CONSTRUCTION DRAWINGS
[Plans de Construction]

2 AND 3 STORY MIXED USE BUILDINGS
[Bâtiments Avec Un Ou Deux Étages]

HAITI POST EARTHQUAKE HOUSING RECONSTRUCTION
TECHNICAL ASSISTANCE PROGRAM

[Program d'Assistance Technique à
la Reconstruction de Logements suite an Séisme à Haïti]
MATERIALS SPECIFICATIONS

1. CAST IN PLACE CONCRETE:
   a. HIGH STRENGTH CONCRETE
   b. PRECAST PRESTESSED CONCRETE

2. Precast concrete wall panels:
   a. 24" x 80"
   b. 24" x 100"

3. Masonry:
   a. 8" thick concrete block
   b. 10" thick concrete block
   c. 12" thick concrete block

4. Steel:
   a. 1/2" thick steel plate
   b. 3/4" thick steel plate
   c. 1" thick steel plate

5. Glass:
   a. 1/2" thick tempered glass
   b. 3/4" thick tempered glass
   c. 1" thick tempered glass

6. Wood:
   a. 2x4 studs
   b. 2x6 studs
   c. 2x8 studs

7. Roofing:
   a. SBS modified bitumen membrane
   b. EPDM membrane
   c. PVC membrane

8. Insulation:
   a. R-11 fibreglass insulation
   b. R-19 fibreglass insulation
   c. R-25 fibreglass insulation

9. Plumbing:
   a. 1" galvanized steel pipe
   b. 3/4" galvanized steel pipe
   c. 1/2" galvanized steel pipe

10. Electrical:
    a. 1/2" PVC conduit
    b. 3/4" PVC conduit
    c. 1" PVC conduit

11. HVAC:
    a. 4" round ductwork
    b. 6" round ductwork
    c. 8" round ductwork

12. Lighting:
    a. 120V LED fixtures
    b. 240V LED fixtures
    c. 12V LED fixtures

**NOTES TO CONSTRUCTION**

1. PROVIDE CONCRETE BY LEAVING OUT EVERY OTHER RACE FOR BOTTOM COURSE. PLACE MORTAR AFTER]
   PROVIDE CONCRETE FOR THE RACE.
2. DO NOT TERMINATE MEASURES WALL OR BLOCK WALLS AT A MINIMUM OF 60 MINUTES OF HAND HOURS OF DRY MORTAR.
3. COMPLETE DETAILS BY THE OPERATOR, DESIGNER, AND CONSTRUCTION WORKER.
4. USE A ROD TO CENTER MORTAR BETWEEN THE BLOCKS.
5. PROVIDE CONCRETE BY LEAVING OUT EVERY OTHER RACE FOR BOTTOM COURSE. PLACE MORTAR AFTER]
   PROVIDE CONCRETE FOR THE RACE.
6. DO NOT TERMINATE MEASURES WALL OR BLOCK WALLS AT A MINIMUM OF 60 MINUTES OF HAND HOURS OF DRY MORTAR.
7. COMPLETE DETAILS BY THE OPERATOR, DESIGNER, AND CONSTRUCTION WORKER.
8. USE A ROD TO CENTER MORTAR BETWEEN THE BLOCKS.

**GENERAL NOTES**

- PROVIDE CONCRETE BY LEAVING OUT EVERY OTHER RACE FOR BOTTOM COURSE. PLACE MORTAR AFTER]
- PROVIDE CONCRETE FOR THE RACE.
- DO NOT TERMINATE MEASURES WALL OR BLOCK WALLS AT A MINIMUM OF 60 MINUTES OF HAND HOURS OF DRY MORTAR.
- COMPLETE DETAILS BY THE OPERATOR, DESIGNER, AND CONSTRUCTION WORKER.
- USE A ROD TO CENTER MORTAR BETWEEN THE BLOCKS.

**DESIGN REFERENCES**

1. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) SECTIONS FOR BUILDING AND OTHER STRUCTURES, 2005
2. AMERICAN INSTITUTE OF ARCHITECTS (AIA) CODES AND STANDARDS, 2005
3. CANADIAN CONSTRUCTION MATERIALS ASSOCIATION (CCMA) CODES AND STANDARDS, 2005
4. CANADIAN CODES AND ENGINES (CCE) SHORE CODES AND STANDARDS, 2005
5. CANADIAN INSTITUTE OF MINING, METALLURGY, AND PETROLEUM ENGINEERS (CIMPE) CODES AND STANDARDS, 2005

**SEISMIC CRITERIA**

The design of the building is based on the seismic hazard classification for the area. The design involves the following measures:

- **ZONES**: 1G
- **HEIGHT LIMIT**: 30 feet
- **DRY WIND LOAD**: 0.2 kip/sq ft
- **SNOW LOAD**: 0.6 kip/sq ft
- **ONE STORY BUILDING**: One story building with no more than 1,000 sq ft of floor area
- **TOOLED BLOCK WALL**: Block wall with a minimum thickness of 8" at all points
- **MINIMUM MORTAR SPACING**: 1" at all points

**NOTES**

- All dimensions are in millimeters unless otherwise noted.
- All materials are based on current availability and pricing.

**FLOOR PLANS**

See attached floor plans for additional details.

**ELEVATIONS**

See attached elevations for additional details.

**CROSS SECTIONS**

See attached cross sections for additional details.

**GUTTER DETAIL**

See attached gutter detail for additional details.

**STAIR DETAIL**

See attached stair detail for additional details.

**ROOF DETAIL**

See attached roof detail for additional details.

**CONSTRUCTION DRAWINGS**

See attached construction drawings for additional details.

**REVISION HISTORY**

- 02/03/2011
  - Initial submission

**COPYRIGHT**

© 2011 by BUILD CHANGE
CREOLE TYPE LAYOUT

PLAN TYPE

NOTE:
SEE S1.1 FOR SIM. ELEVATIONS
[Voir S1.1 pour des élévations similaires]

ALTERNATE CREOLE TYPE LAYOUT

[Plan Variante de Type Creole]
FOUNDATION PLAN

ZONE B & C / SOIL BEARING CAPACITY = 50 kN / m²

ZONE B / SOIL BEARING CAPACITY = 100 kN / m²
ZONE C / SOIL BEARING CAPACITY = 150 kN / m²
TYPICAL INFILL ELEVATIONS

1:40 [Remplissage Typique de Maçonnerie]

1:40 [Remplissage Typique Avec Porte]
# Footing Schedule

<table>
<thead>
<tr>
<th>COL. MARK</th>
<th>B = L*</th>
<th>DEPTH H</th>
<th>REINFORC [Armatures]</th>
<th>REMARKS [Notes]</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>1250</td>
<td>400</td>
<td>6#3 E.W.</td>
<td>3/59</td>
</tr>
<tr>
<td>F2</td>
<td>2000</td>
<td>400</td>
<td>9#3 E.W.</td>
<td>3/59</td>
</tr>
<tr>
<td>F3</td>
<td>2250</td>
<td>400</td>
<td>10#3 E.W.</td>
<td>3/59</td>
</tr>
</tbody>
</table>

* FOOTING PLAN DIMENSIONS

---

# Foundation Schedules

## Concrete Column Schedule - Zone B

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>250</td>
<td>4 - #5</td>
<td>#4 @100</td>
<td>SEE S6 [Voir S6]</td>
</tr>
<tr>
<td>C2</td>
<td>350</td>
<td>8 - #5</td>
<td>#4 @100</td>
<td>SEE S6 [Voir S6]</td>
</tr>
</tbody>
</table>

* LIMITED ZONE SEISMICITY LEVEL, SSB = 1.05g

## Concrete Column Schedule - Zone C

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>250</td>
<td>4 - #5</td>
<td>#4 @100</td>
<td>SEE S6 [Voir S6]</td>
</tr>
<tr>
<td>C2</td>
<td>400</td>
<td>8 - #6</td>
<td>#4 @100</td>
<td>SEE S6 [Voir S6]</td>
</tr>
</tbody>
</table>

* LIMITED ZONE SEISMICITY LEVEL, SSB = 1.67g

---

# Concrete Column Schedules

2 S7

---

**FOOTING SCHEDULE**

ZONE B / SOIL BEARING CAPACITY = 100 kN/m²

ZONE C / SOIL BEARING CAPACITY = 150 kN/m²
### Concrete Beam Schedules

#### Zone B

<table>
<thead>
<tr>
<th>Beam Mark</th>
<th>Level</th>
<th>B = D</th>
<th>Long. Reinforcing</th>
<th>Lateral Reinforcing</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Top (haut)</td>
<td>Bottom (bas)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>300</td>
<td>2</td>
<td>2 - #5</td>
<td>2 - #5</td>
<td>SEE 2/- &amp; 4/-</td>
</tr>
<tr>
<td>Grade</td>
<td>[sol]</td>
<td></td>
<td>#3 @ 250mm O.C.</td>
<td>[voir]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>250</td>
<td>2 - #5</td>
<td>2 - #5</td>
<td>[voir] SEE 4/-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>250</td>
<td>2 - #5</td>
<td>2 - #5</td>
<td>[voir] SEE 4/-</td>
</tr>
<tr>
<td>Roof</td>
<td>[sol]</td>
<td>250</td>
<td>2 - #5</td>
<td>2 - #5</td>
<td>[voir] SEE 4/-</td>
</tr>
</tbody>
</table>

#### Zone C

<table>
<thead>
<tr>
<th>Beam Mark</th>
<th>Level</th>
<th>B = D</th>
<th>Long. Reinforcing</th>
<th>Lateral Reinforcing</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Top (haut)</td>
<td>Bottom (bas)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>300</td>
<td>2</td>
<td>2 - #5</td>
<td>2 - #5</td>
<td>SEE 2/- &amp; 4/-</td>
</tr>
<tr>
<td>Grade</td>
<td>[sol]</td>
<td></td>
<td>#3 @ 250mm O.C.</td>
<td>[voir]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>250</td>
<td>2 - #5</td>
<td>2 - #5</td>
<td>[voir] SEE 4/-</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>250</td>
<td>2 - #5</td>
<td>2 - #5</td>
<td>[voir] SEE 4/-</td>
</tr>
<tr>
<td>Roof</td>
<td>[sol]</td>
<td>250</td>
<td>2 - #5</td>
<td>2 - #5</td>
<td>[voir] SEE 4/-</td>
</tr>
</tbody>
</table>

### Concrete Beam Schedules

- **Concrete Beam Schedule**
  - [Tableau de Poutre Beton - Zone B]
  - [Tableau de Poutre Beton - Zone C]

### Beam Reinforcing Diagram

- **Beam Reinforcing Diagram**
  - 1:20 [Armatures a Poutre]
  - 4 S8

### Typical Grade Beam/Footing Intersection

- **Typ. Grade Beam/Footing Intersection**
  - 1:20 [Detal Carrefour de Poutre a Sol et Fondation]
  - 2 S8
LAP SPLICING TABLE & HOOK LENGTH

BAR SIZE (mm) | LAP SPLICING LENGTH (mm)
---|---
#3 | 400
#4 | 400
#5 | 400
#6 | 700

SECTION

1:20

BEAM / COLUMN JOINT

1:20

TERMINATE HOOKS WITHIN COLUMN TIES, EACH DIRECTION

CLEAN & ROUGHEN JOINTS

CLEAN & ROUGHEN JOINTS

PROVIDE 4 #4 TIES IN JOINT

[terminer les crochets dans les attaches à poteau, chaque direction]

[nettoyer et rendre rugueux au montage]

[nettoyer et rendre rugueux au montage]

[L'attache dans les attaches à poteau, chaque direction]

[à partir de l'enfoncement de maçonnerie, enrouler autour de rebar]
**TRUSS END CONNECTION**

[Raccord de Charpente à Mur] 1:20 S12

8mm THICK x 150mm WIDE BENT STEEL PLATE CENTERED ON WALL

6mm x 150mm plaque pliée en acier au centre de mur

3 (16mm) DIAMETER BOLT

[3 boulons de 16mm de diamètre]

(2) 19 A307 BOLTS

(2) boulons A307 - 13mm de diamètre

**CONCRETE BEAM**

[Poutre béton]

**TRUSS LATERAL BRACING**

[Soutien Latéral Pour Charpente] 1:20 S12

2x38x38x4x1.3 ANGLES, TYP. AT EA END OF EA, BRACE W/ 4x81 NAILS EA, LEG, "SIMPSON" A34 CLIPS

ALSO ACCEPTABLE

2x AT TRUSS MID-SPAN

[2x à moitié de charpente]

MATCH HEIGHT OF STANDARD BLOCK

[Égaliser hauteur de bloc]

CONCRETE AT HORIZ, BAR

[béton à armature horizontale]

BOND BEAM UNIT AT HORIZ, BAR [bloca avec coude où se trouver armature horizontale]

HOLE FOR VERT, BAR [trou pour armature verticale]

**HORIZONTAL BAR IN MASONRY WALL**

[Armatures Horizontales dans Mur de Maçonnerie] 1:20 S12

**DETAILS**

**OPTION 1**

[Chok 1]

**OPTION 2**

[Chok 2]