

# PROPOSAL

For the creation of temporary  
**Refugee Villages**  
to serve as processing centers for  
refugees seeking asylum in the EU

November 2015



RICHARD ECONOMAKIS ARCHITECTURAL DESIGN

The proposal envisages the creation of refugee villages in Greece, but perhaps also in Turkey, Jordan, Lebanon and other countries bordering with Syria, to serve as processing centers for displaced persons seeking asylum in countries of the European Union. Refugees arriving there would have temporary quarters while they wait to be processed, with services, clinics, child care, refectories, clothing dispensaries, laundry service, etc. Their first experience in transitioning to Europe would thus be humane and civilized. The master plan is intended to serve as an urban template that can be adapted to real sites, once these have been identified and secured for the establishment of the villages. The residential units are intentionally modest and their small size does not favor habitation for long periods.

The buildings would ideally be constructed of sun dried brick (adobe) which is cheap, easy to produce and quick to assemble. An additional advantage is that in their construction, as in their eventual dismantling, sun-dried bricks are highly ecological, as they do not generate deleterious amounts of carbon dioxide when being handled, nor do they leave toxic or other environmentally hazardous waste when discarded. Our intention is to assemble a team of international experts to train teams of workers in adobe construction, and supervise during the construction of the proposed buildings.

It is our hope that the realization of the refugee villages can be financed with European funds, but private initiative is also welcome. We expect that there will be a good return on investment, with gains both for the state and for private investors from eventual conversion of buildings into ordinary family dwellings, academic villages, and resorts, once the refugee crisis has subsided.



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# STATEMENT OF INTENT

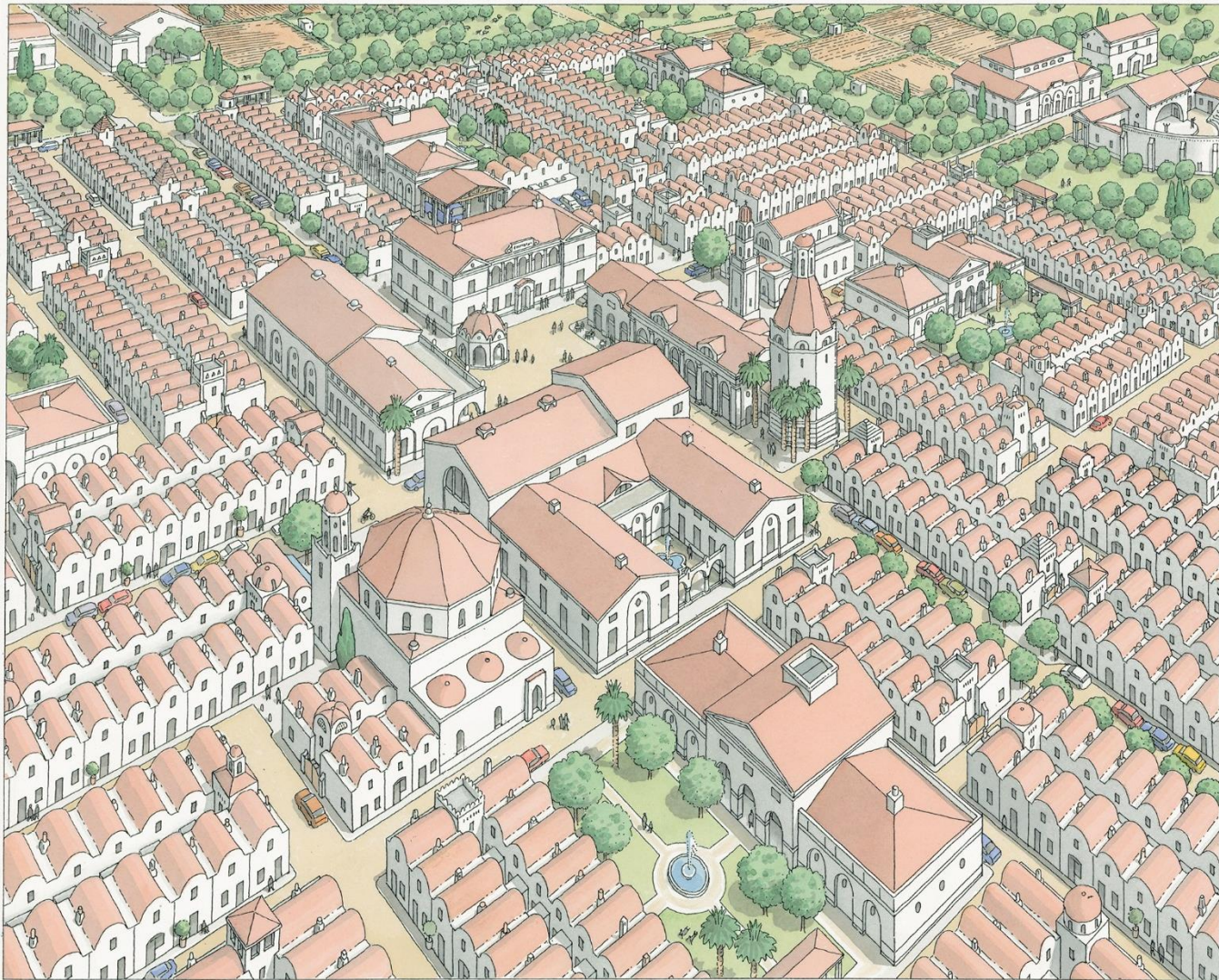
دعونا نبني منازل متواضعة لتكون ملاجئ مؤقتة لإيواء المحرومين والواصلين الى تلك الموانئ والمدن. علينا ان نفعل ذلك مع الاخذ بلعنايه الى استخدام مواد طبيعيه ليس لها اي انبعاثات كربونيه, وبطريقه تتيح لنا وبسهوله ان نزيل هذه المنازل بعد انقضاء فتره الاستعمال, دون التأثير على البيئه, او البقاء عليها الى عده اجيال. فلنعمل على تصميم هذه المنازل لتكون مجمعات امل حقيقيه, قري تعمل على رفع مكانه الموجات القادمه من الرجال, والنساء, والاطفال حتى تتم اجراءات التقدّم كلاجئين. وعندما تخف حده الازمه, وينتقل الاجئين الى اساكن جديده ليبدئو حياه جديده, يمكن لهذه القرى ان تبقى في البلدان المستضيفه وتحويلها الى احياء سكنيه بأسعار معقوله, او قري جامعيه , او منتجعات

CONSTRUYAMOS CASAS MODESTAS PARA LOS DESPOSEIDOS QUE SIRVAN COMO REFUGIOS TEMPORALES EN LOS PUERTOS Y CIUDADES DE SU LLEGADA. DEBEMOS HACERLO DE MANERA RESPONSABLE USANDO MATERIALES NATURALES QUE NO TENGAN HUELLA DE CARBONO Y DE TAL MANERA QUE LOS EDIFICIOS PUEDAN SER FÁCILMENTE DEMOLIDOS CUANDO DEJEN DE SER ÚTILES, SIN QUE IMPACTE EL MEDIO AMBIENTE DE MANERA SIGNIFICATIVA - O BIEN QUE PERMANEZCAN DE PIE DURANTE GENERACIONES. ORGANICEMOS LAS CASAS PARA FORMAR VERDADERAS COMUNIDADES DE ESPERANZA, PUEBLOS QUE DIGNIFIQUEN LAS OLAS DE HOMBRES, MUJERES Y NIÑOS CANSADOS MIENTRAS ESPERAN QUE SUS SOLICITUDES DE ASILO SE TRAMITEN CUANDO LA CRISIS SE REDUZCA Y LOS REFUGIADOS SE HAYAN TRASLADADO A NUEVOS LUGARES Y TENGAN NUEVAS VIDAS. ESTAS CIUDADES PODRÁN SERVIR A LAS NACIONES ANFITRIONAS, BIEN CONVIRTIENDOLAS EN BARRIOS ASEQUIBLES, PUEBLOS ACADÉMICOS O COMO CENTROS TURÍSTICOS.

**LET US BUILD MODEST HOMES TO SERVE AS TEMPORARY SHELTERS FOR THE DISPOSSESSED IN THOSE PORTS AND TOWNS OF THEIR ARRIVAL. WE MUST DO SO RESPONSIBLY, USING NATURAL MATERIALS WHICH HAVE NO CARBON FOOTPRINT, AND IN SUCH A WAY THAT BUILDINGS CAN EASILY BE TORN DOWN WHEN THEY CEASE TO BE USEFUL, WITHOUT SIGNIFICANTLY IMPACTING THE ENVIRONMENT - OR ELSE THEY SHOULD BE ABLE TO STAND FOR GENERATIONS. LET US ARRANGE THE HOUSES TO FORM REAL COMMUNITIES OF HOPE, VILLAGES THAT DIGNIFY THE WAVES OF TIRED MEN, WOMEN AND CHILDREN WHILE THEY WAIT FOR THEIR ASYLUM REQUESTS TO BE PROCESSED. WHEN THE CRISIS ABATES AND THE REFUGEES HAVE MOVED ON TO NEW PLACES AND NEW LIVES, THESE TOWNS MAY SERVE THE HOSTING NATIONS BY BEING CONVERTED INTO AFFORDABLE NEIGHBORHOODS, ACADEMIC VILLAGES OR RESORTS.**

COSTRUIAMO CASE MODESTE CHE POSSANO SERVIRE TEMPORANEAMENTE COME RIFUGI PER I PROFUGHI PRESSO LE LOCALITÀ DEL LORO ARRIVO. A TALE SCOPO È OPPORTUNO INTERVENIRE IN MODO RESPONSABILE ADOPERANDO MATERIALI NATURALI ED EVITANDO OPERAZIONI CHE COMPORTINO EMISSIONI DI ANIDRIDE CARBONICA, FACENDO IN MODO CHE LE COSTRUZIONI POSSANO ESSERE FACILMENTE SMANTELLATE AL CESSARE DEL LORO UTILIZZO, SENZA IMPATTO SULL'AMBIENTE, OPPURE RIMANERE IN PIEDI PER GENERAZIONI. CERCHIAMO DI STRUTTURARE CASE E INSEDIAMENTI IN MODO TALE DA CREARE COMUNITÀ REALI DI SPERANZA, VILLAGI CHE RESTITUISCANO DIGNITÀ A UOMINI, DONNE E BAMBINI STANCHI IN ATTESA DELL'ESITO DELLA DOMANDA DI ASILO. UNA VOLTA SUPERATA LA CRISI E DOPO CHE I RIFUGIATI AVRANNO PROSEGUITO I LORO PERCORSI VERSO NUOVI LUOGHI E NUOVE VITE, QUESTI INSEDIAMENTI POTRANNO ESSERE EFFICACEMENTE CONVERTITI IN ALLOGGI SOCIALI, RESIDENZE STUDENTESCHE O ANCHE VILLAGGI ESTIVI.

ΑΣ ΟΙΚΟΔΟΜΗΣΟΥΜΕ ΣΠΙΤΙΑ ΛΠΤΑ ΠΟΥ ΝΑ ΧΡΗΣΙΜΕΥΟΥΝ ΩΣ ΠΡΟΣΩΡΙΝΑ ΚΑΤΑΦΥΓΙΑ ΓΙΑ ΤΟΥΣ ΠΡΟΣΦΥΓΕΣ ΣΤΟΥΣ ΔΙΜΕΝΕΣ ΚΑΙ ΤΙΣ ΠΟΛΕΙΣ ΤΗΣ ΑΦΙΕΗΣ ΤΟΥΣ. ΝΑ ΤΟ ΚΑΝΟΥΜΕ ΥΠΕΥΘΥΝΑ ΜΕ ΦΥΣΙΚΑ ΥΛΙΚΑ, Η ΧΕΙΡΑΓΩΓΗΣΗ ΤΩΝ ΟΠΟΙΩΝ ΔΕΝ ΕΚΠΕΜΠΕΙ ΕΠΙΒΛΑΒΗ ΠΟΣΑ ΔΙΟΞΕΙΔΙΟΥ ΤΟΥ ΑΝΘΡΑΚΑ, ΚΑΙ ΕΤΣΙ ΩΣΤΕ ΤΑ ΚΤΙΡΙΑ ΝΑ ΜΠΟΡΟΥΝ ΕΙΤΕ: 1. ΝΑ ΚΑΤΕΔΑΦΙΣΤΟΥΝ, ΟΤΑΝ ΠΛΑΣΟΥΝ ΠΙΑ ΝΑ ΕΙΝΑΙ ΧΡΗΣΙΜΑ, ΜΕ ΤΡΟΠΟ ΠΟΥ ΔΕΝ ΕΠΙΠΡΕΑΖΕΙ ΤΟ ΠΕΡΙΒΑΛΛΟΝ, Η: 2. ΝΑ ΠΑΡΑΜΕΙΝΟΥΝ ΟΡΘΙΑ ΓΙΑ ΓΕΝΕΕΣ. ΑΣ ΔΙΑΜΟΡΦΩΣΟΥΜΕ ΜΕ ΤΑ ΣΠΙΤΙΑ ΑΥΤΑ ΠΡΑΓΜΑΤΙΚΕΣ ΚΟΙΝΟΤΗΤΕΣ ΕΛΠΙΔΑΣ, ΕΣΤΩ ΚΑΙ ΠΑΡΟΔΙΚΕΣ, ΠΟΥ ΝΑ ΠΡΟΣΔΙΔΟΥΝ ΑΞΙΟΠΡΕΠΕΙΑ ΣΤΑ ΚΥΜΑΤΑ ΤΩΝ ΤΑΛΑΠΩΡΗΜΕΝΩΝ ΑΝΔΡΩΝ, ΓΥΝΑΙΚΩΝ ΚΑΙ ΜΙΚΡΩΝ ΠΑΙΔΙΩΝ ΚΑΤΑ ΤΟ ΔΙΑΣΤΗΜΑ ΤΗΣ ΑΝΑΜΟΝΗΣ ΤΟΥΣ ΕΝΩ ΕΠΙΞΕΡΓΑΖΟΝΤΑΙ ΟΙ ΑΙΤΗΣΕΙΣ ΤΟΥΣ ΓΙΑ ΕΥΡΩΠΑΪΚΟ ΑΣΥΛΟ. ΟΤΑΝ Η ΚΡΙΣΗ ΥΠΟΧΩΡΗΣΕΙ ΚΑΙ ΟΙ ΠΡΟΣΦΥΓΕΣ ΕΧΟΥΝ ΠΙΑ ΠΡΟΧΩΡΗΣΕΙ ΣΕ ΝΕΟΥΣ ΤΟΠΟΥΣ ΚΑΙ ΝΕΕΣ ΖΩΕΣ, ΟΙ ΠΡΟΣΦΥΓΟΥΠΟΛΕΙΣ ΑΥΤΕΣ ΜΠΟΡΟΥΝ ΝΑ ΩΦΕΛΗΣΟΥΝ ΤΙΣ ΤΟΠΙΚΕΣ ΚΟΙΝΟΤΗΤΕΣ ΜΕ ΤΗ ΜΕΤΑ ΤΡΟΠΗ ΤΟΥΣ ΣΕ ΠΡΟΣΙΤΕΣ ΓΕΙΤΟΝΙΕΣ, ΠΑΝΕΠΙΣΤΗΜΙΟΥΠΟΛΕΙΣ Η ΤΟΥΡΙΣΤΙΚΑ ΘΕΡΕΤΡΑ.



# REFUGEE VILLAGE

EUROPEAN TEMPORARY ASYLUM HOUSING



©



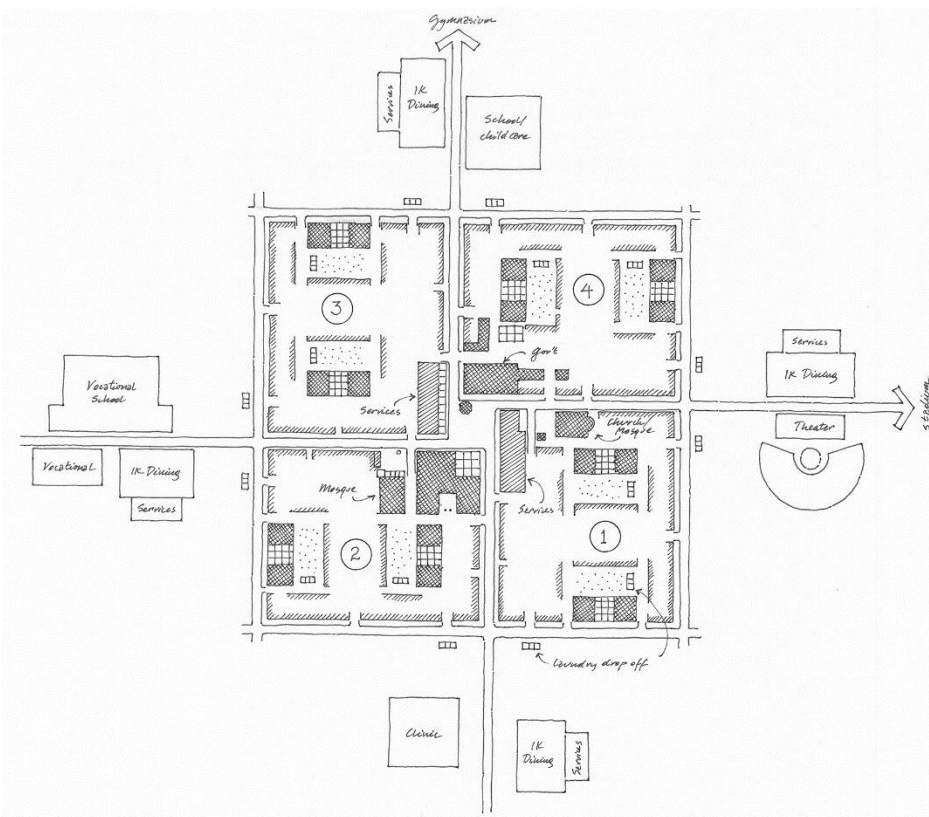
# REFUGEE

EUROPEAN EMERGENCY ASYLUM HOUSING

# VILLAGE

3-4 K RESIDENTS MASTERPLAN PROPOSAL

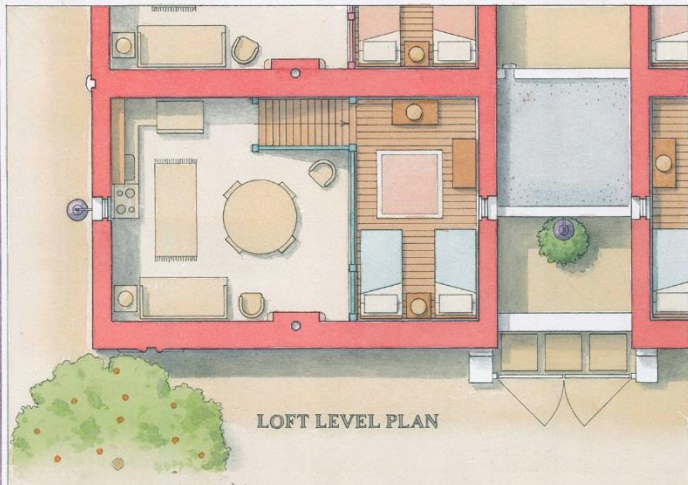




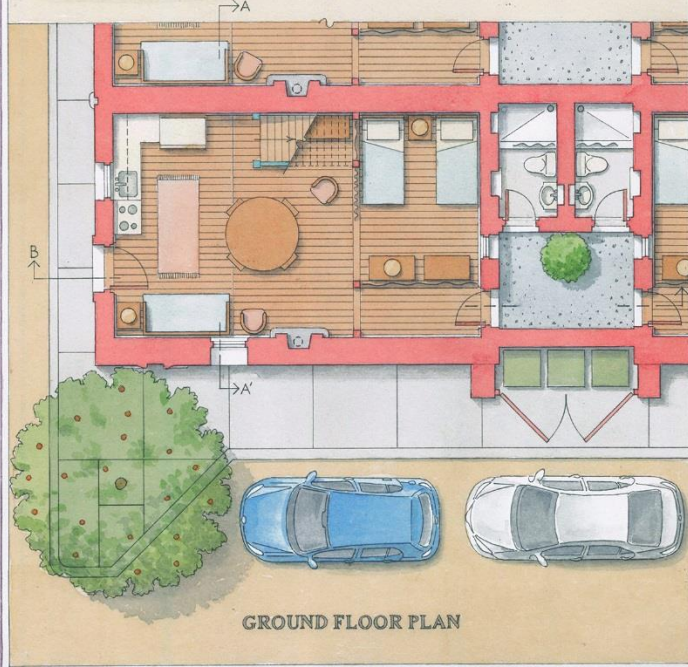
The masterplan which is illustrated in these images is meant to serve as a template that can be made to conform to the particular topography of selected sites. A typical village would be organized in quadrants, forming four distinct urban quarters. These are arranged in pinwheel fashion around a central square which is bounded by public buildings, including an administrative complex with a processing center, offices, security, and fire station. Other public buildings would contain services such as a refectory and kitchens, cafés, clothing dispensaries, hairdressing, postal office, audience hall, clinic, child care, etc. Mosque(s) and a church (or alternatively, interfaith buildings) would open onto secondary squares a short distance from the larger central space. The urban quarters comprise residential blocks arranged around two greens, or landscaped public spaces. These are lined on one side by spacious community halls with multipurpose rooms, and separate restrooms and shower facilities for men and women.

Surrounding each village would be dining facilities, daycare, entertainment, medical and other services, which would be useful especially whenever the villages reach maximum occupancy. Laundry pickup points serving the houses around each green are conveniently located near the community halls.

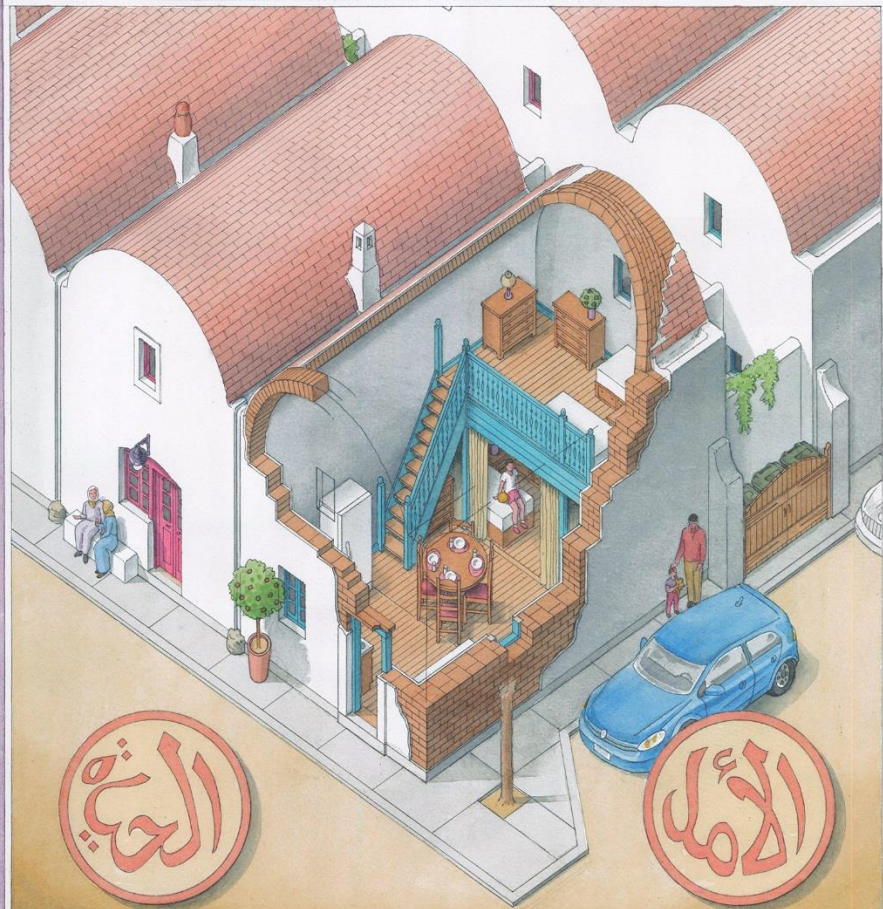
A total number of 800 housing units are indicated in this masterplan, allowing for 200 in each quadrant. Each unit can accommodate up to 10 persons, which means that the maximum number of refugees in each quadrant would be 2,000, making for a total population of nearly 8,000. With adjustments to the masterplan, this number could easily be increased to 10,000. A number of such villages would need to be constructed, if necessary even in close proximity to each other.



LOFT LEVEL PLAN



GROUND FLOOR PLAN



LIFE



HOPE

CUTAWAY ISOMETRIC VIEW  
SHOWING WALL AND VAULT CONSTRUCTION

# REFUGEE VILLAGE

EUROPEAN TEMPORARY ASYLUM HOUSING

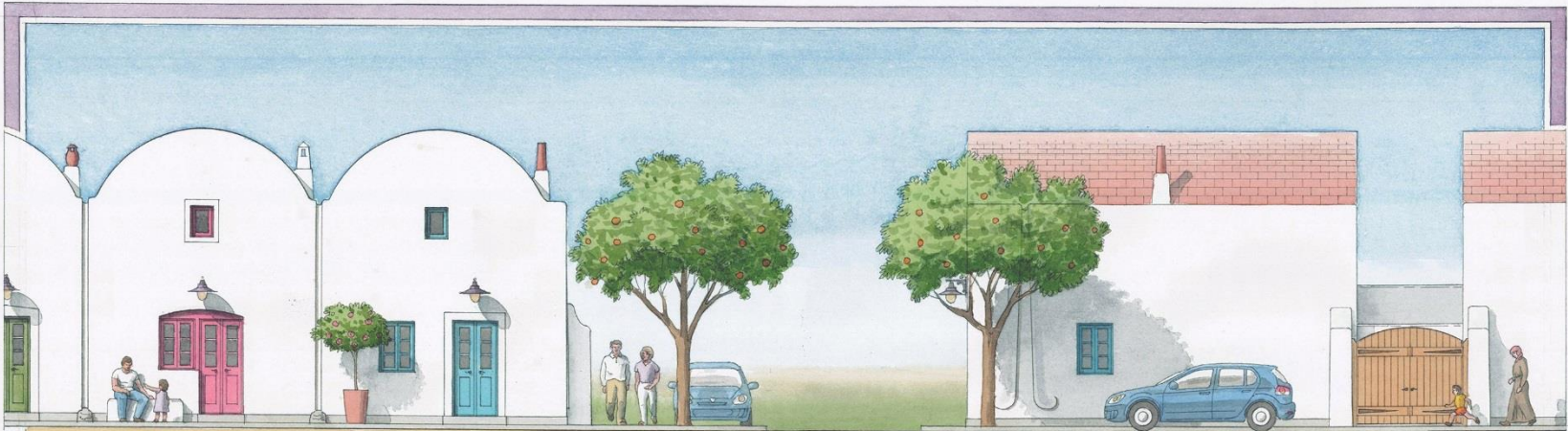




The residential units are deliberately modest in size (approximately 80 sq. meters total) and in the nature of their furnishings. This is for two principal reasons: 1. to keep the cost of construction and maintenance down, and 2. to discourage prolonged stays. They are designed to accommodate transient individuals with a basic degree of comfort, providing temporary shared quarters for individuals or for families of refugees who have just arrived and need immediate shelter and care. A typical unit comprises a ground floor with small dining area, kitchen, sleeping quarters and bathroom, and a loft with additional beds. Four or five beds with associated furniture can be easily accommodated in the combined ground floor and loft, and a couch or *divan* in the dining area can be used as an additional bed. Curtains would afford the ground floor sleeping area a modicum of privacy without requiring the construction of walls, which would be an additional expense. Small fireplaces have been incorporated in the dining areas, to serve as a supplementary heating source or cooking facility, which for many refugees is a familiar resource. The walls of a typical unit are made of sun dried mud bricks (adobe), which may be manufactured locally, even on site, provided there is available clay-rich earth.

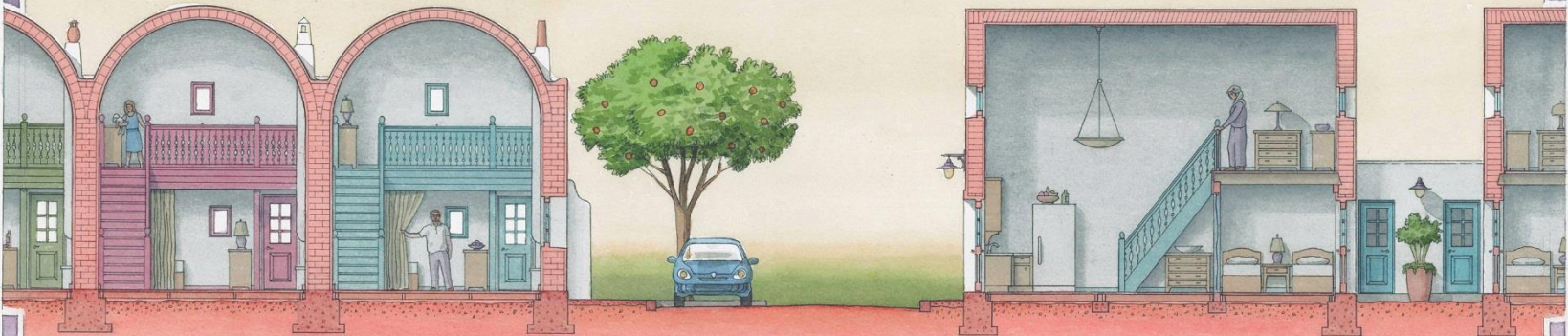
These bricks are easily produced using simple wooden forms into which a thick, wet mixture of clay mud, hay, and sand is poured and left to dry. Drying takes approximately a week or two, which is about the same time for the construction of the walls and roofs. Individual units could thus effectively be constructed within three to four weeks after foundations are set.

In the model we propose, the roofs are also made of sun dried brick, laid in rows of inclined arches to form vaults according to the so-called 'Nubian' method. The bricks are held together with mortar made of the same clay mixture. Walls are plastered with a thick coat of lime, which forms a waterproof exterior. The vaulted brick roofs are given an additional layer of fired brick tiles, to ensure impermeability. Floors are made of simple wooden decks with built-in natural insulation (e.g. pumice or hay), painted and set on continuous concrete footings above a layer of gravel. Simple area rugs would provide additional insulation.



ENTRANCE ELEVATIONS

SIDE ELEVATION (END OF BLOCK)



SECTION A-A'

SECTION B-B'

# REFUGEE VILLAGE

EUROPEAN TEMPORARY ASYLUM HOUSING

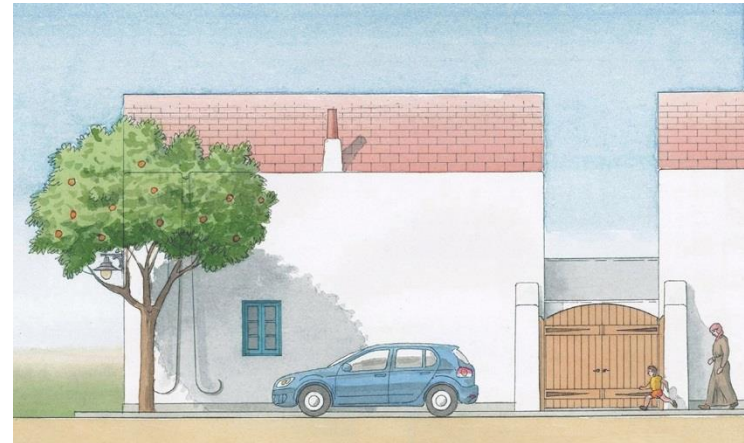




Urban blocks are made of contiguous barrel vaulted units, with shared walls to reduce costs and increase expediency in construction. Facades have simple openings, perhaps with alternating square and arched window and door types to ensure a degree of variety. Operable clerestory windows at the front and back of each residential unit –the ones at the rear serving the lofts- permit cross ventilation when the ground floor windows and doors are closed.

Small courts at the back of the units provide natural light and are convenient locations for modest bathrooms with a shower, sink and toilet. As shown in the aerial view at the ends of the urban blocks, small towers, some perhaps serving

as actual dovecotes, would take the place of the open court and incorporate larger bathrooms. The end units that are illustrated in the elevations depict a simpler option, which does not include towers. At these locations, between end units on the sides facing the street, small gated enclosures hide waste and recycling bins that serve the units on each block.





## PRODUCTION AND COSTING:

Earthen bricks are common in Syria, Turkey and other countries of the region, and remain popular as a building material in many parts of the world. Because earth is not readily available in some 'hot spots' of the refugee crisis, it will need to be shipped there. For the sake of expediency, specialized equipment need to be employed, such as the MC3500 AECT Compressed Earth Block machine. This can produce approximately 500 blocks per hour, or about 12,000 bricks in one 24 hr. period. ,IFRQWLRQOPXG Ericks DUHHPSORHG all 800 houses (which can each accommodate between 6 and 10 refugees) EULFNVEZXOGEHODLGDQGULHG DQUHDGWRXVHZWKLQVZHNDGGLWLRQZHNEZXOGEHQHGHGWRHUHFVWKHDCQVDCQROHHUUIURPWKHUHIXHH FRPPXQWUHHQHG the entire Village FRXOGEHFROUWUWFVHC an weekV

Costing will include:

1. Laying of concrete foundations.
2. Laying of infrastructure (plumbing, electric, etc.).
3. Extraction and transportation of earth.
4. Production of blocks and lime mortar.
5. /DLRUEULFNV
6. Carpentry (standardized for units, includes floor decks [4 per house]; posts to support loft; stairs; railings; skirting boards)
  - . Doors and windows (standardized for the units).
  - . Fees for supervision by earth masonry experts (Terrachidia, INTBAU Spain and masterplan supervision (READ)).

1HZRQWUXFWLRQVLDGREHWHFKQTXHV

There will also need to be reparation fees to owners of land. As a way of expediting the acquisition of suitable sites, arrangements could be made so that compensation comes in the form of profit sharing from eventual re-purposing of the villages.

# EXAMPLES OF NEW ADOBE AND COMPRESSED EARTH BRICK CONSTRUCTION



*cseb-auroville*



*Koudougou, Swiss Agency for Development and Cooperation*



*Tanouan-Ibin, Primary School*

READ (Richard Economakis Architectural Design) is a firm specializing in traditional architectural and urban design, with a portfolio of realized projects in the US, Central America, and Europe. Recently executed works include the Civic Hall and a number of mixed use buildings in the new town of Cayalá, Guatemala (with Estudio Urbano); the Heritage Square commercial center in Mishawaka, Indiana; and houses in Greece and the United States.

The firm's principal, Richard Economakis, combines practice with teaching, and is currently serving as Director of Graduate Studies in Architecture and Urbanism at the University of Notre Dame, in Indiana. His professional work has received a number of international awards, including the *Acanthus Award* (Chicago 2015), the *International Making Cities Livable Award* (2015), *Palladio Award* (2013), and *CNU Academic Award of Excellence* (2010). He is the author of the books *Nisyros: History and Architecture of an Aegean Island* (Melissa Publications, Athens 2001), and *Acropolis: Ancient Cities* (ArtMedia, London 2003), and editor of the books *Acropolis Restoration* (Academy Editions, London 1994), *Building Classical* (Academy Editions, London 1993). His most recent edited book is *Durability in Construction* (Papadakis Publisher, London 2015). Prof. Economakis is currently working on the design of an Assembly Hall in Seaside, Florida, and housing projects in Europe and the United States.

For more information on this proposal, see the article of 11-2-2015 in Building Design magazine:  
<http://www.bdonline.co.uk/news/architect-pitches-refugee-village-plan-to-un/5078452.article>

See also:

<http://www.wsbt.com/news/local/Notre-Dame-professor-proposes-village-plan-for-Syrian-refugees/36792690>



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