This is a guidance document with sample specification language intended to be inserted into project specifications on this subject as appropriate to the agency's environmental goals. Certain provisions, where indicated, are required for U.S. federal agency projects. Sample specification language is numbered to clearly distinguish it from advisory or discussion material. Each sample is preceded by identification of the typical location in a specification section where it would appear using the SectionFormat™ of the Construction Specifications Institute; the six digit section number cited is per CSI Masterformat™ 2004 and the five digit section number cited parenthetically is per CSI Masterformat™ 1995.

SECTION 10 81 50 (10295) – INTEGRATED PEST MANAGEMENT (IPM)

SPECIFIER NOTE:

resource management: Pesticide use exerts a powerful selection pressure for changing the genetic make-up of a pest population. Naturally resistant individuals in a pest population are able to survive pesticide treatments. The survivors pass on the resistance trait to their offspring. The result is a much higher percentage of the pest population resistant to a pesticide. In the last decade, the number of weed species known to be resistant to herbicides rose from 48 to 270, and the number of plant pathogens resistant to fungicides grew from 100 to 150. Resistance to insecticides is so common — more than 500 species — that nobody is really keeping score.
Pesticides often kill off natural enemies along with the pest. With their natural enemies eliminated, there is little to prevent recovered pest populations from exploding to higher, more damaging numbers than existed before pesticides were applied. Additional chemical pesticide treatments only repeat this cycle.

toxicity/IEQ: Only a minute portion of any pesticide application contacts the target organism. The remainder may degrade harmlessly, but too often water, wind, and soil carries pesticides to non-target areas and organisms, affecting the health of human and wildlife populations. Public concerns over residues are deepened by the lack of research and knowledge about possible synergistic interactions between pesticide residues and the hundreds of other synthetic chemical residues now found in the environment.
Both pests and pesticides pose health concerns for building occupants. Pests carry human pathogens and may produce potent human allergens. Building occupants may be exposed to pesticides through the air, or direct contact with treated surfaces. IPM is being recognized by many experts as the best means to control pests effectively, while using the least amount of pesticide necessary. An increasing number of states, municipalities and schools systems are mandating that IPM programs be implemented in their buildings.

performance: Studies have indicated that in most situations where IPM has been implemented, both pesticide use and pest problems have decreased dramatically.
The national goal of implementing integrated pest management (IPM) methods on 75 percent of the nation's cropland was jointly announced by the U.S. Department of Agriculture, the U.S. Environmental Protection Agency, and the Food and Drug Administration in September 1993. This goal represents a commitment by the federal government to work with its state and private sector partners to develop and implement ecologically-based pest management approaches that rely less on synthetic chemical pest controls and are more sustainable. For additional information, refer to the National Information System for USDA's Regional IPM Centers at http://www.ipmcenters.org/.
IPM has been used successfully for many years in agriculture, and is increasingly being applied in non-agricultural settings. In structural pest control (pest control in and around buildings), IPM focuses mainly on eliminating or reducing sources of food, water, and harborage that are available to pests, and limiting pest access into and throughout buildings. Control measures such as sanitation, and building maintenance and modifications are strong elements of a structural IPM program. The success of such a program requires the collaborative efforts of everyone involved in the management and maintenance of a building including service contractors, tenants, custodians, and other employees. Education and cooperation are necessary parts of any IPM program.

Refer to the U.S. EPA guidelines for establishing IPM programs in schools, http://www.epa.gov/pesticides/ipm/brochure/ipmprograms.htm

Also, for assistance with design and/or monitoring information related to structural IPM, refer to:
- California's EPP Best Practices Manual Building Maintenance--Structural IPM
- http://www.green.ca.gov/EPP/building/structipm.htm
- California School IPM Pest Prevention: Maintenance Practices and Facility Design http://www.schoolipm.info/managing_pests/71_pest_prevention.cfm
- IPM Standards for Schools: Tactics and Resources for Reducing Pest and Pesticide Risks in Schools and Other Sensitive Environments http://www.ipminstitute.org/
- Integrated Pest Management Guidance for Plan Development; Massachusetts Department of Food & Agriculture http://www.mass.gov/agr/

PART 1 GENERAL

1.1 SUMMARY

A. Section includes: Integrated Pest Management (IPM) to address the following pests:
1. Indoor populations of rodents, insects (including termites), arachnids, and other arthropods.
2. Outdoor populations of potentially indoor-infesting species that are within the property boundaries.
3. Nests of stinging insects within 20 (twenty) feet of the building and within the property boundaries.
4. Individuals of all excluded pest populations that are incidental invaders inside the building.
a. Excluded Pest Populations:
1) Birds, bats, snakes, and all other vertebrates other than commensal rodents.
2) Pests that primarily feed on outdoor vegetation.

B. Integrated Pest Management (IPM) shall include the following:
1. Initial building and site inspection.
2. Developing an IPM Plan appropriate to the building, site, and local ecosystems.
3. Implementing the approved IPM Plan.
4. Documenting IPM services.

SPECIFIER NOTE:
Coordinate requirements specified under this section with work specified under related sections. Edit below to suit project.

C. Related Sections:
1. Section 01 50 00 (01500) - Temporary Facilities And Controls
2. Section 01 57 19.11 (01352) – Indoor Air Quality (IAQ) Management
3. Section 01 74 13 (Section 01740) – Progress Cleaning
4. Section 01 78 23 (01830) – Operation and Maintenance Data
5. Section 01 78 53 (01780) – Sustainable Design Closeout Documentation
6. Section 01 79 11 (01821) – Environmental Demonstration & Training
7. Section 10.81.16.13 (02872) - Bat Houses
8. Section 31 31 00 (02360) - Soil Treatment: Sand barrier termite controls and mesh termite control
9. Section 32 90 00 (02900) – Planting: Landscape maintenance program and soil solarization

1.2 DEFINITIONS

A. Definitions pertaining to sustainable development: As defined in ASTM E2114.

B. Action Threshold: The level at which action is initiated as determined by how many pests can be tolerated.
   1. The action threshold reflects the pest management objective for the site. The presence of some pests does not, in itself, necessarily require action. When pest populations exceed established action thresholds, action must be taken.

C. Biological Control: The use of living organisms—parasites, predators, or pathogens—to maintain pest populations.

D. Cultural Control: The manipulations of the site ecosystem that make it less friendly to the establishment and proliferation of pest populations.

E. Exclusion: The practice of structural and procedural modifications to reduce access used by pests.

F. Integrated Pest Management (IPM): An approach to pest management that uses current, comprehensive information on the life cycles of pests and their interactions with the environment to identify and implement effective methods of pest control with the least possible hazard to people, property, and the environment.

G. Mechanical Control: The use of one or more physical components of the environment, such as temperature, humidity, or light, to the detriment of the pest.

H. Phenology: The annual cycles of plants and animals and how they respond to seasonal changes in their environment.

1.3 QUALITY ASSURANCE

A. Contractor Qualifications:
   1. Experience: Minimum of **[3] [5] [xxxx]** years experience in performing the types of services specified herein.
   2. Certification:
      a. Contractor personnel providing on-site pest control service must maintain certification as Commercial Pesticide Applicators in the category of Industrial, Institutional, Structural, and Health Related Pest Control. Uncertified individuals working under the supervision of a Certified Applicator will not be permitted to provide service under this contract.

SPECIFIER NOTE:
The IPM Institute of North America; http://www.ipminstitute.org/ is a non-profit organization formed in 1998 to foster recognition and rewards in the marketplace for goods and service providers who practice IPM. The focus has been largely on agricultural IPM, including labels for food products. The IPM Institute has developed its IPM Star Certification to recognize excellence in structural IPM. IPM Star certification is available for pest management professionals providing structural IPM services.

      [b. IPM Star Certification: IPM Star Service Provider in accordance with the IPM Institute of North America's certification program.]

B. Pesticides:
   1. Contractor shall be responsible for application of pesticides according to the label.
   2. Regulatory compliance:
      a. All pesticides used by the Contractor must be registered with the U.S. Environmental Protection Agency (EPA) and applicable jurisdictions.
      b. Transport, handling, and use of all pesticides shall be in strict accordance with the manufacturer's label instructions and all applicable laws and regulations.

3. Contractor shall not store any pesticide product in the project building(s) and site.
4. Prohibited Pesticides:
   a. Contractor shall not apply any pesticide product that has not been included in the approved IPM Plan or approved in writing by the Owner.
5. Minimization of Risk:
   a. When pesticide use is necessary, Contractor shall employ the least risk pesticide, most precise application technique, and minimum quantity of pesticide necessary to achieve control.
   b. Application of pesticides in any inside or outside area shall not occur unless visual inspection or monitoring devices indicate the presence of pests in that specific area.
   c. Recommendations for preventive pesticide treatments in areas where inspection indicates a potential insect or rodent infestation will be evaluated by the Owner on a case-by-case basis. Written approval must be granted by the Owner prior to any preventive pesticide application.
   d. Notification: Contractor shall notify Owner at least 48 hours in advance of the application of any pesticide. Exceptions may be made for applications made for emergencies, where an imminent threat to health exists (e.g., stinging insects). For emergency applications, notification must be made as soon as practical.

C. Key Pests and Action Thresholds:

SPECIFIER NOTE:
Following are examples; edit to suite project.

key pest	**action threshold**	
	interior	**exterior**
birds	1 bird	1 nest on building
rats	any evidence	any evidence
flies	1 complaint (when one or more become a nuisance)	1 complaint (when one or more become a nuisance); also, **30/day** based on monitoring count
ants	1 complaint	1 fire ant mound within 100 feet of building/ pavement
cockroaches	1 cockroach in public areas or fresh food areas	n/a
pantry pests (meal moth)	1 complaint	n/a
crickets	1 complaint	n/a
weeds	n/a	tbd

D. Coordination with construction operations:

SPECIFIER NOTE:
IPM is most successful when the project site is maintained appropriately during construction to minimize both pests and pesticides. Coordination with Contractor operations during construction is critical. Open waste bins, partially consumed soda pops and food wrappers, for example, can attract numerous pests that may take up residence during construction and become extremely problematic to dislodge with basic IPM procedures.

1. Review Contractor's Indoor Air Quality (IAQ) Management Plan to verify moisture controls are appropriate to anticipated IPM Plan.
2. Review Contractor's Waste Management Plan to verify sanitation levels are appropriate to anticipated IPM Plan.
3. Review Contractor's progress cleaning methods to verify sanitation levels are appropriate to anticipated IPM Plan.

E. Coordination with Owner's operations:
   1. Coordinate with Section 01 78 23 (01830) – Operation and Maintenance Data: Sanitation information consistent with approved IPM plan.
   2. Coordinate with Section 32 90 00 (02900) – Planting: Landscape maintenance program.

1.4 PRECONSTRUCTION MEETING

A. After award of Contract and prior to the commencement of the Work, schedule and conduct meeting with Owner and Architect to discuss the proposed IPM Plan and to develop mutual understanding relative to details of environmental protection.

1.5 SUBMITTALS

A. Integrated Pest Management (IPM) Plan: Not less than 10 days before the Pre-construction meeting, prepare and submit an IPM Plan including, but not limited to, the following:
   1. Verify key pests and action thresholds for each key pest are appropriate to project, local ecosystem, and climate.
   2. Proposed IPM Strategies: Provide for each key pest, appropriate to the building, site, and local ecosystems.
      a. Indicate strategies for inspection, prevention and for response to identified pest problems.
         1) Inspection: Describe methods and procedures to be used for identifying sites of pest harborage and access, and for making objective assessments of pest population levels throughout the term of the contract.
         2) Prevention: Describe methods and procedures recommended for prevention of pest harborage and access.
         3) Response: Indicate prioritization of strategies such that non-chemical controls are utilized before chemical controls; and lesser risk options are used before resorting to actions with greater risk factors.
   3. Proposed Materials and Equipment:
      a. Provide brand names of pesticide application equipment, rodent bait boxes, insect and rodent trapping devices, pest monitoring devices, pest detection equipment, and other pest control devices or equipment that may be used to provide service.
      b. Commercial Pesticide Applicator Certificates or Licenses: The Contractor shall provide photocopies of State-issued Commercial Pesticide Applicator Certificates or Licenses for every Contractor employee who will be performing on-site service under this contract.
      c. Pesticides: For all pesticides to be used, submit:
         1) Product data indicating conformance to U.S. National Organics Program (NOP) Final Rule list.
         2) Current EPA-registered label.
         3) Material Safety Data Sheet. MSDSs shall be prepared/updated within the previous five years and shall include responses to Sections 1 – 16 in accordance with ANSI Z400.1 and as follows:
            a) Section 11: Toxicological Information. Include data used to determine the hazards cited in Section 3. Identify acute data, carcinogenicity, reproductive effects, and target organ effects.
            b) Section 12: Ecological Information. Include data regarding environmental impacts in the event of an accidental release.

c) Section 13: Disposal Considerations. Include data regarding the proper disposal of the chemical. Indicate whether or not the product is considered to be "hazardous waste" according the US EPA Hazardous Waste Regulations 40 CFR 261.
d) Section 14: Transportation Information. Identify hazard class for shipping.
e) Section 15: Regulatory Information. Identify federal, state, and local regulations applicable to the material.

4. Service Schedule: Provide a complete service schedule that includes weekly or monthly frequency of Contractor visits, specific day(s) of the week of Contractor visits, and approximate duration of each visit.
   a. Start of Service Schedule: Start of construction.
5. Revise and resubmit Plan as required by Owner.
   a. Approval of Contractor's Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations.

B. Baseline IPM Reports: Prior to beginning implementation of approved IPM Plan, submit the following:
   1. Initial Building Inspection Report. Conduct a site visit to verify the pest control needs of all locations and identify problem areas and any equipment, structural features, or management practices that may contribute to pest infestations.
      a. Submit Report summarizing observations. Indicate proposed revisions, if any, to approved IPM Plan that may be necessary based upon results of Initial Building Inspection.
   2. Summary of Conventional Pest Management Controls for Key Pests: Submit summary of conventional pest management materials and methods that would be applicable to the building and site for key pests. Include the types of pesticide, application rates, estimated annual quantity required, and environmental issues of concern for each.

C. Operations and Maintenance Information: Submit instructions for Owner's personnel regarding Owner operations and maintenance procedures associated with Contractor provided IPM services.
   1. Include overview of potential pest problems, conventional practices and environmental impacts, and IPM practices and environmental impacts.
   2. Coordinate with landscaping maintenance program.
   3. Coordinate with building cleaning and routine maintenance programs.

D. Field Quality Control Documentation.
   1. IPM Inspection Reports
   2. IPM Deficiency Reports
   3. IPM Log Book.

PART 2 - PRODUCTS

SPECIFIER NOTE:
EO 13423 includes requirements for Federal Agencies to use "sustainable environmental practices, including acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products"

EO 13423 includes requirements for Federal Agencies to reduce "the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed of by the agency"

Executive Order 13514; *Federal Leadership in Environmental, Energy, and Economic Performance*; was signed on October 5, 2009. http://www.ofee.gov/execorders.asp It expands upon the environmental performance requirements of EO 13423.
http://www1.eere.energy.gov/femp/regulations/printable_versions/eo13423.html

EO 13514 sets numerous federal requirements in several areas, including sustainable buildings and communities. Federal agencies must implement high performance sustainable federal building design, construction, operation and management, maintenance, and deconstruction, including:

- Ensuring all new Federal buildings, entering the design phase in 2020 or later, are designed to achieve zero net energy by 2030.
- Ensuring all new construction, major renovations, or repair or alteration of Federal buildings comply with the Guiding Principles of Federal Leadership in High Performance and Sustainable Buildings http://www1.eere.energy.gov/femp/pdfs/mouhighperfsustainfedfacs.pdf
- Ensuring at least 15% of existing agency buildings and leases (above 5,000 gross square feet) meet the Guiding Principles by fiscal year 2015 and that the agency makes annual progress towards 100% compliance across its building inventory.

2.1 CHEMICAL CONTROLS

A. Prohibited Pesticides:

1. Pesticides containing active ingredients classified as known, likely or probable carcinogens or reproductive toxins according to any of the following lists: State of California EPA List of Chemicals Known to Cause Cancer or Reproductive Toxicity, State of Illinois EPA List of Known Endocrine Disrupters, US EPA List of Chemicals Evaluated for Carcinogenic Potential.
2. Pesticides containing inert ingredients included on US EPA's List 1: Inerts of Toxicological Concern.
3. Pesticide formulations and uses presenting a potential physical hazard or dust/powder inhalation hazard to building occupants.
4. Pesticides with label precautionary statements including "toxic" or "extremely toxic" to bees, birds, fish or wildlife. *Does not apply to pesticides used as per label directions to control bird, fish, wildlife or stinging insect pests.*
5. Pesticides with label precautionary statements including specific warnings regarding ground or surface water contamination.

SPECIFIER NOTE:
The National Organic Program (NOP) "Final Rule" is a refinement of the Organic Food Production Act of 1990. Refer to http://www.ams.usda.gov/nop/NOP/standards.html
The NOP Final Rule is an attempt by the United States Department of Agriculture (USDA) to outline the requirements for the production and processing/storage of organic food products. Most organic certifying agencies now consider the materials (including pesticides) listed on the "National List of Allowed and Prohibited Substances" included in the Final Rule as the only materials acceptable for use in organic food processing and warehousing facilities. "organic."
The Code of Federal Regulations (CFR) that governs the NOP is 7CFR 205. As outlined in 7CFR 205, the products that can be used in the service of organic facilities are somewhat restricted. Any non-synthetic materials used for pest control must be listed on the NOP Final Rule list of acceptable materials (National List). Essentially, only boric acid-based materials, plant oil-based materials for crawling insects and Vitamin D3 (Cholecalciferol) and Quintox for rodents are acceptable.

B. Lesser Risk Pesticides: Materials listed on the U.S. National Organic Program's Final Rule, US Code of Federal Regulations 7CFR 205, list of acceptable materials and as follows:

1. Crawling insects: Boric acid based or plant based pesticides.

SPECIFIER NOTE:
Botanical pesticides can be as simple as pureed plant leaves, extracts of plant parts, or chemicals purified from plants. Pyrethrum, neem formulations, and rotenone are examples of botanicals.
Some botanicals are broad-spectrum pesticides. Others, like ryania, are very specific.
Botanicals are generally less harmful in the environment than synthetic pesticides because they degrade quickly, but they can be just as deadly to beneficials as synthetic pesticides.

a. Botanical pesticides: Pyrethrum, neem formulations, rotenone, and others as approved by Owner.

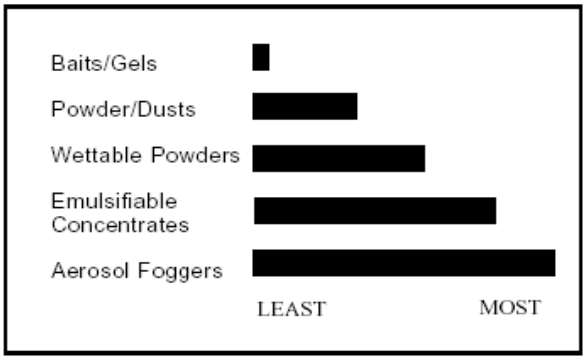
2. Rodents: Vitamin D3 (Cholecalciferol) or Quintox.
3. Weeds: Plant based pesticides and herbicides. Coordinate with Section 32 90 00 (02900) – Planting.
   a. Botanical pesticides: Pyrethrum, neem formulations, rotenone, and others as approved by Owner.
4. Plant diseases: Plant based fertilizers. Coordinate with Section 32 90 00 (02900) – Planting.

SPECIFIER NOTE:
Compost teas are most commonly used for foliar disease control and applied as foliar nutrient sprays. The idea underlying the use of compost teas is that a solution of beneficial microbes and some nutrients is created, then applied to plants to increase the diversity of organisms on leaf surfaces. This diversity competes with pathogenic organisms, making it more difficult for them to become established and infect the plant.
An important consideration when using compost teas is that high-quality, well-aged compost be used, to avoid contamination of plant parts by animal pathogens found in manures that may be a component of the compost. There are different techniques for creating compost tea. The compost can be immersed in the water, or the water can be circulated through the compost.

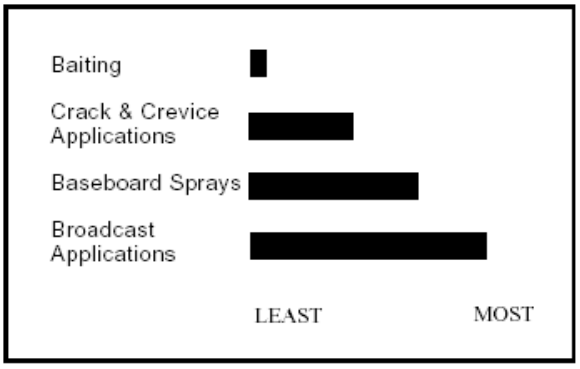
   a. Compost Teas: Verify that compost tea does not include invasive species, including seeds. Verify that compost tea does not include animal pathogens.

C. Lesser Risk Pesticide Application Methodologies:

Likelihood the Pesticide Will Become Airborne



Use Pattern and Amount of Pesticide Used



PART 3 - EXECUTION

3.1 NON-CHEMICAL PEST MANAGEMENT

A. Provide IPM in accordance with approved IPM Plan and as follows:

SPECIFIER NOTE:
Cultural controls can include removing pest habitat (sanitation) and improving biodiversity. Maintaining and increasing biological diversity of the site is a primary strategy of IPM. Decreased biodiversity tends to result in ecosystems that are unstable and prone to recurrent pest outbreaks and many other problems. Systems high in biodiversity tend to be more "dynamically stable"—that is, the variety of organisms provide more checks and balances on each other, which helps prevent one species (i.e., pest species) from overwhelming the system.
Healthy, biologically active soils increase below ground diversity.
Habitat for beneficial organisms increases above ground diversity.
To assist with disease management decisions, the State Cooperative Extension Service (CES) will often issue warnings of "infection periods" for certain diseases, based upon the weather.
It should be kept in mind that ecosystem manipulation is a two-edged sword. Some plant pests (such as the tarnished plant bug and lygus bug) are attracted to the same plants that attract beneficials. The development of beneficial habitats with a mix of plants that flower throughout the year can help prevent such pests from migrating *en masse.*

1. Cultural Controls:
   a. Sanitation and exclusion: Recommend structural and procedural modifications as appropriate to reduce food, water, harborage, and access used by pests.
   b. Soils: Maintain healthy, biologically active soils. Coordinate with Section 32 90 00 (02900) – Planting.
   c. Habitat for beneficial organisms: Recommend modifications as appropriate to promote healthy habitat for beneficial organisms. Habitat enhancement may include flowering annual or perennial plants that provide pollen and nectar needed during certain parts of the insect life cycle, overwintering sites, and wind protection. Coordinate with Section 32 90 00 (02900) – Planting.

SPECIFIER NOTE:
For information on Phenology and its use in IPM, refer to http://www.attra.org/attra-pub/phenology.html or the US Department of Agriculture Plants database, http://plants.usda.gov/

   d. Phenology: Determine correlation with insect emergence and pest control. Develop recommendations as appropriate.

SPECIFIER NOTE:
Common examples of mechanical controls are: tillage, flaming, flooding, soil solarization, and mulches to kill weeds or to prevent weed seed germination.

2. Mechanical Controls
   a. Traps:
      1) Rodents: Trapping devices shall be the standard method for indoor rodent control. All such devices shall be concealed out of the general view and in protected areas so as not to be affected by routine cleaning and other operations.
      2) Insects: Trapping devices shall be the standard method for indoor fly control.
   b. Vacuums:
      1) Insects: Portable vacuums shall be the standard method for initial cleanouts of cockroach infestations, ants, termites, and for control of spiders in webs.
   c. Flame weeding: Unless otherwise approved by Owner, flame weeding shall not be permitted.

SPECIFIER NOTE:
Mulching helps to minimize the spread of soil borne plant pathogens by preventing their transmission through soil splash. Mulch, if heavy enough, prevents the germination of many annual weed seeds. Hay and straw, for example, provide habitat for spiders, which eat a variety of insects. Living mulches of various clovers can reduce insect pest damage to vegetables and orchard crops as they provide habitat for to natural predators.

   d. Mulches, living or non-living:

1) Weeds: Mulch shall be used for suppression of weeds, insect pests, and plant diseases as appropriate. Coordinate with Section 32 90 00 (02900) – Planting.

e. Boiling Water:

1) Fire Ants (exterior): Boiling water shall be the standard method for control of exterior fire ants. Use boiling water at a rate of approximately 3 gallons per mound.

3. Biological Controls:

a. Lady bugs, nematodes, and other biological controls: Permitted only for control of exterior ants, aphids, and/or other insects as appropriate. Coordinate with Section 32 90 00 (02900) – Planting.

b. Bats: Permitted only for control of exterior insects as appropriate. Coordinate with Section 10.81.16.13 (02872) - Bat Houses.

3.2 CHEMICAL PEST MANAGEMENT

A. Chemical Controls: Unless otherwise approved by Owner, Contractor shall use non-chemical methods of control. When pesticide use is necessary, the Contractor shall employ the least risk, NOP-listed pesticide; most precise application technique; and minimum quantity of pesticide necessary to achieve control.

B. Baits Boxes: Bait boxes shall be maintained with an emphasis on the safety of non-target organisms.

1. Bait boxes shall be placed out of the general view, in locations where they will not be disturbed by routine operations.
2. Lids shall be securely locked or fastened shut.
3. Bait boxes shall be securely attached or anchored to floor, ground, wall, or other immovable surface, so that the box cannot be picked up or moved.
4. Bait shall be secured in the feeding chamber of the box and never placed in the runway or entryways of the box.
5. Bait boxes shall be labeled on the inside with the Contractor's business name and address, and dated by the Contractor's technician at the time of installation and each servicing.

3.3 PEST REMOVAL

A. Pest Removal: Remove traps, bait boxes, and their contents according to the approved IPM Plan and as requested by Owner.

3.4 SPECIAL REQUESTS AND EMERGENCY SERVICE

A. On occasion, the Owner may request that the Contractor perform corrective, special, or emergency service(s) that are beyond routine service requests. The Contractor shall respond to these exceptional circumstances and complete the necessary work within three (3) hours after receipt of the request.

3.5 FIELD QUALITY CONTROL

A. Inspection: Inspect building and site for pests and beneficials to gather information about the health of the landscaping and local ecosystem, pests, and natural enemies.

1. Methods: Use methods indicated in approved IPM Plan and as follows:

a. Sweep nets, sticky traps, and pheromone traps may be used to collect insects for both identification and population density information.

b. Leaf counts may be used for recording plant growth stages.

c. Square-foot or larger grids laid out in a field may provide a basis for comparative weed counts.

d. Records of rainfall and temperature may be used to help predict the likelihood of disease infections.

2. Schedule: Inspect at regular intervals and at critical times in accordance with approved IPM Plan.
3. Reports: Document results of inspections. Submit using **[GSA Form 3638, Pest Control Work and Inspection Report.] [form approved by Owner.]**

B. Recommendations: Throughout the term of this contract, the Contractor shall be responsible for advising the Owner about any structural, sanitary, or procedural modifications that would reduce pest food, water, harborage, or access.
1. The Contractor shall be responsible for adequately suppressing all pests included in this contract regardless of whether or not the suggested modifications are implemented.
2. The Contractor will not be held responsible for carrying out structural modifications as part of the pest control effort. However, minor applications of caulk and other sealing materials by the Contractor to eliminate pest harborage or access may be approved by the Owner on a case by case basis. The Contractor shall obtain the approval of the Owner prior to application of sealing material and other structural modification.

C. Log Book: The Contractor shall maintain a pest control logbook or file. These records shall be kept on-site and maintained on each visit by the Contractor. Each logbook or file shall include:
1. IPM Plan: A copy of the approved IPM Plan.
2. IPM Contact List: Include contact information for Contractor and Owner contact. Indicate emergency contact information for Contractor.
3. Schedule: Contractor's service schedule for the property. Identify IPM activity that has been performed.
4. Product Data: A list of all pesticides used on property and product data for each as follows:
   a. Product data indicating conformance to U.S. National Organics Program (NOP) Final Rule list.
   b. Current EPA-registered label.
   c. Material Safety Data Sheet.
5. IPM Inspection Reports and Deficiency Reports.
6. Pest Diagrams: Plans and site drawings noting the location of pest activity, including the location of all traps, trapping devices, and bait stations in or around the site.

END OF SECTION