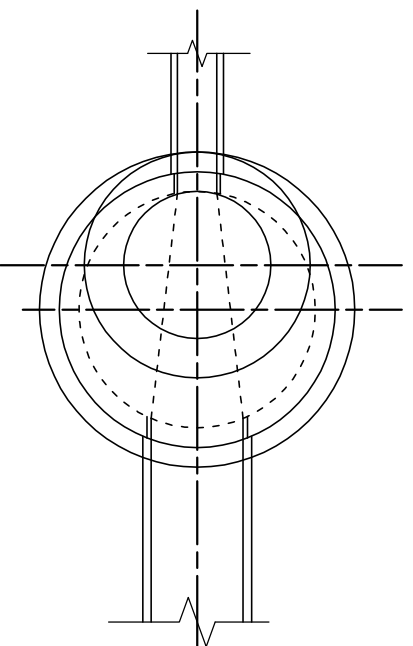
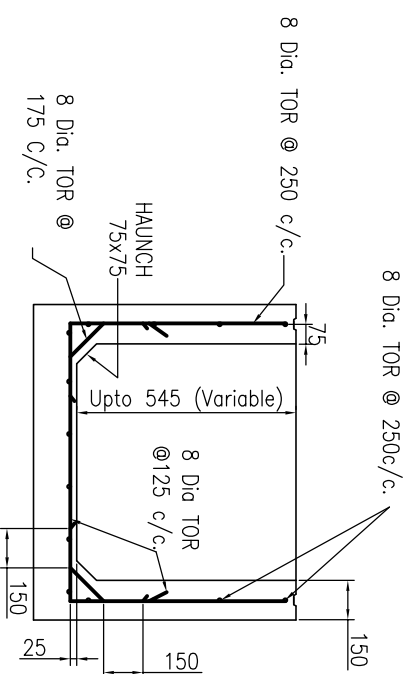


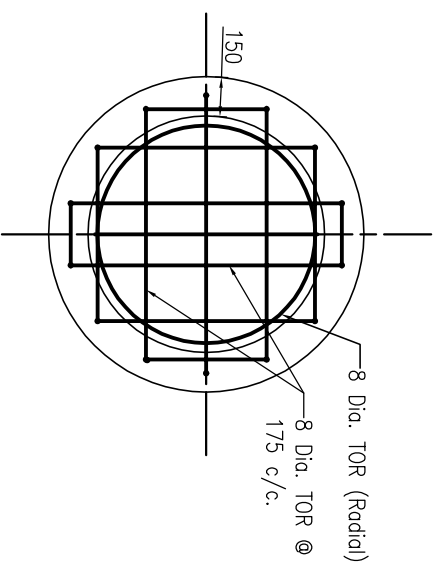
CROSS SECTION
TYPICAL DETAIL OF PREFAB RCC MANHOLE



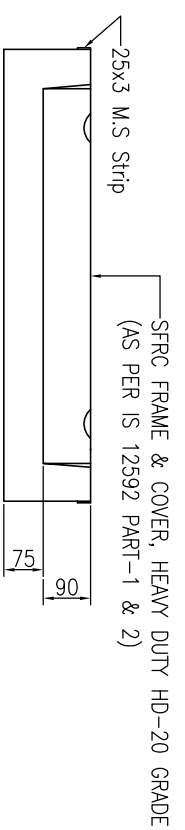
PLAN OF PREFAB RCC MANHOLE



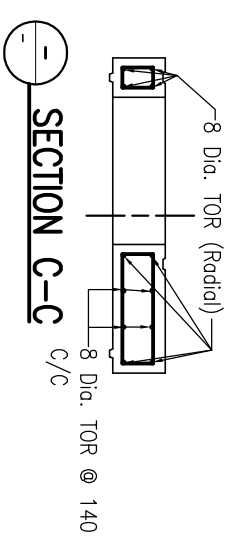
REINFORCEMENT DETAIL OF BASE UNIT



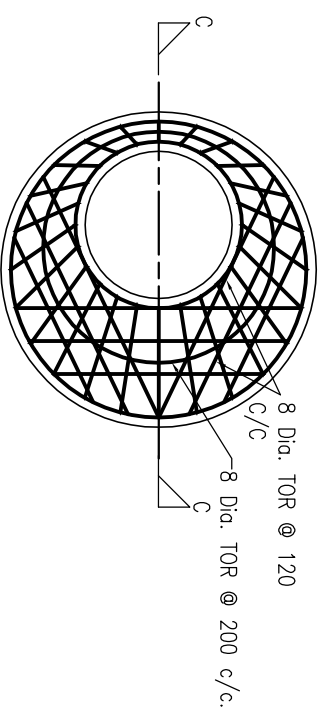
SECTION B-B
REINFORCEMENT DETAIL OF BASE SLAB



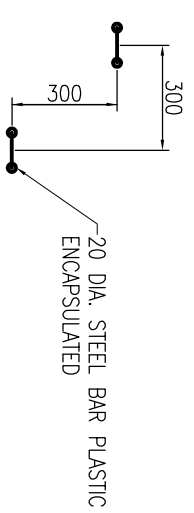
DETAIL OF MANHOLE COVER & ADJUSTABLE RING
SCALE 1:10



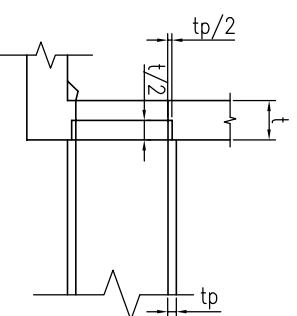
SECTION C-C



SECTION A-A
REINFORCEMENT DETAIL OF INTERMEDIATE SLAB



DETAIL-Y
SCALE 1:15



DETAIL-Z

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 27 MM, EXCEPT BASE SLAB, WHICH SHALL BE 40 MM.
 3. GRADE OF CONCRETE M30.
 4. GR. OF STEEL F415, CONFORMING TO IS 1786
 5. MAXIMUM BEARING PRESSURE 8.94 T/SQ.M.
 6. SCALE 1:20, UNLESS OTHERWISE STATED

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHK'D
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

CLIENT:-

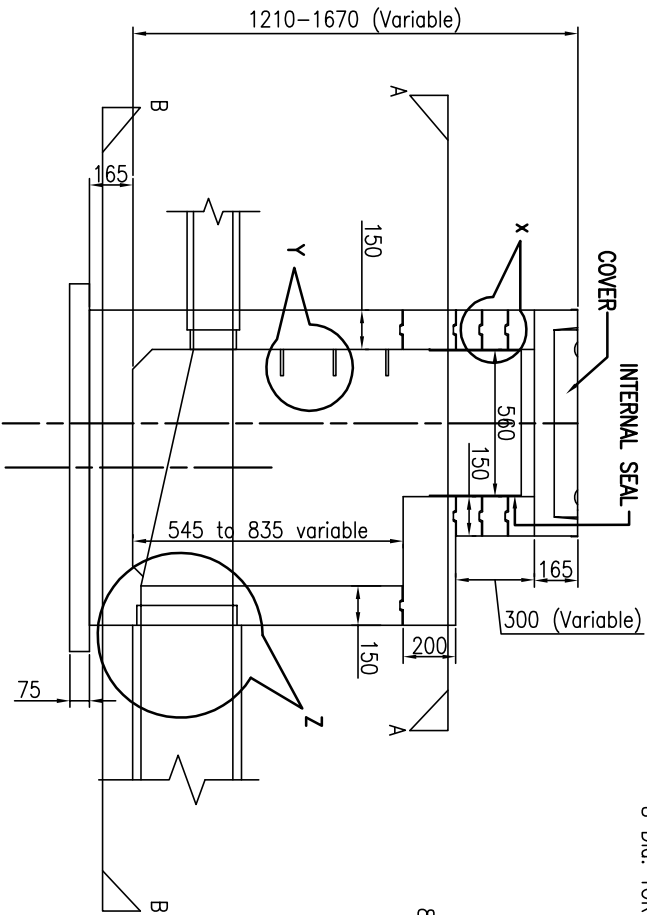


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URBAN INFRASTRUCTURE
DEVELOPMENT CORPORATION
303 Maharaj Park - 800 001
Bihar - (0612) 2210101, fax - (0612) 2210103
Phone - (0612) 2210101, fax - (0612) 2210103
PROJECT NO. 3489

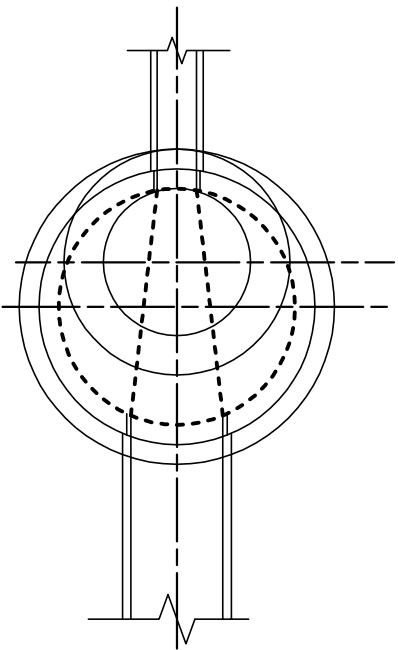
PREPARATION OF DETAILED
PROJECT REPORTS (DPRs) & BID
DOCUMENTS:
TENDERING FOR EXECUTION;
CONSTRUCTION SUPERVISION &
QUALITY CONTROL OF SEWERAGE &
DRAINAGE PROJECTS OF PATNA
UNDER JNNURM

DRAWING TITLE
910 DIA. MANHOLE DEPTH UPTO 0.91 M.
MAX. SIZE OF OUT GOING PIPE 350 NP-2

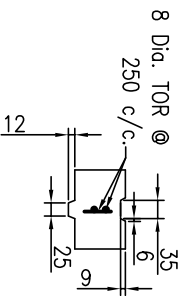
PURPOSE OF ISSUE		SCALE :- 1 : 20	
DRAWN	SKS	SHEET SIZE :- A3	DATE OF FIRST ISSUE
DESIGNED	JR		MAY 2013
CHECKED	RP		MAY 2013
APPROVED	CRR		MAY 2013
JOB NO.	DISCIPLINE	DRAWING NO.	REVISION
1092.01	PH	STD-01	00



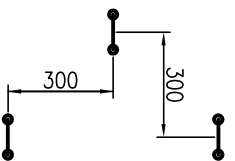
CROSS SECTION
TYPICAL DETAIL OF PREFAB RCC MANHOLE



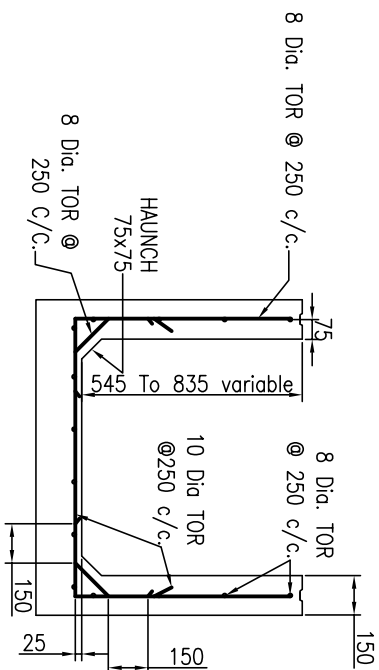
PLAN OF PREFAB RCC MANHOLE



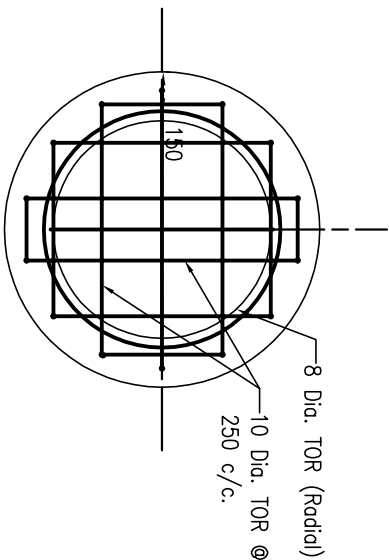
DETAIL -X
SCALE 1:10



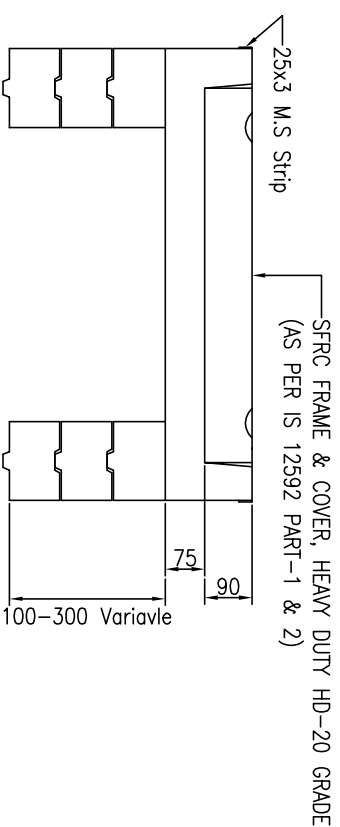
DETAIL -Y
SCALE 1:15



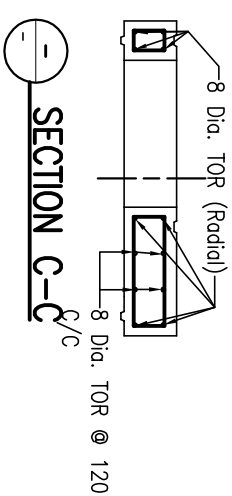
REINFORCEMENT DETAIL OF BASE UNIT



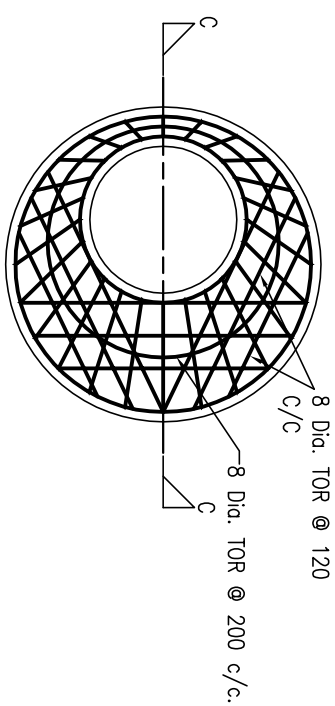
SECTION B-B
REINFORCEMENT DETAIL OF BASE SLAB



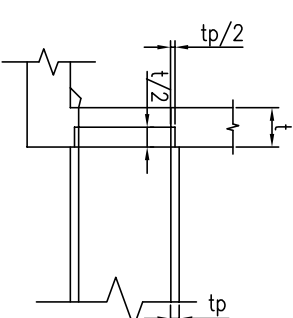
DETAIL OF MANHOLE COVER & ADJUSTABLE RING
SCALE 1:10



SECTION C-C
REINFORCEMENT DETAIL OF INTERMEDIATE SLAB



SECTION A-A
REINFORCEMENT DETAIL OF INTERMEDIATE SLAB



DETAIL -Z

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 27 MM EXCEPT BASE SLAB, WHICH IS 25 MM.
 3. GRADE OF CONCRETE M30.
 4. SR. OF STEEL Fe 415, CONFORMING TO IS 1786
 5. MAXIMUM BEARING PRESSURE 8.94 T/SQ.M.
 6. SCALE 1:20, UNLESS OTHERWISE STATED

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

CLIENT:-

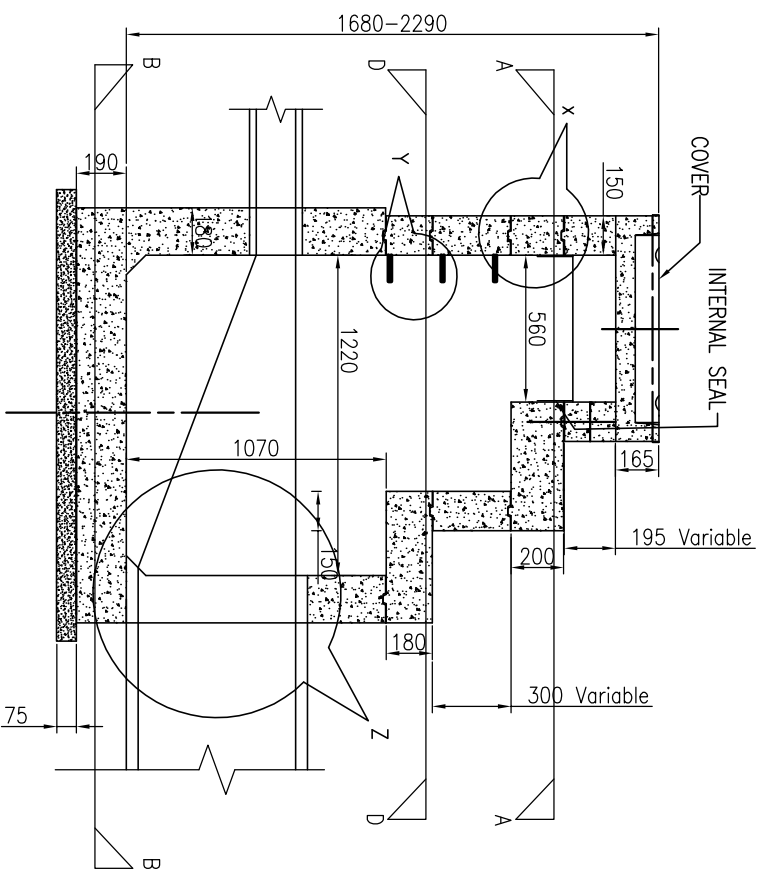


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DEVELOPMENT CORPORATION

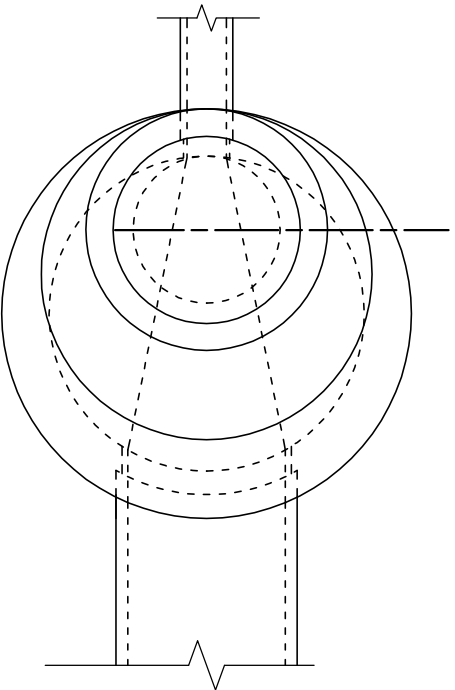
PREPARATION OF DETAILED
PROJECT REPORTS (DPRs) & BID
DOCUMENTS:
TENDERING FOR EXECUTION;
CONSTRUCTION SUPERVISION &
QUALITY CONTROL OF SEWERAGE &
DRAINAGE PROJECTS OF PATNA
UNDER JNNURM

DRAWING TITLE
**910 DIA. MANHOLE, DEPTH 0.91-1.67 M,
MAX SIZE OF OUT GOING PIPE 400 NP-2**

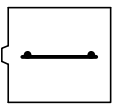
PURPOSE OF ISSUE		SCALE :- 1 : 20	
DRAWN	BY	SHEET SIZE :- A3	DATE OF FIRST ISSUE
DESIGNED	JR	DATE OF REVISION	
CHECKED	RP		
APPROVED	CRR		
JOB NO.	DISCIPLINE	DRAWING NO.	REVISION
1092.01	PH	STD-02	00



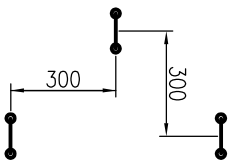
CROSS SECTION
TYPICAL DETAIL OF PREFAB RCC MANHOLE



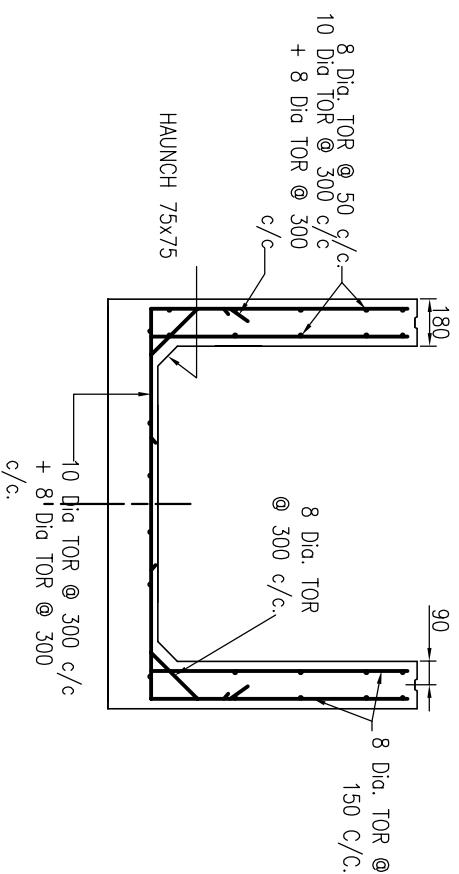
PLAN OF PREFAB RCC MANHOLE



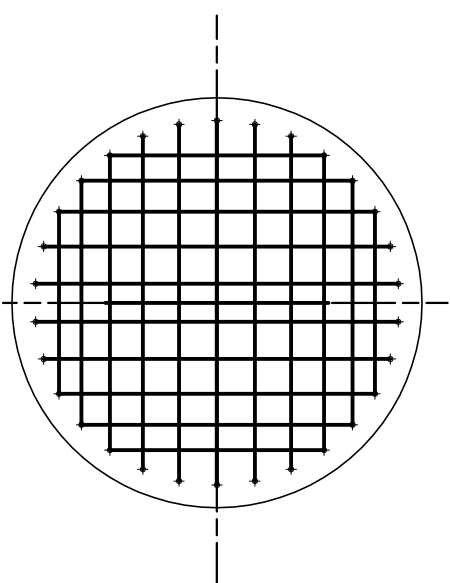
DETAIL -X
SCALE 1:10



DETAIL -Y
SCALE 1:15

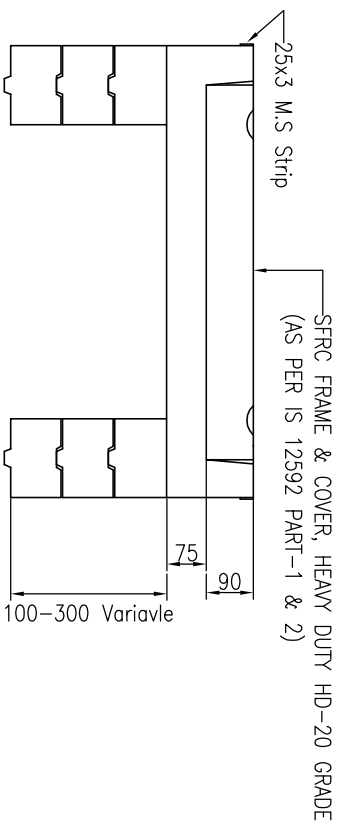


REINFORCEMENT DETAIL OF BASE UNIT

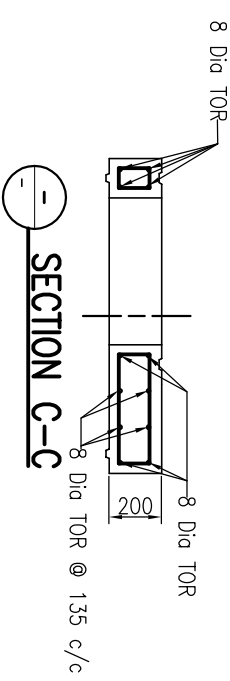


SECTION A-A
REINFORCEMENT DETAIL OF INTERMEDIATE SLAB

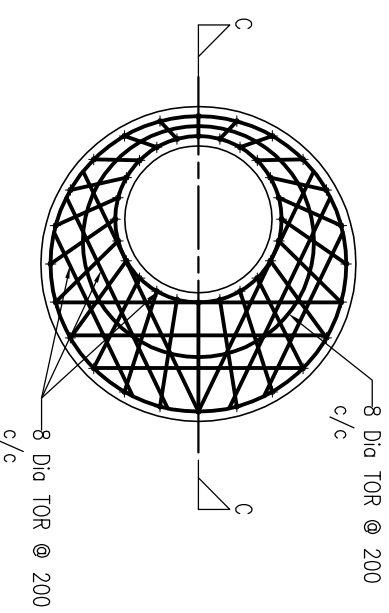
SECTION B-B
REINFORCEMENT DETAIL OF BASE SLAB



DETAIL OF MANHOLE COVER & ADJUSTABLE RING
SCALE 1:10



SECTION C-C



DETAIL -Z

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 25 MM EXCEPT BASE SLAB, WHICH IS 50 MM.
 3. GRADE OF CONCRETE M20.
 4. GR. OF STEEL Fe 415, CONFORMING TO IS 1786
 5. MAXIMUM BEARING PRESSURE 8.94 T/SQ.M.
 6. SCALE 1:20, UNLESS OTHERWISE STATED

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHK'D
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

CLIENT:-

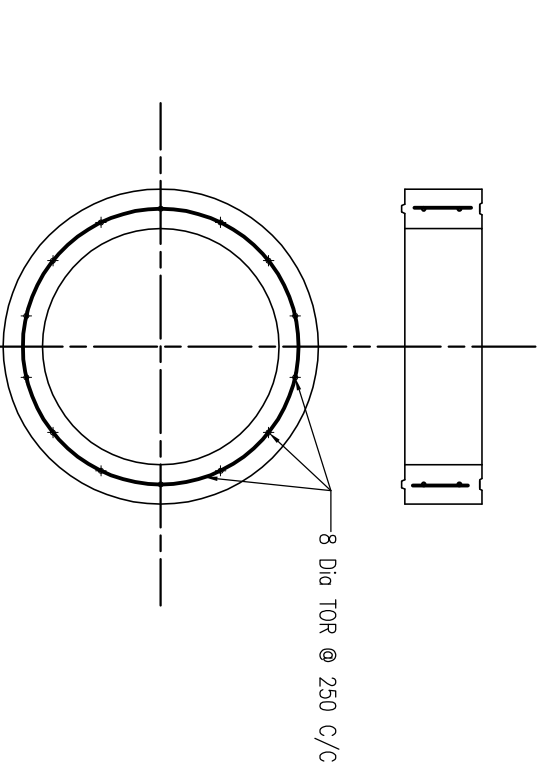
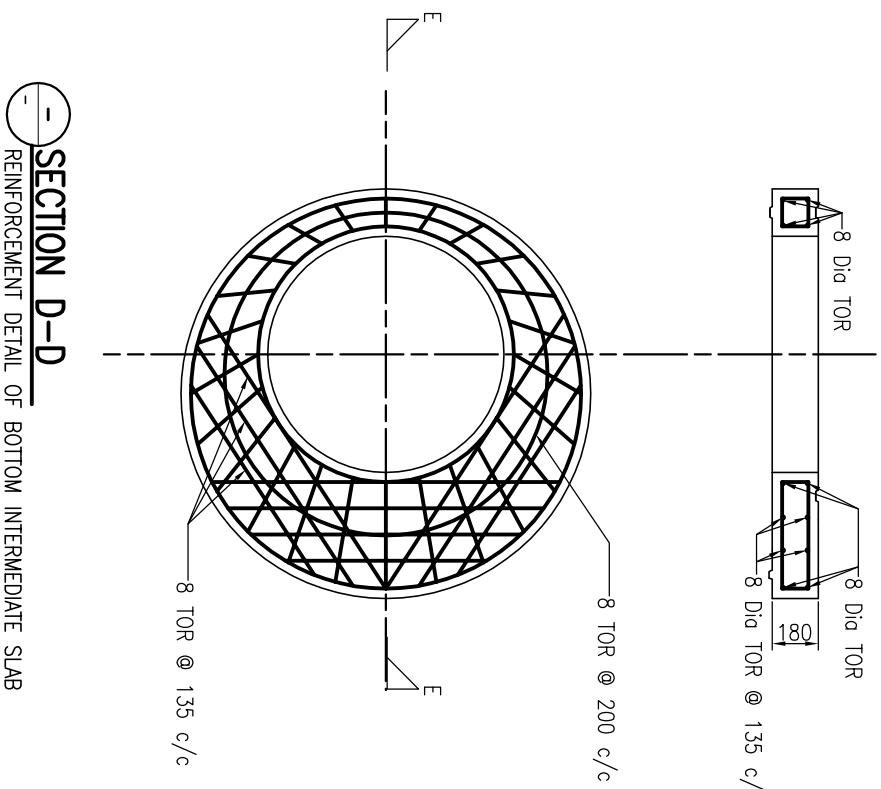


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PREPARATION OF DETAILED PROJECT REPORTS (DPRs) & BID DOCUMENTS:
TENDERING FOR EXECUTION,
CONSTRUCTION SUPERVISION &
QUALITY CONTROL OF SEWERAGE &
DRAINAGE PROJECTS OF PATNA
UNDER JNNURM

DRAWING TITLE
**1220 DIA. MANHOLE, DEPTH UPTO 1.68 M,
MAX SIZE OF OUT GOING PIPE 600 NP-3**
SHEET - 1/2

PURPOSE OF ISSUE		SCALE :- 1 : 20	
DRAWN	BY	SHEET SIZE :-	A3
DESIGNED	JR	DATE OF FIRST ISSUE	MAY 2013
CHECKED	RP	DATE OF SECOND ISSUE	MAY 2013
APPROVED	CRR	DATE OF THIRD ISSUE	MAY 2013
JOB NO.	DISCIPLINE	DRAWING NO.	REVISION
1092.01	PH	STD-03	00



- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 27 MM, EXCEPT BASE SLAB, UNDER REINFORCEMENT SHALL BE 23 MM.
 3. GRADE OF CONCRETE M30.
 4. GR. OF STEEL Fe 415, CONFORMING TO IS 1786
 5. MAXIMUM BEARING PRESSURE 0.94 T/SQ.M.
 6. SCALE 1:20, UNLESS OTHERWISE STATED

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

CLIENT:-



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 URBAN INFRASTRUCTURE
 DEVELOPMENT CORPORATION

303 Mahipal
 Buzh Mangi Pura - 800 051
 Patna - (0612) 2210101 Fax - (0612) 2210103
 E-mail - info@buidc.com

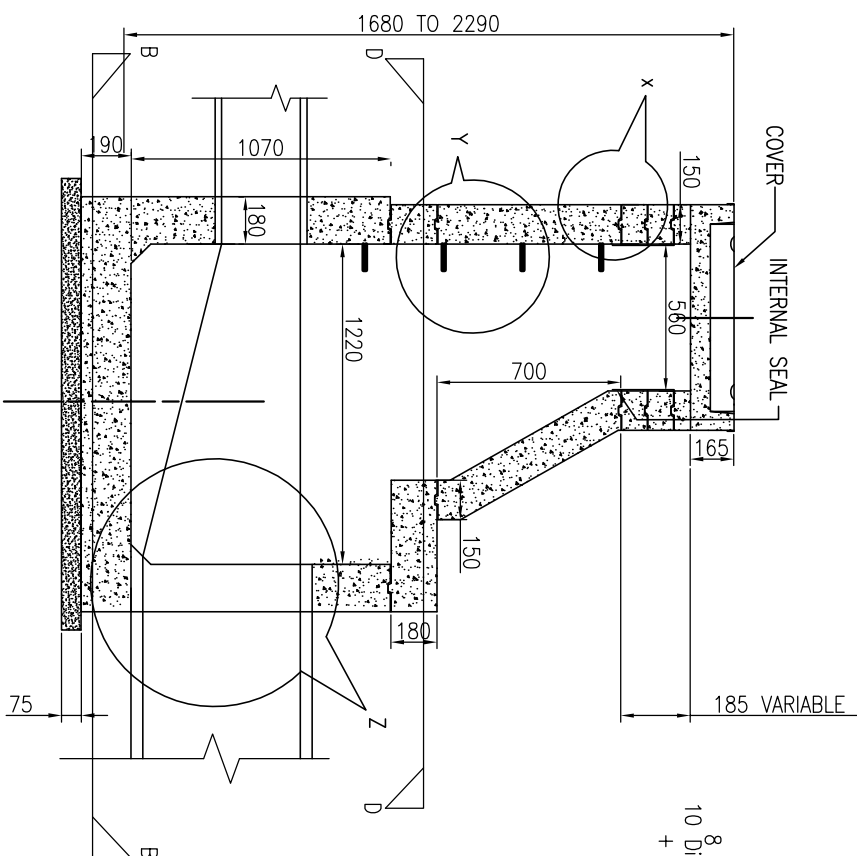
**PREPARATION OF DETAILED
 PROJECT REPORTS (DPRs) & BID
 DOCUMENTS:-**
 TENDERING FOR EXECUTION;
 CONSTRUCTION SUPERVISION &
 QUALITY CONTROL OF SEWERAGE &
 DRAINAGE PROJECTS OF PATNA
 UNDER JNNURM

DRAWING TITLE

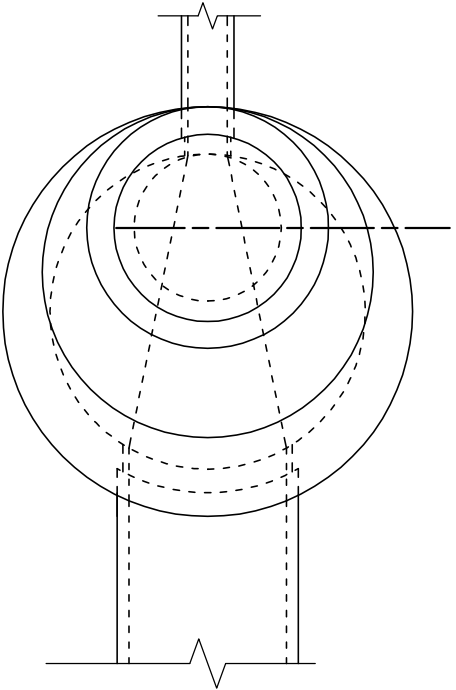
**1220 DIA. MANHOLE, DEPTH UPTO 1.68 M,
 MAX. SIZE OF OUT GOING PIPE 600 NP-3**
 SHEET - 2/2

SCALE :- 1 : 20

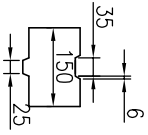
PURPOSE OF ISSUE		SCALE :- 1 : 20	
DRAFT	DETAILED PROJECT REPORT	SHEET SIZE :-	A3
BY	DATE OF FIRST ISSUE		
SKS	MAY 2013		
DESIGNED	JR	MAY 2013	
CHECKED	RP	MAY 2013	
APPROVED	CRR	MAY 2013	
JOB NO.	DISCIPLINE	DRAWING NO.	REVISION
1092.01	PH	STD-03	00



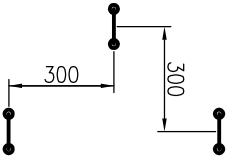
CROSS SECTION
TYPICAL DETAIL OF PREFAB RCC MANHOLE



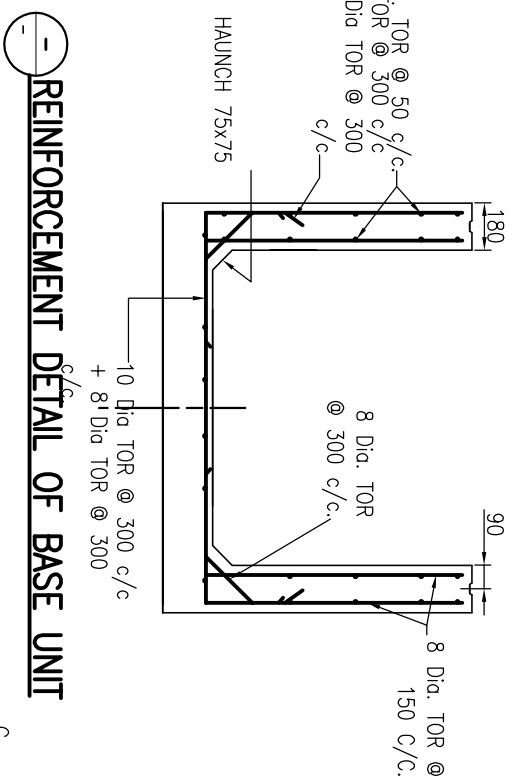
PLAN OF PREFAB RCC MANHOLE



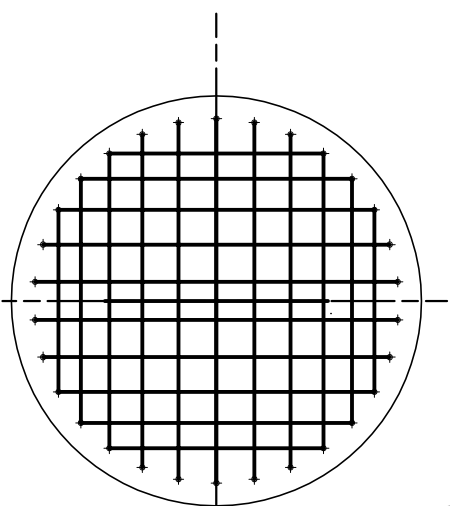
DETAIL -X
SCALE 1:10



DETAIL -Y
SCALE 1:15

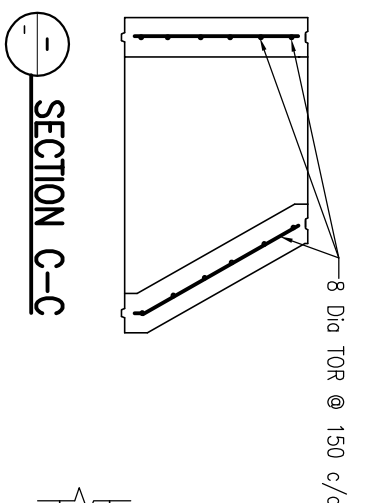


REINFORCEMENT DETAIL OF BASE UNIT

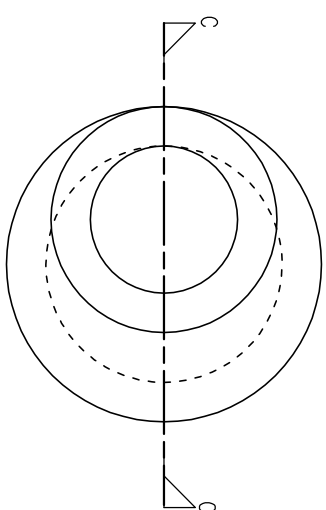


SECTION B-B
REINFORCEMENT DETAIL OF BASE SLAB

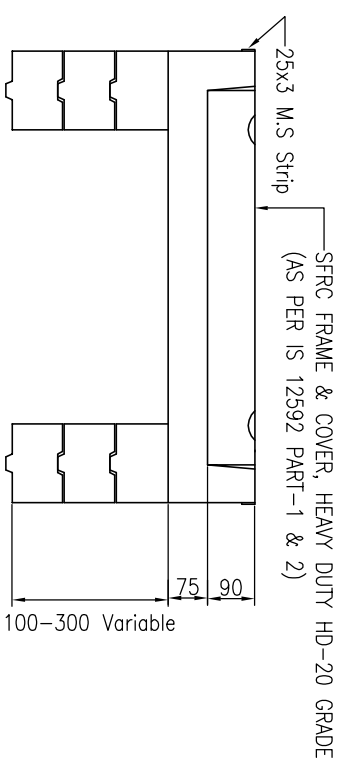
REINFORCEMENT DETAIL OF REDUCING SHAFT



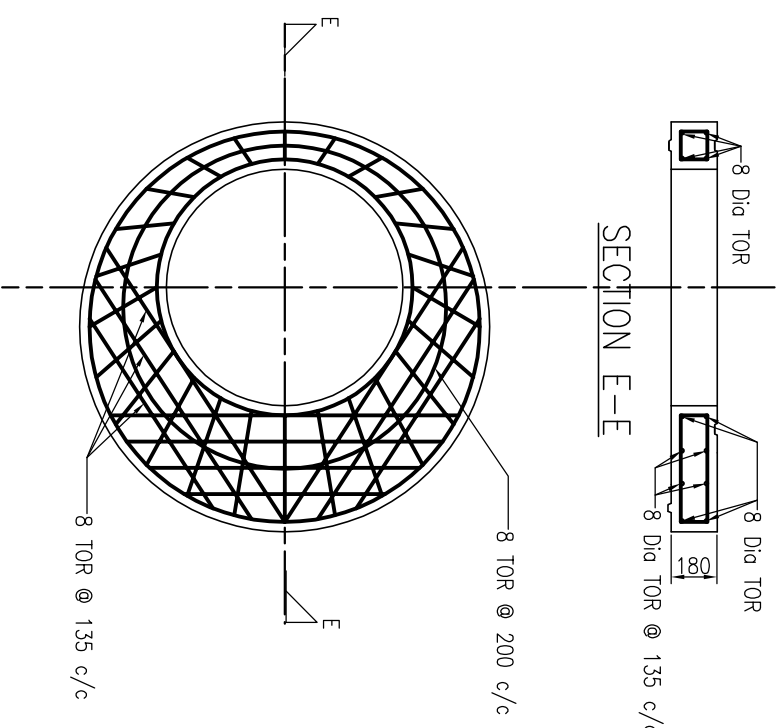
SECTION C-C



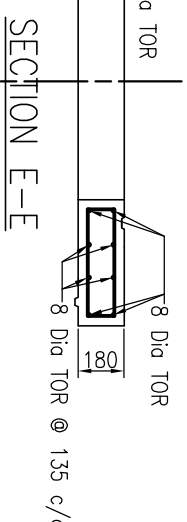
DETAIL -Z



DETAIL OF MANHOLE COVER & ADJUSTABLE RING
SCALE 1:10



SECTION D-D
REINFORCEMENT DETAIL OF INTERMEDIATE SLAB



SECTION E-E

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 25 MM EXCEPT BASE SLAB, 40 MM.
 3. GRADE OF CONCRETE M20.
 4. GR. OF STEEL Fe 415, CONFORMING TO IS 1786
 5. MAXIMUM BEARING PRESSURE 8.94 T/SQ.M.
 6. SCALE 1:20, UNLESS OTHERWISE STATED

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

CLIENT:-



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URBAN INFRASTRUCTURE
DEVELOPMENT CORPORATION

PREPARATION OF DETAILED
PROJECT REPORTS (DPRs) & BID
DOCUMENTS:
TENDERING FOR EXECUTION,
CONSTRUCTION SUPERVISION &
QUALITY CONTROL OF SEWERAGE &
DRAINAGE PROJECTS OF PATNA
UNDER JNNURM

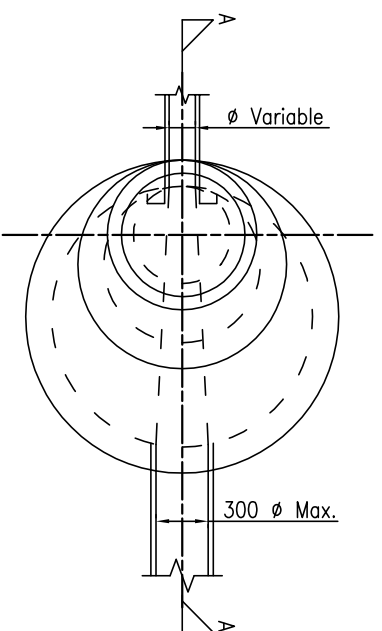
DRAWING TITLE
1220 DIA. MANHOLE, DEPTH 1.68 TO 2.29 M,
MAX.SIZE OF OUT GOING PIPE 800 NP-5

PURPOSE OF ISSUE
SCALE :- 1 : 20

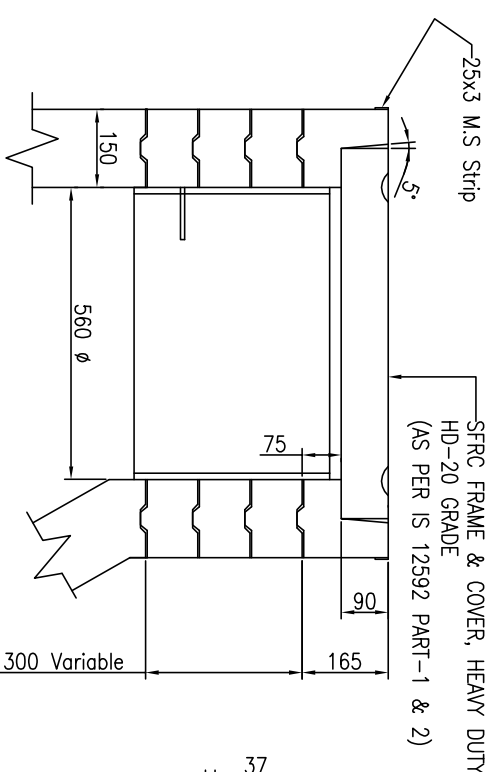
DRAWN	BY	DATE OF FIRST ISSUE
SKS <td>SKS <td>MAY 2013</td> </td>	SKS <td>MAY 2013</td>	MAY 2013

DESIGNED	CHECKED	APPROVED	DISCIPLINE	DRAWING NO.	REVISION
JR	RP	CRR	PH	STD-04	00

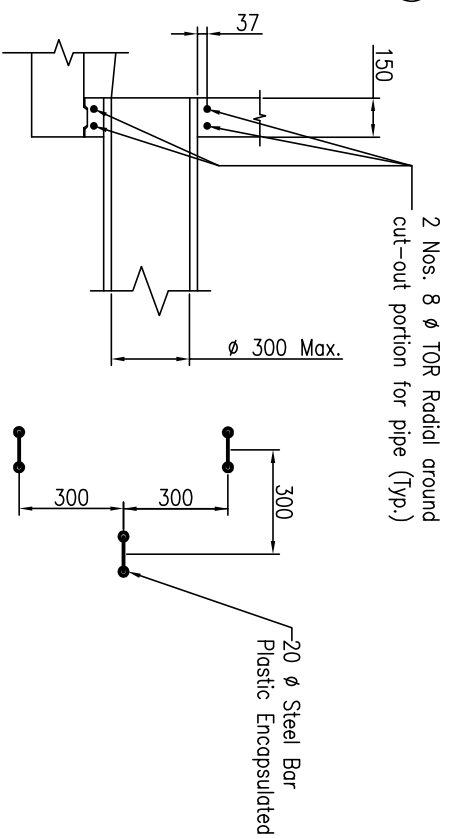
JOB NO.	DISCIPLINE	DRAWING NO.	REVISION
1092.01	PH	STD-04	00



PLAN OF PREFAB RCC MANHOLE

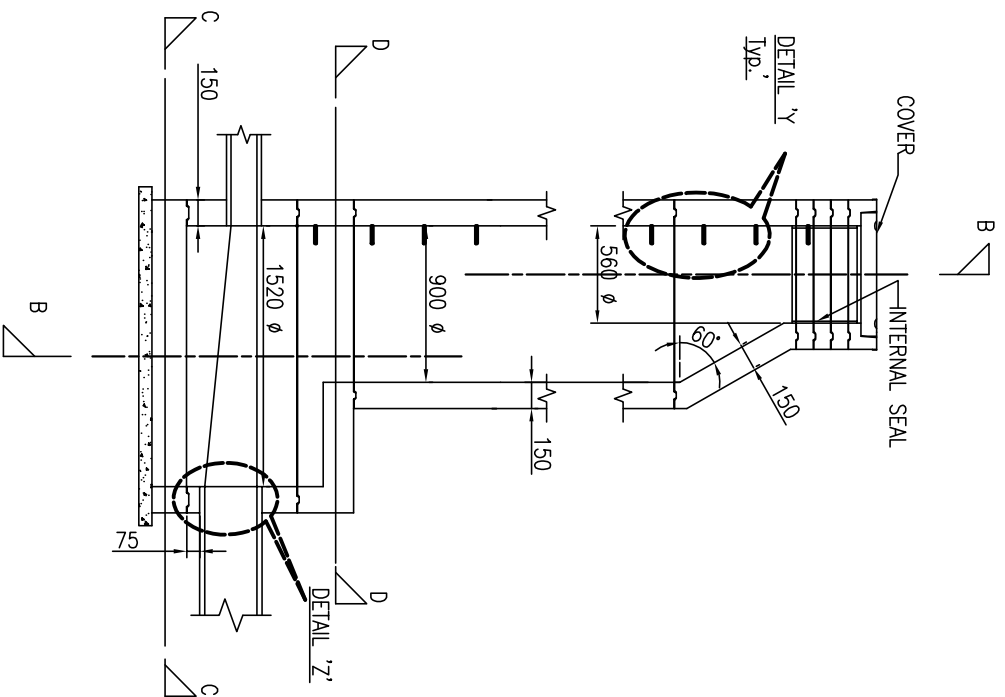


DETAIL OF MANHOLE COVER & ADJUSTABLE RING
SCALE: 1:15

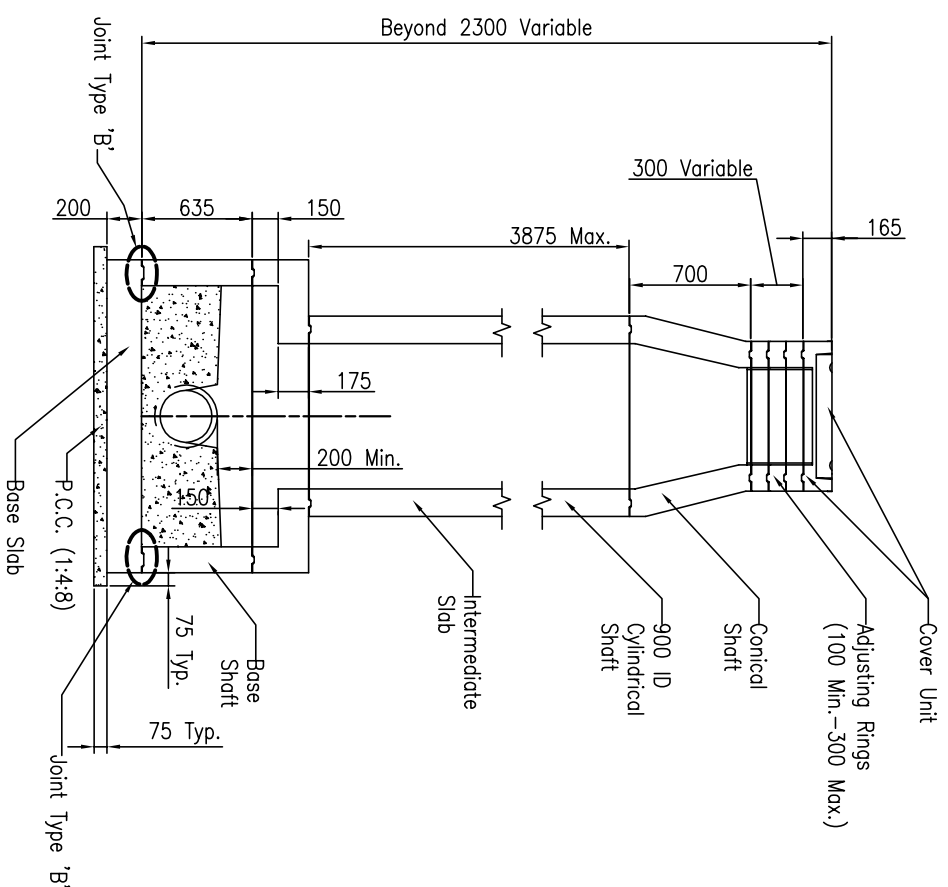


DETAIL-Z
SCALE:- 1 : 20

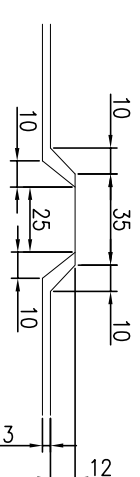
DETAIL-Y (TYP.)
SCALE 1:15



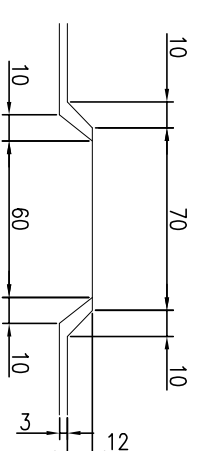
SECTION A-A
TYPICAL DETAIL OF PREFAB RCC MANHOLE



SECTION B-B
TYPICAL DETAIL OF PREFAB RCC MANHOLE



JOINT DETAIL (TYP.)
SCALE:- 1 : 2

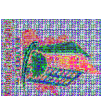


JOINT DETAIL TYPE 'B' (TYP.)
SCALE:- 1 : 2

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 37 MM, EXCEPT BASE SLAB.
 3. WHERE MINIMUM CLEAR COVER IS 25 MM.
 4. GR. OF CONCRETE M30.
 5. GR. OF STEEL Fe 415, CONFORMING TO IS 1786.
 6. ALL JOINTS ARE JOINT TYPE EXCEPT JOINTS UNDER JNNURM UNLESS OTHERWISE STATED.
 7. SCALE 1:20, UNLESS OTHERWISE STATED.

Drawing Base Reference:
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP



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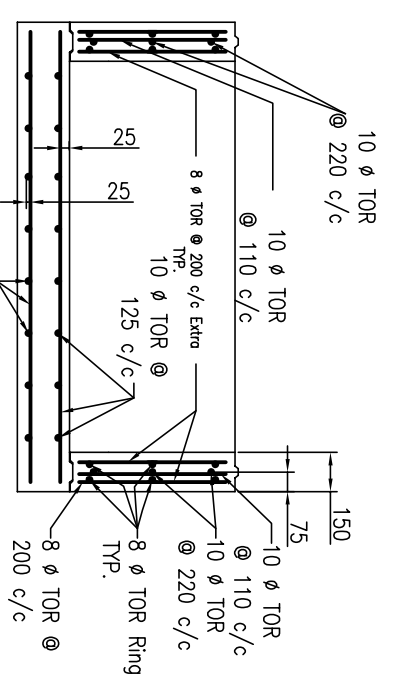
PROJECT:-

PREPARATION OF DETAILED
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DOCUMENTS:
TENDERING FOR EXECUTION;
CONSTRUCTION SUPERVISION &
QUALITY CONTROL OF SEWERAGE &
DRAINAGE PROJECTS OF PATNA
UNDER JNNURM

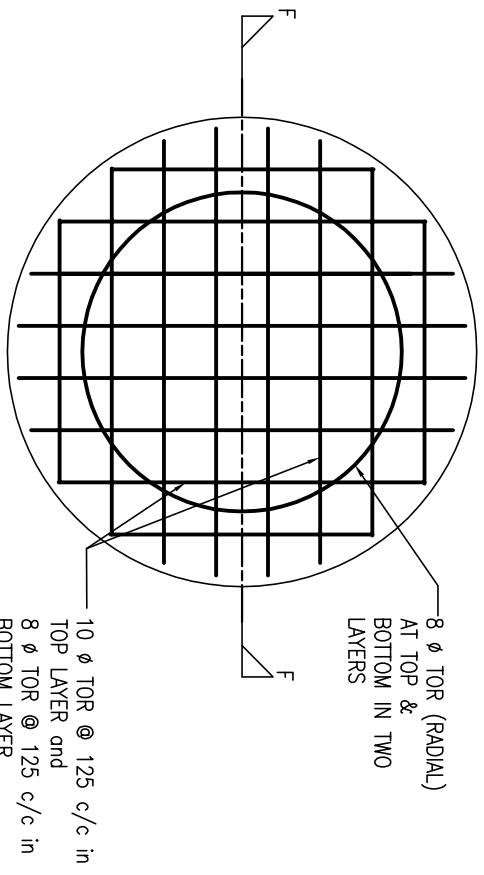
DATE	BY	DATE OF FIRST ISSUE
MAY 2013	SKS	MAY 2013
MAY 2013	JR	MAY 2013
MAY 2013	RP	MAY 2013
MAY 2013	CR	MAY 2013

DRAWING TITLE
ø 1520 Manhole, Depth beyond 2.30 M, Max. Size of
Outgoing Pipe ø 300 Np-2 with 60° Conical Shaft
SHEET - 1/2

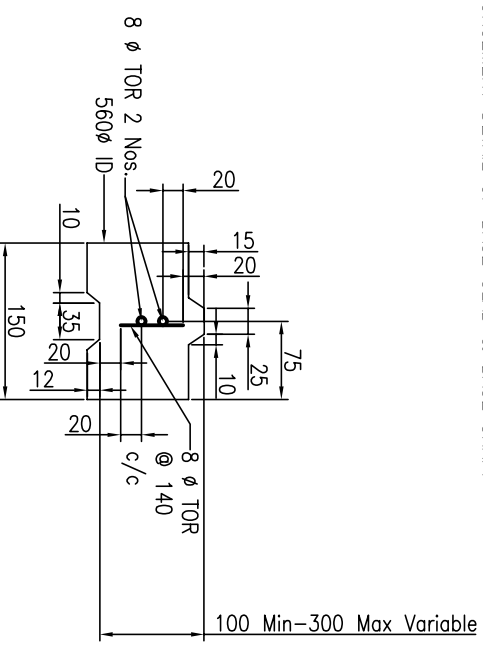
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DRAFT DESIGN PROJECT	SHEET SIZE:- A3	
DESIGNED	DATE OF FIRST ISSUE	
CHECKED	RP	
APPROVED	CR	
JOB NO.	DISCIPLINE	REVISION
1092.01	PH	STD-05
		00



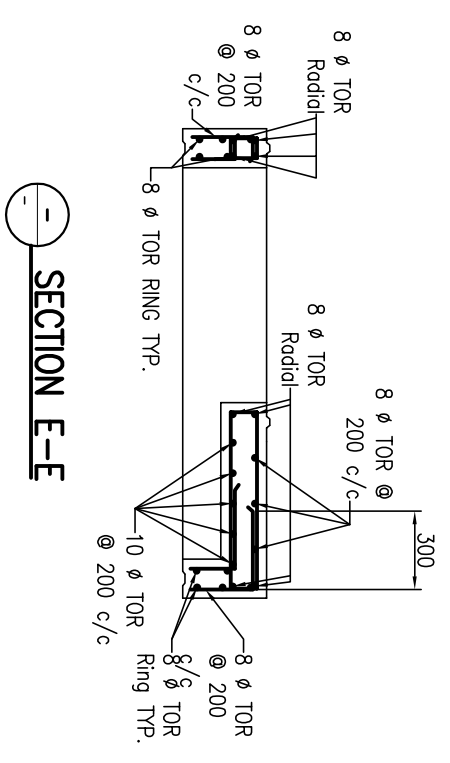
SECTION F-F



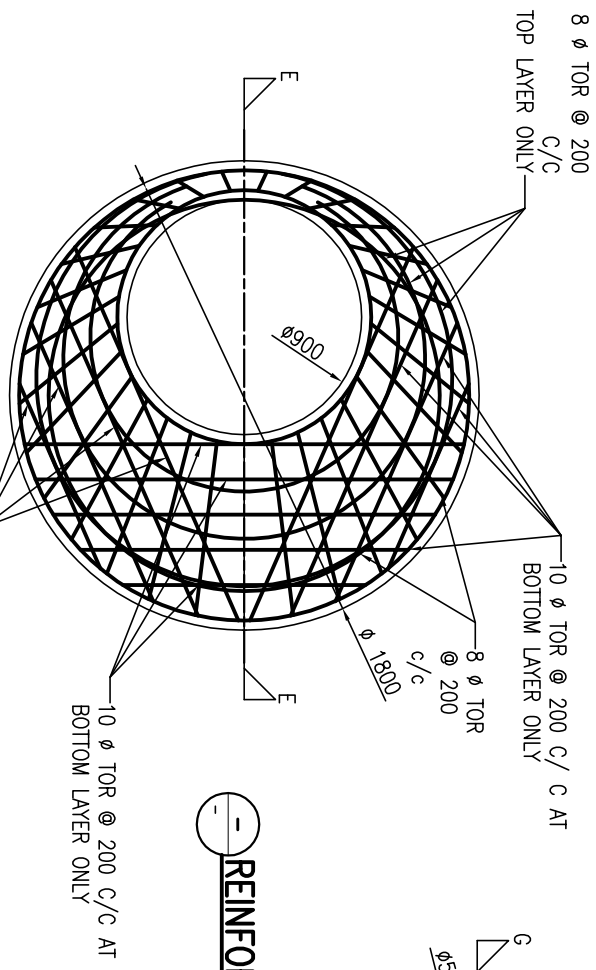
SECTION C-C



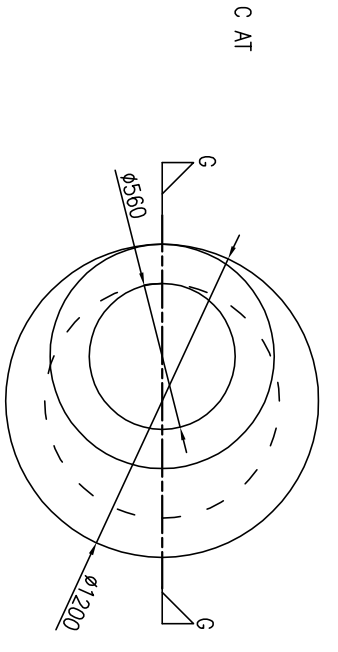
REINFORCEMENT DETAIL OF ADJUSTING RING



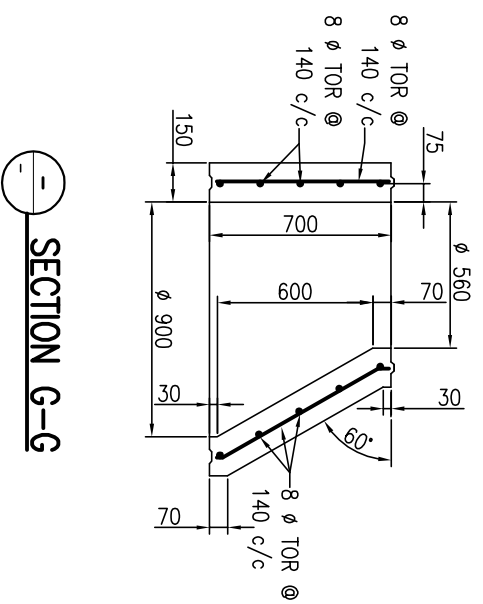
SECTION E-E



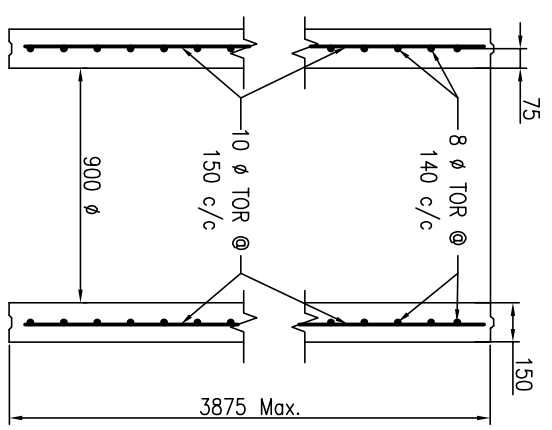
SECTION D-D



REINFORCEMENT DETAIL OF CONICAL SHAFT



SECTION G-G

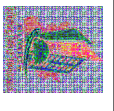


REINFORCEMENT DETAIL OF 900 ID CYLINDRICAL SHAFT

NOTES:-
 1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 37 MM, EXCEPT BASE SLAB.
 3. GRADE OF CONCRETE M30.
 4. GR. OF STEEL Fe 415, CONFORMING TO IS 1786.
 5. ALL JOINTS ARE JOINT TYPE EXCEPT JOINTS UNDER JNNURM.
 6. SCALE 1:20, UNLESS OTHERWISE STATED

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

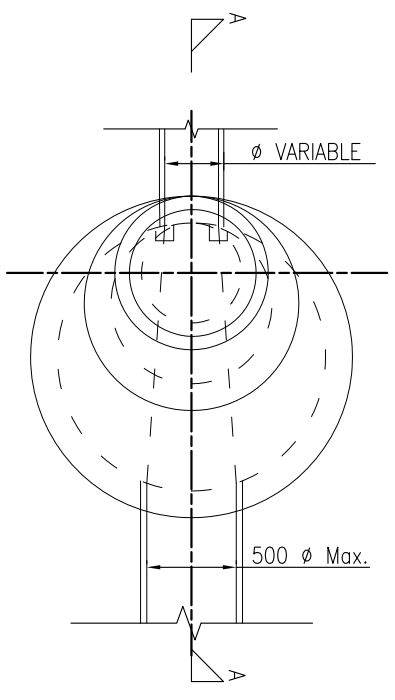


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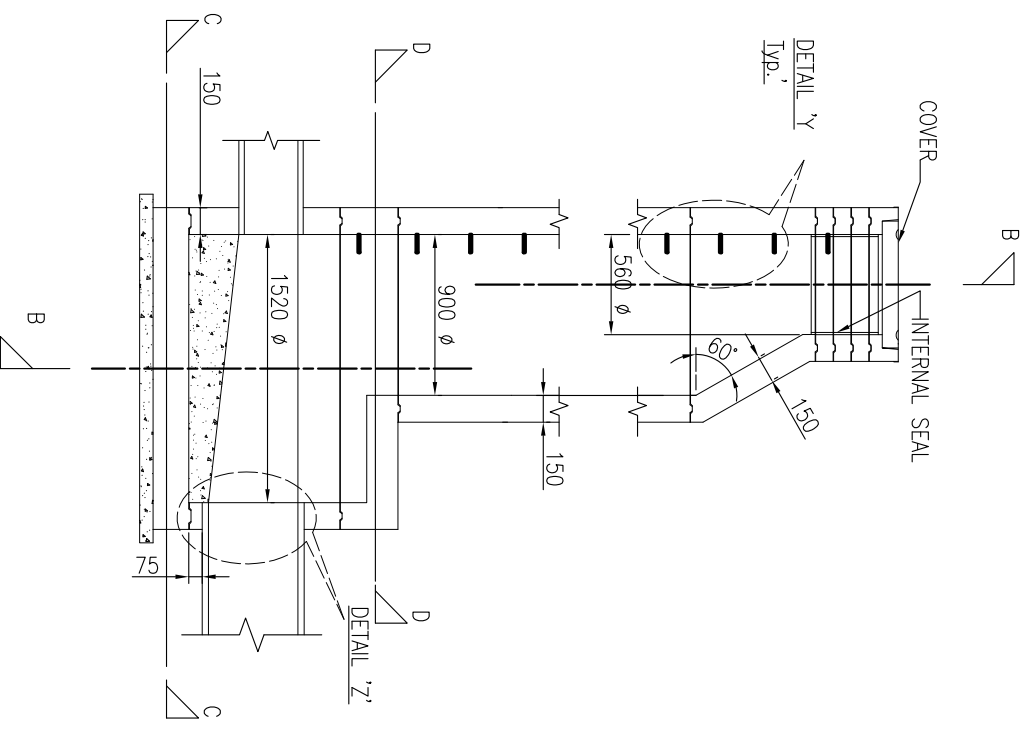
PREPARATION OF DETAILED PROJECT REPORTS (DPRs) & BID DOCUMENTS:
 TENDERING FOR EXECUTION, CONSTRUCTION SUPERVISION & QUALITY CONTROL OF SEWERAGE & DRAINAGE PROJECTS OF PATNA UNDER JNNURM

DATE OF FIRST ISSUE	DATE OF REVISION	BY	SCALE
MAY 2013	MAY 2013	SMS	1 : 20
MAY 2013	MAY 2013	JR	1 : 20
MAY 2013	MAY 2013	RP	1 : 20
MAY 2013	MAY 2013	CR	1 : 20

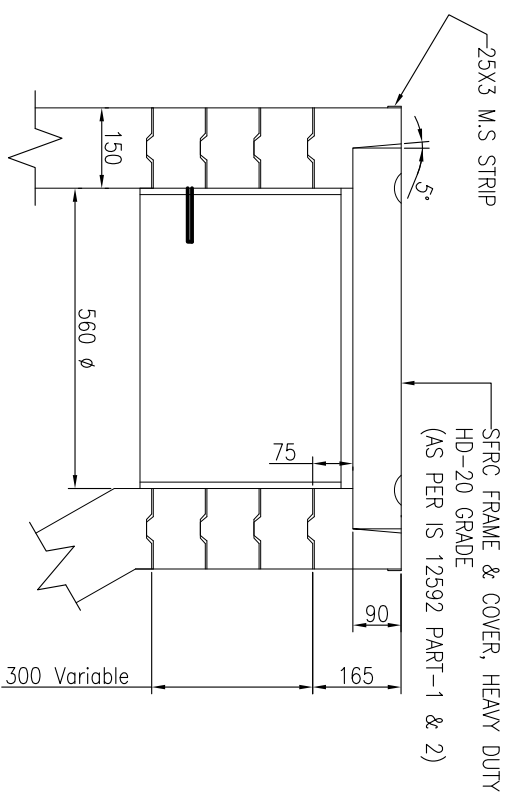
DISCIPLINE	REVISION
PH	STD-05
00	00



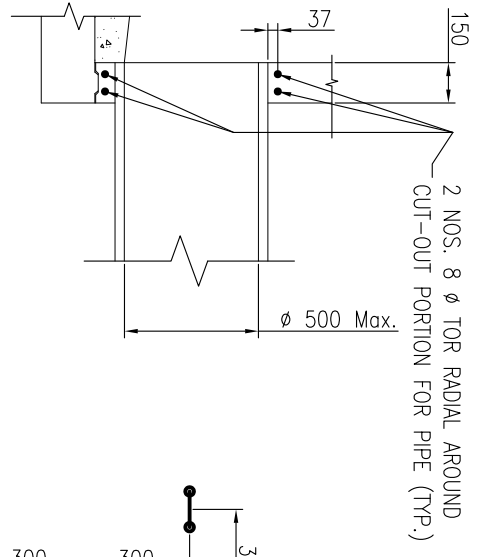
PLAN OF PREFAB RCC MANHOLE



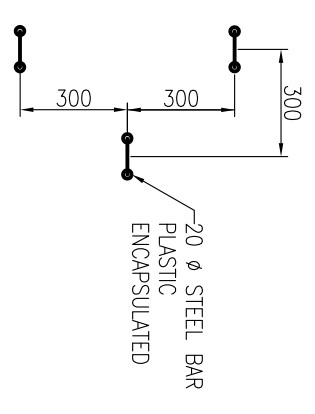
SECTION A-A
TYPICAL DETAIL OF PREFAB RCC MANHOLE



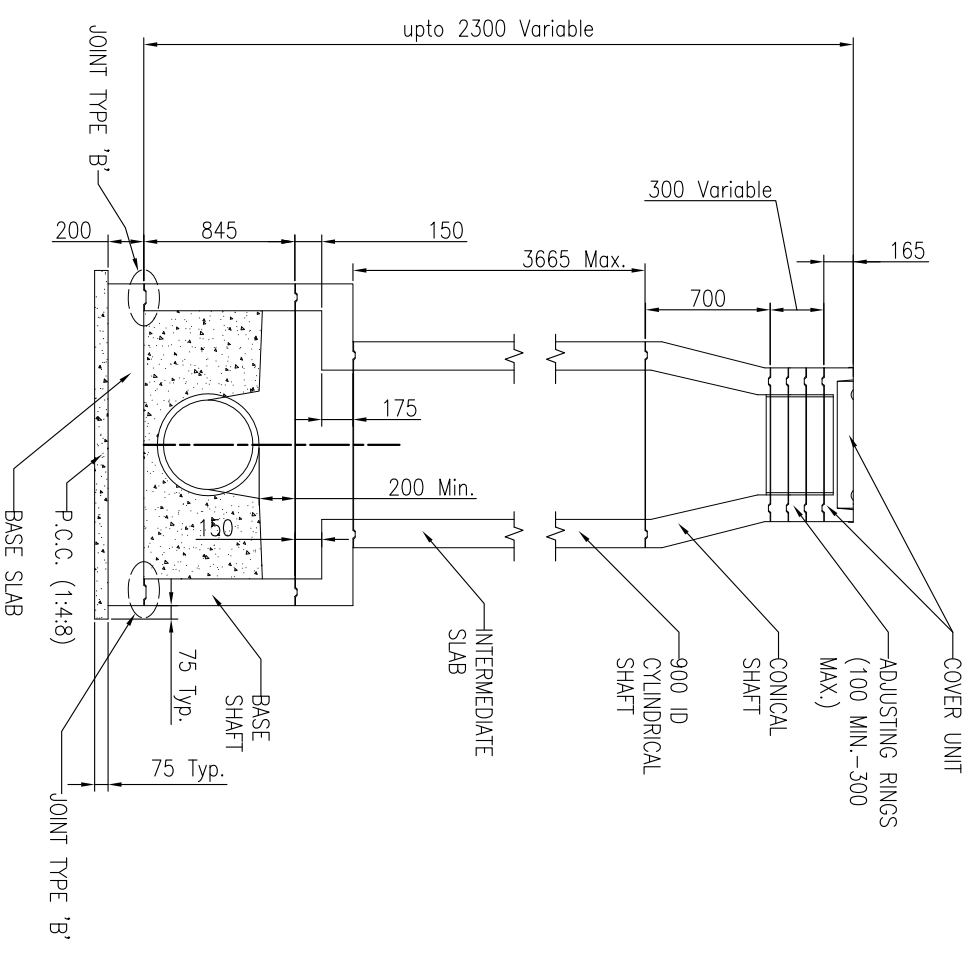
DETAIL OF MANHOLE COVER & ADJUSTABLE RING
SCALE 1:15



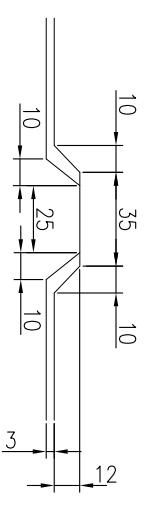
DETAIL-Z
SCALE:- 1 : 20



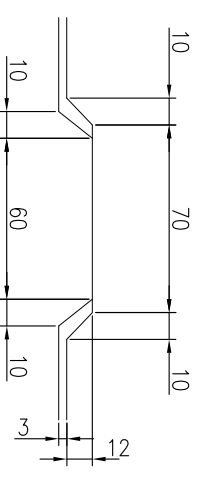
DETAIL-Y (TYP.)
SCALE 1:15



SECTION B-B
TYPICAL DETAIL OF PREFAB RCC MANHOLE



JOINT DETAIL (TYP.)
SCALE:- 1 : 2



JOINT DETAIL TYPE 'B' (TYP.)
SCALE:- 1 : 2

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 37 MM EXCEPT BASE SLAB, WHERE MINIMUM CLEAR COVER IS 25 MM.
 3. GRADE OF CONCRETE M30.
 4. GR. OF STEEL Fe-415, CONFIRMING TO IS 1786
 5. ALL JOINTS ARE JOINT TYPE 'B' IN SECTION B-B
 6. SCALE 1:30, UNLESS OTHERWISE STATED

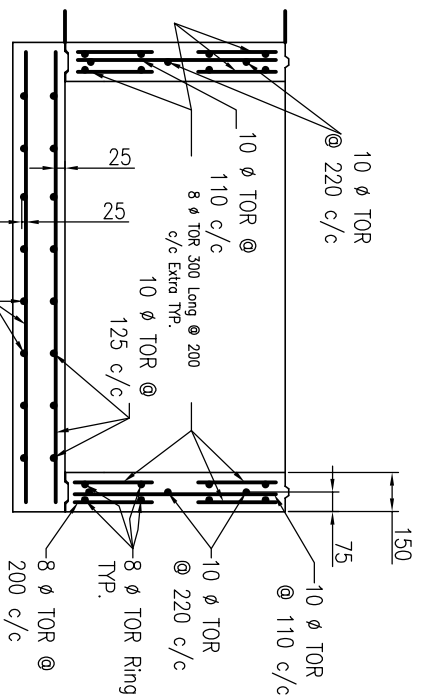
Drawing Base Reference:
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

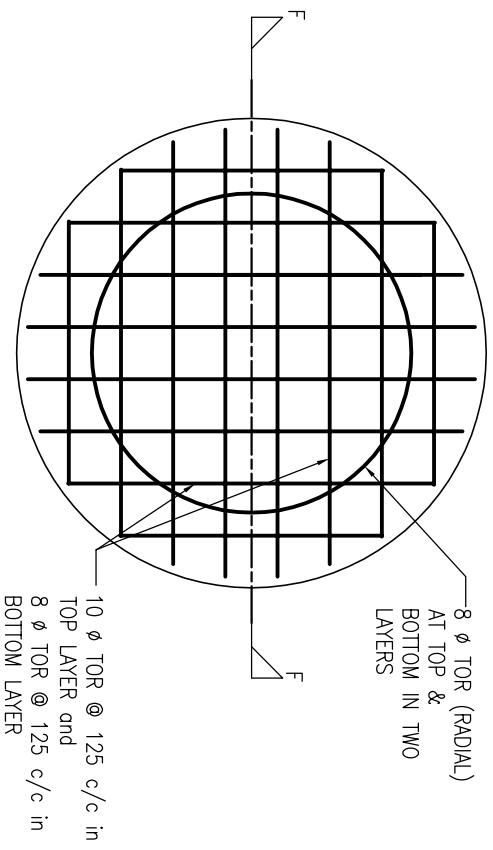
CLIENT:-
BIHAR URBAN INFRASTRUCTURE DEVELOPMENT CORPORATION
303, Mahura Road, Patna-800 001
Phone: (0612)2210101 Fax: (0612)2210103
Website: http://www.ubidco.org

PROJECT:-
PREPARATION OF DETAILED PROJECT REPORTS (DPRs) & BID DOCUMENTS: TENDERING FOR EXECUTION, CONSTRUCTION SUPERVISION & QUALITY CONTROL OF SEWERAGE & DRAINAGE PROJECTS OF PATNA UNDER JNNURM

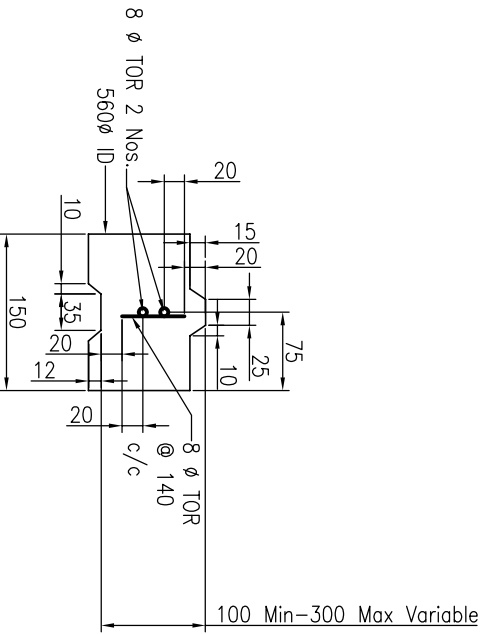
DRAWING TITLE		SCALE:- 1 : 30	
ø 1520 Manhole, Depth upto 2.30 M, Max. Size of Outgoing Pipe ø 500 Np-2 with 60° Conical Shaft		SHEET - 1/2	
PURPOSE OF ISSUE		SCALE:- 1 : 30	
DRAFT DETAILED PROJECT REPORT	SHEET SIZE:- A3		
BY: SKS	DATE OF FIRST ISSUE: MAY 2013		
DESIGNED: JR	MAY 2013		
CHECKED: RP	MAY 2013		
APPROVED: CHR	MAY 2013		
JOB NO. 1092.01	PH	DRAWING NO. STD-06	REVISION 00



SECTION F-F

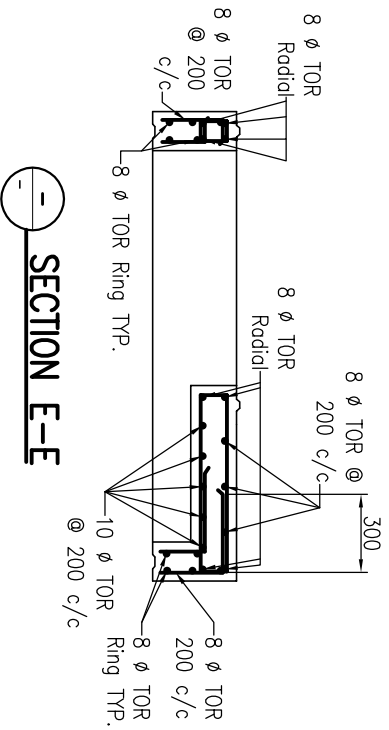


SECTION C-C

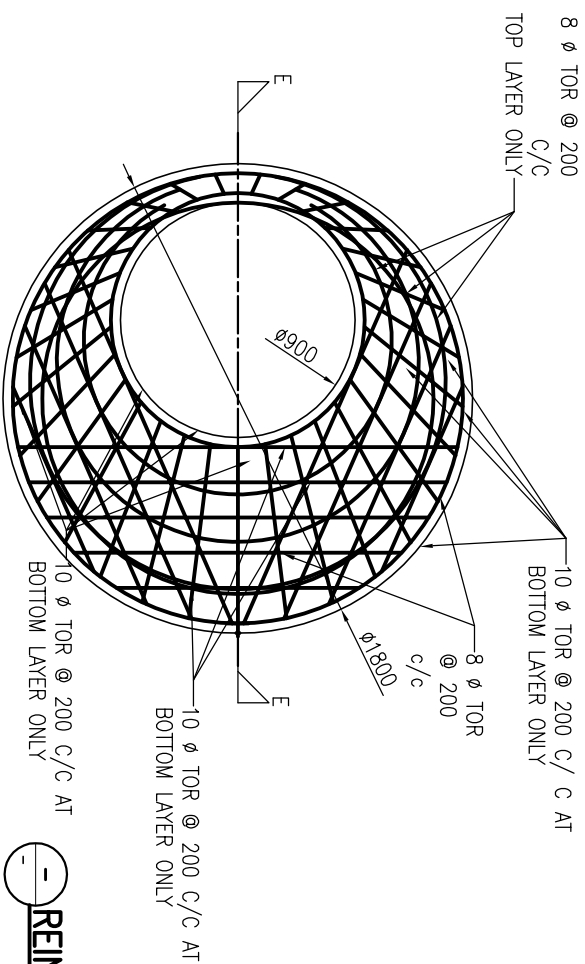


REINFORCEMENT DETAIL OF ADJUSTING RING

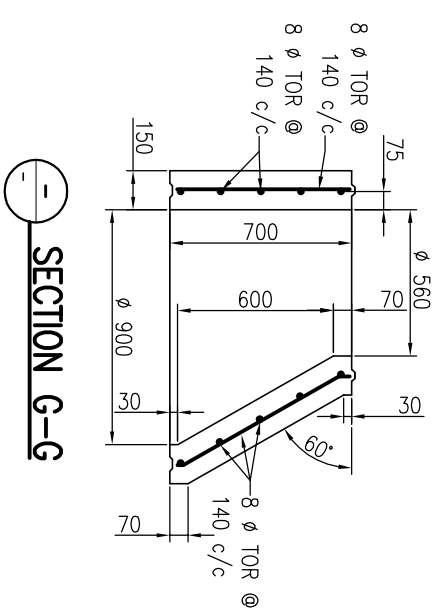
SCALE 1:20, UNLESS OTHERWISE STATED



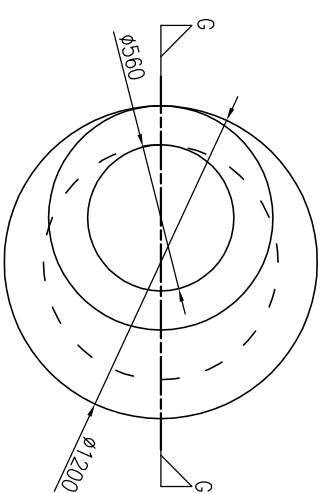
SECTION E-E



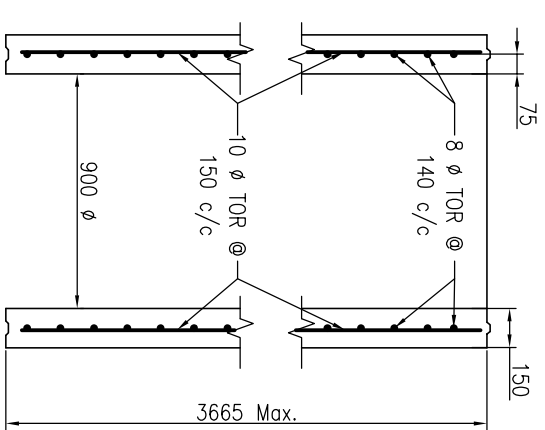
SECTION D-D



SECTION G-G



REINFORCEMENT DETAIL OF CONICAL SHAFT

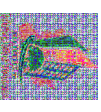


REINFORCEMENT DETAIL OF 900 ID CYLINDRICAL SHAFT

NOTES:-
 1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 37 MM, EXCEPT BASE SLAB.
 3. GRADE OF CONCRETE M30.
 4. GR. OF STEEL Fe 415, CONFORMING TO IS 1786.
 5. ALL JOINTS ARE JOINT TYPE EXCEPT JOINTS UNDER JNNURM.
 6. SCALE 1:20, UNLESS OTHERWISE STATED

Drawing Base Reference:-
 PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

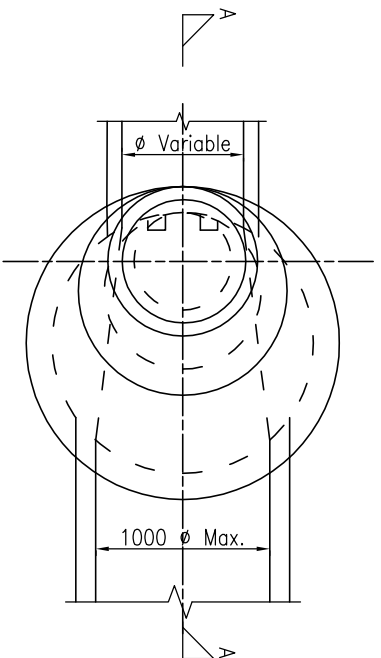


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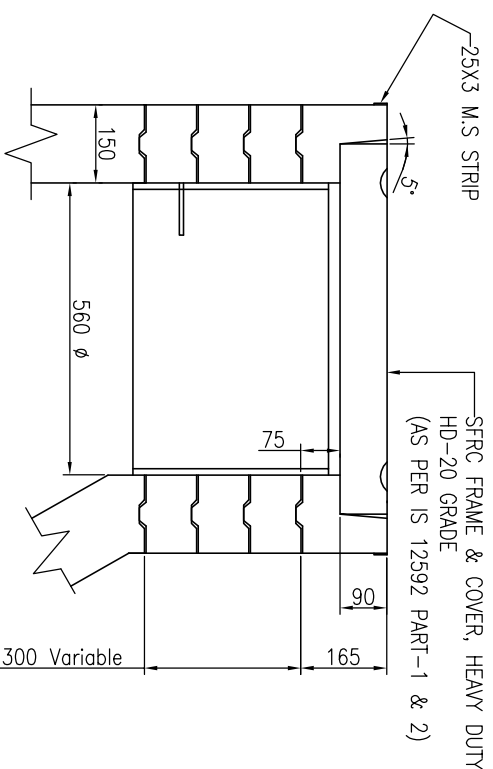
PREPARATION OF DETAILED
 PROJECT REPORTS (DPRs) & BID
 DOCUMENTS:
 TENDERING FOR EXECUTION;
 CONSTRUCTION SUPERVISION &
 QUALITY CONTROL OF SEWERAGE &
 DRAINAGE PROJECTS OF PATNA
 UNDER JNNURM

DRAWING TITLE
 # 1520 Manhole, Depth beyond 2.30 M. Max. Size of
 Outgoing Pipe # 500 Np-2 with 60° Conical Shaft
 SHEET - 2/2

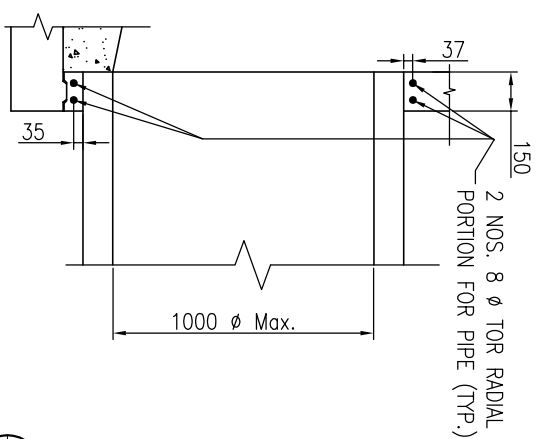
PURPOSE OF ISSUE	SCALE	DATE OF FIRST ISSUE	REVISION
DRAWN	1 : 20	MAY 2013	00
CHECKED		MAY 2013	
APPROVED		MAY 2013	
JOB NO.	1092.01	DISCIPLINE	STD-06



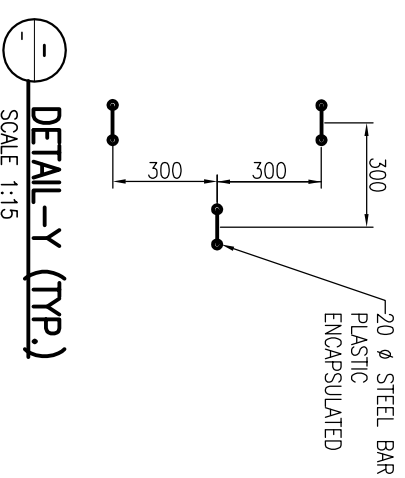
PLAN OF PREFAB RCC MANHOLE



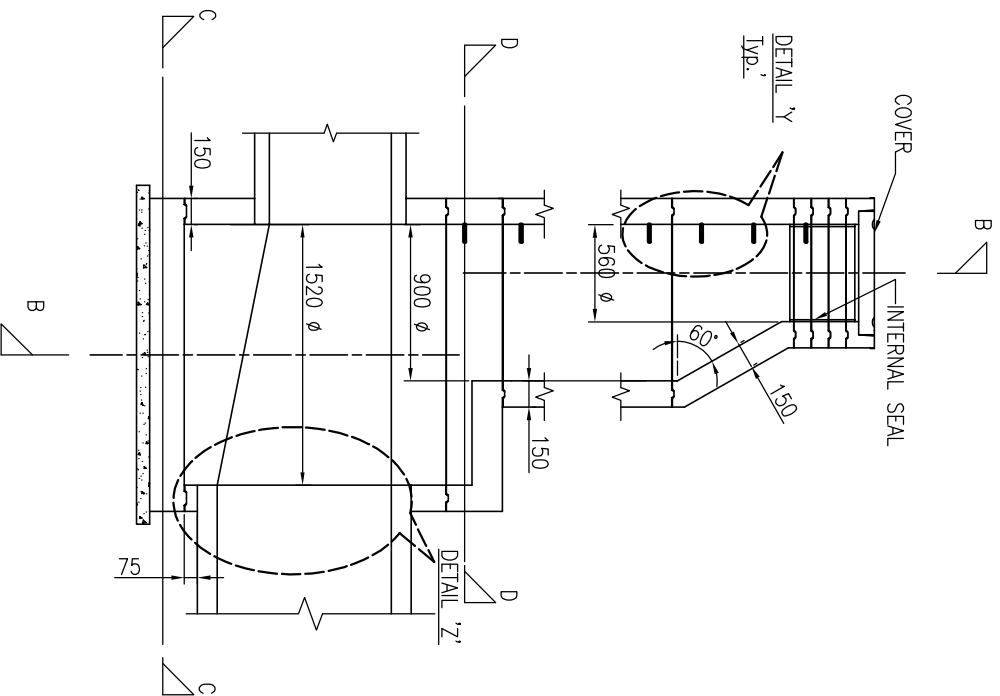
DETAIL OF MANHOLE COVER & ADJUSTABLE RING
SCALE 1:15



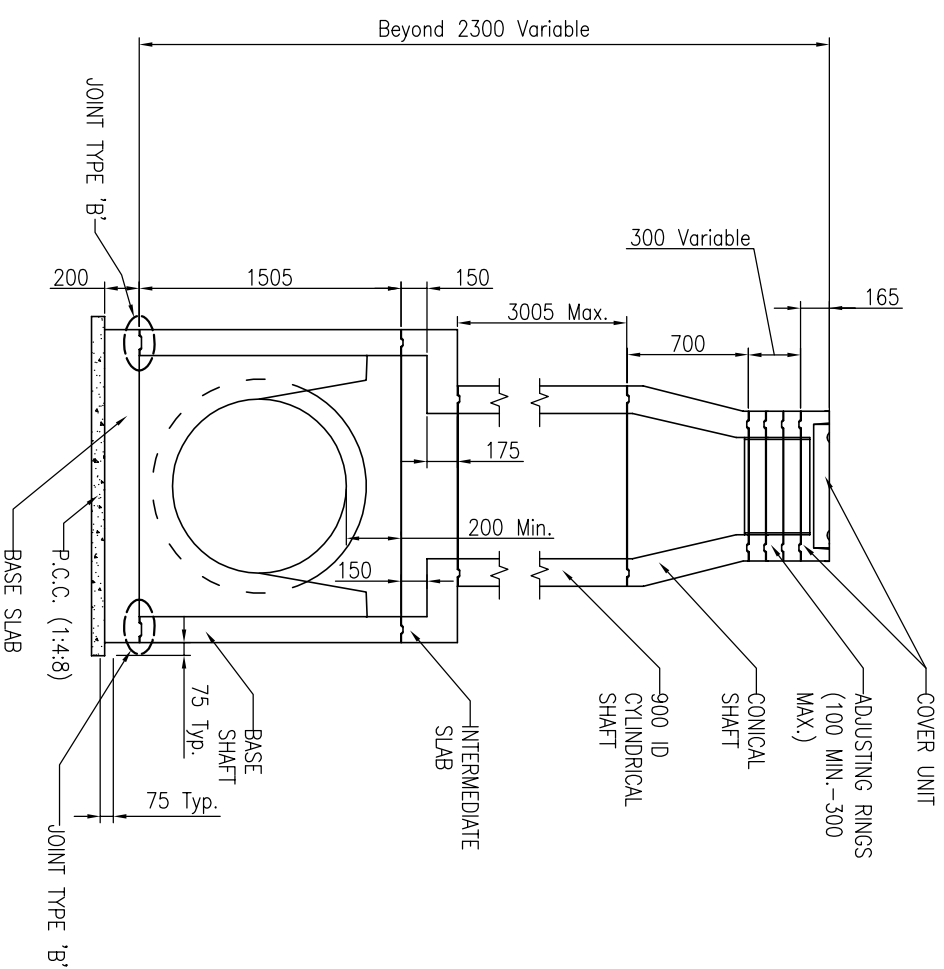
DETAIL-Z
SCALE:- 1 : 20



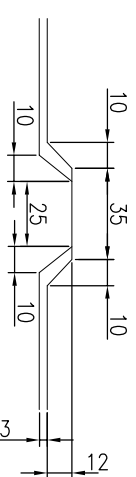
DETAIL-Y (TYP.)
SCALE 1:15



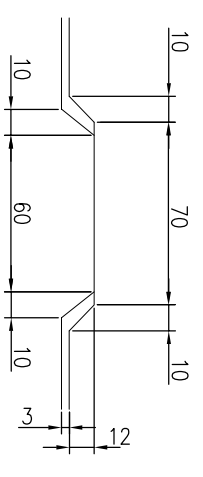
SECTION A-A
TYPICAL DETAIL OF PREFAB RCC MANHOLE



SECTION B-B
TYPICAL DETAIL OF PREFAB RCC MANHOLE



JOINT DETAIL (TYP.)
SCALE:- 1 : 2

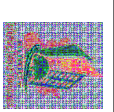


JOINT DETAIL TYPE 'B' (TYP.)
SCALE:- 1 : 2

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 37 MM, EXCEPT BASE SLAB, WHERE MINIMUM CLEAR COVER IS 25 MM.
 3. GRADE OF CONCRETE M30.
 4. GR. OF STEEL FR 415, CONFORMING TO IS 1786.
 5. ALL JOINTS ARE JOINT TYPE A EXCEPT JOINTS UNDER JNNURM.
 6. SCALE 1:20, UNLESS OTHERWISE STATED.

Drawing Base Reference:
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

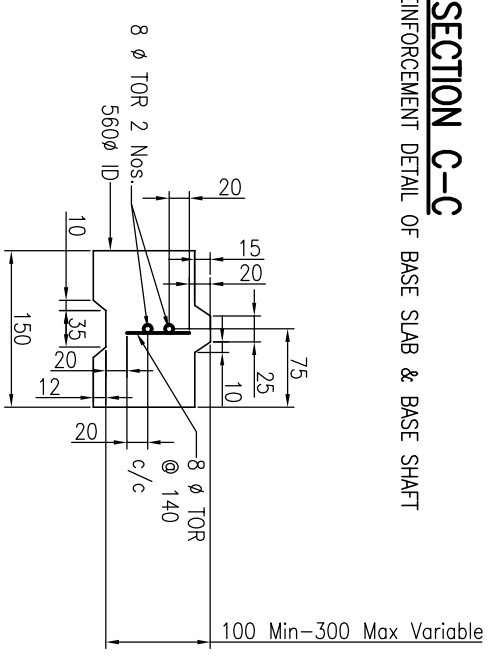
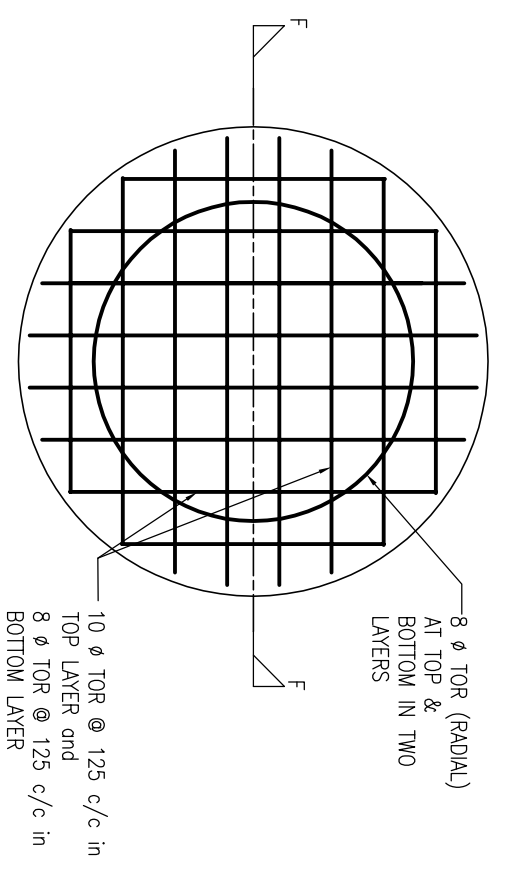
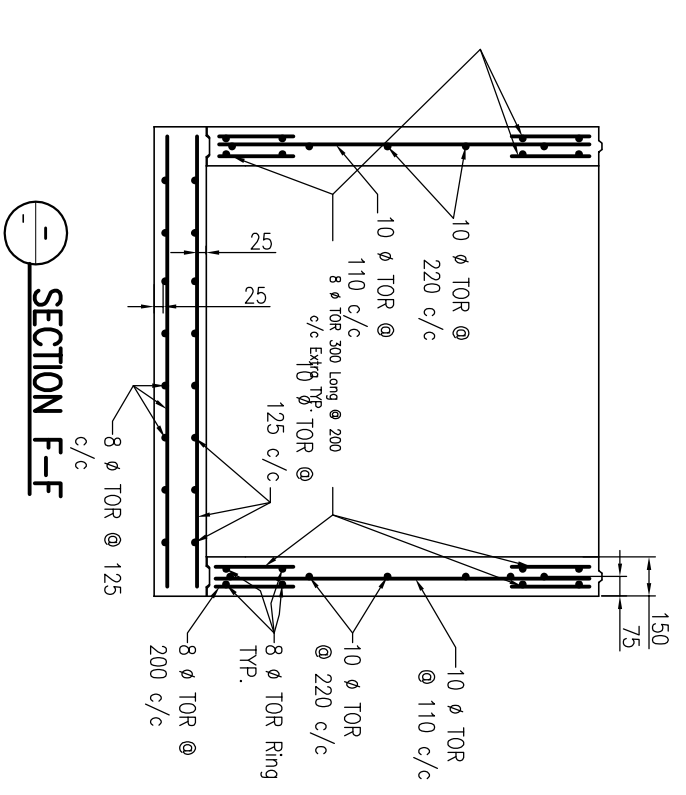


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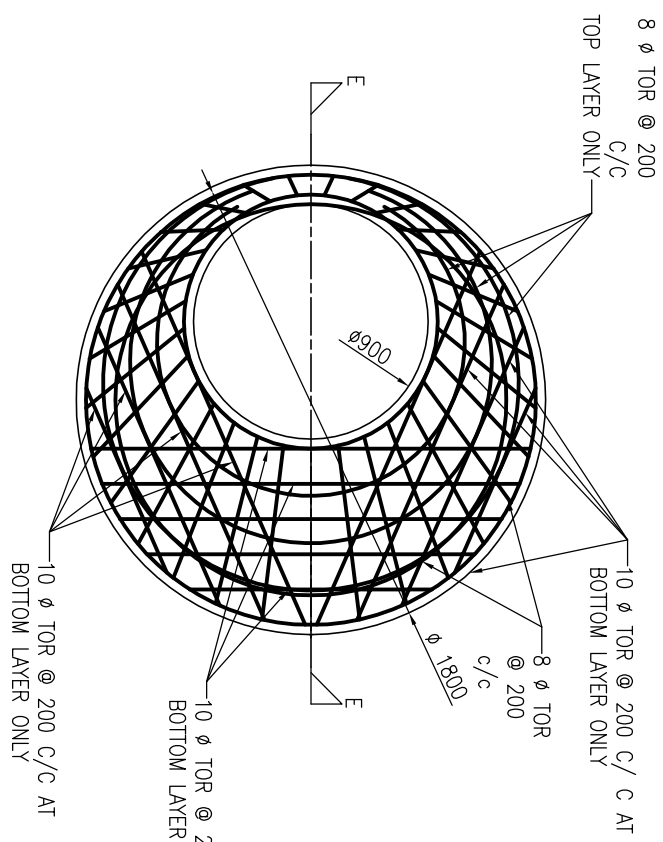
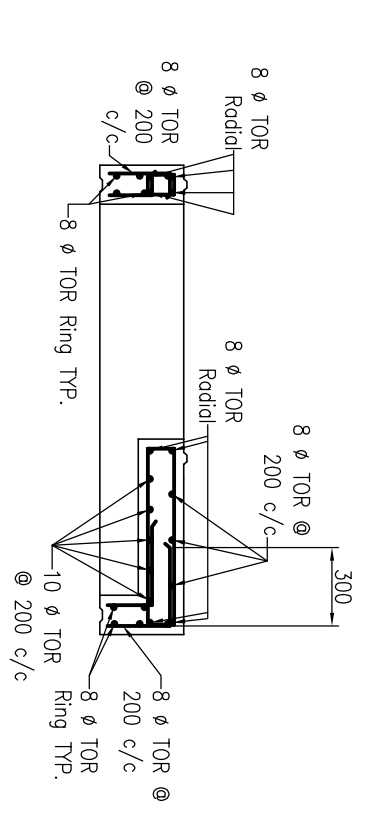
PREPARATION OF DETAILED
PROJECT REPORTS (DPRs) & BID
DOCUMENTS:
TENDERING FOR EXECUTION;
CONSTRUCTION SUPERVISION &
QUALITY CONTROL OF SEWERAGE &
DRAINAGE PROJECTS OF PATNA
UNDER JNNURM

DISCIPLINE	REVISION
PH	STD-07
00	00

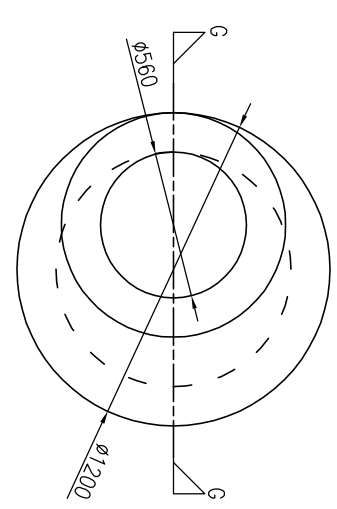
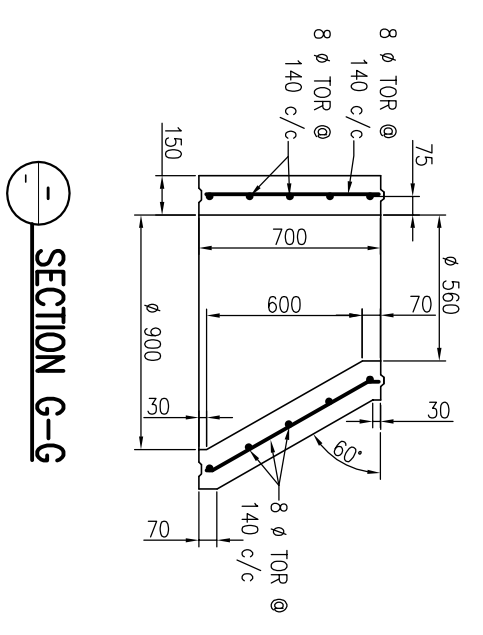
PURPOSE OF ISSUE	SCALE	AS SHOWN
DRAFT DETAILED PROJECT	AS SHOWN	AS SHOWN
BY	DATE OF FIRST ISSUE	
SKS	MAY 2013	
DESIGNED	DATE OF FIRST ISSUE	
JR	MAY 2013	
CHECKED	DATE OF FIRST ISSUE	
RP	MAY 2013	
APPROVED	DATE OF FIRST ISSUE	
CRP	MAY 2013	
JOB NO.	DRAWING NO.	REVISION
1092.01	STD-07	00



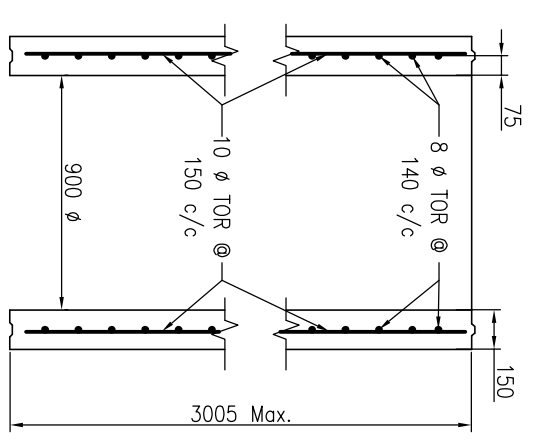
REINFORCEMENT DETAIL OF ADJUSTING RING
SCALE:- 1 : 5



SECTION D-D
REINFORCEMENT DETAIL OF INTERMEDIATE SLAB



REINFORCEMENT DETAIL OF CONICAL SHAFT



REINFORCEMENT DETAIL OF 900 ID CYLINDRICAL SHAFT

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 37 MM, EXCEPT BASE SLAB.
 3. WHERE MINIMUM CLEAR COVER IS 25 MM.
 4. GRADE OF STEEL IS Fe 415, CONFORMING TO IS 1786.
 5. ALL JOINTS ARE JOINT TYPE EXCEPT JOINTS.
 6. SCALE 1:20 UNLESS OTHERWISE STATED.

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

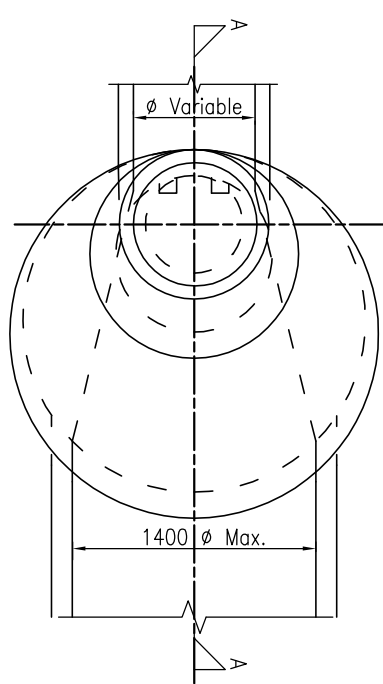


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DEVELOPMENT CORPORATION

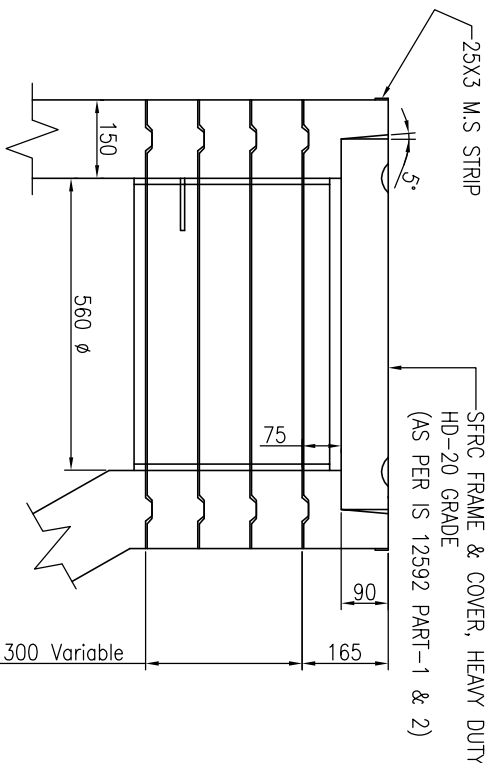
PREPARATION OF DETAILED PROJECT REPORTS (DPRs) & BID DOCUMENTS:
TENDERING FOR EXECUTION, CONSTRUCTION SUPERVISION & QUALITY CONTROL OF SEWERAGE & DRAINAGE PROJECTS OF PATNA UNDER JNNURM

DATE	BY	DATE OF FIRST ISSUE
MAY 2013	SMS	MAY 2013
MAY 2013	JR	MAY 2013
MAY 2013	RP	MAY 2013
MAY 2013	CR	MAY 2013

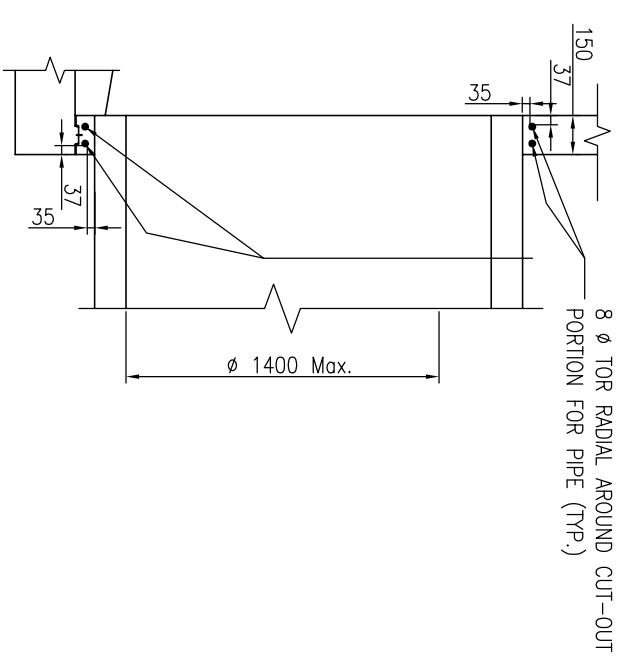
DISCIPLINE	DRAWING NO.	REVISION
PH	STD-07	00



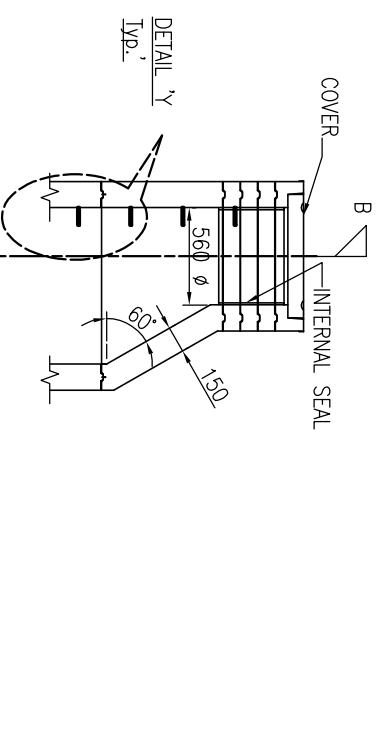
PLAN OF PREFAB RCC MANHOLE



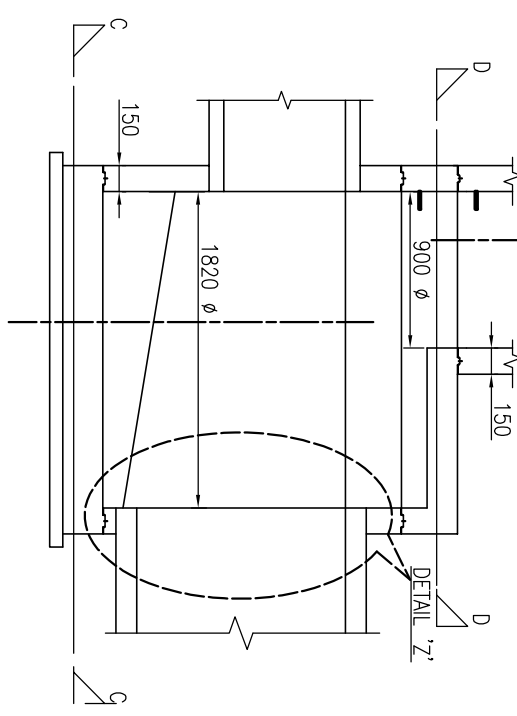
DETAIL OF MANHOLE COVER & ADJUSTABLE RING
SCALE 1:15



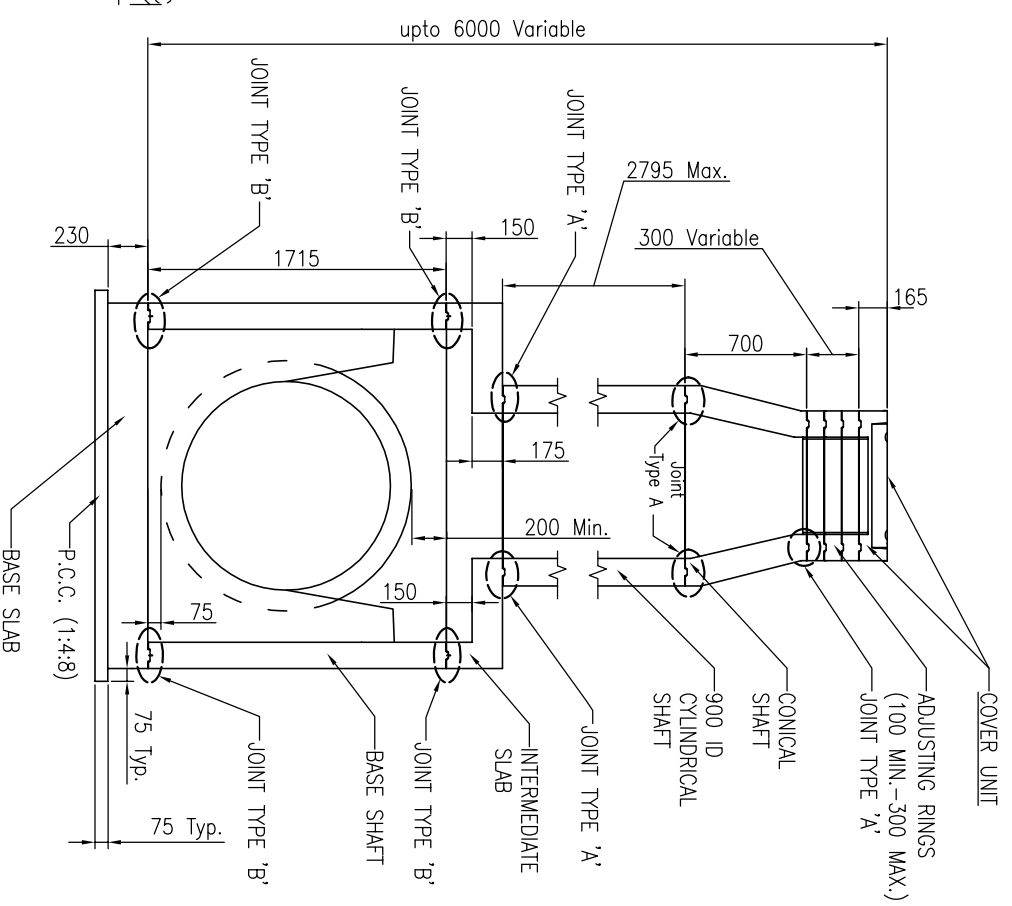
DETAIL-Z
SCALE:- 1 : 20



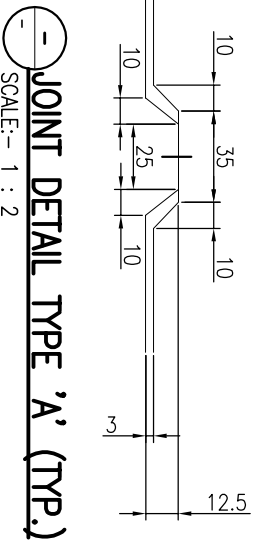
DETAIL-Y (TYP.)
SCALE 1:15



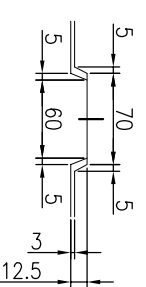
SECTION A-A
TYPICAL DETAIL OF PREFAB RCC MANHOLE



SECTION B-B
TYPICAL DETAIL OF PREFAB RCC MANHOLE



JOINT DETAIL TYPE 'A' (TYP.)
SCALE:- 1 : 2



JOINT DETAIL TYPE 'B' (TYP.)
SCALE:- 1 : 4

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 37 MM, EXCEPT BASE SLAB, WHERE MINIMUM CLEAR COVER IS 25 MM.
 3. GRADE OF CONCRETE M30.
 4. GR. OF STEEL F415, CONFORMING TO IS 1786.
 5. ALL JOINTS ARE JOINT TYPE 'A' EXCEPT JOINTS UNDER JNNURM.
 6. SCALE 1:20, UNLESS OTHERWISE STATED.

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

NO	DATE	REV	DESCRIPTION	CHKD
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

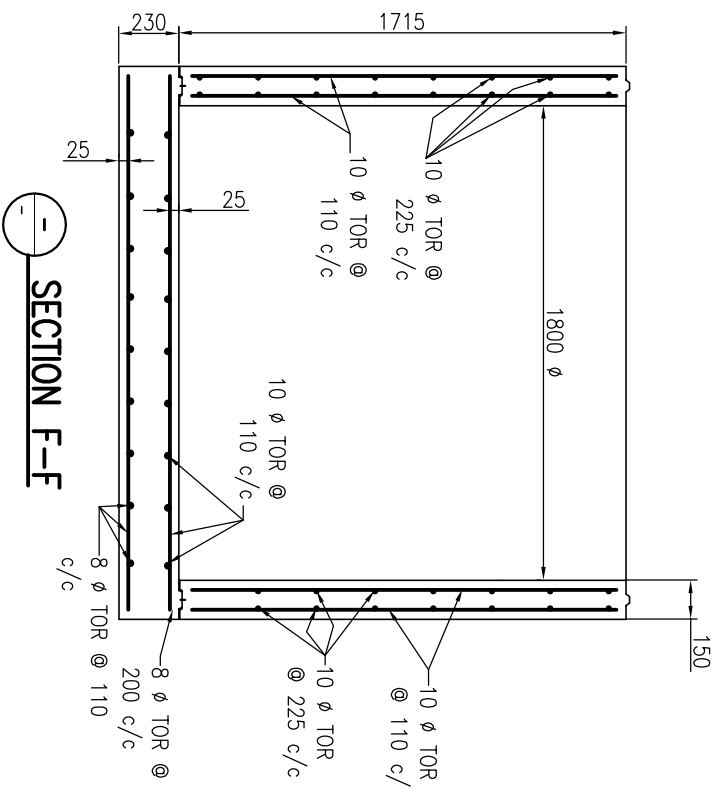


BIHAR URBAN INFRASTRUCTURE DEVELOPMENT CORPORATION

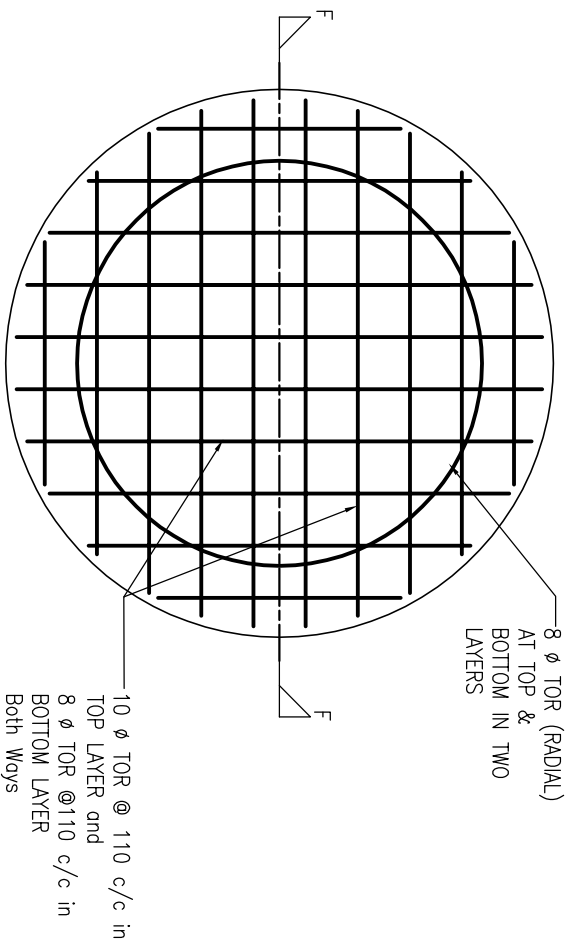
PREPARATION OF DETAILED PROJECT REPORTS (DPRs) & BID DOCUMENTS:
TENDERING FOR EXECUTION, CONSTRUCTION SUPERVISION & QUALITY CONTROL OF SEWERAGE & DRAINAGE PROJECTS OF PATNA UNDER JNNURM

DISCIPLINE	DATE OF FIRST ISSUE	DATE OF THIS ISSUE
DRAWN	MAY 2013	MAY 2013
DESIGNED	MAY 2013	MAY 2013
CHECKED	MAY 2013	MAY 2013
APPROVED	MAY 2013	MAY 2013

DRAWING TITLE	1820 Manhole, Depth 2300 to 9000 M, Max. Size of Outgoing Pipe 900 mm with 60° Conical Shaft
PURPOSE OF ISSUE	SCALE:- 1 : 30
DRAWN	BY: SKS DATE: MAY 2013
DESIGNED	BY: JR DATE: MAY 2013
CHECKED	BY: RP DATE: MAY 2013
APPROVED	BY: CRP DATE: MAY 2013
JOB NO.	1092.01
DISCIPLINE	PH
DRAWING NO.	STD-08
REVISION	00

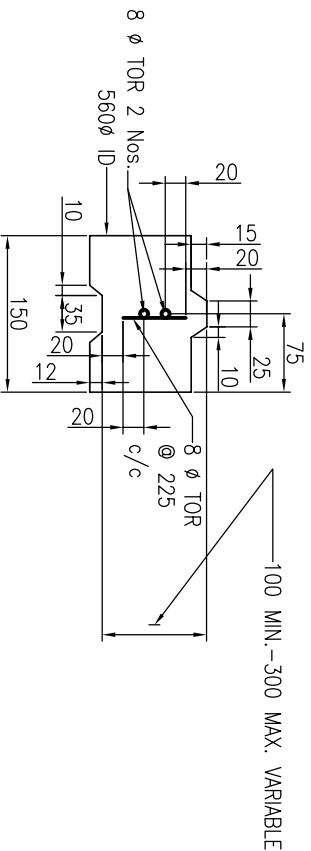


SECTION F-F



SECTION C-C

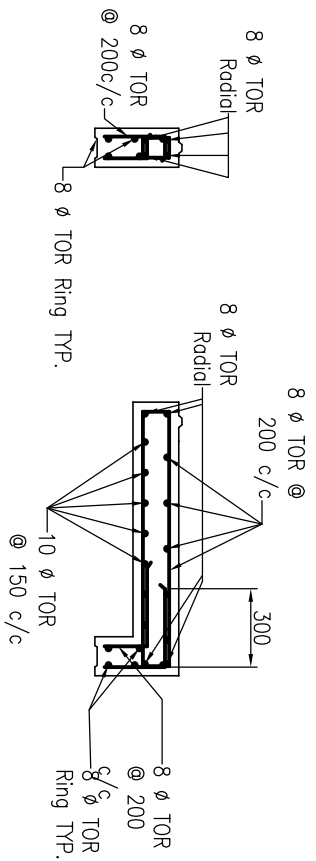
REINFORCEMENT DETAIL OF BASE SLAB & BASE SHAFT



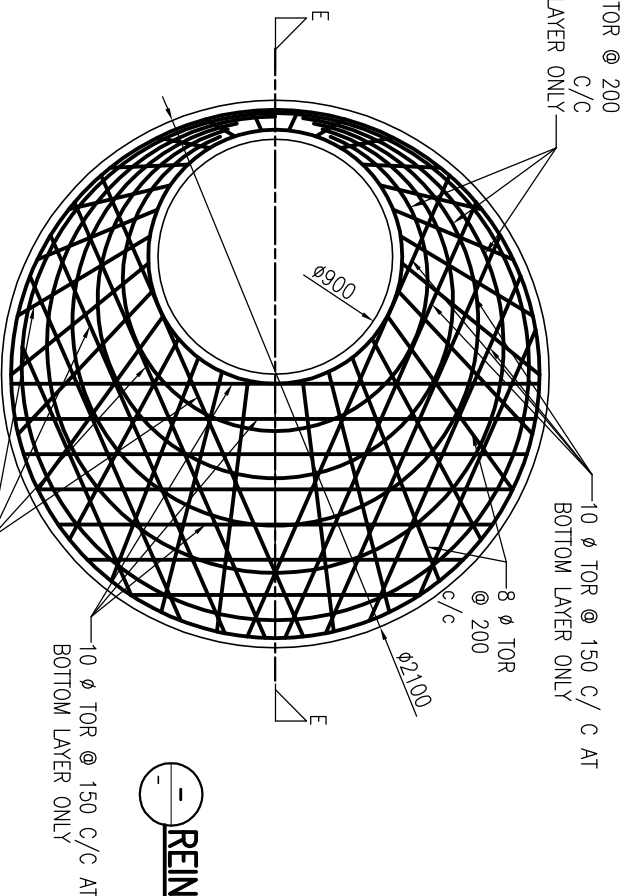
REINFORCEMENT DETAIL OF ADJUSTING RING

SCALE:- 1 : 5

SCALE 1:20, UNLESS OTHERWISE STATED

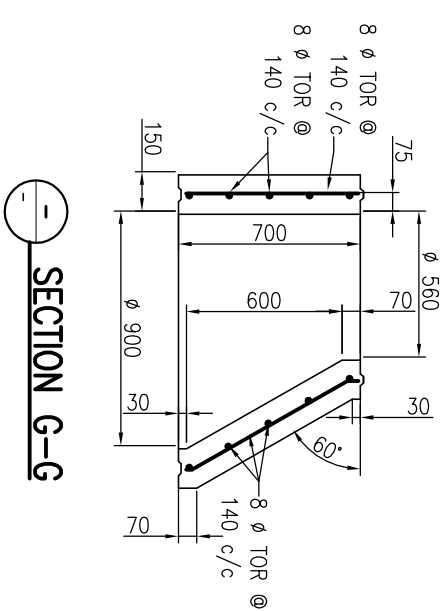


SECTION E-E

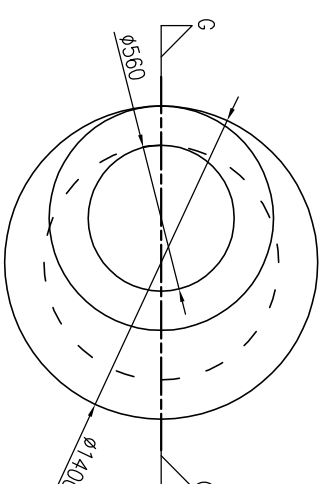


SECTION D-D

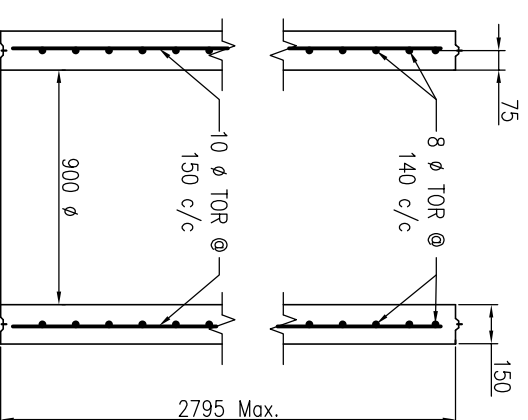
REINFORCEMENT DETAIL OF INTERMEDIATE SLAB



SECTION G-G



REINFORCEMENT DETAIL OF CONICAL SHAFT



REINFORCEMENT DETAIL OF 900 ID CYLINDRICAL SHAFT

SCALE:- 1 : 5

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. MINIMUM CLEAR COVER 37 MM, EXCEPT BASE SLAB, WHERE MINIMUM CLEAR COVER IS 25 MM.
 3. GRADE OF CONCRETE M30.
 4. GR. OF STEEL Fe 415, CONFORMING TO IS 1786.
 5. ALL JOINTS ARE JOINT TYPE EXCEPT JOINTS BETWEEN MANHOLE AND SHAFT.
 6. SCALE 1:20, UNLESS OTHERWISE STATED.

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

NO	DATE	REV	DESCRIPTION	CHKD
00	MAY'13	SKS	DRAFT DPR SUBMISSION	RP

CLIENT:-

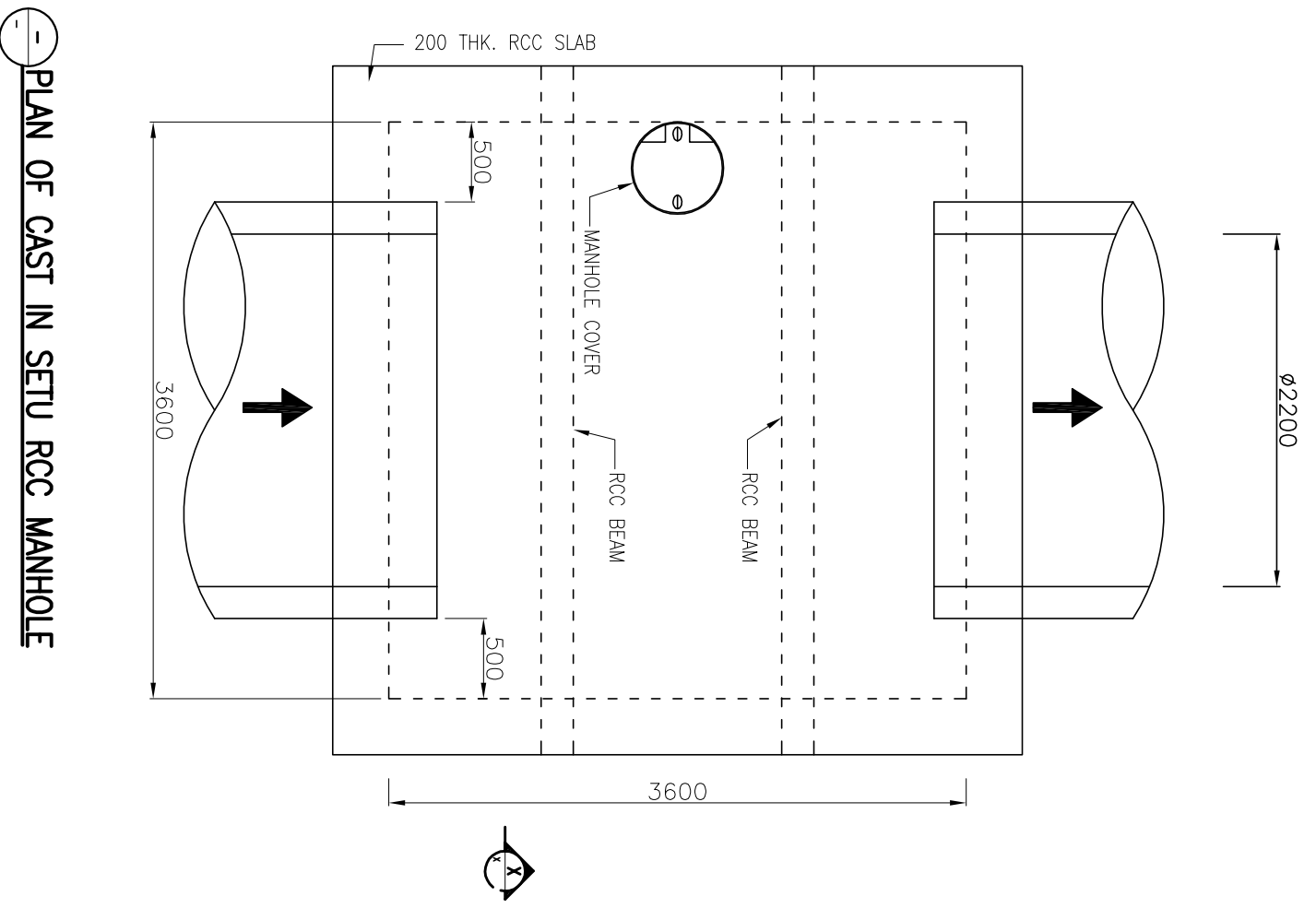
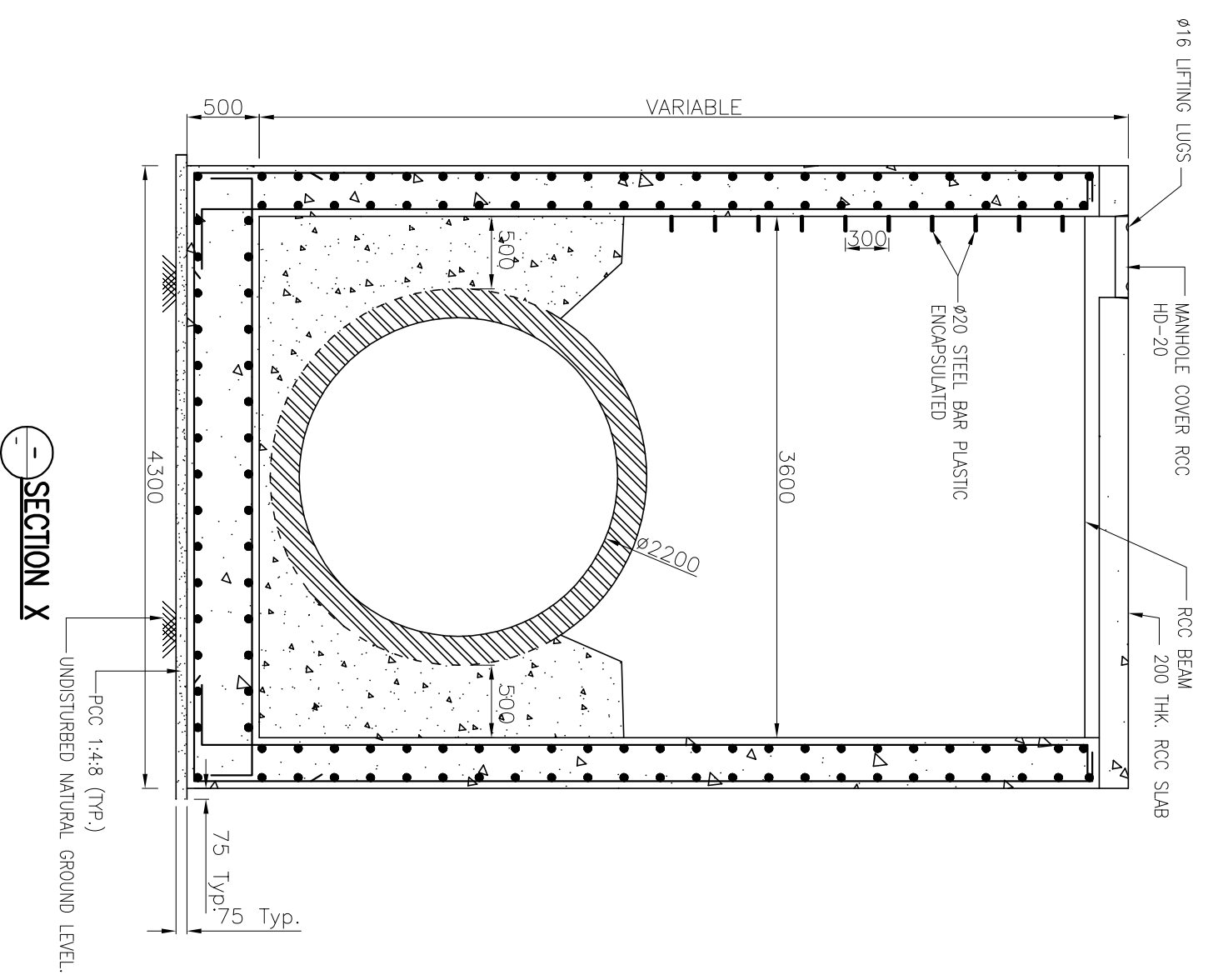


BIHAR
URBAN INFRASTRUCTURE
DEVELOPMENT CORPORATION

PREPARATION OF DETAILED
PROJECT REPORTS (DPRs) & BID
DOCUMENTS:
TENDERING FOR EXECUTION,
CONSTRUCTION SUPERVISION &
QUALITY CONTROL OF SEWERAGE &
DRAINAGE PROJECTS OF PATNA
UNDER JNNURM

DRAWING TITLE
Ø 1820 Manhole, Depth upto 2.30 M, Max. Size of
Outgoing Pipe Ø 1400 NPS with 60° Conical Shaft
SHEET - 2/2

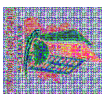
PURPOSE OF ISSUE	SCALE:-	DATE OF FIRST ISSUE	REVISION
DRAWN	1 : 20	MAY 2013	00
DESIGNED		MAY 2013	
CHECKED		MAY 2013	
APPROVED		MAY 2013	



- NOTES:-**
1. ALL DIMENSION ARE IN mm. UNLESS OTHERWISE SPECIFIED.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCEMENT OF WORK ON SITE.
 3. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY/13	SKS	DRAFT DPR SUBMISSION	RP

CLIENT:-

BIHAR URBAN INFRASTRUCTURE DEVELOPMENT CORPORATION

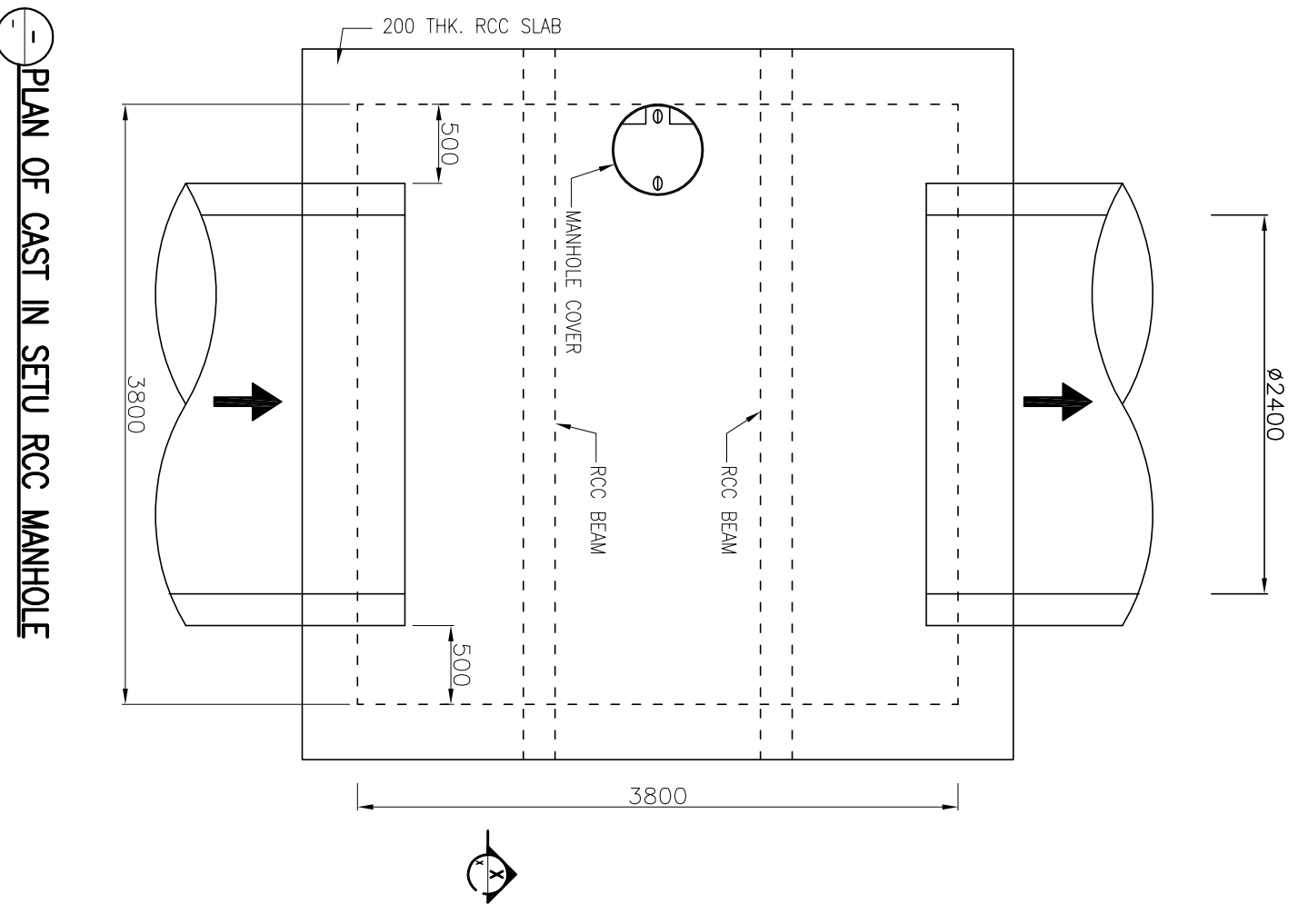
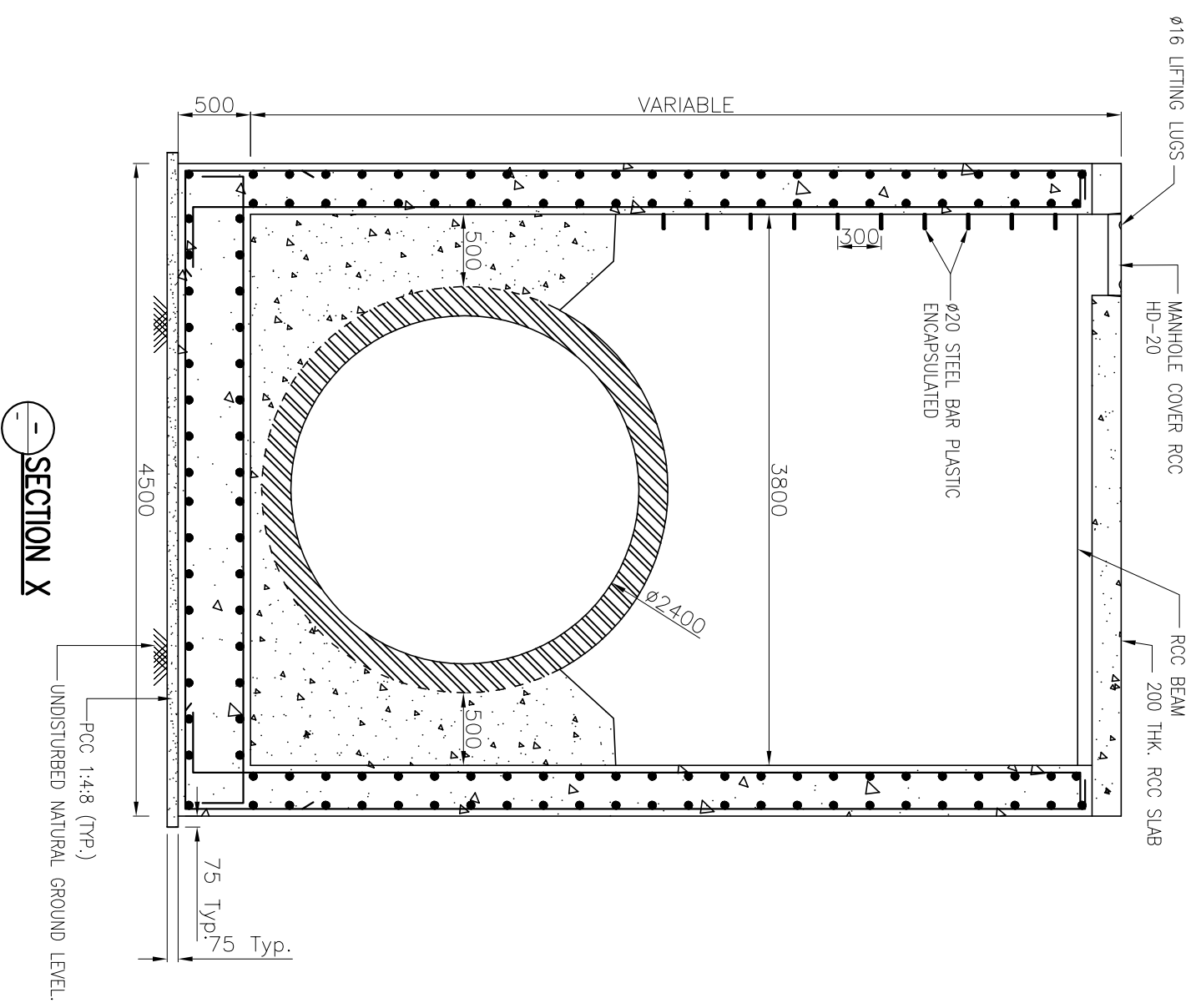
PROJECT:-
**PREPARATION OF DETAILED PROJECT REPORTS (DPRS) & BID DOCUMENTS;
 TENDERING FOR EXECUTION;
 CONSTRUCTION SUPERVISION &
 QUALITY CONTROL OF SEWERAGE &
 DRAINAGE PROJECTS OF PATNA UNDER JNNURM**

303, Mahatma, Patna-800 001
 Bihar, India
 Phone: (061) 2210101, Fax: (061) 2210103
 E-mail: info@buidc.com

DRAWING TITLE
Rectangular Manhole, Size of Outgoing Pipe 2200 NP-3

DATE OF FIRST ISSUE	BY	DATE OF FIRST ISSUE
MAY 2013	SKS	MAY 2013
MAY 2013	JR	MAY 2013
MAY 2013	RP	MAY 2013
MAY 2013	CRR	MAY 2013

REVISION	DISCIPLINE	DRAWING NO.	REVISION
00	PH	STD-09	00

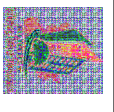


- NOTES:-**
1. ALL DIMENSION ARE IN mm. UNLESS OTHERWISE SPECIFIED.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS. ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER. ALL DIMENSIONS MUST BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY/13	SKS	DRAFT DPR SUBMISSION	RP

CLIENT:-



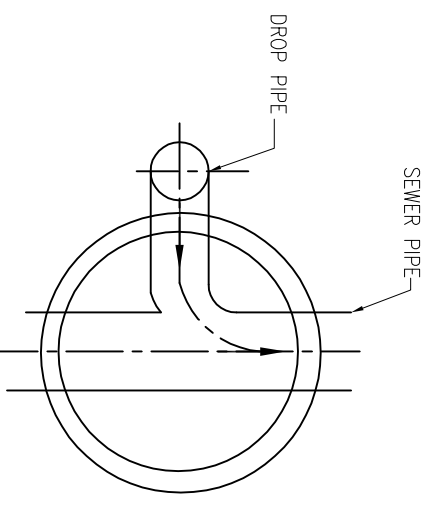
BIHAR URBAN INFRASTRUCTURE DEVELOPMENT CORPORATION

PREPARATION OF DETAILED PROJECT REPORTS (DPRS) & BID TENDERING FOR EXECUTION, CONSTRUCTION SUPERVISION & QUALITY CONTROL OF SEWERAGE & DRAINAGE PROJECTS OF PATNA UNDER JNNURM

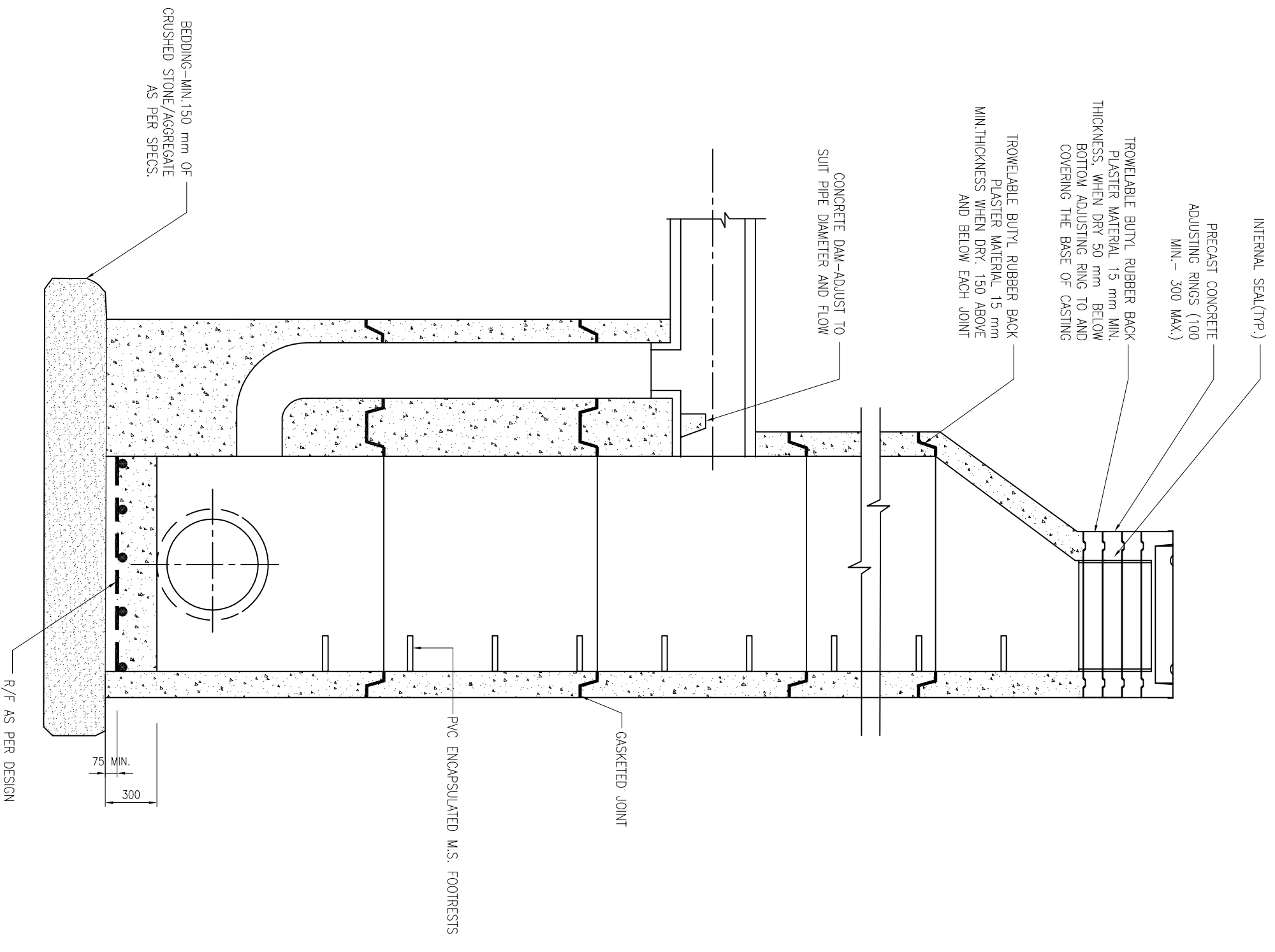
DRAWING TITLE
Rectangular Manhole, Size of Outgoing Pipe 2400 NP-3

DATE OF FIRST ISSUE	SCALE	BY	DATE OF FIRST ISSUE
DRAWN	1 : 30	SKS	MAY 2013
DESIGNED		JR	MAY 2013
CHECKED		RP	MAY 2013
APPROVED		CRR	MAY 2013

JOB NO.	DISCIPLINE	DRAWING NO.	REVISION
1092.01	PH	STD-10	00



DETAIL PLAN VIEW



- NOTES:-**
1. ALL DIMENSION ARE IN mm. UNLESS OTHERWISE SPECIFIED.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS. ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF CONSULTANTS.
 3. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.

Drawing Base Reference:
PMC WORK ORDER 3489, DATED 15 DECEMBER, 2009

REV	DATE	NAME	DESCRIPTION	CHKD
00	APRIL 13	SA	ISSUED FOR DPR	GP



CLIENT:-

BIHAR URBAN INFRASTRUCTURE DEVELOPMENT CORPORATION

303 Mahila Tower, 6th Floor, Sector-10, Patna-800 001
 Phone: +91(81)2210101, Fax: +91(81)2210103
 Website: www.buidc.co.in

PROJECT:-
PREPARATION OF DETAILED PROJECT REPORTS (DPRs) & BID DOCUMENTS; TENDERING FOR EXECUTION; CONSTRUCTION SUPERVISION & QUALITY CONTROL OF SEWERAGE & DRAINAGE PROJECTS OF PATNA UNDER JNNURM

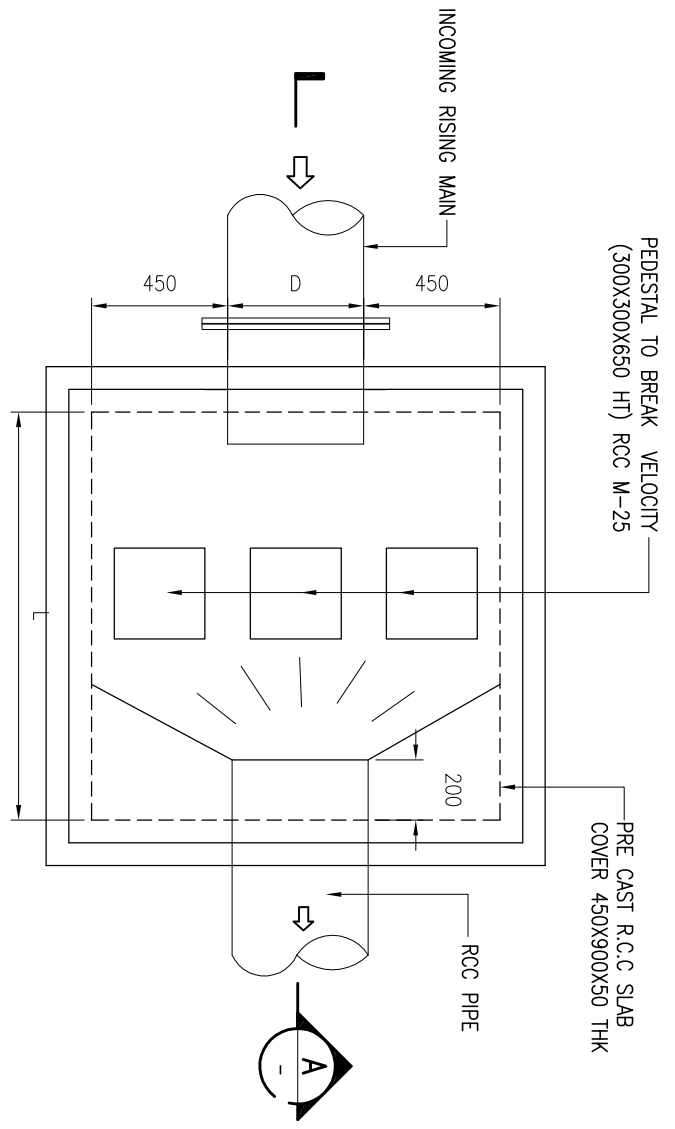
DRAWING TITLE

TYPICAL DETAILS OF PREFAB RCC DROP MANHOLE

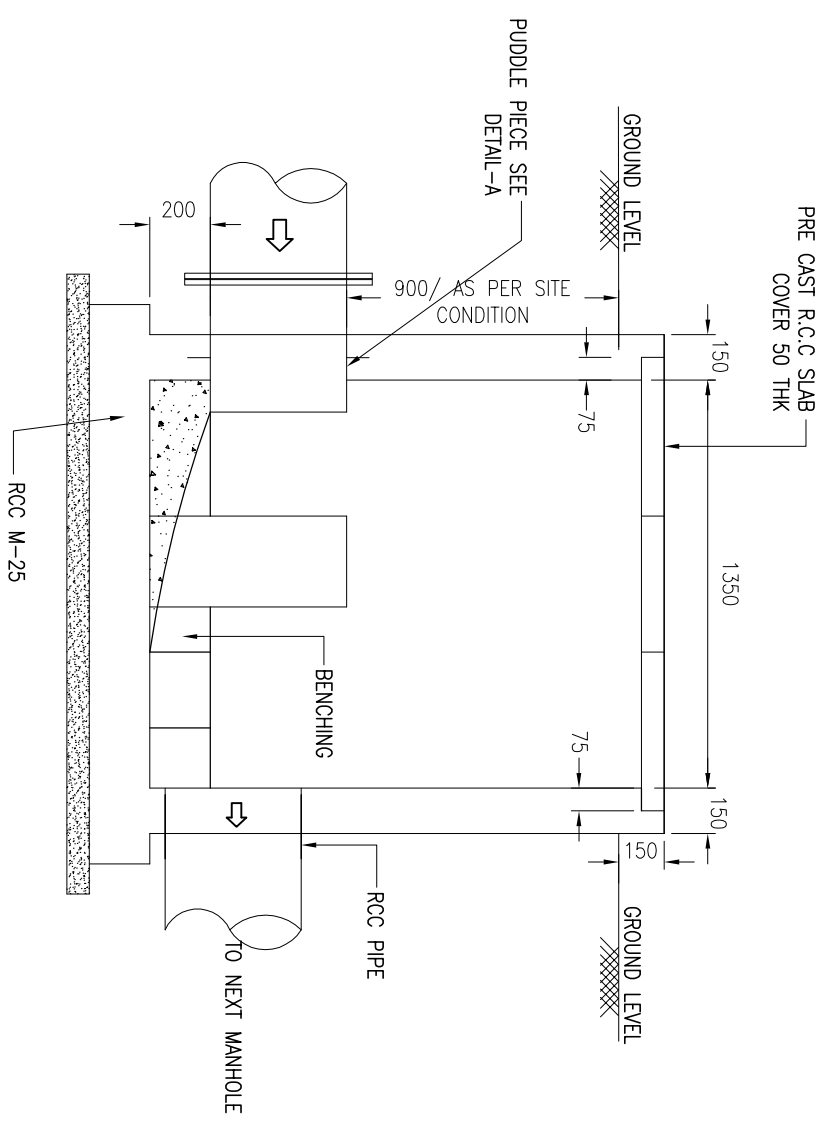
SCALE: 1:30

PURPOSE OF ISSUE		SCALE	
DETAILS PROJECT REPORT (SEWERAGE)	BY	SHEET SIZE: A3	DATE OF FIRST ISSUE
DRAWN	SA		APRIL 2013
DESIGNED	JR		APRIL 2013
CHECKED	GP		APRIL 2013
APPROVED	CR		APRIL 2013

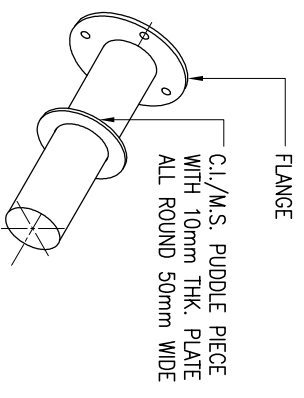
JOB NO.	DISCIPLINE	DRAWING NO.	REVISION
1092.01	PH	STD - 11	00



PLAN



SECTION



DETAIL

- NOTES:-**
1. ALL DIMENSION ARE IN mm. UNLESS OTHERWISE SPECIFIED
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS. ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF CONSULTANTS
 3. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE

Drawing Base Reference:
PMC WORK ORDER 3489, DATED 15 DECEMBER, 2009

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY 13	SA	DRAFT DRG SUBMISSION	RP

CLIENT:-

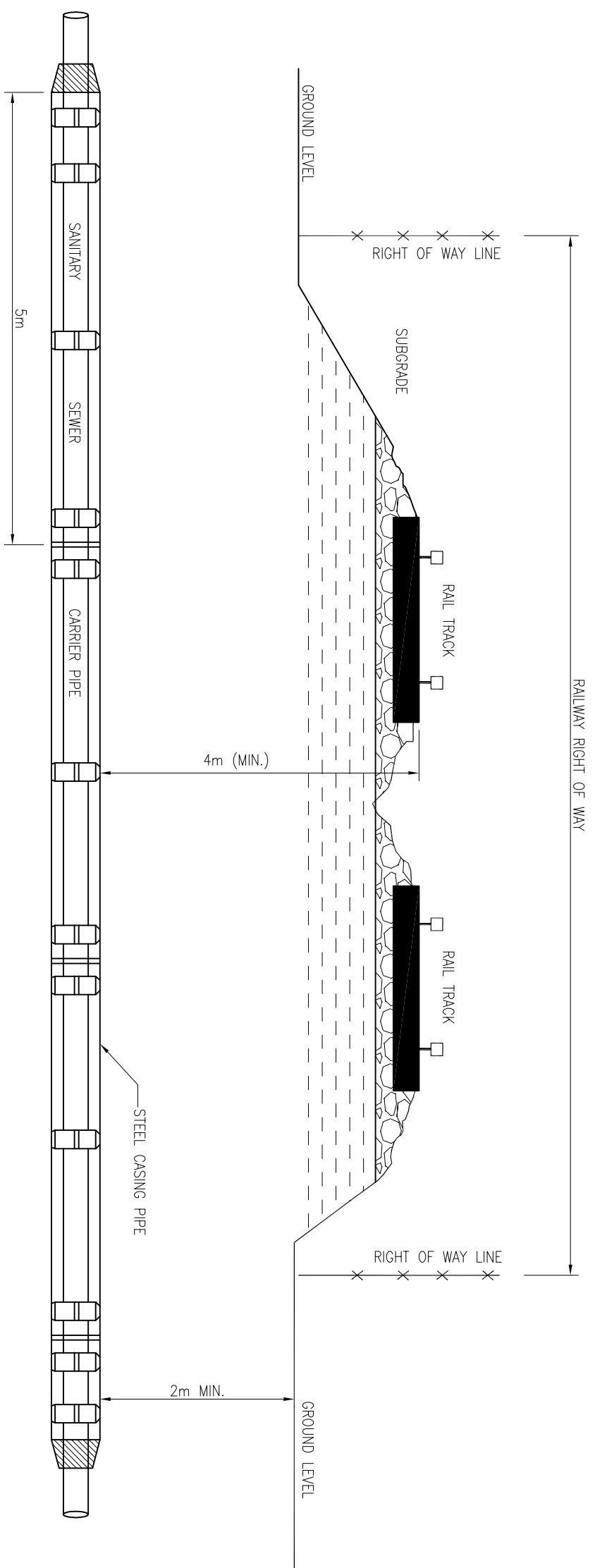


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 URBAN INFRASTRUCTURE
 DEVELOPMENT CORPORATION

PROJECT:-
 PREPARATION OF DETAILED
 PROJECT REPORTS (DPRS) & BID
 DOCUMENTS; TENDERING FOR
 EXECUTION; CONSTRUCTION
 SUPERVISION & QUALITY CONTROL
 OF SEWERAGE & DRAINAGE
 PROJECTS OF PATNA UNDER
 JNNURM

**RISING MAIN DISCHARGE
 MANHOLE**

PURPOSE OF ISSUE		SCALE :
DRAFT DETAILED PROJECT REPORT	BY SA	1 : 25
DATE OF FIRST ISSUE	DATE OF FIRST ISSUE	SHEET SIZE : A3
DESIGNED	JR	MAY 2013
CHECKED	RP	MAY 2013
APPROVED	QRR	MAY 2013
JOB NO. 1092.01	DISCIPLINE PH	DRAWING NO. STD - 12
		REVISION 00



- NOTES:-**
1. ALL DIMENSION ARE IN mm. UNLESS OTHERWISE SPECIFIED.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS. ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF CONSULTANTS.
 3. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.

Drawing Base Reference:
PMC WORK ORDER 3489, DATED 15 DECEMBER, 2009

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY 13	SA	DRAFT DPR SUBMISSION	RP

CLIENT:-

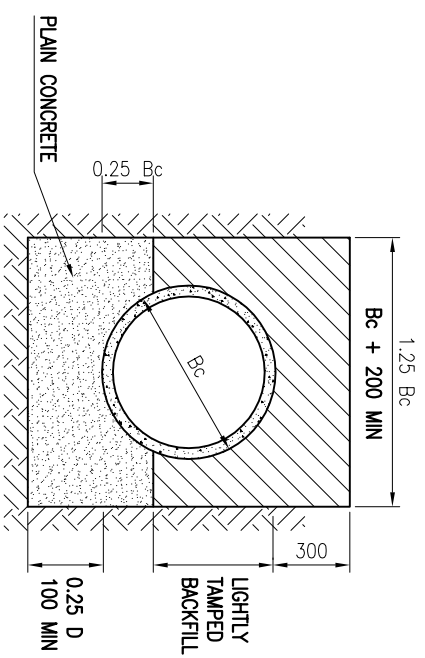


BIHAR URBAN INFRASTRUCTURE DEVELOPMENT CORPORATION
 303 Mahana Tower, 1st Floor, Patna - 851 001
 Phone - (061)2210101, Fax - (061)2210103
 Website - <http://www.buidc.co.in>

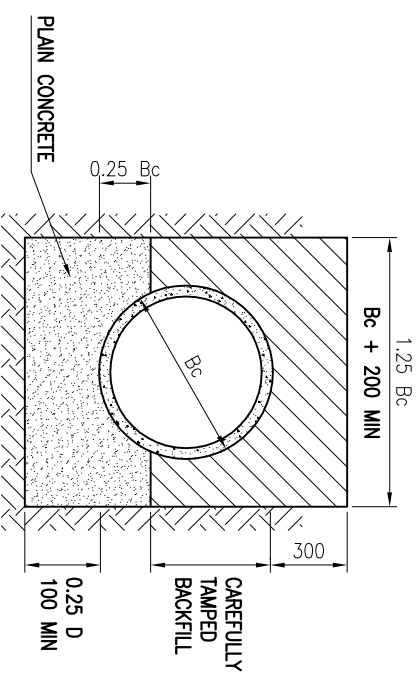
PROJECT:-
 PREPARATION OF DETAILED PROJECT REPORTS (DPRS) & BID DOCUMENTS; TENDERING FOR EXECUTION; CONSTRUCTION SUPERVISION & QUALITY CONTROL OF SEWERAGE & DRAINAGE PROJECTS OF PATNA UNDER JNNURM

DRAWING TITLE
SCHEMATIC OF RAIL TRACK CROSSING

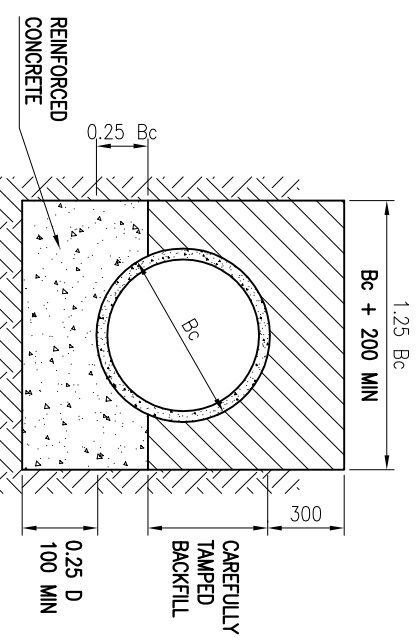
PURPOSE OF ISSUE		SCALE - MS	
DRAFT DETAILED PROJECT REPORT		SHEET SIZE - A3	
BY	SA	DATE OF FIRST ISSUE	MAY 2013
DESIGNED	JR	MAY 2013	
CHECKED	RP	MAY 2013	
APPROVED	CR	MAY 2013	
JOB NO.	DISCIPLINE	DRAWING NO.	REVISION
1092.01	PH	STD - 13	00



BEDDING CLASS – Aq
(PCC GRADE AND LIGHTLY TAMPED BACKFILL)

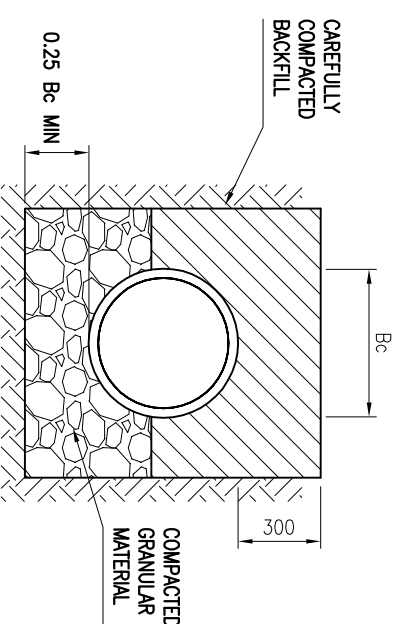


BEDDING CLASS – Ab
(PCC GRADE AND CAREFULLY TAMPED BACKFILL)



BEDDING CLASS – Ac
(RCC GRADE WITH P-0.4%)
P: THE RATIO OF THE AREA OF STEEL TO THE AREA OF CONCRETE AT THE CROWN

CLASS – A



BEDDING CLASS – B
COMPACTED GRANULAR BEDDING

CLASS – B

- NOTES:-**
1. ALL DIMENSIONS ARE IN MM.
 2. GRANULAR BEDDING AS PER APPROVAL OF ENGINEER.
 3. PCC MIX AS PER APPROVAL OF ENGINEER.
 4. IN ROCK, TRENCH IS EXCAVATED AT LEAST 150 MM BELOW THE BELL OF THE PIPE EXCEPT WHERE CONCRETE CRADLE IS USED.
 5. WELL GRADED CRUSHED ROCK OR GRAVEL WITH THE MAX. SIZE NOT EXCEEDING 25 MM IS RECOMMENDED.
 6. THE ENCASEMENT OF PIPE AND WIDTH OF EXCAVATION SHALL BE AS PER OPHEED MANUAL ON SEWERAGE AND SEWAGE TREATMENT.

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER, 2009

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SA	DRAFT DPR SUBMISSION	GP

CLIENT:-



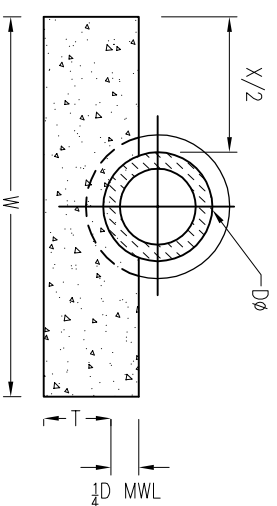
BIHAR
URBAN INFRASTRUCTURE
DEVELOPMENT CORPORATION

PROJECT:-
PREPARATION OF DETAILED
PROJECT REPORTS (DPRs) & BID
DOCUMENTS; TENDERING FOR
EXECUTION; CONSTRUCTION
SUPERVISION & QUALITY CONTROL
OF SEWERAGE & DRAINAGE
PROJECTS OF PATNA UNDER
JNNURM

DRAWING TITLE
TYPICAL DRAWING FOR
DIFFERENT CLASSES OF
BEDDING FOR SEWER IN
TRENCHES

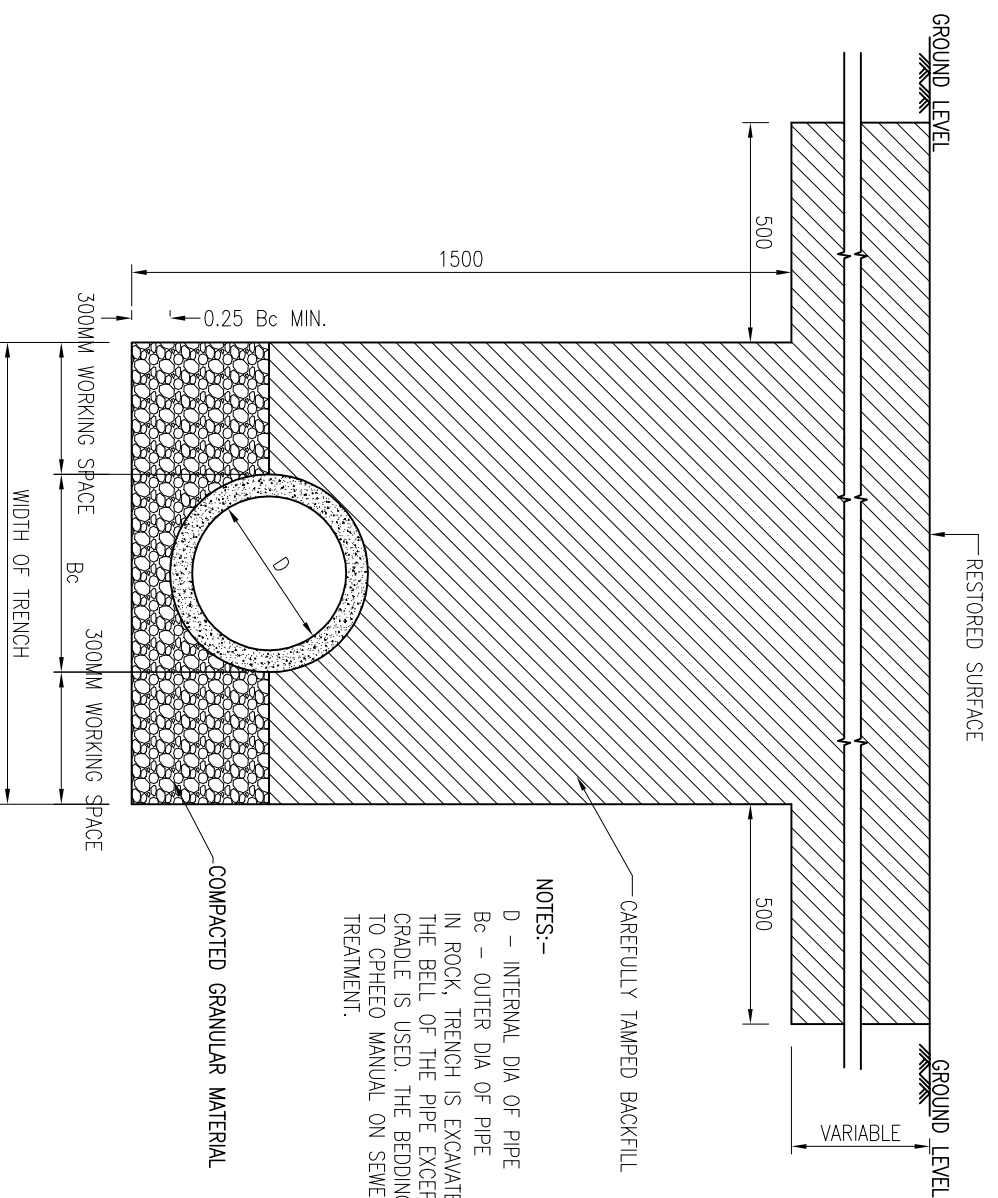
DATE OF FIRST ISSUE	SCALE	BY	DATE OF FIRST ISSUE
MAY 2013	1:10	SA	MAY 2013
MAY 2013	A3	JR	MAY 2013
MAY 2013		RP	MAY 2013
MAY 2013		CRB	MAY 2013

JOB NO.	DISCIPLINE	DRAWING NO.	REVISION
1092.01	PH	STD - 14	00



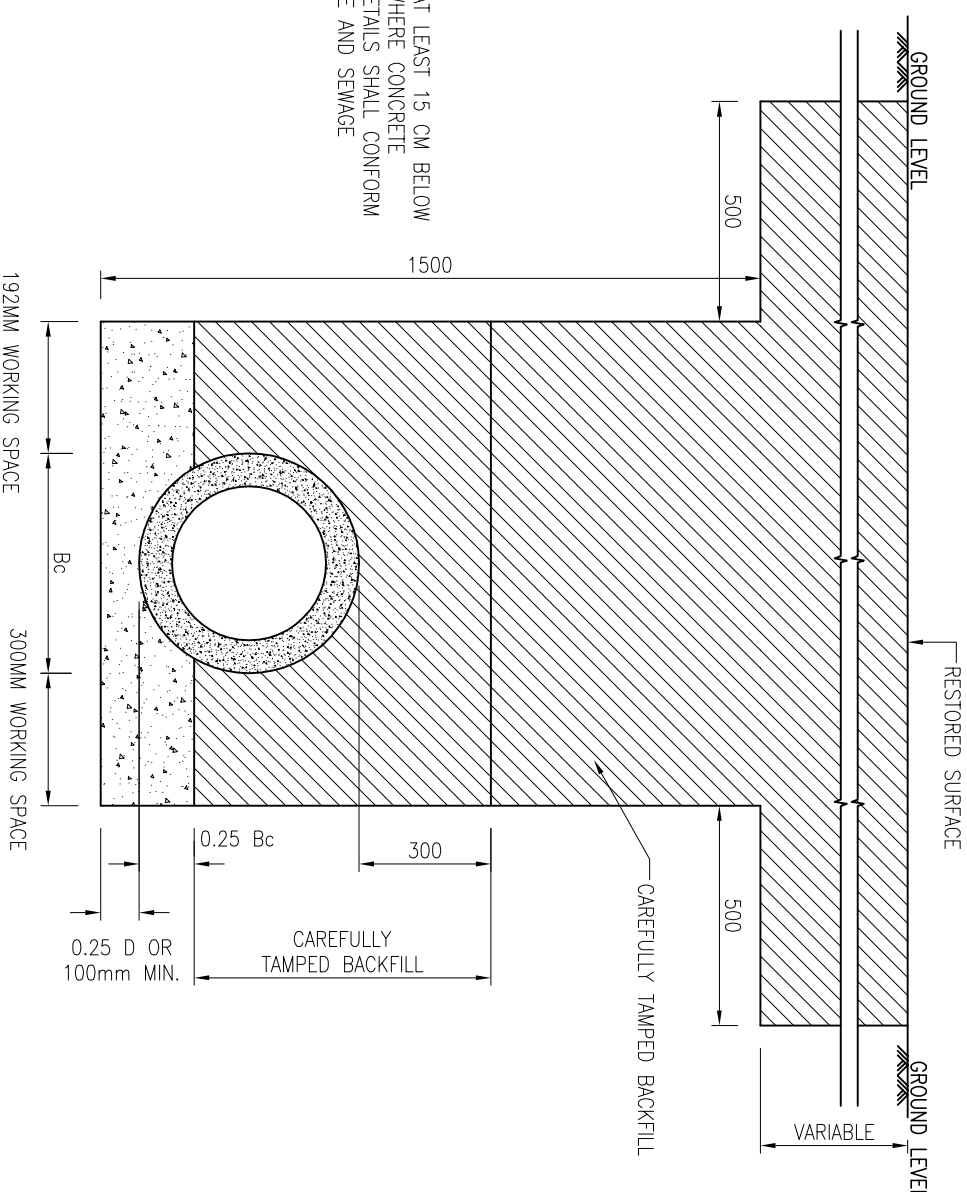
W = D+X, WHERE D IS THE EXTERNAL DIAMETER OF THE PIPE
 X = 300MM, UPTO TRENCH DEPTH OF 1.2 M.
 400MM, UPTO TRENCH DEPTH MORE THAN 1.2 M.
 T = 100MM FOR PIPES UNDER 150MM NOMINAL DIAMETER;
 ONE FOURTH OF INTERNAL DIAMETER SUBJECT TO A
 MINIMUM OF 150MM AND MAXIMUM OF 300MM FOR
 PIPES OF MORE THAN 150MM DIAMETER.
 MWL = MAXIMUM WATER LEVEL.

BEDDING-STONEWARE PIPE



NOTES:-
 D - INTERNAL DIA OF PIPE
 Bc - OUTER DIA OF PIPE
 IN ROCK, TRENCH IS EXCAVATED AT LEAST 15 CM BELOW THE BELL OF THE PIPE EXCEPT WHERE CONCRETE CRADLE IS USED. THE BEDDING DETAILS SHALL CONFORM TO CPHEEO MANUAL ON SEWERAGE AND SEWAGE TREATMENT.

COMPACTED GRANULAR BEDDING CLASS-B



NOTES:-
 D - INTERNAL DIA OF PIPE
 Bc - OUTER DIA OF PIPE
 IN ROCK, TRENCH IS EXCAVATED AT LEAST 15 CM BELOW THE BELL OF THE PIPE EXCEPT WHERE CONCRETE CRADLE IS USED. THE BEDDING DETAILS SHALL CONFORM TO CPHEEO MANUAL ON SEWERAGE AND SEWAGE TREATMENT.

CONCRETE CRADLE CLASS-A

NOTES:-
 1. ALL DIMENSION ARE IN mm. UNLESS OTHERWISE SPECIFIED.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS. ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF CONSULTANTS.
 3. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.

Drawing Base Reference:
 PMC WORK ORDER 3489, DATED 15 DECEMBER, 2009

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY 13	SA	DRAFT DPR SUBMISSION	RP

CLIENT:-

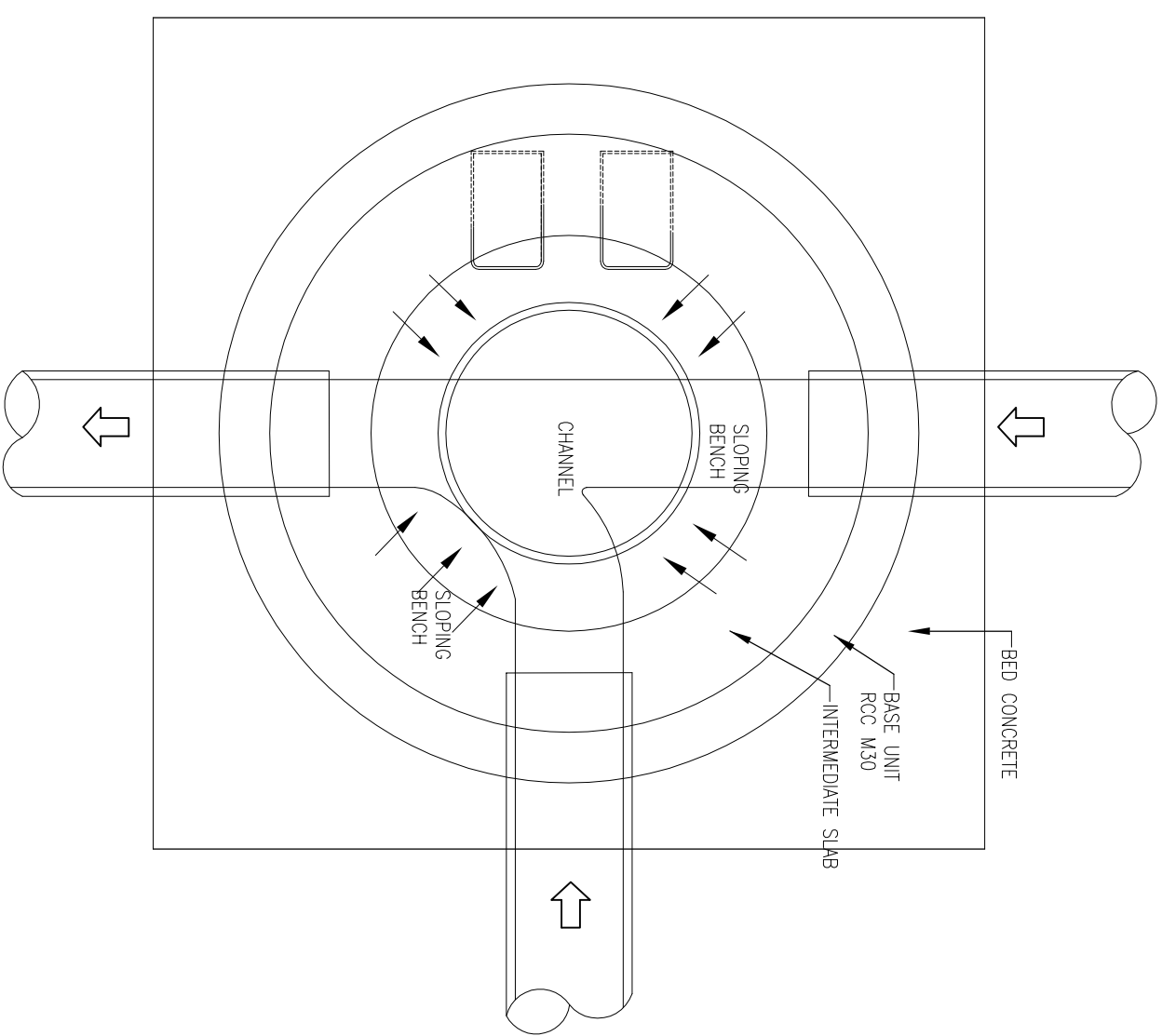


BIHAR
 URBAN INFRASTRUCTURE
 DEVELOPMENT CORPORATION
 303 Mahana Tower, 1st floor,
 Plot No. - 05/12/2010/01, IKA - 05/12/2010/03
 Website: www.buidc.co.in

PROJECT:-
 PREPARATION OF DETAILED
 PROJECT REPORTS (DPRS) & BID
 DOCUMENTS: TENDERING FOR
 EXECUTION: CONSTRUCTION
 SUPERVISION & QUALITY CONTROL
 OF SEWERAGE & DRAINAGE
 PROJECTS OF PATNA UNDER
 JNNURM

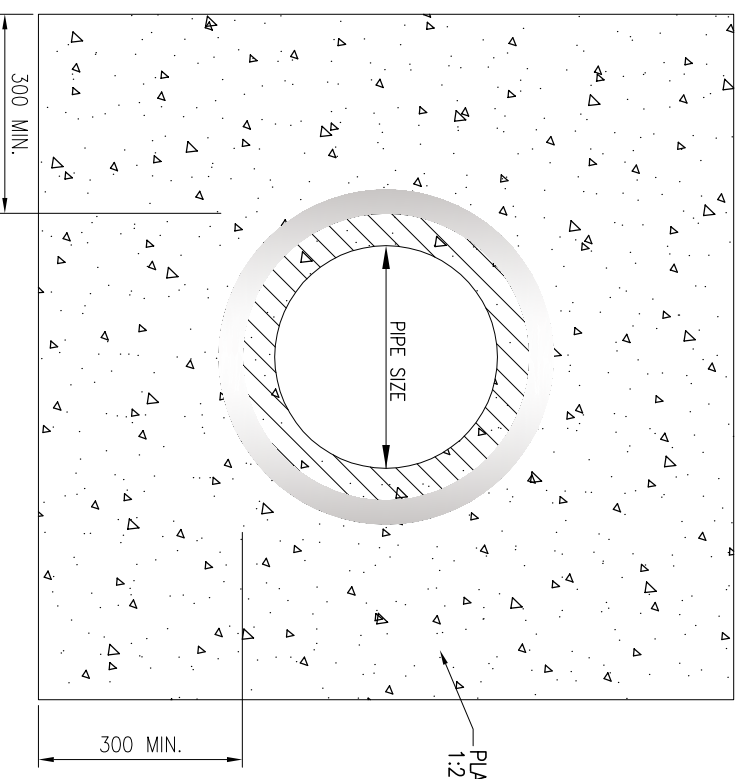
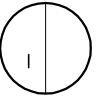
DRAWING TITLE
 TYPICAL DETAILS OF BEDDING OF
 SEWER IN TRENCHES

DISCIPLINE	NO.	DATE	REVISION
PH	STD - 15		00

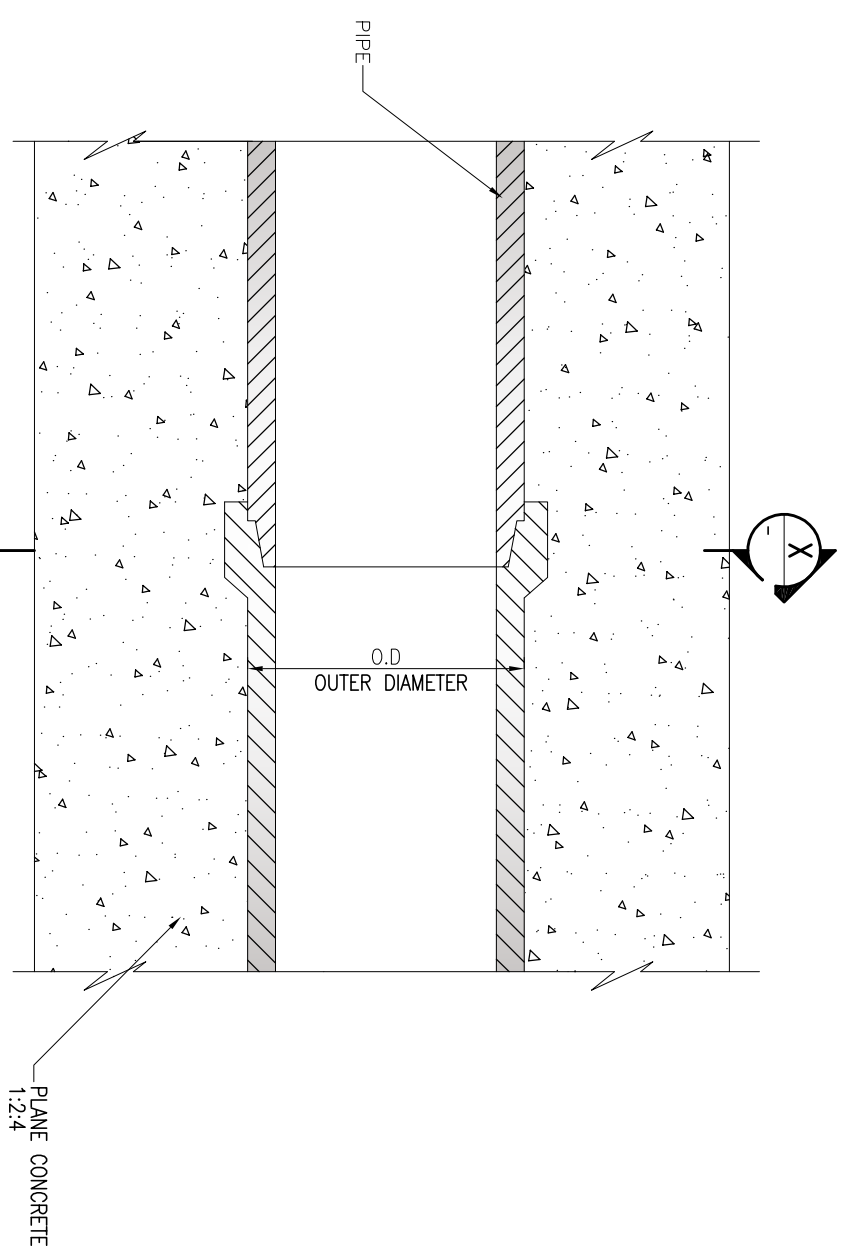


CHANNEL INVERT AT ENDS TO MATCH WITH IL OF INCOMING/OUTGOING PIPES- CHANNEL BOTTOM TO SLOPE WHERE IL OF PIPES DIFFER

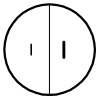
MANHOLE-TYPICAL PLAN



CROSS SECTION



LONGITUDINAL SECTION (TYPICAL ENCASING OF PIPE UNDER STREAM BED & ROADS)



- NOTES:-**
1. ALL DIMENSION ARE IN mm. UNLESS OTHERWISE SPECIFIED.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS. ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF CONSULTANTS.
 3. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.
 4. ENCASMENT TO BE USED WHERE SEWER IS CROSSING STREAM BED OR ROAD.

Drawing Base Reference:
PMC WORK ORDER 3489, DATED 15 DECEMBER, 2009

REV	DATE	NAME	DESCRIPTION	CHKD
00	MAY 13	SA	DRAFT DPR SUBMISSION	RP

CLIENT:-



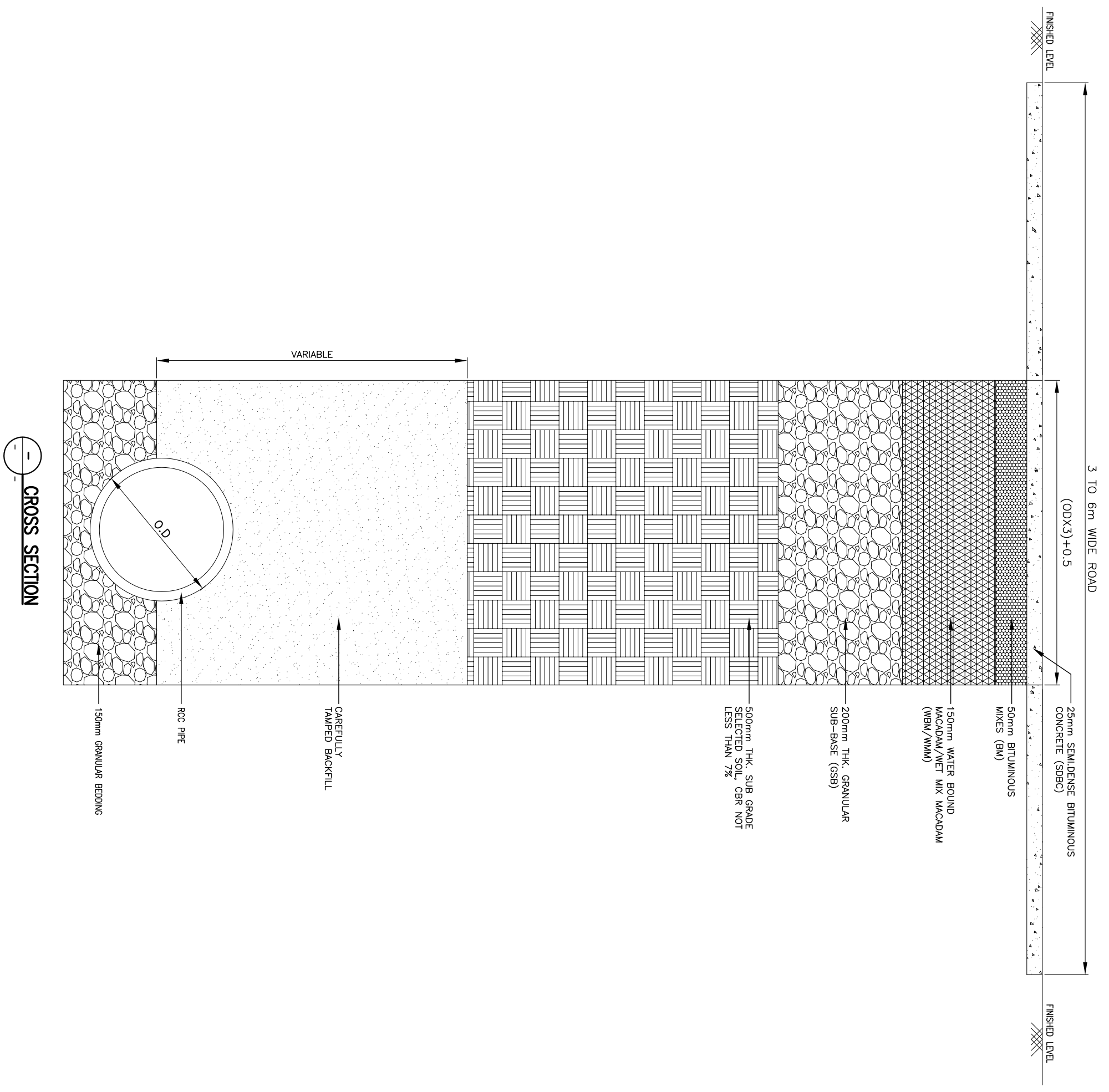
BIHAR URBAN INFRASTRUCTURE DEVELOPMENT CORPORATION
 303 Mahila Tower, 1st floor, Patna - 800 001
 Phone: +91(81)2210101, Fax: +91(81)2210103
 Website: www.buidc.co.in

PROJECT:-
 PREPARATION OF DETAILED PROJECT REPORTS (DPRS) & BID DOCUMENTS; TENDERING FOR EXECUTION; CONSTRUCTION SUPERVISION & QUALITY CONTROL OF SEWERAGE & DRAINAGE PROJECTS OF PATNA UNDER JNNURM

DRAWING TITLE
 MANHOLE DETAIL AT PIPE JUNCTION & ENCASING DETAIL OF SEWER UNDER STREAM BED & ROAD CROSSING

PURPOSE OF ISSUE		SCALE : M/S	
DATE	BY	SHEET SIZE : A3	REPORT
DESIGNED	SA	MAY 2013	REPORT
CHECKED	JR	MAY 2013	
APPROVED	RP	MAY 2013	
	CR	MAY 2013	

JOB NO. **1092.01** DISCIPLINE **PH** DRAWING NO. **STD - 19** REVISION **00**



- NOTES:-**
1. ALL DIMENSION ARE IN mm. UNLESS OTHERWISE SPECIFIED.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS. ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF CONSULTANTS.
 3. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.

Drawing Based Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER, 2009

REV	DATE	NAME	DESCRIPTION	CHK'D
00	MAY 13	SA	DRAFT DPR SUBMISSION	RP

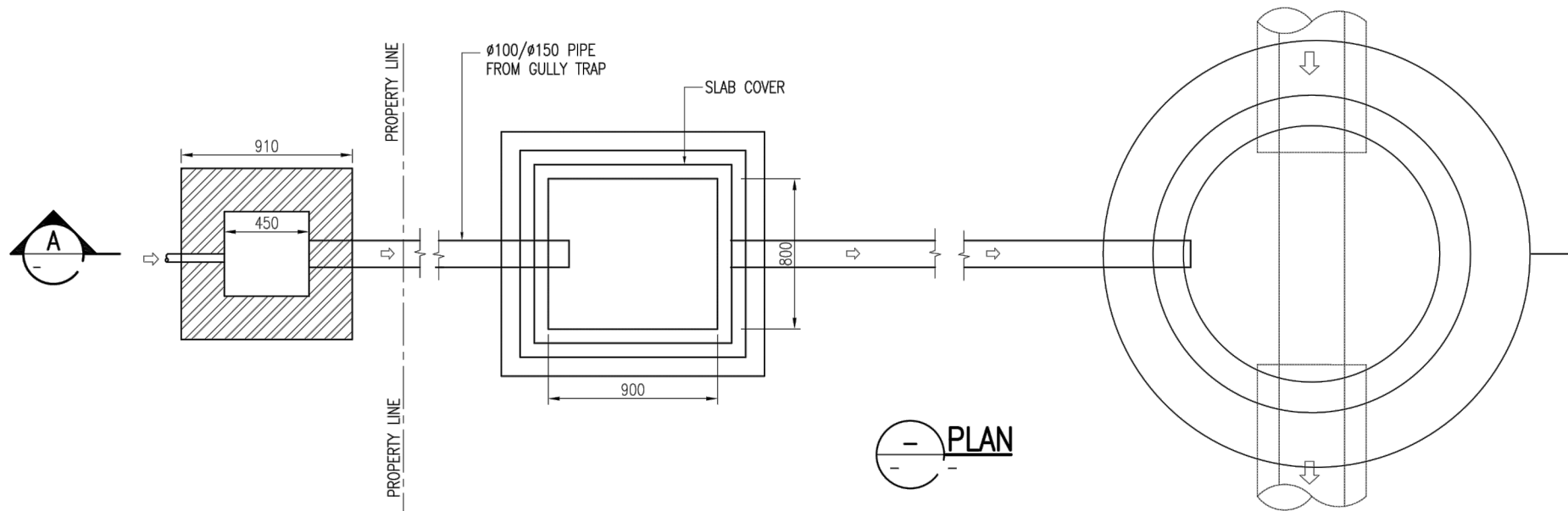


CLIENT:-
BIHAR URBAN INFRASTRUCTURE DEVELOPMENT CORPORATION

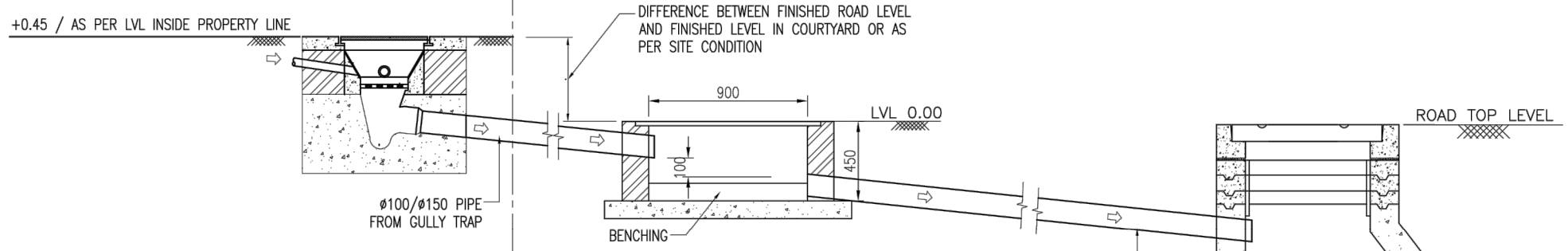
PROJECT:-
PREPARATION OF DETAILED PROJECT REPORTS (DPRS) & BID DOCUMENTS; TENDERING FOR EXECUTION; CONSTRUCTION SUPERVISION & QUALITY CONTROL OF SEWERAGE & DRAINAGE PROJECTS OF PATNA UNDER JNNURM

DRAWING TITLE
TYPICAL CROSS SECTION DETAILS FOR ROAD RESTORATION

PURPOSE OF ISSUE		SCALE :- N.T.S	
DRAWN	BY	SHEET SIZE :- A3	DATE OF FIRST ISSUE
DESIGNED	JR	MAY 2013	
CHECKED	RP	MAY 2013	
APPROVED	CRB	MAY 2013	
JOB NO. 1092.01	DISCIPLINE PH	DRAWING NO. STD - 20	REVISION 00



PLAN



SECTION-A

- NOTES:-**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF CONSULTANTS.
 2. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.
 3. UNDER NO CIRCUMSTANCES SHOULD DIMENSIONS BE SCALED FROM THIS DRAWING.

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

NO	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SA	DRAFT DPR SUBMISSION	RP

CLIENT:-

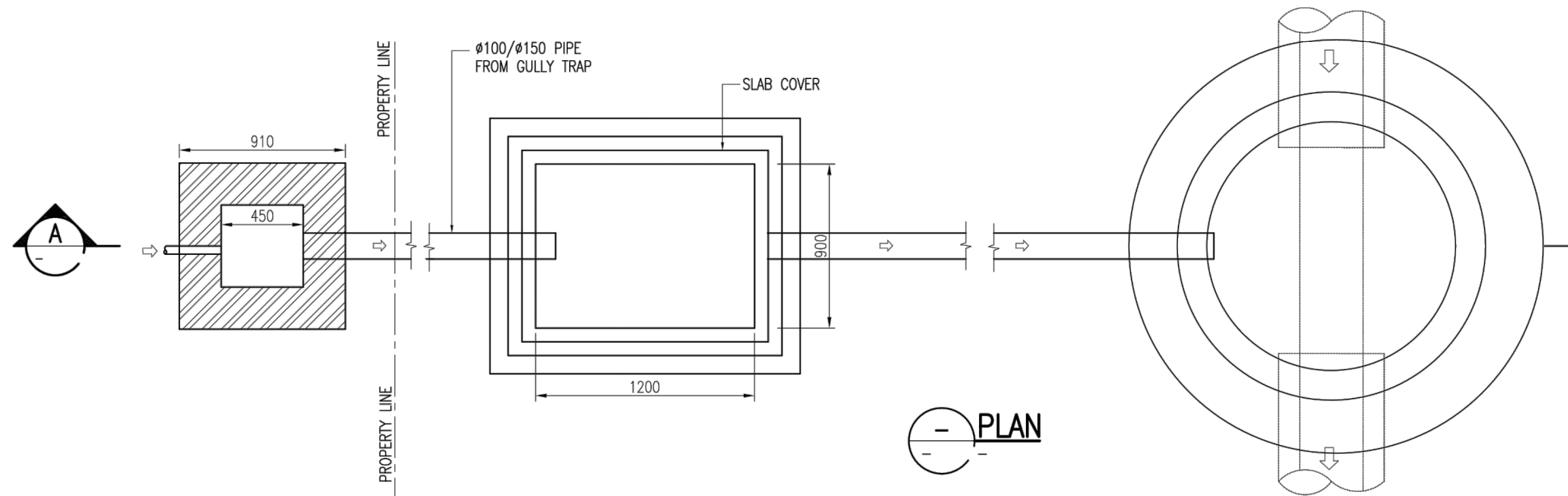
 BIHAR
 URBAN INFRASTRUCTURE
 DEVELOPMENT CORPORATION
 303, Maurya Tower,
 South Main, Patna - 800 001
 Phone - (0612) 2210101, Fax - (0612) 2210103
 Website - http://www.buidc.co.in

PROJECT:-
**PREPARATION OF DETAILED
 PROJECT REPORTS (DPRs) & BID
 DOCUMENTS;
 TENDERING FOR EXECUTION;
 CONSTRUCTION SUPERVISION &
 QUALITY CONTROL OF SEWERAGE &
 DRAINAGE PROJECTS OF PATNA
 UNDER JNNURM**

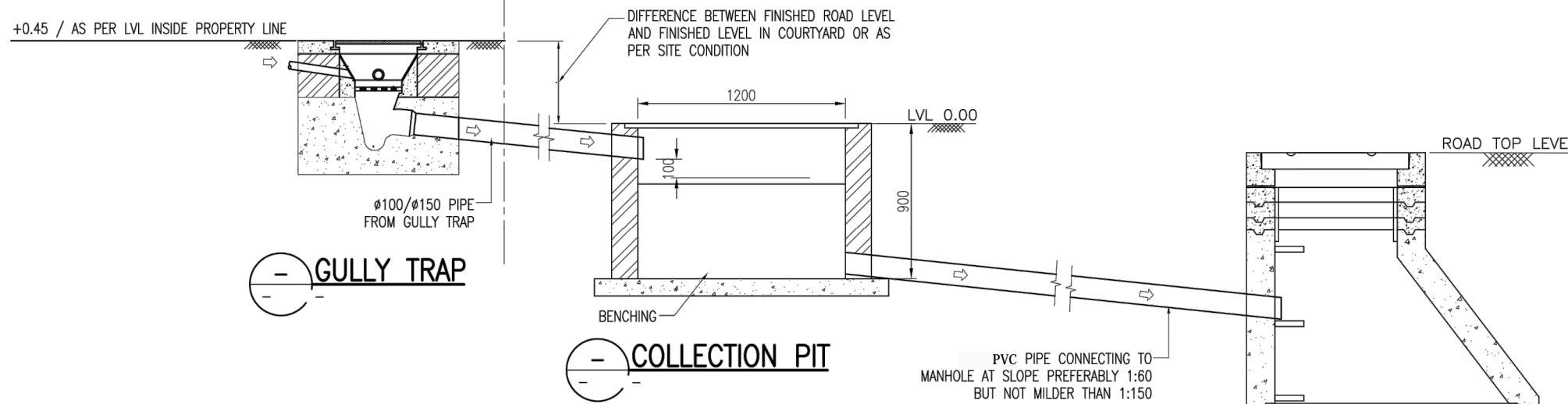
DRAWING TITLE
**TYPICAL CONNECTION FROM
 PROPERTY LINE TO SEWER LINE
 (TYPE-1)**

PURPOSE OF ISSUE DRAFT DETAILED PROJECT REPORT	SCALE:- 1 : 30 SHEET SIZE - A3
BY SA	DATE OF FIRST ISSUE MAY 2013
DRAWN SA	MAY 2013
DESIGNED JR	MAY 2013
CHECKED RP	MAY 2013
APPROVED CRR	MAY 2013
JOB NO. 1092.01	DISCIPLINE PH
	DRAWING NO. STD-21
	REVISION 00

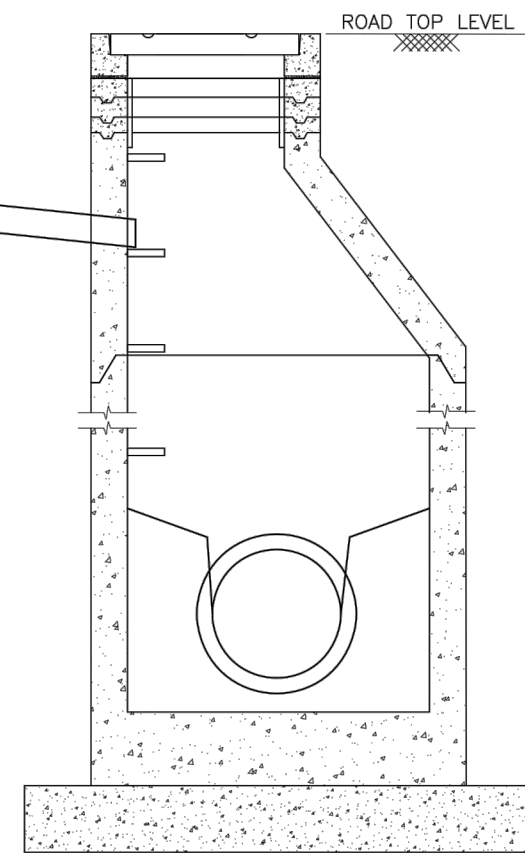
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PLAN



SECTION-A



MANHOLE

- NOTES:-**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF CONSULTANTS.
 2. ALL DIMENSIONS TO BE CHECKED BEFORE COMMENCEMENT OF WORK ON SITE.
 3. UNDER NO CIRCUMSTANCES SHOULD DIMENSIONS BE SCALED FROM THIS DRAWING.

Drawing Base Reference:-
PMC WORK ORDER 3489, DATED 15 DECEMBER 2009.

NO	DATE	NAME	DESCRIPTION	CHKD
00	MAY'13	SA	DRAFT DPR SUBMISSION	RP

CLIENT:-

BIHAR URBAN INFRASTRUCTURE DEVELOPMENT CORPORATION
 303, Maurya Tower,
 South Main, Patna - 800 001
 Phone - (0612) 2210101, Fax - (0612) 2210103
 Website - <http://www.buidc.co.in>

PROJECT:-
PREPARATION OF DETAILED PROJECT REPORTS (DPRs) & BID DOCUMENTS; TENDERING FOR EXECUTION; CONSTRUCTION SUPERVISION & QUALITY CONTROL OF SEWERAGE & DRAINAGE PROJECTS OF PATNA UNDER JNNURM

DRAWING TITLE
TYPICAL CONNECTION FROM PROPERTY LINE TO SEWER LINE (TYPE-2)

PURPOSE OF ISSUE	SCALE:- 1 : 30
DRAFT DETAILED PROJECT REPORT	SHEET SIZE - A3
BY	DATE OF FIRST ISSUE
DRAWN SA	MAY 2013
DESIGNED JR	MAY 2013
CHECKED RP	MAY 2013
APPROVED CRR	MAY 2013
JOB NO. DISCIPLINE	DRAWING NO. REVISION
1092.01 PH	STD-22 00

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