

PPS - Wilson High School – South Bleacher Assessment



North View of Bleacher

ABHT Project #11516

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Submitted to:

Portland Public Schools
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EXPIRES 6-30-18

EXECUTIVE SUMMARY

Portland Public Schools was concerned that the Wilson High School football field pre-fabricated bleachers on the South side of the field at the Bleacher Rows was being compromised structurally due to water damage. The goal of ABHT's work was to review existing drawings and perform site observations in order to assess areas of the grandstand which had potentially been damaged due to water. Our assessment was based on the following:

1. Multiple site observations were performed by representatives of ABHT Structural Engineers between the months of April and June 2016.
2. No existing drawings were available for review.
3. No calculations/analysis were performed.

STRUCTURAL SUMMARY

The Wilson High School football field bleachers on the South side of the field appear to be constructed with pre-fabricated aluminum and galvanized steel members. PPS had contracted us to mainly review the Bleacher Rows potential water damage. However, there did not appear to me much (if any) water damage to the bleacher rows. Therefore, we mainly performed a cursory review of the pre-fabricated bleachers for any immediate structural concerns. Our immediate structural concerns focused mainly on missing structural bolts and areas of the pressure treated wood sill plates bearing on the ground to support the bleachers. Attached drawings have been provided within this assessment to provide a better understanding of the existing structure, observations, and recommendations. The attached drawings to this assessment are as follows:

DRAWING S1 - OVERALL BLEACHER PLANS
DRAWING S2 - ENLARGED BLEACHER PLANS
DRAWING S3 - ENLARGED BLEACHER PLANS
DRAWING S4 - BLEACHER SECTION
DRAWING S5 - OBSERVATIONS AND RECOMMENDATIONS

Please note that the all recommendations and details noted within this report and within the attached drawings are preliminary and are not meant to be used for construction.

REPORT INFORMATION PROVIDED

This assessment contains the following information:

- **Figures/Photos**
 - Steel Structure Figures**
Observation photos of the steel structure.
 - Bolt Figures**
Observation photos of the missing or damaged anchors.
 - Wood Base Figures**
Observation photos of the wood base system.
- **Drawings S1 through S4**
Indicated within the building summary section.

DISCLAIMER

No liability of the existing structure is assumed based on the issuance of this assessment. Due to the limitations of this assessment and the fact that not every area of the grandstand was reviewed, it is possible that other issues exist. Limitations of this needs assessment include: observations only readily available to view and limited calculations/analysis performed. Guarantees cannot be made that construction or engineering problems, concealed or otherwise, could exist.

STEEL STRUCTURE FIGURES



FIGURE S1: BENT CROSS FRAME ANGLE



FIGURE S2A: BENT ANGLE



FIGURE S2B: BENT ANGLE



FIGURE S3A: DENTED ANGLE



FIGURE S3B: DENTED ANGLE



FIGURE S3C: DENTED ANGLE



FIGURE S4: BENT ANGLE



FIGURE S5: WARPED ANGLE



FIGURE S6: DESTROYED CROSS BRACE ANGLE



FIGURE S7: RUSTED PLATES AT STAIRS



FIGURE S8: DAMAGED SEAT



FIGURE S9: TYP. MINOR BENDING IN SEATS

BOLT FIGURES



FIGURE B1: BOLT MISSING FOR SEAT/TREAD CONNECTION



FIGURE B2: BOLT MISSING FOR BRACE CONNECTION



FIGURE B3: BOLT MISSING FOR FRAME TO FRAME CONNECTION



FIGURE B4: BOLT MISSING FOR STAIR ANGLE CONNECTION



FIGURE B5: U-BOLT MISSING FOR RAILING CONNECTION



FIGURE B6: RUSTED SCREWS

WOOD BASE FIGURES



FIGURE W1: SUPPORTING WOOD MEMBER DETERIORATING



FIGURE W2: BASE ANGLE HANGING OFF SUPPROTING WOOD



FIGURE W3: BASE ANGLE FLOATING AT POINT OF SUPPORT