



UTILITY PLAN LEGEND

- SANITARY SEWER
- SANITARY SEWER MANHOLE
- STORM SEWER
- STORM SEWER MANHOLE
- STORM SEWER MANHOLE WITH GRATE INLET TOP
- NYLOPLAST DRAIN BASIN WITH GRATE INLET TOP
- NYLOPLAST DRAIN BASIN
- CLEANOUT
- TRENCH DRAIN
- SWM
- STORMWATER FILTRATION VAULT
- WATER LINE
- DOMESTIC WATER METER 3" OR LARGER
- 2" DOMESTIC WATER METER (ASSUMED)

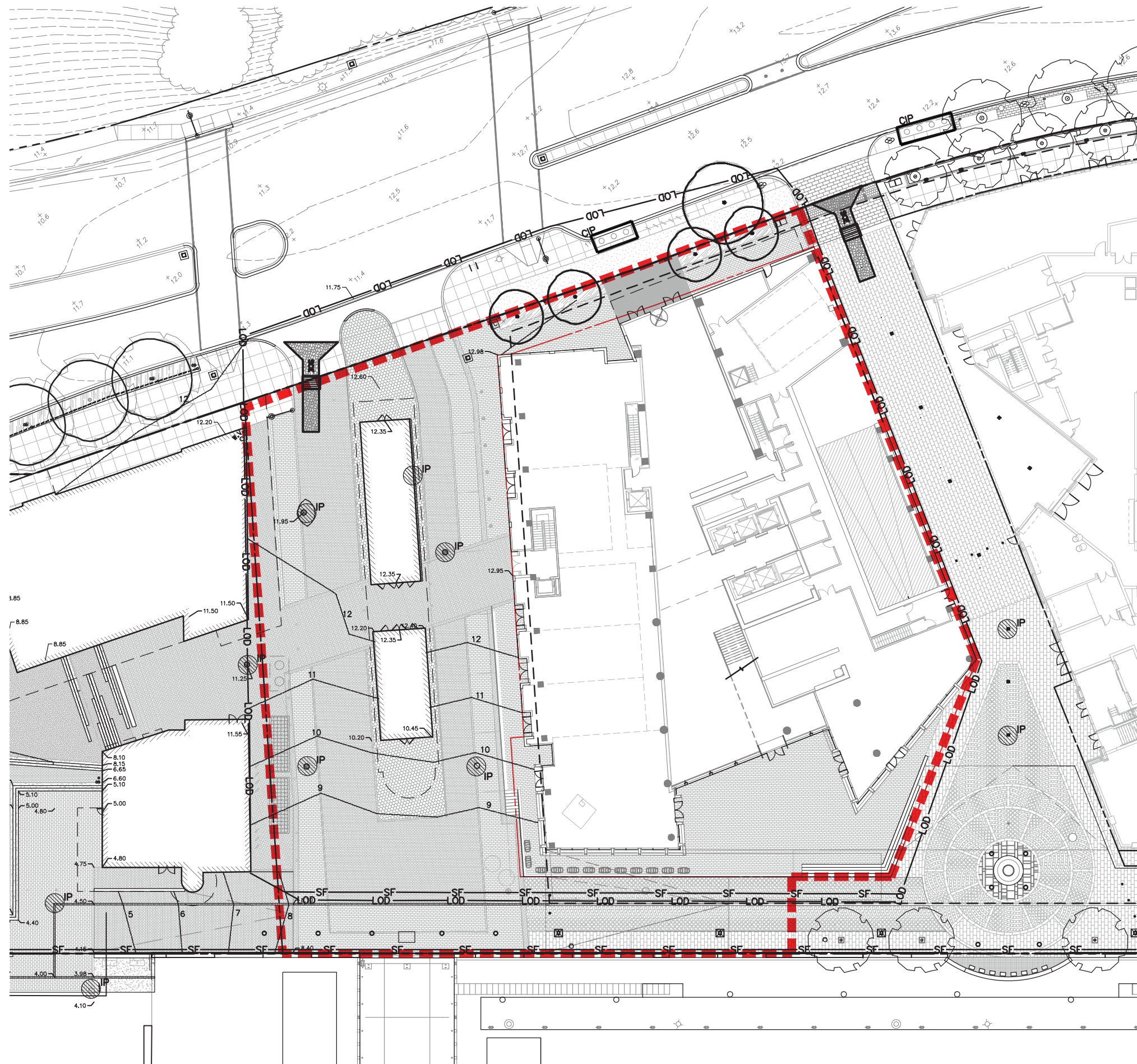
LEGEND

- STAGE 2 PUD BOUNDARY
- PARCEL 1 PROPERTY BOUNDARY
- PROPERTY/PARCEL BOUNDARY

STORMWATER MANAGEMENT CONCEPT PLAN KEYNOTES

- 1 PARCEL 1 GREEN ROOF (NOT DEPICTED)
- 2 STORMWATER PRETREATMENT MANHOLE TO FILTER PARCEL 1 BUILDING & SITE DRAINAGE PRIOR TO CISTERN
- 3 CISTERN IN G2 GARAGE LEVEL TO ACCEPT PRETREATED PARCEL 1 SITE & ROOF RUNOFF, FOR REUSE BY PARCEL 2 COOLING TOWERS
- 4 STORMFILTER VAULT (INSTALLED IN PREVIOUS DEVELOPMENT PHASE) TO FILTER MARKET SQUARE RUNOFF
- 5 BIORETENTION FACILITIES TO TREAT MAINE AVE SIDEWALK
- 6 FLEXIPAVE PERVIOUS PAVING BIKE PATH
- 7 TRENCH DRAIN TO DISCHARGE TO PRETREATMENT MANHOLE / CISTERN, TYP.
- 8 TRENCH DRAIN TO DISCHARGE TO MARKET SQUARE STORMFILTER VAULT TYP.
- 9 SITE INLET IN AT-GRADE GARAGE SLAB, TYP.
- 10 STORM PIPING IN GARAGE, TYP.
- 11 LIMITS OF GARAGE STRUCTURE, TYP.
- 12 TRENCH DRAIN ADJACENT TO MARKET SHED





SOUTHWEST WATERFRONT PARCEL 1 SEDIMENT CONTROL NARRATIVE

PARCEL 1 IS LOCATED WITHIN AND IS A PART OF A LARGER DEVELOPMENT SUBMITTED UNDER SEPARATE PLANS AND PERMITS CALLED SOUTHWEST WATERFRONT PHASE 1, ALSO KNOWN AS "THE WHARF". DURING THE PREVIOUS PHASES OF DEVELOPMENT, INFRASTRUCTURE IN THE VICINITY OF PARCEL 1 INCLUDING ROADWORK, SURFACE IMPROVEMENTS, GRADING, UTILITIES, AND THE UNDERGROUND PARKING GARAGE ARE DESIGNED AND PERMITTED SEPARATELY.

PARCEL 1 IS LOCATED BETWEEN MAINE AVENUE SW AND THE WASHINGTON CHANNEL, EAST OF THE FISH MARKET AND WEST OF PARCEL 2. THE PARCEL 1 BUILDING IS LOCATED ON TOP OF A 2-LEVEL UNDERGROUND PARKING GARAGE BUILT IN A PREVIOUS STAGE (PHASE 1) OF THE SOUTHWEST WATERFRONT PROJECT.

BECAUSE ALL SURROUNDING INFRASTRUCTURE WILL HAVE BEEN INSTALLED PRIOR TO THE ONSET OF THE PARCEL 1 BUILDING CONSTRUCTION, THE MAJORITY OF THE SITE WILL BE STABILIZED AND SEDIMENT CONTROL WILL ALREADY BE IN PLACE. NEVERTHELESS, ALL SEDIMENT-LADEN RUNOFF FROM THE CONSTRUCTION SITE MUST NOT LEAVE THE WHARF BEFORE BEING FILTERED AND PERIMETER CONTROLS MUST BE INSTALLED AND MAINTAINED. ALTERNATIVELY, SEDIMENT-LADEN RUNOFF MAY FLOW TO THE LARGE UNDERGROUND STORMWATER CISTERN WHICH WILL HAVE BEEN INSTALLED ADJACENT TO, SOUTH OF, AND DOWNSTREAM OF THE PARCEL 1 BUILDING. IT IS ANTICIPATED THAT THE CISTERN WILL ACT AS A SEDIMENT BASIN DURING THE INTERIM CONSTRUCTION CONDITION.

STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

1. THE CONTRACTOR SHALL CONDUCT OPERATIONS AND MAINTAIN THE PROJECT SITE SO AS TO MINIMIZE THE CREATION AND DISPERSION OF DUST. DUST CONTROL SHALL BE USED THROUGHOUT THE WORK AT THE SITE.
2. THE CONTRACTOR MUST PROVIDE CLEAN WATER, FREE FROM SALT, OIL AND OTHER DELETERIOUS MATERIAL TO BE USED FOR ON-SITE DUST CONTROL.
3. THE CONTRACTOR SHALL SUPPLY WATER SPRAYING EQUIPMENT CAPABLE OF ACCESSING ALL WORK AREAS.
4. THE CONTRACTOR SHALL IMPLEMENT STRICT DUST CONTROL MEASURES DURING ACTIVE CONSTRUCTION PERIODS ON-SITE. THESE CONTROL MEASURES WILL GENERALLY CONSIST OF WATER APPLICATIONS THAT SHALL BE APPLIED A MINIMUM OF ONCE PER DAY DURING DRY WEATHER OR MORE OFTEN AS REQUIRED TO PREVENT DUST EMISSIONS.
5. FOR WATER APPLICATION TO UNDISTURBED SOIL SURFACES, THE CONTRACTOR SHALL:
 - A. APPLY WATER WITH EQUIPMENT CONSISTING OF TANK, SPRAY BAR, PUMP WITH DISCHARGE PRESSURE GAUGE.
 - B. ARRANGE SPRAY BAR HEIGHT, NOZZLE SPACING AND SPRAY PATTERN TO PROVIDE COMPLETE COVERAGE OF GROUND WITH WATER.
 - C. DISPENSE WATER THROUGH NOZZLES ON SPRAY BAR AT 20 PSI MINIMUM. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
6. FOR WATER APPLICATION TO UNDISTURBED SOIL SURFACES, THE CONTRACTOR SHALL:
 - A. APPLY WATER WITH EQUIPMENT CONSISTING OF A TANK, PUMP WITH DISCHARGE GAUGE, HOSES AND MIST NOZZLES.
 - B. LOCATE TANK AND SPRAYING EQUIPMENT SO THAT THE ENTIRE EXCAVATION AREA CAN BE MISTED WITHOUT INTERFERING WITH DEMOLITION AND/OR EXCAVATION EQUIPMENT OR OPERATIONS. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
 - C. APPLY WATER SPRAY IN A MANNER TO PREVENT MOVEMENT OF SPRAY BEYOND THE SITE BOUNDARIES.

STANDARDS AND SPECIFICATIONS FOR STREET SWEEPING

1. STREETS WITHIN ONE MILE SHALL BE INSPECTED DAILY, ANY DROPPED SOIL, DUST AND/OR DEBRIS SHALL BE REMOVED.
2. VACUUM TYPE STREET CLEANER SHALL BE USED TO EFFECTIVELY REMOVE TOTAL DUST AND DIRT ON PAVED SURFACES.
3. ROADS SHALL BE SWEEPED ON A WEEKLY BASIS (MINIMUM) DURING ALL ON AND OFF SITE HAULING OPERATIONS FOR UP TO ONE MILE ALONG HAUL ROUTES.

CONSTRUCTION SPECIFICATION

1. LENGTH – MIN. OF 50' RAMP x 30' RAMP FOR SINGLE RESIDENCE LOT.
2. WIDTH – 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE.
4. STONE – CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
5. SURFACE WATER – ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND MIN. OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SOE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MIN. WILL BE REQUIRED.
6. LOCATION – A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY WHEN WASHING IS REQUIRED. IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO A APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

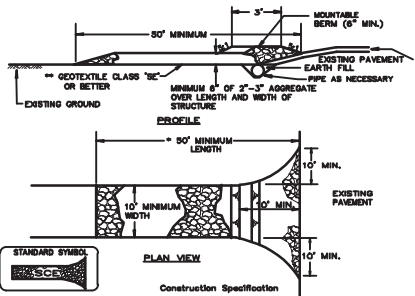
SILT FENCE

Silt Fence Design Criteria

Slope Steepness	(Medium) Slope Length	(Medium) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

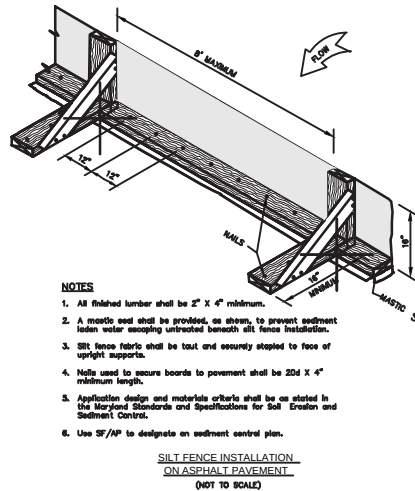
Notes: In areas of less than 25% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

DETAIL 1 – STABILIZED CONSTRUCTION ENTRANCE



1. LENGTH – MINIMUM OF 50' (30' FOR SINGLE RESIDENCE LOT).
2. WIDTH – 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SOE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED. THE MOUNTABLE BERM IS REQUIRED ON ALL SLOPES NOT LOCATED AT A HIGH SPOT.
4. LOCATION – A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

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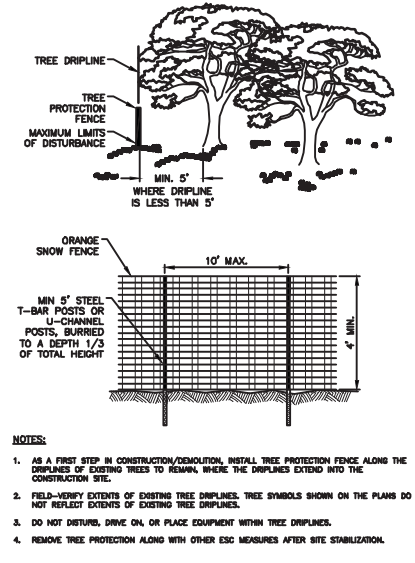


NOTES

1. All finished lumber shall be 2" x 4" minimum.
2. A mastic seal shall be provided, as shown, to prevent sediment laden water seeping underneath silt fence installation.
3. Silt fence fabric shall be taut and securely stapled to face of upright supports.
4. Nails used to secure boards to pavement shall be 20d x 4" minimum length.
5. Application design and materials criteria shall be as stated in the Maryland Standards and Specifications for Soil Erosion and Sediment Control.
6. Use SF/SP to designate on sediment control plan.

SILT FENCE INSTALLATION
ON ASPHALT PAVEMENT
(NOT TO SCALE)

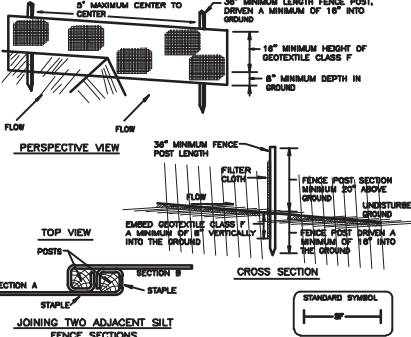
TREE PROTECTION FENCE



- NOTES:
1. AS A FIRST STEP IN CONSTRUCTION/DEMOLITION, INSTALL TREE PROTECTION FENCE ALONG THE DIAPHRANES OF EXISTING TREES TO REMAIN, WHERE THE DIAPHRANES EXTEND INTO THE CONSTRUCTION SITE.
 2. FIELD-VERIFY EXTENTS OF EXISTING TREE DIAPHRANES. TREE SYMBOLS SHOWN ON THE PLANS DO NOT REFLECT EXTENTS OF EXISTING TREE DIAPHRANES.
 3. DO NOT DISTURB, DRIVE ON, OR PLACE EQUIPMENT WITHIN TREE DIAPHRANES.
 4. REMOVE TREE PROTECTION ALONG WITH OTHER EROSION MEASURES AFTER SITE STABILIZATION.

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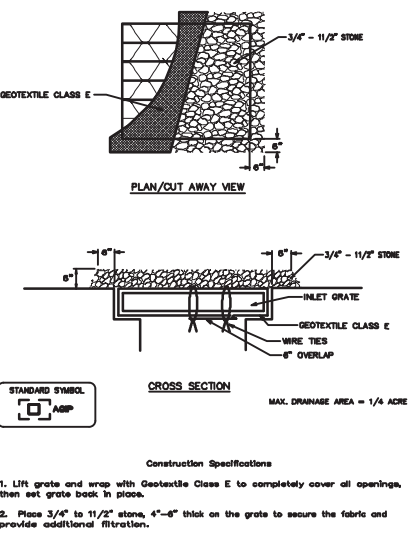
DETAIL 4 – SILT FENCE



- CONSTRUCTION SPECIFICATIONS
1. FENCE POSTS SHALL BE A MINIMUM OF 30" LONG DRIVEN 18" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1 1/2" x 1 1/2" SQUARE (MINIMUM) CUT, OR 1 1/2" DIAMETER (MINIMUM) ROUND AND SHALL BE OF GRADE QUALITY HARDWOOD. STEEL POSTS SHALL BE STANDARD I OR U SECTION BEHAVIOR NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
 2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:
- | | | |
|----------------------|-------------------------|------------------|
| TABLE STRENGTH | 50 LBS/IN (MIN) | TEST ASTM D-4886 |
| TABLE MODULUS | 20 LBS/IN (MIN) | TEST ASTM D-4886 |
| FLOW RATE | 0.3 GAL/FT MINUTE (MAX) | TEST ASTM D-5141 |
| FILTERING EFFICIENCY | 70% (MIN) | TEST ASTM D-5141 |
3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.
 4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BALDES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED JOE OF THE FABRIC.

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DETAIL 6B – AT GRADE INLET PROTECTION



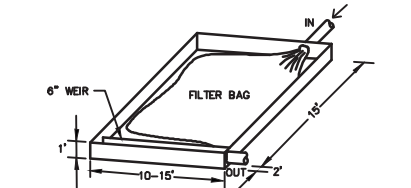
- Construction Specifications
1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.
 2. Place 3/4" to 1 1/2" stone, 4"-6" thick on the grate to secure the fabric and provide additional filtration.

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SILT BAG FOR PUMPED DIRTY WATER

- I. INSTALLATION/USE
 1. UNFOLD THE SILT BAG AND SIT INSIDE THE FABRICATED BOX (WOOD, METAL, OR PLASTIC).
 2. INSERT PUMP DISCHARGE HOSE INTO HANDY SEWN-IN SPOUT AND SECURE WITH THE ATTACHED STRAPS.
 3. CONNECT OUTFALL PIPE OR HOSE TO THE OUTLET PIPE OF BOX AND RUN TO THE NEAREST CATCH BASIN.
 4. PUMP DIRTY WATER INTO BAG. THE BAG COLLECTS THE SILT AS THE CLEAN WATER GENTLY FILTERS OUT FROM ALL SIDES.
- II. SPECIFICATIONS FOR SILT BAG 10'x15', 12-1/2'x15', AND 15'x15' SIZES.
- III. MAINTENANCE
 1. REPLACE THE SILT BAG AFTER IT IS FILLED WITH SILT.

PROPERTIES	TEST METHOD	UNITS	WOVEN
WEIGHT	ASTM D-3776	OZ./YD.	8
GRAB TENSIL	ASTM D-4632	LBS.	300
PUNCTURE	ASTM D-4633	LBS.	120
FLOW RATE	ASTM D-4491	GAL./MIN./FT ²	40
PERMITIVITY	ASTM D-4991	%	0.55
UV RESISTANCE	ASTM D-4355	%	80



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STAGE TWO PUD APPLICATION
VOLUME VI
PARCEL 1, MARKET SQUARE AND MARKET SHED
AUGUST 17, 2015 - PRELIMINARY SUBMISSION

