AND ARE NON-MEMBERS OF TENNESSEE 811

3. 72 HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: TENNESSEE 811 AND ALL OTHER AGENCIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT

4. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING WITH APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTORS TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND OWNER'S REPRESENTATIVE FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES OCCURRING IN THE COURSE OF THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.

6. CONTRACTOR SHALL OBTAIN A PERMIT FOR ALL CONSTRUCTION ACTIVITIES AND PERFORM SAID ACTIVITIES IN ACCORDANCE WITH ALL LOCAL, STATE, FEDERAL & OSHA REGULATIONS.

7. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES, OBTAIN ALL APPLICABLE PERMITS, AND PAY ALL REQUIRED FEES PRIOR TO BEGINNING WORK.

8. ANY WORK PERFORMED IN THE LOCAL RIGHT OF WAYS SHALL BE IN ACCORDANCE WITH THE APPLICABLE LOCAL REQUIREMENTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY PERMITS FOR THE WORK, SCHEDULE NECESSARY INSPECTIONS, AND PROVIDE THE NECESSARY TRAFFIC CONTROL MEASURES AND DEVICES, ETC., FOR WORK PERFORMED IN THE RIGHT OF WAYS.

9. THE PROPOSED SITE IMPROVEMENTS WILL REQUIRE COVERAGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT ISSUED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC). THE TOTAL SITE DISTURBANCE IS +/- 1.3 ACRES.

10. CONTRACTOR SHALL IMPLEMENT ALL SOIL AND EROSION CONTROL PRACTICES REQUIRED BY THESE PLANS, CITY OF LEWISBURG AND TDEC.

11. ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION AND ARE TO FINAL GRADE AND ARE TO REMAIN SO, SHALL BE PERMANENTLY STABILIZED AS SOON AS PRACTICAL IN ACCORDANCE WITH SPECIFICATIONS.

12. ALL WORK SHALL COMPLY WITH CITY OF LEWISBURG SPECIFICATIONS, AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS AND IN ACCORDANCE WITH APPLICABLE STANDARDS OF THE CITY OF LEWISBURG.

13. ALL WORK PERFORMED BY THE CONTRACTOR SHALL CONFORM TO THE LATEST REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT.

14. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THE PROJECT.

15. BEFORE INSTALLATION OF STORM OR SANITARY SEWER, OR OTHER UTILITY THE CONTRACTOR SHALL VERIFY ALL CROSSINGS, BY EXCAVATION WHERE NECESSARY, AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT THEY ARE NOT NOTIFIED OF DESIGN CONFLICTS PRIOR TO CONSTRUCTION.

16. DIMENSIONS ARE SHOWN TO THE EDGE OF PAVEMENT AND/OR EDGE OF BUILDING UNLESS OTHERWISE NOTED.

17. CONSTRUCTION OF ALL PAVEMENT AND SIDEWALKS SHALL MEET THE REQUIREMENTS OF CITY OF LEWISBURG CONSTRUCTION CRITERIA AND STANDARD DETAILS.

18. CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH STATE DEPARTMENT OF TRANSPORTATION REGULATIONS AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.

19. ALL TRENCHING, PIPE LAYING AND BACKFILLING SHALL BE IN ACCORDANCE WITH ALL FEDERAL OSHA REGULATIONS. CONTRACTOR TO PAY PARTICULAR ATTENTION TO 29 CFR PART 1926, SUBPARTS M AND P.

20. THE PROPERTY SHOWN HEREON IS LOCATED IN A FLOOD HAZARD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) ACCORDING TO F.I.R.M. MAP "MARSHALL COUNTY, TENNESSEE" PANEL 158 OF 325, MAP NUMBER 47117C0158D, REVISED SEPTEMBER 28, 2007.

## **DEMOLITION NOTES**

1. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD BY THE CONTRACTOR.

2. NO TREES SHALL BE REMOVED, NOR VEGETATION DISTURBED BEYOND THE LIMITS OF CONSTRUCTION WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.

3. TREE PROTECTION FENCING (IF APPLICABLE) SHALL BE IN ACCORDANCE WITH CITY OF LEWISBURG STANDARDS AND DETAILED DRAWINGS. DO NOT OPERATE OR STORE EQUIPMENT, NOR HANDLE OR STORE MATERIALS WITHIN THE DRIP LINES OF THE TREES SHOWN TO REMAIN.

4. PROTECTION OF EXISTING TREES AND VEGETATION: PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND VEGETATION TO BE LEFT STANDING.

5. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS, OTHER THAN TOPSOIL, SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR DAMAGE ACCORDING TO THE APPROPRIATE UTILITY COMPANY STANDARDS AND AT THE CONTRACTOR'S EXPENSE.

6. ALL UTILITY DISCONNECTION, REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY / AGENCY. UTILITY CONTACTS ARE LISTED ON THE COVER SHEET.

7. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR OBTAINS PRIOR WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.

8. EROSION & SEDIMENT CONTROL MEASURES AROUND AREAS OF DEMOLITION SHALL BE PROPERLY INSTALLED AND FUNCTION PROPERLY PRIOR TO INITIALIZATION OF DEMOLITION ACTIVITIES.

HAZARDOUS MATERIALS ARE NOT EXPECTED, IF FOUND ON SITE, SUCH MATERIALS SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED.

10. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL AND OSHA REGULATIONS DURING ALL DEMOLITION

11. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.

12. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, STRUCTURES, AND FEATURES TO REMAIN. ANY ITEMS TO REMAIN THAT HAVE BEEN DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.

13. ANY UTILITY AND STRUCTURE REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED AND PROPERLY DOCUMENTED BY A CERTIFIED PROFESSIONAL, WHEN APPLICABLE, WITH THE APPROPRIATE UTILITY COMPANY, MUNICIPALITY AND/OR AGENCY. DEMOLITION OF REGULATED ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO WELLS, ASBESTOS, UNDER GROUND STORAGE TANKS, SEPTIC TANKS AND ELECTRIC TRANSFORMERS. DEMOLITION CONTRACTOR SHALL REFER TO ANY ENVIRONMENTAL STUDIES FOR DEMOLITION RECOMMENDATIONS AND GUIDANCE. AVAILABLE ENVIRONMENTAL STUDIES MAY INCLUDE, BUT ARE NOT LIMITED TO PHASE I ESA, PHASE II ESA, WETLAND AND STREAM DELINEATION AND ASBESTOS SURVEY. ALL APPLICABLE ENVIRONMENTAL STUDIES SHALL BE MADE AVAILABLE UPON REQUEST.

14. THE CONTRACTOR SHALL USE SUITABLE METHODS TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION ACTIVITIES.

## LAYOUT NOTES

1. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.

2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. RELOCATE EXISTING UTILITIES AS INDICATED, OR AS NECESSARY FOR CONSTRUCTION

3. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES, INCLUDING PRIOR TO INSTALLATION OF PAVED SURFACES.

4. THE CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN IN ACCORDANCE WITH THE PLANS.

5. ALL DAMAGE TO EXISTING PAVEMENT TO REMAIN, WHICH RESULTS FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH LIKE MATERIALS AT THE CONTRACTOR'S EXPENSE.

6. SITE DIMENSIONS SHOWN ARE TO THE EDGE OF PAVEMENT, EDGE OF CONCRETE, OR FACE OF BUILDING UNLESS OTHERWISE NOTED.

7. CONTRACTOR SHALL MAINTAIN ONE SET OF AS-BUILT/RECORD DRAWINGS ON-SITE DURING CONSTRUCTION FOR DISTRIBUTION TO THE OWNER AND/OR OWNER'S REPRESENTATIVE UPON COMPLETION.

8. THIS SITE LAYOUT IS SPECIFIC TO THE APPROVALS NECESSARY FOR THE CONSTRUCTION IN ACCORDANCE WITH THE CITY OF LEWISBURG. NO CHANGES TO THE SITE LAYOUT ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. CHANGES MADE TO THE SITE LAYOUT WITHOUT APPROVAL IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. CHANGES INCLUDE BUT ARE NOT LIMITED TO, INCREASED IMPERVIOUS PAVEMENT, MOVEMENT OF CURB LINES, CHANGES TO DRAINAGE STRUCTURES AND PATTERNS, LANDSCAPING, ETC.

## TRAFFIC CONTROL NOTES

1. WHENEVER CONSTRUCTION OPERATIONS ENCROACH ON THE RIGHT-OF-WAY OF ADJACENT ROADWAYS, TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH LOCAL AND STATE STANDARDS.

2. NO MATERIALS OR EQUIPMENT SHALL BE STORED OR STOCKPILED WITHIN THE RIGHT-OF-WAY OF ADJACENT ROADWAYS.

3. ALL TRAFFIC CONTROL, INCLUDING MARKINGS, SIGNS, ETC. SHALL FOLLOW THE CURRENT EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

## **GRADING AND DRAINAGE NOTES**

1. ALL GRADING, DRAINAGE AND EROSION CONTROL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT STANDARDS, SPECIFICATIONS, DETAILS AND REQUIREMENTS OF THE CITY OF LEWISBURG.

2. THE CONTRACTOR SHALL CHECK ALL EXISTING AND FINISHED GRADES, DIMENSIONS, ETC. PRIOR TO BEGINNING WORK. NOTIFY THE OWNERS REPRESENTATIVE OF ANY DISCREPANCIES AND/OR ERRORS IN THE PLANS PRIOR TO COMMENCING WORK.

ALL PROPOSED GRADES SHOWN ARE FINAL GRADES, TOP OF GROUND LEVEL, OR TOP OF PAVEMENT, OR GRATE ELEVATION AT THE DRAWDOWN POINT, UNLESS INDICATED OTHERWISE.

4. ALL ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS.

5. CONTRACTOR SHALL ADHERE TO THE EROSION & SEDIMENT CONTROL PLANS PREPARED FOR THIS PROJECT.

6. EARTHWORK SHALL INCLUDE CLEARING AND GRUBBING, STRIPPING AND STOCKPILING TOPSOIL, GRADING, EXCAVATION, FILLING, UNDER CUT AND REPLACEMENT, IF REQUIRED, AND COMPACTION.

7. CONTRACTOR TO REFILL UNDERCUT AREAS (IF REQUIRED) WITH SUITABLE MATERIAL AND COMPACT AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

8. EXCAVATED SUBGRADES AND EACH LAYER OF FILL SHALL BE OF A QUALITY ACCEPTABLE TO THE OWNERS REPRESENTATIVE AND SHALL NOT INCLUDE ORGANIC MATERIAL, BOULDERS, DEBRIS, WET MATERIAL, ETC. CUT OR STRIPPED AREAS SHALL BE PROOF ROLLED PRIOR TO ANY FILLING. ALL GRADING ACTIVITY AND PLACEMENT OF MATERIAL SHALL BE MONITORED BY A QUALIFIED GEOTECHNICAL ENGINEER (OR THEIR REPRESENTATIVE), OR AS DIRECTED BY THE OWNERS REPRESENTATIVE. MATERIAL SHALL MEET OR EXCEED COMPACTION REQUIREMENTS SPECIFIED IN THE SPECIFICATIONS PUBLISHED BY THE CITY OF BRENTWOOD AND METRO NASHVILLE.

9. PLACE TOPSOIL OVER THE SUBGRADE OF UNPAVED, DISTURBED AREAS TO A DEPTH A MINIMUM DEPTH OF 6". TOPSOIL SHALL BE FREE OF ROCK AND DEBRIS.

10. ALL SLOPES IN NON-PAVED AREAS SHALL BE 3:1 (HORIZONTAL:VERTICAL) MAXIMUM UNLESS NOTED OTHERWISE.

11. ALL AREAS NOT PAVED SHALL BE STABILIZED IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLANS, UNLESS NOTED OTHERWISE.

12. ALL FILLS SHALL BE CONTROLLED, COMPACTED, AND INSPECTED BY AN APPROVED TESTING LABORATORY OR AN INSPECTOR FROM THE APPROPRIATE GOVERNMENTAL AGENCY.

13. SITE BUILDING PAD EXCAVATION AND CONSTRUCTION TO BE PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. BUILDING PAD PREPARATION SHALL BEGIN BY CLEARING & STRIPPING UNSUITABLE MATERIAL FROM PAD SITE, THEN PLACEMENT & COMPACTION OF BACKFILL MATERIAL PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. ALL BACKFILL MATERIAL MUST BE ACCEPTABLE TO THE GEOTECHNICAL ENGINEER.

14. ALL EXCESS SOIL MATERIALS, OTHER THAN TOPSOIL, SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.

15. THE CONTRACTOR IS RESPONSIBLE FOR THE SITE EARTHWORK BY IMPORTING OR EXPORTING AS NECESSARY TO ACHIEVE DESIGN GRADES AND SPECIFICATIONS.

16. THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO ADJACENT PROPERTIES DURING CONSTRUCTION. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO ADJACENT PROPERTIES OCCURRING DURING CONSTRUCTION OF THIS PROJECT. NO WORK SHALL BE PERFORMED OUTSIDE THE PROJECT BOUNDARY WITHOUT PROPER AGREEMENTS WITH THE AFFECTED PROPERTY

17. THE LOCATION AND/OR ELEVATION OF THE EXISTING UTILITIES SHOWN HEREON ARE BASED ON UTILITY COMPANY RECORDS, AND WHERE POSSIBLE, FIELD MEASUREMENTS. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 3 DAYS BUT NOT MORE THAN 10 DAYS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES TO REMAIN. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED UTILITIES ACCORDING TO LOCAL CODES AT THE CONTRACTORS EXPENSE.

18. THE CONTRACTOR SHALL CHECK ALL EXISTING AND FINISHED GRADES, DIMENSIONS, ETC. PRIOR TO BEGINNING WORK. NOTIFY THE OWNERS REPRESENTATIVE OF ANY DISCREPANCIES AND/OR ERRORS IN THE PLANS PRIOR TO COMMENCING WORK.

19. THE GENERAL CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR JOB SITE CONDITIONS, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING CONSTRUCTION. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS.

20. MATERIALS NOT SUITABLE FOR FILL OR REUSE SHALL BE DISPOSED OF OFFSITE IN ACCORDANCE WITH THE REQUIREMENTS OF CITY OF LEWISBURG AND AS DIRECTED BY THE OWNER OR THEIR REPRESENTATIVE.

21. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT O.S.H.A. PROVISIONS AND THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION, ISSUED BY THE AGC OF AMERICA, INCORPORATED, AND THE SAFETY AND HEALTH REGULATIONS OF CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.

22. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE THROUGH THE SITE DURING ALL PHASES OF

23. CONTRACTOR IS TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED FROM THE CITY OF LEWISBURG ENGINEERING DEPARTMENTS PRIOR TO GRADING.

24. THE GENERAL CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR JOB SITE CONDITIONS, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING CONSTRUCTION. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS.

## **EROSION AND SEDIMENT CONTROL NOTES**

 THE PROPOSED SITE IMPROVEMENTS WILL REQUIRE COVERAGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT ISSUED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC). THE TOTAL SITE DISTURBANCE IS +/- 1.2 ACRES.

2. PRIOR TO INSTALLATION OF EROSION CONTROL MEASURES OR INITIATION OF EARTH DISTURBING ACTIVITIES, THE CONTRACTOR SHALL CLEARLY DELINEATE THE PROPOSED LIMITS OF DISTURBANCE IN THE FIELD UTILIZING FLAGGING, STAKES, AND/OR CONSTRUCTION FENCE. NO DISTURBANCE BEYOND THESE LIMITS SHALL BE PERMITTED WITHOUT FIRST OBTAINING WRITTEN PERMISSION FROM THE ENGINEER, THE AFFECTED PROPERTY OWNER AND ANY APPLICABLE REGULATORY AGENCIES.

3. THE CONSTRUCTION ACTIVITIES ANTICIPATED FOR THIS PROJECT INCLUDES GRADING, PAVING, AND UTILITY INSTALLATION.

4. CONSTRUCTION SHALL BE SEQUENCED BY THE CONTRACTOR AS TO MINIMIZE EXPOSURE TIME OF CLEARED SURFACE AREAS. PERIMETER EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL PRIOR TO EARTH MOVING OPERATIONS.

5. THE CONTRACTOR SHALL DESIGNATE IN WRITING THE NAME AND PHONE NUMBER OF THE PERSON(S) RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS AT THE SITE. THIS INFORMATION SHALL BE POSTED AT THE JOB SITE TRAILER, OR AT THE SITE CONSTRUCTION SIGN.

6. PRE-CONSTRUCTION VEGETATIVE GROUNDCOVER SHALL NOT BE REMOVED MORE THAN 14 DAYS PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES. ALL GRADED AREAS EXPECTED TO REMAIN UNFINISHED FOR MORE THAN 14 DAYS SHALL BE COVERED WITH TEMPORARY GRASS, SOD, STRAW, MULCH, OR FABRIC MATTING. STEEP SLOPES (GREATER THAN 35%) SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED. PERMANENT SOIL STABILIZATION SHALL BE INSTALLED WITHIN 15 DAYS OF THE ESTABLISHMENT OF FINAL GRADES.

7. THE CONTRACTOR SHALL MAINTAIN RECORDS OF EROSION AND SEDIMENT CONTROL FOR A PERIOD OF THREE YEARS AFTER COMPLETION OF CONSTRUCTION OR AS REQUIRED BY GOVERNING AUTHORITIES.

8. TEMPORARY SEEDING FOR THIS PROJECT SHALL UTILIZE TDOT, TDEC OR LOCAL STANDARDS UNLESS OTHERWISE INDICATED HEREON.

9. MULCHING SHALL CONSIST OF LOOSE HAY OR STRAW APPLIED AT A RATE OF 2 TONS PER ACRE. MULCH MUST BE CRIMPED INTO THE SOIL BY MECHANICAL MEANS. BROADCAST SPREADING OF MULCH IS NOT ACCEPTABLE.

10. SOIL STOCKPILES SHALL BE STABILIZED AND PROTECTED FROM EROSION. ALL STOCKPILES SHALL BE COVERED WITH TEMPORARY SEEDING AND PROTECTED WITH SILT FENCING.

11. FOR PERMANENT STABILIZATION OF ALL SLOPES 3:1 OR STEEPER, INSTALL TEMPORARY EROSION CONTROL BLANKET (TENSAR NORTH AMERICAN GREEN S150 OR APPROVED EQUAL) INSTALLED PER MANUFACTURERS' RECOMMENDATIONS SHALL BE USED IN PLACE OF STRAW MULCH.

12. THE LOCATION OF SOME OF THE EROSION CONTROL MEASURES MAY NEED TO BE ALTERED DUE TO CHANGING SITE CONDITIONS COMMENSURATE WITH PROGRESS OF THE WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION AND SEDIMENT CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES OF CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

13. EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL A PERMANENT GROUND COVER IS ESTABLISHED. SEEDED AREAS MUST HAVE A MINIMUM 70% COVERAGE (ENGINEER WILL DETERMINE APPROXIMATE PERCENTAGE OF COVER) PRIOR TO REMOVAL OF THE TEMPORARY EROSION CONTROL DEVICES. FINAL SEEDING AND ESTABLISHMENT OF GROUNDCOVER SHALL BE APPLIED TO ANY AREA DISTURBED AS A RESULT OF THE REMOVAL OF THE EROSION CONTROL MEASURES.

14. CONTRACTOR SHALL PREPARE, IMPLEMENT, AND MAINTAIN A SPILL PREVENTION, CONTROL AND COUNTERMEASURES (SPCC) PLAN, AS A SEPARATE DOCUMENT OR AS A COMPONENT OF THE SWPPP, FOR ALL TANKS/CONTAINERS STORING ONSITE FUEL, CHEMICALS, OR OTHER POLLUTANTS CONSISTENT WITH THE REQUIREMENTS OF STATE NPDES RULES. EFFECTIVE MEASURES NECESSARY TO PREVENT SPILLS AND TO CLEAN UP SPILLS OF ANY TOXIC POLLUTANT, AS DOCUMENTED IN THE FACILITY'S SPCC PLAN, SHALL BE FULLY IMPLEMENTED. SOIL CONTAMINATED BY HAZARDOUS SUBSTANCES, PAINTS, FUEL, OR CHEMICAL SPILLS, SHALL BE IMMEDIATELY CLEANED UP, MANAGED, AND DISPOSED OF IN AN APPROVED MANNER. WHERE POTENTIAL SPILLS CAN OCCUR. MATERIALS HANDLING PROCEDURES SHALL BE SPECIFIED AND PROCEDURES FOR IMMEDIATE CLEANUP/REMEDIATION OF SPILLS SHALL BE DESCRIBED IN THE SPCC PLAN OR EMPLOYEE TRAINING PLANS. THE EQUIPMENT NECESSARY TO IMPLEMENT A CLEANUP SHALL BE MADE AVAILABLE TO FACILITY PERSONNEL. THE OPERATOR SHALL IMMEDIATELY NOTIFY THE DESIGNATED STATE AND LOCAL GOVERNMENT AGENCIES AFTER BECOMING AWARE OF A VISIBLE OIL SHEEN IN STORMWATER RUNOFF FROM ITS FACILITY OR IN A WATER OF THE STATE IN THE PROJECT VICINITY AS A RESULT OF ACTIVITIES AT THE SITE. THE CALLER SHOULD BE PREPARED TO REPORT THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PERSON REPORTING SPILL, THE EXACT LOCATION OF THE SPILL, COMPANY NAME AND LOCATION, THE MATERIAL SPILLED, THE ESTIMATED QUANTITY, THE SOURCE OF THE SPILL. THE CAUSE OF THE SPILL. THE NEAREST DOWNSTREAM WATER WITH THE POTENTIAL TO RECEIVE THE SPILL. AND THE ACTIONS BEING TAKEN FOR CONTAINMENT AND CLEANUP.

15. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE SELECTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH TDEC SEDIMENT AND EROSION CONTROL HANDBOOK, LATEST EDITION.

16. THE CONTRACTOR SHALL REPAIR/REPLACE ANY EPSC MEASURES THAT ARE FAILING OR IN DISREPAIR AS INDICATED ON THE 72-HOUR TDEC CONSTRUCTION INSPECTION REPORT AND/OR WHEN NOTIFIED BY THE CITY STORMWATER INSPECTOR.

## **UTILITY NOTES**

 ALL GAS, ELECTRIC, TELEPHONE, AND CABLE SERVICE LINES AND EXTENSIONS ARE TO BE CONSTRUCTED TO THE RESPECTIVE UTILITY COMPANY SPECIFICATIONS. UTILITY DISCONNECTIONS TO BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.

2. THE GENERAL CONTRACTOR IS PARTICULARLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF THE EXISTING UTILITIES SHOWN HEREON IS BASED ON UTILITY COMPANY RECORDS, AND WHERE POSSIBLE, FIELD MEASUREMENTS. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RELOCATE EXISTING UTILITIES CONFLICTING WITH IMPROVEMENTS SHOWN HEREON IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

3. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES, GAS LINES, UNDERGROUND ELECTRIC, PHONE AND CABLE DO NOT CONFLICT WITH SANITARY SEWERS OR STORM SEWERS. INSTALL UTILITIES PRIOR TO PAVEMENT CONSTRUCTION.

5. ALL TRENCH SPOILS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.

6. ROOF DRAINS, FOUNDATION DRAINS AND ALL OTHER CLEAR WATER CONNECTIONS TO THE SANITARY SEWER SYSTEMS ARE PROHIBITED.

7. CONTRACTOR TO INSTALL CONDUIT SYSTEMS FOR UNDERGROUND ELECTRIC, TELEPHONE AND CABLE SERVICES IN ACCORDANCE WITH UTILITY COMPANIES' REQUIREMENTS, INCLUDING PULL CORDS INSIDE CONDUITS AND HIGHWAY LOAD-BEARING PULL BOXES AND MANHOLES.

8. CONTRACTOR SHALL INSTALL PAD(S) FOR TRANSFORMER(S) AND CONDUITS FOR UNDERGROUND ELECTRIC SERVICE IN ACCORDANCE WITH ELECTRIC COMPANY'S REQUIREMENTS.

9. LOCATION OF PROPOSED CONDUITS SHALL BE COORDINATED AND APPROVED BY THE LOCAL PROVIDER PRIOR TO INSTALLATION.

10. ALL AND ANY FEES, LICENSES AND PERMITS NECESSARY FOR THIS CONSTRUCTION ARE TO BE OBTAINED PRIOR TO INITIATION OF CONSTRUCTION AND THE COST OF SAME TO BE BORNE BY THE CONTRACTOR.

11. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND ELECTRICAL WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK, THE CONTRACTOR MUST WORK IN THE CLOSE PROXIMITY OF THE ABOVE-NOTED WIRES, THE ELECTRIC COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD AND UNDERGROUND WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION.

12. ADJUST ALL EXISTING UTILITY SURFACE FEATURES TO REMAIN INCLUDING BUT NOT LIMITED TO CASTINGS, VALVE BOXES, PEDESTALS, CLEANOUTS, ETC. AS NEEDED TO MATCH PROPOSED FINISHED GRADES, UNLESS OTHERWISE INDICATED.

13. ALL SANITARY SEWER AND WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CURRENT STANDARDS, SPECIFICATIONS, DETAILS AND REQUIREMENTS OF LEWISBURG WATER AND WASTEWATER DEPARTMENT.

14. THE CONTRACTOR SHALL NOTIFY TDEC AND LEWISBURG WATER AND WASTEWATER A MINIMUM OF 48 HOURS PRIOR TO COMMENCEMENT OF ANY PART OF THE SANITARY SEWER AND WATER CONSTRUCTION.

15. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY REQUIRED LICENSES, PERMITS AND FEES ASSOCIATED WITH THE SANITARY SEWER AND WATER CONSTRUCTION. ANY RELATED COSTS ARE TO BE PAID BY THE CONTRACTOR,

16. MAINTAIN 10 FEET HORIZONTAL SEPARATION (EDGE-TO-EDGE) AND 18 INCHES OF VERTICAL SEPARATION (WATER OVER SEWER) BETWEEN SANITARY SEWERS AND WATER LINES WHERE POSSIBLE. CONTRACTOR MAY NEED TO MAKE FIELD ADJUSTMENTS TO MAINTAIN SEPARATION.

17. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, IN THE FIELD, ALL EXISTING UTILITIES BEFORE THE START OF CONSTRUCTION. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRED AT HIS EXPENSE.

18. CONTRACTOR SHALL COORDINATE ALL UTILITY CONSTRUCTION TO ELIMINATE CONFLICTS.

19. IN CASE OF CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN. FIGURE DIMENSIONS ON DRAWINGS SHALL GOVERN OVER SCALE DIMENSIONS, AND DETAILED DRAWINGS SHALL GOVERN OVER GENERAL DRAWINGS.

20. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN THE DRAWINGS AND SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY CORRECT SUCH INCONSISTENCIES OR AMBIGUITIES IN WRITING. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.

21. CONTRACTOR SHALL NOTIFY LEWISBURG WATER AND WASTEWATER TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE PRIOR TO BEGINNING ANY CONSTRUCTION.

22. ALL TRENCH SPOILS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.

23. THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED. IN ADDITION, ALL OTHER AGENCIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF TENNESSEE 811 SHALL BE NOTIFIED.

## ABBREVIATIONS WITHIN CONSTRUCTION PLANS

P TYPICAL

F REFERENCE

REF REFERENCE
PUDE PUBLIC UTILITY AND DRAINAGE EASEMENT

TDOT TENNESSEE DEPARTMENT OF TRANSPORTATION DIA DIAMETER

NTS NOT TO SCALE

UG UNDERGROUND SAN SANITARY SEWER

WTR WATER
PVC POLYVINYL CHLORIDE

MTEMC MIDDLE TENNESSEE ELECTRIC MEMBERSHIP CORPORATION EPSC EROSION PREVENTION AND SEDIMENT CONTROL

NPDES NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
SPCC SPILL PREVENTION, CONTROL AND COUNTERMEASURES

EP EDGE OF PAVEMENT
FC FACE OF CURB
FOG FACE OF GUTTER

ON CENTER

LP LOW POINT
HP HIGH POINT
EX EXISTING

OC

CONT CONTINUOUS

MBSL MINIMUM BUILDING SETBACK LINE

# WPN 21.0592 Lewisburg Dental Clinic APPROVED FOR CONSTRUCTION

THE DOCUMENT BEARING THIS STAMP HAS BEEN RECEIVED AND REVIEWED BY THE

DIVISION OF WATER RESOURCES

AND IS HEREBY APPROVED FOR CONSTRUCTION BY THE COMMISSIONER

TENNESSEE DEPT. OF ENVIRONMENT & CONSERVATION

August 23, 2021

THIS APPROVAL SHALL NOT BE CONSTRUED AS CREATING A PRESUMPTION OF CORRECT OPERATION OR AS WARRANTING BY THE COMMISSIONER THAT THE APPROVED FACILITIES WILL REACH THE DESIGNED GOALS.

APPROVAL EXPIRES ONE YEAR FROM ABOVE DATE

NOTE:

CONTRACTOR SHALL REFER TO THE GEOTECHNICAL EXPLORATION REPORT, PREPARED BY ECS SOUTHEAST, LLP, ECS PROJECT NO. 26:4743, DATED APRIL 1, 2021 FOR ALL GEOTECHNICAL RECOMMENDATIONS. THE GEOTECHNICAL EXPLORATION REPORT SHALL BE CONSIDERED AN INTEGRAL PART OF THE BID PACKAGE.



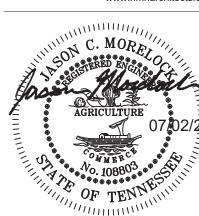
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Michael Hindma Architects, P.

> 1607 Westgate Circle - Suite 100 Brentwood, Tennessee 37027 615.370.3252 www.hmharchitects.com



SOUTHE MAE, LLC

Revisions

HMH Job Number

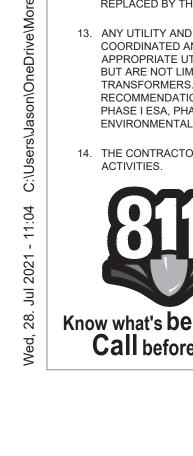
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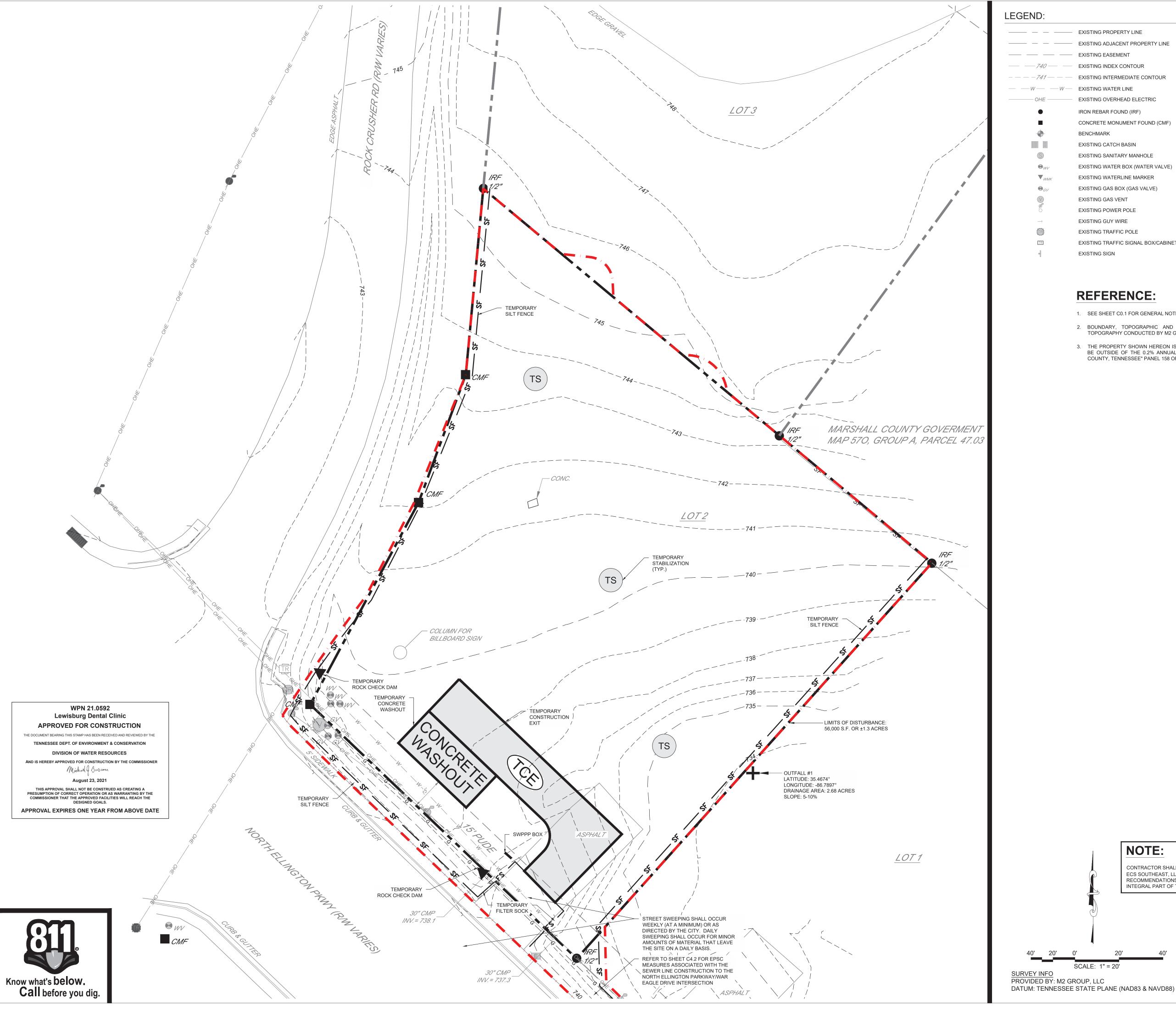
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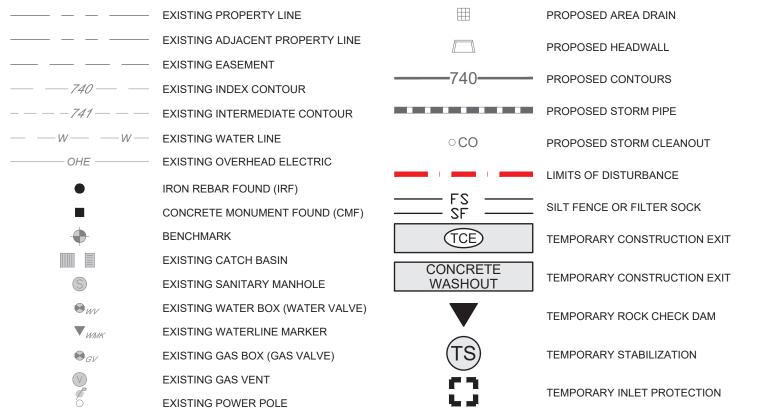
Drawing

GENERAL NOTES SHEET

C0.1







## **REFERENCE:**

EXISTING GUY WIRE

**EXISTING SIGN** 

EXISTING TRAFFIC POLE

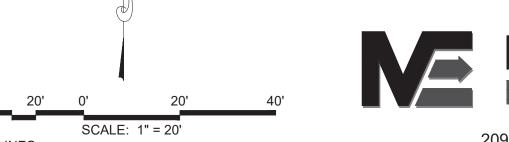
EXISTING TRAFFIC SIGNAL BOX/CABINET (ABOVE GRADE)

- 1. SEE SHEET C0.1 FOR GENERAL NOTES AND EROSION AND SEDIMENT CONTROL NOTES.
- 2. BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION SHOWN IS BASED ON A FIELD-RUN TOPOGRAPHY CONDUCTED BY M2 GROUP, LLC, RECEIVED IN APRIL 2021.
- 3. THE PROPERTY SHOWN HEREON IS LOCATED IN A FLOOD HAZARD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) ACCORDING TO F.I.R.M. MAP "MARSHALL COUNTY, TENNESSEE" PANEL 158 OF 325, MAP NUMBER 47117C0158D, REVISED SEPTEMBER 28, 2007.

STORMWATER OUTFALL

## NOTE:

CONTRACTOR SHALL REFER TO THE GEOTECHNICAL EXPLORATION REPORT, PREPARED BY ECS SOUTHEAST, LLP, ECS PROJECT NO. 26:4743, DATED APRIL 1, 2021 FOR ALL GEOTECHNICAL RECOMMENDATIONS. THE GEOTECHNICAL EXPLORATION REPORT SHALL BE CONSIDERED AN INTEGRAL PART OF THE BID PACKAGE.



PROVIDED BY: M2 GROUP, LLC



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Revisions

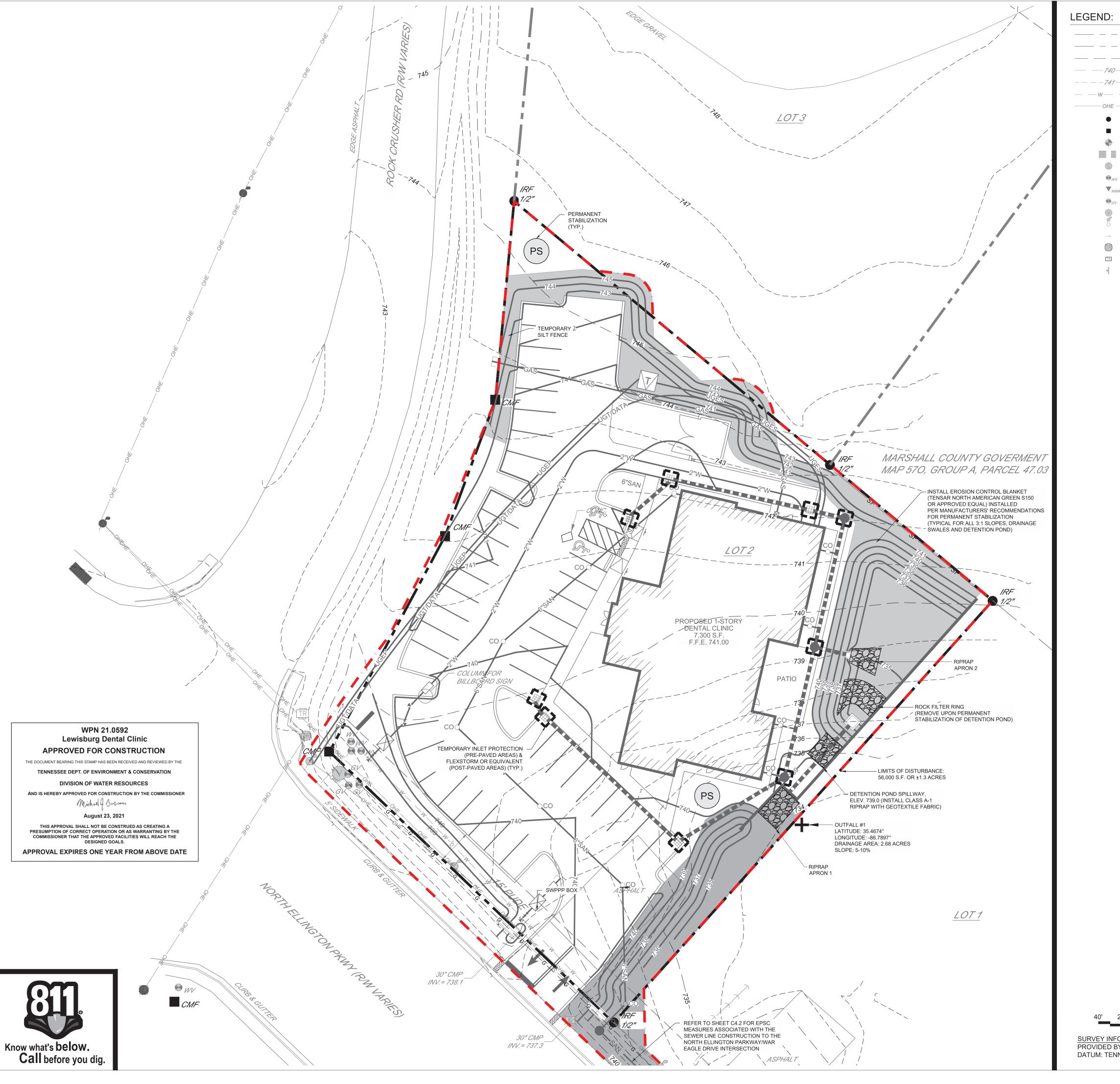
HMH Job Number 20064

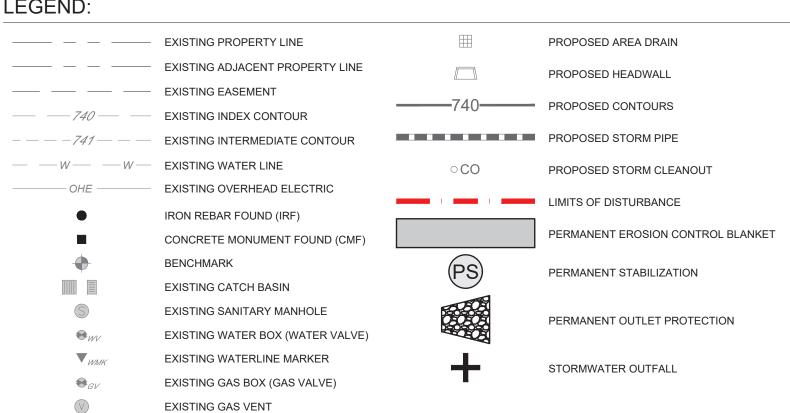
Drawn By

Date 07.02.21

Drawing

EPSC PLAN STAGE I





## **REFERENCE:**

EXISTING TRAFFIC SIGNAL BOX/CABINET (ABOVE GRADE)

EXISTING POWER POLE **EXISTING GUY WIRE** EXISTING TRAFFIC POLE

**EXISTING SIGN** 

- 1. SEE SHEET C0.1 FOR GENERAL NOTES AND EROSION AND SEDIMENT CONTROL NOTES.
- 2. BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION SHOWN IS BASED ON A FIELD-RUN TOPOGRAPHY CONDUCTED BY M2 GROUP, LLC, RECEIVED IN APRIL 2021.
- 3. THE PROPERTY SHOWN HEREON IS LOCATED IN A FLOOD HAZARD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) ACCORDING TO F.I.R.M. MAP "MARSHALL COUNTY, TENNESSEE" PANEL 158 OF 325, MAP NUMBER 47117C0158D, REVISED SEPTEMBER 28, 2007.

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HMH Job Number 20064

Drawn By

07.02.21

Drawing

EPSC PLAN STAGE II

NOTE:

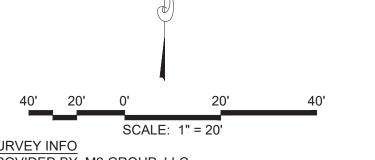
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MORELOCK
ENGINEERING

2097 BELSFORD DRIVE

NOLENSVILLE, TN 37135

JASON@MORELOCKENG.COM - (615) 300-6486



PROVIDED BY: M2 GROUP, LLC DATUM: TENNESSEE STATE PLANE (NAD83 & NAVD88) STORM MANHOLE NOT TO SCALE

## NOTES:

- 1. ALL MATERIAL, DESIGN, MANFACTURING, PHYSICAL TEST REQUIREMENTS, FINISH MARKING, INSPECTION, REJECTION AND REPAIRS TO MEET / OR EXCEED SPECIFICATIONS FOR PRECAST-REINFORCED CONCRETE MANHOLE SECTIONS". PER ASTM C-478 (LATEST REVISION).
- 2. MANHOLE SECTIONS TO BE TONGUE AND GROOVED.
- 3. BENCHES MUST BE PROVIDED IN ALL STORM MANHOLES.
- 4. USE JOHN BOUCHARD & SON'S CO. 1150, OR APPROVED EQUAL.
- 5. CASTINGS SHALL BE FURNISHED WITH MANUFACTURERS' STANDARD ASPHALT COATING.
- 6. GRATE AND STRUCTURE MUST MEET HEAVY DUTY TRAFFIC RATING
- 7. CONCRETE = MIN. 4000 PSI AT 28 DAYS.
- 8. REINFORCEMENT = MIN. 0.14 SQ. IN./SQ. FT., GRADE 60 BARS.
- 9. VERTICAL MANHOLE STEPS SHALL BE CONSISTENTLY SPACED AND SHALL COMPLY WITH OSHA (SUBPART D) "FIXED LADDERS" (SECTION 1910-27) AND/OR ASTM C-478.
- 10. INSTALL LADDER BAR @ 16" O.C. FRAME AND GRATE SHALL BE STAMPED WITH "NO DUMPING...DRAINS TO RIVER" OR CITY/COUNTY APPROVED EQUAL.

WPN 21.0592 Lewisburg Dental Clinic APPROVED FOR CONSTRUCTION THE DOCUMENT BEARING THIS STAMP HAS BEEN RECEIVED AND REVIEWED BY THE **TENNESSEE DEPT. OF ENVIRONMENT & CONSERVATION DIVISION OF WATER RESOURCES** AND IS HEREBY APPROVED FOR CONSTRUCTION BY THE COMMISSIONER Michael & Bascom August 23, 2021

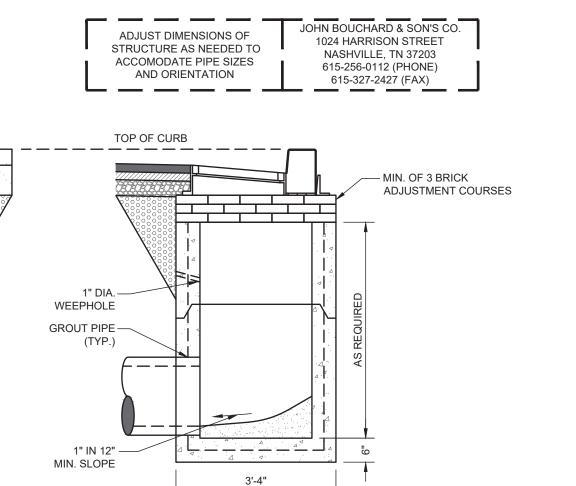
THIS APPROVAL SHALL NOT BE CONSTRUED AS CREATING A PRESUMPTION OF CORRECT OPERATION OR AS WARRANTING BY THE COMMISSIONER THAT THE APPROVED FACILITIES WILL REACH THE DESIGNED GOALS.

APPROVAL EXPIRES ONE YEAR FROM ABOVE DATE

## NOTES:

1. CASTING FOR STANDARD CURB AND GUTTER SHOWN. USE JOHN BOUCHARD & SON'S CO. 3103 & 3103-V FOR ROLLOVER CURB AND GUTTER OR APPROVED EQUAL. REFER TO STORM DRAINAGE SCHEDULES FOR CORRECT CASTING TYPE.

- 2. FRAME AND GRATE SHALL BE REQUIRED TO BE MARKED WITH "NO DUMPING...DRAINS TO RIVER" OR CITY/COUNTY APPROVED EQUAL
- 3. CASTINGS SHALL BE FURNISHED WITH MANUFACTURERS' STANDARD ASPHALT COATING.
- 4. GRATE AND STRUCTURE MUST MEET HEAVY DUTY TRAFFIC RATING (H20).
- 5. CONCRETE = MIN. 4000 PSI AT 28 DAYS
- 6. REINFORCEMENT = MIN. 0.14 SQ. IN./SQ. FT., GRADE 60 STEEL
- 7. PRECAST CIRCULAR MANHOLE SECTIONS MAY BE PROVIDED IN LIEU OF SQUARE OR RECTANGULAR BOXES. SUBSTITUTIONS AFTER BID AT NO ADDITIONAL COST TO OWNER, ANY COST SAVINGS SHALL BE CREDITED TO
- 8. SINGLE INLET SHALL BE PROVIDED WITH ONE (1) 1"Ø WEEP HOLE ON THE SIDE FACING THE ASPHALT OR CONCRETE PAVEMENT.
- 9. INSTALL MANHOLE STEPS 2146 TYPE TWO, GRADE 49108 @ 16" O.C.
- 10. ADJUST ALL SIDES OF THE FRAME AND GRATE TO MATCH ROADWAY CROSS SLOPE AND LONGITUDINAL SLOPE,



SINGLE CURB INLET NOT TO SCALE

## NOTES:

BACK OF CURB

1" DIA.

3'-4"

SECTION A-A

WEEPHOLE

WASHED-STONE

PORTLAND CEMENT -

SIEVE ANALYSIS CHART

SAND

NOMINAL SIZE | % PASSING | NOMINAL SIZE | % PASSING | NOMINAL SIZE | % PASSING

PAVED AREAS

#4

#200

MAXIMUM P.I. = 5

MAXIMUM L.L. = 30

100

60 - 100

0 - 5

**CRUSHED STONE** 

ASTM D-448, NUMBER 67

3/4"

3/8"

#8

FINISHED GRADE -

TDOT CLASS B OR

CLASS C MATERIAL

100

90 - 100

20 - 55

0 - 10

0 - 5

GROUT TO DRAIN

SELECT NATIVE

100

40 - 100

0 - 50

MATERIAL

#4

#200

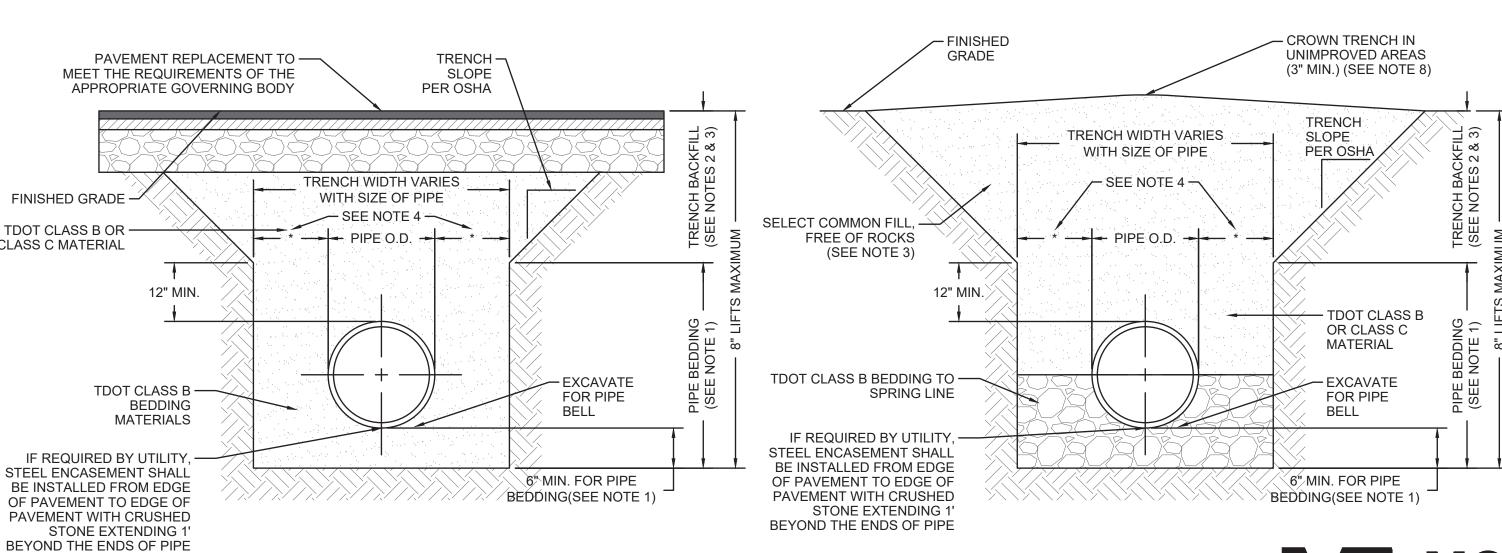
MAXIMUM P.I. = 12

- PIPE BEDDING: TDOT CLASS B BEDDING COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
- 2. TRENCH BACKFILL: TDOT CLASS B OR CLASS C MATERIAL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER
- 3. TRENCH BACKFILL UTILIZING SELECT COMMON FILL SHALL BE IN ACCORDANCE WITH TDOT SPECIFICATIONS.
- 4. (\*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
- 5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
- 6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.

NON-PAVED AREAS

SECTION B-B

- 7. SHEETING AND BRACING SHALL BE USED IN ACCORDANCE WITH CURRENT TRENCHING REGULATIONS AND WHERE UNSAFE CONDITIONS EXIST.
- 8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH CITY OR TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.



FABRICATED FITTINGS ARE AVAILABLE IN TEES, WYES, REDUCERS, 45° BENDS. WATERTIGHT (WT) JOINTS SHOWN, SOIL-TIGHT (ST) FITTINGS ARE ALSO AVAILABLE. BUILDING FACE NYLOPLAST CLEANOUT END CAP -ADJUST GRADE PER ENGINEERS DOWNSPOUT ADAPTER -INSERTED IN RISER FINISHED GRADE FABRICATED HDPE ST DBL, MITER 90° BEND FABRICATED HDPE ST -INSERT INJECTION MOLDED, -FABRICATED HDPE -GASKETED SPIGOT BY ST DBL. MITER 90° BELL REDUCER WT BELL-BELL COUPLER (TYP) - HDPE PIPE (TYP.) INJECTION MOLDED WT TEE FORMATTING UPDATES AND RENAMED TJR 03/07/14 DESCRIPTION ROOF DRAIN (45 DEG WYE CLEANOUT AND FITTING) HELIARD, OHIO 43026

> STORM CLEANOUT NOT TO SCALE

Call before you dig.

TYPICAL STORM BEDDING

NOT TO SCALE

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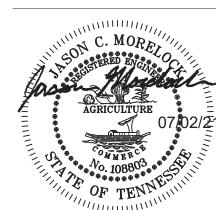
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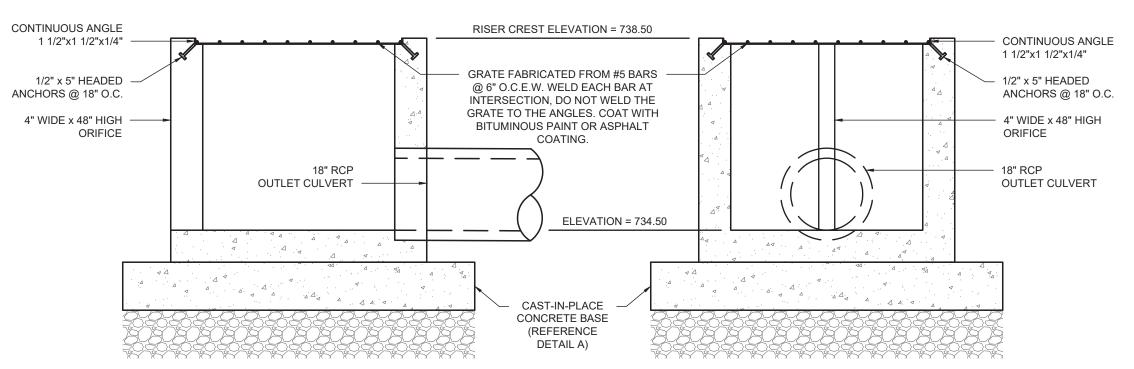
HMH Job Number 20064

Drawn By

Date 07.02.21 Drawing

& EPSC DETAILS

GRADING, DRAINAGE



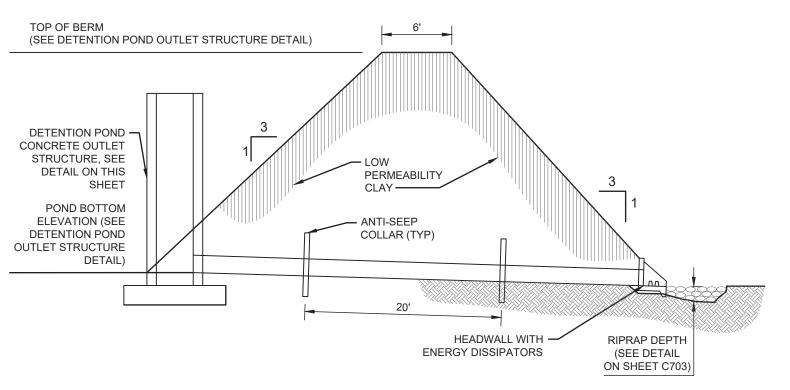
**DETENTION POND OUTLET STRUCTURE** NOT TO SCALE

← INSTALL CLASS A-1 RIPRAP ALONG BOTTOM AND SIDES OF SPILLWAY TOP OF BANK TOP OF BANK **ELEVATION 740.00 ELEVATION 740.00** SPILLWAY ELEVATION 739.00 - HEAVY GEOTEXTILE

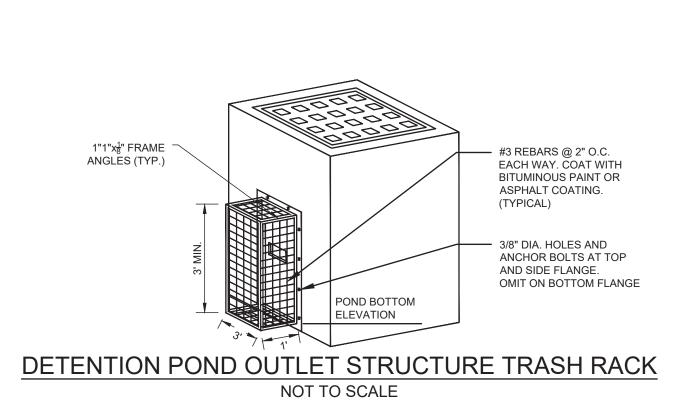
DETENTION POND SPILLWAY CROSS SECTION NOT TO SCALE

## NOTES:

- 1. ALL FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER AND COMPACTED TO 95% OF MAXIMUM DENSITY PER ASTM D-698 OR AS DIRECTED BY THE ON SITE GEOTECHNICAL ENGINEER.
- 2. OVERBUILD ENTIRE BERM BY 5 FEET ON EITHER SIDE OF BERM DURING FILL PLACEMENT/COMPACTION AND REMOVE EXCESS MATERIAL TO MATCH TYPICAL CROSS SECTION WHEN CONSTRUCTED TO PROPER ELEVATION.
- 3. BARREL PIPE SHALL BE FITTED WITH ANTI-SEEP COLLARS AS SHOWN ON DETAIL THIS SHEET
- 4. EXISTING GROUND (BEDROCK CONDITION) SHALL BE CLEANED OF ALL NATIVE SOILS/LOOSE MATERIAL AND FISHERS IN BEDROCK SHALL BE GROUTED FLUSH WITH SURFACE. CONSULT THE ON SITE GEOTECHNICAL ENGINEER FOR PROPER PREPARATION BEFORE APPROVED FILL IS PLACED.
- 5. EXISTING GROUND CONDITION SHALL MEET THE REQUIREMENTS OF THE TYPICAL COMPACTION KEY DETAIL THIS SHEET, AN APPROVED EQUIVALENT KEY MAY BE UTILIZED TO PROVIDE MAXIMUM COHESION AS DIRECTED BY THE ON SITE GEOTECHNICAL ENGINEER.



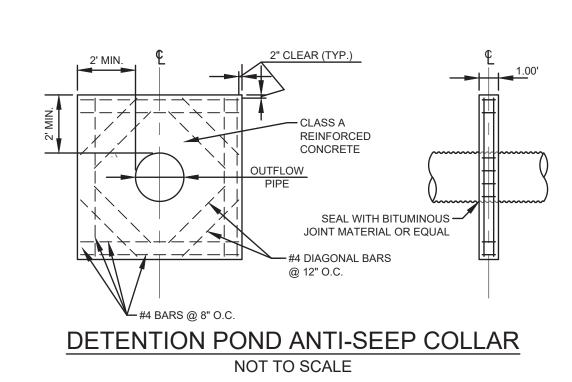
DETENTION POND BERM WITH OUTLET STRUCTURE NOT TO SCALE



SIDE VIEW

WPN 21.0592

Lewisburg Dental Clinic



FRONT VIEW

STRUCTURE -GEOTEXTILE FABRIC PLACED BETWEEN NO. 57 STONE AND RIPRAP (CLASS A) MINERAL AGGREGATE (SIZE 57) AT 1' THICK

> SECTIONAL VIEW NOT TO SCALE

OUTLET

NOTE: INSTALLATION AND MAINTENANCE SHALL MEET THE REQUIREMENTS OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK, TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION, LATEST EDITION.

> **ROCK FILTER RING** NOT TO SCALE



RIP RAP (CLASS A)

**OUTLET PIPE** 

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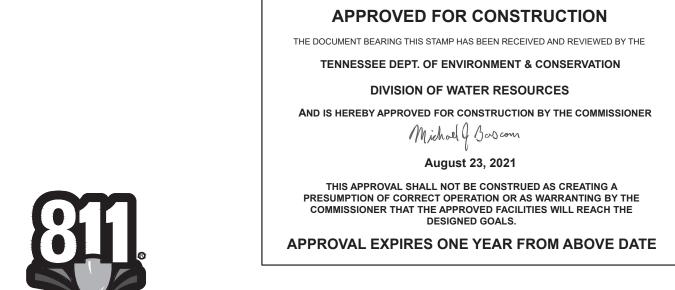
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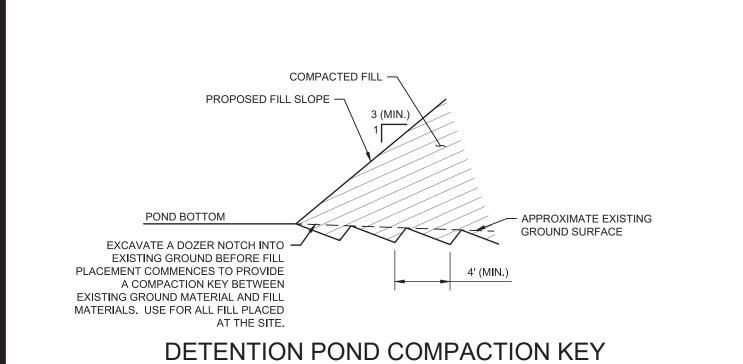
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GRADING, DRAINAGE & EPSC DETAILS



Know what's below.

Call before you dig.



NOT TO SCALE

## CONSTRUCTION SPECIFICATIONS

- 2" X 2" X 36" WOODEN

STAKES PLACED 8' O.C.

TRENCH 2-3" DEEP IN SOIL

− 2" X 2" X 36" WOODEN

- FILTREXX®

SOXX™ (12" TYPICAL)

AREA TO BE

PROTECTED

STAKES PLACED 10' O.C.

- FILTREXX® SOXX™ (12" TYPICAL)

AREA TO BE PROTECTED

- 1. PROPER SITE PREPARATION IS ESSENTIAL TO ENSURE SEDIMENT WATTLES AND TUBES ARE IN COMPLETE CONTACT WITH THE UNDERLYING SOIL OR UNDERLYING SURFACE. REMOVE ALL ROCKS, CLODS VEGETATION OR OTHER OBSTRUCTIONS SO INSTALLED SEDIMENT TUBES HAVE DIRECT CONTACT WITH THE UNDERLYING
- 2. INSTALL TUBES BY LAYING THEM FLAT ON THE GROUND. EXCAVATE A SMALL TRENCH 2-3 INCHES IN DEPTH ON THE CONTOUR AND PERPENDICULAR TO WATER FLOW. SOIL FROM THE EXCAVATION SHOULD BE STORED CLOSE BY FOR USE AFTER THE WATTLE HAS
- 3. INSTALL TUBES SO NO GAPS EXIST BETWEEN THE SOIL AND THE BOTTOM OF THE SEDIMENT TUBE. LAP THE ENDS OF ADJACENT SEDIMENT TUBES A MINIMUM OF 6-INCHES TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE FIELD JOINT.
- . WOODEN STAKES SHOULD BE USED TO FASTEN THE WATTLES TO THE SOIL. WHEN CONDITIONS WARRANT, A STRAIGHT METAL BAR CAN BE USED TO DRIVE A "PILOT HOLE" THROUGH THE WATTLE AND
- 5. DRIVE WOODEN STAKES THROUGH THE WATTLE AND ANGLED SLIGHTLY AGAINST THE DIRECTION OF FLOW (SEE FIGURE 7.37-1 OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK (AUGUST 2012)). INSTALL WOODEN STAKES AT 4 FEET INTERVALS, UNLESS THE WATTLE MANUFACTURER SPECIFIES OTHERWISE LEAVING LESS THAN 1-2 INCHES OF STAKE EXPOSED ABOVE THE WATTLE. ALTERNATELY, STAKES MAY BE PLACED ON EACH SIDE OF THE WATTLE TYING ACROSS WITH A NATURAL FIBER TWINE OR STAKING IN A CROSSING MANNER ENSURING DIRECT SOIL CONTACT
- 6. TERMINAL ENDS OF WATTLES MAY BE DOG LEGGED UP SLOPE TO ENSURE CONTAINMENT AND PREVENT CHANNELING OF
- 7. BACKFILL THE UPSLOPE LENGTH OF THE WATTLE WITH THE EXCAVATED SOIL AND COMPACT.
- . CARE SHALL BE TAKEN DURING INSTALLATION SO AS TO AVOID DAMAGE OCCURRING TO THE WATTLE AS A RESULT OF THE INSTALLATION PROCESS. SHOULD THE WATTLE BE DAMAGED DURING INSTALLATION, A WOODEN STAKE SHALL BE PLACED EITHER SIDE OF THE DAMAGED AREA TERMINATING THE LOG

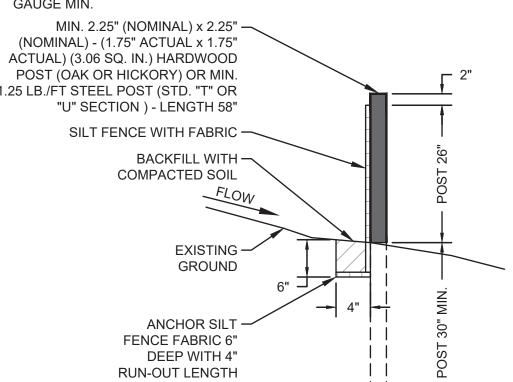
### MAINTENANCE AND INSPECTION POINTS

- 1. INSPECT WATTLES AND TUBES AFTER INSTALLATION FOR GAPS UNDER AND BETWEEN THE JOINTS OF ADJACENT ENDS OF WATTLES AND TUBES.
- 2. REPAIR ALL RILLS, GULLIES, AND UNDERCUTTING NEAR WATTLES
- 3. REMOVE ALL SEDIMENT DEPOSITS THAT IMPAIR THE FILTRATION CAPABILITY OF THE TUBES WHEN THE SEDIMENT REACHES 1/3 THE HEIGHT OF THE EXPOSED TUBE.
- 4. REMOVE AND/OR REPLACE INSTALLED SEDIMENT TUBES AS REQUIRED TO ADAPT TO CHANGING CONSTRUCTION SITE CONDITIONS
- 5. PRIOR TO FINAL STABILIZATION, BACKFILL ALL TRENCHES, DEPRESSIONS AND OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE DEVICES.

## INSTALLATION AND MAINTENANCE SHALL MEET THE REQUIREMENTS OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK, TENNESSEE DEPARTMENT

## NOT TO SCALE

- WHERE WIRE BACKING IS REQUIRED, WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
- WHERE WIRE BACKING IS REQUIRED, MIDDLE AND VERTICAL WIRES SHALL BE 12 1/2 GAUGE MIN.
- WHERE WIRE BACKING IS REQUIRED, TOP AND BOTTOM WIRES SHALL BE 10 GAUGE MIN.



SECTIONAL VIEW

NOT TO SCALE

BOTTOM OF —

TRENCH

**PLAN VIEW** 

NOT TO SCALE

SILT FENCE FABRIC -

TOTAL WIDTH 36"

SILT FENCE

NOT TO SCALE

MAX. 6' POST SPACING

PER 100 FT. OF LENGTH

— USE MIN. OF 18 POSTS -

## BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST OR ROLL THE FABRIC TOGETHER AND FASTEN TO ONE POST TO CREATE A STRONGER JOINT. WHERE JOINTS ARE NECESSARY, PLAN THE ROLL LAYOUT SO AS NOT TO HAVE JOINTS AT LOW 3. DO NOT ATTACH FILTER FABRIC TO TREES. 4. WHEN SILT FENCE IS INSTALLED ADJACENT TO STREAMS. WETLANDS AND OTHER NATURAL RESOURCES, SILT FENCE WITH BACKING SHOULD BE USED. 5. INSTALL POSTS NO MORE THAN 6 FEET APART.

**CONSTRUCTION SPECIFICATIONS** 

1. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE

FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE

2. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE

THE GROUND SURFACE. PONDING WATER DEPTH SHOULD NOT EXCEED 1.5 FEET. (HIGHER

- 6. INSTALL POSTS 2 FEET DEEP ON THE DOWNSTREAM SIDE OF THE SILT FENCE, AND AS CLOSE AS POSSIBLE TO THE FABRIC, ENABLING POSTS TO SUPPORT THE FABRIC FROM UPSTREAM WATER PRESSURE.
- 7. SECURELY ATTACH THE SILT FENCE FABRIC TO THE POSTS ON THE UPSTREAM SIDE OF THE POSTS. FOR STEEL POSTS, ATTACH FABRIC TO THE POSTS USING WIRE OR PLASTIC ZIP TIES WITH A MINIMUM 50 POUND TENSILE STRENGTH, AT LEAST 5 TO A POST, THREE TIES SHOULD BE INSTALLED IN THE UPPER 8 INCHES FOR TOP STRENGTH. TIES SHOULD BE INSTALLED ON THE DIAGONAL, AS OPPOSED TO ON THE HORIZONTAL, TO GRAB MORE STRANDS. FOR HARDWOOD POSTS, ATTACH FABRIC WITH 17 GAUGE WIRE STAPLES (3/4" WIDE X 1/2" LONG), AT LEAST 5 TO A POST. 3 STAPLES SHOULD BE INSTALLED IN THE UPPER 8 INCHES FOR TOP
- 8. INSTALL J-HOOKS FOR CONFINING THE WATER BEHIND THE FENCE AND MAXIMIZING THE TRAPPING EFFICIENCY. SEE FIGURE 7.34-1 OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK (AUGUST 2012).

## MAINTENANCE AND INSPECTION POINTS

- 1. REMOVE SEDIMENT ONCE IT HAS ACCUMULATED TO ½ THE ORIGINAL HEIGHT OF THE BARRIER.
- 2. REPLACE FILTER FABRIC WHENEVER IT IS WORN OR HAS DETERIORATED TO SUCH AN EXTENT SO THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED.
- 3. ALL SEDIMENT ACCUMULATED AT THE FENCE SHOULD BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE FENCE IS REMOVED.
- 4. REPAIR SAGGING SILT FENCE TO PREVENT FAILURE OR OVERTOPPING.
- MONITOR THE TOE FOR EVIDENCE OF PIPING OR EROSION ALONG THE TOE. INSTALL J-HOOKS WHEREVER RUNOFF FLOWS ALONG THE TOE OF THE FENCING TO PREVENT UNDERMINING.
- 6. SILT FENCE SHOULD REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

### INSTALLATION AND MAINTENANCE SHALL MEET THE REQUIREMENTS OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK, TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION, LATEST EDITION.

## WPN 21.0592 Lewisburg Dental Clinic

APPROVED FOR CONSTRUCTION THE DOCUMENT BEARING THIS STAMP HAS BEEN RECEIVED AND REVIEWED BY THE TENNESSEE DEPT. OF ENVIRONMENT & CONSERVATION

DIVISION OF WATER RESOURCES AND IS HEREBY APPROVED FOR CONSTRUCTION BY THE COMMISSIONER Michael & Bascom August 23, 202

THIS APPROVAL SHALL NOT BE CONSTRUED AS CREATING A PRESUMPTION OF CORRECT OPERATION OR AS WARRANTING BY THE COMMISSIONER THAT THE APPROVED FACILITIES WILL REACH THE DESIGNED GOALS.

APPROVAL EXPIRES ONE YEAR FROM ABOVE DATE



Architects, P.C

www.hmharchitects.com

Brentwood, Tennessee 370

## CONSTRUCTION SPECIFICATIONS

- 1. STORMWATER MANAGEMENT AROUND THE CONSTRUCTION EXIT MUST BE TAKEN INTO CONSIDERATION. IF STORMWATER RUNOFF FLOWS ACROSS THE STONE PAD AND ONTO THE PUBLIC RIGHT OF WAY, MUD ON THE PAD CAN BE WASHED INTO THE ROW AS WELL. DIVERSIONS OR WATERBARS SHOULD BE INSTALLED AT THE UPGRADIENT END OF THE PAD, DIRECTING RUNOFF INTO SEDIMENT TRAPS FOR TREATMENT PRIOR TO DISCHARGING RUNOFF INTO THE
- 2. EXCAVATE AREAS WHERE CONSTRUCTION EXITS ARE TO BE CONSTRUCTED TO A DEPTH OF AT LEAST 3 INCHES AND CLEAR THE AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE
- 3. CONSTRUCTION EXIT AREAS SHOULD BE AT MINIMUM 50 FEET IN LENGTH BY 20 FEET IN WIDTH.
- . INSTALL A GEOTEXTILE UNDERLINER ACROSS THE FULL WIDTH AND DEPTH OF THE CONSTRUCTION EXIT TO SEPARATE THE ROCK FROM UNDERLYING SOIL.
- 5. PROVIDE CLEAN, WASHED STONE TO A DEPTH OF 8 INCHES. STONE SHOULD VARY IN SIZE FROM 2 TO 4 INCHES. ROCK MUST BE CLEAN ROCK WITH NO FINES. CRUSHER RUN AND ROAD BASE ARE NOT ACCEPTABLE MATERIALS FOR A CONSTRUCTION EXIT, AS THE FINES CAN BE TRACKED OUT ONTO THE ROAD.

### MAINTENANCE AND INSPECTION POINTS

1 THE EXIT MUST BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MATERIAL ONTO PUBLIC RIGHTS-OF-WAY OR INTO THE STORM DRAIN SYSTEM. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH FRESH STONE OR FULL REPLACEMENT OF STONE AS CONDITIONS DEMAND. AND REPAIR AND/OR CLEANOUT OF ANY RELATED DIVERSIONS AND SEDIMENT TRAPS. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED BY THE END OF THE DAY.

## **CONSTRUCTION EXIT**

INSTALLATION AND MAINTENANCE SHALL MEET THE REQUIREMENTS OF THE TENNESSEE

NOT TO SCALE

EROSION & SEDIMENT CONTROL HANDBOOK, TENNESSEE DEPARTMENT OF

ENVIRONMENT AND CONSERVATION, LATEST EDITION.

## MAINTENANCE AND INSPECTION POINTS

1. ENSURE CONTRACTORS AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE AND PERFORM WASHOUT OF CONCRETE TRUCKS OFFSITE OR IN DESIGNATED AREAS ONLY. DO NOT ALLOW CONCRETE TRUCKS TO WASH INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS. DO NOT ALLOW EXCESS CONCRETE TO BE DUMPE ONSITE, EXCEPT IN DESIGNATED AREAS. DO NOT WASH SWEEPINGS FROM EXPOSED

AGGREGATE CONCRETE INTO THE STREET OR STORM DRAINS

- TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 4 INCHES FOR ABOVE GRADE FACILITIES AND 12 INCHES FOR BELOW GRADE FACILITIES. INSPEC PLASTIC LININGS AND SIDEWALLS OF SITE-BUILT WASHOUTS TO ENSURE THEY HAVE NOT BEEN DAMAGED DURING CONSTRUCTION ACTIVITIES. INSPECT ALL SURFACES O
- PREFABRICATED WASHOUTS TO ENSURE THE CONTAINER IS NOT LEAKING. 3. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.
- 4. INSPECTORS SHOULD NOTE WHETHER WASHOUT FACILITIES ARE BEING USED AND MAINTAINED REGULARLY. IF INSPECTOR FINDS THAT CONCRETE TRUCKS ARE BEING WASHED OUT IN LOCATIONS OTHER THAN DESIGNATED WASHOUT AREAS. THE INSPECTOR SHOULD NOTIFY THE SITE SUPERINTENDENT IMMEDIATELY AND THE SIT SUPERINTENDENT SHOULD CORRECT THE ISSUE.

## CONSTRUCTION SPECIFICATIONS

1. ENSURE THAT THE SUBGRADE FOR THE GEOTEXTILE AND RIPRAP FOLLOWS THE REQUIRED LINES AND GRADES SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUBGRADE ON UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIPRAP THICKNESS.

- 3" INCH STONE, CRUSHED,

8" MIN, UNLESS OTHERWISE

SPECIFIED BY A SOILS ENGINEER

**SECTION B-B** 

NOT TO SCALE

- SUPPLY WATER TO WASH

WHEELS IF NECESSARY

PLAN VIEW

SWALE OR OTHER SEDIMENT

CONTROL DEVICE

WASHED, AND WELL GRADED

ROCK TO AT LEAST A DEPTH OF 8"

EXISTING NATURAL

GROUND

- GEOTEXTILE FABRIC SHALL BE PLACED

UNDER ENTIRE WIDTH OF RIPRAP

- INSTALL A GEOTEXTILE LINER TO PREVENT SOIL MOVEMENT THROUGH THE OPENINGS IN THE RIPRAP
- THE GEOTEXTILE MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGE BY REMOVING THE RIPRAP AND PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED AREA. ALL CONNECTING JOINTS SHOULD OVERLAP A MINIMUM OF 1 FOOT. IF THE DAMAGE IS EXTENSIVE REPLACE THE ENTIRE GEOTEXTILE LINER.
- RIPRAP MAY BE PLACED BY EQUIPMENT, BUT TAKE CARE TO AVOID DAMAGING THE GEOTEXTILE.
- THE MINIMUM THICKNESS OF THE RIPRAP SHOULD BE 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6 INCHES.
- THE OUTLET STRUCTURE MUST CONFORM TO THE SPECIFIED GRADING LIMITS SHOWN ON THE PLANS.
- CONSTRUCT THE APRON ON ZERO GRADE WITH NO TURBULENCE AT THE END. MAKE THE TOP OF THE RIPRAP AT THE DOWNSTREAM END LEVEL WITH THE RECEIVING AREA OR SLIGHTLY BELOW IT.
- ENSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND, PREFERABLY, STRAIGHT THROUGHOUT ITS LENGTH.
- IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION.
- 10. SELECT STONE FOR RIPRAP FROM FIELDSTONE OR QUARRY STONE. THE STONE SHOULD BE HARD, ANGULAR, AND HIGHLY WEATHER-RESISTANT. THE SPECIFIC GRAVITY OF THE INDIVIDUAL STONES SHOULD BE AT LEAST 2.5.

MAINTENANCE AND INSPECTION POINTS

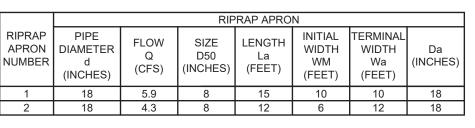
INSPECT RIPRAP OUTLET STRUCTURES AFTER HEAVY RAINS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, IF THE STONES HAVE BEEN DISLODGED, OR IF THE SEPARATOR HAS BEEN DAMAGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

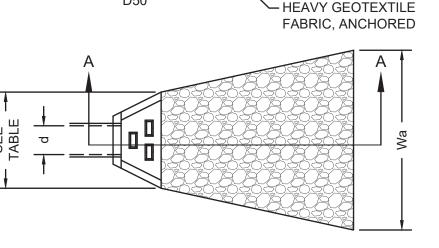
## DETAIL NOTES

- La IS THE LENGTH OF THE RIPRAP APRON.
- 2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
- IF THE PIPE DISCHARGES DIRECTLY INTO A WELL-DEFINED CHANNEL, THE APRON SHOULD EXTEND ACROSS THE CHANNEL BOTTOM AND UP THE CHANNEL BANKS TO AN ELEVATION 1 FOOT ABOVE THE HIGH TAILWATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS)
- A FILTER BLANKET OR FILTER FABRIC SHALL BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

## APRON LENGTH AND THICKNESS

HE APRON DIMENSIONS AND d<sub>50</sub>, STONE MEDIAN SIZE, SHALL BE AS FOLLOWS:





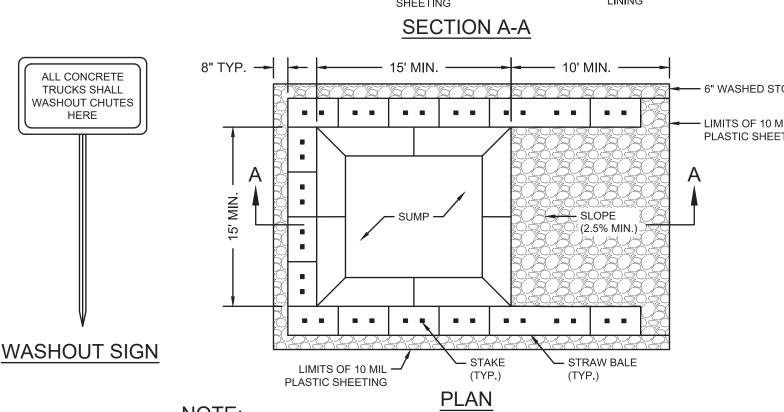
Da = 1.5 x 1.5 x

PIPE OUTLET TO FLAT AREA

NSTALLATION AND MAINTENANCE SHALL MEET THE REQUIREMENTS OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK, TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION, LATEST EDITION.

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INSTALLATION AND MAINTENANCE SHALL MEET THE REQUIREMENTS OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION, LATEST EDITION.

> **CONCRETE WASHOUT** NOT TO SCALE

SIZE AND D50). 2. PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC 3. KEEP THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS. B **←** 4. SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF WEIR SECTION OF THE LOWER DAM IS THE SAME AS THE TOE TOP OF BASE OF ELEVATION OF THE UPPER DAM. DITCH DITCH DITCH DITCH EXTEND GEOTEXTILE FABRIC 3 FEET DOWN GRADIENT FROM THE TOE OF THE CHECK DAM TO PREVENT SCOUR AT THE TOE. **PLAN VIEW** 6. PROTECT THE CHANNEL AFTER THE LOWEST NOT TO SCALE - NATURAL TOP OF CHECK -CHECK DAM FROM HEAVY FLOW THAT COULD DAM AT EDGE GROUND CAUSE EROSION OF DITCH . ENSURE THAT THE CHANNEL REACH ABOVE THE — BASE OF DITCH — MOST UPSTREAM DAM IS STABLE. GEOTEXTILE -8. ENSURE THAT OTHER AREAS OF THE CHANNEL,

**SECTION B-B** 

NOT TO SCALE

S = DITCH SLOPE ---

SECTION A-A

NOT TO SCALE

## MAINTENANCE AND INSPECTION

BLOCKAGE FROM DISPLACED STONES.

CONSTRUCTION SPECIFICATIONS

1. ROCK CHECK DAMS SHOULD BE CONSTRUCTED

OUT OF MACHINED RIPRAP, CLASS A-1 (SEE TABLE

7.20-1 OF THE TENNESSEE EROSION & SEDIMENT

CONTROL HANDBOOK (AUGUST 2012)) FOR STONE

1. SEDIMENT SHOULD BE REMOVED BEFORE IT REACHES A DEPTH OF ONE-HALF THE ORIGINAL DAM HEIGHT.

SUCH AS CULVERT ENTRANCES BELOW THE

CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR

- 2. ADD ROCK AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.
- 3. IF THE AREA IS TO BE MOWED. CHECK DAMS MUST BE REMOVED ONCE FINAL STABILIZATION HAS OCCURRED. AFTER REMOVAL, THE DISTURBED AREA SHOULD BE SEEDED AND MULCHED IMMEDIATELY

INSTALLATION AND MAINTENANCE SHALL MEET THE REQUIREMENTS OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK, TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION, LATEST EDITION.

**GEOTEXTILE FABRIC TO** 

EXTEND 3' BEYOND

LIMITS OF RIPRAP

- TOP OF CHECK DAM

AT EDGE OF DITCH

## . FACILITIES SHOULD ALSO BE LOCATED A MINIMUM OF 50 FEET AWAY FROM STORM

CONSTRUCTION SPECIFICATIONS

MIN. 2.25" (NOMINAL) x 2.25" —

(NOMINAL) - (1.75" ACTUAL x

1.75" ACTUAL) (3.06 SQ. IN.)

HARDWOOD POST (OAK OR

HICKORY) OR MIN. 1.25 LB./FT

STEEL POST (STD. "T" OR "U"

SECTION ) - LENGTH 58"

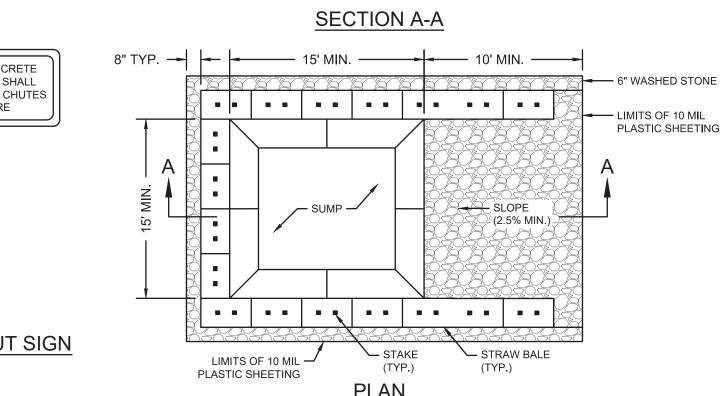
- SITE-BUILT WASHOUTS SHOULD BE CONSTRUCTED BY PROVIDING A TEMPORARY PIT OR BERMED AREA SIZED LARGE ENOUGH TO HANDLE SOLIDS. WASH SLURRY, AND
- THE STORAGE PIT AREA SHOULD BE LINED WITH A PERMEABLE GEOTEXTILE FABRIC. DO NOT ALLOW RUNOFF FROM THE STORAGE AREA. CONSTRUCT A TEMPORARY PIT

RAINFALL TO PREVENT OVERFLOW AND INCLUDE A MINIMUM OF 4" FREEBOARD

OR BERMED AREA LARGE ENOUGH TO CONTAIN ANTICIPATED SLURRY AMOUNT,

- SOLID WASTE, AND DIRECT RAINWATER. WASH OUT WASTES INTO THE TEMPORARY PIT WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND THEN DISPOSED PROPERLY
- AVOID CREATING RUNOFF BY DRAINING WATER TO A BERMED OR LEVEL AREA WHEN WASHING CONCRETE TO REMOVE FINE PARTICLES AND EXPOSE THE AGGREGATE.
- PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT. IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL
- PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.

## — STRAW BALE 6" WASHED SLOPE STONE (2.5% MIN.) 6" WASHED -REMOVABLE SHEETING



**OUTLET PROTECTION** NOT TO SCALE

FABRIC SHALL BE

PLACED UNDER

**ENTIRE WIDTH** 

OF RIPRAP

FLOW LINE -

OF DITCH

\_\_\_\_\_

FLOW LINE -

OF PROPOSED

Know what's below.

Call before you dig

FLOW LINE OF WEIR -

MACHINED RIPRAP,

CLASS A-1

**HMH Job Number** Drawn By

> 07.02.21 Drawing

Date

Revisions

GRADING. DRAINAGE

12 INCHES IN DEPTH AND 6 INCHES IN WIDTH.

2. INSTALLATION FOR SLOPES: PLACE THE BLANKET 2-3 FEET OVER THE TOP OF THE SLOPE AND INTO AN EXCAVATED END TRENCH MEASURING APPROXIMATELY 12 INCHES DEEP BY 6 INCHES WIDE. PIN THE BLANKET AT 1 FOOT INTERVALS ALONG THE BOTTOM OF THE TRENCH. BACKFILL. AND COMPACT, UNROLL THE BLANKET DOWN (OR ALONG) THE SLOPE MAINTAINING DIRECT CONTACT BETWEEN THE SOIL AND THE BLANKET

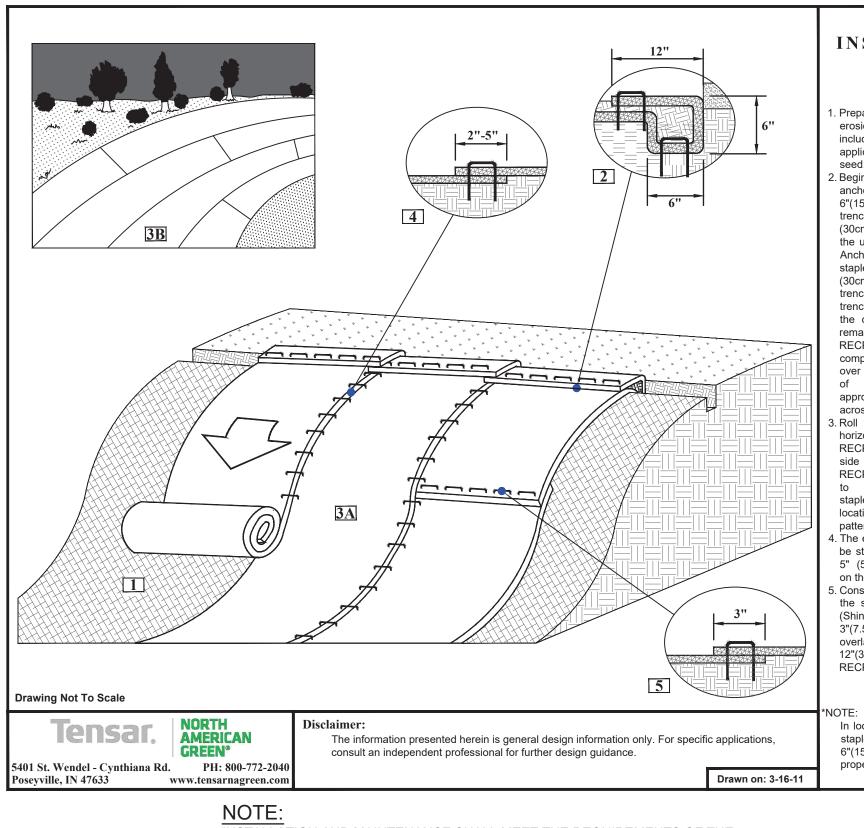
AT BLANKET END. TERMINAL ANCHOR TRENCHES SHOULD BE A MINIMUM OF

## CONSTRUCTION SPECIFICATIONS

OVERLAP ADJACENT ROLLS A MINIMUM OF 3 INCHES. PIN THE BLANKET TO THE GROUND USING STAPLES OR PINS IN A 3 FOOT CENTER-TO-CENTER PATTERN OR AS RECOMMENDED BY MANUFACTURER.

3. ANCHORING DEVICES: 11 GAUGE, AT LEAST 6 INCHES LENGTH BY 1 INCH WIDTH, STAPLES OR 12 INCH MINIMUM LENGTH WOODEN STAKES ARE RECOMMENDED FOR ANCHORING THE BLANKET TO THE GROUND. DRIVE STAPLES OR PINS SO THAT THE TOP OF THE STAPLE OR PIN IS FLUSH WITH THE GROUND SURFACE. ANCHOR EACH BLANKET EVERY 3 FEET ALONG ITS CENTER. LONGITUDINAL OVERLAPS MUST BE SUFFICIENT TO ACCOMMODATE A ROW OF ANCHORS AND UNIFORM ALONG THE ENTIRE LENGTH OF OVERLAP AND ANCHORED EVERY 3 FEET ALONG THE OVERLAP LENGTH.

ENDS MAY BE SPLICED BY OVERLAPPING 1 FOOT (IN THE DIRECTION OF WATER FLOW), WITH THE UPSTREAM/UPSLOPE MAT PLACED ON TOP OF THE DOWNSTREAM/DOWNSLOPE BLANKET. THIS OVERLAP SHOULD BE ANCHORED AT 1 FOOT SPACING ACROSS THE BLANKET. WHEN INSTALLING MULTIPLE WIDTH MATS HEAT SEAMED IN THE FACTORY, ALL FACTORY SEAMS AND FIELD OVERLAPS SHOULD BE SIMILARLY ANCHORED.



### SLOPE INSTALLATION DETAIL

Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and

2. Begin at the top of the slope by anchoring the RECPs in 6"(15cm) deep X 6"(15cm) wide trench with approximately 1 (30cm) of RECPs extended beyond the up-slope portion of the trench. Anchor the RECPs with a row of staples/stakes approximately 1 (30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12"(30cm) apart across the width of the RECPs. B. Roll the RECPs (A) down or (E horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple

pattern guide. . The edges of parallel RECPs mus be stapled with approximately 2" 5" (5-12.5cm) overlap depending on the RECPs type. . Consecutive RECPs spliced down the slope must be end over end (Shingle style) with an approximate 3"(7.5cm) overlap. Staple through overlapped area, approximately 12"(30cm) apart across entire RECPs width.

In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary t properly secure the RECP's.

INSTALLATION AND MAINTENANCE SHALL MEET THE REQUIREMENTS OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK, TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION, LATEST EDITION.

## **EROSION CONTROL BLANKET (SLOPE INSTALLATION)**

NOT TO SCALE

## CONSTRUCTION SPECIFICATIONS

CESSIVE WATER RUNOFF SHALL BE REDUCED BY PROPERLY DESIGNED AND INSTALLED EROSION CONTROL PRACTICES SUCH AS DITCHES, DIKES, DIVERSIONS, AND SEDIMENT BASINS. NO SHAPING OR GRADING IS REQUIRED IF SLOPES CAN BE STABILIZED BY HAND-SEEDED VEGETATION OR IF HYDRAULIC SEEDING EQUIPMENT IS TO BE USED.

## SEEDBED PREPARATION: GOOD SEEDBED PREPARATION IS ESSENTIAL TO SUCCESSFUL PLANT ESTABLISHMENT. A GOOD SEEDBED

IS WELL PULVERIZED, LOOSE AND UNIFORM. WHERE HYDROSEEDING METHODS ARE USED, THE SURFACE MAY BE LEFT WITH A MORE IRREGULAR SURFACE OF LARGE CLODS AND STONES. APPLY LIME ACCORDING TO SOIL TEST RECOMMENDATIONS. IF THE PH (ACIDITY) OF THE SOIL IS NOT KNOWN, AN APPLICATION OF GROUND AGRICULTURAL LIMESTONE AT THE RATE TO 1 TO 11/2 TONS/ACRE ON

### COARSE TEXTURED SOILS AND 2-3 TONS/ACRE ON FINE TEXTURED SOILS IS USUALLY SUFFICIENT. APPLY LIMESTONE UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL. SOILS WITH A PH OF 6 OR HIGHER DO NOT NEED TO BE LIMED.

BASE APPLICATION RATES ON SOIL TESTS. WHEN SOIL TESTS ARE NOT POSSIBLE, APPLY A 10-10-10 GRADE FERTILIZER AT 700-1000LB/ACRE. BOTH FERTILIZER AND LIME SHOULD BE INCORPORATED INTO THE TOP 4-6 INCHES OF SOIL. IF A HYDRAULIC SEEDER IS USED, DO NOT MIX SEED AND FERTILIZER MORE THAN 30 MINUTES BEFORE THE APPLICATION.

RECENT TILLAGE OPERATIONS HAVE RESULTED IN A LOOSE SURFACE, ADDITIONAL ROUGHENING MAY NOT BE NECESSARY, EXCEPT TO BREAK UP LARGE CLODS. IF RAINFALL CAUSED THE SURFACE TO BECOME SEALED OR CRUSTED, LOOSEN IT JUST PRIOR TO SEEDING BY DISKING, RAKING, HARROWING, OR OTHER SUITABLE METHODS. GROOVE OR FURROW SLOPES STEEPER THAN 3:1 ON THE CONTOUR BEFORE

## CONSTRUCTION SPECIFICATIONS

SEEDING: SELECT A NON-INVASIVE GRASS OR GRASS-LEGUME MIXTURE SUITABLE TO THE AREA AND SEASON OF THE YEAR. SEE FIGURES 7.8-1 TO 7.8-3 FOR SUGGESTIONS OF TEMPORARY SEEDING SPECIES. ALTHOUGH NATIVE PLANTS ARE PREFERRED, THERE ARE CURRENTLY NO AVAILABLE NATIVE SPECIES THAT ARE NOT COST PROHIBITIVE. NON-INVASIVE ANNUAL PLANTS ARE PREFERRED. SEED SHALL BE APPLIED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRAULIC SEEDER. DRILL OR CULTIPACKER SEEDERS SHOULD NORMALLY PLACE SEED ½ TO ½ INCHES DEEP. APPROPRIATE DEPTH OF PLANTING IS 10 TIMES THE SEED DIAMETER. SOIL SHOULD BE RAKED LIGHTLY TO COVER SEED WITH SOIL IF

MULCHING:
THE USE OF MULCH WILL HELP ENSURE ESTABLISHMENT UNDER NORMAL CONDITIONS, AND IS ESSENTIAL TO SEEDING SUCCESS UNDER HARSH SITE CONDITIONS. HARSH SITE CONDITIONS INCLUDE:

- SEEDING IN FALL FOR WINTER COVER SLOPES STEEPER THAN 3:1 EXCESSIVELY HOT OR DRY WEATHER
- ADVERSE SOILS (SHALLOW, ROCKY, OR HIGH IN CLAY OR SAND), AND AREAS RECEIVING CONCENTRATED FLOW.

IRRIGATION:

DURING TIMES OF DROUGHT, WATER SHALL BE APPLIED AT A RATE NOT CAUSING RUNOFF AND EROSION.

THE SOIL SHALL BE THOROUGHLY WETTED TO A DEPTH THAT WILL ENSURE GERMINATION OF THE SEED. SUBSEQUENT APPLICATIONS SHOULD BE MADE AS NEEDED. NEWLY SEEDED AREAS REQUIRE MORE WATER THAN MORE MATURE PLANTS.

## MAINTENANCE AND INSPECTION POINTS

RESEED AND MULCH AREAS WHERE SEEDLING EMERGENCE IS POOR OR WHERE EROSION OCCURS, AS SOON AS POSSIBLE. DO NOT MOW.

TEMPORARY COVER SEEDING MIXTURES						
SEEDING DATES	GRASS SEED	SOIL AMENDMENTS	MULCH	MAINTENANCE		
JANUARY 1 TO MAY 1	RYE (120 LB/ACRE)	FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE	APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH	REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH		
	OATS (60 LB/ACRE)	AND 750 LB/ACRE 10-10-10 FERTILIZER.	BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.	IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.		
MAY 1 TO AUGUST 15	BROWN TOP MILLET (30 LB/ACRE)					
AUGUST 15 - DECEMBER 31	OATS (30 LB/ACRE)					
	WINTER WHEAT (30 LB/ACRE)					

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**TEMPORARY SEEDING** 

NOT TO SCALE

## CONSTRUCTION SPECIFICATIONS

- 1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE
- 2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET. A MAXIMUM OF 4 FEET APART.
- 3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP. MIDDLE, AND BOTTOM. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
- 4. PLACE CLEAN GRAVEL (#57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN
- 5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
- 6. COMPACT THE AREA PROPERLY AND STABILIZE IT WITH GROUNDCOVER.

## MAINTENANCE AND INSPECTION POINTS

- 1. SEDIMENT SHOULD NOT BE ALLOWED TO WASH INTO THE INLET. I SHOULD BE REMOVED FROM THE INLET PROTECTION AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT ENTER THE INLET AGAIN. REMOVE SEDIMENT FROM THE DEPOSITION AREAS WHEN HALF THE HEIGHT OF THE STORAGE AREA HAS BEEN FILLED
- 2. CHECK MEASURE FOR DAMAGE OR EVIDENCE OF EROSION AND BYPASSING AROUND THE INLET PROTECTION. IF INLETS ARE IN SERIES, RUNOFF THAT BYPASSES AN UPGRADIENT INLET CAN OVERWHELM A DOWNGRADIENT INLET PROTECTION DEVICE SAND BAGS, DIVERSIONS, OR OTHER METHODS SHOULD BE USED TO DIRECT RUNOFF INTO STORM DRAIN INLETS.
- 3. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTI Y STABILIZED, ALL MATERIALS AND ANY SEDIMENT SHOULD BE REMOVED. AND EITHER SALVAGED OR DISPOSED OF PROPERLY. THE DISTURBED AREA SHOULD BE BROUGHT TO PROPER GRADE, THEN SMOOTHED AND COMPACTED. APPROPRIATELY STABILIZE ALL DISTURBED AREAS AROUND THE

INSTALLATION AND MAINTENANCE SHALL MEET THE REQUIREMENTS OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK, TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION, LATEST EDITION.

## **INLET PROTECTION (PRE-PAVED AREAS)**

- WIRE MESH

(19 GAUGE

OPENING)

(SIZE NO. 57)

- STEEL POST (1.25 LBS/FOOT)

(MIN. LENGTH: 60")

MINERAL AGGREGATE

HARDWARE CLOTH

WITH  $\frac{1}{4}$  INCH MESH

MINERAL AGGREGATE

NOT TO SCALE

### MAINTENANCE AND INSPECTION POINTS

WIRE MESH -

(19 GAUGE HARDWARE CLOTH

WITH ½ INCH MESH OPENING)

1. GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE BLANKET.

CATCH

BASIN

**PLAN VIEW** 

NOT TO SCALE

FILTERED

WATER

**SECTION A-A** 

NOT TO SCALE

MAX. 4' ———

- 2. ANY AREAS OF THE BLANKET THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
- 3. IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA REPAIRED.
- 4 MONITOR AND REPAIR THE BLANKET AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED. INSPECTIONS SHOULD INCLUDE WALKING ACROSS THE SLOPE TO CHECK FOR EROSION GULLIES THAT CAN BE FELT RATHER THAN SEEN.

### CONSTRUCTION SPECIFICATIONS

GRADING AND SHAPING MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED. VERTICAL BANKS SHALL BE SLOPED TO ENABLE PLANT ESTABLISHMENT.

WHEN CONVENTIONAL SEEDING AND FERTILIZING ARE TO BE DONE GRADE AND SHAPE THE SLOPE WHERE FEASIBLE AND PRACTICAL, SO THAT EQUIPMENT CAN BE USED SAFELY AND EFFICIENTLY DURING SEEDBED PREPARATION, SEEDING, MULCHING, AND MAINTENANCE OF VEGETATION.

CONCENTRATIONS OF WATER THAT COULD CAUSE EXCESSIVE SOIL EROSION SHOULD BE DIVERTED TO A SAFE OUTLET. DIVERSIONS AND OTHER TREATMENT PRACTICES MUST CONFORM TO THE APPROPRIATE STANDARDS AND SPECIFICATIONS.

REFER TO TABLE 7.9-1 OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK (AUGUST 2012) FOR SUGGESTED SPECIES, GRASS TYPE SHOULD BE SELECTED ON THE BASIS OF SPECIES CHARACTERISTICS: SITE AND SOIL CONDITIONS: PLANNED LISE AND MAINTENANCE OF THE AREA: TIME OF YEAR OF PLANTING, METHOD OF PLANTING; AND THE NEEDS AND DESIRES OF THE LAND USER.

PLANT SELECTION MAY ALSO INCLUDE ANNUAL COMPANION CROPS. ANNUAL COMPANION CROPS SHOULD PERIOD. CARE SHOULD BE TAKEN IN SELECTING COMPANION CROP SPECIES AND SEEDING RATES BECAUSE ANNUAL CROPS WILL COMPETE WITH PERENNIAL SPECIES FOR WATER, NUTRIENTS, AND GROWING SPACE. A HIGH SEEDING RATE OF THE COMPANION CROP MAY PREVENT THE ESTABLISHMENT

RYEGRASS SHALL NOT BE USED IN ANY SEEDING MIXTURES CONTAINING PERMANENT, PERENNIAL SPECIES DUE TO ITS ABILITY TO OUT-COMPETE DESIRED SPECIES CHOSEN FOR PERMANENT PERENNIAL COVER, HOWEVER, CRIMSON, CLOVER, OATS AND WINTER WHEAT CAN BE PLANTED ANY TIME OF THE YEAR AND ARE RECOMMENDED AS A COVER CROP WITH NATIVE PERENNIAL SPECIES.

TOPSOIL:
TOPSOIL SHOULD BE REPLACED ON ALL AREAS TO BE SEEDED. SEE PRACTICE 7.3 OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK (AUGUST 2012) FOR MORE INFORMATION ON THE REMOVAL. STORAGE AND REAPPLICATION OF TOPSOIL.

WHEN CONVENTIONAL SEEDING IS TO BE USED, TOPSOIL SHOULD BE APPLIED TO ANY AREA WHERE THE DISTURBANCE RESULTS IN SUBSOIL AT THE FINAL GRADE SURFACE. FIGURE 7.9-3 OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK (AUGUST 2012) PROVIDES GUIDANCE ON THE VOLUME OF TOPSOIL REQUIRED TO PROVIDE SPECIFIC TOPSOIL DEPTHS. SOIL PH SHOULD BE ABOVE 5 - PREFERABLY BETWEEN 6.0 AND 6.5. SOIL ON THE SITE SHOULD BE TESTED TO DETERMINE LIME AND FERTILIZER RATES. SOIL SHOULD BE SUBMITTED TO A SOILS SPECIALIST OR COUNTY AGRICULTURAL EXTENSION AGENT FOR TESTING AND SOIL AMENDMENT RECOMMENDATIONS. IN THE ABSENCE OF SOIL TEST RESULTS, THE FOLLOWING APPLICATION RATES CAN BE USED:

## GROUND AGRICULTURAL LIMESTONE:

• LIGHT-TEXTURED, SANDY SOILS: 1 - 1 1/2 TONS/ACRE HEAVY-TEXTURED, CLAYEY SOILS: 2 - 3 TONS/ACRE

 GRASSES: 800-1200 LB/ACRE OF 10-10-10 (OR THE EQUIVALENT) GRASS-LEGUME MIXTURES: 800-1200 LB/ACRE OF 5-10-10 (OR THE EQUIVALENT)

- SEEDBED PREPARATION MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING EQUIPMENT IS TO BE
- TILLAGE, AT A MINIMUM, SHALL ADEQUATELY LOOSEN THE SOIL TO A DEPTH OF 4 TO 6 INCHES; ALLEVIATE COMPACTION; INCORPORATE TOPSOIL, LIME, AND FERTILIZER; SMOOTH AND FIRM THE SOIL; ALLOW FOR THE PROPER PLACEMENT OF SEED, SPRIGS, OR PLANTS; AND ALLOW FOR THE ANCHORING OF STRAW OR HAY MULCH IF A CRIMPER IS TO BE USED. TILLAGE MAY BE DONE WITH ANY SUITABLE EQUIPMENT
- TILLAGE SHOULD BE DONE PARALLEL TO THE CONTOUR WHERE FEASIBLE.
- ON SLOPES TOO STEEP FOR THE SAFE OPERATION OF TILLAGE EQUIPMENT, THE SOIL SURFACE SHALL BE PITTED OR TRENCHED ACROSS THE SLOPE WITH APPROPRIATE HAND TOOLS TO PROVIDE CONSECUTIVE BEDS, 6 TO 8 INCHES APART, IN WHICH SEED MAY LODGE AND GERMINATE. HYDRAULIC SEEDING MAY ALSO BE USED.

NATIVE LEGUME SEEDS DO NOT NEED TO BE INOCULATED. ALL NON-NATIVE LEGUME SEED SHALL BE INOCULATED WITH APPROPRIATE NITROGEN FIXING BACTERIA. THE INOCULANTS SHALL BE PURE CULTURE PREPARED SPECIFICALLY FOR THE SEED SPECIES AND USED WITHIN THE DATES ON THE CONTAINER. A MIXING MEDIUM RECOMMENDED BY THE MANUFACTURER SHALL BE USED TO BOND THE INOCULANTS TO THE SEED. FOR CONVENTIONAL SEEDING, USE TWICE THE AMOUNT OF INOCULANTS RECOMMENDED BY

INSTALLATION AND MAINTENANCE SHALL MEET THE REQUIREMENTS OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK, TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION, LATEST EDITION.

NO-TILL SEEDING IS PERMISSIBLE INTO ANNUAL COVER CROPS WHEN PLANTING IS DONE FOLLOWING MATURITY OF THE COVER CROP OR IF THE TEMPORARY COVER STAND IS SPARSE ENOUGH TO ALLOW ADEQUATE GROWTH OF THE PERMANENT (PERENNIAL) SPECIES. NO-TILL SEEDING SHALL BE DONE WITH APPROPRIATE NO-TILL SEEDING EQUIPMENT. THE SEED MUST BE UNIFORMLY DISTRIBUTED AND PLANTED AT THE PROPER DEPTH. NATIVE GRASSES RESPOND VERY WELL TO DRILL SEEDING AT A DEPTH OF ONE-FOURTH INCH.

**INLET PROTECTION (POST-PAVED AREAS)** 

\* SUBSTITUTIONS SHALL BE CITY APPROVED EQUAL

A: GRATE WIDTH (LEFT TO RIGHT)

F: CURB BACK OPENING SIZE

H: CURB BACK MAXIMUM HEIGHT

G: CURB BACK WIDTH

B: FRAME CLEAR OPENING WIDTH ILEFT TO RIV

D: FRAME CLEAR OPENING DEPTH (FRONT T

Rexstorm Ratings (Flow at 50% max)

Bag Capacity FX/FX+ Flow Rate Bypass (CFS)

CLIGRATE DEPTH (FRONT TO BACK)

MAGNETIC FLAP

NOT TO SCALE

STRAW MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS AND MUST BE APPLIED IMMEDIATELY AFTER THE APPLICATION OF SEED. THE APPLICATION RATE FOR MULCH IS 2 TONS PER ACRE WITH OVERALL UNIFORM SOIL COVERAGE OF 70%. ALL MULCH MUST BE ANCHORED. SEE PRACTICE 7.6 OF THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK (AUGUST 2012) FOR MORE INFORMATION ON STRAW MULCH

MAINTENANCE AND INSPECTION POINTS:

CONSTRUCTION SPECIFICATIONS

LEXSTORM P/Ns 62SCBFX

TREBERED OF THE PROPERTY OF TH

(A x C)

1. RATINGS SHOWN ARE FOR STANDARD 22' BAG DEPTH; "SHORT" 12' DEPTH BA

AVAILABLE WITH -S SUFFIX; RATINGS REDUCED BY ~50%.

2. THE FOLLOWING REQUIRES ADDITIONAL REVIEW

-GRATES WITH EXTENDED BOTTOMS

-ANY OBSTRUCTED INLET OPENINGS

Flexstorm Item Code

62SCBFX C-SQCB-200-109-176-85-FX 20 x 10.875

62SC8FX C-SQCB-200-109-185-90-FX 20 x 10.9

SQCB INLET TYPE: RAISED CAST IRON FRAME AND GRATE WITH CURB HOOD

17.6 x 8.5

CL W W D

Flexstorm Framing Dims

(B x D) B1 D1 A1 C1

18.5 x 9.0 18.0 8.0 20.0 8.0

ANY AREAS THAT HAVE WASHED OUT DUE TO HIGH STORMWATER FLOWS, AREAS THAT HAVE BEEN DISTURBED BY BLOWING WIND, AND AREAS THAT DO NOT SHOW GOOD GERMINATION SHOULD BE

INSPECT SEEDED AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS AND RESEEDINGS WITHIN THE SAME SEASON, IF POSSIBLE.

RESEEDING: IF A STAND HAS INADEQUATE COVER, RE-EVALUATE CHOICE OF PLANT MATERIALS AND QUANTITIES OF LIME AND FERTILIZER. RE-ESTABLISH THE STAND AFTER SEEDBED PREPARATION OR OVER-SEED THE STAND. CONSIDER SEEDING TEMPORARY, ANNUAL SPECIES IF THE TIME OF YEAR IS NOT APPROPRIATE FOR PERMANENT SEEDING.

	PERM	MANENT COVER SEEDING	MIXTURES (PREFERR	ED)
	ZONE	BEST	MARGINAL	PREFERRED RATE/MIX (lb/ac PLS)
	LOW MAINTENANCE; SLOPES AND POOR, SHALLOW SOILS	AUG 25 - SEPT 15 FEB 15 - MAY 30	SEPT 15 - OCT 25 MAR 21 - MAY 30	15 BROWNTOP MILLET* (NURSE CROP) 5 LITTLE BLUESTEM 2 SWITCH GRASS 2 TALL DROPSEED 5 SIDEOATS GRAMMA 2 BLACK-EYED SUSAN 2 PARTRIDGE PEA 1 GREYHEADED CONEFLOWER
REGION II	LOW MAINTENANCE; MODERATE SLOPES; SOILS >6in. DEPTH	AUG 25 - SEPT 15 FEB 15 - MAY 30	SEPT 15 - OCT 25 MAR 21 - APR 15	15 BROWNTOP MILLET* (NURSE CROP) 5 PURPLETOP 5 LITTLE BLUESTEM 5 VIRGINIA WILD RYE 2 BLACK-EYED SUSAN 2 PARTRIDGE PEA 1 GREYHEADED CONEFLOWER
	HIGH MAINTENANCE	AUG 30 - OCT 15	FEB 15 - APR 15	15 BROWNTOP MILLET* (NURSE CROP) 2 PARTRIDGE PEA 45 RED FESCUE* 45 HARD FESCUE* 25 CHEWING FESCUE*

IN TABLE, THE BOLD DATES ARE THE PREFERRED DATES FOR SEEDING. ALSO, HIGH MAINTENANCE AREAS INCLUDE LAWNS AND OTHER GRASSED AREAS THAT WILL BE MAINTAINED FOR AESTHETICS.

	PERMANENT COVER SEEDING MIXTURES (ALLOWED)								
ZONE		BEST	MARGINAL	PREFERRED RATE/MIX (lb/ac PLS)					
	LOW MAINTENANCE; SLOPES AND POOR, SHALLOW SOILS	AUG 25 - SEPT 15 FEB 15 - MAR 21	SEPT 15 - OCT 25 MAR 21 - APR 15	100 PENSACOLA BAHIAGRASS 40 BERMUDAGRASS (HULLED) 20 KOREAN LESPEDEZA** 10 KOBE LESPEDEZA**					
REGION II	LOW MAINTENANCE; MODERATE SLOPES; SOILS >6in. DEPTH	AUG 25 - SEPT 15 FEB 15 - MAR 21	SEPT 15 - OCT 25 MAR 21 - APR 15	80 PENSACOLA BAHIAGRASS 30 BERMUDAGRASS (HULLED) 20 KOREAN LESPEDEZA** 10 KOBE LESPEDEZA**					
	HIGH MAINTENANCE AUG 15 - OCT 15		FEB 15 - APR 15	200 KY 31 FESCUE**					

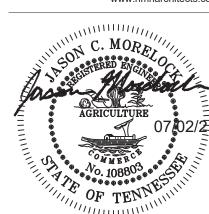
IN TABLE, THE BOLD DATES ARE THE PREFERRED DATES FOR SEEDING. ALSO, HIGH MAINTENANCE AREAS INCLUDE LAWNS AND OTHER GRASSED AREAS THAT WILL BE MAINTAINED FOR AESTHETICS.



2097 BELSFORD DRIVE PERMANENT SEEDING NOLENSVILLE, TN 37135 JASON@MORELOCKENG.COM - (615) 300-6486

Architects, P.C.

Brentwood, Tennessee 370 www.hmharchitects.com

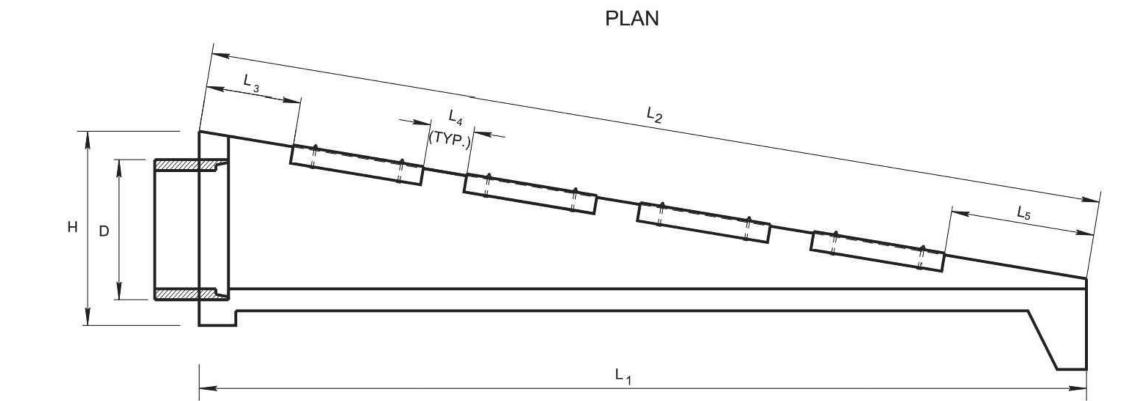


Revisions

**HMH Job Number** 

07.02.21

Drawing



- L5 x 5 x 5/<sub>16</sub>" x 3'-0"

5" MIN.

**ALTERNATE ANCHORS FOR STRUCTURAL STEEL GRATES** 

DRILLED-IN EPOXY ANCHORS OR CAST-IN THREADED INSERTS MAY BE UTILIZED IN LIEU OF CAST-IN HEADED

SPECIFICATIONS. THE REQUIRED ULTIMATE LOAD FOR 5" DIAMETER ANCHORS IS 10,000 POUNDS.

ANCHOR BOLTS PROVIDED THAT THE CONTRACTOR FURNISHES CERTIFIED ANCHOR PULL OUT DATA FROM AN

INDEPENDENT TESTING LABORATORY USING CLASS "A" CONCRETE AS PRESCRIBED BY TENNESSEE HIGHWAY

1" x 1½" (± ½")

SLOT (TYP.)

3" NOMINAL

2'-0"

**PLAN** 

CERTIFICATION:

WG

SECTION A-A

3" (NOMINAL)

SECTION B-B

SHOWING ANCHOR BOLTS AND PARTIAL WINGWALLS

STEEL PIPE GRATE

SIDE	DIMENSIONS AND QUANTITIES FOR ONE ENDWALL									
DRAIN DIA. (D)	CONCRETE ENDWALL DIMENSIONS			GRATE PLACEMENT DIMENSIONS			STRUCTURAL STEEL GRATE DIMENSIONS AND QUANTITY		STRUCT. STEEL	
	Н	W	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L 5	WG	NO. REQ'D.	LB.
15"	SEE STD. DWG. D-PE-15A			2'-2"	1'-0"	2'-1%"	2'-5"	2	172	
18"	SEE STD. DWG. D-PE-18A		10%"	1'-0"	1'-0"	2'-8"	3	269		
24"	SEE STD. DWG. D-PE-24A	2'-2"	1'-0"	3'-25%"	3'-3"	3	296			
30"	SEE STD. DWG. D-PE-30A			2'-2"	1'-0"	3'-3%"	3'-10"	4	694	
36"	SEE STD. DWG. D-PE-36A			2'-2"	1'-0"	2'-97/8"	4'-5"	5	975	
42"	SEE STD. DWG. D-PE-42A			2'-2"	1'-0"	1'-10%"	5'-0"	6	1,300	
48"	S	EE STD. DW	G. D-PE-48/	<b>A</b>	2'-2"	1'-0"	1'-5"	5'-7"	7	1,669

## **GENERAL NOTES**

DRAWING TO BE USED FOR ALL 15" THRU 48" SIDE DRAIN CONCRETE ENDWALLS. REFER THE FOLLOWING STANDARD DRAWINGS FOR CONSTRUCTION DIMENSIONS.

> 15" ENDWALL - SEE D-PE-15A & D-PE-15B WITH 6:1 WINGWALL SLOPE 18" ENDWALL - SEE D-PE-18A & D-PE-18B WITH 6:1 WINGWALL SLOPE 24" ENDWALL - SEE D-PE-24A & D-PE-24B WITH 6:1 WINGWALL SLOPE 30" ENDWALL - SEE D-PE-30A & D-PE-30B WITH 6:1 WINGWALL SLOPE 36" ENDWALL - SEE D-PE-36A & D-PE-36B WITH 6:1 WINGWALL SLOPE 42" ENDWALL - SEE D-PE-42A & D-PE-42B WITH 6:1 WINGWALL SLOPE 48" ENDWALL - SEE D-PE-48A & D-PE-48B WITH 6:1 WINGWALL SLOPE

SIDE DRAIN CONCRETE ENDWALL REQUIRES STEEL PIPE GRATES SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL OMIT THE CONCRETE BLOCKOUTS (4" x 7") AS SHOWN ON STANDARD DRAWING D-PE-99 SECTION D-D THRU WINGWALL AND SUBSTITUTE THE FOLLOWING REINFORCING BARS:

30" ENDWALL - SUBSTITUTE A465 & A466 BY EXTENDING A464 TO 19'-5" 36" ENDWALL - SUBSTITUTE A464 & A465 BY EXTENDING A463 TO 23'-0" 42" ENDWALL - SUBSTITUTE A465 (2 BARS), A466 & A467 BY EXTENDING A464 TO 26'-0" 48" ENDWALL - SUBSTITUTE A465 (2 BARS), A466 & A467 BY EXTENDING A464 TO 29'-7"

THE MATERIALS, WELDING AND PAINTING FOR STRUCTURAL STEEL GRATE SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

1) ANGLES: ASTM A36

STEEL PIPE: ASTM A53 GRADE B, STANDARD WEIGHT (SW) OR ASTM A500 GRADE B AND SHALL BE GALVANIZED FOR 15" THRU 24" DIAMETER PIPE CULVERT. ASTM A53 GRADE B, DOUBLE EXTRA STRONG WEIGHT (XXS) - FOR 30" THRU 48" DIAMETER

WELDING: AASHTO/AWS D1.5M/D1.5 BRIDGE WELDING CODE (LATEST EDITION)

ALL STEEL GRATES SHALL BE GALVANIZED.

THE MATERIAL AND GALVANIZING FOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

1) BOLTS, NUTS AND WASHERS: ASTM F1554 GRADE 36

GALVANIZING: ASTM A153

THE COST OF FURNISHING BOLTS, NUTS AND WASHERS, INCLUDING ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION, SHALL BE INCLUDED IN THE PRICE BID FOR STRUCTURAL STEEL.

PAYMENT WILL BE MADE UNDER ITEM NUMBERS:

611-07.30 15IN ENDWALL (SIDE DRAIN) **EACH** 611-07.31 18IN ENDWALL (SIDE DRAIN) **EACH** 24IN ENDWALL (SIDE DRAIN) 611-07.32 **EACH** 30IN ENDWALL (SIDE DRAIN) 611-07.33 **EACH EACH** 611-07.34 36IN ENDWALL (SIDE DRAIN) 42IN ENDWALL (SIDE DRAIN) **EACH** 611-07.35 611-07.36 48IN ENDWALL (SIDE DRAIN) **EACH** 

THE CONTRACTOR MAY ELECT TO SUBSTITUTE AN APPROVED ALTERNATIVE DESIGN

DIMENSIONAL AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE (SOP) 5-3.

MINOR REVISION - FHWA APPROVAL NOT REQUIRED

STATE OF TENNESSEE STANDARD DRAWING DEPARTMENT OF TRANSPORTATION

TYPE "SAFETY" SIDE DRAIN ENDWALL WITH STEEL PIPE GRATE, FOR 15" THRU 48" PIPES, 6:1 SLOPE

03-01-2012

D-SEW-1A



NOT TO SCALE



REV. 7-10-12: REVISED ALTERNATE H. Michael Hindman ANCHORS FOR STRUCTURAL STEEL

GRATES NOTE.

NOTES (F) AND (G).

SHEET.

DIMENSIONS.

(A) (B) AND (C2)

■ REV. 1-10-13: CHANGED REQUIREMENT FOR GRATE ON ALL ENDWALLS.

REV. 6-14-13: REVISED NOTE (E), ADDED

■ REV. 3-16-17: REVISED GENERAL NOTES.

REV. 06-28-19; RENAMED AND REDREW

REV. 10-16-20; REVISED SLOT DIMENSION. ADDED ANCHOR BOLT DETAIL AND REVISED 18" PIPE GRATE PLACEMENT

REV. 03-04-21: REVISED GENERAL NOTES

ADDED FOOTNOTE TO TABLE.

Architects, P.C.

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Revisions

HMH Job Number 20064

Drawn By Date

07.02.21 Drawing

& EPSC DETAILS

GRADING, DRAINAGE

ANCHOR BOLT DETAIL

NOTE:

BOLTS SHALL NOT EXTEND MORE

- %" ø HEADED ANCHOR BOLT

– L5 x 5 x ½6"

INTERIOR

WINGWALL

THAN ½" ABOVE TOP OF NUTS.

€ BOLTS

21/2"

**EXTERIOR** 

FACE

H-BAR -

%" ø HEADED

ANCHOR BOLT

31/2"

**ANCHOR BOLT ASSEMBLY**