



6.0 ENVIRONMENTAL REMEDIATION GUIDELINES



6.0 Environmental Remediation Guidelines

This section of the Plan provides an overview of recommendations related to environmental cleanup. Please refer to Technical Memorandum: Environmental Conditions (September 2007) for the history and current conditions of the site.

6.1 Environmental Conditions

Research and development activities and associated support activities that have occurred at Fort Monmouth during its over 80 years of operation have resulted in the generation of a number of wastes. Prior to recognition of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA), disposal of some wastes occurred on site instead of being transported off-site and handled by the proper authorities. Due to this common practice, the Installation Restoration Program (IRP) was developed by the DoD to comply with federal guidelines for managing and controlling past hazardous waste disposal actions. The IRP is intended to address the cleanup and environmental impacts of contamination and damage resulting from past, not current, activities. The DoD is the lead federal agency responsible for conducting environmental investigations and implementing the final cleanup plans at a military base under the IRP.

As a result of Fort Monmouth's history of research and development (R&D) activity, known and potential environmental concerns identified to date include:

- 43 IRP sites (26 are considered No Further Action (NFA) sites, 17 are still active)
- Petroleum Hydrocarbons Releases resulting from Underground Storage Tanks

(USTs) and Above-ground Storage Tanks (ASTs)

- Munitions and Explosives of Concern (MECs)(1 active range)
- Potential Radiological Contamination
- Underground Utilities
- Asbestos and Lead-Based Paint
- Polychlorinated Biphenyl (PCB)-Impacted Equipment, Storage, Spills, and Disposal Areas
- Pesticide and Herbicide Storage Areas, Mixing Areas, and Site-Wide Application

Note: Additional detail and background information is provided in the referenced Technical Memorandum

It should be noted that many of the potential environmental concerns do not pose environmental constraints; however, field investigation and remediation would be necessary to ensure that environmental risk is managed as property transfer proceeds.

The current quantitative environmental information has been used to help guide reuse planning activities, including identification of appropriate locations of each land uses depending on level of contamination, budgeting considerations, potential schedule impacts, and potential land use controls. Final remediation requirements would be determined by the New Jersey Department of Environmental Protection (DEP) and would include consideration of the future land use proposed for the individual areas. Critical environmental constraints were honored during the Plan development. In other words, prime development locations do not conflict with IRP site restrictions. In order to further reduce the level of contamination on the site, administrative controls, engineering controls,

and additional investigation may be used to mitigate contamination or reduce minor environmental constraints.

Due to the potential for other environmental contamination, not previously detected, to exist throughout the installation, use of a Materials Management Plan and a Health and Safety Plan during construction activities is strongly recommended. If potentially contaminated soil, sediment, or water is observed during construction or renovation activities, the procedures outlined in the Materials Management Plan should be followed.

6.2 Property Reuse Constraints

While there would clearly be environmental remediation efforts within the Reuse Areas continuing well into the future, this Plan has been developed so that none of the proposed land uses are subject to critical constraints from the environmental sites. The Plan development process has been completed in concert with this evaluation of environmental conditions and, as a result, any severe constraints resulting from environmental conditions have already been identified and avoided. The following figure on page 6-4 shows the known environmental conditions combined with the current reuse Plan and illustrates the compatible reuse proposed for critical environmental sites such as the landfills.

As the property transfer proceeds and the disposition strategy is refined, it is critical that the stakeholders continue to be aware of engineering constraints imposed by the remaining environmental conditions. Issues such as potential vapor intrusion into new or existing structures from contaminated groundwater would require minimal additional engineering and construction costs that must be factored into any future transfer strategy. The continuing investigation and remediation activities performed by the Army would also continue to refine the understanding and consideration of any future engineering constraints resulting from environmental

conditions. FMERPA or its successor must remain vigilant in monitoring the progress of the Army's efforts and the resulting improved understanding of the environmental conditions within the Reuse Areas.

This section, including environmental concerns and cleanup requirements would be updated once the Final Plan is determined based on the data that is available at this time.

6.3 Remediation Requirements

Because of the proactive approach taken by Fort Monmouth staff in identifying, investigating, and remediating the IRP sites at the installation, future remediation requirements should be straightforward to formulate. Ultimate remediation requirements would be coordinated with and determined by the NJDEP with future property use as one of the criteria considered for formulating appropriate remediation requirements. The environmental data gaps are limited at the site; therefore, the only critical remaining issue that must be resolved is the finalization of the redevelopment components. The current Plan has been developed so as to avoid critical conflicts between the selected land use and the existing environmental conditions. Thus, environmental remediation is not a prerequisite for any redevelopment activity proposed. There are likely situations where a remediation effort could benefit from concurrent performance of a development activity or where a concurrent remediation effort would be required to be protective of human health. However, this type of aggressive scheduling cannot be completed until a disposition strategy and schedule are complete.

6.4 Remediation Timeframe and Responsibilities

The Base Closure & Realignment (BRAC) Acts of 1988 and 1990 provide a number of specific legal requirements that must be met when a military base is closed and transferred to a different owner, such as

FMERPA. Specifically, the US Army is responsible for either transferring clean property or for paying for the investigation and cleanup of environmental contamination in soil, sediment, groundwater, and surface water necessary to protect human health and the environment.

It is important to understand that there are two different environmental remediation scenarios allowed under the BRAC law that create both opportunity and complexity in the planning of property disposition. Without BRAC, the Army would be required to transfer property only after it had satisfied the provisions of CERCLA. While this routine approach remains one of the possible scenarios, the BRAC provisions make it possible for the Army to transfer the remediation responsibility to the new property owner prior to satisfying the CERCLA requirements. This process is referred to as Early Transfer or accelerated transfer and involves a negotiation process whereby the Army agrees to provide funds for the necessary environmental remediation.

The flexibility allowed by BRAC means that the timing of the environmental remediation of the Reuse Areas can be adjusted to address the community's needs as identified in the reuse planning process. For example, a highly desirable property that is determined to represent economic benefit to the community and is contaminated could be a candidate for transfer prior to remediation. This Early Transfer places more control in the hands of the community for ensuring that the remediation goals meet the land use needs identified by the community as opposed to those imposed by the Army. In cases where a specific parcel is not as economically critical, or the transfer schedule is not short, the Army could proceed with remediation on their schedule and transfer the property along with the NJDEP approval of a completed remedy sufficient to protect human health and the environment under the planned land use scenario.

This inter-related nature of the environmental responsibilities under BRAC make the determination of a remediation schedule prior to finalization of a disposition strategy and

associated schedule problematic. Further complication arises from the fact that the FMERPA would identify development schedule constraints that are unknown to the Army, and are driven by economic factors that are not of concern to the Army, and that are likely to change over time. These schedule requirements must also be taken into consideration when developing a timeframe and establishing whom the responsible party is with respect to remediation as part of the disposition implementation.

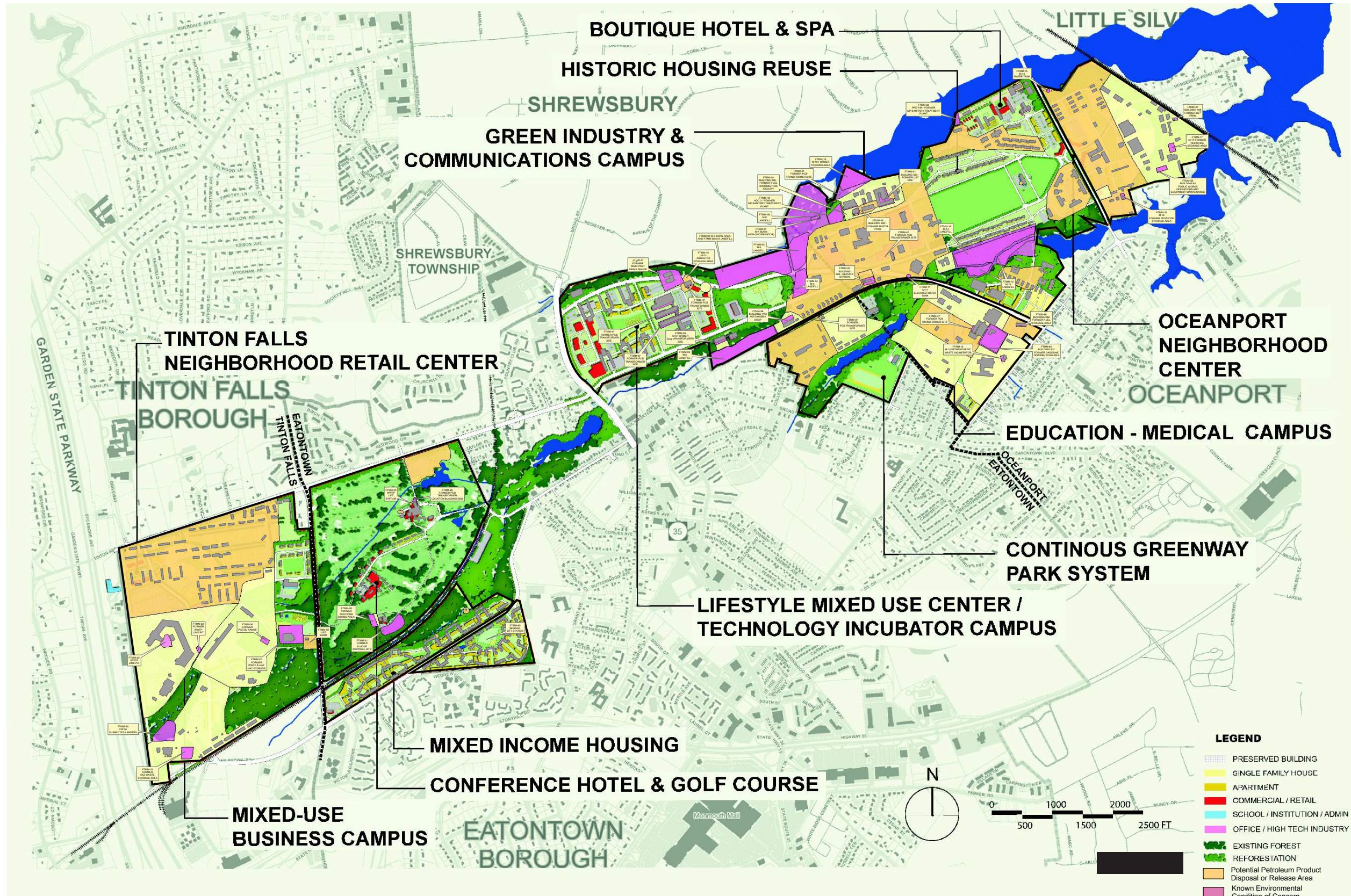
The degree of remediation that is eventually achieved is also of great concern to the community and is closely related to the land use proposed for the transferred property. Environmental remediation is intended to reduce or eliminate ecological or human health risk that could be created by environmental contaminants. Risk (ecological or human health) is characterized by considering a variety of factors that have the potential to contribute to that risk including, at the basic level, the type and concentration of contaminants and the magnitude of exposure for both ecological and human receptors. Residential use creates more exposure than recreational use because people spend more time on average in and around their homes than walking in a park. Because regulatory cleanup criteria are driven by an evaluation of the risk that is created on a site specific basis, it is critical that land use be identified prior to establishing these cleanup criteria. For example, the cleanup criteria for a landfill that is planned to be used as open space would be much less restrictive than for a landfill planned for residential use. This process is straightforward and well understood; however, it is not possible to finalize the cleanup criteria for any specific site within the Reuse Areas until the Plan and disposition strategy is finalized.

Finally, the cost of environmental remediation is also dependent upon the finalization of the Plan. The Early Transfer includes a detailed negotiation process where FMERPA or its successor would study the environmental conditions associated with any specific Early Transfer properties and, in cooperation with NJDEP, forecast the required remediation efforts. The Army and the community would

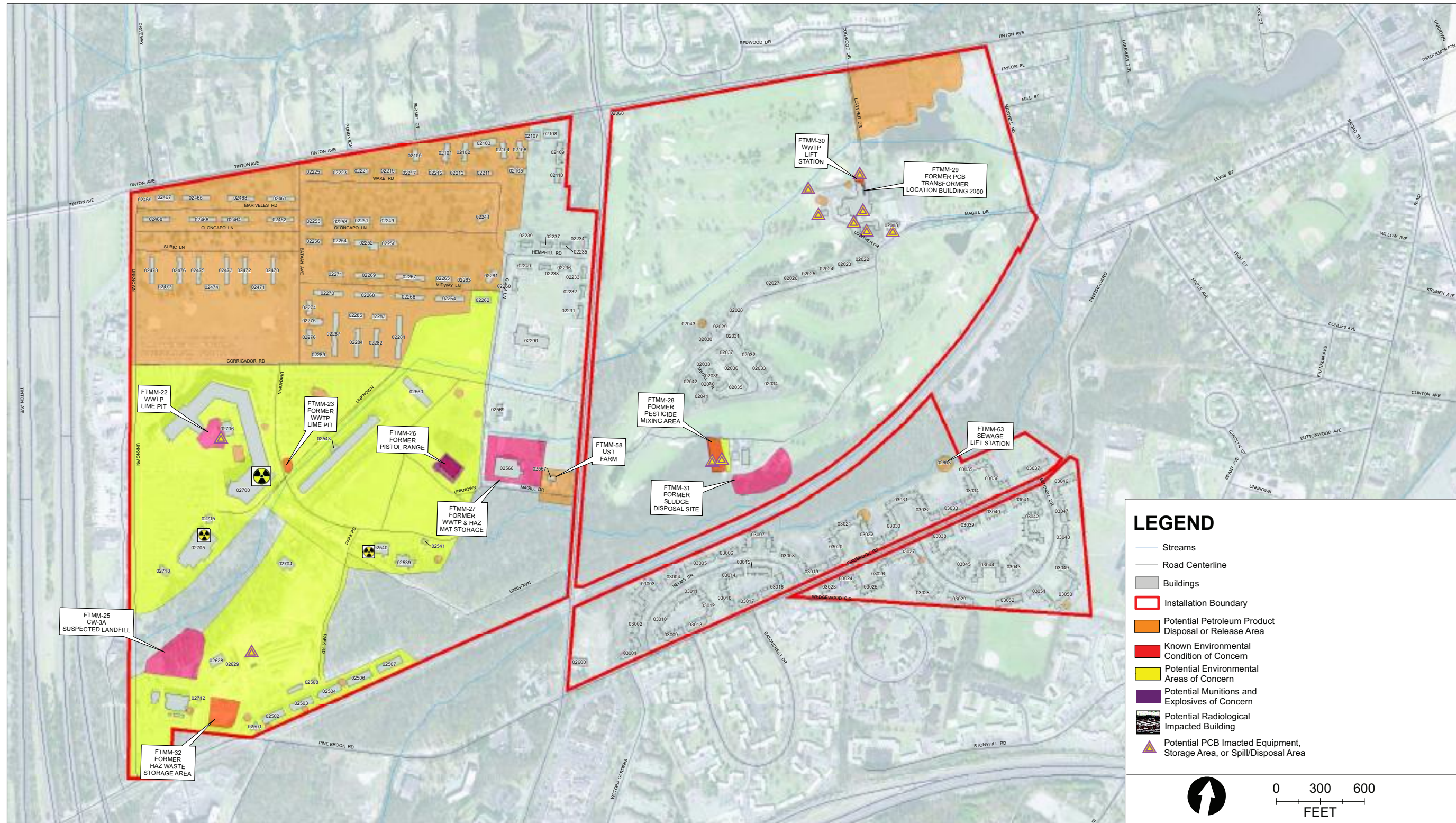
then agree to a transfer including funding that would allow FMERPA to achieve the regulatory criteria and obtain clean closure for each site. Although the simplest example of funding the remediation is for the Army to provide a grant in the negotiated amount, there are other approaches that may be attractive at Fort Monmouth. For example, because of the value of a specific parcel, the Army may prefer to discount the purchase price for a specific parcel by an amount commensurate with the remediation cost. In the end however, these alternatives are variations on the theme of Army funded remediation in support of an Early Transfer.

Any properties that remain in the Army's hands as part of the disposition strategy would proceed through cleanup to clean closure under the Army's direct supervision and using funds separate from any direct community involvement. FMERPA would continue to be able to comment on the costs, schedule, and cleanup criteria for these properties but would lack any direct influence on the Army's process or progress.

Because of these identified interrelated factors, it is impossible to establish a clear timeframe regarding remediation of the Reuse Areas or to establish responsibilities beyond the general understanding that the Army is ultimately responsible under law. Once the Reuse Plan is adopted, and a strategy and schedule is in place, a more detailed environmental remediation timeframe and responsibility matrix can be developed.



Source: Matrix Design Group

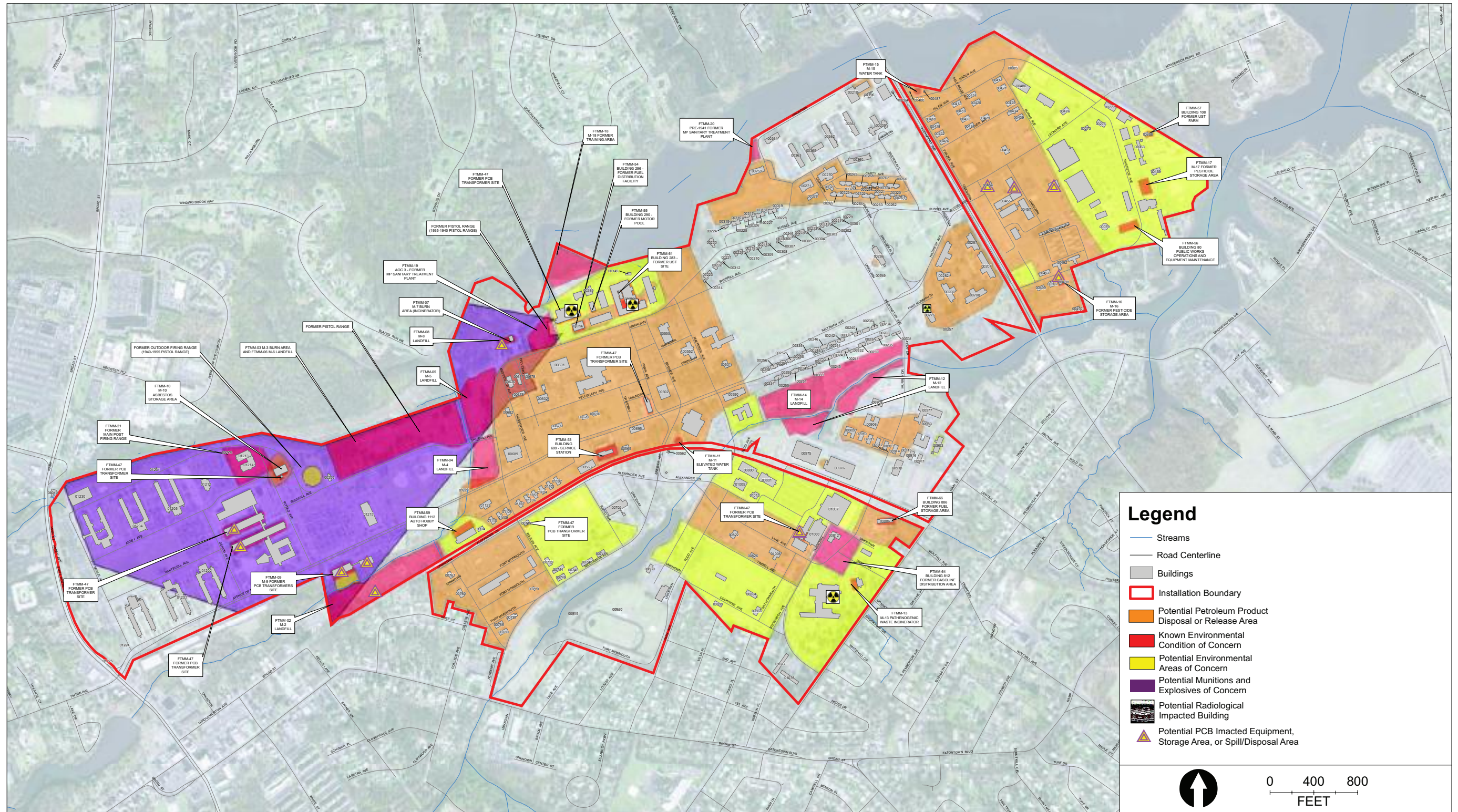


LEGEND

- Streams
- Road Centerline
- Buildings
- Installation Boundary
- Potential Petroleum Product Disposal or Release Area
- Known Environmental Condition of Concern
- Potential Environmental Areas of Concern
- Potential Munitions and Explosives of Concern
- Potential Radiological Impacted Building
- Potential PCB Impacted Equipment, Storage Area, or Spill/Disposal Area

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FIGURE 2: ENVIRONMENTAL CONDITIONS OF CONCERN: CHARLES WOOD



FORT MONMOUTH REUSE AND REDEVELOPMENT PLAN



Legend

- Streams
- Road Centerline
- Buildings
- Installation Boundary
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ENVIRONMENTAL CONDITIONS OF CONCERN: MAIN POST

