HAWAII LTAP

http://hltap.eng.hawaii.edu

Workshop sponsored by the:

Hawaii Local Technical Assistance Program
in cooperation with the
Hawaii State Department of Transportation,
University of Hawaii's Department of Civil & Environmental Engineering
and the Federal Highway Administration

Registration Procedure

1. Please contact Gail Ikeda at 808-956-8367, 808-956-8851 (FAX) or gikeda@hawaii.edu by ***Monday, October 27, 2008.***
2. Attendance is limited to 40 participants, and preference is given to local government employees.
3. Private company participation is on a space available basis at a fee of $525.

Parking

Parking passes are available to purchase for $2/day ($6 total). Parking is available at the Hawai'i Tokai International College 4th & 5th floors. If you would like a parking pass please contact us by October 27, 2008.

Payment Method

Payment for parking pass(es) may be combined with registration fees. Payment can be made via Check – payable to the Research Corporation of the University of Hawaii (RCUH), Purchase Order, Credit Card (Visa & MasterCard) or Purchasing Card. Please mail payments to:

Hawaii LTAP
University of Hawaii at Manoa
Dept. of Civil & Environmental Engineering
2540 Dole Street, Holmes Hall 383
Honolulu, HI 96822

Cancellations

Please contact us if you must cancel your registration or if someone will be substituting for you. Refunds will be made if notice is received at least 3 workdays prior to the workshop date.

Urban Drainage Design

Hawai'i Tokai International College,
Room 802
2241 Kapi'olani Blvd.
Honolulu, Hawaii

November 5—7, 2008
8:00 a.m.—4:30 p.m.

Registration begins at 7:30 a.m.
Lunch is not provided.

Hawaii Local Technical Assistance Program
University of Hawaii at Manoa
Department of Civil & Environmental Engineering
2540 Dole Street, Holmes Hall #383
Honolulu, Hawaii 96822

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Course Description:

This course provides a detailed introduction to urban roadway drainage design. Design guidance for solving basic problems encountered in urban roadway drainage design is provided. The topics are hydrology including rational equation, soil conservation method, regression equations, and synthetic hydrographs; and highway drainage including gutter flow, roadway inlet interception, storm drain systems, energy and hydraulic grade lines, detention ponds, and stormwater management.

Course Outcomes:

Upon completion of the course, participants will be able to:

- Determine runoff (peak flows and volumes) from urban watersheds
- Apply basic hydraulic principles to urban drainage design
- Perform roadway drainage designs using various roadway inlets
- Size and/or analyze storm drain conveyance systems
- Establish the energy and hydraulic grade lines for storm drains
- Design and/or analyze detention basins
- Perform hydraulic design of pumping stations (with optional day four)

Target Audience:

Highway designers with limited experience in drainage design, but familiar with mathematical concepts such as algebra and geometry and have some working background in hydrology and hydraulics.

Instructors:

Dr. Jim Ruff
Dr. Jim Ruff is a registered Professional Engineer in Colorado and Wyoming. His Ph.D. is from M.I.T, and he spent 30 years as a civil engineering professor at Colorado State University. He was also a Vice-President in a civil engineering consulting firm. Design and construction management experience includes a wide variety of highways, bridges, dams, pipelines, canals, river diversions, and bank stabilization. He wrote and produced a number of FHWA training films, including "Energy Dissipators for Highway Structures," and is a frequent NHI instructor for the Urban Drainage, Culvert and Introduction to Highway Hydraulics training courses.

Dr. Jim Schall
Dr. Jim Schall is a registered Professional Engineer in Colorado, Nevada and California, and has 30 years as a practicing consulting engineer specializing in water resources. Highway and urban drainage design experience includes large storm drainage systems, detention pond design, stable channel design and culvert crossings. He is the senior author for HDS-4, Introduction to Highway Hydraulics, and a certified National Highway Institute Instructor for six popular Federal Highway Administration short courses (Urban Drainage Design, Culvert Design, Introduction to Highway Hydraulics, Scour and Stream Stability, Countermeasure Design, and River Engineering for Highway Encroachments).