CONCEPTION OF PROJECT:

DEFINE GREEN BUILDING...
SUSTAINABLE SOCIETY.

- NATURAL STEP -- SEE VIDEO "COMPLETING THE CAMPUS"
- GUIDING PRINCIPLES OF SUSTAINABLE DESIGN BY NATIONAL PARK SERVICE
- WORLD WATCH INSTITUTE REPORT ON PROGRESS TOWARD A SUSTAINABLE SOCIETY
  STATE OF THE WORLD 1999, MILLENIAL EDITION

PRE PROGRAMMING:

- FIND EXAMPLES OF GREEN BUILDINGS OF A SIMILAR FUNCTION
- PRECEDENTS -- TABLE OF DESIGN CRITERIA & ACTUAL PERFORMANCE
  - REGIONAL PLANNING ISSUES
  - SITE PLANNING
  - RESOURCE EFFICIENCY
  - ENERGY CONSERVATION
  - DAYLIGHTING
  - RESOURCE EFFICIENT BLDG. MATERIALS
  - INDOOR HEALTH ISSUES

PROGRAMMING:

PROJECT GOALS, FUNCTIONAL REQUIREMENTS, DESIGN CRITERIA, BUDGET AND SCHEDULE

- BRAINSTORMING SESSIONS TO GET EVERYONE TO PULL IN THE SAME DIRECTION
  - ALL DECISION MAKERS PRESENT FOR CONSENSUS BUILDING MEETINGS
  - FULL DESIGN TEAM AND CONTRACTOR PRESENT
- ESTABLISH DESIGN CRITERIA
- ESTABLISH PERFORMANCE GOALS

This is the text of the slides presented by George Beeler of AIM Associates, Petaluma, CA 707-763-3300 aimassocia@metro.net "A Case Study of the Environmental Technology Center at Sonoma State University" on 8 October 1999 at the National Sustainable Buildings Workshopbn Center for Sustainable Systems (CSS) University of Michigan, Ann Arbor, MI

INTEGRATED DESIGN TEAM PROCESS: IT IS SYNERGISTIC

- EVERY COMPONENT IS EVALUATED FOR ITS EFFECTS ON THE WHOLE
- HOW EACH WILL EFFECT THE BUILDING'S
  - FUNCTIONAL USE
  - PRODUCTIVITY OF OCCUPANTS
  - OPERATIONS AND MAINTENANCE
  - ENERGY PERFORMANCE
  - INDOOR HEALTH
  - LOCAL ECOLOGY
  - AESTHETIC RESPONSE, ETC.

PERFORMANCE SIMULATIONS:

CHALLENGE ARCHITECT & ENGINEERS:
TEST ALTERNATIVE DESIGN CONCEPTS

- COMPUTER SIMULATIONS OF ENERGY USE AND DAYLIGHTING.
- SCALE MODEL FOR DAYLIGHTING TEST AT PG & E ENERGY CENTER.
- SCALE MODEL FOR WIND TUNNEL TESTING FOR NATURAL VENTILATION.

GOOD MANAGEMENT COMBINES NURTURING AND NUDGING: PEER REVIEW

MATERIAL SELECTION CRITERIA

1 AVOID LOSS OF BIODIVERSITY, HABITAT ALTERATION, STRATOSPHERIC OZONE DEPLETION, & GLOBAL CLIMATE CHANGE.

2 USE PRODUCTS MADE FROM, WITH & PACKAGED WITH RENEWABLE RESOURCES OBTAINED IN A SUSTAINABLE MANOR.

3 USE PRODUCTS THAT CONSERVE RESOURCES; THAT IS REUSED, RECYCLED, USES BY PRODUCTS, USES FASTER GROWING SPECIES OF WOOD, FROM SUSTAINABLE FORESTS, FROM SUSTAINABLE AGRICULTURAL PRACTICES, ETC.

4 IS PRODUCT LESS TOXIC IN MINING, MANUFACTURING, INSTALLATION, USE & MAINTENANCE.

5 IS PRODUCT DURABLE, LOW MAINTENANCE, NOT NEED PAINTING OR COATINGS. CONSIDER LIFE CYCLE COST AND LONGEVITY. CONSIDER WEATHER, FIRE, VERMIN, SEISMIC, & WIND RESISTANCE

6 USE PRODUCTS THAT ARE VERY EFFICIENT IN USE OF ELECTRICITY, PETROLEUM, WATER, ETC. LOW EMBODIED ENERGY OVERALL; CONSIDER TRANSPORTATION.

7 ARE COMPONENTS REUSABLE, RECYCLABLE OR AT LEAST BIODEGRADABLE. CONSIDER DECONSTRUCTION ISSUES.

8 USE SOCIALLY RESPONSIBLE CRITERIA IN SELECTION OF DESIGNERS, SUPPLIERS & CONTRACTORS.