



National Science Foundation
National Institutes of Health



FY 2005 Survey of Science and Engineering Research Facilities

Part 1: Research Space

Your participation in this survey is voluntary. However, your institution's response is important. The information from this survey on individual institutions can be used by your institution and other institutions for decision- and policy-making. The data also describe science and engineering research facilities at the national, regional, and state levels.

Based on pretests, responding to this survey (Part 1 and Part 2 combined) typically requires 41 hours for academic institutions or 7 hours for biomedical institutions, depending on how data are maintained at your institution. If you wish to comment on the burden of completing this survey, contact Suzanne H. Plimpton, Reports Clearance Officer, NSF, via e-mail at splimpto@nsf.gov or call 1-703-292-7556. Or, you may write to the Office of Management and Budget, Paperwork Reduction Project (OMB Number 3145-0101), Washington, DC 20503.

If you have a question, please contact Ann Buki via e-mail at facilitiesurvey@westat.com or call 1-888-742-3226. The survey director at the National Science Foundation is Dr. Leslie Christovich.

Please complete and submit this survey on the web (according to the instructions on page 1) or return it by mail to:

ATTN: NSF Facilities Survey
Westat
1650 Research Blvd.
Rockville, MD 20850

Thank you for your participation.

General information

This questionnaire is available on the World Wide Web. Go to www.facilitysurvey.org to access the web version of the questionnaire. You will need to click on “Part 1 and Coordinator Tools” and then enter the Part 1 Coordinator ID and password. These are provided on the label on the front cover of this paper questionnaire.

Please report information for the **institution** included on the label on the front cover.

If you do not have exact figures for any part of this questionnaire, please provide estimates.

Most FY 2005 Research Facilities Survey data will be identified for individual institutions. Identifying individual institutional data is standard policy for NSF’s research and development surveys, and will permit you to compare your institution’s data with other institutions’ data. Responses on two topics will not be publicly available for individual institutions because of their sensitive nature. These confidential data are: all responses concerning animal space (Question 1 row i, and questions 3, 8, 9, 11, 13F, 16, 19, 22, and 25) and reports on the condition of research space (Question 7).

Definition of science and engineering (S&E) research and research space

Please refer to these definitions when answering all questions in this survey.

Research is all sponsored research and development activities of your institution that are separately budgeted and accounted for. Research can be funded by your own institution, the federal government, a state government, foundations, corporations, or other sources. It does not include departmental research that is not separately budgeted.

Research space is the net assignable square feet of space in buildings within which research activities take place. Research facilities are located within buildings. A **building** is a roofed structure for permanent or temporary shelter of persons, animals, plants, materials, or equipment. As a guideline, structures should be included if they are (1) attached to a foundation, (2) roofed, (3) serviced by a utility, exclusive of lighting, and (4) a source of significant maintenance and repair activities.

Net assignable square feet (NASF) is the sum of all areas on all floors of a building assigned to, or available to be assigned to, an occupant for a specific use, such as research or instruction. NASF is measured from the inside faces of walls.

Definition of science and engineering (S&E) research and research space (continued)

Research space includes:

- controlled-environment space, such as clean, cold, or white rooms
- technical and laboratory support space, such as equipment areas, preparation areas, darkrooms, carpentry and machine shops, storage areas, etc.
- laboratories, including computer labs, behavior observation rooms, etc.
- core laboratories that serve other laboratories
- laboratories and associated support areas used for animal research, including procedure rooms, bench space, animal production colonies, holding rooms, germ-free rooms, surgical facilities, recovery rooms, etc.
- housing facilities for research animals and associated maintenance areas, including cage rooms, stalls, wards, isolation rooms, exercise rooms, feed storage rooms, cage-washing rooms, holding and storage areas, etc.
- space for clinical trial research
- offices, to the extent that they are used for research activities, including administrative activities for a specific research project
- space with fixed (built-in) equipment such as fume hoods
- space with nonfixed equipment costing \$1 million or more each, such as MRIs
- leased space

Research space does not include:

- space for the fields of law, business administration/management (except economics and information systems), humanities, history, the arts, or education (except educational psychology)
- libraries, unless they are dedicated to a specific research project
- animal field buildings sheltering animals that do not directly support research or that are not subject to government regulations concerning humane care and use of laboratory animals
- Federally Funded Research and Development Centers (FFRDCs)
- in-kind space used by your faculty, staff, or other persons but administered by other organizations, such as research facilities at non-university hospitals or Veterans Administration hospitals
- space administered by your institution but leased to another organization
- outdoor areas such as fish ponds or planting fields

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Question 1: Types of research space

1. Please indicate whether or not your institution had each type of S&E research space listed below at the end of your FY 2005.

Did your institution have this type of S&E research space at end of FY 2005?

(Mark one "X" for each row.)

Types of S&E research space	Yes	No	Uncertain
a. Laboratories, wet or dry, including computer laboratories, behavior observation laboratories, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Laboratory support space, including autoclave rooms, darkrooms, equipment areas, storage areas for research equipment and supplies for research, etc.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Instructional laboratories that are <i>also</i> used for research.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Core laboratories that serve other laboratories.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Leased space that is used for research.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Offices, to the extent they are used for research activities.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Space used for research containing nonfixed equipment costing \$1 million or more each, such as MRIs.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Research space in a medical school that awards the M.D. degree.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Research animal space.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Laboratories and associated support areas used for research animals that are subject to local, state, and federal government policies and regulations concerning humane care and use of animals. Examples include procedure rooms, holding rooms, recovery rooms, animal production colonies, and storage areas.</p> <p>Space for housing research animals and associated maintenance areas that are subject to local, state, and federal government policies and regulations concerning humane care and use of animals. Examples include animal quarters, cage washing rooms, feed storage areas, isolation rooms, and exercise rooms.</p>			
j. Research space that is used for clinical trials.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Question 2: Amount of research space

2. At the end of your FY 2005, how much net assignable square feet was used for research (based on the definition of research space on page 2) for each of the fields of S&E below? Please include any research animal space and clinical trial space used for research. You may provide estimates if you do not have exact figures.

Research space is equivalent to functional category 2 (Research) for facilities inventory systems based on NCES, NACUBO, or WICHE classifications. For classifications, please refer to the Postsecondary Education Facilities Inventory and Classification Manual, U.S. Department of Education, Office of Educational Research and Improvement, NCES 92-165; the 1988 NACUBO Taxonomy of Functions; or the 1972 WICHE Program Classification Structure.

Research animal space includes all departmental and central facilities, such as laboratories, housing, and associated support areas, that are subject to local, state, and federal government policies and regulations concerning humane care and use of laboratory animals.

If research space was shared among fields or used for other purposes in addition to research, report the portion of space used for research by each field below. For example, if two fields shared the space equally, report half of the space in one field and half in the other. Or, if an area was used for research one-fourth of the time and for other purposes the rest of the time, report one-fourth of the space as research space.

Field of S&E (Include research animal space. See page 29 for field definitions.)	Net assignable square feet of research space at end of FY 2005
a. Agricultural sciences	<input type="text"/> NASF
b. Biological sciences	<input type="text"/> NASF
c. Computer sciences	<input type="text"/> NASF
d. Earth, atmospheric, and ocean sciences	<input type="text"/> NASF
e. Engineering	<input type="text"/> NASF
f. Mathematical sciences	<input type="text"/> NASF
g. Medical sciences	<input type="text"/> NASF
h. Physical sciences	<input type="text"/> NASF
i. Psychology	<input type="text"/> NASF
j. Social sciences	<input type="text"/> NASF
k. Other sciences (<i>Please describe.</i>)	<input type="text"/> NASF

Question 3: Research animal space

3. At the end of your FY 2005, how much of the research NASF reported in Question 2 was used for research animals?

Research animal space includes all departmental and central facilities, such as laboratories, housing, and associated support areas, that are subject to local, state, and federal government policies and regulations concerning humane care and use of laboratory animals.

Research animal portion of the space
included in Question 2 (*If none, enter "0."*)..... NASF

Question 4: Clinical trial research space

4. At the end of your FY 2005, how much of the research NASF reported in Question 2 was used for clinical trials?

Clinical trial portion of the space
included in Question 2 (*If none, enter "0."*)..... NASF

Question 5: Leased research space

5. At the end of your FY 2005, how much of the research NASF reported in Question 2 was leased?

Leased portion of the space
included in Question 2 (*If none, enter "0."*)..... NASF

Question 6: Research space in medical school

6. *If your institution had a medical school*, how much of the research NASF reported in Question 2 was located in the medical school at the end of your FY 2005?

Medical school is a school that awards the M.D. degree.

If your institution did **not** have a medical school,
check this box and go to Question 7.....

Medical school portion of space
included in Question 2 (*If none, enter "0."*)..... NASF

Question 7: Condition of research space

7. At the end of your FY 2005, what percentage of the research NASF reported in Question 2 fell into each of the four condition categories below? Include research animal space.

Superior condition Suitable for the most scientifically competitive research in this field over the next 2 years (your FY 2006 and FY 2007)

Satisfactory condition Suitable for continued use over the next 2 years (your FY 2006 and FY 2007) for most levels of research in this field, but may require minor repairs or renovation

Requires renovation Will no longer be suitable for current research without undergoing major renovation within the next 2 years (your FY 2006 and FY 2007)

Requires replacement Should stop using space for current research use within the next 2 years (your FY 2006 and FY 2007)

Research animal space includes all departmental and central facilities, such as laboratories, housing, and associated support areas, that are subject to local, state, and federal government policies and regulations concerning humane care and use of laboratory animals.

Percent of net assignable square feet

Mark "X" if no research space in this field

(The percentages should sum to 100 within each row.)

Field of S&E <i>(Include research animal space.)</i>	<i>Mark "X" if no research space in this field</i>	Superior condition	Satisfactory condition	Requires renovation	Requires replacement	Total
a. Agricultural sciences.....	<input type="checkbox"/>	___%	___%	___%	___%	100%
b. Biological sciences.....	<input type="checkbox"/>	___%	___%	___%	___%	100%
c. Computer sciences	<input type="checkbox"/>	___%	___%	___%	___%	100%
d. Earth, atmospheric, and ocean sciences	<input type="checkbox"/>	___%	___%	___%	___%	100%
e. Engineering	<input type="checkbox"/>	___%	___%	___%	___%	100%
f. Mathematical sciences	<input type="checkbox"/>	___%	___%	___%	___%	100%
g. Medical sciences	<input type="checkbox"/>	___%	___%	___%	___%	100%
h. Physical sciences.....	<input type="checkbox"/>	___%	___%	___%	___%	100%
i. Psychology	<input type="checkbox"/>	___%	___%	___%	___%	100%
j. Social sciences	<input type="checkbox"/>	___%	___%	___%	___%	100%
k. Other sciences	<input type="checkbox"/>	___%	___%	___%	___%	100%

Question 8: Condition of research animal space

8. At the end of your FY 2005, what percentage of the research animal space reported in Question 3 fell into each of the four condition categories below?

Research animal space includes all departmental and central facilities, such as laboratories, housing, and associated support areas, that are subject to local, state, and federal government policies and regulations concerning humane care and use of laboratory animals.

Superior condition Suitable for the most scientifically competitive research in this field over the next 2 years (your FY 2006 and FY 2007)

Satisfactory condition Suitable for continued use over the next 2 years (your FY 2006 and FY 2007) for most levels of research in this field, but may require minor repairs or renovation

Requires renovation Will no longer be suitable for current research without undergoing major renovation within the next 2 years (your FY 2006 and FY 2007)

Requires replacement Should stop using space for current research use within the next 2 years (your FY 2006 and FY 2007)

Percent of net assignable square feet

*Mark "X" if
no research
animal
space*

(The percentages should sum to 100.)

	Superior condition	Satisfactory condition	Requires renovation	Requires replacement	Total
All space for research animals regardless of S&E field <input type="checkbox"/>	____%	____%	____%	____%	100%

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Question 9: Biosafety level of research animal facilities

9. For each type of animal listed below, please indicate which types of biosafety level (BL) facilities were available at your institution at the end of your FY 2005.

Biosafety Levels (BL)

BL-1 Involves working with defined and characterized strains of viable microorganisms not known to cause disease in healthy adult humans

BL-2 Involves working with the broad spectrum of indigenous moderate-risk agents present in the community and associated with human disease of varying severity

BL-3 Involves working with indigenous or exotic agents with a potential for respiratory transmission, and which may cause serious and potentially lethal infection

BL-4 Involves working with dangerous and exotic agents that pose a high individual risk of life-threatening disease, that may be transmitted via the aerosol route, and for which there is no available vaccine or therapy

If your institution did *not* have research animal facilities, check this box and go to Question 10

Biosafety levels at end of FY 2005

Type of animal	<i>Mark "X" if no facilities for this type of animal</i>	<i>(Check all that apply for each row.)</i>			
		BL-1	BL-2	BL-3	BL-4
Non-mammals					
a. Fish/Aquatic species.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Birds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Amphibians	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Reptiles.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Insects.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Other non-mammals (<i>Please specify</i>).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input style="width: 100%; height: 15px;" type="text"/>					
Mammals					
g. Rodents.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Cats, dogs, and rabbits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Pigs, sheep, cattle, and goats.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Non-human primates.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Other mammals (<i>Please specify</i>).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input style="width: 100%; height: 15px;" type="text"/>					

Note: For additional information on biosafety levels, see the report Biosafety in Microbiological and Biomedical Laboratories, 4th Edition, 1999, U.S. Department of Health and Human Services.

Question 10: Repairs and renovations started in FY 2004 and FY 2005

10. Please provide the completion costs for repair and renovation of S&E research facilities that started during your FY 2004 or FY 2005. Include research animal space. Include only projects whose prorated cost was estimated to be \$250,000 or more for at least one field of S&E listed below. For **multi-year projects**, report the entire completion cost even if some work will occur in future years.

Research animal space includes all departmental and central facilities, such as laboratories, housing, and associated support areas, that are subject to local, state, and federal government policies and regulations concerning humane care and use of laboratory animals.

Start date is the date on which the physical work of the repairs or renovations actually began.

Repairs and renovations are activities such as fixing up facilities in deteriorated condition, capital improvements on facilities, conversion of facilities, and the building out of shell space. Include any repairs or renovations to existing space that are performed in combination with new construction projects. **Do not** report building additions since they are reported in this survey under new construction.

Completion costs include planning, site preparation, construction, fixed equipment, nonfixed equipment that costs \$1 million or more, and building infrastructure such as plumbing, lighting, air exchange, and safety systems either in the building or within 5 feet of the building foundation.

If research facilities are shared by two or more fields, allocate the appropriate share of the costs to each field in order to determine which fields to report. For example, if a field will have one-fourth of the costs for a \$300,000 project, do **not** report that field's share, which is \$75,000. If a \$400,000 project will have two fields with the same costs, do **not** report either field's portion, which is \$200,000 each.

If research facilities are also used for nonresearch activities, report the S&E research portion of the costs for the fields listed below. For example, if a facility is used for S&E research one-fourth of the time and for instruction the rest of the time, report one-fourth of the completion costs for S&E research facilities.

If your institution had no repair or renovation projects, check this box and go to Question 13

Field of S&E (Include costs for research animal space.)	Completion costs for projects started in FY 2004 or FY 2005
a. Agricultural sciences	\$ <input type="text"/>
b. Biological sciences	\$ <input type="text"/>
c. Computer sciences	\$ <input type="text"/>
d. Earth, atmospheric, and ocean sciences	\$ <input type="text"/>
e. Engineering	\$ <input type="text"/>
f. Mathematical sciences	\$ <input type="text"/>
g. Medical sciences	\$ <input type="text"/>
h. Physical sciences	\$ <input type="text"/>
i. Psychology	\$ <input type="text"/>
j. Social sciences	\$ <input type="text"/>
k. Other sciences (Please describe.)	\$ <input type="text"/>

Question 11: For research animal facilities only: repairs and renovations in FY 2004 and FY 2005

11. How much of the completion costs for repair and renovation of research facilities as reported in Question 10 was for research animal facilities?

Research animal portion of the costs included in Question 10 (*If none, enter "0."*).....\$

Question 12: For medical schools only: repairs and renovations in FY 2004 and FY 2005

12. *If your institution had a medical school*, how much of the completion costs for repair and renovation of research facilities as reported in Question 10 was located in the medical school?

Medical school is a school that awards the M.D. degree.

If your institution did *not* have a medical school, check this box and go to Question 13.....

Medical school portion of the costs included in Question 10 (*If none, enter "0."*).....\$

Question 13: New construction started in FY 2004 and FY 2005

13. Please provide the total number of new construction projects that included S&E research facilities that started during your FY 2004 or FY 2005. Include research animal space. Include only projects whose prorated cost was estimated to be \$250,000 or more for at least one field of S&E.

New construction is the construction of a new building or additions to an existing building.

Research facilities are defined on page 2 of the survey questionnaire.

Start date is the date on which the physical work of the construction actually began.

Completion costs include planning, site preparation, construction, fixed equipment, nonfixed equipment that costs \$1 million or more, and building infrastructure such as plumbing, lighting, air exchange, and safety systems either in the building or within 5 feet of the building foundation.

If new facilities are shared for research and nonresearch activities, report only projects with completion costs of \$250,000 or more for at least one field of S&E research. For example, if a \$300,000 project involves space used for research only one-fourth of the time, this project of \$75,000 for the research facilities should not be reported.

If new facilities are shared by two or more fields of S&E, report the new construction project only if at least one field of S&E research has completion costs of \$250,000 or more. For example, if two fields share the costs equally for a research project costing \$400,000, neither field's share of \$200,000 meets the cost minimum.

If your institution had no new construction projects, check this box and go to Question 14.....

If your institution had one or more new construction projects, enter the number of projects here and fill out a separate Individual Project Form for each one..... projects

Please make additional copies of this form as needed.
Individual Project Form for Question 13
Page 1 of 4

Please complete this form for **each** new construction project that started during your FY 2004 or FY 2005. Include only projects that will cost \$250,000 or more for at least one of the S&E fields. Consider the **start date** to be the date on which the physical work of the new construction began.

13A. What is the name of this project? _____

13B. During which of your fiscal years did the physical work of new construction begin for this project?

FY 2004.....

FY 2005.....

13C. When this project is completed, what is (a) the entire project's (research and nonresearch) gross square feet; (b) the entire project's net assignable square feet; and (c) the S&E research facilities portion in net assignable square feet?

For **multi-year projects**, report the space expected when the project is completed.

a. Gross square feet (GSF) for entire project (research and nonresearch) _____ GSF

Gross square feet (GSF) is based on the floor area of a structure within the outside faces of the exterior walls.

b. Net assignable square feet (NASF) for entire project
(research and nonresearch) _____ NASF

Net assignable square feet (NASF) is the sum of all areas on all floors of a building assigned to, or available to be assigned to, an occupant for a specific use, such as research or instruction. NASF is measured from the inside faces of walls.

NOTE: If the entire project is S&E research, the answers for row b and row c will be the same.

c. Net assignable square feet for **S&E research facilities** portion
(defined on page 2 of the survey questionnaire) _____ NASF

Research facilities are defined on page 2 of the survey questionnaire, including examples of what areas to include and exclude.

If the research facilities are also used for nonresearch activities, adjust the amount of space based on the amount of time the area is used for S&E research. For example, if an area is used for S&E research one-fourth of the time and for instruction the rest of the time, report one-fourth of the space as S&E research facilities.

Please make additional copies of this form as needed.
Individual Project Form for Question 13
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13D. When this project is completed, what are the completion costs for (a) the entire project (research and nonresearch), and (b) the S&E research facilities portion of the project? **For multi-year projects**, report the costs expected when the project is completed.

Completion costs include planning, site preparation, construction, fixed equipment, nonfixed equipment that costs \$1 million or more, and building infrastructure such as plumbing, lighting, air exchange, and safety systems either in the building or within 5 feet of the building foundation.

a. Completion costs for the GSF of the *entire project* (research and nonresearch)\$

b. Completion costs for the **S&E research facilities** portion
(defined on page 2 of the survey questionnaire)\$

If the research facilities are also used for nonresearch activities, adjust the completion costs based on the amount of time the facilities are used for S&E research. For example, if a facility is used for S&E research one-fourth of the time and for instruction the rest of the time, report one-fourth of the completion costs for S&E research facilities.

Please make additional copies of this form as needed.
Individual Project Form for Question 13
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13E. For the portion of this project used for **S&E research facilities**, what are (1) the completion costs, and (2) the net assignable square feet, for each field listed below? Include research animal space. **For multi-year projects**, report costs and NASF expected when the project is completed.

Research animal space includes all departmental and central facilities, such as laboratories, housing, and associated support areas, that are subject to local, state, and federal government policies and regulations concerning humane care and use of laboratory animals.

Report only fields with costs of \$250,000 or more for research facilities.

If research facilities are shared by two or more fields, allocate the appropriate share of the costs to each field in order to determine which fields to report. For example, if a field will have one-fourth of the costs for a \$300,000 project, do **not** report that field's share, which is \$75,000. If a \$400,000 project will have two fields with the same costs, do **not** report either field's portion, which is \$200,000 each.

If research facilities are also used for nonresearch activities, report the S&E research portion of the cost and net assignable square feet for the fields listed below. See Questions 13C and 13D for instructions and examples of research facilities used for nonresearch activities.

	Research facilities		
Field of S&E <i>(Include research animal space.)</i>	(1) Completion costs	(2) Net assignable square feet	
a. Agricultural sciences	\$ _____	_____	NASF
b. Biological sciences	\$ _____	_____	NASF
c. Computer sciences.....	\$ _____	_____	NASF
d. Earth, atmospheric, and ocean sciences	\$ _____	_____	NASF
e. Engineering	\$ _____	_____	NASF
f. Mathematical sciences	\$ _____	_____	NASF
g. Medical sciences	\$ _____	_____	NASF
h. Physical sciences	\$ _____	_____	NASF
i. Psychology	\$ _____	_____	NASF
j. Social sciences.....	\$ _____	_____	NASF
k. Other sciences <i>(Please describe.)</i>	\$ _____	_____	NASF

Please make additional copies of this form as needed.
Individual Project Form for Question 13
Page 4 of 4

13F. How much of the completion costs and NASF reported in Question 13E are for **research animal space**?

Research animal space includes all departmental and central facilities, such as laboratories, housing, and associated support areas, that are subject to local, state, and federal government policies and regulations concerning humane care and use of laboratory animals.

	Completion costs	Net assignable square feet
Research animal portion included in Question 13E (<i>If none, enter "0."</i>)	\$ <input style="width: 100px;" type="text"/>	<input style="width: 100px;" type="text"/> NASF

13G. **If your institution has a medical school**, how much of the completion costs and NASF reported in Question 13E are for research facilities located in the medical school?

Medical school is a school that awards the M.D. degree.

If your institution does not have a medical school, check this box and go to Question 14

	Completion costs	Net assignable square feet
Medical school portion included in Question 13E (<i>If none, enter "0."</i>)	\$ <input style="width: 100px;" type="text"/>	<input style="width: 100px;" type="text"/> NASF

Question 14: Sources of project funding

14. Please provide the completion costs by source of funding for repair and renovation and new construction of S&E research facilities that started during your FY 2004 or FY 2005 as reported in Question 10 and Question 13E. Include only projects whose prorated cost was estimated to be \$250,000 or more for at least one field of S&E.

Total costs reported in column 1 should match the sum of the costs for repair and renovation of research facilities reported in Question 10 on page 12.

Total costs reported in column 2 should match the sum of the costs for new construction as reported in Question 13E on all Individual Project Form(s).

Completion costs for projects started in FY 2004 or FY 2005 (for projects of \$250,000 or more)

Source of funding	(1) Repairs and renovations reported in Question 10	(2) New construction reported in Question 13E (all project forms)
a. Federal government.....	\$ <input type="text"/>	\$ <input type="text"/>
b. State or local government	\$ <input type="text"/>	\$ <input type="text"/>
c. Institutional funds and other sources Examples: operating funds, endowments, tax-exempt bonds and other debt financing, indirect costs recovered from federal grants/contracts, private donations, other sources.....	\$ <input type="text"/>	\$ <input type="text"/>
Total	\$ <input type="text"/>	\$ <input type="text"/>

Question 15: Planned repairs and renovations to start in FY 2006 and FY 2007

15. Please provide the estimated completion costs planned for repair and renovation of S&E research facilities that are funded **and** scheduled to start in your FY 2006 or FY 2007. Include research animal space. Include only projects whose prorated cost is estimated to be \$250,000 or more for at least one field of S&E listed below. For **multi-year projects**, report the entire completion cost even if some work will occur in future years.

Research animal space includes all departmental and central facilities, such as laboratories, housing, and associated support areas, that are subject to local, state, and federal government policies and regulations concerning humane care and use of laboratory animals.

Start date is the date on which the physical work of the repairs or renovations is scheduled to begin.

Repairs and renovations are activities such as fixing up facilities in deteriorated condition, capital improvements on facilities, conversion of facilities, and the building out of shell space. Include any repairs or renovations to existing space that are performed in combination with new construction projects. **Do not** report building additions since they are reported in this survey under new construction.

Completion costs include planning, site preparation, construction, fixed equipment, nonfixed equipment that costs \$1 million or more, and building infrastructure such as plumbing, lighting, air exchange, and safety systems either in the building or within 5 feet of the building foundation.

If research facilities are shared by two or more fields, allocate the appropriate share of the costs to each field in order to determine which fields to report. For example, if a field will have one-fourth of the costs for a \$300,000 project, do **not** report that field's share, which is \$75,000. If a \$400,000 project will have two fields with the same costs, do **not** report either field's portion, which is \$200,000 each.

If research facilities will also be used for nonresearch activities, report the S&E research portion of the costs for the fields listed below. For example, if a facility will be used for S&E research one-fourth of the time and for instruction the rest of the time, report one-fourth of the completion costs for S&E research facilities.

If your institution does **not** have planned repair or renovation projects, check this box and go to Question 18.....

Field of S&E <i>(Include costs for research animal space.)</i>	Completion costs for planned repair/renovation projects to start in FY 2006 or FY 2007
a. Agricultural sciences	\$ <input style="width: 150px;" type="text"/>
b. Biological sciences	\$ <input style="width: 150px;" type="text"/>
c. Computer sciences	\$ <input style="width: 150px;" type="text"/>
d. Earth, atmospheric, and ocean sciences	\$ <input style="width: 150px;" type="text"/>
e. Engineering	\$ <input style="width: 150px;" type="text"/>
f. Mathematical sciences	\$ <input style="width: 150px;" type="text"/>
g. Medical sciences	\$ <input style="width: 150px;" type="text"/>
h. Physical sciences	\$ <input style="width: 150px;" type="text"/>
i. Psychology	\$ <input style="width: 150px;" type="text"/>
j. Social sciences	\$ <input style="width: 150px;" type="text"/>
k. Other sciences <i>(Please describe.)</i>	\$ <input style="width: 150px;" type="text"/>

Question 16: For research animal facilities only: planned repairs and renovations in FY 2006 and FY 2007

16. How much of the completion costs for planned repair and renovation of research facilities as reported in Question 15 will be for research animal facilities?

Research animal portion of the costs included in Question 15 (*If none, enter "0."*).....\$

Question 17: For medical schools only: planned repairs and renovations in FY 2006 and FY 2007

17. *If your institution has a medical school*, how much of the completion costs for planned repair and renovation of research facilities as reported in Question 15 will be located in the medical school?

Medical school is a school that awards the M.D. degree.

If your institution does *not* have a medical school, check this box and go to Question 18.....

Medical school portion of the costs included in Question 15 (*If none, enter "0."*).....\$

Question 18: Planned new construction to start in FY 2006 and FY 2007

18. Please provide the estimated completion costs and NASF for planned new construction of S&E research facilities that are funded and scheduled to start in your FY 2006 or FY 2007. Include research animal space. Include only projects whose prorated cost was estimated to be \$250,000 or more for at least one field of S&E listed below. For **multi-year projects**, report the entire completion cost even if some work will occur in future years.

Research animal space includes all departmental and central facilities, such as laboratories, housing, and associated support areas, that are subject to local, state, and federal government policies and regulations concerning humane care and use of laboratory animals.

Start date is the date on which the physical work of the construction is scheduled to begin.

New construction is the construction of a new building or additions to an existing building.

Completion costs include planning, site preparation, construction, fixed equipment, nonfixed equipment that costs \$1 million or more, and building infrastructure such as plumbing, lighting, air exchange, and safety systems either in the building or within 5 feet of the building foundation.

If research facilities are shared by two or more fields, allocate the appropriate share of the costs to each field in order to determine which fields to report. For example, if a field will have one-fourth of the costs for a \$300,000 project, do **not** report that field's share, which is \$75,000. If a \$400,000 project will have two fields with the same costs, do **not** report either field's portion, which is \$200,000 each.

If research facilities are also used for nonresearch activities, report the S&E research portion of the cost and net assignable square feet for the fields listed below. For example, if a facility will be used for S&E research one-fourth of the time and for instruction the rest of the time, report one-fourth of the completion costs for S&E research facilities.

If your institution does **not** have any planned new construction projects, check this box and go to Question 21

Planned new construction scheduled to start in FY 2006 or FY 2007

Field of S&E (Include research animal space.)	Completion costs	Net assignable square feet	
a. Agricultural sciences	\$ <input style="width: 150px;" type="text"/>	<input style="width: 100px;" type="text"/>	NASF
b. Biological sciences	\$ <input style="width: 150px;" type="text"/>	<input style="width: 100px;" type="text"/>	NASF
c. Computer sciences	\$ <input style="width: 150px;" type="text"/>	<input style="width: 100px;" type="text"/>	NASF
d. Earth, atmospheric, and ocean sciences	\$ <input style="width: 150px;" type="text"/>	<input style="width: 100px;" type="text"/>	NASF
e. Engineering	\$ <input style="width: 150px;" type="text"/>	<input style="width: 100px;" type="text"/>	NASF
f. Mathematical sciences	\$ <input style="width: 150px;" type="text"/>	<input style="width: 100px;" type="text"/>	NASF
g. Medical sciences	\$ <input style="width: 150px;" type="text"/>	<input style="width: 100px;" type="text"/>	NASF
h. Physical sciences	\$ <input style="width: 150px;" type="text"/>	<input style="width: 100px;" type="text"/>	NASF
i. Psychology	\$ <input style="width: 150px;" type="text"/>	<input style="width: 100px;" type="text"/>	NASF
j. Social sciences	\$ <input style="width: 150px;" type="text"/>	<input style="width: 100px;" type="text"/>	NASF
k. Other sciences (Please describe.)	\$ <input style="width: 150px;" type="text"/>	<input style="width: 100px;" type="text"/>	NASF

Question 19: For research animal facilities only: planned new construction in FY 2006 and FY 2007

19. How much of the completion costs and NASF for the planned new construction of research facilities as reported in Question 18 will be for research animal facilities?

	Completion costs	Net assignable square feet
Research animal portion included in Question 18 (<i>If none, enter "0."</i>).....\$	_____	_____ NASF

Question 20: For medical schools only: planned new construction in FY 2006 and FY 2007

20. *If your institution has a medical school*, how much of the completion costs and NASF for the planned new construction of research facilities as reported in Question 18 will be located in the medical school?

Medical school is a school that awards the M.D. degree.

If your institution does *not* have a medical school, check this box and go to Question 21

	Completion costs	Net assignable square feet
Medical school portion included in Question 18 (<i>If none, enter "0."</i>).....\$	_____	_____ NASF

Question 21: Deferred repairs and renovations

21. Please provide the estimated costs for any **deferred repair and renovation** projects of S&E research facilities that are needed for current research program commitments, but are not yet funded **and** not yet scheduled to start in your FY 2006 or FY 2007. Include research animal space. Please estimate costs separately for projects included in your approved institutional plan and projects not included in this plan. Institutional plans usually will include goals, strategies, and budgets for fulfilling your institution's mission during a specific time period.

Research animal space includes all departmental and central facilities, such as laboratories, housing, and associated support areas, that are subject to local, state, and federal government policies and regulations concerning humane care and use of laboratory animals.

Deferred projects are those that: (1) are not funded, and (2) are not scheduled for FY 2006 or FY 2007. Do not include projects planned for developing new programs or expanding your current programs.

Repairs and renovations are activities such as fixing up facilities in deteriorated condition, capital improvements on facilities, conversion of facilities, and the building out of shell space. Include any repairs or renovations to existing space that are performed in combination with new construction projects. **Do not** report building additions since they are reported in this survey under new construction.

Current research program commitments include current faculty and staff or those to whom offers have been made or grants awarded (whether or not research has actually begun) and programs which have been approved.

If the repaired or renovated research facilities will be shared by two or more fields, allocate the appropriate share of the costs to each field. If space will be used for other purposes in addition to science and engineering research, estimate the costs for the research portion of the space.

If your institution does **not** have deferred projects for repair or renovation, check this box and go to Question 24.....

Estimated costs of deferred repairs and renovations

Field of S&E (Include costs for research animal space.)	For projects included in your institutional plan	For projects <i>not</i> included in your institutional plan
a. Agricultural sciences	\$ <input type="text"/>	\$ <input type="text"/>
b. Biological sciences	\$ <input type="text"/>	\$ <input type="text"/>
c. Computer sciences	\$ <input type="text"/>	\$ <input type="text"/>
d. Earth, atmospheric, and ocean sciences	\$ <input type="text"/>	\$ <input type="text"/>
e. Engineering.....	\$ <input type="text"/>	\$ <input type="text"/>
f. Mathematical sciences.....	\$ <input type="text"/>	\$ <input type="text"/>
g. Medical sciences.....	\$ <input type="text"/>	\$ <input type="text"/>
h. Physical sciences	\$ <input type="text"/>	\$ <input type="text"/>
i. Psychology.....	\$ <input type="text"/>	\$ <input type="text"/>
j. Social sciences.....	\$ <input type="text"/>	\$ <input type="text"/>
k. Other sciences (Please describe.).....	\$ <input type="text"/>	\$ <input type="text"/>

Question 22: For research animal facilities only: deferred repairs and renovations

22. How much of the estimated costs for deferred repair and renovation of research facilities as reported in Question 21 would be for research animal facilities?

	For projects included in your institutional plan	For projects <i>not</i> included in your institutional plan
Research animal portion of the costs included in Question 21 (<i>If none, enter "0."</i>).....\$	<input type="text"/>	\$ <input type="text"/>

Question 23: For medical schools only: deferred repairs and renovations

23. *If your institution has a medical school*, how much of the estimated costs for deferred repair and renovation of research facilities as reported in Question 21 would be located in the medical school?

Medical school is a school that awards the M.D. degree.

If your institution does *not* have a medical school,
check this box and go to Question 24

	For projects included in your institutional plan	For projects <i>not</i> included in your institutional plan
Medical school portion of the costs included in Question 21 (<i>If none, enter "0."</i>).....\$	<input type="text"/>	\$ <input type="text"/>

Question 24: Deferred new construction

24. Please provide the estimated costs for any **deferred new construction** projects of S&E research facilities that are needed for current program commitments, but are not yet funded **and** not yet scheduled to start in your FY 2006 or FY 2007. Include research animal space. Please estimate costs separately for projects included in your approved institutional plan and projects not included in this plan. Institutional plans usually will include goals, strategies, and budgets for fulfilling your institution's mission during a specific time period.

Research animal space includes all departmental and central facilities, such as laboratories, housing, and associated support areas, that are subject to local, state, and federal government policies and regulations concerning humane care and use of laboratory animals.

Deferred projects are those that: (1) are not funded, and (2) are not scheduled for FY 2006 or FY 2007. Do not include projects planned for developing new programs or expanding your current programs.

New construction is the construction of a new building or additions to an existing building.

Current research program commitments include current faculty and staff or those to whom offers have been made or grants awarded (whether or not research has actually begun) and programs which have been approved.

If the newly constructed research facilities will be shared by two or more fields, allocate the appropriate share of the costs to each field. If space will be used for other purposes in addition to science and engineering research, estimate the costs for the research portion of the space.

If your institution does *not* have deferred projects for new construction, check this box and go to Question 27

Estimated costs of deferred new construction

Field of S&E (Include costs for research animal space.)	For projects included in your institutional plan	For projects <i>not</i> included in your institutional plan
a. Agricultural sciences	\$ <input type="text"/>	\$ <input type="text"/>
b. Biological sciences	\$ <input type="text"/>	\$ <input type="text"/>
c. Computer sciences	\$ <input type="text"/>	\$ <input type="text"/>
d. Earth, atmospheric, and ocean sciences	\$ <input type="text"/>	\$ <input type="text"/>
e. Engineering	\$ <input type="text"/>	\$ <input type="text"/>
f. Mathematical sciences	\$ <input type="text"/>	\$ <input type="text"/>
g. Medical sciences	\$ <input type="text"/>	\$ <input type="text"/>
h. Physical sciences	\$ <input type="text"/>	\$ <input type="text"/>
i. Psychology	\$ <input type="text"/>	\$ <input type="text"/>
j. Social sciences	\$ <input type="text"/>	\$ <input type="text"/>
k. Other sciences (Please describe.)	\$ <input type="text"/>	\$ <input type="text"/>
<input style="width: 400px; height: 15px;" type="text"/>		

Question 25: For research animal facilities only: deferred new construction

25. How much of the estimated costs for deferred new construction projects of research facilities as reported in Question 24 would be for research animal facilities?

	For projects included in your institutional plan	For projects <i>not</i> included in your institutional plan
Research animal portion of the costs included in Question 24 (If none, enter "0.").....\$	\$ [input type="text"]	\$ [input type="text"]

Question 26: For medical schools only: deferred new construction

26. *If your institution has a medical school*, how much of the estimated costs for deferred new construction of research facilities as reported in Question 24 would be located in the medical school?

Medical school is a school that awards the M.D. degree.

If your institution does *not* have a medical school,
check this box and go to Question 27

	For projects included in your institutional plan	For projects <i>not</i> included in your institutional plan
Medical school portion of the costs included in Question 24 (If none, enter "0.").....\$	\$ [input type="text"]	\$ [input type="text"]

Question 27: Comments

27. Please add any comments for Part 1 below.

Thank you. This is the end of Part 1. Part 2, which is bound separately, covers your institution's computing and network capacity.

**Classification of NSF Fields of Science and Engineering (S&E)
with a crosswalk to the National Center for Education Statistics (NCES)
2000 Classification of Instructional Programs (CIP 2000)**

NSF field of S&E	NCES CIP 2000 classification and additional examples of disciplines				
Agricultural Sciences (except agricultural engineering and agricultural economics)	01.03	Agricultural Production Operations	Additional examples: Agricultural Chemistry		
	01.0303	Aquaculture	Agronomy		
	01.07	International Agriculture	Animal Science		
	01.12	Soil Sciences	Conservation		
	03	Natural Resources and Conservation (Exclude 03.0509 Wood Science and Wood Products/Pulp and Paper Technology.)	Fish and Wildlife Forestry Horticulture		
	04.06	Landscape Architecture			
Biological Sciences	19.05	Foods, Nutrition, and Related Services	26.0701 Zoology/Animal Biology	26.1301 Ecology	
	26.01	Biology, General	26.0702 Entomology	26.1309 Epidemiology	
	26.0202	Biochemistry	26.0707 Animal Physiology	26.99 Biological and Biomedical Sciences, Other	
	26.0203	Biophysics	26.0799 Zoology/Animal Biology, Other	30.1901 Nutrition Sciences	
	26.03	Botany/Plant Biology	26.0804 Animal Genetics		
	26.04	Cell/Cellular Biology and Anatomical Sciences	26.09 Physiology, Pathology, and Related Sciences	Additional examples: Allergies and Immunology	
	26.0403	Anatomy	26.0910 Pathology/Experimental Pathology	Biogeography	
	26.05	Microbiological Sciences and Immunology	26.1001 Pharmacology	Biotechnology	
	26.0503	Medical Microbiology and Bacteriology	26.1004 Toxicology	Pathology	
	26.0505	Parasitology	26.1101 Biometry/Biometrics	Physical Anthropology	
	26.0507	Immunology	26.1102 Biostatistics	Virology	
	Computer Sciences	11	Computer and Information Sciences and Support Services	Additional examples: Design, development, and application of computer capabilities to data storage and manipulation	
		52.1201	Management Information Systems, General	Information Science	
Earth, Atmospheric, and Ocean Sciences (Environmental)	Earth Sciences		Additional examples:	Lab Geophysics	
	15.1102	Surveying Technology/Surveying	Engineering Geophysics	Organic Geochemistry	
	40.06	Geological and Earth Sciences/Geosciences	General Geology	Paleomagnetism	
	40.0601	Geology/Earth Science, General	Geodesy and Gravity	Paleontology	
	45.0702	Cartography	Geomagnetism	Physical Geography	
			Hydrology	Seismology	
			Inorganic		
			Isotopic		
	Atmospheric Sciences		Additional examples:	Solar	
	40.04	Atmospheric Sciences and Meteorology	Aeronomy Extraterrestrial Atmospheres	Weather Modification	
Ocean Sciences		Additional examples:			
26.1302	Marine Biology and Biological Oceanography	Biological			
40.0607	Oceanography, Chemical and Physical	Chemical Geological Physical			
Other Earth, Atmospheric, and Ocean Sciences					
Multidisciplinary projects within Earth, Atmospheric, and Ocean Sciences					

NSF field of S&E

NCES CIP 2000 classification and additional examples of disciplines

Engineering**Aeronautical and Astronautical**14.02 Aerospace, Aeronautical, and Astronautical
Engineering**Additional examples:**Aerodynamics
Space Technology**Biomedical/Medical Engineering**

14.05 Biomedical/Medical Engineering

Chemical03.0509 Wood Science and Wood Products/Pulp and Paper
Technology

14.07 Chemical Engineering

14.25 Petroleum Engineering

14.32 Polymer/Plastics Engineering

Additional example:

Petroleum Refining Process

Civil

04.02 Architecture

14.04 Architectural Engineering

14.08 Civil Engineering

14.14 Environmental/Environmental Health Engineering

Additional examples:Geotechnical
Hydraulic
Hydrologic
Sanitary and Environmental
Structural
Transportation**Electrical**

14.09 Computer Engineering, General

14.10 Electrical, Electronics, and Communications
Engineering**Additional example:**

Power Engineering

Mechanical

14.11 Engineering Mechanics

14.19 Mechanical Engineering

Metallurgical and Materials

14.06 Ceramic Sciences and Engineering

14.18 Materials Engineering

14.20 Metallurgical Engineering

14.21 Mining and Mineral Engineering

14.28 Textile Sciences and Engineering

14.31 Materials Science

Additional example:

Welding

Other Engineering

14.01 Engineering, General

14.03 Agricultural/Biological Engineering and
Bioengineering

14.12 Engineering Physics

14.13 Engineering Science

14.22 Naval Architecture and Marine Engineering

14.23 Nuclear Engineering

14.24 Ocean Engineering

14.27 Systems Engineering

14.99 Engineering, Other

30.06 Systems Science and Theory

Additional example:

Marine and Ocean Engineering Systems

**Mathematical
Sciences**

14.3701 Operations Research

27.01 Mathematics

27.03 Applied Mathematics

27.05 Statistics

27.99 Mathematics and Statistics, Other

30.08 Mathematics and Computer Science

Additional examples:Algebra
Analysis
Foundations and Logic
Geometry
Numerical Analysis
Topology

NSF field of S&E	NCES CIP 2000 classification and additional examples of disciplines				
Medical Sciences (Exclude all residency programs.) Institutions with schools of veterinary medicine should distribute information among the appropriate fields of S&E (e.g., agricultural, medical, and biological) rather than only in medical sciences.	26.0209 Radiation Biology/ Radiobiology 30.11 Gerontology 30.2401 Neuroscience 51.02 Communication Disorders Sciences and Services 51.04 Dentistry 51.07 Health and Medical Administrative Services 51.10 Clinical/Medical Laboratory Science and Allied Professions 51.1201 Medicine 51.16 Nursing 51.1610 Psychiatric/Mental Health Nurse/Nursing 51.17 Optometry 51.19 Osteopathic Medicine/ Osteopathy 51.20 Pharmacy, Pharmaceutical Sciences, and administration 51.21 Podiatric Medicine/Podiatry	51.22 Public Health 51.2306 Occupational Therapy/ Therapist 51.2308 Physical Therapy/ Therapist 51.2399 Rehabilitation and Therapeutic Professions, Other 51.24 Veterinary Medicine 51.99 Health Professions and Related Clinical Sciences, Other Additional examples: Anesthesiology Cardiology Colon and Rectal Surgery Dental/Oral Surgery Dermatology Family Medicine Gastroenterology General Surgery Geriatric Medicine	Hematology Internal Medicine Medical Programs, Other Neonatal-perinatal Medicine Neurological Surgery Neurology Nuclear Medicine Nuclear Radiology Obstetrics and Gynecology Oncology Ophthalmology Orthopedics/Orthopedic Surgery Otorhinolaryngology Pediatrics Physical and Rehabilitative Medicine Plastic Surgery Preventive Medicine Psychiatry Thoracic Surgery Urology		
Physical Sciences	Astronomy 40.02 Astronomy and Astrophysics	Additional examples: Gamma-ray Neutrino Optical and Radio X-ray			
	Chemistry 40.05 Chemistry Additional examples: Analytical Inorganic	Organic Organo-metallic Pharmaceutical Physical Polymer Sciences (except Biochemistry)			
	Physics 40.08 Physics Additional examples: Acoustics Atomic/Molecular Chemical	Condensed Matter Elementary Particles Nuclear Structure Optics Plasma Theoretical/Mathematical			
	Other physical sciences 40.01 Physical Sciences 40.99 Physical Sciences, Other	Additional examples: Multidisciplinary projects within physical sciences Other physical science disciplines not listed separately above			
Psychology	42.01 Psychology, General 42.02 Clinical Psychology 42.17 School Psychology 51.2301 Art Therapy/Therapist	Additional examples: Animal Behavior Educational Experimental Human Development and Personality Social			

NSF field of S&E

NCES CIP 2000 classification and additional examples of disciplines

Social Sciences

Economics

- 01.0103 Agricultural Economics
- 45.06 Economics
- 52.06 Business/Managerial Economics

Additional examples:

- Applied
- Development

- Econometrics
- Industrial
- International
- Labor
- Public Finance and Fiscal Policy
- Quantitative
- Resource

Political science

- 44.04 Public Administration
- 44.05 Public Policy Analysis
- 44.99 Public Administration and Social Service Professions, Other
- 45.09 International Relations and Affairs
- 45.10 Political Science and Government

Additional examples:

- Comparative Government
- Legal Systems
- Political Theory
- Regional Studies

Sociology

- 45.02 Anthropology (Social and Cultural only)
- 45.05 Demography and Population Studies
- 45.11 Sociology

Additional examples:

- Comparative and Historical
- Complex Organizations
- Cultural and Social Structure
- Group Interactions
- Social Problems and Welfare Theory

Other social sciences

- 04.03 City/Urban, Community, and Regional Planning
- 05 Area, Ethnic, Cultural, and Gender Studies
- 16.0102 Linguistics
- 43.01 Criminal Justice and Corrections
- 44.02 Community Organization and Advocacy
- 45.01 Social Sciences, General
- 45.03 Archeology

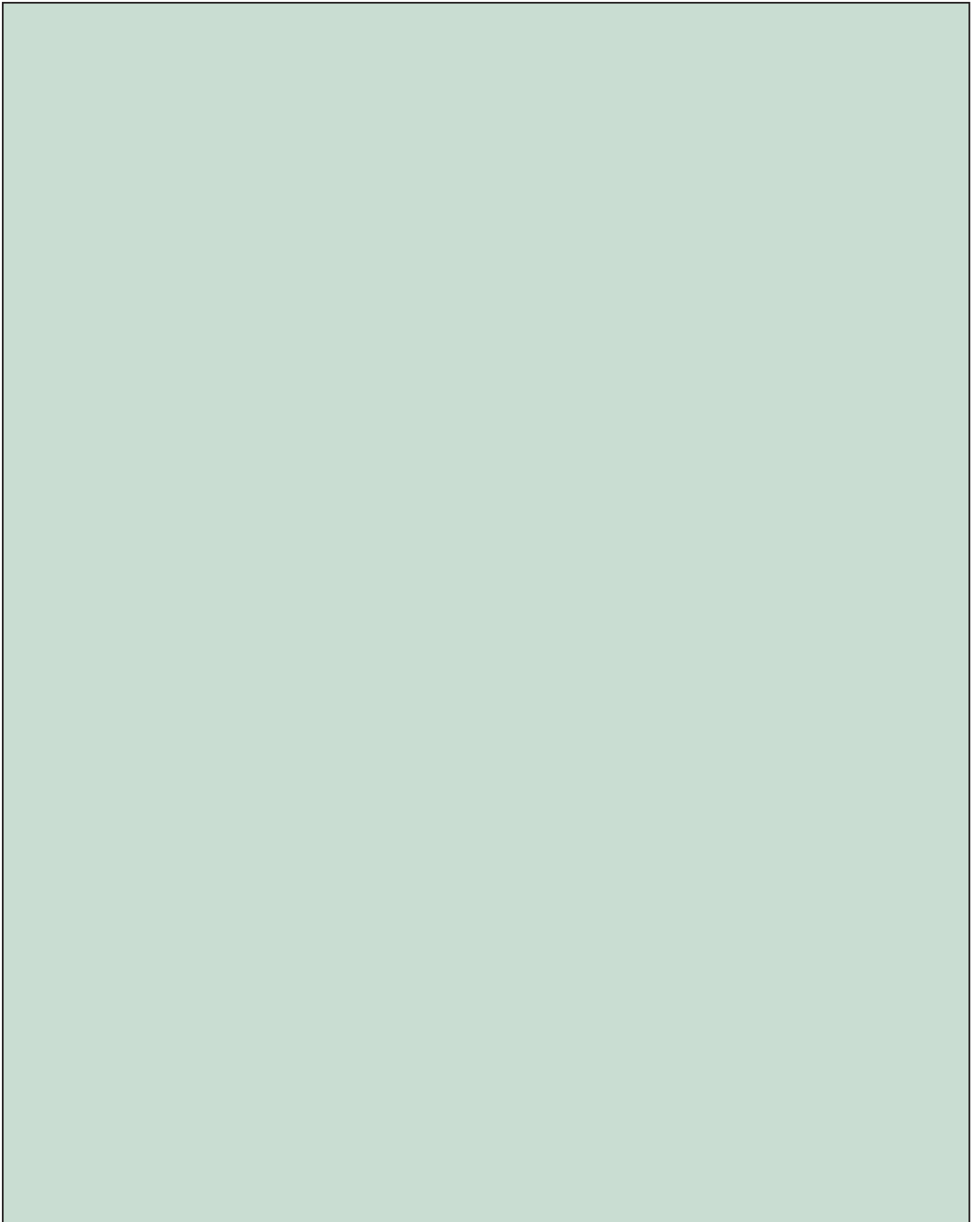
- 45.07 Geography and Cartography (Exclude 45.0702 Cartography.)
- 45.12 Urban Studies/Affairs
- 45.99 Social Sciences, Other

Additional examples:

- History of Science
- Socioeconomic Geography

Other Sciences

Use this category when multidisciplinary, interdisciplinary, or other aspects make classification under one primary field impossible.





National Science Foundation
National Institutes of Health



Part 2: Computing and Networking Capacity (for research and instructional activities)

FY 2005 Survey of Science and Engineering Research Facilities

If you have a question, please contact Ann Buki of Westat via e-mail at facilitiesurvey@westat.com or call 1-888-742-3226. The survey director at the National Science Foundation is Dr. Leslie Christovich.

Please complete the questionnaire and submit it according to the arrangements you made with your institutional coordinator named in the label above.

Thank you for your participation.

General information

Report information for the institution named on the front cover of Part 2 of this survey. Include computing and networking capacity available:

- to residence halls,
- to a hospital that is part of your institution,
- for both research and instructional activities.

If you do not have exact figures for any part of this questionnaire, please provide estimates.

This questionnaire is available on the World Wide Web. Go to www.facilitiesurvey.org to access the web version of the questionnaire. You will need to click on “Part 2” and then enter the Part 2 survey ID and password printed on the label on the front of this questionnaire or given to you by your institutional coordinator.

Question 1: Commodity internet (Internet1) and Abilene (Internet2) total bandwidth

1. At the end of your FY 2005, what was your institution's **total** bandwidth to the commodity internet (Internet1) and Abilene (Internet2)? What is your estimate of the total for your institution at the end of your FY 2006?

Bandwidth is the amount of data that can be transmitted in a given amount of time, usually measured in bits per second.

Commodity internet (Internet1) is the general public, multiuse network often called the "Internet."

Abilene (Internet2) is a high performance backbone network managed by the Internet2 consortium of academia, industry, and government. The purpose of Internet2 is to develop and deploy advanced network applications and technologies.

Please do not include:

- Redundant connections, which are not normally active but available if a failure occurs with the active connection;
- Burstable bandwidth;
- Standard modems (57,600 bps or slower);
- DSL (Digital Subscriber Lines), communication over copper wires;
- Cable modems;
- ISDN (Integrated Services Digital Network), a communications standard for sending voice, video, and data over telephone lines.

Total bandwidth

(Mark one "X" for each column.)

Speed	At end of FY 2005	Estimated at end of FY 2006
a. No bandwidth to EITHER commodity internet (Internet1) OR Abilene (Internet2)	<input type="checkbox"/>	<input type="checkbox"/>
b. Less than 1.6 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
c. 1.6 to 9 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
d. 10 megabits/second.....	<input type="checkbox"/>	<input type="checkbox"/>
e. 11 to 45 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
f. 46 to 99 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
g. 100 megabits/second.....	<input type="checkbox"/>	<input type="checkbox"/>
h. 101 to 155 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
i. 156 to 622 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
j. 623 to 999 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
k. 1 to 2.5 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
l. 2.6 to 9 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
m. 10 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
n. More than 10 gigabits/second.....	<input type="checkbox"/>	<input type="checkbox"/>
o. Other (Please specify.).....	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>		
<input type="text"/>		

Question 2: Abilene (Internet2) bandwidth

2. At the end of your FY 2005, what was your institution's bandwidth to Abilene (Internet2)? What is your estimate of the bandwidth to Abilene at the end of your FY 2006?

Bandwidth is the amount of data that can be transmitted in a given amount of time, usually measured in bits per second.

Abilene (Internet2) is a high performance backbone network managed by the Internet2 consortium of academia, industry, and government. The purpose of Internet2 is to develop and deploy advanced network applications and technologies.

*Please do **not** include redundant connections.* A redundant connection is not normally active but is available if a failure occurs with the active connection.

Bandwidth for Abilene

(Mark one "X" for each column.)

Speed	At end of FY 2005	Estimated at end of FY 2006
a. No bandwidth to Abilene (Internet2)	<input type="checkbox"/>	<input type="checkbox"/>
b. Less than 1.6 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
c. 1.6 to 9 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
d. 10 megabits/second.....	<input type="checkbox"/>	<input type="checkbox"/>
e. 11 to 45 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
f. 46 to 99 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
g. 100 megabits/second.....	<input type="checkbox"/>	<input type="checkbox"/>
h. 101 to 155 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
i. 156 to 622 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
j. 623 to 999 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
k. 1 to 2.5 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
l. 2.6 to 9 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
m. 10 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
n. More than 10 gigabits/second.....	<input type="checkbox"/>	<input type="checkbox"/>
o. Other (Please specify.).....	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>		
<input type="text"/>		

Question 3: Commodity internet (Internet1) bandwidth

3. At the end of your FY 2005, what was your institution's bandwidth to the commodity internet (Internet1)? What is your estimate of the bandwidth to the commodity internet at the end of your FY 2006?

Bandwidth is the amount of data that can be transmitted in a given amount of time, usually measured in bits per second.

Commodity internet (Internet1) is the general public, multiuse network often called the "Internet."

Please do not include:

- Redundant connections, which are not normally active but available if a failure occurs with the active connection;
- Burstable bandwidth;
- Standard modems (57,600 bps or slower);
- DSL (Digital Subscriber Lines), communication over copper wires;
- Cable modems;
- ISDN (Integrated Services Digital Network), a communications standard for sending voice, video, and data over telephone lines.

Bandwidth for commodity internet

(Mark one "X" for each column.)

Speed	At end of FY 2005	Estimated at end of FY 2006
a. No bandwidth to commodity internet (Internet1).....	<input type="checkbox"/>	<input type="checkbox"/>
b. Less than 1.6 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
c. 1.6 to 9 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
d. 10 megabits/second.....	<input type="checkbox"/>	<input type="checkbox"/>
e. 11 to 45 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
f. 46 to 99 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
g. 100 megabits/second.....	<input type="checkbox"/>	<input type="checkbox"/>
h. 101 to 155 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
i. 156 to 622 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
j. 623 to 999 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
k. 1 to 2.5 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
l. 2.6 to 9 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
m. 10 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
n. More than 10 gigabits/second.....	<input type="checkbox"/>	<input type="checkbox"/>
o. Other (Please specify.).....	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>		
<input type="text"/>		

Question 4: Commodity internet (Internet1) connections

4. At the end of your FY 2005, how many lines did your institution have to the commodity internet (Internet1) at each of the connection speeds listed below? Also, please provide the number of fractional lines at your institution on the first row below. Please estimate this information for your FY 2006.

Commodity internet (Internet1) is the general public, multiuse network often called the “Internet.”

If your institution has fractional circuits, please report the speed of the fractional line in rows a through m. For example, if your institution purchases 45 megabits/second of an OC-12 line, report the line speed as 45 megabits/second.

If your institution has bonded lines, please report the speed of the bonded lines together and count as one line. For example, if your institution has two T1 lines joined to act as a single line, report the speed as 3 megabits/second.

Please do not include:

- Redundant connections, which are not normally active but available if a failure occurs with the active connection;
- Burstable bandwidth;
- Standard modems (57,600 bps or slower);
- DSL (Digital Subscriber Lines), communication over copper wires;
- Cable modems;
- ISDN (Integrated Services Digital Network), a communications standard for sending voice, video, and data over telephone lines.

Number of lines

Fractional lines	At end of FY 2005	Estimated at end of FY 2006
Number of fractional lines included in answers in rows a through m.....	<input type="text"/>	<input type="text"/>
Connection speed		
a. Less than 1.6 megabits/second	<input type="text"/>	<input type="text"/>
b. 1.6 to 9 megabits/second.....	<input type="text"/>	<input type="text"/>
c. 10 megabits/second.....	<input type="text"/>	<input type="text"/>
d. 11 to 45 megabits/second.....	<input type="text"/>	<input type="text"/>
e. 46 to 99 megabits/second.....	<input type="text"/>	<input type="text"/>
f. 100 megabits/second.....	<input type="text"/>	<input type="text"/>
g. 101 to 155 megabits/second.....	<input type="text"/>	<input type="text"/>
h. 156 to 622 megabits/second.....	<input type="text"/>	<input type="text"/>
i. 623 to 999 megabits/second.....	<input type="text"/>	<input type="text"/>
j. 1 to 2.5 gigabits/second	<input type="text"/>	<input type="text"/>
k. 2.6 to 9 gigabits/second	<input type="text"/>	<input type="text"/>
l. 10 gigabits/second.....	<input type="text"/>	<input type="text"/>
m. More than 10 gigabits/second.....	<input type="text"/>	<input type="text"/>
n. Other (<i>Please specify.</i>).....	<input type="text"/>	<input type="text"/>
<input type="text"/>		
<input type="text"/>		

Question 5: Bandwidth from consortia

5. At the end of your FY 2005, did any of your institution's bandwidth come from a consortium? Do you expect to obtain bandwidth from a consortium at the end of your FY 2006?

Bandwidth is the amount of data that can be transmitted in a given amount of time, usually measured in bits per second.

A **consortium** is a collaboration of any combination of educational institutions (e.g., university, K-12), government agencies, network infrastructure operators (e.g., Internet2), vendors, health care organizations, or non-profit organizations with the purpose of coordinating and facilitating networking activities, as well as other services.

(Mark one "X" for each row.)

Fiscal year	Yes	No
a. Bandwidth from consortia at the end of FY 2005.....	<input type="checkbox"/>	<input type="checkbox"/>
b. Bandwidth from consortia at the end of FY 2006.....	<input type="checkbox"/>	<input type="checkbox"/>

Please provide the names of all consortia from which you expect to obtain bandwidth at the end of your FY 2006.

Question 6: High performance network connections

6. At the end of your FY 2005, did your institution have connections to the following high performance networks? Do you expect to have connections to any of these networks at the end of your FY 2006?

A **high performance network** is characterized by high bandwidth, low latency, and low rates of packet loss. Additionally, a high performance network is able to support delay-sensitive, bandwidth-intensive applications such as distributed computing, real-time access, and control of remote instrumentation.

Abilene (Internet2) is a high performance backbone network managed by the Internet2 consortium of academia, industry, and government. The purpose of Internet2 is to develop and deploy advanced network applications and technologies.

National LambdaRail is an initiative of research universities and technology companies to provide a national infrastructure for research and experimentation in networking technologies and applications.

ESnet is the Department of Energy's Energy Sciences Network.

NREN is the NASA Research and Education Network.

(Mark one "X" for each row.)

At the end of FY 2005	Yes	No
a. Abilene.....	<input type="checkbox"/>	<input type="checkbox"/>
b. National LambdaRail.....	<input type="checkbox"/>	<input type="checkbox"/>
c. Federal government research network (e.g., Department of Energy ESnet, NASA NREN).....	<input type="checkbox"/>	<input type="checkbox"/>
d. Other (Please specify).....	<input type="checkbox"/>	<input type="checkbox"/>

Estimated at the end of FY 2006	Yes	No
e. Abilene.....	<input type="checkbox"/>	<input type="checkbox"/>
f. National LambdaRail.....	<input type="checkbox"/>	<input type="checkbox"/>
g. Federal government research network (e.g., Department of Energy ESnet, NASA NREN).....	<input type="checkbox"/>	<input type="checkbox"/>
h. Other (Please specify).....	<input type="checkbox"/>	<input type="checkbox"/>

Question 7: Desktop port connections

7. At the end of your FY 2005, what percentage of your institution's desktop ports had hardwire connections at each of the speeds listed below? What percentage do you estimate will be at these speeds at the end of your FY 2006?

Please report on the *capacity of the ports themselves* and not the speed of the workstations connected to them. Also, *do not include servers* when determining your responses.

Percentage of desktop ports

Speed of connection	At end of FY 2005	Estimated at end of FY 2006
a. 10 megabits/second or less.....	<input type="text"/> %	<input type="text"/> %
b. 100 megabits/second	<input type="text"/> %	<input type="text"/> %
c. 1 gigabit/second or more.....	<input type="text"/> %	<input type="text"/> %
d. Other (<i>Please specify.</i>)	<input type="text"/> %	<input type="text"/> %
<input type="text"/>		
Total	100%	100%

Question 8: Type of cable for desktop ports

8. At the end of your FY 2005, what percentage of your institution's desktop ports were connected to your institution's network by the following types of cable? What percentages do you estimate at the end of your FY 2006?

Please *do not include servers* when determining your responses.

Percentage of desktop ports

Type of cable	At end of FY 2005	Estimated at end of FY 2006
a. Unrated	<input type="text"/> %	<input type="text"/> %
b. Category 3	<input type="text"/> %	<input type="text"/> %
c. Category 5	<input type="text"/> %	<input type="text"/> %
d. Category 5e	<input type="text"/> %	<input type="text"/> %
e. Category 6	<input type="text"/> %	<input type="text"/> %
f. Other (<i>Please specify.</i>)	<input type="text"/> %	<input type="text"/> %
<input type="text"/>		
Total	100%	100%

Question 9: Dark fiber

9. At the end of your FY 2005, did your institution own any dark fiber to your institution's internet service provider (ISP) or between your institution's buildings? Do you plan to acquire any dark fiber to your ISP or between your institution's buildings during your FY 2006?

Dark fiber is fiber-optic cable that has already been laid but is not being used. Include only fiber that was dark (i.e., unlit) when it was purchased by your institution.

(Mark one "X" for each row.)

Owned at the end of FY 2005

- | | Yes | No |
|---|--------------------------|--------------------------|
| a. To your institution's ISP | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Between your institution's buildings | <input type="checkbox"/> | <input type="checkbox"/> |

To be acquired during FY 2006

- | | Yes | No |
|---|--------------------------|--------------------------|
| c. To your institution's ISP | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Between your institution's buildings | <input type="checkbox"/> | <input type="checkbox"/> |

Question 10: Maximum speed on your network

10. At the end of your FY 2005, what was the *maximum speed* that a desktop computer on your network could connect to another computer *on your institution's network*? What maximum speed will your institution have at the end of your FY 2006?

For example, the speeds of some desktop ports may be 10 megabits/second, but others may be 100 megabits/second. With a distribution speed (or backbone speed) of 50 megabits/second, the maximum speed would be 50 megabits/second.

(Mark one "X" for each column.)

Maximum speed	At end of FY 2005	Estimated at end of FY 2006
a. Less than 1.6 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
b. 1.6 to 9 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
c. 10 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
d. 11 to 45 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
e. 46 to 99 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
f. 100 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
g. 101 to 155 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
h. 156 to 622 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
i. 623 to 999 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
j. 1 to 2.5 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
k. 2.6 to 9 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
l. 10 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
m. More than 10 gigabits/second.....	<input type="checkbox"/>	<input type="checkbox"/>
n. Other (<i>Please specify</i>).....	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>		
<input type="text"/>		

Question 11: Maximum speed through any internet connection

11. At the end of your FY 2005, what was the *maximum speed* that a desktop computer on your network could connect to another institution *through any internet connection (commodity internet or Abilene)*? What maximum speed will your institution have at the end of your FY 2006?

Commodity internet (Internet1) is the general public, multiuse network often called the "Internet."

Abilene (Internet2) is a high performance backbone network managed by the Internet2 consortium of academia, industry, and government. The purpose of Internet2 is to develop and deploy advanced network applications and technologies.

For example, your distribution speed (or backbone speed) may be 100 megabits/second, but your internet connection speed may be 1.5 megabits/second. Your maximum speed would be no greater than 1.5 megabits/second to an outside connection.

(Mark one "X" for each column.)

Maximum speed	At end of FY 2005	Estimated at end of FY 2006
a. <i>No internet connection (commodity internet or Abilene)</i>	<input type="checkbox"/>	<input type="checkbox"/>
b. Less than 1.6 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
c. 1.6 to 9 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
d. 10 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
e. 11 to 45 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
f. 46 to 99 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
g. 100 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
h. 101 to 155 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
i. 156 to 622 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
j. 623 to 999 megabits/second	<input type="checkbox"/>	<input type="checkbox"/>
k. 1 to 2.5 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
l. 2.6 to 9 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
m. 10 gigabits/second	<input type="checkbox"/>	<input type="checkbox"/>
n. More than 10 gigabits/second.....	<input type="checkbox"/>	<input type="checkbox"/>
o. Other (<i>Please specify</i>).....	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>		
<input type="text"/>		

Question 12: Wireless connections

12. At the end of your FY 2005, what percentage, if any, of your institution's building area was covered by wireless capabilities for network access? What percentage do you estimate will have wireless access at the end of your FY 2006?

Building area refers to the sum of floor by floor calculations of square footage.

Please *do not include rogue* wireless access points.

Wireless coverage for network access

(Mark one "X" for each column.)

Percent of building area	At end of FY 2005	Estimated at end of FY 2006
a. None.....	<input type="checkbox"/>	<input type="checkbox"/>
b. 1 to 10 percent	<input type="checkbox"/>	<input type="checkbox"/>
c. 11 to 20 percent	<input type="checkbox"/>	<input type="checkbox"/>
d. 21 to 30 percent	<input type="checkbox"/>	<input type="checkbox"/>
e. 31 to 40 percent	<input type="checkbox"/>	<input type="checkbox"/>
f. 41 to 50 percent	<input type="checkbox"/>	<input type="checkbox"/>
g. 51 to 60 percent	<input type="checkbox"/>	<input type="checkbox"/>
h. 61 to 70 percent	<input type="checkbox"/>	<input type="checkbox"/>
i. 71 to 80 percent	<input type="checkbox"/>	<input type="checkbox"/>
j. 81 to 90 percent	<input type="checkbox"/>	<input type="checkbox"/>
k. 91 to 100 percent	<input type="checkbox"/>	<input type="checkbox"/>

Question 13: Number of high performance computing systems

13. At the end of your FY 2005, how many high performance computing systems were physically located at your institution? Include mainframe computers and distributed/parallel computing if your institution had this configured.

High performance computing performs at the fastest rate currently available, manipulating a very large amount of data in a short time. High performance computing includes large-capacity mainframe computers. It also includes the use of parallel processing to spread a computational problem over multiple computers.

If you did *not* have high performance computing systems physically located at your institution, check this box and go to Question 15

Number of high performance computing systems

Question 14: For high performance computing only: Faculty access

14. *If your institution had high performance computing*, were any of those systems generally available to all of your faculty at the end of your FY 2005? Include only those systems physically located at your institution.

(Mark only one "X.")

- a. Yes
- b. No
- c. Other (*Please explain.*)

Thank you. This is the end of Part 2. Please submit this part of the survey according to the arrangements you made with your institutional coordinator (named on the label on the front cover of the survey questionnaire).

