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Standard Guide for Asset Management Career Development, Education, and Training¹

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1. Scope

1.1 This guide provides the principles for an Asset Management Career Development program including education and training for professional employees engaged in the practice of asset management.

1.2 As a guide, this is the consensus of the asset management profession for the requirements for an Asset Management Career Development (AMCD) program.

1.3 The use of this guide by the profession can improve professional competence, enhance value from assets, reinforce or establish adequate internal controls, encourage a broader and higher level of competency and thinking by its practitioners, reinforce the use of innovative and cost-effective practices, create greater commonality between all entities that perform asset management, and increase the ability of entities to respond to changing needs and business conditions.

1.4 The AMCD program establishes the recommended education, training, and experience requisites necessary for asset management activities to adequately support the missions and objectives of an entity's asset management operations, and therefore supports the entities' missions.

1.5 The AMCD program is predicated on multiple levels of professional competency and achievement based on a combination of academic education and training and professional experience.

1.6 It is the responsibility of each entity that adopts this guide to confirm the appropriateness of any specific education and training offerings.

1.7 This guide encourages a broad and continuous self-study practice for those within the profession as applicable knowledge and lessons learned are disseminated continuously from multiple sources.

1.8 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the*

¹ This guide is under the jurisdiction of ASTM Committee E53 on Asset Management and is the direct responsibility of Subcommittee E53.01 on Process Management.

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responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.

1.9 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 This listing is not intended to be a complete list of reference documents; however, it may prove useful in developing a plan to better understand the training and development goals and priorities established by this guide.

2.2 *ASTM Standard*.²

E2453 Practice for Estimating the Life-Cycle Cost of Ownership of Property Assets

2.3 *ISO Standards*.³

ISO 55000 Asset Management -- Overview, principles and terminology

ISO 55001 Asset management -- Management systems -- Requirements

ISO 55002 Asset management -- Management systems -- Guidelines for the application of ISO 55001

3. Terminology

3.1 *Definitions of Terms Specific to This Standard*—Terms are in order of (understanding) and not alphabetically arranged. Similar job titles may be used within organizations.

3.1.1 *asset management, n*—the coordinated activity of an organization to realize value from assets. The scope of asset management is circumstantial based upon the nature of an entity's work, customer base, and identified objective, policies, and plans. It generally covers the lifecycle of assets and

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from International Organization for Standardization (ISO), ISO Central Secretariat, BIBC II, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland, <http://www.iso.org>.

disposition. The types of assets managed should be included in the entity's policies and may include entity, customer or grant property, tangible and intangible property, and other types of assets.

3.1.1.1 *Discussion*—All employees have some level of skill set(s). All employees have knowledge gaps. To be successful within the Asset Management Career field, all employees need to be competent in given job assignments or developing that competence in an AMCD program. *Similar job titles may be used within organizations and may or may not represent the same level of competence as described here.* Asset employee levels include the following:

3.1.1.2 *asset specialist, n*—an employee who is new to asset management.

3.1.1.3 *asset administrator, n*—generally an employee who has worked in asset management or asset management related function for at least three years and has a variety of entry level work experience in several of the functional areas (see 3.1.1.4) of asset management. An administrator generally does not have managerial authority but has the assignment to carry out policy and other's managerial decisions.

3.1.1.4 *Discussion*—Functional areas of personal property asset management are identified and described in Practice E2453. They include, with some additions beyond Practice E2453, but are not limited to:

- (1) Asset Management Life Cycle Processes:
- (a) Requirements planning
 - (b) Acquisition
 - (c) Receiving
 - (d) Identification
 - (e) Records (and database administration)
 - (f) Utilization
 - (g) Consumption
 - (h) Maintenance, and metrology (calibration) and rehabilitation
 - (i) Movement and Storage, Transfers, and Transportation
 - (j) Physical Inventory
 - (k) Reports
 - (l) Subcontractor control (for those assets at vendors)
 - (m) Audits and Self Assessments
 - (n) Disposition, Impairments, and Retirement
- (2) Asset Management Related Processes:
- (a) Environmental Issues
 - (b) Security/protection
 - (c) Property Financial Accounting
 - (d) Contracts, Grants, and Agreements
 - (e) Property insurance
 - (f) Compliance Ownership, Responsibility, and Accountability, Leadership
 - (g) Fleet Management, including water and aircraft
 - (h) Statutory Issues, for example, EAR and ITAR

3.1.1.5 *asset manager or asset management subject matter expert, n*—an employee who has worked in asset management for at least six years, has work experiences in a majority of the functional areas (see 3.1.1.4), and four years of more responsible managerial or comparable experience, and the employee has completed an appropriate AMCD program. Managerial or

comparable experience means supervision, decision-making, recognized subject matter expert, or lead supervision of resources (not necessarily personnel). This experience outside of asset management could include project management, program management, financial management (budget), accounting, auditing, facilities, software management, subcontract management, team leadership, activity as the sole asset manager in an AMCD or institution, and like type experience regardless of title. Asset managers should have similar educational backgrounds as other business management professions but not less. Overall business management knowledge and skills are generally broader than asset management disciplines. Due to the greater complexity and magnitude of assets at this level, the greater need for higher levels of competence, which may include formal degree programs in an asset management or asset management related program, for example, supply chain management, production and inventory control, and program management. Recommended Associate's or Bachelor's Degree with emphasis in Asset Management or related field. (See Table 1.)

3.1.1.6 *asset senior manager, n*—at the senior manager level, there is a change of balance of responsibilities, that is, more responsibility for the program, less day to day transaction oversight, and a greater role in managing multiple teams. Senior managers have decision-making authority over asset management programs, personnel, and systems decisions. They are the interface to other business managers and to executive management. They have a broader, deeper background that could/should include experience in other related disciplines, for example, contracts, subcontracts, productions, etc., and require a greater depth and breadth of understanding of the organization's mission and products. Generally, this level of appointment should have a recommended Bachelor's Degree in Asset Management or related field. (See Table 1.)

3.1.1.7 *asset management director, n*—from the senior manager level, the director has multiple disciplines for which they are responsible that are associated with asset management. This could include contracting, subcontracting, and other occupational groups and titles. They have responsibilities on project, program, and management teams for decisions for the organization mission and goals. They are on the executive team (not just have communication with it). They manage the asset management program and systems' decisions for a broader organization or multiple organizations; they make personnel decisions on a program or organization level, but not on individuals. Recommended Master's Degree in Asset Management or related field. (See Table 1.)

3.1.2 *baseline of knowledge, n*—this is the starting point of knowledge and should include an inventory of knowledge, skills, and level of recognized competence.

4. Significance and Use

4.1 The asset management career field has many career disciplines (particularly asset management consistent with ISO 55000 definitions, concepts, and requirements) that support an entity's activities. These career titles may include, but are not limited to, industrial asset management specialists, asset administrators, property asset management, operations,