U.S. ARMY GARRISON (USAG) STUTTGART, GERMANY

INTEGRATED SOLID WASTE MANAGEMENT PLAN (ISWMP)

Final Version

October 2008

Last Revision February 2023

APPROVALS

This Integrated Solid Waste Management Plan (ISWMP) addresses management requirements specific to current and planned waste generation and disposal activities at the U.S. Army Garrison Stuttgart (USAG Stuttgart)

This ISWMP satisfies the requirement to develop and maintain a Solid Waste Management Plan contained in Section C7.3.3 of the Final Governing Standards (FGS) for Germany and the USAREUR Separate or Recycle Trash (SORT) Program. This ISWMP must be reviewed and updated at least once every 5 years.

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USAG STUTTGART INTEGRATED SOLID WASTE MANAGEMENT PLAN

RECORD OF REVISIONS

The ISWMP is reviewed and updated at least once every 5 years. The plan is also updated in the event of a major demographic change at the USAG Stuttgart such as a significant permanent troop movement. A record of these revisions is maintained in the following table.

Revision No.	Date	Name and Title	Remarks	Pages Affected
1	05/2013	Jochen Doerr CardnoTec	See pages affected	2-3, 2-3;4-1 to 4-14, A3-entire, A5-1
2	05/2013	Sylvia Juchheim Env. Div.	See pages affected	Cover page, Approvals, 2-3
3	05/2013		See pages affected	
4	12/05/17	DPW & O&M Div.	See pages affected	Front page, Aprovals, p. 2-2, p. 3-4, App. 5, App. 6
5	12/05/17	DPW & O&M Div.	See pages affected	Front page, Aprovals, p. 2-2, p. 3-4, App. 5, App. 6
6	02/27/ 20	Katia Pedrotti, Ch Refuse & Recycling	PEDROTTI.KATIA.1286620970 Digitally signed by PEDROTTI.KATIA.1286620970 Date: 2020.02.27 10:30:31 +01'00'	Front page, Approvals, 1-2, 2-2,3-1 thru 3-3,4-2, 4-6thru 4-10, 10-1, 12-1,12-2, A2-1 and Tables A3.1 thru A3, App.6.
7	07/01/20	Sylvia Juchheim, Env. Spec.	JUCHHEIM.SYLVIA.A.1290207793 Digitally signed by JUCHHEIM.SYLVIA.A.1290207793 Date: 2020.07.01 14:51:57 +02'00'	2-2,3-1 thru 3-3,4-2, 4-10,10-1,12-1,12-2, A2-1,A4-1.
8	10/15/21		Contact change {removed}and at Panzer Kaserne Building 2930 {changed to}Tires can no longer be disposed at 2930, MWR brings tires to Kelley	2-2 4-10
9	10/15/21		{removed} enforcement policies the Housing Division {removed} Broadcast SORT program information via radio and newspaper {changed to} Provide SORT program information via social media through PAIO{removed} Safety DayPrograms {changed to} CARE Fair Programs	A-2-1

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1 INTRODUCTION

This Integrated Solid Waste Management Plan (ISWMP) is developed for current and planned solid waste collection, storage, and disposal facilities and programs at the USAG Stuttgart. Special emphasis is placed on coordination of the recycling and collection programs and compliance with German law and the Final Governing Standards (FGS) for Germany. Responsibility for development, maintenance, and implementation of the ISWMP lies within the Garrison's Directorate of Public Works (DPW) Environmental Division (ED) and Refuse Branch Utilities Division, Operations and Maintenance Division (O&M).

1.1 PURPOSE

The purpose of this ISWMP is to identify the policies and procedures for the reduction, collection, storage, transportation, and disposal of solid waste throughout the installations of the USAG Stuttgart that are as follows:

- Kelley Barracks, Stuttgart-Möhringen
- Patch Barracks, Stuttgart-Vaihingen
- Robinson Barracks, Stuttgart-Bad Cannstatt
- Panzer Kaserne, Böblingen
- Stuttgart Army Airfield, Leinfelden-Echterdingen
- Warehouse, Stuttgart-Weilimdorf
- Golf Course, Kornwestheim
- Local Training Area, Böblingen

This plan also provides a detailed description of the collection program for compliance with USAREUR Separate or Recycle Trash (SORT) criteria and the waste reduction goals of Germany. This ISWMP satisfies the criteria for a solid waste management strategy as identified in Section C7.3.3 of the FGS for Germany.

1.2 BACKGROUND

Until 1966, the U.S. Army at Stuttgart had their own landfill in Böblingen that was located east of Panzer Kaserne. The landfill was handed over to the City of Böblingen in 1966. In 1972, the District Office of Böblingen assumed responsibility for the operation of the landfill. Until 1999, the Garrison had the permission to dispose of residual waste without being charged for disposal. Since 2000, the USAG Stuttgart has an agreement with the District Office Böblingen and the City of Stuttgart that allows the Garrison to transport all residual waste generated within the USAG Stuttgart installations to the residual waste thermal power plant at Böblingen for thermal recycling. The residual waste thermal power plant at Böblingen is incinerating waste for the production of heat and electricity.

1.3 COOPERATION WITH GERMAN AGENCIES AND REGULATIONS

The USAG Stuttgart has installations within the city areas of Stuttgart, Böblingen, Leinfelden-Echterdingen, and Kornwestheim and cooperates with the City of Stuttgart and the District Offices of Böblingen, Esslingen, and Ludwigsburg concerning all matters of solid waste reduction and disposal. Table 1-1 provides a listing of local German government contacts for solid waste:

Table 1-1. German Regulatory Agency Contacts – Solid Waste

District/City	Agency	Address	Contact Information
District Office Böblingen / City of Böblingen	Abfallwirtschaftsbetrieb Landkreis Böblingen	Wolf-Hirsch-Str. 33 71034 Böblingen	Ph: 07031.663.1550 Email: abfallinfo@lrabb.de
City of Stuttgart	Eigenbetrieb Abfallwirtschaft Stuttgart	Heinrich-Baumann-Str.4, 70190 Stuttgart	Ph: 0711.216.88700 Email: aws-kundenberatung@stuttgart.de
District Office Esslingen / City of Leinfelden-Echterdingen	Abfallwirtschaftsbetrieb Landkreis Esslingen	Röntgenstraße 16-18, 73730 Esslingen am Neckar	Ph: 0800.931.2526 Email: service-awb@lra-es.de
District Office Ludwigsburg / City of Kornwestheim	Abfallverwertungsgesellschaft Landkreis Ludwigsburg	Hindenburgstraße 30 71638 Ludwigsburg	Ph: 07141.144.2828 Email: servicecenter@avl-lb.de

1.4 COORDINATION WITH OTHER PLANS

For effective overall pollution prevention, the ISWMP is coordinated with the Hazardous Waste Management Plan (HWMP) regarding Hazardous Waste (i.e. paint, waste oil, batteries), and the requirement for an appointed Waste Management Officer. The ISWMP also complies with the USAG Stuttgart Storm Water Pollution Prevention Plan (SWPPP) requirements regarding the design and placement of all solid waste storage areas.

2 KEY PERSONNEL / ROLES & RESPONSIBILITIES

2.1 WASTE MANAGEMENT OFFICER *(BETRIEBSBEAUFTRAGTER FÜR ABFALL)*

The USAG Stuttgart has not appointed a Waste Management Officer *(Betriebsbeauftragter für Abfall)*, because the activities defined in the host nation laws that require a Waste Management Officer are not applicable for the Garrison. Table 2-1 identifies solid waste management activities performed at this installation.

Table 2-1. USAG Stuttgart Solid Waste Management Activities

Solid Waste Activity	Yes	No
Landfill		✓
Stationary waste disposal facility with a throughput of more than 0.75 metric tons per hour, including incinerator and composting facilities		✓
Stationary waste disposal facility for the chemical or physical treatment of waste with a throughput of more than 0.5 metric tons per hour		✓
Stationary waste disposal facilities for the incineration of medical waste		✓
Storage or treatment of scrap vehicles (site larger than 4,000 m^2)	✓	
Hospital and/or clinic	✓	
Facilities where hazardous waste is generated on a regular basis	✓	

2.2 SORT PROGRAM COORDINATOR

The SORT Program Coordinator is responsible for:

- To monitor the path of waste, from its occurrence or delivery to its recycling or disposal;
- To monitor compliance by conducting inspections at regular intervals of facility operations and the type and nature of waste produced, recycled, or disposed;
- To provide information concerning detected deficiencies to the Installation Commander;
- To implement measures to correct these deficiencies;
- To inform the Installation Commander of any detrimental effect that could result from the waste management and measures to minimize the negative impacts;
- To cooperate in the development and introduction of standard operating procedures, especially by studying the relevant processes and products using criteria of closed substance cycle waste management and disposal; and

- Overseeing all SORT programs and enforcement. The SORT Coordinator operates directly under the Directorate of Public Works (DPW) and works in conjunction with Environmental Division and O&M Division.

2.3 LISTING OF KEY PERSONNEL

Key Garrison waste management personnel are listed in

Table 2-2. The contact information contained herein is updated, as appropriate, to reflect modifications in Garrison operations.

Table 2-2. USAG Stuttgart Key Waste Management Personnel

	Name	Telephone Number	E-mail Address
SORT Program Coordinator, Disposal Contract COR, Maintenance of Disposal Records (DPW O&M Div.)	Ms. Katia Pedrotti	0711-819-7343	katia.pedrotti1.ln@army.mil
POC for Hazardous Waste (DPW, ED)	Ms. Therese Mundorff	09641-70-596-6135	therese.mundorff.ln@army.mil
Alternate POC for Recycling Awareness & Booklet (DPW, ED)	Ms. Simone Leiss-Wenzel	09641-70-596-6134	simone.leiss-wenzel.ln@army.mil
Chief, O&M Div. (DPW)	Mr. Abdul Salam K. Othman	09641-70-596-6250	abdulsalam.k.othman.civ@army.mil

2.4 OTHER RESPONSIBILITIES

The Installation Coordinators at the different USAG Stuttgart installations inspect the different Recycling Islands and Recycling Centers on a frequent schedule, oversee the proper segregation of recyclables and trash and are responsible to maintain the respective areas in a clean manner, and keep the Sort Program Coordinator informed.

Buildings Coordinators oversee the proper segregation as well as the removal of recyclables and trash at their respective building.

Managers and Supervisors of the food facilities are responsible for the proper recycling of recyclable items at their facility and the disposal of food waste.

3 WASTE REDUCTION, RECYCLING, AND DISPOSAL PLAN

This section provides a brief overview of the waste reduction and recycling plan as a whole. Detailed descriptions of the mechanics of these programs are provided in other sections of the ISWMP, and links are provided to these sections where applicable.

The USAG Stuttgart has implemented a SORT Program and provides collection for recycling and/or disposal of the following items:

- Residual Waste, Refuse;
- Paper, Cardboard;
- Glass (clear, brown, green);
- Metal cans;
- Plastics;
- Electronic waste;
- Metal scrap;
- Wood waste;
- Bulky items, furniture;
- Bulky white items, refrigerators, air conditioners;
- Yard waste;
- Construction and demolition waste;
- Scrap vehicles;
- Tires;
- Food waste;
- Grease waste;
- Medicine.

3.1 RECYCLING

Solid waste is generated through a variety of sources across the USAG Stuttgart, including military family housing, administrative offices, commercial areas, industrial shops, and operational units. The Stuttgart Garrison has implemented a recycling program and focuses on opportunities to reduce the volume of waste disposed by emphasizing waste reduction, reuse, and/or recycling. The Garrison ensures that separated waste streams are recycled to the maximum extent possible, using a recycling contractor and an in-house workforce for the collection of recyclables. Construction debris is collected separately from other wastes. Listed below are specific practices that the Garrison is implementing as part of its recycling program.

1. **Single-Family Homes** - The Garrison has a source-separated recycling program in place for single-family home (curbside) collection (see details in Section 4.1).
2. **Multi-Family Housing and Administrative Buildings** - The Garrison has installed recycling islands for the collection of refuse and recyclables for residents of multi-family housing buildings (see details in Section 4.2).
3. **Barracks** - The Garrison has implemented recycling centers at its larger installations providing different containers for the different recyclable ma- terials and items serving residents in barracks and buildings (see details in Section 4.3).
4. **SORT Center** – The Garrison manages its solid waste and recycling pro- gram from the SORT-Center located at Kelley Barracks. The SORT Cen- ter provides different containers for the collection of respective recyclable materials and items serving residents in barracks and buildings (see de- tails in Section 4.3.1).
5. **Significant Waste Generators** - The Garrison has implemented recycla- ble collection for service to significant waste generators (see details in Section 4.4).
6. **Yard Waste** - USAG Stuttgart does not perform composting of yard waste and is providing collection and transportation of yard waste. (see details in Section 4.6).
7. **Scrap Vehicles and Bulky Items** - The Garrison provides collection points for unusable scrap vehicles and/or unusable bulky white goods and maintains a contract for transport of these materials for recycling (see de- tails Section 4.8 and Section 4.9).

3.2 REDUCTION

USAG Stuttgart implements the following efforts to maximize waste reduction efforts.

1. The Garrison Director of Contracting uses Environmentally Preferable Purchas- ing (EPP) as a criterion in purchasing decisions.
2. The Garrison Director of Contracting evaluates the feasibility of incorporating waste reduction incentives in contracts with on-base vendors/contractors.
3. The Garrison is conducting periodic surveys for developing new means of waste avoidance in both the work and home environments.
4. The Garrison has prepared an Affirmative Procurement flyer that includes infor- mation about “Buying Green” products. The flyer is being distributed to appropri- ate units and organizations within the Garrison’s area of responsibility.
5. The Garrison has prepared a Policy Letter # 19, Trash Separation and Illegal Dumping of Trash that prohibits the bringing of trash generated off-post onto the installations. A copy is included in Appendix 6.

3.3 EDUCATION AND TRAINING

The Garrison continues to implement waste reduction programs and focuses on efforts to provide education to DoDDS, housing residents, tenants (such as the Exchange), and non-resident personnel. More detailed information on this program is included in Appendix 2.

Education efforts include:

- Provision of SORT and enforcement policies and the On-post Recycling Booklet as well as the Off-post Recycling Booklet to the Housing Officer for distribution to all new Garrison residents;
- Provision of Recycling Booklets to single family housing units, multi-family housing, and office buildings;
- Recycling Booklets are also available on the Garrison Website and on the Citizen
- Providing Information booths at the public locations on the Recycling Day in November

3.4 GOALS

The primary goal for the solid waste program at the USAG Stuttgart is to continuously reduce the quantity of solid waste generated. To meet that goal, the USAG Stuttgart has used the source reduction approach and has successfully implemented an installation-wide comprehensive recycling program for solid waste. The solid waste recycling program encompasses all activities conducted at the installation including family housing, administrative, and tactical mission-related areas.

The goals established by IMCOM-Europe for the region are to reduce continuously the quantity of non-hazardous solid waste generated (excluding construction & demolition debris) by approximately 3% per year, to increase the percentage of non-hazardous solid waste diverted from land disposal facilities, and to increase the economic benefit of solid waste diversion. In order to measure progress toward and ultimately reach these goals, the following metrics are to be measured and tracked:

- The quantity of solid waste diverted from disposal;
- the quantity of solid waste sent to a disposal facility;
- the residential and non-residential installation population;
- the economic benefit of solid waste diversion, and
- the cost of solid waste management.

The Garrison's solid waste goal to continuously reduce the quantity of solid waste generated is highly dependent on the residential and non-residential population. Based on the fact that the population is fluctuating, due to the deployment of units and positioning of new units (e.g., AFRICOM) the evaluation, if the Garrison has achieved its goal will be based on the quantity of solid waste generated per capita.

Table 3-1. Solid Waste generated Per Capita & Recycling data.

Parameter	Base Year (BY)	BY +1	BY +2	BY +3	BY +4	BY +5	BY +6	BY +7
	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
Solid Waste Generated Total (U.S. ton)	5,517.80	5,521.89	5,606.15	5,417.83	5,041.36	5,814.02	4.836.85	4.874.73
Solid Waste Disposed/Incinerated (U.S. ton)	2,671.24	2,451.19	2,420.250	2,386.15	2,202.55	2,345.04	2,104.68	2,090.31
Disposal/Incineration Cost (€)	671,991.70	620,187.80	612,096.00	620,187.80	612,096.00	1,341.049	619.308.36	630.619.56
Solid Waste Recycled (U.S. ton)	2,846.56	3,069.90	3,185.90	3,069.90	3,185.90	3,468.98	2,818.44	2,708.81
Recycling Cost (€)	497,178.80	522,329.00	559,222.80	522,329.00	559,222.80	898,968.87	660,105.46	634.429.04
Diversion Rate (%)	50.00	55.60	55.30	55.60	55.30	57.70	55.30	54.90
Solid Waste Generated per Person (U.S. ton)	1,3224	1,3117	2,2469	1,3117	2,2469	2,3040	2,0792	2,0438
Total Population	22,146	22,146	13,230	13,230	13,230	13,230	13,730	13,730

In accordance with the Strategic Sustainability Performance Plan (SSPP) the 50% diversion goal have been reached in FY16 indicating that the Garrison's recycling program has been implemented successfully and is working in a steady state. Since FY08 the population census was not available due to security reasons, and it was estimated. According to information provided by DPW, the actual population numbers were not made available to the public during the recent years due to the incidents of 9-11. The population number should be monitored very closely over the next fiscal years to receive appropriate and reliable data for the evaluation of the Garrison's goal to reduce the annual quantity of solid waste generated, diverted, recycled, and disposed.

4 WASTE COLLECTION

The USAG Stuttgart provides recyclable and solid waste collection services to all residential, administrative, and maintenance facilities within the Garrison's fence line. DPW O&M Division is managing the recycling and solid waste operation with the local agency (Landkreis Böblingen Abfallwirtschaftsbetrieb) and in-house personnel. DPW O&M Division operates and maintains waste collection trucks that are used to collect and pick up bulky waste and abandoned hazardous waste at Patch Barracks, Kelley Barracks, Panzer Kaserne, Stuttgart Army Airfield, Weilimdorf Warehouse, and Kornwestheim Golf Course with in-house personnel. Residual solid waste collection and the collection of recyclables at the entire Stuttgart Garrison is contracted out to the Böblingen Abfallwirtschaftsbetrieb. The Garrison's main recycling center (SORT-Center) is located at Kelley Barracks, building 3360 and served by personnel of the DPW, O&M Div on a regular basis. The collected and separated recycling materials are pick up by the Böblingen Abfallwirtschaftsbetrieb.

4.1 SINGLE-FAMILY HOME (CURBSIDE) COLLECTION

The USAG Stuttgart provides curbside home collection service to 41 single-family residences located in Steuben und Weicht Village Family Housing at Patch Barracks and to 23 single-family residences located in Roosevelt Village Möhringen Family Housing at Kelley Barracks. Containers from each residence are picked up on a weekly basis. Containers are being provided to the residents by the Garrison. Waste is required to be source-separated into household refuse, paper and cardboard, plastics, and glass. This service is performed through the Böblingen Abfallwirtschaftsbetrieb.

4.2 RECYCLING ISLAND COLLECTION

The Garrison provides collection service to residential, administrative, and maintenance buildings and units throughout the Garrison's installations through the use of recycling islands. The islands are listed in Appendix 3 and shown on maps in Appendix 1. Each island serves an average of two multi-family housing residences or two administrative buildings and provides separate containers for the collection of refuse, paper, plastics, and glass and metal cans. The recycling islands are within 100 meters walking distance from the respective buildings served and are not locked. The recycling islands are fenced with wooden or concrete palisades for aesthetical reasons. New recycling islands located at the AFRICOM area will be fenced with concrete columns as a force protection measure.

The Garrison provides separate containers for Garrison personnel in offices of administrative buildings for the collection of refuse, paper, empty soda cans, and empty plastic bottles. Contracted custodial staff is collecting and transferring the solid wastes and recyclable materials once a week and place them into the appropriate collection containers at the respective recycling islands of the administrative buildings.

Recycling Island with containers for the collection of trash, plastics, paper/cardboard, and glass and metal cans

4.3 CENTRALIZED COMMUNITY RECYCLING CENTERS

The Garrison has four Centralized Community Recycling Centers at Kelley Barracks, Patch Barracks, Robinson Barracks and Panzer Kaserne that can also be used to collect overflow of recyclables from collection points at the housing areas and barracks. These centralized facilities include the Garrison's main recycling facility, the SORT-Center, Building 3360, located at Kelley Barracks.

The Centralized Community Recycling Centers are serviced by DPW O&M personnel on a regular basis. Delivery of recyclable items at the Centralized Community Recycling Centers need to be coordinate with the Installation Coordinator in charge for your Installation. The recycling center locations are depicted on the Garrison maps included in Appendix 1.

4.3.1 SORT Center Kelley Barracks, Building 3360

The following containers are provided:

- **Paper**

- **Cardboard Press Container**

- **Glass & Metal Cans**

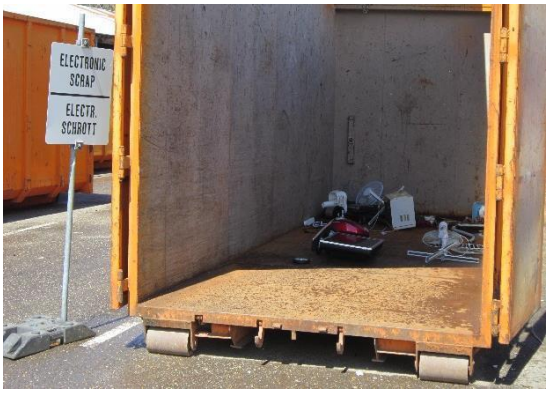
- **Plastics**

- **Metal scrap**

- **Bulky Items**

- **White Goods, Refrigerators**

- **Electronic Scrap**



- **Used Tires**

- **Construction Debris**

- **Yard Waste**

4.3.2 Recycling Center Patch Barracks, Building 2338

The following containers are provided:

- Electronic scrap
- Metal scrap
- Bulky waste
- Press container cardboard
- TVs Monitors

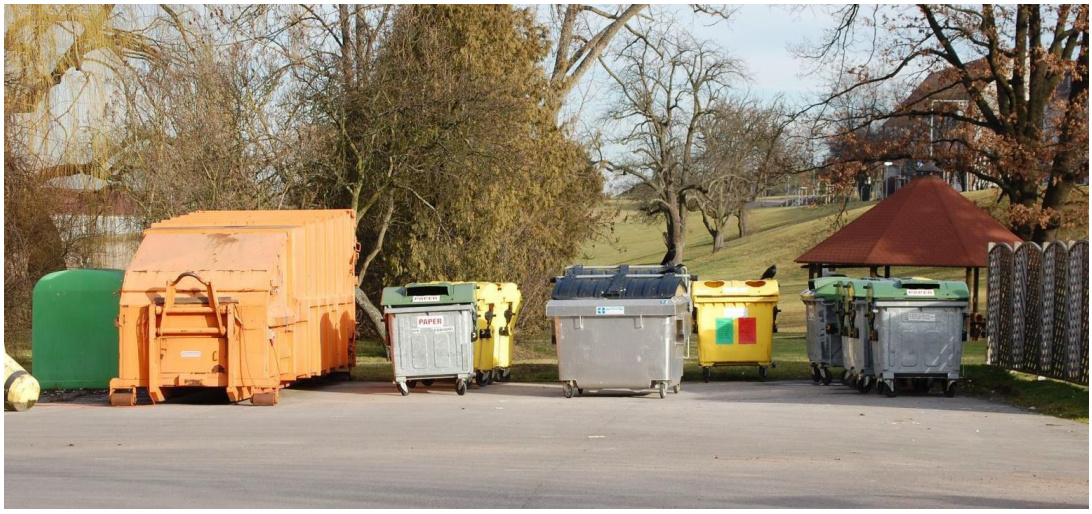
Based on the size of the installation and the residential, community, and administrative activities at Patch Barracks, the installed Recycling Center is considered too small and not appropriate to provide for an adequate collection of the different streams of recyclable materials.

Bulky Waste collection container at the Patch Barracks Recycling Center

4.3.3 Recycling Center Robinson Barracks, Building 146

The following containers are provided:

- Refuse
- Paper
- Plastics
- Metal scrap
- Bulky waste
- Glass and Metal Cans
- Electronic scrap
- TVs Monitors



Recycling Center at Robinson Barracks

4.3.3 Recycling Center Panzer Kaserne, Building 2956

The following containers are provided:

- Bulky waste
- Metal Scrap
- Electronic scrap
- TVs Monitors

COLLECTION FROM SIGNIFICANT GENERATORS

Table 4-1 identifies the Garrison's significant waste generators. The Garrison defines significant waste generators as those who are responsible for 5% or more of the overall solid waste generation, responsible for 5% or more of the generation of a single waste stream (e.g., cardboard), or presenting unique waste collection challenges. Generators meeting this definition are identified in Table 4-1.

Table 4-1. Significant Waste Generators

Description of Generator	Primary Types of Waste
Kelley Barracks	
• DeCA Commissary, Building 3316	Cardboard, Wood (Pallets)
Patch Barracks	
• DeCA Commissary, Building 2350	Refuse, Cardboard, Wood (Pallets)
• AAFES Shoppette, Building 2349	Cardboard
• Destruction Facility, Building 2395	Paper shredder
Panzer Kaserne	
• AAFES Shoppette, Building 2952	Cardboard
• DeCA Commissary, Building 2957	Cardboard
• AAFES PX Store, Building 2903	Refuse, Cardboard, Wood, Metal
• Food Court, Building 2903	Refuse, Cardboard
• Central Receiving Point, Building 2958	Bulky Waste, Furniture, Metal
Robinson Barracks	
• AAFES CX Store/Commissary, Building 146	Refuse, Cardboard, Wood (Pallets), Bulky Waste, Plastic
• DeCA Commissary, Building 146	Refuse, Cardboard

Waste collection from the above-listed generators is handled by the Böblingen Abfallwirtschaftsbetrieb. At the collection point, waste is source-separated by the generator into the following categories:

- Refuse
- Paper and Cardboard
- Plastic
- Glass and Metal Cans
- Bulky Items

Collection occurs as needed to prevent unsightly conditions occurring in the waste storage areas.

4.4 MATERIALS PROCESSING FACILITY (MPF)

All solid wastes or materials that have been separated for the purpose of recycling are stored in such a manner that they do not constitute a fire, health or safety hazard, or provide food or harborage for vectors, and are contained or bundled so as not to result in spillage. The Garrison does not operate a Materials Processing Facility.

4.5 YARD WASTE

Yard waste collection and transportation at the USAG Stuttgart is coordinated and provided by the Roads and Grounds Contract. The Roads and Grounds Contractor is responsible for tree cutting, lawn mowing, and yard maintenance at the Garrison and provides the disposal of the generated yard wastes.

4.6 HAZARDOUS WASTE

The Garrison provides hazardous waste collection at central Hazardous Waste Accumulation Points located at each installation. These facilities are fenced and secured. The Garrison has developed a reuse program for household hazardous waste. Household hazardous wastes (i.e. paint, cleaners, spray cans, solvents, pesticides, bleach, automotive liquids) that are not expired and originally sealed can be dropped off at the LRC Reuse Center at Building 2958 on Panzer Kaserne. Further details are provided in the USAG Stuttgart Hazardous Waste Management Plan (HWMP).

For hazardous waste disposal, the respective Installation Coordinator should be contacted. For Access to the Hazardous Waste Storage Area (HWSA) in Kelley DPW Environmental Division should be contacted. All contact information is found at the Garrison website.

4.7 BULKY WASTE, WHITE GOODS, AND FURNITURE WASTE

The Garrison provides collection of furniture, bulky items, and white goods (refrigerators, air conditioners) as part of its curbside collection services. Bulky waste, white goods, and furniture are collected curbside on a regular basis, as well as during spring and fall cleanups. In addition, Garrison personnel and residents can contact the Installation Coordinator to make an appointment for an extra waste pick-up.

White goods that contain Freon and other refrigerants or chemicals are only temporary stored at the Garrison. It is not allowed to empty or destruct items containing refrigerants

at the Garrison. Storage of such white goods destined for disposal (rather than reuse) is managed in accordance with the requirements of the Garrison's HWMP.

Bulky items and furniture waste are collected at the following facilities:

- SORT-Center at Kelley Barracks, Building 3360;
- Recycling Center at Panzer Kaserne, Building 2956;
- Central Receiving Point at Panzer Kaserne, Building 2958;
- Recycling Center at Patch Barracks, Building 2338;
- Recycling Center at Robinson Barracks, Building 146, and
- Depot Weilimdorf

White goods are collected only at the SORT-Center at Kelley Barracks, Building 3360.

Pick-up of collection containers for bulky waste, white goods, and furniture waste is contracted through the Böblingen Abfallwirtschaftsbetrieb.

4.8 SCRAP VEHICLES

The FMWR Organization currently has no license for holding scrap vehicles. Collection and disposal of scrap vehicles is done on an as-needed basis by FMWR, Auto Skills Center, at Building 2928 at Panzer Kaserne. (Section 9.3)

4.9 TIRES

Tires with and without rims are collected at the SORT-Center at Kelley Barracks. Tires can no longer be disposed at B2930, MWR brings the tires to Kelley. The tires are disposed of free of charge at Bldg. 3360. The waste tire storage area is fenced and secured when not open for operation. Contact of waste tires with storm water run-off is restricted through collection of the tires in a container as required by the Garrison's Storm Water Pollution Prevention Plan (SWPPP). The collected tires are picked-up and transported for disposal under contract with the Böblingen Abfallwirtschaftsbetrieb.

4.10 METAL SCRAP

Metal Scrap is collected at the SORT-Center, Building 3360 at Kelley Barracks and at the recycling center, Building 2956 on Panzer Kaserne. The scrap metal container at Kelley Barracks is within an area that is fenced and secured when not open for operation.

4.11 FOOD WASTE AND COOKING GREASE

Food waste is collected at the dining facilities and commissaries and picked-up by contractor for proper disposal.

Collection of cooking grease in proper container is provided at the various dining facilities and cantinas and picked-up by contractor.

Food waste and cooking grease generated by the residents of the Single-Family Home and the residents of the Housing Areas are disposed into the residual waste containers.

4.12 EXPIRED MEDICINE

Expired medicine can be turned in at the pharmacies for free.

5 TRANSPORTATION

5.1 LABELING OF SOLID WASTE TRANSPORT VEHICLES

When Garrison personnel and vehicles are used to transport bulky waste on public roads, each of the following criteria are met:

1. Vehicles are labeled with 2 rectangular, reflective, white warning signs, with a minimum baseline of 40 centimeters (cm), and a minimum height of 30 centimeters (cm).
2. The warning signs are:
    - marked with a black ‘A’ (20 cm high, 3 cm wide);
    - clearly visible on the front and rear of the vehicle;
    - perpendicular to the axle and no more than 1.50 meters above the road.
3. The driver of the vehicle is responsible for ensuring that the signs are in place.

5.2 TRANSPORTING WASTE OUTSIDE OF GERMANY

The Garrison does not transport solid waste that is generated in Germany to locations outside of Germany.

5.3 USE OF APPROVED DISPOSAL COMPANY

The Garrison uses only approved and permitted disposal companies. DPW O&M Division is responsible for confirming that disposal companies used are permitted and approved. An approved disposal company must have an inspection certificate *(Überwachungszertifikat)* and inspection seal *(Überwachungszeichen)* issued by the technical inspection organization and displaying the word *“Entsorgungsfachbetrieb"*. If Garrison (DoD) trucks are used for the transport of Garrison (DoD)-generated bulky waste, no permit is required.

6 DISPOSAL

6.1 SOLID WASTE LANDFILLS

The USAG Stuttgart does not operate an on-post solid waste landfill. Garrison refuse is currently transported through the Böblingen Abfallwirtschaftsbetrieb to the thermal heating plant at Böblingen for incineration and thermal recycling (waste to energy).

6.2 CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL

Construction debris generated in the course of larger construction/renovation projects is disposed of through the contracted construction/renovation company. Construction debris generated during small renovation work performed by resident or Garrison personnel is collected at the SORT-Center at Kelley Barracks and disposed of through the Böblingen Abfallwirtschaftsbetrieb.

6.3 INCINERATORS

The Garrison does not operate an incineration facility on its installations. Refuse from the Garrison is transported through the Böblingen Abfallwirtschaftsbetrieb to the thermal heating plant at Boeblingen for incineration and thermal recycling.

6.4 OPEN BURNING

Open burning is not a method of solid waste disposal used at the Stuttgart Garrison.

6.5 SEWAGE SLUDGE/WASTEWATER TREATMENT

The USAG Stuttgart does not operate a wastewater treatment facility, thus does not generate sewage sludge. Wastewater treatment for the different installations of the Garrison is provided by the respective municipality.

7 COMPOSTING

7.1 YARD WASTE COMPOSTING FACILITIES

USAG Stuttgart does not operate a Yard Waste Composting facility on site. Collection and disposal of yard waste at the USAG Stuttgart is provided and coordinated by the Roads and Grounds Contractor

8 CONTAINERS

8.1 CONTAINER SPECIFICATIONS

Storage containers are leak proof, waterproof, and vermin-proof (including sides, seams, and bottoms) and are durable enough to withstand anticipated usage and environmental conditions without rusting, cracking, or deforming in a manner that would impair serviceability. All storage containers have functional lids.

Storage containers are inspected on a regular basis to ensure that they continue to meet the above requirements throughout their lifetime.

Storage containers are replaced immediately if any one of the following conditions is met:

- Container has a leak; or
- Lid no longer functions to keep rainwater out of waste; or
- Container no longer seals tightly enough to deter vermin; or
- Container is cracked or deformed, making handling difficult.

8.2 CONTAINER INVENTORY

An inventory of the total number of containers is provided in Appendix 3. Overall, the container volume goals are being achieved. Based on existing container capacities and the annual waste generation volume per convenience center, existing containers are under-utilized in some locations and over-utilized in others.

8.3 CONTAINER STORAGE

Containers are stored on a firm, level, well-drained surface that is large enough to accommodate all of the containers and is maintained in a clean, spill-free condition.

The ED works with DPW O&M to ensure that all buildings or other facilities constructed, modified, or leased include provisions for storage areas that 1) accommodate the volume of solid waste anticipated; 2) are easily cleaned and maintained; and 3) allow for safe, efficient collection.

9 DOCUMENTATION, REPORTING, AND PERMITTING

9.1 DOCUMENTATION

All Garrison-generated wastes are assigned a six-digit code as per European Waste Catalogue. When assigning the waste into the relevant types, the two-digit, branch-specific or process-specific code precedes any two-digit code denoting origin or type of waste.

Preparation of solid waste documentation is, in many cases, a responsibility shared with the waste contractor or municipality. However, responsibility for retention of these documents is the responsibility of the Garrison. Specific requirements are detailed in FGS Chapter 7 by waste types. Requirements for retention of key documents are summarized in Table 9-1.

Table 9-1. Document Retention Requirements

Waste Type	Record Type	Retention Time
Residential rubbish and recycling	Acceptance slips *(Übernahmeschein)* and weight slips *(Wiegeschein)*	3 years
Commercial / Industrial rubbish and recycling	Proof logs *(Nachweisbücher)*, which include simplified proof forms *(vereinfachter Sammelnachweis VS)*, acceptance slips *(Übernahmeschein)*, and weight slips *(Wiegeschein)*	3 years (minimum)
Compostable Materials	Delivery note *(Lieferschein)*	3 years (minimum)

9.2 RECORDKEEPING AND REPORTING

As the operator of a recycling center, the Stuttgart Garrison submits annual reports to document the following information:

Solid Waste Annual Report (SWAR)

The Garrison prepares and submits a Solid Waste Annual Report (SWAR) in compliance with the USAREUR Separate or Recycle Trash (SORT) program. The Garrison updates the SWAR every six months and submits a copy electronically to IMCOM-Europe via SWARWeb.

Waste Management Plan and Waste Registry

At the present time, preparation of a Waste Management Plan and a Waste Registry is not required at the Garrison-level. Requirements are re-evaluated during the 5-year review cycle.

Waste Stream Characterization

As part of the recordkeeping required to prepare the above reports, the Garrison generates data on waste generation rates, annual waste volumes, and waste collection frequency requirements. The data required to fully characterize the Garrison's waste streams are also used to prepare the Garrison's SWAR (described above) and to negotiate terms and conditions with solid waste contractors.

9.3 PERMITTING REQUIREMENTS

USAG Stuttgart solid wastes are treated, stored, and disposed of in authorized facilities that have been permitted by appropriate German Federal and State authorities. Waste facilities in Germany possessing valid permits meet DOD solid waste disposal standards.

Transportation

All subcontractors that transport Garrison waste for disposal are permitted by the appropriate German authorities. This includes the public entity responsible for disposal *(öffentlich-rechtlicher Entsorgungsträger)* or private transport companies.

Scrap Vehicles

The FMWR Auto Skills Center does not hold a current license for holding scrap vehicles. The facility is currently part of a demolition and reconstruction project that is in the planning phase. Once finalized it will hold the required operation license *(Betriebserlaubnis)*.

10 TRAINING

The Garrison conducts in-house training for waste management and recycling program personnel as necessary and reviews the training program periodically to ensure all required training is provided.

The Garrison provides waste and recycling management training to the USAG Stuttgart employees as necessary and provides awareness information to the Garrison personnel and residents during the Recycling Day and Earth Day Activities.

The Garrison public website and App provide the Recycling Handbooks as an electronic format as well as the Garrison Trash Policy.

11 DEFINITIONS

Bulky Waste: Large items of solid waste such as household appliances, furniture, large auto parts, and other oversize wastes whose large size precludes or complicates their handling by normal solid wastes collection, processing, or disposal methods.

Composting: The biological decomposition of organic waste under controlled conditions.

Construction and Demolition (C&D) Waste: The waste building materials, packaging, and rubble resulting from construction, remodeling, repair, and demolition operations on pavements, houses, commercial buildings, and other structures.

Disposal costs: The disposal costs are defined as costs for waste treatment or waste disposal and include treatment, transportation between initial storage facility and any additional storage facilities and final disposition. Each waste stream has a specific cost that depends on the type of disposal/treatment.

Electronic waste: Waste that is considered bulky waste or household waste powered by electricity and/or batteries and contains electronic components.

Food Waste: The organic residues generated by the handling, storage, sale, preparation, cooking, and serving of foods, commonly called garbage.

Household Waste/ Residential waste: The waste generated by normal household activities from residential areas.

Incinerator: A combustion device specifically designed for the volume reduction, by burning, of combustible community solid wastes.

Landfill: An area of land or excavation in which solid wastes are placed for permanent disposal and that is not a land application unit, surface impoundment injection well, or waste pile, as those terms are defined in 40 CFR 257.2.

Municipal Solid Waste Landfill (MSWLF): A discrete area of land or an excavation that receives household waste and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined in 40 CFR 257.2. A MSWLF unit may also receive other types of RCRA subtitle D wastes, such as commercial solid waste, non-hazardous sludge, small quantity generator waste, and industrial solid waste. A MSWLF unit may be a new or existing MSWLF, or a lateral expansion, and such a landfill may be publicly or privately owned.

Pollution Prevention (P2): Source reduction and other practices that reduce or eliminate the creation of pollutants through (a) increased efficiency in the use of raw materials, energy, water, and other resources; and (b) protection of natural resources through conservation.

Qualified Recycling Program (QRP): An organized operation that diverts or recovers scrap or waste streams, and that identifies, segregates, and maintains the integrity of the recyclable materials in order to maintain or enhance the marketability of the materials.

Recycling: The recovery operation that turns waste into products, materials, or substances whether for the original purpose or for other purposes; it includes the processing of organic material but does not include energy recovery and the reprocessing into materials that are intended for use as fuels or for backfilling.

Refuse/ Trash: Household waste excluding recyclable materials.

Rental costs: The costs for a container rental are monthly levied. There are different container sizes and different specifications of the containers, e.g., lid, compactor, water-proofed; therefore, rental prices differ. In addition, all maintenance and repair costs for waste management equipment are covered by the waste management contractor. The waste management contractor also ensures that all power operated technical equipment meets the applicable safety standards.

Reuse: The reintroduction of a product into the economic stream without a total loss of the original identity.

Service costs: The service costs are a sum of the first transportation and handling costs done by contracted waste personnel. The transportation costs include container pick up, transportation to destination and return of the empty container. Each container size has a specific price for transportation. The number of pickups multiplied by the price per container represents the service prize.

Solid Waste: May include the terms garbage, refuse, sludge, and items that have been discarded from industrial, commercial, and agricultural operations, and from community activities.

Solid Waste Management Site: Any land area used for storage, transfer, processing, separation, incineration, composting, treatment, recycling, reuse, or disposal of solid wastes.

Waste prevention: Any change in the design, manufacture, purchase, or use of materials or products (including packaging) to reduce their amount or toxicity before they are discarded; also refers to the reuse of products or materials.

Waste reduction: Decreasing the amount of waste being generated through waste prevention, recycling, or purchase of recycled and environmentally preferable products.

Yard Waste: Grass and shrubbery clippings, tree limbs, leaves, and similar organic materials commonly generated in residential yard maintenance (also known as green waste).

12 ACRONYMS

AAFES	Army and Air Force Exchange Service
ADBM	Application Database Manager
AFV	Alternative Fueled Vehicle
AP	Affirmative Procurement
AR	Army Regulation
ASA (IL&E)	Assistant Secretary of the Army for Installations, Logistics and the Environment
ASOS	Air Support Operations Squadron
ASP	Activity Specific Plan
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
AUL	Authorized Use List
AVN	Aviation
BDE	Brigade
BMP	Best Management Practice
BN	Battalion
BOD	Biological Oxygen Demand
Btry	Battery
BTU	British Thermal Units
CA	Corrective Action
CARC	Chemical Agent Resistant Coating
CAS	Chemical Abstract Services
C&D	Construction and Demolition
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
CIF	Central Issue Facility
CLIN	Contract Line Item Number
CO	Carbon Monoxide
COD	Chemical Oxygen Demand
CONUS	Continental United States
CPG	Comprehensive Procurement Guidelines
CRC	CONUS Replacement Center
CRP	Central Receiving Point
CWA	Clean Water Act
CY	Calendar Year
DA	Department of the Army
DCA	Directorate of Community Activities
DeCA	Defense Commissary Agency
DET	Detachment
DFEL	Directorate of Facilities Engineering and Logistics

DIV	Division
DLA	Defense Logistics Agency
DoD	U.S. Department of Defense
DoDDS	Department of Defense Dependent Schools
DoDI	Department of Defense Instruction
DOIM	Directorate of Information Management
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
ECO	Environmental Officer
ED	Environmental Division
EN or ENG	Engineer
EO	Executive Order
EPAR	Environmental Performance Assessment Report
EPAS	Environmental Performance Assessment System
EPP	Environmentally Preferable Purchasing
EP&S	Engineering Plans and Specifications
EQ	Environmental Quality
EQCC	Environmental Quality Control Committee
EQR	Environmental Quality Report
ERDC	European Region Dental Command
ERMC	European Region Medical Command
EWC	European Waste Code
FA	Field Artillery
FASTT	Field Activity Support and Technology Transfer
FGS-GE	Final Governing Standards for Germany
FR	Federal Register
FSB	Forward Support Battalion
FY	Fiscal Year
gal	Gallon(s)
GPP	Green Procurement Program
GRP	Group
gpm	Gallons per Minute
GSA	General Services Administration
HM	Hazardous Material(s)
HMCC	Hazardous Materials Control Center
HQ	Headquarters
HSMS	Hazardous Substance Management System
HW	Hazardous Waste(s)
HWAP	Hazardous Waste Accumulation Point
HWSA	Hazardous Waste Storage Area
IC	Installation Coordinator
ICAP	Installation Corrective Action Plan

IMCOM-Europe	Installation Management Command – Europe
INF	Infantry
IPR	In Progress Review
ISWMP	Integrated Solid Waste Management Plan
kg	Kilograms
kW	Kilowatt
kWh	Kilowatt Hour
lbs/mo	Pounds per Month
LRC	Logistic Readiness Center
m^3	Cubic Meter
MACOM	Major Command
MEDDAC	Medical Activity
mg/L	Milligrams per Liter
mgd	Million Gallons per Day
MBtu	Million British Thermal Units
MoM	Measure of Merit
mpg	Miles per Gallon
MRF	Material Recovery Facility
MW	Megawatt
MWR	Morale, Welfare, and Recreation
N/A	Not Applicable
NATO	North Atlantic Treaty Organization
NBC	Nuclear, Biological, Chemical
NIST	National Institute of Standards and Technology
NSN	National Stock Number
OB/OD	Open Burn/Open Detonation
OCONUS	Outside the Continental United States
ODC	Ozone Depleting Chemical
ODS	Ozone Depleting Substance (equivalent to ODC)
OEBGD	Overseas Environmental Baseline Guidance Document
O&M Div.	Operations and Maintenance Division
P2	Pollution Prevention
PAO	Public Affairs Office
PBO	Property Book Office
PCB	Polychlorinated Biphenyls
PM	Particulate Matter
POL	Petroleum, Oil, and Lubricants
POV	Privately Owned Vehicle
PPA	Pollution Prevention Act
ppm	Parts per Million
PPOA	Pollution Prevention Opportunity Assessment
PSD	Prevention of Significant Deterioration
PX	Post Exchange

RGT or Regt	Regiment
RMP	Risk Management Plan
SARSS	Standard Army Retail Supply System
SFG	Special Forces Group
sq. ft.	Square Feet
SORT	Separate or Recycle Trash
SSA	Supply Support Activities
SWAR	Solid Waste Annual Report
SWARS	Solid Waste Annual Reporting System
SWPPP	Storm water Pollution Prevention Plan
TEC	The Environmental Company
TMP	Transportation Motor Pool
TRADOC	U.S. Army Training and Doctrine Command
TRI	Toxic Release Inventory
TSB	Training Support Branch
TSS	Total Suspended Solids
UFR	Unfunded Requirement
USAEC	U.S. Army Environmental Center
USAF	U.S. Air Force
USAG	U.S. Army Garrison
USAR	U.S. Army Reserve
U.S.C.	United States Code
USEPA	U.S. Environmental Protection Agency
USAREUR	U.S. Army Europe
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

Appendix 1

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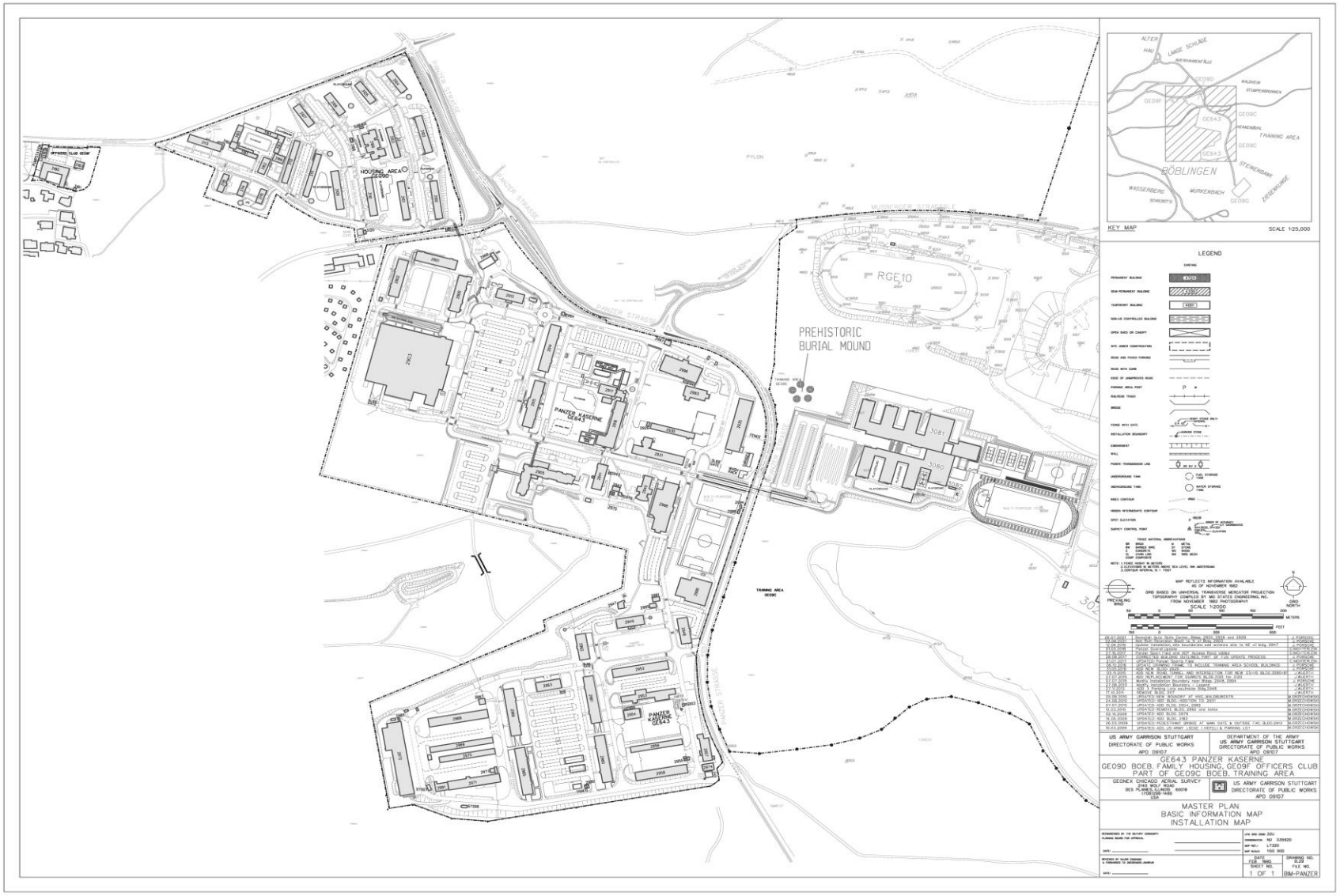
Mapping of Collection and Recycling Locations

GEBOJ
STEUBEN AND WEICHT VILLAGE
FAMILY HOUSING
GE656
PATCH BARRACKS
GE43X
KEFURT AND CRAIG VILLAGE
FAMILY HOUSING
KEY MAP
SCALE 1:25,000
VAIHINGEN
LEGEND
SCALE 1:2000
MASTER PLAN
BASIC INFORMATION MAP
INSTALLATION MAP
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
GE656
GE43X
GEBOJ
PATCH BARRACKS
KEFURT&CRAIG VILL. FAM. HSG.
STEUBEN&WEICHT VILL. FAM. HSG.
GEONEX CHICAGO AERIAL SURVEY
DES PLAINES, ILLINOIS 60016
USA
SHEET NO.
1 of 1
FILE NO.
BIM-PATCH


PREHISTORIC
BURIAL MOUND
HOUSING AREA
GE09D
PANZER KASERNE
GE643
RGE10
TRAINING AREA
GE09C
KEY MAP
SCALE 1:25,000
BÖBLINGEN
LEGEND
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
DEPARTMENT OF THE ARMY
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
GE643 PANZER KASERNE
GE09D BOEB. FAMILY HOUSING, GE09F OFFICERS CLUB
PART OF GE09C BOEB. TRAINING AREA
GEONEX CHICAGO AERIAL SURVEY
2140 WOLF ROAD
DES PLAINES, ILLINOIS 60018
(708)298-1480
USA
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
MASTER PLAN
BASIC INFORMATION MAP
INSTALLATION MAP
DATE
FEB 1995
SHEET NO.
1 OF 1
DRAWING NO.
8.2A
FILE NO.
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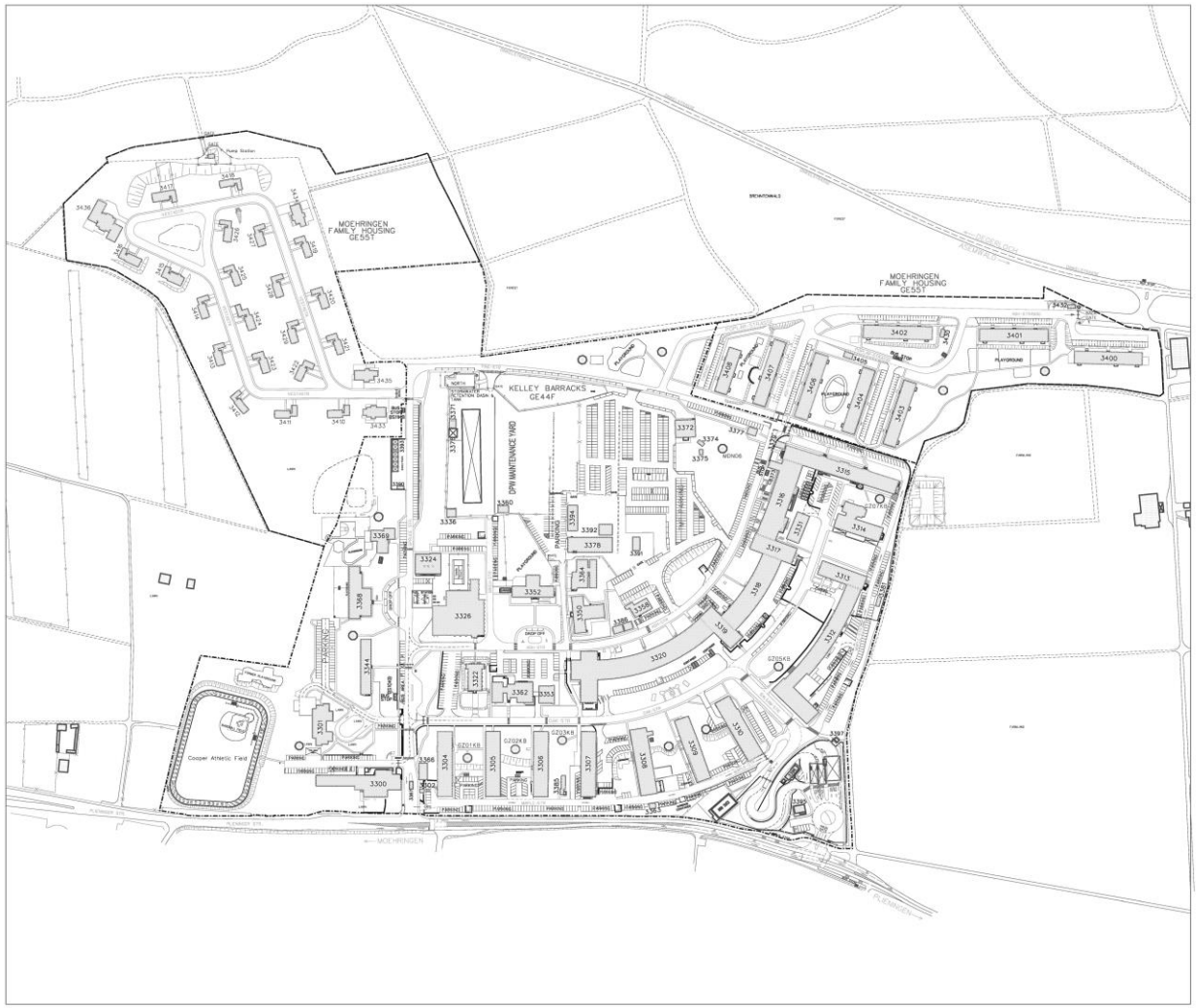


KEY MAP SCALE 1:25,000

LEGEND

US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107

GE55T
GE44F

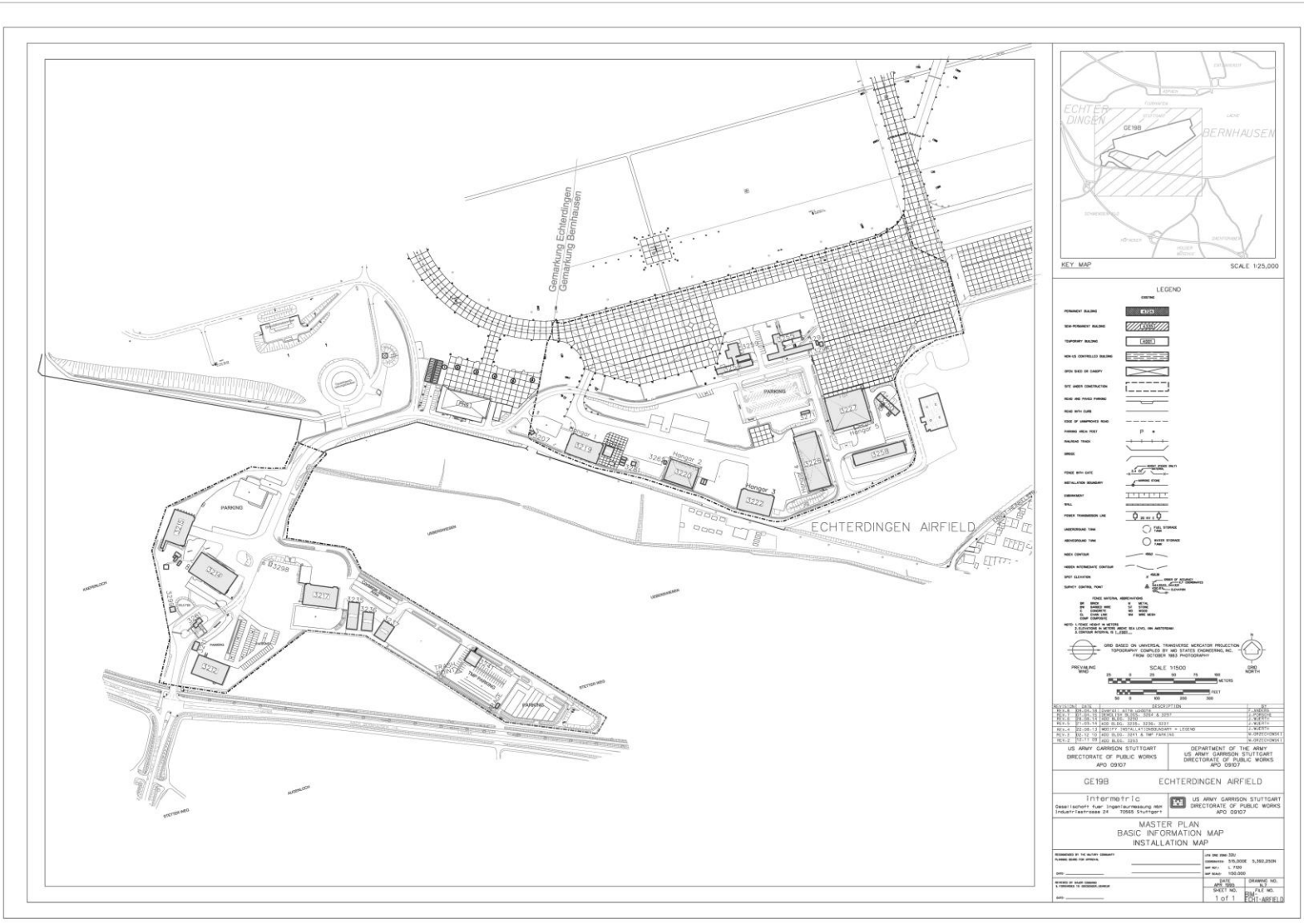
MOEHRINGEN FAMILY HOUSING
KELLEY BARRACKS

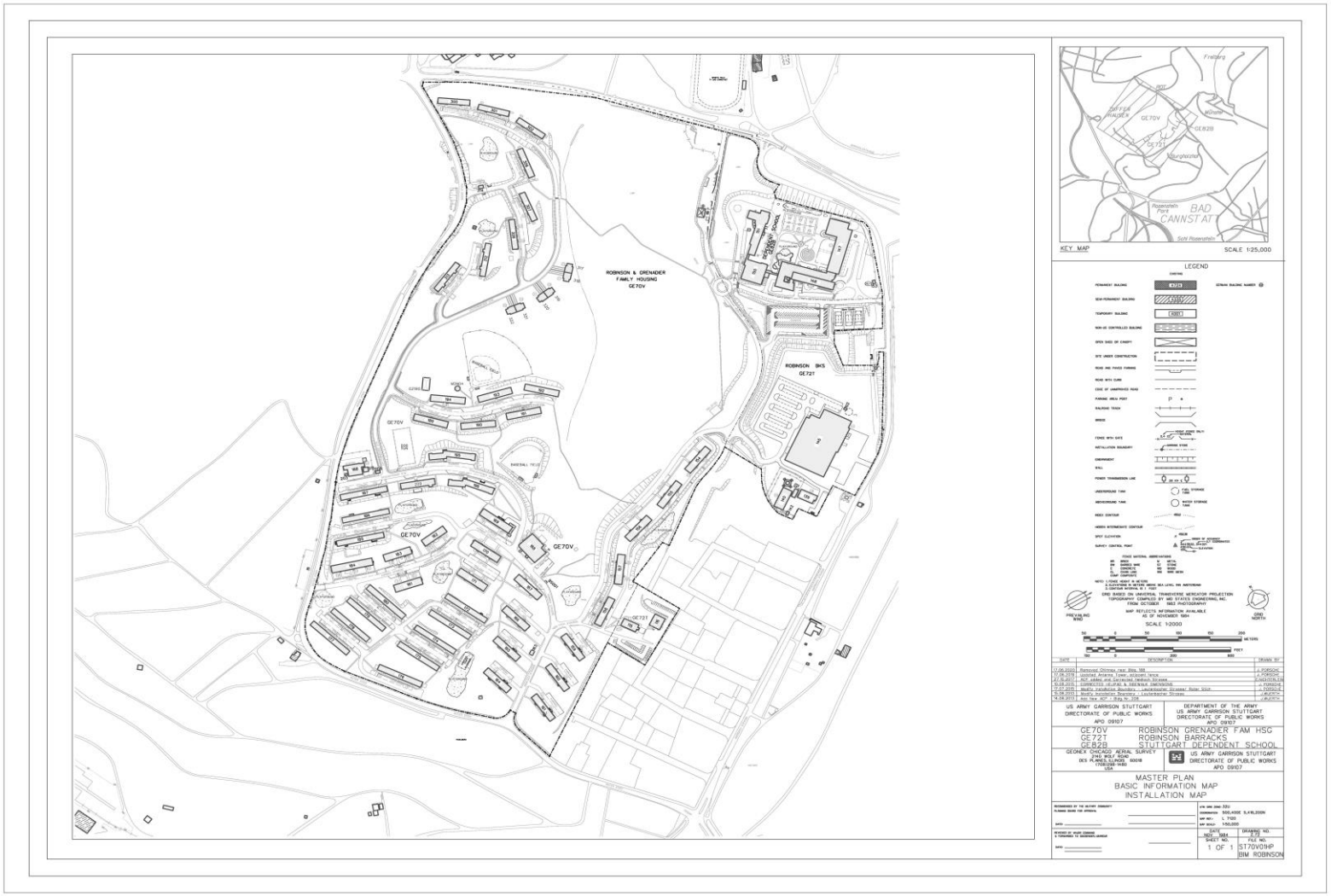
GEONEX CHICAGO AERIAL SURVEY
2340 WOLF ROAD
DES PLAINES, ILLINOIS 60018
(708)298-1480
USA

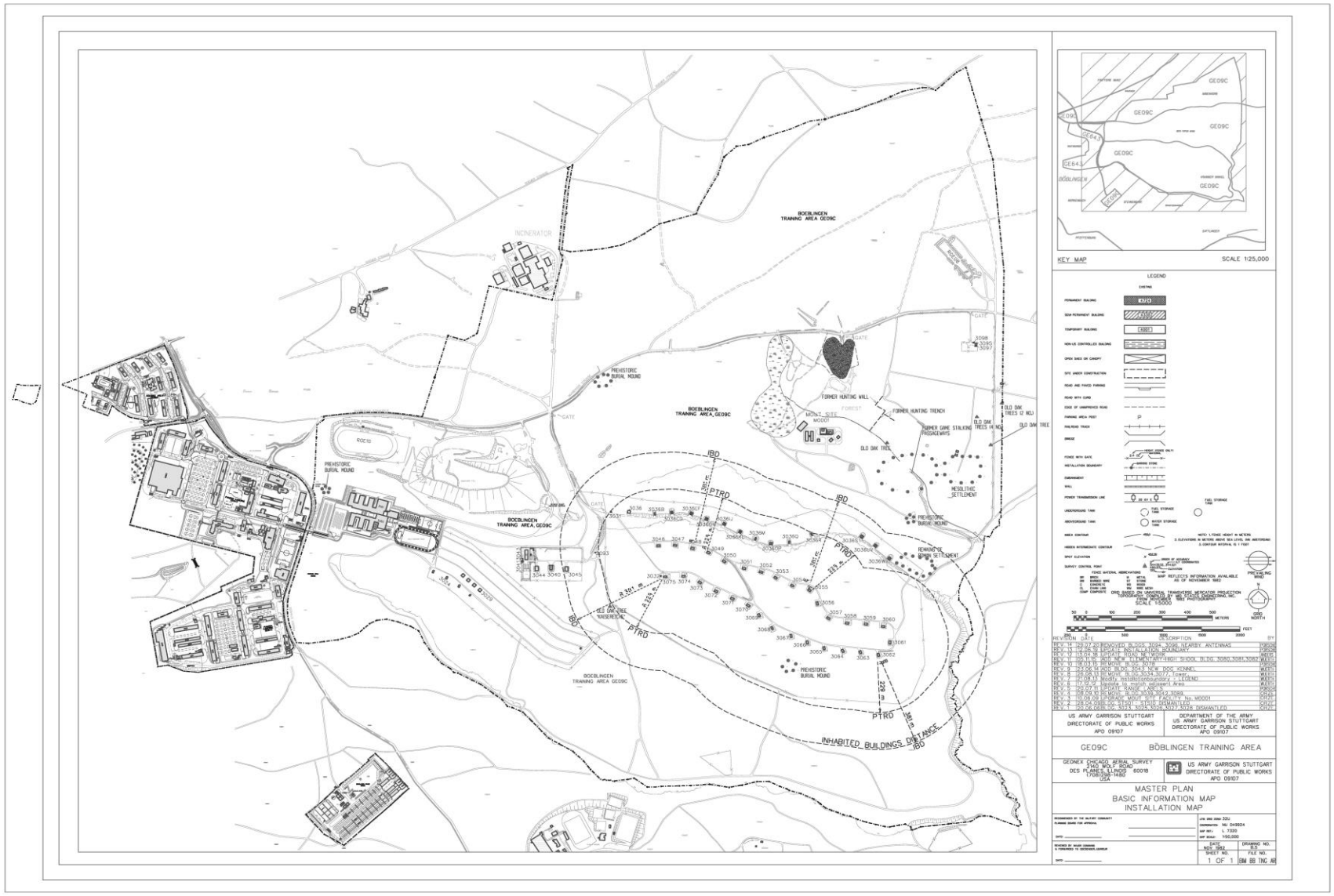
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107

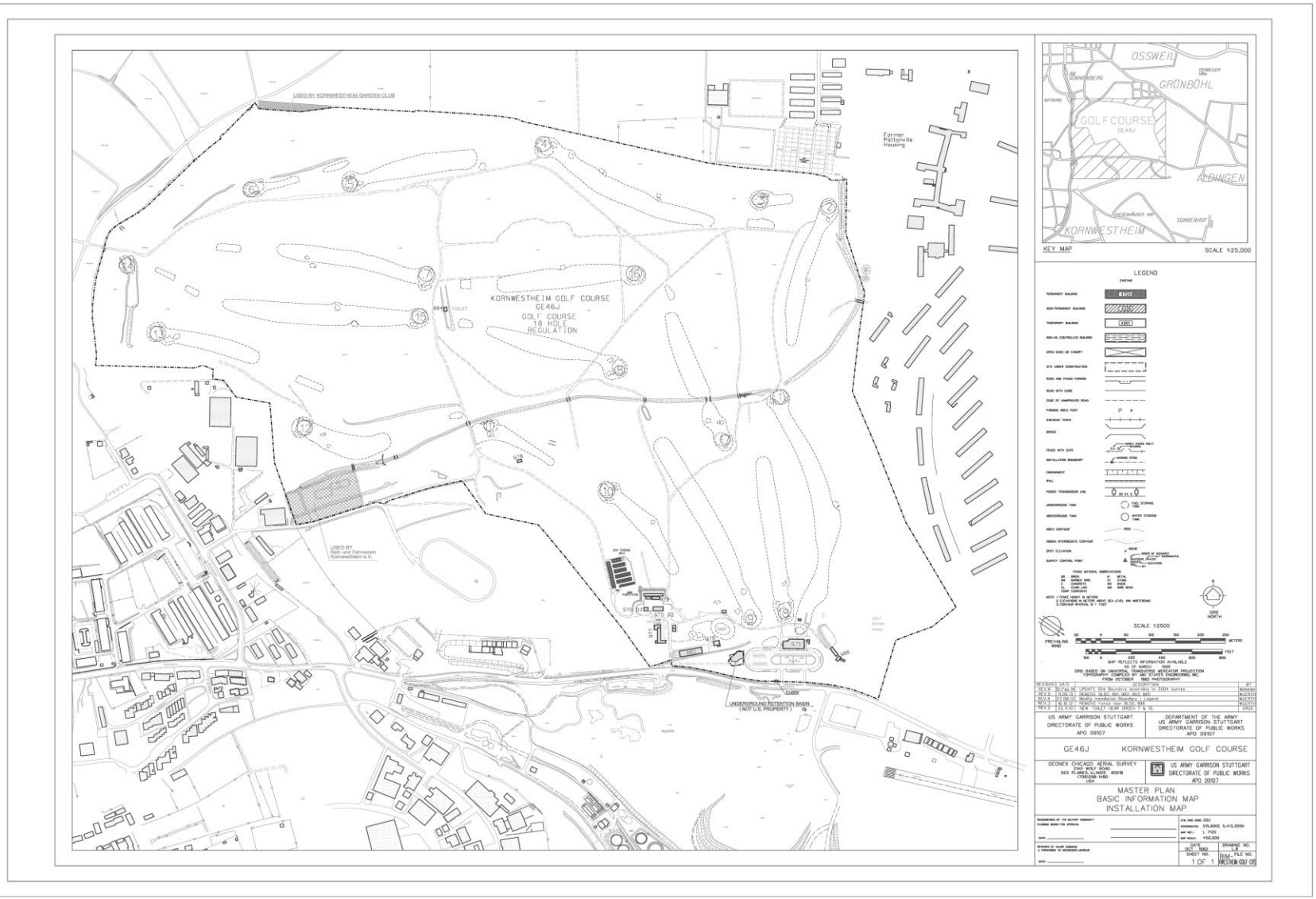
MASTER PLAN
BASIC INFORMATION MAP
INSTALLATION MAP

DATE	SHEET NO.	DRAWING NO.
	1 OF 1	BIM - FILE NO. KELLEY


Gemarkung Echterdingen
Gemarkung Bernhausen
ECHTERDINGEN AIRFIELD
Hangar 1
Hangar 2
Hangar 3
PARKING
KEY MAP
SCALE 1:25,000
LEGEND
SCALE 1:500
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
DEPARTMENT OF THE ARMY
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
GE19B
ECHTERDINGEN AIRFIELD
Intermetric
MASTER PLAN
BASIC INFORMATION MAP
INSTALLATION MAP


ROBINSON & GRENADIER
FAMILY HOUSING
GE70V
ROBINSON SKS
GE72T
GE70V
GE70V
GE70V
GE72T
KEY MAP
SCALE 1:25,000
LEGEND
PREVAILING WIND
GRID NORTH
SCALE 1:2000
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
DEPARTMENT OF THE ARMY
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
GE70V ROBINSON GRENADIER FAM HSG
GE72T ROBINSON BARRACKS
GE82B STUTTGART DEPENDENT SCHOOL
GEONEX CHICAGO AERIAL SURVEY
2140 WEST ROSCOE
DES PLAINES, ILLINOIS 60018
(708)318-1450
USA
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
MASTER PLAN
BASIC INFORMATION MAP
INSTALLATION MAP
DATE
SHEET NO.
1 OF 1
DRAWING NO.
ST70V01HP
BIM ROBINSON


BOEBLINGEN TRAINING AREA GE09C
INCINERATOR
PREHISTORIC BURIAL MOUND
BOEBLINGEN TRAINING AREA GE09C
FORMER HUNTING WALL
FORMER HUNTING TRENCH
FORMER GAME STALKING PASSAGEWAYS
OLD OAK TREE
MESOLITHIC SETTLEMENT
REMNANTS OF IRON SETTLEMENT
INHABITED BUILDINGS DISTANCE
KEY MAP
SCALE 1:25,000
LEGEND
GEO9C BÖBLINGEN TRAINING AREA
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
MASTER PLAN
BASIC INFORMATION MAP
INSTALLATION MAP


USED BY KORNWESTHEIM GARDEN CLUB
KORNWESTHEIM GOLF COURSE
GE46J
GOLF COURSE
18 HOLE
REGULATION
TOILET
Former
Pattonville
Housing
USED BY
Reit- und Fahrverein
Kornwestheim e.V.
UNDERGROUND RETENTION BASIN
(NOT U.S. PROPERTY)
OSSWEIL
GRÜNBÜHL
GOLF COURSE
GE46J
ALDINGEN
KORNWESTHEIM
KEY MAP
SCALE 1:25,000
LEGEND
SCALE 1:2500
PREVAILING WIND
GRID NORTH
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
DEPARTMENT OF THE ARMY
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
GE46J KORNWESTHEIM GOLF COURSE
GEONEX CHICAGO AERIAL SURVEY
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
MASTER PLAN
BASIC INFORMATION MAP
INSTALLATION MAP
SHEET NO.
1 OF 1

BOEBLINGEN RANGE
GE09G
PANZER STRASSE
K1057
FOREST
LAWN
FLAGPOLE
RAPPELING TOWER
BUILDING 3008
BUILDING 3003
BUILDING 3012
BUILDING 3013
BUILDING 3014
BUILDING 3015
BUILDING 3016
BUILDING 3017
BUILDING 3018
BUILDING 3019
BUILDING 3020
BUILDING 3021
BUILDING 3022
BUILDING 3023
BUILDING 3024
BUILDING 3025
BUILDING 3026
BUILDING 3027
BUILDING 3028
BUILDING 3029
BUILDING 3030
BUILDING 3031
BUILDING

POWER SUBSTATION
VOLVO DEALERSHIP
TRANSFORMER STATION
TO MUENCHWEIN 0.7 KM
PARKING
5376
MOTORSTRASSE
LACHEMAIER
LOTTER STRASSE
5377
PARKING
PARKING
INDUSTRIAL AREA
MOTORSTRASSE
LOTTERSBROSTRASSE
TO WEILIMDORF 0.4 KM
KEY MAP
1 : 25 000
LEGEND
GRID BASED ON UNIVERSAL TRANSVERSE MERCATOR PROJECTION
PREVAILING WIND
GRID NORTH
SCALE 1:500
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
DEPARTMENT OF THE ARMY
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
GE93B
WEILIMDORF WAREHOUSE
BLACK & VEATCH
8601 College Blvd.
Overland Park, Kansas 66211 USA
US ARMY GARRISON STUTTGART
DIRECTORATE OF PUBLIC WORKS
APO 09107
MASTER PLAN
BASIC INFORMATION MAP
INSTALLATION MAP
DATE
OCT 2009
DRAWING NO.
SHEET NO.
1 OF 1
FILE NO.
SM-
WEILIMDORF-B-WEHS

Appendix 2

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Education Program

USAG Stuttgart Education Program

The Garrison performs an education program comprised of the elements listed below. All educational programs are the responsibility of the ED.

Program	Date or Schedule	Target	Materials Needed
Distribution of Recycling Handbooks for all new and current Garrison residents	On-going	New Garrison residents	Recycling Handbooks, Enforcement Policies
Provide SORT Program information via newspaper and social media through PAO	As needed	All	None
Participate with CARE Fair Program to include providing waste and recycling information	Annually	All	Handouts
Conduct Recycling Day Program to include providing waste and recycling information	Annually	All	Handouts
Publish recycling booklets on the Garrison website and App	On-going	All	None

Appendix 3
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Container Inventory

Table A-3.1 Container Inventory Sheet for Centralized Community Recycling Centers

Container Location, Building Number	UTM Coordinates		Number of Containers for Each Waste Type																TOTAL
			Electronic Scrap		Cardboard/ Paper			Glass and Metal Cans	Plas-tic	Wood	Bulky Waste		Yard Waste	Metal Scrap	TV's monitor	White Goods	Used Tires	Con-struction Debris	
	X-Coord	Y-Coord	36 m^3	15 m^3	1.1 m^3	4.5 m^3	23.0 m^3	1.1 m^3	1.1 m^3	36.0 m^3	20.0 m^3	36.0 m^3	36.0 m^3	36.0 m^3	15.0 m^3	36.0 m^3	36.0 m^3	15.0 m^3	
Recycling Centers																			
SORT-Center, Bldg. 3360, Kelley Barracks	513048	5396869	1				2	1	1	1		2	1	2	1	1	1	1	
Recycling Center Bldg. 2956, Panzer Kaserne	503509	5391735		1						1		1		1	1				
Recycling Center Bldg. 2338 Patch Barracks				1								1		1	1				
Recycling Center Bldg. 146 Robinson Barracks				1								1	1	1	1				
Total No. of Containers			1	3	0	0	2	1	1	2	0	5	2	5	4	1	1	1	**28**
Total Capacity (m^3)			36	45	0	0	46	1.1	1.1	72	0	180	72	180	60	36	36	15	**780.2**

Table A-3.2 Container Inventory Sheet for Recycling Islands

Container Location, Building Number	UTM Coordinates		Number of Containers for Each Waste Type											
			Trash		Cardboard/ Paper				Glass/ Metal Cans	Plastic	Plastic	Grease Waste	Wood	Bulky Waste
	X-Coord	Y-Coord	4.5 m^3	2.5 m^3	1.1 m^3	2.5 m^3	4.5 m^3	23.0 m^3	1.1 m^3	1.1 m^3	2.5 m^3	200 ltr	36.0 m^3	36.0 m^3
Kelley Barracks														
3301	512839	5396633		3	1	1			1	1				
3304/3305				2	1				1	1				
3307/3308	513115	5396537		2		1			1	1				
3368	513184	5396665		2		1			1	1				
3310				2										
3312	513381	5396704		2	2				1	1				
3316	513279	5396838		2	1			1	1	4			1	
3318-3319				2		2		1	1	1	1			
3319 Front				2	1				1	1				
3320 Oak Str	513184	5396665		1		1			1		1			
3320 Ash Str	513150	5396697		1		1			1	1				
3322				2	3				1	1				
3362				2	2				1	1				
3360 Inside			1	1	1			2	2	4			1	2
3360	513014	5396813		2	2				1	1				
3378			1		3				1		1			
3401				3	4				2	2				
3406/3407	513330	5397036		4	4				1	2				
Patch Barracks														
2317			2				2		2		2			
2319				2	2	2			1	1	1			
2329	505698	5398221	2	2			2				2			
2341 Front	505640	5398231	1				1		1		2			
2337	505880	5398399	1	1		1					1			
2345	505702	5398433	2			1			1	1				
2339	505589	5398374		3		2			1	1	1			
2350	505545	5398321	3	4				3			2		1	
2341 Back	505556	5398218		1	1						1			
2342	505566	5398172		2	4	3			2	3	3			
2342-2343														
2311 Front	505633	5397973	1		2		1				1			
2311 Back	505582	5398060	1	1	3						1			

Container Location, Building Number	UTM Coordinates		Number of Containers for Each Waste Type											
			Trash		Cardboard/ Paper				Glass/ Metal Cans	Plastic	Plastic	Grease Waste	Wood	Bulky Waste
	X-Coord	Y-Coord	4.5 m^3	2.5 m^3	1.1 m^3	2.5 m^3	4.5 m^3	23.0 m^3	1.1 m^3	1.1 m^3	2.5 m^3	200 ltr	36.0 m^3	36.0 m^3
2505	506101	5397605	2			3			1					
2332			2		1									
2386 Cantina				4		3			1	2				
2349	505734	5398155	1			1		1	1		2			
2307			2		1					1	1			
2408/2410	506173	5398352		3		3			2	1	1			
2406/2408	506264	5398328		3	1	2			2	1	1			
2402/2404	506153	5398270		3	1	3			1	1	1			
2400/2402	506247	5398249		3	1	3			1	1	1			
2534				6		4			2	1	1			
2520	506081	5397889		3		3			2		2			
2525/2526	506055	5397797		2		2			1		1			
2506				1		1			1		1			
2511	506215	5397685		2	1	2			2	1	2			
2501				2		3			2					
2519	506151	5397756		2		3			1	1				
2517/2518	506123	5397819		2		3			1	1				
2516	506226	5397845		3		2			1	2	2			
2529/2530	505890	5397803		2		1			1		1			
2527/2528	506023	5397724		2		2			1		1			
Husky Field														
Panzer Kaserne														
2902	503096	5392535	2		1				1	1	1			
2903 Food court	503125	5392367	2		2				2		1	1		
2903 AAFES	503065	5392416	4		1			1	1		1		1	
2998	503520	5392113	2					2	1	2	2	1		
2990	503608	5391992		2	2				1	1				
2956	503509	5391735		2	1					1				1
2957Commissary	503616	5391773	1						1		3			
3081 School			6		6				3	2				
2953	503490	5391856	1											
2963	503399	5391849	2	1		3			1	1				
2965	503385	5391687		2	3				1	1	1			
2972	503145	5391812	2											
2966	503276	5391874		3	3				1	1				
2949 Back	503272	5391991		2	2				1	1				

Container Location, Building Number	UTM Coordinates				Number of Containers for Each Waste Type									
			Trash			Cardboard/ Paper			Glass/ Metal Cans	Plastic	Plastic	Grease Waste	Wood	Bulky Waste
	X-Coord	Y-Coord	4.5 m^3	2.5 m^3	1.1 m^3	2.5 m^3	4.5 m^3	23.0 m^3	1.1 m^3	1.1 m^3	2.5 m^3	200 ltr	36.0 m^3	36.0 m^3
2949 Front		5391991	1					1		1	1			
2935	503671	5392367	1							1				
2915	503415	5392485		2	2				1	1				
2930	503522	5392320	1		1				1	1				
2914			3				2		3	2				
2913	503277	5392557		2	2				1	1				
2996	503576	5392401	1	1	3				1	1				
2905 Hotel				4			3		2	2				
2960	503487	5391729		2	2				1	1				
2973	503273	5391732	1							1				
2952	503554	5391887	1					1		1	1			
RIFLE RANGE				6	4				1	1				
DOG KENNEL				2	3				1	1				
BUNKER														
3118	502839	5392790		3	3				1	1				
3111	502948	5392712		3	4				1	1				
3109	503017	5392677		3	2				1	1				
3106	503035	5392840		3	3				1	1				
3100	503175	5392680		2	3				1	1				
3101	503148	5392689		2	4				1					
3104	503130	5392878		3	2				1	1				
Officer's Club Boeblingen 3180	502839	5392790		1	1				1	1				
Robinson Barracks														
148	514525	5407731	2	4	2		4		1	3				
150	514354	5407741			1									
151	514406	5407866	1		2				2	3				
146 FRONT			2		2				1	2				1
139	514267	5407398			2									
158	513853	5407359		2	2				1	1				
157	513934	5407470		2	4				1	2				
196	513812	5407669		2	2				1	2				
RB CLUB				1	2				1	1				
155	514079	5407523		2	3				1	2				
146 CX1 AAFES	514333	5407534		3				1					1	
146 CX2 PX	514349	5407437		3				1					1	

Container Location, Building Number	UTM Coordinates				Number of Containers for Each Waste Type									
			Trash			Cardboard / Paper			Glass/ Metal Cans	Plastic	Plastic	Grease Waste	Wood	Bulky Waste
	X-Coord	Y-Coord	4.5 m^3	2.5 m^3	1.1 m^3	2.5 m^3	4.5 m^3	23.0 m^3	1.1 m^3	1.1 m^3	2.5 m^3	200 ltr	36.0 m^3	36.0 m^3
302	514138	5408176		2	2				1	1	1			
306	514111	5408136		2	4				2	3	3			
312	513985	5408029		2	3				1	2	2			
190	513812	5407791		2	2				1	1	1			
193	513812	5407791		2	3				1	1	1			
209				2	2				1	1	1			
172/173	513666	5407466		3	3				2	2	2			
182				3	2				1	1	1			
186				2	2				1	1	1			
184				2	3				1	2	2			
178/178	513464	5407609		2	3				1	2	2			
174/175	513598	5407443		3	4				2	2	2			
176				2	2				1	2	2			
170/171	513742	5407627		2	3				1	2	2			
166	513729	5407541		2	3				1	2	2			
187/209	513669	5407748		2	2				1	1	1			
Stuttgart Army Airfield														
3215	513991	5391933	1		1									
3217	514078	5391891	2		2				1	2	2			
3214	514009	5391889	2		2					1	1			
3212	514033	5391777	1		1				1	1	1			
3241				1	1				1	1	1			
3226				2	4				1	1	1			
3258				2	1				1	1	1			
Weilimdorf Warehouse														
Motorstr. 42	507258	5408215	2					1			1			1
Kornwestheim Golf Course														
975	516022	5412712	2			2	2		2	2				
977	515727	5412762	1	3										
Total No. of Containers			69	207	180	65	17	15	120	126	83	2	6	5
Total Capacity (m^3)			310.5	515.5	198	71.5	76.5	345	132	138.5	207.5	400Ltr	216	180

Table A-3.3 Container Inventory Sheet for Housing on Base

Container Location, Building Number	Number of Containers for Each Waste Type			
	Refuse 640 ltr	Paper 240 ltr	Plastik 240 ltr	Glass 240 ltr
Kelley Single Houses				
3410	1	1	1	1
3411	1	1	1	1
3412	1	1	1	1
3413	1	1	1	1
3414	1	1	1	1
3415	1	1	1	1
3416	1	1	1	1
3417	1	1	1	1
3418	1	1	1	1
3419	1	1	1	1
3420	1	1	1	1
3421	1	1	1	1
3422	1	1	1	1
3423	1	1	1	1
3424	1	1	1	1
3425	1	1	1	1
3426	1	1	1	1
3427	1	1	1	1
3428	1	1	1	1
3429	1	1	1	1
3435	1	1	1	1
3433	1	1	1	1
3434	1	1	1	1
Patch Single Houses				
2413	1	1	1	1
2412	1	1	1	1
2415	1	1	1	1
2414	1	1	1	1
2416	1	1	1	1
2418	1	1	1	1
2421	1	1	1	1
2419	1	1	1	1
2417	1	1	1	1
2420	1	1	1	1

Container Location, Building Number	Number of Containers for Each Waste Type			
	Refuse 640 ltr	Paper 240 ltr	Plastik 240 ltr	Glass 240 ltr
2423	1	1	1	1
2422	1	1	1	1
2427	1	1	1	1
2425	1	1	1	1
2424	1	1	1	1
2429	1	1	1	1
2426	1	1	1	1
2428	1	1	1	1
2430	1	1	1	1
2431	1	1	1	1
2432	1	1	1	1
2434	1	1	1	1
2436	1	1	1	1
2433	1	1	1	1
2435	1	1	1	1
2438	1	1	1	1
2440	1	1	1	1
2442	1	1	1	1
2437	1	1	1	1
2439	1	1	1	1
2441	1	1	1	1
2444	1	1	1	1
2445	1	1	1	1
2446	1	1	1	1
2448	1	1	1	1
2443	1	1	1	1
2450	1	1	1	1
2452	1	1	1	1
2451	1	1	1	1
2449	1	1	1	1
2447	1	1	1	1
Total No. of Containers	**64**	**64**	**64**	**64**
Total Capacity (m^3)	**40.96**	**15.36**	**15.36**	**15.36**

Appendix 4
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Solid Waste Compliance Plan

Solid Waste Program Compliance Plan Form

ARLOC	Facility Number	Deficiency	Compliance Action	Completion Date	Cost Estimate	Project Number
GE643	FMWR Auto Skills Center Building 2928/2926/ 2920, Panzer Kaserne	The MWR vehicle holding yard is not a permitted facility therefore closed. The storage and disposal of scrap vehicles must meet certain requirements. (FGS C 7.3.3.1)	A project to demolish the facility and build a new Auto Skills Center that meets the requirements for a vehicle holding yard, is funded, and started in FY 20.Construction work will start in winter 2024.	tbd	tbd	N1-00388-TP

Appendix 5

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Preparation of Recommendations

A-5.1 RECOMMENDATIONS FOR IMPROVEMENT

Table A-5.1. Recommendations for Solid Waste Program Improvements

Recognized Problem	Possible Recommendations
1. Recyclables are disposed in regular trash containers, and containers for recyclables contain non-recyclable waste.	1. Contract and implement a sorting service at the recycling islands to remove and separate recyclables such as cardboard/paper and plastics from refuse containers. Refuse & Recycling Branch depending on funds availability. 2. Perform Recycling presentations as part of the newcomer or pre-orientation program. Housing Div. 3. Commercial campaign from Refuse and Recycling Branch thru AFN Radio to raise awareness of the customers and promote proper segregation of waste and recyclables. On Air since mid-January 2018. 4. Recycling flyers at multi-family housing buildings have been distributed thru the Installation Coordinators and Refuse & Recycling Branch.

Appendix 6
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US Army Garrison Stuttgart