

EROSION AND SEDIMENT CONTROL REQUIREMENTS

PART 1 - GENERAL

- 1.01 SUMMARY
- A. FURNISH, INSTALL, AND MAINTAIN TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS, BUT NOT NECESSARILY LIMITED TO, HAY BALE AND SILT FENCE BARRIERS, RIPRAP, DIVERSION CHANNELS AND BERMS, CHECK DAMS, STRATEGICALLY LOCATED STOCKPILES, SEDIMENT BASINS, MULCH, AND SEED MIX (HEREINAFTER "CONTROL MEASURES") ADEQUATE TO PREVENT THE CONVEYANCE OF EROSION PRODUCTS (E.G. SOIL, MULCH, SOD) OFF SITE, OR INTO ENVIRONMENTALLY SENSITIVE AREAS, OR INTO AREAS WHERE WORK WILL BE ADVERSELY IMPACTED. INCLUDE ENVIRONMENTALLY SENSITIVE AREAS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, WETLANDS, TRIBUTARIES TO WETLANDS, WETLAND BUFFER ZONES, INTERMITTENT AND PERENNIAL STREAMS / RIVERS, AND THEIR ATTENDANT BUFFER ZONES.
1. REFER TO DRAWINGS FOR LOCATION AND DETAILS OF CONTROL MEASURES REQUIRED TO COMMENCE WORK. THESE CONTROL MEASURES WILL BE ADEQUATE ONLY FOR VEGETATION CLEARING. THE DRAWINGS ARE NOT INTENDED TO GRAPHICALLY DEPICT ALL CONTROL MEASURES THAT WILL BE REQUIRED TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A.
2. DEVISE AND EMPLOY CONTROL MEASURES THROUGHOUT THE DURATION OF PROJECT, OVER ALL AREAS DISTURBED OR UNDISTURBED BY CONSTRUCTION, AS NECESSARY TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A.
3. DEVISE AND EMPLOY TEMPORARY CONTROL MEASURES AS NECESSARY TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A, WHILE ALLOWING WORK TO PROCEED IN AN EFFICIENT, COST EFFECTIVE MANNER.
4. DEVISE, EMPLOY AND MAINTAIN CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE SITE IS PERMANENTLY STABILIZED BY ESTABLISHED VEGETATION, FINISH LANDSCAPE MATERIALS, PAVED SURFACES, AND/OR ROOF AREA.
5. ONCE THE SITE IS PERMANENTLY STABILIZED AND CERTIFIED AS SUCH BY ENGINEER, REMOVE TEMPORARY CONTROL MEASURES WHILE PROTECTING STABILIZED SURFACES.

- 1.02 SUBMITTALS
- A. SUBMIT PRODUCT DATA, WARRANTY, AND TEST REPORTS AS INDICATED ON THE DRAWINGS.
- 1.03 QUALITY ASSURANCE
- A. COMPLY WITH COVERING CODES AND REGULATIONS. PROVIDE PRODUCTS FROM ACCEPTABLE MANUFACTURERS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. CONFORM TO CONDITIONS OF APPROVAL ISSUED BY REGULATORY AGENCIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, LOCAL PLANNING BOARD, CONSERVATION COMMISSION, BOARD OF SELECTMEN, BOARD OF HEALTH, PUBLIC WORKS / HIGHWAY DEPARTMENT, STATE ENVIRONMENTAL PROTECTION DEPARTMENT, AND U.S. GOVERNMENT, ENVIRONMENTAL PROTECTION AGENCY, WHERE CONDITIONS OF REGULATORY APPROVAL DIFFER FROM REQUIREMENTS CONTAINED HEREIN OR ON THE DRAWINGS, COMPLY WITH THE MORE STRINGENT REQUIREMENT.

PART 2 - PRODUCTS

- 2.01 MATERIALS
- A. STRAW WATTLES: DRY GRASS OR STRAW, MACHINE BOUND WITH JUTE OR WIRE.
- B. SILT FENCE: NON-WOVEN, UV-RESISTANT, POLYPROPYLENE FABRIC, FLOW RATED AT 10 GPM/SF MINIMUM, GRAB TENSILE RATED AT 124 POUNDS MINIMUM, WITH INTEGRAL STAKE LOOPS, AND HARDWOOD STAKES. USE NO. 2130 BY AMOCO FABRICS & FIBERS, OR APPROVED EQUAL.
- C. MULCH: ORGANICS INCLUDING HAY, PROCESSED PINE / HEMLOCK TWIGS AND NEEDLES.
- D. SEED MIXES: PERENNIAL RYEGRASS, KENTUCKY BLUEGRASS, AND / OR FINE RESCUE, DISEASE RESISTANT. NON-MAINTAINED AREA OPTION - ANNUAL RYEGRASS COMBINED WITH MEDIUM RED CLOVER.
- E. EXCELSIOR BLANKET: CURLED WOOD FIBER ON PHOTODEGRADABLE EXTRUDED PLASTIC MATRIX, BOX OF FIBERS 6-INCHES LONG OR LONGER, WEIGHT 0.975 POUNDS / SY, CONTAINING NO CHEMICAL ADDITIVES. USE CURLEX I BLANKET BY AMERICAN EXCELSIOR COMPANY, OR APPROVED EQUAL.
- F. ROCK RIPRAP: SOUND, ANGULAR, 6-INCH MINUS PROCESSED ROCK, BLAST ROCK, OR TAILINGS.
- G. CRUSHED STONE: SOUND, ANGULAR, 2-INCH MINUS PROCESSED CRUSHED STONE.

PART 3 - EXECUTION

- 3.01 THROUGHOUT CONSTRUCTION
- A. DEVISE WORK SEQUENCE SO AS TO LIMIT DRAINAGE AREA THAT IS TRIBUTARY TO DISTURBED AREAS. DEVISE, EMPLOY, AND MAINTAIN CONTROL MEASURES SUCH AS DIVERSION CHANNELS, AND BERMS, STRATEGICALLY LOCATED STOCKPILES, AND SEDIMENT BASINS TO SUBDIVIDE DRAINAGE AREAS INTO SMALL, MANAGEABLE SUBAREAS, THEREBY MINIMIZING RUNOFF AND THE POTENTIAL FOR EROSION.
- B. MAINTAIN BARRIER AT LIMIT OF WORK AND PROTECT EXISTING VEGETATION / FACILITIES OUTSIDE OF LIMIT OF WORK.
- C. MAINTAIN SPARE MATERIAL STOCKPILES FOR IMMEDIATE EMPLOYMENT / REPAIR / EXPANSION OF CONTROL MEASURES. AT A MINIMUM, SUCH MATERIALS SHALL INCLUDE HAY BALES, SILT FENCE AND STAKES, AND CRUSHED STONE.
- D. INSPECT AND MAINTAIN EFFECTIVENESS OF CONTROL MEASURES BY REPAIRING AS NECESSARY TO ENSURE INTENDED FUNCTION; BY SUPPLEMENTING AS NECESSARY FOR ADEQUATE EXTENT; BY REMOVING TRAPPED PRODUCTS OF EROSION AS NECESSARY TO MAINTAIN EFFECTIVE TRAP VOLUME.
- E. LIMIT EXTENT OF WORK AREA SO THAT ALL DISTURBED AREAS CAN BE STABILIZED WITH CONTROL MEASURES WITHIN A 24-HOUR PERIOD.
- F. INSTALL CONTROL MEASURES AS SOON AS PRACTICABLE AFTER EACH MANAGEABLE PORTION OF EARTHWORK IS COMPLETE. EMPLOY TEMPORARY MEASURES AS NECESSARY TO STABILIZE DISTURBED AREAS, EVEN WHERE SUBSEQUENT CONSTRUCTION OPERATIONS MAY REQUIRE RE-DISTURBANCE.
- G. WHEN INTENSE RAINFALL IS EXPECTED, CONSIDER, DEVISE, AND EMPLOY REINFORCING CONTROL MEASURES PRIOR TO THE RAINFALL EVENT TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A. IF NECESSARY, EMPLOY TEMPORARY CONTROL MEASURES ON MATERIAL STOCKPILES TO COUNTERACT POTENTIAL SEDIMENT TRANSPORT DURING INTENSE RAINFALL.
- H. WHEN VEHICLE REFUELING IS REQUIRED ON SITE, CONDUCT REFUELING OPERATIONS OUTSIDE OF ENVIRONMENTALLY SENSITIVE AREAS.
- I. PROPERLY DISPOSE OF DEBRIS, SOLID WASTE, TRASH, AND CONSTRUCTION WASTE / BYPRODUCTS OFF-SITE.
- J. SWEEP ON-SITE PAVED AREAS AND OFF-SITE STREETS AS NECESSARY TO PREVENT SILT AND DEBRIS ORIGINATING ON SITE FROM ENTERING CLOSED DRAINAGE SYSTEMS AND / OR ENVIRONMENTALLY SENSITIVE AREAS.

NOTES:

- [1] DO NOT USE DRIP EDGE ADJACENT HABITABLE SPACES LOCATED BELOW GRADE (I.E. BASEMENT). IN SUCH CASES, CONSULT WITH ENGINEER REGARDING GUTTERS, FOUNDATION DRAINS, SUMP PUMPS, AND OTHER MEASURES TO LESSEN THE LIKELIHOOD OF INTERIOR FLOODING.

DRIP EDGE

TYPICAL CROSS SECTION  
NOT TO SCALE

3.02 SITE PREPARATION AND ACCESS

- A. WALK SITE AND IDENTIFY LOCATIONS OF LIMIT OF WORK AND ENVIRONMENTALLY SENSITIVE AREAS. ESTABLISH CONSTRUCTION STAGING AREA, LOCATED BEYOND ENVIRONMENTALLY SENSITIVE AREAS.
- B. INSTALL CONTROL MEASURES AS SHOWN ON THE DRAWINGS, INCLUDING THOSE DEFINING THE LIMIT OF WORK.
- C. LIMIT VEHICULAR TRAFFIC TO AND FROM SITE TO MINIMIZE TRANSPORT OF SEDIMENT.
- 3.03 CLEARING, GRUBBING, AND STRIPPING
- A. SCHEDULE GRUBBING AND STRIPPING TO OCCUR IMMEDIATELY PRIOR TO EARTH DISTURBANCE. DEPENDING ON SITE AREA, CONSIDER MULTIPLE GRUBBING PHASES, SEQUENCED TO TAKE ADVANTAGE OF THE EROSION PREVENTION POTENTIAL OF EXISTING VEGETATIVE COVER.
- B. MINIMIZE THE AREA OF EXISTING VEGETATION REMOVED WHEREVER POSSIBLE.
- C. LOCATE AND SIZE STOCKPILES TO MINIMIZE EROSION POTENTIAL, TAKING ADVANTAGE OF TERRAIN SLOPE AND ASPECT, WHERE APPROPRIATE.
- D. PROTECT VEGETATION, INCLUDING ROOT SYSTEMS, BEYOND LIMIT OF CLEARING.
- E. PROCESS TIMBER, STUMPS, SLASH, AND BRUSH SO AS TO PROTECT ENVIRONMENTALLY SENSITIVE AREAS AND INSTALLED CONTROL MEASURES. PROPERLY DISPOSE OF EXCESS OFF SITE. BURIAL OF STUMPS ON SITE IS PROHIBITED.

3.04 EXCAVATIONS FOR BUILDING FOUNDATIONS AND UTILITIES

- A. DEVISE AND INSTALL CONTROL MEASURES ADEQUATE TO HANDLE DISCHARGES AND TRAP SEDIMENT FROM FOOTING SUMP AND WELL POINT PUMPS PRIOR TO EXCAVATION.
- B. ARMOR SUMP PUMP DISCHARGE LOCATIONS TO PREVENT EROSION AT POINT OF DISCHARGE AND AREAS DOWNSTREAM.
- C. IF FOUNDATION EXCAVATIONS GRADE TO DAYLIGHT ON THE LOW SIDE, DEVISE AND INSTALL CONTROL MEASURES TO HANDLE SURFACE AND GROUNDWATER FLOW FROM EXCAVATION LOW POINT.
- D. STOCKPILE EXCAVATED MATERIALS TO BAFFLE OVERLAND RUNOFF, AVOIDING THE CREATION OF LENGTHY PATHS OF CONCENTRATED EROSION.
- E. BACKFILL UTILITY TRENCHES AS SOON AS PRACTICABLE TO PREVENT FLOODING, SLOUGHING, POTENTIAL OVERFLOW, AND REPETITIVE EARTH DISTURBANCE.

3.05 SITE GRADING

- A. WHERE APPLICABLE, FOLLOW EXCAVATION AND FILL PRACTICES SHOWN ON DRAWINGS TO LOCALIZE AND MINIMIZE EROSION.
- B. MONITOR SEDIMENT VOLUME IN TEMPORARY SEDIMENT BASINS AND AT DIVERSION BERMS AND CHECK DAMS. IN ALL AREAS EXCEPT THOSE THAT DO NOT PRESENT POTENTIAL PROBLEMS WITH REGARD TO FUTURE SOIL STABILITY, DRAINAGE, OR BEARING CAPACITY, REMOVE AND PROPERLY DISPOSE OF TRAPPED SEDIMENT BEFORE BRINGING SITE TO FINAL SUBGRADE.

3.06 STORMWATER MANAGEMENT SYSTEM

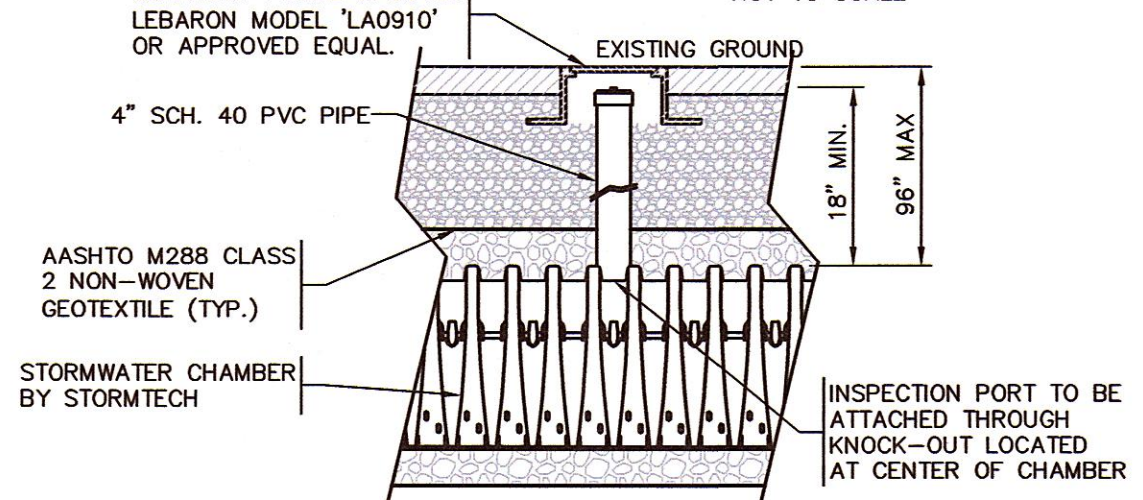
- A. THE STORMWATER MANAGEMENT SYSTEM INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, ALL PERMANENT DETENTION / RETENTION BASINS, DISCHARGE STRUCTURES, WEIRS, CULVERTS, OPEN CHANNELS, CURBS, GUTTERS, PAVED SWALES, CATCH BASINS, DRAIN MANHOLES, DRAINAGE ROOF DRAIN MANIFOLDS, WATER QUALITY SWALES, SEPARATORS, AND SIMILAR STORMWATER RUNOFF CONVEYANCE, TREATMENT, AND STORAGE FACILITIES.
- B. INSTALL STORMWATER MANAGEMENT SYSTEM COMPONENTS STARTING AT THE DOWNSTREAM END AND PROCEED UPSTREAM, WHERE POSSIBLE, COMPLETE INSTALLATION OF PERMANENT DETENTION / RETENTION BASINS PRIOR TO BEGINNING WORK ON UPSTREAM SYSTEM COMPONENTS.
- C. INSTALL CONTROL MEASURES AT FINISHED UPSTREAM AND DOWNSTREAM PIPE ENDS AS SOON AS POSSIBLE AFTER COMPLETION OF PIPE RUN. SUCH MEASURES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, RIPRAP, CHECK DAMS, STRAW WATTLES / SILT FENCE BARRIERS, AND VELOCITY DISSIPATORS.
- D. AT THE END OF EACH DAY OR WHEN RAINFALL IS EXPECTED, PLUG UPSTREAM END OF PIPES / DAM OPEN CHANNELS OR OTHERWISE REDIRECT POTENTIAL RUNOFF AND PREVENT FLOW FROM ENTERING PARTIALLY COMPLETED SYSTEM / SYSTEM COMPONENTS.
- E. WHERE PORTIONS OF A NEW SYSTEM ARE TO BE ACTIVATED PRIOR TO COMPLETION OF THE ENTIRE SYSTEM, EMPLOY CONTROL MEASURES TO PREVENT SILT AND DEBRIS FROM ENTERING THE SYSTEM. EMPLOY SILT SACKS OR FABRIC ON CATCH BASIN INLETS AND PIPE AND CULVERT OPENINGS. EMPLOY CHECK DAMS AND TEMPORARY SEDIMENT BASINS UPSTREAM OF AND ALONG OPEN CHANNELS, SWALES, AND DITCHES TO TRAP SEDIMENT UPGRADIENT OF ENVIRONMENTALLY SENSITIVE AREAS.
- F. REMOVE TRAPPED SEDIMENT AND DEBRIS FROM ALL SYSTEM COMPONENTS AFTER COMPLETION OF INSTALLATION, AND AGAIN AFTER THE ENTIRE SITE IS PERMANENTLY STABILIZED BY ESTABLISHED VEGETATION, FINISH LANDSCAPE MATERIALS, PAVED SURFACES, AND/OR ROOF AREA. REMOVE TRAPPED SEDIMENT AND DEBRIS FROM DETENTION / RETENTION BASIN BOTTOMS SO THAT FINISH BOTTOM MATERIALS / INFILTRATION FUNCTION CONFORM TO DESIGN.

3.07 LANDSCAPING

- A. COMPLETE LANDSCAPING AS SOON AS POSSIBLE AFTER COMPLETION OF FINAL SUBGRADE.
- B. IMMEDIATELY AFTER PLACEMENT OF TOPSOIL, STABILIZE WITH CONTROL MEASURES INCLUDING, BUT NOT NECESSARILY LIMITED TO, SEED MIX, MULCH, AND / OR BLANKET.

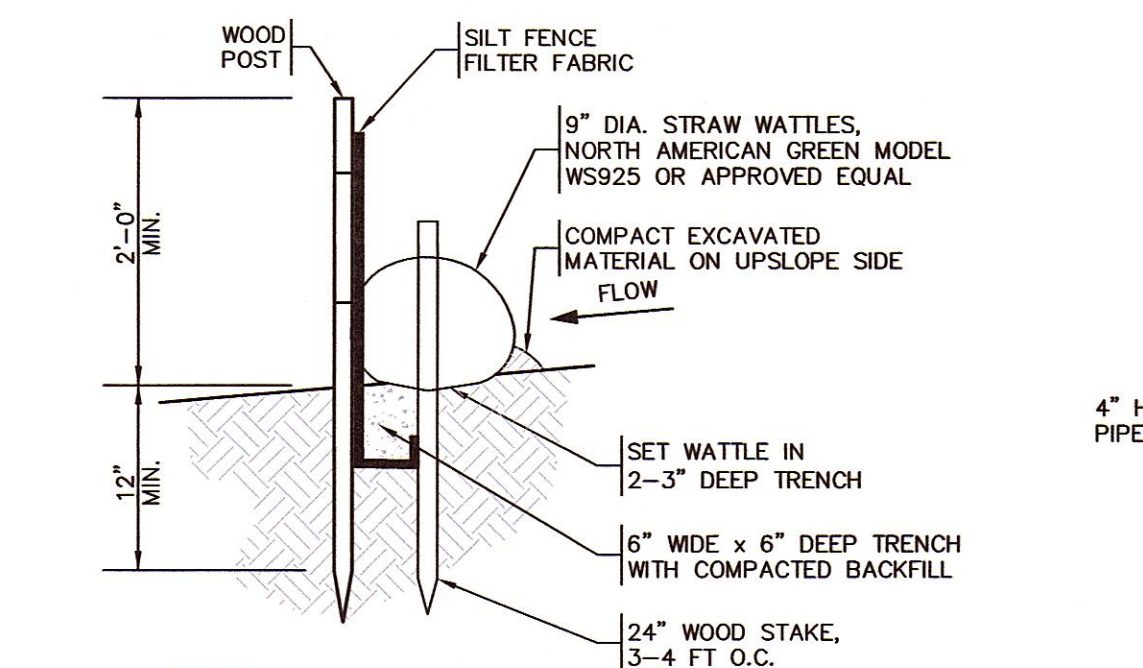
STONE DIAPHRAGM

TYPICAL CROSS SECTION  
NOT TO SCALE



INSPECTION PORT

TYPICAL CROSS SECTION  
NOT TO SCALE



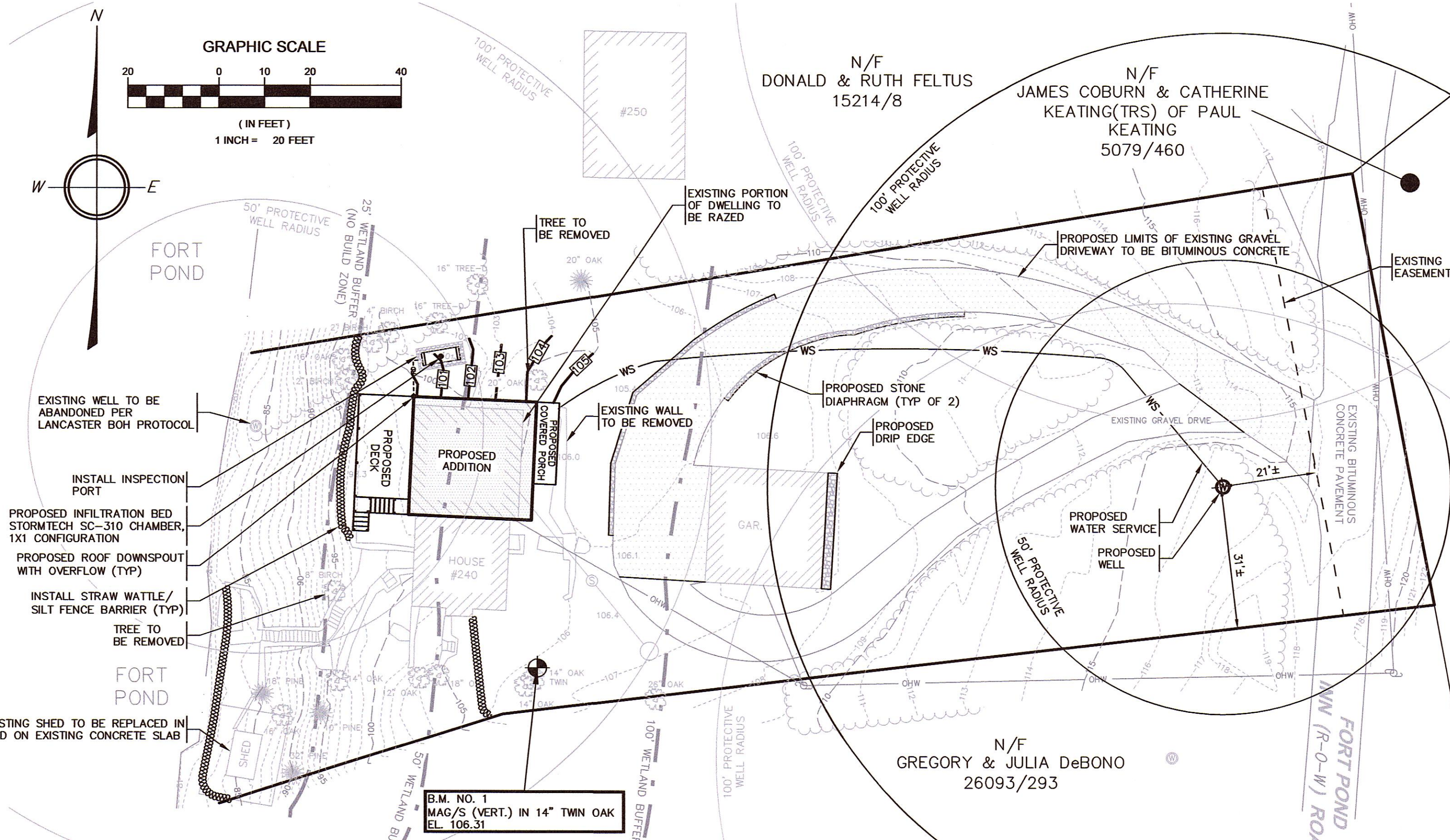
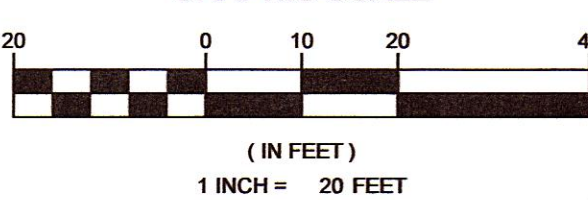
NOTES:

- [1] INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
- [2] TRAPPED SEDIMENT SHALL BE REMOVED TO A NON-SENSITIVE UPLAND AREA.

STRAW WATTLE / SILT FENCE BARRIER

TYPICAL CROSS SECTION  
NOT TO SCALE

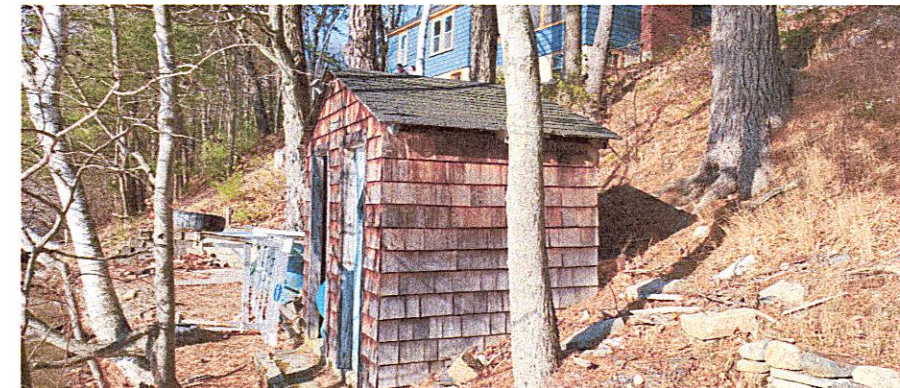
GRAPHIC SCALE



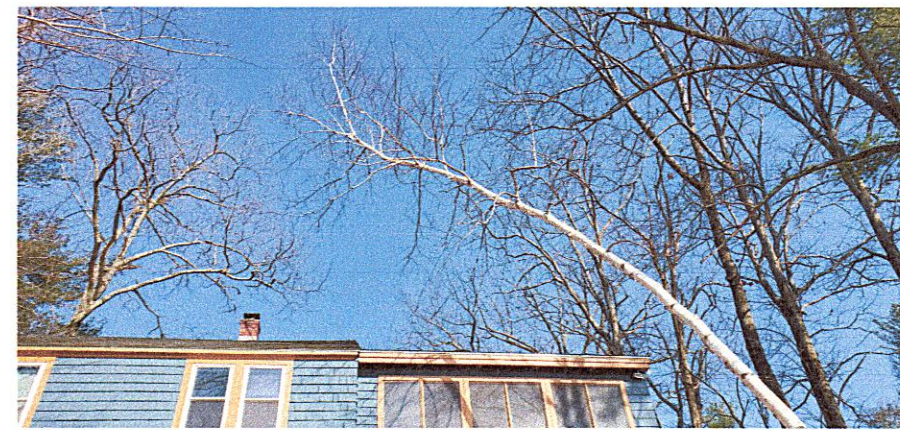
SITE NOTES

1. CONTRACTORS (IN ACCORDANCE WITH MASS. G.L. CHAPT. 82 SECT. 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING. ALSO CALL "DIG-SAFE" AT 811 OR 1-888-344-7233.
2. EXISTING SEPTIC AND WATER SERVICES SHOWN HEREON ARE BASED ON AVAILABLE RECORD DATA FROM THE TOWN OF LANCASTER AND LAND OWNER RECORDS, RESPECTIVELY, AND ARE TO BE CONSIDERED APPROXIMATE. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO DEMOLITION.
3. PROPERLY DISPOSE OF NON-SALVAGEABLE MATERIAL/DEBRIS INCLUDING TREE STUMPS AND OTHER UNSUITABLE FILL MATERIAL OFF SITE.
4. CONTRACTOR SHALL TAKE MEASURES TO CONTROL DUST DURING EARTH REMOVAL AND CONTAIN DIRT ON SITE. STREET SWEEPING AND SWEEPING OF EXISTING PAVEMENT MAY BE REQUIRED DURING CONSTRUCTION.
5. COORDINATE WITH OWNER REGARDING DISPOSITION OF SALVAGEABLE MATERIALS.
6. WHERE EXISTING UTILITY LINES/STRUCTURES ARE TO BE CUT/BROKEN DOWN/ABANDONED, LINES/STRUCTURES SHALL BE PLUGGED/CAPPED/FILLED IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS.
7. ALL TREES HERE ON NOT LABELED TO BE REMOVED ARE TO BE PROTECTED.

SITE PHOTOS (03/09/2020):



EXISTING SHED TO BE REPLACED IN KIND ON EXISTING CONCRETE SLAB

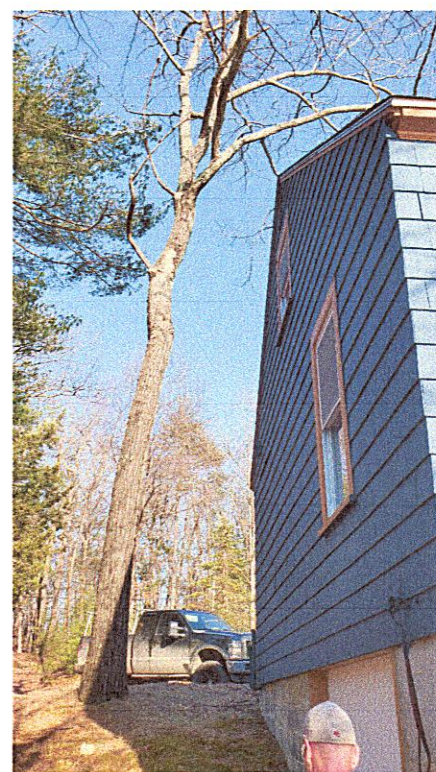


EXISTING 8" BIRCH TO BE REMOVED

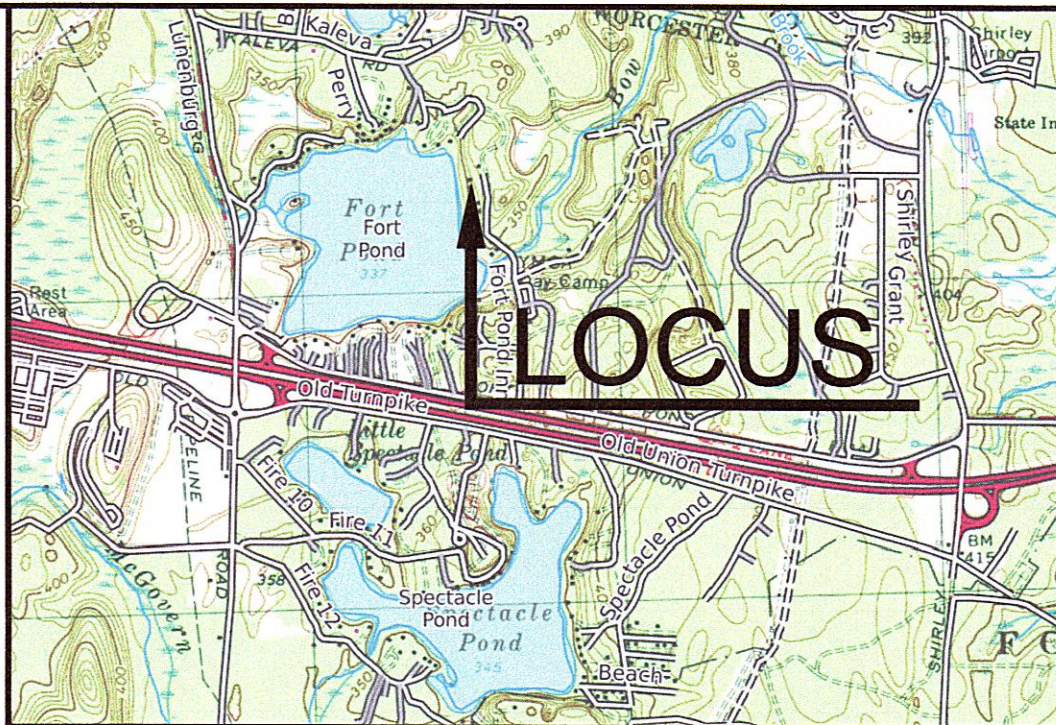
SITE PHOTOS (05/01/2019):



EXISTING 2-BDR DWELLING



EXISTING 20" OAK TO BE REMOVED



LOCUS MAP

1" = 2000'

ELEVATION DATUM

DATUM: ASSUMED

B.M. NO.1

PLAN REFERENCES:

1. "ADDITION-SINGLE FAMILY RESIDENCE-LAFRANCE-LANCASTER, MA" PREPARED FOR THE LAFRANCE RESIDENCE BY THE DRAWING BOARD, INC. DATED FEBRUARY 8, 2020.
2. "BUILDING PERMIT PLAN-#240 FORT POND INN ROAD LANCASTER, MA" PREPARED FOR MARC LAFRANCE BY GOLDSMITH, PREST & RINGWALL, INC. DATED FEBRUARY 21, 2020.

ASSESSORS REFERENCE:

ASSESSORS MAP 5, PARCEL 7, 0.55± ACRES

EXISTING CONDITIONS NOTES:

1. EXISTING CONDITION INFORMATION BASED ON AN ON-THE-GROUND TOPOGRAPHIC AND BOUNDARY SURVEY PERFORMED BY GOLDSMITH, PREST & RINGWALL, INC. DATED 05/01/19, 05/15/19 & 03/09/2020.
2. EDGE OF FORT POND LOCATED BASED ON AN ON-THE-GROUND SURVEY BY GOLDSMITH, PREST & RINGWALL, INC. DATED 03/09/2020.

DRAWING ISSUED FOR:

- ☐ CONCEPT ☐ CONSTRUCTION
- ☒ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION

**GPR**

Engineering Solutions  
for Land & Structures

**GOLDSMITH, PREST & RINGWALL, INC.**

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NOTICE OF INTENT  
RESIDENTIAL DEVELOPMENT

SITE PLAN &  
CONSTRUCTION DETAILS

240 FORT POND INN ROAD  
LANCASTER, MA

PREPARED FOR:  
MARC LAFRANCE  
240 FORT POND INN ROAD  
LANCASTER, MA 01523

DES. BY: MCL	DATE: APRIL 2020	JOB 191037	1 OF 1
CHK. BY: NMP			