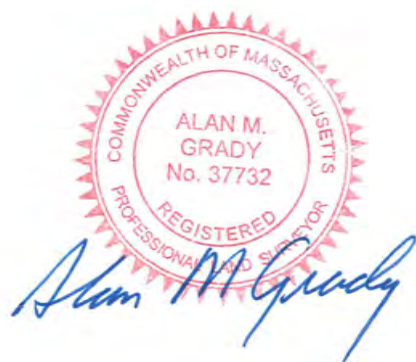
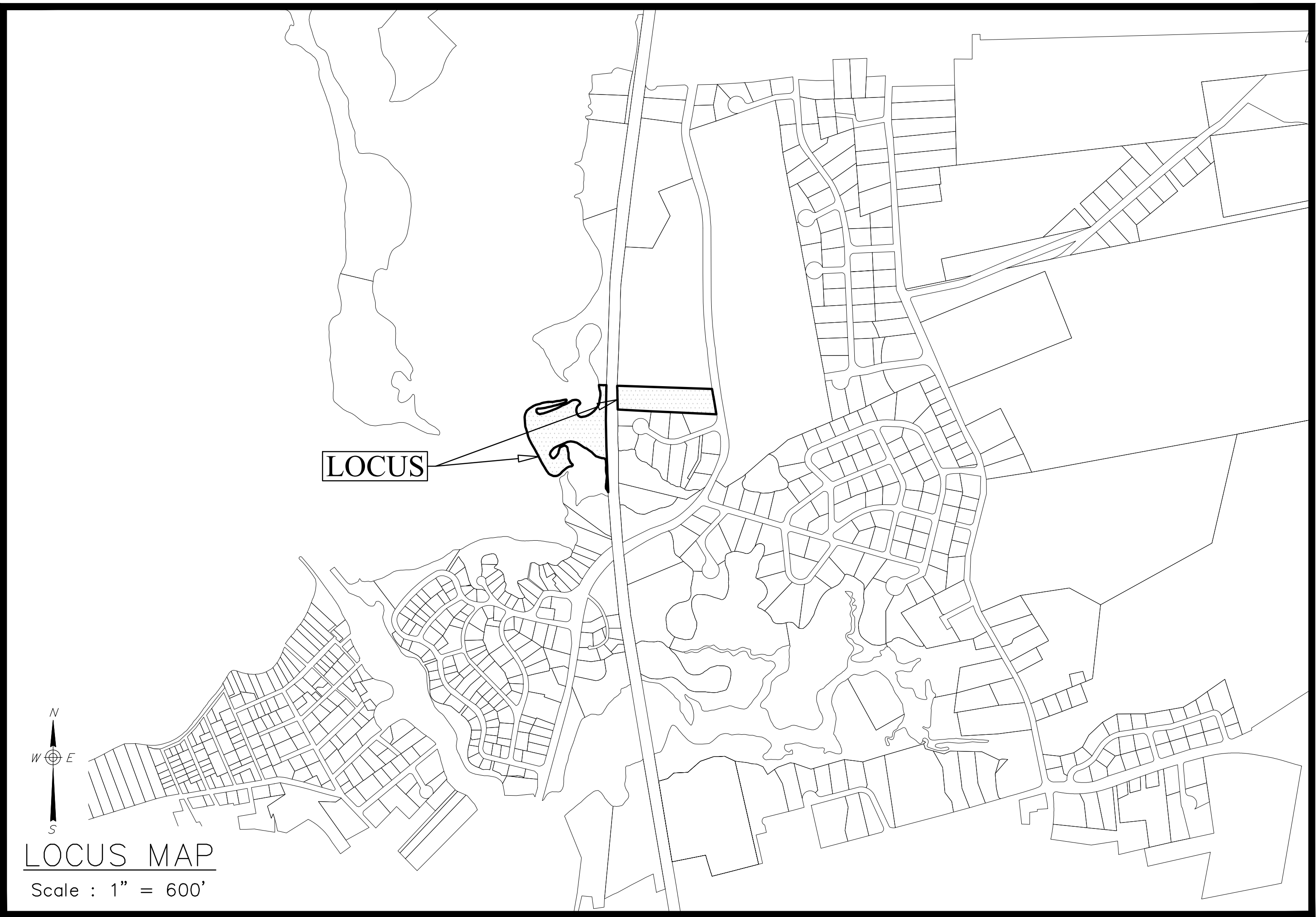


PROPOSED STORM WATER IMPROVEMENTS
AT
MONKS PARK | HOG HOUSE POINT
BOURNE, MASSACHUSETTS

MARCH 1, 2022

PAGE	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS KEY SHEET
3	GRADING & DRAINAGE SHEET
4	CONSTRUCTION NOTES AND DETAILS
5	CONSTRUCTION NOTES AND DETAILS

EXISTING		PROPOSED	
100	MINOR CONTOUR	100	MAJOR/MINOR CONTOUR
99	MAJOR CONTOUR	99x9	SPOT ELEVATION
100x1	SPOT ELEVATION		LIMIT OF WORK/EDGE OF CLEARING
TP10	TEST PITS	X	SILT FENCE
	EDGE OF CLEARING	- - -	FILTREXX SOXX BARRIER
W	WATER SERVICE	W	WATER SERVICE
	WATER GATE		WATER GATE
	WATER HYDRANT		HYDRANT
G	GAS SERVICE	G	GAS SERVICE
	GAS GATE	E	ELECTRIC SERVICE
	ELECTRIC MANHOLE		DRAIN LINE
	TELEPHONE MANHOLE		DRAIN MANHOLE
	DRAIN LINE		CATCH BASIN
	DRAIN MANHOLE	VCC	VERTICAL CONCRETE CURB
	CATCH BASIN	CCB	CAPE COD BERM
S	SEWER LINE	S	SEWER SERVICE
	SEWER MANHOLE		BUILDING EGRESS
	HIGHWAY/ROAD SIGN		EARTH BERM
	BUILDING EGRESS		GRAVEL/DIRT SURFACE



NO.	DATE	DESCRIPTION	BY

OWNER / APPLICANT:

TOWN OF BOURNE
24 PERRY AVENUE
BOURNE, MA 02532

CIVIL ENGINEER / LAND SURVEYOR:



49 HERRING POND ROAD 19 OLD SOUTH ROAD 905 SOUTH MAIN ST. SUITE 204
BUZZARDS BAY, MA 02532 NANTUCKET, MA 02554 MANSFIELD, MA 02048
(Tel) 508.833.0070 (Tel) 508.325.0044 (Tel) 508.618.3029
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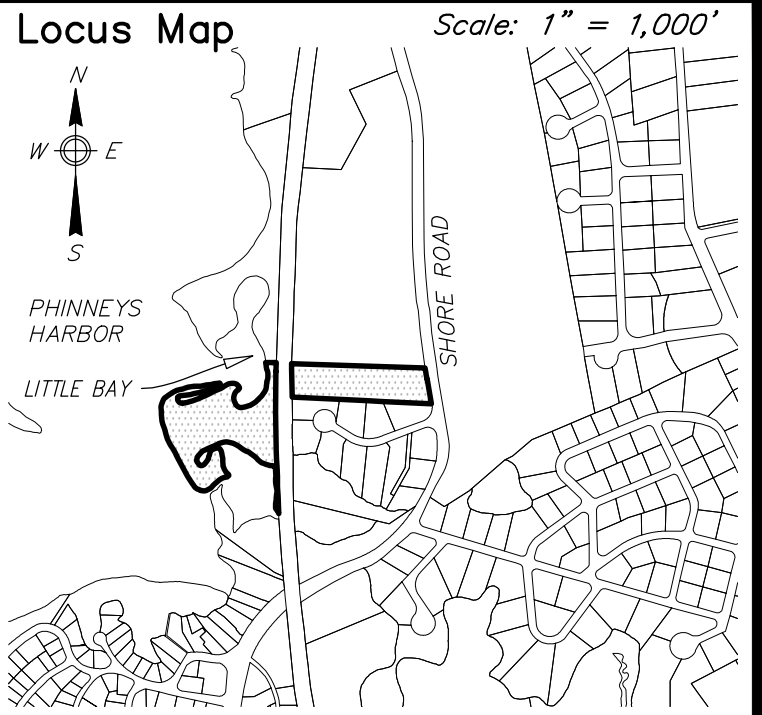
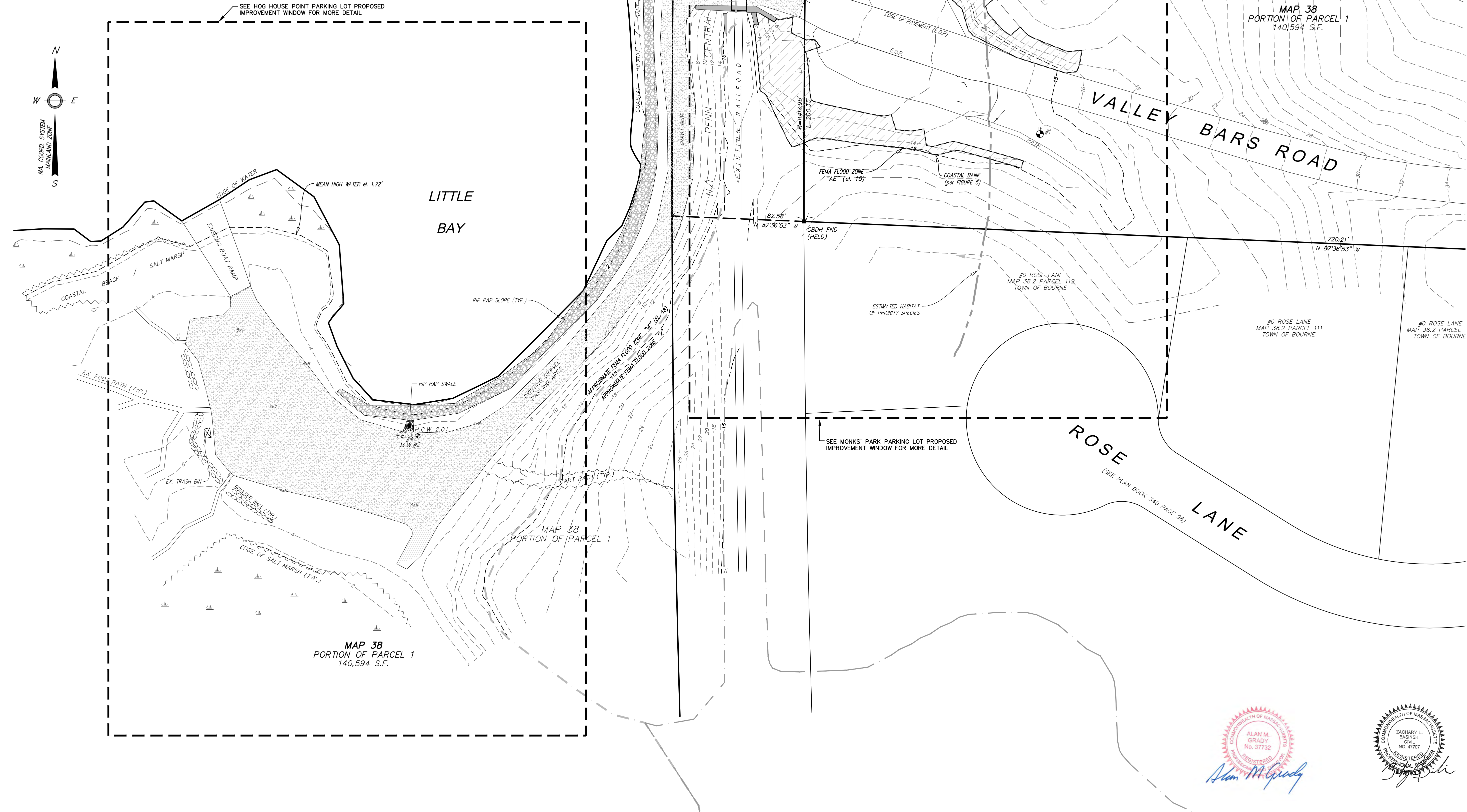
Notes

- LOCUS: MONKS PARK / VALLEY BARS ROAD
MAP 38 PARCEL 1
- OWNER: TOWN OF BOURNE
24 PERRY AVENUE
BUZZARDS BAY, MA 02532
- DEED REF: BOOK 1082 PAGE 213
- PLAN REF: Plan Bk: 58 Pg: 77
- LOCUS PARTIALLY FALLS WITHIN A SPECIAL FLOOD HAZARD ZONE "AE" (EL. 15) & "VE" (EL. 18) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25001C-0503-J dated 07/16/2014.
- LOCUS PARTIALLY FALLS WITHIN THE NATURAL HERITAGE and ENDANGERED SPECIES PROGRAM (NHESP) AREAS OF ESTIMATED HABITATS OF RARE WILDLIFE and PRIORITY HABITATS OF RARE SPECIES.
- SITE IS PARTIALLY LOCATED WITHIN A COASTAL BARRIER RESOURCE SYSTEM (EST. 11/16/1990) PER FEMA FLOOD INSURANCE RATE MAP No. 25001C-0503-J dated 7/16/2014.
- THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-800-322-4844.

SOIL LOGS

DATE PERFORMED: SEPTEMBER 30, 2021
SOIL EVALUATOR: ZACHARY L. BASINSKI, PE

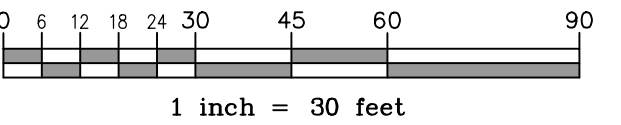
TP NO.	#1	TP NO.	#2	TP NO.	#3	TP NO.	#4
GRD. EL.	13.1	GRD. EL.	8.6	GRD. EL.	4.0	GRD. EL.	4.5
GW. EL.	3.1	GW. EL.	0.6	GW. EL.	2.3 PER HOBO LOG	GW. EL.	2.0 PER HOBO LOG
0"	FILL / HTM SAND 10YR 5/3	0"	FILL / HTM SAND 10YR 3/3	0"	FILL / HTM SAND 10YR 3/3	0"	FILL / HTM SAND 10YR 3/3
21"	A LOAMY SAND 10YR 3/2	24"	B LOAMY SAND 10YR 4/4	5"		30"	
27"	B LOAMY SAND 10YR 4/4	72"	C1 LOAMY SAND 10YR 5/6	28"	C1 VERY COARSE SAND	30"	C1 VERY COARSE SAND
60"	C1 LOAMY SAND 10YR 5/6	90"	C2 MEDIUM SAND 2.5Y 5/4	36"	WATER WEeping	48"	WATER WEeping
96"	C2 MEDIUM SAND 2.5Y 5/4	96"	PEAT/SAND 2.5Y 5/4	42"	WATER WEeping	60"	WATER WEeping
120"	WATER WEeping	114"	WATER WEeping	42"	WATER WEeping	60"	WATER WEeping
132"	WATER WEeping	114"	WATER WEeping	42"	WATER WEeping	60"	WATER WEeping



Notes

- LOCUS: MONKS PARK / VALLEY BARS ROAD MAP 38 PARCEL 1
- OWNER: TOWN OF BOURNE 24 PERRY AVENUE BUZZARDS BAY, MA 02532
- DEED REF: BOOK 1082 PAGE 213
- PLAN REF: Plan Bk: 58 Pg: 77
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PLAN SCALE



Prepared By:

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Sheet Title:

**EXISTING CONDITIONS |
KEY SHEET PLAN**

Project:

**PROPOSED STORM WATER
IMPROVEMENTS**

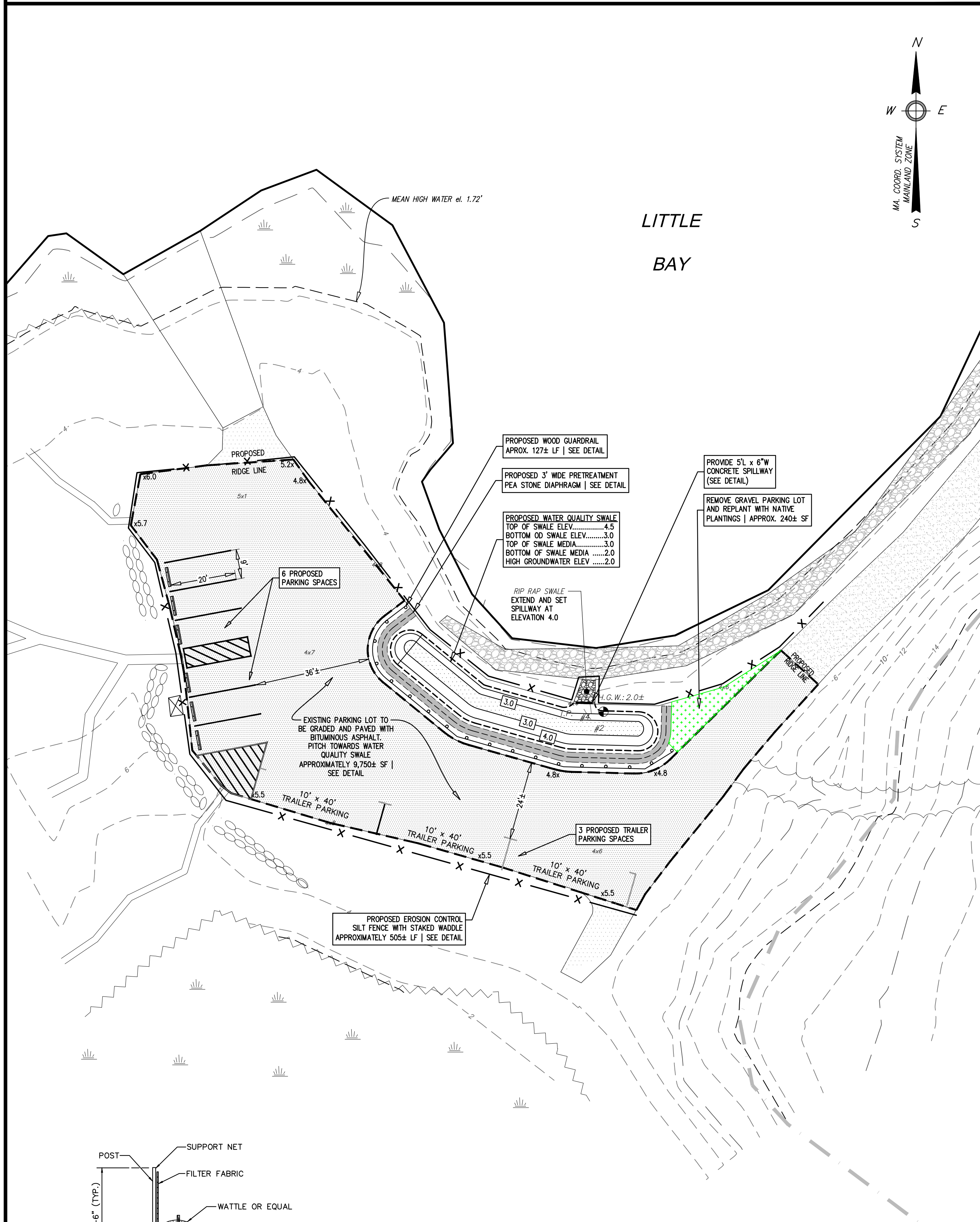
PREPARED FOR:

TOWN OF BOURNE**MONK'S PARK | HOG HOUSE POINT
MAP 38 LOT 1**

No. Date Revision Description By

Date: MARCH 1, 2022 Drawn: ERC/RED/BEI Checked: ZLB/AMG Sheet: 2 of 5

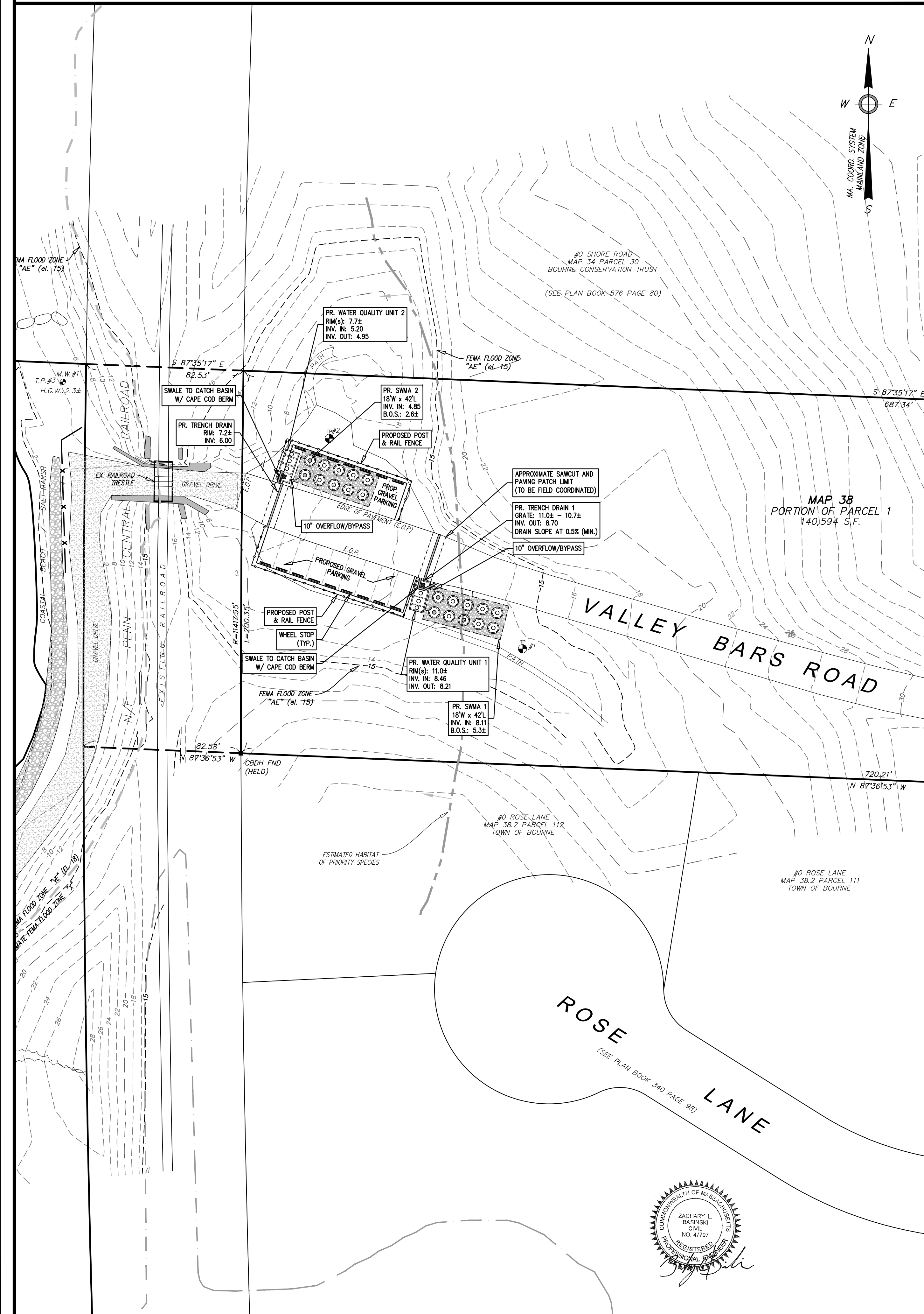
SCALE: 1"=20'



SILTATION FENCE DETAIL
NOT TO SCALE

1. NE WETWIK (WETLAND SEED MIX) - SPREAD AT A RATE OF 1 POUND PER 2800 SF. ALONG THE BOTTOM AND SIDES OF WETLAND. NE WETWIK SUPPLIED BY NEW ENGLAND WETLAND PLANTS, INC., 620 WEST STREET AMHERST, MA
2. FINAL PLANT SPECIES AND QUANTITIES TO BE REVIEWED, AND APPROVED BY THE BOURNE COMMISSION PRIOR TO INSTALLATION.
3. CONTRACTOR TO PROVIDE 2 YEAR WARRANTY ON ALL INSTALLED PLANTS. WARRANTY SHALL START UPON ACCEPTANCE OF PROJECT SITE BY OWNER AT COMPLETION OF PROJECT AND WILL RUN FOR TWO FULL GROWING SEASONS. ANY PLANTS THAT DIE OR ARE DAMAGED ARE TO BE REPLACED.

SCALE: 1"=20'



1. DISTURBANCE OF SOIL SURFACES IS REGULATED BY STATE LAW. ALL WORK SHALL COMPLY WITH THE CRITERIA OUTLINED TO PREVENT OR MINIMIZE SOIL EROSION.
2. THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL DEVICES IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL COMPLY WITH ALL OF THE TOWN OF BOURNE, THE STATE OF MASSACHUSETTS AND FEDERAL REGULATIONS IN CONSTRUCTING THE EROSION AND SEDIMENTATION CONTROLS INDICATED ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF TEMPORARY DRAINAGE SWALES, TEMPORARY SEDIMENT BASINS AND OTHER METHODS TO MANAGE THE STORMWATER RUNOFF ON AND FROM THE SITE DURING THE DURATION OF SITE CONSTRUCTION.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ROADS, CONTROL DUST, AND TAKE WHATEVER MEASURES NECESSARY TO ENSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
5. THE CONTRACTOR IS RESPONSIBLE FOR TIMELY INSTALLATION, INSPECTION, REPAIR OR REPLACEMENT OF EROSION CONTROL DEVICES TO ENSURE PROPER OPERATION.
6. THE CONTRACTOR SHALL INSPECT AND REPAIR EROSION SEDIMENT CONTROL DEVICES AT THE END OF EACH WORKING DAY AND AFTER EACH STORM.
7. ANY EXISTING OR PROPOSED STORMWATER DRAINAGE STRUCTURES WHICH MAY BE SUBJECT TO SEDIMENTATION PROCESSES, INCLUDING CATCH BASINS (GRATES), INLET/OUTLET STRUCTURES, AND OUTFALL AREAS SHALL BE PROTECTED WITH CRUSHED GRAVEL, CRUSHED STONE FILTERS, OR SILT SACKS THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD, AS DIRECTED.
8. ALL TEMPORARY SOIL STOCKPILE AREAS AND TRENCH EXCAVATION SPOILS SHALL BE PROTECTED WITH A ROW OF STAKED HAYBALES AND/OR SILT FENCE AND WITH A SPREAD HAY MULCH AND WOVEN NETTING (OR EXCESSOR EROSION CONTROL MATTING) WHEN LEFT EXPOSED FOR LONG PERIODS OF TIME. ANY SUCH STOCKPILE AREAS SHALL BE PLACED IN AN APPROPRIATE UPLAND LOCATION AND COMPLETELY REMOVED PRIOR TO PROJECT CLOSE-OUT.
9. THE EROSION CONTROL MEASURES SHOWN SHOULD BE CONSIDERED MINIMUM STANDARDS.
10. A SILT FENCE BARRIER IS TO BE INSTALLED AT THE PROPOSED DOWN GRADIENT TOE OF SLOPE AT ALL LOCATIONS WHERE EARTHWORK IS PROPOSED.
11. FILTER FABRIC SHALL BE "MIRAFI 140 N" PHILLIPS "SUPAC S-P" OR APPROVED EQUAL. CONTRACTOR SHALL ADHERE TO MANUFACTURER SPECIFICATIONS FOR PLACEMENT AND INSTALLATION.
12. THE CONTRACTOR MUST KEEP ONSITE, AT ALL TIMES, ADDITIONAL SILT FENCE FOR EMERGENCY INSTALLATION OR FOR INSTALLATION AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE, THE ENGINEER, OR THE TOWN OF ROCKLAND REPRESENTATIVE.
13. WHEN SILT HAS BUILT UP TO ONE-HALF THE HEIGHT OF THE EROSION CONTROL, IT IS TO BE REMOVED.
14. EXPOSED SLOPES GREATER THAN 5' IN LENGTH ARE TO HAVE HAYBALE CHECK DAMS, TERRACES AND/OR MULCHING INSTALLED IN ORDER TO REDUCE EROSION AND TO ENHANCE SURFACE STABILIZATION. IF CHECK DAMS ARE USED THEY SHOULD BE PLACED APPROXIMATELY 50' O/C, PARALLEL WITH THE FACE OF THE SLOPE.
15. AT THE END OF CONSTRUCTION ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS. HAYBALES TO BE REMOVED AND DISPOSED OF IN ACCORDANCE TO ALL LOCAL REQUIREMENTS.
16. ALL EARTHEN PERIMETER SIDE SLOPES THAT ARE GRADED AND ARE NOT SCHEDULED FOR PERMANENT STABILIZATION WITHIN 30 DAYS OF COMPLETION ARE TO BE COVERED WITH HAY OR WOOD CHIP MULCH, BIODEGRADABLE EROSION CONTROL FABRIC, OR HYDROSEEDING WITH A TEMPORARY GRASS MIXTURE IF WEATHER CONDITIONS ARE NOT CONDUCTIVE TO GERMINATION OF THE SEED.

0 4 8 12 16 20 30 40 60

1 inch = 20 feet

Prepared By:



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Sheet Title:

PROPOSED LAYOUT, GRADING & DRAINAGE PLAN

Project:

Project: **PROPOSED STORM WATER IMPROVEMENTS**
PREPARED FOR:
TOWN OF BOURNE
MONK'S PARK | HOG HOUSE POINT
MAP 38 LOT 1

No.	Date	Revision Description		By
Date:		Drawn:	Checked:	Sheet:
MARCH 1, 2022		ERC/RED/BEI	ZLB/AMG	3 of 5

GENERAL CONSTRUCTION NOTES:

- ALL NECESSARY POLICE DETAIL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS.
- ALL EXISTING CONDITIONS SHOWN SHALL BE CONSIDERED APPROXIMATE AND ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER PRIOR TO INSTALLING ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES, AND WHEREVER POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON 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 IN THE TOWN, AND "DIGSAFE" (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK IN PREVIOUSLY UNALTERED AREAS TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE CONFLICTS BETWEEN THE PROPOSED UTILITIES AND FIELD LOCATED UTILITIES AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES NOT COMPLETELY OR INACCURATELY SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCURATE RECORDS OF THE LOCATION AND ELEVATION OF ALL WORK INSTALLED AND EXISTING UTILITIES FOUND DURING CONSTRUCTION FOR THE PREPARATION OF THE AS-BUILT PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EXISTING UTILITIES IN WORKING ORDER, AND FREE FROM DAMAGE DURING THE ENTIRE DURATION OF THE PROJECT. ALL COST RELATED TO THE REPAIR OF UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL UTILIZE ALL PRECAUTIONS AND MEASURES TO ENSURE THE SAFETY OF THE PUBLIC, ALL PERSONNEL, AND PROPERTY DURING CONSTRUCTION IN ACCORDANCE WITH OSHA STANDARDS, INCLUDING BARRICADES, SAFETY LIGHTING, CONES, POLICE DETAIL AND/OR FLAG MEN AS DETERMINED NECESSARY BY THE ENGINEER AND/OR TOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POLICE DETAIL AND FOR COORDINATING WITH THE LOCAL OR STATE POLICE DEPARTMENT FOR ALL REQUIRED POLICE DETAIL.
- ALL TRENCHING WORK WITHIN A ROADWAY SHALL BE COORDINATED WITH THE PROPER LOCAL & STATE AGENCY. TRENCH SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING ANY LOCAL AND/OR STATE PERMITS REQUIRED FOR THE TRENCH WORK. THIS WORK MAY BE REQUIRED TO TAKE PLACE OUTSIDE OF NORMAL HOURS OF OPERATION FOR THE FACILITY, THE CONTRACTOR SHALL PLAN ACCORDINGLY.
- THE CONTRACTOR SHALL MAKE ALL CONNECTION ARRANGEMENTS WITH UTILITY COMPANIES, AS REQUIRED.
- ALL IMPORTED MATERIAL, IF REQUIRED, SHALL BE CLEAN. NO MATERIAL WILL BE ACCEPTED FROM AN EXISTING OR FORMER 21E SITE AS DEFINED BY THE MASSACHUSETTS CONTINGENCY PLAN 310 CMR 40.0000.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS DURING CONSTRUCTION INCLUDING BENCHMARK LOCATIONS AND ELEVATIONS AT CRITICAL AREAS. THE LOCATION OF ALL CONTROL POINTS AND BENCHMARKS SHALL BE COORDINATED WITH THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL GRADE STAKES SET BY THE SURVEYOR. GRADE STAKES SHALL REMAIN UNTIL A FINAL INSPECTION OF THE ITEM HAS BEEN COMPLETED BY THE ENGINEER. ANY RE-STAKING OF PREVIOUSLY SURVEYED SITE FEATURES SHALL BE THE RESPONSIBILITY (INCLUDING COSTS) OF THE CONTRACTOR.
- UNLESS OTHERWISE SPECIFIED ON THE PLANS AND DETAILS/SPECIFICATIONS, ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE MOST RECENT VERSION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (THE MASSACHUSETTS HIGHWAY DEPARTMENT 1988 STANDARD SPECIFICATION FOR HIGHWAYS AND BRIDGES, THE 2002 SUPPLEMENTAL SPECIFICATIONS AND THE 2006 SPECIAL PROVISIONS).
- CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS REGARDING NOISE, VIBRATION, DUST, SEDIMENTATION CONTAINMENT, AND TRENCH WORK.
- SOLID WASTES SHALL BE COLLECTED AND STORED IN A SECURED DUMPSTER. THE DUMPSTER SHALL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS.
- THE CONTRACTOR SHALL RESTORE ALL SURFACES EQUAL TO THEIR ORIGINAL CONDITION AFTER CONSTRUCTION IS COMPLETE. AREAS NOT DISTURBED BY CONSTRUCTION SHALL BE LEFT NATURAL. THE CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO SHRUBS, TREES, OTHER LANDSCAPING, AND/OR NATURAL FEATURES. WHEREAS THE PLANS DO NOT SHOW ALL LANDSCAPE FEATURES, EXISTING CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR IN ADVANCE OF THE WORK. ANY DAMAGED LANDSCAPING, SHRUBS AND/OR TREES SHALL BE REPAIRED AND/OR REPLACED AT THE SOLE COST OF THE CONTRACTOR.
- ALL UNPAVED AREAS DISTURBED BY THE WORK SHALL HAVE A MINIMUM OF 6-INCHES OF LOAM INSTALLED AND BE SEED WITH NATIVE SEED AS SHOWN ON THE PLAN AND/OR DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING ANY LOAM AND SEEDS AREAS UNTIL PLANT GROWTH IS ESTABLISHED AND APPROVED BY THE ENGINEER AND/OR OWNER.
- ALL PROPOSED STRUCTURES SHALL BE DESIGNED BY THEIR MANUFACTURERS FOR AASHTO H-20 LOADING. PRECAST CONCRETE SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED HEREIN.
- LEDGE OR BOULDER EXCAVATION IS NOT ANTICIPATED FOR THIS SITE. HOWEVER, THE CONTRACTOR SHALL PROVIDE A UNIT PRICE COST IN CUBIC YARD MEASURE FOR LEDGE AND/OR BOULDER REMOVAL. LEDGE AND/OR BOULDERS LESS THAN 1 CUBIC YARD IN SIZE BASED ON THE AVERAGE DIMENSIONS WILL NOT BE CONSIDERED PAYABLE ROCK. UNIT PRICE SHALL BE GIVEN FOR BOTH ON AND OFF SITE DISPOSAL COST OF REPLACEMENT MATERIAL SHALL BE INCLUDED IF ADDITIONAL FILL MATERIAL IS REQUIRED.
- THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE TO AN APPROVED DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.
- CONCRETE, ASPHALT OR CONSTRUCTION VEHICLES SHALL NOT BE WASHED ONSITE. ANY CEMENT, CONCRETE AND/OR DEBRIS LEFT IN THE DISTURBED AREA SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
- BURIAL OF ANY STUMPS, SOLID DEBRIS, AND/OR STONES/BOULDERS ONSITE IS PROHIBITED. NO ROAD SALT OR OTHER DE-ICING CHEMICALS SHALL BE USED ON THE PARKING AREAS, DURING OR AFTER CONSTRUCTION.
- IF ANY DEVIATION OR ALTERATION OF THE WORK PROPOSED ON THESE DRAWINGS IS REQUIRED, THE CONTRACTOR IS TO IMMEDIATELY CONTACT AND COORDINATE WITH THE ENGINEER AND OWNER. ANY WORK REQUIRED TO BE MODIFIED, THAT WAS NOT PRE-APPROVED BY THE OWNER AND/OR ENGINEER SHALL BE REMOVED AND/OR CORRECTED AT THE CONTRACTOR'S SOLE EXPENSE.
- AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. A THOROUGH INSPECTION OF ALL THE WORK PERIMETER IS TO BE MADE AND ALL DISCARDED MATERIALS, BLOWN OR WATER CARRIED DEBRIS, SHALL BE COLLECTED AND REMOVED FROM THE SITE.

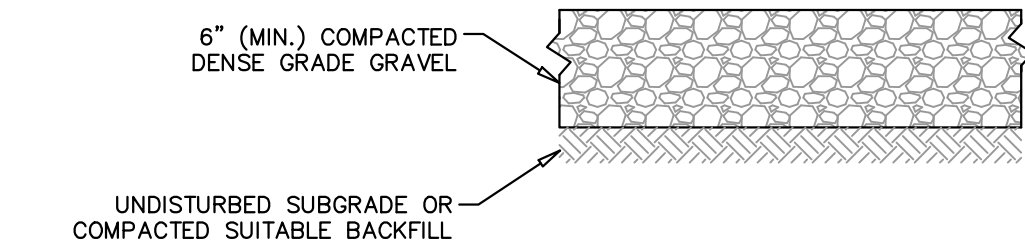
GENERAL GRADING & DRAINAGE NOTES:

- ALL SITE GRADES TO BE ESTABLISHED BY A REGISTERED LAND SURVEYOR.
- ALL CUT AND FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AND/OR GRAVEL AREAS AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE TRANSITION AT LIMIT OF WORK.
- CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
- PROPOSED ELEVATIONS ARE SHOWN TO FINISH SITE GRADE UNLESS NOTED OTHERWISE.
- BACKFILL ADJACENT TO PIPES AND STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED SIX INCHES IN THICKNESS AND COMPACTED TO A DENSITY OF 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/- 2% OF OPTIMUM. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99. TESTING OF BACKFILL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COMPACTION TESTING RESULTS SHALL BE PROVIDED TO THE ENGINEER AND OWNER.

STORMWATER FACILITY OPERATION & MAINTENANCE:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES UNTIL SUCH TIME THAT THE PARKING LOT, AND ASSOCIATED UTILITIES ARE ACCEPTED BY THE OWNER AND THE ENGINEER.
- THE CONTRACTOR SHALL INSPECT AND RESTORE/CLEAN ALL FACILITIES (INLETS, MANHOLES, WATER QUALITY SWALES RAIN GARDENS, ETC.) OF SEDIMENT AND DEBRIS PRIOR TO THE OWNER'S ACCEPTANCE.
- ALL SEDIMENT AND DEBRIS SHALL BE DISPOSED OF PROPERLY IN A PRE-APPROVED LOCATION.
- THE CONTRACTOR SHOULD REFER TO THE OPERATION & MAINTENANCE PLAN FOR ADDITIONAL INFORMATION PERTAINING TO STORMWATER FACILITY OPERATION AND MAINTENANCE REQUIREMENTS AND SHALL MAINTAIN A WORKING COPY ON SITE AT ALL TIMES.
- ALL STORMWATER FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR AFTER EVERY MAJOR RAINFALL EVENT OF 1" OR GREATER FOR THE ENTIRE DURATION OF THE CONSTRUCTION PROJECT AND THE FIRST 3 MONTHS AFTER CONSTRUCTION TO ENSURE PROPER STABILIZATION AND CONSTRUCTION. ANY REPAIRS REQUIRED TO REPAIR THE SITE AFTER ANY MAJOR RAIN EVENT SHALL BE THE SOLE RESPONSIBILITY AND COST OF THE CONTRACTOR UNTIL THE PROJECT IS ACCEPTED BY THE OWNER.

NOTE: OPERATION AND MAINTENANCE CHECKLIST AVAILABLE UPON REQUEST

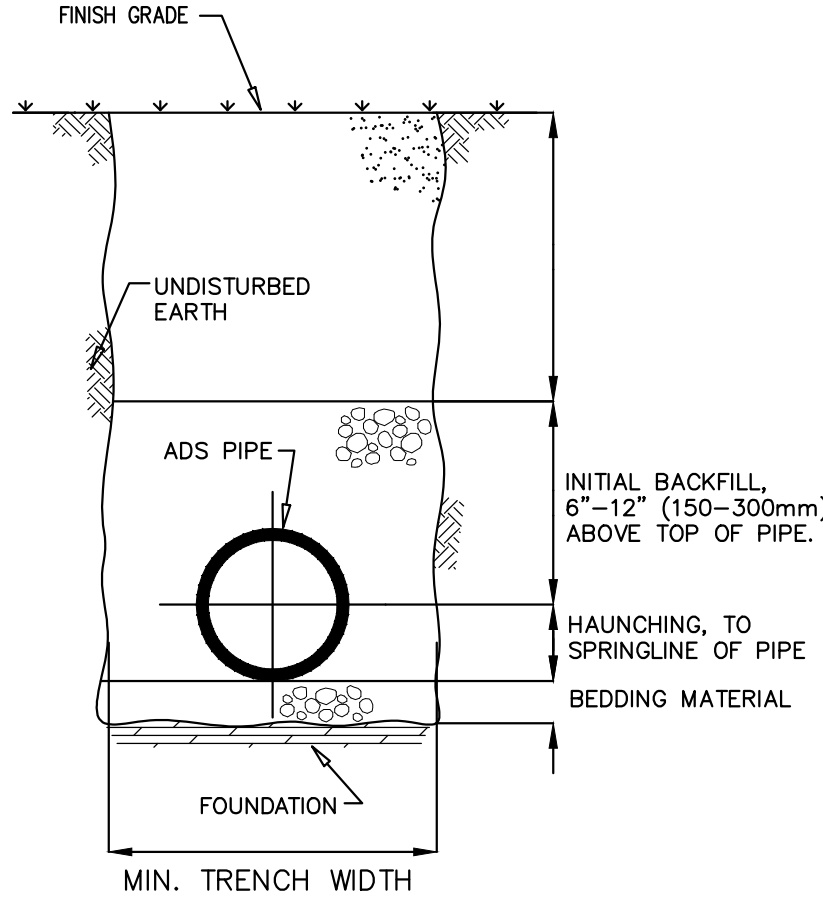


NOTES:

- SANDY LOAM and/or LOAMY SAND TOPSOIL MATERIAL SHALL BE EXCAVATED FROM ALL PARKING AREAS PRIOR TO SUB-BASE INSTALLATION.
- SUB-GRADE (EXISTING MATERIAL) SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE and/or COARSE SAND, FREE FROM LOAM AND CLAY TO A DEPTH NOT LESS THAN 4 FEET BELOW THE FINISH SURFACE.
- SUBGRADE FILL SHALL BE COMPACTED TO 95% COMPACTION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

MONK'S PARK GRAVEL PARKING SECTION

NOT TO SCALE



NOTES:

- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321. "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.

- BEDDING, HAUNCHING & INITIAL BACKFILL: SUITABLE MATERIAL SHALL CONSIST OF CLEAN, HARD, PARTICLES OF GRAVEL MEETING THE FOLLOWING:

SIEVE SIZES	PASSING
3/4"	85-95%
NO. 4	5-15%
NO. 8	0-2%

MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

MINIMUM BEDDING THICKNESS SHALL BE 4" (100MM) FOR 4"-24" (100-600MM) AND 42"-48" (1050-1200MM) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150MM) FOR 30"-36" (750-900MM) CPEP.

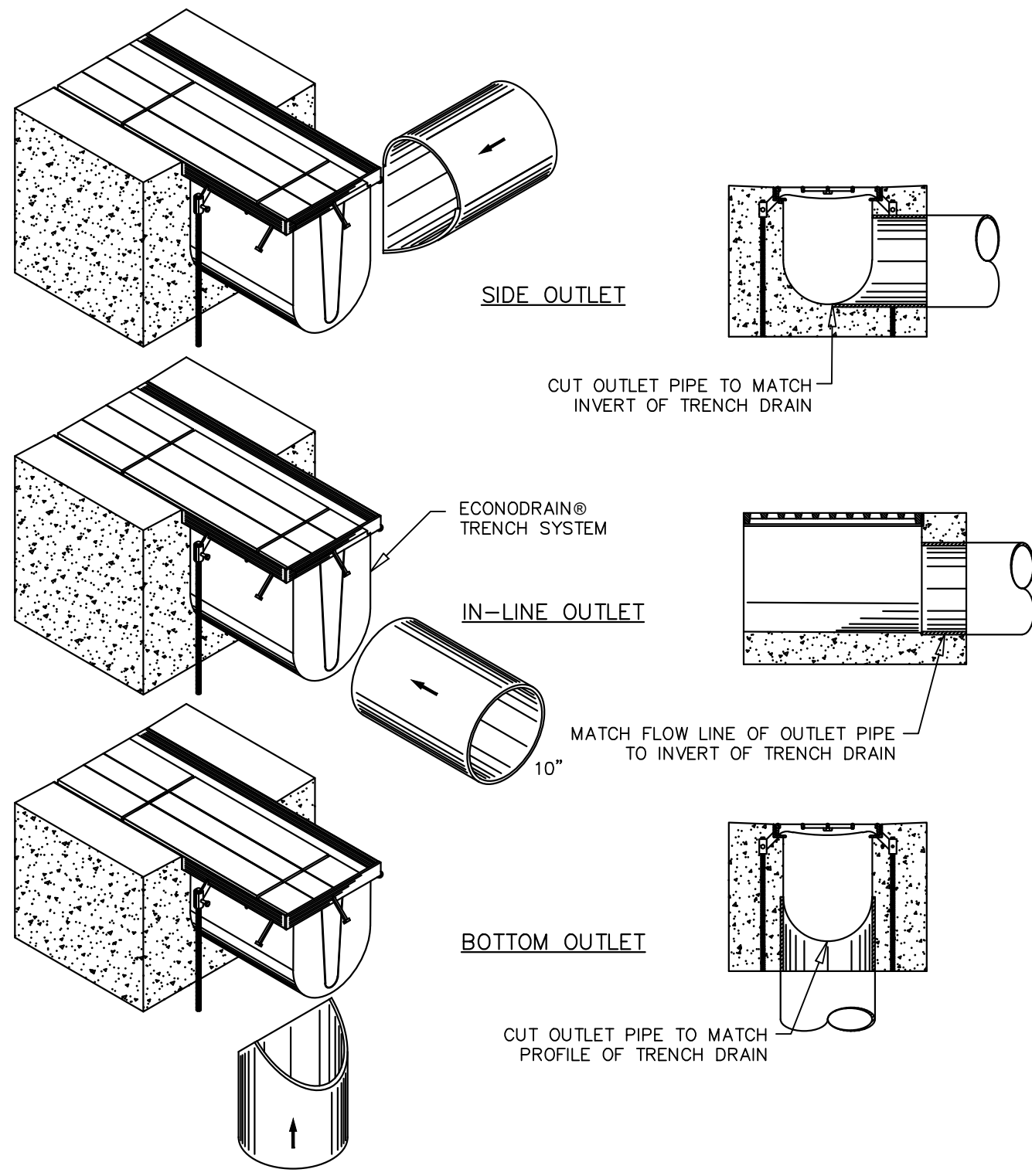
NOMINAL ø in (mm)	MIN. RECOMMENDED TRENCH WIDTH in (mm)
8 (200)	25 (630)
10 (250)	28 (710)
12 (300)	31 (790)
15 (375)	34 (860)
18 (450)	39 (990)

SURFACE LIVE LOADING CONDITION	COVER in (mm)
H25 (FLEXIBLE PAVEMENT)	12 (300)
H25 (RIGID PAVEMENT)	12 (300)
E80 RAILWAY	24 (610)
HEAVY CONSTRUCTION	48 (1220)

*TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION

TRENCH CROSS-SECTION & A.D.S. PIPE INSTALLATION DETAIL

NOT TO SCALE



NOTES TO THE SPECIFIER:

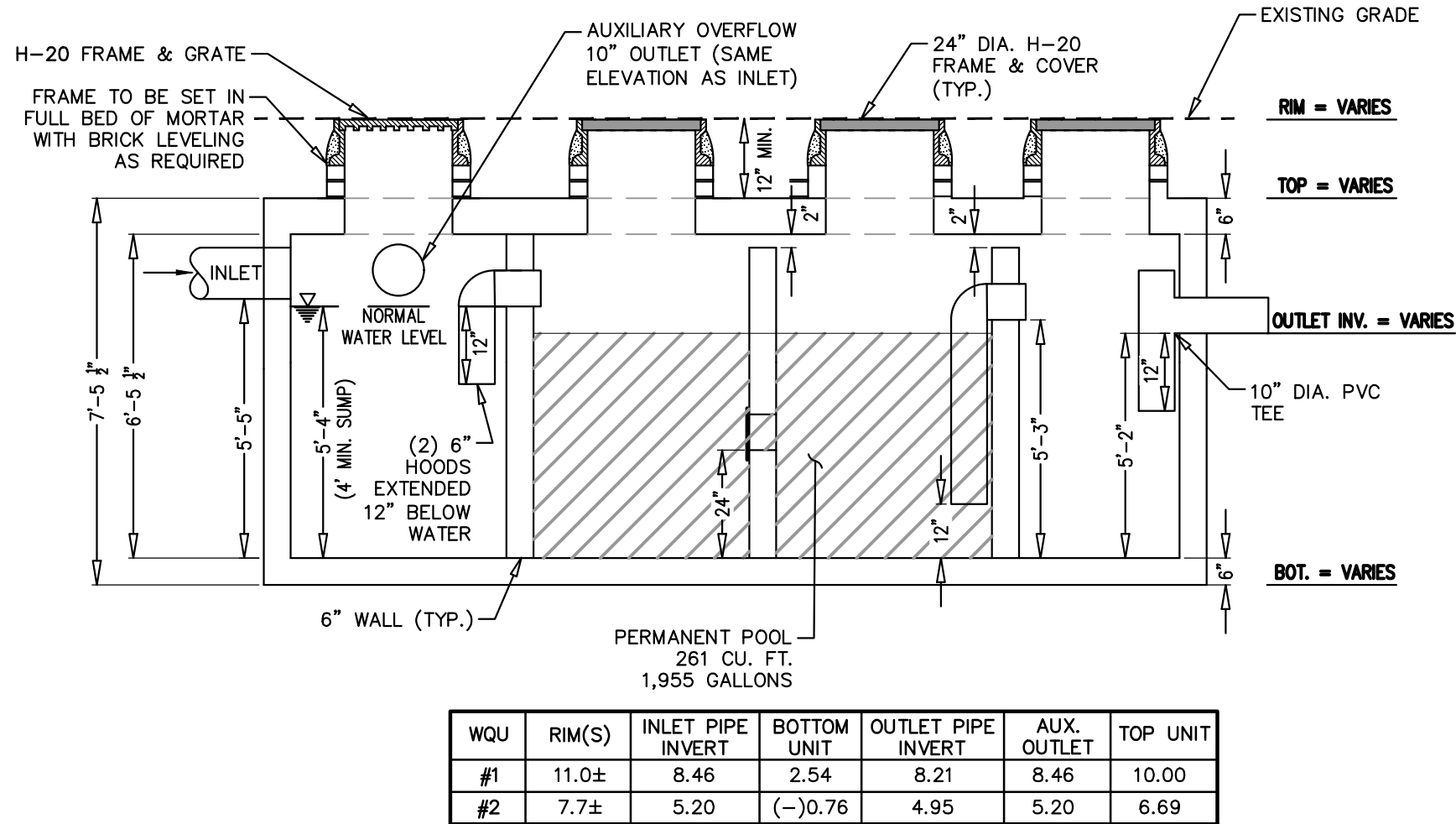
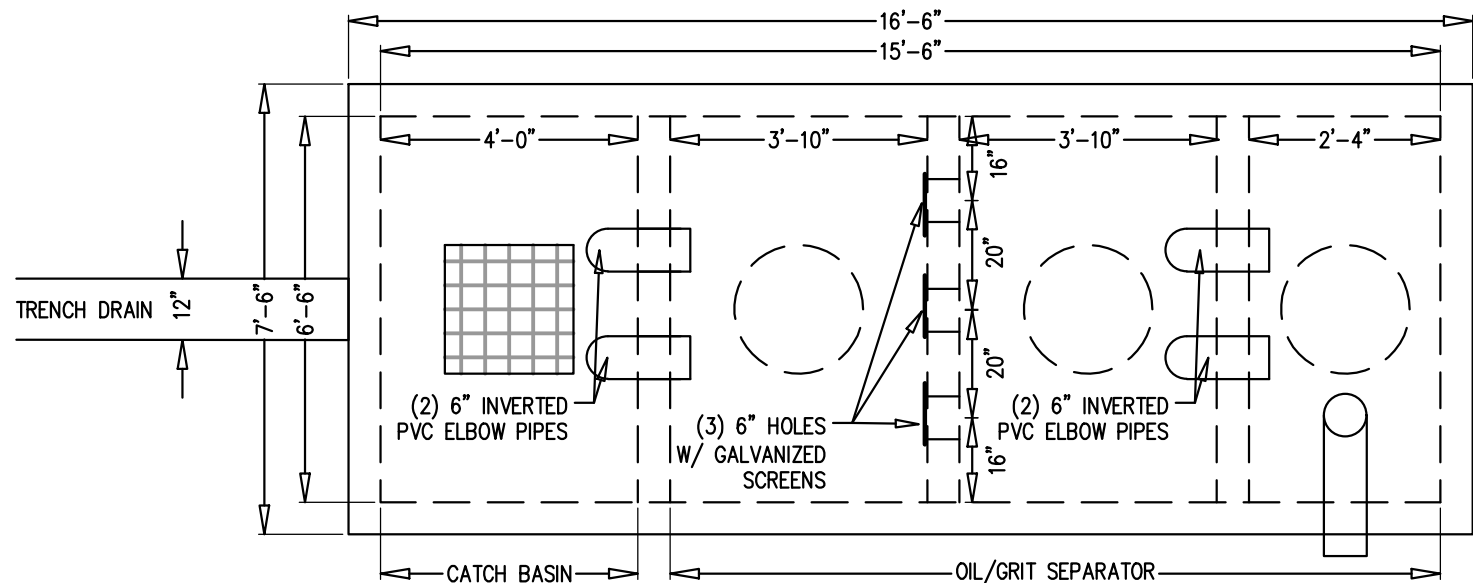
- ADD REBAR AS REQUIRED.
- SPECIFY MINIMUM CONCRETE ENCASEMENT.
- 4" MINIMUM CONCRETE COVERAGE OF OUTLET PIPE IS RECOMMENDED (LABELED WITH *).
- FINAL CONCRETE THICKNESS PER LOCAL ENGINEERING REGULATIONS AND GUIDELINES.

CONSTRUCTION NOTES:

- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
- SECURE OUTLET PIPE PRIOR TO CONCRETING OPERATIONS.
- FOR ILLUSTRATION ONLY - DO NOT SCALE

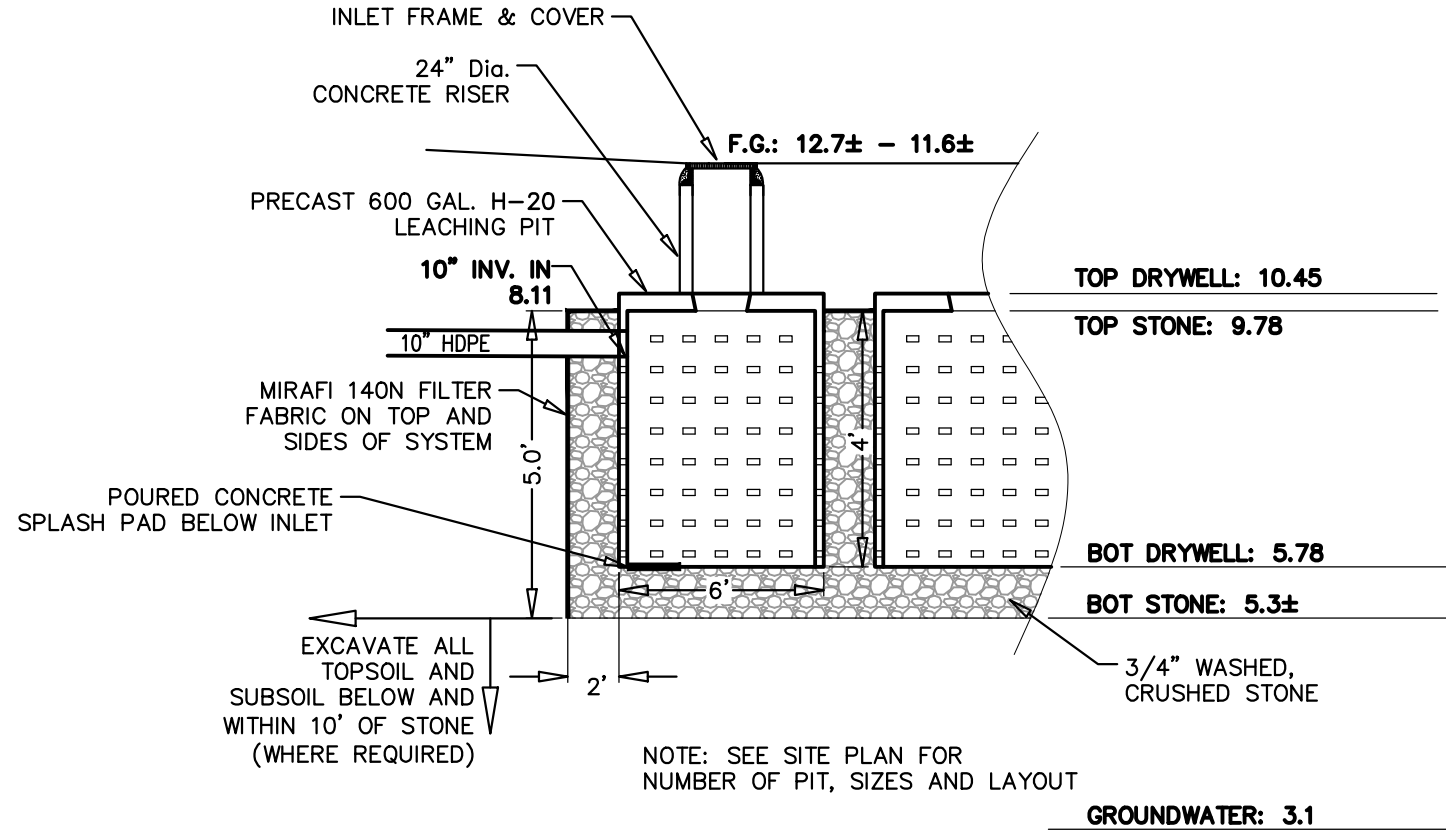
EconoDrain SERIES #12 OUTLETS FROM END OF TRENCH

NOT TO SCALE



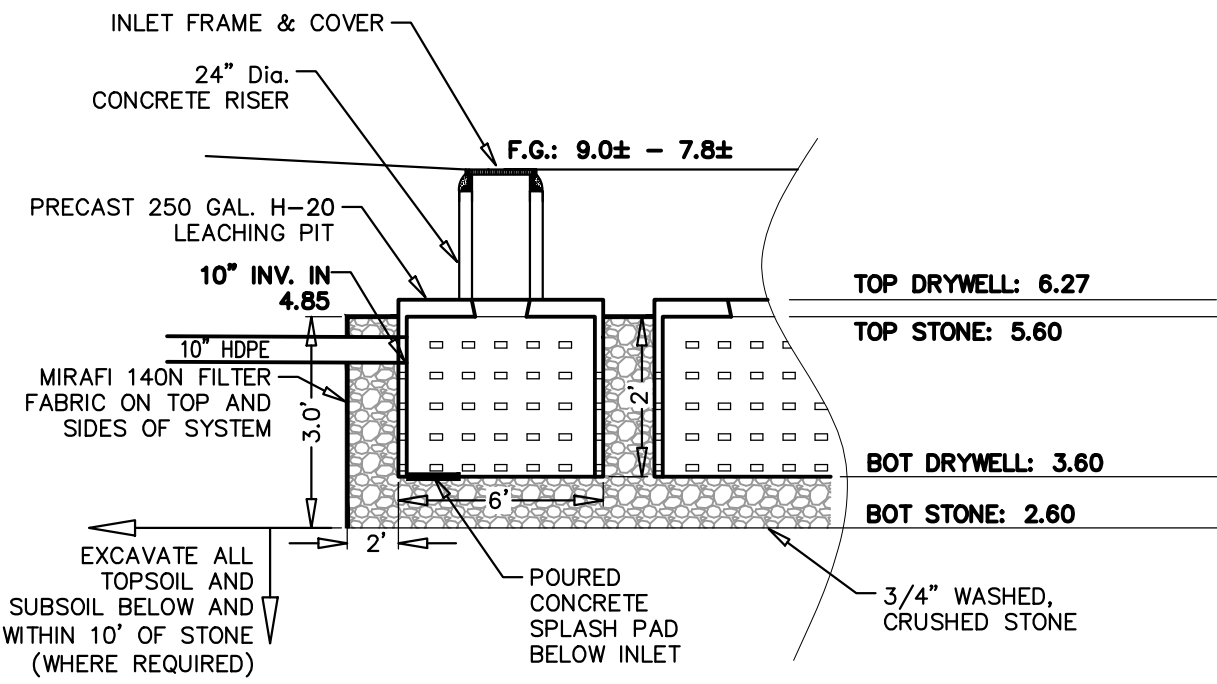
USE 4,000 GALLON SEPTIC TANK MANUFACTURED BY WGGIN MEANS PRECAST (OR APPROVED EQUAL)
COMBINATION CATCH BASIN & OIL/GRIT SEPARATOR

NOT TO SCALE



STORMWATER MANAGEMETN AREA #1 DETAIL

NOT TO SCALE



NOTE: SEE SITE PLAN FOR NUMBER OF PIT, SIZES AND LAYOUT

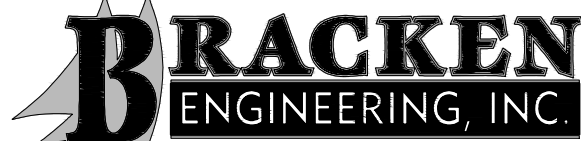
GROUNDWATER: 0.6

STORMWATER MANAGEMETN AREA #2 DETAIL

NOT TO SCALE



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Sheet Title:

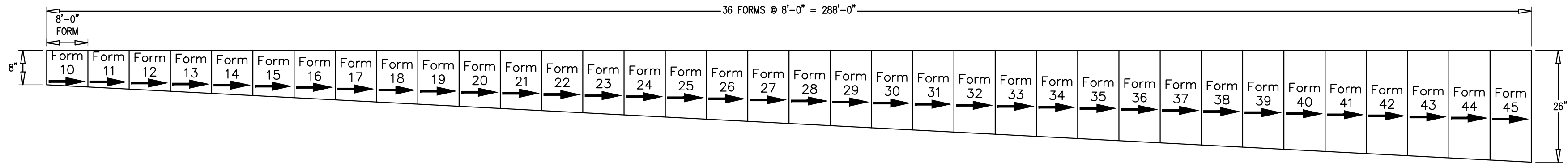
CONSTRUCTION NOTES & DETAILS

Project:

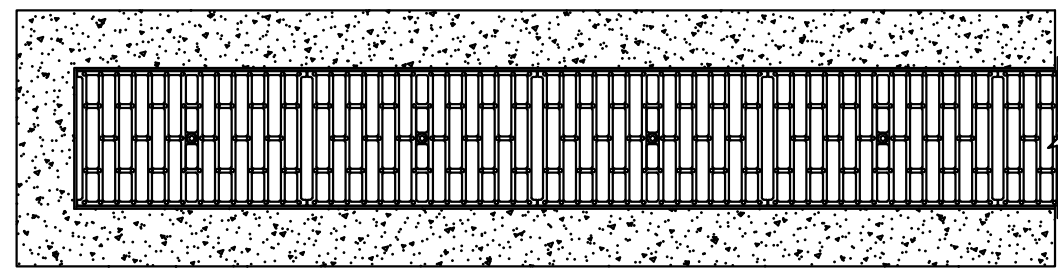
PROPOSED STORM WATER IMPROVEMENTS
PREPARED FOR:
TOWN OF BOURNE
MONK'S PARK | HOG HOUSE POINT
MAP 38 LOT 1

No.	Date	Revision Description			By
Date:		Drawn:	Checked:	Sheet:	
MARCH 1, 2022		ERC/RED/BEI	ZLB/AMG	4 of 5	

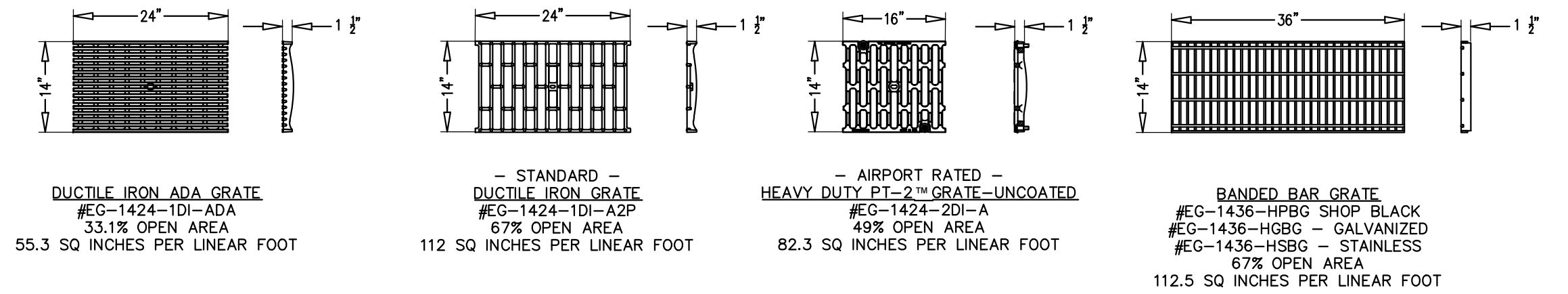
ISSUED FOR REVIEW - NOT FOR CONSTRUCTION



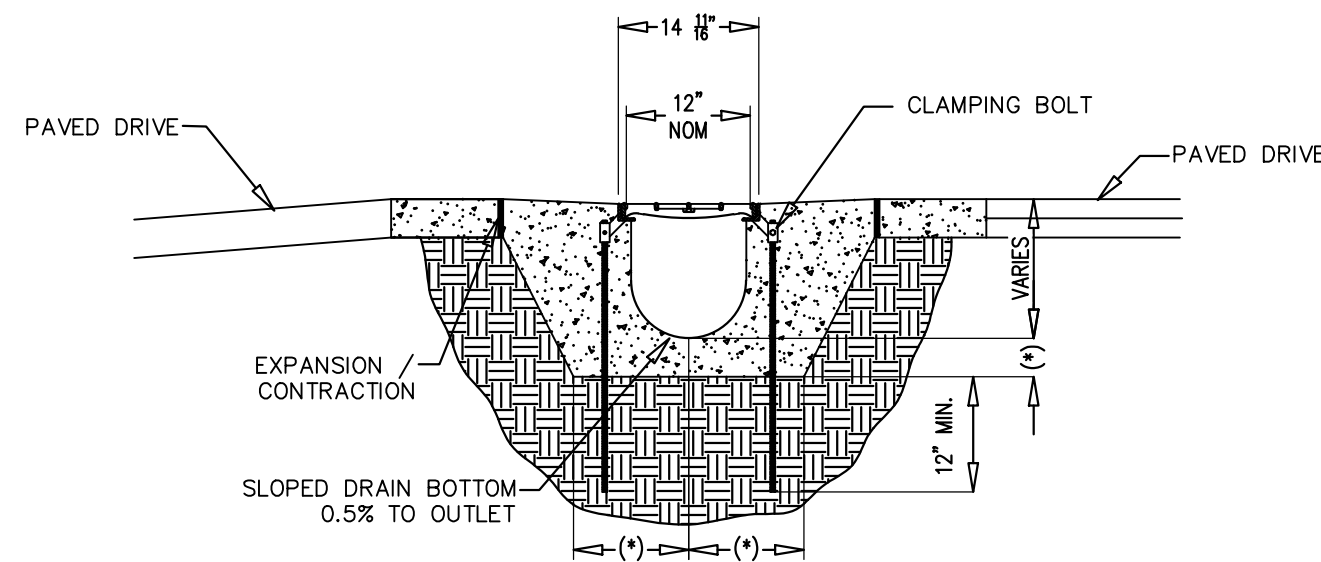
EconoDrain SERIES #12 STANDARD EPS FORMS
NOT TO SCALE



EconoDrain SERIES #12 FINISHED PLAN VIEW
NOT TO SCALE

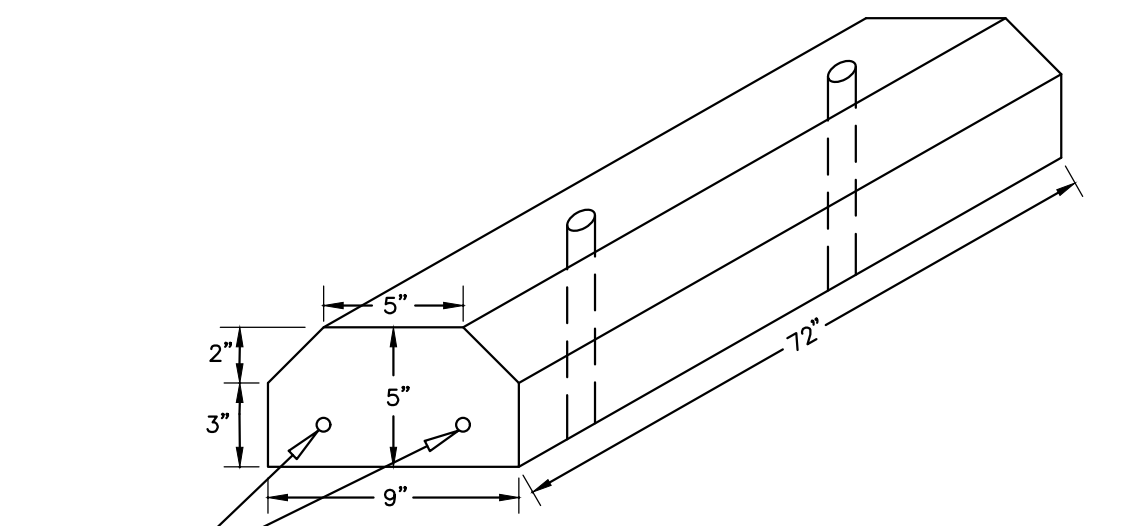


EconoDrain SERIES #12 GRATE SELECTION
NOT TO SCALE



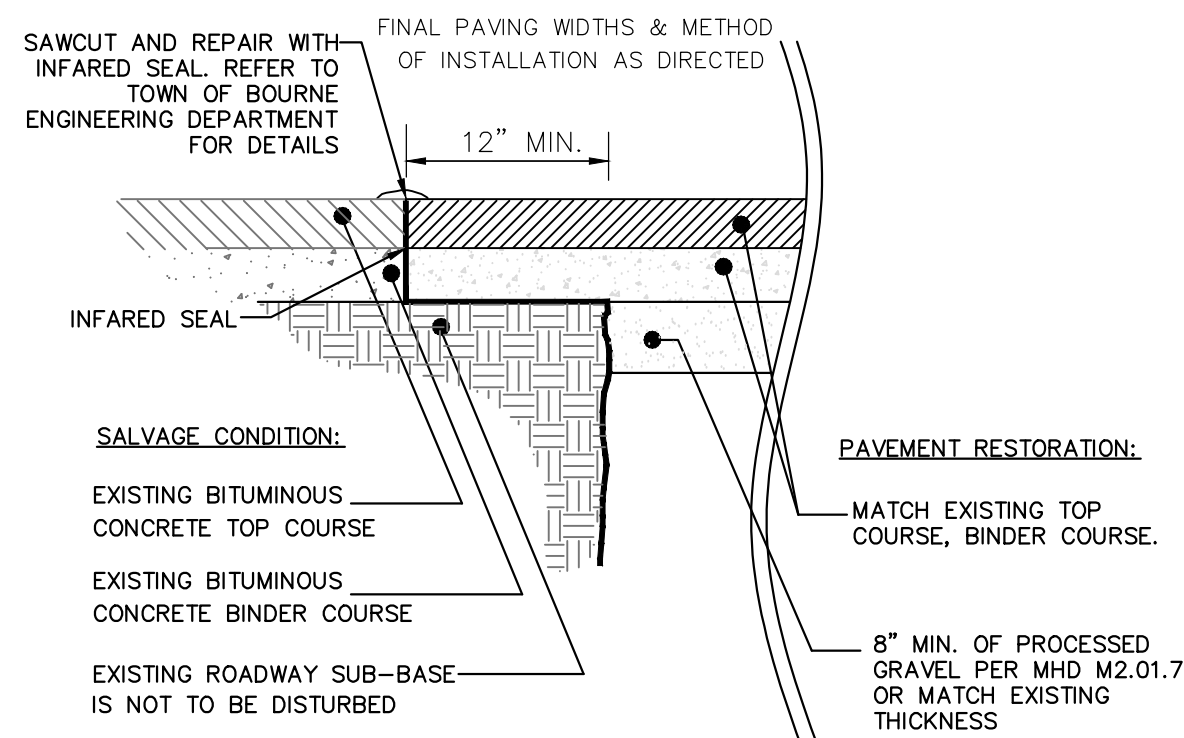
- NOTES TO THE SPECIFIER:
1. ADD REBAR AS REQUIRED.
 2. SPECIFY REQUIRED DIMENSIONS (LABELED WITH *) USING 6" EACH SIDE OF STEEL FRAME AND BELOW EPS FORM AS A RECOMMENDED MINIMUM.
 3. SHOW TOP OF GRATE ELEVATION IN PLAN VIEW 4. EXPANSION/CONTRACTION JOINT PER LOCAL ENGINEERING REGULATIONS AND GUIDELINES
 5. STANDARD CHANNEL LENGTH IS 8'-0" (96")
 6. STANDARD CHANNEL SLOPE IS 0.5%
 7. MINIMUM OF 4" CONCRETE TO BE PLACED OVER OUTLET PIPE

EconoDrain SERIES #12 INSTALLATION DETAIL
NOT TO SCALE

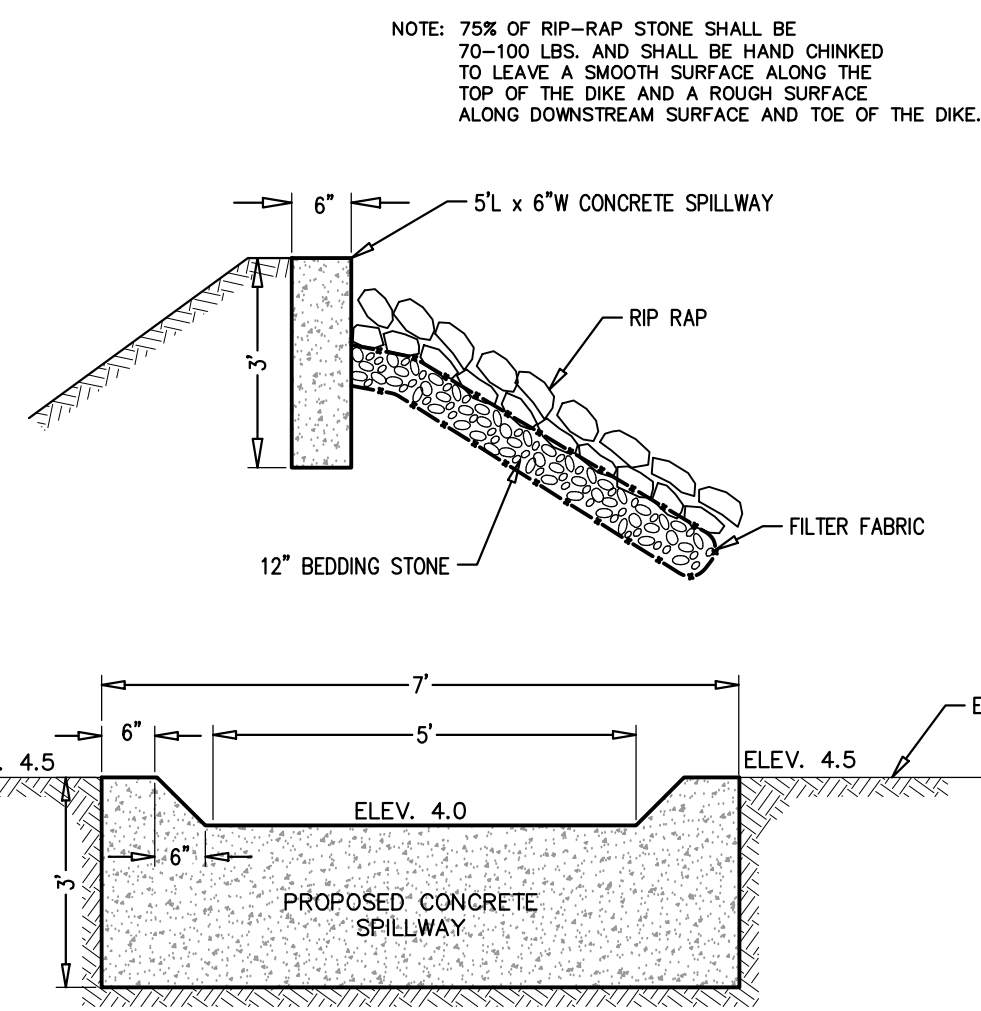


- NOTES:
1. CONCRETE STRENGTH 4,000 PSI @ 28 DAYS.
 2. APPROXIMATE WEIGHT: 210 LBS.
 3. CAR STOP MANUFACTURED BY WIGGINS PRECAST CORP. (OR APPROVED EQUAL)

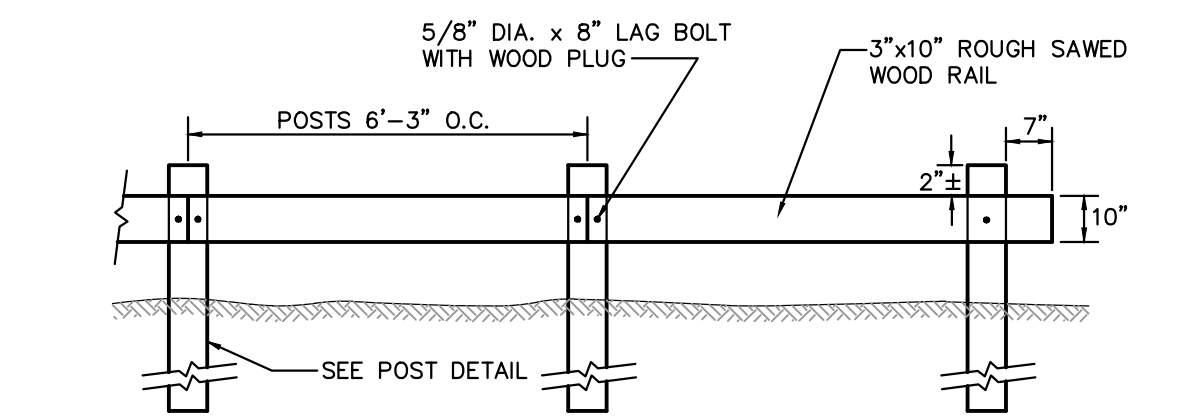
WHEEL STOP DETAIL
NOT TO SCALE



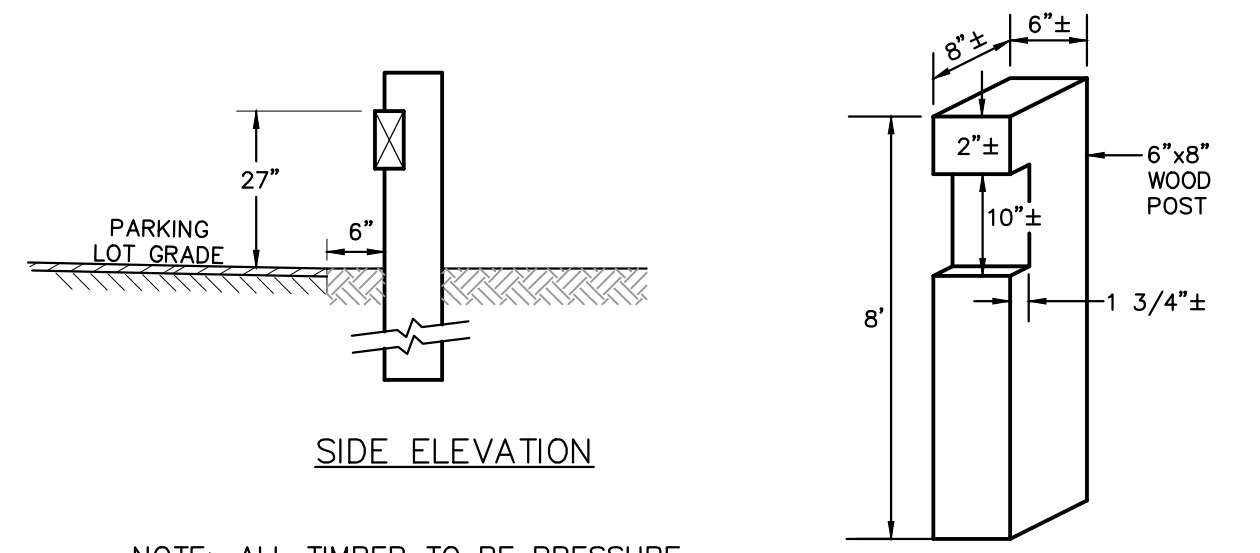
PAVEMENT SAW CUT & INFRARED SEAL DETAIL
NOT TO SCALE



SPILLWAY/RIP RAP SWALE CROSS-SECTION
NOT TO SCALE



FRONT ELEVATION

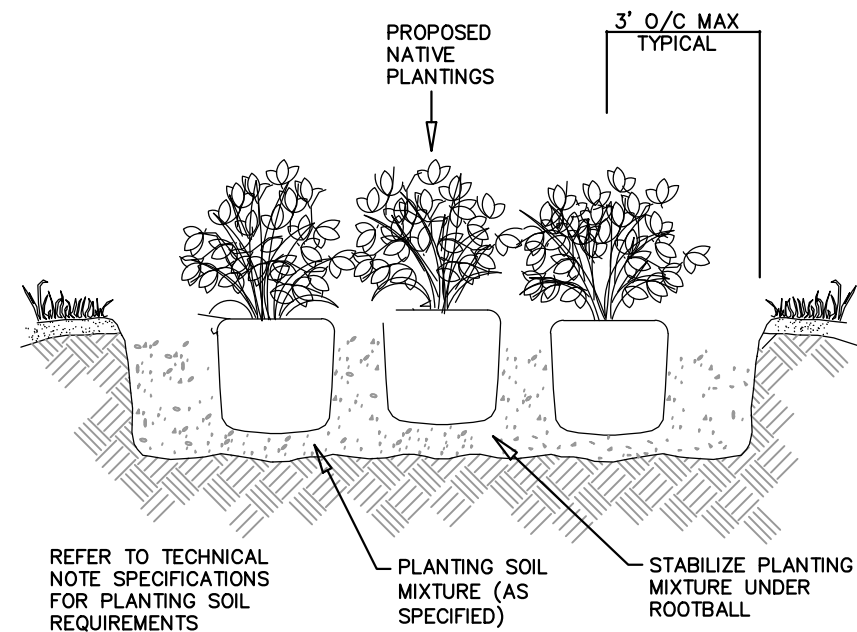


SIDE ELEVATION

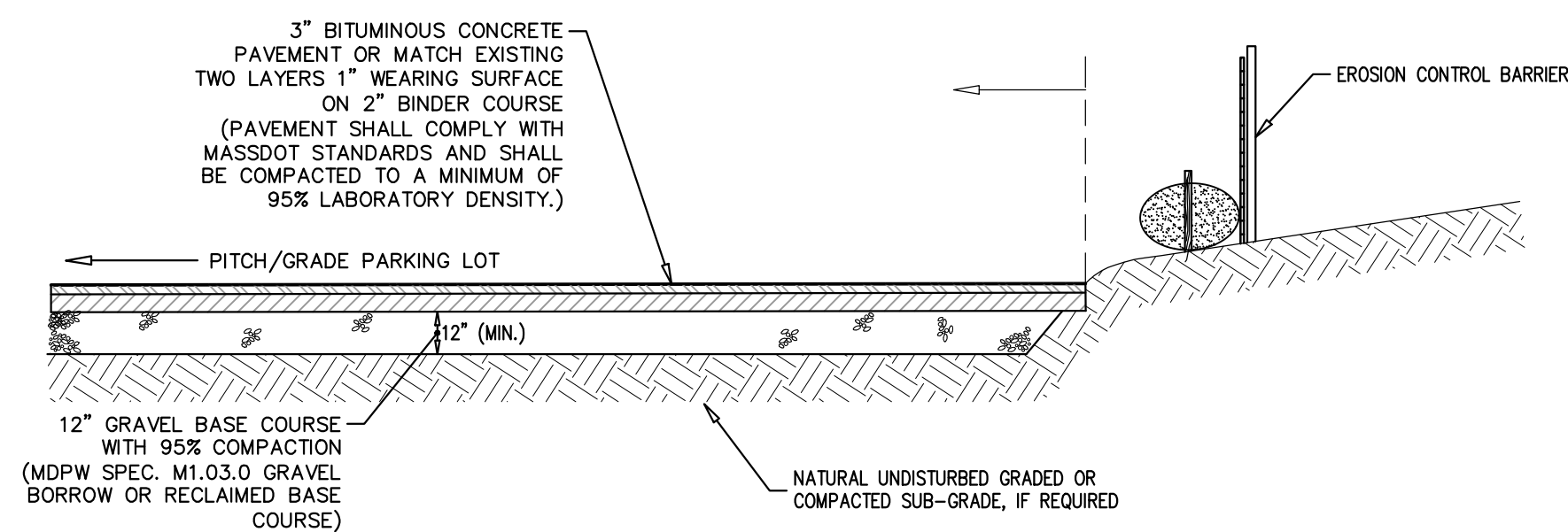
NOTE: ALL TIMBER TO BE PRESSURE TREATED. STEEL BEAM GUARD RAIL MAY BE SUBSTITUTED BY OWNER.

ALL HARDWARE TO BE CORROSION RESISTANT

WOOD GUARD RAIL DETAIL
NOT TO SCALE

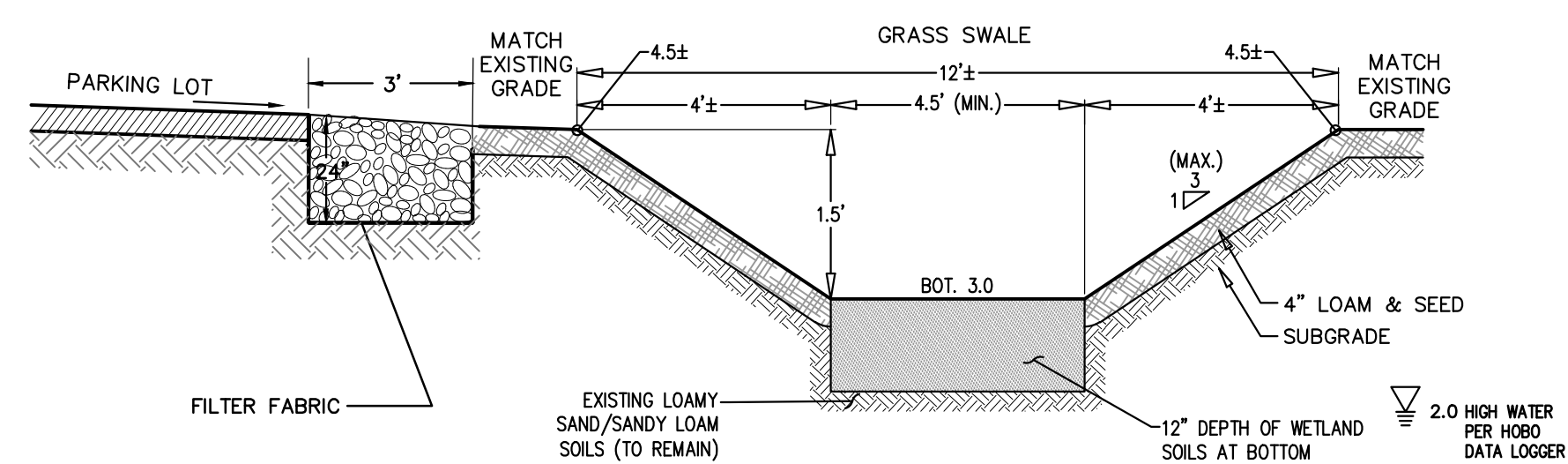


GROUNDCOVER PLANTING DETAIL
NOT TO SCALE



- NOTE:
1. SANDY LOAM and/or LOAMY SAND TOPSOIL MATERIAL SHALL BE EXCAVATED FROM ALL PAVEMENT AREAS PRIOR TO SUB-BASE INSTALLATION.
 2. SUB-GRADE (EXISTING MATERIAL) SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE and/or COARSE SAND, FREE FROM LOAM and CLAY TO A DEPTH NOT LESS THAN 4 FEET BELOW THE FINISH PAVEMENT SURFACE.
 3. SUBGRADE FILL SHALL BE COMPACTED TO 95% COMPACTION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

HOG HOUSE POINT PARKING LOT DETAIL
NOT TO SCALE



WATER QUALITY / WET SWALE #1
NOT TO SCALE

LANDSCAPING NOTES:

1. ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 NURSERY STOCK, LATEST EDITION (AMERICAN ASSOCIATION OF NURSERYMEN, INC.)
2. PLANTING IS RECOMMENDED IN THE FALL OR SPRING PLANTING SEASON.
3. 4" AGED PINEBARK MULCH SHALL BE APPLIED TO ALL SHRUB & GROUNDCOVER BEDS.
4. PLANT PIT BACKFILL SHALL BE MIXED AT A RATE OF 7 PARTS OF TOPSOIL TO 1 PART OF DEHYDRATED COW MANURE. USE EXISTING ON SITE TOPSOIL AS PART OF BACKFILL WHEN AVAILABLE.
5. ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEEDING OR SODDING AS INDICATED ON PLANS.
6. ALL SOD, SEED, SHRUB AND TREE AREAS SHALL RECEIVE 6"PH CORRECTED TOPSOIL. AFTER TOP-SOIL IS SPREAD EVENLY OVER ENTIRE AREA, ALL CLODS, LUMPS, STONES AND OTHER DELETERIOUS MATERIAL SHALL BE RAKED UP AND REMOVED.
7. APPLICATION OF GRASS SEED, FERTILIZERS, LIME AND MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED.
8. NEWLY GRADED AREAS REQUIRING SLOPE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE HAY MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 3 TONS PER ACRE.
9. FINAL PLANT SPECIES AND QUANTITY TO BE APPROVED BY CONSERVATION PRIOR TO INSTALLATION.
10. CLEAR AND GRUB (TO LIMITS SHOWN ON GRADING PLAN) TO REMOVE TREES, ROCKS, DEBRIS, ROOTS, ETC. STUMPS SHALL BE REMOVED AND DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE REGULATIONS. AFTER CLEARING, ROTOTILL, STRIP AND STOCKPILE ALL ON-SITE TOPSOIL FOR REUSE TO THE MAXIMUM EXTENT POSSIBLE.
11. FOR SEED AND SOD AREAS G.C. TO USE EXISTING TOPSOIL, IF AVAILABLE, FOR A 4" DEPTH AND TOP DRESS WITH 2" OF SCREENED TOPSOIL, UNLESS OTHERWISE NOTED ON PLAN.
12. ALL TREES, SHRUBS AND SOD SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR AFTER ACCEPTANCE.

