



# Federal Register

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**Friday,  
June 15, 2001**

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**Part III**

## **Department of Education**

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**National Institute on Disability and  
Rehabilitation Research; Notice of Final  
Funding Priorities for Fiscal Years 2001–  
2003 for Three Rehabilitation Engineering  
Research Centers**

**DEPARTMENT OF EDUCATION****National Institute on Disability and Rehabilitation Research; Notice of Final Funding Priorities for Fiscal Years 2001–2003 for Three Rehabilitation Engineering Research Centers**

**AGENCY:** Office of Special Education and Rehabilitative Services, Department of Education.

**ACTION:** Notice of Final Funding Priorities for Fiscal Years 2001–2003 for three Rehabilitation Engineering Research Centers.

**SUMMARY:** We will announce final funding priorities for three Rehabilitation Engineering Research Centers (RERC) on Technology for Successful Aging, Wheelchair Transportation Safety and Mobile Wireless Technologies for Persons with Disabilities under the National Institute on Disability and Rehabilitation Research (NIDRR) for FY 2001–2003. We take this action to focus research attention on areas of national need. We intend these priorities to improve the rehabilitation services and outcomes for individuals with disabilities.

**DATES:** These priorities take effect on July 16, 2001.

**FOR FURTHER INFORMATION CONTACT:** Donna Nangle. Telephone: (202) 205–5880. Individuals who use a telecommunications device for the deaf (TDD) may call the TDD number at (202) 205–4475. Internet: [Donna.Nangle@ed.gov](mailto:Donna.Nangle@ed.gov).

Individuals with disabilities may obtain this document in an alternative format (*e.g.*, Braille, large print, audiotope, or computer diskette) on request to the contact person listed in the preceding paragraph.

**SUPPLEMENTARY INFORMATION:** This notice contains final priorities under the Rehabilitation Engineering Research Centers (RERC) on Technology for Successful Aging, Transportation Safety and Mobile Wireless Technologies for Persons with Disabilities under the National Institute on Disability and Rehabilitation Research (NIDRR) for FY 2001–2003.

The final priorities refer to NIDRR's Long-Range Plan (the Plan). The Plan can be accessed on the World Wide Web at: <http://www.ed.gov/offices/OSERS/NIDRR/#LRP>.

**National Education Goals**

The eight National Education Goals focus the Nation's education reform efforts and provide a framework for improving teaching and learning.

This notice addresses the National Education Goal that every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

The authority for the program to establish research priorities by reserving funds to support particular research activities is contained in sections 202(g) and 204 of the Rehabilitation Act of 1973 (the Act), as amended (29 U.S.C. 762(g) and 764). Regulations governing this program are found in 34 CFR part 350.

**Note:** This notice does not solicit applications. A notice inviting applications is published in this issue of the **Federal Register**.

**Analysis of Comments and Changes**

On April 10, 2001, we published a notice of proposed priorities in the **Federal Register** (66 FR 18688). The Department of Education received 13 letters commenting on the notice of proposed priorities by the deadline date. Technical and other minor changes—and suggested changes that we are not legally authorized to make under statutory authority—are not addressed.

*Priority 1: Technologies for Successful Aging*

**Comment:** One commenter feels that this priority should address the communication needs of older Americans with communication disabilities in order to individualize their rehabilitation and optimize their ability to communicate in their natural environments.

**Discussion:** NIDRR recognizes the importance of addressing the communication needs of all individuals with disabilities and currently supports an RERC on Communication Enhancement that addresses communications needs of the aging population. An applicant could propose activities that address the communication needs of older Americans and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to address the communication needs of elderly individuals with communication disabilities.

**Changes:** None.

**Comment:** One commenter suggested that a new activity should be added that requires the RERC to develop new technologies in speech generated devices (speech aids that provide individuals with severe speech impairment the ability to meet their functional needs) and accessories such

as mounting systems, switches, and access devices.

**Discussion:** An applicant could propose activities to develop new technologies in speech generated devices and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to develop new technologies in speech generated devices.

**Changes:** None.

**Comment:** One commenter suggested that a new activity should be added that requires the RERC to develop new technologies in hearing aids, assistive listening devices, and cochlear implants to assist those individuals with severe hearing loss.

**Discussion:** NIDRR recognizes the importance of addressing the hearing needs of all individuals with disabilities and currently supports an RERC on Hearing Enhancement and Assistive Devices that addresses hearing needs of a broad range of individuals with hearing loss. An applicant could propose activities to develop hearing technologies that would benefit older Americans with hearing impairments and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to develop hearing technologies.

**Changes:** None.

**Comment:** One commenter suggested that a new activity should be added that requires the RERC to focus on the cultural and linguistic diversity of the aging population.

**Discussion:** An applicant could propose activities that focus on cultural and linguistic diversity of the aging population and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to focus on the cultural and linguistic diversity of the aging population.

**Changes:** None.

**Comment:** One commenter suggested that adding the words “and other service providers” after “home health” would strengthen the fourth activity.

**Discussion:** NIDRR agrees that adding “and other service providers” to the fourth activity would strengthen the priority.

**Changes:** The fourth activity has been modified to include the words “and other service providers” after “home health.”

**Comment:** One commenter suggested that the emphasis in this priority on home-based monitoring and communication technologies is very

similar to the types of activities being conducted at the RERC on Telerehabilitation and suggested that it made more sense for the RERC on Technology for Successful Aging to collaborate with the RERC on Telerehabilitation in these areas and to focus on topics not currently funded. Specifically, the RERC should be required to: Investigate factors that limit access to community resources and socialization by older Americans with disabilities; analyze strategies (both AT and non-AT) that have the potential to prevent loss of function in home and community; investigate personal and public transportation issues that impact the safety and integration of older Americans in their communities, as well as the amount of care required to keep them home; collaborate with the RERC on Ergonomic Solutions for Employment to enhance knowledge of human factors issues in home and community environments affecting the safety and function of older Americans in these environments; and collaborate with the RERC on Telerehabilitation to develop and expand the application of telemonitoring and measure the impact on health as well as community integration and socialization.

*Discussion:* NIDRR agrees that the RERC on telerehabilitation and the RERC on Technology for Successful Aging should be encouraged to collaborate with one another. NIDRR also recognizes that there are similarities between the two RERCs, specifically activities dealing with the development of monitoring technologies. The RERC on Telerehabilitation is responsible for identifying and developing technologies capable of supporting rehabilitation services for individuals who do not have access to comprehensive outpatient rehabilitation services. The RERC on Technology for Successful Aging is required to focus on technological solutions that promote health, safety, independence, active engagement and quality of life of older persons with disabilities. All of the proposed activities contained in this comment are within the scope of the priority and could be proposed by an applicant to achieve the general purpose of this priority. The peer review process will evaluate the merits of the proposal. However, there is insufficient evidence to warrant requiring all applicants to carry out the activities suggested in this comment.

*Changes:* The last bulleted activity has been modified to include "the RERC on Telerehabilitation" as a potential NIDRR-funded project with which this RERC may collaborate.

*Comment:* The scope of this priority should be expanded beyond technologies for monitoring and communications to include technologies for automating tasks (such as rehabilitation robotics) and smart mobility aids (such as power wheelchairs that help the user perform specific tasks like passing through narrow doorways, walkers that keep track of a person's location within his or her home, and manual wheelchairs that automatically avoid obstacles).

*Discussion:* An applicant could propose to explore technologies for automating tasks and smart mobility aids and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to propose to explore technologies for automating tasks and smart mobility aids.

*Changes:* None.

*Comment:* One commenter believes that the priority should consider the need to marshal the forces of capitalism and the marketplace to encourage industry to develop products based on the solutions created by the proposed RERC.

*Discussion:* NIDRR agrees with the commenter and points out that the RERC is required under the fifth activity to explore strategies for strengthening partnerships with industry to facilitate the transfer of technologies and applications developed by this RERC.

*Changes:* None.

*Comment:* The fourth activity should be expanded to promote knowledge beyond awareness of new and existing technologies and include educational activities designed to teach how the technology is used.

*Discussion:* NIDRR agrees with the commenter about the importance of including educational activities on how newly developed technologies are used and believe the fourth activity adequately supports this point.

*Changes:* None.

*Comment:* Particular attention must be given to the ethical implications of the technologies developed by this RERC. For example, examining technology outcomes, such as ease of task performance or control of daily living activities must be studied in tandem with issues such as: Who has access to data about how I spend my time? Is turning off the monitoring device under my control?

*Discussion:* All RERCs are required to obtain human subjects approval through their respective Institutional Review Boards (IRB) and show evidence of such approval to the U.S. Department of Education prior to commencing with

any research that includes human subjects. As part of the informed consent process, researchers are required to abide by strict confidentiality rules that protect the identity of all participating subjects. However, once a product (i.e., a monitoring device) has moved beyond the laboratory and is being used by the general public, human subject protection may or may not be valid. For instance, if a person is being monitored (using a newly developed monitoring device developed by the RERC) by a health care institution, patient confidentiality laws apply. This would not be the case if family members are monitoring a loved one. This type of policy issue goes beyond the scope of this RERC.

*Changes:* None.

*Comment:* One commenter suggested that the RERC use the services of the "highly developed" Geriatric Education Centers, which are dispersed nationwide, for education, training, and disseminating efforts.

*Discussion:* Applicants are required under the first bulleted activity of this priority to develop and implement a plan to disseminate the RERC research results to various constituents. NIDRR believes applicants should have the discretion to determine the best way to disseminate their information. An applicant could propose to include the Geriatric Education Centers as part of its plan and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to use the Geriatric Education Center.

*Changes:* None.

*Comment:* Two commenters feel that the high tech requirement of the RERC should be balanced with a public policy activity that targets reimbursement of assistive devices, including high tech communication and monitoring technologies, and health care policy.

*Discussion:* NIDRR agrees there are complex policy issues that affect reimbursement of assistive technologies, both high and low tech, for all persons with disabilities. The Assistive Technology Act of 1998 (AT Act) funds projects to identify, describe and work to remove barriers that confront all persons with disabilities in their attempt to acquire assistive technologies. NIDRR will expect this RERC to work closely with relevant AT Act projects in addressing complex policy issues surrounding reimbursement of AT devices that would benefit the aging population.

*Changes:* The last bullet has been modified to include "AT Act projects"

as potential NIDRR-funded projects with which this RERC may collaborate.

*Comment:* One commenter suggested that it would be beneficial if the RERC was required to quantifiably measure outcome variables that could be used for determining utilization outcomes for each product developed by the RERC. Such measures, according to the commenter, would be very useful to show policymakers the effectiveness of new approaches and devices.

*Discussion:* An applicant could propose to explore ways to incorporate mechanisms that would quantifiably measure outcome variables and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to propose to explore mechanisms that would quantifiably measure outcome variables.

*Changes:* None.

#### Priority 2: Wheelchair Transportation Safety

*Comment:* One commenter suggested that an activity should be added to this priority that addresses the transportation safety needs of manual wheelchair users who are capable of transferring onto a vehicle seat rather than having to be transported while seated in their wheelchair.

*Discussion:* NIDRR agrees that issues remain to be addressed with regard to wheelchair transportation safety. An applicant could propose to address the transportation safety needs of manual wheelchair users who transfer into vehicles and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to propose to explore transportation safety needs of manual wheelchair users who transfer into vehicles.

*Changes:* None.

*Comment:* Two commenters suggested that an activity should be added to the priority that specifically addresses the unique safety issues associated with wheelchair users who drive.

*Discussion:* NIDRR agrees with the commenters that issues remain to be addressed with regard to wheelchair transportation safety. An applicant could propose to address the unique safety issues of wheelchair users who drive and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to propose to address the unique safety issues of wheelchair users who drive.

*Changes:* None.

*Comment:* One commenter suggested the title of this priority be changed to better reflect the emphasis on wheelchair user transportation safety or broaden the scope to include the transportation safety needs of other groups of individuals with disabilities.

*Discussion:* NIDRR agrees with the commenter that the title of the RERC should be reworded to better reflect the emphasis on wheelchair users. NIDRR further agrees that there are many other disability groups (e.g., individuals who are visually, hearing, or cognitively impaired) who could benefit from an RERC that focused its research and development efforts on transportation safety needs. However, NIDRR feels that requiring this RERC to research the transportation safety needs for such a broad array of disability groups would require greater resources than have been allocated for this priority. Based upon the foregoing, an applicant could propose to address the transportation safety needs of wheelchair users who also have other disabilities and the peer review process will evaluate the merits of the proposal.

*Changes:* The title has been changed to the "RERC on Wheelchair Transportation Safety."

*Comment:* Two commenters suggested that the first activity should be expanded to require the RERC to gather additional information such as the cause of accident, the type of incident (i.e., normal driving maneuver, emergency maneuver, vehicle impact magnitude and direction), the cause of injury (i.e., wheelchair failure, securement or restraint failure, or improper securement), and the type of vehicle or transportation service involved (i.e., school bus, transit bus, paratransit, personal van).

*Discussion:* NIDRR agrees with the commenter that additional information about vehicle accidents involving wheelchair users would be beneficial and could ultimately lead to improvements in securement and vehicle adaptations.

*Changes:* The first activity has been modified to include "the cause of accident," "the cause of injury," and "the type of vehicle or transportation service involved."

*Comment:* A great deal of work has been done on independent securement that need not be repeated. What's needed is to build on the existing body of knowledge and incorporate advances made during the last decade in both wheelchair design and transit system vehicles.

*Discussion:* NIDRR agrees with the commenter and expects all applicants to be knowledgeable about the

methodology and literature of pertinent subject areas and to demonstrate an awareness of the state-of-the-art in technology.

*Changes:* None.

*Comment:* One commenter supported the development of integrated occupant restraint systems but feels it is important to require these efforts to be integrated with all wheelchair securement efforts, including the universal securement interfaces developed under the third activity.

*Discussion:* The fifth activity requires applicants to investigate integrated occupant restraint systems that are "independent of the vehicle." NIDRR believes that, in order to be independent of the vehicle, the integrated occupant restraint system must also be independent of wheelchair securement systems given that wheelchair securement systems are attached to vehicles. However, NIDRR does agree with the commenter's general concern that integrated occupant restraint systems developed by this RERC should not interfere with, or in any way compromise, the integrity of currently marketed wheelchair securement devices or those developed under the third activity.

*Changes:* None.

*Comment:* One commenter suggested that the third activity is too limiting in that it refers only to development of a universal securement interface that would enable users to safely and independently secure their wheelchairs and scooters. Other securement options need to be investigated that may be more feasible, more rapidly commercialized and more widely accepted while achieving the goal of being safer and easier to operate.

*Discussion:* NIDRR believes that the concept of a universal securement interface capable of being independently operated by most wheelchair users is an important concept that must be investigated. An applicant is free to propose to investigate other securement options and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to propose to investigate other securement options.

*Changes:* None.

*Comment:* Traditional dynamic testing is fairly straight forward but quite expensive given that it requires a test sled. Emphasis of the fourth activity should be on the development of lower cost tests, both static and dynamic, that are adequate to define the crashworthiness of wheelchairs as either acceptable or not acceptable. In

addition, this effort should include research to define the level of modification at which a wheelchair must be retested.

*Discussion:* NIDRR agrees with the commenter that it is important to investigate low-cost methods for testing the crashworthiness of wheelchairs and after-market and customized wheelchair seating systems and peripheral devices. NIDRR agrees that issues remain to be addressed with regard to wheelchair testing and retesting. An applicant could propose research to define the level of modification at which a wheelchair must be retested and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to propose research to define the level of modification at which a wheelchair must be retested.

*Changes:* The fourth activity has been modified to include “\* \* \* methods, including low-cost methods, for testing, both static and dynamic, the crashworthiness \* \* \*”.

*Comment:* Performance standards are an essential part of the process of implementing good securement and restraint practices on a wide scale. However, before starting work on new standards, the RERC should carefully study the response of manufacturers, transit agencies, and the public to the newly established standards on belt-type securement.

*Discussion:* The seventh activity requires the RERC to investigate the use of new or existing voluntary performance standards that would address problems associated with wheelchair-seated occupants. Development and implementation of new or existing voluntary performance standards are very time consuming and require input from a broad array of constituents, including those mentioned by the commenter.

*Changes:* None.

*Comment:* One commenter feels that the requirement for applicants to develop a plan for ensuring that all new and improved technologies are successfully transferred to the marketplace is a bit strong. The commenter went on to suggest that perhaps a better statement might be “\* \* \* provide evidence that a good effort has been made to transfer \* \* \*” and that levels of success in technology transfer should be clearly defined.

*Discussion:* Technology transfer is a critical activity that requires effort and planning. NIDRR believes that requiring all RERCs to develop a plan within the first year of the grant cycle promotes consideration of technology transfer

issues throughout the life of the grant. NIDRR does not believe that the requirement as stated is too “strong.”

*Changes:* None.

*Comment:* One commenter feels that the requirement for the RERC to conduct a state-of-the-science conference is one way to disseminate information but experience has shown it to be very limited in value. The commenter went on to suggest that an alternative might be to demonstrate active dissemination efforts (e.g., direct contact of user groups, regional meetings, e-mail publicity about a web-site as opposed to the passive approach of building a web-site that only curious people find, etc.).

*Discussion:* In addition to the mandatory state-of-the-science conference, applicants are required under the first bulleted activity of this priority to develop and implement a plan to disseminate the RERC research results to various constituents. NIDRR believes applicants should have the discretion to determine the best way to disseminate their information.

*Changes:* None.

*Comment:* Two commenters suggested that the priority be expanded to include all aspects of transportation safety for individuals with physical disabilities including the various modes of public and private transportation (e.g., roads, rails, air, and water) and high-risk activities such as boarding, exiting, and vehicle maneuvers.

*Discussion:* NIDRR agrees with the commenters that issues remain to be addressed with regard to other aspects of transportation safety for individuals with physical disabilities. However, NIDRR feels that requiring this RERC to research the transportation safety needs for all public and transportation modes as well as high-risk activities would require greater resources than have been allocated for this priority. An applicant could propose to address the transportation safety needs of individuals with physical disabilities in addition to those published in this priority and the peer review process will evaluate the merits of the proposal.

*Changes:* None.

*Comment:* One commenter believes that, before NIDRR establishes an activity investigating integrated occupant restraint systems, the relative merits of integrated restraints should be evaluated, considering their impact on non-travel activities, wheelchair design, compatibility with other required postural supports, and medical issues in addition to the biomechanics of crash safety.

*Discussion:* As noted in the background statement, there are numerous problems associated with

anchoring vehicle-mounted occupant restraint systems for wheelchair-seated occupants, thereby justifying NIDRR's requirement to investigate the concept of integrated occupant restraint systems that are independent of the vehicle.

*Changes:* None.

*Comment:* The terminology “use of new or existing standards” is unclear. There are incompatibilities between existing standards that need to be addressed without additional crashworthy requirements that may not be justified by injury data but would place undue burden on consumers, clinicians, and manufacturers.

*Discussion:* NIDRR's reference to “existing standards” in the seventh activity is based upon the background statement where two of voluntary performance standards (i.e., ANSI/RESNA WC-19 and SAE J2249) were discussed. These voluntary standards were developed by a diverse group, including researchers, manufacturers, relevant federal agencies, and consumers, as an attempt to improve transportation safety for wheelchair-seated travelers. NIDRR recognizes that there are some inconsistencies between these standards. NIDRR also recognizes the importance of obtaining quality injury and accident data of accidents involving wheelchair-seated travelers (see activity one). NIDRR believes that the required activities of this RERC will provide a solid foundation for research, development, testing, and information dissemination related to the development and implementation of voluntary standards aimed at improving transportation safety for wheelchair-seated travelers.

*Changes:* None.

*Comment:* The proposed priority did not make any distinction between children and adults, so we assume that both are to be included in RERC projects. In particular, there are special safety issues that are primarily related to children in wheelchairs that need to be addressed.

*Discussion:* The priority purposefully does not distinguish between children and adults. NIDRR agrees with the commenter that there are special safety issues related to children in wheelchairs (i.e., design requirements for restraints used with smaller children and the types of head support that are suitable and safe for use by children during transportation). An applicant could propose activities that focus specifically on children, adults, or both and the peer review process will evaluate the merits of the proposal.

*Changes:* None.

*Comment:* The detailed quantitative data on motor-vehicle crashes needed to

determine the incidence and extent of injuries to wheelchair-seated occupants in relation to the vehicle, occupant, restraint factors, and crash are not available, and will not be available for the foreseeable future. A code to identify wheelchair-seated occupants was recently added to the National Automotive Sampling System (NASS) data set, but because of the representative sampling strategy used in the NASS, it will be many years before this database provides a useful number of crashes involving wheelchair-seated occupants. What is needed now is a program that is aimed specifically at conducting in-depth investigations of as many motor-vehicle crashes involving wheelchair-seated occupants as possible in order to identify injury modes and risks that are unique to wheelchair-seated occupants in different types of crashes and to provide real-world feedback regarding the performance and effectiveness of equipment that complies with voluntary safety standards.

*Discussion:* An applicant could propose a program that is aimed specifically at conducting in-depth investigations of motor vehicle crashes involving wheelchair-seated occupants under the first activity and the peer review process will evaluate the merits of the proposal.

*Changes:* None.

*Priority 3: Mobile Wireless Technologies for Persons With Disabilities*

On April 18, 2001, we published a notice of proposed priority in the **Federal Register** (66 FR 20078). The Department of Education received 3 letters commenting on the notice of proposed priorities by the deadline date. Technical and other minor changes—and suggested changes we are not legally authorized to make under statutory authority—are not addressed.

*Comment:* An important outcome of an RERC is a body of objective knowledge that is archived for widespread use. The publication of results in peer reviewed literature that is appropriate for the constituencies of the center should be included as an option in the RERC's dissemination plan.

*Discussion:* NIDRR agrees with the commenter and supports the use of peer-reviewed journals as one means for disseminating RERC research results. NIDRR points out that the second bulleted activity does include "appropriate journals" as part of the dissemination plan requirement.

*Changes:* None.

*Comment:* The review process should include consideration of how the

applicant will conduct work that will promote long-term impact on the accessibility of wireless technologies after the conclusion of the grant.

*Discussion:* As the background statement suggests, the information technology field, including mobile wireless technologies, is evolving at such a high rate that it would virtually be impossible to determine the long-term impact on the accessibility of mobile wireless technologies after conclusion of this grant.

*Changes:* None.

**Rehabilitation Engineering Research Center Program**

The authority for RERCs is contained in section 204(b)(3) of the Rehabilitation Act of 1973, as amended (29 U.S.C. 764(b)(3)). The Assistant Secretary may make awards for up to 60 months through grants or cooperative agreements to public and private agencies and organizations, including institutions of higher education, Indian tribes, and tribal organizations, to conduct research, demonstration, and training activities regarding rehabilitation technology in order to enhance opportunities for meeting the needs of, and addressing the barriers confronted by, individuals with disabilities in all aspects of their lives. An RERC must be operated by or in collaboration with an institution of higher education or a nonprofit organization.

**Description of Rehabilitation Engineering Research Centers**

RERCs carry out research or demonstration activities by:

(a) Developing and disseminating innovative methods of applying advanced technology, scientific achievement, and psychological and social knowledge to (1) solve rehabilitation problems and remove environmental barriers, and (2) study new or emerging technologies, products, or environments;

(b) Demonstrating and disseminating (1) innovative models for the delivery of cost-effective rehabilitation technology services to rural and urban areas, and (2) other scientific research to assist in meeting the employment and independent living needs of individuals with severe disabilities; or

(c) Facilitating service delivery systems change through (1) the development, evaluation, and dissemination of consumer-responsive and individual and family-centered innovative models for the delivery to both rural and urban areas of innovative cost-effective rehabilitation technology services, and (2) other scientific

research to assist in meeting the employment and independent needs of individuals with severe disabilities.

Each RERC must provide training opportunities to individuals, including individuals with disabilities, to become researchers of rehabilitation technology and practitioners of rehabilitation technology in conjunction with institutions of higher education and nonprofit organizations.

The Department is particularly interested in ensuring that the expenditure of public funds is justified by the execution of intended activities and the advancement of knowledge and, thus, has built this accountability into the selection criteria. Not later than three years after the establishment of any RERC, NIDRR will conduct one or more reviews of the activities and achievements of the Center. In accordance with the provisions of 34 CFR 75.253(a), continued funding depends at all times on satisfactory performance and accomplishment.

*Priority 1: RERC on Technology for Successful Aging*

**Background**

Americans are living longer, and because of this demographic revolution the landscape of disability is also changing. Since 1900, average life expectancy has increased dramatically from less than 50 years of age to approximately 76 years, and centenarians now represent the fastest growing age group in the United States (Bureau of the Census, "Current Population Reports," pgs. 70-73, 1993). During this same time period, the percentage of Americans who are 65 years or older has more than tripled (from 4.1% in 1900 to 12.7% in 1999) and the actual number increased eleven times from 3.1 million to 34.5 million. This number is expected to double by the year 2030 (Administration on Aging, "Profile of Older Americans, 2000," <http://www.aoa.dhhs.gov/aoa/stats/profile/>).

In 1994-1995 more than half of those 65 and older (52.5%) reported having at least one disability and it is estimated that one-third of this population has a severe disability. Over 4.4 million (14%) have difficulty in carrying out activities of daily living (ADLs), which includes bathing, dressing, eating, and getting around the house, and 6.5 million (21%) reported difficulty in carrying out instrumental activities of daily living (IADLs) such as preparing of meals, shopping, managing money, using the telephone, doing housework, and taking medication. However, despite the increased risks of disability associated

with aging, ninety-five percent of older Americans choose to remain in their own homes, use public services and function independently as they age (Current Population Reports, "Americans with Disabilities, 1994–1995," <http://www.census.gov/main/cprs.html>).

Although there are many similarities between younger and older persons with disabilities (e.g., the goal of independent living), there are also important differences. Younger persons with disabilities are much more likely to experience impairment or disability in only one area (e.g., cognitive, hearing, vision, or mobility), whereas older persons tend to have multiple chronic conditions, presenting a mix of symptoms, impairments, and functional limitations. Older persons with disabilities also differ from their younger counterparts in that they are predominantly female, have lower income, and have a smaller network of social support.

As the baby boomer generation ages, the challenge for policymakers and industry is to fully leverage advances in information, communications, sensors, advanced materials, lighting, and many other technologies to optimize existing public and private investments and to create new environments that respond to an aging society's needs (Coughlin, J.F., "Technology Needs of Aging Boomers," *Issues in Science and Technology Online*: <http://bob.nap.edu/issues/16.1/coughlin.htm>, pg. 5, 1999). There is a need for an integrated infrastructure for independent aging that should include a safe home, a productive workplace, personal communications, and lifelong transportation.

The NIDRR Long-Range Plan suggests that aging of the disabled population in conjunction with quality of life issues dictates a particular focus on prevention and alleviation of secondary disabilities and coexisting conditions and on health maintenance over the lifespan. Research in this area must focus on the development and evaluation of environmental options in the built environment and the communications environment, including such approaches as universal design, modular design, and assistive technology that enable individuals with disabilities and society to select the most appropriate means to accommodate or alleviate limitations (NIDRR, Long-Range Plan: 1999–2003, pg. 49).

Home environmental interventions and assistive and universally designed technologies have the potential to increase independence for community-

based older persons with disabilities. A new generation of home-based monitoring and communication technologies could enable caregivers at any distance to monitor and respond to the needs of older friends, family, residents, and patients. Systems that make full use of the existing telecommunications infrastructure could be used to ensure that medicine has been taken, that physical functions are normal, and that minor symptoms are not indicators of a larger problem. They could provide early identification of problems that, if left untreated, may result in hospitalization for the individual and higher health care costs to society (Coughlin, J.F., op cit., pg. 7, 1999).

The fact that most older adults choose to remain in their own homes as they age is a cost effective option from a public policy perspective provided that the home can be used as a platform to ensure overall wellness and community integration. For example, introduction of a new generation of appliances, health monitors, and related devices that can safely support independence and remote caregiving could make the home a viable alternative to long-term care for many older adults. Research should go beyond questions of design and physical accessibility to the development of an integrated home that is attractive to us when we are younger and supportive of us as we age (Coughlin, J.F., op cit., pg. 6, 1999).

In the emerging, evolving field of assistive technology, there are gaps in the research. This is particularly true for older adults with disabilities. To create enabling home environments, research is needed on assistive and universally designed technologies and environmental interventions that are safe, affordable, support independence and social participation, and involve the integration of information technology and ergonomic principles. As part of achieving this goal, there is a need to develop appropriate devices that unobtrusively monitor key needs (*i.e.*, taking medications, eating, and drinking), as well as critical events (*i.e.*, falls or stove left on). There is also a need for research to determine the most effective ways to inform professionals, families, and consumers about new and emerging assistive and universally designed technologies, the best ways to use them, and ways to pay for them.

Another important area relates to the needs of older persons with cognitive impairments. This population presents the greatest challenge to creating enabling environments. According to recent findings, individuals with cognitive impairment use the fewest

numbers of assistive devices but could benefit from the development of "smart" environments—devices that anticipate needs, suggest (or actually provide) alternatives, and limit the amount of sensory input and decision making required (Mann, W., *Topics in Geriatric Rehabilitation 8(2)*, pgs. 35–52, 1993).

#### Priority

We will establish an RERC on technologies for successful aging that will focus on technological solutions to promote the health, safety, independence, active engagement and quality of life of older persons with disabilities. The RERC must:

(a) Identify, assess, and evaluate current and emerging needs, and barriers to meeting those needs, for home-based monitoring and communication technologies that promote health, independence, and active engagement of older persons with disabilities in the community and with family and friends;

(b) Investigate, develop, and evaluate home-based monitoring and communication technologies to promote health independence, and active engagement of older persons with disabilities;

(c) Investigate, develop, and evaluate technologies that can be used to create "smart" environments that anticipate needs, suggest (or actually provide) alternatives, and limit the amount of sensory input and decision making required of older persons with multiple types of impairments, including sensory, mobility, and cognitive;

(d) Identify, develop and evaluate strategies and training materials to promote knowledge about new and existing technologies for use by caregivers, home health and other service providers, case managers and by older persons with disabilities; and

(e) Develop and explore various strategies for strengthening partnerships with industry to facilitate the development of new technologies and applications that are appropriate for use by older persons with multiple types of impairments and functional capabilities.

In addition to activities proposed by the applicant to carry out these purposes, the RERC must:

- Develop and implement in the first year of the grant, and in consultation with the NIDRR-funded National Center for the Dissemination of Disability Research (NCDDR), a plan to disseminate the RERC's research results to all relevant target audiences including, but not limited to, clinicians, engineers, manufacturers, service providers, older persons with

disabilities, families, disability organizations, technology service providers, case managers, businesses, and appropriate journals;

- Develop and implement in the first year of the grant, and in consultation with the NIDRR-funded RERC on Technology Transfer, a utilization plan for ensuring that all new and improved technologies developed by this RERC are successfully transferred to the marketplace;
- Conduct in the third year of the grant a state-of-the-science conference on home-based monitoring and communication technologies to promote the health, independence, and active engagement of older persons with disabilities and publish a comprehensive report on the final outcomes of the conference in the fourth year of the grant; and
- Collaborate on research projects of mutual interest with NIDRR-funded projects, such as the RERCs on Universal Design and the Built Environment, Mobile Wireless Technologies, Information Technology Access, Telecommunications Access, Telerehabilitation, the RRTC on Aging with a Disability, and Assistive Technology Act projects as identified through consultation with the NIDRR project officer.

#### *Priority 2: RERC on Wheelchair Transportation Safety*

##### Background

Americans live in a very mobile society where access to, and use of, public and private transportation services is essential to daily living. There are roughly 1.7 million Americans living outside of institutions who use wheelchairs and scooters (Kaye, H.S., Kang, T., and LaPlante, M.P., "Mobility Device Use in the United States," *Disability Statistics Report, (14)*, Washington, D.C.: U.S. Department of Education, NIDRR, June, 2000), including those who rely heavily on public and private transportation services to commute to work and school, participate in recreational activities, and carry out daily activities. The Individuals with Disabilities Education Act (IDEA) requires that children with disabilities, including those who use wheelchairs, must be transported safely to educational settings. The Americans with Disabilities Act of 1990 (ADA) requires that all public and private transportation systems, including trains, buses, and subways be accessible to persons with disabilities, including those who use wheelchairs. (The ADA does not address air transportation and

school buses.) However, in a recent report eighty-two percent of wheelchair users stated they have difficulty accessing their local public transportation system (Kaye, H.S., Kang, T., and LaPlante, M.P., "Mobility Device Use in the United States." *Disability Statistics Report, (14)*, Washington, D.C.: U.S. Department of Education, NIDRR, June, 2000).

Many wheelchair users are not capable of transferring into a vehicle seat and instead are required to travel seated while in their wheelchairs. However, most wheelchairs are not designed to function as vehicle seats, thus putting wheelchair-seated travelers at greater risk of injury compared to those who sit in standard vehicle seats (Bertocci, G.E., et. al., "Computer Simulation and Sled Test Validation of a Powerbase Wheelchair and Occupant Subjected to Frontal Crash Conditions," *IEEE Transactions on Rehabilitation Engineering*, Vol. 7, No. 2, pg. 234, June, 1999). Providing effective occupant protection in a motor vehicle is a multifaceted problem that involves the vehicle seat, how the seat is anchored to the vehicle, and an occupant restraint system (seatbelts, airbags, etc). Manufacturers of motor vehicle seats are required to perform extensive testing to ensure that vehicle seating systems are designed and constructed to provide support for the occupant under crash conditions (Department of Transportation, U.S. National Center for Health Statistics, "Federal Motor Vehicle Safety Standards Seating Systems," U.S. Government Printing Office, Washington, DC, 49 CFR 571.207). However, wheelchairs used as motor vehicle seats are not necessarily designed for such use and must rely upon after-market products to secure or anchor the wheelchair to the vehicle. Unfortunately, tie-down systems are not afforded the same scrutiny as vehicle seating systems thereby increasing the likelihood that the tie-down systems could fail and the wheelchair and its occupant could become a projectile in crash settings.

Laboratory research has dramatically demonstrated the potential danger for wheelchair riders not adequately secured using wheelchair tie-down and restraint systems (WTORS) during vehicle collisions (Benson, J.B. and Schneider, L.W., "Improving the crashworthiness of restraints for handicapped children," In: *Advances in belt restraint systems, design, performance, and usage: Society of Automobile Engineers Technical Paper #840528*, Warrendale, PA., pgs. 389-404, 1984). Although there has been an increased awareness about wheelchair

rider safety, there is a paucity of information regarding the risk to wheelchair riders while riding in motor vehicles. In an effort to better characterize wheelchair rider risk, an analysis of motor vehicle accident data for the general public was conducted. According to Shaw, the most readily accessible and quantifiable information regarding vehicle accidents involving onboard wheelchairs was found in the National Electronic Injury Surveillance System (NEISS) database that is maintained by the Consumer Product Safety Commission (CPSC). CPSC staff collected information from a sample of 95 (out of an estimated 6,000) hospitals nationwide that are equipped to accommodate emergency visits. Based upon data collected from January 1988 through September 1996, an estimated 1,320 wheelchair riders were injured as a result of vehicle accidents (Shaw, G., "Wheelchair rider risk in motor vehicles: A technical note," *Journal of Rehabilitation Research and Development*, Vol. 37, No. 1, Pgs. 89-100, January and February, 2000).

Similar results were found in a different study that looked at NEISS data from 1986 to 1990. In that study, an estimated 2,200 wheelchair riders were injured and the author concluded that "improper securement accidents generally occur when the vehicle stops too quickly or makes a sharp turn." Furthermore, the author could only find the record of one fatality between 1973 and 1991 that resulted from an occupant falling from the wheelchair due to a sudden stop (Richardson, H.A., "Wheelchair occupants injured in motor vehicle-related accidents," U.S. Department of Transportation National Center for Statistics and Analysis, Mathematical Analysis Division, Washington, DC 1991).

Both studies expressed the need for caution when using NEISS data to define wheelchair rider injury risk. Although the NEISS data source provides a perspective regarding the approximate number of incidents and insight as to the kinds of injury-producing situations, it does not provide sufficient specific detail such as a consistent reporting and classification of vehicle type and size (i.e., large, heavy vehicles versus small, lighter vehicles), the WTORS used, and the death and injury rate per unit of exposure. This information is needed to establish the risk and to evaluate the efficiency of risk-reduction efforts (Shaw, G., op cit., 2000).

Voluntary standards have been developed to establish general design and performance requirements for wheelchairs intended to also be used as

a vehicle seat and for WTORS. The American National Standards Institute/Rehabilitation Engineering Society of North America (ANSI/RESNA) wheelchair standard (hereafter referred to as ANSI/RESNA WC-19) provides wheelchair manufacturers with design and testing guidelines under frontal impact conditions for wheelchairs intended to be used as seats in motor vehicles (American National Standards Institute (ANSI)/Rehabilitation Engineering Society of North America (RESNA), "WC/Volume 1, Section 19: Wheelchairs used as seats in motor vehicles," RESNA standard, Arlington, VA: RESNA, 2000). Similarly, a standard developed by the Society of Automotive Engineers (SAE J2249) provides guidance for the installation and usage of WTORS (SAE, "SAE J2249: Wheelchair tie-downs and occupant restraints systems for use in motor vehicles," Society of Automotive Engineers (SAE), 1996).

Although these voluntary standards address the safety needs of wheelchair-seated travelers, there is still much that needs to be accomplished. For instance, the ANSI/RESNA WC-19 standards are used to assess the crashworthiness of complete wheelchair systems through a variety of tests including dynamic frontal impact testing. However, there are no requirements to test the crashworthiness of wheelchair systems under varying impact directions, such as side or rear impact crashes. Studies of both the biomechanics and kinematics of occupants and wheelchairs subjected to side and rear impact crashes could lead to a better understanding of injury risk for wheelchair-seated occupants under these circumstances and improved design criteria and safety standards.

The SAE J2249 standards recommend using four-point, strap-type wheelchair tie-downs for securing wheelchairs to a vehicle. Devices such as these have been used for some time and are effective if the chair is designed to accommodate the strains and is secured properly. However, strap-type tie-downs are cumbersome and time-consuming, warranting the need for development of wheelchair tie-downs that are both safe and easy to operate.

Finally, it is not uncommon for rehabilitation technology professionals to order a wheelchair frame or base from one supplier and add to it a separate seating system or other peripheral device, such as a ventilator, that has been purchased from another supplier. Despite an effort to evaluate the crashworthiness of a wheelchair system using the ANSI/RESNA WC-19 standards, the common practice of

adding after-market or customized equipment invalidates the test results of a wheelchair tested with originally manufactured components. Subsequently, the after-market or customized equipment are not subjected to the same dynamic impact testing used on the original wheelchair system to evaluate its ability to withstand crash-level forces (Van Roosmalen, L., et al., "Proposed Test Method for and Evaluation of Wheelchair Seating System (WCSS) Crashworthiness," *Journal of Rehabilitation Research and Development*, Vol. 37, No. 5, Pgs. 543-553, September and October, 2000).

Perhaps one of the most successful safety devices introduced by the automobile industry is the safety belt, or occupant restraint system. It is estimated that safety belts save 9,500 lives every year (National Highway Traffic Safety Administration, "America's Experience with Seat Belt and Child Seat Use," January 2, 2001: [www.nhtsa.dot.gov/people/injury/airbags/presbelt/america\\_seatbelt.html](http://www.nhtsa.dot.gov/people/injury/airbags/presbelt/america_seatbelt.html)) and many States now make it mandatory for occupants riding in private vehicles to wear safety belts. Traditional vehicle seating systems protect their occupants through properly positioned occupant restraint systems and crashworthy seat design (Department of Transportation, U.S. National Center for Health Statistics, "Federal Motor Vehicle Safety Standards Seating Systems," U.S. Government Printing Office, Washington, DC, 49 CFR 571.207). Unfortunately, individuals who must remain seated in their wheelchairs while traveling in motor vehicles are unable to benefit from traditional seating systems. According to the SAE J2249 standards, the current practice for wheelchair-seated occupant pelvic restraints (lap belts) is to anchor the belts to the vehicle floor or to rear wheelchair tie-downs. Current practice for the shoulder restraint is to anchor one end of the belt on the vehicle wall or ceiling and the lower end to the pelvic restraint belt (Society of Automotive Engineers, "SAE J2249: Wheelchair tie-downs and occupant restraints (WTORS) for use in motor vehicles," 1996). ANSI/RESNA WC-19 recommends an additional wheelchair integrated pelvic restraint on wheelchairs that are used in motor vehicles (American National Standards Institute (ANSI)/Rehabilitation Engineering Society of North America (RESNA), "WC/ Volume 1, Section 19: Wheelchairs used as seats in motor vehicles," RESNA Standard, Arlington, VA: RESNA, 2000). However, there are

numerous problems associated with anchoring vehicle-mounted occupant restraint systems for wheelchair-seated occupants including, but not limited to, the limited number of anchoring options due to window locations, seating positions, and the vehicle's structural integrity. In addition, all users, regardless of wheelchair models, seat heights, etc., are required to use the same fixed occupant restraint systems that have the potential of compromising safety belt fit, comfort, and occupant safety.

#### Priority

We will establish an RERC on transportation to improve the safety of wheelchair users who remain seated in their wheelchairs while using public and private transportation services and to investigate new wheelchair securement technologies that might enable wheelchair users to independently secure and release the wheelchair without the need for a second person. The RERC must:

(a) Investigate and report on the incidence, extent, and nature of injury of wheelchair riders due to motor vehicle accidents, making a distinction between the cause of accident, the cause of injury, the type of vehicle or transportation service involved, and the vehicle size and weight, and include recommendations for ways to minimize injury;

(b) Investigate and report on safety issues, including both kinematics and biomechanics, related to wheelchair-seated occupants subjected to side and rear impact crashes;

(a) Investigate, develop and evaluate universal securement interfaces that would enable wheelchair and scooter users to safely and independently secure their wheelchairs and scooters to motor vehicles;

(b) Investigate and compare methods, including low-cost methods, for testing, both static and dynamic, the crashworthiness of after-market and customized wheelchair seating systems and peripheral devices and, if found to be viable, develop strategies for integrating these methods into existing voluntary wheelchair performance standards;

(e) Investigate, develop, and evaluate integrated occupant restraint systems that are independent of the vehicle and easy for wheelchair-seated occupants to operate; and

(f) Investigate the use of new or existing voluntary performance standards that would address problems associated with wheelchair-seated occupants subjected to side and rear impact crashes and potential benefits of

using integrated occupant restraint systems, universal securement interfaces, and after-market and customized wheelchair seating systems and peripheral devices.

In addition to the activities proposed by the applicant to carry out the purposes, the RERC must:

- Develop and implement in the first year of the grant, and in consultation with the NIDRR-funded National Center for the Dissemination of Disability Research (NCDDR), a plan to disseminate the RERC's research results to clinicians, engineers, manufacturers, persons with disabilities, disability organizations, technology service providers, businesses, and appropriate journals;
- Develop and implement in the first year, and in consultation with the NIDRR-funded RERC on Technology Transfer, a utilization plan for ensuring that all new and improved technologies developed by this RERC are successfully transferred to the marketplace;
- Conduct in the third year of the grant a state-of-the-science conference on wheelchair transportation and publish a comprehensive report on the final outcomes of the conference in the fourth year of the grant;
- Collaborate on research projects of mutual interest with other projects, such as the NIDRR-funded RERC on Wheeled Mobility and the Federal Transit Administration-funded Project Action, as identified through consultation with the NIDRR project officer; and
- Collaborate with relevant Federal agencies responsible for the administration of public laws that address access to and usability of public and private transportation for individuals with disabilities including, but not limited to, the U.S. Department of Transportation's Federal Transit Administration and National Highway Traffic Safety Administration, and other relevant Federal agencies identified by the NIDRR project officer.

### *Priority 3: RERC on Mobile Wireless Technologies for Persons With Disabilities*

#### Background

The information technology (IT) revolution is fundamentally altering the way Americans work, purchase goods and services, communicate, and play. Today, one can access information using any number of electronic devices and networks, including computers connected to "plain old telephone lines" (POTS), televisions connected to cable or digital satellite networks, cellular telephones, or wireless hand-held personal digital assistant devices.

Unlike earlier information technologies (*i.e.*, print, radio, telephone, television and telefax), mobile communications networks, the Internet and the World Wide Web did not enter into our daily lives gradually—rather, they exploded onto the scene. While the economic impact of this transformation has not been fully evaluated at either the individual or systems level, it is significant.

The proliferation of information technologies, including wireless technologies, does not guarantee accessibility for persons with disabilities. According to a recent study, only 23.9% of people with disabilities have access to a computer at home compared to just over half (51.7%) of their non-disabled counterparts. The gap in Internet use is even more striking: roughly 10% of people with disabilities connect to the Internet compared to almost 40% of those without disabilities. Elderly people with disabilities are even less likely to make use of these technologies. Among those 65 years of age or older, only 10% of individuals with disabilities have computers at home and, of those, only 2.2% use the Internet (Kaye, H.S., "Computer and Internet Use Among People with Disabilities," *Disability Statistics Report (14)*, U.S. Department of Education, National Institute on Disability and Rehabilitation Research, Washington, D.C., 1999).

Chapter 5 of NIDRR's Long-Range Plan (64 FR 45768) discusses the importance of making information technology accessible to persons with disabilities of all ages, and includes a discussion of universal access and the need for continued research and development in this area. Unfortunately, while advances in computers and information technologies create new opportunities for some individuals, they create barriers for others. The proliferation of electronic visual and tactile displays (*i.e.*, LCD, LED, and touch screens) on home appliances, business equipment, and public access terminals also poses a major problem for individuals with sensory and motor deficits unless alternative methods for accessing and using these devices are made available. Conversely, audio cues (beeps) cannot convey information to individuals who are deaf or hard of hearing. Of particular concern is that an increasing number of functions are being integrated onto single chips or motherboards, obviating the need for third party accessories such as sound cards or voice input devices. This makes changes or modifications to these built-in features difficult or even impossible.

Cellular communications are wireless communications that occur in small "cells" or geographic areas on land. When one talks on a cellular phone their voice is transmitted to a nearby tower (usually within ten miles). Cellular phone calls are then passed from tower to tower as cellular users move from one geographic area to the next. To manage all the communications, the cellular phones and towers must "speak" the same language. The Internet and World Wide Web revolutions began in the 1990's and, in less than a decade, have been responsible for reshaping the way information is accessed and the way commerce is conducted (Hjelm, J., *Designing Wireless Information Services*, Wiley Computer Publishing, New York, pg. 2, 2000).

Technologies that launched the digital revolution are undergoing rapid changes, resulting in a new generation of mobile information systems. The Wireless Application Protocol (WAP) was developed in 1997 by numerous wireless companies in an attempt to make a common interface for wireless devices to access the Internet (Hjelm, J., *op cit.*, pg. 293, 2000). This standard is currently being implemented into cellular phones and personal digital assistants and includes the technology to transmit data back and forth using "micro-browsers." Micro-browsers are analogous to Internet browsers used on personal computers but have far fewer features so only the most relevant information is communicated using WAP (Mock, D.L., "Wireless 101: A Guide to Wireless Investing for Newbies and non-Techies," *Rev. 2*, pgs. 13-14, July, 2000). A new technology that is poised to revolutionize the IT industry is the Bluetooth Protocol Architecture, the name given to a new short-range radio frequency technology that could ultimately replace data wire connections on just about any electronic device. Bluetooth technologies will enable electronic devices within about 30 feet of each other to communicate over a high-speed wireless connection and could transcend any environment (Hjelm, J., *op cit.*, pg. 292, 2000).

The future generation of wireless technologies, commonly referred to as "third generation" systems, will ultimately have the capacity to transmit data, text, voice, and graphics between terminals that may be fixed or moving, with bandwidth that varies according to the instant demand and is charged for on that basis (Shipley, T. and Gill, J., "Inclusive Design of Wireless Systems," Royal National Institute for the Blind, London, England, pg. 27, 2000). Third generation systems will provide Internet

access as well as point-to-point communication, and will ultimately merge with other wireless technologies, such as Bluetooth (Ibid).

The ubiquitous nature of mobile wireless communications brings with it a host of opportunities as well as challenges. For example, a cellular telephone cannot present information in the same way that a laptop or desktop can. Furthermore, different environments require different types of input and output. It is difficult to use a keyboard when walking, difficult and even dangerous to use a device that requires visual attention when driving, and devices that require speech input or output are not practical in noisy environments.

People with disabilities should be able to benefit from the evolving digital revolution on equal terms, freed from the barriers of inaccessible technology (Ibid, pg. 27). This will happen only if the new wave of wireless communications systems are designed to accommodate a broad range of abilities among users (Ibid, pg. 2). Without an inclusive approach to design, large segments of this target population will find themselves precluded from accessing and participating in the new information driven society (Ibid). The infrastructure to support the new era of wireless technologies will be complex and expensive, and because of this there will be reluctance to make changes once systems are operational. Therefore, it is imperative that the design of both systems and equipment be considered carefully at the outset of development.

Further, there is a critical shortage of engineers and product designers who are capable of providing expertise to developers and manufacturers about incorporating accessible and universal design features into their IT products. Achieving this goal will require product designers and IT experts to collaborate more closely with clinicians, service providers, and consumers to identify potential applications of new telecommunications devices and systems that support independent living, employment, and community integration. Finally, more individuals need to be trained to educate consumers, customer service professionals, technical writers, web developers, marketers, and other IT related professionals about accessible and usable information technologies.

NIDRR currently funds RERCs on Information Technology Access and Telecommunications Access. The RERC on Mobile Wireless Technologies for Persons with Disabilities will be required to coordinate with these two

RERCs on relevant policy and regulatory activities and other activities of mutual interest.

#### Priority

We will establish an RERC on mobile wireless technologies to investigate promising applications of, and facilitate equitable access to, future generations of mobile wireless technologies for individuals with disabilities of all ages and to expand research and development capacity within this subject area. The RERC must:

(a) Investigate, develop, and evaluate technological solutions in collaboration with industry to promote universal access and usability in future generations of mobile wireless technologies;

(b) Investigate, develop, and evaluate applications of mobile wireless technologies that could benefit persons with disabilities in independent living, employment, and community integration such as healthcare monitoring, environmental control, emergency location signaling devices, scheduling maintenance, mobile communications, etc.;

(c) Investigate, develop, and evaluate innovative and flexible multi-modal interface methods for accessing and using future generations of mobile wireless technologies such as home appliances, mobile communication systems and portable information terminals, office equipment, health-monitoring devices, and public access terminals;

(d) Identify, implement, and evaluate, in collaboration with the wireless IT industry, professional IT associations, and institutions of higher education, innovative approaches to expand capacity in accessible IT studies including design, research and development;

(e) Monitor trends and evolving product concepts that represent and signify future directions for mobile wireless technologies; and

(f) Provide technical assistance to public and private organizations responsible for developing policies, guidelines and standards that affect the accessibility of mobile wireless technologies and systems that are manufactured and implemented.

In addition to the activities proposed by the applicant to carry out these purposes, the RERC must:

- Collaborate with industry, industrial consortia, and professional and trade associations on all activities;
- Develop and implement in the first year of the grant, and in consultation with the NIDRR-funded National Center for the Dissemination of Disability

Research (NCDDR), a plan to disseminate the RERC's research results to disability organizations, persons with disabilities, technology service providers, businesses, manufacturers, and appropriate journals;

- Develop and implement in the first year of the grant, and in consultation with the NIDRR-funded RERC on Technology Transfer, a utilization plan for ensuring that all new and improved technologies developed by this RERC are successfully transferred to the marketplace;

- Conduct a state-of-the-science conference on accessible information technologies in the third year of the grant cycle and publish a comprehensive report on the final outcomes of the conference in the fourth year of the grant cycle; and

- Coordinate on research projects of mutual interest with relevant NIDRR-funded projects such as the RERCs on Information Technology Access and Telecommunications Access and the Information Technology Technical Assistance and Training Center, as identified through consultation with the NIDRR project officer.

*Applicable Program Regulations:* 34 CFR part 350.

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(Catalog of Federal Domestic Assistance Numbers 84.133E, Rehabilitation Engineering Research Center) Program Authority: 29 U.S.C. 762(g) and 764.

Dated: June 12, 2001.

**Francis V. Corrigan,**

*Deputy Director, National Institute on Disability and Rehabilitation Research.*

[FR Doc. 01-15154 Filed 6-14-01; 8:45 am]

BILLING CODE 4000-01-P

**DEPARTMENT OF EDUCATION**

[CFDA No.: 84.133E]

**Office of Special Education and Rehabilitative Services; National Institute on Disability and Rehabilitation Research**

**ACTION:** Notice Inviting Applications and pre-application meeting for New Rehabilitation Engineering Research Centers for Fiscal Year 2001–2003.

*Note to Applicants:* This notice is a complete application package. Together with the statute authorizing the programs and applicable regulations governing the programs including the Education Department General Administrative Regulations (EDGAR), this notice contains information, application forms, and instructions needed to apply for a grant under these competitions.

This notice of final funding priorities for Technology for Successful Aging, Wheelchair Transportation Safety, and Mobile Wireless Technologies for Persons with Disabilities are published elsewhere in this issue of the **Federal Register**.

**National Education Goals**

The eight National Education Goals focus the Nation's education reform efforts and provide a framework for improving teaching and learning. This notice would address the National Education Goals that promote new

partnerships to strengthen schools and expand the Department's capacities for helping communities to exchange ideas and obtain information needed to achieve the goals.

This notice addresses the National Education Goal that every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

*Eligible Applicants:* Parties eligible to apply for grants under this program are States, public or private agencies, including for-profit agencies, public or private organizations, including for-profit organizations, institutions of higher education, and Indian tribes and tribal organizations.

*Program Authority:* 29 U.S.C. 764(b)(3).

*Applicable Regulations:* The Education Department General Administrative Regulations (EDGAR), 34 CFR parts 74, 75, 77, 80, 81, 82, 85, 86 and 97, and the program regulations 34 CFR part 350.

*Pre-Application Meeting:* Interested parties are invited to participate in a pre-application meeting to discuss the funding priorities and to receive technical assistance through individual consultation and information about the funding priorities. The meeting will be held on *July 12, 2001* you may attend either in person or by conference call at the Department of Education, Office of Special Education and Rehabilitative

Services, Switzer Building, Room 3065, 330 C St. SW., Washington, DC between 10 a.m. and 12 noon. NIDRR staff will also be available from 1:30 p.m. to 4 p.m. on that same day to provide technical assistance through individual consultation and information about the funding priority. For further information or to make arrangements to attend contact William Peterson, Switzer Building, Room 3425, 330 C St., SW, Washington, DC 20202.

William.Peterson@ed.gov on the Internet or Telephone (202) 205–9192. If you use a telecommunication device for the deaf (TDD), you may call (202) 205–4475.

**Assistance to Individuals With Disabilities at the Public Meetings**

The meeting site is accessible to individuals with disabilities, and a sign language interpreter will be available. If you need an auxiliary aid or service other than a sign language interpreter in order to participate in the meeting (e.g. other interpreting service such as oral, cued speech, or tactile interpreter; assistive listening device; or materials in alternative format), notify the contact person listed in this notice at least two weeks before the scheduled meeting date. Although we will attempt to meet a request we receive after this date, we may not be able to make available the requested auxiliary aid or service because of insufficient time to arrange it.

**APPLICATION NOTICE FOR FISCAL YEAR 2001 REHABILITATION ENGINEERING RESEARCH CENTERS, CFDA NO. 84–133E**

Funding priority	Deadline for transmittal of applications	Estimated number of awards	Maximum award amount (per year) <sup>1</sup>	Project period (months)
84.133E–1 Technology for Successful Aging .....	August 13, 2001 .....	1	\$900,000	60
84.133E–3 Wheelchair Transportation Safety .....	August 13, 2001 .....	1	900,000	60
84.133E–8 Mobile Wireless Technologies for Persons with Disabilities.	August 13, 2001 .....	1	1,000,000	60

Available Date: June 15, 2001.

<sup>1</sup> The Secretary will reject without consideration or evaluation any application that proposes a project funding level that exceeds the stated maximum award amount in any year (See 34 CFR 75.104(b)).

Note.—The estimate of funding level and awards in this notice do not bind the Department of Education to a specific level of funding or number of grants.

*For Applications Contact:* The Grants and Contracts Service Team (GCST), Department of Education, 400 Maryland Avenue SW., Switzer Building, 3317, Washington, DC 20202, or call (202) 205–8207. Individuals who use a telecommunications device for the deaf (TDD) may call the TDD number at (202) 205–9860. The preferred method for requesting information is to FAX your request to (202) 205–8717.

Individuals with disabilities may obtain a copy of the application package

in an alternative format by contacting the GCST. However, the Department is not able to reproduce in an alternative format the standard forms included in the application package.

**FOR FURTHER INFORMATION CONTACT:** Donna Nangle, U.S. Department of Education, 400 Maryland Avenue, SW., room 3414, Switzer Building, Washington, DC 20202–2645. Telephone: (202) 205–5880. Individuals who use a telecommunications device for the deaf (TDD) may call the TDD

number at (202) 205–4475. Internet: Donna.Nangle@ed.gov.

Individuals with disabilities may obtain this document in an alternative format (e.g., Braille, large print, audiotape, or computer diskette) on request to the contact person listed in the preceding paragraph.

**Selection Criteria:** The Secretary uses the following selection criteria to evaluate applications under the RERC program.

(a) *Importance of the problem* (6 points total).

(1) The Secretary considers the importance of the problem.

(2) In determining the importance of the problem, the Secretary considers the following factors:

(i) The extent to which the applicant clearly describes the need and target population (3 points).

(ii) The extent to which the proposed project will have beneficial impact on the target population (3 points).

(b) *Responsiveness to an absolute or competitive priority* (5 points total).

(1) The Secretary considers the responsiveness of an application to the absolute or competitive priority published in the **Federal Register**.

(2) In determining the application's responsiveness to the absolute or competitive priority, the Secretary considers the following factors:

(i) The extent to which the applicant addresses all requirements of the absolute or competitive priority (3 points).

(ii) The extent to which the applicant's proposed activities are likely to achieve the purposes of the absolute or competitive priority (2 points).

(c) *Design of research activities* (22 points total).

(1) The Secretary considers the extent to which the design of research activities is likely to be effective in accomplishing the objectives of the project.

(2) In determining the extent to which the design is likely to be effective in accomplishing the objectives of the project, the Secretary considers the following factors:

(i) The extent to which the research activities constitute a coherent, sustained approach to research in the field, including a substantial addition to the state-of-the-art (7 points).

(ii) The extent to which the methodology of each proposed research activity is meritorious, including consideration of the extent to which—

(A) The proposed design includes a comprehensive and informed review of the current literature, demonstrating knowledge of the state-of-the-art (3 points);

(B) Each research hypothesis is theoretically sound and based on current knowledge (3 points);

(C) Each sample population is appropriate and of sufficient size (3 points);

(D) The data collection and measurement techniques are appropriate and likely to be effective (3 points); and

(E) The data analysis methods are appropriate (3 points).

(d) Design of development activities (20 points total).

(1) The Secretary considers the extent to which the design of development activities is likely to be effective in accomplishing the objectives of the project.

(2) In determining the extent to which the design is likely to be effective in accomplishing the objectives of the project, the Secretary considers the extent to which the plan for development, clinical testing, and evaluation of new devices and technology is likely to yield significant products or techniques, including consideration of the extent to which:

(i) The proposed project will use the most effective and appropriate technology available in developing the new device or technique (3 points);

(ii) The proposed development is based on a sound conceptual model that demonstrates an awareness of the state-of-the-art in technology (4 points);

(iii) The new device or technique will be developed and tested in an appropriate environment (3 points);

(iv) The new device or technique is likely to be cost-effective and useful (3 points);

(v) The new device or technique has the potential for commercial or private manufacture, marketing, and distribution of the product (4 points); and

(vi) The proposed development efforts include adequate quality controls and, as appropriate, repeated testing of products (3 points).

(e) *Design of training activities* (4 points total).

(1) The Secretary considers the extent to which the design of training activities is likely to be effective in accomplishing the objectives of the project.

(2) In determining the extent to which the design is likely to be effective in accomplishing the objectives of the project, the Secretary considers the extent to which the type, extent, and quality of the proposed clinical and laboratory research experience, including the opportunity to participate in advanced-level research, are likely to develop highly qualified researchers (4 points).

(f) *Design of dissemination activities* (7 points total).

(1) The Secretary considers the extent to which the design of dissemination activities is likely to be effective in accomplishing the objectives of the project.

(2) In determining the extent to which the design is likely to be effective in accomplishing the objectives of the project, the Secretary considers the following factors:

(i) The extent to which the materials to be disseminated are likely to be effective and usable, including consideration of their quality, clarity, variety, and format (5 points).

(ii) The extent to which the information to be disseminated will be accessible to individuals with disabilities (2 point).

(g) *Design of utilization activities* (3 points total).

(1) The Secretary considers the extent to which the design of utilization activities is likely to be effective in accomplishing the objectives of the project.

(2) In determining the extent to which the design is likely to be effective in accomplishing the objectives of the project, the Secretary considers the extent to which the potential new users of the information or technology have a practical use for the information and are likely to adopt the practices or use the information or technology, including new devices (3 points).

(h) *Plan of operation* (4 points total).

(1) The Secretary considers the quality of the plan of operation.

(2) In determining the quality of the plan of operation, the Secretary considers the adequacy of the plan of operation to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, and timelines for accomplishing project tasks (4 points).

(i) *Collaboration* (4 points Total).

(1) The Secretary considers the quality of collaboration.

(2) In determining the quality of collaboration, the Secretary considers the extent to which the applicant's proposed collaboration with one or more agencies, organizations, or institutions is likely to be effective in achieving the relevant proposed activities of the project. (4 points).

(j) *Adequacy and reasonableness of the budget* (4 points total).

(1) The Secretary considers the adequacy and the reasonableness of the proposed budget.

(2) In determining the adequacy and the reasonableness of the proposed budget, the Secretary considers the following factors:

(i) The extent to which the costs are reasonable in relation to the proposed project activities (2 point).

(ii) The extent to which the budget for the project, including any subcontracts, is adequately justified to support the proposed project activities (2 points).

(k) *Plan of evaluation* (8 points total).

(1) The Secretary considers the quality of the plan of evaluation.

(2) In determining the quality of the plan of evaluation, the Secretary

considers the extent to which the plan of evaluation provides for periodic assessment of progress toward the following factors:

(i) Implementing the plan or operation; (4 points); and  
(ii) Achieving the project's intended outcomes and expected impacts (4 points).

(1) *Project staff* (8 points total).

(1) The Secretary considers the quality of the project staff.

(2) In determining the quality of the project staff, the Secretary considers the extent to which the applicant encourages applications for employment from persons who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability (2 point).

(3) In addition, the Secretary considers the following factors:

(i) The extent to which the key personnel and other key staff have appropriate training and experience in disciplines required to conduct all proposed activities (3 points).

(ii) The extent to which the commitment of staff time is adequate to accomplish all the proposed activities of the project (3 points).

(m) *Adequacy and accessibility of resources* (5 points total).

(1) The Secretary considers the adequacy and accessibility of the applicant's resources to implement the proposed project.

(2) In determining the adequacy and accessibility of resources, the Secretary considers the following factors:

(i) The extent to which the applicant is committed to provide adequate facilities, equipment, other resources, including administrative support, and laboratories, if appropriate (2 points).

(ii) The extent to which the applicant has appropriate access to clinical populations and organizations representing individuals with disabilities to support advanced clinical rehabilitation research (2 point).

(iii) The extent to which the facilities, equipment, and other resources are appropriately accessible to individuals with disabilities who may use the facilities, equipment, and other resources of the project (1 point).

#### Additional Selection Criterion

We will use the selection criteria in 34 CFR 350.54 to evaluate applications under this program. The maximum score for all the criteria is 100 points; however, we will also use the following criterion so that up to an additional 10 points may be earned by an applicant for a total possible score of 110 points.

Up to 10 points could be added based on the extent to which an application

includes effective strategies for employing and advancing in employment qualified individuals with disabilities in projects awarded under these absolute priorities. In determining the effectiveness of those strategies, we will consider the applicant's prior success, as described in the application, in employing and advancing in employment qualified individuals with disabilities.

Thus, for purposes of this competitive preference, applicants can be awarded up to a total of 10 points in addition to those awarded under the published selection criteria for these priorities. That is, an applicant meeting this competitive preference could earn a maximum total of 110 points.

#### Instructions for Application Narrative

We will reject without consideration or evaluation any application that proposes a project funding level that exceeds the stated maximum award amount per year (See 34 CFR 75.104(b)).

We strongly recommend the following:

(1) a one-page abstract;

(2) an Application Narrative (*i.e.*, Part III that addresses the selection criteria that will be used by reviewers in evaluating individual proposals) of no more *125 pages for Project applications*, double-spaced (no more than 3 lines per vertical inch) 8" x 11" pages (on one side only) with one inch margins (top, bottom, and sides). The application narrative page limit recommendation does not apply to: Part I—the electronically scannable form; Part II—the budget section (including the narrative budget justification); and Part IV—the assurances and certifications; and (3) a font no smaller than a 12-point font and an average character density no greater than 14 characters per inch.

#### Instructions for Transmittal of Applications

If you want to apply for a grant and be considered for funding, you must meet the following deadline requirements:

(a) *If You Send Your Application by Mail.*

You must mail the original and two copies of the application on or before the deadline date to: U.S. Department of Education, Application Control Center, Attention: CFDA #84.133E (Applicant must insert priority name), Washington, DC 20202-4725.

You must show one of the following as proof of mailing:

(1) A legibly dated U.S. Postal Service postmark.

(2) A legible mail receipt with the date of mailing stamped by the U.S. Postal Service.

(3) A dated shipping label, invoice, or receipt from a commercial carrier.

(4) Any other proof of mailing acceptable to the Secretary.

If you mail an application through the U.S. Postal Service, we do not accept either of the following as proof of mailing:

(1) A private metered postmark.

(2) A mail receipt that is not dated by the U.S. Postal Service.

(b) *If You Deliver Your Application by Hand*

You or your courier must hand deliver the original and two copies of the application by 4:30 p.m. (Washington, DC time) on or before the deadline date to: U.S. Department of Education, Application Control Center, Attention: CFDA #84.133E (Applicant must insert priority name), Room #3633, Regional Office Building #3, 7th and D Streets, SW, Washington, DC.

The Application Control Center accepts application Deliveries daily between 8 a.m. and 4:30 p.m.

(Washington, DC time), except Saturdays, Sundays, and Federal holidays. The Center accepts application deliveries through the D Street entrance only. A person delivering an application must show identification to enter the building.

#### Notes:

(1) The U.S. Postal Service does not uniformly provide a dated postmark. Before relying on this method, an applicant should check with its local post office.

(2) If you send your application by mail or if you or your courier deliver it by hand, the Application Control Center will mail a Grant Application Receipt Acknowledgment to you. If you do not receive the notification of application receipt with 15 days from the date of mailing the application, you should call the U.S. Department of Education Application Control Center at (202) 708-9493.

(3) You must indicate on the envelope and—if not provided by the Department—in Item 3 of the Application for Federal Assistance (ED Form 424; revised November 12, 1999) the CFDA number—and letter, if any—of the competition under which you are submitting your application.

#### Application Forms and Instructions

The Appendix to this application is divided into four parts. These parts are organized in the same manner that the submitted application should be organized. These parts are as follows:

PART I: Application for Federal Assistance (ED 424 (Rev. 11/12/99)) and instructions.

PART II: Budget Form—Non-Construction Programs (ED 524) and instructions.

PART III: Application Narrative.

#### Additional Materials

Estimated Public Reporting Burden.

Assurances—Non-Construction Programs (Standard Form 424B).

Certification Regarding Lobbying, Debarment, Suspension, and Other Responsibility Matters: and Drug-Free Work-Place Requirements (ED Form 80-0013).

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion: Lower Tier Covered Transactions (ED Form 80-0014) and instructions. (NOTE: ED Form GCS-014 is intended for the use of primary participants and should not be transmitted to the Department.)

Disclosure of Lobbying Activities (Standard Form LLL (Rev. 7-97)) if applicable) and instructions.

You may submit information on a photocopy of the application and budget forms, the assurances, and the certifications. However, the application form, the assurances, and the certifications must each have an *original signature*. We will not award a grant unless we have received a completed application form.

#### Electronic Access to This Document

You may view this document, as well as all other Department of Education documents published in the **Federal Register**, in text or Adobe Portable Document Format (PDF) on the Internet at the following site: [www.ed.gov/legislation/FedRegister](http://www.ed.gov/legislation/FedRegister). To use PDF you must have Adobe Acrobat Reader, which is available free at the previous site. If you have questions about using PDF, call the U.S. Government Printing Office (GPO), toll free at 1-888-293-6498; or in the Washington, DC, area at (202) 512-1530.

**Note:** The official version of this document is the document published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available on GPO Access at: <http://www.access.gpo.gov/nara/index.html>

(Catalog of Federal Domestic Assistance Numbers: 84.133E, Rehabilitation Engineering Research Centers)

*Program Authority:* 29 U.S.C. 762(g) and 764(b)(3).

Dated: June 12, 2001.

**Francis V. Corrigan,**

*Deputy Director, National Institute on Disability and Rehabilitation Research.*

#### Appendix

##### Application forms and Instructions

Applicants are advised to reproduce and complete the application forms in this Section. Applicants are required to submit an original and two copies of each application as provided in this Section. However, applicants are encouraged to submit an original and seven copies of each application in order to facilitate the peer review process and minimize copying errors.

##### Frequent Questions

###### 1. Can I Get an Extension of the Due Date?

No! On rare occasions the Department of Education may extend a closing date for all applicants. If that occurs, a notice of the revised due date is published in the **Federal Register**. However, there are no extensions or exceptions to the due date made for individual applicants.

###### 2. What Should Be Included in the Application?

The application should include a project narrative, vitae of key personnel, and a budget, as well as the Assurances forms included in this package. Vitae of staff or consultants should include the individual's title and role in the proposed project, and other information that is specifically pertinent to this proposed project. The budgets for both the first year and all subsequent project years should be included.

If collaboration with another organization is involved in the proposed activity, the application should include assurances of participation by the other parties, including written agreements or assurances of cooperation. It is *not* useful to include general letters of support or endorsement in the application.

If the applicant proposes to use unique tests or other measurement instruments that are not widely known in the field, it would be helpful to include the instrument in the application.

Many applications contain voluminous appendices that are not helpful and in many cases cannot even be mailed to the reviewers. It is generally not helpful to include such things as brochures, general capability statements of collaborating organizations, maps, copies of publications, or descriptions of other projects completed by the applicant.

###### 3. What Format Should Be Used for the Application?

NIDRR generally advises applicants that they may organize the application to follow the selection criteria that will be used. The specific review criteria vary according to the specific program, and are contained in this Consolidated Application Package.

4. May I Submit Applications to More Than One NIDRR Program Competition or More Than One Application to a Program?

Yes, you may submit applications to any program for which they are responsive to the program requirements. You may submit the same application to as many competitions as you believe appropriate. You may also submit more than one application in any given competition.

###### 5. What Is the Allowable Indirect Cost Rate?

The limits on indirect costs vary according to the program and the type of application. An applicant for an RRTC is limited to an indirect rate of 15%. An applicant for a Disability and Rehabilitation Research Project should limit indirect charges to the organization's approved indirect cost rate. If the organization does not have an approved indirect cost rate, the application should include an estimated actual rate.

###### 6. Can Profitmaking Businesses Apply for Grants?

Yes. However, for-profit organizations will not be able to collect a fee or profit on the grant, and in some programs will be required to share in the costs of the project.

###### 7. Can Individuals Apply for Grants?

No. Only organizations are eligible to apply for *grants* under NIDRR programs. However, individuals are the only entities eligible to apply for fellowships.

###### 8. Can NIDRR Staff Advise Me Whether My Project Is of Interest to NIDRR or Likely To Be Funded?

No. NIDRR staff can advise you of the requirements of the program in which you propose to submit your application. However, staff cannot advise you of whether your subject area or proposed approach is likely to receive approval.

###### 9. How Do I Assure That My Application Will Be Preferred to the Most Appropriate Panel for Review?

Applicants should be sure that their applications are referred to the correct competition by clearly including the competition title and CFDA number, including alphabetical code, on the Standard Form 424, and including a project title that describes the project.

###### 10. How Soon After Submitting My Application Can I Find Out if It Will Be Funded?

The time from closing date to grant award date varies from program to program. Generally speaking, NIDRR endeavors to have awards made within five to six months of the closing date. Unsuccessful applicants generally will be notified within that time frame as well. For the purpose of estimating a project start date, the applicant should estimate approximately six months from the closing date, but no later than the following September 30.

11. Can I Call NIDRR To Find Out if My Application Is Being Funded?

No. When NIDRR is able to release information on the status of grant applications, it will notify applicants by letter. The results of the peer review cannot be released except through this formal notification.

12. If My Application Is Successful, Can I Assume I Will Get the Requested Budget Amount in Subsequent Years?

No. Funding in subsequent years is subject to availability of funds and project performance.

13. Will All Approved Applications Be Funded?

No. It often happens that the peer review panels approve for funding more applications

than NIDRR can fund within available resources. Applicants who are approved but not funded are encouraged to consider submitting similar applications in future competitions.

**BILLING CODE 4000-01-U**



## Instructions for ED 424

1. **Legal Name and Address.** Enter the legal name of applicant and the name of the primary organizational unit which will undertake the assistance activity.
2. **D-U-N-S Number.** Enter the applicant's D-U-N-S Number. If your organization does not have a D-U-N-S Number, you can obtain the number by calling 1-800-333-0505 or by completing a D-U-N-S Number Request Form. The form can be obtained via the Internet at the following URL: <http://www.dnb.com/dbis/aboutdb/intlduns.htm>.
3. **Tax Identification Number.** Enter the tax identification number as assigned by the Internal Revenue Service.
4. **Catalog of Federal Domestic Assistance (CFDA) Number.** Enter the CFDA number and title of the program under which assistance is requested.
5. **Project Director.** Name, address, telephone and fax numbers, and e-mail address of the person to be contacted on matters involving this application.
6. **Federal Debt Delinquency.** Check "Yes" if the applicant's organization is delinquent on any Federal debt. (This question refers to the applicant's organization and not to the person who signs as the authorized representative. Categories of debt include delinquent audit disallowances, loans and taxes.) Otherwise, check "No."
7. **Type of Applicant.** Enter the appropriate letter in the box provided.
8. **Novice Applicant.** Check "Yes" only if assistance is being requested under a program that gives special consideration to novice applicants and you meet the program requirements for novice applicants. By checking "Yes" the applicant certifies that it meets the novice applicant requirements specified by ED. Otherwise, check "No."
9. **Type of Submission.** Self-explanatory.
10. **Executive Order 12372.** Check "Yes" if the application is subject to review by Executive Order 12372. Also, please enter the month, date, and four (4) digit year (e.g., 12/12/2000). Applicants should contact the State Single Point of Contact (SPOC) for Federal Executive Order 12372 to determine whether the application is subject to the State intergovernmental review process. Otherwise, check "No."
11. **Proposed Project Dates.** Please enter the month, date, and four (4) digit year (e.g., 12/12/2000).
12. **Human Subjects.** Check "Yes" or "No". If research activities involving human subjects are **not** planned **at any time** during the proposed project period, check "No." **The remaining parts of item 12 are then not applicable.**

If research activities involving human subjects, whether or not exempt from Federal regulations for the protection of human subjects, **are** planned **at any time** during the proposed project period, either at the applicant organization or at any other performance site or collaborating institution, check "Yes." If **all** the research activities are designated to be exempt under the regulations, enter, in item 12a, the exemption number(s) corresponding to one or more of the six exemption categories listed in "Protection of Human Subjects in Research" attached to this form. Provide sufficient information in the application to allow a determination that the designated exemptions in item 12a, are appropriate. **Provide this narrative information in an "Item 12/Protection of Human Subjects Attachment" and insert this attachment immediately following the ED 424 face page. Skip the remaining parts of item 12.**

If **some or all** of the planned research activities involving human subjects are covered (nonexempt), skip item 12a and continue with the remaining parts of item 12, as noted below. In addition, follow the instructions in "Protection of Human Subjects in Research" attached to this form to prepare the six-point narrative about the nonexempt activities. **Provide this six-point narrative in an "Item 12/Protection of Human Subjects Attachment" and insert this attachment immediately following the ED 424 face page.**

**tion of Human Subjects Attachment" and insert this attachment immediately following the ED 424 face page.**

**If the applicant organization has an approved Multiple Project Assurance of Compliance** on file with the Grants Policy and Oversight Staff (GPOS), U.S. Department of Education, or with the Office for Protection from Research Risks (OPRR), National Institutes of Health, U.S. Department of Health and Human Services, that covers the specific activity, enter the Assurance number in item 12b and the date of approval by the Institutional Review Board (IRB) of the proposed activities in item 12c. This date must be no earlier than one year before the receipt date for which the application is submitted and must include the four (4) digit year (e.g., 2000). Check the type of IRB review in the appropriate box. An IRB may use the expedited review procedure if it complies with the requirements of 34 CFR 97.110. If the IRB review is delayed beyond the submission of the application, enter "Pending" in item 12c. If your application is recommended/selected for funding, a follow-up certification of IRB approval from an official signing for the applicant organization must be sent to and received by the designated ED official within 30 days after a specific formal request from the designated ED official. **If the applicant organization does not have on file with GPOS or OPRR an approved Assurance of Compliance** that covers the proposed research activity, enter "None" in item 12b and skip 12c. In this case, the applicant organization, by the signature on the application, is declaring that it will comply with 34 CFR 97 within 30 days after a specific formal request from the designated ED official for the Assurance(s) and IRB certifications.

13. **Project Title.** Enter a brief descriptive title of the project. If more than one program is involved, you should append an explanation on a separate sheet. If appropriate (e.g., construction or real property projects), attach a map showing project location. For preapplications, use a separate sheet to provide a summary description of this project.
14. **Estimated Funding.** Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions should be included on appropriate lines as applicable. If the action will result in a dollar change to an existing award, indicate **only** the amount of the change. For decreases, enclose the amounts in parentheses. If both basic and supplemental amounts are included, show breakdown on an attached sheet. For multiple program funding, use totals and show breakdown using same categories as item 14.
15. **Certification.** To be signed by the authorized representative of the applicant. A copy of the governing body's authorization for you to sign this application as official representative must be on file in the applicant's office.

Be sure to enter the telephone and fax number and e-mail address of the authorized representative. Also, in item 15c, please enter the month, date, and four (4) digit year (e.g., 12/12/2000) in the date signed field.

### Paperwork Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is **1875-0106**. The time required to complete this information collection is estimated to average between 15 and 45 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. **If you have any comments concerning the accuracy of the estimate(s) or suggestions for improving this form, please write to:** U.S. Department of Education, Washington, D.C. 20202-4651. **If you have comments or concerns regarding the status of your individual submission of this form write directly to:** Joyce I. Mays, Application Control Center, U.S. Department of Education, 7th and D Streets, S.W. ROB-3, Room 3633, Washington, D.C. 20202-4725.

## PROTECTION OF HUMAN SUBJECTS IN RESEARCH (Attachment to ED 424)

### I. Instructions to Applicants about the Narrative Information that Must be Provided if Research Activities Involving Human Subjects are Planned

If you marked item 12 on the application "Yes" and designated exemptions in 12a, **(all research activities are exempt)**, provide sufficient information in the application to allow a determination that the designated exemptions are appropriate. Research involving human subjects that is exempt from the regulations is discussed under **II.B. "Exemptions,"** below. The Narrative must be succinct. **Provide this information in an "Item 12/Protection of Human Subjects Attachment" and insert this attachment immediately following the ED 424 face page.**

If you marked "Yes" to item 12 on the face page, and designated no exemptions from the regulations **(some or all of the research activities are nonexempt)**, address the following six points for each nonexempt activity. In addition, if research involving human subjects will take place at collaborating site(s) or other performance site(s), provide this information before discussing the six points. Although no specific page limitation applies to this section of the application, be succinct. Provide the six-point narrative and discussion of other performance sites in an **"Item 12/Protection of Human Subjects Attachment" and insert this attachment immediately following the ED 424 face page.**

(1) Provide a detailed description of the proposed involvement of human subjects. Describe the characteristics of the subject population, including their anticipated number, age range, and health status. Identify the criteria for inclusion or exclusion of any subpopulation. Explain the rationale for the involvement of special classes of subjects, such as children, children with disabilities, adults with disabilities, persons with mental disabilities, pregnant women, prisoners, institutionalized individuals, or others who are likely to be vulnerable.

(2) Identify the sources of research material obtained from individually identifiable living human subjects in the form of specimens, records, or data. Indicate whether the material or data will be obtained specifically for research purposes or whether use will be made of existing specimens, records, or data.

(3) Describe plans for the recruitment of subjects and the consent procedures to be followed. Include the cir-

cumstances under which consent will be sought and obtained, who will seek it, the nature of the information to be provided to prospective subjects, and the method of documenting consent. State if the Institutional Review Board (IRB) has authorized a modification or waiver of the elements of consent or the requirement for documentation of consent.

(4) Describe potential risks (physical, psychological, social, legal, or other) and assess their likelihood and seriousness. Where appropriate, describe alternative treatments and procedures that might be advantageous to the subjects.

(5) Describe the procedures for protecting against or minimizing potential risks, including risks to confidentiality, and assess their likely effectiveness. Where appropriate, discuss provisions for ensuring necessary medical or professional intervention in the event of adverse effects to the subjects. Also, where appropriate, describe the provisions for monitoring the data collected to ensure the safety of the subjects.

(6) Discuss why the risks to subjects are reasonable in relation to the anticipated benefits to subjects and in relation to the importance of the knowledge that may reasonably be expected to result.

### II. Information on Research Activities Involving Human Subjects

#### A. Definitions.

A research activity involves human subjects if the activity is research, as defined in the Department's regulations, and the research activity will involve use of human subjects, as defined in the regulations.

#### —Is it a research activity?

The ED Regulations for the Protection of Human Subjects, Title 34, Code of Federal Regulations, Part 97, define research as "a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge." *If an activity follows a deliberate plan whose purpose is to develop or contribute to generalizable knowledge, such as an exploratory study or the collection of data to test a hypothesis, it is research.* Activities which meet this definition constitute research whether or not they are conducted or supported under a program which is considered research for other purposes. For example, some demonstration and service programs may include research activities.

**—Is it a human subject?**

The regulations define human subject as “a living individual about whom an investigator (whether professional or student) conducting research obtains (1) data through intervention or interaction with the individual, or (2) identifiable private information.” (1) *If an activity involves obtaining information about a living person by manipulating that person or that person’s environment, as might occur when a new instructional technique is tested, or by communicating or interacting with the individual, as occurs with surveys and interviews, the definition of human subject is met.* (2) *If an activity involves obtaining private information about a living person in such a way that the information can be linked to that individual (the identity of the subject is or may be readily determined by the investigator or associated with the information), the definition of human subject is met.* [Private information includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, and information which has been provided for specific purposes by an individual and which the individual can reasonably expect will not be made public (for example, a school health record).]

**B. Exemptions.**

Research activities in which the only involvement of human subjects will be in one or more of the following six categories of *exemptions* are not covered by the regulations:

(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (a) research on regular and special education instructional strategies, or (b) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (a) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (b) any disclosure of the human subjects’ responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, or reputation. *If the subjects are children, this exemption applies only to research involving educational tests or observations of pub-*

*lic behavior when the investigator(s) do not participate in the activities being observed.* [Children are defined as persons who have not attained the legal age for consent to treatments or procedures involved in the research, under the applicable law or jurisdiction in which the research will be conducted.]

(3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior that is not exempt under section (2) above, if the human subjects are elected or appointed public officials or candidates for public office; or federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

(5) Research and demonstration projects which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (a) public benefit or service programs; (b) procedures for obtaining benefits or services under those programs; (c) possible changes in or alternatives to those programs or procedures; or (d) possible changes in methods or levels of payment for benefits or services under those programs.

(6) Taste and food quality evaluation and consumer acceptance studies, (a) if wholesome foods without additives are consumed or (b) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

*Copies of the Department of Education’s Regulations for the Protection of Human Subjects, 34 CFR Part 97 and other pertinent materials on the protection of human subjects in research are available from the Grants Policy and Oversight Staff (GPOS) Office of the Chief Financial and Chief Information Officer, U.S. Department of Education, Washington, D.C., telephone: (202) 708-8263, and on the U.S. Department of Education’s Protection of Human Subjects in Research Web Site at <http://ocfo.ed.gov/humansub.htm>.*

## Pitfalls to Avoid in Responding to Item 12 of the ED 424

### *(Human Subjects Item on Application for Federal Education Assistance)*

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In 1998, the U.S. Department of Education (ED) began using in all grant application packages a revised version of the Application for Federal Education Assistance (ED 424). The ED 424 contains a new item, item 12, which requests information about the protection of human research subjects in projects funded by ED. To minimize the need for ED-requested revisions to item 12 responses, we have prepared a list of pitfalls to avoid. We have also tightened up the instructions for item 12 to specify where in the application, if necessary, the applicant should insert 1) the information we need to determine if designated exemptions to the Regulations for the Protection of Human Subjects are appropriate or 2) the six-point narrative required when nonexempt research activities involving human subjects are planned.

### **The following are the most common responses that result in ED-requested revisions to item 12 of the ED 424.**

1. The applicant did not check the "Yes" or the "No" box. One of the boxes must be checked.
2. The applicant checked "No," but the proposal suggests that research activities involving human subjects are planned. If research activities involving human subjects are planned, whether or not those activities are exempt under the ED regulations, "Yes" must be checked.
3. The applicant checked "No" but also responded to other parts of item 12. If "No" is checked, do not respond to the remaining parts of item 12.
4. The applicant checked "Yes" and designated one or more exemption(s) in 12a., indicating that all the research activities involving human subjects are exempt, but also provided information in 12b. or 12c.
  - a. If all the research activities are exempt, do not respond to the remaining parts of item 12, even if the applicant submits the proposal to the Institutional Review Board for review.
  - b. If some or all of the research activities are covered (nonexempt), skip 12a. and go directly to 12b.
5. The applicant checked "Yes" and entered one or more exemption number(s) in 12a. but overlooked the requirement to provide the information we need to determine if the designated exemptions are appropriate. The narrative information about the designated exemptions should be provided in an "Item 12/Protection of Human Subjects Attachment" and be inserted immediately following the ED 424 face page. The narrative must be succinct.
6. The applicant checked "Yes" and did not designate exemption(s), but failed to provide the six-point research activities narrative outlined in "Instructions to Applicants about the Narrative Information that Must Be Provided if Research Activities Involving Human Subjects are Planned" in Protection of Human Subjects in Research (Attachment to ED 424). The narrative is required when covered (nonexempt) research activities involving human subjects are planned. The six-point narrative should be provided in an "Item 12/Protection of Human Subjects Attachment" and be inserted immediately following the ED 424 face page. The narrative must be succinct.

For additional information, please visit our Protection of Human Subjects web site at:  
<http://ocfo.ed.gov/humansub.htm>.

 <b>U.S. DEPARTMENT OF EDUCATION</b> <b>BUDGET INFORMATION</b> <b>NON-CONSTRUCTION PROGRAMS</b>		OMB Control Number: 1890-0004				
Name of Institution/Organization		Expiration Date: 02/28/2003				
<b>SECTION A - BUDGET SUMMARY</b> <b>U.S. DEPARTMENT OF EDUCATION FUNDS</b>		Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.				
Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel						
2. Fringe Benefits						
3. Travel						
4. Equipment						
5. Supplies						
6. Contractual						
7. Construction						
8. Other						
9. Total Direct Costs (lines 1-8)						
10. Indirect Costs						
11. Training Stipends						
12. Total Costs (lines 9-11)						

Name of Institution/Organization		SECTION B - BUDGET SUMMARY NON-FEDERAL FUNDS					Total (f)
Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.		Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	
Budget Categories							
1. Personnel							
2. Fringe Benefits							
3. Travel							
4. Equipment							
5. Supplies							
6. Contractual							
7. Construction							
8. Other							
9. Total Direct Costs (lines 1-8)							
10. Indirect Costs							
11. Training Stipends							
12. Total Costs (lines 9-11)							

SECTION C - OTHER BUDGET INFORMATION (see instructions)

Public reporting burden for this collection of information is estimated to vary from 13 to 22 hours per response, with an average of 17.5 hours per response, including the time reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, Information Management and Compliance Division, Washington, D.C. 20202-4651; and the Office of Management and Budget, Paperwork Reduction Project 1875-0102, Washington DC 20503.

## INSTRUCTIONS FOR ED FORM 524

### General Instructions

This form is used to apply to individual U.S. Department of Education discretionary grant programs. Unless directed otherwise, provide the same budget information for each year of the multi-year funding request. Pay attention to applicable program specific instructions, if attached.

### Section A - Budget Summary U.S. Department of Education Funds

All applicants must complete Section A and provide a breakdown by the applicable budget categories shown in lines 1-11.

Lines 1-11, columns (a)-(e): For each project year for which funding is requested, show the total amount requested for each applicable budget category.

Lines 1-11, column (f): Show the multi-year total for each budget category. If funding is requested for only one project year, leave this column blank.

Line 12, columns (a)-(e): Show the total budget request for each project year for which funding is requested.

Line 12, column (f): Show the total amount requested for all project years. If funding is requested for only one year, leave this space blank.

### Section B - Budget Summary Non-Federal Funds

If you are required to provide or volunteer to provide matching funds or other non-Federal resources to the project, these should be shown for each applicable budget category on lines 1-11 of Section B.

Lines 1-11, columns (a)-(e): For each project year for which matching funds or other contributions are provided, show the total

contribution for each applicable budget category.

Lines 1-11, column (f): Show the multi-year total for each budget category. If non-Federal contributions are provided for only one year, leave this column blank.

Line 12, columns (a)-(e): Show the total matching or other contribution for each project year.

Line 12, column (f): Show the total amount to be contributed for all years of the multi-year project. If non-Federal contributions are provided for only one year, leave this space blank.

### Section C - Other Budget Information Pay attention to applicable program specific instructions, if attached.

1. Provide an itemized budget breakdown, by project year, for each budget category listed in Sections A and B.
2. If applicable to this program, enter the type of indirect rate (provisional, predetermined, final or fixed) that will be in effect during the funding period. In addition, enter the estimated amount of the base to which the rate is applied, and the total indirect expense.
3. If applicable to this program, provide the rate and base on which fringe benefits are calculated.
4. Provide other explanations or comments you deem necessary.

Public reporting burden for these collections of information is estimated to average 30 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Send comments regarding this burden estimate or any other aspect of these collections of information, including suggestions for reducing this burden, to: the U.S. Department of Education, Information Management and Compliance Division, Washington, DC 20202-4651; and to the

Office of Management and Budget, Paperwork Reduction Project 1820-0027, Washington, DC 20503.

*Rehabilitation Engineering Research Centers* (CFDA No. 84.133E) 34 CFR part 350 Subpart B.

**BILLING CODE 4000-01-P**

**NOTICE TO ALL APPLICANTS**

The purpose of this enclosure is to inform you about a new provision in the Department of Education's General Education Provisions Act (GEPA) that applies to applicants for new grant awards under Department programs. This provision is Section 427 of GEPA, enacted as part of the Improving America's Schools Act of 1994 (Pub. L. 103-382).

**To Whom Does This Provision Apply?**

Section 427 of GEPA affects applicants for new grant awards under this program. **ALL APPLICANTS FOR NEW AWARDS MUST INCLUDE INFORMATION IN THEIR APPLICATIONS TO ADDRESS THIS NEW PROVISION IN ORDER TO RECEIVE FUNDING UNDER THIS PROGRAM.**

(If this program is a State-formula grant program, a State needs to provide this description only for projects or activities that it carries out with funds reserved for State-level uses. In addition, local school districts or other eligible applicants that apply to the State for funding need to provide this description in their applications to the State for funding. The State would be responsible for ensuring that the school district or other local entity has submitted a sufficient section 427 statement as described below.)

**What Does This Provision Require?**

Section 427 requires each applicant for funds (other than an individual person) to include in its application a description of the steps the applicant proposes to take to ensure equitable access to, and participation in, its Federally-assisted program for students, teachers, and other program beneficiaries with special needs. This provision allows applicants discretion in developing the required description. The statute highlights six types of barriers that can impede equitable access or participation: gender, race, national origin, color, disability, or age. Based on local circumstances, you should determine whether these or other barriers may prevent your students, teachers, etc. from such access or participation in, the Federally-funded project or activity. The description in your application of steps to be taken to overcome these barriers need not be lengthy; you may provide a clear and succinct description of how you plan to address those barriers

that are applicable to your circumstances. In addition, the information may be provided in a single narrative, or, if appropriate, may be discussed in connection with related topics in the application.

Section 427 is not intended to duplicate the requirements of civil rights statutes, but rather to ensure that, in designing their projects, applicants for Federal funds address equity concerns that may affect the ability of certain potential beneficiaries to fully participate in the project and to achieve to high standards. Consistent with program requirements and its approved application, an applicant may use the Federal funds awarded to it to eliminate barriers it identifies.

**What are Examples of How an Applicant Might Satisfy the Requirement of This Provision?**

The following examples may help illustrate how an applicant may comply with Section 427.

- (1) An applicant that proposes to carry out an adult literacy project serving, among others, adults with limited English proficiency, might describe in its application how it intends to distribute a brochure about the proposed project to such potential participants in their native language.
- (2) An applicant that proposes to develop instructional materials for classroom use might describe how it will make the materials available on audio tape or in braille for students who are blind.
- (3) An applicant that proposes to carry out a model science program for secondary students and is concerned that girls may be less likely than boys to enroll in the course, might indicate how it intends to conduct "outreach" efforts to girls, to encourage their enrollment.

We recognize that many applicants may already be implementing effective steps to ensure equity of access and participation in their grant programs, and we appreciate your cooperation in responding to the requirements of this provision.

**Estimated Burden Statement for GEPA Requirements**

The time required to complete this information collection is estimated to vary from 1 to 3 hours per response, with an average of 1.5 hours, including the time to review instructions, search existing data resources, gather and maintain the data needed, and complete and review the information collection. **If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to:** U.S. Department of Education, Washington, DC 20202-4651.

**ASSURANCES - NON-CONSTRUCTION PROGRAMS**

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

**NOTE:** Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	TITLE
APPLICANT ORGANIZATION	DATE SUBMITTED

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**CERTIFICATIONS REGARDING LOBBYING; DEBARMENT, SUSPENSION AND OTHER  
RESPONSIBILITY MATTERS; AND DRUG-FREE WORKPLACE REQUIREMENTS**

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Applicants should refer to the regulations cited below to determine the certification to which they are required to attest. Applicants should also review the instructions for certification included in the regulations before completing this form. Signature of this form provides for compliance with certification requirements under 34 CFR Part 82, "New Restrictions on Lobbying," and 34 CFR Part 85, "Government-wide Debarment and Suspension (Nonprocurement) and Government-wide Requirements for Drug-Free Workplace (Grants)." The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of Education determines to award the covered transaction, grant, or cooperative agreement.

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**1. LOBBYING**

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 34 CFR Part 82, for persons entering into a grant or cooperative agreement over \$100,000, as defined at 34 CFR Part 82, Sections 82.105 and 82.110, the applicant certifies that:

(a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the making of any Federal grant, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal grant or cooperative agreement;

(b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions;

(c) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subgrants, contracts under grants and cooperative agreements, and subcontracts) and that all subrecipients shall certify and disclose accordingly.

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**2. DEBARMENT, SUSPENSION, AND OTHER  
RESPONSIBILITY MATTERS**

As required by Executive Order 12549, Debarment and Suspension, and implemented at 34 CFR Part 85, for prospective participants in primary covered transactions, as defined at 34 CFR Part 85, Sections 85.105 and 85.110—

A. The applicant certifies that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this application been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (2)(b) of this certification; and

(d) Have not within a three-year period preceding this application had one or more public transaction (Federal, State, or local) terminated for cause or default; and

B. Where the applicant is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this application.

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**3. DRUG-FREE WORKPLACE  
(GRANTEES OTHER THAN INDIVIDUALS)**

As required by the Drug-Free Workplace Act of 1988, and implemented at 34 CFR Part 85, Subpart F, for grantees, as defined at 34 CFR Part 85, Sections 85.605 and 85.610 -

A. The applicant certifies that it will or will continue to provide a drug-free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

(b) Establishing an on-going drug-free awareness program to inform employees about:

(1) The dangers of drug abuse in the workplace;

(2) The grantee's policy of maintaining a drug-free workplace;

(3) Any available drug counseling, rehabilitation, and employee assistance programs; and

(4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);

(d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will:

(1) Abide by the terms of the statement; and

(2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

(e) Notifying the agency, in writing, within 10 calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to: Director, Grants Policy and Oversight Staff, U.S. Department of Education, 400 Maryland Avenue, S.W. (Room 3652, GSA Regional Office Building No. 3), Washington, DC 20202-4248. Notice shall include the identification number(s) of each affected grant;

(f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted:

(1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

(2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;

(g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e), and (f).

B. The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

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Check  if there are workplaces on file that are not identified here.

As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above certifications.

NAME OF APPLICANT	PR/AWARD NUMBER AND / OR PROJECT NAME
PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE	
SIGNATURE	DATE

**DRUG-FREE WORKPLACE  
(GRANTEES WHO ARE INDIVIDUALS)**

As required by the Drug-Free Workplace Act of 1988, and implemented at 34 CFR Part 85, Subpart F, for grantees, as defined at 34 CFR Part 85, Sections 85.605 and 85.610-

A. As a condition of the grant, I certify that I will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant; and

B. If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any grant activity, I will report the conviction, in writing, within 10 calendar days of the conviction, to: Director, Grants Policy and Oversight Staff, Department of Education, 400 Maryland Avenue, S.W. (Room 3652, GSA Regional Office Building No. 3), Washington, DC 20202-4248. Notice shall include the identification number(s) of each affected grant.

**DISCLOSURE OF LOBBYING ACTIVITIES**

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352  
(See reverse for public burden disclosure.)

Approved by OMB  
0348-0046

<b>1. Type of Federal Action:</b> <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	<b>2. Status of Federal Action:</b> <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	<b>3. Report Type:</b> <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change <b>For Material Change Only:</b> year _____ quarter _____ date of last report _____
<b>4. Name and Address of Reporting Entity:</b> <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known:  Congressional District, if known:	<b>5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:</b>  Congressional District, if known:	
<b>6. Federal Department/Agency:</b>	<b>7. Federal Program Name/Description:</b>  CFDA Number, if applicable: _____	
<b>8. Federal Action Number, if known:</b>	<b>9. Award Amount, if known:</b> \$	
<b>10. a. Name and Address of Lobbying Registrant</b> (if individual, last name, first name, MI):	<b>b. Individuals Performing Services</b> (including address if different from No. 10a) (last name, first name, MI):	
<b>11.</b> Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	
<b>Federal Use Only:</b>		Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

**INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES**

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.  
  
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.