/2/18	CONSERVATION COMMENTS
2	4/30/18	CONSERVATION COMMENTS
3	5/7/18	CONSERVATION COMMENTS
4	5/11/18	CONSERVATION COMMENTS

COMMONWEALTH OF MASSACHUSETTS
CHRISTIAN ALBERT FARLAND
No. 47544
CIVIL
REGISTERED PROFESSIONAL ENGINEER

FARLAND CORP.

www.FarlandCorp.com

401 COUNTY STREET
NEW BEDFORD, MA 02740
P.508.717.3479
OFFICES IN:
- TAUNTON
- MARLBOROUGH
- WARWICK, RI

DRAWN BY: MJW
DESIGNED BY: MJW
CHECKED BY: CAF

SITE PLAN

61 JOHN VERTENTE BOULEVARD

ASSESSORS MAP 133 LOT 47
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR: SMRE 61, LLC
100 DUCHAINE BOULEVARD
NEW BEDFORD, MA 02745

FEBRUARY 21, 2018

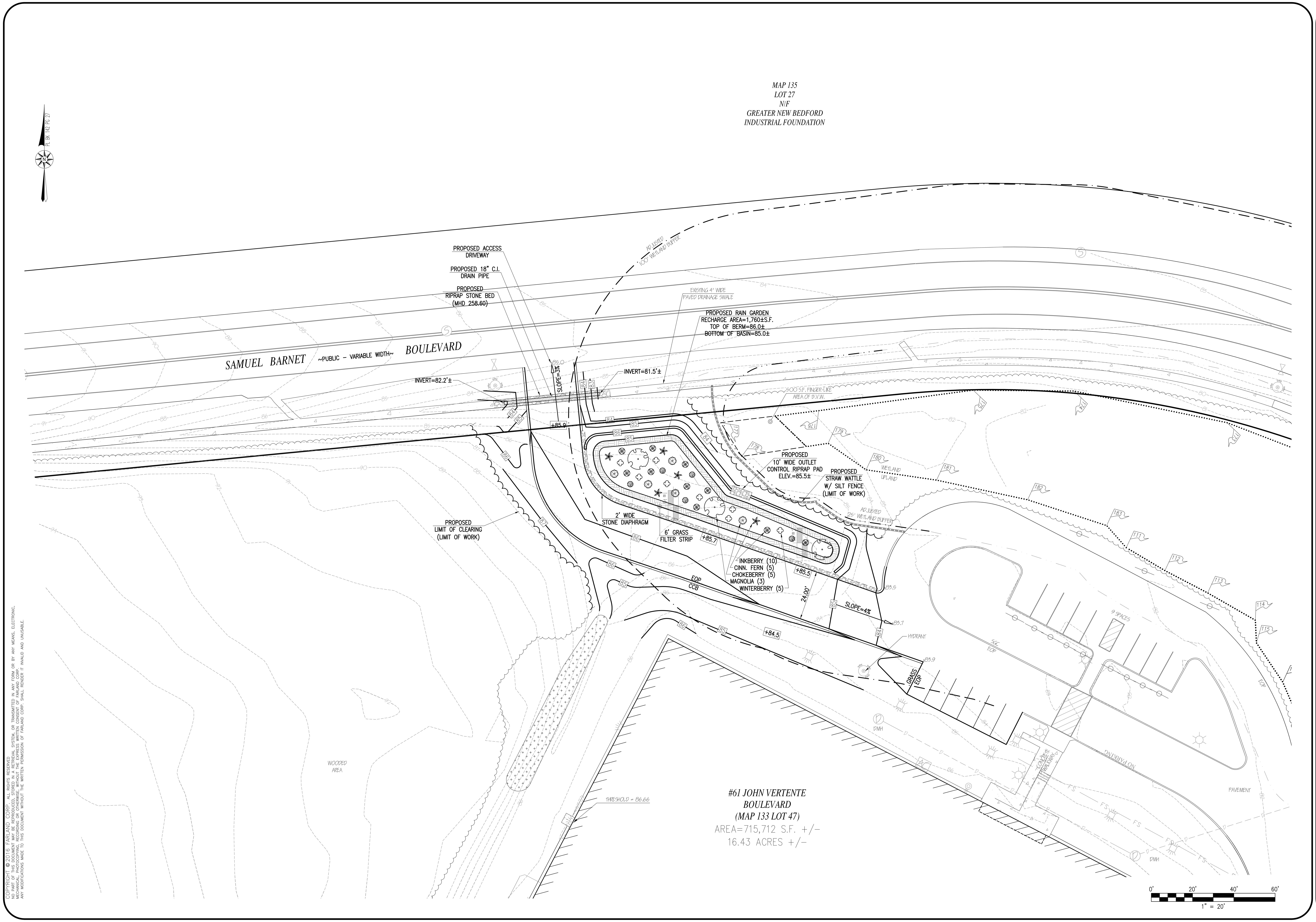
SCALE: 1"=20'

JOB NO. 17-413.1

LATEST REVISION:
MAY 11, 2018

EXISTING CONDITIONS

SHEET 2 OF 5



MAP 135
LOT 27
N/F
GREATER NEW BEDFORD
INDUSTRIAL FOUNDATION
SAMUEL BARNET ~PUBLIC - VARIABLE WIDTH~ BOULEVARD
PROPOSED ACCESS DRIVEWAY
PROPOSED 18" C.I. DRAIN PIPE
PROPOSED RIPRAP STONE BED (MHD 258.60)
EXISTING 4' WIDE PAVED DRAINAGE SWALE
PROPOSED RAIN GARDEN
RECHARGE AREA=1,760±S.F.
TOP OF BERM=86.0±
BOTTOM OF BASIN=85.0±
INVERT=82.2'±
INVERT=81.5'±
SLOPE=3%
PROPOSED 10' WIDE OUTLET CONTROL RIPRAP PAD ELEV.=85.5±
PROPOSED STRAW WATTLE W/ SILT FENCE (LIMIT OF WORK)
PROPOSED LIMIT OF CLEARING (LIMIT OF WORK)
2' WIDE STONE DIAPHRAGM
6' GRASS FILTER STRIP
INKBERRY (10)
CINN. FERN (5)
CHOKEBERRY (5)
MAGNOLIA (3)
WINTERBERRY (5)
24.00'
SLOPE=4%
EOP
CCB
HYDRANT
GRASS
9 SPACES
DMH
PAVEMENT
WOODED AREA
THRESHOLD = 86.66
#61 JOHN VERTENTE BOULEVARD
(MAP 133 LOT 47)
AREA=715,712 S.F. +/-
16.43 ACRES +/-
0' 20' 40' 60'
1" = 20'

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FEBRUARY 21, 2018
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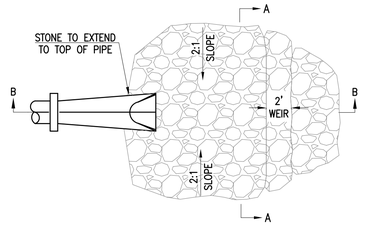
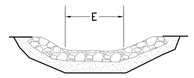
LAYOUT & GRADING PLAN
SHEET 3 OF 5

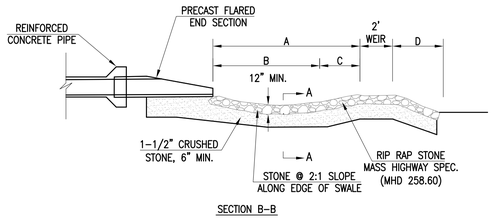




SECTION A–A

PIPE DIA.	12"	15"	18"	24"
A	10'–0"	12'–6"	15'–0"	20'–0"
B	7'–6"	9'–6"	11'–3"	15'–0"
C	2'–6"	3'–0"	3'–9"	5'–0"
D	3'–0"	4'–0"	4'–6"	6'–0"
E	4'–0"	5'–0"	6'–0"	8'–0"

PLAN



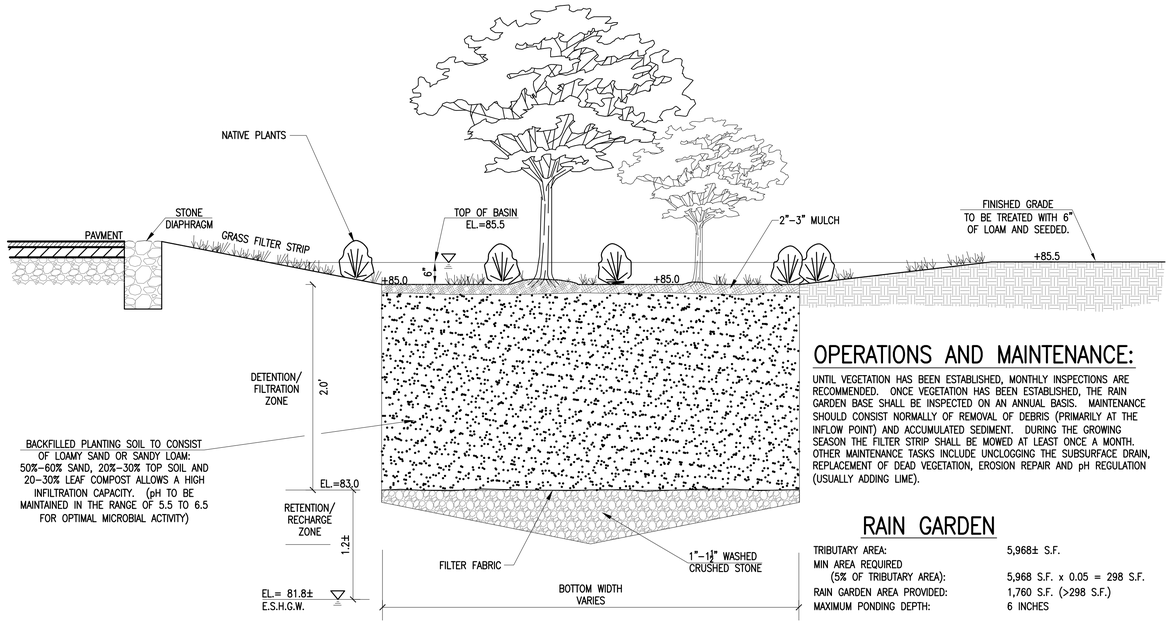
SECTION B–B

NOTES:
1. STONE FOR EROSION CONTROL PADS SHALL COMPLY WITH MDPW MATERIAL SPEC MHD 258.60

2. STONE BERM FOR SILT TRAP SHALL BE CONSTRUCTED AROUND SIDES OF EROSION CONTROL PADS

FLARED END OUTLET

NOT TO SCALE



OPERATIONS AND MAINTENANCE:

UNTIL VEGETATION HAS BEEN ESTABLISHED, MONTHLY INSPECTIONS ARE RECOMMENDED. ONCE VEGETATION HAS BEEN ESTABLISHED, THE RAIN GARDEN BASE SHALL BE INSPECTED ON AN ANNUAL BASIS. MAINTENANCE SHOULD CONSIST NORMALLY OF REMOVAL OF DEBRIS (PRIMARILY AT THE INFLOW POINT) AND ACCUMULATED SEDIMENT. DURING THE GROWING SEASON THE FILTER STRIP SHALL BE MOWED AT LEAST ONCE A MONTH. OTHER MAINTENANCE TASKS INCLUDE UNCLOGGING THE SUBSURFACE DRAIN, REPLACEMENT OF DEAD VEGETATION, EROSION REPAIR AND pH REGULATION (USUALLY ADDING LIME).

RAIN GARDEN

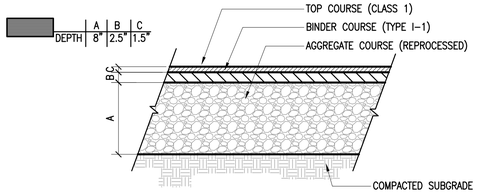
TRIBUTARY AREA:	5,968± S.F.
MIN AREA REQUIRED (5% OF TRIBUTARY AREA):	5,968 S.F. x 0.05 = 298 S.F.
RAIN GARDEN AREA PROVIDED:	1,760 S.F. (>298 S.F.)
MAXIMUM PONDING DEPTH:	6 INCHES

RAIN GARDEN (PROFILE)

NOT TO SCALE

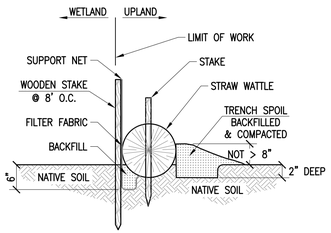
PLANTING SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	HEIGHT "AS PLANTED"	MATURE HEIGHT	MATURE SPREAD	QUANTITY
SHRUBS						
	ILEX GLABRA 'SHAMROCK'	INKBERRY	3 GALLON	4–6'	4–6'	10
	ARONIA MELANOCARPA	BLACK CHOKEBERRY	3 GALLON	6'–8'	4'–6'	5
	ILEX VERTICILLATA	WINTERBERRY	3 GALLON	6'–8'	4'–6'	8
GRASSES AND FERNS						
	PANICUM VIRGATUM	SWITCHGRASS	1 GALLON	3'–5'	4'	5
	OSMUNDA CINNAMOMEA	CINNAMON FERN	3 GALLON	3'–5'	4'	5
TREES						
	MAGNOLIA VIRGINIANA GLAUCA	SWEET BAY MAGNOLIA	5'–7'	15'–20'	15'–20'	3



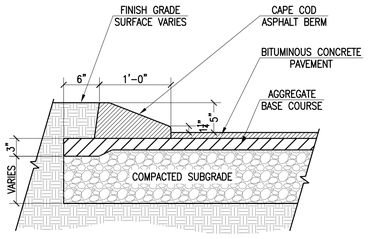
BITUMINOUS CONCRETE PAVEMENT

NOT TO SCALE



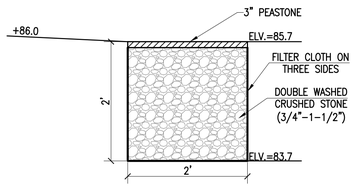
STAKED STRAW WATTLE WITH SILT FENCE

NOT TO SCALE



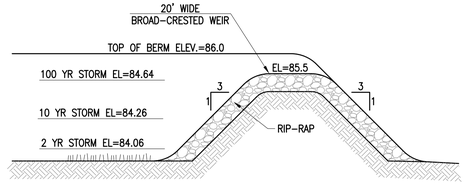
BITUMINIOUS CONCRETE CAPE COD BERM

NOT TO SCALE



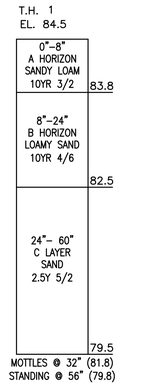
STONE DIAPHRAGM

NOT TO SCALE



BROAD–CRESTED STONE OUTLET WEIR

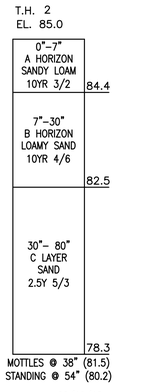
NOT TO SCALE



DATE: 02/19/18
PERFORMED BY: JOHN MARCHAND
WITNESS: NONE

SOIL PROFILE

NOT TO SCALE



DATE: 02/19/18
PERFORMED BY: JOHN MARCHAND
WITNESS: NONE

SOIL PROFILE

NOT TO SCALE

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61 JOHN VERTENTE BOULEVARD
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NEW BEDFORD, MASSACHUSETTS

PREPARED FOR: SMRE 61, LLC
100 DUCHAINE BOULEVARD
NEW BEDFORD, MA 02745

FEBRUARY 21, 2018
SCALE: AS NOTED
JOB NO. 17–413.1
LATEST REVISION: MAY 11, 2018

DETAIL SHEET

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIG SAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
2. PROPERTY LINE INFORMATION TAKEN FROM: PLAN ENTITLED: "APPROVAL NOT REQUIRED PLAN' IN NEW BEDFORD, MASSACHUSETTS DRAWN FOR JOHNSON & JOHSON PROFESSIONAL, INC." DATED JANUARY 18, 1999 BY EARLE O. PHILLIPS, JR.
3. TOPOGRAPHIC SURVEY PERFORMED BY FARLAND CORP. IN JULY & AUGUST 2017.
4. WETLAND DELINEATION FROM PLAN ENTITLED "MANUFACTURING AND OFFICE ADDITION, DEPUY ORTHOPEDICS, INC, 61 JOHN VERTENTE BOULEVARD" (SHEET C2) DATED 10/08/04 BY PLANNERS DESIGNERS ARCHITECTS, INC.
5. VERTICAL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 AND HORIZONTAL LOCATIONS REFER TO THE NORTH AMERICAN DATUM (NAD) OF 1983.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL STANDARDS AND REGULATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.
8. WHERE PROPOSED PAVEMENT AND WALKS ARE TO MEET EXISTING, THE CONTRACTOR SHALL SAWCUT A NEAT LINE AND MATCH GRADE. SEAL ALL JOINTS WITH HOT BITUMINOUS ASPHALT JOINT SEALER.
9. CURBING TO BE AS INDICATED ON THE PLANS.
10. ALL EXISTING TREES, SHRUBS AND GROUND COVER WHERE NATURAL GRADE IS TO BE RETAINED SHALL BE KEPT IN THEIR EXISTING STATE UNLESS REMOVAL IS REQUIRED FOR CONSTRUCTION PURPOSES. THE NUMBER OF REMOVED TREES SIX CALIPER OR LARGER SHALL BE MINIMIZED.
11. ALL AREAS DISTURBED BY CONSTRUCTION AND NOT TO BE PAVED OR OTHERWISE TREATED AS NOTED ON PLAN SHALL BE TREATED WITH 4" OF LOAM, SEEDED AND HAY MULCHED FOR EROSION CONTROL.
12. SITE IMPROVEMENTS SHALL CONFORM TO A.D.A. SPECIFICATIONS.
13. LIGHTING SHALL BE DIRECTED ON SITE AND AWAY FROM TRAFFIC INTERFERENCE.
14. THE CONTRACTOR SHALL PROTECT AND/OR CAP OFF ALL EXISTING ON-SITE UTILITY SERVICES ACCORDING TO THE LOCAL AUTHORITY'S SPECIFICATIONS. SERVICES SHALL BE CAPPED OFF WHERE SAME ENTER THE PERIMETER OF THE PROPERTY LINE.
15. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
16. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.
17. THESE PLANS ARE PERMITTING PLANS AND SHALL NOT TO BE USED FOR CONSTRUCTION. A FINAL SET OF STAMPED PLANS FOR CONSTRUCTION WILL BE ISSUED AFTER RECEIVING FINAL APPROVAL FROM THE LOCAL AND/OR STATE DEPARTMENTS.
18. ANY MINOR MODIFICATIONS (AS DETERMINIED BY THE CITY PLANNER) TO THE INFORMATION SHOWN ON THE APPROVED SITE PLANS SHALL BE SUBMITTED TO THE CITY PLANNER AS A MINOR PLAN REVISION FOR APPROVAL PRIOR TO WORK BEING PERFORMED.
19. ANY WORK AND MATERIAL WITHIN THE CITY RIGHT-OF-WAY SHALL CONFORM TO THE CITY OF NEW BEDFORD REQUIREMENTS.
20. ALL HANDICAP PARKING, RAMPS, AND ACCESS SHALL CONFORM TO AAB & MAAB REQUIREMENTS.
21. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION. EROSION CONTROL SHALL CONFORM TO CITY OF NEW BEDFORD CONSERVATION COMMISSION REQUIREMENTS AS STATED IN THE ORDER OF CONDITIONS.
22. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO MUTCD REQUIREMENTS.
23. THE CONTRACTOR SHALL OBTAIN A STREET DISTURBANCE & OBSTRUCTION PERMIT PRIOR TO ANY CONSTRUCTION WITHIN THE RIGHT OF WAY.
24. ALL WATER AND SEWER MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE CITY OF NEW BEDFORD REQUIREMENTS.
25. ALL WATER AND SEWER CONSTRUCTION SHALL BE INSPECTED BY THE CITY OF NEW BEDFORD BEFORE BEING BACKFILLED.
26. THE CITY SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE REQUIRED INSPECTIONS.

CONSTRUCTION SEQUENCING NOTES

1. CONSTRUCT TEMPORARY AND PERMANENT EROSION CONTROL FACILITIES. EROSION CONTROL FACILITIES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING.
2. TREE PROTECTION FENCE SHALL BE INSTALLED AND APPROVED BY THE OWNER REPRESENTATIVE PRIOR TO ANY EARTH MOVING.
3. ALL PERMANENT DITCHES AND SWALES ARE TO BE STABILIZED WITH VEGETATION OR RIP RAP PRIOR TO DIRECTING RUNOFF TO THEM.
4. CLEAR CUT, DEMOLISH AND DISPOSE OF EXISTING SITE ELEMENTS NOT TO REMAIN.
5. STORMWATER SHALL NOT BE DIRECTED TOWARDS THE INFILTRATION BASIN UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
6. GRADE AND GRAVEL ALL PAVED AREAS. ALL PROPOSED PAVED AREAS SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
7. BEGIN ALL PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION.
8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES AND MULCH AND SEED AS REQUIRED.
9. FINISH PAVING ALL HARD SURFACE AREAS.
10. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
11. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
12. REMOVE TEMPORARY EROSION CONTROL MEASURES.
13. THE CONSTRUCTION SEQUENCE SHALL BE CONFINED TO THE LIMIT OF WORK AS SHOWN ON THE DRAWINGS.
14. UPON COMPLETION OF CONSTRUCTION THE OWNER SHALL AGREE TO MAINTAIN AND CLEAN ALL DRAINAGE STRUCTURES AS REQUIRED.

SITE PREPARATION NOTES

1. WITHIN THE LIMIT OF WORK LINE AS NOTED ON THE SITE PLANS, REMOVE AND DISCARD ALL CONCRETE PAVEMENT, BITUMINOUS CONCRETE PAVEMENT, BRICK PAVEMENT, TOP SOIL, MULCH, TRASH, DEAD TREES AND STUMPS, SHRUBBERY, CHAIN LINK FENCE POSTS, RAILS, FABRIC, GATES, FOOTINGS AND ALL APPURTENANCES, BOLLARDS, POSTS, CONCRETE FOOTINGS AND FOUNDATIONS, WALLS AND CURBS UNLESS OTHERWISE NOTED.
2. THE OWNER'S REPRESENTATIVE SHALL BE CONSULTED AND WILL REVIEW THE WORK ON SITE WITH THE CONTRACTOR BEFORE ANY WORK SHALL COMMENCE.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS TO REMAIN THAT ARE DUE TO CONTRACTOR OPERATIONS.
5. ALL ITEMS TO BE REMOVED THAT ARE NOT STOCKPILED FOR LATER REUSE ON THE PROJECT OR DELIVERED TO THE OWNER SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS EFFORTS OF THE DEMOLITION WITH ALL TRADES.
7. THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENT OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.
8. THE CONTRACTOR SHALL MAINTAIN OR ADJUST TO NEW FINISH GRADES AS NECESSARY ALL UTILITY AND SITE STRUCTURES SUCH AS LIGHT POLES, SIGN POLES, MANHOLES, CATCH BASINS, HAND HOLES, WATER AND GAS GATES, HYDRANTS, ETC., FROM MAINTAINED UTILITY AND SITE SYSTEMS UNLESS OTHERWISE NOTED OR DIRECTED BY THE OWNER'S REPRESENTATIVE.

UTILITY AND GRADING NOTES

1. ALL ON-SITE STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) OR CLASS V RCP, UNLESS NOTED OTHERWISE.
2. HDPE PIPE SHALL CONFORM WITH AASHTO DESIGNATIONS M294 AND M252, SHALL BE MANUFACTURED WITH HIGH DENSITY POLYETHYLENE PLASTIC AND SHALL BE ADS N-12 PIPE AS MANUFACTURED BY ADVANCE DRAINAGE SYSTEM, INC. OR HANCOR HI Q PIPE AS MANUFACTURED BY HANCOR, INC. OR APPROVED EQUAL UNLESS OTHERWISE NOTED OR DETAILED.
3. A MINIMUM OF 18" VERTICAL CLEARANCE SHALL BE MAINTAINED WHERE WATER SERVICES CROSS STORM DRAIN LINES.
4. ALL WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 5 FEET OF COVER AND A MAXIMUM OF 6 FEET OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE. GREATER DEPTHS ARE PERMITTED WHERE REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES.
5. GENERALLY, WATER MAIN FITTINGS IDENTIFIED ON THIS DRAWING ARE SHOWN FOR INSTALLATION LOCATION PURPOSE. THE CONTRACTOR SHALL NOTE THAT NOT ALL FITTINGS ARE NOTED, SHOWN OR INDICATED.
6. ALL WATER MAIN FITTINGS, TEES, BENDS, HYDRANTS, ETC. SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS.
7. DOMESTIC WATER SERVICES 2.5" AND SMALLER SHALL BE TYPE K COPPER TUBING AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED CORPORATION STOP AND APPROVED SADDLE CURB STOP, AND BOX, USING MATERIALS SPECIFIED BY THE MUNICIPAL WATER DEPARTMENT OR COMPANY.
8. ALL WATER MAINS 3" AND LARGER SHALL BE CEMENT LINED DUCTILE IRON - CLASS 52, AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED FITTINGS AND GATE VALVES.
9. ALL WATER MAIN APPURTENANCES, MATERIALS, METHODS OF INSTALLATION AND TESTING REQUIREMENTS SHALL MEET OR EXCEED ALL LOCAL MUNICIPAL REQUIREMENTS.
10. PRESSURE AND LEAKAGE TEST, DISINFECTION AND FLUSHING SHALL BE IN ACCORDANCE WITH ALL LOCAL MUNICIPAL STANDARDS AND REQUIREMENTS. CONTRACTORS SHALL BE RESPONSIBLE FOR ALL COSTS IN CONNECTION WITH UTILITY TESTS, FLUSHING AND INSPECTIONS AS REQUIRED BY THE LOCAL MUNICIPALITY.
11. BEFORE THE DEVELOPMENT SITE IS GRADED, THE AREA OF THE DRAINAGE BASINS SHOULD BE FENCED OFF TO PREVENT HEAVY EQUIPMENT FROM COMPACTING THE UNDERLYING SOIL.
12. WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK. PONDING AT TRANSITION AREAS WILL NOT BE ALLOWED.
13. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS AND STRUCTURES.
14. MAXIMUM SLOPE IN DISTURBED AREAS SHALL NOT EXCEED 3:1 , UNLESS OTHERWISE NOTED.
15. CONTRACTOR SHALL VERIFY EXISTING GRADES AND NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
16. CONTRACTOR SHALL ADJUST UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.
17. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE OWNER'S REPRESENTATIVE FOR RESOLUTION OF THE CONFLICT.
18. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ALL GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
19. THE LOCATION, SIZE, DEPTH AND SPECIFICATIONS FOR CONSTRUCTION OF PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY AND APPROVED BY THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE AND ELECTRICAL). FINAL DESIGN AND LOCATIONS AT THE BUILDING WILL BE PROVIDED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE UTILITY CONNECTIONS WITH THE RESPECTIVE COMPANIES PRIOR TO ANY UTILITY CONSTRUCTION.

LAYOUT AND MATERIAL NOTES

1. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
2. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATTIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND ALL DETAILS CONTIGUOUS TO THE BUILDING INCLUDING SIDEWALKS, RAMPS, UTILITY ENTRANCE LOCATIONS, WALL PACKS, CONCRETE DOOR PADS, ROOF DRAINS, ETC.
4. ACCESSIBLE CURB RAMPS SHALL BE PER THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD AND THE AMERICANS WITH DISABILITIES ACT ACCESSIBLITY GUIDELINES, WHICHER IS MORE STRINGENT.
5. THE FOLLOWING LAYOUT CRITERIA SHALL CONTROL UNLESS OTHERWISE NOTED ON THE PLAN:
   ALL DIMENSIONS ARE TO OUTSIDE FACE OF BUILDING.
   ALL DIMENSIONS ARE TO FACE OF CURB AT GUTTER LINE.
   ALL DIMENSIONS ARE TO CENTER OF PAVEMENT MARKINGS.
   ALL TIES TO PROPERTY LINES ARE PERPENDICULAR TO THE PROPERTY LINE UNLESS OTHERWISE NOTED.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE CONSERVATION COMMISSION SHALL BE NOTIFIED, AT LEAST 72 HOURS PRIOR TO ANY LAND DISTURBANCE.
2. A COPY OF THE SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
3. SOIL EROSION AND SEDIMENT CONTROL PRACTICES IN THE PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
4. ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY DEMOLITION GRADING OPERATIONS AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
5. ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
6. ALL SOIL EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
7. THE MAINTENANCE OF SOIL EROSION AND SEDIMENT CONTROL MEASURES AND FACILITIES DURING AND IMMEDIATELY AFTER CONSTRUCTION RESTS WITH THE GENERAL CONTRACTOR. UPON ACCEPTANCE OF THE PROJECT, THE OWNER SHALL BECOME RESPONSIBLE FOR MAINTENANCE OF ANY REMAINING MEASURES AND FACILITIES.
8. OFF SITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE ENGINEER.
9. THE CONSERVATION COMMISSION AND/OR ENGINEER MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, AS DIRECTED BY THE DISTRICT INSPECTOR.
10. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS AT ALL TIMES.
11. THE CONTRACTOR SHALL UTILIZE ALL METHODS NECESSARY TO PREVENT BLOWING AND MOVEMENT OF DUST FROM THE EXPOSED SOIL SURFACES.
12. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
13. A CRUSHED STONE TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ENTRANCE EXISTS. SEE LOCATION DETAIL ON PLAN.
14. ALL CATCH BASIN INLETS SHALL BE PROTECTED DURING CONSTRUCTION AS DETAILED ON THE PLAN, IF APPLICABLE.
15. ALL STORM DRAINAGE OUTLETS SHALL BE PROTECTED AS REQUIRED HEREON BEFORE DISCHARGE POINTS BECOME OPERATIONAL.
16. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
17. LAND AREAS EXPOSED AT ANY ONE TIME AND THE LENGTH OF EXPOSURE SHALL BE KEPT TO A PRACTICAL MINIMUM. THEY SHALL BE LEFT IN A NEAT AND FINISHED APPEARANCE AND PROTECTED FROM EROSION.
18. ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN SIXTY (60) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTRIBUTED AREAS SHALL BE MULCHED.
19. ALL CRITICAL AREAS SUBJECT TO EROSION SHALL RECEIVE A TEMPORARY SEEDING AND BE MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS IMMEDIATELY FOLLOWING ROUGH GRADING.
20. IMMEDIATELY AFTER COMPLETION OF STRIPPING AND STOCKPILING OF TOPSOIL, SEED THE STOCKPILE WITH ANNUAL RYE GRASS. STABILIZE TOPSOIL STOCKPILES WITH STRAW MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE APPLICATION AND ESTABLISHMENT OF TEMPORARY SEEDING.
21. SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN FIFTY (50) FEET OF WETLANDS, THE FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITIES. THE BASE OF ALL STOCKPILES SHALL BE PROTECTED BY A STRAW BALE BARRIER OR SEDIMENT FENCE. LOCATIONS ARE DELINEATED ON THE PLAN.
22. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 3:1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
23. ALL AREAS NOT STABILIZED BY CONSTRUCTION, SODDING OR LANDSCAPING SHALL BE SEEDED AND STABILIZED IN ACCORDANCE WITH THE SEEDING AND MULCHING SPECIFICATIONS.
24. MULCHING IS REQUIRED ON ALL SEEDED AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLIER VEGETATIVE COVER.
25. ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTRATION DEVICE. THE SEDIMENT FILTER MUST BE CAPABLE OF FILTERING THE SEDIMENT AND BE PLACED SO AS NOT TO CAUSE EROSION OF THE DOWNSTREAM AREA.

GENERAL PLANTING NOTES

1. ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN OR THE PLANT MATERIAL WILL BE UNACCEPTABLE. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY, SIZE AND BE CERTIFIED DISEASE AND INSECT FREE. THE OWNER AND/OR THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO APPROVE ALL PLANT MATERIAL ON SITE PRIOR TO INSTALLATION.
2. ALL PLANT MATERIAL SHALL BE PROPERLY GUYED, STAKED, WRAPPED, AND PLANTED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS. GUY WIRES SHALL BE ATTACHED TO THE TREE AT A HEIGHT OF TWO-THIRDS THE HEIGHT OF THE TREE AND SHOULD BE LOCATED AT POINTS SO AS NOT TO SPLIT THE TRUNK OF MULTI-STEMMED TREES. PROVIDE THREE STAKES PER TREE UNLESS NOTED OTHERWISE INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE. PROVIDE BURLAP WRAPPING WITH A 50% OVERLAP. CUT AND REMOVE BURLAP FROM TOP ONE-THIRD OF THE ROOT BALL.
3. PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH ONE PART EACH OF TOP SOIL, PEAT MOSS, AND PARENT MATERIAL. IF WET SOIL CONDITIONS EXIST THEN PLANTING PITS SHALL BE EXCAVATED AN ADDITIONAL 12" AND FILLED WITH SAND.
4. NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION AND SHALL BE SUBSEQUENTLY FLOODED TWICE WITHIN TWENTY-FOUR (24) HOURS OF PLANTING. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL PLANTS.
5. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR AFTER THE DATE OF FINAL ACCEPTANCE. ANY PLANT MATERIAL THAT DIES WITHIN THAT TIME PERIOD SHALL BE REMOVED, INCLUDING THE STUMP, AND REPLACED WITH MATERIAL OF SIMILAR SIZE AND SPECIES AT THE EXPENSE OF THE DEVELOPER. THE REPLACED PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR AFTER THE REPLACEMENT DATE.
6. THE LANDSCAPE CONTRACTOR SHALL PROVIDE A MINIMUM 4" LAYER OF TOPSOIL IN ALL LAWN AREAS AND A MINIMUM OF 6" OF TOPSOIL IN ALL PLANTING AREAS. A FULL SOIL ANALYSIS SHALL BE CONDUCTED AFTER CONSTRUCTION AND PRIOR TO PLANTING TO DETERMINE THE EXTENT OF SOIL AMENDMENT REQUIRED.
7. ALL DISTURBED LAWN AREAS SHALL BE STABILIZED WITH EITHER SOD OR SEED AS INDICATED ON THE LANDSCAPE PLANS. SEED SHALL CONSIST OF THE MIXTURE LISTED IN THE GENERAL SEEDING NOTES. ALL DISTURBED LAWN AREAS SHALL BE TOP SOILED, LIMED, FERTILIZED, AND FINE GRADED PRIOR TO LAWN INSTALLATION.
8. ALL TREES ARE TO BE GUYED, 3 EACH, UNLESS OTHERWISE NOTED ON PLAN.
9. ALL DECIDUOUS TREES ARE TO BE WRAPPED, WITH TREE WRAP, UP TO THE FIRST BRANCHING AND SECURED.
10. THE LANDSCAPE CONTRACTOR IS TO PERFORM ALL CONTRACTED WORK IN A REASONABLE PERIOD OF CONTINUOUS WORK.
11. THE LANDSCAPE CONTRACTOR IS TO MAINTAIN PLANT MATERIAL WHILE THE PROJECT IS UNDERWAY AND FOR A PERIOD OF TWO WEEKS AFTER THE COMPLETION OF THE PROJECT UNLESS OTHERWISE SPECIFIED.
12. THE CONTRACTOR IS TO CLEAN UP AND REMOVE ANY DEBRIS FROM THE SITE, CAUSED BY THE LANDSCAPE CONTRACTOR.

LEGEND

EXISTING		PROPOSED
101	CONTOUR LINE	101
101.1	SPOT GRADE	+101.1
EOP	EDGE OF PAVEMENT	EOP
VGC	VERTICAL GRANITE CURB	VGC
SGC	SLOPED GRANITE CURB	SGC
VCC	VERTICAL CONCRETE CURB	VCC
BCC	BITUMINOUS CONCRETE CURB	BCC
CCB	CAPE COD BERM	CCB
	STONE WALL	
	CHAIN LINK FENCE	
	IRON FENCE	
	POST & RAIL FENCE	
	STOCKADE FENCE	
	GUARD RAIL	
	STRAW WATTLES	
W	WATER LINE	W
	FIRE HYDRANT	
	POST INDICATOR VALVE	
	WATER GATE	
WM	WATER METER PIT	WM
HH	IRRIGATION HAND HOLE	HH
W	WELL	
S	SEWER LINE	S
	SEWER MANHOLE	
G	GAS LINE	G
	GAS METER	
	GAS GATE	
D	DRAIN LINE	
	DRAIN MANHOLE	
	CATCH BASIN	
OHW	OVERHEAD WIRES	OHW
ETC	ELECTRIC, TELEPHONE & CABLE	ETC
	UTILITY POLE	
	GUY WIRE	

REVISIONS

1	4/2/18	CONSERVATION COMMENTS
2	4/30/18	CONSERVATION COMMENTS
3	5/7/18	CONSERVATION COMMENTS
4	5/11/18	CONSERVATION COMMENTS

COMMONWEALTH OF MASSACHUSETTS
CHRISTIAN ALBERT FARLAND
No. 47544
CIVIL
REGISTERED PROFESSIONAL ENGINEER

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●WARWICK, RI

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SITE PLAN
61 JOHN VERTENTE BOULEVARD
ASSESSORS MAP 133 LOT 47
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR: SMRE 61, LLC
100 DUCHAINE BOULEVARD
NEW BEDFORD, MA 02745

FEBRUARY 21, 2018
SCALE: AS NOTED
JOB NO. 17-413.1
LATEST REVISION: MAY 11, 2018

NOTES & LEGEND