

Harriman Associates

GENERAL

A. PLAN THE SEQUENCE OF CONSTRUCTION SO THAT THE SMALLEST PRACTICAL AREA OF LAND IS EXPOSED AT ANY ONE TIME DURING CONSTRUCTION. SCHEDULE THE WORK SUCH THAT SEDIMENTATION BARRIERS AND DETENTION PONDS ARE INSTALLED EARLY IN THE CONSTRUCTION SEQUENCE, TO PREVENT SEDIMENTS FROM UPHILL AREAS REACHING STREAMS, WETLANDS OR PROPERTY LINES. THE AREA DISTURBED BY STRIPPING OF VEGETATION, SOIL REMOVAL, AND REGARDING SHALL BE THE MINIMUM NECESSARY AT ANY ONE TIME. THE DURATION OF EXPOSURE OF THE DISTURBED AREA SHALL BE KEPT TO A PRACTICAL MINIMUM. UNTIL A DISTURBED AREA IS STABILIZED, SEDIMENT IN RUN-OFF SHALL BE TRAPPED BY THE USE OF DEBRIS BASIN, SEDIMENT BASINS, SILT TRAPS OR OTHER ACCEPTABLE METHODS.

B. NOT USED.

- C. TAKE NECESSARY STEPS TO PREVENT SOIL EROSION. REFER TO PUBLICATION OF MAINE DEP PARTICULARLY CHAPTER 500, AND THE MAINE SOIL AND WATER CONSERVATION COMMISSION FOR ADDITIONAL PREVENTION MEASURES TO STOP SOIL EROSION AND FOLLOW DEP MAINE EROSION AND SEDIMENT CONTROL BMP'S. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN CONFORMITY WITH ALL FEDERAL AND STATE PERMIT REQUIREMENTS CONCERNING WATER, AIR OR NOISE POLLUTION, OR THE DISPOSAL OF CONTAMINATED OR HAZARDOUS MATERIALS. EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE MINIMUM ONLY. SATISFY THE CURRENT REQUIREMENTS OF THE REGULATORY AGENCIES. REPAIR ALL AREAS OF INSTABILITY AND EROSION IMMEDIATELY AND MAINTAIN UNTIL THE SITE IS FULLY STABILIZED.
- D. IF UNDERDRAIN FILTER BASINS, BIO-RETENTION CELLS, OR WETPONDS ARE USED AS TEMPORARY SEDIMENT PONDS, DO NOT INSTALL UNDERDRAIN, GRAVEL FILTER, SOIL FILTER, OR GEOTEXTILE FABRIC UNTIL AFTER THE SURROUNDING AREAS ARE STABILIZED AND/OR THE AREAS ARE NO LONGER RECEIVING SEDIMENT LOADING. SEDIMENT BASINS MUST PROVIDE STORAGE FOR EITHER THE RUNOFF FROM A TWO (2) YEAR, 24 HOUR STORM OR PROVIDE FOR 3, 600 CUBIC FEET OF CAPACITY PER ACRE DRAINING TO THE SCHEDULE BASIN/POND CONSTRUCTION DURING THE BASIN. MONTHS OF JUNE THROUGH SEPTEMBER; WITH PONDS STABILIZED BY OCTOBER 1ST. CLEAN ALL STORM WATER BASINS, PIPES, AND TREATMENT TANKS PRIOR TO SUBSTANTIAL COMPLETION.
- E. WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE. IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 FEET AND 50 FEET OF ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY
- F. EROSION CONTROL MESH: INTENDED AS A TEMPORARY EROSION CONTROL MEASURE THAT WILL DECOMPOSE AFTER STABILIZATION. OPEN WEAVE, SINGLE JUTE YARN OF LOOSELY TWISTED CONSTRUCTION, NOT VARYING IN THICKNESS BY MORE THAN ½ ITS NORMAL DIAMETER. THE WOVEN MATERIALS SHALL WEIGH 0.9 POUNDS PER SQUARE YARD. SYNTHETIC MESH MATERIAL MAY BE USED AS APPROVED. STAPLES: NO. 11 (OR HEAVIER) PLAIN IRON WIRE, MADE 6 INCHES IN LENGTH.
- G. EROSION CONTROL BLANKET: INTENDED AS A PERMANENT EROSION CONTROL MEASURE THAT WILL REINFORCE THE TOPSOIL AND VEGETATION AGAINST EROSION AFTER CONSTRUCTION. SYNTHETIC FIBER MATRIX SANDWICHED BETWEEN HEAVY DUTY UV STABILIZED NETTING. BLANKET SHALL WEIGH NOT LESS THAN 0.9 POUNDS PER SQUARE YARD. NORTH AMERICAN GREEN P300 OR APPROVED EQUAL. STAPLES: NO. 11 (OR HEAVIER) PLAIN IRON WIRE, MADE 6 INCHES IN LENGTH.

H. SILT FENCE:

POST: 1"X1" HARDWOOD POST, 4.5 FEET IN LENGTH.

FABRIC: PERVIOUS 36" WIDE SHEET OF SYNTHETIC POLYMER OF 12-MIL THICKNESS, SUCH AS MIRAFI 100X; TERRA TEX-SC OR APPROVED EQUAL. THE BOTTOM OF THE FABRIC SHALL BE TRENCHED INTO THE EXISTING GROUND A MINIMUM OF 6 INCHES. IN ADDITION, HAY BALES OR DITCH CHECKS SHALL BE INSTALLED ALONG THE SILT FENCE TO CREATE SEDIMENTATION POOLS IN LOW AREAS WHERE RUN-OFF CONCENTRATES.

I. EROSION CONTROL SOIL/BARK MIX: SHALL CONSIST OF A MIX OF RECYCLED COMPOSTED BARK, FLUME GRIT, AND FRAGMENTED WOOD GENERATED FROM WATER-FLUME LOG HANDLING SYSTEMS. CONFORMING TO THE FOLLOWING:

1. PH - 5.0 TO 6.0.

2. SCREEN SIZE - 6 INCHES MINUS.

3. NO LESS THAN 25 PERCENT ORGANIC MATERIAL.

4. NO STONES LARGER THAN 2 INCHES IN DIAMETER.

5. APPROVE BY MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR USE IN WETLANDS AND NEAR WATERWAYS.

- J. HAY BALES: BALES SHALL BE AT LEAST 14" X 18" X 30" IN SIZE, STAKED TWICE PER BALE. STAKES SHALL BE 1" X 1" X 36" WOODEN. PLACE BALES WITH TWINE ON SIDES OF BALE, NOT TOP OR BOTTOM.
- K. CATCH BASIN SEDIMENT FILTER SACK: A FILTER FABRIC BAG WHICH HANGS UNDER THE GRATE TO CATCH SEDIMENTS. PROVIDE "STREAMGUARD MODEL 3003," "BASIN BAG" BY EMCO DISTRIBUTION, "SILT SACKS HIGH FLOW" BY ACF ENVIRONMENTAL, OR APPROVED EQUAL. INSTALL THE BAG DEVICE PER MANUFACTURER'S RECOMMENDATION.
- L. BEFORE EARTHWORK IS STARTED, A SILT FENCE, FILTER BERM, OR STONE SEDIMENT DAM SHALL BE INSTALLED ALONG THE DOWN-SLOPE SIDE OF THE CONSTRUCTION SITE, AS NECESSARY, TO PREVENT SOIL SEDIMENT MIGRATION AWAY FROM THE SITE. INSTALL SILT FENCE OR FILTER BERM ALONG THE DOWN-SLOPE SIDE OF ALL TOP-SOIL AND SUBSOIL STOCKPILES.
- M. EROSION CONTROLS BARRIERS SHALL BE REMOVED AFTER CONSTRUCTION IS COMPLETE, BUT NOT UNTIL FINISH GRADING, FINAL SEEDING, AND MULCHING HAS BEEN COMPLETED AND THE ESTABLISHED GRASS HAS STABILIZED THE SOIL. MAINTAIN BARRIERS IN GOOD CONDITION UNTIL REMOVED.
- N. INSPECT EROSION AND SEDIMENTATION CONTROL WEEKLY AND AFTER STORM AND MAINTAIN IN GOOD WORKING CONDITION FOR PROJECT DURATION. REMOVE SILT DEPOSITS FROM THE SITE, PLACE IN AN AREA OF LOW EROSION POTENTIAL SO IT WILL NOT WASH INTO A WETLAND OR WATER BODY. SEED WITH EROSION CONTROL MIX. AND MULCH.
- O. FILTER BERM: PLACE UNCOMPACTED EROSION CONTROL MIX IN A WINDROW AT LOCATIONS SHOWN ON THE PLAN OR AS DIRECTED BY THE ARCHITECT. AT A MINIMUM THE BERM SHALL BE 3 FEET WIDE AT THE BASE AND 2 FEET HIGH AT THE CENTER OF ALL POINTS ALONG ITS LENGTH. BERM MATERIAL. WHERE THE BERM IS STILL REQUIRED. WHICH HAS DECOMPOSED. CLOGGED WITH SEDIMENT, ERODED, OR BECOMES INEFFECTIVE, SHALL BE REPLACED. THE BERM SHALL BE REMOVED FROM THE SITE OR RAKED INTO NEARBY WOODS TO A DEPTH NO GREATER THAN 1", WHEN NO LONGER REQUIRED, AS APPROVED BY THE ARCHITECT.
- P. TEMPORARY STABILIZATION: WITHIN 7 DAYS OF THE CESSATION OF CONSTRUCTION ACTIVITIES IN AN AREA THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS, STABILIZE EXPOSED SOIL WITH MULCH, OR OTHER NON-ERODIBLE COVER. STABILIZE AREAS WITHIN 75 FEET OF A WETLAND OR WATERBODY WITHIN 48 HOURS OF THE INITIAL DISTURBANCE OF THE SOIL OR PRIOR TO A STORM EVENT, WHICHEVER COMES FIRST. REMOVE TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE. MAINTAIN TEMPORARY EROSION CONTROL MEASURES FOR THE FULL DURATION OF CONSTRUCTION. INSPECT WEEKLY AND AFTER EACH STORM AND REPAIR AS NEEDED. REMOVE SEDIMENTS FROM THE SITE, PLACE IN AREA OF LOW EROSION POTENTIAL, AND STABILIZE WITH SEED AND MULCH.
- Q. PERMANENT STABILIZATION: IF THE AREA WILL NOT BE WORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE, THEN PERMANENTLY STABILIZE THE AREA WITHIN 7 DAYS BY PLANTING VEGETATION, SEEDING, SOD, OR THROUGH THE USE OF PERMANENT MULCH, OR RIPRAP, OR ROAD SUB-BASE. "IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS; AMEND AREAS OF DISTURBED SUBSOILS WITH TOPSOIL, COMPOST, OR FERTILIZERS; PROTECT SEEDED AREAS WITH MULCH OR, IF NECESSARY, EROSION CONTROL BLANKETS; AND SCHEDULE SODDING, PLANTING, AND SEEDING SO TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS." NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL VEGETATION IS WELL-ESTABLISHED WITH 90% COVER BY HEALTHY VEGETATION. IF NECESSARY, AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY, OR TOPSOIL EROSION IS EVIDENT. PERMANENT
- 1. SEEDED AREAS: PERMANENT STABILIZATION MEANS A 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.
- 2. SODDED AREAS: PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.
- 3. PERMANENT MULCH: PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.
- 4. RIPRAP: PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP. STONE MUST BE SIZED APPROPRIATELY. IT IS RECOMMENDED THAT ANGULAR STONE BE USED.
- 5. PAVED AREAS: PERMANENT STABILIZATION MEANS PLACEMENT OF THE COMPACTED SUBBASE GRAVEL IS COMPLETED, PROVIDED IT IS FREE OF FINE MATERIALS THAT MAY RUNOFF WITH A RAIN
- 6. DITCHES, CHANNELS, AND SWALES: PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH A 90% COVER OF HEALTHY VEGETATION, WITH A WELL-GRADED RIPRAP LINING, TURF REINFORCEMENT MAT, OR WITH ANOTHER NON-EMSIVE LINING SUCH AS CONCRETE OR ASPHALT PAVEMENT. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE CHANNEL LINING, UNDERCUTTING OF THE CHANNEL BANKS OR DOWN-CUTTING OF THE CHANNEL.

2. TEMPORARY SEEDING AND MULCHING

STABILIZATION IS DEFINED AS FOLLOWS:

A. TOPSOIL STRIPPED AND STOCKPILED ON SITE SHALL BE IMMEDIATELY SEEDED WITH EROSION CONTROL SEED MIX AND MULCHED WITH HAY. MULCH SHALL BE CURED STRAW FREE FROM NOXIOUS WEED SEEDS AND ROUGH OR WOODY MATERIALS.

B. EROSION CONTROL SEED:

Seed Type	% Weight	% Purity	% Germination
Domestic Rye	70	85	80
Perennial Rye	30	85	80

- C. EXPOSED EARTHWORK AREAS WHICH WILL NOT BE WORKED ON FOR ONE WEEK SHALL BE MULCHED WITH STRAW.
- D. UNFINISHED AREAS WHICH ARE NOT TO BE WORKED ON FOR ONE MONTH OR WILL BE WINTERED SHALL BE SEEDED WITH EROSION CONTROL MIX AT A RATE OF 3 POUNDS OF SEED PER 1,000 SQ. FT. AND MULCHED WITH STRAW. APPLY STRAW MULCH AT THE RATE OF 75 POUNDS PER 1,000 SQ. FT. ANCHOR MULCH TO PREVENT WIND BLOWN MOVEMENT.
- E. IN SENSITIVE AREAS (WITHIN 25 FT. OF STREAM OR WETLAND EDGE) TEMPORARY MULCH MUST BE APPLIED AT THE END OF EACH WORK DAY AND PRIOR TO ANY STORM EVENT. NO FILL SHALL BE PLACED ON HAY MULCH.

3. PERMANENT SEEDING AND MULCHING

- A. GRASS SEED SHALL BE FREE FROM NOXIOUS WEED SEEDS AND RECLEANED, GRADE A RECENT CROP SEED, TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING, DELIVERED TO THE SITE IN SEALED CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS AND EACH VARIETY OF SEED SHALL HAVE PERCENTAGES OF GERMINATION OF NOT LESS THAN 80% AND A PERCENTAGE OF PURITY OF NOT LESS THAN 85%.. SOW SEEDS AT A RATE OF 5lbs PER 1,000s.f.
- B. WEED SEED CONTENT SHALL NOT EXCEED 0.25%. WET, MOLDY OR OTHERWISE DAMAGED SEED WILL BE REJECTED.

C. SEED MIX PROPORTIONS BY WEIGHT:

Seed Type	% Weight	% Purity	% Germination
Chewing Fesue	35	85	80
Creeping Red Fescue	35	85	80
Perennial Rye	30	85	80

4. WINTER CONSTRUCTION

- A. WINTER CONSTRUCTION" IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 15. IF DISTURBED AREAS ARE NOT STABILIZED WITH PERMANENT MEASURES BY NOVEMBER 1 OR NEW SOIL DISTURBANCE OCCURS AFTER NOVEMBER 1, BUT BEFORE APRIL 15, THEN THESE AREAS MUST BE PROTECTED AND RUNOFF FROM THEM MUST BE CONTROLLED BY ADDITIONAL MEASURES AND RESTRICTIONS.
- B. SITE STABILIZATION: FOR WINTER STABILIZATION, HAY MULCH IS APPLIED AT TWICE THE STANDARD TEMPORARY STABILIZATION RATE. AT THE END OF EACH CONSTRUCTION DAY, AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE
- STABILIZED. MULCH MAY NOT BE SPREAD ON TOP OF SNOW. C. SEDIMENT BARRIERS: ALL AREAS WITHIN 75 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIERS.
- D. DITCH: ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1 OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE DEPARTMENT.
- E. SLOPES: MULCH NETTING MUST BE USED TO ANCHOR MULCH ON ALL SLOPES GREATER THAN 8% UNLESS EROSION CONTROL BLANKETS OR EROSION CONTROL MIX IS BEING USED ON THESE SLOPES.
- 5. DRAINAGE DITCHES AND EMBANKMENTS A. DRAINAGE DITCHES SHALL BE PROVIDED WITH TEMPORARY STONE CHECK DAMS SPACED NO GREATER THAN 100 FEET APART. TEMPORARY DITCH CHECK DAMS SHALL BE CONSTRUCTED WHERE INDICATED. ADDITIONAL TEMPORARY DITCH DAMS
- SHALL BE INSTALLED DURING THE CONSTRUCTION, WHERE NECESSARY TO PREVENT SOIL FROM LEAVING THE WORK AREA. B. GRASSED DRAINAGE DITCHES AND SWALES SHALL BE LINED WITH A CONTINUOUS MAT OF EROSION CONTROL MESH FOR FULL BOTTOM WIDTH AND SIDE SLOPES TO 12" ABOVE BOTTOM, WITHIN 48 HOURS OF FINAL GRADING AND PRIOR TO A STORM
- EVENT, IN ORDER TO STABILIZE THE LOAM, SEED AND MULCH. C. WHERE EROSIVE VELOCITIES IN DITCHES OR EMBANKMENTS ARE ANTICIPATED OR EXPERIENCED AND SOIL CANNOT BE STABILIZED WITH MULCH AND MESH, SUBSTITUTE EROSION CONTROL SOIL/BARK MIX IN PLACE OF LOAM. SCREEN THE EROSION CONTROL SOIL/BARK MIX TO REMOVE WOOD, BARK AND STONES ONE INCH IN SIZE AND GREATER. IF EROSIVE VELOCITIES ARE EXCESSIVE, PROVIDE A 12" THICK STONE RIP-RAP LINING ALONG DITCH BOTTOM AND UP SIDE SLOPES TO ONE FOOT
- ABOVE THE BOTTOM ELEVATION. PLACE NON-WOVEN GEOTEXTILE BENEATH RIP-RAP. D. STABILIZE POND EMBANKMENT (INTERIOR AND EXTERIOR), SLOPES STEEPER THAN THREE HORIZONTAL TO ONE VERTICAL AND DRAINAGE DITCHES BY SEPTEMBER 15, CONSISTING OF PERMANENT SEEDING AND MULCH. IF THIS DATE CANNOT BE MET,
- PROVIDE ALTERNATIVE PERMANENT OR TEMPORARY STABILIZATION DESCRIBED AS FALL AND WINTER STABILIZATION. E. INSTALL EROSION CONTROL MESH OVER MULCH ON SLOPES STEEPER THAN SIX HORIZONTAL TO ONE VERTICAL (16%) AND IN CONFORMANCE TO DOT STANDARD SPECIFICATION, LATEST EDITION, SECTION 9.48, PARAGRAPHS 613.03 THROUGH 613.06.
- ANCHOR MESH AS RECOMMENDED BY MANUFACTURER.
- F. PERMANENTLY RIP-RAP INLETS AND OUTLETS OF CULVERTS AND PIPE OUTFALLS WITHIN 48 HOURS OF INSTALLATION, AS SPECIFIED IN SECTION 312000 EARTH MOVING AND AS SHOWN ON THE DRAWINGS.
- G. INSTALL PERMANENT EROSION CONTROL BLANKET AROUND CULVERT INLETS AND OUTLETS AS SHOWN ON THE DRAWINGS AND ACCORDING TO MANUFACTURERS' RECOMMENDATIONS.
- 1. PREPARE SOIL WITH LOAM, FERTILIZER AND SEED AS SPECIFIED IN SECTION 329200 PRIOR TO INSTALLING THE EROSION CONTROL BLANKET.

2. INSTALL PERMANENT EROSION CONTROL BLANKET FIVE FEET MINIMUM IN ALL DIRECTIONS AROUND CULVERT INLETS.

- 3. INSTALL PERMANENT EROSION CONTROL BLANKET FIVE FEET MINIMUM IN ALL DIRECTIONS AROUND CULVERT OUTLETS AND A SIX FOOT WIDTH CENTERED ALONG THE OUTLET CHANNEL FOR TEN FEET
- 4. INSTALL STAPLES AS SHOWN ON THE EROSION CONTROL BLANKET DETAIL ON THE DRAWINGS AND THROUGHOUT THE BLANKET IN AN 18 BY 18 INCH GRID.

6. PARKING AND DRIVES

- A. PLACE A TEMPORARY STABILIZED CONSTRUCTION EXITS WHERE VEHICLES LEAVE THE SITE AND ENTER EXISTING PAVED ROADS; CONSISTING OF A 6" LAYER OF 1 1/2" TO 3" CRUSHED STONE. TRACKING A SPILLING OF EARTH AND/OR DEBRIS ON PUBLIC STREETS SHALL BE AVOIDED TO THE MAXIMUM EXTENT POSSIBLE. CLEAN UP AND REMOVE SUCH SPILLAGE.
- B. AS THE CRUSHED STONE STABILIZED CONSTRUCTION EXITS CONTINUE TO SCRUB THE SOIL FROM THE TRUCKS, THE STONE LAYER WILL TEND TO FILL WITH SEDIMENTS. WHEN THIS OCCURS, REMOVE THE STONE AND SEDIMENT AND REPLACE IT WITH A CLEAN LAYER OF STONE.
- C. AS SOON AS POSSIBLE AFTER ROADS AND PARKING AREAS ARE CLEARED, GRUBBED AND GRADED TO THE REQUIRED SUBGRADE, THE BASE GRAVEL SHALL BE PLACED.

REMOVAL AND DISPOSAL WHEN PERMANENT SOIL STABILIZATION HAS BEEN ACHIEVED, TEMPORARY MATERIALS AND DEVICES THAT ARE NOT READILY DEGRADABLE SHALL BE REMOVED AND DISPOSED OF OFF SITE. SILT FENCES, FILTER BERMS AND CATCH BASIN SEDIMENT FILTERS MUST BE FULLY REMOVED. REUSABLE MATERIALS ARE AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

8. STONES FOR RIP-RAP

A. SIZE THE STONE MIXTURE SUCH THAT 50% OF THE STONES, BY WEIGHT, ARE LARGER THAN THE SPECIFIED D50 SIZE. STONES SHALL NOT BE SCHISTOSIC.

B. PLAIN RIP-RAP: 4" TO 12" DIAMETER, HARD, SOUND ANGULAR STONES, D50 = 6".

C. SPECIAL RIP-RAP: 8" TO 18" WIDE SOUND STONES WITH FLAT TOP SURFACE, D50 = 11".

D. THE STONES SHALL BE PLACED WITH THEIR BENDS AT RIGHT ANGLES TO THE SLOPE, THE LARGER STONES BEING USED IN BOTTOM COURSES.

E. THE FINISHED WORK SHALL PRESENT AN EVEN, TIGHT AND REASONABLY SMOOTH SURFACE CONFORMING TO THE REQUIRED CONTOUR AND HAVE A NEAT ORDERLY APPEARANCE WITHOUT SCATTERED STONES. F. SPECIAL" RIP-RAP SHALL BE HAND-PLACED IN CLOSE CONTACT TO FORM AN EVEN. TIGHT AND REASONABLY SMOOTH SURFACE WITH RELATIVELY FLAT TOP SURFACES. USE NO SMALL STONES OR SPALL.

A. SEEDING: SEEDING SHALL BE DONE BETWEEN AUGUST 15TH TO SEPTEMBER 15TH AND/OR APRIL 15TH TO JUNE 15TH.

B. SODDING: SODDING MAY BE DONE BETWEEN APRIL 15TH AND NOVEMBER 15TH.

C. VARIANCE: IF SPECIAL CONDITIONS EXIST WHICH MAY WARRANT A VARIANCE IN THE ABOVE PLANTING DATES, A WRITTEN REQUEST SHALL BE SUBMITTED TO THE ARCHITECT STATING THE SPECIAL CONDITIONS FOR THE PROPOSED VARIANCE. PERMISSION FOR THE VARIANCE WILL BE GIVEN IF WARRANTED IN THE OPINION OF THE ARCHITECT. REGARDLESS OF THE TIME OF SEEDING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR A FULL GROWTH OF GRASS.

D. PLACE PERMANENT SOIL STABILIZATION WITHIN 15 DAYS OF FINAL GRADING.

10. SPILL PREVENTION AND GROUNDWATER PROTECTION A. AREAS INSIDE AND OUTSIDE THE CONTRACT WORK LIMITS SHALL BE PROTECTED FROM LUBRICANTS, FUEL, SEDIMENT, LITTER, CONSTRUCTION DEBRIS, CHEMICALS AND OTHER POLLUTANTS.

- B. TAKE PRECAUTIONS AND CONFORM TO ALL FEDERAL. STATE AND LOCAL REGULATIONS TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. IMPLEMENT SPILL PREVENTION, CONTAINMENT AND RESPONSE.
- C. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BE DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. IMPERVIOUS LINERS OR MATERIALS MUST BE USED TO STORE OR CONTAIN THE HAZARDOUS MATERIALS AND PREVENT THEM FROM ENTERING THE GROUNDWATER. 11. FUGITIVE SEDIMENT AND DUST
- A. USE TRAFFIC CONTROL TO RESTRICT TRAFFIC TO PREDETERMINED ROUTES. MAINTAIN AS MUCH NATURAL VEGETATION AS IS PRACTICABLE. USE PHASING OF CONSTRUCTION TO REDUCE THE AREA OF LAND DISTURBED AT ANY ONE TIME. THE USE OF TEMPORARY MULCHING, PERMANENT MULCHING, TEMPORARY VEGETATIVE COVER, PERMANENT VEGETATIVE COVER, OR SODDING WILL REDUCE THE NEED FOR DUST CONTROL. USE MECHANICAL SWEEPERS ON PAVED SURFACES WHERE NECESSARY TO PREVENT DUST BUILDUP. STATIONARY SOURCES OF DUST, I.E. ROCK CRUSHERS, SHOULD UTILIZE FINE WATER SPRAYS TO CONTROL DUST.
- B. THE EXPOSED SOIL SURFACE SHOULD BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST. C. CALCIUM CHLORIDE SHALL BE EITHER LOOSE DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH A SPREADER AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. LIQUID CALCIUM CHLORIDE CAN ALSO BE USED. TO REDUCE POTENTIAL FOR ENVIRONMENTAL DEGRADATION, USE ONLY WHEN OTHER METHODS ARE NOT PRACTICAL.
- D. COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL. IN AREAS ADJACENT TO WATERWAYS, USE CHEMICALLY STABLE AGGREGATE
- E. WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL. 12. DEBRIS AND OTHER MATERIALS - MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF.

13. EXCAVATION DE-WATERING

- A. WATER FROM CONSTRUCTION DEWATERING OPERATIONS SHALL BE CLEANED OF SEDIMENT BEFORE REACHING WETLANDS, WATER BODIES, STREAMS, OR SITE BOUNDARIES. UTILIZE TEMPORARY SEDIMENT BASINS, EROSION CONTROL SOIL FILTER BERMS BACKED BY STAKED HAY BALES, A DIRT BAG 55" SEDIMENT FILTER BAG BY ACF ENVIRONMENTAL, INC. OR OTHER APPROVED BEST MANAGEMENT PRACTICES (BMP's).
- B. IN SENSITIVE AREAS, NEAR STREAMS OR PONDS, DISCHARGE THE WATER FROM THE DE-WATERING OPERATION INTO A TEMPORARY SEDIMENT BASIN CREATED BY A SURROUNDING FILTER BERM OF UNCOMPACTED EROSION CONTROL MIX IMMEDIATELY BACKED BY STAKED HAY BALES (SEE THE SITE DETAILS). LOCATE THE TEMPORARY SEDIMENT BASIN AT LEAST 100 FEET FROM THE NEAREST WATER BODY, SUCH THAT THE FILTERED WATER WILL FLOW THROUGH UNDISTURBED
- VEGETATED SOIL AREAS PRIOR TO REACHING THE WATER BODY OR PROPERTY LINE. C. PREPARE A DE-WATERING PLAN TO ADDRESS EXCAVATION DE-WATERING FOLLOWING HEAVY RAINFALL EVENTS OR WHERE THE EXCAVATION MAY INTERCEPT THE GROUNDWATER TABLE DURING CONSTRUCTION. THE COLLECTED WATER NEEDS
- TREATMENT AND A DISCHARGE POINT THAT WILL NOT CAUSE DOWNGRADIENT EROSION AND OFFSITE SEDIMENTATION OR WITHIN A RESOURCE. FOLLOW THE DETAIL OF THE PLAN THROUGHOUT CONSTRUCTION DURATION. D. THE OWNER OR REGULATORY AGENCIES DO NOT AUTHORIZE A WATER DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, INCLUDING THE FOLLOWING: WASTEWATER FROM CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS; FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; SOAPS, SOLVENTS OR DETERGENTS USED IN VEHICLE AND EQUIPMENT
- WASHING; AND TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE. 14. UNAUTHORIZED NON-STORMWATER DISCHARGES, THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:
- WASTEWATER FROM THE WASHOUT OR CLEAN OUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS.
 - FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE.
- SOAPS, SOLVENTS OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING. TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.
- 15. AUTHORIZED NON-STORMWATER DISCHARGES, IMPLEMENT APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE FOLLOWING DISCHARGES.
 - FIREFIGHTING ACTIVITY.
 - FIRE HYDRANT FLUSHINGS
 - VEHICLE WASH-WATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED.
 - DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND DEP CHAPTER 500 APPENDIX (C)(3)
 - ROUTINE EXTERNAL BUILDING WASH-DOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS.
 - PAVEMENT WASH-WATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOTE USED. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE.
 - FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED.

UNCONTAMINATED GROUNDWATER OR SPRING WATER.

- UNCONTAMINATED EXCAVATION DE-WATERING (SEE REQUIREMENTS IN DEP CHAPTER 500 APPENDIX C(5)).
- POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS.
- LANDSCAPING IRRIGATION.

17. CONSTRUCTION OBSERVATIONS NOTES

- 16. CONSTRUCTION INSPECTION AND MAINTENANCE
- A. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL BEST MANAGEMENT PRACTICES (BMP'S), MATERIALS STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST OF THE PERMIT, SHALL CONDUCT THE INSPECTIONS.
- B. UPON DISCOVERY OF A PROBLEM, REPAIR BMPS NO LATER THAN THE END OF THE NEXT WORK DAY. IF ADDITIONAL BMPS OR SIGNIFICANT REPAIRS ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO
- C. KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND CORRECTIVE ACTION TAKEN. INCLUDING THE NAME AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS. THE DATE OF THE INSPECTIONS AND MAJOR OBSERVATIONS OF OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS, MATERIALS STORAGE AREAS AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPS THAT NEED MAINTENANCE, BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION AND LOCATION (S) WHERE ADDITIONAL BMPS ARE NEEDED. NOTE IN THE LOG THE CORRECTIVE ACTION TAKEN AND WHEN IT WAS TAKEN. THE LOG MUST BE MADE ACCESSIBLE TO THE OWNER, ARCHITECT AND REGULATORY AGENCIES' STAFF AND A COPY MUST BE PROVIDED UPON REQUEST. THE PERMITTEE SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.
- A. CONSTRUCTION OBSERVATIONS: THE OWNER WILL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO OBSERVE THE CONSTRUCTION AND STABILIZATION OF ALL STORMWATER MANAGEMENT STRUCTURES. CONTRACTOR MUST NOTIFY THE ENGINEER OF THE SCHEDULE FOR CONSTRUCTION OF STORM PONDS AND FILTER BEDS. IF NECESSARY, THE ENGINEER WILL INTERPRET THE POND'S CONSTRUCTION PLAN FOR THE CONTRACTOR. B. UNDERDRAINED SOIL FILTER BASINS: REFER TO NOTES ON DETAILS SHEETS.

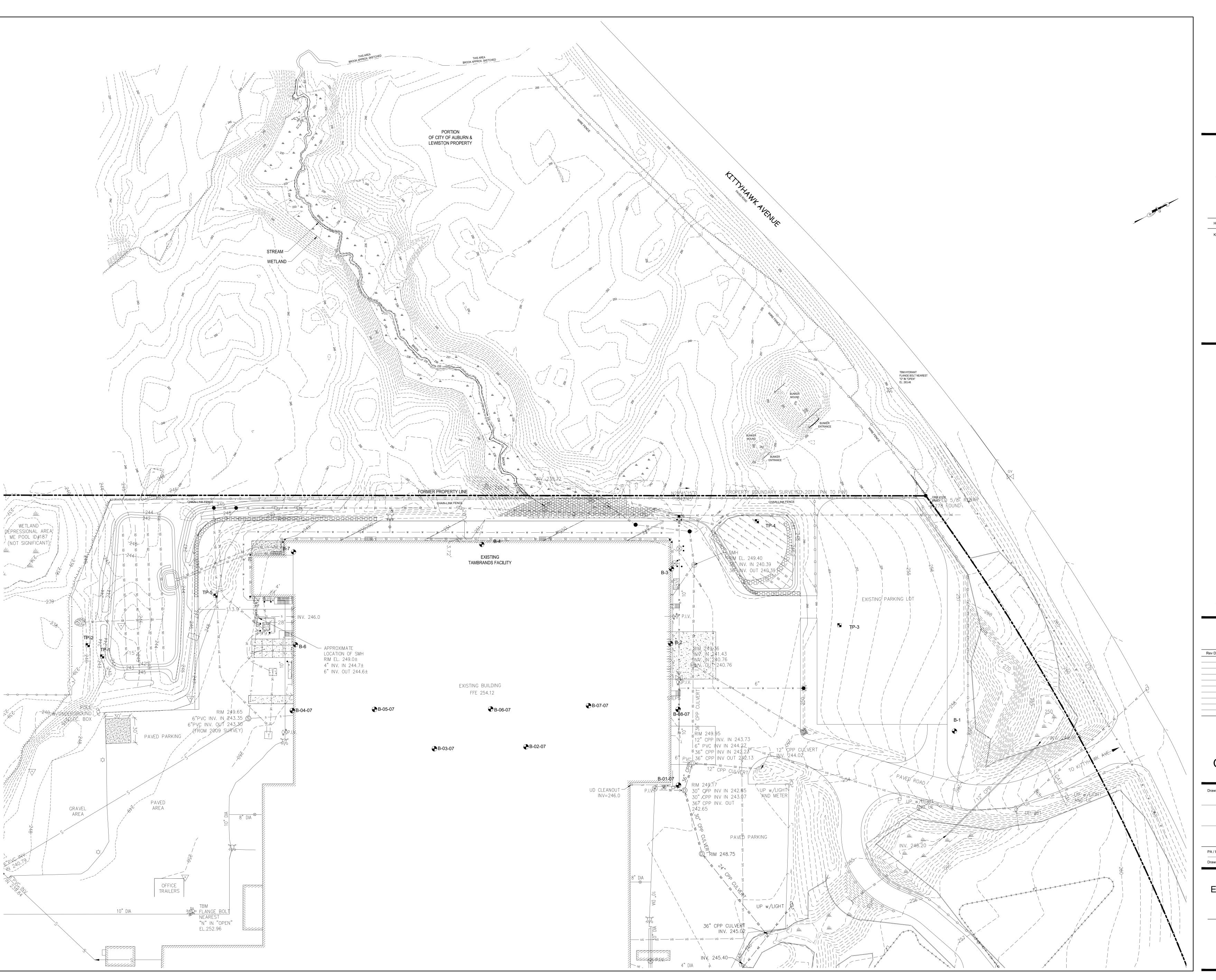


AUBURN	I, MAINE
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Key Plan	Proj North



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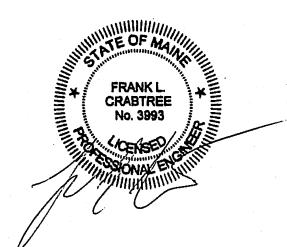


TAMBRANDS, INC. GALENA EXPANSION

AUBURN, MAINE

Harriman Project No. 20430

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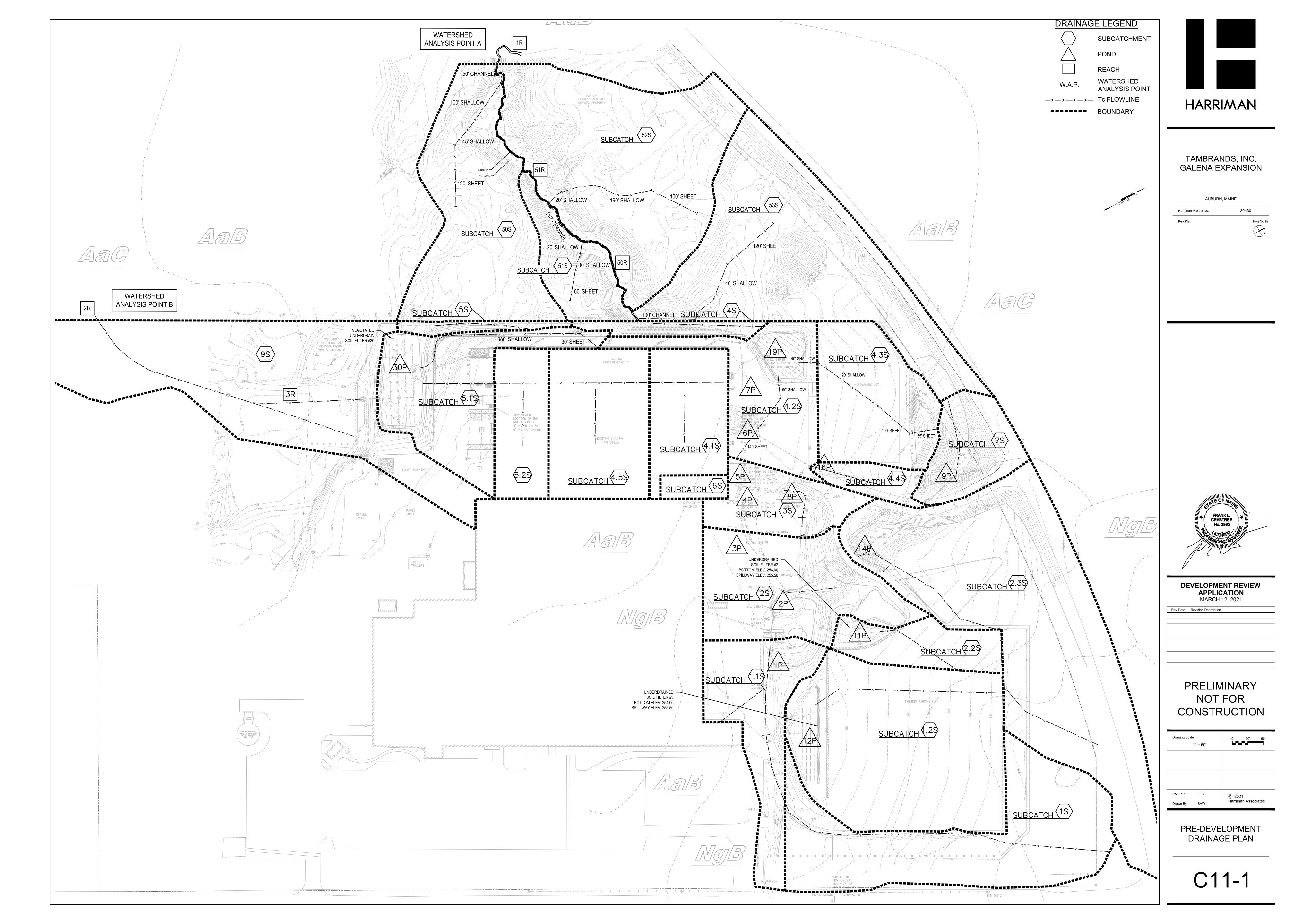
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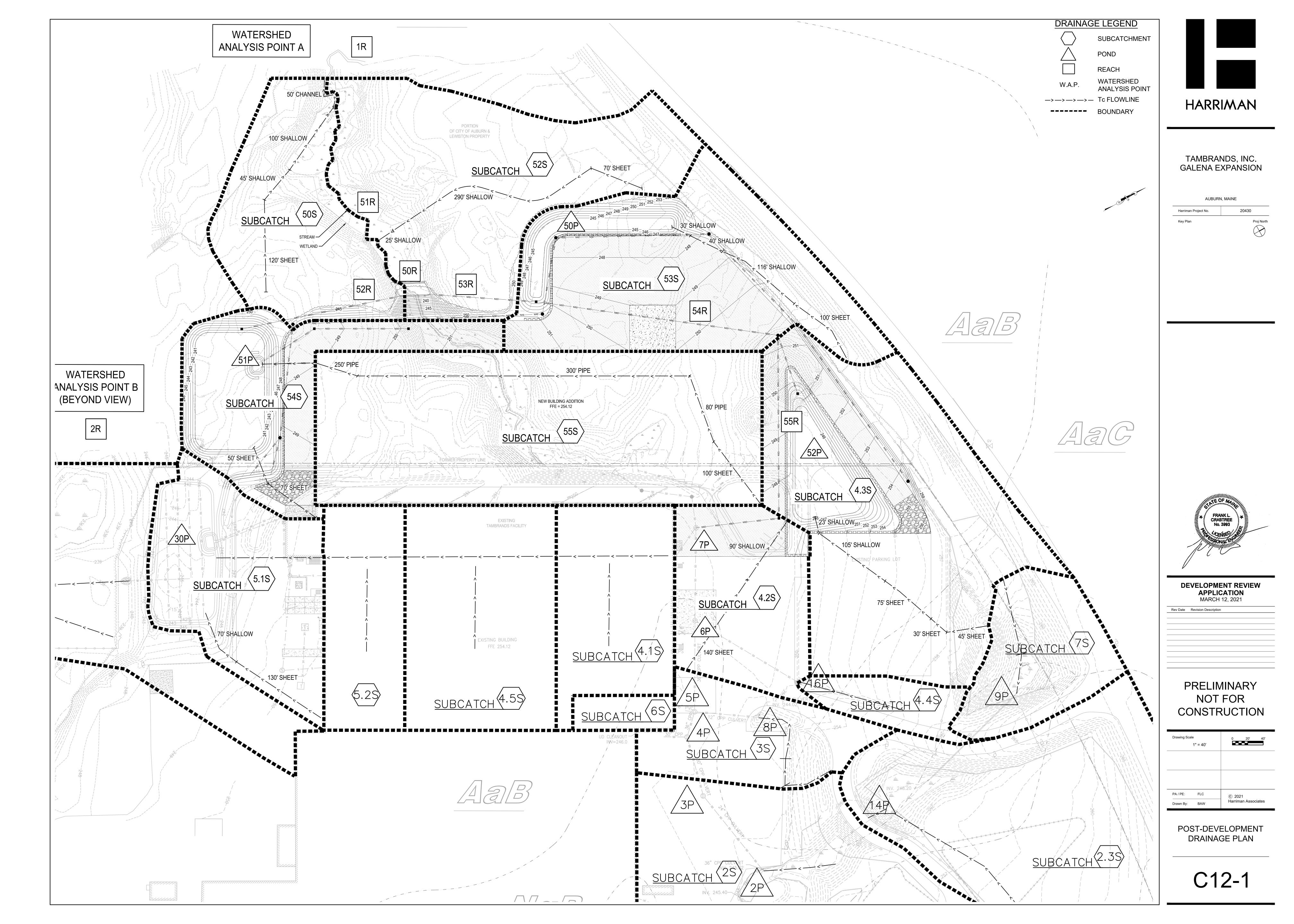
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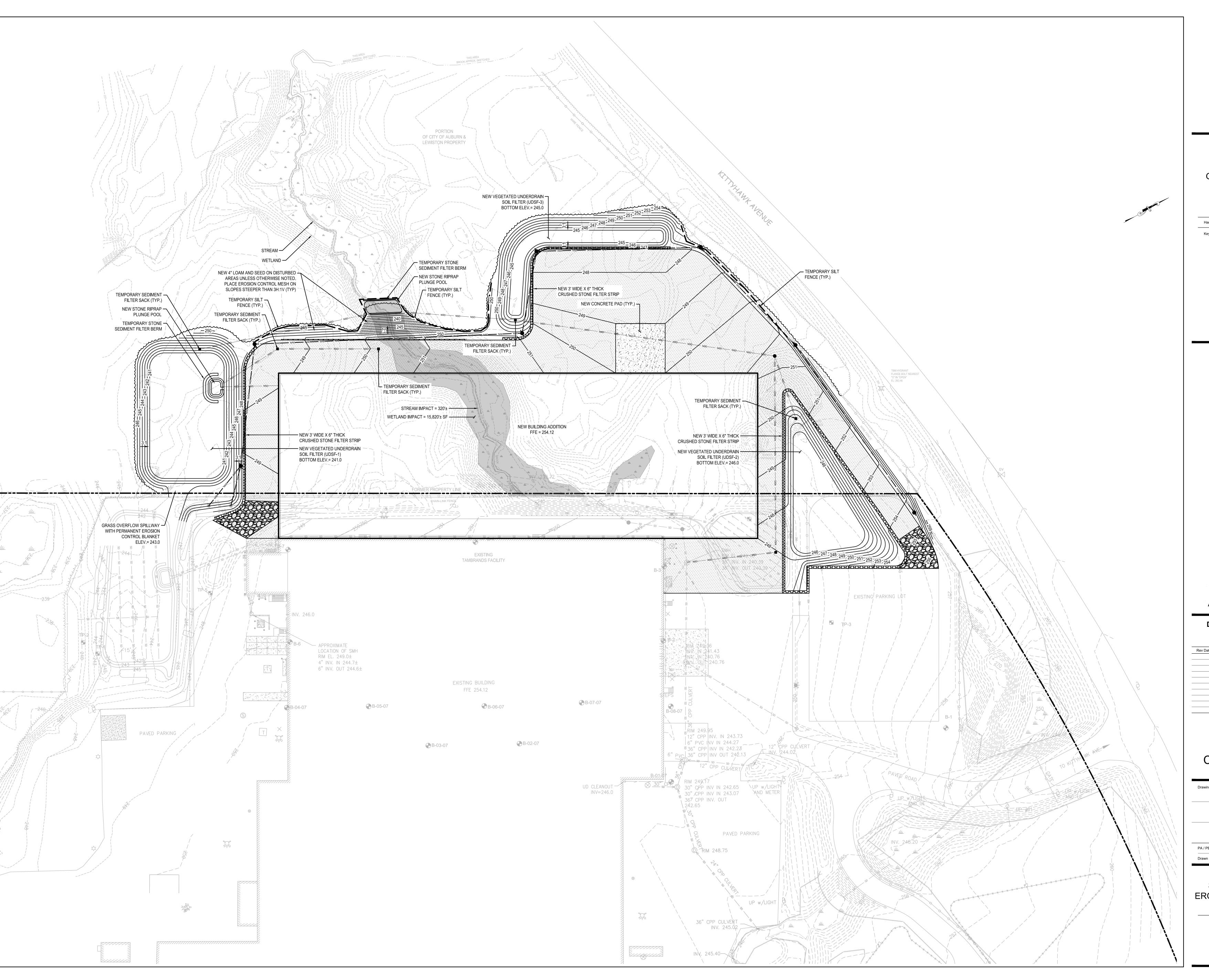
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EXISTING CONDITIONS PLAN

C10-1







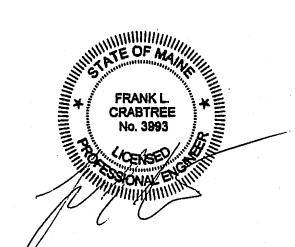


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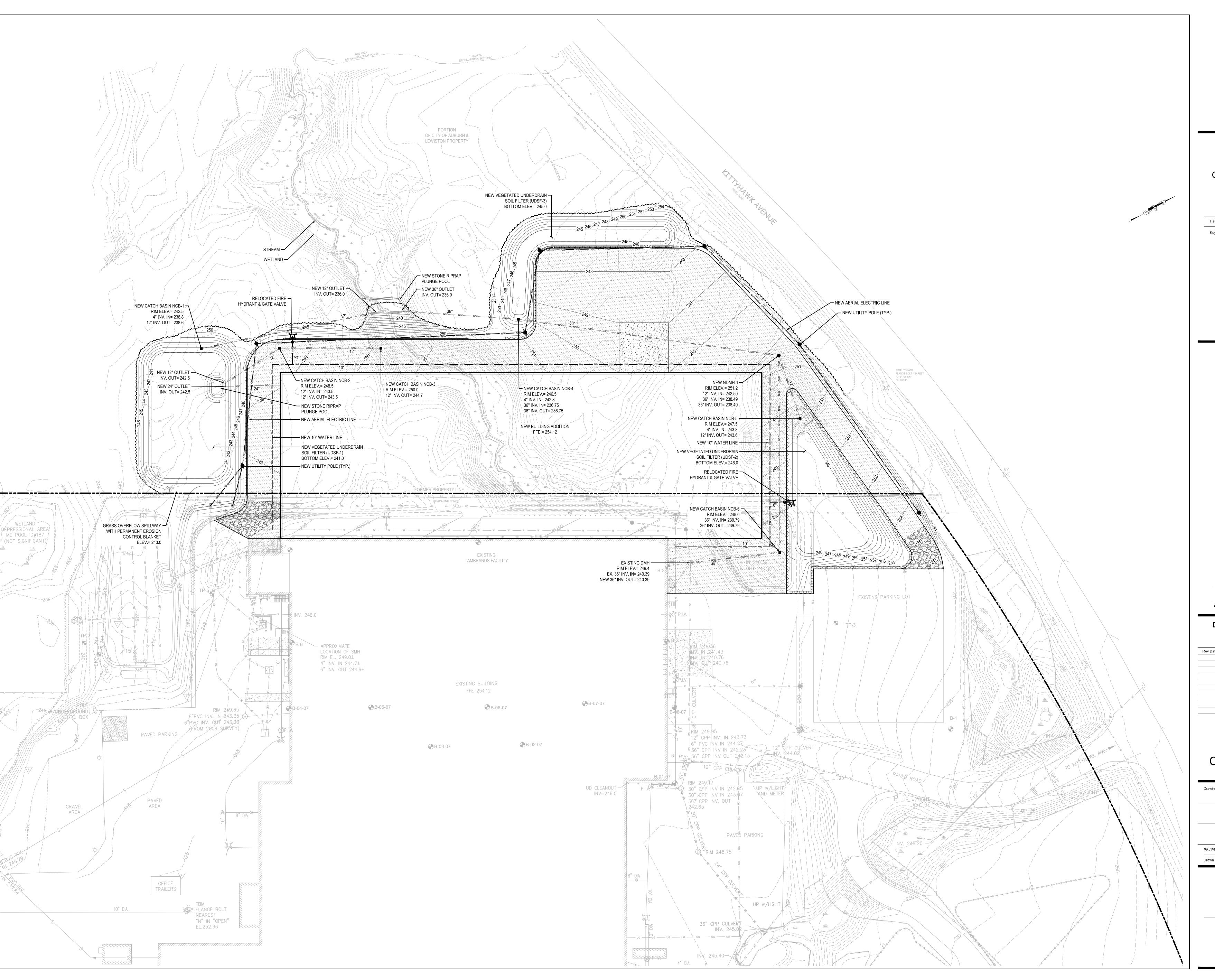
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SITE GRADING AND EROSION CONTROL PLAN

C30-1



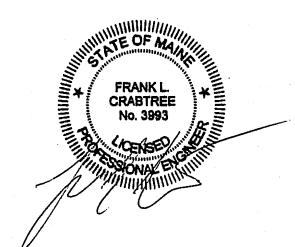


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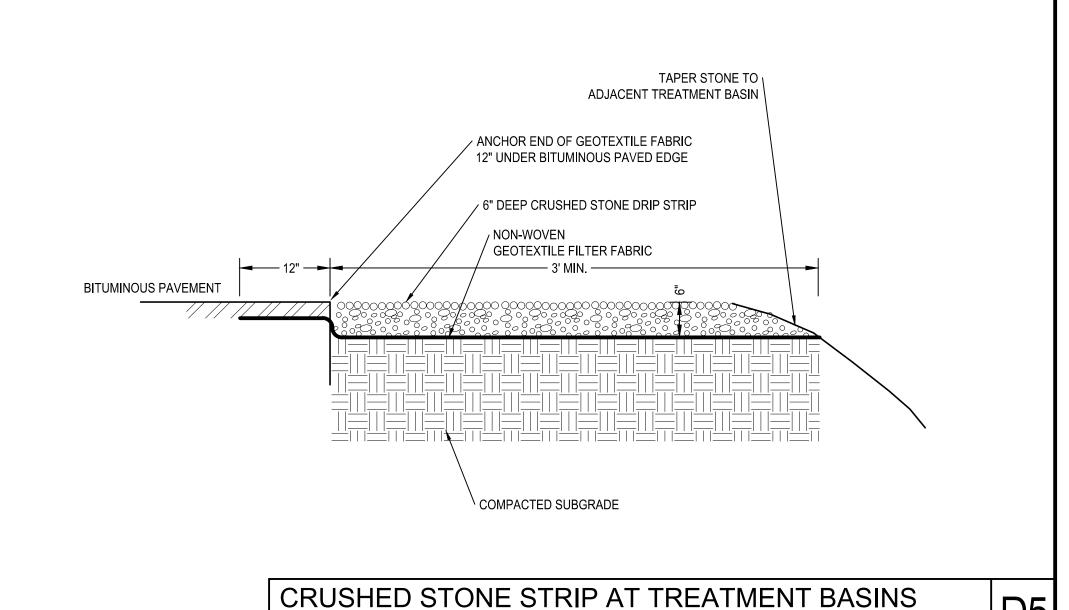
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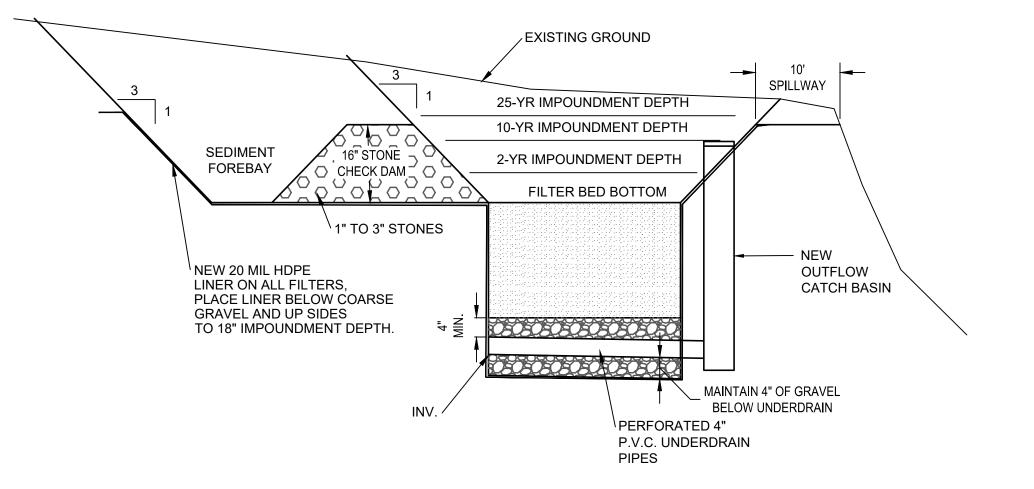
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SITE UTILITY PLAN

C40-1



UNDERDRAINED SOIL FILTER INFORMATION TOP OF DIKE UNDERDRAIN RUNOFF IMPOUNDMENT DEPTHS OUTFLOW CATCH SEDIMENT UNDERDRAINED BOTTOM BOTTOM SPILLWAY SOIL FILTER SIZE (SF) ELEV. ELEV. ELEV. 25-YR BASIN RIM FOREBAY 2-YR 10-YR YES 13,760 243.0 241.67 | 242.19 | 242.6 | 242.5 246.71 | 247.53 | 247.81 | 247.5 YES 8,000 246.0 248.0 3,920 245.0 250.5 245.57 | 246.26 | 246.63 | 246.5 YES N/A



LBS/ACRE

20

20

FILTER BASIN SEED MIX

Name

Creeping Red Fescue

Tall Fescue

ROUND CONCRETE

- 6" Ø CONC. FILLED SCHEDULE

AT TOP



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AUBURN, MAINE

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Key Plan

VEGETATED UNDERDRAIN SOIL FILTER BASIN TYPICAL CROSS SECTION
NOT TO SCALE

CONSTRUCTION NOTES:

1) BASIN EXCAVATION: THE AREA OF THE BASIN MAY BE EXCAVATED IN PREPARATION OF THE INSTALLATION OF THE UNDERDRAIN AND CAN BE USED FOR A SEDIMENT TRAP FROM THE SITE DURING CONSTRUCTION. AFTER EXCAVATION OF THE BASIN, THE OUTLET STRUCTURE AND PIPING SYSTEM MUST BE INSTALLED AT THE APPROPRIATE ELEVATION AND PROTECTED WITH A SEDIMENT BARRIER. IF THE BASIN IS TO BE USED AS A SEDIMENT TRAP, THE SIDES OF THE EMBANKMENTS MUST BE MULCHED AND MAINTAINED TO PREVENT EROSION.

NOT TO SCALE

- 2) COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED TO BETWEEN 90 AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA.
- 3) OUTLET DISCHARGE: OUTFLOW OF THE FILTER BASIN UNDERDRAIN CAN BE CONTROLLED BY A CONSTRICTIVE ORIFICE OR A VALVE (2" PLASTIC BALL VALVE, TYPE 346, WITH A BALL VALVE HANDLE EXTENSION, TYPE 615, WITH A THREE-PIECE VALVE BOX INSTALLED OVER THE VALVE). UPON COMPLETION OF THE INSTALLATION OF THE SOIL FILTER MEDIA, THE CONTRACTOR SHALL FLOOD THE BASIN TO THE DESIGN ELEVATION WITH CLEAN WATER AND ADJUST THE OUTFLOW TO OBTAIN A 24 HOUR TO 32 HOUR RELEASE TIME.
- 4) CONSTRUCTION SEQUENCE: EROSION AND SEDIMENTATION FROM UNSTABLE SUBCATCHMENTS IS THE MOST COMMON REASON FOR FILTER FAILURE. NOT HEEDING THE CONSTRUCTION SEQUENCING CRITERIA IS LIKELY TO RESULT IN THE NEED TO REPLACE THE SOIL FILTER. THE SOIL FILTER MEDIA MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION. OTHERWISE, THE RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA MUST BE DIVERTED AROUND THE FILTER UNTIL STABILIZATION IS COMPLETED UNLESS THE DEPARTMENT HAS DETERMINED THAT SUFFICIENT MEASURES ARE BEING TAKEN TO PREVENT EROSION OF MATERIAL FROM THE UNSTABLE CATCHMENT AREA AND DEPOSITION ON THE FILTER
- 5) TESTING AND SUBMITTALS: THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL:
- SUBMIT SAMPLES OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
- PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES; 1996a) ON EACH TYPE OF THE SAMPLE MATERIAL. THE RESULTING SOIL FILTER MEDIA MIXTURE MUST HAVE 8% TO 12% BY WEIGHT PASSING THE #200 SIEVE, A CLAY CONTENT OF LESS THAN 2% (DETERMINED HYDROMETER GRAIN SIZE ANALYSIS) AND HAVE 10% DRY WEIGHT OF ORGANIC MATTER.

PERFORM A PERMEABILITY TEST ON THE SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698."

DIA. | A | B | C | D | E | R

└─ 4"X4" BACKFILLED

SECTION

ANCHOR TRENCH

SEDIMENT FILTER SACK

POLYPROPYLENE

SEDIMENT CONTROL

FABRIC

CONNECTION PLAN VIEW

ROLL BOTH FENCE — POSTS TOGETHER /

TO CONNECT

TWO FENCE ENDS

4" CONTINUOUS

A6 SILT FENCE

NOT TO SCALE

PROFILE VIEW

14" LAYER OF RIP RAP

D50=6" UNLESS OTHERWISE NOTED

- CONCRETE FLARED END

SECTION & ADAPTERS

NOTE: MIN. WIDTH AND LENGTH UNLESS SHOWN OTHERWISE ON PLANS

STORM DRAIN INLET/OUTLET RIP-RAP

NONWOVEN —

EOTEXTILE FILTER

NOT TO SCALE

ANCHOR TRENCH

PROFILE

CONSTRUCTION OVERSIGHT:
FIELD OBSERVATION OF THE FILTER BASIN SHALL BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY THE DESIGN ENGINEER WITH REQUIRED REPORTING TO THE DEP. AT A MINIMUM, CONTRACTOR SHALL NOTIFY ARCHITECT ONE WEEK PRIOR TO THE

AFTER PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED;
 AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA;

AFTER THE FILTER MEDIA HAS BEEN INSTALLED

FOLLOWING:

AND SEEDED;

AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS; AND

ALL MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN WILL BE APPROVED BY THE DESIGN ENGINEER AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THEY ARE PASSING DEP

SPECIFICATIONS SHOWN ON THIS SHEET.

	E SANDY LOAM TOPSOIL SHALL BE TESTED AT A SOIL STING LAB AND:
163	MATCH THE USDA SANDY LOAM TOPSOIL
•	
	CLASSIFICATION
•	HAVE 5-8% HUMIFIED ORGANIC MATTER
•	HAVE NO LESS THAN 8% PASSING THE #200 SIEVE
•	HAVE A CLAY CONTENT OF LESS THAN 2%.
•	BE FREE OF STONES, STUMPS, ROOTS OR OTHER
	OBJECTS GREATER THAN 2".
IF T	HE TOPSOIL DOES NOT CONTAIN SUFFICIENT NUTRIEN
CON	NTENT TO SUPPORT GRASS GROWTH, SUPPLEMENT
	H SUPERHUMUS ORGANIC MATTER AND RETEST
ORO	GANIC MATTER AND CLAY CONTENT.
ORG	SANIC MATTER AND CLAY CONTENT.

#703.01)

% BY WEIGHT

85

70-100

15-40

8-15

< 2%

COARSE SAND LAYER

SIEVE SIZE

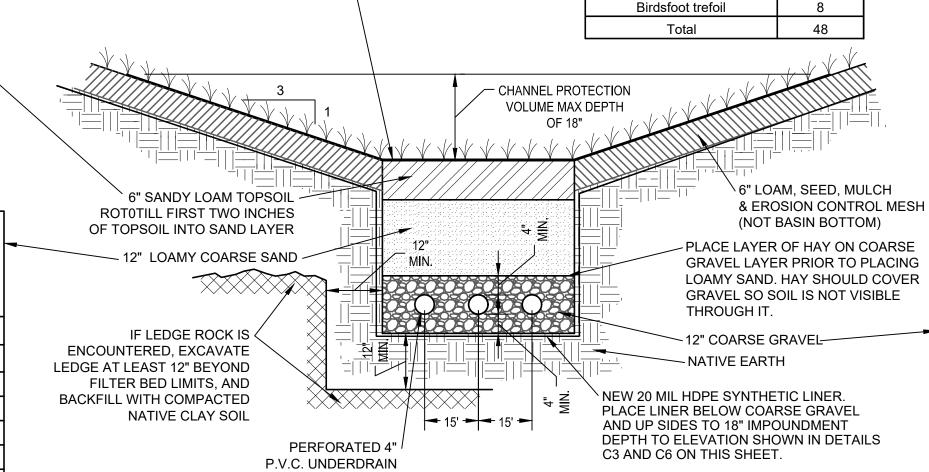
#10

#20

#60

#200

#200 CLAY



MATERIAL COMPACTED AS SPECIFIED

MARKER TAPE-

12" ABOVE PIPE

GRANULAR PIPE

COMPACTED TO 95% MAX. DENSITY

BEDDING MATERIAL

A3 PIPE TRENCH
NOT TO SCALE

- EXISTING

PAVEMENT

ROAD

→ 50' MIN — →

PLAN VIEW

TEMP. STABILIZED CONSTRUCTION EXIT

D +2'-6" MAX

PIPE BEDDING

ZONE

ADDITIONAL 4" BEDDING — IF LEDGE ENCOUNTERED ½ PLUS 4" MIN PE DIA.

SEED, FERTILIZE AND PLACE

EROSION CONTROL MESH

ON BASIN BOTTOM

COARS	SE GRAVEL
	IONS FOR UNDERDRAINS
(MEDO	OT #703.22)
SIEVE SIZE	% PASSING BY WEIGHT
UNDERI	DRAIN TYPE B
1"	90-100
<u>1</u> "	75-100
#4	50-100
#20	15-80
#50	0-15
#200	0-5

- 4" GRAVEL BASE

A2 BITUMINOUS PAVEMENT DETAIL

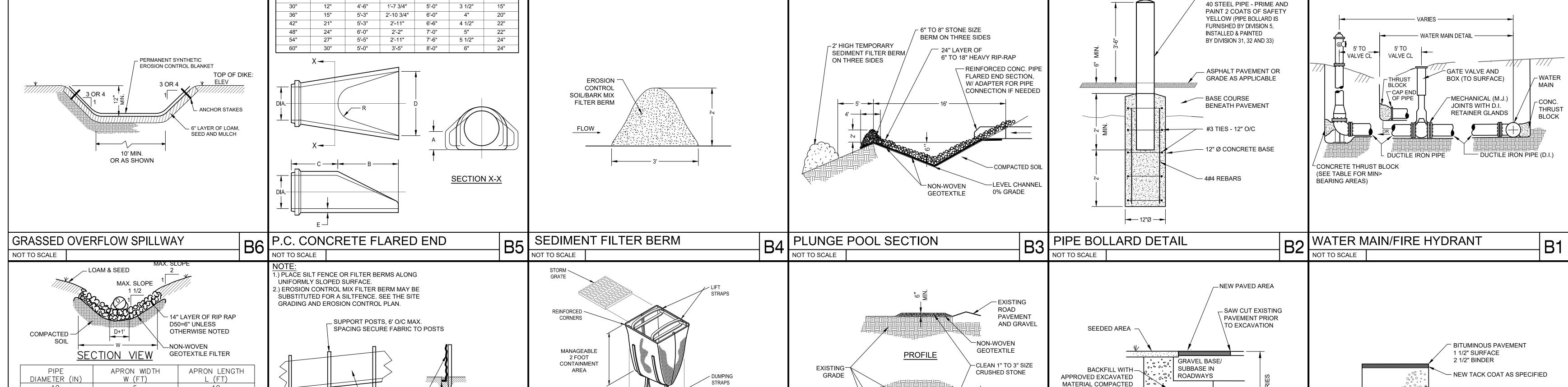
- 14" GRAVEL SUBBASE

COMPACTED SUBGRADE

TYPICAL UNDERDRAIN SOIL FILTER SECTION

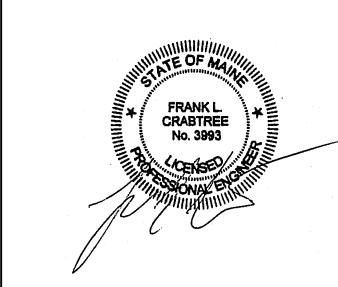
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C1



TRAFFIC

DIRECTION



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SITE DETAILS

C50-1

