

NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CONTRACT TERMS AND CONDITIONS, SPECIFICATION AND SCHEDULE OF ITEMS.
- ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS ARE IN METRES, UNO.
- EL.(±)0.000 CORRESPONDS TO FINISHED FLOOR LEVEL OF POWER HOUSE BUILDING WHICH CORRESPONDS TO SITE RL 82.20M

LEGEND

| | |
|-----------------------------|------------------------------|
| BOC - BOTTOM OF CONCRETE | LVL - LEVEL |
| C/C - CENTER TO CENTER | MAX. - MAXIMUM |
| CL - CENTER LINE | PLVL - PLATFORM LEVEL |
| EL - ELEVATION | TOC - TOP OF CONCRETE |
| FFL - FINISHED FLOOR LEVEL | THK - THICKNESS |
| FGL - FINISHED GROUND LEVEL | TYP - TYPICAL |
| | UNO - UNLESS NOTED OTHERWISE |

REFERENCE DRAWINGS
(CONSTRUCTION)

PE-DG-294-600-C001 - STANDARD NOTES FOR RCC WORKS
 PE-DG-294-600-C004 - STANDARD DETAILS FOR STRUCTURAL STEEL WORK
 PE-DG-294-671-C001(SHT2 OF 2) - G.A. & DETAILS
 (ENGINEERING)

PE-DG-294-100-M001 - PLOT PLAN
 PE-DG-294-172-N101 - P & ID PLANT WATER

TCE CONSULTING ENGINEERS LTD., VENDOR DOCUMENT REVIEW STATUS

A. Drawing approved or submitted proceed with fabrication /construction.
 B. Drawing approved subject to comments notes proceed with fabrication /construction considering our comments.
 C. Our comments are noted on this marked up print.
 D. Our comments are noted in memo attached to the forwarding transmittal letter No.
 E. Correct original of this drawing to reflect our comments and resubmit for approval.
 F. Correct original of this drawing to reflect our comments and resubmit for records.
 G. Drawings of this category are for information only and not for approval. Information furnished on the drawing is noted.
 H. Drawing reviewed against our previous comments and other revisions highlighted and identified by the vendor.
 I. Drawing returned without review.
 Approval conveyed herein neither releases Vendor / Contractor of his contractual obligations and his responsibilities for correctness of dimensions, materials of construction, weights, quantities, design details, assembly etc, system/performance requirements and conformity of supplies with Indian statutory laws as may be applicable nor does it limit the Purchaser's rights under the contract.

Reviewed by:.....Date.....

| | | | |
|--|--|--|--|
| GHCL | | GUJARAT STATE ELECTRICITY CORPORATION LIMITED 1x500 MW, UNIT # 6, UKAI THERMAL POWER STATION | |
| TCE CONSULTING ENGINEERS LIMITED | | BHARAT HEAVY ELECTRICALS LTD POWER SECTOR PROJECT ENGINEERING MANAGEMENT NEW DELHI | |
| JOB NO. 294 STATUS CONTRACT | | NAME SIGN DATE DRN D.Y. 09.06.2010 DESIGN P.S.L. 09.06.2010 CHK MAP 09.06.2010 APPRO ST 09.06.2010 | |
| STAMP ALL PREVIOUS REVISION AS SUPERSEDED | | ENGINEERING SUB CONTRACTOR FICHTNER CONSULTING ENGINEERS, CHENNAI | |
| TITLE SERVICE WATER & POTABLE WATER OVERHEAD TANK GENERAL ARRANGEMENT & DETAILS | | | |
| CV ME EL MC | | DEPT. SCALES SHOWN SIGN DATE | |
| PE-DG-294-671-C001 | | DRAWING NO. SHEET 1 OF 2 REV. 00 | |

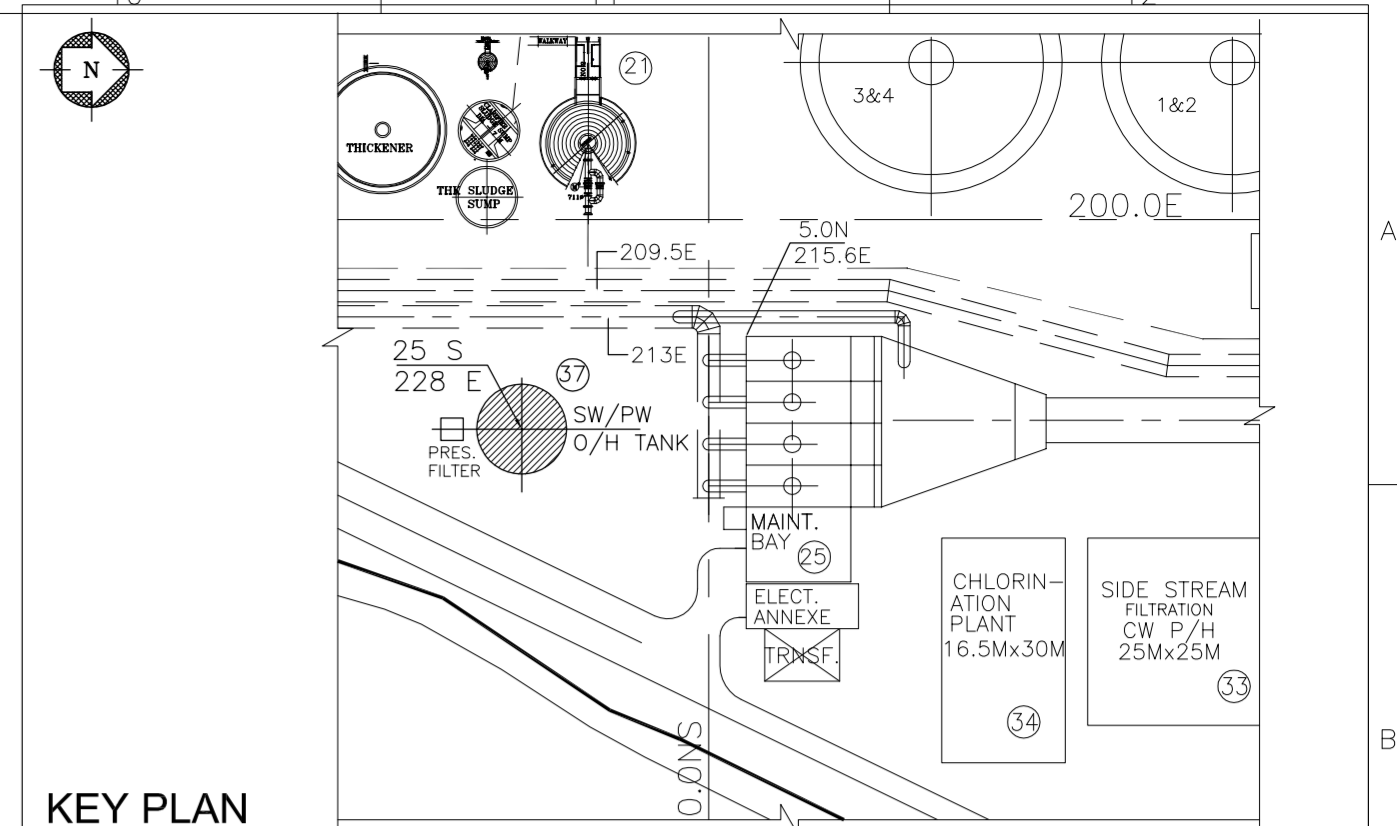
ELECTRONIC FILE NAME: 20100810003-071-C001(SHT-1)-REV-20100809

CONSENT AND CONFIDENTIALITY: The information on this document is property of BHARAT HEAVY ELECTRICALS LIMITED. It shall be used directly or indirectly in any way detrimental to the interest of the company.

FORMAT SIZE: A0

BILL OF QUANTITIES (APPROX.)

| SL.NO. | DESCRIPTION | UNIT | QUANTITY |
|--------|---------------|------|-------------|
| 1 | RCC (M25) | Cu.M | 142.6 |
| 2 | PCC | Cu.M | 12.0 |
| 3 | REINFORCEMENT | | |
| | 16 Φ | MT | 1.43 |
| | 20 Φ | MT | 1.98 |
| | 25 Φ | MT | 3.0 |
| | TOTAL | | 6.41 |



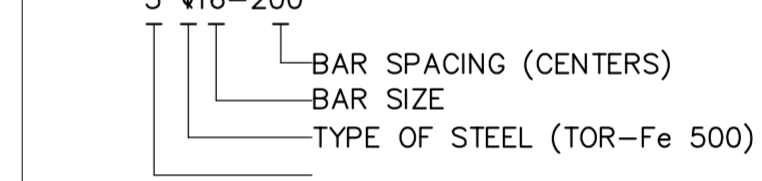
KEY PLAN

NOTES

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH CONTRACT TERMS AND CONDITIONS, SPECIFICATION.
- ALL DIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METERS, UNO.
- ALL ELEVATIONS ARE REFERRED TO FINISHED FLOOR LEVEL OF POWER HOUSE BUILDING BUILDING EL(±)0.000M, WHICH CORRESPONDS TO RL 82.20M.
- GRADE OF CONCRETE SHALL BE M25 WITH 20mm DOWN GRADED AGGREGATES.
- REINFORCEMENT STEEL SHALL BE OF Fe500 GRADE, CONFORMING TO IS:1786
- CLEAR COVER TO CONCRETE SHALL BE AS FOLLOWS:

| DESCRIPTION | TOP | BOTTOM | SIDES |
|-------------|-----|--------|-------|
| FOOTING | 50 | 75 | 50 |
- LAP LENGTH (Ld) FOR REINFORCEMENT SHALL BE 45 DIA. OF SMALLEST BAR BEING LAPPED.
- THE NET SAFE BEARING CAPACITY OF SOIL IS ASSUMED AS 45 T/M² AS PER INVESTIGATION REPORT
- FOUNDING LEVELS FOR ALL FOUNDATIONS SHALL BE AT WEATHERED ROCK/HARD ROCK STRATUM
- IF WEATHERED ROCK/HARD ROCK STRATUM ARE BEYOND 500 MM THAN THE FOUNDING LEVEL SAME SHALL BE INFORMED TO DESIGN OFFICE AND REDESIGN THE FOUNDATION CONSIDERING THE NEW FOUNDING LEVEL AT THE WEATHERED ROCK/HARD ROCK STRATUM.
- ALL BACK FILLING SOIL SHALL BE OF GOOD EARTH AND THE SAME SHALL BE COMPACTED WELL TO 95% PROCTOR DENSITY.
- REINFORCEMENT IS CALLED UP AS THUS :

| | |
|---|--------|
| 5 | 16-200 |
|---|--------|



REFERENCE DRAWINGS

- (CONSTRUCTION)
- PE-DG-294-600-C001 - STANDARD NOTES FOR RCC WORKS
 - PE-DG-294-671-C001 - SERVICE WATER & POTABLE WATER OVERHEAD TANK - G.A & DETAILS
 - PE-DG-294-671-C003 - SERVICE WATER & POTABLE WATER OVERHEAD TANK - REINFORCEMENT DETAILS FOR SUPER STRUCTURE
 - PE-DG-294-100-M001 - PLOT PLAN
 - PE-DG-294-172-N101 - P&ID PLANT WATER

LEGEND

- BOC - BOTTOM OF CONCRETE
- CL - CENTER LINE
- EL - ELEVATION
- FFL - FINISHED FLOOR LEVEL
- FGL - FINISHED GROUND LEVEL
- THK - THICKNESS
- TYP - TYPICAL
- UNO - UNLESS NOTED OTHERWISE

BHEL-PROJECT ENGINEERING MANAGEMENT(CIVIL)

THIS DRAWING MARKED IS RELEASED FOR

COMMENTS/APPROVAL FABRICATION

PLANNING INFORMATION

CONSTRUCTION AS BUILT DRAWING

STAMP ALL PREVIOUS REVISION AS SUPERSEDED

ISSUED BY: ALOK BANSAL

NAME: ALOK BANSAL

SIGNATURE: _____

DATE: _____

TCE CONSULTING ENGINEERS LTD., VENDOR DOCUMENT REVIEW STATUS

A. Drawing approved as submitted proceed with fabrication /construction.

B. Drawing approved subject to comments notes proceed with fabrication /construction considering our comments.

C. Our comments are noted on this marked up print.

D. Our comments are noted in memo attached to the forwarding transmittal letter No. Dated:

E. Correct original of this drawing to reflect our comments and resubmit for approval.

F. Correct original of this drawing to reflect our comments and resubmit for records.

G. Drawings of this category are for information only and not for approval. Information furnished on the drawing is noted.

H. Drawing reviewed against our previous comments and other revisions highlighted and identified by the vendor.

I. Drawing returned without review.

Approval conveyed herein neither relieves Vendor / Contractor of his contractual obligations and his responsibilities for correctness of dimensions, materials of construction, weights, quantities, design details, assembly fits, system/performance requirements and conformity of supplies with Indian statutory Laws as may be applicable nor does it limit the Purchaser's rights under the contract.

Reviewed by: Date:

GSECL GUJARAT STATE ELECTRICITY CORPORATION LIMITED
1x500 MW, UNIT # 6, UKAI THERMAL POWER STATION

TCE CONSULTING ENGINEERS LIMITED

| DEPT | DRN | NAME | SIGN | DATE |
|------|------|------|------|------------|
| C | DY | RSL | | 09.06.2010 |
| | DES | MAP | | 09.06.2010 |
| | APPD | ST | | 09.06.2010 |

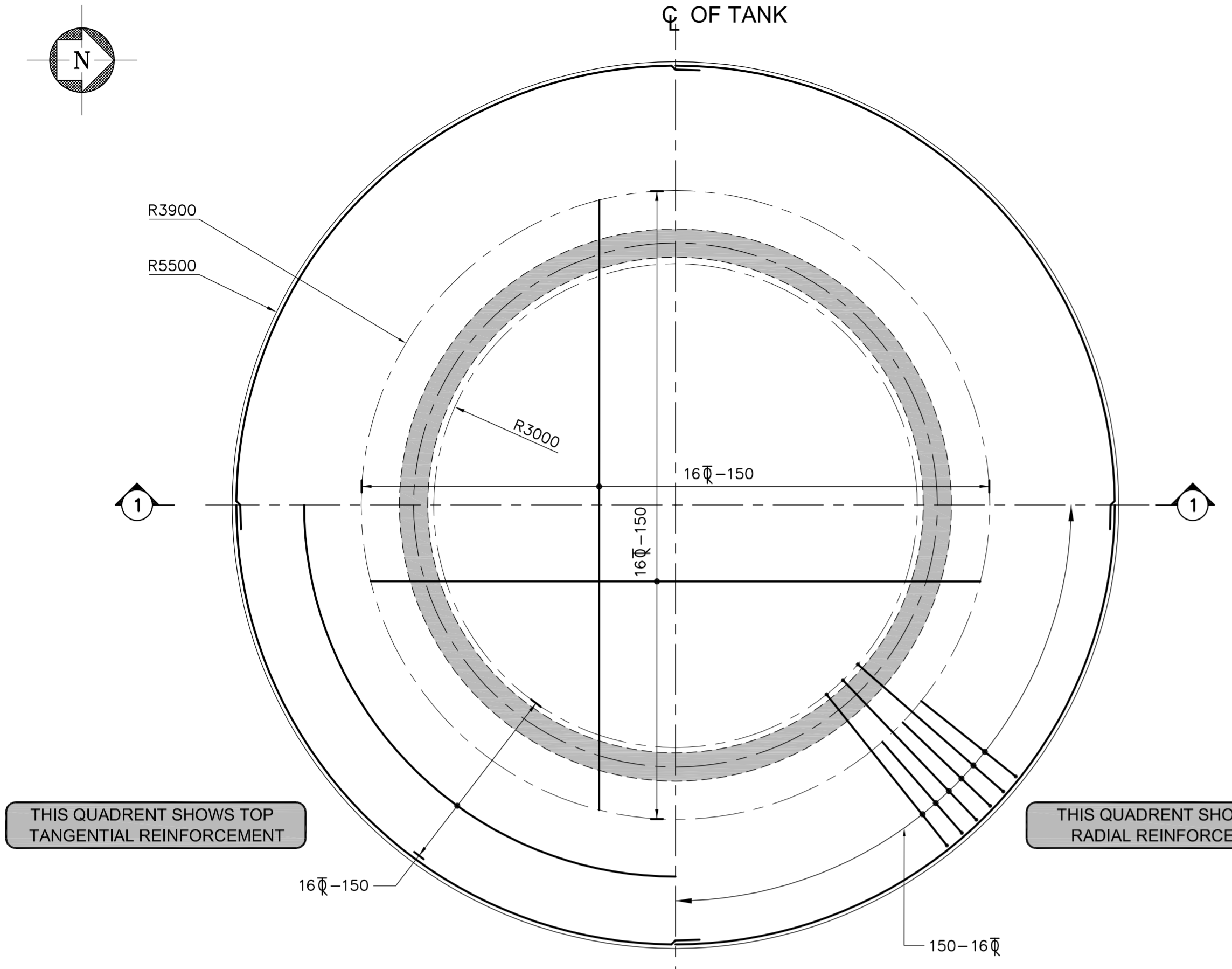
BHARAT HEAVY ELECTRICALS LTD
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NEW DELHI

ENGINEERING SUB CONTRACTOR FICHTNER CONSULTING ENGINEERS, CHENNAI

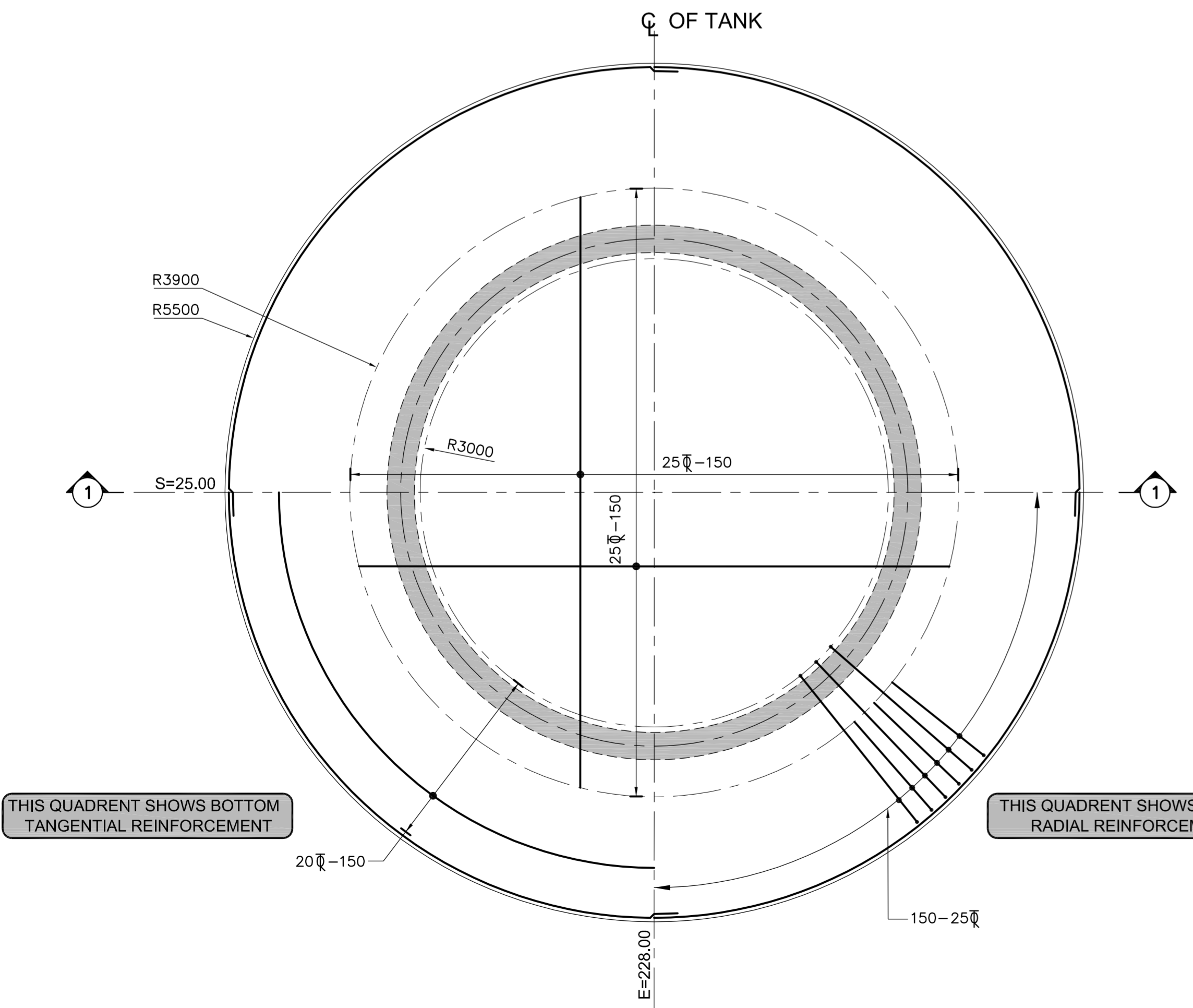
TITLE: **SERVICE WATER & POTABLE WATER OVERHEAD TANK FOUNDATION REINFORCEMENT DETAILS**

CV ME EL I&C DEPT. SCALE: AS SHOWN DRAWING NO. **PE-DG-294-671-C002**

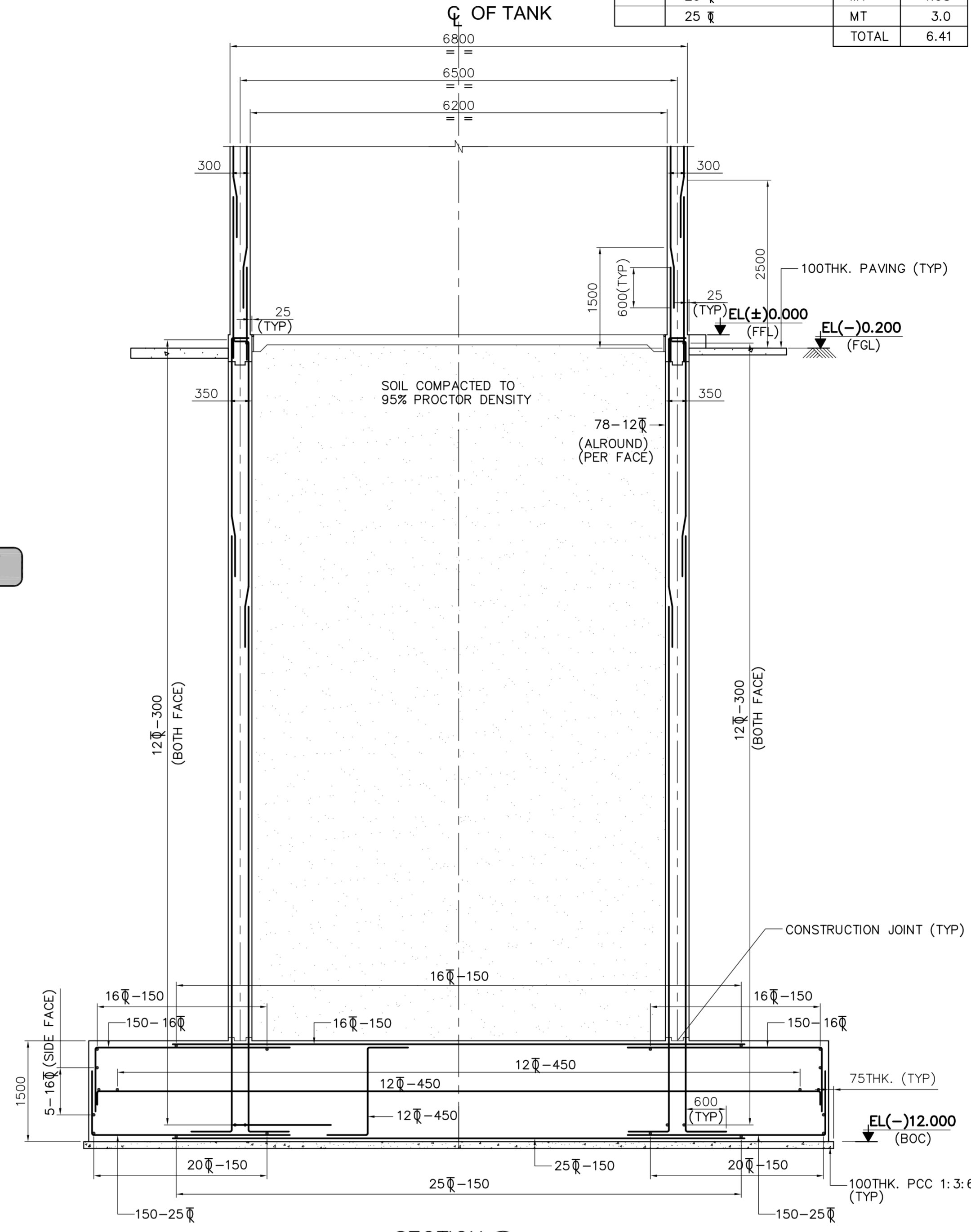
SIGN SHEET 1 OF 1 REV. 0



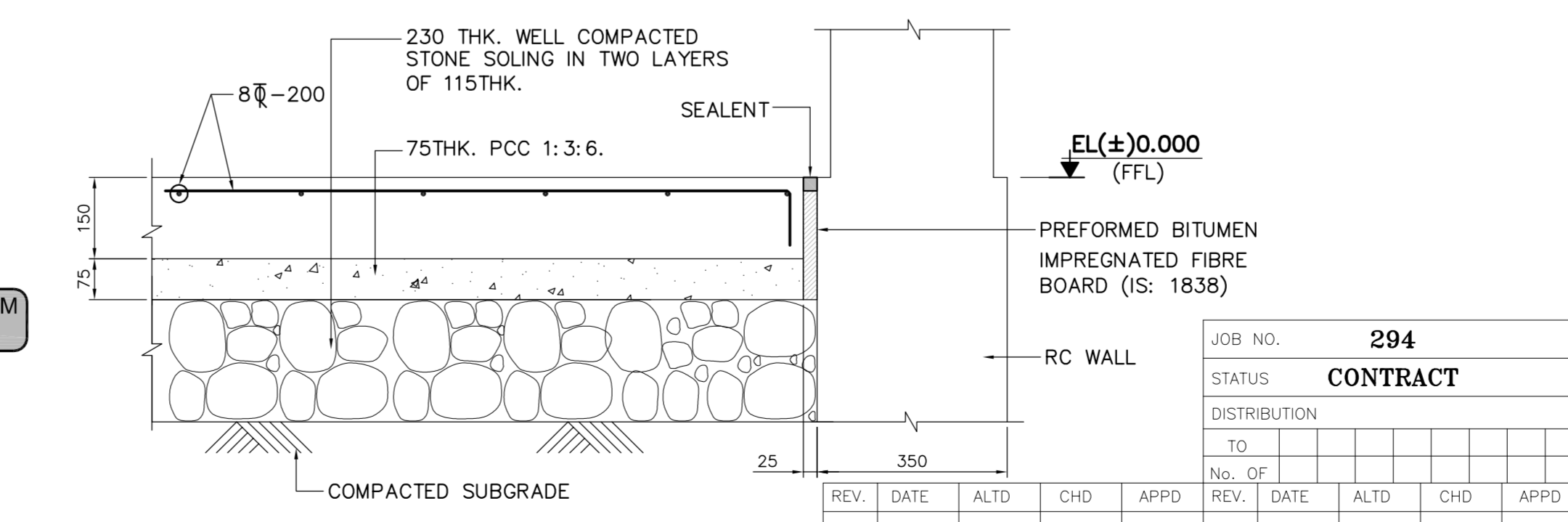
FOUNDATION PLAN AT TOP
(SCALE 1:50)



FOUNDATION PLAN AT BOTTOM
(SCALE 1:50)



SECTION 1
(SCALE 1:50)



TYP. DETAIL OF GRADE SLAB
(SCALE 1:10)

JOB NO. 294

STATUS CONTRACT

DISTRIBUTION

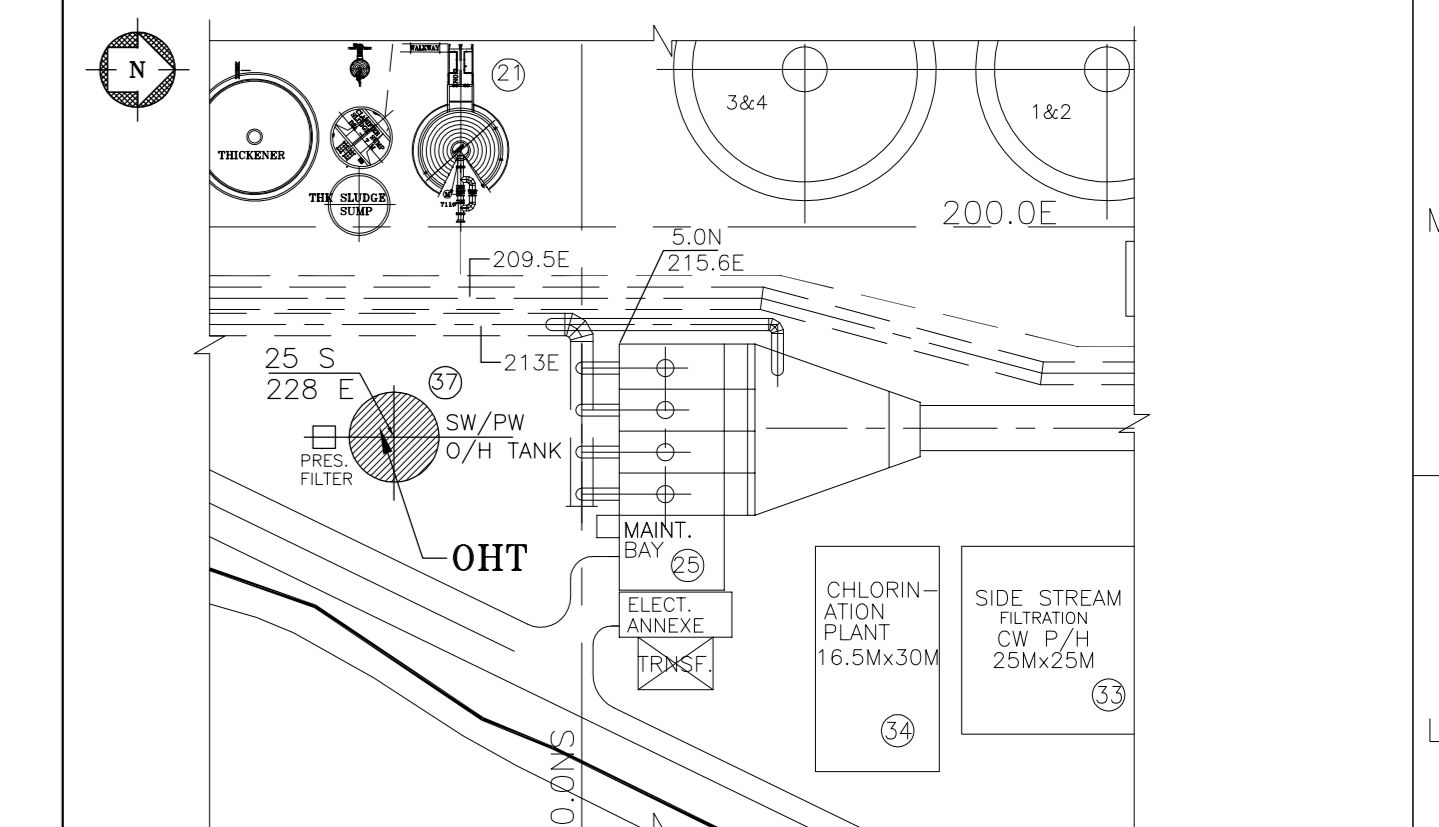
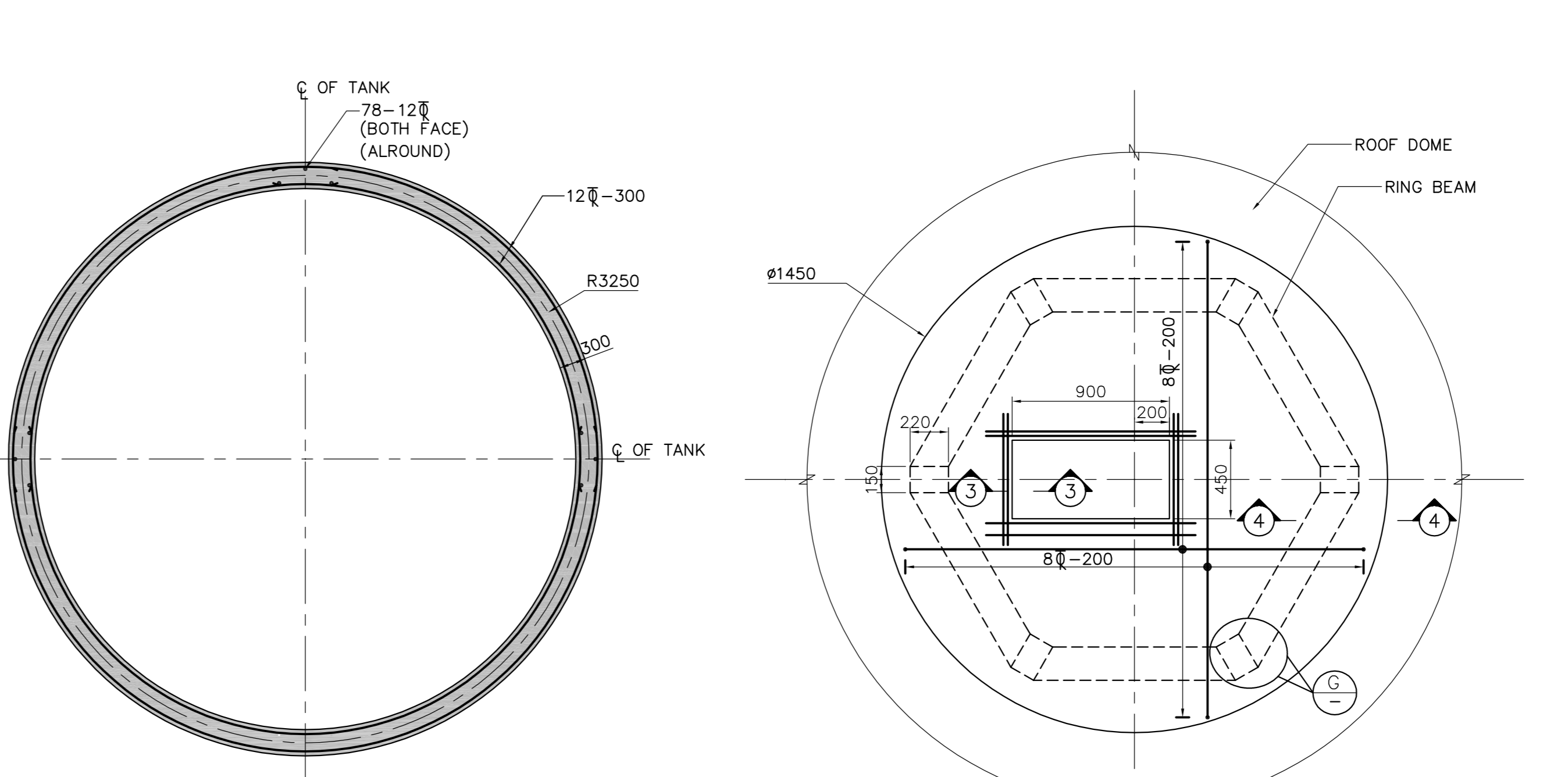
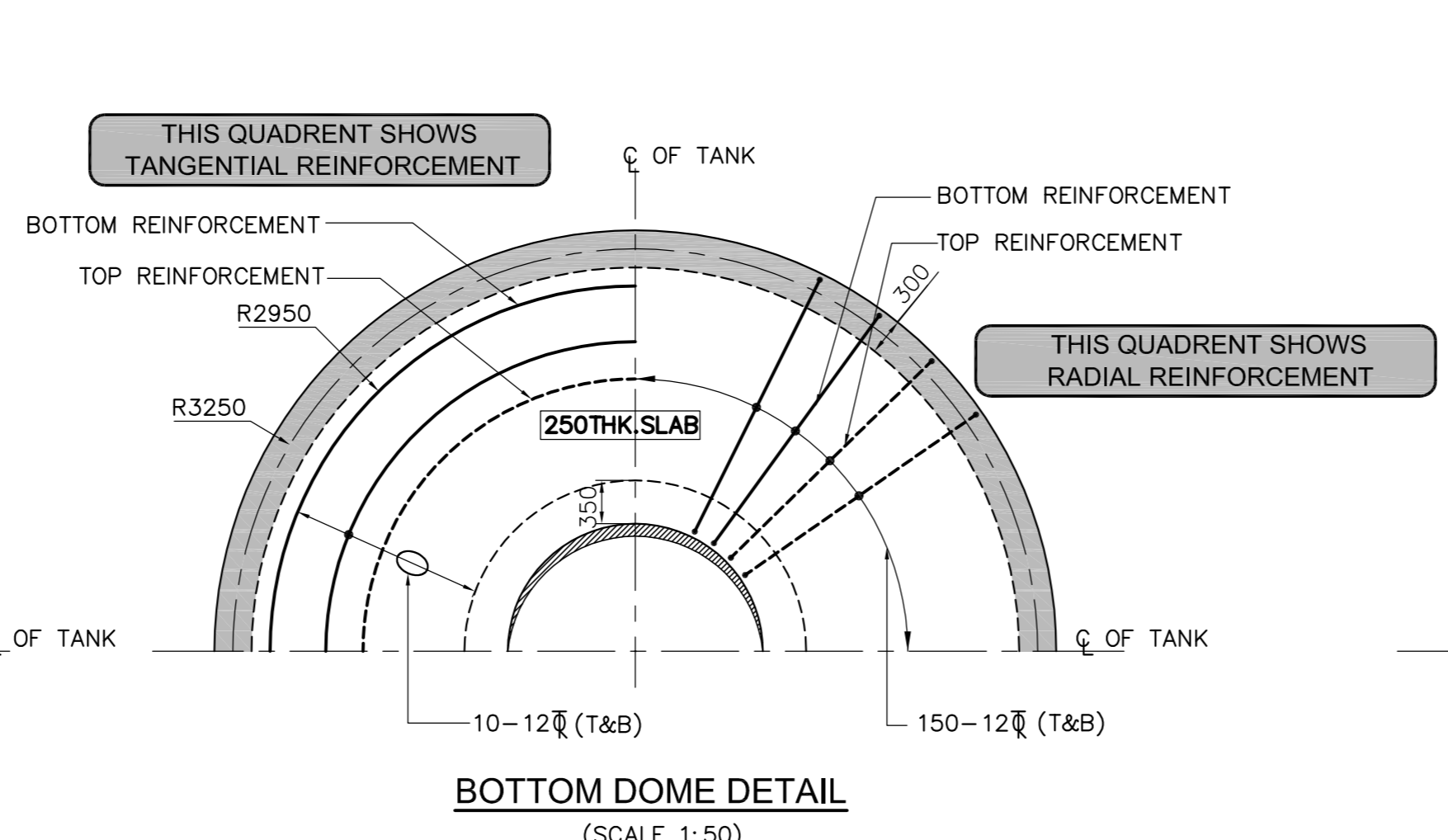
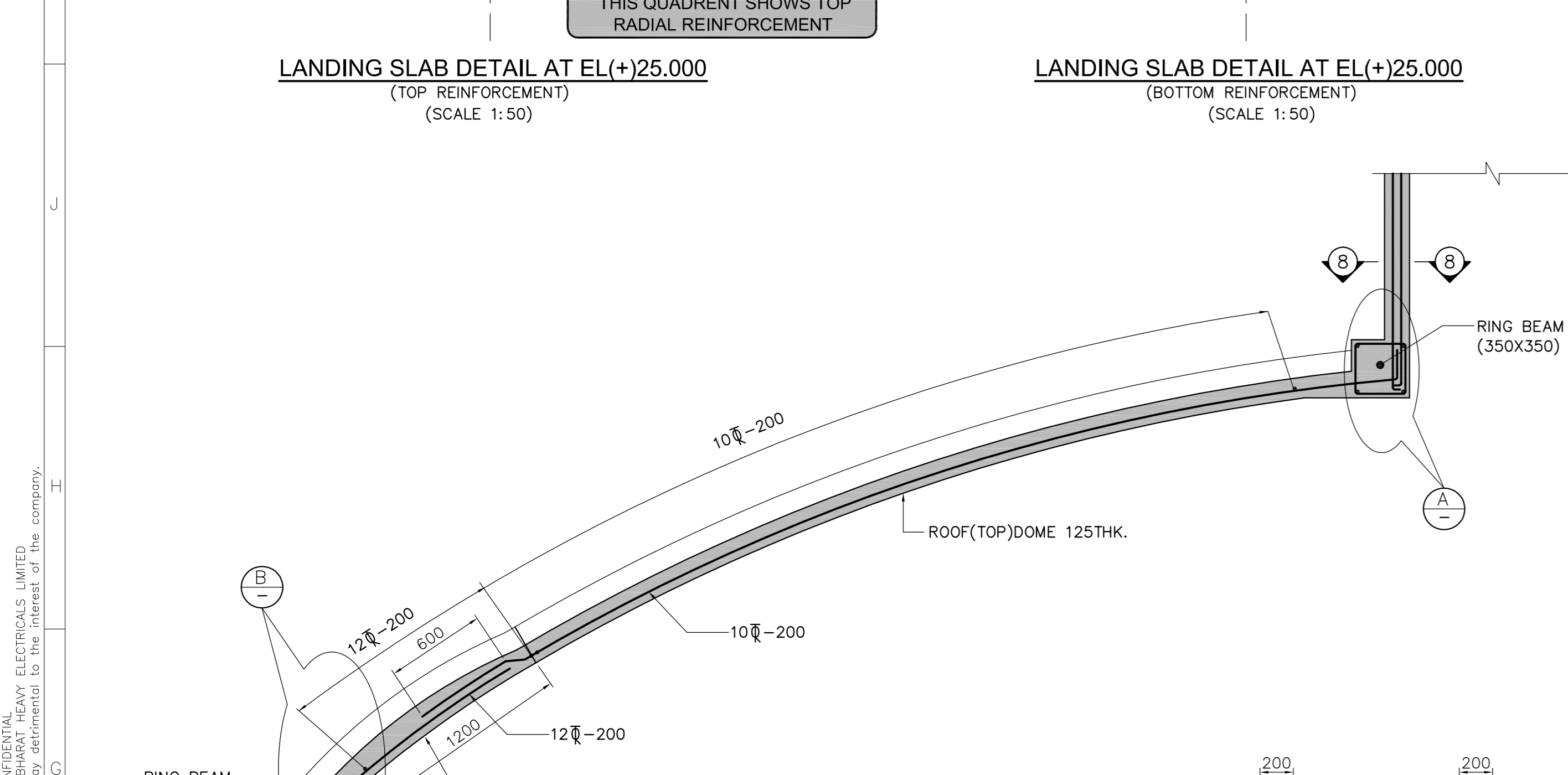
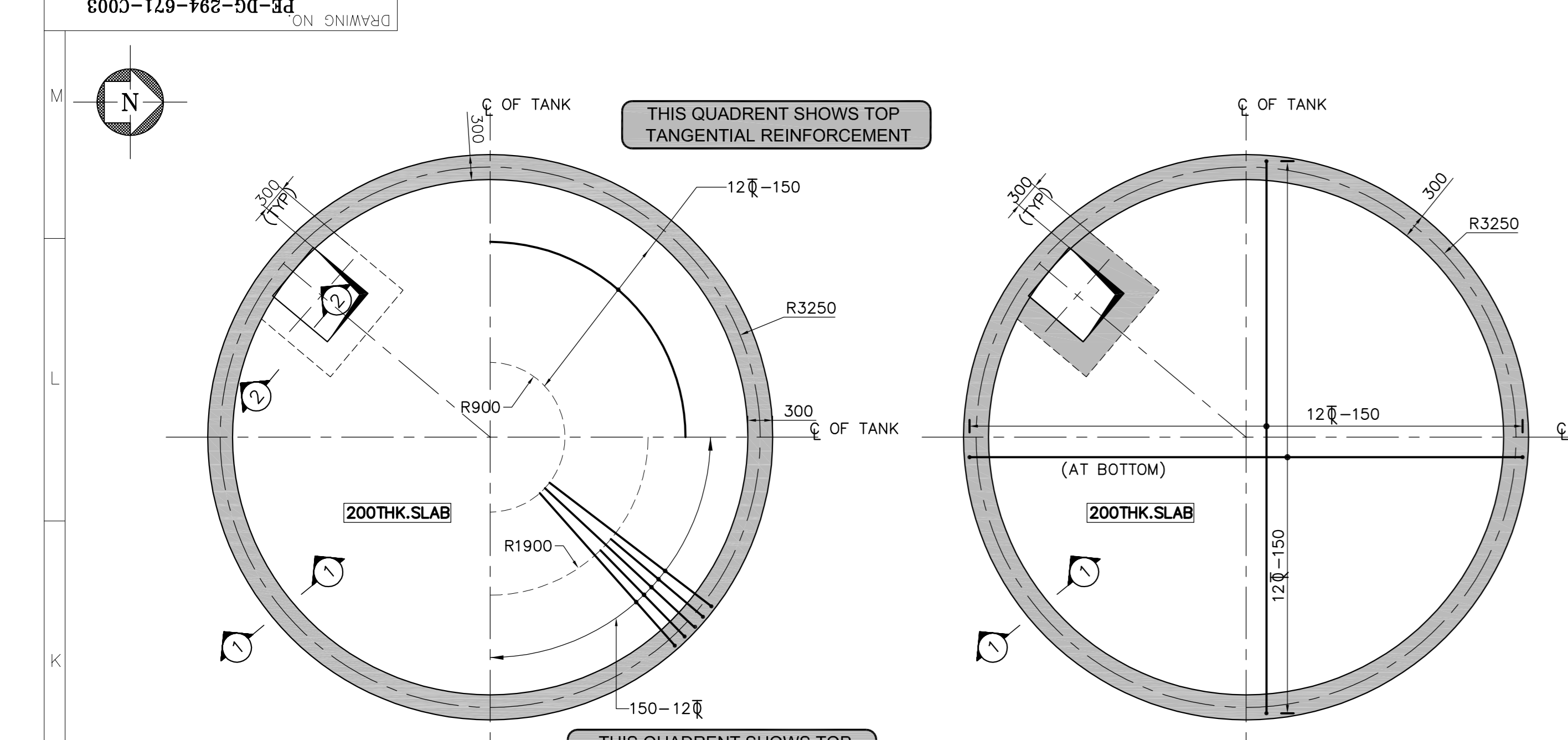
TO

No. OF

| REV. | DATE | ALTD | CHD | APPD |
|------|------|------|-----|------|
| | | | | |

ELECTRONIC FILE NAME: PE-DG-294-671-C002-R0C-20100609

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- NOTES**
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 - ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS ARE IN METRES, UNO.
 - EL(+30.000) CORRESPONDS TO FINISHED FLOOR LEVEL OF POWER HOUSE BUILDING WHICH CORRESPONDS TO SITE RL 82.20M
 - GRADE OF CONCRETE SHALL BE M25 WITH 20mm DOWN GRADED AGGREGATES.
 - REINFORCEMENT STEEL SHALL BE OF F4500 GRADE, CONFORMING TO IS: 1786
 - CLEAR COVER TO CONCRETE SHALL BE AS FOLLOWS:
- | DESCRIPTION | TOP | BOTTOM | SIDES |
|-------------|-----|--------|-------|
| WALL | - | - | 30 |
- LAP LENGTH (Ld) FOR REINFORCEMENT SHALL BE 45 DIA. OF SMALLEST BAR BEING LAPPED.
 - REINFORCEMENT IS CALLED UP AS THIS :

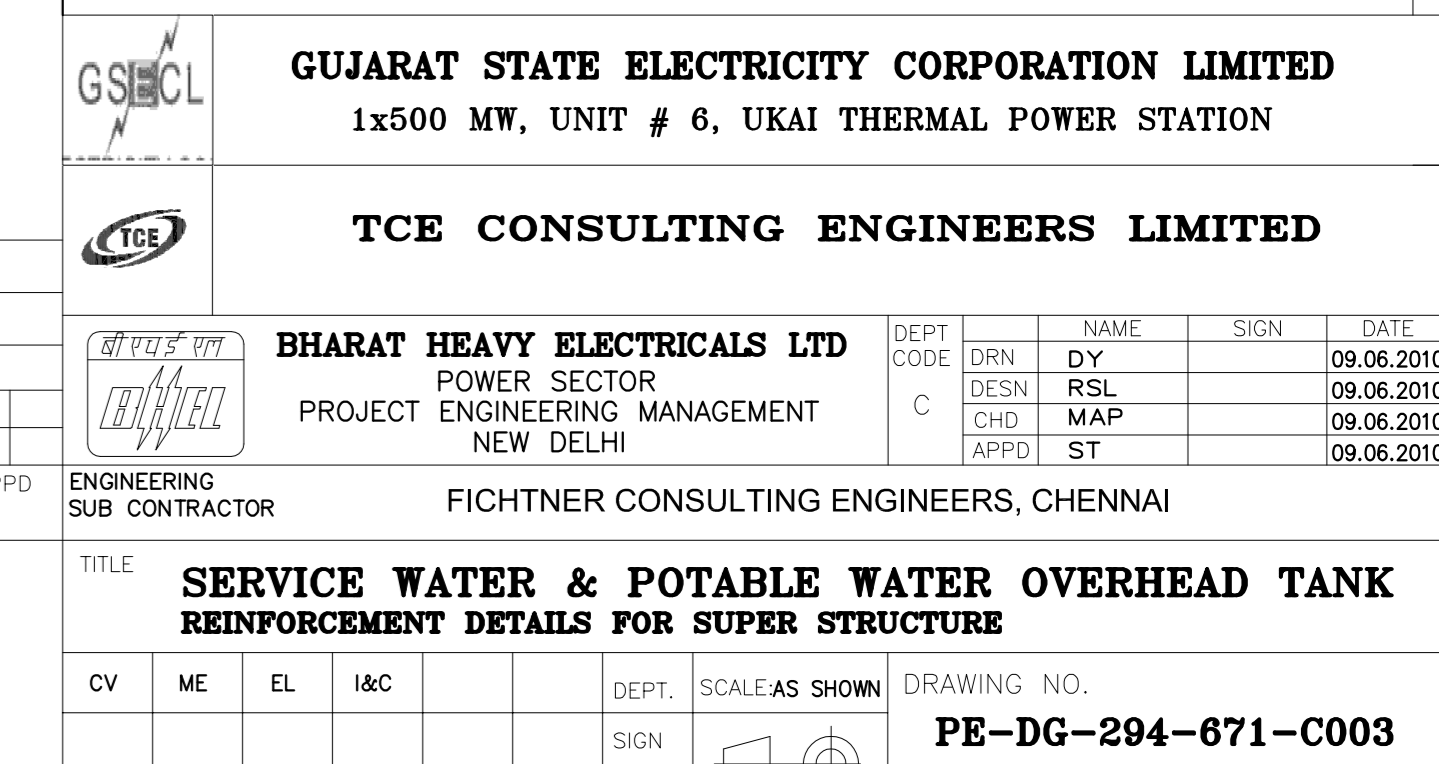
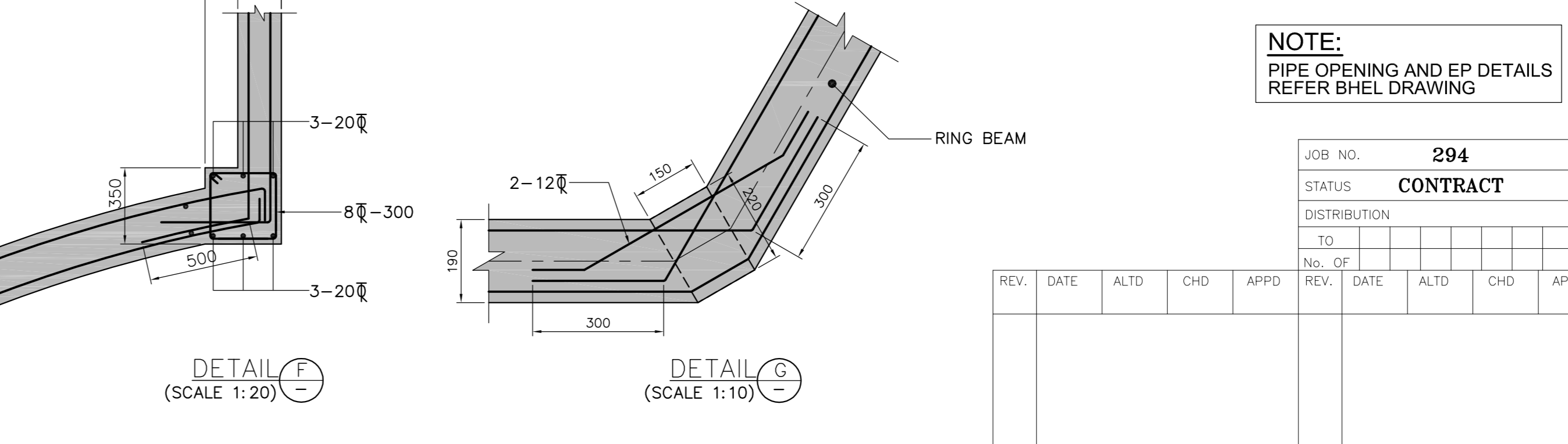
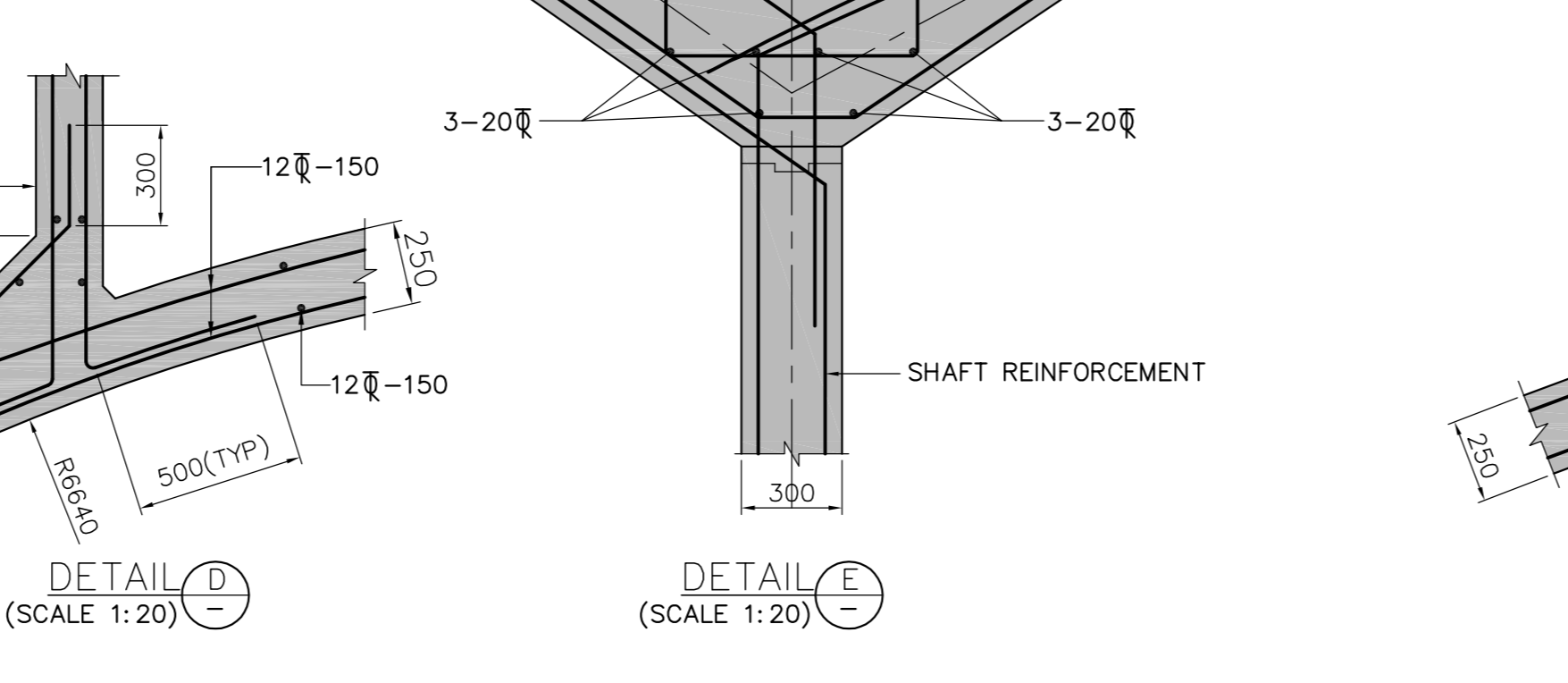
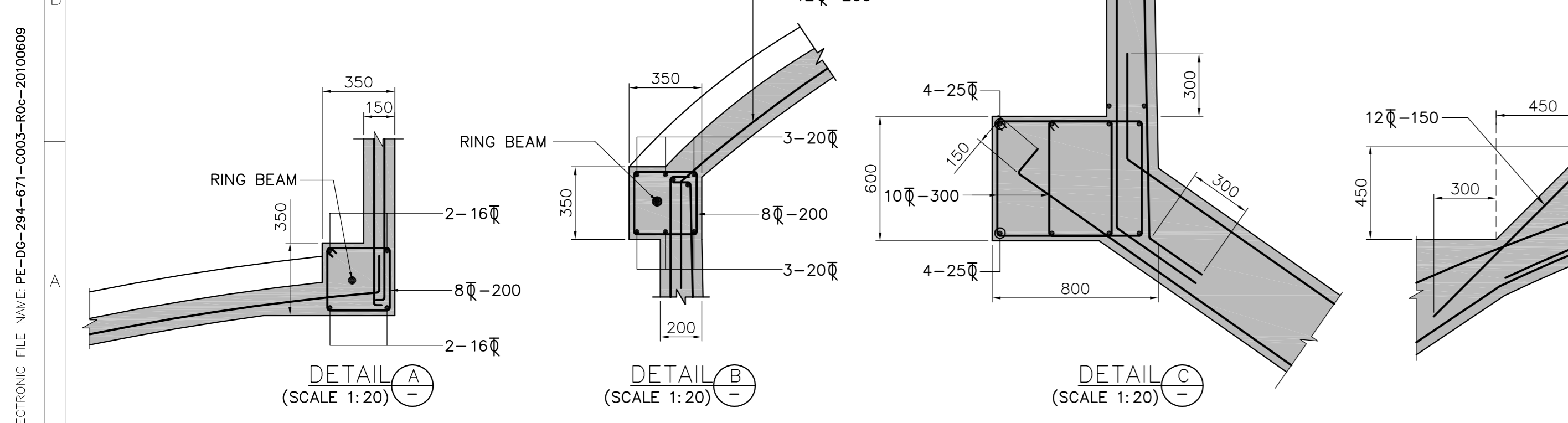
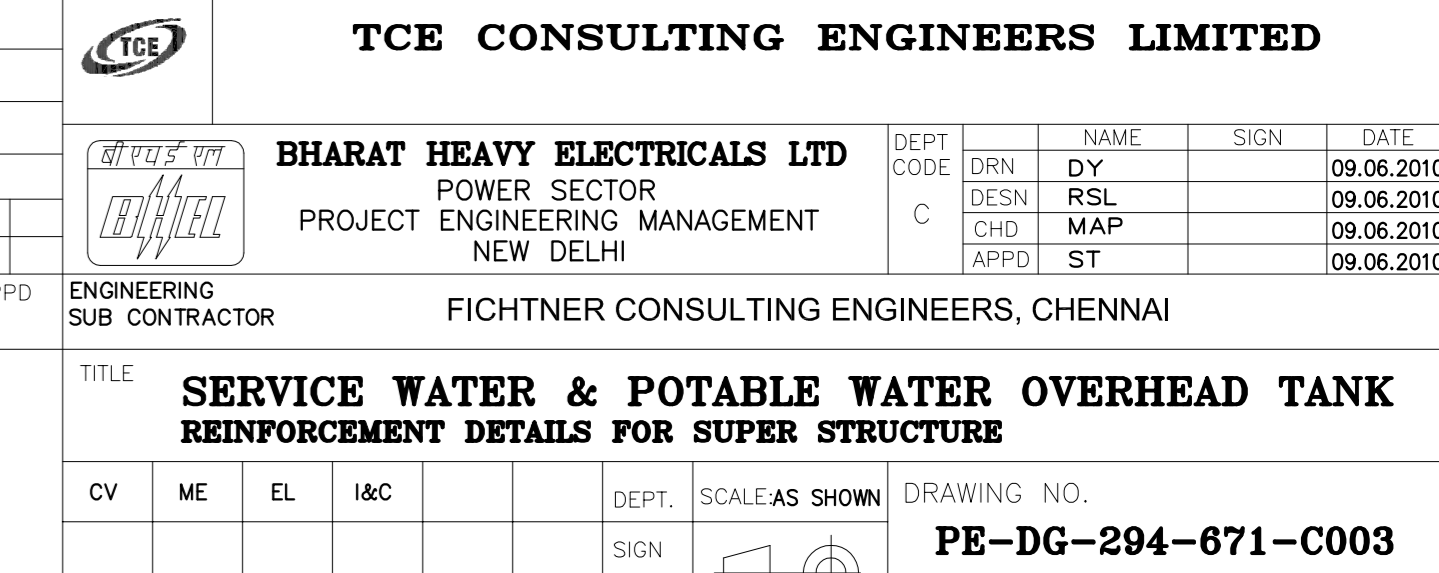
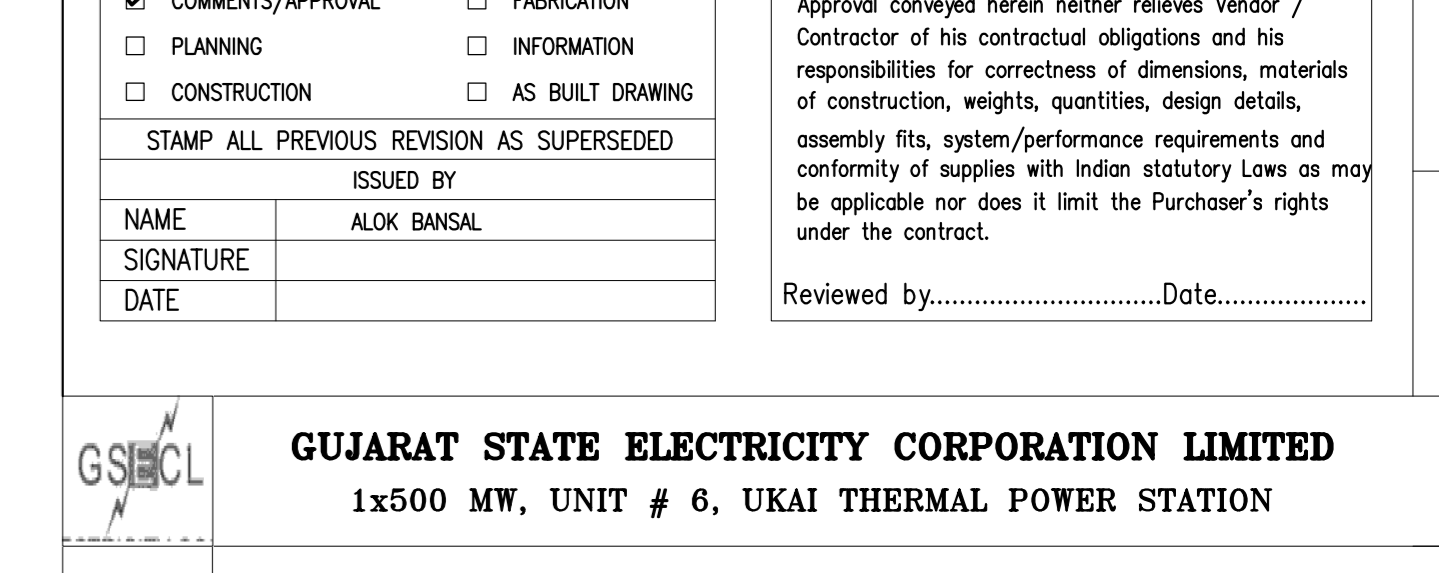
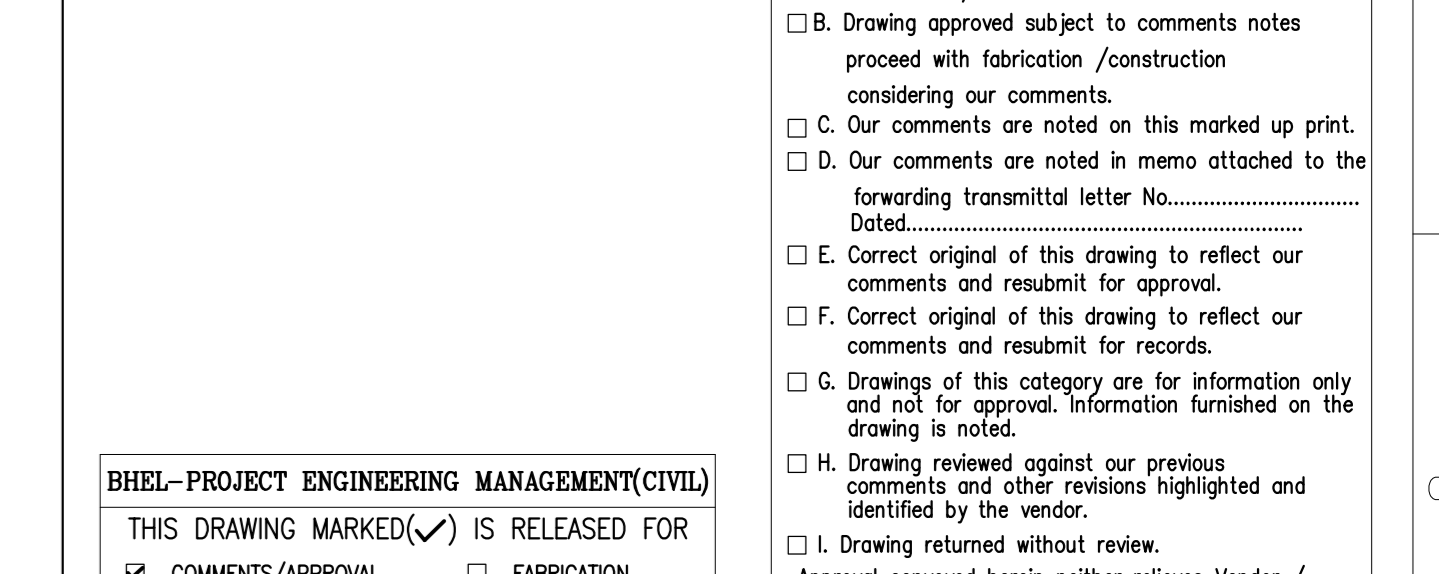
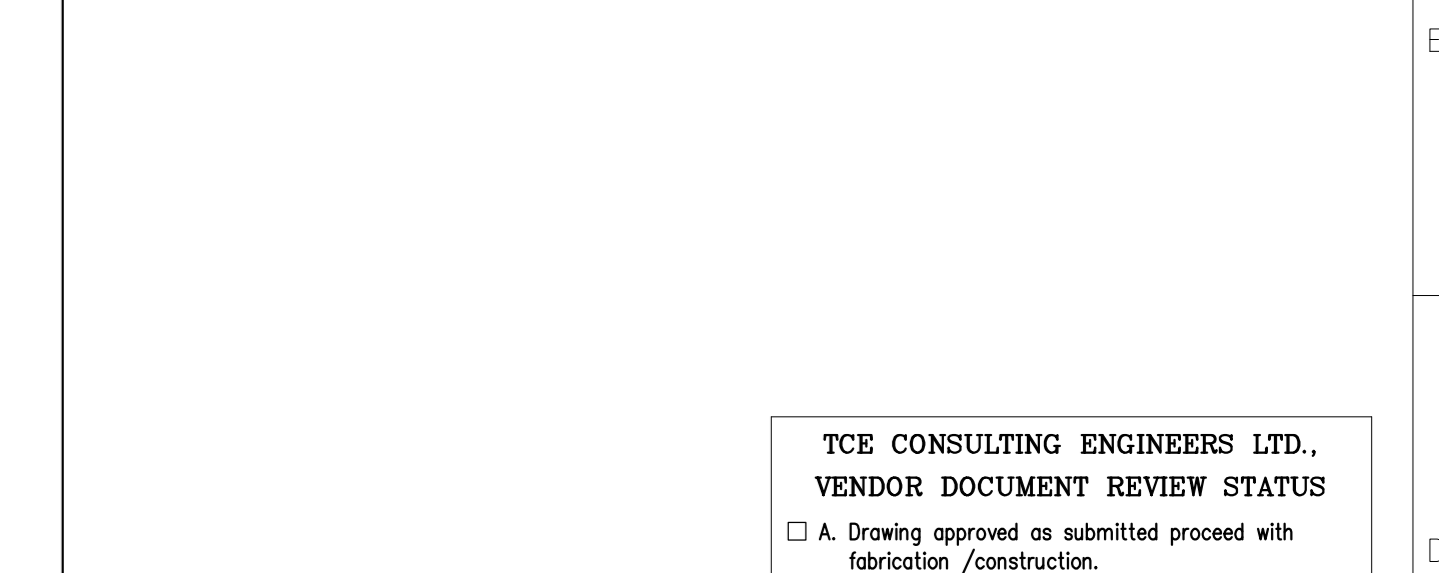
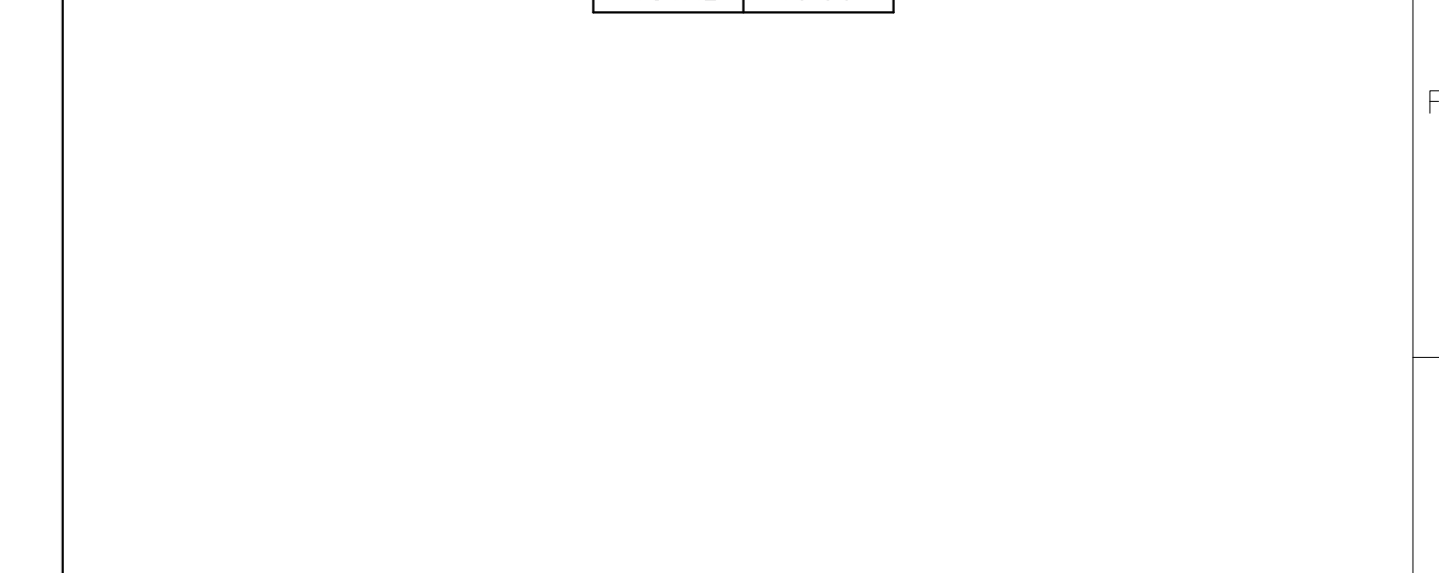
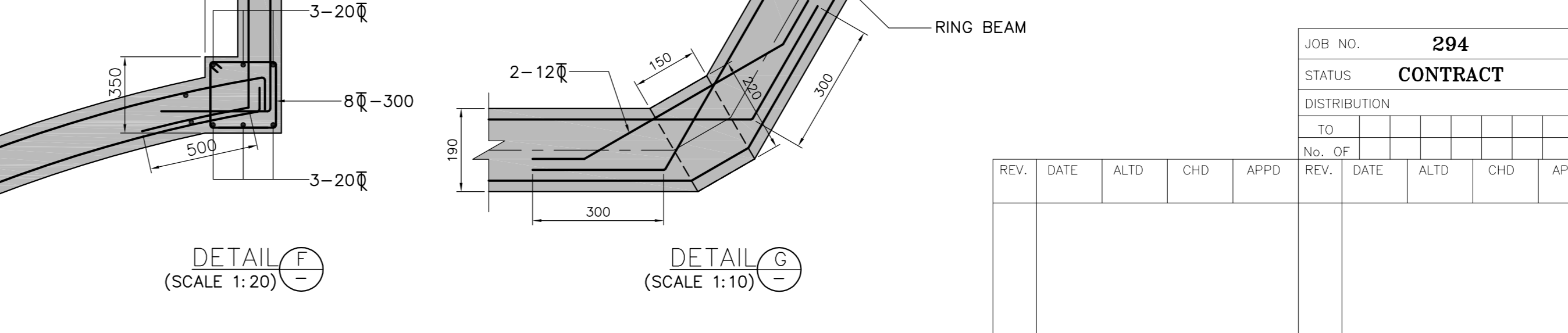
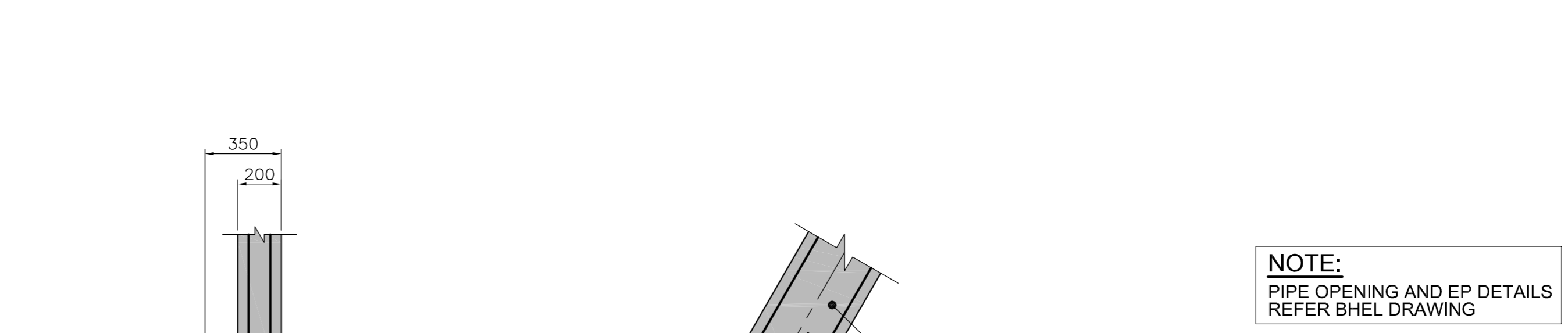
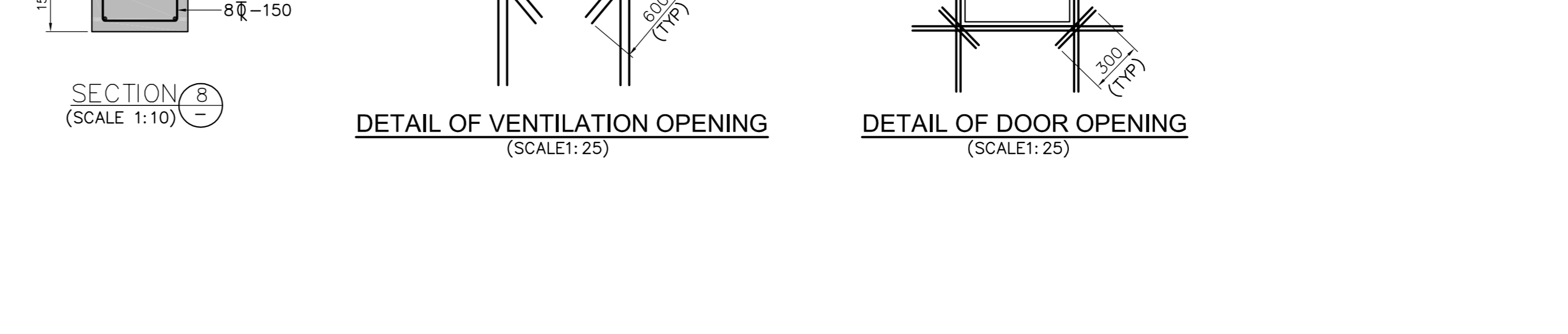
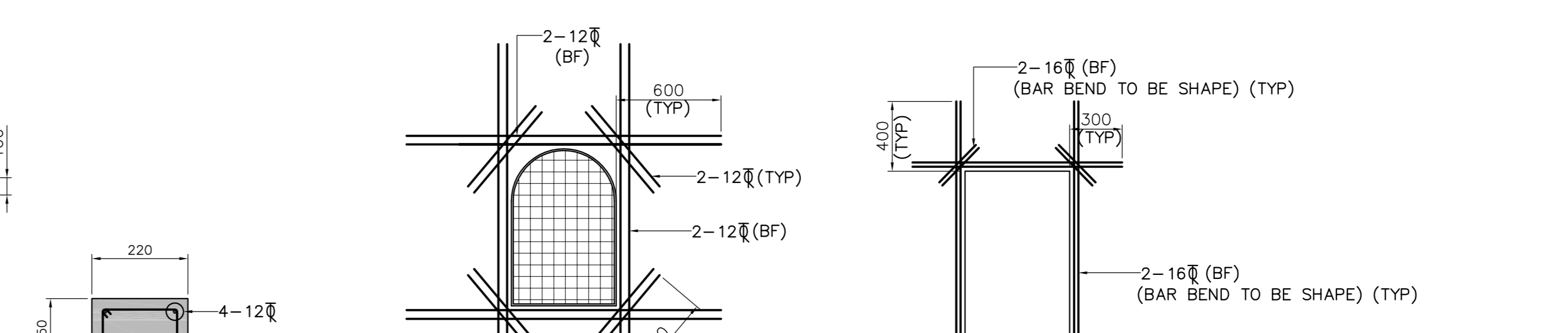
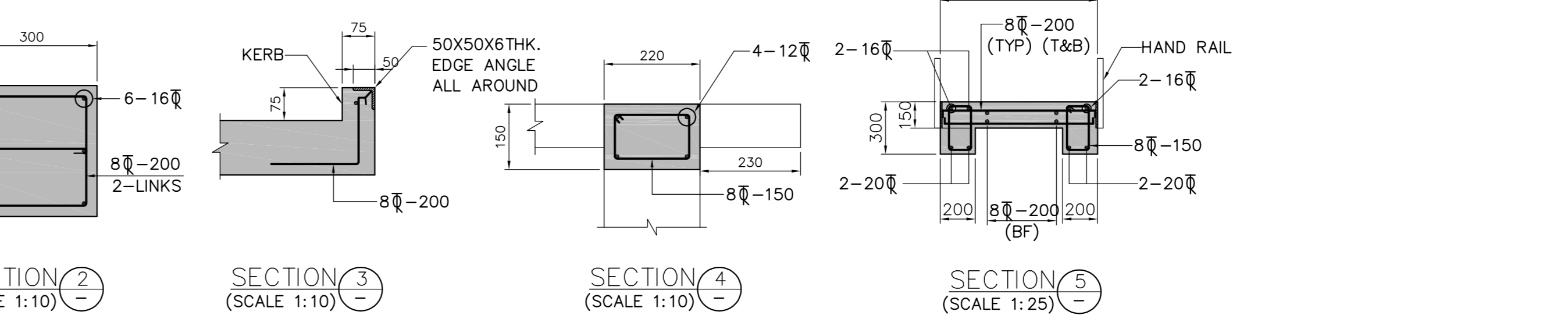
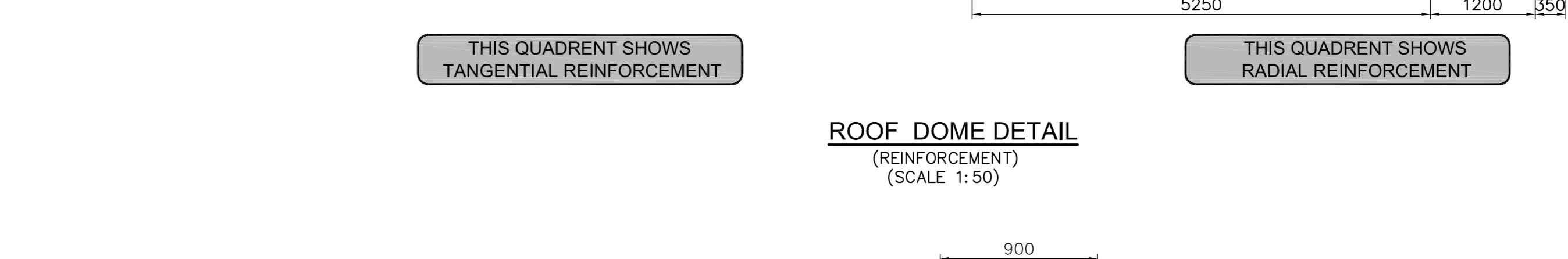
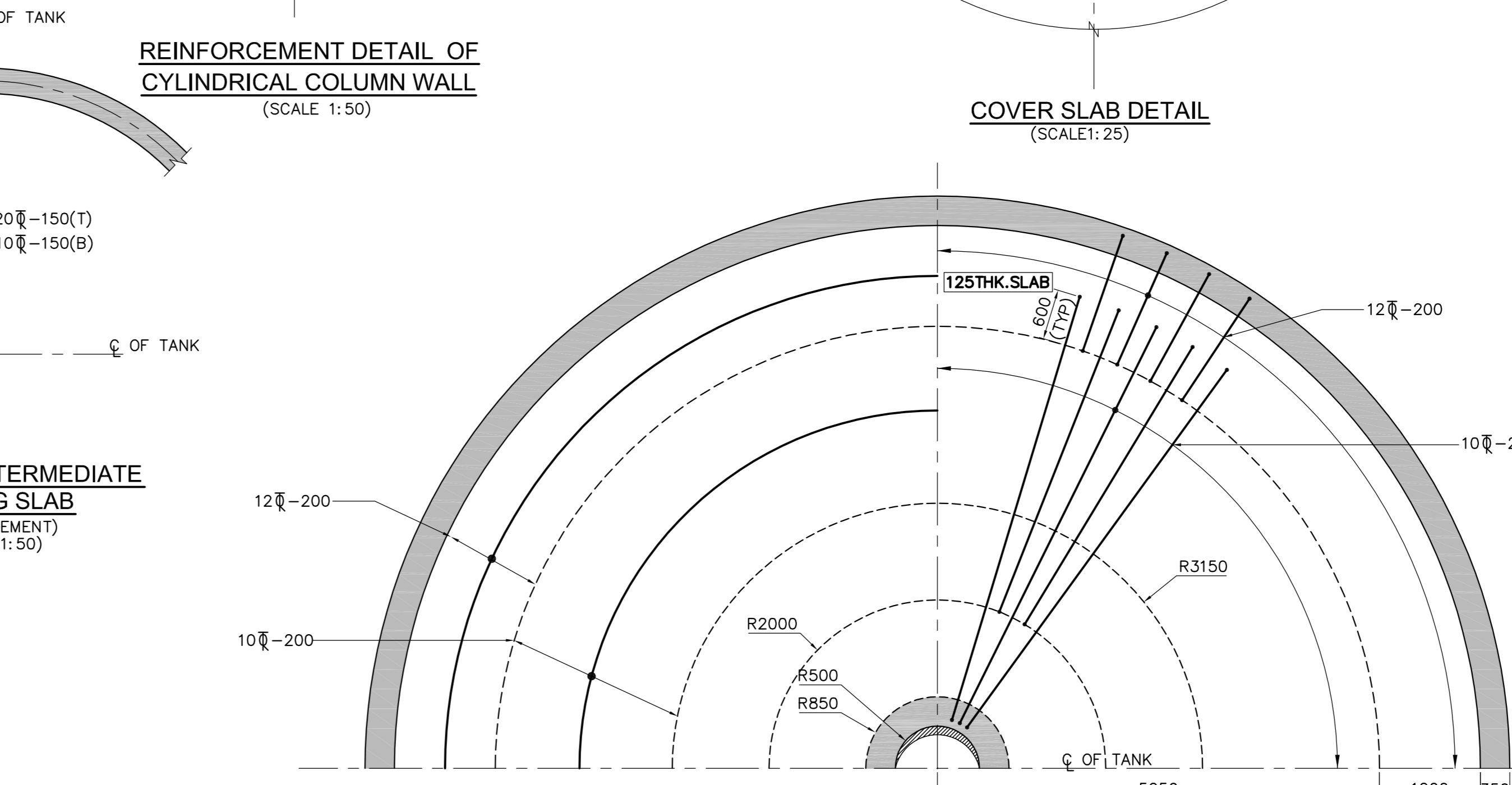
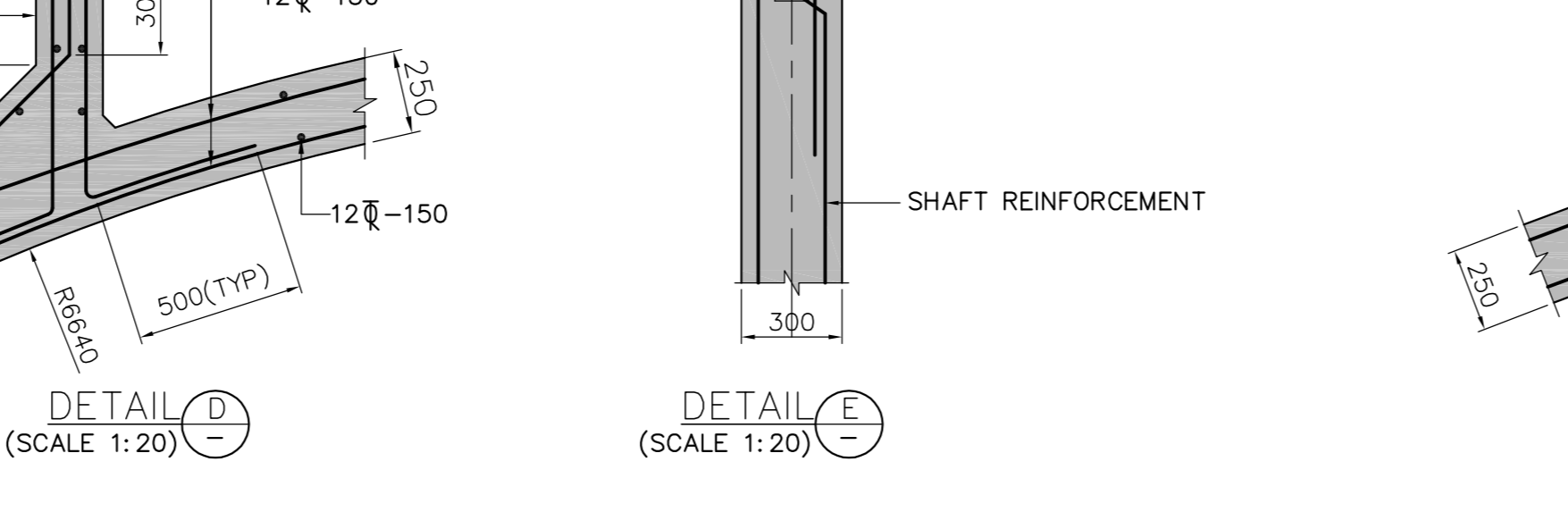
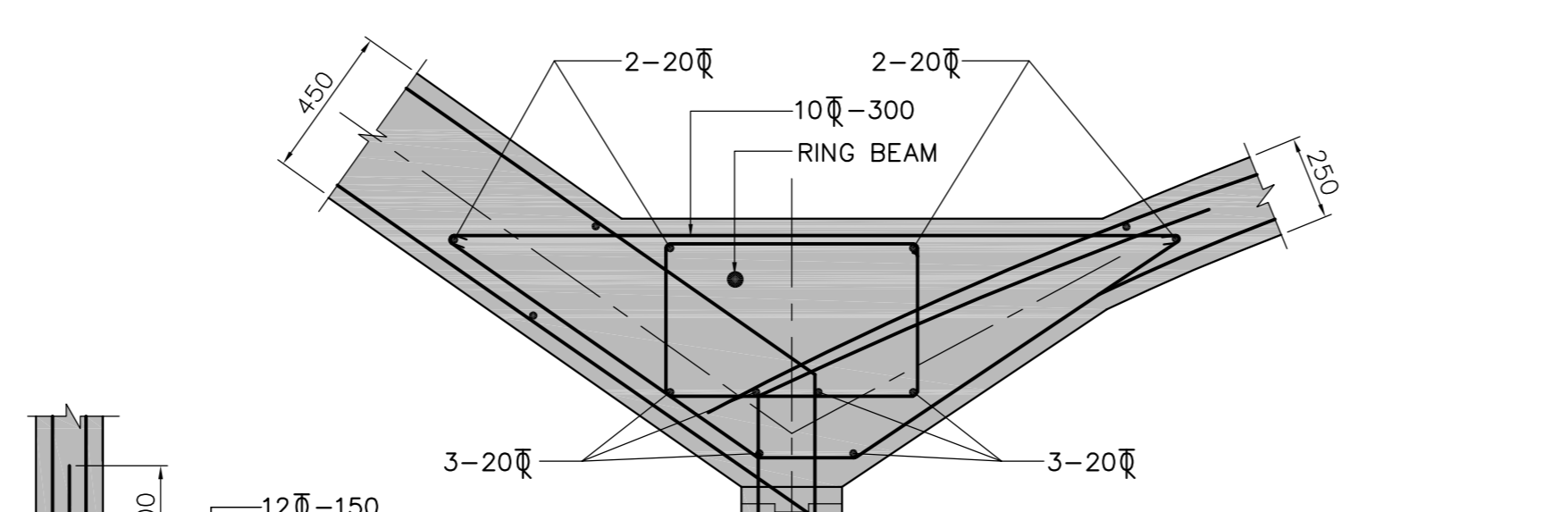
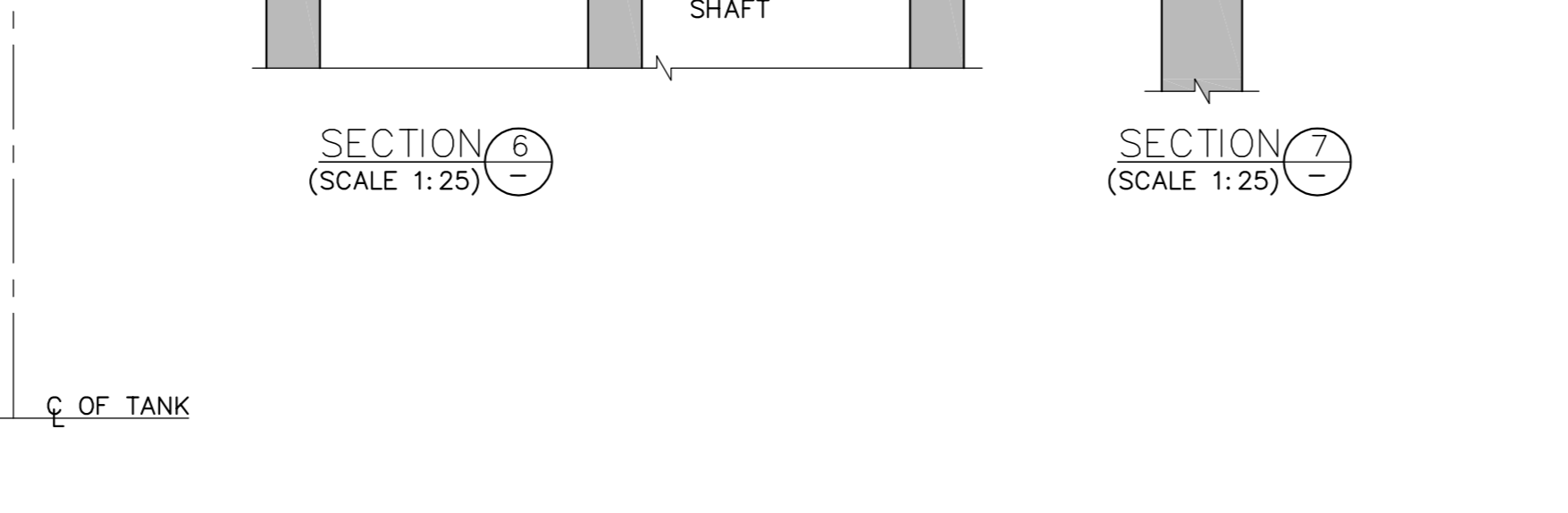
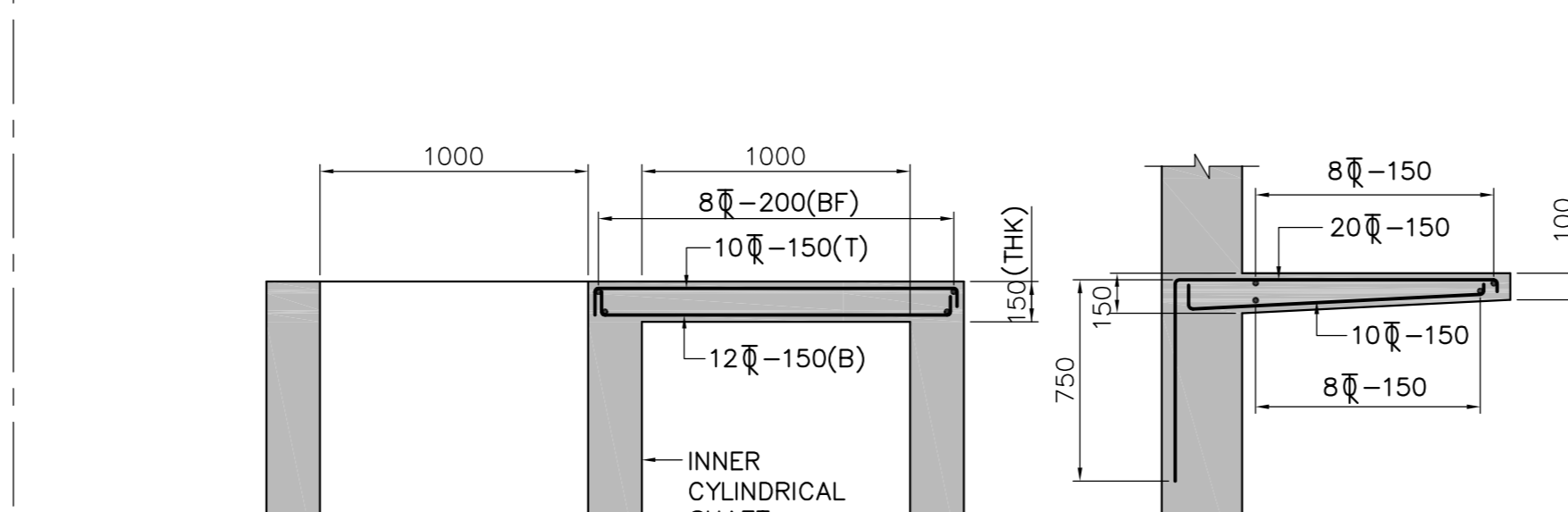
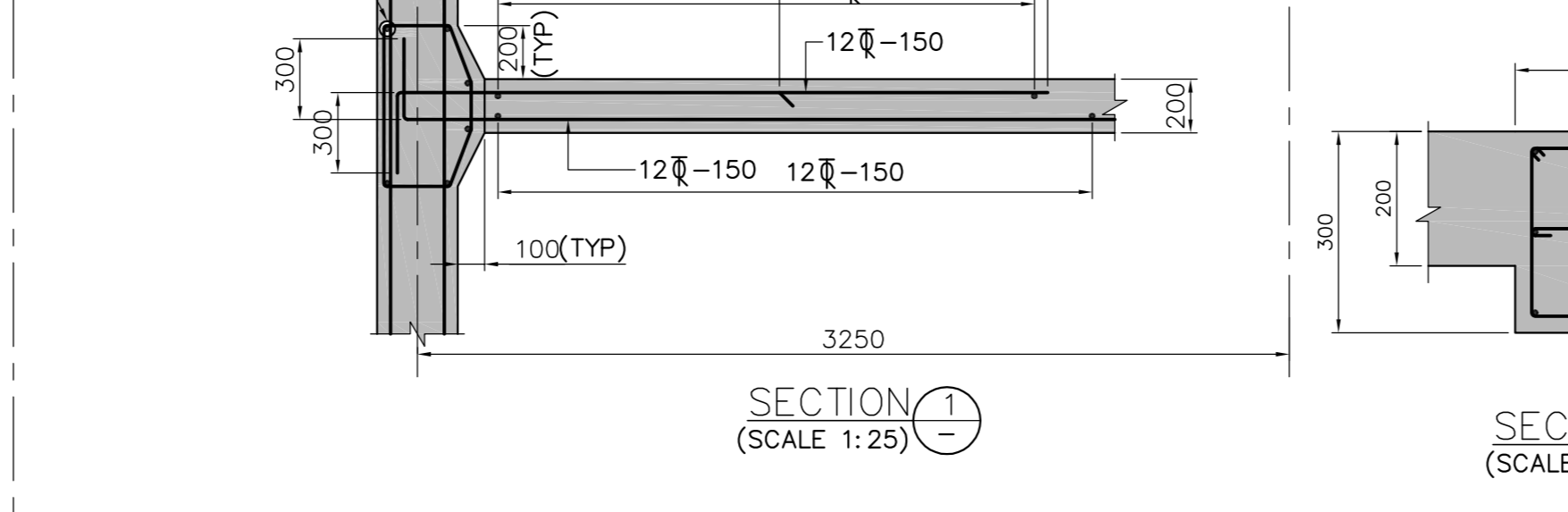
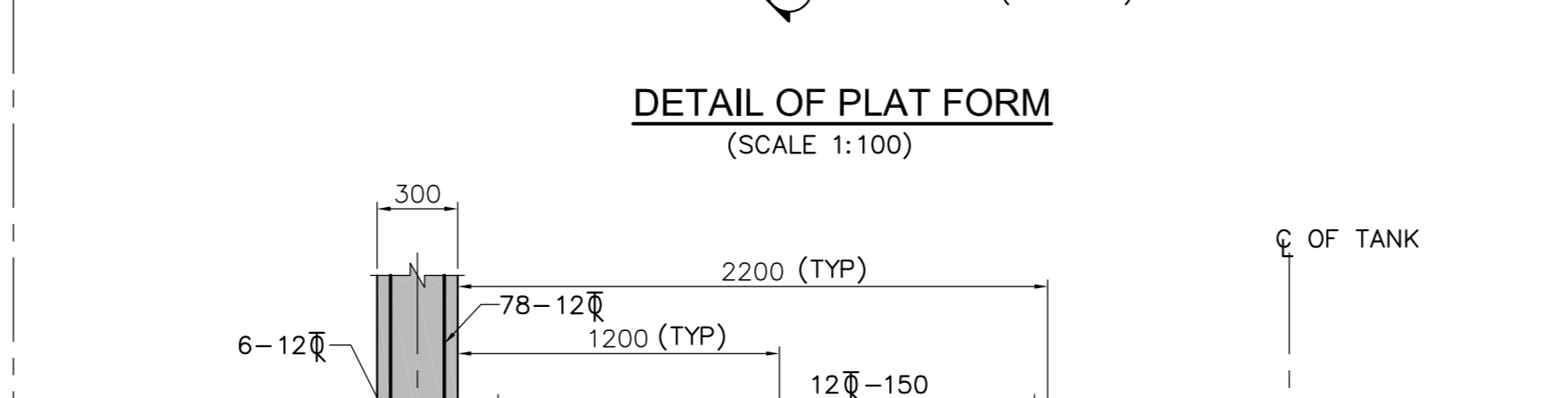
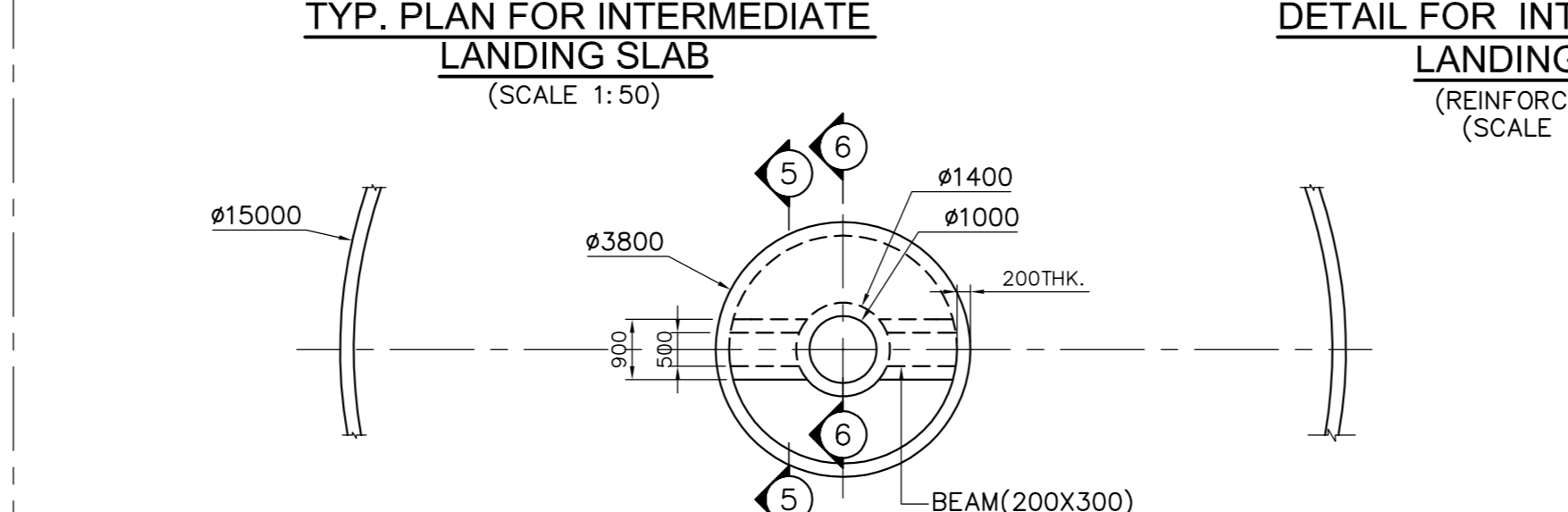
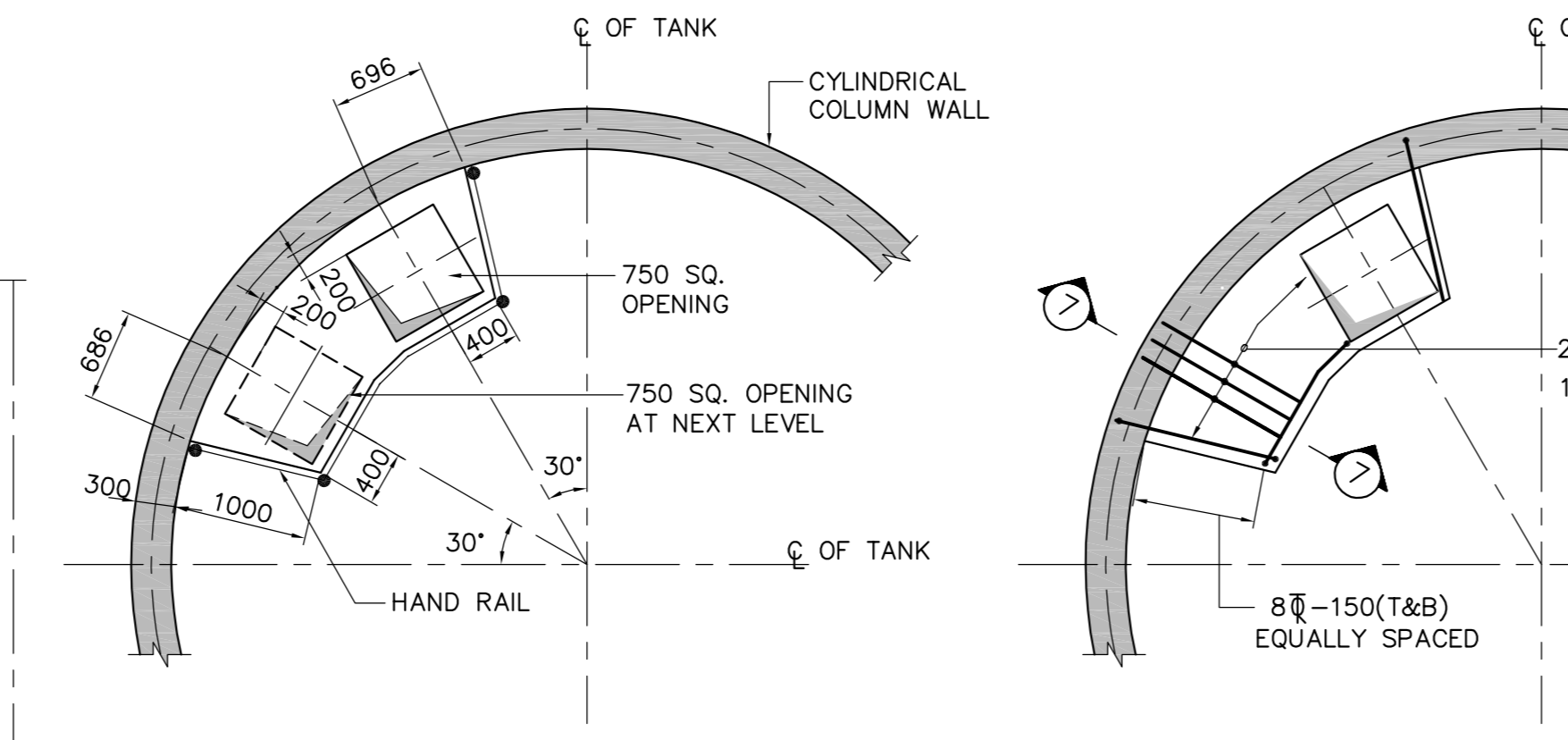
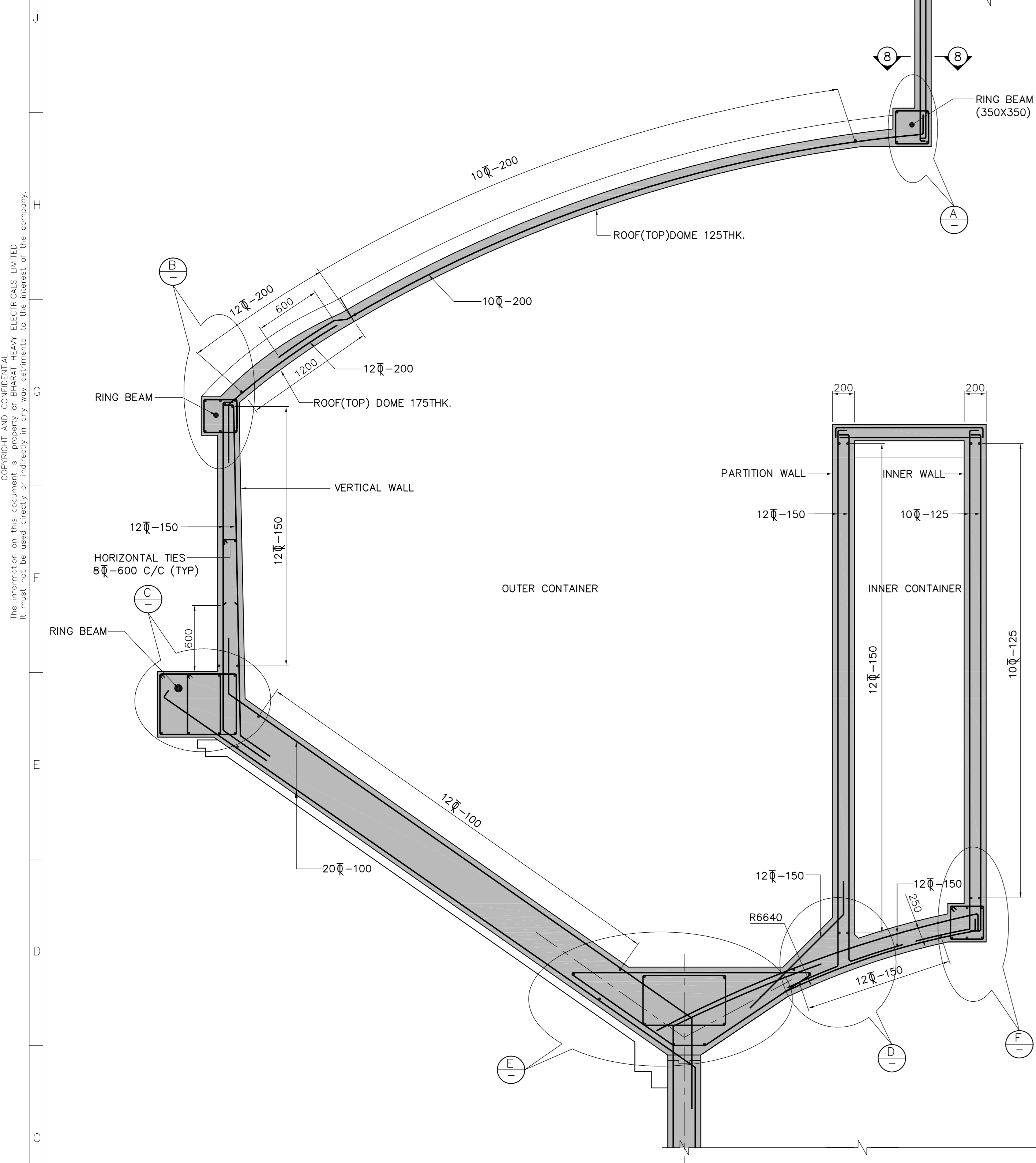
- | DESCRIPTION | TOP | BOTTOM | SIDES |
|-------------|-----|--------|-------|
| WALL | - | - | 30 |
7. LAP LENGTH (Ld) FOR REINFORCEMENT SHALL BE 45 DIA. OF SMALLEST BAR BEING LAPPED.
8. REINFORCEMENT IS CALLED UP AS THIS :
- | BAR SPACING (CENTERS) | BAR SIZE | TYPE OF STEEL (TOR-Fe 500) | NUMBER OF BARS |
|-----------------------|----------|----------------------------|----------------|
| 100 | 12 | TYP | 12 |

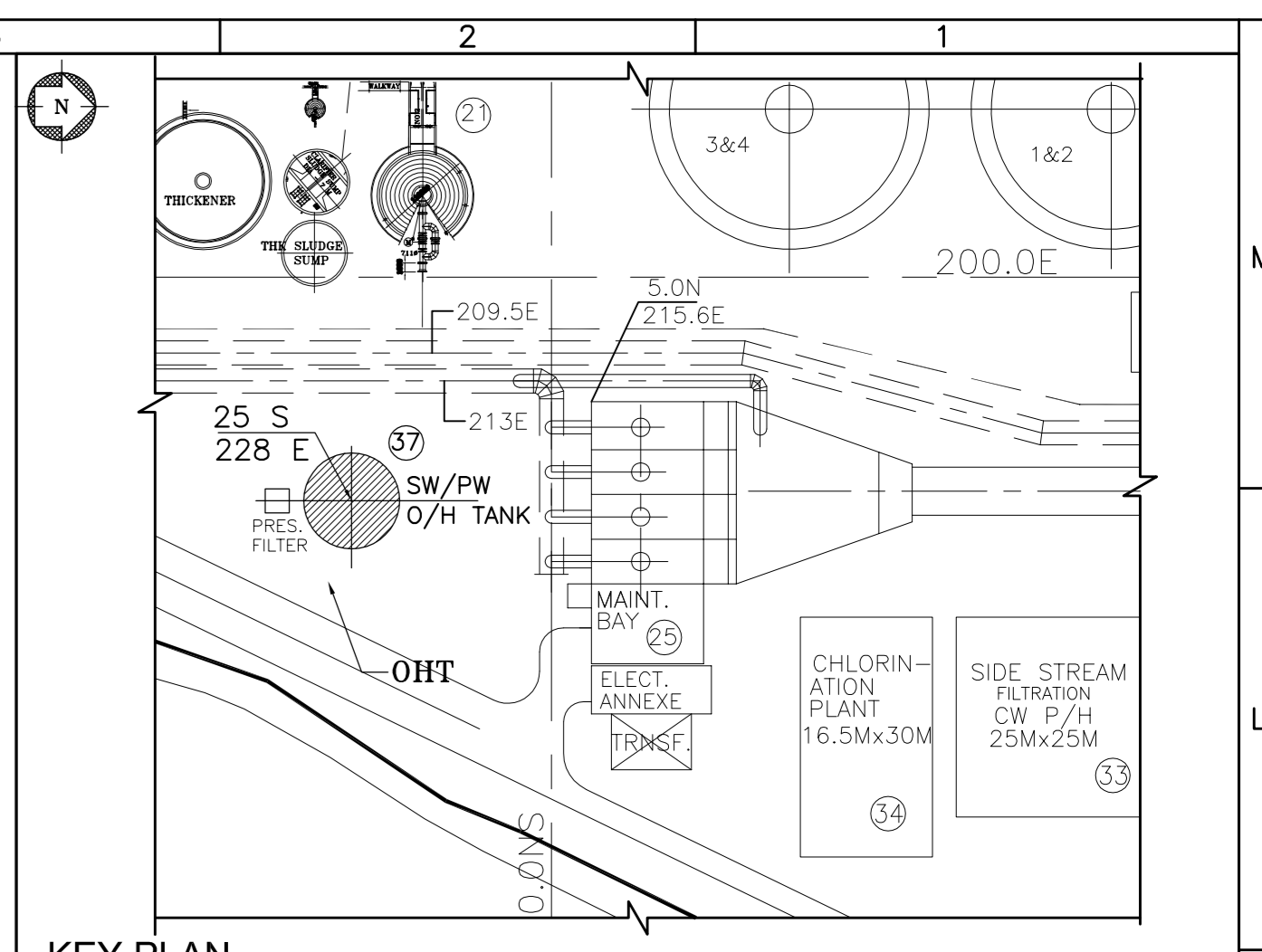
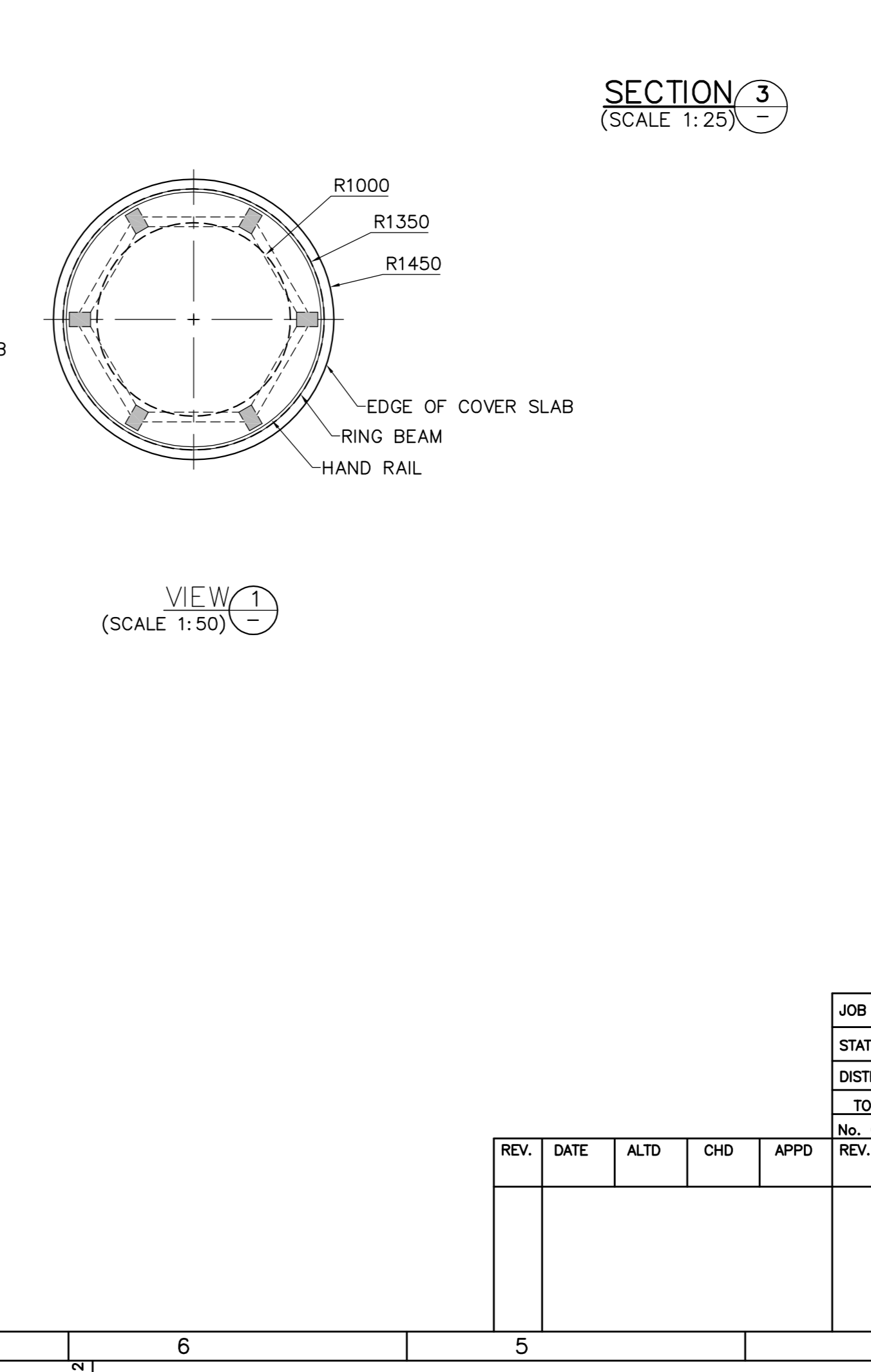
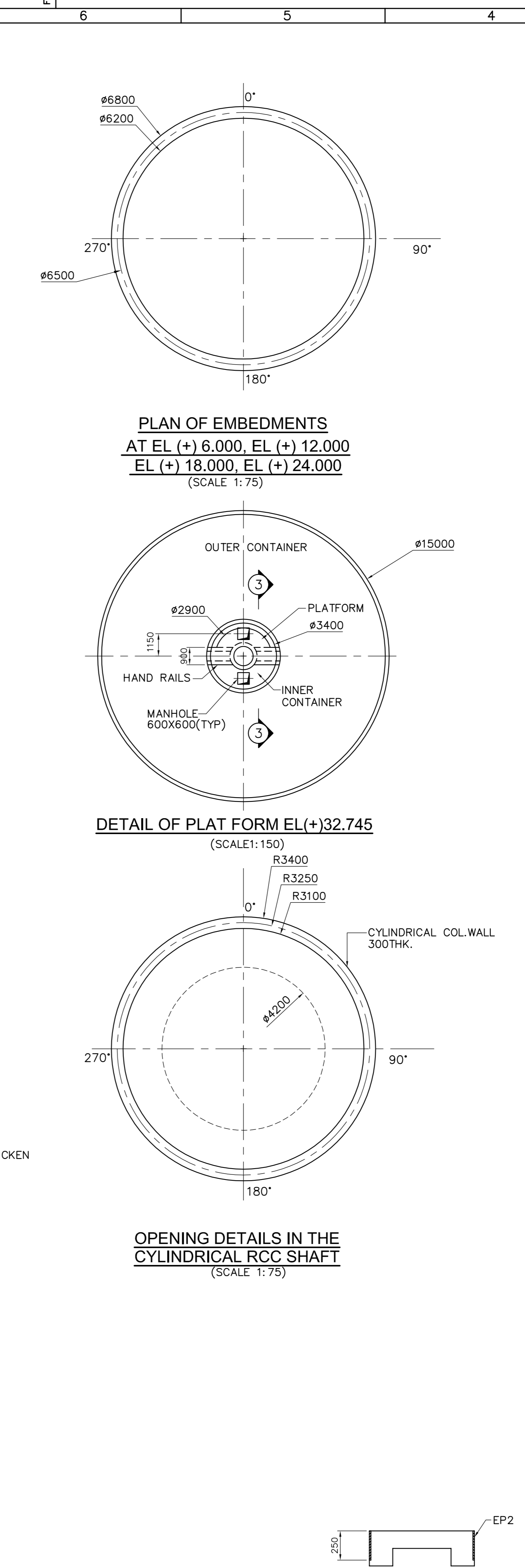
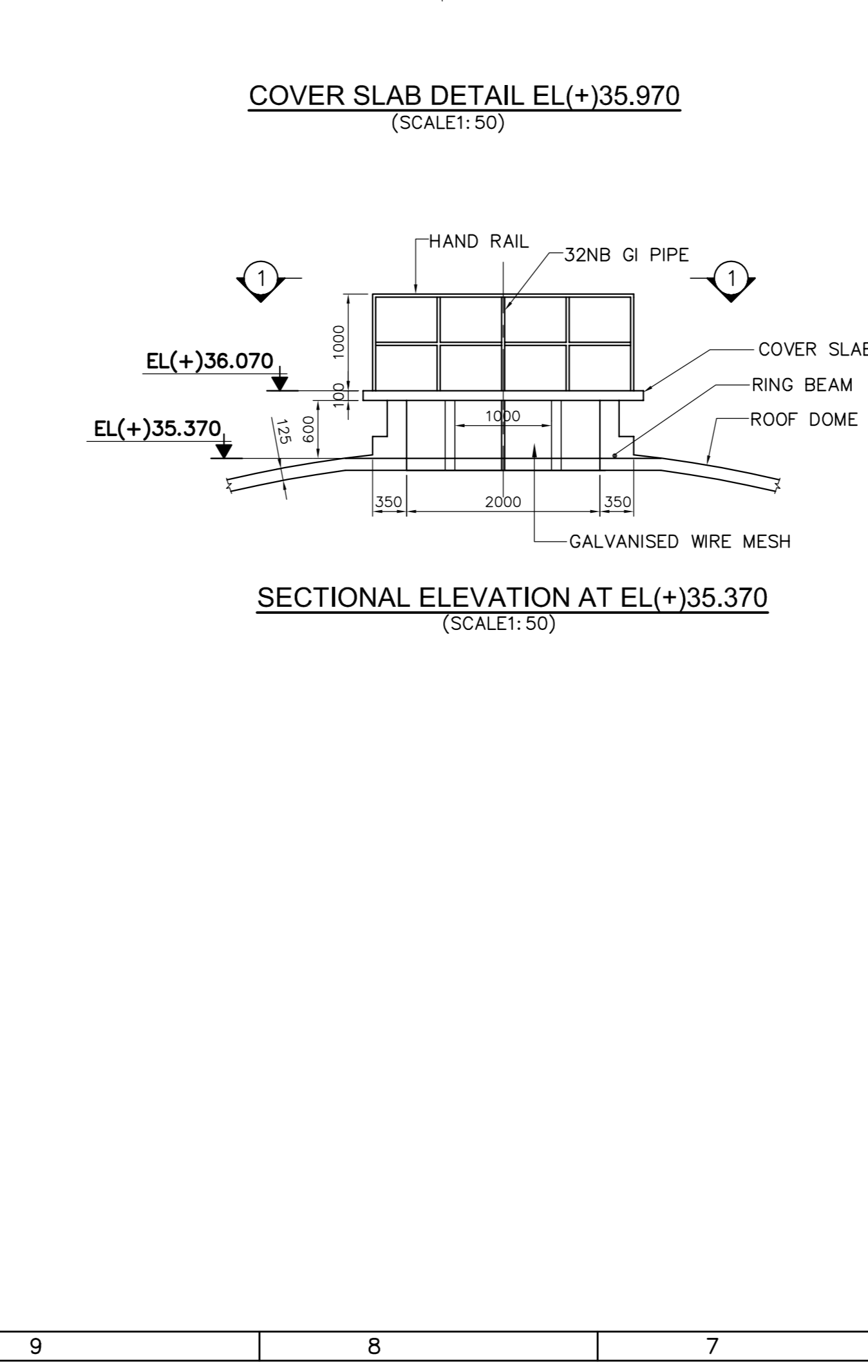
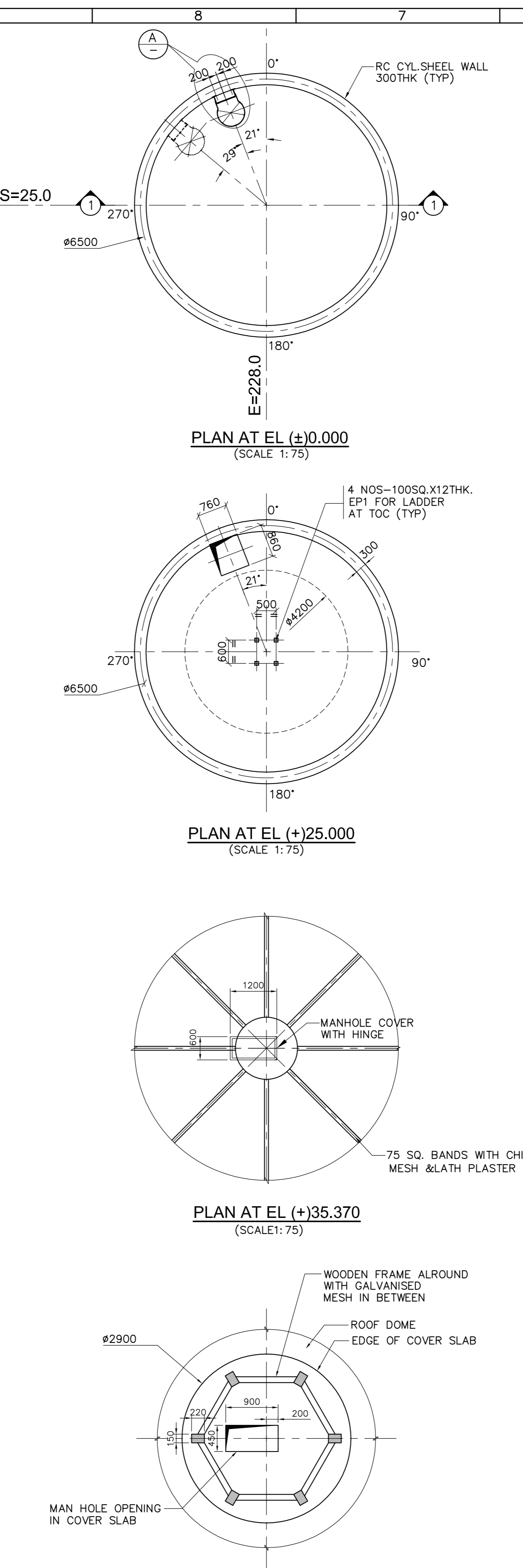
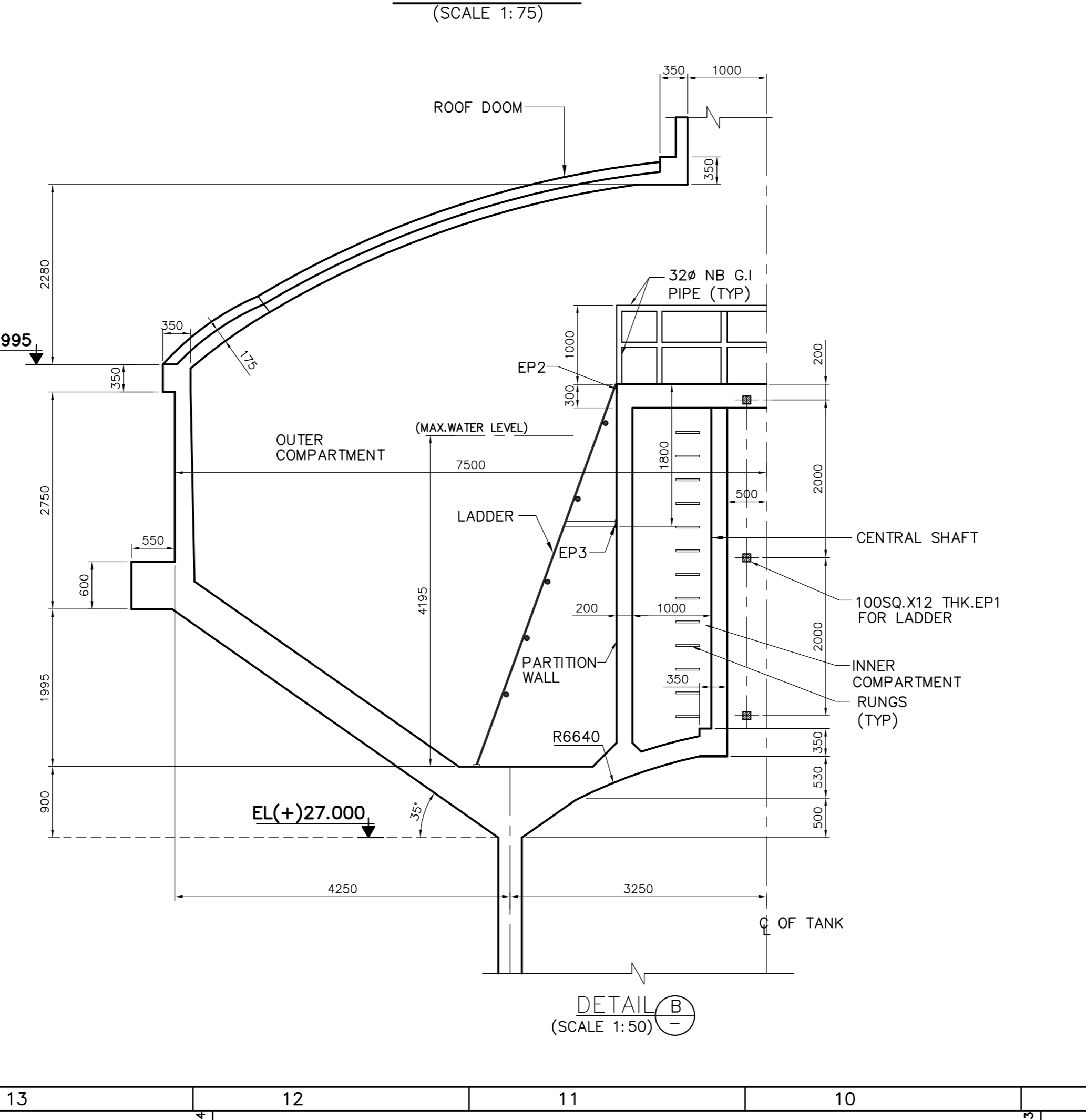
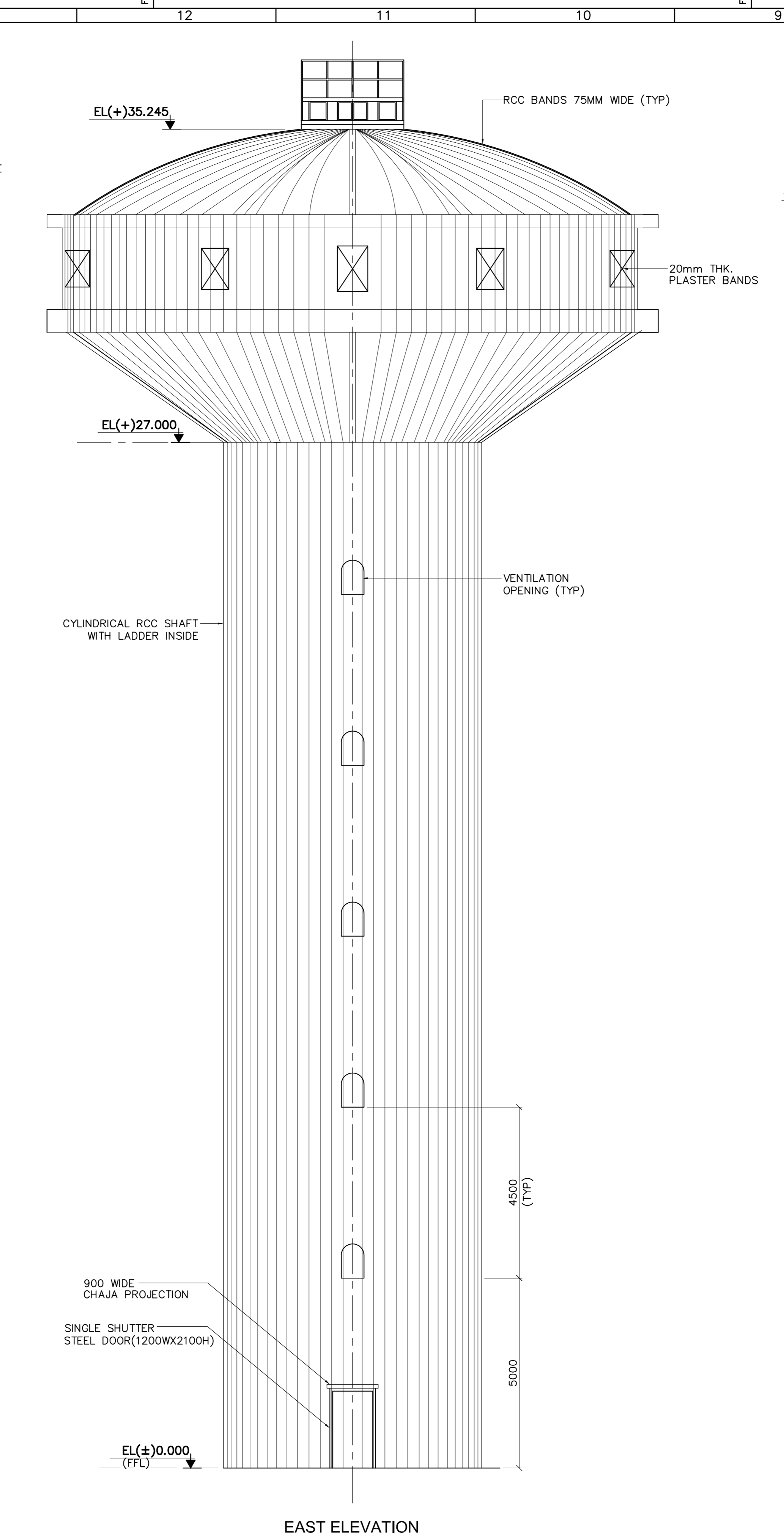
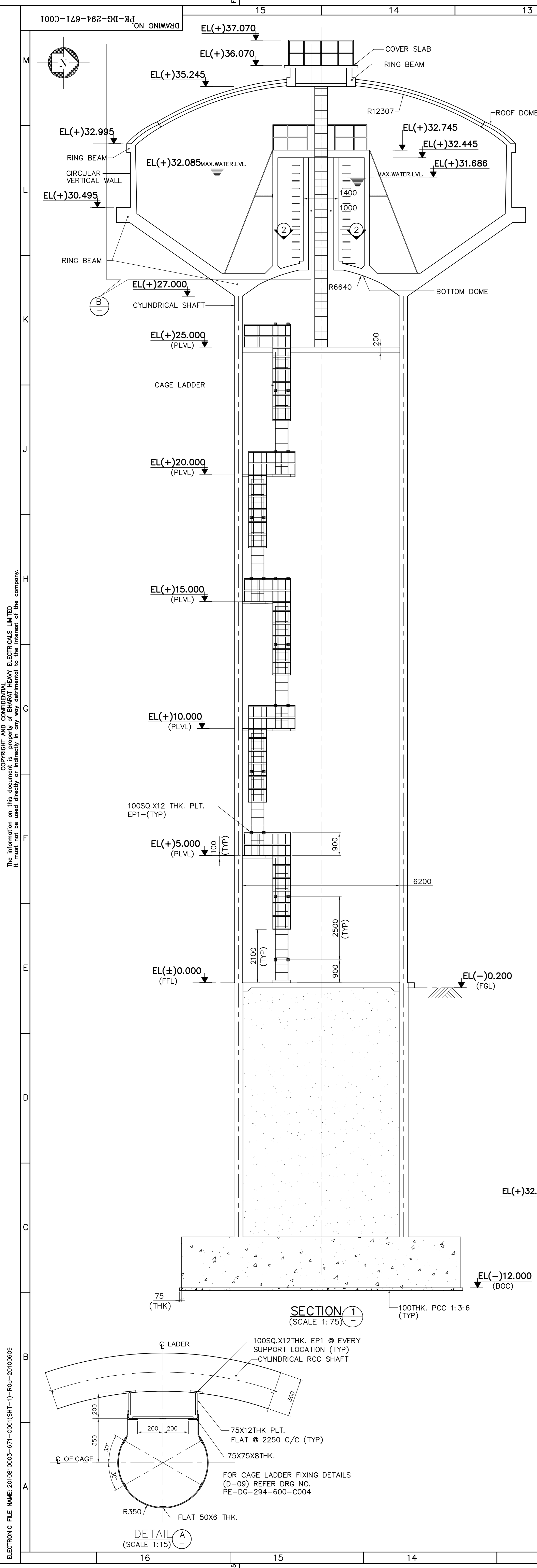
- LEGEND**
- B/C - BOTTOM OF CONCRETE
 - BF - BOTH FACE
 - C/C - CENTER TO CENTER
 - CL - CENTER LINE
 - EL - ELEVATION
 - T&B - TOP AND BOTTOM
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(CONSTRUCTION)
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 - PE-DG-294-671-C001 - SERVICE WATER & POTABLE WATER OVERHEAD TANK - S.A & DETAILS
 - PE-DG-294-671-C002 - SERVICE WATER & POTABLE WATER OVERHEAD TANK - FOUNDATION REINFORCEMENT DETAILS
- (ENGINEERING)
- PE-DG-294-100-M001 - PLOT PLAN
 - PE-DG-294-172-N101 - P & ID PLANT WATER

BILL OF QUANTITIES (APPROX.)

| SL.NO. | DESCRIPTION | UNIT | QUANTITY |
|--------------|---------------|------|--------------|
| 1 | RCC (M25) | Cu.M | 296.7 |
| 2 | REINFORCEMENT | MT | 0.28 |
| 3 | 8 # | MT | 1.93 |
| 4 | 10 # | MT | 16.43 |
| 5 | 12 # | MT | 0.04 |
| 6 | 16 # | MT | 20.79 |
| 7 | 20 # | MT | 1.42 |
| 8 | 25 # | MT | 40.90 |
| TOTAL | | | 40.90 |





NOTES

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- EL.(±)0.000 CORRESPONDS TO FINISHED FLOOR LEVEL OF POWER HOUSE BUILDING WHICH CORRESPONDS TO SITE RL 82.20M

LEGEND

| | |
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 PE-DG-294-671-C001(SHT2 OF 2) - G.A. & DETAILS

(ENGINEERING)

PE-DG-294-100-M001 - PLOT PLAN
 PE-DG-294-172-N101 - P & ID PLANT WATER

TCE CONSULTING ENGINEERS LTD., VENDOR DOCUMENT REVIEW STATUS

THIS DRAWING MARKED (✓) IS RELEASED FOR:

PLANNING / APPROVAL FABRICATION

CONSTRUCTION INFORMATION

AS BUILT DRAWING

STAMP ALL PREVIOUS REVISION AS SUPERSEDED

ISSUED BY: _____

NAME: ALOK BASAL

SIGNATURE: _____

DATE: _____

Reviewed by: _____ Date: _____

GUJARAT STATE ELECTRICITY CORPORATION LIMITED
 1x500 MW, UNIT # 6, UKAI THERMAL POWER STATION

TCE CONSULTING ENGINEERS LIMITED

BHARAT HEAVY ELECTRICALS LTD
 POWER SECTOR
 PROJECT ENGINEERING MANAGEMENT
 NEW DELHI

DEPT: _____ NAME: _____ SIGN: _____ DATE: _____

CODE: _____ DESK: _____ PSL: _____

CHD: _____ MAP: _____

APPRO: _____ ST: _____

| | |
|----------------------------|--|
| JOB NO. | 294 |
| STATUS | CONTRACT |
| DISTRIBUTION | |
| TO | |
| NO. OF | |
| REV. | DATE |
| ALD | CHD |
| APPO | APPO |
| ENGINEERING SUB CONTRACTOR | FICHTNER CONSULTING ENGINEERS, CHENNAI |
| TITLE | SERVICE WATER & POTABLE WATER OVERHEAD TANK GENERAL ARRANGEMENT & DETAILS |
| CV | ME |
| EL | MC |
| DEPT. | SCALE(S) SHOWN |
| SIGN | NO. |
| DATE | PE-DG-294-671-C001 |
| SHEET | 1 OF 2 |
| REV. | RO |

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