

**STORM WATER POLLUTION PREVENTION PLAN**

THE FOLLOWING PLAN IS ESTABLISHED AND INCORPORATED TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM SEWER WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE UNDER NPDES.

THE PURPOSE OF THIS PLAN IS TO MINIMIZE EROSION WITHIN THE CONSTRUCTION SITE AND TO LIMIT SEDIMENTS FROM LEAVING THE CONSTRUCTION SITE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.

CERTAIN EROSION CONTROL FACILITIES SHALL BE INSTALLED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION DEPENDING ON THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHERS CONDITIONS.

THE CONTRACTOR SHALL INSTALL PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A TIME FRAME SPECIFIED HEREIN AND AS DIRECTED BY THE ENGINEER, THEREFORE MINIMIZING THE AMOUNT OF AREA SUSCEPTIBLE TO EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING. THE ENGINEER WILL DETERMINE IF ANY TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLANS CAN BE DELETED AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL NOT INCLUDED IN THIS PLAN, SHALL BE ADDED. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN IN STANDARD 280001 OF THE PLANS.

SECTION 280, TEMPORARY EROSION CONTROL, OF THE STANDARD SPECIFICATIONS AND HIGHWAY STANDARD 280001 ADDITIONALLY SUPPLEMENT THIS PLAN.

OTHER REPORTS, STUDIES AND PLANS WHICH AID IN THE DEVELOPMENT OF THE STORM WATER POLLUTION PREVENTION PLAN AS REFERENCED DOCUMENTS:

1. INFORMATION OF THE SOILS AND TERRAIN WITHIN THE SITE WAS OBTAINED FROM TOPOGRAPHIC SURVEYS, SOIL MAPS AND/OR SOIL BORINGS THAT WERE USED UTILIZED FOR THE DEVELOPMENT OF THE PROPOSED TEMPORARY EROSION CONTROL SYSTEMS.
2. PROJECT PLAN DOCUMENTS, SPECIFICATIONS AND SPECIAL PROVISIONS, AND PLAN DRAWINGS INDICATING DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER GRADING ACTIVITIES WERE UTILIZED FOR THE PROPOSED PLACEMENT OF THE TEMPORARY EROSION CONTROL SYSTEM.

**SITE DESCRIPTION**

AREA OF CONSTRUCTION SITE: 4.7 ACRES

THE TOTAL AREA OF THE CONSTRUCTION SITE IS ESTIMATED TO BE 4.7 ACRES OF WHICH 3.5 ACRES WILL BE DISTURBED BY EXCAVATION, GRADING AND OTHER ACTIVITIES.

DRAINAGE TRIBUTARIES AND SENSITIVE AREAS RECEIVING RUNOFF FROM THIS CONSTRUCTION SITE:

1. INTERIOR DRAINAGE AND LEVEE TOE DRAINAGE DITCH OF THE HUNT / LIMA LEVEE AND DRAINAGE DISTRICT.

**DESCRIPTION OF CONSTRUCTION ACTIVITIES:**

1. THE PROJECT CONSISTS OF THE REPAIR OF THE ROADWAY EMBANKMENT BY PLACING FILL MATERIAL TO FLATTEN THE EMBANKMENT SLOPE AGAINST THE BENCHED EXISTING EMBANKMENT.
2. CONSTRUCTION ACTIVITIES INCLUDE EARTH EXCAVATION, EMBANKMENT, REMOVAL AND REPLACEMENT OF EXISTING GUARD RAIL, INSTALLATION OF A CASING AND PIPE UNDER THE EXISTING ROADWAY AND SEEDING OF THE DISTURBED AREAS.

DESCRIPTION OF INTENDED SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB SOILS FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE:

1. TREE REMOVAL AS SHOWN ON THE PLANS. REMAINING TREES TO BE PROTECTED AGAINST DAMAGE.
2. EXCAVATION AND EMBANKMENT WILL BE COMPLETED ALONG THE JOB SITE TO GRADE OUT FOR THE PROPOSED ROADWAY AND DRAINAGE WAYS.
3. DRAINAGE STRUCTURES, STORM SEWER AND CULVERTS.
4. PLACEMENT, MAINTENANCE, REMOVAL AND PROPER CLEAN-UP OF TEMPORARY EROSION CONTROL, SUCH AS PERIMETER EROSION CONTROL BARRIER, TEMPORARY DITCH CHECKS, INLET AND PIPE PROTECTION, TEMPORARY SEEDING, ECT.
5. FINAL GRADING, PAVING AND OTHER MISCELLANEOUS ITEMS.
6. PLACEMENT OF PERMANENT EROSION CONTROL, SUCH AS RIPRAP DITCH, AND EROSION CONTROL BLANKET, SEEDING, ETC.

**CONTROLS - EROSION CONTROLS AND SEDIMENT CONTROL**

**DESCRIPTION OF STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION**

1. THE DRAWINGS, SPECIFICATIONS AND SPECIAL PROVISIONS WILL ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED. STABILIZATION PRACTICES INCLUDE: TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, PROTECTION OF TREES, PRESERVATION OF MATURE VEGETATION, AND OTHER APPROPRIATE MEASURES AS DIRECTED BY THE ENGINEER. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

- (a.) AREAS OF EXISTING VEGETATION (WOOD AND GRASSLAND) OUTSIDE THE PROPOSED CONSTRUCTION LIMITS SHALL BE IDENTIFIED BY THE ENGINEER FOR PRESERVING AND SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES.
  - (b.) DEAD, DISEASED OR UNSUITABLE VEGETATION WITHIN THE SITE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER, ALONG WITH THE REQUIRED TREE REMOVAL.
  - (c.) AS SOON AS REASONABLE ACCESS IS AVAILABLE TO ALL LOCATIONS WHERE WATER DRAINS AWAY FROM THE PROJECT, TEMPORARY DITCH CHECKS, INLET AND PIPE PROTECTION, AND PERIMETER EROSION BARRIER SHALL BE INSTALLED AS CALLED OUT IN THIS PLAN AND AS DIRECTED BY THE ENGINEER.
  - (d.) BARE AND SPARSELY VEGETATED GROUND IN HIGH ERODABLE AREAS AS DETERMINED BY THE ENGINEER SHALL BE TEMPORARILY SEEDED WHERE NO CONSTRUCTION ACTIVITIES ARE EXPECTED WITHIN SEVEN (7) DAYS.
  - (e.) IMMEDIATELY AFTER TREE REMOVAL IS COMPLETED, AREAS WHICH ARE HIGHLY ERODABLE AS DETERMINED BY THE ENGINEER, SHALL BE TEMPORARILY SEEDED WHEN NO CONSTRUCTION ACTIVITIES ARE EXPECTED WITHIN SEVEN (7) DAYS.
  - (f.) AT LOCATIONS WHERE A SIGNIFICANT AMOUNT OF WATER DRAINS INTO THE CONSTRUCTION ZONE FROM OUTSIDE AREAS (ADJACENT LANDOWNERS), TEMPORARY DITCH CHECKS WILL BE UTILIZED TO LOCALLY DIVERT WATER, REDUCE FLOW RATES, AND COLLECT OUTSIDE SILTATION INSIDE THE RIGHT-OF-WAY LINE.
2. ESTABLISHMENT OF THESE TEMPORARY EROSION CONTROL MEASURES WILL HAVE ADDITIONAL BENEFITS TO THE PROJECT. DESIRABLE GRASS SEED WILL BECOME ESTABLISHED IN THESE AREAS AND SPREAD SEEDS ONTO THE CONSTRUCTION SITE UNTIL PERMANENT SEEDING / MOWING AND OVERSEEDING CAN BE COMPLETED.

**DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION:**

1. DURING CONSTRUCTION, AREAS OUTSIDE THE CONSTRUCTION LIMITS AS OUTLINED PREVIOUSLY HEREIN SHALL BE PROTECTED. THE CONTRACTOR SHALL NOT USE THIS AREA FOR STAGING (EXCEPT AS DESCRIBED ON THE PLANS AND DIRECTED BY THE ENGINEER), PARKING OF VEHICLES OR CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS, OR OTHER CONSTRUCTION RELATED ACTIVITIES.
  - (a.) WITHIN THE CONSTRUCTION LIMITS, AREAS WHICH MAY BE SUSCEPTIBLE TO EROSION AS DETERMINED BY THE ENGINEER SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PREVENT UNNECESSARY SOIL EROSION.
  - (b.) EARTH STOCKPILES SHALL BE TEMPORARY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN FOURTEEN (14) DAYS.
  - (c.) AS CONSTRUCTION PROCEEDS, THE CONTRACTOR SHALL INSTITUTE THE FOLLOWING AS DIRECTED BY THE ENGINEER.
    - (i.) PLACE TEMPORARY EROSION CONTROL FACILITIES AT LOCATIONS SHOWN ON THE PLANS.
    - (ii.) TEMPORARILY SEED ERODABLE BARE EARTH ON A WEEKLY BASIS TO MINIMIZE THE AMOUNT OF ERODABLE SURFACE AREA WITHIN THE CONTRACT LIMITS.
    - (iii.) CONSTRUCT ROADSIDE DITCHES AND PROVIDE TEMPORARY EROSION CONTROL SYSTEMS.
    - (iv.) TEMPORARILY DIVERT WATER AROUND PROPOSED CULVERT LOCATIONS.
    - (v.) BUILD NECESSARY EMBANKMENT AT CULVERT LOCATIONS AND THEN EXCAVATE AND PLACE THE CULVERT.
    - (vi.) CONTINUE BUILDUP OF THE EMBANKMENT TO THE PROPOSED GRADE WHILE AT THE SAME TIME, PLACING PERMANENT EROSION CONTROL SUCH AS RIPRAP DITCH LINING AND CONDUCTING FINAL SHAPING TO THE SLOPES.
  - (d.) EXCAVATED AREAS AND EMBANKMENT SHALL BE PERMANENTLY SEEDED IMMEDIATELY AFTER FINAL GRADING. IF NOT, THE AREAS SHALL BE TEMPORARY SEEDED IF NO CONSTRUCTION ACTIVITY IN THE AREA IS PLANNED FOR SEVEN (7) DAYS.
  - (e.) CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNATED LOCATIONS. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR OTHER POLLUTANT IN ACCORDANCE WITH EPA WATER QUALITY REGULATIONS. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
  - (f.) THE RESIDENT ENGINEER SHALL INSPECT THE PROJECT DAILY DURING CONSTRUCTION ACTIVITIES. INSPECTION SHALL ALSO BE DONE WEEKLY AND AFTER RAINS OF 1/2 INCH OR GREATER OR EQUIVALENT SNOWFALL AND DURING WINTER SHUTDOWN PERIOD.
  - (g.) SEDIMENT COLLECTED DURING CONSTRUCTION OF THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE PAID FOR AT THE UNIT BID PRICE FOR EARTH EXCAVATION FOR EROSION CONTROL OR IN ACCORDANCE WITH ARTICLE 108.04 OF THE STANDARD SPECIFICATIONS.
  - (h.) THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING. THE COST OF THIS REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR VARIOUS TEMPORARY EROSION CONTROL PAY ITEMS.

**DESCRIPTION OF STRUCTURAL PRACTICES AFTER FINAL GRADING:**

1. TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS SEEDED AND ESTABLISHED.
2. ONCE PERMANENT EROSION CONTROL SYSTEMS AS PROPOSED IN THE PLANS ARE FUNCTIONAL AND ESTABLISHED, TEMPORARY ITEMS SHALL BE REMOVED, CLEANED UP AND DISTURBED AREAS RESEDED.

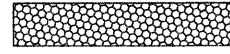
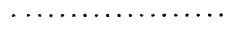




**MAINTENANCE AFTER CONSTRUCTION:**

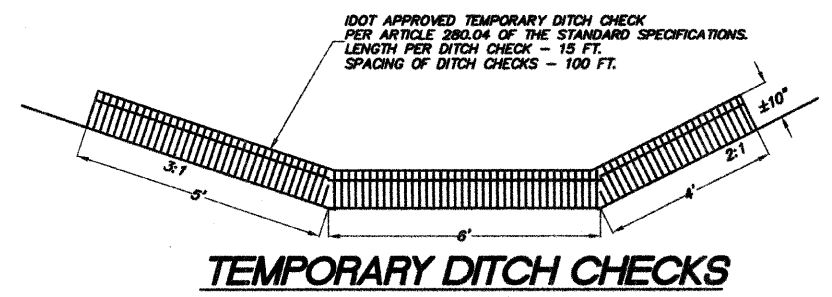
1. CONSTRUCTION IS COMPLETE AFTER ACCEPTANCE BY I.D.O.T. FINAL INSPECTION, MAINTENANCE UP TO THIS DATE WILL BE BY THE CONTRACTOR.

**MISCELLANEOUS:**

1. THE SPACING OF TEMPORARY DITCH CHECKS SHALL BE DETERMINED BY THE HEIGHT OF DITCH CHECK / PERCENT SLOPE OF DITCH EXPRESSED AS A DECIMAL OR AS SHOWN ON THE EROSION CONTROL PLAN  
 EXAMPLE: 1 FT. DITCH CHECK HEIGHT / 0.05 (5% SLOPE) = 20 FT. SPACING.  
 1 FT. DITCH CHECK HEIGHT / 0.02 (2% SLOPE) = 50 FT. SPACING.
2. TEMPORARY EROSION CONTROL SEEDING SHALL BE APPLIED AT A RATE OF 100 LBS/ACRE.
3. PERIMETER EROSION BARRIER AND SILT FENCING OR STRAW BALES WILL NOT BE PERMITTED FOR TEMPORARY OR PERMANENT DITCH CHECKS.
4. ALL EROSION CONTROL PRODUCTS FURNISHED SHALL BE SPECIFICALLY RECOMMENDED BY THE MANUFACTURER FOR THE USE SPECIFIED IN THE EROSION CONTROL PLAN. PRIOR TO APPROVAL AND USE OF THE PRODUCT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A NOTARIZED CERTIFICATION BY THE PRODUCER STATING THE INTENDED USE OF THE PRODUCT AND THAT THE PHYSICAL PROPERTIES REQUIRED FOR THIS APPLICATION ARE MET OR EXCEEDED. THE CONTRACTOR SHALL PROVIDE MANUFACTURER INSTALLATION PROCEDURES TO FACILITATE THE ENGINEER IN CONSTRUCTION INSPECTION.

**LEGEND**

- RIPRAP RIPRAP DITCH 
- SLOPE LIMITS 
- PERIMETER EROSION BARRIER 
- TEMPORARY DITCH CHECK 
- PERMANENT DITCH CHECK 
- INLET AND PIPE PROTECTION 



**TEMPORARY DITCH CHECKS**