

100 YEAR WATER -— SEED BASIN FLOOR AND SLOPES WITH SURFACE ELEV. 611.0 NEW ENGLAND EROSION CONTROL/RESTORATION MIX TOP OF BERM -FOR DETENTION BASINS AND MOIST SITES ELEV. 612.0 PROPOSED -GRADE EXISTING -GRADE BASIN FLOOR -600 _____ ELEV. 605.0

STORMWATER MANAGEMENT AREA TYPICAL SECTION

STORMWATER MANAGEMENT SYSTEM OPERATION AND MAINTENANCE SCHEDULE

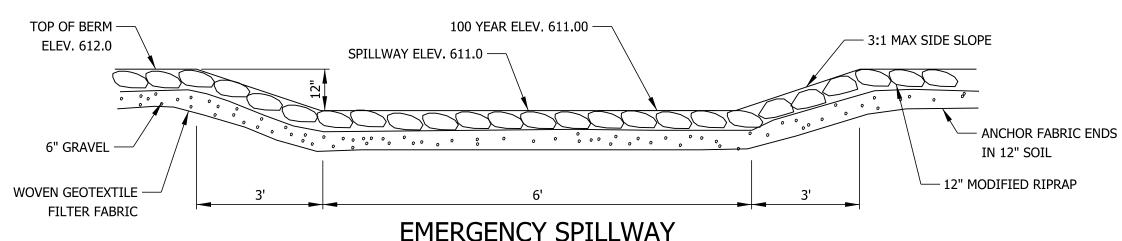
THE DRAINAGE WILL BE PRIVATELY OWNED AND MAINTAINED.

STORM DRAINAGE STRUCTURES, STORM DRAINAGE PIPING, RIPRAP SWALE AND RIPRAP OUTLET PROTECTION:

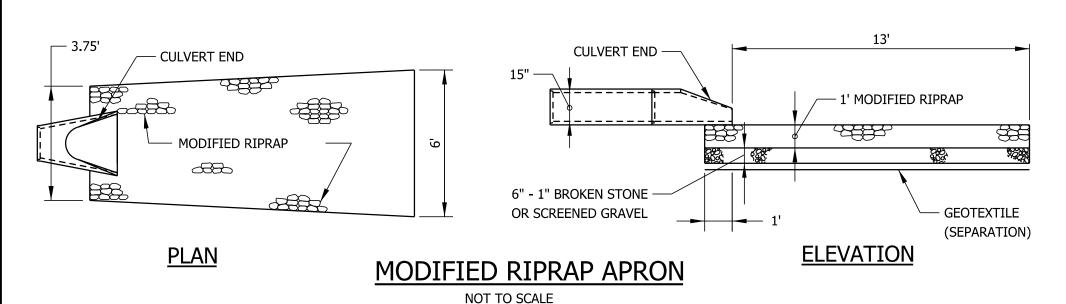
- 1. THE STORM DRAINAGE SYSTEM SHALL BE INSPECTED AND CLEANED ON AN ANNUAL BASIS.
- 2. INSPECT AND CLEAN THE STORM DRAINAGE STRUCTURES, DRAINAGE PIPES, RIPRAP SWALES, AND OUTLET PROTECTION. ACCUMULATED DEBRIS SHALL BE REMOVED AND DISPOSED OF BY A LICENSED CONTRACTOR.

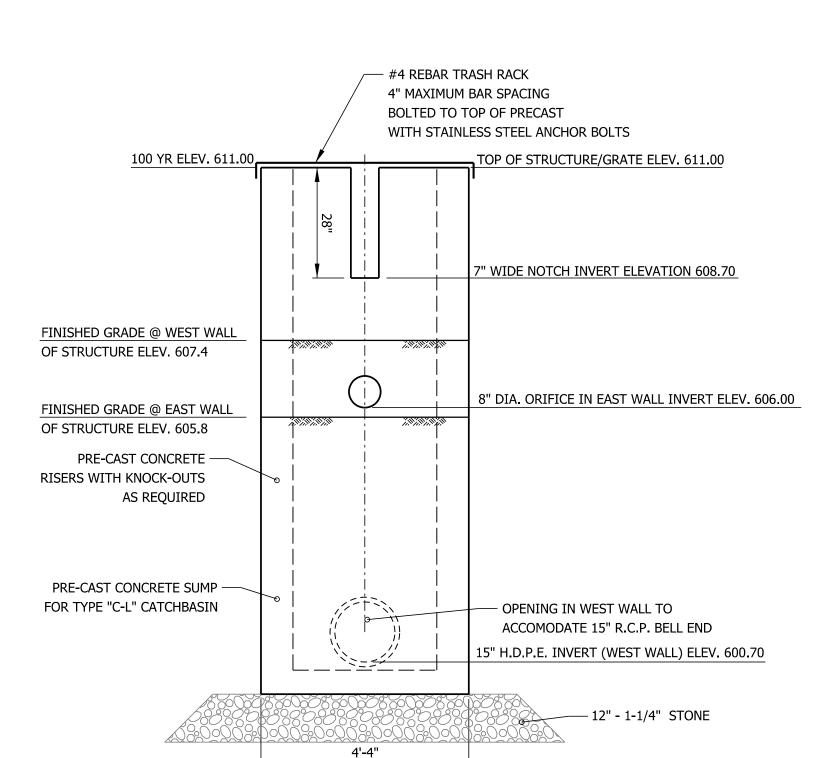
STORMWATER MANAGEMENT AREA:

- 1. THE ACCESS PATH TO THE STORMWATER MANAGEMENT AREA SHALL BE MOWED ON AN ANNUAL BASIS.
- 2. THE INTERIOR OF THE STORMWATER MANAGEMENT AREA BERM WILL BE MOWED AND ANY INVASIVE SPECIES SHALL BE REMOVED ON AN ANNUAL BASIS.
- 3. REMOVE TREES FROM THE FILLED BERM. ONLY SHRUBS AND GRASSES SHALL BE ALLOWED TO REMAIN.
- 4. THE BASIN AND OUTLET STRUCTURE SHALL BE INSPECTED ON A BIANNUAL BASIS. ANY DEBRIS AND SEDIMENT
- BUILT UP OVER 2 INCHES SHALL BE REMOVED. ANY DEBRIS BUILT UP IN FRONT OF THE OUTLET STRUCTURE SHALL BE REMOVED. SEDIMENT SHALL BE DISPOSED OF BY A LICENSED CONTRACTOR.



EMERGENCY SPILLWAY NOT TO SCALE





FORMATION OF EMBANKMENT FOR STORMWATER MANAGEMENT AREA

A. MATERIALS

1. FILL MATERIAL SHALL BE FREE OF FROZEN MATERIAL, SOD, BRUSH, ROOTS, STUMPS AND OTHER ORGANIC MATERIAL. EARTH EMBANKMENTS SHALL CONTAIN NO STONES OVER SIX INCHES IN DIAMETER. THE MATERIAL USED IN THE CORE PORTION OF THE EMBANKMENT SHALL BE THE MOST IMPERVIOUS MATERIAL OBTAINED FROM THE BORROW AREAS, AS REQUIRED. THE MORE PERVIOUS MATERIALS SHALL BE USED IN THE OUTER FILL PORTION OF THE EMBANKMENT AS SHOWN ON THE PLANS.

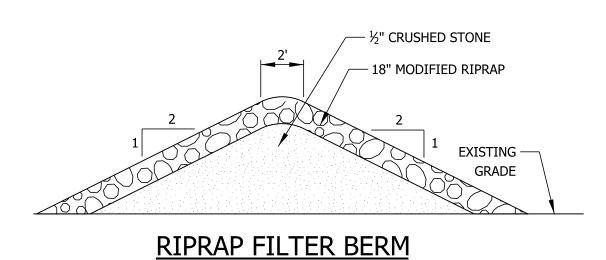
2. THE IMPERVIOUS CORE FILL MATERIAL SHALL BE GLACIAL TILL, TO BE PROVIDED IN SUFFICIENT QUANTITIES TO COMPLETE THE WORK. FILL MATERIAL SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. GLACIAL TILL SHALL CONSIST OF HARD AND DURABLE PARTICLES OR FRAGMENTS AND SHALL BE FREE OF ORGANIC MATTER AND OTHER OBJECTIONABLE MATERIALS. GLACIAL TILL SHALL CONFORM TO THE FOLLOWING GRADATION REQUIREMENTS.

U.S. STANDARD SIEVE SIZE	PERCENT PASSING BY WEIGHT
3 INCH	100
NO. 4	60 - 95
NO. 10	50 - 95
NO. 40	30 - 75
NO. 100	20 - 65
NO. 200	10 - 40

B. BERM FOUNDATION PREPARATION

1. ALL TREE CLEARING SHALL BE FLAGGED AND REVIEWED BY THE ZONING ENFORCEMENT OFFICER PRIOR TO ANY CUTTING OR CLEARING.

2. THE AREA WHERE THE BERM IS TO BE CONSTRUCTED SHALL BE CLEARED AND GRUBBED OF ALL TOPSOIL AND OTHER ORGANIC MATERIALS TO A DEPTH OF AT LEAST 24". UNLESS OTHERWISE SPECIFIED ON THE PLANS, BERM FOUNDATION AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF THREE INCHES PRIOR TO PLACEMENT OF FILL MATERIAL



NOT TO SCALE

C. PLACEMENT OF FILL

1. ALL EROSION CONTROL MEASURES SHALL BE ERECTED, INSPECTED AND APPROVED BY THE WETLANDS ENFORCEMENT OFFICER PRIOR TO PLACEMENT/EXCAVATION OF MATERIAL.

2. NO FILL SHALL BE PLACED UNTIL THE FOUNDATION PREPARATION AND EXCAVATIONS IN THE FOUNDATION HAVE BEEN COMPLETED AND APPROVED BY THE ENGINEER. NO FILL SHALL BE PLACED ON A FROZEN SURFACE NOR SHALL FROZEN MATERIAL BE INCORPORATED.

3. EMBANKMENT MATERIAL SHALL BE PLACED IN HORIZONTAL LAYERS IN 12 INCH LOOSE LIFTS. DURING CONSTRUCTION, THE SURFACE OF THE FILL SHALL BE SLOPED TO DRAIN. EACH LAYER OR LIFT SHALL EXTEND OVER THE ENTIRE AREA OF THE FILL.

4. THE FILL SHALL BE FREE FROM LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFERING SUBSTANTIALLY IN TEXTURE OR GRADATION FROM THE SURROUNDING MATERIAL. THE MORE PERVIOUS MATERIAL SHALL BE PLACED IN THE OUTSIDE PORTION OF THE BERM OR AS INDICATED ON THE DRAWINGS. THE FINISHED FILL SHALL BE SHAPED AND GRADED TO THE LINES AND GRADE SHOWN ON THE DRAWINGS.

5. PIPE BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 6 TO 8 INCH LOOSE LIFTS AND SHALL BE BROUGHT UP UNIFORMLY AROUND THE OUTLET PIPE AND FLARED END SECTION.

D. MOISTURE CONTROL

1. THE MOISTURE OF MATERIALS IN THE BERM SHALL BE CONTROLLED TO MEET THE REQUIREMENTS OF SOF APPROVED SPRINKLING EQUIPMENT. WATER SHALL BE ADDED UNIFORMLY AND EACH LAYER SHALL BE THOROUGHLY DISKED OR HARROWED TO PROVIDE PROPER MIXING. ANY LAYER FOUND TOO WET FOR COMPACTION SHALL BE ALLOWED TO DRY BEFORE ROLLING. PLACING OR ROLLING MATERIALS ON EARTH FCONTENT BEYOND THE LIMIT OF SATISFACTORY COMPACTION. THE EARTH FILL SHALL BE BROUGHT UP UNIFORMLY AND ITS TOP SHALL BE KEPT GRADED AND SLOPED SO THAT A MINIMUM OF RAIN WATER WILL BE RETAINED THEREON. COMPACTED EARTH FILL DAMAGED BY RUNOFF SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR.

E. COMPACTION OF BERM

1. BERM MATERIALS SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY AT OR NEAR OPTIMUM MOISTURE CONTENT AND BY THE COMPACTION EQUIPMENT SPECIFIED HEREIN. THE COMPACTION EQUIPMENT SHALL TRAVERSE THE ENTIRE SURFACE OF EACH LAYER OF FILL MATERIAL.

2. APPROVED TAMPING ROLLERS SHALL BE USED FOR COMPACTING ALL PARTS OF THE BERM. THE CONTRACTOR SHALL DEMONSTRATE THE EFFECTIVENESS OF THE ROLLER BY ACTUAL SOIL COMPACTION TEST RESULTS OF THE SOIL TO BE USED IN THE BERM WITH LABORATORY WORK PERFORMED BY AN APPROVED SOIL TESTING LABORATORY. COMPACTION TESTS SHALL INCLUDE MODIFIED PROCTOR AND NUCLEAR DENSITY TESTS MADE ST THE ENGINEER'S DISCRETION. A MINIMUM OF THREE PROCTOR TESTS SHALL BE PERFORMED AND DENSITY TESTS SHALL BE PERFORMED EVERY 1500 SQUARE FEET.

3. PIPE BACKFILL SHALL BE COMPACTED BY HAND TAMPING WITH MECHANICAL TAMPERS. HEAVY EQUIPMENT SHALL NOT BE OPERATED WITHIN THREE FEET OF ANY STRUCTURE. EQUIPMENT SHALL NOT BE ALLOWED TO OPERATE OVER THE OUTLET CULVERTS UNTIL THERE IS A LEAST TWO FEET OF COVER OVER THE PIPES.

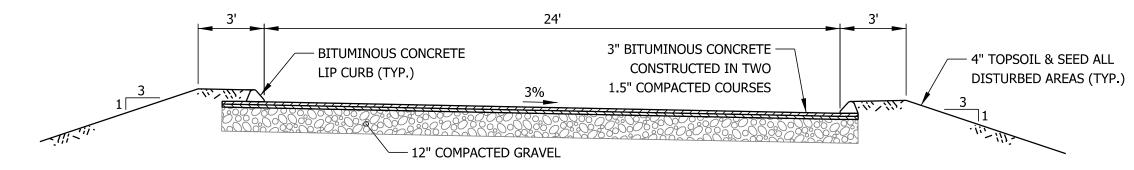
F. FINISHING EMBANKMENTS

1. THE BERM SHALL BE CONSTRUCTED TO THE ELEVATIONS, LINES AND GRADES AND CROSS SECTIONS AS SHOWN ON THE PLANS. THE BERM SHALL BE MAINTAINED IN A MANNER SATISFACTORY TO THE ENGINEER AND THE TOWN AND SURFACES SHALL BE COMPACTED AND ACCURATELY GRADED BEFORE TOPSOIL IS PLACED ON THEM.

2. THE TOPSOIL SHALL BE PLACED AT A DEPTH OF 4 TO 6 INCHES OVER THE DISTURBED AREA AFTER COMPLETION OF CONSTRUCTION.

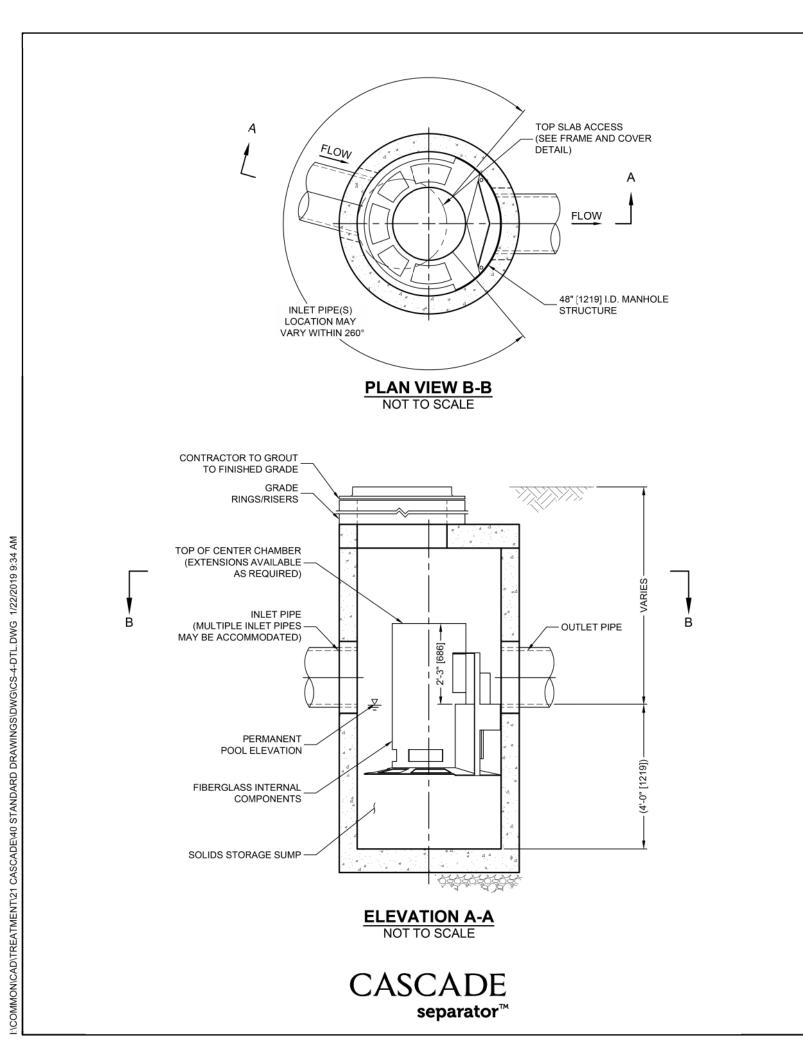
3. DISTURBED AREAS SHALL BE SEEDED WITH "NEW ENGLAND ENVIRONMENTAL BASIN MIX" OR APPROVED EQUAL AT A RATE OF 1 LB. PER 5000 SQUARE FEET OR AT A RATE RECOMMENDED BY THE MANUFACTURER. 4. SEEDED AREAS SHALL BE STABILIZED WITH HAY OR MULCH UNTIL VEGETATION IS FIRMLY ESTABLISHED. ECTION E " COMPACTION OF BERM". WHEN NECESSARY, MOISTURE SHALL BE ADDED BY THE USE

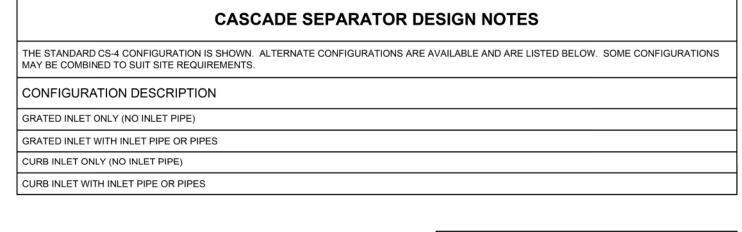
5. SEEDED AREAS SHALL BE MONITORED WEEKLY FOR EROSION AND ANY AREAS THAT REQUIRE RESEEDING SHALL BE RESEEDED COMPLETELY AND IMMEDIATELY.ILL WILL NOT BE PERMITTED DURING OR IMMEDIATELY AFTER RAINFALLS WHICH INCREASE THE MOISTURE

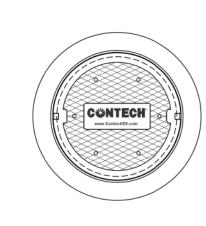


TYPICAL DRIVEWAY CROSS SECTION

TRUCTURE ID







WATER QUALITY FLOW RATE (cfs [L/s]) PEAK FLOW RATE (cfs [L/s]) RETURN PERIOD OF PEAK FLOW (yrs) RIM ELEVATION PIPE DATA: INVERT MATERIAL DIAMETER INLET PIPE 1 INLET PIPE 2 JTLET PIPE

SITE SPECIFIC

DATA REQUIREMENTS

FRAME AND COVER NOT TO SCALE

- GENERAL NOTES

 1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE. 2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED
- SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com 3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN
- THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT. 4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
- 5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN
- 6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

CENTERLINES TO MATCH PIPE OPENING CENTERLINES.

SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

- INSTALLATION NOTES

 A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD
- B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE

E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS



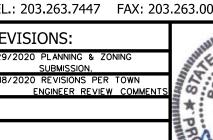
CASCADE SEPARATOR STANDARD DETAIL

DETAILS

SITE LOCATION APPLICANT: DAVID SIPPIN 1 COMMERCE DRIVE AND CHRISTIAN STREET 34 MAIN STREET TAX ASSESSOR'S MAP 25 BLOCK 25 LOT 1 BB 4 MONROE, CT 06468

WOLFF ENGINEERING

CIVIL & STRUCTURAL ENGINEERING CORNERSTONE PROFESSIONAL PARK, SUITE C101 39 SHERMAN HILL ROAD, WOODBURY, CT 06798 TEL.: 203.263.7447 FAX: 203.263.0060



DATE: 11/22/2019 DRAWN BY: R.P.W. CHECKED BY: R.P.W.

ENGINEERING

FIELD BOOK: R.P.W. SCALE: AS NOTED SHEET: 2 OF 6

PLOT DATE: 2/19/2020

Ronald Wolff Design\0xford\Commerce Drive\Ustn\2-5CommerceDrDetails.dgn

OUTLET CONTROL STRUCTURE

EROSION CONTROL NOTES

GENERAL PRINCIPLES

THE FOLLOWING GENERAL PRINCIPLES SHALL BE MAINTAINED AS EFFECTIVE MEANS OF MINIMIZING EROSION AND SEDIMENTATION DURING THE SITE DEVELOPMENT PERIOD.

REMOVAL OF VEGETATION, REGRADING, AND OTHER GROUND DISTURBANCE SHALL BE PERFORMED IN A METHOD SUCH THAT EROSION IS MINIMIZED.

GRADING PLANS SHALL PRESERVE NATURAL FEATURES WHEREVER POSSIBLE AND INSURE CONFORMITY WITH TOPOGRAPHY SO AS TO MINIMIZE THE POTENTIAL FOR EROSION AND ADEQUATELY HANDLE THE VOLUME AND VELOCITY OF SURFACE WATER RUNOFF.

WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED, AND SUPPLEMENTED WHEREVER INDICATED ON THE PLANS.

DISTURBED AREAS SHALL BE STABILIZED AS QUICKLY AS POSSIBLE.

TEMPORARY VEGETATION AND/OR MULCHING SHALL BE USED TO PROTECT EXPOSED STRIPPED AREAS WHEN EXPECTED DURATION OF EXPOSURE IS GREATER THAN 30 DAYS.

THE FINAL VEGETATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS EARLY AS FEASIBLE DURING THE CONSTRUCTION PHASE.

SEDIMENT IN THE RUNOFF WATER SHALL BE TRAPPED UNTIL THE DISTURBED AREAS ARE STABILIZED BY APPROPRIATE SEDIMENT CONTROL MEASURES.

ALL LAND WITHIN THE DEVELOPMENT SHALL BE GRADED TO DRAIN AND DISPOSE SURFACE WATER WITHOUT PONDING.

FINAL GRADING SHALL BE PERFORMED IN A MANNER TO PROVIDE PROPER DRAINAGE AWAY FROM BUILDINGS AND DISPOSE OF THE SURFACE WATER WITHOUT PONDING.

WHERE DRAINAGE SWALES ARE USED TO DIVERT SURFACE WATER, THEY SHALL BE SODDED OR PLANTED.

CONCENTRATION OF SURFACE RUNOFF SHALL ONLY BE PERMITTED BY PIPING AND/OR THROUGH THE USE OF DRAINAGE SWALES OR NATURAL WATERCOURSES.

CUTS AND FILLS

SLOPES CREATED BY CUTS OR FILLS THAT ARE STEEPER THAN 3:1, AND THE VERTICAL HEIGHT EXCEEDS 15 FEET, SHALL BE STABILIZED WITH ENGINEERED SLOPE STABILIZATION OR A BENCH SHALL BE CONSTRUCTED WITH A REVERSE SLOPE OF 5:1 OR FLATTER, AT LEAST 1 FOOT DEEP.

ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATER FROM DAMAGING THE CUT FACE OF EXCAVATIONS OR THE SLOPING SURFACES OF FILLS.

CUTS AND FILLS SHALL NOT ENDANGER ADJOINING PROPERTY.

ALL FILLS SHALL BE COMPACTED TO PROVIDE STABILITY OF MATERIAL AND TO PREVENT UNDESIRABLE SETTLEMENT. THE FILL SHALL BE SPREAD IN LIFTS NOT EXCEEDING 12" AND SHALL BE COMPACTED BY AN APPROVED METHOD AFTER EACH LIFT IS PLACED.

GRADING SHALL BE PERFORMED IN A MANNER SUCH THAT SURFACE WATER IS NOT DIVERTED ON PROPERTY OF AN ADJACENT LANDOWNER.

FILLS SHALL NOT ENCROACH ON NATURAL WATERCOURSES, CHANNELS, OR REGULATED FLOOD PLAIN AREAS UNLESS PERMITTED BY LICENSE OR PERMIT FROM PROPER AUTHORITY.

DUST CONTROL MEASURES SHALL BE IMPLEMENTED DURING CONSTRUCTION ACTIVITIES IF REQUIRED.

SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THESE PLANS AND THE "2002 CONNECTICUT GUIDELINES FOR SOIL AND SEDIMENT CONTROL".

RESPONSIBILITY FOR THE PLAN

WHENEVER SEDIMENTATION IS CAUSED BY STRIPPING VEGETATION AND/OR GRADING, IT SHALL BE THE RESPONSIBILITY OF THE PERSON, CORPORATION, OR OTHER ENTITY HAVING RESPONSIBILITY TO REMOVE SEDIMENTATION FROM ALL LOWER PROPERTIES, DRAINAGE SYSTEMS AND WATERCOURSES, AND TO REPAIR ANY DAMAGE AT THEIR EXPENSE AS QUICKLY AS POSSIBLE.

MAINTENANCE OF ALL DRAINAGE FACILITIES AND WATERCOURSES WITHIN ANY PROJECT SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER UNTIL THE PROJECT IS ACCEPTED BY THE TOWN. ALL CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. SURFACE INLETS SHALL BE KEPT OPEN AND FREE OF SEDIMENT AND DEBRIS. THE CONTROL MEASURES SHALL BE CHECKED AFTER EVERY MAJOR STORM AND SEDIMENT SHALL BE REMOVED AS REQUIRED.

IT SHALL BE THE RESPONSIBILITY OF ANY PERSON, CORPORATION, OR OTHER ENTITY ENGAGING IN ANY ACT ON OR NEAR ANY STREAM, WATERCOURSE OR SWALE OR UPON THE FLOOD PLAIN OR RIGHT-OF-WAY THEREOF TO MAINTAIN AS NEARLY AS POSSIBLE IN ITS PRESENT STATE THAT SAME STREAM, WATERCOURSE, SWALE, FLOOD PLAIN OR RIGHT-OF-WAY FOR THE DURATION OF THE ACTIVITY AND TO RETURN IT TO ITS ORIGINAL OR EQUAL CONDITION AFTER SUCH ACTIVITY IS COMPLETED.

MAINTENANCE OF DRAINAGE FACILITIES OR WATERCOURSES ORIGINATING AND COMPLETELY ON PRIVATE PROPERTY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO THEIR POINT OF OPEN DISCHARGE AT THE PROPERTY LINE OR AT A COMMUNAL WATERCOURSE WITHIN THE PROPERTY.

NO PERSON, CORPORATION, OR OTHER ENTITY SHALL BLOCK, IMPEDE THE FLOW OF, ALTER, CONSTRUCT ANY STRUCTURE OR DEPOSIT ANY MATERIAL OR OBJECT OR COMMIT ANY ACT WHICH WILL EFFECT NORMAL OR FLOOD FLOW IN ANY COMMUNAL STREAM OR WATERCOURSE WITHOUT HAVING OBTAINED PRIOR APPROVAL FROM THE PROPER AUTHORITY.

AN ADEQUATE RIGHT-OF-WAY AND/OR EASEMENT SHALL BE PROVIDED FOR ALL DRAINAGE FACILITIES AND WATERCOURSES WHICH ARE PROPOSED EITHER FOR ACCEPTANCE BY THE TOWN OR PROVIDED BY OTHER PROPERTY OWNERS FOR THE CONVENIENCE OF THE OWNER/DEVELOPER.

IN CASE OF AN EMERGENCY (SEVERE FLOODING, HEAVY RAINS, ETC.) THE PARTY RESPONSIBLE AND THE TOWN'S W.E.O. SHALL BE NOTIFIED.

THE EMERGENCY CONTACT IS: DAVID SIPPIN TEL. 203.209.6698.

TOPSOIL AND TURF ESTABLISHMENT

PLACING TOPSOIL

THE AREAS ON WHICH TOPSOIL IS TO BE PLACED SHALL BE GRADED TO A REASONABLY TRUE SURFACE. TOPSOIL SHALL THEN BE SPREAD TO THE LINES AND GRADES SHOWN ON THE PLANS. ALL STONES, ROOTS, DEBRIS, SOD, WEEDS AND OTHER UNDESIRABLE MATERIAL SHALL BE REMOVED. AFTER SHAPING AND GRADING, ALL TRUCKS AND OTHER EQUIPMENT SHALL BE EXCLUDED FROM THE TOPSOILED AREA TO PREVENT EXCESSIVE COMPACTION. THE CONTRACTOR SHALL PERFORM SUCH WORK AS REQUIRED TO PROVIDE A FRIABLE SURFACE FOR SEED GERMINATION AND PLANT GROWTH PRIOR TO SEEDING.

SEEDBED PREPARATION

FINE GRADE AND RAKE SURFACE TO REMOVE STONES LARGER THAN TWO INCHES IN DIAMETER. INSTALL THE REQUIRED EROSION CONTROL DEVICES. GRADE STABILIZATION STRUCTURES, SEDIMENT BASINS AND/OR DRAINAGE CHANNELS TO MAINTAIN SEEDED AREAS. APPLY LIMESTONE AT A RATE OF 2 TONS/ACRE OR 90 LBS./1000 SF UNLESS SPECIFIED OTHERWISE ON TOPSOIL TEST RESULTS. APPLY 10-10-10 FERTILIZER AT A RATE OF 300 LBS./ACRE OR 77.5 LBS./1000 SF. AT LEAST 50% OF THE NITROGEN SHALL BE FROM ORGANIC SOURCES. WORK LIME AND FERTILIZER INTO SOIL UNIFORMLY TO A DEPTH OF 4" WITH A HARROW OR OTHER SUITABLE EQUIPMENT FOLLOWING THE CONTOUR LINES.

SEED APPLICATION

APPLY GRASS MIXTURES AT RATES SPECIFIED BY HAND, CYCLONE SEEDER OR HYDROSEEDER. INCREASE SEED MIXTURE BY 10% IF HYDROSEEDER IS USED. LIGHTLY DRAG OR ROLL THE SEEDED SURFACE TO COVER SEED. SEEDING FOR SELECTED FINE GRASSES SHOULD BE DONE BETWEEN APRIL 1 AND JUNE 1 OR BETWEEN AUGUST 15 AND OCTOBER 15. IF SEEDING CANNOT BE DONE DURING THESE TIMES, REPEAT MULCHING PROCEDURE BELOW UNTIL SEEDING CAN TAKE PLACE OR SEED WITH A QUICK GERMINATING SEED MIXTURE TO STABILIZE SLOPES. A QUICK GERMINATING SEED MIXTURE, (DOMESTIC RYE), CAN BE APPLIED BETWEEN JUNE 15 THROUGH AUGUST 15 AS APPROVED BY THE ENGINEER.

MULCHING

IMMEDIATELY FOLLOWING SEEDING, MULCH THE SEEDED SURFACE WITH STRAW, HAY OR WOOD FIBER AT A RATE OF 1.5 TO 2 TONS/ACRE EXCEPT AS OTHERWISE SPECIFIED ELSEWHERE. MULCHES SHALL BE FREE OF WEEDS AND COARSE MATTER. SPREAD MULCH BY HAND OR MULCH BLOWER. PUNCH MULCH INTO SOIL SURFACE WITH TRACK MACHINE OR DISK HARROW SET STRAIGHT-UP. MULCH MATERIAL SHALL BE "TUCKED" APPROXIMATELY 2"-3" INTO THE SOIL SURFACE. CHEMICAL MULCH BINDERS OR NETTING IN COMBINATION WITH THE STRAW, HAY OR WOOD FIBERS, SHALL BE USED WHERE DIFFICULT SLOPES DO NOT ALLOW HARROWING BY MACHINES.

GRASS SEED MIXTURES

TEMPORARY COVERS PERMANENT COVERS

BALES PLACED AWAY FROM TOE OF SLOPE

SEDIMENT

HAVE A LARGER CONFINEMENT AREA.

BEHIND ORIGINAL BALES BEFORE

ADDITIONAL BALES SHOULD BE ADDED

SEDIMENTATION TOPS THE FIRST BALES.

PERENNIAL RYEGRASS: 20 LBS./ACRE CREEPING RED FESCUE: 40 LBS./ACRE ANNUAL RYEGRASS: 20 LBS./ACRE CANADA BLUEGRASS: 20 LBS./ACRE

SOIL EROSION CONTROL NARRATIVE

- 1. THIS PROJECT CONSISTS OF THE CONSTRUCTION OF AN INDUSTRIAL BUILDING ON AN EXISTING BUILDING LOT. ZONING OF THE PROPERTY IS INDUSTRIAL.
- 2. CONSTRUCTION ACTIVITIES ARE TAKING PLACE WITHIN AN EXISTING BUILDING LOT.
- 3. THE STORMWATER MANAGEMENT SYSTEM IS DESIGNED TO COLLECT RUNOFF FROM THE PROPOSED BUILDING ROOF AND PAVEMENT SURFACE AND DIRECT IT TO THE PROPOSED STORMWATER MANAGEMENT AREA. THE STORMWATER MANAGEMENT AREA AND HYDRODYNAMIC SEPARATOR WILL CONTROL RUNOFF AND PROVIDE WATER QUALITY.
- 4. APPROXIMATELY 55,000 SQUARE FEET OF PAVEMENT WILL BE CONSTRUCTED FOR THE PROPOSED PARKING AREA. 5. EROSION AND SEDIMENTATION CONTROL MEASURES SHOULD BE IMPLEMENTED SPECIFICALLY TO PROTECT THE
- SITE. THESE MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND PER THE 2002 CONNECTICUT GUIDELINES FOR SOIL AND SEDIMENT CONTROL.
- 6. THE PERMITS ASSOCIATED WITH THIS PROJECT INCLUDE AN INLAND WETLANDS PERMIT AND LOCAL PLANNING & ZONING PERMIT.
- 7. DETAILS FOR THE INSTALLATION OF THE PROPOSED EROSION AND SEDIMENTATION CONTROLS CAN BE FOUND ON THE "EROSION CONTROL DETAIL" SHEETS WITHIN THESE PLANS.
- 8. THE ENGINEERING REPORT AND HYDROLOGY AND HYDRAULICS CALCULATIONS PREPARED BY WOLFF ENGINEERING, ARE A SEPARATE DOCUMENT AND ARE PART OF THE SEDIMENT AND EROSION CONTROL PLAN.
- 9. DAVID SIPPIN WILL BE THE PERSON RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL SOIL EROSION CONTROL MEASURES. TEL.: 203.209.6698.
- 10. THE ESTIMATED START DATE FOR THIS PROJECT IS MAY 1, 2020 AND COMPLETION DATE APRIL 30, 2021.

SUGGESTED CONSTRUCTION SEQUENCE

THE FOLLOWING IS A SUGGESTED SEQUENCE OF EVENTS FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.

- HAVE THE PROPOSED IMPROVEMENTS AND LIMITS OF CONSTRUCTION/DISTURBANCE, STAKED BY A LICENSED LAND SURVEYOR.
 HOLD THE PRECONSTRUCTION MEETING WITH THE DEVELOPER, CONTRACTOR, ENGINEER AND TOWN STAFF. NOTIFY CALL BEFORE YOU DIG: (1-800-922-4455).
- 3. INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS FOR THE ENTIRE SITE IN ACCORDANCE WITH THE SEDIMENTATION AND EROSION CONTROL PLAN.
- 4. CLEAR VEGETATION WITHIN THE DEFINED CLEARING LIMITS AND REMOVE CUT WOOD. CHIP BRUSH AND STOCKPILE CHIPS FOR FUTURE USE OR REMOVE OFF SITE. EXCAVATE STUMPS AND REMOVE TO A DISPOSAL SITE OR STOCKPILE AREA TO BE CHIPPED.

 5. REMOVE ALL TOPSOIL WITHIN THE SLOPE LIMITS. STOCKPILE ALL TOPSOIL IN AN APPROVED AREA AND SECURE WITH EROSION
- AND SEDIMENT CONTROLS OR REMOVE TOPSOIL FROM THE SITE.

 6. INSTALL THE DRIVEWAY FOR THE BUILDING AND INSTALL THE STONE ANTI-TRACKING PAD AT THE INTERSECTION WITH THE STREET.

 7. EXCAVATE FOR THE STORMWATER MANAGEMENT AREA, TEMPORARILY DIRECT RUNOFF TO THE STORMWATER MANAGEMENT AREA
- DURING CONSTRUCTION.
- 8. EXCAVATE FOR THE BUILDING FOUNDATION, CONSTRUCT THE FOOTING AND FOUNDATION WALLS.
 9. INSTALL UNDERGROUND UTILITIES AND STORM DRAINAGE ITEMS, COMPLETE THE STORMWATER MANAGEMENT AREA.
- 10. PLACE AND COMPACT SUBBASE FOR THE PARKING AREA.
- 11. PAVE THE PARKING AREA.
- 12. SPREAD TOPSOIL, MULCH AND SEED ALL DISTURBED AREAS.
- 13. PLANT TREES AND LANDSCAPING ITEMS.
- 14. EROSION AND SEDIMENT CONTROL INSPECTION REPORTS SHALL BE SUBMITTED TO THE INLAND WETLAND OFFICER BIWEEKLY OR IMMEDIATELY AFTER ONE-HALF INCH OF RAINFALL.

SEDIMENTATION AND EROSION CONTROL MAINTENANCE

ANTI-TRACKING PAD MAINTENANCE

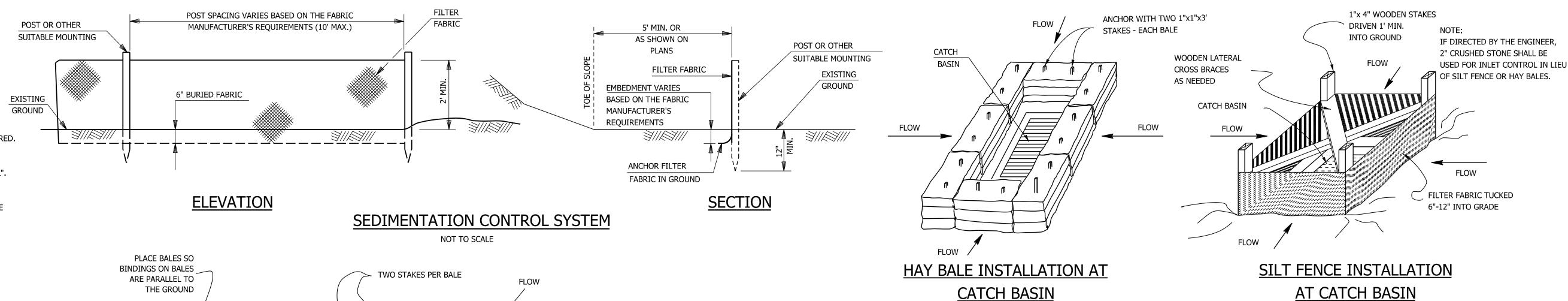
MAINTAIN THE ENTRANCE IN A CONDITION WHICH WILL PREVENT TRACKING AND WASHING OF SEDIMENT ONTO PAVED SURFACES. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND. REPAIR ANY MEASURES USED TO TRAP SEDIMENT AS NEEDED. IMMEDIATELY REMOVE ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PAVED SURFACES. ROADS ADJACENT TO A CONSTRUCTION SITE SHALL BE LEFT CLEAN AT THE END OF EACH DAY. IF THE CONSTRUCTION ENTRANCE IS BEING PROPERLY MAINTAINED AND THE ACTION OF A VEHICLE TRAVELING OVER THE STONE PAD IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF THE SEDIMENT, THEN EITHER (1) INCREASE THE LENGTH OF THE CONSTRUCTION ENTRANCE, (2) MODIFY THE CONSTRUCTION ACCESS ROAD SURFACE, OR (3) INSTALL WASHING RACKS AND ASSOCIATED SETTLING AREA OR SIMILAR DEVICES BEFORE THE VEHICLE ENTERS A PAVED SURFACE.

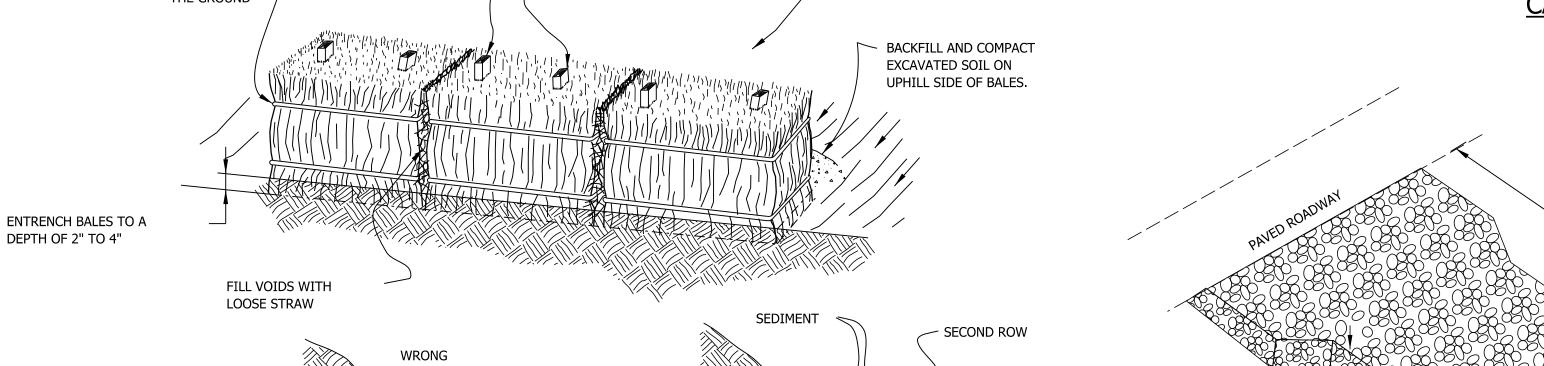
SILT FENCE MAINTENANCE

INSPECT THE SILT FENCE AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER TO DETERMINE MAINTENANCE NEEDS. WHEN USED FOR DEWATERING OPERATIONS, INSPECT FREQUENTLY BEFORE, DURING AND AFTER PUMPING OPERATIONS. REMOVE THE SEDIMENT DEPOSITS OR, IF ROOM ALLOWS, INSTALL A SECONDARY SILT FENCE UP SLOPE OF THE EXISTING FENCE WHEN SEDIMENT DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE EXISTING FENCE. REPLACE OR REPAIR THE FENCE WITHIN 24 HOURS OF OBSERVED FAILURE. FAILURE OF THE FENCE HAS OCCURRED WHEN SEDIMENT FAILS TO BE RETAINED BY THE FENCE BECAUSE: (A) THE FENCE HAS BEEN OVERTOPPED, UNDERCUT OR BYPASSED BY RUNOFF WATER, (B) THE FENCE HAS BEEN MOVED OUT OF POSITION (KNOCKED OVER), OR (C) THE GEOTEXTILE HAS DECOMPOSED OR BEEN DAMAGED. WHEN REPETITIVE FAILURES OCCUR AT THE SAME LOCATION, REVIEW CONDITIONS AND LIMITATIONS FOR USE AND DETERMINE IF ADDITIONAL CONTROLS (E.G. TEMPORARY STABILIZATION OF CONTRIBUTING AREA, DIVERSIONS, STONE BARRIERS) ARE NEEDED TO REDUCE FAILURE RATE OR REPLACE FENCE. MAINTAIN THE FENCE UNTIL THE CONTRIBUTING AREA IS STABILIZED. AFTER THE CONTRIBUTING AREA IS STABILIZED DETERMINE IF SEDIMENT CONTAINED BY THE FENCE REQUIRES REMOVAL OR REGRADING AND STABILIZATION. IF THE DEPTH IS GREATER THAN OR EQUAL TO 6 INCHES, REGRADING OR REMOVAL OF THE ACCUMULATED SEDIMENT IS REQUIRED. NO REMOVAL OR REGRADING IS REQUIRED IF SEDIMENT DEPTH IS LESS THAN 6 INCHES. REMOVE THE FENCE BY PULLING UP THE SUPPORT POSTS AND CUTTING THE GEOTEXTILE AT GROUND LEVEL. REGRADE OR REMOVE SEDIMENT AS NEEDED, AND STABILIZE DISTURBED SOILS.

HAY BALE BARRIER MAINTENANCE

INSPECT THE HAY BALE BARRIER AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER TO DETERMINE MAINTENANCE NEEDS. FOR DEWATERING OPERATIONS, INSPECT FREQUENTLY BEFORE, DURING, AND AFTER PUMPING OPERATIONS. REMOVE THE SEDIMENT DEPOSITS OR INSTALL A SECONDARY BARRIER UPSLOPE FROM THE EXISTING BARRIER WHEN SEDIMENT DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. REPLACE OR REPAIR THE BARRIER WITHIN 24 HOURS OF OBSERVED FAILURE. FAILURE OF THE BARRIER HAS OCCURRED WHEN SEDIMENT FAILS TO BE RETAINED BY THE BARRIER BECAUSE: (A) THE BARRIER HAS BEEN OVERTOPPED, UNDERCUT OR BYPASSED BY RUNOFF WATER, (B) THE BARRIER HAS BEEN MOVED OUT OF POSITION, OR (C) THE HAY BALES HAVE DETERIORATED OR BEEN DAMAGED. WHEN REPETITIVE FAILURES OCCUR AT THE SAME LOCATION, REVIEW CONDITIONS AND LIMITATIONS FOR USE AND DETERMINE IF ADDITIONAL CONTROLS (E.G. TEMPORARY STABILIZATION OF CONTRIBUTING AREA, DIVERSIONS, STONE BARRIERS) ARE NEEDED TO REDUCE FAILURE RATE OR REPLACE HAY BALE BARRIER. MAINTAIN THE HAY BALE BARRIER UNTIL THE CONTRIBUTING AREA IS STABILIZED. AFTER THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED, PULL THE STAKES OUT OF THE HAY BALES. UNLESS OTHERWISE REQUIRED, NO REMOVAL OR REGRADING OF ACCUMULATED SEDIMENT IS NECESSARY. THE HAY BALES MAY THEN BE LEFT IN PLACE OR BROKEN UP FOR GROUND COVER.





- FIRST ROW

PREFERRED PLACEMENT

HAY/STRAW BALES

NOT TO SCALE

6" DEPTH

2" CRUSHED STONE

GEOTEXTILE TO
STABILIZE FOUNDATION

25 FEET WITH

ANTI-TRACKING PAD

NOT TO SCALE

DETAILS

APPLICANT:

DAVID SIPPIN

1 COMMERCE DRIVE AND CHRISTIAN STREET

234 MAIN STREET

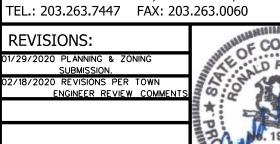
TAX ASSESSOR'S MAP 25 BLOCK 25 LOT 1 BB 4

MONROE, CT 06468

OXFORD, CT

WOLFF ENGINEERING CIVIL & STRUCTURAL ENGINEERING

CIVIL & STRUCTURAL ENGINEERING
CORNERSTONE PROFESSIONAL PARK, SUITE C101
39 SHERMAN HILL ROAD, WOODBURY, CT 06798
TEL: 203 263 7447 FAX: 203 263 0060



DATE: 11/22/2019
DRAWN BY: R.P.W.
CHECKED BY: R.P.W.
FILE:
FIELD BOOK: R.P.W.

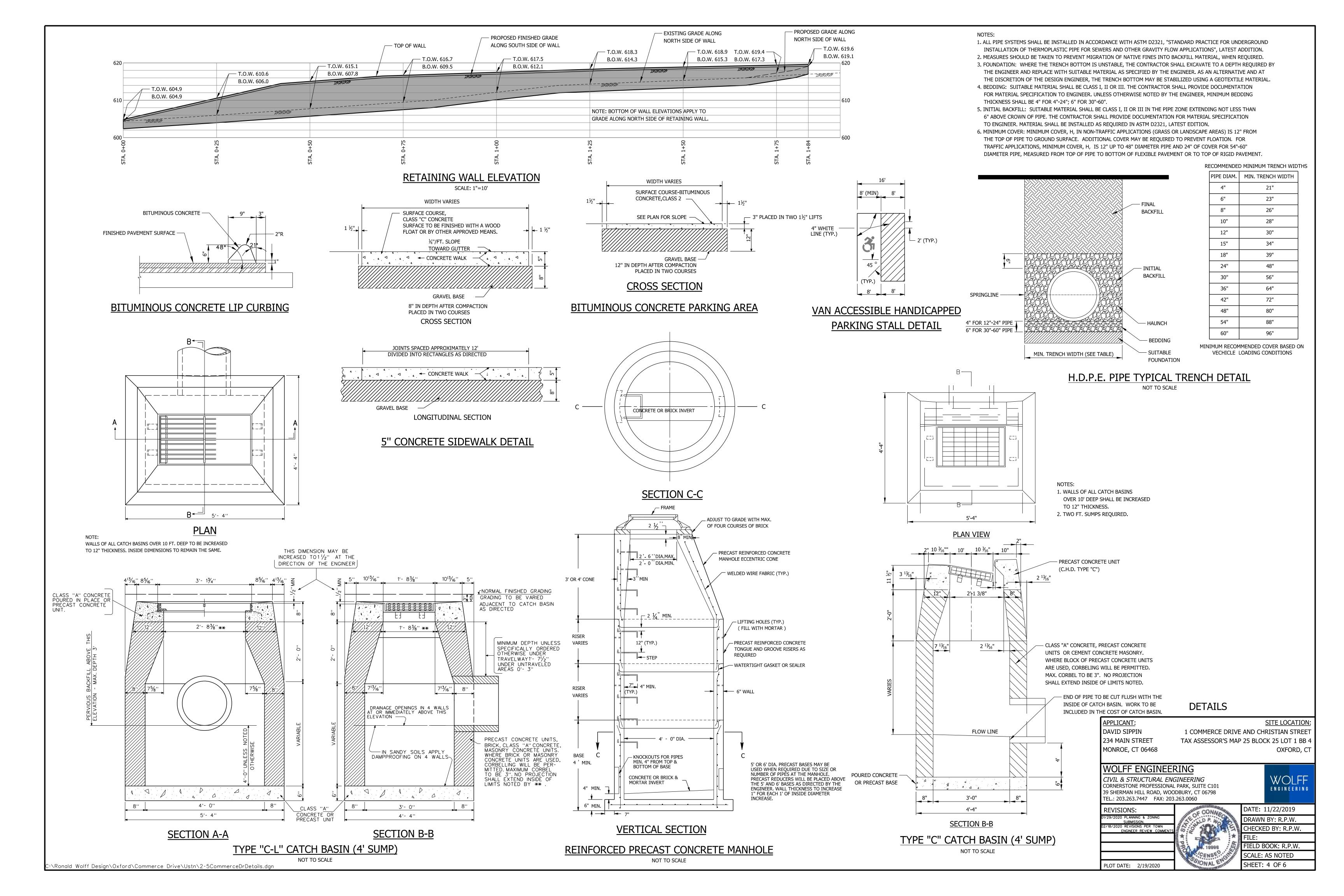
ENGINEERING

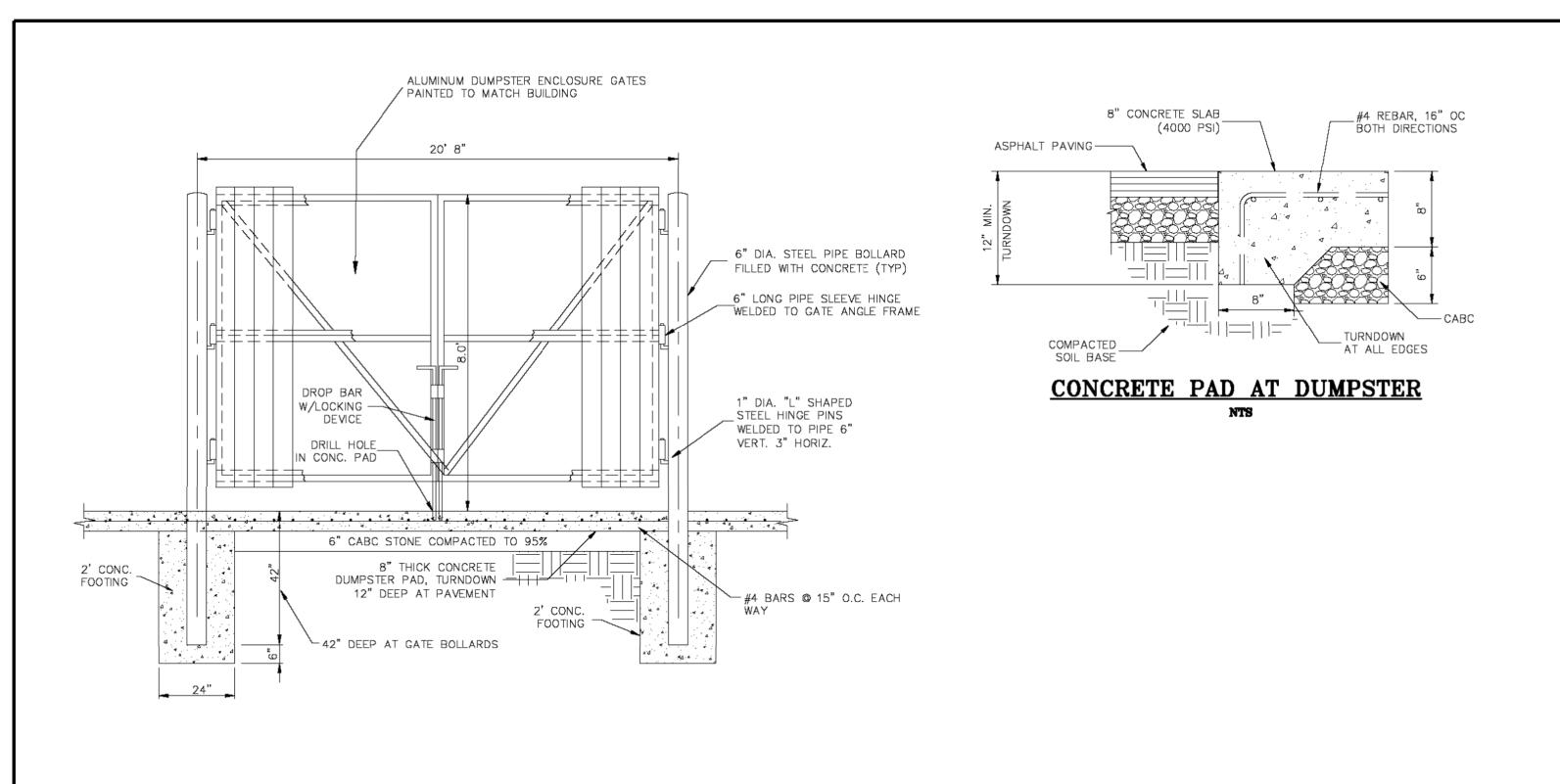
FILE:
FIELD BOOK: R.P.W.
SCALE: AS NOTED
SHEET: 3 OF 6

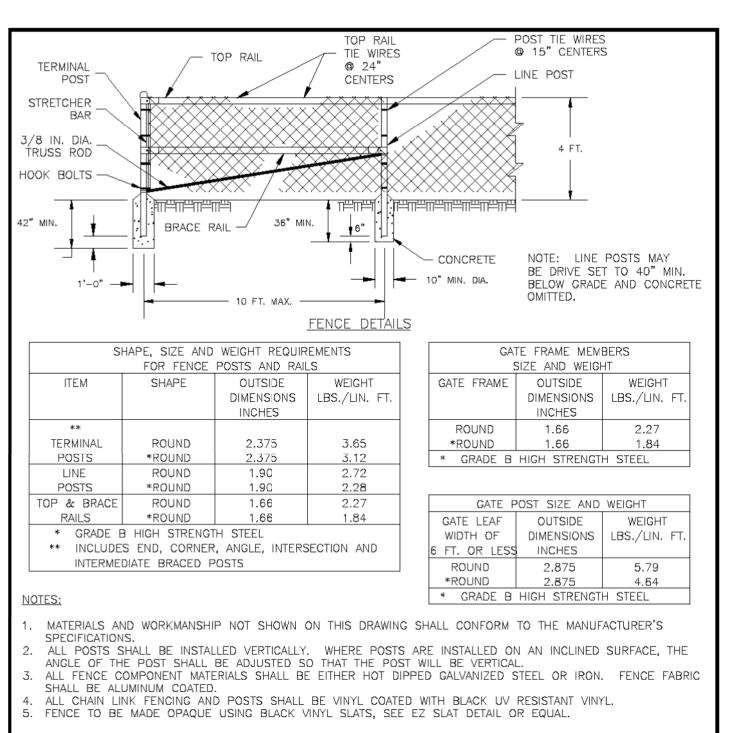
PLOT DATE: 2/19/2020

CATCH BASIN IN A DEPRESSION

NOT TO SCALE

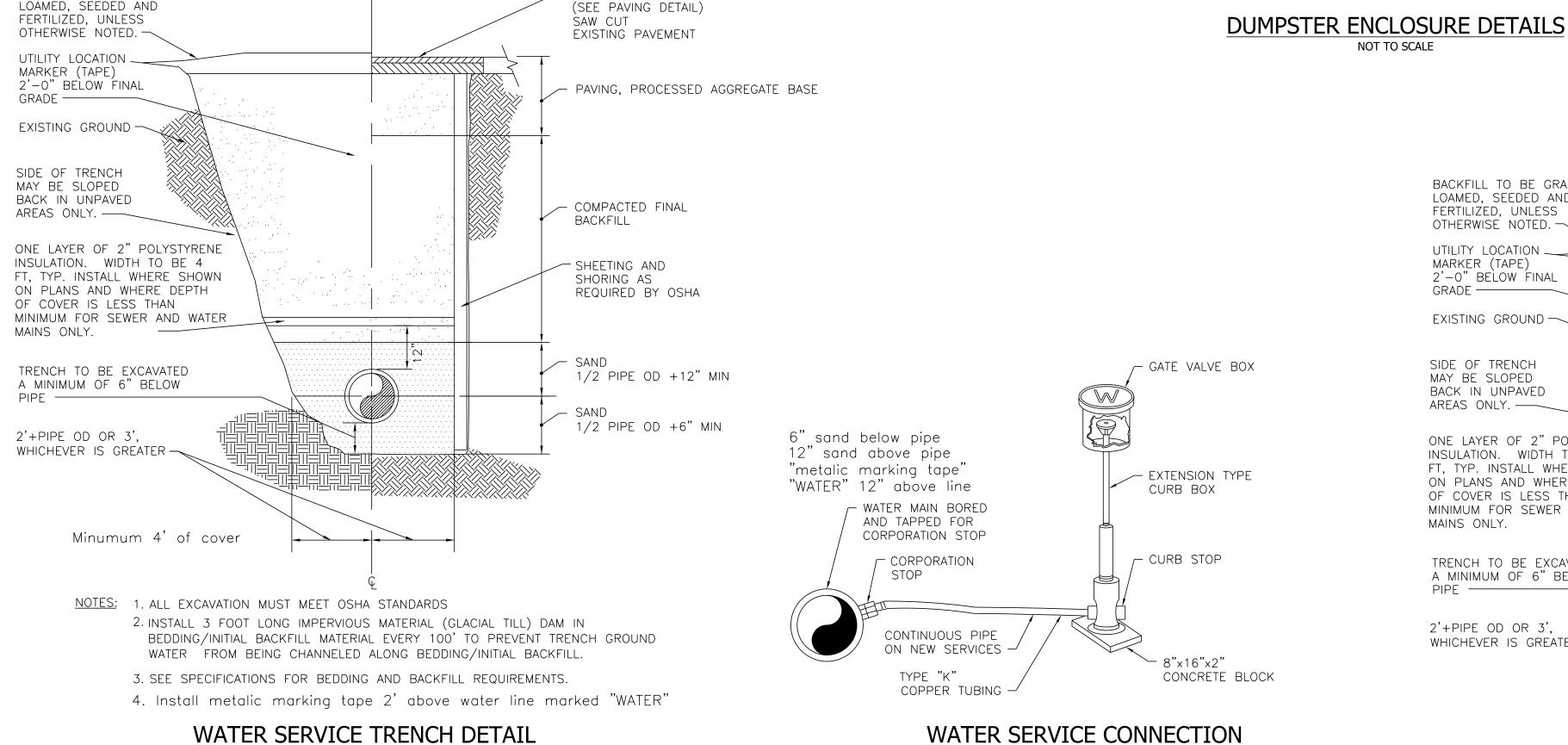






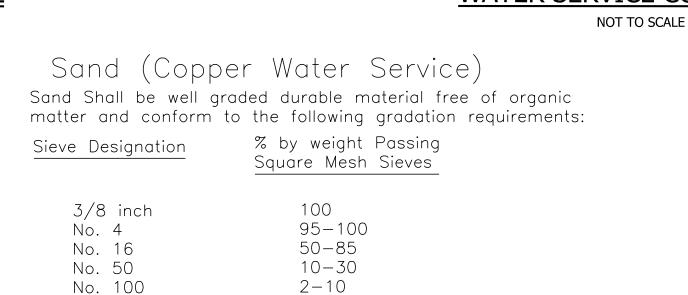
CHAIN LINK FENCE DETAIL

NOT TO SCALE

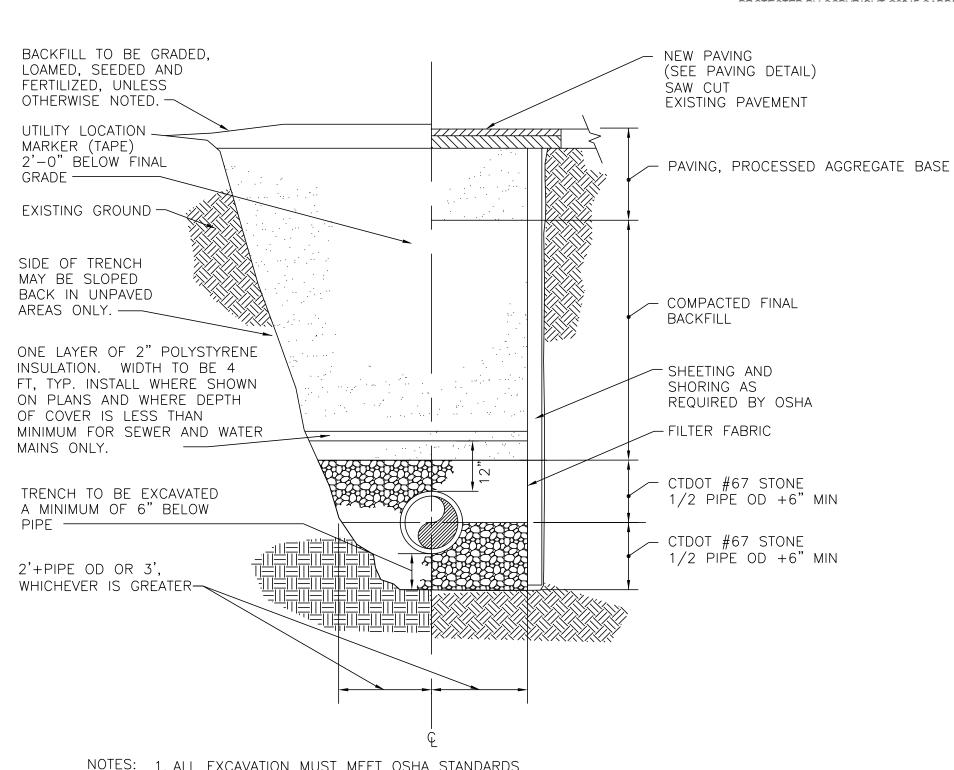


No. 200

NEW PAVING



0 - 5



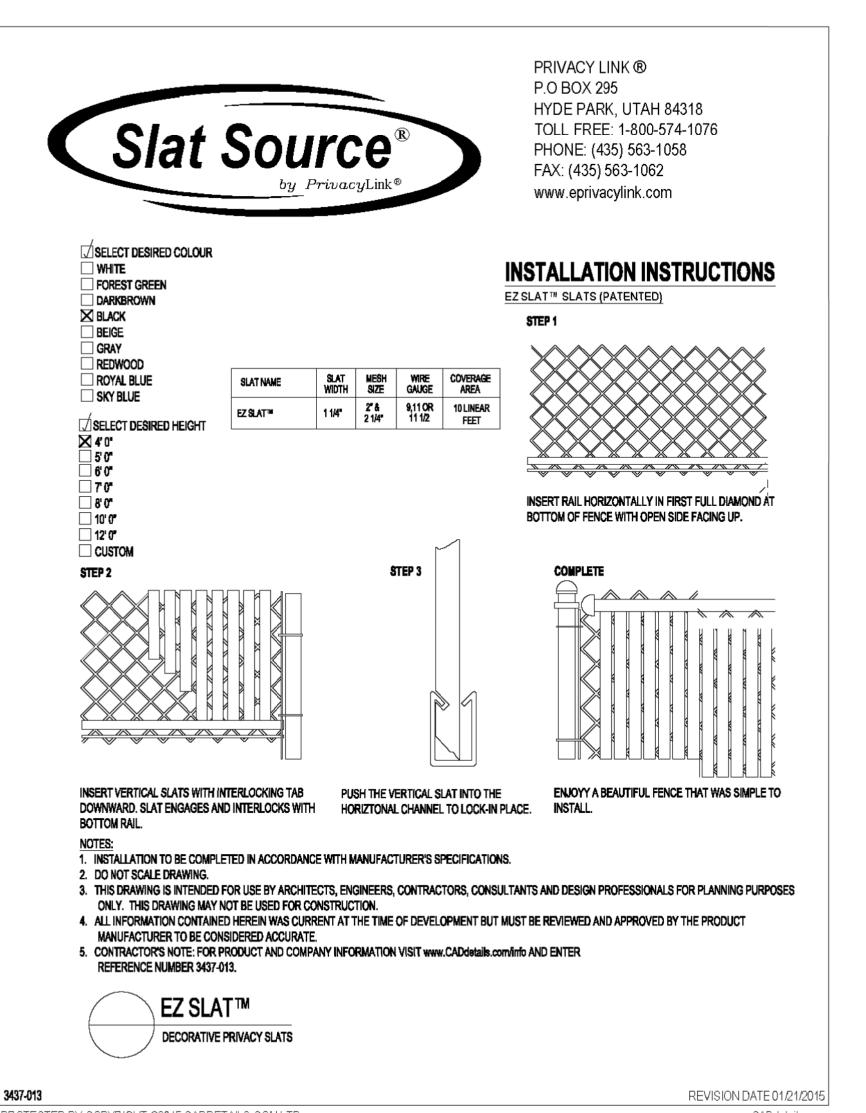
NOTES: 1. ALL EXCAVATION MUST MEET OSHA STANDARDS

2. INSTALL 3 FOOT LONG IMPERVIOUS MATERIAL (GLACIAL TILL) DAM IN BEDDING/INITIAL BACKFILL MATERIAL EVERY 100' TO PREVENT TRENCH GROUND WATER FROM BEING CHANNELED ALONG BEDDING/INITIAL BACKFILL.

3. SEE SPECIFICATIONS FOR BEDDING AND BACKFILL REQUIREMENTS. 4. Install metalic marking tape 3' above sewer pipe marked "SEWER"

SEWER PIPE TRENCH DETAIL

NOT TO SCALE





APPLICANT: SITE LOCATION: DAVID SIPPIN 1 COMMERCE DRIVE AND CHRISTIAN STREET 234 MAIN STREET TAX ASSESSOR'S MAP 25 BLOCK 25 LOT 1 BB 4 MONROE, CT 06468 OXFORD, CT

WOLFF ENGINEERING

CIVIL & STRUCTURAL ENGINEERING CORNERSTONE PROFESSIONAL PARK, SUITE C101 39 SHERMAN HILL ROAD, WOODBURY, CT 06798 TEL.: 203.263.7447 FAX: 203.263.0060



DATE: 11/22/2019 DRAWN BY: R.P.W. CHECKED BY: R.P.W.

FIELD BOOK: R.P.W. SCALE: AS NOTED SHEET: 5 OF 6

WOLFF

PLOT DATE: 2/19/2020

REVISIONS:

\Ronald Wolff Design\Oxford\Commerce Drive\Ustn\2-5CommerceDrDetails.dgn

100

50 - 100

25-100

Compacted Final Backfill

Sieve Designation

3-1/2"

3/4"

No. 4

NOT TO SCALE

% by weight Passing

Square Mesh Sieves

BACKFILL TO BE GRADED.

LOAMED, SEEDED AND

CENSE

