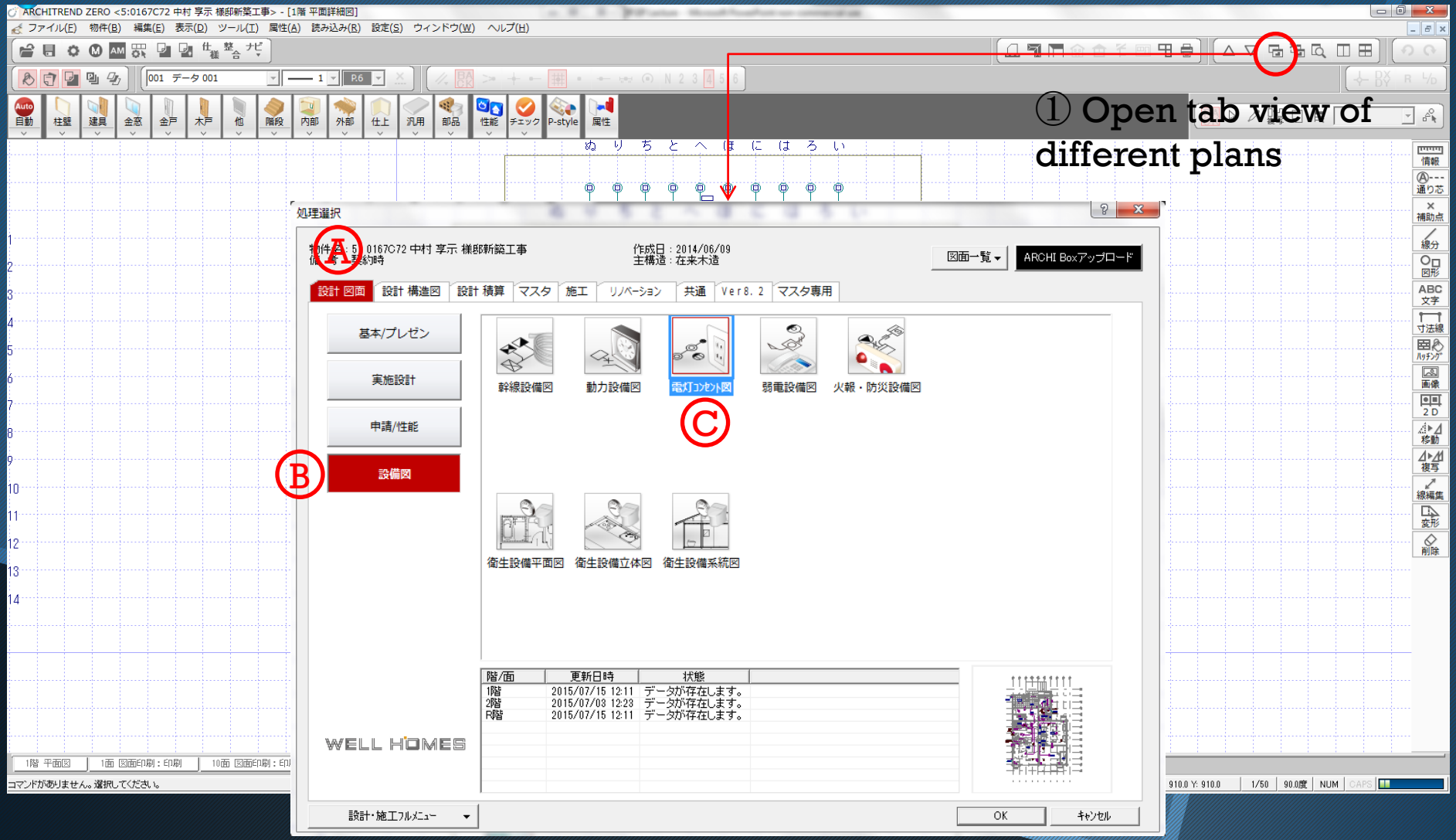
BASIC ELECTRICAL PLAN

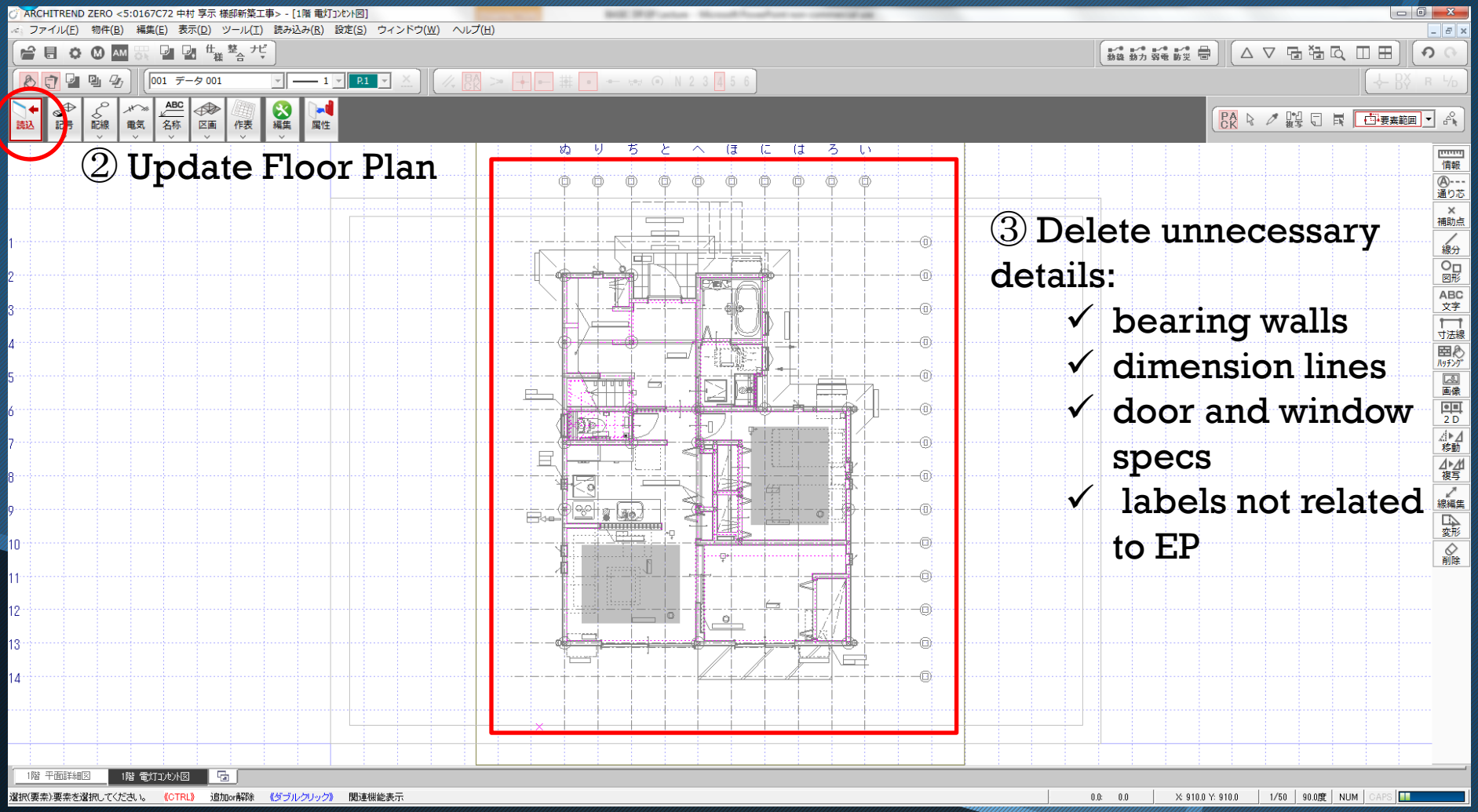
- Combination of LIGHTING LAYOUT, ELECTRICAL LAYOUT and AUXILIARY PLAN
- Includes the lighting, switches, outlets and other symbols that may use electricity
- Uses modified FLOOR PLAN as base plan

Frontier Intermediary Technology, Inc.

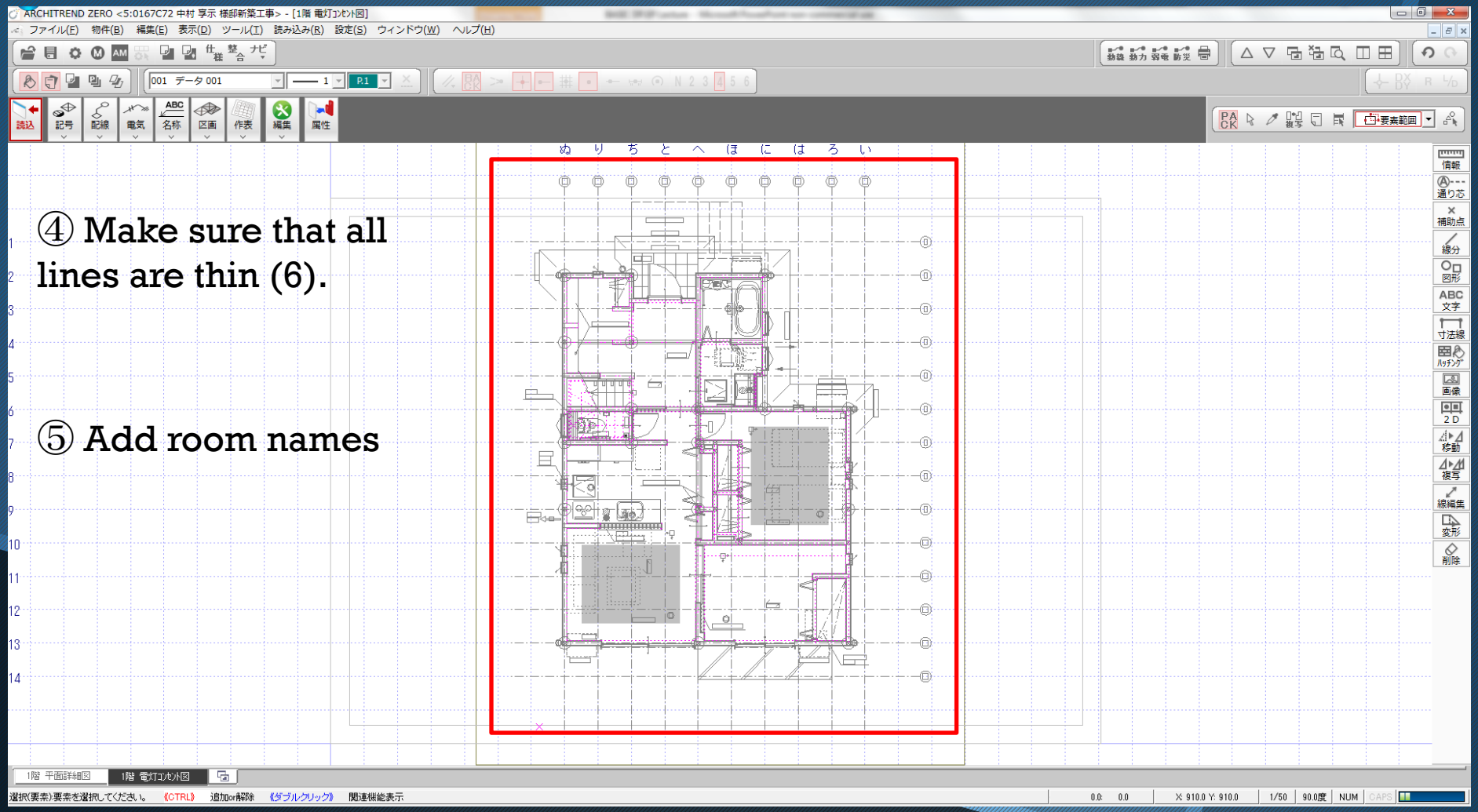
How to Create Basic EP



How to Create Basic EP



How to Create Basic EP



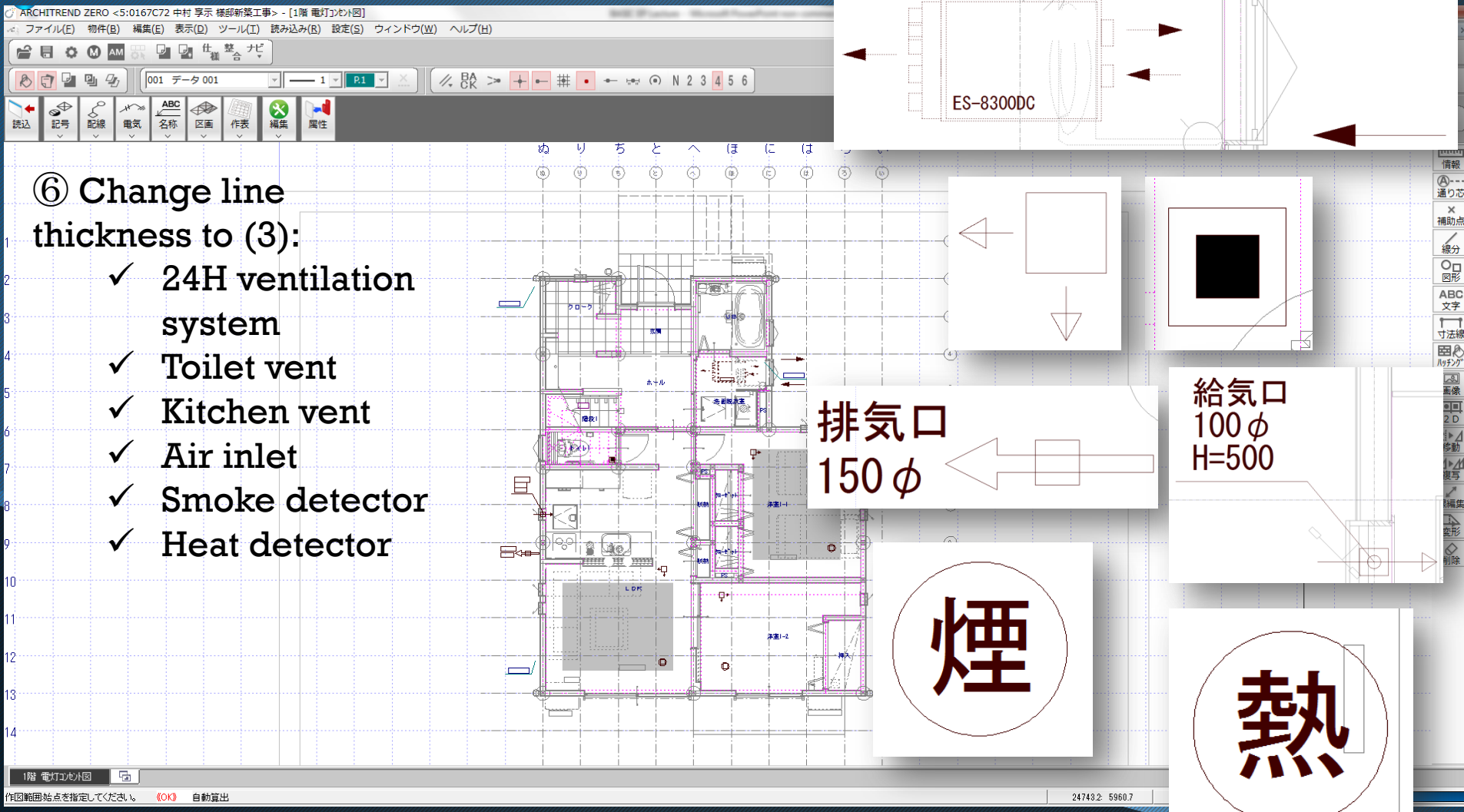
④ Make sure that all lines are thin (6).

⑤ Add room names

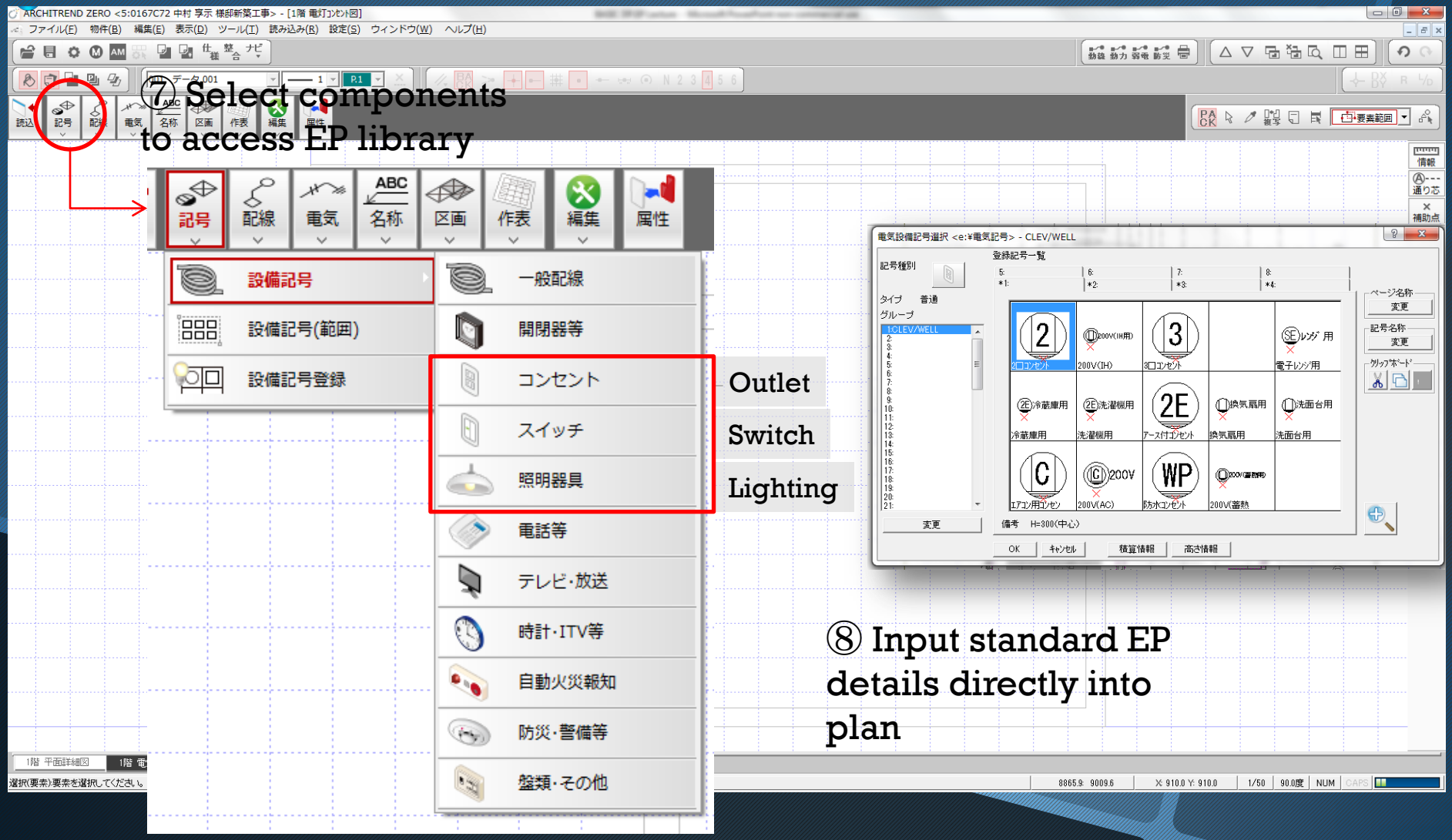
How to Create Basic EP

⑥ Change line thickness to (3):

- ✓ 24H ventilation system
- ✓ Toilet vent
- ✓ Kitchen vent
- ✓ Air inlet
- ✓ Smoke detector
- ✓ Heat detector



How to Create Basic EP



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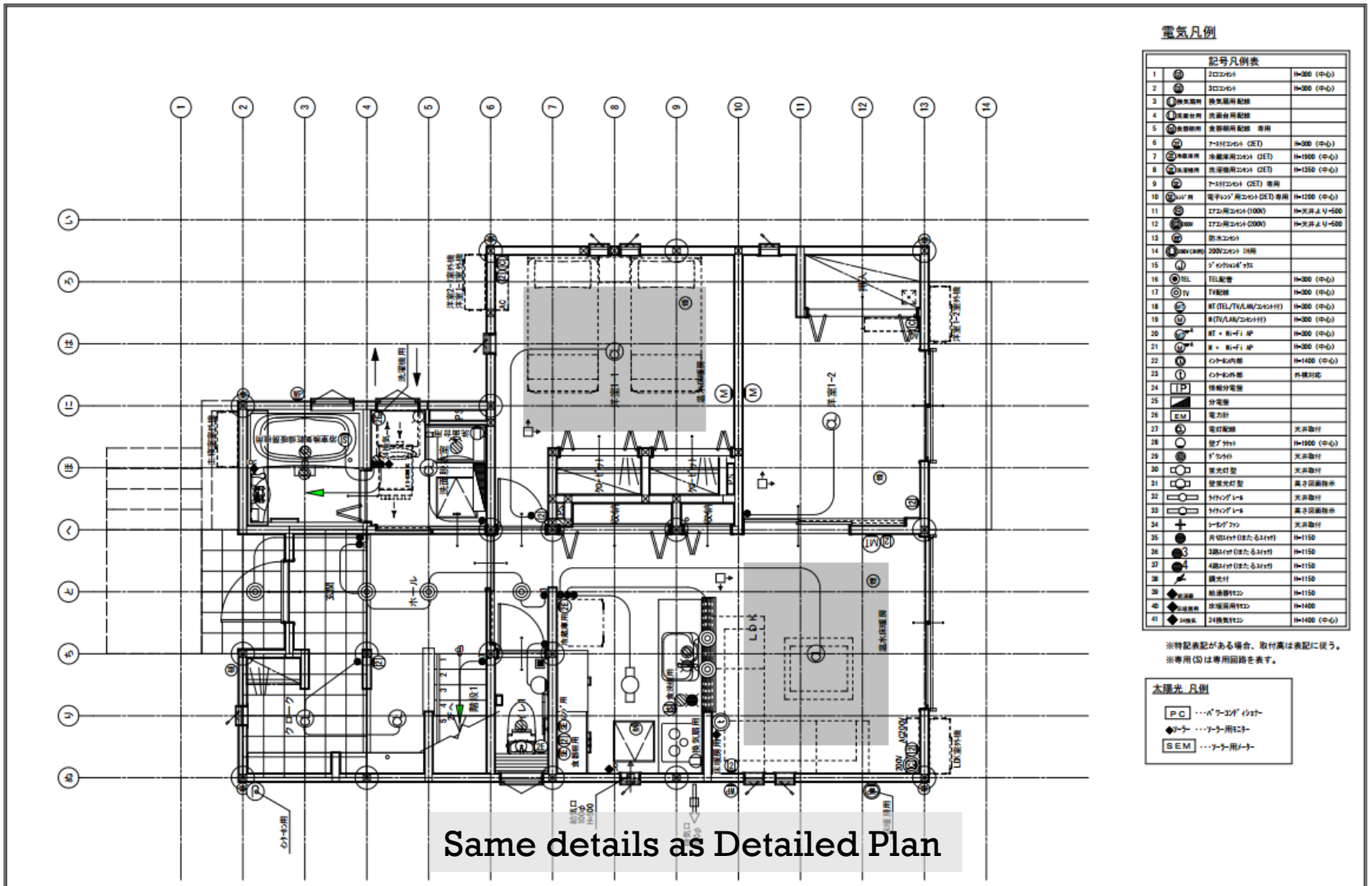
電気凡例
記号凡例表
太陽光 凡例
Same details as Detailed Plan
0167C72 中村 享示 様邸新築工事
CLEVERLY HOME 株式会社 西東京建設
東京都八王子市大谷町234-NO.30
TEL:042-540-0505
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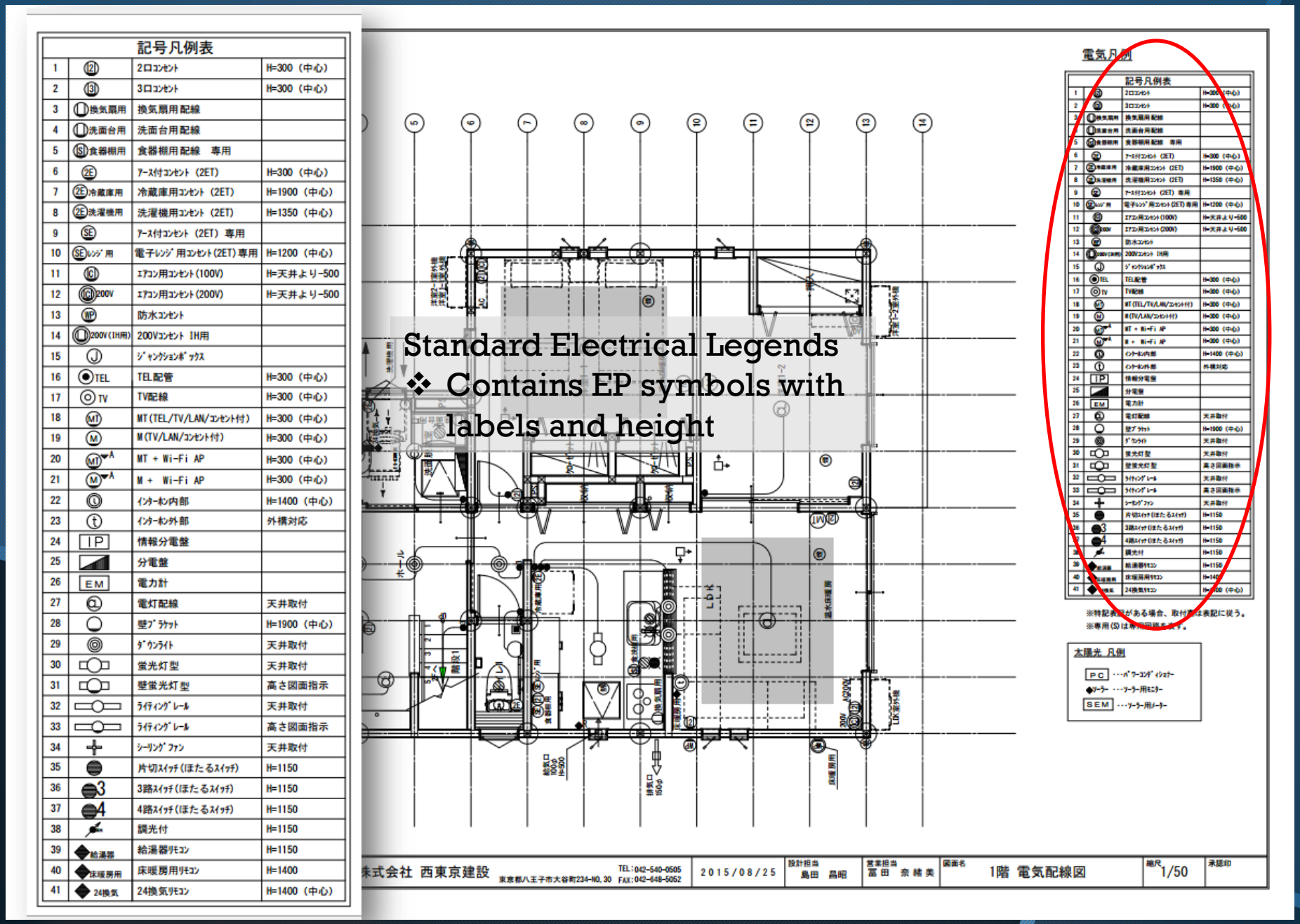
2015/08/25
設計担当 島田 昌昭
営業担当 冨田 奈緒美
図面名 1階 電気配線図
縮尺 1/50
承認印

TITLE BLOCK



記号凡例表

1	(2)	2口ｺﾝｾﾝﾄ	H=300（中心）
2	(3)	3口ｺﾝｾﾝﾄ	H=300（中心）
3	換気扇用	換気扇用配線	
4	洗面台用	洗面台用配線	
5	(S)食器棚用	食器棚用配線　専用	
6	(2E)	ｱｰｽ付ｺﾝｾﾝﾄ（2ET）	H=300（中心）
7	(2E)冷蔵庫用	冷蔵庫用ｺﾝｾﾝﾄ（2ET）	H=1900（中心）
8	(2E)洗濯機用	洗濯機用ｺﾝｾﾝﾄ（2ET）	H=1350（中心）
9	(SE)	ｱｰｽ付ｺﾝｾﾝﾄ（2ET）専用	
10	(SE)ﾚﾝｼﾞ用	電子ﾚﾝｼﾞ用ｺﾝｾﾝﾄ(2ET)専用	H=1200（中心）
11	(C)	ｴｱｺﾝ用ｺﾝｾﾝﾄ(100V)	H=天井より-500
12	(C)200V	ｴｱｺﾝ用ｺﾝｾﾝﾄ(200V)	H=天井より-500
13	(WP)	防水ｺﾝｾﾝﾄ	
14	200V(IH用)	200Vｺﾝｾﾝﾄ IH用	
15	(J)	ｼﾞｬﾝｸｼｮﾝﾎﾞｯｸｽ	
16	TEL	TEL配管	H=300（中心）
17	TV	TV配線	H=300（中心）
18	(MT)	MT(TEL/TV/LAN/ｺﾝｾﾝﾄ付)	H=300（中心）
19	(M)	M(TV/LAN/ｺﾝｾﾝﾄ付)	H=300（中心）
20	(MT)A	MT + Wi-Fi AP	H=300（中心）
21	(M)A	M + Wi-Fi AP	H=300（中心）
22	(L)	ｲﾝﾀｰﾎﾝ内部	H=1400（中心）
23	(t)	ｲﾝﾀｰﾎﾝ外部	外構対応
24	IP	情報分電盤	
25		分電盤	
26	EM	電力計	
27	(CL)	電灯配線	天井取付
28		壁ﾌﾞﾗｹｯﾄ	H=1900（中心）
29		ﾀﾞｳﾝﾗｲﾄ	天井取付
30		蛍光灯型	天井取付
31		壁蛍光灯型	高さ図面指示
32		ﾗｲﾃｨﾝｸﾞﾚｰﾙ	天井取付
33		ﾗｲﾃｨﾝｸﾞﾚｰﾙ	高さ図面指示
34		ｼｰﾘﾝｸﾞﾌｧﾝ	天井取付
35		片切ｽｲｯﾁ(ほたるｽｲｯﾁ)	H=1150
36	3	3路ｽｲｯﾁ(ほたるｽｲｯﾁ)	H=1150
37	4	4路ｽｲｯﾁ(ほたるｽｲｯﾁ)	H=1150
38		調光付	H=1150
39	給湯器	給湯器ﾘﾓｺﾝ	H=1150
40	床暖房用	床暖房用ﾘﾓｺﾝ	H=1400
41	24換気	24換気ﾘﾓｺﾝ	H=1400（中心）

Standard Electrical Legends

- Contains EP symbols with labels and height

電気凡例

記号凡例表

1	(2)	2口ｺﾝｾﾝﾄ	H=300（中心）
2	(3)	3口ｺﾝｾﾝﾄ	H=300（中心）
3	換気扇用	換気扇用配線	
4	洗面台用	洗面台用配線	
5	(S)食器棚用	食器棚用配線　専用	
6	(2E)	ｱｰｽ付ｺﾝｾﾝﾄ（2ET）	H=300（中心）
7	(2E)冷蔵庫用	冷蔵庫用ｺﾝｾﾝﾄ（2ET）	H=1900（中心）
8	(2E)洗濯機用	洗濯機用ｺﾝｾﾝﾄ（2ET）	H=1350（中心）
9	(SE)	ｱｰｽ付ｺﾝｾﾝﾄ（2ET）専用	
10	(SE)ﾚﾝｼﾞ用	電子ﾚﾝｼﾞ用ｺﾝｾﾝﾄ(2ET)専用	H=1200（中心）
11	(C)	ｴｱｺﾝ用ｺﾝｾﾝﾄ(100V)	H=天井より-500
12	(C)200V	ｴｱｺﾝ用ｺﾝｾﾝﾄ(200V)	H=天井より-500
13	(WP)	防水ｺﾝｾﾝﾄ	
14	200V(IH用)	200Vｺﾝｾﾝﾄ IH用	
15	(J)	ｼﾞｬﾝｸｼｮﾝﾎﾞｯｸｽ	
16	TEL	TEL配管	H=300（中心）
17	TV	TV配線	H=300（中心）
18	(MT)	MT(TEL/TV/LAN/ｺﾝｾﾝﾄ付)	H=300（中心）
19	(M)	M(TV/LAN/ｺﾝｾﾝﾄ付)	H=300（中心）
20	(MT)A	MT + Wi-Fi AP	H=300（中心）
21	(M)A	M + Wi-Fi AP	H=300（中心）
22	(L)	ｲﾝﾀｰﾎﾝ内部	H=1400（中心）
23	(t)	ｲﾝﾀｰﾎﾝ外部	外構対応
24	IP	情報分電盤	
25		分電盤	
26	EM	電力計	
27	(CL)	電灯配線	天井取付
28		壁ﾌﾞﾗｹｯﾄ	H=1900（中心）
29		ﾀﾞｳﾝﾗｲﾄ	天井取付
30		蛍光灯型	天井取付
31		壁蛍光灯型	高さ図面指示
32		ﾗｲﾃｨﾝｸﾞﾚｰﾙ	天井取付
33		ﾗｲﾃｨﾝｸﾞﾚｰﾙ	高さ図面指示
34		ｼｰﾘﾝｸﾞﾌｧﾝ	天井取付
35		片切ｽｲｯﾁ(ほたるｽｲｯﾁ)	H=1150
36	3	3路ｽｲｯﾁ(ほたるｽｲｯﾁ)	H=1150
37	4	4路ｽｲｯﾁ(ほたるｽｲｯﾁ)	H=1150
38		調光付	H=1150
39	給湯器	給湯器ﾘﾓｺﾝ	H=1150
40	床暖房用	床暖房用ﾘﾓｺﾝ	H=1400
41	24換気	24換気ﾘﾓｺﾝ	H=1400（中心）

※特記表現がある場合、取付高は表記に従う。
※専用(S)は専用回路を表す。

太陽光 凡例

PC ･･･ﾊﾟﾜｰｺﾝﾃﾞｨｼｮﾅｰ
◆ｿｰﾗｰ ･･･ｿｰﾗｰ用ﾓﾆﾀｰ
SEM ･･･ｿｰﾗｰ用ﾒｰﾀｰ

株式会社 西東京建設
東京都八王子市大谷町234-N0, 30
TEL：042-640-0505
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2015/08/25	設計担当 島田 昌昭	営業担当 冨田 奈緒美	図面名 1階 電気配線図	縮尺 1/50	承認印

LIGHTING

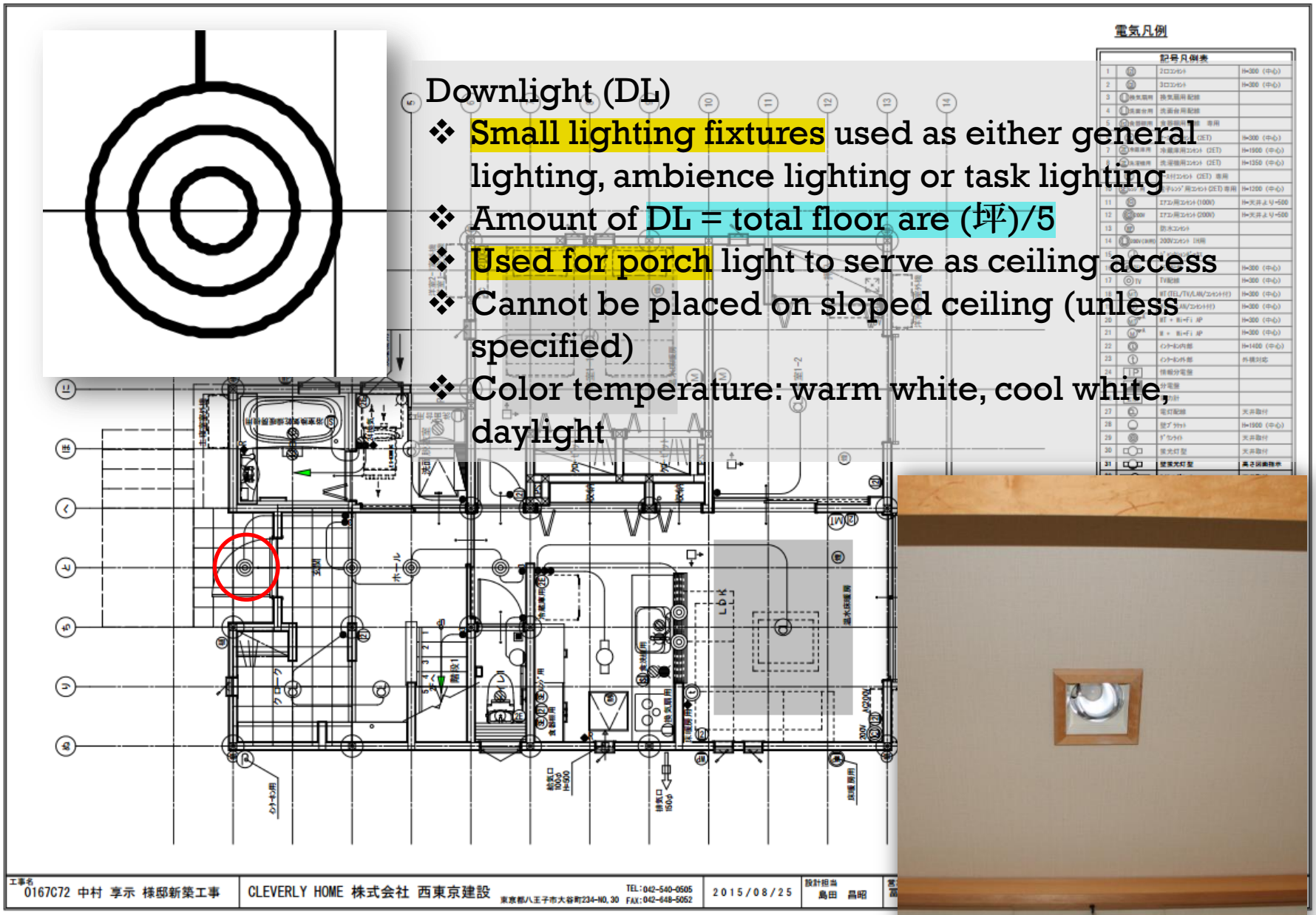
FIT INC.

Frontier Intermediary Technology, Inc.

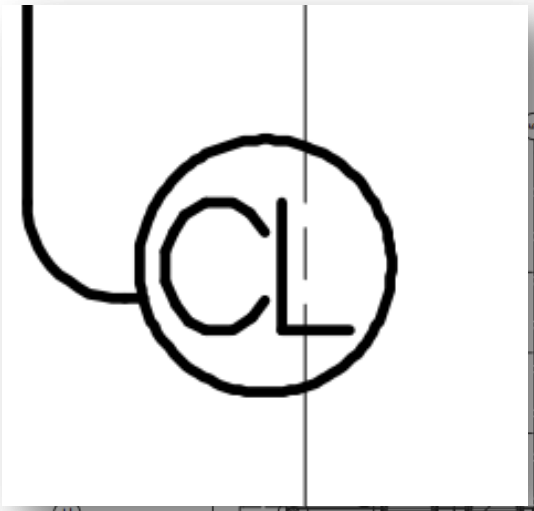
Basic EP components

Downlight (DL)

- Small lighting fixtures used as either general lighting, ambience lighting or task lighting
- Amount of DL = total floor are (坪)/5
- Used for porch light to serve as ceiling access
- Cannot be placed on sloped ceiling (unless specified)
- Color temperature: warm white, cool white, daylight

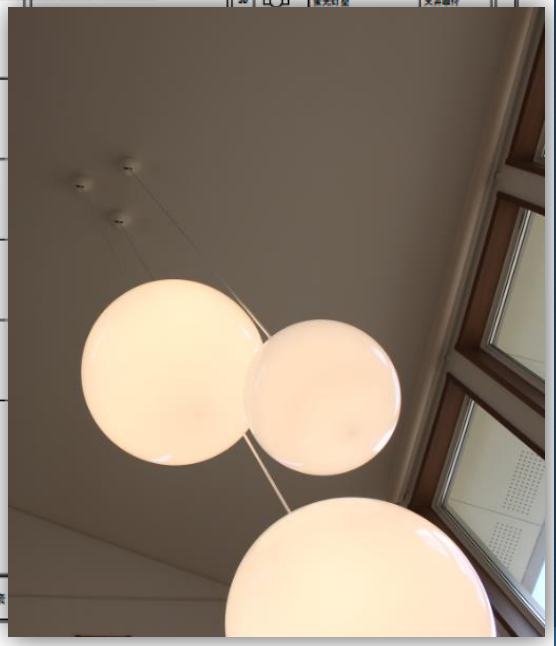


Basic EP components

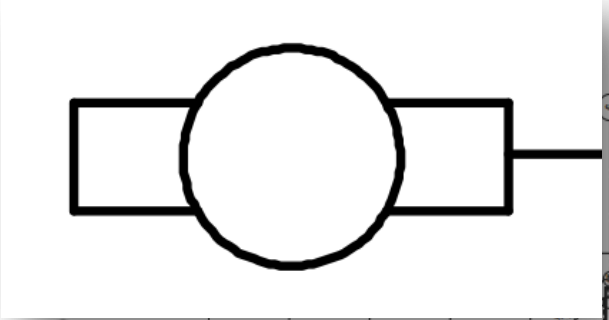


Ceiling Light (CL)

- May be compact light, surface-embedded, or suspended
- May be placed on sloping ceilings
- At least 1 lighting per room/area
- Color temperature: warm white, cool white, daylight



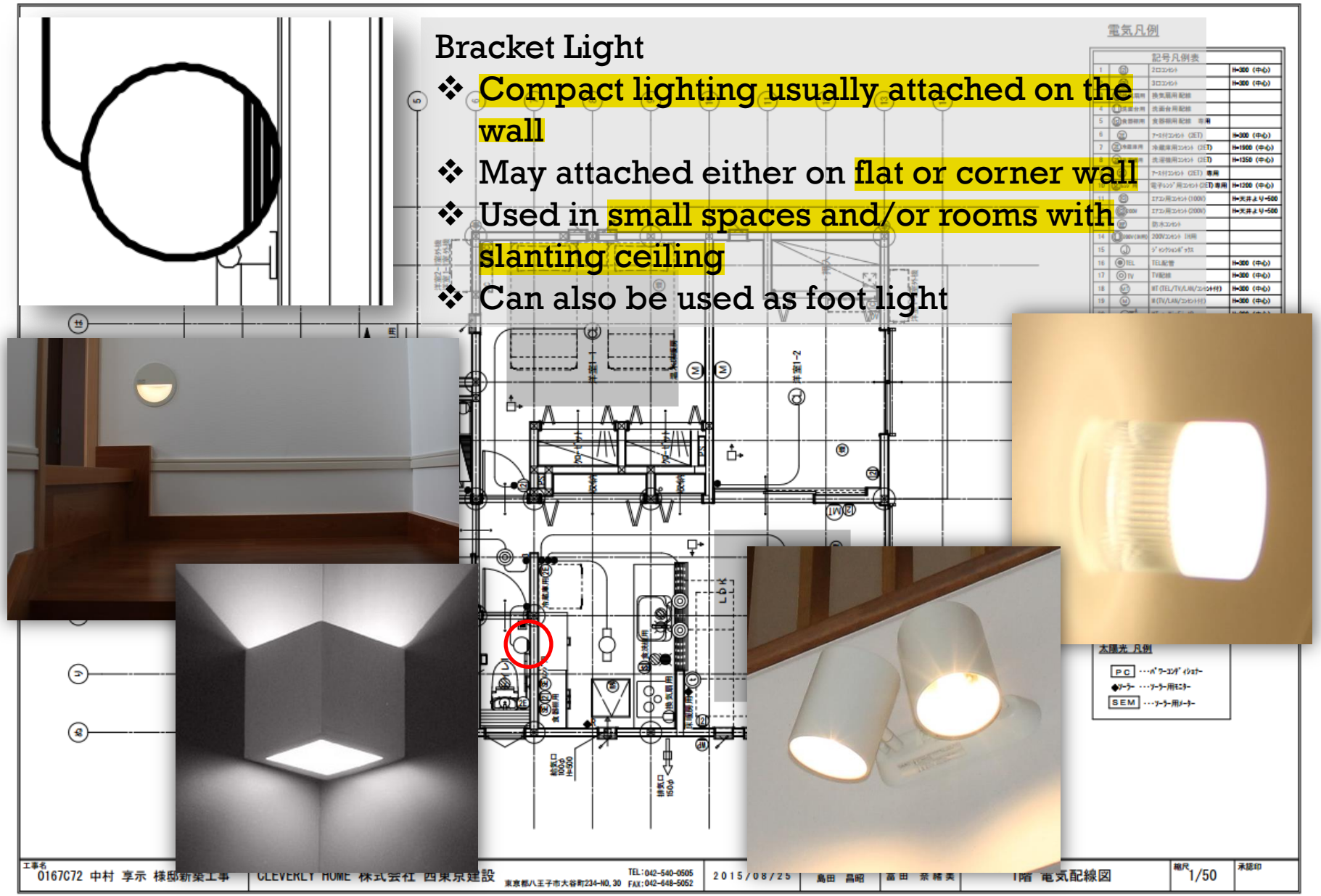
Basic EP components



Fluorescent Light

- Tubular lights used as general lighting and/or cove light
- May be attached to either wall or ceiling
- Normally used as kitchen lighting and under-cabinet lighting

Basic EP components



Bracket Light

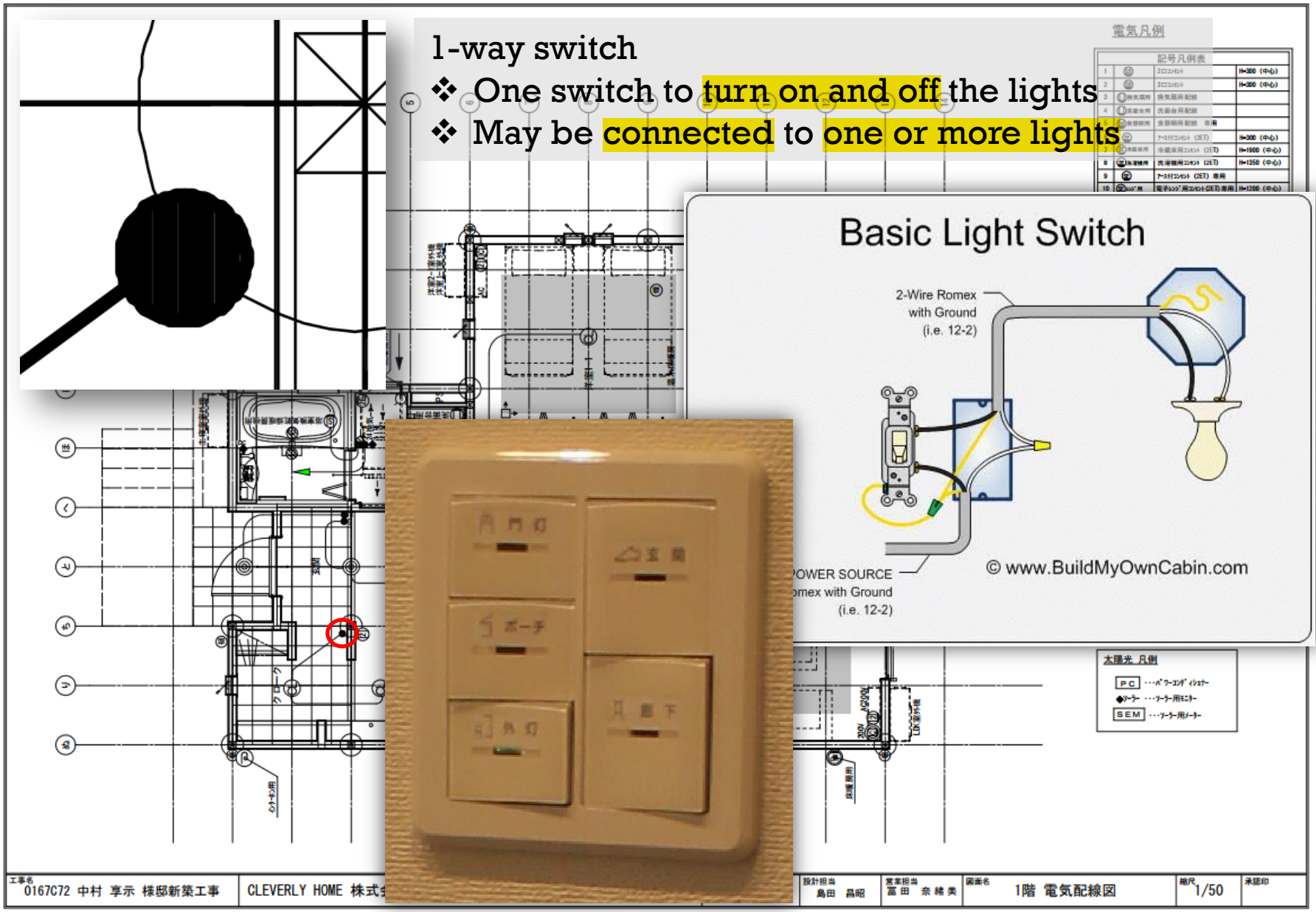
- Compact lighting usually attached on the wall
- May attached either on flat or corner wall
- Used in small spaces and/or rooms with slanting ceiling
- Can also be used as foot light

SWITCHES

FIT INC.

Frontier Intermediary Technology Inc.

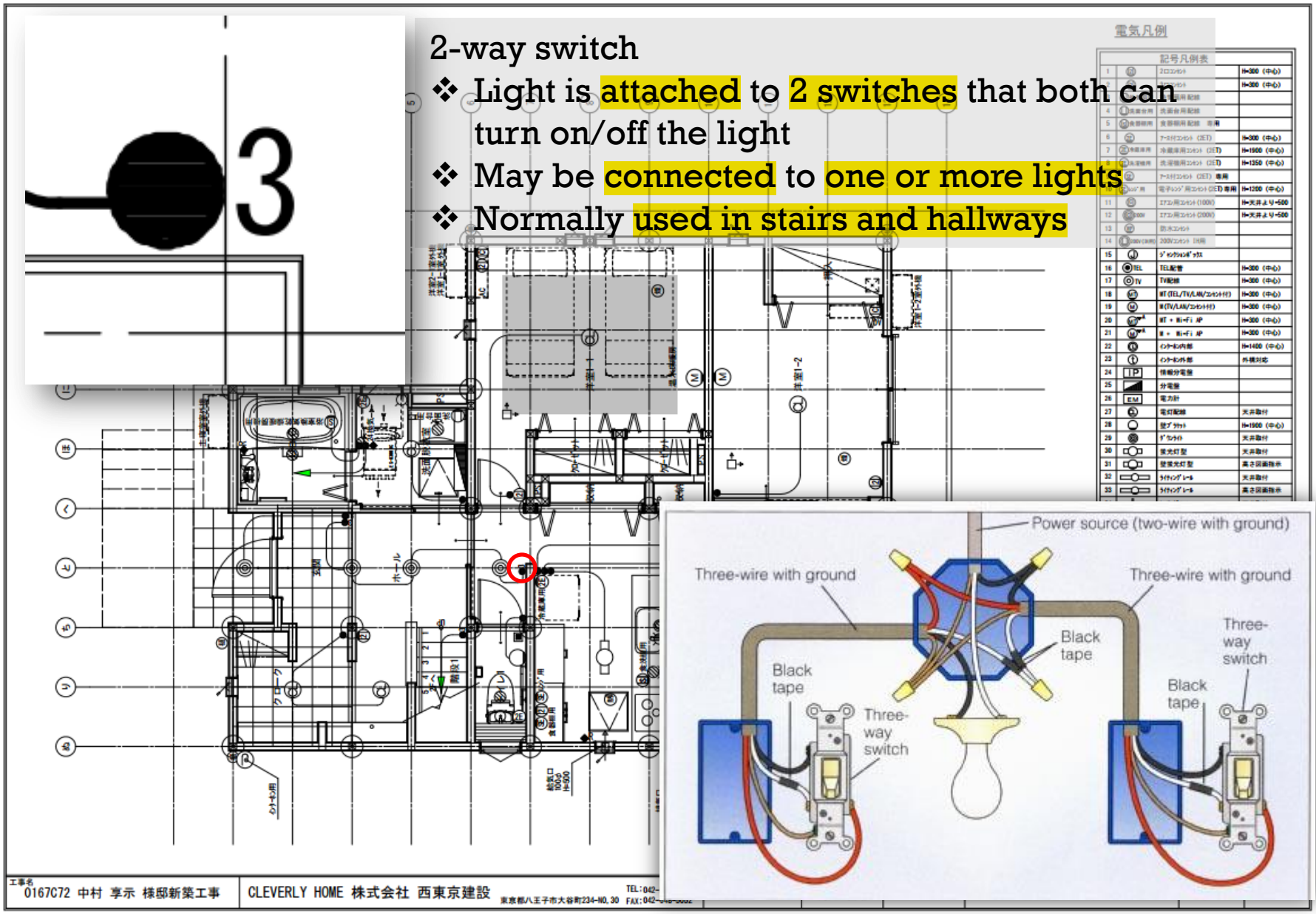
Basic EP components



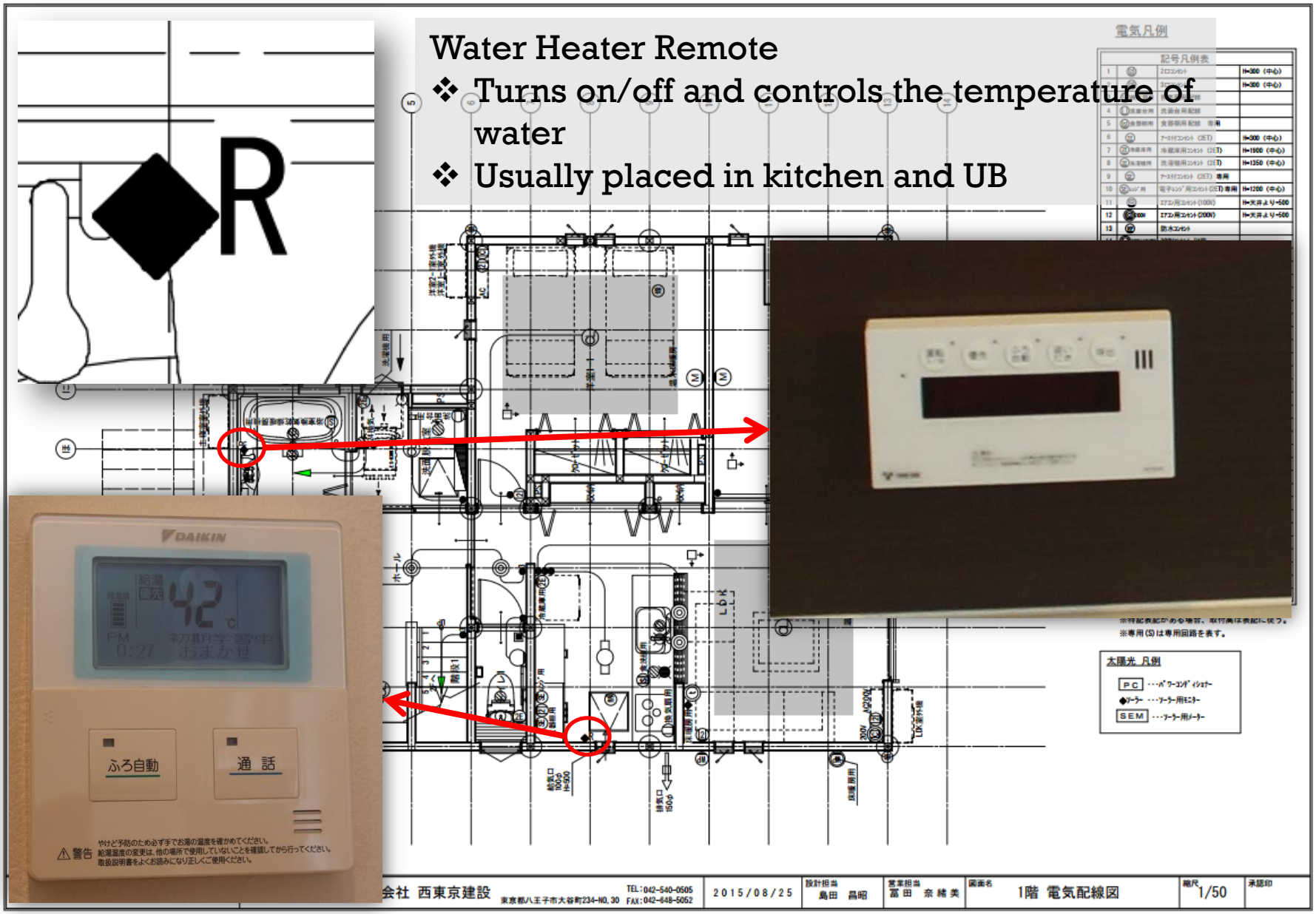
Basic EP components

2-way switch

- Light is attached to 2 switches that both can turn on/off the light
- May be connected to one or more lights
- Normally used in stairs and hallways



Basic EP components



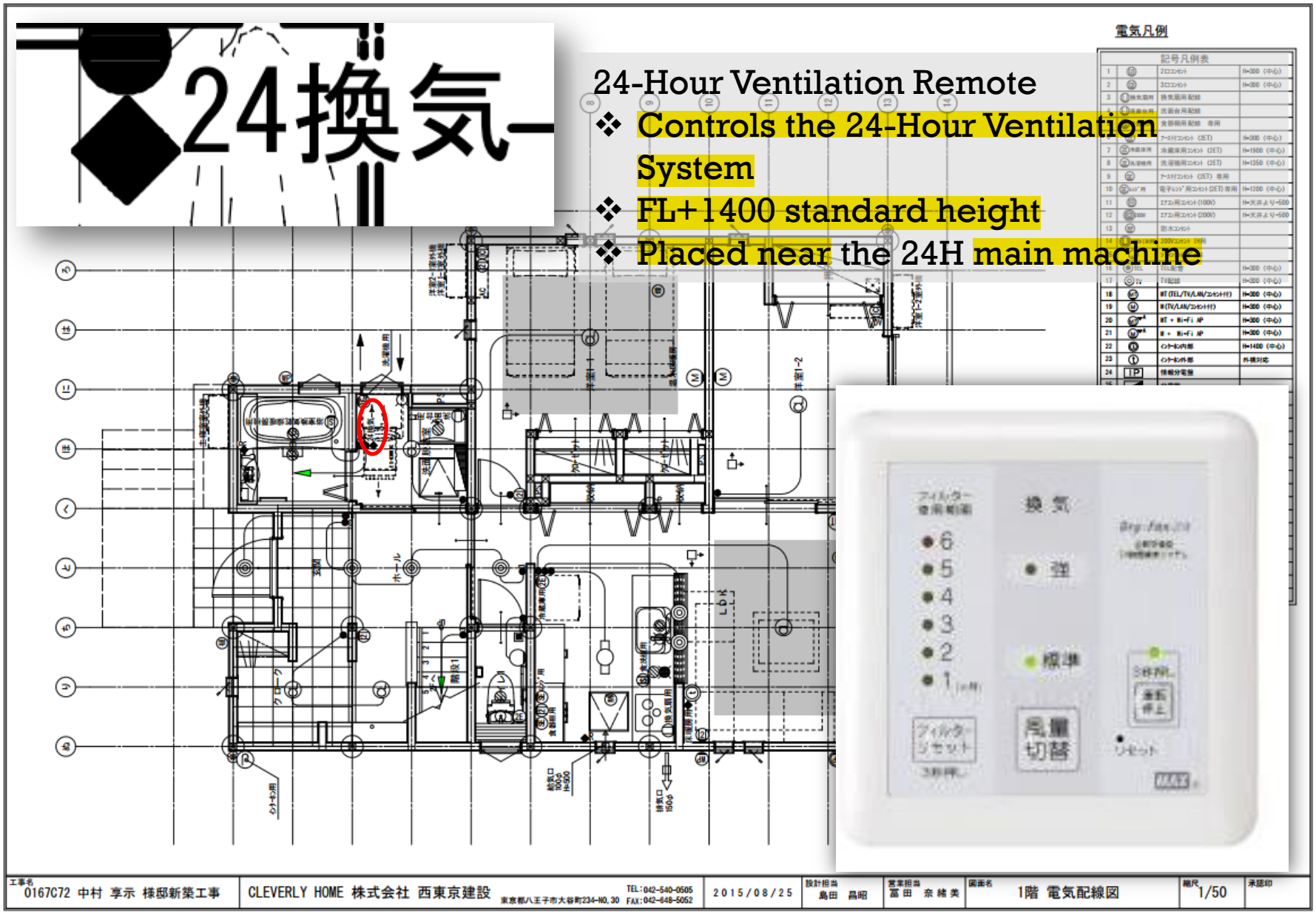
Water Heater Remote

- Turns on/off and controls the temperature of water
- Usually placed in kitchen and UB

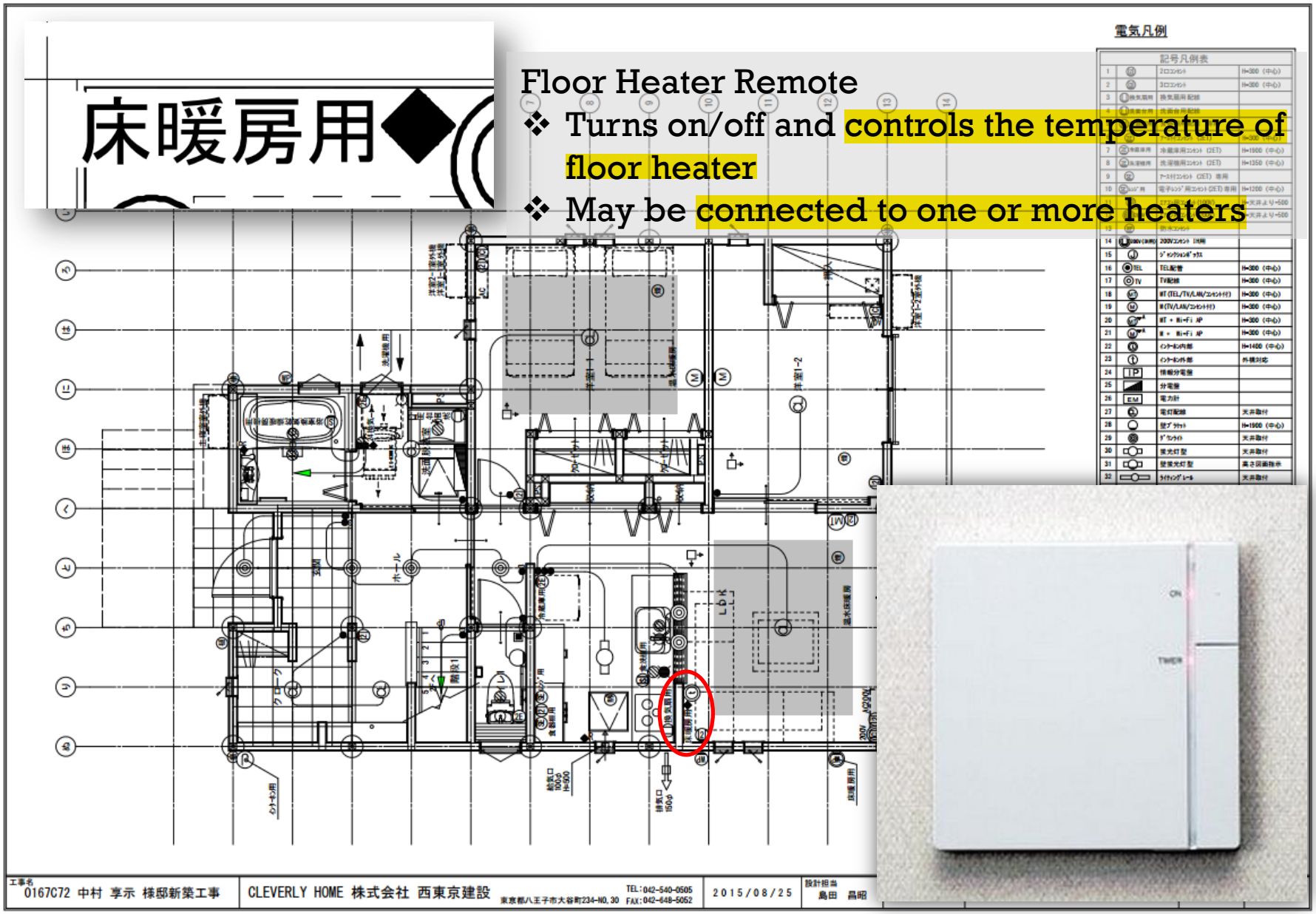
Basic EP components

24-Hour Ventilation Remote

- Controls the 24-Hour Ventilation System
- FL+1400 standard height
- Placed near the 24H main machine



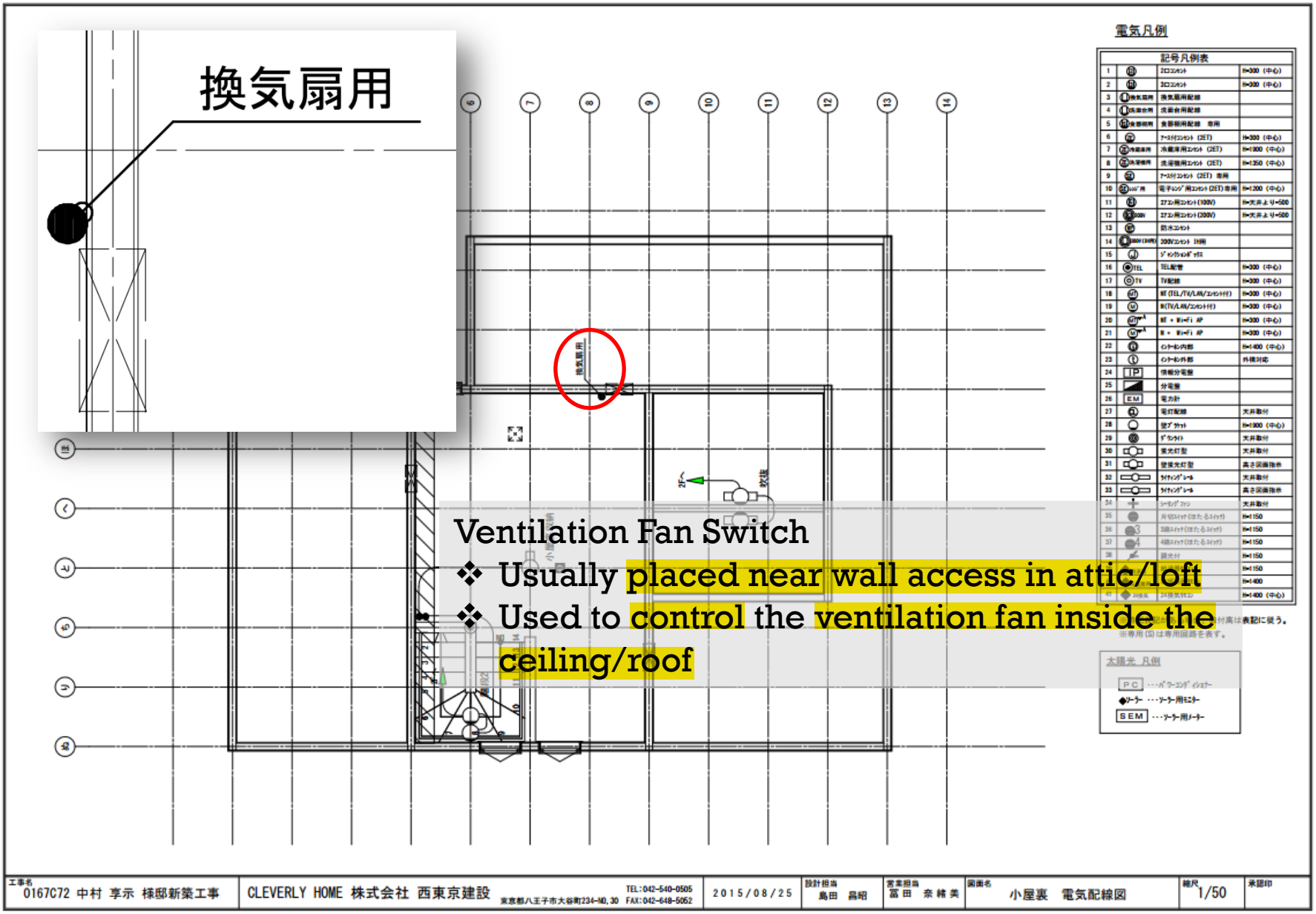
Basic EP components



Floor Heater Remote

- Turns on/off and controls the temperature of floor heater
- May be connected to one or more heaters

Basic EP components



Ventilation Fan Switch

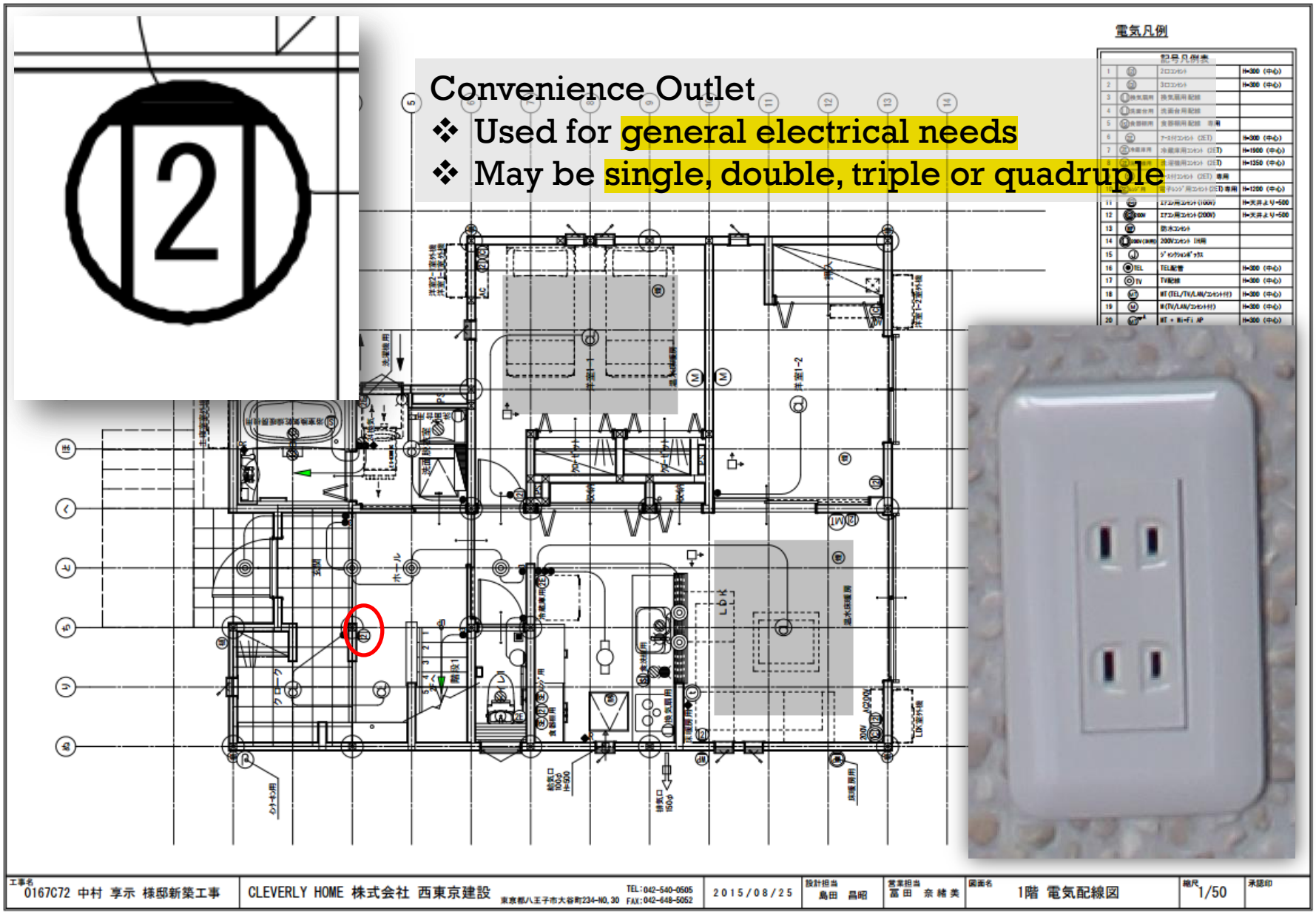
- Usually placed near wall access in attic/loft
- Used to control the ventilation fan inside the ceiling/roof

OUTLETS

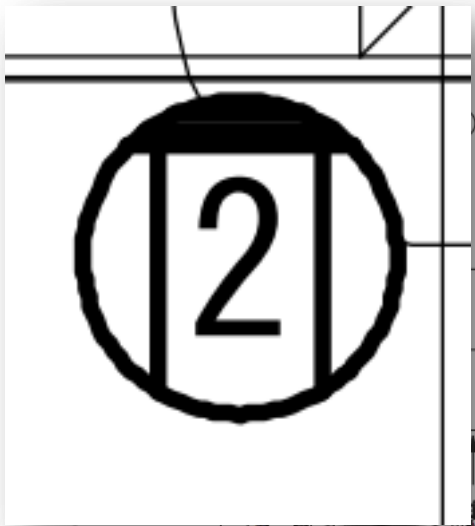
FIT INC.

Frontier Intermediary Technology Inc.

Basic EP components



Basic EP components



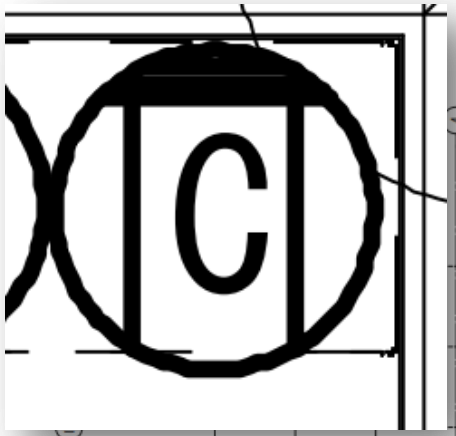
COMPUTATION:

Amount of Convenience Outlet in a Room

1) Get the area of the room.
   - 11.80㎡
2) Convert ㎡ to 帖: ㎡ × 0.605
   - 11.80㎡ × 0.605 = 7.14帖
3) Divide by 2.
   - 7.14 ÷ 2 = 3.57
4) Subtract 1.
   - 3.57 – 1 = 2.57
5) Round up to nearest ones.
   - 2.57 → 3 outlets

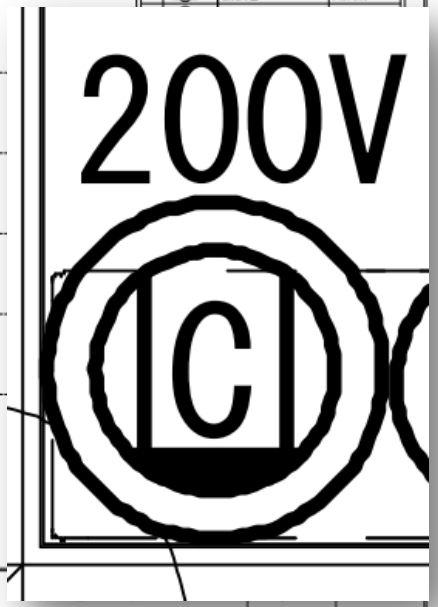
工事名 0167C72 中村 享示 様邸新築工事 | CLEVERLY HOME 株式会社 西東京建設 | TEL:042-540-0505 FAX:042-648-5052 東京都八王子市大谷町234-NO.30 | 2015/08/25 | 設計担当 島田 昌昭 | 営業担当 冨田 奈緒美 | 図面名 1階 電気配線図 | 縮尺 1/50 | 承認印

Basic EP components



AC Outlet

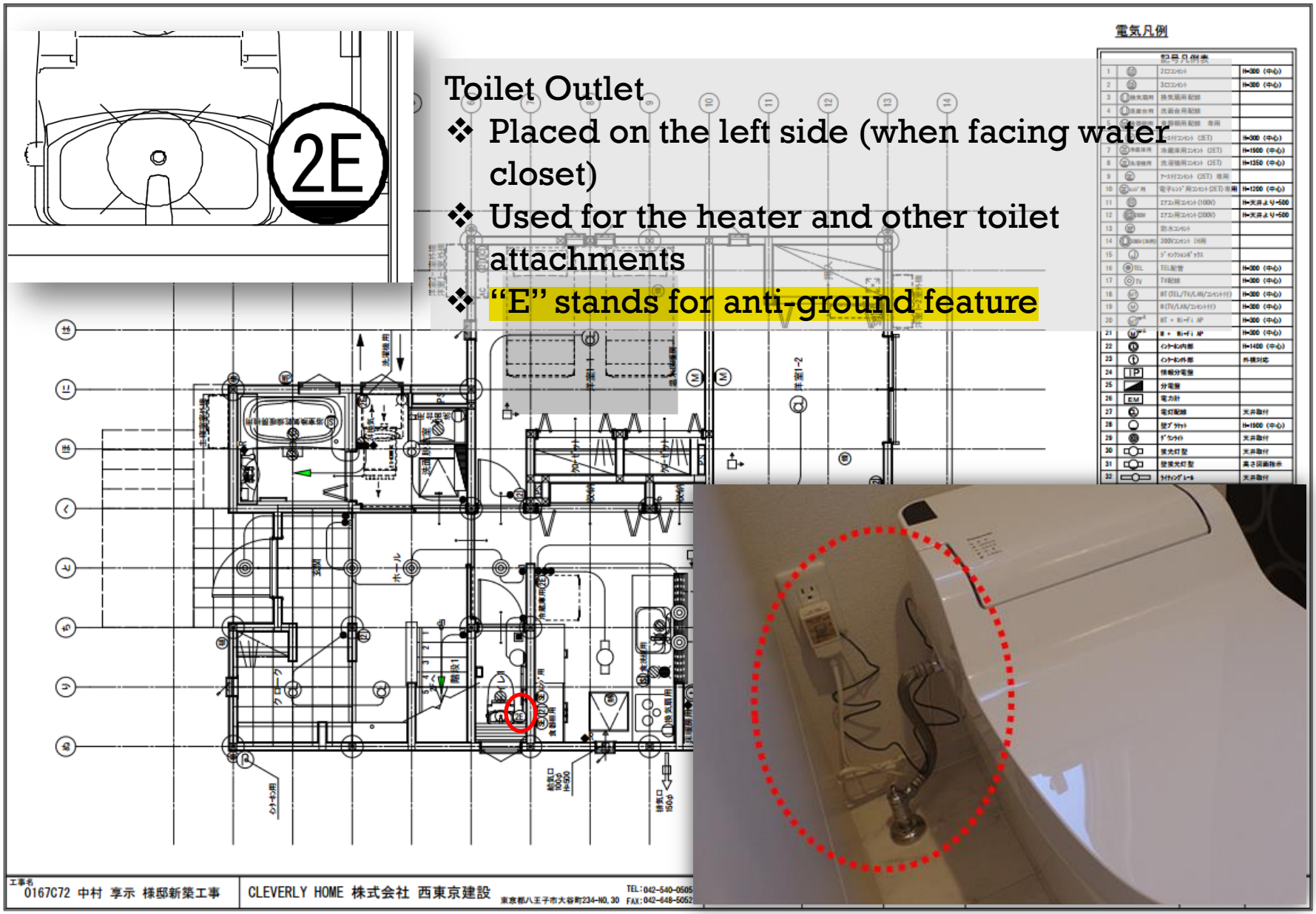
- Exclusive for air conditioner
- At least 500mm from ceiling line
- 100V for regular AC
- 200V for AC in larger areas



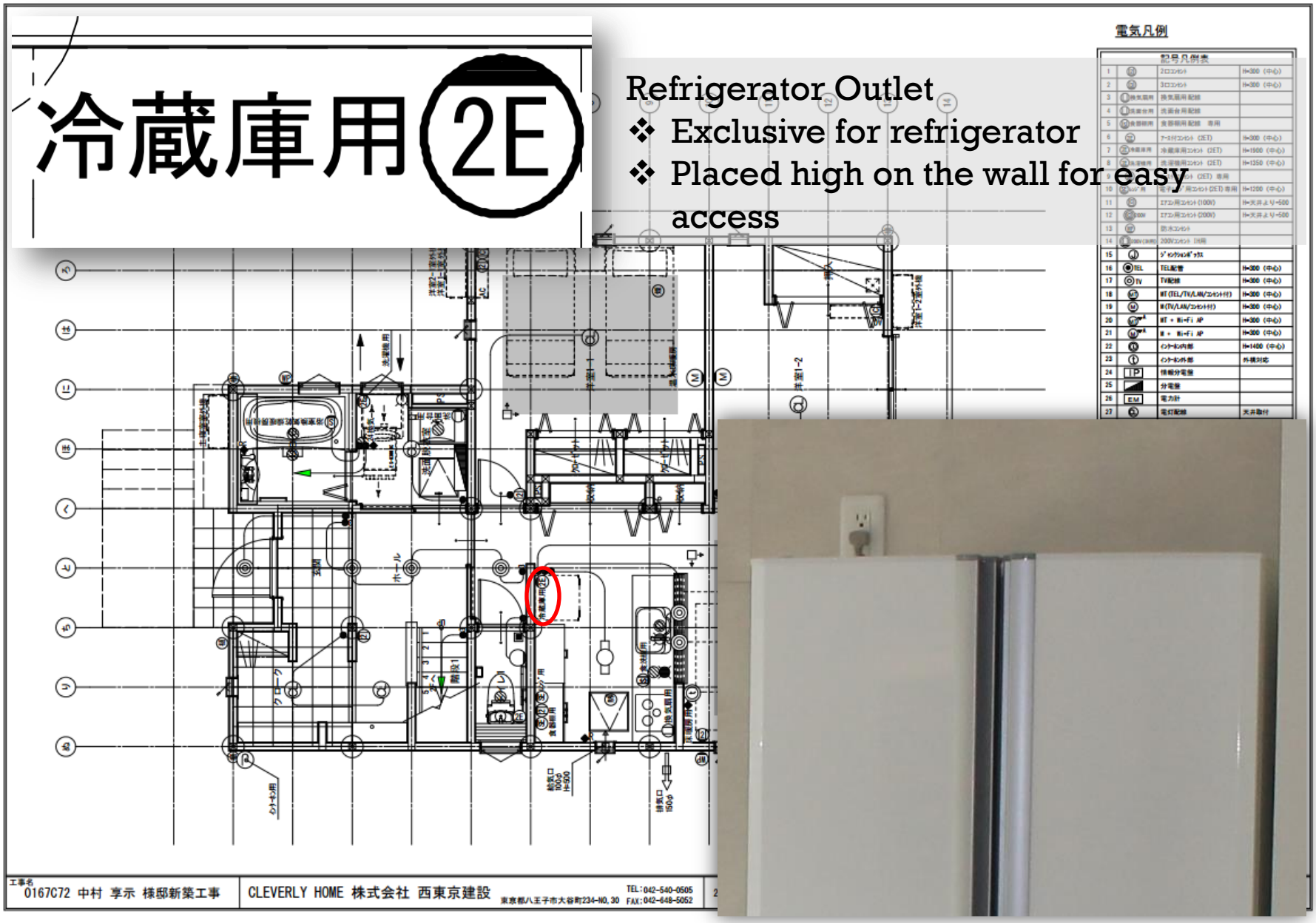
Basic EP components

Toilet Outlet

- Placed on the left side (when facing water closet)
- Used for the heater and other toilet attachments
- "E" stands for anti-ground feature



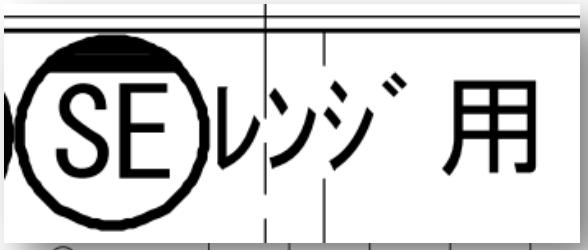
Basic EP components



Refrigerator Outlet

- Exclusive for refrigerator
- Placed high on the wall for easy access

Basic EP components



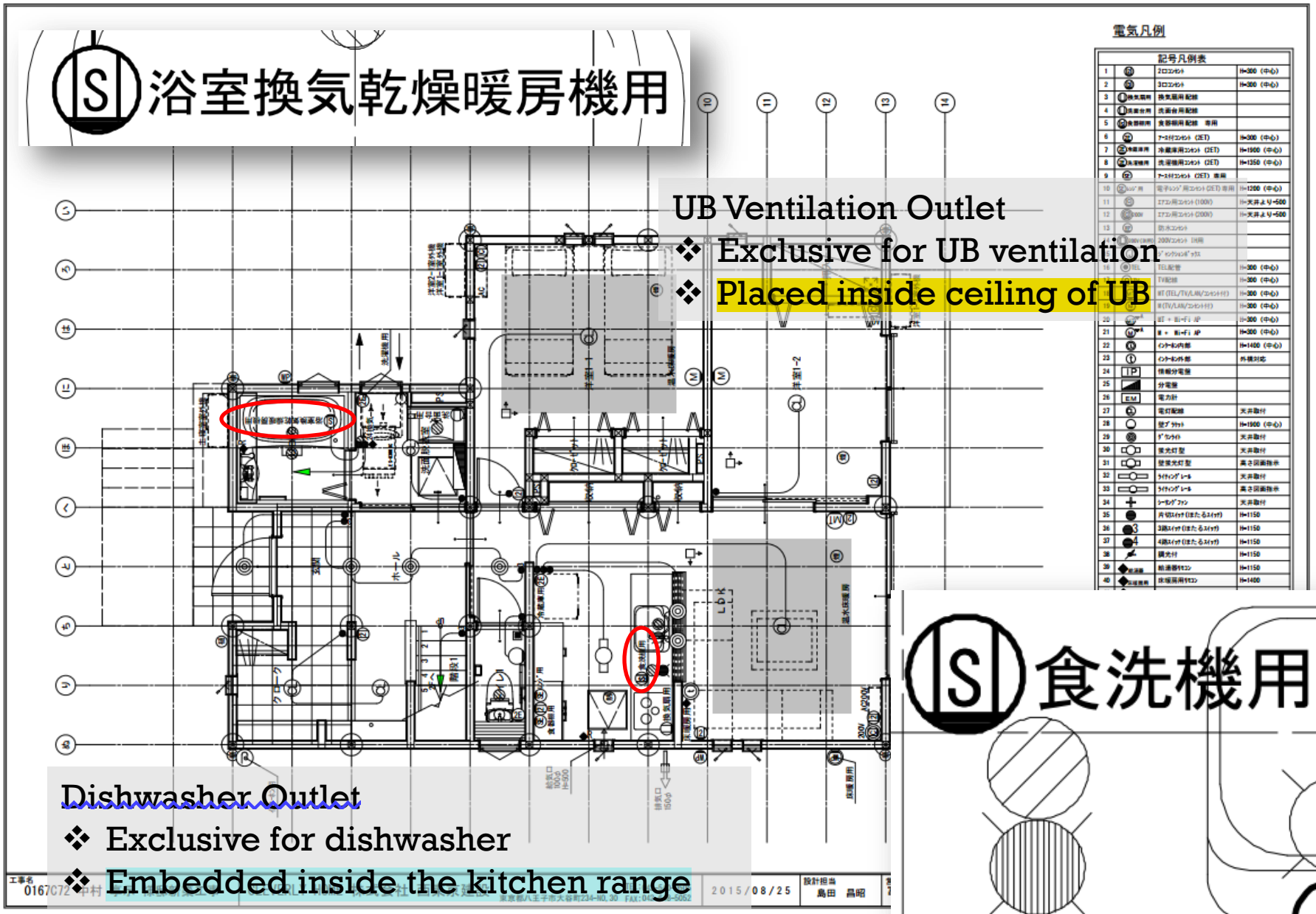
Range Outlet

- ❖ Exclusive for oven
- ❖ Placed on the counter or inside dish cabinet

Dish Cabinet Outlet

- ❖ For small appliances inside the dish cabinet
- ❖ Placed on the counter or inside cabinet

Basic EP components



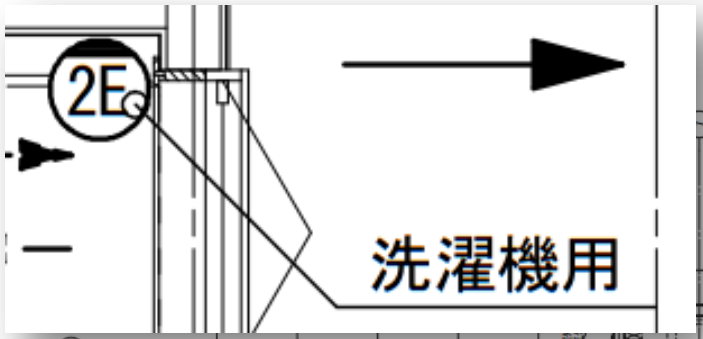
UB Ventilation Outlet

- Exclusive for UB ventilation
- Placed inside ceiling of UB

Dishwasher Outlet

- Exclusive for dishwasher
- Embedded inside the kitchen range

Basic EP components



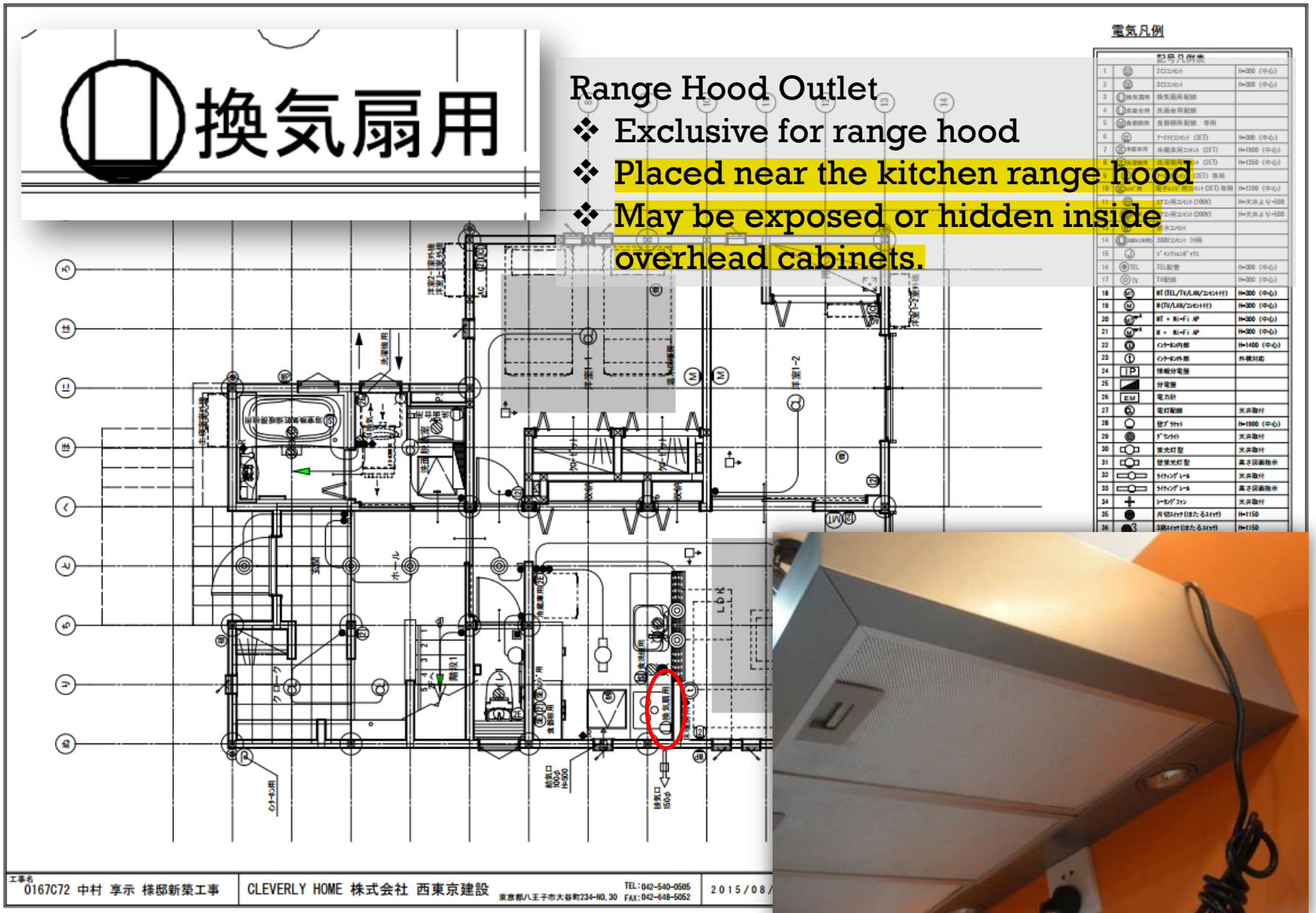
Laundry Outlet

- Exclusive for laundry machine
- Placed near the laundry machine
- May be near or opposite the water supply

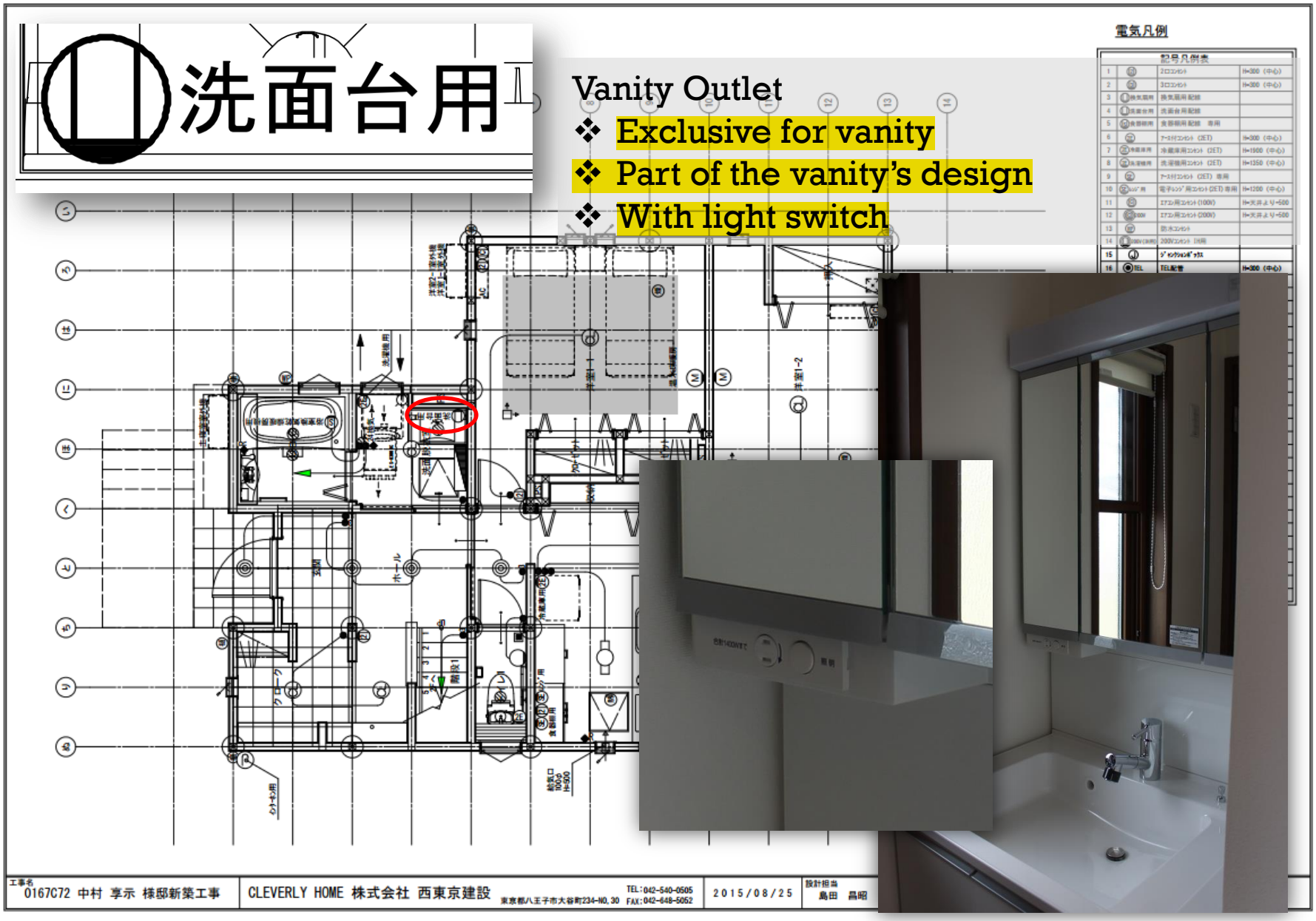
Basic EP components

Range Hood Outlet

- Exclusive for range hood
- Placed near the kitchen range hood
- May be exposed or hidden inside overhead cabinets.



Basic EP components



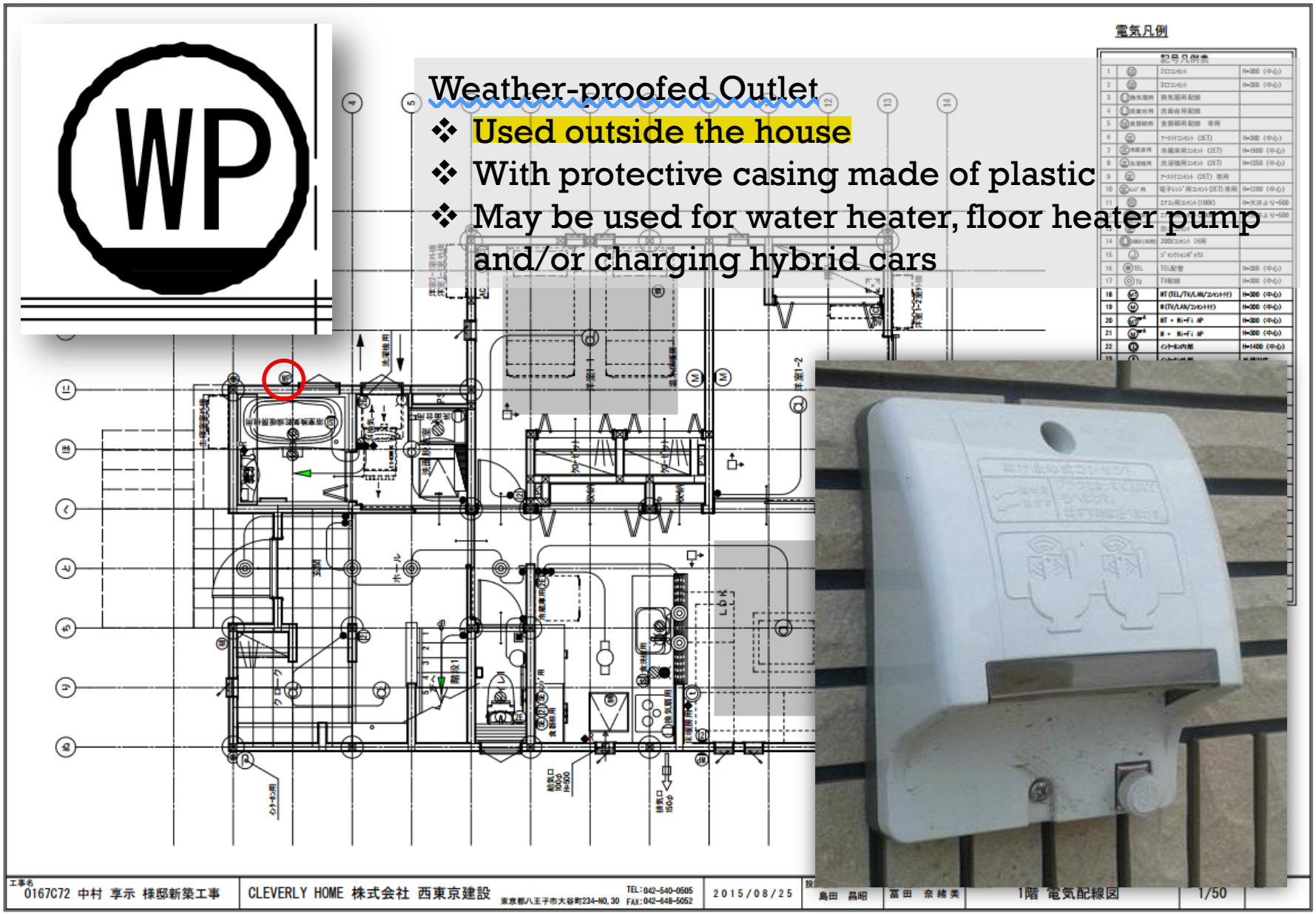
Vanity Outlet

- Exclusive for vanity
- Part of the vanity's design
- With light switch

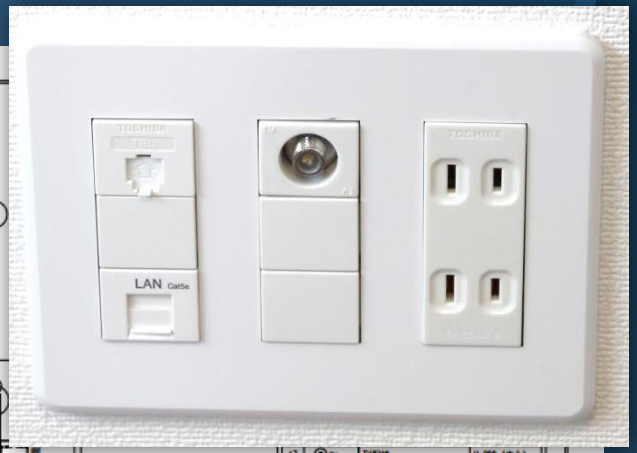
Basic EP components

Weather-proofed Outlet

- Used outside the house
- With protective casing made of plastic
- May be used for water heater, floor heater pump and/or charging hybrid cars

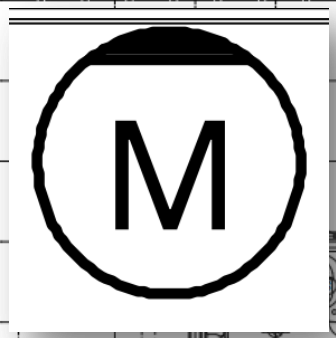


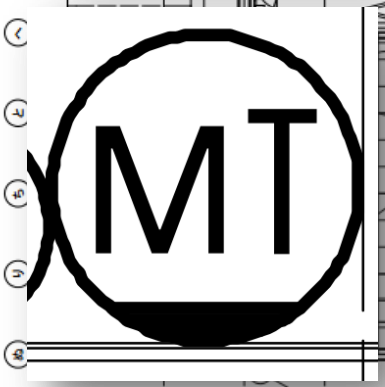
Basic EP components



MULTIMEDIA OUTLETS

CLEVERLY HOMES





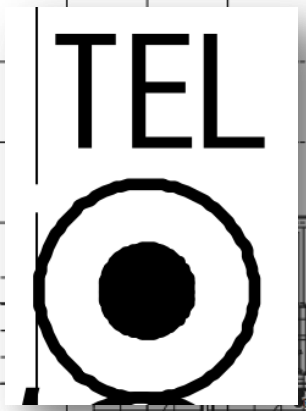
- 2 types:
  - Outlet + TV + Lan
  - Outlet + TV + Lan + Telephone
- Counted as 1 convenience outlet
- Placed in areas usually occupied by owners
- Requirements:
  - M → 3 outlets per house
  - MT → 2 outlets per house

工事名 0167C72 中村 享示 様邸新築工事 | CLEVERLY HOME 株式会社 西東京建設 東京都八王子市大谷町234-NO.30 TEL:042-540-0505 FAX:042-648-5052 | 2015/08/25 | 設計担当 島田 昌昭 | 営業担当 冨田 奈緒美 | 図面名 1階 電気配線図 | 縮尺 1/50 | 承認印

Basic EP components

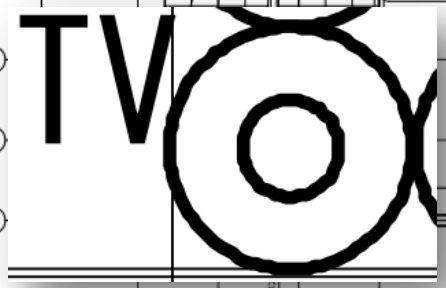
MULTIMEDIA OUTLETS

WELLHOMES, ACTIE, NEXTHOUSE



Telephone Outlet

- For telephone and data line
- 2 outlets per house
- Must be paired with at least 1 convenience outlet



Television Outlet

- For television antenna and/or cable
- 5 outlets per house
- Must be paired with at least 1 convenience outlet

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OTHERS

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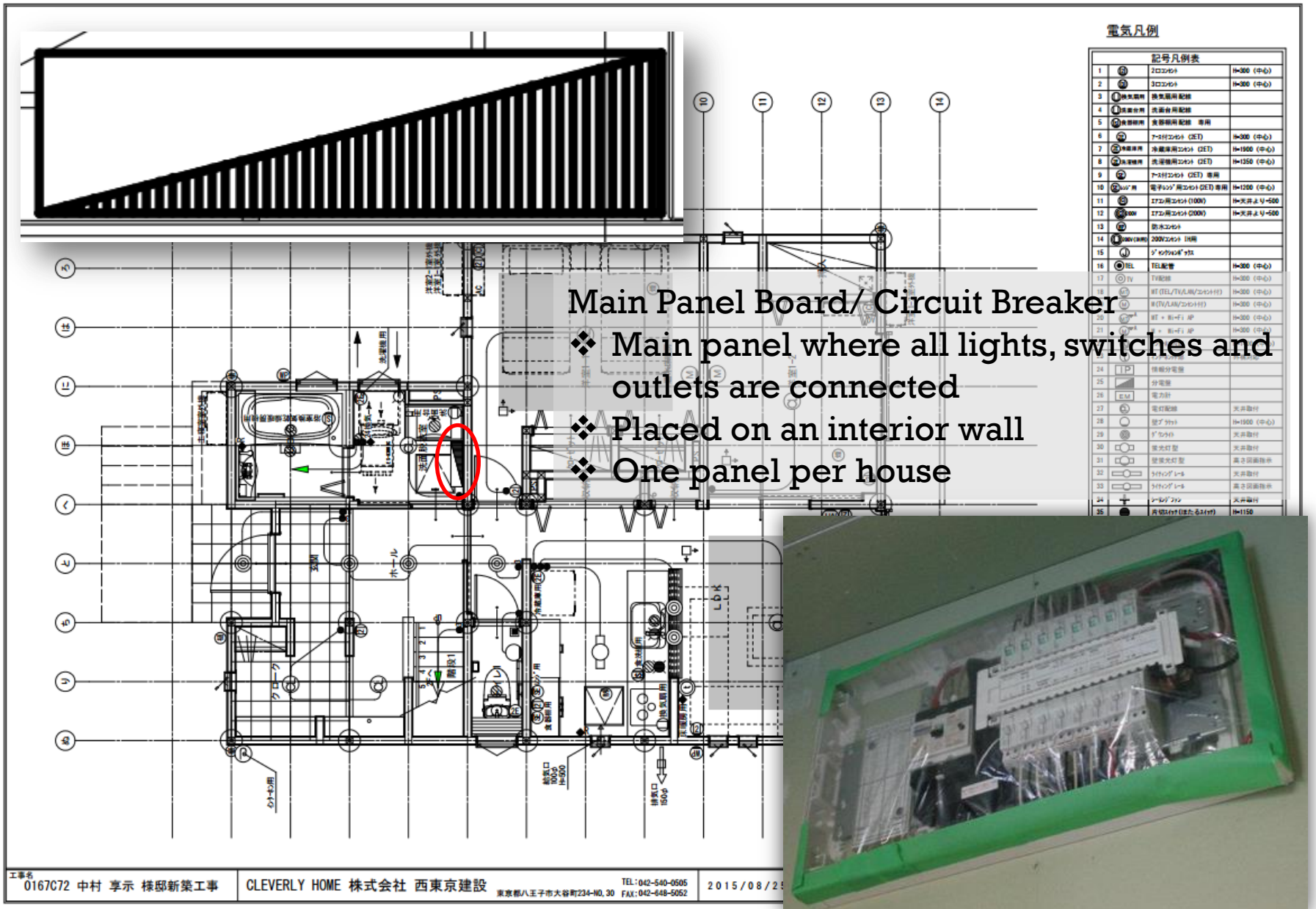
Basic EP components



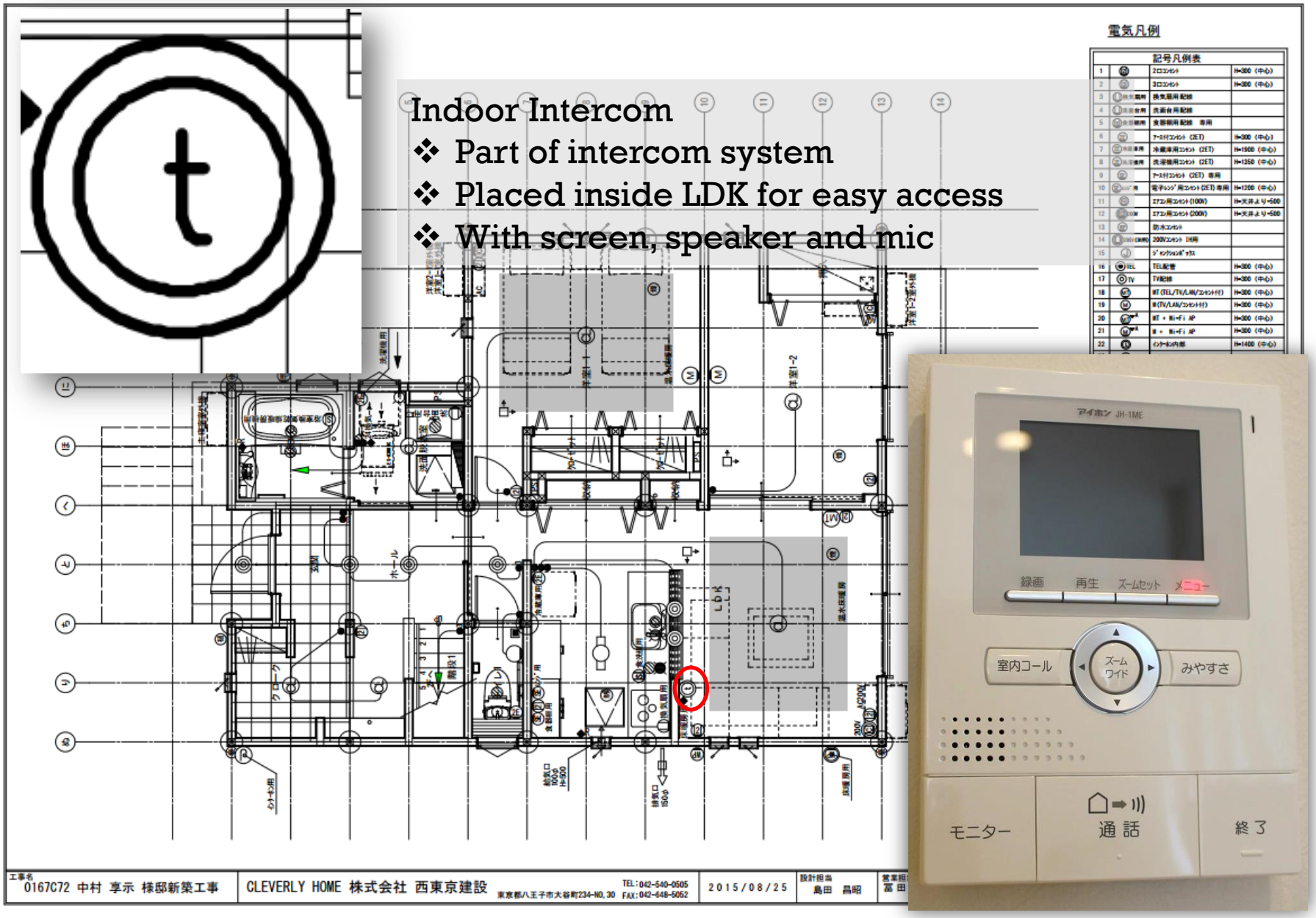
Main Panel Board/ Circuit Breaker

- Main panel where all lights, switches and outlets are connected
- Placed on an interior wall
- One panel per house

Basic EP components

Indoor Intercom

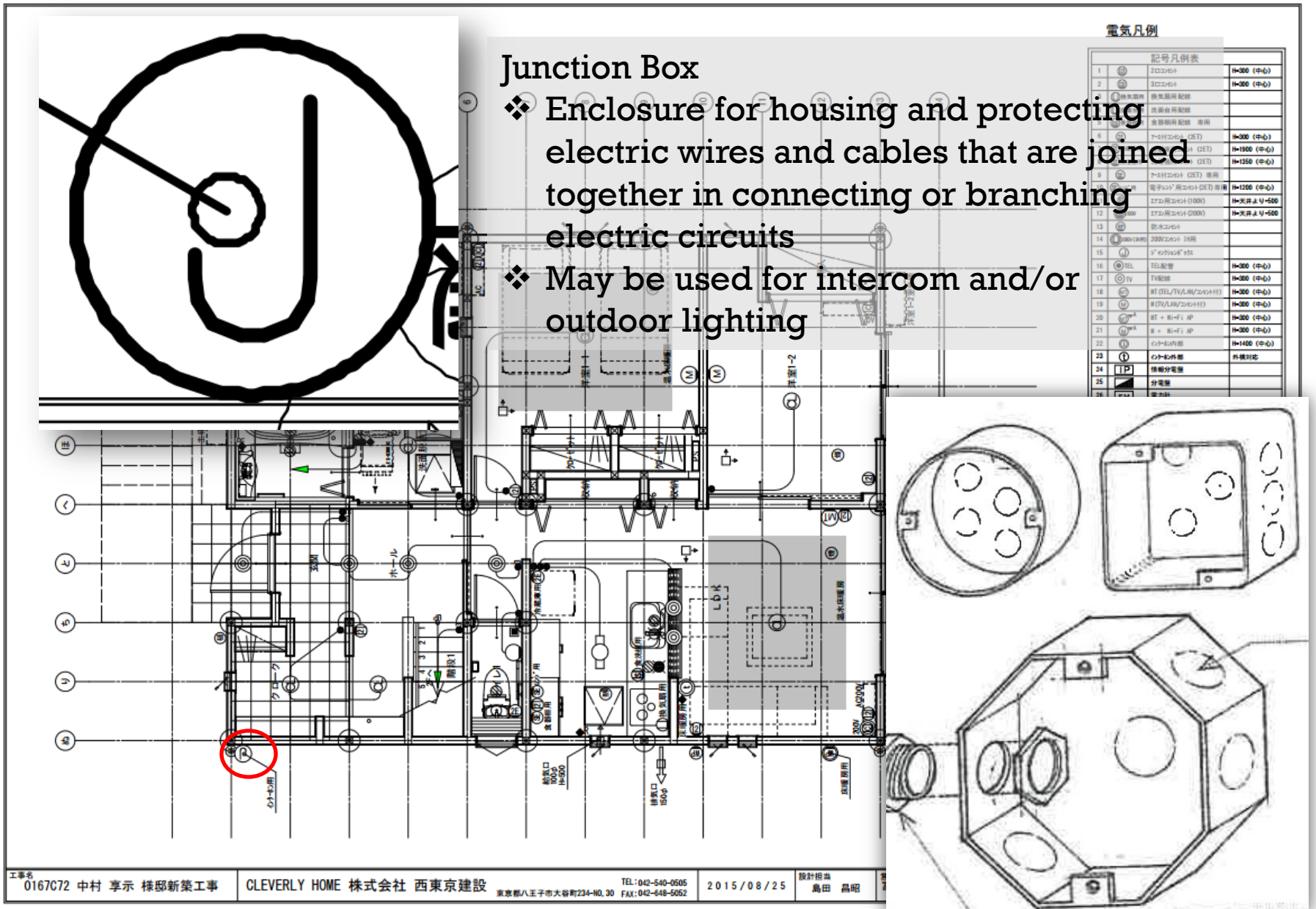
- Part of intercom system
- Placed inside LDK for easy access
- With screen, speaker and mic



Basic EP components

Junction Box

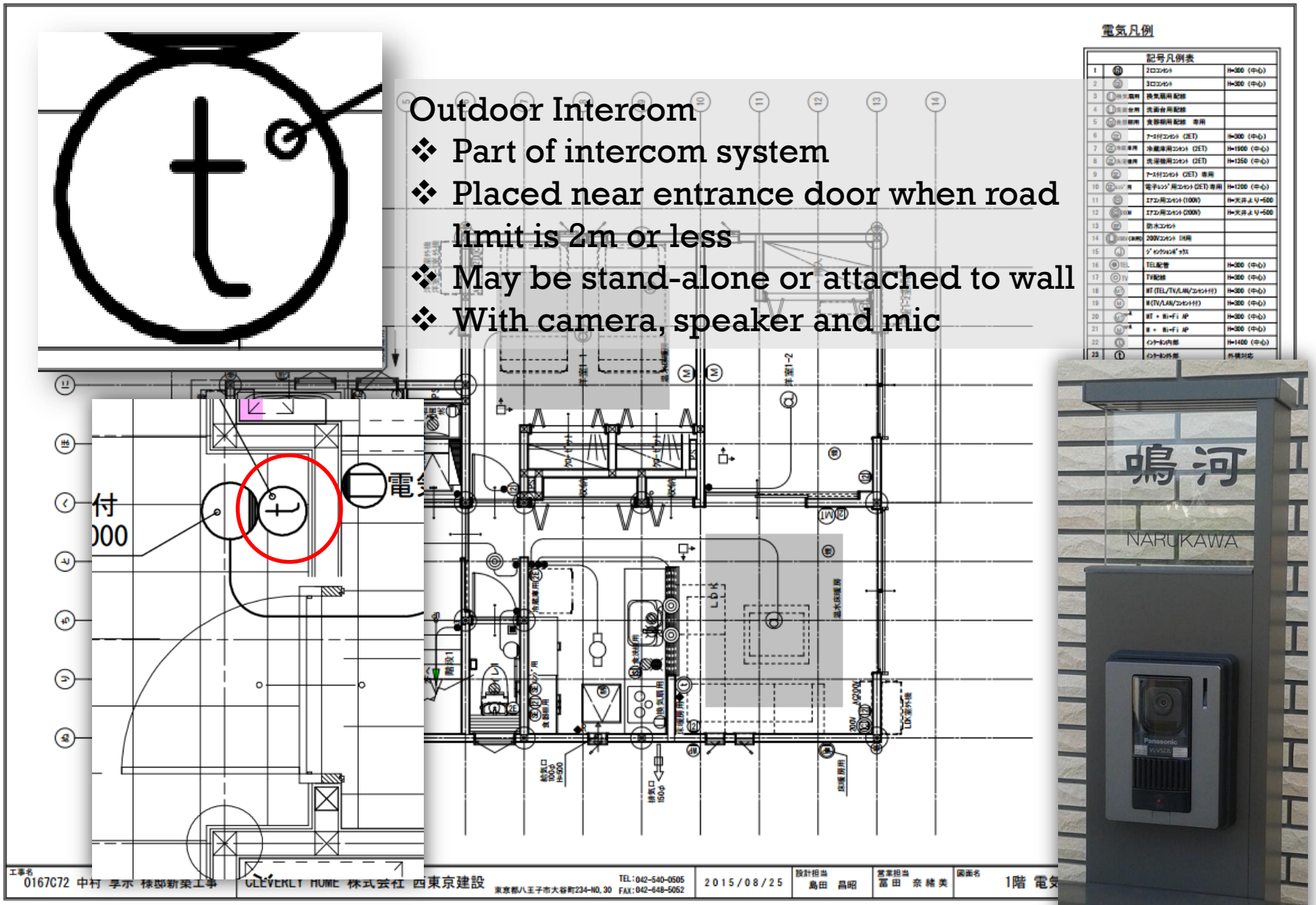
- Enclosure for housing and protecting electric wires and cables that are joined together in connecting or branching electric circuits
- May be used for intercom and/or outdoor lighting



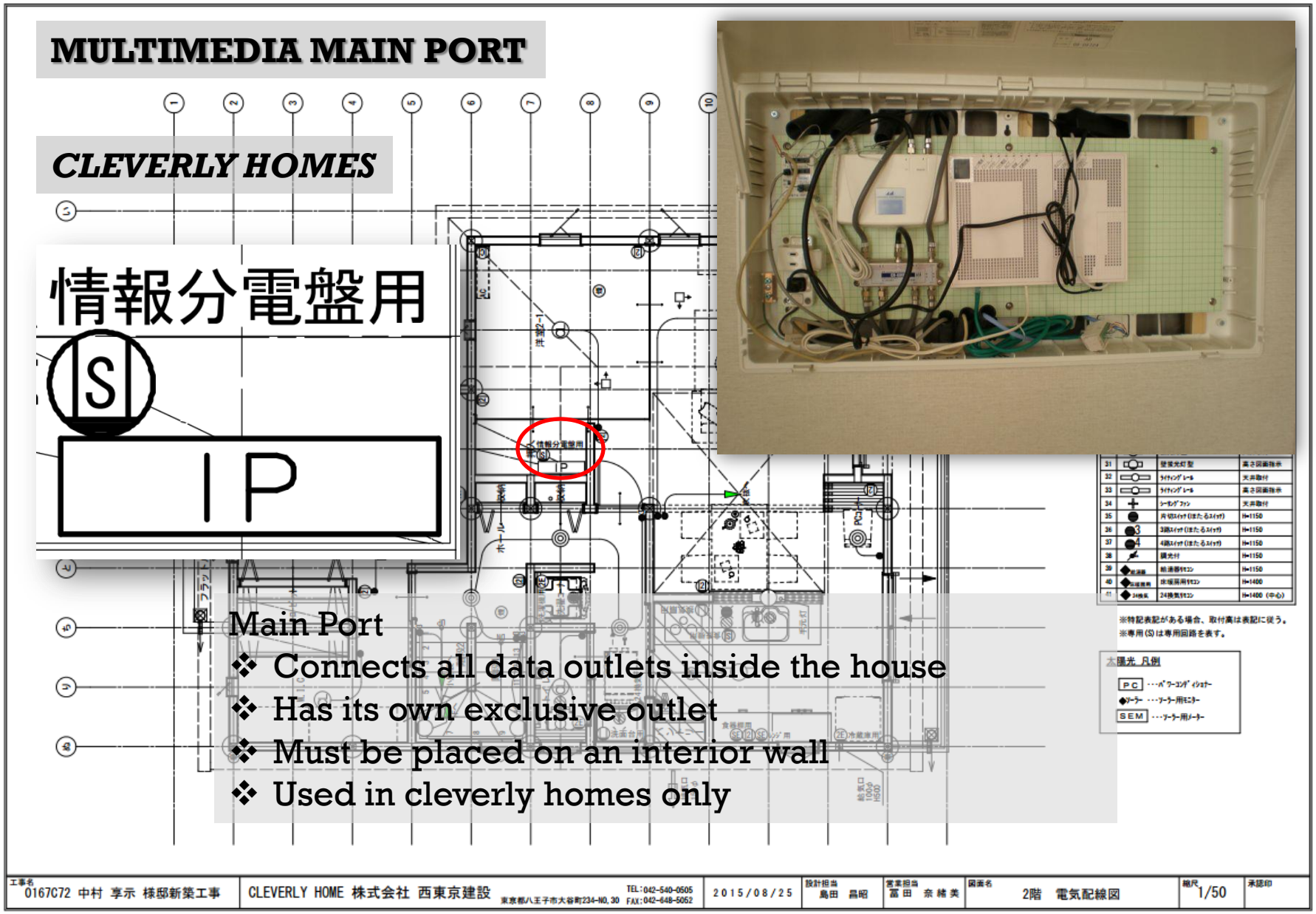
Basic EP components

Outdoor Intercom

- Part of intercom system
- Placed near entrance door when road limit is 2m or less
- May be stand-alone or attached to wall
- With camera, speaker and mic



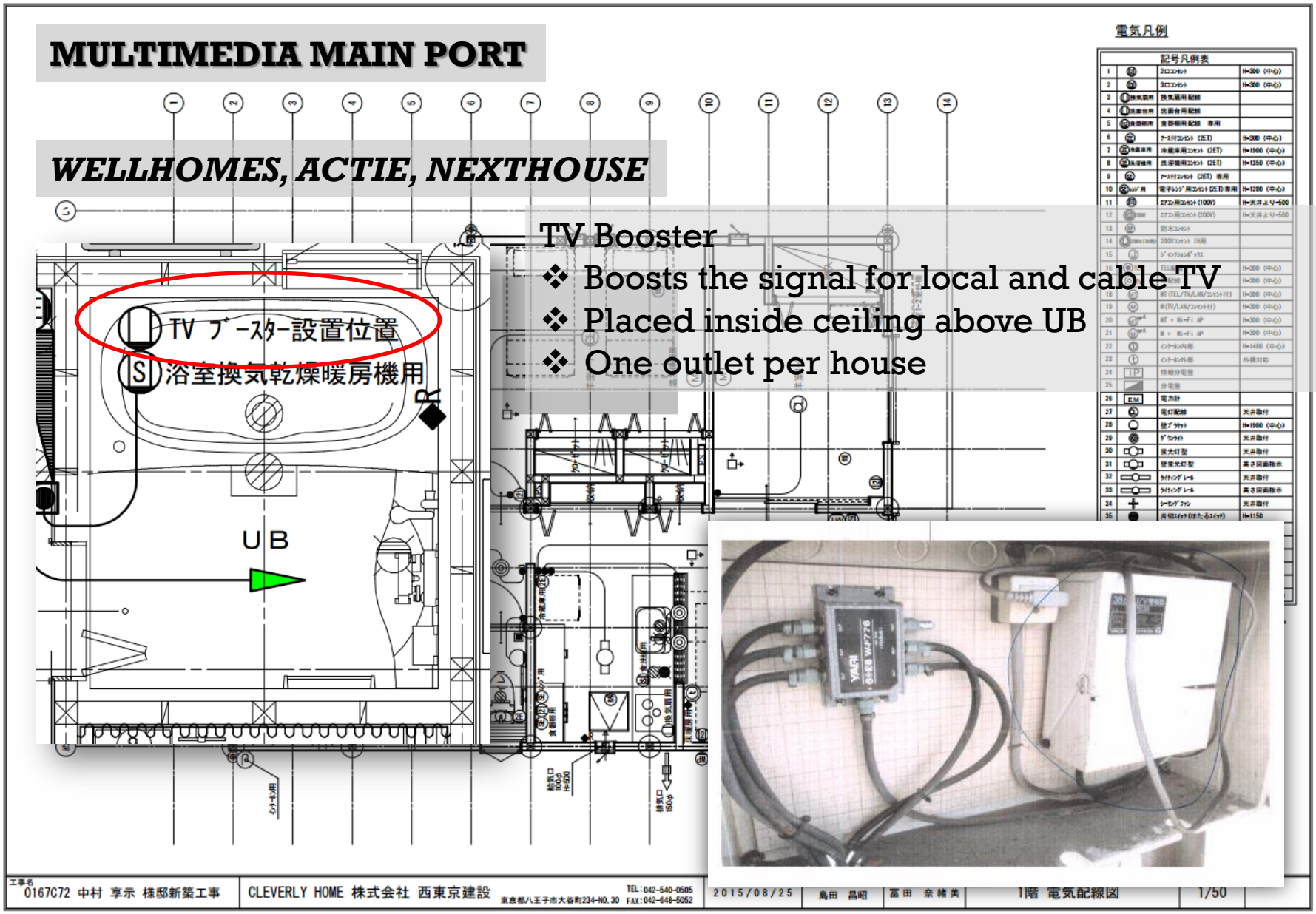
Basic EP components



Basic EP components

MULTIMEDIA MAIN PORT

WELLHOMES, ACTIE, NEXTHOUSE



TV Booster

- Boosts the signal for local and cable TV
- Placed inside ceiling above UB
- One outlet per house

EXERCISES

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