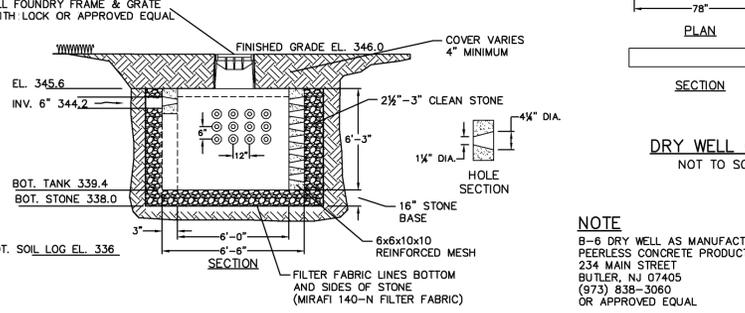
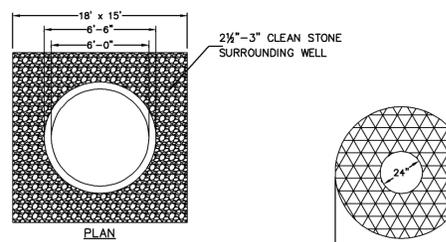
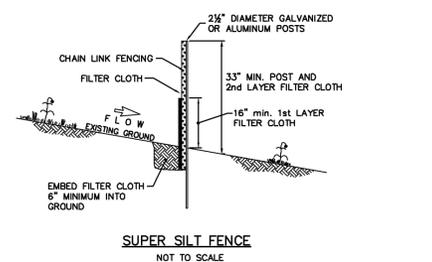
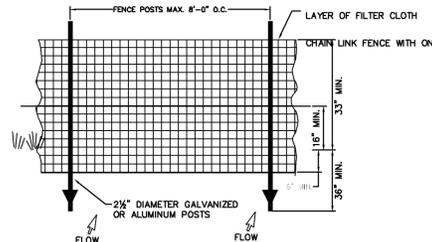


**TOPSOIL STOCKPILE DETAIL**  
NOT TO SCALE

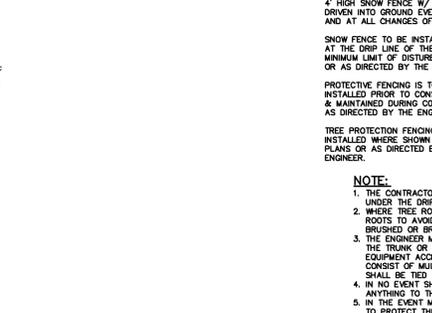
**GRANITE BLOCK CURB**  
NOT TO SCALE



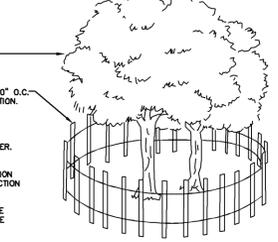
**NOTE**  
B-6 DRY WELL AS MANUFACTURED BY PERLESS CONCRETE PRODUCTS COMPANY 234 MAIN STREET BUTLER, NJ 07405 (973) 838-3080 OR APPROVED EQUAL



**GRANITE BLOCK CURB**  
NOT TO SCALE



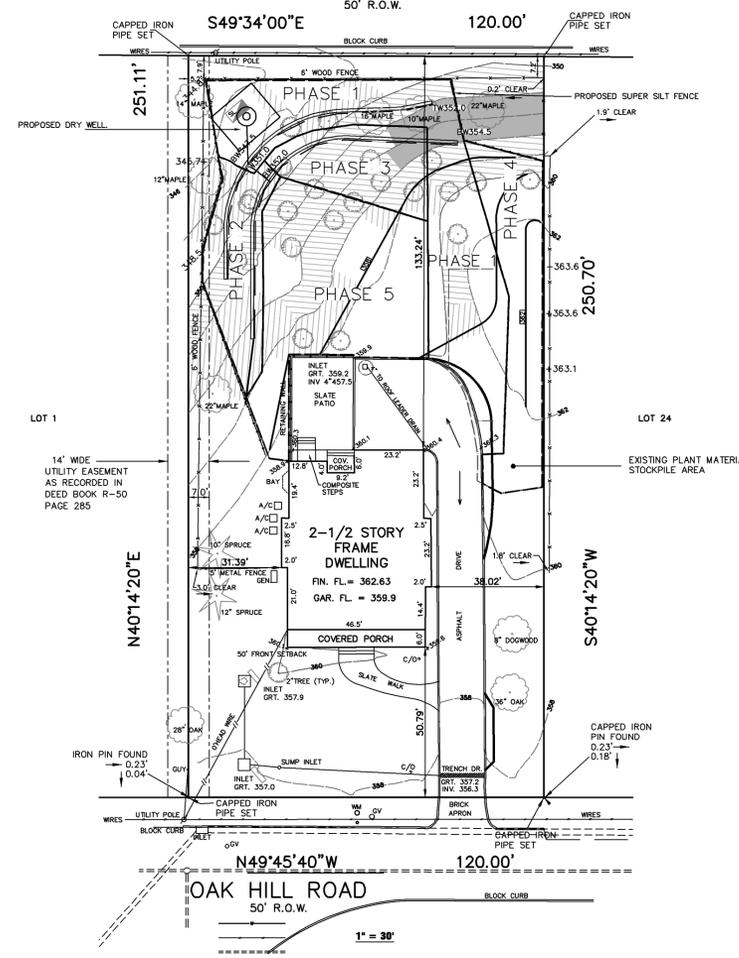
**BLOCK WALL TYPICAL SECTION**  
NOT TO SCALE



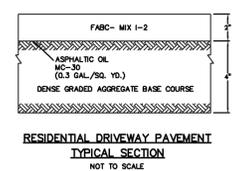
**TREE PROTECTION**  
NOT TO SCALE

**NOTE:**  
1. THE CONTRACTOR SHALL NOT STORE EQUIPMENT AND/OR MATERIALS OF ANY NATURE UNDER THE DRIP LINE OF THE TREES.  
2. WHERE TREE ROOTS ARE ENCOUNTERED, THE CONTRACTOR SHALL TUNNEL UNDER THE ROOTS TO AVOID DAMAGE BEING DONE TO THEM. ANY LARGE ROOTS WHICH ARE BRUSHED OR BROKEN SHALL BE PRUNED AS DIRECTED BY THE ENGINEER.  
3. THE ENGINEER MAY DIRECT THE CONTRACTOR TO INSTALL PROTECTIVE WRAPPING AROUND THE TRUNK OR BRANCHED TO MINIMIZE DAMAGE IN THE EVENT THE CONSTRUCTION EQUIPMENT ACCIDENTALLY COMES IN CONTACT WITH THE TREE. THIS WRAPPING SHALL CONSIST OF MULTIPLE LAYERS OF BURLAP AND WOODEN SNOW FENCING. THE WRAPPING SHALL BE TIED TO THE TREE IN SUCH A MANNER AS TO PRECLUDE DAMAGING THE BARK. IN NO EVENT SHALL NAILS OR OTHER MECHANICAL FASTENERS BE USED TO FASTEN ANYTHING TO THE TREES.  
4. IN NO EVENT SHALL MULCH OR OTHER MECHANICAL FASTENERS BE USED TO PROTECT THE TREES. THE CONTRACTOR'S BEST EFFORTS TO PROTECT THE TREES, HE SHALL IMMEDIATELY BRING THE DAMAGE TO THE ENGINEER'S ATTENTION.

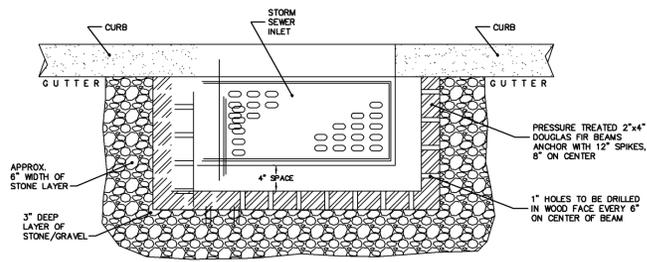
**SHUNPIKE ROAD**  
50' R.O.W.



- SEQUENCE OF CONSTRUCTION**
- DAY 1: INSTALL SOIL EROSION CONTROL DEVICES
  - WEEK 1: TEMPORARILY RELOCATE 2" TREES
  - WEEK 2-3: PHASE 1, STRIP TOPSOIL PRIOR TO CONSTRUCTING DRY WELL & LOWER BOLDER WALL. TEMPORARILY STABILIZE DISTURBED AREAS. STEEP SLOPE DISTURBANCE PHASE 1 = 1,450 S.F.
  - WEEK 3-4: PHASE 2, STRIP TOPSOIL. CONSTRUCT REMAINING PORTION OF LOWER BOLDER WALL. CONSTRUCT WESTERN PORTION OF UPPER BOLDER WALL. TEMPORARILY STABILIZE DISTURBED AREAS. STEEP SLOPE DISTURBANCE PHASE 2 = 1,190 S.F.
  - WEEK 5: PHASE 3, STRIP TOPSOIL. CONSTRUCT REMAINING PORTION OF UPPER BOLDER WALL. RE-GRADE AS REQUIRED. TEMPORARILY STABILIZE DISTURBED AREAS. STEEP SLOPE DISTURBANCE PHASE 3 = 1,030 S.F.
  - WEEK 6: PHASE 4, STRIP TOPSOIL. CONSTRUCT BLOCK WALL & REGRADE AS REQUIRED. TEMPORARILY STABILIZE DISTURBED AREAS. STEEP SLOPE DISTURBANCE PHASE 4 = 200 S.F.
  - WEEK 7: PHASE 5, FINAL GRADE, INSTALL LANDSCAPING & PERMANENTLY STABILIZE ALL DISTURBED AREAS. STEEP SLOPE DISTURBANCE PHASE 5 = 1,525 S.F.
  - LAST DAY: REMOVE SOIL EROSION & SEDIMENT CONTROL DEVICES



**RESIDENTIAL DRIVEWAY PAVEMENT TYPICAL SECTION**  
NOT TO SCALE



**INLET PROTECTION**

**Definition**  
The control of dust on construction sites and roads.

**Purpose**  
To prevent blowing and movement of dust from exposed soil surfaces, reduced on-site and off-site damage and health hazards, and improve traffic safety.

**Condition Where Practice Applies**  
This practice is applicable to areas subject to dust blowing and movement where on-site and off-site damage is likely without protection. Consult with local municipal ordinances on any restrictions.

**Water Quality Enhancement**  
Sediments deposited on "dust" are often fine colloidal material which is extremely difficult to remove from water once it becomes suspended. Use of this standard will help to control the generation of dust from construction sites and subsequent blowing and deposition into local surface water resources.

**Planning Criteria**  
The following methods should be considered for controlling dust:  
Mulches - See Standard of Stabilization with Mulches Only, pg. 5-1  
Vegetative Cover - See Standard for Temporary Vegetative Cover, pg. 7-1, Permanent Vegetative Cover for Soil Stabilization, pg. 4-1, and Permanent Stabilization with Sod, pg. 6-1  
Spray-On Adhesives - On mineral soils (not effective on muck soils). Keep traffic off these areas.

**Table 16-1: Dust Control Materials**

MATERIAL	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE
Anionic Asphalt Emulsion	7:1	Coarse Spray	1200
Latex emulsion	12.5:1	Fine Spray	235
Resin in water	4:1	Fine Spray	300
Polyacrylamide(PAM)-spray on			Apply according to manufacturer's instruction. May also be used as an additive to sediment basins to flocculate and precipitate suspended solids.
Polyacrylamide(PAM)-dry spread			
Acidulated Soy Bean Soap Stick	None	Coarse Spray	1200

**Tillage** - To roughen the surface and bring clods to the surface. This is a temporary emergency measure, which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, and spring-toothed harrows are examples of equipment, which may produce the desired effect.

**Sprinkling** - Site is sprinkled until the surface is wet.

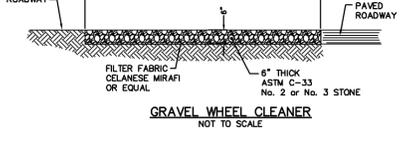
**Barriers** - Solid board fences, snow fences, burlap fences, crate walls, bales of hay, and similar material can be used to control air currents and soil blowing.

**Calcium Chloride** - Shall be in the form of loose, dry granules or flakes fine enough to feed through commonly used spreaders at a rate that will keep surface moist but not cause pollution or plant damage. If used on steeper slopes, then use other practices to prevent washing into streams, or accumulation around plants.

**Stone** - Cover surface with crushed stone or coarse gravel.

**CHATHAM TOWNSHIP SOIL EROSION & SEDIMENT CONTROL NOTES**

- All soil erosion and sediment control practices on this plan will be constructed in accordance with the "New Jersey Standards for Soil Erosion and Sediment Control," (revised 1999) and will be in place prior to any soil disturbance or in their proper sequence and maintained until permanent protection is established.
- Chatham Township will be notified 72 hours prior to any land disturbance.
- During and after construction, the owner will be responsible for the maintenance and upkeep of the drainage structures, vegetative cover, and any other measures deemed appropriate by the Township.
- A crushed stone vehicle wheel cleaning blanket will be installed whenever a construction access road intersects any paved roadway. Said blanket will be composed of 2 1/2" crushed stone, will be at least 50 feet long and the width of the exit roadway or driveway, and will be properly maintained.
- All paved roadways must be kept clean at all times.
- All new roadways and driveways will be treated with a suitable substrate upon establishment of final grade elevations.
- Disturbed areas shall be maintained in a rough graded condition and temporarily seeded and mulched until proper weather conditions exist for the establishment of permanent vegetative cover.
- All soil stockpiled for a period of greater than 30 days will be temporarily seeded and mulched.
- Stockpiles shall not be located within 50 feet of a floodplain, slope, drainage facility, or roadway. All stockpile bases shall be protected by a hay bale barrier or sediment fence.
- Immediately following initial disturbance or rough grading, all critical areas subject to erosion will receive a temporary seeding in combination with straw mulch or suitable equal, at a 2 ton/acre ratio rate, according to State Standards.
- Temporary Stabilization - any disturbed area that will be left exposed for more than thirty (30) days and not subject to construction activities shall immediately be stabilized upon disturbance by applying the following:
  - Ground limestone at a rate of 90 pounds per 1,000 square feet.
  - Fertilizer at a rate of 14 pounds per 1,000 square feet using a 10-20-10 analysis or an equivalent worked into the soil a minimum of 4".
  - Seed shall be Annual Ryegrass applied at not less than 1 pound per 1,000 square feet.
  - Mulch all newly seeded areas with untreated salt hay or small grain straw at a rate of 90 pounds per 1,000 square feet according to the NJ standard. Mulch shall not be ground into short pieces and in no case shall more than 5 days elapse between seeding and mulching.
  - Mulch shall be anchored with a liquid match binder applied at a rate of 1 gal./1,000 s.f. or by approved methods (i.e. peg and twine, match netting).
- The site shall, at all time, be graded and maintained such that all storm water runoff is diverted to soil erosion and sediment control facilities.
- All dewatering operations must discharge directly into a sediment filter area. The sediment filter should be composed of a suitable filter fabric.
- All sedimentation structures will be inspected and maintained on a regular basis.
- All storm drain inlets shall be protected with gravel filters to prevent entry of sediment carried by runoff water until vegetation and/or paving is established.
- All storm drainage outlets will be stabilized as required before the discharge points become operational.
- All trees to remain after construction are to be protected with tree protection devices or sediment barriers.
- The Township may request additional measure to minimize on or off site erosion problems during construction.
- Sequence of construction (must be modified for each specific project)
  - Install vehicle wheel cleaning blanket and inlet protection.
  - Install silt fence.
  - Clear site.
  - Strip and stockpile soil.
  - Construct site improvements.
  - Provide temporary stabilization if required.
  - Provide permanent stabilization.
  - Remove temporary silt fence, inlet protection and other soil erosion controls.
- A copy of the Soil Erosion and Sediment Control Plan must be on-site at all times and made available to a Township representative during inspection.



**GRAVEL WHEEL CLEANER**  
NOT TO SCALE

**TEMPORARY / PERMANENT SEEDING SPECIFICATIONS**

**PERMANENT SEEDING:**  
FERTILIZER (10-10-10) AT A RATE OF 23 LBS./1000SF Limestone in accordance with the following table:  
- CLAY, CLAY LOAMS = 135 LBS./1000 SF  
- SANDY LOAMS, LOAMS, SILT LOAMS = 90 LBS./1000 SF  
- LOAMY SANDS, SANDS = 45 LBS./1000 SF  
SEED:  
- KY-31 TALL FESCUE = 3/4 LBS./1000 SF  
- RED FESCUE = 3/4 LBS./1000 SF  
MULCH AT THE RATE OF 70-90 LBS./1000 SF

**STABILIZATION SPECIFICATIONS - TEMPORARY SEED AND MULCHING:**  
- LIME: 135 LBS./1000 SF. GROUND  
- FERTILIZER: (10-20-10) = 11 LBS./1,000 S.F.  
- WORK LIME AND FERTILIZER INTO 4" OF TOPSOIL.  
- SEED - ANNUAL RYEGRASS 1 LB./1,000 S.F., PLANT BETWEEN MARCH 1 AND MAY 15 OR BETWEEN AUGUST 15 AND OCTOBER 1.  
- MULCH - SALT HAY OR SMALL GRAIN STRAW AT A RATE OF 70 TO 90 LBS./1,000 S.F., TO BE APPLIED ACCORDING TO THE N.J. STANDARDS.  
MULCH SHALL BE SECURED BY APPROVED METHODS (I.E. PEG AND TWINE, MULCH NETTING, OR LIQUID MULCH BINDER).

**FISK ASSOCIATES, P.A.**  
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*Robert M. Fisk* 2/28/2020

**STEPHEN M. FISK, L.S., LIC.# 23919**  
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L.S. - NEW JERSEY PROFESSIONAL LAND SURVEYOR  
P.E. - NEW JERSEY PROFESSIONAL ENGINEER

**SOIL EROSION & SEDIMENT CONTROL CONSTRUCTION PHASING & DETAILS**

7 OAK HILL ROAD  
LOT 25 BLOCK 117  
TOWNSHIP OF CHATHAM  
MORRIS COUNTY - NEW JERSEY

3 WALL + DRIVE 2/28/2020  
2 DRY WELL 7/9/2019  
1 GENERAL 4/13/2019

SCALE: AS NOTED FIELD BOOK/PAGE: 622/17 JOB#: CHA-5632 SHEET: 2