PT. X is one of the largest precast concrete industry in Indonesia, where to realize the vision, they continue to develop products and improve productivity performance by trying to improve quality of service, production process, and delivery product to customer with minimal cost and on time. To reach that purpose, needed Lean Construction method to eliminate waste and identify activities that can affect the products value-added.

Research begins with description of the company’s condition using Value Stream Mapping. Waste was identified by questionnaires, the analyzed by selection of mapping tools on Value Stream Analysis Tools and analyzed the root cause for suggestion of improvement.

The results showed that the most critical waste that affected productivity were defects (37.50%), unnecessary inventory (25%) and inappropriate processing (15%). Lead time required for overall of the process was 479.56 minutes and after improvement was reduced to 463.83 minutes by unification T.III / T.IV (fixing and tightening of the bolt plate) which reduced non-value added 15.73 minutes.

Keywords : Lean Construction, Value Stream Mapping, Value Stream Analysis Tools, Critical Waste, Lead Time, Unification Process.