

**Özkartallar Campak Joint Venture**

## **Solid Waste Management of Khokhar Town (UC-69)**



**5<sup>th</sup> Floor Shaheen Complex, Egerton Road, Lahore**

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## 1. Introduction

Union Council – 69 (Khokhar Town) is located in Data Gunj Baksh Town. Total area of the UC is 2182095 m<sup>2</sup> with population of 63218<sup>1</sup>. This area is predominantly middle income area with planned settlement.



Mughal Park UC-69



Open Plot Mughal Park UC-69



Rashid Road UC-69

*Fig: 1. Pictorial View of Important Areas of UC-69*

### 1.1 Important Places of Union Council-69

From Sanitation point of view Union Council-69 has important Places like Commercial Markets, Parks, Graveyard Important Roads, and Mosques etc.

#### **Commercial Markets**

- Toheed Road
- Ameen Park No 9
- Rashid Road Main Bazar

#### **Graveyards**

- Amin park near Abu Baker masjid(band par)
- Shafiq Abad no 2 (band par)

#### **Mosques**

- Jamai Masjid Ghulam Muhammad (Rashid Road)
- Jamai Masjid Abu Bakar Sadiq (Allama Iqbal Road Nasir Park)
- Jamai Masjid Umer Farooq (Rashid Road)
- Masjid Tayyaba (Toheed Road)
- Madina Munawra Masjid (Shafiqabad)
- Jamai Masjid Rahmia (Boobi Plaza)
- Jamai Mashjid Qabah (Nasir Park)

#### **Open Plots**

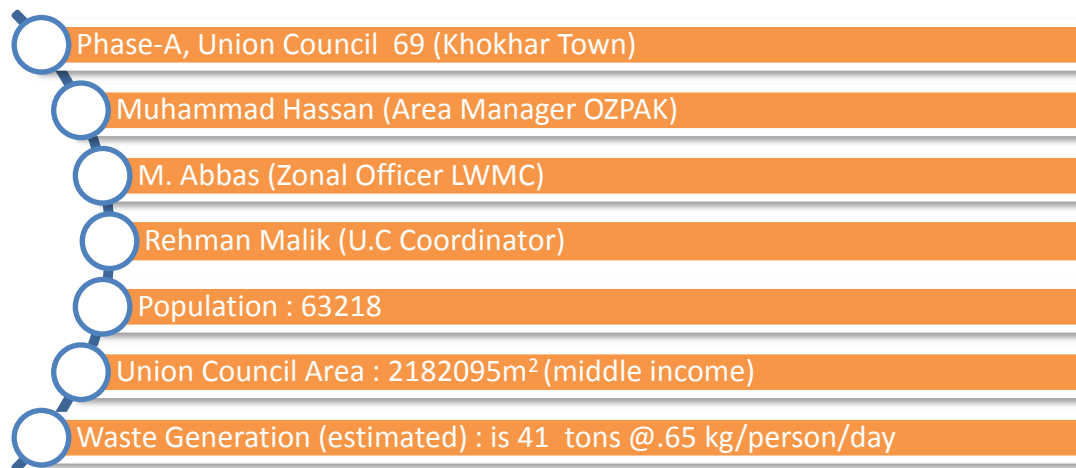
- Mughal Park, Kareem Park, Khalid Park, Shafiqabad (All River Side Areas)

### 1.2 Solid Waste Generation

Estimated solid waste generation is 41 metric tons per day @ waste generation rate of 0.65 kg/person/day.

<sup>1</sup> Punjab Development Statistics – 2011, Bureau of Statistics, Govt. of the Punjab

### 1.3 Particulars



## 2. Solid Waste Management Practices

This area is under control of M/s. OZPAK J.V for solid waste management. Existing arrangements for SWM based upon actual operations are as follows:

## 3. Operational Activities - First Shift Plan

### 3.1 Manual Sweeping Operation

Manual sweeping of the roads, streets, markets, footpaths and every paved and unpaved passageway is being done with Sanitary Workers equipped with all necessary operational tools and PPE's (Personal protective equipment's)

- ✓ Manual sweeping in first shift is carried out from 6AM to 2PM.
- ✓ Personal protective equipment's include Proper uniform, Gloves, Mask, Proper Shoes, Long Boots and Rain Coat in case of monsoon Season.
- ✓ Operational Requirement for Sanitary Worker includes Broom, Shovel, Wheelie Bin, Waste Bags, Scrapper and Hand Cart.



Broom



Hand Cart



Wheelie Bin



Shovel



Proper Uniform with PPE's



Waste Bag



Scraper



Shovel 1



Monsoon SOP's (Long Boots & Rain Coat)

*Fig: 3. Pictorial View of Operational Equipment's, PPE's & Monsoon SOP's for Sanitary Worker*

- ✓ Sanitary Workers are managed by Sanitary Supervisors in Union Council and each sanitary worker has its own defined Beat (Area).
- ✓ During Manual Sweeping Operation in 1<sup>st</sup> Shift, Waste is also collected by sanitary workers from households i.e. collected from their house entrance.
- ✓ Waste Bags are also used by sanitary workers to collect waste from the roads, streets and households which are then hauled through wheelie bins and hand carts to the waste containers.

## Manual Sweeping Operation Details



### 3.2 Solid Waste Collection Operation (Container Collection)

Solid waste generated is stored in waste containers which are placed all over the Union Council. These waste containers are lifted by Hydraulic Compactor Vehicles moving in the union council on a specific route for the purpose of waste collection and dump the waste at temporary waste disposal station Outfall workshop.

- ✓ Total 54 waste containers are in place in Union Council at 43 different Points.
- ✓ Total waste storage capacity in 54 containers is 14 tons in one time lifting.
- ✓ These Waste Containers are lifted by Hydraulic Compactor Vehicles having a Compaction Ratio of 1:3.
- ✓ Two Small Compactors are deployed for waste collection in Union Council and divided the union council from operational point of view in two side i.e River Side & City Side. Each compactor has two helpers equipped with all necessary operational tools and PPE's (Personal protective equipment's).
- ✓ Compactor's responsibility is to lift all the containers in its route during the shift and also to collect all open heaps from the roads and streets to maintain efficient cleanliness standards.



Compactor Hydraulic System



Compactor



Mini Dumper Hydraulic System



Mini Dumper



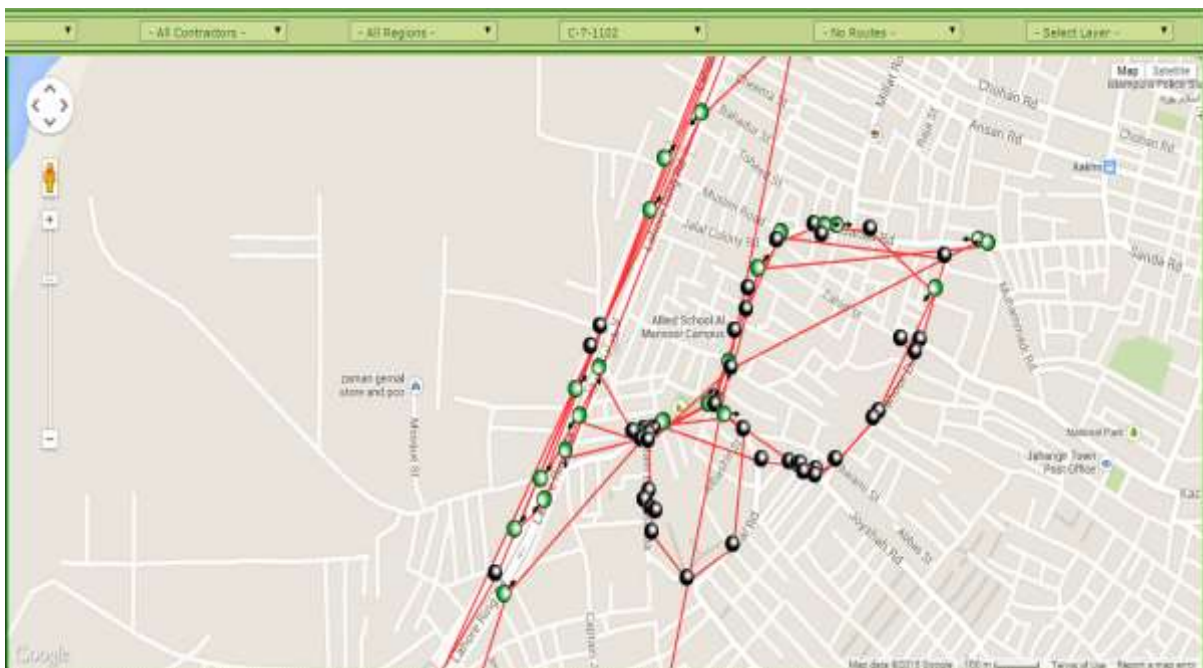


*Fig. 4. Pictorial View of Vehicles & Operational Equipment's for Helpers*

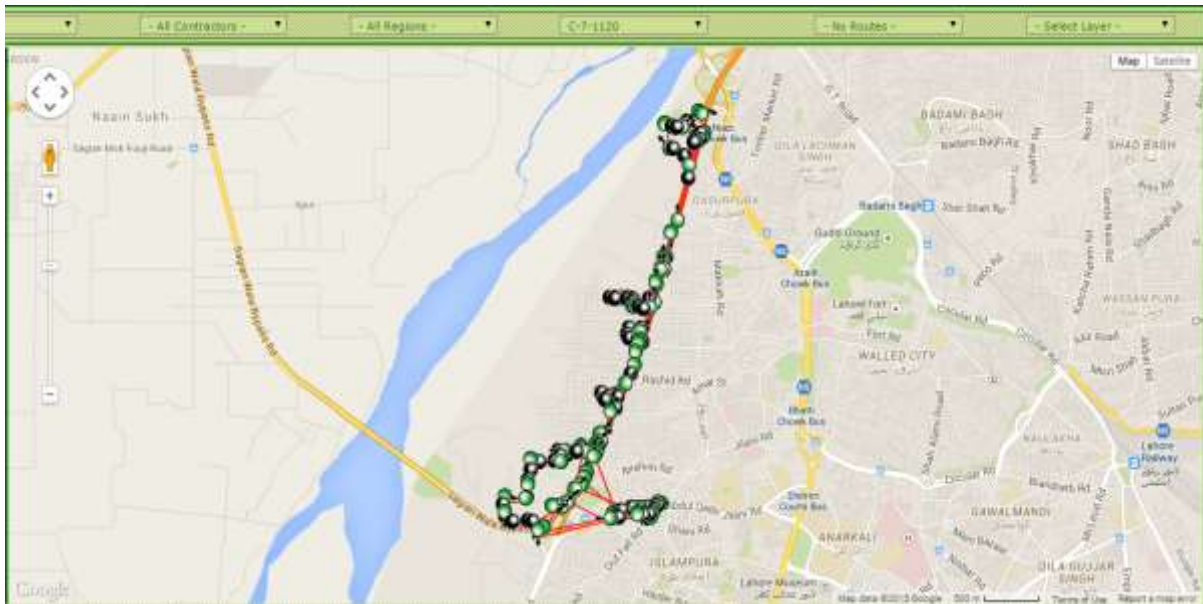
**Solid Waste Collection Operation (Container Collection) Details**

- Containers Placed: 54
- Container Points: 27
- Compactor Vehicles: C07-1101 & C-07-1120 (River Side) ( Both are 7m<sup>3</sup> Compactors)
- Compactors Waste Collection: 7m<sup>3</sup> Compactor can carry 4-5 tons of waste in single trip and 7m<sup>3</sup> Compactor make two trips in 1st Shift so the Collection Capacity in 1st Shift is 20 tons by 2 compactors

**3.3 C-07-1101 Compactor Vehicle Route:**



### 3.4 C-07-1120 Compactor Vehicle Route ( River Side ) :



### 3.5 Container locations on Map UC 69



Map: 01. Location of Containers

### 3.6 Weekly Working Plan After 11:00 pm (Areas)

Union Council-69	
Day	Areas to Cover
Monday	Main Rashid Road + Main Baza Kokhar Town
Tuesday	Amir Park Main bazar + Toheed Road



<b>Wednesday</b>	Nawaz Road + Bilal Chowk + Ravi Chowk
<b>Thursday</b>	Mughal Park + Taj Street + Mko
<b>Friday</b>	Factory + Manzoor Park + Chisti Kothi + Pandi Road
<b>Saturday</b>	Suigas Road + Kokhar Town

### 3.7 Weekly Working Plan After 11:00 pm (Plots)

Union Council-69	
Day	Open Plot Areas
Monday	Nawaz Road lucky isani + Dongi Plot
Tuesday	Bilal chowk, Mughal Park + MKO Plot
Wednesday	Boby Plaza Back side, Mughal Park Amir butt
Thursday	Shafiqabad 1 + 2
Firday	Kahlid Park Tower Point
Saturday	Kahlid Park Gujjar Point

### 3.8 Open Plots Pictorial View





## 4 Operational Activities- Second Shift Plan

### 4.1 Solid Waste Collection Operation (Container Collection)

Solid waste generated is stored in waste containers which are placed all over the Union Council. These waste containers are lifted by Hydraulic Compactor Vehicles moving in the union council on a specific route for the purpose of waste collection and dump the waste at Dumping Site (Mehmood Booti).

#### Solid Waste Collection Operation (Container Collection) Details



Compactor Vehicles: C07-1113 ( 7m<sup>3</sup> Compactors)



Compactor Waste Collection 2nd Shift: Compactor C07-1113 Covers Main Roads and Important Markets Container Points covering Union Councils 67,68 and 69.

## 5 Operation Activities - Third Shift Plan

### 5.1 Manual Sweeping Operation

Manual Sweeping Operation is not carried out in 3rd Shift.

### 5.2 Solid Waste Collection Operation (Container Collection)

Solid waste generated is stored in waste containers which are placed all over the Union Council. These waste containers are lifted by Hydraulic Compactor Vehicles moving in the union council on a specific route for the purpose of waste collection and dump the waste at Dumping Site (Mehmood Booti).



Compactor Vehicles: C13-1016 ( 13m<sup>3</sup> Compactors)



Compactor Waste Collection 3rd Shift: Compactor C13-1016 Covers Main Roads and Important Markets Container Points and Problematic Points covering Union Councils 67,68,69,70 & 71

In third shift compactor collected waste from all containers of complete zone and used to dump at temporary disposal station at outfall workshop.

## 6 Compactor Vehicle Staff Deployment for Union Council 69

Detail of vehicles deployed in all three shift and contact number of responsible persons are given below:

Conservancy Staff Zone-15						
Overall Incharge = Fahim Ismail Awaz ( 0333-4405244)						
Supervisor = Babar (0320-8431703) & M Shahid (0346-4382320)			Overall Incharge = Ali Rajbi (0315-4533505)		Supervisor = Taj ( 0300-5258304)	
1st shift			2nd shift		3rd shift	
UC	Vehicle No.	Driver Name & Mobile	Vehicle No.	Driver Name & Mobile	Vehicle No.	Driver Name & Mobile
69	1101	Shabeer (03224143857)	1113	Khawar	1016	Navid Nazir (0333-4556377)
	1120	Muzamil Ahmed				

## **7 Door To Door Waste Collection**

### **7.1 Old System for D-T-D Waste Collection**

- ✓ A year ago Ozpak deployed one Mini Dumper in each Union Council to enhance the efficiency of Door to Door Waste Collection System but unfortunately they were not fulfilling the sole purpose of D-T-D Collection in Union Council.
- ✓ Mini Dumper was covering about 30%-40% of the UC area for the purpose of door to door waste collection and the 60%-70% area was dependent on old collection methods and our sanitary workers to collect waste from their door steps and dump it as an open heap.

### **7.2 New System for D-T-D Waste Collection**

- ✓ Our Mini Dumper Door to Door Waste Collection System was working with 50-70 % efficiency but we have implemented a new plan due to which we are able to achieve 100% Door to Door Waste collection
- ✓ To make sure the efficiency of this plan to be 100% we collected all the background data necessary for the proper functioning of Mini Dumper in Union Council i.e. Original (Local) Names of Minor Streets and Roads to be displayed on the maps so that we can easily monitor and communicate with our responsible person during door to door collection Operation.

### **7.3 Door to Door Collection Details**

#### **7.3.1 Door to Door (City Side)**

MD-01 is the code of mini dumper which is deployed for UC-67 working with OZPAK JINGLE and achieving 100% efficiency, collecting Door to Door waste. It start working in UC from 06:00 am and cover all areas of UC like Toheed Road, Nasir Park, Chadury Park, Nasir Park, Khokhar Town, Khokhar Town, Chaudry Park, Amin Park, Umar Park Sherazi, Khalid Park, Umar Park, Gulshan Riaz, Mian Yaseen Street, Shafiqabad, Amin Park Phincha wala Road, Etc. In the narrow streets where mini dumper is unable to enter then it is helper duty to go inside and collect waste in shoppers from every house of the streets and finally dumped in the mini dumper.

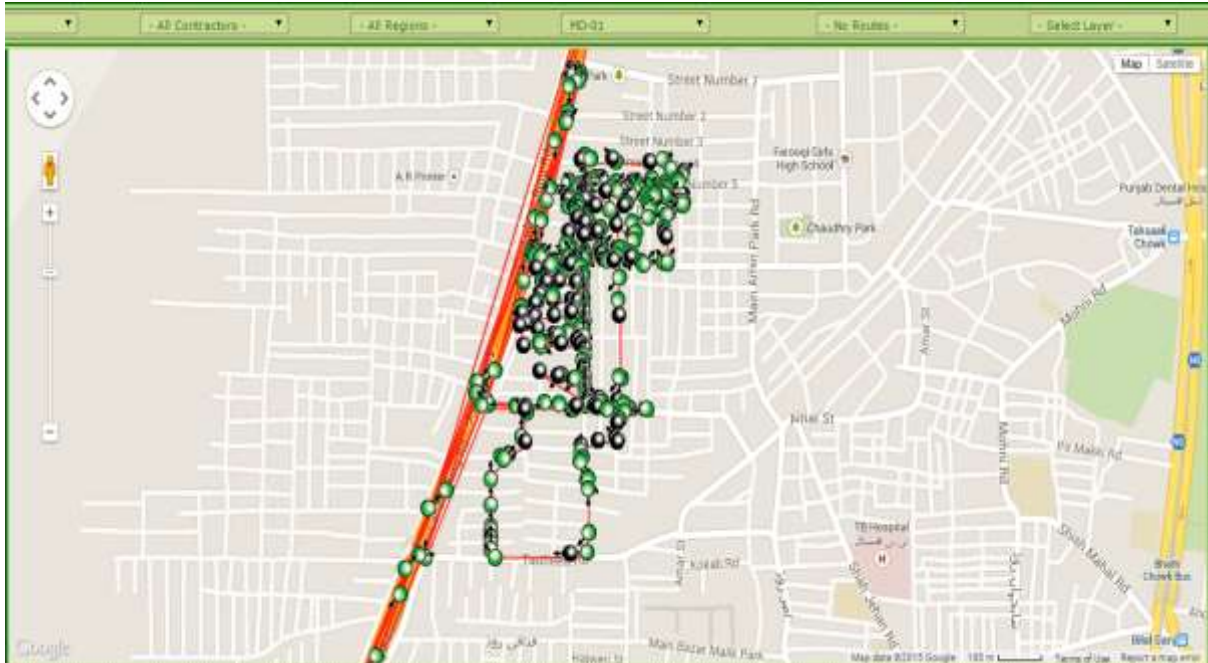




Mini Dumper: MD-01

Mini Dumper Driver: Afzal (0321-9496573) with 1 Helper (Properly Equipped)

#### 7.4 MD-01 Vehicle Route



#### 7.5 Door to Door Collection Details

##### 7.5.1 Door to Door (River Side)

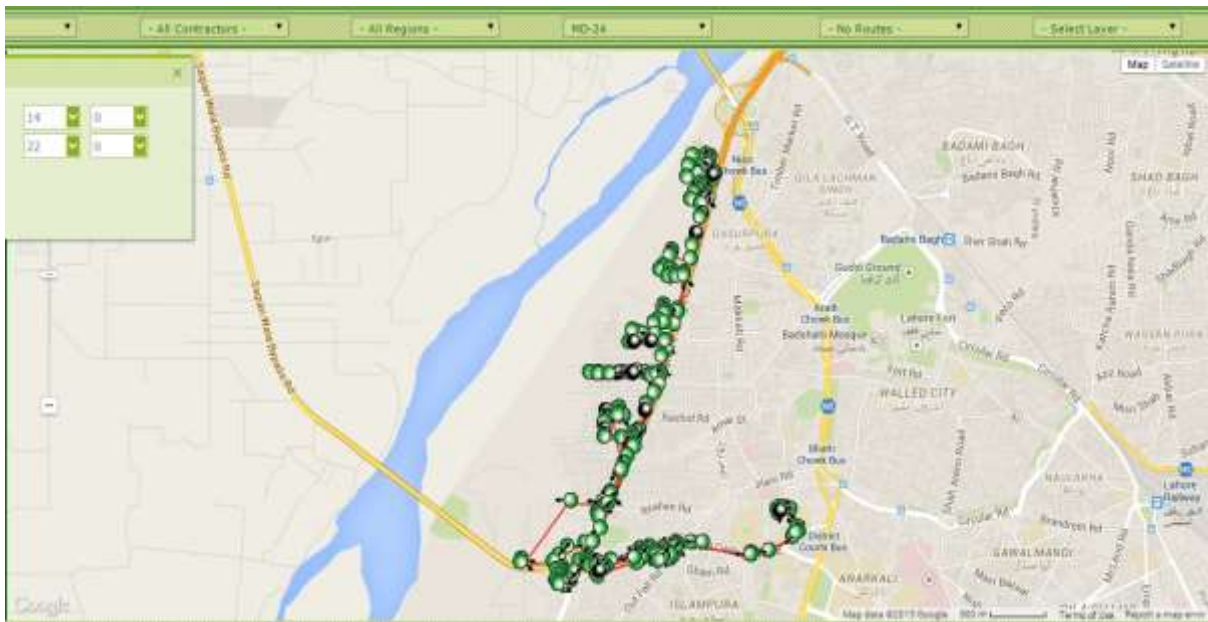
MD-24 is the code of mini dumper which is deployed for UC-67 (River Side) working with OZPAK JINGLE and achieving 100% efficiency, collecting Door to Door waste. It start working in UC from 14:00 hrs and cover all areas of UC like , Chirag Park street from 1 to 9, Gao Shalla street from 1to 7, Lechion wala Bag street from 1 to 9, Ameen Park No. 2 streets from 1 to 13. Etc. In the narrow streets where mini dumper is unable to enter then it is helper duty to go inside and collect waste in shoppers from every house of the streets and finally dumped in the mini dumper.



Mini Dumper: MD-24

Mini Dumper Driver M. Shafique with 1 Helper (Properly Equipped)

## 7.6 MD-24 Vehicle Route



## 8 Special Gang

Special gang is a team consists of Sanitary workers with a driver and a supervisor. Special Gang solely on Shef / ZO's disposal to attend important complaints and to work for absent workers beats of the day.

Special gang covers following activities:

- Open plot cleanliness
- Cleanliness of absent workers beats
- Important complaints (1139 and residents complaints)
- Main road clearness like (Chuburji to kachahri lower mall road, Kachari chowk to shell pump outfall road and People house to secretariat road)



## 9 Scope of Work (U.C Coordinator)

**06:00AM-07:00AM**

### *Attendance Points:*

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- ❖ Manual and Android Cards Attendance Marking on these fixed attendance points
  - Rashid Road
  - Tauheed Road
  - Bobby plaza
  - Khalid park # 1
  - Khalid Park # 2

### *Finding Problematic Points & Deployment of Human Resource and Machinery*

- ❖ Check arrival of Compactor and Mini Dumper in Union Council
- ❖ Deploy Human Resource on Main Roads, Commercial and Residential Areas
- ❖ Highlight important open heaps points and problematic over flowed containers to Compactor and Mini Dumper drivers to attend on priority.

**07:00AM-09:00AM**

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- ❖ Check Manual Sweeping on Main Roads, Sanitary Workers Attendance and Containers Collection.
  - Amin Park Main + Street No. 5 + 1 Container
  - Khokhar Town Bazar + 1 Container + Sirya Point Khokhar Town Open Heap
  - Toheed Road + 3 Containers
  - Nasir Park + 10 Containers
  - Rashid Road Main Bazar + 5 Containers
  - Amin Park Main bazar + 1 Containers

**09:00AM-10:00AM**

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- ❖ Check Manual Sweeping, Worker Attendance, Container Collection & Door to Door Waste Collection in Inner (Residential) Areas like
  1. Nasir park link Street
  2. New Chaudhary Park street
  3. Khokhar town Link street + 2 Containers
  4. Amin Park link Street + 2 Containers
  5. Rashid Road link street
- ❖ During Visit Focusing on Manual sweeping Quality, presence of worker in allocated area, Door to Door Collection efficiency and staying in touch with compactor driver for timely lifting of containers.

**10:00AM-11:00AM**

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- Break Time from 10:00am to 11:00am
- Door to door Mini Dumpers checking

#### ***11:00AM-01:30PM***

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- ❖ Divide work force in groups to cover empty areas, absent worker area, problematic areas are and open plots.
- ❖ Send workers in group in empty areas and on open plots daily according to a fix schedule
- ❖ Check working in empty areas, open plots.
- ❖ Resolve PMS & 1139 Complaints on priority basis if any
- ❖ Checking again main roads manual sweeping & container collection including some problematic container points.
  - Amin Park Main + Street No. 5 + 1 Container
  - Khokhar Town Bazar + 1 Container + Sirya Point Khokhar Town Open Heap
  - Toheed Road + 3 Containers
  - Nasir Park + 10 Containers
  - Rashid Road Main Bazar + 5 Containers
  - Amin Park Main bazar + 1 Containers
  - River Side Detailed Checking
- ❖ In Final Round Checking focus is to check Group Working, Main Roads Sweeping and Container Collection of important Points.

#### ***01:30AM-02:00PM***

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- ❖ Manual and Android Cards Attendance Marking on these fixed attendance points
  - Rashid Road
  - Tauheed Road
  - Boby plaza
  - Khalid park # 1
  - Khalid Park # 2

## **10 Public Awareness**

- Distribution of leaflets along-with bags distribution has been done as per contract.
- Announcement(OZPAK JINGLE) of waste collection when pickup will move in the area.
- Involvement of public representatives in mass awareness campaign

## **10. Recommendations**

Union Council-69 has two sides (City side and River Side). City side has good Roads and houses Infrastructure comparative to River side which lacks in Infrastructure and proper planning. Our focus should be on River side of Union Council but unfortunately we have deployed our major



part of machinery and staff on city side which results in bad sanitation condition at River side of Union Council resulting into 1139 complaints of Open plots and Over flowing open Drains. It is difficult to tackle these complaints with limited resources. That's why it is necessary to have one Mini Dumper on River Side of Union Council for Door to Door Collection and Open heaps Collection which will limit the dumping of waste in open plots by Community and will help in improving the sanitation condition.



River Side Union Council-69 (1)



River Side Union Council-69