

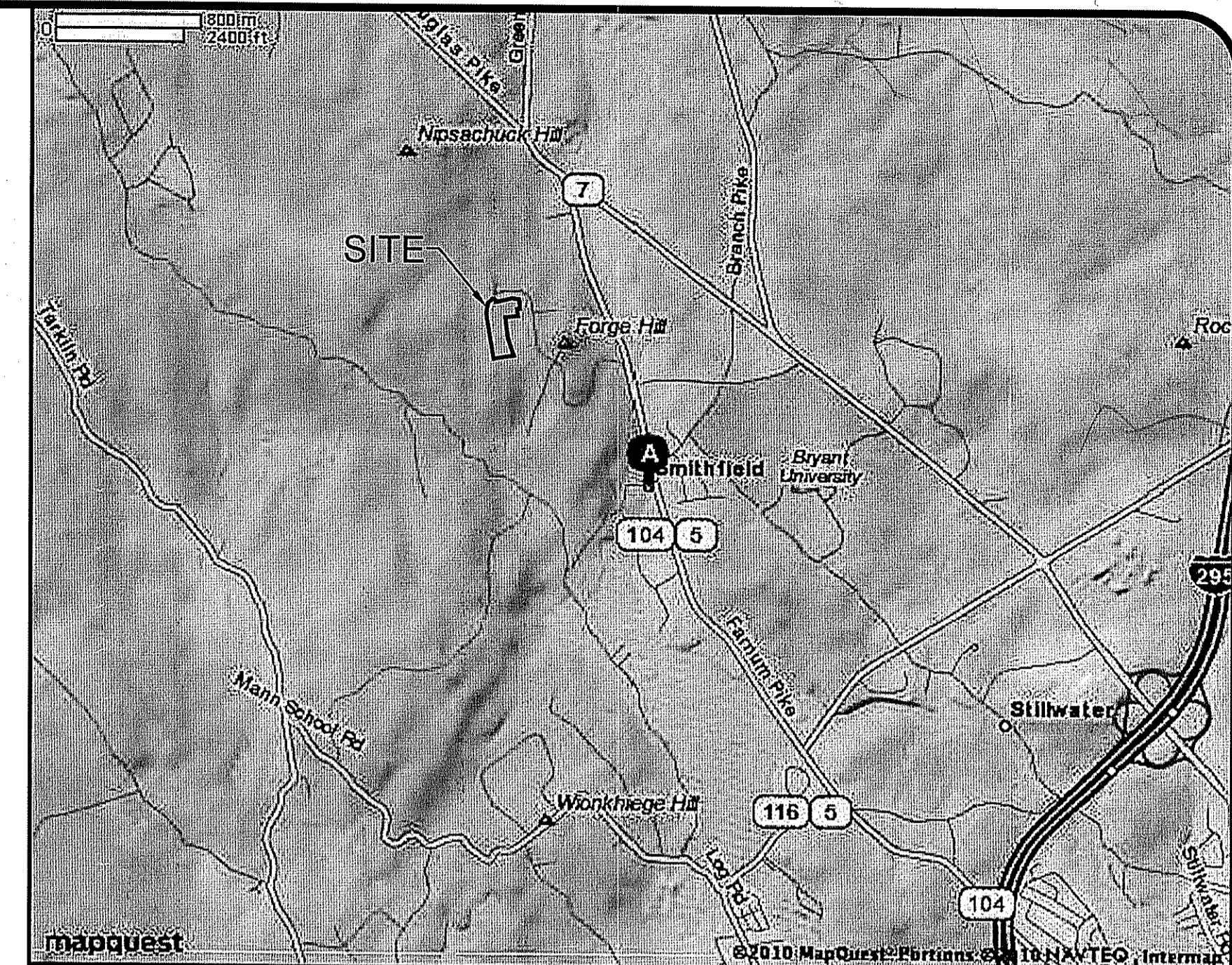
Burlingame Estates

Residential Conservation Development

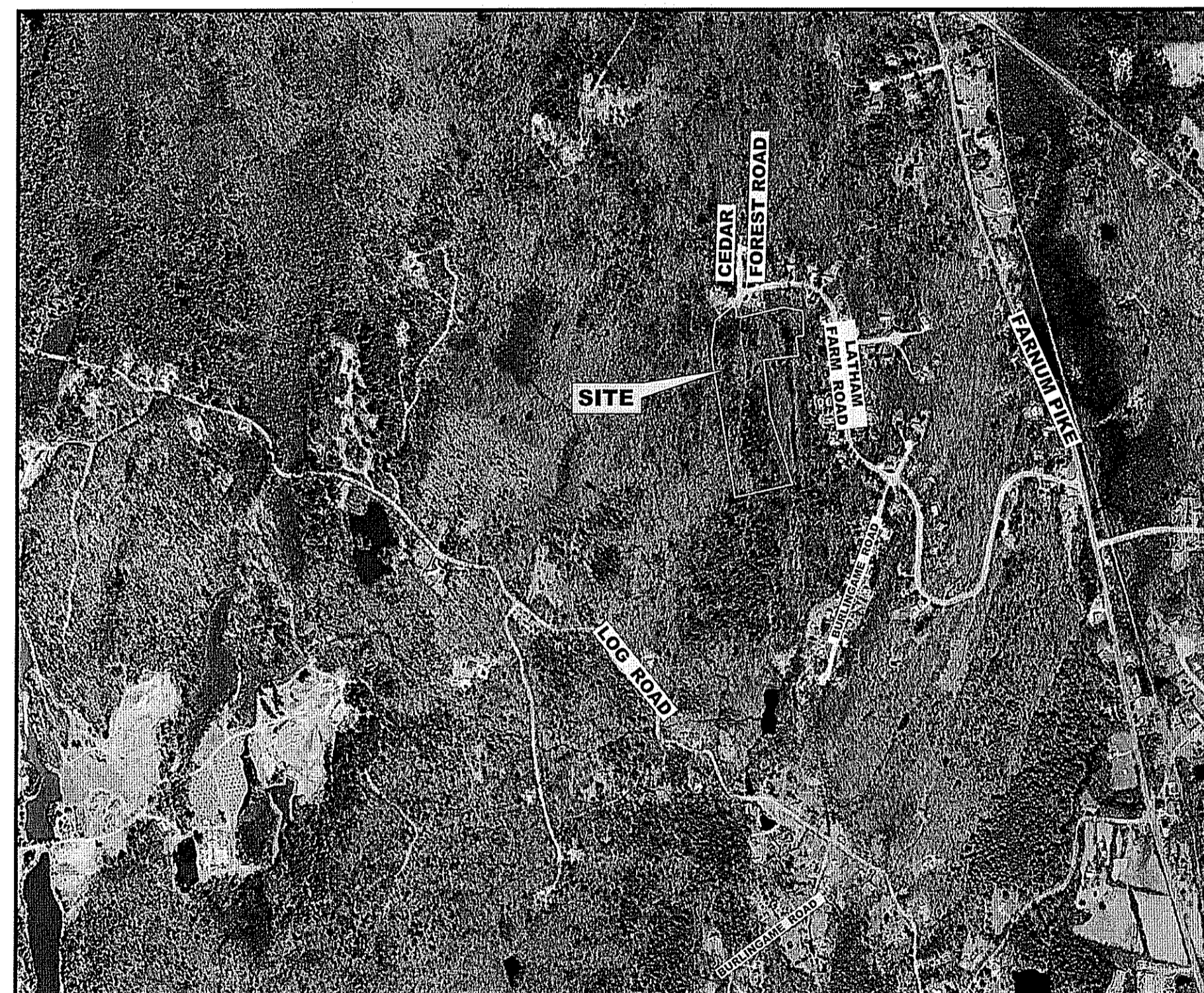
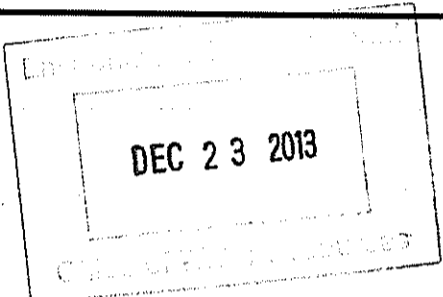
A.P. 49 Lot 161

Cedar Forest Road

Smithfield, Rhode Island



Locus Map



Aerial Map 1"=1000'

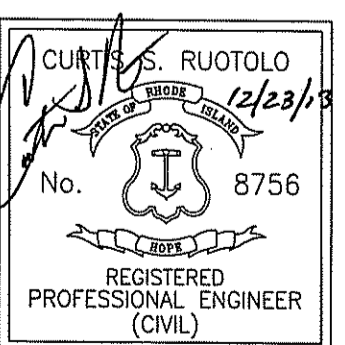
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Owner/Applicant:

JOHN J. MULHEARN
200 METRO CENTER BLVD.
WARWICK, RI 02886

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF PERMIT
DATED JAN 02 2014 FILE # 04-0096
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Harkin



RIDEM PERMIT #04-0096

FINAL PLAN SET

Advanced Civil Design, Inc.

CIVIL ENGINEERS
7 COUNTRYSIDE LANE
SCITUATE, RI 02857



Sequene & Staging of Land

Disturbing Activities

- 1) SURVEY AND STAKE THE PROPOSED ROAD CENTERLINE, DETENTION PONDS, STRUCTURES, AND LIMIT OF CLEARING.
- 2) PLACE SEDIMENTATION BARRIERS (HAY BALES OR SILT FENCE) AS SHOWN ON THE PLANS AND AS STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS.
- 3) CLEAR AND GRUB ENTIRE RIGHT-OF-WAY AREA. HEALTHY TREES WITHIN THE RIGHT-OF-WAY WIDTH AND OUTSIDE THE PAVEMENT WIDTH MAY BE LEFT STANDING, PROVIDED TREES ARE NOT MORE THAN 5 FEET FROM THE RIGHT-OF-WAY LINE.
- 4) STRIP LOAM FROM ROADWAY AND DETENTION POND AREAS. STOCKPILE WITHIN APPROVED DISTURBANCE LIMITS. STOCKPILES SHALL BE SEED FOR STABILIZATION.
- 5) EXCAVATE, GRADE, LOAM, AND SEED DETENTION PONDS AS SHOWN ON PLAN. INSTALL ALL STRUCTURES AND EROSION CONTROL WITHIN POND AS SHOWN ON PLAN.
- 6) DIVERT ALL RUNOFF FROM DISTURBED AREAS TO DETENTION POND AREAS. (NO STORMWATER IS ALLOWED TO LEAVE THE SITE UNTIL ALL AREAS ARE STABILIZED, AND BINDER COURSE HAS BEEN PAVED.)
- 7) INSTALL UTILITIES AND DRAINAGE PIPE. (UNDERGROUND ELECTRIC AND GAS MUST BE COORDINATED WITH NATIONAL GRID FOR PLANS AND SPECIFICATIONS.)
- 8) ONCE ROAD BASE HAS BEEN APPROVED BY TOWN ENGINEER, FINE GRADING AND PAVING MAY BE ACCOMPLISHED.
- 9) INSPECT ALL DRAINAGE COMPONENTS. FLUSH PIPES AND REMOVE BUILT-UP SEDIMENT IN CATCH BASINS AND PONDS AS REQUIRED. RESEED DETENTION AREAS AS NECESSARY.
- 10) REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ONCE VEGETATION HAS BEEN ESTABLISHED.

General Contractor Notes & Requirements

1. THE CONTRACTOR IS TO NOTIFY DIG SAFE PRIOR TO CONSTRUCTION.
2. A PRE-CONSTRUCTION MEETING WITH THE TOWN SHALL BE COORDINATED THROUGH THE PLANNING DEPARTMENT PRIOR TO START OF ANY WORK.
3. CONTRACTOR TO OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS (IF APPLICABLE) PRIOR TO THE START OF CONSTRUCTION.
4. ALL WORK PERFORMED HEREIN SHALL BE GOVERNED BY THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION AND THE TOWN OF SMITHFIELD STANDARD SPECIFICATIONS AND DETAILS.
5. DRAINAGE PIPE TO BE HOPE (ADS N-12).
6. BOULDER WALLS TO BE 4 FEET HIGH MAX. WALLS > 4 FT. SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AND DRAWINGS PROVIDED TO TOWN ENGINEER.
7. ALL CATCH BASINS AND MANHOLES TO BE 4 FT DIAMETER UNLESS SPECIFIED OTHERWISE.
8. LOAM & SEED ALL DISTURBED AREAS. ADDITIONAL EROSION CONTROLS MAY BE REQUIRED BY THE PROJECT AND/OR TOWN ENGINEER.
9. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE. DEVIATIONS OR CHANGES WILL NOT BE ALLOWED UNLESS APPROVED BY THE PROJECT AND MUNICIPAL ENGINEER.
10. THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
11. METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS FOR THIS PROJECT SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE TOWN OF SMITHFIELD AND THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION.
12. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIALS SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
13. CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. ALL WATER, GAS, SEWER AND OTHER UTILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, ANY PAVEMENT, DRIVEWAYS, WALKS, WALLS, CURBS, ETC., THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION.
15. THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT, EXCEPTING FOR LIABILITY ARISING FROM "THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER."
16. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND TO TAKE WHATEVER STEPS NECESSARY TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS DILIGENTLY ATTEMPTED TO LOCATE AND INDICATE ALL EXISTING FACILITIES ON THESE PLANS; HOWEVER, THIS INFORMATION IS SHOWN FOR THE CONTRACTORS CONVENIENCE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES FOR EXACT LOCATION OF THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND REPLACE ANY AND ALL DAMAGED MADE TO UTILITIES BY THE CONTRACTOR.
17. A SOIL EROSION PERMIT IS REQUIRED FOR EACH INDIVIDUAL LOT CONSTRUCTION THROUGH THE SMITHFIELD ENGINEER'S OFFICE.
18. THIS SUBDIVISION HAS BEEN DESIGNED WITH ASSUMPTIONS OF HOUSE SIZES (2,076 S.F.) AND PROPOSED GRADES. IF A HOUSE SIZE VARIES FROM THIS PLAN, THE INDIVIDUAL DRAINAGE SYSTEMS SHOWN ON THE LOTS MAY INCREASE IN SIZE AND SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AT THE TIME OF SOIL EROSION APPLICATION. PROPOSED GRADES MAY CHANGE ON THE INDIVIDUAL LOTS AS WELL AT THE TIME OF SOIL EROSION APPLICATION.
19. FOUNDATION DRAINS MAY BE REQUIRED AND MUST BE SHOWN AT TIME OF SOIL EROSION FOR EACH INDIVIDUAL LOT.

Sanitary Sewer Notes:

- 1) ALL SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED SEWER AUTHORITY PLANS AND THE TOWN SMITHFIELD SEWER AUTHORITY "STANDARD SPECIFICATIONS AND DETAILS FOR THE INSTALLATION OF SEWER AND APPURTENANCES BY PRIVATE DEVELOPERS."
- 2) EXISTING SANITARY SEWER FLOWS SHALL BE MAINTAINED WITHOUT INTERRUPTION DURING CONSTRUCTION. DRAIN LAYERS SHALL ONLY INSTALL SEWERS DURING THE NORMAL WORKING HOURS OF THE SMITHFIELD SEWER AUTHORITY.
- 3) PRECAST CONCRETE SECTIONS AND APPURTENANCES SHALL CONFORM TO ASTM C478-79.
- 4) GASKETS FOR PIPE TO MANHOLE CONNECTIONS SHALL CONFORM TO ASTM C923.
- 5) EXTERIOR SURFACES OF MANHOLE STRUCTURES AND APPURTENANCES SHALL BY GIVEN TWO (2) COATS OF BITUMINOUS WATERPROOFING.
- 6) MANHOLE BRICK TO CONFORM TO ASTM M32, AND AASHTO M91, RED BRICK.
- 7) STANDARD MANHOLE FRAMES AND COVERS TO BE LEBARON FOUNDRY MODEL LC326-200, WITH THE WORD "SEWER" CAST IN THE COVER.
- 8) ALL SEWER LATERALS ARE TO HAVE TEN (10) FEET OF HORIZONTAL CLEARANCE FROM WATER LINES. WHERE SEWER AND WATER CROSS, A MINIMUM OF EIGHTEEN (18) INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED.
- 9) ALL SEWER LATERALS ARE TO BE INSTALLED TO PROVIDE BASEMENT SEWER SERVICE.
- 10) ALL NON-PRESSURE SANITARY SEWER PIPES SHALL BE POLY VINYL CHLORIDE (PVC) PIPE AND SHALL CONFORM TO ASTM D-3034, SDR 35 & SCH 40 STANDARDS.
- 11) ALL EXCAVATIONS FOR THE INSTALLATION OF A BUILDING SEWER SHALL BE OPEN TRENCH WORK. PIPE LAYING AND BACKFILL SHALL BE PERFORMED IN ACCORDANCE WITH ASTM SPECIFICATIONS (C12-72) EXCEPT THAT NO BACKFILL SHALL BE PLACED UNTIL WORK HAS BEEN INSPECTED.
- 12) ALL BUILDING SEWER LINES SHALL BE OF 6-INCH DIAMETER AND BUILT WITH A MINIMUM DEPTH OF COVER OF 42 INCHES AND WIDTH OF TRENCH SHALL BE AT LEAST 24 INCHES.
- 13) ALL GRAVITY SEWER PIPE SHALL BE CONSTRUCTED ON A BED OF CRUSHED STONE AT LEAST 12 INCHES IN DEPTH. STONE SHALL BE INSTALLED BEFORE THE PIPE IS PLACED IN THE TRENCH AND THE PIPE SHALL BE COVERED WITH AT LEAST 12 INCHES OF CRUSHED STONE. NO BLOCKS OR STONES SHALL BE USED TO SUPPORT THE PIPE.
- 14) BUILDING SEWER JOINTS SHALL BE GASKETED AND WATERPROOF. NO CEMENT-MORTAR JOINTS WILL BE PERMITTED.
- 15) ALL JOINTS POLYVINYL CHLORIDE (PVC) PIPE OR BETWEEN SUCH PIPE SHALL BE MADE WITH APPROVED FLEMOLDED GASKET JOINTS.
- 16) SEWER LATERALS SHALL BE INSTALLED TO THE PROPERTY LINES OF EACH LOT THE PROPOSED SEWER MAIN PASSES BY. THE ENDS OF ALL NEW SEWER SERVICES SHALL BE CAPPED OR PLUGGED AND SHALL BE MARKED AT THE PROPERTY LINE WITH A 1 FT. SQUARE STEEL PLATE BURIED 1 FT. BELOW GRADE IF NOT CONNECTED IMMEDIATELY.
- 17) THE SEWER AUTHORITY AND ENGINEERING DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF ANY WORK ON SEWER OR HOUSE CONNECTIONS. INSPECTION OF ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY TOWN OF SMITHFIELD SEWER CONSULTANT.
- 18) INSPECTION OF ALL SEWER SERVICES ON PRIVATE PROPERTY MUST BE COORDINATED WITH VEOLIA WATER PERSONNEL, 401-231-1506.
- 19) APPLICANT IS REQUIRED TO PROVIDE AS-BUILT PLANS TO THE SEWER AUTHORITY AND ENGINEERING DEPARTMENT UPON COMPLETION OF CONSTRUCTION. PRIOR TO FINAL ACCEPTANCE, AS-BUILT PLANS SHALL INCLUDE FIELD MEASUREMENTS OF ALL INSTALLED PIPE AND APPURTENANCES, INCLUDING LENGTH, SLOPE, MANHOLE RIMS AND INVERTS, AS WELL AS SWING TIES/MEASUREMENTS, TO ALL MANHOLES, SEWER STUBS, AND LATERAL SERVICE CONNECTIONS. NO FLOW WILL BE ACCEPTED UNTIL A COMPLETION CERTIFICATE IS ISSUED.
- 20) ALL FILL AROUND NEW MANHOLES WILL BE SCREENED WITH NO STONES LARGER THAN A 2-INCH DIAMETER.
- 21) ALL NEW SEWER PIPES AND MANHOLES SHALL BE CLEANED AND TESTED PRIOR TO ACCEPTANCE. GRAVITY SEWER PIPES SHALL BE REQUIRED TO PASS BOTH LOW PRESSURE AIR AND DEFLECTION (I.E., MANDREL) TESTING. LOW PRESSURE SEWER PIPING SHALL BE REQUIRED TO PASS A LOW PRESSURE (I.E., HYDROSTATIC) TEST. GRAVITY SEWER MANHOLES SHALL BE REQUIRED TO PASS A VACUUM TEST.
- 22) ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY A DRAINLAYER LICENSED IN THE STATE OF RHODE ISLAND AND THE TOWN OF SMITHFIELD.
- 23) ALL CONSTRUCTION MATERIALS, AS WELL AS ALL MATERIAL SHOP DRAWINGS AND MANUFACTURERS DATA SHEETS SHALL BE REVIEWED AND APPROVED BY THE SEWER AUTHORITY PRIOR TO WORKING. PRIOR TO FABRICATION AND INSTALLATION, AND SUBMITTED TO THE SMITHFIELD SEWER AUTHORITY AND TOWN ENGINEER PRIOR TO CONSTRUCTION.
- 24) THE CONTRACTOR SHALL CONFINE HIS CONSTRUCTION OPERATIONS AND ACTIVITIES TO WITHIN THE STREET LINES, EASEMENT AND/ OR RIGHT-OF-WAY, AS SHOWN ON THE DRAWINGS.
- 25) IT IS UNDERSTOOD THAT "FLUSHING MANHOLE" OR "FLUSHING CONNECTION" REFER TO THE "CLEANOUT MANHOLE" OR "CLEANOUT" AS SHOWN ON THE PLANS.
- 26) INSPECTION OF ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY TOWN OF SMITHFIELD SEWER CONSULTANT. APPLICANT SHALL PROVIDE SCHEDULE FOR CONSTRUCTION AS SOON AS POSSIBLE TO ALLOW FOR DEVELOPMENT OF INSPECTION FEE, TO BE PAID BY APPLICANT DIRECTLY TO TOWN OF SMITHFIELD, ENGINEERING DEPARTMENT, UPON PAYMENT OF FEE, COMMENCEMENT OF CONSTRUCTION INSPECTION REQUIRED MINIMUM NOTIFICATION OF 48-HOURS.
- 27) APPLICANT IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM LOCAL, STATE, AND/OR FEDERAL AGENCIES WITH REGULATORY JURISDICTION OVER THE PROPOSED WORK. ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY A DRAINLAYER LICENSED IN THE STATE OF RHODE ISLAND AND THE TOWN OF SMITHFIELD.

ADS-N12 (HDPE) Pipe Installation Notes

- 1) FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A STABLE DEPTH AND REPLACE WITH A FOUNDATION OF CLASS II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
- 2) BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION, UNLESS OTHERWISE SPECIFIED BY THE PROJECT ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 4" TO 24" DIA. & 6" FOR 30" TO 60" DIA.
- 3) HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- 4) UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL DIA. (IN)	MIN. TRENCH WIDTH (IN)
6"	23"
8"	25"
10"	28"
12"	31"
15"	34"
18"	39"
- 5) MINIMUM COVER: RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF PIPE TO THE GROUND SURFACE.

SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED COVER (IN)
H25 (FLEXIBLE PAVEMENT)	12"
H25 (RIGID PAVEMENT)	12"
HEAVY CONSTRUCTION	48"
- 6) SEE DETAIL SHEETS FOR ADDITIONAL NOTES ON REQUIRED MATERIAL FOR BACKFILL.

Structural Measures

- 1) DETENTION POND SYSTEMS ARE USED TO CONTROL RUNOFF. DISCHARGE OUTLETS ARE PROTECTED WITH RIP-RAP APRONS AND/OR LEVEL SPREADERS.
- 2) A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED IN THE BASIN IMMEDIATELY AFTER GRADING. THE SEEDING EXTENT TO AT LEAST THE DESIGN TOP WIDTH AND INCLUDE ANY OTHER AREAS DESIGNATED FOR VEGETATION ACTIVITIES. ACTIVITIES SHALL BE CONFINED TO WITHIN THE LIMIT OF WORK AS SHOWN ON THE PLANS.
- 3) VIGOROUS VEGETATION SHALL BE MAINTAINED BY APPLYING LIME AND FERTILIZER. BARE OR ERODED AREAS SHALL BE IMMEDIATELY REPAIRED AND RESEEDED BY THE CONTRACTOR AND AT THE DIRECTION OF THE TOWN ENGINEER.
- 4) THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF THE PONDS DURING AND UP TO A YEAR AFTER COMPLETION OF CONSTRUCTION. THE TOWN OF SMITHFIELD IS RESPONSIBLE THEREAFTER. ANY UNDEVELOPED VEGETATION COVER IN THE PONDS WITHIN A YEAR OF THE PROJECT COMPLETION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL RESEED ANY UNSTABILIZED AREAS AFTER A FULL GROWING SEASON AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 5) THE GRASS WITHIN THE PONDS SHALL BE ALLOWED TO GROW BETWEEN 2" - 10".
- 6) THE DETENTION PONDS SHALL BE BUILT TO CONTROL RUNOFF FOR THE 2-YEAR THROUGH 100-YEAR STORM FREQUENCIES.
- 7) SIDE SLOPES OF THE PONDS SHALL BE SEEDDED. THE SIDE SLOPES SHALL BE 2:1 MAXIMUM WITH AN ENCLOSED FENCE.
- 8) ALL EMBANKMENTS OF THE PONDS SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH R.I. STANDARD SPECIFICATION SECTION 202.
- 9) RIP-RAP APRONS SHALL BE INSTALLED AT THE OUTLETS OF ALL CULVERTS. THE EMERGENCY SPILLWAY SHALL BE PROTECTED BY RIP RAP DOWNSTREAM AND UPSTREAM.
- 10) RIP-RAP APRONS SHALL BE INSPECTED SEMIANNUALLY AND AFTER MAJOR STORMS. IF REPAIRS ARE NEEDED, THEY SHALL BE ACCOMPLISHED IMMEDIATELY.
- 11) THE CONSTRUCTION SUPERINTENDENT SHALL HAVE THE OVERALL RESPONSIBILITY FOR STRUCTURAL MEASURES IMPLEMENTATION AND FOR SEEING THAT APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
- 12) REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY USDA SOIL CONSERVATION SERVICE 1989, AS A GUIDE.

Establishment of Vegetative Cover

- 1) SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.

TYPE	lbs./ACRE
CREeping RED FESCUE	15
KENTUCKY BLUE GRASS	15
PERENNIAL RYE GRASS	5
- 2) ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDDED OR PROTECTED.
- 3) THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH RHODE ISLAND'S STANDARD SPECIFICATION, M.20.
- 4) THE GENERAL DESIGN MIX FOR REGRADING AREAS SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	lbs./ACRE
CREeping RED FESCUE	15
KENTUCKY BLUE GRASS	15
PERENNIAL RYE GRASS	5
- 5) EARLY SPRING OR LATE SUMMER SEEDING IS RECOMMENDED. LIME AND FERTILIZE AS REQUIRED BY SOIL TESTING TO COMPLEMENT OR UPGRADE EXISTING CONDITIONS. THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
- 6) TEMPORARY TREATMENTS SHALL CONSIST OF NORTH AMERICAN GREEN EROSION CONTROL, BLANKETS OR HAY, STRAW OR FIBER MULCH. THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 2 TONS/ACRE.
- 7) ALL HAY BALES OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
- 8) ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 202.
- 9) STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAY. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDDED AND/OR STABILIZED. STOCKPILE TO BE SURROUNDED BY HAYBALES.
- 10) THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE.
- 11) ALL AREAS DISTURBED BY POND CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. PERMANENTLY SEEDDED AREAS SHALL BE PROTECTED DURING ESTABLISHMENT WITH MULCH. ALL SEEDDED AREAS WILL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEEDED AS NECESSARY.
- 12) REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK" PREPARED BY THE USDA SOIL CONSERVATION SERVICE 1989, AS A GUIDE.
- 13) MAXIMUM GRADED SLOPE WITHIN SUBDIVISION TO BE 3:1, UNLESS SPECIFIED OTHERWISE BY WHICH ADDITIONAL STABILIZATION METHODS SHALL BE EMPLOYED.
- 14) IF AND WHEN REQUIRED, TEMPORARY HAY MULCH TO BE TACKED IN PLACE WITH NYLON MESH NETTING.

Sediment Control Program

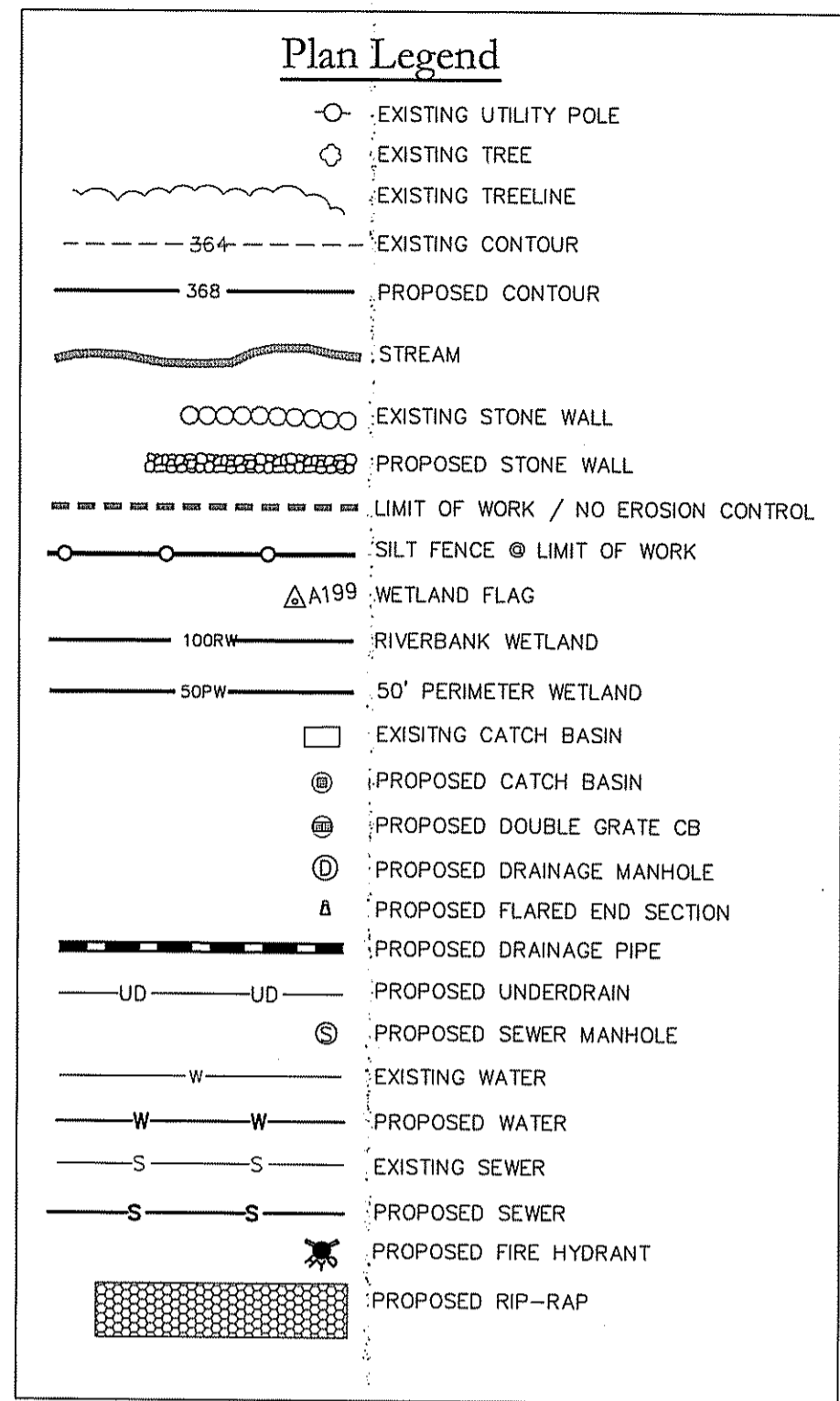
- 1) DISTURBED AREAS WHICH ARE PARTICULARLY SENSITIVE TO EROSION SHALL RECEIVE A CRUSHED STONE OR SHARP ANGULAR RIPRAP TREATMENT IF OTHER METHODS OF STABILIZATION ARE UNSUCCESSFUL.
- 2) BANKS OR SLOPES NOT RECEIVING RIP RAP SHALL BE SEEDDED AND PROTECTED WITH FIBER MULCH.
- 3) DURING CONSTRUCTION, THE CONTRACTOR AND OR THE DEVELOPER SHALL BE RESPONSIBLE FOR UTILIZING BEST MANAGEMENT PRACTICES TO CONTROL ENVIRONMENTAL DAMAGE THAT COULD RESULT FROM UNCHECKED STORMWATER RUNOFF.
- 4) SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED PERIODICALLY AND MAINTAINED REGULARLY. SPECIAL ATTENTION SHOULD BE GIVEN AFTER A HEAVY OR PROLONGED RAINFALL.
- 5) CARE SHALL BE SO AS NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECT TO STORM WATER FLOWAGE.
- 6) ADDITIONAL HAYBALS, SILT FENCE OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
- 7) SEDIMENTATION TRAPS SHALL BE PROVIDED AND MAINTAINED AT ALL DRAINAGE STRUCTURES DURING CONSTRUCTION.
- 8) REFERENCE THE "RHODE ISLAND EROSION AND SEDIMENT CONTROL HANDBOOK" (1989) PREPARED BY THE RI DEPT. OF ENVIRONMENTAL MANAGEMENT, RI STATE CONSERVATION COMMISSION AND THE U.S. DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE AS A PRACTICAL.

Nonstructural Measures

- 1) CONSTRUCTION TRAFFIC SHALL BE LIMITED TO ACCESS ROADS, DRAINAGE EASEMENTS AND AREAS TO BE GRADED.
- 2) A STONE STABILIZATION PAD IS LOCATED AT THE SITE EXITS TO REDUCE THE TRACKING OR FLOWING OF SEDIMENTS ONTO PUBLIC RIGHT-OF-WAY.
- 3) THE EXITS SHALL BE MAINTAINED BY THE CONTRACTOR. THE MAINTENANCE SHALL INCLUDE TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND OR AS DIRECTED BY THE ENGINEER. ALL SEDIMENTS SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY, MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
- 4) TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCK PILE LOCATION SHALL BE SUBJECT TO APPROVAL BY THE PROJECT ENGINEER. A SEDIMENT BARRIER SHOULD SURROUND ALL TOPSOIL STOCKPILES.
- 5) HAY BALES OR SILT FENCE SHALL BE INSTALLED DOWNSTREAM OUTSIDE THE LIMITS OF ANY PROPOSED CONSTRUCTION AS SHOWN ON THE SITE PLANS AND PRIOR TO THE COMMENCEMENT OF THE PROPOSED ALTERATIONS.
- 6) SILT FENCE AND HAY BALES SHALL BE MAINTAINED BY THE CONTRACTOR. INSPECTIONS SHALL BE MADE AFTER EACH STORM EVENT AND REPAIRS OR REPLACEMENTS WHEN NECESSARY. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED.
- 7) THE HAY BALES OR SILT FENCE SHALL BE CHECKED WEEKLY BY THE CONTRACTOR FOR UNDERMINING OR DETERIORATION.
- 8) THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION OF NON-STRUCTURAL MEASURES AND FOR SEEING THAT APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
- 9) REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY USDA SOIL CONSERVATION SERVICE 1989, AS A GUIDE.

Maintenance: Short Term / Long Term

- 1) ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL CHECK REGULARLY ALL SEEDDED AREAS TO SEE THAT A GOOD STAND IS MAINTAINED.
- 2) THE CONTRACTOR MUST REPAIR OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE.
- 3) ALL HAY BALES, TEMPORARY TREATMENTS (HAY, STRAW, ETC.) AND TEMPORARY PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
- 4) THE CONTRACTOR SHALL MAINTAIN ALL TOP SOIL STOCKPILES AND SEDIMENT BARRIERS THROUGHOUT CONSTRUCTION. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT SEDIMENTS DO NOT SPILL OVER THE SEDIMENT BARRIER.
- 5) THE HAY BALES OR SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. CONTRACTOR SHALL REPAIR OR REPLACE THE HAYBALES AS NECESSARY. CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED IN WITH SEDIMENTS.
- 6) THE STONE STABILIZATION PADS AT THE SITE ENTRANCE SHALL BE MAINTAINED BY THE CONTRACTOR. THE MAINTENANCE SHALL INCLUDE TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND OR AS DIRECTED BY THE ENGINEER. ALL SEDIMENTS SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
- 7) THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF THE PONDS DURING AND UP TO A YEAR AFTER COMPLETION OF CONSTRUCTION. MAINTENANCE SHALL INCLUDE RESEEDING ANY UNDEVELOPED AREAS AFTER A FULL GROWING SEASON AT NO ADDITIONAL EXPENSE. REMOVING ACCUMULATED SILT OVER 3" IN THE PONDS, AND MAINTAINING THE GRASS TO A GROWING HEIGHT BETWEEN 2" - 10". EXCAVATION OF SILT SHALL BE MANUAL WITH A SHOVEL AND WHEELBARROW ONLY. REMOVE ALL WOODY VEGETATION FROM POND EMBANKMENTS.
- 8) THE CONTRACTOR SHALL INSPECT RIP-RAP APRONS AFTER EACH STORM AND REPAIR AS NECESSARY.
- 9) THE CONTRACTOR SHALL MAINTAIN THE DRAINAGE SYSTEM THROUGHOUT CONSTRUCTION. THE ACCUMULATED SEDIMENTS IN THE CATCH BASINS SHALL BE REMOVED AND DRAINAGE PIPES FLUSHED BY THE CONTRACTOR AT THE END OF CONSTRUCTION.
- 10) THE TOWN OF SMITHFIELD IS RESPONSIBLE FOR THE LONG TERM MAINTENANCE OF ALL DETENTION PONDS. ALL DRAINAGE SYSTEM COMPONENTS WITHIN THE RIGHT-OF-WAY SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE TOWN ACCEPTS THE ROAD. THE DRAINAGE SYSTEMS SHALL BE CHECKED SEMI-ANNUALLY AND ACCUMULATED SEDIMENTS SHALL BE REMOVED WHEN THE EXCEED 3" DEPTH OR EVERY 10 YEARS, WHICHEVER COMES FIRST. CATCH BASIN SUMPS SHALL BE CHECKED ANNUALLY AND SEDIMENTS SHALL BE REMOVED IF THEY EXCEED 0.5' OR 10 YEARS, WHICHEVER COMES FIRST.
- 11) THE TOWN OF SMITHFIELD SHALL CHECK THE RIP-RAP APRONS AND EMERGENCY OUTLETS AFTER MAJOR STORMS AND AN ANNUAL BASIS. REPAIRS SHALL BE PERFORMED IMMEDIATELY AS CONDITIONS WARRANT.
- 12) THE PONDS SHALL BE MAINTAINED BY THE TOWN OF SMITHFIELD STARTING 1 YEAR FROM THE DATE OF THE ACCEPTANCE OF THE ROADWAY AND ALL OTHER IMPROVEMENTS. THE TOWN SHALL MAINTAIN A GOOD VEGETATIVE COVER (GRASS BETWEEN 2"-10" OR VEGETATION AS SPECIFIED). BOTTOM OF PONDS SHALL BE INSPECTED ON A BIENNIAL BASIS AND ACCUMULATED SEDIMENTS SHALL BE REMOVED WHEN THEY REACH A 3" DEPTH OR EVERY 10 YEARS, WHICHEVER COMES FIRST.
- 13) ALL DETENTION POND BOTTOMS AND SIDE SLOPES SHOULD BE INSPECTED IN THE FALL AND SPRING TO INSURE PROPER COVER. AREAS SUBJECT TO EROSION SHOULD BE REPAIRED AND RESEEDED.
- 14) DETENTION POND BOTTOMS AND SIDE SLOPES SHOULD BE MOWED A MINIMUM OF TWICE PER YEAR AND INSPECTED FOR WOODY GROWTH. WOODY PLANTS SHOULD BE REMOVED FROM THE DETENTION BASIN BERM DURING MOWING OPERATION.
- 15) ALL CONTRIBUTING CATCH BASINS AND MANHOLE SUMPS SHOULD BE INSPECTED AND CLEANED ONCE PER YEAR. ALL REMOVED SOLIDS MUST BE DISCARDED AT AN APPROVED SITE.
- 16) THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR THE MAINTENANCE PROGRAM DURING THE CONSTRUCTION PHASE. THE SUPERINTENDENT SHALL SEE THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
- 17) AFTER THE FIRST YEAR AND ACCEPTANCE BY THE TOWN, THE TOWN OF SMITHFIELD SHALL HAVE OVERALL RESPONSIBILITY FOR IMPLEMENTING THE MAINTENANCE PROGRAM.
- 18) CONSTRUCTION OF ALL DRAINAGE PONDS SHALL BE SUPERVISED BY A PROFESSIONAL ENGINEER. A REPORT AND PLAN OF AS-BUILT CONSTRUCTION SHALL BE MADE AVAILABLE TO THE TOWN ENGINEER.



Smithfield Water Notes

- 1) ALL INSTALLATION, JOINTS, CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO TOWN OF SMITHFIELD WATER SUPPLY BOARD REQUIREMENTS, AWWA STANDARDS AND GOVERNMENTAL REQUIREMENTS.
- 2) ALL FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT CLASS 350 CEMENT MORTAR LINED COMPACT STYLE (BY AMERICAN MANUFACTURER ONLY). FITTINGS SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C153/A21.53. MECHANICAL JOINTS SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C111/A21.11.
- 3) WATER PIPE SHALL BE DOUBLE CEMENT MORTAR LINED DUCTILE IRON PIPE CL52 AND SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C151/A21.51.
- 4) CONSTRUCTION SHALL INCLUDE ALL PIPE, JOINTS, BENDS, TEES, FITTINGS, THRUST BLOCKS, SERVICE CONNECTIONS AND ALL MISCELLANEOUS ITEMS REQUIRED TO CONSTRUCT THE PROPOSED SYSTEM.
- 5) CONCRETE THRUST, ANCHOR, OR BEARING BLOCKS SHALL BE INSTALLED IN LOCATIONS INDICATED AND AT ALL BENDS, FITTINGS, PLUGS, ETC. WHEN A THRUST BLOCK CANNOT BE PLACED AGAINST UNDISTURBED EARTH, A REACTION BLOCK SUBSTITUTE SHALL BE DESIGNED AND SUBMITTED TO THE ENGINEER FOR APPROVAL.
- 6) PRESSURE AND LEAKAGE TESTS AND DISINFECTING PIPES SHALL BE PERFORMED BY THE CONTRACTOR IN CONFORMANCE TO AMERICAN WATER WORKS ASSOCIATION (AWWA) RECOMMENDATIONS, SMITHFIELD WATER SUPPLY BOARD REQUIREMENTS, AND GOVERNMENTAL AGENCIES HAVING JURISDICTION.
- 7) ALL FITTINGS, PIPE, JOINTS, ETC. SHALL BE DESIGNED FOR 1.5 TIMES WORKING PRESSURE BUT NOT LESS THAN 150 PSI. PIPE SIZES SHOWN ON THE PLANS ARE SUBJECT TO CHANGE UPON REVIEW BY THE SMITHFIELD WATER SUPPLY BOARD.
- 8) WATER PIPE SHALL TYPICALLY BE LOCATED AT LEAST TEN (10) FEET HORIZONTALLY FROM SEWER PIPE. AND AT A MINIMUM DEPTH OF COVER EQUAL TO 5', WHERE A NEW WATER MAIN IS LESS THAN 18 INCHES CLEAR-DISTANCE ABOVE A SEWER OR WHERE A WATER MAIN PASSES BENEATH A SEWER OR STORM DRAIN, ENCASE THE SEWER OR DRAIN IN 6" OF CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING WATER MAIN.
- 9) ALL SYSTEM COMPONENTS AND CONSTRUCTION METHODS, SUCH AS PIPE, THRUST BLOCKS, FITTINGS, CASTINGS, ETC. SHALL BE SUBMITTED TO THE SMITHFIELD WATER SUPPLY BOARD AND ENGINEER FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION. THIS SUBMISSION SHALL INCLUDE MANUFACTURER'S LITERATURE, SHOP DRAWINGS, PROPOSED CONSTRUCTION METHODS, ETC.
- 10) WATER LINE TRENCH TO BE AWWA TYPE 5. A METALIZED DETECTABLE IDENTIFICATION TAPE 2" IN WIDTH, BLUE IN COLOR AND PRINTED WITH "CAUTION WATERLINE BURIED BELOW" SHALL BE UTILIZED OVER ALL MAINS. TAPE SHALL BE SET AT APPROXIMATELY 1'-0" BELOW FINISHED GRADE.
- 11) AT THE END OF EACH PHASE OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL A GATE VALVE (OPEN LEFT), ONE LENGTH OF PIPE, AN END CAP, AND A 2-INCH BLOW-OFF ASSEMBLY.
- 12) HOMES MORE THAN 100 FEET FROM THE PROPERTY LINE ARE REQUIRED TO INSTALL METER PITS. METER PITS MUST BE JUST INSIDE THE PROPERTY LINE ON THE HOMEOWNER'S PROPERTY AND SHALL MEET THE SW5B STANDARD.
- 13) WATER SHUTOFF VALVES SHALL BE LOCATED AT THE PROPERTY LINE FOR EACH LOT.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JAN 8 2014 FILE # 04-0916
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Roberts

Dimensional Requirements

CONSERVATION DEVELOPMENT -	SINGLE FAMILY DWELLINGS; PUBLIC SEWER AND WATER
MIN. BUILDABLE LOT AREA	20,000 S.F.
MIN. LOT FRONTAGE & WIDTH	80 FT.
MIN. FRONT YARD SETBACK	25 FT.
MIN. SIDE YARD SETBACK	16 FT.
MIN. REAR YARD SETBACK	30 FT.
MAX. BUILDING COVERAGE	25 FT.

Advanced Civil Design, Inc.

CIVIL ENGINEERS
7 COUNTRYSIDE LANE
SQUATTA, RI 02857
Ph: (401) 473-4404

NO.	DATE	REVISION
1	10/29/13	WETLAND PERMIT MODIFICATION SUBMISSION

PROJECT TITLE

BURLINGAME ESTATES

A.P. 49 LOT 161
CEDAR FOREST ROAD
SMITHFIELD, RI

OWNER/APPLICANT: **John Mulhearn**
200 Metro Center Blvd.
Warwick, RI 02886

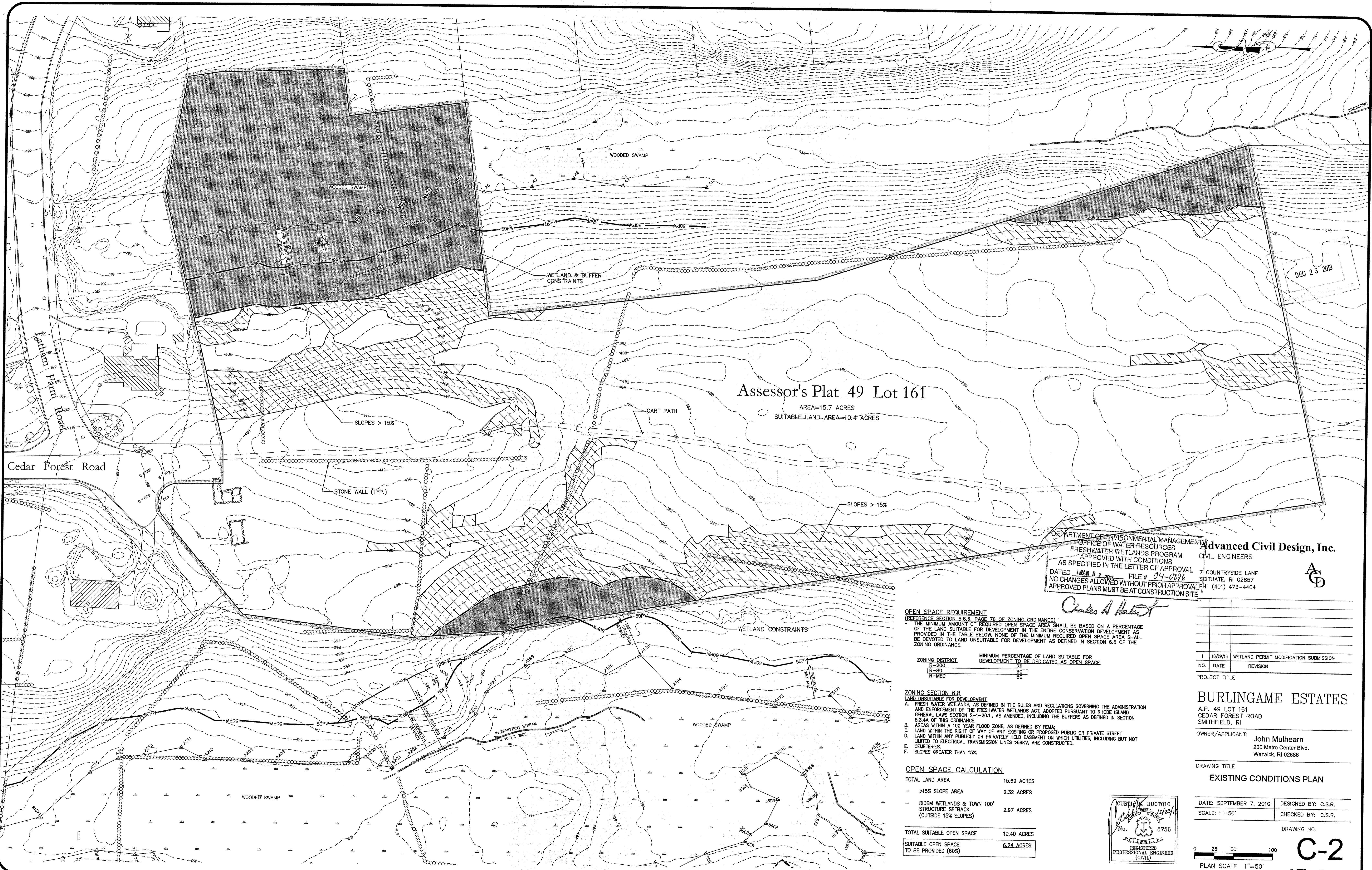
DRAWING TITLE
NOTES & LEGEND

DATE: SEPTEMBER 7, 2010	DESIGNED BY: C.S.R.
SCALE: N.T.S.	CHECKED BY: C.S.R.

DRAWING NO.

C-1

SHEET 1 OF 9



DEC 23 2013

Assessor's Plat 49 Lot 161

AREA=15.7 ACRES
SUITABLE LAND AREA=10.4 ACRES

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JAN 02 2014 FILE # 04-0796
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

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CIVIL ENGINEERS
7 COUNTRYSIDE LANE
SCITUATE, RI 02857
(401) 473-4404

OPEN SPACE REQUIREMENT
(REFERENCE SECTION 5.6.6, PAGE 78 OF ZONING ORDINANCE)
THE MINIMUM AMOUNT OF REQUIRED OPEN SPACE AREA SHALL BE BASED ON A PERCENTAGE OF THE LAND SUITABLE FOR DEVELOPMENT IN THE ENTIRE CONSERVATION DEVELOPMENT AS PROVIDED IN THE TABLE BELOW. NONE OF THE MINIMUM REQUIRED OPEN SPACE AREA SHALL BE DEVOTED TO LAND UNSUITABLE FOR DEVELOPMENT AS DEFINED IN SECTION 6.8 OF THE ZONING ORDINANCE.

ZONING DISTRICT	MINIMUM PERCENTAGE OF LAND SUITABLE FOR DEVELOPMENT TO BE DEDICATED AS OPEN SPACE
R-200	75
R-60	80
R-MED	90

ZONING SECTION 6.8
LAND UNSUITABLE FOR DEVELOPMENT
A. FRESH WATER WETLANDS, AS DEFINED IN THE RULES AND REGULATIONS GOVERNING THE ADMINISTRATION AND ENFORCEMENT OF THE FRESHWATER WETLANDS ACT, ADOPTED PURSUANT TO RHODE ISLAND GENERAL LAWS SECTION 2-1-20.1, AS AMENDED, INCLUDING THE BUFFERS AS DEFINED IN SECTION 5.3.4A OF THIS ORDINANCE.
B. AREAS WITHIN A 100 YEAR FLOOD ZONE, AS DEFINED BY FEMA;
C. LAND WITHIN THE RIGHT OF WAY OF ANY EXISTING OR PROPOSED PUBLIC OR PRIVATE STREET
D. LAND WITHIN ANY PUBLICLY OR PRIVATELY HELD EASEMENT ON WHICH UTILITIES, INCLUDING BUT NOT LIMITED TO ELECTRICAL TRANSMISSION LINES >69KV, ARE CONSTRUCTED.
E. CEMETERIES.
F. SLOPES GREATER THAN 15%.

OPEN SPACE CALCULATION

TOTAL LAND AREA	15.69 ACRES
- >15% SLOPE AREA	2.32 ACRES
- RIDEM WETLANDS & TOWN 100' STRUCTURE SETBACK (OUTSIDE 15% SLOPES)	2.97 ACRES
TOTAL SUITABLE OPEN SPACE	10.40 ACRES
SUITABLE OPEN SPACE TO BE PROVIDED (60%)	6.24 ACRES

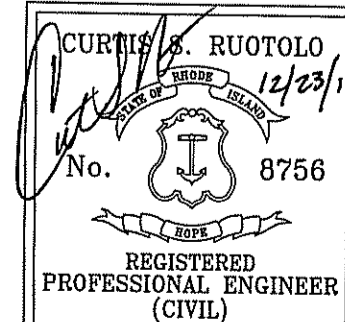
NO.	DATE	REVISION
1	10/29/13	WETLAND PERMIT MODIFICATION SUBMISSION

PROJECT TITLE

BURLINGAME ESTATES
A.P. 49 LOT 161
CEDAR FOREST ROAD
SMITHFIELD, RI
OWNER/APPLICANT:
John Mulhearn
200 Metro Center Blvd.
Warwick, RI 02886

DRAWING TITLE
EXISTING CONDITIONS PLAN

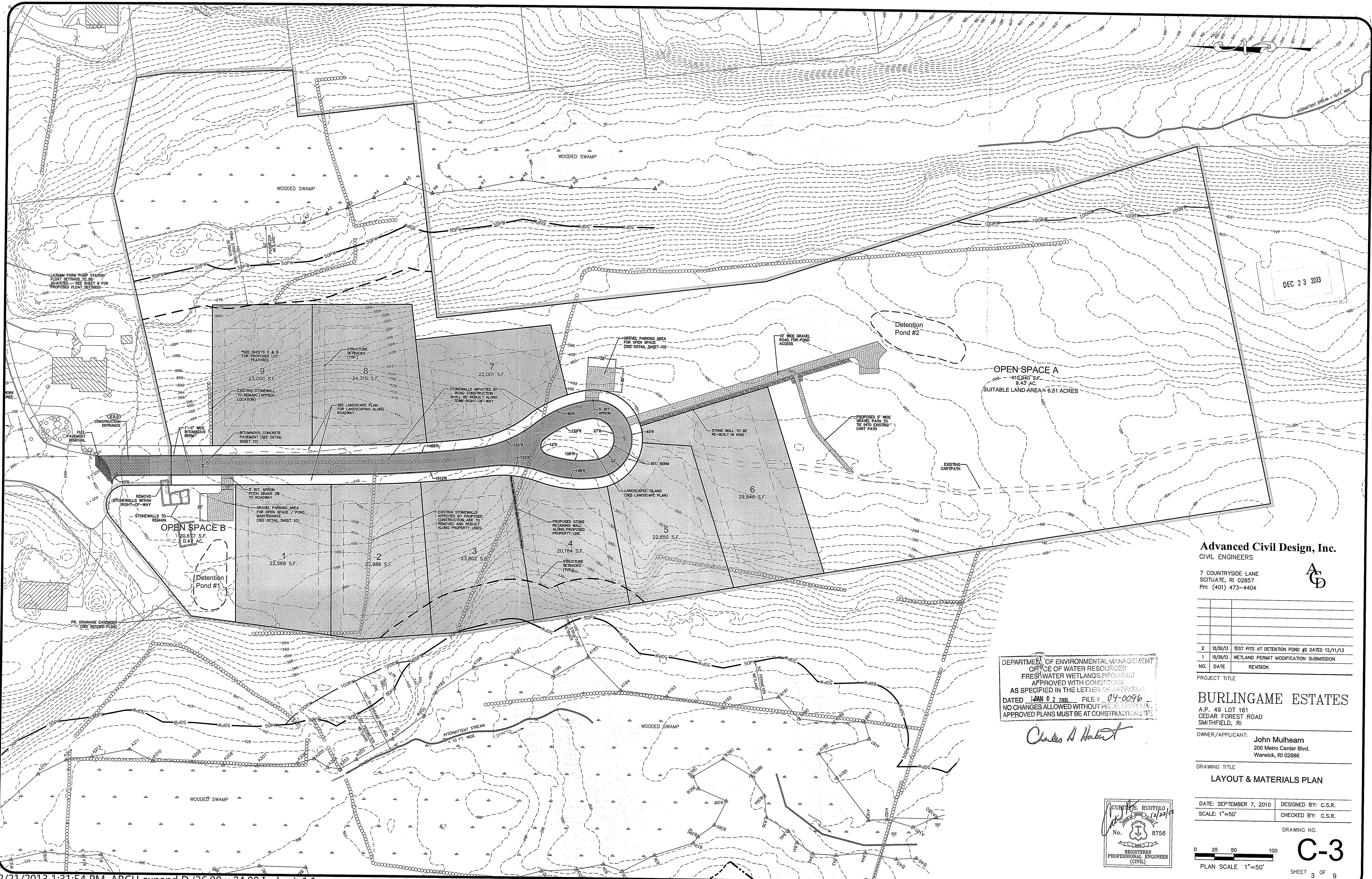
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SCALE: 1"=50' CHECKED BY: C.S.R.



DRAWING NO.
C-2

PLAN SCALE 1"=50'

SHEET 2 OF 9



DEC 23 2013

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SCITUATE, RI 02857
PH: (401) 473-4404

NO.	DATE	REVISION
2	12/20/13	TEST PITS AT DETENTION POND #2 DATED 12/11/13
1	10/29/13	WETLAND PERMIT MODIFICATION SUBMISSION

PROJECT TITLE

BURLINGAME ESTATES

A.P. 49 LOT 161
CEDAR FOREST ROAD
SMITHFIELD, RI

OWNER/APPLICANT:
John Mulhearn
200 Metro Center Blvd.
Warwick, RI 02886

DRAWING TITLE
LAYOUT & MATERIALS PLAN

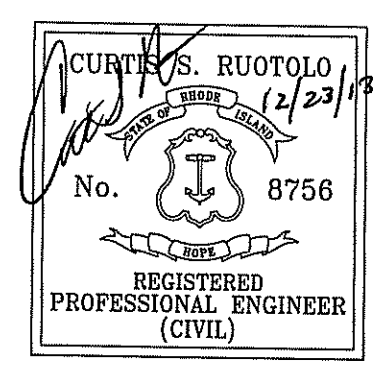
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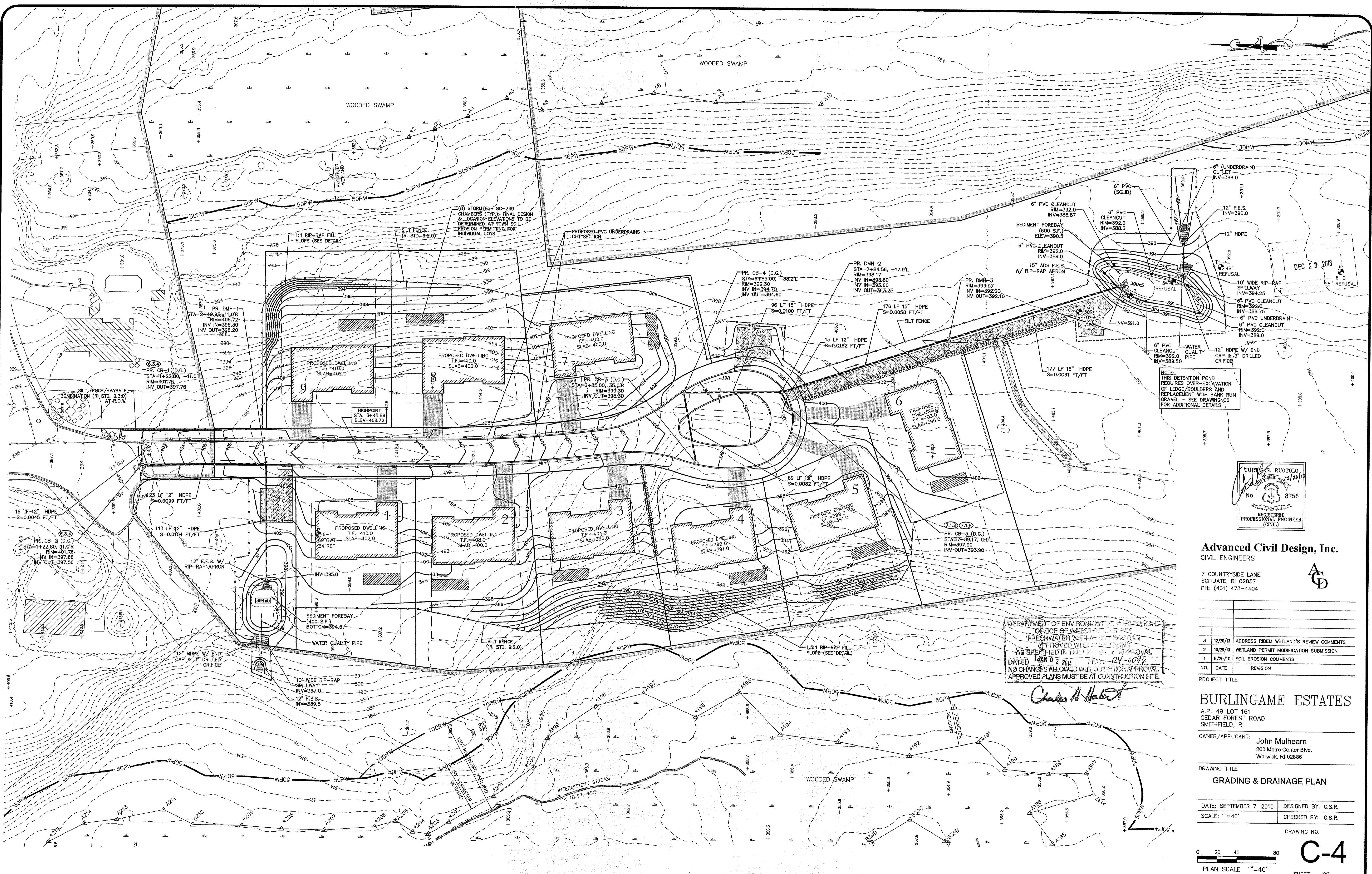
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0 25 50 100
PLAN SCALE 1"=50'
C-3
SHEET 3 OF 9

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JAN 02 2014 FILE # 04-0096
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Hester





DEC 23 2013

NOTE: THIS DETENTION POND REQUIRES OVER-EXCAVATION OF LEDGE/BOULDERS AND REPLACEMENT WITH BANK RUN GRAVEL - SEE DRAWING C6 FOR ADDITIONAL DETAILS

CURTIS S. RUOTOLO
 No. 8756
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

Advanced Civil Design, Inc.
 CIVIL ENGINEERS

7 COUNTRYSIDE LANE
 SCITUATE, RI 02857
 PH: (401) 473-4404

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WETLANDS PROGRAM
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED JAN 07 2014 FILE# 01-0096
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NO.	DATE	REVISION
3	12/20/13	ADDRESS RIDEM WETLAND'S REVIEW COMMENTS
2	10/29/13	WETLAND PERMIT MODIFICATION SUBMISSION
1	9/20/10	SOIL EROSION COMMENTS

PROJECT TITLE
BURLINGAME ESTATES
 A.P. 49 LOT 161
 CEDAR FOREST ROAD
 SMITHFIELD, RI

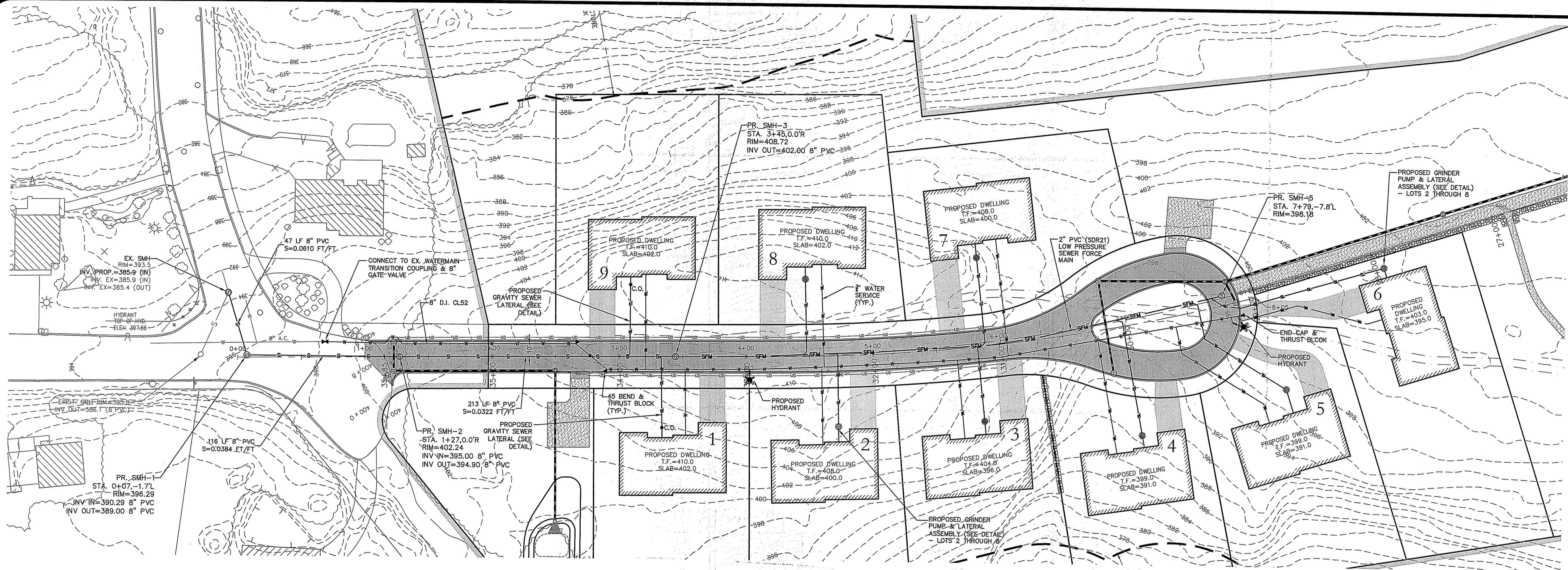
OWNER/APPLICANT:
John Mulhearn
 200 Metro Center Blvd.
 Warwick, RI 02886

DRAWING TITLE
GRADING & DRAINAGE PLAN

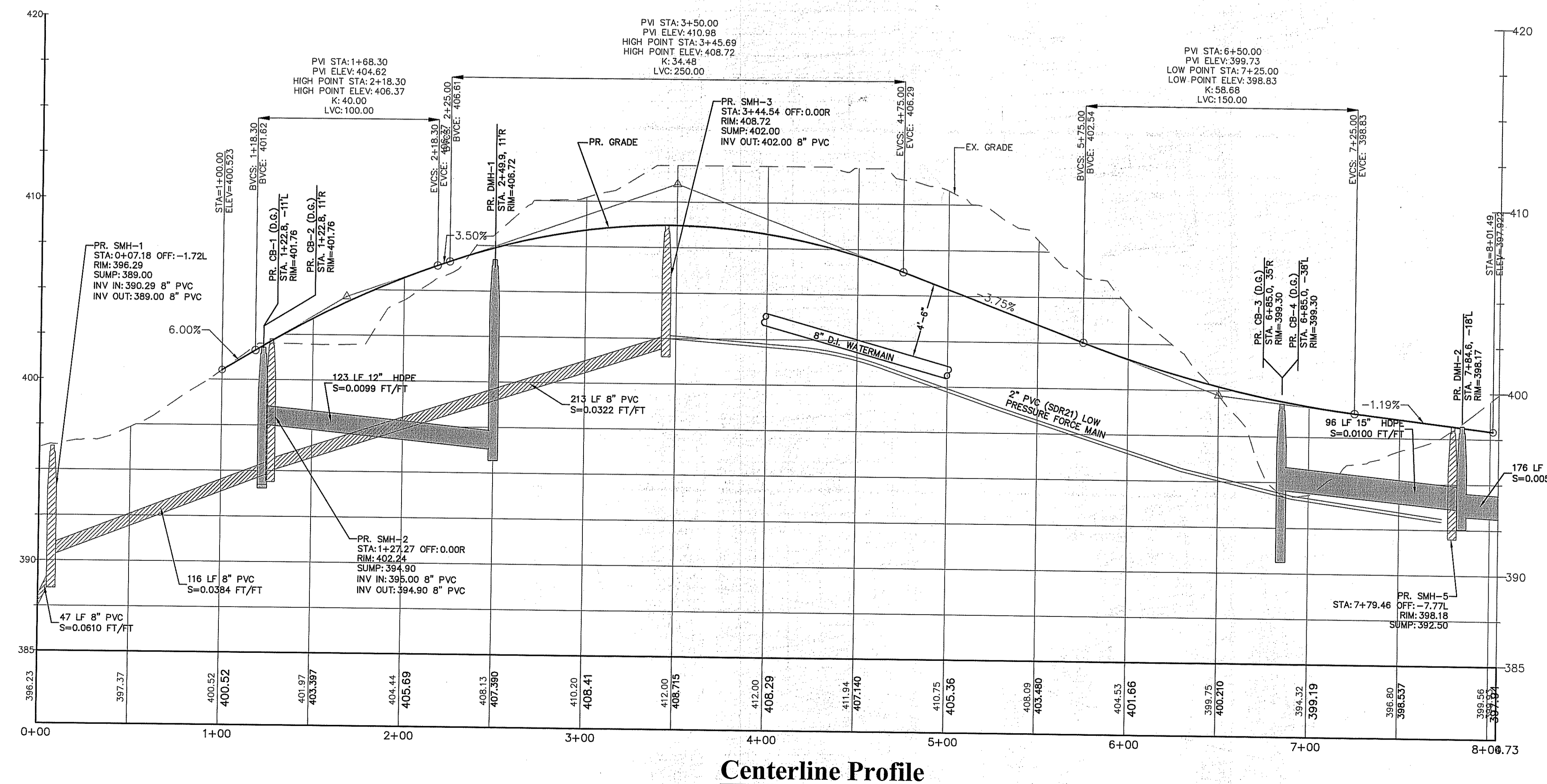
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DRAWING NO.
C-4

0 20 40 80
 PLAIN SCALE 1"=40'
 SHEET 4 OF 9



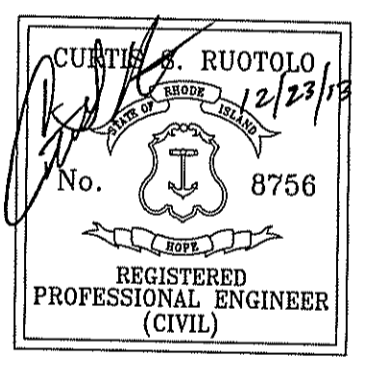
DEC 23 2013



Centerline Profile

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED JAN 02 2014 FILE # 04-0096
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Ruotolo



Advanced Civil Design, Inc.
 CIVIL ENGINEERS
 7 COUNTRYSIDE LANE
 SCITUATE, RI 02857
 PH: (401) 473-4404

NO.	DATE	REVISION
1	10/29/13	WETLAND PERMIT MODIFICATION SUBMISSION

BURLINGAME ESTATES
 A.P. 49 LOT 161
 CEDAR FOREST ROAD
 SMITHFIELD, RI

OWNER/APPLICANT: **John Mulhearn**
 200 Metro Center Blvd.
 Warwick, RI 02886

DRAWING TITLE
UTILITY PLAN & PROFILE

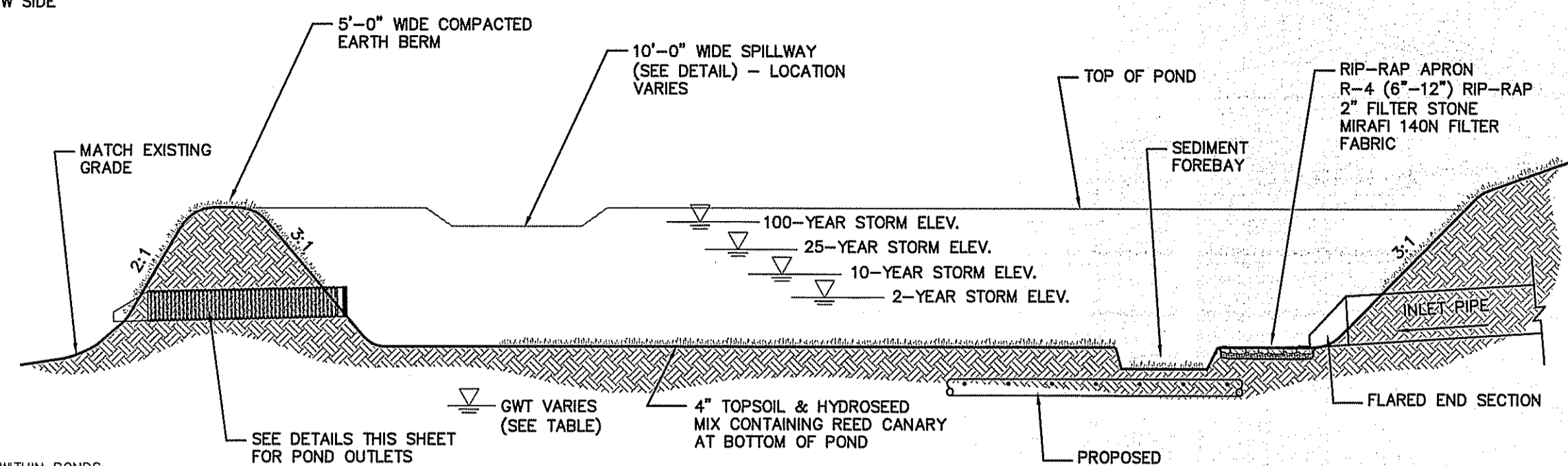
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DRAWING NO.

0 20 40 80
 PLAN SCALE 1"=40'
C-5
 SHEET 5 OF 9

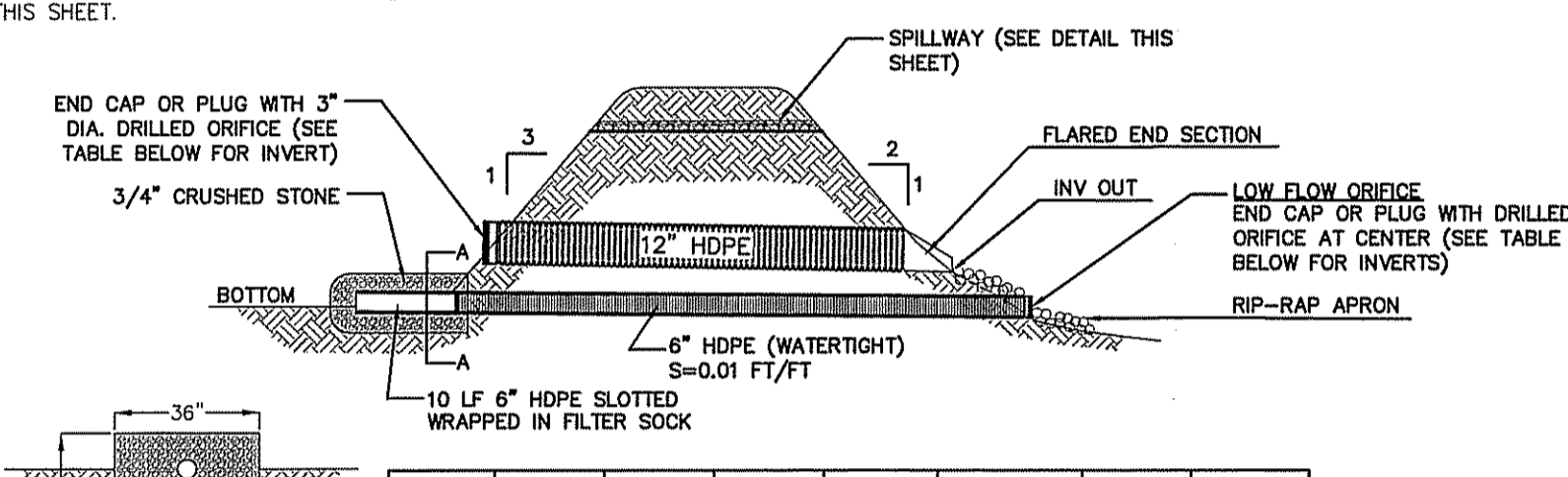
POND / BASIN	1	2
APPROX. LEDGE ELEV.	NONE	391.0 (H) 389.5 (L)
EST. SEASONAL HIGH GWT	392.25	392.0 (H) 391.0 (L)
SEDIMENT FOREBAY EL.	394.50	390.50
BOTTOM OF POND EL.	395.00	391.00
WATER QUALITY VOLUME EL.	395.44	391.87
2-YEAR STORM EL.	395.71	392.47
10-YEAR STORM EL.	396.28	393.58
25-YEAR STORM EL.	396.63	394.19
100-YEAR STORM EL.	397.08	394.46
EMERGENCY SPILLWAY	397.00	394.25
TOP OF POND EL.	398.00	395.00

(H) = HIGH SIDE
(L) = LOW SIDE



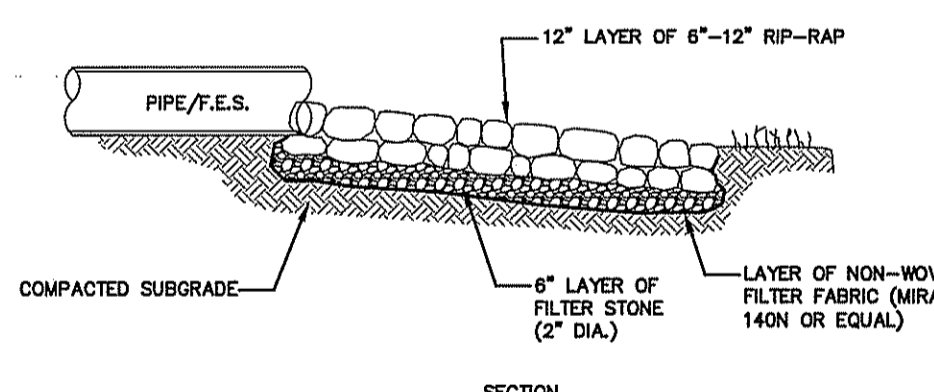
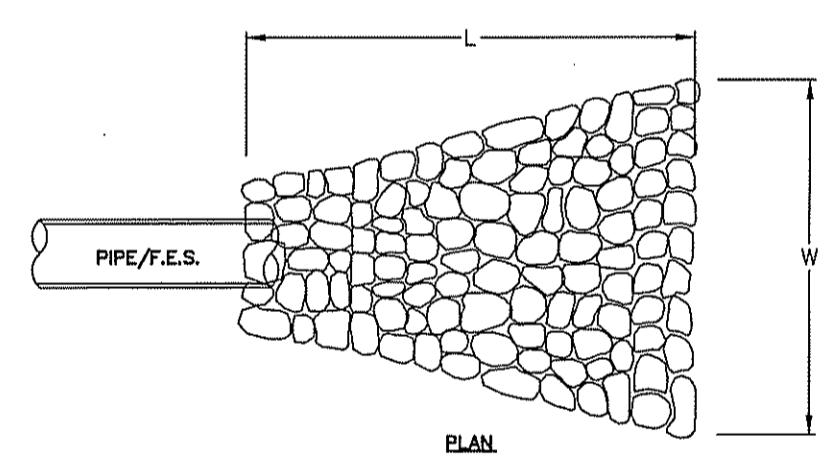
DETENTION POND DETAIL
N.T.S.

- NOTES:
- THE FOLLOWING AREAS SHALL BE PROVIDED FOR SEDIMENT STORAGE WITHIN PONDS:
DETENTION POND #1 400 SQ. FT.
DETENTION POND #2 600 SQ. FT.
 - LEDGE AND/OR BOULDERS SHALL BE REMOVED 2 FT. BELOW BOTTOM OF POND AND REPLACED WITH BANK RUN GRAVEL. TRENCHING FOR UNDER-DRAINS MAY BE DEEPER TO ACCOMMODATE INVERT ELEVATIONS
 - INSTALL A 6" PERFORATED UNDERDRAIN AT POND #2 AS SHOWN ON THE PLAN AND DETAILED ON THIS SHEET.

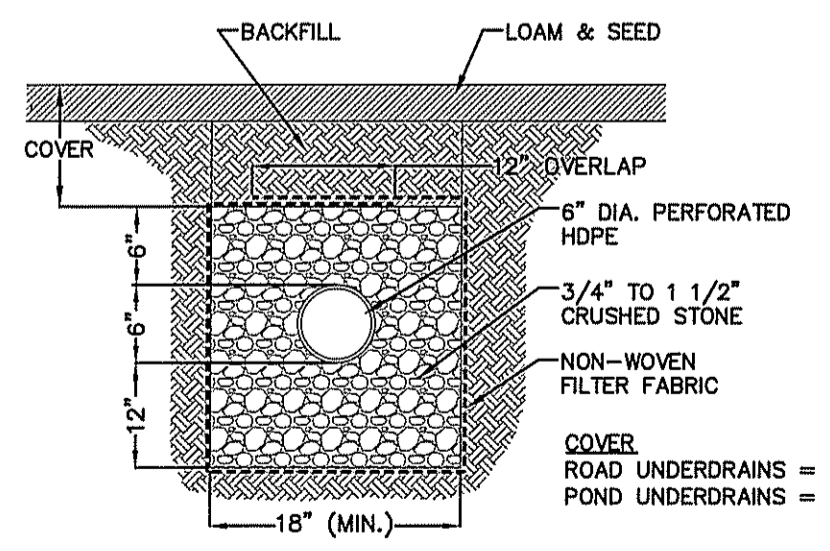


POND	3" ORIFICE INV.	12" INV OUT	12" INV OUT	12" LENGTH	LOW FLOW ORIFICE DIA.	6" INV IN	6" INV OUT
1	395.50	395.00	389.50	32'	1 1/2"	394.50	389.50
2	391.50	391.40	390.00	36'	4/5"	390.50	390.00

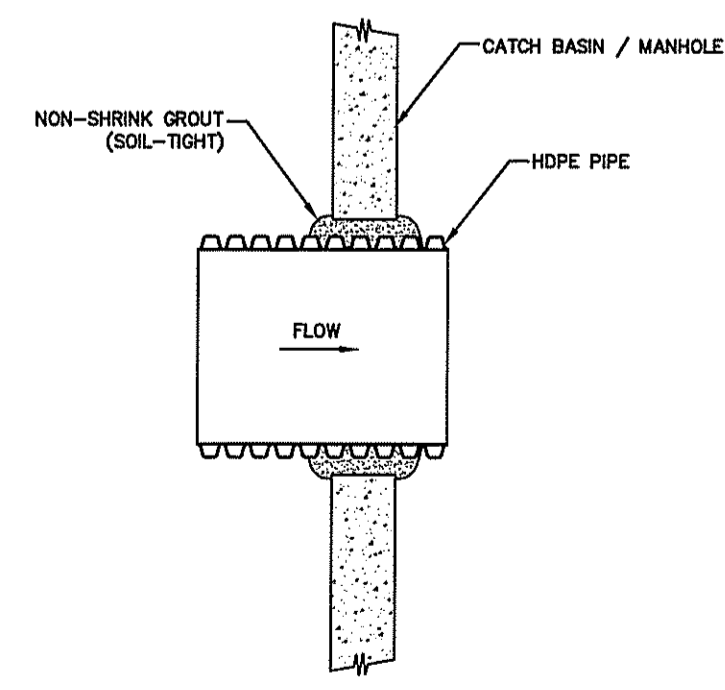
OUTLET PIPE AND WATER QUALITY PIPE DETAIL THROUGH POND BERM
N.T.S.



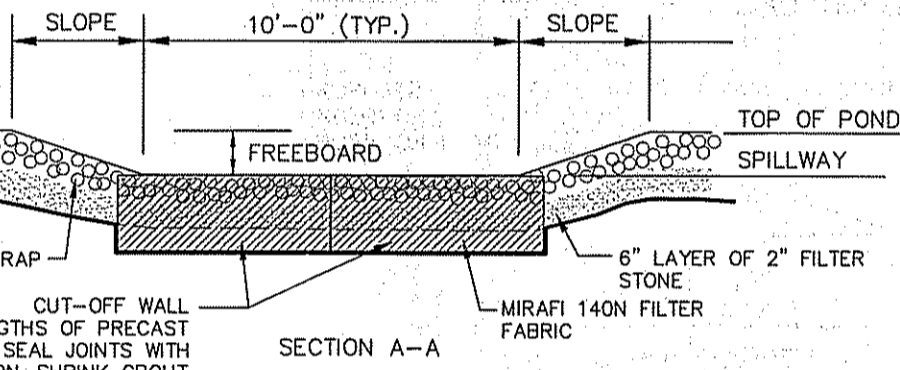
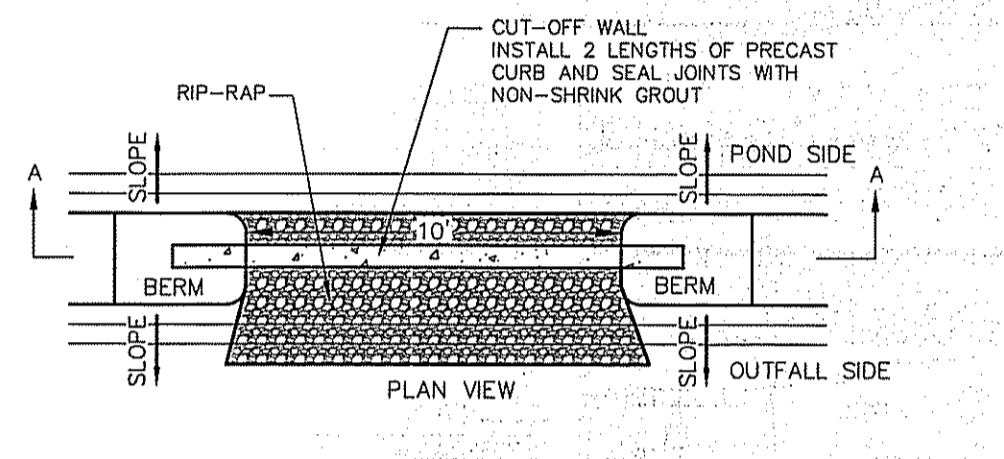
RIP-RAP APRON DETAIL
N.T.S.



UNDERDRAIN DETAIL
N.T.S.

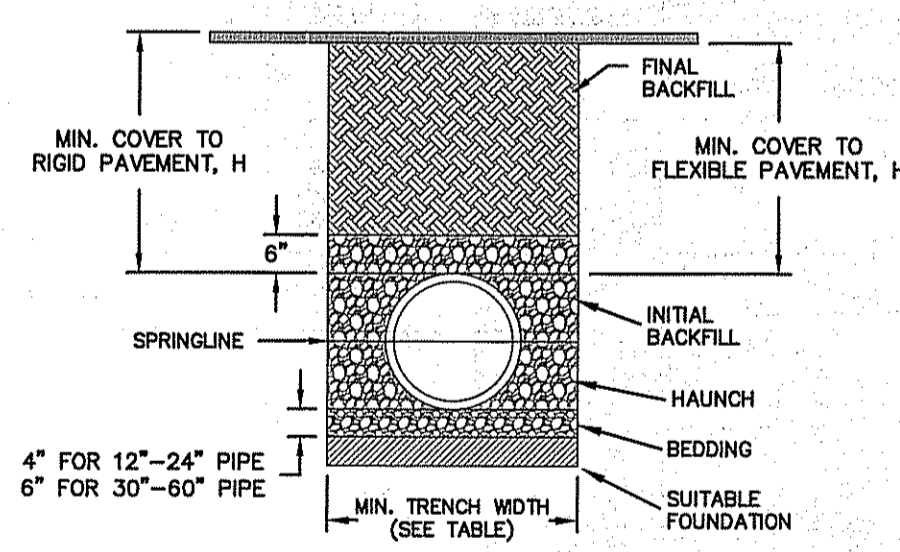


HDPE PIPE TO MANHOLE CONNECTION
N.T.S.



POND	TOP OF POND	SPILLWAY	FREEBOARD
1	398.0	397.0	1.00 ft.
2	395.0	394.25	0.75 ft.

EMERGENCY SPILLWAY DETAIL
N.T.S.



RECOMMENDED MINIMUM TRENCH WIDTHS

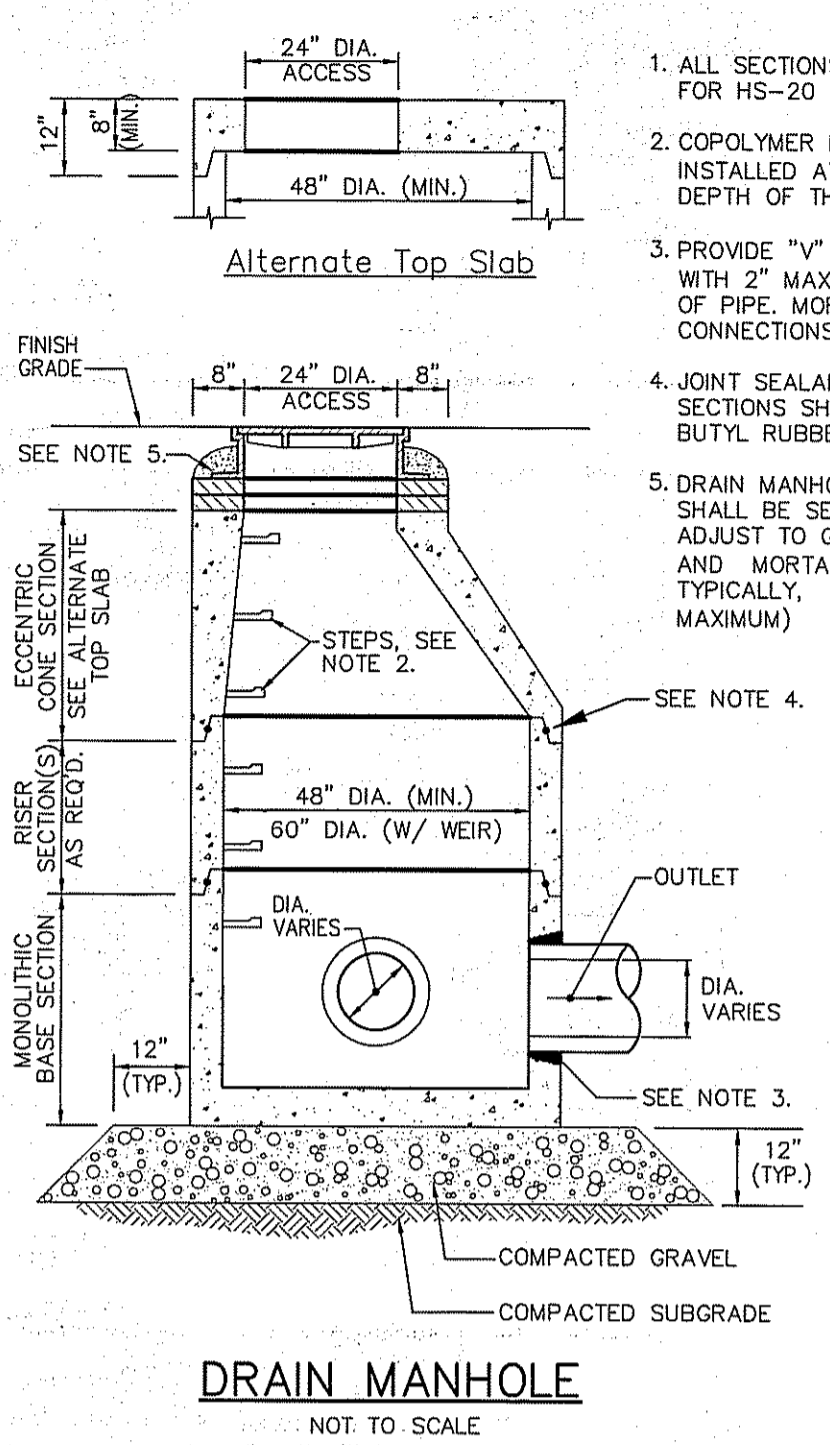
PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

- NOTES:
- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION
 - MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
 - FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH CLASS II MATERIAL. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
 - BEDDING: SUITABLE MATERIAL SHALL BE CLASS I. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
 - INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 - MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO TOP OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

CLASS I - ANGULAR CRUSHED STONE OR ROCK, DENSE OR OPEN GRADED WITH LITTLE OR NO FINES (3/4" TO 1 1/2" SIZE)

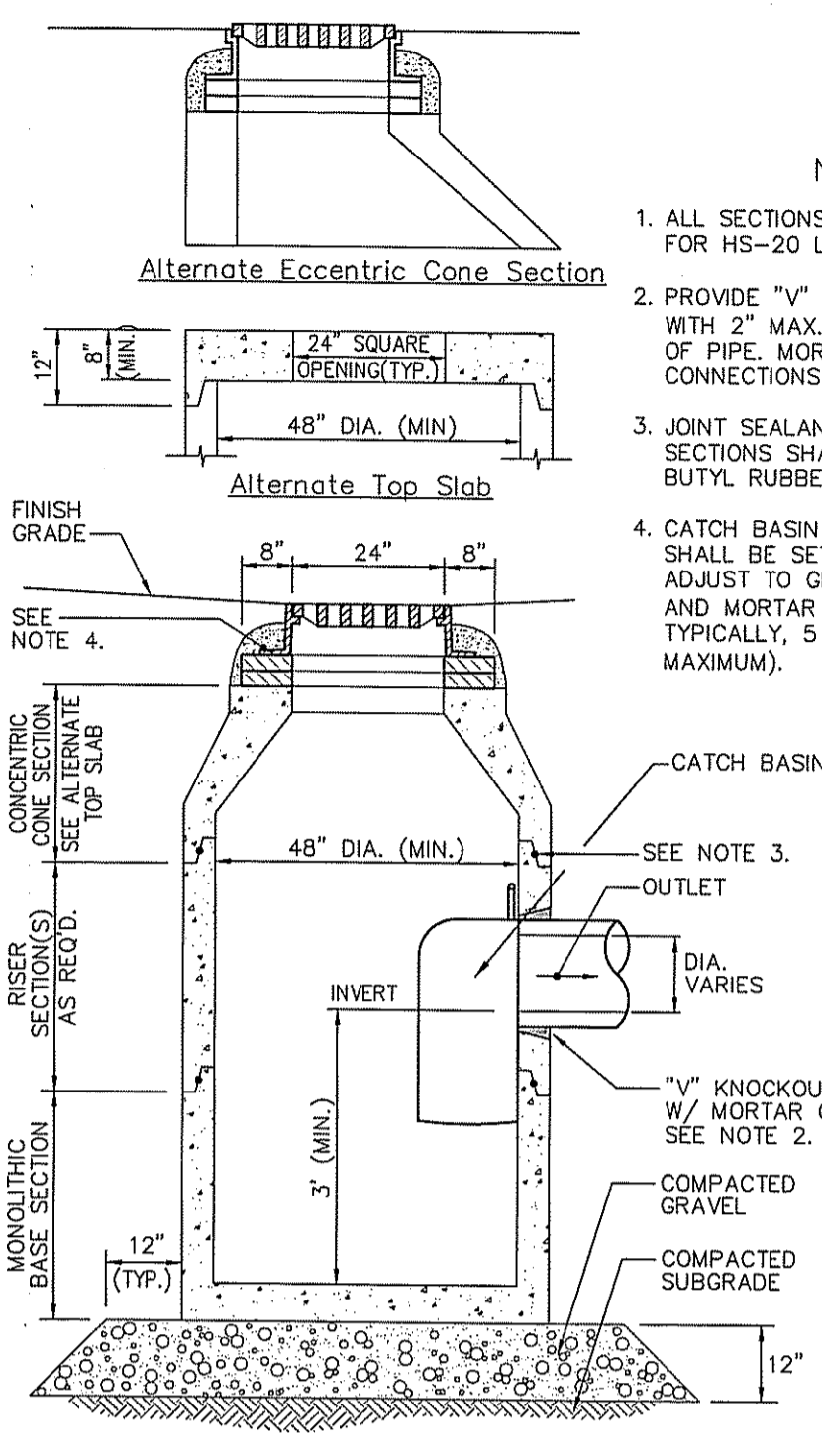
CLASS II - CLEAN, COARSE GRAINED MATERIALS, SUCH AS GRAVEL, COARSE SANDS, AND GRAVEL/SANDS MIXTURES (1 1/2" SIZE) (MSHTO CLASSIFICATION AT & A3)

ADS DRAIN PIPE TRENCH INSTALLATION
N.T.S.



DRAIN MANHOLE
NOT TO SCALE

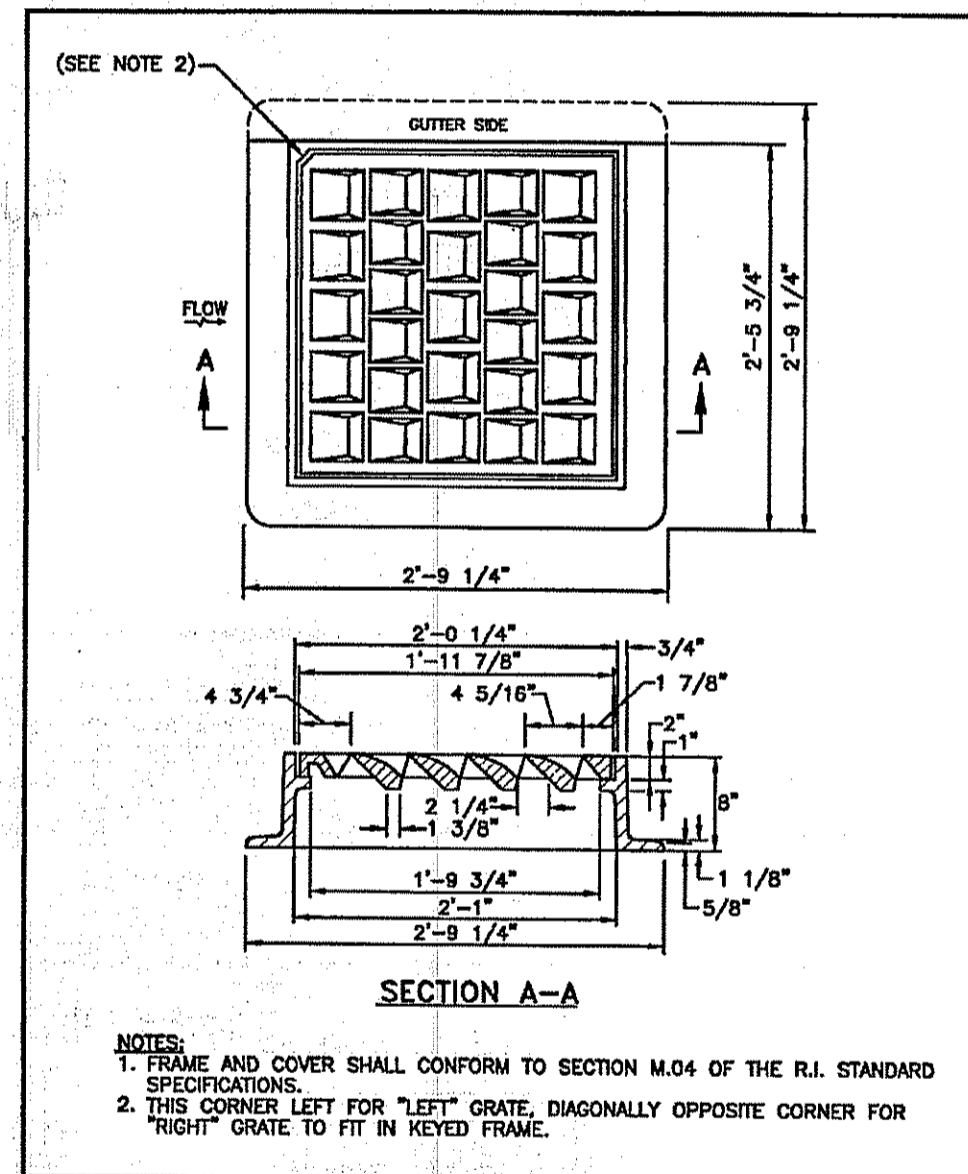
- NOTES:
- ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
 - COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
 - PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
 - JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
 - DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).



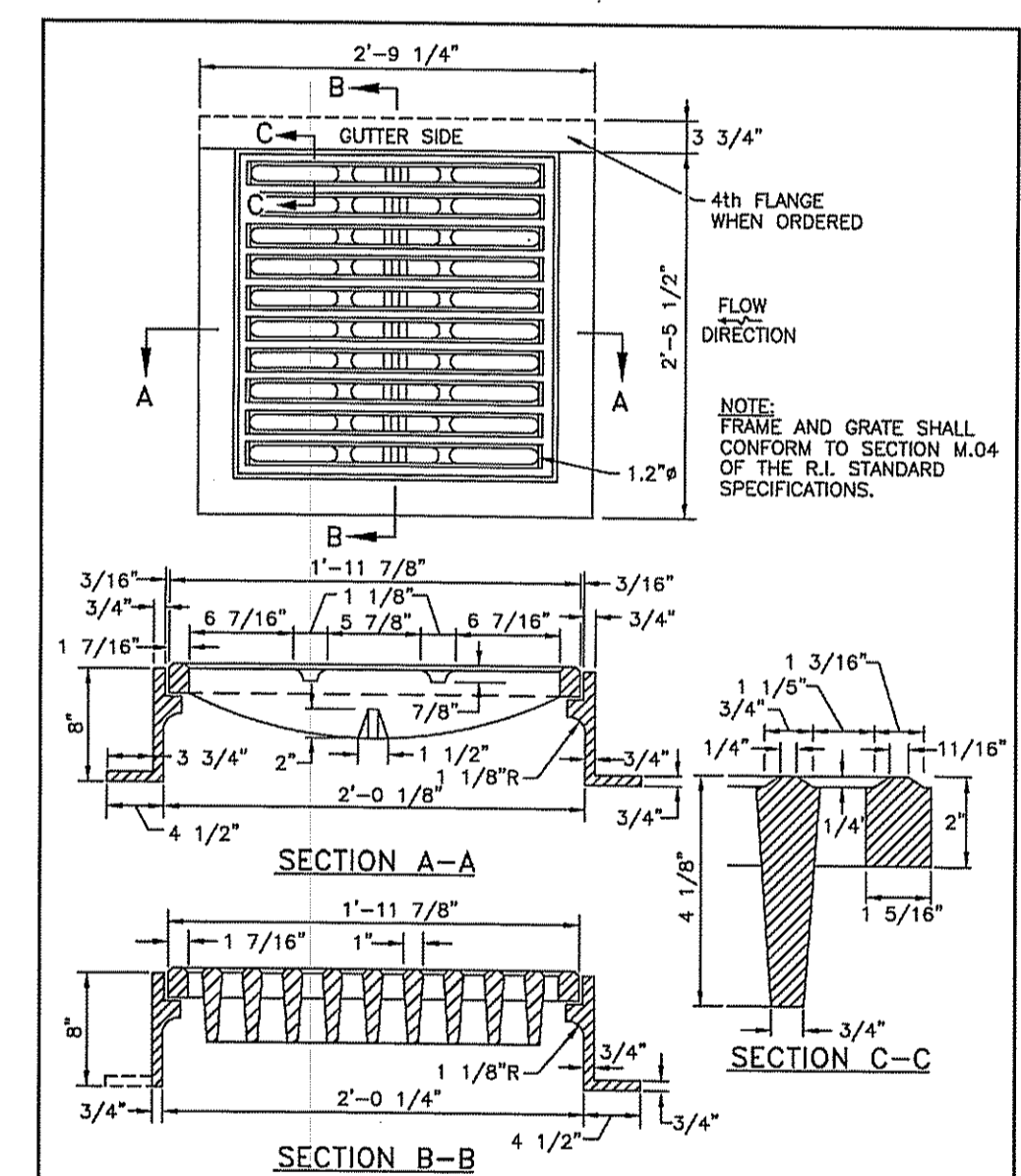
CATCH BASIN W/ HOOD
NOT TO SCALE

- NOTES:
- ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
 - PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
 - JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
 - CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

DEC 23 2013
City of Wake Forest



RHODE ISLAND DEPARTMENT OF TRANSPORTATION
HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)
R.I. STANDARD 6.3.4
JUNE 15, 1998



RHODE ISLAND DEPARTMENT OF TRANSPORTATION
SQUARE FRAME AND GRATE (BICYCLE SAFE)
R.I. STANDARD 6.3.2
JUNE 15, 1998

CURTIS S. RUOTOLO
No. 8756
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

Advanced Civil Design, Inc.
CIVIL ENGINEERS

7 COUNTRYSIDE LANE
SCITUATE, RI 02857
PH: (401) 473-4404

NO.	DATE	REVISION
3	12/20/13	ADDRESS RIDEM WETLAND'S REVIEW COMMENTS
2	10/28/13	WETLAND PERMIT MODIFICATION SUBMISSION
1	9/20/10	SOIL EROSION COMMENTS

BURLINGAME ESTATES

A.P. 49 LOT 161
CEDAR FOREST ROAD
SMITHFIELD, RI

OWNER/APPLICANT: John Mulhearn
200 Metro Center Blvd.
Warwick, RI 02886

DRAWING TITLE: DETAILS

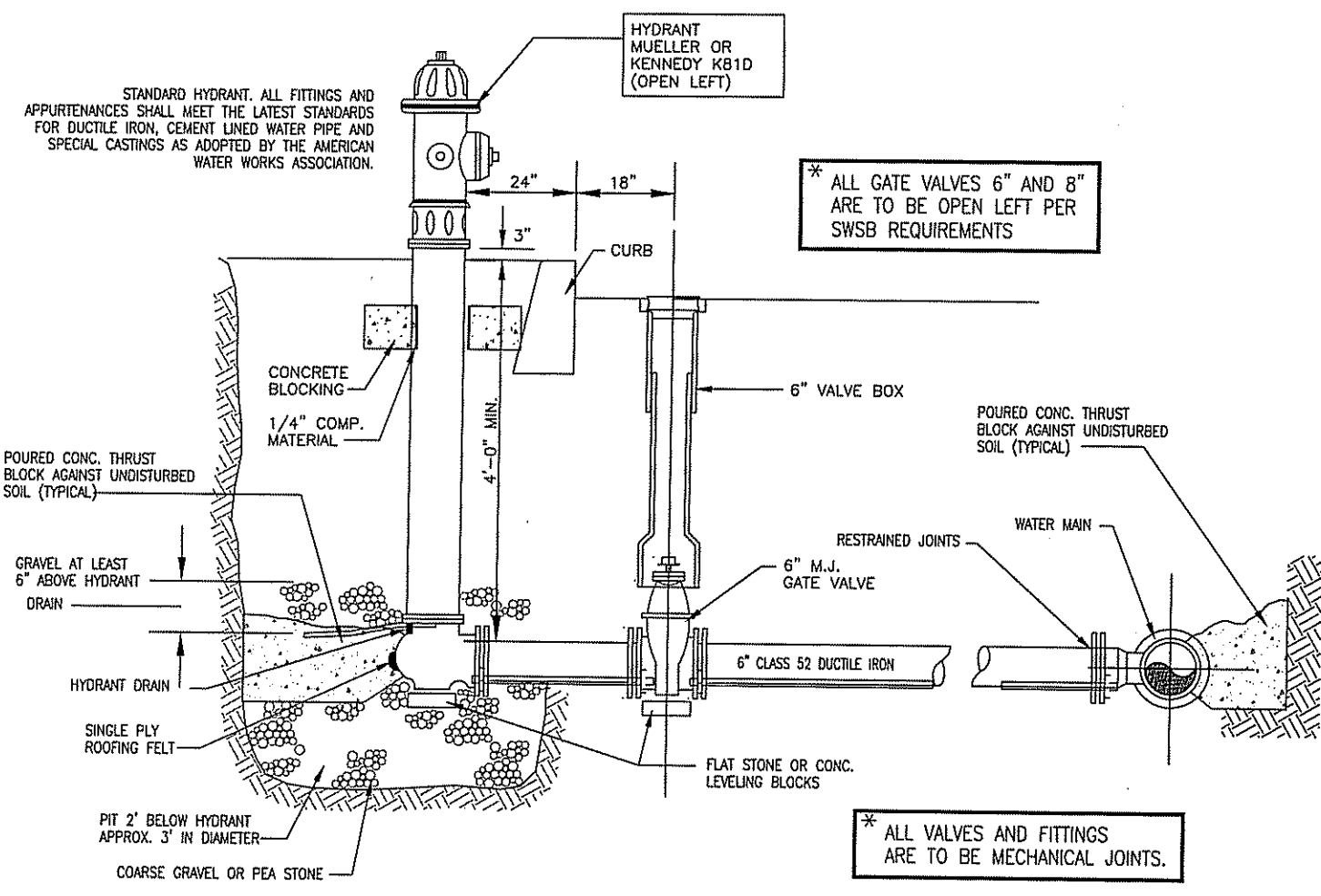
DATE: SEPTEMBER 7, 2010 DESIGNED BY: C.S.R.
SCALE: N.T.S. CHECKED BY: C.S.R.

DRAWING NO.

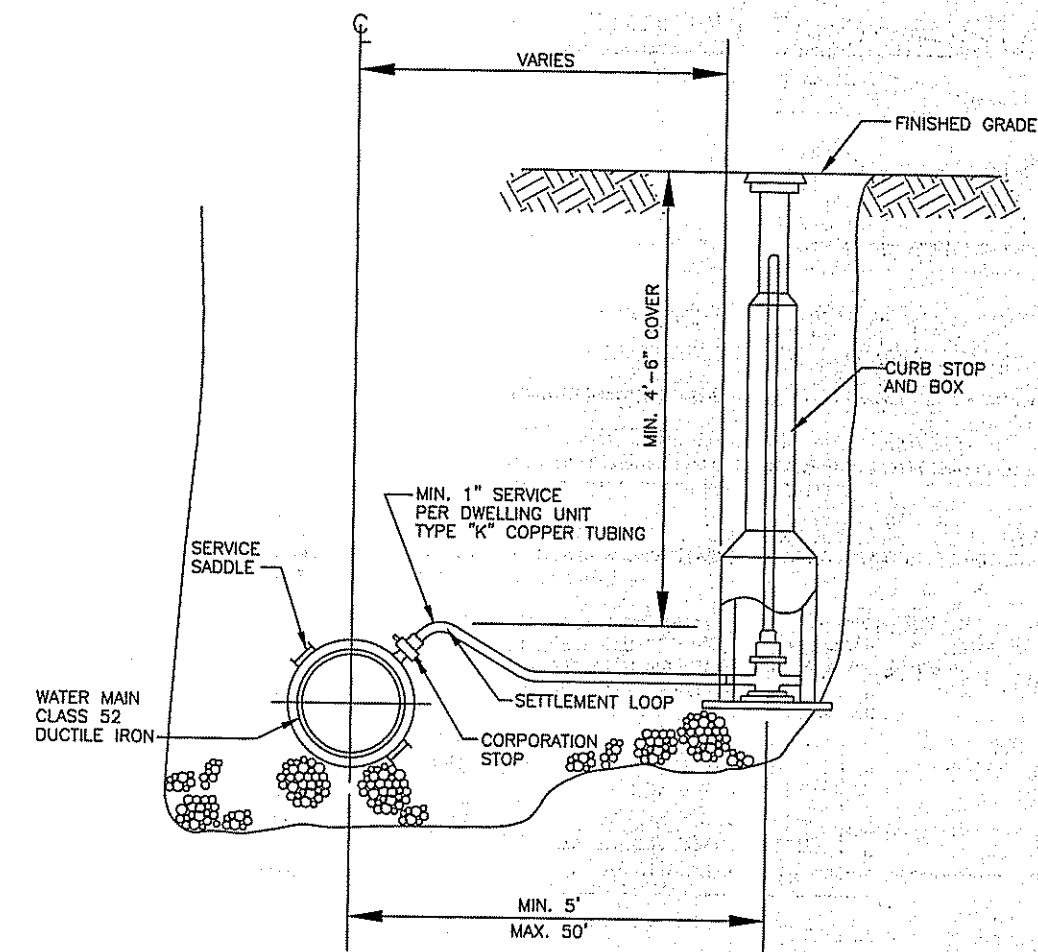
C-6

SHEET 6 OF 9

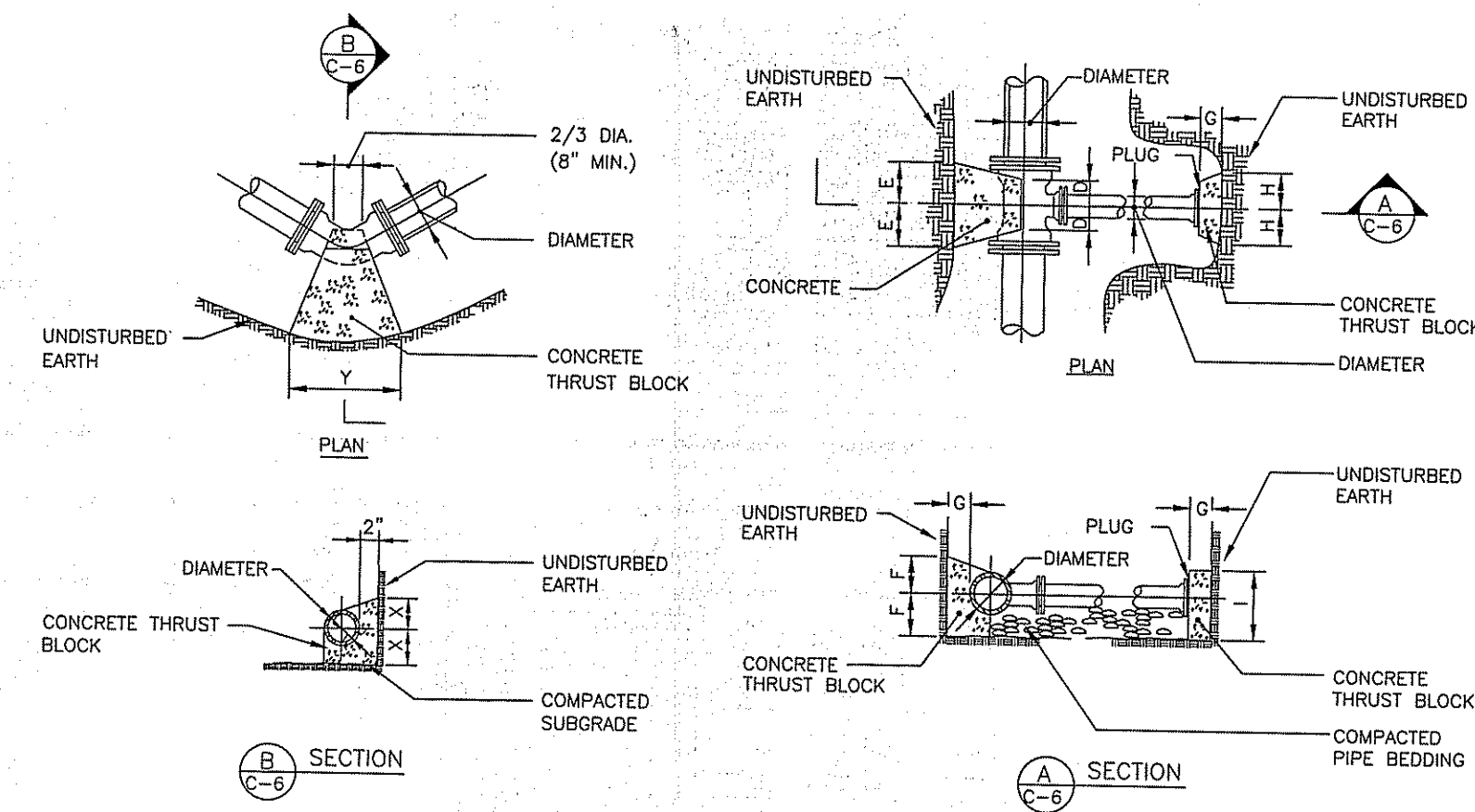
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED 10/02/2014 FILE # 04-0096
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Harbert



STANDARD HYDRANT DETAIL
NOT TO SCALE



WATER SERVICE CONNECTION TO MAIN
NOT TO SCALE



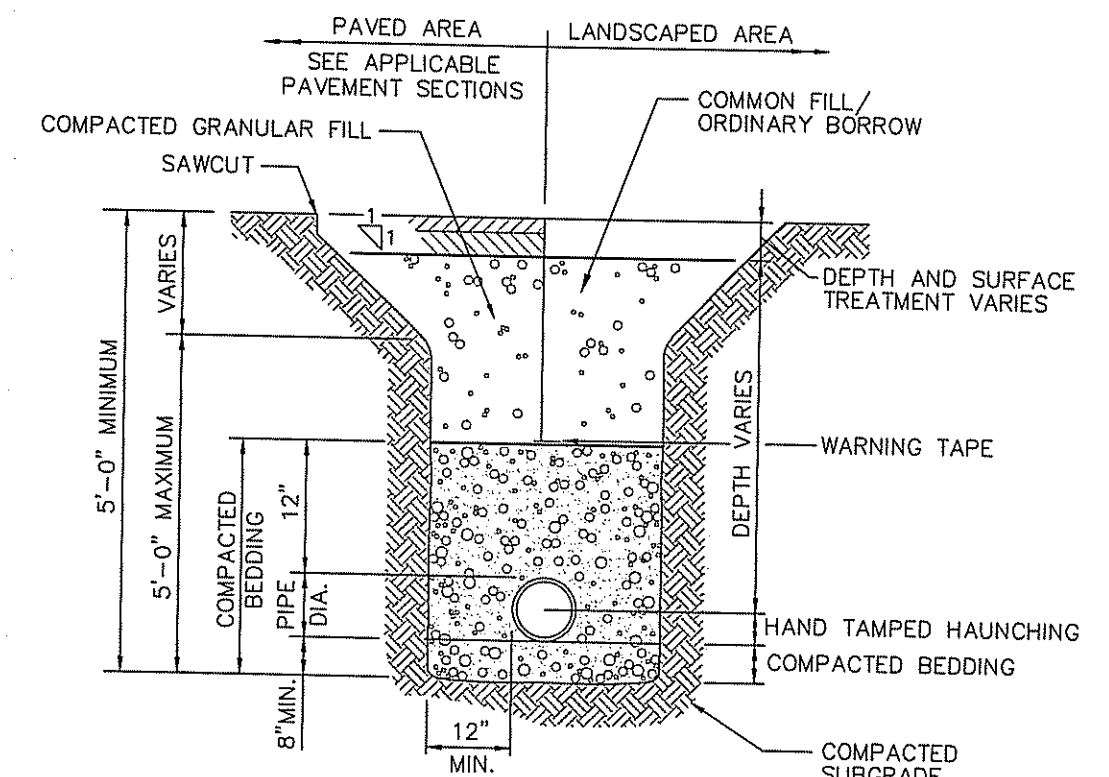
HORIZONTAL BENDS

TYPE OF BEND	SIZE											
	X	Y	Z	A	B	C	D	E	F	G	H	I
11-17/4"	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0
22-17/2"	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0
25	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0
30	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0	1-0

TEES & DEAD ENDS

SIZE OF BRANCH	SIZE								
	D	E	F	G	H	I	J	K	L
3"	4"	4"	4"	4"	4"	4"	4"	4"	4"
4"	6"	6"	6"	6"	6"	6"	6"	6"	6"
6"	8"	8"	8"	8"	8"	8"	8"	8"	8"
8"	10"	10"	10"	10"	10"	10"	10"	10"	10"
10"	12"	12"	12"	12"	12"	12"	12"	12"	12"

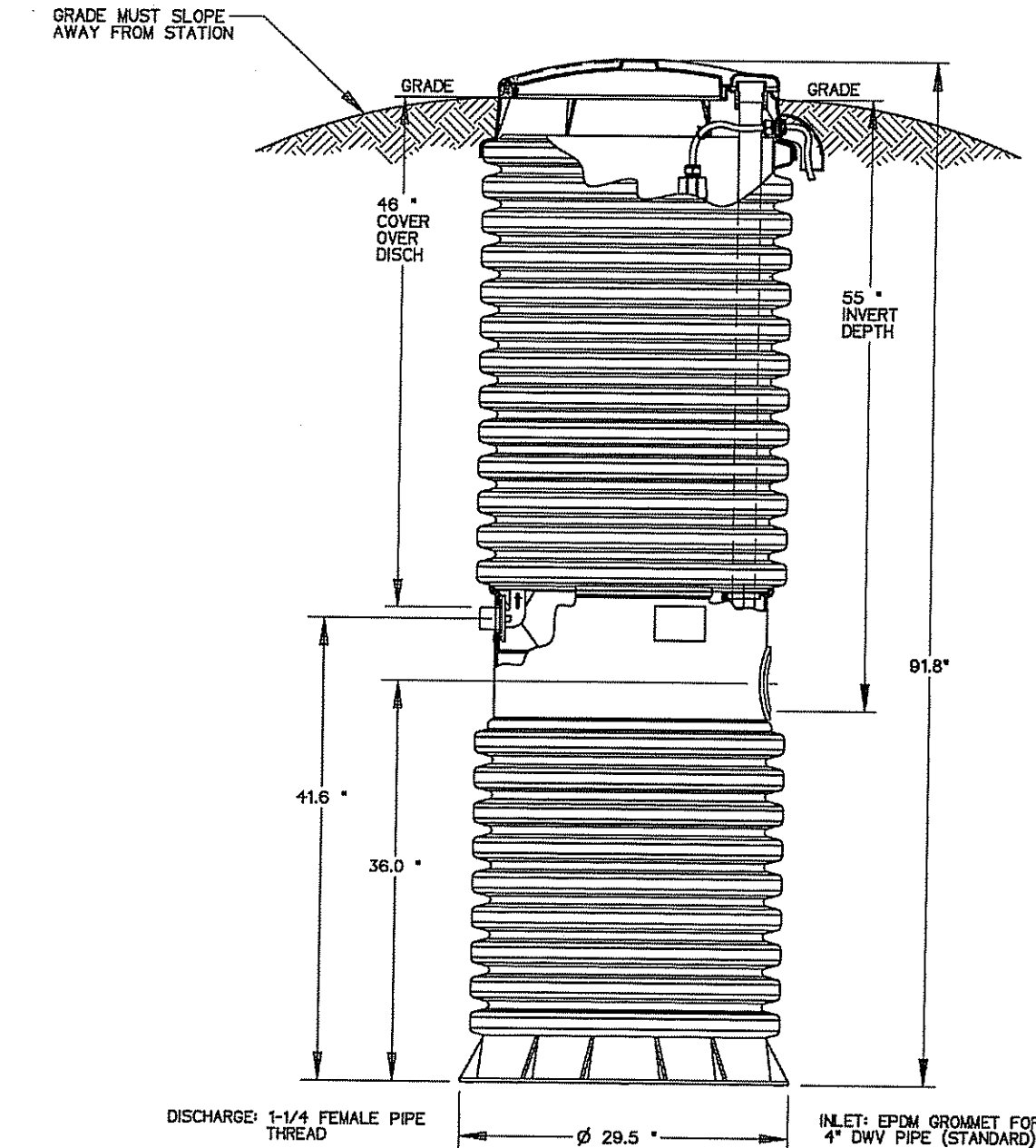
HORIZONTAL THRUST BLOCK DETAILS
NOT TO SCALE



WATER LINE TRENCH DETAIL
NOT TO SCALE

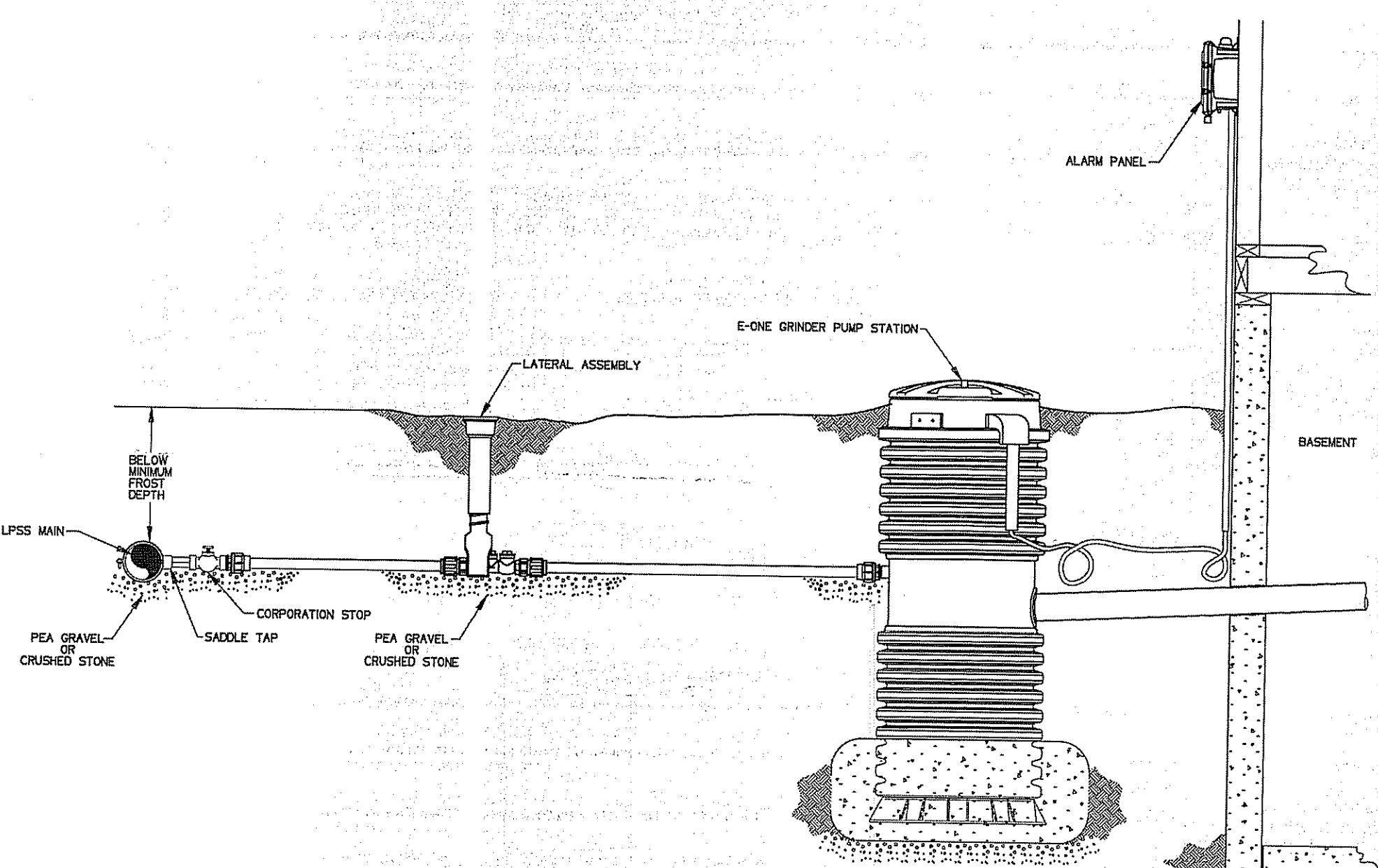
DEC 23 2013

OPTIONS: DH071-93 (HARD WIRED LEVEL CONTROLS)
 DR071-93 (WIRELESS LEVEL CONTROLS)

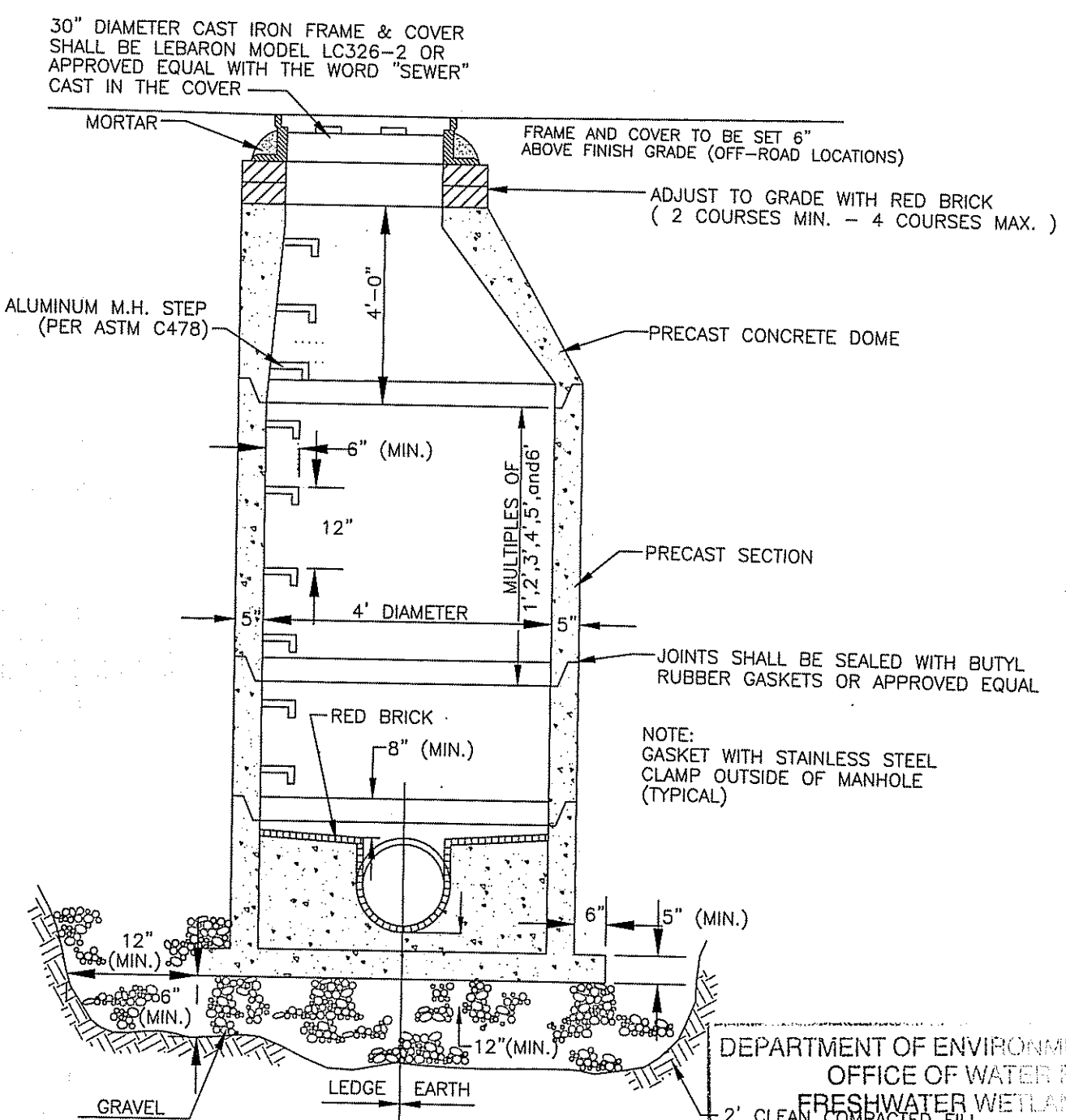


UL NSF ISA

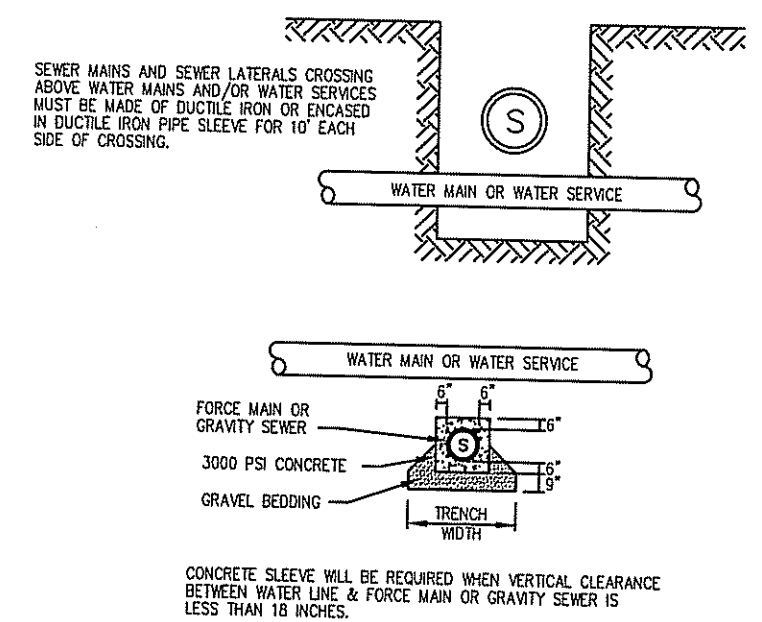
AD	CAH	07/12/07	A	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE
eone SEWER SYSTEMS				
MODEL DH071-93 / DR071-93				
NA0050P06				



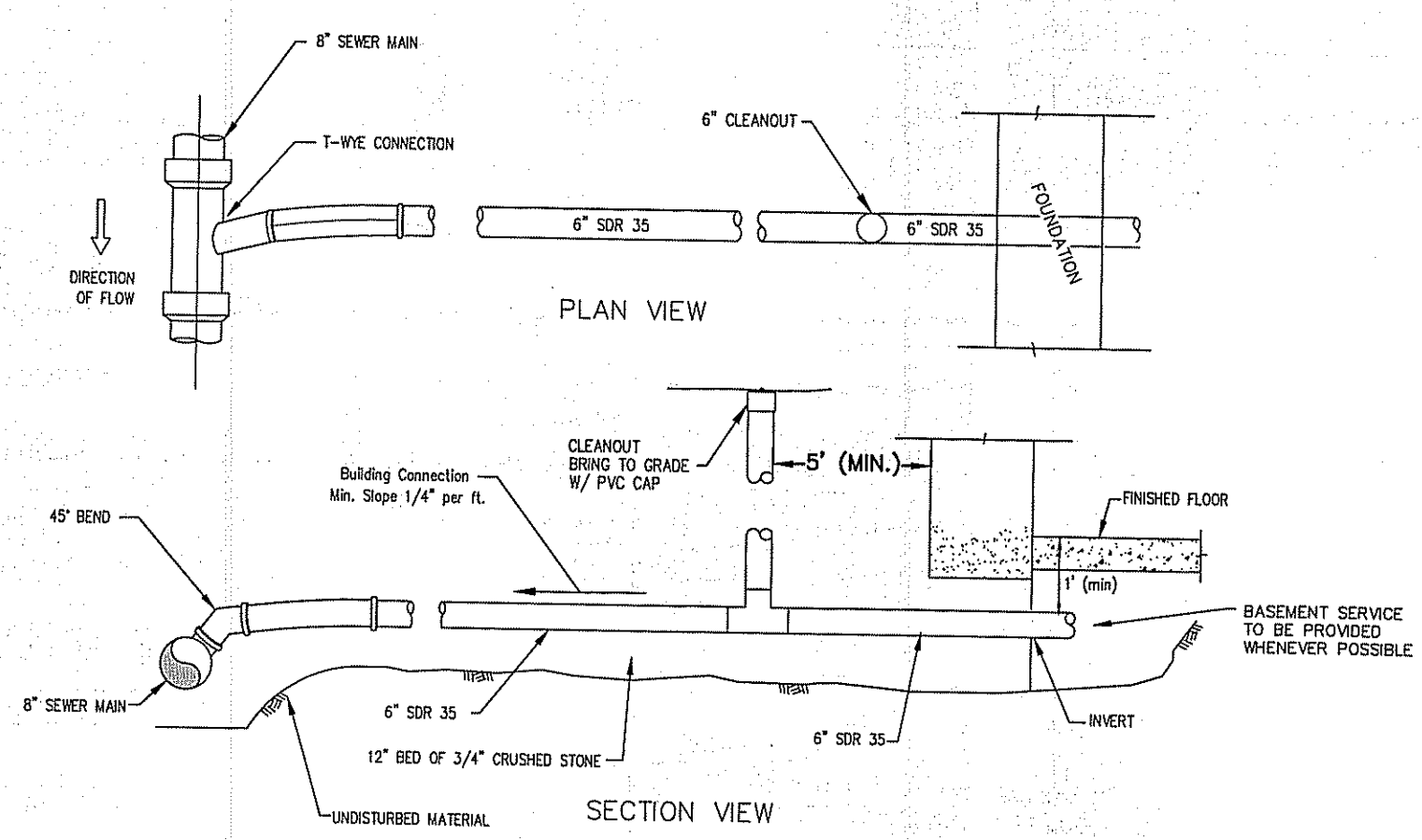
E-ONE GRINDER PUMP LATERAL PROFILE
NOT TO SCALE



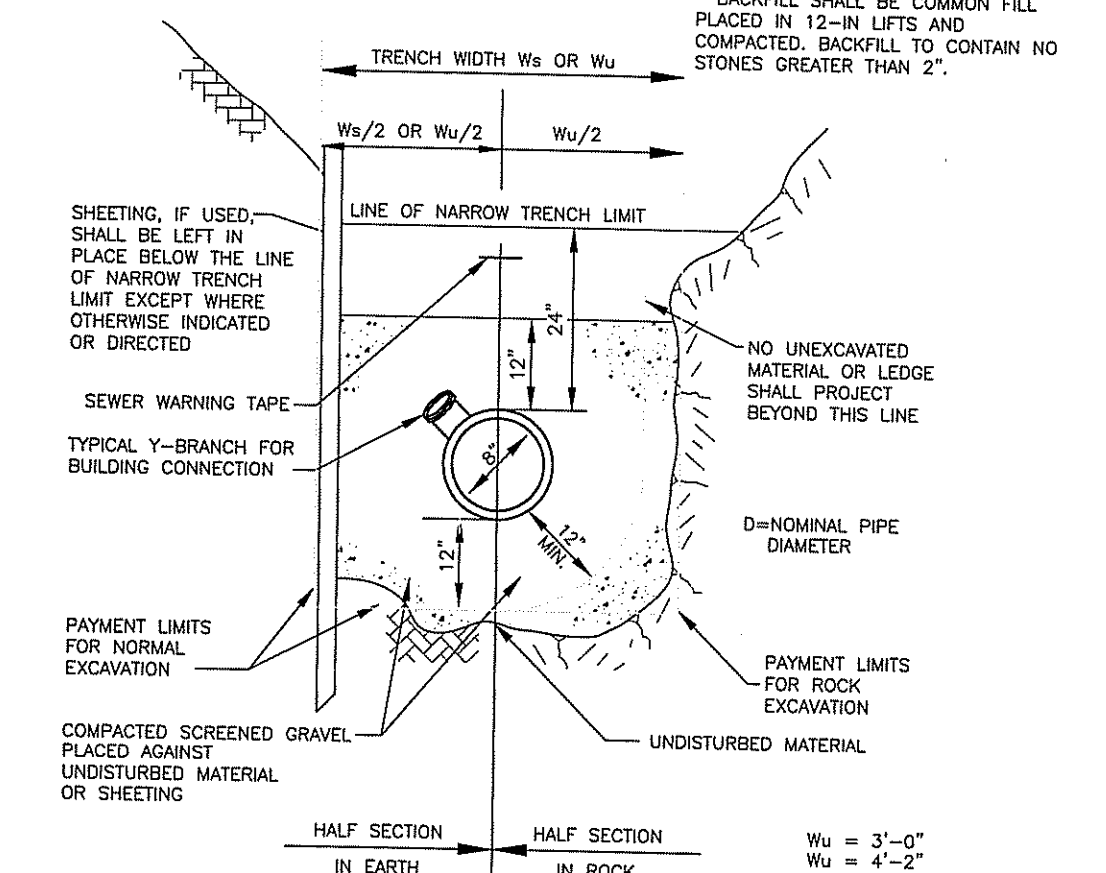
SANITARY SEWER MANHOLE
NOT TO SCALE



TYPICAL SEWER-WATER LINE CROSSINGS
NOT TO SCALE



GRAVITY SEWER LATERAL
NOT TO SCALE



GRAVITY SEWER TRENCH
NOT TO SCALE

CHARLES A. RUOTOLO
No. 8756
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

Advanced Civil Design, Inc.
CIVIL ENGINEERS

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PERMIT
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF
DATED JAN 02 2014 FILE # 04-0098
NO CHANGES ALLOWED WITHOUT CONSTRUCTION
APPROVED PLANS MUST BE AT CONSTRUCTION

7 COUNTRYSIDE LANE
SCITUATE, RI 02857
(401) 473-4404

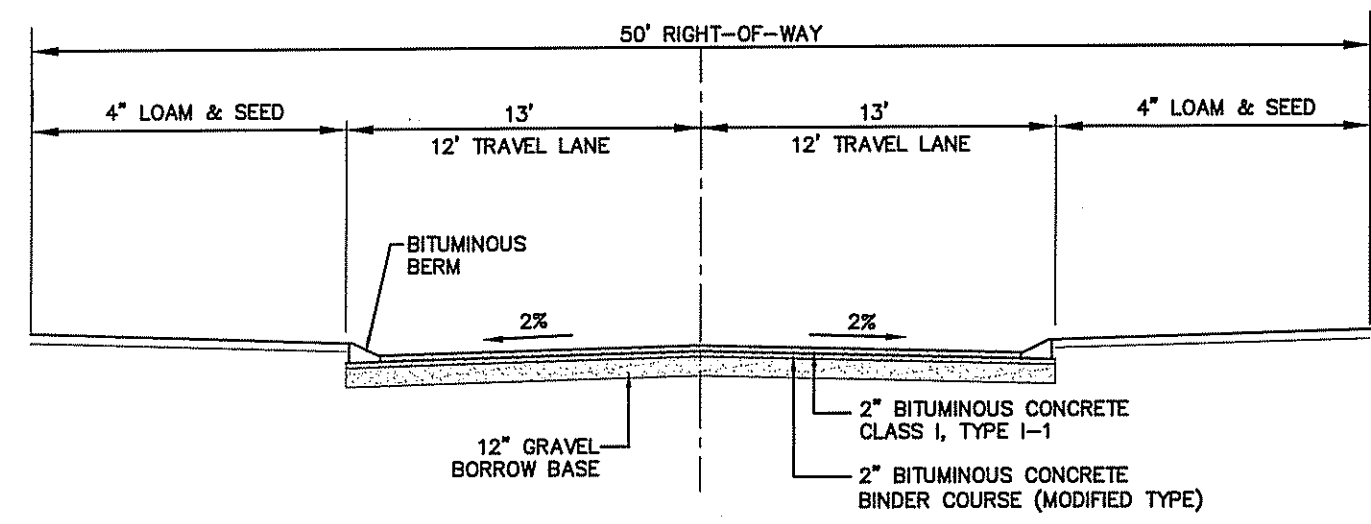
NO.	DATE	REVISION
1	10/29/13	WETLAND PERMIT MODIFICATION SUBMISSION

BURLINGAME ESTATES
A.P. 49 LOT 161
CEDAR FOREST ROAD
SMITHFIELD, RI

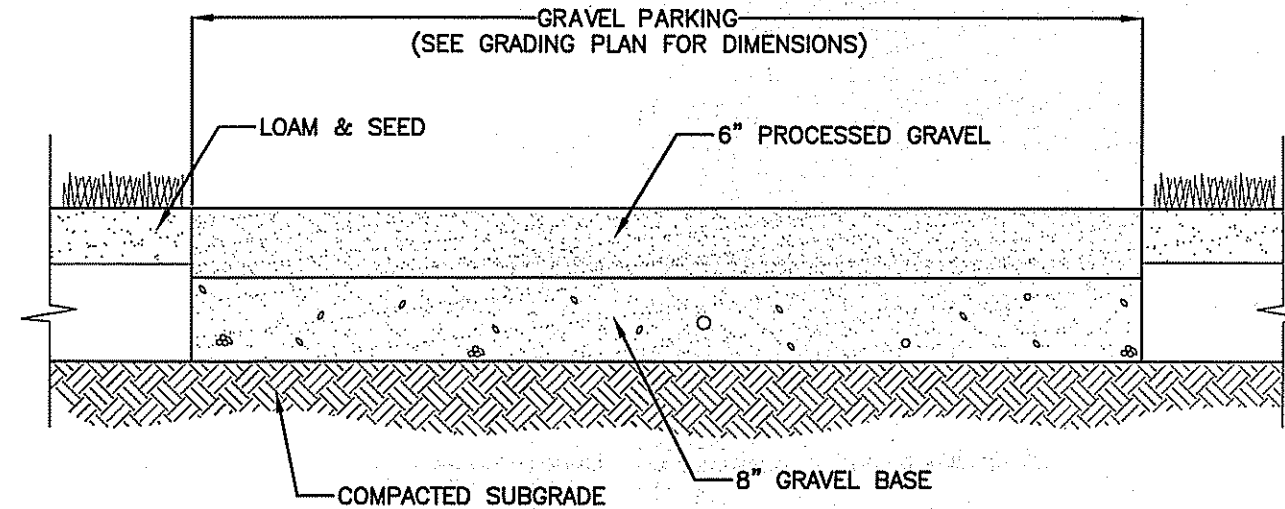
OWNER/APPLICANT: **John Mulhearn**
200 Metro Center Blvd.
Warwick, RI 02886

DATE	DESIGNED BY
SEPTEMBER 7, 2010	C.S.R.
SCALE	CHECKED BY
N.T.S.	C.S.R.

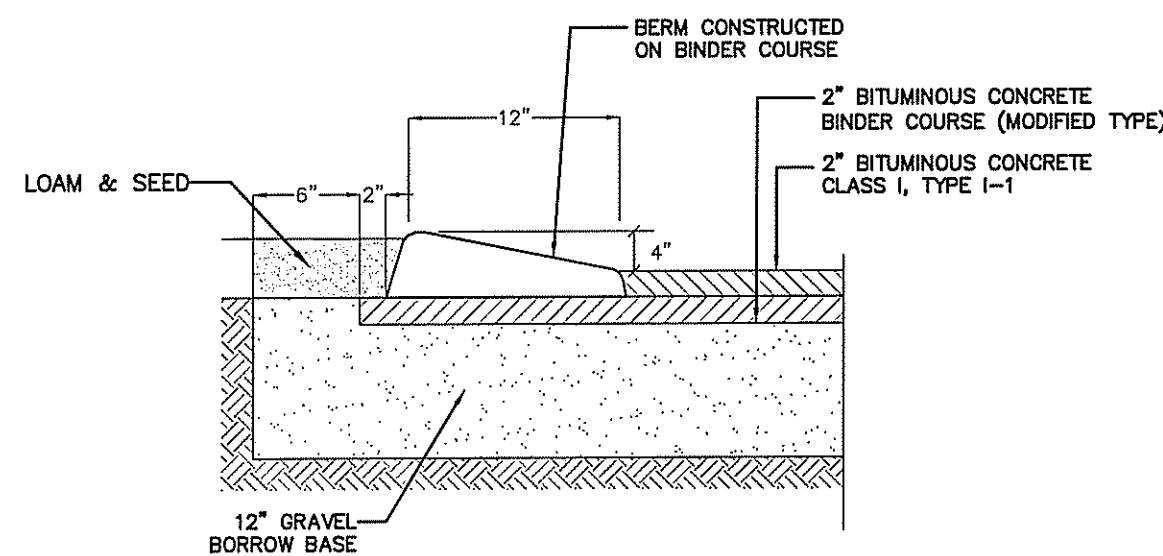
DRAWING NO.
C-7
SHEET 7 OF 9



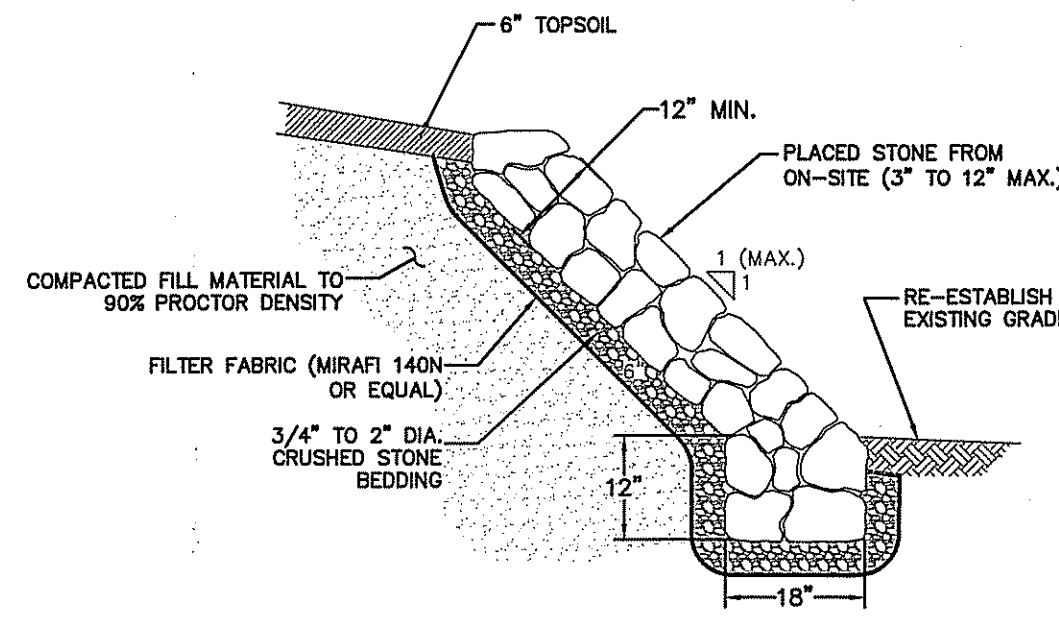
TYPICAL ROADWAY SECTION
N.T.S.



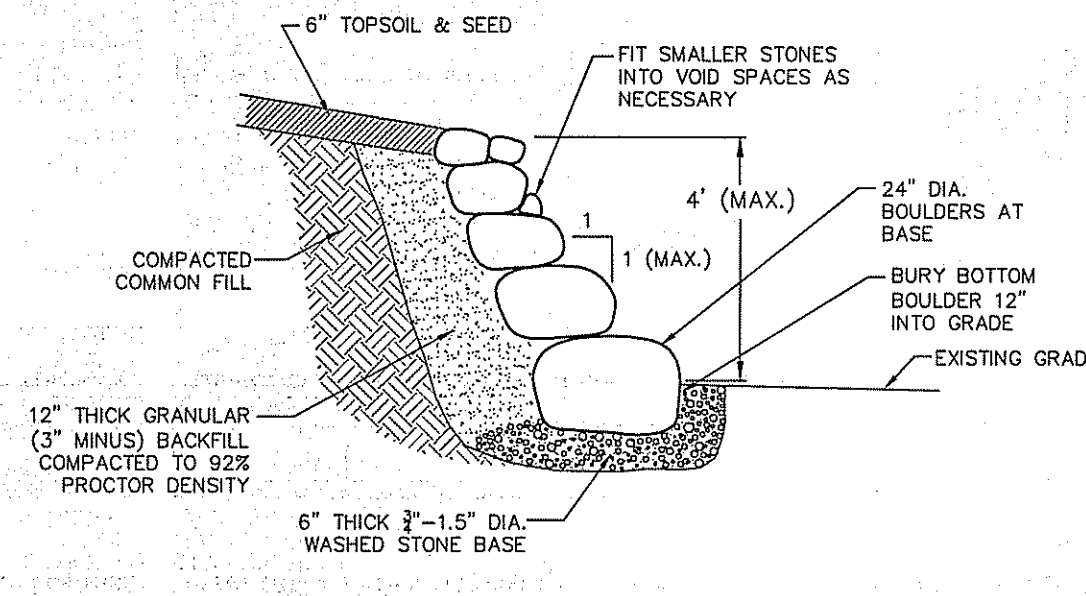
GRAVEL PAVING SECTION
N.T.S.



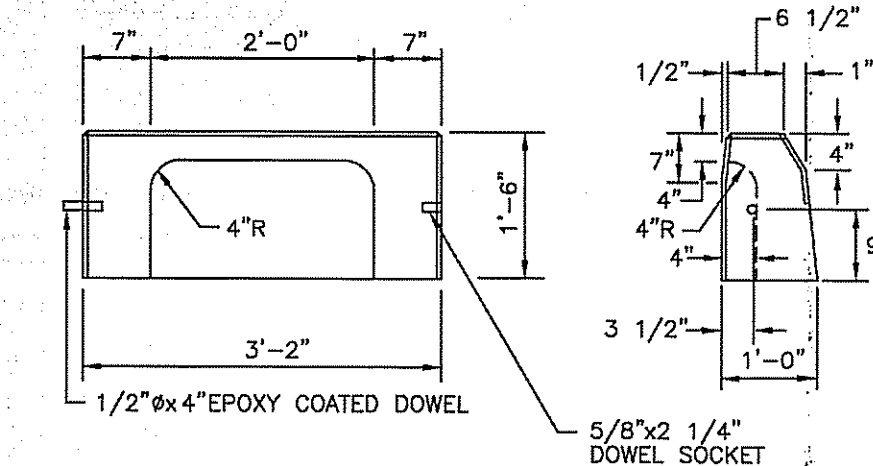
BITUMINOUS BERM
N.T.S.



RIP-RAP FILL SLOPE
N.T.S.

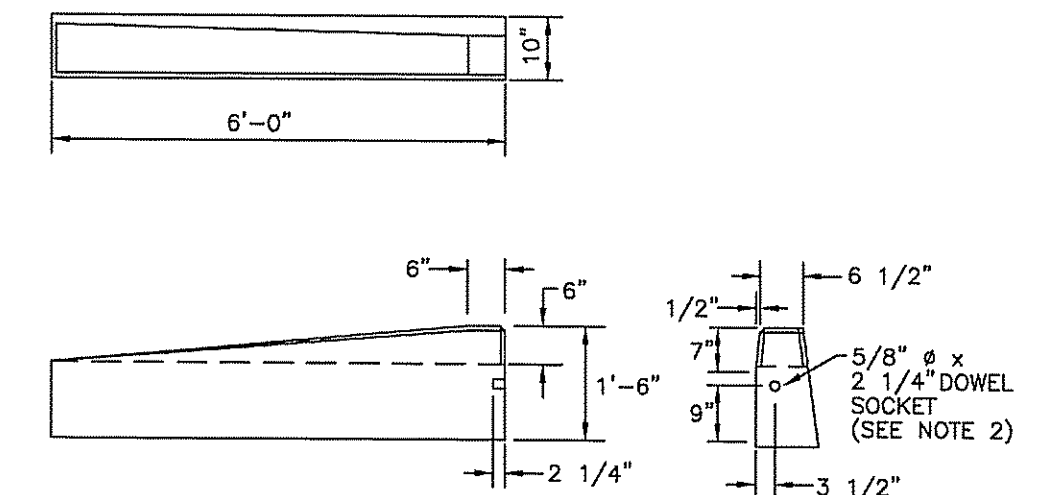


STONE RETAINING WALL (4' HIGH MAX.)
NOT TO SCALE



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

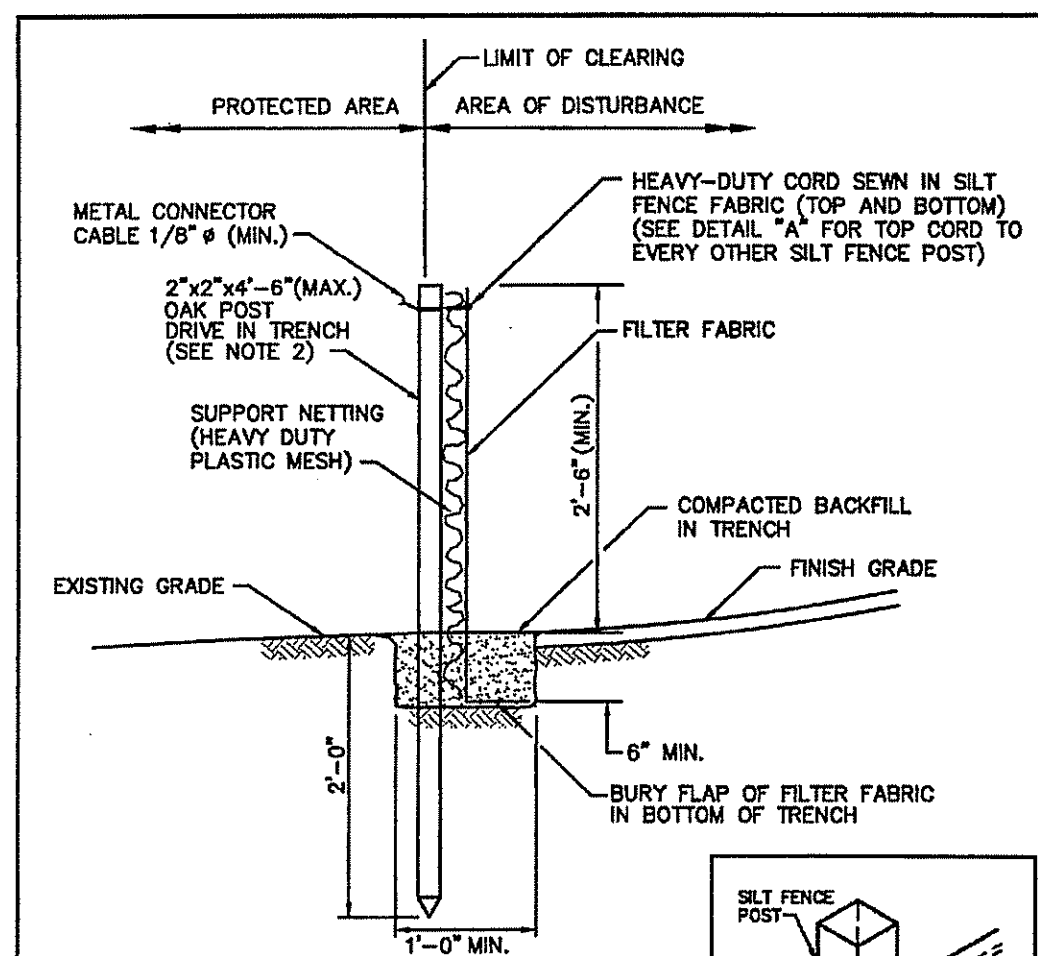
RHODE ISLAND DEPARTMENT OF TRANSPORTATION
 REVISIONS: NO. BY DATE
 1 M.P. Mar 05
 PRECAST CONCRETE APRON STONE (FOR ROUND CATCH BASIN)
 JAMES H. COLETTI, R.I. STANDARD 7.1.8
 JUNE 15, 1998



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

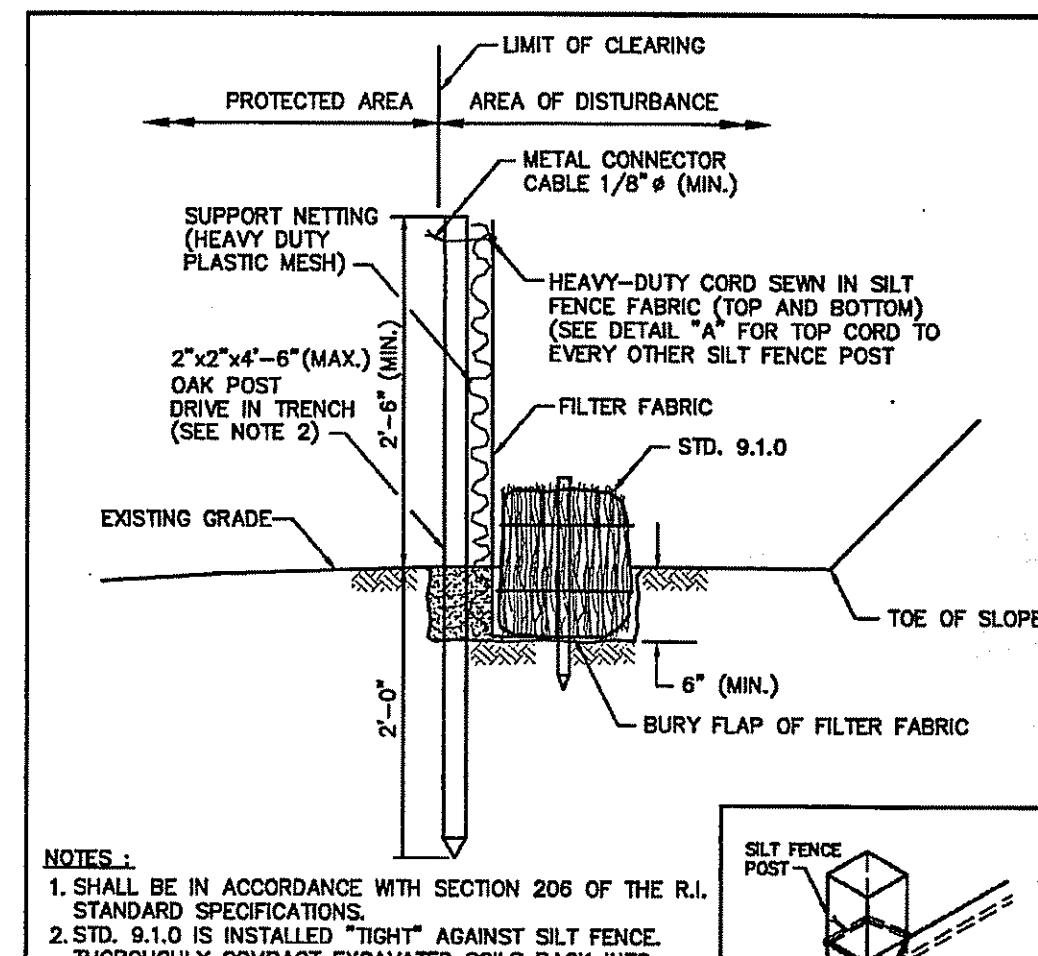
RHODE ISLAND DEPARTMENT OF TRANSPORTATION
 REVISIONS: NO. BY DATE
 1 M.P. Mar 05
 6" PRECAST CONCRETE TRANSITION CURB
 JAMES H. COLETTI, R.I. STANDARD 7.1.2
 JUNE 15, 1998

DEC 23 2013
 Office of Water Resources



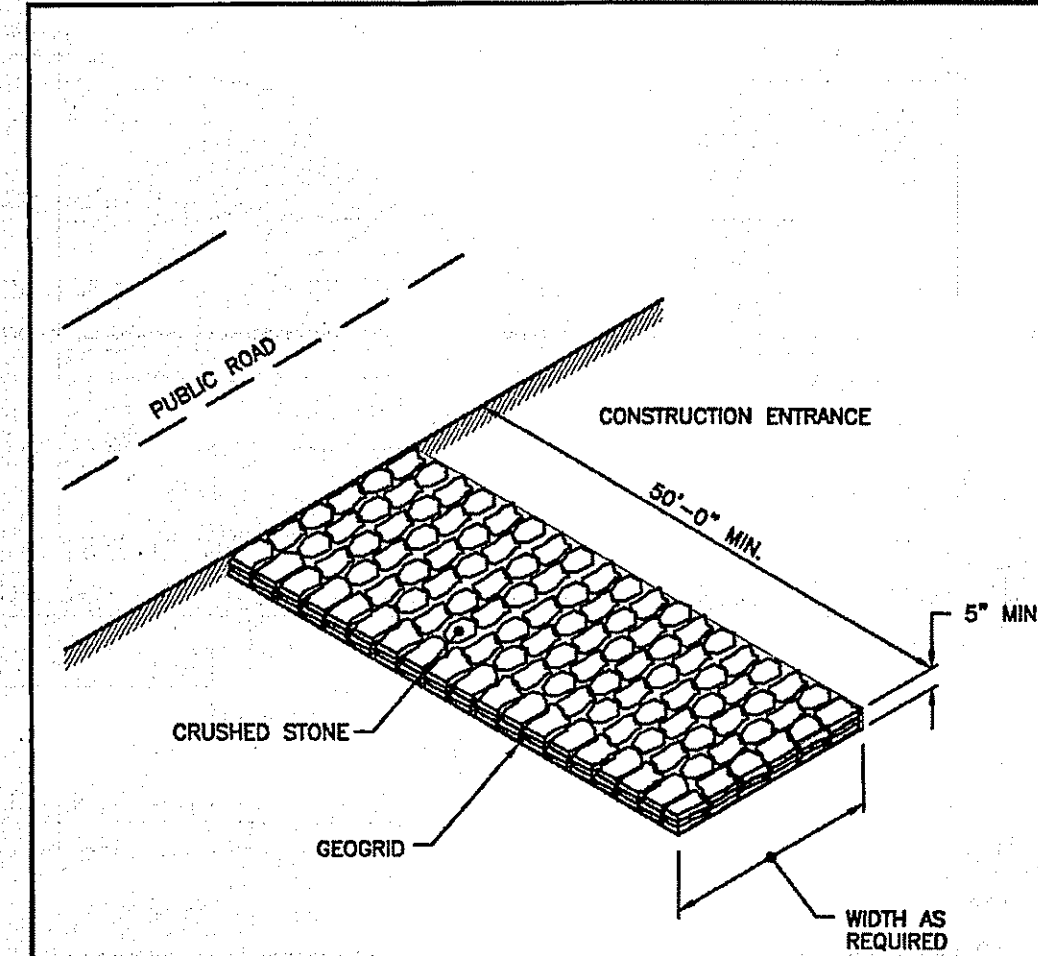
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2"x2"x4" OAK POSTS FOR SILT FENCE SHALL BE LOCATED 9'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
 REVISIONS: NO. BY DATE
 1 M.P. Mar 05
 SILT FENCE DETAIL
 JAMES H. COLETTI, R.I. STANDARD 9.2.0
 JUNE 15, 1998



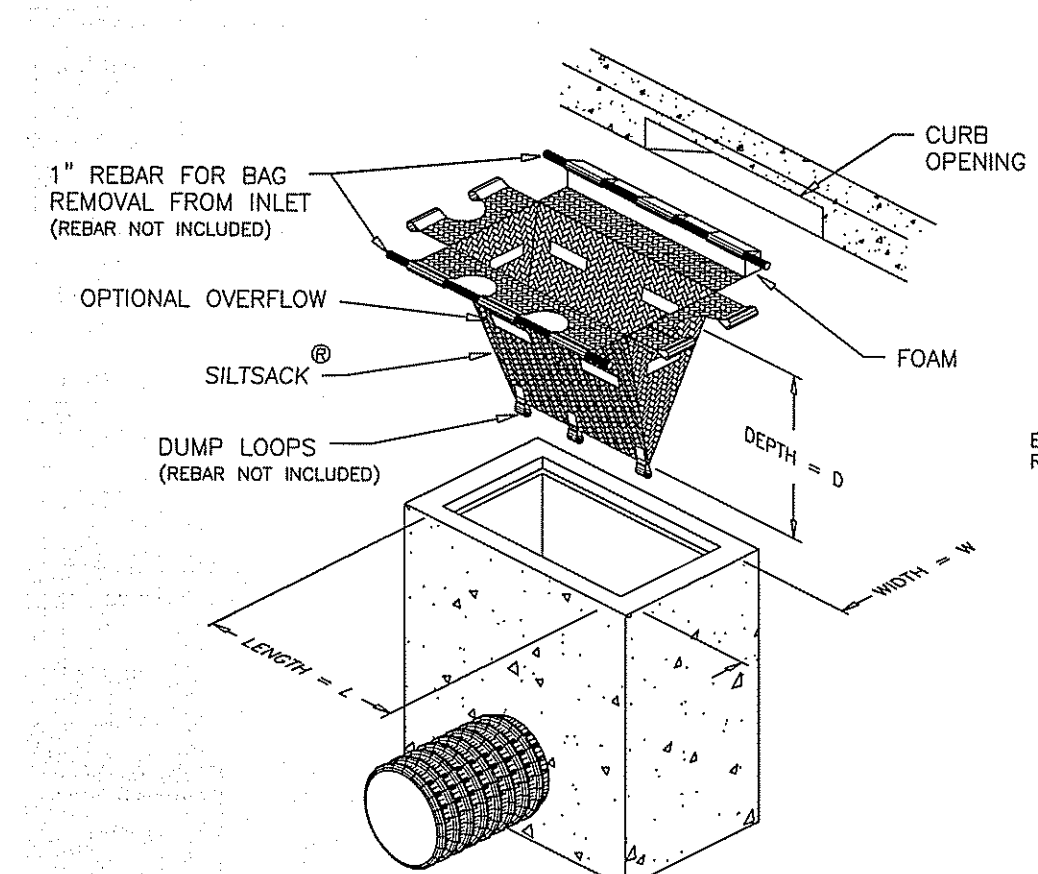
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. STD. 9.1.0 IS INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICE. SILT FENCE FABRIC SHALL NOT BE SLIT. STD. 9.1.0 POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC. 2"x2"x4" OAK POST FOR SILT FENCE SHALL BE LOCATED 9'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE AND BALED HAY SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
 REVISIONS: NO. BY DATE
 1 M.P. Mar 05
 BALED HAY EROSION CHECK AND SILT FENCE COMBINED
 JAMES H. COLETTI, R.I. STANDARD 9.3.0
 JUNE 15, 1998

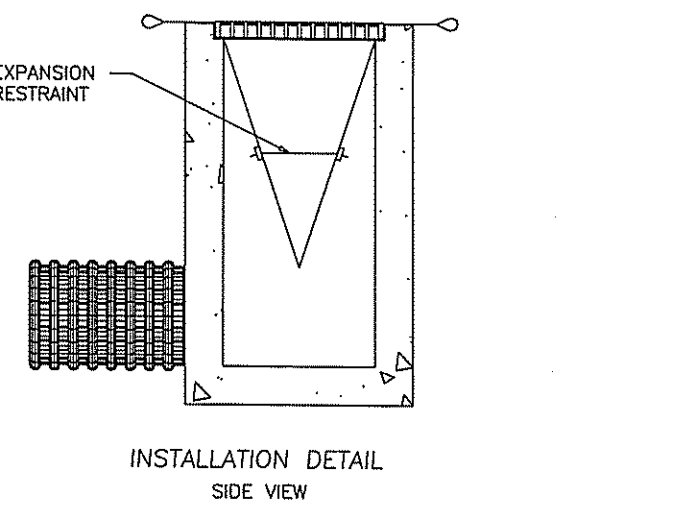


NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
 REVISIONS: NO. BY DATE
 1 M.P. Mar 05
 CONSTRUCTION ACCESS
 JAMES H. COLETTI, R.I. STANDARD 9.9.0
 JUNE 15, 1998



INLET PROTECTION DEVICE - SILT SACK
N.T.S.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PERMIT
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED JAN 02 2014 FILE # 04-0096
 NO CHANGES ALLOWED WITHOUT PERMITTING AGENCY APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

CURTIS RUOTOLO
 No. 8756
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

Advanced Civil Design, Inc.
 CIVIL ENGINEERS
 7 COUNTRYSIDE LANE
 SCITUATE, RI 02857
 PH: (401) 473-4404

NO.	DATE	REVISION
1	10/29/13	WETLAND PERMIT MODIFICATION SUBMISSION

PROJECT TITLE
 BURLINGAME ESTATES
 A.P. 49 LOT 161
 CEDAR FOREST ROAD
 SMITHFIELD, RI

OWNER/APPLICANT: John Mulhearn
 200 Metro Center Blvd.
 Warwick, RI 02886

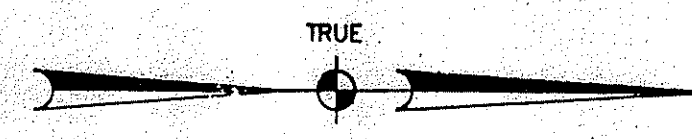
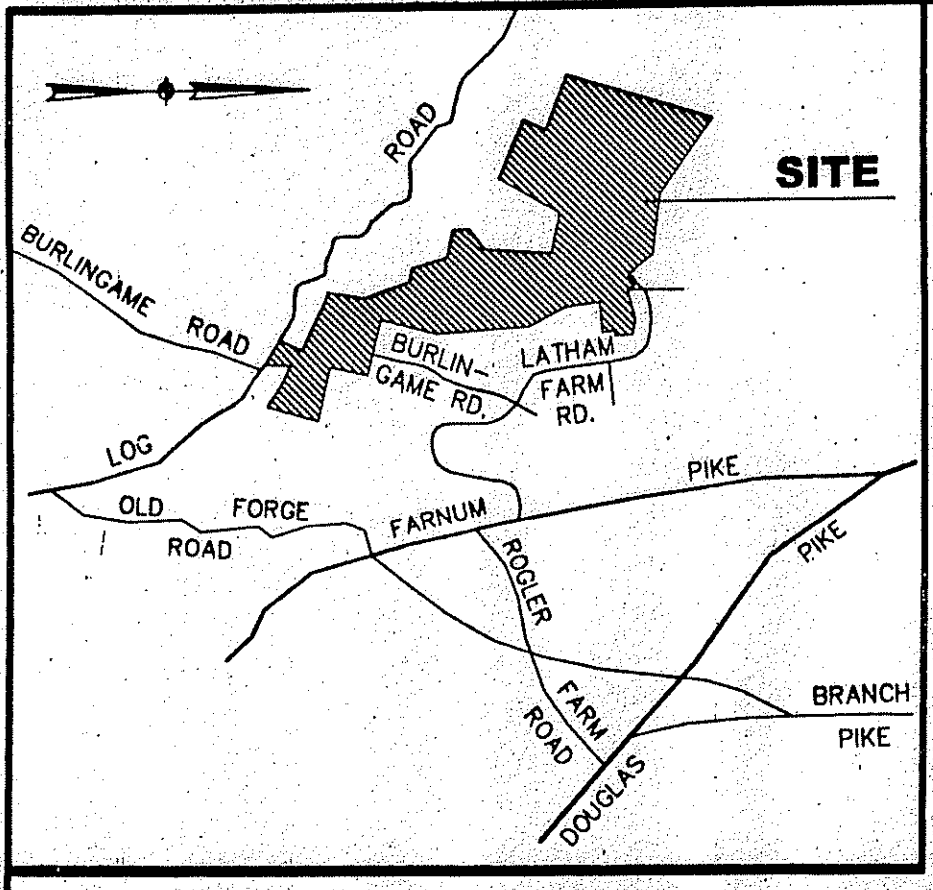
DRAWING TITLE
 DETAILS

DATE: SEPTEMBER 7, 2010 DESIGNED BY: C.S.R.
 SCALE: N.T.S. CHECKED BY: C.S.R.

DRAWING NO.

C-8

SHEET 8 OF 9



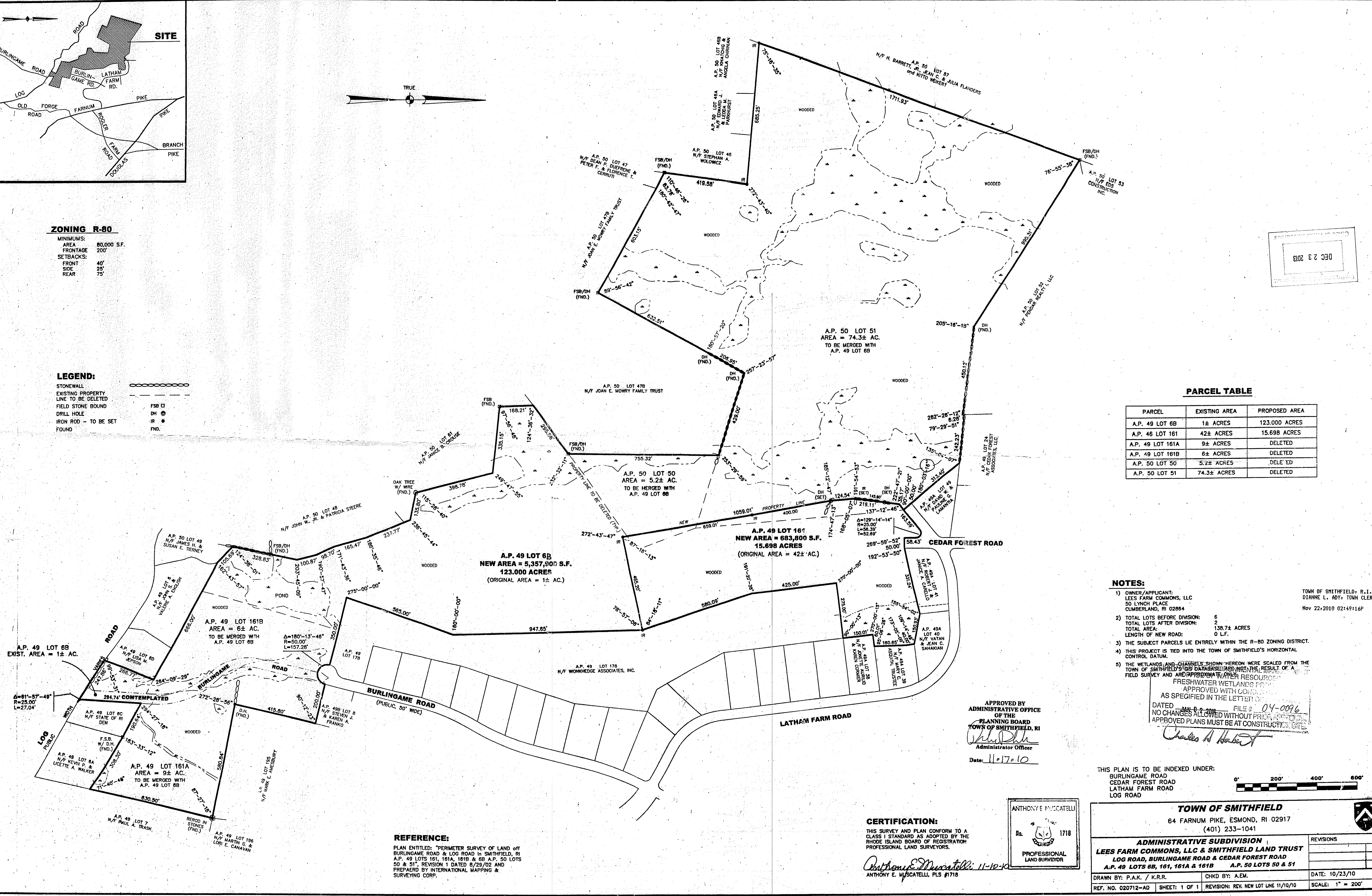
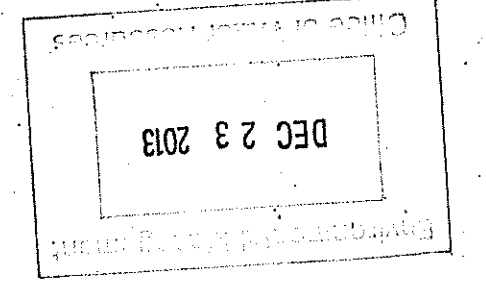
ZONING R-80

MINIMUMS:

AREA	80,000 S.F.
FRONTAGE	200'
SETBACKS:	
FRONT	40'
SIDE	25'
REAR	75'

LEGEND:

STONEWALL	-----
EXISTING PROPERTY LINE TO BE DELETED	-----
FIELD STONE BOUND	-----
DRILL HOLE	○
IRON ROD - TO BE SET	●
FOUND	○



PARCEL TABLE

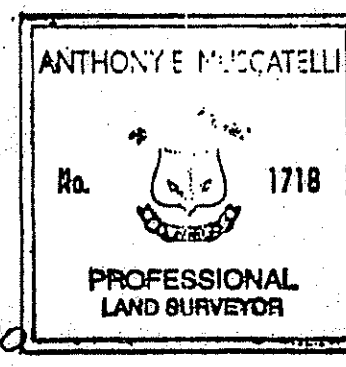
PARCEL	EXISTING AREA	PROPOSED AREA
A.P. 49 LOT 6B	1± ACRES	123.000 ACRES
A.P. 46 LOT 161	42± ACRES	15.698 ACRES
A.P. 49 LOT 161A	9± ACRES	DELETED
A.P. 49 LOT 161B	6± ACRES	DELETED
A.P. 50 LOT 50	5.2± ACRES	DELETED
A.P. 50 LOT 51	74.3± ACRES	DELETED

NOTES:

- OWNER/APPLICANT: LEES FARM COMMONS, LLC, 50 LYNCH PLACE, CUMBERLAND, RI 02864
- TOTAL LOTS BEFORE DIVISION: 6; TOTAL LOTS AFTER DIVISION: 2; TOTAL AREA: 138.7± ACRES; LENGTH OF NEW ROAD: 0 L.F.
- THE SUBJECT PARCELS LIE ENTIRELY WITHIN THE R-80 ZONING DISTRICT.
- THIS PROJECT IS TIED INTO THE TOWN OF SMITHFIELD'S HORIZONTAL CONTROL DATUM.
- THE WETLANDS AND CHANNELS SHOWN HEREON WERE SCALED FROM THE TOWN OF SMITHFIELD'S GIS DATABASES/AGENCIES. THE RESULT OF A FIELD SURVEY AND ARCHITECTURAL WATER RESOURCE REPORT IS SHOWN AS APPROVED WETLANDS PER AS SPECIFIED IN THE LETTER OF DATE: JAN 9 2010 FILE # 04-0096. NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL. APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

TOWN OF SMITHFIELD, R.I.
DIANNE L. ADY, TOWN CLERK
Nov 22, 2010 02:49:16P

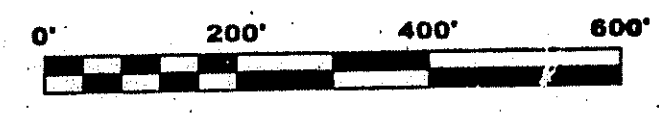
APPROVED BY
ADMINISTRATIVE OFFICE
OF THE
PLANNING BOARD
TOWN OF SMITHFIELD, RI
Charles A. Hackett
Administrator
Date: 11-17-10



CERTIFICATION:
THIS SURVEY AND PLAN CONFORM TO A CLASS I STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRAR PROFESSIONAL LAND SURVEYORS.

Anthony E. Muscatelli 11-10-10
ANTHONY E. MUSCATELLI, PLS #1718

THIS PLAN IS TO BE INDEXED UNDER:
BURLINGAME ROAD
CEDAR FOREST ROAD
LATHAM FARM ROAD
LOG ROAD



TOWN OF SMITHFIELD
64 FARNUM PIKE, ESMOND, RI 02917
(401) 233-1041

ADMINISTRATIVE SUBDIVISION
LEES FARM COMMONS, LLC & SMITHFIELD LAND TRUST
LOG ROAD, BURLINGAME ROAD & CEDAR FOREST ROAD
A.P. 49 LOTS 6B, 161, 161A & 161B A.P. 50 LOTS 50 & 51

DRAWN BY: P.A.K. / K.R.R.	CHKD BY: A.E.M.	DATE: 10/23/10
REF. NO. 020712-AD	SHEET: 1 OF 1	REVISION: REV. NEW LOT LINE 11/10/10

SCALE: 1" = 200'

REFERENCE:

PLAN ENTITLED: "PERIMETER SURVEY OF LAND OFF BURLINGAME ROAD & LOG ROAD IN SMITHFIELD, RI A.P. 49 LOTS 161, 161A, 161B & 6B A.P. 50 LOTS 50 & 51" REVISION 1 DATED 8/29/02 AND PREPARED BY INTERNATIONAL MAPPING & SURVEYING CORP.

RECEIVED
OCT 12 2010

Burlingame Estates

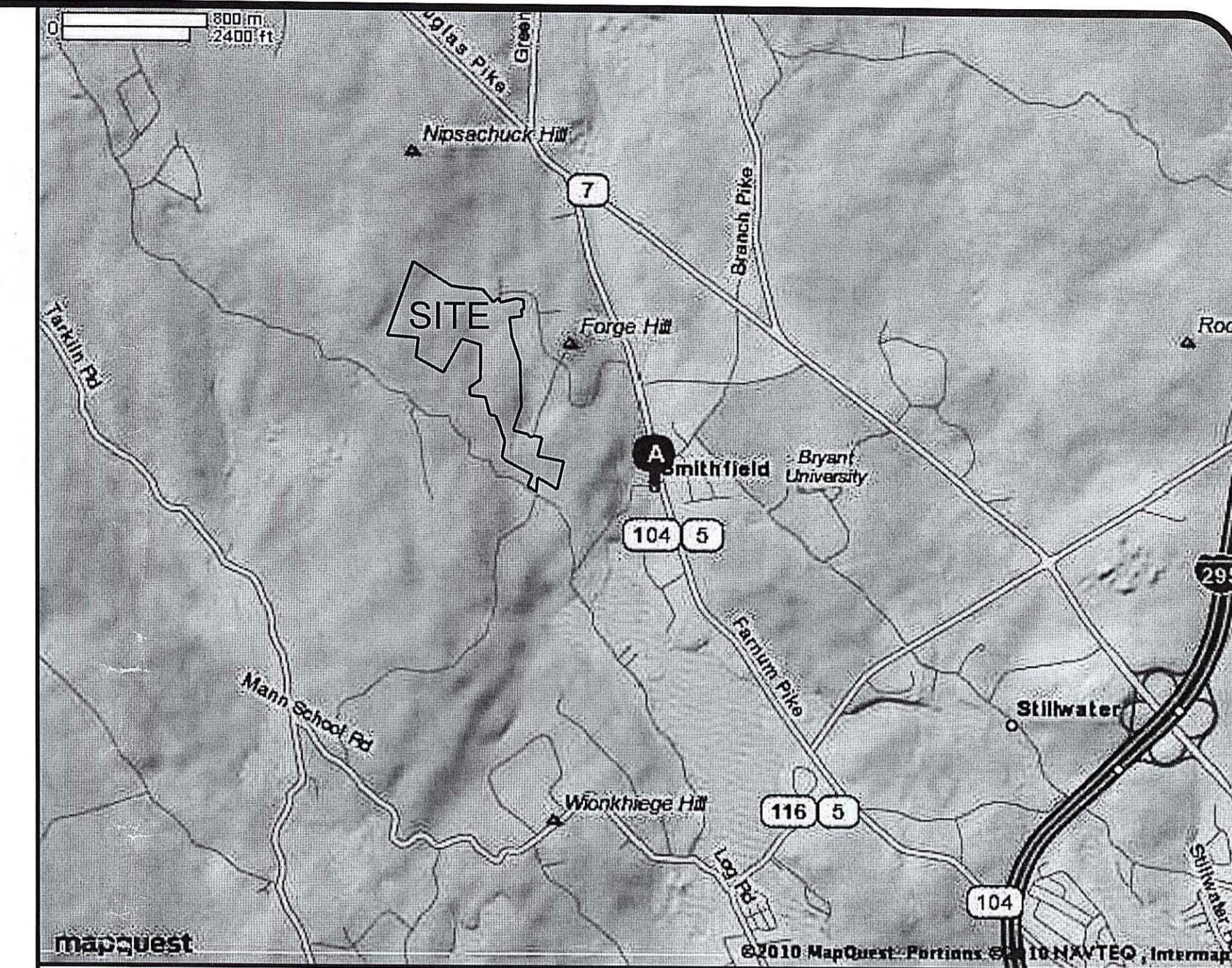
Residential Conservation Development

A.P. 49 Lot 6B, 161, 161A, & 161B

A.P. 50 Lots 50 & 51

Cedar Forest Road

Smithfield, Rhode Island



Locus Map



Aerial Map 1"=1000'

Sheet Index		
SHEET NO.	TITLE	DATE ISSUED
1	NOTES & LEGEND	10/5/2010
2	EXISTING CONDITIONS PLAN	10/5/2010
3	OVERALL SITE PLAN	10/5/2010
4	LAYOUT & MATERIALS PLAN	10/5/2010
5	CONSTRUCTION GRADING & DRAINAGE PLAN	10/5/2010
6	LOT GRADING PLAN	10/5/2010
7	UTILITY PLAN & PROFILE	10/5/2010
8	DETAILS	10/5/2010
9	DETAILS	10/5/2010
10	DETAILS	10/5/2010
11	LANDSCAPE PLAN & DETAILS	9/16/2010
12	* OVERALL RECORD PLAN	10/5/2010
13	* RECORD PLAN - LOT LAYOUT	10/5/2010

* NOT INCLUDED IN WETLANDS SUBMISSION

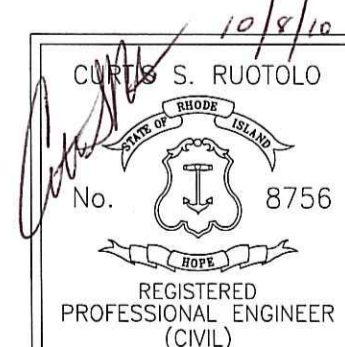
Owner/Applicant:

LEES FARM COMMONS, INC.
90 ORCHARD MEADOWS DRIVE
SMITHFIELD, RI 02917

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 19 2010 FILE # 04-0096
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

OCT 12 2010

Charles A. Haber



FINAL PLAN SET

Advanced Civil Design, Inc.
CIVIL ENGINEERS

7 COUNTRYSIDE LANE
SITUATE, RI 02857
PH: (401) 644-8656



Sequence & Staging of Land

Disturbing Activities

- 1) SURVEY AND STAKE THE PROPOSED ROAD CENTERLINE, DETENTION PONDS, STRUCTURES, AND LIMIT OF GRADING.
- 2) PLACE SEDIMENTATION BARRIERS (HAY BALES OR SILT FENCE) AS SHOWN ON THE PLANS AND AS STAKED OUT. THE FIELD CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS.
- 3) CLEAR AND GRUB ENTIRE RIGHT-OF-WAY AREA. HEALTHY TREES WITHIN THE RIGHT-OF-WAY WITHIN AND OUTSIDE THE PAVEMENT WIDTH MAY BE LEFT STANDING, PROVIDED TREES ARE NOT MORE THAN 5 FEET FROM THE RIGHT-OF-WAY LINE.
- 4) STRIP LOAM FROM ROADWAY AND DETENTION POND AREAS. STOCKPILE WITHIN APPROVED DISTURBANCE LIMITS. STOCKPILES SHALL BE SEEDED FOR STABILIZATION.
- 5) EXCAVATE, GRADE, LOAM, AND SEED DETENTION PONDS AS SHOWN ON PLAN. INSTALL ALL STRUCTURES AND EROSION CONTROL WITHIN POND AS SHOWN ON PLAN.
- 6) DIVERT ALL RUNOFF FROM DISTURBED AREAS TO DETENTION POND AREAS. (NO STORMWATER IS ALLOWED TO LEAVE THE SITE UNTIL ALL AREAS ARE STABILIZED, AND BINDER COURSE HAS BEEN PAVED.)
- 7) INSTALL UTILITIES AND DRAINAGE PIPE. (UNDERGROUND ELECTRIC AND GAS MUST BE COORDINATED WITH NATIONAL GRID FOR PLANS AND SPECIFICATIONS.)
- 8) ONCE ROAD BASE HAS BEEN APPROVED BY TOWN ENGINEER, FINE GRADING AND PAVING MAY BE ACCOMPLISHED.
- 9) INSPECT ALL DRAINAGE COMPONENTS. FLUSH PIPES AND REMOVE BUILT-UP SEDIMENT IN CATCH BASINS AND PONDS AS REQUIRED. RESEED DETENTION AREAS AS NECESSARY.
- 10) REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ONCE VEGETATION HAS BEEN ESTABLISHED.

General Contractor Notes & Requirements

1. THE CONTRACTOR IS TO NOTIFY DIG SAFE PRIOR TO CONSTRUCTION.
2. A PRE-CONSTRUCTION MEETING WITH THE TOWN SHALL BE COORDINATED THROUGH THE PLANNING DEPARTMENT PRIOR TO START OF ANY WORK.
3. CONTRACTOR TO OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS (IF APPLICABLE) PRIOR TO THE START OF CONSTRUCTION.
4. ALL WORK PERFORMED HEREIN SHALL BE GOVERNED BY THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION AND THE TOWN OF SMITHFIELD STANDARD SPECIFICATIONS AND DETAILS.
5. DRAINAGE PIPE TO BE HDPE (ADS N-12).
6. BOULDER WALLS TO BE 4 FEET HIGH MAX. WALLS > 4 FT. SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AND DRAWINGS PROVIDED TO TOWN ENGINEER.
7. ALL CATCH BASINS AND MANHOLES TO BE 4 FT DIAMETER UNLESS SPECIFIED OTHERWISE.
8. LOAM & SEED ALL DISTURBED AREAS. ADDITIONAL EROSION CONTROLS MAY BE REQUIRED BY THE PROJECT AND/OR TOWN ENGINEER.
9. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE. DEVIATIONS OR CHANGES WILL NOT BE ALLOWED UNLESS APPROVED BY THE PROJECT AND MUNICIPAL ENGINEER.
10. THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
11. METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS FOR THIS PROJECT SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE TOWN OF SMITHFIELD AND THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION.
12. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIALS SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
13. CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS, PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. ALL WATER, GAS, SEWER AND OTHER UTILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, ANY PAVEMENT, DRIVEWAYS, WALKS, WALLS, CURBS, ETC. THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION.
15. THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
16. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND TO TAKE WHATEVER STEPS NECESSARY TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS DILIGENTLY ATTEMPTED TO LOCATE AND INDICATE ALL EXISTING FACILITIES ON THESE PLANS; HOWEVER, THIS INFORMATION IS SHOWN FOR THE CONTRACTORS CONVENIENCE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES FOR EXACT LOCATION OF THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND REPLACE ANY AND ALL DAMAGED MADE TO UTILITIES BY THE CONTRACTOR.
17. A SOIL EROSION PERMIT IS REQUIRED FOR EACH INDIVIDUAL LOT CONSTRUCTION THROUGH THE SMITHFIELD ENGINEER'S OFFICE.
18. THIS SUBDIVISION HAS BEEN DESIGNED WITH ASSUMPTIONS OF HOUSE SIZES (2,076 S.F.) AND PROPOSED GRADES. IF A HOUSE SIZE VARIES FROM THIS PLAN, THE INDIVIDUAL DRAINAGE SYSTEMS SHOWN ON THE LOTS MAY INCREASE IN SIZE AND SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AT THE TIME OF SOIL EROSION APPLICATION. PROPOSED GRADES MAY CHANGE ON THE INDIVIDUAL LOTS AS WELL AT THE TIME OF SOIL EROSION APPLICATION.
19. FOUNDATION DRAINS MAY BE REQUIRED AND MUST BE SHOWN AT TIME OF SOIL EROSION FOR EACH INDIVIDUAL LOT.

Sanitary Sewer Notes:

- 1) ALL SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED SEWER AUTHORITY PLANS AND THE TOWN SMITHFIELD SEWER AUTHORITY "STANDARD SPECIFICATIONS AND DETAILS FOR THE INSTALLATION OF SEWER AND APPURTANCES BY PRIVATE DEVELOPERS."
- 2) EXISTING SANITARY SEWER FLOWS SHALL BE MAINTAINED WITHOUT INTERRUPTION DURING CONSTRUCTION. DRAIN LAYERS SHALL ONLY INSTALL SEWERS DURING THE NORMAL WORKING HOURS OF THE SMITHFIELD SEWER AUTHORITY.
- 3) PRECAST CONCRETE SECTIONS AND APPURTENANCES SHALL CONFORM TO ASTM C478-79.
- 4) GASKETS FOR PIPE TO MANHOLE CONNECTIONS SHALL CONFORM TO ASTM C923.
- 5) EXTERIOR SURFACES OF MANHOLE STRUCTURES AND APPURTENANCES SHALL BY GIVEN TWO (2) COATS OF BITUMINOUS WATERPROOFING.
- 6) MANHOLE BRICK TO CONFORM TO ASTM M32, AND AASHTO M91, RED BRICK.
- 7) STANDARD MANHOLE FRAMES AND COVERS TO BE LEBARON FOUNDRY MODEL LC326-200, WITH THE WORD "SEWER" CAST IN THE COVER.
- 8) ALL SEWER LATERALS ARE TO HAVE TEN (10) FEET OF HORIZONTAL CLEARANCE FROM WATER LINES, WHERE SEWER AND WATER CROSS, A MINIMUM OF EIGHTEEN (18) INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED.
- 9) ALL SEWER LATERALS ARE TO BE INSTALLED TO PROVIDE BASEMENT SEWER SERVICE.
- 10) ALL NON-PRESSURE SANITARY SEWER PIPES SHALL BE POLY VINYL CHLORIDE (PVC) PIPE AND SHALL CONFORM TO ASTM D-3034, SDR 35 & SCH 40 STANDARDS.
- 11) ALL EXCAVATIONS FOR THE INSTALLATION OF A BUILDING SEWER SHALL BE OPEN TRENCH WORK. PIPE LAYING AND BACKFILL SHALL BE PERFORMED IN ACCORDANCE WITH ASTM SPECIFICATIONS (C12-72) EXCEPT THAT NO BACKFILL SHALL BE PLACED UNTIL WORK HAS BEEN INSPECTED.
- 12) ALL BUILDING SEWER LINES SHALL BE OF 6-INCH DIAMETER AND BUILT WITH A MINIMUM DEPTH OF COVER OF 42 INCHES AND WIDTH OF TRENCH SHALL BE AT LEAST 24 INCHES.
- 13) ALL GRAVITY SEWER PIPE SHALL BE CONSTRUCTED ON A BED OF CRUSHED STONE AT LEAST 12 INCHES IN DEPTH. STONE SHALL BE INSTALLED BEFORE THE PIPE IS PLACED IN THE TRENCH AND THE PIPE SHALL BE COVERED WITH AT LEAST 12 INCHES OF CRUSHED STONE. NO BLOCKS OR STONES SHALL BE USED TO SUPPORT THE PIPE.
- 14) BUILDING SEWER JOINTS SHALL BE GASKETED AND WATERPROOF. NO CEMENT-MORTAR JOINTS WILL BE PERMITTED.
- 15) ALL JOINTS POLYVINYL CHLORIDE (PVC) PIPE OR BETWEEN SUCH PIPE SHALL BE MADE WITH APPROVED PREMOULDED GASKET JOINTS.
- 16) SEWER LATERALS SHALL BE INSTALLED TO THE PROPERTY LINES OF EACH LOT THE PROPOSED SEWER MAIN PASSES BY. THE ENDS OF ALL NEW SEWER SERVICES SHALL BE CAPPED OR PLUGGED AND SHALL BE MARKED AT THE PROPERTY LINE WITH A 1 FT. SQUARE STEEL PLATE BURIED 1 FT. BELOW GRADE IF NOT CONNECTED IMMEDIATELY.
- 17) THE SEWER AUTHORITY AND ENGINEERING DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF ANY WORK ON SEWER OR HOUSE CONNECTIONS. INSPECTION OF ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY TOWN OF SMITHFIELD SEWER CONSULTANT.
- 18) INSPECTION OF ALL SEWER SERVICES ON PRIVATE PROPERTY MUST BE COORDINATED WITH VEOLIA WATER PERSONNEL, 401-231-1506.
- 19) APPLICANT IS REQUIRED TO PROVIDE AS-BUILT PLANS TO THE SEWER AUTHORITY AND ENGINEERING DEPARTMENT UPON COMPLETION OF CONSTRUCTION. PRIOR TO FINAL ACCEPTANCE, AS-BUILT PLANS SHALL INCLUDE FIELD MEASUREMENTS OF ALL INSTALLED PIPE AND APPURTANCES, INCLUDING LENGTH, SLOPE, MANHOLE RIMS AND INVERTS, AS WELL AS SWING TIES/MEASUREMENTS, TO ALL MANHOLES, SEWER STUBS, AND LATERAL SERVICE CONNECTIONS. NO FLOW WILL BE ACCEPTED UNTIL A COMPLETION CERTIFICATE IS ISSUED.
- 20) ALL FILL AROUND NEW MANHOLES WILL BE SCREENED WITH NO STONES LARGER THAN A 2-INCH DIAMETER.
- 21) ALL NEW SEWER PIPES AND MANHOLES SHALL BE CLEANED AND TESTED PRIOR TO ACCEPTANCE. GRAVITY SEWER PIPES SHALL BE REQUIRED TO PASS BOTH LOW PRESSURE AIR AND DEFLECTION (I.E. MANDREL) TESTING. LOW PRESSURE SEWER PIPING SHALL BE REQUIRED TO PASS A LOW PRESSURE (I.E. HYDROSTATIC) TEST. GRAVITY SEWER MANHOLES SHALL BE REQUIRED TO PASS A VACUUM TEST.
- 22) ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY A DRAINLAYER LICENSED IN THE STATE OF RHODE ISLAND AND THE TOWN OF SMITHFIELD.
- 23) ALL CONSTRUCTION MATERIALS, AS WELL AS ALL MATERIAL SHOP DRAWINGS AND MANUFACTURERS DATA SHEETS SHALL BE REVIEWED AND APPROVED BY THE SEWER AUTHORITY OR ITS REPRESENTATIVE PRIOR TO FABRICATION AND INSTALLATION, AND SUBMITTED TO THE SMITHFIELD SEWER AUTHORITY AND TOWN ENGINEER PRIOR TO CONSTRUCTION.
- 24) THE CONTRACTOR SHALL CONFINE HIS CONSTRUCTION OPERATIONS AND ACTIVITIES TO WITHIN THE STREET LINES, EASEMENT AND/ OR RIGHT-OF-WAY, AS SHOWN ON THE DRAWINGS.
- 25) IT IS UNDERSTOOD THAT "FLUSHING MANHOLE" OR "FLUSHING CONNECTION" REFER TO THE "CLEANOUT MANHOLE" OR "CLEANOUT" AS SHOWN ON THE PLANS.
- 26) INSPECTION OF ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY TOWN OF SMITHFIELD SEWER CONSULTANT. APPLICANT SHALL PROVIDE SCHEDULE FOR CONSTRUCTION AS SOON AS POSSIBLE TO ALLOW FOR DEVELOPMENT OF INSPECTION FEE TO BE PAID BY APPLICANT DIRECTLY TO TOWN OF SMITHFIELD, ENGINEERING DEPARTMENT. UPON PAYMENT OF FEE, COMMENCEMENT OF CONSTRUCTION INSPECTION REQUIRES MINIMUM NOTIFICATION OF 48-HOURS.
- 26) APPLICANT IS RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS FROM LOCAL, STATE, AND/OR FEDERAL AGENCIES WITH REGULATORY JURISDICTION OVER THE PROPOSED WORK. ALL SEWER CONSTRUCTION SHALL BE PERFORMED BY A DRAINLAYER LICENSED IN THE STATE OF RHODE ISLAND AND THE TOWN OF SMITHFIELD.

ADS-N12 (HDPE) Pipe Installation Notes

- 1) FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A STABLE DEPTH AND REPLACE WITH A FOUNDATION OF CLASS II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
- 2) BEDDING: SUITABLE MATERIAL SHALL BE CLASS I INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. UNLESS OTHERWISE SPECIFIED BY THE PROJECT ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 4" TO 24" DIA. & 6" FOR 30" TO 60" DIA.
- 3) HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- 4) UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL DIA. (IN)	MIN. TRENCH WIDTH (IN)
2"	23"
8"	25"
10"	28"
12"	31"
15"	34"
18"	39"

- 5) MINIMUM COVER: RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF PIPE TO THE GROUND SURFACE.
- | SURFACE LIVE LOADING CONDITION | MINIMUM RECOMMENDED COVER (IN) |
|--------------------------------|--------------------------------|
| H25 (FLEXIBLE PAVEMENT) | 12" |
| H25 (RIGID PAVEMENT) | 12" |
| HEAVY CONSTRUCTION | 48" |

6) SEE DETAIL SHEETS FOR ADDITIONAL NOTES ON REQUIRED MATERIAL FOR BACKFILL.

Structural Measures

- 1) DETENTION POND SYSTEMS ARE USED TO CONTROL RUNOFF. DISCHARGE OUTLETS ARE PROTECTED WITH RIP-RAP APRONS AND/OR LEVEL SPREADERS.
- 2) A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED IN THE BASIN IMMEDIATELY AFTER GRADING. THE SEEDING EXTENT TO AT LEAST THE DESIGN TOP WIDTH AND INCLUDE ANY OTHER AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO WITHIN THE LIMIT OF WORK AS SHOWN ON THE PLANS.
- 3) VIGOROUS VEGETATION SHALL BE MAINTAINED BY APPLYING LIME AND FERTILIZER. BARE OR ERODED AREAS SHALL BE IMMEDIATELY REPAIRED AND RESEEDED BY THE CONTRACTOR AND AT THE DIRECTION OF THE TOWN ENGINEER.
- 4) THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF THE PONDS DURING AND UP TO A YEAR AFTER COMPLETION OF CONSTRUCTION. THE TOWN OF SMITHFIELD IS RESPONSIBLE THEREAFTER. ANY UNDEVELOPED VEGETATION COVER IN THE PONDS WITHIN A YEAR OF THE PROJECT COMPLETION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL RESEED ANY UNSTABILIZED AREAS AFTER A FULL GROWING SEASON AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 5) THE GRASS WITHIN THE PONDS SHALL BE ALLOWED TO GROW BETWEEN 2' - 10'.
- 6) THE DETENTION PONDS SHALL BE BUILT TO CONTROL RUNOFF FOR THE 2-YEAR THROUGH 100-YEAR STORM FREQUENCIES.
- 7) SIDE SLOPES OF THE PONDS SHALL BE SEEDED. THE SIDE SLOPES SHALL BE 2:1 MAXIMUM WITH AN ENCLOSED FENCE.
- 8) ALL EMBANKMENTS OF THE PONDS SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH R.I. STANDARD SPECIFICATION SECTION 202.
- 9) RIP-RAP APRONS SHALL BE INSTALLED AT THE OUTLETS OF ALL CULVERTS. THE EMERGENCY SPILLWAY SHALL BE PROTECTED BY RIP-RAP DOWNSTREAM AND UPSTREAM.
- 10) RIP-RAP APRONS SHALL BE INSPECTED SEMIANNUALLY AND AFTER MAJOR STORMS. IF REPAIRS ARE NEEDED, THEY SHALL BE ACCOMPLISHED IMMEDIATELY.
- 11) THE CONSTRUCTION SUPERINTENDENT SHALL HAVE THE OVERALL RESPONSIBILITY FOR STRUCTURAL MEASURES IMPLEMENTED AND FOR SEEING THAT APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
- 12) REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY USDA SOIL CONSERVATION SERVICE 1989, AS A GUIDE.

Establishment of Vegetative Cover

- 1) SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.
- 2) ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED OR PROTECTED.
- 3) THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH RHODE ISLAND'S STANDARD SPECIFICATION, M.23.
- 4) THE GENERAL DESIGN MIX FOR REGRADING AREAS SHALL BE COMPRISED OF THE FOLLOWING:

TREE	LBS./ACRE
CREeping RED FESCUE	15
KENTUCKY BLUE GRASS	75
PERENNIAL RYE GRASS	5

- 5) EARLY SPRING OR LATE SUMMER SEEDING IS RECOMMENDED. LIME AND FERTILIZE AS REQUIRED BY SOIL TESTING TO COMPLEMENT OR UPGRADE EXISTING CONDITIONS. THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
- 6) TEMPORARY TREATMENTS SHALL CONSIST OF NORTH AMERICAN GREEN EROSION CONTROL BLANKETS OR HAY, STRAW OR FIBER MULCH. THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 2 TONS/ACRE.
- 7) ALL HAY BALES OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
- 8) ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 202.
- 9) STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAY. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED. STOCKPILE TO BE SURROUNDED BY HAYBALES.
- 10) THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE.
- 11) ALL AREAS DISTURBED BY POND CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. PERMANENTLY SEEDED AREAS SHALL BE PROTECTED DURING ESTABLISHMENT WITH MULCH. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEEDED AS NECESSARY.
- 12) REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK" PREPARED BY THE USDA SOIL CONSERVATION SERVICE 1989, AS A GUIDE.
- 13) MAXIMUM GRADED SLOPE WITHIN SUBDIVISION TO BE 3:1, UNLESS SPECIFIED OTHERWISE BY WHICH ADDITIONAL STABILIZATION METHODS SHALL BE EMPLOYED.
- 14) IF AND WHEN REQUIRED, TEMPORARY HAY MULCH TO BE TACKED IN PLACE WITH N/LOAN MESH NETTING.

Sediment Control Program

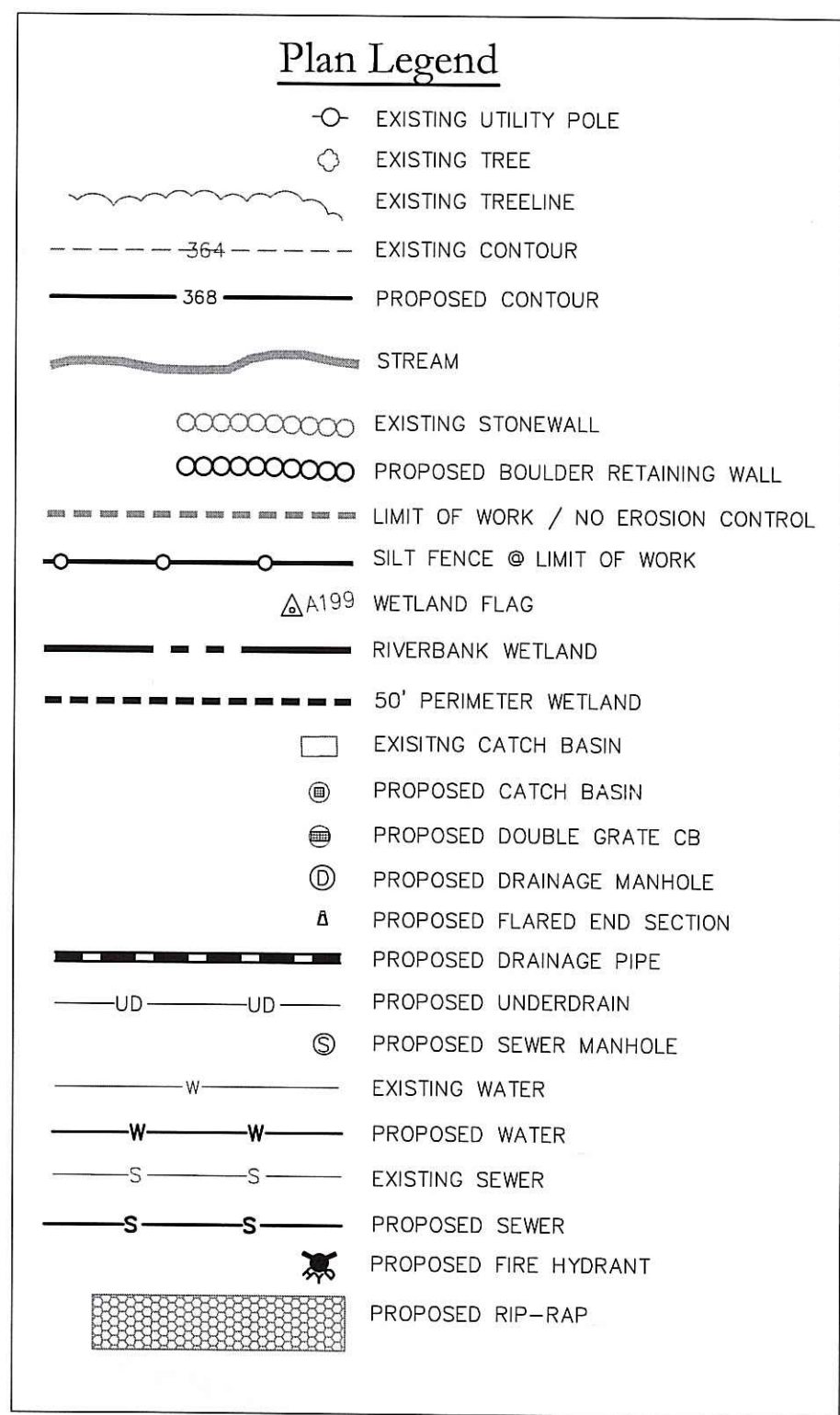
- 1) DISTURBED AREAS WHICH ARE PARTICULARLY SENSITIVE TO EROSION SHALL RECEIVE A CRUSHED STONE OR SHARP ANGULAR RIPRAP TREATMENT IF OTHER METHODS OF STABILIZATION ARE UNSUCCESSFUL.
- 2) BANKS OR SLOPES NOT RECEIVING RIP RAP SHALL BE SEEDED AND PROTECTED WITH FIBER MULCH.
- 3) DURING CONSTRUCTION, THE CONTRACTOR AND OR THE DEVELOPER SHALL BE RESPONSIBLE FOR UTILIZING BEST MANAGEMENT PRACTICES TO CONTROL ENVIRONMENTAL DAMAGE THAT COULD RESULT FROM UNCHECKED STORMWATER RUNOFF.
- 4) SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED PERIODICALLY AND MAINTAINED REGULARLY. SPECIAL ATTENTION SHOULD BE GIVEN AFTER A HEAVY OR PROLONGED RAINFALL.
- 5) CARE SHALL BE SO AS NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECT TO STORM WATER FLOWAGE.
- 6) ADDITIONAL HAYBALES, SILT FENCE OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
- 7) SEDIMENTATION TRAPS SHALL BE PROVIDED AND MAINTAINED AT ALL DRAINAGE STRUCTURES DURING CONSTRUCTION.
- 8) REFERENCE THE "RHODE ISLAND EROSION AND SEDIMENT CONTROL HANDBOOK" (1989) PREPARED BY THE RI DEPT. OF ENVIRONMENTAL MANAGEMENT, RI STATE CONSERVATION COMMISSION AND THE U.S. DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE AS A PRACTICAL

Nonstructural Measures

- 1) CONSTRUCTION TRAFFIC SHALL BE LIMITED TO ACCESS ROADS, DRAINAGE EASEMENTS AND AREAS TO BE GRADED.
- 2) A STONE STABILIZATION PAD IS LOCATED AT THE SITE EXITS TO REDUCE THE TRACKING OR FLOWING OF SEDIMENTS ONTO PUBLIC RIGHT-OF-WAY.
- 3) THE EXITS SHALL BE MAINTAINED BY THE CONTRACTOR. THE MAINTENANCE SHALL INCLUDE TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND OR AS DIRECTED BY THE ENGINEER. ALL SEDIMENTS SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY, MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
- 4) TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCK PILE LOCATION SHALL BE SUBJECT TO APPROVAL BY THE PROJECT ENGINEER. A SEDIMENT BARRIER SHOULD SURROUND ALL TOPSOIL STOCKPILES.
- 5) HAY BALES OR SILT FENCE SHALL BE INSTALLED DOWNSTREAM OUTSIDE THE LIMITS OF ANY PROPOSED CONSTRUCTION AS SHOWN ON THE SITE PLANS AND PRIOR TO THE COMMENCEMENT OF THE PROPOSED ALTERATIONS.
- 6) SILT FENCE AND HAY BALES SHALL BE MAINTAINED BY THE CONTRACTOR. INSPECTIONS SHALL BE MADE AFTER EACH STORM EVENT AND REPAIRS OR REPLACEMENTS WHEN NECESSARY. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED.
- 7) THE HAY BALES OR SILT FENCE SHALL BE CHECKED WEEKLY BY THE CONTRACTOR FOR UNDERMINING OR DETERIORATION.
- 8) THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION OF NON-STRUCTURAL MEASURES AND FOR SEEING THAT APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
- 9) REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY USDA SOIL CONSERVATION SERVICE 1989, AS A GUIDE.

Maintenance: Short Term / Long Term

- 1) ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL CHECK REGULARLY ALL SEEDED AREAS TO SEE THAT A GOOD STAND IS MAINTAINED.
- 2) THE CONTRACTOR MUST REPAIR OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE.
- 3) ALL HAY BALES, TEMPORARY TREATMENTS (HAY, STRAW, ETC.) AND TEMPORARY PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
- 4) THE CONTRACTOR SHALL MAINTAIN ALL TOP SOIL STOCKPILES AND SEDIMENT BARRIERS THROUGHOUT CONSTRUCTION. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT SEDIMENTS DO NOT SPILL OVER THE SEDIMENT BARRIER.
- 5) THE HAY BALES OR SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. CONTRACTOR SHALL REPAIR OR REPLACE THE HAYBALES AS NECESSARY. CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED IN WITH SEDIMENTS.
- 6) THE STONE STABILIZATION PADS AT THE SITE ENTRANCE SHALL BE MAINTAINED BY THE CONTRACTOR. THE MAINTENANCE SHALL INCLUDE TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND OR AS DIRECTED BY THE ENGINEER. ALL SEDIMENTS SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
- 7) THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF THE PONDS DURING AND UP TO A YEAR AFTER COMPLETION OF CONSTRUCTION. MAINTENANCE SHALL INCLUDE RESEEDING ANY UNDEVELOPED AREAS AFTER A FULL GROWING SEASON AT NO ADDITIONAL EXPENSE. REMOVING ACCUMULATED SILT OVER 3" IN THE PONDS, AND MAINTAINING THE GRASS TO A GROWING HEIGHT BETWEEN 2' - 10". EXCAVATION OF SILT SHALL BE MANUAL WITH A SHOVEL AND WHEELBARROW ONLY. REMOVE ALL WOODY VEGETATION FROM POND EMBANKMENTS.
- 8) THE CONTRACTOR SHALL INSPECT RIP-RAP APRONS AFTER EACH STORM AND REPAIR AS NECESSARY.
- 9) THE CONTRACTOR SHALL MAINTAIN THE DRAINAGE SYSTEM THROUGHOUT CONSTRUCTION. THE ACCUMULATED SEDIMENTS IN THE CATCH BASINS SHALL BE REMOVED AND DRAINAGE PIPES FLUSHED BY THE CONTRACTOR AT THE END OF CONSTRUCTION.
- 10) THE TOWN OF SMITHFIELD IS RESPONSIBLE FOR THE LONG TERM MAINTENANCE OF ALL DETENTION PONDS, ALL DRAINAGE SYSTEM COMPONENTS WITHIN THE RIGHT-OF-WAY SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE TOWN ACCEPTS THE ROAD. THE DRAINAGE SYSTEMS SHALL BE CHECKED SEMI-ANNUALLY AND ACCUMULATED SEDIMENTS SHALL BE REMOVED WHEN THE EXCEED 3" DEPTH OR EVERY 10 YEARS, WHICHEVER COMES FIRST. CATCH BASIN SUMP SHALL BE CHECKED ANNUALLY AND SEDIMENTS SHALL BR REMOVED IF THEY EXCEED 0.5' OR 10 YEARS, WHICHEVER COMES FIRST.
- 11) THE TOWN OF SMITHFIELD SHALL CHECK THE RIP-RAP APRONS AND EMERGENCY OUTLETS AFTER MAJOR STORMS AND AN ANNUAL BASIS. REPAIRS SHALL BE PERFORMED IMMEDIATELY AS CONDITIONS WARRANT.
- 12) THE PONDS SHALL BE MAINTAINED BY THE TOWN OF SMITHFIELD STARTING 1 YEAR FROM THE DATE OF THE ACCEPTANCE OF THE ROADWAY AND ALL OTHER IMPROVEMENTS. THE TOWN SHALL MAINTAIN A GOOD VEGETATIVE COVER (GRASS BETWEEN 2'-10" OR VEGETATION AS SPECIFIED). BOTTOM OF PONDS SHALL BE INSPECTED ON A BIENNIAL BASIS AND ACCUMULATED SEDIMENTS SHALL BE REMOVED WHEN THEY REACH A 3' DEPTH OR EVERY 10 YEARS, WHICHEVER COMES FIRST.
- 13) ALL DETENTION POND BOTTOMS AND SIDE SLOPES SHOULD BE INSPECTED IN THE FALL AND SPRING TO INSURE PROPER COVER. AREAS SUBJECT TO EROSION SHOULD BE REPAIRED AND RESEEDED.
- 14) DETENTION POND BOTTOMS AND SIDE SLOPES SHOULD BE MOWED A MINIMUM OF TWICE PER YEAR AND INSPECTED FOR WOODY GROWTH. WOODY PLANTS SHOULD BE REMOVED FROM THE DETENTION BASIN BERM DURING MOWING OPERATION.
- 15) ALL CONTRIBUTING CATCH BASINS AND MANHOLE SUMPS SHOULD BE INSPECTED AND CLEANED ONCE PER YEAR. ALL REMOVED SOILS MUST BE DISCARDED AT AN APPROVED SITE.
- 16) THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR THE MAINTENANCE PROGRAM DURING THE CONSTRUCTION PHASE. THE SUPERINTENDENT SHALL SEE THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
- 17) AFTER THE FIRST YEAR AND ACCEPTANCE BY THE TOWN, THE TOWN OF SMITHFIELD SHALL HAVE OVERALL RESPONSIBILITY FOR IMPLEMENTING THE MAINTENANCE PROGRAM.
- 18) CONSTRUCTION OF ALL DRAINAGE PONDS SHALL BE SUPERVISED BY A PROFESSIONAL ENGINEER. A REPORT AND PLAN OF AS-BUILT CONSTRUCTION SHALL BE MADE AVAILABLE TO THE TOWN ENGINEER.

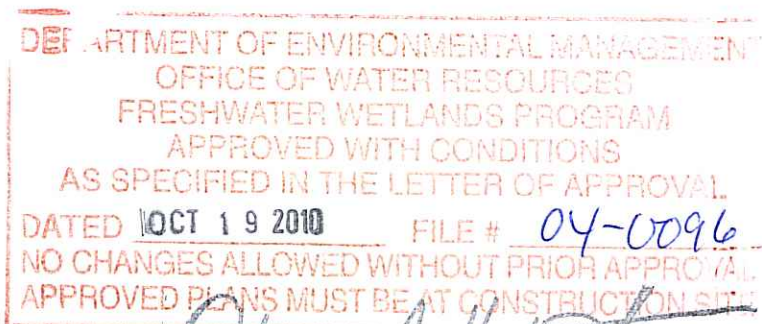


Dimensional Requirements

CONSERVATION DEVELOPMENT -	SINGLE FAMILY DWELLINGS: PUBLIC SEWER AND WATER
MIN. BUILDABLE LOT AREA	20,000 S.F.
MIN. LOT FRONTAGE & WIDTH	80 FT.
MIN. FRONT YARD SETBACK	25 FT.
MIN. SIDE YARD SETBACK	16 FT.
MIN. REAR YARD SETBACK	30 FT.
MAX. BUILDING COVERAGE	25 FT.

Smithfield Water Notes

- 1) ALL INSTALLATION, JOINTS, CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO TOWN OF SMITHFIELD WATER SUPPLY BOARD REQUIREMENTS, AWWA STANDARDS AND GOVERNMENTAL REQUIREMENTS.
- 2) ALL FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT CLASS 350 CEMENT MORTAR LINED COMPACT STYLE (BY AMERICAN MANUFACTURER ONLY). FITTINGS SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C153/A21.53. MECHANICAL JOINTS SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C111/A21.11.
- 3) WATER PIPE SHALL BE DOUBLE CEMENT MORTAR LINED DUCTILE IRON PIPE C152 AND SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C151/A21.51.
- 4) CONSTRUCTION SHALL INCLUDE ALL PIPE, JOINTS, BENDS, TEES, FITTINGS, THRUST BLOCKS, SERVICE CONNECTIONS AND ALL MISCELLANEOUS ITEMS REQUIRED TO CONSTRUCT THE PROPOSED SYSTEM.
- 5) CONCRETE THRUST, ANCHOR, OR BEARING BLOCKS SHALL BE INSTALLED IN LOCATIONS INDICATED AND AT ALL BENDS, FITTINGS, ELBGS, ETC. WHEN A THRUST BLOCK CANNOT BE PLACED AGAINST UNDISTURBED EARTH, A REACTION BLOCK SUBSTITUTE SHALL BE DESIGNED AND SUBMITTED TO THE ENGINEER FOR APPROVAL.
- 6) PRESSURE AND LEAKAGE TESTS AND DISINFECTING PIPES SHALL BE PERFORMED BY THE CONTRACTOR IN CONFORMANCE TO AMERICAN WATER WORKS ASSOCIATION (AWWA) RECOMMENDATIONS, SMITHFIELD WATER SUPPLY BOARD REQUIREMENTS, AND GOVERNMENTAL AGENCIES HAVING JURISDICTION.
- 7) ALL FITTINGS, PIPE, JOINTS, ETC. SHALL BE DESIGNED FOR 1.5 TIMES WORKING PRESSURE BUT NOT LESS THAN 150 PSI PIPE SIZES SHOWN ON THE PLANS ARE SUBJECT TO CHANGE UPON REVIEW BY THE SMITHFIELD WATER SUPPLY BOARD.
- 8) WATER PIPE SHALL TYPICALLY BE LOCATED AT LEAST TEN (10) FEET HORIZONTALLY FROM SEWER PIPE, AND AT A MINIMUM DEPTH OF COVER EQUAL TO 5'. WHERE A NEW WATER MAIN IS LESS THAN 18 INCHES CLEARANCE ABOVE A SEWER OR WHERE A WATER MAIN PASSES BENEATH A SEWER OR STORM DRAIN, ENCASE THE SEWER OR DRAIN IN 6" OF CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING WATER MAIN.
- 9) ALL SYSTEM COMPONENTS AND CONSTRUCTION METHODS, SUCH AS PIPE, THRUST BLOCKS, FITTINGS, CASTINGS, ETC. SHALL BE SUBMITTED TO THE SMITHFIELD WATER SUPPLY BOARD AND ENGINEER FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION. THIS SUBMISSION SHALL INCLUDE MANUFACTURER'S LITERATURE, SHOP DRAWINGS, PROPOSED CONSTRUCTION METHODS, ETC.
- 10) WATER LINE TRENCH TO BE AWWA TYPE 5. A METALIZED DETECTABLE IDENTIFICATION TAPE 2" IN WIDTH, BLUE IN COLOR AND PRINTED WITH "CAUTION WATERLINE BURIED BELOW" SHALL BE UTILIZED OVER ALL MAINS. TAPE SHALL BE SET AT APPROXIMATELY 1'-0" BELOW FINISHED GRADE.
- 11) AT THE END OF EACH PHASE OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL A GATE VALVE (OPEN LEFT), ONE LENGTH OF PIPE, AN END CAP, AND A 2-INCH BLOW-OFF ASSEMBLY.
- 12) HOMES MORE THAN 100 FEET FROM THE PROPERTY LINE ARE REQUIRED TO INSTALL METER PITS. METER PITS MUST BE JUST INSIDE THE PROPERTY LINE ON THE HOMEOWNER'S PROPERTY AND SHALL MEET THE SW8 STANDARD.
- 13) WATER SHUTOFF VALVES SHALL BE LOCATED AT THE PROPERTY LINE FOR EACH LOT.



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 SOUTHADE, RI 02857
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NO.	DATE	REVISION

BURLINGAME ESTATES

CEDAR FOREST ROAD
 SMITHFIELD, RI

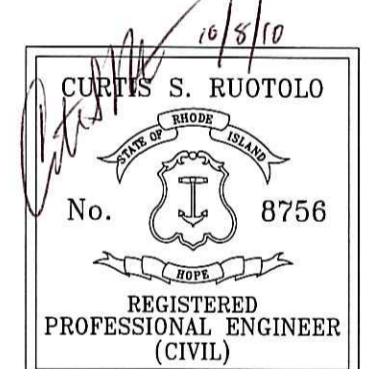
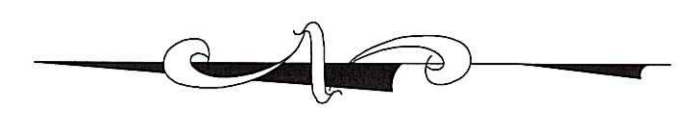
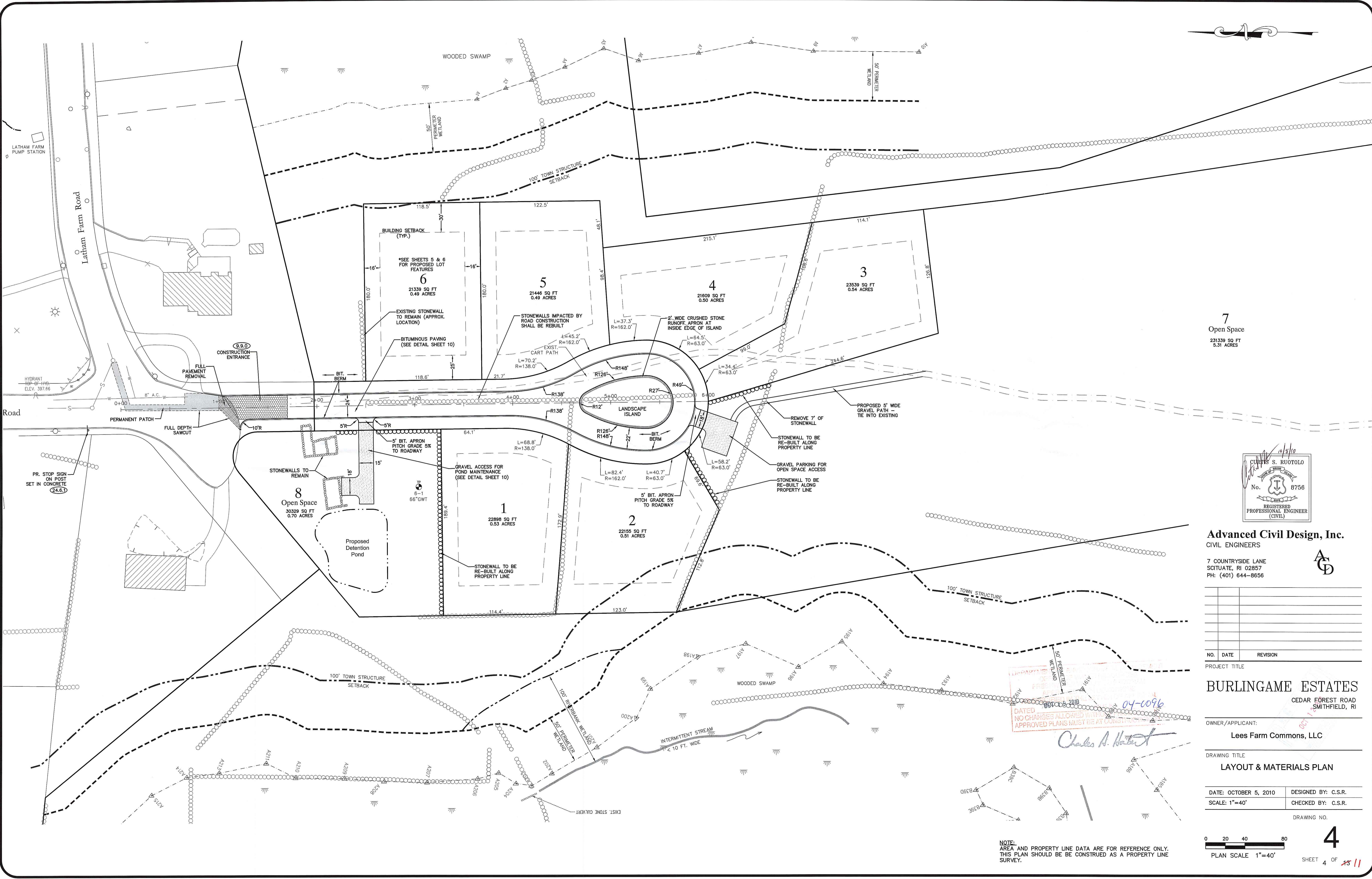
OWNER/APPLICANT:
Lees Farm Commons, LLC

DRAWING TITLE

NOTES & LEGEND

DATE: OCTOBER 5, 2010	DESIGNED BY: C.S.R.
SCALE: N.T.S.	CHECKED BY: C.S.R.

DRAWING NO.



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 SCITUATE, RI 02857
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NO.	DATE	REVISION

BURLINGAME ESTATES
 CEDAR FOREST ROAD
 SMITHFIELD, RI

OWNER/APPLICANT:
Lees Farm Commons, LLC

DRAWING TITLE
LAYOUT & MATERIALS PLAN

DATE: OCTOBER 5, 2010 DESIGNED BY: C.S.R.
 SCALE: 1"=40' CHECKED BY: C.S.R.

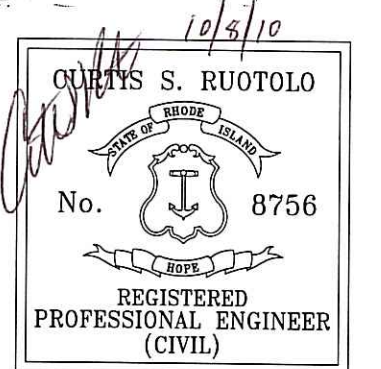
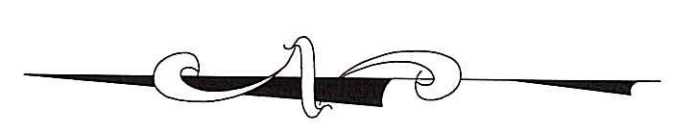
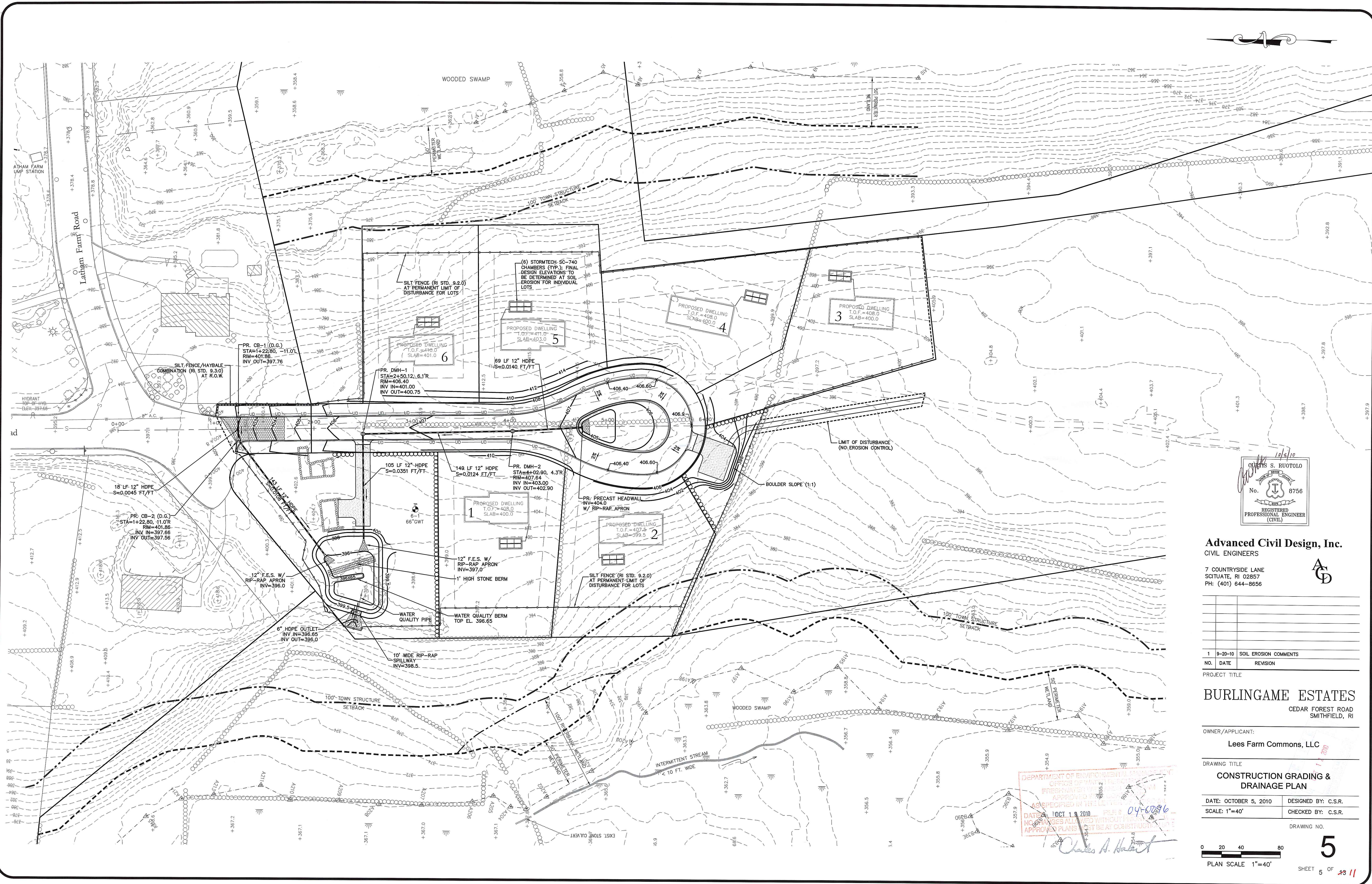
DRAWING NO.



4
 SHEET 4 OF 11

APPROVED FOR CONSTRUCTION
 DATED 09/05/2010
 NO CHANGES ALLOWED WITHOUT APPROVED PLANS MUST BE AT CONSTRUCTION
Charles A. Herbert

NOTE:
 AREA AND PROPERTY LINE DATA ARE FOR REFERENCE ONLY.
 THIS PLAN SHOULD BE CONSTRUCTED AS A PROPERTY LINE SURVEY.



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NO.	DATE	REVISION
1	9-20-10	SOIL EROSION COMMENTS

PROJECT TITLE
BURLINGAME ESTATES
 CEDAR FOREST ROAD
 SMITHFIELD, RI

OWNER/APPLICANT:
Lees Farm Commons, LLC

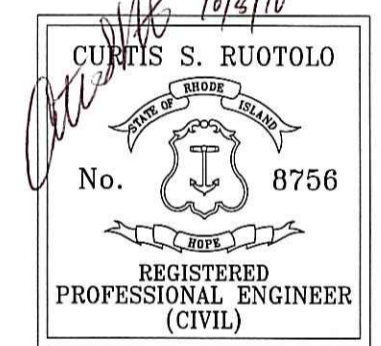
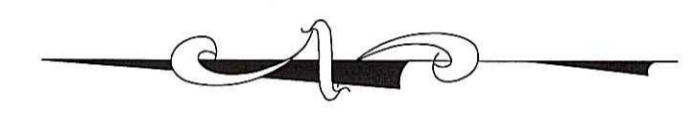
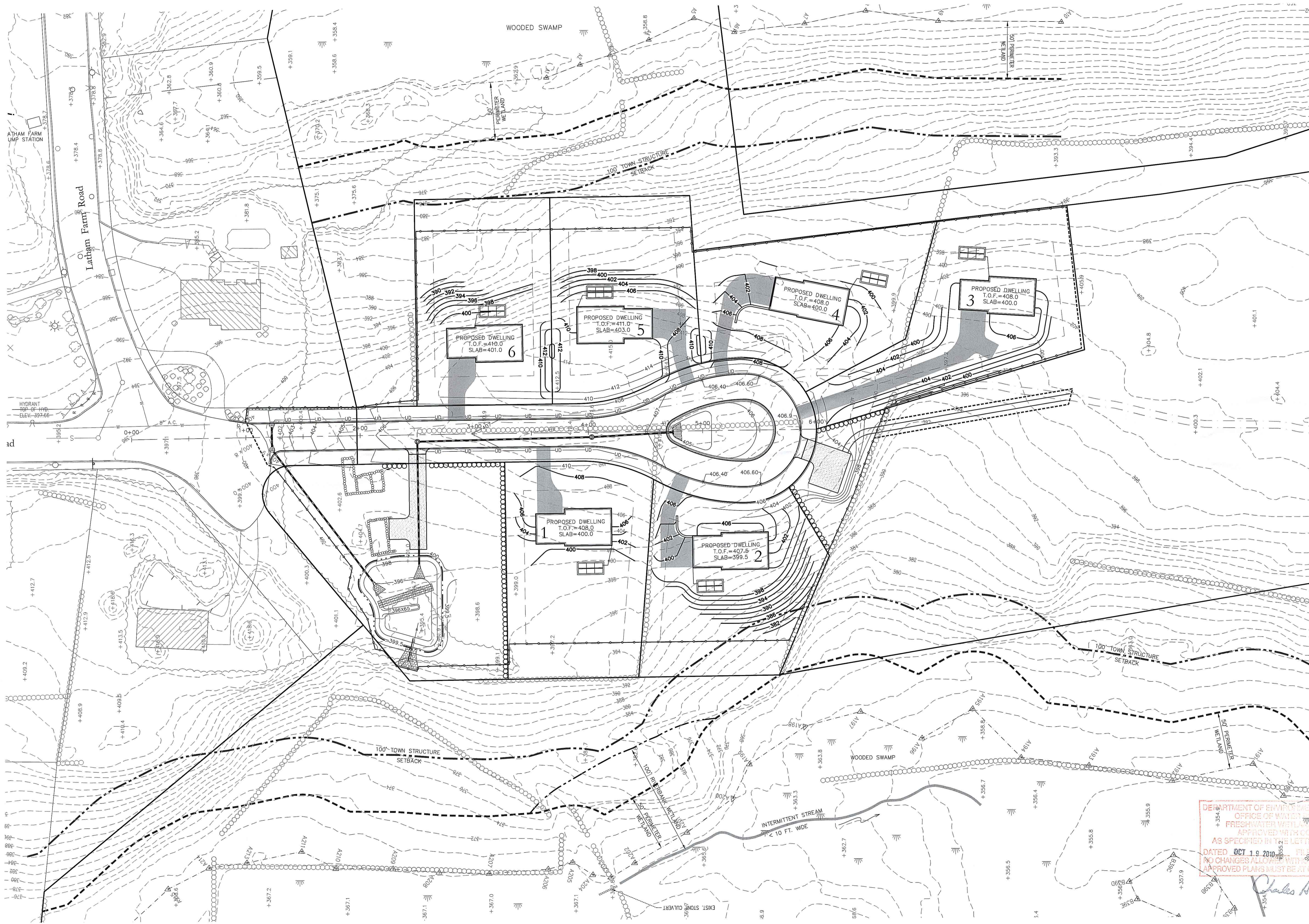
DRAWING TITLE
CONSTRUCTION GRADING & DRAINAGE PLAN

DATE: OCTOBER 5, 2010
 SCALE: 1"=40'

DESIGNED BY: C.S.R.
 CHECKED BY: C.S.R.

DRAWING NO.
5
 PLAN SCALE 1"=40'
 SHEET 5 OF 11

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER PROTECTION
 APPROVED FOR CONSTRUCTION
 AS SPECIFIED IN THE PERMITS
 DATE: OCT 11 2010 FILE # 04-0286
 NO CHANGES ALLOWED WITHOUT THE
 APPROVAL PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Herbert



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CIVIL ENGINEERS



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SCITUATE, RI 02857
PH: (401) 644-8656

NO.	DATE	REVISION

BURLINGAME ESTATES
CEDAR FOREST ROAD
SMITHFIELD, RI

OWNER/APPLICANT:
Lees Farm Commons, LLC

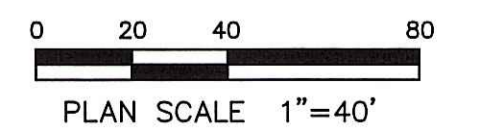
DRAWING TITLE
LOT GRADING PLAN

DATE: OCTOBER 5, 2010 DESIGNED BY: C.S.R.
SCALE: 1"=40' CHECKED BY: C.S.R.

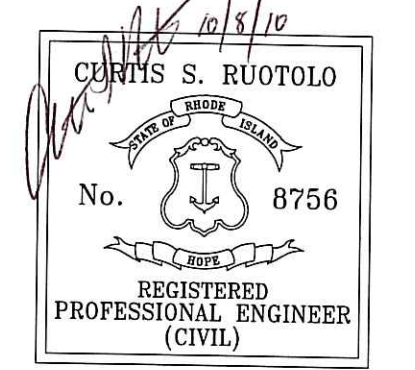
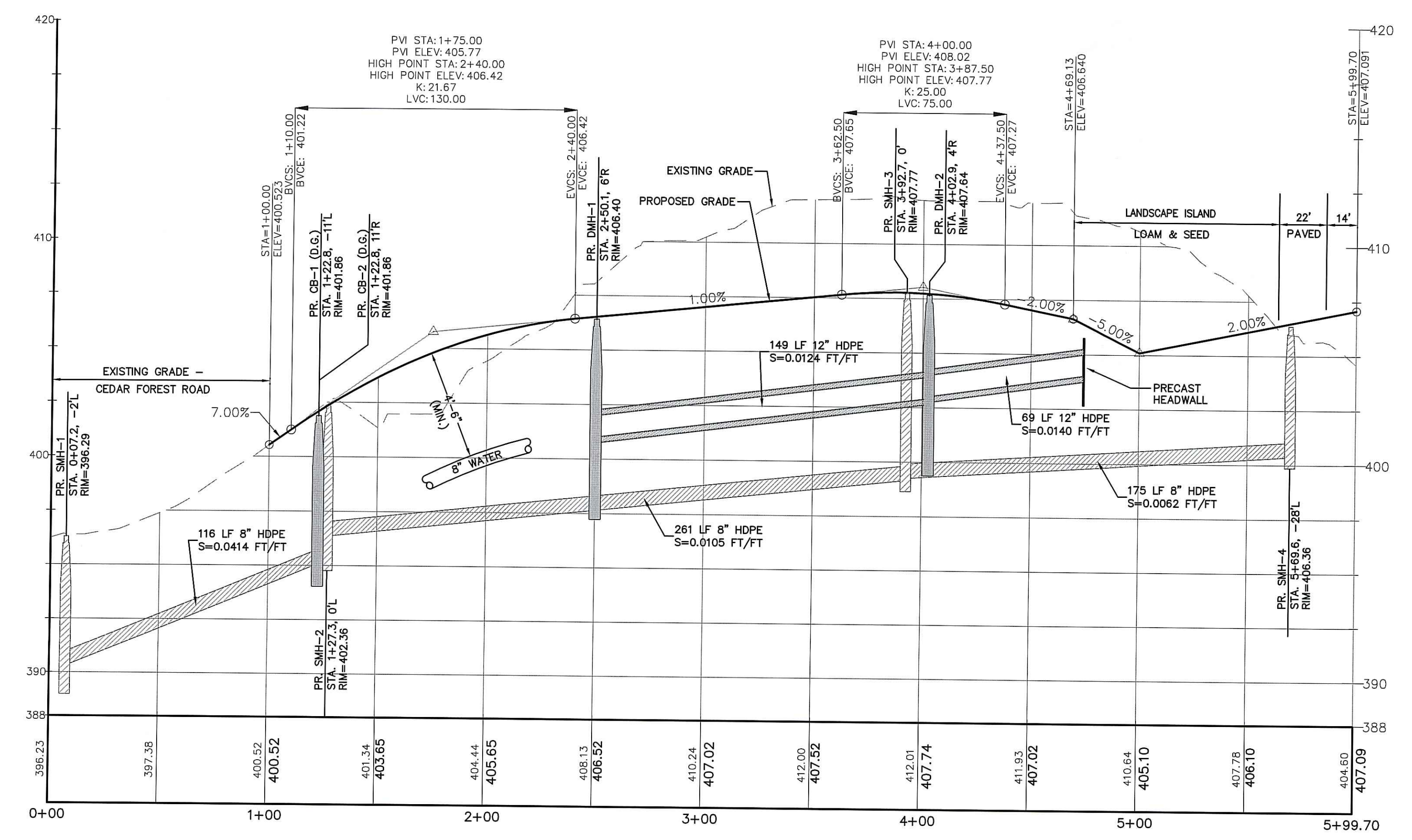
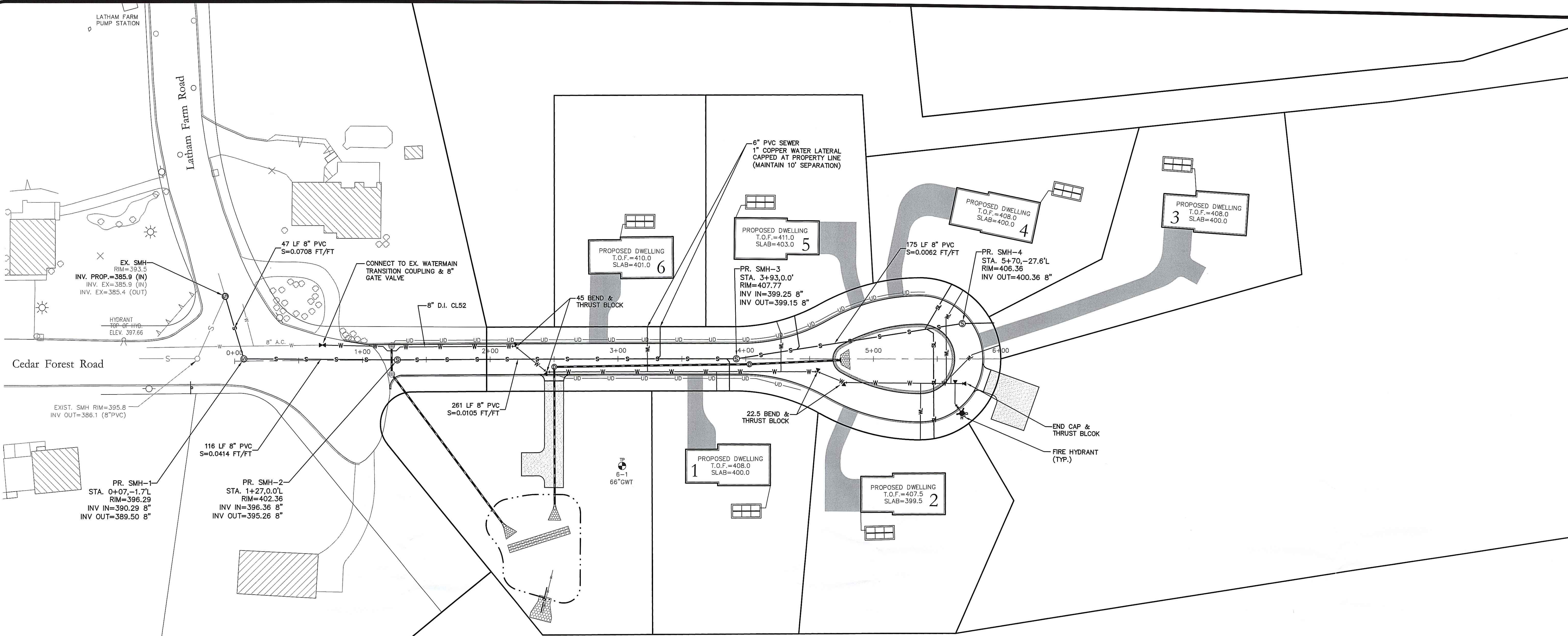
DRAWING NO.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 19 2010
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Hallett



6
SHEET 6 OF 11



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PH: (401) 644-8656



NO.	DATE	REVISION

BURLINGAME ESTATES
CEDAR FOREST ROAD
SMITHFIELD, RI

OWNER/APPLICANT:
Lees Farm Commons, LLC

DRAWING TITLE:
UTILITY PLAN & PROFILE

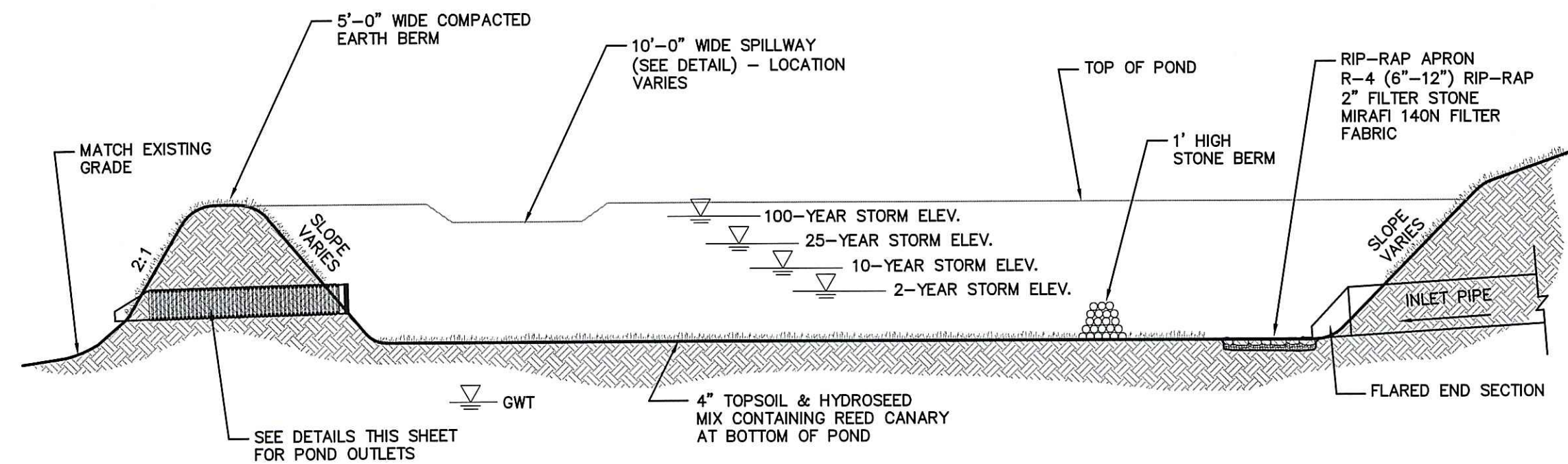
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 18 2010 FILE # 04-0296
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

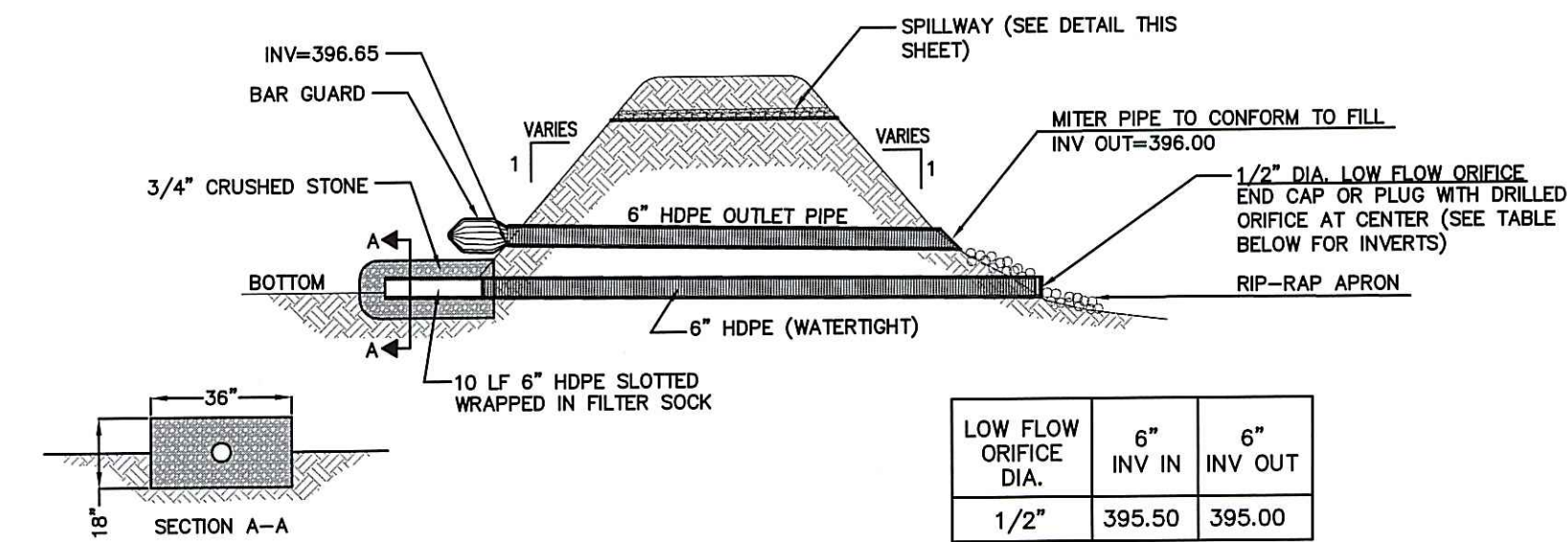
DATE: OCTOBER 5, 2010 DESIGNED BY: C.S.R.
SCALE: 1"=40'H / 1"=4'V CHECKED BY: C.S.R.

DRAWING NO. 7
SHEET 7 OF 38/11
PLAN SCALE 1"=40'

ELEVATION SCHEDULE	
APPROX. LEDGE ELEV.	NONE
EST. SEASONAL HIGH GWT	392.25
SEDIMENT FOREBAY EL.	396.00
BOTTOM OF POND EL.	396.00
WATER QUALITY VOLUME EL.	396.63
2-YEAR STORM EL.	396.91
10-YEAR STORM EL.	397.51
25-YEAR STORM EL.	397.90
100-YEAR STORM EL.	398.56
EMERGENCY SPILLWAY	398.50
TOP OF POND EL.	399.50

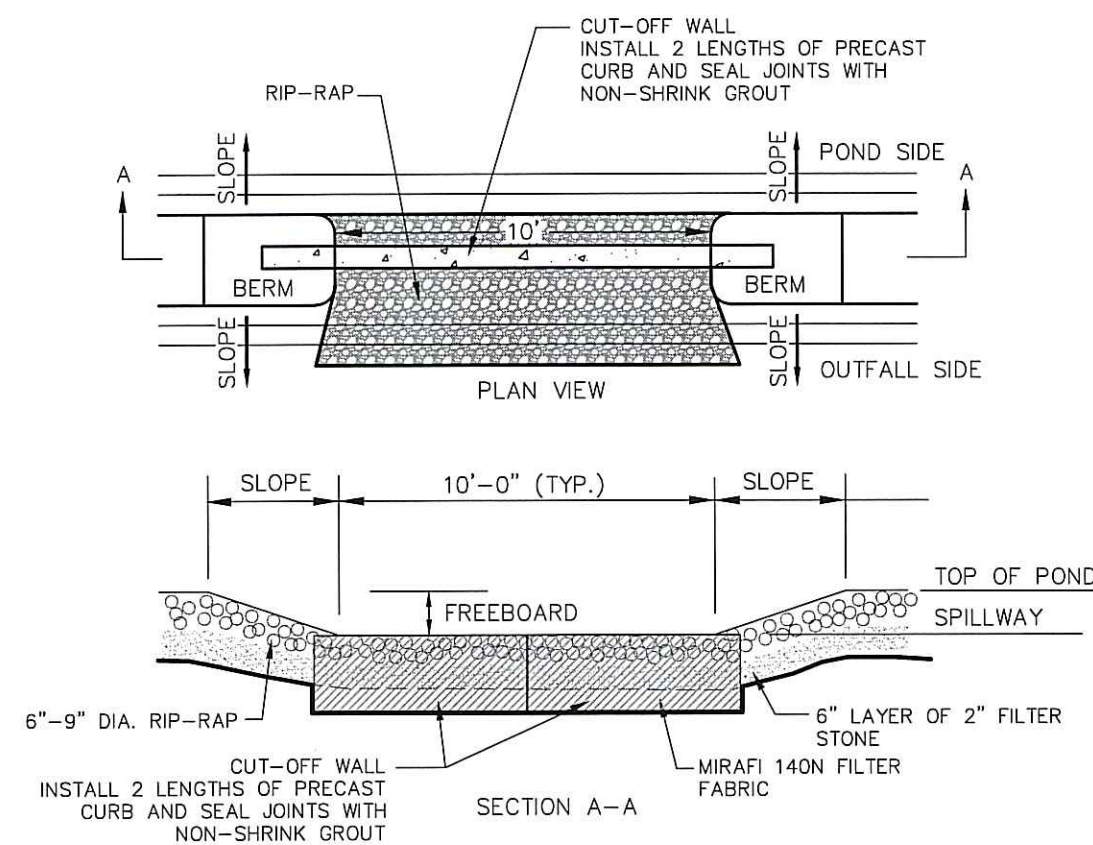


DETENTION POND DETAIL
N.T.S.



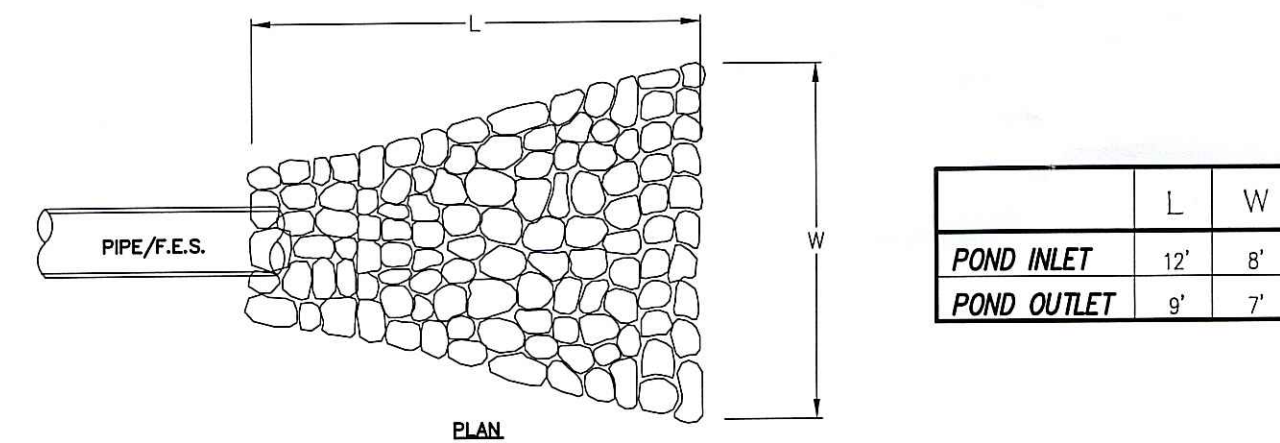
OUTLET PIPE AND WATER QUALITY PIPE DETAIL THROUGH POND BERM
N.T.S.

LOW FLOW ORIFICE DIA.	6" INV IN	6" INV OUT
1/2"	395.50	395.00

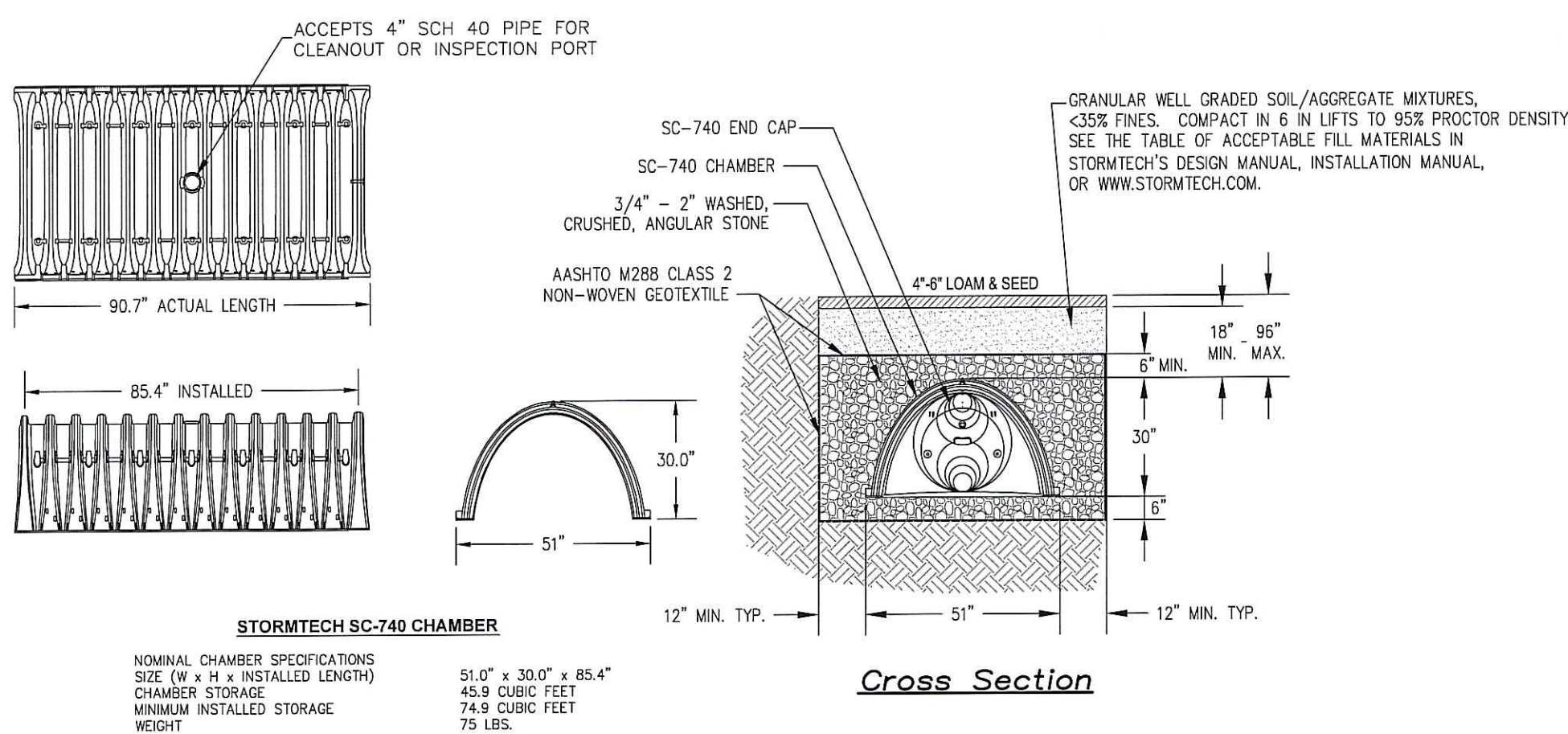


POND ELEV.	TOP OF POND	SPILLWAY	FREEBOARD
398.0	397.0	1.00 ft.	

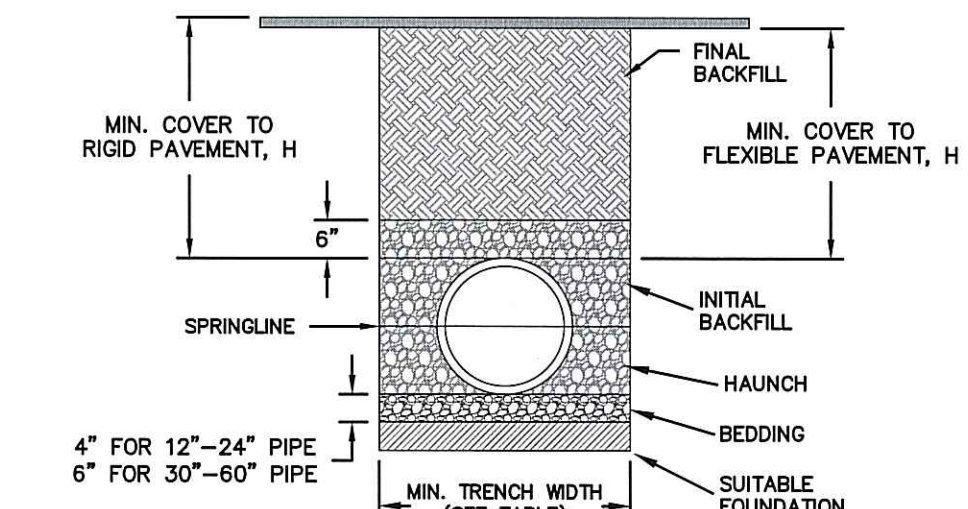
EMERGENCY SPILLWAY DETAIL
N.T.S.



RIP-RAP APRON DETAIL
N.T.S.



STORMTECH SC-740 CHAMBER FOR DRYWELL APPLICATION
N.T.S.



- NOTES:
- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
 - MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
 - FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH CLASS II MATERIAL. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
 - BEDDING: SUITABLE MATERIAL SHALL BE CLASS I. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
 - INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 - MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	95"

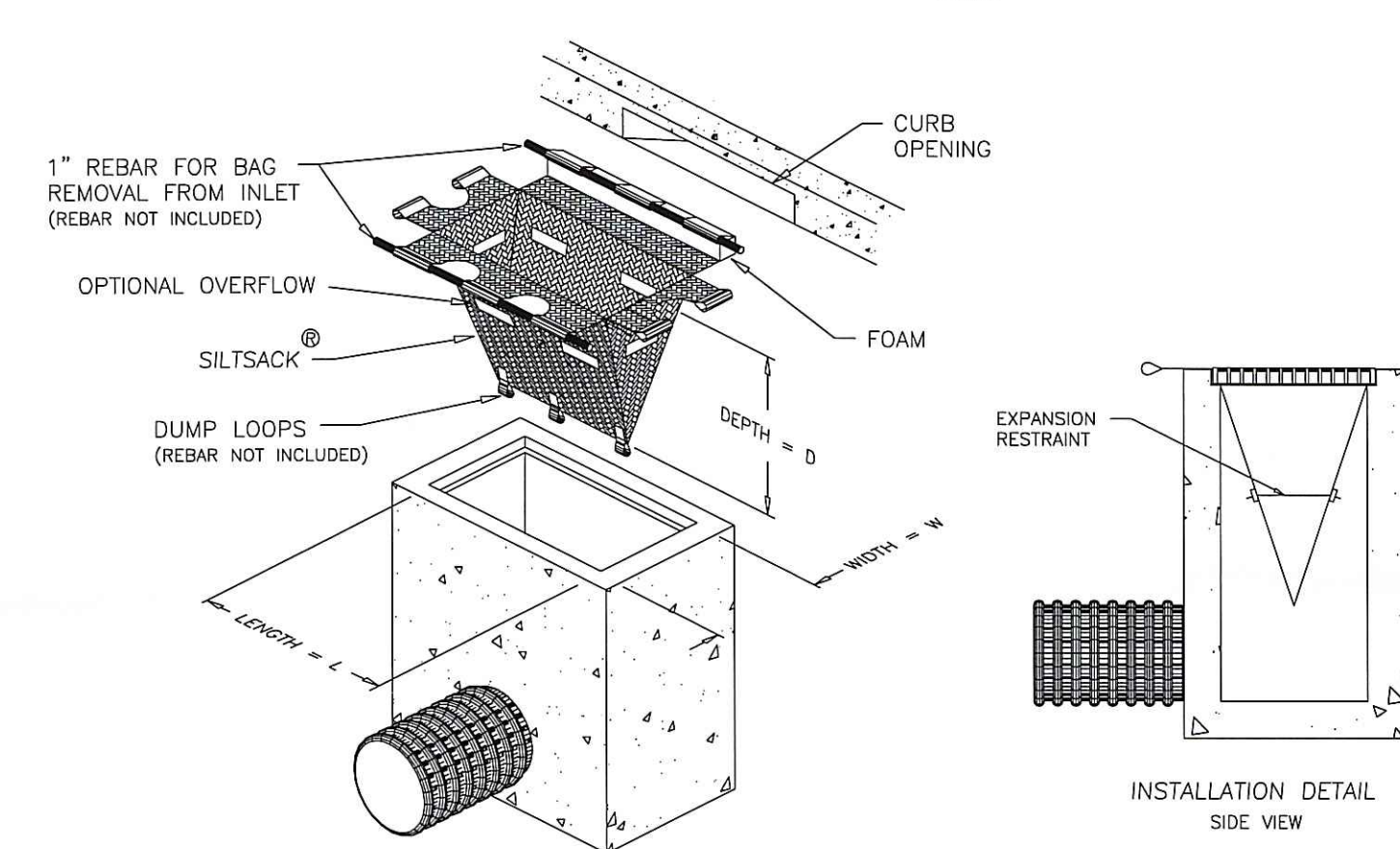
- CLASS I - ANGULAR CRUSHED STONE OR ROCK, DENSE OR OPEN GRADED WITH LITTLE OR NO FINES (1/2" TO 1 1/2" SIZE)
- CLASS II - CLEAN, COARSE GRAINED MATERIALS, SUCH AS GRAVEL, COARSE SANDS, AND GRAVEL/SANDS MIXTURES (1/2" SIZE) (ASHTO CLASSIFICATION A1 & A3)

MINIMUM RECOMMENDED COVER BASED ON LOADING CONDITIONS

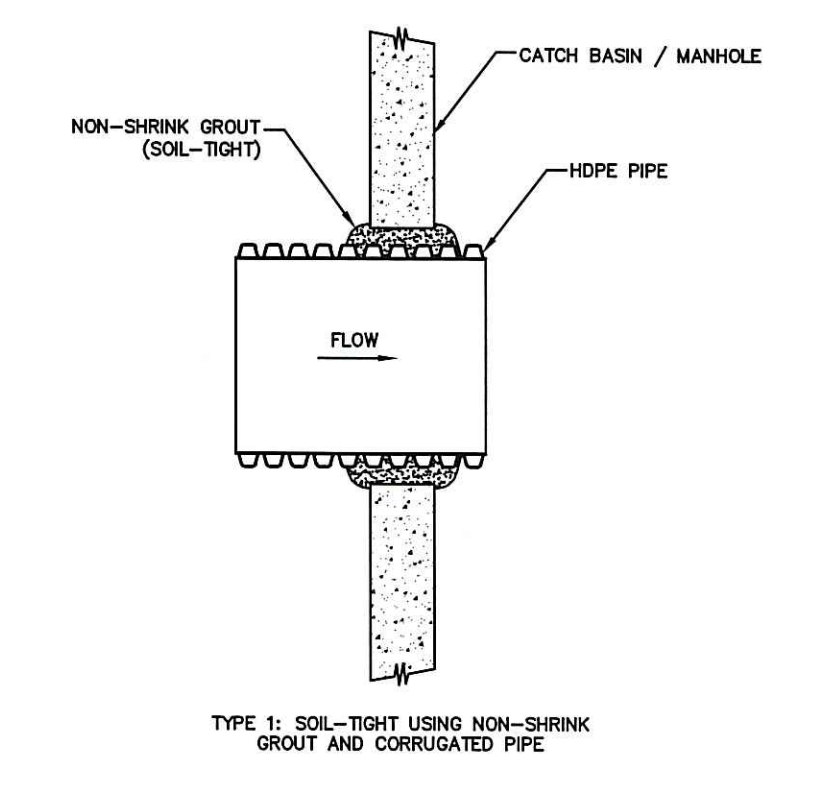
PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-20	HEAVY CONSTRUCTION (75T AXLE LOAD)
12"-48"	12"	48"
54"-60"	24"	60"

*VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

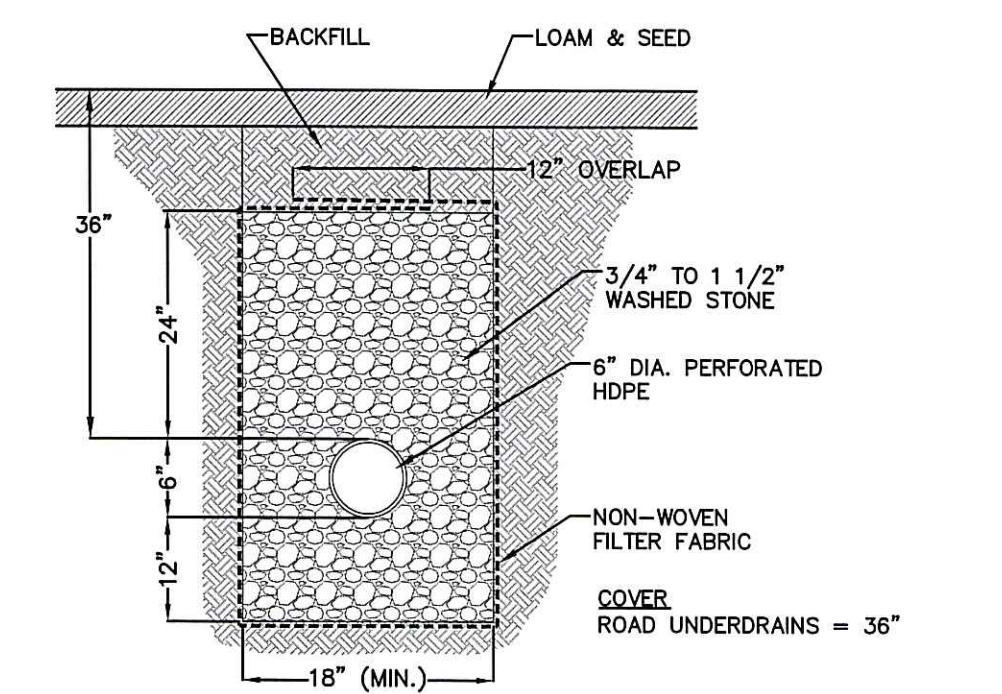
ADS DRAIN PIPE TRENCH INSTALLATION
N.T.S.



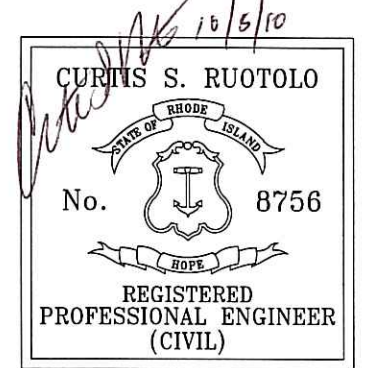
INLET PROTECTION DEVICE - SILT SACK
N.T.S.



HDPE PIPE TO MANHOLE CONNECTION
N.T.S.



UNDERDRAIN DETAIL
N.T.S.



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CIVIL ENGINEERS

7 COUNTRYSIDE LANE
SCITUATE, RI 02857
PH: (401) 644-8656

NO.	DATE	REVISION
1	9-20-10	SOIL EROSION COMMENTS

PROJECT TITLE

BURLINGAME ESTATES
CEDAR FOREST ROAD
SMITHFIELD, RI

OWNER/APPLICANT:
Lees Farm Commons, LLC

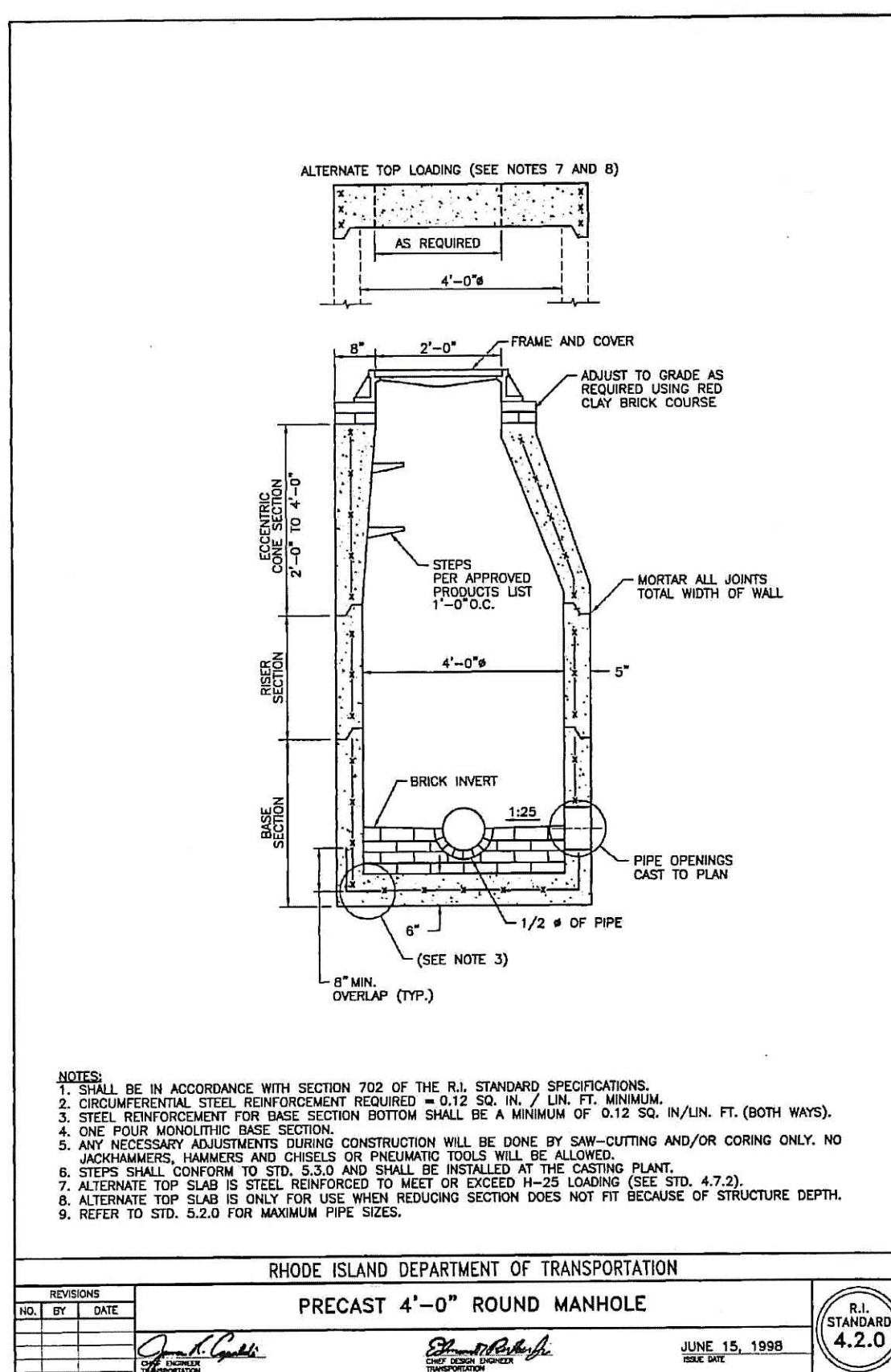
DRAWING TITLE
DETAILS

DATE: OCTOBER 5, 2010
SCALE: N.T.S.

DESIGNED BY: C.S.R.
CHECKED BY: C.S.R.

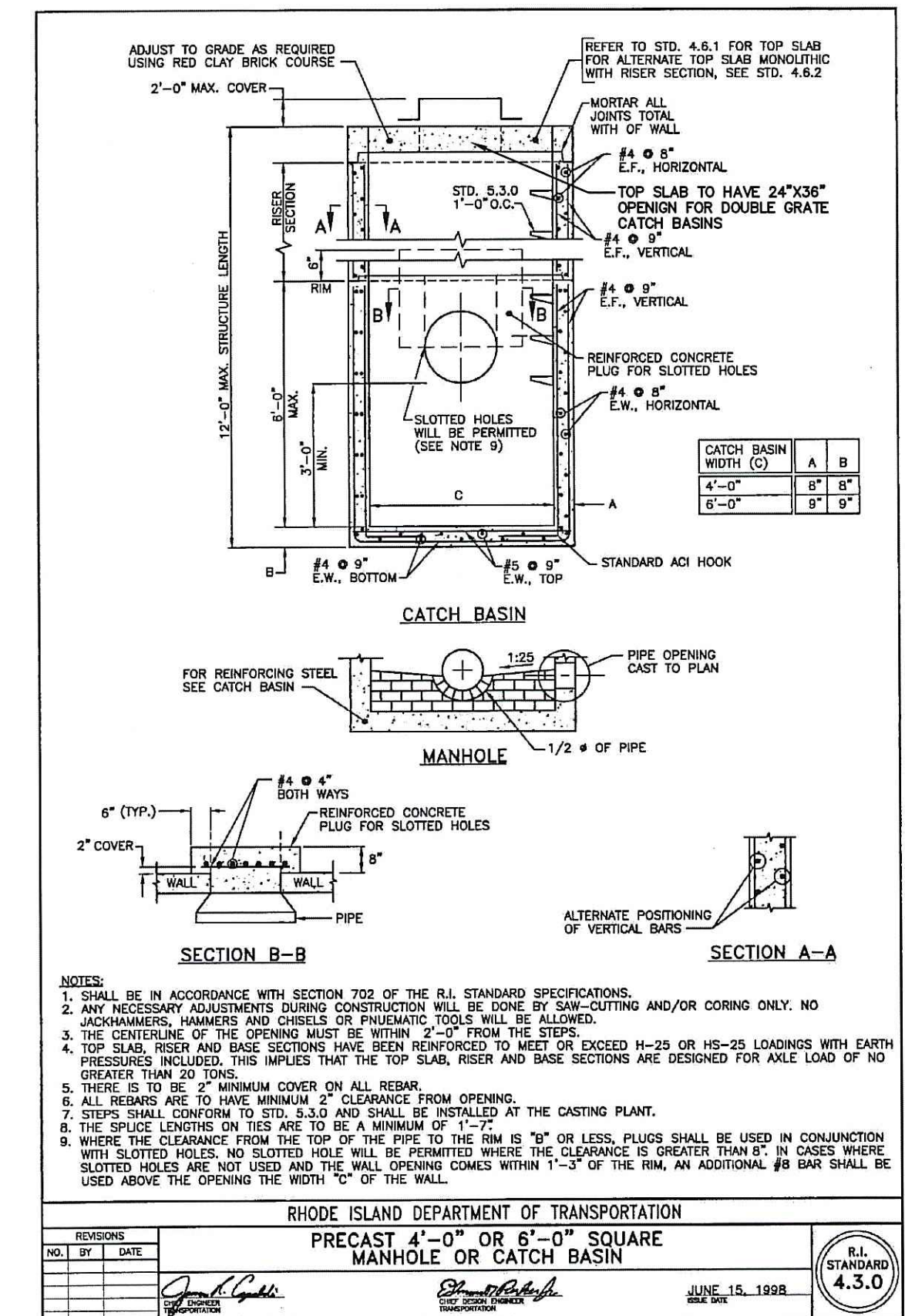
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER POLLUTION CONTROL
APPROVED FOR CONSTRUCTION
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 19 2010 FILE # 04-0096
NO CHANGES ALLOWED WITHOUT PREVIOUS WRITTEN
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Hester



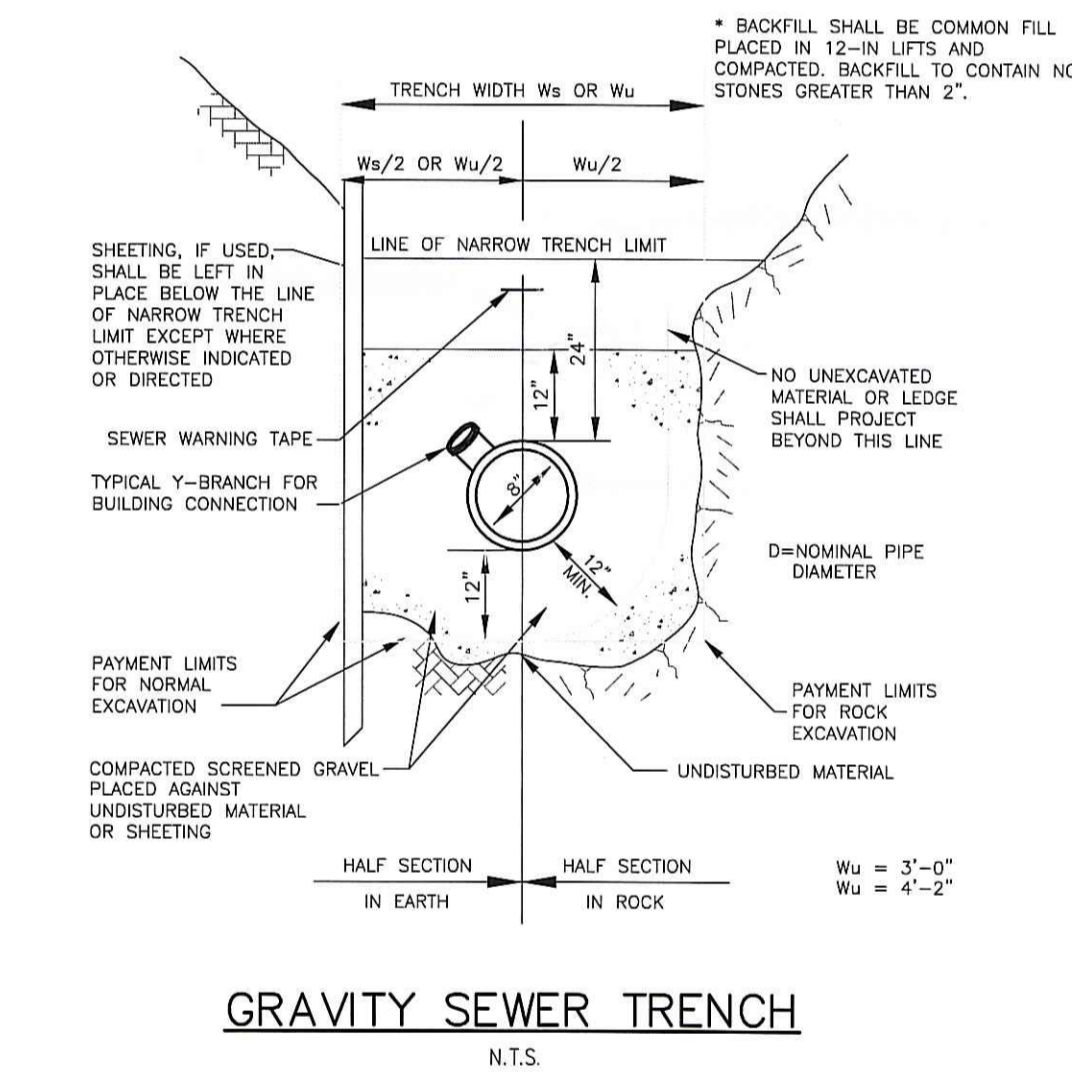
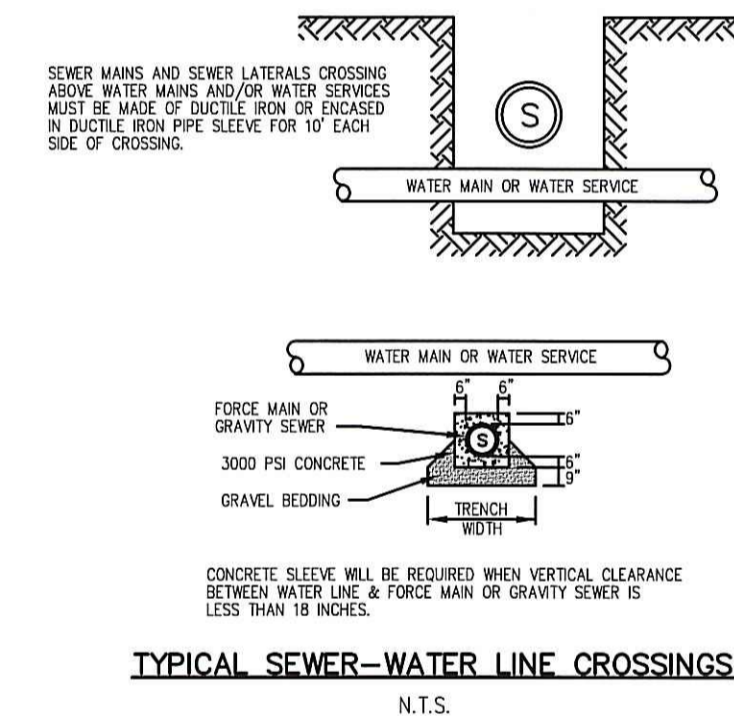
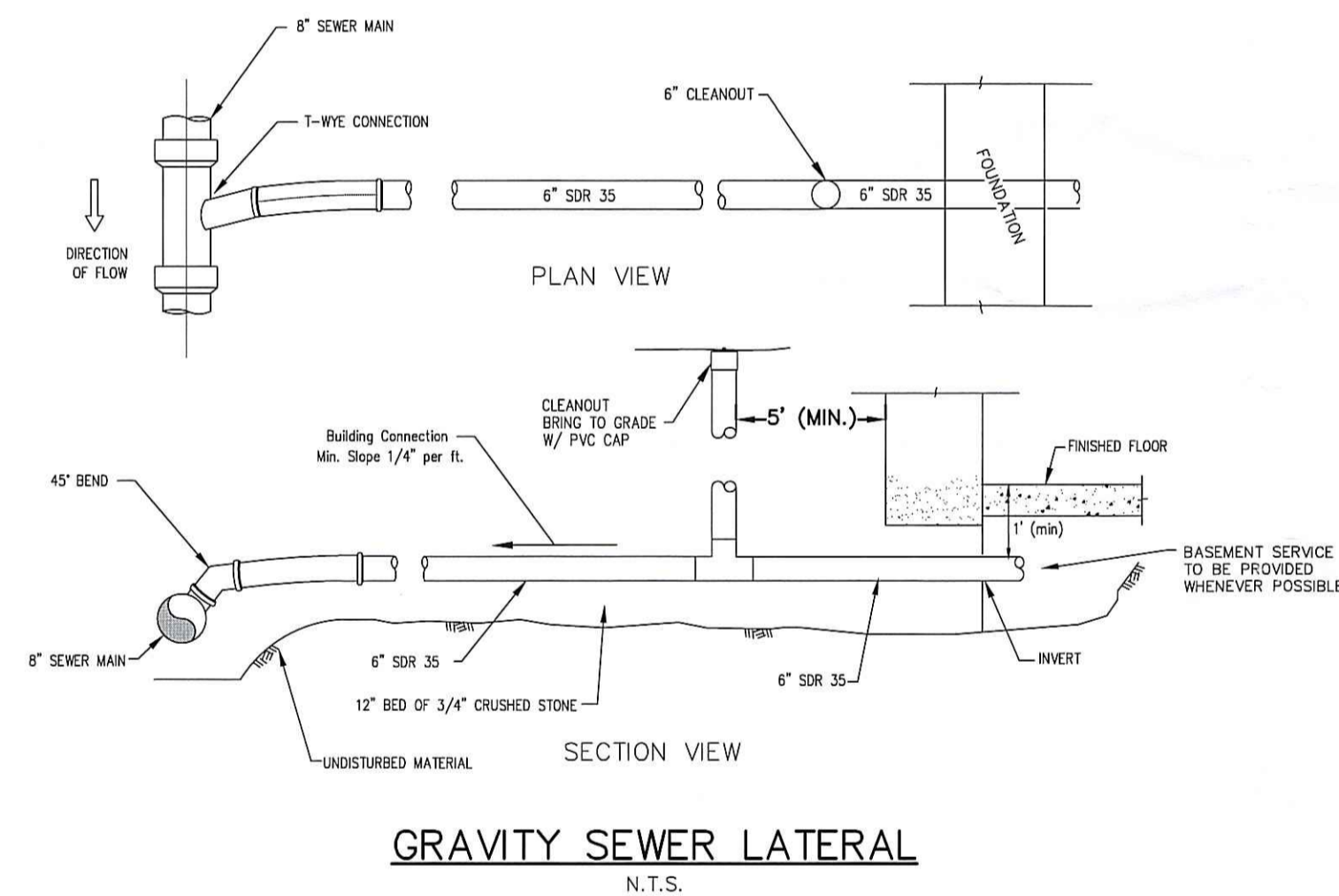
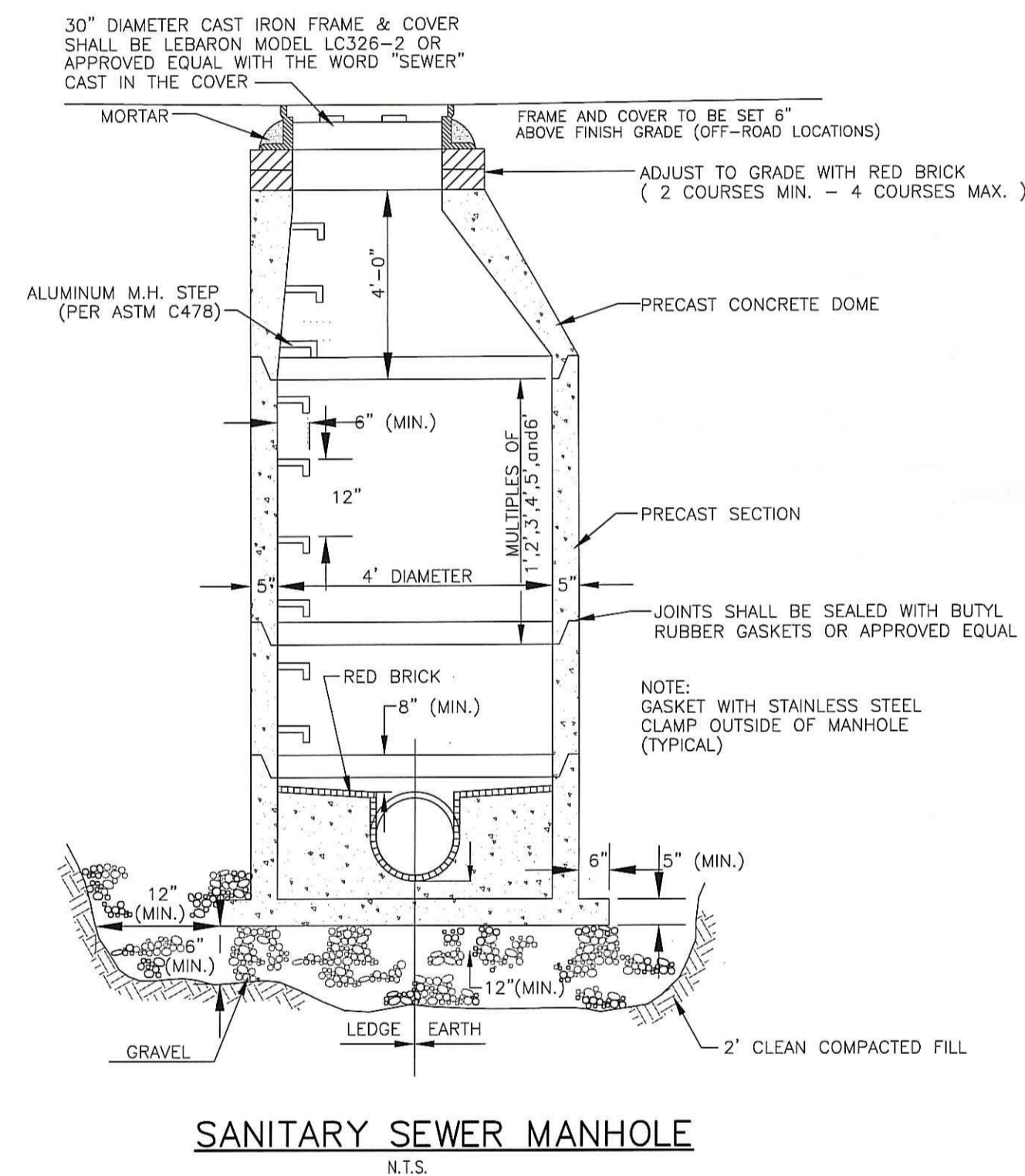
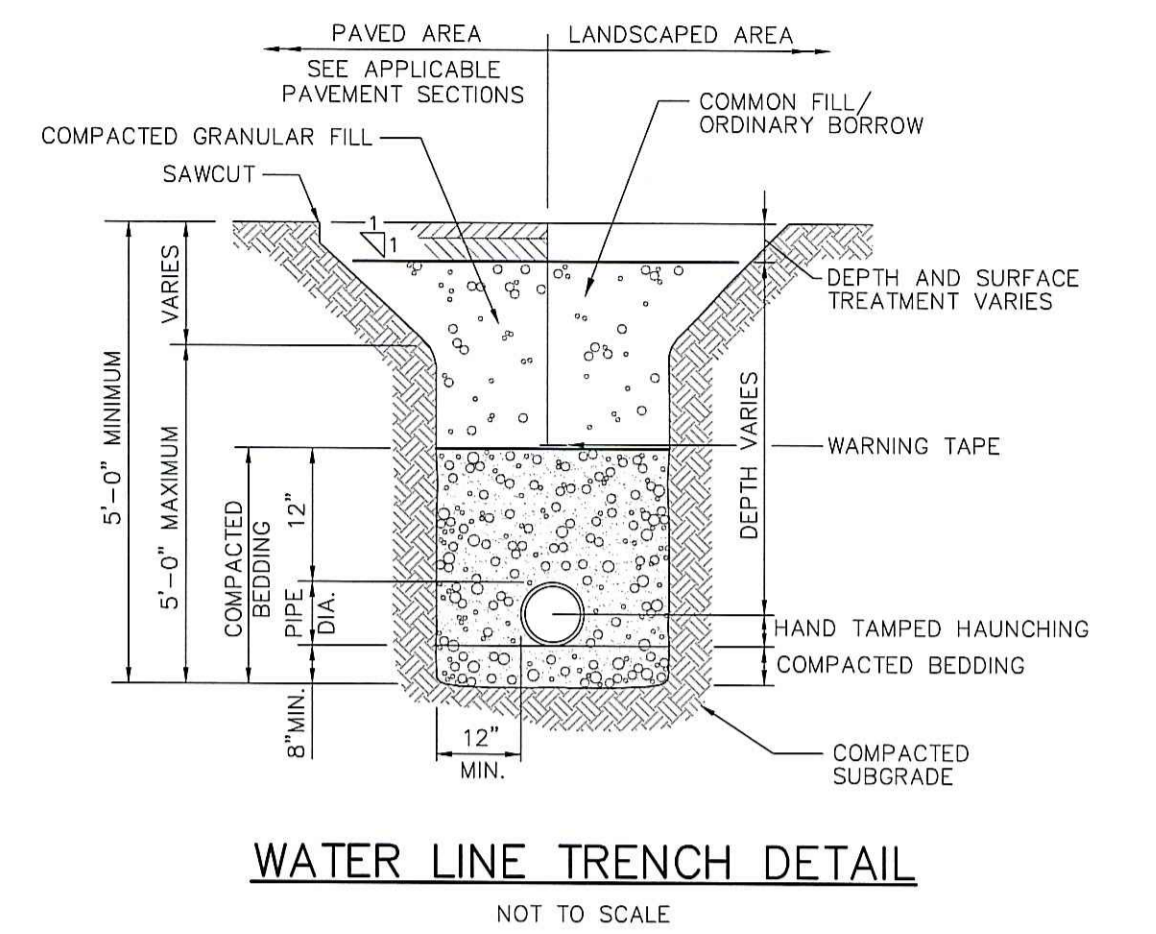
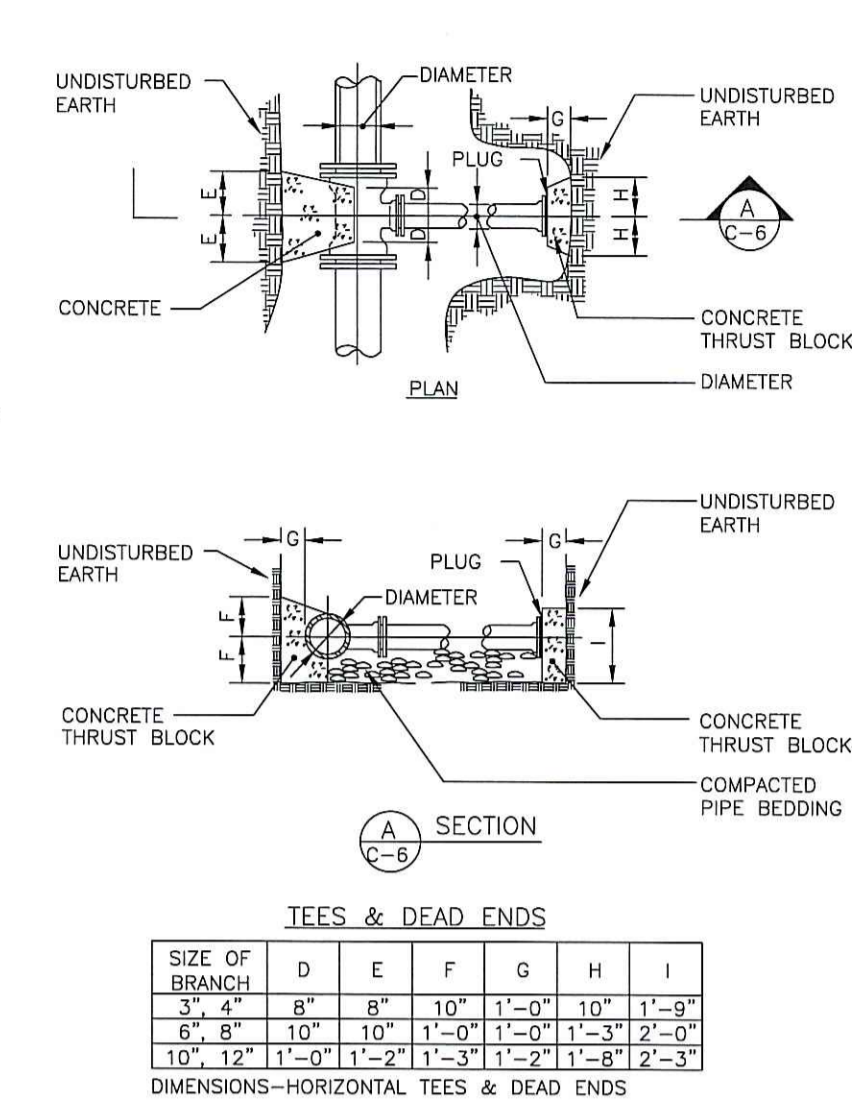
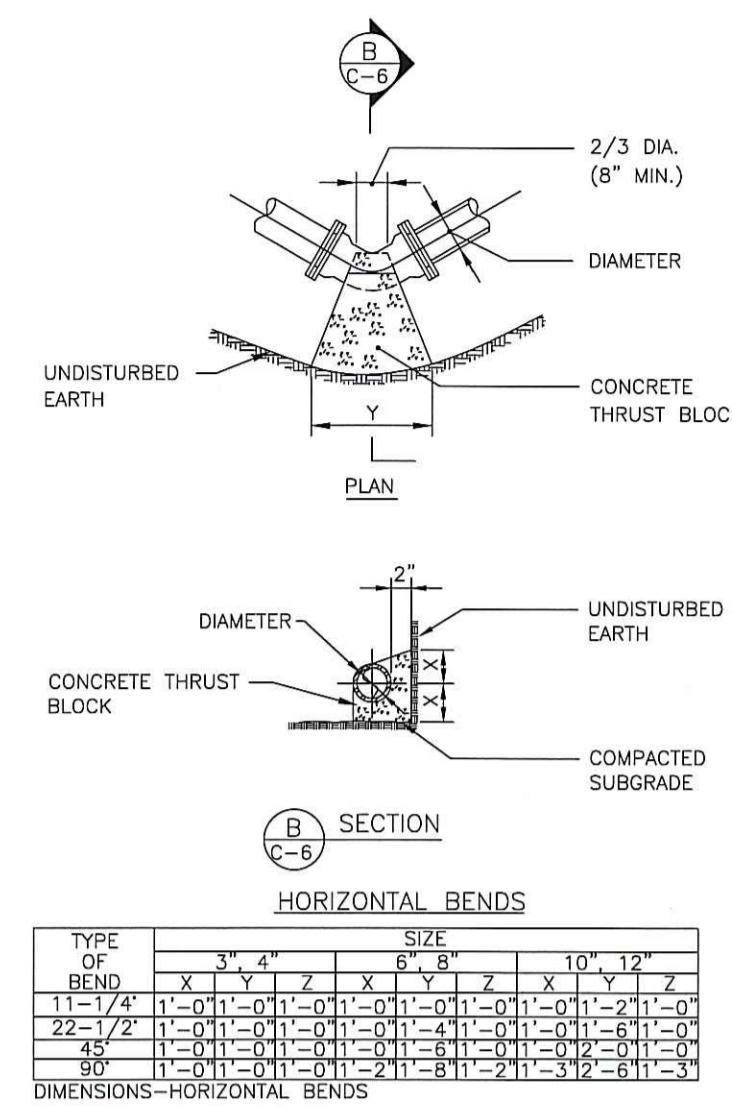
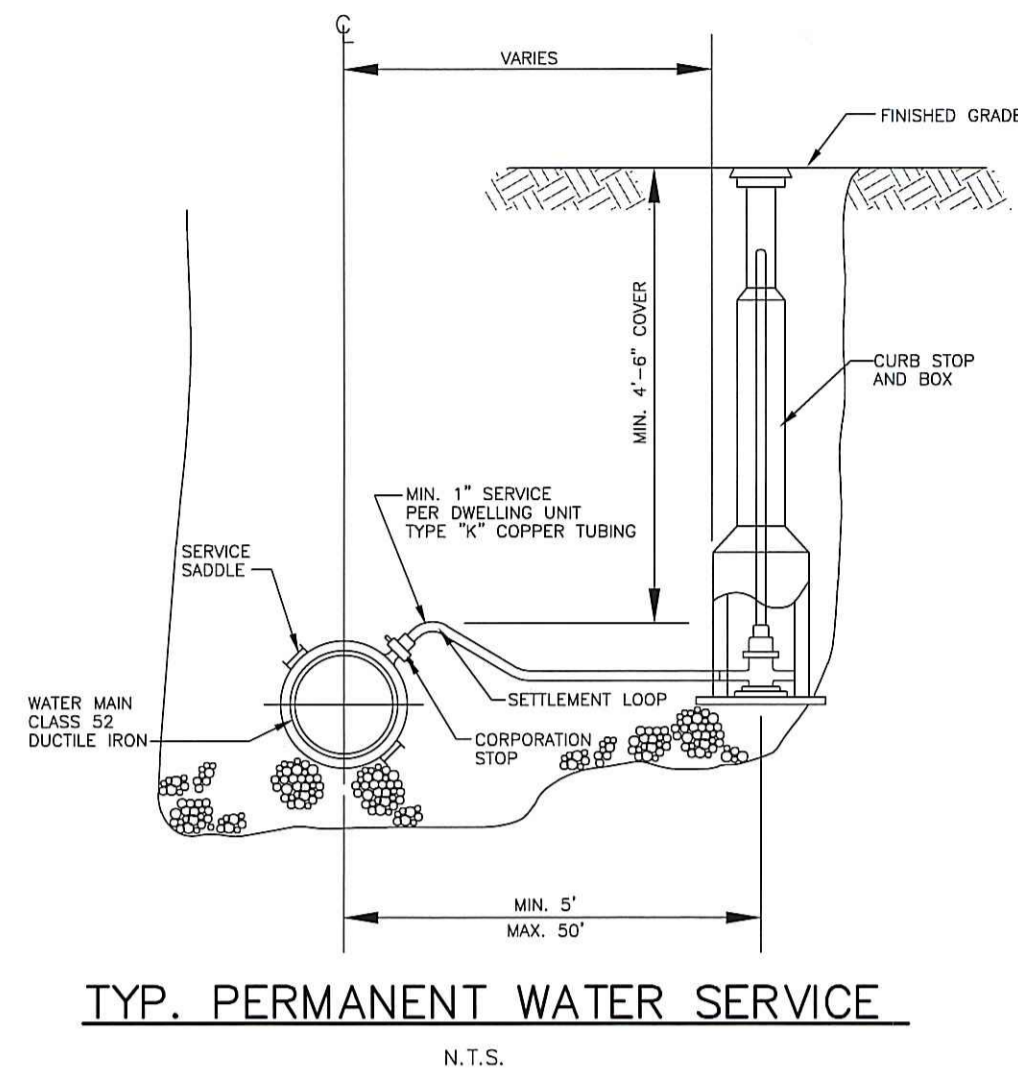
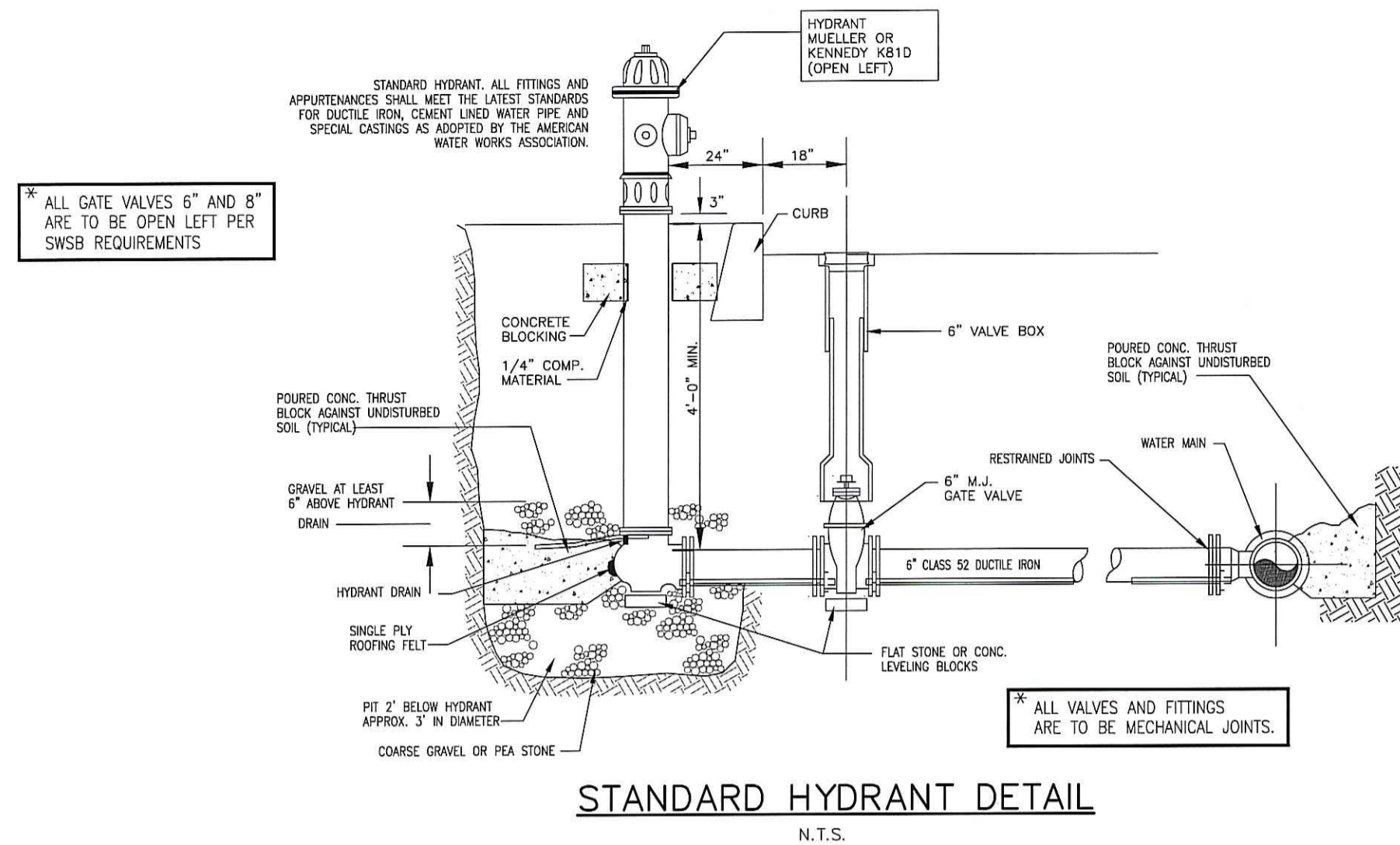
- NOTES:
- SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
 - SMALL DIFFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.12 SQ. IN. / LIN. FT. MINIMUM.
 - STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN. / LIN. FT. (BOTH WIDTHS).
 - ONE HOUR MONOLITHIC BASE SECTION.
 - ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
 - STEPS SHALL CONFORM TO STD. 5.5.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
 - ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
 - ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
 - REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
PRECAST 4'-0" ROUND MANHOLE
REVISED: [Signature] DATE: [Signature]
JUNE 15, 1998
R.I. STANDARD 4.2.0



- NOTES:
- SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
 - ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
 - THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
 - TOP SLAB, RISER AND BASE SECTIONS HAVE BEEN REINFORCED TO MEET OR EXCEED H-25 OR H-25 LOADINGS WITH 6" x 6" REINFORCEMENT. THIS APPLIES THAT THE TOP SLAB, RISER AND BASE SECTIONS ARE DESIGNED FOR AXLE LOAD OF NO GREATER THAN 20 TONS.
 - THESE SLABS TO BE 2" MINIMUM COVER ON ALL REBAR.
 - ALL REBARS ARE TO HAVE MINIMUM 6" SPACING FROM OPENING.
 - STEPS SHALL CONFORM TO STD. 5.5.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
 - THE SPICE LENGTHS ON ALL REBAR TO BE A MINIMUM OF 1'-0".
 - WHERE THE CLEARANCE FROM THE TOP OF THE PIPE TO THE RIM IS 10" OR LESS, PLUGS SHALL BE USED IN CONJUNCTION WITH SLOTTED HOLES. NO SLOTTED HOLES SHALL BE PERMITTED WHERE THE CLEARANCE IS GREATER THAN 10" IN CASES WHERE SLOTTED HOLES ARE NOT USED AND THE WALL OPENING COMES WITHIN 1'-3" OF THE RIM, AN ADDITIONAL #8 BAR SHALL BE USED ABOVE THE OPENING THE WIDTH "C" OF THE WALL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN
REVISED: [Signature] DATE: [Signature]
JUNE 15, 1998
R.I. STANDARD 4.3.0



10/8/10

CURTIS S. RUOTOLO

REGISTERED PROFESSIONAL ENGINEER (CIVIL)

No. 8756

Advanced Civil Design, Inc.
CIVIL ENGINEERS

7 COUNTRYSIDE LANE
SCITUATE, RI 02857
PH: (401) 644-8656

NO.	DATE	REVISION

PROJECT TITLE

BURLINGAME ESTATES
CEDAR FOREST ROAD
SMITHFIELD, RI

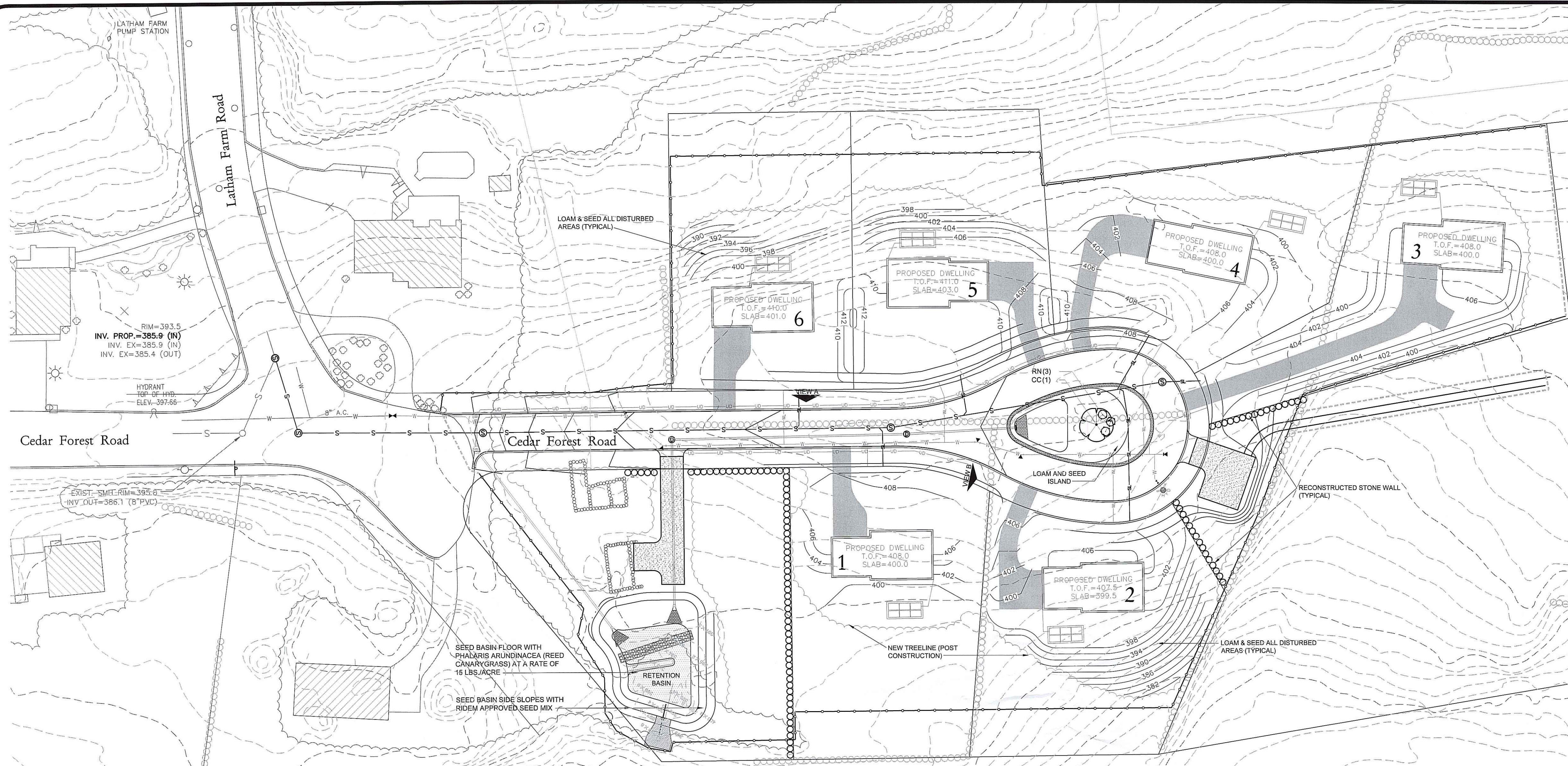
OWNER/APPLICANT:
Lees Farm Commons, LLC

DRAWING TITLE	
DETAILS	
DATE: OCTOBER 5, 2010	DESIGNED BY: C.S.R.
SCALE: N.T.S.	CHECKED BY: C.S.R.

DEPARTMENT OF ENVIRONMENT & PLANNING
OFFICE OF WATER RESOURCES
FRESHWATER WATERS DIVISION
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
OCT 19 2010 FILE # 04-0096

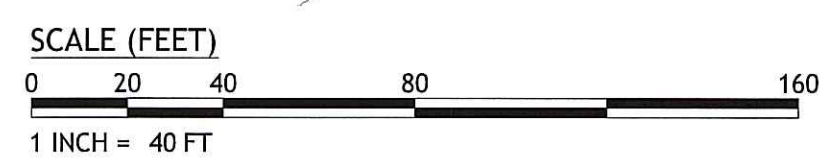
NO CHANGES ALLOWED WITHOUT PERMISSION
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

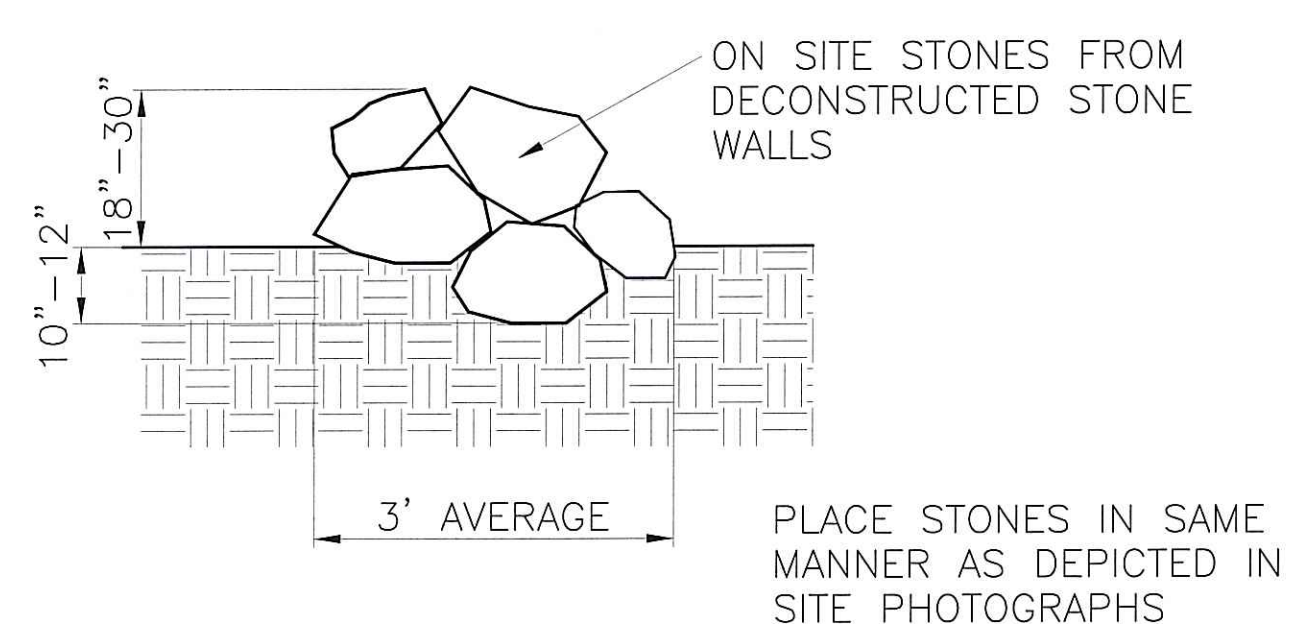


PRELIMINARY LANDSCAPE PLAN

1" = 40'



NOTE: EXISTING STONE WALLS ARE TO BE RELOCATED AND RECONSTRUCTED WITH SAME CONSTRUCTION METHODS AND SAME CHARACTER AS ORIGINAL WALLS USING AS MUCH OF THE ORIGINAL MATERIALS AS POSSIBLE.



STONE WALL DETAIL
NO SCALE



VIEW A - LOOSELY PLACED STONES INDICATIVE OF CHARACTER OF WALLS IN PROJECT AREA (SEE PLAN BELOW FOR LOCATION)



VIEW B - LOOSELY PLACED STONES INDICATIVE OF CHARACTER OF WALLS IN PROJECT AREA, SLIGHTLY TALLER THAN STONES IN VIEW A (SEE PLAN BELOW FOR LOCATION)

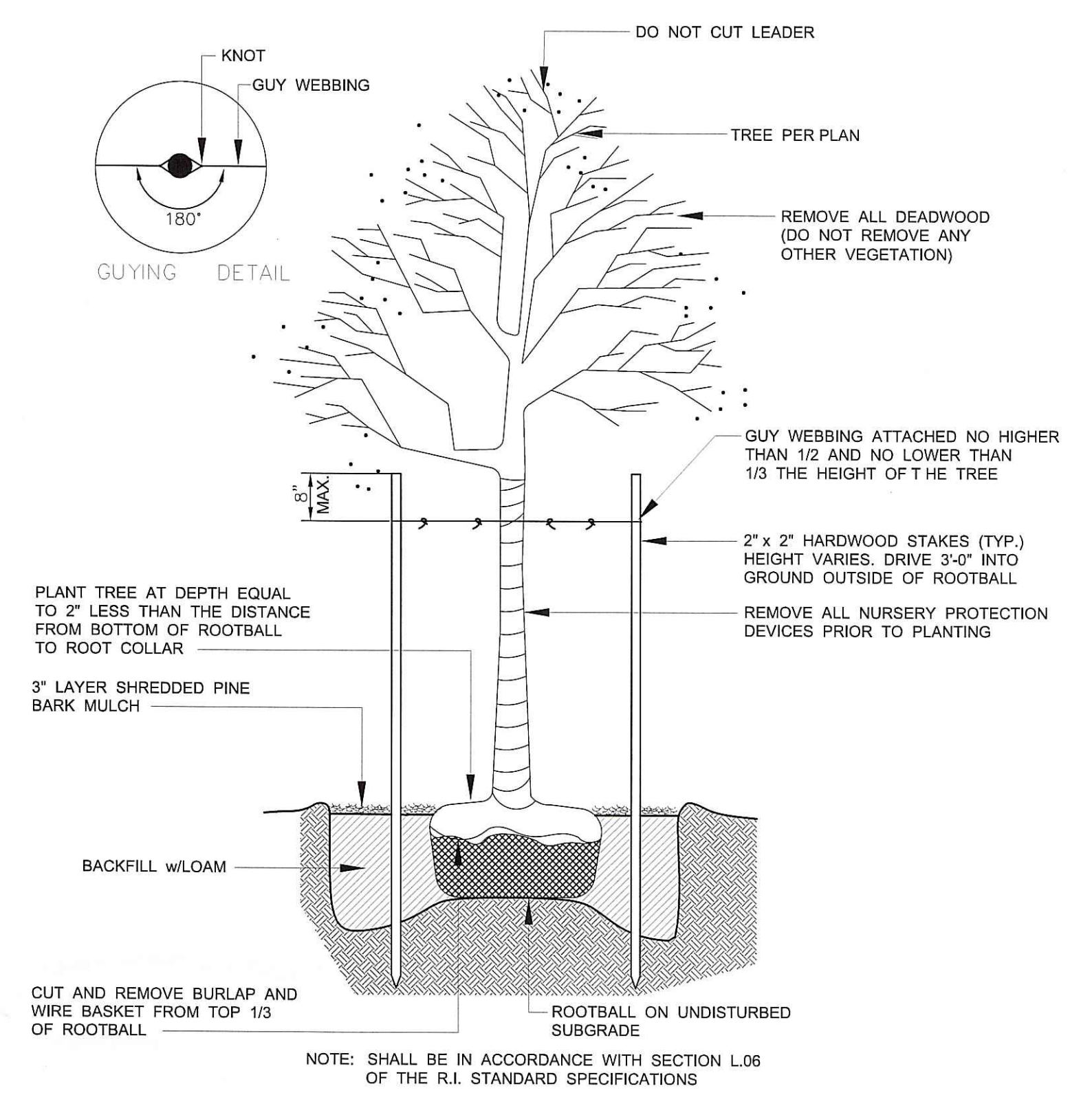
TOWN OF SMITHFIELD LAND DEVELOPMENT AND SUBDIVISION REGULATIONS

Description	Required	Provided
Buffer between residential development and collector street	40 feet wide	0 feet to 10 feet
Minimum buffer between single family homes and adjacent single family development	0 feet	162 feet
Street Tree and Canopy Tree caliper size	2 1/2"	N / A
Ornamental Trees Height	6 feet	6 feet
Evergreen Tree Height	8 feet	N / A
Trees required along frontage	at discretion of Town	

PLANT SCHEDULE

FLOWERING TREES	CODE	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL
	CC	1	Cercis canadensis / Eastern Redbud	B & B	1.5" Cal

SHRUBS	CODE	QTY	BOTANICAL NAME / COMMON NAME	CONT
	RN	3	Rhododendron catawbiense 'Nova Zembla' / Catawba Rhododendron	5 gal



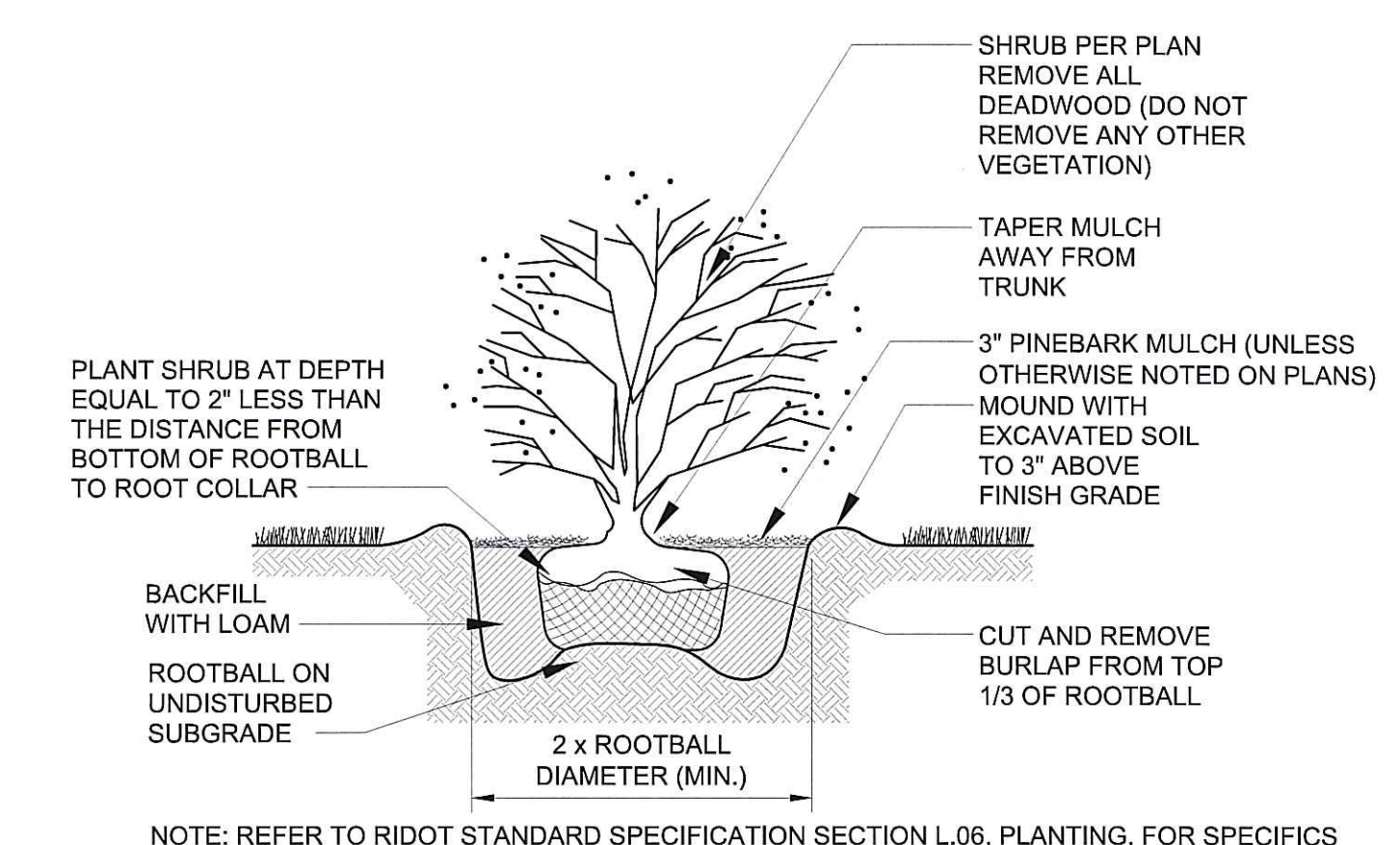
TREE PLANTING DETAIL
no scale

Diane C.
SOULE & ASSOCIATES, ASLA
422 Farmum Pike
Smithfield, Rhode Island 02917
401.231.0736 diane@DCSA.ws

Advanced Civil Design, Inc.

CIVIL ENGINEERS

7 COUNTRYSIDE LANE
SCITUATE, RI 02857
PH: (401) 644-8556



SHRUB PLANTING DETAIL
no scale

DEPARTMENT OF ENVIRONMENTAL PLANNING
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 19 2010 FILE # 04-0096
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Hackett

BURLINGAME ESTATES

CEDAR FOREST ROAD
SMITHFIELD, RI

OWNER/APPLICANT:
Lees Farm Commons, LLC

LANDSCAPE PLAN & DETAILS

DATE: SEPTEMBER 16, 2010 DESIGNED BY: D.C.S.
SCALE: AS SHOWN CHECKED BY: DCSA

DRAWING NO.

11