Site Plans

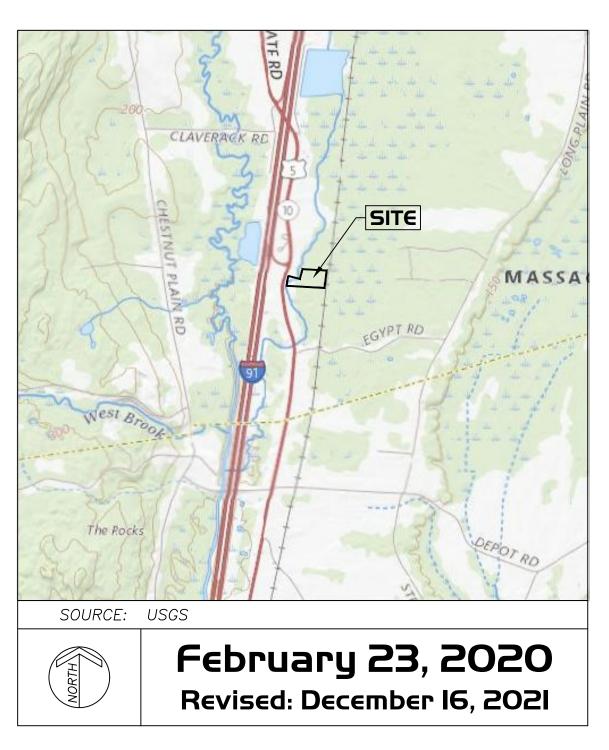
Proposed Self-Storage Facility

State Road Whately, MA Map 5 Parcel 29

AS PREPARED FOR

Todd Cellura Sovereign Builders

I35 Southampton Rd Westhampton, MA 01027

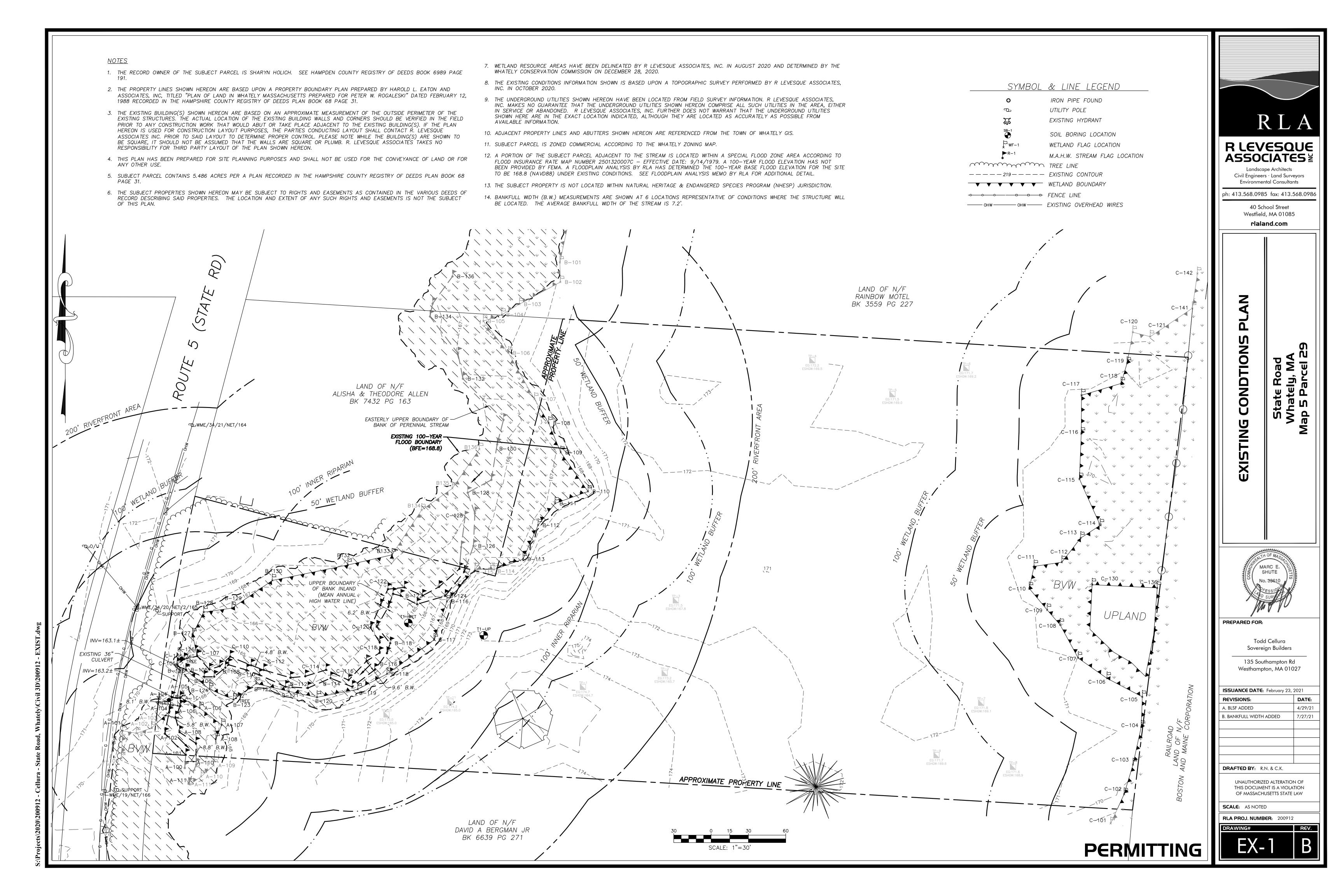


BY



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EROSION & SEDIMENT CONTROL NOTES

MANAGEMENT STRATEGIES

- CONSTRUCTION TRAFFIC SHALL BE LIMITED TO THE CONSTRUCTION ENTRANCE.
- 2. CONSTRUCTION SEQUENCE SHALL BE PHASED TO AVOID LEAVING LARGE AREAS EXPOSED FOR LONG PERIODS OF TIME.
- 3. TEMPORARY SEED AND MULCH SHALL BE APPLIED IMMEDIATELY FOLLOWING ROUGH
- 4. SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED CONTINUOUSLY, ESPECIALLY FOLLOWING STORM EVENTS TO LOCATE FAILING CONTROL MEASURES AND CONDUCT ROUTINE MAINTENANCE OPERATIONS.
- 5. THE CONSTRUCTION SUPERINTENDENT SHALL INFORM ALL ON-SITE WORKERS OF THE SEDIMENTATION CONTROL PROGRAM.

VEGETATIVE CONTROL PRACTICES

- 1. TOPSOIL STOCKPILING: TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE DISTURBED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATION SHALL BE APPROVED BY THE OWNER AND ENGINEER AND BE WITHIN LIMIT OF WORK.
- 2. TEMPORARY SEEDING: THE TEMPORARY SEDIMENT BASIN, TOPSOIL STOCKPILE AND ROUGH GRADED AREAS SHALL BE SEEDED WITH WINTER RYE AT A RATE OF 30 LBS. PER ACRE ANY SOILS THAT ARE LEFT EXPOSED AND UNDISTURBED FOR MORE THAN 30 DAYS SHALL BE TEMPORARILY SEEDED.

A. SITE PREPARATION

• COMPLETE ALL ROUGH GRADING ACTIVITIES

- REMOVE ALL ROCKS AND DEBRIS LARGER THAN 3" IN DIAMETER FROM AREAS TO BE TEMPORARILY SEEDED. -EVENLY APPLY LIME TO ACHIEVE A PH VALUE OF 6.0. • EVENLY APPLY 14 LBS. OF 5-10-10 ANALYSIS FERTILIZER TO A DEPTH OF 4" USING SUITABLE EQUIPMENT.
- SEEDBED IS TO BE LEFT IN FIRM AND SMOOTH CONDITION. • THE LAST TILLAGE OPERATION SHALL BE PERFORMED ACROSS THE SLOPE.

B. ESTABLISHMENT

 EVENLY APPLY SEED IN ACCORDANCE WITH THE SPECIES AND RATE INDICATED ABOVE BY MEANS OF BROADCASTING OR HYDROSEEDING.

- UNLESS HYDROSEEDED, COVER SEED WITH 1/4" TO 1/2" OF TOPSOIL • APPLY MULCH OR EROSION CONTROL BLANKET IMMEDIATELY FOLLOWING SEEDING. VERIFY SEEDING DATES WITH ENGINEER/LANDSCAPE ARCHITECT. IF
- ENGINEER/LANDSCAPE ARCHITECT DETERMINES THAT SEED CANNOT BE APPLIED DUE TO CLIMATE, TOPSOIL SHALL NOT BE SPREAD AND MULCHING SHALL BE APPLIED TO THE EXPOSED SURFACE TO STABILIZE SOILS UNTIL THE NEXT RECOMMENDED SEEDING
- PERMANENT SEEDING SHALL BE APPLIED BETWEEN APRIL 15 AND SEPTEMBER 30. TEMPORARY SEEDING SHALL BE APPLIED TO ALL DISTURBED AREAS OUTSIDE THIS TIME FRAME, UPON APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT.

• ALL SEEDED/MULCHED AREAS SHALL BE INSPECTED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE REPAIRED AS NECESSARY.

NONSTRUCTURAL CONTROL PRACTICES

- SCARIFICATION: EXPOSED SLOPES EXCEEDING 4:1 SHALL BE SCARIFIED AT RIGHT ANGLES TO THE SLOPE. PROVIDE PERIODIC UPGRADING OF SERRATIONS DURING EXPOSED PERIOD UNTIL VEGETATION IS ESTABLISHED. PROVIDE VEGETATIVE COVER AS SOON AS POSSIBLE.
- STRAW MULCH: STRAW MULCH SHALL BE APPLIED IN CONJUNCTION WITH TEMPORARY/PERMANENT SEEDING AND TO GRADED AREAS WHICH REMAIN EXPOSED OUTSIDE OF RECOMMENDED SEEDING DATES. MULCH SHALL BE APPLIED AT 90 LBS. PER 1000 S.F. CONTRACTOR SHALL PERIODICALLY INSPECT AND REAPPLY AS NECESSARY, PARTICULARLY FOLLOWING SIGNIFICANT STORM EVENTS.
- 3. TOPSOIL: DISTURBED AREAS SHALL BE TOPSOILED PRIOR TO SEED APPLICATION. APPLICATION STANDARDS: • REMOVE ALL ROCKS AND DEBRIS OVER 1"-1 1/2" IN DIAMETER. • SCARIFY SURFACE PRIOR TO SEED APPLICATION. • APPLY 6" DEPTH OF TOPSOIL.
- 4. SILT FENCE: SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF THE SITE, AT CULVERT OUTLET LOCATIONS, OR AS INDICATED ON THE DRAWINGS. SILT FENCE SHALL BE INSPECTED AND REPAIRED ROUTINELY, ESPECIALLY FOLLOWING STORM EVENTS UNTIL THE SITE HAS BEEN STABILIZED (COVER > 70%) BY VEGETATION.

STRUCTURAL CONTROL PRACTICES

- 1. RIP-RAP OUTLET PROTECTION: RIP-RAP SHALL BE PROVIDED AT ALL PIPE OUTLETS. MATERIAL SHALL BE HARD, DURABLE FIELD OR QUARRY STONE WHICH IS ANGULAR AND RESISTS BREAKING DOWN WHEN EXPOSED TO WATER OR WEATHERING.
- 2. CONSTRUCTION ENTRANCE: CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DRAWINGS.
- 3. DUST CONTROL: A WATER TRUCK SHOULD BE LOCATED ON-SITE FOR DUST CONTROL WHILE WORK IS PROCEEDING. MAINTENANCE SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT. THE FOLLOWING ITEMS SHALL BE CHECKED IN PARTICULAR:
 - A. RIP-RAP OUTLET PROTECTION SHALL BE CHECKED REGULARLY FOR SEDIMENT ACCUMULATION. IF SIGNIFICANT AMOUNTS OF SEDIMENT ACCUMULATE, RIP-RAP SHALL BE REMOVED AND REPLACED.
 - B. SILT FENCING SHALL BE INSPECTED REGULARLY FOR UNDERMINING AND DETERIORATION. REMOVE SEDIMENT FROM BEHIND FENCE WHEN IT BECOMES 6 INCHES DEEP.
 - C. SEEDED/MULCHED AREAS SHALL BE INSPECTED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE REPAIRED AS NECESSARY.

SILT FENCE INSTALLATION NOTES

- 1. THIS SEDIMENT BARRIER UTILIZES MIRAFI ENVIROFENCE (100X) OR EQUAL. IT IS DESIGNED FOR SITUATIONS IN WHICH ONLY SHEET OR OVERLAND FLOWS ARE EXPECTED.
- 2. THE HEIGHT OF THE BARRIER SHALL NOT EXCEED 36 INCHES (HIGHER BARRIERS MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE). IDEALLY THE FILTER FENCE SHALL BE PLACED 10 FEET AWAY FROM THE TOE OF SLOPE.
- 3. WHEN JOINTS ARE NECESSARY, FILTER FABRICS SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT STAKES WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY SEALED. SEE MANUFACTURER'S RECOMMENDATION.
- 4. STAKES SHALL BE SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). IN APPLICATIONS WHERE HEAVY FLOWS ARE EXPECTED SUCH AS IN-STREAM INSTALLATIONS STAKE SPACING SHALL BE PER MANUFACTURER'S RECOMMENDATIONS AND/OR THE ENGINEERS RECOMMENDATIONS.
- 5. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 6 INCHES WIDE AND 6 INCHES DEEP ALONG THE LINE OF STAKES AND UPSLOPE FROM THE BARRIER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 6. THE PRE ASSEMBLED SILT FENCE SYSTEM SHALL BE UNROLLED, POSITION THE STAKES ON THE DOWNHILL SIDE OF THE TRENCH AND HAMMER THE STAKES AT LEAST 12 INCHES INTO
- 7. THE BOTTOM SIX (6) INCHES OF THE FABRIC SHALL BE LAID INTO THE TRENCH TO PREVENT UNDERMINING BY STORM WATER RUNOFF.
- 8. BACKFILL THE TRENCH OVER THE FILTER FABRIC AND COMPACT SUFFICIENTLY TO PREVENT THE RUNOFF FROM ERODING THE BACKFILL.
- 9. THE FABRIC SHALL NOT EXTEND MORE THAT 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES OR SUPPORTS OTHER THAN THE STANDARD STAKES.
- 10. INSTALLED SILT FENCE BARRIERS SHALL BE MAINTAINED ON A REGULAR SCHEDULE WHICH MAY BE PRESCRIBED BY THE LOCAL, STATE OF FEDERAL REGULATORY AUTHORITY; BUT, AT MINIMUM SHALL BE CHECKED WEEKLY AS WELL AS AFTER EACH STORM EVENT. MAINTENANCE SHALL CONSIST OF AN INSPECTION OF THE ENTIRE LENGTH OF THE BARRIER TO DETERMINE IF IT IS FUNCTIONING AS INTENDED. ALL BREAKS, DETACHED FABRIC, SLUMPED FABRIC, CLOGGED FABRIC, AND UNDERMINED AREAS SHALL BE FIXED THE DAY THAT THEY ARE DISCOVERED.
- 11. WHEN A MAXIMUM OF SIX (6) INCHES OF SEDIMENT HAS ACCUMULATED BEHIND THE SILT FENCE THIS SEDIMENT SHALL BE REMOVED AND THE FENCE SHALL BE INSPECTED FOR TEARS, CLOGGING OF BREAKS. ALL DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY EITHER BY REPAIR OF REPLACEMENT OF THE SILT FENCE BARRIER AND/OR STAKES AS NEEDED.
- 12. SILT FENCE BARRIERS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN CLEANED OF SILT AND PERMANENTLY STABILIZED.

HAY BALE INSTALLATION & MAINTENANCE (AS REQ'D)

- 1. HAY BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE ON THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
- 2. ALL BALES SHALL BE EITHER WIRE BOUND OR STRING TIES. BALES SHALL BE INSTALLED SO THAT BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES TO PREVENT DETERIORATION OF THE BINDINGS.
- 3. THE BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF FOUR (4) INCHES AND A MAXIMUM DEPTH OF SIX (6) INCHES. AFTER THE BALES ARE STAKED AND CHINKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE BARRIER. BACKFILL SOIL SHALL CONFORM TO THE GROUND LEVEL ON THE DOWNHILL SIDE AND SHALL BE BUILT UP TO FOUR (4) INCHES AGAINST THE UPHILL SIDE OF THE
- 4. EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST TWO (2) STAKES OR REBARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER. STAKES OR REBARS SHALL BE DRIVEN DEEP ENOUGH INTO THE GROUND TO SECURELY ANCHOR THE BALES.
- 5. THE GAPS BETWEEN BALES SHALL BE CHINKED (FILLED BY WEDGING) WITH STRAW TO PREVENT WATER FROM ESCAPING BETWEEN THE BALES. (LOOSE STRAW SCATTERED OVER THE AREA IMMEDIATELY UPHILL FROM A STRAW BALE BARRIER TENDS TO INCREASE BARRIER EFFICIENCY.)
- 6. HAY BALES GENERALLY DETERIORATE IN 2-6 MONTHS AND THUS NEED REPLACEMENT.
- 7. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- 8. BALE BARRIERS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

SITE PREP

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATION, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH.
- 2. CONTRACTOR SHALL ERECT AND MAINTAIN SAFETY BARRICADES AND POST PROPER NOTICES PRIOR TO THE COMMENCEMENT OF WORK.
- 3. CONTRACTOR SHALL PROTECT EXISTING SITE IMPROVEMENTS, APPURTENANCES, AND LANDSCAPING TO REMAIN.
- 4. CONTRACTOR SHALL MAINTAIN EXISTING UTILITIES TO REMAIN IN SERVICE AND PROTECT THEM FROM DAMAGE DURING DEMOLITION OPERATIONS.
- 5. DO NOT DAMAGE EXISTING UTILITIES TO REMAIN WITHIN PROJECT AREA. ALL DAMAGE TO EXISTING UTILITIES TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE UTILITY OWNER.
- 6. THERE SHALL BE NO BURNING OF DEMOLISHED MATERIAL ALLOWED ON SITE.
- 7. CONTRACTOR SHALL COORDINATE WITH OWNER FOR ANY ITEMS TO BE TURNED OVER TO OWNER.
- 8. DEMOLISH AND REMOVE ALL PAVEMENT, SLABS, FOOTINGS, SUBSURFACE ELEMENTS, MISCELLANEOUS DEBRIS, ETC. WITHIN PROPERTY LINES UNLESS NOTED OTHERWISE.
- 9. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST SO THAT DUST DOES NOT CREATE A NUISANCE ON ADJACENT ROADS OR PROPERTIES. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR STREET SWEEPING AND CATCH BASIN CLEANING AFTER EACH PHASE OF CONSTRUCTION AND AS NEED IS DETERMINED BY THE ENGINEER.
- 10. CONTRACTOR SHALL REMOVE AND DISPOSE OF ANY ABANDONED SUBSURFACE SOIL ABSORPTION SYSTEM (SAS) AND MISCELLANEOUS DEBRIS.
- 11. NO ACTIVITY OTHER THAN NORMAL MAINTENANCE SHALL OCCUR OUTSIDE OF LIMIT OF WORK LINES AS SHOWN ON PLAN WITHOUT THE APPROVAL OF THE ENGINEER.
- 12. THE CONTRACTOR SHALL NOTIFY DIG SAFE @ 1-888-344-7233 PRIOR TO COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITY.

LANDSCAPE NOTES

- 1. THE CONTRACTOR SHALL VERIFY FINAL SELECTION OF PLANT MATERIALS WITH THE LANDSCAPE ARCHITECT AND OWNER PRIOR TO INSTALLATION.
- 2. NO PLANT MATERIAL WILL BE ACCEPTED WHICH DISPLAYS MAJOR IRREGULARITIES OR DAMAGE. THE OWNER/LANDSCAPE ARCHITECT RETAINS THE RIGHT TO REJECT ANY PLANT MATERIAL DEEMED UNFIT.
- 3. WARRANTEE: FOR A PERIOD OF TWO GROWING SEASONS FROM THE DATE THAT THE WORK UNDER THIS CONTRACT IS CERTIFIED AS SUBSTANTIALLY COMPLETE. THE CONTRACTOR SHALL: 1) WARRANTEE ALL PLANTS AND SEEDED AREAS UNDER THIS CONTRACT; 2)REMOVE AND REPLACE DURING THIS GUARANTEE PERIOD PLANTS WHICH DIE OR ARE IN POOR CONDITION AS DETERMINED BY THE OWNER; 3) REPLANT WITH STOCK OF SAME SIZE AND QUALITY AS ORIGINALLY SPECIFIED; 4) GUY AND MAINTAIN AS SPECIFIED HEREIN AT NO ADDITIONAL COST TO THE OWNER.
- 4. ALL NEW LAWN AREAS SHALL RECEIVE A MINIMUM OF 4 INCHES TOPSOIL OF THE PROPER PH AND ORGANIC CONTENT SUITABLE FOR THE HEALTHY GROWTH OF LAWNS. THESE AREAS SHALL BE SEEDED WITH A FINE BLADE LAWN GRASS SEED OR SODDED. ADDITIONAL OFF-SITE TOPSOIL MAY BE REQUIRED.
- 5. ALL AREAS TO BE MULCHED SHALL RECEIVE 4 INCHES MINIMUM 100% SHREDDED BARK MULCH WITHIN 48 HOURS OF PLANTING UNLESS OTHERWISE NOTED IN PLANTING DETAILS.
- 6. ALL TREE AND SHRUB PITS SHALL BE AT LEAST 2 FEET WIDER AND 1 FOOT DEEPER THAN THE TREE OR SHRUB ROOT BALL TO BE PLANTED IN IT. BACKFILL SHALL BE HIGH QUALITY LOAM OF THE PROPER PH AND ORGANIC CONTENT SUITABLE FOR THE HEALTHY GROWTH OF PLANT MATERIALS.
- 7. ALL PLANTS SHALL BE NURSERY GROWN AND CONFORM TO THE LATEST EDITION OF "ANSI Z60.1, AMERICAN STANDARD FOR NURSERY STOCK".
- 8. EACH PLANT TO BE FREE FROM DISEASE, INSECT INFESTATION, MECHANICAL INJURIES, AND IN ALL RESPECTS BE SUITABLE FOR FIELD PLANTING.
- 9. EACH PLANT TO BE IN THE TOP OF ITS SIZE CLASS AFTER SHEARING AND PRUNING.
- 10. ADJACENT TO THE TOP OF ANY WALLS OVER 36" A FENCE OR WALL SHALL BE CONSTRUCTED PER PLAN THAT MEETS LOCAL BUILDING CODE AND ALL OTHER APPLICABLE STATE AND FEDERAL LAWS.

11. SEE DETAIL SHEETS FOR ADDITIONAL DETAILS & SPECIFICATIONS.

- 12. SHOULD GC OR ANY SUBCONTRACTOR ENCOUNTER A DISCREPANCE/CONFLICT IN THE PLAN AN THE ACTUAL LOCATION OF A SITE FEATURE, THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT/ENGINEER AND OWNER IMMEDIATELY.
- 13. ALL AREAS DISTURBED DURING CONSTRUCTION NOT DESIGNATED TO RECEIVE OTHER TREATMENT SHALL BE LOAMED TO A MINIMUM DEPTH OF 4" AND SEEDED IN ACCORDANCE WITH THE FOLLOWING:

A. INCORPORATE GROUND LIMESTONE INTO ALL AREAS TO BE SEEDED AT A RATE OF

- 50 LBS/1,000 S.F. B. APPLY 10-6-4 FERTILIZER TO ALL AREAS TO BE SEEDED AT A RATE OF 2
- LBS/1,000 S.F. C. THOROUGHLY INCORPORATE LIME AND FERTILIZER INTO SEED BED TO DEPTH OF 3"
- BY DISCING OR OTHER APPROVED METHOD.
- D. SEED WITH THE FOLLOWING MIXTURE, APPLIED AT A RATE OF 10 LBS/1,000 S.F. SEED MIX:

NAME OF S	SEED % E	BY WEIGHT N IN MIXTURE	IIN. % PURITY	MIN. GER	MINATION
POS PRETE "BARON" BARON BLU		50	90	7	75
FESTUCA R "PENNLAWN PENNLAWN	1"	25	95	8	:5
LOLIUM PE "PENNFINE" PFNNFINF		25	98		95

- E. MULCH ALL SEEDED AREAS WITH STRAW AT A RATE OF 5 LBS/1.000 S.F.UNLESS HYDROSEEDING WAS USED.
- F. ALL SLOPES OF 3:1 OR GREATER AFTER BEING LOAMED, SEEDED AND MULCHED IN ACCORDANCE WITH THE ABOVE SHALL SECURED WITH EROSION CONTROL BLANKETS (NO. AMERICAN GREEN S150 OR EQUAL). OVERLAP ALL NETTING JOINTS A MINIMUM OF 6" AND SECURE WITH DOUBLE ROW OF STAPLES.



R LEVESQUE **ASSOCIATES**

Landscape Architects Civil Engineers · Land Surveyors Environmental Consultants

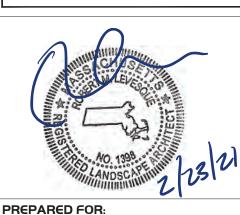
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Sovereign Builders

ISSUANCE DATE: February 23, 2021 REVISIONS: DATE:

DRAFTED BY: R.N. & C.K. UNAUTHORIZED ALTERATION OF THIS DOCUMENT IS A VIOLATION

OF MASSACHUSETTS STATE LAW

SCALE: AS NOTED

RLA PROJ. NUMBER: 200912

—— SF —— SF —— SILT FENCE LINE

- 2. THE OWNER, R LEVESQUE ASSOCIATES, INC., AND PAUL S. SMITH LAND SURVEYING AND/OR THEIR REPRESENTATIVES, IN PREPARING THESE PLANS HAVE ATTEMPTED TO LOCATE ALL EXISTING UTILITIES IN THE PROJECT AREA. HOWEVER, THERE MAY BE UTILITIES THAT WERE NOT OR COULD NOT BE LOCATED. UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL CALL ALL APPROPRIATE UTILITY COMPANIES FOR LOCATIONS OF THEIR UTILITIES AT LEAST 48 HOURS BEFORE COMMENCING EXCAVATION. IN THE EVENT THAT A UTILITY IS SITUATED SUCH THAT CONSTRUCTION CANNOT PROCEED AS SHOWN ON THE PLANS, THE PROJECT ENGINEER/LANDSCAPE ARCHITECT AND OWNER SHALL BE NOTIFIED IMMEDIATELY.
- 3. THE SITE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH OCCUR DUE TO HIS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UTILITIES.
- 4. ALL FILL WORK REQUIRED TO BRING THE PROPOSED ROADWAY UP TO SUB-GRADE LEVEL SHALL CONFORM TO MHD SPECIFICATIONS SECTION 150.
- 5. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
- 6. ALL WORK IN THE CITY/TOWN RIGHT-OF-WAY AND EASEMENTS SHALL BE IN ACCORDANCE WITH THE CITY/TOWN SPECIFICATIONS AND MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
- 7. THE CONTRACTOR SHALL GIVE THE CITY/TOWN A MINIMUM OF 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
- 8. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING
- 9. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH THE CONDITIONS OF APPROVAL OUTLINED IN ALL STATE AND LOCAL PERMITS. COPIES OF THE CONDITIONS ARE INCLUDED WITHIN THE PROJECTS TECHNICAL SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THIS INFORMATION PRIOR TO CONSTRUCTION AND CONFORMING TO THE CONDITIONS AS REQUIRED DURING CONSTRUCTION.
- 10. THE CONTRACTOR SHALL MAINTAIN THE JOB CLEAR OF TRASH AND DEBRIS. THE WORK AREAS ARE TO BE PICKED UP AT THE END OF EACH WORK DAY.
- 11. ANY TEMPORARY FACILITIES FOR THE STORAGE OR PROTECTION OF TOOLS, EQUIPMENT OR MATERIALS SHALL CONFORM TO LOCAL REGULATIONS AND SHALL BE THE GENERAL CONTRACTORS RESPONSIBILITY. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. SAFETY, CARE OF ADJACENT PROPERTIES DURING CONSTRUCTION, AND COMPLIANCE WITH STATE AND FEDERAL REGULATIONS REGARDING SAFETY SHALL BE THE GENERAL CONTRACTORS RESPONSIBILITY.
- 12. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS PRIOR TO SUBMITTING HIS PROPOSAL. NO EXTRAS DUE TO UNFAMILIARITY WITH THE EXISTING SITE OR WORKING CONDITIONS WILL BE ALLOWED.
- 13. CONTRACTOR SHALL BE REQUIRED TO PERFORM FINAL CLEANUP CONSISTING OF CLEANING THE PROPOSED DRAINAGE AND SEWER SYSTEMS OF ALL DEBRIS PRIOR TO THE ACCEPTANCE BY THE OWNER. ADDITIONALLY, THE PROPOSED ROADWAY SHALL BE CLEANED AND SWEPT BY THE CONTRACTOR PRIOR TO ACCEPTANCE.
- 14. ALL EXCAVATION SHALL COMPLY WITH OSHA'S LATEST STANDARDS. ALL REQUIREMENTS OF OSHA'S EXCAVATION STANDARDS SHALL BE PROVIDED BY THE CONTRACTOR INCLUDING, BUT NOT LIMITED TO, THE PROVISION FOR A COMPETENT PERSON ON SITE MANAGER AND ANY REQUIRED DOCUMENTATION THAT MAY REQUIRE CERTIFICATION BY A PROFESSIONAL ENGINEER. THE OWNER, THROUGH ITS ENGINEER, SHALL EXPRESSLY NOT PROVIDE ANY OF THE ABOVE REQUIREMENTS DESIGNATED BY OSHA'S EXCAVATION STANDARD.
- 15. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE COST OF LAYING OUT ALL ITEMS OF THE WORK BASED ON CERTAIN HORIZONTAL CONTROL AND BENCHMARK SUPPLIED BY THE SURVEYOR OF RECORD. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
- 16. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, PERMITS AND APPURTENANCES NECESSARY TO PROVIDE A COMPLETE PROJECT AS INDICATED ON THE PLANS AND IN THESE SPECIFICATIONS.
- 17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A THOROUGH SITE EXAMINATION IN ORDER TO PREPARE SITE FOR CONSTRUCTION.
- 18. ANY AND ALL DEMOLISHED TREES, STRUCTURES AND OTHER RUBBLE MATERIAL PERTAINING TO THIS PROJECT SHALL BE DISPOSED OF BY THE CONTRACTOR OFF—SITE AT HIS EXPENSE IN ACCORDANCE WITH ALL OF THE CITY/TOWN ORDINANCES AND ALL APPLICABLE STATE AND FEDERAL ENVIRONMENTAL REGULATIONS.
- 19. ALL PAVEMENT DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS.
- 20. ALL STREET EXCAVATIONS SHALL BE COMPLETELY CLOSED AT THE END OF EACH WORKING DAY BY BACKFILLING OR COVERING WITH STEEL PLATES.
- 21. ALL MATERIALS AND METHODS ARE TO COMPLY WITH THE CITY/TOWN DPW STANDARDS OR MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MASSDOT) (WHERE APPLICABLE), UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 22. PERMITS WILL BE REQUIRED BY CONTRACTOR WHEN WORKING WITHIN OR OCCUPYING PUBLIC WAY. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED WORK PERMITS AND MAINTAINING A COPY OF ALL PERMITS IN A THREE RING BINDER OR PROJECT BOOK AND ON—SITE AT ALL TIMES.
- 23. BACKFILL WILL BE PLACED IN SUCCESSIVE LAYERS NOT MORE THAN TWELVE INCHES IN THICKNESS AND SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY DETERMINED BY STANDARD PROCTOR TEST (ASTM 698) FOR ALL APPLICABLE TYPES OF BACKFILL MATERIAL. NO FROZEN MATERIAL SHALL BE USED AS BACKFILL. IF, IN THE OPINION OF THE ENGINEER OR THE DPW, THE EXCAVATED MATERIAL IS UNSUITABLE, THE ENTIRE MATERIAL FOR BACKFILLING SHALL CONSIST OF APPROVED GRAVEL OR APPROVED BORROW, AS DIRECTED. AFTER THOROUGH TAMPING AROUND AND BENEATH THE UTILITY, A SIX—INCH LAYER OF BACKFILL WILL BE THOROUGHLY COMPACTED AS FOLLOWS: IF DRY, SHALL BE MOISTENED AND THEN COMPACTED WITH MECHANICAL TAMPERS OR BY HAND TAMPERS HAVING A TAMPING FACE NOT EXCEEDING 25 SQUARE INCHES IN AREA. THE FINAL TWELVE INCHES OF FILLING WILL, IN ALL CASES, CONSIST OF APPROVED GRAVEL THOROUGHLY TAMPED.
- 24. CONTRACTOR SHALL PROVIDE FIELD COMPACTION VERIFICATION UTILIZING ASTM D5195-02, STANDARD TEST METHOD FOR DENSITY OF SOIL & ROCK IN-PLACE AT DEPTHS BELOW THE SURFACE BY NUCLEAR METHODS.
- 25. CONTRACTOR SHALL PROVIDE FIELD COMPACTION RESULTS TO ENGINEER WITHIN 24-HOURS PRIOR TO PLACEMENT OF INFRASTRUCTURE OR BITUMINOUS BINDER.
- 26. ALL FILL TO BRING PROPOSED ROADWAY UP TO THE SUB-GRADE LEVEL SHALL EXTEND PAST THE EDGE OF THE RIGHT-OF-WAY AT A 2:1 SLOPE. THIS IS TO PROVIDE ADEQUATE SUPPORT FOR THE RIGHT-OF-WAY.

LAYOUT NOTES

WORK.

- 1. ALL CONSTRUCTION IN CITY/TOWN RIGHT-OF-WAYS AND/OR EASEMENTS SHALL BE IN ACCORDANCE WITH THE CITY/TOWN STANDARD SPECIFICATIONS.
- 2. IN THE EVENT OF DISCREPANCIES BETWEEN LOCAL SPECIFICATIONS AND SITE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
- 3. SITE CONTRACTOR SHALL PROTECT ALL BENCHMARKS AND PROPERTY MONUMENTATION AND SHALL REPLACE OR REPAIR, AT HIS OWN EXPENSE, BENCHMARKS AND MONUMENTATION DISTURBED DURING CONSTRUCTION.
- 4. ALL STRIPING, PAVEMENT MARKINGS, AND TRAFFIC SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, UNLESS OTHERWISE NOTED ON THE PLANS.
- 5. ALL WORK SHALL COMPLY WITH FEDERAL, STATE AND LOCAL CODES AND ORDINANCES INCLUDING BUT NOT LIMITED TO: AASHTO, OSHA, EPA, DEP, MASSDOT, ETC. THE GENERAL CONTRACTOR SHALL APPLY FOR ALL PERMITS AND SHALL PAY ALL PERMIT RELATED FEES. ALL NECESSARY PERMITS SHALL BE OBTAINED PRIOR TO THE START OF
- 6. ALL DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS ARE TO BE VERIFIED BY THE CONTRACTOR. IF FIELD CONDITIONS VARY SIGNIFICANTLY ENOUGH TO REQUIRE A CHANGE TO THE CONTRACT DOCUMENTS, THE PROJECT PROPONENT AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- 7. THE SITE/GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL CONTACT THE OWNER AND ENGINEER SHOULD HE FIND ANY CONFLICT OR INCONSISTENCY BETWEEN THE WORK SHOWN ON THE DRAWINGS AND NORMAL ACCEPTED CONSTRUCTION PRACTICES, OR HE SHALL ASSUME RESPONSIBILITY FOR ALL CORRECTIONS.
- 8. ANY CORRECTIONS REQUIRED FOR REVISIONS TO THE CONTRACT DRAWINGS INITIATED BY THE GENERAL CONTRACTOR OR SUBCONTRACTORS WITHOUT PRIOR APPROVAL OF THE OWNER AND OR THE ENGINEER SHALL BE ACCOMPLISHED AT THE CONTRACTORS RISK.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL & LEGAL DISPOSAL OF ALL MATERIAL NECESSARY TO PREPARE THE SITE FOR THE NEW CONSTRUCTION AS SHOWN ON THE SITE DRAWINGS.
- THE CITY/TOWN REGULATIONS.

 11. CONTRACTOR SHALL SAWCUT PAVEMENT EDGE WHERE PAVEMENT TO REMAIN IS ADJACENT

10. REPAIR DAMAGED CITY/TOWN ROADS AND CURBS IN ACCORDANCE WITH MASSDOT AND/OR

12. CONTRACTOR SHALL PREPARE SITE AS NECESSARY FOR CONSTRUCTION SHOWN ON THE PLANS.

EARTHWORK NOTES

TO PAVEMENT TO BE REMOVED.

- 1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- 2. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
- 3. STORM PIPE SHALL BE AS NOTED ON PLANS.

A SMOOTH FIT AND CONTINUOUS GRADE.

AND PAVED AREAS.

- 4. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- 5. EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT INTERVALS.
- 6. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT INTERVALS.
- 7. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
- 8. ALL STORM PIPE ENTERING STRUCTURES SHALL BE SEALED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
- 9. ALL STORM SEWER MANHOLES FRAMES AND GRATES ARE TO BE SET EQUAL TO FINISH GRADES, AND SHALL HAVE TRAFFIC BEARING RING & COVERS (H20).
- 10. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE
- 11. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL
- 12. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH THE SPECIFICATIONS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
- 13. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
- 14. IF CONTRACTOR RELOCATES OR SETS NEW BENCHMARKS, THE VERTICAL ELEVATIONS OF THE BENCHMARKS SHALL BE SET WITHIN A TOLERANCE OF 0.010 FT.
- 15. CONTRACTOR SHALL LEAVE GRADE BEHIND CURB IN ALL PLANTER AREAS A MINIMUM OF 4" LOW FOR THE PLACEMENT OF SUITABLE TOPSOIL OR PLANTING MIX.

SITE UTILITY NOTES

GENERAL:

- 1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
- 2. TOPS OF EXISTING MANHOLES SHALL BE SET EQUAL TO FINISH GRADE. IN GRASSED LANDSCAPED AREAS WITH WATER TIGHT LIDS.
- 3. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
- 4. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
- 5. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
- 6. SITE/GENERAL CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES AT THE TOWN WITH REGARD TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
- 7. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- 8. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
- 9. CONTRACTOR SHALL COORDINATE INSPECTION OF UTILITY LINES WITH APPROPRIATE AUTHORITIES PRIOR TO BACKFILLING TRENCHES.
- 10. CONTRACTOR SHALL COMPLY WITH THE LATEST OSHA STANDARDS OR DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND MAINTENANCE OF ALL SUPPORT SYSTEMS, SLOPING, BENCHING, AND OTHER MEANS OF PROTECTION.
- 11. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES WITH LOCAL COMPANIES TO AVOID CONFLICTS AND TO ASSURE THAT PROPER DEPTHS ARE ACHIEVED. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANIES FOR EXACT LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
- 12. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, DUE TO THE LACK OF AVAILABLE DOCUMENTATION. ALL UTILITIES, INCLUDING CURB BOXES, MAY NOT BE SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL CALL THE "DIG SAFE CENTER" TO HAVE ALL UTILITIES MARKED ON THE GROUND PRIOR TO THE START OF CONSTRUCTION
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH OCCUR DUE TO HIS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- 14. DO NOT INTERRUPT EXISTING UTILITIES WITHOUT AUTHORIZATION FROM THE OWNER, OWNERS OF ADJACENT PROPERTIES, AND THE CORRESPONDING UTILITY OWNER. CONTRACTOR SHALL ARRANGE TO SHUT OFF UTILITIES, AS REQUIRED, WITH THE UTILITY OWNERS.
- 15. COORDINATE UTILITY TERMINATION WITH UTILITY OWNERS.

SEWER:

- 1. SANITARY SEWER MAINS AND LATERALS SHALL BE PVC PIPE CONFORMING TO ASTM D 3034—SDR35. THE MINIMUM SIZE FOR SEWER MAINS SHAL BE 8"; SEWER LATERALS SHALL BE 4" MIN.
- 2. ALL SANITARY SEWERS, SEWER FORCE MAINS, AND SEWER LATERALS SHALL BE INSTALLED IN FIRST—CLASS BEDDING AND IN ACCORDANCE WITH THE DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS. SEWERS SHALL BE INSTALLED TO THE LINE AND GRADE INDICATED ON THE PLANS.
- 3. ONLY PRECAST CONCRETE MANHOLES OF A DESIGN APPROVED BY THE TOWN ENGINEER SHALL BE INSTALLED ON A SANITARY SEWER MAIN.
- 4. NO GROUNDWATER OR SURFACE WATER SHALL BE DISCHARGED INTO THE SANITARY
- 5. WHERE ROCK IS ENCOUNTERED, IT SHALL BE REMOVED TO A DEPTH OF ONE FOOT BELOW THE FLOWLINE OF THE SEWER AND THE PIPE LAID IN A PROPERLY COMPACTED GRANULAR MATERIAL APPROVED BY THE TOWN ENGINEER.
- 6. ONLY GRANULAR MATERIAL APPROVED BY THE TOWN ENGINEER SHALL BE USED AS BACKFILL IN ANY TRENCH EXCAVATION.

WATER:

- 1. CONTRACTOR SHALL CONTACT THE CITY/TOWN WATER DEPARTMENT FOR SPECIFICATIONS AND MAKE OF VALVES, VALVE BOXES, FIRE HYDRANTS AND ALL OTHER WATER LINE APPURTENANCES.
- 2. WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL DPW SPECIFICATIONS AND WATER DISTRIBUTION SYSTEM. CONTRACTOR SHALL COORDINATE TESTING WITH THE TOWN WATER DEPARTMENT.
- 3. ALL WATER MAIN SHALL BE DUCTILE IRON (D.I.), CLASS 52, AWWA C-151 (ANSI A21.40). D.I. PIPE SHALL BE DOUBLE CEMENT LINED WITH A SEAL COAT CONFORMING TO AWWA C-104 (ANSI A-21.4).
- 4. JOINTS FOR D.I. PIPE SHALL BE PUSH-ON OR OTHERWISE APPROVED, AWWA C151(ANSI A-21.51) WITH GASKETS CONFORMING TO AWWA C-111 (ANSI A-21.11) MAXIMUM LENGTH OF PIPE TO BE 20 L.F.
- 5. ALL FITTINGS SHALL BE DUCTILE IRON CLASS 53 WITH PRESSURE RATING OF 350 PSI AND MECHANICAL JOINTS CONFORMING TO AWWA C-151 (ANSI A21.51).
- 6. RETAINER GLANDS: RETAINER GLANDS SHALL BE DESIGNED TO IMPART MULTIPLE WEDGING ACTION AGAINST THE PIPE, INCREASE ITS RESISTANCE AS THE PRESSURE INCREASES. GLANDS SHALL BE MANUFACTURED OF DUCTILE IRON CONFORMING TO ASTM A536—80. RESTRAINING DEVICES SHALL BE DUCTILE IRON HEAT—TREATED TO A MINIMUM HARNESS OF 370 BHN. TWIST—OFF NUTS SHALL BE USED TO INSURE PROPER ACTUATING OF THE RETAINER GLAND. DIMENSIONS OF THE GLAND SHALL BE SUCH THAT IT CAN BE USED WITH THE STANDARD MECHANICAL JOINT BELL AND TEE—HEADED BOLTS CONFORMING TO ANSI/AWWA A21.1 AND ANSI/WWA 153/A21.5. THE RETAINER GLAND SHALL HAVE A WORKING PRESSURE OF 250 PSI WITH A MINIMUM SAFETY FACTOR OF 2:1 AND SHALL BE CERTIFIED BY THE MANUFACTURER TO BE COMPATIBLE WITH THE PIPE CLASS AND PIPE MANUFACTURER FOR ALL SIZES PROVIDED ON THE JOB. THE RETAINER GLAND SHALL BE MEGA—LUG AS MANUFACTURED EBAA IRON, INC., OR APPROVED EQUAL.
- 7. ALL WATER MAINS, UNLESS OTHERWISE NOTED, SHALL BE INSTALLED WITH A MINIMUM FIVE FEET OF COVER. WHEN CROSSING ABOVE OR BELOW WATER PIPELINES, A MINIMUM VERTICAL SEPARATION OF SIX INCHES SHALL BE PROVIDED. WHEN CROSSING SANITARY SEWERS, A MINIMUM OF 18" SHALL BE PROVIDED.

SITE UTILITY NOTES (CONTINUED)

- 8. THE INSTALLED WATER MAIN SHALL BE PRESSURE TESTED, FLUSHED AND DISINFECTED BY CONTRACTOR IN ACCORDANCE WITH AWWA C-600 AND AWWA C-651 OR PER CITY/TOWN WATER DEPARTMENT STANDARDS.
- 9. DUCTILE IRON PIPES SHALL BE INSTALLED IN ACCORDANCE WITH AWWA C-600.
- 10. ALL MECHANICAL JOINTS ARE TO BE RESTRAINED. FITTINGS SHALL BE RESTRAINED BY MECHANICAL JOINT RESTRAINTS. THE PIPE CONNECTED TO THE FITTING SHALL BE RESTRAINED PER THE MANUFACTURER'S SCHEDULE.
- 11. THE CONTRACTOR SHALL MARK THE LOCATION OF THE PROPOSED WATER MAIN AT LEAST 48 HOURS PRIOR TO EXCAVATING. EXCAVATION SHALL NOT PROCEED WITHOUT AUTHORIZATION BY THE ENGINEER.
- 12. ALL WATER MAINS, HYDRANT BRANCHES, AND SERVICES SHALL HAVE UTILITY WARNING TAPE. THE TAPE SHALL BE BURIED APPROXIMATELY 2 FEET BELOW
- 13. BACKFILL SHALL BE COMPACTED TO 95 PERCENT OF THE STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D698. COMPACTION EQUIPMENT USED MUST BE SPECIFICALLY DESIGNED FOR COMPACTION. TAMPING WITH THE BACK OF THE BACK HOE BUCKET IS UNACCEPTABLE COMPACTION.
- 14. ALL WATER SERVICES SHALL BE 1" DIA. COPPER TUBING TYPE K, SOFT TEMPER CONFORMING TO ASTM B88 UNLESS OTHERWISE NOTED.
- 15. DEPRESS WATER MAIN UNDER EXISTING SERVICES AND HYDRANT BRANCHES TO MAINTAIN 5'-0" OF COVER.
- 16. ALL WATER MAINS SHALL BE LAID PER THE PLANS TO MAINTAIN THE MAXIMUM SEPARATION FROM EXISTING OR PROPOSED SANITARY SEWER. DISTANCE SHALL BE MEASURED EDGE TO EDGE.
- 17. IDENTIFY EACH PIPE LENGTH & FITTING CLEARLY WITH MANUFACTURE'S NAME & TRADEMARK. NOMINAL PIPE SIZE & MATERIAL DESIGNATION.
- 18. ALL WATER MAINS & SERVICE PIPES SHALL BE LAID IN A TRENCH SEPARATE FROM ANY OTHER UTILITY (GAS, ELECTRIC, TELEPHONE, ETC.) SHALL BE A MINIMUM NO LESS THAN FIVE (5) FEET FROM ANOTHER UTILITY.
- 19. ALL MATERIAL SHALL BE IN ACCORDANCE WITH CITY/TOWN WATER DEPARTMENT "RULES & REGULATIONS". ALL WORK TO BE PERFORMED IN ACCORDANCE WITH CITY/TOWN WATER DEPARTMENT "SPECIFICATIONS". CITY/TOWN WATER DEPARTMENT STANDARDS SHALL TAKE PRECEDENCE OVER ANY REQUIREMENTS LISTED ABOVE.



Landscape Architects
Civil Engineers · Land Surveyors
Environmental Consultants

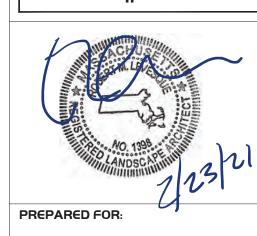
40 School Street Westfield, MA 01085 **rlaland.com**

ph: 413.568.0985 fax: 413.568.0986

TION NOTES

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State Road Whately, MA Map 5 Parcel 7



Todd Cellura Sovereign Builders

Westhampton, MA 01027

ISSUANCE DATE: February 23, 2021

REVISIONS: DATE:

DRAFTED BY: R.N. & C.K.

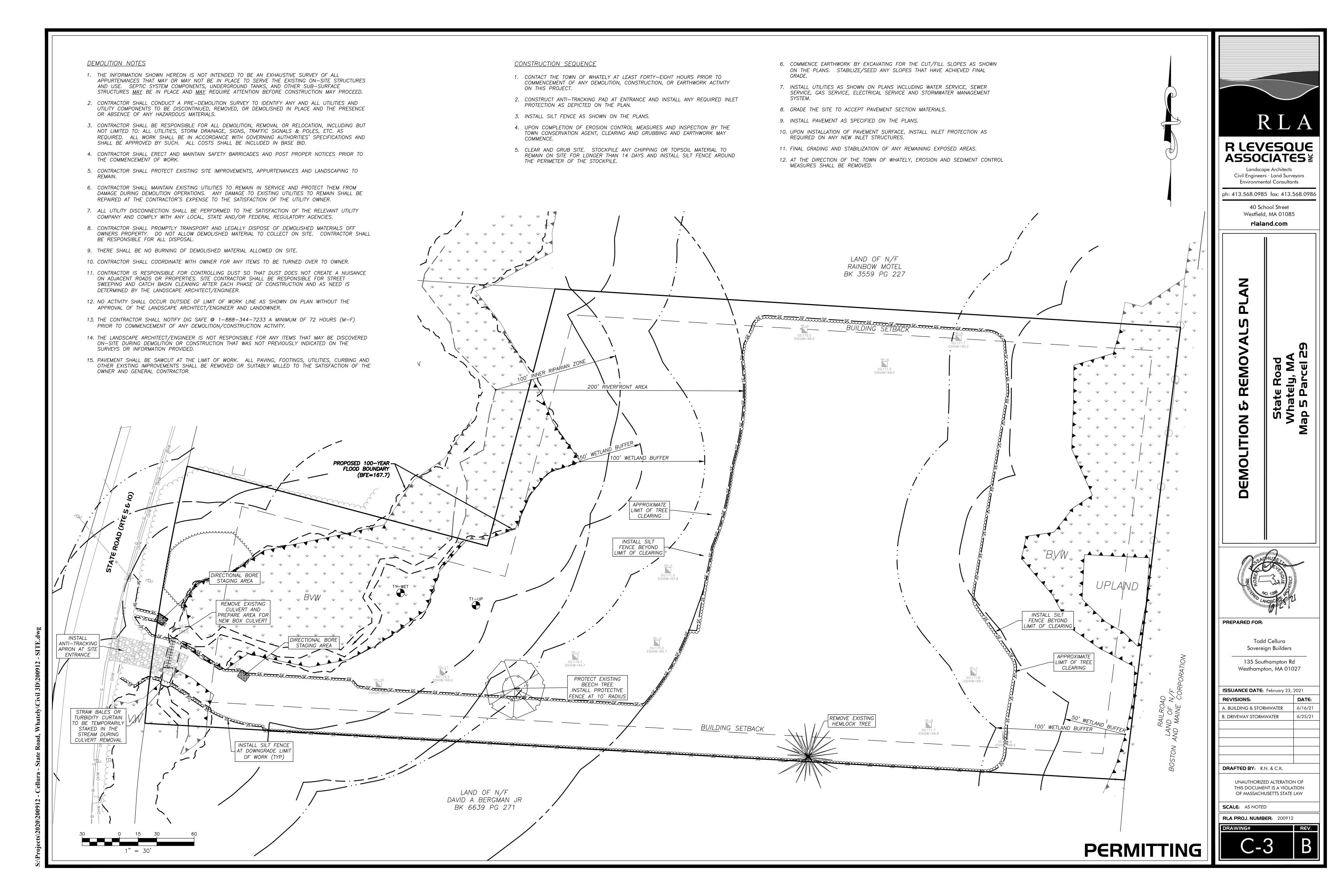
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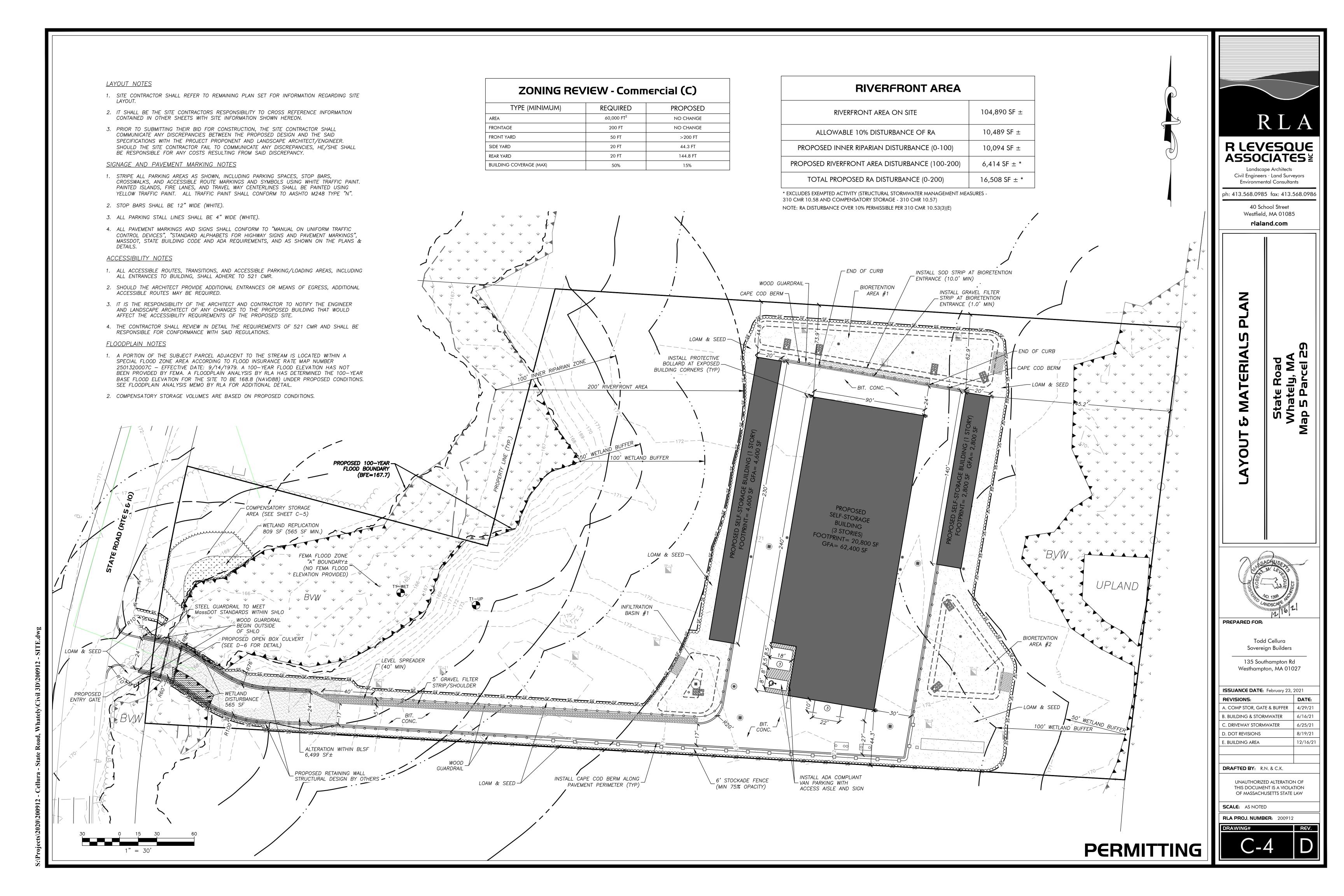
OF MASSACHUSETTS STATE LAW

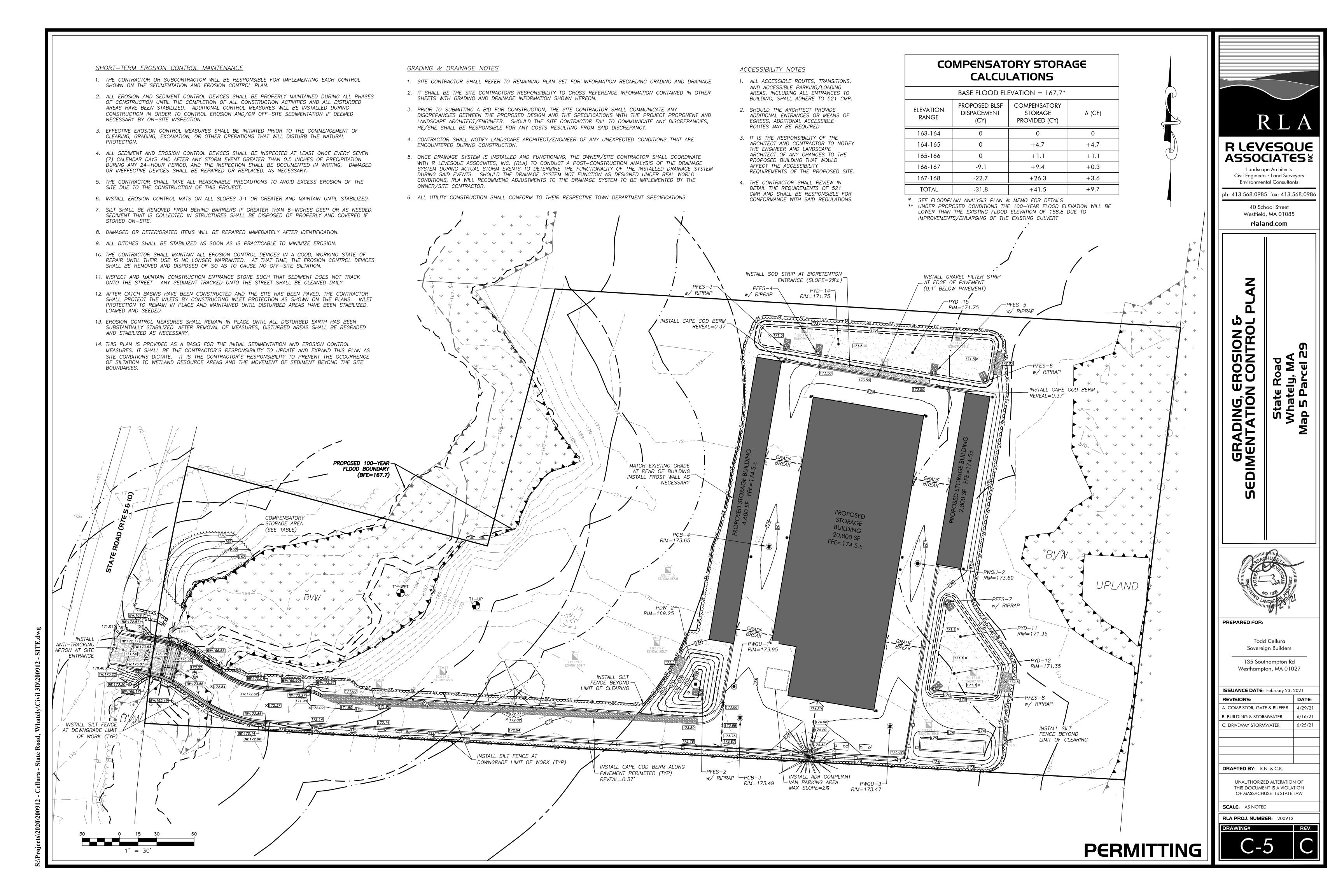
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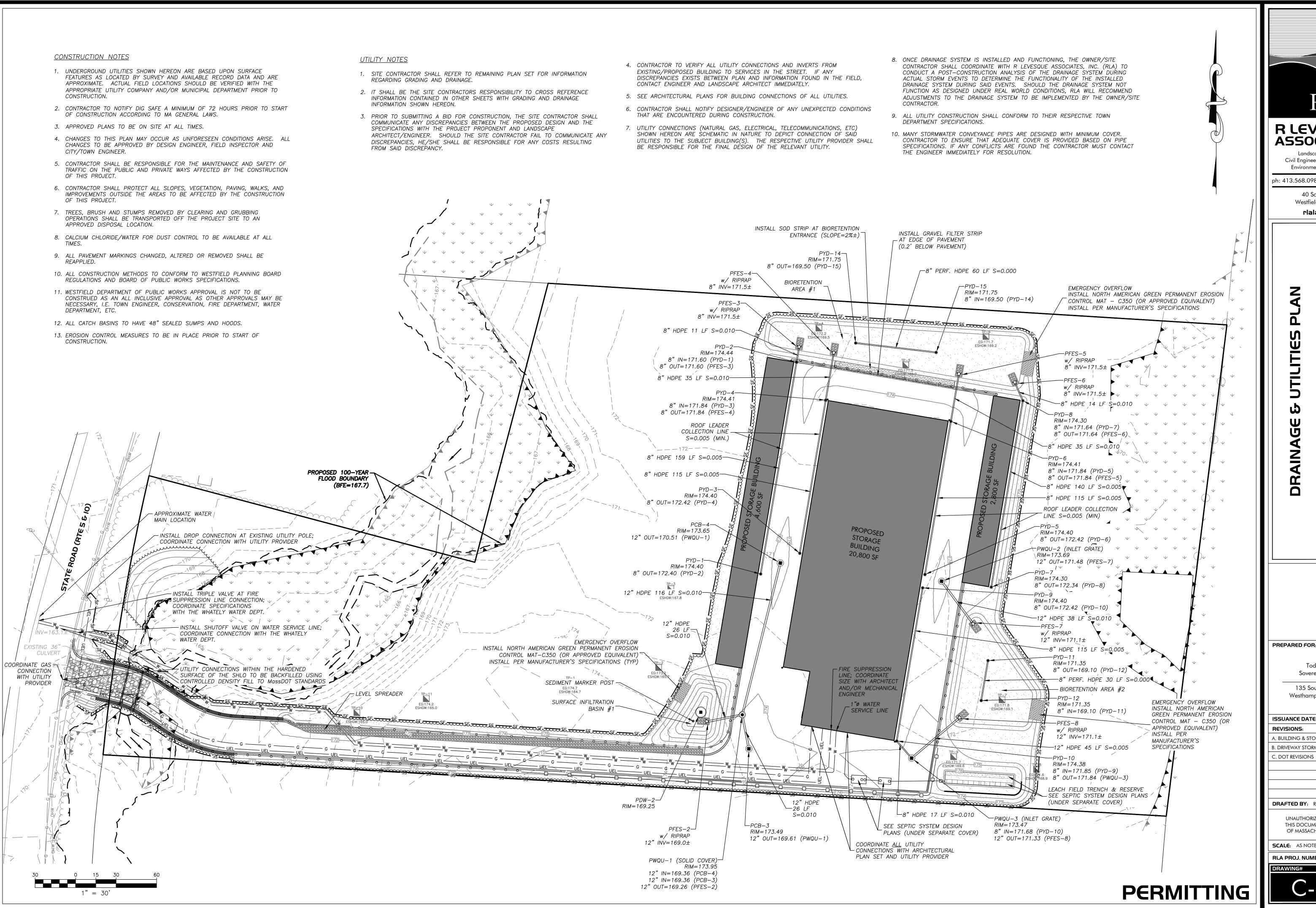
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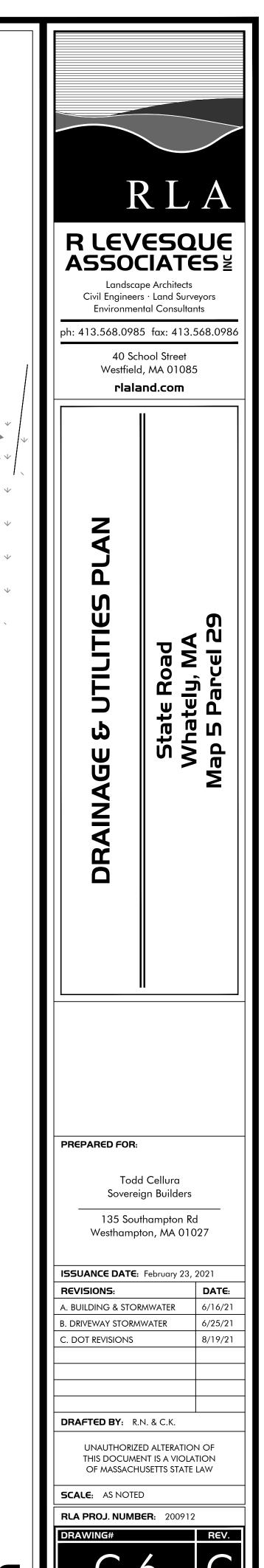
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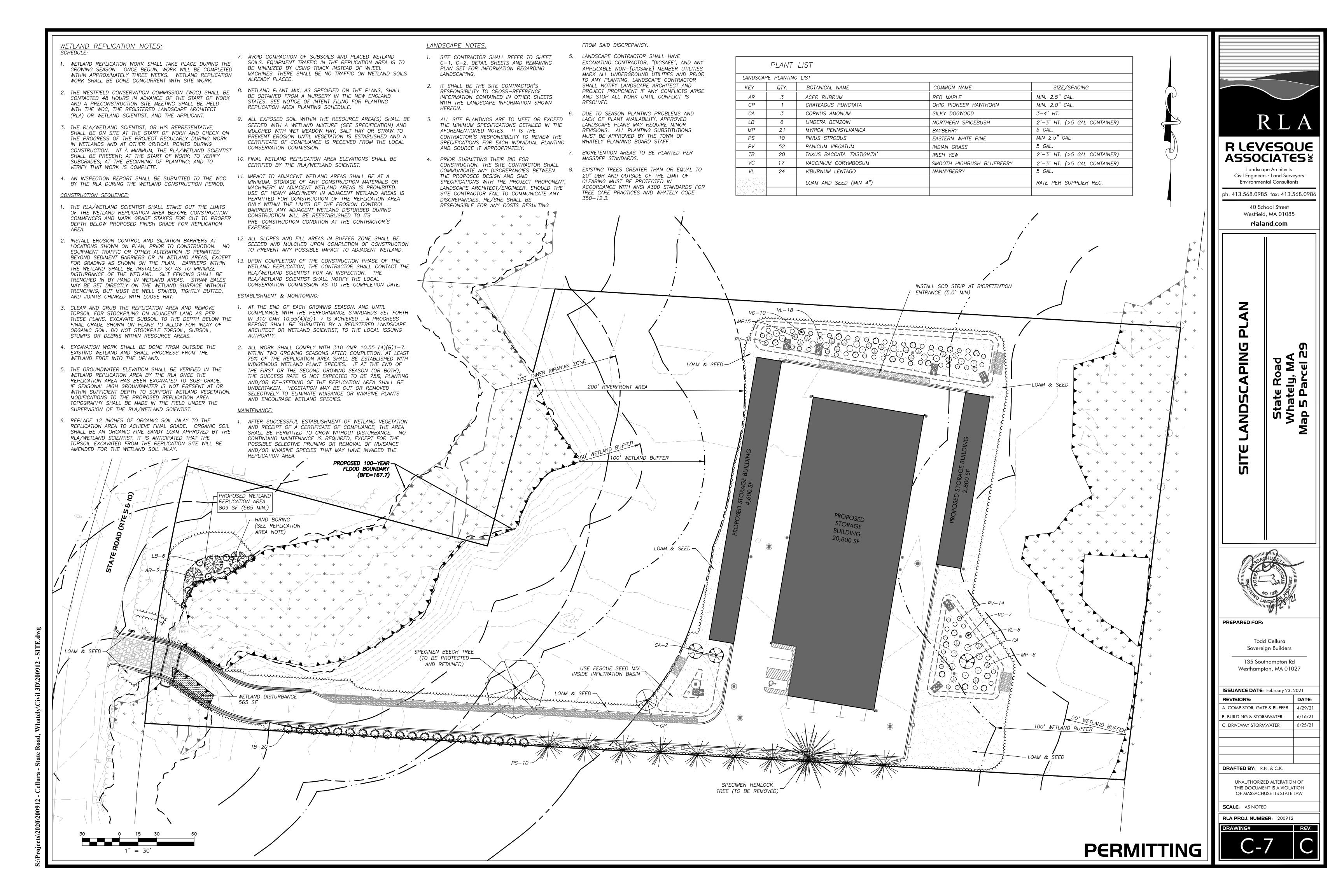




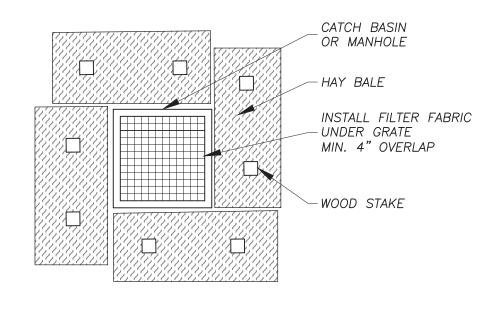






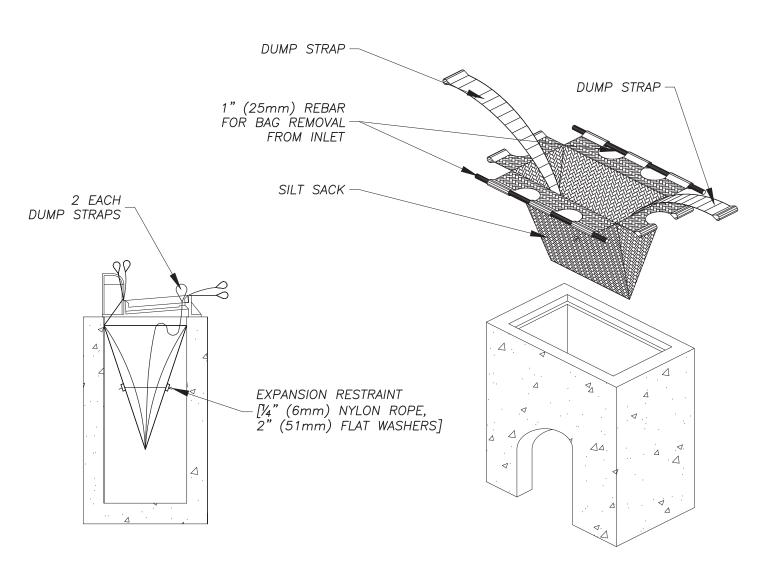




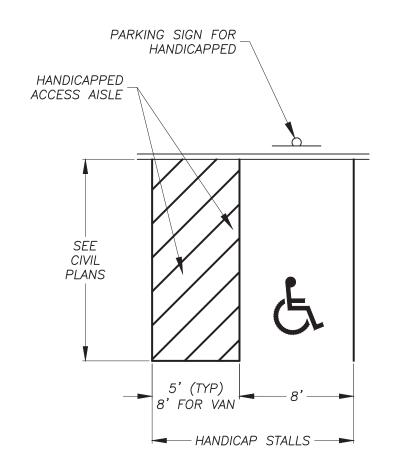


NOTE INSTALL BARRIER AT EACH CATCH BASIN AND DRAINAGE BASIN. CATCH BASINS IN PAVEMENT AREAS ARE TO RECEIVE ONLY THE FILTER FABRIC TREATMENT.

INLET PROTECTION - HAY BALES NO SCALE

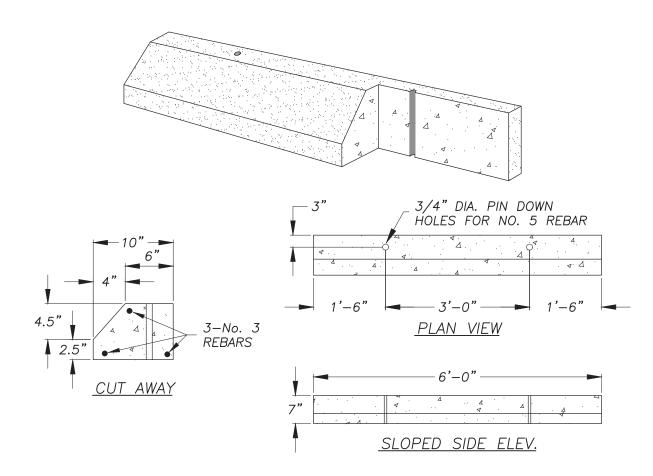


INLET PROTECTION - SEDIMENT FILTER SACK NO SCALE

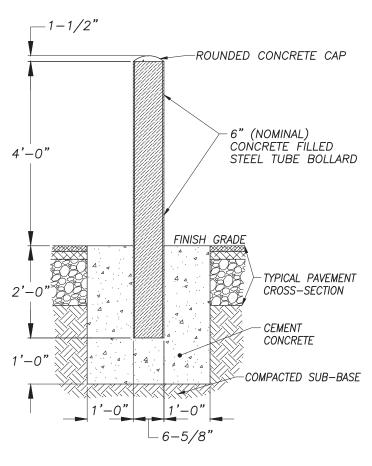


- 1. ALL DIMENSIONS TO CENTER OF 4" PAVEMENT STRIPING. 2. ALL STRIPING SHALL BE 4" SOLID WHITE PAVEMENT MARKING PAINT UNLESS OTHERWISE NOTED. 3. CONTRACTOR TO ENSURE HANDICAP ACCESSIBLE PARKING SPACE SHALL HAVE A SLOPE OF 2% OR LESS IN ALL
- 4. SEE AAB 521 CMR 23.00 FOR REQUIRED NUMBER AND PROPORTION OF VAN ACCESSIBLE SPACES.

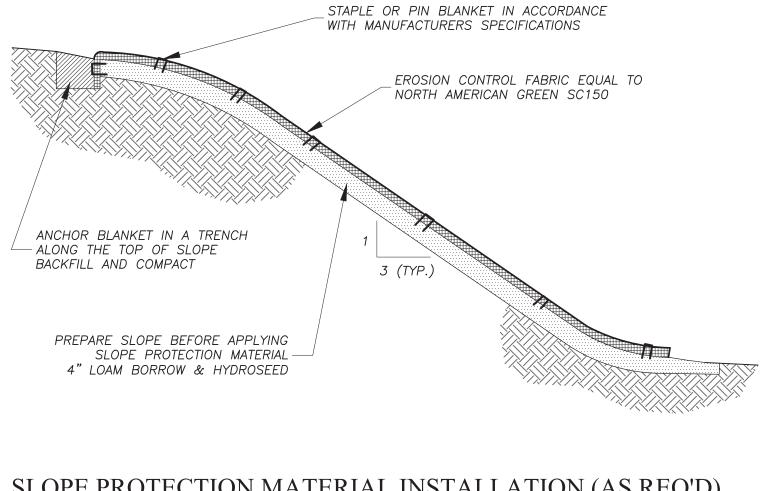
HANDICAP PARKING STALL NO SCALE



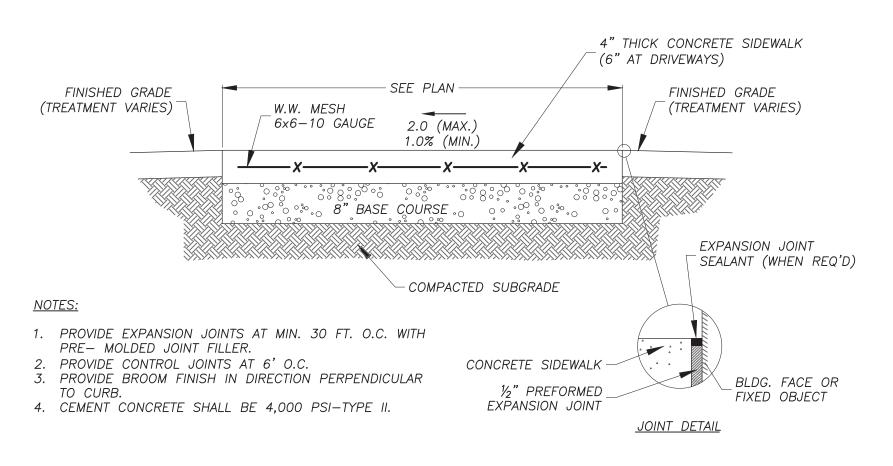
6' STANDARD SINGLE SIDE WHEEL STOP NO SCALE



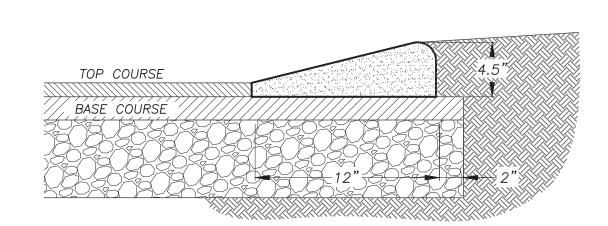
STEEL BOLLARD DETAIL NO SCALE



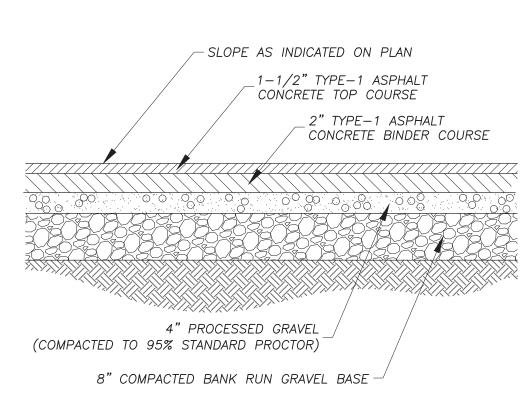
SLOPE PROTECTION MATERIAL INSTALLATION (AS REQ'D)



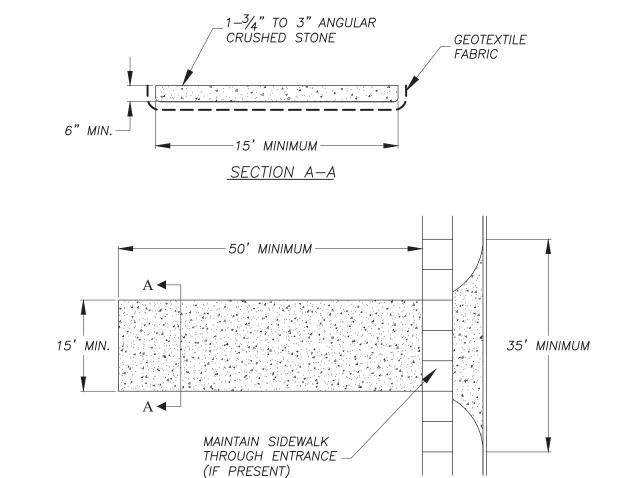
REINFORCED CONCRETE SIDEWALK SECTION



BITUMINOUS CONCRETE BERM (CAPE COD) NO SCALE

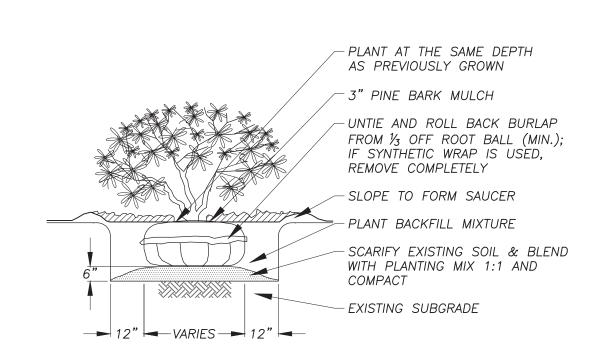


BITUMINOUS CONCRETE PAVING DETAIL NO SCALE



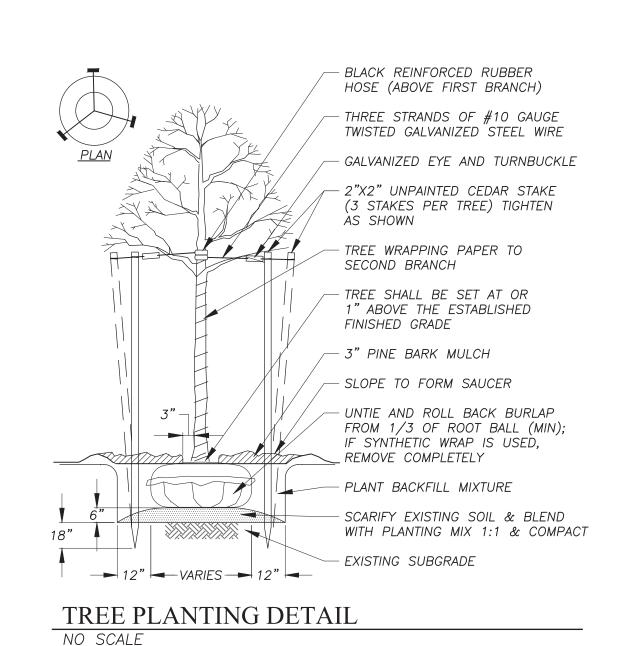
- EACH SITE ENTRANCE IS TO HAVE A TEMPORARY CONSTRUCTION ENTRANCE.
- 2. STONE IS TO BE 1-3/4" TO 3" ANGULAR CRUSHED STONE.
 3. PLACE GEOTEXTILE OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
 4. ANY SEDIMENT TRACKED INTO THE ROADWAY NEEDS TO BE CLEANED IMMEDIATELY.
 5. ADDITIONAL STONE IS TO BE ADDED TO THE PAD AS NEEDED TO MAINTAIN THE ORIGINAL DEPTH.
- 6. ANY SIDEWALK DAMAGED DURING CONSTRUCTION MUST BE REPLACED AT THE CONTRACTORS/DEVELOPERS EXPENSE.
- 7. SIDEWALK MUST REMAIN PASSABLE, IF THE SIDEWALK BECOMES UNSAFE OR IMPASSABLE, A TEMPORARY SIDEWALK/ SIDEWALK DETOUR MUST BE PROVIDED.

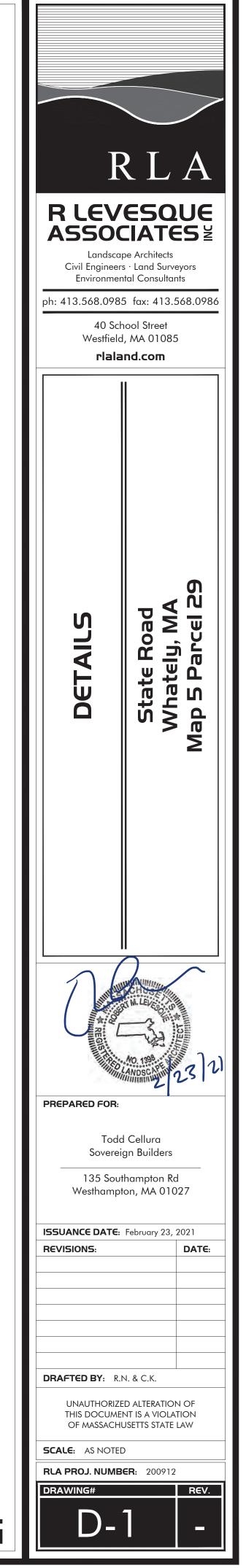
ANTI-TRACKING APRON (AS REQ'D) NO SCALE



SHRUB PLANTING DETAIL

NO SCALE





12" FIBER ROLL INSTALLATION
NO SCALE

IN SWALES OR AREAS OF
CONCENTRATED RUN-OFF,
ADD COMPOST/WOOD-CHIP
MIX OR PEA STONE ON
UPSLOPE SIDE

12" DIA. FILTER SOCK BY FILTREXX (OR EQUIV.)
INSTALL PER MANUFACTURER'S SPECIFICATIONS

- FABRIC MESH TUBE

WOOD-CHIP & COMPOST MIX

PROTECTED AREA

EXISTING GRADE

SOCKS MAY BE STACKED TO
FORM SEDIMENT BASINS OR
CHECK DAMS

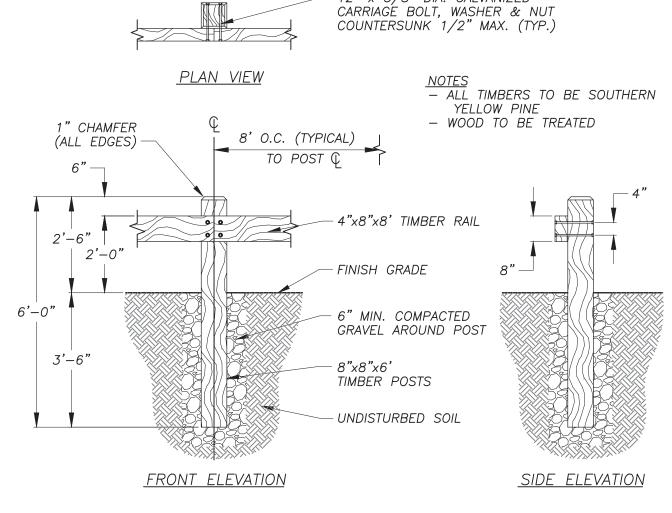
EROSION CONTROL LOG

4" TOP SOIL & SEED

COMMON FILL OR
COMPACTED SUBGRADE

GRASSED AREA REPAIR

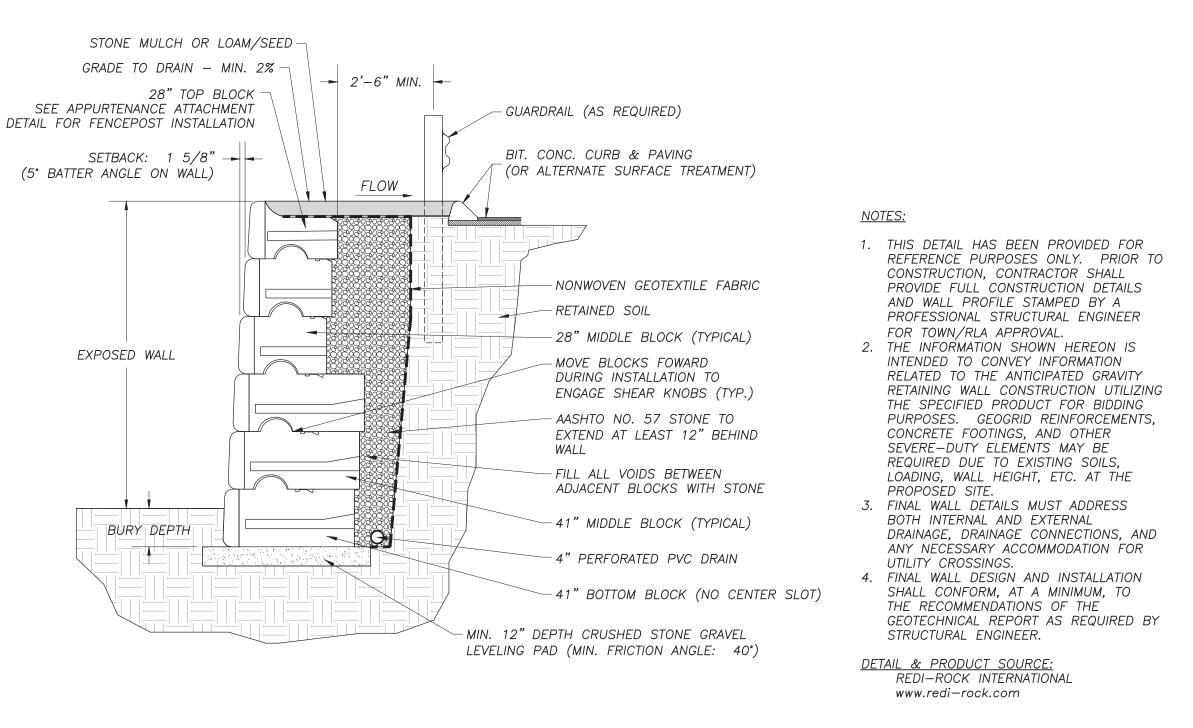
NO SCALE



12" x 5/8" DIA. GALVANIZED

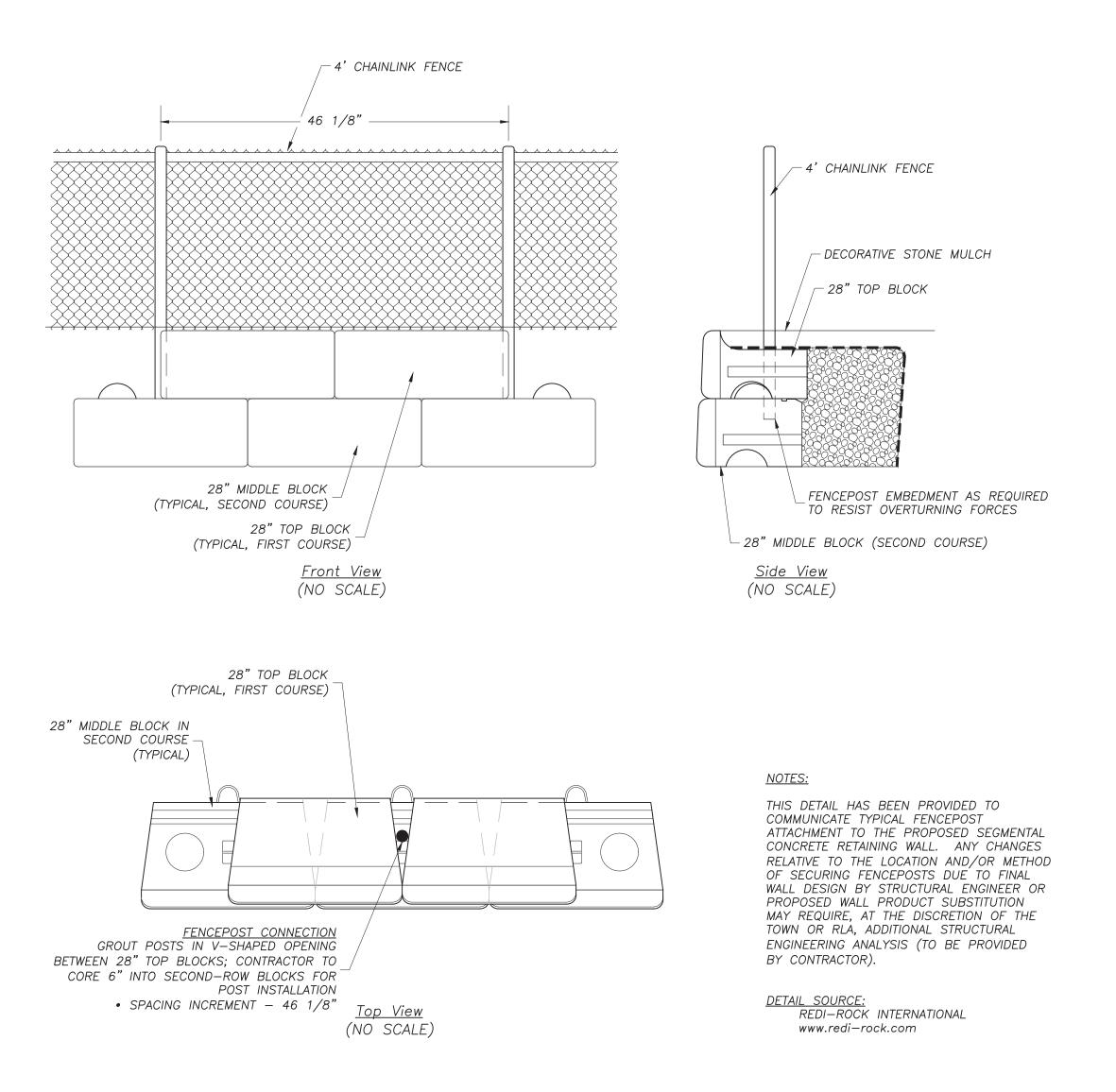
WOOD GUARDRAIL

NO SCALE



TYPICAL SECTION - SEGMENTAL PRECAST CONCRETE RETAINING WALL

NO SCALE - FOR REFERNCE PURPOSES ONLY (STRUCTURAL ENGINEER REVIEW REQ.)

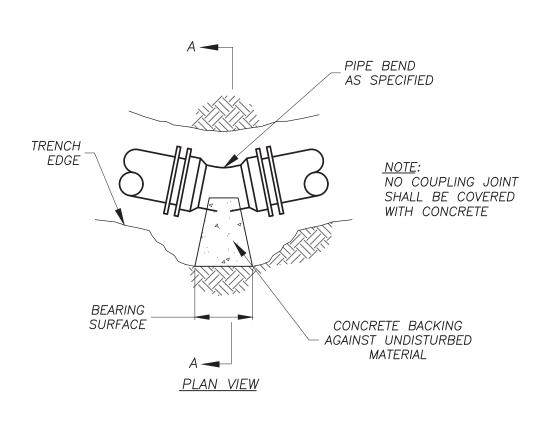


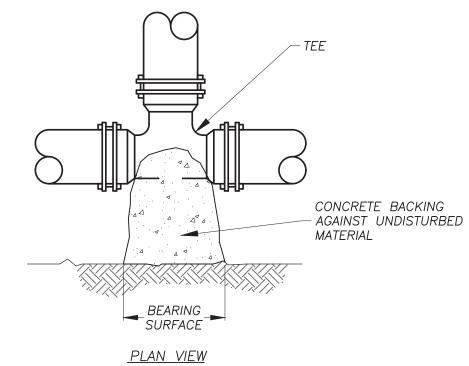
TYPICAL FENCEPOST TO RETAINING WALL ATTACHMENT

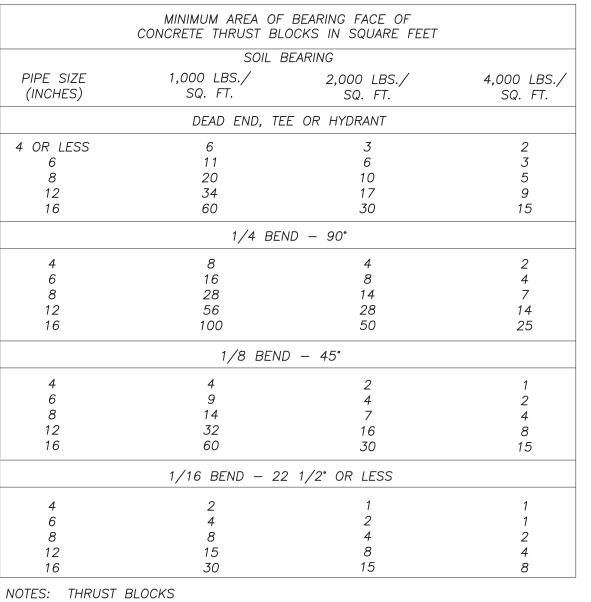
NO SCALE - FOR REFERNCE PURPOSES ONLY (STRUCTURAL ENGINEER REVIEW REQ.)

R LEVESQUE **ASSOCIATES** Landscape Architects Civil Engineers · Land Surveyors **Environmental Consultants** ph: 413.568.0985 fax: 413.568.0986 40 School Street Westfield, MA 01085 rlaland.com State Road Whately, MA Iap 5 Parcel 29 DETAILS PREPARED FOR: Todd Cellura Sovereign Builders 135 Southampton Rd Westhampton, MA 01027 **ISSUANCE DATE**: February 23, 2021 **REVISIONS:** DATE: **DRAFTED BY:** R.N. & C.K. UNAUTHORIZED ALTERATION OF THIS DOCUMENT IS A VIOLATION OF MASSACHUSETTS STATE LAW **SCALE**: AS NOTED RLA PROJ. NUMBER: 200912

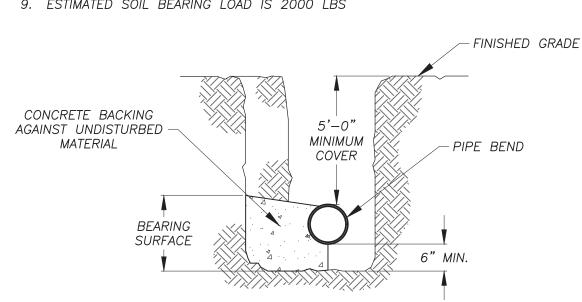
- 1) THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE + WATER HAMMER). FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED PROPORTIONALLY
- (2) IN EACH DIRECTION FROM POINT OF DEFLECTION EXCEPT FOR TEE AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE TEE STEM.
- (3) IF TIE RODS ARE USED, USE 4 RODS MINIMUM AND ADD 1/8" TO BAR DIA AS CORROSION ALLOWANCE.

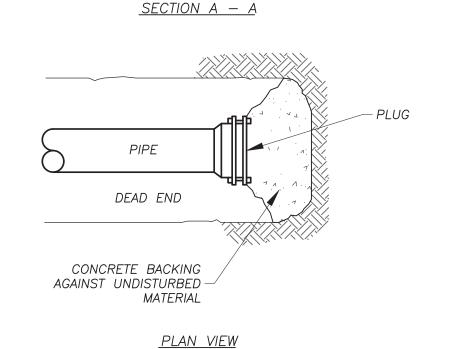




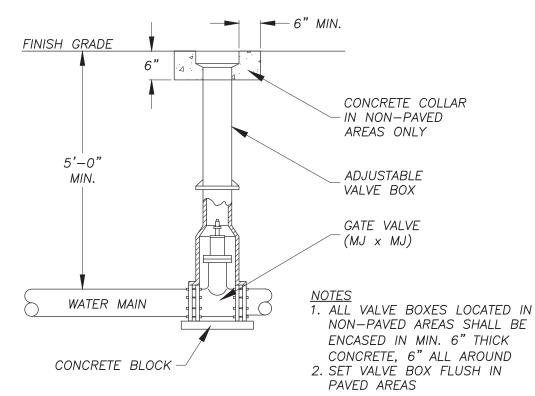


- 1. FIGURES BASED ON 300 PSI OPERATING PLUS SURGE PRESSURE 2. CONCRETE SHALL NOT BE DUMPED OVER THE FITTING. THE BLOCK MUST BE
- FORMED
- 3. RETAINING RODS OR RESTRAINED JOINT PIPE AS APPROVED BY THE ENGINEER MAY BE USED IN PLACE OF THRUST BLOCKS
- 4. PLACE 15 LB ROOF FELT BETWEEN PIPE AND CONCRETE 5. CONCRETE SHALL NOT COVER PIPE JOINTS
- 6. ALL BENDS, TEES, HYDRANTS AND DEAD ENDS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS OR SUITABLE RESTRAINING DEVICES
- 7. BEARING AREA IS AREA OF CONCRETE IN CONTACT WITH WALL OF TRENCH =
- 8. HEIGHT (H) AND LENGTH (L) AS REQUIRED TO OBTAIN AREA IN TABLE.
- LENGTH TÓ BE 2 TIMES HEÍGHT 9. ESTIMATED SOIL BEARING LOAD IS 2000 LBS

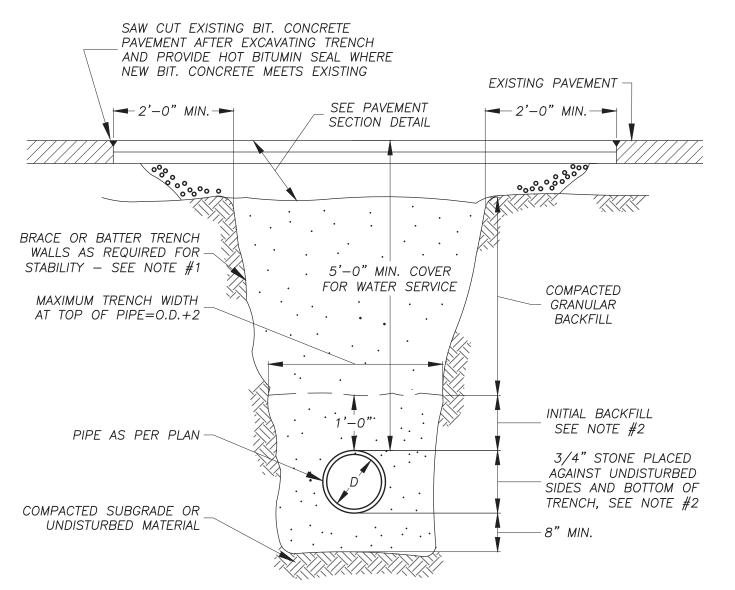




WATER MAIN · HORIZONTAL THRUST BLOCK DETAILS NO SCALE



TYPICAL BURIED VALVE NO SCALE

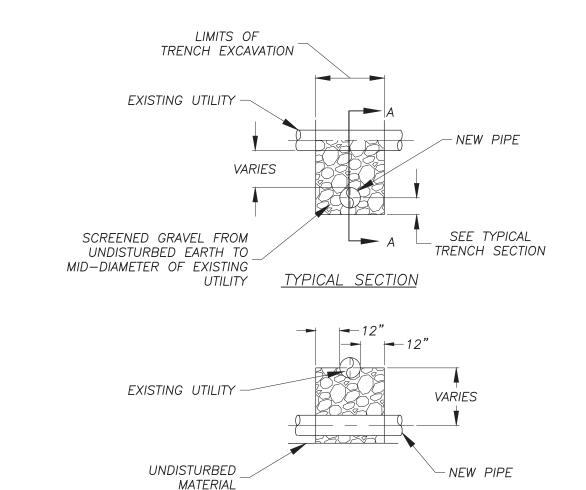


PIPE TRENCH DETAIL (STANDARD)

NO SCALE

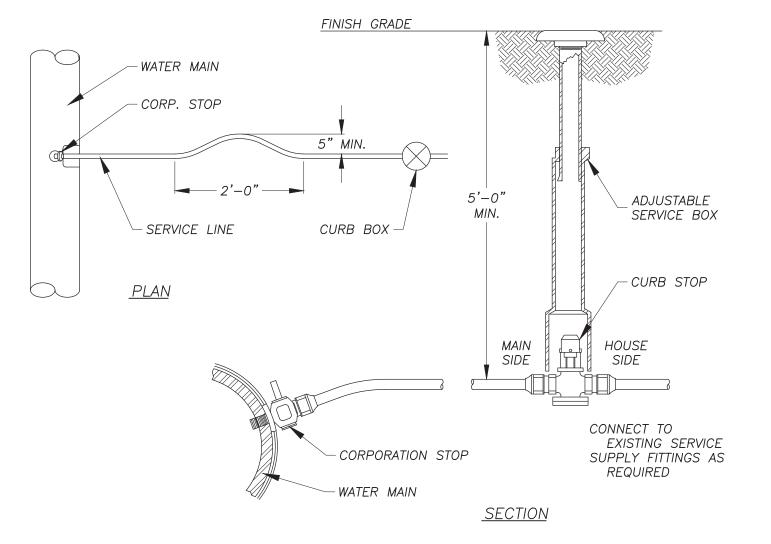
TRENCH NOTES

- 1. SHEETING, WHEN REQUIRED TO BE CUT OFF AT LEAST 5 FT. BELOW STREET AND A MINIMUM OF 1 FT. ABOVE TOP OF PIPE. WOOD SHEETING DRIVEN BELOW MID—DIAMETER OF THE PIPE SHALL BE LEFT IN PLACE. STEEL SHEETING DRIVEN BELOW MID-DIAMETER MAY BE WITHDRAWN IF APPROVED IN WRITING BY THE ENGINEER. FOR P.V.C. PIPE, ALL SHEETING DRIVEN BELOW MID-DIAMETER SHALL BE LEFT IN PLACE.
- 2. SELECTED COMMON FILL, HAND PLACED, FROM MID-DIAMETER OF PIPE TO 12" ABOVE, TOP OF PIPE.
- 3. TRENCHES LOCATED ON THE ROAD SHOULDER SHALL BE TREATED THE SAME AS STREET EXCEPT FOR PAVING. 4. PROVIDE AT LEAST ONE IMPERVIOUS DAM IN GRAVEL BEDDING BETWEEN EACH
- MANHOLE WHERE DIRECTED, OR EVERY 300 FT., WHICHEVER IS LESS. 5. COMPACT ALL BACKFILL MATERIAL WITH VIBRATORY PLATE EQUIPMENT (MINIMUM TWO PASSES) TO A MINIMUM DENSITY OF 95 PERĆENT OF THE STANDARD PROCTOR DENSITY AS DETERMINED BY
- ASTM D698. 6. PLACE BACKFILL MATERIALS IN MAXIMUM ONE FOOT LIFTS.

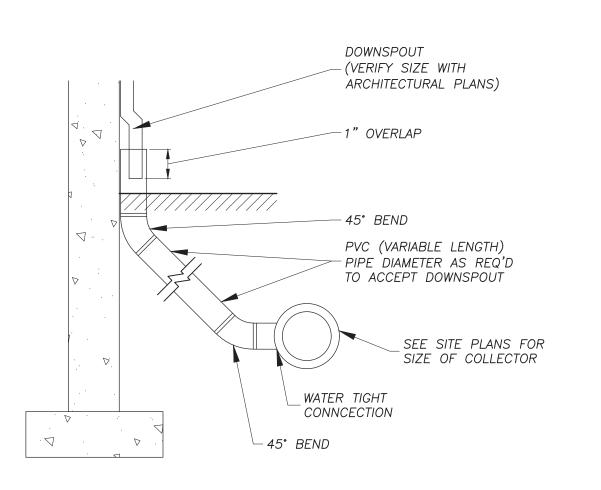


<u>SECTION "A-A"</u>

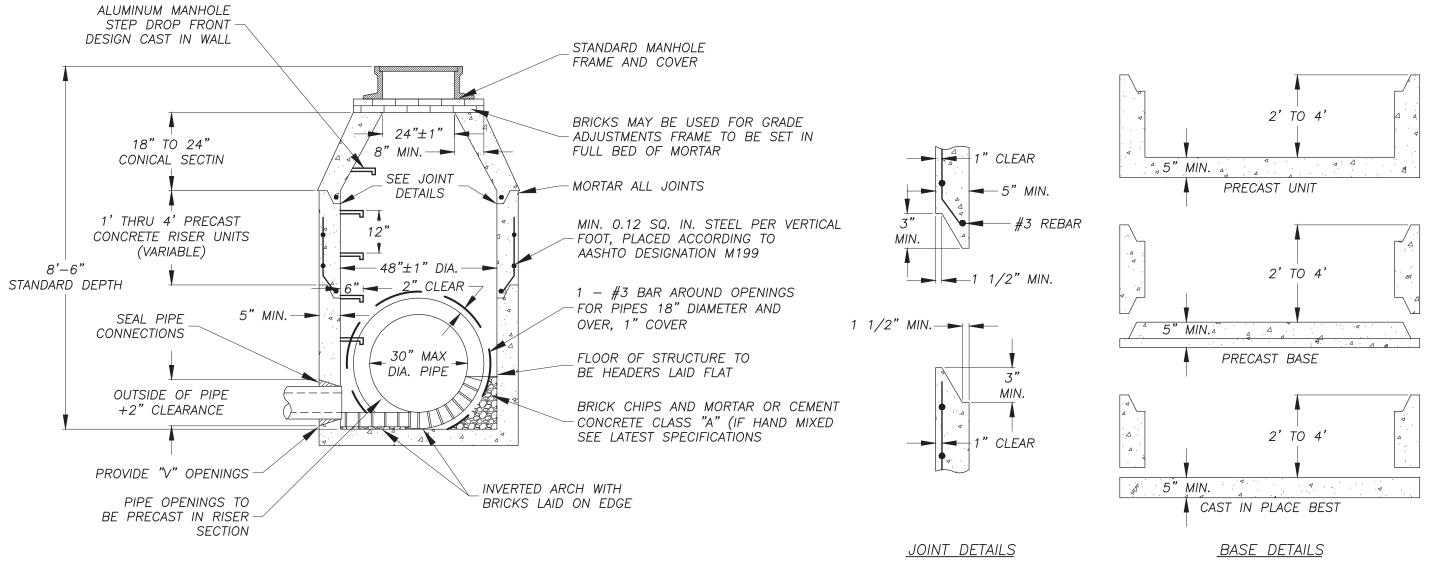
UTILITY CROSSING DETAIL NO SCALE



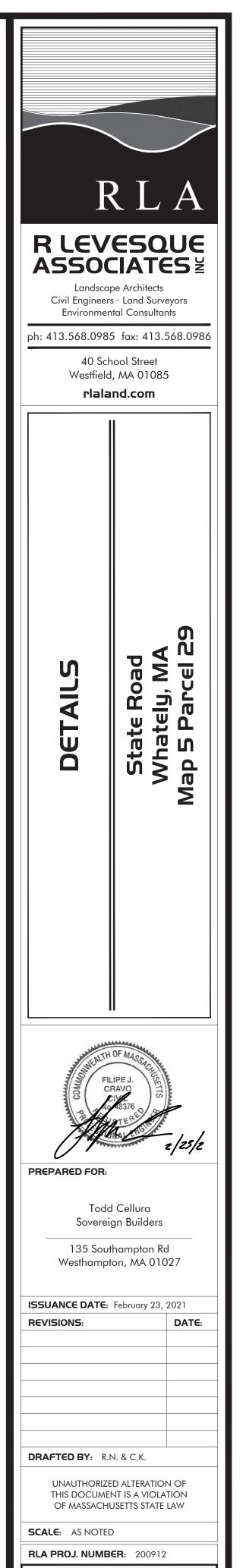




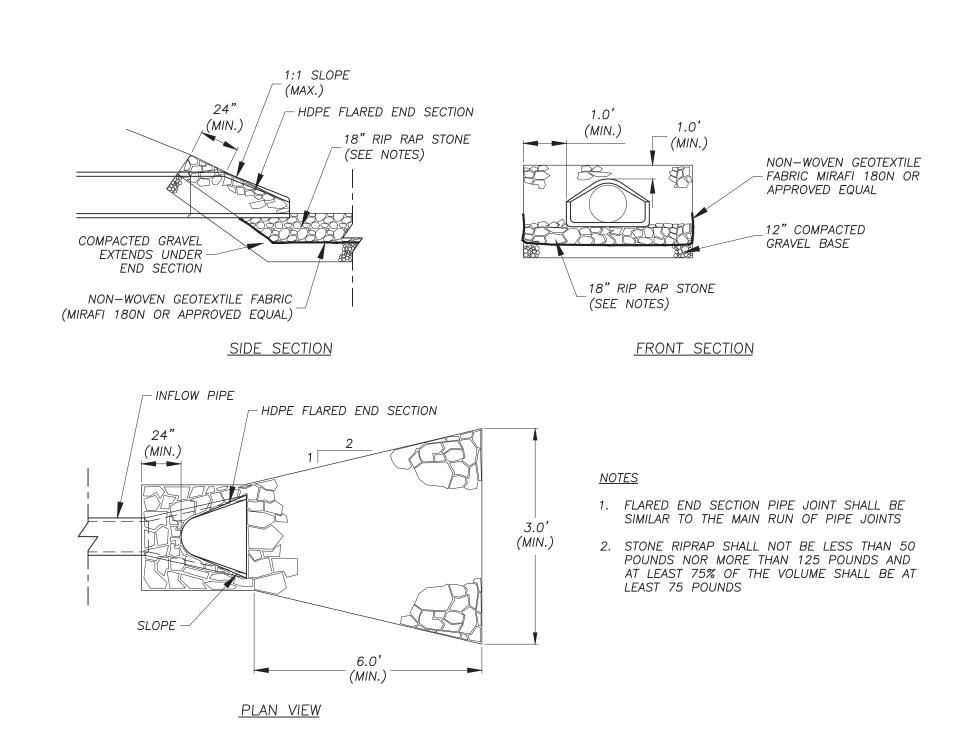
DOWNSPOUT COLLECTOR DETAIL NO SCALE



PRECAST CONCRETE MANHOLE NO SCALE

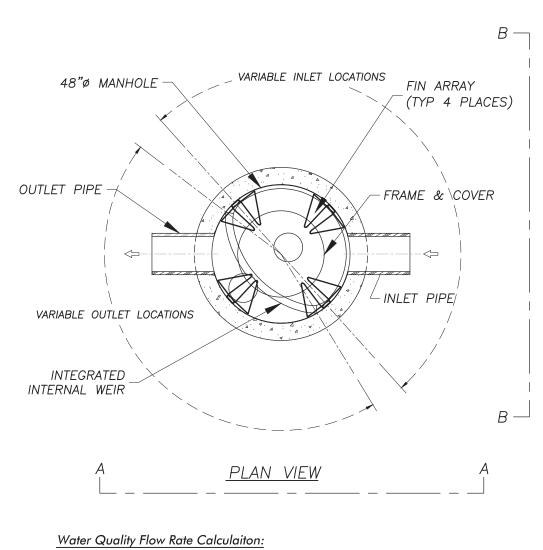






STANDARD RIP RAP PIPE OUTLET

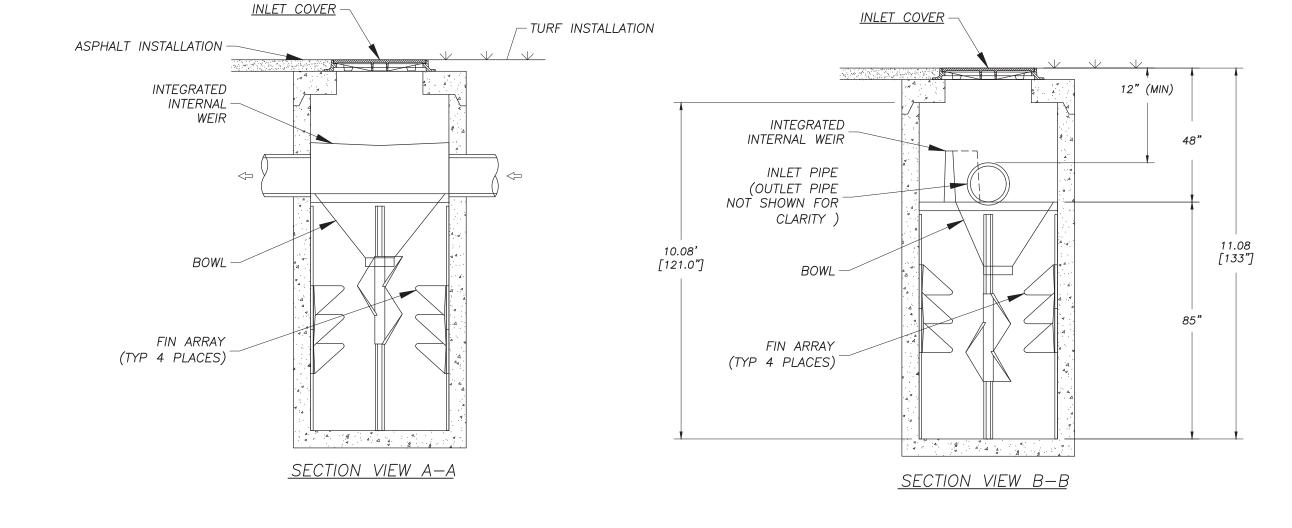
NO SCALE



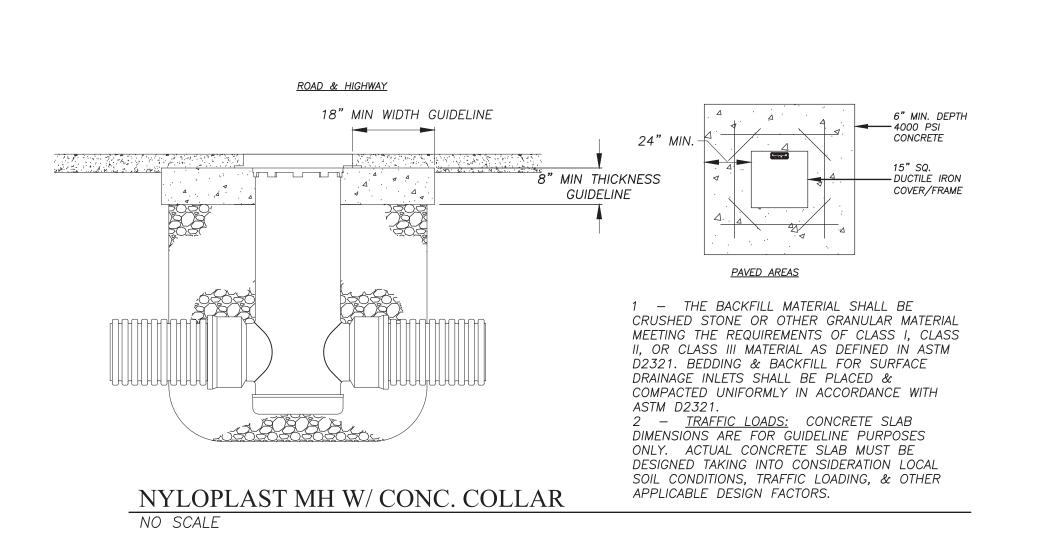
Q = peak flow rate associated with water quality event (c.f.s.) = (qu) (A) (WQV)

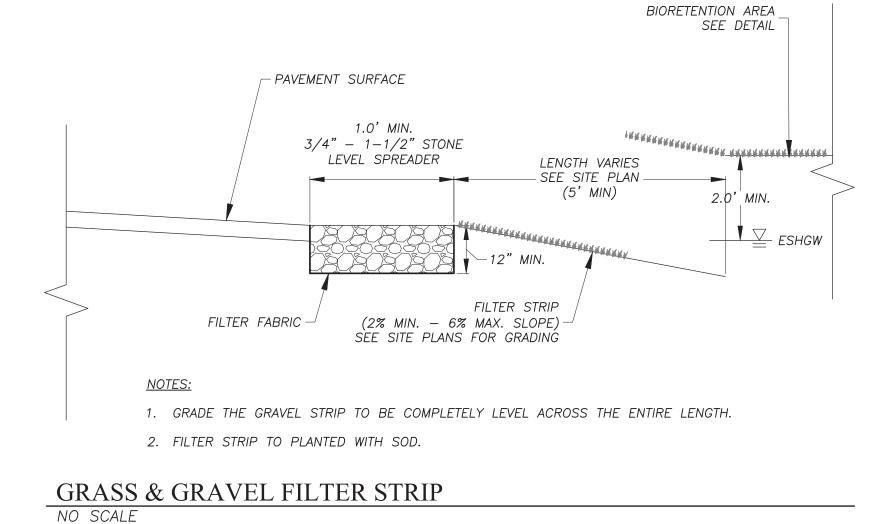
 $qu = unit peak discharge (csm/in) - value taken from table based on <math>t_c (t_c = 0.100 \text{ hrs}) = 752 \text{ csm/in}$ A = impervious surface drainage area (sq. mi.) = 0.00155 sq. mi. WQV = water quality volume in watershed inches = 0.5 inch

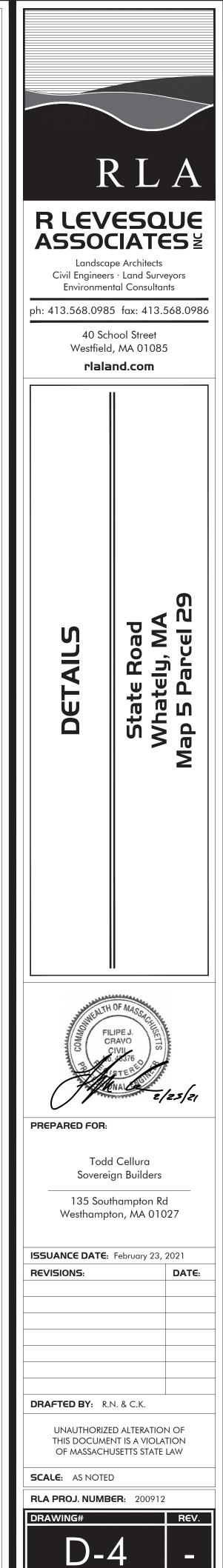
 $Q_{0.5} = (752 \text{csm/in}) (0.00155 \text{ sq. mi.}) (0.5 \text{ inch}) = 0.58 \text{ c.f.s}^*$ *Barracuda S4 Water Quality Unit is capable of treating up to 1.08 cfs.

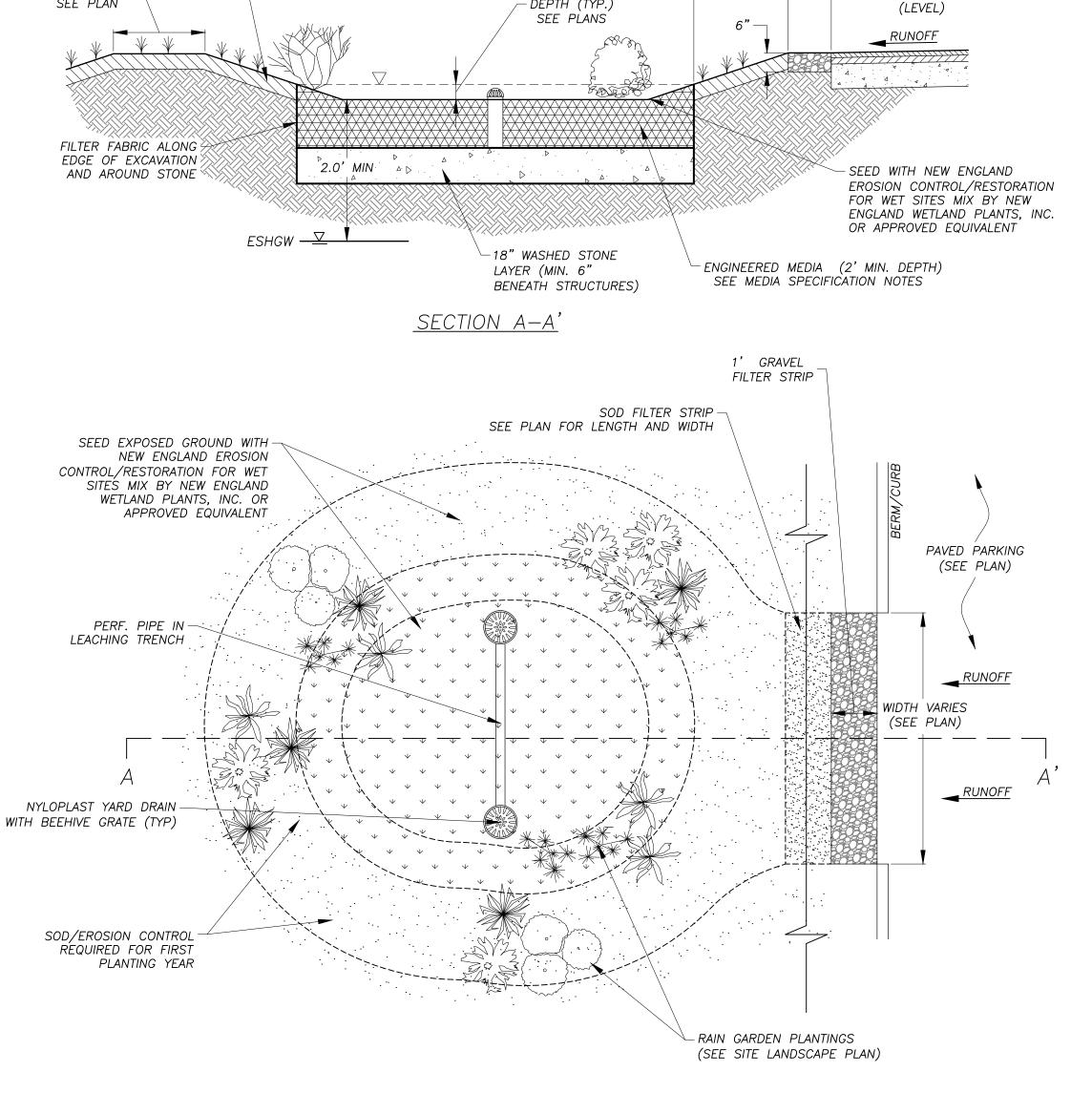


WATER QUALITY UNIT - BARRACUDA S4 (PWQU-1) NO SCALE









PONDING

DEPTH (TYP.)

6" TOPSOIL

BIORETENTION AREA #1

NO SCALE

BERM

AS REQUIRED -

SEE PLAN

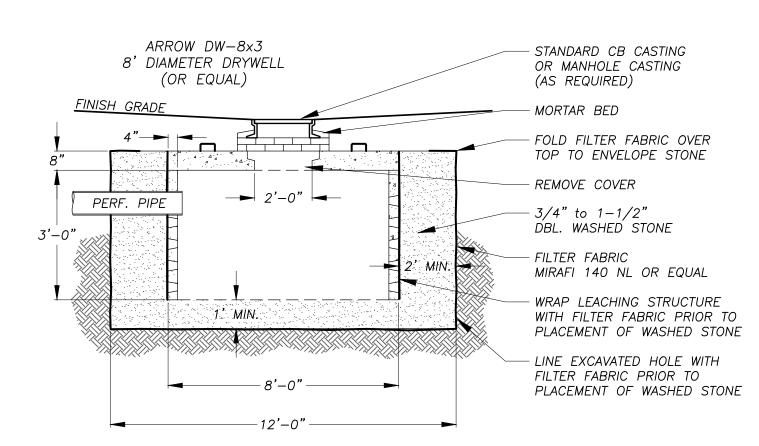
SOD FILTER STRIP $^{-}$ (5.0' MIN.—SEE PLAN)

12" WIDE GRAVEL

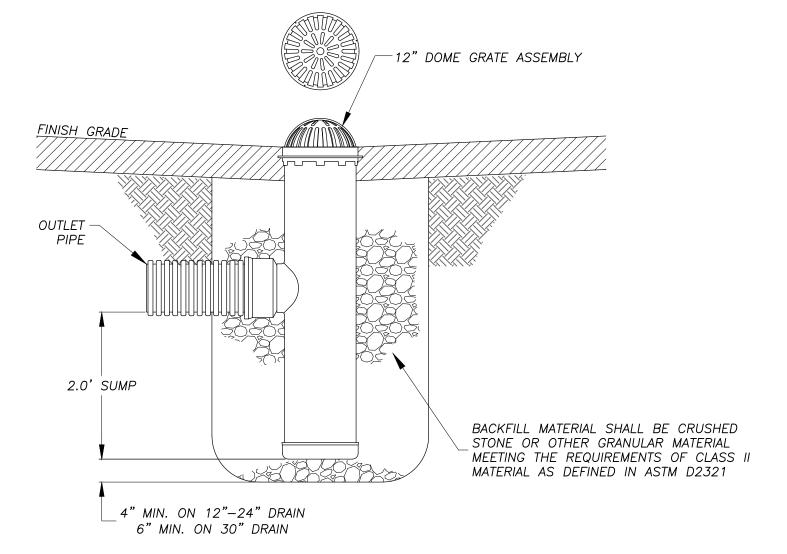
— LEVEL SPREADER

RAIN GARDEN/BIORETENTIONS BASIN NOTES

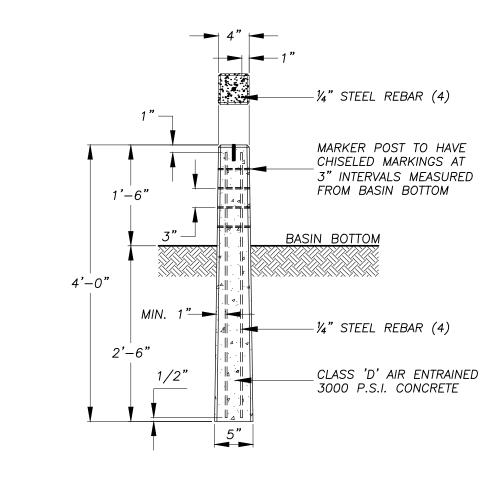
- 1. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS, ETC.) TO THE RAIN GARDEN/BIORETENTION BASIN AREAS DURING ANY STAGE OF CONSTRUCTION.
- 2. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH HEAVY CONSTRUCTION EQUIPMENT. PERFORM EXCAVATIONS WITH LIGHT EARTH-MOVING EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM IF FEASIBLE.
- 3. IF RAIN GARDEN/BIORETENTION BASIN AREAS ARE EXPOSED DURING CONSTRUCTION AND DO RECEIVE SEDIMENT DEPOSITS, BASIN BOTTOM MUST BE OVER EXCAVATED 6-8" INTO NATIVE MATERIAL TO REMOVE SEDIMENT DEPOSITS.
- 4. ALL DRAINAGE AREAS TO A RAIN GARDEN/BIORETENTION BASIN FACILITY ARE TO BE STABILIZED PRIOR TO INSTALLATION OF AMENDED SOILS, SEED MIX, MULCH OR PLANTINGS.
- 5. AMENDED SOIL WILL ONLY BE PERMITTED WITH A VALID SOIL ANALYSIS REPORT
- 6. FOR BIORETENTION BASIN, WRAP PERFORATED UNDERDRAIN WITH FILTER FABRIC PRIOR TO BACKFILLING.
- 7. UNDERDRAIN PIPE SHOULD HAVE 3/8" PERFORATIONS SPACED AT 6" CENTERS, MIN. 4 HOLES PER ROW. MAXIMUM SPACING OF UNDERDRAIN PIPE IS 10 FEET ON CENTER.
- 8. FILTER MEDIA FOR RAIN GARDENS AND BIORETENTION BASINS SHALL BE AS FOLLOWS: 20-30% MODERATELY FINE
 - SHREDDED BARK OR WOOD FIBER MULCH WITH <5% FINES PASSING NO. 200 SIEVE 70-80% COURSE LOAMY SAND MEETING THE FOLLOWING GRADATION:
- PERCENT BY WEIGHT PASSING STANDARD SIEVE INDICATED 70-100 15-40 8-15



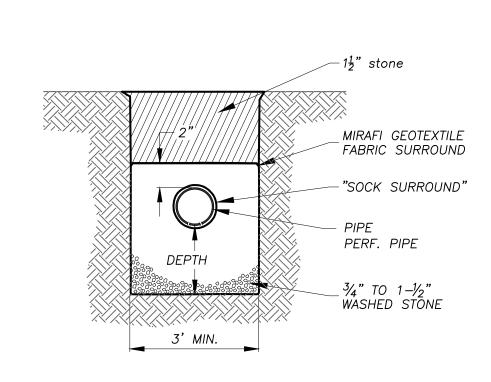
PRECAST CONCRETE DRYWELL DETAIL NO SCALE



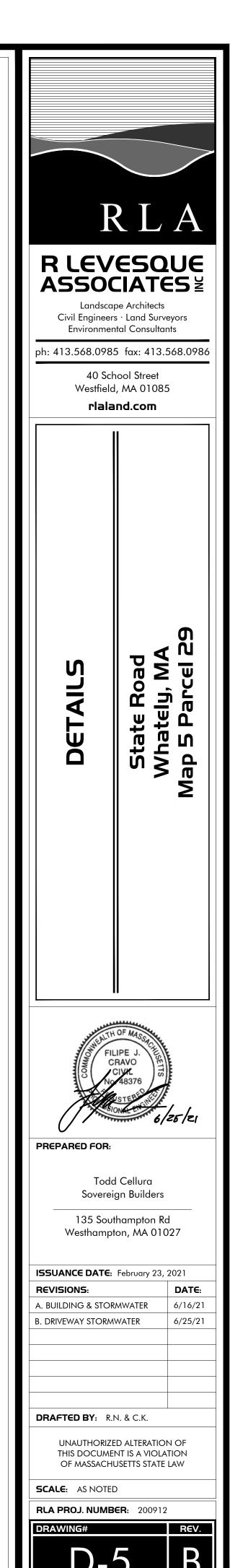
ADS NYLOPLAST YARD DRAIN BASIN NO SCALE



SEDIMENT MARKER POST NO SCALE



LEACHING TRENCH DETAIL NO SCALE



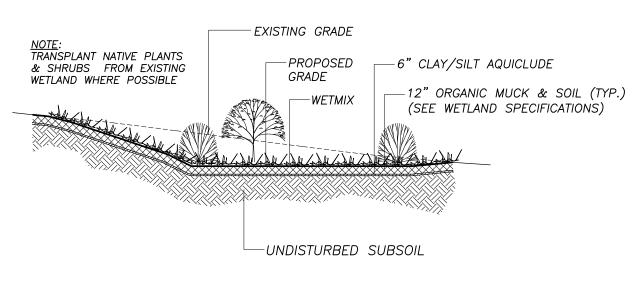
CULVERT CONSTRUCTION SCHEDULE:

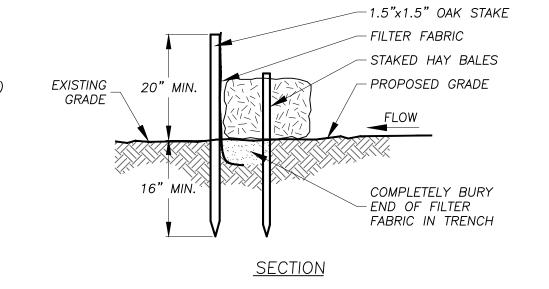
- 1. CULVERT/BRIDGE CROSSING DESIGN TO BE PROVIDED BY MANUFACTURER/STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION AND SHALL ACCOMMODATE H—20 LOADING FOR EMERGENCY VEHICLES. OWNER TO OBTAIN BUILDING PERMIT PRIOR TO CÓNSTRUCTION.
- 2. NOTIFY THE CONSERVATION COMMISSION A MINIMUM OF ONE (1) WEEK PRIOR TO THE START OF ACTIVITIES ON THE SITE.
- 3. INSTALL THE DEP SIGN FOR THE SITE AS REQUIRED BY THE WETLANDS PROTECTION ACT.
- 4. INSTALL EROSION/SEDIMENTATION CONTROLS (ESC) AS INDICATED ON THE PROJECT PLAN(S). ADDITIONAL ESC SHALL BE STOCKPILED ON SITE FOR FUTURE USE IF NECESSARY. AN ADEQUATE AMOUNT ON ESC SHALL BE ON-SITE FOR ROUTINE REPAIRS OF ANY DAMAGED CONTROLS.
- 5. NOTIFY THE CONSERVATION COMMISSION WHEN THE ESC HAVE BEEN INSTALLED.
- 6. CLEAR AND GRUB AS INDICATED ON THE PROJECT PLAN(S).

SEDIMENT MIGRATION BEYOND THE AREA OF WORK.

- 7. ROUGH GRADE DRIVEWAY LOCATION FOR ACCESS TO STREAM CROSSING LOCATION. TEMPORARY BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED TO REDUCE AND CONTROL ANY EXPOSED SOILS. THE PROJECT SHALL BE CONDUCTED TO MINIMIZE SOIL DISTURBANCE AT ANY ONE TIME.
- 8. IN ORDER TO MINIMIZE THE AMOUNT OF DISTURBANCE, WORK SHALL ONLY TAKE PLACE DURING LOW-FLOW, NON-STORM EVENT STREAM FLOWS. THE CULVERT INSTALLATION SHALL TAKE PLACE IN AS SHORT A TIME PERIOD AS POSSIBLE, DURING A PERIOD OF EXTENDED FORECASTED DRY WEATHER.
- 9. INSTALL FOOTINGS FOR PROPOSED OPEN BOTTOM BOX CULVERT/BRIDGE. IF DEWATERING IS REQUIRED IT SHALL BE CONDUCTED USING BEST MANAGEMENT PRACTICES, PREVENTING
- 10. STABILIZE ANY EXPOSED SOILS ON THE INTERIOR SIDE OF THE FOOTINGS, CLOSEST TO THE STREAM CHANNEL PRIOR TO SETTING THE OPEN BOTTOM BOX CULVERT.
- 11. SET THE BOX CULVERT/BRIDGE USING THE APPROPRIATE EQUIPMENT. ADDITIONAL DETAIL ON THE PROCESS SHALL BE OBTAINED FROM THE MANUFACTURER OF THE CULVERT.
- 12. EXPOSED SOILS SHALL BE STABILIZED USING A RESTORATION SEED MIX, MULCH, EROSION CONTROL BLANKETS, OR A COMBINATION OF THESE AS NECESSARY. FINAL SURFACE CONDITIONS OF THE DRIVEWAY SHALL BE ESTABLISHED.
- 13. UPON ACHIEVING 70% STABILIZATION OF PERMANENT VEGETATIVE COVER. OVER 90% OF THE AREA, THE CONSERVATION COMMISSION SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE EROSION CONTROLS BEING REMOVED. EROSION CONTROLS SHALL NOT BE REMOVED UNTIL REMOVAL IS APPROVED BY THE CONSERVATION COMMISSION.
- 14. BANKFULL WIDTH MEASUREMENTS ARE SHOWN ON EX-1 (NOTE 14)

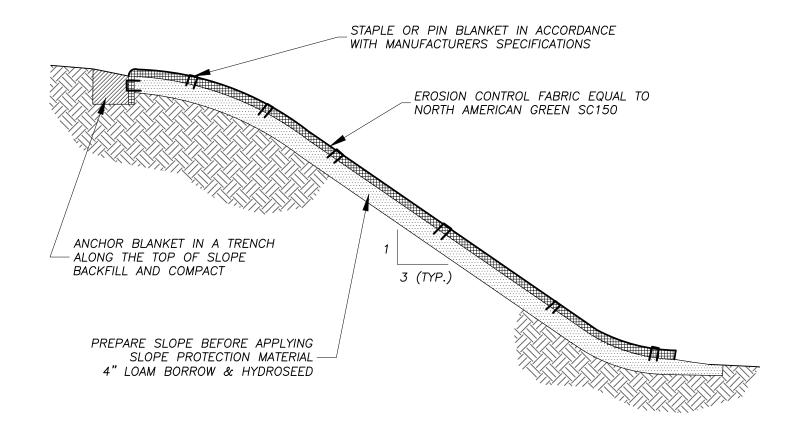
SEED WETLAND REPLICATION AREA WITH "NEW ENGLAND WETMIX" BY NEW ENGLAND WETLAND PLANTS, INC., OR EQUAL APPROVED BY LANDSCAPE ARCHITECT/WETLAND SCIENTIST. SEED MIXTURE TO BE APPLIED AT A RATE OF 1.0 LB/2,500 S.F.





TYPICAL WETLAND REPLICATION AREA - CROSS SECTION

EROSION CONTROL - DOUBLE BARRIER



SLOPE PROTECTION MATERIAL INSTALLATION (AS REQ'D)

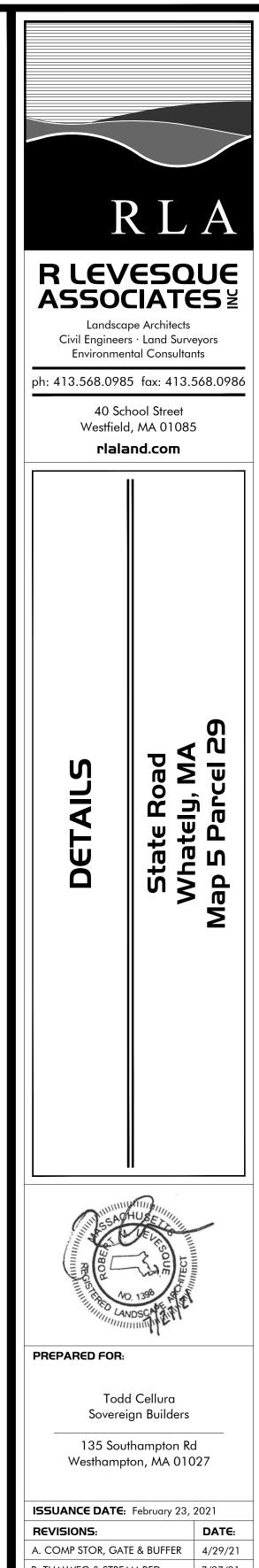
INVASIVE PLANT NOTE:

PRIOR TO CONSTRUCTION, CONTRACTOR SHALL ENSURE THAT ANY ACCUMULATED SOIL ON EARTHMOVING EQUIPMENT HAS BEEN REMOVED TO LIMIT THE RISK OF INVASIVE PLANT INTRODUCTION TO THE CONSTRUCTION SITE. CONTRACTOR SHALL CONTROL EXISTING INVASIVE PLANT SPECIES WITHIN THE LIMIT OF WORK AND WITHIN CONSERVATION JURISDICTION AFTER COORDINATION WITH THE WESTLAND SCIENTIST TO IDENTIFY SAID SPECIES. CONTROL EFFORTS SHALL BE IN ACCORDANCE WITH WETLAND SCIENTIST'S RECOMMENDATIONS AND ANY APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.

36" CAST IRON CULVERT `— PROPOSED DRIVEWAY |-WITH GUARDRAIL INSTALL EROSION CONTROL MATS (TYP) INSTALL OPEN BOX CULVERT/BRIDGE STREAM LENGTH:31' WIDTH:10' BANKFULL WIDTH: 7.2 OPEN HEIGHT:SEE DETAIL OPENNESS RATIO:1.75 FG @ @ROAD:173.2 CULVERT CEILING:170.0± STRAW WATTLES -1EG @ BANK:165.0± BASE OF FOOTING:161.0± (SEE CROSSING NOTE) -WETLAND DISTURBANCE CROSSING NOTE SILT FENCE LINE PROPOSED OPEN BOX CULVERT/BRIDGE IS SHOWN SCHEMATICALLY. ACTUAL CULVERT/BRIDGE, DECKING, FOOTING, ETC. DESIGN TO BE PROVIDED BY A STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. DESIGN SHALL ACCOMMODATE H-20 LOADING AND ALL NECESSARY PUBLIC SAFETY APPARATUS. REPLICATION AREA NOTE WETLAND REPLICATION AREA TO BE GRADED TO MATCH ADJACENT WETLAND ELEVATIONS. HAND - BORING TO BE PERFORMED TO DETERMINE GROUND WATER ELEVATION AND ESTABLISH FINISH GRADE. WETLAND SCIENTIST TO BE ON SITE TO MONITOR ee DURING WETLAND REPLICATION AREA CONSTRUCTION.

PLAN VIEW - STREAM CROSSING

PERMITTING



B. THALWEG & STREAM BED

DRAFTED BY: R.N. & C.K.

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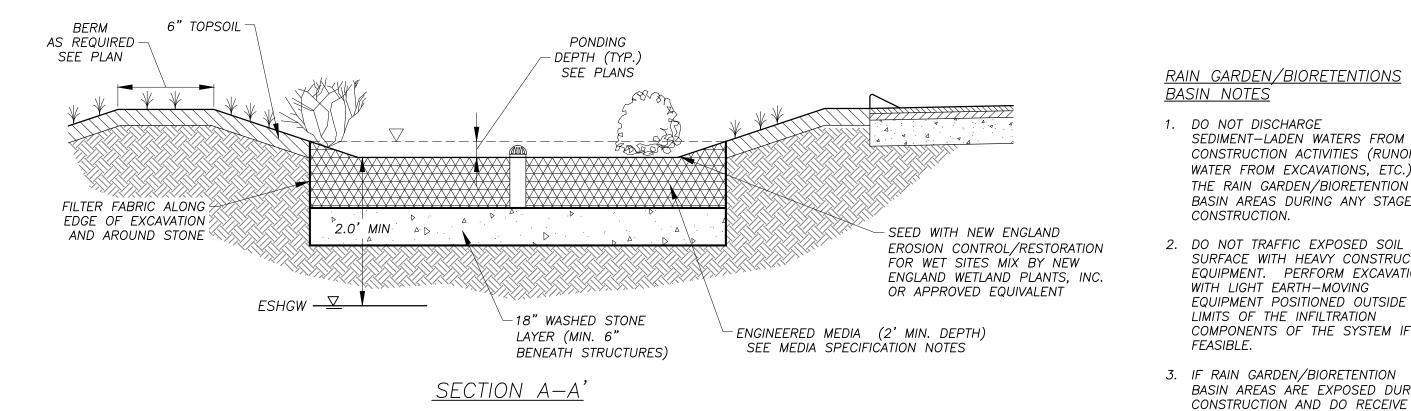
SCALE: AS NOTED

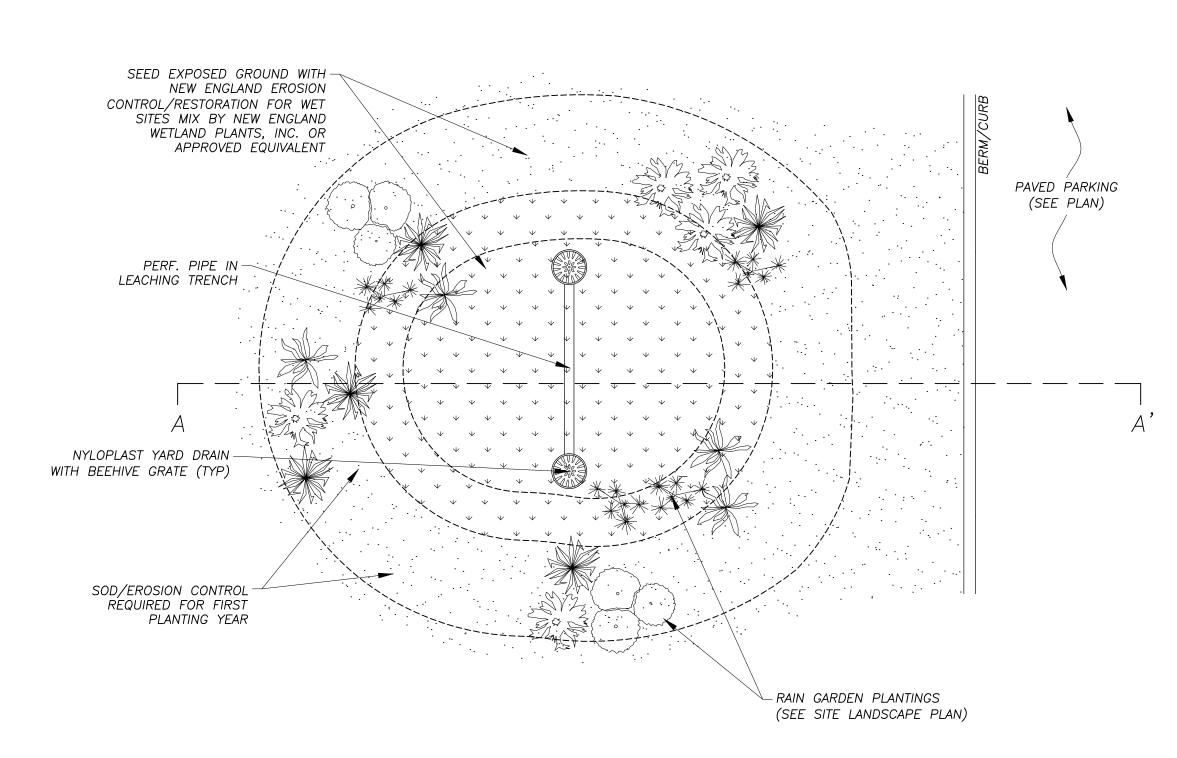
RLA PROJ. NUMBER: 200912



SURFACE INFILTRATION BASIN #1

NO SCALE





BIORETENTION AREA #2

NO SCALE

INFILTRATION BASIN NOTES

SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF,

CONSTRUCTION.

WATER FROM EXCAVATIONS, ETC.) TO THE RAIN GARDEN/BIORETENTION

BASIN AREAS DURING ANY STAGE OF

SURFACE WITH HEAVY CONSTRUCTION

EQUIPMENT. PERFORM EXCAVATIONS

EQUIPMENT POSITIONED OUTSIDE THE

WITH LIGHT EARTH-MOVING

LIMITS OF THE INFILTRATION

COMPONENTS OF THE SYSTEM IF

BASIN AREAS ARE EXPOSED DURING CONSTRUCTION AND DO RECEIVE SEDIMENT DEPOSITS, BASIN BOTTOM MUST BE OVER EXCAVATED 6-8"

INTO NATIVE MATERIAL TO REMOVE

4. ALL DRAINAGE AREAS TO A RAIN

GARDEN/BIORETENTION BASIN

PRIOR TO INSTALLATION OF

5. AMENDED SOIL WILL ONLY BE PERMITTED WITH A VALID SOIL

6. FOR BIORETENTION BASIN, WRAP

PERFORATED UNDERDRAIN WITH FILTER FABRIC PRIOR TO

7. UNDERDRAIN PIPE SHOULD HAVE 3/8"

CENTERS, MIN. 4 HOLES PER ROW. MAXIMUM SPACING OF UNDERDRAIN

PERFORATIONS SPACED AT 6"

PIPE IS 10 FEET ON CENTER.

8. FILTER MEDIA FOR RAIN GARDENS

AND BIORETENTION BASINS SHALL

20-30% MODERATELY FINE SHREDDED BARK OR WOOD

PASSING NO. 200 SIEVE

MEETING THE FOLLOWING

FIBER MULCH WITH <5% FINES

70-80% COURSE LOAMY SAND

PERCENT BY WEIGHT PASSING

STANDARD SIEVE INDICATED

70-100 15-40

8-15

FACILITY ARE TO BE STABILIZED

AMENDED SOILS, SEED MIX, MULCH

SEDIMENT DEPOSITS.

OR PLANTINGS.

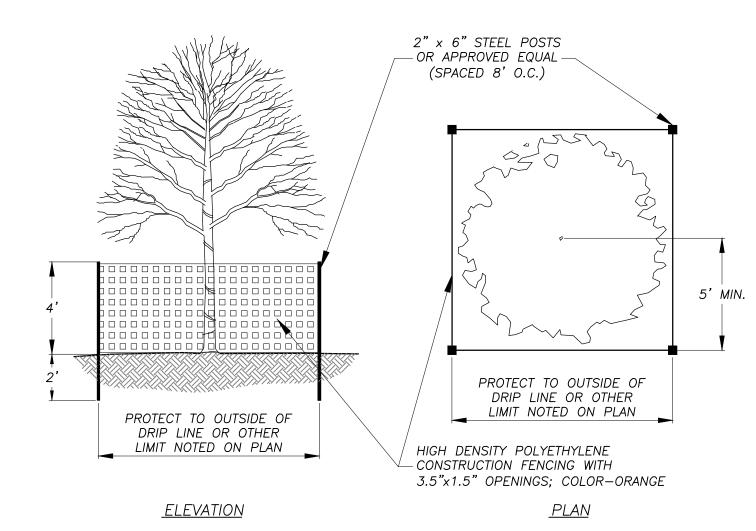
BACKFILLING.

BE AS FOLLOWS:

GRADATION:

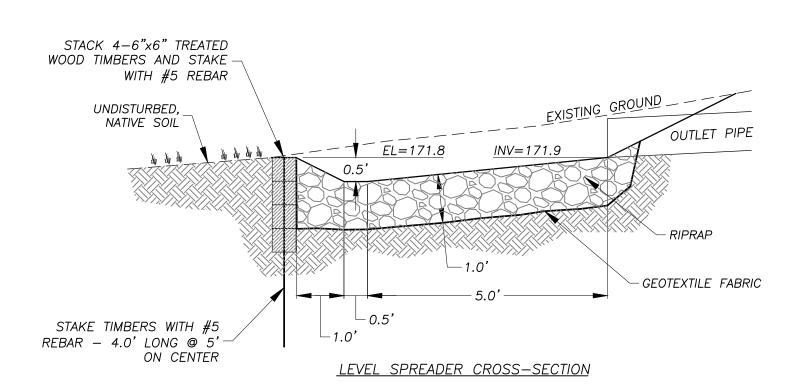
ANALYSIS REPORT

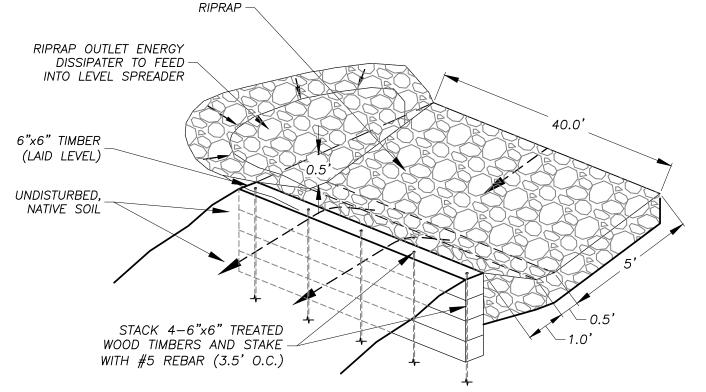
- 1. INFILTRATION BASIN BOTTOM TO BE LOCATED A MINIMUM OF 3.0' ABOVE ESTIMATED SEASONAL HIGH GROUNDWATER (ESHGW).
- 2. IMMEDIATELY AFTER CONSTRUCTING THE BASIN, STABILIZE THE BOTTOM AND SIDE SLOPES WITH WATER-TOLERANT GRASS.
- 3. DURING BASIN EXCAVATION, USE NATIVE SOILS THAT WERE EXCAVATED FROM THE A OR B HORIZONS AND MIX WITH COMPOST, PROPERLY AGED TO KILL ANY SEED STOCK. SCARIFY THE NATIVE MATERIALS AND USE THE COMPOST MATERIAL TO SHAPE THE BASIN. MIX INTO THE PARENT MATERIAL TO A DEPTH OF 12 INCHES.
- 4. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS, ETC.) TO THE INFILTRATION BASIN AREAS DURING ANY STAGE OF CONSTRUCTION.
- 5. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH HEAVY CONSTRUCTION EQUIPMENT. PERFORM EXCAVATIONS WITH LIGHT EARTH-MOVING EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM IF FEASIBLE.
- 6. IF INFILTRATION BASIN AREAS ARE EXPOSED DURING CONSTRUCTION AND DO RECEIVE SEDIMENT DEPOSITS, BASIN BOTTOM MUST BE OVER EXCAVATED 6-8" INTO NATIVE MATERIAL TO REMOVE SEDIMENT
- 7. ALL DRAINAGE AREAS TO AN INFILTRATION BASIN FACILITY ARE TO BE STABILIZED PRIOR TO INSTALLATION OF TOPSOIL/COMPOST MIX AND SEED MIX.
- 8. INFILTRATION BASIN BOTTOMS AND EMBANKMENTS TO BE SEEDED AS NOTED ON PLANS. NO TREES OR SHRUBS TO BE PLANTED WITHIN INFILTRATION BASINS OR EMBANKMENTS. DO NOT USE SOD.



- NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST. 2. NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING
- FENCE INSTALLATION AND REMOVAL. 3. SEE REMAINING PLAN SET FOR ANY MODIFICATIONS WITH THE TREE PROTECTION AREA.

TREE PROTECTION DETAIL NO SCALE





- 1.) LEVEL SPREADER SHALL BE INSTALLED WITH A LEVEL INSTRUMENT. CONSTRUCT LEVEL UP TO 0% GRADE TO ENSURE UNIFORM SHEET FLOW. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL. 2.) CONSTRUCTION OF LEVEL SPREADER SHALL BE FROM UPHILL SIDE ONLY. LEVEL LIP AND AREA BELOW
- SPREADER SHALL BE AT EXISTING GRADES AND UNDISTURBED BY EARTHWORK OR EQUIPMENT. 3.) CONSTRUCT SPREADER WITH LIP AT EXISTING GRADE AS SPECIFIED. 4.) DOWNGRADIENT RECEIVING AREA MUST BE NATURALLY WELL VEGETATED.

LEVEL SPREADER DETAIL

NO SCALE

R LEVESQUE **ASSOCIATES** Landscape Architects Civil Engineers · Land Surveyors **Environmental Consultants** ph: 413.568.0985 fax: 413.568.0986 40 School Street Westfield, MA 01085 rlaland.com DETAIL State Ros Whately, I lap 5 Parc PREPARED FOR: Todd Cellura Sovereign Builders 135 Southampton Rd Westhampton, MA 01027 **ISSUANCE DATE**: June 16, 2021 REVISIONS: DATE: A. DRIVEWAY STORMWATER **DRAFTED BY:** R.N. & C.K. UNAUTHORIZED ALTERATION OF THIS DOCUMENT IS A VIOLATION OF MASSACHUSETTS STATE LAW **SCALE**: AS NOTED RLA PROJ. NUMBER: 200912

Lumin	aire Sch	edule			
Qty	Label	Watts	Arrangement	LLF	Description
16	WP4	28.6	SINGLE	0.900	Beacon LNC2-12L-3K-070-4-U-x-x-x / MTD 8FT AFG

Calculation Summary						
Label	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Fc	0.12	8.0	0.0	N.A.	N.A.

t.o t.o t.o t.o t.o t.o t.o t.o t.o t.o

8.5 8.6 \$\int_{0}\$ b.3 8.5 3.6 \$\int_{0}\$ b.3 8.5 3.6 \$\int_{0}\$ b.3 8.5 \$\int_{0}\$ b.3 8 Lo & S. d. & S

to 5.8 to 5.0 to 5.0 to 5.8 to 5.0 to 5.8 to 5.0 to $b.o \ b.o \ b.o$ $t.0 \quad t.0 \quad t.0$

(a 3.5 1.6 / ₺ b.5 b.8 h 1 4.4 1.5 / t b√.5 ±2.2 ±2 1.1 1.2 .5 ± ± ± ± ± ± Ď.8 Ď.9 .5 ±2.5 b.o b.o0.5 ³.5 ¹.7 √ Ž.7 Ž.5 / ₩.5 1.5 \[\frac{\pi_{0.0}}{\pi_{0.0}} ².4 ¹.3/ ⁵ b.5 2.6 5 0.6 ±2.8 · 0.7 0.7 1.8 1.5 t.6 1.8 t 3.7 1.4

PROPOSED STORAGE b 5 0.8 t BUILDIN 5.0 1.2 5 1.3 1.0 t.9 t.8 4.0 1.3 3.2 1.2

Project: Self Storage Whately MA

\bigg\ \frac{\pi_{.0}}{\pi_{.0}} \frac{\pi_{

Contact: Liza Tuttle Specification Sales (860) 751-4388 ltuttle@illuminatene.com

> illuminate 44 Sixth Road

Woburn, MA 01801 (781) 935-8500 333 Pleasant Valley Road

South Windsor, CT 06074

(860) 282-0597

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Date: 2/9/2021

Drawn By: AJS

Scale: 1" = 30'-0"

Drawing Number:

Revision:----

Sheet 1 of 1

Detail: Photometric Calculation