

NOTES:

NONE IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED. 7 DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)

NPDES GROUND STABILIZATION CRITERIA

SPRING-SUMMER PERMANENT GRASSING DETAIL RATE (lb/gcre)

1. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA.
2. USE COMMON BERMUDA GRASS ONLY ON ISOLATED SITES WHERE IT CANNOT BECOME A PEST. BERMUDA GRASS MAY BE REPLACED WITH 5 ID/OGTO CENTIPEDE GRAS

APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 3,000 ib/acre GROUND AGRICULTURE LIMESTONE AND 500 ib/acre 10-10-10 FERTILIZER.

APPLY 4,000 Ib/gcre Grain Strawor Equivalent cover of another suitable mulch. Anchor by Tacking with asphalt, rowing, or netting or by crimping with a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

REFERTILIZE THE FOLLOWING APRIL WITH 50 Ib/ocre NITROGEN. REPEAT AS GROWTH REQUIRES. MAY BE MOWED ONLY ONCE A YEAR. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND MOW AS OFTEN AS NEEDED.

FALL-WINTER PERMANENT GRASSING DETAIL

RATE (lb/gcre)

APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 3.000-5,000 ib/dora GROUND AGRICULTURAL LIMESTONE (USE THE LOWER RATE ON SANDY SOILS) AND 1,000 ib/dora 10-10-10 FERTILIZER.

APPLY 4,000 Ib/gore grain straw or equivalent cover of another suitable mulch. Anchor straw by tacking with asphalt, roving, or netting or by crimp—ing with a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

FERTILIZE ACCORDING TO SOIL TESTS OR APPLY 40 Ib/ggre NITROGEN IN JANUARY OR FEBRUARY, 40 Ib IN SEPTEMBER AND 40 Ib IN NOVEMBER, FROM A 12-4-8, 16-4-8, OR SIMILAR TURF FERTILIZER. AVOID FERTILIZER APPLICATIONS DURING WARM WEATHER, AS THIS INCREASES STAND LOSSES TO DISEASE, RESEED, FERTILIZE, AND MULCH DAMAGED AREAS IMMEDIATELY. MOW TO A HEIGHT OF 2.5-3.5 INCHES AS NEEDER

LATE WINTER & EARLY SPRING TEMPORARY GRASSING DETAIL RATE (lb/gcre)

Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)

Omit annual lespedeza when duration of temporary cover is not to extend

Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

Refertilize if growth is not fully adequate. Reseed, refertilize and mulch im-mediately following erosion or other damage.

TEMPORARY SUMMER GRASSING DETAIL RATE (lb/gcre)

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

TEMPORARY FALL GRASSING DETAIL RATE (lb/gcre)

MOUNTAINS - AUG. 15-DEC. 15 COASTAL PLAN and PIEDMONT - AUG. 15-DEC 30

FOLLOW SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

Repair and refertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extend temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

SITE WORK NOTES 1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIARIZED WITH EXISTING CONDITIONS BOTH ON AND IMMEDIATELY ADJACENT TO THE SITE CLEARING: CONTRACTOR SHALL REMOVE ALL TREES AND VEGETATION WITHIN LIMITS

REVISIONS te Description F CONSTRUCTION UNLESS OTHERWISE DESIGNATED TO REMAIN. GRUBBING AND STRIPPING: CONTRACTOR SHALL RAKE AND REMOVE ROOTS, STUMPS VEGETATION, DEBRIS, EXISTING STRUCTURES ABOVE AND BELOW GRADE, ORGANIC MATERIAL OR ANY OTHER UNSUITABLE MATERIAL WITHIN LIMITS OF CONSTRUCTION. MUCKING: CONTRACTOR SHALL COORDINATE WITH OWNER AND THEIR GEOTECHNICAL REPRESENTATIVE TO COORDINATE REMOVAL OF ANY SOFT AREAS. DISPOSAL: CLEARED, GRUBBED, STRIPPED OR OTHER WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A PROPERLY PERMITTED FACILITY. FILL AND COMPACTION SHOULD COMPLY WITH GEOTECHNICAL REPORT.
THE CONTRACTOR SHALL NOTE THAT THE GRADING PLAN MAY NOT REPRESENT A BALANCED EARTHWORK CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT AND

THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. BEFORE COMMENCING ANY EXCAVATIONS IN OR ALONG ROADWAYS OR RIGHT-OF-WAYS, PUBLIC AREAS OR IN PRIVATE EASEMENTS, THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE PERSONNEL OF THEIR INTENT TO EXCAVATE, IN WRITING, NOT LESS THAN 10 DAYS PRIOR TO EXCAVATING.

10. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE DISCONNECTION/ RECONNECTION AND/OR THE RELOCATION OF ALL EXISTING UTILITIES WITH APPROPRIATE PERSONNEL

THE CONTRACTOR SHALL FURNISH SUITABLE BORROW MATERIAL FROM AN OFF-SITE

FILL QUANTITIES AND COMPLETE INSTALLATION TO SPECIFIED GRADES.

PROPERLY PERMITTED FACILITY AS REQUIRED.

1. EXISTING SURVEYING PERFORMED BY MIKE UNDERWOOD, PLS AND SUPPLIED BY THE OWNER. 12. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AT THE SITE. FURTHERMORE THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES OR QUESTIONS TO THE ENGINEER

PRIOR TO INSTALLATION. 13. THE CONTRACTOR SHALL PROVIDE ANY AND ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK UNLESS OTHERWISE DIRECTED BY OWNER. 14. ALL PVC UTILITY MAINS SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER

AT FINAL GRADE. 15. ALL SERVICE CONNECTIONS SHALL BE INSTALLED TO MEET ALL LOCAL AND STATE CODES. METERS, TAPS, MATERIALS, WORKMANSHIP AND ALL FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH ALL REQUIREMENTS.

16. ALL PAVEMENT, BASE AND SUBGRADE SHALL CONFORM TO NCDOT STANDARDS INCLUDING WORKMANSHIP, MATERIALS AND EQUIPMENT. APPROPRIATE BARRICADES, SIGNS, LIGHTS OR OTHER TRAFFIC CONTROL DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH NCDOT TO MAINTAIN SAFETY AND TWO WAY TRAFFIC

17. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO INSTALLATION. ALL AREAS SHALL BE SLOPED TO DRAIN AWAY FROM BUILDINGS AT ALL TIMES.

18. CONCRETE STORM DRAINAGE PIPE SHALL BE CLASS III WITH RUBBER GASKETED JOINTS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. 19. USE WHITE LANE MARKING PAINT FOR ALL PAVEMENT MARKINGS. PAINT SHALL BE A CHLORINATED RUBBER ALKYD, FS TT-P-115, TYPE III, FACTORY MIXED, QUICK DRYING,

NON BLEEDING. REFLECTIVE MATERIAL MAY BE ADDED AT OWNER'S OPTION FOR

NIGHT REFLECTING. 20. DUCȚILE IRON SHALL BE CLASS 50. 21. CONCRETE FOR WALKS, CURBS AND DRIVES SHALL HAVE A MINIMUM COMPRESSIVE

STRENGTH OF 3000 PSI @ 28 DAYS - AIR ENTRAINED. 22. FIELD TESTING SHALL BE DONE BY AN INDEPENDENT TESTING LABORATORY PAID FOR BY THE OWNER. FURTHER TESTING REQUIRED DUE TO A FAILED TEST WILL BE

PAID FOR BY THE CONTRACTOR. 23, SEE GEOTECHNICAL REPORT NO. _____, DATED ______, BY _____ _____ FOR ADDITIONAL REQUIREMENTS.

CONSTRUCTION SEQUENCE NO CUT SLOPE OR FILL SLOPE SHALL EXCEED A RISE OR FALL OF ONE FOOT FOR EVERY RUN OF 3 FEET (1 VERTICAL TO 3 HORIZONTAL).

NO SEDIMENT WILL BE ALLOWED TO EXIT THE SITE. ALL EROSION SHALL BE CONTROLLED INCLUDING SIDE SLOPES DURING AND AFTER CONSTRUCTION. INSTALL PRIMARY EROSION CONTROL MEASURES BEFORE BEGINNING CONSTRUCTION INCLUDING BUT NOT LIMITED TO GRAVELED CONSTRUCTION ENTRANCE, SILT FENCE, CHECK DAMS. ETC. INSTALL ALL SECONDARY EROSION CONTROL MEASURES AS SOON AS POSSIBLE AFTER BEGINNING

4. ALL EROSION CONTROL MEASURES TO BE INSPECTED AFTER EACH RAIN.

SILT FENCE AND INLET PROTECTION ARE TO BE CLEANED WHEN 0.5 FEET OF SEDIMENT HAVE ACCUMULATED IN FRONT OF THE DEVICE OR WHEN THEY LEAK OR FAIL. SEDIMENT TRAPS ARE CLEANED OUT AS STATED OR WHEN HALF FULL. 5. IF APPLICABLE, CONSTRUCT PROPOSED RETENTION POND TO ACT AS A SEDIMENT BASIN

DURING CONSTRUCTION. REMOVE ACCUMULATION OF SILT AS REQUIRED TO ALLOW PROPER FUNCTIONING. RESTORE POND TO DESIGN LEVELS AT THE COMPLETION OF CONSTRUCTION. 6. IF APPLICABLE, INSTALL DROP INLETS WITH INLET PROTECTION TO ACT AS SILT TRAPS DURING CONSTRUCTION. REMOVE ACCUMULATED SILT AS NEEDED TO PREVENT SILT FROM ENTERING STORM DRAIN PIPING. 7. A 4" LAYER OF TOPSOIL SHALL BE APPLIED TO ALL NEW AREAS TO BE GRASSED.

MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PROJECT IS COMPLETE. MORE STRINGENT MEASURES MAY BE REQUIRED TO HALT EROSION IF THOSE ON THIS PLAN PROVE TO BE LESS EFFECTIVE.

10. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES UPON COMPLETION OF CONSTRUCTION. ALL PERMANENT MEASURES SHALL BE WELL ESTABLISHED PRIOR TO PROJECT COMPLETION.

MAINTENANCE PLAN ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE, LESS THAN

ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALI ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL SPILLED, WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.

SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, BLOCK AND GRAVEL INLET, ROCK DOUGHNUT INLET PROTECTION AND ROCK PIPE INLET PROTECTION WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WIL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARDWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT. 4. DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE REPAIRED. SWALES MUST BE TEMPORARILY STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF

ACTIVITY ASSOCIATED WITH A SWALE. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET MAX. WITH THE USE OF EXTRA STRENGTH FABRIC, WITHOUT WIRE BACKING. STAKE SPACING WILL BE 8 FEET MAX. WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS ARE DESIGNED AT LOW POINTS IN THE IN THE SEDIMENT FENCE THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF FULL OF SEDIMENT, NO LONGER DRAINS AS DESIGNED

SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. THE ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR WHEN THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE. TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN. SEDIMENT WILL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE DESIGN STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR IF THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR

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PROMPTLY. SEDIMENT WILL BE REMOVED FROM BAFFLES WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND 8. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE

EGETATIVE COVER. ALL SLOPES WILL BE STABILIZED WITHIN 21 CALENDAR DAYS. ALL OTHER AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS. 9. FLOCCULATES WILL BE USED TO ADDRESS TURBIDITY ISSUES. THE PUMPS, TANKS, HOSES AND INJECTION SYSTEMS WILL BE CHECKED FOR PROBLEMS OR TURBID DISCHARGES DAILY.

SITE POLLUTANTS NOTES

1. LOCATE AREAS DEDICATED FOR MANAGEMENT OF LAND CLEARING AND DEMOLITION DEBRIS, CONSTRUCTION AND DOMESTIC WASTE
AND HAZARDOUS OR TOXIC WASTE. THIS LOCATION SHALL BE AT LEAST 50' AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.

2. DUMPING OF PAINT OR OTHER LIQUID BUILDING MATERIAL WASTES IN STORM DRAINS IS PROHIBITED. LITTER AND SANITARY WASTE-THE PERMITTEE SHALL CONTROL THE MANAGEMENT AND DISPOSAL OF LITTER AND SANITARY WASTE 4. LOCATE EARTHEN-MATERIAL STOCK PILE AREAS AT LEAST 50' AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS 4. LOCATE EARTHEN—MATERIAL STOCK PILE AREAS AT LEAST 50' AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.

5. CONCRETE MATERIALS ONSITE, INCLUDING EXCESS CONCRETE, MUST BE CONTROLLED AND MANAGED TO AVOID CONTACT WITH SURFACE WATERS, WETLANDS OR BUFFERS. NO CONCRETE OR CEMENT SLURRY SHALL BE DISCHARGED FROM THE SITE.

6. ANY HARDENED CONCRETE RESIDUE WILL BE DISPOSED OF, OR RECYCLED ON SITE, IN ACCORDANCE WITH LOCAL AND STATE SOLID WASTE REGULATIONS.

7. SOIL STABILIZATION SHALL BE ACHEIVED ON ANY AREA OF A SITE WHERE LAND—DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:

i. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3.1) SHALL BE PROVIDED TEMPORARY OR REPMANENT STABILIZATION WITH CROUND COVER AS SOON AS PRACTICABLE BUT THE ANALYSE. (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACTIVITY.

II. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND—DISTURBING ACTIVITY.

8. CONDITIONS—IN MEETING THE STABILIZATION REQUIREMENTS ABOVE, THE FOLLOWING CONDITIONS OR EXEMPTIONS SHALL APPLY:

I. EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE—SPECIFIC CONDITIONS THAT MAKE COMPILIANCE IMPRACTICABLE. CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE.

II. ALL SLOPES 50' IN LENGTH OR GREATER SHALL APPLY TO GROUND COVER WITHIN 7 DAYS EXCEPT WHEN THE SLOPE SEARCH THAN 4:1. SLOPES LESS TRAN 50' SHALL APPLY GROUND COVER WITHIN 14 DAYS EXCEPT WHEN SLOPES ARE STEEPER THAN 3:1, THE 7-DAY REQUIREMENT APPLIES.

iii. ANY SLOPED AREA FLATTER THAN 4:1 SHALL BE EXEMPT FROM THE 7-DAY GROUND COVER REQUIREMENT. SLOPES 10' OR LESS IN LENGTH SHALL BE EXEMPT FROM THE 7-DAY GROUND COVER REQUIREMENT EXCEPT WHEN THE V. ALTHOUGH STABILIZATION IS USUALLY SPECIFIED AS GROUND COVER, OTHER METHODS, SUCH AS CHEMICAL STABILIZATION, MAY BE ALLOWED ON A CASE—BY—CASE BASIS. vi. FOR PORTIONS OF PROJECTS WITHIN THE SEDIMENT CONTROL COMMISSION-DEFINED "HIGH QUALITY WATER ZONE" (15A NCAC

OF THE SITE WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACT.

0105), STABILIZATION WITH GROUND COVER SHALL BE ACHIEVED AS SOON AS PRACTICABLE BUT IN ANY EVENT ON ALL AREAS

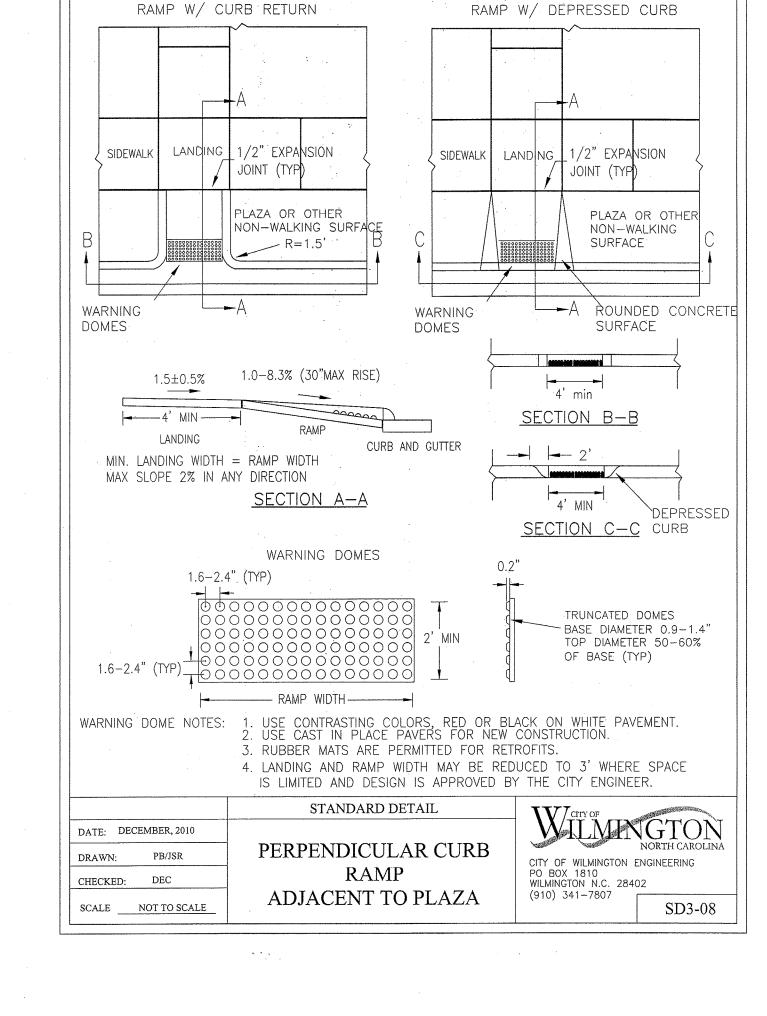
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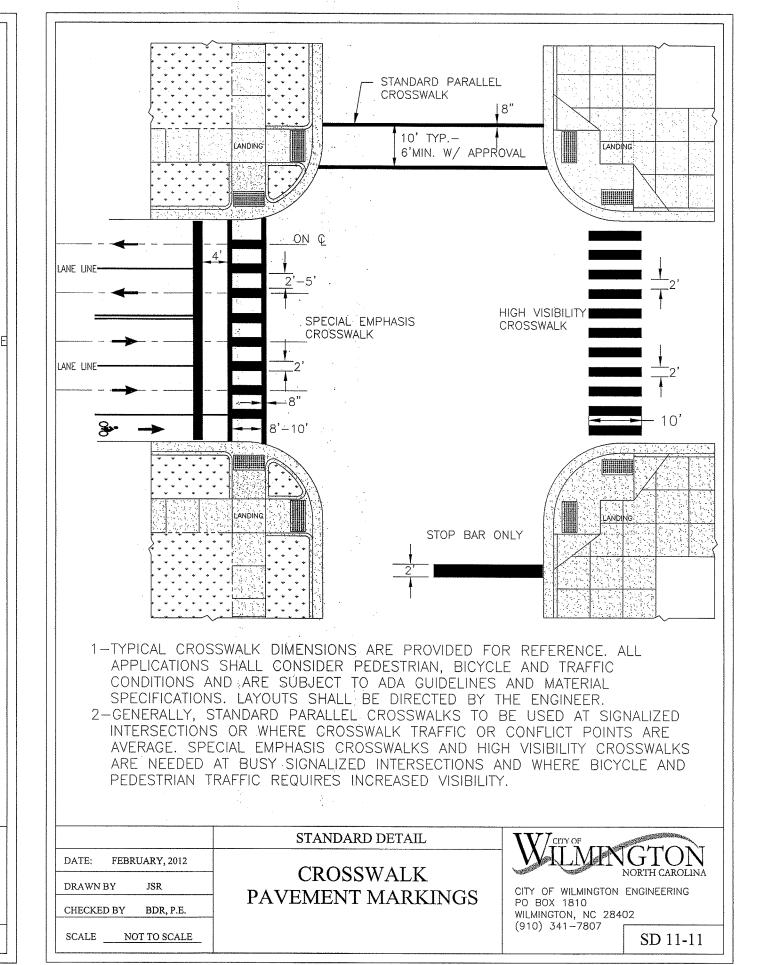
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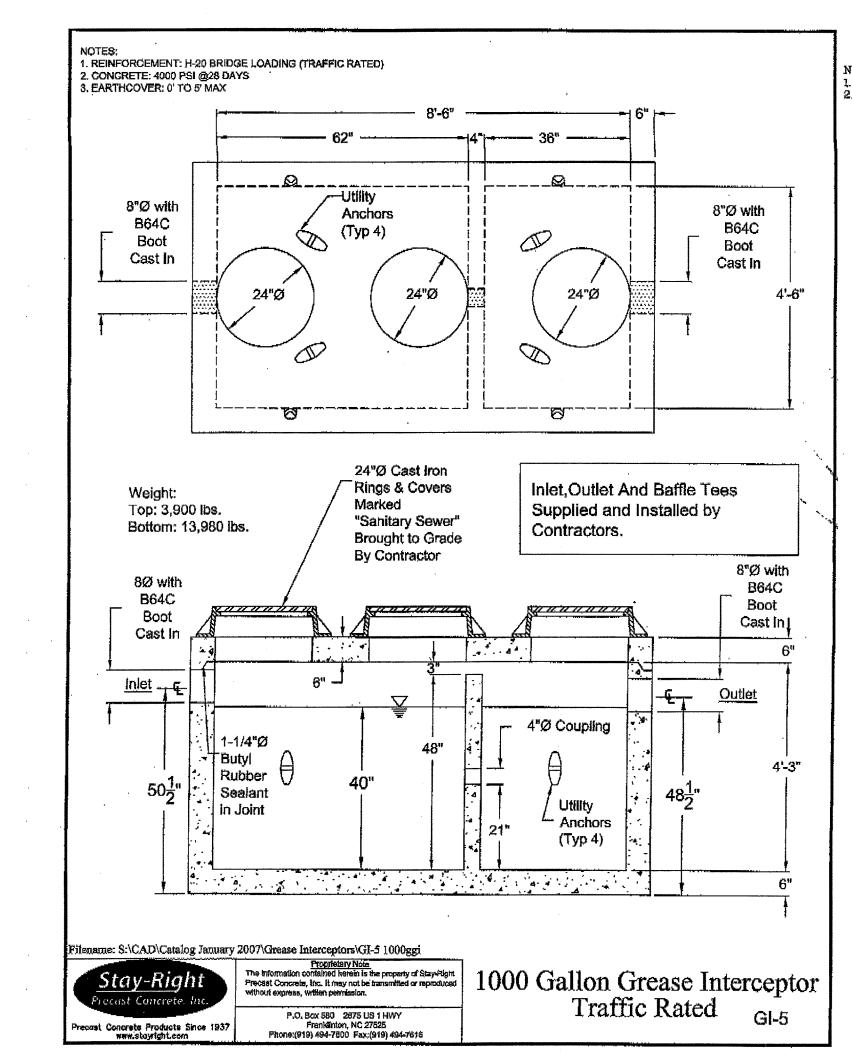
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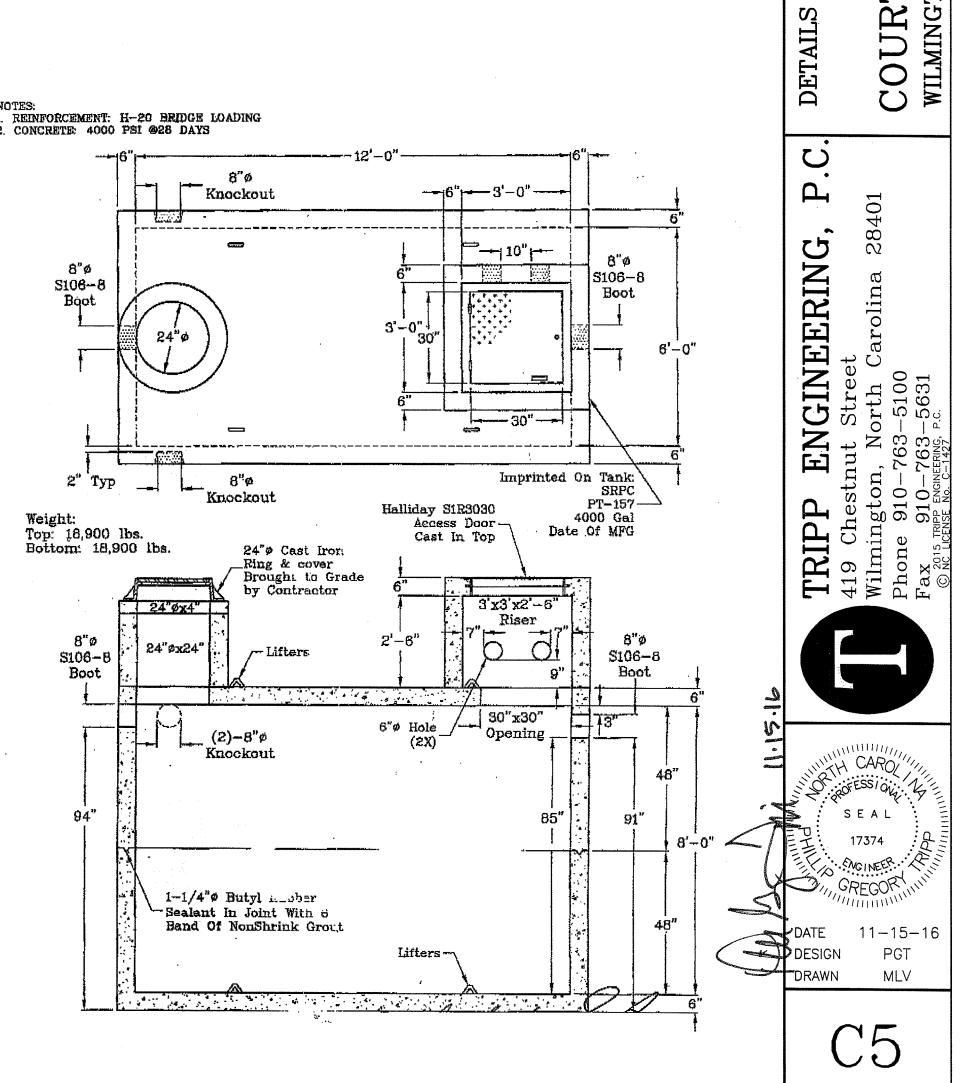
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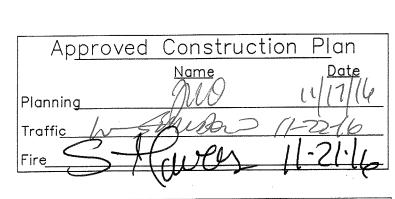
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SHEET 5 OF 5

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STORMWATER MANAGEMENT PLAN

APPROVED

CITY OF WILMINGTON

ENGINEERING DEPARTMENT

DATE 11 22 16 PERMIT # 200502321

For each open utility cut
of
City streets, a \$325
permit
shall be required from the
City prior to occupancy
and/or project
acceptance.

