

Appendix A:

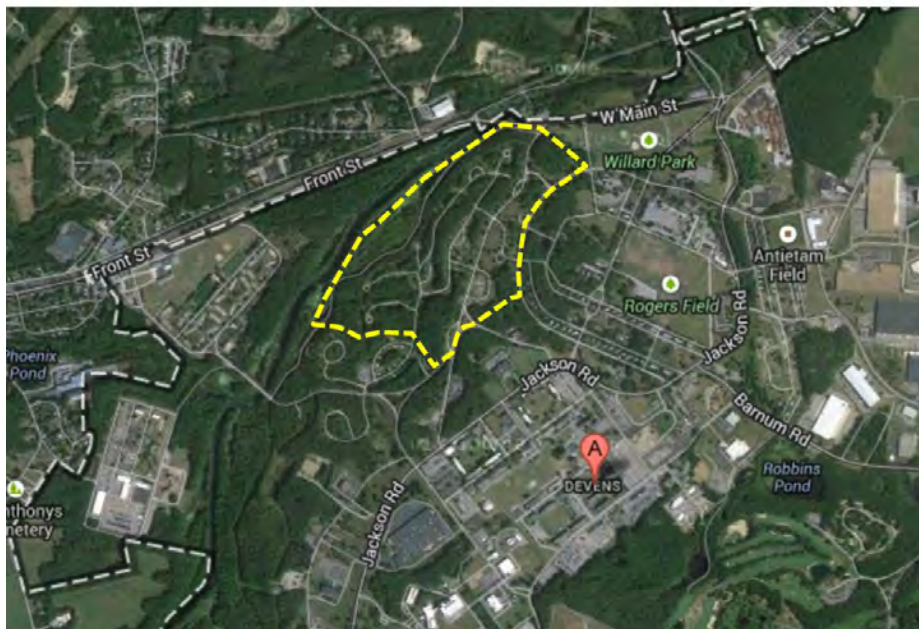
HIA Workshop Handouts

Framing of A Rapid Health Impact Assessment for Grant Road (R-1 Zoning District) Devens Regional Enterprise Zone:

The 1994 Devens Reuse Plan calls for Devens to become a model of sustainable development for this former Army base which closed under the 1993 Base Realignment and Closure Act (BRAC). Sustainable Development for Devens means balancing economic development, environmental protection and social equity. In 2013 the Devens Enterprise Commission (DEC) adopted a Healthy Community Proclamation <http://www.devensec.com/news.html>. This proclamation recognizes that what we build is important, but how and where we build is equally important and can directly influence the day to day activities that impact our public health.

The Grant Road housing area is a residentially zoned 135 acre tract of land located within the Devens Regional Enterprise Zone within the former Fort Devens Army base being redeveloped by the Commonwealth of Massachusetts. Under current zoning, this area could accommodate up to 140 dwelling units which would approximately double the population of Devens:

Residential I Zoning District



Rapid Health Impact Assessment Proposed:

In order to better assess and evaluate how development in the Grant Road area could complement existing development patterns and further Devens' sustainable redevelopment efforts, the DEC, with participation from residents and organizations in the area, will be conducting a Rapid Health Impact Assessment (HIA). An HIA is used to provide a broad overview of possible health impacts of a development proposal or scenario. It involves the collection and analyzing of data on land use patterns, building types, infrastructure, transportation options, environmental protection, social inclusiveness and economic viability.

The proposed HIA will compare a conventional development plan of 120 dwelling units within the Grant Road area to a development plan utilizing the DEC newly adopted Innovative Residential Development Regulations (IRD) which are based on the US Green Building Council (USGBC)'s LEED for Neighborhood Development rating system. For additional information on LEED ND and its relationship with HIA's, go to: http://www.cdc.gov/healthyplaces/factsheets/LEED-ND_tabloid_Final.pdf

We are asking participants to assist us in reviewing the following components of a healthy community: Sustainable safe transportation, healthy housing, healthy economy, social cohesion, public infrastructure and environmental stewardship as well as land use and other factors we all agree have relevance.

Healthy Housing: Devens is a model of sustainable development and as such the use of energy-efficient construction and renewable energy systems are encouraged, in addition to utilizing building materials and finishes that contribute to healthy indoor air quality. Devens is also a former Superfund site and the Grant Road housing area is a brownfield site that has been remediated to facilitate redevelopment. Soil management plans and water use restrictions would still apply to either scenario.

Social Cohesion: The redevelopment area will attract a diverse range of individuals and families with children. The project is in proximity to an existing neighborhood and needs to be compatible with and recognize and respect existing residents. The project has a specific and unique geographical area. Community interaction and availability of services (or lack thereof) are important considerations. Devens does not currently have good access to healthy foods or a supermarket within a 1 mile radius. One site has been identified and deemed to be an allowed use for a supermarket but the area currently lacks the population to support it. Crime rates and perceived safety are additional attributes that will impact social cohesion.

Healthy Economy: The redevelopment area could include various forms of housing that will attract a diverse range of individuals and families with varying income levels. Each scenario has requirements for providing low and moderate income housing as part of the project and is located in proximity to employment centers.

Environmental Stewardship: Devens, as does most of southern New England; lies within a serve non-attainment area. The redevelopment regulations have varying potential impacts on water quantity and quality issues. Access to open space with its mental health benefits will vary with development options.

Sustainable Safe Transportation: The redevelopment area is located within two miles of two commuter rail stations located along the Fitchburg Commuter rail line. It is also located within two miles of the Jackson Road exit onto Route 2, a major east west transportation corridor. We will look at assessing the multi-modal (walk, bike, drive, commute) transportation options. Public safety and safe access within, as well as to and from Devens will also be important considerations.

Public Infrastructure: The area is served by existing water, sewer, electric and natural gas infrastructure. Some of the infrastructure will need to be upgraded in either development scenario. Development scenarios can enhance the connectivity and accessibility within Devens. Universal design (unrestricted access for all ages and abilities) and safe, convenient access to recreation and public health facilities/services will be important considerations.

Evaluating Development Options in the Grant Road Area of Devens:

Under the current DEC regulations, conventional residential development can occur on 15,000 sf or greater lots with 100' minimum frontage requirements. The newly adopted IRD regulations have 10,000 sf maximum and 5000 sf minimum single/duplex lot sizes and 75-50' frontages with a goal of 7 dwelling units per acre. Conventional development allows conventional roads whose design and width are "developer's choice". IRD creates three new road types and encourages a more pedestrian friendly design element (universal accessibility).

Conventional development requires compliance with MA Building Code minimum requirements and does not address indoor air quality. IRD requires more energy efficient development, the use of low to no VOC paints, and EPA Water sense fixtures. In order to permit development under its Innovative Residential Development Regulation the DEC must make a finding that "the development plan will be designed with due consideration for health and safety issues" and "is superior to a conventional plan..."

The DEC intends to review mock development scenarios using the conventional approach and the IRD approach and use an HIA and its results to help understand and evaluate the health impacts of future planning decisions within the Grant Road neighborhood. Doing so will help further our sustainable development goals for Devens and help facilitate the future development of a more complete, connected, inclusive, green and healthy community.

**List of Background Information provided for Grant Road Health Impact Assessment
Devens Regional Enterprise Zone
11AM – 3PM Thursday April 10, 2014**

1. Workshop Agenda
2. Workshop Poster
3. Checklist of Topics proposed for event
4. Development Scenarios (pdf) for Grant Road
5. Background briefing
6. Framing of HIA (previously sent)
7. List of sources for background information
 - Devens ReUse Plan (Master Plan for Devens)
http://www.devensec.com/development/Devens_Reuse_plan.pdf
 - Devens By-Laws <http://www.devensec.com/bylaws/bylawstoc.html>
 - DEC Regulations (Housing and IRD) <http://www.devensec.com/rules-regs/decregs501.html> and <http://www.devensec.com/rules-regs/decregs502.html>
 - 2008 Devens Open Space and Recreation Plan
http://www.devensec.com/development/Devens_OSRP_1-23-08.pdf
 - Devens Trail Plan <http://www.devensec.com/development/devenstrails.pdf>
 - 2012 Sustainable Indicators Report
<http://www.devensec.com/sustain/indicators/2012indicators.html>
 - Devens Traffic Monitoring Report 2012
http://www.devensec.com/meetings/Devens_Traffic_Monitoring_Program_2012_Report.pdf

**Devens
Grant Road HIA
Background Briefing
March 2013**

We will provide a more detailed community briefing during the project itself, but in the interim we are providing this summary to help provide a taste of the rich broth which makes up these communities. By its nature this briefing is a vast oversimplification of the communities and their status.

The region is a mostly rural area which developed around the railroad crossroads for New England in Ayer (the most industrialized community in the area) and which attracted the Army to establish Camp Devens here in the run up to WWI. Populations run from 3000- 6000 per town. Harvard is an affluent community with one of the best school systems in the state, Ayer and Shirley are more working class communities. Ayer is amongst the most integrated communities in the area, perhaps a legacy of the military who have remained in the region after retiring from the service. Harvard has numerous orchards located throughout its hilly environs, and branches of the Nashua River run through all three communities on their journey to the Merrimac. Geologically, this is part of the region where the coastal plain butts up against the mountains/highlands. Ecologically speaking, this boundary area contains a large diversity of flora, fauna and animal species which has resulted in portions of the region being designated Areas of Critical Environmental Concern and measures protecting these areas underlies the Devens ReUse Plan.

Camp Devens got promoted to Fort Devens in 1930 and was closed as part of the 1993 Base Realignment and Closure (BRAC) process. The army, having other things on its mind during the 20th Century, left us with a superfund site which is in the last stages of clean up. The Commonwealth of Massachusetts has articulated a clear connection between available housing and retaining and attracting jobs to the Commonwealth. The Grant Road area was designated for housing redevelopment as part of the ReUse Plan developed when the base went through the BRAC process (1993-94). As the base contained over 10,000 housing units at the time, the host communities capped the amount of housing they would allow at 282 units. At this time about 120 units of housing have been developed within Devens, mostly historic officer (brick colonials) and NCO housing (brick bungalows) and 20 units of sustainable housing (2010-13). Future development could approximately double the amount of housing within Devens and the population of the resident community.

Devens is a quasi – place governed by two quasi-governmental agencies – Mass Development and the Devens Enterprise Commission. In 1993 it was created by the legislature out of the three communities which hosted Fort Devens. Devens has an estimated population of 400+/- and is cut out of portions of three towns which makes gathering health related data for the Regional Enterprise Zone a difficult task. We have addressed this by looking at data for the host communities of Ayer, Harvard, and Shirley (also Lancaster on the south side of Route 2).

We hope to address these issues and more during the regional context portion of our event. Bring your questions .

**Devens Rapid Health Impact Assessment
Checklist**

Goal – Each group review the checklist of questions/issues to consider and identify which issues might be given more or less weight.

Topic/Issue:		Questions/Issues to consider:	Comments/Notes:	Scenario#1 Rank: (1=low, 5=high)					Scenario#2 Rank: (1=low, 5=high)				
Transportation	Transit Service	Does the plan involve residential components that are built at an average density greater than or equal to seven dwelling units per acre of buildable land available for residential use?		1	2	3	4	5	1	2	3	4	5
	Transit Stops	Is there regularly schedule transit service within ¾ miles of all residential and employment areas?		1	2	3	4	5	1	2	3	4	5
Accessibility	Transit Ready	Does the residential development project incorporate measures to deliver future transit services such as designating areas to convert to bus stops?		1	2	3	4	5	1	2	3	4	5
	Access to Health Care	How close are the residential uses to health care facilities (hospital, clinic, pharmacy, health club)?		1	2	3	4	5	1	2	3	4	5
	Distance to Schools	How close are the residential uses to nearby schools (daycare facilities, elementary schools, secondary schools, and post -secondary schools)?		1	2	3	4	5	1	2	3	4	5
Air Quality	Distance from major transportation routes	Are the residential areas and schools within close proximity (¼ mile) of major auto related transportation routes (Route 2) that could impact air quality issues?		1	2	3	4	5	1	2	3	4	5
	Distance from polluting uses	Does the project propose residential uses in close proximity to businesses that disproportionately contribute pollutants (such as dry cleaning, automotive painting, manufacturing, requiring air permits)?		1	2	3	4	5	1	2	3	4	5
	Green Infrastructure	Are vegetated roofs, street trees, and other green infrastructure required for the project to mitigate air quality?	<i>Yes. Regulations require green infrastructure elements for both scenarios.</i>	1	2	3	4	5	1	2	3	4	5

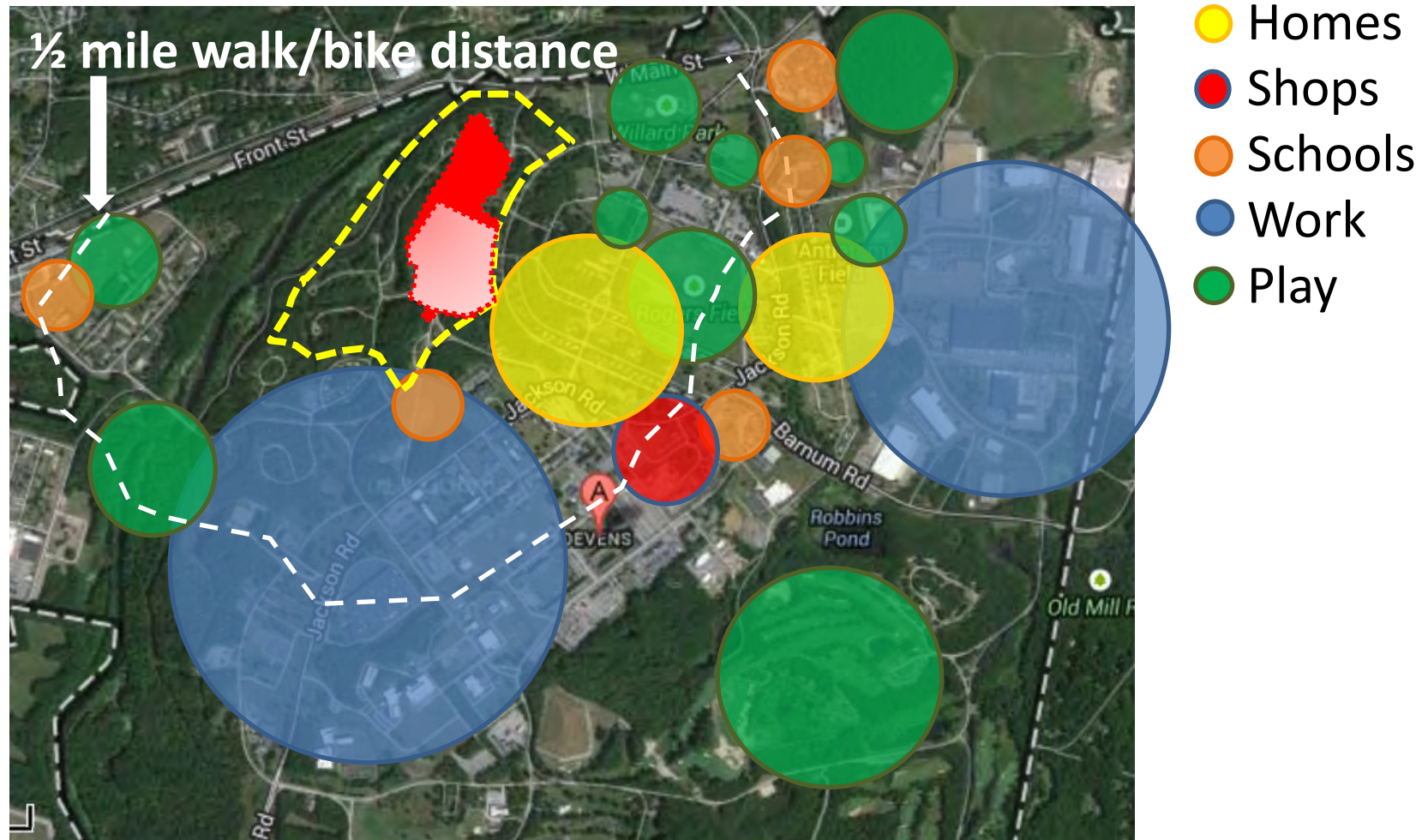
Topic/Issue:		Questions/Issues to consider:	Comments/Notes:	Scenario#1Rank: (1=low, 5=high)					Scenario#2Rank: (1=low, 5=high)				
Env. Health and Housing Quality	Lead exposure	Does the project propose to minimize exposure to lead to at risk populations (children)?	<i>Yes. Regulations require compliance with lead exposure laws for both scenarios.</i>	1	2	3	4	5	1	2	3	4	5
	Exposure to VOC's	Does the project propose to minimize exposure to VOCs and other sources of indoor air pollution?		1	2	3	4	5	1	2	3	4	5
	Certified Green Housing	Does the project contemplate using certified green housing or neighborhood programs such as LEED for Homes, LEED for Neighborhood Development or Enterprise Green Housing to address more sustainable approaches to building such as water and energy efficiency, and indoor air quality?		1	2	3	4	5	1	2	3	4	5
Food	Access to healthy food sources	Are there supermarkets and/or convenience stores with fresh produce within a mile of each home?		1	2	3	4	5	1	2	3	4	5
	Ability to grow food on-site/community gardens	Are there any restrictions preventing residents from growing food on site? Are community gardens provided?	<i>Yes (restrictions). Regulations require raised planting beds due to past contamination issues (for both scenarios).</i>	1	2	3	4	5	1	2	3	4	5
	Distance from and availability of Seasonal Farmers Markets	Are there farmers markets within a mile of each home?		1	2	3	4	5	1	2	3	4	5
Mental Health	Views of Green	Does the project require lot-level landscaping and buffering in proximity to dwelling units? Do the dwellings face streets or open space or both?	<i>Yes. Regulations require lot level landscaping and buffering for both scenarios.</i>	1	2	3	4	5	1	2	3	4	5
Physical Activity	Access to playing areas, parks and trails	In order to reduce car trips and provide options for physical activity and social interaction, Is the average unit distance to active open space walkable?		1	2	3	4	5	1	2	3	4	5
	Access to trail system	Does the proposed project facilitate connections to these open spaces?		1	2	3	4	5	1	2	3	4	5
	Multi-modal transportation	Does the project adequately account for safe circulation patterns for alternative modes of transportation other than single occupancy vehicles?		1	2	3	4	5	1	2	3	4	5
	Accessibility	Does the proposed plan facilitate ease of access for people of all abilities and age groups?		1	2	3	4	5	1	2	3	4	5

Topic/Issue:		Questions/Issues to consider:	Comments/Notes:	Scenario#1Rank: (1=low, 5=high)					Scenario#2Rank: (1=low, 5=high)				
Safety	Lighting	Is adequate lighting proposed for the project?	<i>Yes. Regulations require safe, pedestrian-scale lighting levels and dark-sky compliant lighting fixtures for both scenarios.</i>	1	2	3	4	5	1	2	3	4	5
	Complete Streets, traffic calming and transportation safety	Does the plan and proposed street layout adequately account for safe circulation patterns for people and all modes of traffic? Does the proposed layout help reduce vehicle speeds and provide more 'eyes on the street'?		1	2	3	4	5	1	2	3	4	5
Social Capital	Housing options	Does the project include a mix of housing densities and/or tenures (e.g. at least 15-20% of the housing stock in a different use tenure or as apartments/condos)?		1	2	3	4	5	1	2	3	4	5
	Social Housing	Does the project propose to reserve units affordable to people of low to moderate and median incomes (80-120% of median income)?		1	2	3	4	5	1	2	3	4	5
Water Quality and Quantity	Groundwater quality	Does the plan propose measures to protect the groundwater on the site?	<i>Yes. Regulations contain Water Resource Protection requirements for both scenarios.</i>	1	2	3	4	5	1	2	3	4	5
	Drinking water quality	Is there a secure and adequate supply of good quality drinking water for the project?	<i>Yes. Both scenarios have access to high quality/quantity drinking water. Connection to Devens system required.</i>	1	2	3	4	5	1	2	3	4	5
	Surface water quality	Does the project propose to take measures to protect nearby surface water quality?	<i>Yes. Regulations contain Water Resource Protection requirements for both scenarios.</i>	1	2	3	4	5	1	2	3	4	5
	Water quantity	Does the project propose measures to implement water conservation measures?		1	2	3	4	5	1	2	3	4	5
	<i>Others?</i>			1	2	3	4	5	1	2	3	4	5
				1	2	3	4	5	1	2	3	4	5
				1	2	3	4	5	1	2	3	4	5
				1	2	3	4	5	1	2	3	4	5
				1	2	3	4	5	1	2	3	4	5

Groups are to conduct a comparative analysis of each scenario answering these three questions:

1. Highlights of each scenario using checklist topics
2. Most important attributes of each scenario & why
3. Which is “better” and why

Proximity to Local Services

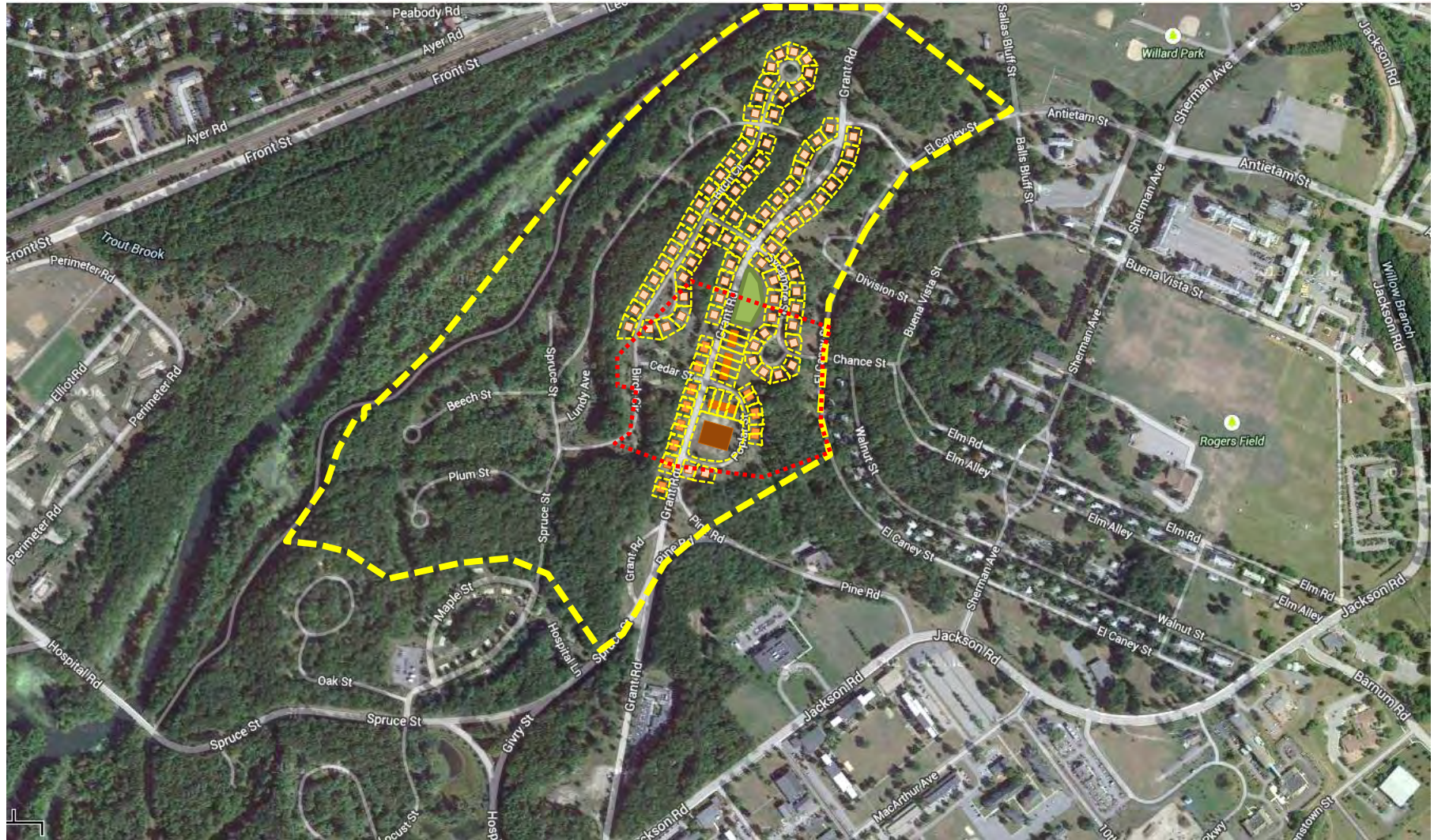


120 Unit Development Scenario #1 (30 acres)



Housing Mix:	30 single family	16 single fam. cottage	16 two-family	28 – multi-family
(#of units)	30 multi-family			(9x 3-4 units)
	(4x 6-12 units)			

120 Unit Development Scenario #2 (60 acres)

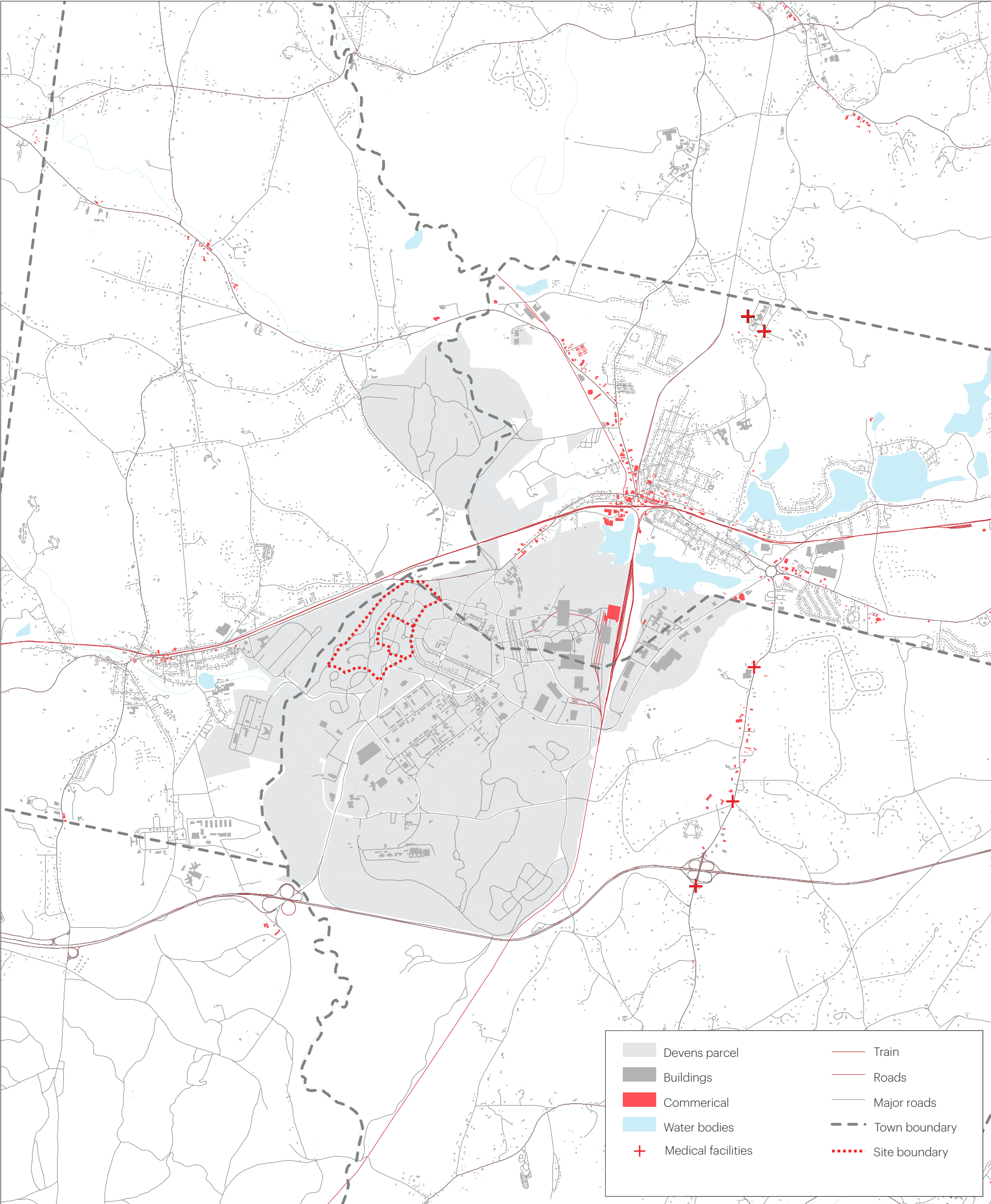


Housing Mix:

80 single family	22 two-family	12 – 3-4 family	6 multi-family (1x6 unit)
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(#of units)

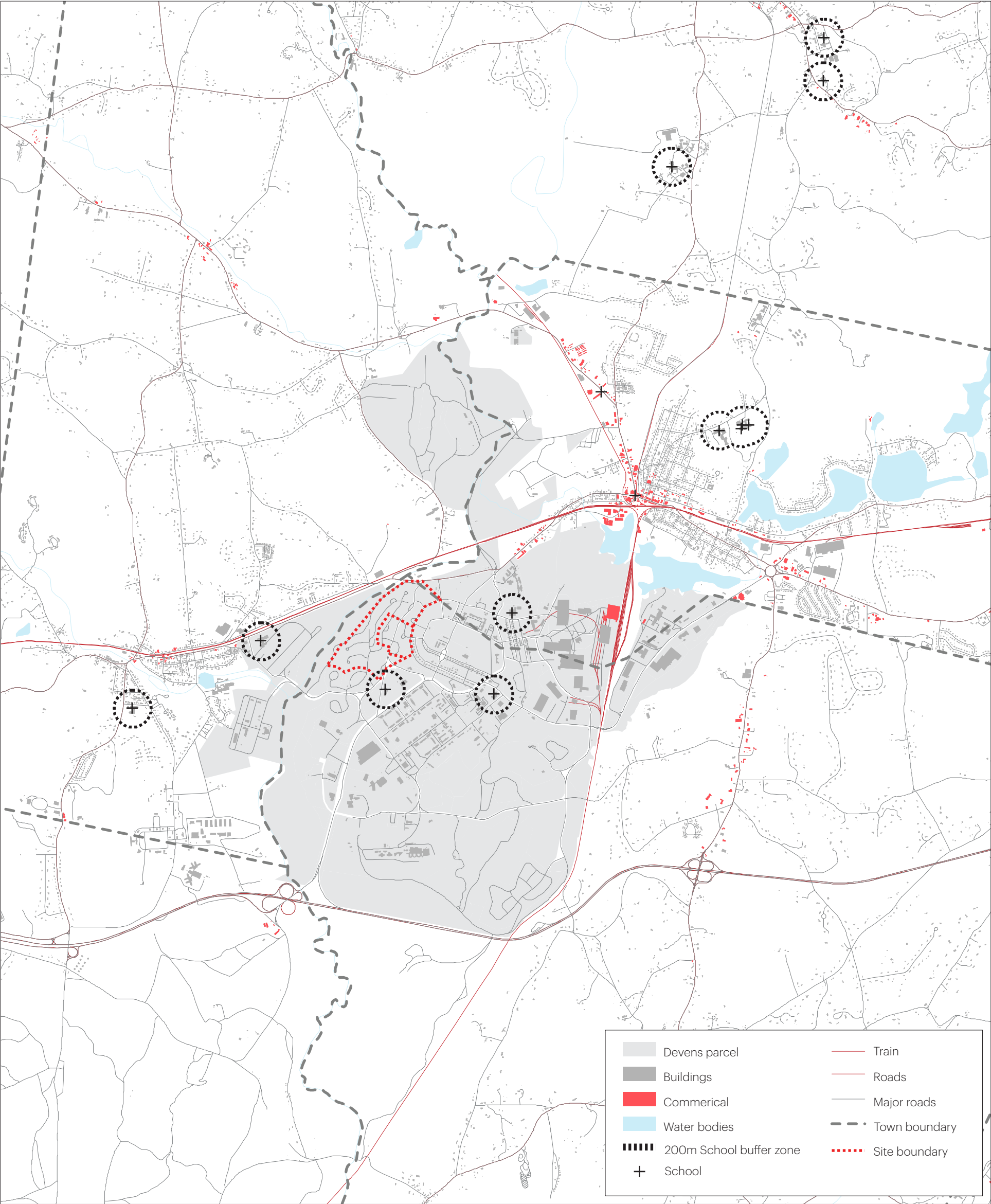
Map 2: Medical Facilities



0 0.3 0.6 1.2 Miles



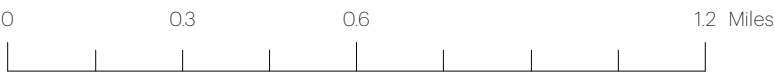
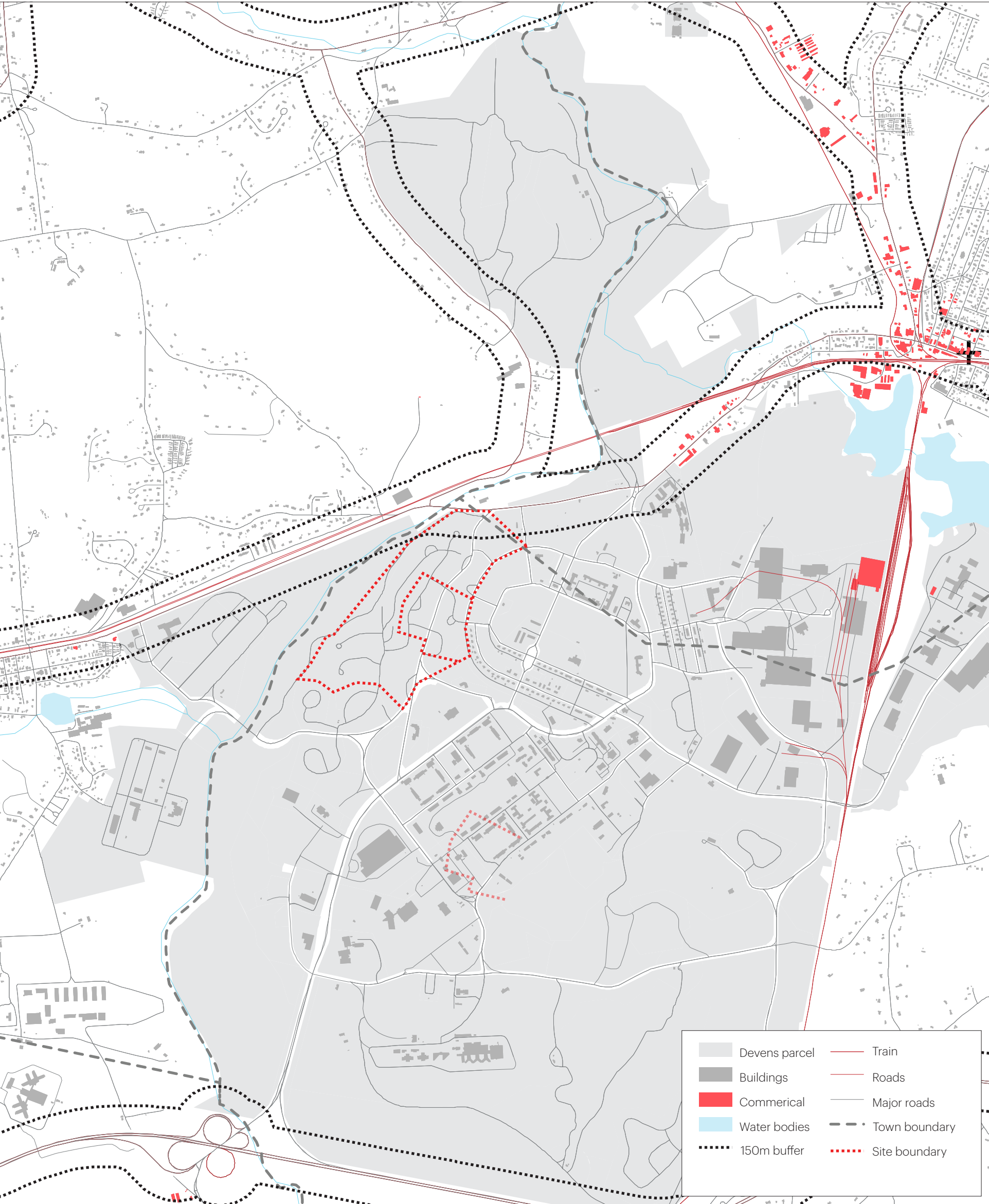
Map 4: School Safety Zone Proximity to Roads



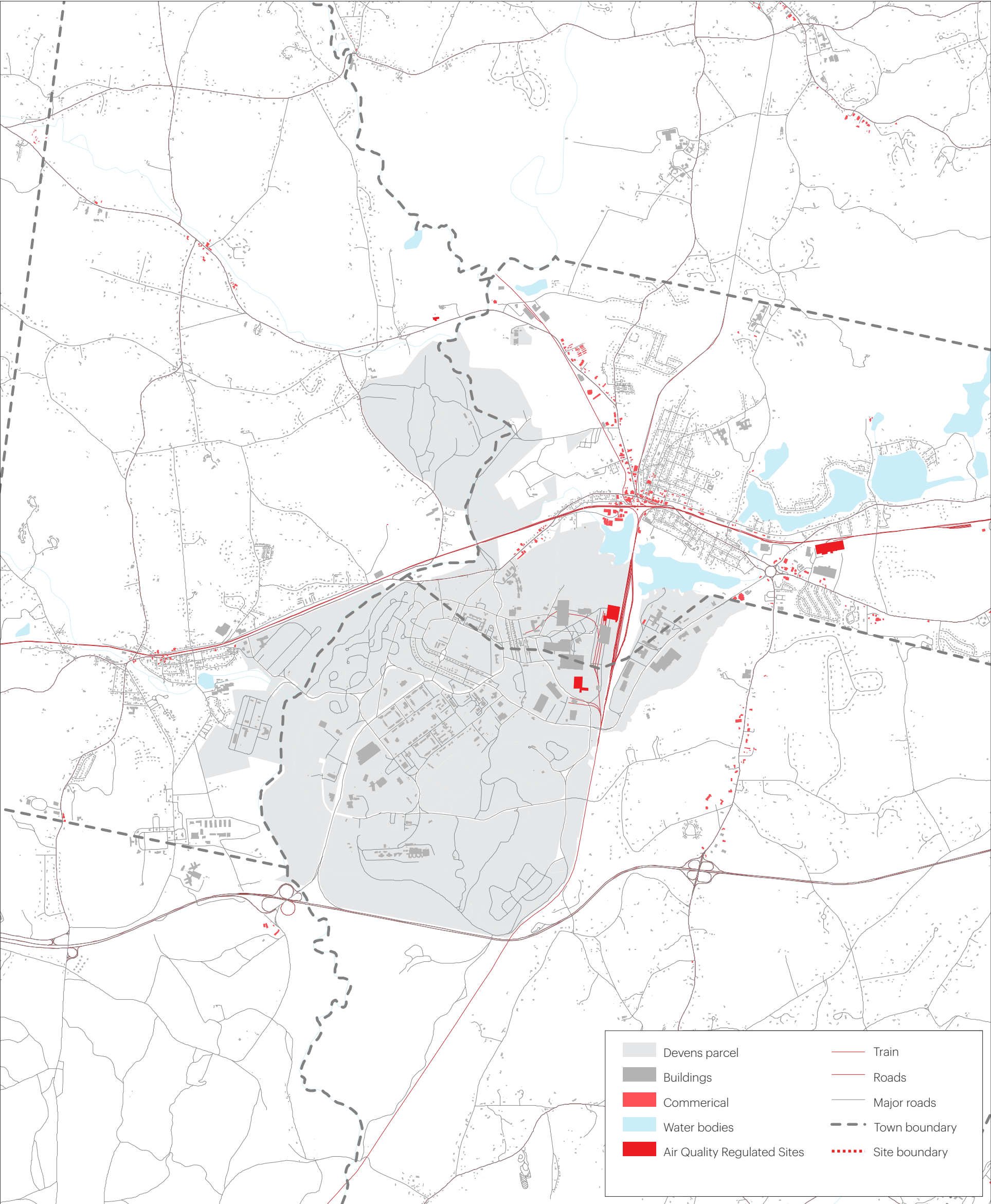
0 0.3 0.6 1.2 Miles



Map 5: Proximity of Major Roads



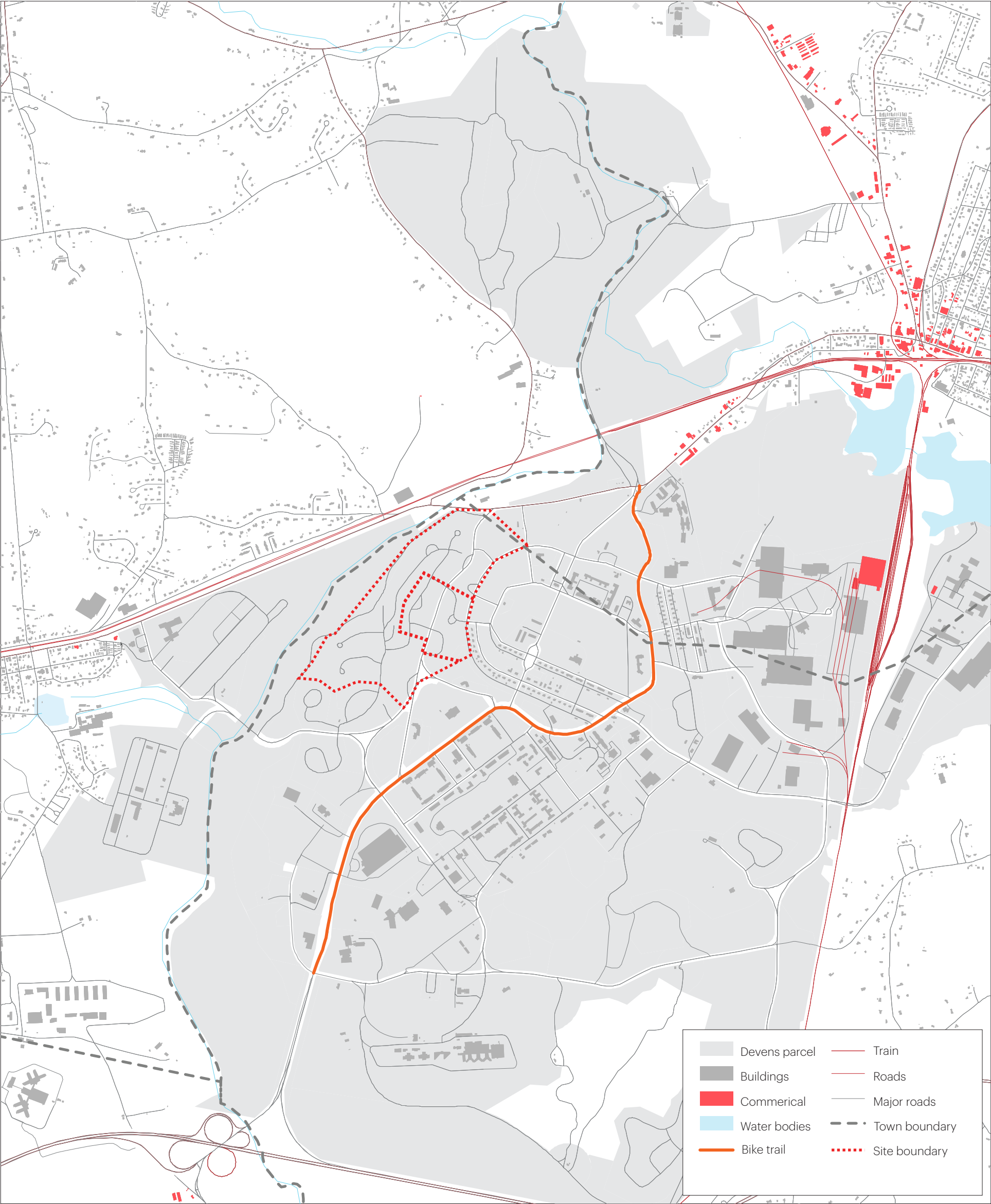
Map 6: Air Quality Regulated Sites



0 0.3 0.6 1.2 Miles



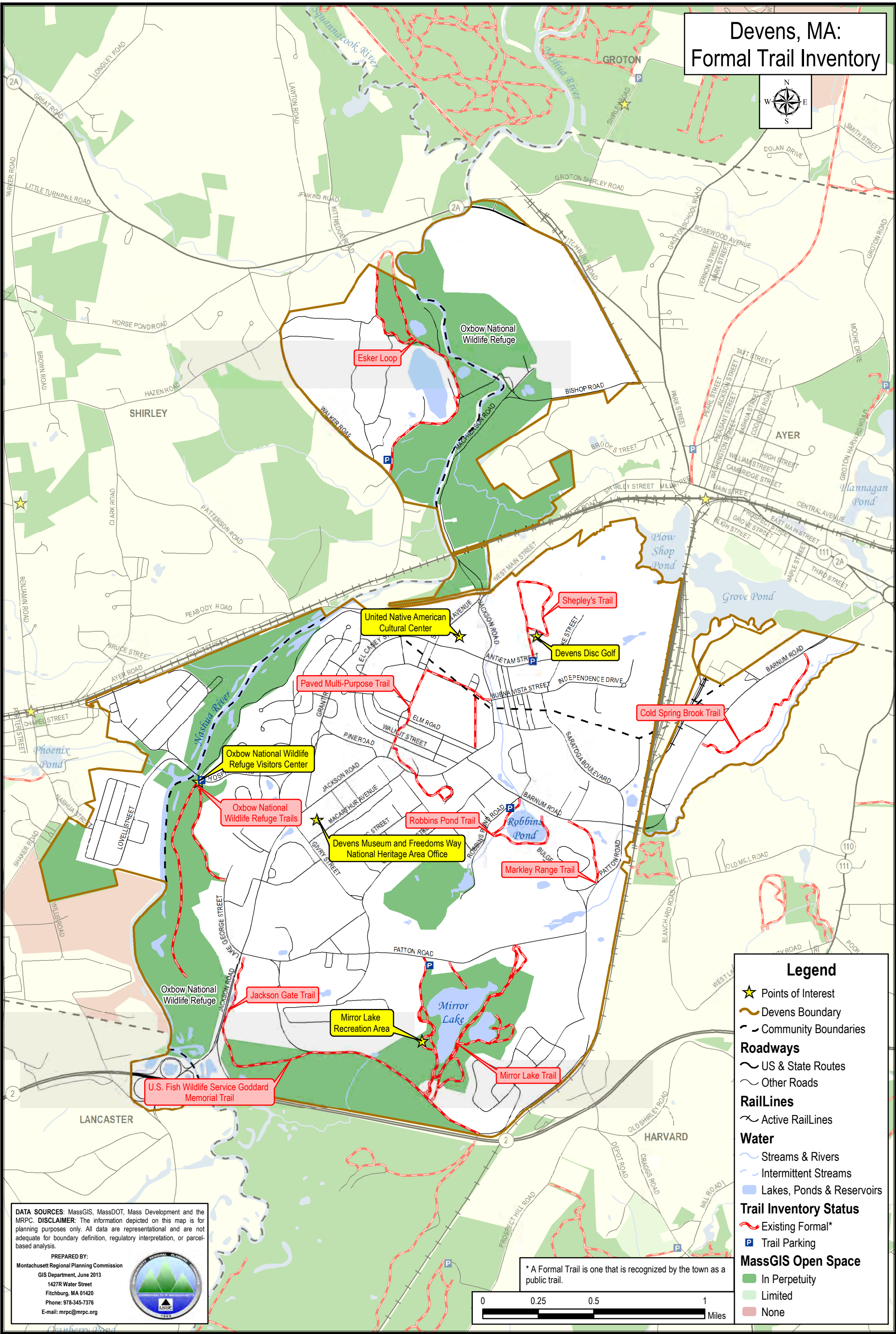
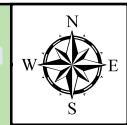
Map 10: Bike Trail



0 0.3 0.6 1.2 Miles



Devens, MA: Formal Trail Inventory

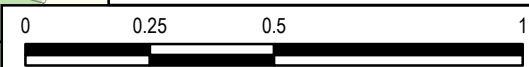


DATA SOURCES: MassGIS, MassDOT, Mass Development and the MRPC. **DISCLAIMER:** The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis.

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GIS Department, June 2013
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* A Formal Trail is one that is recognized by the town as a public trail.



Legend

- ★ Points of Interest
- Devens Boundary
- Community Boundaries

Roadways

- US & State Routes
- Other Roads

RailLines

- Active RailLines

Water

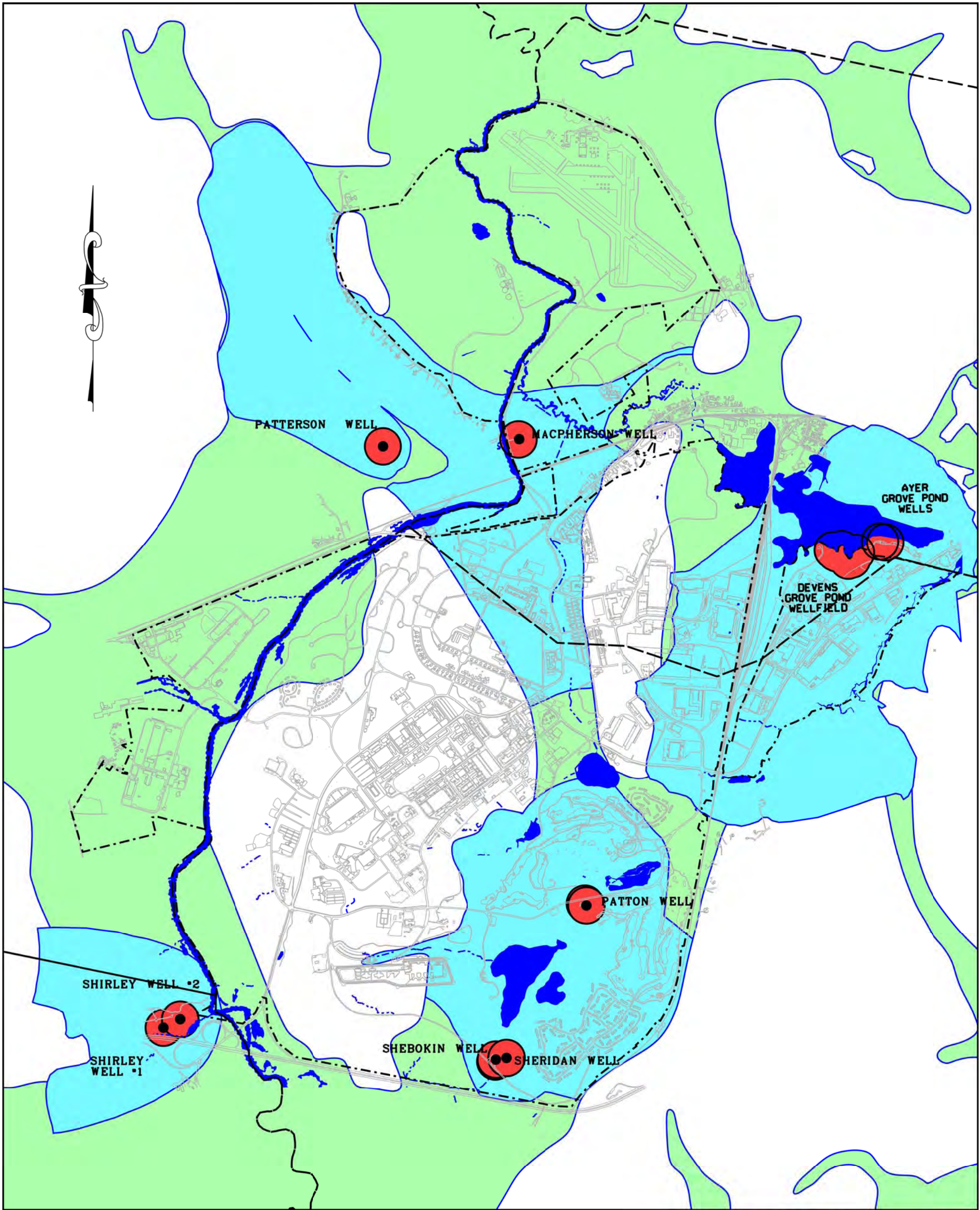
- Streams & Rivers
- Intermittent Streams
- Lakes, Ponds & Reservoirs

Trail Inventory Status



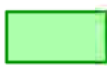
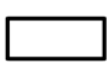
- Existing Formal*
- Trail Parking





MassGIS Open Space

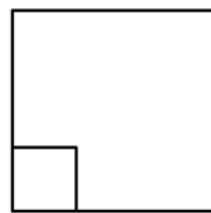
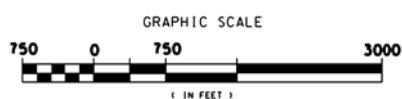
- In Perpetuity
- Limited
- None



Legend:

-  Zone I District
-  Zone II District
-  Aquifer District
-  Watershed Districts

-  Well Head
-  Surface Waters
-  DREZ Boundary
-  Town Boundary

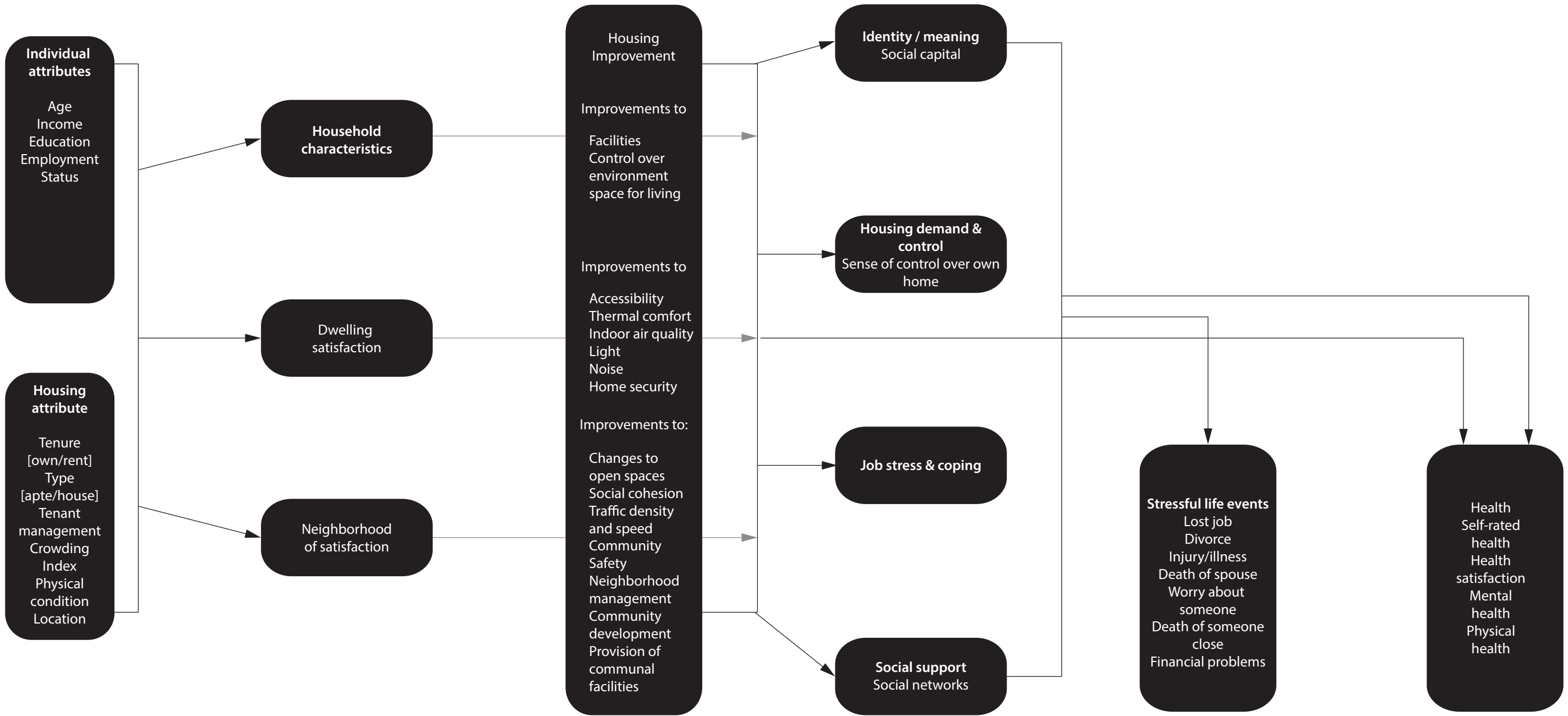


Devens Regional Enterprise Zone

Water Resource Protection Overlay Districts

Original Map Date:
November 17, 1994
Re-Printed:
November 3, 1999
Revised:
February 7, 2003 - Based on updated data from DEP
February 2, 2007 - Based on updated data from DEP
August __, 2011 - Based on updated data from DEP

Links between Housing and related factors and health.



Transportation Pathway

