From:	Matt Stone
To:	Jon Creighton
Subject:	RE: 5844 Buncombe County - topping slab
Date:	Thursday, March 10, 2016 11:03:00 AM
Attachments:	image001.png

Bob and I went by the range this morning and have some additional questions related to altering rated doors as well as the effect on ADA in the building that raising the slab will have. Do you want to discuss them with you or just contact John Shields with them?

From: John C. Shields [mailto:jshields@ClarkNexsen.com]
Sent: Wednesday, March 09, 2016 8:19 PM
To: Matt Stone; Bob Haynes
Cc: Jon Creighton; David Lancor; Patrick Ward; Matt S. Hickey; Marcus B. Whitaker
Subject: 5844 Buncombe County - topping slab

Mr. Stone and Mr. Haynes:

This is an draft outline of what Clark Nexsen would recommend for a topping slab over the existing firing range floor slab, to correct the deficient slab thickness problem.

Option – Striate slab, add bonding agent and an additional 2" minimum of concrete topping

- Procedure:
  - The existing concrete slab would be mechanically striated to create a rough surface for improved bonding of the topping. Welded wire fabric would be installed over the existing slab, and a bonding agent would be applied to the existing slab. Then, a topping concrete mix would be applied and finished. Topping concrete mixes typically have a lower water-cement ratio than normal concrete, to reduce shrinkage in the topping. Control joints would be cut in the topping near the location of the control joints in the existing slab.
- Pros:
  - There should be no damage to the methane barrier as work in place remains in place
  - End product is thicker than specified.
  - Construction schedule impact will be less than with total slab replacement.
- Cons:
  - Client loses vertical clearance in the Range if baffle heights cannot be raised to compensate.
  - Height of existing door openings will be reduced by two inches. Note: This includes reducing vehicle access clearance through doors 100E and 100C by two inches.
    - Personnel doors, if already furnished, will need to be replaced with new doors and frames.
    - If coiling overhead doors cannot be adjusted to compensate for reduced opening height, new doors will be required.
  - Contractor will have to adjust design to accommodate new finished floor elevation. This will require, at a minimum:
    - Door adjustment/replacement as described above.
    - Provide a floor height transition at doors 100E and 100F.
    - Including topping slab in Storage 101 to match range floor height.
    - Adjust exterior grade elevations at range exterior doors.
    - A transition at door 100A will be required. The transition method will require discussion, as elevation change may affect adjacent toilets and plumbing rough-ins.
    - Coordination with bullet trap-related wall penetrations.

Please call or email if you have any questions.

John Shields AIA, CCS
Senior Architect | Associate

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