

JOHNSON WILBUR ADAMS, INC.

Structural Engineering

July 26, 2024

Mr. Benjamin M. Rea, CPRE, MPA
Executive Director
Palatine Park District
250 E. Wood Street
Palatine, Illinois 60067

**Re: Palatine Stables – Palatine, IL
Structural Condition Assessment Supplemental Report
JWA Project No. 2024201**

Dear Ben:

This report is a follow-up to my initial report dated May 3, 2024. Per your request, a site visits were performed on Friday June 21, 2024; Friday June 28, 2024; Monday, July 15, 2024; and Tuesday July 16, 2024, at the above referenced Park District Facility. The purpose of the site visits was to expand the scope of the initial structural condition assessment to include all accessible posts. In addition, the structural condition of the wood roof framing and interior support posts of the stable areas of both the Upper and Lower Barns was also included in the expanded scope.

The roofs of the stable areas were observed to consist of 2x6 wood purlins spaced at approximately 24" o.c. and spanning between single 2x10 wood beams headers. The 2x10 beams were supported by two interior 6x6 wood columns. The maximum span of the 2x10 beams was observed to be approximately 12'-0".

The existing condition of the roof and foundation systems of both building and recommended additional repairs will be discussed below:

Stable Area Roof Structures

In general, the roof structure of the stable areas of both barn buildings was observed to be in fair structural condition. No significant movement or distress was observed in any of the structural roof elements that would indicate that an instability or load capacity issue currently exists.

However, based on preliminary calculations, the existing single 2x10 roof beams do not have the capacity to support the minimum building code required dead and live loads for a barn structure. As a result, it is my opinion that, as part of any renovation to the stable portions of the buildings, the beams be reinforced as required to meet the minimum loads required.

Pole Barn Columns

As indicated above all accessible columns of both the Upper and Lower Barns were visually observed to determine the existing structural condition of the columns. Rot was observed at the bases of a significant number of columns at both the Upper and Lower Barns. Approximately 48% of the Lower Barn columns (40/83) and 55% of the Upper Barn columns (102/187) were

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observed to have varying degrees of deterioration. See Attachments A and B for a summary of the column locations and conditions.

As previously indicated in my initial report it is my opinion that the rotted column bases should be repaired as soon as possible to prevent any further damage to the barn structures over time. In addition, it is also my recommendation that the repairs to the interior columns and roof beams in the stable areas of both buildings be completely prior to this coming winter.

If you have any questions regarding this report or need additional assistance, please feel free to call me.

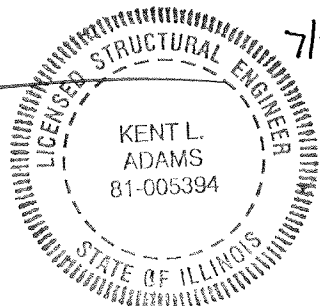
Scope and Limitation:

This report is a qualitative review of the structure and does not represent an exhaustive structural analysis of the building and its components. This report addresses the exposed and accessible structural framing only. This report does not address nonstructural items such as mechanical, plumbing, and electrical systems, weather enclosure items (roofing, gutters, siding, doors, and windows), life safety and accessibility issues, architectural features, pest control, mold, mildew, fungus, hazardous materials etc. All structural observations were visual only; no measurements or tests were performed. The observations were limited to the exposed and accessible areas of the building. The opinions and recommendations given above are based on the conditions assessed at the time of the observations. JWA reserves the right to modify or change any of these opinions in the event that other areas of construction are made accessible for observation or other documents and information about the structure become available. JWA makes no warranties, expressed, or implied in this report.

Very truly yours,



Kent L. Adams, S.E.
Johnson Wilbur Adams, Inc.-Principal



7/26/24

License Exp. 11/30/24

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Structural Condition Assessment Supplemental Report
JWA Project No. 2024201**



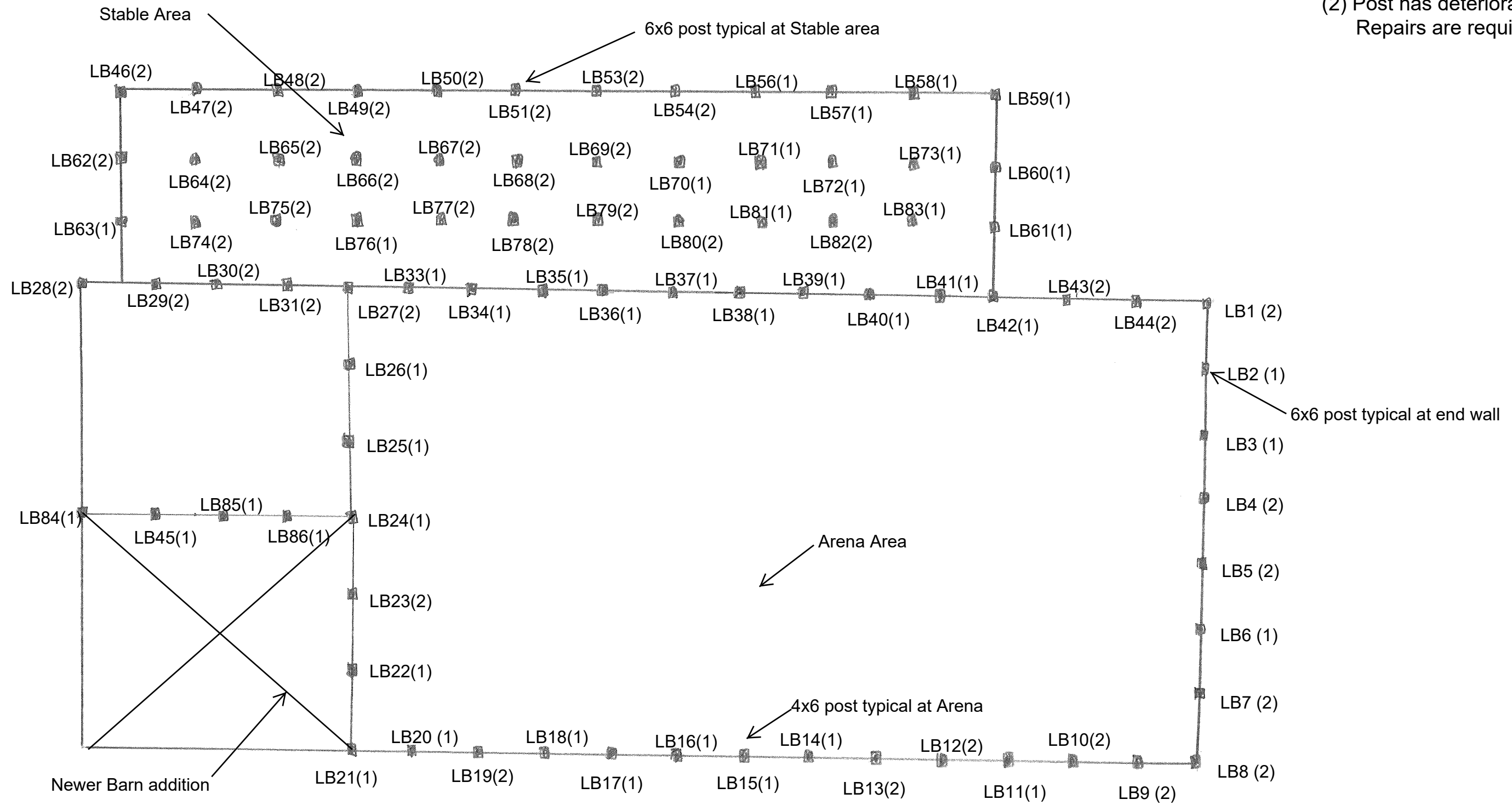
Photo 1 2x10 Roof Beam at Stable Area



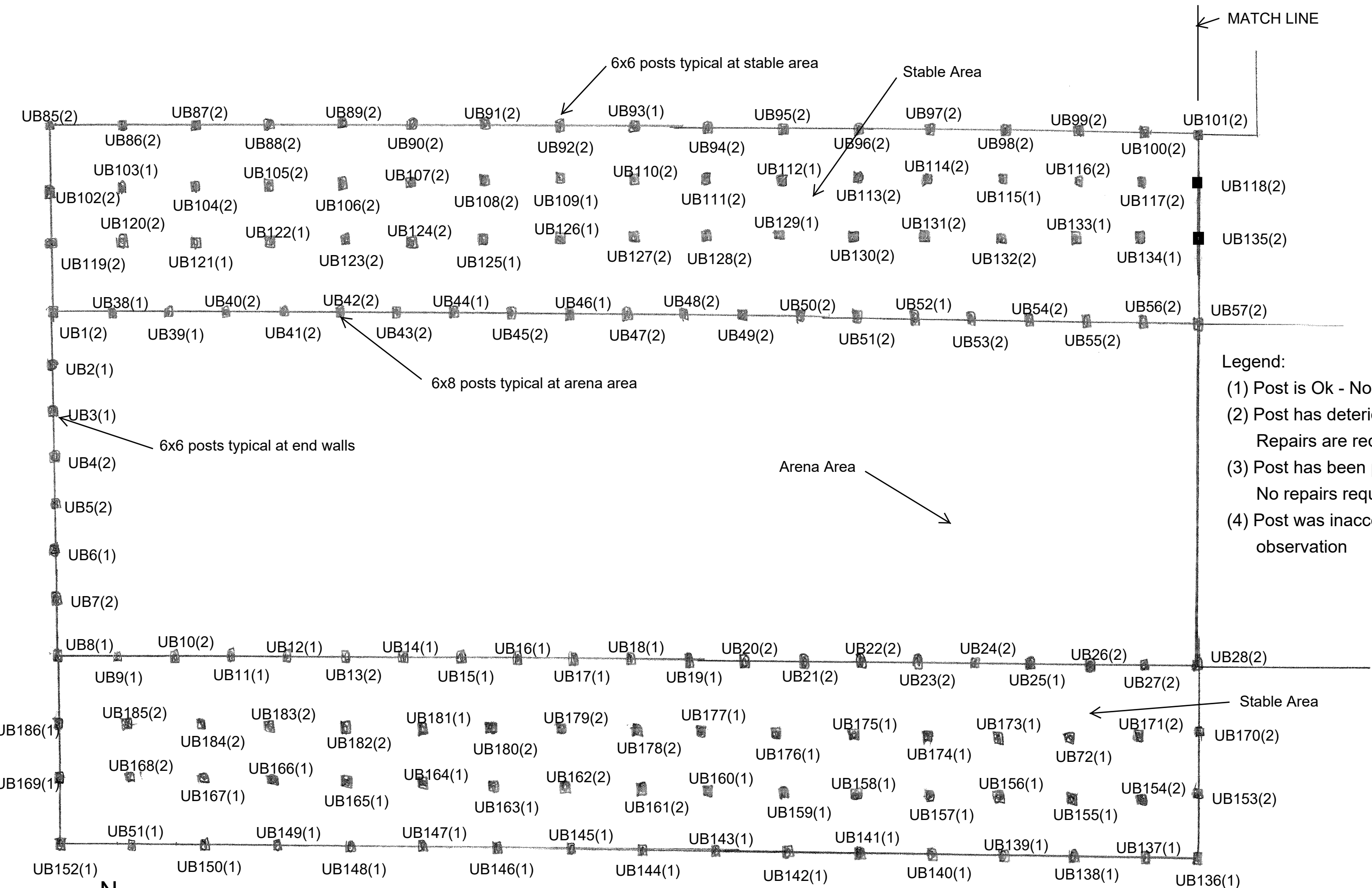
Photo 2 Rotted Interior Post at Stable

Legend :

- (1) Post is OK - No repairs required
- (2) Post has deteriorated due to rot
Repairs are required

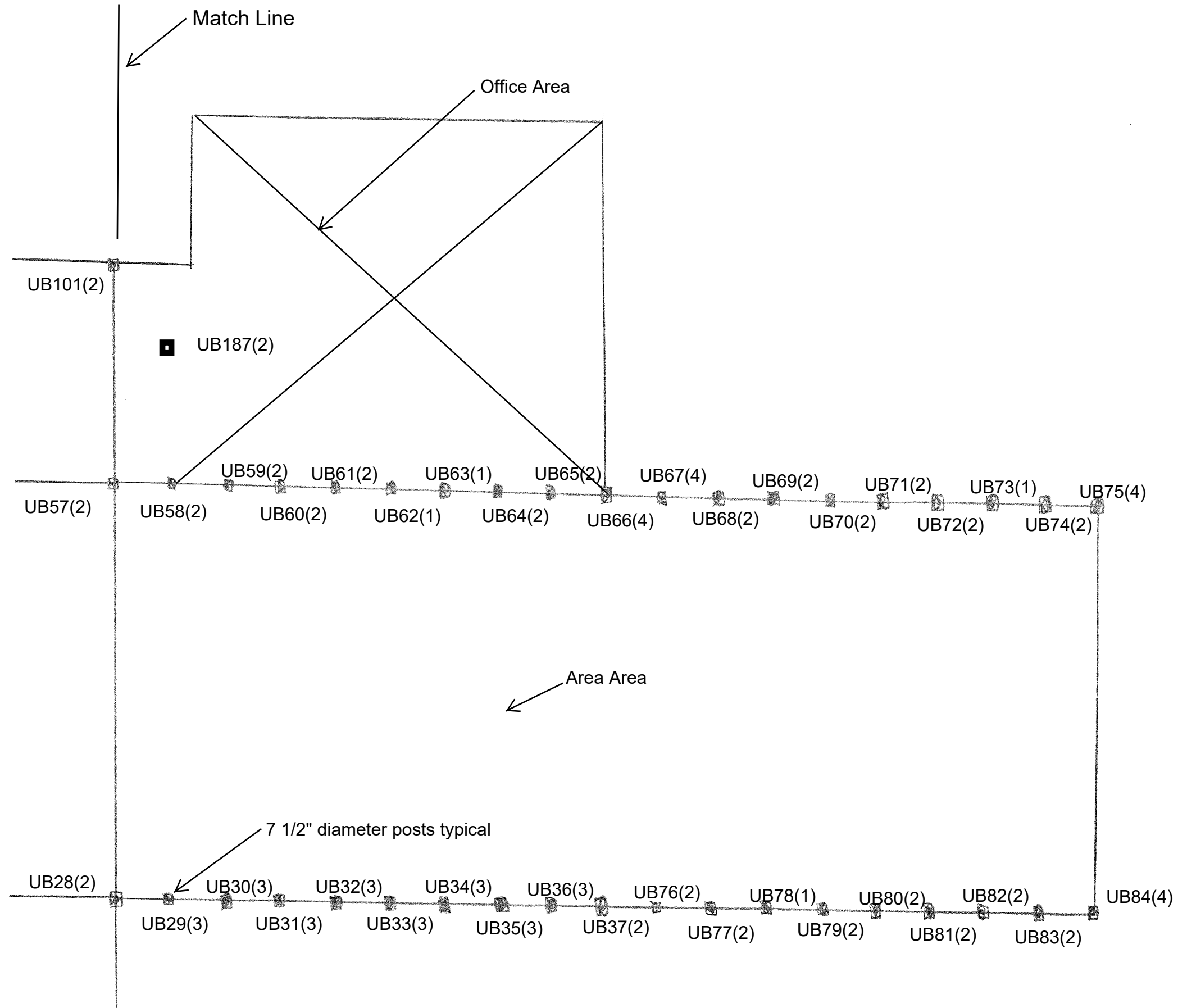


Lower Barn Post Plan



- Legend:
- (1) Post is Ok - No repairs required
 - (2) Post has deteriorated due to rot
Repairs are required.
 - (3) Post has been previously repaired
No repairs required
 - (4) Post was inaccessible for
observation

Upper Barn Partial Post Plan - Area A



- Legend:
- (1) Post is OK - No repairs required
 - (2) Post has deteriorated due to rot
Repairs are required
 - (3) Post Has been previously repaired
No repairs required
 - (4) Post was Inaccessible for
observation



Upper Barn Partial Post Plan - Area B