

Özkartallar Campak Joint Venture

Solid Waste Management for Gunj Kalan (UC-70)



5th Floor Shaheen Complex, Egerton Road, Lahore

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Map of UC 70 Gunj Kalan

1. Introduction

Union Council – 70 (Gunj Kalan) is located in Data Gunj Baksh Town. Total area of the UC is 797844 m² with population of 66331¹. This area is predominantly middle income area with planned settlement.



Ibrahim Road UC-70



Usman Chowk UC-70

Fig: 1. Pictorial View of Important Areas of UC-70

1.1 Important Places of Union Council-70

From Sanitation point of view Union Council-70 has important Places like Commercial Markets, Parks, Graveyard Important Roads, and Mosques etc.

Commercial Markets

- Malik park main bazar

Graveyards

- Masumia Grave yard near munshi hospital

Important Roads

- Kacha Ravi Road, Ibrahim Road

Mosques

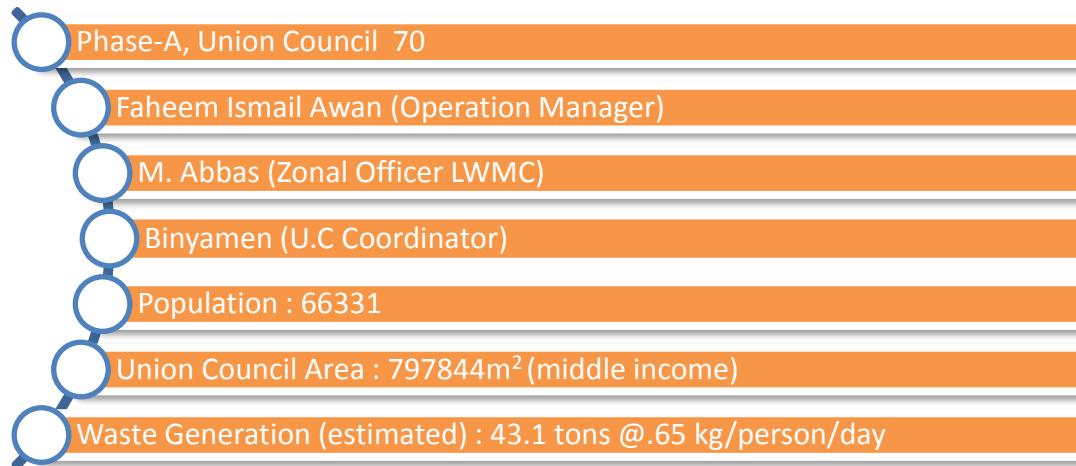
- Mai Hajan Masjid (Abu bakar Road)
- Sherazia Masjid (Ameer Road)
- Raheem Masjid
- Munshi Masjid (Ibrahim Road)
- Niaz Masjid (Chowk Sardar)
- Karmaan Wali Masjid (Rasool Street)
- Farooq e Azam Masjid (Hafeez Road)

¹ Punjab Development Statistics – 2011, Bureau of Statistics, Govt. of the Punjab

1.2 Solid Waste Generation

Estimated solid waste generation is 43.1 metric tons per day @ waste generation rate of 0.65 kg/person/day.

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 Boats & 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 1st 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 77 waste containers are in place in Union Council at 57 different Points.

- ✓ Total waste storage capacity in 77 containers is 19.25 tons in one time lifting.
- ✓ These Waste Containers are lifted by Hydraulic Compactor Vehicles having a Compaction Ratio of 1:3.
- ✓ Two Compactors (One Big & One Small) are deployed for waste collection in Union Council. 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



Broom



Shovel 1



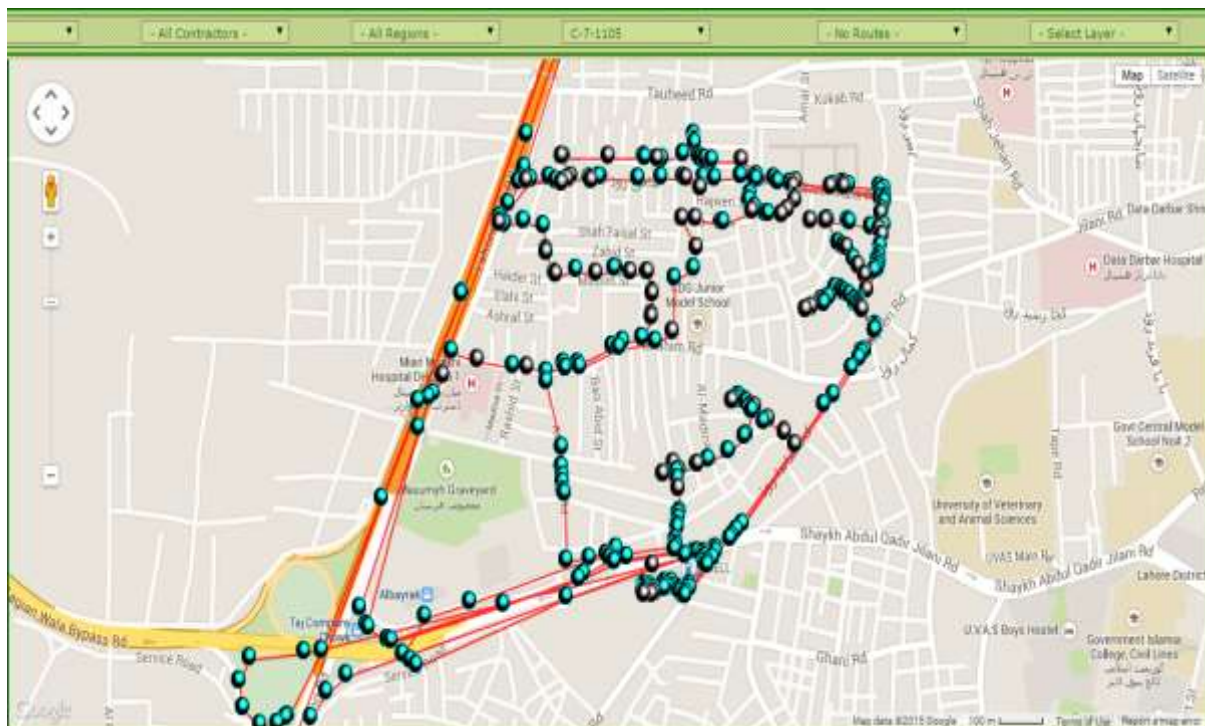
Waste Bag

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

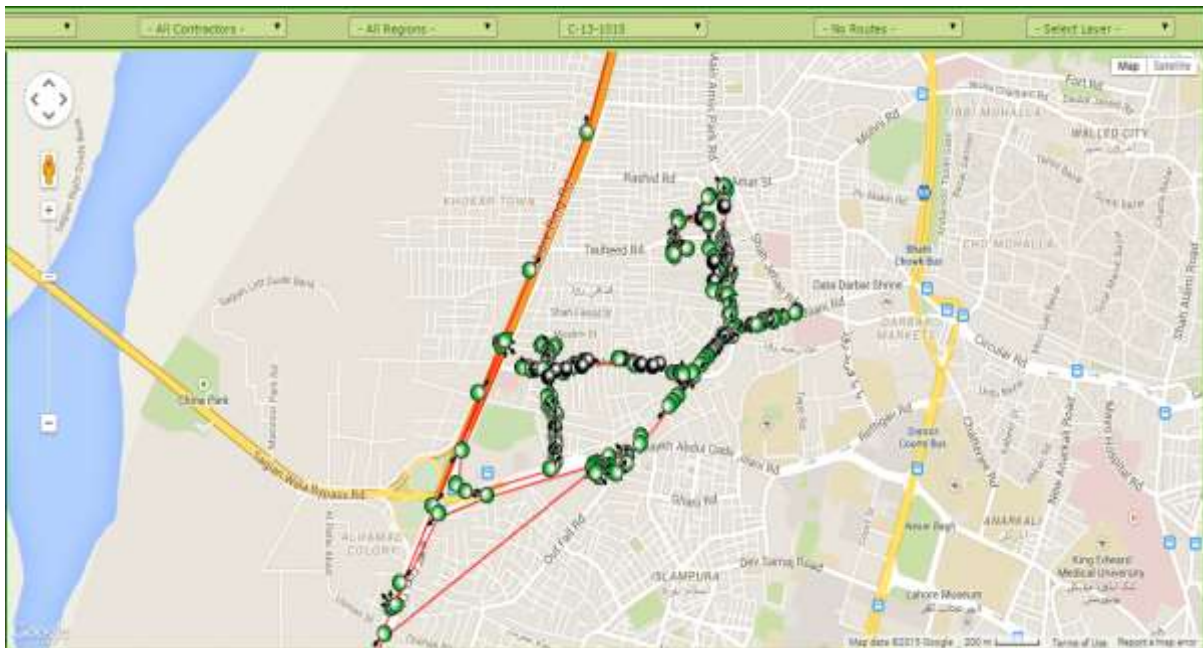
Solid Waste Collection Operation (Container Collection) Details

- Containers Placed: 77
- Container Points: 57
- Compactor Vehicles: C07-1105 & C13-1015 (C13 is 13m³ Compactor)
- Compactors Waste Collection: 7m³ Compactor can carry 4-5 tons of waste in single trip and 7m³ Compactor make two trips in 1st Shift and 13m³ Compactor makes one trip of 8-10 tons so the Collection Capacity in 1st Shift is 20 tons by 2 compactors

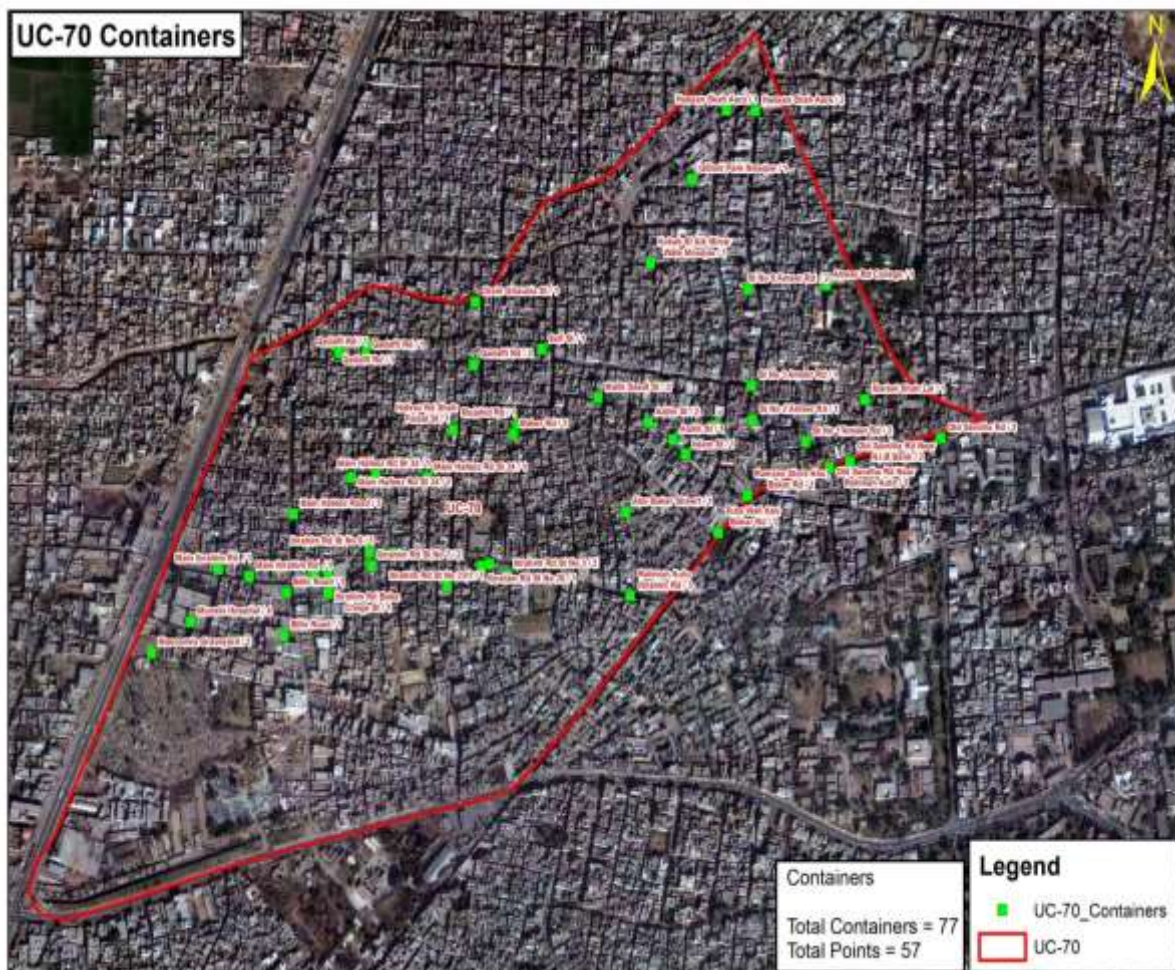
3.3 C-07-1105 Compactor Vehicle Route:



3.4 C-13-1015 Compactor Vehicle Route:



3.5 Container locations on Map UC 70



Map: 01. Location of Containers

3.5 Weekly Working Plan After 11:00 am (Areas)

Union Council-70	
Day	Areas to Cover
Monday	Ibrahim Road + Badar Street Ibrahim Road
Tuesday	Hafiz Road
Wednesday	Abubakar Road
Thursday	Gung Kalan Pind
Friday	Haji Kanka Saheed Road
Saturday	Muhammadia Street + sadi street + Umer street

3.6 Weekly Working Plan After 11:00 am (Open Plots)

Union Council-70	
Day	Open Plot Areas
Wednesday	Gilani Masjid Plot
Thursday	Malik Park Plot

3.6 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 Temporary waste Disposal Station, outfall road workshop.

Solid Waste Collection Operation (Container Collection) Details



Compactor Vehicles: C07-1120 (7m³ Compactors)



Compactor Waste Collection 2nd Shift: Compactor C07-1120 Covers Main Roads and Important Markets Container Points covering Union Councils 70 and 71.

5. Operational 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 (13m³ 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 70

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 Awan (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
70	1105	Muhammad Ashraf (0308-4600449)	1120	M. Maqbool (0321-6094887)	1016	Navid Nazir (0333-4556377)
	1015	Shabeer Hussain (0300-8086834)				

Table: 02. Conservancy Staff UC-70

7. Door To Door Waste Collection

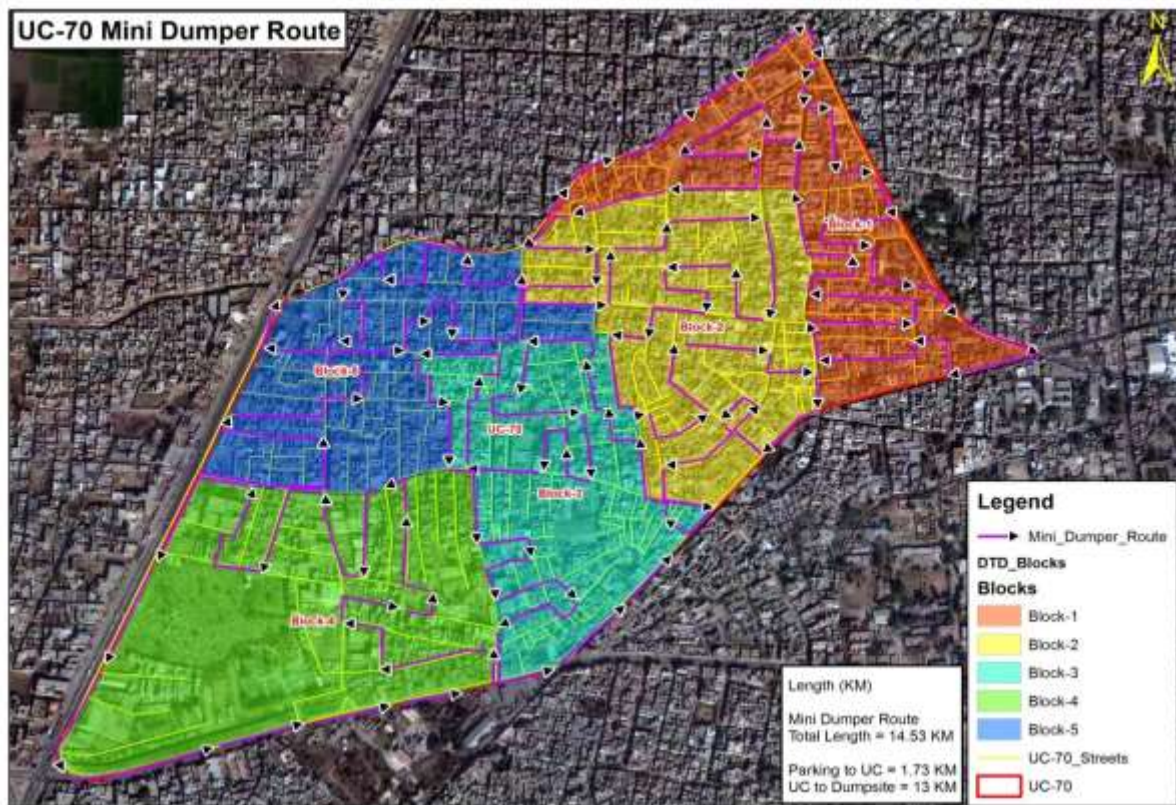
7.1 Old System for D-T-D Waste Collection

- ✓ 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 Route Plan for Mini Dumper



7.4 Door to Door Collection Details

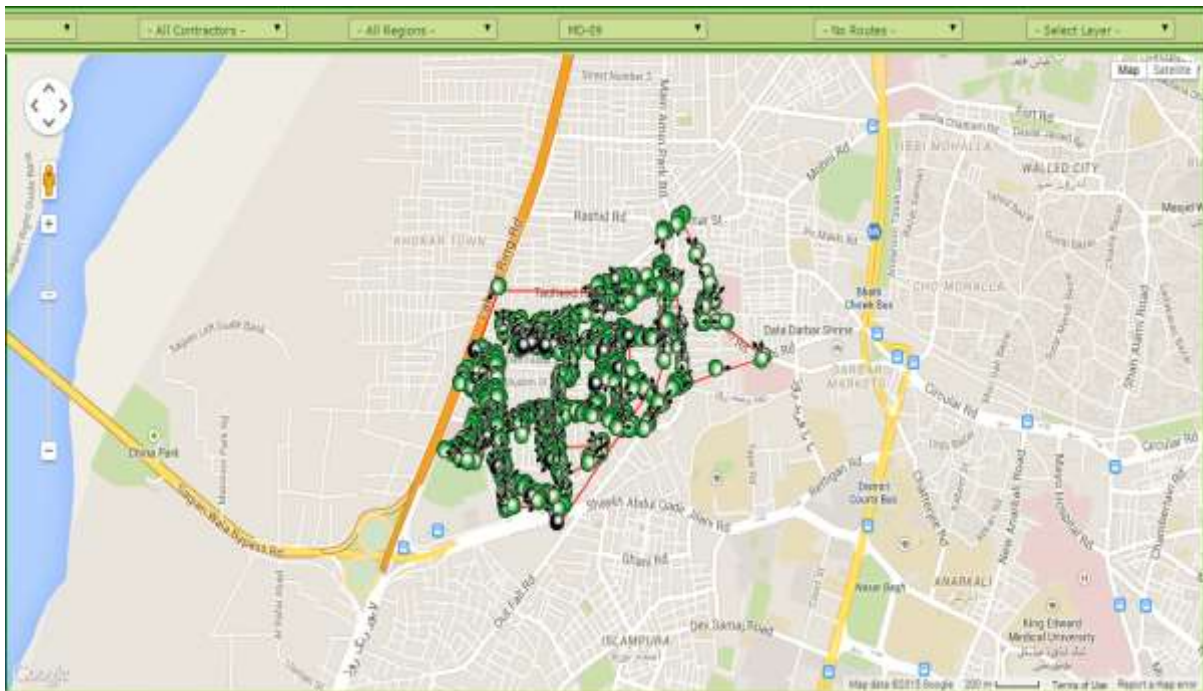
MD-09 is the code of mini dumper which is deployed for UC-70 working with OZPAK JINGLE and achieving 100% efficiency, collecting Door to Door waste. It start working in UC from 06:00 am and cover all areas of UC like Ibrahim Road, Islamia Street, Gulistan Street, Muhammad Ali Street, Mughal Street, Noor Street, Ibrahim Road(Humza Street,Steer No.(3,5,6,7,9,10,11,12), Gosia Street, Abbas Street, Madina Street, Babar street, Hafeez Road(Hafeez Road Farooq Street, Ilahi Street, Haider Street, Tepoo Street, Shakeel Street, Itahad Street, Main Boulevard Road(Mian Biloo Road Shehzad Street, Abdullah Street, Mian Billo Street, Kashif Street, Qadaffi Road(Qaqzafi Road Chistain Street, Ali Muhammad Street, Data Street, Agha Street, Mujahid Street, Noshahi Street, Abid Street, Quaid e Azam Street(Quaid-e-Azam Street No.1 to 6, Malik Park(Malik Park Masoom Street, Nadeem Street, Gillani Park(Gilani park Gilani Pura No.1 to 3), Amir Street(Ameer Road Ameer Road No.2 to 8) 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-09

Mini Dumper Driver: Orangzaib (03334908799) with 1 Helper (Properly Equipped)

7.5 MD-09 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:

- ❖ Manual and Android Cards Attendance Marking on these fixed attendance points
 - Hafiz road
 - Ibrahim road
 - Abu Bakar road

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 like

07:00AM-09:00AM

- ❖ Check Manual Sweeping on Main Roads, Sanitary Workers Attendance and Containers Collection.
 - Liaqat Street Hafiz Road
 - Madni Road Malik Road
 - Gunj Kala Pind Farooqia Azam Masjid
 - Ameer Road
 - Ibrahim Road with containers + 14 Containers
 - Malik Park with containers + 4 Containers
 - Kacha Sanda with containers + 5 Containers
 - Outfall Road with containers + 2 Containers
 - Ameer Road with container + 2 Containers

09:00AM-10:00AM

- ❖ Check Manual Sweeping, Worker Attendance, Container Collection & Door to Door Waste Collection in Inner (Residential) Areas like
 - Ibrahim Road link Streets + 8 Containers
 - Hafiz Road Link Streets + 4 Containers
 - Ameer Road Link Streets + 3 Containers
- ❖ 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

- Break Time from 10:00am to 11:00am

- Door to door Mini Dumpers checking

11:00AM-01:30PM

- ❖ Divide work force in groups to cover empty areas, absent worker area, problematic areas 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.
 - Liaqat Street Hafiz Road
 - Madni Road Malik Road
 - Gunj Kala Pind Farooqia Azam Masjid
 - Ameer Road
 - Ibrahim Road with containers + 14 Containers
 - Malik Park with containers + 4 Containers
 - Kacha Sanda with containers + 5 Containers
 - Outfall Road with containers + 2 Containers
 - Ameer Road with container + 2 Containers
- ❖ In Final Round Checking focus is to check Group Working, Main Roads Sweeping and Container Collection of important Points.

01:30AM-02:00PM

- ❖ Manual and Android Cards Attendance Marking on these fixed attendance points
 - Hafiz road
 - Ibrahim road
 - Abu Bakar road

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- 70 is also a well planned and well infrastructured Area like UC-68. People are more aware of cleanliness and show good Sanitation Habits. That's why this Union council alongside

Union Council-68 must be a major target in ZONE 15 for maintaining excellent sanitation conditions.