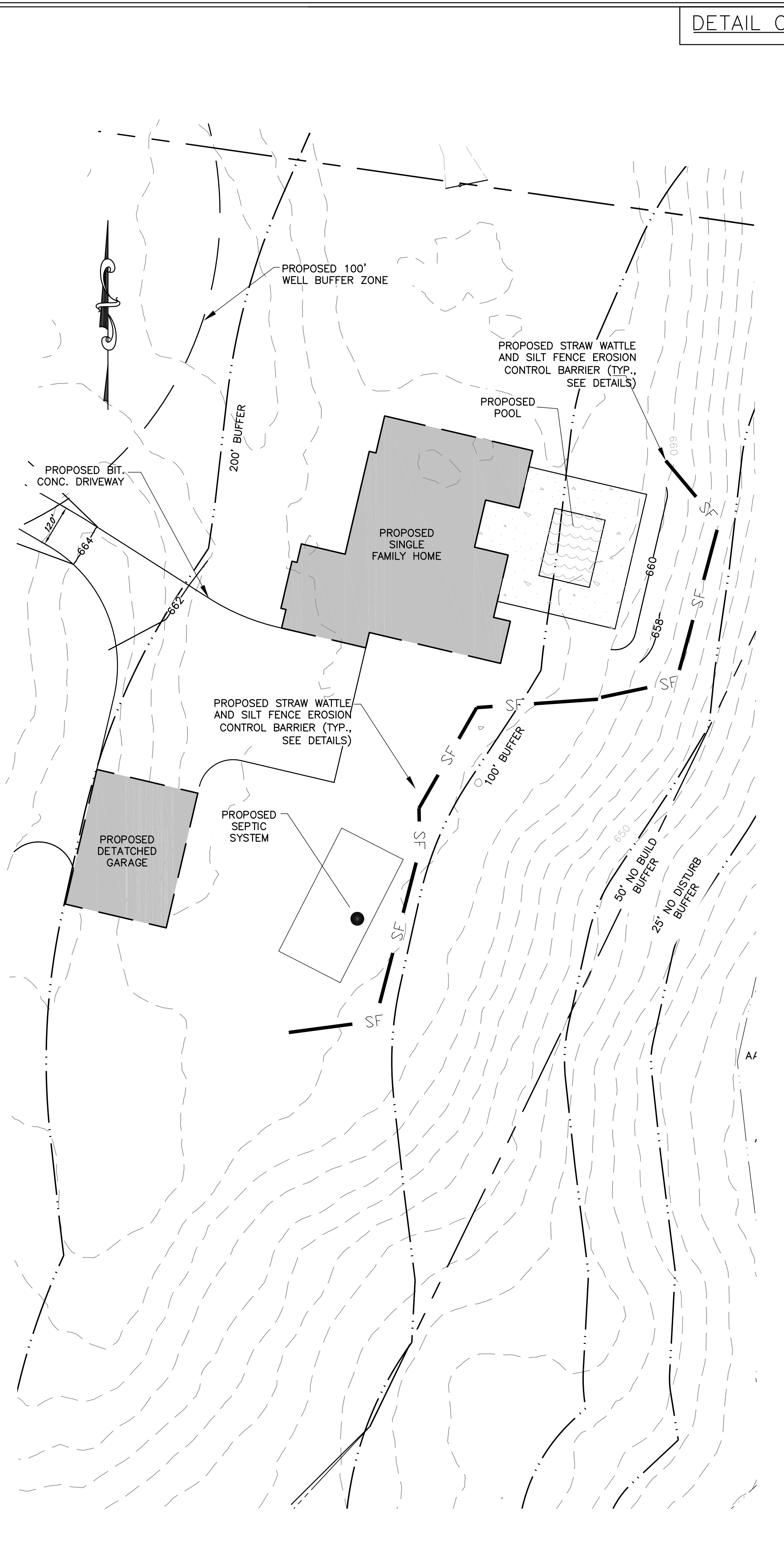
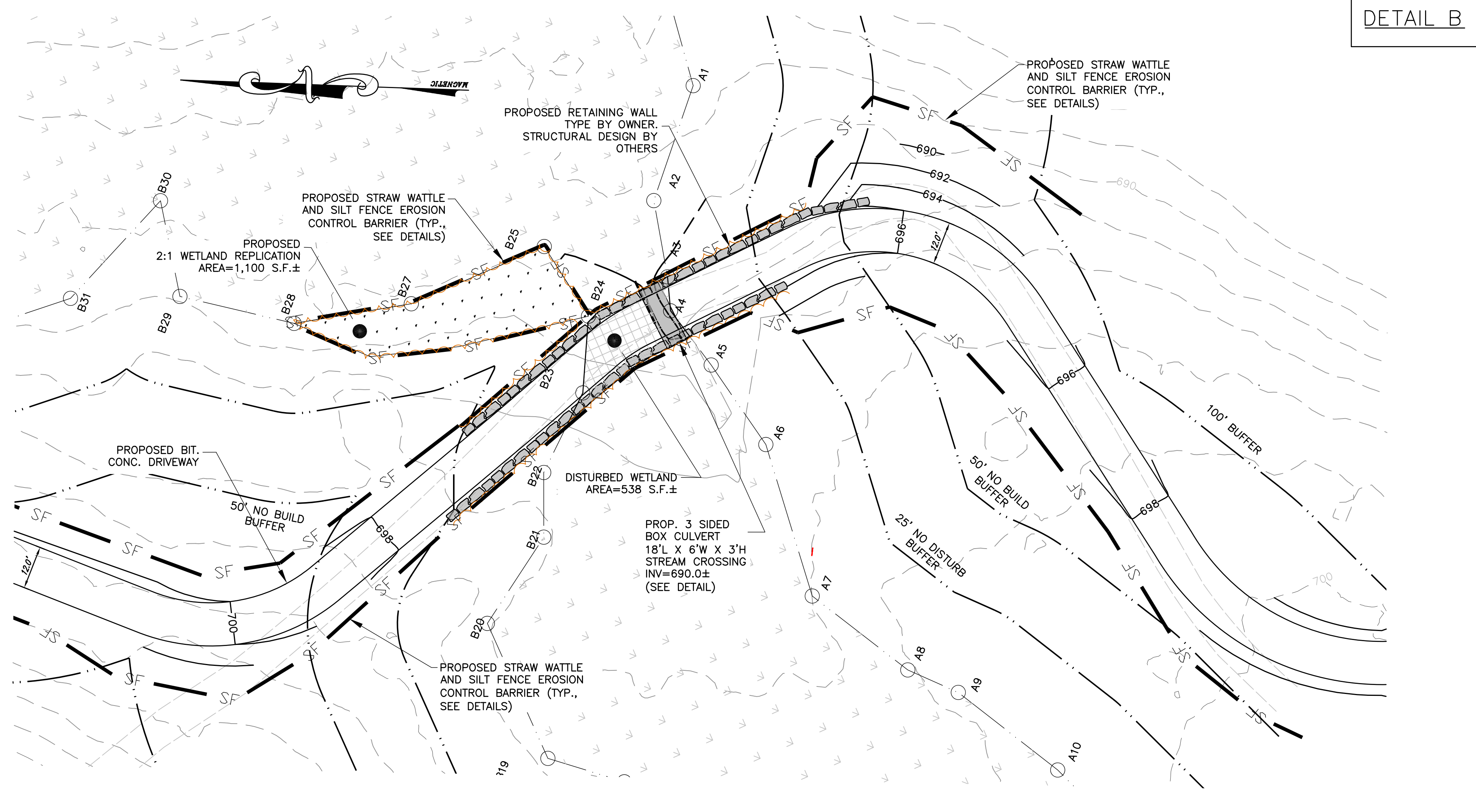
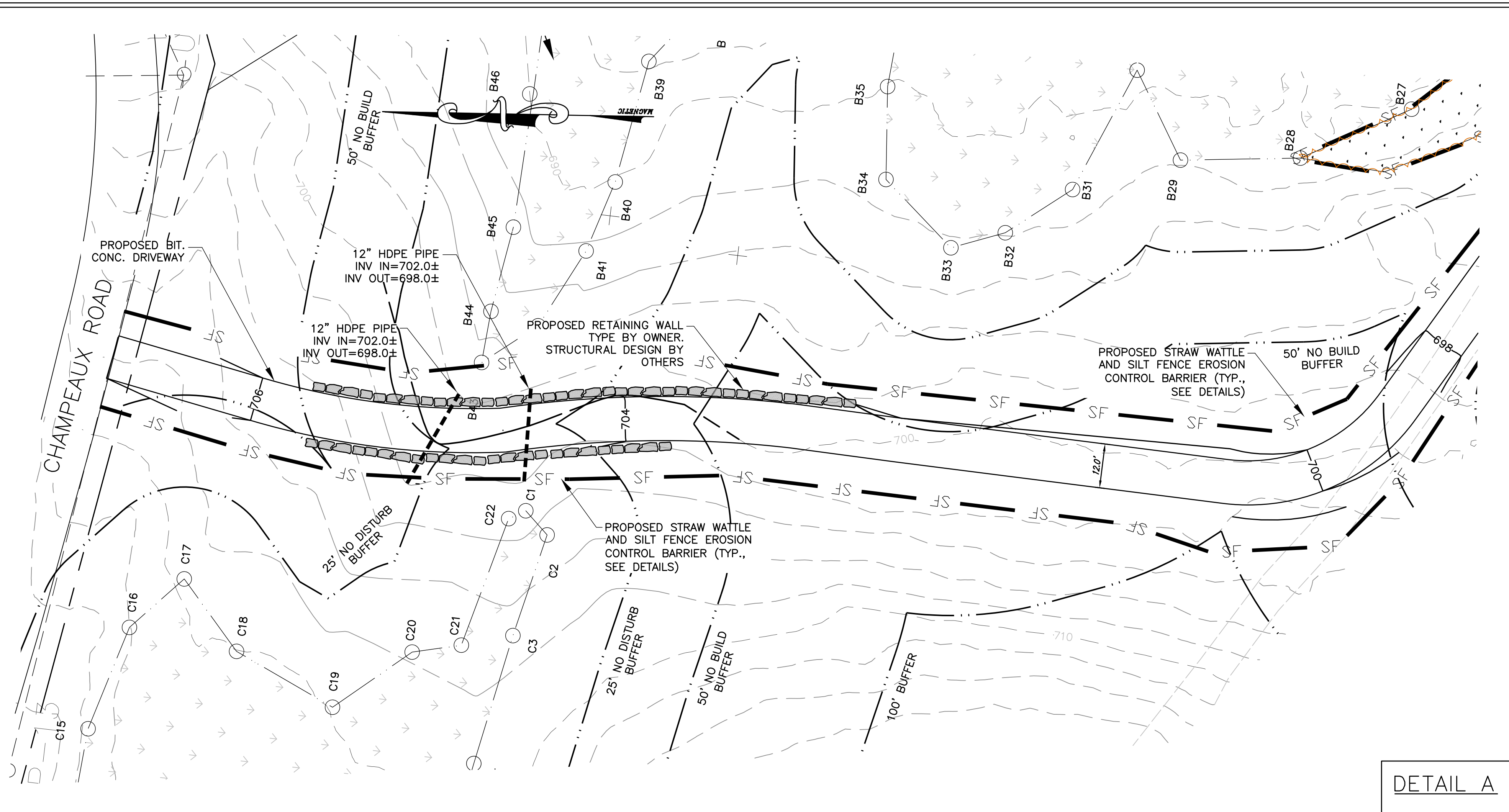


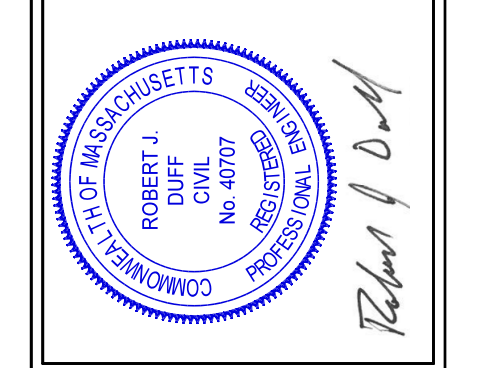
M:\CHAMPEAUX\36 Champeaux Rd_Site Plan\DWG\217-2865-0_Site Plan REV1.dwg



HOR. SCALE IN FEET: 1"=20'

REV	DATE	DESCRIPTION	MADE	APVD

ROBERT DUFFE, P.E.
PROFESSIONAL ENGINEER
MA LIC. NO. 40707



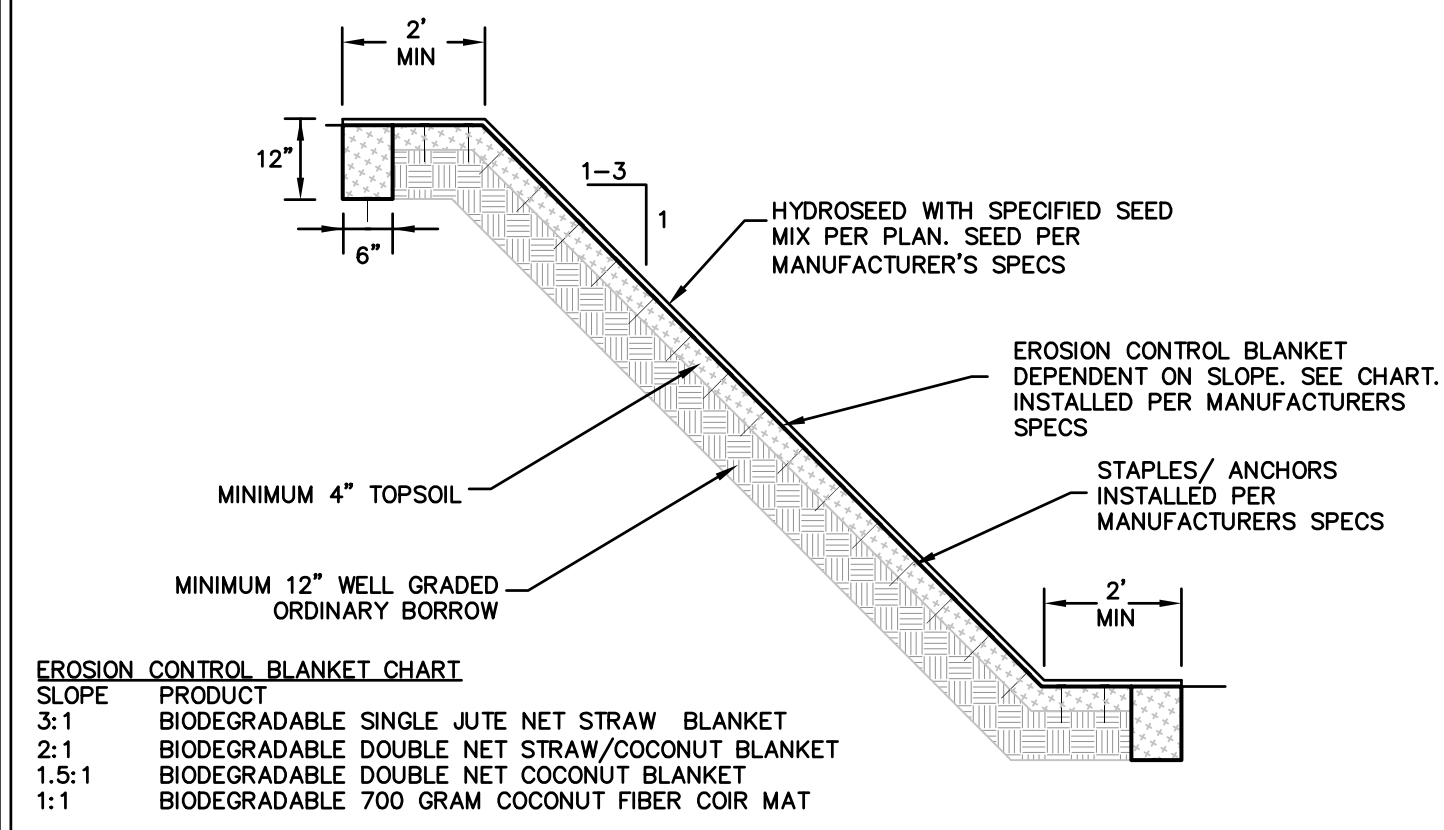
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PROPOSED SINGLE FAMILY HOME
36 CHAMPEAUX ROAD
STURBRIDGE, MA 01518
PREPARED FOR
KEVIN LAMY
32 PAIGE ROAD
BRIMFIELD, MA 01507

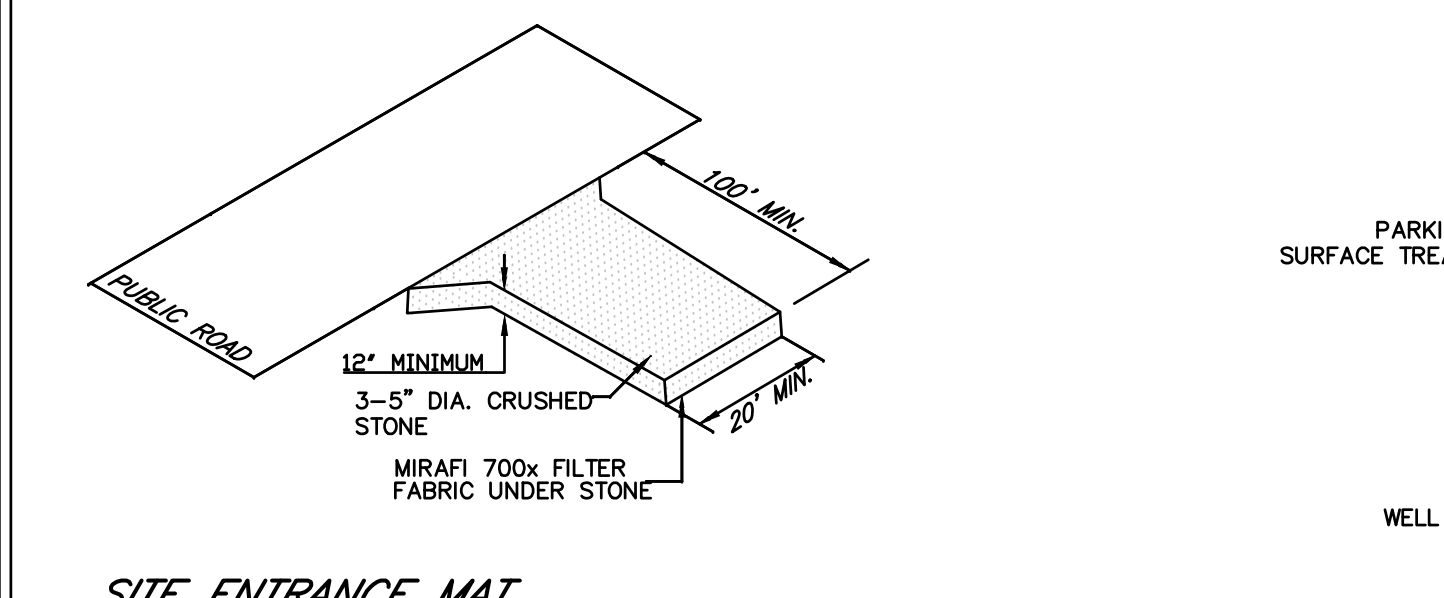
DRAWN BY: JW
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CHK BY: RD
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EROSION AND SEDIMENTATION CONTROL PLAN

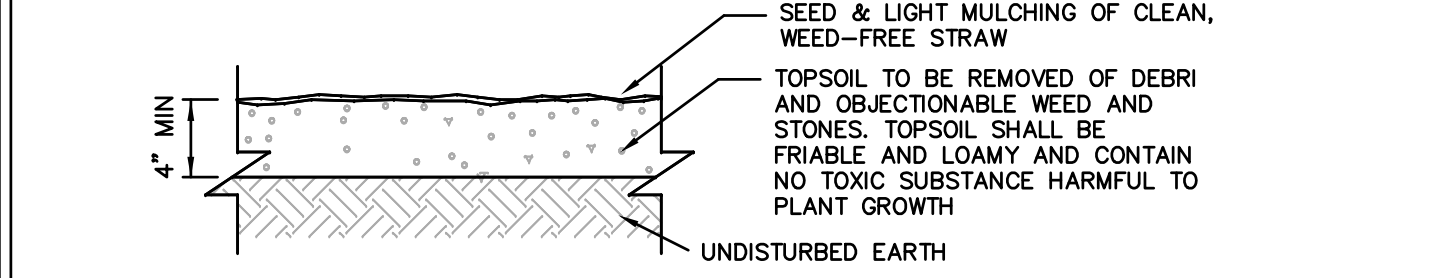
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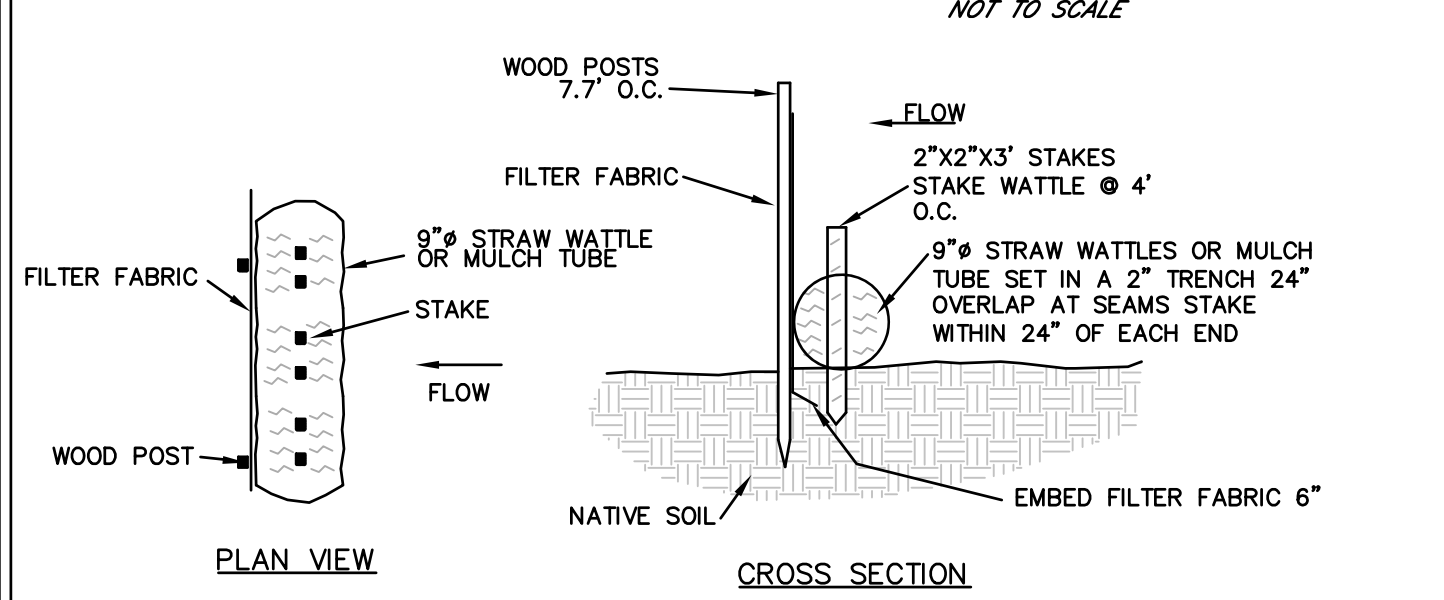
SLOPE STABILIZATION DETAILS
NOT TO SCALE



SITE ENTRANCE MAT
NOT TO SCALE

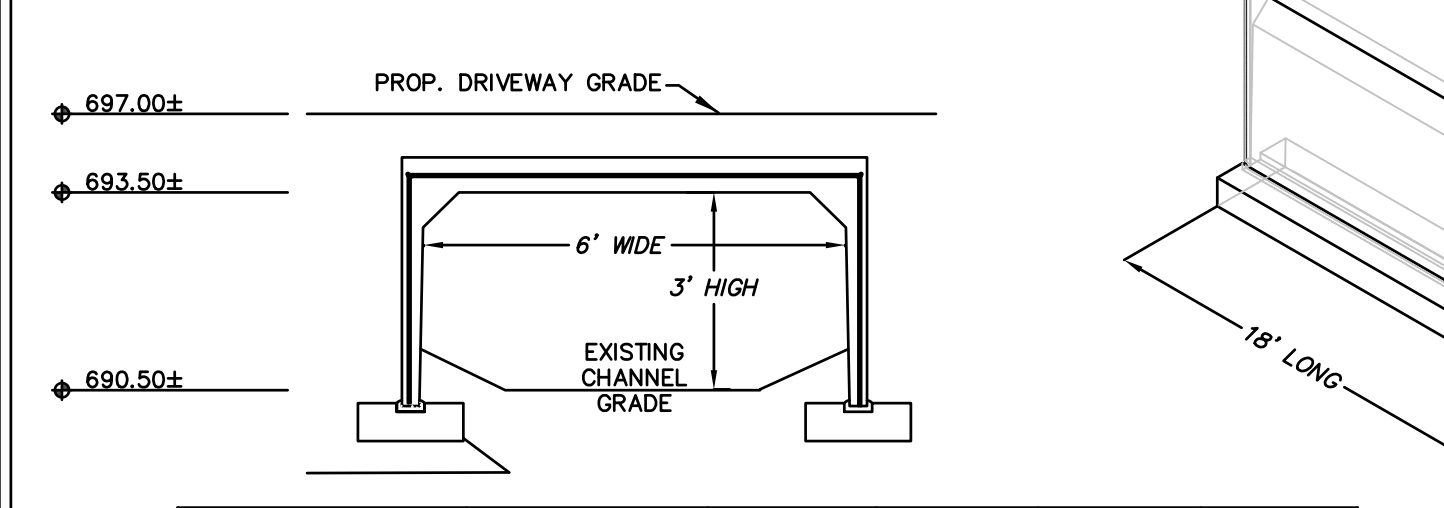


TOP SOIL & SEEDING DETAIL
NOT TO SCALE

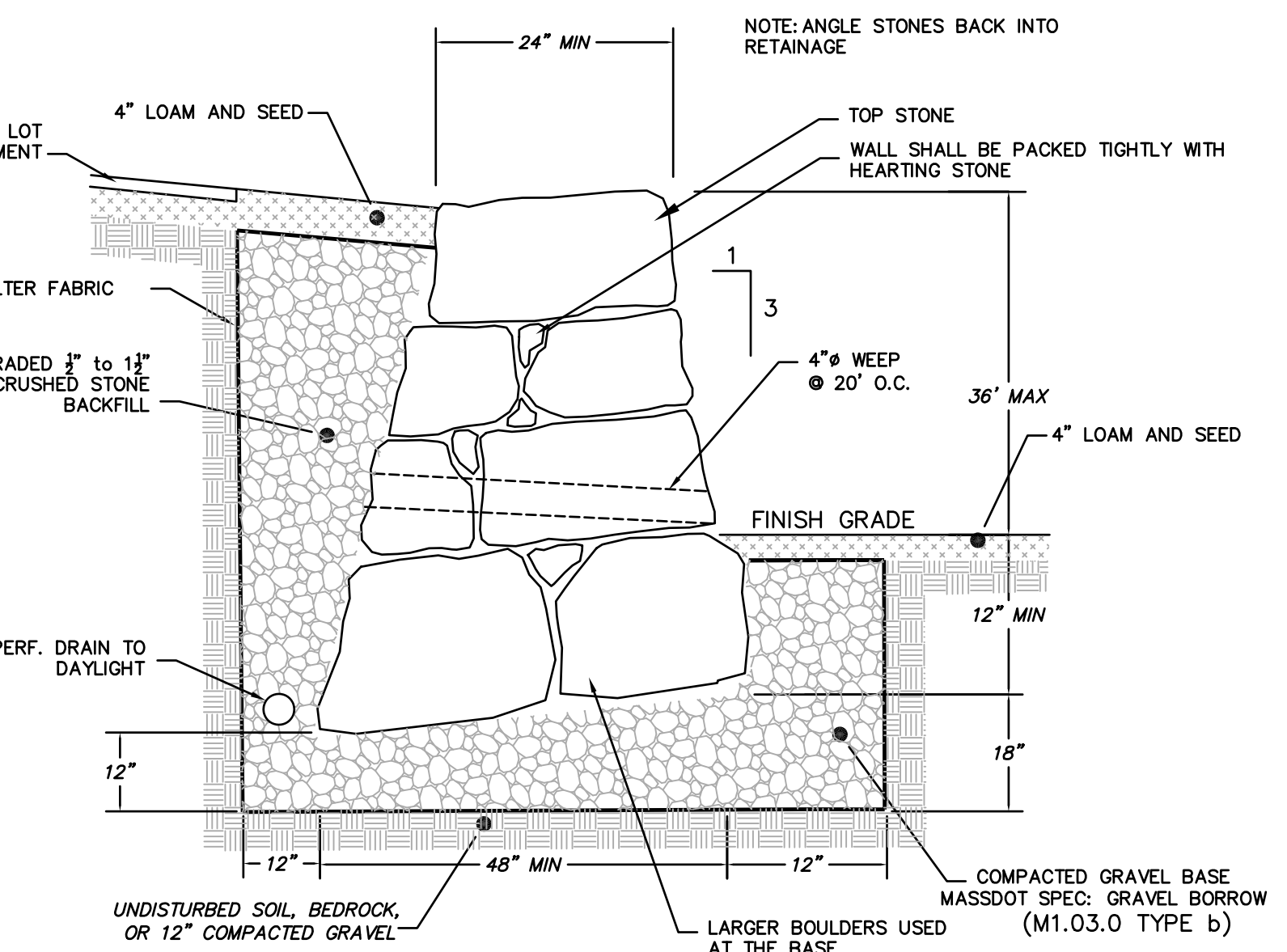


STRAW WATTLE AND SILT FENCE DETAIL
NOT TO SCALE

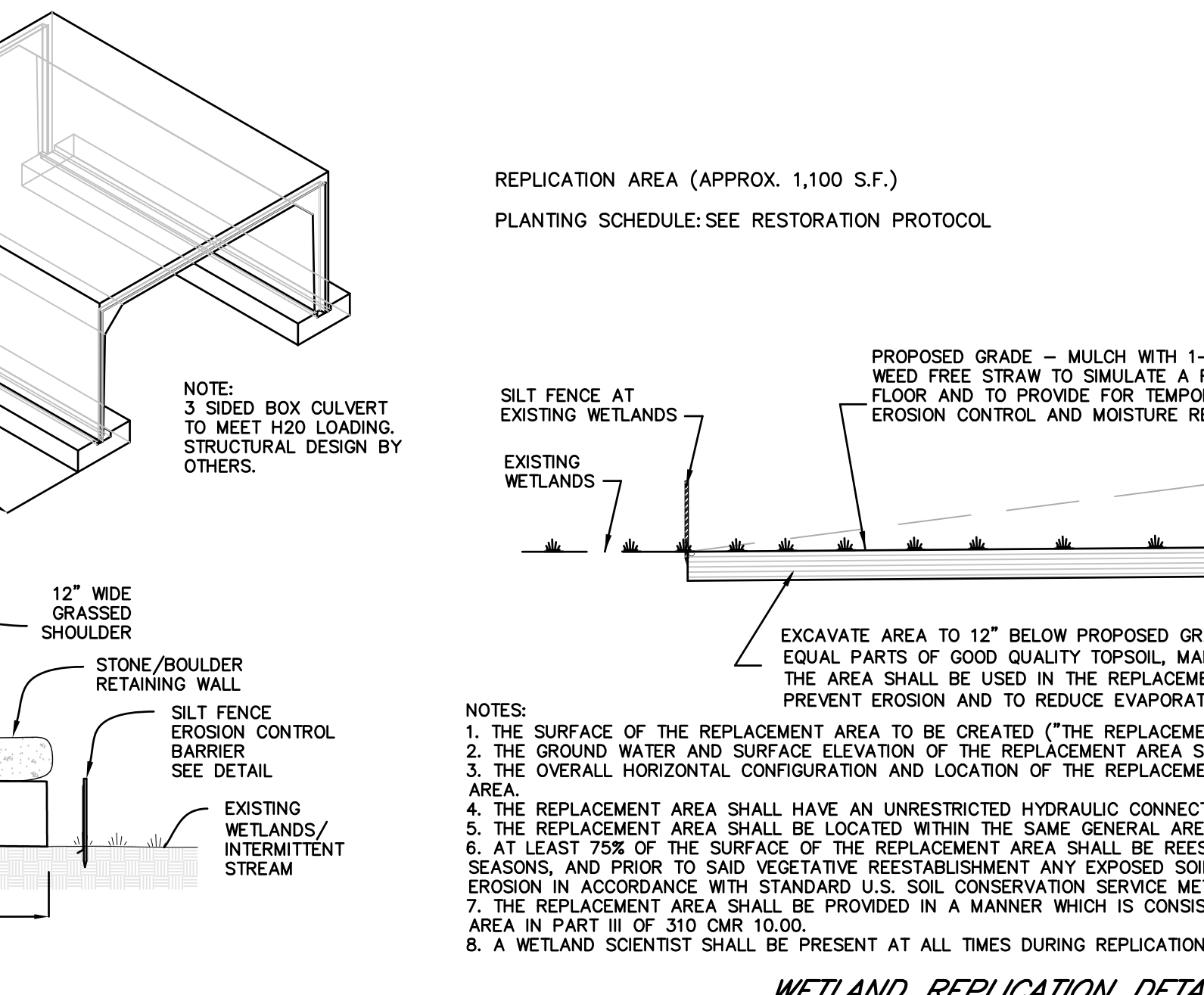
RE-CONSTRUCT THE NATURAL CHANNEL BOTTOM SUBSTRATE AND BYW WITHIN STRUCTURE IF NECESSARY (IF DAMAGE TO THE CHANNEL IS INCURRED DURING CONSTRUCTION OR FROM TEMPORARY CROSSING). SUBJECT TO INSPECTION BY WETLAND SCIENTIST, DESIGN ENGINEER, AND TOWN. ALL EFFORTS SHALL BE MADE TO NOT DISTURB OR DAMAGE THE BYW, STREAM BANKS, OR CHANNEL DURING CONSTRUCTION.



3-SIDED BOX CULVERT DETAIL
NOT TO SCALE



BOULDER RETAINING WALL DETAIL OR APPROVED EQUAL
NOT TO SCALE



WETLAND REPLICATION DETAIL
NOT TO SCALE

DESCRIPTION AND MAINTENANCE OF EROSION CONTROL MEASURES
ALL MEASURES STATED ON THIS PLAN, AND IN THE STORMWATER MANAGEMENT PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT IN ACCORDANCE WITH THE FOLLOWING:

- INSTALL EROSION CONTROL BARRIERS AT LOCATIONS AS SHOWN ON THE PLANS AND DETAILS. EROSION CONTROLS SHALL BE INSPECTED DAILY AND AFTER 1/4" RAIN EVENTS. INSPECTIONS SHALL BE RECORDED WITH THE TIME AND DATE AND REPORTS SHALL BE AVAILABLE FOR INSPECTION BY THE TOWN OR ENGINEER. REMOVE SEDIMENT ONCE LEVELS HAVE REACHED 1/4 OF THE EFFECTIVE HEIGHT. REPAIR AND/OR REPLACE THE BARRIER IMMEDIATELY IF DAMAGED OR IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION. IF EROSION CONTROL MEASURES ARE DAMAGED BY CONSTRUCTION VEHICLES, ACTS OF VANDALISM, OR SEVERE WEATHER CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY REMOVE SEDIMENT IN THE VICINITY OF THE EROSION CONTROL MEASURES AND REPAIR THESE MEASURES TO A FUNCTIONAL CONDITION.
- IF, DURING OR AFTER CONSTRUCTION, IT BECOMES APPARENT THAT EXISTING EROSION CONTROL MEASURES ARE INCAPABLE OF CONTROLLING EROSION, THE ENGINEER OR THE TOWN MAY REQUIRE ADDITIONAL CONTROL MEASURES, INCLUDING BUT NOT LIMITED TO: ADDITIONAL STRAW WATTLES, HAYBALES, SILT FENCE, SEDIMENT BASINS, MECHANICALLY ANCHORED MULCH, OR ENHANCED DEWATERING FILTRATION.
- THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF SEDIMENT ONTO A PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCE AS CONDITIONS DEMAND. THE CONTRACTOR SHALL SWEEP PAVED ROADWAYS ADJACENT TO THE SITE ON A ROUTINE BASIS TO PREVENT TRACKING OF MUD ONTO PUBLIC ROADWAYS AND WASHING OF MUD INTO WATERWAYS. IF THE CONTRACTOR'S SCHEDULE FOR CLEANING THE PAVEMENT IS FOUND TO BE INADEQUATE BY THE OWNER, OWNER'S REPRESENTATIVE, OR TOWN, THE CONTRACTOR SHALL INCREASE THE FREQUENCY AT NO ADDITIONAL COST TO THE OWNER.
- NO EQUIPMENT OR MATERIAL STOCKPILES SHALL BE STORED WITHIN 50' OF WETLANDS. COMPLETELY SURROUND TEMPORARY MATERIAL STOCKPILES WITH STRAW WATTLES OR MULCH TUBES TO PREVENT TRANSPORTATION OF SEDIMENT. STOCKPILES SHOULD BE STABILIZED (HYDROSEED, TACKIFIER, TARP COVER, ETC.) IF NOT TOUCHED FOR 14 DAYS. ALL REFUELING OF CONSTRUCTION EQUIPMENT IS TO TAKE PLACE OUTSIDE OF WETLAND BUFFER AREAS. NO CONCRETE WASHOUT OR WASHING OF CONSTRUCTION EQUIPMENT IS ALLOWED WITHIN THE RESOURCE BUFFER AREAS.
- THE CONTRACTOR SHALL MAINTAIN AND INSPECT, ON A DAILY BASIS, THE ADEQUACY OF DUST CONTROL MEASURES AND CORRECT ANY DEFICIENCIES IMMEDIATELY. BROOM OFF PAVEMENT AREAS ADJOINING THE EXCAVATION ON A DAILY BASIS. COVER AND/OR KEEP MOIST ALL EARTH STOCKPILES AT ALL TIMES.
- IF DEWATERING IS REQUIRED, WATER SHOULD BE DISCHARGED TO DEWATERING BAGS OR OTHER SEDIMENT REMOVAL DEVICES PRIOR TO DISCHARGE TO RESOURCE AREAS. WATER MAY ALSO BE USED FOR DUST CONTROL AND/OR VEGETATION WATERING.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LANDSCAPED AREAS. IF TOPSOIL, SEED, AND/OR MULCH IS WASHED AWAY BY RAINFALL, THE CONTRACTOR SHALL RESTORE THE AREA. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RE-SEEDED AS NEEDED.
- CLEAN ALL STORMWATER STRUCTURES INCLUDING, BUT NOT LIMITED TO, PIPES, SWALES, SUBSURFACE RETENTION BASINS, SEDIMENT TRAPS, AND RIPRAP APRONS OF SEDIMENT UPON COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL PROVIDE AN ADEQUATE NUMBER OF COVERED WASTE CONTAINERS TO ENSURE THAT NO LITTER, DEBRIS, BUILDING MATERIALS, OR SIMILAR MATERIALS ARE DISCHARGED TO WETLANDS OR WATERCOURSES. THE CONTRACTOR SHALL INSTRUCT SUBCONTRACTORS TO USE THE CONTAINERS FOR WASTE MATERIAL. THE CONTAINERS SHALL BE PROMPTLY EMPTIED WHEN FULL.

PRE-CONSTRUCTION CONFERENCE

- PRIOR TO ANY WORK TAKING PLACE, A PRE-CONSTRUCTION MEETING SHOULD BE SCHEDULED BETWEEN THE ENGINEER, CONSTRUCTION MANAGER, AND THE CONSERVATION COMMISSION REPRESENTATIVE TO REVIEW THE OOC, ESC PLAN, AND SCHEDULE.
- FOLLOWING THE PRE-CONSTRUCTION MEETING, ALL ASPECTS OF EROSION CONTROLS ARE TO BE INSTALLED INCLUDING INSTALLATION OF STRAW WATTLES, SILTATION FENCE, AND THE STABILIZED CONSTRUCTION ENTRANCE.
- PRIOR TO ANY SITE WORK OR EQUIPMENT MOBILIZATION, THE EROSION AND SEDIMENTATION CONTROLS SHALL BE INSPECTED BY THE CONSERVATION COMMISSION REPRESENTATIVE.

INSPECTIONS:

- EROSION AND SEDIMENTATION CONTROL INSPECTIONS SHOULD BE CONDUCTED DAILY. ANY REPAIRS SHOULD BE MADE IMMEDIATELY.
- STORMWATER CONSTRUCTION SITE INSPECTIONS SHOULD BE PERFORMED WEEKLY AND AFTER 1/4" RAINFALL EVENTS. ANY NECESSARY STORMWATER REPAIRS SHOULD BE MADE IMMEDIATELY AND DOCUMENTED IN REPORTS AS LISTED IN THE STORMWATER MANAGEMENT REPORT.
- COPIES OF REPORTS AND RAIN EVENT REPORTS SHOULD BE KEPT ON FILE UNTIL COMPLETION.

RESPONSIBILITIES OF OWNER/PERMITEE

- THE OWNER/ PERMITEE SHALL:
- PROVIDE THE CONTRACTOR WITH COPIES OF LAND-USE PERMITS THAT THE OWNER HAS ACQUIRED.
 - INFORM ALL PARTIES INVOLVED WITH THE PROPOSED SITE WORK OF THIS PLAN'S OBJECTIVES AND REQUIREMENTS.

RESPONSIBILITIES OF CONTRACTOR

- THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING EROSION OF THE SITE AND FOR PROTECTING ADJACENT STORM SEWERS AND WATERWAYS FROM SEDIMENTATION. THE CONTRACTOR SHALL:
- INSTALL, MONITOR, AND MAINTAIN ALL OF THE SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THIS PLAN.
 - READ, UNDERSTAND, AND COMPLY WITH ALL PERMIT REQUIREMENTS AND MAINTAIN A COPY OF APPLICABLE PERMITS ON SITE AT ALL TIMES.

REPLICATION CONSTRUCTION PROTOCOL:

THE REPLICATION WORK SHALL BE COMPLETED IN CONFORMANCE WITH THE FOLLOWING PROTOCOL. A WETLAND SCIENTIST SHALL BE PRESENT ON SITE DURING MITIGATION ACTIVITIES. A WETLAND SCIENTIST REPORT SHALL BE REQUIRED FOLLOWING REPLICATION/ RESTORATION ACTIVITIES.

- THE CONSERVATION COMMISSION WILL BE NOTIFIED AT LEAST 48 BUSINESS WEEK HOURS PRIOR TO COMMENCEMENT OF RESTORATION WORK.
- THE WETLAND BOUNDARIES (I.E., DOWNGRADE EDGES OF THE WETLAND REPLICATION AREAS) WILL BE MARKED IN THE FIELD.
- PRIOR TO THE START OF EARTH-MOVING ACTIVITIES IN THE REPLICATION AREA, AN EROSION CONTROL BARRIER OF PROPERLY INSTALLED SILTATION FENCE WILL BE INSTALLED ALONG THE WETLAND BOUNDARIES BETWEEN THE WETLAND AND THE WETLAND REPLICATION AREA. THE PROJECT WETLAND SCIENTIST WILL EVALUATE THE REPLICATION AREAS PRIOR TO CLEARING. THE WETLAND REPLICATION AREA WILL THEN BE CLEARED AND GRUBBED, WITH THE EXCEPTION OF THE TREES THAT HAVE BEEN MARKED TO BE SAVED.
- THE PROPOSED FINAL GRADE FOR THE REPLICATION AREAS SHOULD APPROXIMATE THE ELEVATION OF THE ADJACENT WETLAND AREA AS NOTED ON THE SITE PLANS. THE REPLICATION AREAS WILL BE EXCAVATED TO A DEPTH OF 12 INCHES BELOW THE PROPOSED FINAL GRADE. THE EXCAVATION AND PLANTING WORK WILL BE CLOSELY SUPERVISED BY A QUALIFIED WETLAND SCIENTIST. MODIFICATIONS TO THE PROPOSED GRADING MAY BE MADE IN THE FIELD BY THE WETLAND SCIENTIST IN RESPONSE TO OBSERVED SUBSURFACE HYDROLOGIC CONDITIONS. ALL EXCAVATED MATERIAL WILL BE DISPOSED OF AWAY FROM ALL WETLAND RESOURCE AREAS AND PROTECTED FROM EROSION. ROCK PILES WILL BE PLACED AT SUB-GRADE AS NOTED BELOW.
- WETLAND TOPSOILS WILL CONSIST OF A 1:1 MIXTURE OF HIGH QUALITY, LOAMY TOPSOIL AND LEAF MOLD COMPOST, AS NECESSARY, TO APPROXIMATE 12 INCHES IN THICKNESS THROUGHOUT THE REPLICATION AREA. THE SUBSTRATE WILL BE ROUGHLY GRADED TO PROVIDE AN APPROPRIATE MICROTOPOGRAPHY. A MINIMUM OF 4 INCHES OF LOAMY TOPSOIL WILL BE APPLIED TO THE SIDE-SLOPES OF THE WETLAND REPLICATION AREA. THE SIDE SLOPES SHOULD BE STABILIZED AS NECESSARY TO PREVENT EROSION.
- WILDLIFE ENHANCEMENT MEASURES INCLUDING TREE SNAGS AND ROCK PILES WILL BE INSTALLED WITHIN THE REPLICATION AREA. THE TREE SNAGS WILL CONSIST OF FIVE OR SIX BOULDERS EACH (APPROXIMATELY 24 INCHES IN DIAMETER) PILED AT SUB-GRADE SO AS TO CREATE CREVICES AND CAVITIES FOR SHELTER AND NESTING.
- AN EROSION CONTROL BARRIER COMPRISING OF ONLY TOED-IN SILTATION FENCE WILL BE PROPERLY INSTALLED BETWEEN THE COMPLETED REPLICATION AREA AND THE ADJACENT UPLAND SIDESLOPES.
- PLANTINGS IN THE REPLICATION AREA TO BE NATIVE WETLAND SPECIES. SCHEDULE TO BE DETERMINED BY WETLAND SCIENTIST. PLANTING WILL BE DONE ONLY DURING THE BEGINNING (APRIL 15 THROUGH JUNE 15) OR END (SEPTEMBER 15 TO NOVEMBER 15) OF THE GROWING SEASON. PLANTING IN THE MID-GROWING SEASON IS ONLY ACCEPTABLE IF IRRIGATION IS PROVIDED. THE PLANT SPECIES IDENTIFIED IN THE TABLE BELOW WILL BE PLANTED IN THE REPLICATION AREA EITHER BY TRANSPLANT OR FROM NURSERY STOCK. THE SAPLINGS WILL BE DISTRIBUTED THROUGHOUT THE AREA. THE SHRUBS WILL BE PLANTED RANDOMLY THROUGHOUT THE AREA IN CLUMPS OF TWO TO THREE WITH THE AVERAGE SPACING BETWEEN SHRUB CLUMPS APPROXIMATELY 5 FEET ON-CENTER. THE WOODY VEGETATION SHOULD NOT BE PLANTED IN ROWS.
- THE PLANTED REPLICATION AREA WILL BE MULCHED WITH 1 TO 2 INCHES OF WEED FREE STRAW TO SIMULATE A FOREST FLOOR AND TO PROVIDE FOR TEMPORARY EROSION CONTROL AND MOISTURE RETENTION.
- THE SIDE-SLOPES OF THE WETLAND REPLICATION AREA WILL BE SEEDED WITH A GRASS/WILDFLOWER MIXTURE DESIGNED TO PROVIDE PERMANENT COVER (NEW ENGLAND CONSERVATION/WILDFLOWER MIX OR EQUAL). AFTER SEEDING, THE SIDE-SLOPES WILL BE MULCHED WITH A THIN LAYER OF STRAW TO PROVIDE FOR TEMPORARY EROSION CONTROL.
- THE REPLICATION AREA ACCESS ROUTE WILL BE RESTORED FOLLOWING THE COMPLETION OF THE REPLICATION AREA.
- THE REPLICATION AREA WILL BE INSPECTED, BY A QUALIFIED WETLAND SCIENTIST, AT THE END OF EACH GROWING SEASON FOR A MINIMUM OF TWO YEARS OR UNTIL SUCH TIME AS THE REQUIRED 75% OF VEGETATIVE COVER WITH WETLAND SPECIES HAS BEEN ESTABLISHED. WRITTEN RESULTS OF THESE INSPECTIONS WILL BE SUBMITTED TO THE CONSERVATION COMMISSION TWICE A YEAR BY JUNE 1 AND NOVEMBER 1 OF EACH YEAR.
- IF INVASIVE SPECIES ARE NOTED (E.G., KNOTWEED, PHRAQUITES, ETC.) THESE SPECIES WILL BE REMOVED BY EITHER HAND-PULLING THE ENTIRE PLANT OUT BY THE ROOTS OR BY CUTTING THE ABOVE-GROUND PORTION AND APPLYING GLYPHOSATE HERBICIDE TO THE STEM WITH A DRIP APPLICATOR. THE CUT OR PULLED PLANTS WILL BE PROPERLY DISPOSED OF OUTSIDE THE WETLANDS AND BUFFER ZONES AND CARE WILL BE TAKEN NOT TO DISTRIBUTE ANY SEEDS OR BERRIES THAT MAY BE PRESENT.
- IF THE WETLAND REPLICATION AREA HAS BECOME VEGETATIVELY STABILIZED, AND FOLLOWING APPROVAL OF THE ISSUING AUTHORITY, THE SILTATION FENCE AND ALL WOODEN STAKES WILL BE REMOVED AND DISPOSED OF PROPERLY.

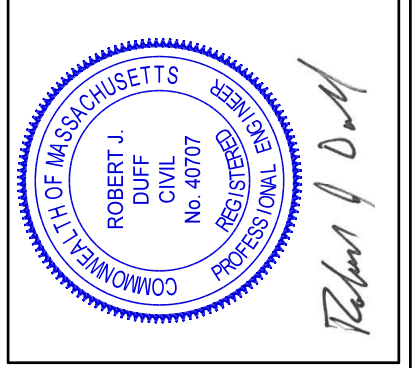


WETLAND REPLICATION DETAIL
NOT TO SCALE

HOR. SCALE IN FEET: NTS

REV	DATE	DESCRIPTION	MADE	APVD

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