Knowledge, Skills & Abilities
First-Line Construction Superviors
Construction BILT Validation

Job titles include: Construction Foreman, Construction Superintendent, Construction Supervisor, Field Supervisor, Job Superintendent, Project Superintendent, Superintendent, Supervisor

4 = must have, 3 = should have, 2 = awareness needed, 1 = not needed (Detailed Work Activities - "yes" = 4, "no" = 1)

		General Contractors									Comments	Home Builders							
		Y	N	Blank	4	3	2	1	TOTAL			Y	N	Blank	4	3	2	1	TOTAL
	DETAILED WORK ACTIVITIES																		
1	Direct construction personnel	14	1						3.8		Leadership training	5	0						4.0
2	Coordinate construction project activities	14	1						3.8			5	0						4.0
3	Review blueprints or specification to determine work requirements	15							4.0		On a tablet, Bluebeam, plan grid and/or procore on screen take-off (OST) BIM 360, set of "as-builts", allows all parties (owners, architect, CM) to have most current plans digitally accessible at any moment	5							4.0
4	Evaluate projects to determine compliance with technical specifications	14		1					4.0		Not as important as codes	5							4.0
5	Inspect equipment or tools to be used in construction	11	2	2					3.5		Varies, depend on what they will work with, not day-to-day, but should have knowledge of what's worng or right, yes to safety inspections	2	3						2.2
6	Monitor construction operations	15							4.0		Scheduling	5							4.0
7	Mark reference points on construction materials	11	2	2					3.5		Would supervise others doing this	2	3						2.2
8	Measure work site dimensions	12	2	1					3.6		Surveying, Would supervise others doing this, home builders may need to verify	3	2						2.8
9	Estimate construction project labor requirements	14	1						3.8		Pre-construction,Productivity analysis	2	3						2.2
10	Estimate materials requirements for projects	12	2	1					3.6		Pre-construction, Supervisory no - estimator yes, As an operational exercise, introduction - understanding of budgets, value engineering, and quantity take-off?	3	2						2.8
11	Communicate with other construction personnel to discuss project details	14		1					4.0		Sketch, face-to-face, email, text	5							4.0
12	Order construction materials or equipment	13	1	1					3.8		As it relates to operations, Difficult to teach since different companies do this differently	5	0						4.0
13	Train construction personnel	10	3	2					3.3		Entry level people may lack experience to train others	3	2						2.8
14	Record operational or environmental data	12	1	2					3.8		SWPPP Training, Accuracy needed, observational skills	5	0						4.0
15	Other - Coordinate work with requlatory autorities	3										3							
16	Other - Interface with owners/designers for work solutions																		
17	Other - Analyze plans and situations to avaoid trouble																		
18	Other - Safety managment	9									Safety Trained Supervisor (STS), CHST, job hazard analysis (JHA), CPR Cert, Toolbox	6							
19	Other - Basic construction vocabulary, familiarity with trade applications for home builders	3																	
20	Other - Surveying, Total Stations, GPS																		
21	Other - Spanish	2										2							
22	Other - LEAN Construction/Quality	2										2							
23	Other - Public Speaking																		
24	Other -Construction scheduling																		

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26	Other - Construction contract management																			
26	Other - Construction cordination through various trades																			
27	Other- Leadership development and teamwork																			
28	Other - Construction law and risk management																			
29	Other - 3D modeling/sketch up																			
30	Other - Understand sequencing - which activities happen first, etc.																			
31	Other - Types of construction delivery methods (C.S.P, CMaR, Design Build																			
32	Other - Familiarity with career path in 5 large trades (how you get started, how many yrs as a journeyman, earning potential, growth opportunities)																			
33	Other - basic understanding of the ICC codes																			
	KNOWLEDGE																			
1	Materials & Methods - knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures				14	1			3.93							4	1			3.80
2	Mechanical - knowledge of machines and tools, including their designs, uses, repair, and maintenance				1	4	10		2.40									5		2.00
3	Safety and Security - knowledge of local, state and national standards of safety				14	1			3.93							3	2			3.60
4	~~Personnel and~~ Human Resources - knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation				1	3	8	3	2.13		Employment Laws Topics: 1) Discipline; 2) Discrimination, 3) Firing, 4) FMLA-ADA, 5) Hiring, 6) Harassment, 6) Wage Hour, and 7) Documentation, Employee relations if unionized					0	0	2	3	1.40
5	Risk Management - knowledge of insurance, liability and workers compensation issues					10.5	4.5		2.70									5	0	2.00
6	Customer service - knowledge of principles and processes for providing customer services				10.5	4.5			3.70		Ability to answer customer's questions,Presentation class					5				4.00
7	Sustainability - knowledge of sustainable building codes and standards (and best practices)				1	7.5	5.5	1	2.57		SWPPP, Demonstrate responsible construction waste management, Sustainability is largely brought into the desigh in commercial construction					1	2	2		2.80
8	Mathematics Level - knowledge of **arithmetic, algebra, geometry,** calculus, statistics and their applications (circle all that apply)				8.5	2.5	3		3.39		trig, differences between grades/slopes/elevations, Tech math, surveying course						3	2		2.60
9	Spanish Language - knowledge of conversational Spanish for the construction worker				2	8	5		2.80		Red angle spanish class? Video delivered classes, could lead to greater job satisfaction and an improved ability to get things done					1	2	2		2.80
10	Other - Contracts and construction law				1															
11	Other- Sequencing projects, scheduling and time management				0.5	0.5	1													
12	Other - Writing Skills				1															
13	Other - Quality-means and methods, constructability, estimating																			
14	Other - knowledge of process from step 1 - land purchase-development-sales-purchasing-budget-plan generation																			

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	SKILLS																			
1	Critical Thinking - Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems				13	2			3.87							3	2			3.60
2	Management and Personnel Resources - Motivating, developing, and directing people as they work identifying the best people for the job				10.5	3.5	1		3.63		Leadership					3	2			3.60
3	Time Management - Managing one's own time and the time of others				14	1			3.93							5				4.00
4	Complex Problem Solving - Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions				13	2			3.87		Thinking ahead/planning ahead, andicipating problems					2	1	2		3.00
5	Judgement and Decision Making - Considering the relative costs and benefits of potential actions to choose the most appropriate one				12	2			3.86							4	1			3.80
6	Quality Control **Analysis** - Conducting tests and inspections of products, services, or processes to evaluate quality or performance				5	7	3		3.13		3rd party does this, need to be able to understand the results of the tests, do it right the first time, Geotech reports, concrete test reports, Quality control not quality assurance, critical activity for residential dev					4		1		3.60
	TECHNOLOGY SKILLS																			
1	Calendar and scheduling software				11	2	2		3.60		Phoenix scheduling software, Outlook, P6					4	2			3.67
2	Computer aided design CAD software				0.5	5.5	6	3	2.23		BIM Revit						1	4		2.20
3	Document management software				7	5	2	1	3.20							1	2	2		2.80
4	Project management software				8	4	2	1	3.27							4	1			3.80
5	Spreadsheet software				9	4	2		3.47							1	3	1		3.00
6	Word processing software				10	4	1		3.60							1	2	2		2.80
7	Other - Online meeitng ("Go-to Meetings")										Coordinating multiple parties across multiple geographics									
8	Other - Bluebeam/Editing/Photo manipulation																			
9	Other - Budget control																			
10	Other - Internet searching																			
	ABILITIES																			
1	Supervise, coordinate or schedule the activities of construction workers				13	2			3.87							5				4.00
2	Read specifications/blueprints to determine construction requirements or to plan procedures				14	1			3.93							4	1			3.80
3	Inspect work progress, equipment or sites to verify safety or ensure specifications are met				11	4			3.73							5				4.00
4	Locate, measure, and mark site locations or placement of structures or equipment				3.5	11.5			3.23		call 811?					2	2	1		3.20
5	Coordinate work activities with other construction project activities				14	1			3.93							5				4.00
6	Ability to estimate material and labor ~~costs~~				5.5	7.5	2		3.23		quantities						4	1		2.80
7	Ability to understand the basic principles of mechanical, electrical and piping systems				3	10	2		3.07								4	1		2.80
8	Estimate material or worker requirements to complete jobs and order materials and supplies				5	9	1		3.27							2	2	1		3.20

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9	Confer with managers, contractors, or others to resolve problems or coordinate activities				13	2			3.87							5				4.00
10	Ability to understand basic principles of structural behavior				5.5	7.5	2		3.23		loads/wind shear					3	2			3.60
11	Ability to analyze professional decisions based on ethical principles				10.5	4.5			3.70		not a stand alone class, but woven throughout					3	2			3.60
12	Analyze worker or production problems and recommend solutions			1	8	6			3.57							5				4.00
13	Train workers in construction **methods**, operations or equipment, **safety** or company policies				1.5	8.5	5		2.77		OSHA 30					2	1	2		3.00
14	Suggest or initiate personnel actions, such as promotions, transfers or hires					3	8	4	1.93								1	3	1	2.00
15	Understand legal implications of contract and regulatory law to manage a construction project				7.5	4	3.5		3.27							3	1	1		3.40
16	Create written communications appropriate to the construction discipline				9	5	1		3.53							4	1			3.80
17	Other - LEAN Construction										MWBE or HUB awareness/compliance									
18	Other - Integrated Project Delivery																			
19	Other - Understanding of delivery methods and resulting contracts										CMaR, Design-Duild, CM Agent & CSP-Bid									
20	Other - SMART Building, Data communication/IT Systems																			
21	Other - Regulatory Process/Inspectors										General knowledge of city/state/federal									
22	Other - "Crucial Conversation"																			
23	Other - Home - Teambuilding, creating a positive, fun work environment																			
24	Other																			

More than .5 but less that 1.0 difference between general contractors' and home builders' responses

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