

ENR THE TOP 100

GREEN DESIGN FIRMS AND CONTRACTORS

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AUTOPILOT FUTURE Gensler, with New York City-based Studio Dror, designed the Electrical Vehicle Enclave in London, Ontario, as a net-zero pilot residential project centered around the use of communal electric autonomous vehicles.



PHOTO COURTESY OF GENSLER + DROR

NUMBER 1

Reshaping Green Building Ideas

Sustainability has been about buildings that help the environment. But COVID-19 has focused attention on healthy buildings. By Gary J. Tulacz



Top 5 Green Contractors by Sector

COMMERCIAL OFFICES		
RANK	FIRM	\$ MIL. REVENUE
1	AECOM	1,849.01
2	THE TURNER CORP.	1,491.13
3	CLAYCO	1,190.00
4	HATHAWAY DINWIDDIE CONSTRUCTION CO.	1,110.00
5	THE WHITING-TURNER CONTRACTING CO.	1,042.32

EDUCATIONAL FACILITIES		
RANK	FIRM	\$ MIL. REVENUE
1	THE TURNER CORP.	1,132.71
2	GILBANE BUILDING CO.	821.94
3	THE WHITING-TURNER CONTRACTING CO.	492.63
4	SKANSKA USA	491.22
5	WEBCOR	421.13

GOVERNMENT OFFICES		
RANK	FIRM	\$ MIL. REVENUE
1	HENSEL PHELPS	563.23
2	BL HERBERT INTERNATIONAL	545.70
3	CADDELL CONSTRUCTION CO. (DE) LLC	476.93
4	CLARK GROUP	462.07
5	LENLEASE	437.90

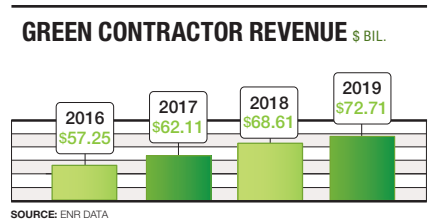
HEALTH CARE		
RANK	FIRM	\$ MIL. REVENUE
1	THE TURNER CORP.	794.87
2	CLARK GROUP	533.42
3	PCL CONSTRUCTION	518.78
4	STO BUILDING GROUP INC.	491.70
5	SWINERTON	373.50

MANUFACTURING & INDUSTRIAL		
RANK	FIRM	\$ MIL. REVENUE
1	CLAYCO	333.00
2	HASKELL	219.52
3	THE TURNER CORP.	196.07
4	GILBANE BUILDING CO.	162.01
5	BRASFIELD & GORRIE LLC	133.39

MULTI-UNIT RESIDENTIAL		
RANK	FIRM	\$ MIL. REVENUE
1	CLARK GROUP	1,097.14
2	LENLEASE	1,078.40
3	HANOVER CO.	669.00
4	COASTAL CONSTRUCTION GROUP	575.80
5	AECOM	537.71

RETAIL		
RANK	FIRM	\$ MIL. REVENUE
1	GLY CONSTRUCTION	758.11
2	SKANSKA USA	173.12
3	O'NEIL INDUSTRIES INC.	112.05
4	SWINERTON	103.50
5	AECOM	91.98

SPORTS, ENTERTAINMENT & CIVIC		
RANK	FIRM	\$ MIL. REVENUE
1	AECOM	636.58
2	THE TURNER CORP.	596.08
3	CLARK GROUP	532.02
4	SWINERTON	455.00
5	SUFFOLK CONSTRUCTION CO. INC	378.95



and improving lifecycle impacts. “Our favorites include: Mindful Materials, the Embodied Carbon Construction Calculator (EC3) and Tally. We work to make using these tools a part of our team’s standard process,” says Freed of CannonDesign.

More and more, local and state governments, along with some institutional and corporate clients, are requiring firms to adopt aggressive sustainability targets. “In states like California with a relatively clean power grid, the focus has shifted from LEED Gold or Platinum to operational net zero carbon,” says Hyman of ZGF Architects.

Many design firms are adjusting their design processes to help reduce embodied carbon and reduce a structure’s overall carbon footprint. For example, SmithGroup has now started to invite structural engineers to its early-concept sustainable design charrettes.

“The embodied carbon of a traditional building can represent approximately 25% of the lifetime emissions of a project, and a building’s structural system can represent half of its embodied carbon,” says Mella. He says the firm is more frequently collaborating with the structural engineer to optimize the concrete mix design and evaluate the carbon impacts of structural bay sizes, and is increasingly considering mass timber systems.



“[A]ccording to our annual sustainability survey, 60% of our clients plan to incorporate intelligent building technologies in the next one to two years.”

Jennifer Taranto,
Director of Sustainability,
STO Building Group

Further, many firms are creating their own databases of materials and supplies to automate their processes. “We are using software that helps us locate sustainable building materials compiled with analytics to make informed decisions. This platform houses an online database that provides filtering options per various rating systems, lifecycle cost analysis and comparison features,” says Ryan Poole, global sustainability leader for DPR Construction.

New Approaches

To combat indoor pathogens while still maintaining overall sustainable structures, many firms are considering new approaches to the problem of creating green buildings. For example, 100% outside air with no recirculation will reduce the threat of exposure within the workplace. “Displacement ventilation to reduce the turbulence within an office environment will also help eliminate the exposure to those in the same room,” says Hyman of ZGF Architects. He notes that this practice has been used in health care environments for years. “Now, everyone is going to demand the same level of infection control.”

Other options include 40% to 60% relative humidity, UV germicidal irradiation and bipolar ionization—each activating the air people breathe to reduce aerosol

RANK 2020	RANK 2019	FIRM	ACC. STAFF	2019 GREEN REVENUE		RETAIL / OFFICE	GOVERNMENT OFFICE	EDUCATION	HEALTH CARE	HOTEL	MULTI-RESIDENTIAL	ENTERTAINMENT / CIVIC	OTHER BUILDINGS	OTHER MKTGS.
				IN \$ MIL.	% OF TOTAL REVENUE									
1	1	THE TURNER CORP., New York, N.Y.	1,051	6,560.34	45	23	5	17	12	4	3	9	9	18
2	3	CLARK GROUP, Bethesda, Md.	439	4,858.45	80	19	10	8	11	5	23	11	9	5
3	4	SWINERTON, San Francisco, Calif.	194	4,152.60	90	20	0	10	9	8	12	11	8	21
4	2	AECOM, Los Angeles, Calif.	1,000	3,384.65	34	57	1	3	0	2	16	19	0	2
5	5	HENSEL PHELPS, Greeley, Colo.	508	3,143.06	55	5	18	11	8	0	0	0	46	13
6	6	SKANSKA USA, New York, N.Y.	339	2,675.53	37	17	0	18	8	0	6	4	28	19
7	10	THE WHITING-TURNER CONTRACTING CO., Baltimore, Md.	305	2,430.26	25	44	2	20	6	2	9	6	9	1
8	11	CLAYCO, Chicago, Ill.	100	2,377.00	73	50	0	0	0	0	0	0	36	14
9	8	GILBANE BUILDING CO., Providence, R.I.	335	2,176.07	35	13	9	38	5	2	10	8	4	12
10	14	PCL CONSTRUCTION, Denver, Colo.	298	2,108.40	33	23	1	13	25	2	21	7	5	2
11	9	WEBCOR, San Francisco, Calif.	220	1,962.26	92	29	1	21	0	18	25	0	4	1
12	7	LENLEASE, New York, N.Y.	184	1,901.20	59	8	23	0	9	1	57	0	0	2
13	12	HOLDER CONSTRUCTION, Atlanta, Ga.	336	1,880.00	42	23	0	3	0	0	0	0	18	56
14	13	STO BUILDING GROUP INC., New York, N.Y.	244	1,781.74	23	53	1	11	28	0	4	5	0	0
15	18	HATHAWAY DINWIDDIE CONSTRUCTION CO., San Francisco, Calif.	135	1,577.00	77	70	6	5	0	3	0	11	5	0
16	16	HOFFMAN CONSTRUCTION, Portland, Ore.	208	1,519.00	71	10	10	17	1	0	7	14	12	29
17	34	JE DUNN CONSTRUCTION GROUP, Kansas City, Mo.	335	1,179.91	28	22	10	16	15	3	16	3	9	7
18	15	DPR CONSTRUCTION, Redwood City, Calif.	695	1,021.27	17	19	0	7	2	1	0	0	2	68
19	24	JAMES G. DAVIS CONSTRUCTION CORP., Rockville, Md.	43	990.37	96	71	0	6	4	0	18	0	0	0
20	32	MORTENSON, Minneapolis, Minn.	200	965.71	19	25	0	3	3	13	0	16	1	40
21	20	SUFFOLK CONSTRUCTION CO. INC, Boston, Mass.	NA	896.26	24	0	0	17	0	2	18	42	17	4
22	21	AUSTIN INDUSTRIES, Dallas, Texas	116	889.56	36	21	0	2	0	8	8	5	56	0
23	22	FORTIS CONSTRUCTION INC., Portland, Ore.	60	866.00	67	0	1	7	0	0	0	0	0	92
24	28	COASTAL CONSTRUCTION GROUP, Miami, Fla.	14	833.70	89	2	0	6	0	21	69	0	1	0
25	36	POWER CONSTRUCTION CO. LLC, Chicago, Ill.	91	807.00	80	17	0	15	16	2	42	0	8	0
26	57	GLY CONSTRUCTION, Bellevue, Wash.	54	758.11	83	100	0	0	0	0	0	0	0	0
27	26	BRASFIELD & GORRIE LLC, Birmingham, Ala.	143	718.85	19	47	14	4	6	0	4	7	0	19
28	17	THE WALSH GROUP, Chicago, Ill.	300	683.62	14	0	9	1	1	0	18	0	4	68
29	37	MCCARTHY HOLDINGS INC., St. Louis, Mo.	404	671.70	15	11	0	28	48	0	0	10	0	2
30	25	HANOVER CO., Houston, Texas	56	669.00	100	0	0	0	0	0	100	0	0	0
31	19	LEVEL 10 CONSTRUCTION, Sunnyvale, Calif.	104	599.40	74	99	0	0	0	0	0	0	0	0
32	43	CADDELL CONSTRUCTION CO. (DE) LLC, Montgomery, Ala.	20	568.03	91	0	84	0	2	0	5	0	9	0
33	23	CONSIGLI CONSTRUCTION CO. INC., Milford, Mass.	76	556.50	31	21	0	50	3	1	24	0	1	0
34	31	HITT CONTRACTING INC., Falls Church, Va.	78	548.70	23	52	11	2	4	8	19	0	5	0
35	27	BL HARBERT INTERNATIONAL, Birmingham, Ala.	45	545.70	56	0	100	0	0	0	0	0	0	0
36	29	BERNARDS, San Fernando, Calif.	102	539.40	100	2	6	22	15	4	23	5	22	2
37	35	AVALONBAY COMMUNITIES INC, Arlington, Va.	19	533.13	63	0	0	0	0	0	100	0	0	0
38	33	LEASE CRUTCHER LEWIS, Seattle, Wash.	40	526.10	52	2	0	35	12	1	14	3	32	1
39	30	ADOLFSON & PETERSON CONSTRUCTION, Minneapolis, Minn.	44	515.70	41	23	10	54	5	0	0	0	9	0
40	39	PEPPER CONSTRUCTION, Chicago, Ill.	123	442.27	35	26	0	35	2	1	18	3	12	4
41	40	OKLAND CORP., Salt Lake City, Utah	40	435.66	33	25	0	19	29	0	0	0	26	0
42	**	MORLEY BUILDERS, Santa Monica, Calif.	40	429.00	100	10	0	27	0	31	0	0	32	0
43	42	DAVID E. HARVEY BUILDERS INC., Houston, Texas	29	411.85	29	81	0	0	5	2	5	1	5	0
44	45	CAHILL CONTRACTORS, San Francisco, Calif.	37	390.13	100	2	0	7	0	0	88	2	0	0
45	48	HASKELL, Jacksonville, Fla.	123	386.98	36	0	13	0	0	0	0	0	0	87
46	**	JAMES MCHUGH CONSTRUCTION CO., Chicago, Ill.	28	322.30	72	0	0	0	0	8	84	8	0	0
47	53	CHINA CONSTRUCTION AMERICA/PLAZA CONSTRUCTION, Jersey City, N.J.	NA	307.65	21	21	11	0	0	0	24	0	44	0
48	64	HARKINS BUILDERS, Columbia, Md.	15	305.00	72	2	16	0	13	0	69	0	0	0
49	61	E.E. REED CONSTRUCTION L.P., Sugar Land, Texas	36	300.00	35	68	0	0	7	0	0	0	25	0
50	50	DIMEO CONSTRUCTION CO., Providence, R.I.	98	297.40	56	19	18	48	0	0	12	2	0	0