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General

COs System Operation and Maintenance: Facilities, Instructions, Standards and Techniques, Volume 5-12
Bureau of Reclamation, Denver, CO. Hydroelectric Research and Technical Services Group. May 2005, 50p, FIST-5-12. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-107615WBT Price code: PC A04/MF A01

This volume identifies Reclamation's standard operation and maintenance practices for carbon dioxide (CO2) systems. Reclamation has used CO2 fire suppression systems in it power plant for many years to protect generators and large motors. Different operation and maintenance practices have evolved across the agency and new, low-pressure systems are supplanting the older, high-pressure systems in many locations. CO2 poses risk to personnel who may be exposed to it, and adequate safety precautions must be in place. Consistency is desirable to ensure effective fire suppression and to maximize safety for plant staff. This volume provides guidance in making those practices consistent.

Final Report for the Variable Speed Integrated Intelligent HVAC Blower. (Final Report, December 2001-June 2003.)
General Electric Corp., Niskayuna, NY. Research and Development. Jun 2003, 30p. Sponsored by Department of Energy, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
DE2005-835010WBT Price code: PC A03

This comprehensive topical report discusses the key findings in the development of an advanced blower for HVAC applications. The benefits of rearward inclined blades over that of traditional forward inclined blades is well documented, and several prototype wheels are demonstrated in various housings. A comparison of retrofitted blowers to that of three typical units from the industry is presented. The design and modification of the blower housing is addressed and the impact of size limitations on static efficiency is discussed. The roadmap to rearward-inclined wheel technology insertion is presented and typical static efficiency gains are documented.

Metal-Matrix Composites and Thermal Spray Coatings for Earth Moving Machines. Final Report (July 2, 2001-June 11, 2003)
D. T. Weaver, M. T. Kiser, F. W. Zok, C. G. Levi, and J. Hawk.
California Univ., Santa Barbara. Feb 2004, 132p. Prepared in cooperation with Caterpillar, Inc., Peoria, IL. Sponsored by Department of Energy, Albany, OR. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
DE2005-833402WBT Price code: PC A08

In an effort to realize minimum of a 2x increase in wear life of ground engaging components used on mining machines, two potentially cost effective processes were explored for the production of tailored, highly abrasion resistant materials: (1) hybrid pressure casting of steel composites, and (2) arc lamp fusing of thermal spray coatings. Steel composites comprised of cermet or oxide hard particles were successfully produced using pressure casting processes, although a cost effective process has not yet been identified for oxide particles. Both composites achieved project wear targets in high stress gouging wear, but the cermet composites did not meet the targets in impact wear, due to poor matrix toughness resulting from particle dissolution. Oxide composites had superior toughness and are expected to meet impact wear goals. Arc lamp processing of thermal spray coatings was successfully demonstrated to produce a metallurgical bond at the coating interface. Functionally graded materials were developed and successfully fused to allow for the accommodation of thermal process stresses in an intermediate layer. Ultimately, three functionally graded materials were identified as having high stress, three-body abrasion

Prepared by the National Technical Information Service
U.S. Department of Commerce, Technology Administration, Springfield, VA 22161 (703) 605-6000

resistance sufficient to exceed project goals.

Registered Apprenticeship Programs: Labor Can Better Use Data to Target Oversight
Government Accountability Office, Washington, DC. Aug 2005, 78p, GAO-05-886. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110003WBT Price code: PC A06/MF A01

Between 2002 and 2012 nearly 850,000 jobs will open in the construction industry; experts predict that there will not be enough skilled workers to fill them. This has heightened concerns about program outcomes and program quality in the nation's apprenticeship system and the Department of Labor's oversight of it. GAO assessed (1) the extent to which Labor monitors registered apprenticeship programs in the states where it has direct oversight, (2) its oversight activities in states that do their own monitoring, and (3) the outcomes for construction apprentices in programs sponsored by employers and unions in relation to programs sponsored by employers alone.

Report of the Technical Investigation of The Station Nightclub Fire. Volume I. Main Report
W. Grosshandler, N. Bryner, D. Madrzykowski, and K. Kuntz. National Inst. of Standards and Technology (BFRL), Gaithersburg, MD. Jun 2005, 254p, NIST-NCSTAR2-V1. See also Volume 2, Appendices, PB2005-110247. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110246WBT Price code: PC A13

A fire occurred on the night of Feb. 20, 2003, in The Station nightclub at 211 Cowesett Avenue, West Warwick, Rhode Island. A band that was on the platform that night, during its performance, used pyrotechnics that ignited polyurethane foam insulation lining the walls and ceiling of the platform. The fire spread quickly along the walls and ceiling area over the dance floor. Smoke was visible in the exit doorways in a little more than one minute, and flames were observed breaking through a portion of the roof in less than five minutes. Egress from the nightclub, which was not equipped with sprinklers, was hampered by crowding at the main entrance to the building. One hundred people lost their lives in the fire. On Feb. 27, 2003, under the authority of the National Construction Safety Team (NCST) Act, the National Institute of Standards and Technology (NIST) established a National Construction Safety Team to determine the likely technical cause or causes of the building failure that led to the high number of casualties in that fire. This report documents the procedures, findings, and issues that were raised by the investigation. Volume I contains the main report and Volume II contains appendix material. The investigation concluded that strict adherence to 2003 model codes available at the time of the fire would go a long way to preventing similar tragedies in the future. Changes to the codes subsequent to the fire made them stronger. By making some additional changes - and state and local agencies adopting and enforcing them - we can strengthen occupant safety even further. Ten recommendations to improve model building and fire codes, standards and practices (as they existed in February 2003) resulted from the investigation, including (i) urging state and local jurisdictions to (a) adopt and update building and fire codes covering nightclubs based on one of the model codes and (b) enforce those codes aggressively; (ii) strengthening the requirements for the installation of automatic fire sprinklers; (iii) increasing the factor of safety on the time for occupants to egress; (iv) tightening the restriction on the use of flexible polyurethane foam -- and other materials that ignite as easily and propagate flames as rapidly as non-fire retarded foam -- as an interior finish product; (v) further limiting the use of pyrotechnics; and (vi) conducting research in specific areas to underpin the recommended changes.

Report of the Technical Investigation of The Station Nightclub Fire. Volume II. Appendices
W. Grosshandler, N. Bryner, D. Madrzykowski, and K. Kuntz. National Inst. of Standards and Technology (BFRL), Gaithersburg, MD. Jun 2005, 422p, NIST-NCSTAR2-V2. See also Volume 1, Main Report, PB2005-110246. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110247WBT Price code: PC A19

A fire occurred on the night of Feb. 20, 2003, in The Station nightclub at 211 Cowesett Avenue, West Warwick, Rhode Island. A band that was on the platform that night, during its performance, used pyrotechnics that ignited polyurethane foam insulation lining the walls and ceiling of the platform. The fire spread quickly along the walls and ceiling area over the dance floor. Smoke was visible in the exit doorways in a little more than one minute, and flames were observed breaking through a portion of the roof in less than five minutes. Egress from the nightclub, which was not equipped with sprinklers, was hampered by crowding at the main entrance to the building. One hundred people lost their lives in the fire. On Feb. 27, 2003, under the authority of the National Construction Safety Team (NCST) Act, the National Institute of Standards and Technology (NIST) established a National Construction Safety Team to determine the likely technical cause or causes of the building failure that led to the high number of casualties in that fire. This report documents the procedures, findings, and issues that were raised by the investigation. Volume I contains the main report and Volume II contains appendix material. The investigation concluded that strict adherence to 2003 model codes available at the time of the fire would go a long way to preventing similar tragedies in the future. Changes to the codes subsequent to the fire made them stronger. By making some additional changes - and state and local agencies adopting and enforcing them - we can strengthen occupant safety even further. Ten recommendations to improve model building and fire codes, standards and practices (as they existed in February 2003) resulted from the investigation, including (i) urging state and local jurisdictions to (a) adopt and update building and fire codes covering nightclubs based on one of the model codes and (b) enforce those codes aggressively; (ii) strengthening the requirements for the installation of automatic fire sprinklers; (iii) increasing the factor of safety on the time for occupants to egress; (iv) tightening the restriction on the use of flexible polyurethane foam -- and other materials that ignite as easily and propagate flames as rapidly as non-fire retarded foam -- as an interior finish product; (v) further limiting the use of pyrotechnics; and (vi) conducting research in

specific areas to underpin the recommended changes.

Foreign Technology

Teknik Dergi, Cilt 16, Sayi 2, Nisan 2005 (Technical Journal of Turkish Chamber of Civil Engineers, Volume 16, Number 2, April 2005)
TMMOB Metalurji Muhendisleri Odasi, Ankara (Turkey). Apr 2005, 104p. Text in Turkish; English abstract. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-107465WBT Price code: PC A07/MF A02

Owing to densely placed petrol storage facilities in Korfez district of Kocaeli, the risk imposed on the nearby housing settlement is rather serious. Current codes defining safe distance from property line cannot be applied under present circumstances. Besides, the prescriptive nature of the present fire code necessitates the justification of the rules imposed on users. As a consequence, in case of fire, its effects on the adjoining settlement should be attended to by means of a systematic procedure making use of the latest fire engineering approach. The paper proposes an assessment procedure of tank fire effects and presents the findings and measures to be applied to the area under risk.

Architectural Design & Environmental Engineering

Architect of the Capitol Accountability Report, 2003
Architect of the Capitol, Washington, DC. 2003, 36p. See also PB2003-102501. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109750WBT Price code: PC A04

This is the Accountability Report for the Office of the Architect of the Capitol (AOC) for Fiscal Year 2003. This report highlights achievements realized during the fiscal year, including information on audited balance sheet - a first in the history of the AOC. Looking back over this past year and the complex challenges faced by this organization, We are proud of our many accomplishments. We are undergoing an organization-wide transformation to address management challenges and program risks that have been identified by the Government Accountability Office (GAO). We realize it is vital to take a strategic approach to achieve our mission, and we are continually taking the necessary actions to move the organization forward. During fiscal year 2003, we continued construction of the Capitol Visitor Center; began to install roof fall protection campus-wide; renovated elevators in the House, Senate, Capitol, and Library buildings; installed perimeter security elements to protect visitors and building occupants; razed the structurally unsound ONeill House Office Building; modernized the Capitol Power Plant coal-handling equipment; and installed a buildingwide sprinkler system in the Rayburn House Office Building.

Documentation for FY2002 BTS GPRA Metrics
D. B. Belzer, K. A. Cort, J. A. Dirks, and D. J. Holstick. Pacific Northwest National Lab., Richland, WA. Jan 2002, 186p, PNNL-13766. Sponsored by Department of Energy, Washington, DC. Office of Building Technology State and Community Programs. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
DE2005-15010660WBT Price code: PC A10

PNNL estimated the FY2002 energy, environmental, and financial benefits (i.e., metrics) of the technologies and practices in the U.S. Department of Energy's (DOE's) Office of Building Technology, State and Community Programs (BTS). BTS uses the estimates of benefits as part of its annual budget request. This report includes an overview of the analytical approaches used to estimate energy savings for the FY2002 appropriated budget for BTS. The report also includes descriptions of key assumptions and the methodology that is used to calculate energy savings estimates for each BTS program.

Energy Cost and IAQ Performance of Ventilation Systems and Controls. Report 6: Meeting Outdoor Air Requirements in Very High Occupant Density Buildings. A Study of Auditoriums and Schools
Environmental Protection Agency, Washington, DC. Office of Air and Radiation. Jan 2000, 46p, EPA-402-S-01-001F. See also PB2005-109164. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109845WBT Price code: PC A04/MF A01

ASHRAE Standard 62-1989 (and the subsequent Standard 62-19991) raised the outdoor air requirements for acceptable indoor air quality for very high occupant density buildings such as schools and auditoriums from its previous level of 5 cfm per occupant to 15 cfm per occupant. Since occupant densities in these buildings can be very high (e.g. 30-150 occupants per 1000 square feet), the absolute increase in outdoor air volumes in these buildings due to ASHRAE Standard 62 is exceptionally large, and outdoor air fractions (proportion of supply air which is outdoor air) rise significantly. Therefore, air flows in these buildings become heavily dominated by indoor air quality requirements rather than by thermal load requirements. This raises questions as to whether VAV systems can effectively meet the ASHRAE requirements under part load conditions. At part load conditions, supply air flows may be less than the required outdoor air flows unless VAV box minimum flow settings are sufficiently high. However, as VAV box minimum flow settings are raised in VAV systems, the operational characteristics of the VAV system approach that of a CV system (see Project Report no. 3), so that the energy savings of VAV systems over CV systems may be diminished or lost in these buildings. This further suggests that VAV systems in very high occupant density buildings whose design settings are meant to achieve the ASHRAE requirement of 15 cfm per occupant, may not in actuality be meeting that requirement unless their VAV box minimum flow settings are higher than normal practice would provide.

Energy Cost and IAQ Performance of Ventilation Systems and Controls. Report 7: The Cost of Protecting Indoor Environmental Quality During Energy Efficiency Projects for Office and Education Buildings. Integrating Indoor Environmental Quality with Energy Efficiency

Environmental Protection Agency, Washington, DC. Office of Air and Radiation. Jan 2000, 26p, EPA-402-S-01-001G. See also PB2005-109845. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109846WBT Price code: PC A03/MF A01

Many building owners and managers are under increased pressure from many circles to provide good indoor environmental quality (IEQ). There are many opportunities to advance IEQ during the course of energy projects without sacrificing energy efficiency. These opportunities could provide the energy service companies and other energy professionals with the ability to gain a competitive edge as they market their services to a clientele that is becoming increasingly sensitive to indoor environmental quality issues. Many energy professionals believe that IEQ necessarily leads to significant energy penalties and therefore deliberately ignore it in their projects.

Introduction to Building Systems Performance: Houses that Work II. Revised February 2005. (January 2003-December 2003)
National Renewable Energy Lab., Golden, CO. Mar 2005, 180p, NREL/SR-550-37664. Sponsored by Department of Energy, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
DE2005-15015120WBT Price code: PC A10

Buildings should be suited to their environments. Design and construction must be responsive to varying seismic risks, wind loads, and snow loads, as well as soil conditions, frost depth, orientation, and solar radiation. In addition, building envelopes and mechanical systems should be designed for a specific hygro-thermal regions, rain exposure, and interior climate. The Building Science Consortium (BSC) design recommendations are based on the hygro-thermal regions with reference to the annual rainfall. Local climate must be addressed if it differs significantly from the climate described for a particular design.

Southwest Housing Traditions: Design Materials Performance
Department of Housing and Urban Development, Washington, DC. Office of Policy Development and Research. May 2005, 222p. Prepared in cooperation with PATH Program, Richmond, CA. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110430WBT Price code: PC A11

This book is about design and construction, materials and culture, human habitation and intentions. It considers the lessons which traditional architecture holds for today's designers and builders. Traditional houses are of a time when people built for themselves, following shared ideas of what a house should be. These houses reflect the building practices of their geographic region, and the design ideas of the culture which produced them. This book is intended as a guide for the non-profit developer and its design team in applying the relevant lessons of traditional architecture to the design of new affordable housing. It should make more widely known the principles of energy efficiency, durability and low life-cycle costs, as well as cultural appropriateness, found in the traditional housing of the southwestern borderlands. It is offered in hopes that it will prove useful to others in the development, design and construction of affordable housing in the Southwest.

Construction Management & Techniques

Economic Census, 2002: Arizona. Construction. Geographic Area Series
Bureau of the Census, Washington, DC. Sep 2005, 58p, EC02-23A-AZ. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110197WBT Price code: PC A05/MF A01

The economic census is the major source of facts about the structure and functioning of the nations economy. It provides essential information for government, business, industry, and the general public. The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.

Introduction to Building Systems Performance: Houses that Work II. Revised February 2005. (January 2003-December 2003)
National Renewable Energy Lab., Golden, CO. Mar 2005, 180p.
DE2005-15015120WBT Price code: PC A10

For complete citation see Architectural Design & Environmental Engineering

Southwest Housing Traditions: Design Materials Performance
Department of Housing and Urban Development, Washington, DC. Office of Policy Development and Research. May 2005, 222p.
PB2005-110430WBT Price code: PC A11

For complete citation see Architectural Design & Environmental Engineering

Construction Materials, Components, & Equipment

Accelerated Curing of Silica Fume Concrete
N. Yazdani, S. Haroon, and M. Fils-Aime. FAMU/FSU Coll. of Engineering, Tallahassee. Dept. of Civil and Environmental Engineering. 30 Apr 2005, 112p, DB-488. Sponsored by Florida State Dept. of Transportation, Tallahassee. and Federal Highway Administration, Tallahassee, FL. Florida Div. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

PB2005-109451WBT Price code: PC A07/MF A02

Silica fume is a common addition to high performance concrete mix designs. The use of silica fume in concrete leads to increased water demand. For this reason, Florida Department of Transportation(FDOT) currently allows only a 72-hour continuous moist cure process for concrete containing silica fume. Accelerated curing has been shown to be effective in producing high-performance characteristics at early ages in silica-fume concrete. However, the heat greatly increases the moisture loss from exposed surfaces, which may cause shrinkage problems. This experimental study was undertaken to determine the feasibility of steam curing of FDOT concrete with silica fume in order to reduce precast turn around time.

Characterization of the Punching Shear Capacity of Thin Ultra-High Performance Concrete Slabs
D. K. Harris, and C. L. Roberts-Wollmann.
Virginia Highway and Transportation Research Council, Charlottesville. Jun 2005, 70p, VTRC-05-CR26. See also PB94-138369. Sponsored by Virginia Dept. of Transportation, Richmond. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110436WBT Price code: PC A05

Ultra-high performance concrete (UHPC) is a relatively new type of concrete that exhibits mechanical properties that are far superior to those of conventional concrete and in some cases rival those of steel. The main characteristics that distinguish UHPC from conventional reinforced concrete are its very high compressive strength (20 to 33 ksi), the addition of steel fibers which enables tension to be carried across open cracks without conventional reinforcing steel, and a very high resistance to corrosion and degradation. The mechanical properties of UHPC allow for smaller, thinner sections as compared to conventional reinforced concrete sections. However, as it is a new material, the use of UHPC has been limited to a few structural applications due primarily to the high cost of the material and the lack of established design guidelines. In previous research, a material model based on physical tests was used in conjunction with finite element models to develop an optimized cross-section for a prestressed UHPC girder for bridge applications. The cross-section is a double-tee with bulbs at the bottoms of the webs to accommodate the prestressing strands. As it is envisioned in bridge applications, the double-tees will be placed directly adjacent to one another, and the top flange will act as the riding surface after a thin asphalt overlay is placed. Based on the longitudinal compressive stresses, the top flange of the girder can be quite thin. However, there exists the possibility that a punching shear failure could occur from the application of a point load such as a wheel patch load if the flange is made too thin. The research reported herein was initiated to characterize the punching shear capacity of thin UHPC plates and to develop recommendations on the minimum top flange thickness for the optimized double-tee. Twelve small slabs (45 in x 45 in) were tested to failure to characterize the punching shear strength of UHPC. The variables considered were the slab thickness (2, 2.5, and 3 in) and loading plate dimensions (from 1 in x 1 in to 3 in x 3 in). The results of the testing were compared to several existing models for punching shear. The two equations that predicted strengths most reliably were the current ACI punching shear equation and a modified bolt pull-out equation. After evaluation of the test results, the minimum slab thickness required to prevent a punching shear failure in the top flange due to an 8 in x 20 in wheel patch was determined to be 1 in. Three larger slabs were also tested. These slabs had the same clear span length as the top flange of the optimized double-tee and were loaded with a wheel patch load. The slabs were all approximately 3 in thick and all failed in flexure rather than punching shear. It was concluded that the casting method has a strong influence on the orientation of the steel fibers, which in turn influences the flexural strength in orthogonal directions in the slab. The top flange thickness will be governed by transverse bending rather than punching shear, and the 3 in slabs were not able to support the full wheel load plus impact and load factor. The results of this research help in the continued optimization of a UHPC shape for use in highway bridges. If material use in the girder is minimized, UHPC bridges can become economically competitive with HPC bridges, but offer the benefits of more rapid construction and better durability.

Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges
Federal Highway Administration, Washington, DC. Office of Engineering. Dec 1995, 128p, FHWA-PD-96-001. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110123WBT Price code: PC A08/MF A02

This Guide has been prepared for use by the States, Federal and other agencies in recording and coding the data elements that will comprise the National Bridge Inventory data base. By having a complete and thorough inventory, an accurate report can be made to the Congress on the number and state of the Nation's bridges. The Guide also provides the data necessary for the Federal Highway Administration (FHWA) and the Military Traffic Management Command to identify and classify the Strategic Highway Corridor Network and it's connectors for defense purposes. The coded items in this Guide are considered to be an integral part of the data base that can be used to meet several Federal reporting requirements, as well as part of the States' needs.

Structural Analyses

Application of Electromagnetic Geophysics (EMG) Technology to Subsurface Investigations
M. E. Kalinski, and R. S. Sripada.
Federal Highway Administration, Madison, WI. Wisconsin Div. Jun 2005, 56p, WHRP-05-09. This report is documentation for PB2005-500173. It is available free with purchase of that product. It can also be ordered separately. Dates of coverage: January 7, 2004 - June 30, 2005. Prepared in cooperation with Department of Civil Engineering, University of Kentucky Lexington, KY. Sponsored by Wisconsin Highway Research Program, Madison, WI. Also available on CD-ROM. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-102756WBT Price code: PC A05/MF A01

Electromagnetic geophysics (EMG) consists of several emerging, non-destructive, wave propogation technologies that have the potential to minimize the number of required soil

borings and associated costs, by providing reliable indirect information about subsurface conditions. Currently, some methods of EMG used to assess subsurface soil conditions and characteristics are, because of their complexity and specialized character, viewed as something of a black box technology. The objective of this project was to analyze several of the various EMG methods, capabilities, applications and limitations, and issue guidelines for possible WisDOT use of EMG in site characterizations. Research tasks included assessment of current practice, literature search, contractor data collection, and collection of data on equipment, cost and training.

Application of Electromagnetic Geophysics (EMG) Technology to Subsurface Investigations (on CD-ROM)
Federal Highway Administration, Madison, WI. Wisconsin Div.
Jun 2005, one CD-ROM disc, WHRP-05-09-CD. System requirements: Windows/NT 95 and higher, Adobe Acrobat Reader 5.0 or higher, Microsoft Word. Documentation is included or may be ordered separately as PB2005-102756. Prepared in cooperation with Department of Civil Engineering, University of Kentucky Lexington, KY. Sponsored by Wisconsin Highway Research Program, Madison, WI. Available on one CD-ROM disc. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-500173WBT Price code: CD-ROM CP D01

This report includes one CD-ROM disc with EMG consultants SOQs, equipment Manufacturer Information and providing a comprehensive overview of Electromagnetic Geophysics (EMG) in terms of description of methods, synopsis of consultant capabilities and a summary of available EMG equipment. A study was performed to investigate current methods for using EMG technology to assess the capabilities, limitations, and cost associated with these methods, and to identify EMG consultants and equipment that may be of benefit to WisDOT for performing site investigations in Wisconsin. Based on the results of this study, six EMG methods were identified and described. Based on the information provided by 10 consultants, several consultants who may be attractive candidates for providing EMG services to WisDOT were identified. Information was also compiled on 17 pieces of EMG equipment manufactured by 7 companies.

Final Environmental Assessment: Proposed Demolition of 12 Structures, Hill Air Force Base, Utah
R. Klein, and K. Winn.
STREAMLINE CONSULTING LLC FARMINGTON UT. 22 Aug 2005, 32p. The original document contains color images. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
ADA436603WBT Price code: PC A04/MF A01

Hill AFB proposes to accommodate current United States Air Force (USAF) missions by demolishing 12 structures on Hill AFB. All 12 buildings have both aged and deteriorated to the point they cannot be economically repaired or remodeled. Seven of the 12 buildings would be demolished without being replaced in kind. For five of the 12 buildings, military construction (MILCON) projects would provide new facilities to house the activities that are or were being performed in the deteriorated structures. The proposed action and the no action alternative were both considered in detail. Following the demolition phase, backfill and revegetation operations would prevent erosion of the site. The proposed action could be implemented with minor air emissions of short term duration. During demolition activities, solid wastes and wastes containing asbestos, lead-based paint, PCBs, mercury, asphalt, petroleum products, and any contaminated soils would all be stored, transported, disposed, and/or recycled properly. The proposed demolition projects would have an adverse effect on cultural resources, but mitigation efforts would be conducted according to an existing MOA with the Utah SHPO. No long-term environmental impacts are expected from either the proposed action or the no action alternative.

PRODUCT ANNOUNCEMENT

HIPAA 101 Video Gives Basics of the Administrative Simplification Provisions for Electronic Transactions

Centers for Medicare and Medicaid Services video now available from NTIS

HIPAA 101 is a video program designed to inform the health care provider community about the administrative simplification provisions of the Health Insurance Portability and Accountability Act of 1996 or HIPAA. In addition to creating consumer protection for health care benefits, HIPAA standardizes financial and administrative health transactions for privacy and security. The *HIPAA 101* video program is available from the National Technical Information Service.

This video will help the health care provider community understand:

- The history of HIPAA and its benefits
- How to tell if you are a 'covered entity'
- The standards that have been adopted for electronic transactions and code sets
- Why the designated standards maintenance organizations may be important to you
- What you need to do to be compliant with the administrative simplification provisions
- How HIPAA's rules and deadlines will be enforced

HIPAA applies to all health care clearinghouses, all health plans, and health care providers that conduct certain transactions in electronic form or who use a billing service to conduct transactions on their behalf.

HIPAA 101 (Health Insurance Portability and Accountability Act of 1996): The Basics of HIPAA Administrative Simplification is available from NTIS, call 1-800-553-6847 or (703) 605-6000, for $13, no additional charge for shipping or handling; quote order number AVA21211VNB1KSU. Most major credit cards accepted. Fax orders to (703) 605-6900. Order online at http://www.ntis.gov/products/hipaa.asp

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PRODUCT ANNOUNCEMENT

NTIS Releases Columbia Accident Investigation Report on CD

News Media, Researchers, Citizens Can Access Scientific & Technical Information at NTIS.GOV

The National Technical Information Service, the federal government's central source for the sales of scientific, technical, engineering, and related business information produced by or for the U.S. government, announces that the first volume of the *Columbia Accident Investigation Board Report* is now available on CD.

This report is the first of 6 volumes being released by the Columbia Accident Investigation Board. This first volume is organized into four parts: the accident, why the accident occurred, a look ahead, and various appendices. To put the accident in context, parts one and two begin with histories, after which the accident is described and then analyzed, leading to findings and recommendations. Part three contains the Board's views on what is needed to improve safety. The report is richly illustrated with full color photographs and diagrams throughout.

Columbia Accident Investigation Board Report Volume 1, August 2003(on CD) is available from NTIS, call 1-800-553-6847 or (703) 605-6000, for $40 plus $5 handling fee, no additional charge for shipping; quote order number PB2003-107244KSV. Most major credit cards accepted. Fax orders to (703) 605-6900. Order online at http://www.ntis.gov/products/columbia.asp. For your convenience, the NTIS Web site also provides a link to the full text document on the NASA Web site.

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NASA has transferred well over 1,000 scientific, technical, and engineering research reports to the National Technical Information Service this year so far. These reports cover a wide range of subjects including astronomy, astrophysics, biomedical technology, communications, robotics, space technology and exploration. NTIS permanently stores all of these technical reports, and makes them available on a cost-recovery basis – no appropriated or taxpayer funds are involved.

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PRODUCT ANNOUNCEMENT

Communicating Health: Priorities and Strategies for Progress

New Report Presents Action Plan for Communications Objectives in Healthy People 2010

Healthy People 2010 is a 10-year plan for the Nation developed by the U.S. Department of Health and Human Services. The plan has two goals: increase the quality and years of healthy life, and eliminate health disparities. These goals have been elaborated in 467 objectives in 28 focus areas. *Communicating Health: Priorities and Strategies for Progress* presents the communications action plan for *Healthy People 2010*. The report is available from the National Technical Information Service.

Communication is increasingly recognized as a necessary element of all efforts to improve health. The action plans set out in this report represent the best ideas to date about how to make investments – financial, intellectual, educational, political, and practical – in health communication count. They provide a foundation on which to bring together individuals and groups that have a stake in the achievement of shared objectives. The six major objectives covered in *Communicating Health: Priorities and Strategies for Progress* are:

- Internet Access in the Home
- Improvement of Health Literacy
- Research and Evaluation of Health Communication Programs
- Disclosure of Information to Assess the Quality of Health Web Sites
- Centers for Excellence in Health Communication
- Healthcare Providers' Communication Skills

The report will be especially helpful for researchers, teachers, practitioners, policymakers and organizations on the general strategies and specific steps that they can take in support of the objectives.

Communicating Health: Priorities and Strategies for Progress is available from NTIS, call 1-800-553-6847 or (703) 605-6000, for $12 plus $5 handling fee, no additional charge for shipping; quote order number PB2003-106852KSW. Most major credit cards accepted. Fax orders to (703) 605-6900. Order online at http://www.ntis.gov/products/commhealth.asp

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