

EROSION CONTROL MAINTENANCE PLAN

1. 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. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. INSPECT SEDIMENT TRAPS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT, AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN DESIGNATED DISPOSAL AREA, AND REPLACE THE PART OF THE GRAVEL FACING THAT IS IMPAIRED BY SEDIMENT.
3. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES ABOUT 0.5 FEET DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
4. ALL AREAS WILL BE FERTILIZED, RESEED, AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
5. GRAVEL CONSTRUCTION ENTRANCE TO BE CLEANED WHEN SEDIMENT ACCUMULATIONS ARE VISIBLE OR SEDIMENT IS DEPOSITED ON THE ASPHALT AND STONE WILL BE PERIODICALLY TOP DRESSED WITH 2 INCHES OF #4 STONE TO MAINTAIN 6 INCH DEPTH.
6. INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2" OR GREATER) RAINFALL EVENT. CLEAR THE WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

EROSION CONTROL NOTES

1. ANY CONSTRUCTION ACTIVITY BEYOND THE 1.87 ACRE LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE STATE EROSION CONTROL ORDINANCE AND IS SUBJECT TO FINES.
2. CONTRACTOR SHALL REMOVE ALL TREES AND VEGETATION WITHIN ROAD RIGHT OF WAYS UNLESS OTHERWISE DESIGNATED TO REMAIN.
3. CONTRACTOR SHALL RAKE AND REMOVE ROOTS, STUMPS, VEGETATION, DEBRIS, EXISTING STRUCTURES ABOVE AND BELOW GRADE, ORGANIC MATERIAL OR ANY OTHER UNSUITABLE MATERIAL WITHIN THE LIMITS OF CONSTRUCTION.
4. CONTRACTOR SHALL COORDINATE WITH OWNER AND THEIR GEOTECHNICAL REPRESENTATIVE TO COORDINATE REMOVAL OF ANY UNSUITABLE SOILS.
5. CLEARED, GRUBBED, STRIPPED OR OTHER WASTE MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A PROPERLY PERMITTED FACILITY.
6. THE CONTRACTOR SHALL FURNISH ANY REQUIRED BORROW MATERIALS FROM A PROPERLY PERMITTED OFF-SITE FACILITY.
7. SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:
8. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (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.
9. 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.
10. CONDITIONS - IN MEETING THE STABILIZATION REQUIREMENTS ABOVE, THE FOLLOWING CONDITIONS OR EXEMPTIONS SHALL APPLY:
11. EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE.
12. ALL SLOPES 50' IN LENGTH OR GREATER SHALL APPLY THE GROUND COVER WITHIN 7 DAYS EXCEPT WHEN THE SLOPE ARE STEEPER THAN 3:1, THE 7 DAY REQUIREMENT APPLIES.
13. ANY SLOPED AREA FLATTER THAN 4:1 SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT.
14. SLOPES 10' OR LESS IN LENGTH SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT.
15. ALTHOUGH STABILIZATION IS USUALLY SPECIFIED AS GROUND COVER, OTHER METHODS, SUCH AS CHEMICAL STABILIZATION, MAY BE ALLOWED ON A CASE BY CASE BASIS.
16. FOR PORTIONS OF PROJECTS WITHIN THE SEDIMENT CONTROL COMMISSION DEFINED "HIGH QUALITY WATER ZONE" (15A NCAC 04A.0105), STABILIZATION WITH GROUND COVER SHALL BE ACHIEVED AS SOON AS PRACTICABLE BUT IN ANY EVENT ON ALL AREAS OF THE SITE WITHIN 7 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACT.
17. PORTIONS OF A SITE THAT ARE LOWER IN ELEVATION THAN ADJACENT DISCHARGE LOCATIONS AND ARE NOT EXPECTED TO DISCHARGE DURING CONSTRUCTION MAY BE EXEMPT FROM THE TEMPORARY GROUND COVER REQUIREMENTS IF IDENTIFIED ON THE APPROVED E&S PLAN OR ADDED BY THE PERMITTING AUTHORITY.
18. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE STATE ENGINEERING DEPARTMENT.
19. SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
20. ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UPON BY THE FIELD INSPECTOR, ENGINEER, AND OWNER.
21. IF ACTIVE CONSTRUCTION CEASES IN ANY AREA FOR MORE THAN 15 CALENDAR DAYS, ALL DISTURBED AREAS MUST BE SEEDED, MULCHED, AND TACKED UNLESS WRITTEN APPROVAL IS GRANTED BY THE EROSION CONTROL OFFICER.
22. PRIOR TO CONSTRUCTING THE INFILTRATION BASIN BMP, ALL ACCUMULATED SEDIMENT IN THE SEDIMENT TRAP SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED TO A PERMITTED LOCATION.

CONSTRUCTION SEQUENCE

1. OBTAIN ALL NECESSARY PERMIT APPROVALS PRIOR TO ANY LAND DISTURBING ACTIVITY.
2. HOLD A PRE-CONSTRUCTION MEETING WITH THE EROSION CONTROL INSPECTOR.
3. INSTALL GRAVEL CONSTRUCTION ENTRANCE, INLET PROTECTION AND SILT FENCE, COMMENCE DEMOLITION, CLEARING AND ROUGH GRADING.
4. ROUGH GRADE SITE AND INSTALL UNDERGROUND UTILITIES.
5. INSTALL PAVEMENT BASE AND BEGIN BUILDING CONSTRUCTION.
6. ONCE BUILDING EXTERIOR WORK IS NEAR COMPLETE, PAVE ROADWAYS AND PARKING AREAS AND POUR CONC. WALKS.
7. PROVIDE TEMPORARY PROTECTION MEASURES AND DEVICES AS REQUIRED UNTIL UNDERGROUND UTILITIES AND PAVEMENT IS COMPLETE AND FINAL GRADES ARE STABILIZED WITH TEMPORARY VEGETATIVE COVER.
8. STABILIZE (FERTILIZE, SEED, AND MULCH) ALL DISTURBED AREAS AS SOON AS FINAL GRADES ARE ESTABLISHED.
9. ONCE CONSTRUCTION IS COMPLETE AND ALL DISTURBED AREAS ARE STABILIZED, OBTAIN NCDENR'S APPROVAL TO REMOVE TEMPORARY EROSION CONTROL MEASURES.

GRADING NOTES

1. INITIATE EROSION CONTROL SEQUENCE BEFORE BEGINNING CLEARING, GRUBBING AND GRADING OPERATIONS.
2. CLEAR AREAS TO BE GRADED OF ALL VEGETATION. PROTECT VEGETATION BEYOND GRADING LIMITS.
3. STRIP TOPSOIL TO FULL DEPTH IN AREAS TO BE GRADED AND STOCKPILE. INSTALL SILT FENCE AROUND STOCKPILED MATERIAL.
4. COMPACT ALL FILL AREAS TO 95% OF MAXIMUM DENSITY.
5. ALL BANKS AND SWALE SIDE SLOPES SHALL BE GRADED WITH NO GREATER THAN 3:1 SLOPES.
6. ALL AREAS ARE TO BE GRADED SO THAT NO AREAS OF STANDING WATER OCCUR.
7. PROPOSED SPOT ELEVATIONS ARE SHOWN AT FINISHED GRADE.
8. OPERATOR SHALL FIELD VERIFY EXISTING TOPOGRAPHY IN RELATION TO THE PROPOSED GRADES TO ENSURE DRAINAGE IN THE DIRECTIONS INDICATED ON THE PLAN.

SEED SCHEDULE

1. FOLLOW RECOMMENDATIONS OF SOIL TEST OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LBS/ACRE 10-10-10 FERTILIZER.
2. APPLY 4,000 LBS/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL.
3. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.
4. REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.
5. RESEED AND MULCH AREAS WHERE SEEDING EMERGENCE IS POOR, OR WHEN EROSION OCCURS, AS SOON AS POSSIBLE. DO NOT MOW. PROTECT FROM TRAFFIC AS MUCH AS POSSIBLE.

STABILIZATION TIMEFRAMES

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALE, DITCHES, SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH

TEMPORARY SEEDING

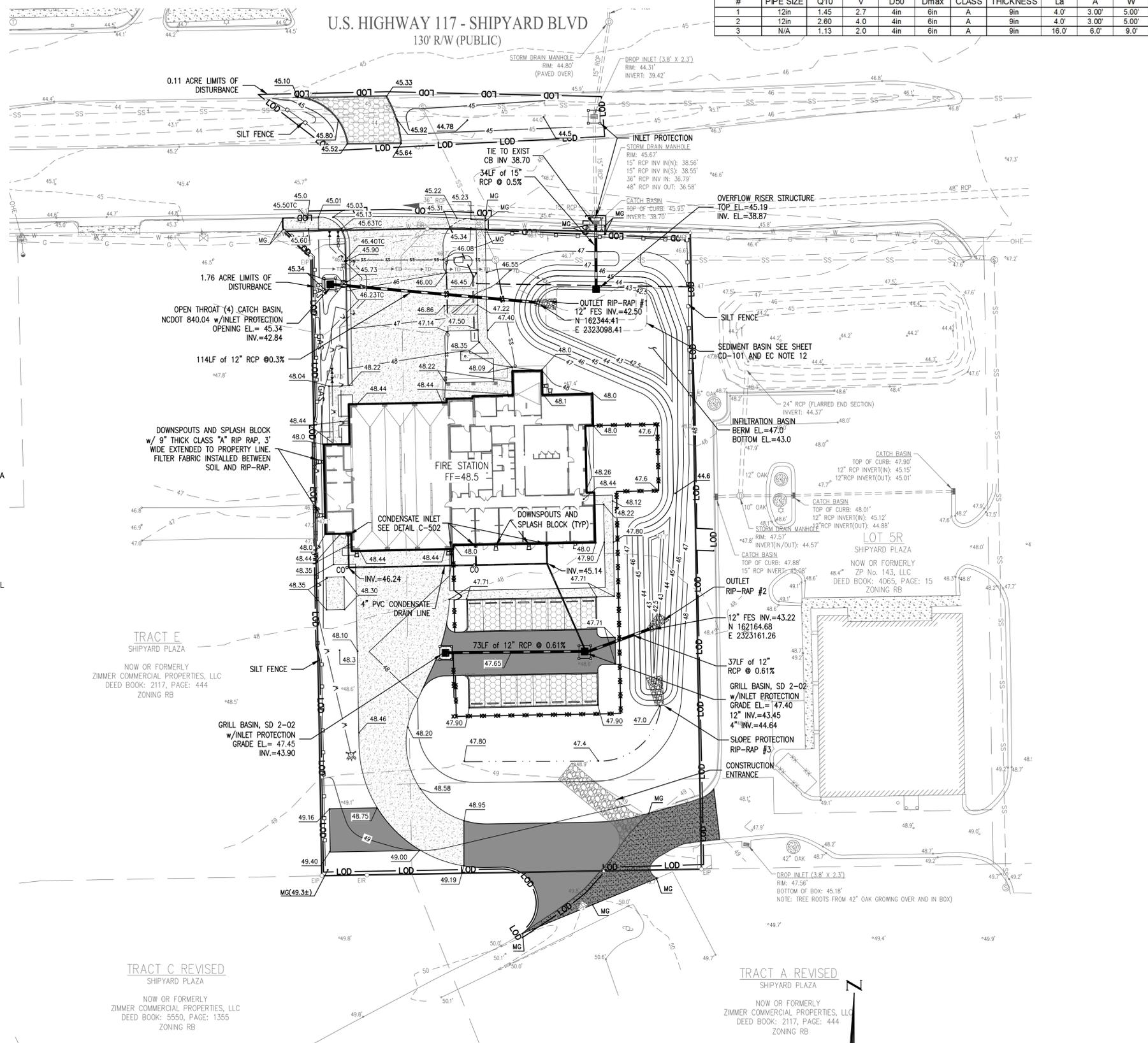
GRASS TYPE	AMOUNT/1000 S.F.	TIME OF SEEDING	INITIAL
RYE GRAIN	1-2 LBS.	AUG 15 - DEC 31	25 LBS. 10-10-10
GERMAN MILLET	1-2 LBS.	MAY 1 - AUG 14	25 LBS. 10-10-10
RYE GRAIN AND ANNUAL LESPEDEZA	2-3 LBS. 1-1.5 LBS	JAN 1 - APR 30	25 LBS. 10-10-10

PERMANENT SEEDING

GRASS TYPE	AMOUNT/1000 S.F.	TIME OF SEEDING	INITIAL
BERMUDA, COMMON	1-2 LBS.	APRIL THRU JUNE	25 LBS. 10-10-10
FESCUE, TALL (KENTUCKY 31)	5-7 LBS.	JUNE THRU AUG. FEB. THRU OCT.	25 LBS. 10-10-10
SERICEA LESPEDEZA (SLOPES)	1-2 LBS.	MARCH THRU APRIL	25 LBS. 10-10-10

RIP-RAP SCHEDULE

#	PIPE SIZE	Q10	V	D50	Dmax	CLASS	THICKNESS	La	A	W
1	12in	1.45	2.7	4in	6in	A	9in	4.0'	3.00'	5.00'
2	12in	2.60	4.0	4in	6in	A	9in	4.0'	3.00'	5.00'
3	N/A	1.13	2.0	4in	6in	A	9in	16.0'	6.0'	9.0'



BECKER MORGAN GROUP
 ARCHITECTURE PLANNING
 Wilmington, NC
 3205 Randall Parkway, Suite 211
 Wilmington, NC 28403
 910.341.7600
 Salisbury, MD
 312 West Main St. Suite 300
 Salisbury, MD 21801
 410.546.9100
 Dover, DE
 309 S Governors Ave
 Dover, DE 19904
 302.734.7950
 www.beckermorgan.com

CATLIN
 Engineers and Scientists
 220 Old Dairy Road
 Wilmington, NC 28405
 Corporate License No. for Engineering Services C-0688

Professional Engineer
 State of North Carolina
 License No. 10000
 August 18, 2016 11:44 AM

PROJECT TITLE
CITY OF WILMINGTON FIRE DEPARTMENT
FIRE STATION No. 5
 680 SHIPYARD BLVD.
 WILMINGTON, NC

SHEET TITLE
GRADING, DRAINAGE & EROSION CONTROL PLAN

ISSUE BLOCK
 PROJECT NO: 2015028.00
 DATE: 6/30/2016
 SCALE:
 DRAWN BY: EJS / NMY | PROJ MGR: LML

