

**Comments Provided to DPS on
Proposed Amendments to IgCC
Chapters 4—5**

PROPOSED AMENDMENTS TO 2012 IgCC
For Discussion at the DPS Public Work Session
May 28, 2014 2:30pm – 4:30pm
(Proposed by DPS)

Second Worksession: Proposed amendments to Chapters four and five.

Sec. 9. Sections 402.2 through 402.3: Delete

Sec. 10. Section 403, **Stormwater Management**: Delete Entire Section

Sec. 11. Section 404.1 **Landscape irrigation systems**. Replace with: “Landscaping plans shall be designed by a registered design professional and shall be submitted as part of the construction permit drawings and specifications. Irrigations of exterior landscaping shall comply with Sections 404.1.1 and 404.1.2.”

Sec. 11. Section 404.1.1 **Water for outdoor landscape irrigation**. Replace with: “Outdoor landscape irrigation systems shall be designed and installed to reduce potable water use by 50 percent from a calculated mid-summer baseline in accordance with Section 404.1.2 or with alternate onsite nonpotable water complying with Chapter 7.”

Sec. 12. Section 405.6(2) **Documentation**: Add after the last sentence: “Test results shall be made available to the code official upon request.”

Sec. 13. Section 407.2 **Changing and shower facilities**: Move to Appendix A.

Sec. 14. Section 504 **Waste Management And Recycling**: Delete in its entirety.

Sec. 15. Section 506 **Lamps**: Delete in its entirety.

Respondent: Anonymous

Comments: Chapter 4 - Site Development and Land Use

Sec. 11. Section 404.1 Landscape irrigation systems. Replace with: "Landscaping plans shall be designed by a registered design professional and shall be submitted as part of the construction permit drawings and specifications. Irrigations of exterior landscaping shall comply with Sections 404.1.1 and 404.1.2."

SHOULDN'T THIS SECTION SAY "LANDSCAPE IRRIGATION PLANS SHALL BE.....

LANDSCAPE PLANS SHOULD BE DESIGNED BY A LICENSED LANDSCAPE ARCHITECT.

Chapter 4 – Site Development and Land Use 401.1 Scope and intent. This chapter provides requirements for the development and maintenance of building and building sites to minimize negative environmental impacts and to protect, restore and enhance the natural features and environmental quality of the site.

PROPOSED ACTION: Adopt with the following modifications:

RATIONALE / IMPACT: See Sections 401.2 through 409.3

2011 ASHRAE 189.1 CORRELATION: See Chapters 5, 6 and 10 of 2011 ASHRAE 189.1

401.2 Predesign site inventory and assessment. An inventory and assessment of the natural resources and baseline conditions of the building site shall be submitted with the construction documents. The inventory and assessment shall: 1. Determine the location of any protection areas identified in Section 402.1 that are located on, or adjacent to, the building site; 2. Determine whether, and to the degree to which, the native soils and hydrological conditions of the building site have been disturbed and altered by previous use or development; 3. Identify invasive plant species on the site for removal; and 4. Identify native plant species on the site.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by M-NCPPC and DPS (Articles 19 & 22A of County Code – Forest Conservation)

2011 ASHRAE 189.1 CORRELATION: None

402.1 Protection by area. Where flood hazard areas, surface water bodies or wetlands, conservation areas, parklands, agricultural lands or greenfields are located on, or adjacent to, a lot, the development of the lot as a building site shall comply with the provisions of Sections 402.2 through 402.8.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by FEMA, MDE, M-NCPPC and DPS (Articles 19 & 22A of County Code – Forest Conservation)

2011 ASHRAE 189.1 CORRELATION: 5.3.1.2

402.2. Flood hazard areas. For locations within flood hazard areas, unless compliance with Section 402.2.1 or Section

402.2.2 is required by Table 302.1, new buildings and structures and substantial improvements shall comply with Section 402.2.3. 402.2.1 Flood hazard area preservation, general. Where this section is indicated to be applicable in Table 302.1, new buildings and structures, site disturbance, and development of land shall be prohibited within flood hazard areas. 402.2.2 Flood hazard area preservation, specific. Where this section is indicated to be applicable in Table 302.1, new buildings and structures, site disturbance, and development of land shall be prohibited within the specific flood hazard areas established pursuant to local land use authority.

402.2.3 Development in flood hazard areas. New buildings, structures and substantial improvements constructed in flood hazard areas shall be in compliance with Section 1612 of the International Building Code provided the lowest floors are elevated or dry floodproofed to not less than 1 foot (25 mm) above the elevation required by Section 1612 of the International Building Code, or the elevation established by the jurisdiction, whichever is higher.

PROPOSED ACTION: Delete (402.2.1 and 402.2.2 are Jurisdictional Electives)

RATIONALE / IMPACT: Regulated by FEMA, MDE, and DPS (Article 19 of County Code – Sediment Control)

2011 ASHRAE 189.1 CORRELATION: 5.3.1.2

402.3 Surface water protection. Where this section is indicated to be applicable in Table 302.1, buildings and building site improvements shall not be located over, or located within a buffer as established by the jurisdiction, around or adjacent to oceans, lakes, rivers, streams and other bodies of water that support or could support fish, recreation or industrial use. The buffer shall be measured from the ordinary high-water mark of the body of water. Exceptions: 1. Buildings and associated site improvements specifically related to the use of the water including, but not limited to, piers, docks, fish hatcheries, and habitat restoration facilities, shall be permitted where the impacts of the construction and location adjacent to or over the water on the habitat is mitigated. 2. Buildings and associated site improvements shall be permitted where a wetlands permit has been issued under a national wetlands permitting program or otherwise issued by the authority having jurisdiction.

PROPOSED ACTION: Delete (402.3 is a Jurisdictional Elective)

RATIONALE / IMPACT: Regulated by FEMA, MDE, and DPS (Article 19 of County Code – Sediment Control)

2011 ASHRAE 189.1 CORRELATION: 5.3.1.2

402.4 Wetland protection. Buildings and building site improvements shall not be located within a wetland or within a buffer as established by the jurisdiction around a wetland. Exception: Buildings and associated site improvements specifically related to the use of the wetland including, but not limited to, piers, docks, fish hatcheries, and habitat restoration facilities, shall be permitted where the impacts of the construction and location adjacent to or over the wetland on the habitat are mitigated.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by EPA, MDE, and DPS (Article 19 of County Code – Sediment Control)

2011 ASHRAE 189.1 CORRELATION: 5.3.1.2

402.5 Conservation area. Where this section is indicated to be applicable in Table 302.1, site disturbance or development of land in or within 50 feet (15 240 mm) of any designated conservation area shall not be permitted. Exception: Buildings and associated site improvements located in or within 50 feet (15 240 mm) of a conservation area shall be permitted where the building and associated site improvements serve a purpose related to the conservation area as determined by the authority that designated the conservation area.

PROPOSED ACTION: Delete (402.5 is a Jurisdictional Elective)

RATIONALE / IMPACT: Regulated by MDE, M-NCPPC and DPS (Article 19 of County Code – Sediment Control)

2011 ASHRAE 189.1 CORRELATION: 5.3.1.2

402.6 Park land. Site disturbance or development of land located within a public park shall not be permitted. Exceptions: 1. Buildings and site improvements shall be permitted to be located within a park where the building and site improvements serve a park-related purpose. 2. Park lands owned and managed by the Federal government shall be exempt from this prohibition. 3. Privately held property located within the established boundary of a park shall be exempt from this prohibition.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by M-NCPPC

2011 ASHRAE 189.1 CORRELATION: None

402.7 Agricultural land. Where this section is indicated to be applicable in Table 302.1, buildings and associated site improvements shall not be located on land zoned for

agricultural purposes. Exception: Buildings and associated site improvements shall be permitted to be located on agriculturally zoned land where the building serves an agriculturally related purpose, including, but not limited to, primary residence, farmhouse, migrant workers housing, farm produce storage, processing and shipping.

PROPOSED ACTION: Delete (402.7 is a Jurisdictional Elective)

RATIONALE / IMPACT: Regulated by M-NCPPC and DPS (Article 59 of County Code – Zoning)

2011 ASHRAE 189.1 CORRELATION: None

402.8 Greenfield sites. Where this section is indicated to be applicable in Table 302.1, site disturbance or development shall not be permitted on greenfield sites. Exception: The development of new buildings and associated site improvements shall be permitted on greenfield sites where the jurisdiction determines that adequate infrastructure exists, or will be provided, and where the sites comply with not less than one of the following:

1. The greenfield site is located within 1/4 mile (0.4 km) of developed residential land with an average density of not less than 8 dwelling units per acre (19.8 dwelling units per hectare).
2. The greenfield site is located within 1/4 mile (0.4 km) distance, measured over roads or designated walking surfaces, of not less than 5 diverse uses and within 1/2 mile (0.8 km) walking distance of not less than 7 diverse uses. The diverse uses shall include not less than one use from each of the following categories of diverse uses: retail, service, or community facility.
3. The greenfield site has access to transit service. The building on the building site shall be located in compliance with one of the following: 3.1. Within 1/4 mile (0.4 km) distance, measured over designated walking surfaces, of existing or planned bus or streetcar stops. 3.2. Within 1/2 mile (0.8 km) distance, measured over designated walking surfaces, of existing or planned rapid transit stops, light or heavy passenger rail stations, ferry terminals, or tram terminals.
4. The greenfield site is located adjacent to areas of existing development that have connectivity of not less than 90 intersections per square mile (35 intersections per square kilometer). Not less than 25 percent of the perimeter of the building site shall adjoin, or be directly across a street, public bikeway or pedestrian pathway from the qualifying area of existing development. 4.1. Intersections included for determination of connectivity shall include the following: 4.1.1. Intersections of public streets with other public streets; 4.1.2. Intersections of public streets with bikeways and pedestrian pathways that are not part of a public street for motor vehicles; and 4.1.3. Intersections of bikeways and pedestrian pathways that are not part of a public street for motor

vehicles with other bikeways and pedestrian pathways that are not part of a public street for motor vehicles. 4.2. The following areas need not be included in the determination of connectivity: 4.2.1. Water bodies, including, but not limited to lakes and wetlands. 4.2.2. Parks larger than 1/2 acre (2023 m² designated conservation areas and areas preserved from development by the jurisdiction or by the state or federal government. 4.2.3. Large facilities including, but not limited to airports, railroad yards, college and university campuses. 402.8.1 Site disturbance limits on greenfield sites. For greenfield sites that are permitted to be developed, site disturbances shall be limited to the following areas: 1. Within 40 feet (18 288 mm) of the perimeter of the building; 2. Within 15 feet (4572 mm) of proposed surface walkways, roads, paved areas and utilities; 3. Within 25 feet (7620 mm) of constructed areas with permeable surfaces that require additional staging areas to limit compaction in the constructed areas.

PROPOSED ACTION: Delete (402.8 is a Jurisdictional Elective)

RATIONALE / IMPACT: Regulated by M-NCPPC and DPS (Article 59 of County Code – Zoning)

2011 ASHRAE 189.1 CORRELATION: 5.3.1.1

403.1 Stormwater management. Stormwater management systems, including, but not limited to, infiltration, evapotranspiration; rainwater harvest and runoff reuse; shall be provided and retained on the building site.

403.1.1 Increased runoff. Stormwater management systems shall address the increase in runoff that would occur resulting from development on the building site and shall either: 1. Manage rainfall onsite and size the management system to retain not less than the volume of a single storm which is equal to the 95th-percentile rainfall event and all smaller storms and RETAIN the predevelopment natural runoff; or 2. RETAIN or restore the predevelopment stable, natural runoff hydrology of the site throughout the development or redevelopment process. Post-construction runoff rate, volume, and duration shall not exceed predevelopment rates. The stormwater management system design shall be based, in part, on a hydrologic analysis of the building site.

403.1.2 Adjoining lots and property. The stormwater management system shall not redirect or concentrate off-site discharge that would cause increased erosion or other drainage related damage to adjoining lots or public property.

403.1.3 Brownfields. Stormwater management systems on areas of brownfields where contamination is left in place shall not use infiltration. Stormwater management systems shall not penetrate, damage, or otherwise compromise remediation actions at the building site.

403.2 Coal tar sealants. Coal tar sealants shall not be used in any application exposed to stormwater, wash waters, condensates, snowmelt, icemelt or any source of water that could convey coal tar sealants into soils, surface waters or ground-waters.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by EPA, MDE and DPS (Article 19 of County Code – Sediment Control)

2011 ASHRAE 189.1 CORRELATION: None

404.1 Landscape irrigation systems. Irrigation of exterior landscaping shall comply with Sections 404.1.1 and 404.1.2.

404.1.1 Water for outdoor landscape irrigation. Outdoor landscape irrigation systems shall be designed and installed to reduce potable water use by 50 percent from a calculated mid-summer baseline in accordance with Section 404.1.2 or, where permitted by State regulation or local ordinances, the system shall be supplied by municipal reclaimed water or with alternate onsite nonpotable water complying with Chapter 7. Exceptions: Potable water is permitted to be used as follows: 1. During the establishment phase of newly planted landscaping. 2. To irrigate food production. 3. To supplement nonpotable water irrigation of shade trees provided in accordance with Section 408.2.3. 4. Potable water is permitted for landscape irrigation where approved by local ordinance or regulation.

404.1.2 Irrigation system design and installation. Where in-ground irrigation systems are provided, the systems shall comply with all of the following: 1. The design and installation of outdoor irrigation systems shall be under the supervision of an irrigation professional accredited or certified by an appropriate local or national body. 2. Landscape irrigation systems shall not direct water onto building exterior surfaces, foundations or exterior paved surfaces. Systems shall not generate runoff. 3. Where an irrigation control system is used, the system shall be one that regulates irrigation based on weather, climatological or soil moisture status data. The controller shall have integrated or separate sensors to suspend irrigation events during rainfall. 4. Irrigation zones shall be based on plant water needs with plants of similar need grouped together. Turfgrass shall not be grouped with other plantings on the same zone. 5. Microirrigation zones shall be equipped with pressure regulators that ensure zone pressure is not greater than 40 psi (275.8 kPa), filters, and flush end assemblies. 6. Sprinklers shall: 6.1. Have nozzles with matched precipitation rates. 6.2. Be prohibited on landscape areas less than 4 feet (1230 mm) in any dimension. 6.3. Be prohibited on slopes greater than 1 unit vertical to 4 units horizontal (25-percent slope). Exception: Where the application rate of the sprinklers is less than or equal to 0.5 inches (12.7 mm) per hour. 6.4. Be permitted for use on turfgrass and crop areas only excepting microsprays of a flow less than 45 gallons (170 liters) per hour. 6.5. If of the pop-up configuration, pop-up

to a height of not less than 4 inches (101 mm). 6.6. Only be installed in zones composed exclusively of sprinklers and shall be designed to achieve a lower quarter distribution uniformity of not less than 0.65.

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: 6.3.1.2

404.2 Outdoor ornamental fountains and water features. Where available and approved for use by the authority having jurisdiction, alternate nonpotable onsite water sources complying with Chapter 7 shall be used for outdoor ornamental fountains and other water features constructed or installed on a building site. Where the fountain or water feature is the primary user of the building site's nonpotable water source, a potable makeup water connection is prohibited. Exception: Outdoor ornamental fountains and water features are allowed to use potable water provided water is recirculated and there is not an automatic refill valve connection to a source of potable water, and provided that either: 1. The catch basin or reservoir is no greater than 100 gallons (379 L); or 2. Less than 20 square feet (1.86 m²) of water surface area is exposed.

404.2.1 Treatment. The treatment required to RETAIN appropriate water quality shall comply with the authority having jurisdiction.

404.2.2 Recirculation. Outdoor ornamental fountains and water features shall be equipped to recirculate and reuse the supplied water.

404.2.3 Signage. Signage in accordance with Chapter 7 shall be posted at each outdoor ornamental fountain and water feature where nonpotable water is used.

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: 6.4.3

405.1 Soil and water quality protection. Soil and water quality shall be protected in accordance with Sections 405.1.1 through 405.1.6.

PROPOSED ACTION: Adopt with the following modifications (see 405.1.1 through 405.1.6)

RATIONALE / IMPACT: Good practice, some sections covered by other County ordinances

2011 ASHRAE 189.1 CORRELATION: See below

405.1.1 Soil and water quality protection plan. A soil and water quality protection plan shall be submitted by the owner and approved prior to construction. The protection plan shall address the following:

1. A soils map, site plan, or grading plan that indicates designated soil management areas for all site soils, including, but not limited to:
 - 1.1. Soils that will be retained in place and designated as vegetation and soil protection areas (VSPAs).
 - 1.2. Topsoils that will be stockpiled for future reuse and the locations for the stockpiles.
 - 1.3. Soils that will be disturbed during construction and plans to restore disturbed soils and underlying subsoils to soil reference conditions.
 - 1.4. Soils that will be restored and revegetated.
 - 1.5. Soils disturbed by previous development that will be restored in place and revegetated.
 - 1.6. Locations for all laydown and storage areas, parking areas, haul roads and construction vehicle access, temporary utilities and construction trailer locations.
 - 1.7. Treatment details for each zone of soil that will be restored, including the type, source and expected volume of materials, including compost amendments, mulch and topsoil.
 - 1.8. A narrative of the measures to be taken to ensure that areas not to be disturbed and areas of restored soils are protected from compaction by vehicle traffic or storage, erosion, and contamination until project completion.
2. A written erosion, sedimentation and pollutant control program for construction activities associated with the project. The program shall describe the best management practices (BMPs) to be employed including how the BMPs accomplish the following objectives:
 - 2.1. Prevent loss of soil during construction due to stormwater runoff or wind erosion, including the protection of topsoil by stockpiling for reuse.
 - 2.2. Prevent sedimentation of stormwater conveyances or receiving waters or other public infrastructure.
 - 2.3. Prevent polluting the air with dust and particulate matter.
 - 2.4. Prevent runoff and infiltration of other pollutants from construction site, including, but not limited to thermal pollution, concrete wash, fuels, solvents, hazardous chemical runoff, pH and pavement sealants. Ensure proper disposal of pollutants.
 - 2.5. Protect from construction activities the designated vegetation and soil protection areas, flood hazard areas and other areas of vegetation that will remain on site.
3. A written periodic maintenance protocol for landscaping and stormwater management systems, including, but not limited to:
 - 3.1. A schedule for periodic watering of new planting that reflects different water needs during the establishment phase of new plantings as well as after establishment. Where development of the building site changed the amount of water reaching the preserved natural resource areas, include appropriate measures for maintaining the natural areas.
 - 3.2. A schedule for the use of fertilizers appropriate to the plants species, local climate and the preestablishment and post-establishment needs of the installed landscaping. Nonorganic fertilizers shall be discontinued following plant establishment.
 - 3.3. A requirement for a visual inspection of the site after major precipitation events to evaluate systems performance and site impacts.
 - 3.4. A schedule of maintenance activities of the stormwater management system including, but not limited to, cleaning of gutters, downspouts, inlets and outlets, removal of sediments from pretreatment sedimentation pits and wet detention ponds, vacuum sweeping

followed by high-pressure hosing at porous pavement and removal of litter and debris.
3.5. A schedule of maintenance activities for landscaped areas including, but not limited to, the removal of dead or unhealthy vegetation; reseeding of turf areas; mowing of grass to a height which optimizes lawn health and retention of precipitation.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by MDE and DPS (Article 19 of County Code – Sediment Control)

2011 ASHRAE 189.1 CORRELATION: None

405.1.2 Topsoil protection. Topsoil that could potentially be damaged by construction activities or equipment shall be removed from areas to be disturbed and stockpiled on the building site for future reuse on the building site or other approved location. Topsoil stockpiles shall be secured and protected throughout the project with temporary or permanent soil stabilization measures to prevent erosion or compaction.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by MDE and DPS (Article 19 of County Code – Sediment Control)

2011 ASHRAE 189.1 CORRELATION: None

405.1.3 Imported soils. Topsoils or soil blends imported to a building site to serve as topsoil shall not be mined from the following locations: 1. Sites that are prime farmland, unique farmland, or farmland of statewide importance. 2. Greenfield sites where development is prohibited by Section 402.8. Exception: Soils shall be permitted to be imported from the locations in Items 1 and 2 where those soils are a byproduct of a building and building site development process provided that imported soils are reused for functions comparable to their original function.

PROPOSED ACTION: Delete RATIONALE / IMPACT: Regulated by MDE and DPS (Article 19 of County Code – Sediment Control)

2011 ASHRAE 189.1 CORRELATION: None

405.1.4 Soil reuse and restoration. Soils that are being placed or replaced on a building site shall be prepared, amended and placed in a manner that establishes or restores the ability of the soil to support the vegetation that has been protected and that will be planted. Soil reuse and restoration shall be in accordance with Sections 405.1.4.1 and 405.1.4.2.

405.1.4.1 Preparation. Before placing stockpiled or imported topsoils, compliance with all of the following shall occur: 1. Areas shall be cleared of debris including, but not limited to, building materials, plaster, paints, road base type materials, petroleum based chemicals, and other harmful materials; 2. Areas of construction-compacted subsoil shall be scarified; and 3. The first lift of replaced soil shall be mixed into this scarification zone to improve the transition between the subsoil and overlying soil horizons.

Exception: Scarification is prohibited in all of the following locations: 1. Where scarification would damage existing tree roots. 2. On inaccessible slopes. 3. On or adjacent to trenching and drainage installations. 4. On areas intended by the design to be compacted such as abutments, footings, inslopes. 5. Brownfields. 6. Other locations where scarification would damage existing structures, utilities and vegetation being preserved.

405.1.4.2 Restoration. Soils disturbed during construction shall be restored in areas that will not be covered by buildings, structures or hardscapes. Soil restoration shall comply with the following: 1. Organic matter. To provide appropriate organic matter for plant growth and for water storage and infiltration, soils shall be amended with a mature, stable compost material so that not less than the top 12 inches (305 mm) of soil contains not less than 3 percent organic matter. Sphagnum peat or organic amendments that contain sphagnum peat shall not be used. Soil organic matter shall be determined in accordance with ASTM D 2974. Organic materials selected for onsite amendment or for blending of imported soils shall be renewable within a 50-year cycle. Exception: Where the reference soil for a building site has an organic level depth other than 12 inches (305 mm), soils shall be amended to organic matter levels and organic matter depth that are comparable to the site's reference soil. 2. Additional soil restoration criteria. In addition to compliance with Item 1, soil restoration shall comply with not less than three of the following criteria: 2.1. Compaction. Bulk densities within the root zone shall not exceed the densities specified in Table 405.1.2 and shall be measured using a soil cone penetrometer in accordance with ASAE S313.3. The root zone shall be not less than 12 inches (305 mm) nor less than the site's reference soil, whichever results in the greater depth of measurement. Data derived from a soil cone penetrometer shall be reported in accordance with ASAE EP542. 2.2. Infiltration rates. Infiltration rates or saturated hydraulic conductivity of the restored soils shall be comparable to the site's reference soil. Infiltration rates shall be determined in accordance with ASTM D 3385 or ASTM D 5093. For sloped areas where the methods provided in the referenced standards cannot be used successfully, alternate methods approved by the code official shall be permitted provided that the same method is used to test both reference soil and onsite soil. 2.3. Soil biological function. Where remediated soils are used, the biological function of the soils' mineralizable nitrogen shall be permitted as a proxy assessment of biological activity. 2.4. Soil chemical characteristics. Soil chemical characteristics appropriate for plant growth shall be restored. The pH, cation exchange capacity and nutrient profiles of the original undisturbed soil or the site's reference soil shall be matched in restored soils. Salinity suitable for regionally appropriate vegetation shall be established. Soil amendments and

fertilizers shall be selected from those which minimize nutrient loading to waterways or groundwater.

405.1.5 Engineered growing media. Where engineered growing media are used onsite, including, but not limited to vegetative roofs, trees located within hardscape areas, and special soils specified for wetlands and environmental restoration sites, such media shall comply with the best 405.1.6 Documentation. The following shall be provided to document compliance with Sections 405.1.3 through 405.1.5: 1. Documentation, such as receipts from a soil, compost and amendments supplier, to demonstrate that techniques to restore soil occurred; and 2. Soil test results to demonstrate that the selected techniques achieved the criteria of Section 405.1.4.2. Not less than two soil tests shall be conducted on the building site. For building sites where more than 8,000 square feet (744 m² of soil is to be disturbed during construction, there shall be not less than one report for every 4,000 square feet (372 m² disturbed or report frequency as determined by the registered design professional. available science and practice standards for that engineered growing media and use.

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: None

405.2 Vegetation and soil protection. Vegetation and soils shall be protected in accordance with Sections 405.2.1 and 405.2.2.

405.2.1 Vegetation and soil protection plan. Where existing soils and vegetation are to be protected, a vegetation and soil protection plan establishing designated vegetation and soil protection areas (VSPAs) shall be submitted with the construction documents and other submittal documents. The protection plan shall address the following: 1. Identification of existing vegetation located on a building site that is to be preserved and protected. 2. Identification of portions of the building site to be designated as vegetation and soil protection areas (VSPAs) that are to be protected during the construction process from being affected by construction activities. 3. Specification of methods to be used such as temporary fencing or other physical barriers to maintain the protection of the designated vegetation and soil protection areas (VSPAs). 4. Specification of protected perimeters around trees and shrubs that are to be included in the designated vegetation and soil protection areas (VSPAs). Perimeters around trees shall be identified as a circle with a radius of not less than 1 foot (305 mm) for every inch (25 mm) of tree diameter with a radius of not less than 5 feet (1524 mm). The perimeters around shrubs shall be not less than twice the radius of the shrub. Exception: Approved alternative perimeters appropriate to the location and the species of the trees and shrubs shall be permitted. 5. Specification of methods to protect the viability of the designated vegetation and soil protection areas (VSPAs) to support the remaining

vegetation at the conclusion of the construction process including minimizing impacts on the existing stormwater drainage patterns associated with the VSPAs. 6. Identification of plans, methods and practices used to designate essential areas of soil and subsoil disturbance. 405.2.1.1 Tree protection zones (TPZ). Where tree protection zones are specified, the specifications and documentation shall be in accordance with Part 5 of TCIA/ANSI A300.

405.2.2 Invasive plant species. Invasive plant species shall not be planted on a building site. A management plan for the containment, removal and replacement of any invasive plant species currently on the site shall be generated based on either published PROPOSED ACTION for the referenced invasive plant or guidance prepared by a qualified professional. Existing vegetation that is to be retained on a building site shall be protected as required by Section 405.2.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by M-NCPPC (Article 22A of County Code – Forest Conservation)

2011 ASHRAE 189.1 CORRELATION: None 405.3 Native plant landscaping. Where new landscaping is installed as part of a site plan or within the building site, not less than 75 percent of the newly landscaped area shall be planted with native plant species.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by M-NCPPC (Article 22A of County Code – Forest Conservation)

2011 ASHRAE 189.1 CORRELATION: None

406.1 Building site waste management plan. A building site waste management plan shall be developed and implemented to divert not less than 75 percent of the land-clearing debris and excavated soils. Land-clearing debris includes rock, trees, stumps and associated vegetation. The plan shall include provisions that address all of the following: 1. Materials to be diverted from disposal by efficient usage, recycling or reuse on the building site shall be specified. 2. Diverted materials shall not be sent to sites that are agricultural land, flood hazard areas or greenfield sites where development is prohibited by Section 402.1 except where approved by the code official. 3. The effective destruction and disposal of invasive plant species. 4. Where contaminated soils are removed, the methods of removal and location where the soils are to be treated and disposed. 5. The amount of materials to be diverted shall be specified and shall be calculated by weight or volume, but not both. 6. Where the site is located in a federal or state designated quarantine zone for invasive insect species, building site vegetation management shall comply with the quarantine rules. 7. Receipts or other documentation

related to diversion shall be maintained through the course of construction. When requested by the code official, evidence of diversion shall be provided.

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: None 406.2 Construction waste. Construction materials and waste and hardscape materials removed during site preparation shall be managed in accordance with Section 503.

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: None

407.1 Walkways and bicycle paths. Not less than one independent, paved walkway or bicycle path suitable for bicycles, strollers, pedestrians, and other forms of nonmotorized locomotion connecting a street or other path to a building entrance shall be provided. Walkways and bicycle paths shall connect to existing paths or sidewalks, and shall be designed to connect to any planned future paths. Paved walkways and bicycle paths shall be designed to minimize stormwater runoff. Pervious and permeable pavement shall be designed in accordance with Section 408.2.4.

PROPOSED ACTION: Move to Appendix A – Adopt as written

RATIONALE / IMPACT: Good practice; may be difficult to implement for all projects

2011 ASHRAE 189.1 CORRELATION: 10.3.2.4.1 407.2 Changing and shower facilities. Buildings with a total building floor area greater than 10,000 square feet (929 m²) and that are required to be provided with long-term bicycle parking and storage in accordance with Section 407.3 shall be provided with onsite changing room and shower facilities. Not less than one shower shall be provided for each 20 long-term bicycle parking spaces, or fraction thereof. Where more than one changing room and shower facility is required, separate facilities shall be provided for each sex.

PROPOSED ACTION: Move to Appendix A – Adopt as written

RATIONALE / IMPACT: Good practice; may be difficult to implement for all projects

2011 ASHRAE 189.1 CORRELATION: None

407.3 Bicycle parking and storage. Long-term and short-term bicycle parking shall be designated on the site plan by a registered design professional and as specified in Table 407.3. The required number of spaces shall be determined based on the net floor area of each primary use or occupancy of a building except where Table 407.3 specifies otherwise. Accessory occupancy areas shall be included in the calculation of primary occupancy area. Exceptions: 1. Long-term bicycle parking shall not be required where the total building floor area is less than 2,500 square feet (232 m²) 2. Subject to the approval of the code official, the number of bicycle parking spaces shall be permitted to be reduced because of building site characteristics including, but not limited to, isolation from other development.

407.3.1 Short-term bicycle parking. Short-term bicycle parking shall comply with all of the following: 1. It shall be provided with illumination of not less than 1 footcandle (11 lux) at the parking surface; 2. It shall be located at the same grade as the sidewalk or at a location reachable by ramp or accessible route; 3. It shall have an area of not less than 18 inches (457 mm) by 60 inches (1524 mm) for each bicycle; 4. It shall be provided with a rack or other facility for locking or securing each bicycle; and 5. It shall be located within 100 feet (30 480 mm) of, and visible from, the main entrance.

Exception: Where directional signage is provided at the main building entrances, short-term bicycle parking shall be permitted to be provided at locations not visible from the main entrance. 407.3.2 Long-term bicycle parking. Long-term bicycle parking shall comply with all of the following: 1. It shall be located on the same site and within the building or within 300 feet (91 440 mm) of the main entrances; 2. It shall be provided with illumination of not less than 1 footcandle (11 lux) at the parking surface; 3. It shall have an area of not less than 18 inches (457 mm) by 60 inches (1524 mm) for each bicycle; and 4. It shall be provided with a rack or other facility for locking or securing each bicycle. Not less than 50 percent of long-term bicycle parking shall be within a building or provided with a permanent cover including, but not limited to, roof overhangs, awnings, or bicycle storage lockers. Vehicle parking spaces, other than those required by Section 407.4, local zoning requirements and accessible parking required by the International Building Code, shall be permitted to be used for the installation of long term bicycle parking spaces.

PROPOSED ACTION: Move to Appendix A – Adopt as written

RATIONALE / IMPACT: Good practice; may be difficult to implement for all projects. Regulated by Chapter 59 Montgomery County Code – Zoning Ordinance.

2011 ASHRAE 189.1 CORRELATION: 10.3.2.4.1 407.4 Preferred vehicle parking. Where either Section 407.4.1 or 407.4.2 is indicated to be applicable in Table 302.1, parking provided at a building site shall comply with this section. Preferred parking spaces required by this section shall be those in the parking facility that are located on the shortest route of travel from the parking facility to a building entrance, but shall not take precedence over parking spaces that are required to be accessible in accordance

with the International Building Code. Where buildings have multiple entrances with adjacent parking, parking spaces required by this section shall be dispersed and located near the entrances. Such parking spaces shall be provided with approved signage that specifies the permitted usage.

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: 10.3.2.4.1

407.4.1 High-occupancy vehicle parking. Where employee parking is provided for a building that has a total building floor area greater than 10,000 square feet (929 m²) and a building occupant load greater than 100 and not less than 20 employees, at least 5 percent, but not less than two, of the employee parking spaces provided shall be designated as preferred parking for high occupancy vehicles.

PROPOSED ACTION: Move to Appendix A- adopt as written (407.4.1 is a Jurisdictional Elective)

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: 10.3.2.4.1

407.4.2 Low-emission, hybrid, and electric vehicle parking. Where parking is provided for a building that has a total building floor area greater than 10,000 square feet (929 m²) and that has an building occupant load greater than 100, at least 5 percent, but not less than two, of the parking spaces provided shall be designated as preferred parking for low emission, hybrid, and electric vehicles.

PROPOSED ACTION: Move to Appendix A- adopt as written (407.4.2 is a Jurisdictional Elective)

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: 10.3.2.4.1

408.1 General. The heat island effect of building and building site development shall be mitigated in accordance with Sections 408.2 and 404.3.

PROPOSED ACTION: Adopt with following modification - Replace 404.3 with 408.3.

RATIONALE / IMPACT: Typographical error

2011 ASHRAE 189.1 CORRELATION: None

408.2 Site hardscape. In climate zones 1 through 6, as established in the International Energy Conservation Code, not less than 50 percent of the site hardscape shall be provided with one or any combination of options described in Sections 408.2.1 through 408.2.4. For the purposes of this section, site hardscape shall not include areas of the site covered by solar photovoltaic arrays or solar thermal collectors.

408.2.1 Site hardscape materials. Hardscape materials shall have an initial solar reflectance value of not less than 0.30 in accordance with ASTM E 1918 or ASTM C 1549. Exception: The following materials shall be deemed to comply with this section and need not be tested: 1. Pervious and permeable concrete pavements. 2. Concrete paving without added color or stain.

408.2.2 Shading by structures. Where shading is provided by a building or structure or a building element or component, such building, structure, component or element shall comply with all of the following: 1. Where open trellis-type, free-standing structures such as, but not limited to, covered walkways, and trellises or pergolas, are covered with native plantings, the plantings shall be designed to achieve mature coverage within five years; 2. Where roofed structures are used to shade parking, those roofs shall comply with Section 408.3 in climate zones 1 through 6; and 3. Shade provided onto the hardscape by an adjacent building or structure located on the same lot shall be calculated and credited toward compliance with this section based on the projected peak sun angle on the summer solstice.

408.2.3 Shading by trees. Where shading is provided by trees, such trees shall be selected and placed in accordance with all of the following: 1. Trees selected shall be those that are native or adaptive to, the region and climate zone in which the project site is located. Invasive plant species shall not be selected. Plantings shall be selected and sited to produce a hardy and drought resistant vegetated area; 2. Construction documents shall be submitted that show the planting location and anticipated ten year canopy growth of trees and that show the contributions of existing tree canopies; and 3. Shading calculations shall be shown on the construction documents demonstrating compliance with this section and shall include only those hardscape areas directly beneath the trees based on a ten year growth canopy. Duplicate shading credit shall not be granted for those areas where multiple trees shade the same hardscape.

408.2.4 Pervious and permeable pavement. Pervious and permeable pavements including open grid paving systems and open-graded aggregate systems shall have a percolation rate not less than 2 gallons per minute per square foot (100 L/min m²) Pervious and permeable pavement shall be permitted where the use of these types of hardscapes does not interfere with fire and emergency apparatus or vehicle or personnel access and egress, utilities, or telecommunications lines. Aggregate used shall be of uniform size.

PROPOSED ACTION: Move to Appendix A – adopt as written

RATIONALE / IMPACT: Good practice: may represent significant cost impact for some projects

2011 ASHRAE 189.1 CORRELATION: 5.3.2.1

408.3 Roof surfaces. Not less than 75 percent of the roof surfaces of buildings and covered parking located in climate zones 1 through 3, as established in the International Energy Conservation Code, shall be a roof complying with Section 408.3.1; shall be covered with a vegetative roof complying with Section 408.3.2; or a combination of these requirements. The provisions of this section shall apply to roofs of structures providing shade to parking in accordance with Section 408.2.2 where located in climate zones 1 through 6. Exception: Portions of roof surfaces occupied by the following shall be permitted to be deducted from the roof surface area required to comply with this section: 1. Solar thermal collectors. 2. Solar photovoltaic systems. 3. Roof penetrations and associated equipment. 4. Portions of the roof used to capture heat for building energy technologies. 5. Rooftop decks and rooftop walkways.

408.3.1 Roof coverings—solar reflectance and thermal emittance. Where roof coverings are used for compliance with Section 408.3, roof coverings shall comply with Section 408.3.1.1 or 408.3.1.2. The values for solar reflectance and thermal emittance shall be determined by an independent laboratory accredited by a nationally recognized accreditation program. Roof products shall be listed and labeled and certified by the manufacturer demonstrating compliance.

408.3.1.1 Roof products testing. Roof products shall be tested for a minimum three-year aged solar reflectance in accordance with ASTM E 1918, ASTM C 1549 or the CRRC-1 Standard and thermal emittance in accordance with ASTM C 1371, ASTM E 408 or the CRRC-1 Standard, and shall comply with the minimum values in Table 408.3.1.

408.3.1.2 Solar reflectance index. Roof products shall be permitted to use a solar reflectance index (SRI) where the calculated value is in compliance with Table 408.3.1 values for minimum aged SRI. The SRI value shall be determined using ASTM E 1980 with a convection coefficient of 2.1 Btu/h-ft² (12 W/m² K) based on three-year aged roof samples tested in accordance with the test methods in Section 408.3.1.1.

PROPOSED ACTION: Move to Appendix A – adopt as written

RATIONALE / IMPACT: Good practice: may represent significant cost impact for some projects

2011 ASHRAE 189.1 CORRELATION: 5.3.2.1

408.3.2 Vegetative roofs. Vegetative roofs, where provided in accordance with Section 408.3, shall comply with the following: 1. All plantings shall be selected based on their hardiness zone classifications in accordance with USDA MP1475 and shall be capable of withstanding the climate conditions of the jurisdiction and the micro climate conditions of the building site including, but not limited to, wind, precipitation and temperature. Planting density shall provide foliage coverage, in the warm months, of not less than 80 percent within two years of the date of installation unless a different time period is established in the approved design. Plants shall be distributed to meet the coverage requirements. Invasive plant species shall not be planted. 2. The engineered soil medium shall be designed for the physical conditions and local climate to support the plants and shall consist of nonsynthetic materials. The planting design shall include measures to protect the engineered soil medium until the plants are established. Protection measures include, but are not limited to, installation of pregrown vegetated mats or modules, tackifying agents, fiber blankets and reinforcing mesh. The maximum wet weight and water holding capacity of an engineered soil medium shall be determined in accordance with ASTM E 2399. 3. Where access to the building facades is provided from locations on the perimeter of the roof, nonvegetated buffers adequate to support associated equipment and to protect the roof shall be provided. 4. Nonvegetated clearances as required for fire classification of vegetative roof systems shall be provided in accordance with the International Fire Code. 5. Plantings shall be capable of being managed to RETAIN the function of the vegetative roof as provided in the documents required by Section 904.3.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by MDE (Stormwater Management Regulations)

2011 ASHRAE 189.1 CORRELATION: 5.3.2.3

409.1 Light pollution control. Where this section is indicated to be applicable in Table 302.1, uplight, light trespass, and glare shall be limited for all exterior lighting equipment as described in Sections 409.2 and 409.3. Exception: Lighting used for the following exterior applications is exempt where equipped with a control device independent of the control of the nonexempt lighting: 1. Specialized signal, directional, and marker lighting associated with transportation. 2. Advertising signage or directional signage. 3. Lighting integral to equipment or instrumentation and installed by its manufacturer. 4. Theatrical purposes, including performance, stage, film production, and video production. 5. Athletic playing areas where lighting is equipped with hoods or louvers for glare control. 6. Temporary lighting. 7. Lighting for industrial production, material handling, transportation sites, and associated storage areas where lighting is equipped with hoods or louvers for glare control. 8. Theme elements in theme and amusement parks. 9. Roadway lighting required by governmental authorities. 10. Lighting used to highlight

features of public monuments and registered landmark structures. 11. Lighting classified for and used in hazardous areas. 12. Lighting for swimming pools and water features.

409.1.1 Exterior lighting zones. The lighting zone for the building site shall be determined from Table 409.1.1 unless otherwise specified by the jurisdiction.

PROPOSED ACTION: (409.1 is a Jurisdictional Elective) Adopt with the following modification - Add the following exceptions:

- 13. Means of egress and emergency lighting
- 14. Lighting for public safety
- 15. Lighting for security

RATIONALE / IMPACT: To minimize vandalism and provide safe environments

2011 ASHRAE 189.1 CORRELATION: 5.3.3.1 and 5.3.3.3

409.2 Uplight. Exterior lighting shall comply with the requirements of Table 409.2 for the exterior lighting zones (LZ) appropriate to the building site. Exception: Lighting used for the following exterior applications shall be exempt from the requirements of Table 409.2. 1. Lighting for building facades, landscape features, and public monuments in exterior lighting zones 3 and 4. 2. Lighting for building facades in exterior lighting zone 2.

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: 5.3.3.3

409.3 Light trespass and glare. Where luminaires are mounted on buildings with their backlight oriented towards the building, such luminaires shall not exceed the applicable glare ratings specified in Table 409.3(1). Other exterior luminaires shall not exceed the applicable backlight and glare ratings specified in Table 409.3(2).

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: 5.3.3.2

Chapter 5 – Material Resources Conservation and Efficiency 501.1 Scope. The provisions of this chapter shall govern matters related to building material conservation, resource efficiency and environmental performance.

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: No action required

2011 ASHRAE 189.1 CORRELATION:

502.1 Construction material management. Construction material management shall comply with Sections 502.1.1 and 502.1.2.

502.1.1 Storage and handling of materials. Materials stored and handled onsite during construction phases shall comply with the applicable manufacturer's printed instructions. Where manufacturer's printed instructions are not available, approved standards or guidelines shall be followed 502.1.2 Construction phase moisture control. Porous or fibrous materials and other materials subject to moisture damage shall be protected from moisture during the construction phase. Material damaged by moisture or that are visibly colonized by fungi either prior to delivery or during the construction phase shall be cleaned and dried or, where damage cannot be corrected by such means, shall be removed and replaced.

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: None

503.1 Construction material and waste management plan. Not less than 50 percent of nonhazardous construction waste shall be diverted from disposal, except where other percentages are indicated in Table 302.1. A Construction Material and Waste Management Plan shall be developed and implemented to recycle or salvage construction materials and waste. The Construction Material and Waste Management Plan shall comply with all of the following: 1. The location for collection, separation and storage of recyclable construction waste shall be indicated. 2. Materials to be diverted from disposal by efficient usage, recycling, reuse, manufacturer's reclamation, or salvage for future use, donation or sale shall be specified. 3. The percentage of materials to be diverted shall be specified and shall be calculated by weight or volume, but not both. 4. Receipts or other documentation related to diversion shall be maintained through the course of construction. Where requested by the code official, evidence of diversion shall be provided. For the purposes of this section, construction materials and waste shall include all materials delivered to the site and intended for installation prior to the issuance of the certificate of occupancy, including related

packaging. Construction and waste materials shall not include land-clearing debris, excavated soils and fill and base materials such as, but not limited to, topsoil, sand and gravel. Land-clearing debris shall include trees, stumps, rocks, and vegetation. Excavated soil, fill material and land-clearing debris shall be managed in accordance with Section 406.1.

PROPOSED ACTION: (503.1 is a Jurisdictional Elective) Adopt with following modification: Add Calculations are allowed to be done by either weight or volume, but shall be consistent throughout. Further recommendation: maintain 50% waste management as base requirement in Table 302.1; delete 65% waste management requirement altogether; and move to Appendix A for 75% waste management.

RATIONALE / IMPACT: Consistent with Montgomery County Recycle Program and to provide specific direction for consistency

2011 ASHRAE 189.1 CORRELATION: 9.3.1.1

504.1 Recycling areas for waste generated post certificate of occupancy. Waste recycling areas for use by building occupants shall be provided in accordance with one of the following: 1. Waste recycling areas shall be designed and constructed in accordance with the jurisdiction's laws or regulations; 2. Where laws or regulations do not exist or where limited recycling services are available, waste recycling areas shall be designed and constructed to accommodate recyclable materials based on the availability of recycling services; or 3. Where recycling services are not available, waste recycling areas shall be designed and constructed to accommodate the future recycling of materials in accordance with an approved design. The approved design shall meet one of the following: 3.1. The approved waste recycling area design shall be based on analysis of other regional recycling services, laws or regulations. 3.2. The approved waste recycling area shall be designed to meet the needs of the occupancy, facilitate efficient pick-up, and shall be available to occupants and haulers.

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: Good practice

2011 ASHRAE 189.1 CORRELATION: 9.3.4.1

504.2 Storage of lamps, batteries and electronics. Storage space shall be provided for fluorescent lamps, high-intensity discharge (HID) lamps, batteries, electronics, and other discarded items requiring special disposal by the jurisdiction.

PROPOSED ACTION: Replace with the following: An area shall be provided that serves the entire building and is designed for the collection and storage of fluorescent and HID

lamps and ballasts and facilitates proper disposal and/or recycling according to state and local hazardous waste requirements.

RATIONALE / IMPACT: Language revision for clearer intent

2011 ASHRAE 189.1 CORRELATION: 9.3.4.3

505.1 Material selection and properties. Building materials shall conform to Section 505.2. Exceptions: 1. Electrical, mechanical, plumbing, security and fire detection, and alarm equipment and controls, automatic fire sprinkler systems, elevators and conveying systems shall not be required to comply with Section 505.2. 2. Where a whole building life cycle assessment is performed in accordance with Section 303.1, compliance with Section 505.2 shall not be required.

PROPOSED ACTION: Add - Exception: 3. Projects that are less than 50,000 sq.ft.

RATIONALE / IMPACT: Considerations include: cost impact; administrative complexity; limited availability of quality products to meet current energy efficiency, product durability and envelope system requirements; availability of materials from manufacturing facilities that are consolidated beyond defined limits; and environmental impact of material transport via various means from distances beyond and within defined limits.

2011 ASHRAE 189.1 CORRELATION: 9.4.1

505.2 Material selection. Not less than 55 percent of the total building materials used in the project, based on mass, volume or cost, shall comply with Section 505.2.1, 505.2.2, 505.2.3, 505.2.4 or 505.2.5. Where a material complies with more than one section, the material value shall be multiplied by the number of sections that it complies with. The value of total building material mass, volume or cost shall remain constant regardless of whether materials are tabulated in more than one section.

505.2.1 Used materials and components. Used materials and components shall comply with the provisions for such materials in accordance with the applicable code referenced in Section 102.4 and the applicable requirements of this code.

505.2.2 Recycled content building materials. Recycled content building materials shall comply with one of the following: 1. Contain not less than 25 percent combined post-consumer and preconsumer recovered material, and shall comply with Section 505.2.3. 2. Contain not less than 50 percent combined post-consumer and preconsumer recovered material.

505.2.4 Bio-based materials. Bio-based materials shall be those materials that comply with one or more of the following: 1. The bio-based content is not less than 75 percent

as determined by testing in accordance with ASTM D 6866. 2. Wood and wood products used to comply with this section, other than salvaged or reused wood products, shall be labeled in accordance with the SFI Standard, FSC STD-40-004 V2-1 EN, PEFC Council Technical Document or equivalent fiber procurement system. As an alternative to an on-product label, a Certificate of Compliance indicating compliance with the fiber procurement system shall be permitted. Manufacturer's fiber procurement systems shall be audited by an accredited third-party. 3. The requirements of USDA 7CFR Part 2902.

505.2.5 Indigenous materials. Indigenous materials or components shall be composed of resources that are recovered, harvested, extracted and manufactured within a 500 mile (800 km) radius of the building site. Where only a portion of a material or product is recovered, harvested, extracted and manufactured within 500 miles (800 km), only that portion shall be included. Where resources are transported by water or rail, the distance to the building site shall be determined by multiplying the distance that the resources are transported by water or rail by 0.25, and adding that number to the distance transported by means other than water or rail.

PROPOSED ACTION: Revise 505.2 as follows: 505.2 Material selection. Not less than 40 percent...

RATIONALE / IMPACT: Consistent with current practice

2011 ASHRAE 189.1 CORRELATION: 9.4.1, 9.4.1.1, 9.4.1.1 and 9.4.1.3

506.1 Low mercury lamps. The mercury content in lamps shall comply with Section 506.2 or 506.3. Exception: Appliance, black light, bug, colored, germicidal, plant, shatter-resistant/shatterproof/shatter-protected, showcase, UV, T-8 and T-12 lamps with a color rendering index of 87 or higher, lamps with RDC bases, and lamps used for special-needs lighting for individuals with exceptional needs.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by federal government

2011 ASHRAE 189.1 CORRELATION: None

506.2 Straight fluorescent lamps. Straight, double-ended fluorescent lamps less than 6 feet (1829 mm) in nominal length and with bi-pin bases shall contain not more than 5 milligrams of mercury per lamp. Exception: Lamps with a rated lifetime greater than 22,000 hours at 3 hours per start operated on an ANSI reference ballast shall not exceed 8 milligrams of mercury per lamp.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by federal government

2011 ASHRAE 189.1 CORRELATION: None

506.3 Compact fluorescent lamps. Single-ended pin-base and screw-base compact fluorescent lamps shall contain not more than 5 milligrams of mercury per lamp, and shall be listed and labeled in accordance with UL 1993. Exception: Lamps rated at 25 watts or greater shall contain not more than 6 milligrams of mercury per lamp.

PROPOSED ACTION: Delete

RATIONALE / IMPACT: Regulated by federal government

2011 ASHRAE 189.1 CORRELATION: None

507.1 Moisture control preventative measures. Moisture preventative measures shall be inspected in accordance with Sections 902 and 903 for the categories listed in Items 1 through 7. Inspections shall be executed in a method and at a frequency as listed in Table 903.1. 1. Foundation subsoil drainage system. 2. Foundation waterproofing. 3. Foundation dampproofing. 4. Under slab water vapor protection. 5. Flashings: Windows, exterior doors, skylights, wall flashing and drainage systems. 6. Exterior wall coverings. 7. Roof coverings, roof drainage, and flashings.

PROPOSED ACTION: Adopt as written

RATIONALE / IMPACT: Consistent with current practice

2011 ASHRAE 189.1 CORRELATION: None

EXECUTIVE COMMITTEE

CLARK WAGNER
President
(Pleasants Development, Inc.)
RICK BAILEY
Vice President/Calvert Co.
(Marrick Properties)
DOUG MEEKER
Vice President/Charles Co.
(Elm Street Development)
WILLIAM KOMINERS
Vice President/Mont. Co.
(Lerch, Early & Brewer, Chtd.)
KEN DUNN
Vice President/Prince George's Co.
(Soltesz)
TOM THOMAS
Vice President/St. Mary's Co.
(Stanley Martin Companies Inc.)
HILLARY COLT
Vice President/Washington, DC
(Konterra)
LYNN ELAHI
Associate Vice President
(Washington Gas)
TOM HUDSON
Treasurer
(Ribera Development, LLC)
DAVE LUNDEN
Vice President, State Legis./Secretary
(Timberlake Design Build)
ROBERT R. HARRIS
Life Director
(Lerch, Early & Brewer Chtd.)
A.J. JACKSON
Immediate Past President
(EYA)
STEPHEN P. ELMENDORF
Legal Counsel
(Linowes & Blocher, LLP)
DIANE K. SWENSON, CAE
Executive Vice President

BOARD OF DIRECTORS

BRIAN AFNAN
NVR, Inc.
STEPHEN ALFANDRE
Toll Brothers
MATT BECK
NVR, Inc.
LIZA BOWLES
Newport Partners
LARRY CAFRITZ
Laurence Cafritz Builders
JEFF CARUSO
Caruso Homes
CHUCK COVELL
Covell Communities
MIKE CONLEY
Winchester Homes, Inc.
HILARY GOLDFARB
Bozzuto Group
MELANIE GRAFF
Walton Dvlpt. & Mgmt.
TOM HYDE
Miller and Smith Homes
ROB A. JACOBS
Süfel Bank & Trust
HOWARD KATZ
Michael Harris Homes
MICHAEL KINGSLEY
KTGY Group Inc.
MARK MACFARLAND
St. Charles Community LLC
TOM MARSHALL
Elm Street Development
JIM PLAZAK
Fireside Hearth & Home
STEVE ROBINS
Lerch, Early & Brewer, Inc.
DUSTY ROOD
Rodgers Consulting Inc.
MICHAEL SCHUELER
Winchester Homes, Inc.
ROBERT SPALDING
Miller & Smith Homes
JOHN WASHINGTON
Sears Commercial Sales
PEGGY WHITE
Axiom Engineering Design, LLC
MEL WILLIS
Burgess & Niple, Inc.
CARTER WILLSON
Carter Inc.

May 28, 2014

TO: Montgomery County Department of Permitting Services
SUBJ: International Green Construction Code Chapters 4 and 5 – Public Work Session May 28, 2014

Comments on the IgCC Adoption Process:

The Maryland-National Capital Building Industry Association would like to make a few comments on the process established by Montgomery County's Department of Permitting Services for considering adoption of the International Green Construction Code (IgCC), as well as the information available for consideration.

While the Association appreciates the scheduled work sessions to hear comments from stakeholders, we feel that the process has been rushed. Only eight work days or less has been given to date to consider the County's proposed amendments, and the second work session on May 28th occurs after a holiday weekend.

More time is needed to reach out to our members – our stakeholders – for their review, discussion and comments. Not only must the stakeholders digest the proposed amendments but they must consider them in the context of the 280-page 2012 IgCC, a document that must be purchased or accessed online in a section-by-section format, as well as consider the 160-page ASHRAE 189.1-2011, which is available to purchase or can be viewed as a read-only online version.

The 2012 IgCC is a relatively new code that has not been fully tested in practice. According to the International Code Commission, only a few States or jurisdictions have adopted the IgCC and primarily as a voluntary code. Recently the District of Columbia adopted the IgCC with amendments. We note the IgCC is currently undergoing a code cycle where adopted amendments will result in a new version by 2015. The AIA-Potomac Valley has provided DPS with its analysis and recommendations on the IgCC.

Based on the lack of information on the IgCC in practice, and amendments being proposed by DPS and others, it would be prudent to have a long adoption process that actively involves the stakeholders in discussions with each other and the County.

Comments on Proposed Amendments to Chapters 4 and 5:

Chapter 4 Site Development and Land Use addresses many issues such as natural resources, land use, outdoor water use, erosion and sediment control, stormwater, and transportation that have been regulated by other County departments and State/Federal agencies. To avoid confusion and unnecessary delay, we recommend that many, if not all, the sections of Chapter 4 should be deleted. We note that DPS already proposed to delete some sections in Chapter 4 and Chapter 5.

Annette Rosenblum
Director, Regulatory Affairs
MNCBIA
Maryland Center for Housing
11825 W. Market Place
Fulton, MD 20759

BUILDING HOMES & CREATING NEIGHBORHOODS FOR 60 YEARS
1954-2014

WSSC comments for Chapters 4 & 5 of the 2012 IGCC

May 28, 2014; by Tom Buckley

Sec. 11. Section 404.1 **Landscape irrigation systems.**

WSSC Comment: Confirm, entire IGC Code does not apply to Residential?

Sec. 11. Section 404.1.1 **Water for outdoor landscape irrigation.**

WSSC Comment: Are all County agencies/departments on-board with water re-use regulations and permissions. What is the water quality standard for non-potable water supplied to spray irrigation systems? Who is going to monitor this standard? What are the sampling, testing and reporting protocols?

Sec 11. Section 404.2 **Outdoor ornamental fountains and water features.**

WSSC Comment: Are all County agencies/departments on-board with water re-use regulations and permissions. What is the water quality standard for non-potable water *supplied to* ornamental fountains and water features? Who is going to monitor this standard? What are the sampling, testing and reporting protocols?

Sec. 12. Section 405.1.6(2)

WSSC Comment: minor edit

Sec. 13. Section 407.2 **Changing and shower facilities.** Move to Appendix.

WSSC Comment: Is Appendix A going to be adopted as Code? Will this requirement be mandated by the Building Plans Reviewer at time of Building Permit or by Plumbing Plans Reviewer at time of WSSC Plumbing Permit?

PROPOSED AMENDMENT TO 2012 IgCC
DPS Public Work Session
May 28, 2012 2:30pm – 4:30pm

Second Worksession: Proposed amendments to Chapters four and five.

~~Sec. 9.~~ Sections 402.2 through 402.3: Delete

~~Sec. 10.~~ Section 403, **Stormwater Management**: Delete Entire Section

Sec. 11. Section 404.1 **Landscape irrigation systems**. Replace with: "Landscaping plans shall be designed by a registered design professional and shall be submitted as part of the construction permit drawings and specifications. Irrigations of exterior landscaping shall comply with Sections 404.1.1 and 404.1.2."

Licensed

or certified irrigation professional

Planting

plant material

Sec. 11. Section 404.1.1 **Water for outdoor landscape irrigation**. Replace with: "Outdoor landscape irrigation systems shall be designed and installed to reduce potable water use by 50 percent from a calculated mid-summer baseline in accordance with Section 404.1.2 or with alternate onsite nonpotable water complying with Chapter 7."

Landscape/Turf

at least

Sec. 12. Section 405.6(2) **Documentation**: Add after the last sentence: "Test results shall be made available to the code official upon request."

Sec. 13. Section 407.2 **Changing and shower facilities**: Move to Appendix A.

~~Sec. 14.~~ Section 504 **Waste Management And Recycling**: Delete in its entirety.

~~Sec. 15.~~ Section 506 **Lamps**: Delete in its entirety.

Seven Locks Civic Association, Inc.
8308 Raymond Lane
Potomac, MD 20854
garson@comcast.net

May 28, 2014

I am Jerry Garson the President of the Seven Locks Civic Association, Inc. and offer the following comments to the Department of Permitting Services Public Work Session on Proposed Amendment to the 2012 IgCC.

For Chapter 4 Section 402.6 Park Land

The following language should be added to make Montgomery County more pedestrian friendly: All Park land within 3,000 feet on any Commercial Residential Town Zone or General Retail Zone shall have paved Sidewalks Walkways and an off street Bicycle path suitable for bicycles, strollers, pedestrians, and other forms of non motorized locomotion connecting a street or path to a park entrance to be located within the Parkland. Motorized locomotion for Handicapped individuals on scooters or equivalent shall be allowed on these paths.

If we really want to make Montgomery County pedestrian and bicycle friendly, we have to start requiring all parks in the county to be accessible to pedestrians especially from the new Proposed Commercial Residential Town centers.

Chapter 4 Section 407.1 Walkways and bicycle paths This section should be amended to add: Motorized locomotion for Handicapped individuals on scooters or equivalent shall be allowed on these paths.

We have to start realizing that in Montgomery County we have a significant number of elderly and handicapped residents.

The United States has over 10% of the vehicles having Handicapped Plates or tags and only 2% of the parking spots are reserved for them.

STUART D. KAPLOW, P.A.

ATTORNEYS AT LAW

15 EAST CHESAPEAKE AVENUE

TOWSON, MARYLAND 21286-5306

TELEPHONE 410-339-3910

FACSIMILE 410-339-3912

E-MAIL SKAPLOW@STUARTKAPLOW.COM

STUART D. KAPLOW

WWW.STUARTKAPLOW.COM

May 27, 2014

Via email mark.nauman@montgomerycountymd.gov
Mark Nauman, Senior Permitting Services Specialist
Department of Permitting Services
255 Rockville Pike, 2nd Floor
Rockville, Maryland 20850

Re: **Adoption of 2012 International Green Construction Code**

Dear Mr. Nauman:

I am writing to follow up the May 16, 2014 letter from the Asphalt Pavement Alliance to Diane Schwartz Jones about Montgomery County's contemplated adoption of the 2012 International Green Construction Code, and in advance of the May 28, 2014 public work session.

My client is a coalition of the Asphalt Institute, the National Asphalt Pavement Association and the State Asphalt Pavement Associations, expressly including the Maryland Asphalt Association.

IgCC

My concern is that **as proposed, the version of the IgCC being considered has the practical effect of banning the use of asphalt pavement.**

Effectively banning the use of asphalt pavement, the most commonly used paving material, is a radical change from existing law in Montgomery County. Nothing in existing County law restricts the use of asphalt. LEED does not prohibit the use of asphalt pavement (e.g., there is a voluntary LEED credit that may be pursued reducing urban heat island effect by reducing asphalt paved areas).

Not only would adoption of that provision in the form code be a major expansion over what is regulated today in Montgomery County, the provision also has the effect of the County government choosing winners and losers in selecting hardscape materials through code, when such material selection is site specific and should be an owner's determination (including the County schools system's determination) in concert with its design and engineering professionals.

As detailed in my client's May 16 letter, I recommend the entire IgCC section 408.2 Site hardscape (including the underlying 408.2.1 thru 408.2.4) be deleted.



Mark Nauman, Senior Permitting Services Specialist
Page Two
May 27, 2014

That recommendation in no way precludes the use of any urban heat island effect mitigation strategy that a design team may recommend, including it would allow permeable hard scape that might be pervious concrete or porous asphalt pavement.

In the alternative, my client's letter also proposed the entire matter of mitigation of urban heat island effect be moved to the "voluntary" Appendix A and that the language be modified to allow porous asphalt.

ASHRAE 189.1

With respect to ASHRAE 189.1 I offer the following recommendation and alternative recommendation.

189.1 Recommendation #1

Outside of major metropolitan areas, urban heat island mitigation is unlikely to be a significant concern for building sites, including in most counties, if not all area of the County. Therefore, we urge the entire subsection 5.3.2.1 be an Optional requirement.

We recommend that the Exception specific to subsection 5.3.2.1 Site Hardscape be modified as follows: "*Exception: Section 5.3.2.1 shall not apply to building projects in climate zones 4, 5, 6, 7, and 8*"

198.1 Alternative Recommendation #2

In the alternative, we recommend, that in subsection 5.3.2.1(c), the definitions for Permeable Pavements and Permeable Pavers be separated as such:

c. open-graded (uniform-sized) aggregate, permeable pavement, permeable pavers, and porous pavers (open grid pavers). Permeable pavements shall have a minimum percent air void of 16% and permeable pavers shall have a percolation rate of not less than 2 gal/min·ft² (100 L/min·m²).

It is my intention to be in attendance on May 28th and to more fully explain my clients concern, but please appreciate that as proposed, the version of the IgCC being considered has the practical effect of banning the use of asphalt pavement, and such is a matter of grave concern. And thank you for your continued courtesies.

Sincerely,

Stuart Kaplow

Stuart D. Kaplow

SDK:tbm
Attachment

cc: Brian Dolan, Executive Director, Maryland Asphalt Association



Asphalt.

AMERICA RIDES ON US

» **Asphalt Pavement Alliance**

5100 Forbes Boulevard
Suite 101B
Lanham, MD 20706
877.272.0077 Voice
301.918.8393 Fax
AsphaltRoads.org

May 16, 2014

Via email diane.jones@montgomerycountymd.gov

Diane Schwartz Jones, Director
Department of Permitting Services
255 Rockville Pike, 2nd Floor
Rockville, Maryland 20850-4166

Re: Adoption of International Green Construction Code (IgCC)

Dear Ms. Jones:

The Asphalt Pavement Alliance (APA) is a coalition of the Asphalt Institute, the National Asphalt Pavement Association (NAPA) and the State Asphalt Pavement Associations. In concert with the Maryland Asphalt Association, we are writing to you as Montgomery County continues a process of adopting the International Green Construction Code.

We are aware, your Department has published proposed amendments to the IgCC for chapters 1 through 3. We would like to apprise you of a specific concern we have within chapter 4, with the thought your Department might include the resolution of this issue within its soon to be released proposed amendments for that chapter.

We have a specific concern with the 408.2 Site Hardscape section and suggest possible recommendations to address the issues. Currently, section 408.2.1 mandates urban heat island (UHI) mitigation for not less than 50% of site hardscape with material as having a solar reflectance value of not less than 0.30. In doing so, this code neglects many other factors that are required for optimizing hardscape designs, such as pavement loads, environmental conditions, soil strength, and cost and determines the hardscape material based on one feature, its color. As a result, asphalt pavements, which have many other sustainable facets such as reusing asphalt pavements or recycling other waste materials including tires and shingles, are not allowed. This makes the current form of IgCC an outlier as the only green standard, rating system, or code to effectively ban the use of asphalt, the most commonly used paving material.

We commend that the code attempts to recognize other ways that UHI may be mitigated in subsections 408.2.2-408.2.4, however, it is still limiting other beneficial hardscapes that have proven environmental benefits and will contribute to increasing the project cost. For example 408.2.4 identifies permeable pavements as a strategy for the mitigation of the urban heat island effect, but the definition as written is unclear and restrictive, eliminating common permeable pavements materials such as porous asphalt pavements which can improve water quality, stormwater runoff, reduce deicing chemicals, and mitigate UHI.



Not only would adoption of that provision in the form code be a major expansion over what is regulated today in Montgomery County, the provision also has the effect of the state selecting hardscape materials through code, when such material selection is site specific and should be an owner's determination in concert with its design and engineering professionals. To address these concerns we propose the following recommendations:

Recommendation #1

We recommend that the entire section 408.2 Site hardscape (including the underlying subsections 408.2.1 thru 408.2.4) be deleted.

And we recommend, that to then clean up the remaining language, section 408.1 General, be edited to be consistent with the deleted text by removing the then superfluous words beginning in the first line of that section, deleting "and building site development".

This recommendation does not preclude the use of any urban heat island effect mitigation strategy that a design team may recommend, including it would allow permeable hard scape that might be pervious concrete or porous asphalt pavement.

Alternative Recommendation #2

Outside of metropolitan areas, urban heat island mitigation is unlikely to be a significant concern for building sites in most counties within this state. Therefore, mitigation of urban heat island effect site hardscape is appropriate for Appendix A: Project Elective. In cases where urban heat island effect site hardscape mitigation is desirable, we urge the following modifications to the IgCC text.

We recommend that the entire section 408.2 Site hardscape (including the underlying subsections 408.2.1 thru 408.2.4) be deleted from its current location and moved to and replace the existing A104.9.9 thru A104.9.3 (such that the mitigation be a project elective);

And that in 408.2, in the 5th line the reference to 408.2.4 be deleted and replaced with 408.2.5.

Additionally, we recommend adding a new subsection,

408.2.5 Porous Asphalt Pavement. Porous asphalt pavements include open-graded asphalt mixtures with percent air voids not less than 16%. Porous asphalt pavements shall be permitted where the use of these types of hardscapes does not interfere with fire and emergency apparatus or vehicle or personnel access and egress, utilities, or telecommunications lines.

[Commentary: This is the fifth option for mitigating building site heat island impacts.]

Asphalt.

AMERICA RIDES ON US

» **Asphalt Pavement Alliance**
5100 Forbes Boulevard
Suite 101B
Lanham, MD 20706
877.272.0077 Voice
301.918.8393 Fax
AsphaltRoads.org

And we recommend, that to then clean up the remaining language, section 408.1 General, be edited to be consistent with the deleted text by removing the then superfluous words beginning in the first line of that section, deleting “and building site development”.

Should there be any questions, Stuart Kaplow, a sustainability and green building attorney we are working with, would be pleased to speak with you or appear at one of the public work sessions. If this proposal is not acceptable to your Department, we request an opportunity to address this matter otherwise. Please let us know at your earliest convenience and thank you in advance.

Respectfully Submitted,

Heather Dylla, PhD, NAPA Dir. of Sustainable Engineering
Michael Kvach, Executive Director APA
5100 Forbes Blvd., Suite 101B
Lanham, MD 20706
Tel 301-918-8391
Email HDylla@asphaltpavement.org
Email mkvach@asphaltroads.org

cc: Hemal Mustafa, Manager, hemal.mustafa@montgomerycountymd.gov
Stuart Kaplow, Esquire, Stuart D. Kaplow, P.A., 410-339-3910, skaplow@stuartkaplow.com
Brian Dolan, Executive Director, Maryland Asphalt Association, bdolan@mdasphalt.org



**Heather Dylla, National Asphalt Pavement Association,
representing National Asphalt Pavement Association
(hdylla@asphaltpavement.org) requests Approve as Modified
by this Public Comment.**

Replace Proposal as Follows:

408.2.2 A104.9.1 Site hardscape. In climate zones 1 through 6, as established in the *International Energy Conservation Code*, not less than 50 percent of the site hardscape shall be provided with one or any combination of options described in Sections 408.2.4A104.9.1.1 through 408.2.4A104.9.1.5. For the purposes of this section, site hardscape shall not include areas of the site covered by solar photovoltaic arrays or solar thermal collectors.

408.2.4 A104.9.1.1 Site hardscape materials. Hardscape materials shall have an initial solar reflectance value of not less than 0.30 in accordance with ASTM E 1918 or ASTM C 1549.

- **Exception:** The following materials shall be deemed to comply with this section and need not be tested:
 1. Pervious and permeable concrete pavements.
 2. Concrete paving without added color or stain.

408.2.2 A104.9.1.2 Shading by structures. Where shading is provided by a building or structure or a building element or component, such building, structure, component or element shall comply with all of the following:

1. Where open trellis-type, free-standing structures such as, but not limited to, covered walkways, and trellises or pergolas, are covered with native plantings, the plantings shall be designed to achieve mature coverage within five years;
2. Where roofed structures are used to shade parking, those roofs shall comply with Section 408.3 in climate zones 1 through 6; and
3. Shade provided onto the hardscape by an adjacent building or structure located on the same lot shall be calculated and credited toward compliance with this section based on the projected peak sun angle on the summer solstice.

408.2.3 A104.9.1.3 Shading by trees. Where shading is provided by trees, such trees shall be selected and placed in accordance with all of the following:

1. Trees selected shall be those that are native or adaptive to, the region and climate zone in which the project site is located. *Invasive plant species* shall not be selected. Plantings shall be selected and sited to produce a hardy and drought resistant vegetated area;
2. Construction documents shall be submitted that show the planting location and anticipated ten year canopy growth of trees and that show the contributions of existing tree canopies; and
3. Shading calculations shall be shown on the construction documents demonstrating compliance with this section and shall include only those hardscape areas directly beneath the trees based on a ten year growth canopy. Duplicate shading credit shall not be granted for those areas where multiple trees shade the same hardscape.

408.2.4 A104.9.1.4 Pervious and permeable pavement. Pervious and permeable pavements including open grid paving systems and open-graded aggregate systems shall have a percolation rate not less than 2 gallons per minute per square foot (100 L/min × m²). Pervious and permeable pavement shall be permitted where the use of these types of hardscapes does not interfere with fire and emergency apparatus or vehicle or personnel access and egress, utilities, or telecommunications lines. Aggregate used shall be of uniform size.

A104.9.1.5 Porous Asphalt Pavement

Porous asphalt pavements include open-graded asphalt mixtures with percent air voids not less than 16%

determined by testing in accordance with ASTM D3203. Porous asphalt pavements shall be permitted where the use of these types of hardscapes does not interfere with fire and emergency apparatus or vehicle or personnel access and egress, utilities, or telecommunications lines.

Commenter's Reason: *Urban heat island is a complex issue that is context specific. Outside of metropolitan areas, urban heat island mitigation is unlikely to be a significant concern for building sites. Therefore, in response to recommendations received at the Committee Action Hearing, instead of removing the mitigation section 408.2.1 of the code, the entire section 408.2.1 thru 408.2.5 is more appropriate as an elective in Appendix A: Project Elective.*

Furthermore, currently, section 408.2.1 mandates urban heat island (UHI) mitigation for not less than 50% of site hardscape with material as having a solar reflectance value of not less than 0.30. In doing so, this code neglects many other factors that are required for optimizing hardscape designs, such as pavement loads, environmental conditions, soil strength, and cost; thus it determines the hardscape material based on one feature, its color. As a result, asphalt pavements, which have many other sustainable facets such as reusing asphalt pavements or recycling other waste materials including tires and shingles, are currently not allowed. This makes the current form of IgCC an outlier as the only green standard, rating system or code to effectively ban the use of asphalt, the most commonly used paving material.

In addition, currently, section 408.2.4 is restrictive, only permitting the use of permeable unit pavers and pervious concrete thus eliminating other common permeable pavements materials such as porous asphalt. To address this issue, this public comment adds a specific section explicitly for porous asphalt pavements as a method of urban heat island mitigation (in lieu of modifying the existing section 408.2.4.), as suggested by one of the IgCC Committee members during the Committee Action Hearings.

Porous asphalt is recognized as a "cool pavement technology" by the U.S. EPA (EPA). Research studies have shown that porous pavements are an effective means to mitigate urban heat island (UHI) effect due to their high air void nature which can reduce stored heat, and allow for rapid cooling via evaporation (Kevern 2012).

In addition, there are many other benefits to porous asphalt pavements including: improved water quality, reduction in deicing chemicals by as much as 75%, and asphalt pavements can be 100% recyclable.

Bibliography: Reducing Urban Heat Island Compendium of Strategies: Cool Pavements, EPA.
<http://www.epa.gov/heatisland/resources/pdf/CoolPavesCompendium.pdf>

"Hot Weather comparative Heat Balances in Pervious Concrete and Impervious Concrete Pavement Systems."
Journal of Heat Island Institute International, Vol. 7-2. Kevern, J.T., Haselback, L., and Schaefer, V.R. 2012. 231-237.