

Bicycle Promotion Plan and Space Design Guidelines in Japan



Tokyo Tech

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EASTS

TODAY'S CONTENTS

NCR ACT & PLAN CITY NETWORK GUIDELINES COVID-19

NCR NATIONAL CYCLE ROUTE

WHAT IS THE NATIONAL CYCLE ROUTE?

The National Cycle Route is a scheme in which the national government designates routes that meet certain standards as world-class cycling routes that showcase Japan.

The objective of the scheme is to revitalize regional areas.

This will be done by creating new tourism value in Japan from excellent tourism resources.

Biwaichi

Shimanami Kaido Cycling Road

Source: MLITT

Tsukuba-Kasumigaura

ring-ring road

SHIMANAMI KAIDO CYCLING ROAD

The SHIMANAMI cycling route is 70 km long between Onomichi and Imabari.

It is the first bicycle road in Japan that lets you cross a sea strait, which attracts cyclists from all over the world, allowing them to enjoy beautiful scenery woven by many islands.

SIMANAMI





BIWAICHI

LENGTH: 193KM (121 MI) ROUTE: LAKESHORE LOOP OF BIWA LAKE

Biwaichi is a cycling route that circumnavigates Lake Biwa, Japan's largest lake, in an anti-clockwise direction.

More experienced cyclists could complete this distance in a day, but we recommend riding Biwaichi over two or three days, so you can enjoy sightseeing and delicious food along the way.



Source: MLITT



KASUMIGAURA

Tsukuba-Kasumigaura ring-ring road connects the former Tsukuba Railway cycling path with Kasumigaura lakeside path to form a 180km cycling course.

The area offers a diverse range of natural landscapes, from the rivers and wetlands of the Lake Kasumigaura to Mount Tsukuba, as well as historical and cultural sites.



rce: MLITT

KASUMIGAURA

NCR: NATIONAL CYCLE ROUTES



"Wa" is considered to be the power to let heterogeneous things coexist.

→ The culture of Wa might have an affinity with Bike because everyone can enjoy bicycle.

The logo for the national cycle route shows a bicycle represented by the Chinese character "和"(wa), (Meaning peace and harmony, while also referencing Japan and Japanese culture.

Source: MLITT(Ministry of Land, Infrastructure, Transport and Tourism)

PROMOTION OF NATIONAL CYCLE ROUTES BY WEB

Japan National Tourism Organization(JNTO) HP



Foods, Scenic Points, Museums, Attractions, etc.







Ramen

(Dnomichi Ramen is famous)

(over 700 islands)

Murakami Suigun Museum Ihistorical museumi

Promotion of good services and high quality of facilities



A cycle station

Cycle Stations provide services such as air filling, tool lending, and bicycle rental.







maintenance hubs, offering repair services.

Repairing service Private-sector facilities act as bicycle

Portal Site of NCRs



HP of each NCR for tourists

A lot of fun: attractive events, heritage, route information,



REQUIREMENTS FOR DESIGNATION AS A NATIONAL CYCLE ROUTE

The following requirements have been established for designation as a National Cycle Route from the perspectives of route establishment, riding environment, hosting environment, information dissemination, and initiative frameworks.

Perspectives	Specified Requirements		
Establishment of Route	Safe and attractive route that is able to contribute to the promotion of cycling tourism		
Riding Environment	Environment in which anyone can ride safely and comfortably		
	Environment in which anyone can ride with peace of mind, without getting lost		
Hosting Environment	"Gateways" for cyclists with bike amenities are accessible via other modes of transport.		
	Rest facilities that cyclists can use at any time		
	Alternative transport services that allow cyclists to move while carrying their bicycles		
	paralleled with the route		
	Accommodation facilities for cyclists to stay overnight with peace of mind		
	Facilities and programs to help cyclists to enjoy the charms of the region to the fullest and		
	contribute to regional promotion		
	Repair facilities, etc. that can assist cyclists with bicycle trouble		
	Systems and facilities for support in an emergency		
Information Dissemination	Facilities, systems, and the like that offer information that can be easily obtained at any		
	time		
Initiative Frameworks	The necessary initiative frameworks have been established for maintaining the standard of		
	the cycling environment through public-private partnerships		

Source: MLIT

EXAMPLES OF "SPECIFIED REQUIREMENTS"

Establishment of Route

- Safe and attractive route that is able to contribute to the promotion of cycling tourism

Riding Environment

- Environment in which anyone can ride **safely and comfortably**

- Environment in which anyone can ride with peace of mind, without getting lost



EXAMPLES OF MANDATORY CRITERIA

- The **route length** must be at least 100 km long (excluding cases in which the route is on an island).

• **Bicycle spaces** must be established with the use of nationally standardized shared lane markings installed on the left edge of the vehicle lane, or other types of bikeways, etc.

· Road markings and signs for route navigation must be established.

• A "gateway" to the cycle route must be established at a station/terminal which has bicycle rental facilities, changing rooms, etc.

• Cycle stations must be established approximately every 20 km along the route.

• Accommodation facilities for cyclists must be available close to the route approximately every 60 km.

• Information must be disseminated via websites and other sources in at least Japanese and English.

Source: MLIT

IMPROVEMENT OF BICYCLE SPACE

before

BIWAICHI(LAKE BIWA)

after

This is not SIDEWAK ! (explain later)



Cycling Environment





EXAMPLES OF RECOMMENDED CRITERIA

 The route should avoid sections with continuous steep inclines.

- There should be <u>train, bus or ferry</u> services that allow cyclists to board with bicycles available.
- <u>Tour guiding</u> should be conducted (in at least Japanese and English).

 \rightarrow Other potential routes will be promoted as NCR by improving their environments.

EXAMPLE OF OTHER ROUTES: GREAT POTENTIAL IN HOKKAIDO

Major Cycling Routs proposed by Hokkaido Cycling Routes Liaison Council



Source: MLITT





North-Hokkaido

North-Hokkaido Cycling Route



Road Environment of Hokkaido Cycling Routes







Bicycle Roads of Hokkaido Cycling Routes









Services for Cyclists along Hokkaido Cycling Routs







Lots of Scenic Points from the routes in Hokkaido





Lots of Fun along the Cycling Routs in Hokkaido







Lots of Fun along the Cycling Routs in Hokkaido





LOTS OF ATTRACTIVE & SCENIC CYCLING ROUTES IN JAPAN

PLEASE COME AGAIN TO ENJOY RIDING A BIKE AFTER COVID-19 DISASTER!



BICYCLE ATTRACTION IN IBARAKI AND CHIBA

OBicycle Service Station & Bicycle Hotel at Tsuchiura JR Station Building

OWeekend Bicycle Train in Chiba Peninsula







ACT & PLAN BICYCLE USE PROMOTION ACT & PLAN

3K OF BICYCLE (in Japanese)



→ "Bicycle Measures" was changed to "Bicycle Comprehensive Policy" by the new legislation.

ACT: BICYCLE USE PROMOTION ACT 2016.12



STRUCTURE OF BICYCLE USE PROMOTION ACT

1. General

- (1) Position of the Act, Background, **Basic Principle**
- (2) Planning period: 3 years by considering its long-term vision
- (3) Current situation and **future challenges** about bicycle

2. Aim and Means

In line with the principle of the act, the **aim** of promoting bicycle use and **15 basic measures** are shown in the act.

3. Concrete measures to promote bicycle use

In order to implement each measures, the Bicycle Use Promotion plan should cover concrete countermeasures during the planning period.

4. Other actions to comprehensive and systematic achievements

- Cooperation among stakeholders, Survey, Research, Publication,
- Financial Supports, Follow up and update of the plan, Others

BICYCLE USE PROMOTION HQ 2017.5

- "Bicycle Use Promotion Headquarters" (Administrative Chief; Minister of Land, Infrastructure, Transport and Tourism) has been established within the MLIT.
- O "Bicycle Use Promotion Headquarters Secretariat" has been established within Road Bureau, MLIT, involving staff from various agencies.
- C Liaison meeting among relevant agencies has been established to bring agencies together as one to promote use of bicycle

Bicycle Use Promotion Headquarters

[Administrative Chief] Minister of Land, Infrastructure, Transport and Tourism

[Administrative Members]

Minister for Internal Affairs and Communications Minister of Education, Culture, Sports, Science and Technology, Minister of Health, Labour and Welfare Minister of Economy, Trade and Industry, Minister of the Environment, Minister of State, Chief Cabinet Secretary, Chairman of National Public Safety Commission (Prime Minister may add more members as necessary)

Bicycle Use Promotion Headquarters Secretariat

[Secretary General] [Acting Director-General]		Director-General, Road Bureau, MLIT
		Assistant Vice-Minister for Road Bureau, MLIT
[Sub-director]	Counsell officials f Ministry Ministry Ministry Trade an	or, Minister's Secretariat for MLIT, Director-level for Cabinet Office, National Police Agency, of Internal Affairs and Communications, of Education, Culture, Sports, Science and Technology, of Health, Labour and Welfare, Ministry of Economy, d Industry, and Ministry of the Environment.

Liaison meeting among relevant agencies

[Chairperson]

Director-General, Road Bureau, MLIT (also serving as Administrative Chief in Headquarters) [Members]

- [Members]
- Councillor, Cabinet Secretariat

 Director General for Policy Coordination, Cabinet Secretariat
 Deputy Director General for Policies on Cohesive Society, Cabinet Office

- Director-General of Traffic Bureau, National Police Agency
- Director-General of Supervisory Bureau, Financial Services Agency
- Vice-Commissioner, Consumer Affairs Agency
- Director-General for Policy Coordination, Minister's Secretariat, Ministry Of Internal Affairs And Communications
- Deputy Commissioner, Japan Sports Agency, Ministry Of
- Education, Culture, Sports, Science And Technology
- Director-General of Health Service Bureau, Ministry of Health, Labour and Welfare
- Director-General, Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry
- Director-General for Global Environment Bureau, Ministry of the Environment

Note: Members include staff from ministries that are not part of Headquarters A subordinate organization may be established as necessary.

BICYCLE USE PROMOTION PLAN 2018.6 Planning Process for BUP Plan 2018





NATIONAL BICYCLE USE PROMOTION PLAN 2018-2020

Objective 1 Formation of Better Urban Environment by enlarging bicycle function	Objective 3 Realization of a tourism- oriented nation by promoting cycle- tourism
 Promotion of planned implementation of bicycle space as a network Construction of off-road car parking and strengthening of detection of illegal parking 	 Attracting international conferences and international cycling competitions Creating a world-class cycling environment by improving bicycle space and local support system for tourists
3. Promotion of the spread of share cycle4. Construction of necessary cycle parking	Objective 4 Realization of a safe and secure nation with no bicycle accident
 5. Promotion of Bicycle IoT 6. Improvement of bicycle space by reducing through traffic and eliminating utility poles 	 Promotion of the spread of highly safe bicycles Public relations and enlightenment about inspection and maintenance of bicycles
Objective 2 Realization of a lively, healthy and long-lived society by promoting cycle sports	 15. Public relations and enlightenment to contribute to raising awareness of traffic safety, and strengthening of guidance and detection 16. Promotion of holding traffic safety classes at
7. Preparation of cycling facilities with international standards	schools 17. Promotion of planned implementation of
8. Creating a safe bicycle usage environment on public roads and parks	bicycle space as a network 18. Utilization of bicycles after a disaster
 9. Public relations and enlightenment about health promotion by bicycle 10. Promotion of bicycle commuting Source: M 	→89 local governments have already LITT made their BUP PLAN, as of March 2020

ACT: BACKGROUND

TRAFFIC ACCIDENTS



ACT: BACKGROUND



資料:東京都政50年史 通史 Source: 50 Year's History of the Metropolitan Government of Tokyo



Changes in the number of bicycle accidents classified according to the other party (last 5 years)

36
TRANSITION OF LEGISLATION ON ROAD SPACE FOR BICYCLE

- The Road Traffic Act of 1960 stated that cyclists must use the left lane of the roadway. However, a rapid increase in accidents, in the 1970s, prompted a change in regulation that allowed bicycle riding on designated sidewalks.
- Around the same time, new legislation provided for bicycle roads and lanes.

		Bicycle lane	Sidewalks shared by cyclists and pedestrians	
1965	Road Structure Ordinance of 1970 Bicycle Track were newly introduced, which shall be provided where "automobile and bicycle traffic is high and it is necessary to segregate cyclists from the automobile traffic for traffic flow".	Before 1971, there were no bicycle lanes in Japan. Road Traffic Act of 1971 Introduced <u>bicycle lanes (made it</u> possible to regulate traffic in	Not segregated Image: Segregated Image: Segregated Image: Segregated Road Structure Ordinance of 1970 Introduced sidewalks that are to be shared by cyclists and pedestrians, which shall be provided where "automobile and bicycle traffic is	With road markings to visually separate cyclists from pedestrians
1975	Road Traffic Act of 1970 Introduced the obligation of cyclists to use bicycle tracks (cyclists must use bicycle tracks where provided).	bicycle lanes). Ordinance of Road Signs of 2008 Provided road signs for <u>bicycle</u> <u>lanes</u> .	heavy and it is necessary for safe and smooth traffic". Road Traffic Act of 1970 Deregulation of <u>bicycle riding on</u> <u>sidewalks</u> (cyclists were allowed to use sidewalks).	Before 1978, there were no sidewalks with bicycle track markings. Road Traffic Act of 1978 Introduced <u>bicycle tracks as</u> <u>part of sidewalks</u> (cyclists were allowed to ride on marked bicycle tracks on sidewalks)

Length of Road Space for Bicycle

- In the 1970s, traffic regulations were relaxed to allow cyclists to ride on the sidewalks. Since then, <u>sidewalks shared</u> by cyclists and pedestrians have been gradually introduced so that bicycles are separated from automobiles (83,600km in length).
- On the other hand, bicycle tracks separate from both automobiles and pedestrians are only 3,000km in total length.



Source: MLITT

Note: "length" refers to road length as of Mar 2010. Source: MLIT documents and NPA documents.

Total road length across Japan: 1.2 million km

FORMER BICYCLE SPACES IN TOKYO

Vertex of the second se

Typical Bicycle-Pedestrian way on sidewalk

Since 1970, bicycle could share sidewalk with pedestrian in Japan.

Pedestrian

Bicycle-Pedestrian way on widen Trunk Road in Tokyo

bicycles from

eyesight of car drives.

Bicycle

Chaos on Sidewalk

Ordinary Scene of local street drawn by a primary schoolchild



TRAFFIC SAFETY GUIDELINES FOR PED. AND CYCLISTS

Five rules to follow to ensure safety whe

自転車の通行方法 自転車安全利用五則 を守りましょう。



Rule In principle, cyclists should ride on the street and use sidewalks only in exceptional cases

- Bicycles are classified as vehicles, so as a generative, cyclists should use the street.
- Cyclists should use designated bicycle paths when they are available.
- Cyclists should use the lanes marked for bicycles on sidewalks or roads when they are available.
- Children under 13, adults 70 and over, and people with physical disabilities are permitted to ride a bicycle on the sidewalk.
- * When the street is too narrow, cyclists can ride on sidewalks.

自転車は、車道が原則、歩道は例外。 自転車は車両の仲間なので、原則として 車道を通行します。 ● 白転車道があるところでは、白転車道を

第一則

- 自転車道があるところでは、 自転車道を 通行すること。
- 普通自転車歩道通行可の標識がある歩道は、自転車で通行できます。
- ●13歳未満の子ども、70歳以上の高齢者、体の 不自由な人は、歩道を自転車で通行できます。 ※車道の幅が狭いなどのやむを得ない場合には例外 として歩道を通行できます。

Cyclists can use the sidewalks when they are available.

Source: National Police Agency

TRAFFIC SAFETY GUIDELINES

歩行者と自転車のための 本における交通安全 ガイド

A TOUGH QUESTION ON BICYCLE SPACE



A: Sidewalk where bicycles are obliged to pass at very low speed (about 4-6 km/h)

- → "Bicycle-Pedestrian Way" (in Japanese)
- B: Exclusive road space for Bicycle and Pedestrian where bicycles can pass at <u>higher</u> speed than pedestrians (possible 15 km/h)

→ "Bicycle-Pedestrian Exclusive Way" (in Japanese)



Bicycle-Pedestrian Exclusive Way

You had better give up distinguishing 2 types of Bicycle-Pedestrian Ways in Japan.

Please be careful enough on sidewalk!



Bicycle-Pedestrian Way (Slow speed)



CITY NETWORK PLAN IN THE CITY

CITY: BICYCLE NETWORK PLANNING

■ The number of municipalities which made their bicycle network plan



■ Bicycle Space segregated from pedestrian





%1. limited by the roadway which has an arrow and a bicycle pict showing the width of bicycle space

[Source: MLITT and NPA, as of 2020.3.31]





Typical Local Road in Tokyo

Bicycle Space Shared with Vehicle on Road

Non-statutory road marking for bicycle traffic (Tokyo)

Nixed Traffic on Narrow Street

4.0

1

15

Typical Local Road in Tokyo

11-23

48

Very Narrow Bicycle Track

This track was made by sweeping gravel. (Kyoto Imperial Palace) 위

BICYCLE NETWORK PLAN IN OTA CITY, TOKYO 2012.3



Example: Planned Sections in 2017



Source: City of Ota

合計 約13,750m

PLANNING SYSTEM IN OTA CITY, TOKYO: INC. BICYCLE SPACE CONSTRUCTION



GUIDELINES BICYCLE SPACE GUIDELINES 2012, 2016

DESIGN: BIKE SPACE DESIGN, GUIDELINES

安全で快適な自転車利用環境創出ガイドライン

平成 28 年 7 月

国土交通省 道路局 警察庁 交通局

Guidelines for creating a safe and comfortable bicycle riding environment 2016.7 MLITT, Road Bureau



Guidebook for intersection design considering bicycle ride (revised) 2020.7 ITE, Japan

ILLUSTRATIVE DESCRIPTION OF IMPROVEMENT AT BLACK SPOT

Ministry of Land, Infrastructure, Transport and Tou Illustrative Description of Improvements at Black Spot (intersection)



Source: MLITT 17

SELECTION CRITERIA OF BICYCLE SPACE BEFORE REVISION

- Provides ideas and criteria* for spaces for cyclists to choose from, in addition to the basic shared carriageway, taking into consideration automobile speeds and traffic volume.
- Suggests the consideration of the rearrangement of road space, road widening, and change of cycling space based on reviewed speed limits. It also suggests the consideration of practical development for the time being and alternative routes, if road space development is difficult.

Note: * includes bicycle roads, bicycle lanes and carriageways shared with automobiles.



CYCLE TRACK, BICYCLE LANE & SHARED USE PATH, SIDEWALK (BASED ON FHWA) TERMINOLOGY



1-way Cycle Track



Source: FHWA

SELECTION CRITERIA OF BICYCLE SPACE AFTER REVISION

Guidelines was amended in 2016.



Source: MLITT

BICYCLE LANE: FROM SIDEWALK TO BIKE LANE IN TOKYO (BICYCLE SPACE ON NATIONAL ROAD NO.20)



Bike Space in **2019** →





3 KINDS OF BICYCLE SPACE IN JAPAN

AFTER REVISION OF GUIDELINES

Sidewalk can not be a part of a bicycle network any more! (People just use sidewalks which allow bikes to ride slowly, if they like.)



Bicycle Lane



Lane shared with Car on roadway



The arrow is showing direction and width of bicycle space.

Bicycle Marking on roadway



Source: MLITT

Bicycle Network Formulation Stages

Step by Step construction of Bike Network is recommended by new guidelines.



Bicycle TrackShared LaneBicycle Lane

TWO-STEP IMPLEMENTATION OF BICYCLE SPACE



Source: MLITT

TWO-STEP IMPLEMENTATION OF BICYCLE SPACE



If a bicycle lane cannot be implemented, consider a provisional design.

Provisional Design

When space converted to bicycle lane can be secured at least 1.5 m (1.0 m * if unavoidable) outside the outside line



When it is difficult for the time being to maintain bicycle lane by reallocating road space, and the safety of bicycles traveling on the road must be improved immediately





0

Consider coexistence with bus lanes or bus priority lanes, operation in specific time zones, etc.

*** if unavoidable**: When it is difficult to secure 1.5 m in a part of the section such as the place where the right turn lane is installed at the intersection due to space restrictions.

Bicycle Space on Roadway

13.1 Bt

Car stopping except alighting is banned by traffic law. (Photo: Mito, Ibaraki)

e

9.76

COLORING OPTIONS & PICT SIGN FOR BICYCLE SPACE



COVID-19 BICYCLE SPACE PROVISION DURING COVID-19

BICYCLE USE INCREASE

- 23% of cyclists in Tokyo have started to commute by bike after the spread of COVID-19! (500 sample survey)
- The usage of Share Cycle in Fukuoka is increasing from 116* (Jan.) to 160 (May).
 *thousand times per month
- Monthly members of share cycle in Kanazawa are increasing from 1270 (March) to 2322 (May).



BICYCLE USE INCREASE

■ The number of bicycles might be increasing gradually before the rainy season in Tokyo.



Shibuya Scramble Crossing 8-9 am



Source: Tokyo Tech and MLITT

BICYCLE USE INCREASE

■ The number of bicycles in 2020.7 at several section along National Road is significantly increased from 2005.



自転車通勤導入に関する手引き

令和元年5月 白城車活用並進信民連時協議会

Bicycle Commuting Guidance for Companies

Source: MLI



After Great East Japan Earthquake, Gov. had provided **Bike Lanes for** roadway cyclists. However, stopped vehicles are still a big issue!

After Great East Japan Earthquake, cyclists had increased dramatically in Tokyo.

REMAINING PROBLEMS : PARKED CARS & ??



PROVISION OF BIKE SPACE IN TOKYO BET. 2020-2022.

- O Considering the increase of bicycle traffic with/after COVID-19, the Gov. is planning to provide bicycle space of 10 km on National Road and 7 km on Prefectural Road this year. (including 8 km long bicycle lanes)
- O In addition to the above, the Gov. formulates a short-term program to improve bicycle space in the 23 wards of Tokyo in this fall, and will improve them in about three years.
- O The Gov. will formulate similar plans in various parts of the country and will promote the provision of bike space.

TODAY'S SUMMARY

National Cycle Routes (FUN!)

Bicycle Use Promotion Plan (Positive 3K progress)

Bicycle Network in the CITY (Watershed: Roadway or Sidewalk)

Bicycle Space GUIDELINES Update (Parking & Track/Lane combination)

COVID-19 Bike Space Construction (*Touchstone: Space reallocation in Japan*)