

RSPA-84-6



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

Transportation
Systems Center

FY 1983 DOT Awards to Academic Institutions

August 1984

DOT-TSC-RSPA-84-6

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University Research and
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16. Abstract This report is a comprehensive listing of contracts and grants awarded by the U. S. Department of Transportation to colleges and universities during the fiscal year 1983. <p style="text-align: center;"><u>TABLE OF CONTENTS</u></p> Summary of Contract/Grant Awards to Universities SECTION I - Awards by agency within DOT and by university SECTION II - Awards by university and title of the contract/grant SECTION III - Awards by state and university		13. Type of Report and Period Covered Comprehensive Listing Fiscal Year 1983	
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Cambridge, Massachusetts 02142

The Department of Transportation recognizes the innovative capabilities and professional expertise of the nation's academic community as a critical resource in addressing transportation-related problems and policies at the local, state, regional and national levels. In addition to funding transportation research and training, the Department convenes representatives of academia, industry, and government in university-based seminars to enhance understanding of technical and socio-economic issues and opportunities in all modes of transportation.

This publication, prepared annually by the Transportation Systems Center, University Research and Technology Innovation Office, summarizes the Department's contracts and grants awarded to colleges and universities during the fiscal year 1983. Total obligations amounted to more than \$33 million, including approximately \$3 million of indirect highway-related R&D funding to universities via state governments and other agencies. Details of these awards are contained herein as noted in the table of contents. Inquiries concerning additional information may be directed to the University Research and Technology Innovation Office.

We believe that the academic community, through the Department's research and training programs, is making significant contributions to improving the safety, economics and efficiency of the nation's transportation system.



Robert J. Bavera
Acting Director

DEPARTMENT OF TRANSPORTATION
SUMMARY OF CONTRACT/GRANT AWARDS TO UNIVERSITIES

Fiscal Year Obligations in Thousands

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
USCG	\$ 1,445	\$ 651	\$ 1,022	\$ 758	\$ 621	\$ 633	\$ 614	\$ 558	\$ 373	\$ 600	\$ 75	\$ 495
FAA	1,966	736	3,432	3,806	3,199	2,863	2,864	3,036	2,601	2,762	13,677	16,659
FHWA	1,438	2,283	3,979	2,706	7,127	10,993	10,102	9,128	9,282	9,562	6,645	7,275
FRA	589	719	328	795	2,018	887	309	477	258	147	20	-0-
NHTSA	3,515	4,408	4,497	5,029	4,940	6,961	6,334	3,651	3,145	3,613	2,057	2,473
UMTA	3,898	3,610	3,750	2,426	3,197	2,851	3,497	2,681	2,271	1,872	2,046	1,507
MARAD	---	---	---	---	---	---	---	---	---	---	288	530
RSPA	582	3,045	4,311	7,367	4,813	3,581	4,152	5,218	4,862	4,368	2,675	4,578
Totals	\$13,433	\$15,452	\$21,299	\$22,887	\$25,887	\$28,769	\$27,872	\$24,749	22,792	\$22,924	\$27,483	\$33,517

NOTE: Fiscal Year 1983 data for the Federal Highway Administration include direct obligations of \$4,268,530 and \$3,006,733 indirect highway-related R&D funding to universities via state governments and other agencies.

SECTION

I

AWARDS BY AGENCY
WITHIN DOT
AND BY UNIVERSITY

UNITED STATES COAST GUARD

University	City	State	Contract Number	Contract Amount	Short Contract Title
Arkansas, University of	Fayetteville	AR	DTCG2380-C-20029	\$45,137	R&D
Dartmouth College	Hanover	NH	DTCG-60-79-1948	208,328	ADP Timesharing Service
George Mason University	Fairfax	VA	DTCG2383-D-32042	11,340	Tuition fees
Massachusetts Institute of Technology	Cambridge	MA	DTCG2383-F-09102	29,900	Tuition fees
New York University	New York	NY	DTCG2382-F-01297 DTCG2382-F-05338	24,030 13,300 <u>37,330</u>	Tuition fees Tuition fees
Oregon Institute of Technology	Klamath Falls	OR	DTCG2382-F-01297	3,580	Tuition fees
South Alabama, University of	Mobile	AL	DTCG3983-C-00770	27,455	Lodging
Webb Institute of Naval Architecture	Glen Cove	NY	DTCG2382-C-20016	111,582	R&D - slosh loads

UNITED STATES COAST GUARD

- **TOTAL**

\$494,652

FEDERAL HIGHWAY ADMINISTRATION - INDIRECT OBLIGATIONS - HP&R/NCHRP FUNDS

<i>University</i>	<i>City</i>	<i>State</i>	<i>Contract Amount</i>	<i>Short Contract Title</i>
Arizona State University	Tempe	AZ	\$30,000	Left turn signal warrants
Arizona, University of	Tucson	AZ	20,000	Recycled asphalt concrete mix
California, University of	Berkeley	CA	43,200 18,000 51,200	Cost effective locations for climbing lanes Column loads due to superstructure shortening
Case Western Reserve University	Cleveland	OH	106,000	Steel to steel adhesive bonds
Hawaii, University of	Honolulu	HI	121,000	Creep in prestressed concrete piles
Illinois, University of	Urbana	IL	219,100	Evaluation of concrete pavement
Kentucky, University of	Lexington	KY	6,300	Fill height tables for pipe culverts
Louisiana State University	Baton Rouge	LA	44,873	Rusting, pitting in steel bridges
Maryland, University of	College Park	MD	14,000 50,000 64,000	Project level life cycle cost model Storm water management
Michigan State University	Lansing	MI	20,388	Wildlife warning reflectors
Mississippi, University of	University	MS	63,976	Cracking study - flexible pavements
Nebraska, University of	Lincoln	NE	28,635	Guidelines for 2-way left turn lanes
Ohio State University	Columbus	OH	1,500	Traffic control system study
Oklahoma, University of	Norman	OK	34,159	Stabilized base course
Pennsylvania State University	University Park	PA	770,225	Research - test track
Purdue University	Lafayette	IN	18,270 7,796 9,000 29,100 32,200 33,900 130,266	MIS to improve productivity Pile stress Pavement evaluation Maintenance of hwy-plantings Growth retardants - roadside vegetation Fly ash for hwy-concrete

URBAN MASS TRANSPORTATION ADMINISTRATION

University	City	State	Contract Number	Contract Amount	Short Contract Title
Atlanta University	Atlanta	GA	GA-11-0014	\$84,341	Analysis of transit general managers
Auburn University	Auburn	AL	AL-06-0012	84,820	Use of 1980 census info in planning models
California, University of	Los Angeles	CA	CA-06-0195	84,187	Factors affecting bus crime
Edward Waters College	Jacksonville	FL	FL-11-0010	54,907	Minority business enterprise - an analysis of barriers
Florida Memorial College	Miami	FL	FL-11-0011	71,733	Functional training courses
Georgia Institute of Technology	Atlanta	GA	GA-11-0015	74,607	Mgmt. development seminar for women
Illinois, University of	Chicago	IL	IL-06-0058	77,294	Commuter clubs to increase public sector efficiency
Iowa, University of	Iowa City	IA	IA-11-0005	82,218	Transit patronage model
Massachusetts Institute of Technology	Cambridge	MA	MA-11-0041	40,000	Transit service planning process
Morgan State University	Baltimore	MD	MD-11-0006	42,917	Transit user marketing tools
New York University	New York	NY	NY-11-0032	36,772	Future of public transportation in large cities
New York, Polytechnic Inst. of	Brooklyn	NY	NY-06-0108	78,623	Returning transit to private ownership
Norfolk State University	Norfolk	VA	VA-11-0014	82,916	Elements to improve ridership for low income citizens
North Carolina A&T State U.	Greensboro	NC	NC-11-0013	80,903	Development of funding sources for public transit systems
North Florida, University of	Jacksonville	FL	FL-11-0009	83,865	Cooperative initiatives in transit labor-mgmt. relations
Oklahoma, University of	Norman	OK	OK-11-0004	82,798	Mgmt. techniques guide for bus fleet mgrs.
Purdue University	Lafayette	IN	IN-11-0010	35,287	New approaches to circuitry in ride sharing
Rensselaer Polytechnic Institute	Troy	NY	NY-06-0109	78,623	Transit industry microcomputer exchange

AWARDS BY UNIVERSITY AND TITLE OF CONTRACT /GRANT *continued*

University	DOT Admin.	Contract Number	Contract Amount	Short Contract Title
Lane College	RSPA	DTRS5682-C-00037	\$1,000	Economic aspects of public transportation
Lehigh University	RSPA	DTRS5682-C-00014	50,000	Fracture analysis in pipelines
	RSPA	DTRS5782-C-00046	41,812	Predict fracture strength
	FHWA	DTFH6183-C-00084	216,885	Structural efficiency study
	FHWA	DTFH6183-C-00091	100,000	Structural evaluation - bridges
	FHWA	DOT-FH-11-9448	33,235	Corrosion fatigue - bridge steel
	FAA	DTFA0183-C-20051	4,198	Impact testing
			<u>446,130</u>	
Louisiana State University	FHWA	HP&R/NCHRP Funds	44,873	Rusting in steel bridges
Maryland, University of	FHWA	HP&R/NCHRP Funds	14,000	Project level life-cycle cost model
			<u>64,000</u>	Storm water management
Massachusetts, University of	RSPA	DTRS5683-C-00038	89,218	Tensile zone effects on track/pavement
	RSPA	DTRS5683-C-00013	92,717	Transportation and revitalization downtown
	RSPA	DTRS5681-C-00019	54,101	MIS for rural transit services
			<u>236,036</u>	
Massachusetts Institute of Technology	RSPA	DOT-RC-92016	65,500	Quality stds for highway maint.
	RSPA	DTRS5680-C-00018	90,000	High speed ground vehicle performance
	RSPA	DTRS5681-C-00020	107,087	Pantograph-catenary systems
	RSPA	DTRS5683-C-00004	65,000	Comparison-airport charges in int'l aviation
	RSPA	DTRS5681-C-00019	54,101	Transit service planning process
	UMTA	MA-11-0041	*40,000	Tuition fees
	USCG	DTCG2383-F-09102	29,900	Welding robots and commercial shipping
	MARAD	DTMA9183-C-30030	43,433	Measurement of ship resistance
	MARAD	DTMA9183-C-30003	49,900	
			<u>544,921</u>	

* (grant)

* (grant)

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

continued

<i>University</i>	<i>City</i>	<i>State</i>	<i>Contract Number</i>	<i>Contract Amount</i>	<i>Short Contract Title</i>
Nebraska, University of	Lincoln	NE	DOT-RC-92021	\$961	Cost-effectiveness/retrofit concrete barriers
New Mexico State University	Las Cruces	NM	DTRS5683-C-00040	10,000	International trade - U.S. and Mexico
New York, Polytechnic Institute of	Brooklyn	NY	DTRS5680-C-00022	250	Interstate hwy. trade-in process
Norfolk State University	Norfolk	VA	DTRS5783-C-00090	37,500	Freight transportation study
North Carolina, University of	Chapel Hill	NC	DTRS5683-C-00041	87,878	Drinking driver countermeasures
North Carolina A&T State University	Greensboro	NC	DTRS5683-C-00042	75,000	Total factor productivity in public transportation
North Carolina State University	Raleigh	NC	DTRS5681-C-00002 DTRS5683-C-00043	10,500 104,633 115,133	Tire/pavement interaction Design/construction of bridges
Northwestern University	Evanston	IL	DTRS5680-C-00024	31,753	Transferability of disaggregate choice models
Ohio State University	Columbus	OH	DTRS5683-C-00045	62,094	Control strategies for route guidance
Pennsylvania State University	University Park	PA	DTRS5683-C-00006 DTRS5683-C-00046	64,999 67,078	Eval. of distress in highway pavements Measurement of alcohol impaired performance
Pittsburgh, University of	Pittsburgh	PA	DTRS5680-C-00026	64,000	Software reliability - ATC system
Purdue University	Lafayette	IN	DTRS5683-C-00047	99,819	Monitoring altered person-machine systems
South Carolina State University	Orangeburg	SC	DTRS5683-C-00048	10,000	Transportation resource allocation
Southern University	Baton Rouge	LA	DTRS5683-C-00049	90,000	Assess interstate highway/dev. of minority communities
Syracuse University	Syracuse	NY	DTRS5681-C-00028	55,000	Shopper mode choice in rural communities
Texas, University of	Houston	TX	DTRS5683-C-00057	66,256	Use of safety belts

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

<i>University</i>	<i>City</i>	<i>State</i>	<i>Contract Number</i>	<i>Contract Amount</i>	<i>Short Contract Title</i>
Alabama State University	Montgomery	AL	DTRS5683-C-00023	\$75,000	Transit efficiency for inner city minorities
Arizona State University	Tempe	AZ	DTRS5683-C-00001	83,304	Automation of air traffic control
Benedict College	Columbia	SC	DTRS5683-C-00024	125,000	Influence of heavy trucks on pavement
California, University of	Berkeley	CA	DTRS5683-C-00026 DTRS5683-C-00025	150,000 53,863 <u>203,863</u>	Artificial intelligence techniques in ATC Print sector funding of transportation services
California, University of	Irvine	CA	DTRS5683-C-00027	111,089	Safety boat legislation - pediatric trauma
California State University	Domenquez Hills	CA	DTRS5683-C-00028	49,145	Transportation disruption after earthquake
Cheney State College	Cheney	PA	DT055983-C-00014	109,178	Program mgmt. center.evaluation project
Clarkson College	Potsdam	NY	DTRS5683-C-00029	55,063	Presence mode full actuated control
Denver, University of	Denver	CO	DTRS5681-C-00014	3,000	Hispanic accessibility to public transportation
Dillard University	New Orleans	LA	DTRS5683-C-00030	10,000	Design, implementation of workshops
Duquesne University	Pittsburgh	PA	DTRS5683-C-00031	34,908	Trade conditions/U.S. regulatory policies
Florida, University of	Gainesville	FL	DTRS5683-C-00032	109,997	Effects of transport deregulation on motor carrier service
Florida Atlantic University	Boca Raton	FL	DTRS5683-C-00033	82,346	On drift prediction
George Washington University	Washington	DC	DTRS5683-C-00002	64,859	Maritime cargo protection practices
Georgia, University of	Athens	GA	DTRS5683-C-00053	43,400	Teaching adolescents about alcohol
Hampton Institute	Hampton	VA	DTRS5683-C-00034 DTRS5783-R-00023	30,957 37,500 <u>68,457</u>	Child safety seat legislation Ground, air transportation services
Harvard University	Cambridge	MA	DTRS5683-C-00008	108,709	Transportation investment and pricing
Howard University	Washington	DC	DTRS5683-P-00558 DTRS5683-C-00035	8,000 <u>130,000</u> <u>138,000</u>	Regional structure, urban form Joint dev. for rapid-transit station sites

University	Admin.	Number	Amount	Short Contract Title
Michigan, University of	MARAD	DTMA9182-C-30031	\$49,530	Construction planning
	MARAD	DTMA9183-C-30032	44,925	Computer-aided fleet deployment
	RSPA	DTRS5683-C-00005	89,419	Upgrading towed vessel safety
	FHWA	DTFH6183-C-00046	236,915	Truck tractive power criteria
	FHWA	DTFH6183-C-00123	284,260	Road roughness profiling
	FHWA	DTFH6183-C-00160	92,385	Stability of liquid cargo tank truck
	FHWA	DTFH6182-C-00054	10,118	Truck safety at interchanges
	FHWA	DOT-FH-11-9577	23,000	Meas. of pavement-truck interactions
	NHTSA	DTNH2280-C-07502	160,000	Dev. of anthropometrically based specs.
	NHTSA	DTNH2283-C-07187	193,000	Eval. of factors influencing truck performance
	NHTSA	DTNH2283-C-07360	191,044	Meas. of crash avoidance characteristics
	NHTSA	DTNH2283-C-07005	300,000	Evaluation of anthropomorphic device
	NHTSA	DTNH2283-C-07188	98,995	Analysis of accident rates of heavy duty vehicles
			<u>1,773,591</u>	
Michigan State University	RSPA	DTRS5683-C-00039	78,305	Dispersion of oil slick
	RSPA	DTRS5683-C-00056	90,871	Education to reduce alcohol impaired driving
	FHWA	HP&R/NCNHRP Funds	20,388	Wildlife warning reflectors
			<u>189,564</u>	
Michigan Technological University	FHWA	DTFH6183-C-00155	168,850	Design of aggregate surfaced roads
Mississippi, University of	FHWA	HP&R/NCNHRP Funds	63,976	Flexible pavements study
	NHTSA	DTNH2280-C-07240	63,000	Establish/operations of primary sampling unit
Montevallo, University of	NHTSA	DTNH2280-C-07245	110,000	Establish/operations of primary sampling unit
	NHTSA	DTNH2283-C-07184	40,000	Establish/operations of primary sampling unit
			<u>213,000</u>	
Morgan State University	RSPA	DTRS5783-C-00124	94,981	Historically black colleges program
	MARAD	DTMA9183-C-30033	49,958	Minority utilization in U.S. Maritime industry
	UMTA	MD-11-0006	*42,917	Transit user marketing tools
			<u>187,856</u>	
Nebraska, University of	RSPA	DOT-RC-92021	961	Cost effectiveness/retrofit concrete barriers
	FHWA	HP&R/NCNHRP Funds	28,635	Guidelines for 2-way left turn lanes
			<u>29,596</u>	
Nevada, University of	FHWA	DTFH6183-C-00014	56,936	Study-pavement pulverizing equipment
New Mexico State University	FHWA	DTFH6182-C-00097	71,280	Highway bridge inspection
	RSPA	DTRS5683-C-00040	10,000	International trade - U.S.
			<u>81,280</u>	
				* (grant)

Ohio State University	RSPA FHWA	DTRS5683-C-00045 HP&R/NCHRP Funds	\$62,044 1,500 <u>63,544</u>	Control strategies for route guidance Traffic control system study
Oklahoma, University of	FHWA FAA FAA UMTA FHWA	HP&R/NCHRP Funds DTFA0282-D-82005 DTFA0280-C-80001 OK-11-0004 DTFH6183-C-00045	34,159 13,000,000 1,422,601 *82,798 <u>141,700</u> 14,681,258	Stabilized base course Air traffic training support Management training services Guide for bus fleet mgrs. Corrosion of highway structure metals
Oregon Graduate Center	FHWA	DTFH6183-C-00112	100,000	Electrotag welds
Oregon Institute of Technology	USCG	DTCG2382-F-01297	23,580	Tuition fees
Pennsylvania State University	FAA FHWA FHWA FHWA RSPA RSPA RSPA	DTFA0181-C-10037 DTFH6181-C-00063 DOT-FH-11-9591 HP&R/NCHRP Funds DTRS5683-C-00006 DTRS5683-C-00046 DTRS5782-C-00101	5,000 7,756 43,065 770,225 64,999 67,078 <u>84,994</u> 1,043,117	Runway drainage measurement Evaluation of pavement texture Pavement service texture Research - test track Eval. of distress in highway pavements Meas. of alcohol impaired performance Assessment - highway barriers
Pittsburgh, University of	NHTSA RSPA	DOT-HS-8-02028 DTRS5680-C-00026	8,216 64,000 <u>72,216</u>	Rural med. service study Software reliability - ATC system
Princeton University	FAA	DTFA0382-C-00046	158,860	ATC performance
Purdue University	FHWA FHWA FHWA UMTA RSPA FHWA FHWA FHWA FHWA FHWA	DTFH6182-C-00035 DTFH6182-C-00077 DTFH6183-C-00099 IN-11-0010 DTRS5683-C-00047 HP&R/NCHRP Funds	75,000 7,242 30,000 *35,287 99,819 18,270 7,796 9,000 29,100 32,200 33,900 <u>377,614</u>	Design to prevent pumping in rigid pavement Slope stability program Third Int'l Conference - concrete pavements New approaches to circuitry in ride sharing Maintaining altered person-machine systems MIS to improve productivity Pile stress Pavement evaluation Maintenance of highway plantings Growth retardants - roadside vegetation Fly ash for hwy concrete.

* (grant)

University

University	Admin.	Number	Amount	Description
Texas A&M University	NHTSA	DTNH2280-C-07249	\$129,000	Establish/operations of a primary sampling unit
	NHTSA	DTNH2283-C-07153	20,000	
	NHTSA	DTNH2283-C-07158	20,000	
	FAA	DTFA0183-C-30076	150,000	Airport pavements study
	MARAD	DTMA9183-C-30036	49,800	Studies on liquid sloshing
	FHWA	DTFH6183-C-00009	303,256	Safer wooden utility poles
	FHWA	DTFH6181-C-00080	635	Sulphex binders
	FHWA	DTFH6181-C-00102	46,743	New concepts - traffic control in work zones
	FHWA	DTFH6182-C-00051	49,339	Eval. of barrier limit capacity
	FHWA	DTFH6182-C-00052	109,384	Roadside safety guide
	FHWA	DTFH6182-C-00061	2,500	Factors affecting traffic signal time
	FHWA	DTFH6182-C-00074	133,000	Structure properties-paving materials
	FHWA	DOT-FH-11-9181	5,000	Safer bridge railing designs
	FHWA	DOT-FH-11-9458	81,971	Safer barriers for construction sites
	FHWA	DOT-FH-11-9603	45,658	Requirements of highway safety features
	FHWA	DTFH1180-C-00040	92,181	Skid test center
	FHWA	DTFH1180-C-00080	16,921	Testing of evaluation technique
	FHWA		65,000	Handling traffic in work zones
	FHWA		10,000	Warrants for intersection control
	FHWA		30,000	Pressure meter and design of structures
	FHWA		45,000	Traffic information for air quality study
	FHWA		47,000	Vehicle emission from roadways
	FHWA		39,800	Eval. of TV for traffic monitoring
	FHWA		35,000	Overload protection for elec. equipment
	FHWA		50,000	Concrete safety shaped barrier
FHWA		50,000	Safety devices for highway work zones	
FHWA		85,000	Analysis of ramp designs	
FHWA		55,000	Eval. of traffic control plans	
FHWA		58,000	Use of existing highway rights-of-way	
FHWA		<u>100,000</u>	Freeway data collection system	
		1,925,188		
HP&R/NCHRP Funds				
Toledo, University of	FHWA	HP&R/NCHRP Funds	26,000	Skid resistance of bituminous surfaces
	FHWA	HP&R/NCHRP Funds	28,308	Uptake of MSMA in workers applying herbicide
	NHTSA	DTNH2282-C-05086	34,234	Eval. of helmet law in L.A.
			<u>62,542</u>	
Tuskegee Institute	UMTA	AL-06-0011	*39,432	Microcomputer technology in transportation systems
	FAA	DTFA0282-D-82065	11,523	Chemical analysis
Utah, University of	UMTA	UT-11-0003	*83,918	Model for fare/service functions
			<u>95,441</u>	

* (grant)

SECTION III

SUMMARY BY STATES

SUMMARY BY STATES

<i>State/University</i>	<i>Total FY 1983 Obligations</i>
1. ALABAMA	
Alabama State University	\$75,000
Auburn University	306,250
Montevallo, University of	213,000
South Alabama	27,455
Tuskegee Institute	<u>39,482</u>
	\$661,137
2. ARIZONA	
Arizona, University of	\$90,503
Arizona State University	<u>113,304</u>
	\$203,807
3. ARKANSAS	
Arkansas, University of	\$45,137
4. CALIFORNIA	
California, University of (Berkeley)	\$265,063
California, University of (Irvine)	111,089
California, University of (Los Angeles)	84,187
California State University	49,145
Southern California, University of	<u>1,370</u>
	\$510,854
5. COLORADO	
Colorado State University	\$182,062
Denver, University of	<u>3,000</u>
	\$185,062
6. DISTRICT OF COLUMBIA	
George Washington University	\$64,859
Howard University	<u>138,000</u>
	\$202,859
7. FLORIDA	
Edward Waters College	\$54,907
Embry Riddle Aero University	17,150
Florida, University of	385,258
Florida Atlantic University	82,346
Florida Memorial College	71,733
North Florida, University of	<u>83,865</u>
	\$695,259
8. GEORGIA	
Atlanta University	\$84,341
Georgia, University of	456,241
Georgia Institute of Technology	<u>90,813</u>
	\$631,395
9. HAWAII	
Hawaii, University of	\$121,000

SUMMARY BY STATES *continued*

<i>State/University</i>	<i>Total FY 1983 Obligations</i>
19. MISSISSIPPI	
Mississippi, University of	\$63,976
20. NEBRASKA	
Nebraska, University of	\$29,596
21. NEVADA	
Nevada, University of	\$56,936
22. NEW HAMPSHIRE	
Dartmouth	\$208,328
23. NEW JERSEY	
Princeton University	\$158,860
Rutgers University	20,202
Stevens Institute of Technology	48,945
	\$228,007
24. NEW MEXICO	
New Mexico State University	\$81,280
25. NEW YORK	
Clarkson College	\$55,063
New York University	74,102
New York, Polytechnic Institute of	168,871
New York, State University of (Stonybrook)	49,983
Rensselaer Polytechnic Institute	70,623
Syracuse University	55,000
Webb Institute of Naval Architecture	147,558
	\$629,200
26. NORTH CAROLINA	
North Carolina, University of	\$349,153
North Carolina A&T State University	155,903
North Carolina State University	115,133
	\$620,189
27. OHIO	
Case Western Reserve University	\$106,000
Dayton, University of	17,872
Ohio University	389,493
Ohio State University	63,544
Toledo, University of	26,000
Wright State University	38,938
	\$641,847

SUMMARY BY STATES *continued*

<i>State/University</i>	<i>Total FY 1983 Obligations</i>
36. WASHINGTON	
Washington, University of	\$417,000
Washington State University	<u>5,451</u>
	\$422,451
37. WEST VIRGINIA	
West Virginia University	\$64,943