

Distribution of American Houses Around the USA Air Force Soon after the Second World War in Fukuoka, Japan

Makoto Taniguchi, Nobuo Mishima, and Takayuki Fuchikami

Abstract—This paper aims to clarify a case of distribution of American houses in the term of occupation by US forces after the second world war, especially focusing on the surrounding area of the US force base in Fukuoka, Japan. In several countries as well as in Japan, there still remain many traces of the second world war even though some of them are invisible and unrecognizable. The traces have possibility to be used and to be succeeded in one's memory also for planning or designing architecture and urban spaces. The target area of this study is Kasugabaru area of Fukuoka city where a railway company developed for sports facilities area before the war and US forces stationed at the airport Japanese force made as the front line against the Allied Powers in the period of the war. After the war, the American soldiers lived mainly in the airport, but some of them lived in the city area until the area was returned to Japan. We used old housing maps and cadaster (land registration book) to make a distribution map of foreigner's house and to analyze the characteristics. We could clarify the possibility that the distribution was related to the demand of the foreigners and the provision of land by land owners.

Index Terms—Land development along the railroads, requisition, American houses, occupation by US forces.

I. INTRODUCTION

A. Background of Study

In Japan, there are many areas railroad companies developed along railroads (hereafter, RD area) before and after the Second World War (hereafter, the WW II). It is very well-known that the railroad residential area in Japan was originally developed by Eiichi Shibusawa who introduced modern postal system in Tokyo, Japan. He was influenced also by Ebenezer Howard who devised Garden City in England, but he used the idea combining with railway developments and separating place for live from place for work. Near Osaka, Ichizou Kobayashi introduced also development along a railway called Takarazuka line. He developed not only residential area but also amusement facilities.

Nakajima *et al.* [1] study that Okinawa Housing Corporation supplied housing to the United States Armed Forces and was constructed as the organization which performed not only the housing construction but also the management. Fukushima and Ando [2] study that most of

wooden 2-story houses in Naha city after the WW II were built in the 1940s and the 1950s and had played a big role as a city house. Ooka [3], [4] studies that there were very few urban independent residences in Fukuoka after the WW II because many war reconstruction housings were built chiefly by housing shortage. The principle of the arrangement of houses and rooms has been changed in the late 1940s. Asano [5], [6] studies that in the city where a land use zoning was appointed before the WW II, early zoning designation was reviewed for post-war period. Early zoning designation was changed complicated land use zoning. Imamura and Nishimura indicate that many old military grounds of Japan were changed to national resources after the WW II, and then most of them have been used publicly [7], [8]. It is currently used as a base of the Air Self Defense Force.

Kasugabaru district in Kasuga city (hereafter, K district) that we target in this research as bellow-mentioned is in present like normal urban area, but it was originally developed as a large athletic ground by a railroad company referring the project by H. Kobayashi. Tatsuta *et al.* [9] mention that the development of K district is an oldest example of the large-scale developments in Kyushu along the line. The sports facilities, however, were demolished in the term of the WW II because Japanese government would make a large munition city to attack US. Then, after the war, US air force requisitioned the airport and the munition factories near the area until returned. Harato *et al.* [10] study that the dependent housings US high-ranking officers lived in Kyoto were modern Japanese-style buildings whereas the dependent housings in Tokyo were mostly western-style. Katano *et al.* [11] surveyed the lodging of the soldiers who worked in US air force occupying K district and revealed characteristics of the building.

Yet, it is not clarified how the other Americans were living in the area. Furthermore, the choice of the place to live should be related to the potential of the area, and the distribution of living in the area should be probably related to the development of K district after the occupation. Therefore, it is significant to reveal the distribution of the American houses in the area.

B. Aim of Study

Thus, this study aims to clarify the distribution of American people in the target area for discussing the influence to development of the area.

II. OUTLINE OF THE STUDY AREA

A. Location of the Study Area

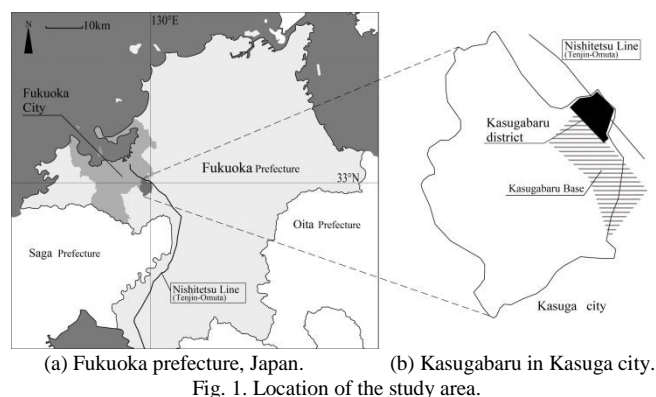
The study area is a part of a southern neighboring city of Fukuoka city as shown in Fig. 1, called K district.

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In the K district, a railroad business started in the early 20th century, and the district was developed as a residential area of the munition city. Soon after the WW II, USA air force made a base, so it is well known that American lived in the district for a while.



B. History of Establishment of Nishi-Nippon Railroad

Hereby, the history of Nishi-Nippon Railroad (hereafter, NNR) is introduced, because the K district was originally developed by the NNR as we mentioned above. Therefore, the target area is **located** at a station of a main line the NNR built and the sports facilities were managed by the NNR.

The NNR was established by unifying four railroad companies of Kyushu. One of the forerunner companies was Kyushu railroad (hereafter, KR) which was established in 1915 by the **name** of Chikushi Electric orbit. They started a business not for freight transportation but for people transportation, because the National railway serviced mainly for freight transportation in Kyushu at that time. Actually, they planned a route from Fukuoka to Futsukaichi. Four years later, the KR acquired the right of routes from Futsukaichi to Kurume in 1919 and changed the company name to KR. Thus, they expanded their railway business and started between Fukuoka and Kurume in 1924. Moreover, they began the service of a line from Fukuoka to Omuta. Then, four railroad companies of Kyushu were unified in 1942, and changed the company name to NNR.

The KR acquired a group of land along the railroad and planned its development before the opening of business of 1924. The land KR acquired is in Kasugabarū, Oho, Mitsusawa. The development was soon planned by the head office because the K district had a big development scale.

C. Early Stage of Land Development along the Railroads in Kasugabarū District

The KR planned to manage this area as a residential area referring to the former example of Osaka area. Considering the economic condition of recession at that time, however, the KR changed the plan to a compound facility. Then, athletic facilities were completed one after another in 1924. The facilities were mainly a baseball field, land sports stadiums, etc. Fig. 2 shows a view of K district in 1924. Afterward, KR newly built a racetrack on the west side of the Japanese National Railways Line in 1932. The real estate management of compound facilities, however, could not get remarkable achievements, so the business of real estate was consigned to the Shoei Real Estate co. which was newly established by KR.



Fig. 2. A view of Kasugabarū district in 1924. (source: [2])

D. Kasugabarū Land Readjustment Project

The land in the K district managed by the NNR was to be taken into the Kasugabarū land readjustment project (hereafter, KLR project) performed by Fukuoka prefecture in 1942 because of the beginning of the WW II. The intents of the project were to remove the athletic ground and to introduce residential area for the munition industries of the main function of the KLR project such as a munitions factory called Kasuga factories of the Ogura army, so the area became called a city for war, even though the plan was canceled and changed to a residential area after the WW II. Thus, NNR established Nishitetsu real estate cooperation (hereafter, NRE) in 1953 to push forward sales of lots of Kasugabarū land. We, however, consider that influences of the original plan are remaining in the area.

E. Summary of the Chapter II

As mentioned above, the abolition of the athletic ground was carried out by the KLR project. Namely, the KLR project offered an opportunity for NRE to sale the land. Moreover, there is a remote cause comes from the term of the WW II. The sale of lands in lots in Kasugabarū is probably realized also by the KRL project as an opportunity, so we think that the KRL project became a motive for the sale in lots by the Nishitetsu real estate.

III. REQUISITION PLACE AND ITS HISTORY

A. Kasugabarū Land Readjustment Project

A plan of the KLR project was decided in May 1941. The land targeted for this project was broadly planned in Fukuoka city, Naka town, Kasuga village and Ohno village which are at Hakata ward, Kasuga city and Onojo city. The main purpose of KLR project was to form a national defense city. Fukuoka city neighboring to K district had begun to become a point of Kyushu as a national defense city. In around 1941, Hakata Port was repaired, and Fukuoka Airport and a navy airport were completed. The national defense city in Fukuoka city was probably formed by practical defense facilities.

On the other hand, in K district and Zasshonokuma located in the south of Fukuoka city, ironwork- and munition-factories were established and/or expanded. Thus, population of K district increased rapidly. The population growth as it was could have caused an unhealthy non-national defense city. Hence, the purpose of this project was to form an ideal national defense city.

The project was planned in the term of WW II, so the main purpose was the maintenance of the industrial area. We suppose that it was accompanied with the maintenance of residential areas and commercial areas.

In addition, the implication of the national defense city formed in K district is different from that in Fukuoka city. The national defense city in Fukuoka city has a function of direct defense of the country like a camp or a base of the warplane, and the one in Kasugabaruru has a function of indirect defense of the country like a munitions factory. After the WW II, KLR project lost its purpose for the national defense city formation.

Thus, the purpose was changed to form commercial and residential areas. K district became a suburb linked with a center of Fukuoka by railroad, but the plan was to be continued.

B. Kokura Army Arsenal Kasuga Factory

There were also some factories which produced munitions around K district as shown in Fig. 3. Yet, Japanese government planned to increase the ability of munition production as supporting the front line, Kokura Army Arsenal Kasuga Factory (hereafter, KAA Kasuga Factory) was introduced in this place.

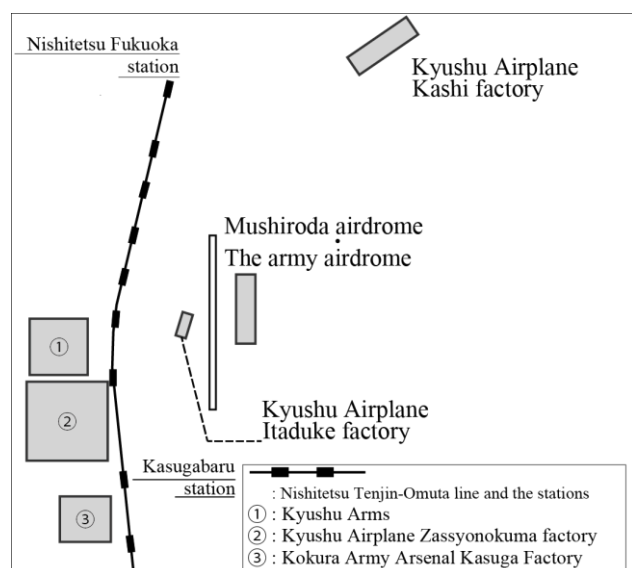


Fig. 3. Munition factories around K district.

In 1941, KAA Kasuga Factory begun to be built. Therefore, land was purchased as the site. The site is place of 1km in the west of Kasugabaruru Station in November of 1940. A part of the site is racetrack which is athletic ground that KR have since 1924. Fukuoka prefecture purchased 622,565 square meters of sites and factory reservoir. The KAA Kasuga Factory had started production at the end of 1942. The construction of a factory and the employee lodgings was completed, and the full-scale operation began in 1943.

Watanabe ironworks (hereafter, WI) was one of the factories specialized for the navy. Two factories of WI related to airplane and underwater ordnance moved to the north side of K district in 1931. The airplane section and the underwater ordnance section were renamed to Kyushu Airplane and Kyushu Arms, respectively. Then, these sections begun their operations as separate companies. In 1945, the Kyushu Airplane was requisitioned by the US forces, although a part of the factory evacuated to avoid an air

raid.

In the same year when the KLR project was decided, the site of KAA Kasuga Factory was purchased. The construction of KAA Kasuga Factory was probably one of the main constituents of the KLR project. Before the second world ended in August, 1945, KAA Kasuga Factory began to evacuate in April, so it had operated only for about two and a half years.

The main reasons why KAA Kasuga Factory was requisitioned by US forces were that a field of airport was relatively near, and munitions factories stood around Kasugabaruru intensively. Furthermore, the evacuation of KAA Kasuga Factory just before the end of the war facilitated to offer also an opportunity for US forces to requisition.

After August 30, 1945 when General MacArthur arrived at the Atsugi airport, the occupation by the alliance national military began. The advance party of the occupation army came to Kanoya navy airport of Kagoshima in Kyushu on September 3, then GHQ arrived at Mushiroda army airport in Fukuoka on September 22 and occupied it.

IV. DISTRIBUTION OF US FORCE HOUSES

Table I shows a list of facilities in Kasugabaruru Base. Besides Residential buildings (Fig. 4), there are facilities to enhance its living environment such as cleaning shops, banks, and amusement like bowling alley, skating rink, etc. We can say that it is one of the biggest characteristics that welfare functions also with offices and accommodations were standing rather than military facilities.

1	BOWLING ALLEY	26	AIRMEN CLUB
2	OFFICE FOR FINANCIAL AFFAIRS	27	OFFICE FOR HOUSING
3	DENTAL OFFICE	28	GARAGE
4	INVESTIGATION UNIT OF THE ARMY	29	BANK
5	CLEANERS	30	GYMNASIUM
6	ANIMAL MEDICAL CENTER	31	STALL
7	OFFICE FOR SUPPLY OF HOUSING	32	THEATER
8	HQ OF THE AIR FORCE PATROLMAN	33	CAFETERIA
9	HOSPITAL	34	SERVICE/CLUB
10	GUEST HOUSE	35	CREDIT UNION
11	COMMUNICATION UNIT OF THE ARMY	36	LODGING FOR OFFICER
12	OFFICE FOR TRANSPORT	37	OFFICER CLUB
13	POOL	38	CHURCH
14	COMMUNITY CENTER	39	HOUSING FOR FAMILY
15	OFFICE FOR PROOF OF COMMUNICATION	40	FOOTBALL FIELD
16	FEN STUDIO	41	BASE HEADQUARTERS
17	POST OFFICE	42	BOYS BASEBALL FIELD
18	CLOTHES SHOP	43	HELIPORT
19	DINNER	44	SKATING RINK
20	THE RED CROSS	45	BASEBALL FIELD GROUND
21	SERVICE OF HOME APPLIANCES	46	FILLING STATION
22	LIBRARY	47	STALL FOR FAMILY
23	LODGING FOR SINGLE OFFICER	48	SCHOOL
24	LODGING FOR SERVICEMAN	49	COMMAND POST ANTI-AIRCRAFT RADAR
25	USED GOODS SHOP	50	HOUSING FOR FAMILY

A. Housing Distribution

Here, we analyze and discuss the distribution of housings

in the surroundings of the Kasugabaru Base including K district through making a distribution map of American houses.



Fig. 4. Housing in kasugabaru base.

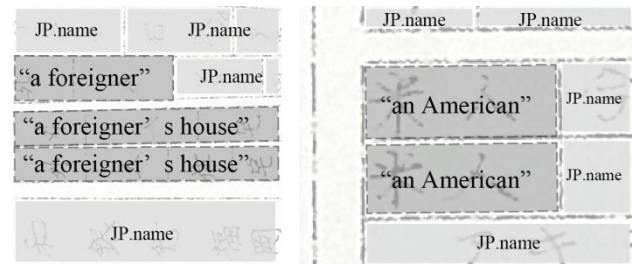
At first, as making the distribution map, we made a base map tracing lines of blocks and lots with using a recent map. We also checked older lines of blocks and lots comparing with older maps we could obtain. Finding changes from the older map, we created a base map of that time.

B. Address notation of US Force Houses in the Map

In this study, we used housing maps of ZENRIN co. to grasp existence of American houses around the Kasugabaru base. The maps we could collect were of publication in 1962 and 1972. As we mentioned above, the WW II finished in 1945 and the airport was returned in 1972. Therefore, we used the map of 1962 to show the position of the American houses on the distribution map. Full names of the residents were usually shown on the housing map as address notation. The notation of foreigners on the house map of 1962, however, were written without their names like "an

American," "a foreigner," "foreigner's house," and "American's house" to confirm American houses in K district as shown in Fig. 5.

Moreover, we could suppose that these address notations of foreigners were strongly related to the American soldiers who worked in the Kasugabaru base from the housing map of 1972. First, we could suppose that foreigners affiliated to US Forces lived in Kasugabaru until the base was returned to Japan in 1972. Actually, the Kasugabaru base became unused in 1971, and was returned in 1972. Second, there were no notations of foreigners on the map of 1972 at the same places where we could find the notations of foreigners on the map of 1962, then the notations were changed into full names of Japanese residents. In other words, Americans lived there in 1962, but they moved out by 1972 when the base was returned. Thus, we could suppose that the foreigner's houses written in the housing map of 1962 are concerning the US military. The reason why the names of the foreigners were not written are probably caused from difficulties of grasping their names by Japanese surveyors.



JP.name : Japanese name

Fig. 5. Notation on the housing map in 1962.

C. Distribution of American's Houses

Fig. 6 shows the distribution of American's houses around the Kasugabaru Base. We could find 60 foreigner's houses in the land for sale managed by Nishitetsu (hereafter, N management area), and 73 Americans in the K district.

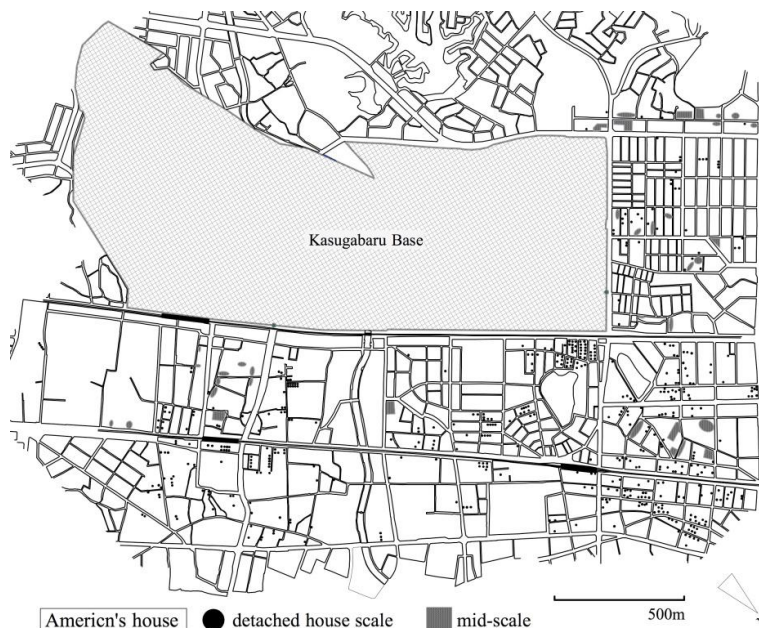


Fig. 6. Lots of foreigner.

Several American's houses were neighboring in N management area rather than houses standing alone. In addition, especially near the north gate in the N management area, there were two blocks wholly occupied by American's house, three blocks almost occupied, and one block more than half occupied. These buildings in block were probably mansions of upper-class officers or apartments of soldiers, because the houses occupied large area of the blocks. We could also find several lots where detached houses were standing. In case of the N management area, these housing was newly built.

Apartments should play a role to supply house demand for US Forces soldiers, and mansion or detached houses should meet the demand of upper class officers who were able to choose residential environment.

Next, we analyzed the location of the houses. Table II shows distribution of American's houses in which we can indicate the calculation result of distances from the gates of the Kasugabaru base to American's house. The Kasugabaru Base had two gates, the north gate and the east gate.

In case of the north gate, 320 American's houses could be confirmed within 1km. The reasons why many American's houses existed there could be probably that Nishitetsu real estate co. provided a planned residential district, that airport were nearer than the east gate, and that the area was located between the base and the airport.

In case of the east gate, the number of American's houses within 1km were fewer than the north gate, but we could find along the street from the east gate to the Nishitetsu station.

TABLE II: DISTRIBUTION OF FOREIGNER'S HOUSES

Total	No.of houses from North Gate	The Range(m)	No.of houses from East Gate	Total
12	12	0-250	17	17
94	82	250-500	33	50
205	111	500-750	68	118
320	115	750-1000	61	179
329	9	1000-1250	27	206
374	45	1250-1500	62	268
429	55	1500-1750	132	400
457	28	1750-2000	60	460
461	4	2000-	7	464

D. Visualization, Digitizing of the Distribution

Obtaining data of cadaster (land registration book) which the tax office controlled, we clarified whether the foreigners owned the land of houses. The area we could obtain the cadaster were only N management land. The cadaster had following contents: 1) location of the land, 2) lot number, 3) classification of land, 4) area of land, 5) name of land owner, and 6) date of registration as shown in Fig. 7.

Absorbing the data of the registration from the cadaster, the notation such as "American", "foreigner" and so on were mapped as shown in Fig. 8 to indicate the distribution of foreigner's houses in the N management land.

In the area, there were only one lot that American himself owned, and all of the others were owned by Japanese people. It can be expected that the Japanese purchased lands of single-family house to rent American people, because the term Japanese purchased the land were concentrated from 1957 to 1958 after Nishitetsu real estate started to sell the lots in 1954, and the address notations of the foreigner's houses

were found on the housing map of 1962.

We could find the area where an American's house covered a whole block or the most of a block. In this case, the block was located in the N management area. A division adjacent in this way is gathered up, and it is thought that an apartment house might be built. In addition, we can suppose that they had high house demand of US Forces after the WW II, while there was lack of houses caused by the postwar of Japan besides reduction of salary.

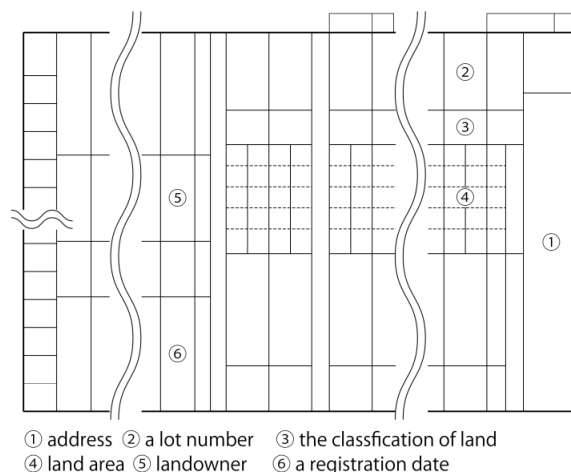


Fig. 7. An example of the cadaster.

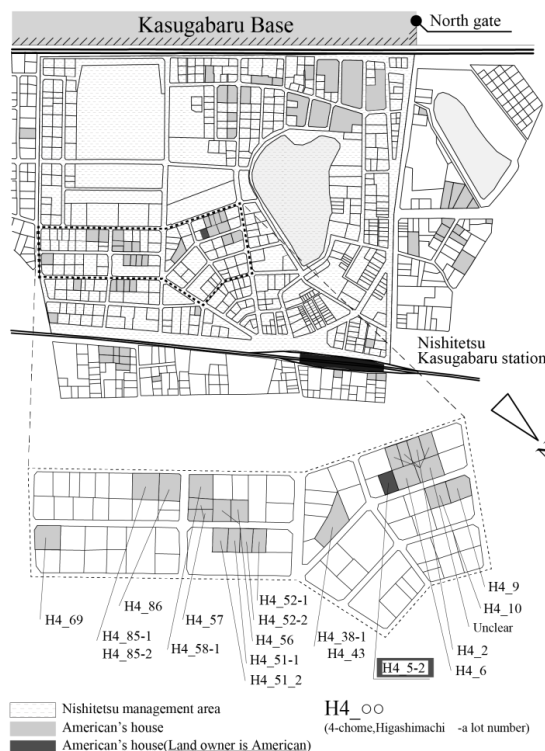


Fig. 8. Distribution of foreigner's houses in N management land.

V. SUMMARY

A. Discussion

In this study, we were able to arrange the history of K district and analyze the distribution of the foreigner's houses in K district after the WW II. In the previous studies, the housing in the Kasugabaru base was studied, and the relations between the KLR project and the residential development of N management area was discussed, but the history of the term

of US occupation in the K district was not analyzed, even though the K district was one of the most symbolic areas of the US occupation in Japan.

The foreigners's houses were located in the areas especially near by the gate of the base and facing to the airport or the station. It means which were convenient for their works of military or the environment, even though entertainment facilities were equipped in the base. The soldiers and officers were probably living in apartments or detached houses such as mansions as we mentioned above. They might have also high demand for single-family house. The development of N management area could be a good opportunity for Japanese to provide lots for the foreigners who wanted to live outside of the base. We could confirm the fact that the Japanese land owners rent the land to the foreigners. We could say that the KLR project had brought the opportunity by chance.

We, however, were not able to touch spatial issues of the foreigner's houses such as layout or design because we could not find the materials. Therefore, the spatial characteristics of the area at that time were not clarified. These issues are remained as future study problems.

B. Conclusion

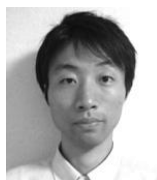
In this study, distribution of American residents who were working in the US force base and living in the surroundings of the base soon after the WW II were studied, especially focusing on the Kasugabaru area in Fukuoka, Japan. We could find that the distribution of the American's houses was related to the convenience and environment of the foreigners according to their needs, and provided by Japanese landowners who purchased the lots of the residential developments.

ACKNOWLEDGMENT

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