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The larval zebrafish is fast becoming a very promising vertebrate model organism for circuit based neuroscience. It offers the convenience of powerful genetic tools, well stocked mutant libraries and more importantly for circuit neuroscience, the ability to perform whole-brain imaging (Rainer review). The transparent brain of the larval zebrafish, coupled with genetic calcium based reporters and light-sheet microscopy, has allowed unprecedented ability to image from the whole brain (Arhens paper). In order to tease circuits comprehensively, often researchers adopt a 'reverse-engineering' approach to determine the exact nature of the neuronal function to behavior. One such tool that is often used in the c.elegans commiuinty is the connectome - the entire wring diagram of the worm (Bargmann papers). Here we attempt to reconstruct the precise connectivity among neurons - the wiring diagram, in the oculomotor circuit of the larval zebrafish. We correlated functional light microscopic imaging with serial electron microscopy to reconstruct multiple neurons from the hindbrain of the larval zebrafish, which were specifically involved in the task of velocity-to-positon-neural-integration (VPNI). We validated previous results, showing, that there are different classes of cells that make up the VPNI and observed a potential new class of cells, previously unknown, that had axonal projections ipsilaterally and contralaterally. These cell classes had varying dendritic arborization patterns and axonal projections. Axons of VPNI cells were observed to give rise to collaterals that overlapped with the dendritic field of other cells, suggesting the possibility of recurrent synaptic feedback between these cells. We were able to map the number of inputs and outputs and observed that on average there were three times more inputs as compared to outputs from these cells. Lastly, we answered a long standing question in systems neuroscience and observed that integrator cells are synaptically connected, specifically, cells from the same class synapses onto each other.