

FHWA Office of Real Estate Services
Research Results:
2006 Future Needs of Public Sector Real Estate
With Graphic Illustrations

August 2006

I. Executive Summary

The Office of Real Estate Services (HEPR) intends to enhance strategic decision-making by looking 30 years into the future, to 2035. This research effort sought to identify concepts, capabilities and technologies that the Federal Highway Administration (FHWA) and other Federal agencies, conducting real estate acquisition, relocation and management activities under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended, will require to remain relevant, vital and productive, serving the missions of the taxpayers and Government efficiently and effectively into the 21st century.

An in depth analysis of expected future operational needs of public sector real estate, specifically as they relate to transportation projects, was conducted. The goal was to identify what new ideas; concepts and technologies can be utilized to meet present and future needs of public sector real estate.

Purpose of Study

The purpose of this study was to increase HEPR's ability to meet program goals by focusing on the most important needs in a rapidly changing global environment as follows:

- Identify attractive, yet non-obvious opportunities for innovation for public sector real estate.
- Identify technologies with independent forecasts of emerging technologies that could impact public sector real estate.
- Identify methods to reduce uncertainty, and ultimately costs, when making technology and new product investment decisions.
- Identify methods to accelerate the strategic planning cycle with an outside-in view of the future.
- Identify ways to expand our professional skills by learning from individuals from a broad range of experiences, affiliations, and networks.
- Add weight, breadth and effectiveness to our existing planning of public sector real estate activities.
- Challenge conventional wisdom and traditional thinking and bring dynamic insights to public sector real estate strategic planning and project development thinking.
- Create a forum for debate on issues concerned with future trends and needs for public sector real estate.

The results of the research will assist HEPR to understand new or developing concepts, capabilities and technology; identify feasible legislative and regulatory changes to streamline and improve public sector real estate work; develop tools and methods to anticipate future needs and become more proactive; identify new ideas, methods and techniques quickly and effectively; and be able to face a changing environment in a systematic and broad-based way.

Methodology

Research was conducted to identify the tools – technical, legislative, regulatory, human resource skills, and stewardship mechanisms – that will be needed in the time span to the year 2035. The research also identifies present and future needs and possible solutions of public sector real estate internally and externally. Techniques used to conduct this research included an electronic survey distributed to selected stakeholder participants and a focused brainstorming session that specifically addressed how to identify possible legislative and regulatory changes and needs on which to focus limited resources in a rapidly changing global environment.

Stakeholder participants were selected from a variety of backgrounds throughout the United States and because of their knowledge and expertise in the fields of engineering, planning, construction, and laws and regulations related to the acquisition of real property for transportation projects under the Uniform Act. Stakeholder participants include representatives from FHWA Headquarters and Division offices, Federal Aviation Administration (FAA) offices, State DOT Right-of-Way offices, Regional Transportation District (RTD), Eminent Domain Attorneys, Right-of-Way Consultants, Land Use, Economic and Public Involvement Specialists.

Stakeholder Survey

An online Stakeholder survey was developed to collect information and used to direct the content of the one-day brainstorming session, which took place on January 12, 2006. This was a onetime survey that required approximately one hour to complete, including the time for reviewing instructions.

The survey inquired as to the participant's concerns related to their real estate and right-of-way programs. The survey also addressed present and future needs and possible solutions to public sector real estate in the next 30 years.

Brainstorming Session

Twenty-one participants met to brainstorm future public sector real estate needs. The session was graphically illustrated and the graphic illustrations have been used to illustrate issues, concerns and possible solutions discussed during the Brainstorming Session. Two graphic illustrations of the day's discussion can be found in the Appendix.

The purpose for the Brainstorming Session was to focus on identifying present real estate program needs; what the real estate program will look like in the next 30 years; new ideas, concepts, and technologies that can be utilized to meet present and future needs of public sector real estate; and how FHWA can help implement these solution and do more with less.

The session opened by referencing the questions addressed in the Survey Response Summary to further identify common issues among each of the Stakeholders, their agency or organization and their present and future needs. While discussing these issues, the Stakeholders were instructed to not only develop solutions to meet today's needs, but also with an eye toward meeting future needs.

The discussion addressed the following present and future needs and possible solutions were developed for each of the categories listed below:

- Early Integration and Coordination of Right-of-Way
- Flexibility in the Laws and Regulations
- Training and Education
- Recruitment
- Public Relations
- Technology

The following summary of recommendations were identified as methods for FHWA to consider as solutions to the previously identified present and future needs of public sector real estate in the next 30 years. The following recommendations are divided into six categories; internal procedural changes for FHWA and DOTs, technical assistance and training support, legislation, regulation, policy, and outreach and information dissemination activities.

Recommended Changes to FHWA and DOT Procedures

The following recommended procedural changes for both FHWA and the DOTs summarize possible solutions previously identified in the survey and discussed during the brainstorming session. These tie to the areas of early integration and coordination of right-of-way during project development process, right-of-way training and education, future staff recruitment, public relations outreach, and technological tools and techniques as outlined above.

FHWA

- FHWA needs to be a strong advocate for DOTs in setting a precedent for Engineering and Planning Managers to emphasize the need for right-of-way involvement in the early planning, project development, environmental, and final design phases of projects.

- A mandate should come from the FHWA Administrator stating that in order for an agency to receive federal funds, right-of-way must be fully integrated throughout the project development process.
- Public Relations experts need to be brought into the right-of-way and eminent domain processes and should work in conjunction with the Right-of-Way and Project Managers to develop a systematic approach for addressing landowner concerns to effectively change the public perception of acquisition of private property under eminent domain.
- FHWA in coordination with DOTs needs to develop a “Design Acceptance Stage” that runs concurrently with other functions of the project development process.
- FHWA needs to utilize alternative technologies such as GIS that make for a more efficient and effective program.

DOTs

- DOTs need to integrate the right-of-way function early in the project development process, elevate the importance of the right-of-way process with upper Engineering Management, encourage long range planning and coordination with MPOs and LPAs in the preservation of future right-of-way, and provide the necessary experts (i.e., legal, relocation, land value, and utilities experts) for the project development process.
- DOTs need to implement partnering from the top down, gain “buy-in” and understanding from Engineering Management of the priority of right-of-way in the project development process, and be responsible for providing the necessary resources to elevate training and education within their organizations. Right-of-Way Managers also need to create a “grass roots” effort and form informal networks between Attorneys, Engineering Management, Planners, Environmental and Right-of-Way staff.
- DOTs need to create a public private partnership between agencies and consultants to provide cross training that builds stronger experience levels and aids in the utilization and retention of institutional knowledge on both sides.
- DOT Right-of-Way Managers should work with Public Relations experts and be present at public meetings early in the project development process to answer questions and address the public’s concerns regarding right-of-way impacts. Landowners and the surrounding community also need to be informed and involved from the beginning and throughout the project development process.
- DOTs need to utilize alternative technologies such as GIS to develop a more efficient and effective program.

Recommended Technical Assistance and Training Support

- FHWA needs to make training a top priority and act as advocates in making real estate a major policy issue for DOTs. FHWA should develop and disseminate cost effective educational tools and techniques such as online training, videos and DVDs for basic courses, and webinars. In addition, FHWA should continue to offer traditional face-to-face classroom courses that are more personable in discussing more advanced issues specific to each state.
- FHWA needs to develop and build on training courses and degree programs within community colleges. Also, FHWA should encourage engineering schools to expand their curriculum to include courses on land acquisition and the project development process to give engineers an appreciation for right-of-way.
- FHWA needs to become an advocate for the right-of-way profession as a career path. They need to emphasize the right-of-way discipline in their recruiting efforts and develop partnerships with universities, vocational institutions, and private real estate colleges.
- FHWA needs to identify funding sources for scholarships through Right-of-Way professional organizations such as International Right of Way Association (IRWA) and American Association of State Highway and Transportation Officials (AASHTO).

- FHWA needs to support DOT Right-of-Way Managers in developing and delivering a statewide right-of-way training and education program to internal staff as well as MPOs and LPAs that is consistently updated and provided on an ongoing basis.
- FHWA needs to help DOTs to develop the right-of-way profession as career path within their organizations by implementing incentives such as combined on-the-job training and real estate training courses.

Recommended Changes to Legislation

The Uniform Act

- Modify the Uniform Act and the implementing regulations to allow states the authority, within general guidelines, to react as needed to situations relating to the administration of their own right-of-way program. Allow states to develop and document their own quality assistance/quality control (QA/QC) processes, which FHWA can continue to monitor for compliance.
- While there wasn't consensus among Stakeholders, a recommendation was made to amend the Uniform Act to require presentation of the appraisal at the time of the offer to purchase property. Disclosure with landowners, as early as in the process as possible, builds trust. At issue here is the contradiction between the recommendation for more statutory and regulatory requirement and the conflicting recommendation for more State flexibility in implementing the laws and regulations.
- Develop a more collaborative and structured approach to a "reasonable" basis for fair attorney's fees associated with property owner representation. The Uniform Act should allow for payment of attorney fees up to a certain percentage of the award to protect property owners uniformly. Consensus among Stakeholders regarding a "reasonable" basis for fair attorney's fees was not reached during the Brainstorming Session. Again, at issue here is the contradiction between the recommendation for more statutory and regulatory requirement and the conflicting recommendation for more State flexibility in implementing the laws and regulations.
- Provide a simplified program for small, non-complex (5 parcels) projects, such as a De Minimis process, which allows a lump sum payment (global settlement) or self-service relocation claim.
- The law should allow flexibility at the state level within the existing federal principals of fairness, justice, equity and uniformity. Change the law to allow the states additional payment authority over the statutory caps under Title III, when properly justified and documented.

The National Environmental Policy Act

- Legislate that land acquisition may commence prior to NEPA without prejudicing the outcome of the NEPA process.

Recommended Changes to Regulation

23 CFR

- Amend the provision in the regulation to allow for construction clearance approvals on a parcel-by-parcel basis similar to the Design Build project provisions.

49 CFR

- Amend the regulations to include the effective hardship and protective buying provisions of 23 CFR into 49 CFR, allowing all agencies to acquire property under the same provisions. Need to explore further in light of federal agencies own laws and regulations. FHWA should seek to understand why and where these inconsistencies exist and to set up a system for dialogue on this issue of program funding for real estate acquisition, with the goal of helping all agencies see the varying options that are being used and to identify what changes they may wish to make in their own laws and rules.
- A white paper recently drafted by one of the Stakeholders proposes a revision to 23CFR 710 to include FHWA's authorization to acquire lands necessary for right-of-way and mitigation sites in advance of the Record of Decision (ROD) based upon the reasonable necessity of the land for the project.

- Modify the implementing regulations to reflect any and all statutory changes recommended above.

Recommended Changes to Policy

Require all applicable Federal Agencies to publish and maintain Uniform Act program policy documents and appoint an experienced Program Manager responsible for the management and implementation of their respective agency's real estate program.

Outreach and Information Dissemination Activities

FHWA should encourage reciprocal training and outreach to disseminate information to all federal agencies that acquire property under the Uniform Act as well as MPOs and LPAs. Also, this information can be disseminated through meetings and conferences of professional organizations and associations such as the International Right of Way Association (IRWA), the American Association of State Highway Transportation Officials (AASHTO), the American Society of Civil Engineers (ASCE), the Institute of Transportation Engineers (ITE), and the National Association of Environmental Professionals (NAEP).

Conclusion

The Stakeholders made recommendations for FHWA to consider as solutions to the identified present and future needs of public sector real estate in the next 30 years. The identified recommendations for change were then divided into six categories; internal procedural changes for FHWA and DOTs, technical assistance and training support, legislation, regulation, policy, and outreach and information dissemination activities.

The following include the top recommendations for FHWA:

- To be a strong advocate for integrating the right-of-way function early in the planning, project development, environmental, and final design phases of projects.
- To mandate that in order for an agency to receive federal funds, right-of-way must be emphasized in the project development process.
- To make training a top priority and act as advocates in making real estate a major policy issue for DOTs.
- To develop an understanding from Engineering Management for right-of-way to be fully integrated throughout the project development process.
- To bring Public Relations experts into the right-of-way and eminent domain processes.
- To utilize alternative technologies such as GIS that make for a more efficient and effective program.
- To become an advocate for the right-of-way profession as a career path and emphasize the right-of-way discipline in their recruiting efforts and develop partnerships with universities, vocational institutions, and private real estate colleges.
- To promote flexibility in the law to allow states more authority regarding administration of their right-of-way programs, i.e.:
 - require presentation of appraisal to landowner at the time of offer
 - allow for a “reasonable” basis for fair attorney’s fees associated with property owner representation, and
 - allow additional payment authority over the statutory caps under Title III

In order to implement the above-mentioned recommendations, FHWA and other agencies must seek changes in legislation, regulation, and policy with respect to the Uniform Act. While the onus for changes in legislation, regulation and policy ultimately lies within the FHWA organization, it is apparent that these changes are the mutual responsibility of all agencies that implement the Uniform Act. Therefore, it is recommended that partnerships be formed between all agencies to create a forum for dialogue and develop recommendation for consistent policies and Best Practices in implementing the Uniform Act uniformly among all agencies.

- Legislation should be changed to allow that land acquisition may commence prior to NEPA without prejudicing the outcome of the NEPA process.

- Regulatory changes should include amending 23CFR to allow for construction clearance approvals on a parcel-by-parcel basis and 49 CFR to include effective hardship and protective buying provisions and to acquire right-of-way and mitigation sites in advance of the ROD.
- Policy should be changed to require all applicable Federal Agencies to publish and maintain Uniform Act program policy documents and appoint an experienced Program Manager responsible for the management and implementation of their respective agency's real estate program.

Going forward, FHWA should encourage reciprocal training and outreach to disseminate information to all federal agencies that acquire property under the Uniform Act as well as MPOs and LPAs. Also, this information can be disseminated through meetings and conferences of professional organizations and associations such as American Association of State Highway Transportation Officials (AASHTO), American Society of Civil Engineers (ASCE), Institute of Transportation Engineers (ITE), and the National Association of Environmental Professionals (NAEP).

While it is challenging to encourage forward thinking and focus on the unknown future needs of public sector real estate; the Stakeholders were encouraged by the fact that someone was listening to their needs and concerns, and that they were given the opportunity to exchange ideas based on their personal knowledge and experience. Although, it was difficult for Stakeholders to imagine possible future needs without first considering present needs and possible solutions, Stakeholders agreed that by taking a more proactive approach toward addressing solutions to present needs could possibly result in the minimization or resolution of future needs altogether.

This experienced group of professionals who have worked in the field of right-of-way acquisition for many years are hopeful that their recommendations, which have been discussed over the past 10 years, will be carefully considered and carried forward.

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II. Introduction

The Office of Real Estate Services (HEPR) intends to enhance strategic decision-making. Advocates of formal approaches to forecasting claim that an organization can supplement its effectiveness if it can forecast its environment, anticipate problems and develop plans to respond to those problems. Thus, the HEPR wants to look 30 years into the future, to 2035, to identify concepts, capabilities and technologies that the Federal Highway Administration (FHWA) and other Federal agencies, conducting real estate acquisition, relocation and management activities under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended, will require to remain relevant, vital and productive, serving the missions of the taxpayers and Government efficiently and effectively into the 21st century.

Purpose of Study

The purpose of this research was to increase HEPR's ability to meet program goals by focusing on the most important needs in a rapidly changing global environment. The results of the research should assist HEPR to:

- Critically address the future needs of public sector real estate work so that new or developing concepts, capabilities and technology are identified and understood in a fast-paced, changing and interdependent world.
- Identify feasible legislative and regulatory changes that the HEPR should champion to streamline and improve public sector real estate work.
- Develop tools and methods to anticipate future needs and become more proactive.
- Look towards building parallel processes. Transformational techniques and processes can be nurtured, knowing it is okay to have more tradition-based processes run on a parallel track while change is proved effective and accepted.
- Understand how to identify and exploit "trigger events" which can be used to introduce new ideas, methods and techniques quickly and effectively.
- Be able to face a changing environment in a systematic and broad-based way.

Some of the purposes of this research are as follows:

- Identify attractive, yet non-obvious opportunities, for innovation, new business development, and healthy growth for public sector real estate.
- Identify disruptive technologies with independent forecasts of emerging technologies that could impact public sector real estate.
- Identify methods to reduce uncertainty, and ultimately costs, when making technology and new product investment decisions.
- Identify methods to accelerate the strategic planning cycle with an outside-in view of the future.
- Identify ways to expand our professional skills by learning from individuals from a broad range of experiences, affiliations, and networks.
- Add weight, breadth and effectiveness to our existing planning of public sector real estate activities.
- Challenge conventional wisdom and traditional thinking and bring dynamic insights to public sector real estate strategic planning and project development thinking.
- Create a forum for debate on issues concerned with future trends and needs for public sector real estate.

Research Goals

The HEPR program goals and the goals of this study are: 1. Provide guidance to FHWA Divisions, State Departments of Transportation (DOT), and Local Public Agencies (LPA) to ensure they have the capacity to discharge their stewardship, oversight and other responsibilities for the right-of-way program, including (a) providing legislative proposals, regulations, policies and guidance; (b) providing technical assistance and training support; and (c) engaging in outreach and information dissemination activities; 2. Fulfill Lead Agency role for Uniform Act by (a) advancing updating activities for the UA statute and implementing regulations; and (b) assisting those operating under the Uniform Act to understand it and to meet its requirements; 3. Identify and promote improved practices and new approaches for right-of-way program; and, 4. Serve as proactive Headquarters Program Office for right-of-way, including integration with other functions, programs and disciplines.

III. Methodology

Research was conducted to identify the tools – technical, legislative, regulatory, human resource skills, and stewardship mechanisms – that will be needed in the time span to the year 2035. The research also identifies present and future needs and possible solutions of public sector real estate internally and externally. Techniques used to conduct this research included an electronic survey distributed to selected stakeholder participants and a focused brainstorming session that specifically addressed how to identify possible legislative and regulatory changes and needs on which to focus limited resources in a rapidly changing global environment.

Selection of Stakeholder Participants

Stakeholder participants were selected from a variety of backgrounds throughout the United States and because of their knowledge and expertise in the fields of engineering, planning, construction, and laws and regulations related to the acquisition of real property for transportation projects under the Uniform Act. Stakeholders participant include representatives from FHWA Headquarters and Division offices, FAA offices, State DOT Right-of-Way offices, Regional Transportation District (RTD), Eminent Domain Attorneys, Right-of-Way Consultants, Land Use, Economic and Public Involvement Specialists.

Online Survey Tool

An online survey tool provided participants an opportunity to answer open-ended questions with detailed comments regarding concerns within their program and possible solutions.

Stakeholder Survey

The Stakeholder survey was developed to collect information and used to direct the content of the one-day brainstorming session, which took place on January 12, 2006. This was a onetime survey that required approximately one hour to complete, including the time for reviewing instructions. The survey inquired as to the participant's concerns related to their real estate and right of way programs. The survey also addressed present and future needs and possible solutions to public sector real estate in the next 30 years. Questions specifically addressed the following issues:

- Frustrations with current program processes and solutions for streamlining or simplifying those challenges associated with the Uniform Act
- Significant changes in real estate acquisition, appraisal, relocation assistance, eminent domain, and current federal and state laws and regulations in addressing future acquisition or preservation of real estate required for transportation projects
- Ideas for coordinating with local jurisdictions to aid in the preservation of right-of-way
- Necessary concepts, capabilities and technologies to implement solutions in the 21st Century

- How FHWA can best assist in accommodating suggested solutions and do more with less.

Brainstorming Session

The survey results were used to prepare for the Focused Brainstorming held on January 12, 2006 at the FHWA Colorado Division Offices in Lakewood, Colorado. There were 21 attendees. The graphic illustrations from the session have been used to illustrate issues, concerns and possible solutions discussed during the Brainstorming Session. A copy of the graphic illustrations of the day's discussion can be found in the Appendix.

The purpose for the Brainstorming Session was to focus on identifying:

- Present real estate program needs
- What the real estate program will look like in the next 30 years
- New ideas, concepts, and technologies that can be utilized to meet present and future needs of public sector real estate; and
- How FHWA can help implement these solution and do more with less.

The goals of the Brainstorming Session were centered on assisting FHWA in providing future guidance to federal, state and local public agencies in the areas of:

- Legislative proposals, regulations, policies, and guidance
- Technical assistance and training support
- Outreach and information dissemination activities
- Improved practices and new approaches for real estate programs
- Lead agency integration with other functions, programs and disciplines

IV. Needs and Possible Solutions

The session opened by referencing the questions addressed in the Survey Response Summary to further identify common issues among each of the Stakeholders, their agency or organization, and their present and future needs. While discussing these issues, the Stakeholders were instructed to not only develop solutions to meet today's needs, but also with an eye toward meeting future needs.

The discussion began with addressing the following present and future needs and possible solutions:

Early Integration and Coordination of Right-of-Way

- There is a need for integration of right-of-way functions early in the project development process. Once lines and access controls are set, it's too late to make changes to the design plans. Engineers need to be educated on what compensable damages are and how the design can be tweaked to avoid problems down the "road."
- Early coordination with Right-of-Way Managers and Attorneys would provide better opportunity to negotiate with landowners before they become "dug in" and not willing to negotiate. Right-of-way Managers and Attorneys should review alternatives and issues from the beginning and effectively include landowners early and throughout the project development, environmental, and final design stages of projects. Historically, by the time the Attorney has been notified, there is already a problem and often it's too late.

- Senior Management needs to be a part of the bigger picture and recognize that right-of-way issues can potentially “kill” their project if they don’t make time to include right-of-way up front. At a minimum, the Right-of-Way Team should consist of the Right-of-Way Manager, an Appraiser, and an Attorney. The entire team needs to be aware of what’s coming at the conceptual stage.
- The common sentiment among the Brainstorming Session Stakeholders was that there is a fundamental lack of recognition of right-of-way in the traditional Design-Bid-Build process, which is handled by the DOTs. They went on to suggest that the process should be renamed “Design-Acquire-Bid-Build” to recognize that acquisition should be viewed as an equally important segment in the process. Similarly, acquisition should also be recognized as an equally important segment of the Design-Build process.
- Typically, Design Build projects identify right-of-way design at 30%. This raises the question, when should agencies internally look at right-of-way issues prior to public and landowners becoming aware of the project? The public wants to know when the project will happen and many times, there are no answers until alternatives are studied. Most often property owner’s questions come in advance of the National Environmental Policy Act (NEPA) process. Conversely, involving property owners where there may not be issues before an alternative is identified, is also a concern. The bottom line is that the public needs to know and agencies need to be more up front with the information.
- The length of time required to complete the NEPA process and delays until the agency is able to begin the acquisition and relocation process can be counter productive, unfair to property owners and tenants, and creates significant schedule impacts. During this lengthy process, real estate in the corridor is rapidly escalating in value and extensive development is allowed to occur, thereby significantly increasing the cost of the right-of-way and threatening the feasibility of the project.
- Advanced acquisition needs to be strategic and prior to the NEPA process but the agency also needs to make a distinction between buying property and buying right-of-way. The Stakeholders felt that there is nothing environmentally damaging about purchasing property, especially when it can be rapidly and easily remarketed in today’s real estate market. Property acquisition is an environmentally neutral event, but is not considered such because of the fear of prejudicing alignment decisions.
- Effective corridor preservation is difficult to achieve after the NEPA process. To be effective, corridor preservation should be done in advance of NEPA. However, more often than not, there is a lack of financing. Currently, there are states that buy property ahead of NEPA, although they are using their own funds. This then precludes agencies from requesting federal reimbursement.
- How sophisticated a particular jurisdiction is with regard to preserving right-of-way is also an issue. Agencies and LPAs need to implement equitable and consistent land use tools that prevent development from happening in areas of potential right-of-way preservation.
- Agencies should integrate right-of-way early during the Major Investment Study (MIS) or Feasibility Study. In this way, right-of-way can become part of the screening criteria in the NEPA process. After 60% design, right-of-way tends to become locked in and too late for revisions.
- Without an improved planning and development process, real estate acquisition will continue to be reactive, expensive and complex.

Solutions: Early Integration and Coordination of Right-of-Way

- Integrate the right-of-way function early in the planning, environmental and final design processes.
- FHWA needs to be a strong advocate for DOTs in setting a precedent for Engineering and Planning Managers to emphasize the need for right-of-way involvement in early planning, project development, environment, and final design phases of projects.
- DOTs also need to do a better job elevating right-of-way issues to upper engineering management.
- As a comprehensive team, the Chief Engineer, Senior Managers and the Real Estate Project Manager need to be responsible for a strategic approach to bringing in related skill sets such as; legal, relocation, land value, and utilities experts, as needed.
- To encourage long range planning in the preservation of future right-of-way, there should be a collaborative effort between DOTs and LPAs, who operate in fast growing areas and are dependent on or influenced by developers.
- Changes should be made to the NEPA process to allow land acquisition as early in the process as the development of the Purpose and Need and consider land acquisition as an environmentally neutral event so that it will not be a deterrent to the outcome of the preferred alternative. However, the current understanding is that doing anything with the land prior to the NEPA determination will not be allowed.
- Traditionally, Engineers view utilities as a separate process from right-of-way. The practical solution would be to incorporate both processes concurrently. The Corps of Engineers (COE) has implemented a Project Initiation Process that includes right-of-way and utilities together. This has shown to greatly increase coordination and planning with Project Managers.
- FHWA in coordination with DOTs need to develop a “Design Acceptance Stage” similar to the process currently being utilized by ODOT that allows for establishing footprint and slope lines early in the project development process. This would allow DOTs to proceed with right-of-way acquisition concurrently with other functions of the project development process.

Flexibility in the Laws and Regulations

- There is not enough flexibility in the laws and regulations as they relate to additional payment authority. Agencies are dollar sensitive and need more flexibility.
- There is lack of uniformity and efficiency within some Federal agencies and between their partners in estimating the cost of right-of-way and defining right-of-way problems in the project development process.

Solutions: Flexibility in the Laws and Regulations

- Change the laws and regulations and provide the states flexibility in determining payments as the situation and fairness demand. Require that states document their actions as they do now with administrative and legal settlements.
- FHWA mentioned a current research study underway to identify Best Practices for Right-of-Way Cost Estimating. The Stakeholders suggested that AASHTO be informed of the study so they can help integrate and disseminate the Best Practices identified in the study to agencies receiving federal aid assistance under the Uniform Act.

Training and Education

- To have successful coordination you need education. Agencies need to be educated on technologies that streamline processes and make them more cost effective and efficient. Program Management needs to understand that right-of-way is a critical process with legally required steps and timelines that cannot be accelerated with additional resources and therefore this can greatly

affect project delivery. Managers need to be aware of the importance of right-of-way and how it can stop their projects.

- Agencies are experiencing high turnover of experienced Right-of-Way staff who possess a great deal of institutional knowledge and this creating a void. Younger staff is left without training and mentorship from knowledgeable senior staff. Also, there is a high turnover of less experienced staff that is initially trained by the Agency only to leave within a few years.
- There is a lack of importance for training, internally and externally, regarding the right-of-way process within the engineering and planning disciplines. Advocacy for training needs to be elevated within the Agencies, with FHWA and Right-of-Way Managers taking the lead.
- Metropolitan Planning Organizations (MPOs), LPAs, Engineering Management, Environmental Planners, Public Involvement Specialist, and others involved in the planning and project development process also need to be included in statewide training developed by FHWA and DOT Right-of-Way Managers.
- In some cases Federal Agencies and their partners do not properly inform landowners of their benefits and eligibility for acquisition and relocation assistance.
- Landowners lack basic understanding of relocation caps (\$22,500 and 90 days), which creates problems. Adding to this confusion is the lack of awareness of the Uniform Act and training for and by the staff of federal agencies and their partners about the relocation program.
- A mechanism is needed to promote private sector partners who have the same incentive for accountability and profit motives as the agency. The private sector needs to be sensitive to impacts of private property owners and provide equally professional services.
- Bottom line - internal Agency staff training is lacking due to budget constraints and the availability of in-state and reasonably priced courses. Right-of-way people should be well trained whether from the public or private sector. A universal and active training process is needed. Training must be reasonably priced, available in-state, and available on a timely basis.

Solutions: Training and Education

- Training needs to be a top priority for FHWA as advocates in making real estate a major policy issue for DOTs. A mandate should come from the FHWA Administrator stating that in order for an agency to receive federal funds, right-of-way must be emphasized in the project development process.
- DOTs top Engineering Management needs to “buy into” and understand the priority of right-of-way in the planning and design phase. Also, Engineering Management needs to be responsible providing the resources necessary to elevate right-of-way training and education within their organizations.
- “Implement partnering from the top down in an effort to get everyone on the same page”. It is critical for Right-of-Way Managers to become advocates for the right-of-way process within their organization and create a “grass roots” effort and an informal network between Attorneys, Engineering Management, Planners, Environmental, and Right-of-Way staff. Right-of-Way Managers must develop a statewide right-of-way training and an ongoing basis.
- Help Engineers understand that right-of-way is very personal and that there is an emotional perspective to working with property owners and displaced persons. Engineering Management needs to understand this is a “people” process where real people are impacted and that short cutting the process can be problematic to project delivery.
- DOTs need to develop training and education programs that are disseminated to MPOs and LPAs on a statewide basis. Also, should emphasize project delivery methods.

- FHWA should develop and disseminate cost effective educational tools and techniques such as online training, video and DVD for basic courses, and webinars. In addition, FHWA should offer traditional face-to-face classroom courses that are more personable in discussing more advanced and issues specific to each state.
- FHWA should help develop and build on training courses and degree plans within community colleges. Also, FHWA should encourage engineering schools to expand their curriculum to include courses on land acquisition and the project development process to give engineers an appreciation for right-of-way.

Recruitment

- Right-of-Way is not widely known as a profession and therefore recruiting is difficult. At one time FHWA had an initiative to create a career path within universities; however, this effort did not attract much interest. FHWA recruiters are also not currently emphasizing right-of-way in their recruitment efforts.
- The DOTs are unable to find qualified in-state right-of-way applicants and need the ability to advertise nationally for right-of-way positions.
- FHWA and DOTs need to improve perception of federal and state employment to attract potential right-of-way practitioners.
- Soft skills as well as technical skills are important within the right-of-way profession – this is a people oriented industry. The search should be broadened to include people in the liberal arts fields rather than only those with a technical or scientific background.

Solutions: Recruitment

- FHWA needs to become an advocate for the right-of-way profession as a career path. They need to emphasize the right-of-way discipline in their recruiting efforts and develop relationships with universities, vocational institutions, and private real estate colleges.
- FHWA needs to develop and initiate better partnerships with universities and identify funding sources for scholarships. The Right-of-Way professional organizations such as IRWA and AASHTO should participate in this effort.
- FHWA and DOTs need to develop the right-of-way profession within their organizations by implementing incentives such as combined on-the-job training and real estate training courses. “Grow your own future.” Develop an internal attractive career path complete with a training and education stepladder as an incentive for higher-level positions and salary increases.
- Create a public private partnership between agencies and consultants to provide cross training to build stronger experience levels across the board and to utilize and retain institutional knowledge on both sides. “We’re in this together.”
- FHWA and DOTs need to seek assistance in developing a personality profile from such outside sources as the Meyers Briggs Test or have the Gallop organization do interviews for management positions within the agencies.

Public Relations

- Public relations, i.e., how and when to deal with landowners, is an issue. Lack of understanding by the public regarding eminent domain has created anecdotal information about landowners being mistreated by agencies. “Stop the government from taking my house!” Now more than ever there is a need to educate the public on the right-of-way process before fear sets in.
- Top management should understand that right-of-way and environmental issues need to be dealt with early in the planning and environmental process. Timelines are not sufficient to acquire property and to do quality work at the same time. “If you don’t do it right it comes back to haunt you.”

- Public relations experts (knowledgeable in the real estate process) are not historically involved early enough in the environmental and planning stages to help address the public's concerns regarding right-of-way.

Solutions: Public Relations

- Public Relations experts need to be brought into the right-of-way and eminent domain processes and should work in conjunction with the Right-of-Way and Project Managers to develop a systematic approach for addressing landowner concerns to effectively change the public perception of acquisition of private property under eminent domain.
- The broader perspective is that there is an interconnection between input from the community and each phase of the project development process and how each impacts the other. Landowners and the surrounding community need to be informed and involved from the beginning and throughout the project development process.
- At a minimum, the Right-of-Way Manager should be present at public meetings to answer questions and address the public's concerns regarding right-of-way impacts.

Technology

- Agencies are using their limited resources to collect redundant and outdated information. Agencies should look at using Geographic Information Systems (GIS) overlays to determine right-of-way impacts as early in the project development process as feasible. Agencies need to learn what GIS can do and how to apply it in real time analysis to be more efficient in determining impacts.
- GIS layers can be used in conceptual mapping of alternatives by integrating GIS and CADD layers along with such data that includes information on utilities, ownership, titles and agreements, historical, land use, zoning, etc.
- Utilizing GIS to obtain historic property information can be more efficient in the development of design plans and the mapping of Right-of-Way deeds and easements.

Solutions: Technology

- FHWA and DOTs need to consider alternative technologies and understand the full use and capabilities of such technologies. GIS as an automated management tool in the project development process streamlines and makes for a more cost effective and efficient process. This technology is currently available and right-of-way can be incorporated into this system quickly.

V. Recommended Methods for FHWA's Implementation of Solutions

The following summary of recommendations were identified as methods for FHWA to consider as solutions to the previously identified present and future needs of public sector real estate in the next 30 years. The following recommendations are divided into six categories; internal procedural changes for FHWA and DOTs, technical assistance and training support, legislation, regulation, policy, and outreach and information dissemination activities.

Recommended Changes to FHWA and DOT Procedures

The following recommended procedural changes for both FHWA and the DOTs summarize possible solutions previously identified in the survey and discussed during the brainstorming session. These tie to the areas of early integration and coordination of right-of-way during project development process, right-of-way training and education, future staff recruitment, public relations outreach, and technological tools and techniques as outlined above.

FHWA

- FHWA needs to be a strong advocate for DOTs in setting a precedent for Engineering and Planning Managers to emphasize the need for right-of-way involvement in the early planning, project development, environmental, and final design phases of projects.
- A mandate should come from the FHWA Administrator stating that in order for an agency to receive federal funds, right-of-way must be fully integrated throughout the project development process.
- Public Relations experts need to be brought into the right-of-way and eminent domain processes and should work in conjunction with the Right-of-Way and Project Managers to develop a systematic approach for addressing landowner concerns to effectively change the public perception of acquisition of private property under eminent domain.
- FHWA in coordination with DOTs needs to develop a “Design Acceptance Stage” that runs concurrently with other functions of the project development process.
- FHWA needs to utilize alternative technologies such as GIS that make for a more efficient and effective program.

DOTs

- DOTs need to integrate the right-of-way function early in the project development process, elevate the importance of the right-of-way process with upper Engineering Management, encourage long range planning and coordination with MPOs and LPAs in the preservation of future right-of-way, and provide the necessary experts (i.e., legal, relocation, land value, and utilities experts) for the project development process.
- DOTs need to implement partnering from the top down, gain “buy-in” and understanding from Engineering Management of the priority of right-of-way in the project development process, and be responsible for providing the necessary resources to elevate training and education within their organizations. Right-of-Way Managers also need to create a “grass roots” effort and form informal networks between Attorneys, Engineering Management, Planners, Environmental and Right-of-Way staff.
- DOTs need to create a public private partnership between agencies and consultants to provide cross training that builds stronger experience levels and aids in the utilization and retention of institutional knowledge on both sides.
- DOT Right-of-Way Managers should work with Public Relations experts and be present at public meetings early in the project development process to answer questions and address the public’s concerns regarding right-of-way impacts. Landowners and the surrounding community also need to be informed and involved from the beginning and throughout the project development process.
- DOTs need to utilize alternative technologies such as GIS to develop a more efficient and effective program.

Recommended Technical Assistance and Training Support

- FHWA needs to make training a top priority and act as advocates in making real estate a major policy issue for DOTs. FHWA should develop and disseminate cost effective educational tools and techniques such as online training, videos and DVDs for basic courses, and webinars. In addition, FHWA should continue to offer traditional face-to-face classroom courses that are more personable in discussing more advanced issues specific to each state.
- FHWA needs to develop and build on training courses and degree programs within community colleges. Also, FHWA should encourage engineering schools to expand their curriculum to include courses on land acquisition and the project development process to give engineers an appreciation for right-of-way.

- FHWA needs to become an advocate for the right-of-way profession as a career path. They need to emphasize the right-of-way discipline in their recruiting efforts and develop partnerships with universities, vocational institutions, and private real estate colleges.
- FHWA needs to identify funding sources for scholarships through Right-of-Way professional organizations such as IRWA and AASHTO.
- FHWA needs to support DOT Right-of-Way Managers in developing and delivering a statewide right-of-way training and education program to internal staff as well as MPOs and LPAs that is consistently updated and provided on an ongoing basis.
- FHWA needs to help DOTs to develop the right-of-way profession as career path within their organizations by implementing incentives such as combined on-the-job training and real estate training courses.

Recommended Changes to Legislation

The Uniform Act

- Modify the Uniform Act and the implementing regulations to allow states the authority, within general guidelines, to react as needed to situations relating to the administration of their own right-of-way program. Allow states to develop and document their own QA/QC processes, which FHWA can continue to monitor for compliance.
- While there wasn't consensus among Stakeholders, a recommendation was made to amend the Uniform Act to require presentation of the appraisal at the time of the offer to purchase property. Disclosure with landowners, as early as in the process as possible, builds trust. At issue is the contradiction between the recommendation for more statutory and regulatory requirement and the conflicting recommendation for more State flexibility in implementing the laws and regulations.
- Develop a more collaborative and structured approach to a "reasonable" basis for fair attorney's fees associated with property owner representation. The Uniform Act should allow for payment of attorney fees up to a certain percentage of the award to protect property owners uniformly. Consensus among Stakeholders regarding a "reasonable" basis for fair attorney's fees was not reached during the Brainstorming Session. Again, at issue here is the contradiction between the recommendation for more statutory and regulatory requirement and the conflicting recommendation for more State flexibility in implementing the laws and regulations.
- Provide a simplified program for small, non-complex (5 parcels) projects, such as a De Minimis process, which allows a lump sum payment (global settlement) or self-service relocation claim.
- The law should allow at the state level within the existing federal principals of fairness, justice, equity and uniformity. Change the law to allow the states additional payment authority over the statutory caps under Title III, when properly justified and documented.

The National Environmental Policy Act

- Legislate that land acquisition may commence prior to NEPA without prejudicing the outcome of the NEPA process.

Recommended Changes to Regulation

23 CFR

- Amend the provision in the regulation to allow for construction clearance approvals on a parcel-by-parcel basis similar to the Design Build project provisions.

49 CFR

- Amend the regulations to include the effective hardship and protective buying provisions of 23 CFR into 49 CFR, allowing all agencies to acquire property under the same provisions. Need to explore further in light of federal agencies own laws and regulations. FHWA should seek to understand why and where these inconsistencies exist and to set up a system for dialogue on this issue of program funding for real estate acquisition, with the goal of helping all agencies see the varying options that are being used and to identify what changes they may wish to make in their own laws and rules.
- A white paper recently drafted by one of the Stakeholders proposes a revision to 23CFR 710 to include FHWA's authorization to acquire lands necessary for right-of-way and mitigation sites in advance of the Record of Decision (ROD) based upon the reasonable necessity of the land for the project.
- Modify the implementing regulations to reflect any and all statutory changes recommended above.

Recommended Changes to Policy

- Require all applicable Federal Agencies to publish and maintain Uniform Act program policy documents and appoint an experienced Program Manager responsible for the management and implementation of their respective agency's real estate program.

Outreach and Information Dissemination Activities

FHWA should encourage reciprocal training and outreach to disseminate information to all federal agencies that acquire property under the Uniform Act as well as MPOs and LPAs. Also, this information can be disseminated through meetings and conferences of professional organizations and associations such as the International Right of Association (IRWA), the American Association of State Highway Transportation Officials (AASHTO), the American Society of Civil Engineers (ASCE), the Institute of Transportation Engineers (ITE), and the National Association of Environmental Professionals (NAEP).

VI. Conclusion

To meet the HEPR program goals of this study to identify the Future Needs of Public Sector Real Estate, it was determined that the best way to begin was by identifying present needs and possible solutions. To accomplish this, stakeholder participants were selected from a pool of national experts in the right-of-way and related fields. The core of the research involved an electronic survey distributed to these stakeholders and a focused brainstorming session with them that both specifically addressed how to identify possible legislative and regulatory changes and needs on which to focus limited resources in a rapidly changing global environment. Present and future needs and possible solutions were identified in the areas of:

- early integration and coordination of right-of-way during project development process
- right-of-way training and education
- future staff recruitment
- public relations outreach
- technological tools and techniques

The Stakeholders made recommendations for FHWA to consider as solutions to the identified present and future needs of public sector real estate in the next 30 years. The identified recommendations for change were then divided into six categories; internal procedural changes for FHWA and DOTs, technical assistance and training support, legislation, regulation, policy, and outreach and information dissemination activities.

The following include the top recommendations for FHWA:

- To be a strong advocate for integrating the right-of-way function early in the planning, project development, environmental, and final design phases of projects.
- To mandate that in order for an agency to receive federal funds, right-of-way must be emphasized in the project development process.
- To make training a top priority and act as advocates in making real estate a major policy issue for DOTs.
- To develop an understanding from Engineering Management for right-of-way to be fully integrated throughout the project development process.
- To bring Public Relations experts into the right-of-way and eminent domain processes.
- To utilize alternative technologies such as GIS that make for a more efficient and effective program.
- To become an advocate for the right-of-way profession as a career path and emphasize the right-of-way discipline in their recruiting efforts and develop partnerships with universities, vocational institutions, and private real estate colleges.
- To promote flexibility in the law to allow states more authority regarding administration of their right-of-way programs, i.e.:
 - require presentation of appraisal to landowner at the time of offer
 - allow for a “reasonable” basis for fair attorney’s fees associated with property owner representation, and
 - allow additional payment authority over the statutory caps under Title III

In order to implement the above-mentioned recommendations, FHWA and other agencies must seek changes in legislation, regulation, and policy with respect to the Uniform Act. While the onus for changes in legislation, regulation and policy ultimately lie within the FHWA organization, it is apparent that these changes are the mutual responsibility of all agencies that implement the Uniform Act. Therefore, it is recommended that partnerships be formed between all agencies to create a forum for dialogue and develop recommendation for consistent policies and Best Practices in implementing the Uniform Act uniformly among all agencies.

- Legislation should be changed to allow that land acquisition may commence prior to NEPA without prejudicing the outcome of the NEPA process.
- Regulatory changes should include amending 23CFR to allow for construction clearance approvals on a parcel-by-parcel basis and 49 CFR to include effective hardship and protective buying provisions and to acquire right-of-way and mitigation sites in advance of the ROD.
- Policy should be changed to require all applicable Federal Agencies to publish and maintain Uniform Act program policy documents and appoint an experienced Program Manager responsible for the management and implementation of their respective agency’s real estate program.

Going forward, FHWA should encourage reciprocal training and outreach to disseminate information to all federal agencies that acquire property under the Uniform Act as well as MPOs and LPAs. Also, this information can be disseminated through meetings and conferences of professional organizations and associations such as the International Right of Way Association (IRWA), the American Association of State Highway Transportation Officials (AASHTO), the American Society of Civil Engineers (ASCE), the Institute of Transportation Engineers (ITE), and the National Association of Environmental Professionals (NAEP).

The recommendations above meet HEPR's goals for this study, which were to:

- 1) Provide guidance to FHWA Divisions, State Departments of Transportation (DOT), and Local Public Agencies (LPA) to ensure they have the capacity to discharge their stewardship, oversight and other responsibilities for the right-of-way program, including (a) providing legislative proposals, regulations, policies and guidance; (b) providing technical assistance and training support; and (c) engaging in outreach and information dissemination activities;
- 2) Fulfill Lead Agency role for Uniform Act by (a) advancing updating activities for the Uniform Act statute and implementing regulations; and (b) assisting those operating under the Uniform Act to understand it and to meet its requirements;
- 3) Identify and promote improved practices and new approaches for right-of-way program; and,
- 4) Serve as proactive Headquarters Program Office for right-of-way, including integration with other functions, programs and disciplines.

While it is challenging to encourage forward thinking and focus on the unknown future needs of public sector real estate; the Stakeholders were encouraged by the fact that someone was listening to their needs and concerns, and that they were given the opportunity to exchange ideas based on their personal knowledge and experience. Although, it was difficult for Stakeholders to imagine possible future needs without first considering present needs and possible solutions, Stakeholders agreed that taking a more proactive approach toward addressing solutions to present needs could possibly result in the minimization or resolution of future needs altogether.