



Sustainable Housing Environment Development by Small Enterprise



Daiken Inc.
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UN-Habitat Agenda
Providing Adequate Shelter
for All



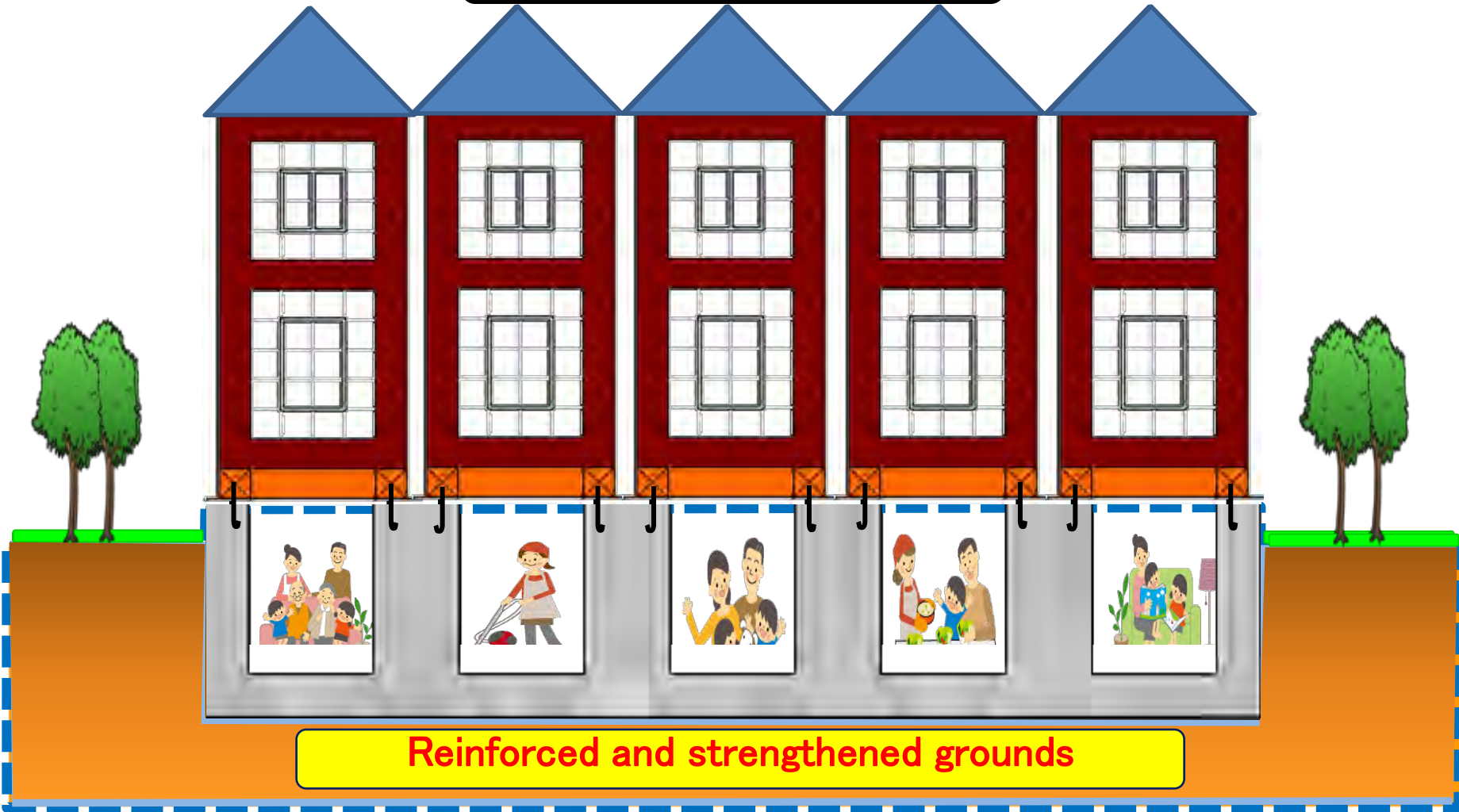
**We want to
contribute !**

**Technology we can
offer**

1. NCZ foundation construction method with basement which is disaster resilient and strengthens the community]
2. Rainwater harvesting underground reservoir which can store clean rainwater easily

1. NCZ foundation construction method with basement which is disaster resilient and strengthens the community

Image of completed houses



**NCZ
methods**

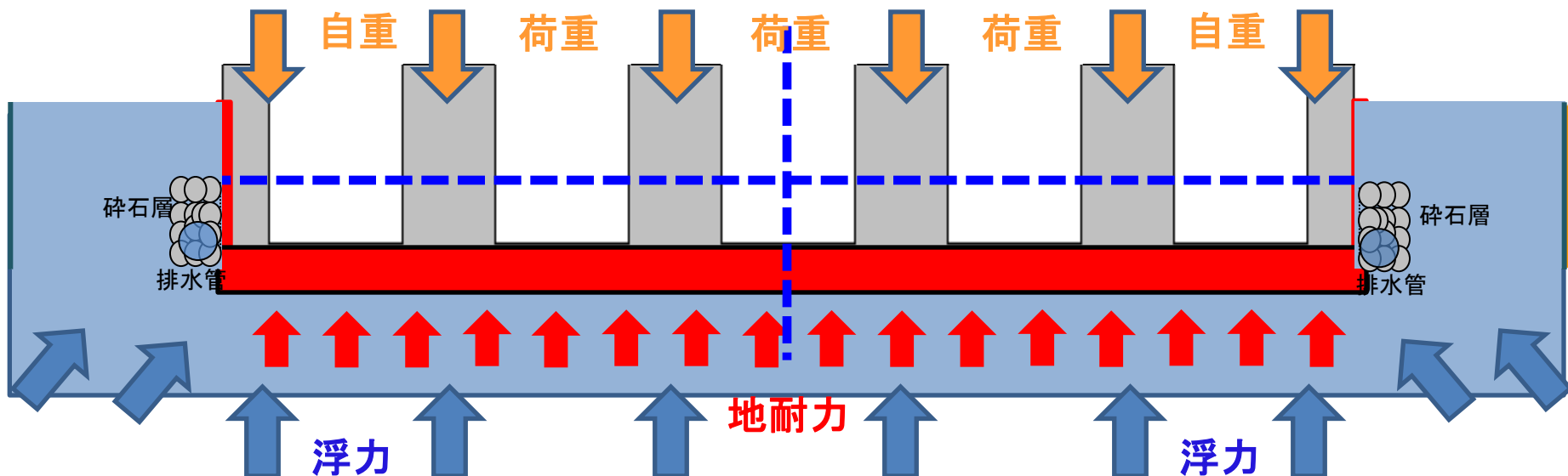
- (1) Reduces CO2 emissions and disaster resilient reinforced grounds
- (2) Larger living space and stronger community ties

1. NCZ foundation construction method with basement which is disaster resilient and strengthens the community

(1) Reduces CO2 emissions and disaster resilient reinforced grounds

Reasons: A large and stable underground structure, regardless of the natural ground conditions

- ① 大きな地下構造物で地耐力、摩擦力が大きいいため地震に強い
- ② 左右・上下のバランスの取れた構造体のため、偏心荷重がかかりにくく、不同沈下しにくい
- ③ 水を寄せ付けない構造のため液状化に強い
- ④ 浮力とバランスするよう埋設の深さが調整できる

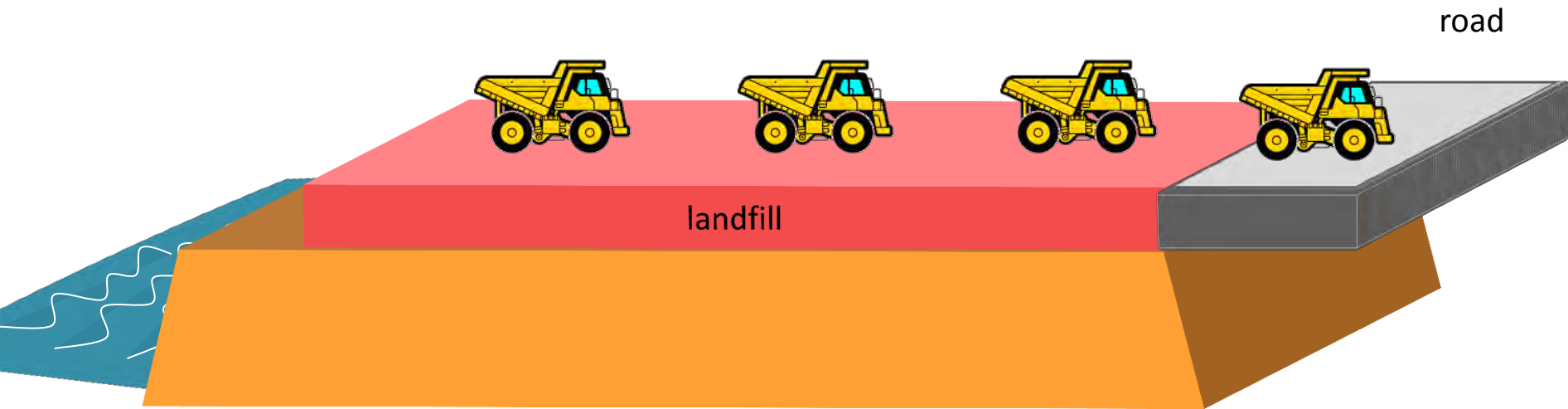


1. NCZ foundation construction method with basement which is disaster resilient and strengthens the community

(1) Reduces CO2 emissions and disaster resilient reinforced grounds

Construction example: when constructing settlements on low lands, near the river

The most common method is to transport dirt by heavy trucks to the site



Issues

Transportation of dirt by heavy trucks will cause

- ① Burden on the environment (CO2)
- ② High cost
- ③ Potential issues to transportation and safety



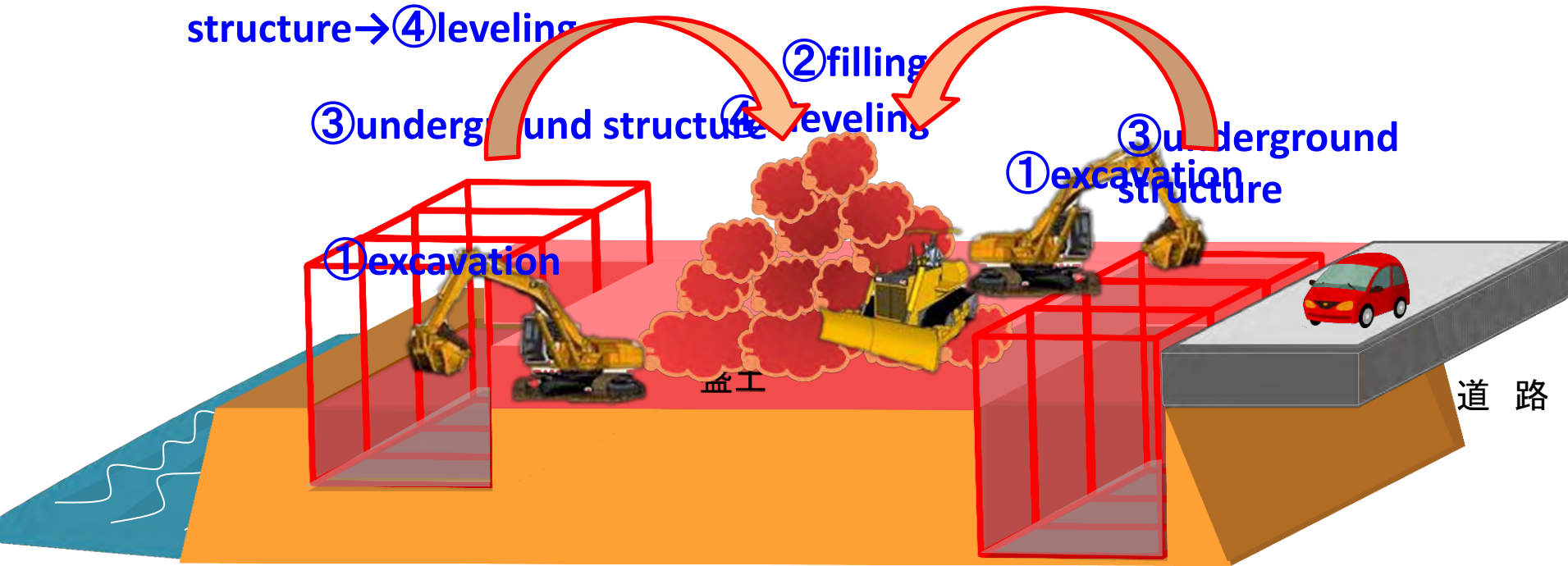
NCZ method can solve these issues !

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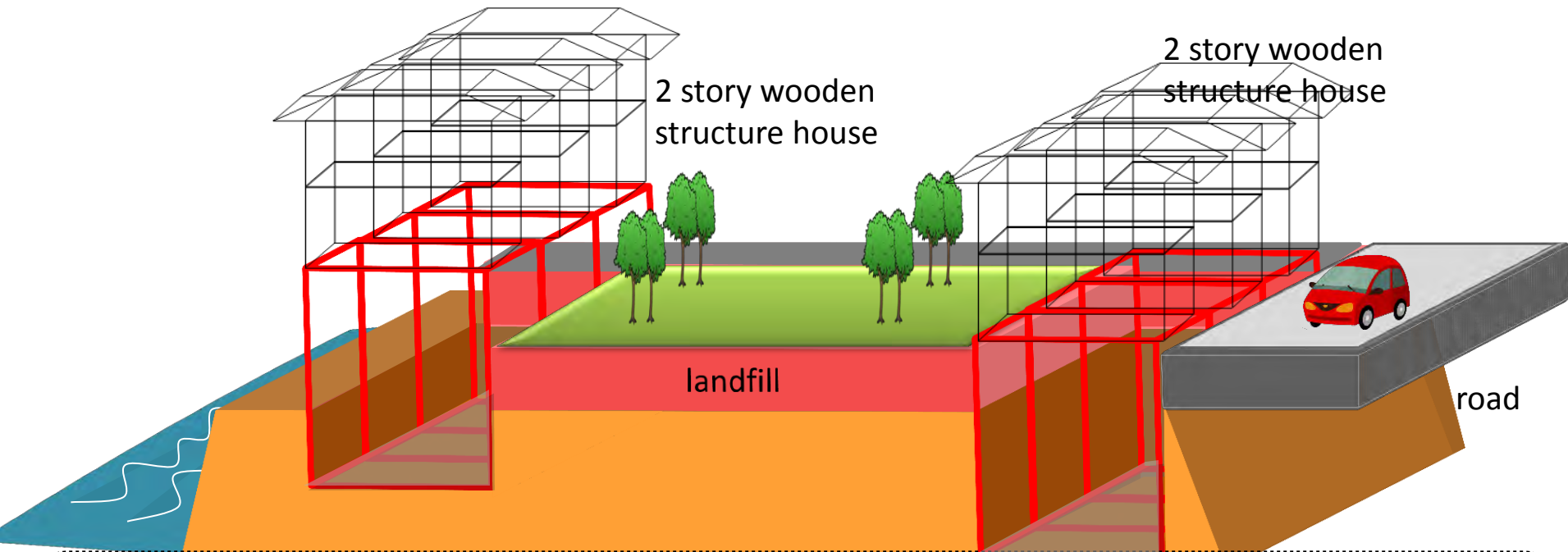
【NCZ Process】①excavation→②filling→③build underground structure→④leveling



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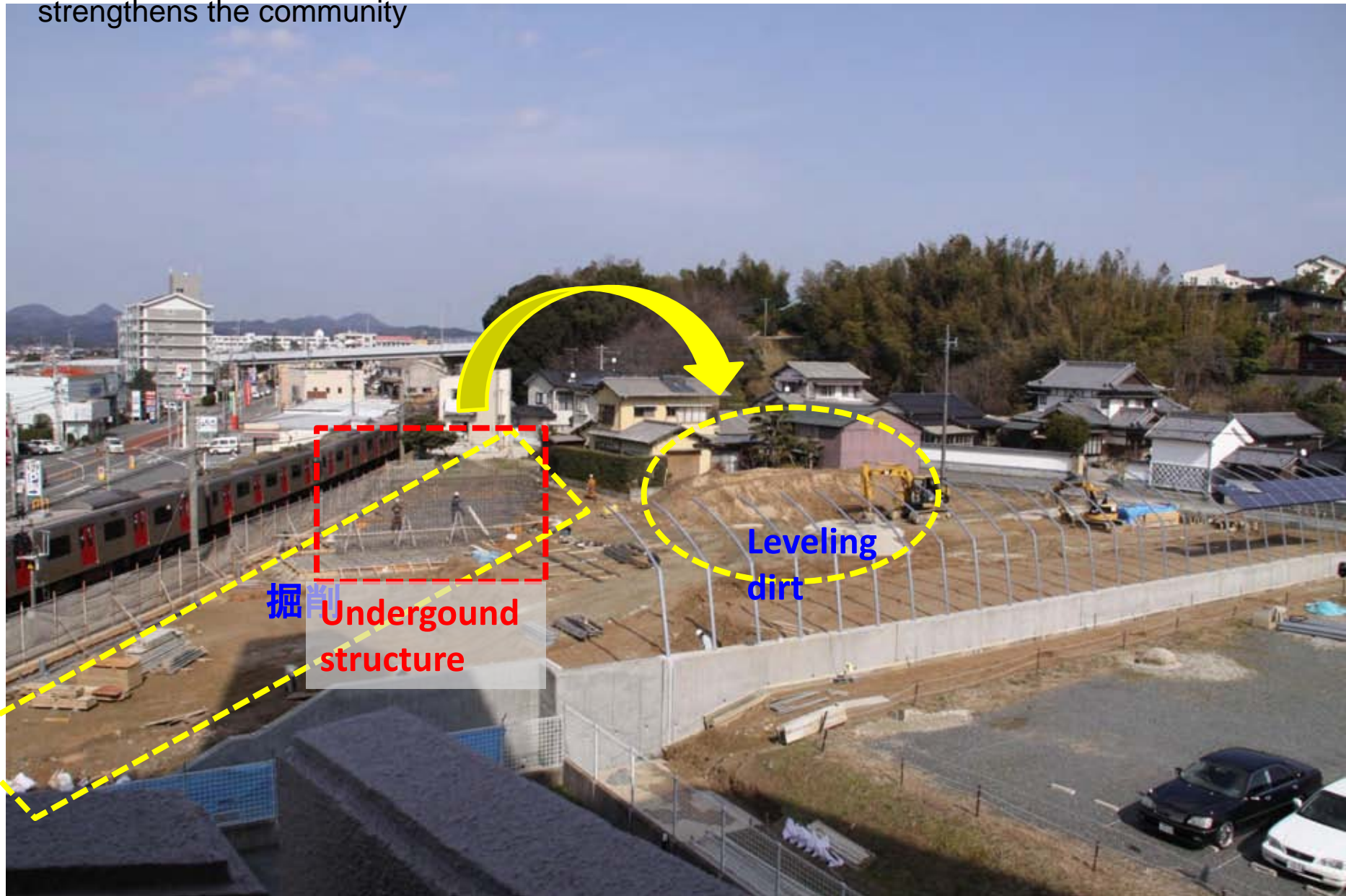
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Construction example: when constructing settlements on low lands, near the river



- ① Because it uses the dirt within the property, it minimizes the use and transportation of dirt transported from elsewhere.
- ② Because the underground structure plays the role of firming the dirt, it creates a strong foundation even in fragile locations.
- ③ Because it can raise the height of the property it will be more resilient to floods

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地下工作物の鉄筋組立ての様子

1. NCZ foundation construction method with basement which is disaster resilient and strengthens the community



地下工作物の断熱型枠材を施工する様子

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地盤と一体となった強固な人工地盤
（「NCZ工法」の施工例）



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平成24年 6 月現地