GENERAL CONSTRUCTION NOTES

GENERAL NOTES

1. IN THE INTERPRETATION OF THESE DRAWINGS, INDICATED DIMENSIONS SHALL GOVERN AND DISTANCES OR SIZES SHALL BE SCALED FOR CONSTRUCTION PURPOSES.

2. THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, SANITARY AND OTHER UTILITY AND EQUIPMENT PLANS FOR THE EXACT SIZE, NUMBER AND LOCATION OF ALL SLEEVES OR OPENINGS THROUGH FLOOR SLABS AND WALLS.

3. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE IN METERS.

4. ALL REINFORCED CONCRETE WORKS SHALL BE DONE IN ACCORDANCE WITH CHAPTER 4 OF THE NATIONAL STRUCTURAL CODE OF THE PHILIPPINES. VOL. I, 6TH EDITION. IN SO FAR AS THEY DO NOT CONFLICT WITH THE ACI 318-08 BUILDING CODE REQUIREMENTS.

FOUNDATION

1. FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS CONTAINED IN GEOTECHNICAL INVESTIGATION REPORT FOR THE PROPOSED PROJECT.

2. FOOTINGS ARE DESIGN FOR A SAFE SOIL BEARING PRESSURE OF 50kPa. CONTRACTORS SHALL REPORT IN WRITING TO THE STRUCTURAL ENGINEER ON THE ACTUAL SOIL CONDITIONS UNCOVERED AND CONFIRM ACTUAL SOIL BEARING CAPACITY BEFORE DEPOSITING OF CONCRETE.

3. NO FOOTING SHALL REST ON FILL. FOOTINGS FOR CHB WALLS AND OTHER MINOR STRUCTURE SHALL BE EMBEDDED AT LEAST 600mm BELOW.

4. PROVIDE TEMPORARY REMOVAL OF WATER FROM ANY SOURCE DURING CONSTRUCTION. DEWATERING SHALL BE CAREFULLY AND PROPERLY PERFORMED TO AVOID DISTURBING THE FOUNDATIONS AND SLAB BEARING SURFACES.

5. CONTRACTOR SHALL DESIGN, INSTALL AND MONITOR ALL EXCAVATION RETENTION SYSTEMS AS REQUIRED FOR THE PROTECTION OF ADJACENT PROPERTIES AND PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO MINIMIZE SETTLEMENT AND PREVENT DAMAGE TO ADJACENT EXISTING STRUCTURE OR NEW CONSTRUCTION.

6. CONTRACTOR SHALL UNDERGO PROBING OPERATIONS TO LOCATE PRESENCE OF SOIL CAVITIES UNDER HEAVILY LOADED COLUMNS AND SHALL EXECUTE THE NECESSARY REMEDIAL MEASURE BEFORE PLACING STEEL REINFORCEMENT AND CONCRETE.

7. ALL STRUCTURAL FILL MATERIALS SHALL BE COMPACTED TO 95% RELATIVE COMPACTION IN ACCORDANCE WITH ASTM D698. FILL SHOULD BE PLACED IN LIFTS NOT TO EXCEED 300mm.

8. REFER TO THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND OTHER TRADES FOR SUBSOIL DRAINAGE SYSTEM, MACHINERY ANCHORS AND OTHER EMBEDDED ITEMS, DEPRESSIONS, FINISHES, DOWELS FOR MASONRY WALLS, CURBS ETC.

CONCRETE

1. CONCRETE MINIMUM CYLINDER 28-DAY COMPRESSIVE STRENGTH SHALL BE:

   fc' = 27.6MPa (4,000 psi) FOOTINGS, COLUMNS, STAIRS, SUSPENDED SLABS, BEAMS AND GIRDERS

   fc' = 21MPa (3,000 psi) SLAB ON GRADE

2. AGGREGATES SIZE SHALL BE AS FOLLOWS:

20mm MAXIMUM	SUSPENDED SLABS, BEAMS, GIRDERS, COLUMNS AND WALLS
40mm MAXIMUM	FOOTINGS, THICKENED SLABS AND SLABS ON GRADE

3. MINIMUM CONCRETE COVER FOR REINFORCING BARS SHALL BE NOT LESS THAN:

75mm	UNFORMED CONCRETE DEPOSITED AGAINST GROUND
50mm	FORMED CONCRETE AGAINST GROUND OR EXPOSED TO WEATHER FOR BARS LARGER THAN Ø16
40mm	FORMED CONCRETE AGAINST GROUND OR EXPOSED TO WEATHER FOR BARS OF Ø16 AND SMALLER
40mm	BEAMS AND COLUMNS NOT EXPOSED TO GROUND OR TO WEATHER
20mm	SLABS AND WALLS NOT EXPOSED TO GROUND OR TO WEATHER
75mm	CONCRETE EXPOSED TO SEWAGE

4. ALL REINFORCING STEEL DOWELS, ANCHOR BOLTS AND OTHER INSERTS SHALL BE SECURED IN POSITION PRIOR TO POURING O CONCRETE.

5. CONCRETE CYLINDERS SHALL BE TAKEN FOR EACH DAY OF POURING AND EACH 50m³ OR FRACTION THEREOF CAST IN ACCORDANCE WITH ASTM C31 AND TESTED IN ACCORDANCE WITH ASTM C39.

6. SLUMP TEST SHALL BE CONDUCTED FOR ALL READY MIXED CONCRETE BATCH PRIOR TO DEPOSITING OR LOADING TO PUMPCRETE. ADDITIONAL CONCRETE CYLINDER SHALL BE TAKEN IF THE SLUMP TEST FAILED.

REINFORCING STEEL

1. GRADE

ASTM A615 GRADE 60 DEFORMED BARS (fy = 414 MPa)	FOOTINGS, WALL FOOTINGS, FTB, COLUMNS, S-SLAB BEAMS AND GIRDERS
ASTM A615 GRADE 40 DEFORMED BARS (fy = 275 MPa)	STAIRS, RAMPS, CANOPY, SEPTIC TANK

2. ALL BARS SHALL BE BENT COLD UNLESS PERMITTED BY THE STRUCTURAL ENGINEER.

3. THE MINIMUM LAP LENGTH SHALL BE AS SHOWN ON THE TABULATION BELOW.

4. ALL REINFORCING BARS SHALL BE SUPPORTED IN CONFORMANCE WITH "THE MANUAL OF STANDARD PRACTICE" - DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315 LATEST EDITION).

5. ALL REINFORCING BARS SHALL BE CLEANED THOROUGHLY OF ALL LOOSE RUST, SOIL OR OTHER MATERIAL IMMEDIATELY BEFORE PLACING OF CONCRETE.

6. A FULL WELDED SPLICE SHALL HAVE BARS BUTTED AND WELDED TO DEVELOP IN TENSION AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH (fy) OF THE BAR.

7. ALL WELDING OF REINFORCEMENT SHALL CONFORM TO THE PROVISIONS OF THE STRUCTURAL WELDING CODE FOR REINFORCING STEEL, AWS D1.4.

8. A FULL MECHANICAL CONNECTION (REBAR SPLICER) SHALL DEVELOP IN TENSION OR COMPRESSION AS REQUIRED AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH (fy) OF THE BAR. IF USED, SUBMIT SAMPLE FOR THE APPROVAL OF THE STRUCTURAL ENGINEER.

MINIMUM EMBEDMENT AND LAP SPLICE (mm)

fc' = 21 MPa to 28MPa

BAR SIZE	STRAIGHT EMBEDMENT 'Ld'	EMBEDMENT LENGTH 'E' W/ STD. END HOOK 'H'	CLASS-A TENSION SPLICE ALSO FOR COMPRESSION SPLICE = 'LD'	CLASS-B TENSION SPLICE =1.3*LD	CLASS-C TENSION SPLICE =1.7*LD	TOP BARS (W/ MIN. 300mm CONC. CAST BELOW) STRAIGHT EMBEDMENT =1.4*Ld	CLASS-A TENSION SPLICE =1.4*Ld	CLASS-B TENSION SPLICE =1.82*Ld	CLASS-C TENSION SPLICE =2.38*Ld
Ø10	300	E = 125 B = 150	300	400	500	300	300	450	600
Ø12	300	E = 150 H = 200	400	500	700	400	400	550	700
Ø16	400	E = 200 H = 250	500	650	850	550	550	750	950
Ø20	500	E = 250 H = 300	600	800	1000	700	700	900	1200
Ø25	800	E = 300 H = 400	800	1050	1350	1100	1100	1450	1.900
Ø28	900	E = 350 H = 500	900	1200	1550	1250	1250	1650	2150
Ø32	1100	E = 600 H = 750	1100	1450	1900	1550	1550	2000	2600
Ø36	1200	E = 750 H = 800	1300	1700	2200	1700	1700	2200	2850
SKETCH	STRAIGHT EMBEDMENT	E / H STD. 90° OR 180° HOOK	CLASS-A	CLASS-B	CLASS-C	STRAIGHT EMBEDMENT 300 MIN	CLASS-A	CLASS-B	CLASS-C
REMARKS	END ANCHORAGE FOR BOTTOM BARS OF SLAB & BEAMS	END ANCHORAGE FOR BOTTOM BARS OF SLAB, BEAMS, WALL, & COLUMN DOWELS TO FOOTING	FOR COLUMN VERT. BARS, BEAM BOT. BARS WHERE TENSILE STRESS IN BARS < 0.5*fy & % OF BAR SPLICE > 75%	FOR BEAM BOTTOM BARS WHERE TENSILE STRESS IN BARS< 0.5*fy & % OF BAR SPLICE > 75%	FOR CONC. WALL VERT. BARS, SLAB & BEAM BARS WHERE TENSILE STRESS IN BARS < 0.5*fy & % OF BAR SPLICE > 75%	FOR BEAMS INTO WALLS	BEAM TOP BARS WHERE TENSILE STRESS IN BARS < 0.5*fy & % OF BAR SPLICE > 75%	BEAM TOP BARS WHERE TENSILE STRESS IN BARS < 0.5*fy & % OF BAR SPLICE > 75%	FOR CONC. WALL VERT. BARS, BEAM TOP BARS WHERE TENSILE STRESS IN BARS < 0.5*fy & % OF BAR SPLICE > 50%

STRUCTURAL STEEL

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE 9TH EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL UNLESS OTHERWISE SHOWN OR INDICATED.

2. THE STRUCTURAL STEEL MINIMUM YIELD STRENGTH (Fy) SHALL BE 248MPa.

3. THE CONTRACTOR SHALL FURNISH ALL PLATES, CLIP ANGLES, CONNECTORS, ETC. REQUIRED FOR THE COMPLETION OF THE STRUCTURE EVEN IF EVERY SUCH ITEM IS NOT SHOWN ON THE CONTRACT DRAWINGS.

4. WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY CODE AWSD1.1 UNLESS OTHERWISE NOTED. WELDING ELECTRODE SHALL BE E70xx.

5. ALL BOLTS AND THREADED FASTENERS SHALL BE ASTM A325 UNLESS OTHERWISE NOTED.

MASONRY

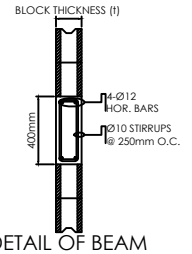
1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND SPECIFICATIONS OF THE NATIONAL CONCRETE MASONRY ASSOCIATION AND UNIFORM BUILDING CODE AND CHAPTER 7 OF THE NATIONAL STRUCTURAL CODE OF THE PHILIPPINES, VOL. I.

2. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 GRADE 'N'.

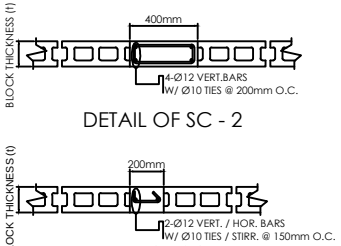
3. MORTAR AND GROUT FOR ALL REINFORCED MASONRY SHALL CONFORM TO ASTM 270 TYPE 'M' AND SHALL HAVE A MINIMUM 28-DAY STANDARD CYLINDER COMPRESSIVE STRENGTH OF 17.24 MPa (2,500 psi).

4. ALL MASONRY WALLS SHALL BE REINFORCED ACCORDING TO THE FOLLOWING SCHEDULE OF CONCRETE HOLLOW BLOCK REINFORCEMENT UNLESS OTHERWISE NOTED IN THE PLANS. (REFER TO TABULATION BELLOW).

BLOCK THICKNESS (mm)	REINFORCEMENTS HORIZONTAL	REINFORCEMENTS VERTICAL	NOTES
75	Ø10 at 600mm O.C.	Ø10 at 600mm O.C.	A. MIN. LAP SPLICES = 250mm. B. PROVIDE RIGHT ANGLED REINFORCEMENT 900mm LONG. C. WHERE CHB WALL, ADJOIN COLUMNS, RC BEAMS & WALL DOWELS WITH THE SAME SIZE AS VERT. OR HOR. REINFORCEMENT. D. FOR HIGH WALLS, PROVIDED BEAM BLOCKS AT EVERY 3.00m & POST AT EVERY 6.00m O.C.. E. PROVIDE LENTEL BEAM AT THE TOP OF EVERY WINDOW AND DOOR OPENINGS.
100	Ø10 at 600mm O.C.	Ø10 at 600mm O.C.	
125	Ø10 at 600mm O.C.	Ø10 at 600mm O.C.	
150	Ø12 at 600mm O.C.	Ø12 at 600mm O.C.	
200	Ø12 at 600mm O.C.	Ø12 at 600mm O.C.	



DETAIL OF BEAM BLOCK



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE

NATIONAL MEAT INSPECTION SERVICE

PREPARED BY:
SUKOR G. MACALAO
CIVIL ENGINEER

LIC. NO. : 0145248
PTR NO. : 7446725
DATE ISSUED: 1/11/2019
ISSUED AT: QUEZON CITY
TIN: 488-342-805

PROJECT TITLE:
PROPOSED CONSTRUCTION OF NMIS RTOC VIII ADMINISTRATIVE BUILDING
OWNER: NATIONAL MEAT INSPECTION SERVICE
LOCATION: Quezon Blvd., Market Site, Tacloban City

NOTED BY:
AR. MARIANNE JOY G. LIMBO
OIC - ENGINEERING SECTION

RECOMMENDING APPROVAL:
DR. KENNEDY S. SUNICO
REGIONAL TECHNICAL DIRECTOR

APPROVED BY:
DR. REILDREN G. MORALES
EXECUTIVE DIRECTOR

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