The following design sequence was compiled to follow the process of design from its initial stages to its full development. The drawings may be divided into two categories: 1. freehand sketches from Paolo Soleri's sketchbook, 2. freehand presentation drawings to scale. The sketches were made by Paolo Soleri in a period of a year while he was also engaged in the production of crafts including bronze and clay wind bells. Other architectural projects contemporary with the Cosanti Foundation are Mesa City and various bridge designs. The freehand sketches were made in a tracing paper sketchbook with a ball point pen. The actual number of sketches made for this project are many more than printed here; however with Paolo Soleri's help the number was reduced to include only the most important and arranged in chronological order. The scaled drawings and models were executed by Paolo Soleri and his apprentices. One model is partially constructed of plaster by means of the silt forming technique which would also be used for building in concrete some of the full scale structures of the foundation. The actual size of the final drawing printed on the insert is approximately 60 ft. long and 8 ft. high.

The editors of the Student Publications of the School of Design acknowledge the cooperation of Paolo Soleri who made the material for this publication available and generously gave his assistance in organizing it. The text under each sketch was provided by Paolo Soleri for this publication. Richard Saul Wurman, the advisor to the staff, freely gave his enthusiasm and technical advice when it was needed. Dorothy Wurman drafted the map locating the Cosanti Foundation and Ralph Mills of the Visual Aids Department of N. C. State, photographed Paolo Soleri's work for the publication.

K.S. & R.T.
the development by

Paolo Soleri

of the Design for the

Cosanti Foundation

Arizona, U.S.A.
OUTLINE
The foundation will be a planned environment to be established in Arizona, New Mexico or California. On an untouched landsite and with enough space to secure freedom and growth, the foundation will build a complex of workshops, research facilities and living quarters. This nucleus will eventually develop into a village which will function as a center for the arts and other cultural endeavors. The foundation will seek the help and sponsorship of institutes of learning—and of anyone else concerned with man and the earth on which he lives.

OBJECTIVES
The quest for an environment in harmony with man. Architecture as environment will be the primary concern of the foundation. Construction and research will be the means to this end. This will be pursued by students, apprentices, scholars, teachers, instructors, retired professors, members of the performing arts, artists and craftsmen.

1) Elective courses available to students of colleges and universities will be given by resident instructors. This training will be complementary to academic learning.
2) Apprentices will work in the foundation with the students and will be under the same guidance. Their training will be alternative to academic learning.
3) The retired professors, teachers, scholars and others will live and work in an environment showing concern for culture and will lend their experience and guidance to the younger members of the foundation. Students and apprentices may learn through the curriculum of the many ways by which man and nature are reciprocally indebted.

The foundation will furnish all workshops, living quarters and cultural facilities. The foundation will make available the teaching staff, the instructors, scholars, etc. This staff will be paid:
A. By the productivity of instructors and apprentices.
B. By the income from the foundation facilities.
C. By institutes of learning having students at the foundation.
D. By grants from industrial and non-profit foundations.

Paolo Soleri
...the place is the geology of the land, the grass—now green, now dead, and the sky...
... the thermal belt is 20-70 in winter, 70-100 in summer...
... where does the sun hit ... and when ... welcome or not?
...the work areas occupied by day are sheltered by the structure occupied by night...
...a site-less idea for work and dwelling platform...
...a percentage of work area is shaded part of the time mainly during the summer months...
... top platform: student and apprentice living quarters,
lower platform: silt for model making (cranes over head),
ground level: landscaped models...
...the wind-swept (preceding) scheme is abandoned for a wind-break wall...
...what the wall does on the vertical, the large bowl does horizontally...
...now environment is bivalent: outside of the large bowl... inside the large bowl...
...the open world as nature is... the open micro-world as man makes it...
THE TECHNICAL "EXPLOSION" HAS PHYSICALLY PARAMETERED THE BREAKING DOWN ACCOUNTING IN THE "SOUL" OF MAN. PARTICLE OF SOUL ARE THUS RIDING ON BITS OF MATTER CASUALLY ORGANIZED IN CONSUMER GOODS.

THE CONSUMPTION OF MANY THINGS IS DIRECT CONSEQUENCE (OR CAUSE) OF THE POLICY OF PRODUCTION.

WE DO NOT PRODUCE OUT OF NECESSITY ANY MORE. WE MUST CONSUME BECAUSE PRODUCTION NO LONGER.

THIS MATERIALIZATION OF EXISTENCE WELL REFLECTS THE ATOMIZATION OF VALUES.

WE LIVE IN AN EXPLODED CIVILIZATION UNLESS TRANSFERS OF "CULTURE," STRONG ENOUGH FORCE TO REMOVE SOCIETY AROUND THEMSELVES.


...wind-break wall and large bowl in a first integration...
...the wall is a complex structure carved for sun-controlled work areas... it carries studios and quarters for apprentices and students... the base is for residences... two-level roadways...
...life is there where clustering is in process...
...the wall—curved and carved to shelter man (of a spherical cosmos)...
...to join geology, grass and sky is now man's work
... post-structural ... non-statistical...
... detail of the large bowl ... studios on the threshold of the two environments: nature and the man-made...
...last sketch on this parcel of land...
...the better land founded... the contours of the 'mesa' suggest the physiognomy of the complex...
THE FACSIMILE OF A LIFE IS IN THE CONTAINMENT OF ALL SUCH DIVERSE STRUCTURES, IN A CARVED TROUGH, COHERENT, STRUCTURE, DIVERSIFICATION IS THEN A LIVING PRESSURE KEEPING THE SKIN OF THE TOTAL STRUCTURE FIRM BUT VIBRANT, SUCH VIBRANCY CARVED BY EACH AND EVERY PANEL OF IT IS TESTIMONY OF HOW NOTHINIS ESSENTIAL THAT IS NOT CARRIED OUT THE CONCENTRATION SEEMINGLY LAVISH, IS ITSELF STRUCTURAL STRUCTURAL NOT AS A FRAME WORK BUT AS LIFE-TO-LIFE FOR A CONSTRUCTION, IN LAMINAR, WAY, THAT IS WHAT A GREATER Fondness FOR OPAQUE SUBSTANCES, STONE, METAL, GLASS, THE A SOMEWHAT SIMILAR VIBRANCY IS THE QUALIFYING CHARACTER FOR VIVIDITY IN SPACE IN TIME IN SPIRIT OF WHICH IS IN ITSELF THE PROLIFICITY, THE PRESENCE, OF LIFE, ITSELF IS THE ESSENCE

...coordination of large structures...
...articulation of wind-break wall...
... land, structures and intermediate, the gardens...
...the carved wall has achieved character and functional detailing...
... water tower with hinged platform...

RASMUS T. N. Notes:

As I see it, this was to be a one-day devotional experience...

Not unlike a method actor...

Gourde as a devotional experience of a sort.

Absence of good churches for the sake of religious experience:

God is missing.
The soul of Luther for whom this earthly existence is an inevitable evil in which redemption is sought through divine grace...

His Church is the denunciation of anything physical (see contemporary society).

Life is something am a bit business... This church is an act of profanity.

The Church of the contemporary world as mmm representing the faith in salvation through efficiency's comfort...

Many fold mmm cut deep in such tenets... Even mature speak clearly on this:

Efficiency, that is specialization, puts an armour around the living flesh to the final suffocation of one not individual itself, comfort is the last word on a one-way street, a dead end street.

This church is akin to the casting's alley, olives in restaurants, the car itself, the executive office.

It is the executive office (kitchen room) of the minister of the boss of all bosses: God,

Thus church that as the soul coincides with end of a...
construction techniques, using silt as a surface form...
...reproportioning of carved wall...

It is quite possible that a revitalized school may demand a recreation of pre-concepts; we now seem to say; the school is where we must be. Free doom you can have! The first and preliminary for the disfigure that life itself will demand, once my say; the school is where you are constructed in the hominies of multiple outer behaviors so that the inner disfigure so friends us incapable you for the thing that good life will make you to abide to...
...carvings in the carved wall by the silt form technique...
...detailing of large bowls and insertion of tall ground-platforms...

...of structure and man:
the opposition of a compressive
primitive universe to a structural
universe is the universal
was seeking for homogeneity
to evolve in man.

If structure was the idea
to pursue, then man is always
superficial accident. Nature
will always be the universe's
self-structuralizing force.

The fashionable(structural)
of man is a shrewd, infantile
plagiarism of the sophistica-
ted and apparently effortless
productivity of nature.

The soul whatever it may be
is the first human happening
in a two-ear universe,
those first tears, premonitors
of an eye that will see the
post structure.

Phantasm of man
structural
reality.
The prephysical
platform on which
the building of
compressible man
will try to
reassimilate the

dream that universal
decadence for a com-
enlive transmigration
demands greatfear in
worship.

So it is that in architecture
for instance, structure was
conceived by the Egyptians
THE LIESURE OF MAN MAY BE CAUSED IN SLOTH, PLAYFULNESS OR POIGNANCY.
IF SLOTH, ONE IS A REGRESSIVE NON-FORCE, THE MOST PRIMITIVE ACTIVITIES IN THE NON LIESURE TIME WILL NOT RELIEVE NON-COLLECTIONS, EXHIBITS. RECOGNIZE THE CONDITION SUCH ACTIVITY UNABLE TO CLEARLY WITNESS THE NODULAR CORE OF UNIQUE REAL MAN, IT MARSH OF LEGITIMACY FOR LIFE UMAN.

IN PLAYFULNESS ONE IS CONSTANTLY PRESSING ON THE SKIN OF THE REAL, FORM UNDER AND EVEN THO' PUNCTUATIONS OF IT AND CONSEQUENT LIBERATION IS PREDOMINANTAL, THE "SUBLIME TENSION" CONDITION IS THE CLOSE ONE MAY GET TO THE GIVING STATUS THAT IS A STATUS OF PERFECTION.

IN POSMATIC THE AIM OF THE LIVING IS MAJOR, PULY BECOMING SELF-DISCOVERY AND SEND IT THE PROGRESS OF EVOLUTION TAKEN IN, THE STOREAGE OF UIGAELESSNESS IS ENRICHED, MAN'S EXPRSSION WAS ANOTHER PARTICULAR OF "ETERNITY", TO CONFRONT THE SEAL OF UNIVERSAL UNEFFERGENCY THE PERSISTENCY OF THE CAUSE OF MYSTERY

...the shaft at the center and the suspended (hinges and cables) ground-platform...
...casting procedure by horizontal layers ... silt as form media ...
This plan is a case of the cart before the horse. Not knowing the character of the horse, its capital energies, its reliability, one has nonetheless planned the best cart abstractly conceivable. Although the horse is not there yet, the journey is somewhat planned and the ground itself chosen.

More than a cart, it is a train capable of successive ‘extensions’. One single wagon will already make a useful instrument. With the horse power increasing, the carts and the loads will multiply.

The land:
It is a parcel of about 1 square mile, of which two-thirds is in the Prescott National Forest. The Forest surrounds it from the east, south and west as a natural barrier to the encroachment of ‘civilization’.

Topographically the land is isolated on the south and west side by deep canyons. On the north, the drop is about 300’ from the upper level of the land and the Little Ash Creek runs about 9 months a year towards the west and then in the canyon moving south. The parcel itself slopes gently toward the south starting from a convex (skyward) arch on the north rim.

The elevation of about 4100’ puts the land within the Arizona prairie belt. The spare grass is green after the winter and summer rains. The rest of the year it is evenly of the most beautiful pale gold.

The ground in the plateau is 60 percent or so loose rocks and stone. The soil is kept soft by the winter frosts. By forming an artificial lake in the Ash Creek bed, the rich soil thus excavated could be moved on the plateau to form the garden areas. The rocks dredged in suitable ditches and holes would constitute air wells for the growth of trees.
Plan view of model
wax crayon on paper and cardboard
The lake below, besides being a reliable source of water for the foundation, could be a good camping site.

The plan:
This specific plan results from the encounter of an idea with the described site broadly responding to its demands.

This encounter had to be consumed within a 'heavenly' determinant: if the cosmography governing the land was square, that is, if a square sun rising vertically on the straight horizon would describe a square orbit in the cubical sky, the scheme of the structure and its parts would be square. For our spherical (elliptical) cosmography the structural morphology, parts and all, is spherical (curved).

The reason for making such dependence is not far-fetched because in the foundation most of the activities are to be developed in sheltered but open spaces. To succeed in this, the main problem is to tame the sun by selecting those radiations that are 'kind' and rejecting those that are 'unkind'. Its curved trajectory demands curved 'traps'.

The movements of the sun in the sky:
The long, hot, horizontal, east and west intrusions, and the mid-day blasting vertically of summer, in winter its shorter and inclined warmth were causal in the choice of the two schemes adopted. One, a micro-structure sheltering individual or small group activities, is repetitively used.

The other, a macro-structure sheltering similar activities this time compactly grouped is used in three variations.

Very generically the micro-structures are 'vertically efficient'. The macro-structures are horizontally efficient. The first, like a hand sheltering
Micro-structure model
cardboard and plaster cast in silt
Micro-structure model
cardboard and plaster cast in silt
the lighted match; the other, as a two-hand bowl catching falling water (falling sunlight). The physiological similitude stops there, all structures being inscribed in elemental geometric configurations.

The micro-structure is an apse trapping (if open to the south) most of the winter sunshine projecting into it, slowly releasing it through the spring, cutting it out almost totally during the summer months, gradually recapturing it again with fall progressing . . .

The macro-structure is also producing a microclimate zone but more extensively than intensively. In this case, the climatic zones are indeed multiple but broadly divided into two groups; under the bowl is a shaded volume where coolness can be increased by vegetation and water. This volume is of the ground environment, crisscrossed by breezes and winds. It is rain sheltered. The winter sun will cut deep into it on the east-south-west sides.

Within the bowl is a wind-sheltered volume. A system of movable shading devices suspended to the structural cable system permits either shade for most of this volume or lets it be sun-bathed. Thus, in winter the bowl will be a great collector of sun energy. In summer, a vast shaded space.

Access gates between the pillars elliptically displayed to support the structure can be open (summer) or closed (winter) to accentuate the climatic advantages.

This upper volume is a man-made micro-environment sharply contrasting the surrounding nature. Polychromy will enhance the spatial complexity and further distinguish its man-made character from the quasi-monochromatic landscape (green and blue after the rains, pale yellow and blues most of the year).
Section through apse, suspended ground containing mobile dwelling units and earth houses (micro-structure),
wax crayon on paper

Section through bowl work area (macro-structure),
wax crayon on paper
Moving through the gates from one environment, clustered and finite, to the other, open and infinite, should be a momentous experience.

The two described basic schemes have to be now organized in a working complex. For the micro-structures this is done by coupling them back to back then repeating the coupling contiguously and developing it further tri-dimensionally on multiple levels: the elementary function-structure of the apse enriches into a multiple-purpose organism.

There is thus, a series of apsidal volumes: open on the south side for sheltered open-air workshops, a twin series facing north, open or glazed for optimum north light studios: good centers of work in winter as well as summer. Sandwiched in between the apses are two levels of passageways: one level of studios and classrooms and above a continuous suspended ground, where mobile dwelling units are located, for students and apprentices.

At the feet of the apses are earth houses for permanent residents.

Thus, this long structure has become a thoroughfare serving the whole community to which it is itself furnishing studios, workshops, dwellings, suspended gardens, etc. Furthermore, it envelops and shelters on the north side the ground that is to be transformed into a terraced garden reaching under the three macro-structures and closely following the contours of the land.

The relationship between all the facilities incorporated in the thoroughfare varies according to the axial orientation. This causes functional and visual changes.

Paolo Soleri

Detail from elevation wax crayon on paper
Co-editors: Keller Smith Jr., Reyhan Tansal
Business Manager: Wayland Plaster
Circulation Manager: James C. Posey
Faculty Advisor: Richard Saul Wurman

Staff: Intercollegiate Round Robin Exhibition: Roy Colquitt, Eugene Brown
John Kinney XII Annual Art Auction: Co-chairman Gary Giles, Gary Holland

Acknowledgements: The staff would like to thank Dean Henry L. Kamphoefner for his continued support and the secretaries of the School of Design for their invaluable help: Anne Craddock, Winifred Hodge, Elizabeth Pippin, Elizabeth Young.

For the support given to the issue, we are greatly indebted to:

<table>
<thead>
<tr>
<th>Joseph Courter</th>
<th>Galen Minah</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raymond Craun</td>
<td>Harold Ogburn</td>
</tr>
<tr>
<td>Hugh E. Haggett</td>
<td>Bert Oliveri</td>
</tr>
<tr>
<td>Gary Holland</td>
<td>Patsy Posey</td>
</tr>
<tr>
<td>Frank Hough</td>
<td>James Ross</td>
</tr>
</tbody>
</table>

Art Auction Contributors: For their generous contributions of art to the XII Annual Art Auction, we are greatly indebted to:

<table>
<thead>
<tr>
<th>Russell Arnold</th>
<th>R. Eugene Messick</th>
</tr>
</thead>
<tbody>
<tr>
<td>William J. Baron</td>
<td>Raymond Musselwhite</td>
</tr>
<tr>
<td>Jack Berkman</td>
<td>Cork Newman</td>
</tr>
<tr>
<td>George Bireline</td>
<td>William C. Nichols</td>
</tr>
<tr>
<td>Robert Brodersen</td>
<td>Morris Parker</td>
</tr>
<tr>
<td>Joan Conderet</td>
<td>James Ross</td>
</tr>
<tr>
<td>Joseph H. Cox</td>
<td>William Sewell</td>
</tr>
<tr>
<td>Fred Eichenberger</td>
<td>Brian Shawcroft</td>
</tr>
<tr>
<td>L. Evans</td>
<td>Anne K. Shields</td>
</tr>
<tr>
<td>Ligon Flynn</td>
<td>Marjorie Shiffman</td>
</tr>
<tr>
<td>Reingard K. Goethert</td>
<td>Joseph C. Sloane</td>
</tr>
<tr>
<td>Robert Howard</td>
<td>Duncan Stuart</td>
</tr>
<tr>
<td>L. V. Huggins</td>
<td>Wayne Taylor</td>
</tr>
<tr>
<td>Mary Anne Jenkins</td>
<td>Class of Dorothy Wurman</td>
</tr>
<tr>
<td>Louis I. Kahn</td>
<td>Richard Saul Wurman</td>
</tr>
</tbody>
</table>

Subscription rates:
Donor: $50 or more
Patron: $16 or more
Vol. 14 #1, 2, 3, 4 slipcased $8
Vol. 14 #5 Selected Writings and Buildings by Harwell Hamilton Harris $2

Annual subscription based on number of publications issued per year, $2 per issue.
Address all inquiries to: Student Publications of the School of Design, P. O. Box 5273, Raleigh, N. C.


Printed by: The Graphic Press, Inc., Raleigh, N. C.
The staff would like to express its appreciation to the following for their generous contributions:

donors:
(50 dollars or more)

Arts and Architecture Los Angeles, California
Pietro Belluschi Boston, Massachusetts
Joseph N. Boaz Raleigh, North Carolina
Leslie N. Boney Wilmington, North Carolina
James L. Brandt Raleigh, North Carolina
Alden B. Dow Associates Midland, Michigan
Rockwell King DuMoulin Washington, D.C.
Charles M. Goodman Washington, D.C.
Harwell Hamilton Harris Raleigh, North Carolina
Henry J. Heinz II Pittsburgh, Pennsylvania
Vincent Kling Philadelphia, Pennsylvania
E. Archie Mishkin Philadelphia, Pennsylvania
Walter A. Netsch, Jr. Chicago, Illinois
A. G. Odell, Jr. Charlotte, North Carolina
Department of Architecture,
Rice University Houston, Texas
James M. Strutt Ottawa, Canada
Student Government
   N. C. State Raleigh, North Carolina
Student Supply Stores,
   N. C. State Raleigh, North Carolina
Kenzo Tange Tokyo, Japan
M. L. Wurman Philadelphia, Pennsylvania

For the donation of the printing of the Le Corbusier color insert we especially thank the Litho Craft division of Autokraft Box Corp. York, Pennsylvania

patrons:
(16 dollars or more)

Frei Otto Berlin, Germany
Henry Robert Kann New York, New York
G. E. Kidder Smith New York, New York
Dale M. Wiars Milwaukee, Wisconsin

For their past financial support we thank Wallace K. Harrison and Edgar J. Kaufmann Jr.