A. GENERAL

a. ARCHITECTURAL:
   1. ALL DIMENSIONS ARE IN FEET & INCHES
   2. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE TECHNICAL SPECIFICATIONS. THE GENERAL CONDITIONS & ANY ADDITION OR WRITTEN INSTRUCTIONS IN CASE OF ANY CONTRADICTIONS, THE ENGINEER MUST BE ADVISED IMMEDIATELY.

   IT IS THE CONTRACTOR’S RESPONSIBILITY TO CHECK ALL THE DRAWINGS AND VERIFY ALL DIMENSIONING AND LEVELS ON SITE.

   THE CONTRACTORS SHALL WORK IN LINE WITH THE ENGINEER REPRESENTATIVE FOR APPROVAL OF DETAILED STATEMENT OF WORK/DRAWINGS PRIOR TO COMMENCING WORK. ALL WORK SHALL BE PERFORMED TO THE HIGHEST STANDARDS OF WORKMANSHIP AND TO THE SPECIFICATION.

   3. ALL MATERIALS SHALL MEET EQUIVALENT STANDARDS, UNLESS OTHERWISE SPECIFIED. WRITTEN APPROVAL OF THE ENGINEER REPRESENTATIVE SHALL BE OBTAINED PRIOR TO ORDERING OR BRINGING TO THE SITE ANY MATERIAL.

   4. ALL BLOCK WALLS TO BE HOLLOW BLOCKS EXCEPT WHERE OTHERWISE SO INDICATED ON THE DRAWINGS OR INSTRUCTED BY THE ENGINEER. BLOCK WALLS SHALL BE CONSTRUCTED AS SPECIFIED IN THE SPECIFICATIONS/DRAWINGS.

   5. ALL EXTERNAL CONCRETE AND BLOCK WORK FACES TO BE PLASTERED AS SPECIFIED IN THE SPECIFICATIONS.

   6. WHERE EPOXY COATING IS SPECIFIED, SAME SHALL BE CARRIED OUT AS SPECIFIED IN THE SPECIFICATIONS.

   7. INTERNAL WALL SURFACES SHALL BE FINISHED WITH MORTAR PLASTERING AND PAINT FINISHES UNLESS OTHERWISE SPECIFIED.

   8. COLOR OF PAINT, TILES, ETC. SHALL BE APPROVED BY THE OWNER.

   9. CONTRACTOR MUST ALLOW FOR PROVIDING Thresholds WHERE WET AND DRY AREAS MEET AND IN ALL AREAS WITH DIRECT CONNECTION TO THE OUTSIDE, ALL AS APPROVED BY THE OWNER’S ENGINEER.

  10. ALL WATER SUPPLY PIPES SHALL BE ‘PVC’ (WITH APPROVED STANDARDS, GASS AND SEXS).

B. EXTRUDED TILES:

   Extruded tiles shall be in plain colors and produced with key back profiling, complying with the specifications or equivalent as follows:
   1. TO BE ACID AND ALKALI RESISTANT.
   2. AVERAGE WATER ABSORPTION NOT TO BE MORE THAN 1.5%.
   3. SCRATCH RESISTANT.
   4. TILES SHALL BE SUITABLE FOR HEAVY DUTY PURPOSES AS RECOMMENDED BY THE MANUFACTURER FOR SIMILAR BUILDING TYPES.

C. SCHEDULE OF INTERNAL FINISHES:

   a. FLOORS:
      1. CERAMIC TILES AS SPECIFIED IN THE SPECIFICATIONS. TILING SHALL BE CARRIED OUT AS SPECIFIED IN THE SPECIFICATIONS.
      2. ALL FLOOR FINISHES MUST BE CAST-IN-PLACE NON-SLIP CERAMIC TILES OR OTHERWISE SPECIFIED IN THE SPECS CATALOG.

   b. WALLS:
      1. SEMI-GLOSS LATEX EMULSION PAINT (2 COATS) WITH 1 COAT PRIMER/PUTTY OVER PLASTER.
      2. FULL ENAMEL PAINT (2 COATS) WITH 1 COAT PRIMER.

D. SCHEDULE OF EXTERNAL FINISHES:

   1. DOOR AND WINDOWS SHALL BE AS SPECIFIED.
   2. DOOR AND WINDOWS SHALL BE FINISHED WITH ENAMEL PAINT (2 COATS) WITH ANTI-RUST PAINT (1 COAT) AS PRIMER.

E. HARDWARE AND IRONMONGERY:

   HARDWARE AND IRONMONGERY SHALL BE AS SPECIFIED. EACH DOOR SHALL BE COMPLETE WITH DOOR CLOSER AND STOP KNOB. ITEMS MUST BE SUBMITTED TO THE ENGINEER REPRESENTATIVE FOR APPROVAL PRIOR TO PLACING ORDERS.

F. HAZARDOUS ELEMENTS AND MATERIALS:

   NOTE:

   ELEMENTS AND MATERIALS WITH KNOWN HAZARDOUS CONTENT MUST NOT BE USED. APPROPRIATE PRECAUTIONARY MEASURES ARE REQUIRED FOR MATERIALS THAT MAY BE HAZARDOUS DURING CONSTRUCTION ACTIVITIES.
**CONSTRUCTION DRAWINGS**

**PROPOSED WATER KIOSKS**

**GENERAL PROJECT NOTES:**

1. THE DIMENSION UNIT IN THIS DRAWING IS IMPERIAL IN FEET AND FRACTIONAL INCHES SCALED TO A PRECISION OF 0'-0", AND THE ELEVATIONS ARE IN FEET AND INCHES AS WELL UNLESS OTHERWISE SPECIFIED. THE POSITION OF THE WALL IS CENTER TO CENTER ON THE AXIS.

2. ALL STRUCTURAL DRAWINGS ARE SET STANDARD FOR BEAMS, COLUMN, AND FOOTINGS AS SHOWN IN THE FOUNDATION DETAILS AND OTHER DRAWINGS IN THIS VOLUME.

3. ALL MASONRY WALLS ARE MADE OF 6"X8"X16" SANDCRETE HALLOW BLOCK UNLESS OTHER WISE NOTED.

4. ALL FLOORS ARE CAST-IN-SITU MASS CONCRETE WITH SMOOTH TOWELED OR MORTAR SCREED FINISH.

5. CONTRACTOR MUST VERIFY WITH CITIES ALLIANCE BEFORE MAKING ANY MODIFICATION TO THE DRAWINGS, INCLUDING STEEPING THE BUILDING TO MATCH SITE CONTOURS.

6. INDICATIVE FOUNDATIONS ONLY SHOWN ON THE DRAWING. SPECIFIC DESIGNS WILL BE ADOPTED FOR EACH SITE CONSIDERING TOPOGRAPHY AND TERRAIN.

7. ENSURE THAT PROVISIONS ARE TAKEN AGAINST TERMITES, USING CHEMICALS, PLASTIC MEMBRANES, AND TERMITES GUARDS WHERE APPROPRIATE.

8. CONTRACTOR TO REMOVE THE A MINIMUM OF 12" OF THE TOPSOIL TO 4'-0" IN BUILDING AREA.

9. CONTRACTOR TO REMOVE ALL ORGANIC MATTERS, SUCH AS ROOTS AND VEGETATION.

10. CONTRACTOR IS TO BACKFILL WITH APPROVED LATERITE SOIL ONLY AND THEN COMPACTED INTO 6" LAYER.

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<td>12</td>
<td>E</td>
<td>01</td>
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</tr>
</tbody>
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**ARCHITECTURAL SYMBOLS AND LEGENDS**

**FULL PACKAGE OF WORKING DRAWINGS FOR PROPOSED WATER KIOSKS**

THIS DRAWING IS THE PROPERTY OF THE CITIES ALLIANCE, AND IS SUBJECT TO THE CONDITION NOT TO BE COPIED, REPRODUCED OR DISTRIBUTED IN WHOLE OR IN PART EXCEPT BY WRITTEN PERMISSION FROM THE ADMINISTRATION OF THE SAME.
STRUCTURAL - GENERAL NOTES

CONCRETE MIX DESIGN: Conforms to ACI 318 Section 4.2.1. Use concrete mix design, I.B, with the following requirements given below:
Strength(f'c) ................................................... 3000 PSI
Coursing Aggregate ........................................... 300 PSF
W/C Ratio: Water-cementitious ratios shall be based on the total weight of the cementitious materials. Maximum ratios are controlled by strength noted above and durability requirements given in ACI 211.5T Section 4.3.
2. Aggregation shall conform to ASTM C33.
3. Slump: Conforms to ACI 318 Section 4.2.2. Slump determined at point of placement.
4. Merit Limit: Concrete used in elevated slab and beams shall have a shrinkage limit of 0.015% at 28 days measured in accordance with ASTM C197.
MEASURING, MIXING, AND DELIVERY: Conform to ACI 308 Section 4.5.
HANDLING, PLACING, CONSTRUCTION AND CLOSING: Conform to ACI 308 Section 5.5.
CONCRETE PLACEMENT TOLERANCE: Conform to ACI 308-10 for concrete placement tolerance.
FLORAL LEVELS AND FLOOR LEVELS: All concrete slabs shall have a minimum Floor Placement of 17 or 20 as measured in accordance with ACI 117.
CONCRETE Reinforcement:
REFERENCE STANDARDS: Conform to:
1. ACI 308-10 “Specifications for Structural Concrete”, Section 5 “Reinforcement and Reinforcement Supports.”
2. ACI 318-14 “Building Code Requirements for Structural Concrete”
3. IBC Chapter 19-Concrete
4. ACI 318-14, Section 25.3. Refer to “Typical Reinforcement” for the design of typical structural elements.
5. ACI 318-14, Section 25.4. Refer to “Typical Reinforcement” for the design of typical structural elements.
6. ACI 318-14, Section 25.5. Refer to “Typical Reinforcement” for the design of typical structural elements.
7. ACI 318-14, Section 25.6. Refer to “Typical Reinforcement” for the design of typical structural elements.
8. ACI 318-14, Section 25.7. Refer to “Typical Reinforcement” for the design of typical structural elements.
9. ACI 318-14, Section 25.8. Refer to “Typical Reinforcement” for the design of typical structural elements.
10. ACI 318-14, Section 25.9. Refer to “Typical Reinforcement” for the design of typical structural elements.
11. ACI 318-14, Section 25.10. Refer to “Typical Reinforcement” for the design of typical structural elements.
**PROPOSED FLOOR PLAN**

**Construction of Water Kiosks**

Approx. Area: 42.00 sq. ft. (Dim.: 7'-0" x 6'-0")

Scale: 1"=1'-0"

**Notes:**
- Line showing plain concrete curb (2" thick)
- Chamfer pit to host main gate valve and meter
- Ground segment filled with crushed stones (3" thick)
- 3'-0" x 4'-6" steel casement window
- Reinforced conc. window bolder
- 3 Nos. spigots (water points)

**CONCRETE PLATFORM FOR WATER CONTAINERS**

**6" THK. CONCRETE MASONRY BLOCK WALL**
CROSS SECTION 1-1
Scale: 1"=1'-0"

1'-4"
FLOOR LEVEL
0'-0"
1'-0"
APPROX. HEIGHT
2'-0"
SPIGOT LEVEL
3'-0"
SILT LEVEL
CONTAINER
WINDOW OPENING
7'-0"
TOP LEVEL
WINDOW OPENING
9'-4"
ROOF EPIC
28 GAUGE GALVANIZED CORRUGATED ROOFING SHEETS
2" X 4" TIMBER RAFTER
2" X 2" TIMBER PURLINS
3" X 8" TIMBER FASCIA BOARD
6" X 8" RC BEAM
3'-0" X 7-0" STEEL DOOR WITH HARDWARE COMPLETE (MOON LOCK - ABUS BRAND, HINGES, HANDLE)
3'-0" X 5'-3" CASEMENT WINDOW (METAL)

BURGLARY BARS USING 3/8" SQUARE BARS @ approx. 6" o/c or APPROVED EQUIVALENT

SHEET.
CITIES ALLIANCE
MICHAEL MULBAH
ANTHONY WAYLEA
FRED ABANKWA

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Line showing 6" thick fully-grouted masonry unit above

3ft x 3ft x 12" deep column footing (concrete) F1 to details

3ft x 3ft x 12" deep wall footing (concrete) SF2 to details

FOUNDATION - (EL. to verified on site)
Construction of Water Kiosks
Scale: 1:8
GENERAL NOTES:

FOOTINGS
1. The standard hook for column longitudinal reinforcement in footing shall be 90-degree hook, with minimum length of 9" (minimum inside bend diameter and straight length extension shall be 3" and 6" respectively).
2. The standard hook length for footing reinforcement shall be at least 9" for 90-degree hook and 180-degree hook respectively. The minimum inside bend diameter and straight length extension of these standard hook geometry as in the Structural Notes shall be observed.
3. Apply or use damp proof materials (e.g., bitumen) on the footings and underground structural elements to protect concrete and reinforcement against water/sewage leakage.

COLUMNS
1. The first stirrup in Zone A shall be located 2" maximum from the face of column ends.
2. Lap splices shall be located along the middle of the column clear height and shall not extend within the beam/column joint, nor within a distance of 4" at the column ends.
3. Lap splices shall be enclosed by closed hoop stirrups at a maximum spacing of 2.5".
4. Minimum distance for lap splice shall be 12".
5. Minimum length for the 90-degree hook for column vertical/longitudinal reinforcement shall be 9" (minimum inside bend diameter and straight length extension shall be 3" and 6" respectively).
6. The standard hook length for splices and ties shall be at least 5" for 135-degree hook. The minimum inside bend diameter and straight length extension of these standard hook geometry shall be observed as in the Structural Notes.
**FLOOR FRAMING PLAN (EL. 0'-0")**

Construction of water kiosks (6Nos.)

Scale: 1' = 1'-0"

Assumed Grade

6'-0" [1.83]

1'-6" [0.46]

2'-6" [0.76]

Concrete platform (see details for reinforcement plan)

---

**SECTION Y-Y**

Construction of water kiosks (6Nos.)

Scale: 1' = 1'-0"

Platform Reinforcement - Typical Elevation

Scale: 1" = 1'-0"

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**SECTION X-X**

Construction of water kiosks (6Nos.)

Scale: 1' = 1'-0"

Platform Reinforcement - Typical Elevation

Scale: 1" = 1'-0"
## Finishing Plan

Scale: 1:2

### Wall Finishing

<table>
<thead>
<tr>
<th>Area</th>
<th>Wall Finishing</th>
<th>Floor Finishing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitting Area</td>
<td>- ⅜&quot; plaster on wall</td>
<td>Porcelain floor tiles (12&quot; x 12&quot;)</td>
</tr>
<tr>
<td></td>
<td>- 2 coats water-based paint (washable) on one coat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>primer from finished floor to roof level.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 2 coats oil-based paint on one coat primer for</td>
<td></td>
</tr>
<tr>
<td></td>
<td>undercoat</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>N/A</td>
<td>Concrete fine finished with Floortex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>coating or paint</td>
</tr>
<tr>
<td>Concrete Platform</td>
<td>Ceramic Wall tiles (8&quot; x 12&quot;)</td>
<td>Porcelain floor tiles (12&quot; x 12&quot;)</td>
</tr>
</tbody>
</table>

### Exterior Walls
- 1/2" Plaster on wall with 2 coats latex enamel paint on one coat primer

### Door & Window
- 2 coats anti-rust paint
**WATER SUPPLY PLAN**

Construction of water kiosks (6Nos.)

Scale : 1:4

NOTE:

Liberia Water and Sewer Corporation will be responsible for the following:
- Connection and piping of the Water kiosks to Water and Sewer network.
- Metering and pressure rating of the system for adequate flow to the kiosk.

uPVC SCHEDULE 40 INDUSTRIAL PIPES AS PER ASTM D-1785

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Nom. Size</th>
<th>Avg. OD</th>
<th>Min Wall Thickness</th>
<th>Max. Wrok Pre. at 23°C</th>
<th>Max. Wrok Pre. at 23°C</th>
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<tbody>
<tr>
<td>M61400001</td>
<td>1/2 x 20</td>
<td>1.95</td>
<td>0.41</td>
<td>560</td>
<td>42.19</td>
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<td>M61400002</td>
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<td>0.75</td>
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<td>13.28</td>
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<tr>
<td>M61400006</td>
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<td>6.25</td>
<td>0.92</td>
<td>1010</td>
<td>9.07</td>
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NOTE:

- Connection and piping of the Water kiosks to Water and Sewer network.
- Metering and pressure rating of the system for adequate flow to the kiosk.

uPVC SCHEDULE 80 INDUSTRIAL PIPES AS PER ASTM D-1785

<table>
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**NOTE:**

- Connection and piping of the Water kiosks to Water and Sewer network.
- Metering and pressure rating of the system for adequate flow to the kiosk.

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**CONSTRUCTION OF WATER KIOSKS**

GREATER MONROVIA

**SECTION X-X**

Construction of water kiosks (6Nos.)

Scale : 1:4
GENERAL NOTE

USE LIGHTING GLOBAL APPROVED OR CERTIFIED "PICO-SOLAR HOME SYSTEM (<100W)" FOR ENERGY GENERATION. THE PICO-SOLAR HOME SYSTEM (SHS) KIT MUST HAVE MINIMUM THREE (3) - LIGHTING POINTS, MOBILE PHONE CHARGING FEATURE AND SOLAR FAN, IN ADDITION TO THE SYSTEM COMPONENTS: PANEL & BATTERY.

SOLAR PV PANEL OF THE pico-SHS KIT (MAX. 100W) ** TO BE PERMANENTLY INSTALLED ON THE ROOF

BATTERY OF THE pico-SHS KIT ** TO BE PLACE AT APPROVED LOCATION

3Nos. LIGHTING POINTS OF THE pico-SHS KIT ** TO BE INSTALLED AT APPROVED LOCATION

MOBILE PHONE CHARGING FEATURE OF THE pico-SHS KIT

DC FAN OF THE pico-SHS KIT ** TO BE PLACE AT APPROVED LOCATION

ENERGY GENERATION OPTION

Construction of water kiosks (6Nos.)
Scale : 1:4