Town of Rye Public Safety Building

Second Floor Analysis

Town of Rye Public Safety Building: Second Floor Analysis

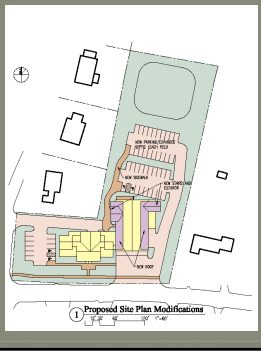
- Review existing conditions
  - Approx. 62'x100', 6,259 SF
  - Steel frame installed, no floor
  - Almost no natural light
- Review design construction drawings
- Analysis: Structural Engineer
  - 88 PSF floor capacity, suitable for office (85 PSF)
  - Wood frame floor required due to weight vs. steel and concrete
  - Flush frame floor due to condition at perimeter steel and gable roof; remove existing cross bracing (floor provides bracing)

Town of Rye Public Safety Building: Second Floor Analysis

- Analysis: Architect
  - No access available to second floor. Police and Fire Departments must be secure; can't use existing stairs or elevator (not in a reasonable location). Provide two stair towers and an elevator (Life Safety Code and ADA).
  - Locate stair and elevator towers on outside of Public Safety building (see Site Plan Concept).
  - Stair and elevator towers very tall, will require proper reinforcing and bracing. 19'-4" floor-to-floor height.
  - 3 high windows at each gable end. Provide natural light with either roof windows (skylights) or shed dormers and windows. Use dormers so as not to lose floor area.
  - Construct office partitions, with finishes including flooring and ceilings.
  - Provide plumbing for rest rooms and staff area. Leach field may require expansion.
  - Provide mechanical system for heating and cooling.
  - Provide electrical service including wiring, lighting, outlets, fire alarm system and communication systems.
  - Provide parking for staff and public at rear of building (see Site Plan). Safety issue with emergency vehicles.
  - Relocate sidewalk.

Town of Rye Public Safety Building: Second Floor Analysis

Site Plan



Town of Rye Public Safety Building: Second Floor Analysis

Estimate of Probable Construction Cost

Second Floor:
$1,152,000-
$1,371,000

New Construction:
$1,095,000 -
$1,252,000

Section	Description	Unit	Size	Low Estimate Unit	Low Estimate Total	High Estimate Unit	High Estimate Total	% of Total Low	% of Total High
Sitework	Parking/driveway area	sf/sy	4	$ 37,500.00	$ 150,000.00	$ 37,500.00	$ 150,000.00		
	Site lighting/miscellaneous	sf/sy	1	$ 50,000.00	$ 50,000.00	$ 50,000.00	$ 50,000.00		
	Septic/leach field/improvements	sf/sy	1	$ 15,000.00	$ 15,000.00	$ 15,000.00	$ 15,000.00		
	Sitework Subtotal				$ 215,000.00		$ 215,000.00	5.7%	4.6%
Substructure	Crawl foundations	sf/sy	1	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00		
	Exterior stairway, steel	sf/sy	1	$ 25,000.00	$ 25,000.00	$ 25,000.00	$ 25,000.00		
	Structural modifications, steel floor	sf	6,259	$ 18.00	$ 112,662.00	$ 18.00	$ 112,662.00		
	Substructure Subtotal				$ 139,662.00		$ 139,662.00	3.8%	3.0%
Exterior Building	Wall assemblies, gable gables, 19'-7"hgt	sf/sy	1	$ 150,000.00	$ 150,000.00	$ 150,000.00	$ 150,000.00		
	Wall finishes, interior and exterior shell	sf	1,000	$ 35.00	$ 35,000	$ 35.00	$ 35,000.00		
	Shed dormer	Each	1	$ 15,000.00	$ 15,000.00	$ 15,000.00	$ 15,000.00		
	Add dormer each side with windows	SF Roof	1,000	$ 31.57	$ 31,570.00	$ 31.57	$ 31,570.00		
	Dormer roof	SF Roof	2,000	$ 11.50	$ 23,000	$ 11.50	$ 23,000.00		
	Shell Subtotal				$ 254,570.00		$ 254,570.00	6.9%	5.4%
Interior Building	Partitions	SF	6,259	$ 10.00	$ 62,590	$ 12.00	$ 75,108.00		
	Doors	SF	6,259	$ 4.00	$ 25,036.00	$ 5.00	$ 31,295.00		
	Cabinetry	SF	6,259	$ 5.00	$ 31,295.00	$ 6.00	$ 37,554.00		
	Glass	SF	6,259	$ 1.00	$ 6,259	$ 1.20	$ 7,510.80		
	Ceiling	SF	6,259	$ 4.00	$ 25,036.00	$ 5.00	$ 31,295.00		
	Floors	SF	7,759	$ 4.00	$ 31,036	$ 5.00	$ 38,795.00		
	Paint	SF	7,759	$ 1.75	$ 13,578	$ 2.00	$ 15,518.00		
	Accessories (Blinds, Toilet accessories)	Allow	1	$ 10,000.00	$ 10,000.00	$ 15,000.00	$ 15,000.00		
	Interior Subtotal				$ 205,230.00		$ 252,076.80	5.4%	4.4%
Services	Plumbing	SF	6,259	$ 8.00	$ 50,072	$ 9.00	$ 56,331.00		
	Sprinkler System	SF	7,759	$ 2.47	$ 19,157	$ 2.72	$ 21,100.48		
	HVAC	SF	7,759	$ 15.00	$ 116,385	$ 18.00	$ 139,662.00		
	Electrical Service/Distribution	SF	7,759	$ 11.27	$ 87,440.93	$ 15.00	$ 116,385.00		
	Services Subtotal				$ 273,057.93		$ 333,478.48	7.2%	5.8%
GRAND TOTAL	Building						$ 1,095,095.73		
	Building and Sitework						$ 1,252,095.73		
	GC Overhead	%		8.75	$ 109,446.76	8.75	$ 125,209.57	7.1%	7.1%
	GC Bond/ins	%		3.00	$ 38,478.41	3.00	$ 44,034.42	2.2%	2.2%
	GC Fees	%		4.00	$ 55,104.16	4.00	$ 63,038.86	3.1%	3.1%
	Subtotal				$ 1,298,125.07		$ 1,484,378.57	42.4%	41.4%
TOTAL					$ 1,152,125.07		$ 1,371,378.57	100.0%	100.0%
Square Foot summary	Building $/sf	sf	7,759	$ 148.50	$ 148.50	$ 176.80	$ 1,095,095.73	$ 1,372,792.40	
	Building $/sf w/Sitework	sf	7,759	$ 148.50	$ 176.80	$ 1,252,095.73	$ 1,372,792.40		

Estimated Size

Second Floor	6,259 SF
Stairwell Towers	1,500 SF
Total	7,759 SF

Estimated Cost New Construction (added stairs/elevator not required)

6,259 SF @ 175.2444 SF = $1,095,095 - $1,371,000

Town of Rye Public Safety Building: Second Floor Analysis

- Advantages
  - Utilize existing foundations and steel frame.
- Disadvantages
  - Parking and driveway safety.
  - Construct stair and elevator towers.
  - Construct dormers and fit up interiors.
  - Provide HVAC and electrical.
  - Construction more costly than new construction.
  - Town Hall Departments in multiple locations; inefficient and inconvenient for public.