

SOIL EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION:

THE PURPOSE OF THIS PROJECT IS THE INSTALLATION OF NEW PAVEMENT OVER AN AREA OF ALREADY IMPERVIOUS COMPACTED GRAVEL, AND CHANGING A CERTAIN AMOUNT OF EXISTING GRASSED AREAS TO IMPERVIOUS PAVEMENT FOR USE AS A USED AUTOMOBILE SALES FACILITY. THE PROJECT AREA CURRENTLY DRAINS IN SHEET FLOW TO ORANGE AVENUE, AND WILL CONTINUE TO DO SO FOLLOWING COMPLETION OF THIS PROJECT. THE PROPERTY IS LOCATED AT 2405 ORANGE AVENUE, NE IN THE CITY OF ROANOKE, VIRGINIA. THE AREA OF LAND DISTURBANCE IS ESTIMATED TO BE 0.23 ACRES (9,872 SQ. FT.).

EXISTING SITE CONDITIONS:

AS SHOWN ON REMAINING SHEETS OF THESE PLANS, THE AREA OF DISTURBANCE IS CURRENTLY A MIXTURE OF COMPACTED CRUSHED STONE AND THINLY VEGETATED GRASS AREAS. THE SUBJECT SITE LIES WITHIN "ZONE X" AS SHOWN ON FEMA FLOOD INSURANCE RATE MAPS (FIRM MAP NUMBER 51161C01066, EFFECTIVE DATE 09/28/2007).

EXISTING SOIL CONDITIONS:

THERE HAVE BEEN NO COMPREHENSIVE SUBSURFACE INVESTIGATIONS FOR THE SUBJECT DEVELOPMENT. THE USDA WEB SOIL SURVEY IDENTIFIES THE SOILS IN THE AREA OF PROPOSED CONSTRUCTION AS BELONGING TO THE FOLLOWING SOIL UNIT GROUP(S), AND PROVIDES THE SPECIFIC SOIL CHARACTERISTICS INDICATED. SEE PLAN SHEET FOR SOIL BOUNDARIES.

UNIT CODE	NAME	CHARACTERISTICS	DRAINAGE CLASS	DEPTH TO BEDROCK	EROSION POTENTIAL	DEPTH TO SEASONAL HIGH WATER	HYDROLOGIC SOIL GROUP
51	Chilwell-Lite complex, 7 to 15 percent slopes	Charney Silty Loams	Well-Drained	10 in to 40 in	Low	> 80 INCHES	D

ADJACENT PROPERTY:

THE SUBJECT SITE IS BOUNDED TO THE NORTHWEST BY ORANGE AVENUE, NE; TO THE SOUTHWEST BY COMMERCIAL PROPERTIES, AND TO THE SOUTHEAST BY UNIMPROVED PUBLIC RIGHT OF WAY (SEE SHEET C-02 FOR INDIVIDUAL OWNERS).

OFF-SITE AREAS:

THE SITEWORK CONTRACTOR SHALL REMOVE AND DISPOSE OF EXCESS CUT AND/OR UNSUITABLE MATERIAL OFF-SITE. THE CONTRACTOR HOLDING THE LAND DISTURBING PERMIT WILL BE REQUIRED TO VERIFY THAT AN APPROVED SOIL EROSION CONTROL PLAN AND PERMIT ARE IN PLACE FOR ANY OFF-SITE BORROW OR WASTE SITE(S) USED IN CONJUNCTION WITH THIS PROJECT. THE CITY OF ROANOKE OR ITS APPROVED AGENT RESERVES THE RIGHT TO PLACE A STOP WORK ORDER ON THE SUBJECT SITE AND ANY OFF-SITE WASTE AREAS, SHOULD APPROVED PLANS AND PERMITS NOT EXIST FOR ALL SITES. ANY SEDIMENT FROM THE PROPOSED DEVELOPMENT THAT ENDOUCHES OUTSIDE THE LIMITS OF CONSTRUCTION OR ONTO ADJACENT PROPERTIES SHALL BE IMMEDIATELY REMOVED AND THE AFFECTED AREAS RESTORED TO PRE-CONSTRUCTION CONDITIONS OR BETTER, IN ACCORDANCE WITH THESE PLANS.

CRITICAL AREAS:

- SILT FENCE BARRIERS SHALL BE INSPECTED DAILY AND CLEANED OR REPLACED AS REQUIRED. CLEAN SILT FENCE WHEN SILT MEASURES ONE-HALF THE HEIGHT OF THE FENCE, OR AS REQUIRED.
 - PUBLIC STREETS AND ADJACENT PAVED AREAS SHALL REMAIN IN A DUST AND MUD-FREE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. SHOULD OFF-SITE SEDIMENTATION OCCUR, IT IS THE CONTRACTOR'S RESPONSIBILITY TO RETURN ALL AFFECTED AREAS TO A CONDITION EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION, AT NO ADDED COST TO THE OWNER.
 - DISTURBED AREAS THAT ARE NOT PERMANENTLY STABILIZED WITHIN FOURTEEN (14) DAYS SHALL BE TEMPORARILY SEEDED IN ACCORDANCE WITH STANDARD AND SPECIFICATION 3.31 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
 - ALL PROTECTIVE MEASURES WHICH PERTAIN TO, OR INCLUDE CUT AND FILL SLOPES (SILT FENCE, DIVERSION DICES, ETC.) SHALL BE INSTALLED AND MAINTAINED AS THE SLOPES COME TO GRADE. ADDITIONAL DIVERSION DIKES WILL BE REQUIRED TO PROTECT DISTURBED AREAS, UNTIL SUCH TIME THAT THE STORM DRAIN SYSTEM IS IN PLACE, AND FUNCTIONALLY PROTECTED FROM SEDIMENT INFILTRATION.
- THE CONTRACTOR IS REQUIRED TO PROVIDE AND MAINTAIN ALL EROSION CONTROL MEASURES AT THEIR OPTIMUM PERFORMANCE, SUCH THAT ADJOINING AREAS AND DRAINAGEWAYS ARE PROVIDED THE BEST AVAILABLE PROTECTION AT EVERY PHASE OF CONSTRUCTION. IT IS IMPERATIVE THAT SEDIMENT TRANSFER FROM THIS SITE IS MINIMIZED.

EROSION AND SEDIMENT CONTROL MEASURES:

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK", THIRD EDITION. 1. GIVEN THE NATURE AND LOCATION OF THE PROPOSED PROJECT, A FORMAL TEMPORARY CONSTRUCTION ENTRANCE IS NOT WARRANTED. HOWEVER, ALL TRACKED CONSTRUCTION EQUIPMENT SHALL BE UNLOADED / LOADED DIRECTLY FROM THE AREA OF DISTURBANCE ONTO THE TRAILER, TO AVOID (1) DISTURBANCE OF THE EXISTING PAVEMENT WHICH IS TO REMAIN, AND (2) TO AVOID THE DEPOSITION OF DIRT AND MUD ONTO PAVED AREAS WHICH MAY BE BEYOND THE APPROVED LIMITS OF WORK.

IN AREAS OF LAND DISTURBANCE, IT IS CRITICAL THAT NEW BASE STONE IS INSTALLED AS SOON AS POSSIBLE FOLLOWING STRIPPING OF SURFICIAL SOILS, TO STABILIZE AGAINST EROSION UNTIL SUCH TIME THAT PAVEMENT SURFACING MAY BE INSTALLED.

REGARDLESS OF FUTURE DEVELOPMENT PLANS, THE CONTRACTOR SHALL IMMEDIATELY INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLANS. THIS WORK SHALL BE COORDINATED IN ORDER TO PROTECT AREAS FROM THE WORK WHICH IS TO FOLLOW. CONTROL AT CENTERS OF FLOW AND OTHER POINTS OF CONCENTRATION SHOWN HEREIN SHALL BE CONSTRUCTED FIRST.

3. FOLLOWING INSTALLATION OF THE PERMITTER CONTROLS, THE SITEWORK CONTRACTOR SHALL BEGIN EARTHWORK OPERATIONS. THE CONTRACTOR SHALL IMMEDIATELY PROCEED WITH STRIPPING OF PAVEMENT AND GRADING OPERATIONS.

4. IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL, IN PARTICULAR:

- ALL INLET PROTECTION MEASURES SHALL BE INSPECTED FOR SEDIMENT COLLECTION AND TO INSURE THAT THE INTENDED PURPOSE OF PREVENTING SEDIMENT TRANSPORT INTO THE STORM SYSTEM IS BEING MAINTAINED.
 - ALL SILT FENCE BARRIERS (STD & SPEC 3.05) AND INLET PROTECTIONS (STD & SPEC 3.07) SHALL BE CHECKED REGULARLY FOR UNDERMINING AND SEDIMENT BUILDUP.
 - ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEED AS NEEDED.
5. THE SOIL EROSION CONTROL MEASURES INSTALLED FOR THIS CONTRACT SHALL REMAIN IN PLACE UNTIL REMOVAL IS APPROVED BY THE CITY OF ROANOKE INSPECTOR. AT WHICH TIME IT SHALL BE THE SITEWORK CONTRACTOR'S RESPONSIBILITY TO REMOVE ALL TEMPORARY MEASURES FROM THE SITE UNLESS OTHERWISE REQUIRED HEREIN. REMOVE ACCUMULATED SEDIMENT FROM THE STORMWATER COLLECTION SYSTEMS TO AN APPROVED WASTE AREA, AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS.

PERMANENT STABILIZATION:

UPON ACHIEVING FINISH GRADE ELEVATIONS, ALL AREAS NOT TO RECEIVE HARD SURFACING SHALL BE PERMANENTLY SEEDED (STD & SPEC 3.32). AS AN ALTERNATIVE, THREE TO FOUR INCHES OF SHREDDED HARDWOOD MULCH MAY BE PLACED IN AREAS TO BE LANDSCAPED (ALONG WITH REQUIRED PLANTINGS), IF WRITTEN DIRECTION FROM THE OWNER IS GIVEN TO INSTALL THESE MULCH AREAS.

MAINTENANCE:

THE RESPONSIBLE LAND DISTURBER ON RECORD WITH THE CITY FOR THIS PROJECT IS RESPONSIBLE FOR IMPLEMENTATION, MAINTENANCE, AND REMOVAL OF ALL EROSION CONTROL MEASURES, AS APPLICABLE. ALL MEASURES REQUIRED HEREIN SHALL BE MAINTAINED AS OUTLINED IN "CRITICAL AREAS" AND "EROSION AND SEDIMENT CONTROL MEASURES" SECTIONS ABOVE.

STORMWATER MANAGEMENT:

IN ACCORDANCE WITH CHAPTER 11.7 OF THE CODE OF THE CITY OF ROANOKE, SECTION 11.7-6(b)(2), PROJECTS THAT HAVE GREATER THAN 2,500 AND LESS THAN 10,000 SQUARE FEET OF LAND DISTURBANCE NEED NOT ADDRESS MINIMUM STANDARD 19 CONCERNING STORMWATER MANAGEMENT REQUIREMENTS. AS THE RECEIVING CHANNEL DOES NOT HAVE DOCUMENTED FLOODING ISSUES, AND SO LONG AS THE PROPOSED WORK WILL NOT IMPED FLOW CAUSING UPSTREAM FLOODING, TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE RECEIVING STORM DRAIN SYSTEM IN ORANGE AVENUE DOES NOT HAVE DOCUMENTED FLOODING ISSUES IN THIS LOCATION, AND THE PROPOSED PAVING WILL NOT IMPED UPSTREAM FLOWS, THEREFORE THESE PLANS DO NOT PROPOSE ANY NEW STORM DRAIN OR STORMWATER MANAGEMENT FACILITIES.

GENERAL COMMENTS:

- THE SITEWORK CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
- THE CITY OF ROANOKE OR THEIR AUTHORIZED AGENT RESERVES THE RIGHT TO ADD TO, DELETE, OR OTHERWISE CHANGE EROSION CONTROL DEVICES AS MAY BE DEEMED NECESSARY, BY WRITTEN NOTIFICATION TO THE CONTRACTOR.
- NO WORK SHALL PROCEED ON THE SITE UNTIL THE PROPER AUTHORIZATION OR PERMIT HAS BEEN OBTAINED FROM THE CITY OF ROANOKE.
- THE ENGINEER, CALDWELL WHITE ASSOCIATES, ASSUMES NO RESPONSIBILITY FOR ANY WORK BEING PERFORMED.

VESCH TABLE 6-1: GENERAL EROSION AND SEDIMENT CONTROL NOTES:

ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 4VA500-30 EROSION AND SEDIMENT CONTROL REGULATIONS.

ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE- CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8: DURING DEMAIRING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUN-OFF PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

STATE IMPOSED MINIMUM STANDARDS

THE FOLLOWING STANDARDS ARE TO BE PROVIDED OR ADDRESSED ON EVERY DEVELOPMENT PROJECT EXCEEDING 10,000 S.F. IN AREA OF DISTURBANCE. THESE STANDARDS ARE CONSIDERED A MINIMUM AND MAY REQUIRE ADDITIONAL MEASURES AS DEEMED NECESSARY BY THE LOCAL APPROVING AUTHORITY OR THE CONSULTING ENGINEER.

No.	CRITERIA, TECHNIQUE OR METHOD	REMARKS
1	PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENuded AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE HAS BEEN REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENuded AREAS THAT MAY BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDEVELOPED) FOR LONGER THAN FOURTEEN (14) DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE (1) YEAR.	SEE "PERMANENT SEEDING" AND "TEMPORARY SEEDING" REQMENTS, SHEET C-02 AND THIS SHEET.
2	DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING. MEASURES THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.	NOT APPLICABLE TO THIS PROJECT
3	A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENuded AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A DORMANT COVER IS ACHIEVED THAT, IN THE OPINION OF THE LOCAL PROGRAM ADMINISTRATOR OR DESIGNATED AGENT, IS SUFFICIENT TO PREVENT EROSION AND WILL MINIMIZE EROSION.	SELF EXPLANATORY - REFER TO THE SEEDING SPECS, THIS SHEET.
4	SEDIMENT BASINS AND TRAPS, PERMITTER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSTREAM LAND DISTURBANCE TAKES PLACE.	INSTALL NEW SILT FENCE PRIOR TO LAND DISTURBANCE.
5	STABILIZATION METHODS SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.	NOT APPLICABLE TO THIS PROJECT
6	SEDIMENT TRAPS AND BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.	NOT APPLICABLE TO THIS PROJECT
7	CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE EXPOSING EXCESSIVELY WITHIN ONE (1) YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZATION MEASURES UNTIL THE PROBLEM IS CORRECTED.	NOT APPLICABLE TO THIS PROJECT
8	CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.	NOT APPLICABLE TO THIS PROJECT
9	WHenever WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.	NOT APPLICABLE TO THIS PROJECT
10	ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LOADED WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.	NOT APPLICABLE TO THIS PROJECT
11	BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.	NOT APPLICABLE TO THIS PROJECT
12	WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE EROSION. CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COTTERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF APPROVED BY NONERODIBLE COVER MATERIALS.	NOT APPLICABLE TO THIS PROJECT
13	WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX (6) MONTH PERIOD, A TEMPORARY STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL.	NOT APPLICABLE TO THIS PROJECT
14	ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET. THE BEDS AND BANKS OF ANY WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	NOT APPLICABLE TO THIS PROJECT
15	THE BEDS AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.	NOT APPLICABLE TO THIS PROJECT
16	UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA: (1) WORK MORE THAN 500 LINEAL FEET OF ANY TRENCH MAY BE OPENED AT ONE TIME; EXCAVATED MATERIAL SHALL BE PLACED ON THE UPRILL SIDE OF TRENCHES. DISJOINTED FROM EXISTING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH; AND USED FOR BACKFILL TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.	NOT APPLICABLE TO THIS PROJECT
17	MAJOR CONSTRUCTION VEHICLE ACCESS ROUTES WITHOUT EXISTING OR PUBLIC RIGHTS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRAFFIC ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY GRADING OR SHEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.	NOT APPLICABLE TO THIS PROJECT; SEE "TEMPORARY CONSTRUCTION ENTRANCE", SHEET C-02
18	ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM ADMINISTRATOR. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.	REMOVAL OF TEMPORARY MEASURES SHALL BE IN ACCORDANCE WITH MS-18 AND "EROSION & SEDIMENT CONTROL MEASURES" SECTION OF NARRATIVE, THIS SHEET.
19	PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED PRECEDENT STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS: (1) THE DESIGN CONCEPTS AND DESIGN CONDITIONS FOR THE PROPOSED DEVELOPMENT SHALL BE BASED ON THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE. (2) NATURAL OR MAN-MADE CHANNELS: A CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED. (3) ANALYSES OF ALL CHANNELS AND PIPES SHALL BE PERFORMED IN THE FOLLOWING MANNER: (A) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR (B) (4) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS; (5) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS; (6) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR (2) INCREASE THE FLOW RATE OF THE TEN-YEAR STORM TO A CONDITION WHERE THE APPLICANT'S CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR (2) INCREASE THE FLOW RATE OF THE TEN-YEAR STORM TO A CONDITION WHERE THE APPLICANT'S CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR (2) INCREASE THE FLOW RATE OF THE TEN-YEAR STORM TO A CONDITION WHERE THE APPLICANT'S CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR (2) INCREASE THE FLOW RATE OF THE TEN-YEAR STORM TO A CONDITION WHERE THE APPLICANT'S CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR (2) INCREASE THE FLOW RATE OF THE TEN-YEAR STORM TO A CONDITION WHERE THE APPLICANT'S CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL: (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; 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