1. Call to Order
2. Chairman’s Comments
3. Review of Federal Issues/Staff Report
4. Old Business
   a. Issues
      i. Davis-Bacon
      ii. Flood Insurance Reforms
      iii. Workforce Development
   b. Processes
      i. Issue Development and Approval Process
      ii. Coordination on Legislative and Policy Issues Between NSPS and State Societies
5. New Business
   a. Issues
      i. Licensure
      ii. Surveying & Geospatial as STEM education
      iii. White House Conference on Small Business
      iv. NSPS/AAGS/NGS Advisory Committee on National Spatial Reference System Legislation
6. Good of the Order/Adjournment
NSPS JGAC Government Affairs Update
March 2016

John M. Palatiello & Associates, Inc.

3DEP
On March 3, NSPS Government Affairs Consultant John Palatiello and Registered Lobbyist John “JB” Byrd participated in another 3DEP coalition meeting in support of the USGS 3D Elevation Program (3DEP). The meeting based in Arlington, Virginia, featured keynote remarks by Jennifer Gimbel, Assistant Secretary for Water and Science, Department of the Interior, and chair of the Federal Geographic Data Committee (FGDC). In addition, Kevin Gallagher, Associate Director for Core Science Systems at USGS, also provided commentary. The meeting covered the status of 3DEP including a recap of FY 2016 Omnibus bill language, as well as coordinating legislative activities exclusively on 3DEP to maximize the coalition’s effectiveness. NSPS and USGS are working on an appropriations strategy to have an increase for 3DEP within USGS, combined with additional LiDAR data collection activities in NOAA, NRCS and FEMA. (See www.3DEP4America.com for more information).

The President’s FY 2017 budget request for 3DEP includes:
- National Enhancement, Landscape -scale 3-D Maps +$2,387,000 for a total of $21,887,000: To increase acquisition of LiDAR data and expand publicly available 3DEP holdings. Accelerating the national coverage of LiDAR will enable decision making in management of infrastructure and construction, more accurate and cost effective application of chemicals in farming, development of energy projects, and support of aviation safety and vehicle navigation.
- Coastal LiDAR +$500,000 for a total of $500,000: To collect enhanced elevation data using LiDAR in U.S. coastal zones to understand and mitigate the negative effects of coastal erosion and storm surge, to map existing and potential landslide hazards, and to monitor biomass.

In a major victory for NSPS, the Continuing Appropriations Act, 2016 (H.R. 2029), also known as the ‘Omnibus’ appropriations bill, signed into law in December 2015, contained this language for 3DEP:

USGS Core Science Systems.- The bill provides $111,550,000, which includes a $3,000,000 increase for 3D Elevation: National Enhancement, and the requested increase of $1,322,000 to fund the Alaska mapping program;

The Omnibus also included funding for FEMA’s flood insurance program that is expected to be comingled with 3DEP. See below.

In November 2015, in an effort to grow the end user portion of the coalition to support 3DEP, NSPS continued outreach by presenting before the SmarterSafer Coalition, representing the insurance, environmental and taxpayer-rights influences and groups. The presentation, connected to the NFIP, was well received. Like NSPS, SmarterSafer supported the creation of the Technical Mapping Advisory Council (TMAC), and has adopted the following policy position on and mapping efforts underway as part of the NFIP: "Flood maps need to be modern, accurate, and based on the best available science, and the NFIP must have accurate maps that reflect true risks." Other groups approached by NSPS to join the coalition include the Irrigation Association, CropLife America, an association of agriculture businesses, and the SmarterSafer Coalition.

Council on Federal Procurement of Architectural and Engineering Services (COFPAES) & QBS
NSPS has been working within COFPAES, and as part of the Construction Industry Procurement Coalition (CIPC), to advance reforms to regulations involving the Federal procurement process for reverse auctions for A-E services, including surveying and mapping. On June 3, Senators Rob Portman (R-OH) and Mazie Hirono (D-HI) introduced bipartisan legislation, S. 1526, the "Construction Consensus Procurement Improvement Act of 2015" to reform Federal acquisition policies concerning "reverse auctions" and "design-build" contracts to prohibit the use of reverse auctions for the acquisition of A-E services (including surveying and mapping services as defined in the Brooks Act), providing for the use of qualifications based selection (QBS), and reforming design-build, particularly to protect small businesses and subcontractors. Senators Kelly Ayotte (R-NH) and Jeanne Shaheen (D-NH) have also cosponsored the bill, and a markup may occur in the Senate Homeland Security and Governmental Affairs Committee in December. The Senators filed an
amendment, #SA1731, to add these reforms to the 2016 National Defense Authorization Act (NDAA), H.R. 1735. passed on the floor of the U.S. Senate, however the amendment was not added to the Senate bill. The reverse auction provision was included in the House version of the 2016 NDAA. The two versions of the bill were reconciled on September 29, but the reverse auction and design-build reforms were not included in the final bill. Also in June, the White House released a memo on reverse auctions. COFPAES also helped lead efforts to convince Rep. John Garamendi (D-CA) not to offer an amendment he filed in the House Transportation and Infrastructure Committee, for mark-up on the Highway bill, to make QBS compliance optional by states.

Reverse Auctions:
S. 1526 (Portman-Hirono) includes several construction-related services from the bidding ban, including some related to architecture and engineering. Such services, including surveying and mapping, are subject to the qualifications based selection (QBS) procedures in the Brooks Act. NSPS, working with COFPAES, is seeking clarification that reverse auctions should not be used for architecture, engineering, surveying and mapping contracts. On February 10, 2016, the Senate Homeland Security and Governmental Affairs Committee reported the bill favorably out of committee.

In March 2015, Rep. Richard Hanna (R-NY), chairman of Subcommittee on Contracting and Workforce of the House Small Business Committee introduced H.R. 1444, the "Commonsense Contracting Act of 2015." This bill would amend the Small Business Act to prohibit the use of reverse auctions for procurements of covered contracts including for architectural and engineering services as defined in section 1102 of title 40, United States Code, the Brooks Act, which includes surveying and mapping. NSPS is part of the Construction Industry Procurement Coalition that continues to work with members of Congress to prevent professional services, such as surveying and mapping, from having to bid on price rather than compete on qualifications.

A restructured COFPAES is continuing to operate with NSPS, MAPPS, and ASCE as members. There will also be a recruitment push to add more members to the coalition. COFPAES has been working on the procurement legislation mentioned above, has helped members reverse individual procurement solicitations that fail to comply with the Brooks Act, and is promoting Davis-Bacon Act reform and QBS-related provisions in aviation, highway and other infrastructure-related bills in Congress.

One such recent opportunity to add QBS language was during amendment debate and markup of the H.R. 4441, the Aviation Innovation, Reform, and Reauthorization (AIRR) Act of 2016 by the House Committee on Transportation and Infrastructure. When the Committee meets today to consider H.R. 4441, the Aviation Innovation, Reform, and Reauthorization (AIRR) Act, we urge you to support a bipartisan amendment to be offered by Rep. Perry (PA) and Rep. Lipinski (IL.). Reps. Scott Perry (R-PA) and Dan Lipinski (D-IL) offered an amendment to close a loophole in existing law to provide for use of the QBS process for contracts for construction, engineering (A&E) and related services financed through the passenger facility charge (PFC). The Perry-Lipinski amendment would have provided that such services financed through the PFC are treated with the same level of care as those financed through other funding sources. The amendment was withdrawn after opposition from Committee Chairman Shuster (R-PA).

Davis-Bacon
In December 2014, NSPS formulated a letter to DoL on a compromise that would remove a vast majority of survey crews from being included without publicly embarrassing the DoL. The letter makes the following points: 1) Apply the Davis-Bacon Act to individuals involved in construction, not those engaged in surveying; 2) Remove all references to terms such as "surveying", "field surveyors", "survey crew", "rodmans", or "chainmen"; 3) Distinguish between "surveying" and "construction"; 4) Exempt any work that is surveying in nature and for which survey crew members are not directly employed by a construction contractor or subcontractor; 5) Exempt workers who are performing surveying services; and 6) Cover only construction workers not engaged in surveying activities and whose duties are solely manual or physical in nature.

The department’s Wage and Hour Division formal response on December 2, 2015 did not accept all the NSPS recommendations, the response does narrow the application of AAM-212, exempts more activities than previously indicated, and strengthens the distinction that members of survey crews are not "laborers and mechanics" under the law. NSPS will conduct further analysis of the government’s clarifications, and will help NSPS to reply to the Labor Department, and provide further information to the membership.
Digital Coast, HSIA, NOAA Ocean & Coastal Surveying

*THIS IS ONE OF THE ISSUES TO BE TAKEN TO THE HILL ON MARCH 16, 2016.

In November 2015, Sens. Tammy Baldwin (D-WI) and Lisa Murkowski (R-AK) teamed up for bipartisan introduction of S. 2325, the Digital Coast Act of 2015. The Senate Commerce Committee has offered to host a briefing on the bill as soon as it gets introduced with the intent to host this spring. Sen. Baldwin has also requested a hearing on the bill. NSPS is working with Representatives by Rep. C.A. "Dutch" Ruppersberger (D-MD) and Rep. Don Young (R-AK), to reintroduce the companion bill in the House this month.

S. 2325 authorizing a full "Digital Coast" program in the National Oceanic and Atmospheric Administration (NOAA). The bill would create a coordinated and comprehensive national mapping effort for coastal, Great Lakes, and territorial waters of the United States. The "Digital Coast" is a geospatially enabled project to improve coordination and support work with stakeholders to identify geospatial priorities; improve coordination of coastal mapping and management activities; use standards and standardized methods for data acquisition, processing, and distribution to ensure broadest utility of data; promote best practices when applying geospatial data for coastal decision making; and contract for the collection and creation of quality non-navigation feature data sets to include: shoreline change, satellite and aerial imagery, land use and land cover maps, benthic habitat mapping, terrestrial topography, shallow water bathymetry, and submerged aquatic vegetation. The bill would build on the current “project” and authorize a full program.

In June 2015, Rep. Don Young (R-AK) introduced the Hydrographic Services Improvement Act (HSIA) which was referred to the House Committee on Natural Resources. On October 26, Sen. Dan Sullivan (R-AK) introduced S. 2206, the "National Oceanic and Atmospheric Administration (NOAA) Sexual Harassment and Assault Prevention Act". Section 301 of S. 2206 is the Hydrographic Services Improvement Act (HSIA) found on pages 64-66 of S. 2206. NSPS is working to add language emphasizing/strengthening contracting out with the private sector as well as increasing the overall authorization amount while seeking to prevent NOAA from adding to its current vessels and similar assets. The Senate Commerce Committee marked up S. 2206 on November 18, and Sen. Sullivan would like to work with NSPS to insert our ideas for language into a manager’s amendment before the bill reaches the Senate floor.

Federal Prison Industries (FPI) Reform

A bipartisan group of House members introduced H.R. 2098, the "Federal Prison Industries Competition in Contracting Act". Rep. Bill Huizenga (R-MI) and Carolyn Maloney (D-NY) offered the bill in May 2013 with 14 cosponsors and is supported by at least 15 business organizations such as NSPS, COFPAES, and the Business Coalition for Fair Competition (BCFC). This bill is virtually identical to H.R. 2965, the bill that passed the House in 2006 by a 362-57 vote.

On March 26, 2015, Reps. Huizenga and Maloney also introduced H.R. 1699, the "Federal Prison Industries Competition in Contracting Act". Rep. Huizenga has agreed to introduce more targeted bills for the House Small Business and Oversight and Government Reform Committees as well as a targeted campaign for letter-writing to various Chairmen and independent report opportunities (GAO and CRS). Rep. Huizenga will soon introduce a targeted, smaller version of a reform bill that can be used as a template provision for policy riders on authorization and appropriation bills. On March 2, 2016, Reps. Huizenga and Maloney introduced a shorter and briefer bill, H.R. 4671, with safeguard language preventing federal inmates from accessing sensitive infrastructure location data, or personal data such an address thus severely limiting prison industry activity in GIS services.

As a member of the Business Coalition for Fair Competition (BCFC), NSPS is working with Sen. John Thune (R-SD) to be the lead Senate sponsor of companion legislation to the House bill, with Sens. Debbie Stabenow (D-MI) to serve as lead cosponsor.

Flood Insurance Reform and Modernization (FIRM) Act

*THIS IS ONE OF THE ISSUES TO BE TAKEN TO THE HILL ON MARCH 16, 2016.

The NFIP's statutory authority is scheduled to expire at the end of 2017 and the NFIP remains roughly $24 billion in debt to U.S. taxpayers and hasn't repaid any principal on its loans since 2010. In 2016, Congress will seek to reauthorize Biggert-Waters or further reform, and NSPS is engaging the insurance and financial services sector to help educate affected stakeholders as legislation is drafted. In August 2015, NSPS met with Committee staff of Rep. Blaine Luetkemeyer (R-MO), the Chairman of the House Financial Services Subcommittee on Housing and Insurance. His staff
requested NSPS to develop recommendations and rationale on both of the following scenarios: 1) If the NFIP is to remain intact, what suggestions for policy reform does NSPS have in mind; and 2) If the NFIP was completely restructured, overhauled or even privatized, how would this impact NSPS members, and what suggestions for policy reform does NSPS have in mind?

On January 7, 2016, NSPS Executive Director Curtis Sumner and Government Affairs Consultant John Palatiello participated in a Congressional roundtable on the FEMA’s national flood insurance program. The informal session with twelve members of the U.S. House of Representatives focused on surveying and mapping. NSPS pointed out the important role of LiDAR technology and other mapping activities used to accurately locate structures and preparing letters of map amendment (LOMA), as well as the need for current/accurate elevation data, such as would be provided by USGS through the 3DEP program.

The FY 2016 Omnibus Appropriations bill funded $190,000,000 for Flood Hazard Mapping and Risk Analysis with an additional $155,899,000 available for flood mapping activities through the National Flood Insurance Fund, FEMA's fiscal year 2016 resources for flood plain mapping total $345,899,000. Specifically, the Omnibus appropriations bill states: "DHS/FEMA FLOOD HAZARD MAPPING AND RISK ANALYSIS PROGRAM A total of $190,000,000 is provided for Flood Hazard Mapping and Risk Analysis. With an additional $155,899,000 available for flood mapping activities through the National Flood Insurance Fund, FEMA’s fiscal year 2016 resources for flood plain mapping total $345,899,000. This amount will enable FEMA to make significant progress toward its goal of maintaining 80 percent of its mapping inventory as maps with new, validated, or updated engineering. As directed in the Senate report, FEMA shall ensure mapping updates are done in coordination with ongoing state and local flood mitigation efforts. NATIONAL FLOOD INSURANCE FUND A total of $181,198,000 is provided for the National Flood Insurance Fund, for which administrative costs shall not exceed four percent.

It is our understanding that that behind the scenes USGS and FEMA were coordinating on this as far having 3DEP efforts connected to NFIP, without having the language spelled out in legislation/report language.

Attached is FEMA’s response to the NSPS letter.

FLAIR Act
In July 2015, a bi-partisan bill was introduced in the U.S. House of Representatives to create a current, accurate Federal inventory or "cadastre" of all Federal real property. The "Federal Land Asset Inventory Reform (FLAIR) Act of 2015", H.R. 3121, was introduced by Representatives Ron Kind (D-WI) and Kevin Cramer (R-ND). Since 2003 and as recently as February 2015, the Government Accountability Office (GAO) has repeatedly designated 'Managing Federal Real Property' one of the high-risk areas within the Federal government most prone to waste, fraud and abuse. One of the reasons cited by the GAO is the fact that the government does not have a current, accurate inventory of the land it owns. A national cadastre has also been recommended by the National Research Council of the National Academy of Sciences, and the FLAIR Act has been endorsed by its Committee on Land Parcel Databases. The FLAIR Act will provide all agencies owning Federal real property an improved accounting of their land assets. The bill will also conduct an inventory of existing inventories to eliminate duplicate or obsolete activities and save tax dollars. Such a consolidated system will assist in improved Federal land management, resource conservation, environmental protection and utilization of real property, as well as identify property the Federal government no longer needs to own. NSPS members promoted the FLAIR Act in Congress as part of the first-ever National Surveying and Mapping Conference hosted jointly with MAPPs during April 15 in Arlington, VA. Representatives Mark Amodei (R-NV), Suzan DelBene (D-WA), Alan Grayson (D-FL), and David Price (D-NC) are also cosponsors. H.R. 3121 was referred to the House Committee on Natural Resources on which both Congressmen Kind and Cramer previously served as members. S. 1225, the Senate version of this legislation, was introduced in May 2015 by Senator Lisa Murkowski (R-AK), and was referred to the Senate Committee on Energy and Natural Resources, where Senator Murkowski serves as Chair. In late July 2015, the Senate Energy & Natural Resources Committee passed S. 2012, their comprehensive energy infrastructure (Energy Policy Modernization Act of 2015) bill by an 18-4 vote. Within the bill is Section 4401 (pages 310-315), and is a modified version of Sen. Murkowski’s original FLAIR Act bill from May (S. 1225). While NSPS provided Committee staff with the redline changes from what Sen. Murkowski had introduced in S. 1225 compared to the updated version of the House bill (H.R. 3121), both majority and minority staff came to an agreement on language to include within the comprehensive energy bill. NSPS let Committee staff know we would support. In January 2016, the U.S. Senate began debate on S. 2012, the Energy Policy Modernization Act of 2016. The comprehensive, bipartisan bill includes an NSPS-endorsed provision that
authorized an inventory of Federal land. It is a modified version of the Federal land Asset Inventory Reform (FLAIR) Act, that NSPS has long supported. Approval in the Senate is expected as early as this month after being held up as Senators attempted to reach agreement on an aid package for Flint, Michigan’s drinking water crisis.

The following is the Section-by-Section for the FLAIR Act portion (page 14) of Energy bill:

"Subtitle E—Management
Section 4401. Federal land management. Authorizes the Secretary of the Interior to establish a "cadastre," or computerized inventory of buildings and other real property (land), including associated infrastructure such as roads and utility systems and pipelines, collected from surveys, maps, charts and inventories that will be stored as digital data. Authorizes the Secretary to enter into discussions with other federal agencies to utilize the data inventory system to keep track of their holdings, and authorizes the development of cost-sharing agreements so that states, local governments, and Indian tribes may also utilize the inventory system. Outlines the coordination involved in collecting and creating the geographical (data) information system that will store the inventories. Requires that the information be kept in a graphically geo-enabled and searchable format available to the public on the Internet, provided that the identity of any buildings and facilities that would impair or jeopardize national security or homeland defense are withheld from public disclosure. Outlines how the system will be operated and clarifies that nothing in the provision requires any new appraisals or assessments of federal assets for any purpose."

In October 2015, Rep. Rob Bishop (R-UT), Chairman of the House Committee on Natural Resources, wrote to the Department of Interior (DOI) and Department of Agriculture (USDA) seeking better survey and mapping data for stewardship decisions on federally-owned land and property. In the letter, Bishop emphasized that "Currently the federal government owns an amount of land equal to one third of the continental United States. The Committee is dedicated to making sure those federal lands are cared for and maintained in a way that meets the needs of the American public. Most laws dictating federal land management need to be updated to meet the needs of the 21st Century for all Americans and federal land managers. ... Of particular concern is the vast acreage of checkerboard ownership across the nation, which is difficult to manage for federal agencies, states, private landowners, and counties alike. Of equal concern is the lack of marked boundaries of existing federal lands on the ground. For example, "we understand that only 12 percent of National Forest boundaries are surveyed and marked, resulting in countless instances of trespassing and encroachment. To put it plainly, the federal government generally does not know what it owns." The Committee has also released a "Federal Footprint Map" to provide a visualization tool to illustrate the extent of federal land ownership. The interactive tool gathers data from federal agencies and will be used as an educational resource for Members of Congress and their staff, reporters, and the public. This online resource contains information on federal lands, as well as lands with federal environmental designations or resources subject to federal environmental regulations. The map contains "layers" which depict each type of area, a legend identifying each layer, as well as a drop-down box to allow users to select which layers are displayed.

NSPS is also working with Reps. Jason Chaffetz (R-UT), Mike Quigley (D-IL), and Jeff Denham (R-CA) on their Federal real property disposal bill, H.R. 4465, the Federal Assets Sale and Transfer Act (FASTA) of 2016. Section 21 had strong geographic language for the Federal real property database. Geo-referenced attributes to be included within the database: geographic location of each Federal real property of each such agency; address and description for each such property; total size of each Federal real property of each such agency; square footage and acreage of each such property; and the replacement value of each Federal real property. Sen. Ron Johnson (R-WI) introduced the Senate companion to FASTA (S. 2375) in December 2015, and section 13 has language about the “tangible” real property database. In addition in July 2015, Sen. Mark Warner (D-VA) introduced S. 1750, the “Civilian Property Realignment Act (CPRA) of 2015” with 6 original cosponsors. Section 15 of the bill relates to the Federal Real Property Profile, but is absent a provision to improve the geo-referencing of such real property inventory data.

Geospatial Governance and Coordination
In April 2013, Rep. Doug Lamborn (R-CO) reintroduced H.R. 1604, the “Map It Once, Use It Many Times (MIO-UIMT)” Act. NSPS is still looking for a Senate sponsor for companion legislation to H.R. 1604.

In March 2015, Sen. Orrin Hatch (R-UT) introduced S. 740, the “Geospatial Data Act of 2015”. The bill was referred to the Senate Commerce Committee chaired by Sen. John Thune (R-SD). This referral likely came as a huge shock to Hatch’s staff. NSPS was sure Hatch staff was counting on the bill being referred to the Senate Homeland Security and
Governmental Affairs Committee (HSGAC) or Senate Committee on Energy and Natural resources (E&NR). Senator Jim Risch (R-ID) was originally going to introduce geospatial management legislation. NSPS provided comments on Risch's draft and NSPS met with Risch's staff to discuss our concerns. COGO also provided comments, some of which were consistent with the problems NSPS had with the bill. As a result, Senator Risch decided against introducing a bill. Risch staff did share information with Senator Hatch's staff, which picked up the baton on the bill. Hatch's staff spoke at the NSGIC conference in Annapolis February 2015. While Hatch staff indicated they would consult with the geospatial community and share a draft bill, they did not do so. Also that month, NSPS met with Hatch staff. Hatch's staff was not accepting comments or revisions at this point. NSPS is part of an effort to harmonize the Senate bill (Risch/Hatch) with Lamborn's bill in the House, the Map It Once, Use It Many Times (MIO-UIMT) Act. NSPS recommended that to Risch's staff. Hatch's staff did not do so. Hatch's staff first contact with Lamborn's staff was two business days before the Senate bill's introduction, in which Hatch staff asked if Lamborn would introduce in the House a bill identical to that which Hatch is introducing in the Senate. No consultation or harmonizing! Lamborn's staff declined and indicated to NSPS they will be reintroducing MIO-UIMT. On March 25, NSPS met with Lamborn to discuss strategy on reintroduction. NSPS has compiled a list of positive sections of the Hatch bill that could be worked into MIO-UIMT. On March 30, 2015, NSPS met with Lamborn's Subcommittee staff and shared with our recommended additions based on the Hatch bill.

Hatch staff was introduced to geospatial issues when, upon joining Senator Hatch's staff, they were assigned the FLAIR Act, which Senator Hatch had previously introduced. Hatch staff said at NSGIC that when they began investigating the FLAIR Act, they quickly learned the issues in Federal geospatial data were bigger than the lack of a current, accurate, geo-enabled inventory of land owned by the Federal government. That triggered their interest in the Geospatial Data Act, and, as a result, he has decided Senator Hatch will NOT reintroduce the FLAIR Act. S. 740 does not have many of the provisions and reforms that Lamborn has in MIO-UIMT. It preserves both the NGAC and FGDC, so geospatial governance does not change, although there are provisions to make both bodies more effective, responsive, and accountable. The bill outlines the responsibilities of the Federal government, but does not specify the roles and responsibilities of the private sector or universities. It does nothing to encourage or require utilization of the private sector or prevent government or universities from spending Federal tax dollars to duplicate or compete with the private sector. It does not call for a Federal land inventory.

On March 16 in connection with the introduction of S. 740, a Government Accountability Office (GAO) report was released on geospatial coordination and duplication at the Federal level, requested by Sen. Tom Carper and then-Senator Tom Coburn (R-OK). Among its findings, GAO said:

- Federal agencies report spending billions of dollars on geospatial investments; however, the estimates are understated because agencies do not always track geospatial investments;
- The Federal Geographic Data Committee (FGDC) and the Office of Management and Budget (OMB) have started an initiative to have agencies identify and report annually on geospatial-related investments as part of the fiscal year 2017 budget process;
- OMB guidance calls for agencies to eliminate duplication, avoid redundant expenditures, and improve the efficiency and effectiveness of the sharing and dissemination of geospatial data. However, some data are collected multiple times by federal, state, and local entities, resulting in duplication in effort and resources; and
- Until there is effective coordination across the National Spatial Data Infrastructure, there will continue to be duplicative efforts to obtain and maintain these data at every level of government.

In addition, NSPS worked with Rep. Rod Blum (R-IA), a member of the House Budget Committee, to ask OMB Director Shaun Donovan on Federal geospatial expenditures. The answers are comical in that despite all of the oversight performed by former-Rep. Adam Putnam (R-FL) on geospatial coordination and expenditures going back to the 2002, the Federal government remains largely clueless on this issue.

NSPS has adopted a policy on the Hatch bill. Currently, COGO is attempting to develop a statement of principles that all its member organizations can agree to on geospatial coordination and governance legislation. NSPS is participating in that effort.

Highway Bill
In December 2015, President Obama signed a five-year Highway bill into law, Public Law 114-92. The "Fixing America's Surface Transportation (FAST) Act" is a $305 billion fully paid-for surface transportation reauthorization of federal highway, transit, highway safety, motor carrier safety, hazardous materials, and passenger rail program. The bill reforms
and strengthens transportation programs, provides long-term certainty and more flexibility for states and local governments, and streamlines project approval processes. It was paid for with gas tax revenue (but no tax increase) and a package of $70 billion in offsets from other areas of the federal budget. It calls for spending approximately $205 billion on highways and $48 billion on transit projects over the next five years. Provisions of interest to the surveying and mapping community include Section 1312 which calls for improving state and federal agency engagement in environmental reviews and the activities for which funds may be provided including information gathering and mapping; Section 41005 directs coordination of required environmental reviews by authorizing the lead agency to make information available in the environmental review regarding the environmental, historic, and socioeconomic resources located within the project area and the general locations of the alternatives under consideration with this information based on existing data sources, including geographic information systems (GIS) mapping; Section 1430 is a "sense of Congress" that USDOT should utilize, to the fullest and most economically feasible extent practicable, modeling and simulation technology to analyze highway and public transportation projects to ensure that these projects will increase transportation capacity and safety, alleviate congestion, and reduce travel time and environmental impacts; and Section 3028 authorizes $199,000,000 from the Mass Transit Account of the Highway Trust Fund for fiscal year 2017 to assist in financing the installation of positive train control systems.

In January 2015, NSPS met with House Committee staff to discuss mobile mapping as part of a definition of surveying and mapping, subject to licensing and QBS. NSPS sought a provision in the MAP-21 Act Reauthorization (Highway Bill) to clarify that for the purpose of determining services subject to the Brooks Act qualifications based selection (QBS) process, the following definition found in 23 U.S.C. 112 (b)(2) is amended at the end thereof, by adding the following new subparagraph:

"Surveying and mapping services' includes geospatial activities associated with measuring, locating and preparing maps, charts, or other graphical or digital presentations depicting natural and man-made physical features, phenomena, and legal boundaries of the earth."

In October 2015, the House Committee on Transportation and Infrastructure began marking up the Highway Bill. After securing sponsorship from Rep. Duncan Hunter (R-CA) to offer an amendment to the House Highway bill markup to address the QBS issue, NSPS learned that Rep. John Garamendi (D-CA) offered an amendment to weaken QBS compliance and implementation. Working in tandem with other COFPAES members and constituencies, Garamendi chose to withdraw his amendment. However, given that NSPS had defeat Garamendi, the Hunter provision was also withdrawn after not being able to secure a Democrat cosponsor. This represents the second time recently where the Committee has proved problematic in negating the interests of the surveying and mapping marketplace.

FHWA is loosening the rules on federal grants provided to states to help fund new transportation projects. The change in regulation eliminates the need for value engineering studies on any highway improvement project that costs more than $25 million or any bridge project that costs more than $20 million.

FHWA has also published new regulations governing the procurement, management, and administration of engineering and design-related services, including surveying and mapping, on federal-aid highway projects. The rules include changes and clarifications to State DOT procurement policies and QBS procedures, contract negotiation and administration, audit and accounting of allowable costs, and program management and oversight. The rules took effect on June 22. State DOTs will have one year to update their policies and procedures to comply with the new regulations.

In January 2014, the U.S. Department of Transportation and the National Highway Traffic Safety Administration announced that they will move connected vehicle technology forward in an effort to greatly improve safety and save lives on the nation's roadways. Also known as vehicle to vehicle technology (or V2V), the system allows vehicles to communicate potential risks to drivers and avoid rear-end, lane change, and intersection crashes. The program will create a significant demand for precise geospatial data.

HUD
In April 2015, NSPS responded to a request for feedback on proposed changes in the Department of Housing and Urban Development (HUD) loan underwriting guidelines on multi-family projects. In its response, NSPS provided suggestions and volunteered to assist in resolving the numerous redundancies and problems related to the HUD Multi-family survey requirements. Examples include the use of a separate "Surveyors Report," requiring an additional certification, and other
requirements that cause confusion such as those related to wetlands and references to "as-built" surveys. Gary Kent, PS, chair of the NSPS committee on the ALTA/ACSM Standards, coordinated the NSPS participation.

National Parcel Data
In the 111th Congress, President Obama signed the comprehensive, financial services regulatory reform bill commonly referred to as “Dodd-Frank.” Public Law 111–203 creates a new Bureau of Consumer Financial Protection (CFPB) and section 1094 provides for the agency to collect the “parcel number that corresponds [to] real property pledged or proposed to be pledged as collateral” to help track the number and dollar amount of mortgage loans and completed applications. The legislation amends the Home Mortgage Disclosure Act (HMDA), 12 USC 2802, to collect the “parcel number to permit geocoding” on mortgage transactions.

On October 15, 2015, CFPB released its first public information regarding collection of parcel information under the Home Mortgage Disclosure Act (HMDA) and Regulation C. The agency is seeking public comment. One problem with CFPB acting more rapidly has been a turnover of staff and the departure of those with the most GIS knowledge. In September 2014, CFPB GIO Michael Byrne briefed the National Geospatial Advisory Committee (NGAC) on his agency’s efforts to comply with implementation of Dodd-Frank provisions.

The final rule for the Home Mortgage Disclosure Act (HMDA) was published on October 15 by the Consumer Financial Credit Bureau. The rule implements the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (commonly known as the Dodd-Frank Act). Section 1094(3)(A)(iv) of the Dodd-Frank Act amended HMDA to authorize the Bureau, as it may determine to be appropriate, to collect the parcel number that corresponds to the real property pledged or proposed to be pledged as collateral. In its final rule, CFPB did not accept the NSPS recommendation on parcel data, saying, “The Bureau is not at this time pursuing commenters’ suggestions for using Regulation C to develop a national parcel database. The Bureau may consider in the future whether and how it could work with other regulators and public officials to explore a national parcel identification system or other similar systems. The final rule does not require financial institutions to collect a local parcel number in addition to property address. The Bureau concludes that collecting property address strikes the appropriate balance between improving the data’s utility and minimizing undue burden on data reporters.”

An initiative to establish a national address database, promoted by the U.S. Department of Transportation, is making progress, beginning with a series of pilot projects. The initiative was launched in 2015 with a database summit last April. A national parcel summit is also being planned for later this Spring in coordination with the Department of Homeland Security.

In July 2015, Sen. Mike Lee (R-UT) introduced S. 1909, the "Local Zoning Decisions Protection Act of 2015" designed to protect communities from destructive Federal overreach by the Department of Housing and Urban Development (HUD) whereby the bill would prohibit Federal funds from being used to design, build, maintain, utilize, or provide access to a Federal database of geospatial information on community racial disparities or disparities in access to affordable housing.

Pipeline, Utilities and Infrastructure
One of the top NSPS legislative priorities, improved location data for pipelines, got a boost in November 2015 when Senators Deb Fischer (R-NE) and Cory Booker (D-NJ) introduced the “Securing America’s Future Energy: Protecting our Infrastructure of Pipelines and Enhancing Safety Act” or the “SAFE PIPES Act”, S. 2276. This bill reauthorizes the Pipeline and Hazardous Materials Safety Administration (PHMSA), an agency of the U.S. Department of Transportation (USDOT), through FY2019. Section 6 of the bill calls for a Government Accountability Office (GAO) report to Congress regarding the hazardous liquid integrity management program to include an analysis of how surveying, assessment, mitigation, and monitoring activities, including real-time hazardous liquid pipeline monitoring during significant flood events and information sharing with other Federal agencies, are being used to address risks associated with the dynamic and unique nature of rivers, flood plains, and lakes. Section 9, entitled "improving location mapping technology", calls for USDOT in consultation with stakeholders to conduct a study on improving damage prevention through technological improvements in location and communications practices to prevent accidental excavation damage to a pipe or its coating, including considerations of technical, operational, and economic feasibility. The study will include the identification of any methods that could improve damage prevention through location and mapping data in an effort to reduce unintended releases caused by excavation; an analysis of how increased use of GPS digital mapping technologies, predictive analytic tools, public awareness initiatives, including one-call initiatives, the use of mobile devices, and other advanced
technologies could supplement existing one-call notification and damage prevention programs to reduce the frequency and severity of incidents caused by excavation damage; and an analysis of the feasibility of a national data repository for pipeline excavation accident data that creates standardized data models for storing and sharing pipeline accident information. Section 12 called for USDOT to convene a working group to consider the development of a voluntary no-fault information sharing system to encourage collaborative efforts to improve inspection information feedback and information sharing with the purpose of improving natural gas transmission and hazardous liquid pipeline integrity risk analysis, and be comprised of professional stakeholders, including operators of pipeline facilities, inspection technology vendors, and pipeline inspection organizations. Section 13 calls for USDOT to submit a report to Congress on the feasibility of a national integrated pipeline safety regulatory inspection database to improve communication and collaboration between the PHMSA and State pipeline regulators. This database will include a description of any existing inadequacies or gaps in State and Federal inspection, enforcement, geospatial, or other pipeline safety regulatory inspection data. Senators Steve Daines (R-MT) and Gary Peters (D-MI) are original cosponsors of the bill.

On March 3, 2016, the U.S. Senate unanimously passed the SAFE PIPES Act. Key provisions of the bill include encouraging PHMSA to investigate and report on advanced mapping technologies for pipeline networks as well as ensuring coordination and collaboration on research, development, and technology between PHMSA, industry, and public stakeholders.

NSPS is also working with Rep. Jacky Speier (D-CA) on reintroduction of her pipeline regulatory reform bill, and final "draft" legislative language. Rep. Kevin Cramer (R-ND) was recently visited by NSPS and is considering offering the NSPS draft language as part of the House Energy and Commerce Committee’s jurisdiction on the "Architecture of Abundance" legislation or on PHMSA Reauthorization. The Committee’s “Architecture of Abundance” legislation was marked up in September 2015, and Section 1101, contains language on “remote surveys” requiring that when Federal or State agencies consider as an aspect of an application for Federal authorization for FERC permitting, the applicant submitting environmental data, then that respective Federal or State agency shall consider any such data gathered by aerial or other remote means submitted by the applicant; The agency may grant a conditional approval for Federal authorization, conditioned on the verification of such data by subsequent onsite inspection. NSPS is also working with Rep. Morgan Griffith (R-VA) on questions for the record for PHMSA Administrator Marie Therese Dominguez who testified before the House Committee on Energy and Commerce in late February 2016.

In February, NSPS met with staff of the Committee on Energy and Commerce in the U.S. House of Representatives to discuss infrastructure-related legislation such as H.R. 3021, the "Aerial Infrastructure Route (AIR) Survey Act of 2015" introduced last year by Rep. Mike Pompeo (R-KS). In February, the Subcommittee on Energy and Power held a hearing on the bill. The bill amends the Natural Gas Act to allow the use of aerial survey data for certain applications. Based on an analysis by the Committee, specifically, the legislation includes the following provisions: Section 1: This section provides the short title of the “Aerial Infrastructure Route Survey Act of 2015” or the “AIR Survey Act of 2015.” Section 2: Section 2 amends section 7 of the existing gas law to clarify that data collected by aerial survey is acceptable for the purposes of (1) completing any pre-filing process established to facilitate the formal application process for obtaining a certificate of public convenience and necessity for a natural gas transportation facility, or (2) an application associated with a Federal authorization concerning a certificate application. The section also provides the Federal Energy Regulatory Commission (FERC) with the discretion to require, as a condition of approval, that data gathered by aerial survey be verified through the use of ground survey data before construction or extension of proposed facilities. In late February while scheduled to be marked up by the Full Committee, the bill was pulled from consideration following views of negative or poison pill amendments that would have gutted the opportunity for geospatial firms and professionals from helping out during the permitting and verification processes.

Privacy and Geolocation Legislation
The Federal Trade Commission (FTC) issued a report, "Privacy in an Era of Rapid Change" and its proposal that firms engaged in collection, sharing or use of "precise geolocation data" about a citizen be required to obtain "affirmative express consent" or advance approval of each such citizen. The final rule was released in March 2012. It did not include the expected exemptions and clarifications. NSPS has prepared a Sense of the Congress resolution to address this issue, approved its own resolution, and COGO has adopted a similar resolution. A similar resolution was recently approved by the Virginia Geographic Information Network (VGIN).
In March 2014, FTC Chairman Edith Ramirez testified on privacy issues before the Senate Commerce Committee. NSPS worked with Senator John Thune (R-SD) on questions regarding “precise geolocation data” which Senator Thune posed to the Chairman for the hearing record. Senator John Thune (R-SD) secured a very helpful clarification from the Federal Trade Commission on the extent to which the government’s regulatory interest in “precise geolocation data” and its impact on individual citizen privacy. FTC Chairman Edith Ramirez indicated a narrowing of FTC’s view of collecting, storing, applying or disseminating such data by a doctrine of “context of the interaction” that had not previously been shared with NSPS or others in the geospatial community.

In November 2015, Senator Al Franken (D-MN) introduced S. 2270, the “Location Privacy Protection Act” to close legal loopholes that allow stalking applications to exist on smartphones while requiring companies to get customers’ permission before collecting their location data or sharing it with third parties. The bill also defines the term ‘geolocation information’ to mean any information that is not the contents of a communication, is in whole or in part generated by or derived from the operation or use of an electronic communications device, and is sufficient to identify the street name and name of the city or town in which the device is located, and does not include the Internet protocol address or the home, business, or billing address of the individual, or any component parts of such addresses. It also defines the term ‘geolocation information service’ to mean the provision of a global positioning service or other mapping, locational, or directional information service. And finally it defines the term ‘geolocation information service’ to mean the provision of a global positioning service or other mapping, locational, or directional information service. MAPPS has adopted and NSGIC has endorsed a privacy guideline for handling geospatial data.

Private Sector Utilization
*THIS IS ONE OF THE ISSUES TO BE TAKEN TO THE HILL ON MARCH 16, 2016.*

A positive public-private partnership model is needed so that there are clearly defined roles and responsibilities to provide synergy between the public and private sectors in the Federal level, and particularly with regard to geospatial activities. Geospatial technology, identified by the U.S. Department of Labor as one of the top three emerging technologies for the 21st century, is estimated to be a $100 billion worldwide market growing at an annual rate of 10-15%. In this difficult economy, government agencies should be utilizing private sector geospatial firms to the maximum extent practical, not duplicating or directly competing against them. In 2015, Representative John J. “Jimmy” Duncan, Jr. (R-TN) and Senator John Thune (R-SD) introduced the “Freedom from Government Competition Act”, H.R. 2044/S. 1116.

There is a need and role for government in surveying, mapping and geospatial activities. Agency personnel should be focused on inherently governmental activities such as enforcement of standards and specifications, development of requirements, coordination, and administering contracts. Commercial activities, including data acquisition, processing, applications, and value added services should be left to the qualified, competent and capable private sector in surveying and mapping.

Railroad Reauthorization
The tragic railroad accidents in Philadelphia and New York has highlighted the need for Positive Train Control (PTC) systems, which utilize highly accurate geospatial data, such as GPS data, LIDAR data, high resolution digital imagery, survey data, and mobile mapping to delineate the location of rails, clearances and a detailed asset inventory, to assure safety, train separation or collision avoidance, speed enforcement, and for asset management. The issue of survey monumentation upon railroad abandonment may also be considered. The Railroad Authorization was attached to the Highway Bill recently signed into law by President Obama included a three-year delay in the implementation of the PTC program for Class I railroads.

STEM and Geography Education
In December 2015, President Obama signed Public Law 114-95, a bipartisan K-12 education bill to replace No Child Left Behind. The Every Student Succeeds Act (ESSA). The bill authorizes dedicated funding to support important priorities, including increased access to STEM education. Specifically found in the bill, Section 3127 allows grants to be used for activities directly related to improving student academic achievement based on the State’s academic standards or directly related to improving student reading skills or knowledge of geography; and Section 5121 supports projects to develop, test, and demonstrate the effectiveness of services and programs to improve educational opportunities and achievement of Indian children and youth with grants available to raise the achievement of Indian and Alaska Native children in geography.
Unmanned Aerial Systems (UAS)

Professional surveying provides enormous "societal benefit" and state legislation that limits the use of emerging UAS technology will have "unintended consequences". Aerial surveying and mapping were specifically mentioned in the FAA "Roadmap" for UAS. Some state legislation has recognized the benefits of mapping from a UAS. NSPS-state societies should be calling on state legislatures to exempt aerial surveying and mapping from any legislation limiting UAS.

In April 2015, NSPS filed comments with the Federal Aviation Administration (FAA) in response to its Notice of Proposed Rulemaking (NPRM) for commercial operation of small unmanned aircraft systems (sUAS). NSPS stated its strong support for, "the safe integration of commercial unmanned aircraft systems (UAS) into the National Air Space (NAS). UAS presents an extraordinary opportunity for utilization by surveyors to provide services to contribute to public health, safety, and welfare, and enhance the quality of life of all Americans, foster economic growth, increase the efficiency of surveying activities, and create business opportunities for the surveying profession." The final rules are expected soon.

The NTIA, an agency within the U.S. Department of Commerce, was tasked in early 2015 by President Obama to study the privacy, transparency, and accountability issues regarding commercial and private use of UAS. In addition to NSPS submitting a public comment to the FAA in 2015, we took the lead in 2015 in compiling the first ever resource repository of "positive societal benefits" of UAS. This document cited public comments, testimony, issue papers, and reports produced by fifteen organizations and trade associations, including NSPS, and at least one state legislature (Wisconsin) that promoted the positive societal benefits of UAS utilization for geospatial missions. The value of this activity to NSPS members was aligning as many of the groups connected to promoting the "positive societal benefits" theme thereby leveraging a coalition to help with the goals of the surveying and mapping community in opening up public airspace for the safe operation of UAS for commercial use by surveying, mapping and geospatial firms, while also nullifying the opposition to UAS utilization based on privacy concerns. Without this NSPS-led effort, no such document would exist thereby empowering the privacy concern opposition. At the October 2015 NTIA Stakeholder meeting, NSPS Registered Lobbyist John "JB" Byrd formally provided a report on this document to over 40 leading stakeholders in Washington, DC including the Federal Aviation Administration (FAA) and U.S. DOT legal team, among other Federal agencies such as the Federal Trade Commission (FTC) and NTIA. This has increased national and opinion leader awareness of and appreciation for surveying and mapping professionals.

Workforce Development

*THIS IS ONE OF THE ISSUES TO BE TAKEN TO THE HILL ON MARCH 16, 2016.

America is facing an impending crisis. The average age of a surveyor in the U.S. is 58. Surveyors are retiring and leaving the workforce faster than the new generation is entering. The number of individuals currently enrolled in 2-year or 4-year degree programs in surveying and related geospatial curricula, those sitting for state licensing examinations and those passing the examinations are at an unsustainable level. Moreover, colleges and universities are facing a critical shortage of American PhD instructors in surveying. Several universities that recently conducted searches for professors in the geospatial field had very few applicants and rarely are the applicants U.S. citizens or proficient in speaking English. The demand for workers in this area is far outpacing the supply. Future economic growth, home ownership and other important national priorities will be adversely impacted if a new generation of surveyors and mapping professionals are not recruited to enter the workforce. A partnership between government and the geospatial community is needed to develop effective recruiting strategies, create pathways to higher education and professional employment, and ensure there is adequate preparation in academia to staff university faculties and foster the continued development of 4-year degree programs. NSPS is working with members of Congress to introduce legislation to create a public-private partnership to help assure development of the future geospatial workforce America will need to contribute to economic growth, environmental protection, preservation of property rights, home ownership and rebuilding the nation's infrastructure.
### MAPPS Privacy Best Practices Guideline (v.2)

<table>
<thead>
<tr>
<th>Description</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any information about the location and shape of, and the relationships among, geographic features, including remotely sensed and map data.</td>
<td>No</td>
</tr>
<tr>
<td>Any graphical or digital data depicting natural or manmade physical features, phenomena, or boundaries of the earth and any information related thereto, including surveys, maps, charts, remote sensing data, and images.</td>
<td>No</td>
</tr>
<tr>
<td>Collection, storage, retrieval, or dissemination of graphical or digital data to depict natural or manmade physical features, phenomena, or boundaries of the earth and any information related to such data, including any such data that comprises a survey, map, chart, geographic information system, remotely sensed image or data, or an aerial photograph by surveyors, photogrammetrists, hydrographers, geodesists, cartographers, or other such mapping and geospatial professionals.</td>
<td>No</td>
</tr>
<tr>
<td>Data originating from commercial satellite systems licensed to operate by the U.S. government, global positioning systems, geographic information systems, and airborne or terrestrial mapping equipment.</td>
<td>No</td>
</tr>
<tr>
<td>Collection, storage, retrieval or aggregation of information about an individual that is publically available such as legal information found in deeds, property records, and property maps.</td>
<td>No</td>
</tr>
<tr>
<td>Data depicting the physical locations of street addresses, without associated personal information</td>
<td>No</td>
</tr>
<tr>
<td>Personal information about an individual’s real time geospatial location</td>
<td>Yes</td>
</tr>
<tr>
<td>Personal information that is protected under law such as health and employment information.</td>
<td>Yes</td>
</tr>
</tbody>
</table>
February 9, 2016

John M. Palatiello
President, John M. Palatiello & Associates, Inc.
For National Society for Professional Surveyors
1856 Old Reston Avenue, Suite 205
Reston, Virginia 20190

Dear Mr. Palatiello:

Thank you for your correspondence dated June 16, 2015, to the Department of Homeland Security, Federal Emergency Management Agency (FEMA). You wrote regarding FEMA’s MT-2 forms, which are used to request a revision to a Flood Insurance Rate Map. You pointed out that “Section C: Mapping Requirements” states that data be certified by a registered professional engineer. You requested the form be revised to include licensed professional surveyors. I apologize for the delay in responding.

Please note the MT-2 Form 3 you included with your email, the “Riverine Hydrology and Hydraulics Form,” does not pertain to the overall certification requirements for an MT-2 submittal. The MT-2 Instructions for the MT-2 forms state that submittals may be certified by either a registered professional engineer or a licensed land surveyor, as authorized by law. This information is found on Page 8 of the MT-2 Instructions, which are available online at http://www.fema.gov/media-library-data/20130726-1449-20490-6562/mt_2_instructions_2013.pdf, and the section describing certification is shown below:

Certification by Registered Professional Engineer and/or Land Surveyor

The person certifying this submittal must provide a valid license number and expiration date for their license. If this information is provided, affixing a seal is optional. If a seal is available, however, it may be affixed in the seal box provided on this form. The licensed professional engineer and/or land surveyor should have a current license in the State where the affected communities are located. While the individual signing this form is not required to have obtained the supporting data or performed the analyses, he or she must have supervised and reviewed the work.

A certification by a registered professional engineer or other party does not constitute a warranty or guarantee of performance, expressed or implied. Certification of data is a statement that the data is accurate to the best of the certifier's knowledge. Certification of analyses is a statement that the analyses have been performed correctly and in accordance with sound engineering practices. Certification of structural works is a statement that the works are designed in accordance with sound engineering practices to provide protection from the 1% annual chance flood.

www.fema.gov
Certification of “as-built” conditions is a statement that the structure(s) has been built according to the plans being certified, is in place, and is fully functioning.

If the requester is a Federal agency who is responsible for the design and construction of flood control facilities, a letter stating that, “the analyses submitted have been performed correctly and in accordance with sound engineering practices” may be submitted in lieu of certification by a registered professional engineer. Regarding the certification of completion of flood control facilities, a letter from the Federal agency certifying its completion and the flood frequency event to which the project protects may be submitted in lieu of this form.

Because FEMA does not specifically define which aspects of an MT-2 submittal can be certified by a registered professional engineer, an architect, or a licensed land surveyor, these professionals may provide certification for anything their State has authorized them to certify. To address this, Form 1 of the MT-2 Application states:

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information data, hydrologic and hydraulic analysis, and any other supporting information as per NFIP regulations paragraph 65.2(b) and as described in the MT-2 Forms Instructions.

I hope this information is helpful to you in addressing your concerns. If you need additional information or assistance, please contact FEMA’s Map Information eXchange (FMIX), toll-free, at 1-877-336-2627 (FEMA MAP).

Sincerely,

Michael Godesky, Acting Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration
DEC 2 – 2015

Mr. Curtis W. Sumner, PLS
Executive Director
National Society of Professional Surveyors
5119 Pegasus Court, Suite Q
Frederick, Maryland 21704

Dear Mr. Sumner:

This is in response to the proposals offered by the National Society of Professional Surveyors (NSPS) in your December 10, 2014, letter related to the Wage and Hour Division’s (WHD) policy for determining when Davis-Bacon labor standards may apply to members of survey crews. The WHD has reviewed your proposals carefully and believes that many of the concerns that serve as the basis for your proposals can be addressed through additional explanation. The following information and attached Q&As are provided to assist in explaining the criteria used in determining when Davis-Bacon prevailing wage requirements may apply to such workers on construction projects subject to the Davis-Bacon labor standards. The WHD, however, will not grant your request to “rescind and replace” All Agency Memorandum (AAM) 212.

In your letter you recommend that the WHD:

1) Apply the Davis-Bacon Act to individuals involved on construction, not those engaged in surveying;
2) Remove all references to terms such as “surveying”, “field surveyors”, “survey crew”, “rodman”, or “chainman”;
3) Distinguish between “surveying” and “construction”;
4) Exempt any work that is surveying in nature and for which survey crew members are not directly employed by a construction contractor or subcontractor;
5) Exempt workers who are performing surveying services; and
6) Cover only construction workers not engaged in surveying activities and whose duties are solely manual or physical in nature.

Many of the NSPS proposals are already addressed in the guidance provided by All Agency Memorandum No. 212 (AAM 212). Specifically, elements of the NSPS recommendations are already reflected in AAM 212, and they also are reflected and amplified in the attached Q&As. In particular, AAM 212 and the attached Q&As make clear that only a survey crew member who performs primarily physical and/or manual duties while employed by a contractor or subcontractor in work performed immediately prior to or during actual construction in direct support of construction crew(s) on the site
of the work will be considered a laborer or mechanic covered by Davis-Bacon requirements. Survey crew members who do not satisfy all of these conditions of coverage generally will not be covered by Davis-Bacon requirements. To the extent that your recommendations seek a broader exclusion from Davis-Bacon requirements, we believe that such an exclusion would be inconsistent with the Davis-Bacon Act and its implementing regulations.

As this agency had not closely examined survey crew classifications and duties in detail in recent years, a determination was made that it would be appropriate to identify and evaluate the extent of physical and manual work performed by the various survey crew classifications in use today. Available information suggested that the composition of survey crews, the nomenclature used for their job classifications, and the duties assigned to survey crew workers may have evolved over the years, particularly with the introduction of new technologies such as the use of the global positioning system (GPS).

Generally, on federal and federally assisted construction, the Davis-Bacon labor standards apply to "laborers and mechanics" employed by contractors and subcontractors on the "site of the work" for such projects. The following regulatory definition, which has been included in Davis-Bacon regulations since 1983 and is set forth at 29 CFR § 5.2 (m), is used to determine whether individuals employed by contractors and subcontractors on the "site of the work" of a Davis-Bacon project qualify as laborers and mechanics:

The term **laborer or mechanic** includes at least those workers whose duties are manual or physical in nature (including those workers who use tools or who are performing the work of a trade), as distinguished from mental or managerial. ... The term does not apply to workers whose duties are primarily administrative, executive, or clerical, rather than manual. Persons employed in a bona fide executive, administrative, or professional capacity as defined in part 541 of this title are not deemed to be laborers or mechanics. Working foremen who devote more than 20 percent of their time during a workweek to mechanic or laborer duties, and who do not meet the criteria of part 541, are laborers and mechanics for the time so spent.

This definition is used to determine whether or not a worker (including a member of a survey crew) is a "laborer or mechanic" under the Davis-Bacon Act. Determining whether individual members of survey crews who otherwise satisfy all of the conditions of coverage set forth above and in AAM 212 qualify as laborers or mechanics is a question of fact that must take into account the actual duties performed.

In this context, on March 22, 2013, AAM 212, regarding "Applicability of Davis-Bacon labor standards to members of survey crews" advised the federal contracting agencies that they should accept requests for the addition of classifications to contract wage
determinations for “survey crew members whose duties are primarily physical and/or manual while employed by the contractor or subcontractor(s) on Davis-Bacon covered projects immediately prior to or during construction in direct support of construction crews.” (AAM No. 212 also provided important information relevant to determining whether an individual performs primarily physical and/or manual duties.) The Wage and Hour Division’s Branch of Construction Wage Determinations review of such requests includes an analysis of whether the elements required for Davis-Bacon labor standards coverage are present, such as whether or not the duties of requested classifications are primarily physical and/or manual and whether the workers for whom such classifications are requested are employed in direct support of construction crews on the site of the work immediately prior to or during construction (not in relation to the design of a project).

The same criteria apply in evaluating when wage data for survey crew worker classifications reported by contractors (and other interested parties) may be used in determining locally prevailing wages for laborer and mechanic classifications that will be listed in new wage determinations for application to future contracts to which the Davis-Bacon labor standards apply.

We intend to publish the attached Q&As on our website, but would appreciate any input you have as to additional questions or clarifications you believe we should make. We will continue to offer and provide additional compliance assistance to you and your members to ensure that they understand the Davis Bacon Act and its requirements. It is my hope that this letter and the attached Q&As will be helpful to you and your members.

Sincerely,

Michael Lazzari, Director
Office of Government Contracts

Attachment
Q&As Regarding Workers Who Perform Work Activities Involved in Surveying

1. **What determines whether or not federal Davis-Bacon prevailing wage requirements apply to a construction project?**

Prevailing wage requirements of the Davis-Bacon and related Acts (DBRA) apply to laborers and mechanics on federal construction and most federally assisted construction projects. The Davis-Bacon Act (DBA) applies to each contract over $2,000 "to which the Federal Government or the District of Columbia is a party for construction, alteration or repair, including painting and decorating, of public buildings and public works" and requires the Secretary of Labor to determine prevailing wage rates for inclusion in covered contracts. In addition to the DBA itself, Congress has added Davis-Bacon prevailing wage provisions to numerous laws – "related Acts" – under which federal agencies assist construction projects through grants, loans, loan guarantees, and insurance.

Rules governing DBRA administration and enforcement are set forth in Title 29 of the Code of Federal Regulations (CFR) at 29 CFR Parts 1, 3 and 5. Davis-Bacon contract clauses required to be included in covered contracts are set forth at 29 CFR § 5.5 and regulatory definitions that apply in the administration and enforcement of DBRA labor standards are set forth at 29 CFR § 5.2.

2. **What is the U.S. Department of Labor, Wage and Hour Division (WHD) policy concerning the applicability of Davis-Bacon prevailing wage requirements to workers who do survey work on a federal or federally assisted project to which Davis-Bacon labor standards apply?**

A survey crew member who performs primarily physical and/or manual duties while employed by a contractor or subcontractor in work performed immediately prior to or during actual construction in direct support of construction crew(s) on the site of the work will be considered a laborer or mechanic covered by DBRA labor standards. Survey crew members who do not satisfy all of these conditions will not be covered by DBRA requirements (unless, as noted below with respect to certain HUD-assisted projects, a particular DBRA provides for broader coverage).

3. **Are individuals who perform surveying work for a construction project covered by Davis-Bacon prevailing wage requirements always subject to the Davis-Bacon labor standards?**

No. However, some workers involved in surveying activities on a Davis-Bacon project site may be covered by Davis-Bacon labor standards. Applicability of the Davis-Bacon requirements depends on the worker’s duties and other considerations, as discussed in Question #2 above and in more detail below.

4. **When is surveying not subject to Davis-Bacon requirements?**
Generally, workers engaged in surveying work during the design phase for a construction project, whose work is used by the architect or engineering firm responsible for developing design plans and specifications for the project before the construction contract is awarded are not subject to Davis-Bacon requirements; as such preliminary survey work is not a part of construction.*

Similarly, on a design-build contract, workers engaged in surveying work that is conducted to serve the project design work being conducted by the architect or engineering firm would not be covered by the Davis-Bacon labor standards.

On the other hand, workers who perform surveying work immediately prior to or during actual construction may be subject to Davis-Bacon requirements if they satisfy all of the conditions of coverage identified under Question #2 above.

* Note regarding certain HUD-assisted projects: Due to specific language in the Davis-Bacon related Act provisions in the United States Housing Act of 1937 and the Housing Act of 1949, application of a “development of the project” coverage test to construction projects assisted under these laws can be broader and may also result in DBRA coverage of preliminary survey work.

5. Where is work by surveyors and their crews not subject to Davis-Bacon requirements?

The Davis-Bacon labor standards apply only to workers employed on the construction project “site of the work.” Workers not employed on the “site of the work” are not covered by the Davis-Bacon requirements. The Davis-Bacon prevailing wage requirements in a covered contract do not apply to time that workers spend performing contract work off the “site of the work.”** Specifically, the Davis-Bacon Act provides that “the contractor or subcontractor shall pay all mechanics and laborers employed directly on the site of the work … at least once a week” at wage rates not less than those stated in a covered contract. (Emphasis added. 40 U.S.C. § 3142.)

**Note: A very narrow exception exists with respect to the United States Housing Act of 1937 and the Housing Act of 1949 (mentioned above). As reflected at 29 CFR 5.5(a)(1), these laws do not reflect the DBA’s “site of the work” limitation.

For purposes of delineating the scope of DBRA coverage, the term “site of the work” is defined at 29 CFR 5.2(l), by the following provisions:

5.2(l)(1) – “Site of the work” is the physical place or places where the building or work called for in the contract will remain, and any other site where a significant portion of the building or work is constructed, provided that such site is established specifically for the performance of the contract or project;

5.2(l)(2) - Except as provided in paragraph 5.2(l)(3), batch plants, borrow pits, job headquarters, tool yards, etc., are part of the “site,” provided they are dedicated
exclusively, or nearly so, to the contract or project, and are adjacent or virtually adjacent to the site of the work as defined in paragraph 5.2(l)(1);

5.2(l)(3) - Not included in the “site of work” are permanent home offices, branch plant establishments, fabrication plants, tool yards, etc., of a contractor or subcontractor whose location and continuance in operation are determined wholly without regard to a particular federal or federally assisted project. In addition fabrication plants, batch plants, borrow pits, job headquarters, tool yards, etc., of a commercial or material supplier which are established by a supplier of materials for the project before opening of bids and not on the site of the work as stated in paragraph (l)(1) of this section, are not included in the site of the work, ... even where [the operations of such permanent, previously established facilities for a period of time may be dedicated exclusively, or nearly so, to the performance of a contract.

6. Who is obligated to pay prevailing wages, as determined by the Secretary of Labor, for various job classifications in accordance with Davis-Bacon labor standards requirements on covered projects?

Generally, under the terms of DBRA-covered contracts “contractors and subcontractors” who perform contract work must pay at least the locally prevailing wages, determined by the U.S. Department of Labor’s Wage and Hour Division (WHD) to apply, according to the type(s) of construction involved in a project, to laborers and mechanics they employ on the site of the work. (In a few instances, under specific HUD-administered related Acts, coverage is not limited to “contractors and subcontractors.” In particular, under the United States Housing Act of 1937, employees of public housing authorities are also subject to Davis-Bacon requirements.)

Generally, a business engaged by a prime contractor to perform a portion of work called for under the prime contractor’s contract for construction may be considered a “subcontractor” obligated to meet the Davis-Bacon requirements with regard to laborers and mechanics the subcontractor employs to perform such contract work.

If the owner of a facility (not the construction contractor) contracts for independent inspection services, separate and independent from the construction contract, survey work performed under the facility owner’s contract for such inspection services would not be subject to the Davis-Bacon requirements in the construction contract. Thus, if survey work is performed as part of such an independent inspection not contemplated in the construction contract, the workers performing such survey work would not be subject to the DBRA requirements.

On the other hand, an individual who is employed by the prime contractor or a subcontractor to perform a portion of work called for under the prime or general contractor’s contract for construction may be a laborer or mechanic to whom the Davis-Bacon labor standards may apply, depending on whether or not the individual is a “laborer or mechanic” within the meaning of the DBA. As discussed below, the individual’s primary duties are important in determining whether an individual is a laborer or mechanic covered by the Davis-Bacon prevailing wage requirements.
7. **What does it mean to be “employed” within the meaning of the DBRA?**

Every person performing the duties of a laborer or mechanic in the construction, prosecution, completion, or repair of a public building or public work, or building or work financed in whole or in part by loans, grants, or guarantees from the United States, is employed for purposes of the DBRA regardless of any contractual relationship alleged to exist between the contractor and such person. 29 CFR § 5.2(o).

8. **Within the meaning of the DBRA, who are “laborers and mechanics” covered by the Davis-Bacon prevailing wage requirements?**

The applicable regulatory definition of “laborer or mechanic” is set forth in 29 CFR § 5.2(m):

The term laborer or mechanic includes at least those workers whose duties are manual or physical in nature (including those workers who use tools or who are performing the work of a trade), as distinguished from mental or managerial. ... The term does not apply to workers whose duties are primarily administrative, executive, or clerical, rather than manual. Persons employed in a bona fide executive, administrative, or professional capacity as defined in part 541 of this title are not deemed to be laborers or mechanics. Working foremen who devote more than 20 percent of their time during a workweek to mechanic or laborer duties, and who do not meet the criteria of part 541, are laborers and mechanics for the time so spent.

(Underscore added.) The regulations at 29 CFR part 541 set forth the rules for determining whether an employee is exempt from the minimum wage and overtime pay requirements under section 13(a)(1) of the Fair Labor Standards Act (FLSA), the federal law of most general application regarding minimum wage and overtime pay standards nationwide. Section 13(a)(1) of the FLSA exempts “employees employed in a bona fide executive, administrative, or professional capacity” from the minimum wage and overtime requirements of that law.

9. **In view of the definition of the term “laborer or mechanic” stated above, what information should be considered in determining whether or not Davis-Bacon prevailing wage requirements apply to an individual who is employed by a contractor or subcontractor to perform activities involved in surveying work on a project subject to Davis-Bacon labor standards immediately prior to or during actual construction in direct support of construction crew(s) on the site of the work?**

In determining whether a worker (including a member of a survey crew) is a “laborer or mechanic” as defined under the DBRA, the touchstone is whether the worker’s duties “are manual or physical in nature (including those workers who use tools or who are performing the work of a trade).”
Certain workers are explicitly excluded from coverage by the regulatory definition of “laborer or mechanic.” An individual’s work duties are central to determining whether he or she is excluded from the definition of “laborer or mechanic” within the meaning of the DBRA. This is clearly stated in the definition that “[t]he term [laborer or mechanic] does not apply to workers whose duties are primarily administrative, executive, or clerical, rather than manual.” 29 CFR § 5.2(m) (emphasis added).

The result of the reference, in the definition of “laborer or mechanic” at 29 CFR § 5.2(m), to the FLSA exemption status of some workers is that individuals who, within the meaning of the FLSA, are “employees employed in a bona fide executive, administrative, or professional capacity” in accordance with the rules established in 29 CFR Part 541 are also excluded from DBRA coverage.

10. Are business owners who personally perform surveying work on the job site exempt from the Davis-Bacon prevailing wages?

Davis-Bacon prevailing wages do not apply to a business owner who personally performs surveying work on the job site to the extent that he or she does not qualify as a “laborer or mechanic” under 29 CFR § 5.2(m). In particular, the term “laborer or mechanic” “does not apply to workers [including business owners] whose duties are primarily administrative, executive, or clerical rather than manual.” In addition, “[p]ersons employed in a bona fide executive, administrative, or professional capacity as defined in [29 CFR part 541] are not deemed to be laborers or mechanics.” 29 CFR § 5.2(m).

11. Are licensed surveyors performing survey work on a Davis-Bacon job site exempt?

Licensure is not generally a basis for determining whether or not workers are subject to Davis-Bacon labor standards. For example, often local licensing requirements may apply to certain construction workers, such as electricians or plumbers. Thus, in collecting data and determining locally prevailing wages to be paid on projects subject to Davis-Bacon labor standards, the workers in such classifications (whose work is that of laborers or mechanics) are not distinguished based on whether or not they are licensed.

At 29 CFR 541.300, the “541 regulations” provide a general rule for determining whether or not an individual is an “employee employed in a bona fide professional capacity.” An individual “[w] hose primary duty is the performance of work requiring knowledge of an advanced type in a field of science or learning customarily acquired by a prolonged course of specialized intellectual instruction” may be an exempt “professional employee” if he or she is compensated on a salary or fee basis at a rate of not less than $455 per week ($380 per week if employed in America Samoa by employers other than the Federal Government), exclusive of board, lodging or other facilities. The phrase “work requiring advanced knowledge” means work that is predominantly intellectual in character and that includes work requiring the consistent exercise of discretion and judgment, as distinguished from performance of routine mental, manual, mechanical or physical work. Additional information at 29 CFR 541.301 regarding the exemption for “employees employed in a professional capacity” addresses the meaning of the term “field of science or learning” and
the phrase “customarily acquired by a prolonged course of specialized intellectual instruction” and includes examples of various occupational areas that illustrate the analysis involved in determining whether the professional exemption applies.

12. Can we assume that a "Chief of Party" is exempt due to supervisory and administrative duties?

Whether or not DBRA labor standards apply depends on the duties the individual performs in a specific situation not his or her job title. For example, if an individual’s duties normally are to direct and supervise others and to keep records for a survey crew, but on a particular job the individual does not perform such duties, a determination concerning application of Davis-Bacon labor standards would be based on the duties he or she performs on the particular job site.

Also it may be relevant to consider that, as stated in the regulatory definition of the term “laborer or mechanic,” “[w]orking foremen who devote more than 20 percent of their time during a workweek to mechanic or laborer duties, and who do not meet the criteria of part 541, are laborers and mechanics for the time so spent.”

13. Are survey technicians who are perform support work under the supervision of a licensed surveyor subject to Davis-Bacon requirements?

Whether or not DBRA labor standards apply depends on whether an individual performs primarily physical and/or manual duties, not his or her job title, and not on the qualifications of the individual’s supervisor or employer. Further guidance for determining an individual’s primary duties is provided below.

Where a certification program for surveying technicians has been approved by the U.S. Department of Labor’s Employment and Training Administration (ETA)/Office of Apprenticeship (OA), or by a state apprenticeship agency recognized by the ETA/OA, survey technicians individually registered in such a program may be paid at rates below the rates specified in an applicable Davis-Bacon wage determination, in accordance with the Davis-Bacon contract clause requirements in the covered contract.

14. Can the exclusion of workers whose primary duties are clerical also apply to others who work on the job site and whose primary duties are not bookkeeping activities or the like?

A worker whose duties are primarily clerical rather than manual is explicitly outside the scope of the definition of “laborer or mechanic” stated at 29 CFR 5.2(m). An example of this principle is that generally, air balance engineers whose primary function is to take measurements and to accumulate data upon which recommendations are based to advise mechanical contractors how to rectify imperfections or imbalances in heating and air conditioning systems which may become apparent after the contractor(s) have installed such systems. (However, if such employees spend a substantial amount of their time in any workweek (i.e., more than 20 percent) on the site performing manual, physical, and
mechanical functions which are those of a traditional craftsperson, they would be considered laborers or mechanics for the time so spent.) [FOH 15e06]

15. Davis-Bacon requirements apply only if an individual’s duties are “primarily physical and/or manual in nature (including workers who use tools or who are performing the work of a trade). How are an individual’s “primary duties” determined?

In determining whether an individual or survey crew member performs primarily physical and/or manual duties, the principal, main, major or most important duty or duties that the individual performs are considered to be his or her “primary duty.” This determination must be based on the facts in a particular case, with the major emphasis on the character of the worker’s job as a whole. In this context, when determining the primary duty of a survey crew member it is appropriate to consider the relative importance of the manual and/or physical duties as compared with other types of duties performed by the workers in a particular classification.

The amount of time normally spent performing manual and/or physical duties can be a useful guide in determining whether that work is the primary duty of an employee. Thus, survey crew members who normally spend more than 50 percent of their time performing such work will generally satisfy the primary duty requirement.

Time alone, however, is not the sole test. For example, if a survey crew member meets the tests for exemption as a professional, executive or administrative employee under the rules established by 29 CFR Part 541, that survey crew member is not a “laborer or mechanic” as defined under 29 CFR 5.2(m).

16. How does the Department of Labor determine the prevailing wage rates issued in Davis-Bacon wage determinations?

The DBA requires the Secretary of Labor to determine prevailing wage rates for inclusion in covered contracts “based on the wages the Secretary of Labor determines to be prevailing for the corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work” in the area (usually a county) in which proposed contract work is to be performed.

The WHD collects voluntarily submitted data, principally in response to surveys conducted by the WHD regional offices.

The wages on the WD are typically determined by surveying ongoing and recently completed construction projects within an area. WHD conducts the surveys of projects under construction or completed during a specific survey time frame to gather specific wage rate data paid to workers employed in the various laborer and mechanic classifications on construction projects.

As a matter of longstanding policy, the Department of Labor recognizes four general types of construction for purposes of making prevailing wage determinations: building
construction, residential construction (not over 4 stories), highway construction, and heavy construction (a catch-all category for other projects, which is sometimes broken down into subcategories of "projects of a similar character").

As the WHD depends on the voluntary submission of wage data for the various classifications of laborers and mechanics who have been employed on construction work in an area, the classifications and wage rates issued in the Davis-Bacon wage determinations that are incorporated into covered contracts reflect data submitted. Thus, participation by contractors who have performed work on construction projects in an area is vital to enabling the WHD to accurately reflect the classifications and wages that prevail on each type of construction in counties where construction will be performed in the future. (Wage data from federal and federally assisted building and residential projects are not used in determining prevailing wages in an area if there is sufficient data to determine the prevailing wages for such construction in the area without using the data from the federally and federally assisted projects.)

17. How can contractors find out when a new survey will be conducted to determine prevailing wages for application to future contracts subject to Davis-Bacon labor standards in their areas?

Information regarding Davis-Bacon prevailing wage surveys that are planned or already underway and other information concerning the surveys is available on the WHD website at: [http://www.dol.gov/whd/programs/dbra/Survey/status.htm](http://www.dol.gov/whd/programs/dbra/Survey/status.htm).

18. Where can we see the current Davis-Bacon wage determinations that are available to the federal and other contracting agencies for use in upcoming bid solicitations and contracts?


19. How are wage rates established for classifications not listed on a wage determination in a contract to which the Davis-Bacon labor standards apply?

Davis-Bacon wage determinations often do not contain all of the classifications of laborers and mechanics needed for the work that will be performed on a covered project. The Davis-Bacon contract clauses specify the procedure for adding needed classifications not included in a wage determination that applies to given contract work after award of the contract. (See 29 CFR 5.5(a)(1)(ii).) (All Agency Memorandum No. 213 provides additional information on the evaluation of requests for additional classifications needed for work on a project, and is available at [http://www.wdol.gov/aam/aam213.pdf](http://www.wdol.gov/aam/aam213.pdf).)

20. Where does the WHD have additional information available regarding the administration and enforcement of the DBRA?
General information and links to key documents involved in DBRA administration and enforcement are posted at [http://www.dol.gov/whd/govcontracts/dbra.htm](http://www.dol.gov/whd/govcontracts/dbra.htm).

Additional information concerning the wage determinations survey process is available at [http://www.dol.gov/whd/govcontracts/dbra.htm](http://www.dol.gov/whd/govcontracts/dbra.htm).
Licensure

A national campaign at the state level to do away with occupational and professional licensing is underway with broad legislation to rescind or restrict licensing having already been introduced in several states. The surveying community must be ready, vigilant and armed! With that in mind, NSPS is beginning an effort to draft a white paper that makes the case for preservation of licensing of surveyors. This document will explain why licensing of surveyors is essential to protecting public health, welfare and safety. Such a white paper can be used by all state surveying societies to pro-actively defend licensing and prevent legislation to de-license surveyors. If your state has been through a sunset review of your licensing board, or in another way have justified licensing of surveyors, please send copies of any testimony, position papers, letters or other material you produced to advocate for licensing of surveyors to NSPS Executive Director Curt Sumner. This is also an issue in Washington, DC.
John King, Jr.
Acting Secretary of Education
400 Maryland Avenue, SW
Washington, DC 20202

Dear Mr. Secretary:

The undersigned organizations represent the majority of employers, individual professionals, and academicians in the surveying and geospatial field. We are deeply concerned that the geospatial (or "geomatics") field is not properly classified as a science, technology, engineering and mathematics (STEM) discipline by the Department of Education. This error in the treatment of our field is having serious implications for students, instructors, employers and educational institutions.

Specifically, the Department of Education publishes the “Classification of Instructional Programs.” It includes "surveying engineering” in group 14, engineering, but classifies geography and cartography (including geographic information science and cartography) as a social science, in group 45. While Congress and many states are implementing programs to encourage young people to enter disciplines to obtain a STEM education, students studying geography, GIS and cartography are ineligible for many grants, scholarships and tax credits targeted toward STEM majors.

America is facing an impending crisis. The average age of a surveyor in the U.S. is 58. Surveyors are retiring and leaving the workforce faster than the new generation is entering. The number of individuals currently enrolled in 2-year or 4-year degree programs in surveying and related geospatial curricula, those sitting for state licensing examinations and those passing the examinations are at an unsustainable level. Moreover, colleges and universities are facing a critical shortage of American PhD instructors in surveying. Several universities that recently conducted searches for professors in the geospatial field had very few applicants and rarely are the applicants U.S. citizens or proficient in speaking English.

The geospatial community is one of the high growth workforce sectors in the U.S. economy, according to the U.S. Department of Labor. However, the demand for workers in this area is far outpacing the supply.

Surveyors and other geospatial professionals play an important part in the U.S. economy. These professionals, and support technicians, make accurate measurements of the land, structures, and natural and man-made features, as well as determine property boundaries. The geospatial workforce provides data relevant to the size, shape, contour, gravitation, location, elevation, and dimension of land and features on or near the earth’s surface for engineering, land use, development, construction, environmental protection, resource management, defense, aerospace, law enforcement, public safety, homeland security, healthcare, public and private utilities, energy and other fossil and renewable resources development, IT and software/hardware development, internet tools, general business, banking, insurance, retail and marketing, as well as government agencies at all levels. Geospatial technologies now have a place in almost every market sector and industry. According to the federal government’s National Geospatial Advisory Committee, as much as 90 percent of government information has a geospatial information component and up to 80 percent of the information managed by business is connected to a specific location. Geospatial jobs are high paying, high tech, and high quality - the type of jobs the U.S. economy must continue to create and maintain as the information society and knowledge-based economy evolve.

According to market studies, the geospatial sector has steadily increased by 35% a year, with the commercial side growing at an incredible rate of 100% annually. The geospatial community generated approximately $73 billion in revenues in 2011 and comprises at least 500,000 high-wage jobs. The industry is composed of geo-data providers, location-enabled device manufacturers, geoapp developers, and a growing network of geospatial experts and educators. By employees, this is roughly equivalent to the airline industry; by revenues it is
approximately $10 billion more than the U.S. paper industry. More importantly, geospatial services deliver efficiency gains in the rest of the U.S. economy that are valued at many times the size of the sector itself, creating a lasting source of competitive advantage for the U.S. Geospatial services drive $1.6 trillion in revenue and $1.4 trillion of cost savings, representing 15 to 20 times the size of the geospatial services community itself. Geospatial services are used on a daily basis by roughly 5.3 million U.S. workers today, over 4% of the U.S. workforce. In addition, U.S. consumers place a direct value on geospatial services at $37 billion annually. This is recognition of the many ways geo-applications and location-enabled devices are central to our daily lives.

The U.S. Department of Labor identified geospatial technology as one of the top three emerging technologies for the 21st century workforce. According to Bureau of Labor Statistics (BLS), the projected employment demand for licensed professional surveyors over the current decade is 24,200 new jobs, representing a growth rate of 28%. The demand for geodetic surveyors and photogrammetrists through 2020 is projected to grow at the same rate as surveyors, creating another 30,000 new jobs. Growth rate projections for geospatial information scientists and geographic information systems technicians is 9%.

Many of the post-secondary schools that offer surveying/geomatics degrees are accredited by the Accreditation Board for Engineering Technology (ABET). However, it is estimated there are as many as 700 post-secondary schools in the United States teaching geographic information systems (GIS) that are not ABET accredited or classified in STEM departments.

It is clear the supply of schools in surveying and GIS are not matching the projected demand.

To help meet expected geospatial education and employment needs, the National Geospatial Advisory Committee (NGAC), the Federal Advisory Committee Act (FACA) entity responsible for advising federal agencies on geospatial issues conducted a geospatial workforce study which made a recommendation “to include geospatial technology and geomatics as components of the STEM disciplines”.

The Coalition of Geospatial Organizations, an umbrella group of associations of which many of the undersigned are members, unanimously petitioned the Office of Science and Technology Policy found the federal government “defines STEM fields far too narrowly” and sought “to clarify the importance of the geospatial science and technology in STEM education”.

The Classification of Instructional Programs in the Department of Education is not consistent with other classifications in the federal government. The following are a few examples.

The Department of Homeland Security has a list of STEM programs on its website. The geospatial profession is listed and in many different ways: Geographic Information Science and Cartography, geospatial engineering, geospatial intelligence, laser and optical technology, surveying engineering, surveying, surveying technology, geometrical analysis. Only surveying is most clearly classified as part of the broad field of engineering.

The U.S. Department of Labor has adopted a competency model for employers and individuals entering the geospatial technology field. It places an emphasis on “Science and Engineering” which includes, “Knowing and applying the principles, rules, and methods of science and engineering to solve problems.” The model suggests those entering the geospatial field have competency in numerous areas of engineering. The model suggests those entering the geospatial field have competency in such areas of engineering as:

“Engineering Methods

Design - design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models
Engineering technologies, including computer-aided engineering and drafting, site surveying, leveling, and ground-based laser scanning

Subject-specific Engineering Knowledge

Architecture and Architectural Engineering - design and construction of buildings;

Civil Engineering - design and construction of public and private works, such as infrastructure (roads, railways, water supply and treatment), bridges, and buildings;

Environmental Engineering - application of science and engineering principles to improve the environment;

Landscape Architecture - design of outdoor and public spaces”

Several universities include geospatial degree programs in their engineering departments and curricula. For example, the University of Maine offers master’s and doctoral-degree programs in Spatial Information Science and Engineering; Ferris State University in Michigan offers, through its College of Engineering Technology, a BS in Surveying Engineering, AAS in Surveying Engineering, Minor in Surveying Engineering, Certificate in Surveying Engineering, and a Geographic Information System Certificate; and the Geospatial Engineering program at Virginia Tech provides, “in every area of civil and environmental engineering, automation tools and techniques are being utilized in new and exciting ways. Data collection and processing, visualization, and spatially referenced data are becoming increasingly more important as today’s engineering tools. The geospatial engineering research group recognizes this as a high priority and has focused resources toward helping students learn about these issues” -- just to name three.

The U.S. Army classifies the geospatial field as engineering, noting that for a “geospatial engineer” in the Army, “the skills you learn will help prepare you for a career as an engineer with the government or in the private sector” and fully integrates geospatial engineering with other engineering disciplines.

The Corps of Engineers provides the following definition, “Geospatial Engineering encompasses those tasks that provide geospatial information and services to enhance awareness, understanding, and effective use of the operational environment for commanders and staffs across the range of military operations.”

The purpose of the “geomatics” division within the American Society of Civil Engineers is “To provide leadership, within the engineering profession, for the acquisition and management of spatial data required as part of scientific, administrative, legal, and technical operations for surveying, cartography, photogrammetry, multi-purpose cadastre, remote sensing, and geographic information systems; to foster the development of policy, guidelines and specifications; to encourage the advancement of geomatics education; and to foster the dissemination of information.”

The Department of Education’s Classification of Instructional Programs lists “cartography” and “geography” in Group 45, “Social Sciences -- instructional programs that focus on the systematic study of social systems, social institutions, and social behavior”, not as science, technology, engineering or mathematics. Geography, geomatics, geospatial and GIS are not listed in the Classification, and are not eligible for STEM programs.

Fortunately, the Classification has a category 14.3801 Surveying Engineering. This includes an educational program “program that prepares individuals to apply scientific and mathematical principles to the determination of the location, elevations, and alignment of natural and manmade topographic features. Includes instruction in
property line location, surveying, surface measurement, aerial and terrestrial photogrammetry, remote sensing, satellite imagery, global positioning systems, computer applications, and photographic data processing.

This chasm between "geography/geospatial" and "photogrammetry/surveying" does not reflect the reality of educational instruction, required competency, workplace activities, or many state licensing laws in surveying.

Several universities include geospatial degree programs in their engineering departments and curricula. For example, the University of Maine (http://spatial.umaine.edu/) offers masters and doctoral-degree programs in Spatial Information Science and Engineering; Ferris State University in Michigan offers, through its College of Engineering Technology, a BS in Surveying Engineering, AAS in Surveying Engineering, Minor in Surveying Engineering, Certificate in Surveying Engineering, and a Geographic Information System Certificate; and the Geospatial Engineering program at Virginia Tech provides, "In every area of civil and environmental engineering, automation tools and techniques are being utilized in new and exciting ways. Data collection and processing, visualization, and spatially referenced data are becoming increasingly more important as today’s engineering tools. The geospatial engineering research group recognizes this as a high priority and has focused resources toward helping students learn about these issues” -- just to name three.

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Future economic growth, home ownership and other important national priorities will be adversely impacted if a new generation of surveyors and other geospatial professionals and technicians are not recruited to enter the workforce and there is not adequate preparation in academia to staff university faculties and foster the continued development of 2-year and 4-year degree programs. Proper classification of broad surveying and geospatial programs as STEM disciplines will significantly enhance our ability to attract students and sustain academic programs. We urge your favorable action on this request and look forward to working with you on this important initiative.

Sincerely,

NSPS        MAPPS        NCEES        ABET        ASCE        ASPRS        AAGS

Surveying and Geomatics Educators Society (SAGES)
Organizing & Executing the Next 
White House Conference on Small Business (WHCSB)

The White House Conference on Small Business (WHCSB) was a series of three conferences that occurred in 1980, 1990, and 1995. They were convened by presidents Jimmy Carter (originating by Executive Order 12091), Ronald Reagan (originating from Congressional authorization of P.L. 98-276) and Bill Clinton (originating from Congressional authorization P.L. 101-409) in an effort to foster better relationships with members of the business community and to develop innovative policy solutions to economic problems. President Carter and President Clinton presented the 1980 and 1995 Conference’s keynote addresses, respectively. A November 2015 Congressional Research Service (CRS) report provided an analysis of the three Conferences to date. C-SPAN covered the concluding day of the five-day 1995 Conference.

All three shared similar organizational formats and activities performed, with differences generated in process and outcomes. To their credit, each of the three Conferences issued 60 policy recommendations for Congress and the Administration to consider. In addition, the 1995 Conference delegates elected regional implementation teams which worked closely with Small Business Administration (SBA) officials in monitoring congressional and executive branch action on the 1995 Conference’s recommendations after the Conference had ended. The SBA attributed much of the 1995 Conference’s implementation “success rate” to the efforts of these implementation teams. CRS noted that the 1980 Conference included participation from over 200 small business and trade associations.

A critical piece to the success of the WHCSB is the utilization of state conferences to ensure broad and equitable representation of the very diverse small-business community. Through the state conferences, which feed into the regional conferences and then into the national conference, small-business owners are able to develop, enhance and fully embrace the key issues facing small businesses nationwide. In addition to building consensus, growing small-business networks and nurturing future small-business leaders, the state conferences and broad participation of small businesses lend credibility to the final list of recommendations. It also eliminates any concerns that any single constituent group or sponsoring party hand-picked delegates to such a conference.

Despite action and success on a variety of issues impacting small business, there has not been a White House conference in more than two decades. That is far too long to go without giving voice and a forum to America’s small businesses which account for 99 percent of U.S. private sector employers and 64 percent of net new private sector jobs. The 114th Congress should reunite the wide variety of voices within the small business community to help educate Congress and the White House on issues that matter most through an organized effort to identify and rank these priorities. Just as in 1995, Members of Congress can leverage the collective strength and voice of small business advocacy to work with the White House to enact timely and impactful legislation.

In the 114th Congress, Rep. Rod Blum (R-IA) will soon introduce bipartisan legislation in the House with plans for corresponding introduction in the Senate. This draft legislation will be modeled after the language (P.L. 101-409) authorizing the 1995 Conference.