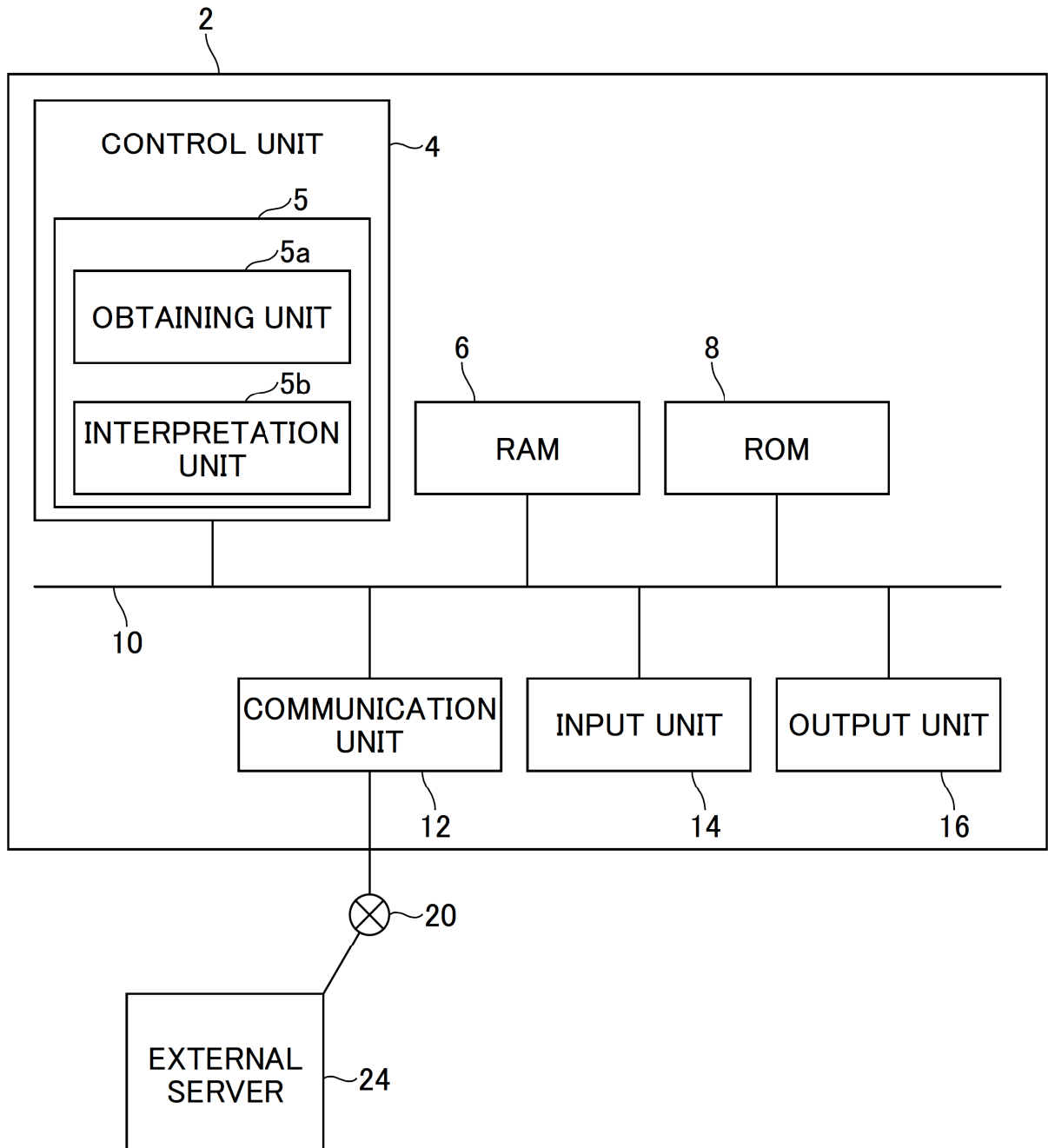


1/31
FIG.1



2/31
FIG.2A

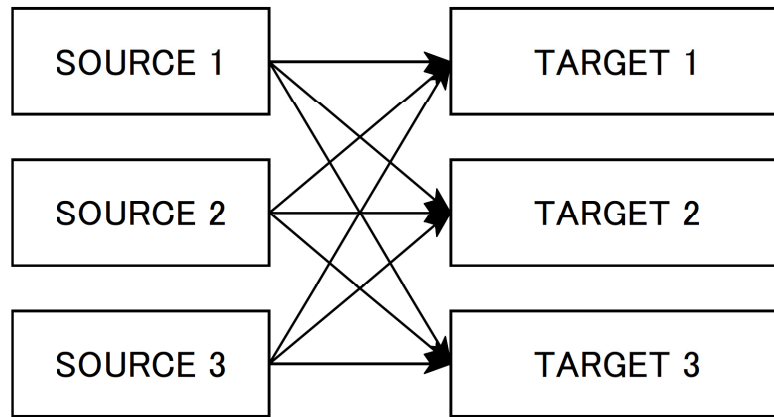
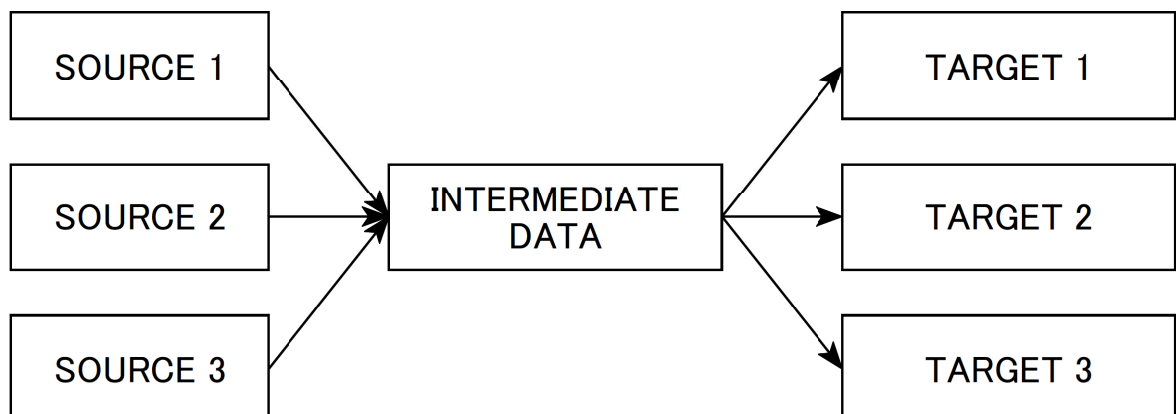


FIG.2B



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FIG.3A

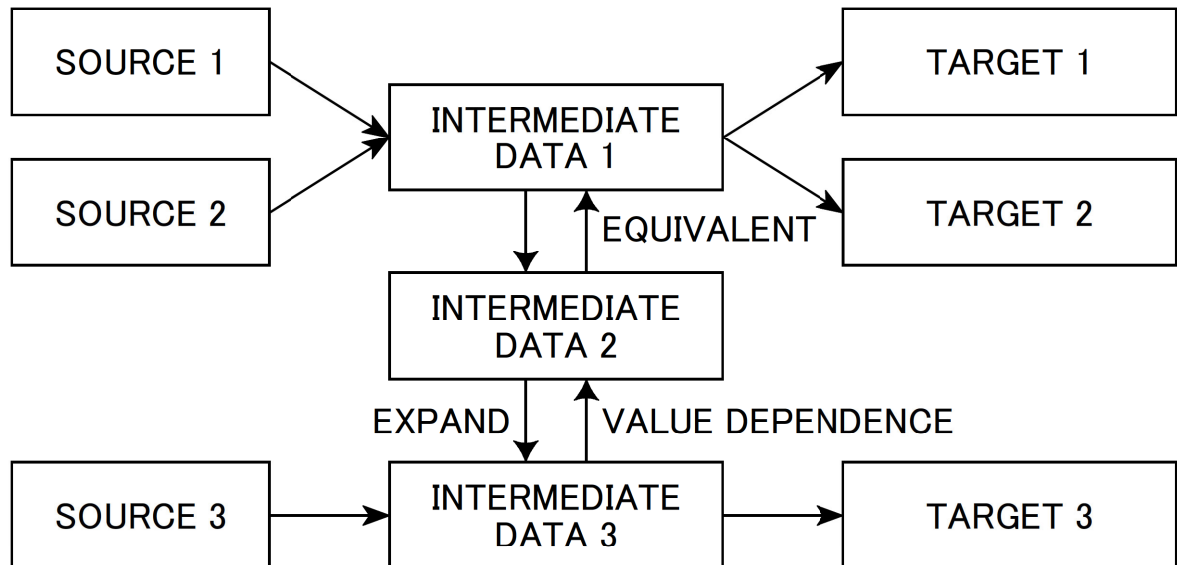
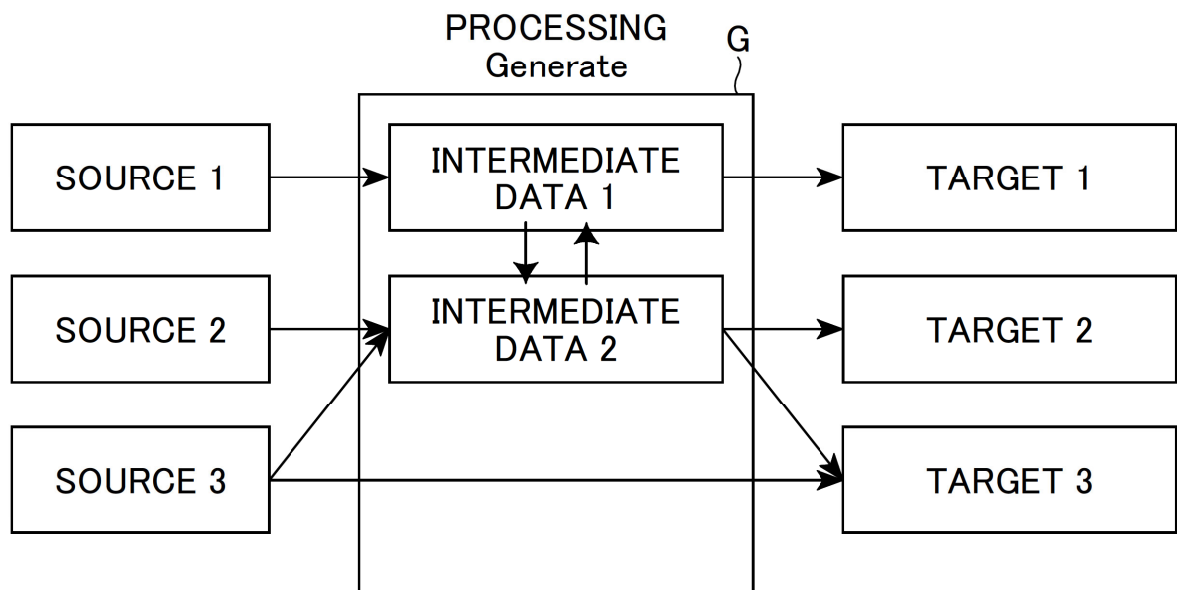


FIG.3B



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FIG.5

NAME OF CONSTRUCTION	CONSTRUCTION OF		
DRAWING NAME	PIER STRUCTURE GENERAL DRAWING		
SCALE	INDICATED IN DRAWING	DRAWING NUMBER	
DESIGN DATE	MONTH: YEAR:		
XXX REGIONAL DEVELOPMENT BUREAU YYY OFFICE			

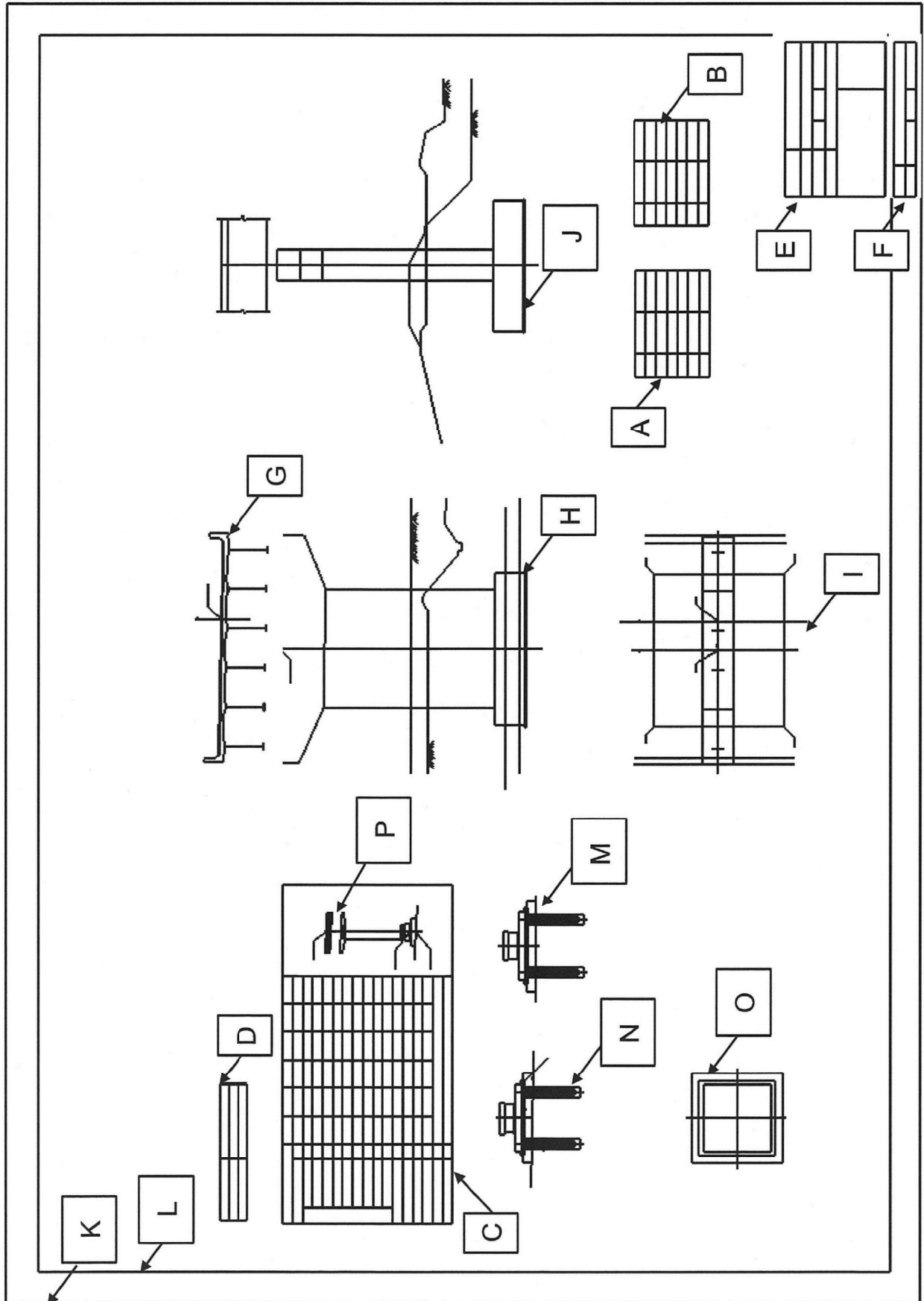


FIG.6

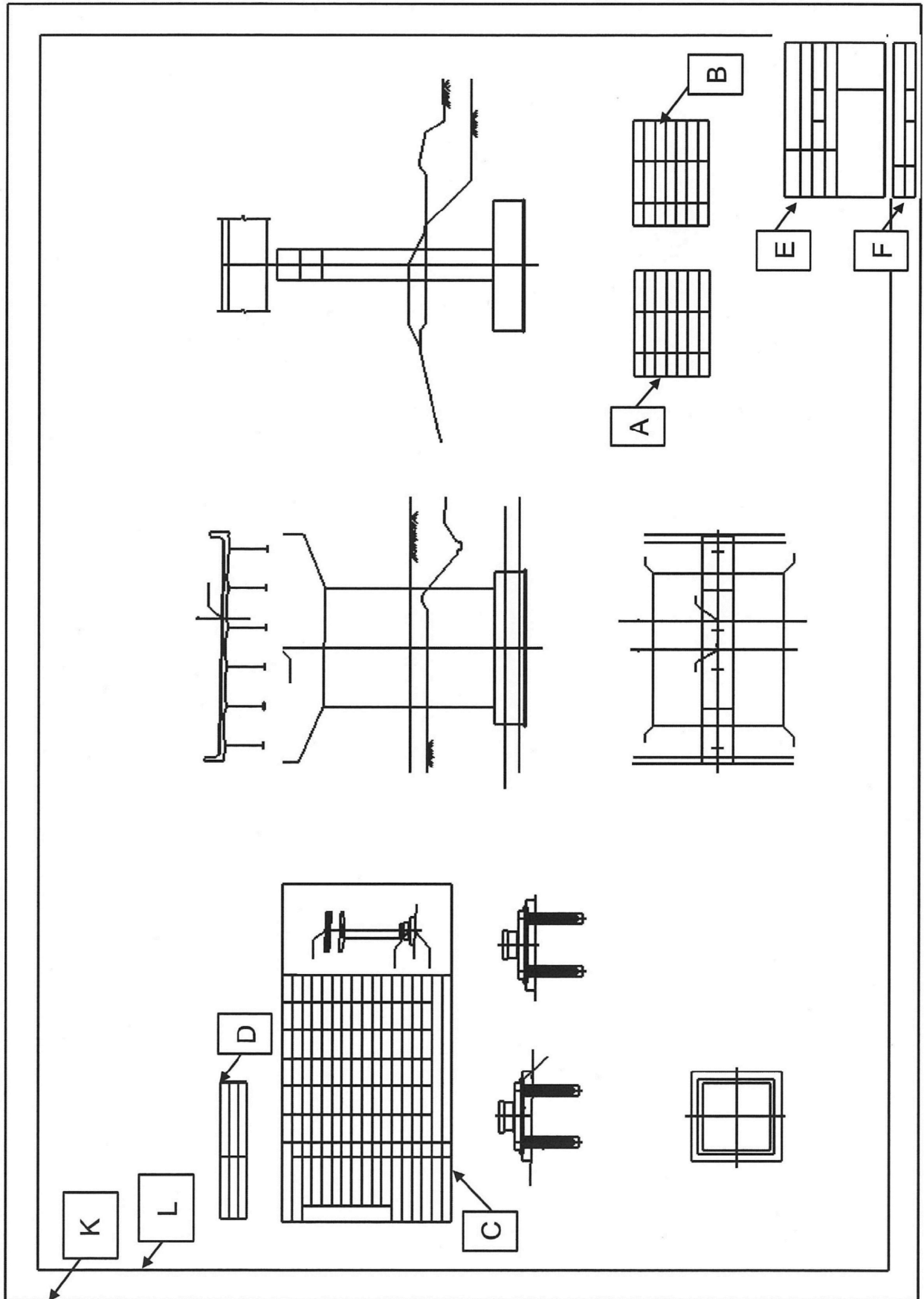


FIG.7

FIG.8A

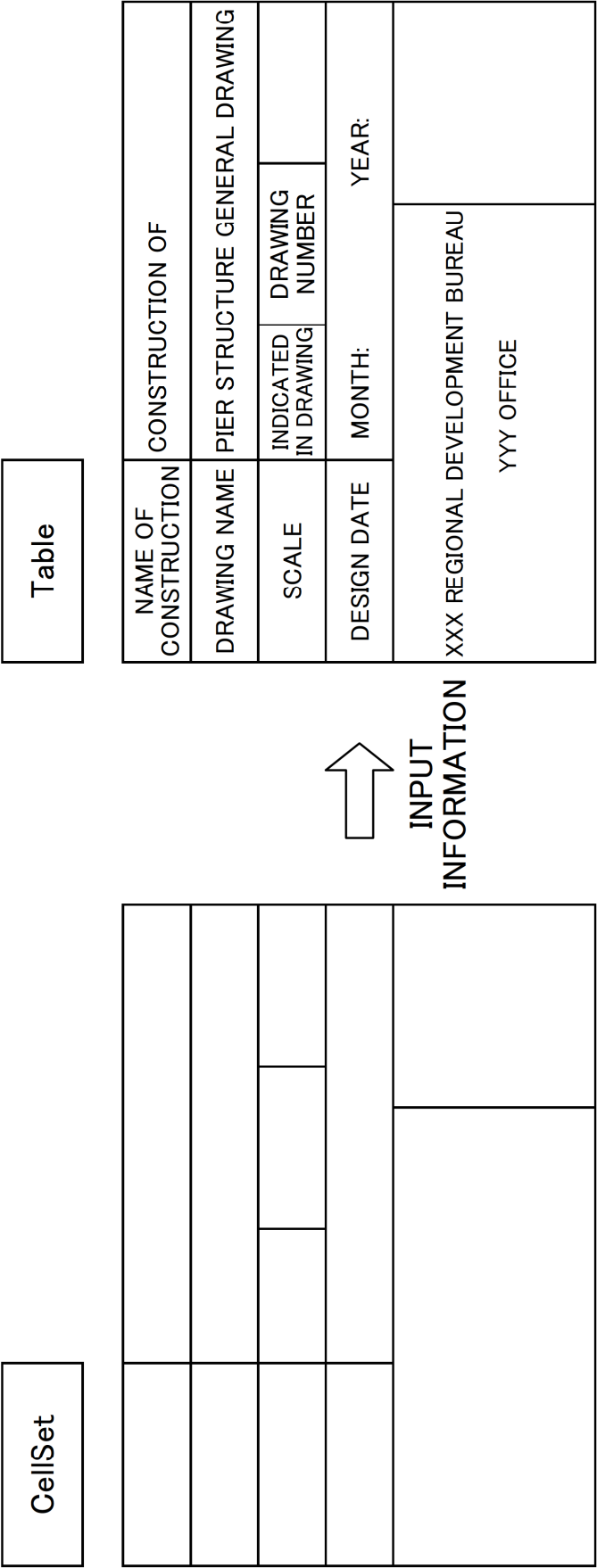


FIG.8B

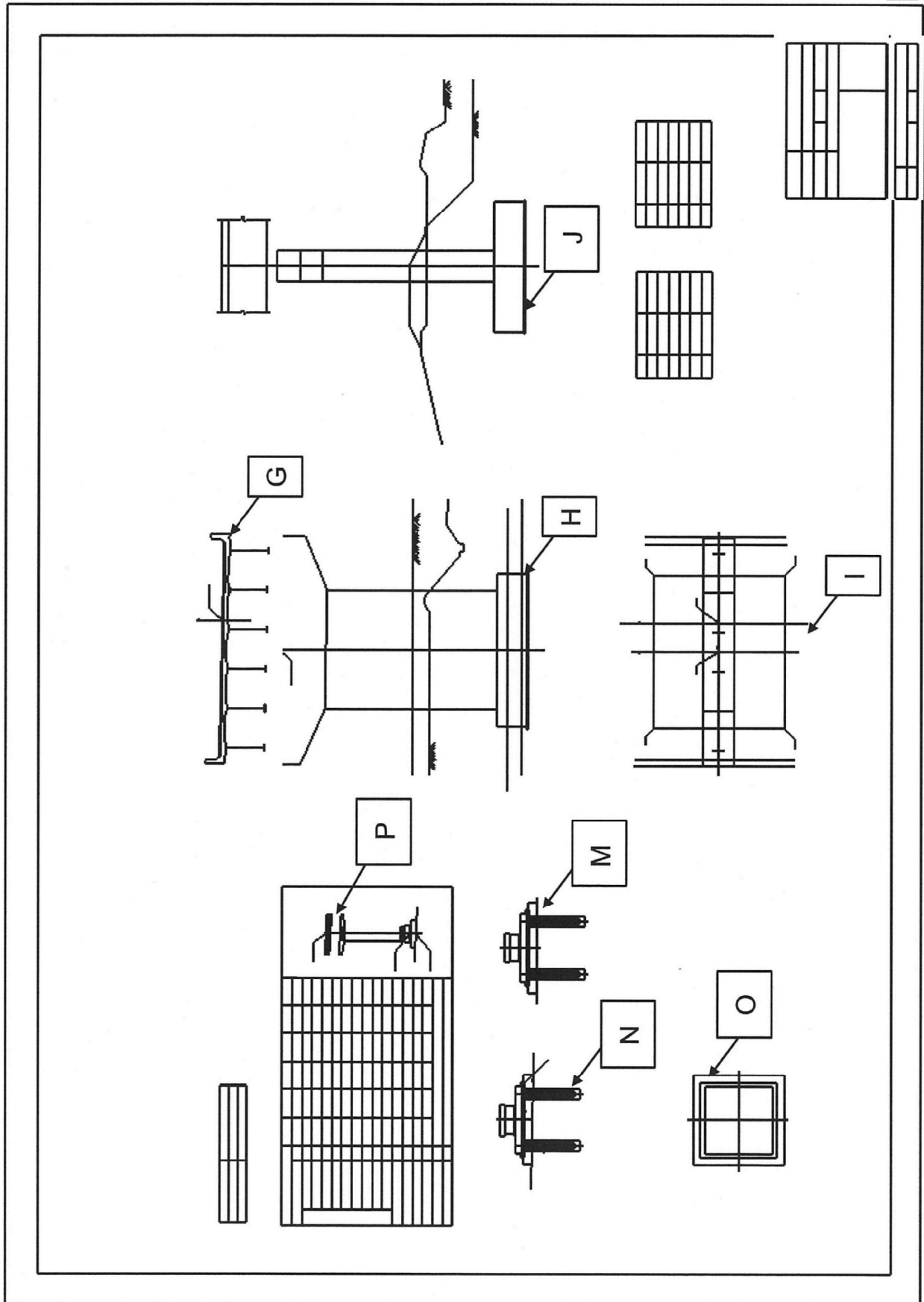
Table					
NAME OF CONSTRUCTION		CONSTRUCTION OF			
DRAWING NAME		PIER STRUCTURE GENERAL DRAWING			
SCALE		INDICATED IN DRAWING	DRAWING NUMBER		
DESIGN DATE		MONTH:		YEAR:	
		XXX REGIONAL DEVELOPMENT BUREAU YYY OFFICE			



ANALYZE
AND
CLASSIFY

TITLE BLOCK

NAME OF CONSTRUCTION	CONSTRUCTION OF			
DRAWING NAME	PIER STRUCTURE GENERAL DRAWING			
SCALE	INDICATED IN DRAWING	DRAWING NUMBER		
DESIGN DATE	MONTH:		YEAR:	
XXX REGIONAL DEVELOPMENT BUREAU YYY OFFICE				



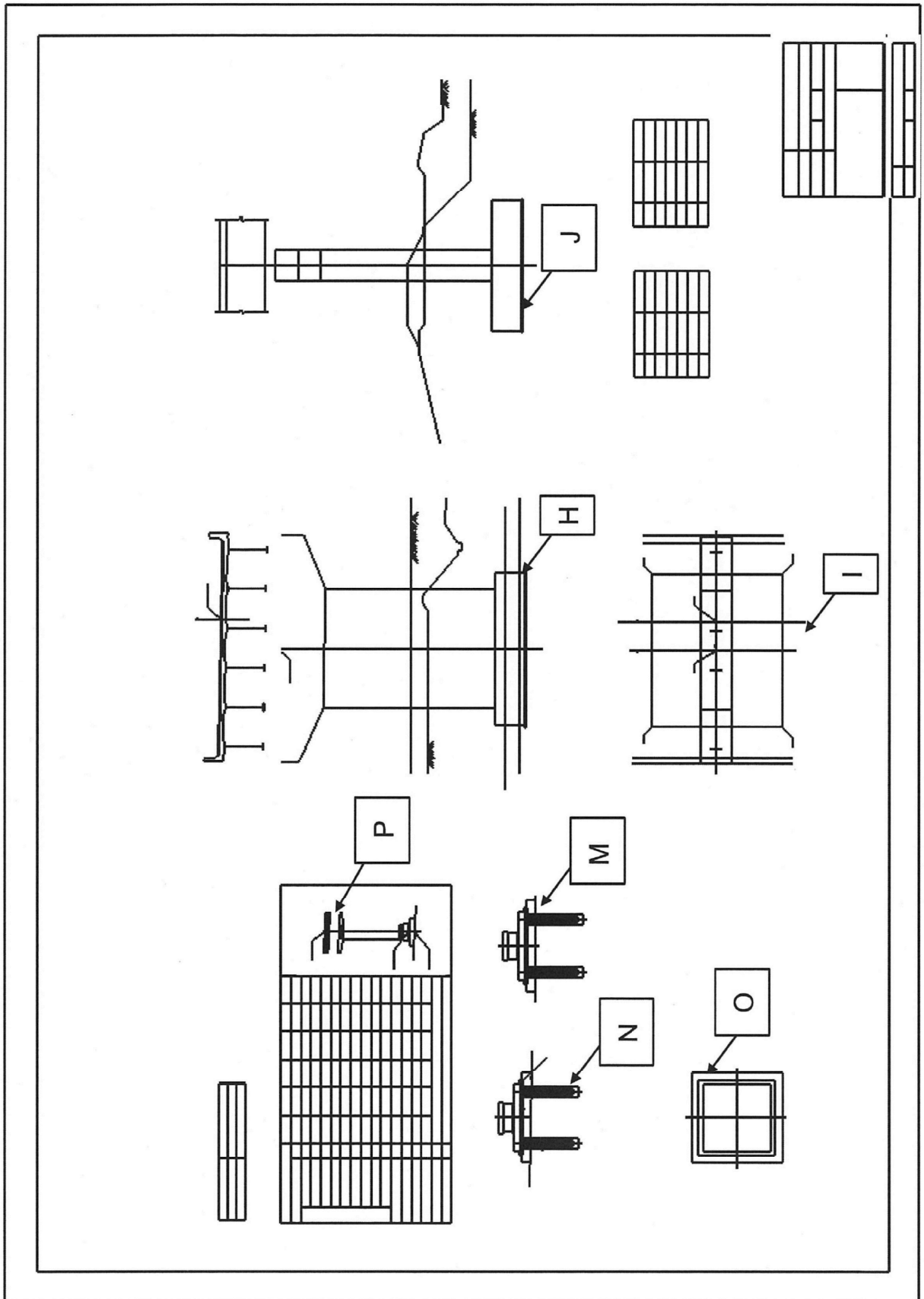


FIG.11

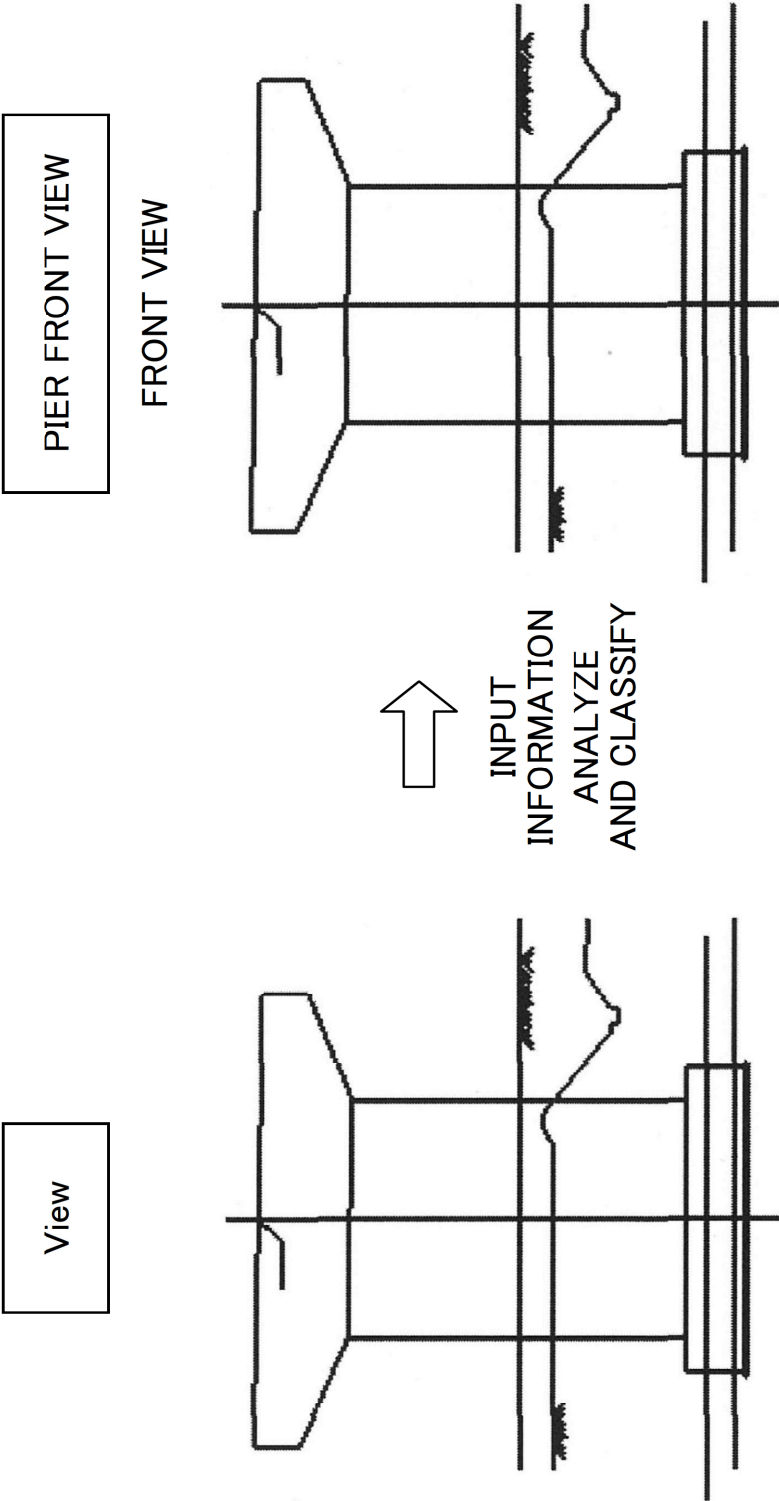
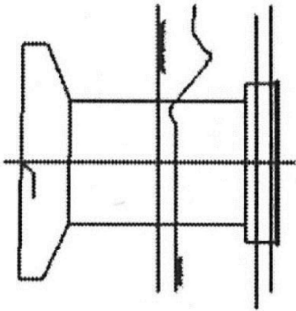


FIG.12A

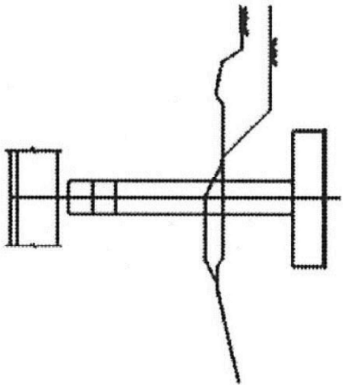
PIER FRONT VIEW

FRONT VIEW



PIER SIDE VIEW

SIDE VIEW



PIER PLAN VIEW

PLAN VIEW

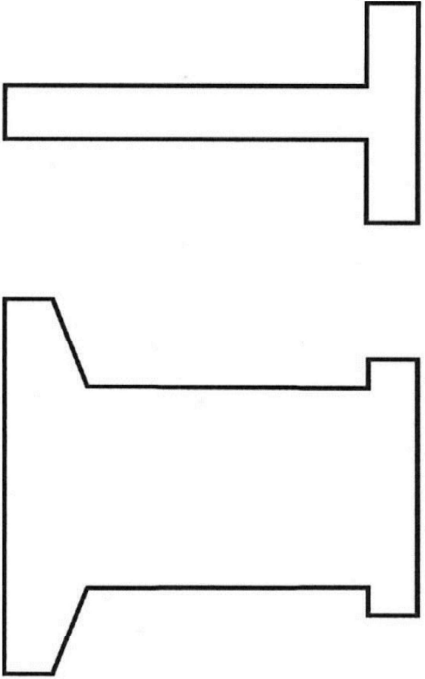
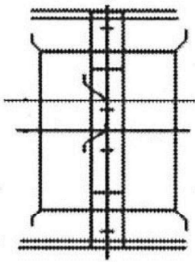


FIG.12B

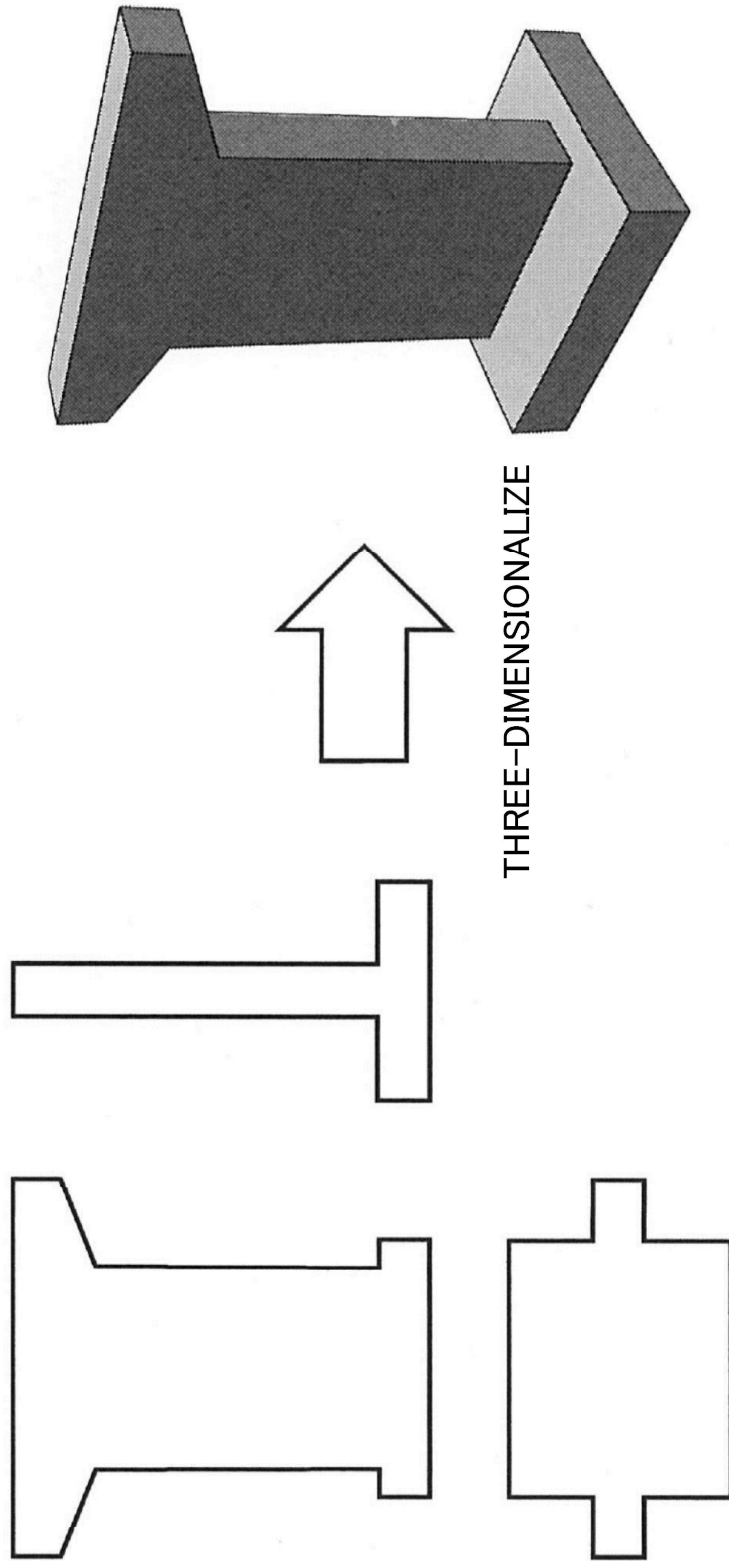


FIG.13

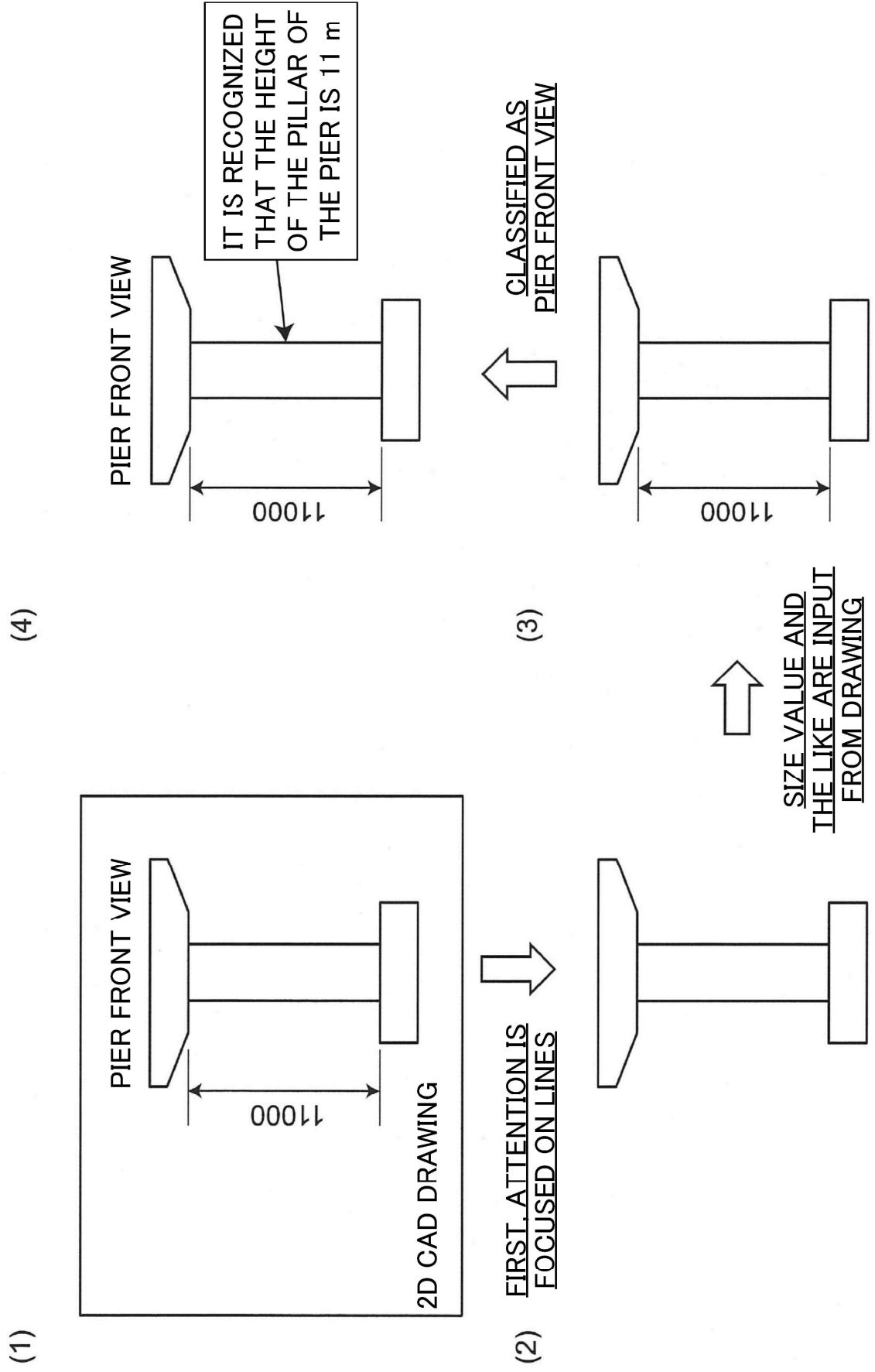


FIG.14

(1)

SUBSTRUCTURE COORDINATES		
	X	Y
①	-97387.2	47546.4
②	-97388.4	47545.1
③	-97388.4	47538.5

2D CAD DRAWING

(4)

SUBSTRUCTURE COORDINATES

	X	Y
①	-97387.2	47546.4
②	-97388.4	47545.1
③	-97388.4	47538.5



FIRST ATTENTION IS
FOCUSED ON LINES



INPUT CONTENTS OF
CELLS FROM DRAWING

(2)



CLASSIFIED AS
SET OF CELLS

RECOGNIZED
CELL

FIG.15

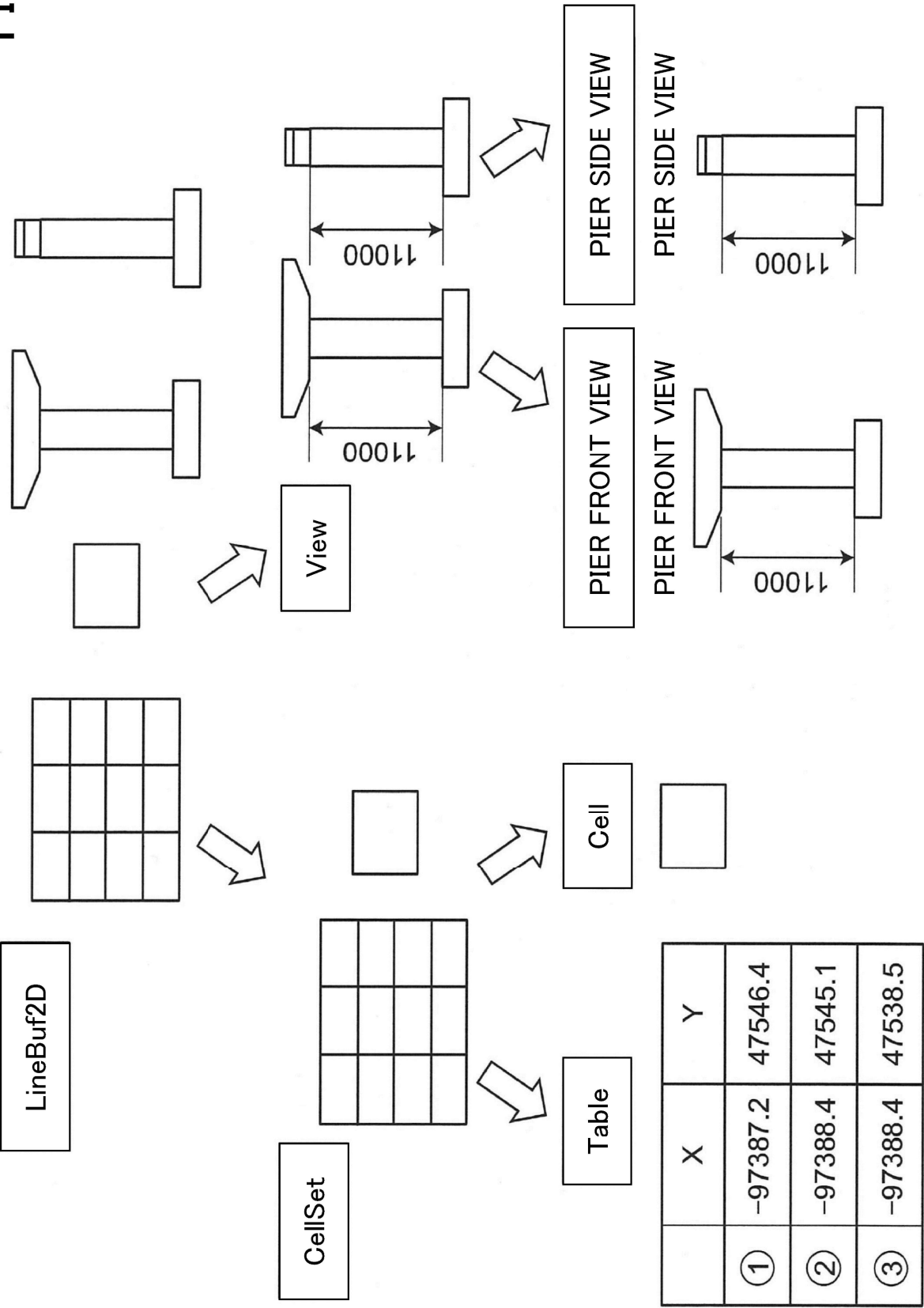
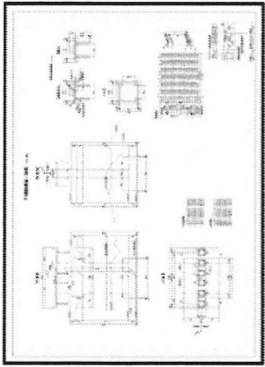
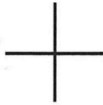


FIG.16

(1) "INPUT INFORMATION"

CellSet



2D CAD DRAWING



Table

	X	Y
①	-97387.2	47546.4
②	-97388.4	47545.1
③	-97388.4	47538.5

(2) "ANALYSIS AND INTERPRETATION"

Table

		NAME OF CONSTRUCTION		CONSTRUCTION OF	
		DRAWING NAME		PIER STRUCTURE GENERAL DRAWING	
		SCALE		DRAWINGS IN DRAWING NUMBER	
		DESIGN DATE		MONTH: YEAR:	
				XX: REGIONAL DEVELOPMENT BUREAU	
				YYY OFFICE	

	X	Y
①	-97387.2	47546.4
②	-97388.4	47545.1
③	-97388.4	47538.5

TITLE BLOCK

	NAME OF CONSTRUCTION		CONSTRUCTION OF	
	DRAWING NAME		PIER STRUCTURE GENERAL DRAWING	
	SCALE	INDICATED IN DRAWING	DRAWING NUMBER	
	DESIGN DATE		MONTH:	YEAR:
XXX REGIONAL DEVELOPMENT BUREAU				YYY OFFICE



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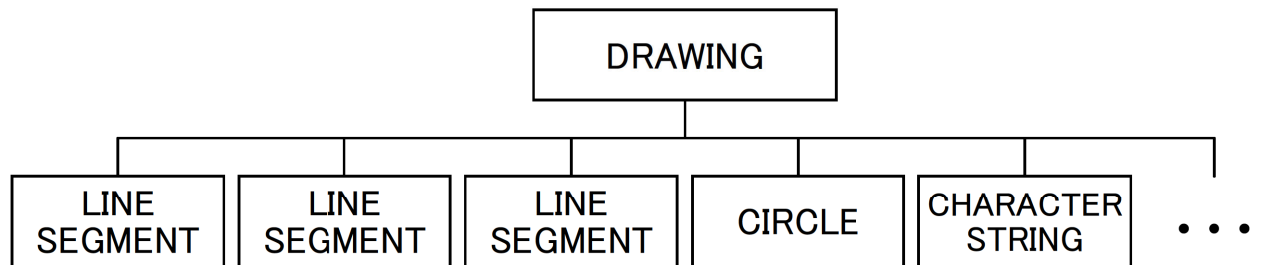
STRUCTURE HEIGHT TABLE

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COORDINATES Table

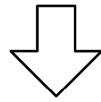
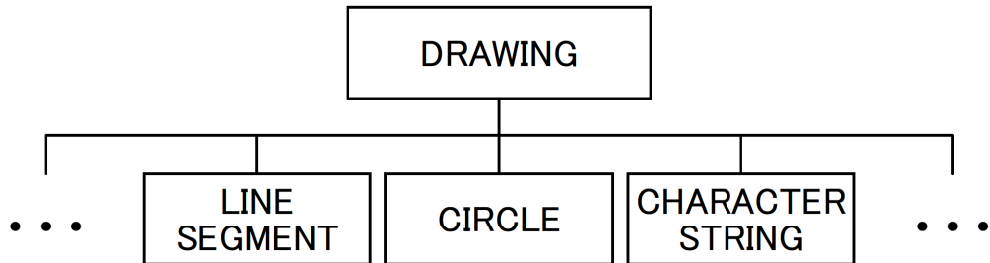
	X	Y
①	-97387.2	47546.4
②	-97388.4	47545.1
③	-97388.4	47538.5

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FIG.18

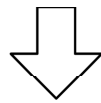
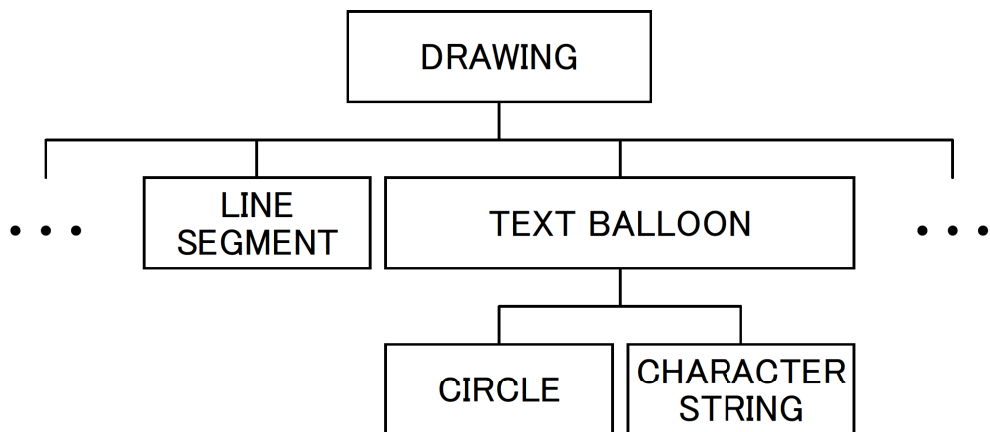


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FIG.19

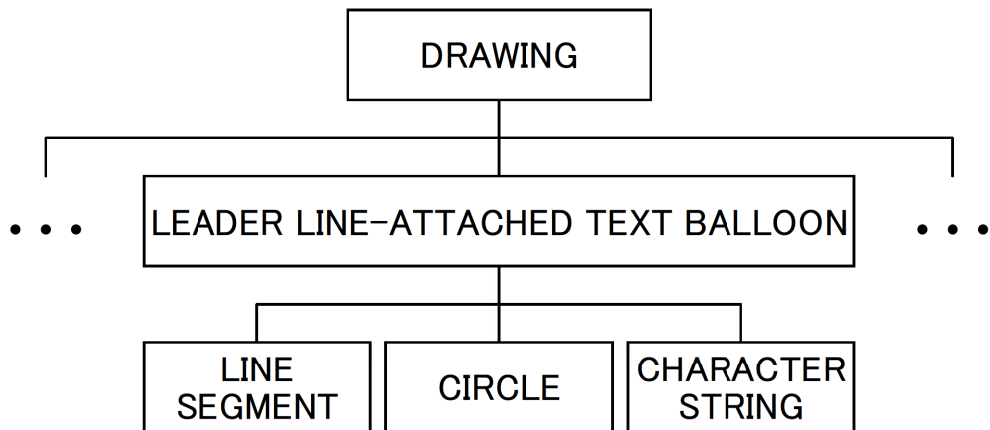
(1)



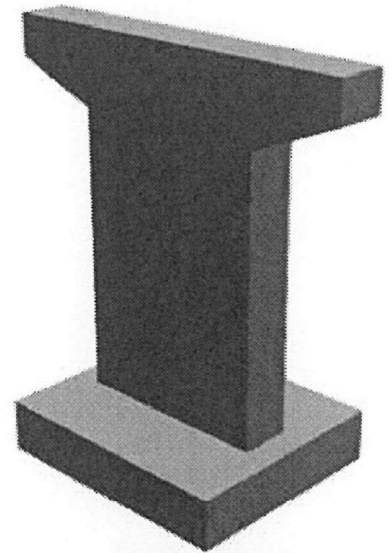
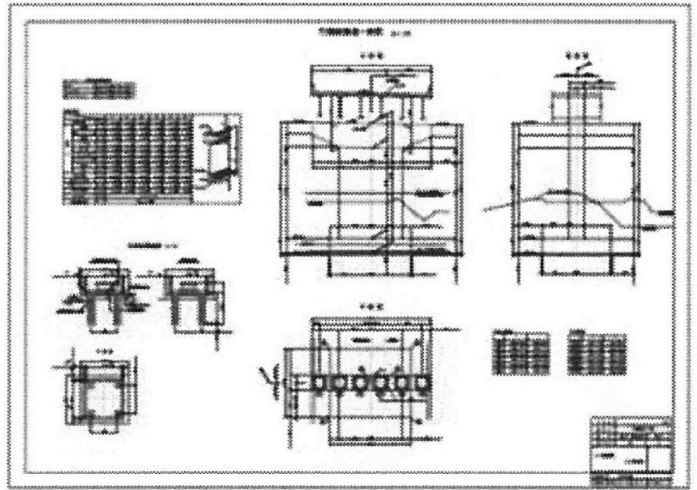
(2)



(3)

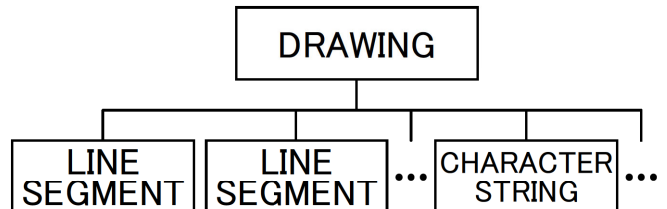


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FIG.20

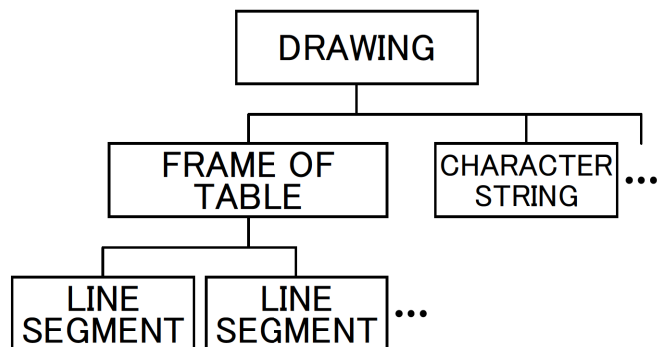


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FIG.21

(1)

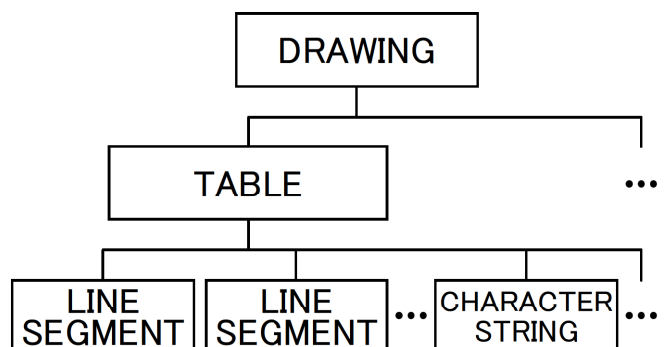


(2)



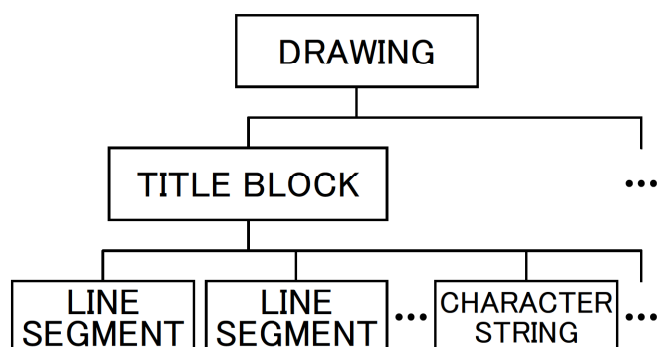
(3)

NAME OF CONSTRUCTION		CONSTRUCTION OF	
DRAWING NAME		PIER STRUCTURE GENERAL DRAWING	
SCALE	INDICATED IN DRAWING	DRAWING NUMBER	
DESIGN DATE	MONTH:		YEAR:
XXX REGIONAL DEVELOPMENT BUREAU YYY OFFICE			



(4)

NAME OF CONSTRUCTION		CONSTRUCTION OF		
DRAWING NAME		PIER STRUCTURE GENERAL DRAWING		
SCALE	INDICATED IN DRAWING	DRAWING NUMBER		
DESIGN DATE	MONTH:		YEAR:	
XXX REGIONAL DEVELOPMENT BUREAU				
YYY OFFICE				



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FIG.22

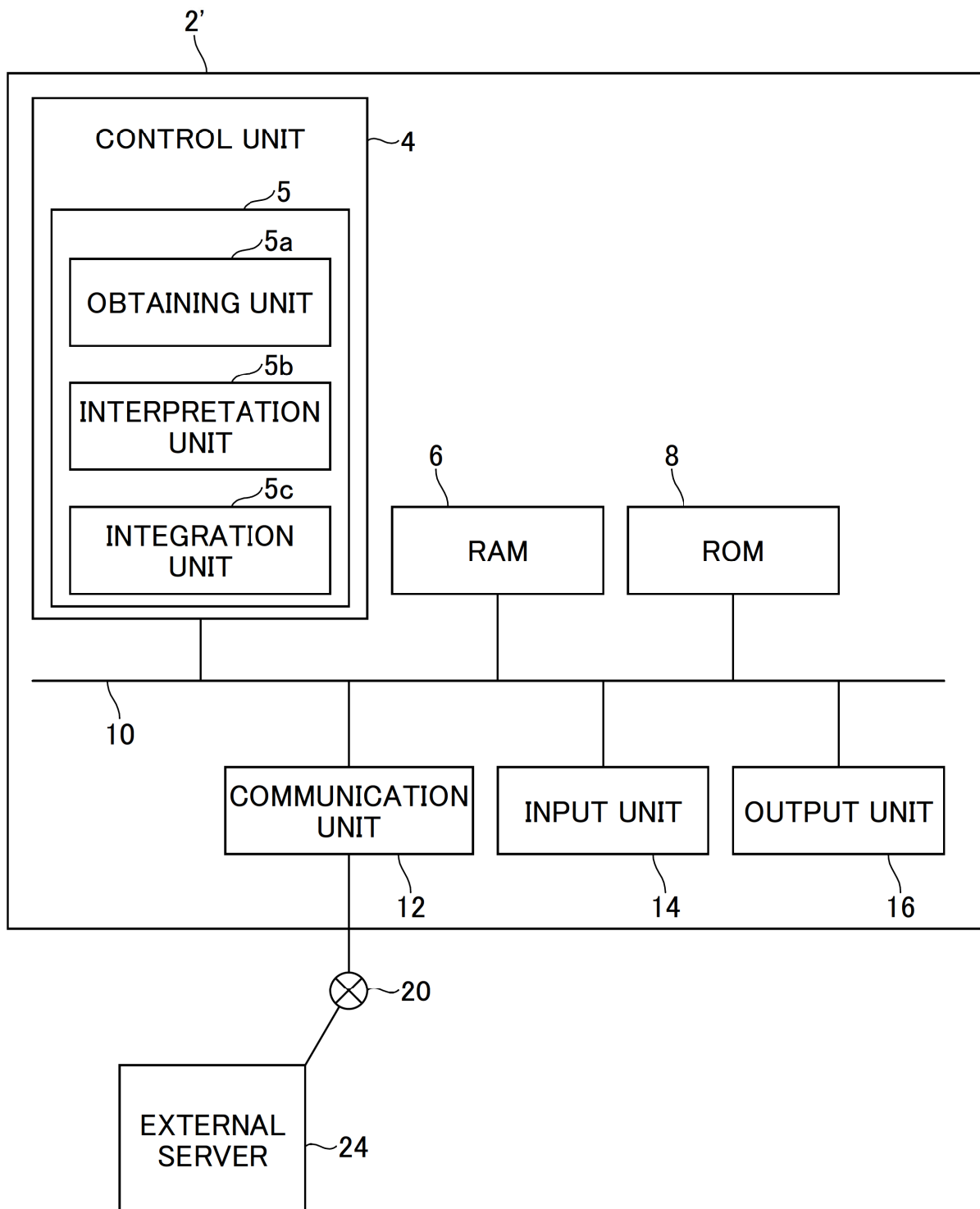


FIG.23A

INDIVIDUAL DEVELOPMENT

$$F(X_1, Y_1)$$

$$F(X_1, Y_2)$$

$$F(X_1, Y_3)$$

...

$$F(X_2, Y_1)$$

$$F(X_2, Y_2)$$

...

$$F(X_i, Y_j)$$

...

FIG.23B

USE OF STANDARD FORMAT

$$F(X_1, Y_1)$$

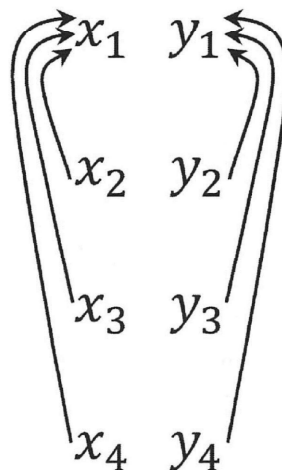
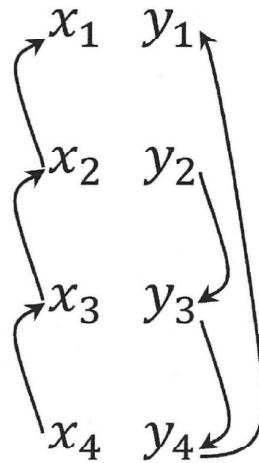


FIG.23C

USE OF AUTOMATIC CONVERSION

$$F(X_1, Y_1)$$



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FIG.24A

STAR-SHAPED NETWORK IN WHICH STANDARD
EXPRESSION FORMAT IS IN THE CENTER

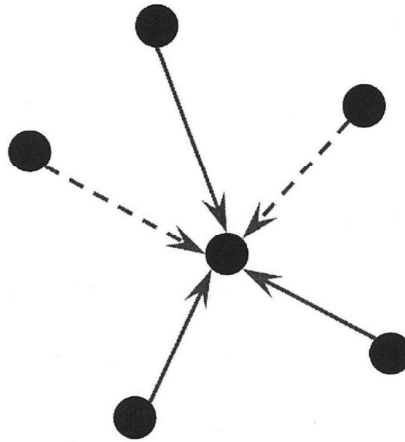


FIG.24B

FREE NETWORK BASED ON AUTOMATIC CONVERSION OF
EXPRESSION FORMATS

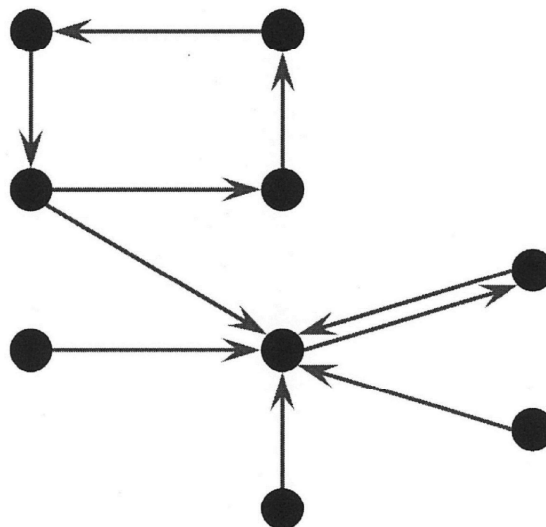


FIG.25A

DIGITAL CITY IN FIXED MANNER BASED ON STANDARD FORMAT

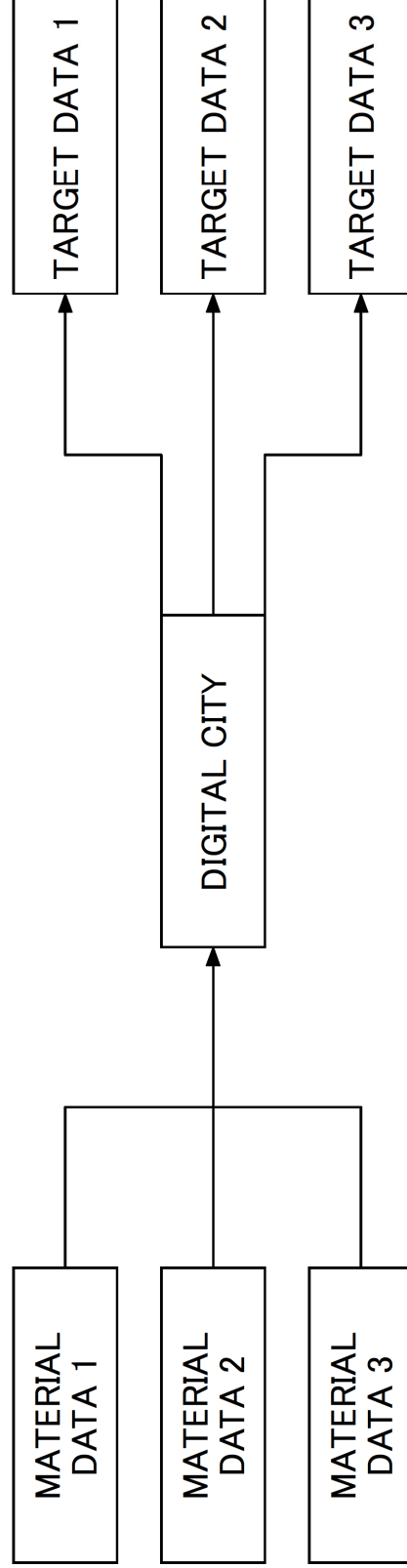
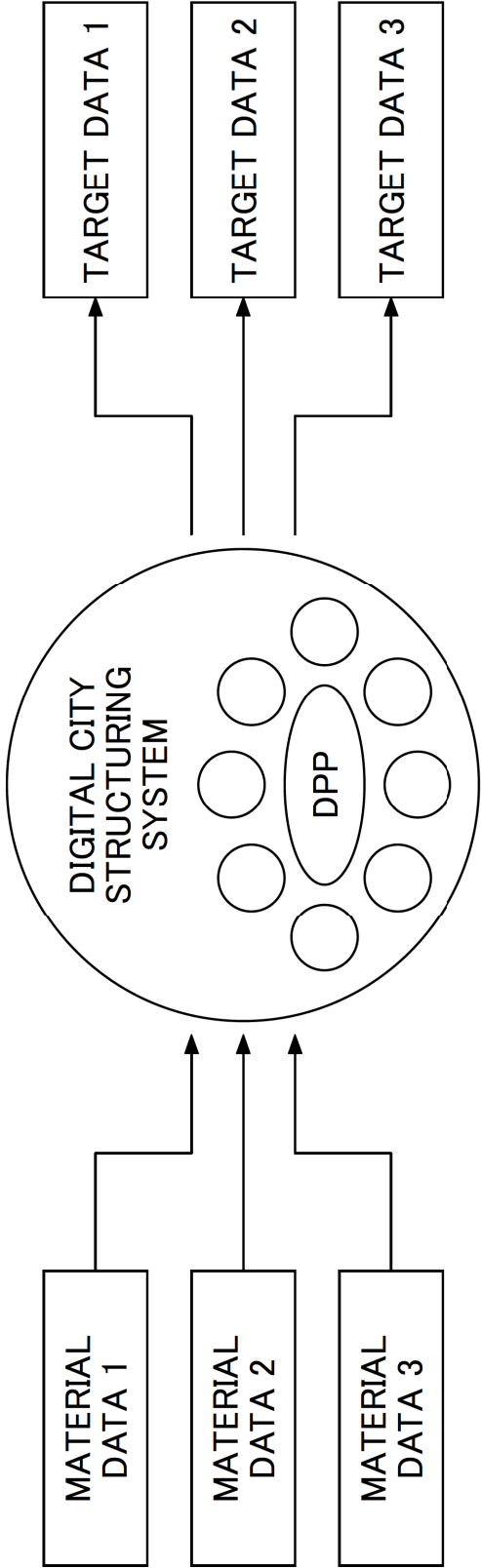
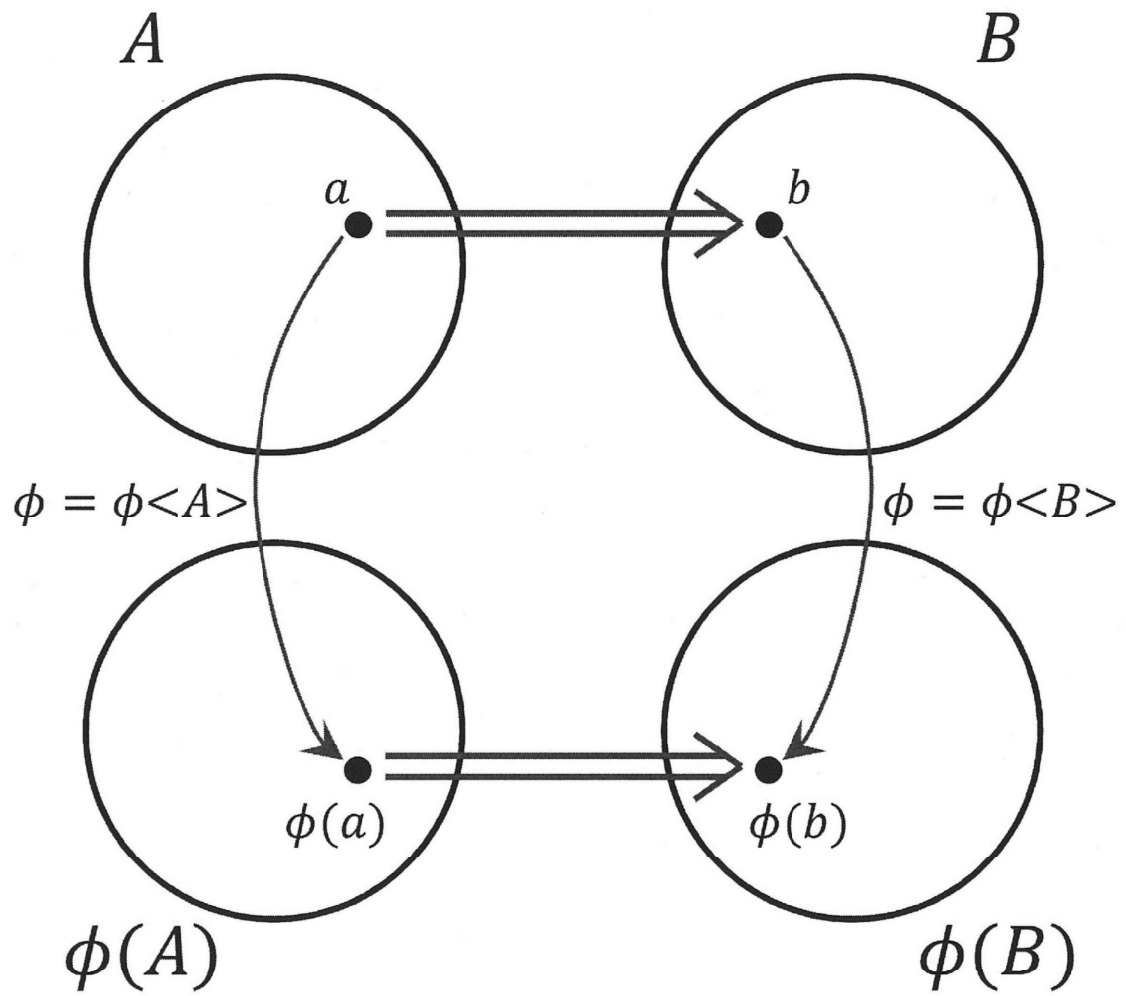


FIG.25B

DIGITAL CITY ESTABLISHING SYSTEM HAVING DEVELOPMENT SUSTAINABILITY



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FIG.26



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FIG.27

```
//  
  
//Load library  
  
//  
library("DXF");  
library("Interpreted");  
  
//  
  
//Read DXF file (obtained as object of DXF class)  
  
//  
data = DXF("006_P2 pier structure general drawing.dxf");  
  
//  
  
//Convert from DXF to ED_FeatureSet (intermediate data of DPP data type)  
  
//Generate ED_FeatureSet_Interpreted (data of ED_FeatureSet in DPP data type attached with analyzed result)  
  
//ED_FeatureSet_Interpreted can be treated as a type of ED_FeatureSet by automatic data conversion technique  
  
//Being able to be treated as a type of ED_FeatureSet means that functions for visualization and the like defined in ED_FeatureSet are usable without any modification.  
  
//  
data = MakeInterpret(data);  
  
//  
  
//Output VTK file  
  
//  
  
//data$PierSideView [0] : Pier side view included in "006_P2 pier structure general drawing.dxf"  
  
//data$PierSideView indicates a portion "PierSideView" of ED_FeatureSet_Interpreted  
  
//Multiple pier side view may be included in the same design drawing, and [0] indicates the first one.  
  
//data$PierPlanView [0] : Pier plan view included in "006_P2 pier structure general drawing.dxf"  
  
//data$PierFrontView [0] : Pier front view included in "006_P2 pier structure general drawing.dxf"  
  
//  
if( data$PierSideView [0] != NA ) OutputVTK( data$PierSideView [0], output_path="tmp1.vtk");  
if( data$PierPlanView [0] != NA ) OutputVTK( data$PierPlanView [0], output_path="tmp2.vtk");  
if( data$PierFrontView [0] != NA ) OutputVTK( data$PierFrontView [0], output_path="tmp3.vtk");  
  
return;
```