

Table of Contents

SECTION C	CERTIFIED AGENCY	17
Chapter 12-	Appendix 1 Architectural and Engineering Services.....	17
A. EXAMPLES OF ARCHITECTURE AND ENGINEERING (A&E) SERVICES ..		17
B. ENGINEERING SERVICES		17
C. EXAMPLES OF ENGINEERING SERVICES		18
D. LAND SURVEYING SERVICES		20
E. EXAMPLES OF LAND SURVEYING SERVICES.....		21
F. ARCHITECTURE SERVICES		21
G. EXAMPLES OF ARCHITECTURE SERVICES.....		21

SECTION C

CERTIFIED AGENCY

Chapter 12-Appendix 1 Architectural and Engineering Services

A. EXAMPLES OF ARCHITECTURE AND ENGINEERING (A&E) SERVICES

If the proposed project falls under one of the following categories of work, then it would generally be considered A&E services.

In contrast to non-A&E personal services agreements, prior ODOT approval is not required for any type of A&E agreement and/or supplement. However, the local agency is still responsible for forwarding all A&E agreements and/or supplements to the [Regional Local Agency Liaison](#).

This Appendix provides general examples of architectural, engineering and land surveying services. These three types of services (architectural, engineering and land surveying) collectively will be referred to as A&E Services. The definitions of the "practice of engineering," "practice of architecture," and "practice of land surveying" are found in ORS Chapters 761 and 762.

B. ENGINEERING SERVICES

The "practice of engineering" is defined in ORS 762.005(1) as:

ORS 762.005(1) "Practice of engineering" or "practice of professional engineering" means doing any of the following:

- (a) Performing any professional service or creative work requiring engineering education, training and experience.
- (b) Applying special knowledge of the mathematical, physical and engineering sciences to such professional services or creative work as consultation, investigation, testimony, evaluation, planning, design and services during construction, manufacture or fabrication for the purpose of ensuring compliance with specifications and design, in connection with any public or private utilities, structures, buildings, machines, equipment, processes, works or projects.
- (c) Surveying to determine area or topography.

- (d) Surveying to establish lines, grades or elevations, or to determine or estimate quantities of materials required, removed or in place.
- (e) Surveying required for design and construction layout of engineering and architectural infrastructure.
- (f) Performing photogram metric mapping.

C. EXAMPLES OF ENGINEERING SERVICES

The following are examples of the types of services that are included in the “engineering services” definition.

Examples of Engineering Services—Civil Design and Plans Specifications and Estimates (PS&E) Services

Computer engineering support	Detour and staging plans
Drafting support	Drainage plans
Field survey support	Preparation of base maps
Preparation of construction cost estimates	Preparation of specifications
Preparation of right of way maps	Roadway, highway and freeway design
Signalization, signing, illumination and channelization design	Stormwater site plans
Temporary Erosion and Sediment Control (TESC) Plans	Value Engineering
Work Zone Traffic Control Plans	

Examples of Engineering Services—Geotechnical Services

Determine and evaluation site geology	Determine condition of existing facilities
Determine general site conditions	Evaluation for impacts to construction operations
Perform field and/or laboratory testing of soil/rock to characterize conditions	Prepare geotechnical design recommendations for the design of structures, cut slopes, embankments, drainage facilities, marine facilities, highways, rockfall control and landslide corrections
Analyze and review boring logs, soil/rock classification, geophysical test results and groundwater information	Submit boring layout, proposes sampling and type of boring equipment to be utilized prior to exploration work

Examples of Engineering Services—Rail Engineering Services

Construction inspection	Light density line analysis
Project design	PS&E

Examples of Engineering Services—Rail Operation Services

Equipment utilization and maintenance agreements (Maintenance agreements are purchased services if not included in the overall scope of the rail engineering project)	Negotiations (If included in the overall scope of the rail-engineering project. However, these services would be procured as non-A&E personal services if not part of the overall rail-engineering project)
Rail equipment and facilities evaluation (If included in the overall scope of the rail-engineering project. However, these services would be procured as non-A&E personal services if not part of the overall rail engineering project)	Railroad appraisals (If included in the overall scope of the rail engineering project. However, these services would be procured as non-A&E personal services if not part of the overall rail engineering project)
Terminal operations analysis (If included in the overall scope of the rail engineering project. However, these services would be procured as non-A&E personal services if not part of the overall rail engineering project)	Track capacity analysis and scheduling

Example of Engineering Services—Structural Design and PS&E Services

Analysis of construction time analysis	Checking shop drawings and making recommendations concerning construction change orders
Design and detailing for incidental items: signing, illumination, drainage and utilities of structure	Preparation of construction cost estimates
Preparation of contract plans	Preparation of special provisions
Preparation of structural design for bridges and related structures	Provide assistance to State in defense of contractor claims (If included in the overall scope of the engineering project. However, legal services and expert witness services would be procured as non-A&E personal services if not part of the overall engineering project)
Review contractor's proposed construction methods for constructability	Review contractor working drawings

Examples of Engineering Services—Traffic Engineering Services

Electrical inspection services	Freeway Modeling/Simulation (e.g. Ramp Metering)
Incident Response Coordination	Inventory based reviews
Plans, Specifications and Estimates for low cost enhancements	Safety investment tracking and evaluation
Safety research	Software development services (If included in the overall scope of the engineering project. However, these services would be procured as non-A&E personal services if not part of the overall engineering project)
Specification Development	Traffic Data Collection/Accident Analysis
Traffic Studies	

D. LAND SURVEYING SERVICES

ORS 762.005(2) “Practice of land surveying” means doing any of the following:

- (1) Providing or offering to provide professional services that apply mathematics, geodesy and other sciences and involve:
 - (a) The making of geometric measurements and gathering of related information pertaining to:
 - (i) The physical or legal features of the earth;
 - (ii) Improvements on the earth; or
 - (iii) The space above or below the earth; or
 - (b) The development of measurements and information described in subparagraph (a) of this paragraph into graphics, data, maps, plans, reports, descriptions, projects or other survey products.
- (2) Performing geodetic surveys.
- (3) Establishing, reestablishing or replacing boundaries or geodetic control monuments or reference points.
- (4) Locating, relocating, establishing, reestablishing or retracing any property lines or boundaries for any tract of land, road right-of-way or easement.
- (5) Making any survey for the division or subdivision of a tract of land or for the consolidation of tracts of land.
- (6) Locating and laying out alignments, positions or elevations for the construction of fixed works.

- (7) Performing or offering to perform any investigation, interpretation or evaluation of, or any consultation or testimony about, any of the services described in paragraphs (1) to (6) of this subsection.
- (8) Collecting, preparing, manipulating or modifying data related to activities described in paragraphs (1) to (6) of this subsection, other than acting as a scrivener.
- (9) Performing photogrammetric mapping.
- (10) Making surveys that involve horizontal or vertical mapping control or geodetic control.

E. EXAMPLES OF LAND SURVEYING SERVICES

Aerial mapping control and map certification	GPS (Global Positioning by Satellite) services for mapping control, land line establishment and/or topographic surveys
Hydraulics information including rivers, streams and drainage systems	
Legal ties of property corners to ODOT right of way	Reestablish or locate legal markers
Relocate and record legal markers that will be destroyed during construction	Surveying for preliminary engineering
Topographic maps for highway corridors or other improvements that will furnish all natural or man-made features, in vertical and horizontal position, on manuscript or electronically	Utilize right of way plans, legal description, county records, etc.; establish or reestablish property corner to ODOT pits, quarries, stockpile and other sites

F. ARCHITECTURE SERVICES

The definition of "practice of architecture" is defined in ORS 761.010(6) as:

ORS 761.010 (6) "Practice of architecture" means the planning, designing or supervising of the erection, enlargement or alteration of any building or of any appurtenance thereto other than exempted buildings.

The following are examples of the types of services that are included in the "architect" definition.

G. EXAMPLES OF ARCHITECTURE SERVICES

Examples of Architect Services – Bidding Phase

Addenda	Analysis of substitutions
Bidding	Bid evaluation (If included in the overall scope of the architectural project. However, these services would be procured as non-A&E personal services if not part of the overall architectural project)
Bidding materials	Construction agreements
Disciplines coordination	Project administration
Redesign	

Examples of Architecture Services – Construction Contract Administration Phase

Construction administration	Construction field observation
Cost accounting	Disciplines coordination document checking
Documents	Permitting authority consulting
Project administration	Project representation
Scheduling	

Examples of Architecture Services – Construction Document Services

Architectural design	Consulting permitting authority
Cost estimating	Data coordination user agency
Disciplines coordination	Document checking
Electrical design	Materials research
Mechanical design	Project administration
Scheduling	Site design
Specifications	Structural design

Examples of Architecture Services – Project Closeout

Operations and maintenance manuals	Record documents (As-Builds)
Warranty period	

Examples of Architecture Services – Schematic Design and Design Development Services

NOTE: The preceding definitions for A&E services are for information only. If the local agency has questions as to whether a particular service is A&E or not, then the local agency must contact their [Regional Local Agency Liaison](#). The Regional Local Agency Liaison will coordinate with the appropriate ODOT staff to verify whether the overall project will be considered A&E or non-A&E personal services.

Architectural design	Civil/site design
Consulting permitting authority	Cost estimating
Data coordination user agency	Disciplines coordination
Document checking	Electrical design
Materials research (Only for schematic design phase)	Mechanical design
Presentations (If included in the overall scope of the architectural project. However, these services would be procured as non-A&E personal services such services are not part of the overall architectural project)	Project administration
Scheduling	Specifications
Structural design	