CASE STUDY – COMMERCIAL BUILDING DEMOLITION

Project Description: Engineering Assessment, Project Design and Management

Scope of Services: AET was contracted by a Regional Redevelopment Authority to perform an engineering assessment of a multi-story commercial building (with a basement) scheduled to be demolished and redeveloped. The building is bordered on each side by occupied structures to remain and located in the downtown area.

AET's Twelve Key Items Essential in Bid Documents

1. Describe ***Past Use(s)*** of the Building to be demolished. What are the Current/Past uses of adjacent buildings? Are property lines clearly established, marked and visible?
2. Provide a ***Professional Engineering Assessment/Description*** of the structural design of the building. Is it structurally sound? Does it share a "party wall" or other common structural component(s) or utilities with the adjacent structures. Will adjacent structures have limited/restricted occupancy during demolition? Are the adjacent structures structurally sound?
3. Detail ***excavation requirements*** for the basement. Do the existing foundation walls, floors and any subsurface structures/footers have to be removed? What are the adjacent soil conditions; is soil stable, is fill required to bring the excavation site up-to-grade, and what are the soil compaction requirements?
4. Provide ***Photo Documentation*** of the existing condition or damages to adjacent structures as well as the sidewalks, roads, signs, lights, utilities, landscaping, etc. defined to remain.
5. Identify any ***Historical Building Components or other items*** to be preserved and that may have potential ***tax credits.***
6. Identify the ***Extent of Salvage*** building materials (such as ferrous and non-ferrous metals) at the site and who will receive compensation for their sale or reuse.
7. Identify ***Utilities*** servicing adjacent properties (including underground) which must be relocated before demolition begins. Address the termination of all active utilities servicing the structure to be demolished per local utility requirements. Have all utilities clearly marked prior to any pre-demolition site meetings. Define how existing storm drains will be protected or sealed/capped. Also include provision for storm water management and erosion control.
8. Describe temporary ***security and safety*** requirements to isolate and protect the site from public access including fencing, warning lights, signs, etc. Address the local governing authority requirements for any street and sidewalk closings during demolition.
9. Document the ***Presence, location and quantity (via Hazardous Material Survey)*** of environmental contaminants such as EPA NESHAPs (asbestos) which must be removed from the building prior to demolition. Where unsafe conditions occur, detail handling and disposal requirements for materials to be removed during demolition. Identify special handling and controls for non-friable ACM (such as roofing and mastics) which will remain throughout the demolition process and how these materials will be disposed or landfilled. PCB and mercury items as well as stored chemicals must also be identified.
10. Detail ***disposal requirements*** for the site. Ensure permitted disposal site will accept the waste stream. Transporters are to be licensed to transport the material. Receipts for landfill are to be maintained and returned to the owner.
11. Detail a ***Phasing and Coordination Plan*** for site planning and use including disturbance to area traffic flow during waste loading and transportation. Provide public notice, posting(s) and pre-work meeting(s) with the surrounding stakeholders (including the news media) such that everyone is aware of the planned safe and environmental compliant demolition process.
12. Detail ***future plans*** for the demolition site. Address any reconstruction to adjacent structures on public right-away(s).

Conclusion: Project specific documentation for building demolition is essential for contractor bid submittal purposes. Clear, concise bid documents should result in contractor bid submissions relatively close in price and project duration, with limited occurrences of unknown conditions during the work. Project award should be to the lowest responsible bidder. Project management of demolition work in conjunction with contract documents and contractor submittals ensure work will be properly completed on-time and on-budget.

When you need professional property redevelopment advice email Alan Sutherland, CIH, CHMM at a.sutherland@aetinc.biz or call 610-891-0114. We provide nationwide services; phone consultations are free. Check out the full range of environmental contracting/consulting services on our website www.aetinc.biz.

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