AUTHOR SUMMARY

While standard connectivity studies in mammalian models focus on the overall connection strength between areas, there is an increasing focus on specific connection types between cell classes when describing functions at a local circuit level. Having recently described the importance of such classes in the cortico-thalamic system, we now investigate their importance for estimating brain-wide mesoscopic connectivity. Even within our relatively large dataset, the connectivity data across cell classes is sparse, and so we introduce a method to more reliably extrapolate across classes and estimate connection-type specific inter-areal connectivity. We observe that this complex connectivity may be described via a relatively small set of factors. While not complete, this connectivity matrix represents a categorical and quantitative improvement in mouse mesoscale connectivity models.