LEWIS LANDING

PROPOSED MULTI-UNIT RESIDENTIAL DEVELOPMENT
HUTTLESTON AVE.
FAIRHAVEN, MASSACHUSETTS

APPLICANT/OWNER:

DANA LEWIS
18 TANNER LANE
FAIRHAVEN, MA 02719

LOCUS:

MAP 31 - LOT 117C AND LOT 115A
HUTTLESTON AVENUE
FAIRHAVEN, MA

N

SCALE: 1"=100'

SEPTEMBER 9, 2019

REVISED DECEMBER 4, 2019

SCHEDULE OF DRAWINGS

SHEET NUMBER	PLAN TITLE
-	COVER SHEET
1	EXISTING CONDITIONS PLAN
2	SITE LAYOUT AND LANDSCAPING PLAN
3	GRADING & UTILITIES PLAN
4	EROSION CONTROL PLAN
5	DETAIL SHEET-1
6	DETAIL SHEET-2
7	ARCHITECTURALS

WAIVERS REQUESTED

1. FAIRHAVEN ZONING BYLAW 198-31.1 (C) (2) (g) [6] REQUIRING BASINS AND PONDS TO HAVE 4:1 SIDE SLOPES AND SEDIMENT FOREBAYS TO HAVE 3:1 SIDE SLOPES.
2. FAIRHAVEN ZONING BYLAW 198-31.1 (C) (2) (n) [6] REQUIRING 2 FEET OF COVER FOR HDPE PIPES NOT SUBJECTED TO MAINTENANCE EQUIPMENT OR VEHICLE LOADS.
3. FAIRHAVEN ZONING BYLAW 198-31.1 (A) (1) (a) [2] ALLOWING NO INCREASE IN THE 10-YEAR STORM RUNOFF VOLUME DUE TO SOILS UNSUITABLE FOR INFILTRATION.

PREPARED BY:

PRIME ENGINEERING INC

CIVIL ENGINEERING–LAND SURVEYING–ENVIRONMENTAL ASSESSMENT
P.O. BOX 1088, 350 BEDFORD STREET, LAKEVILLE, MA 02347
TEL: 508.947.0050 FAX: 508.947.2004

N/F
FERNANDO S. & ANN MARIE PINTO
10 BROOKVIEW ST.
MAP 31 – LOT 161

N/F
ARNE OLE ANDERSEN
8 BROOKVIEW ST.
MAP 31 – LOT 160

N/F
VIOLET A. CONLEY
6 BROOKVIEW ST.
MAP 31 – LOT 159

N/F
PHILIP E. & DONNA M. CHARTIER
4 BROOKVIEW ST.
MAP 31 – LOT 158

N/F
DAVID & DESIREE VINCENT
2 BROOKVIEW ST.
MAP 31 – LOT 157

S 87°23'40" W 350.31'

NON JURISDICTIONAL ISOLATED LAND SUBJECT TO FLOODING (UNDER MA WETLAND REGULATIONS). HOWEVER, AN ACTIVE ORDER OF CONDITIONS MAKES IT JURISDICTIONAL UNTIL FEBRUARY 2020.

PAVED DRIVE

CATCH BASIN
RIM= 59.21
INV.IN(18")= 53.26
INV.OUT(20")= 52.96

LAWN

N/F
TONY MARTINS
2A–2B BROOKVIEW ST.
MAP 31 – LOT 117

N 03°36'00" W 110.96'

18" RCP

N 88°17'00" W 126.67'

N 04°07'00" E

N 04°07'00" E 549.70'

SCRUB GROWTH

TP-2

TOTAL LOT AREA
107,289 SQ.FT.
2.463 AC. ±

DMH
RIM= 61.70
INV.IN(15")= 56.01
INV.IN(18")= 56.89
INV.OUT(18")= 55.30

SOUTHCOAST WINE & SPIRITS

S 01°43'00" W 234.65'

100' BUFFER ZONE

N/F
SMR HUTTLESTON LLC
355 HUTTLESTON AVE.
MAP 31 – LOT 117A & 117B

N/F
BRANDON L. BRASSEUR
347 HUTTLESTON AVE
MAP 31 – LOT 114

EXISTING PAVEMENT (5,488 SF)

TWIN - 18" LINDEN TREE

TP-1

18" RCP

15" RCP

MAP 31 – LOT 115A
MAP 31 – LOT 117C

SITE BENCHMARK
MAG NAIL SET
ELEV.= 65.06 (NAVD88)

EXISTING WATER GATE

352.95'

S 88°17'00" E 279.95'

127.09'

VERTICAL GRANITE CURB

EXISTING SIDEWALK

12" RCP

8" SEWER

EXISTING SEWER STUB

EXISTING WATER STUB

5' BIT. CONC. SIDEWALK

DMH
RIM= 63.60
CENTERLINE OF TROUGH
INV.= 56.92

10" WATER

INV.18" RCP
ELEV.= 59.06

4" GAS

HUTTLESTON (U.S. ROUTE 6) AVE.

NEW BOSTON ROAD

SITE ADDRESS
0 HUTTLESTON AVENUE
FAIRHAVEN, MA 02719
(VACANT LOT)

CURRENT OWNERS
DANA LEWIS
18 TANNER LANE
FAIRHAVEN, MA 02719

ASSESSORS' REFERENCE
MAP 31 - LOT 115A & 117C

DEED REFERENCE
BK. 12776 - PG. 341
PLAN REFERENCE
PB. 11 - PG. 2 PB. 65 - PG. 16

ZONING DESIGNATION
SINGLE RESIDENCE DISTRICTS- RC

VERTICAL DATUM SHOWN
NAVD88

FEMA FLOODZONE DESIGNATION
ZONE X- AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. AS SCALED FROM FLOOD INSURANCE RATE MAP NUMBER:25005-C-0413F, EFFECTIVE DATE: 7/7/2009

NOTE:
THE WETLAND DELINEATION LINE SHOWN HEREON WAS BASED ON A PLAN BY ALLEN D. QUINTIN, DATED JANUARY 11, 2017 AND WAS NOT FIELD LOCATED BY PRIME ENGINEERING INC. DELINEATION APPROVED BY FAIRHAVEN CONSERVATION COMMISSION.

ELEV. (FEET)	TP-1	DEPTH (INCHES)
64.3		0
	SL FILL	
59.30		60
	MUCK	
58.30		72
	DENSE TILL	
58.30		96

SEEPAGE ENCOUNTERED @ 60"

ELEV. (FEET)	TP-2	DEPTH (INCHES)
64.2		0
	SL FILL	
59.20		60
	MUCK	
58.20		72
	FS	
56.20		96
	DENSE TILL	
55.20		108

SEEPAGE ENCOUNTERED @ 60"

N

0 20' 40'
SCALE: 1" = 20'

REV.	DATE	DESCRIPTION	BY	APP.
2	12/4/2019	RESPONSE TO COMMENTS	SWL	RJR
1	11/8/2019	RESPONSE TO COMMENTS	SWL	RJR

DRAWING TITLE
EXISTING CONDITIONS PLAN

PROJECT
MAP 31- LOT 117C
FAIRHAVEN, MASSACHUSETTS

CLIENT
DANA LEWIS
FAIRHAVEN, MASSACHUSETTS

• CIVIL ENGINEERING
• LAND SURVEYING
• ENVIRONMENTAL ASSESSMENT

PRIME ENGINEERING INC.
P.O. BOX 1088
350 BEDFORD ST.
LAKEVILLE, MA 02347
TEL.: 508.947.0050
FAX: 508.947.2004

SCALE: 1" = 20'
DATE: SEPT. 9, 2019
DRAWN BY: SWL
DESIGNED BY: RJR
CHECKED BY: RJR
APPROVED BY: RJR
SHEET NO. 1 OF 7
PROJECT NO. 2729-01-01

COMMONWEALTH OF MASSACHUSETTS
REGISTERED PROFESSIONAL ENGINEER

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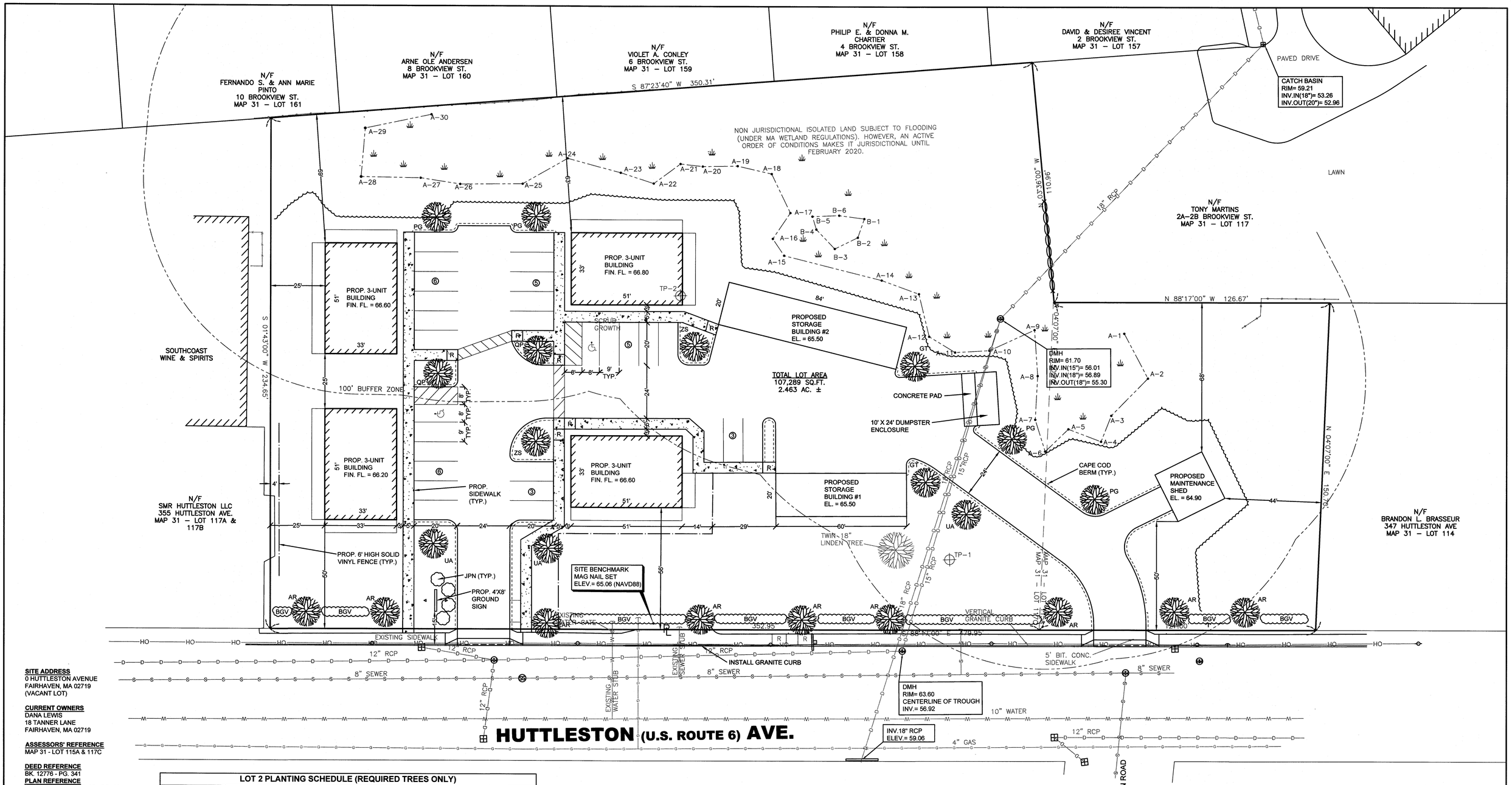

SITE ADDRESS
0 HUTTLESTON AVENUE
FAIRHAVEN, MA 02719
(VACANT LOT)

CURRENT OWNERS
DANA LEWIS
18 TANNER LANE
FAIRHAVEN, MA 02719

ASSESSORS' REFERENCE
MAP 31 - LOT 115A & 117C

DEED REFERENCE
BK. 12776 - PG. 341
PLAN REFERENCE
PB. 11 - PG. 2 PB. 65 - PG. 16

ZONING DESIGNATION
SINGLE RESIDENCE DISTRICTS- RC

VERTICAL DATUM SHOWN
NAVD88

FEMA FLOODZONE DESIGNATION
ZONE X- AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. AS SCALED FROM FLOOD INSURANCE RATE MAP NUMBER:25005-C-0413F, EFFECTIVE DATE: 7/7/2009

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LOT 2 PLANTING SCHEDULE (REQUIRED TREES ONLY)

SYMBOL	QUANTITY	% OF TOTAL	BOTANICAL NAME	COMMON NAME	SIZE	MATURE HEIGHT	MATURE WIDTH
DECIDUOUS TREES							
AR	9	41%	ACER RUBRUM 'RED SUNSET'	RED MAPLE	2.5"–3 CAL.	60'	40'
GT	2	9%	GLEDITSIA TRIACANTHOS 'SHADEMASTER'	HONEYLOCUST	2.5"–3 CAL.	50'	30'
QP	2	9%	QUERCUS PALUSTRIS	PIN OAK	2.5"–3 CAL.	65'	50'
UA	3	14%	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	2.5"–3 CAL.	70'	60'
ZS	2	9%	ZELKOVA SERRATA 'VILLAGE GREEN'	JAPANESE ZELKOVA	2.5"–3 CAL.	60'	60'
% DECIDUOUS TREES: 82%							
EVERGREEN TREES							
PG	4	18%	PICEA GLAUCA	BLUE SPRUCE	4'–6' HT.	75'	N/A
DECIDUOUS SHRUBS							
SHRUBS							
BGV	75	–	BUXUS SEMPERVIRENS	GREEN VELVET BOXWOOD	GAL	4'	4'
JPN	4	–	JUNIPER PROCUMBENS NANA	DWARF JAPANESE JUIPER	GAL	1'	3'

RC ZONING TABLE

REQUIREMENT	REQUIRED	PROVIDED
MINIMUM FRONTAGE	100 L.F.	479.95 L.F.
MINIMUM LOT AREA	15,000 S.F.	107,289 S.F.
MINIMUM SETBACKS:		
FRONT	50 FT	50.0 FT
SIDES	25 FT	25.0 FT
REAR	50 FT	59.4 FT
MINIMUM CONTIGUOUS UPLAND	70,000 S.F.	85,151 S.F.
MAXIMUM LOT COVERAGE	50%	38.6%
MAXIMUM BUILDING COVERAGE	25%	11.7%

N

0 20' 40'
SCALE: 1" = 20'

REV	DATE	DESCRIPTION	BY	APP.
2	12/4/2019	RESPONSE TO COMMENTS	SWL	RJR
1	11/8/2019	RESPONSE TO COMMENTS	SWL	RJR

DRAWING TITLE
SITE LAYOUT AND LANDSCAPING PLAN

PROJECT
MAP 31- LOT 117C
FAIRHAVEN, MASSACHUSETTS

CLIENT
DANA LEWIS
FAIRHAVEN, MASSACHUSETTS

• CIVIL ENGINEERING
• LAND SURVEYING
• ENVIRONMENTAL ASSESSMENT

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P.O. BOX 1088
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LAKEVILLE, MA 02347
TEL: 508.947.0050
FAX: 508.947.2004

SCALE: 1" = 20'
DATE: SEPT. 9, 2019
DRAWN BY: SWL
DESIGNED BY: RJR
CHECKED BY: RJR
SHEET NO. 2 OF 7
APPROVED BY: RJR
PROJECT NO. 2729-01-01

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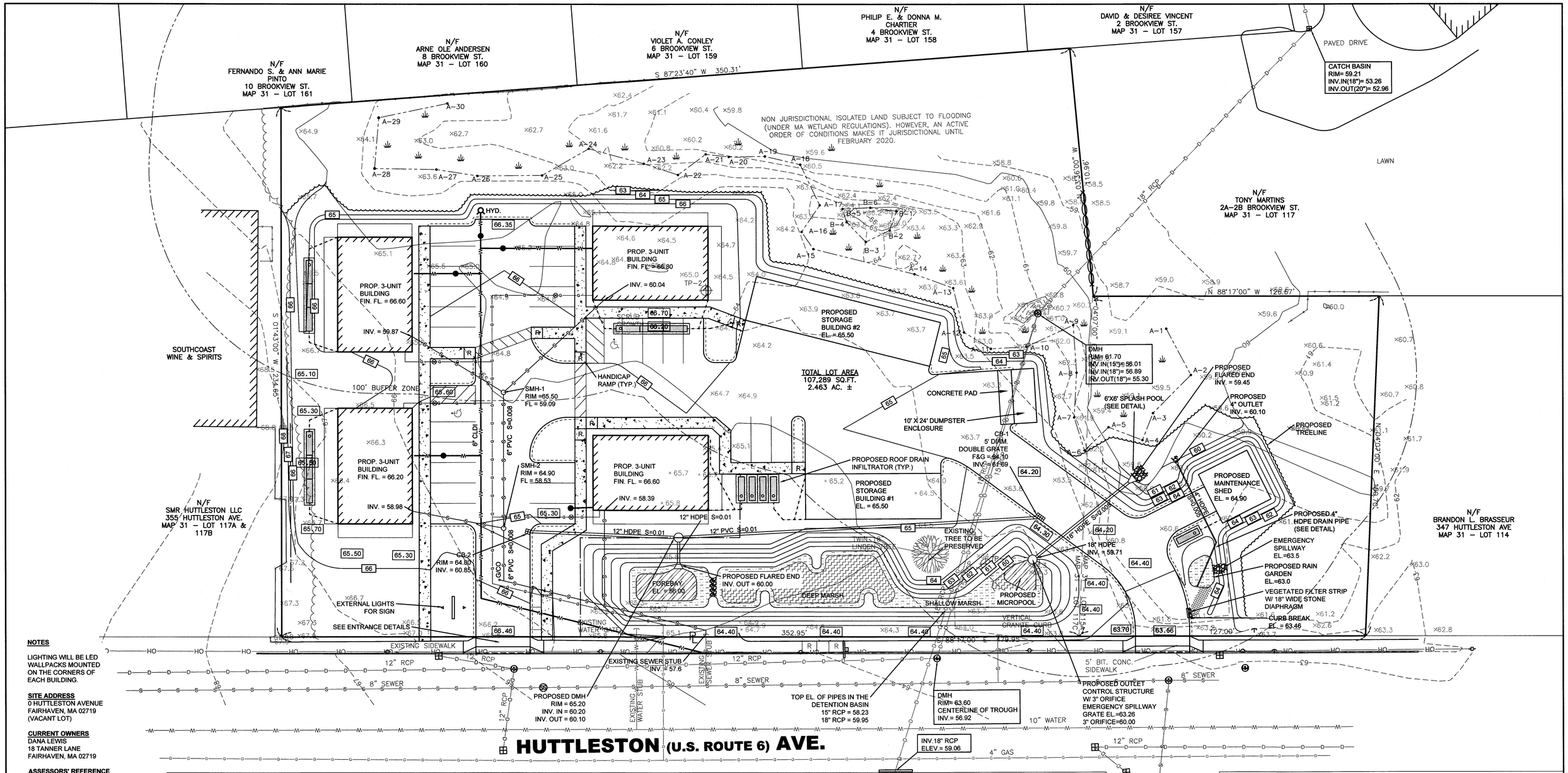

NOTES

LIGHTING WILL BE LED WALLPACKS MOUNTED ON THE CORNERS OF EACH BUILDING.

SITE ADDRESS
0 HUTTLESTON AVENUE
FAIRHAVEN, MA 02719
(VACANT LOT)

CURRENT OWNERS
DANA LEWIS
18 TANNER LANE
FAIRHAVEN, MA 02719

ASSESSORS' REFERENCE
MAP 31 - LOT 115A & 117C

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ZONING DESIGNATION
SINGLE RESIDENCE DISTRICTS- RC

VERTICAL DATUM SHOWN
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DEEP MARSH PLANTINGS

BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY
NUPHAR LUTEUM	YELLOW WATER LILY	TUBERS	10
NYMPHAEA ODORATA	WHITE WATER LILY	TUBERS	10
PONTEDERIA CORDATA	PICKEREL WEED	2" PLUG	10
POTAMOGETON NODOSUS	LONG LEAF PONDWEED	RHIZOMES	10
POTAMOGETON PECTINATUS	SAGO PONDWEED	TUBERS	10
VALLISNERIA AMERICANA	WILD CELERY	TUBERS	10

SHALLOW MARSH PLANTINGS

BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY
ACORUS AMERICANA	SWEET FLAG	2" PLUG	10
ALISMA PLANTAGO-AQUATICA	WATER PLANTAIN	2" PLUG	10
ASTER PUNICEUS	SWAMP ASTER	2" PLUG	20
CALAMAGROSTIS CANADENSIS	BLUE JOINT GRASS	2" PLUG	20
CAREX COMOSA	BEARDED SEDGE	2" PLUG	20
CAREX STRICTA	TUSSOCK SEDGE	2" PLUG	20

DETENTION BASIN PLANTING SCHEDULE

ROOF DRAIN CALCULATIONS

REQUIRED STORM CATCHMENT = 0.25"/SF OF IMP. AREA

INFILTRATION REQUIREMENT = 30,964 SF IMP. X 0.25"/SF = 645 CF

CULTEC 150XLHD INFILTRATOR W/ 12" CRUSHED STONE BOTTOM = 56.8 CF STORAGE

645 CF / 56.8 CF/CHAMBER = 12 CHAMBERS REQUIRED (MIN.)

CHAMBERS PROVIDED = 14, TOTAL STORM CATCHMENT PROVIDED = 795 CF

TOP OF PIPE CALCULATIONS

EXISTING 15" RCP

SLOPE = (56.92 - 56.01) / 159 FT = .0057 SLOPE

INV. AT BASIN = 56.92 - (26 FT TO BASIN X .0057) = 56.77

TOP EL. OF PIPE IN BASIN = 56.77 + 1.25 FT DIAM. + .21 PIPE THICKNESS = 58.23

EXISTING 18" RCP

SLOPE = (59.06 - 56.89) / 209 FT = .0103 SLOPE

INV. AT BASIN = 59.06 - (80 FT TO BASIN X .0103) = 58.24

TOP EL. OF PIPE IN BASIN = 58.24 + 1.5 FT DIAM. + .21 PIPE THICKNESS = 59.95

LEGEND

100	EXISTING CONTOURS
x98.5	EXISTING SPOT ELEVATION
TP–101	OBSERVATION HOLE LOCATION
100	PROPOSED CONTOURS
100.0	PROPOSED SPOT ELEVATION
	PROPOSED WATER
	EXISTING TREELINE
	PROPOSED TREELINE
R	HANDICAP RAMP
G G G G	PROPOSED GAS
S S S S	PROPOSED SEWER

REV.	DATE	DESCRIPTION	BY	APP.
2	12/4/2019	RESPONSE TO COMMENTS	SWL	RJR
1	11/8/2019	RESPONSE TO COMMENTS	SWL	RJR

DRAWING TITLE: GRADING AND UTILITIES PLAN

PROJECT: MAP 31- LOT 117C
FAIRHAVEN, MASSACHUSETTS

CLIENT: DANA LEWIS
FAIRHAVEN, MASSACHUSETTS

• CIVIL ENGINEERING
• LAND SURVEYING
• ENVIRONMENTAL ASSESSMENT

PRIME ENGINEERING INC.
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350 BEDFORD ST.
LAKEVILLE, MA 02347
TEL: 508.947.0050
FAX: 508.947.2004

SCALE:	1" = 20'
DATE:	SEPT. 9, 2019
DRAWN BY:	SWL
DESIGNED BY:	RJR
CHECKED BY:	RJR
SHEET NO.	3 OF 7
APPROVED BY:	RJR
PROJECT NO.	2729-01-01

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EROSION & SEDIMENT CONTROL NOTES:

THE FOLLOWING IS THE MINIMUM REQUIREMENTS THE CONTRACTOR SHALL FOLLOW TO PREVENT IMPACTS CAUSED BY EROSION AND SEDIMENTATION DURING CONSTRUCTION. THE CONTRACTOR MAY, AT HIS DISCRETION, IMPLEMENT ADDITIONAL MEASURES IF NECESSARY.

1. EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO STUMP REMOVAL AND CONSTRUCTION. STABILIZATION OF ALL REGRADED AND SOIL STOCKPILE AREAS WILL BE INITIATED AND MAINTAINED DURING ALL PHASES OF CONSTRUCTION.

2. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH LOCAL MUNICIPAL REGULATIONS. ALL EROSION CONTROL MEASURES ARE TO BE MAINTAINED AND UPGRADED AS REQUIRED TO ACHIEVE PROPER SEDIMENT CONTROL DURING CONSTRUCTION. A STAKED HAYBALE DAM SHALL BE INSTALLED DOWN GRADIENT OF ALL DRAINAGE OUTFALLS.

3. ADDITIONAL CONTROL MEASURES WILL BE INSTALLED DURING THE CONSTRUCTION PERIOD, IF DEEMED NECESSARY BY THE OWNER OR AGENTS OF THE OWNER.

4. CATCH BASINS WILL BE PROTECTED WITH HAYBALE FILTERS THROUGHOUT THE CONSTRUCTION PERIOD UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED. FILTER FABRIC SHOULD BE INSTALLED UNDER GRATE OPENING UNTIL PAVEMENT IS IN PLACE AND GROUND SURFACE IS STABILIZED.

5. SEEDING MIXTURE FOR FINISHED GRASSED AREAS WILL BE AS FOLLOWS:

KENTUCKY BLUE GRASS	45%
CREEPING RED FESCUE	45%
PERENNIAL RYEGRASS	10%

SEED TO BE APPLIED AT A RATE OF 4 LBS./1000 SQ. FT.
FERTILIZER SHALL BE APPLIED AT A RATE OF 2 LBS./1000 SQ. FT.
PLANTING SEASONS SHALL BE APRIL 1 TO JUNE 1 AND AUGUST 1 TO OCTOBER 1. AFTER OCTOBER 1, AREAS WILL BE STABILIZED WITH HAYBALE CHECK, FILTER FABRIC, OR WOODCHIP MULCH, AS REQUIRED, TO CONTROL EROSION.

6. AREAS TO BE LEFT BARE BEFORE FINISHED GRADING AND SEEDING IS ACHIEVED, SHALL RECEIVE A TEMPORARY SEEDING OF PERENNIAL RYEGRASS APPLIED TO A RATE OF 2 LBS./1,000 SQ. FT. AT A DEPTH OF 1/2 INCH. LIMESTONE (EQUIVALENT TO BE 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) SHALL BE APPLIED AS SEEDBED PREPARATION AT A RATE OF 90 LBS./1,000 SQ. FT. PLANTING SEASONS SHALL BE APRIL 1 TO JUNE 1 AND AUGUST 1 TO OCTOBER 1. WHERE GRASS PREDOMINATES, FERTILIZE ACCORDING TO A SOIL TEST AT A MINIMUM APPLICATION RATE OF 1 LB. OF NITROGEN PER 1 ,000 SQ. FT. AREAS TO BE LEFT BARE BEFORE FINISH GRADING AND SEEDING OUTSIDE OF PLANTING SEASONS SHALL RECEIVE AN AIR–DRIED WOOD CHIP MULCH, FREE OF COARSE MATTER, TREATED WITH 1-2, LBS. NITROGEN PER TON, APPLIED AT A RATE OF 185–275 LBS./1,000 SQ. FT.

7. AT ALL PROPOSED FILL AREAS WHICH ARE NOT CURRENTLY SHOWN ON THESE PLANS, THE CONTRACTOR SHALL ESTABLISH AN EROSION CONTROL LINE (HAYBALE CHECK OR FILTER FABRIC) ABOUT TEN (10') FEET FROM TOE TO SLOPE OF PROPOSED FILL AREAS PRIOR TO BEGINNING FILL INSTALLATION. STABILIZATION OF SLOPES IN FILL AREAS (USING MULCH OR GRASS) SHALL BE INITIATED WITHIN THIRTY (30) DAYS OF COMMENCEMENT OF FILL INSTALLATION.

8. STABILIZATION OF SLOPES IN CUT AREAS (USING MULCH OR GRASS) AND THE INSTALLATION OF CONTROL LINE (HAYBALE CHECK OR FILTER FABRIC) AT THE TOE OF SLOPE SHALL BE INITIATED WITHIN THIRTY (30) FEET.

9. SEDIMENT REMOVED FROM CONTROL STRUCTURES WILL BE DISPOSED IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN. ALL HAYBALES OR SILT FENCE RETAINING SEDIMENT OVER 1/2 THEIR HEIGHT SHALL HAVE THE SEDIMENT REMOVED AND ALL DAMAGED EROSION CONTROLS SHALL BE REPAIRED OR REPLACED.

10. CONTRACTOR WILL BE ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE PROPER TOWN AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY. THE OWNER SHALL BE RESPONSIBLE FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.

11. THE CONTRACTOR SHALL SECURE THE SERVICES OF A PROFESSIONAL ENGINEER, WHO SHALL VERIFY IN THE FIELD THAT THE CONTROLS REQUIRED BY THIS PLAN ARE PROPERLY INSTALLED, SHALL MAKE INSPECTION OF SUCH FACILITIES NOT LESS FREQUENTLY THAN EVERY 14 DAYS OR AFTER A RAINFALL IN EXCESS OF 1/4 INCH, WHICHEVER OCCURS FIRST.

12. STOCKPILES OF SOIL SHALL BE SURROUNDED BY A SEDIMENT BARRIER. SOIL STOCKPILES TO BE LEFT BARE FOR MORE THAN THIRTY (30) DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION OR MULCH. IF SOIL STOCKPILES ARE TO REMAIN FOR MORE THAN SIXTY (60) DAYS, FILTER FABRIC SHALL BE USED IN PLACE OF HAYBALES. SIDE SLOPES SHALL NOT EXCEED 2:1.

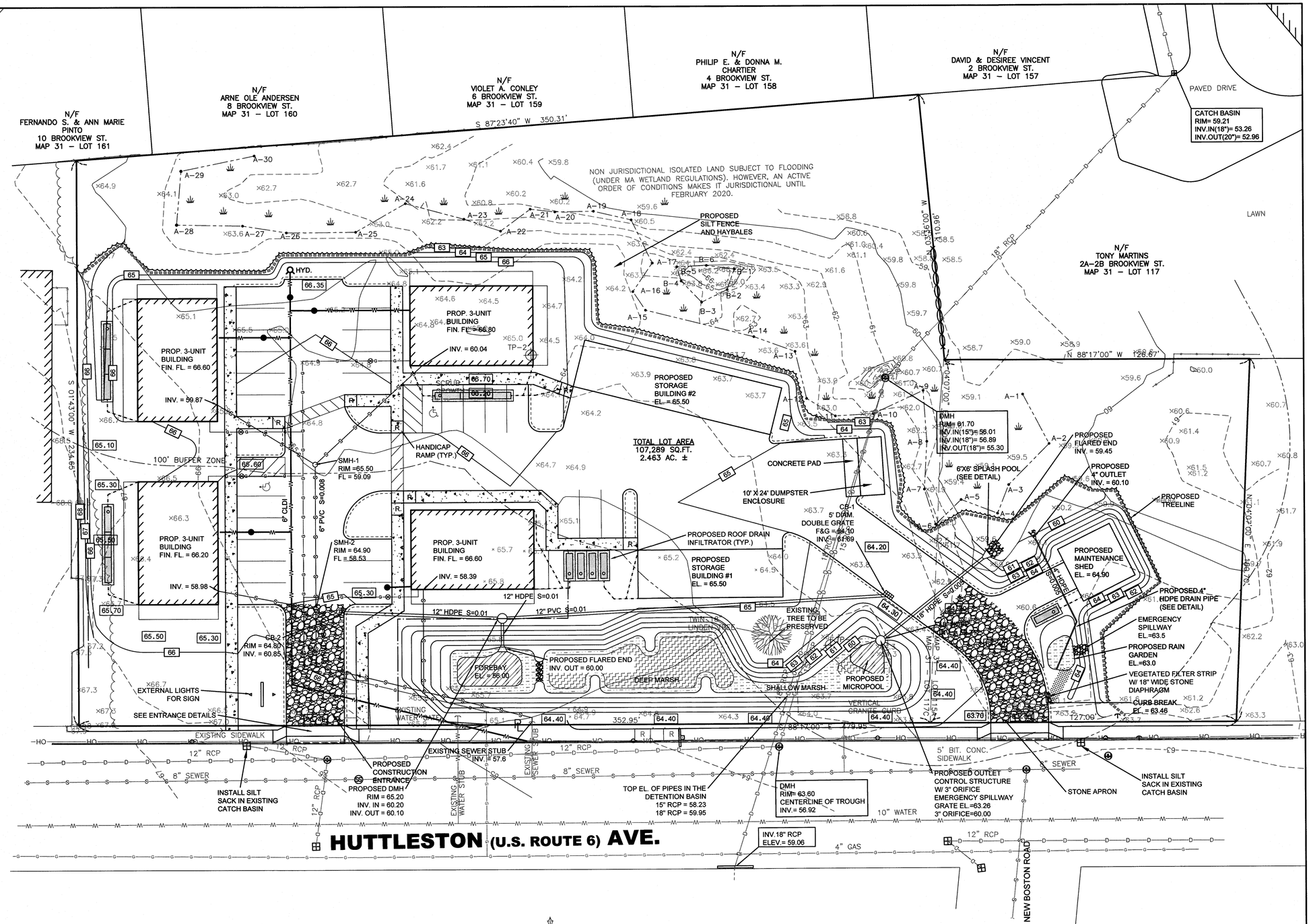
13. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE LIFE OF HIS CONTRACT. DUST CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO SPRINKLING OF WATER ON EXPOSED SOILS AND HAUL ROADS AS NEEDED. CONTRACTOR SHALL CONTROL DUST TO PREVENT A HAZARD TO TRAFFIC.

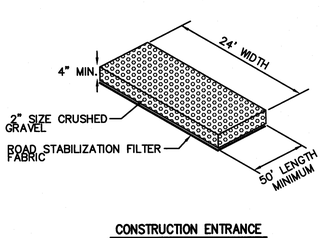
14. IF FINAL GRADING IS TO BE DELAYED FOR MORE THAN THIRTY (30) DAYS AFTER LAND DISTURBANCES CEASE, TEMPORARY VEGETATION OR MULCH SHALL BE USED TO STABILIZE SOILS.

15. HAYBALES SHALL BE USED ONLY AS A TEMPORARY MEASURE. WHERE CONTROL MEASURES WILL BE REQUIRED FOR LONGER THAN SIXTY (60) DAYS, FILTER FABRIC SHALL BE USED.

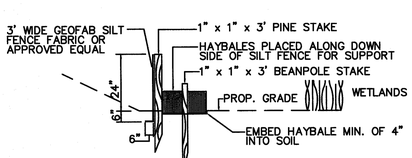
16. WHERE DEWATERING IS NECESSARY, THERE SHALL NOT BE A DISCHARGE DIRECTLY INTO WETLANDS OR WATERCOURSES. PROPER METHODS AND DEVICES SHALL BE UTILIZED TO THE EXTENT PERMITTED BY LAW, SUCH AS PUMPING WATER INTO A TEMPORARY SEDIMENTATION BOWL, PROVIDING SURGE PROTECTION AT THE INLET AND THE OUTLET OF PUMPS, OR FLOATING THE INTAKE OF THE PUMP, OR OTHER METHODS TO MINIMIZE AND RETAIN THE SUSPENDED SOLIDS. IF A PUMPING OPERATION IS CAUSING TURBIDITY PROBLEMS, SAID OPERATION SHALL CEASE UNTIL SUCH TIME AS FEASIBLE MEANS OF CONTROLLING TURBIDITY ARE DETERMINED AND IMPLEMENTED. SAID DISCHARGE POINTS SHALL BE LOCATED OVER 100 FEET FROM THE DELINEATED WETLANDS AS INDICATED ON THIS PLAN.

17. THE CONTRACTOR SHALL OBTAIN AN NPDES PERMIT PRIOR TO THE START OF CONSTRUCTION.

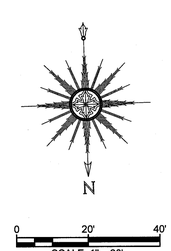




CONSTRUCTION ENTRANCE
NOT TO SCALE



HAYBALE AND SILT FENCE
NOT TO SCALE



REV	DATE	DESCRIPTION	BY	APP.
2	12/4/2019	RESPONSE TO COMMENTS	SWL	RJR
1	11/8/2019	RESPONSE TO COMMENTS	SWL	RJR

DRAWING TITLE: EROSION CONTROL PLAN
PROJECT: MAP 31- LOT 117C, FAIRHAVEN, MASSACHUSETTS
CLIENT: DANA LEWIS, FAIRHAVEN, MASSACHUSETTS

• CIVIL ENGINEERING
• LAND SURVEYING
• ENVIRONMENTAL ASSESSMENT
PRIME ENGINEERING INC
P.O. BOX 1088
300 BEDFORD ST.
LAKEVILLE, MA 02347
TEL: 508.947.0050
FAX: 508.947.2004

SCALE: 1" = 20'
DATE: SEPT. 9, 2019
DRAWN BY: SWL
DESIGNED BY: RJR
CHECKED BY: RJR
APPROVED BY: RJR
SHEET NO. 4 OF 7
PROJECT NO. 2729-01-01

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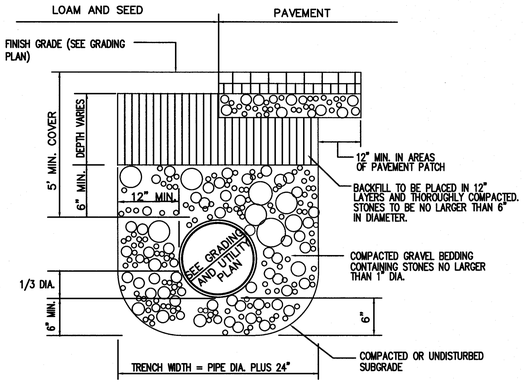
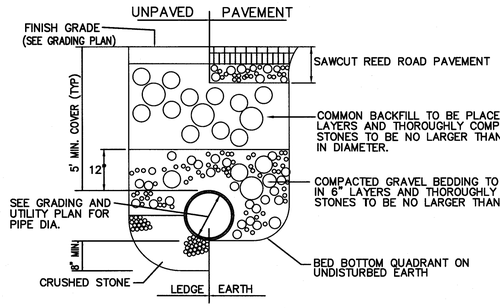


NOTE: ALL DRAINAGE PIPING DIAMETERS SPECIFIED ON GRADING AND UTILITIES PLAN
DRAINAGE PIPING SHALL BE HDPE ASTM D 3350 OR APPROVED EQUAL

DRAINAGE PIPE TRENCH DETAIL

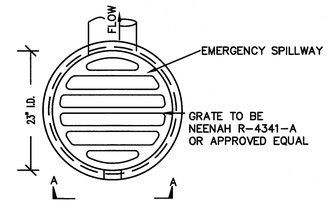
NOT TO SCALE



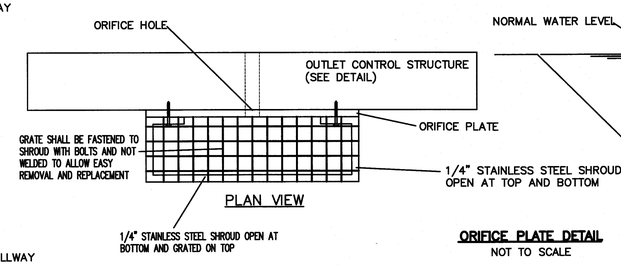
NOTE: WATER MAIN SHALL BE CLDI CLASS 52. GATE VALVES SHALL BE (OPEN RIGHT) U.S. PIPE A-USPO-23, MUELLER A2360-23 RESILIENT SEATED OR AMERICAN FLOW CONTROL SERIES 2500

WATER MAIN TRENCH DETAIL

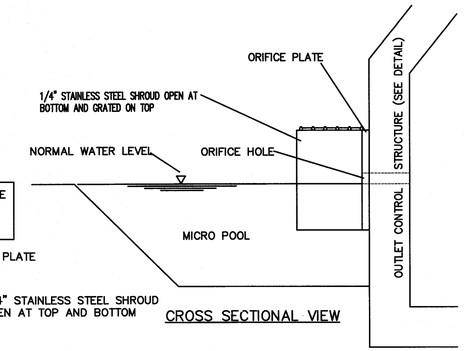
NOT TO SCALE



PLAN VIEW



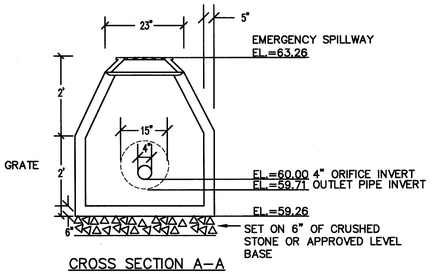
PLAN VIEW



CROSS SECTIONAL VIEW

ORIFICE PLATE DETAIL

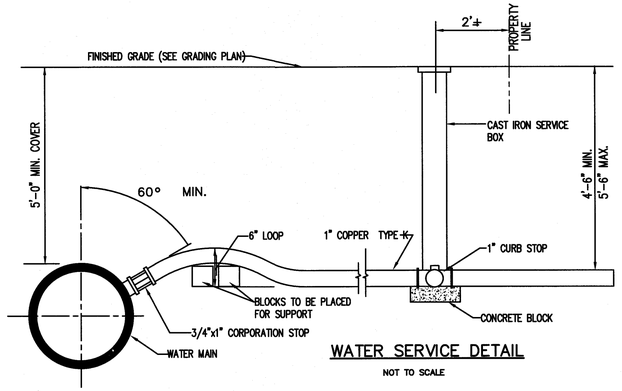
NOT TO SCALE



CROSS SECTION A-A

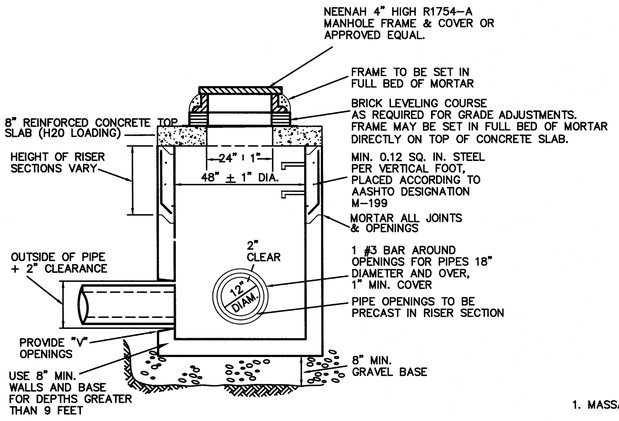
DETENTION BASIN OUTLET STRUCTURE DETAIL

NOT TO SCALE



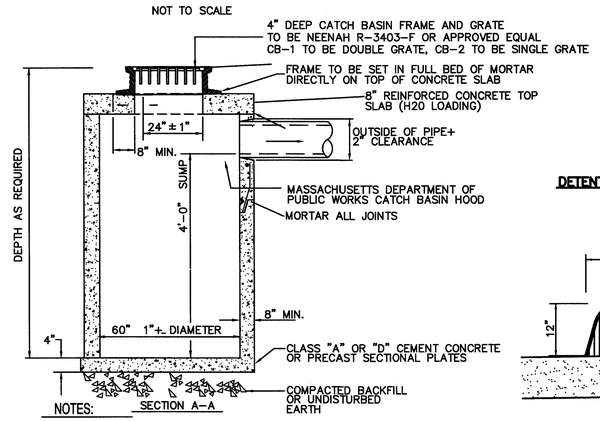
WATER SERVICE DETAIL

NOT TO SCALE



PRECAST CONCRETE FLAT TOP DRAIN MANHOLE

NOT TO SCALE

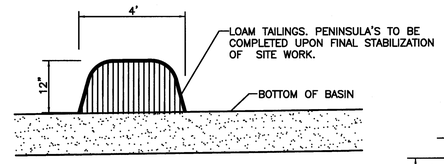


NOTES:

1. MASSACHUSETTS STANDARD CATCH BASIN HOOD SHALL BE INSTALLED ON OUTLET PIPE.

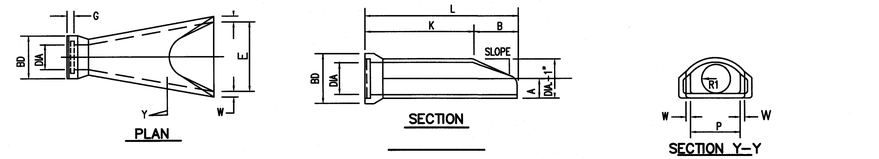
TYPICAL FLAT TOP CATCH BASIN

NOT TO SCALE



FARTHEN PENINSULA

TO BE INSTALLED AT BASE OF DETENTION BASINS
NOT TO SCALE



PLAN

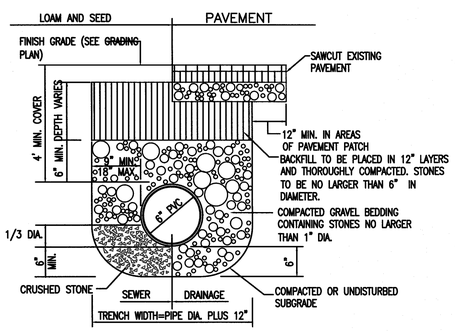
SECTION

SECTION Y-Y

DIA.	W	A	B	C	D	E	BD	K	L	P	DIA. +1"	R1	R2	S	G	SLOPE
15"	2"	4"	2'-0"	4'-07/8"	6'-1 3/4"	2'-0"	23"	4'-6 1/8"	6'-6 1/8"	19 13/16"	16"	10 1/2"	9"	4"	2 1/2"	3:1

CONCRETE FLARED END SECTION

NOT TO SCALE

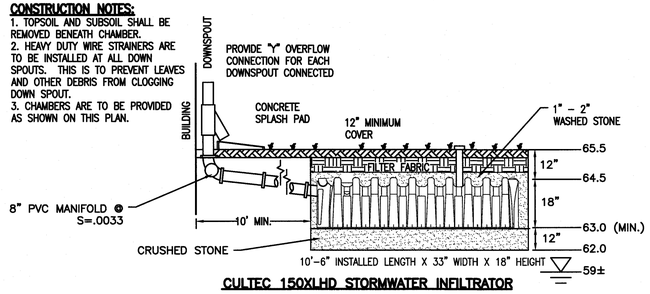


SEWER PIPE TRENCH DETAIL

NOT TO SCALE

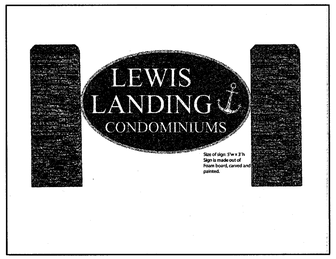
CONSTRUCTION NOTES:

1. TOPSOIL AND SUBSOIL SHALL BE REMOVED BENEATH CHAMBER.
2. HEAVY DUTY WIRE STRAINERS ARE TO BE INSTALLED AT ALL DOWN SPOUTS. THIS IS TO PREVENT LEAVES AND OTHER DEBRIS FROM CLOGGING DOWN SPOUT.
3. CHAMBERS ARE TO BE PROVIDED AS SHOWN ON THIS PLAN.



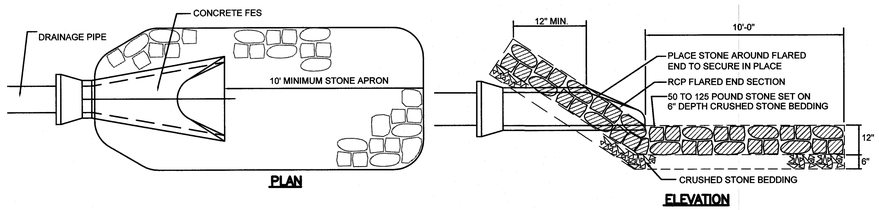
CULTEC 150XLHD STORMWATER INFILTRATOR

NOT TO SCALE



PROPOSED GROUND SIGN

NOT TO SCALE

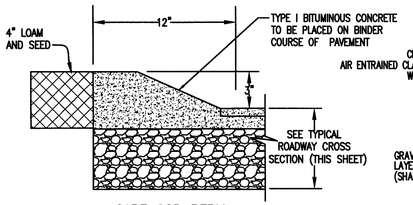


PLAN

ELEVATION

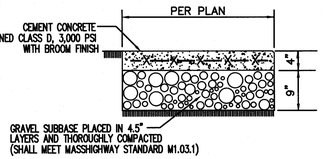
STONE APRON AT PIPE END

NOT TO SCALE



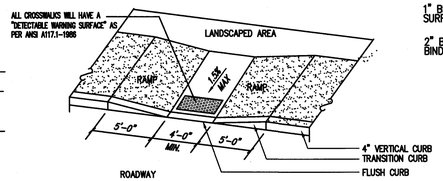
CAPE COD BERM

NOT TO SCALE



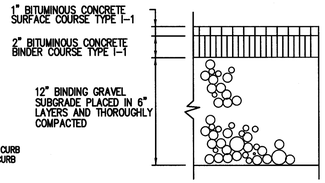
CONCRETE WALK

NOT TO SCALE



HANDICAP RAMP

NOT TO SCALE



BITUMINOUS CONCRETE PAVEMENT

NOT TO SCALE

REV	DATE	DESCRIPTION	BY	APP.
2	12/4/2019	RESPONSE TO COMMENTS	SWL	RJR
1	11/8/2019	RESPONSE TO COMMENTS	SWL	RJR

DRAWING TITLE: DETAIL SHEET-1

PROJECT: MAP 31- LOT 117C
FAIRHAVEN, MASSACHUSETTS

CLIENT: DANA LEWIS
FAIRHAVEN, MASSACHUSETTS

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SCALE: 1" = 20'
DATE: SEPT. 9, 2019
DRAWN BY: SWL
DESIGNED BY: RJR
CHECKED BY: RJR
APPROVED BY: RJR
SHEET NO. 5 OF 7
PROJECT NO. 2729-01-01

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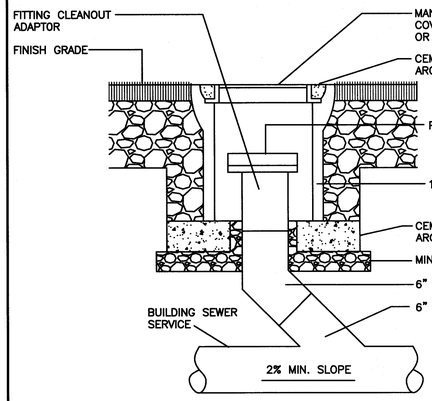
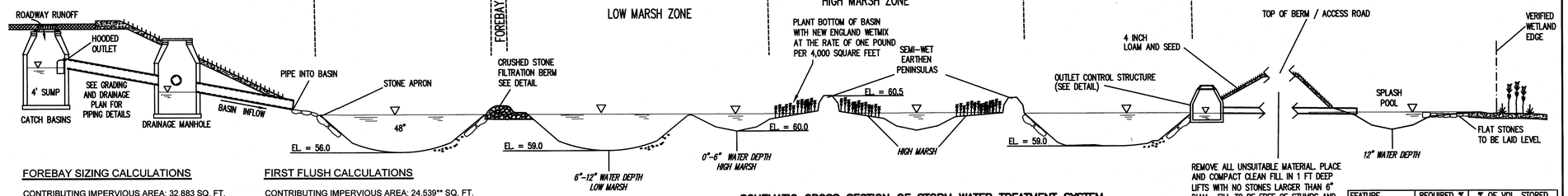


STANDARD SEWER SERVICE CLEANOUT

NOT TO SCALE



SCHEMATIC CROSS SECTION OF STORM WATER TREATMENT SYSTEM

NOT TO SCALE

FOREBAY SIZING CALCULATIONS

CONTRIBUTING IMPERVIOUS AREA: 32,883 SQ. FT.

(32,883 SQ. FT.) X (0.25 IN.) X (1 FT./12 IN.) = 685 CU. FT.

VOLUME PROVIDED = ((331 SQ. FT. @ EL. 60)+(81 SQ. FT. @ EL. 56)/2) X 4 FT. DEPTH = 824 CU. FT.

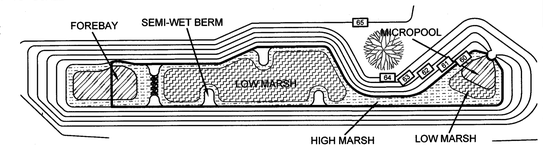
FIRST FLUSH CALCULATIONS

CONTRIBUTING IMPERVIOUS AREA: 24,539** SQ. FT.

24,539 SQ. FT. X 1.25 IN. X 1FT./12 IN. = 2,556 CU. FT. REQUIRED
**DOES NOT INCLUDE ROOF AREAS AS THEY WILL BE INFILTRATED

LOW MARSH: 1,238 SQ. FT. X 1 FT. = 1,238 CU. FT.
HIGH MARSH: 1,100 SQ. FT. X .5 FT. = 550 CU. FT.
MICROPOOL: 138 SQ. FT. X 1 FT. = 138 SQ. FT.
FOREBAY: 824 CU. FT.

TOTAL: 1,238 + 550 + 138 + 824 = 2,750 CU. FT.



FEATURE	REQUIRED %	% OF VOL. STORED
FOREBAY	10%	81%
HIGH MARSH	25%	54%
LOW MARSH	55%	121%
MICROPOOL	10%	14%

WATER QUALITY CALCULATIONS

POST 1-B:

*786 SQ. FT. X 0.5 IN. X 1 FT./12 IN. = 32.8 CU. FT.

PROVIDED:

RAIN GARDEN: 132 SQ. FT. X 1 FT = 132 CU. FT.

*ALL IMPERVIOUS AREA IN POST 1-B BESIDES 786 SQ. FT. OF PAVEMENT IS ROOF OR PATIO AND THUS DOES NOT CONTRIBUTE SIGNIFICANT TSS.

POST 1-A:

24,539** SQ. FT. X 0.5 IN. X 1FT./12 IN. = 1,022 CU. FT.
**DOES NOT INCLUDE ROOF AREAS AS THEY WILL BE INFILTRATED

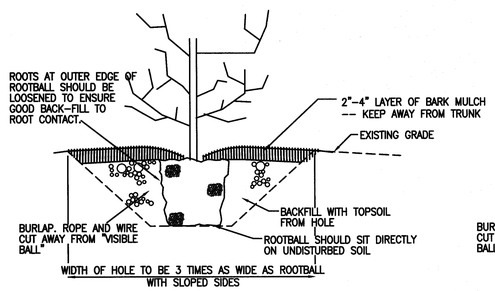
PROVIDED:

LOW MARSH: 1,238 SQ. FT. X 1 FT. = 1,238 CU. FT.
HIGH MARSH: 1,100 SQ. FT. X .5 FT. = 550 CU. FT.
MICROPOOL: 138 SQ. FT. X 1 FT. = 138 SQ. FT.
FOREBAY: 824 CU. FT.

TOTAL: 1,238 + 550 + 138 + 824 = 2,750 CU. FT.

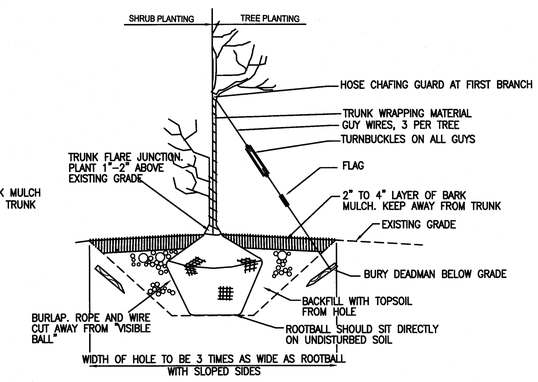
CONSTRUCTED POCKET WETLANDS CALCULATIONS

DETENTION BASIN AREA REQUIREMENTS (SQ. FT.):	AREA PROVIDED (OUT OF 2,752 SQ. FT.):
SEMI-WET AREA = 5% (138 SQ. FT.)	SEMI-WET AREA = 138 SQ. FT.
HIGH MARSH ZONE = 40% (1,100 SQ. FT.)	HIGH MARSH ZONE = 1,100 SQ. FT.
LOW MARSH ZONE = 45% (1,238 SQ. FT.)	LOW MARSH ZONE = 1,238 SQ. FT.
DEEP WATER ZONE = 10%	DEEP WATER ZONE = 469 SQ. FT.
FOREBAY = 5% (138 SQ. FT.)	FOREBAY = 331 SQ. FT
MICROPOOL = 5% (138 SQ. FT.)	MICROPOOL = 138 SQ. FT.



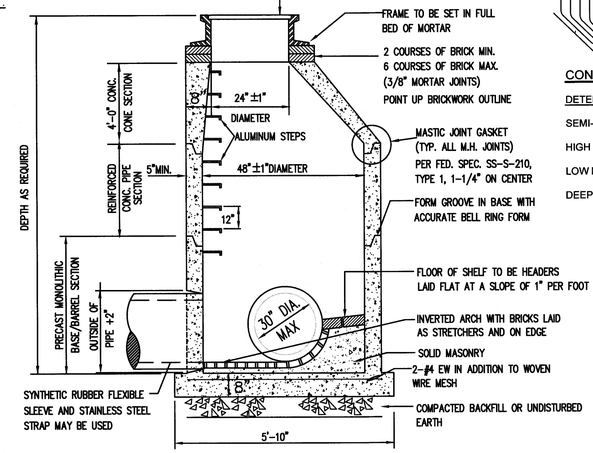
CONTAINER GROWN SHRUB AND TREE PLANTING DETAIL

NOT TO SCALE



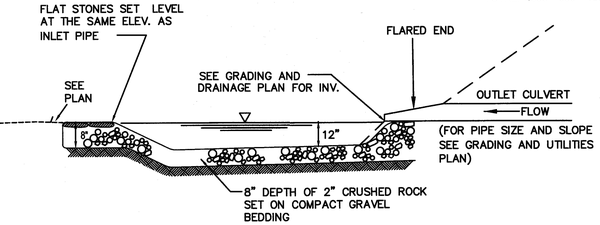
B&B TREE AND SHRUB PLANTING DETAIL

NOT TO SCALE



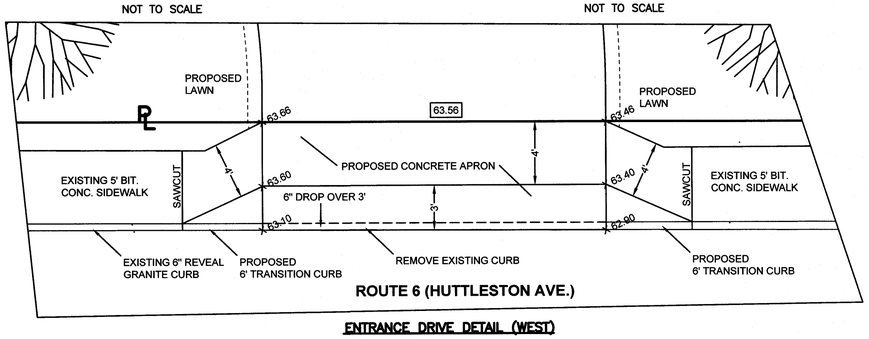
PRECAST CONCRETE SEWER MANHOLE

NOT TO SCALE



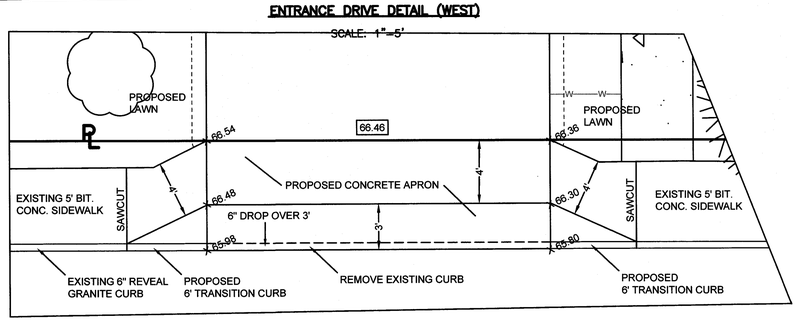
6'X6' SPLASH POOL

NOT TO SCALE



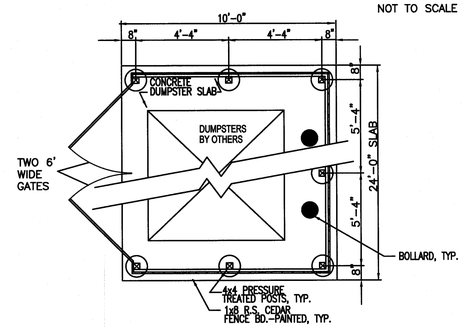
ENTRANCE DRIVE DETAIL (WEST)

SCALE: 1"=5'



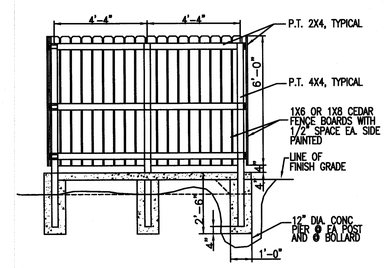
ENTRANCE DRIVE DETAIL (EAST)

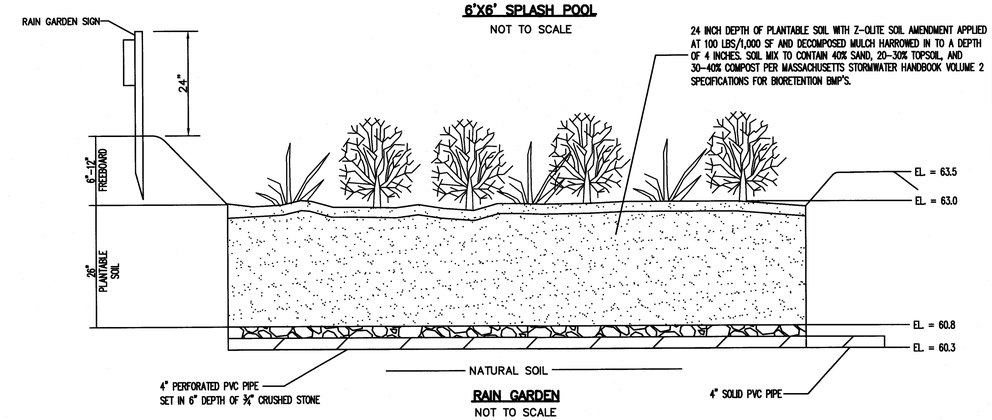
SCALE: 1"=5'



DUMPSTER ENCLOSURE

NOT TO SCALE





RAIN GARDEN

NOT TO SCALE

REV.	DATE	DESCRIPTION	BY	APP.
2	12/4/2019	RESPONSE TO COMMENTS	SWL	RJR
1	11/8/2019	RESPONSE TO COMMENTS	SWL	RJR

DRAWING TITLE: DETAIL SHEET-2

PROJECT: MAP 31- LOT 117C, FAIRHAVEN, MASSACHUSETTS

CLIENT: DANA LEWIS, FAIRHAVEN, MASSACHUSETTS

* CIVIL ENGINEERING
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* ENVIRONMENTAL ASSESSMENT

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APPROVED BY:	RJR
SHEET NO.	6 OF 7
PROJECT NO.	2729-01-01

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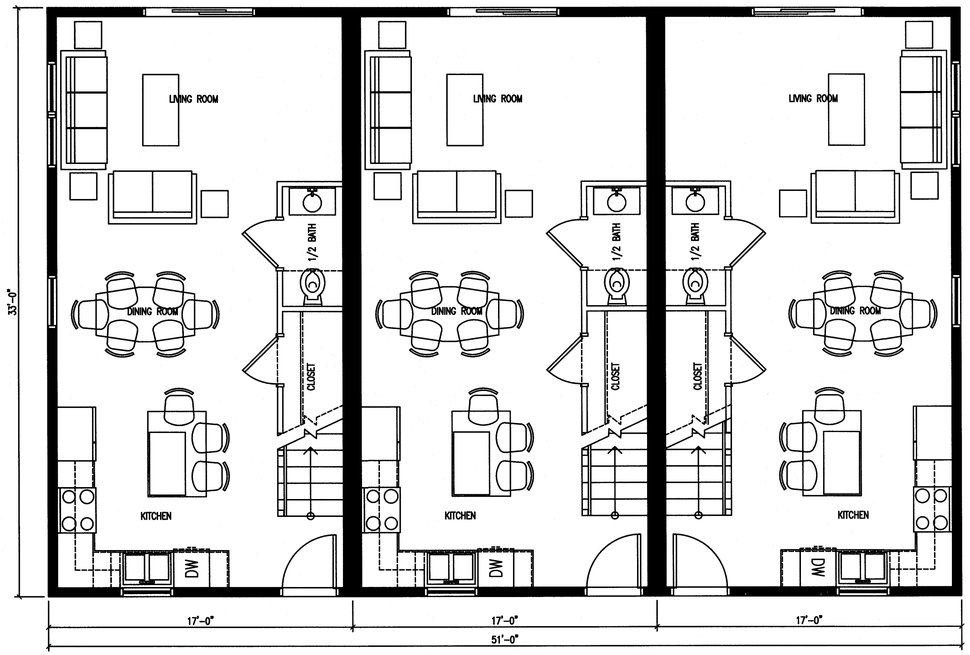
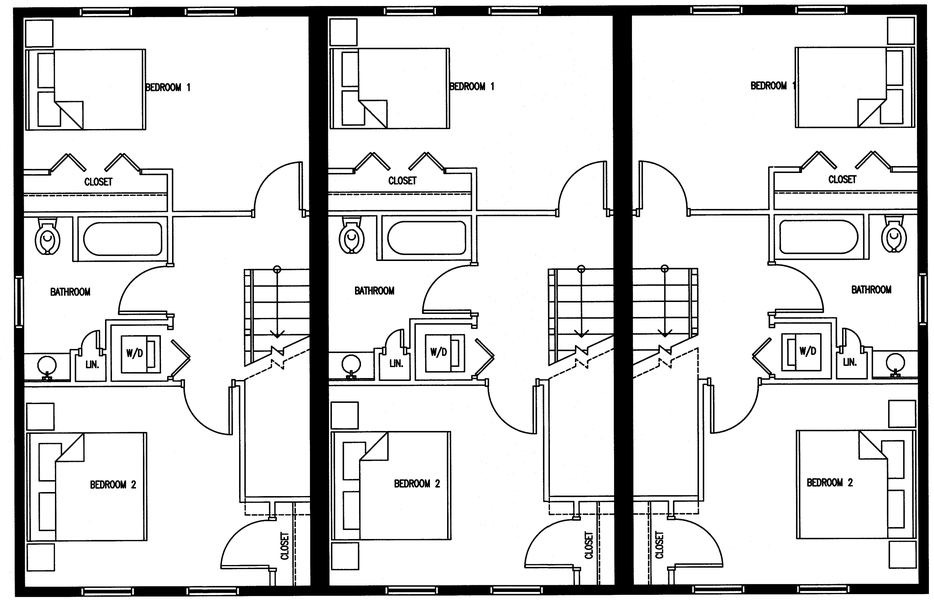


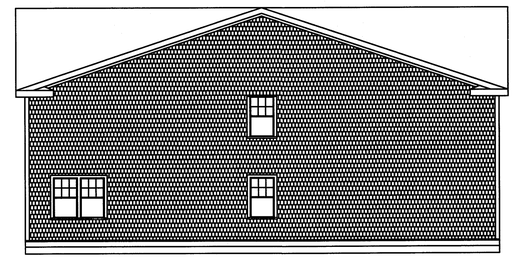
1 A-1.1 PROPOSED FIRST FLOOR PLAN
1/4"=1'-0"



1 A-1.2 PROPOSED SECOND FLOOR PLAN
1/4"=1'-0"

1 A-2.0 PROPOSED FRONT ELEVATION
1/8"=1'-0"

1 A-2.1 PROPOSED REAR ELEVATION
1/8"=1'-0"



1 A-2.2 PROPOSED SIDE ELEVATION
1/8"=1'-0"

REV	DATE	DESCRIPTION	BY	APP.
1	11/8/2019	RESPONSE TO COMMENTS	SWL	RJR

DRAWING TITLE: ARCHITECTURALS

PROJECT: MAP 31- LOT 117C
FAIRHAVEN, MASSACHUSETTS

CLIENT: DANA LEWIS
FAIRHAVEN, MASSACHUSETTS

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