



May 9, 2013
File: PU12186A

Mr. Kevin Kirkman
KIP Development
594 SE Bishop Boulevard, Suite 102
Pullman, Washington 99163

RE: **Letter Addendum**
Pullman Business Center
Commercial Development
Pullman, Washington

Greetings Kevin:

Strata, A Professional Services Corporation (STRATA) provides this letter addendum to supplement our previous geotechnical report for the project, dated February 14, 2013. Upon reviewing the report with the contractor, Germer Construction, Inc. (Germer), we identified typographical errors in the *Required Compaction* report section. We provide this letter to supplement, not supersede, our previous report by revising these errors. The revised section is included below. In our opinion, these corrections do not negatively impact the contractor or the planned work and simply clarify the compaction requirements.

Required Compaction

The City of Pullman standards for earthwork require embankments to be constructed to 90 percent of Modified Proctor to within 1 foot of the surface, then 95 percent. This earthwork standard has proven acceptable for numerous developments throughout the Pullman Area for several decades. However, our experience and settlement estimates also denote that for the embankments planned in your development, a higher overall consolidation potential will be realized and consolidation will take longer if the City of Pullman standards are utilized. For this project we are recommending the compaction requirements below in order to:

- Reduce the overall embankment settlement potential.
- Reduce rework at pavement and foundation subgrades.
- Shorten the expected time to realize embankment settlement based on anticipated rapid sale and potential development of various lots.

Based on the above, STRATA recommends the compaction requirements outlined in Table 2 be specified by earthwork construction documents.

Table 2. Required Compaction and Products for Designated Project Areas

Project Area	Required Structural Fill Product	Compaction Requirement¹
Structural Subgrades	Native soil for embankments	90%
Embankment or utility fill to within 3 vertical feet of finished surfaces	General, Granular, and Crushed Surfacing Structural Fill	92%
Utility Trench Backfill Below Pavements, Slabs, and Buildings to within 3 feet of finished surfaces	General, Granular, and Crushed Surfacing Structural Fill	95%
All structural fill within 3 feet of finished surfaces	General, Granular, and Crushed Surfacing Structural Fill	95%
Landscape Areas Sloped Flatter than 5H:1V	General Structural Fill	85%

1. Relative compaction requirement compared to the maximum dry density of the soil as determined by ASTM D1557 (Modified Proctor).

Structural fill products and existing subgrades must be moisture conditioned to near optimum moisture content and placed in maximum 12-inch-thick, loose lifts. This assumes large, appropriate compaction equipment is used to attempt compaction. If smaller or lighter compaction equipment is provided, reduce the lift thickness to meet the compaction requirements presented herein.

The remainder of the *Structural Fill Section* from our previous geotechnical report remains unchanged and applicable to the project.

We appreciate continuing our service to KIP Development in this project. Please contact us if you have additional questions about our geotechnical report, this letter addendum or our services to date.

Sincerely
 STRATA



Travis J. Wambeke, P.E.
 Principal Engineer

AJA/TJW/ac

