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2020 DIGITAL: SAFETY, INNOVATION & SUSTAINABILITY CONFERENCE

CONSTRUCTION SAFETY REPORT CARD

PRESENTED BY

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ANNUAL CONSTRUCTION-RELATED INJURIES & FATALITIES vs. AVERAGE NYC CONSTRUCTION EMPLOYMENT*

- The graph highlights a stop in the significant increases in incidents in 2019.
- This was accomplished in great part to our commitment to the Construction Safety Compliance Team initiative, as well as the expansion of our Construction Safety Enforcement Team.
- Unfortunately, we have yet to stem the number of fatalities on sites and will continue to commit resources to reduce that number.

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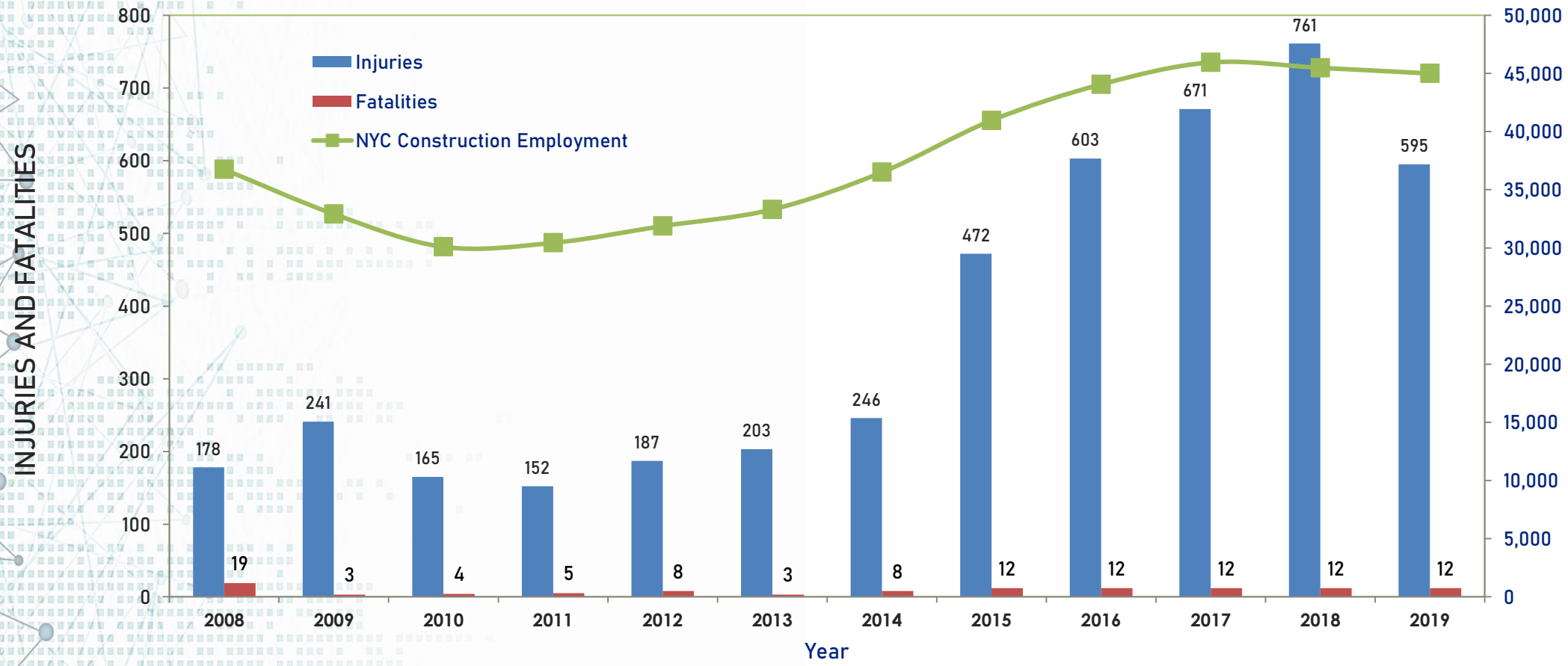
ANNUAL CONSTRUCTION-RELATED INJURIES & FATALITIES vs. AVERAGE NYC CONSTRUCTION EMPLOYMENT*



** NYC Construction Employment figures are based on Current Employment Statistics (CES) survey of construction-related skilled trades occupations in NYC*

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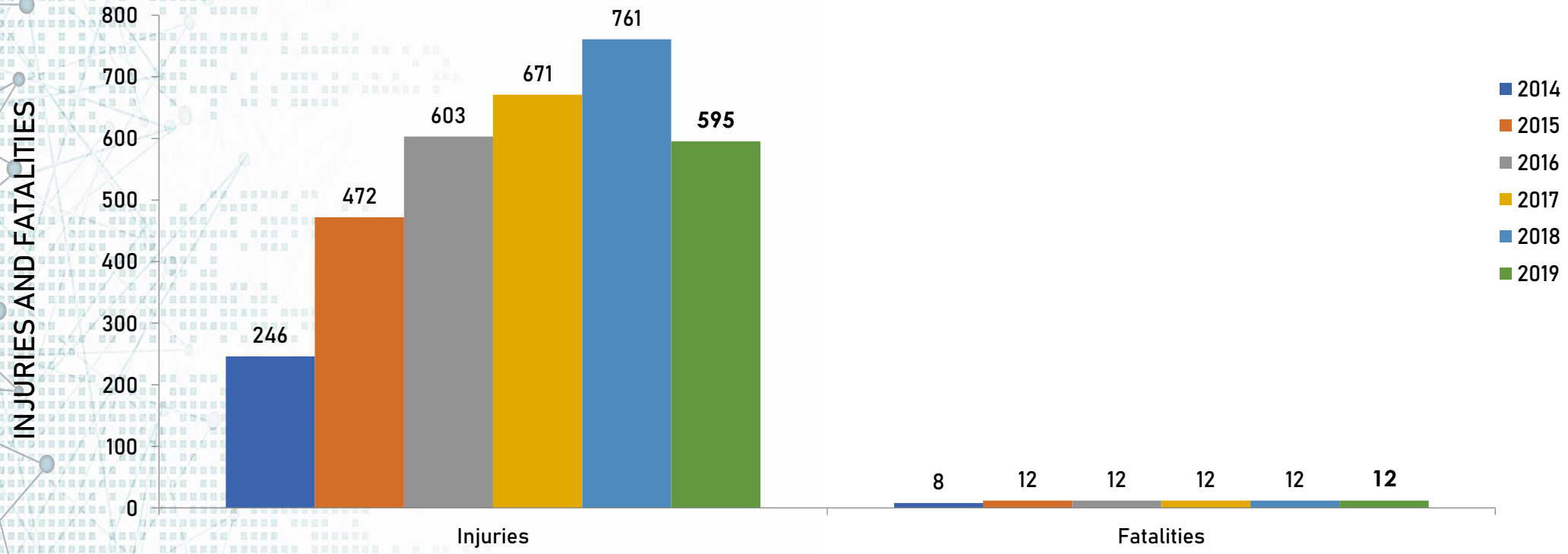
ANNUAL CONSTRUCTION-RELATED INJURIES & FATALITIES

This bar chart illustrates how far we reduced the number of incidents, dropping below the last three years levels.



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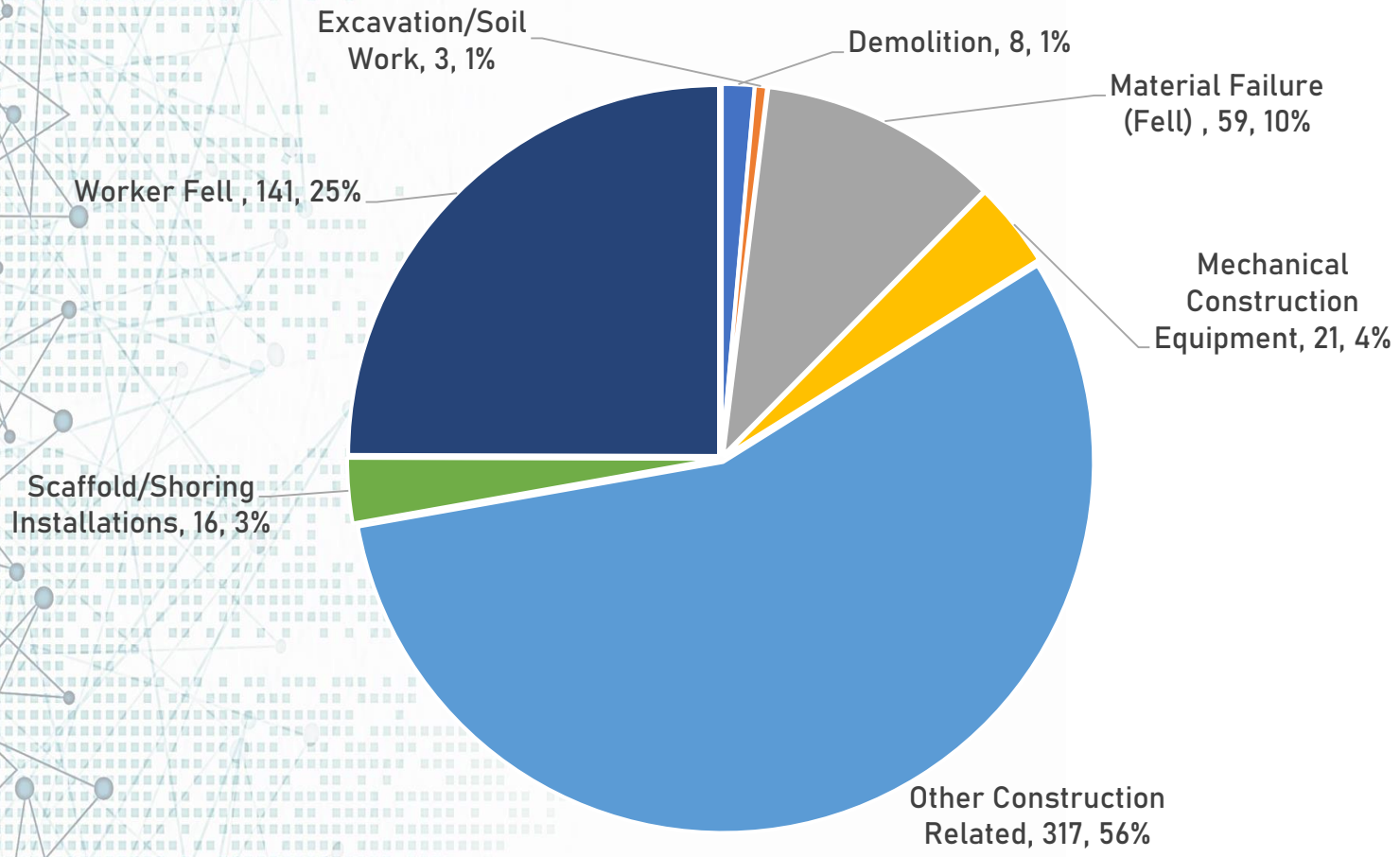
2019 CONSTRUCTION RELATED ACCIDENTS BY CAUSE OF ACCIDENT



This pie chart shows an analysis of which categories these incidents fall into. Worker falls continue to be the serious concern of the Agency as well as industry.

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CONSTRUCTION SAFETY COMPLIANCE

This chart demonstrates the reductions over 2018 when DOB implemented the Construction Safety Compliance concept and staffed up to visit more sites more often focusing on safety.

	2018	2019	Difference	Percent Difference
Total Construction-Related Incidents	1190	955	-235	-19.7%
Total Construction-Related Incidents *WITHOUT* Injury or Fatality	444	390	-54	-12.16%
Total Construction-Related Incidents *WITH* Injury or Fatality	746	565	-181	-24.2%
Percentage of Total Incidents *WITH* Injury or Fatality	62.6%	59.1%	-3.5%	-5.5%

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FAÇADE REPAIR STANDOFF FAILURE 04/08/19

The first fatality of 2019 was located at 311 East 50th Street in Manhattan. On April 8 a crew was doing façade repairs from a suspended scaffold and they placed a standoff bracket on the C-hook, seen in the photograph on the right, to increase distance from the facade. While lowering the scaffold, the bracket slipped causing the C-hook to move forward – impacting the coping stone on top of the parapet wall. The impact pushed the stone off the top of the wall. It fell onto the head of the scaffold worker, killing him.

Failure to protect the coping stone and improper use of a standoff bracket from impact led to the death.

FAÇADE REPAIR STANDOFF FAILURE 04/08/19

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WATER LEAK REPAIR 04/10/19

On April 10, two workers were completing roofing and brick column encasement repairs on the roof of a 12-story building at 1 Pierrepont Street in Brooklyn. While one of the workers set bricks the other worker was moving scaffold sections and other materials near the edge of the roof. No guardrails or parapet were located at the roof level. It was a high wind event day and it appears the worker was blown off the roof and fell to his death. Although harnesses were on site, the workers did not put them on. Failure to tie-off led to the death.

Lack of guardrails, failure to tie-off, and working in high wind conditions were all contributing factors.

CRANE ASSEMBLY 04/13/19

On April 13, at 373 Broome Street in Manhattan, a team of workers were assembling a mobile crane to hoist mechanical equipment to the roof and an assist crane was lifting the counterweights into place. After placing one of the counterweights on the back of the crane using two of the three ropes attached to the hook, the crane operator lifted the ropes away from the weight. The third rope caught the lifting lug and pulled the weight into the air. The worker attempted to jump off the crane deck but the weight struck the deck and knocked the worker to the ground. The worker died from his injuries.

Failure to remove the excess rope not needed for the pick was the contributing factor.

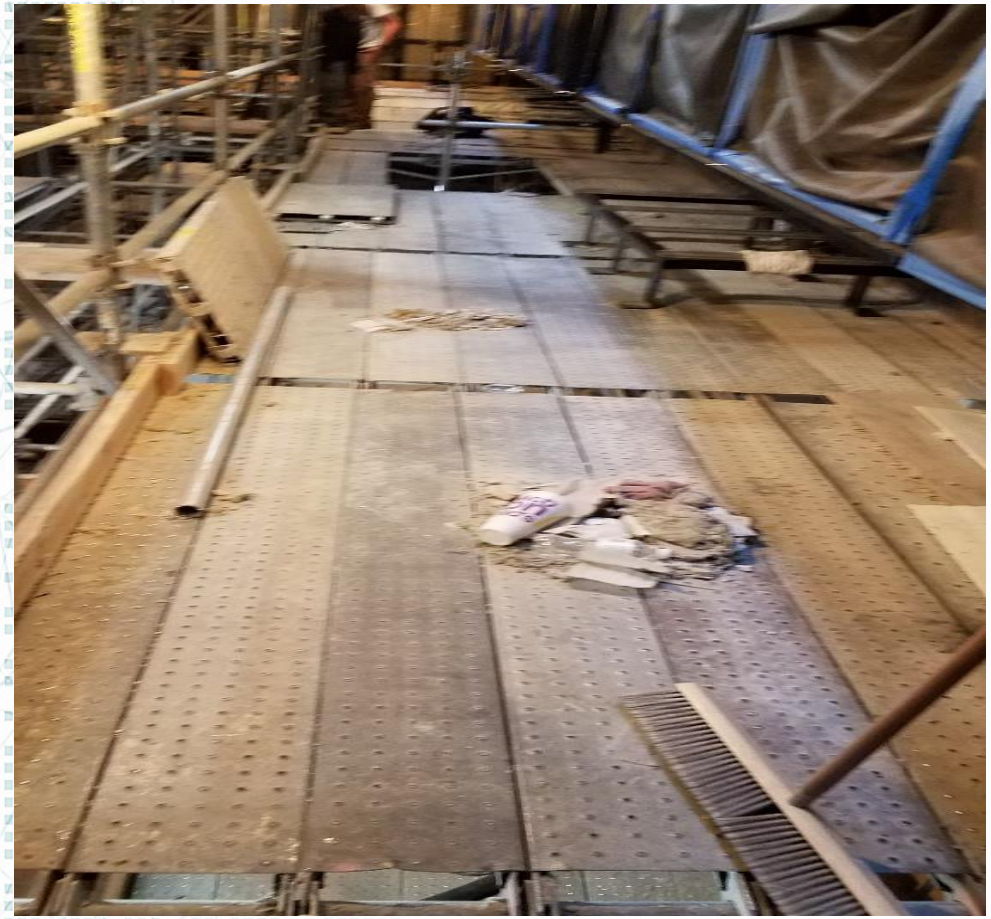
CRANE ASSEMBLY 04/13/19

CLEANUP RAILING REMOVED 05/18/19

On May 18, 2019, a cleanup crew was brought in to clean a site where an overnight shift had been installing curtain wall pieces at 335 Madison Avenue in Manhattan. The overnight crew removed the guardrails surrounding a floor opening used for hoisting to make their work more efficient (seen in the photo on the left) and failed to replace the railings. As a cleaning crew member swept the deck, he walked backwards into the hoisting shaft (seen in the photo on the right) and fell 3-stories to his death.

Failure to maintain the railings in place led to the fatality.

CLEANUP RAILING REMOVED 05/18/19



SCAFFOLD FALL 06/22/19

On June 22, workers doing façade work at 880 Saint Nicholas Avenue in Manhattan took a break for lunch. One of the workers went back up the scaffold to retrieve an item and fell to his death. The scaffold exceeded 50 feet, was unpermitted and improperly installed lacking deck boards and guardrails.

Lack of proper installation was a key contributing factor.

SCAFFOLD FALL 06/22/19

WALL PLACEMENT 07/20/19

On July 20, workers were installing pre-assembled wall sections at 68-04 Tides Road, Rockaway using a mobile crane. While placing a wall section in between two previously installed wall sections, the assembly bumped into one of the installed sections causing it to break loose from its hold down brackets and crushed a worker.

Sequencing, failure to shore and brace installed sections and lack of proper communications were all contributing factors.

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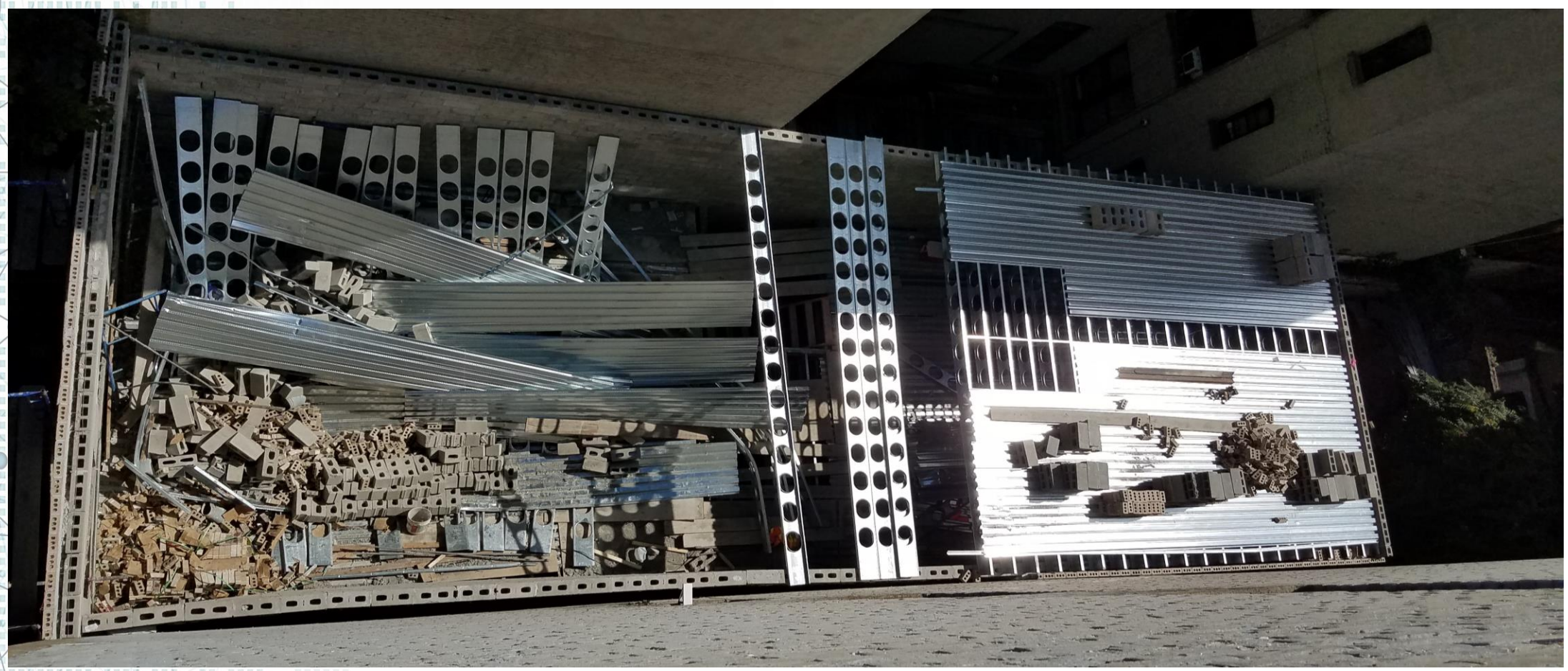
COLD FORM STEEL FAILURE 08/27/19

On August 27 workers building a 4-story structure at 94 East 208th Street in the Bronx. After placing q deck on the 3rd floor deck, the contractor accepted delivery of masonry materials onto the deck to continue construction. A week earlier, a Special Inspector had warned the contractor in writing that he needed to pour the first and second floor decks before continuing to support the loads and to provide structural rigidity to the floor and surrounding walls. Shortly after the material delivery the 3rd floor deck collapsed killing 1 worker and injuring 5 others.

Failure to brace the deck, lack of oversight by the Construction Super, failure to follow the Special Inspector instructions, lack of knowledge surrounding the requirements of cold for steel construction and lack of bracing of the cold form steel were the major contributing factors.

COLD FORM STEEL FAILURE 08/27/19



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SHED INSTALLATION 08/30/19

On August 30, workers were assembling a sidewalk shed at 34-49 107th Street, Queens. A worker was passing materials from the back of the flatbed truck to other workers erecting the shed. After handing materials to the other workers on the shed, the decedent placed one foot on the crossmember of the shed and the other foot on the truck bed in what appeared to be an attempt to climb onto the shed. Losing his balance, he grabbed a junior beam off the shed which was not yet secured to the shed frame. The I-beam slid back, hitting him in the face and causing him to fall between the shed and the truck. The beam followed him to the ground into the gap. He succumbed to his injuries.

Failure to properly gain access to the shed was a key factor.

SHED INSTALLATION 08/30/19

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ASBESTOS CLEANUP 10/21/19

On October 21, workers were doing asbestos abatement cleanup at 60 Norfolk Street in Manhattan. The site was the scene of a fire a year earlier and plans to begin construction of a new structure were hampered by the asbestos debris onsite. Two workers were standing underneath an archway (seen in the photo on the right) placing water on the debris piles to control the dust. The workers were using an excavator with crawler treads and a grappler hook, as well as a bobcat to move the debris. The vibrations from the machinery caused an existing piece of façade to collapse in on the two workers holding the hose, trapping one and fatally striking the other.

Failure to shore and brace the existing façade and improper use of the equipment lead to the collapse.

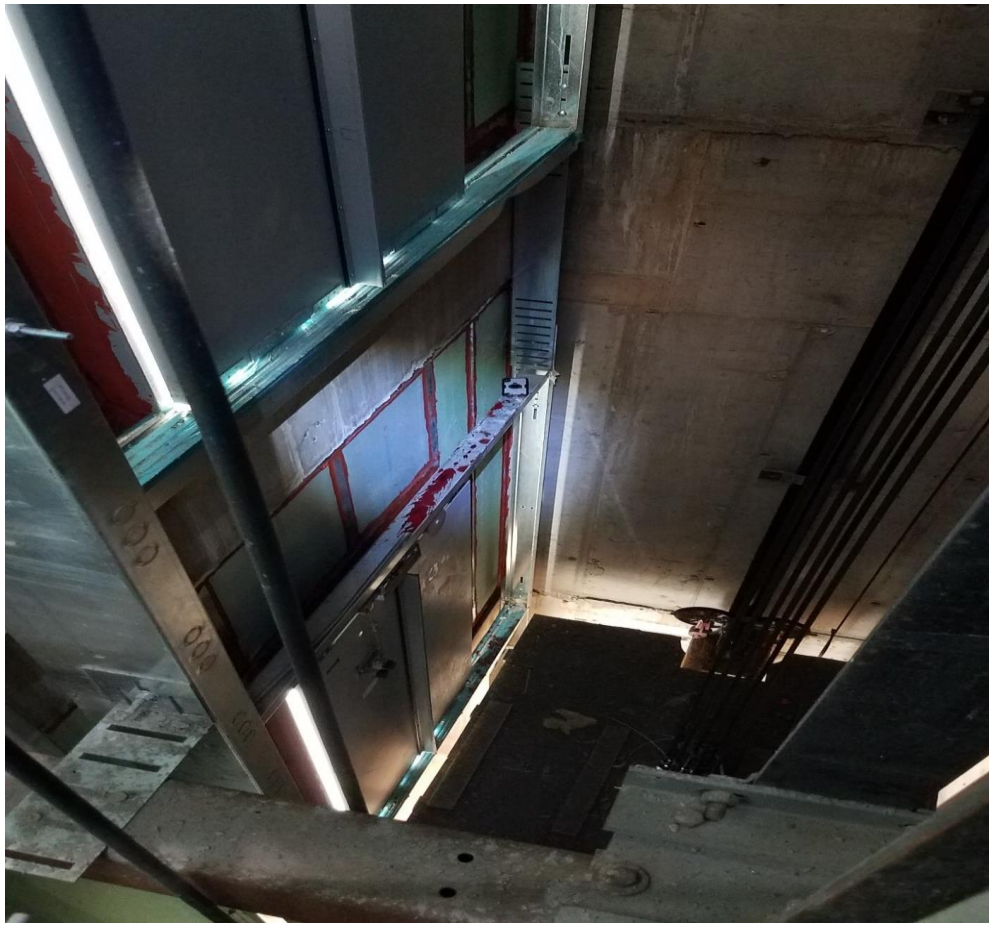
ASBESTOS CLEANUP 10/21/19

MISUSE OF PLATFORM 10/24/19

On October 24, workers were going up to the 35th floor of a new 38-story hotel at 1227 Broadway in Manhattan to perform lobby fireproofing. Rather than wait for the hoist, the workers took control of a temporary elevator platform that was awaiting cab installation. As they neared the 32nd floor, one of the workers using his cell phone dropped it and it landed on the top of the door frame ledge (seen in the center of the photo on the right). The worker laid down on the deck of the platform to retrieve his phone. As he reached down, his skull contacted the deck (seen in the photo on the left) on the 33rd floor and he was pinned between the platform and the deck. He died instantly.

Failure to secure the temporary elevator platform and use by an untrained worker were the contributing factors.

MISUSE OF PLATFORM 10/24/19



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NO CONTROLLED ACCESS ZONE 11/11/19

On November 11, a newly hired worker was assigned to move a stack of plywood on the second-floor deck of a residential project at 3420 Bedford Avenue in Brooklyn. He was not aware that the bottom panel of plywood covered a yet to be constructed stairwell and was unsecured to the deck. There was no controlled access zone around the plywood stack nor any warnings of the stairwell opening. The worker began lifting the plywood and moving it to another area. When he lifted the last piece, he walked forward and stepped into the unmarked stairway well falling three stories to the basement floor. He died of massive trauma.

Failure to secure the opening cover, lack of pre-task planning and failure to set up a controlled access zone were the contributing factors.

NO CONTROLLED ACCESS ZONE 11/11/19

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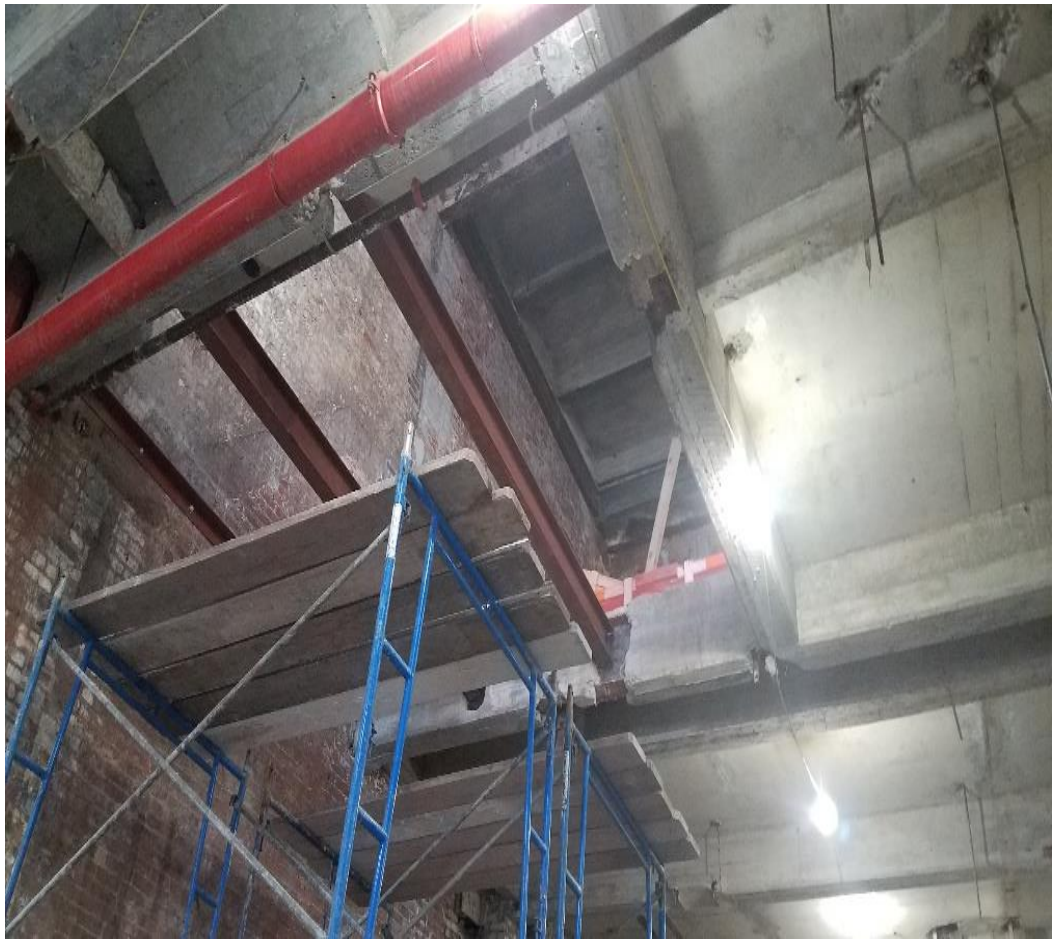
CONTROLLED ACCESS ZONE 12/20/19

On December 20, a worker was assisting another worker building a scaffold at 20 Bruckner Boulevard in the Bronx. The worker on the scaffold wanted another plank. Although there were other planks nearby, the decedent entered a controlled access zone on the floor above (seen in the photo on the left) and fell through the opening landing 20 feet below. He was removed to the hospital where he died two weeks later from his injuries.

Allowing access to the Controlled Access Zone without proper tie-off equipment was a key factor.

CONTROLLED ACCESS ZONE 12/20/19



NEAR MISSES

I survived!

WORKER FALL 02/16/19

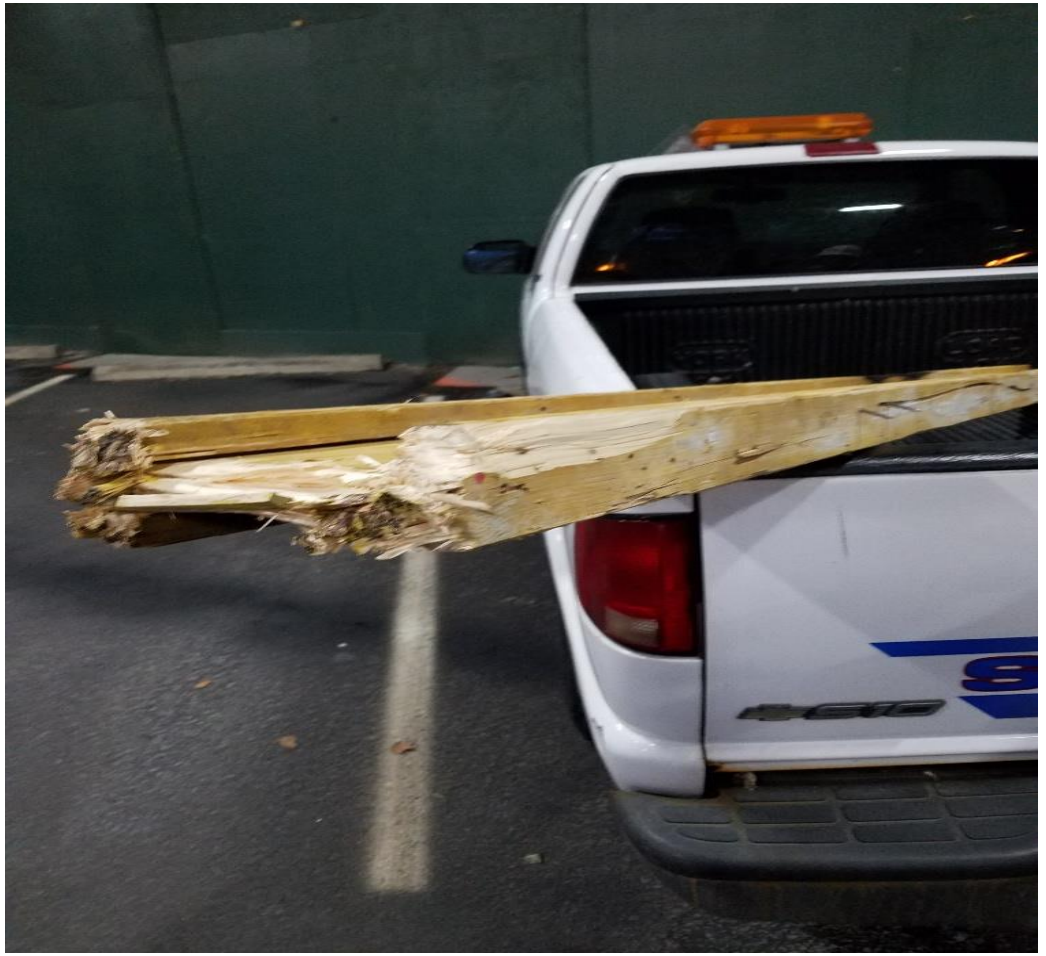
On February 16, a steel worker was installing a beam for the third-floor deck at 556 Bergen Avenue in the Bronx. He slipped off the beam and was stopped from falling by his harness. He sustained some non-life-threatening injuries as he hit a beam during the fall.

MATERIAL FALL 04/16/19

On April 16, at a high-rise project located at 200 Amsterdam Avenue in Manhattan, workers were stripping material in the vicinity of the 26th floor. A worker lost control of the formwork and it fell below the DOKA system and through a net landing on West 69th Street. The 8' piece of formwork is visible in the photo on the right after it was retrieved. No injuries.

Failure to maintain control of the formwork and improper netting led to the incident.

MATERIAL FALL 04/16/19



STANDOFF BRACKET SLIP 06/01/19

On June 1, DOB responded to another standoff bracket failure at 42 West 39th Street in Manhattan. Workers were moving the suspended scaffold over a terrace projection which angled the rig when the standoff bracket slipped impacting the coping stone and causing it to rain down into the middle of West 39th Street (seen in the photo on the right). The inset photo on the left shows the height of the building and the main photo on the left shows the twisted standoff bracket and C-hook. Due to these recent incidents with standoff brackets, we met with the Special Riggers Association and prohibited their use pending further study.

Failure to protect the coping stone from impact, not checking the supporting surface for the loads imposed and misuse of the suspended scaffold led to the incident.

STANDOFF BRACKET SLIP 06/01/19

SCAFFOLD COLLAPSE 06/11/19

On June 11, the scaffold located at 243 4th Avenue in Brooklyn was experiencing a high wind event that was subject of a warning from DOB the previous day. Suddenly, the scaffold was blown off the bulkhead and rained down onto an outdoor café located next door to the construction site. Sitting in the café were several people, one of which was struck in the head by one of the planks. She sustained serious injuries but survived. An investigation revealed that the ties used to stabilize the scaffold had been removed and the scaffold was awaiting a sub-contractor, who was notified over two weeks earlier, to dismantle it.

Failure to safeguard the site was a major factor.

SCAFFOLD COLLAPSE 06/11/19

ROOFER FALL 07/17/19

On July 17, a roofer was replacing roofing materials at a residence at 138-24 233 Street in Queens, including the underlying plywood sheathing. Working close to the edge, the roofer failed to tie-off and slipped off the roof falling 2 ½ stories.

Failure to tie-off led to the incident.

ROOFER FALL 07/17/19

CRANE OVERLOAD 07/30/19

On July 30 workers were using a crane to place roofing materials and steel dunnage onto the roof of a NYCHA building at 749 FDR Drive in Manhattan. During the pick the crane operator bypassed the safety features, lost control of the load and dropped the steel down to the street level onto the FDR Drive service road. The crane boom was bent at close to a 90-degree angle, as depicted in the photo on the left, requiring closure of the FDR Drive and additional cranes to dismantle the damaged unit. An investigation revealed the operator overloaded the crane and exceeded the pick radius. Additionally, slings not rated to lift the load were used, causing them to break (seen in the photo on the right). There were a few minor injuries.

Improper planning, failure to use certified slings, by-passing machine safeties, failure to obtain weight of the load and using a crane that was not rated for the pick as designed were all key factors.

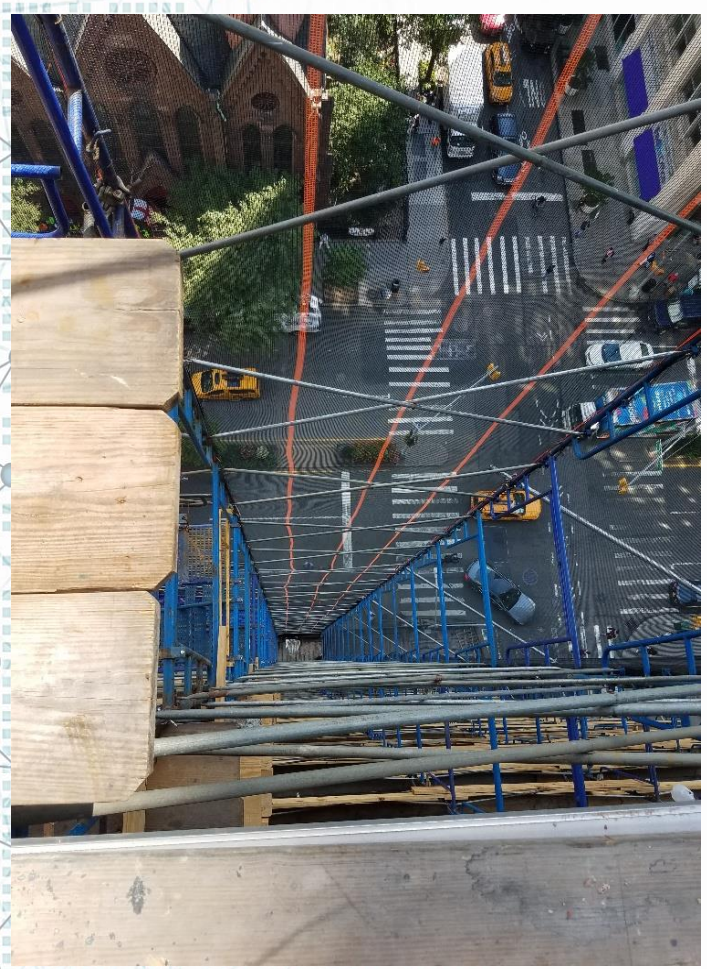
CRANE OVERLOAD 07/30/19

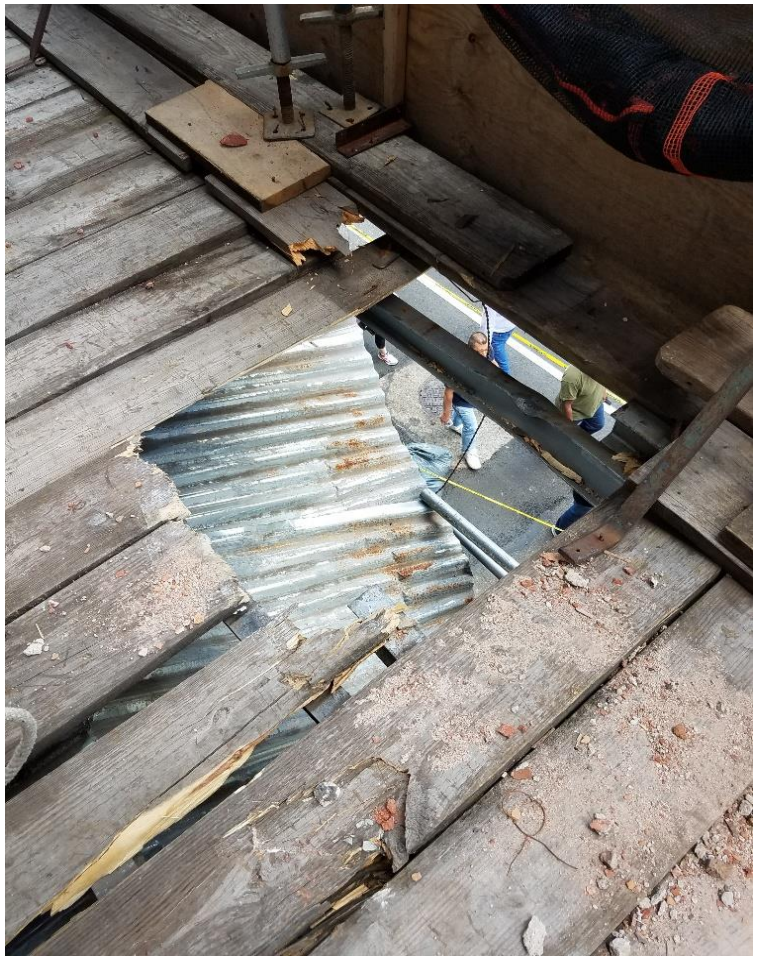
MATERIAL HOIST FAILURE 9/13/19

On September 13, workers were lowering debris in a canvas bucket using a power winch at 270 Park Avenue in Manhattan. The workers overloaded the basket causing the cable to snap and dropped the load 10 stories. The load went through the sidewalk shed and nearly hit a pedestrian.

Failure to inspect the cables of the power winch and overloading the basket were the key factors in the incident.

MATERIAL HOIST FAILURE 9/13/19





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OUTRIGGER FAILURE 10/01/19

On October 1, workers were unloading debris onto the sidewalk shed from a suspended scaffold at 44-14 Newtown Road in Queens. Unexpectedly, one of the outriggers for the scaffold was torn from its mount on the roof (seen in the photo on the left) and spiraled down to the shed below piercing the parapet wall of the shed (seen in the photo on the right).

Improper set up on the primary counterweight support and improper set up of the tie back were the contributing factors.

OUTRIGGER FAILURE 10/01/19

THANK YOU

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