

Appendix F

Environmental Process

Environmental Process

The relocation of the Burlington and Rutland railyards by VTTrans would be subject to overall environmental review under federal and state environmental programs, the primary being: National Environmental Policy Act (NEPA) review, Vermont Act 250 review, and Section 106 Historic Preservation review. In addition, if any wetlands must be filled to accommodate the new railyards, a Section 404 Permit from the U.S. Army Corps of Engineers and a Wetlands Conditional Use Determination (CUD) from Vermont Agency of Natural Resources (ANR) will be required. The next step in the environmental review process will be for VTTrans to initiate the alternatives selection process through the NEPA and Section 404 process, to be followed by the Act 250 and CUD permitting process. These processes are discussed briefly in the following paragraphs.

National Environmental Policy Act

If the railyard relocations are funded, even in part, by federal funds, the project will be subject to NEPA. Therefore, one of the first steps to advance the railyard relocations will be for VTTrans to initiate the NEPA review process in conjunction with the FRA. The FRA's regulations implementing NEPA indicate that the railyard relocations are a "Major FRA Action".

The lead federal agency begins the process of considering the environmental impacts of a proposed major action at the earliest practical time in the planning process for the proposed action preferably when technical and economic studies are being conducted. To the fullest extent possible, steps to comply with all environmental review laws and regulations (*e.g.*, Act 250 and Section 404) are undertaken concurrently.

In the process of considering environmental impacts, all reasonable alternatives to the proposed action are identified, including the "no action" alternative. The goal is to select a preferred alternative that best balances the purpose and need of the project against its social and environmental impacts. Consultation with appropriate federal, state, and local authorities, and to the extent necessary, with the public, is initiated at the earliest practicable time.

The proposed relocations will likely be reviewed in an Environmental Assessment (EA) prepared by VTrans (or its consultant) and approved by FRA. FRA can request that VTrans act as a joint lead agency. The EA must be started no later than when an application is made to the Federal Government for funding.

The EA must discuss the relevant direct, indirect, and cumulative environmental impacts of all alternatives; and mitigation measures that would be included for each alternative. The following aspects of potential environmental impact are generally considered:

- TM Air quality;
- TM Water quality;
- TM Noise and vibration;
- TM Solid waste disposal;
- TM Ecological systems;
- TM Wetland impacts;
- TM Endangered species or wildlife impacts;
- TM Flood hazards and floodplain management;
- TM Coastal zone management;
- TM Use of energy resources;
- TM Use of other natural resources, such as water, minerals, or timber;
- TM Aesthetic and design quality impacts;
- TM Impacts on transportation: of both passengers and freight; by all modes, including the bicycle and pedestrian modes; including impacts on traffic congestion;
- TM Possible barriers to the elderly and handicapped;
- TM Land use, existing and planned;
- TM Impacts on the socioeconomic environment, including the number and kinds of available jobs, the potential for community disruption and demographic shifts, the need for and availability of relocation housing, impacts on commerce, including existing business districts, metropolitan areas, and the immediate area of the alternative, and impacts on local government services and revenues;
- TM Environmental Justice³;
- TM Public health;
- TM Public safety, including any impacts from hazardous materials;
- TM Recreational opportunities;

³ On February 11, 1994, President Clinton issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." This Executive Order is designed to focus the attention of federal agencies on the human health and environmental conditions in minority communities and low-income communities and ensure that they do not bear a disproportionate impact. It requires federal agencies to adopt strategies to address environmental justice concerns within the context of agency operations.

- ™ Locations of historic, archeological, architectural, or cultural significance, including, if applicable, consultation with the appropriate State Historic Preservation Officer(s);
- ™ Use of 4(f)-protected properties⁴; and
- ™ Construction period impacts.

Based upon the information presented in the EA, the FRA will determine whether the proposed action (*i.e.*, relocation of the railyard) will have a significant impact on the quality of the human environment. If not, VTrans will draft a "Finding of No Significant Impact" (FONSI) for FRA approval. Among the information a FONSI must include is a list of the alternatives considered, the expected environmental effects of the preferred alternative, and a discussion of the mitigation measures that will be taken. Importantly, if the proposed relocation will require wetland filling, the FONSI must make a determination that there is no practicable alternative to the location that would not require wetland filling and that the proposed action includes all practicable measures to minimize harm to wetlands.

Section 404

Section 404 of the Clean Water Act is administered by the U.S. Army Corps of Engineers (ACOE). Section 404 regulates the discharge of fill material into waters of the United States, which includes wetlands. The New England Division of the ACOE has developed a joint NEPA/404 review process designed to expedite review of projects and lead to better decision making. Consultation with the ACOE should be initiated at the same time as the NEPA process. The Section 404 review process is based on three-step methodology of avoidance, minimization, and mitigation.

Because of the regulatory protection provided wetlands, avoidance of wetlands is a key factor in the site selection alternatives analysis performed under NEPA, and wetland avoidance typically drives the NEPA/404 review process.⁵ ACOE regulations allow it to only permit the "Least Environmentally Damaging Practicable Alternative" (LEDPA). Therefore, the potential railyard sites must be analyzed carefully to

⁴ "4(f)-Protected Properties" are any publicly-owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state or local significance or any land of a historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site). This memorandum assumes that the proposed relocation will not affect any Section 4(f) properties, and therefore does not discuss the requirements of Section 4(f).

⁵ Avoidance of Section 4(f) properties, historic properties protected under Section 106, and endangered species, are also key environmental factors in the alternatives analysis.

determine what the likely wetland impact at each site would be. Sites that would require a large amount of wetland filling should be dropped from further consideration.

Once a site (or sites) has been selected based on the alternatives analysis, measures to minimize wetland impacts will need to be designed and incorporated into the site planning. After impacts are minimized, appropriate mitigation can be designed to offset unavoidable losses.

Act 250

Act 250 is Vermont's primary means of reviewing large developments. For state-sponsored projects, Act 250 applies to those sites greater than ten acres. Since the railyards will require an area greater than 10 acres, they will require Act 250 review. Once a site for the railyards has been selected, the Act 250 begins when an application, accompanied with conceptual plans, is submitted to the appropriate District Environmental Commission.⁶ The Commission then holds one or more hearings on the proposal.⁷ After the hearing, the Commission issues a Draft Permit and Findings of Fact. The design of the project is then refined in response to the Draft Permit, and a set of plans is submitted to the District Environmental Commission for the purposes of obtaining the Land Use Permit.

In order to receive a Land Use Permit, the project must meet ten criteria contained in the Act. They are:

- ™ Will not result in undue water pollution or air pollution;
- ™ Will have a sufficient water supply;
- ™ Will not cause an unreasonable burden on an existing water supply;
- ™ Will not cause unreasonable soil erosion or runoff;
- ™ Will not cause unreasonable traffic congestion;
- ™ Will not cause an unreasonable burden on educational services;
- ™ Will not cause an unreasonable burden on other municipal services;

⁶ The State is divided into nine districts. Burlington is in District 4, and Rutland in District 1.

⁷ Not all projects require a hearing. Depending on a project's impacts, it may qualify as a "Minor Application." If the District Commission finds that a project does not appear to significantly and adversely affect the environment under any of the Act's ten criteria, it will be treated as a minor application. District Commissions automatically determine whether applications are major or minor in an initial review. The process for reviewing minor applications is simpler than for major ones. The District Commission drafts a proposed permit, informs statutory parties of its action, and publishes a notice saying the permit will be issued as drafted with a hearing unless someone requests one (Corlett Argentine, 1993).

- ™ Will not have an undue adverse effect on scenic beauty, aesthetics, historic sites, or rare and irreplaceable natural areas and will not destroy necessary wildlife habitat or any endangered species;
- ™ Will conform to the capability and development plan, including, for instance, limiting development on primary agricultural soils, using the best available technology for energy efficiency, and using cluster planning in rural growth areas; and
- ™ Will and conform to local and regional plans or capital programs.

Many of these criteria are similar to the issues examined during the NEPA review. And, although, the Act 250 process is subsequent to the NEPA process, the Act 250 criteria should be kept in mind during the alternatives selection process to ensure that the preferred alternative is permissible.

Section 106 – Historic Preservation Review

All projects in the State of Vermont are subject to regulation by Section 106 Historic Preservation review. This review will determine if the proposed project has any impacts to historic resources. If a project does impact historical assets, Section 106 will provide steps for mitigation.

Wetlands Conditional Use Determination

This permit would be applied for at the same time as the Section 404 permit application. ANR reviews wetland fill proposals under the Vermont Wetland Rules (the Rules), using a similar avoidance, minimization, compensation process.

To issue a CUD, ANR must find that the proposed use will not result in an undue adverse effect on protected wetland functions. Adverse impacts on any protected functions, other than minimal impacts, is presumed to constitute an undue adverse effect unless mitigated in accordance with the Rules. To properly mitigate for wetland impacts, the Rules require that the proposed activity cannot practicably be located on the upland portion of the site in question or on another site owned, controlled or available to satisfy the basic project purpose; that all practicable measures have been taken to avoid adverse impacts on protected functions; and that unavoidable impacts are compensated for in accordance with standards contained in the Rules.

The project will also require a Section 401 Water Quality Certification (WQC) from ANR. Generally, the WQC is issued in conjunction with the CUD. No separate permit is required.

The environmental process described above must occur for each of the preferred alternatives. The work associated with this study will determine much of the feasibility of building on that particular site and will give a good cost estimate of the costs of environmental mediation associated with the preferred alternative.

Upon completion of the environmental analysis of each of the proposed sites, a Traffic Impact Assessment must be completed. Depending on the location of the site and its proximity to local streets/highways, a traffic impact assessment will be prepared following Section 205 of the Vermont Environmental guidelines as earlier discussed. Existing conditions, trip generations, trip distribution future conditions and potential mitigation actions will be assessed. This task is applicable as transfers are anticipated between the railroad to trucks. The following items must be included in the traffic impact assessment:

- ™ Traffic Volume Networks – Traffic volume networks for average and annual weekday AM and PM peak hour conditions should be developed for the study area intersections and associated roadway links.
- ™ Safety Analysis – a summary of the safety data for the most recent three year period of data available should be developed.
- ™ Capacity and LOS Analysis – Existing conditions capacity and level of service analysis should be conducted for the study area.
- ™ Future Traffic Conditions: Future traffic conditions activities should include the development of both No-Build and Build traffic volume networks for AM and PM peak hour conditions at the layover site, a capacity and level of service analysis, and the identification of potential impacts generated by the traffic from the site.
- ™ Mitigation Measures: Locations that could potentially be adversely impacted by the site generated traffic should be assessed to develop mitigation measures.

Drainage/Hydrology issues must also be incorporated into the report. Analysis of potential impacts to existing drainage structures and hydrologic conditions resulting from track upgrades and infrastructure construction must be conducted. Potential mitigation measures will be evaluated to ensure maintenance of existing drainage and hydrologic conditions during and after construction.

Engineering Steps

A significant step in the progression of the relocation of the Rutland City or Burlington railyards would be the completion of a field survey. The field survey is a set of base plans to be produced for each of the proposed railyard sites. The base plans should be prepared from a combined effort of aerial mapping and ground survey methods. The base plans should indicate features as; buildings, track, paved areas curbing, tree line, poles, etc. Elevations should be shown at one (1') foot contour intervals. The base plans should be developed for to perform preliminary (10%) design studies at 40 scale with 1' contours. The base plan will show the features mapped from the aerial mapping firm, the approximate location of the railroad right-of-way, record utility lines, and areas of wetlands. As part of the field survey, the following tasks should be performed by a qualified engineering firm:

Site and Right-of-Way Analysis:

An engineering firm should research the proposed sites as well as the impacted right-of-way, easements, and leases. The engineer would research the existing Right-of-Way to obtain copies of Railroad Valuation Maps, local assessors maps and critical record survey plans. The right-of-way would be researched sufficiently to determine its location graphically on the base plans. Critical areas warranting a field survey should be noted. If specific areas are determined to warrant a field survey, THE ENGINEER would prepare a cost estimate for said work. In addition, the Engineer would research Abandonment Status (if applicable) to resolve legal ownership issues.

Control Survey:

The engineer would establish survey control along the entire length of the project. The control would be used for several efforts including, the location of the photo control, Right-of Way, wetlands, utilities, etc. The control survey would be performed through a combined method of surveying utilizing Global Positioning Systems (GPS) and Electronic Total Stations.

Ground Control:

This survey would allow the engineer to field locate horizontal and vertical ground control as required by the aerial mapping to properly produce the mapping for the project. The control can be reduced and calculated to the known datum. The ENGINEER would use this information to prepare control sheets to be transmitted to the aerial mapping firm for the mapping phase of the project.

In coordination with the ground control, the engineer may require the coordination of aerial photographic mapping to produce the base

mapping of the corridor. The width of the mapping corridor would at a minimum be 200 ft. centered with the existing roadbed. The mapping could be produced at electronically and suitable for 40 scale, contours will show at one foot intervals.

As the Rutland area was recently the subject of aerial photography, it is likely that these photos could meet the needs of the engineering firm.

The next step in the field survey is the Supplemental Ground Survey. This is performed using the following ground survey to supplement the aerial mapping as necessary for this phase of the railyard design. It is comprised of two portions:

Topographic Survey- Locations and elevations are obtained in areas that are obscured in the aerial photographs. These locations and elevations will then be added to the Base Plan.

Utility Survey and Misc. Survey: The engineer researches the appropriate utility agencies serving the area to determine the locations of underground utility lines along or crossing the Right-of-Way. Utility lines shown on the record plans will be shown on the Base Plan as well as fences, utility poles, curbing, and culverts.

If the proposed railyard locations are affected by wetlands, a wetland survey is required. The wetland survey would locate the limits of the wetland flagging as determined by a qualified wetland scientist. The wetland flag locations are then added to the base plans of the railyards.

The next phase would also require that the engineer prepare conceptual design plans of the proposed yard layout. These layouts would include:

- Coordination and review meetings
- Site analysis and determination of land use
- Applicable code review
- Local development plans
- Pedestrian and handicap access
- Planning and Urban Design context
- Environmental and Physical Constraints

The summary of each of these tasks would then be developed into a site assessment. The site assessment would include:

ASTM Phase I Environmental Site Assessment Report - An ASTM Phase I Environmental Site Assessment report to document the findings of the assessment activities including a summary of previous site assessments, a site history, a description of neighboring property uses, and an assessment of known and potential environmental concerns

associated with oil and hazardous materials, and asbestos-containing materials and lead-based paint.

ESTABLISH ENVIRONMENTAL SITE CONDITIONS

An ASTM Phase I Environmental Site Assessment and a Limited Subsurface investigation at the sites.

The environmental site assessment would be conducted to identify Recognized Environmental Conditions based on a review of available environmental information and visual observations for overt evidence of a release or threat of a release of oil and/or hazardous materials on or in the vicinity of the sites. To adhere to the standards established by ASTM E 1527-97 for conducting environmental site assessments, the Engineer would conduct the following tasks:

Regulatory File Review & Site History – A computer database search of federal and state files. The federal databases will include the current Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), National Priorities List (NPL), Resource Conservation and Recovery Act (RCRA) Transportation, Storage and Disposal CTSD), RCRA Generators, and Emergency Response Notification System (ERNS) list. The state databases will include the state hazardous waste sites, registered Underground Storage Tanks (USTs), Spills list (includes leaking USTs), Solid Waste Landfills (SWLF), and Public Water Supply lists.

Review available municipal files to help confirm ownership history and past usage. Resources may include tax records, aerial photographs, Conservation Commission records, Building Department records, and Fire Department records. The site history review may also identify reports of historic spills, disposal areas, or other past releases of oil and/or hazardous materials on or adjacent to the property.

Review available site assessment reports including available soil and ground-water data for the property, as-built plans, and historic maps showing the locations of past or present USTs and/or disposal areas on the Site.

Interviews and Site Reconnaissance – Interviews of the current owner and/or people knowledgeable about the Site for pertinent information regarding site history, known release of oil and/or hazardous materials, past use, storage, and disposal of oil and/or hazardous materials, past environmental violations, reports and/or related documentation; and any other relevant information.

Perform a site reconnaissance to observe the Site for overt evidence of a release or threat of release of oil and/or hazardous materials. The Engineer will also walk the boundaries of the Site to observe and note the uses of abutting properties.

LIMITED SUBSURFACE INVESTIGATION

A Limited Subsurface investigation will be conducted to assess the subsurface for a release of oil or hazardous materials in areas of suspected releases.

ENVIRONMENTAL CLEAN UP OF EXISTING SITE

It should be noted that the State of Vermont is responsible for any environmental mitigation associated with the current railyard sites.