

Safety and Drainage Assessment

Billy Ryan High School
Track and Field

Denton Independent School District



VLK | ARCHITECTS

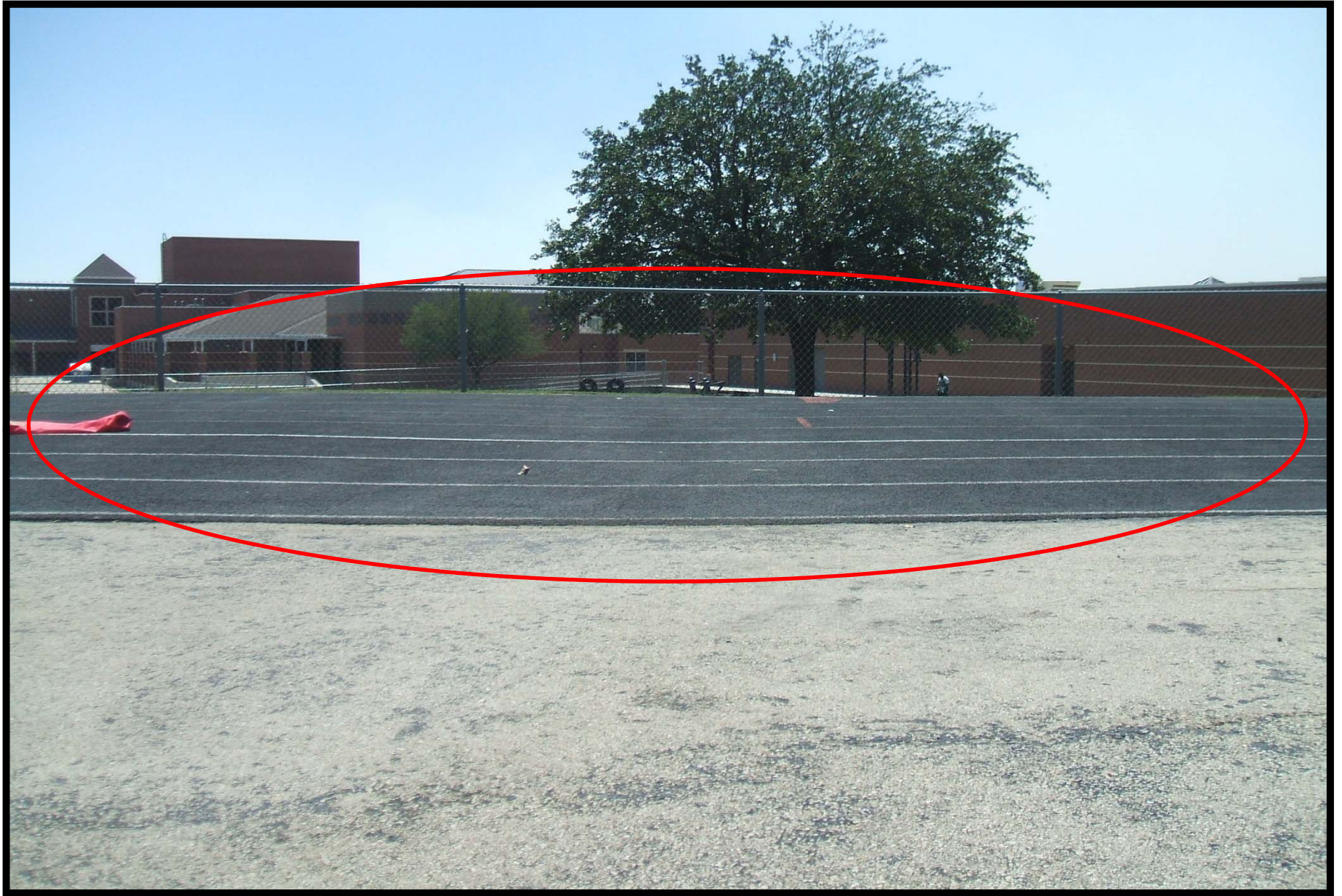
Safety and Drainage Assessment

Billy Ryan High School

Assessment Progress

- District recently notified of safety concerns
- Walked site with Joey Florence to get firsthand understanding of conditions and concerns
- Site Assessment involved multiple representatives
 - Maintenance and Operations Staff
 - Civil & Geotechnical Consultants
 - Contractor
 - Track and Turf Vendor





Recess resulting in uneven surface



Movement in base resulting in surface pushing upward



Uneven surface on track and field



East side of track and field has experienced movement



Weep holes in retaining wall drain across track



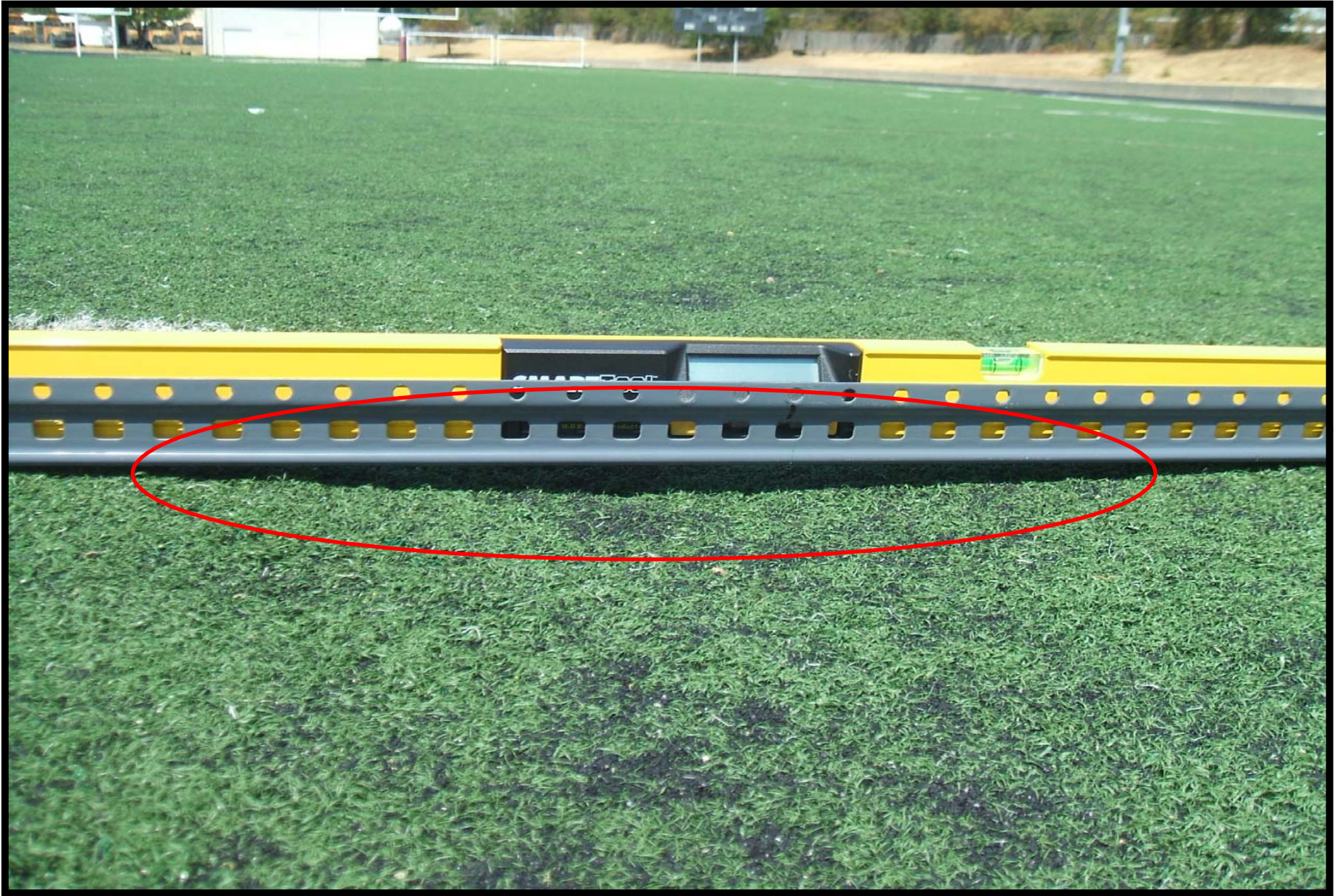
Subgrade has developed pockets.
Cannot be seen due to turf spanning the depression.



Movement in subgrade



Movement in subgrade



Movement in subgrade



Subgrade movement resulting in uneven playing surface



Uneven playing surface



Uneven playing surface



Seam lines



Seam line

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Opinion of Causes

- Drainage conditions introduced by adjacent hill and surrounding topography
- Inadequate surface and subsurface drainage systems
- Expansive clays
- Inadequate soil stabilization

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Recommended Corrective Measures

- Intercept subsurface groundwater before it reaches the retaining wall, track, and field, utilizing a subsurface french drain system
- Complete cross section removal of the existing track and field
- Proper stabilization of subgrade based on geotechnical analysis
- Create, safe, resilient and cost-effective surface option

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Opinion of Probable Cost

• Ryan High School Football Field and Track:	\$1,299,750
• Ryan High School Retaining Wall Rework:	\$79,750
• Ryan High School French Drain at Retaining Wall:	\$30,000
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• Construction Subtotal:	\$1,409,500
• Total Project Cost:	\$1,647,060

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Facility Use Impact

- Campus has deferred 97 athletic competition events to C.H. Collins Athletic Complex
 - High school football programs, middle school football programs and boys /girls soccer programs
- Additional cost to transport sub-varisty football, boys soccer and girls soccer programs to C.H. Collins
- Additional cost of \$4,000 - \$5,000 per season for concession personnel
- Loss of concession revenue at Ryan High School