

Preliminary Design

Prior to beginning

Figure 1: Figure 1: Figure 2: Figure



8 Preliminary Design Steps

- 1) Perform and submit Environmental Study & requested classification
- Determine Municipal Separate Storm Sewer System (MS4) and Limited Reuse Soil (LRS) requirements
- 3) Coordinate Utility Relocations
- 4) Refine Plans and Cost Estimate of the Proposed Action



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8 Steps Continued

- 5) Document Design Exceptions and Deviations
- 6) Review project with Traffic Control Committee
- 7) Submit preliminary design documents for NHDOT review and approval
- 8) Conduct public hearing for eminent domain, if necessary





Step #1 - Perform and Submit Environmental Study and Classification

NEPA basics:

- ➤ NEPA National Environmental Policy Act
- ➤ All projects get "Classified"
- Most LPA Projects get classified as a "Categorical Exclusion"
- Results in an Environmental Document and Commitments that must be followed to build your Proposed Action

Section #17



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Environmental Study and Classification

- NEPA requires a review of the effects of all Federal Actions:
 - Federally Funded Projects
 - Federally Assisted Projects
 - Federally Licensed Projects
- The level of review varies based on <u>Proposed Action</u> and <u>Resources Effected</u>

Section #17











Project Classifications:

- > Environmental Impact Statement (EIS)
- > Environmental Assessment (EA)
- Categorical Exclusion (CE)
 - > Individual Categorical Exclusion (25%)
 - ▶ Programmatic Categorical Exclusion (75% LPA projects)

Section #17



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Environmental Study and Classification

Programmatic Categorical Exclusion

- ➤ Most common LPA classification (**75%**)
- > Called: "Programmatic CE"
- Projects with history of <u>not</u> having <u>significant</u> environmental impacts



- There is a list of 39 "activities" that can qualify as Programmatic
- New activity just added: Electric Vehicle Charging Stations

39 Activities listed in LPA Handouts, as well as On-Line at:

https://www.dot.nh.gov/projects-plans-and-programs/programs/environmental-management-system/project-management-section

Section #17





Env. Study & Classification

Use <u>Determination Form</u> to classify your project

- ➤ Called: <u>Categorical Exclusion Programmatic Determination</u> Checklist Form
- The completed form becomes your <u>Environmental</u> Document w/ attachments
- ➤ **16** yes/no question checklist
- > All Answers "No" = Programmatic CE



Programmatic Determination Checklist Form in LPA Handouts, as well as on-line at:

https://www.dot.nh.gov/projects-plans-and-programs/programs/environmental-management-system/project-management-section

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Environmental Study and Classification

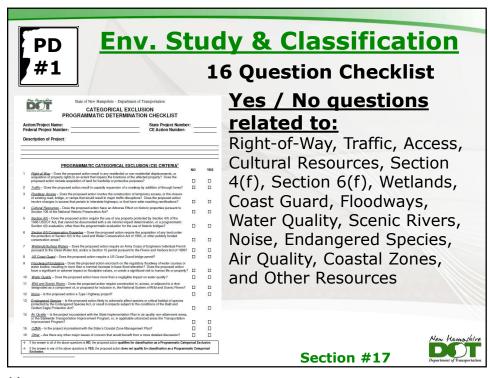
Individual Categorical Exclusion

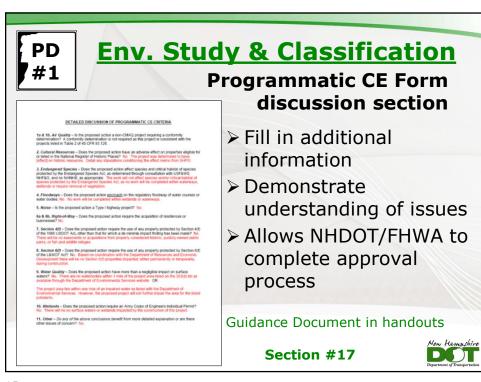
- > Approx. 25% of LPA Projects
- Answered Yes to one or more of the 16 questions on the Programmatic <u>Determination</u> Checklist Form
- Requires an Individual Categorical Exclusion including an alternatives analysis and written narrative
- > Still step wise NEPA process
- Needs FHWA concurrence and approval
- > Example: adverse impact to a historic property

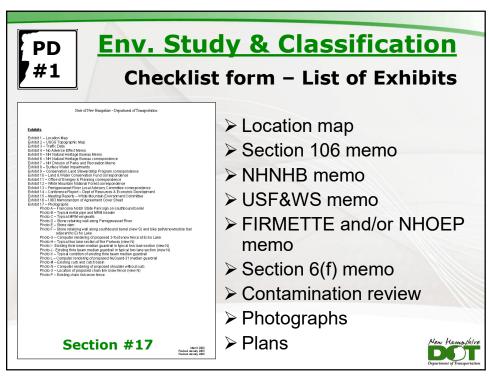
Section #17













Programmatic CE Question #1 - Right-of-Way

Does the proposed action result in any residential or non-residential displacements or acquisition of property rights to an extent that it impairs the functions of the affected property?

Does the proposed action include acquisition of land for hardship or protective purposes?

Section #17



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Environmental Study and Classification

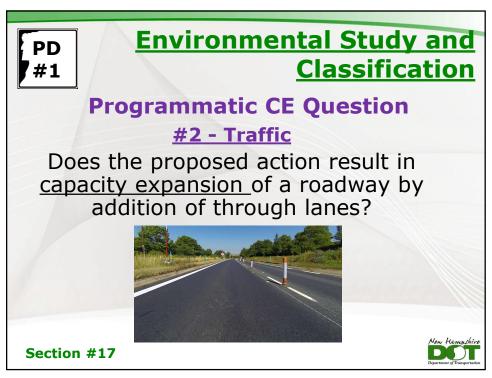
Right-of-Way Guidance

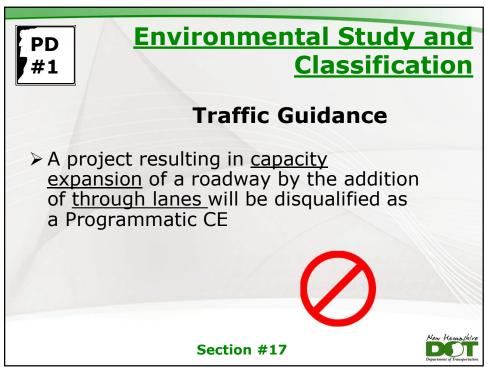
To qualify for Programmatic CE:

- "Proposed Action" cannot require the acquisition of residences or businesses, and
- Project acquisitions or permanent easements cannot impair the function of the property
- ➤ Need to determine and document impacts

Section #17









Programmatic CE Question

#3 - Roadway Access

Does the proposed action involve the construction of temporary access, or the closure of an existing road, bridge, or ramps that would result in major traffic disruptions?

Does the proposed action involve changes in access that pertain to interstate highways, or that have wide-reaching ramifications?

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Environmental Study and Classification

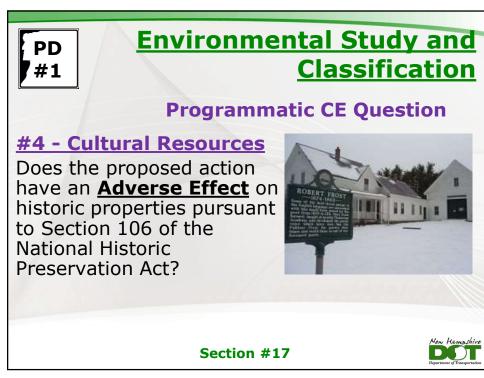
Roadway Access Guidance

Major traffic disruptions (disruptions beyond normal project conditions) are defined on a case by case basis in consultation with NHDOT and FHWA

Most LPA projects are not going to have major traffic disruptions

Section #17







Environmental Study and Classification

Cultural Resource Guidance

- Some LPA projects <u>may not</u> need Cultural Resource Agency review
- ➤ NHDOT Bureau of Environment can review and process certain types of projects with <u>minimal</u> or no potential to cause effects to historic resources

Section #17





What kinds of projects/actions?

- "Appendix A and Appendix B Undertakings" listed in the Section 106 Programmatic Agreement
- ➤ Some Post 1945 Bridges / Culverts

Handout: SHPO Section 106 Programmatic Process and Post 1945 Guidance

Section #17



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Environmental Study and Classification

Cultural Resources Guidance:

- ➤ Submit Request for Project Review (RPR)
- ➤ Attend Cultural Resource review ✓
- Determine Area of Potential Effect (APE)
- Determine your projects effect
 - 1) No historic properties affected?
 - 2) No adverse affect? or
 - 3) Adverse affect?



Section #17







Cultural Resources Guidance Continued

- Sponsor fills out LPA Effects Memo
 - ➤ Discusses project effect
 - ➤ Discusses commitments to mitigate effects
 - >FHWA and Sponsor sign memo
 - > Represents cultural resource approval
 - > Required to move project forward
 - >Adverse Effect = Yes = Individual CE

Copy of Effects Memo in handouts

Section #17



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Environmental Study and Classification

Programmatic CE Question

#5 - Section 4(f)

Does the proposed action require the use of any property protected by **Section 4(f)** of the 1966 USDOT Act, other than a *de minimis* impact determination?



Section #17





Section 4(f) Resources are:

- Publicly owned public parks and recreation areas
- Fish & waterfowl/wildlife refuges
- National Register listed/eligible historic properties







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Environmental Study and Classification

Section 4(f) Guidance

- ➤ Consult with Local, State and/or Federal Agencies involved with 4(f) resources in your project area
- Consult during Monthly Cultural and/or Natural Resource Agency Meetings
- ➤ The specific 4(f) resource and the impacts to it from the proposed action will need to be vetted to determine impacted or not

Section #17





Programmatic CE Question#6 - Section 6(f)

Does the proposed action require the acquisition or conservation of any land under the protection of Section 6(f) of the Land and Water Conservation Act of 1965?



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Environmental Study and Classification

Section 6(f) Guidance

- Section 6(f) Lands are administered through the NH Department of Natural and Cultural Resources (Formally DRED)
- Consult with them to determine if 6(f) lands are involved in your project area



Section #17





Other Publicly Funded Area Guidance

➤ Contact the Stewardship
Specialist at the NH
Conservation Land
Stewardship (CLS) Program
and the Executive Director at
the Land and Community
Heritage Investment Program
(LCHIP)



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Environmental Study and Classification

Programmatic CE Question

#7 - Wetlands & Surface Waters

Does the proposed action require an Army Corp of Engineers Individual Permit?

and/or

A section 10 permit pursuant to the Rivers and Harbors Act of 1899?



Section #17





Wetlands Guidance

- > Perform wetland delineation
- Determine amount and type of wetland impacts
- ➤ If jurisdictional wetland impacts are 3 acres or greater, then an Army Corp of Engineers <u>Individual</u> Permit is required

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Environmental Study and Classification

Rivers and Harbors Guidance

- Proposed actions conducted below the ordinary high water (OHW) elevation of navigable waters need to be permitted by Army Corp
- Natural Resource Coordination Meetings can be utilized to help determine permit thresholds and mitigation requirements

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Programmatic CE Question #8 – US Coast Guard

Does the proposed action require a US Coast Guard bridge permit?



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Environmental Study and Classification

US Coast Guard Guidance

- Alteration or replacement of bridges over navigable waters may require a Bridge Permit from the Coast Guard
- ➤ If the Coast Guard confirms that a Bridge Permit is required, then the action does not qualify for a programmatic CE

See handout for definition of navigable waters

Section #17

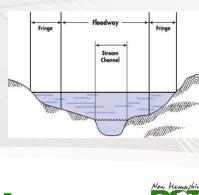




Programmatic CE Question

#9a - Floodways

Does the proposed action encroach on the regulatory floodway of water courses or water bodies, resulting in more than a nominal increase in base flood elevation?



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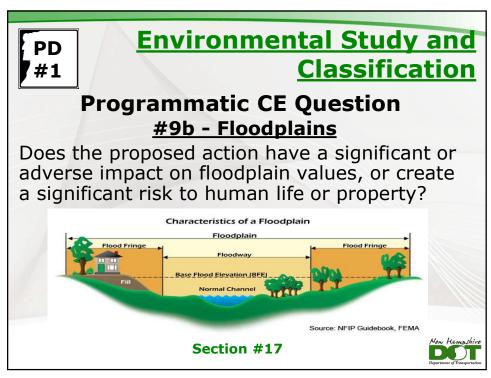
Environmental Study and Classification

Floodway Guidance

- Review Flood Maps to determine if action is located in regulatory floodway
- ➤ If so, perform hydraulic analysis and determine rise in flood elevation
- ➤ Generally rise < 1 foot qualifies for Programmatic CE

Section #17







Environmental Study and Classification

Floodplain Guidance

- Review National Flood Insurance Program Maps
- ➤ Consult Local, State, and Federal entities relative to floodplain management programs and required analysis
- Discuss at Natural Resource Agency monthly meetings

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Programmatic CE Question

#10 - Water Quality

Does the proposed action have more than a negligible impact on water quality?



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Environmental Study and Classification

Water Quality Guidance

- Look for both surface water and ground water resources
- Review at Natural Resource Agency monthly meeting
- Consult with NHDES about sensitive water resources
- Follow Municipal Separate Storm Sewer System (MS4), Alteration of Terrain (AOT) and National Pollutant Discharge Elimination System (NPDES) requirements

Section #17





Programmatic CE Question

#11 - Wild and Scenic Rivers

Does the proposed action require construction in, across, or adjacent to a river designated as a component of, or proposed for inclusion in, the National System of Wild and Scenic Rivers?





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Environmental Study and Classification

Wild & Scenic River Guidance

- ➤ Lamprey River and Wildcat River
- ➤ If a project will impact the channel or banks of a W&S River or the channel or banks of a river below, above, or on a stream tributary to a W&S River, then the action will not qualify for Programmatic CE approval

Section #17





Programmatic CE Question

#12 -Noise

Is the proposed action a Type I highway project?



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Environmental Study and Classification

NOISE Guidance

To qualify for a **Programmatic CE**, the propose action must **not** be a **Type I** project which would consist of the following:

- ➤ Construction of a new highway
- Substantial alteration to vertical or horizontal alignment
- ➤ Addition of through lanes

Section #17





Programmatic CE Question

#13 - Endangered Species

Is the proposed action likely to adversely affect species or critical habitat of species protected by the Endangered Species Act, or result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act?



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PD #1

Environmental Study and Classification

Endangered Species Guidance

Check New Hampshire Natural Heritage Bureau (NHB), US Fish and Wildlife (USFWS), and Information Planning and Conservation System (IPAC) Websites



➤ If positive, then further coordination will be necessary

New Hampshire

Section #17



Programmatic CE Question #14 - Air Quality

Is the project inconsistent with the State Implementation Plan in air quality non-attainment areas, or the Statewide Transportation Improvement Program, or, in applicable urbanized areas the Transportation Improvement Program?





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Environmental Study and Classification

Air Quality Guidance:

To be a Programmatic CE

- Project must be listed in the STIP -Statewide Transportation Improvement Plan
- Project must <u>not</u> be listed as "<u>regionally significant</u>" in the STIP

Section #17





Programmatic CE Question

#15 - CZMA

Is the project inconsistent with the State's Coastal Zone Management Plan?



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Environmental Study and Classification

Coastal Zone Guidance:

- Proposed Actions in coastal communities may require a <u>federal consistency review</u> as determined by coastal program consistency coordinator at NHDES
- ➤ If so, an <u>intergovernmental review process</u> is coordinated thru the Grants and Compliance section of the Office of Energy and Planning (OEP)
- > Other permits may cover these requirements

Section #17





Programmatic CE Question

#16 - Other

Are there any unusual circumstances that would require additional environmental studies to determine if the action would qualify for processing programmatically? For Example:

- Substantial environmental controversy?,
- > Inconsistency with other environmental requirements?, or
- > Significant sources of contamination?





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Environmental Study and Classification

Question #16 Other Guidance

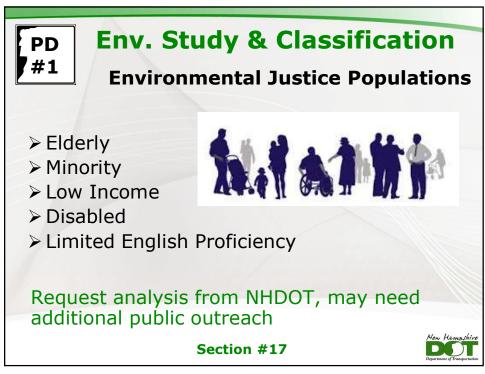
Typical "Other" Items to mention:

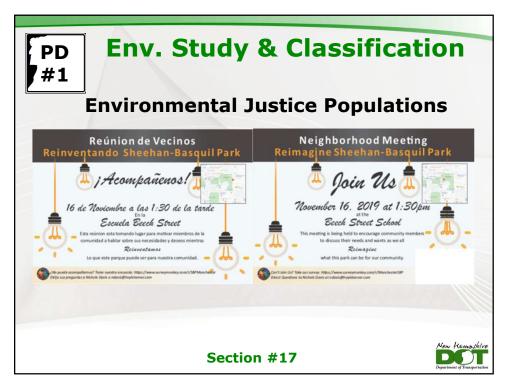
- ➤ Public Opposition
- ➤ NH Designated River
- ➤ Lakes Management Program
- ➤ Comprehensive Shore Land Protection Act (CSPA)
- ➤ Certain population groups next slide

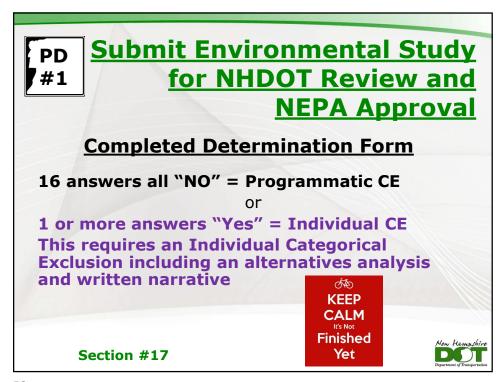
Usually do not end up being answered as "yes" (ie: remain programmatic)

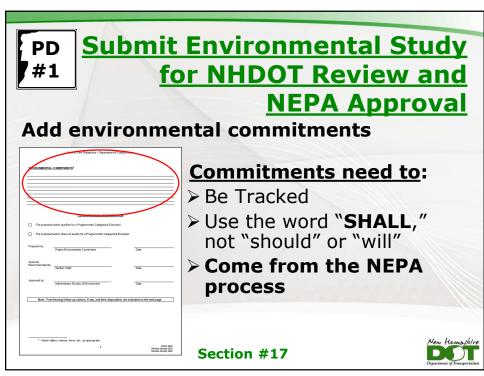
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Submit Environmental Study for NHDOT Review and NEPA Approval

Example Cultural Commitment

"All work within 25 feet of the cemetery, exclusive of work within the footprint of the existing roadway, **shall** be monitored by a 36 CFR 61 qualified archaeologist"

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Submit Environmental Study for NHDOT Review and NEPA Approval

Example public input commitment

"One lane in each direction shall remain open to the travelling public Monday thru Friday during the hours of 3pm to 6pm to help facilitate school buses and higher traffic volumes in the weekday afternoons"

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Submit Environmental Study for NHDOT Review and NEPA Approval

NHDOT review timelines

➤ **Programmatic CE**: 1-2 Weeks

➤ Individual CE: 2-3 Weeks

(Requires review and approval by FHWA)

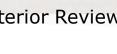
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➤ Programmatic 4(f): 3-4 Weeks

➤ Full 4(f): 14-16 Weeks

(Requires US Dept. of Interior Review)







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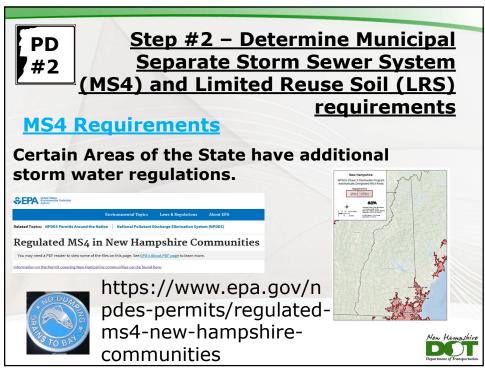
Submit Environmental Study for NHDOT Review and NEPA Approval

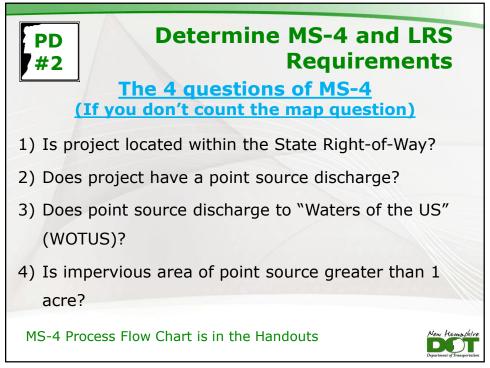
Final Product - NEPA Complete Memo

- NHDOT Bureau of Environment will issue a NEPA Complete Memo to NHDOT Project Manager
- We send copy to Sponsor and consultant (both keep copy)
- Memo will be needed later prior to bidding project (PS&E Stage)
- * NEPA shall be completed before Final Design

Section #17









Determine MS-4 and LRS Requirements

The 4 questions of MS-4:

➤If yes to all 4 questions....then:

- 1) NHDOT needs to be aware it affects our permit with NHDES (Environmental Services)
- 2) Stormwater treatment will likely be required at the point source discharges location(s)
- 3) Determine potential right-of-way needs for stormwater treatment locations.
- 4) Later develop a stormwater treatment "Technical Memo" for NHDOT review in Final Design
 - ➤ If **no** to **any** of the 4 questions, then just mention in the NEPA document not applicable



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Determine MS-4 and LRS Requirements

NHDOT Limited Reuse Soil (LRS) Definition

Transportation corridor soils that commonly containing metals and polycyclic aromatic hydrocarbons at concentrations above naturally occurring background conditions

2019 LRS Presentation in Handouts





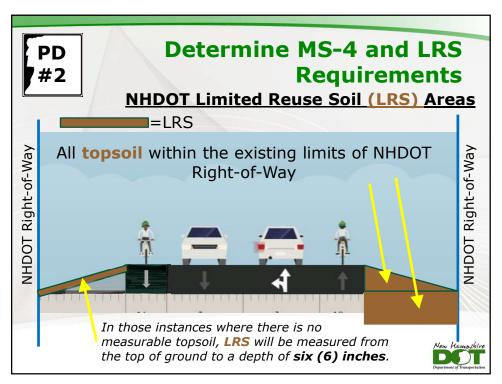
Determine MS-4 and LRS Requirements

NHDOT Limited Reuse Soil (LRS) Areas

Soils currently managed as LRS by the
Department include <u>all topsoil</u> within the limits of
the existing right-of-way (ROW) under its control,
regardless of its depth. In those instances where
there is no measurable topsoil, LRS will be
measured from the top of ground to a depth of six
(6) inches. In addition, street wastes (material
generated through street sweeping, catch basin
clean outs and ditching), <u>asphalt millings</u>, and
reclaimed asphalt are LRS

Department of Transportation

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Determine MS-4 and LRS Requirements

LRS is NOT:

- > Point source contamination
- Material under existing pavement
- ➤ Material underwater
- Considered during clearing/grubbing (de minimis generation activities)







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Determine MS-4 and LRS Requirements

Is LPA project in State Right-of-Way or a Class 4 Urban Compact Section?

If Yes:

- Determine approximate <u>quantity</u> of LRS
- Determine LRS stockpile <u>locations</u> (LRS needs to be kept in existing Right-of-Way footprint



Tomorrow's Final Design
Presentation will provide
an example and cover
documentation needed for
LRS including a Soil
Management Plan





Determine MS-4 and LRS Requirements

Some activities qualify as LRS "De-Minimis" activities?

Examples

- > Installation of guardrail
- Grubbing activities
- > Soil not stockpiled overnight
- > Re-used & stabilized within the same day

If you only have **De-Minimis LRS** activities on LPA project, that will reduce the soil management documentation requirements covered tomorrow in Final Design





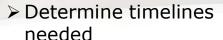
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<u>Step #3 – Coordinate</u> <u>Utility Relocation</u>

- Determine if utilities need to be relocated and who pays?
- Determine if work will be part of the LPA construction contract



Section #20





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Step #3 - Coordinate Utility Relocation

Rules and Policies

- There are rules and policies in place for the relocation of utilities based on type of ownership and type of rightof-way
- > See Section 20 of the LPA Manual
- See NHDOT Utility Accommodation Manual (UAM)

Section #20





Step #3 - Coordinate Utility Relocation

Utility Accommodation Manual (UAM)

- > **UAM** discusses minimum requirements for location, installation, adjustments and maintenance of utilities
- Section 16 of UAM lists situations that qualify for reimbursement (see handout)
- ➤ NHDOT Policy to <u>not</u> participate in the burying of aerial utilities for aesthetics



Section #20

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Step #3 - Coordinate Utility Relocation

Typical RR Projects:

- Active railroad crossing thru your project (CSX, Amtrak, etc...)
- Active railroad with trail nearby
- Abandoned Rail Trail / Multi-Use Paths

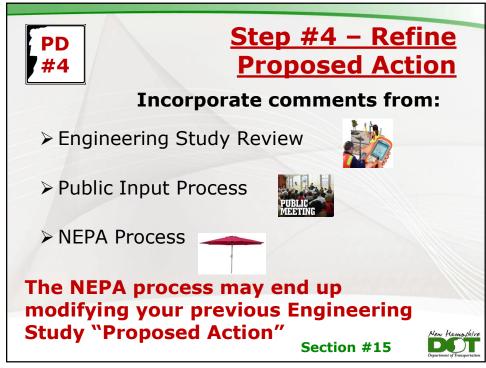
NHDOT owns most abandoned rail corridors

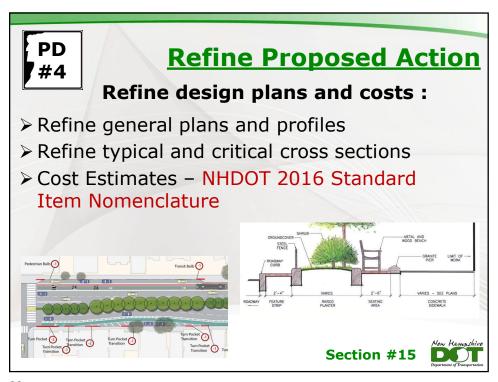
Dept. of Nat & Cult Resources
Manages most abandoned rail
corridors

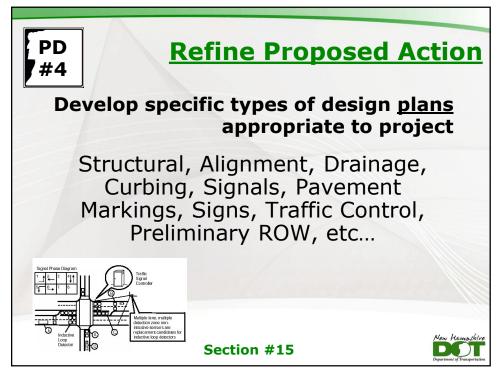


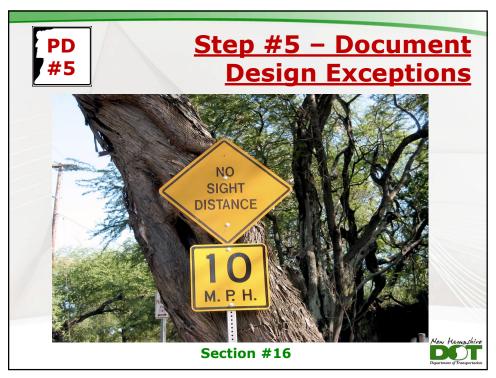


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Document Design Exceptions

If less Than 50mph, then only 2 controlling criteria:

- Design Speed
- > Structural Capacity

Applies to all National Highway System (NHS) Highways

NHDOT practice to apply this to all roadways

Section #15 & #16



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Document Deviations

Additional design standards

- > Clear Zone
- > Intersection Sight Distance
- Hydraulic Opening
- Queuing
- > Level of Service
- > Roadway Ponding
- > And more.....



Ven Hampshire

Section #15 & #16



Document Design Exceptions

Submit Early

- Submit Design Exception and Deviation Documentation along with Preliminary Design submittal
- Design Exceptions shall be granted no later than the Preliminary Design stage



Design Exception info is in the Handouts

Section #15 & #16



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<u>Step #6 – Traffic Control</u> <u>Committee (TCC) Review</u>

"Significance" Determination Consultant Request Memo

- Sponsor and/or Consultant fill out memo and submit to NHDOT PM
- LPA recommends <u>level of</u> <u>significance</u> to TCC as part of memo
- Submittal includes location map, detour plans, traffic volumes, construction phasing plans and/or lane use cross sections

DATE:

AT OFFICE: Bureau of

SUBJECT:

TO: William J. Oldemburg. P.E.
Assistant Decease of Project Development

MEMORANDUM

The following information is in accordance with the Guidelines for Implementation of the Work Zone Sordy and Adolbity Policy to the Traffic Control Committee (TCC) for determination of the project a significance.

Consistent with the TCC Work Zone and Mobility Manual Section 2. Interim Release dated August 19, 2000 regarding the need for Traffic Control Committee reviews, this project is:

Exempt from Presentation

The purpose of this project is:

The project will dovertise on:

The project will dovertise on:

The project will be completed:

Traffic impacts are espected to be:

* An evaluation of the criteria for determination of a significant project is provided in the table shown below.

Section #23



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<u>Step #6 – Traffic Control</u> <u>Committee (TCC) Review</u>

Determination Request Memo Requirements

- Submit one document in pdf format. The TCC Determination memo should be first 4 pages
- The pdf submission should be named: "Project Name_StateProjectNumber_TCC" Example: Concord_41212_TCC.pdf
- > Submissions are due the Friday before the mtg
- ➤ Meetings are third Thursday of the month

 Section #23





<u>Step #6 – Traffic Control</u> <u>Committee (TCC) Review</u>

TCC Presentation Exemption

- Some projects (<u>most LPA projects</u>) will have the ability to avoid meeting with the TCC
- Presentation Exemptions are requested thru the Determination Request Memo and need to provide a reason for exempt status (see memo)

Consistent with the TCC Work Zone and Mobility Manual Section 2 Interim Release dated August 19, 2020 regarding the need for Traffic Control Committee reviews, this project is:



Section #23



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Step #6 - Traffic Control Committee (TCC) Review

TCC Presentation

- Sponsor/Consultant may be requested to meet with TCC to present the project
- Coordinate meeting through your NHDOT Project Manager
- Discuss elements in TCC memo



Section #23





Step #6 - Traffic Control Committee (TCC) Review

TCC Outcome

The TCC will review the information supplied and make any comments or stipulations to be implemented as part of the Work Zone Traffic Control Plan or Project

Outreach Initiatives



Typically, ADA and public outreach comments

Section #23



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Step #7 - Submit Preliminary Design Submission for NHDOT Review and Approval

Submission requirements

- Sponsor letterhead
- Back up material, calculations, design exceptions / deviations, etc..
- Updated estimate
- Updated schedule
- Check with NHDOT Project Manager on format for electronic submission

New Hampshire
Department of Transportation

Section #15



Step #8 - Conduct Public Hearing for Eminent Domain (If Necessary)

Public Hearings for Eminent Domain

- ➤ Very uncommon for LPA projects
- ➤ Need NHDOT concurrence prior
- Need FHWA concurrence of NEPA Classification prior
- ➤ But we do have 1 or 2 a year.....

Section #19



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Conduct Public Hearing for Eminent Domain (If Necessary)

Public Hearing Law

- ➤ If you decide to hold a Public Hearing to layout the project on a class I, II, IV, or V highway, you must comply with State RSA 230 and/or 231
- ➤ This may involve the appointment of a Commission, approved by Governor and Council

Section #19





Conduct Public Hearing for Eminent Domain (If Necessary)

Eminent Domain Laws

- ➤ Eminent Domain Procedures
 State RSA 498A (Final Design)
- ➤ Federal Law Uniform Act of 1970 49 CFR Part 24 (as amended)

Section #19



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Conduct Public Hearing for Eminent Domain (If Necessary)

Discussions with Abutters

- ➤ Encouraged
- Can't discuss compensation until Final Design



"Just Compensation"

covered in Final Design

Section #19





8 Preliminary Design Steps

Re-Cap:

- 1) Perform and Submit Environmental Study & Classification
- 2) Determine Municipal Separate Storm Sewer System (MS4) and Limited Reuse Soil (LRS) requirements
- 3) Coordinate utility relocation
- 4) Refine plans and cost estimate of the Proposed Action



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8 Steps Continued

Re-Cap:

- 5) Document Design Exceptions & Deviations
- 6) Review project with Traffic Control Committee
- Submit Preliminary Design submission for NHDOT review and approval
- 8) Conduct public hearing for eminent domain, if necessary



