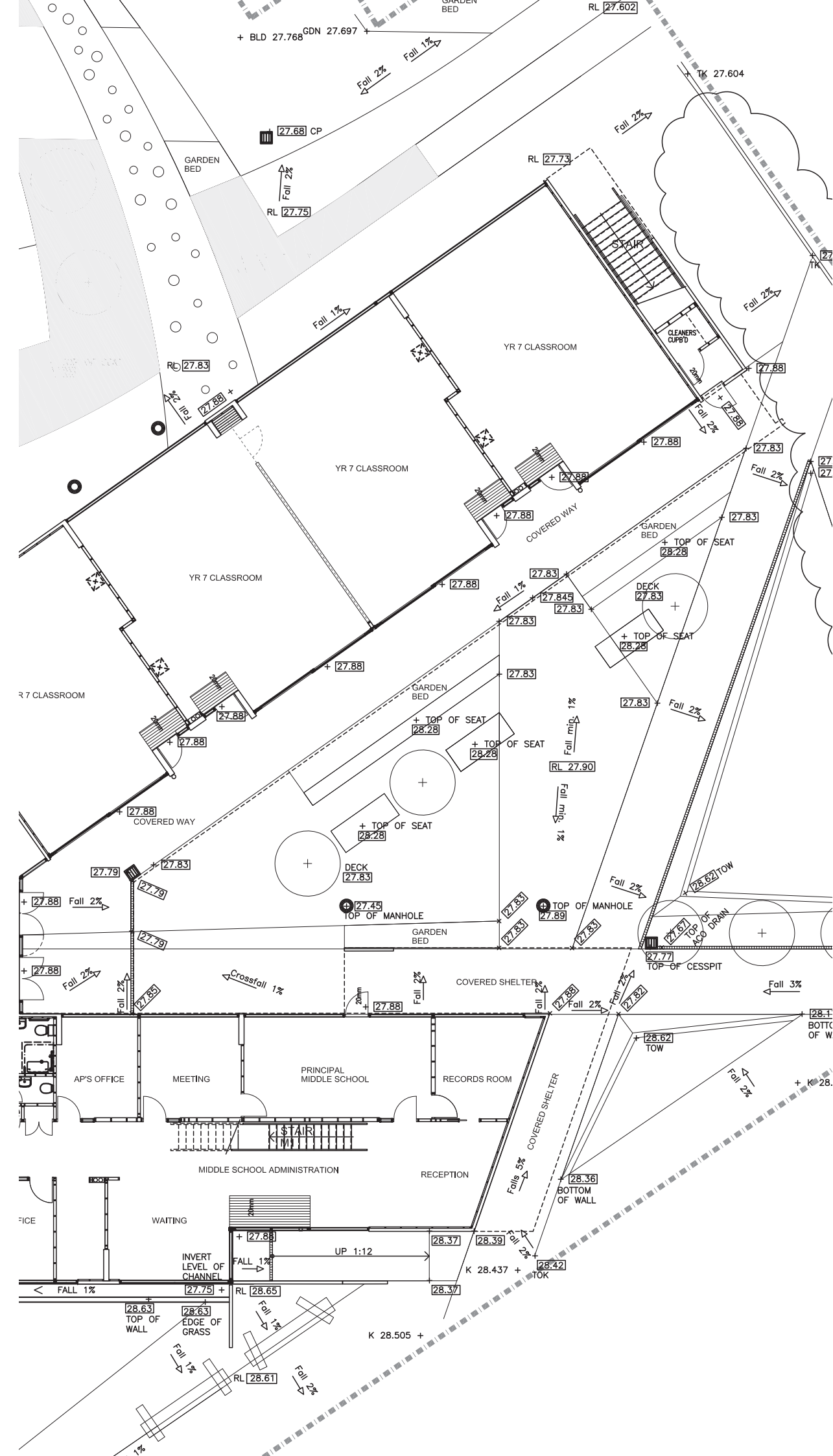


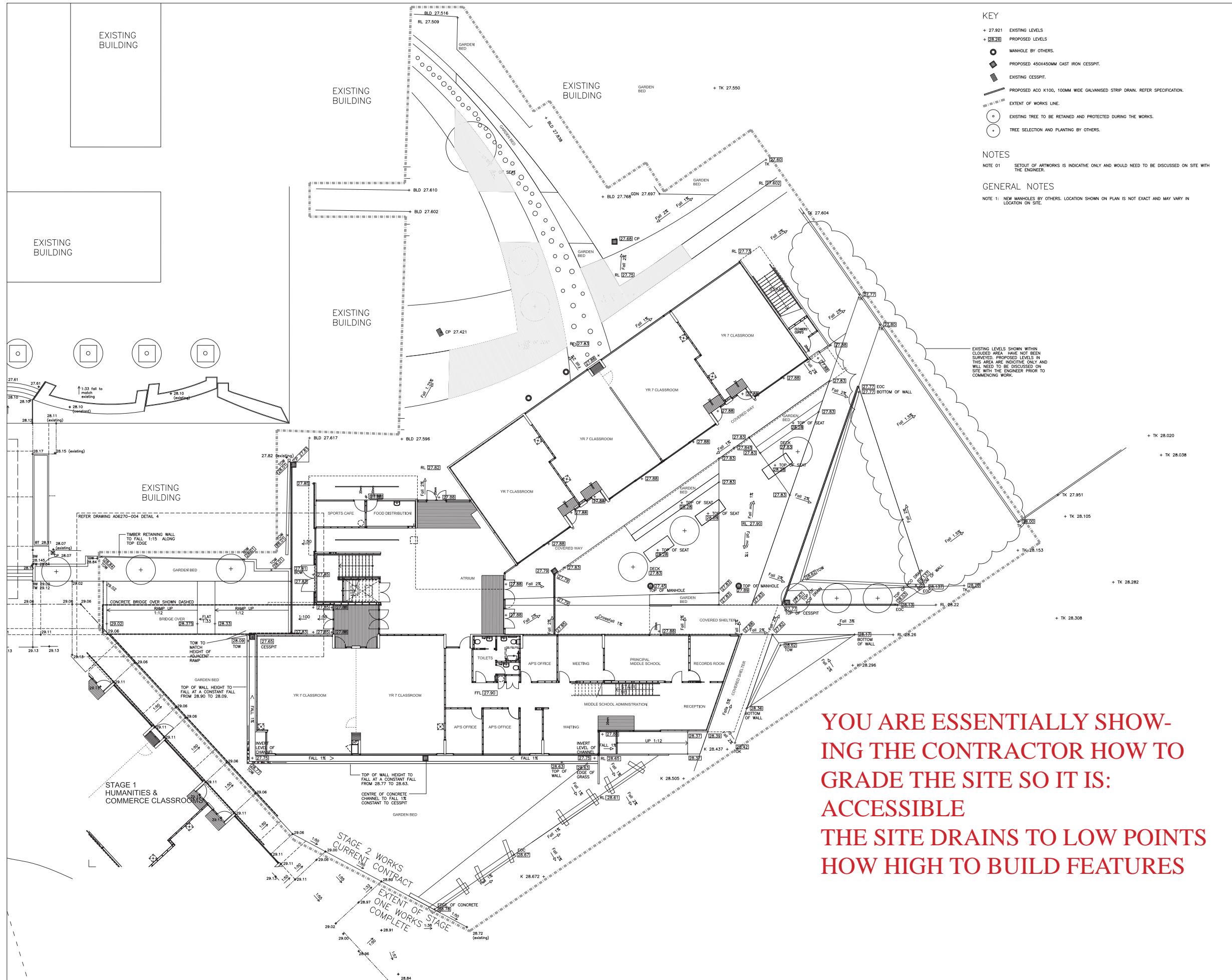
# LEVELS



WORKING IN THE 3RD DIMENSION



# TYPICAL LEVELS PLAN



## Notes

- Contractors to verify all dimensions on site prior to commencing work.
- Contractors are responsible for confirming the location of all underground services on site prior to commencing work.
- Figured dimensions to be taken in preference to scaled dimensions.

- 31.03.08 FOR TENDER

## Revision

Issued for:

TENDER

Design YT  
 Drawn SK  
 Check YT  
 App'd JP

SCALE  
 1:150 @ A1  
 1:300 @ A3  
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Prepared for

KRISTIN SCHOOL










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24 CLASSROOM  
 BLOCK  
 STAGE 2  
 SETOUT AND LEVELS

DRAWING NO. A06270-002  
 REVISION

## KEY

- + 27.921 EXISTING LEVELS
- + 28.26 PROPOSED LEVELS
-  MANHOLE BY OTHERS.
-  PROPOSED 450X450MM CAST IRON CESSPIT.
-  EXISTING CESSPIT.
-  PROPOSED ACO K100, 100MM WIDE GALVANISED STRIP DRAIN. REFER SPECIFICATION.
-  EXTENT OF WORKS LINE.
-  EXISTING TREE TO BE RETAINED AND PROTECTED DURING THE WORKS.
-  TREE SELECTION AND PLANTING BY OTHERS.



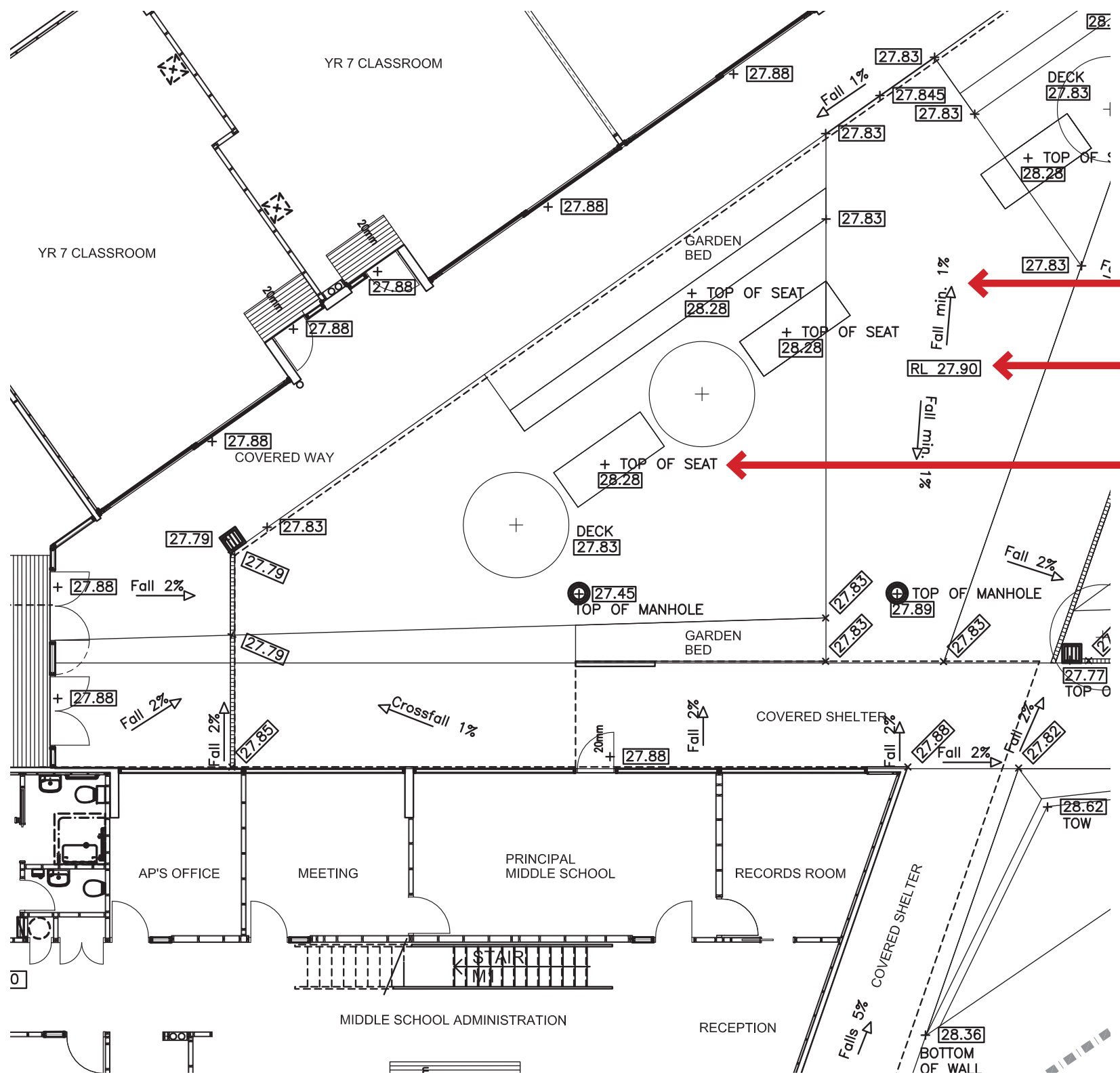
**NOTE HOW THE LEVELS ARE KEYED SO IT IS CLEAR WHAT IS NEW AND WHAT IS EXISTING**

## NOTES

NOTE 01 SETOUT OF ARTWORKS IS INDICATIVE ONLY AND WOULD NEED TO BE DISCUSSED ON SITE WITH THE ENGINEER.

## GENERAL NOTES

NOTE 1: NEW MANHOLES BY OTHERS. LOCATION SHOWN ON PLAN IS NOT EXACT AND MAY VARY IN LOCATION ON SITE.

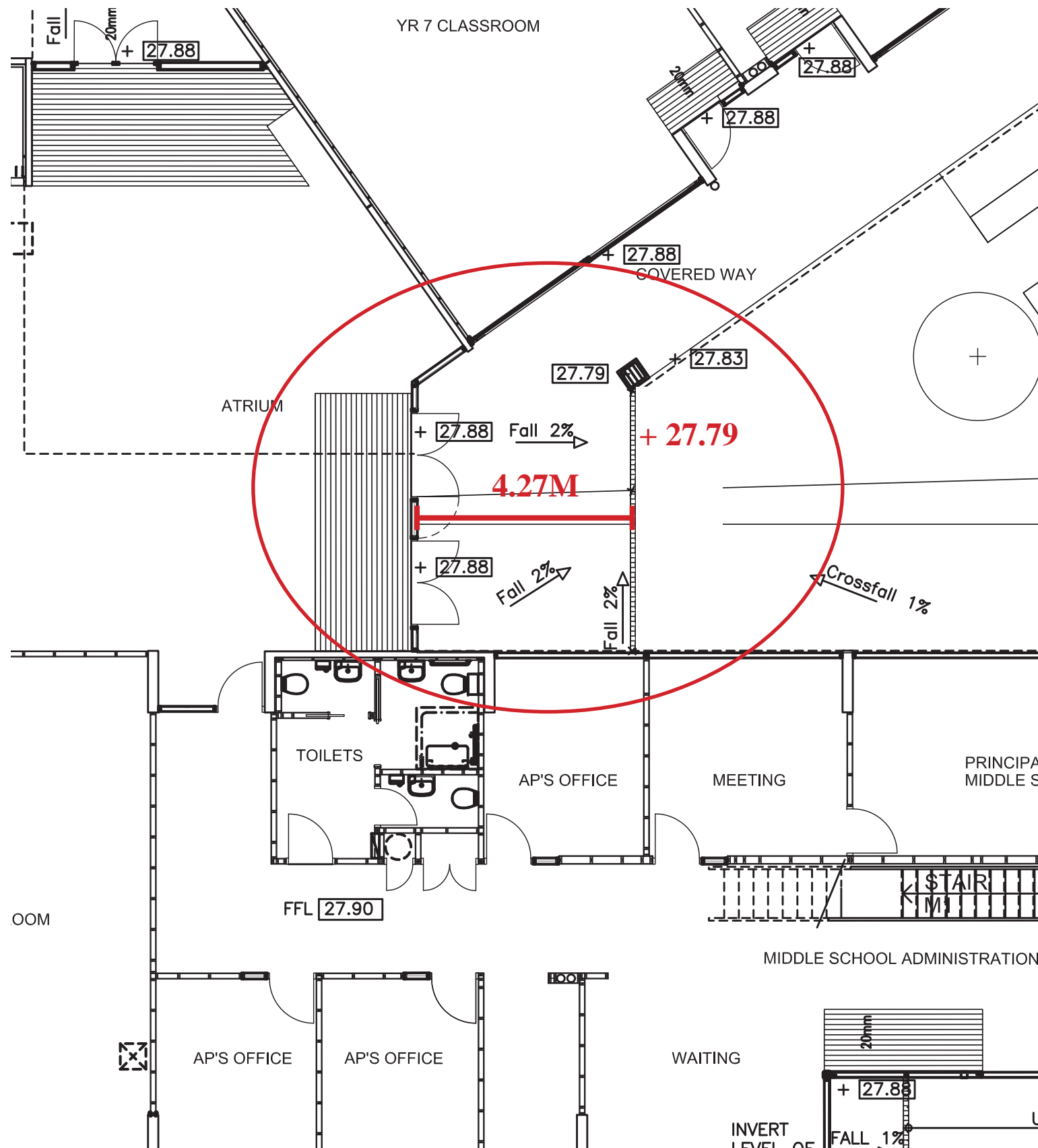


YOU ARE INDICATING THE FALLS

AN RL IS 'RELATIVE LEVEL' - AN APPROXIMATION

YOU ARE INDICATING THE HEIGHT OF AN OBJECT

# EXERCISE



**YOU WANT TO KNOW THE VERTICAL DIFFERENCE?**

**YOU KNOW THE GRADIENT IS 1:50**

**YOU KNOW THE DISTANCE IS 4.27M**

$$1/50 \times 4.27 = 0.0854$$

$$= 0.085\text{M LEVEL CHANGE}$$

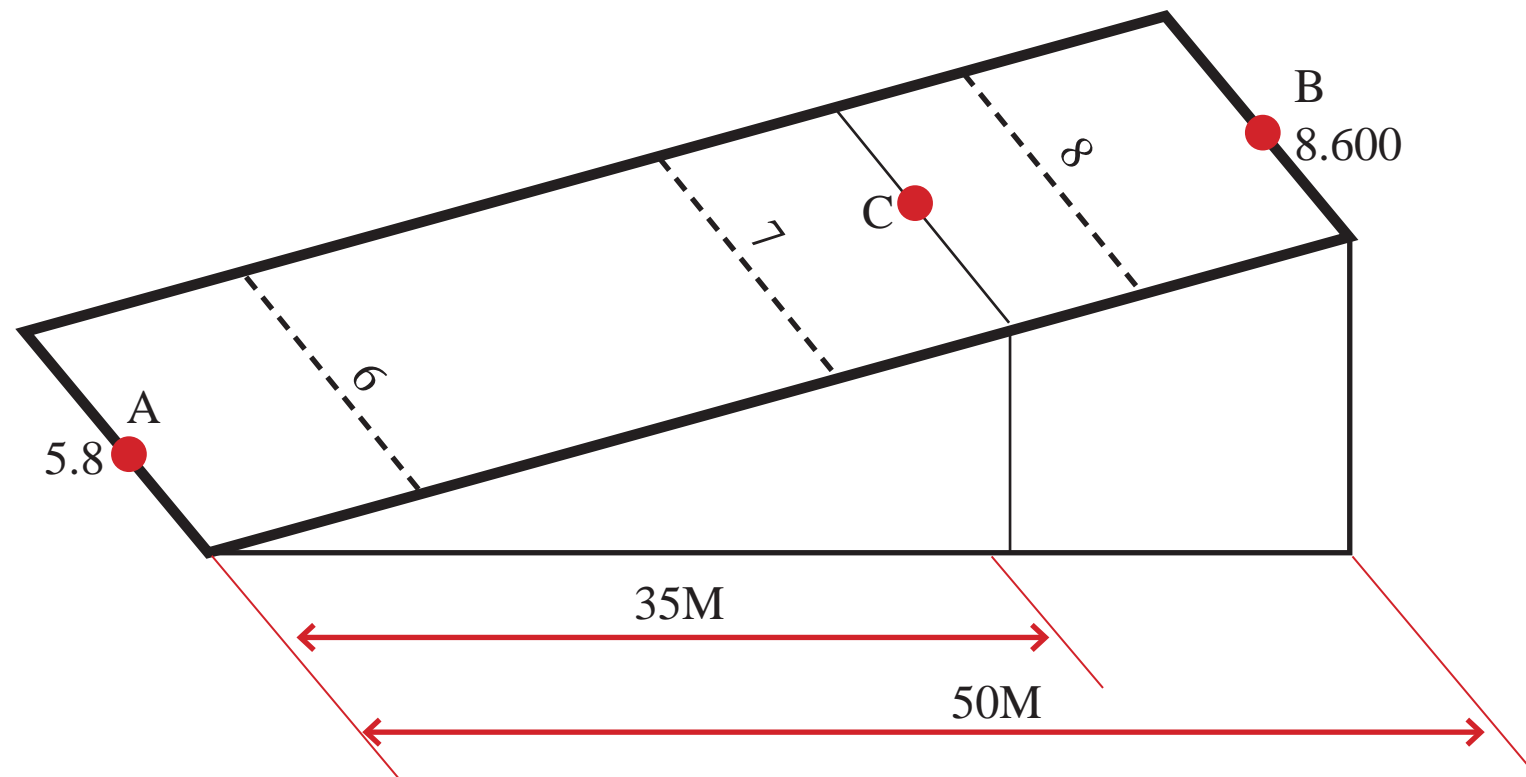
$$\text{SO } 27.88 - 0.085 = 27.79$$

**NOTE:**

**THE BEST WAY TO WORK OUT A LEVELS PLAN IS TO:**

- PRINT YOUR PLAN TO A SCALED A1 AND
- USE A SCALE RULER AND PENCIL AND
- START TO WORK OUT YOUR LEVELS

# EXERCISE



## a) TO FIND THE GRADIENT

$$G = \frac{D}{L}$$

$$= \frac{8.600 - 5.800}{50}$$

$$= \frac{2.800}{50}$$

$$= 0.056 = 5.6\% = 1:17.86$$

## b) TO FIND HORIZONTAL LENGTH (TO LOCATE CONTOUR 7 IN RELATION TO POINT A)

$$L = \frac{D}{G}$$

$$= \frac{7 - 5.800}{0.056}$$

$$= \frac{1.200}{0.056}$$

$$= 21.43M$$

## c) TO FIND ELEVATION OF C

D = DIFFERENCE IN ELEVATION:

$$= L \times G$$

$$= 35 \times 0.056$$

$$= 1.960$$

$$= 5.800 + 1.960$$

ELEVATION OF C IS: 7.760

G = GRADIENT  
D = DISTANCE  
L = LENGTH