DEC Proposed Regulation Updates 2023

Summary of Proposed Regulation Updates:

- **974 CMR 9.00 – Building Code:**
  -Adopt the MA Specialized Stretch Code

- **974 CMR 8.00 – Public Health:**
  -Adopt NIH Guidelines and BioSafety Regulations

- **974 CMR 3.00 and 4.00 – SWM/Impervious Surface Coverage:**
  -Require Green Roofs on all new buildings
  -Require more porous pavement
  -Improve productivity of soils

OVERARCHING THEMES: GHG REDUCTION & CLIMATE RESILIENCE
CONTINUE LEADING BY EXAMPLE

974 CMR 9.00 – Building Code : Adopt Specialized Stretch Code

- Stretch Energy code = higher energy efficiency than the Base code.
- Base code updated (now closer to previous Stretch Code)
- New Stretch Code released to support MA climate goals
- Currently required for Devens projects 300+ parking spaces; 150 spaces and 1000 ADT; or 2000 ADT (GHG Mitigation)
- Stretch code update improves energy efficiency and allows **all-electric** or **mixed-fuels** (fossil-fuel) options with higher efficiency required for mixed-fuels
- Specialized Code option – getting buildings ready for all-electric (optional)

Why Adopt Specialized Stretch Code?

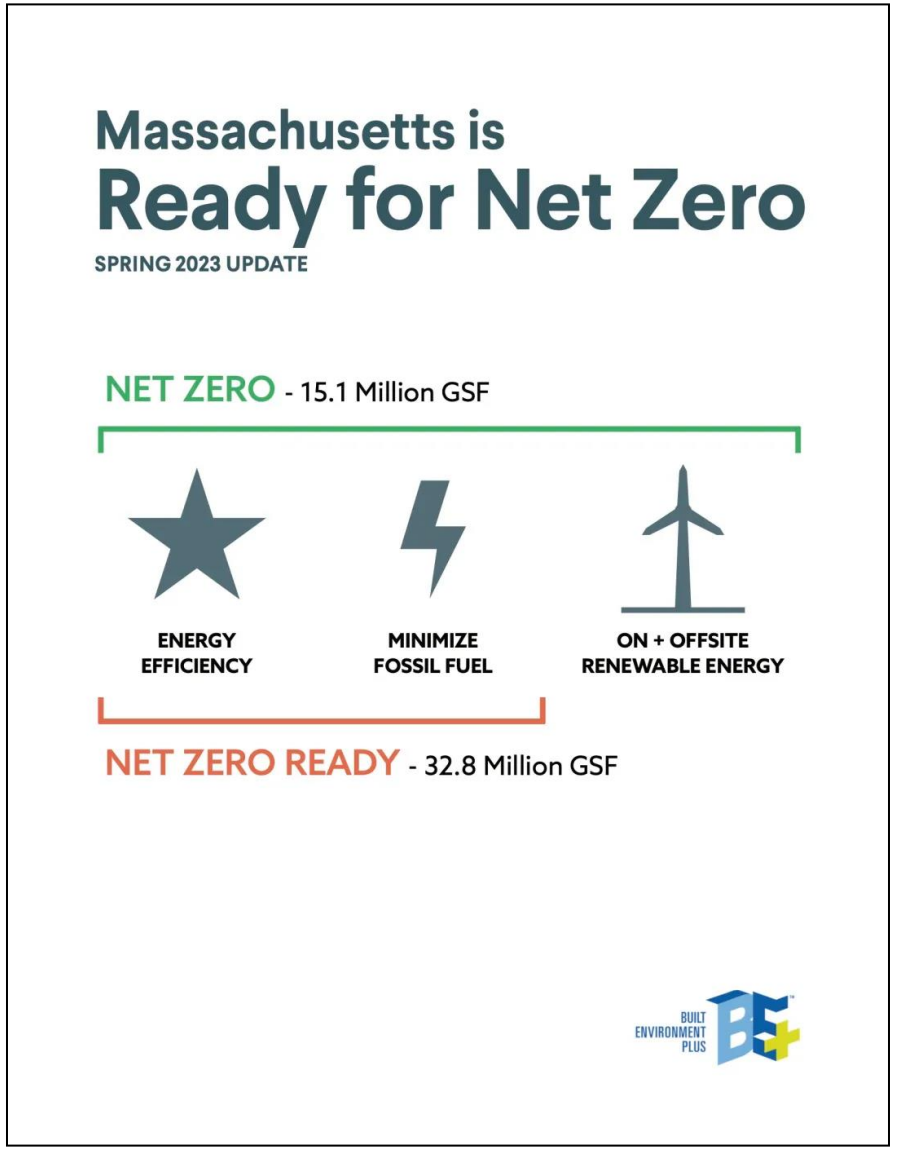
- Improve energy efficiency and resiliency of building stock in Devens
- Reduce reliance on fossil fuels, improved air quality inside and out
- Health benefits and lower energy bills over time

- Help meet state and local GHG reduction goals (50% by 2030)
- Continue to lead by example and support innovative design, construction, management

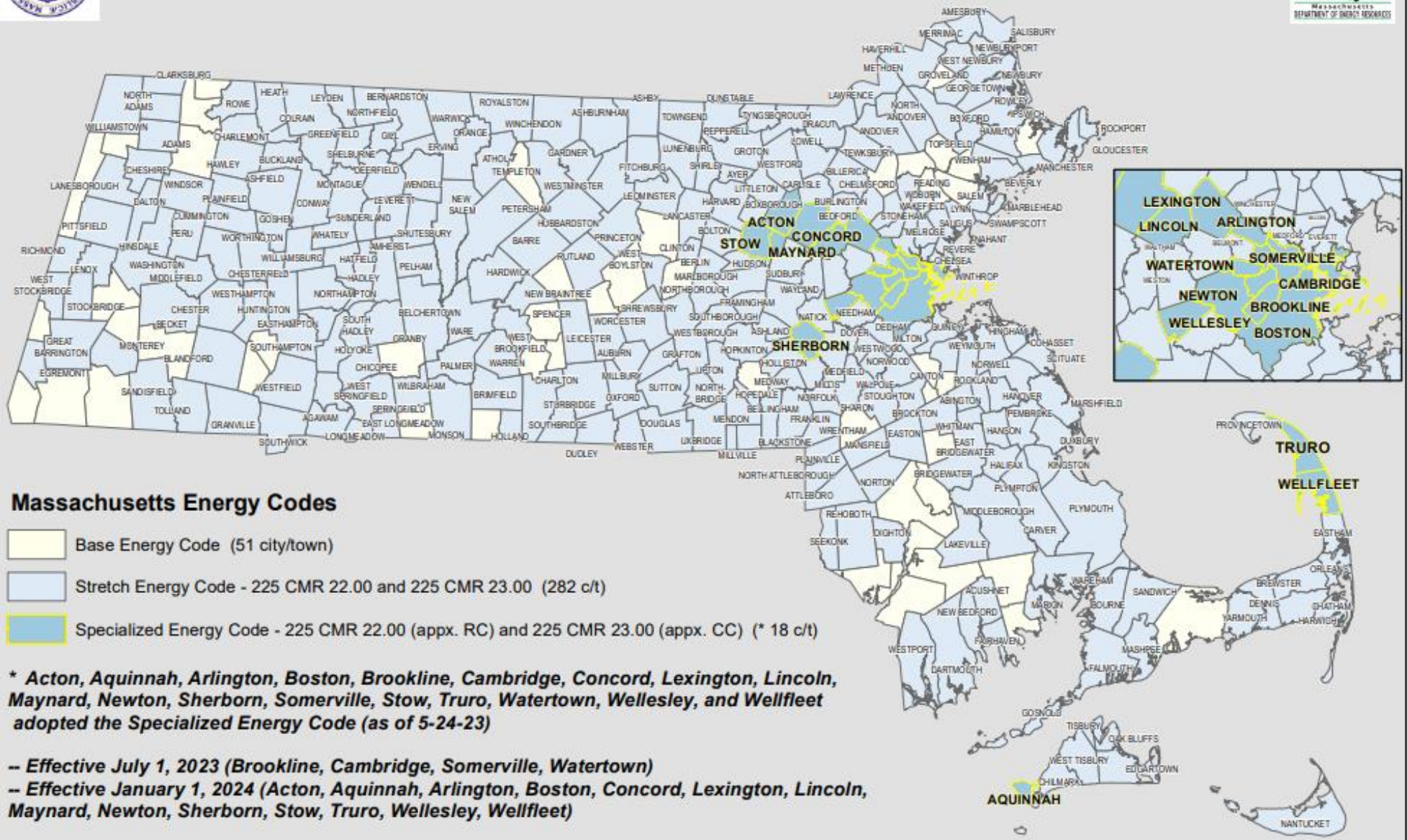
- Fulfill Sustainable Redevelopment Goals of Reuse Plan
- Consistent with Devens Climate Action Plan goals

It’s Already Happening!

- 7.2 mil. GSF to 32.8 mil. GSF - 355% in 2 years.
- <1% construction cost premium for NZE Ready (SSC)
- Lab / Tech / Science space in 2023: 9.3 Million GSF, Net Zero Ready space.
- MF & affordable housing - leading the way for Net Zero development in Massachusetts (heat pumps and on-site renewables to reach NZE)
- 13.5 million GSF reported the use of electricity for domestic hot water.
- 140% increase in Net Zero projects (320 companies) since 2021 to make Net Zero buildings the standard in MA.



Massachusetts Building Energy Code Adoption by Municipality



Massachusetts Energy Codes

- Base Energy Code (51 city/town)
- Stretch Energy Code - 225 CMR 22.00 and 225 CMR 23.00 (282 c/t)
- Specialized Energy Code - 225 CMR 22.00 (appx. RC) and 225 CMR 23.00 (appx. CC) (* 18 c/t)

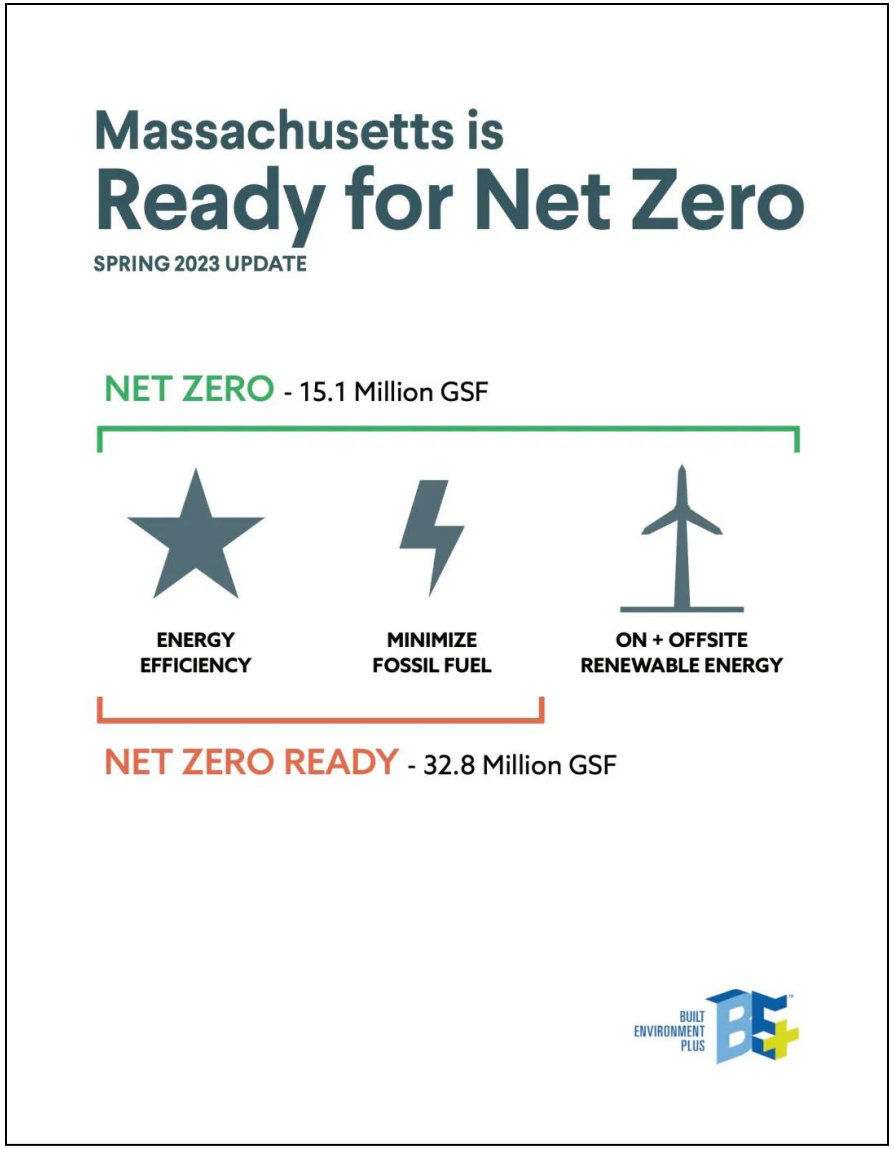
**** Acton, Aquinnah, Arlington, Boston, Brookline, Cambridge, Concord, Lexington, Lincoln, Maynard, Newton, Sherborn, Somerville, Stow, Truro, Watertown, Wellesley, and Wellfleet adopted the Specialized Energy Code (as of 5-24-23)***

-- Effective July 1, 2023 (Brookline, Cambridge, Somerville, Watertown)
-- Effective January 1, 2024 (Acton, Aquinnah, Arlington, Boston, Concord, Lexington, Lincoln, Maynard, Newton, Sherborn, Stow, Truro, Wellesley, Wellfleet)

MA DOER, 7-3-2023, jpfister

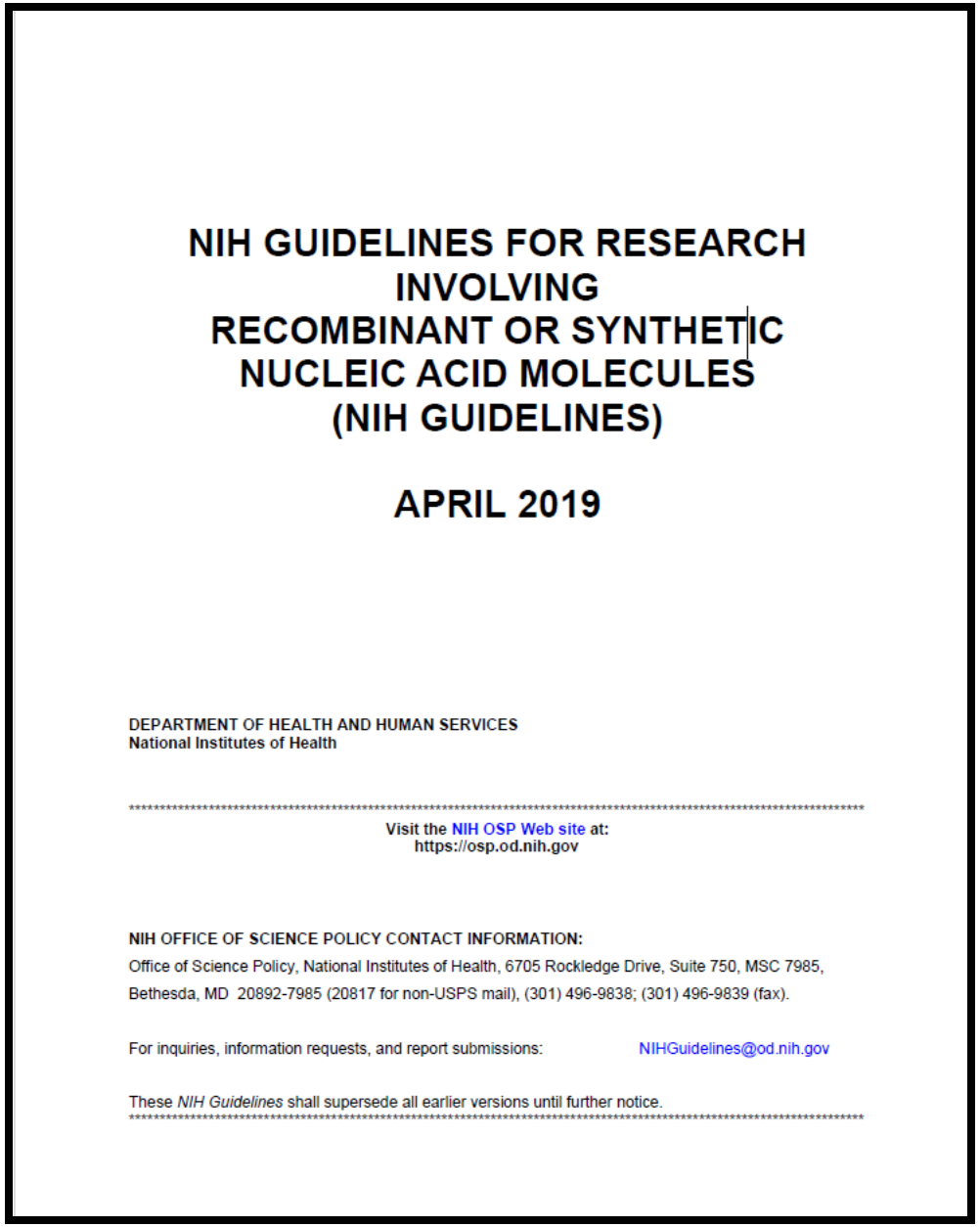
Questions?

- Renovations? No, the Specialized code will apply to new construction only.
- Affordable housing? Yes, the Specialized stretch code applies to affordable housing
- Cost? Low first costs beyond the Stretch code. Energy savings over time and lower life-cycle costs (DEC Embodied Carbon Guidelines)



BioSafety Regulations:

- Policies, rules, and procedures for businesses and personnel working in facilities handling microbiological agents such as bacteria, viruses, parasites
- Varying levels. What is safe for Devens?
- Working with CDC and NIH Guidelines, BOH, DEC Legal Counsel and DEC IPS Peer Review Consultants



NIH GUIDELINES FOR RESEARCH INVOLVING RECOMBINANT OR SYNTHETIC NUCLEIC ACID MOLECULES (NIH GUIDELINES)

APRIL 2019

DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

Visit the NIH OSP Web site at:
https://osp.od.nih.gov

NIH OFFICE OF SCIENCE POLICY CONTACT INFORMATION:
Office of Science Policy, National Institutes of Health, 6705 Rockledge Drive, Suite 750, MSC 7985, Bethesda, MD 20892-7985 (20817 for non-USPS mail), (301) 496-9838; (301) 496-9839 (fax).

For inquiries, information requests, and report submissions: NIHGuidelines@od.nih.gov

These *NIH Guidelines* shall supersede all earlier versions until further notice.

Table 1: Classification of Infectious Microorganisms by Risk Group

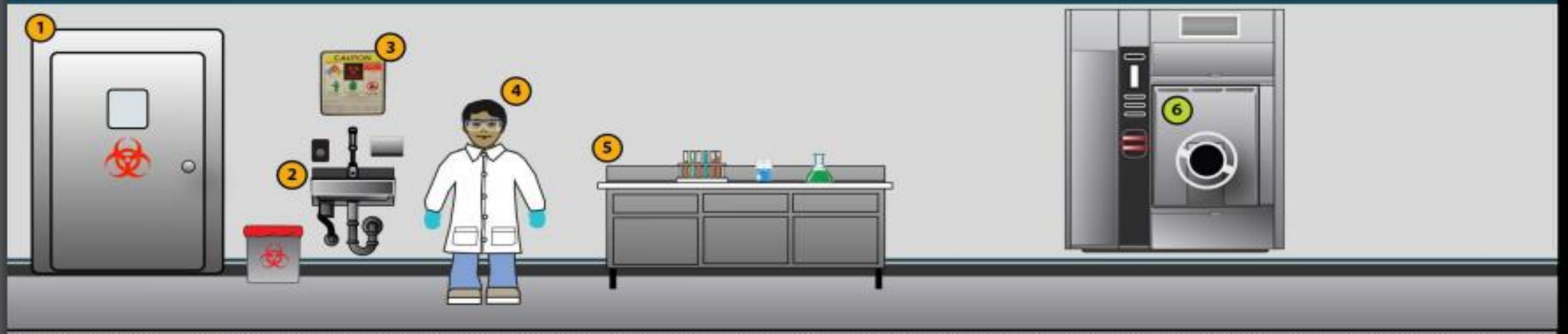
Risk Group Classification	NIH Guidelines for Research involving Recombinant DNA Molecules 2002[2]	World Health Organization Laboratory Biosafety Manual 3rd Edition 2004[1]
Risk Group 1	Agents not associated with disease in healthy adult humans.	(No or low individual and community risk) A microorganism unlikely to cause human or animal disease.
Risk Group 2	Agents associated with human disease that is rarely serious and for which preventive or therapeutic interventions are *often* available.	(Moderate individual risk; low community risk) A pathogen that can cause human or animal disease but is unlikely to be a serious hazard to laboratory workers, the community, livestock or the environment. Laboratory exposures may cause serious infection, but effective treatment and preventive measures are available and the risk of spread of infection is limited.
Risk Group 3	Agents associated with serious or lethal human disease for which preventive or therapeutic interventions may be available (high individual risk but low community risk).	(High individual risk; low community risk) A pathogen that usually causes serious human or animal disease but does not ordinarily spread from one infected individual to another. Effective treatment and preventive measures are available.
Risk Group 4	Agents likely to cause serious or lethal human disease for which preventive or therapeutic interventions are not usually available (high individual risk and high community risk).	(High individual and community risk) A pathogen that usually causes serious human or animal disease and can be readily transmitted from one individual to another, directly or indirectly. Effective treatment and preventive measures are not usually available.[3]

CDC 24/7

4 BIOSAFETY LAB LEVELS

CDC

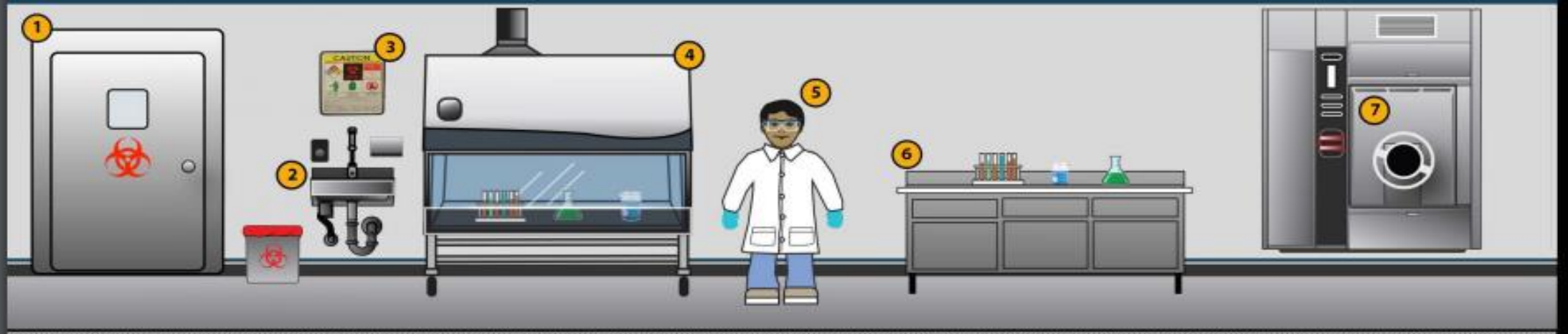
BSL1



BSL1

1. controlled access
2. hand washing sink
3. sharp hazards warning policy
4. personal protective equipment
5. laboratory bench
6. autoclave

BSL2



BSL2

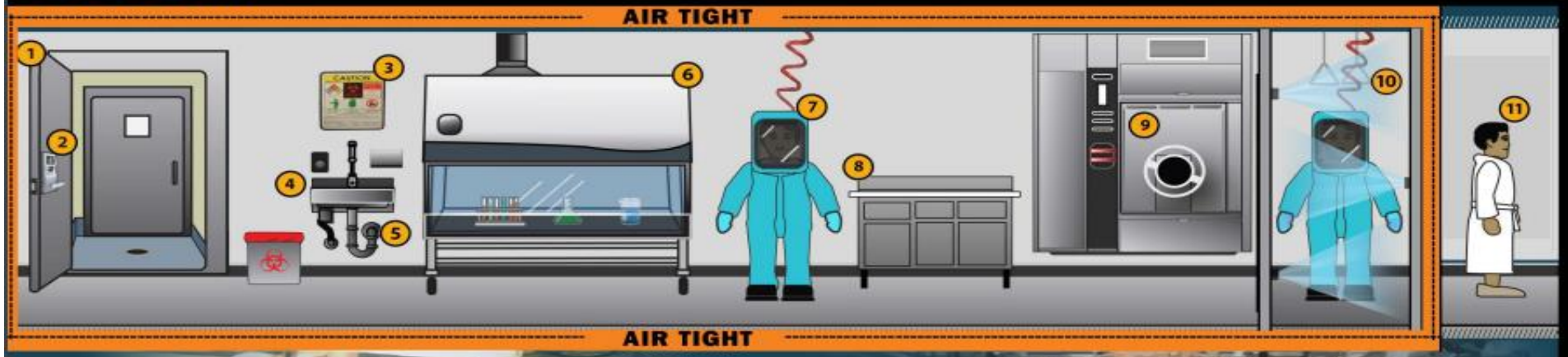
1. controlled access
2. hand washing sink
3. sharp hazards warning policy
4. physical containment device
5. personal protective equipment
6. laboratory bench
7. autoclave

BSL3 (WITH RISK-BASED ENHANCEMENTS)

BSL3

1. self-closing, double-door access
2. controlled access
3. personal shower out
4. sharp hazards warning policy
5. hand washing sink
6. sealed penetrations
7. physical containment device
8. powered air

BSL4



BSL4

1. self-closing, double-door access
2. controlled access
3. sharp hazards warning policy
4. hand washing sink
5. sealed penetrations
6. physical containment device
7. positive pressure protective suit
8. laboratory bench
9. autoclave
10. chemical shower out
11. personal shower out
12. supply and exhaust HEPA filters
13. effluent decontamination system

Required safety equipment Risk-based enhancements

www.cdc.gov/24-7

974 CMR 3.00 SITE PLAN
3.04: Design Standards – Vegetated Roof and Walls

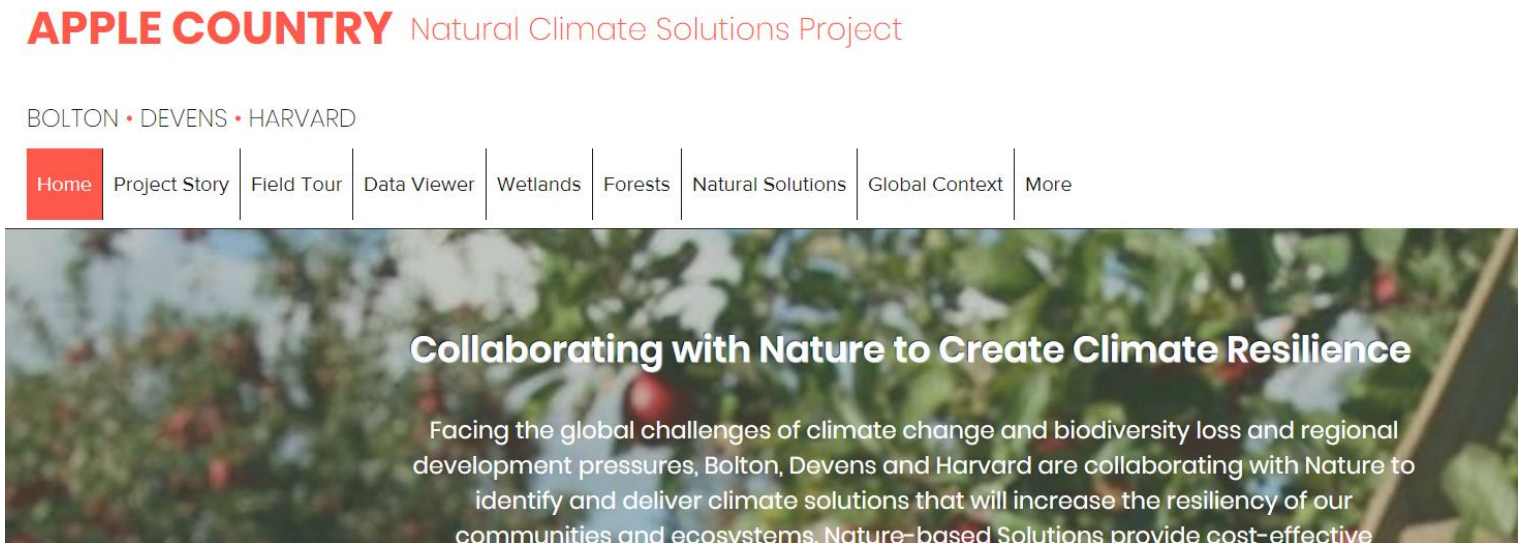
- Currently only required in Viewshed or to meet GHG requirements for certain large projects
- Expand requirements to meet impervious surface reduction goals, UHI, AQ, Habitat, and SWM goals
- 80% of roof area to be vegetated
- Modeled after Somerville, Cambridge, Toronto, Chicago
- Flexibility: Options and exceptions
- Keeping Devens below the FEIR threshold of 984 impervious acres (~808 in 2020)

974 CMR 3.00 SITE PLAN
3.04: Design Standards – Porous Pavement

- Current standard in regulations but no requirements.
- Widely used in many areas and proven to work well in the right location.
- Require in all areas not subject to heavy truck traffic or LUPPL
- Provide spec's and additional guidance based on real experience.
- Expand requirements to meet impervious surface reduction goals and SWM goals.
- Keeping Devens below the FEIR threshold of 984 impervious acres (~808 in 2020)

974 CMR 3.00 SITE PLAN
3.04: Design Standards – Soils

- Improve soil conditions - carbon sequestration & plant health (ecosystem services)
- Synergistic benefits: water quality, flooding, heat islands, drought response
- More productive forests, wetlands and landscapes
- MA Healthy Soils Action Plan Guidance



https://climateresilient.wixsite.com/applecountry

https://www.mass.gov/doc/healthy-soils-action-plan-2023/download

Next Steps:

- Continue research
- Develop biosafety regulations with input from Council, Peer Review, Public Safety, Inspection team
- Finalize Impervious surface regulations and green roof regulations
- Target Winter/Spring Public Hearing

Questions/Comments/Discussion?