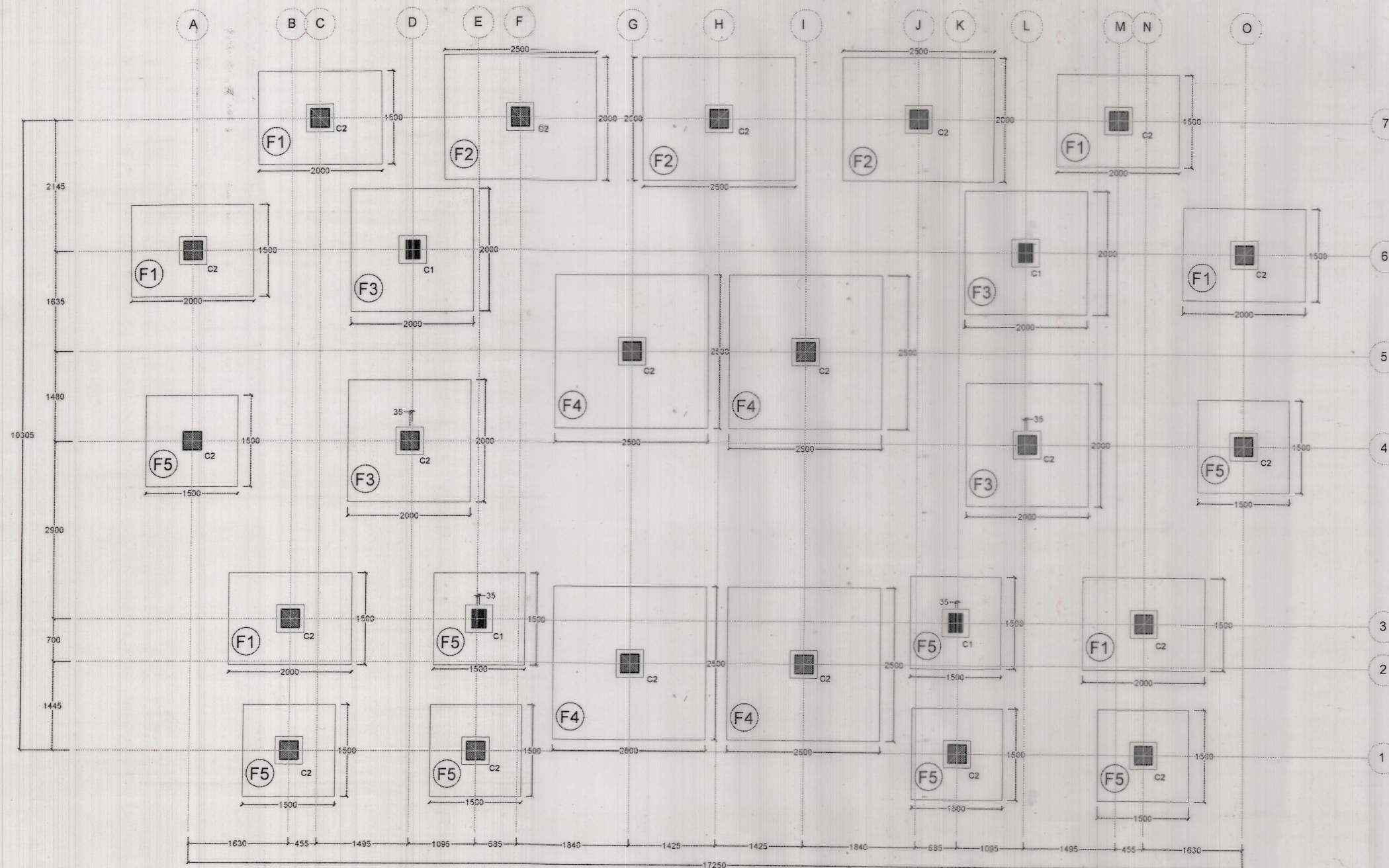


FOUNDATION PLAN

N.R.H.Q.E. PLAN NO. : HQ/09/12/2019

TYPE PLAN NO. : Q-150/2019

CANCEL TYPE PLAN NO. : Q-142



GENERAL NOTES:

- All dimensions are in millimeters unless otherwise specified.
- All dimensions should be followed as per approved GAD.
- Only written dimensions are to be followed neither the bars shall be counted nor the dimensions scaled from the drg.
- All R.C.C. Work shall be in nominal mix concrete M25 as per IS: 456-2000 code of practice for plain and reinforced concrete.
- Concreting shall be done in accordance with the specifications laid down in IS: 456-2000.
- Proper curing of concrete to acquire hardness, strength and other properties essential for satisfactory service shall be ensured.
- All concrete shall be mechanically mixed and vibrated.
- Cover to reinforcement shall not be less than that shown on the plan or as specified in IS: 456-2000.
- High yield Fe500 bars shall conform to IS: 1786-2008.
- Particular care must be taken to ensure that
 - no sag occurs in the reinforcing bars during construction
 - stirrups are effectively tied with wire to the main reinforcing bars.
 - Length of splice where bars obtained are of shorter length, shall not be less than 60 times the diameter of such bars.
- Splice shall not be given at supports or at centre of span. These shall be preferably being located at quarter span points.
- The number of bars shall be decided from the spacing mentioned on the drawing and not by counting span points.
- All R.C.C work must be carried out under the personal supervision of an experienced civil engineer.
- For R.C.C details of lintels and chhajjas over doors and windows not shown in this drawing reference may be made to N.R.H.Q.E. Type plan no. Q-138.
- Expansion gaps to be filled up with bitumen/expansion board.
- The structure has been designed for G+1 storey.
- Assumed safe bearing capacity of soil is 10 t/m².
- In case of soil at site is not safe for the assumed soil Pressure, the foundation should be suitably altered under advice to the Head Quarters Office.
- Clear cover of outer layer reinforcement Shall be as follows.
Foundation = 50 mm. (b) Column = 40 mm. (c) Beam = 25 mm. Or Dia of bar whichever is more (d) Slab = 20 mm. (e) Waist slab = 20 mm.

[FOUNDATION] [G+1, SBC=10T/SqM]

- Layout of building shall be given from the arch. drg.
- The design data for foundation has been taken from soil test report provided by the dept./ client.
- For foundation of boundary wall referred to N.R.H.Q.E. Plan No. HQ/21/05-2002 Type Plan No. F-72

[COLUMN]

- Ties in portion of column & beam junction shall be same as end zone.
- Over laps are allowed only at middle zone of the columns.
- Not more than 50 % of bars shall be lapped at section and overlapped should be staggered.
- Vertical bars of rcc column at top slab shall be extended upto top of beam & bent into beam by development length.

[BEAM]

- For location of beams refer slab plan.
- Where two layers of reinf. bars are to be provided, spacer bar are to be provided at spacing of 1000 mm. max. and the dia. of the spacer bar shall be higher of dia. of longitudinal bars or 25 mm. Maximum 3 nos. of bars shall be provided in a layer of 230 wide beam.
- At the junction of two different number of beams the higher at the support shall be adopted.
- Over lap in top bars shall be near mid span & in bottom bars shall be near support or at support.
- The depth of beam/ lintel monolithic with slab as specified in schedule shall be inclusive of slab thickness unless otherwise specified.
- The first stirrup in beam shall be placed at 50 mm. away from the face of support (column, beam, wall)

[SLAB]

- For slab reinforcement refer table-1,2&4 (detail of slab reinforcement).
- Slab spanning either side of beams/walls, alternate bottom bars shall be curtailed at 1/7 of span and extra top bars shall be extended till 1/3 of span either side.
- Slab terminating on beams/walls, alternate bottom bars shall be cranked at 1/7 and extended till end of beams/walls.
- Extra bar of same diameter of slab bars shall be provided at top face in between two cranked bars as shown in typical section of slab.
- The cross reinforcement/ temperature reinforcement below top reinf. of slab i.e. #8@300/c is to be provided just below the main top steel as shown in typical section of slab.
- The first main bar of slab shall be placed at 80 mm or half the spacing specified whichever is less from the face of support.

V.K. TRIPATHI
(CE/P&D)

RANDHIR SINGH
(XEN/P&D)

K.P. DANGI
(CHECKED BY SSE/DOE)

BIBHA CHANDRA
(DESIGNED BY SSE/DOE)

GURPREET SINGH
(PREPARED BY JE/DRG.)

NORTHERN RAILWAY

Drawing Description

STAFF QUARTER TYPE - III

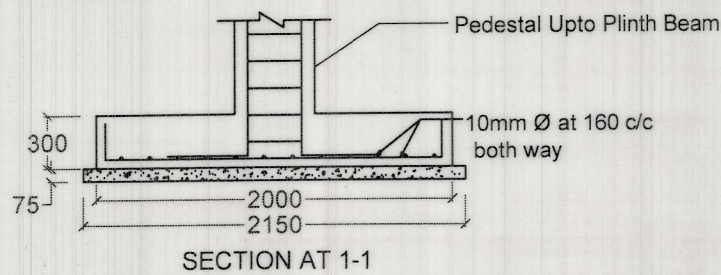
Drawing Description

Foundation Plan of F1, F2, F3, F4
and F5

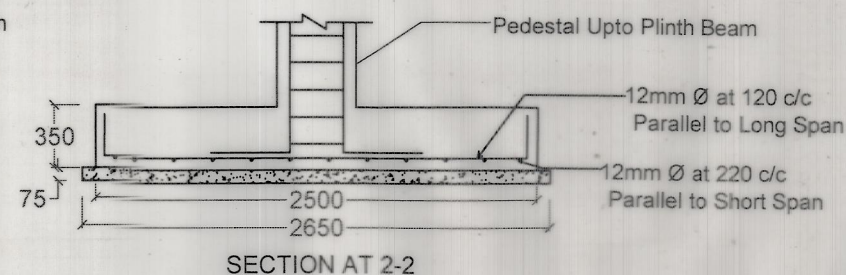
SCALE : NTS @A3

SHEET NO. 01 OF 09

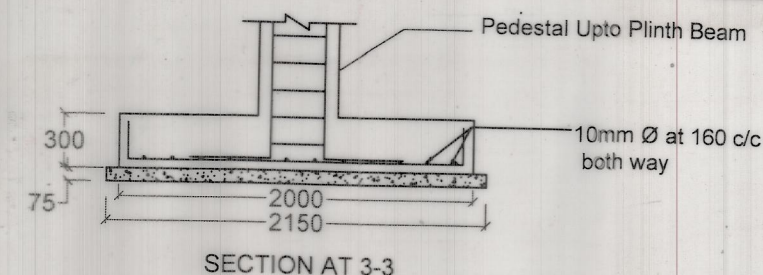
N.R.H.Q.E. PLAN NO. HQ/09/12/2019



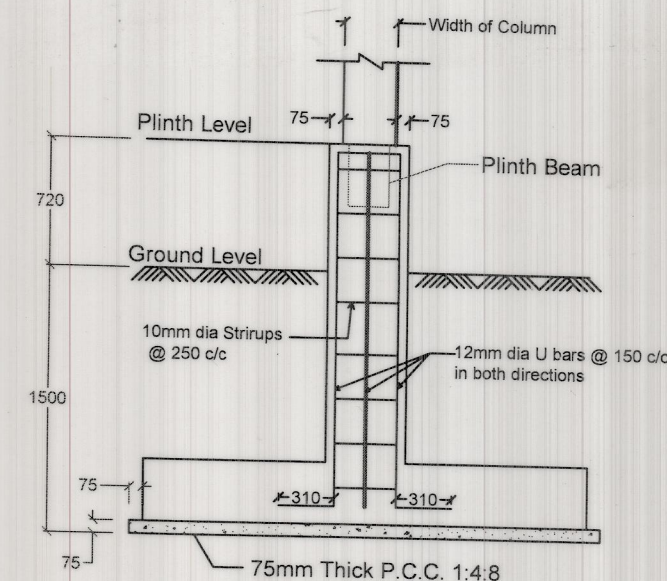
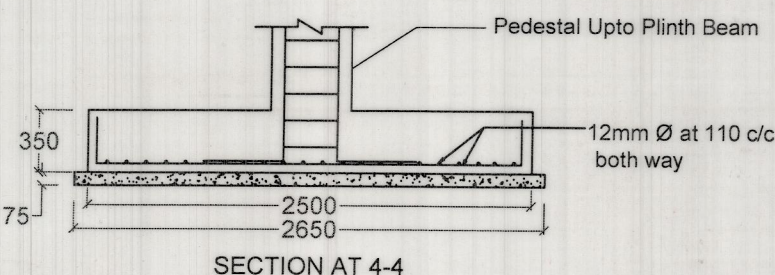
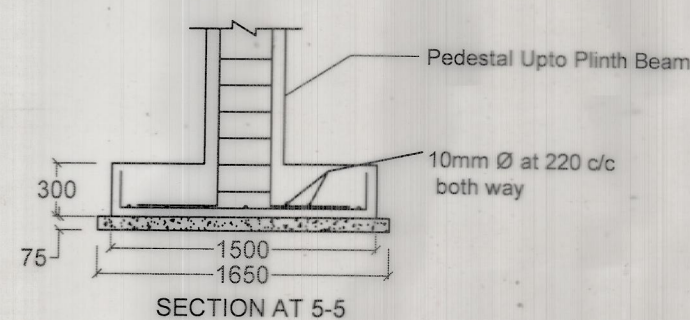
FOUNDATION - F1 (2000 x 1500 x 300)



FOUNDATION - F2 (2500 x 2000 x 350)



FOUNDATION - F3 (2000 x 2000 x 300)

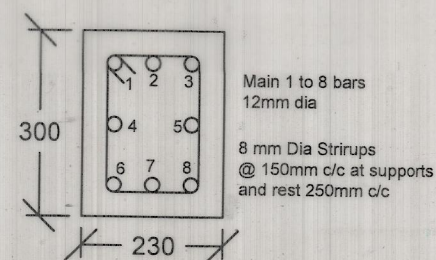
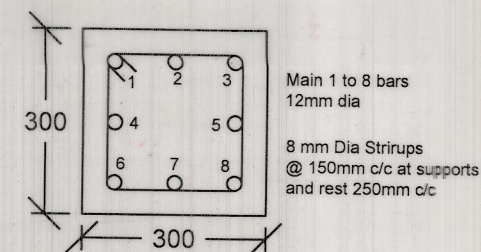


FOUNDATION - F5 (1500 x 1500 x 300)

REINFORCEMENT SCHEDULE FOR FOOTINGS

Footing Name	Size of Footing	Parallel to Short Span	Parallel to Long Span
F1	2000 x 1500 x 300	10mm Ø at 160 c/c	10mm Ø at 160 c/c
F2	2500 x 2000 x 300	12mm Ø at 220 c/c	12mm Ø at 120 c/c
F3	2000 x 2000 x 300	10mm Ø at 160 c/c	10mm Ø at 160 c/c
F4	2500 x 2500 x 350	12mm Ø at 110 c/c	12mm Ø at 110 c/c
F5	1500 x 1500 x 300	10mm Ø at 220 c/c	10mm Ø at 220 c/c

Column Detail



V.K. TRIPATHI (CE/P&D)	23/7/2020
RANDHIR SINGH (XEN/P&D)	
K.P. DANGI (CHECKED BY SSE/DOE)	
BIBHA CHANDRA (DESIGNED BY SSE/DOE)	@handra
GURPREET SINGH (PREPARED BY JE/DRG.)	

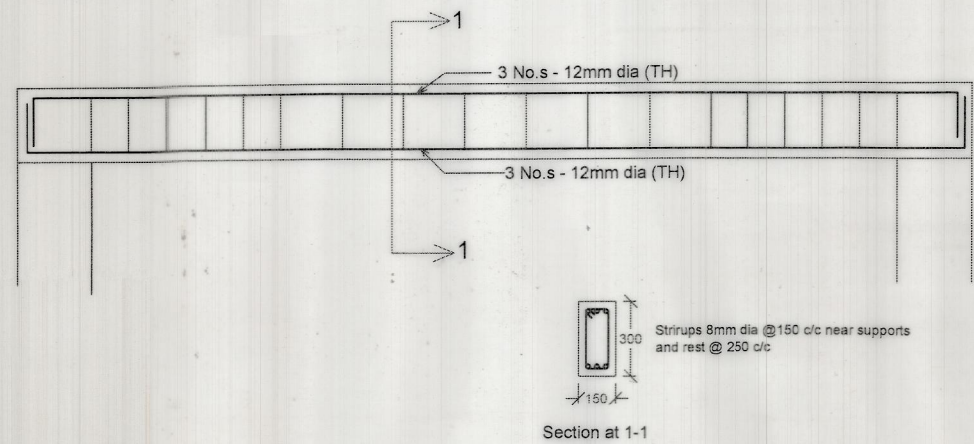
NORTHERN RAILWAY

Drawing Description
 STAFF QUARTER TYPE - III

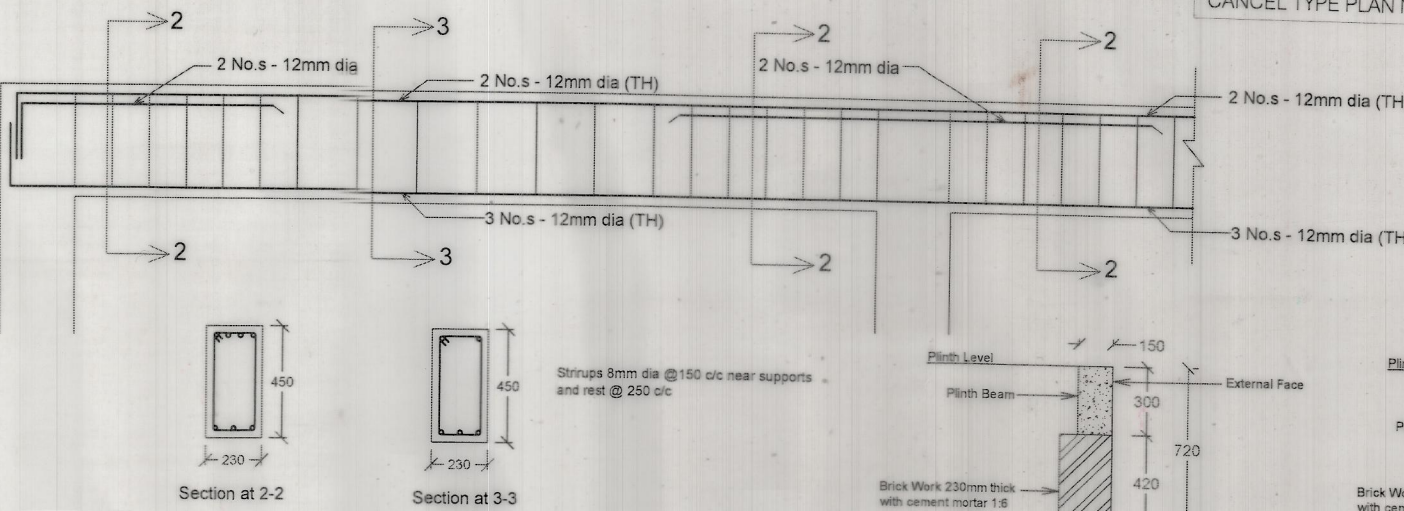
Drawing Description
 Reinforcement Detail of Columns
 and Column Foundations

SCALE : NTS @A3 SHEET NO. 02 OF 09
 N.R.H.Q.E. PLAN NO. HQ/09/12/2019

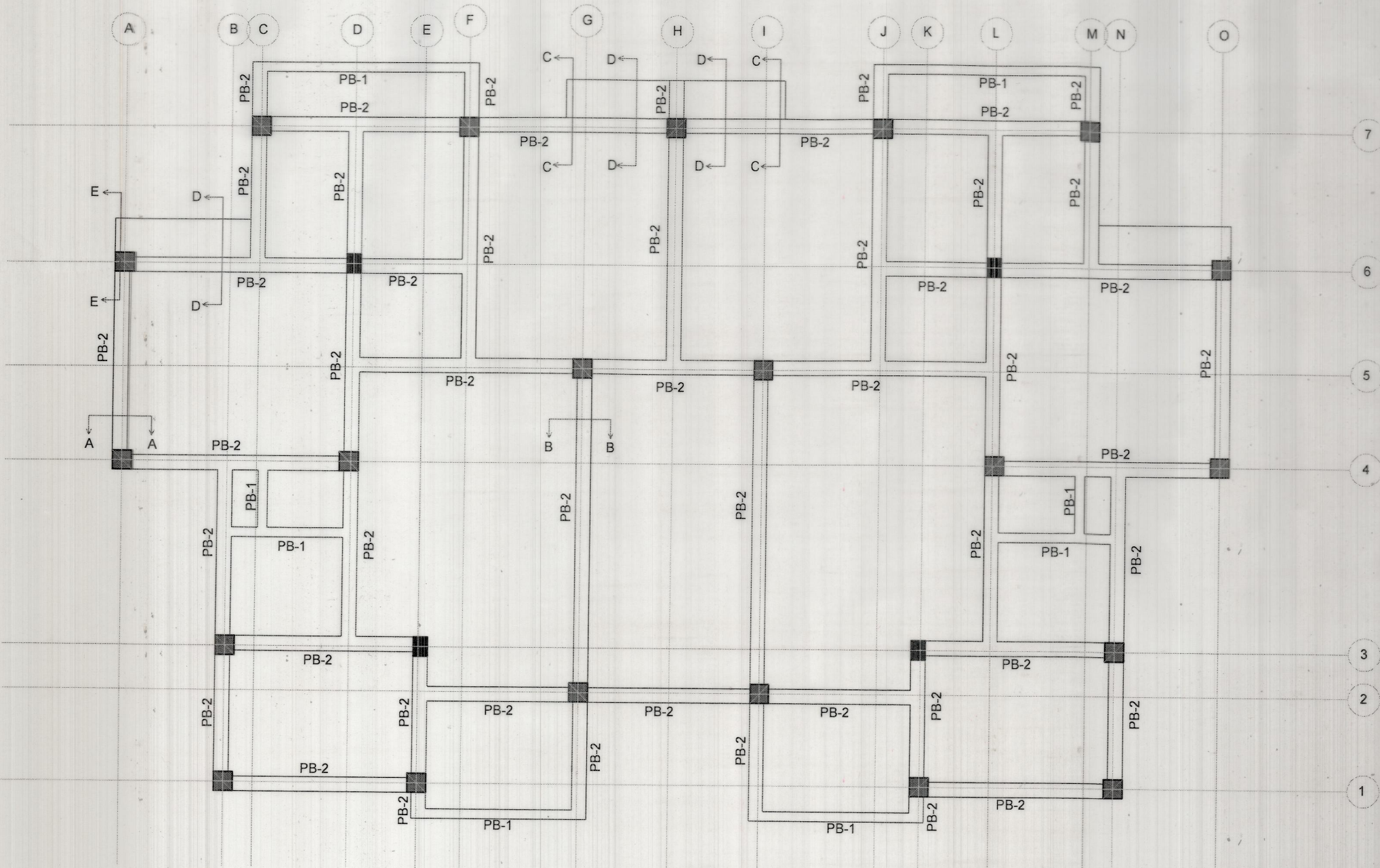
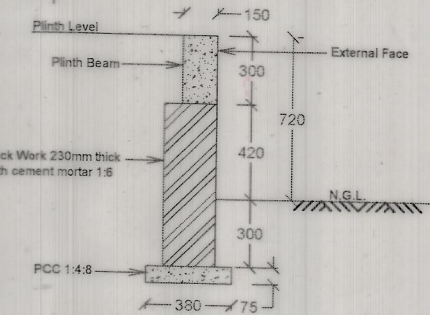
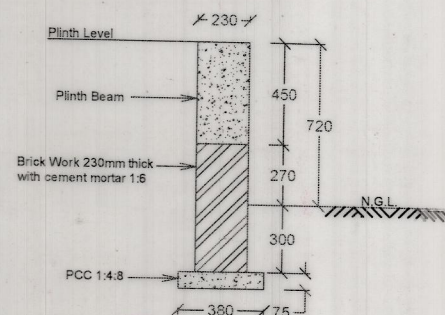
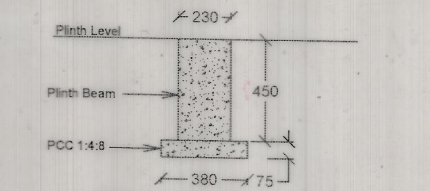
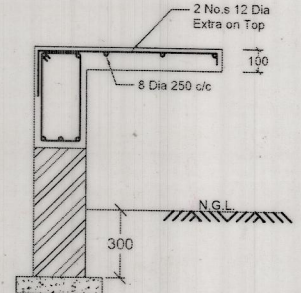
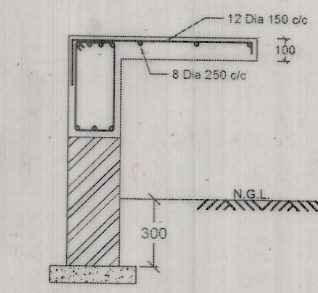
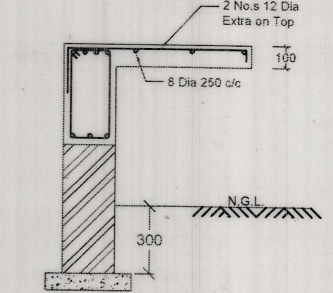
PB-1



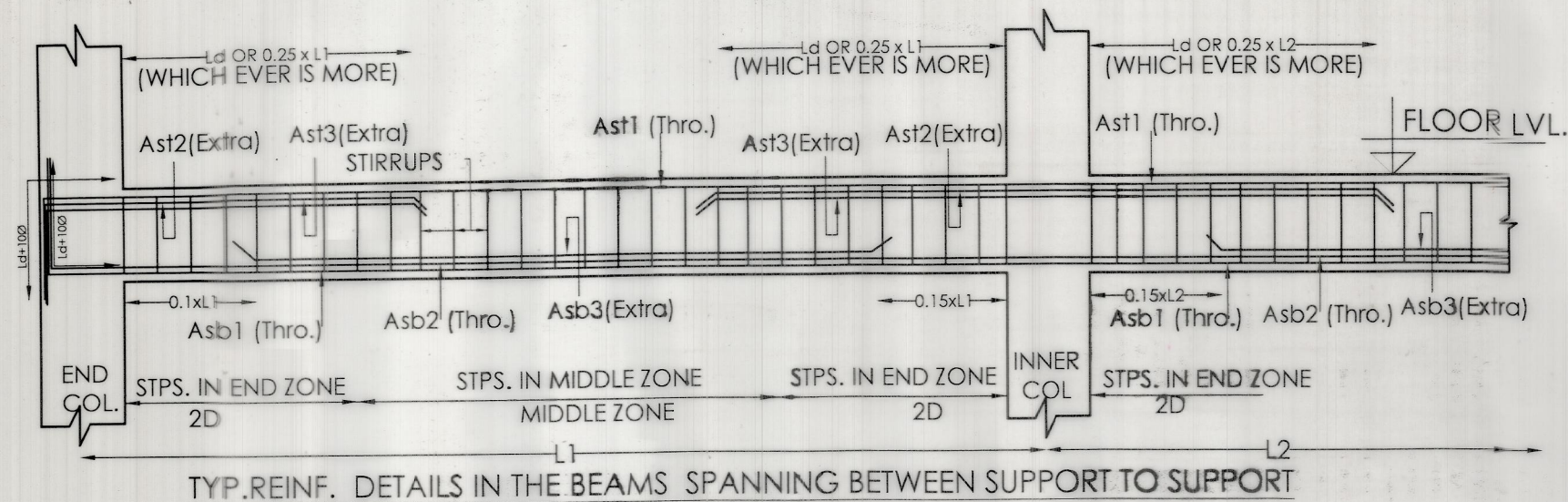
PB-2



N.R.H.Q.E. PLAN NO. : HQ/09/12/2019
TYPE PLAN NO. : Q-150/2019
CANCEL TYPE PLAN NO. : Q-142

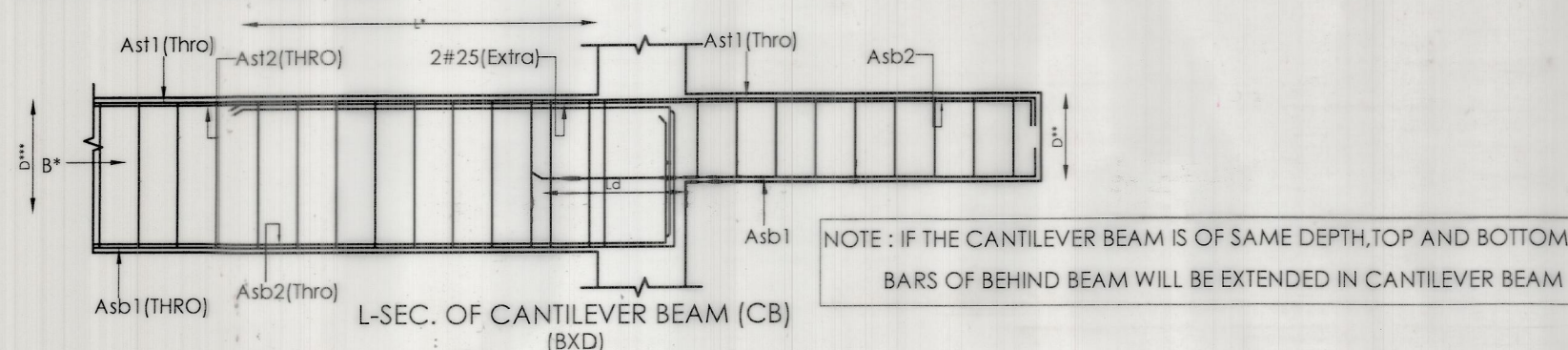


V.K. TRIPATHI (CE/P&D)	
RANDHIR SINGH (XEN/P&D)	
K.P. DANGI (CHECKED BY SSE/DOE)	
BIBHA CHANDRA (DESIGNED BY SSE/DOE)	
GURPREET SINGH (PREPARED BY JE/DRG.)	
NORTHERN RAILWAY	
Drawing Description	
STAFF QUARTER TYPE - III	
Drawing Description	
Reinforcement Detail of Plinth Beam	
SCALE : NTS @A3	SHEET NO. 03 OF 09
N.R.H.Q.E. PLAN NO. HQ/09/12/2019	

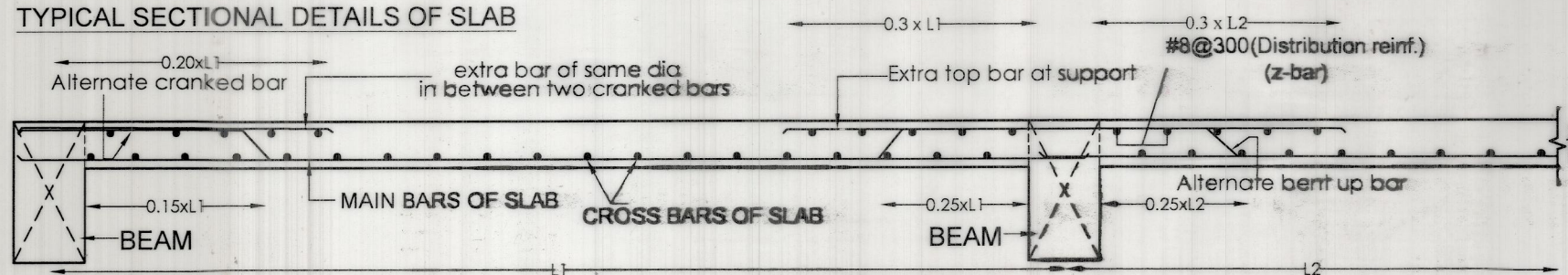


NOTE : AT THE JUNCTION OF TWO DIFF. NUMBER OF BEAMS THE HIGHER REINFORCEMENT AT THE SUPPORT SHALL BE ADOPTED.

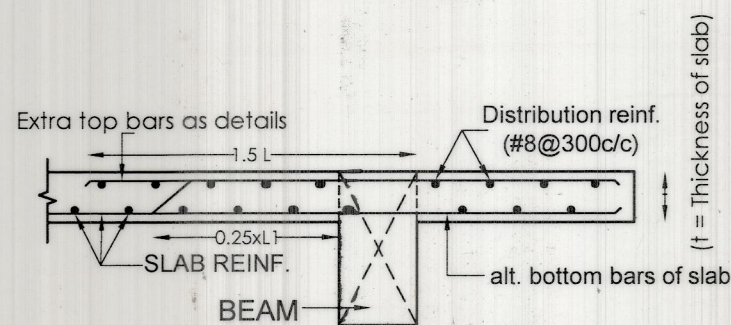
DETAILS OF CANTILEVER BEAMS



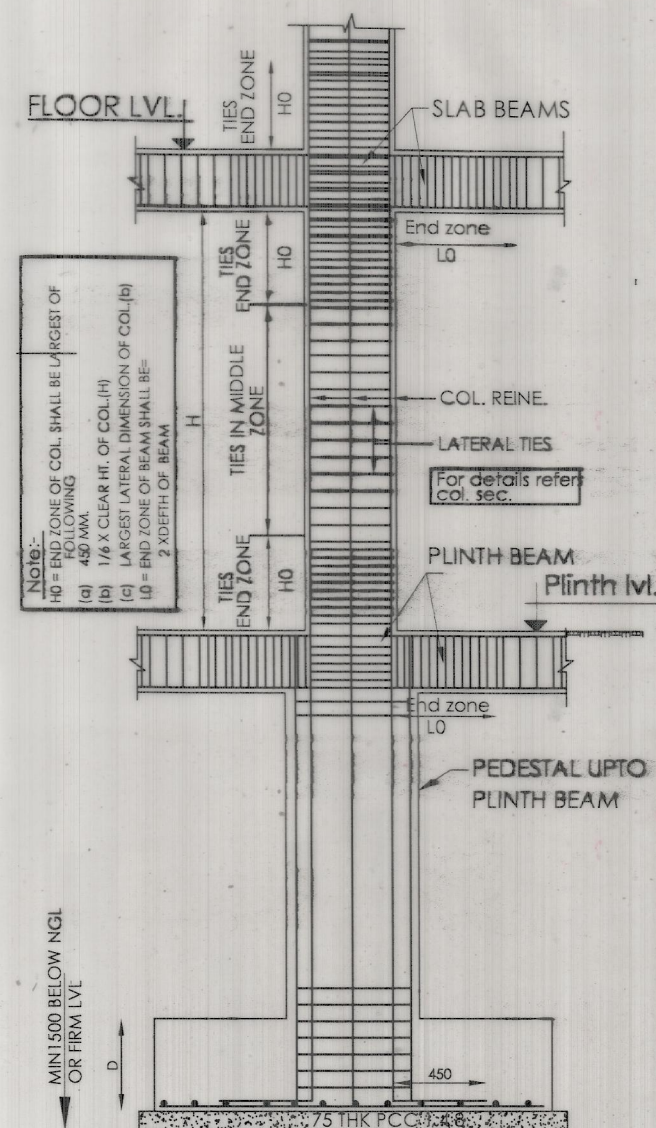
TYPICAL SECTIONAL DETAILS OF SLAB



NOTE:- AT THE JUNCTION OF TWO DIFF. NUMBER OF SLABS THE HIGHER REINFORCEMENT AT THE SUPPORT (EXTRA TOP) SHALL BE ADOPTED



NOTE - IF BALCONY/SLAB PROJECTIONS [L]



TYPICAL COLUMN SECTION

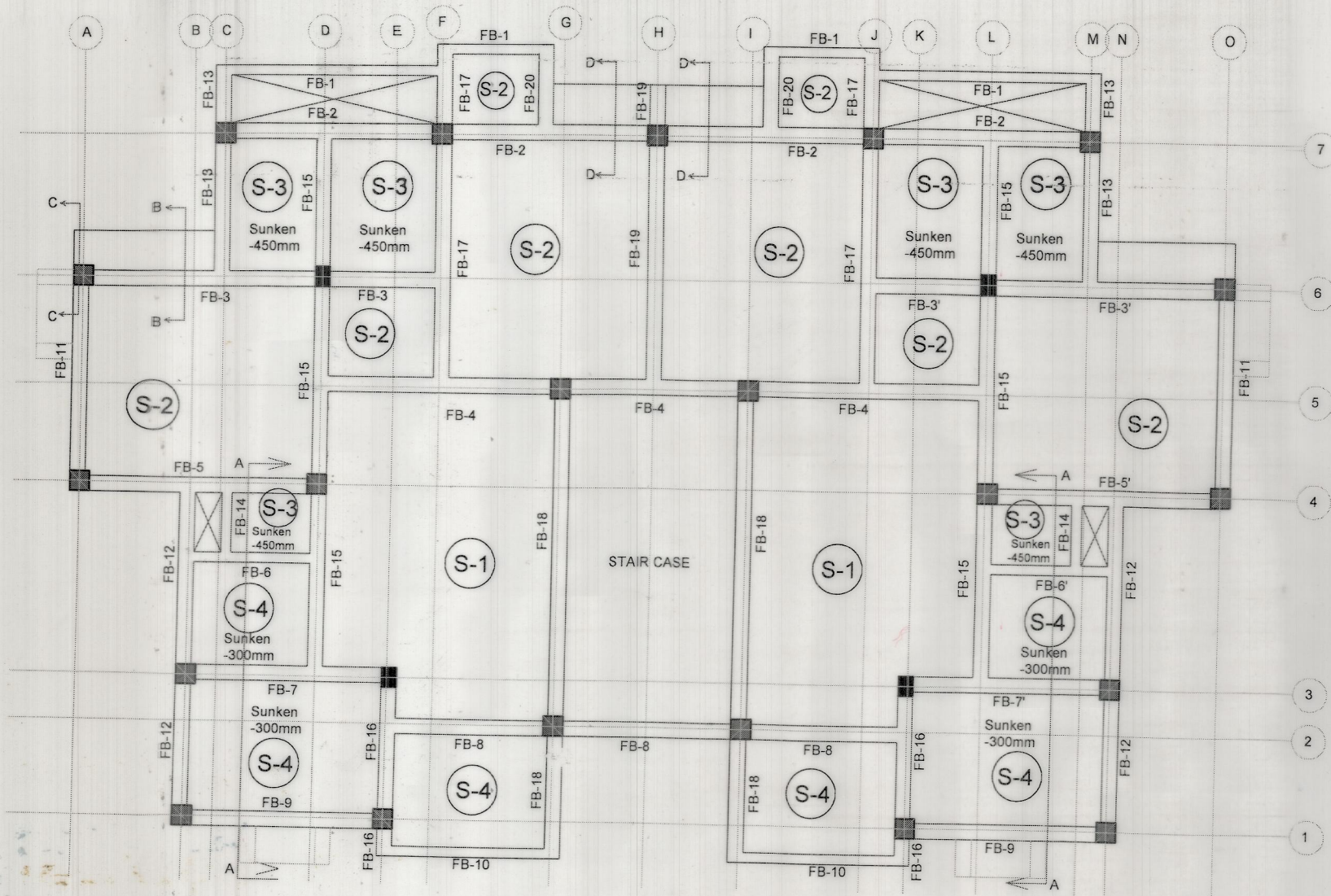
N.R.H.Q.E. PLAN NO. : HQ/09/12/2019

TYPE PLAN NO. : Q-150/2019

CANCEL TYPE PLAN NO. : Q-142

Do not Scale this drawing.
This drawing is to be read with all related information.
All Dimensions to be verified on site by Main Contractor before the commencement of any quarter drawing or work whatsoever.

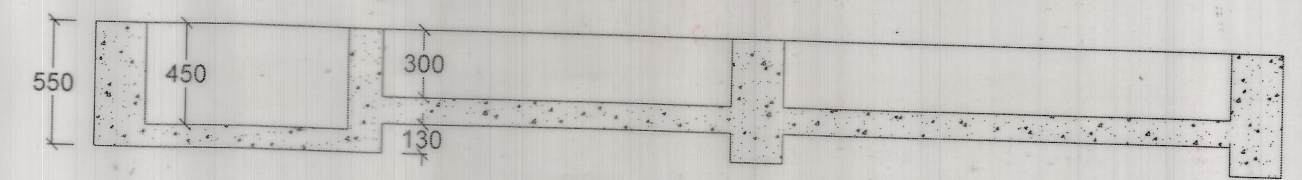
V.K. TRIPATHI (CE/ P&D)	22/7/2020
RANDHIR SINGH (XEN/P&D)	18/12/19
K.P. DANGI (CHECKED BY SSE/DOE)	
BIBHA CHANDRA (DESIGNED BY SSE/DOE)	@bandra
RAKESH KUMAR (PREPARED BY JE/D&D)	Rakesh
NORTHERN RAILWAY	
Drawing Description STAFF QUARTER TYPE - III	
Drawing Description Typical Details Of Beam, Column and Slab	
SCALE : NTS @A3	SHEET NO. 04 OF 09
N.R.H.Q.E. PLAN NO. HQ/09/12/2019	



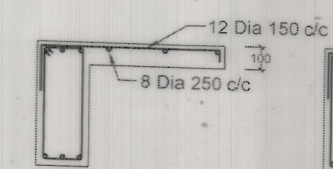
FLOOR BEAMS AND SLAB PLAN

Reinforcement Detail of Slab					
Slab Name	Thickness of Slab in mm	Main Bars	Cross Bars	Extra Bars at Top at Supports	
		Parallel to Short Span	Parallel to Long Span	Parallel to Short Span	Parallel to Long Span
S-1	120	8 dia 150 c/c *	8 dia 200 c/c *	8 dia 300 c/c	8 dia 400 c/c
S-2	120	8 dia 150 c/c *	8 dia 150 c/c *	8 dia 300 c/c	8 dia 300 c/c
S-3	100	8 dia 200 c/c *	8 dia 200 c/c *	8 dia 400 c/c	8 dia 400 c/c
S-4	120	8 dia 200 c/c *	8 dia 200 c/c *	8 dia 400 c/c	8 dia 400 c/c

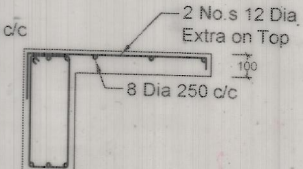
* - Alternate bar should be bent up near supports
 z-bar provide 8 dia 300 c/c as holding bars under cranks and extra



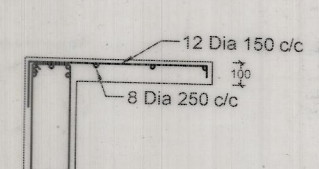
Section at A-A



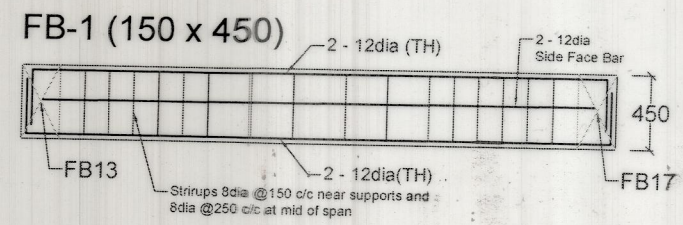
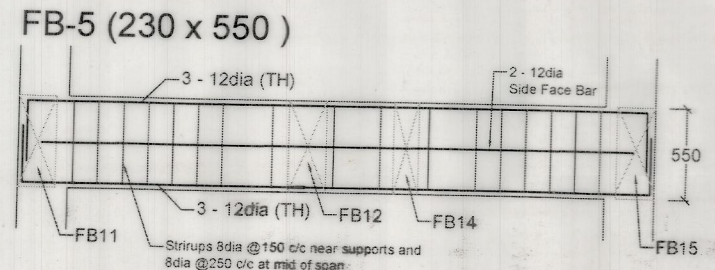
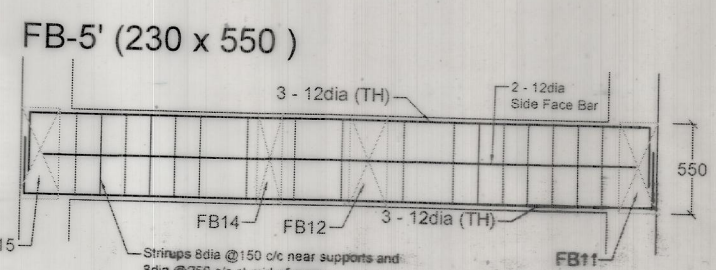
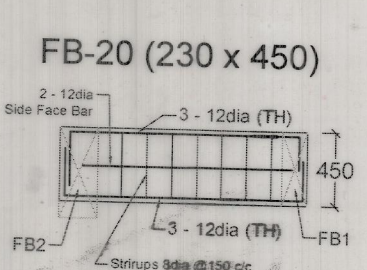
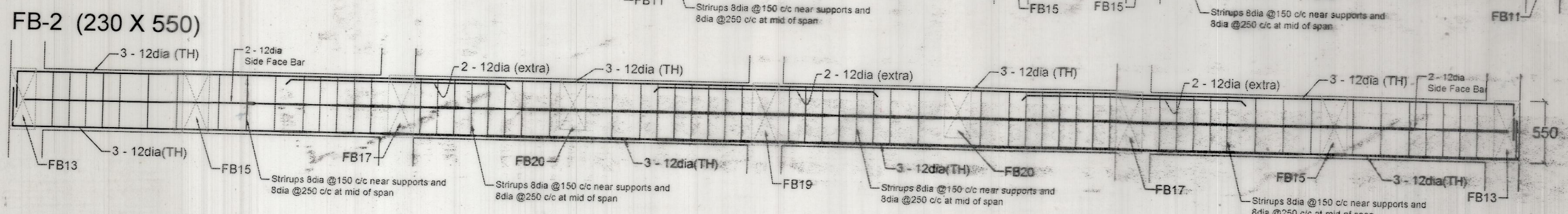
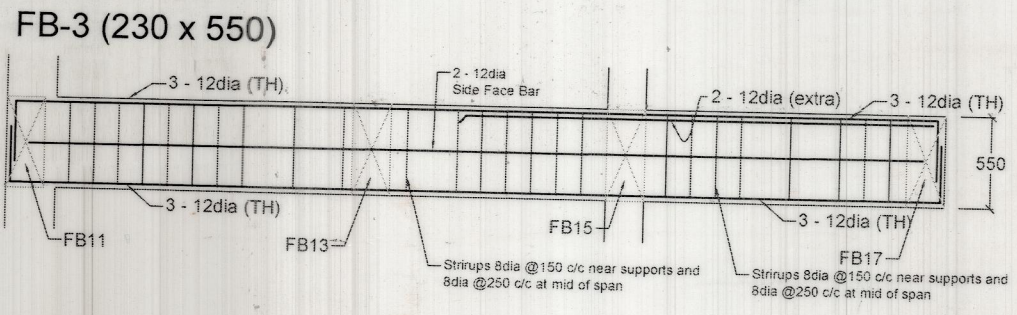
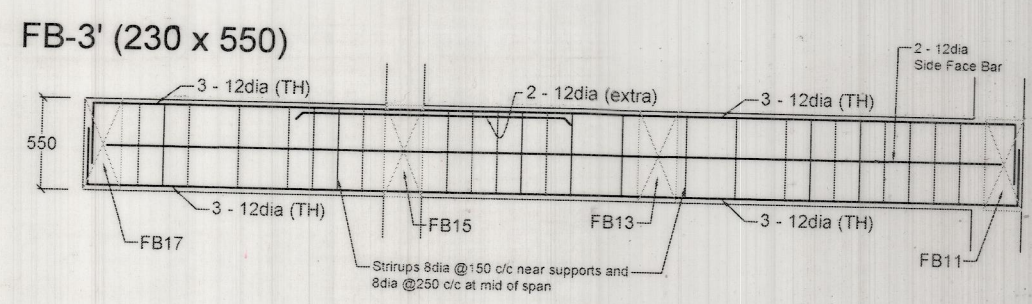
Section at B-B



Section at C-C

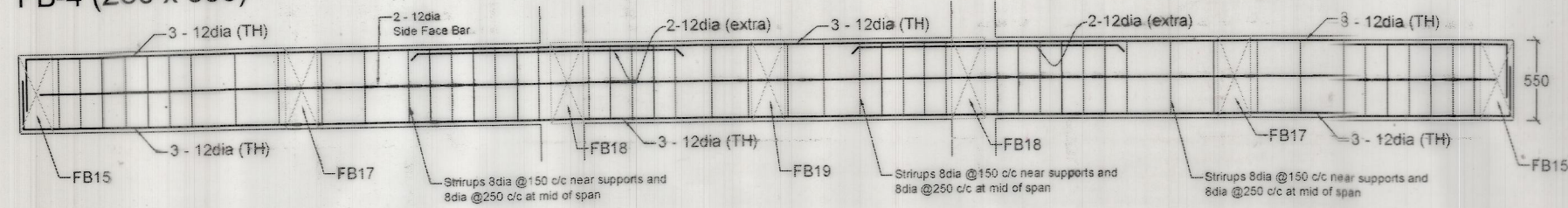


Section at D-D

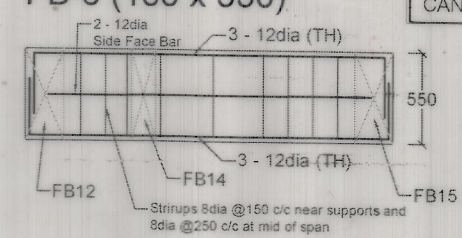


V.K. TRIPATHI (CE/P&D)	23/12/2020
RANDHIR SINGH (XEN/P&D)	
K.P. DANGI (CHECKED BY SSE/DOE)	
BIBHA CHANDRA (DESIGNED BY SSE/DOE)	Bhandra
GURPREET SINGH (PREPARED BY JE/DRG.)	
NORTHERN RAILWAY	
Drawing Description STAFF QUARTER TYPE - III	
Drawing Description Reinforcement Detail of Floor Beams and Slabs Part 1 of 2	
SCALE : NTS @A3	SHEET NO. 05 OF 09
N.R.H.Q.E. PLAN NO. HQ/09/12/2019	

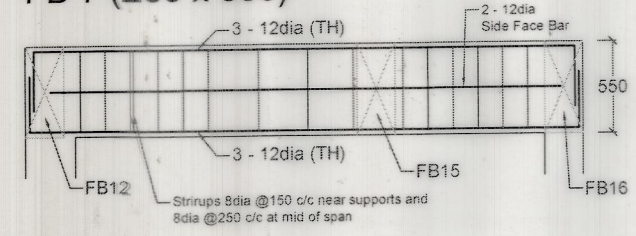
FB-4 (230 x 550)



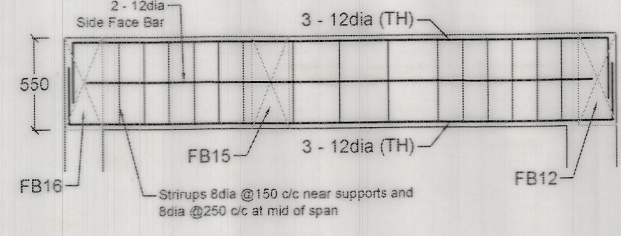
FB-6 (150 x 550)



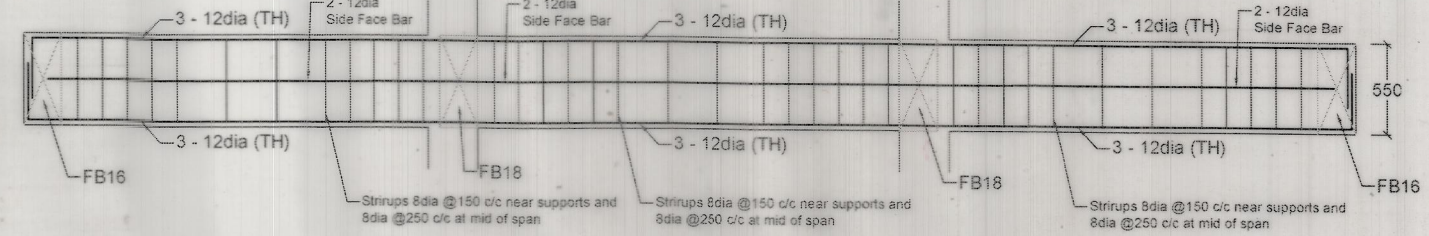
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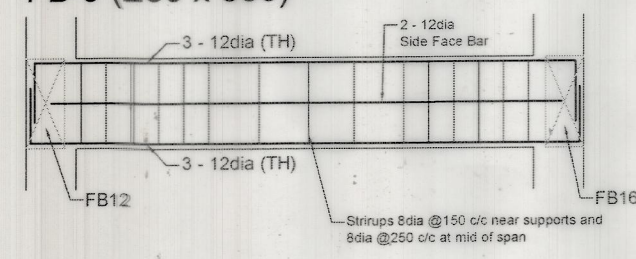
FB-7' (230 x 550)



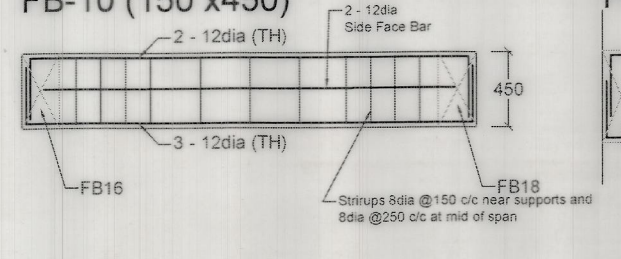
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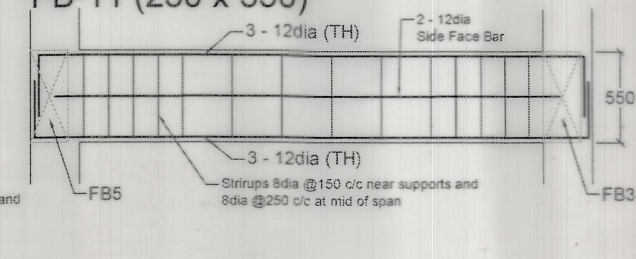
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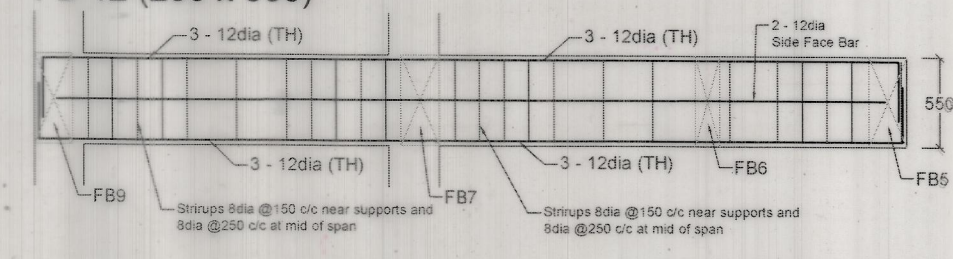
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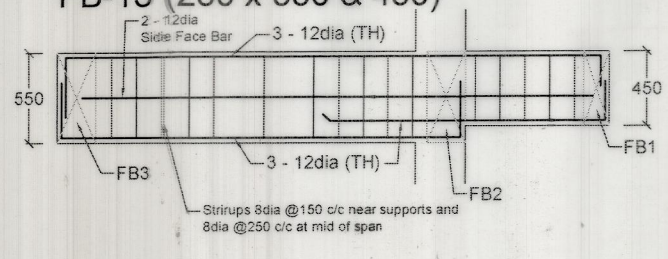
FB-11 (230 x 550)



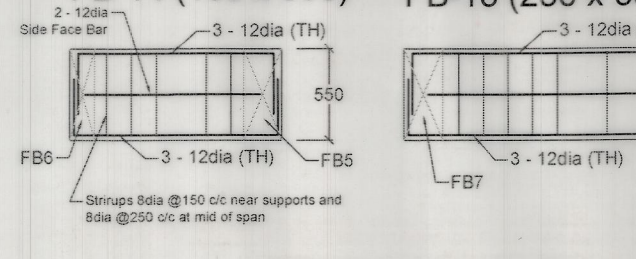
FB-12 (230 x 550)



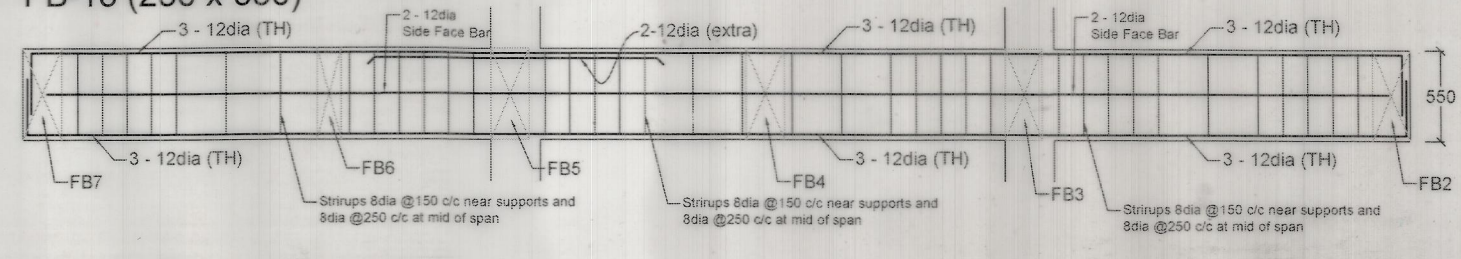
FB-13 (230 x 550 & 450)



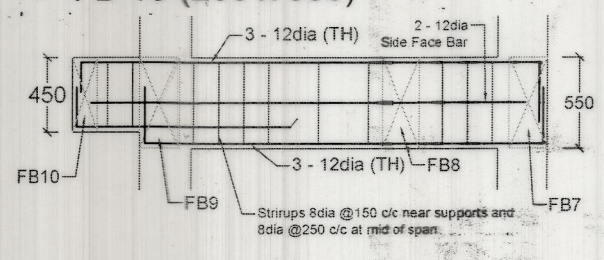
FB-14 (150 x 550)



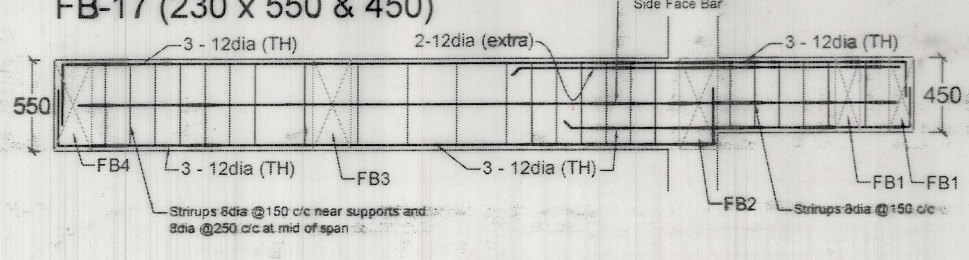
FB-15 (230 x 550)



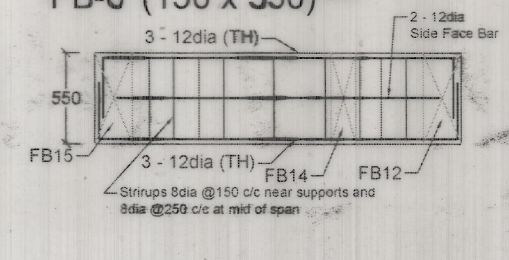
FB-16 (230 x 550)



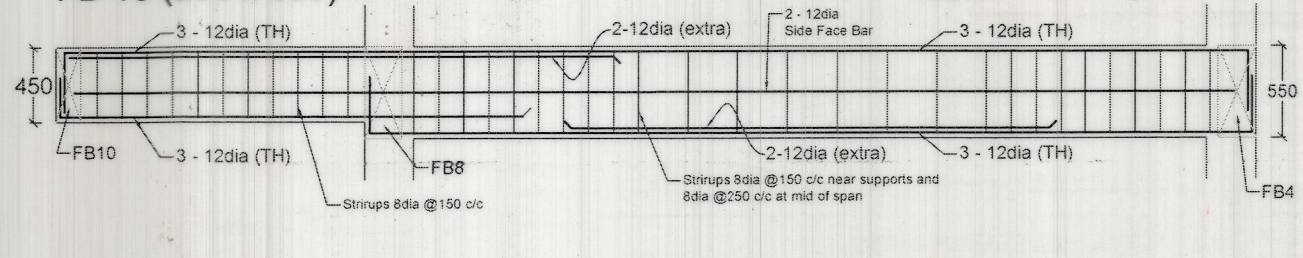
FB-17 (230 x 550 & 450)



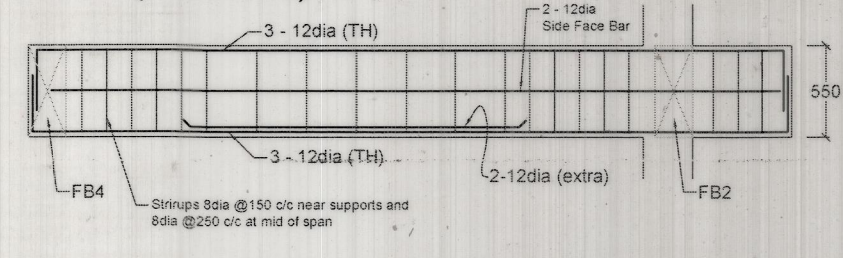
FB-6' (150 x 550)



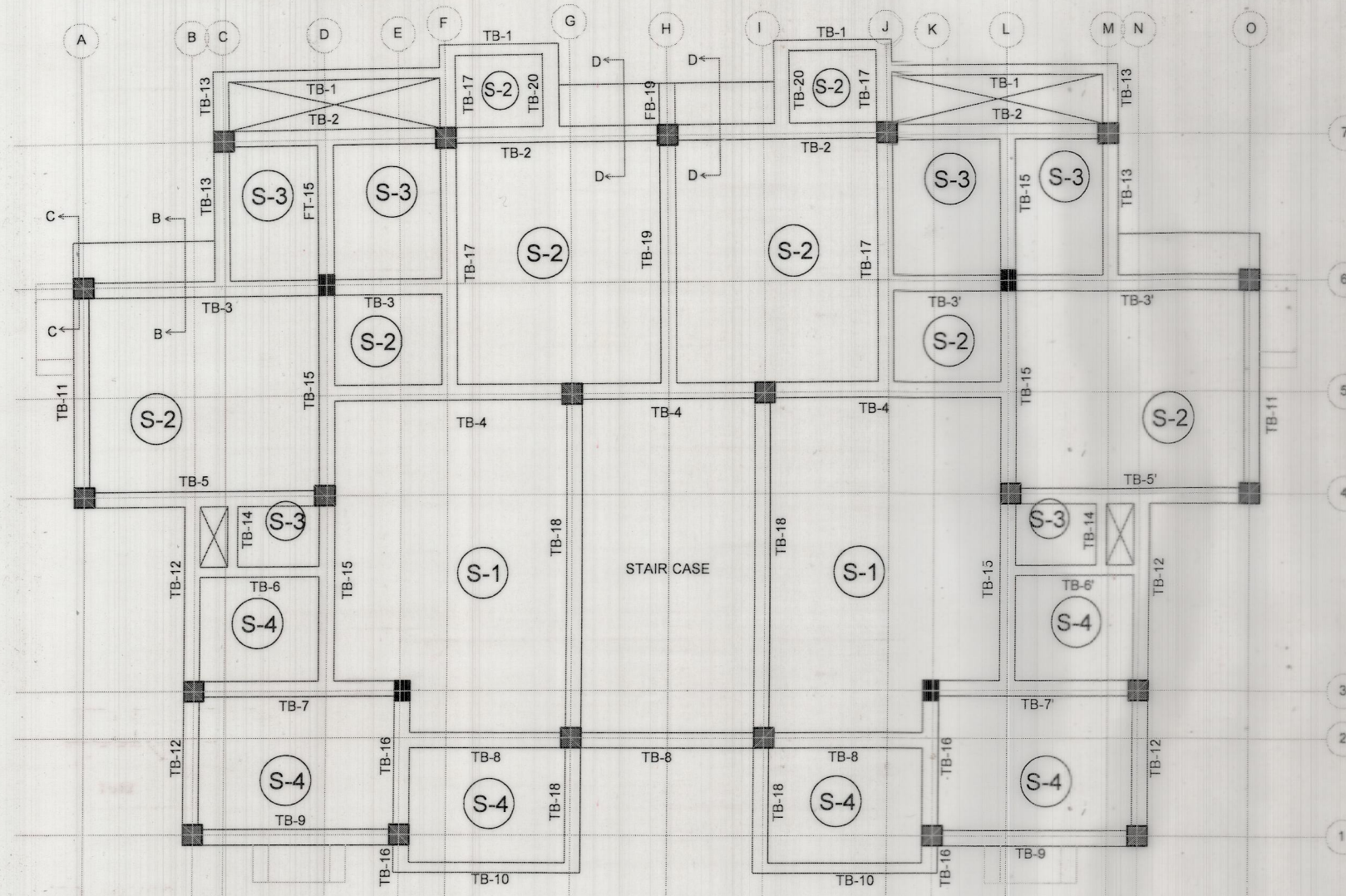
FB-18 (230 x 550)



FB-19 (230 x 550)



V.K. TRIPATHI (CE/P&D)	<i>23/7/2020</i>
RANDHIR SINGH (XEN/P&D)	
K.P. DANGI (CHECKED BY SSE/DOE)	<i>Bhandra</i>
BIBHA CHANDRA (DESIGNED BY SSE/DOE)	
GURPREET SINGH (PREPARED BY JE/DRG.)	
NORTHERN RAILWAY	
Drawing Description STAFF QUARTER TYPE - III	
Drawing Description Reinforcement Detail of Floor Beams and Slabs Part 2 of 2	
SCALE : NTS @A3	SHEET NO. 06 OF 09
N.R.H.Q.E. PLAN NO. HQ/09/12/2019	

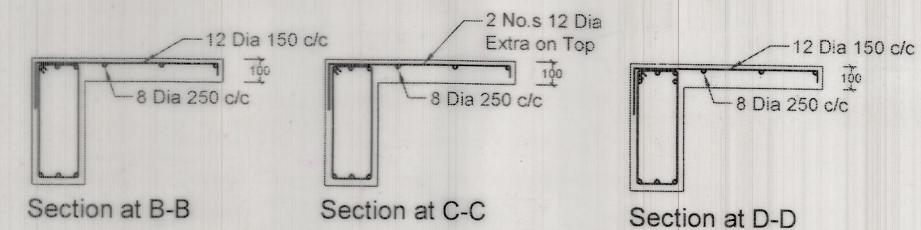
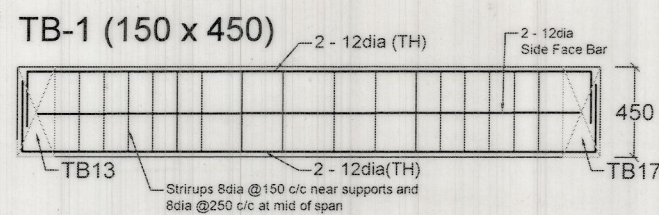
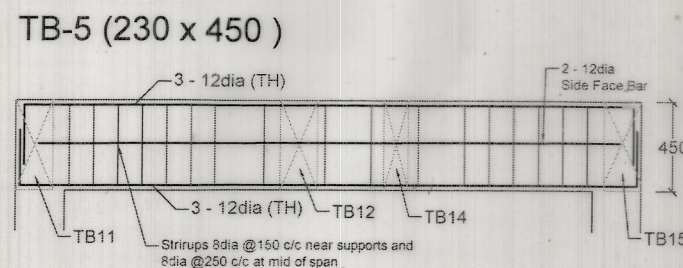
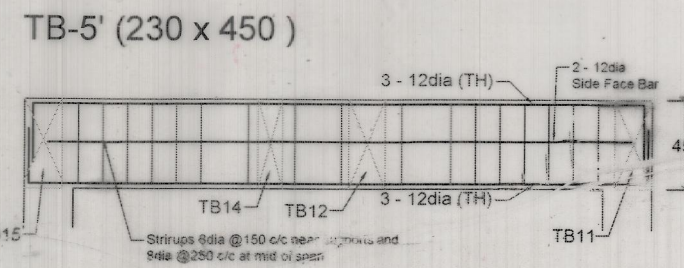
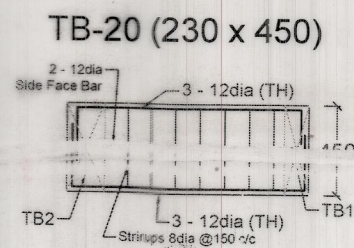
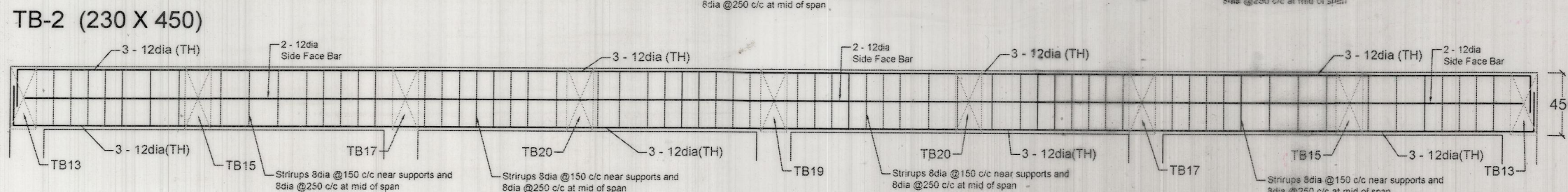
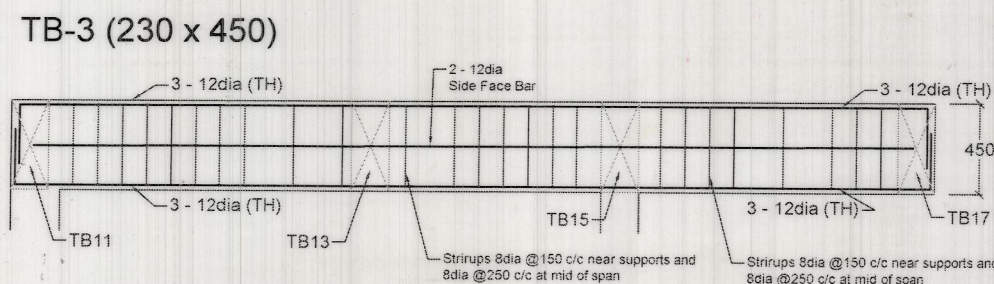
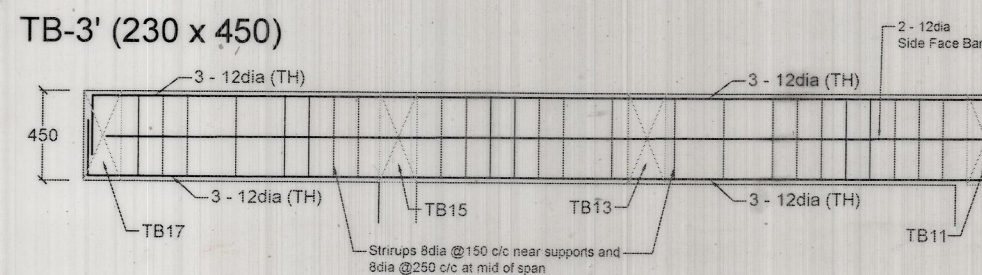


TERRACE BEAMS AND SLAB PLAN

Slab Name	Thickness of Slab in mm	Main Bars	Cross Bars	Extra Bars at Top at Supports	
		Parallel to Short Span	Parallel to Long Span	Parallel to Short Span	Parallel to Long Span
S-1	120	8 dia 150 c/c *	8 dia 200 c/c *	8 dia 300 c/c	8 dia 400 c/c
S-2	120	8 dia 150 c/c *	8 dia 150 c/c *	8 dia 300 c/c	8 dia 300 c/c
S-3	100	8 dia 200 c/c *	8 dia 200 c/c *	8 dia 400 c/c	8 dia 400 c/c
S-4	120	8 dia 200 c/c *	8 dia 200 c/c *	8 dia 400 c/c	8 dia 400 c/c

* - Alternate bar should be bent up near supports

z-bar provide 8 dia 300 c/c as holding bars under cranks and extra



V.K. TRIPATHI (CE/P&D)	23/7/2020
RANDHIR SINGH (XEN/P&D)	23/7/2020
K.P. DANGI (CHECKED BY SSE/DOE)	
BIBHA CHANDRA (DESIGNED BY SSE/DOE)	Bhandra
GURPREET SINGH (PREPARED BY JE/DRG.)	

NORTHERN RAILWAY

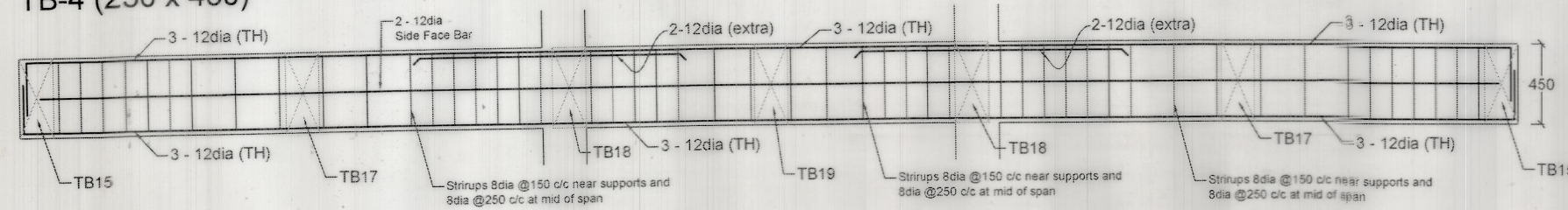
Drawing Description
STAFF QUARTER TYPE - III

Drawing Description
Reinforcement Detail of Terrace
Beams and Slabs Part 1 of 2

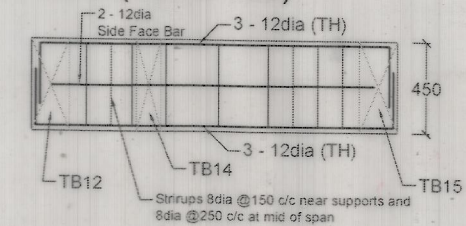
SCALE : NTS @A3 SHEET NO. 07 OF 09

N.R.H.Q.E. PLAN NO. HQ/09/12/2019

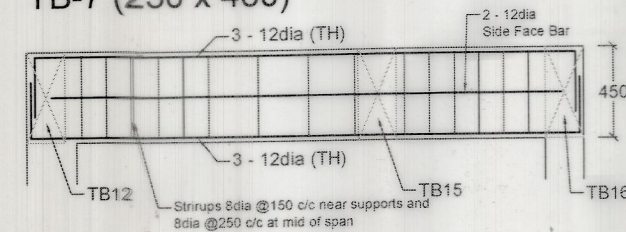
TB-4 (230 x 450)



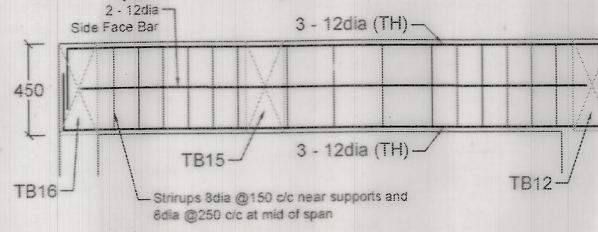
TB-6 (150 x 450)



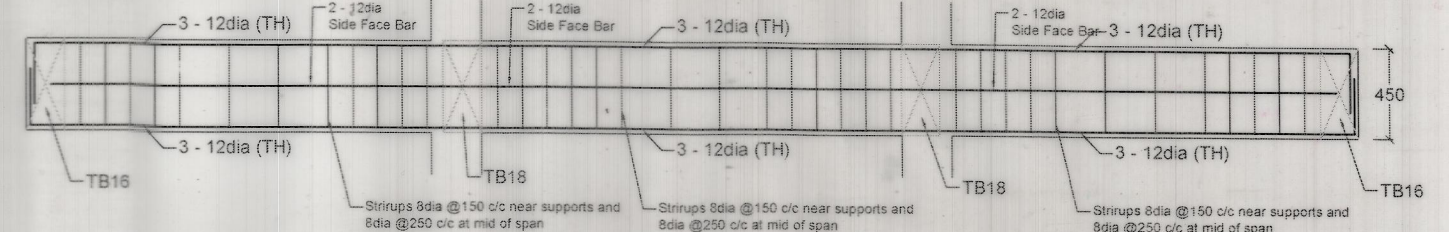
TB-7 (230 x 450)



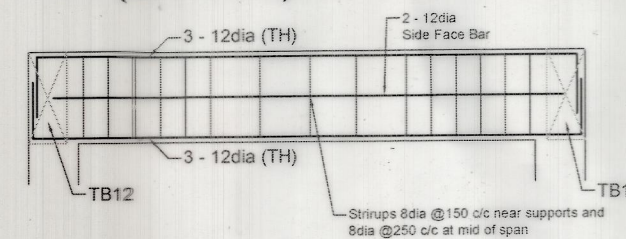
TB-7' (230 x 450)



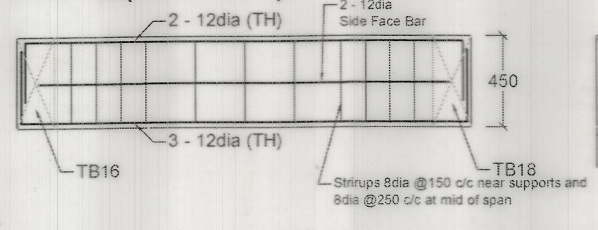
TB-8 (230 x 450)



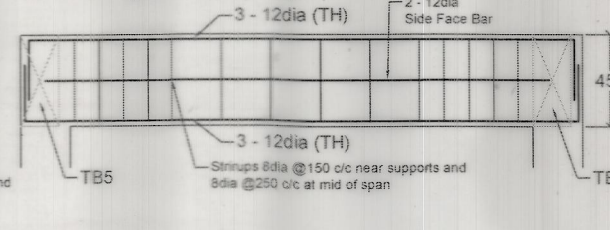
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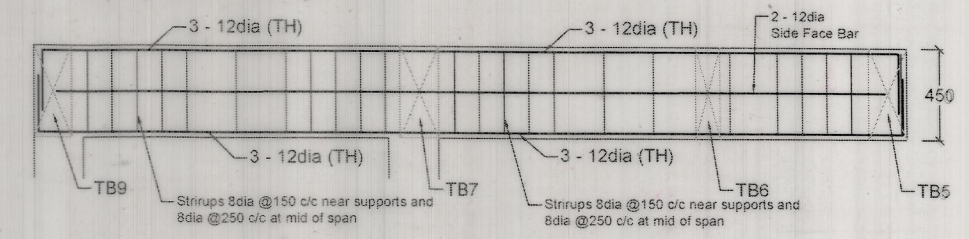
TB-10 (150 x 450)



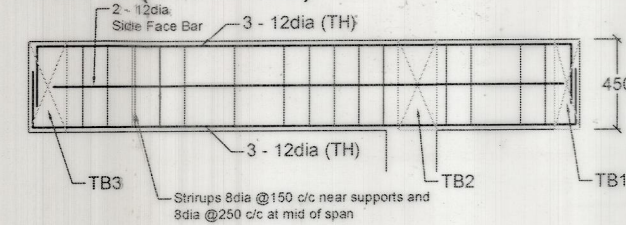
TB-11 (230 x 450)



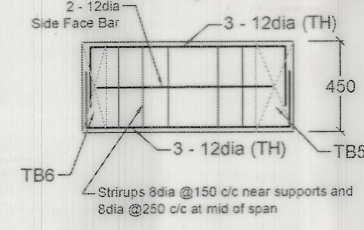
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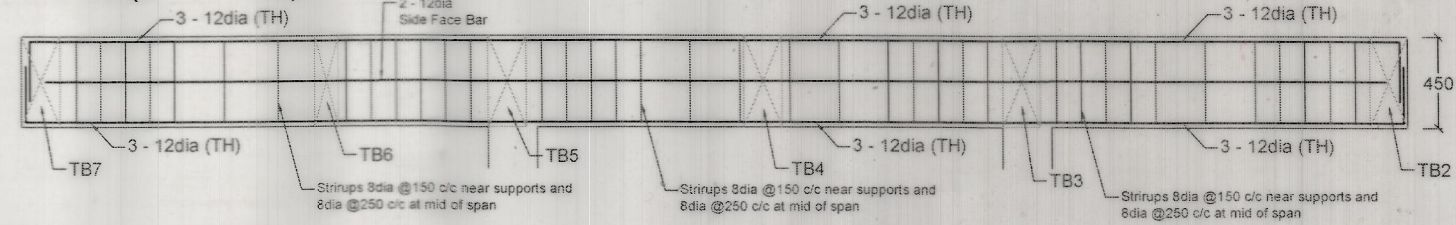
TB-13 (230 x 450)



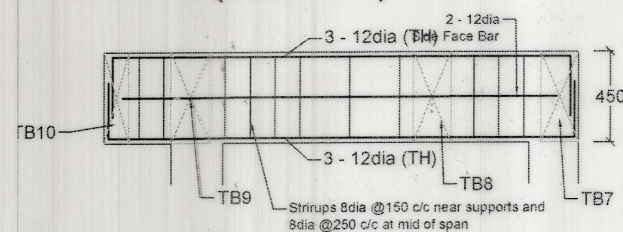
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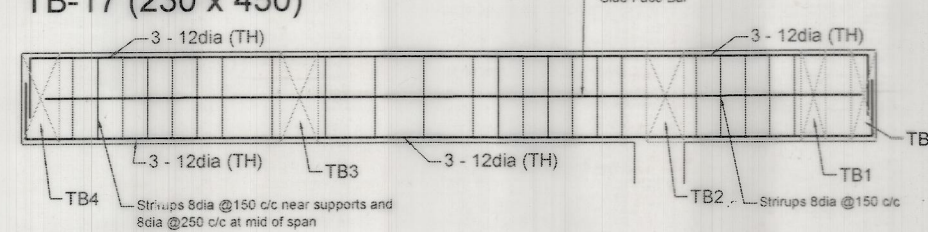
TB-15 (230 x 450)



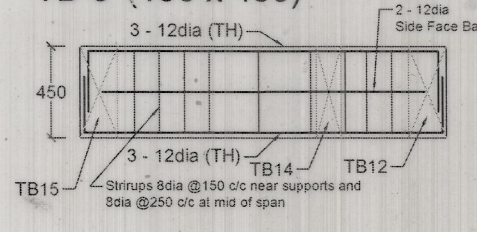
TB-16 (230 x 450)



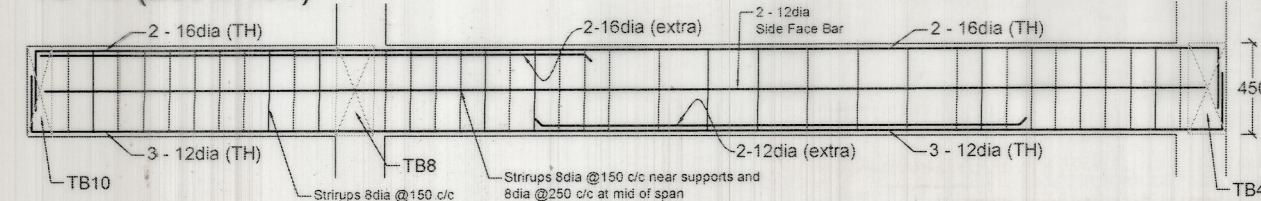
TB-17 (230 x 450)



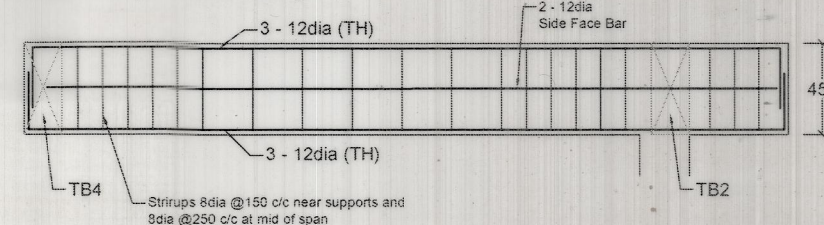
TB-6' (150 x 450)



TB-18 (230 x 450)

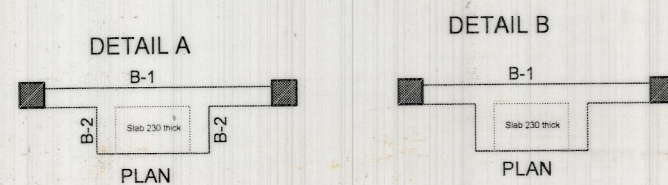
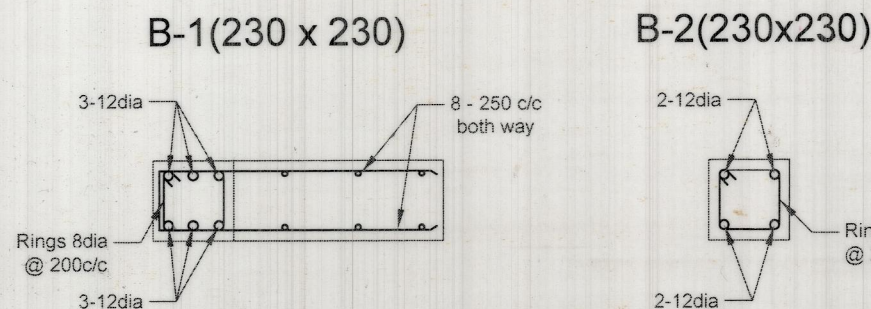
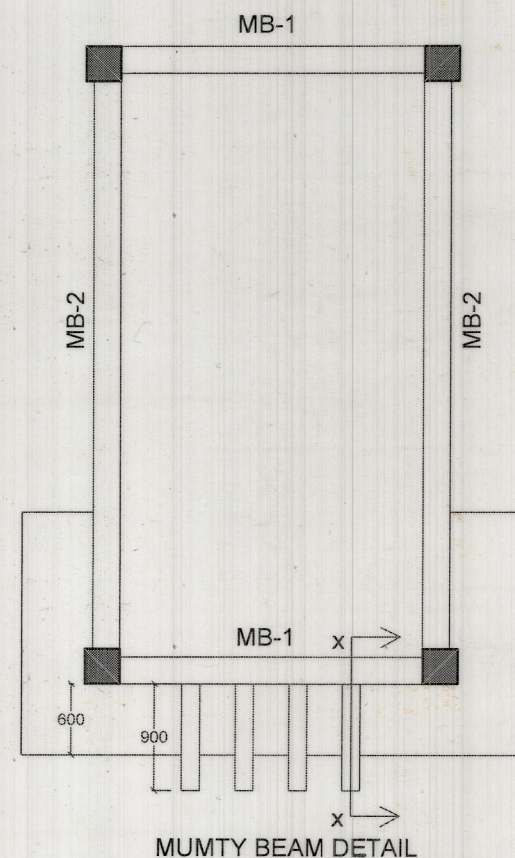
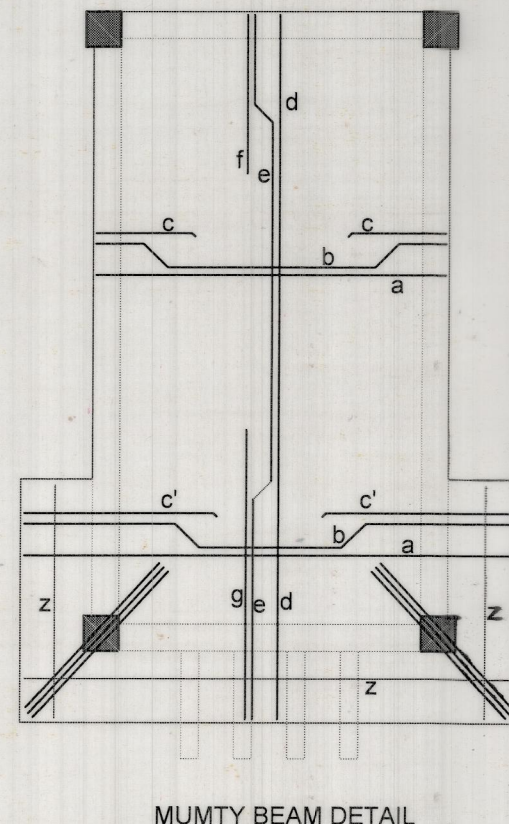
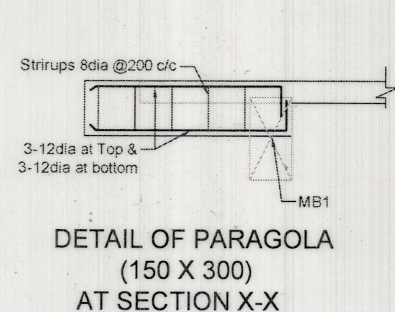
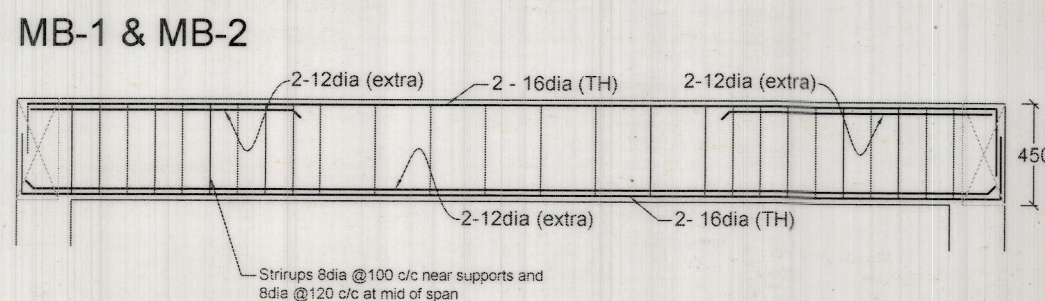
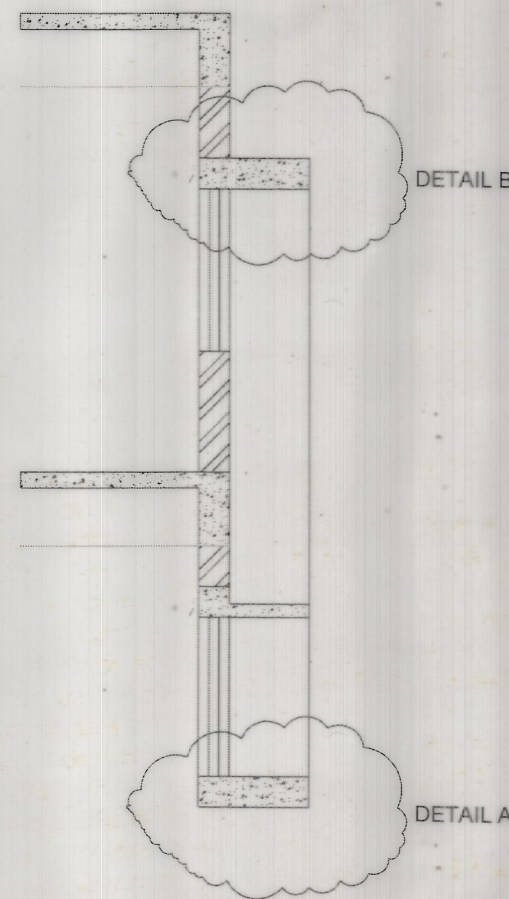
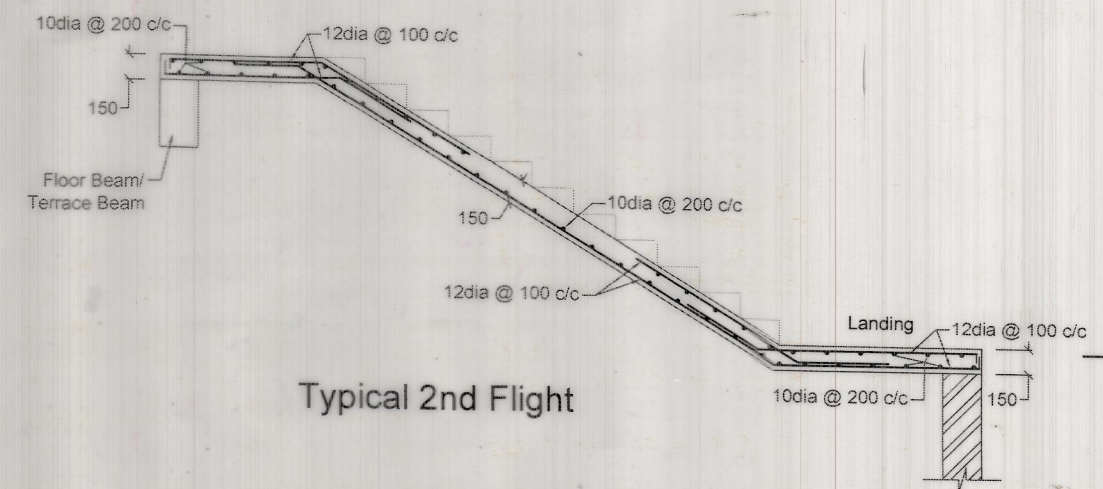
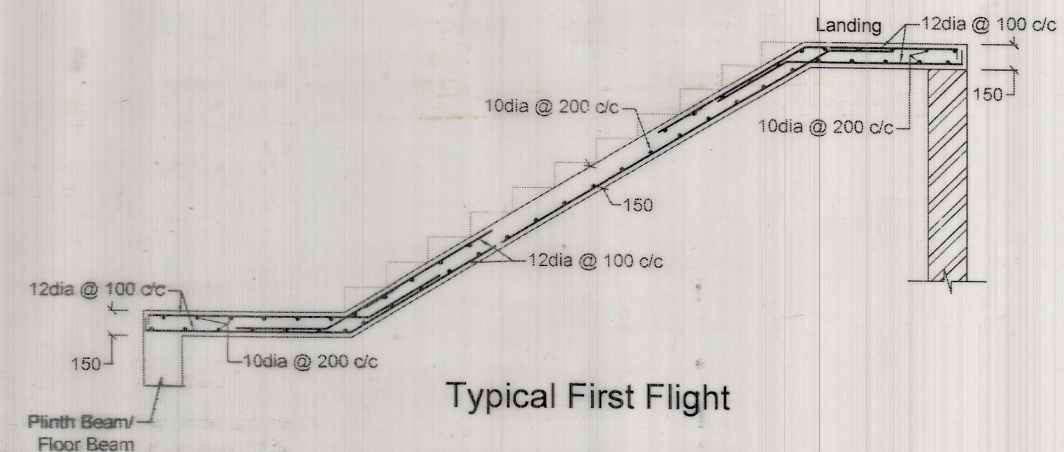


TB-19 (230 x 450)



V.K. TRIPATHI (CE/P&D)	22/17/2019
RANDHIR SINGH (XEN/P&D)	
K.P. DANGI (CHECKED BY SSE/DOE)	
BIBHA CHANDRA (DESIGNED BY SSE/DOE)	Bhandra
GURPREET SINGH (PREPARED BY JE/DRG.)	
NORTHERN RAILWAY	
Drawing Description STAFF QUARTER TYPE - III	
Drawing Description Reinforcement Detail of Terrace Beams and Slabs Part 2 of 2	
SCALE : NTS @A3	SHEET NO. 08 OF 09
N.R.H.Q.E. PLAN NO. HQ/09/12/2019	

TYPICAL DETAIL OF PROJECTION OF W1 & W2



STAIR CASE DETAIL

Reinforcement detail of Mumty Slab	
Bar Name	Dia and Spacing
a	8mm Ø at 150 c/c
b	8mm Ø at 150 c/c
c	8mm Ø at 150 c/c
c'	8mm Ø at 150 c/c
d	8mm Ø at 200 c/c
e	8mm Ø at 200 c/c
f	8mm Ø at 200 c/c
g	8mm Ø at 200 c/c
z	8mm Ø at 300 c/c

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K.P. DANGI (CHECKED BY SSE/DOE)	
BIBHA CHANDRA (DESIGNED BY SSE/DOE)	
GURPREET SINGH (PREPARED BY JE/DRG.)	
NORTHERN RAILWAY	
Drawing Description	
STAFF QUARTER TYPE - III	
Drawing Description	
Reinforcement Detail of Window Projection, Mumty and Stair Case	
SCALE : NTS @A3	SHEET NO. 09 OF 09
N.R.H.Q.E. PLAN NO. HQ/09/12/2019	