

STANDARDS FOR SILT FENCE ②

DEFINITION

TEMPORARY BARRIER FENCE MADE OF BURLAP OR POLYPROPYLENE MATERIAL WHICH IS WATER PERMEABLE BUT WILL TRAP WATER - BORNE SEDIMENT.

PURPOSE

TO INTERCEPT AND DETAIN WATER - BORNE SEDIMENT FROM UNPROTECTED AREAS OF LIMITED EXTENT.

CONDITIONS WHERE PRACTICE APPLIES

SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR OTHER DRAINAGE WAY.

DESIGN CRITERIA

SILT FENCE IS CONSTRUCTED NEAR THE PERIMETER OF A DISTURBED SITE WITHIN THE DEVELOPING AREA. IT IS NOT TO BE CONSTRUCTED OUTSIDE THE PROPERTY LINES WITHOUT OBTAINING A LETTER OF PERMISSION FROM THE AFFECTED ADJACENT PROPERTY OWNERS.

A DESIGN IS NOT REQUIRED FOR THE INSTALLATION OF THE SILT FENCE. HOWEVER, THE FOLLOWING CRITERIA SHALL BE OBSERVED:

- HEIGHT - 30 INCHES MINIMUM HEIGHT MEASURED FROM EXISTING OR GRADED GROUND.
- MATERIAL - BURLAP, POLYPROPYLENE FABRIC, OR NYLON REINFORCED WITH POLYESTER NETTING. THE MULLEN BURST STRENGTH SHALL BE GREATER THAN 150 PSI. THE EDGES SHALL BE TREATED TO PREVENT UNRAVELING.
- SUPPORT - STEEL FENCE POSTS SPACED A MAXIMUM OF 8 FEET APART. WOVEN WIRE WILL BE USED TO SUPPORT THE MATERIAL.

STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.

THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

THE TRENCH SHOULD BE A MINIMUM OF 4 INCHES DEEP AND 4 INCHES WIDE TO ALLOW FOR THE SILT FENCE TO BE LAID IN THE GROUND AND BACKFILLED.

SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POSTS.

SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

OUTLET

SILT FENCE SHALL BE PLACED AND CONSTRUCTED IN SUCH A MANNER THAT RUNOFF FROM A DISTURBED SURFACE OR EXPOSED UPLAND AREA SHALL BE INTERCEPTED, SEDIMENT TRAPPED, AND THE SURFACE RUNOFF ALLOWED TO PERCOLATE THROUGH THE STRUCTURE. SILT FENCE SHALL BE PLACED IN SUCH A MANNER THAT SURFACE RUNOFF WHICH PERCOLATES THROUGH WILL FLOW ONTO AN UNDISTURBED STABILIZED AREA OR STABILIZED OUTLET.

WHEN ACCUMULATED SILT REACHES A DEPTH OF 6 INCHES, THE SILT SHALL BE REMOVED AND DISPOSED OF PROPERLY BY THE CONTRACTOR.

TEMPORARY STONE CONSTRUCTION ENTRANCE/EXIT ③

DESCRIPTION

AN AGGREGATE AREA OR PAD LOCATED WHERE VEHICLES ENTER AND LEAVE A CONSTRUCTION SITE.

PURPOSE

TO PROVIDE AN AREA WHERE VEHICLES CAN REMOVE MUD AND SEDIMENT FROM THEIR TIRES PRIOR TO DRIVING ON PUBLIC STREETS. IF USED PROPERLY, IT REDUCES THE REQUIREMENT TO REMOVE SEDIMENT FROM PUBLIC STREETS, REDUCES THE MAJORITY OF TRAFFIC TO A SINGLE LOCATION, AND PROVIDES PROTECTION FOR OTHER BEST MANAGEMENT PRACTICES ON SITE THROUGH TRAFFIC CONTROL.

APPLICATIONS

USE WHEREVER TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD OR AN OFF-SITE PAVED SURFACE. PRIMARY INSTALLATIONS INCLUDE EXITS FROM STORAGE AREAS, STAGING AREAS, TRUCK HAUL ROUES, AND BORROW/SPOIL AREAS.

LIMITATIONS

SELECTION OF THE STONE CONSTRUCTION EXIT/ENTRANCE LOCATION IS CRITICAL, SINCE TO BE EFFECTIVE ALL TRAFFIC MUST USE THE AREA(S) TO EXIT A SITE. THE DEVICE IS NOT SUITABLE FOR USE ON LONG, LINEAR PROJECTS UNLESS THERE ARE DESIGNATED POINTS FOR CONTROLLED ACCESS. CONTRACTORS SHALL CLEAN-UP EXCESSIVE STONE FROM EXISTING PAVED STREETS DURING THE CONSTRUCTION PROCESS.

DESIGN CRITERIA

- A. LOCATION: LOCATE THE CONSTRUCTION ENTRANCE/EXIT TO LIMIT THE AMOUNT OF SEDIMENT THAT LEAVES THE CONSTRUCTION SITE AND TO PROVIDE FOR MAXIMUM USE BY VEHICLES LEAVING THE SITE. DO NOT PLACE ALONG CURVES IN THE PUBLIC ROADWAY.
- B. FILTER FABRIC: SHALL BE USED FOR INSTALLATIONS WITH A CONSTRUCTION PERIOD OF MORE THAN 6 MONTHS, WHERE HEAVY TRUCK TRAFFIC IS ANTICIPATED DAILY, OR VERY WEAK SUB-GRADE SOILS ARE PRESENT.

MATERIAL SPECIFICATIONS

- A. AGGREGATE - NATURAL STONE MEETING THE GRADATION REQUIREMENTS OF NCTCOG SPECIFICATION ITEM 2.1.8 (d), [3"-4" DIAMETER] - NO RECYCLED CONCRETE ALLOWED.
- B. FILTER STONE - NCTCOG SPECIFICATION 2.23.3.

MAINTENANCE REQUIREMENTS

INSPECTIONS SHOULD BE MADE WEEKLY AND AFTER MAJOR RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY. WHEN SEDIMENT OR MUD HAS CLOGGED THE VOID SPACES BETWEEN THE STONES OR MUD IS BEING TRACKED ONTO THE PUBLIC ROADWAY THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASHDOWN OPERATION SHALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST FLOWING THROUGH ANOTHER BEST MANAGEMENT PRACTICE TO CONTROL OFF-SITE SEDIMENTATION. PERIODIC RE-GRADING OR THE ADDITION OF NEW STONE MAY BE REQUIRED TO MAINTAIN THE EFFICIENCY OF THE INSTALLATION.

GENERAL NOTES:

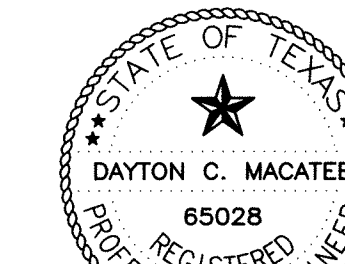
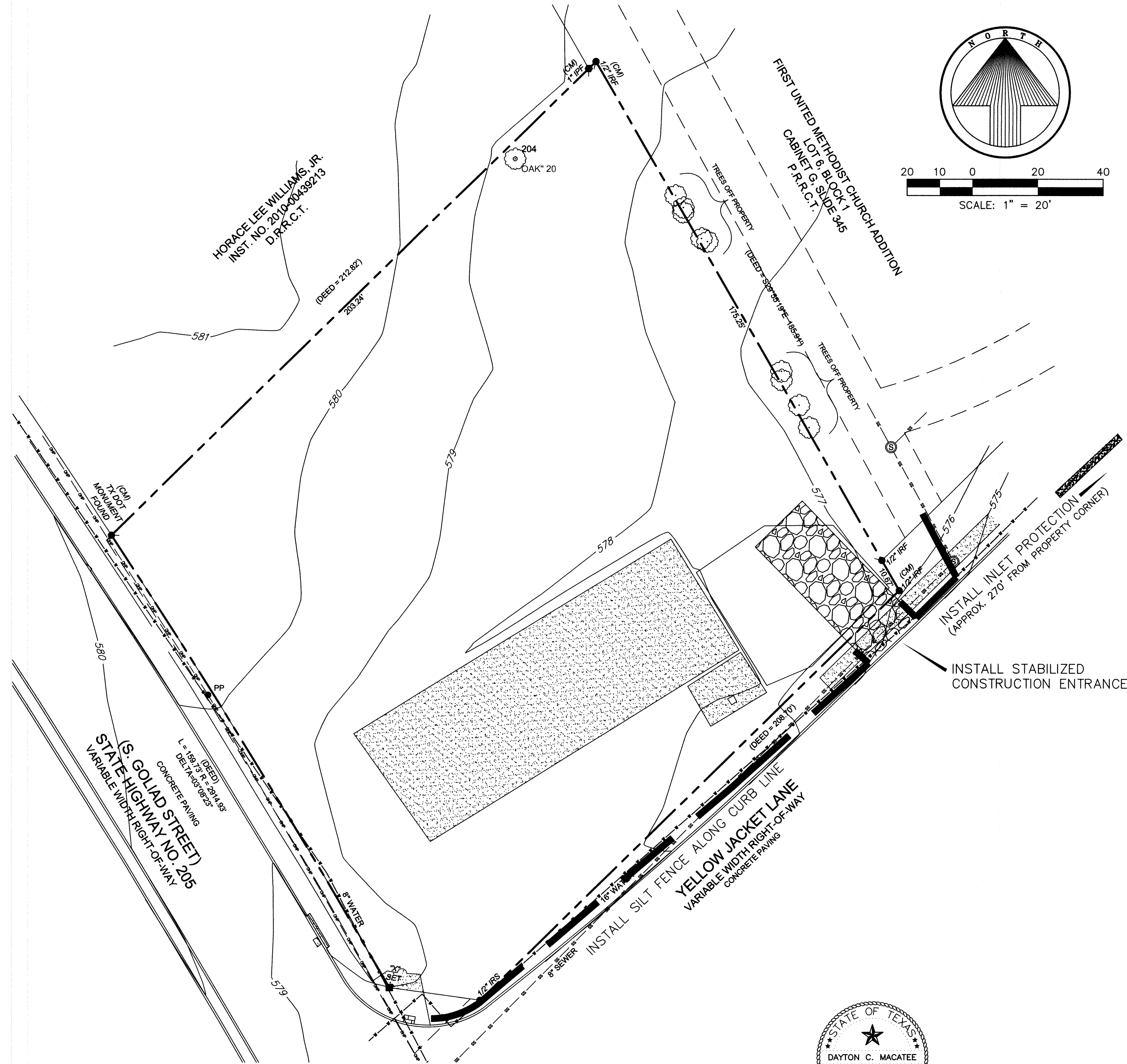
1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.
2. ALL SEEDING AND FERTILIZATION OF DISTURBED AREAS WILL BE THE RESPONSIBILITY OF THE EROSION CONTROL CONTRACTOR.
3. EROSION PROTECTION WILL BE DELETED OR ADDED PER THE CITY OF GARLAND.
4. THE EROSION CONTROL CONTRACTOR SHALL MAKE INSPECTIONS OF THE EROSION CONTROL DEVICES EVERY 7 DAYS OR WITHIN 24 HOURS OF A STORM OF 0.5 INCHES OR MORE IN DEPTH.
5. THE EROSION CONTROL CONTRACTOR SHALL SEED, WATER, AND FERTILIZE ALL DISTURBED AREAS BY THE 14TH DAY AFTER THE LAST DISTURBANCE (EXCEPT THOSE WITHIN LANDSCAPED AREAS) UNTIL SUFFICIENT GRASS GROWTH HAS BEEN PROVIDED TO STOP EROSION. SILT FENCES SHALL REMAIN IN GOOD WORKING CONDITION UNTIL GRASS HAS BEEN ESTABLISHED.
6. THE POST DEVELOPMENT RUNOFF COEFFICIENT IS 0.50.

EROSION CONTROL SEQUENCING

1. THE EROSION CONTROL CONTRACTOR SHALL INSTALL SILT FENCE ALONG THE PERIMETER OF THE SITE AND CONSTRUCT THE STABILIZED CONSTRUCTION ENTRANCES AT THE LOCATIONS SHOWN ON THIS PLAN PRIOR TO CONSTRUCTION.
2. THE GRADING CONTRACTOR SHALL STRIP, CLEAR AND MASS GRADE THE SITE. THE GRADING CONTRACTOR IS TO ASSUME RESPONSIBILITY OF THE EROSION CONTROL DEVICES DURING GRADING OPERATIONS AND ENSURE THAT THESE DEVICES REMAIN IN GOOD WORKING ORDER. AFTER GRADING IS COMPLETE, THE GRADING CONTRACTOR SHALL INSPECT THE DEVICES TO ENSURE THAT THEY REMAIN IN GOOD WORKING ORDER.
3. BEGIN UTILITY INSTALLATION. THE UTILITY CONTRACTOR SHALL ASSUME RESPONSIBILITY OF THE EROSION CONTROL DEVICES DURING UTILITY CONSTRUCTION AND ENSURE THAT THESE DEVICES REMAIN IN GOOD WORKING ORDER. AFTER THE STORM DRAIN INLET INVERT AND WALLS ARE ERECTED, THE CONTRACTOR SHALL PROTECT THE INLET FROM SILTATION BY SURROUNDING IT WITH SILT FENCE OR HAY BALES. AFTER THIS PHASE OF UTILITY INSTALLATION IS COMPLETE, THE UTILITY CONTRACTOR SHALL INSPECT THE DEVICES PRIOR TO MOVING OFF SITE TO ENSURE THAT THEY REMAIN IN GOOD WORKING ORDER.
4. BEGIN PAVING CONSTRUCTION. THE PAVING CONTRACTOR SHALL ASSUME RESPONSIBILITY OF THE EROSION CONTROL DEVICES DURING PAVING CONSTRUCTION AND ENSURE THAT THESE DEVICES REMAIN IN GOOD WORKING ORDER. AFTER PAVING CONSTRUCTION IS COMPLETE, THE PARKWAYS SHALL BE BACKFILLED TO A FINISHED SLOPE OF 1/4" PER FOOT. THE PAVING CONTRACTOR SHALL INSPECT THE DEVICES PRIOR TO MOVING OFF SITE TO ENSURE THAT THEY REMAIN IN GOOD WORKING ORDER.
5. THE UTILITY CONTRACTOR SHALL REMEDIATE AND FINISH THE STORM DRAIN INLET CONSTRUCTION BY COMPLETING THE ERECTION OF THE WALLS AND TOP. AFTER PUBLIC UTILITY CONSTRUCTION IS COMPLETE, THE UTILITY CONTRACTOR SHALL INSPECT THE DEVICES TO ENSURE THAT THEY REMAIN IN GOOD WORKING ORDER.
6. THE EROSION CONTROL CONTRACTOR SHALL INSTALL THE CURB INLET PROTECTION DETAILED ON THIS PLAN, AND SHALL INSTALL SILT FENCE ALONG STREET RIGHTS-OF-WAY.
7. BEGIN FRANCHISE UTILITY CONSTRUCTION. EACH FRANCHISE UTILITY CONTRACTOR SHALL ASSUME RESPONSIBILITY OF THE EROSION CONTROL DEVICES DURING FRANCHISE UTILITY CONSTRUCTION AND ENSURE THAT THESE DEVICES REMAIN IN GOOD WORKING ORDER. AFTER FRANCHISE UTILITY CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL INSPECT THE DEVICES TO ENSURE THAT THEY REMAIN IN GOOD WORKING ORDER.
8. AFTER CONSTRUCTION IS COMPLETE, THE EROSION CONTROL CONTRACTOR SHALL SEED ALL DISTURBED AREAS. WHEN SUFFICIENT GRASS GROWTH HAS BEEN ESTABLISHED, ALL SILT FENCE AND OTHER EROSION CONTROL DEVICES SHALL BE REMOVED FROM THE SITE.

STORM DRAIN INLET PROTECTION CONSTRUCTION SPECIFICATIONS ①

1. WOODEN FRAME IS TO BE CONSTRUCTED OF 2" x 4" CONSTRUCTION GRADE LUMBER.
2. WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC, AND STONE FOR CURB INLETS, WITH WATER FULLY IMPOUNDED AGAINST IT.
3. FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE; RESISTANT TO SUNLIGHT WITH SIEVE SIZE, EDS, 40-85, TO ALLOW SUFFICIENT PASSAGE OF WATER AND REMOVAL OF SEDIMENT.
4. STONE IS TO BE 2" IN SIZE AND CLEAN, SINCE FINES WOULD CLOG THE CLOTH.
5. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1' BEYOND BOTH ENDS OF THE THROAT OPENING.
6. FORM THE WIRE MESH AND FILTER CLOTH TO THE CONCRETE GUTTER AND AGAINST THE FACE OF CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 2" STONE OVER THE WIRE MESH AND FILTER FABRIC IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE FILTER CLOTH.
7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
8. ASSURE THAT STORM FLOW DOES NOT BYPASS INLET BY INSTALLING TEMPORARY EARTH OR ASPHALT DIKES DIRECTING FLOW INTO INLET.



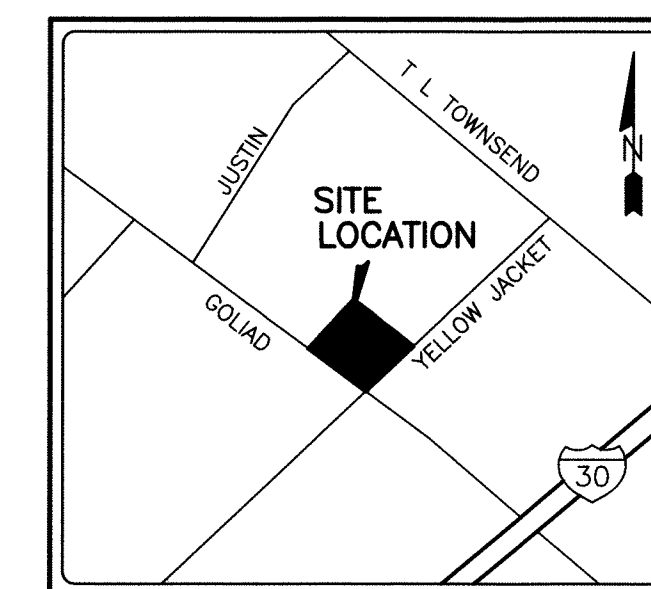
Dayton C. Macatee
08/01/12

MACATEE ENGINEERING
TX. REG. NO. F-456

EC-1

RECORD DRAWINGS:
The information contained hereon was provided by the contractor based on their field installation. The undersigned professional engineer did not provide inspection on this project, and therefore makes no warrants concerning the accuracy or completeness of the information provided.

Dayton C. Macatee 08/23/12
Dayton C. Macatee, P.E. ~ Macatee Engineering, LLC (Tx. Reg. No. F-456) Date



LOCATION MAP
MAPSCO: 20C-Z
N.T.S.

RECORD DRAWINGS (08/23/12)

EROSION CONTROL PLAN						
EROSION CONTROL DETAILS						
8" W.L. IN YELLOW JACKET LN.						
N.E. OF S. GOLIAD ST. (HWY 205)						
CITY OF ROCKWALL, TEXAS						
MACATEE ENGINEERING, LLC						
3519 MILES STREET * DALLAS, TEXAS 75209 * 214-373-1180						
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE NO.	SHEET NO.
M.E.I.	M.E.I.	08-12	1"=20'			EC-1