



Robertson County Tennessee

Jody Stewart, Finance Director

Finance Department

523 South Brown Street, Springfield, TN 37172

(615) 384-0202

Fax (615) 384-0237

POST DATE: **August 21, 2019**

BID 1427: RETAINING WALL AT SPRINGFIELD HIGH SCHOOL

Mandatory Pre-Bid Meeting: Thursday, August 29, 2019 at 10:00 A.M. CST (See details below)

Sealed bids must be received by: September 6, 2019 at 10:15 AM

Robertson County Finance Office
523 South Brown Street
Springfield, TN 37172

THE OUTSIDE OF THE ENVELOPE MUST BE MARKED WITH THE BIDDER'S COMPANY NAME, ITEM BID, TIME OF BID OPENING, DATE OF BID OPENING, BID NO. 1427 AND MUST BE MARKED "SEALED BID, DO NOT OPEN."

Bids are opened and read aloud to the public at the Robertson County Finance Office, 523 S. Brown Street, Springfield, TN 37172 immediately after the bid receipt deadline. Each vendor may submit more than one bid provided each bid meets the stated specifications. Each bid must be submitted in a separate sealed envelope with the appropriate notation on the outside. All bids must be signed by an authorized agent and submitted on the prescribed forms. Submission of bids by telegraph, telephone, or other electronic means is strictly prohibited. Any brand name called for the bid specifications is provided as a reference only. Alternate brand name items offered for bid must be equivalent as to function, basic design, type and quality of material, method of construction, and any required dimensions. Bidder must attach a letter of exception to specifications.

A **MANDATORY** Pre-Bid meeting will be held Thursday, August 29, 2019 at 10:00 A.M. CST at Springfield High School located at 5240 HWY 76E, Springfield, TN 37172. Bidders that do not attend this conference will not be considered for the work. For assistance with technical / product information contact Pat Brown, Athletic Director, Robertson County Schools at (615) 384-5588. For assistance with bid procedures contact Taylor Tomblin, Robertson County Finance Office at (615) 384-0202 or by email: ttomblin@robcotn.org.

Note: Robertson County reserves the right to reject any or all bids, to waive any technicalities or informalities, and to accept any bid deemed in the best interest of the County. All bids will be considered in accordance with Title VI and without regard to age, sex, color, race, creed, national origin, religious persuasion, marital status, political belief, or disability that does not prohibit the performance of duty.

SPECIFICATIONS FOR BUILDING A RETAINING WALL BETWEEN THE SPRINGFIELD HIGH SCHOOL BASEBALL FIELD AND SOCCER FIELD

The Robertson County Board of Education (Owner) is currently seeking bids for building a retaining wall at Springfield High School located at 5240 HWY 76E, Springfield, TN 37172. The successful bidder will be responsible for furnishing all tools, equipment, labor, materials, and miscellaneous items needed to complete this part of the project. The bidder should provide a quote for all work by referencing the engineered plans. Work must be completed by May 22, 2020.

SCOPE OF WORK

The installing contractor's responsibilities shall include the following:

1. The contractor will follow referenced engineered drawings provided by Klober engineering to build a retaining wall between the baseball field and soccer field. (Please contact Josh Lyon at Klober Engineering, (615)382-2000, with any questions.)
 2. The contractor will supply all aggregate backfill, wall block, daylighted positive drainage system, geo grid and labor.
 3. Provide materials and equipment to off load equipment at each project site per scheduled delivery.
 4. Provide storage containers for material as necessary and dumpsters for waste disposal if needed at the location. The Owner will not be responsible for construction generated debris removal. The contractor will clean and remove spoils. The contractor will sod, seed and straw.
 5. Provide adequate security to protect delivered products from theft, vandalism, or other unspecified damage for the duration of the projects. The Owner will not be responsible for any materials stored on site for the duration of the projects.
- A. Keep all heavy equipment off the playing fields. Contractor will repair all damage to grounds which exceeds that which would be expected. Indentations caused by heavy equipment traveling over dry ground would be an example of expected damage. Ruts and sod damage caused by equipment traveling over wet grounds would be an example of damage requiring repair. The contractor will replace all property damaged by him including fences, trees, plants, grass, concrete walks, asphalt drives, building surfaces, stadium seating, etc. at no additional cost to the Owner.

INSURANCE AND BOND REQUIREMENTS

A. The contractor shall provide a certificate of insurance for public liability and property damage with the Robertson County Board of Education named as the certificate holder. The contractor shall provide Workers Compensation Insurance as required by Tennessee state law. The contractor shall prove compliance with Public Chapter No. 587, T.C.A. 49-5-413 (d), criminal background check and provide a Drug Free Workplace affidavit.

The contractor shall, upon completion of the projects, protect the Owner against defective materials or faulty workmanship for a period of two (2) years.

CODES, PERMITS, AND LICENSES

The contractor shall procure all necessary permits or licenses to carry out his work and shall pay the lawful fee thereof as well as for any inspection fee or the cost of a certificate of approval.

In any instance where these specifications call for materials for construction of a better quality or larger size than required by codes, the provisions of these specifications shall take precedence. The codes shall govern in the case of direct conflict between the codes and the plans and the specifications.

There will be a **mandatory** pre-bid conference held at the site on Thursday, August 29th at 10:00 a.m. CST at the Springfield High soccer field at 5240 HWY 76E, Springfield, TN 37172. Bidders that do not attend this conference will not be considered for the work.

For any questions concerning these specifications contact Pat Brown at (615)384-5588 or by e-mail at pat.brown@rcstn.net.

BID SHEET

(Bidder will be required to hold this quote for a period of ninety (90) days so bid can be approved by the Robertson County Board of Education.)

PRICE TO BUILD RETAINING WALL BETWEEN THE BASEBALL FIELD AND SOCCER FIELD PER THE ENGINEERED PLANS AT THE SPRINGFIELD HIGH LOCATION:

(IN WORDS) (IN NUMBERS)

COMPANY NAME: _____

ADDRESS: _____

PHONE: _____

SIGNATURE OF AUTHORIZED COMPANY REPRESENTATIVE

DATE

EMPLOYEES

4.1 Personnel Obligations. Contractor shall be solely responsible for all personnel actions with respect to its employees. The Contractor shall withhold all applicable federal, state and local employment taxes and payroll insurance with respect to its employees; shall be responsible for insurance premiums, contributions to benefit and deferred compensation plans, licensing fees, retirement contributions and workers' compensation costs with respect to its employees; and shall file all required documents and forms. The Contractor shall be responsible for any claims, liabilities and expenses related to or arising out of its responsibilities set forth herein.

5.1 Compliance with Law. Contractor shall comply with all applicable laws, ordinances, rules and regulations relating to the Services operation and shall obtain all required licenses and permits. The Board shall cooperate with Contractor to accomplish the foregoing. The Robertson County Government requires all businesses conducting business with Robertson County have a valid Robertson County business license.

5.2 Workers' Compensation Insurance. Contractor shall maintain workers' compensation insurance as required by state law covering all employees employed by Contractor in connection with the Services. Contractor shall provide the Board with a copy of the Declaration Page of the workers' compensation policy annually during the term of this Agreement.

5.3 Comprehensive or Commercial Insurance. Contractor shall maintain during the term of the Agreement, for protection of the Board and Contractor, Comprehensive or Commercial General Bodily Injury and Property Damage Liability Insurance with a Combined Single Limit of not less than Five Million Dollars (\$5,000,000) for each occurrence, including, but not limited to, Personal Injury Liability, Blanket Contractual Liability and Products Liability, covering the operations and activities of Contractor under the Agreement and shall provide the Board with a certificate evidencing such policies. The insurance policies shall contain covenants by the issuing company that the policies shall not be canceled without thirty (30) days' prior written notice of cancellation. The Board shall be named as an additional insured under Contractor's policies of insurance--other than workers' compensation--to the extent the Board is indemnified pursuant to this Agreement.

Certificates of insurance shall be provided to the Board annually for any and all insurance coverages where the Board is named as an additional insured under Contractor's policies, prior to commencement of services.

5.4 Indemnification. Contractor shall indemnify and save harmless the Board, individual board members, officers, and employees against any and all claims, actions, demands, costs, damages, losses or expenses of any kind whatsoever, in whole or part, resulting from or connected with any acts under this Agreement or from the omission or commission of any act, lawful or unlawful, by Contractor, its agents and/or employees, including, but not limited to, court costs and attorney's fees incurred by the Board in connection with the defense of said matters. The Board shall not in any event be liable in damages for business loss or other incidental or consequential damages of whatever kind or nature, regardless of the cause of such damage, and Contractor, and anyone claiming by or through it, expressly waives all claims to such damages.

5.5 Assignment. The Agreement may not be assigned by either party without the written consent of the other.

5.6 Subcontracts. Contractor is and remains responsible at all times for the performance of the Agreement and cannot subcontract any part of the Agreement without the express written approval of the Board. In the event that the Board consents to Contractor's request to subcontract a part of the Agreement, Contractor shall remain liable and responsible for the performance of all Services under the Agreement.

5.7 Force Majeure. Neither Contractor nor the Board shall be liable for failure to perform its respective obligations hereunder when such failure arises out of fire, explosion, water, act of God, civil disorder or disturbance, strikes, vandalism, war, sabotage, weather and energy related closings, governmental rules or regulations, failure of third parties to perform their obligations with respect to the Services, or like causes beyond the reasonable control of such party, or for real or personal property destroyed or damaged due to such causes. Any party experiencing such an event shall give as prompt notice as possible under the circumstances and such protection from liability shall last only for the duration of the event of such force majeure.

In the event such force majeure necessitates cancellation of Contractor's performance of the Services, in whole or in part, and an alternate date(s) cannot be agreed upon by the parties, the Board will be under no obligation to compensate the Contractor for Services not performed. If such force majeure makes performance of the Services impossible, ineffective, or impracticable, the Board shall have the option of terminating the Agreement immediately without penalty or further expense.

5.8 Termination. This agreement can be terminated by either party with a ninety (90) day written notice.

5.9 Severability. If any term or provision of proposed contract or the application hereof to any person or circumstance shall, to any extent or for any reason be invalid or unenforceable, the remainder of the Agreement and the application of such term or provision to any person or circumstance other than those as to which it is held invalid or unenforceable shall not be affected thereby, and each remaining term and provision of the Agreement shall be valid and enforceable to the fullest extent permitted by law.

5.10 Amendments to Agreement. All provisions to the proposed contract shall remain in effect throughout the term hereof unless the parties agree, in a written document signed by both parties, to amend, add or delete any provision. This proposed contract contains all agreements of the parties with respect to matters covered herein, and may not be changed other than by an agreement in writing signed by the parties hereto.

Robertson County, Tennessee
NON-COLLUSION AFFIDAVIT

The agent of the bidding firm hereby certifies to the best of his/her knowledge and belief that this bid proposal to Robertson County, Tennessee has not been prepared in collusion with any other seller of similar products. The agent also certifies that the prices, terms and conditions of said bid proposal have not been communicated by the undersigned, nor by any employee or agent of the bidding firm, to any other seller of similar products and will not be communicated to any such seller prior to the official opening of said bid. The agent further states that no official or employee of Robertson County Government has promised any personal financial or other beneficial interest, either directly or indirectly in order to influence award of this bid.

Authorized Signature, Title (Owner/ Corporate Officer)

Date

Printed Name: _____

Company Name

Mailing Address

Telephone No.

DRUG-FREE WORKPLACE AFFIDAVIT

The undersigned, principal officer of _____, an employer of five (5) or more employees contracting with Robertson County, Tennessee government to provide construction services, hereby states under oath as follows:

1. The undersigned is a principal officer of _____ (hereinafter referred to as the "Company"), and is duly authorized to execute this Affidavit on behalf of the Company.

2. The Company submits this Affidavit pursuant to T.C.A. § 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services to submit an affidavit stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9, of the *Tennessee Code Annotated*.

3. The Company is in compliance with T.C.A. § 50-9-113.

Authorized Signature, Title (Owner/ Corporate Officer) **Date**

Printed Name: _____

Company Name

Mailing Address

Telephone No. **Fax No.**

Witness signature : _____ **Date:** _____

Witness printed name: _____

Robertson County, Tennessee

Letter of Compliance

Successful bidder must comply with and provide this Letter of Compliance.

Amendments to the Tennessee Code Annotated Section 49-5-413 may require employers doing business with the Robertson County Board of Education to have their employees' criminal history records checked. The law provides that no employer or their employee(s):

1. Shall come in direct contact with school children, children in a childcare program; AND/OR
2. Shall enter the grounds of a school or childcare center operated by the Robertson County Board of Education when children are present without this compliance letter on file.

Your signature below indicates that you are fully aware of these requirements and that if applicable to your business relationship with the Robertson County Board of Education: (1) you have fully complied with the investigation required; and (2) you and any of your employees to which this applies are qualified to be in contact with the children and/or on school grounds as set forth by the Statute.

Further, you agree to hold Robertson County and/or its Board of Education harmless in all respects from any failure on your part to follow these requirements.

Authorized Signature (Owner/ Corporate Officer)

Date

Printed Name _____

Company Name _____

Mailing Address _____

Telephone No. _____ **Fax No.** _____

Email Address: _____

SITE PLAN FOR

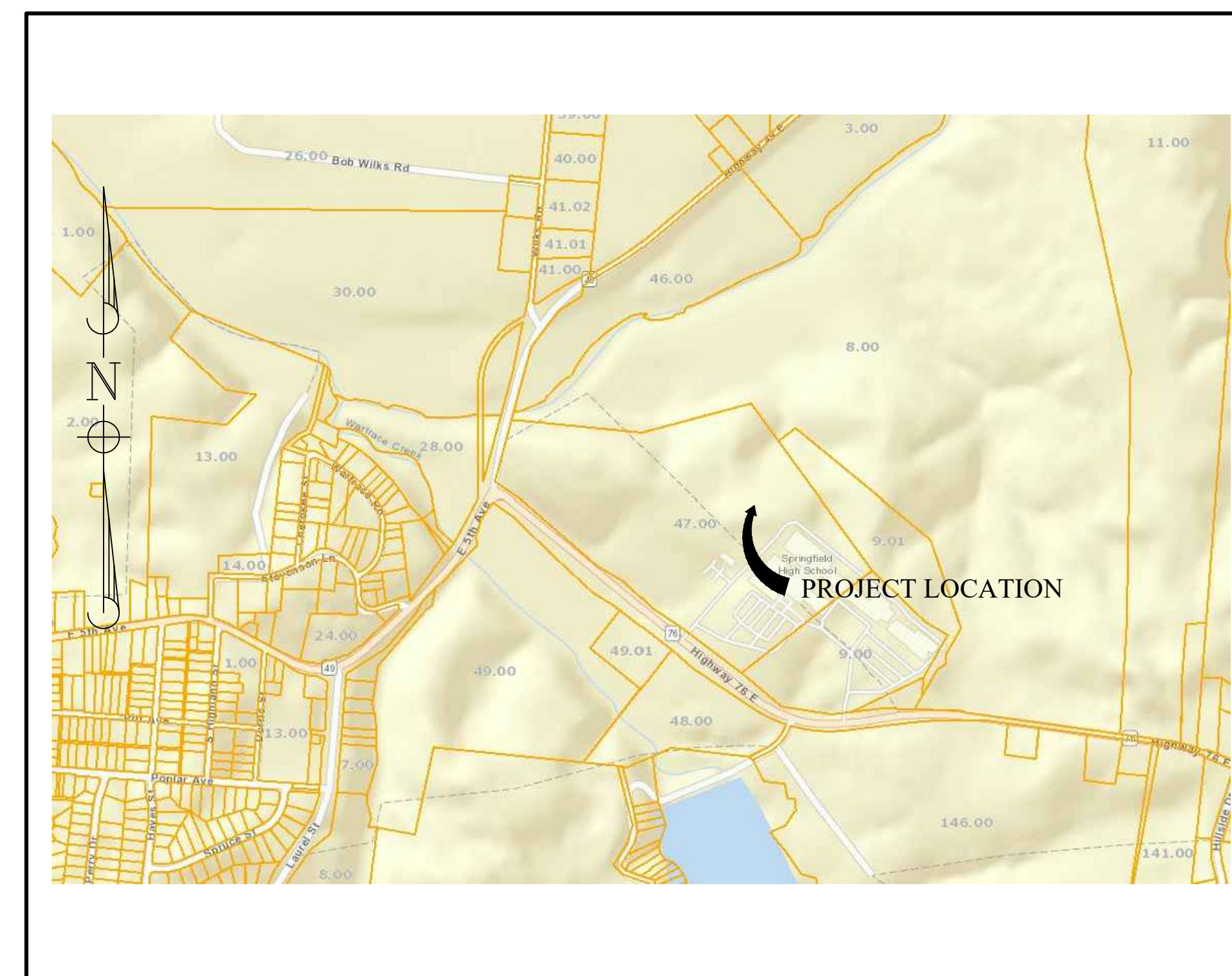
SHS SOCCER FIELD REALIGNMENT

5240 HWY 76 E.
SPRINGFIELD, TN
ROBERTSON COUNTY

SHEET INDEX

C1.00	—————	DEMO AND INITIAL EPSC
C1.01	—————	GRADING & DRAINAGE PLAN
C1.02	—————	FINAL STABILIZATION
C1.03	—————	SEGMENTAL RETAINING WALL
C2.01	—————	CONSTRUCTION DETAILS
C2.02	—————	CONSTRUCTION DETAILS

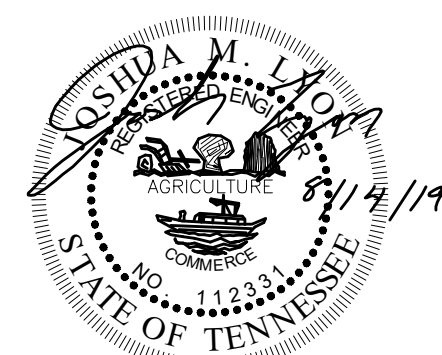
DATE: 08/14/19 SHS SOCCER FIELD REALIGNMENT



Vicinity Map
Not to Scale



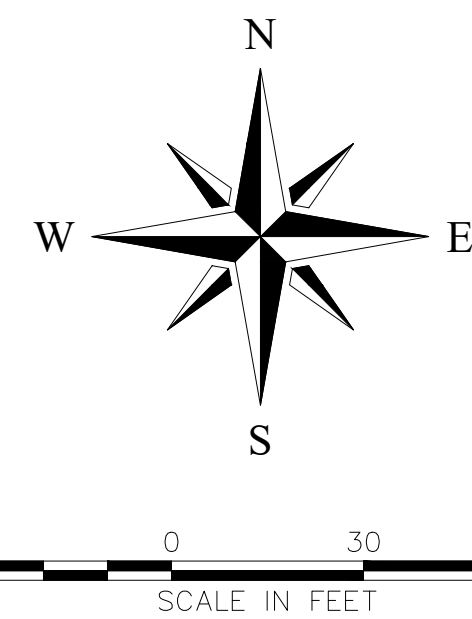
SERVING CLIENTS WITH CIVIL AND ENVIRONMENTAL ENGINEERING SERVICES
3556 TOM AUSTIN HWY, SUITE 1, SPRINGFIELD, TN 37172
PHONE: (615) 382-2000 FAX: (888) 373-4485
www.klobereng.com



JOSHUA M. LYON, P.E. TN#112331

CALL BEFORE YOU DIG

CALL 811 NATIONWIDE
Know what's below. Call before you dig.
IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND POSITIVE PROPERTIES. THEREFORE CERTIFICATION TO THE LOCATION OF ALL UNDERGROUND UTILITIES IS WITHHELD.



LEGEND:

- PROPERTY LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING ELECTRIC LINE
- FENCE
- NEW CURB
- SILT FENCE
- EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- NEW 1' CONTOUR
- DEM'D LINE
- MANHOLE
- CLEAN OUT
- POWER POLE
- WATER METER
- FIRE HYDRANT
- IRON ROD OLD
- IRON ROD NEW
- PIPE INVERT
- PIPE INVERT 25.42
- SPOT ELEVATION
- SLOPE DIRECTION

GRADING, DRAINAGE, AND EROSION CONTROL NOTES:

1. TOPSOIL SHALL BE STRIPPED FROM ALL CUT AND FILL AREAS, STOCKPILED AND REDISTRIBUTED OVER GRADED AREAS TO A MINIMUM DEPTH OF 6 INCHES. MAKE STOCKPILES FREE DRAINING AND PROVIDE EROSION AND SEDIMENTATION CONTROL'S AROUND STOCKPILES.
2. ALL GRADED AREAS SHALL BE SEEDED AND MULCHED WITHIN 15 DAYS AFTER GRADING IS COMPLETED.
3. CONSTRUCT TEMPORARY EROSION CONTROL AS SHOWN ON THE DRAWINGS PRIOR TO BEGINNING GRADING OPERATIONS.
4. ALL DRAINAGE STRUCTURES, PIPES WITHIN THE LIMITS OF CONSTRUCTION, AND DETENTION PONDS SHALL HAVE SEDIMENT REMOVED PRIOR TO FINAL ACCEPTANCE.
5. SILT BARRIERS SHALL BE CLEANED OF ACCUMULATED SEDIMENT WHEN APPROXIMATELY 1/3 FILLED.
6. ALL LOCATIONS OF TEMPORARY EROSION CONTROL DEVICES SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER.
7. WHEN THE TEMPORARY EROSION CONTROL DEVICES ARE NO LONGER REQUIRED FOR THE INTENDED PURPOSE THEY SHALL BE REMOVED.
8. REPLACE DAMAGED AND WORN OUT SILT BARRIERS AS DIRECTED BY THE CITY/ENGINEER.
9. THE GRATE ELEVATIONS FOR CURB INLETS ARE GIVEN TO THE CENTER OF THE INLETS AT THE FACE OF CURB. THE GRATES SHALL SLOPE LONGITUDINALLY WITH THE PAVEMENT GRADE. ADJUST THE CASTING TO FALL ALONG THE CURB LINE.
10. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES, PROTECT UTILITIES TO REMAIN, AND REPAIR CONTRACTOR-CAUSED DAMAGE ACCORDING TO LOCAL STANDARDS AT CONTRACTOR'S EXPENSE.
11. NOTIFY LOCAL UTILITY LOCATOR SERVICE OF INTENDED EXCAVATION/UTILITY TRENCHING OPERATIONS.
12. IN THE EVENT OF ANY DISCREPANCIES FOUND IN THE DRAWINGS OR IF PROBLEMS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
13. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS.
14. SPOT ELEVATIONS AND CONTOURS REPRESENT PROPOSED FINISHED GRADE AND TOP OF FINISHED PAVEMENT AND GRADE.
15. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO BEGINNING WORK.
16. EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR ON SITE AT NO ADDITIONAL COST IN A LEGAL MANNER.
17. CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF A DETAILED ENGINEERING GRADING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE. SHOULD THE CONTRACTOR HAVE ANY QUESTIONS OF THIS INTENT OR ANY PROBLEMS WITH THE CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED PRIOR TO BEGINNING WORK.
18. EXISTING MANHOLE CASTINGS TO REMAIN SHALL BE RESET TO MATCH NEW GRADE.
19. ALL CURBS AND SIDEWALKS SHALL BE BACKFILLED WITH TOPSOIL, AND SEEDED AND MULCHED, UNLESS OTHERWISE NOTED.
20. ALL PIPES UNDER PAVED AREAS SHALL BE BACKFILLED WITH CRUSHED STONE. ALL PIPES UNDER LAWN AREAS SHALL BE BACKFILLED WITH SATISFACTORY MATERIAL COMPACTED TO 98% MAXIMUM PER ASTM D698.
21. SCREENED ITEMS INDICATE A PRE-CONSTRUCTION TOPOGRAPHIC SURVEY PROVIDED BY CHANDLER SURVEYING OF PLEASANT VIEW, TN.
22. ALL STORM DRAINAGE PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED. PIPE LENGTHS SHOWN ARE APPROXIMATE.
23. ALL CUT AND FILL SLOPES TO BE 3:1 MAXIMUM, UNLESS NOTED OTHERWISE.
24. SATISFACTORY TOPSOIL IS DEFINED AS SOIL BEING FREE OF SUBSOIL, CLAY LUMPS, STONES, OTHER OBJECTS OVER 1 INCH IN DIAMETER, OR CONTAMINANTS.
25. AFTER STRIPPING TOPSOIL, PROOFROLL SUBGRADE WITH A LOADED DUMP TRUCK WITH A MINIMUM WEIGHT OF 20 TONS.
26. FINISH GRADES TOLERANCES ARE 0.10 FOOT ABOVE OR BELOW DESIGN ELEVATIONS.
27. PROVIDE TEMPORARY SEEDING ON STOCKPILES AND ALL OTHER AREAS OF THE SITE THAT WILL REMAIN UNDISTURBED FOR 30 DAYS OR MORE.
28. MAXIMUM SLOPES IN ALL DIRECTIONS OF HANDICAP PARKING SPACES/AISLES SHALL BE 2%.
29. EARTHWORK FILL SHALL INCLUDE STRIPPING TOPSOIL AND PLACING ENGINEERED FILL IN MAXIMUM 12" COMPACTED LIFTS WITH DENSITY OF 98% OF MAXIMUM PER ASTM D698.
30. I CERTIFY THAT THESE PLANS HAVE BEEN PREPARED BY ME AND/OR UNDER MY DIRECT SUPERVISION. THIS PROJECT IS PLANNED TO DISTURB MORE THAN ONE ACRE, IT THEREFORE FALLS UNDER THE TENNESSEE DIVISION OF WATER POLLUTION CONTROL'S GENERAL NPDES PERMIT TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY. KLOBER ENGINEERING SERVICES WILL ASSIST THE CONTRACTOR IN SUBMITTING THE "NOTICE OF INTENT (NOI)" TO CONSTRUCT TO THE STATE AT LEAST 30 DAYS PRIOR TO BEGINNING LAND DISTURBANCE. THE TN GENERAL CONSTRUCTION PERMIT IS TNR240995.

Joshua M. Lyon, P.E. PROJECT ENGINEER
8/14/19 DATE

WALTER MCCAULEY
RB, 679, PG. 870 RORCT
MAP 81, PARCEL 8 TAORCT
ZONING: AG-2

NO.	BY	DATE	DESCRIPTION



JOSHUA M. LYON, P.E. TN#112331
CONSTRUCTION DOCUMENTS

**SPRINGFIELD HIGH SCHOOL
SOCCER FIELD REVISION**

DRAWN BY: JML
CHECKED BY: JML
PROJECT NO.: C08618

INITIAL EP&SC
SHEET NUMBER
C1.00

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CALL BEFORE YOU DIG

811 CALL NATIONWIDE. Know what's below. Call before you dig. IF THE CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION, THE LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND POSITIVE IDENTIFICATION, THEREFORE CERTIFICATION TO THE LOCATION OF ALL UNDERGROUND UTILITIES IS WITHHELD.

North arrow pointing N, S, E, W. Scale in feet: 30 0 30 60. LEGEND: PROPERTY LINE, EXISTING WATER LINE, EXISTING SEWER LINE, EXISTING ELECTRIC LINE, FENCE, NEW CURB, SILT FENCE, EXISTING 5' CONTOUR, EXISTING 1' CONTOUR, NEW 1' CONTOUR, DEMO LINE, MANHOLE, CLEAN OUT, POWER POLE, WATER METER, FIRE HYDRANT, IRON ROD OLD, IRON ROD NEW, PIPE INVERT, SPOT ELEVATION, SLOPE DIRECTION.

LEGEND: PROPERTY LINE, EXISTING WATER LINE, EXISTING SEWER LINE, EXISTING ELECTRIC LINE, FENCE, NEW CURB, SILT FENCE, EXISTING 5' CONTOUR, EXISTING 1' CONTOUR, NEW 1' CONTOUR, DEMO LINE, MANHOLE, CLEAN OUT, POWER POLE, WATER METER, FIRE HYDRANT, IRON ROD OLD, IRON ROD NEW, PIPE INVERT, SPOT ELEVATION, SLOPE DIRECTION.

AREA TO BE USED FOR EXCESS MATERIAL DISPOSAL. MAINTAIN ORIGINAL DRAINAGE PATH. PROVIDE PROPER EROSION CONTROL MEASURES AND FINAL STABILIZATION.

ALLAN BLOCK SEGMENTAL RETAINING WALL WITH FENCE ABOVE WALL, #210'

- GRADING, DRAINAGE, AND EROSION CONTROL NOTES: 1. TOPSOIL SHALL BE STRIPPED FROM ALL CUT AND FILL AREAS... 2. ALL GRADED AREAS SHALL BE SEEDED AND MULCHED... 3. CONSTRUCT TEMPORARY EROSION CONTROL... 4. ALL DRAINAGE STRUCTURES, PIPES WITHIN THE LIMITS OF CONSTRUCTION... 5. SILT BARRIERS SHALL BE CLEANED OF ACCUMULATED SEDIMENT... 6. ALL LOCATIONS OF TEMPORARY EROSION CONTROL DEVICES... 7. WHEN THE TEMPORARY EROSION CONTROL DEVICES ARE NO LONGER REQUIRED... 8. REPLACE DAMAGED AND WORN OUT SILT BARRIERS... 9. THE GRATE ELEVATIONS FOR CURB INLETS ARE GIVEN TO THE CENTER OF THE INLETS... 10. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES... 11. NOTIFY LOCAL UTILITY LOCATOR SERVICE OF INTENDED EXCAVATION/UTILITY TRENCHING OPERATIONS... 12. IN THE EVENT OF ANY DISCREPANCIES FOUND IN THE DRAWINGS... 13. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS... 14. SPOT ELEVATIONS AND CONTOURS REPRESENT PROPOSED FINISHED GRADE... 15. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AND INVERTS... 16. EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR... 17. CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF A DETAILED ENGINEERING GRADING DESIGN... 18. EXISTING MANHOLE CASTINGS TO REMAIN SHALL BE RESET TO MATCH NEW GRADE... 19. ALL CURBS AND SIDEWALKS SHALL BE BACKFILLED WITH TOPSOIL... 20. ALL PIPES UNDER PAVED AREAS SHALL BE BACKFILLED WITH CRUSHED STONE... 21. SCREENED ITEMS INDICATE A PRE-CONSTRUCTION TOPOGRAPHIC SURVEY... 22. ALL STORM DRAINAGE PIPE SHALL BE CLASS III RCP... 23. ALL CUT AND FILL SLOPES TO BE 3:1 MAXIMUM... 24. SATISFACTORY TOPSOIL IS DEFINED AS SOIL BEING FREE OF SUBSOIL... 25. AFTER STRIPPING TOPSOIL, PROOFROLL SUBGRADE... 26. FINISH GRADES TOLERANCES ARE 0.10 FOOT ABOVE OR BELOW... 27. PROVIDE TEMPORARY SEEDING ON STOCKPILES... 28. MAXIMUM SLOPES IN ALL DIRECTIONS OF HANDICAP PARKING SPACES... 29. EARTHWORK FILL SHALL INCLUDE STRIPPING TOPSOIL... 30. I CERTIFY THAT THESE PLANS HAVE BEEN PREPARED BY ME AND/OR UNDER MY DIRECT SUPERVISION...

Joshua M. Lyon, P.E. PROJECT ENGINEER 8/14/19 DATE

WALTER MCCAULEY RB, 679, PG. 870 BORCT MAP 81, PARCEL 8 TAORCT ZONING: AG-2



JOSHUA M. LYON, P.E. TN#112331 CONSTRUCTION DOCUMENTS

SPRINGFIELD HIGH SCHOOL SOCCER FIELD REVISION

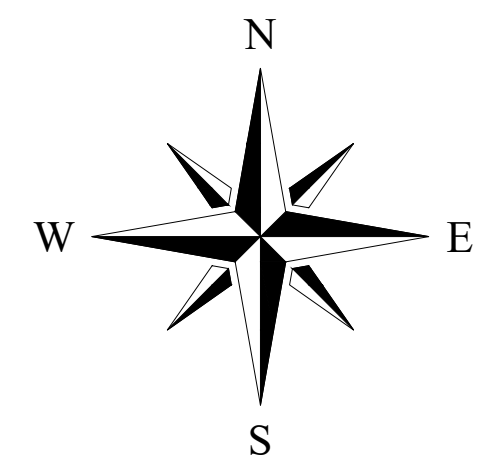
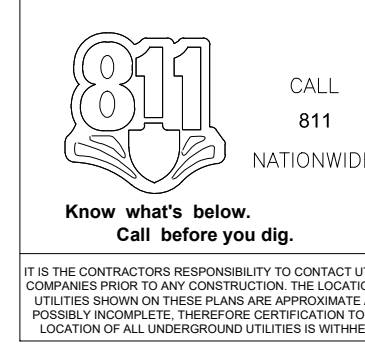
DRAWN BY: JML CHECKED BY: JML PROJECT NO.: C08618

GRADING & DRAINAGE PLAN SHEET NUMBER C1.01

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KLOBER ENGINEERING SERVICES. SERVING CLIENTS WITH CIVIL AND ENVIRONMENTAL ENGINEERING SERVICES. 3585 FOM AUSTIN HWY, SUITE 7, SPRINGFIELD, TN 37172. PHONE: (615) 382-2900 FAX: (615) 374-4485. www.klobereng.com

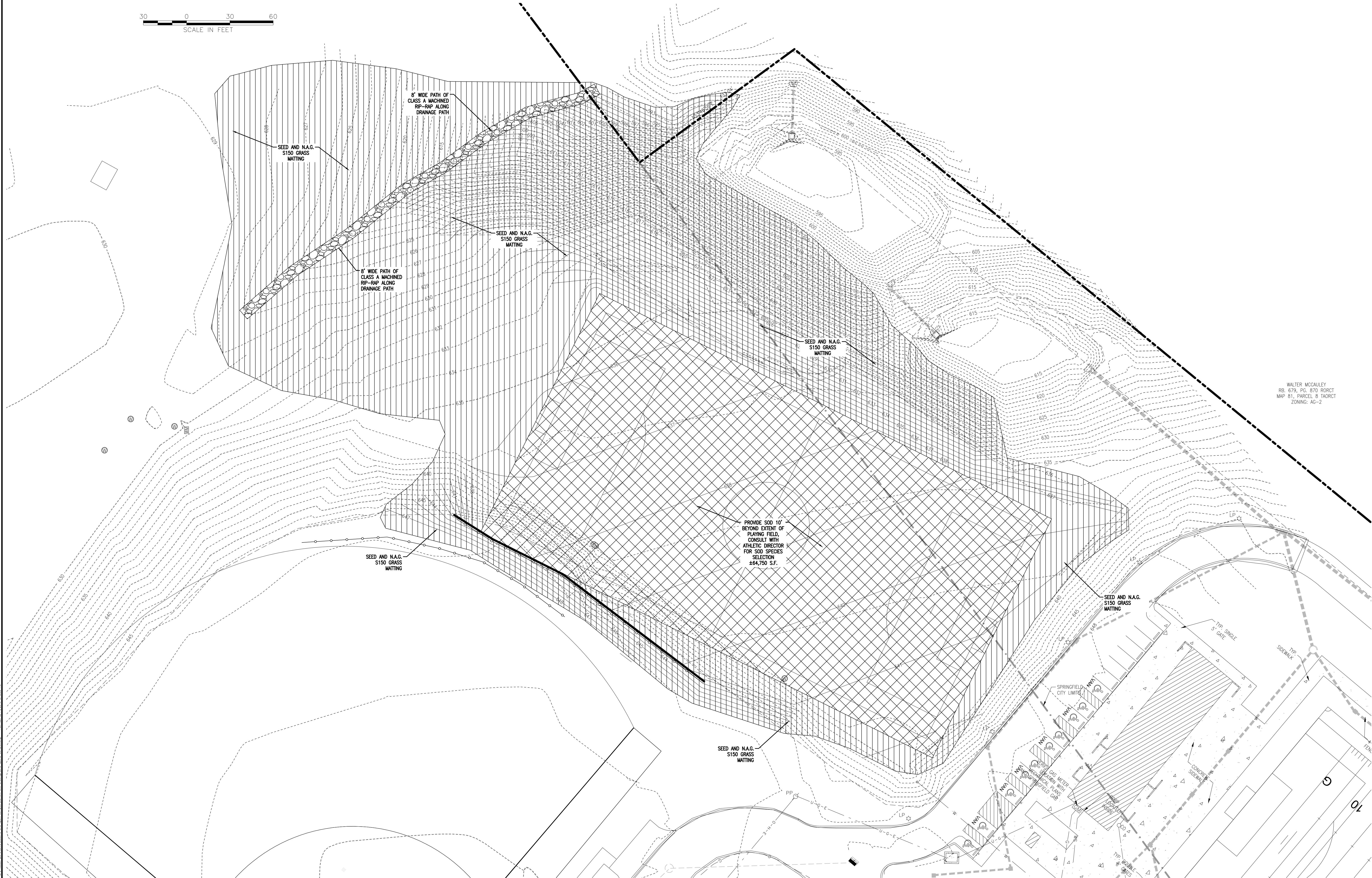
CALL BEFORE YOU DIG



LEGEND:

	PROPERTY LINE		MANHOLE		PIPE INVERT
	EXISTING WATER LINE		CLEAN OUT		SPOT ELEVATION
	EXISTING SEWER LINE		POWER POLE		SLOPE DIRECTION
	EXISTING ELECTRIC LINE		WATER METER		
	NEW CURB		FIRE HYDRANT		
	NEW 5' CONTOUR		IRON ROD OLD		
	NEW 1' CONTOUR		IRON ROD NEW		
	DMND LINE				

- STABILIZATION NOTES:**
1. PRIOR TO BEGINNING CONSTRUCTION ON THIS SITE THE LOCATION OF UTILITIES MUST BE IDENTIFIED BY CALLING THE TOLL-FREE TENNESSEE ONE CALL REFERENCE NUMBER 1-800-351-1111.
 2. ALL CONSTRUCTION ON THIS SITE SHALL COMPLY WITH APPLICABLE REGULATIONS AS SPECIFIED BY THE CITY OF SPRINGFIELD AND THE STATE OF TENNESSEE.
 3. TOPSOIL SHALL BE PLACED ON EXCAVATED AREAS WHICH REQUIRE NEW VEGETATION. GROUND COVER SHALL BE REESTABLISHED WITH KENTUCKY 31 FESCUE SEED AT A MINIMUM OF 250 LBS. PER ACRE WITHIN 72 HOURS OF FINAL GRADING. SLOPES 3:1 OR GREATER, AND AREAS INDICATED ON PLANS, SHALL BE LINED WITH NORTH AMERICAN GREEN S150 GRASS MATTING OR EQUAL. SOD MAY BE SUBSTITUTED FOR MATTING OR SEED & STRAW AREAS.



WALTER MCCAULEY
 RB, 679, PG. 870 RORCT
 MAP 81, PARCEL 8 TAORCT
 ZONING: AG-2

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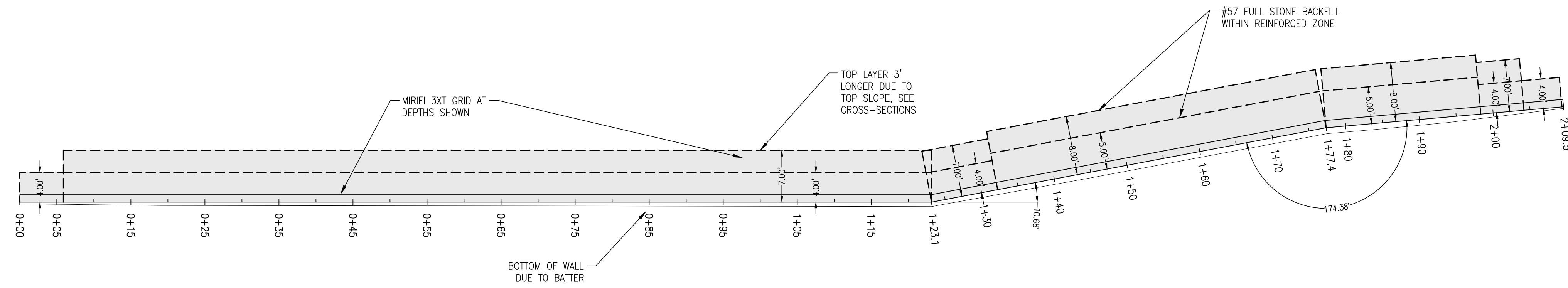
JOSHUA M. LYON, P.E. TN#112331
CONSTRUCTION DOCUMENTS

**SPRINGFIELD HIGH SCHOOL
 SOCCER FIELD REVISION**

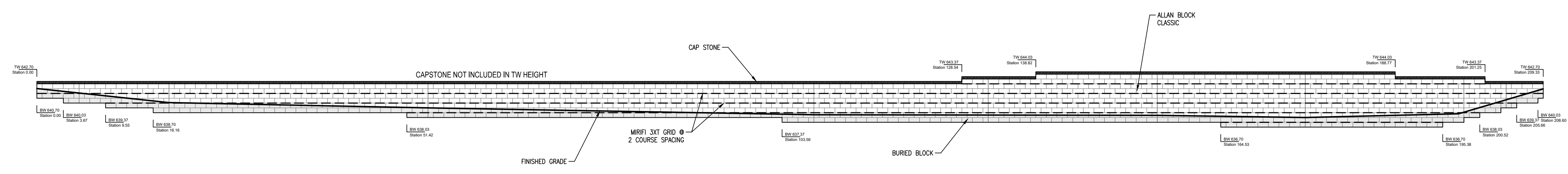
DRAWN BY: JML
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 PROJECT NO.: C08618

FINAL STABILIZATION
 SHEET NUMBER
C1.02

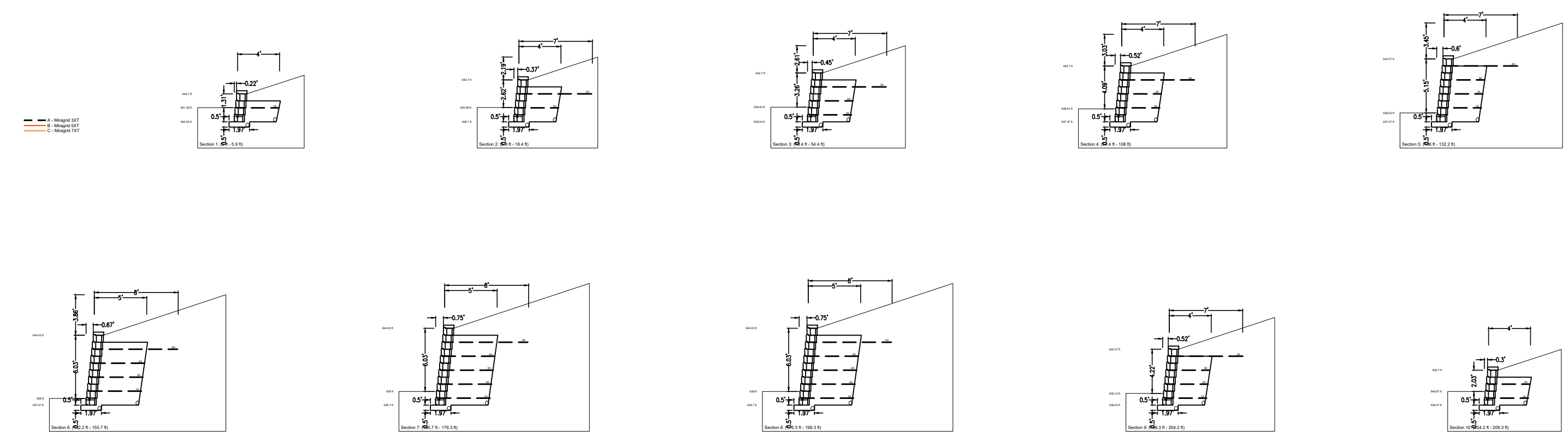
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WALL PLAN VIEW
1"=10'



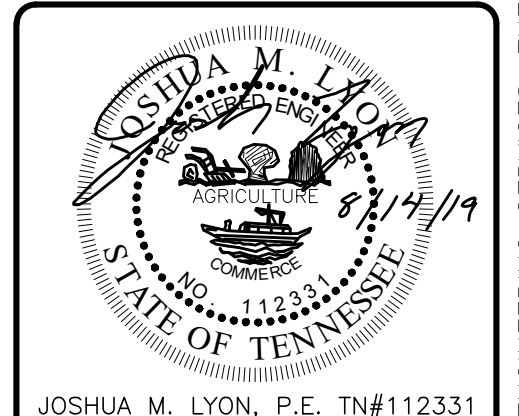
WALL PROFILE VIEW
1"=10'



WALL CROSS SECTIONS
1"=10'

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CONSTRUCTION DOCUMENTS

**SPRINGFIELD HIGH SCHOOL
SOCCER FIELD REVISION**

5240 HIGHWAY 76-E
SPRINGFIELD, TN
ROBERTSON COUNTY

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PROJECT NO.: C08618

WALL PLAN & PROFILE

SHEET NUMBER
C1.03

ALL REINFORCED BACKFILL SHALL BE #57 STONE

ALL BLOCK SHALL BE ALIAN BLOCK CLASSIC

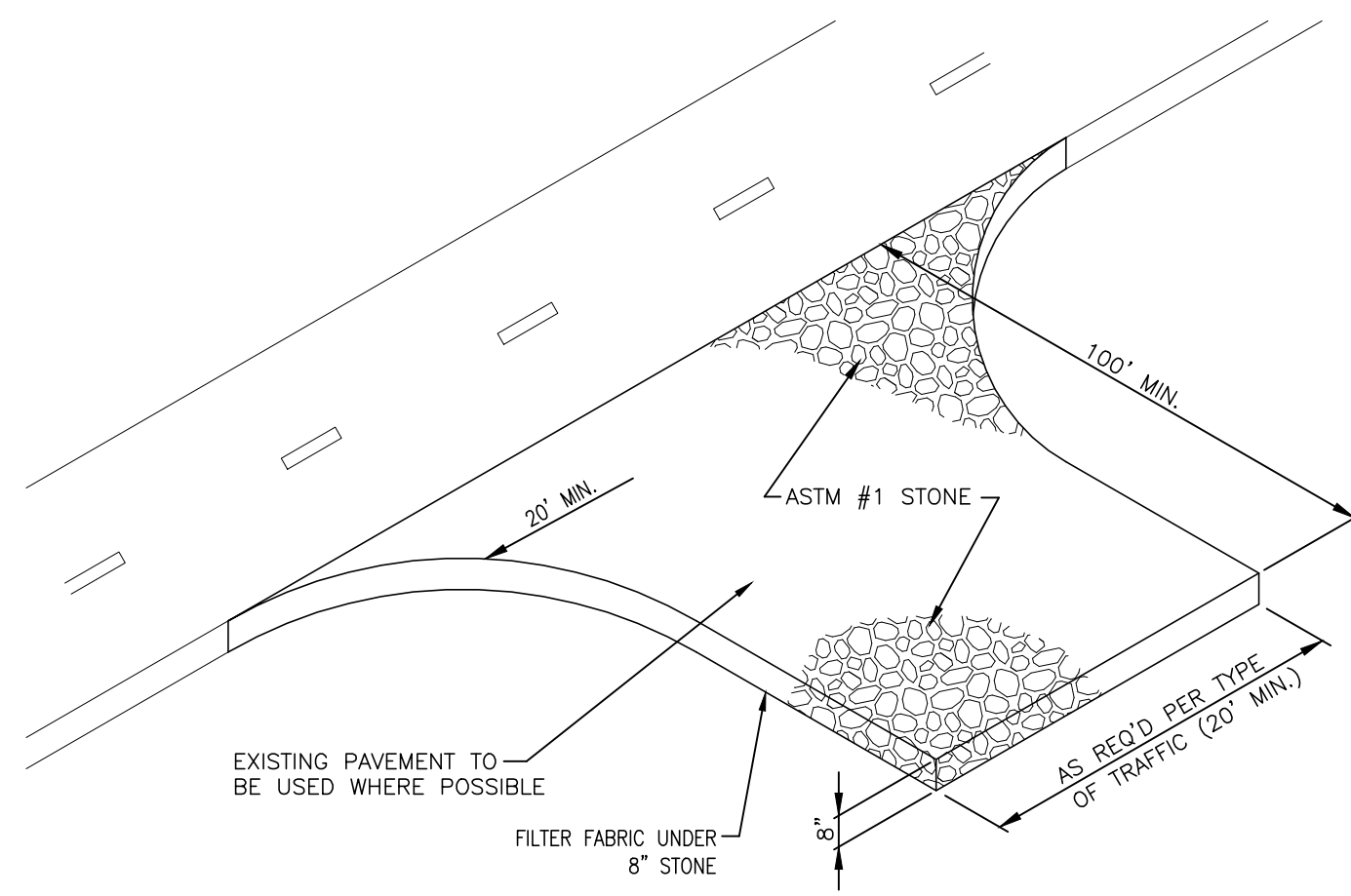
BURY MINIMUM ONE BLOCK, ADDITIONAL BLOCK DUE TO TOE SLOPE

VERIFY GRADES PRIOR TO CONSTRUCTION

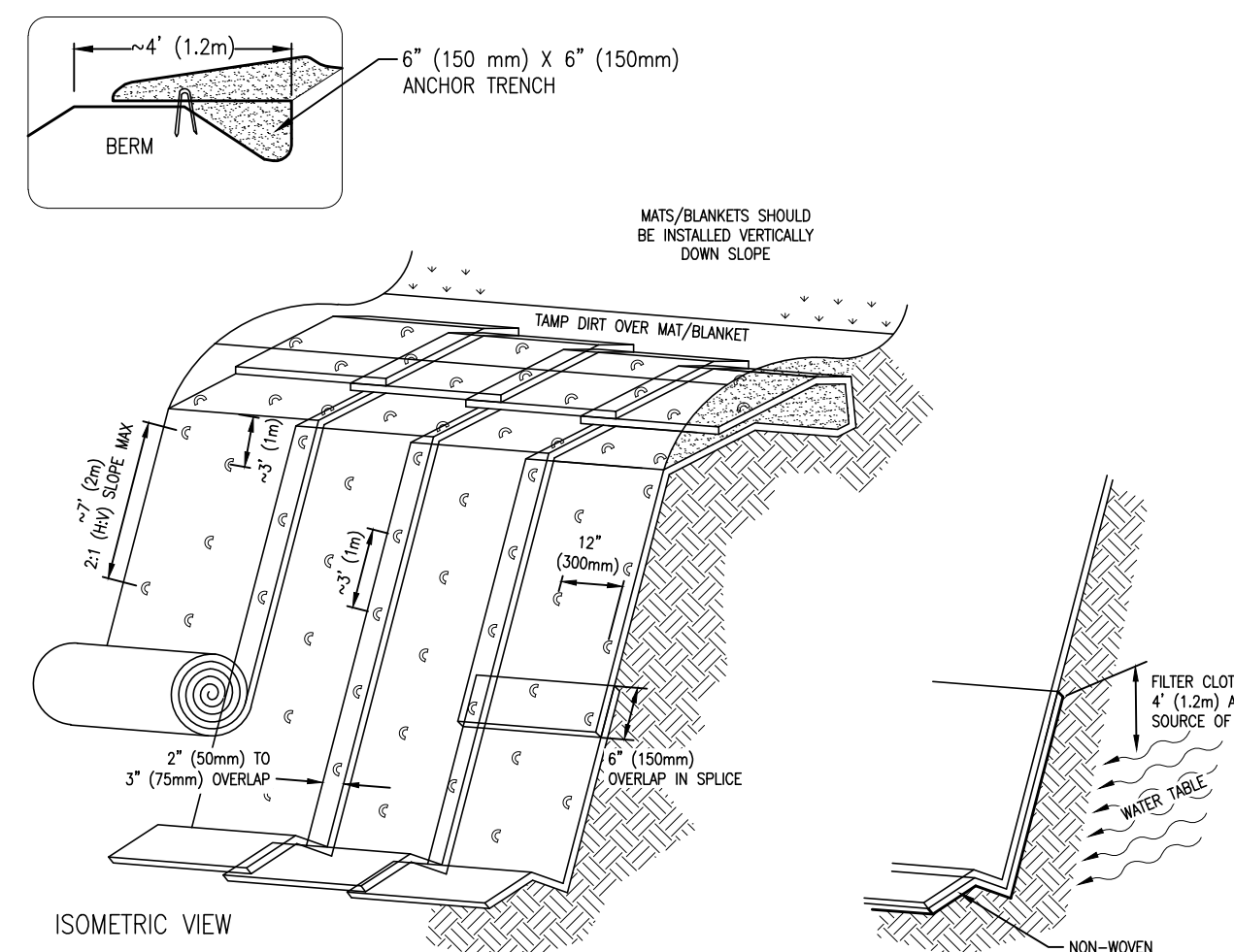
WALL STATIONING IS FROM LEFT TO RIGHT FACING THE WALL

DAYLIGHT WALL DRAINS EVERY 25' OR LESS ALONG ENTIRE LENGTH OF WALL

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TEMPORARY CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE

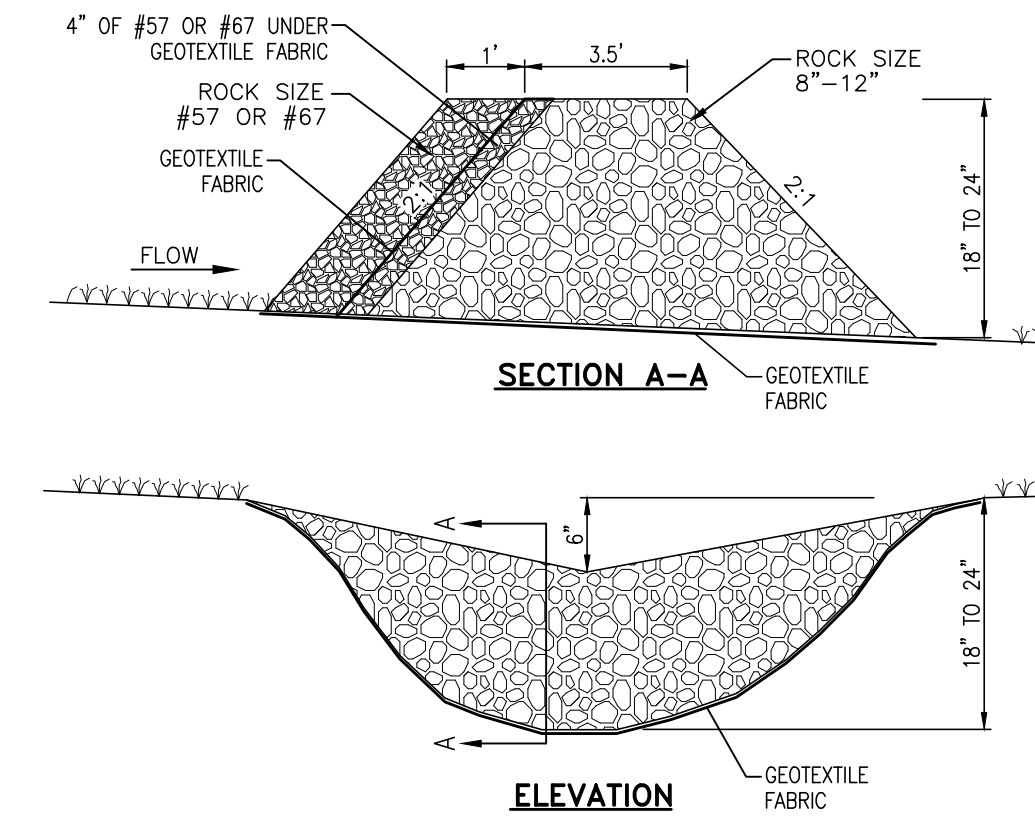


TYPICAL SLOPE SOIL STABILIZATION
N.T.S.

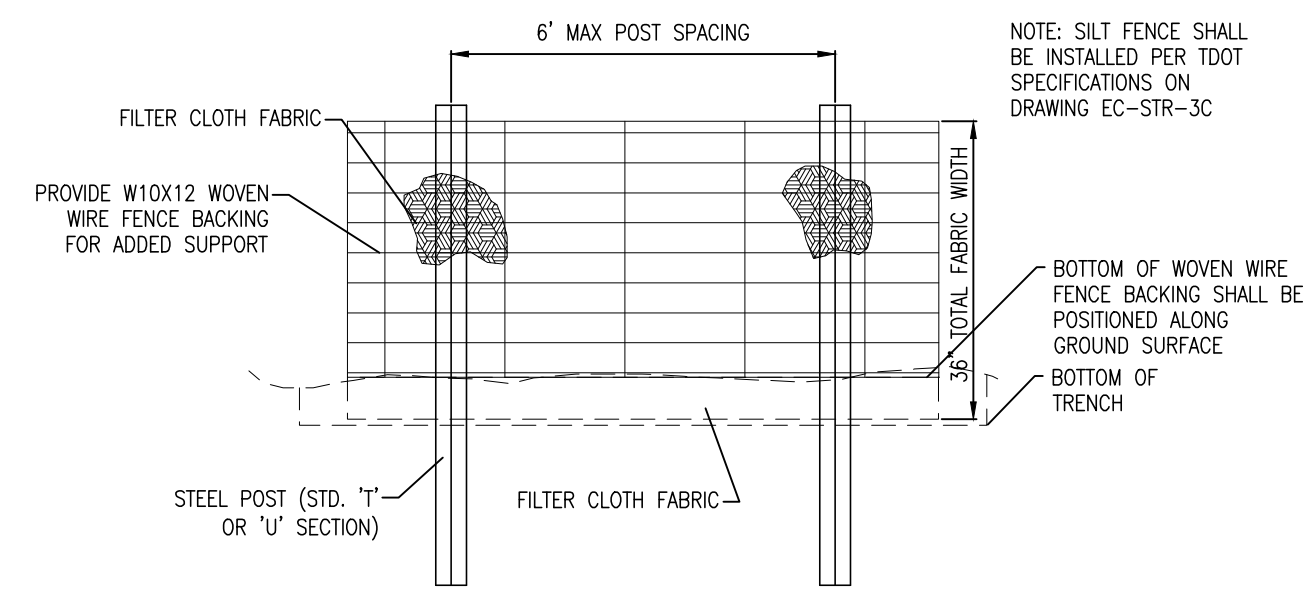
WET SLOPE LINING
N.T.S.

NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, SOIL CLOUDS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT
2. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

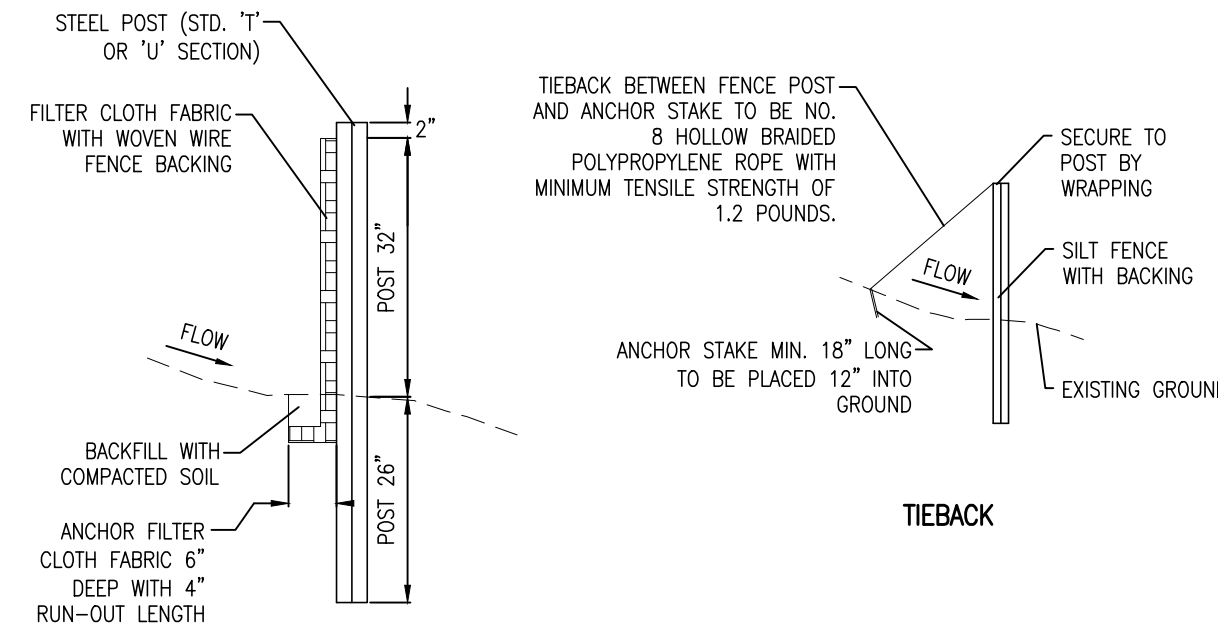
GRASS MATTING PLACEMENT



ROCK FILTER-CHECK DAM
NOT TO SCALE

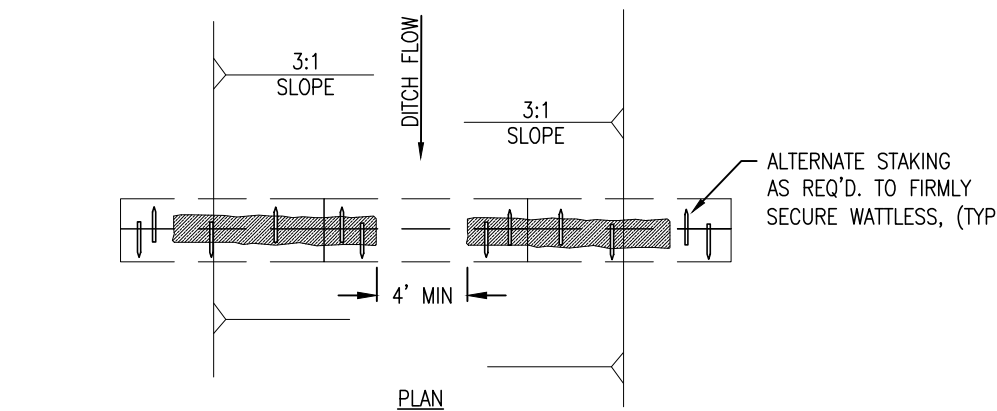


ELEVATION VIEW

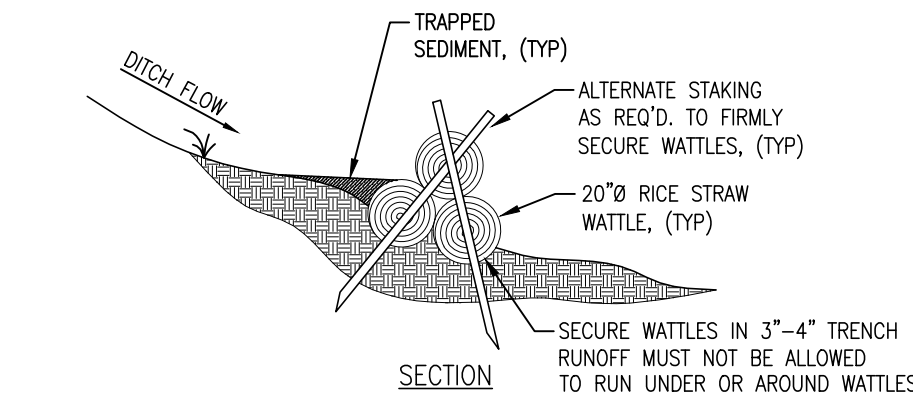
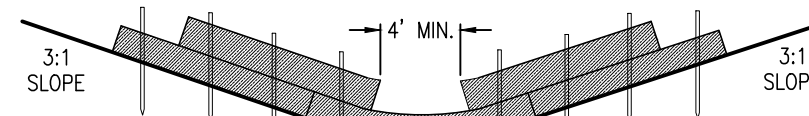


SECTIONAL VIEW

TEMPORARY SILT FENCE WITH BACKING
NOT TO SCALE



ELEVATION



SECTION

STRAW FILTER CHECK DAM
NOT TO SCALE

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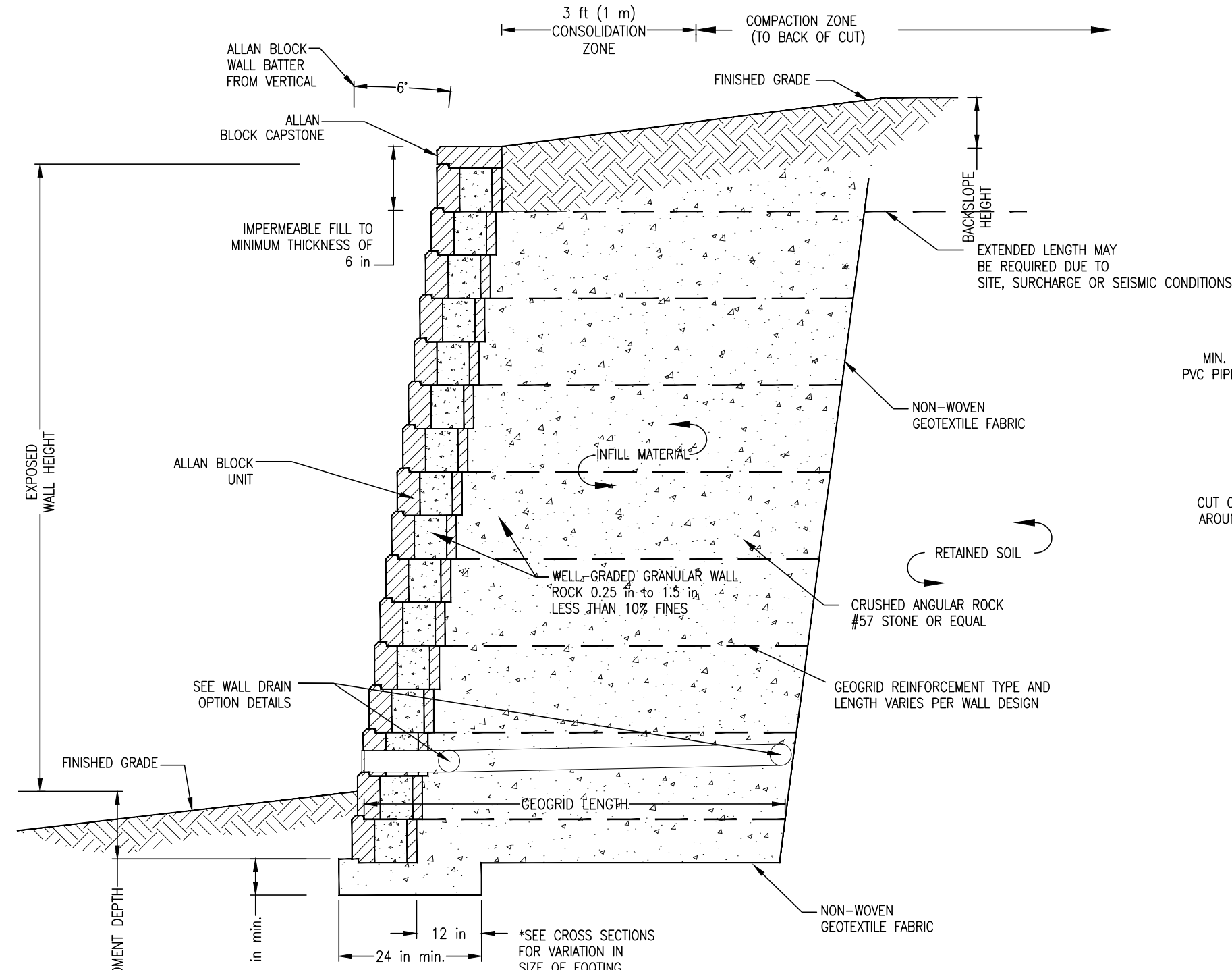
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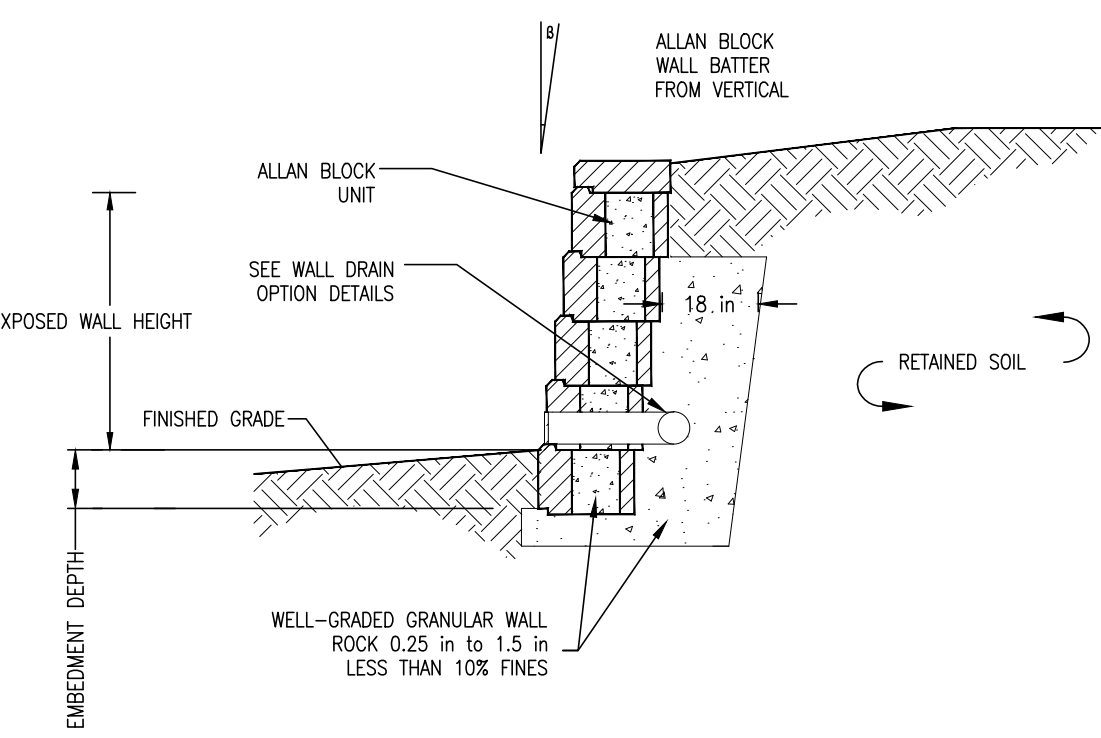
CONSTRUCTION DETAILS

SHEET NUMBER
C2.01

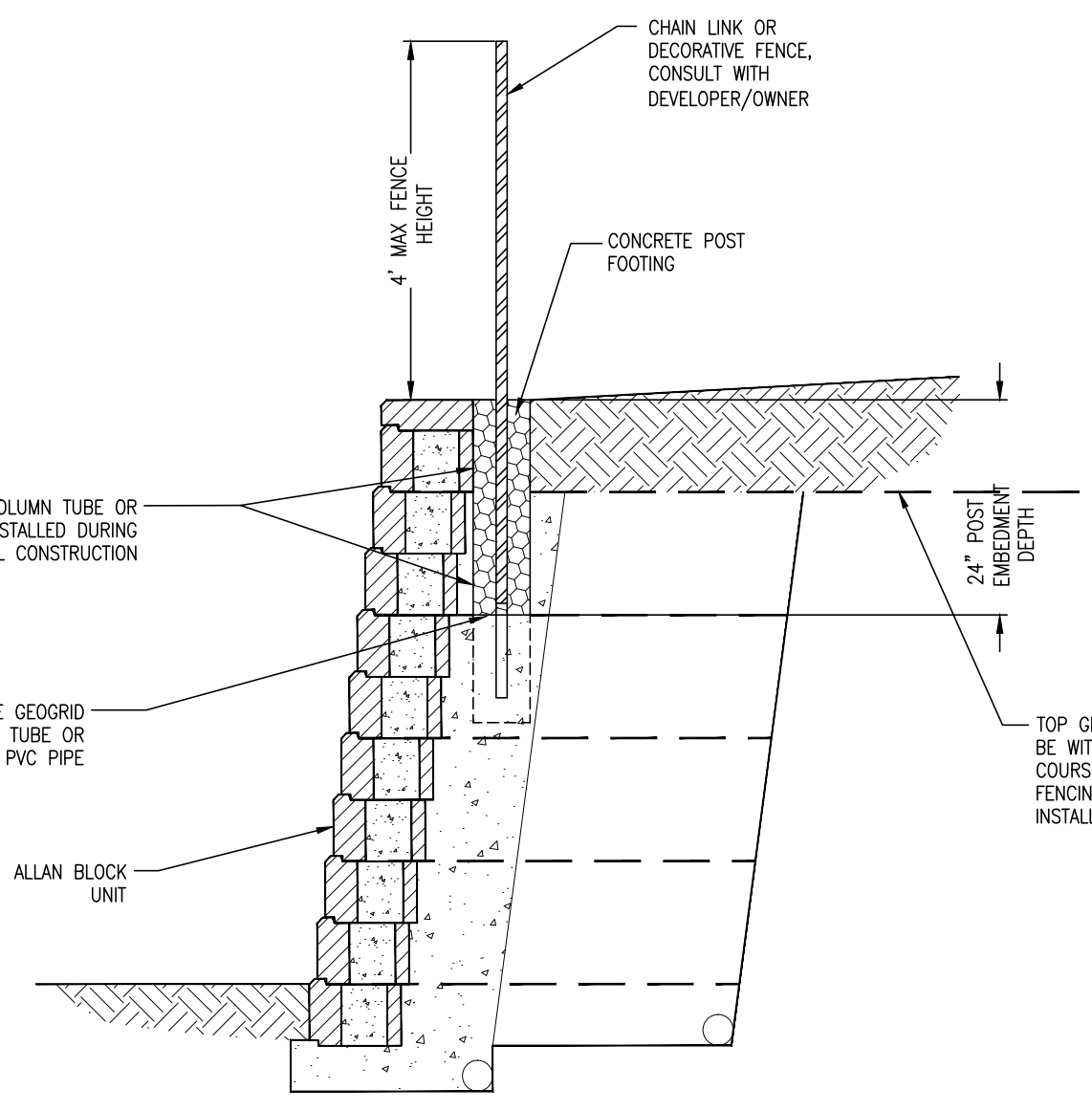
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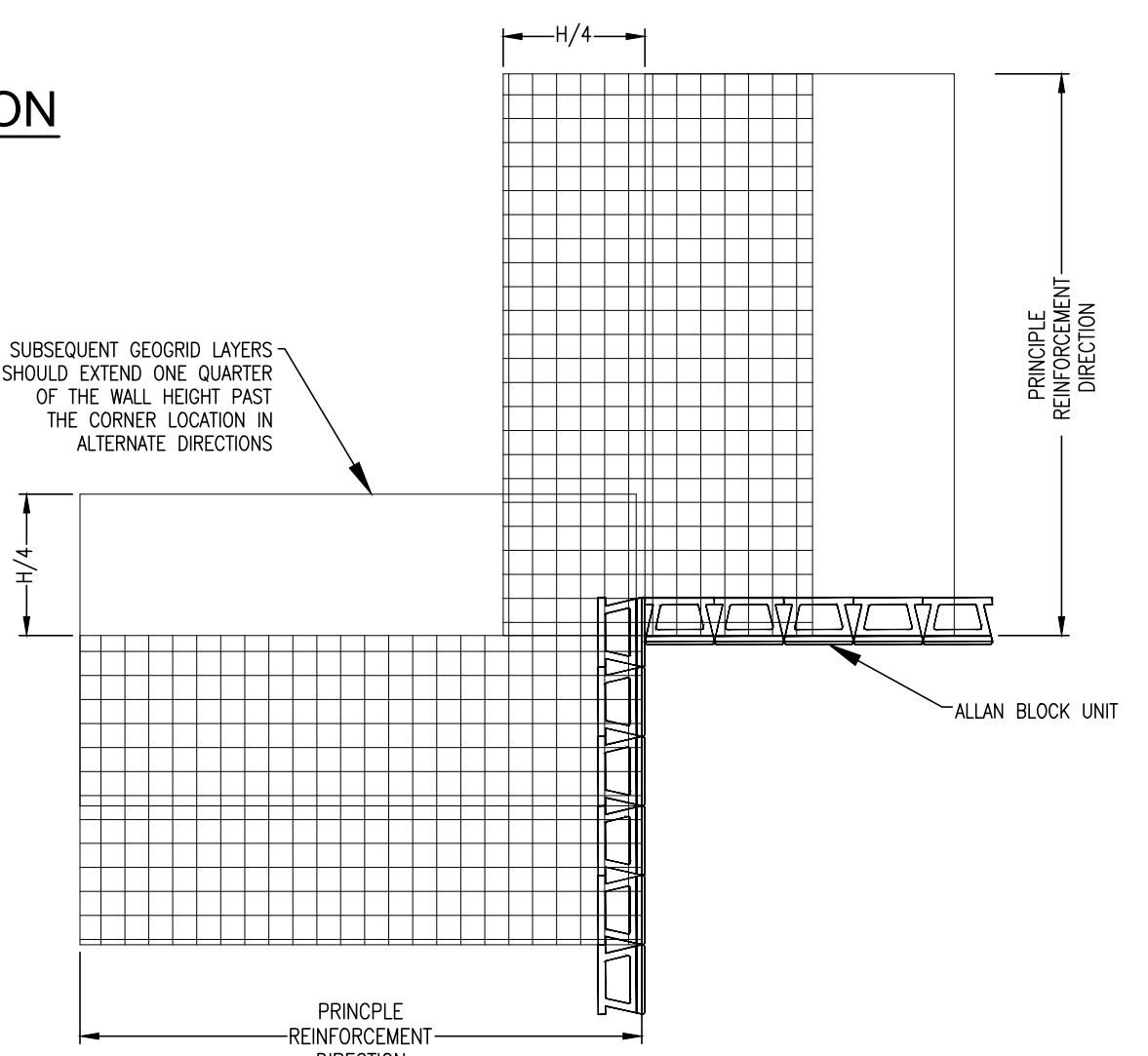
TYPICAL GEOGRID REINFORCED WALL SECTION



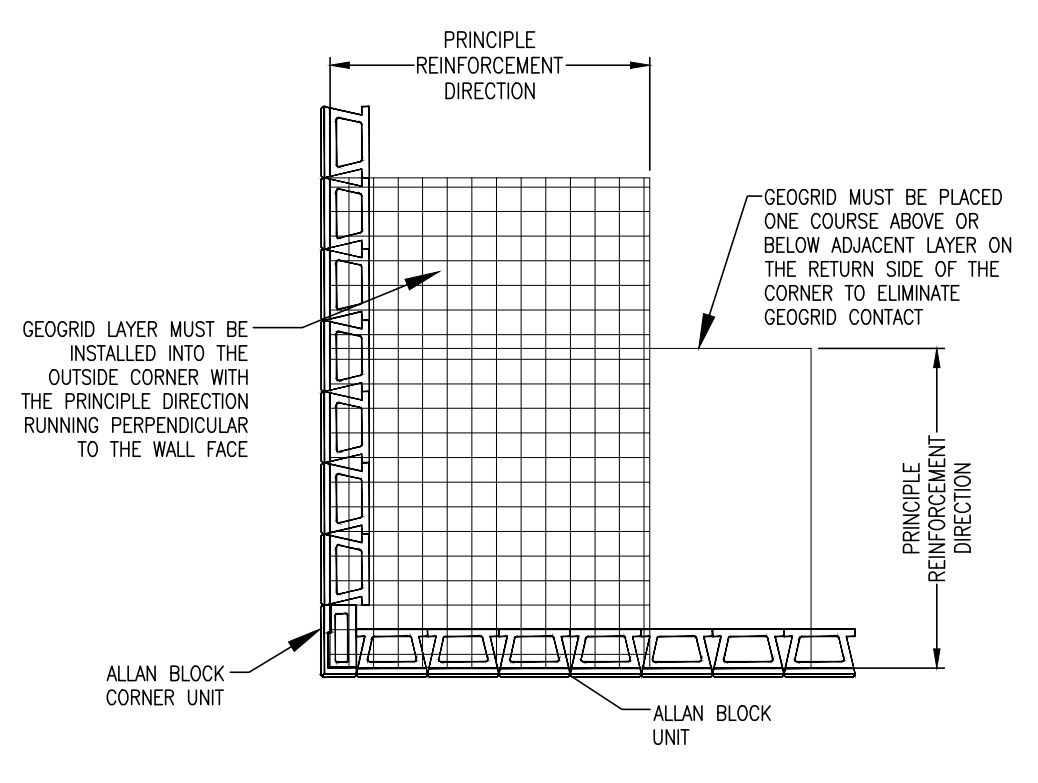
TYPICAL GRAVITY WALL SECTION



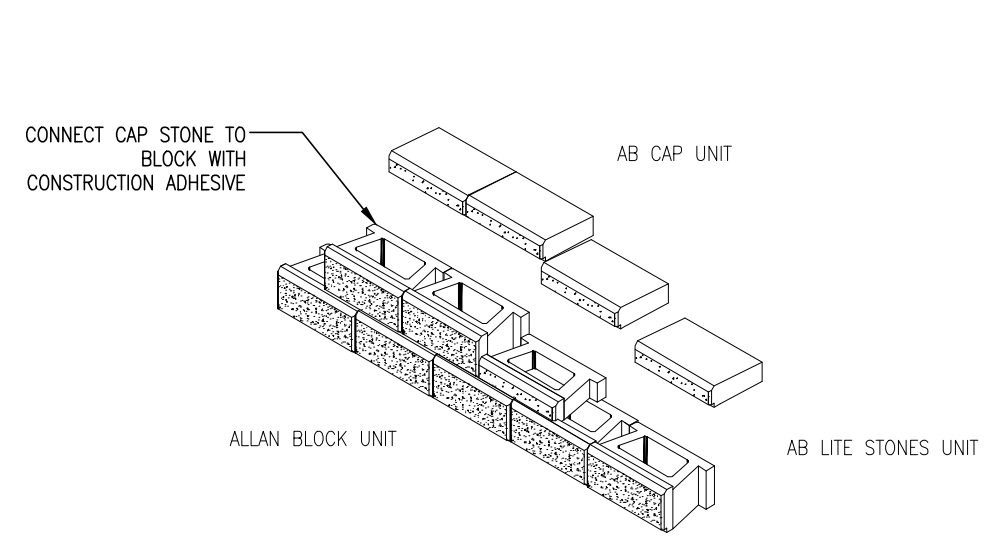
FENCE INSTALLATION (IF REQD)



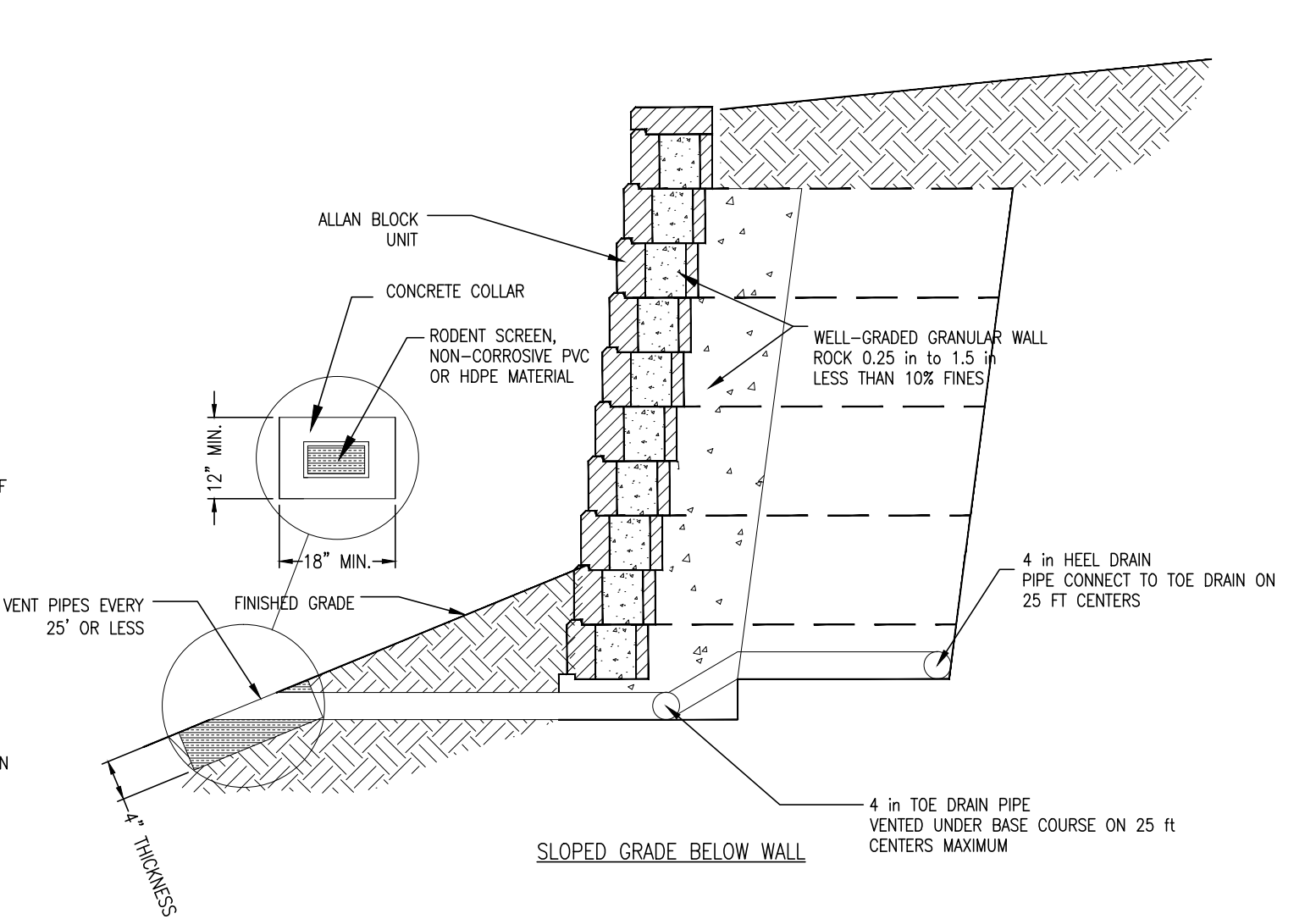
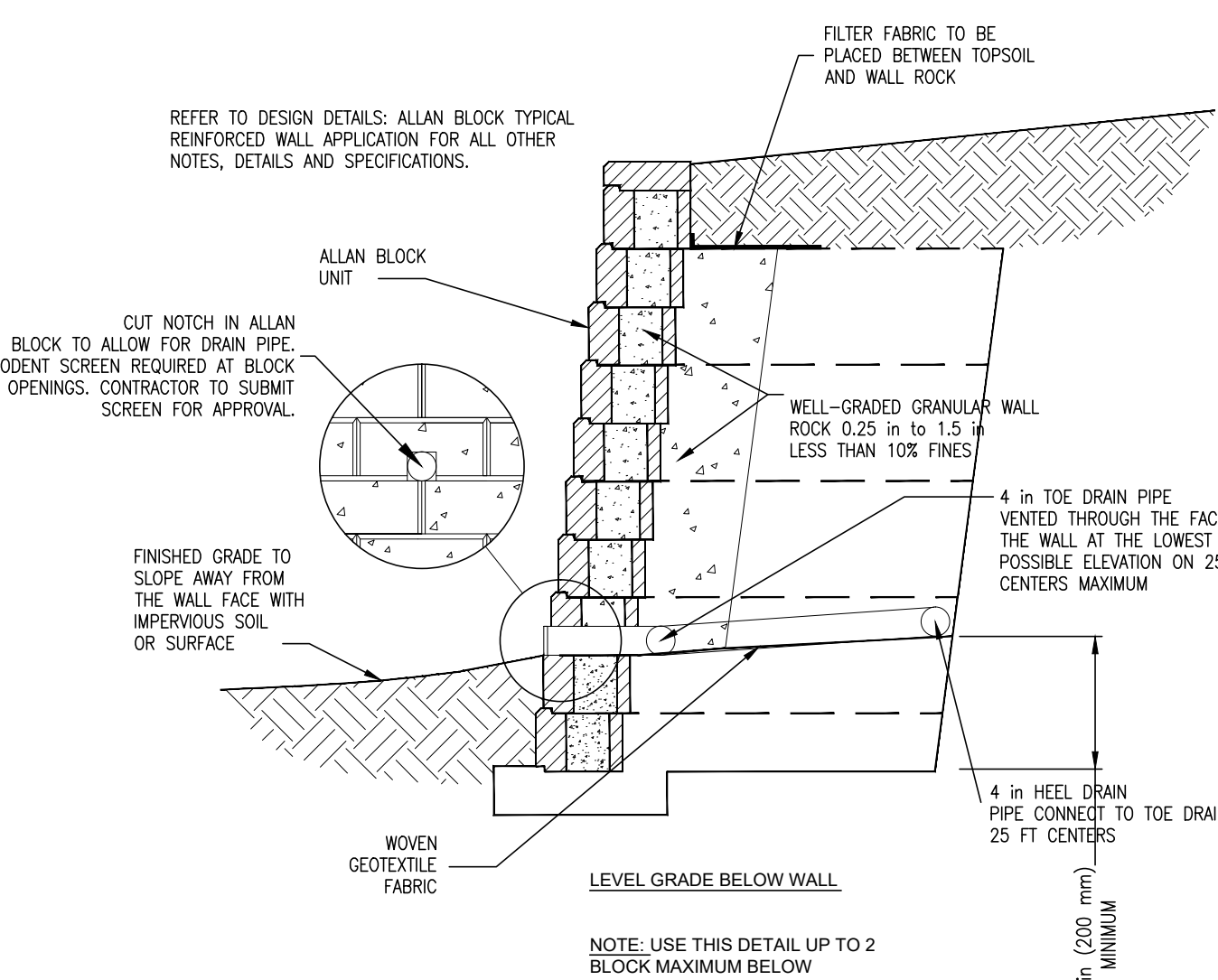
INSIDE CORNER



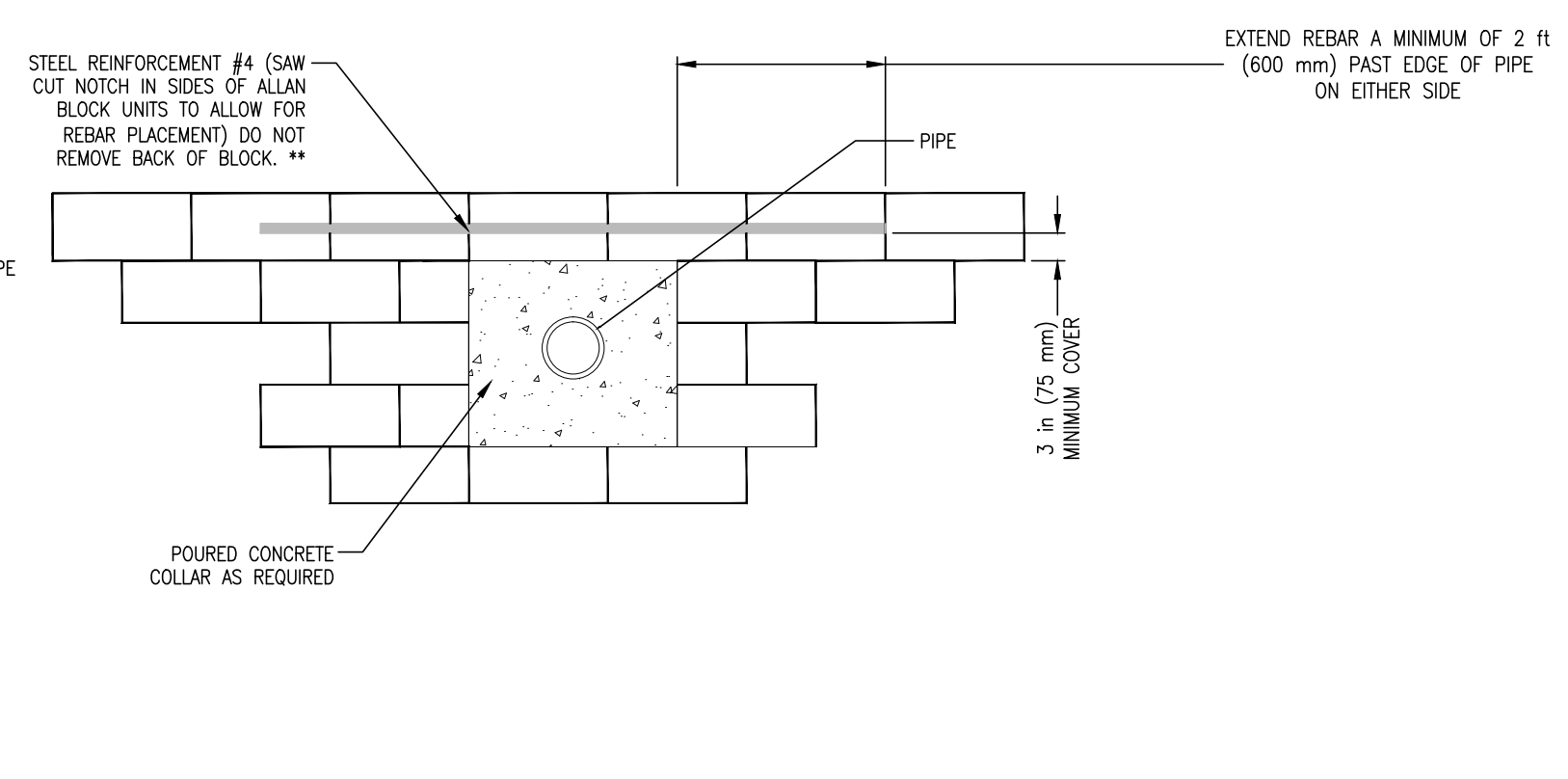
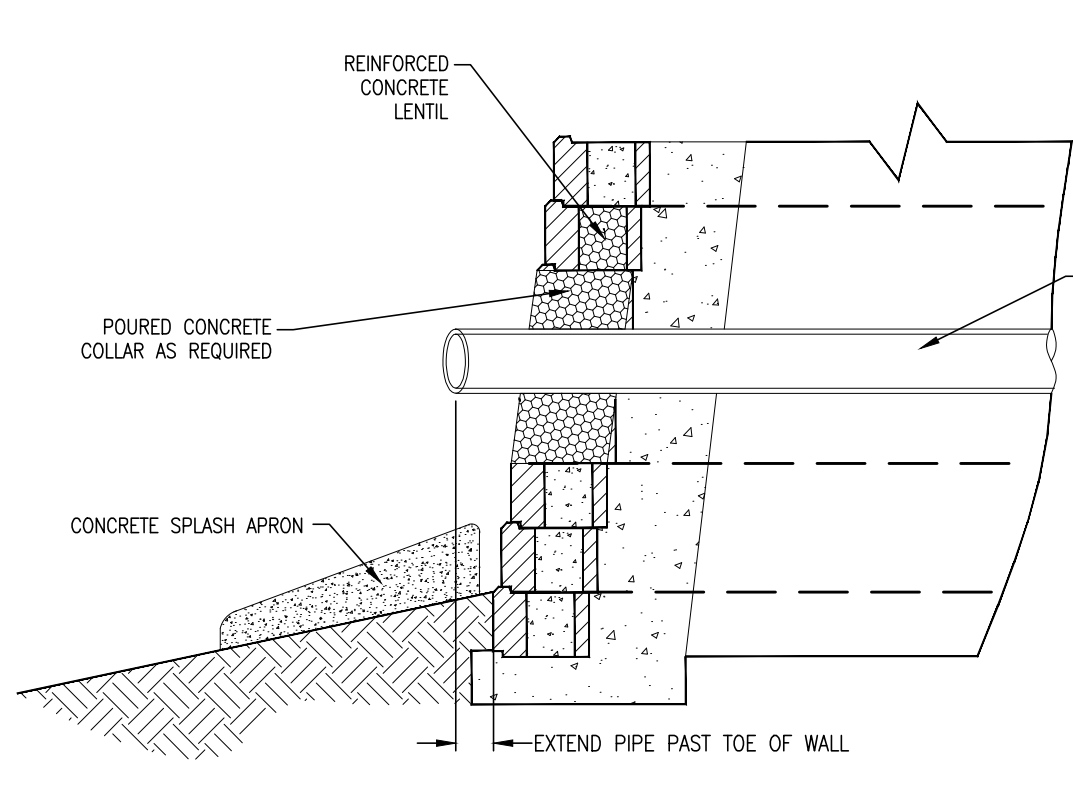
OUTSIDE CORNER



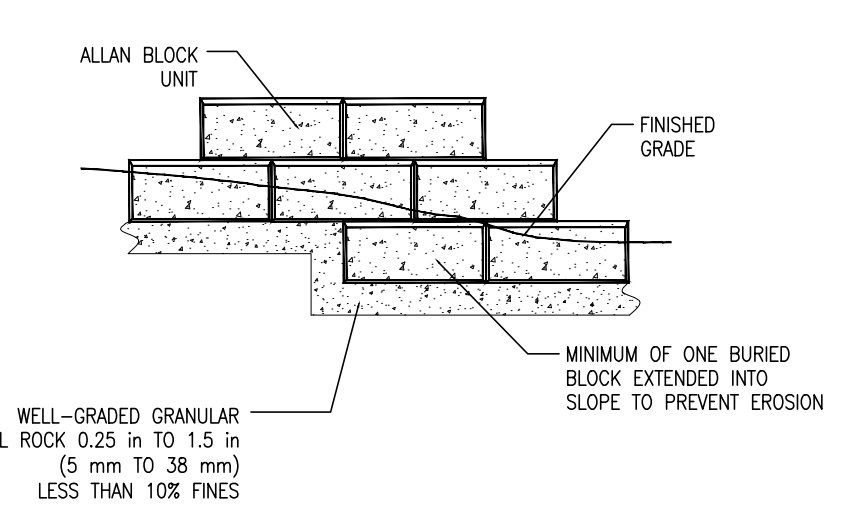
AB TYPICAL SECTION - STEP UPS WITH AB LITE STONE



WALL DRAIN OPTIONS



STORM WATER PIPE



STEP UP

General Notes

Soil Notes

Soil loading considered in this design and calculations are based on the following parameters:

	Internal Friction Angle Deg.	Cohesion psf	Unit Weight pcf	Soil Type
Infill Soil	34	0	115	NET STONE
Retained Soil	28	0	120	GRANULAR FILL
Foundation Soil	28	0	120	GRANULAR FILL

Construction Notes

- 2 Actual soil parameters must meet or exceed these listed conditions to be used in wall construction. In general, Granular soils (Friction angle greater than or equal to 32 degrees) are recommended as infill soil. Fine grained cohesive soils (Friction angle less than 32 degrees) with low plasticity (PI less than 20) may be used in wall construction, but additional backfilling and compaction efforts are required. Allan Block Corporation has not verified these design conditions, and if required the soil parameters shall be confirmed by the Site Geotechnical Engineer or others prior to wall construction.
- 3 Substitution of Infill Soils are strictly prohibited unless approved by the engineer of record.
- 4 In this analysis, the effective friction angle without the addition of cohesion is used to determine the design strength of the soil when calculating lateral forces. At the discretion of the engineer of record, cohesion may be used when calculating the ultimate bearing capacity even though it is typically ignored.
- 5 Global stability has been considered in this design.
- 6 Hydrostatic loading is not considered in this analysis. Sufficient drainage must be provided such that hydrostatic loading (pore pressure) does not develop in the reinforced zone.
- 7 Analysis assumes fill placement in 8 inch (200 mm) lifts compacted to 95% standard proctor. For any wall over 10 feet (3 meters), with a surcharge or contains cohesive soils, compaction test frequency and location shall be determined by the engineer of record or as otherwise specified.
- 8 All fill placed above walls shall be placed and compacted in accordance with the requirements for all other reinforced material.
- 9 Retaining wall units and installation shall conform to the Allan Block Modular Retaining Wall Systems Specification Guidelines, Geogrid Reinforcement Systems Specification Guidelines, and Water Management Specification Guidelines as published in the AB Spec Book and the AB Engineering Manual.
- 10 Retaining walls must be installed and constructed according to the contract drawings. The retaining wall plan view is for wall identification only.
- 11 Geogrid spacing is determined by structural cross-section design requirements. To insure proper geogrid placement, contractor must review both elevation view and cross sections prior to wall construction.
- 12 Suggested Quality Assurance Requirements: A qualified engineer or technician shall supervise the wall construction to verify field and site soil conditions. In the event that the Site Geotechnical Engineer does not perform this work, a qualified Geotechnical Engineer/Technician shall be consulted to assure the Allan Block Wall is constructed with proper soil parameters.

Surface Drainage Notes

- 1 Rainfall and other water sources such as irrigation activities can be defined as surface water. The retaining wall design shall take into consideration the management of this water.
- 2 Site grading shall be designed to route surface water around and away from the wall.
- 3 The internal drainage system of the retaining wall is designed to remove incidental water that infiltrates into the soil behind the wall. Adequate storm water drainage systems are required to completely drain the area around the retaining wall structure.
- 4 Drain piping, toe drain, should be located at the back of the rock drain field behind the wall as close to the bottom of the wall as allowed while still maintaining a positive gradient for drainage to daylight, or to a storm water management system.
- 5 A heel drain may be required at back of the cut to route water away from the reinforced soil mass during the construction process.
- 6 Ground water can be present within the soil due to surface infiltration or water table fluctuation. If ground water is encountered during construction, an adequate drainage system must be installed or the wall design must consider the presence of water within the soil mass.
- 7 All water collection devices such as roof downspouts, storm sewers, and curb gutters must be designed to accommodate maximum flow rates and outlet outside the retaining wall area.
- 8 Retaining walls in conditions that allow standing water to overlap the wall face are considered water applications. These walls require specific design and construction steps to ensure performance.

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STATE OF TENNESSEE
JOSHUA M. LYON, P.E. TN#1123331

CONSTRUCTION DOCUMENTS

SPRINGFIELD HIGH SCHOOL
SOCCER FIELD REVISION

5240 HIGHWAY 76-E
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ROBERTSON COUNTY

DRAWN BY: JML
CHECKED BY: JML
PROJECT NO.: C08618

WALL DETAILS

SHEET NUMBER
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