BUNCOMBE COUNTY SCHOOLS
PREPARING STUDENTS FOR THEIR TOMORROW

Tony Baldwin, Ed.D., Superintendent

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ADDENDUM #1

February 12, 2018

TRANSMITTED VIA EMAIL: 34 pages

TO: ALL PLAN HOLDERS AND POTENTIAL BIDDERS
FROM: TIFFANY McCANTS, PURCHASING OFFICER
SUBJECT: TRACK AND FIELD REPLACEMENT AT T.C. ROBERSON HIGH SCHOOL

(RFP 2-18)

The following changes, additions, revisions, and/or clarifications to the plans and/or specifications are hereby made a part of the original documents. Bidders shall acknowledge receipt of this addendum by notation in the space provided on the Proposal Form.

Addendum #1

RFP 2-18

STATE OF NORTH CAROLINA/BUNCOMBE COUNTY SCHOOLS
REQUEST FOR PROPOSAL RFP# 2-18

PROJECT: **TRACK AND FIELD REPLACEMENT – T.C. ROBERSON HIGH SCHOOL**

Revised 2/12/2018

PROJECT DESIGNER: **Tim Fierle, Director of Facilities and Planning**

USING AGENCY: **Buncombe County Schools** **ISSUE DATE:** ~~1/30/2018~~

Sealed Proposals subject to the conditions made a part hereof will be received until **2:00 pm, Thursday, February 15, 2018** for furnishing all labor, materials, equipment, and services incidental and implied, for completion of the project described herein. At which time bids will be opened and read aloud at 175 Bingham Road, Asheville, NC 28806.

PREBID CONFERENCE: A pre-bid Meeting will be held on Thursday, February 1, 2017 at 9:00 am, at the Central Office of Buncombe County Schools, 175 Bingham Road, Asheville, NC 28806. All visitors must check in at Front Desk in the lobby.

SEND ALL PROPOSALS DIRECTLY TO ONE OF THE ADDRESSES AS SHOWN BELOW:
Buncombe County Schools, Purchasing Division
175 Bingham Road, Asheville, NC 28806

IMPORTANT NOTE: Indicate firm name and RFP number on the front of each sealed proposal envelope or package, along with the date for receipt of proposals specified above.

Direct inquiries concerning this RFP to:
Bidding and document questions: Tiffany McCants, Purchasing Officer Phone: 828-255-5891
Specification/technical questions: Tim Fierle, Director of Facilities and Planning Phone: 828-255-5916

THE PROCUREMENT PROCESS

The following is a general description of the process by which a firm will be selected to provide services.

1. Request for Proposals (RFP) is issued to prospective contractors.

2. A preproposal conference and/or deadline for written questions is five days prior to due date.

3. Proposals in one original will be received from each offeror in a sealed envelope or package. Each original shall be signed and dated by an official authorized to bind the firm. Unsigned proposals will not be considered.

4. All proposals must be received by the issuing agency not later than the date and time specified on the cover sheet of this RFP.

5. At that date and time the proposals from each responding firm will be opened. Interested parties are cautioned that these costs and their components are subject to further evaluation for completeness and correctness and therefore may not be an exact indicator of an offeror's pricing position. Informal proposals (less than $ 300,000) are confidential until such time that award has been made. Thereafter, the purchasing division will furnish bid tabs upon request.

6. At their option, the evaluators may request oral presentations or discussion with any or all offerors for the purpose of clarification or to amplify the materials presented in any part of the proposal. However, offerors are cautioned that the evaluators are not required to request clarification; therefore, all proposals should be complete and reflect the most favorable terms available from the offeror.

7. Proposals will be evaluated according to completeness, content, experience with similar projects, ability of the offeror and its staff, and cost. Award of a contract to one offeror does not mean that the other proposals lacked merit, but that, all factors considered, the selected proposal was deemed most advantageous to the State.

8. Offerors are cautioned that this is a request for offers, not a request to contract, and the State/Buncombe County Schools reserves the unqualified right to reject any and all offers when such rejection is deemed to be in the best interest of the State.

(NOTE: THIS PROPOSAL FORM MUST BE FULLY EXECUTED AND RETURNED FOR CONSIDERATION OF PROPOSAL)

PROPOSAL FORM
TRACK/FIELD REPLACEMENT – T.C. ROBERSON HIGH SCHOOL
RFP#2-18 DUE DATE: 02/15/18 TIME: 2:00 pm

By submitting this proposal, the potential contractor certifies the following:

** This proposal is signed by an authorized representative of the firm.
** It can obtain and submit to the Owner insurance certificates as required within 5 calendar days after notice of award.
** The cost and availability of all equipment, materials, and supplies associated with performing the services described herein have been determined and included in the proposed cost.
** All labor costs, direct and indirect, have been determined and included in the proposed cost.
** All taxes have been determined and included in the proposed cost.
** The offeror has attended the conference *(if applicable)* or conducted a site visit and is aware of prevailing conditions associated with performing these services.
** The potential contractor has read and understands the conditions set forth in this RFP and agrees to them with no exceptions.

Therefore, in compliance with this Request for Proposals, and subject to all conditions herein, the undersigned offers and agrees, if this proposal is accepted within 60 days (normally less) from the date of the opening, to furnish the subject services for a cost not to exceed:

OFFEROR: _____

BASE BID: This project includes the complete replacement of the existing asphalt track at T. C. Roberson High School including, but not limited to removal of the existing asphalt track and stone base, installation of a new perimeter channel drain system, new stone base, a new asphalt paved track and new synthetic track surfacing.

$_____dollars and_____/100 ($).

ALTERNATE #1: ADD Alternate for a new concrete walk outside the 42" high chain link fence around the south end of the track.

$ _____ dollars and _____/100 $ _____

ALTERNATE #2: ADD Alternate for a new three-color Rams head logo in the south D-Zone.

$ _____ dollars and _____/100 $ _____

ALTERNATE #3: DEDUCT Alternate for Black Synthetic track surfacing in lieu of the base bid ~~Red~~ NAVY BLUE track surfacing.

$ _____ dollars and _____/100 $ _____

ALTERNATE #4: DEDUCT Alternate for a non-porous base mat structural spray track surfacing in lieu of base bid sandwich system track surfacing.

$ _____ dollars and _____/100 $ _____

PROPOSAL FORM
TRACK/FIELD REPLACEMENT – T.C. ROBERSON HIGH SCHOOL
RFP#2-18 DUE DATE: 02/15/18 TIME: 2:00 pm

ALLOWANCE: Provide a $20,000 allowance to contract directly with Sprinturf to lay back and then reinstall a 7' wide portion of the existing synthetic turf field as described in detail on sheet C-100.

$ _____ dollars and _____/100 $ _____

LIQUIDATED DAMAGES - $1,000.00/day

Number of addenda received: _____ Attended Pre-bid conference: (Yes/ No) _____

OFFEROR: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE NUMBER: _____ FAX: _____

FED ID No: _____ Type & License #: _____

E-MAIL: _____ MBE Status: _____

Principal Place of Business if different from above (See General Information on Submitting Proposals, Item 18.):

_____

BY: (Signature) _____ TITLE: _____

DATE: _____ (Typed or printed name) _____

Bid bond and MBE forms are required. Bidder must use bond forms included in the bid package. Please include bid bond and MBE forms in separate sealed envelope from proposal form.

Meeting Minutes

T.C. Roberson High School
Track Renovation

Pre-Bid Meeting Minutes

Date: **Thursday, February 1, 2018**
Location: **Buncombe County Schools Central Office and Site Visit**
Time: **9am**

1. Attendees:
   a. See attached sign in sheet

2. Tim Fierle with Buncombe County Schools spoke about the front end documents and project logistics
   a. Electronic front end manuals, plans and specifications can be found on the Buncombe County Schools Purchasing website. https://buncombeschools.org/cms/One.aspx?portalId=92531&pageId=316936
   b. Contractors are advised and required to follow the 3-part bond system. Their bids will need to be accompanied with a Bid, Performance, and Payment bond. Contractors are asked to put their bonds in the outer envelope. Two envelopes are used to protect the bidders.
   c. Permits for the projects are obtained and paid for by the contractor. School system has started the process to get things rolling but they are responsible for permit and fee incurred. An electrical permit will be required for all three projects.
   d. Contractors can bid one, two or all three projects. Contractors can bid them all separately or all together, but are asked to not over extend their capabilities.
   e. Contractors will be required to show ability to provide all three simultaneously, if they win all three.
   f. Unit prices for allowances should be real cost. Owner will be requesting credit if allowances are not used.
   g. Buncombe County Schools will provide a third- party testing agency for Geo-tech. If re-testing is required because of poor contractor performance, the contractor will be responsible for the fees incurred.
   h. Contractors shall account for 4 weather days per month of construction and provide information to CHA. Saturday and Sunday weather days DO NOT count if contractor cannot show that they indeed were planning to work those days.

3. CHA gave a Project Overview
   a. Demolition of the existing track including existing surfacing, asphalt, stone base and perimeter fencing
   b. Attached is the geotechnical report for contractor's reference only.
   c. Installation of a new inside perimeter channel drain system
   d. New stone base
   e. New asphalt
   f. New synthetic track surfacing
   g. New perimeter chain link fencing. A specification is attached and should be added to the technical specifications as part of the bidding documents.

h. Connect existing power and data sources to new electrical boxes within track limits as well as existing electrical boxes within turf field limits. (Any electrical work must be performed by a state licensed electrical contractor).
i. Contractor will be responsible for completing a construction permit application as well as pay for any associated review and permit fees.

4. CHA discussed the Bid Alternates
   a. **Add Alternate Number One:** New concrete walk outside the perimeter 42" high chain link fence around the south end of the track.
   b. **Add Alternate Number Two:** New three color school rams logo in the south D-Zone. Owner to provide image file.
   c. **Deduct Alternate Number Three:** Black track surfacing in lieu of the base bid Navy Blue track surfacing.
   d. **Deduct Alternate Number Four:** Non-Porous basemat structural spray surfacing in lieu of the base bid sandwich system track surfacing.

5. CHA discussed the Allowances
   a. Provide a $20,000 allowance to contract directly with Sprinturf to lay back a 7' wide strip of the existing synthetic turf for installation of the new channel drain followed by re-attachment of the turf to new channel drain and end line concrete curb. Entire scope of work within allowance is shown on the plans. Any costs beyond the $20,000 allowance shall be accounted for by the contractor in their bids.

6. CHA spoke further about Instructions for Submittal of Bids
   a. All bids must be submitted on the Bid Form supplied.
   b. The Bid Form must be filled out in ink or be typed.
   c. Acknowledge receipt of all addendums.
   d. Provide list of major subcontractors.
   e. Understand the contractor qualification requirements per the track surfacing specs.

7. CHA provided Information for Bidders
   a. Bids due on **Thursday 2/15/18 at 2:00pm** at:
      Buncombe County Schools Central Office
      175 Bingham Road
      Asheville, NC 28806
   b. All technical questions and inquiries must be submitted in writing by email to Jason Pollard at jpollard@chacompanies.com. and copy Tim Fierle at tim.fierle@bcsemail.org. All questions are due by 10 AM on Thursday, February 7th.
   c. Late bids will **NOT** be accepted.

8. CHA went over the Anticipated Construction Schedule
   a. Bid award: Mid-March after board approval
   b. Construction Start: May 25, 2018
   c. Contractors shall note that the existing synthetic turf field will be in use after August 1st for games and scrimmages. Contractor will be responsible for coordinating with school staff and will be required to clean up and provide safe access to the existing turf field when events are scheduled during these times.
   d. Substantial Completion: September 28, 2018
   e. Final Completion: October 5, 2018

9. Liquidated Damages: $1000/Day

10. Contractor Questions and CHA answers
    a. What is a good contact for Sprinturf for coordination in regards to the Allowance scope? CHA Response: Contractors can contact Matt Steigerwalt at msteigerwalt@sprinturf.com or (610) 876-6063
    b. Can existing asphalt millings be utilized as base material? CHA Response: Asphalt millings from the existing track can be used to achieve subgrade elevation as long as they are compacted to 95%. Asphalt millings cannot be used for base course and above.
    c. Who will be responsible for installing the nailer board for fastening the reinstalled synthetic turf? CHA Response: The nailer broad will be installed by the track contractor.
    d. Can the existing synthetic turf infill be reused? CHA Response: Reusing the existing infill is not allowed.
    e. Is this project Private or Prevailing wage? CHA Response: This is not a prevailing wage project.
    f. Does the new fence in the home side bleacher concrete wall get cored in or get fastened to the top? CHA Response: The chain link fence can be cored in and epoxy grouted or fastened to the existing concrete wall with a baseplate. The contractor shall submit a shop drawing on their preferred method. The existing chain link fence that gets removed shall be sawcut off and the sleeves filled with concrete grout flush with the top of wall.

BUNCOMBE
COUNTY SCHOOLS
PREPARING STUDENTS FOR THEIR TOMORROW

Pre-Bid Meeting Sign-In Sheet
For RFP 1-18 and RFP 2-18

February 1, 2018
9:00 am

Name	School/Department/Organization
Bud Godfriaux bud@sunbeltasphalt.com	Sunbelt Asphalt 770-318-3512
Tim Murphy TMurphy@Beynonsports.com	Beynon
Tim Riordan TRiordan@chacompanies.com	CHA 240-994-3746
Todd Penley todd@medallionathletics.com	Medallion
Charlie Welsh CWelsh@sprinturf.com	Sprinturf 651-239-0400
Jacob Benson Jbenson@brantleyconstruction.com	Brantley Construction 828-381-3159
DAVID CLAPP david@baselinellc.com	Baseline 865 588 4320
Collin Boyd collin.boyd@wncPaving.com	
Alex Keith alex.Keith@wncpaving.com	WNC Paving Inc 828-712-1960
Jim Waddell jwaddell@youngmcqueen.com	Young & McQueen Grading Co.
Josh Cash Cash's Grading@yahoo.com	Cash's Grading 828-682-7714
Michael Jones Mjones@astroturf.com	Astro Turf 828-553-1133 336-278-9060 336-479-0462

Electrical Contact Information:

Grigg Electric Co Inc
111 Coxe Ave.
Asheville, NC 28801
828.232.0021 P
828.232.1299 F
jan@griggelectric.com

Haynes Electric Construction
PO Box 16589
828.254.6141 P
828.225.5331 C
828.254.1254 F
khouser@mbhaynes.com

Harrington Electric
P.O. Box 886
Skyland, NC 28776
828.681.0297 P
info@harringtonelectricinc.com

Grindstaff Electric, Inc.
40 Patton Cemetery Road
Swannanoa, NC 28778
828.357.8121 P
828.776.5142 C
828.686.3642 F
douggrindstaffel@yahoo.com

Ricky L. Coats Electric
Mr. Ricky Coats
97 South Bear Creek Road
Asheville, NC 28806
828.254.5328 P
828.254.2206 F
rlcelectric@rlcelectric.com

Emory Electric
PO Box 3315
Asheville, NC 28802
828.658.8300 P
828.658.0708 F
info@emoryelectric.com

CEG, Inc.
Mr. David Arredondo
PO Box 1454
Leicester, NC 28748
828.683.2367 P
828.551.3889 C
828.683.2367 F
darredondo@charter.net

Jackson Electrical Contractors
57 Hunter's Ridge Road
Mills River, NC 28759
828.768.9965 P
828.891.4334 F
contact@jacksonelect.com

A American Electric
25 Sheehan Road
Fletcher, NC 28732
828.684.7560 P
pwilson@a-americanelectric.com

AMC, Inc.
PO Box 1348
Arden, NC 28704
828.687.2584 P
828.687.0284 F
sales@amcincorp.com

WE Bolton
169 Elk Mountain Road
P.O. Box 8609
Asheville, NC 28804
828.253.3621 P
828.337.5089 C
steveharrower@webolton.com

SECTION 323113 – CHAIN LINK FENCE AND GATES

PART 1 – GENERAL

1.1 DESCRIPTION

A. The Contractor shall provide all labor, materials, equipment, and services necessary for, and incidental to, the installation of chain link fence and gates, as shown on the Drawings and as specified herein.

B. All chain link fence shall be thermally-bonded polyvinyl chloride (PVC), plastic resin finish over galvanized steel wire.

C. All gates and gate hardware shall be powder coated.

1.2 QUALITY ASSURANCE

A. Comply with standards of the Chain Link Fence Manufacturer's Institute.

B. Provide steel fence and related gates as a complete system produced by a single manufacturer, including necessary erection accessories, fittings and fastenings.

C. Comply with ASTM A-53 for requirements of Schedule 40 piping.

D. Height of fence shall be measured from the top of concrete footing to the top of post.

1.3 SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chain-link fences and gates.
   1. Fence and gate posts, rails and fittings.
   2. Chain link fabric, reinforcements, and attachments.
   3. Gates and hardware.

B. Shop Drawings: Show locations of fences, gates, posts, rails, tension wires, details of extended posts, extension arms, gate swing, or other operation, hardware, and accessories. Indicate materials, dimensions, sizes, weights, and finishes of components. Include plans, gate elevations, sections details of post anchorages, attachment, bracing, and other required installation and operational clearances.

C. Samples for Verification: For each type of chain-link fence and gate indicated:
   1. PVC coated steel wire (for fabric) in 6-inch (150-mm) lengths on shapes for posts, rails, wires and gate framing.
   2. Two-stage powder coat finish, in 6-inch (150-mm) lengths on shapes for gate framing.

D. Product Certificates: For each type of chain-link fence and gate, signed by product manufacturer:
   1. Strength test results for framing according to ASTM F 1043.

E. Qualification Data: For installer.

F. Field quality-control test reports.

G. Maintenance Data: For the following to include in maintenance manuals:
   1. Polymer Finishes
   2. Powder Coat Finishes

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed chain-link fences and gates similar in material, design and extent to those indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

PART 2 – PRODUCTS

2.1 STEEL FRAME WORK

A. Unless noted otherwise on drawings, minimum Nominal Framework Sizes shall be the following:

FENCE HEIGHT	LINE POSTS	END, CORNER & PULL POSTS	RAILS & BRACES	GATE FRAMES	*GATE POSTS	CONCRETE FOUNDATION DIA.		DEPTH
						Diameters	Corner/ End	
						LINE POSTS	PULL & GATE POSTS	
3'	1-1/2"	2"	1-1/4"	1-1/2"	3"	12"	12"	4'
3'-6"	2"	3"	1-1/4"	1-1/2"	4"	12"	12"	4'
4'	2"	3"	1-1/4"	1-1/2"	4"	12"	12"	4'
4'-6"	2"	3"	1-1/4"	1-1/2"	4"	12"	12"	4'
5'	2"	3"	1-1/4"	1-1/2"	4"	12"	12"	4'
6'	2"	3"	1-1/4"	1-1/2"	4"	12"	18"	4'
8'	2"	3"	1-1/4"	1-1/2"	4"	12"	18"	4'
10'	3"	4"	1-1/4"	1-1/2"	4"	18"	18"	4'
12'	3"	4"	1-1/4"	1-1/2"	4"	18"	18"	5'
16'	3-1/2"	4"	1-1/4"	1-1/2"	4"	18"	18"	5'

SCHEDULE 40 S/L PIPE TABLE		
NOMINAL SIZE (IN.)	ACTUAL OUTSIDE DIAMETER (IN.)	WEIGHT *(LB/FT)
1	1.315	1.67
1-1/4	1.660	2.27
1-1/2	1.900	2.71
2	2.375	3.65

50,000 PSI HOT DIPPED ALUMINIZED STEEL TUBING		
NOMINAL SIZE (IN.)	ACTUAL OUTSIDE DIAMETER (IN.)	WEIGHT *(LB/FT)
1	1.315	
1-1/4	1.660	1.83
1-1/2	1.900	2.28
2	2.375	3.12

SCHEDULE 40 S/L PIPE TABLE		
NOMINAL SIZE (IN.)	ACTUAL OUTSIDE DIAMETER (IN.)	WEIGHT *(LB/FT)
2-1/2	2.875	5.79
3	3.500	7.58
3-1/2	4.000	9.11

50,000 PSI HOT DIPPED ALUMINIZED STEEL TUBING		
NOMINAL SIZE (IN.)	ACTUAL OUTSIDE DIAMETER (IN.)	WEIGHT *(LB/FT)
2-1/2	2.875	4.64
3	3.500	5.71
3-1/2	4.000	6.56

2.2 CHAIN LINK FABRIC

A. General: Height indicated on Drawings. Provide fabric in one-piece heights for fence heights up to 10 feet measured between top and bottom of outer edge of selvage knuckle or twist. Comply with ASTM A 392, CLFMI CLF 2445, and requirements indicated below:
   1. Steel Wire Fabric: Polymer-coated wire:
      a. 0.148 inch (9 gauge) diameter for fences and gates.

B. Mesh Size:
   1. 2 inches for fences.

C. Selvages: Knuckled top and bottom.

2.3 SWING GATE FRAMES

A. Assemble gate frames with fully coped welds as shown on the Drawings or on Shop Drawings approved by the Engineer.
   1. All ferrous metal components shall be blast cleaned to and SSPC-6 commercial blast clean.

2.4 GATE HARDWARE

A. Hinges: Non-lift-off type, offset to permit 180-degree swing, and of suitable size and weight to support gate. Provide 1-1/2 pair of hinges for each leaf over 6 feet high.

B. Latch: Provide plunger bar type complete with flush plate set in concrete for all double gates and single gates over 10 feet. Padlock eye shall be an integral part of latch construction.
   1. Provide plunger bar complete with flush plate set in concrete on each gate leaf.
   2. Provide flush plate set in concrete for both the full open position and full closed position.

C. Keeper for Vehicle Gates: Provide keeper which automatically engages the gate leaf and holds it in open position until manually released.

2.5 MISCELLANEOUS MATERIALS AND ACCESSORIES

A. Post Tops: Steel, wrought iron, or malleable iron.

B. Stretcher Bars: One piece equal to full height of fabric, minimum cross-section 3/16 inch by 3/4 inch.

C. Metal Bands (for stretcher bars): Steel, wrought iron, or malleable iron, to secure stretcher bars to end, corner, pull and gate posts.

D. Wire Ties:
   1. For tying fabric to line posts, rails and braces: 9 gauge steel wire.
   2. For tying fabric to tension wire: 11 gauge steel hog rings.

E. Truss Rods: 3/8-inch diameter.

F. Angle Beams, I Beams and Steel Shapes: ASTM A-36.

G. Bolts and Nuts: ASTM A-307, Grade A.

2.6 FINISHES

A. Steel Framework:
   1. PVC Coated Pipe
      a. Metallic coating: Weight of Zn-5-Al-MM Aluminum-Mischmetal Alloy Coating, ASTM F 1345, Type III, Class 2, 1.0 OZ./SQ. ft. (305 g/sq. m).
      b. Thermally-bonded polyvinyl chloride (PVC), plastic resin finish, ASTM F 668, Class 2, not less than 10 mils (.010") thick over metallic-coated steel wire.
      c. Color: Green, Olive Green, Brown, or Black, complying with ASTM F 934.

B. Chain Link Fabric:
   1. PVC Coated Chain Link Fabric:
      a. Metallic coating: Weight of Zn-5-Al-MM Aluminum-Mischmetal Alloy Coating, ASTM F 1345, Type III, Class 2, 1.0 OZ./SQ. ft. (305 g/sq. m).
      b. Thermally-bonded polyvinyl chloride (PVC), plastic resin finish, ASTM F 668, Class 2, not less than 10 mils (.010") thick over metallic-coated steel wire.
      c. Color: Green, Olive Green, Brown, or Black, complying with ASTM F 934.
      d. Coat selvage ends of fabric that is metallic coated before the weaving process with manufacturer's standard clear protective coating.

C. Gates:
   1. Colored Powder Coated Framework:
      a. Powder for coating shall be a polyester-based thermal setting resin.
      b. Powder coat system shall meet or exceed the following test requirements:
         1) Direct Impact Resistance: ASTM D 2794-93, up to 160 in.-lbs.
         2) Flexibility: ASTM D 522-93, Method B, equal to or less than a ¼ inch mandrel.
         3) Pencil Hardness: ASTM D 3363-93a, HB-2H.
         4) Crosshatch Adhesion: ASTM D 3359-97, Method B, 5B.
         5) Salt Spray Resistance: ASTM B 117, plus 1,000 hours.
         6) Humidity Resistance: ASTM D 2247, plus 1,000 hours.
   2. Chain Link Fabric on gate same as finish same for fencing.

D. Fence and Gate Hardware, Miscellaneous Materials, Accessories:
   1. Fence Hardware, Materials and Accessories:
      a. Per fence finish requirements.
   2. Gate Hardware, Materials and Accessories:
      a. Per gate finish requirements.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for a verified survey of property lines and legal boundaries, site clearing, earthwork, pavement work and other conditions affecting performance.

1. Begin installation in general site areas or those not directly adjacent to the playing field only after final grading including topsoiling and paving is completed in that area or as otherwise permitted by Engineer.
2. For installation directly adjacent to the playing field, coordinate footing installation timing with final installation of playing field materials so as not to contaminate, destroy or displace these playing field materials.
3. If unsatisfactory conditions are present, proceed with installation only after they have been corrected.

3.2 PREPARATION

A. Coordinate fence and gate installation with completion of finished grading and installation of adjacent finish field materials.

B. Stake locations of fence lines, gates and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, irrigation system, underground structures, benchmarks and property monuments.

3.3 INSTALLATION

A. Space posts equidistant in the fence line with a maximum of 10 feet on center or as shown on drawings.

B. Footings: Excavate holes as indicated for fence and gate posts. Excavate footings to depths and widths as noted in Specifications or on drawings. Install gravel drainage material in bottom of hole as shown on the drawings.

C. Setting Posts and Footings at Concrete Areas: Set posts in center of hole. Embed post so that bottom of post is flush with the bottom of concrete footing and in gravel drainage layer. Fill hole with concrete. Plumb and align posts. Vibrate or tamp concrete for consolidation. Finish elevation on top of footing to be coordinated with construction of concrete adjacent to posts or as shown on drawings. Do not attach fabric to posts until concrete has cured a minimum of 7 days.

D. Setting Posts and Footings in Grass Areas: Set posts in center of hole. Embed post so that bottom of post is flush the bottom of concrete footing and in gravel drainage layer. Fill hole with concrete. Plumb and align posts. Vibrate or tamp concrete for consolidation. Finish concrete in a dome shape above ground to shed water. Do not attach fabric to posts until concrete has cured a minimum of 7 days.

E. Locate corner posts at corners and at changes in direction. Use pull posts at all abrupt changes in grade and at intervals no greater than 500 feet. On runs over 500 feet, space pull posts evenly between corner or end posts. On long curves, space pull posts so that the strain of the fence will not bend the line posts.

F. Install top rail continuously through post caps or extension arms, bending to radius for curved runs. Install expansion couplings as recommended by fencing manufacturers.

G. Install intermediate rails in one piece between posts and flush with post on fabric side using special offset fittings where necessary.

H. Diagonally brace corner posts, pull posts, and terminal posts to adjacent line posts with truss rods and turnbuckles.

I. Attach fabric to security side of fence for lawn areas. Maintain a maximum 1 inch clearance above finished grade except when indicated otherwise. Thread stretcher bars through fabric using one bar for each gate and end post and two for each corner and pull post. Pull fabric tight so that the maximum deflection of fabric is 2 inches when a 30 pound pull is exerted perpendicular to the center of a panel. Maintain tension by securing stretcher bars to posts with metal bands spaced 15 inches oc. Fasten fabric to steel framework with wire ties spaced 12 inches oc for line posts and 24 inches oc for rails and braces. Bend back wire ends to prevent injury. Tighten stretcher bar bands, wire ties, and other fasteners securely.

J. Position bolts for securing metal bands and hardware so nuts are located opposite the fabric side of fence. Tighten nuts and score excess threads.

1. Secure post tops, extension arms, and caps with one-way cadmium plated steel screws.

K. Install gates plumb and level and adjust for full opening without interference. Install ground-set items in concrete for anchorage, as recommended by fence manufacturer. Adjust hardware for smooth operation and lubricate where necessary. Attach fabric as for fencing. Install ground-set items in concrete as shown on the drawings.

L. Touch Up: Small nicks or other blemishes shall be touched up with paint materials suitable for and matching the finish of the damaged material. Severely damaged fencing /gates deemed as unacceptable at the sole discretion of the Owner or its representatives shall be replaced at the contractor's expense.

END OF SECTION

BUNNELL-LAMMONS ENGINEERING, INC.
GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

October 6, 2016

Mr. Timothy Fierle, AIA
Director of Facilities and Planning
Buncombe County Schools
175 Bingham Road
Asheville, North Carolina 28806

Subject: **Report of Hand Auger Boring Exploration**
Track Replacement Project
T.C. Roberson High School
Black Mountain, North Carolina
BLE Project No. J15-10301-02

Dear Mr. Fierle:

Bunnell-Lammons Engineering, Incorporated (BLE) is pleased to present this report of hand auger boring investigation for the subject project. Our services were provided in general accordance with Bunnell-Lammons Engineering (BLE) Proposal No. P15-0961 dated November 18, 2015 and authorized by Purchase Order # 11000001823 dated November 19, 2015. The purpose of the exploration was to evaluate the existing pavement section and subgrade conditions, and to provide recommendations for subgrade preparation and pavement section for a new asphalt track. Project information was obtained from correspondence Mr. Tim Fierle, AIA with Buncombe County Schools, along with a geotechnical investigation and report scope of services narrative prepared by CHA – design/construction solutions (the owner's designer and construction administrator). Additional project information was obtained during our field exploration.

Project Information and Site Conditions

Buncombe County Schools is planning to renovate the existing running track at T.C Roberson High School in Asheville, North Carolina. The planned renovation will include replacing the existing asphalt pavement on the 8-lane 400-meter running track with new asphalt pavement and a latex or polyurethane-bound track surface. We understand that the existing asphalt pavement is planned to be removed and that the existing site grades will be relatively unchanged. We were not provided design loading information. However, based on the project information and our experience with similar projects, the track will be mainly utilized for athletic purposes and may occasional by traversed by maintenance vehicles.

Based on our review of publicly available current and historical aerial photography and our recent site visits, the existing track surrounds a synthetic turf athletic field with home bleacher seating on the east side and visitor bleacher seating on the west side. The existing asphalt pavement in the subject track is of unknown age (speculated to be approximately 20 years old), but appears to have generally reached the end of its service life.

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The existing asphalt track is covered with a rubber type surfacing. Transverse and block cracking were observed through the existing rubber surface in numerous areas around the track. Both types of cracking are typically caused by shrinkage of the asphalt and daily temperature cycling. The occurrence of these types of cracks are a good indication that the asphalt has hardened significantly through aging. The cracks were observed to be approximately ¼ to ⅜ inch in width with slight spalling on some of the edges. Additional cracking may exist, but may have been concealed by the overlying rubber surface. We also observed ponded water in several areas around the track, particularly on the south side near the home side bleachers. The water was observed to be mainly ponded on the exterior lane of the track along with the accumulation of silt. Not all conditions were observed, conditions differing from the above-described are plausible.

Exploration

The existing asphalt was cored in six locations as shown on the attached Figure 1 - Hand Auger Boring Location Plan. The locations were spaced out across the track in locations selected by BLE with the intent of exploring a representative range of pavement distress and subgrade conditions. The pavement cores were extracted, visually observed and measured for thickness. Photographs of the obtained cores are presented in the Appendix. Beneath the pavement, the borings were extended into the soil subgrade using a hand auger. Aggregate base course stone was not encountered at any of the six hand auger boring locations. Dynamic Cone Penetrometer tests were performed at approximate 1-foot depth intervals in the soil to provide a correlation to soil subgrade strength. Details for each core and hand auger boring are shown on the Hand Auger Boring Logs attached to this report.

Exploration Findings

The rubber surfacing on the track was measured to be approximately ⅜ inches in thickness at the six core locations. Beneath the rubber track surface, the existing asphalt thickness ranged from 6½ to 12¼ inches. The existing pavement section appeared to consist of three to four layers of asphalt. Based on our observations of the cores the asphalt layers consisted of surface course and binder. There was no aggregate base material under the asphalt in the explored locations. A summary of the existing asphalt thickness and number of layers are shown in Table 1 below:

Table 1 – Existing Asphalt Pavement Sections

Boring I.D.	Existing Asphalt Thickness (inches)	Number of Layers
HAB-1	11 ¾	4
HAB-2	8 ½	3
HAB-3	6 ½	3
HAB-4	12 ¼	4
HAB-5	7 ⅝	4
HAB-6	7	3

The hand auger borings were advanced to explore the nature and consistency of the existing subgrade. The hand auger borings were performed to depths of between 32 inches (auger refusal) and 36 inches below the existing soil subgrade. The subsurface soils encountered were examined and classified by our field personnel. Upon completion of the field-testing, the borings were backfilled/patched using bag mix concrete and the rubber track surface repaired.

The subgrade soil immediately below the asphalt typically consisted of firm to very firm brown/tan silty sand. Due to the disturbed conditions of the soil in the hand auger bucket, it was difficult to discern the difference between fill and residual soil. The fill and residual soils have similar appearance and the transition was not easily identifiable.

Based on visual observations, fill soil was encountered in hand auger borings HAB-5 and HAB-6 to depths of between 12 inches and 24 inches below the existing soil subgrade. It is speculated that the existing fill soil was placed during original development of the site. No compaction testing data or field records of fill placement were available for our review. However, based on the penetrometer (DCP) resistance values that ranged from 8 to 12 blows per increment, the existing fill generally appears to have received some compactive effort during original placement. The fill soil encountered in our hand auger borings was generally free of organics and deleterious materials, but it should be noted that the content and quality of man-made fills can vary significantly.

Residual soil typical of the Blue Ridge Physiographic Province were believed to be encountered below the previously described fill soil and below the surface materials at the remaining hand auger boring locations. The residual soils predominantly consisted of very firm silty sands. Penetrometer resistance values ranged from 10 to 25 blows per increment, typically became firmer with depth.

Material sufficiently hard to cause refusal to our hand auger equipment was encountered in hand auger boring HAB-4 at a depth of 29 inches below the existing soil subgrade. Refusal is believed to have resulted from dense residual soil. Power drilling procedures are required to penetrate refusal materials and determine the material character and continuity. Power drilling was beyond the scope of this exploration.

Groundwater was not encountered by the hand auger borings at the time of drilling and before patching of the borings. Because the borings were located in an area accessible by the public, the borings were backfilled shortly after drilling thus precluding 24-hour ground water level measurements. Ground-water levels may fluctuate several feet with seasonal and rainfall variations. Normally, the highest ground water levels occur in late winter and spring and the lowest levels occur in late summer and fall.

Laboratory Testing

Soil samples were collected from the borings and were combined to make a composite sample for the requested laboratory testing. The laboratory testing included particle-size distribution, Atterberg limits (Plasticity Index and Liquid Limit), moisture density relationship and California Bearing Ratio. The tests were performed in accordance with ASTM or other applicable testing standards. Detailed results and information for the individual tests are included on laboratory data sheets included in Appendix.

Conclusion

BLE tested the pavement and underlying soil subgrade at six locations within the track area. The results of the DCP testing indicate that the soil subgrade has adequate strength to support a flexible pavement section. It is our opinion the distress in the existing pavement is due to several factors, as follows:

- **Asphalt Age** – aging asphalt "dries out over time", which reduces its structural capacity and its ability to expand and contract with temperature cycles. This is likely the primary cause of the widespread block cracking.
- **Drainage** – Some areas of the pavement were noted to have poor surface drainage, allowing water to pond on the surface and collecting in open cracks, which allows the infiltration of surface water causing the pavement and subgrade to become saturated and be more susceptible to the detrimental effects of freeze-thaw cycle. We recommend that the design/construction administer or a civil engineer be consulted to determine if the existing ditch slopes and culverts are adequate to handle drainage in the track area. A continuous perimeter collection channel may be needed

Pavement Recommendations

Based on our visual observations and limited field-testing, and our understanding that the existing site grades will be relatively unchanged, the soil subgrade appears to have supported the existing asphalt pavement satisfactorily. The current distress observed appears primarily from dry shrinkage block cracking typical of aged asphalt pavements. This type of cracking typically doesn't represent structural failure. However, as the pavement deteriorates, water can enter the subgrade resulting in poor subgrade support and progressive failure. Based on the current condition of the pavement the following repair options are suggested for improvement of the track. Repair option #1 involves milling the asphalt surface and the placement of an asphalt overlay. Repair option #2 involves removal and replacement of the pavement section.

Either option will provide a suitable track surface, but it is our opinion that milling and an overlay would be the most economical option. However, which of the options to choose will depend on what option best meets Buncombe County Schools desires and budget.

Option #1 – Milling and Overlay

This option consists of conducting full width milling of the entire track surface. It is recommended that the entire track be milled to a depth of at least 2 ½ inches. Track surface specifications were not available at the time this report was written. Therefore, based on the provided information, our experience on similar projects in this region and locally available materials, the overlay material should consist of hot mix asphalt (HMA) surface course S9.5B mix type. The asphalt should meet the material properties and be placed and compacted in accordance with the North Carolina DOT specifications and the project specifications.

In order to achieve good performance for the overlay, BLE should observe the milled surface prior to overlay construction. Any cracks remaining in the milled asphalt surface should be repaired. Cracks should be routed out and cleaned using high-pressure air. Once cleaned a suitable crack sealant should be applied. If the cracks are not thoroughly cleaned, the sealant will not adhere to the sides. For high severity crack areas (if applicable), the crack pavement area should be removed and replaced with full depth hot mix asphalt. Some pop-out and/or other damage should be anticipated especially along the edge of the track. These areas should be repaired prior to the placement of the overlay. Appropriate recommendations may be provided at the time of construction by BLE if encountered. Field recommendations would be made on a case by case basis depending on the severity of the observed conditions.

It is also possible that old cracks will reflect through the new asphalt to the surface. To help retard the progression of the reflecting cracking, we recommend consideration be given to installing a crack reducing interlayer product. This could consist of a pavement reinforcing fabric such as Petromat 4598 or specification equivalent. The pavement reinforcing fabric is typically a non-woven polypropylene geofabric that is embedded in an asphalt tack coat on top of the milled surface. When overlain, the heat of the new asphalt allows the asphalt binder to penetrate the fabric creating a stress absorbing layer that also adds protection against water intrusion though new cracks. Additional information concerning reinforcing fabric can be provided if needed.

Option #2 – Pavement Section Removal and Replacement

This option consists of the removal and replacement with an entirely new section. Following pavement removal, the soil subgrade should be evaluated by proofrolling to determine the suitability of the subgrade. Proofrolling should be performed by an experienced BLE engineering technician working under the direction of the geotechnical engineer. If the subgrades proofroll successfully, then the suggested pavement section can be placed. In areas where the subgrade is found to be unstable under the proofroll, remedial activities may be necessary. Such remedial activities may include partial undercutting and replacement, or stabilization with geo-synthetics and crushed stone, or a combination of these methods. Appropriate recommendations may be provided at the time of construction by BLE, if unsatisfactory proofrolling conditions are encountered. Stabilization measures will vary with location, and will also be dependent on the weather conditions during construction.

We also anticipate that surface grades will remain essentially unchanged. However, some areas may be raised slightly to assist with drainage. We recommend that aggregate base course stone be used as fill material for areas that need to be adjusted. The aggregate base course stone should be compacted to at least 100 percent of the maximum dry density, as determined by the modified Proctor compaction test (ASTM D 1557) and should be checked with a sufficient number of density tests to determine if adequate compaction is being achieved.

The surface of compacted subgrades can deteriorate and lose its support capabilities when exposed to environmental changes and construction activity. Deterioration can occur in the form of freezing, formation of erosion gullies, extreme drying, and exposure for a long period of time or rutting by construction traffic. We recommend that subgrade surfaces that have deteriorated or softened be recompacted prior to construction of the pavement. Recompaction of subgrade surfaces should be checked with a sufficient number of density tests to determine if adequate compaction is being achieved.

Once the subgrade is repaired (if required) and approved by BLE, the new stone base can be placed. The aggregate base course should consist of a Class 1 Aggregate (refer to North Carolina Department of Transportation *Standard Specifications for Roads and Structures*). The new stone base should be placed to a minimum total thickness of 6 inches. The stone base should be compacted to at least 100 percent of the maximum density as determined by the modified Proctor method (ASTM D 1557). The base course stone should meet the material properties and be placed and compacted in accordance with the North Carolina DOT specifications. A final proofroll test of the stone base course should be observed by the BLE engineer prior to replacing the asphalt.

Track surface specifications were not available at the time this report was written. Therefore, based on the provided information, our experience on similar projects in this region and locally available materials, the pavement should consist of hot mix asphaltic concrete surface course either S9.5A or S9.5B Mix Type. These mix types are defined by NCDOT's Superpave specifications. The recommended flexible asphalt pavement section has been developed based on the provided project information and on the assumption that the subgrade will have a minimum CBR (California Bearing Ratio) value of 4 and assuming the track will have the appropriate surface tolerances, slope, grade and adequate drainage.

The performance of the flexible pavements will be influenced by a number of factors including the actual condition of subgrade at the time of pavement installation, installed thicknesses, compaction, and drainage. Areas adjacent to pavements (embankments, landscaped islands, etc.) which can drain water (rainwater) should be designed to help reduce water seepage below the pavements. This may require the use of subsurface trench drains or swales. In addition, sufficient tests and inspections should be performed during pavement installation to confirm that the required thickness, density and quality requirements of the specifications are followed.

Limitations of Report

This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. The conclusions and recommendations contained in this report are based upon applicable standards of our practice in this geographic area at the time this report was prepared. No other warranty, express or implied, is made.

Basis of Recommendations

It is recommended that Bunnell-Lammons Engineering be provided the opportunity to make a general review of any plans and specifications prepared from the recommendations presented in this report. We would then suggest any modifications so that our recommendations are properly interpreted and implemented. We also suggest a meeting be held with the designers, contractors and our firm to ascertain whether we have interpreted the design correctly and that our recommendations are understood.

Closing

We appreciate the opportunity to provide our professional geotechnical services on this project. If you have any questions regarding this report please to not hesitate to call us. We also offer construction materials and technician field testing services. We hope that you will give BLE consideration to provide testing services as this project enters the construction phase.

Sincerely,

BUNNELL-LAMMONS ENGINEERING, INC.

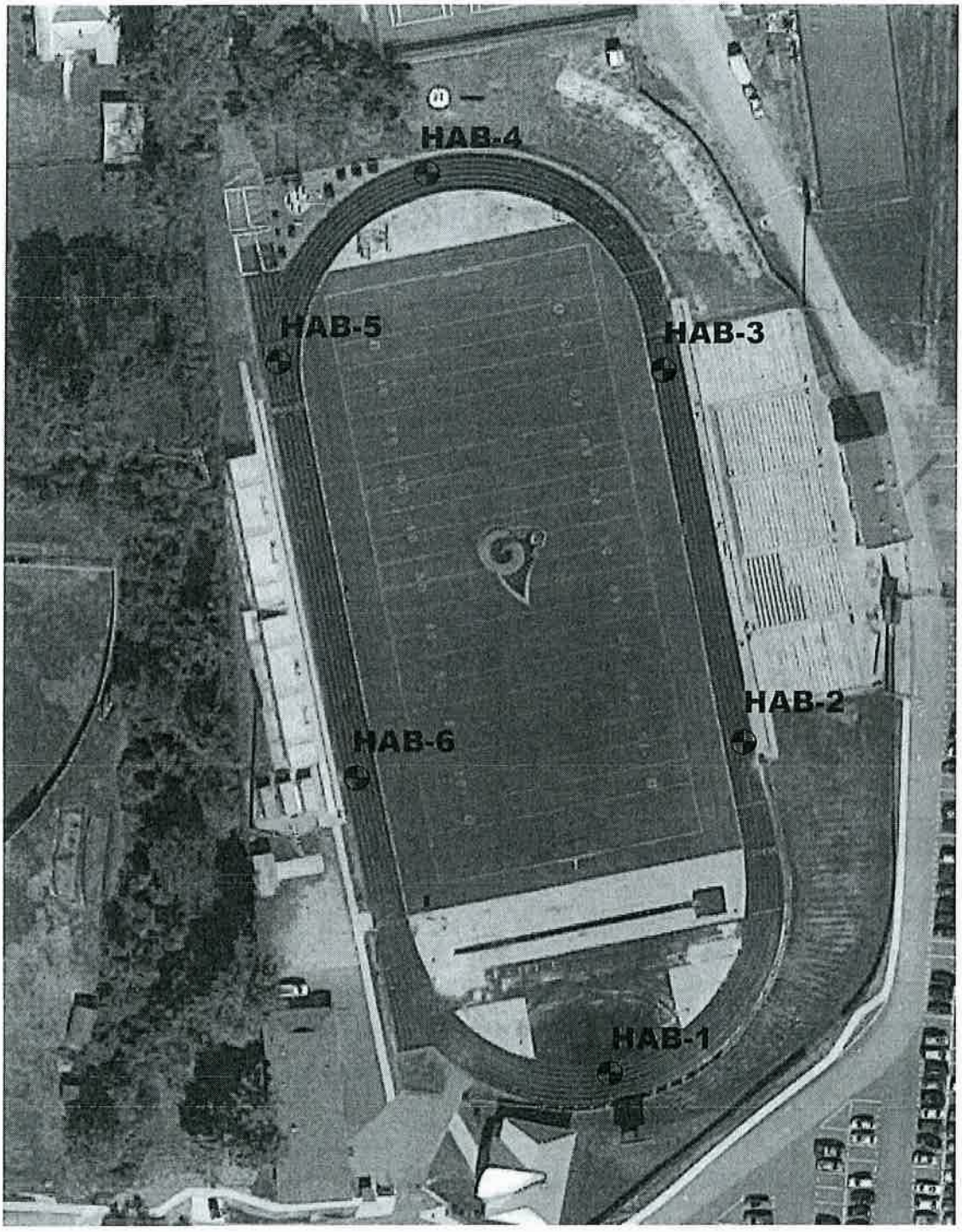
Sam C. Interlicchia
Project Manager

Jesse R. Jacobson, P.E.
Asheville Branch Manager
Registered, North Carolina #30948

NORTH CAROLINA PROFESSIONAL SEAL 030948 ENGINEER JESSE R. JACOBSON 10/6/16

Attachments:

Hand Auger Boring Location
Hand Auger Boring Records Plan
Photographs
Laboratory Test Data Sheet



Approximate Hand Auger Boring Location

Base drawing Google Maps 2016

BUNNELL-LAMMONS ENGINEERING	**Hand Auger Boring Location Plan** TC Roberson High School / Track Replacement Black Mountain, North Carolina BLE Project No. J16-10301-02	Date: 10/05/16 Figure No. 1

BUNNELL-LAMMONS ENGINEERING, INC.
GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

PAGE 1 OF 2

DATE 1/8/16

HAND AUGER BORING

PROJECT TCR HS Track	JOB # 316-1030-02
CLIENT BLPS	SITE LOCATION Skyland

BORING NO.	DEPTH (FEET) FROM	TO	SOIL DESCRIPTION AND REMARKS	DEPTH	PENETROMETER BLOWS 1-3/4"	1-3/4"	1-3/4"	AVG.
1	0	3/8	3/8" Rubber track Surface					
	3/8	11 3/4	11 3/4" Asphalt (4 Layers)					
	12 1/8		Tan/Brown Silty f-m Sand - Residual	SS6	7	12	13	
			(Damp)	-1	20	25	-	
				-2	25+	-	-	
		-3	BTC 3'/Dry	-3	25	-	-	
2	0	3/8	3/8" Rubber track Surface					
	3/8	8 1/2	8 1/2" Asphalt (3 Layers)					
	8 7/8		Brown/Tan Silty f-m Sand - Residual	SS6	8	20	25	
			(Damp)	-1	7	10	10	
				-2	13	13	15	
		-3	BTC 3'/Dry	-3	11	15	15	
3	0	3/8	3/8" Rubber track Surface					
	3/8	6 1/2	6 1/2" Asphalt (3 Layers)					
	6 7/8		Reddish Brown Silty f-m Sand	SS6	7	25	-	
			- Residual	-1	10	16	25	
				-2	12	14	22	
		-3	BTC 3'/Dry	-3	12	12	20	
4	0	3/8	3/8" Rubber track Surface					
	3/8	12 1/4	12 1/4" Asphalt (4 Layers)					
	12 5/8		Brown tan Silty f-m Sand - Residual	SS6	10	25	-	
			(Damp)	-1	25	-	-	
				-2	25	-	-	
		-2'8"	-2'8" AR / Dry					

TECHNICIAN: SCL/WB | CHECKED BY: | DATE: 1/8/16

NOTE: All data subject to Engineering review.

BUNNELL-LAMMONS ENGINEERING, INC.
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PAGE 2 OF 2

DATE 1/8/16

HAND AUGER BORING

PROJECT TCC HS Track	JOB # J16-10301-02
CLIENT Scps	SITE LOCATION Skyland

BORING NO.	DEPTH (FEET) FROM	TO	SOIL DESCRIPTION AND REMARKS	DEPTH	PENETROMETER BLOWS 1-3/4"	1-3/4"	1-3/4"	AVG.
5	0	3/8	3/8" Rubber Track Surface					
	3/8	7 5/8	Asphalt (4 Layers)					
	8"	12"	Pale Brown Silty f-m Sand - Fill soil	SS6	7	8	9	
	12"		Reddish Brown Silty f-m Sand - Residual	-1	9	11	11	
			- Damp)	-2	11	10	11	
		3	BTe 3' / Dry	-3	8	12	14	
6	0	3/8	3/8" Rubber Track Surface					
	3/8	7"	Asphalt (3 Layers)					
	7 3/8		Red / Brown Silty f-m Sand - Fill	SS6	7	8	8	
		-2	- Damp	-1	8	11	12	
	-2		DK Brown Silty f-m Sand - Residual	-2	10	15	15	
		-3	BTe 3' / Dry	-3	15	18	18	

TECHNICIAN: SCI / WB | CHECKED BY: | DATE: 1/8/16

NOTE: All data subject to Engineering review.

T.C. Roberson High School
Track Replacement
Project J15-10301-02
Sheet 1 of 4

130 Oval Road
Suite 200
Arden, North Carolina 28704

Date: 1/8/16

Photographer: S, Interlicchia

1	Location / Orientation	Core #1
	Remarks	

Date: 1/8/16

Photographer: S, Interlicchia

2	Location / Orientation	Core #2
	Remarks	