GENERAL EROSION CONTROL NOTES

1. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS.

2. INSTALL SEDIMENTATION AND EROSION CONTROL MEASURES PRIOR TO CLEARING GRADING AND DEMOLITION WORK. MAINTAIN ALL SEDIMENT AND EROSION CONTROL, AND TREE PROTECTION MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

3. ALL EROSION AND SEDIMENT CONTROL PRACTICES ARE SUBJECT TO FIELD MODIFICATIONS AT THE DIRECTION OF THE TOWN'S DPW ENGINEERING DEPARTMENT.

4. PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH ENTRY TO OR EXIT FROM THE SITE. CONTRACTOR SHALL MAINTAIN CONSTRUCTION ENTRANCE UNTIL SITE PAVING IS COMPLETE.

5. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN-OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED BY VEHICLE OFF-SITE ONTO PUBLIC ROADWAY OR INTO STORM DRAINS MUST BE REMOVED.

6. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCES/EXITS, ALL PERIMETER EROSION CONTROL DEVICES AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION.

7. EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

8. THE CONSTRUCTION OF THE SITE WILL INITIATE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED WITH PERMANENT VEGETATION AND ALL ROADS/DRIVES HAVE BEEN PAVED.

9. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES WHILE IMPROVEMENTS ARE BEING MADE. TRAFFIC CONTROL MEASURES TO BE IN ACCORDANCE WITH VDOT.

10. ALL SILT BARRIERS MUST BE PLACED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL BE DONE UNTIL SILT BARRIER INSTALLATION AND DETENTION FACILITIES, IF REQUIRED, ARE CONSTRUCTED.

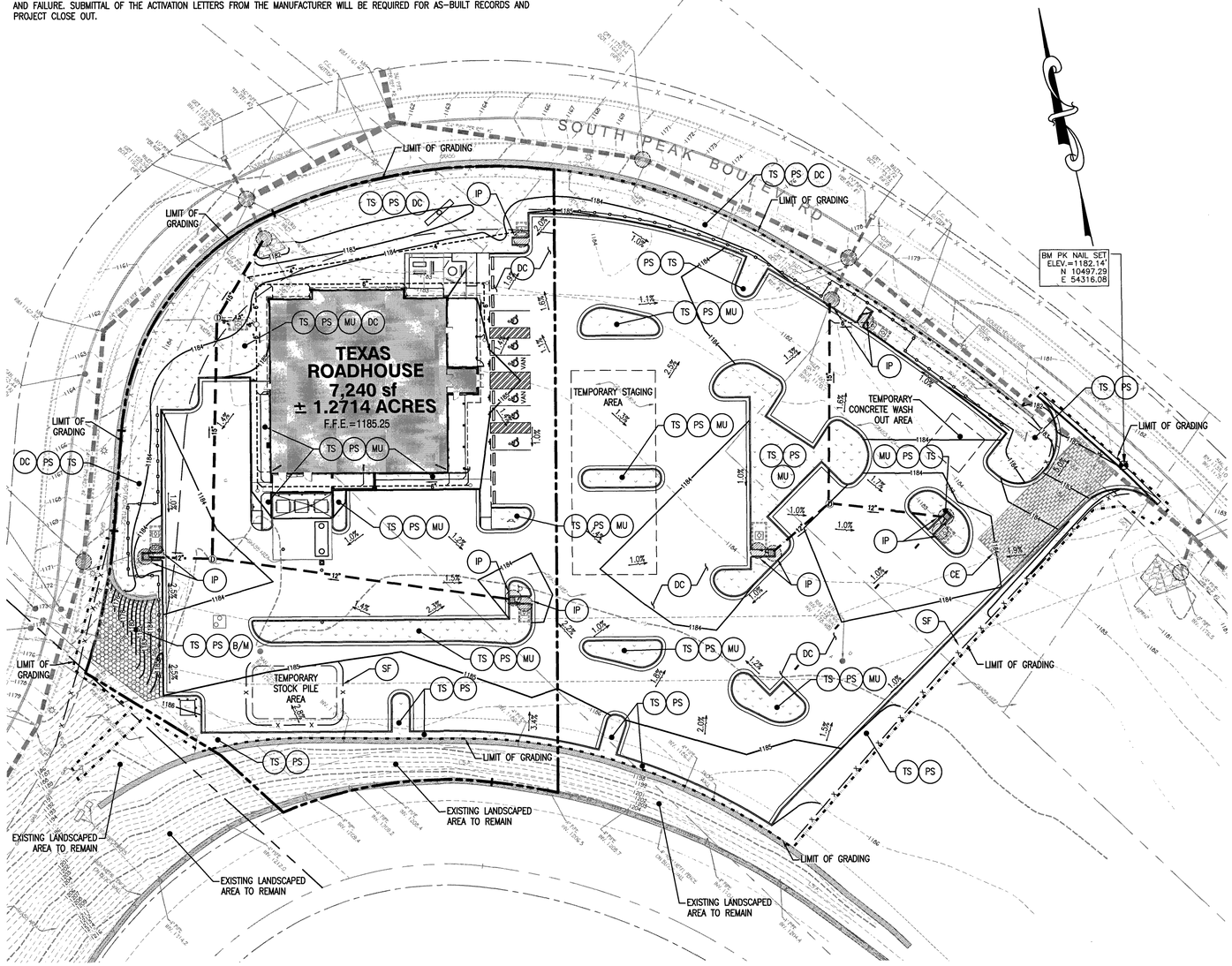
11. CONTRACTOR SHALL PERFORM EROSION CONTROL INSPECTIONS REGULARLY AND IMMEDIATELY FOLLOWING HEAVY RAIN STORMS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY. REPAIR OR REPLACE FAILED SYSTEMS AT THE EARLIEST POSSIBLE DATE.

12. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING.

13. ALL DISTURBED AREAS, WITH NO SPECIFIED GROUND COVER ARE TO BE RESTORED WITH MINIMUM SIX (6) INCHES OF TOPSOIL AND SEEDING.

NOTE:

FILTERRA UNITS SHOULD BE INSTALLED AFTER THE SITE WORK IS COMPLETE AND STABILIZATION MEASURES HAVE BEEN IMPLEMENTED ON ALL TRIBUTARY AREAS. IF UNITS ARE INSTALLED BEFORE ALL TRIBUTARY WORK IS COMPLETE, STRICT IMPLEMENTATION OF E&S PROTECTIVE MEASURES MUST BE INSTALLED AND MAINTAINED IN ORDER TO PROTECT THE FILTER MEDIA FROM PREMATURE CLOGGING AND FAILURE. SUBMITTAL OF THE ACTIVATION LETTERS FROM THE MANUFACTURER WILL BE REQUIRED FOR AS-BUILT RECORDS AND PROJECT CLOSE OUT.



EROSION CONTROL LEGEND:

- PROPERTY LINE
- PROPOSED STORM SEWER PIPE
- PROPOSED CONCRETE CURB
- LIMITS OF GRADING
- SILT FENCE
- STORM DRAIN INLET PROTECTION
- CULVERT INLET PROTECTION
- PROPOSED CATCH BASIN
- PROPOSED STORM CLEANOUT
- SOIL STABILIZATION BLANKETS & MATTING (ON ALL 2:1 SLOPED AREAS)

EROSION CONTROL KEYNOTES

- (CE) 3.02 TEMPORARY STONE CONSTRUCTION ENTRANCE. SEE DETAILS.
- (SF) 3.05 SILT FENCE. SEE DETAILS.
- (IP) 3.07 STORM DRAIN INLET PROTECTION. SEE DETAILS.
- (CIP) 3.08 CULVERT INLET PROTECTION
- (TS) 3.31 TEMPORARY SEEDING
- (PS) 3.32 PERMANENT SEEDING
- (MU) 3.35 MULCHING
- (B/M) 3.36 SOIL STABILIZATION, BLANKETS AND MATTING
- (DC) 3.39 DUST CONTROLS

STORMWATER SITE STATISTICS

	EXISTING	PROPOSED
TOTAL DISTURBED AREA (AC)	2.48	2.46
TOTAL SITE AREA (AC)	2.48	2.48
IMPERVIOUS AREA (AC)	0	1.78
MANAGED TURF AREA (AC)	2.48	0.70
OPEN SPACE / FOREST AREA (AC)	0	0
RIGHT OF WAY DISTURBANCE (SF)	0	0
KARST PRESENT (Y/N)	N	N

NEW BMP INFORMATION

	BMP #1	BMP #2	BMP #3	BMP-ROOF	BMP #4	BMP #5	BMP #6
BMP TYPE	BIORETENTION	BIORETENTION	BIORETENTION	BIORETENTION	BIORETENTION	BIORETENTION	BIORETENTION
LEVEL OF TREATMENT (LEVEL 1 OR LEVEL 2)							
TECHNICAL REQUIREMENTS MET (PART IIB OR IIC)	PART IIC	PART IIC	PART IIC	PART IIC	PART IIC	PART IIC	PART IIC
TOTAL AREA TREATED (AC)	0.36	0.29	0.06	0.21	0.53	0.27	0.31
IMPERVIOUS AREA TREATED BY BMP (AC)	0.32	0.22	0.06	0.21	0.40	0.25	0.28
MANAGED TURF AREA TREATED BY BMP (AC)	0.04	0.07	0	0	0.13	0.02	0.03
OPEN SPACE / FOREST AREA TREATED BY BMP (AC)	0	0	0	0	0	0	0
SURFACE AREA OF BMP (AC)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
STORAGE VOLUME OF BMP (AC-FT)	NEGLIGABLE	NEGLIGABLE	NEGLIGABLE	NEGLIGABLE	NEGLIGABLE	NEGLIGABLE	NEGLIGABLE
MAXIMUM AVERAGE DEPTH (FT)							
QUALITY, QUANTITY, OR BOTH?	QUALITY	QUALITY	QUALITY	QUALITY	QUALITY	QUALITY	QUALITY
TMDL ADDRESSED? (PHOSOPHORUS, BACTERIA, SEDIMENT, ETC)	YES	YES	YES	YES	YES	YES	YES
LATITUDE (DECIMAL DEGREES XX.XXXX)							
LONGITUDE (DECIMAL DEGREES -XX.XXXX)							
NAME OF RECEIVING WATER	ROANOKE RIVER-PETERS CREEK	ROANOKE RIVER-PETERS CREEK	ROANOKE RIVER-PETERS CREEK	ROANOKE RIVER-PETERS CREEK	ROANOKE RIVER-PETERS CREEK	ROANOKE RIVER-PETERS CREEK	ROANOKE RIVER-PETERS CREEK
HYDROLOGIC UNIT CODE (ALPHANUMERIC CODE RU14, ETC)	RU-14	RU-14	RU-14	RU-14	RU-14	RU-14	RU-14

PROJECT INFORMATION

TOTAL SITE LEASE AREA: 54,454 SF : 1.27 ACRES

ZONED: C-2 COMMERCIAL HIGH INTENSITY DISTRICT

TOTAL DISTURBED AREA: 107,300 SF : 2.46 ACRES

DESCRIPTION OF CONSRUCTION ACTIVITIES:

- PROJECT CONSTRUCTION WILL CONSIST PRIMARILY OF SITE GRADING, PAVING, STORM DRAINAGE, WATER SUPPLY, AND SEWAGE COLLECTION TO SUPPORT A TEXAS ROADHOUSE 7,240 S.F. BUILDING.

CONSTRUCTION SEQUENCE:

1. OBTAIN ALL APPROVALS AND OTHER APPLICABLE PERMITS.
2. FLAG THE WORK LIMITS AND INSTALL TEMPORARY CONSTRUCTION FENCE WITH GATE (1 DAY)
3. HOLD PRE-CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO COMMENCEMENT OF CONSTRUCTION (1 DAY).
4. INSTALL ALL SILT FENCING AS FIRST CONSTRUCTION ACTIMTY. (2 DAYS)
5. INSTALL ALL STORM DRAINAGE SYSTEM INLET PROTECTIONS ON EXISTING STRUCTURES (1 DAY)
6. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCES (1 DAY)
7. CONSTRUCT TEMPORARY RUN-OFF DIVERSIONS AROUND BUILDING SITE. INSURE ALL STOCKPILING (IF ANY) IS LOCATED UPGRADIENT OF ALL STREETS OR SWALES (1 DAY)
8. FINISH GRADING AND COMPACTION OF BUILDING PAD (2 DAY)
9. ROUGH GRADE SITE, STOCK PILE MATERIALS, BEGIN INSTALLATION OF PROPOSED ON-SITE STORMWATER SYSTEM (WITH INLET PROTECTION DEVICES INSTALLED), INSTALL SEDIMENT FENCE AS NEEDED. MAINTAIN EXISTING RUN-OFF DIVERSION PATHS. (1 WEEK)
10. FINISH ROUGH GRADING PARKING, ACCESS DRIVES, SIDEWALKS ETC. (3 DAYS)

BMP'S DESCRIPTION:

- EROSION AND SEDIMENT CONTROLS MUST BE DESIGNED TO RETAIN SEDIMENT ON-SITE TO THE EXTENT PRACTICABLE WITH CONSIDERATION FOR LOCAL TOPOGRAPHY, SOIL TYPE, AND RAINFALL. CONTROLS MUST ALSO BE DESIGNED AND UTILIZED TO REDUCE THE OFFSITE TRANSPORT OF SUSPENDED SEDIMENTS AND OTHER POLLUTANTS IF IT IS NECESSARY TO PUMP OR CHANNEL STANDING WATER FROM THE SITE.
- CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED ACCORDING TO THE MANUFACTURER'S OR DESIGNER'S SPECIFICATIONS. IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL HAS BEEN USED INCORRECTLY, OR THAT THE CONTROL IS PERFORMING INADEQUATELY, THE OPERATOR MUST REPLACE OR MODIFY THE CONTROL AS SOON AS PRACTICABLE AFTER DISCOVERY THAT THE CONTROL HAS BEEN USED INCORRECTLY, IS PERFORMING INADEQUATELY, OR IS DAMAGED.
- CONTROLS MUST BE DEVELOPED TO LIMIT, TO THE EXTENT PRACTICABLE, OFFSITE TRANSPORT OF LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION MATERIALS.
- PRIOR TO CLEARING, A SILT FENCE (TRENCHED 8 INCHES DEEP), STAKED WITH HARDWOOD (1 ½" X 1 ½" (SOFTWOOD 2"X 4") SHALL BE INSTALLED AROUND THE PERIMETER OF THE SITE.
- DURING THE CLEARING, GRUBBING AND SITE GRADING STAGES, AREAS THAT ARE DISTURBED MORE THAN 7 DAYS SHALL BE STABILIZED WITH RYE GRASS APPLIED AT MANUFACTURER'S RECOMMENDATIONS. A ROCK ACCESS ROAD (THAT IS 50FT LONG WITH A 6 INCH DEPTH OF STONE AND LINED WITH FILTER FABRIC SHALL BE CONSTRUCTED TO MINIMIZE THE EFFECT OF TRUCK TRAFFIC AND SEDIMENTATION TRACKING BOTH ON AND OFF OF THE SITE.
- AFTER THE INITIAL SITE GRADING WORK, ALL PROPOSED INLET(S)/OUTFALLS, ONCE INSTALLED, SHALL BE PROTECTED FROM EROSION AND SEDIMENT RUNOFF BY THE USE OF SILT FENCE AND PROPERLY INSTALLED DRAIN GUAROS.

TEMPORARY & PERMANENT STABILIZATION:

- TEMPORARY SEEDING SHALL BE RYE GRASS APPLIED AT MANUFACTURER'S RECOMMENDATIONS TO ANY DISTURBED AREAS THAT ARE INACTIVE MORE THAN 14 DAYS.
- MULCHING PRACTICES AND SOD SHALL BE APPLIED TO THE PARKING LOT ISLAND.
- FILTER FABRIC SHALL BE PLACED UNDER THE ROCK ENTRANCE/EXIT.

LOCATION OF WETLANDS AND SURFACE WATERS:

- THERE ARE NOT WETLANDS OR SURFACE WATERS WITH IN THE LIMIT OF WORK.

POTENTIAL POLLUTANTS DURING CONSTRUCTION:

- ALL CONSTRUCTION WASTE AND TRASH (PAPER, PLASTIC, WOOD, SCRAP, METALS, RUBBER, ETC.) SHALL BE COLLECTED AND STORED IN CONTAINERS WITH LIDS OR COVERS THAT CAN BE PLACED OVER THE CONTAINER PRIOR TO RAINFALL. THE WASTE SHALL BE DISPOSED OF ACCORDING TO STATE AND LOCAL SOLID WASTE MANAGEMENT REGULATIONS.
- SANITARY WASTE THAT IS GENERATED ON THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
- DUST ON THE SITE SHALL BE CONTROLLED BY ANY OF THE FOLLOWING METHODS: VEGETATIVE COVER, MULCH (INCLUDING GRAVEL MULCH), WATER SPRINKLING, BARRIERS, TILLAGE, AND CALCIUM CHLORIDE APPLICATION BY MECHANICAL SPREADER AS LOOSE DRY GRANULES AT A RATE THAT DOES NOT CAUSE WATER POLLUTION OR PLANT DAMAGE, APPROVED SPRAY ON ADHESIVES OR ANY OTHER APPROVED METHOD. THE USE OF MOTOR OILS AND OTHER TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- OFF-SITE VEHICLE TRACKING OF SEDIMENTS SHALL BE MINIMIZED BY PROVIDING A CONSTRUCTION ENTRANCE AS DETAILED ON THE EROSION CONTROL PLAN. NO ACCESS FOR CONSTRUCTION INGRESS OR EGRESS SHALL BE ALLOWED EXCEPT FOR THE CONSTRUCTION ENTRANCE SHOWN ON THE EROSION CONTROL PLAN.
- FERTILIZERS AND PESTICIDES WILL BE USED AT A MINIMUM AND IN ACCORDANCE WITH THE MANUFACTURER'S SUGGESTED APPLICATION RATES.
- ALL HAZARDOUS WASTE (PAINTS, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, CONCRETE CURING COMPOUNDS, AND ADDITIVES, ETC.) SHALL BE DISPOSED OF ACCORDING TO LOCAL, STATE, AND FEDERAL REGULATIONS.
- ALL CONTRACTORS AND SUBCONTRACTORS AFFILIATED WITH THE CONSTRUCTION PROJECT SHALL ABIDE BY FEDERAL EPA, STATE, AND LOCAL REQUIREMENTS FOR THE CONSTRUCTION, WASTE DISPOSAL, SANITARY SEWER, AND SEPTIC SYSTEM REGULATIONS.

CALL BEFORE YOU DIG 1-800-552-7001 IT'S FASTER, IT'S FREE, IT'S THE LAW

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

GreenbergFarrow
153 Cordaville Road, Suite 210
Southborough, MA 01772
t: 508 229 0032

ISSUE/REVISION RECORD

DATE	DESCRIPTION
06/05/15	CONCEPTUAL LAYOUT
07/01/15	CONCEPTUAL SUBMITTAL
07/14/15	COORDINATION SET
08/05/15	COUNTY RESPONSE #1
09/08/15	COUNTY RESPONSE #2
10/14/15	COUNTY RESPONSE #3
11/02/15	BID SET
12/03/15	COUNTY RESPONSE #4
12/23/15	CONSTRUCTION SET

PROFESSIONAL SEAL
COMMONWEALTH OF VIRGINIA
JOHN M. NOURZAD
PROFESSIONAL ENGINEER
12/22/15
LICENSE # 019570

PROFESSIONAL IN CHARGE
JOHN NOURZAD, P.E.

PROJECT MANAGER
ANDRE PIMENTEL

QUALITY CONTROL
STEPHEN POWERS, P.E.

DRAWN BY
RYAN SCHNEPPER E.I.T.

PROJECT NAME
TEXAS ROADHOUSE

ROANOKE
VIRGINIA

SOUTH PEAK BLVD.

PROJECT NUMBER
20140788.0

SHEET TITLE
EROSION CONTROL PLAN PHASE II

SHEET NUMBER
C6.1