

RFP PS20161055 Provision of Weigh Scale Management and Point of Sale System

List of Appendices:

Appendix 1-A Site Layout Diagrams (3 pages)

Appendix 1-B Workflows (8 pages)

Appendix 1-C Schematic Network Architecture (1 page)

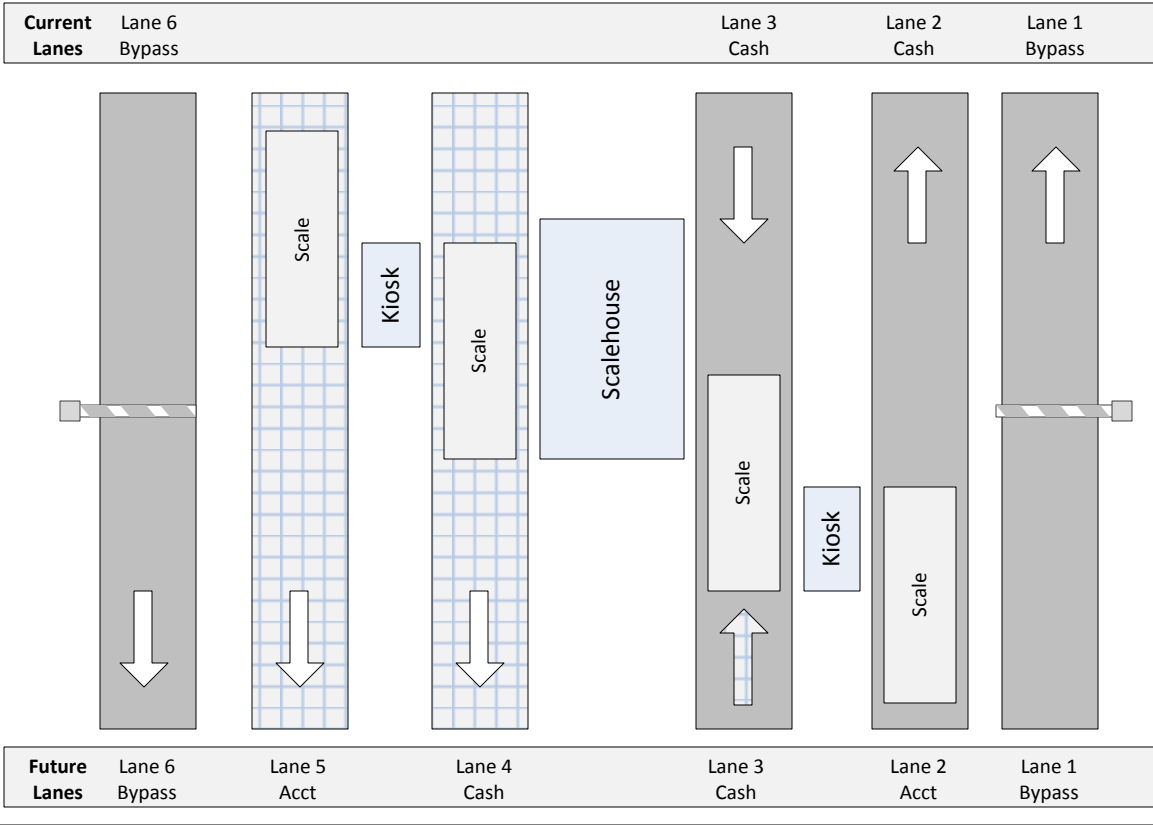
Appendix 1-D Customer Types (1 page)

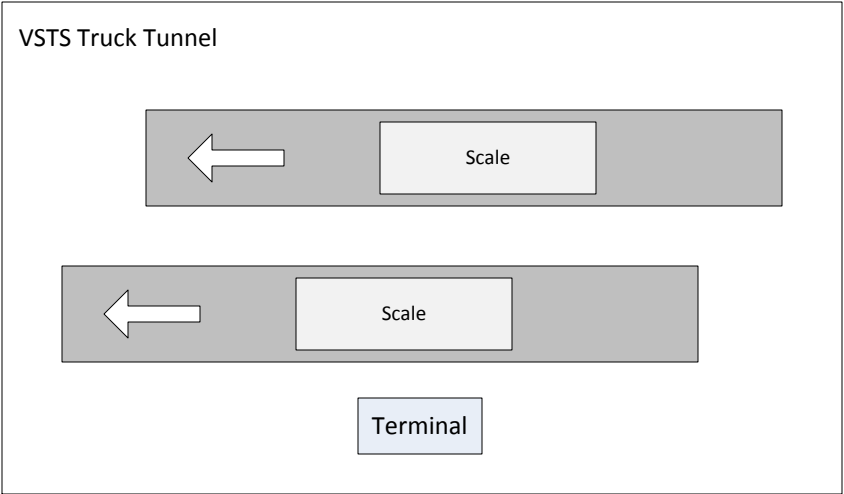
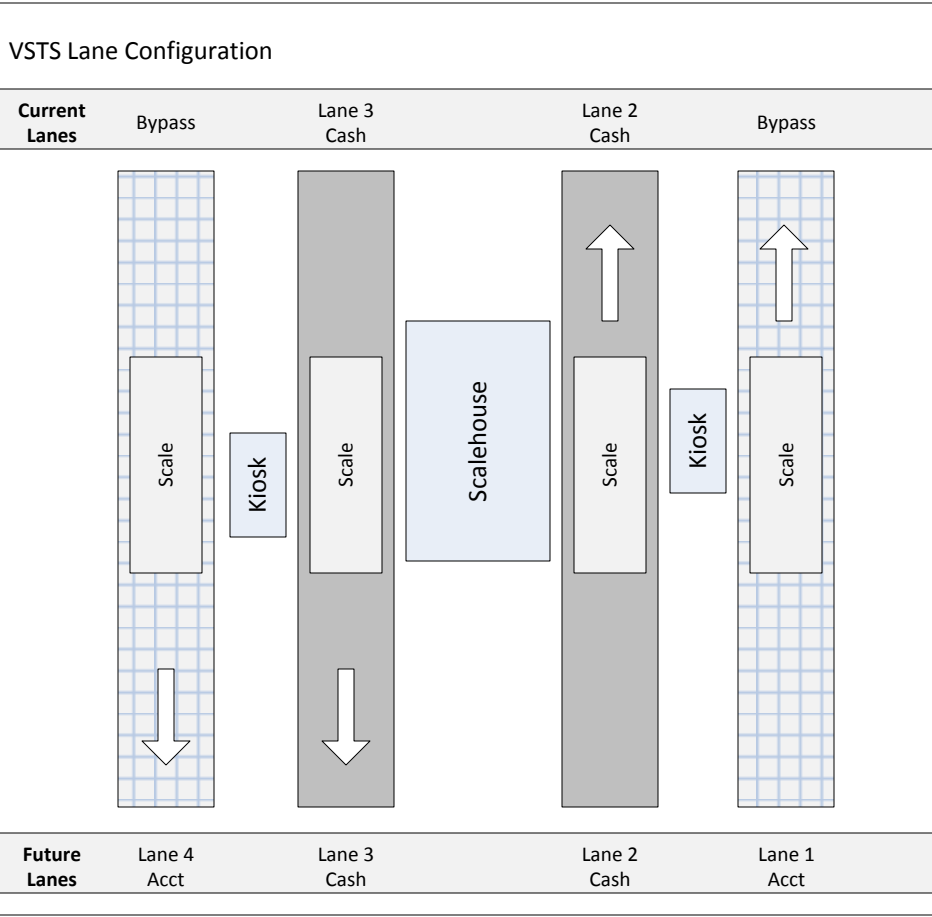
Appendix 1-E Roles (1 page)

Appendix 1-F Integrations (1 page)

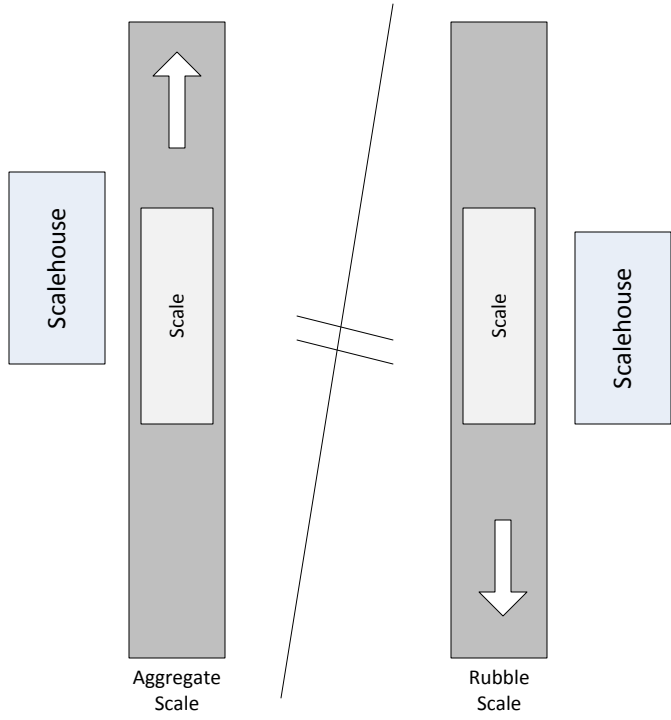
Appendix 1-G Glossary (2 pages)

VLF Lane Configuration



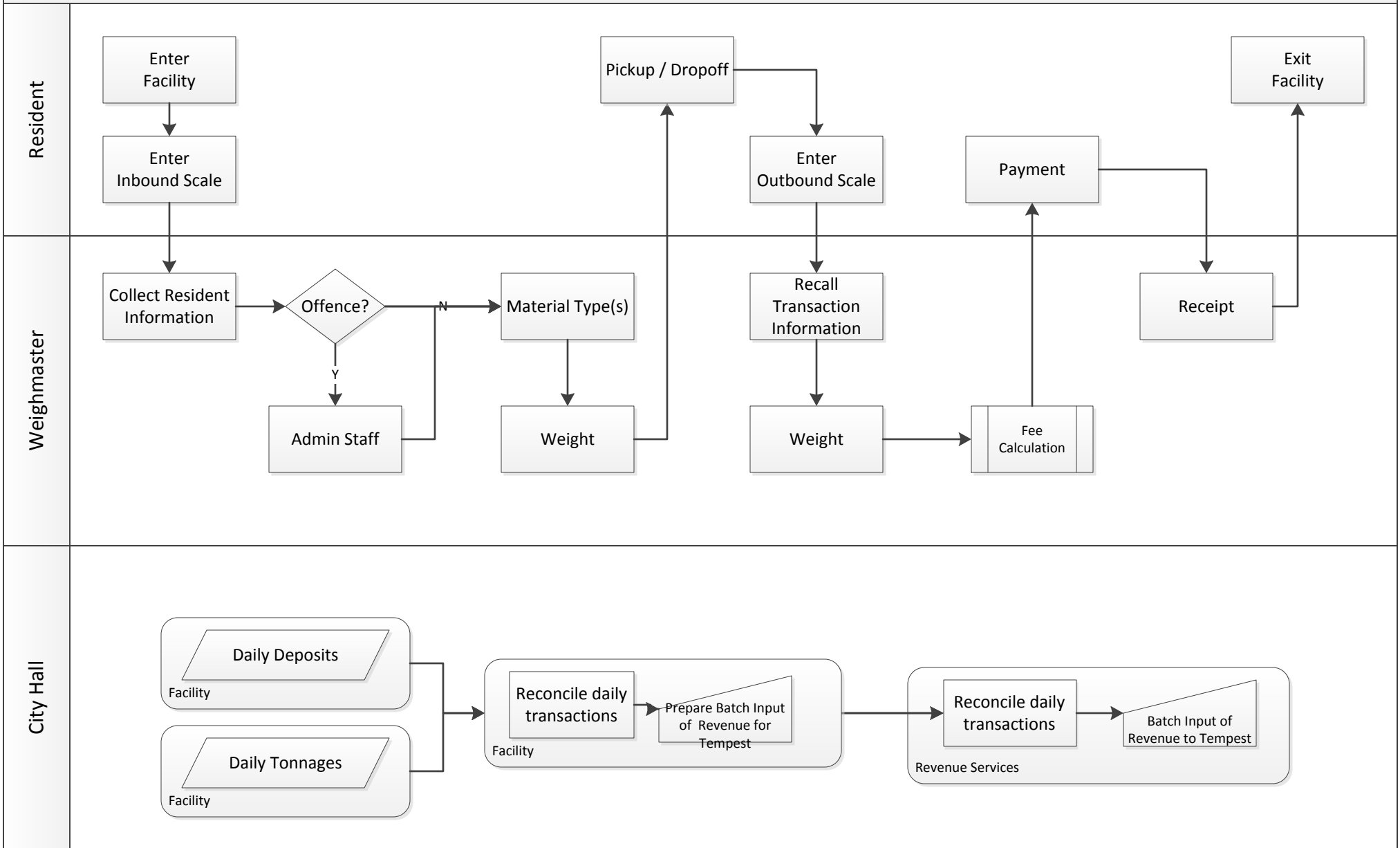


KY Lane Configuration



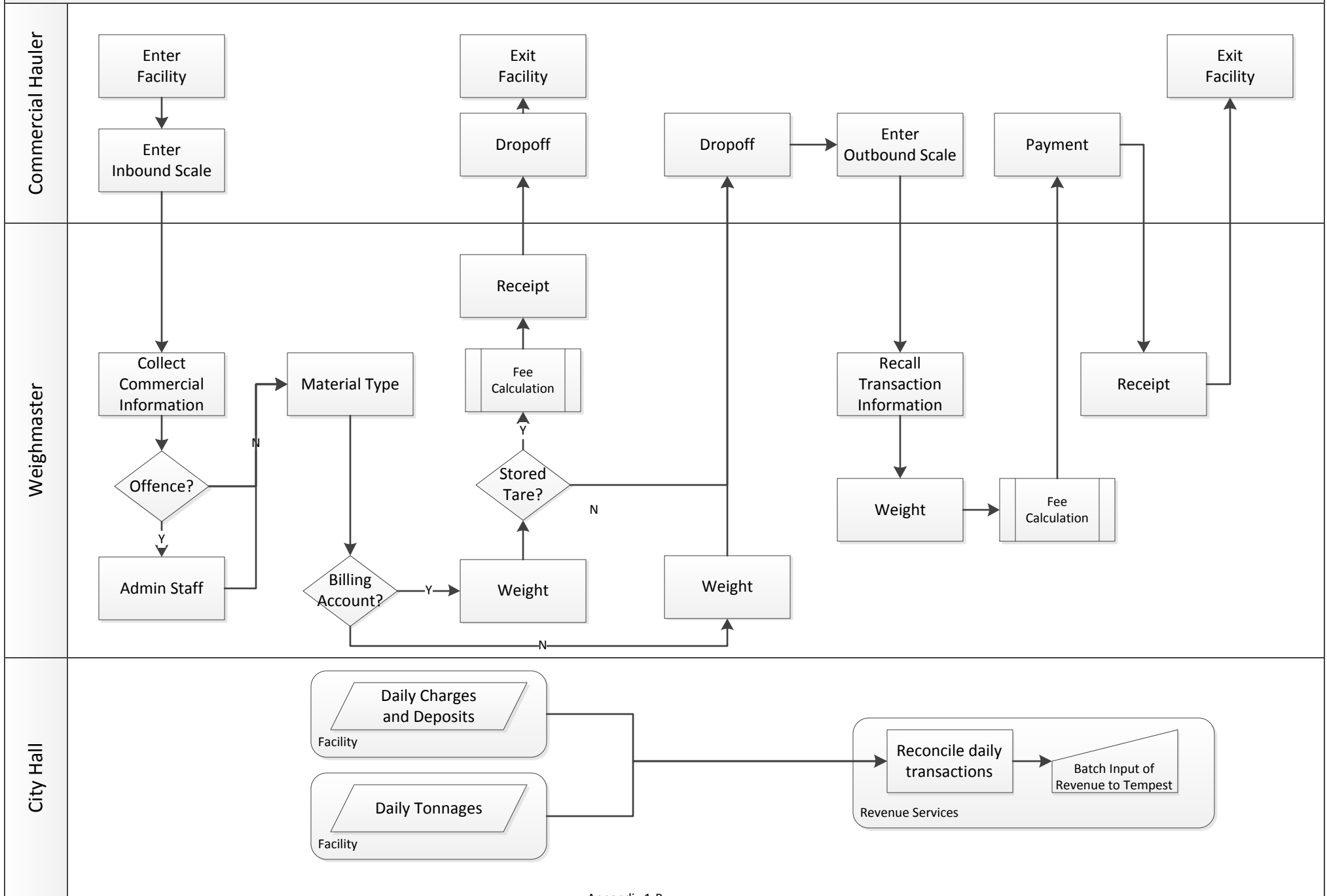
Residential Dropoff / Pickups (AS-IS)

VLF and VSTS



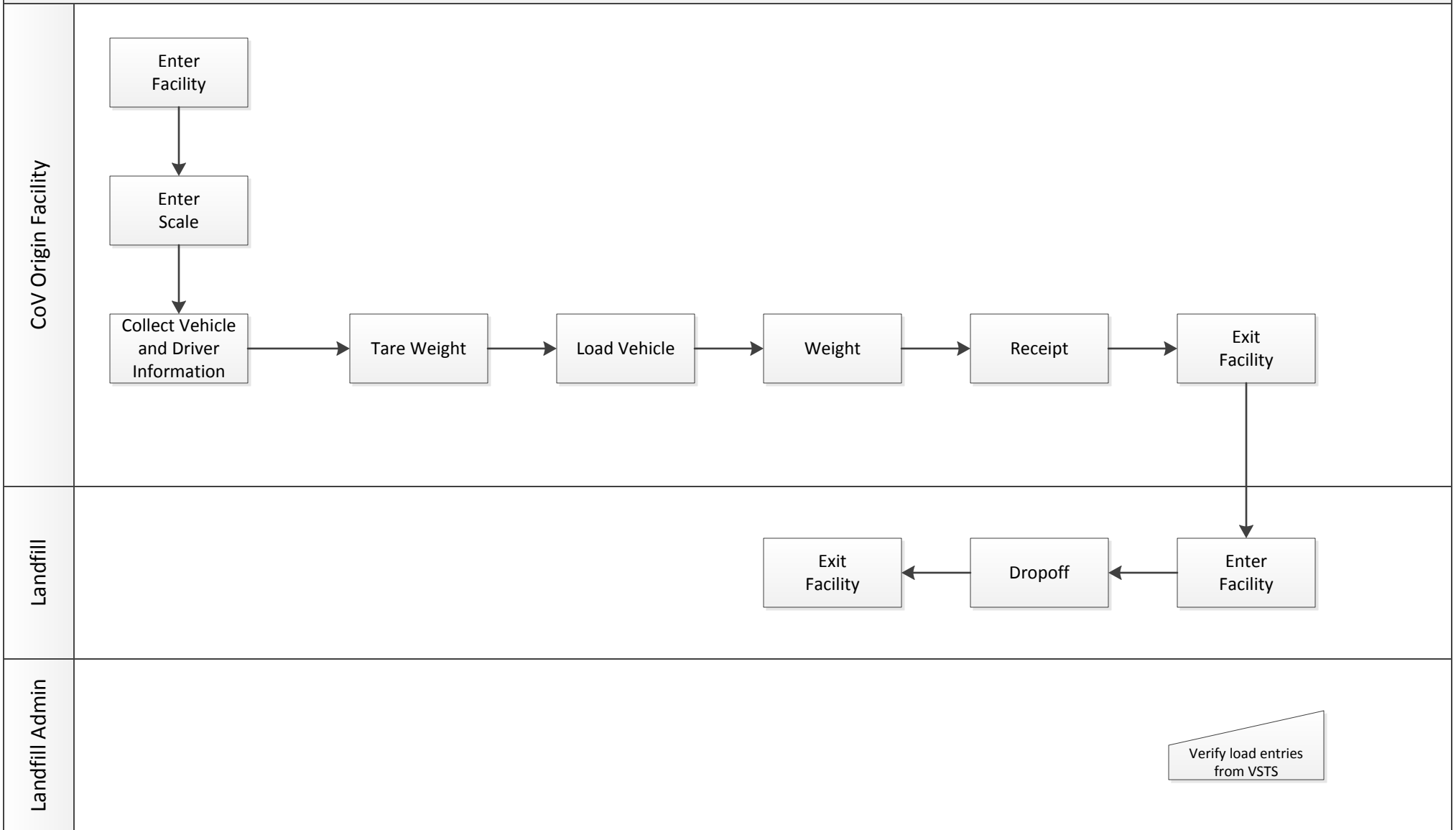
Commercial Dropoffs (AS-IS)

VLF and VSTS



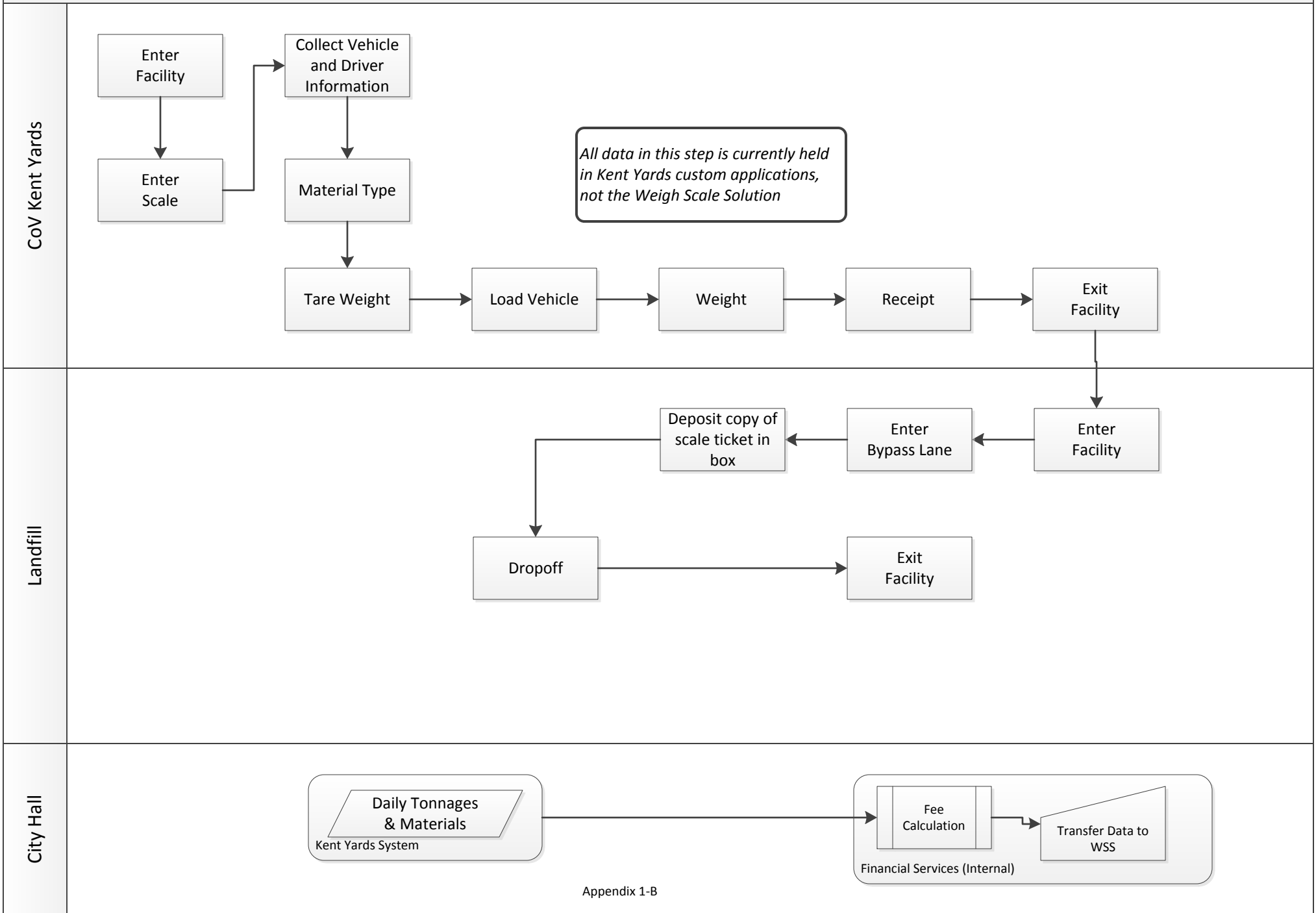
CoV Transfers – Transfer Station to Landfill (AS-IS)

Internal transfer of materials



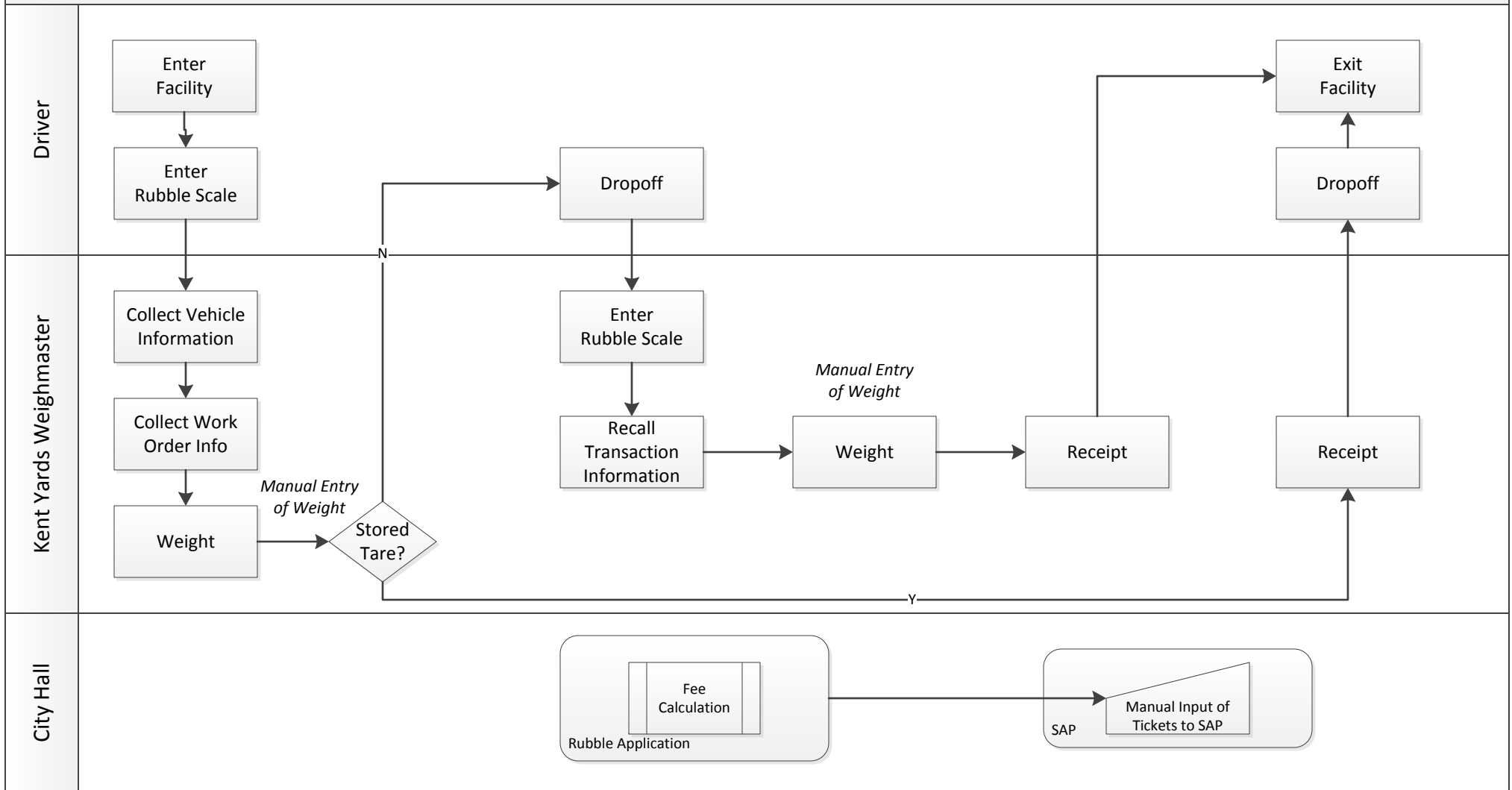
CoV Transfers – Kent Yards (AS-IS)

Internal transfer of Aggregate or Rubble from Kent Yards to Landfill



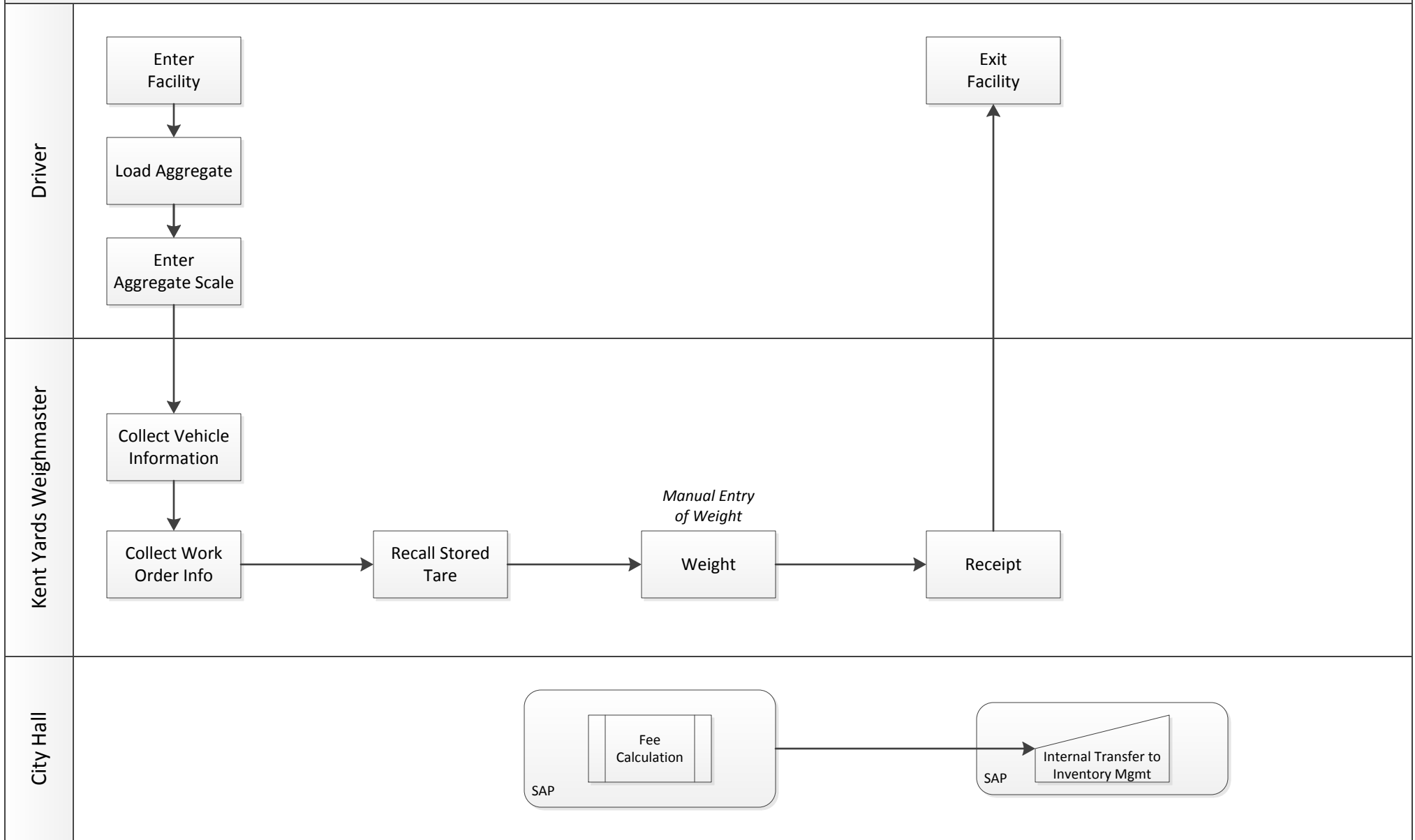
Kent Yards – Rubble (AS-IS)

Inbound material transactions for accounts & CoV Work



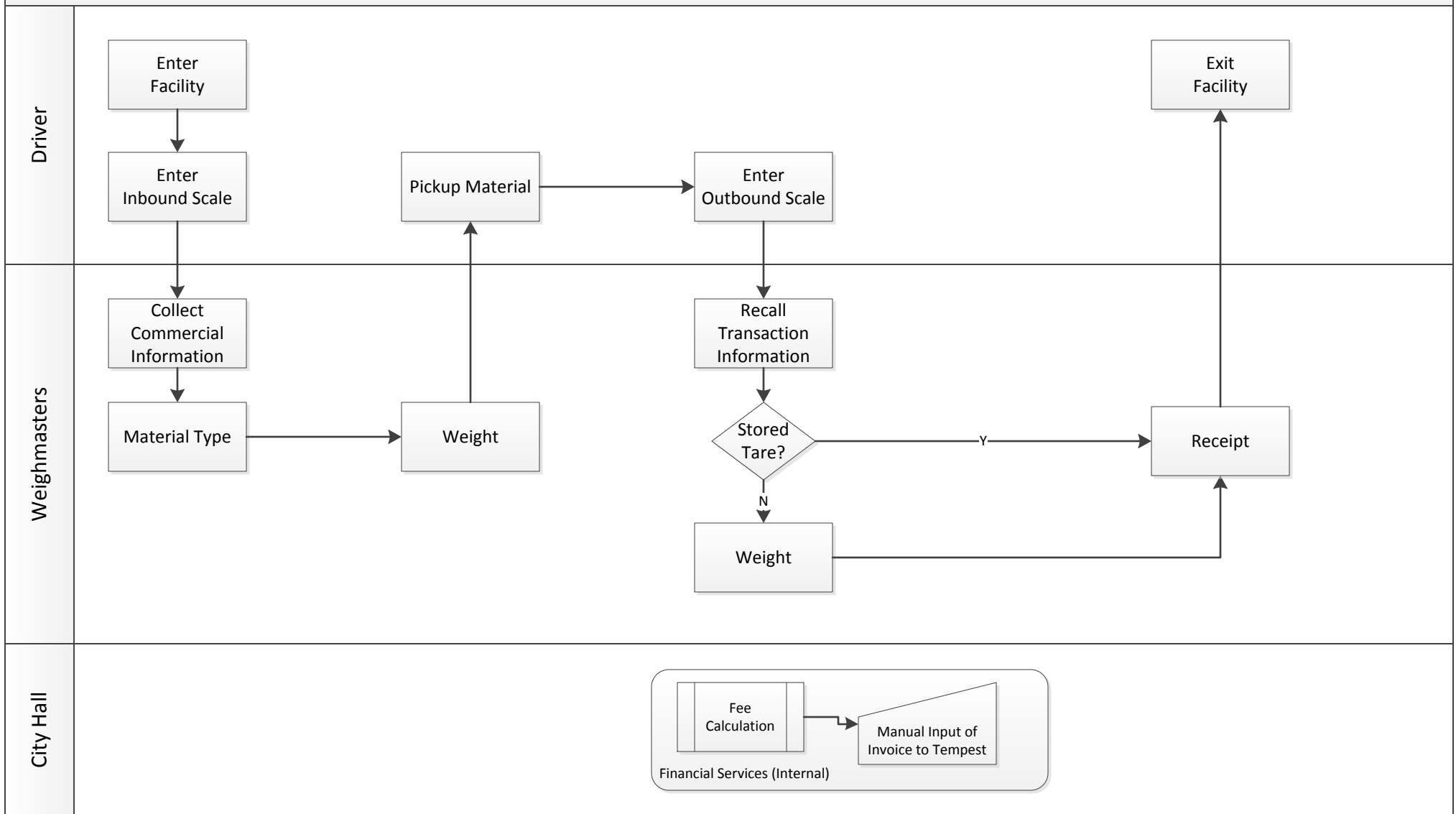
Kent Yards – Aggregate (AS-IS)

Outbound material transactions for accounts & CoV Work



CoV Commercial Pickups – Recycling (AS-IS)

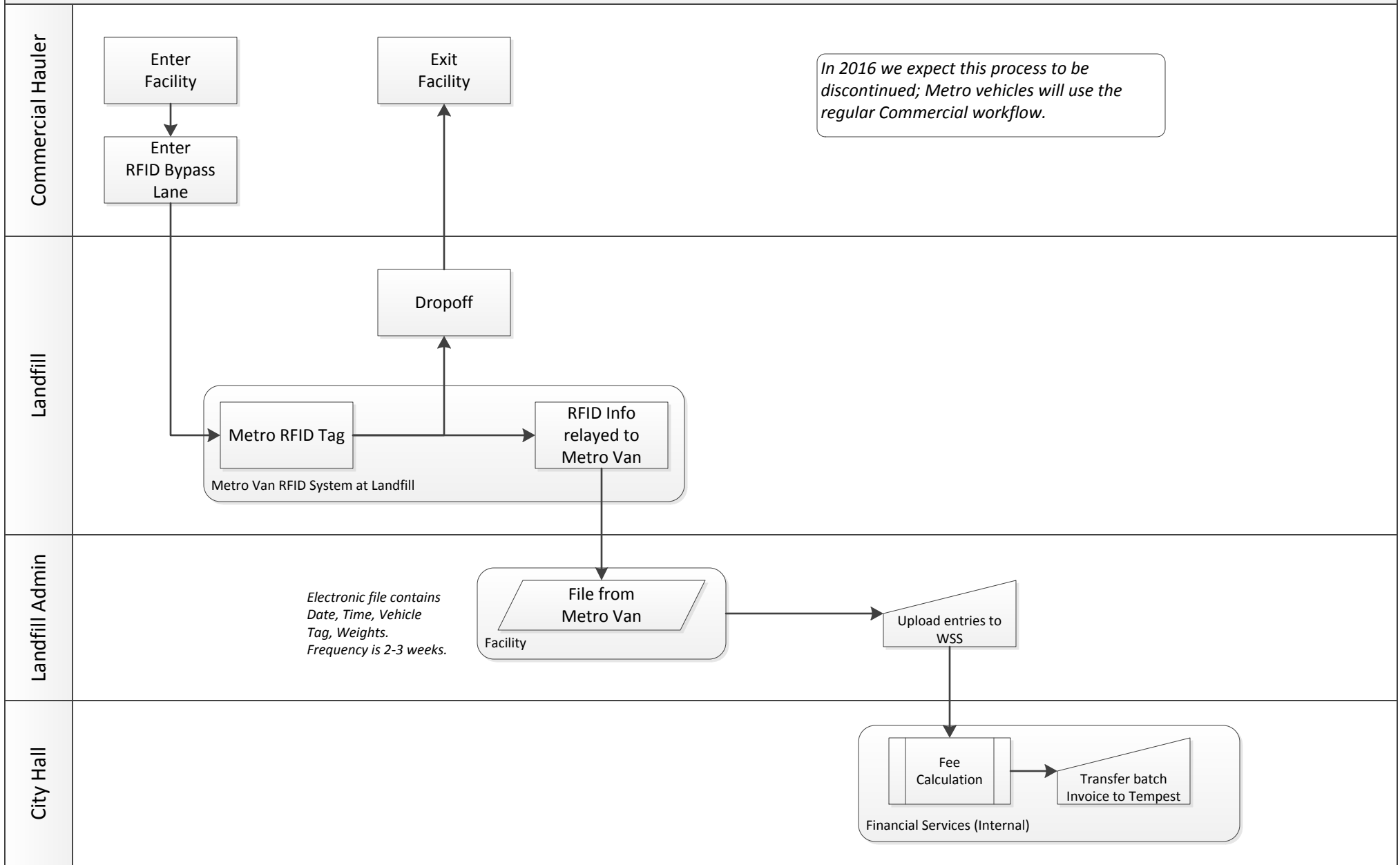
Removal of recyclables from CoV property by commercial entities (Landfill and Transfer Station)

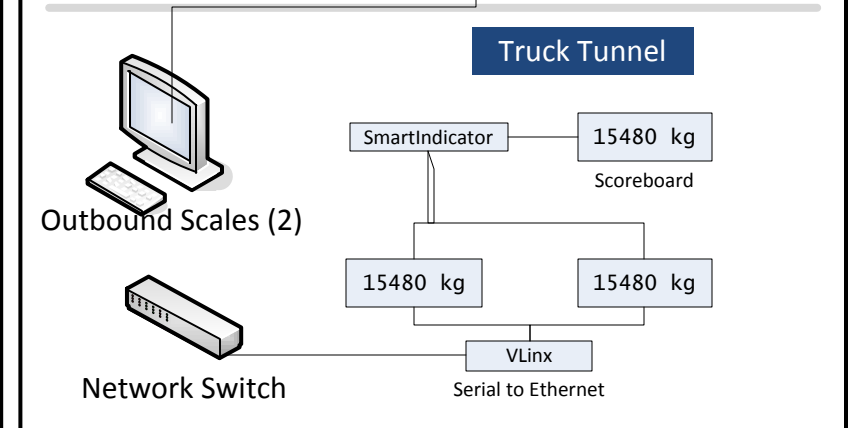
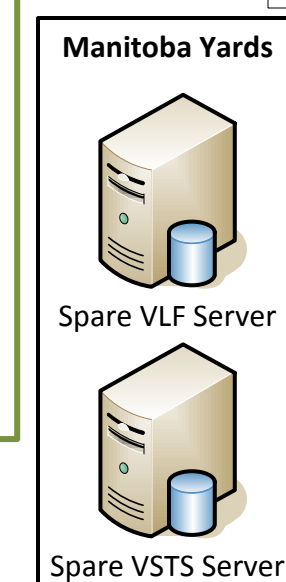
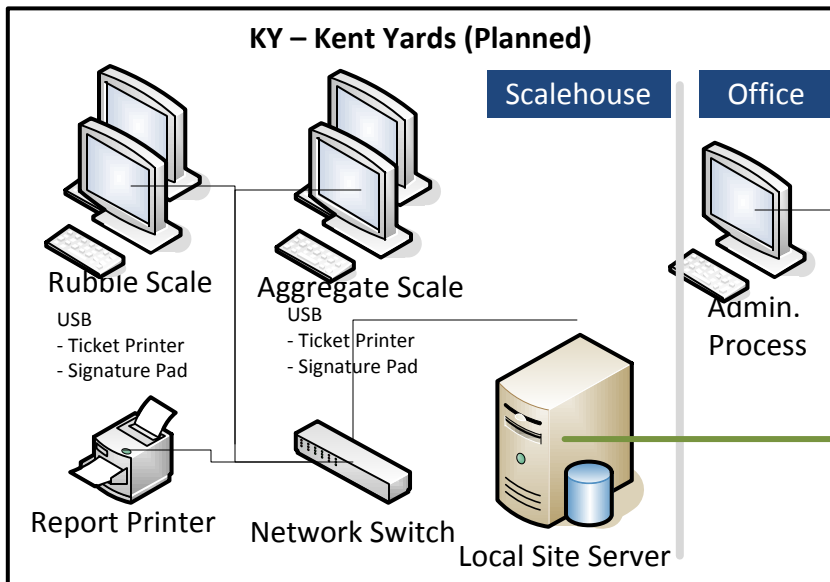
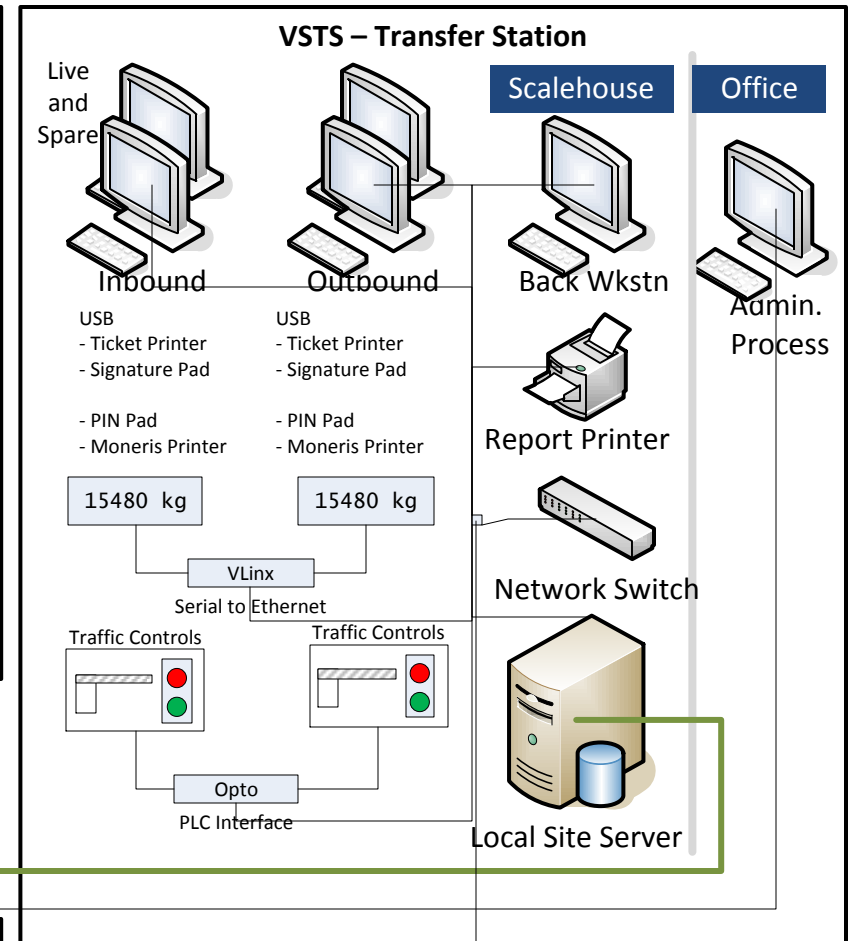
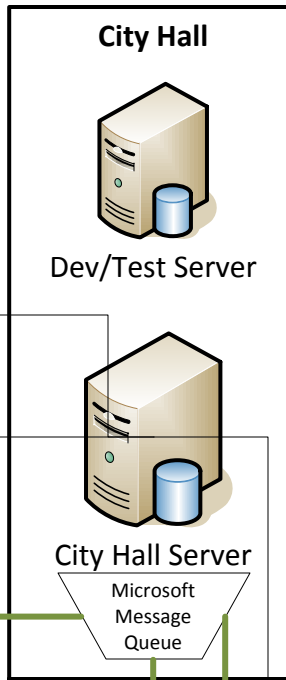
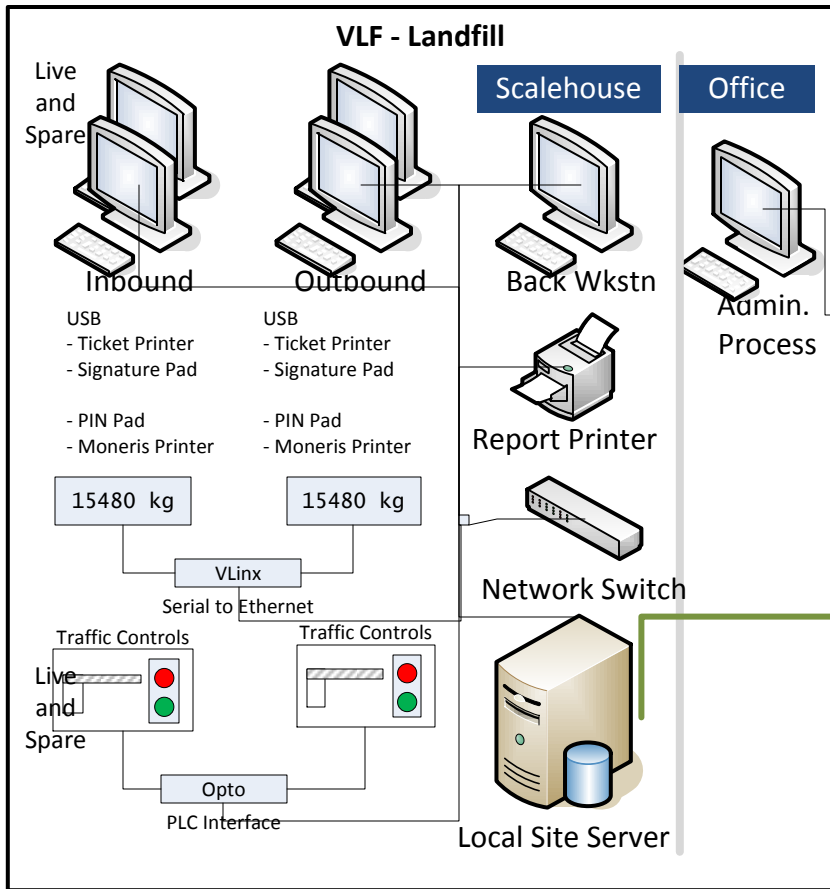


After 2016 construction the Transfer Station recycling will be in a location that requires vehicles picking up materials to loop through the scales before and after pickup.

Municipal Transfer Trailer Dropoffs – Metro Vancouver RFID (AS-IS)

Transactions originating from Metro Vancouver Facilities – destination is Landfill





Current Network Architecture
Appendix 1-C

Weigh Scale Solution - Customer Types

Preface: For Information Only

This chart summarizes the characteristics of each customer type.

Customer Type	Description	Identify By LP-License Plate or RFID	WSS Acct	Vehicle List Maintenance	Automated Scale	Stored Tares	Addl Data Collection	Tracking	Waste Assessments	Notes
City Waste Trucks	City garbage packers	RFID	Y	N	Y	Y	Zone, Beat			Future (2017) values for Zone, Beat and Material Type should be available using a web service call; trucks are both left-hand and right-hand drive (impact on Unattended lanes)
City Transfer Trucks	Moving waste from Transfer Station to Landfill or Green Waste recycling partner	RFID	Y	N	Y	Y	Driver ID			Trucks are weighed at the Transfer Station; at the Landfill they use the Bypass lane
City Engineering Vehicles	Streets, Sewers, Water trucks with Waste, Rubble or Aggregate	RFID/LP	Y	N	Y	Y	Work Order	opt		
City - Other Vehicles	Parks, Cemeteries, misc City vehicles	LP/RFID	Y	N	N	N				
City Contract Vehicles	Moving rubble from Kent Yards to Landfill	LP/RFID	Y	Y	Y	Y				Rubble trucks leaving KY for the Landfill are weighed at KY, then use the bypass lane at the Landfill
Municipal Waste Trucks	Other municipalities with accounts	RFID/LP	Y	Y	Y	Y	Route	opt		Municipality to maintain Vehicle List
Account Customers	Companies with City billing accounts; letter of credit or bond	RFID/LP	Y	Y	Y	Y	Project Number	Available credit, Authorized Cross-billing Vehicles	opt	Account Customers to maintain list of VehicleIDs authorized to bill to their account (with material type, date range). May include their owned vehicles, other Account customer vehicles and Hauler vehicles. Track available credit by decrementing when a load is dropped; increment when a bill is paid (Tempest);
Haulers (Account)	Companies with no billing privileges, providing haul services to Account Customers	LP/RFID	Y	Y	Y/N	opt			opt	Hauler Customers to maintain Vehicle List
Commercial non-account	Mostly landscapers with compostable materials; may be junk haulers or farm vehicles	LP	opt	opt	Y/N	N			opt	Generic "account". Track offenses and daily limits by license plate.
Residential	Metro Vancouver resident	LP	N	N	N	N			opt	Generic "account". Track offenses and daily limits by license plate.
Recycling Partner	Picks up recyclable materials, e.g. mattresses, metal, appliances	LP	Y	Y	Y/N	Y				Partner to maintain Vehicle List

Column Explanations

Identify By	License Plate or RFID; where both are possible the dominant method is shown first
WSS Account	Y if this customer type has a billing account or hauling account
Vehicle List Maintenance	Y if the customer is responsible for maintaining the list of their own vehicles (with web portal)
Automated Scale	Per vehicle approval to use Automated scale
Stored Tares	Customer's vehicles may have stored tares
Additional Data Collection	Extra data fields to collect
Tracking	Other items to track routinely
Waste Assessments	Potential to have a Waste Assessment

Weigh Scale Solution - Expected Roles

Preface: For Information Only

		Access / Functions Available to Role															
		<X> Limited functionality															
Role Name	Description	Encryption Keys	HW Config	SW Config	Business Rules	Code Defn	Lane Defaults	TX - Create	TX - Open edit	TX - Closed Edit	Log Views	Report Views	Account Edit	Vehicle Edit	Offences	Waste Assessments	
System Administrator	Full access; responsible for encryption keys, configuration	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Support Administrator	Full access except for encryption keys; primary responsibility for business rule setup and logic		Y	Y	<X>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Administrative User	Full editing , code definitions, simple fee calculation rule adjustments				<<Y>>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Weighmaster	Scalehouse operations, full edit rights on Open transactions						<script>	Y	Y	<same day>	Y	Y		Y	Y		
Yard Attendant	Updates Open transactions from the tipping area, using a mobile device								<Y>							<Y>	
Inspector	Imposes surcharges and fines on Open transactions from the tipping area; communicates verbally with Weighmaster or Yard Attendant																
Supervisor	Approves clean fill and waste assessments for entry to system by Administrative User; involved on severe Offences															Y	Y
Billing Account Contact	(Desired) View transactions, maintain Vehicle list, provide online Billing Assignments for Hauler vehicles												<Y>		<Y>		
Hauler Account Contact	(Desired) View transactions, maintain Vehicle list												<Y>		<Y>		

Weigh Scale Solution - System Integrations

The City will develop data exchange protocols with the systems listed below using middleware.
Please state how the proposed system will provide outgoing data and accept incoming data.

System Integrations	Description	Outgoing data	Incoming data	Notes
Tempest	City billing system for Account Customers; bills issued twice monthly	Daily updates of account transactions, after site reconciliation	Near real-time updates to Available Credit when a bill is paid Setup matching Account in WSS, copy edits to WSS	Tempest is the City's system of record for billing. Available Credit is to be tracked in the WSS database such that customers who have exhausted their credit are not permitted to continue dumping waste.
SAP	Inventory and Internal Accounting	Daily updates for Rubble and Aggregate material inventories at the Kent Yards facility; Daily material quantities and charges by Work Order number; Daily material quantities to Sanitation by Beat		Work Orders are associated with City Engineering Branch accounts; Beats are associated with the Sanitation Branch account.
SAP	General Ledger	Daily financial updates		
Hansen aka Infor Public Sector	Internal Work Orders		Near real-time source for valid Work Order number, (future) by Vehicle ID	Operations staff input vehicle assignments daily with Work Orders into the Hansen system. A vehicle may be assigned to more than one Work Order for the day.
Middleware:	Microsoft BizTalk Server 2010			

Term	Definition
City	City of Vancouver
Clean Fill	Clean fill includes dirt, clay or gravel (less than 10cm in size). The City determines acceptable sources and quantities on a case by case basis
Commercial Account	Commercial business using its own or independent vehicles, with a City account billed semi-monthly
Cross-billing Authorization Letter	Authorizes one company to charge specific vehicle's transactions to another company's account
Gross Weight	The total weight of the vehicle, including contents
Hansen	Municipal fleet register and work order system; now known as Infor Public Sector
Hauler	Hauling business billing to commercial account
Infor Public Sector (Hansen)	Municipal fleet register and work order system
Inspector	Waste inspector from Metro Vancouver, with the ability to levy fines or surcharges based on inspection of a load at the tipping place
Material types	Categories of materials defined by regulatory and revenue requirements; includes various types of waste, compost, aggregates and commodities
Middleware	Application used to routinely transfer data between disparate systems; BizTalk
Net Weight	The weight of the contents, not including the vehicle
Offence	A contravention of the rules regarding materials, payment, load safety or behaviour
RFID	Radio Frequency Identification Device
SAP	Enterprise Resource Planning (ERP) System used by the City
SOMAS	City Sanitation Operations Management System
Supervisor	Facility Supervisor wrt Tipping, Acceptable Materials, Offences, Safety
Tare Weight	The weight of the vehicle, not including the contents
Tempest	Application for billing customers
Unattended Scale	Means that a vehicle with a registered RFID tag or License Plate is able to use a driver's terminal to process an inbound and outbound transaction without intervention by a Weighmaster
Vehicle ID	The front license plate of a vehicle, or vehicle plus trailer combination

Waste Assessment	Approved Waste Assessments permit the customer to dispose of restricted material, e.g. asbestos, at a specific facility, within a range of dates up to a maximum number of loads per day or total quantity. Special handling requirements are imposed where applicable.
Weigh Scale Facility	Geographically distinct location containing one or more weigh scales. The range of material types and customer types may differ at each facility.
Weighmaster	Scale House Operator
WMRR	City of Vancouver - Waste Management and Resource Recovery
Yard Attendant	City employee who verifies material types and quantities at the tip, monitors waste tipping or material pickup by customers