

ASBA  2024

ASBA TECHNICAL MEETING & TRADE SHOW  
DECEMBER 3-6, 2024 | ORLANDO, FLORIDA

# *Performing and Communicating an Asphalt Inspection for Running Tracks*

Presented by:

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&

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## Presentation Overview

- Working with designers and design teams
- Designer Observations
- ASBA Certified Builders as inspectors
- Reasons for an asphalt inspection on sports facilities
- Types of inspections typically performed
- Gathering the data from the inspection
- Effective communication of the inspection



# Working with Designers & Design Teams

- Collaborative relationships work best
- Identify party's responsibilities and tasks
- Identify criteria for inspection and reporting
- Identify acceptable correction means and methods
- Identify responsible party for corrections
- Identify verification of corrections

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- **ENGINEER AND ARCHITECT OBSERVATIONS**



**UM...  
YEAH.**

**IF YOU COULD GO AHEAD AND FLOOD THAT  
AGAIN**



# DESIGNER QUALITY CONTROL PRIOR TO PAVING

- Submittals for asphalt mix and aggregate to meet the design specifications reviewed by the engineer or architect and approved by the owner.
- Conformance surveys and verification of curb elevations (as built) reviewed by the engineer or architect and approved by the owner.
- Some projects require string line and or conformance survey of the subgrade and stone base. This may be more common for a rolled goods type surface or high-level competition tracks.

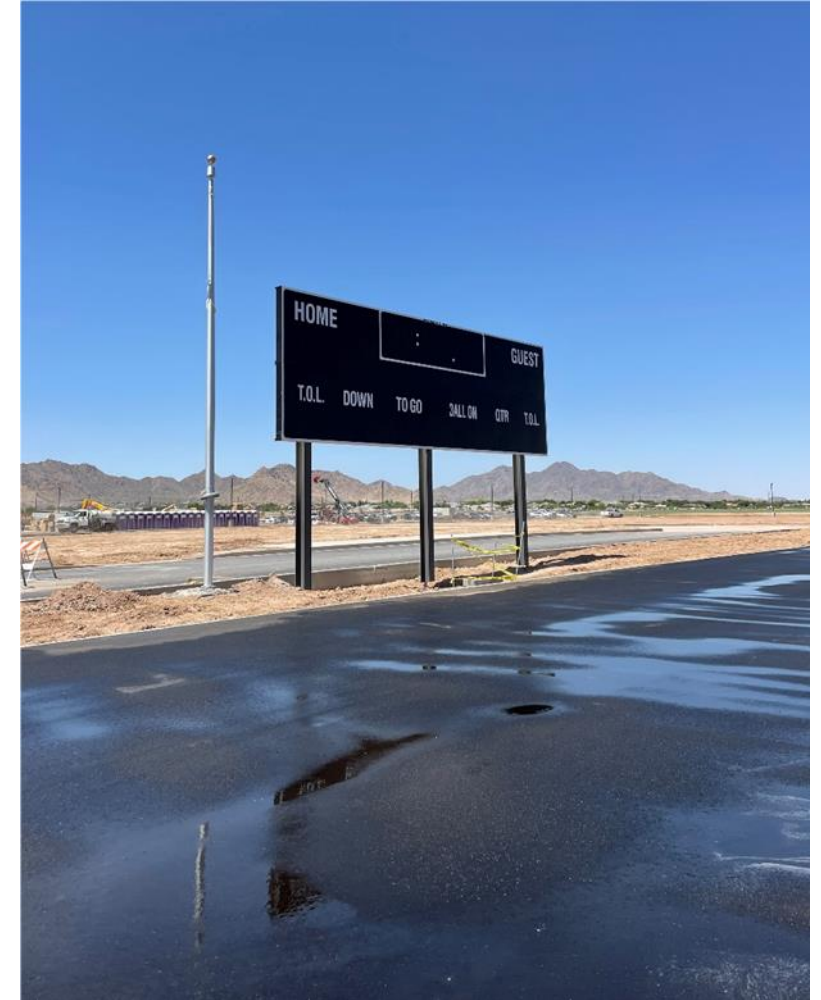


# DESIGNER VISUAL OBSERVATIONS PRIOR TO FLOOD TEST

- Smooth consistent sheen with specified aggregate size.
- Seams and edges flush and smooth
- No loose, uncompacted, or unconfined aggregate
- Clean saw cuts and patch back to existing asphalt where applicable
- Review site with the plans and confirm grades & grade breaks are per plan
- 10' straight edge at designated intervals per the engineer's specifications with tolerance of 1/4". Some specifications or applications may require less deviation under the straight edge.



# DESIGNER FLOOD TESTS



# DESIGNER FLOOD TESTS

- Water flowing to drains or pervious surfaces per plans.
- Slot & Trench drains flush and performing properly.



# DESIGNER FINAL ACCEPTANCE

- Engineer or architect provides field report for items to address or not exceptions taken
- Acceptance by the synthetic track surfacing manufacturer/installer that the asphalt surface meets the manufacturer requirements for installation of the track surface



# ASBA Certified Builders as Inspectors

- Certified Track Builders (CTB's) have the right credentials to act as inspectors for facilities.
- Utilize the correct version of the ASBA Running Tracks – A Construction and Maintenance Manual.
- Utilize the correct version of the appropriate governing body's rules book.
- Utilize other sources as appropriate for the inspection.
- Certified Track Builders (CTB's) can certify fully completed tracks per the ASBA Track Construction & Maintenance Manual Class 3 Verification, Class 4 Verification & Class 5 Certificate of Accuracy.





## Certified Track Builder Inspections – Flood Test

- Flood with copious amounts of water and allow to drain until remaining water is stagnant. Typically 40 minutes depending on weather and temperature.
- Mark low areas holding equal to or exceeding  $\frac{1}{4}$ " in depth.
- Mark high areas that become immediately apparent for testing with straightedge.
- Mark grade breaks for compliance verification.
- Observe curb to asphalt interfaces for potential drainage issues.
- Observe water flow to drainage inlets.



# Certified Track Builder Inspections – Straight Edge Test

- Use a 10' straight edge to check for variations exceeding  $\frac{1}{4}$ " in 10'. This includes high and low areas.
- Measure the variance using a measuring wedge, tape measure or other appropriately accurate measuring tool.
- Mark the area using marking paint, wax Crayola or other marking tool to clearly identify the extent and location of the concern area.
- Use photographs to document the measuring of the deficient area.
- A smart level can be helpful in determining slope of the asphalt section being tested.




# Certified Track Builder Inspections – Straight Edge Test




# Certified Track Builder Inspections – Straight Edge Test



# The Inspection Report



## Company Logo



### Site Inspection Report

Client: Flowing Wells Unified School District	Inspector: Troy Rudolph CTB, CFB, CTGB
Address: 1556 W. Prince Road Tucson, Arizona 85705	Site: Flowing Wells High School – Running Track
Date/Time: February 21, 2023 starting at 11:00 A.M	Weather Conditions: Sunny & Warm

This evaluation was performed at the request of Lloyd Construction.

I am an American Sports Builders Association (ASBA) Certified Track Builder (CTB) having met the qualifications and experience required, and successfully passing a comprehensive examination for certification. ASBA Certified Track Builders are considered experts in the field of Running Track Construction. The quality control standards applied are from the NFHS (National Federation of High Schools) Track and Field Rules and the ASBA (American Sports Builders Association) 2019 Running Tracks Construction Manual tolerances and recommendations.

Elite Sports Builders is the subcontracted installer of the surfacing system for this site.


I performed a visual inspection of the asphalt paving. This is a second or remedial work inspection. The track oval has had double sided taper milling performed to help lessen the effects of the unevenness of the asphalt paving on the track oval.

During the visual inspection, it was apparent there remains substantial unevenness at the paving pass seams of the asphalt pavement as well as the perpendicular pass joints. There are substantial low areas (Birdbaths) evident in the east and west d-zones near the center of the area. The pavement has been finished below the inside concrete valley gutter and outside curbing between .25" and .75" and is quite inconsistent, although it is being ground flush with the adjoining asphalt by others at the time of this report. Grinding on the inside valley gutter was substantially complete on the north straight and had substantial improvements.


Following the visual inspection, I performed a basic planarity check utilized a 10' straight edge with smart level attached placed upon the asphalt pavement multiple directions and areas. It was quickly identified that the paving pass joints remain substantially uneven with "ridge" type peaks that exceed .4" under a straight edge. A sampling of these areas was marked with yellow paint around the track oval for your examination, with the paint marking at approximately the high point of the paving seam. This condition well exceeds the ASBA's tolerance of 1/4" in 10' when measured in any direction.

It was also observed that there are inconsistencies in the asphalt pavement in the lateral or traveling direction of the paving pass as well. A 10' straightedge was placed and relocated across the entire width of the track paving to examine the overall planarity of the asphalt pavement in the lateral direction.

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## Company Logo



This testing method again revealed that the asphalt pavement is not installed as a single plane from the high side to the low side, and each of the passes with the paving machine were placed with different slope planes. For instance, the north straight has the high paver pass at the outside of the track at a minimal slope, with the second paver pass having a bit more slope than the previous, and the final paver pass at the inside of the track has substantially more slope than the previous passes. The milling operations performed on the track oval marginally improved the severity of the ridges. Unfortunately, it had no effect to rectify the separate planes of the asphalt.

Conclusions from the inspection:

- The asphalt pavement should be level with the concrete valley gutter and curbing that border the pavement to provide positive drainage of water from the asphalt and track surfacing system. It should be noted that this condition was being substantially corrected by grinding the concrete valley gutter flush with the asphalt pavement.
- The asphalt should be a single plane, sloped from the outside to the inside consistently and must not exceed variations greater than 1:1000 in the running direction nor 1:100 in the lateral direction, nor deviate more than 1/4" in any direction when measured with a 10' straight edge. The existing asphalt pavement exceeds these requirements and is extreme enough that a SMG sports paving machine could "high center" on the "ridged" high areas during the application of the surfacing system on this pavement. In other words, the surfacing system cannot be installed correctly on the asphalt paving in its current state. Additionally, with the current issues with the asphalt, the depth of the sports surfacing base mat would vary greatly, ranging from an estimated 3 or 4mm to 15mm in a single paver pass.
- The pole vault runway, as designed and installed will not meet NFHS nor ASBA tolerances and has variations greater than 1:1000 measured at the beginning of the runway and at the zero line of the pan, nor 1:100 in the lateral direction.

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## Company Logo



The following are a couple of pictures that show a sampling of the conditions described above.






I don't believe it to be prudent to recommend possible solutions to the issues that exist with this asphalt pavement as it is ultimately the responsibility of the Paving Contractor to decide means and methods used to meet the project requirements and current industry standards related to running track construction.

This report provides general and specific site observations and information only and is not intended to act as a complete and all-inclusive inspection service. Additional inspection methods and testing are available for a comprehensive and inclusive inspection and corresponding report.

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# The Inspection Report

## Key aspects to an effective inspection report:


- Use header to detail project specifics, day/time/weather conditions of the inspection, person performing the inspection and credentials, inspectors' involvement in the project, and other pertinent information.
- Detail what level of competition the facility will host – High School, Collegiate, NCAA, World Athletics, Etc.
- Detail governing body rules and ASBA Running Track Construction & Maintenance Manual.
- Provide a description of the inspection method including visual inspection, flood test, straight edge test, etc.
- Tell the story of the inspection in chronological order of progression.
- Provide raw data produced during the inspection from each step of the inspection.
- Provide conclusions from the inspection in an unbiased and factual manner.
- Reference the governing body or ASBA rule, specification or recommendation used for the conclusion.
- Use pictures demonstrating the inspection technique and areas of concern.
- Use a track diagram or project plan page to detail areas of concern identified during inspection (only).



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# The Inspection Report

## Key concepts of an effective inspection report:

- Be professional and provide expert evaluation details
- Always provide a limitations paragraph on evaluation and report
- Provide detailed and unbiased facts in report
- Never provide personal opinions on cause of issues detailed in report
- Never provide repair methodology or repair recommendations in the report
- Never attempt to definitively quantify the measurements or extent of repair areas.

**NEVER, NEVER, NEVER** accept responsibility for work done by others! Many owners, designers, inspectors and others will attempt to place responsibility on the surface applicator to accept the asphalt, concrete and overall site as meeting all requirements. Unless you have built the facility turn-key, you should never accept responsibility for work done by others.



# ***QUESTIONS***



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thank  
you

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