

## FAA Air Traffic Test Saves Fuel, Time and Money

Everyone came out ahead in a test conducted by the Federal Aviation Administration early in January.

The airlines saved money, the nation saved aircraft fuel, and air travelers bound for Chicago were spared the annoyance of being stacked in an air traffic pattern.

This happy state of affairs prevailed when high winds forced the closing of several runways at Chicago's O'Hare International Airport and the FAA put into operation its fuel advisory (FAD) procedure.

The January 7 test run of FAD involved holding Chicago-bound flights on the ground at some 150 airports around the country until they could be accepted at O'Hare with a minimum of airborne delay.

FAA's air traffic control systems command center in the agency's Washington headquarters metered the flow. O'Hare, the world's busiest airport, was picked for the test because landing delays there can back up traffic throughout the air traffic control system.

Airborne delays on January 7 were compared with delay figures for January 13, a day when heavy snows caused a similar reduction in O'Hare's capacity but the new energy conservation system was not in effect. Aircraft were not held on the ground on the 13th until the air traffic control system reached saturation.

By comparing the time aircraft spent holding on the ground and in the air on each day, FAA concluded that the test procedure had saved 658,446 gallons of jet fuel.

At an average cost of 30 cents a gallon, this constituted a saving of \$197,534.

### Timely Topic

In case you weren't paying attention, there has been a change in the daylight saving time rules.

No change, really. Everything is back the way it used to be—six months of daylight saving time, and six months of standard time.

Clocks will be moved ahead one hour at 2 a.m. on the last Sunday in April, and moved back one hour at 2 a.m. on the last Sunday in October.



Secretary of Transportation William T. Coleman, Jr., swears in David W. Oberlin for his second term as St. Lawrence Seaway Development Corporation Administrator. Oberlin has held the post since August, 1969. Looking on is Mrs. Oberlin.

### Tourists, Residents to Benefit

## DOT Has Major Role in Bicentennial Plans

No matter how they travel—by road, rail, or air—the millions of tourists expected to visit Washington this Bicentennial year will find the way made easier by the Department of Transportation.

So will the residents of the Washington metropolitan area.

This is the substance of a statement delivered by DOT Deputy Under Secretary Theodore G. Lutz before a House District Subcommittee.

As an example, Mr. Lutz cited a recent Urban Mass Transportation Administration (UMTA) demonstration grant of \$7.5 million to the Washington Metropolitan Area Transit Authority for management and operation of special Bicentennial parking lots and Metro-

buses.

(Details on this grant are elsewhere in this issue of DOT News.)

Part of this \$7.5 million will be used to operate the transportation information and hotel referral system at the National Visitor's Center at Union Station. The center is scheduled to open July 4.

In addition, UMTA has awarded a grant to the D.C. Department of Transportation for construction of bus ramps and a bus terminal area in the Visitors Center parking garage.

Additional support for the Center includes Federal Highway Administration (FHWA) funds for construction of the

## UMTA, D.C., Parking, Bus Plans Will Keep Bicen Visitors Moving

For the 17 million tourists expected to visit Washington this Bicentennial year getting around the city, and to and from fringe parking areas will not be that much of a hassle.

Making the difference is a \$7.5 million grant from the Urban Mass Transportation Administration to the Washington Metropolitan Area Transit Authority to operate and manage a broad Bicentennial transportation program.

The program includes visitor fringe parking lots at two close-in locations, express Metro bus service over 17 major radial routes, and a comprehensive advertising and informational program describing the special Bicentennial year transit service.

Special Bicentennial parking lots will be established at the RFK stadium, where 6,000 vehicles can be accommodated, and the Pentagon North lot which has space for 1,200 vehicles on weekdays and 4,000 on weekends and holidays.

A temporary new lot at the old Ft. Myer South Post will have a capacity of 4,000 spaces. Overall, there will be 11,200 spaces during weekdays and more than 15,000 spaces on weekends and holidays.

Metrobus service will be provided from the RFK stadium and the Pentagon lot every three minutes. A four-part round trip ticket will be sold at kiosks at these lots.

The adult fare is \$1.50. For each adult fare purchased, a free pass for children and young adults to age 18 will be provided. Children's tickets to age 12 will be 75 cents. Children age six and under ride free.

This four-part ticket can also be used for round trip service on any of the special express buses within 17 radial corridors

(See BICENTENNIAL, p. 2)

(See BUSES, p. 4)

## McLucas Names Ziegler, Cardinali to Key FAA Positions

Federal Aviation Administrator John L. McLucas has appointed Robert O. Ziegler director of the agency's Pacific-Asia Region, and Louis J. Cardinali, Jr., deputy director of the Eastern Region.

Ziegler, who has 30 years of government aviation experience, served for nearly five years as deputy director of the Great Lakes Region prior to his new appointment.

As director of the Pacific-Asia Region with headquarters in Honolulu, he will supervise U.S. aviation operations and activities over a 12-million square mile area of the Pacific.

He will also be responsible for more than 1,000 employees and 25 facilities. The region has field offices in Guam, Samoa, and Japan.

Ziegler began his career in 1946 as an air traffic controller at Chicago's Midway Airport



Robert O. Ziegler

and within seven years became chief of that facility. From 1953 to 1965 he held air traffic supervisory positions in the FAA Washington headquarters and Central Region headquarters in Kansas City, Mo.

In 1965 he was named chief of the Central Region's air



Louis J. Cardinali, Jr.

traffic division. Two years later he became manager of the Minneapolis Area Office. In 1971 he was appointed deputy director of the Great Lakes Region.

Cardinali has been chief of the airports division of FAA's Eastern Region since 1973.

As deputy director of the Eastern Region he will share responsibility for supervising FAA operations in seven states—Pennsylvania, New Jersey, New York, Delaware, Maryland, Virginia and West Virginia—as well as the District of Columbia.

The Region includes more than 6,400 FAA employees in 140 field facilities.

Cardinali's FAA career began in 1950 as an electronics engineer in the airways facilities division of the Eastern Region. In 1963 he was named assistant chief of the systems maintenance division of the Eastern Region and later, assistant manager of the New York Area office.

From 1969 to 1973 Cardinali served as appraisal officer for the Eastern Region director. He became chief of the airports division of the Eastern Region in 1973.



Henry Bessler, Transportation Systems Center, Cambridge, Mass., evaluating a tire casing using the ultrasonic inspection system developed by the Office of Vehicle Safety Research of NHTSA.

## NHTSA Develops 2-Minute Tire Test

Americans this year will buy about 35 million retreaded tires for their cars, and truck operators will be in the market for nearly 12 million retreads for their trucks.

The National Highway Traffic Safety Administration has developed a two-minute ultrasonic test which will enable retreaders to select sound tire casings to assure longer-lasting and safer recycled tires.

The new technique is an outgrowth of efforts to develop improved instrumentation for safety checks on tires at inspection stations and also possible

regulation of retread tires to meet new safety standards.

More than four years of work by NHTSA's Office of Vehicle Safety Research went into the system design.

In less than two minutes the ultrasonic test device can examine a tire casing, finding separations, belt breaks, misalignments, and nail holes. Tests on more than 100 tires of all construction types in 14"-15" sizes and various makers, indicate that eventual mechanical improvements can be made that will reduce this inspection time to less than a minute.

## Hatch Act: Do's & Don'ts for Federal Workers

In a presidential election year DOT employees should remember the Hatch Act which prohibits partisan political activity by federal workers in primary and general elections.

A general list of acceptable and unacceptable election practices follows. More specific information or an answer to a question can be obtained from your personnel office.

Federal employees may:

- register and vote as they choose;
- assist in general voter registration drives;
- express their opinions about candidates and issues;

- participate in campaigns where none of the candidates represents a political party;

- contribute money to a political organization or attend a political fund-raising function;

- wear or display political badges, buttons, or stickers, and attend political rallies, meetings and conventions;

- join a political club or party or sign nominating petitions;

- serve as an election clerk or judge to perform nonpartisan duties as defined by state or local law.

Federal employees may not:

- campaign for partisan candidates or political parties;

## Patton Appointed To OST Staff Job

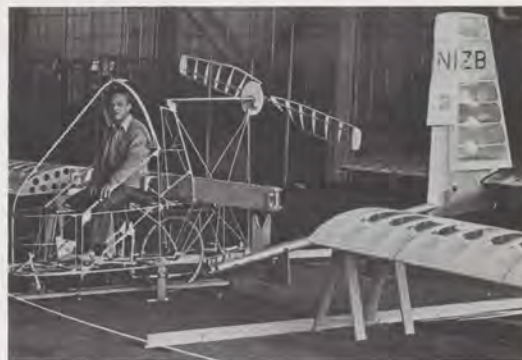
John W. Patton has been named Director of Intergovernmental Affairs for the Department of Transportation.

Patton's office provides the channel of communication between the Secretary and state and local governments. He coordinates at those levels announcements of policy changes, proposed legislation, relocation or termination of facilities, grants and contract awards.

A self-employed businessman in Sheridan, Wyo., Patton served 10 years in the Wyoming legislature. For the past three years he has been director of operations for Legis 50—the Center for Legislative Improvement in Denver.

In that position he was responsible for the organization's field programs, including those in legislative improvement, health, and drug abuse and alcoholism.

Patton served four years in the Wyoming House of Representatives and six years in the Senate. In the upper chamber he chaired the committees on health, education and welfare; judiciary; and joint legislative management.



The Federal Aviation Administration's New England Engineering Manufacturing District Office in Windsor, Conn., has given Joe Zinno the okay to attempt to fly his homemade pedal-powered plane. Zinno, a retired Air Force heavy transport pilot, designed and built the plane himself. (Photo: David Gustafson, Rhode Island College.)

## Pedal Power Pioneer

### FAA Certificates 1-Manpower Plane

Joe Zinno, a retired Air Force pilot with thousands of flying hours, is going back to the basics of flight. All the way back.

And he has received the blessings and well-wishes of the Federal Aviation Administration to do so.

Lt. Colonel Zinno, a former C-141 aircraft commander accustomed to having 84,000 horsepower at his finger tips, has been granted permission by the FAA to fly his pedal-powered home-built plane just as soon as he is ready, which will be soon. The experimental airworthiness certificate was issued by Ray Morin of FAA's New England Engineering Manufacturing District Office in Windsor, Conn. Morin says the tiny 150-pound plane has an excellent chance of flying. "It is soundly designed and extremely well-made," Morin says.

Morin describes the plane as being 21½ feet long, with a

wingspread of 78 feet. A modified bicycle frame with the front wheel removed provides the central structure and the anchor point for the pedals, which move up and down. One manpower is transmitted to an 8½-foot variable pitch propeller.

Aluminum tubing, thin enough to be bent by a child, and light steel make up the rest of the fuselage frame. In order to keep within the weight limit, Colonel Zinno has made extensive use of balsa wood and has covered the airframe with clear mylar plastic.

If the colonel succeeds in getting off the ground, he will be the first person in the U.S. to fly under his own power.

If he is able to fly a mile around a figure-eight course around two pylons, he wins the \$100,000 prize of long standing offered by British Industrialist Henry Kremer.

## BICENTENNIAL—*from page one*

along the 17 major Bicentennial express bus routes.

In addition, action will be taken to ban private automobile parking in the downtown/Mall area and to make those areas available to tour and charter buses. Plans include additional signals at intersections near the Mall, creation of taxi pickup zones and establishment of areas for limousine service.

The Federal Aviation Administration (FAA) has established visitors information booth at Washington National Airport and at Dulles International Air-

port. The booths will be staffed by Travelers Aid at National and by the International Visitors Service Council at Dulles.

The FAA has also made special efforts to upgrade the international area at Dulles. Included are international travel symbol signs and improvement of the automated customs inspection procedure.

The Washington, D.C. program is a part of the total DOT Bicentennial participation which has funded 43 projects at a total cost of \$68.3 million.



Outgoing president of the DOT chapter of the Toastmasters Club Norb Zucker, left, presents his gavel to the club's new president, Flynn Wells. Other newly elected club officers are, from left: administrative vice president, Robin Gaither; educational vice president, Debbie Parker; editor, Linda Sano; sergeant-at-arms, Al Lopez; and area governor, Steve Lesiak. For details on club activities call Norb Zucker, x61568.

## Double up, America.



Two can ride cheaper than one.

Ad Council  
A Public Service of  
This Newspaper & The Advertising Council

DOT NEWS, the official employee publication of the U.S. Department of Transportation, is prepared by the Publications Division, Office of Public Affairs, DOT. Articles of general interest should be submitted directly to: The Editor, DOT NEWS, U.S. Department of Transportation (S-81), 400 Seventh Street, SW, Washington, D.C. 20590. Phone 202-426-4321. Unsolicited manuscripts, photos, or art work will not be returned unless specifically requested.

Secretary of Transportation ..... William T. Coleman, Jr.  
Assistant to the Secretary  
and Director of Public Affairs ..... C. Ramon Greenwood  
Assistant Director of Public Affairs,  
News and Information Services ..... James L. Stafford  
Editor ..... Frank J. Clifford

## Signs and Symbols

### Communicating without Words

"The ancient Chinese were right when they said a picture is worth 10,000 words. Long before there were words there were signs and symbols," says James D. Spart, chief of the graphics branch of the Department of Transportation's publishing and graphics division.

Signs and symbols, Spart's stock in trade, speak an international language. With no words, or with a minimum of words, they can warn of danger, make travel easier, speed vehicle and pedestrian traffic, and simplify complex technical data.

Spart's office and studio takes up about 5,000 of the 12,000 square feet available on the plaza level at the northwest corner of the Headquarters building. The remaining space is occupied by the DOT Information Center, itself a stunning example of graphics in action.

The DOT graphics branch is one of the few in the government which is centralized, providing services to all of the administrations within the department. While some DOT agencies still operate small graphics sections, the bulk of the department's illustrative work is handled by Spart's shop.

#### \$1 Million Annually

It is a big operation, involving some 5,500 jobs a year, almost 3,500 of which are done on the premises. The remainder is contracted out to graphics firms in the Washington area.

The price tag on the work flowing through the graphics branch exceeds \$1 million a year, and is growing.

For this money the department has access to the full range of modern visual art, from simple hand-lettered signs and placards, through engraving, plaques and medals, to full-scale audio-visual shows.

In the major job category is the three-volume "Rail Service in the Mid-West and Northeast Region" publication.

The production of these three books, which contain a detailed program for drastic restructuring of rail service, called for a joint effort with the Federal Railroad Administration, graphics branch, and a commercial graphics contractor to produce the art required for printing in less than 60 days.

The magnitude of the job becomes apparent when the specifications are examined. Each three-volume set totaled 900 pages, plus more than 800 maps. Most of the maps were done in three or four colors.

Another major job in preparation is the "National Transportation Plan", a book of huge

dimensions which will contain the first comprehensive atlas ever published in the United States showing all modes of transportation in the nation.

To be printed in 10 colors, the book will include text, illustrations of transportation vehicles, and maps delineating railroad lines, pipelines, waterways, major highways, airports and marine facilities.

In format it will be similar to the U.S. National Atlas which took the Department of Interior six years to produce.

The graphics branch has a full-time staff of 21, of which 19 are professional workers in the graphics arts, plus 10 part-time assistant illustrators who are art students in local colleges and technical institutes.

With this kind of staffing the graphics branch feels that no job is too small or so large they can't provide the services to produce it.

But when the volume of work exceeds the capacity of the studio, commercial art firms are called in to keep production on schedule by taking the overflow.

Like other government art directors, Spart can draw from a list of more than 400 graphics contractors compiled by the General Services Administration.

Generally, there are three to five bid sessions a week, but to meet sudden high-priority demands, contractor representatives can be assembled within an hour of a call from graphics.

#### Shirtsleeve Sessions

The bid sessions are highly informal, with as few as two or as many as five participants. Bidders generally know each other and conversation is brief and noncommittal. The business "talk" is silent, done with a pencil and pad.

Richard Keen, chief of planning, or one of his assistants, opens the session by concisely describing the job and deadlines. A few terse questions while bidders consult pocket memorandum, make covert calculations, and scribble dollar amounts on bid slips.

Low bidder gets the job. No quibbling. And the next job is offered for bid. A \$1,500 job can be awarded in less than three minutes. All jobs over this amount are bid out by graphics through the OST procurement office.

"We demand the best in graphics, whether it is done right here in our own studio or elsewhere," says Spart. "After all, our graphics are the windows through which DOT is seen."



Artists in the DOT graphics branch convert concepts, crude author's sketches, and gray columns of statistics into bright, easily understood charts, graphs, and illustrations.



Production supervisor Marion K. Vaughn (left) keeps track of the jobs as they move from the initial work order to finished product. Illustrator Charles W. Allen applies the final touches to a poster.



Assistant branch chief Richard Keen (standing, left) and illustrator Mike Lodor explain specifics of a job to three representatives of a commercial graphics firm during a bidding session. DOT graphics branch has access to more than 400 graphics contractors in the Washington area.

## The Commandant Reports

# New Goals, Tasks for the Coast Guard

Admiral Owen W. Siler was appointed Commandant of the Coast Guard June 1, 1974. Following his graduation from the Coast Guard Academy in 1943 he served in the Pacific in World War II, participating in the invasion of Bougainville. He took part in the occupation of Northern Honshu, Japan, following the Japanese surrender. After the war he became a Coast Guard pilot. He has served in Washington, D.C., Juneau, Alaska, and Miami in a variety of duties.

### Is the Coast Guard having any problems in meeting its recruiting goals?

I'm happy to say that in the past 12 months we have made 100 per cent of our quota in recruiting and that we have approximately 2,500 qualified applicants on our waiting list.

### How is the Coast Guard progressing in its minority recruitment program for enlisted personnel, officers and Academy cadets?

Last year showed significant progress. Thirteen per cent of enlistments during 1975 were minorities. The rate for the last six months was 17.4 per cent. By the end of 1975 approximately 11.1 per cent of the Coast Guard enlisted force was minorities.

However, we have a long way to go in the officer minority recruitment program. Only 4.5 per cent of officers commissioned in 1975 were in that category. But this was an improvement over our 2.1 per cent figure for 1974. About three per cent of all Coast Guard officers on active duty are minorities.

We had a cadet population composed of 7.8 per cent minorities at the end of 1975 compared to 5.4 per cent at the end of 1974. I think our success at the Academy is due to our sponsor program, the use of black Academy graduates for high school visitations, and Academy familiarization visits for minority appointees.

### How many women are now in the Coast Guard in each of the various categories?

We are admitting women in increasing numbers. We now have 33 active duty women officers, 391 active duty enlisted, 40 ready and standby reserve officers, and 934 ready and standby reserve enlisted.

This year for the first time we began accepting applications from women to attend the Academy. Of the total 9,995 applications, 690 were from women. We expect that 20 to 30 will qualify—three have already been offered appointments.



### Do you plan to send women to sea?

We have no plans to send women to sea or on isolated duty, but women cadets will train with their male counterparts at sea on the sail training barque *Eagle*.

### Have new programs recently been opened to women?

We have opened our aviation program to officer and enlisted women. One woman officer is already in flight school at Pensacola, Fla., and another has been selected. In addition, all enlisted aviation ratings are now open to women.

### What progress has the Coast Guard made in the development of new equipment for pollution surveillance and enforcement?

We've had good results from our testing of the Airborne Oil Surveillance System (AOSS), and recently we successfully identified our first polluter using Forensic Analysis System (FAS), commonly called the oil fingerprinting method.

### How does the oil fingerprinting method identify suspected polluters?

We compare samples of the oil taken from the spill site with samples taken from cargo tanks. This can become an extensive undertaking, as it was when we were able to identify the vessel responsible for a major spill off the Florida Keys last summer.

Our inspection teams boarded tankers from Maine to the Gulf Coast before we finally identified the ship responsible. The samples were taken to our research and development center in Groton, Conn. for the comparison tests. This method is considered 99.9 per cent accurate.

oil spills at night, and in reduced visibility.

AOSS has also demonstrated its value in such areas as search and rescue and enforcement of laws and treaties.

### With the recent commissioning of the *Polar Star* and planned commissioning of the *Polar Sea*, how many icebreakers do you now have and where are they located?

With the expected commissioning of the *Polar Sea* in late 1976, we will have six icebreakers in commissioned status. The *Northwind* in Baltimore, *Westwind* in Milwaukee, *Glacier* in Long Beach, Calif., *Mackinaw* in Cheboygan, Mich., and the *Polar Star* and *Polar Sea* in Seattle.

### Why is the Coast Guard an administration under the Department of Transportation?

The Coast Guard was transferred to the Department of Transportation when the department was established in 1967. Prior to that we were a part of the Treasury Department for 177 years.

Many of the Coast Guard's peacetime missions are transportation oriented: boating safety, maintenance of navigation aids, merchant marine safety, to name a few. With these responsibilities it was natural that we be included in the new department.

### How is the Coast Guard involved in the development of deepwater ports?

The Coast Guard took an active role in the development of deepwater ports six months

before the President signed the Deepwater Ports Act in 1974, when we established our Deepwater Ports Project Office.

We have been involved in the rulemaking process, issuing final regulations governing ownership, construction and operation of deepwater ports. We also are responsible for processing license applications.

### What is the status of deepwater ports?

On Jan. 21, 1976, the Coast Guard accepted applications from two groups interested in owning, building and operating deepwater ports in the Gulf of Mexico off the coasts of Louisiana and Texas. If licenses are issued, construction could begin in early 1977, with operation possible by 1979.

## BUSES—*from page one*

throughout the region. Service will be provided at a frequency of a bus every 30 minutes.

The fare will be 75 cents from suburban Maryland and Virginia and 50 cents within the District one way.

The terminal for this service is located at 9th and 10th Streets between Pennsylvania and Constitution Avenues.

Robert E. Patrielli, administrator of the Urban Mass Transportation Administration said, "The program is expected to prevent serious traffic congestion and parking problems. It will also demonstrate the feasibility of convenient and reliable mass transit service for sight-seeing and recreation."

### Does the Coast Guard have the ability to do this elsewhere along the East Coast?

In addition to the total system in Groton, we have partial systems in South Portland, Me., New York, and Philadelphia. These systems are 90 per cent accurate. We plan additional installations in fiscal years '76 and '77.

### What is the status of the AOSS?

A recently completed six month operational test of AOSS aboard a HU-16 *Albatross* on the West Coast has shown it to be highly successful in locating

## Spinning Wheels

# 5,000-Year-Old 'New' Idea Moves N.Y. Subway Cars

Two flywheel-driven, energy-storing subway cars developed under an Urban Mass Transportation Administration (UMTA) research and development project, are now hauling passenger cars on New York City transit lines.

Basic to the idea is the flywheel, a 5,000-year-old mechanical concept first used to maintain constant speed in potter's wheels. It could be the key that unlocks a new transportation energy source.

Each of the two subway cars in the test project has been fitted with two flywheel mechanisms that can conserve about one-third the normal electrical energy used.

During braking, energy normally dissipated in heat now "spins-up" the flywheels. The energy

thus stored is then used during acceleration, reducing the peak power demand from the electrified third rail.

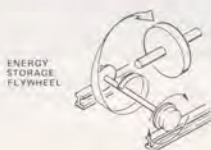
The transit authority estimates that incorporation of this feature throughout its 6,700-car fleet would result in energy savings of \$20 million annually.

In addition to saving energy, the system also has a safety advantage. If third rail power is cut for any reason, the flywheel-driven cars would be able to travel up to several miles, using the stored energy, to discharge passengers safely at the nearest station.

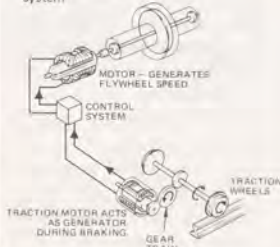
The stored-energy package was developed by Garrett Corporation's AIRsearch manufacturing division under a \$1.26-million UMTA grant.

### WHAT THE SYSTEM DOES

1. It recovers energy generated by subway car braking



2. It returns this energy to the onboard storage system



3. Using this energy, augmented by third rail electrical power, the subway car moves to the next station

