

D.A.V. PUBLIC SCHOOL, BISTUPUR, JAMSHEDPUR

Ref. No. DAVPS/85/24

Date:- 8-04-2024

QUOTATION INVITED

Sealed Quotations are invited for the new construction of 12 classrooms of school campus.

The BOQ & Drawing of 12 classrooms is attached

The Quotation Should be sent through speed post/regd.post/by hand for 12 classrooms as per BOQ

The last date of submission of sealed quotation is on Before 15/05/2024

Note:- Site visit is compulsory before quoting otherwise Quotation will be rejected. Contact the office for the same between 9 am to 2 pm

Website:- www.davbistupur.org,

E-mail ID: dav.bistupur@gmail.com, Principal@davbistupur.org

Signature of Members of Purchase Committee

Signature.

1. Mrs. Susmita Basu, PGT *S Basu*
2. Mr. Santosh Kumar Samanta, PGT
3. Mr. Dhitesh Sharma, TGT *Dhitesh*
4. Mr. Arvind Kumar Sharma, PRT *Arvind*
5. Mrs. Alka Kumari, UDC *Alka*

Pragya

Abhinav

Abhinav Chauhan
J. E (Civil)

Nikhil
6/4/24

Nikhil Shukla
Architect

Pragya *06/04/24*
Pragya Singh
PRINCIPAL
PRINCIPAL
D.A.V PUBLIC SCHOOL
BISTUPUR, JAMSHEDPUR

BOQ

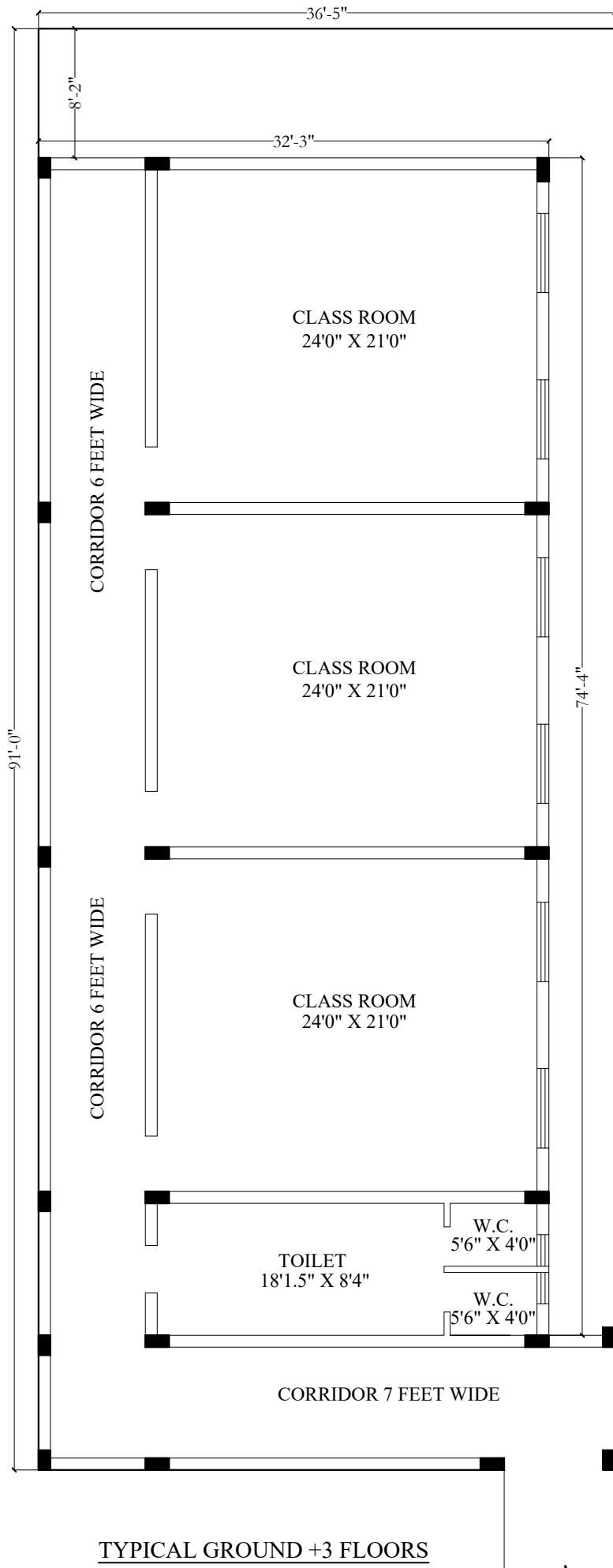
BOQ. NO.		UNIT	QUANTITY	RATE	AMOUNT	REMARKS
	A. SITE GRADING, EARTH WORK & ALLIED WORKS					
A1	Cleaning the proposed power plant site by cutting down plants/trees including grubbing of stumps, roots, etc. and disposal of the same out side the area of work as directed and approved by Engineer.	M ²	308.01			
A2	Earth work in excavation in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m . including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.	M ³				
	a) In all types of ordinary and hard soils (including soils intermixed with boulders, slag and slushy soils)	M ³	152.12			
	b) In soft and decomposed rock	M ³	30.42			
A 3	Excavating, supplying and filling of local earth (including royalty cairriage cost) by mechanical transport upto a lead of 3km also including ramming and watering of the earth in layers not exceeding 20 cm in trenches, plinth, sides of foundation etc. complete. If local earth is	M ³	257.92			
A4	Earth work in filling for levelling and grading using approved quality of borrowed sand/gravel (borrowed earth to be arranged by the bidder at no extra cost to the Owner) on prepared surface obtained by compacting with mechanical means including setting o	M ³	24.63			
A5	Supplying and Providing pre-constructional anti-termite treatment, and creating a chemical barrier, under and on sides of trenches, wall footings, top surface of plinth filling, including junction of wall and floor along the perimeter of building, with ap	M ²	364.50			
	SUB TOTAL OF ITEM UNDER "A"=					
	B. CONCRETE AND ALLIED WOKRS					
B1	Supplying, Providing and laying in position plain cement concrete in levelling course/fill under or around foundations pits, slabs on grade, sumps, manholes, etc. at any depth with 40 mm down graded coarse aggregates including curing, compacting, de-water					
	a)1:4:8 (Min cement content 160Kg/m3)	M ³	7.53			
	c) 1:2:4 (Min cement content 240Kg/m3)	M ³	24.99			
B2.	Providing and laying in position specified grade of reinforced cement concrete including the cost of centring,shuttering,finishing etc -All work puto plinth level.					
	a) Concrete grade M20 with 20mm downgraded coarse aggregates for:	M ³	36.09			
B3.	Supplying, Providing and placing in position reinforced cement concrete for superstructure works at all levels including cost of centring,shuttering vibrating, curing, providing construction joints, leaving cutouts/ pockets for placing of inserts/ embedments, etc., complete, includi					
	a) Concrete grade M20 with 20mm downgraded coarse aggregates for: upto G+3floor lvl.	M ³	177.97			
	b) Concrete grade M20 with 20mm downgraded coarse aggregates for: lintels, chajja etc.	M ³	26.26			
B12.	Supplying, Cleaning, cutting, bending, as per drawings and placing in position High yield strength deformed reinforcement bars conforming to IS: 1786 at all locations and levels including binding with soft annealed 18G black wire, etc. complete as shown					
	b) For HYSD bars of grade Fe500 conforming to IS 1786 except for elongation requirements. (Elongation shall be minimum 14.50 %)	Mt.	23.368			
	SUB TOTAL OF ITEM UNDER "B"=					

BOQ

BOQ. NO.		UNIT	QUANTITY	RATE	AMOUNT	REMARKS
	C. MASONRY & ALLIED WORKS					
C1.	Supplying, Providing and laying brick masonry in cement mortar 1:5 using approved quality bricks of class 3.5 conforming to IS: 1077, scaffolding, curing, raking joints, etc. complete as					
	(a) 230 mm thick upto plinth lvl.	M ³	3.65			
	(b) 230 mm thick above plinth lvl.	M ³	105.86			
	(c) 115 mm thick above plinth lvl.	M ²	10.84			
C2.	a) Supplying, Providing 15 mm thick plain faced internal plaster in cement mortar 1:4 for RCC, brick work, sides, canopies, chajjas with drip moulding, etc. including scaffolding, curing, and including POP punning etc. complete as per specifications and a		2121.54			
	b) Supplying, Providing 18 mm thick external plastering in with water proofing compound) in cement mortar 1:5 for RCC, brick work, including scaffolding, curing, etc. complete as per specif	M ²	1191.79			
	c) Supplying, Providing 6 mm thick plain-faced cement plaster in cement mortar 1:4 for sides and undersides of slabs, canopies, chajjas with drip moulding, etc. including scaffolding, curing, etc. complete as per specifications.	M ²	881.70			
	SUB TOTAL OF ITEM UNDER "C"=					
	D. FLOORING, STONE WORKS ETC.					
D1.	Providing and laying vitrified floor tiles in different sizes 600x600 (thickness to be specified by the manufactruer) with water absorption's less than 0.08 % and conforming to IS : 15622 of approved make in all colours and shades, laid on 20 mm thick cement mortar 1:4 (1 cement: 4 coarse sand) including grouting the joint with white cement and matching pigments etc., complete.	M ²	870.65			
D2.	Providing and fixing 10 mm thick acid and / or alkali resistant tiles of approved make and colour using acid and / or alkali resisting mortar bedding, and joints filled with acid and / or alkali resisting cement as per IS : 4457, complete as per the direction of Engineer-in-Charge.					
	a) In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand).	M ³	3554.46			
	b) In dado/skirting using alkali resistant approved tiles Adhesives.	M ³	214.27			
	SUB TOTAL OF ITEM UNDER "D"=					

BOQ

BOQ. NO.		UNIT	QUANTITY	RATE	AMOUNT	REMARKS
	E. DOORS, WINDOW WORKS ETC.					
E1.	Providing Teak wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length including cost of fasteners, painting etc complete.	M ³	0.98			
E2.	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1 st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters 35 mm thick including stainless steel butt hinges with necessary screws etc complete.	M ²	39.76			
E3	Supplying providing & fixing aluminium framed Doors for toilet with shutters as specified.	M ²	8.54			
E4	Supplying providing & fixing aluminium framed window	M ²	47.58			
E5	Supplying providing & fixing 5mm thk. Glass sheet in doors & windows	M ²	47.58			
	SUB TOTAL OF ITEM UNDER "E"=					
	F. PAINTING, FALSE CEILING , FINISHING AND ALLIED WORKS					
F1.	Finishing walls with Acrylic Smooth interior paint for required sheds on wall New work (includes cost of two coat of wall putty, Two or more coat applied @ 1.67 ltr/ 10 sqm over and including priming coat of primer applied as per manufacturer details.	M ²	3003.24			
F2.	Finishing walls with Acrylic Smooth exterior paint for required sheds on wall New work (Two or more coat applied @ 1.67 ltr/ 10 sqm over and including priming coat of exterior primer applied as per manufacturer details.	M ²	1191.79			
F3	Supplying providing & laying SS grill at floor level by using ss-304 & 1.5mm sections , cost of all fixing fastening etc and as per designed approved by site Engineers/Architect etc complete.	Kg	720.00			
	SUB TOTAL OF ITEM UNDER "F"=					
	Grand Total amount (A+B+C+D+E+F)=					
	ADD FOR ELECTRIFICATION @ 2.0%					
	ADD FOR WATER SUPPLY & SANITARY @ 3.0%					
	ADD FOR CONTINGENCY @ 3.50%					
	ADD FOR CONTRACTORS PROFIT @ 15%					
	TOTAL =					
	Plinth area rate					



TYPICAL GROUND +3 FLOORS



EXTENSION OF CLASSROOMS

Place:

D.A.V.BISTUPUR

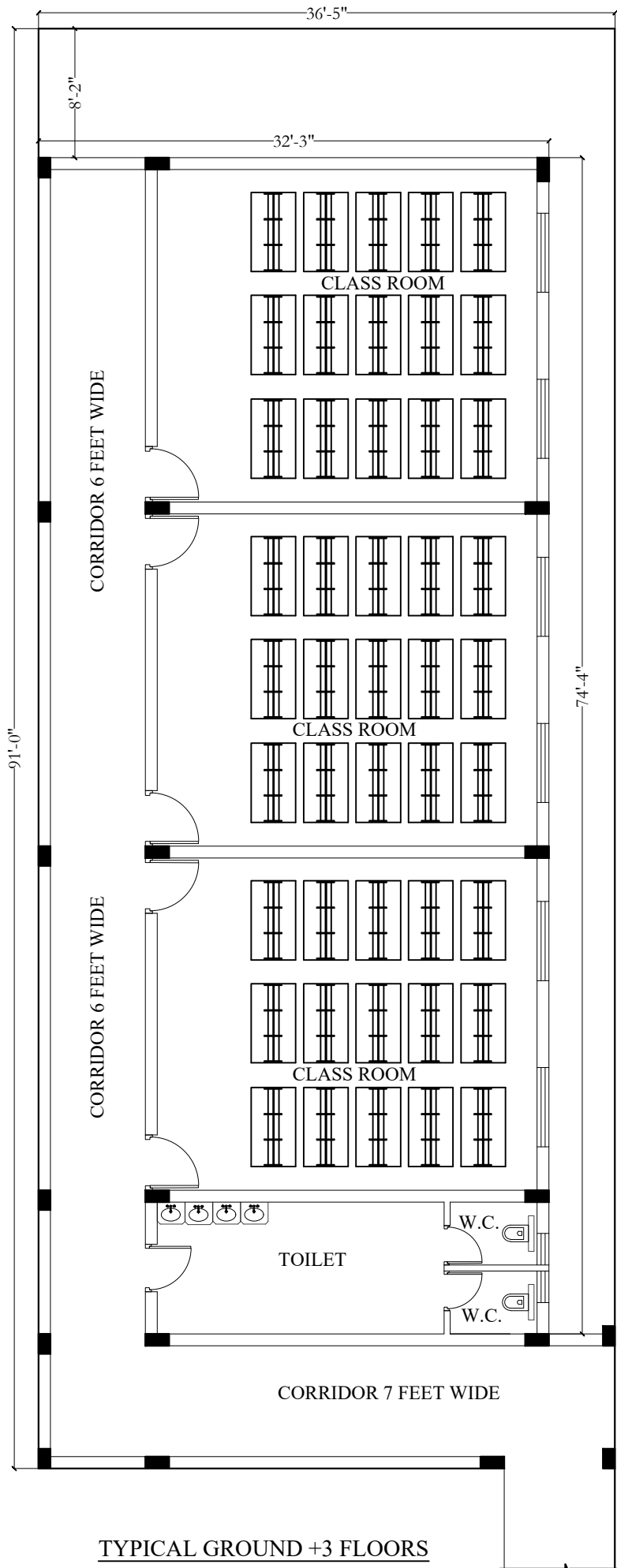
Title:

CONCEPT DRAWING

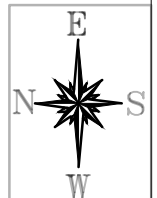
Date:

19/03/2024

DX *design* **XTREME**
 Architects | Planner | Project Consultants
 2nd floor, Sana Complex, Aam Bagan
 Sakchi, Jamshedpur - 831001
 Contact - M - (+91)9835159732, +91-9234459150
 Email - nikhil.archi@gmail.com
 Website - www.designxtreme.in



TYPICAL GROUND +3 FLOORS



EXTENSION OF CLASSROOMS

Place: D.A.V.BISTUPUR

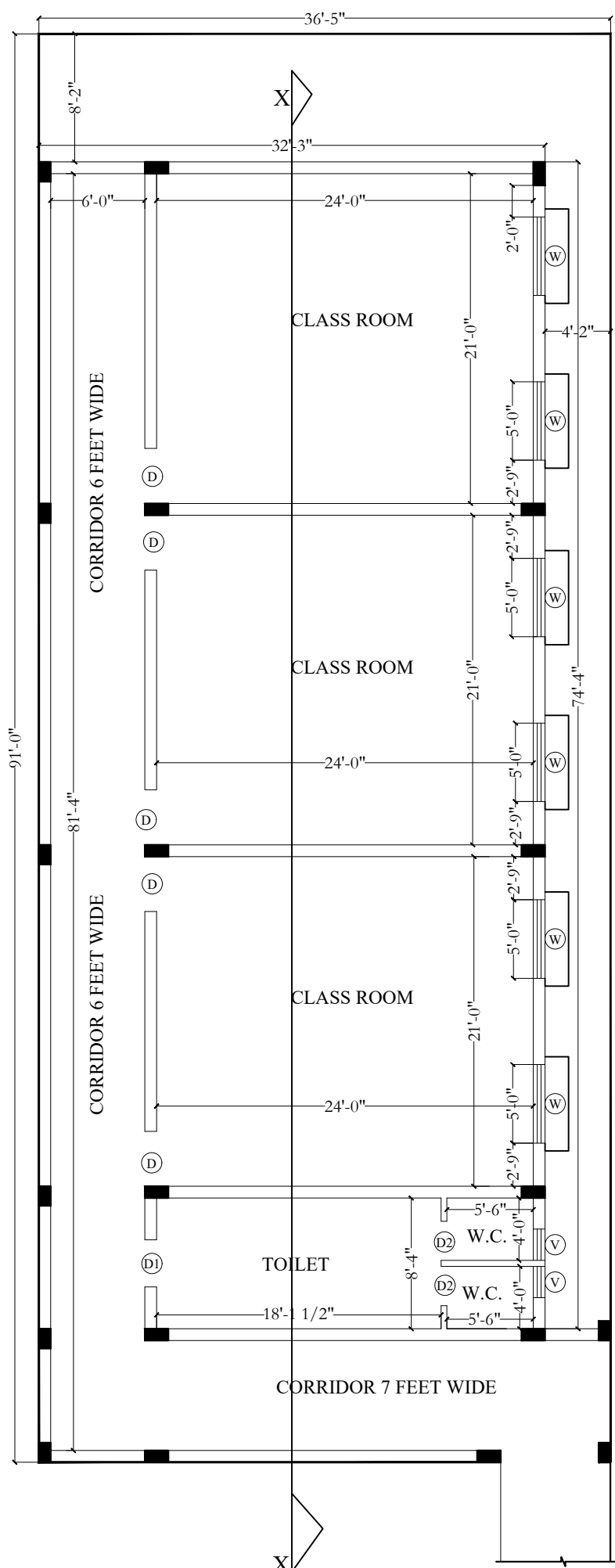
Title: FURNITURE DRAWING

Date: 19/03/2024

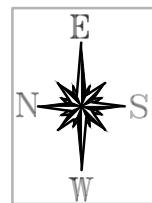
DX *design* **XTREME**
 Architects | Planner | Project Consultants
 2nd floor, Sana Complex, Aam Bagan
 Sakchi, Jamshedpur - 831001
 Contact - M - (+91)9835159732, (+91)9234459150
 Email - nikhil.archi@gmail.com
 Website - www.designxtreme.in

SCHEDULE OF DOORS & WINDOW

NO.	MARKED	SILL LEVEL	LINTEL LEVEL	WIDTH	DISCRPTION
1	D	0'0"	7'0"	3'6"	WOODEN FLUSH DOOR
2	D1	0'0"	7'0"	3'0"	WOODEN FLUSH DOOR
3	D2	0'0"	7'0"	2'6"	WOODEN FLUSH DOOR
4	W	3'0"	7'0"	5'0"	WOODEN FLUSH DOOR
5	V	5'0"	7'0"	2'0"	GLAZED VENTILATOR



TYPICAL GROUND +3 FLOORS



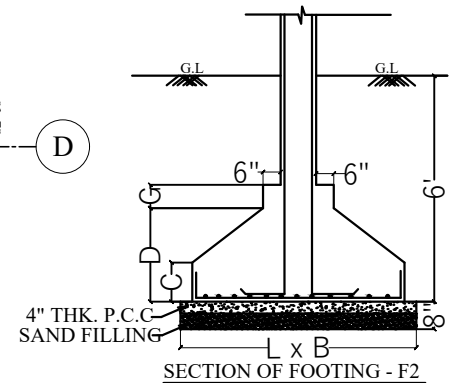
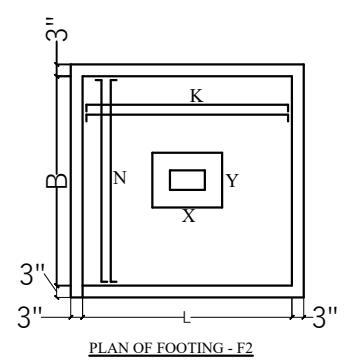
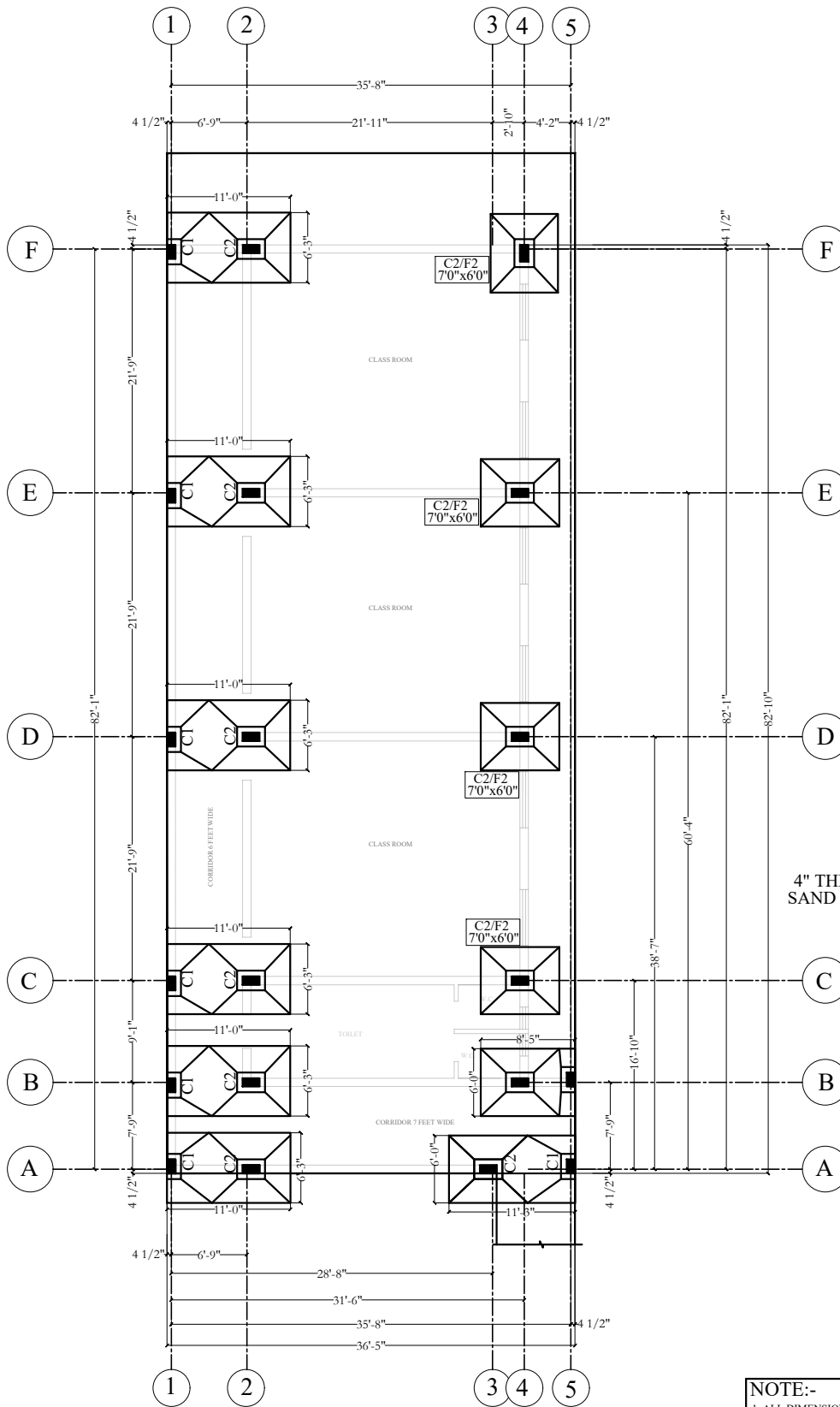
EXTENSION OF CLASSROOMS

Place: D.A.V.BISTUPUR

Title: WORKING DRAWING

Date: 19/03/2024

DXXTREME design
 Architects | Planner | Project Consultants
 2nd floor, Sana Complex, Aam Bagan
 Sakchi, Jamshedpur - 831001
 Contact - M - (+91)9835159732, +91-9234459150
 Email - nikhil.archi@gmail.com
 Website - www.designxtreme.in



FOOTING LAYOUT

- NOTE:-**
1. ALL DIMENSION ARE IN FEET AND INCHES .
 2. ALL CONCRETE MIX M20 UNLESS OTHERWISE SPECIFIED.
 3. MILD STEEL YIELD STRENGTH 250 N / mm²
 4. TOR STEEL YIELD STRENGTH 500 N/mm²
 5. ALL CONCRETE SHALL BE MACHINE MIXED AND MACHINE VIBRATED .
 6. CLEAR COVER TO MAIN STEEL 40 mm. IN COLUMN , 25 mm. IN BEAM & 15 mm. IN SLAB.
 7. ALL DIMENSION ARE TO BE READ NOT TO BE MEASURED .
 8. ALL DISTRIBUTION BARS WHEREVER REQUIRED BUT NOT CALLED OUT SHALL BE 8 Ø @ 250 C/C.
 9. THIS DRAWING SHALL BE READ WITH ARCHITECTURAL DRAWINGS.
 10. BEARING CAPACITY OF SOIL ADOPTED AS 18 T/M².
 11. DEPTH OF FOUNDATION SHALL BE 2000 mm. BELOW EXISTING GROUND .
- LAP LENGTH > Ld OR 30 TIMES OF BAR DIA
 db=DIA OF MAIN BAR
 Ldc=EFFECTIVE DEVELOP. LENGTH CONSIDERING COMPRESSION= 37XBAR DIA
 Ldt=EFFECTIVE DEVELOPMENT LEGNTH CONSIDERING TENSION= 47 X BAR DIA.

DRAWING :-
FOOTING LAYOUT

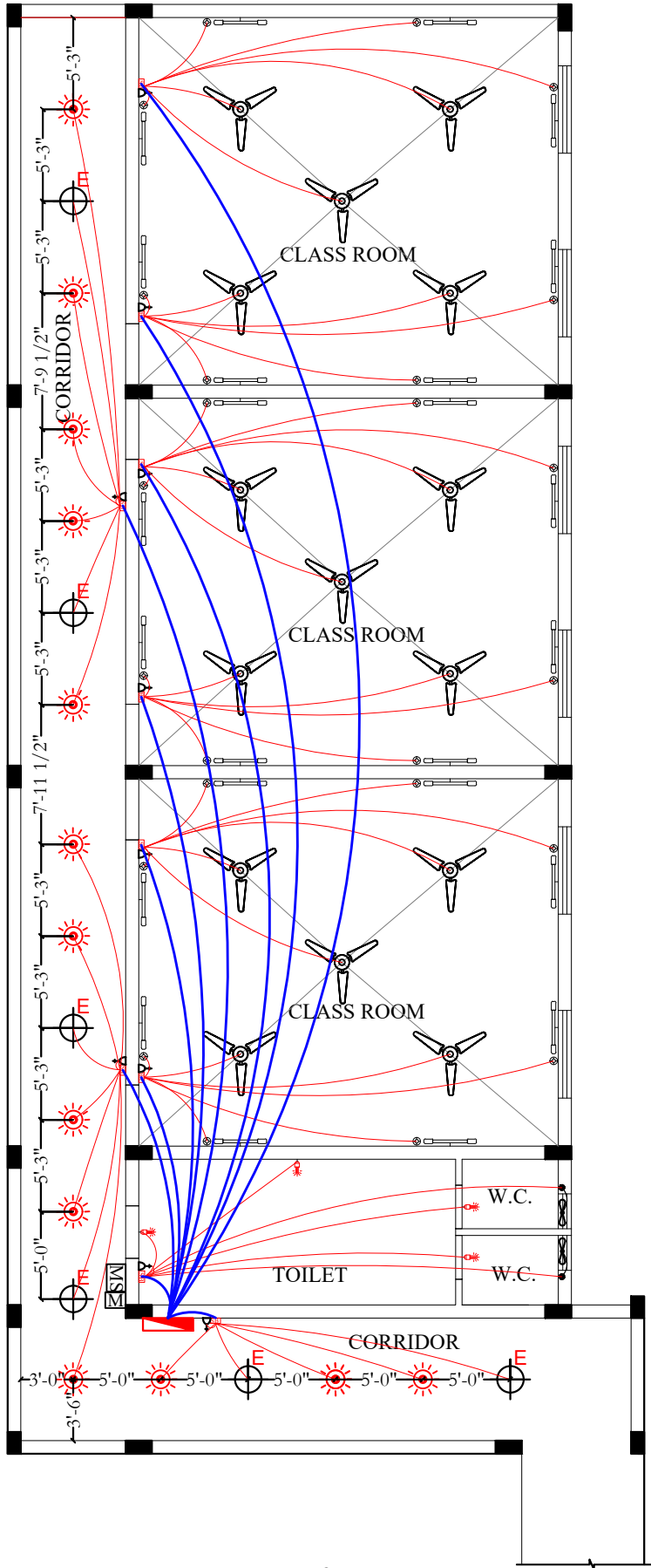
DATE :- 19 /03/2024

PROJECT :- D.A.V.BISTUPUR

FOOTING SCHEDULE										
S.NO.	FOOTING MARKED	FOOTING SIZE		D	C	PEDESTAL		SIZE	REINFORCEMENT	
		L	B			X	Y		N	K
1.	F2	7'-0"	6'-0"	18"	6"	24"	21"	6"	12 TOR @ 5"C/C FOOTING WAYS	12 TOR @ 5"C/C FOOTING WAYS

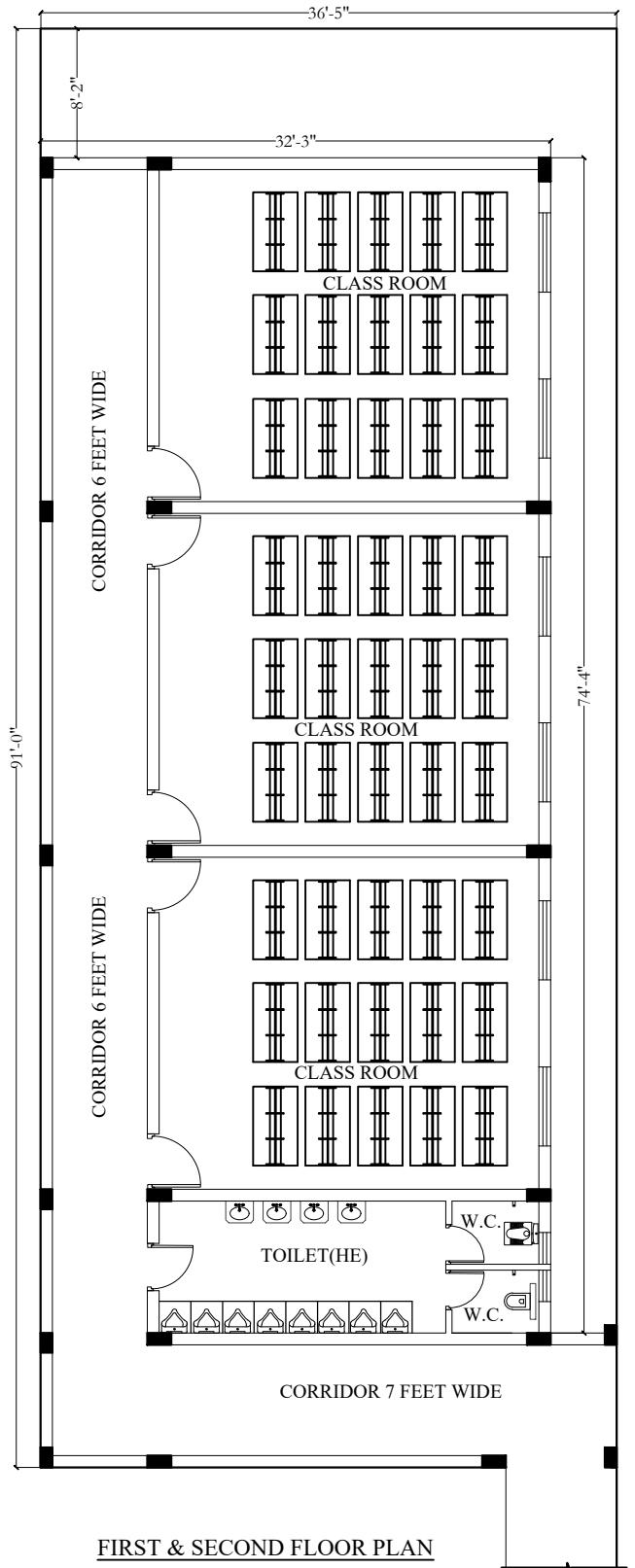
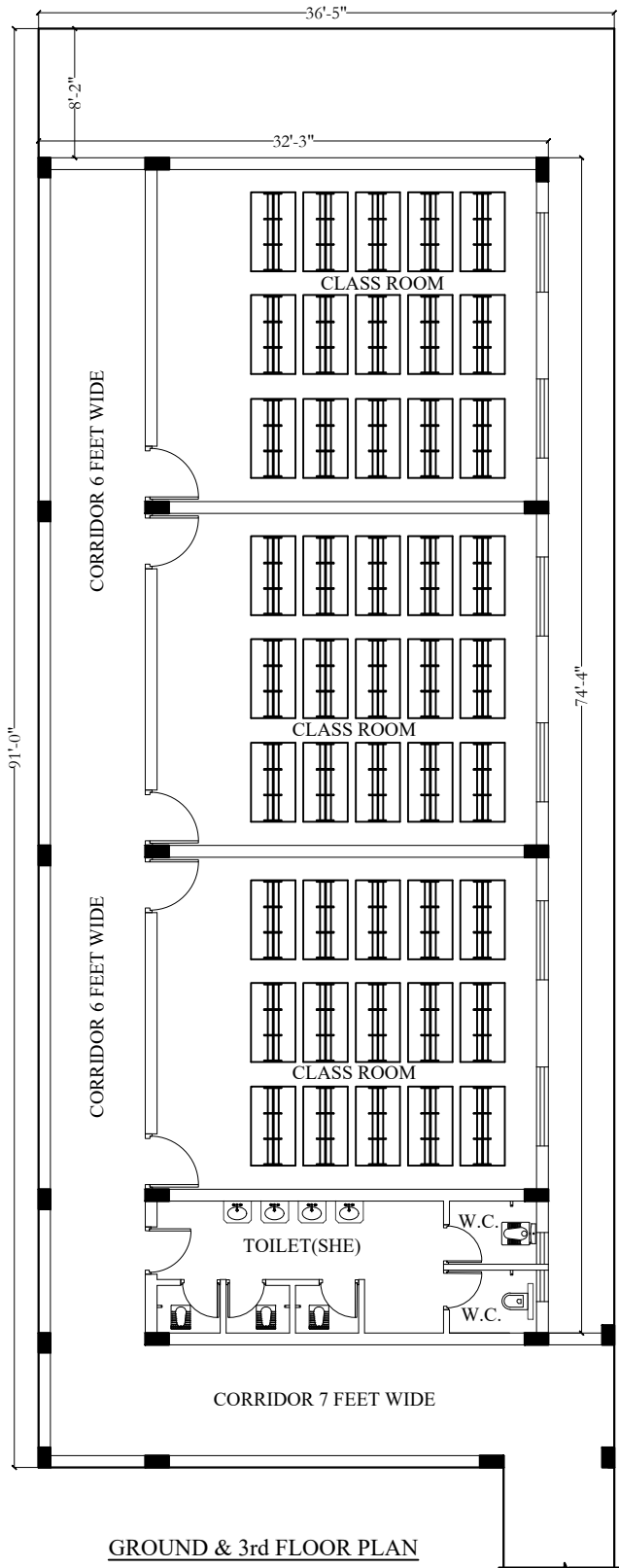
LEGEND : (Electrical)

S. No.	SYMBOL	DESCRIPTION
1.		LIGHT POINT/ WALL BRACKET
2.		CEILING LIGHT (SURFACE)
3.		EMERGENCY CEILING LIGHT (SURFACE)
4.		CEILING FAN
5.		CEILING ROSE
6.		5 AMP PLUG POINT
7.		5 /15 AMP POWER POINT
8.		TELEPHONE POINT
9.		T.V JUNCTION BOX
10.		SWITCH BOARD
11.		BULK HEAD (INSIDE LIFT SHAFT)
12.		DISTRIBUTION BOARD (BOTTOM LEVEL)
13.		INDICATES CONTROLLING OF LIGHT/FAN FROM SWITCH BOARD
14.		INDICATES WIRING FROM DISTRIBUTION BOARD
15.		BELL SWITCH POINT
16.		BUZZER POINT
17.		TUBELIGHT
18.		A.C. POINT
19.		MITTER
20.		MAIN SWITCH
21.		EXHAUST FAN / CEILING ROSE



TYPICAL GROUND +3 FLOORS





EXTENSION OF CLASSROOMS

Place:

D.A.V.BISTUPUR

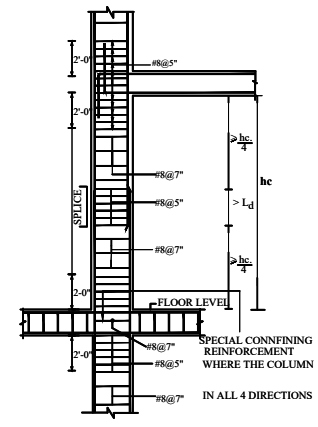
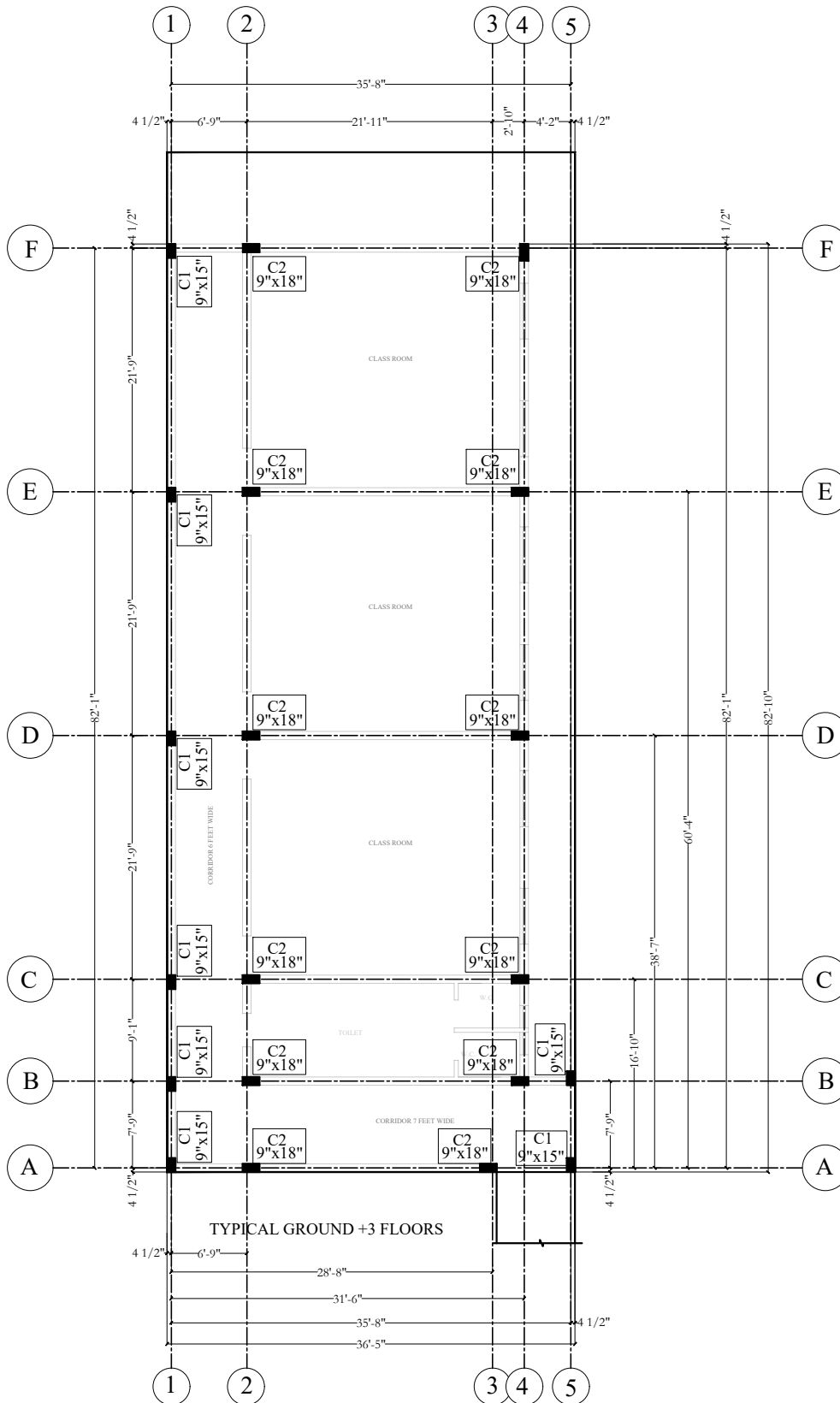
Title:

FURNITURE DRAWING

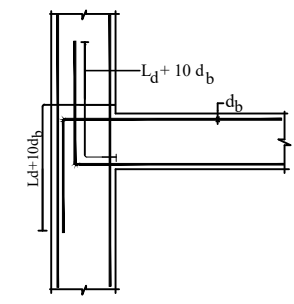
Date:

19/03/2024

DX **XTREME** design
 Architects | Planner | Project Consultants
 2nd floor, Sana Complex, Aam Bagan
 Sakchi, Jamshedpur - 831001
 Contact - M. (+91-9835159732, +91-9234459150)
 Email - mkhil.archi@gmail.com
 Website - www.designxtreme.in



TYP. DETAILS OF COLUMN



TYP. DETAILS OF EXTERNAL JOINT

CENTER LINE

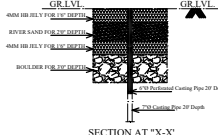
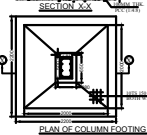
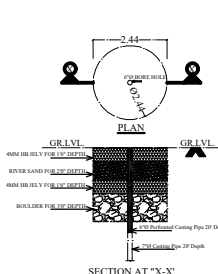
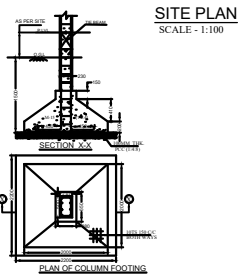
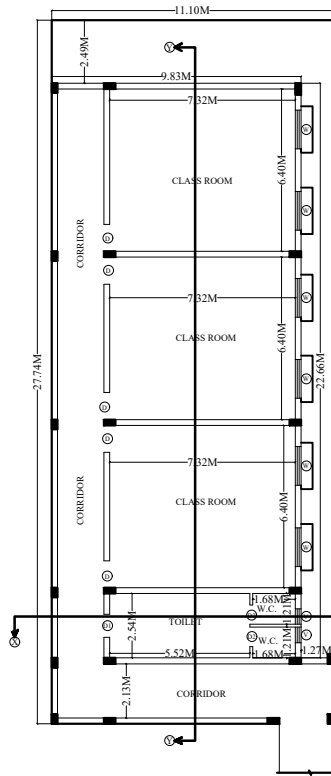
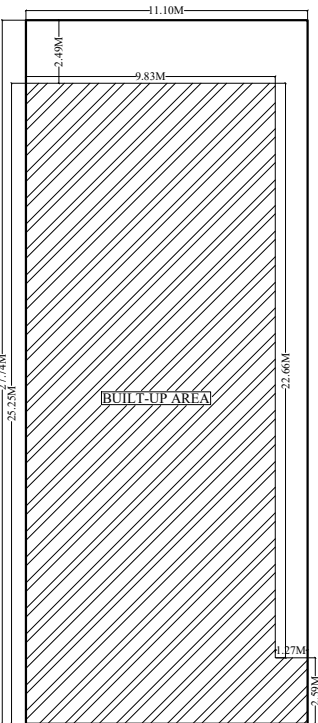
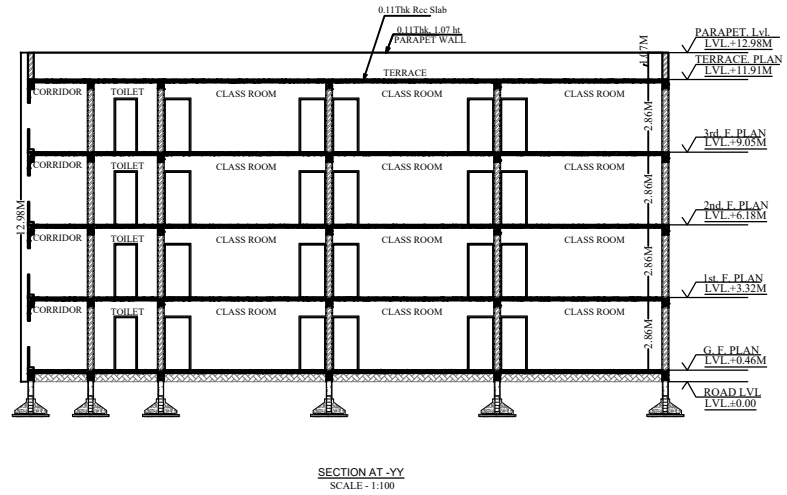
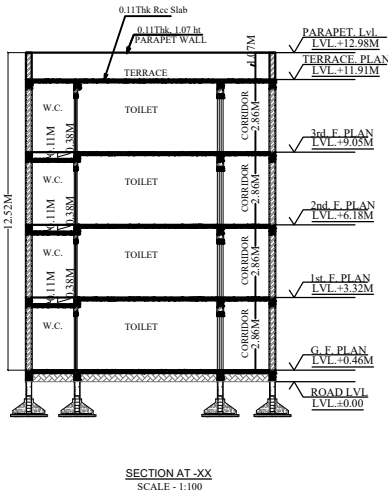
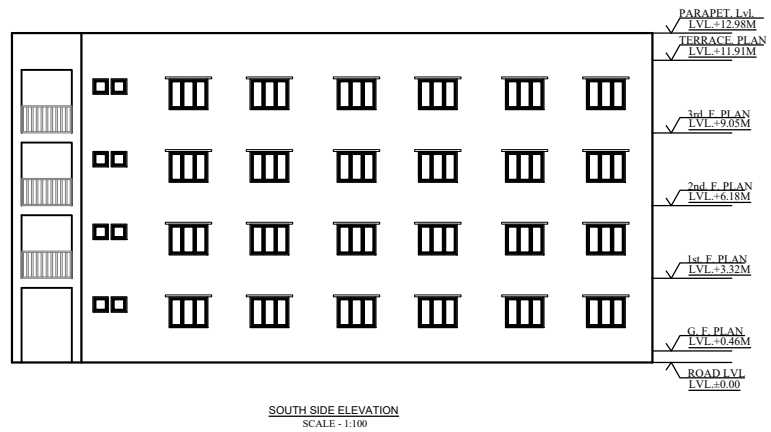
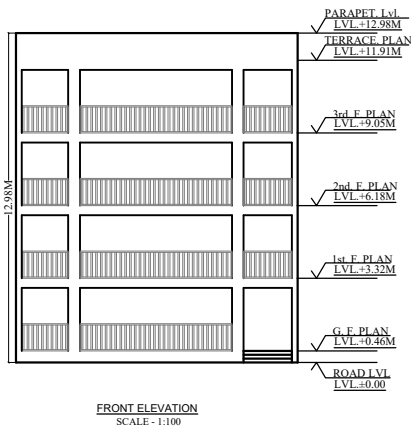
- NOTE:-**
1. ALL DIMENSION ARE IN FEET AND INCHES .
 2. ALL CONCRETE MIX M20 UNLESS OTHERWISE SPECIFIED.
 3. MILD STEEL YIELD STRENGTH 250 N / mm²
 4. TOR STEEL YIELD STRENGTH 500 N/mm²
 5. ALL CONCRETE SHALL BE MACHINE MIXED AND MACHINE VIBRATED .
 6. CLEAR COVER TO MAIN STEEL 40 mm. IN COLUMN , 25 mm. IN BEAM & 15 mm. IN SLAB.
 7. ALL DIMENSION ARE TO BE READ NOT TO BE MEASURED .
 8. ALL DISTRIBUTION BARS WHEREVER REQUIRED BUT NOT CALLED OUT SHALL BE 8 Ø @ 250 C/C.
 9. THIS DRAWING SHALL BE READ WITH ARCHITECTURAL DRAWINGS.
 10. BEARING CAPACITY OF SOIL ADOPTED AS 18 T/M².
 11. DEPTH OF FOUNDATION SHALL BE 2000 mm. BELOW EXISTING GROUND .
- LAP LENGTH > Ld OR 30 TIMES OF BAR DIA
 db=DIA OF MAIN BAR
 Ldc=EFFECTIVE DEVELOP. LENGTH CONSIDERING COMPRESSION= 37XBAR DIA
 Ldt=EFFECTIVE DEVELOPMENT LENGTH CONSIDERING TENSION= 47 X BAR DIA.

COLUMN SIZE	L		B	
	C1	9"	C2	9"
CONCRETE MIX		M20		M20
SECTION WITH MAIN STEEL				
LINKS				
8 mm. Tor @ 5" & 7" C/C				

DRAWING :-
CENTER LINE

DATE :- 19 /03/2024

PROJECT :- D.A.V.BISTUPUR



GENERAL SPECIFICATION:-

FOUNDATION	Plain Cement Concrete As Per Design.
SUPER STRUCTURE	R.C.C. Column Footing & Column As Per Structure Design. R.C.C. Column And Beam As Per Structure Design. 22.5M THK External Wall & 0.11m THK Partition Wall In Cement Mortar. R.C.C. Roof Slab As Per Structure Design.
FLOOR	L.P.S. Flooring On P.C. Bed All Over Floor.
INTERNAL FINISH	White Washing Over Cement Plaster.
SANITARY	1. Vitrified China Sanitary Ware. 2. G.I. Pipe With Supply. 3. C.I. Pipe For Disposal.
DOORS & WINDOWS	As Per Schedule.
ELECTRICAL	Copper Conductor With P.V.C. Conduit.

SCHEDULE OF DOORS & WINDOWS

SL. NO.	NAME	SIZE	DESCRIPTION
D	1.07M X 2.13M	Paneled Single Shutter door.	
D1	0.91M X 2.13M	Paneled Single Shutter door.	
D2	0.84M X 2.13M	Paneled Single Shutter door.	
D3	0.76M X 2.13M	Paneled Single Shutter door.	
W	1.52M X 1.22M	Glazed Steel Frame Window 3. Shutter.	
W1	1.22M X 1.22M	Glazed Steel Frame Window 3. Shutter.	
V	0.61M X 0.61M	Top Hung Steel Ventilator.	

PROPOSED BUILDING FOR:-
1.SMT.
W/O.

KHATA NO.-
NEW PLOT NO.-
MOUZA.-
THANA NO.-
THANA.-
HALKA NO.-
JAMSHEDPUR, EAST SINGHBHUM.

SIGNATURE OF OWNER/ATTORNEY HOLDER

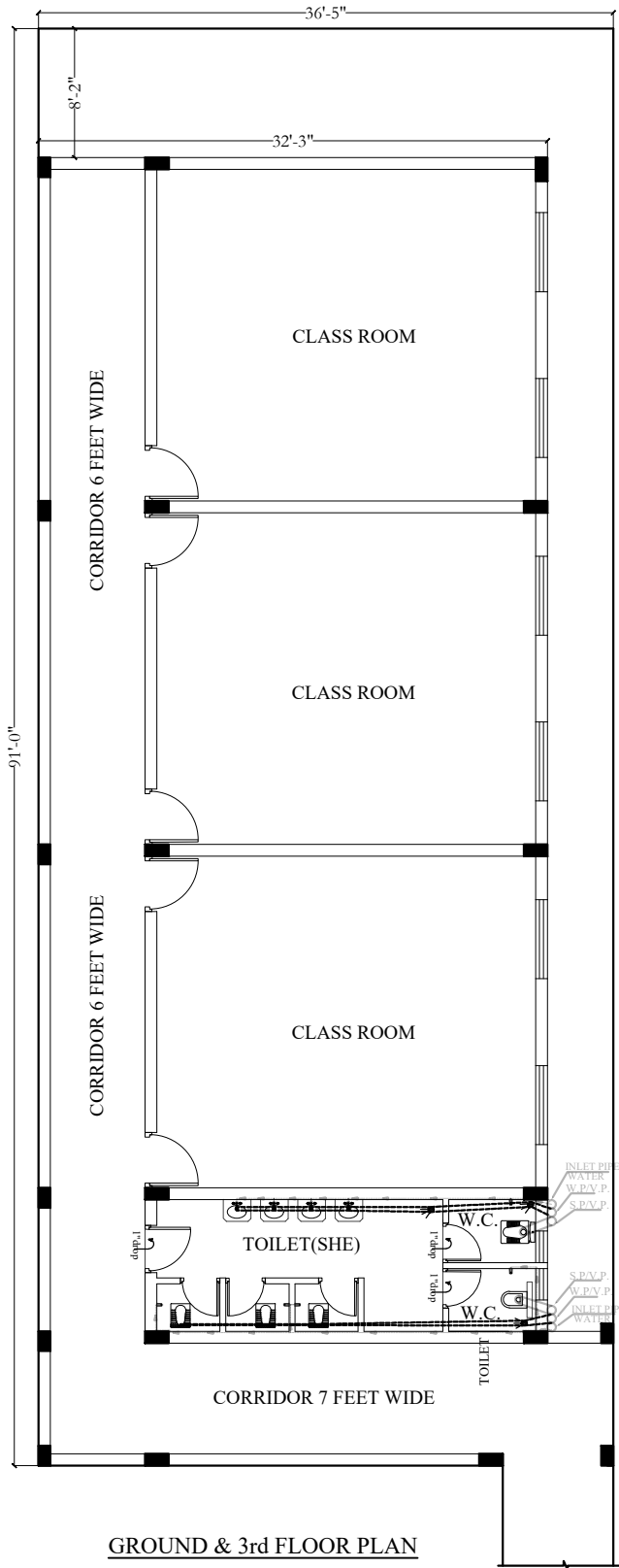
SIGNATURE OF ENGINEER/ ARCHITECT

SITE PLAN, FLOOR PLANS, ELEVATIONS (2-nos.),
SECTIONS (2-nos.), AREA CALCULATION,
LOCATION
PLAN, DRAINAGE PLAN, FOOTING DETAILS,
WATER TANK & SEPTIC TANK CALCULATION.

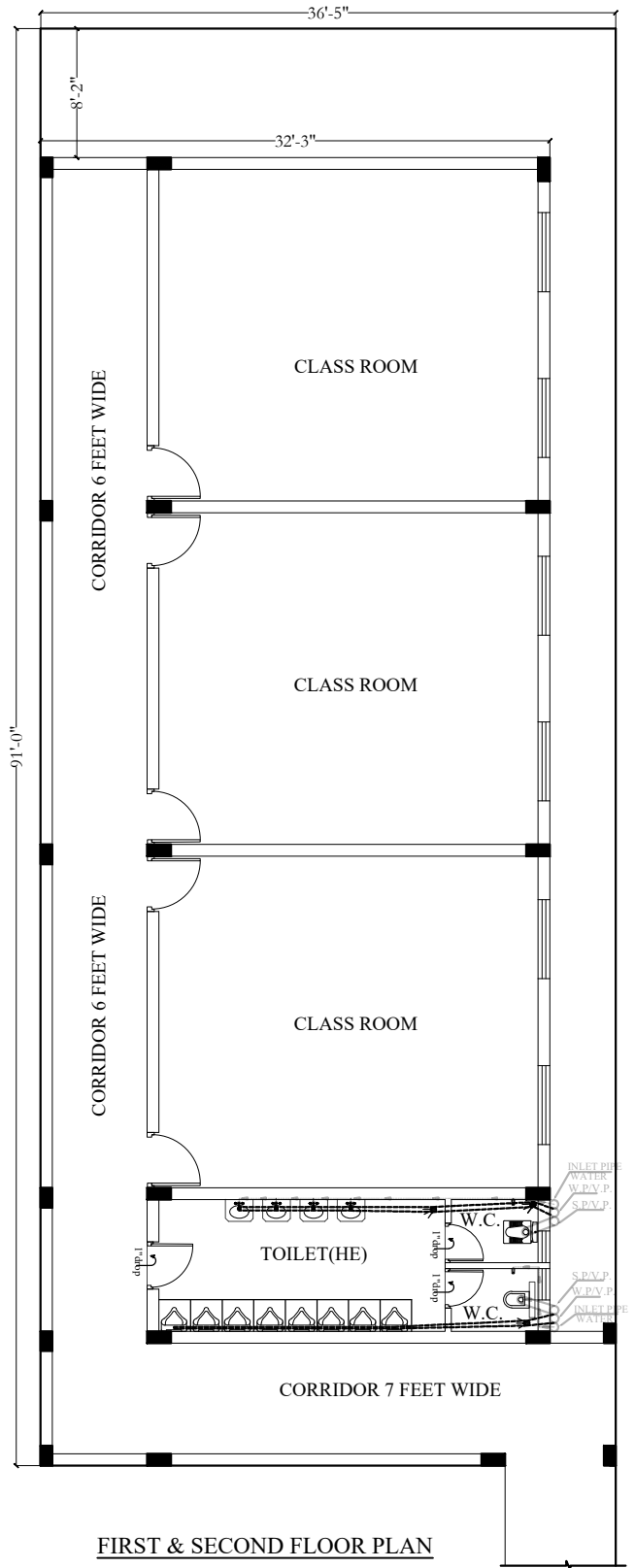
SHEET NO. = 01 OF 01

APPROVED





GROUND & 3rd FLOOR PLAN



FIRST & SECOND FLOOR PLAN



LEGEND		
SN	SYMBOL	PARTICULARS
1.	●	2" SOIL STACK (P.V.C)
2.	●	2" P.V.C. WASTE - RAIN STACK
3.	●	2" NAHND-TRAP
4.	●	2" P-F-TRAP
5.	●	GL. DOWN COMER
6.	+	STOP COCK
7.	+	SHOWER
8.	○	2" P.P.W.C. PIPE FOR BALCONY DRAINAGE
9.	○	GEYSER
10.	—	TOWEL RAIL
11.	□	WASH BASIN
12.	□	WATER CLOSET

EXTENSION OF CLASSROOMS

Place:

Title:

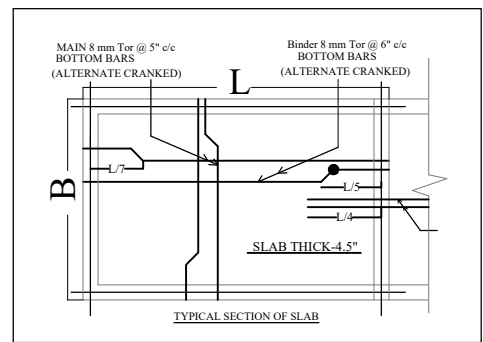
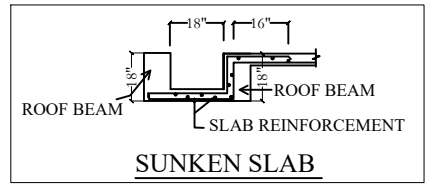
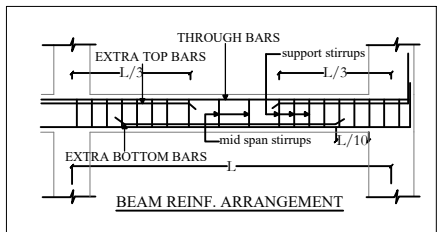
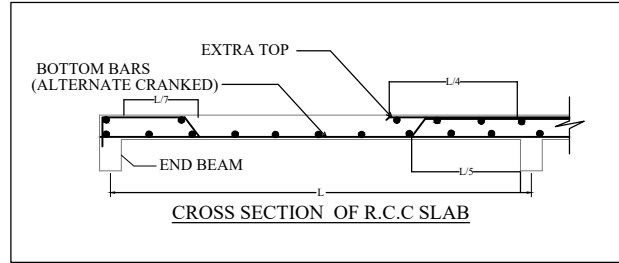
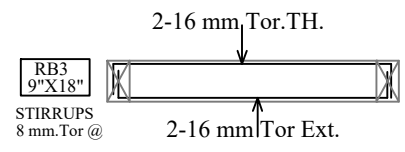
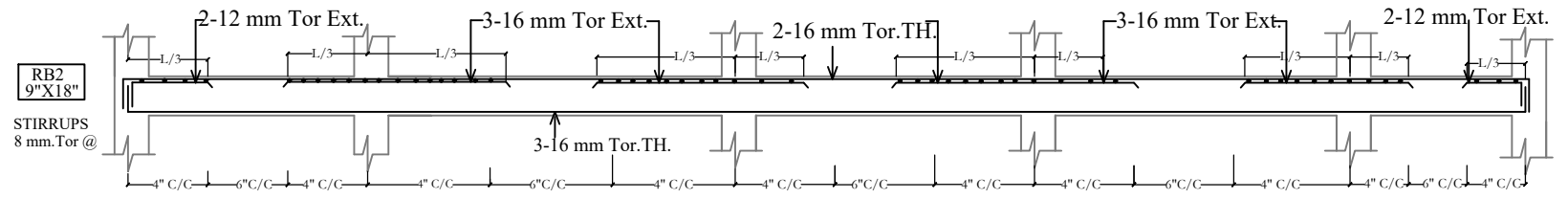
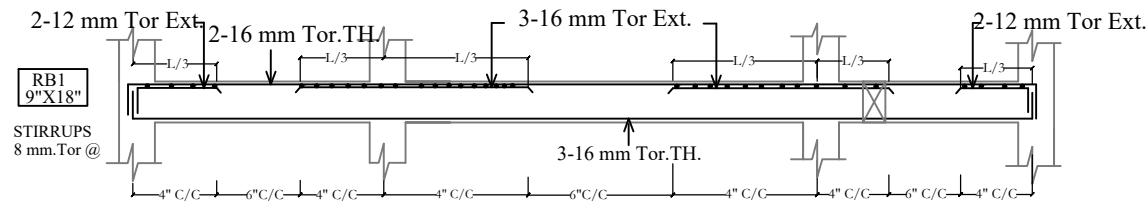
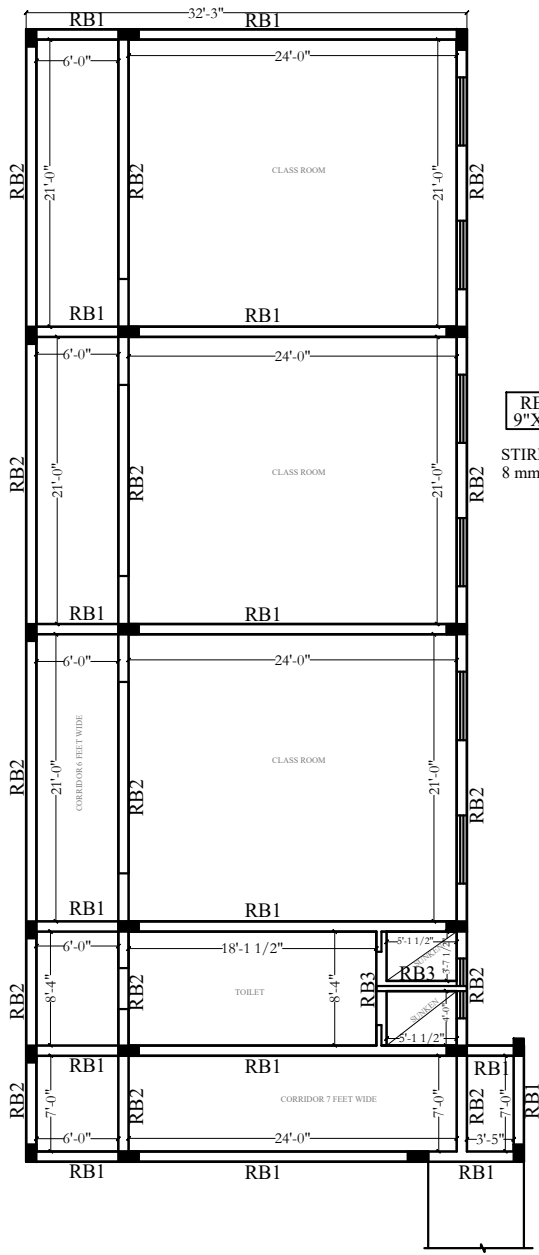
Date:

D.A.V.BISTUPUR

PLUMBING DRAWING

19/03/2024

DX XTREME
 Architects | Planner | Project Consultants
 2nd floor, Sana Complex, Aam Bagan
 Sakchi, Jamshedpur - 831001
 Contact - M - (+91-9835159732, +91-9234459150)
 Email - mihir.arch@gmail.com
 Website - www.designxtreme.in

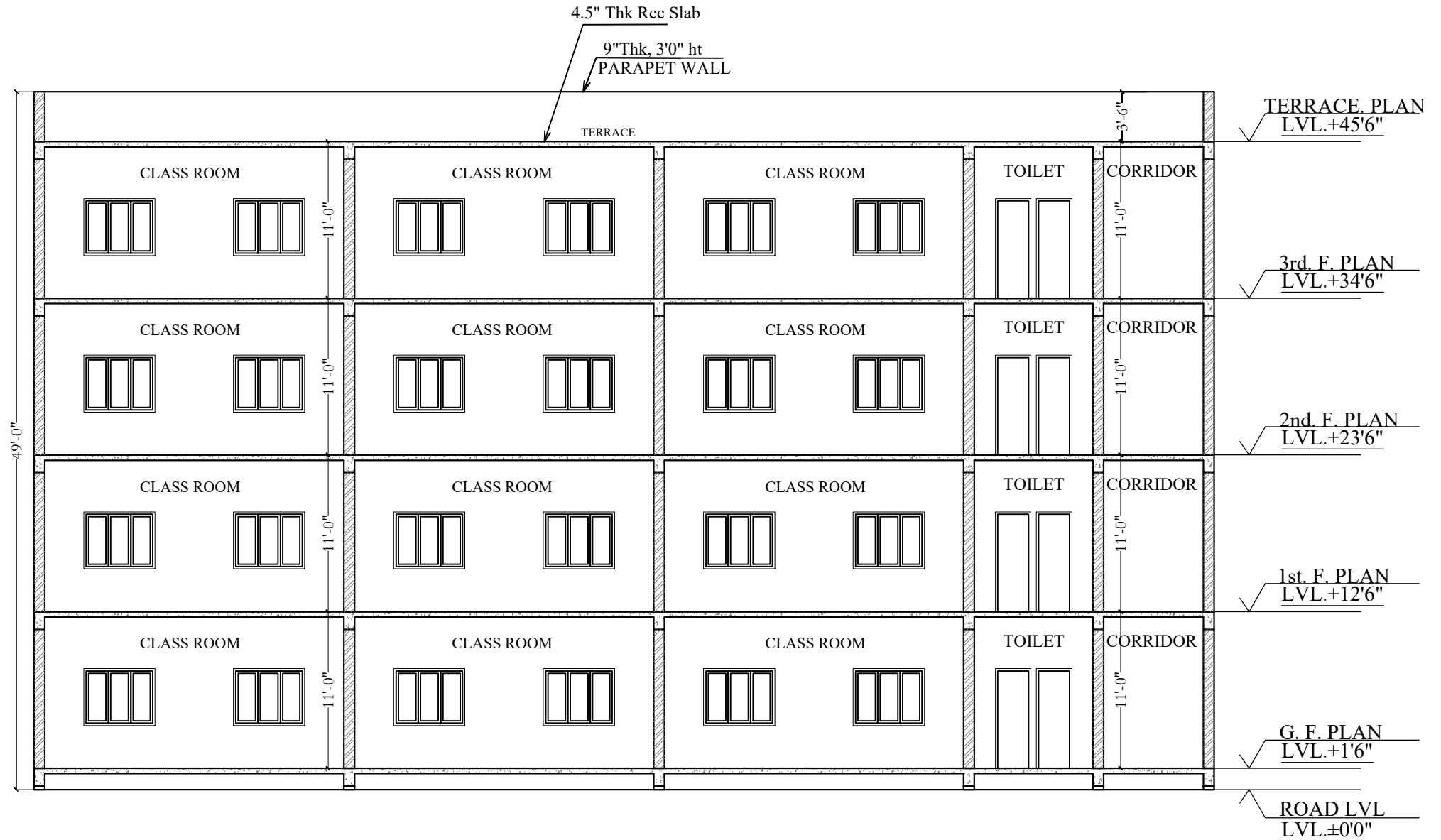


- NOTE:-**
1. ALL DIMENSION ARE IN FEET AND INCHES.
 2. ALL CONCRETE MIX M20 UNLESS OTHERWISE SPECIFIED.
 3. MILD STEEL YIELD STRENGTH 250 N / mm²
 4. TOR STEEL YIELD STRENGTH 500 N/mm²
 5. ALL CONCRETE SHALL BE MACHINE MIXED AND MACHINE VIBRATED.
 6. CLEAR COVER TO MAIN STEEL 40 mm. IN COLUMN , 25 mm.
 7. IN BEAM & 15 mm. IN SLAB.
 8. ALL DISTRIBUTION BARS WHEREVER REQUIRED BUT NOT CALLED OUT SHALL BE 8 Ø @ 250 C/C.
 9. THIS DRAWING SHALL BE READ WITH ARCHITECTURAL DRAWINGS.
 10. BEARING CAPACITY OF SOIL ADOPTED AS 18 T/M².
 11. DEPTH OF FOUNDATION SHALL BE 2000 mm. BELOW EXISTING GROUND .
- LAP LENGTH > Ld OR 30 TIMES OF BAR DIA
 Ld= DIA OF MAIN BAR
 Ldc= EFFECTIVE DEVELOP. LENGTH CONSIDERING COMPRESSION= 37XBAR DIA
 Ldt= EFFECTIVE DEVELOPMENT LENGTH CONSIDERING TENSION= 47 X BAR DIA.

DRAWING :-
ROOF BEAM DETAIL

DATE :- 19 /03/2024

PROJECT :- D.A.V.BISTUPUR



EXTENSION OF CLASSROOMS

Place:

D.A.V.BISTUPUR

Title:

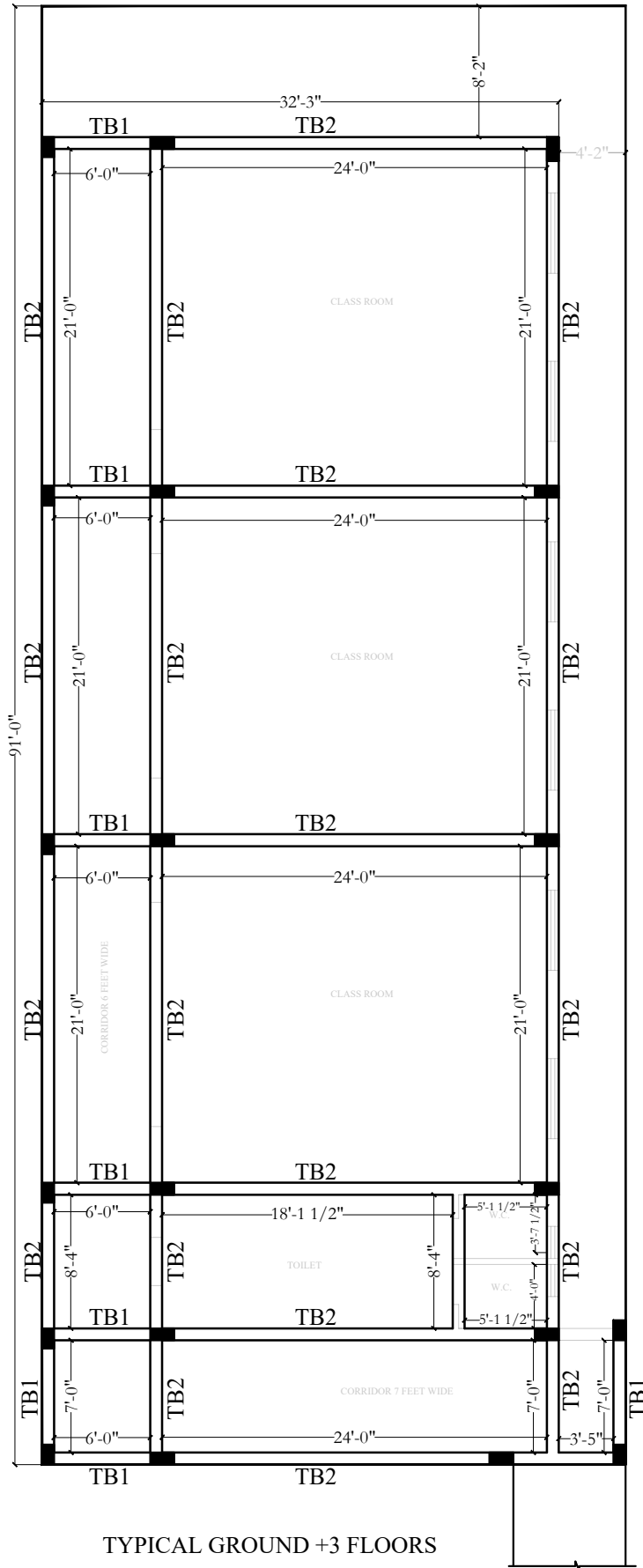
SECTION

Date:

19/03/2024



Architects | Planner | Project Consultants
 2nd floor, Sana Complex, Aam Bagan
 Sakchi, Jamshedpur -831001
 Contact - M - (+91-9835159732, +91-9234459150)
 Email - nikhil.archi@gmail.com
 Website -www.designxtreme.in



TIE BEAM SIZE	L	9"	9"	
	B	16"	16"	
CONCRETE MIX	TB1	M20	TB2	M20
SECTION WITH MAIN STEEL		1 - 16 mm. Tor Extra L/3 2 - 12 mm. Tor th. 2 - 12 mm. Tor th.		2 - 16 mm. Tor Extra L/3 2 - 12 mm. Tor th. 2 - 12 mm. Tor th.
LINKS		8 mm. Tor @ 8" & 9" C/C		

NOTE:-

1. ALL DIMENSION ARE IN FEET AND INCHES .
 2. ALL CONCRETE MIX M20 UNLESS OTHERWISE SPECIFIED.
 3. MILD STEEL YIELD STRENGTH 250 N / mm²
 4. TOR STEEL YIELD STRENGTH 500 N/mm²
 5. ALL CONCRETE SHALL BE MACHINE MIXED AND MACHINE VIBRATED .
 6. CLEAR COVER TO MAIN STEEL 40 mm. IN COLUMN , 25 mm. IN BEAM & 15 mm. IN SLAB.
 7. ALL DIMENSION ARE TO BE READ NOT TO BE MEASURED .
 8. ALL DISTRIBUTION BARS WHEREVER REQUIRED BUT NOT CALLED OUT SHALL BE 8 Ø @ 250 C/C.
 9. THIS DRAWING SHALL BE READ WITH ARCHITECTURAL DRAWINGS.
 10. BEARING CAPACITY OF SOIL ADOPTED AS 18 T/ M².
 11. DEPTH OF FOUNDATION SHALL BE 2000 mm. BELOW EXISTING GROUND .
- LAP LENGTH > L_d OR 30 TIMES OF BAR DIA
 db=DIA OF MAIN BAR
 L_{dc}=EFFECTIVE DEVELOP. LENGTH CONSIDERING COMPRESSION= 37XBAR DIA
 L_{dt}=EFFECTIVE DEVELOPMENT LEGNTH CONSIDERING TENSION= 47 X BAR DIA.

**DRAWING : -
TIE BEAM**

DATE :-19 /03/2024

PROJECT :- D.A.V.BISTUPUR