

**Torres Rojas, Genara**

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**From:** fred.mamoun@nbcuni.com  
**Sent:** Wednesday, March 25, 2015 4:40 PM  
**To:** Duffy, Daniel  
**Cc:** Torres Rojas, Genara; Van Duyne, Sheree; Ng, Danny  
**Subject:** Freedom of Information Online Request Form

Information:

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Phone: 212-413-5791  
Required copies of the records: Yes

List of specific record(s):

i submitted this foil on Sept 12th, 2014 mr duffy never got back. steve colman said you guys will now process. i would like to amend my request to documentsrecords up to today, present. I would like to receive the data electronically Fred mamoun Dear Mr. Daniel: I am requesting records under the OPRAFOIL acts regarding Port Authority Bus Terminal. I would like to receive the data electronically by email. I am requesting information specifically all structural integrity inspection reports for the 42nd Street Bus Terminal for 20132014, and repair records for the 42nd Street Bus Terminal for 20132014. If it is necessary to modify my request, I would prefer to be contacted at the following telephone number: 212-413-5791 or email at [fred.mamoun@nbcuni.com](mailto:fred.mamoun@nbcuni.com). If for any reason any portion of my request is denied, please inform me of the reasons for the denial in writing and provide the name and address of the person or body to whom an appeal should be directed. fred mamo

April 29, 2015

FOI Administrator

Mr. Fred Mamoun  
WNBC News  
175 E 96th St., 6B  
New York, NY 10128

Re: Freedom of Information Reference No. 15934

Dear Mr. Mamoun:

This is in response to your March 25, 2015 request, which has been processed under the Port Authority's Freedom of Information Code (the "Code", copy enclosed) for copies of structural integrity slab inspection reports for the Port Authority Bus Terminal (PABT) for the years 2013 and 2014, and repair records for the PABT from September 18, 2014 through the date of your request.

Material responsive to your request and available under the Code can be found on the Port Authority's website at <http://www.panynj.gov/corporate-information/foi/15934-O.pdf>. Paper copies of the available records are available upon request.

Pursuant to the Code, certain portions of the material responsive to your request are exempt from disclosure as, among other classifications, security.

Please refer to the above FOI reference number in any future correspondence relating to your request.

Very truly yours,



Danny Ng  
FOI Administrator

Enclosure

**Engineering Quality  
Assurance Division**  
T06-925.104

# **Port Authority Facility Condition Survey Program**

**Port Authority Bus Terminal  
2014 Inspection Report of  
Bus and Car Parking Level Slabs**

**November 2014**

***Engineering Department***

**THE PORT AUTHORITY OF NY & NJ**



December 1, 2014

Mr. C. John Lin, P.E.  
Assistant Chief Engineer  
Quality Assurance Division  
THE PORT AUTHORITY OF NY & NJ  
100 Mulberry Street,  
3 Gateway Center, 3<sup>rd</sup> Floor  
Newark, New Jersey 07102

Attention: Camille Dagher, PE  
Project Manager

REF: Expert Professional Services – Performance of Condition Survey for Buildings As Requested on a “Call-In” Basis PA Agreement 405-14-014

Subject: CONDITION SURVEY OF PORT AUTHORITY BUS TERMINAL, BUS AND CAR PARKING LEVEL SLABS P.O. 4900010549

Dear Mr. Dagher,

We are pleased to submit ten (10) copies of the Final Condition Survey Report of the Port Authority Bus Terminal, Bus and Car Parking Level Slabs in accordance with the above referenced agreement with the Port Authority of New York and New Jersey.

The thoroughness and accuracy of all work on this project has been ensured by independent review by our senior technical staff and management staff.

It has been a pleasure doing business with you and we look forward to working with you in the future.

Very truly yours,  
URS Corporation – New York



John Deerkoski, PE  
Principal

## **EXECUTIVE SUMMARY**

URS Corporation – New York (URS), in association with sub-consultants Afridi Associates Inc. and SI Engineering P.C., performed the Condition Survey of the Port Authority Bus Terminal, Bus and Car Parking Level Slabs from June through September of 2014. The purpose of the inspection was to determine the overall condition of the slabs and to identify structural and non-structural deficiencies.

The overall condition of the Bus and Car Parking Level Slabs of the Port Authority Bus Terminal is good with the exception of the Upper Bus Level Slab, which is in fair condition due to numerous cracks in the overlay and large spalls on the underside of the deck, and the 41<sup>st</sup> Street Access Tunnel, which is in fair condition due to numerous wide cracks in the concrete overlay.

During the survey, 1 immediate action condition was found:

- Several areas of cracked and hollow sounding concrete were identified on the underside of the slabs and encased steel framing of the Upper Bus Level (210 SF) and Car Parking Levels 5 (12 SF), 6 (53 SF), and 7 (22 SF). Several areas of cracked and hollow concrete were also identified on the West Truss (258 SF) of Car Parking Levels 5, 6, and 7. Removal of the deteriorated concrete was completed.

There were no previously recommended Priority Repairs for the slabs. During this inspection, two new Priority Repair conditions were identified at 4 locations. One Priority Repair at 3 locations is related to the deck slab expansion joints being deteriorated and exhibiting cracked/spalled concrete headers patched with asphalt, misaligned joint armor, and missing/cracked joint sealant at the top of the deck. In addition, water, rust stains, and heavy efflorescence are evident along the underside of the joints. The other Priority Repair at 1 location is related to concrete encasement being spalled off the bottom chord of the West Truss, exposing rebar and post-tensioning strands. Two of the four strands are severely corroded.

There are 10 non-structural Safety Repairs recommended at 39 locations as a result of this survey. In addition, 14 Routine Repairs are recommended at 1109 locations.

The engineering assessment used to determine the overall condition rating and to recommend repairs was based on the deficiencies found at the time of the inspection. This assessment is not intended to imply long-term viability.

This report contains conclusions concerning the causes of the noted deterioration and the recommendations for rehabilitation of the structures. The repair procedures contained in the recommendation section of this report outline the general extent of the required rehabilitation work. The presentation of these conceptual repairs does not preclude the necessity of performing further investigation and preliminary design work for the purpose of establishing the complete scope of work and final rehabilitation design.

**TABLE ES-1  
CONDITION SURVEY OF PORT AUTHORITY BUS TERMINAL, BUS AND CAR PARKING LEVEL SLABS  
SUMMARY OF PRIORITY REPAIR RECOMMENDATION**

Priority Repair No.	Tracking No.	Location	Description	Current Status	2014 Priority Repair	Photo No./ Drawing No.
	PABT-PLS-001	<u>Expansion Joints</u> Car Parking Level 5, South Wing - Column Lines U0-U1/23 (25 LF) - Column Lines A/23-25 (50 LF)  Suburban Bus Level, South Wing - Column Lines J-K/24 (20 LF)	Joints with cracked/ spalled concrete header patched with asphalt, misaligned joint armor, and missing/cracked joint sealant at the top of the joint. Water, rust, and heavy efflorescence accumulated along the underside of the joint.	New	Repair the expansion joint and the surrounding concrete deck and supporting encased steel. (3 Locations)	Photo 4 & 5/Dwg 23 Photo 6 & 7/Dwg 23  Photo 8 & 9/Dwg 11
	PABT-BDOSW-009	<u>West Truss</u> Bottom Chord - Column Line 1 between Column Lines L1 & L2	Concrete encasement spalled off in a 8' x 26" area along the bottom of the bottom chord resulting in exposed rebar and post-tensioning strands. Two of the four strands are severely corroded.	New	Repair the bottom chord.	Photo 21 & 22/Dwg 25

**TABLE ES-2**  
**CONDITION SURVEY OF PORT AUTHORITY BUS TERMINAL, BUS AND CAR PARKING LEVEL SLABS**  
**SUMMARY OF SAFETY REPAIR RECOMMENDATIONS**

Safety Repair No.	Location	Condition	Repair Recommendation	Photo No./ Drawing No.
1	<u>Top of Deck</u> Car Parking Level 6, South Wing - Along Column Line L (13 Locations)	Unprotected opening in the slab to accommodate the framing for the seismic retrofit. Temporary plywood cover provided at some locations.	Provide proper covering over the opening in the slab. (13 Locations)	Photo 10 Dwg. 28-29
2	<u>Utilities</u> Upper Bus Level, North Wing - Between Column Lines 64-65, South of Column Line MM. (1 Location)	Spall on the underside of the deck. Hangers for a jet fan (2 of 6) are anchored to unsound concrete at this location.	Repair the spall in the deck and provide anchors for the jet fan into sound concrete. (1 Location)	Photo 11 Dwg. 18
3	<u>Concrete Sidewalk</u> Car Parking Level 7 - Along Column Line 3, between Column Lines U0-U1 (2 Locations)	Wide cracks in concrete curb and safety walk with spalls and hollow sounding areas of concrete adjoining the cracks resulting in a tripping hazard.	Repair the cracks and the spalls in the curb. (2 Locations)	Photo 12 Dwg. 32
4	<u>Top of Deck</u> Suburban Bus Level, South Wing - Between Column Lines 23-24, and Column Lines K-L. (1 Location)	Bent and detached steel curb plate due to collision. Uneven tiles adjacent to the curb with vertical offset of ~ 1/2" between the curb plate and the tiles resulting in a tripping hazard.	Repair the curb plate. Replace the tiles on the sidewalk. (1 Location)	Photo 13 Dwg. 11
5	<u>Top of Deck</u> Suburban Bus Level, South Wing - Between Column Lines 9-10, along Column Lines K. - Between Column Lines 24-26, along Column Lines K (2 Locations)	Hand railing is missing.	Replace the hand railing. (2 Locations)	Photo 14 Dwg. 10-11

**TABLE ES-2 (cont'd.)  
CONDITION SURVEY OF PORT AUTHORITY BUS TERMINAL, BUS AND CAR PARKING LEVEL SLABS  
SUMMARY OF SAFETY REPAIR RECOMMENDATIONS**

Safety Repair No.	Location	Condition	Repair Recommendation	Photo No./ Drawing No.
6	<u>Site</u> Access Tunnel at Dyer Avenue - (1 Location)	Misaligned, twisted, and partially detached steel curb resulting in a tripping hazard.	Repair the steel curb. (1 Location)	Photo 15 Dwg. 36
7	<u>Site</u> Access Tunnel at Dyer Avenue - (1 Location)	Cracked and settled concrete sidewalk resulting in a tripping hazard.	Repair the sidewalk. (1 Location)	Photo 16 Dwg. 36
8	<u>Top of Deck</u> Car Parking Level 6, South Wing - Between Column Lines L-U0, along Column Lines 5 & 11 (2 Locations)	Floor drain cover is missing resulting in a tripping hazard.	Install floor drain cover. (2 Locations)	Photo 17 Dwg. 28
9	<u>Top of Deck</u> Car Parking Level 5, South Wing - Between Column Lines 23-25, along Column Line A (1 Location)	Uneven concrete deck joint due to spalls in concrete and asphalt resulting in a tripping hazard.	Patch spalls. (1 Location)	Photo 18 Dwg. 23
10	<u>Ceilings</u> Suburban Bus Level - (15 Locations)	Leaking joints allow water to damage ceilings and create puddles resulting in a slipping hazard for the traveling public. (320 LF)	Seal joint and repair ceilings. (15 Locations)	Photo 19 & 20 Dwg. 10-12

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## **I. SCOPE OF WORK AND INSPECTION PROCEDURES**

### **SCOPE OF WORK**

URS Corporation – New York (URS), in association with sub-consultants Afridi Associates Inc. and SI Engineering P.C., performed the Condition Survey of the Port Authority Bus Terminal, Bus and Car Parking Level Slabs from June through September of 2014. The purpose of the inspection was to determine the overall condition of the slabs and to identify structural and non-structural deficiencies.

The scope of work was limited to the inspection of the bus and parking level slabs, the riding surface of the ramps that connect the parking levels and the access tunnel. The undersides of the decks were inspected in their entirety. The extent of the inspection included the sounding of areas that appeared to exhibit deterioration due to concrete delamination or cracking.

Slabs and Structural Framing: 100% visual inspection and 10% hands-on inspection of all unobstructed tops and undersides of the slabs, structural framing, and connections supporting the slabs at all bus and car parking levels.

Architectural Elements: 100% visual inspection and 10% hands-on inspection of unobstructed architectural elements, façade panels, roof top light poles, utility and mechanical equipment supports and site appurtenances.

Suspended Utilities and Signs: 100% visual inspection of exposed suspended utilities and signs and 10% hands-on inspection of each.

The inspection of mechanical and electrical devices was not part of this condition survey.

### **INSPECTION PROCEDURES**

The URS Team comprised of a Team Leader and an Assistant Team Leader. The team was led by a licensed Professional Engineer in the State of New York.

All inspection personnel were required to obtain a SWAC issued identification card and a Port Authority Bus Terminal Contractor Identification badge prior to the start of the inspection.

All structural deficiencies were recorded, photographed, and located on the “Deficiencies Location Plans,” which are included in this report.

### **Equipment and Access Methods**

The top of the slabs were inspected by walking the surface. The underside of the slabs at the Bus Levels and the Access Tunnel were inspected between 1 am and 5 am using a dual powered 45 ft. manlift (Photo A1 below). Cones, flagman, and a shadow vehicle were used for maintenance and protection of traffic during the course of the inspection. The lift was delivered to the Bus Levels using a flatbed truck. Parking space and electrical outlet for recharging the batteries of the lift were made available in an area selected by the facility. A 60 ft. manlift was used to inspect the underside of the deck overhang above 8<sup>th</sup> Avenue and 42<sup>nd</sup> Street and the West Truss of the South Wing (Photos A2 and A3 below). A shadow vehicle and lane closure was used for

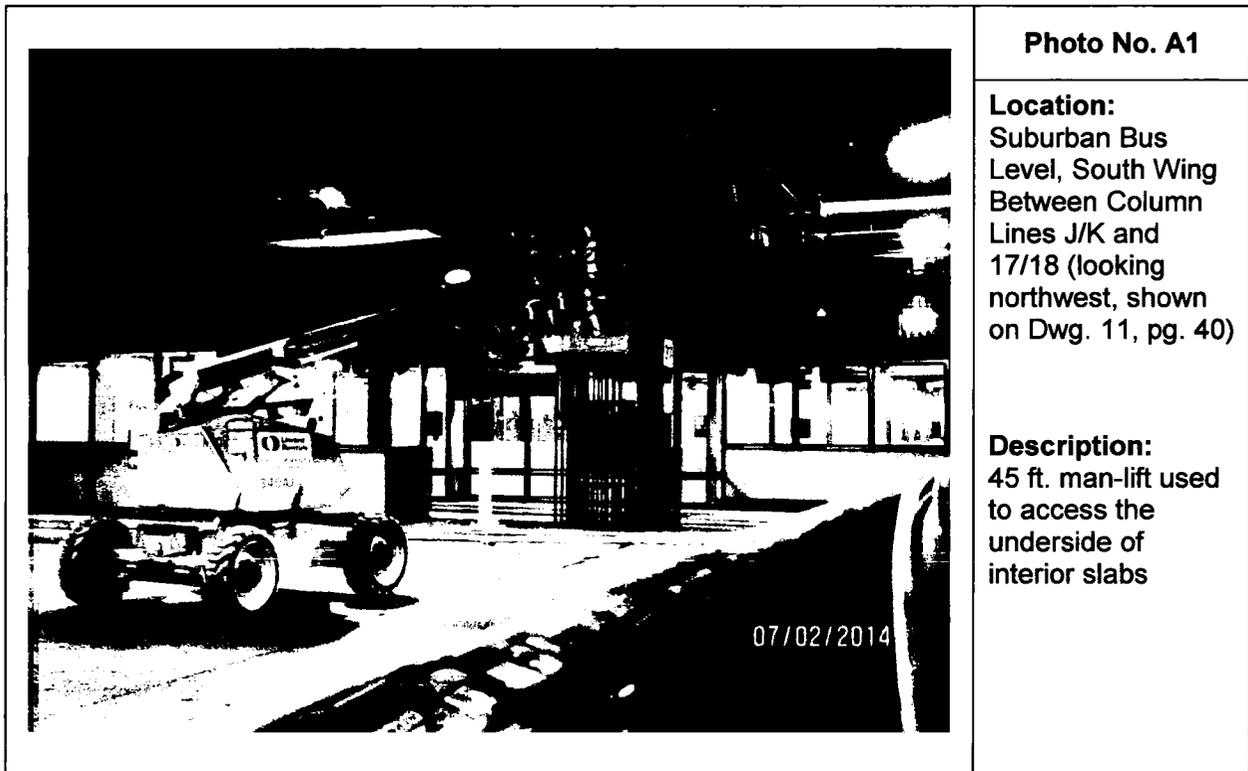
maintenance and protection of traffic while inspecting the Car Parking Level Truss. Lane and sidewalk closure permits were obtained from the NYCDOT.

The inspection of the underside of the Suburban Bus Level slab required removing the metal rib and lightweight acoustic tile ceiling. The deck above the heavyweight ceiling at the 8<sup>th</sup> Avenue entrance lobby and the overhangs above the sidewalk were inspected from the existing hatches. Step ladders were used for inspection from the Suburban Concourse Level. An electric powered scissor lift provided by the Port Authority was used to access the high ceiling areas at the Open Well and at the 8<sup>th</sup> Avenue entrance lobby.

Various inspection tools were utilized during this inspection including hammers, wire brushes, digital cameras, tape measures, calipers, electric power generator, halogen lights, and flashlights.

**Documentation and Field Notes**

Field notes were collected and photographs of general views and typical deficiencies of building structures were recorded. All conditions categorized as requiring priority or safety repairs were also photographed and thoroughly documented.





**Photo No. A2**

**Location:**  
Upper Bus Level,  
South Wing,  
Entrance Ramp to  
Upper Bus Level  
(looking southwest,  
shown on Dwg. 16,  
pg. 45)

**Description:**  
60 ft. man-lift used  
to access the West  
Truss



**Photo No. A3**

**Location:**  
Corner of 9<sup>th</sup>  
Avenue and W. 40<sup>th</sup>  
Street (looking  
southeast, shown  
on Location Plan,  
pg. xi)

**Description:**  
MPT for lane  
closure used to  
inspect the Parking  
Level Truss

## CONDITION SURVEY DEFINITIONS AND TERMINOLOGY

The inspection involves one of the following methods:

<b>Hands-on Inspection</b>	Close-up inspection from no further away than an arm's length away where the member or element can be physically touched.
<b>Visual Inspection</b>	The inspection from a reasonable distance of a member or element where initial determination of the condition can be made.

Four categories of recommendations are identified and defined as follows:

<b>Immediate</b>	Requires immediate action including possible closing of the structure or areas affected for safety reasons until interim remedial measures, such as shoring or removal of potentially unsafe structures (or elements) can be implemented. These closings or interim remedial actions, if any, always require immediate action upon discovery.
<b>Priority</b>	Conditions for which no immediate action may be required or for which immediate action has been completed, but further investigations, design and implementation of interim or long-term repairs should be undertaken on a priority basis, i.e., taking precedence over all other scheduled work.
<b>Safety</b>	Conditions that present a potential hazard and which should be repaired as soon as possible.
<b>Routine</b>	Conditions requiring further investigation or remedial work, which can be undertaken as part of a scheduled maintenance program, other scheduled project, or routine facility maintenance, depending on the action required.

Terms used to describe the condition of a building structural system or component are listed and defined below. When the term is applied to an overall structure or system, this does not indicate that all elements of the structure or system are in the same condition.

<b>Excellent</b>	"As New" Condition.
<b>Good</b>	The structure system is sound and performing its function, although it shows signs of wear and may require some minor repairs, mostly routine.
<b>Fair</b>	The structure system is still performing adequately at this time, but needs "priority" and/or "routine" repair to prevent future deterioration and to restore it to good condition.
<b>Poor</b>	The structure system cannot be relied upon to continue to perform its original function without "immediate" and/or "priority" repair.

## **INSPECTION TERMINOLOGY**

The following terms may be used during inspection to describe the condition of structural members.

### **1) STEEL MEMBERS**

#### **Corrosion**

- Minor (or Light) – A light surface rust.
- Moderate – Rust that is loose and flaking with some pitting. This scaling or exfoliation can be removed with some effort by use of a scraper or chipping hammer. Element exhibits measurable but not significant loss of section.
- Severe – Heavy, stratified rust or rust scales with extensive pitting. Removal requires exerted effort and may require mechanical means. Significant loss of section.

**Pack Rust** – Rust collected between two interfacing surfaces, usually 2 steel plates. Pack rust can be minor, moderate, or severe as described above. Pack rust can severely deform the steel members due to the expansive nature of rust.

**Pitting**- Formation of cavities due to corrosion. Minor, moderate, and severe pitting categories are used based upon depth and density of cavities.

- Minor – Typically less than 1/4 inch diameter and 1/32 inch deep.
- Moderate – 1/4 inch to 1/2 inch diameter and up to 1/8 inch deep.
- Severe – Greater than 1/2 inch diameter and over 1/8 inch deep.

### **2) CONCRETE MEMBERS**

**Cracking** – A separation into 2 or more parts with a space between the fractured concrete surfaces.

- Hairline – Crack width less than 1/32 inch.
- Fine – Crack width between 1/32 inch and 1/16 inch.
- Medium – Crack width between 1/16 inch and 1/8 inch.
- Wide – Crack width greater than 1/8 inch.

The above definitions for cracks can be modified, depending on the type of structural element. Other terminology, such as map cracking, pattern cracking, etc., may be used as appropriate.

**Efflorescence** – A white deposit caused by crystallization of soluble salts brought to the surface by moisture leaching through concrete.

**Delamination** – A layered separation of the concrete. When a delaminated area of concrete is struck (sounded) with a hammer, a hollow sound will be emitted.

**Leaching** – The dissolution and washing away of the calcium hydroxide in concrete. The moisture enters the concrete through exposed cracks in the surface.

**Spall** – A roughly circular, oval, or elongated depression in the surface of a concrete element caused by separation of a portion of the surface concrete.

- Small (Pop-out) – Less than 6 inches in diameter and 1 inch deep.
- Medium – Between 6 inches and 12 inches in diameter and up to 2 inches deep.
- Large – Over 12 inches in diameter and any depth.

**Scaling** - The gradual loss of surface mortar and aggregates.

- Light Scaling – Loss of surface mortar up to 1/4 inch deep.
- Medium Scaling – Loss of surface mortar between 1/4 inch and 1/2 inch deep, including loss between large aggregate.
- Heavy Scaling – Loss of mortar greater than 1/2 inch in depth significantly exposing large aggregate.

**Hollow area** – An area of concrete which emits a hollow sound when struck with a hammer and indicates the existence of a fracture plane beneath the surface.

**Honeycomb** – Typically small pocket voids formed by the entrapment of air during the placement of the concrete.

### 3) TIMBER MEMBERS

**Fungus decay** – generally appears as a moist area with stain on or discoloration. Fungi produce conks, which are fruiting bodies, usually fan-like in shape, and which grow horizontally from the wood. They shed spores which propagate the fungus. Conks are a sure sign of advanced decay and they vary from a fraction of an inch to several inches in length. Sapstain fungi have small black, globular fruiting bodies which smear like soft carbon when brushed with the hand.

- Molds – cottony powdery circular growths varying from white or light colors to black. Molds themselves do not cause decay but their presence is an indication that conditions favorable to growth of fungi.
- Stains – specks, spots, streaks, or patches, varying in color, which penetrate the sap wood. Sapstain is harmless to wood. It is usually a surface phenomenon and like molds, implies conditions
- Soft rot – attack the wood, making it soft and spongy. Only the surface wood is affected, and thus it does not significantly weaken the member.
- Brown rot – feeds upon the cellulose and the lignin and makes the wood white and stringy.

Brown and white rots are responsible for structural damage to wood, while the other fungi types simply provide a sign that favorable conditions exist for growth.

**Checks** – separation of the wood fibers, normally occurring across the annual growth rings.

**Splits** – similar to checks except the separations of the wood fibers extend completely through the piece of wood.

**Shakes** – separations along the grain, which usually occur between the annual growth rings.

**Damage by parasites** – damage is generally inside the surface of the wood and is therefore not visible, but sagging, crushing, small holes or the accumulation of sawdust may be observed. Parasites tunnel in and hollow out the insides to timber members for food and shelter. Some common types of parasites include:

- **Termites** – termites are pale-colored, soft-bodied insects that feed on wood. All damage is inside the surface of the wood; hence it is not visible. The only visible signs of infestation are white mud shelter tubes or runways extending up from the earth to the wood and on the side of masonry substructures.
- **Carpenter ants** – carpenter ants are large, black ants that gnaw galleries in soft or decayed wood. The ants may be seen in the vicinity of the infested wood, but the accumulation of sawdust on the ground at the base of the timber is also an indicator of their presence.
- **Powder-post beetles** – powder-post beetles also hollow out the insides of timber members and leave the outer surface pierced with small holes about 1/16" in diameter filled with dry pulverized wood. Often a powdery wood dust is dislodged from the holes. The inside may be completely excavated.

## **II. BUILDING DESCRIPTION, INSPECTION FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

### **Building Description**

The Port Authority Bus Terminal is a passenger bus terminal located in Midtown Manhattan between 8<sup>th</sup> and 9<sup>th</sup> Avenue and 40<sup>th</sup> and 42<sup>nd</sup> Street (See Location Plan on pg. xi and Photos 1 & 2 on pg. 19).

The building serves as a transportation hub for both commuter and long distance bus service, as well as for commuter parking. The facility also provides access to the New York City Subway system through the Subway Mezzanine.

The Bus Terminal is divided into two wings: the North Wing and the South Wing. The South wing is a seven story structure. Retail and office spaces are located in the common areas of the Main and Suburban Concourse. Bus gates are located at the Lower Bus Level, Suburban Bus Level, and Upper Bus Level. Levels 5, 6, and 7 are used as parking for passenger vehicles. Ramps located at the west end of the South Wing provide vehicular access between the parking levels.

The North Wing is a four story structure. Bus gates are located at the Lower Bus Level and the Suburban Bus Level. The Upper Bus Level of the North Wing is used as a bus staging area. The South and North Wings are connected by passageways that allow the flow of buses between both parts of the terminal. An Access Tunnel located beneath the 41<sup>st</sup> Street roadway connects the Lower Level of the North Wing to Dyer Avenue (See Photo 3 on pg. 20).

The slab at the Lower Bus Level is a cast-in-place reinforced concrete slab supported by steel framing above the South Wing Basement Floor and cast-in-place reinforced concrete slab-on-grab in the remaining areas. The slabs at the Suburban and Upper Bus Levels of the South Wing are cast-in-place reinforced concrete slabs supported by concrete encased steel framing. The North Wing slabs are reinforced concrete and composite corrugated deck. The Bus Level slabs have a waterproofing membrane and concrete overlay over the structural slab.

The slabs of the Car Parking Levels in the South Wing are constructed with precast channel concrete planks spanning between prestressed concrete trusses and concrete encased steel framing. The slabs are topped with a waterproofing membrane and asphalt pavement.

The car ramps between the 5<sup>th</sup> thru 7<sup>th</sup> floors of the South Wing consist of precast concrete segmental box beams with a concrete overlay.

The Access Tunnel to the Lower Bus Level has a concrete slab-on-grade with a concrete overlay.

The original portion of the Bus Terminal was built in 1950. A major expansion took place in 1963 with the conversion of the roof into another bus level and the addition of three car parking levels above the bus levels. The North Wing was added in 1975. The latest expansion took place in 1979 with the addition of 52 new bus positions and the Access Tunnel under 41<sup>st</sup> Street to provide the connection to the Lower Bus Level.

## **Detailed Inspection Findings, Conclusions, and Recommendations**

The overall condition of the Bus and Car Parking Level Slabs of the Port Authority Bus Terminal is good with the exception of the Upper Bus Level Slab, which is in fair condition due to numerous cracks in the overlay and large spalls on the underside of the deck, and the 41<sup>st</sup> Street Access Tunnel, which is in fair condition due to numerous large cracks in the concrete overlay.

During the survey, 1 immediate action condition was found:

- Several areas of cracked and hollow sounding concrete were identified on the underside of the slabs and encased steel framing of the Upper Bus Level (210 SF) and Car Parking Levels 5 (12 SF), 6 (53 SF), and 7 (22 SF). Several areas of cracked and hollow concrete were also identified on the West Truss (258 SF) of Car Parking Levels 5, 6, and 7. Removal of the deteriorated concrete was completed.

The conditions of the individual building elements are as follows:

- The riding surface of the slabs is in good condition with the exception of the Upper Bus Level slab and Access Tunnel, which are in fair condition. Since the previous inspection, the condition of the riding surface of the Access Tunnel was downgraded from good to fair due to wide cracking of the concrete overlay, potholes, and deterioration of the curb and sidewalks (See Photo 3 on pg. 20 and Photos 15 & 16 on pg. 26).
- The deck joints are in poor condition. Since the previous inspection, the condition of the deck joints at the locations of Priority Repair 1, Safety Repair 10, and Routine Repair 3 have been downgraded from good to poor due to missing/cracked sealants, cracking of the concrete deck around the joints, and the leakage of water onto the ceilings above the Suburban Concourse Level.
- The supports of the utilities attached to the underside of the decks are in good condition.
- The structural framing that supports the slabs is in good condition.
- The precast planks at the underside of the Car Parking Levels are in good condition.
- The corrugated metal deck at the North Wing throughout the floors is in good condition.

There were no previously recommended Priority Repairs for the slabs. During this inspection, two new Priority Repair conditions were identified at 4 locations. One Priority Repair at 3 locations is related to the deck slab expansion joints being deteriorated and exhibiting cracked/spalled concrete headers patched with asphalt, misaligned joint armor, and missing/cracked joint sealant at the top of the deck. In addition, water, rust stains, and heavy efflorescence are evident along the underside of the joints. The other Priority Repair at 1 location is related to concrete encasement being spalled off the bottom chord of the West Truss, exposing rebar and post-tensioning strands. Two of the four strands are severely corroded.

There are 10 non-structural Safety Repairs recommended at 39 locations as a result of this survey. The Safety Repair Recommendations are for covering unprotected openings in the slab, anchoring the hangers for a jet fan into sound concrete, repairing cracks/spalls in the sidewalks and curbs, repairing bent and/or detached steel curb angles with uneven sidewalk tiles, replacing a missing hand railing, installing a floor drain cover, repairing an uneven deck joint, and repairing expansion joints that leak onto ceilings over the Suburban Concourse Level. In addition, 14 Routine Repairs are recommended at 1109 locations and 2 Findings without Recommendations at 10 locations.

All findings and repair recommendations are summarized in the following tables.

**TABLE 1  
PRIORITY REPAIR RECOMMENDATION**

Priority Repair No.	Location	Condition	Repair Recommendation	Photo No./ Drawing No.
<b>Bus and Car Parking Level Slabs</b>				
	<u>Expansion Joints</u> Car Parking Level 5, South Wing - Column Lines U0-U1/23 (25 LF) - Column Lines A/23-25 (50 LF)  Suburban Bus Level, South Wing - Column Lines J-K/24 (20 LF)	Joints with cracked/ spalled concrete header patched with asphalt, misaligned joint armor, and missing/cracked joint sealant at the top of the joint. Water, rust, and heavy efflorescence accumulated along the underside of the joint.	Repair the expansion joint and the surrounding concrete deck and supporting encased steel. (3 Locations)	Photo 4 & 5/Dwg 23 Photo 6 & 7/Dwg 23  Photo 8 & 9/Dwg 11
	<u>West Truss</u> Bottom Chord - Column Line 1 between Column Lines L1 & L2	Concrete encasement spalled off in a 8' x 26" area along the bottom of the bottom chord resulting in exposed rebar and post-tensioning strands. Two of the four strands are severely corroded.	Repair the bottom chord. (1 Location)	Photo 21 & 22/Dwg 25

**TABLE 2  
SAFETY REPAIR RECOMMENDATIONS**

<b>Safety Repair No.</b>	<b>Location</b>	<b>Condition</b>	<b>Repair Recommendation</b>	<b>Photo No./ Drawing No.</b>
<b>Bus and Car Parking Level Slabs</b>				
1	<u>Top of Deck</u> Car Parking Level 6, South Wing - Along Column Line L (13 Locations)	Unprotected opening in the slab to accommodate the framing for the seismic retrofit. Temporary plywood cover provided at some locations.	Provide proper covering over the opening in the slab. (13 Locations)	Photo 10 Dwg. 28-29
2	<u>Utilities</u> Upper Bus Level, North Wing - Between Column Lines 64-65, South of Column Line MM. (1 Location)	Spall on the underside of the deck. Hangers for a jet fan (2 of 6) are anchored to unsound concrete at this location.	Repair the spall in the deck and provide anchors for the jet fan into sound concrete. (1 Location)	Photo 11 Dwg. 18
3	<u>Concrete Sidewalk</u> Car Parking Level 7 - Along Column Line 3, between Column Lines U0-U1 (2 Locations)	Wide cracks in concrete curb and safety walk with spalls and hollow sounding areas of concrete adjoining the cracks resulting in a tripping hazard.	Repair the cracks and the spalls in the curb. (2 Locations)	Photo 12 Dwg. 32
4	<u>Top of Deck</u> Suburban Bus Level, South Wing - Between Column Lines 23-24, and Column Lines K-L. (1 Location)	Bent and detached steel curb plate due to collision. Uneven tiles adjacent to the curb with vertical offset of ~ 1/2" between the curb plate and the tiles resulting in a tripping hazard.	Repair the curb plate. Replace the tiles on the sidewalk. (1 Location)	Photo 13 Dwg. 11
5	<u>Top of Deck</u> Suburban Bus Level, South Wing - Between Column Lines 9-10, along Column Lines K. - Between Column Lines 24-26, along Column Lines K (2 Locations)	Hand railing is missing.	Replace the hand railing. (2 Locations)	Photo 14 Dwg. 10-11

**TABLE 2 (cont'd.)  
SAFETY REPAIR RECOMMENDATIONS**

<b>Safety Repair No.</b>	<b>Location</b>	<b>Condition</b>	<b>Repair Recommendation</b>	<b>Photo No./ Drawing No.</b>
<b>Bus and Car Parking Level Slabs</b>				
6	<u>Site</u> Access Tunnel at Dyer Avenue - (1 Location)	Misaligned, twisted, and partially detached steel curb resulting in a tripping hazard.	Repair the steel curb. (1 Location)	Photo 15 Dwg. 36
7	<u>Site</u> Access Tunnel at Dyer Avenue - (1 Location)	Cracked and settled concrete sidewalk resulting in a tripping hazard.	Repair the sidewalk. (1 Location)	Photo 16 Dwg. 36
8	<u>Top of Deck</u> Car Parking Level 6, South Wing - Between Column Lines L-U0, along Column Lines 5 & 11 (2 Locations)	Floor drain cover is missing resulting in a tripping hazard.	Install floor drain cover. (2 Locations)	Photo 17 Dwg. 28
9	<u>Top of Deck</u> Car Parking Level 5, South Wing - Between Column Lines 23-25, along Column Line A (1 Location)	Uneven concrete deck joint due to spalls in concrete and asphalt resulting in a tripping hazard.	Patch spalls. (1 Location)	Photo 18 Dwg. 23
10	<u>Ceilings</u> Suburban Bus Level - (15 Locations)	Leaking joints allow water to damage ceilings and create puddles resulting in a slipping hazard for the traveling public. (320 LF)	Seal joint and repair ceilings. (15 Locations)	Photo 19 & 20 Dwg. 10-12

**TABLE 3  
ROUTINE REPAIR RECOMMENDATIONS**

Routine Repair No.	Location	Condition	Repair Recommendation	Photo No./ Drawing No.
<b>Bus and Car Parking Level Slabs</b>				
1	<u>Drainage</u> Car Parking Level 6 - (10 Locations) Car Parking Level 5 - (1 Location) Upper Bus Level - (12 Locations) Suburban Bus Level - (20 Locations) Lower Bus Level - (15 Locations) Vehicle Pass Through - (1 Location)	Clogged floor drain with accumulated debris at the drain inlets. Grating is damaged at several inlets.	Clean clogged drains. Replace the missing grates for the inlets. (Total: 59 Locations)	Dwg. 28-29  Dwg. 24  Dwg. 16-18  Dwg. 10-12  Dwg. 1-3  Dwg. 5
2	<u>Pavement</u> Car Parking Level 7 - (2 Locations) Car Parking Level 6 - (14 Locations) Car Parking Level 5 - (30 Locations)	Deteriorated asphalt overlay with wide, random cracks and ruts in pavement.  (6 SF)  (162 SF)  (438 SF)	Seal cracks and repair the asphalt pavement. (Total: 46 Locations)	Dwg. 32  Dwg. 28-29  Dwg. 22-24

**TABLE 3 (cont'd)**  
**ROUTINE REPAIR RECOMMENDATIONS**

<b>Routine Repair No.</b>	<b>Location</b>	<b>Condition</b>	<b>Repair Recommendation</b>	<b>Photo No./ Drawing No.</b>
<b>Bus and Car Parking Level Slabs</b>				
3	<u>Expansion Joint</u> Car Parking Level 7 - (3 Locations) Car Parking Level 6 - (7 Locations) Car Parking Level 5 - (5 Locations) Upper Bus Level - (13 Locations) Suburban Bus Level - (4 Locations) Lower Bus Level - (6 Locations)	Deteriorated deck joint with missing/cracked sealant.  (510 LF) (89 LF) (110 LF) (354 LF) (114 LF) (125 LF)	Repair/replace deck joint sealant. (Total: 38 Locations)	Dwg. 32-33  Dwg. 28-29 Dwg. 22  Dwg. 16-18  Dwg. 10-11  Dwg. 1-2
4	<u>Guardrails</u> Car Parking Levels 6 & 7, South Wing - Along Column Line 3, between Column Lines U5 & U6 (1 Location) - Along guiderail of ramp between 6th & 7th Floors (1 Location)	Moderate corrosion of the base plate, anchor bolts, and the base of the guide rail posts.	Clean and paint the base plates, anchor bolts, and bases of the guide rail posts. (Total: 2 Locations)	Dwg. 32  Dwg. 28

**TABLE 3 (cont'd)  
ROUTINE REPAIR RECOMMENDATIONS**

<b>Routine Repair No.</b>	<b>Location</b>	<b>Condition</b>	<b>Repair Recommendation</b>	<b>Photo No./ Drawing No.</b>
<b>Bus and Car Parking Level Slabs</b>				
5	<u>Underside of Slab</u> Car Parking Level 7 - (9 Locations) Car Parking Level 6 - (14 Locations) Car Parking Level 5 - (21 Locations) Upper Bus Level - (176 Locations)	Spall on the underside of the concrete slab with exposed moderately corroded rebar.  (42 SF) (79 SF) (54 SF) (1720 SF)	Repair the spalls in the underside of the slab. (Total: 220 Locations)	Dwg. 34-35 Dwg. 28-31 Dwg. 25-27 Dwg. 19-21
6	<u>Concrete Pavement</u> Upper Bus Level - (37 Locations) Suburban Bus Level - (36 Locations) Lower Bus Level - (44 Locations) Access Tunnel Approach Roadway - (48 Locations)	Medium to wide cracks in concrete overlay.  (566 LF) (351 LF) (602 LF) (573 LF)	Seal the cracks in the pavement. (Total: 165 Locations)	Dwg. 16-18 Dwg. 10-12 Dwg. 1-3 Dwg. 36
7	<u>Concrete Pavement</u> Upper Bus Level - (35 Locations) Suburban Bus Level - (23 Locations) Lower Bus Level - (56 Locations) Access Tunnel Approach Roadway - (13 Locations)	Deteriorated areas of concrete overlay with small spalls, and hollow sounding areas of concrete. (526 SF) (448 SF) (1045 SF) (10,400 SF)	Replace the concrete overlay. (Total: 127 Locations)	Dwg. 16-18 Dwg. 10-12 Dwg. 1-3 Dwg. 36

**TABLE 3 (cont'd)  
ROUTINE REPAIR RECOMMENDATIONS**

<b>Routine Repair No.</b>	<b>Location</b>	<b>Condition</b>	<b>Repair Recommendation</b>	<b>Photo No./ Drawing No.</b>
<b>Bus and Car Parking Level Slabs</b>				
8	<u>Concrete Sidewalk</u> Lower Bus Level - (1 Location)	Wide crack in the concrete median with spalls and hollow sounding areas of concrete adjoining the crack.	Repair the crack and the spalls in the median. (Total: 1 Location)	Dwg. 2
9	<u>Utilities</u> Upper Bus Level, South Wing - Between Column Lines K-L and Column Lines 20-21 (1 Location)	Collision damage to the HVAC duct. Sections of the ducts have separated at the seams.	Repair the damaged ducts. (Total: 1 Location)	Dwg. 20
10	<u>Framing</u> Underside of Car Parking Level 7 - (76 Locations) Underside of Car Parking Level 6 - (61 Locations) Underside of Car Parking Level 5 - (60 Locations)	Cracks in the concrete diaphragm with spalls and hollow sounding areas.	Remove all unsound concrete and repair the spalls in the diaphragm. (Total: 197 Locations)	Dwg. 34-35 Dwg. 30-31 Dwg. 25-26
11	<u>Framing</u> Underside of Car Parking Level 6 - (4 Locations) Underside of Car Parking Level 5 - (2 Locations) West Truss, Top & Bottom Chords - (3 Location)	Missing concrete encasement at underside of wide flange beam and/or truss chords. (15 SF)  (75 SF)  (36 SF)	Replace the missing concrete encasement. (Total: 9 Locations)	Dwg. 31 Dwg. 26 Dwg. 25, 34
12	<u>Site</u> Suburban Bus Level - (30 Locations)	Partially detached steel curb plate. Plate is protruding into the lanes by approximately 2".	Repair the steel curb plate. (Total: 30 Locations)	Dwg. 10-11

**TABLE 3 (cont'd)**  
**ROUTINE REPAIR RECOMMENDATIONS**

Routine Repair No.	Location	Condition	Repair Recommendation	Photo No./ Drawing No.
<b>Bus and Car Parking Level Slabs</b>				
13	<u>Framing</u> Underside of Car Parking Level 7 - (67 Locations) Underside of Car Parking Level 6 - (102 Locations) Underside of Car Parking Level 5 - (44 Locations)	Cracks in the concrete corbels with spalls and hollow sounding areas.	Remove all unsound concrete and repair the spalls and cracks in the corbels. (Total: 213 Locations)	Dwg. 34-35 Dwg. 30-31 Dwg. 25-26
14	<u>Guiderail</u> Suburban Bus Level, South Wing - Between Column Lines F-G and Column Lines 30-31 (1 Location)	4 of 4 loose anchor bolt nuts at the baseplate of the guide rail.	Tighten anchor bolt nuts. (Total: 1 Location)	Dwg. 11

**TABLE 4  
FINDINGS WITHOUT RECOMMENDATIONS**

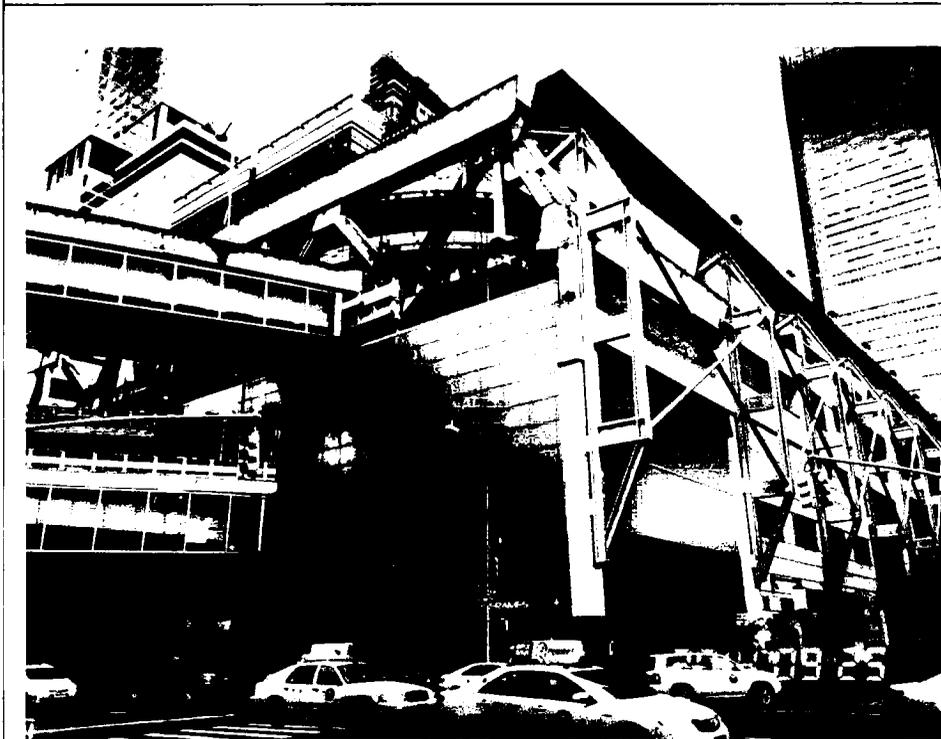
Item No.	Location	Condition	Drawing No.
<b>Bus and Car Parking Level Slabs</b>			
<b>1</b>	<u>Underside of Corrugated Deck</u> Underside of Suburban Floor Level, North Wing - Column Lines CC/54 - Between Column Lines BB-DD/65-66 - Column Lines HH/65 - Between Column Lines MM/62-63	Moderate to heavy corrosion with section loss on the underside of the corrugated deck.	Dwg. 15 Dwg. 15 Dwg. 15 Dwg. 15
<b>2</b>	<u>Precast Façade Panels</u> Car Parking Level 7 - At Column Line U6/5 - At Column Line U6/13 - At Column Line U6/17 - At Column Line U6/19 - At Column Line U6/27 - At Column Line U6/29	Horizontal offset at the joint between adjacent panels of the precast concrete parapet panels.  1/2" Offset 1/2" Offset 1/2" Offset 1/4" Offset 3/4" Offset 1/2" Offset	Dwg. 32 Dwg. 32 Dwg. 33 Dwg. 33 Dwg. 33 Dwg. 33



**Photo No. 1**

**Location:**  
North and East  
Elevation (looking  
Southwest, shown  
on Location Plan,  
pg. xi)

**Description:**  
General View



**Photo No. 2**

**Location:**  
South and West  
Elevation (looking  
Northeast, shown  
on Location Plan,  
pg. xi)

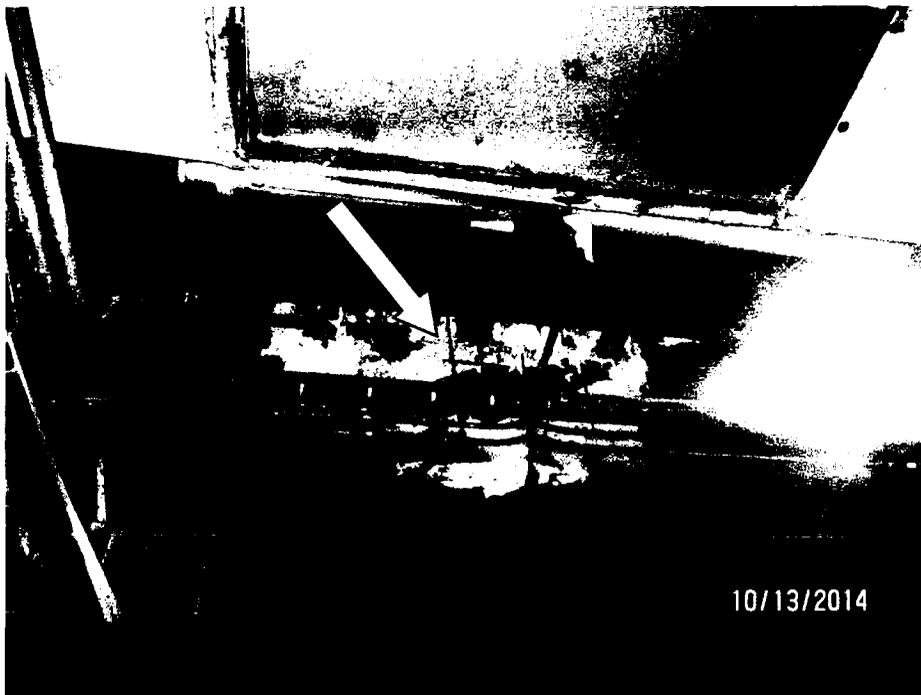
**Description:**  
General View



**Photo No. 3**

**Location:**  
West Exit of  
Access Tunnel  
under 41<sup>st</sup> St.  
(looking east,  
shown on Location  
Plan, pg. xi)

**Description:**  
General View



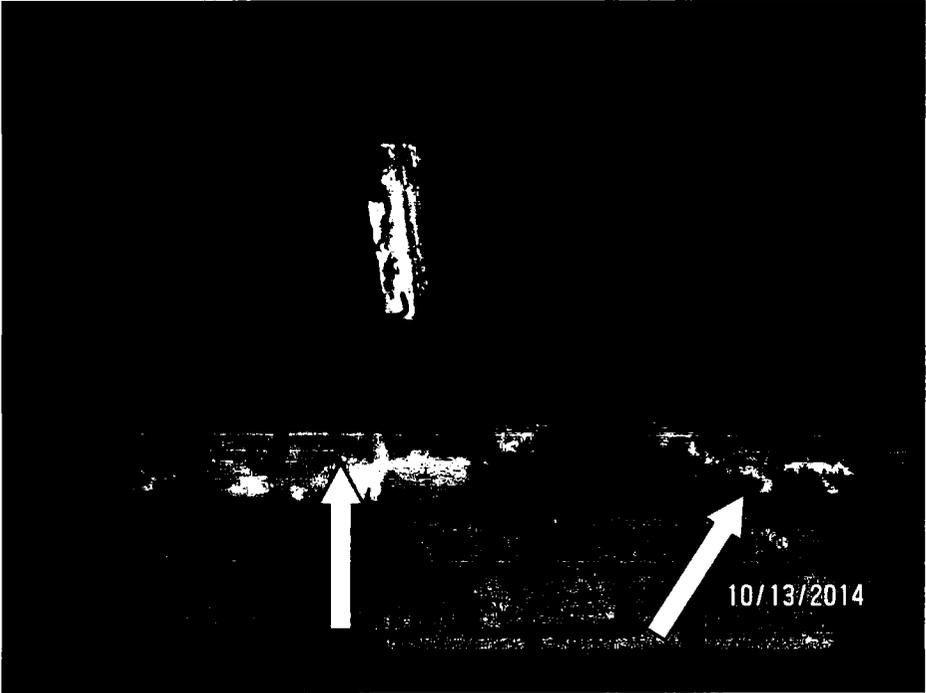
**Photo No. 4**

**Location:**  
Underside of Car  
Parking Level 5,  
South Wing,  
Column Lines  
U0-U1/23 (looking  
west)

**Description:**  
Underside of  
deteriorated  
expansion joint with  
water leakage  
resulting in water  
infiltration of the  
concrete  
encasement and  
corrosion of the  
primary member

**PRIORITY  
REPAIR 1**

	<p><b>Photo No. 5</b></p>
	<p><b>Location:</b> Car Parking Level 5, South Wing Column Lines U0-U1/23 (looking south)</p> <p><b>Description:</b> Deteriorated expansion joint with misaligned and rusted joint armor and missing/cracked sealant</p> <p style="text-align: center;"><b>PRIORITY REPAIR 1</b></p>

	<p><b>Photo No. 6</b></p>
	<p><b>Location:</b> Underside of Car Parking Level 5, South Wing Column Lines A/23-25 (looking north)</p> <p><b>Description:</b> Underside of deteriorated expansion joint with water leakage resulting in water infiltration of the concrete encasement and corrosion of the primary member</p> <p style="text-align: center;"><b>PRIORITY REPAIR 1</b></p>



**Photo No. 7**

**Location:**  
Car Parking Level  
5, South Wing  
Column Lines  
A/23-25 (looking  
east)

**Description:**  
Deteriorated  
expansion joint with  
missing/cracked  
sealant and  
cracking/spalling in  
surrounding  
concrete and  
asphalt

**PRIORITY  
REPAIR 1**

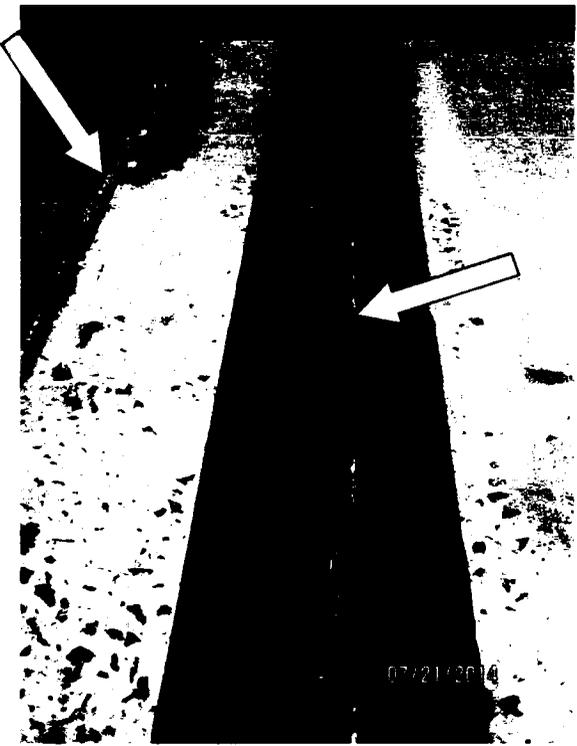
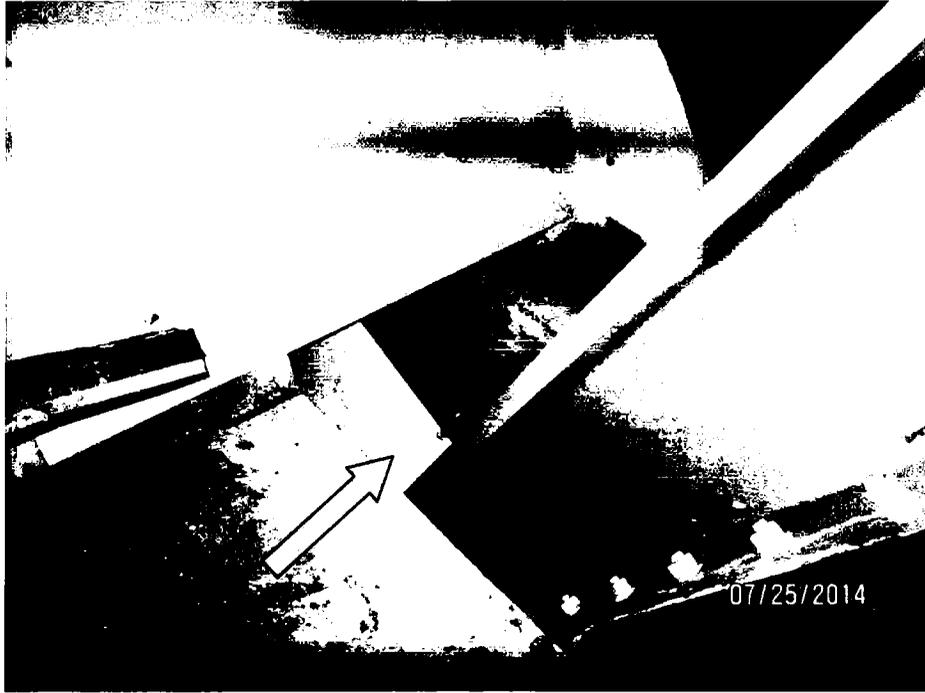


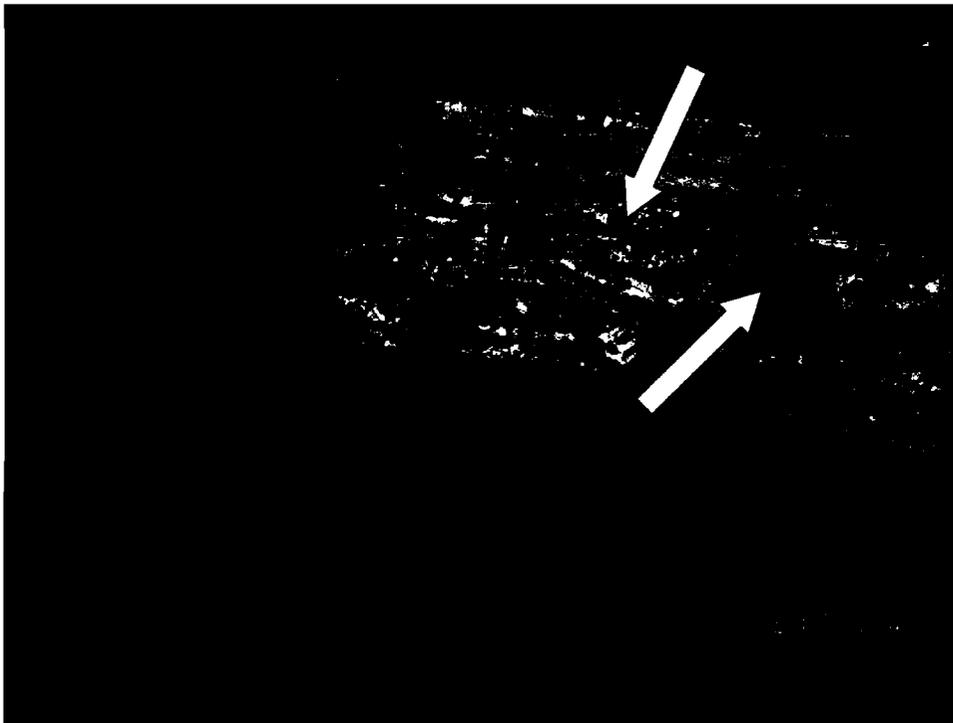
**Photo No. 8**

**Location:**  
Underside of  
Suburban Bus  
Level, South Wing  
Column Lines  
J-K/24 (looking  
west)

**Description:**  
Underside of  
deteriorated  
expansion joint with  
water leakage  
resulting in water  
infiltration of the  
concrete  
encasement and  
corrosion of the  
primary member

**PRIORITY  
REPAIR 1**

	<p><b>Photo No. 9</b></p> <p><b>Location:</b> Suburban Bus Level, South Wing, Column Lines J-K/24 (looking north)</p> <p><b>Description:</b> Deteriorated expansion joint with missing/cracked sealant and cracking in surrounding concrete</p> <p><b>PRIORITY REPAIR 1</b></p>
	<p><b>Photo No. 10</b></p> <p><b>Location:</b> Car Parking Level 6, South Wing Column Lines L/23 (looking southwest)</p> <p><b>Description:</b> Unprotected opening in the slab to accommodate the framing for the seismic retrofit.</p> <p><b>SAFETY REPAIR 1</b></p>

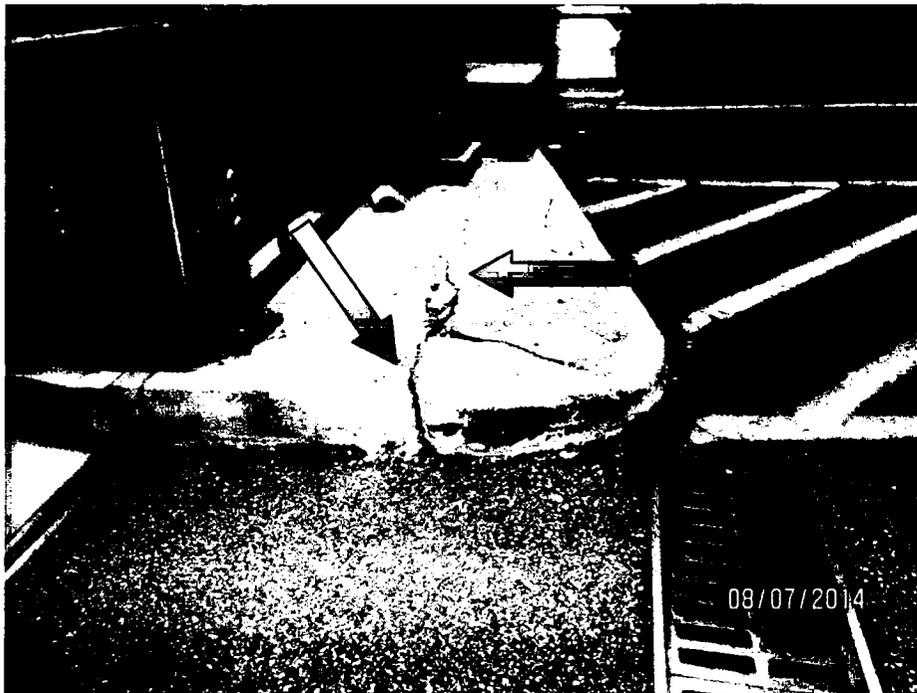


**Photo No. 11**

**Location:**  
Upper Bus Level,  
North Wing  
Between Column  
Lines 64-65, South  
of Column Line MM  
(looking west)

**Description:**  
Spall on the  
underside of the  
deck. Hangers for a  
jet fan (2 of 6) are  
anchored to  
unsound concrete  
at this location.

**SAFETY  
REPAIR 2**



**Photo No. 12**

**Location:**  
Car Parking Level  
7, South Wing  
Along Column Line  
3, between Column  
Lines U0-U1  
(looking north)

**Description:**  
Wide cracks in  
concrete curb and  
safety walk with  
spalls and hollow  
sounding areas of  
concrete adjoining  
the cracks.

**SAFETY  
REPAIR 3**

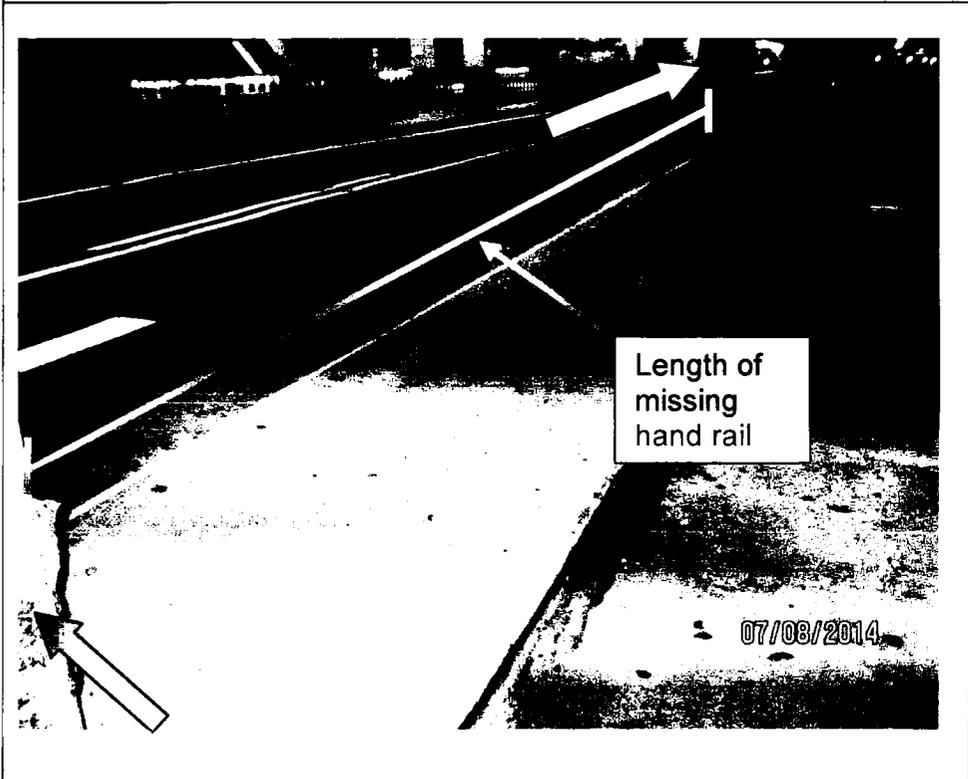


**Photo No. 13**

**Location:**  
Suburban Bus Level, South Wing  
Between Column Lines K-L and  
Column Lines 23-24 (looking west)

**Description:**  
Uneven tiles adjacent to the curb with vertical offset of ~ 1/2" between the curb plate and the tiles.

**SAFETY REPAIR 4**



**Photo No. 14**

**Location:**  
Suburban Bus Level, South Wing  
Between Column Lines 24-26, along  
Column Line K (looking southwest)

**Description:**  
Hand railing is missing between columns.

**SAFETY REPAIR 5**



**Photo No. 15**

**Location:**  
Access Tunnel,  
North side of  
Tunnel Exit at Dyer  
Ave (looking north)

**Description:**  
Misaligned, twisted,  
and partially  
detached steel  
curb.

**SAFETY  
REPAIR 6**

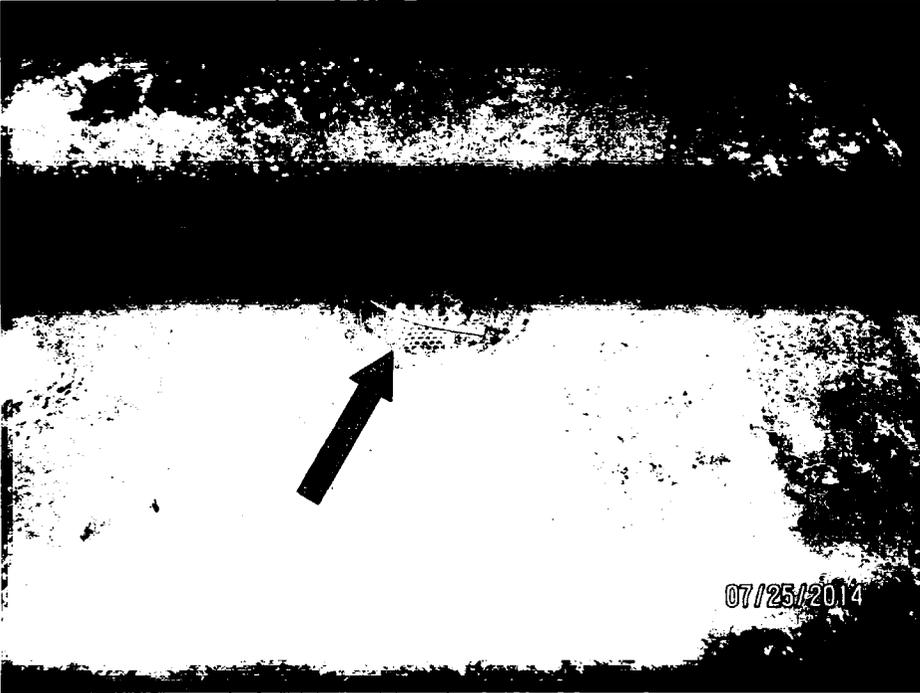
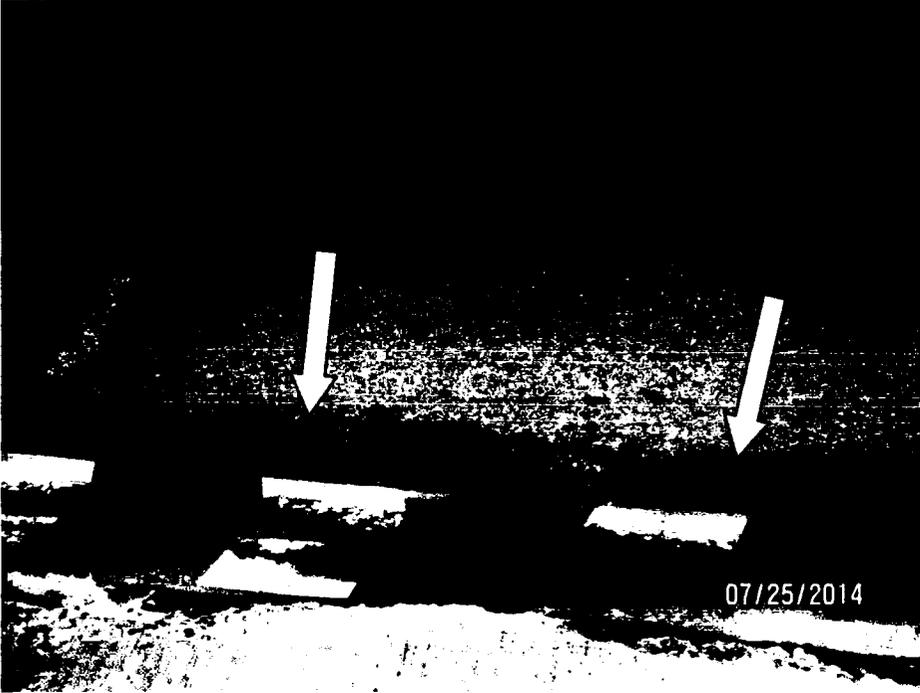


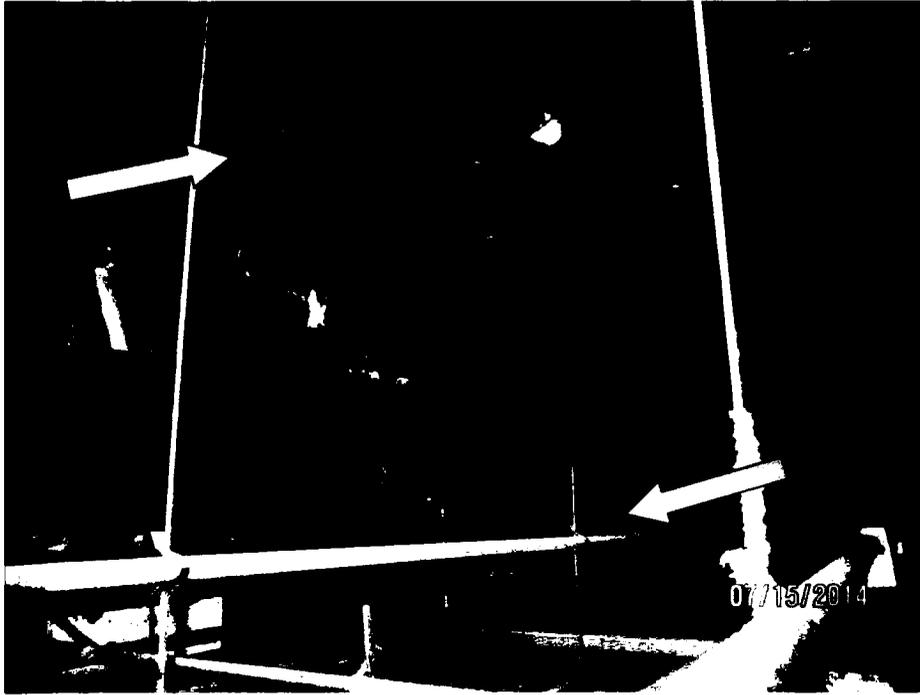
**Photo No. 16**

**Location:**  
Access Tunnel,  
South side of  
Tunnel Entrance at  
Dyer Ave (looking  
east)

**Description:**  
Cracked and  
settled concrete  
sidewalk.

**SAFETY  
REPAIR 7**

	<p><b>Photo No. 17</b></p> <p><b>Location:</b> Car Parking Level 6, South Wing Column Lines U0/5 (looking south)</p> <p><b>Description:</b> Floor drain cover is missing.</p> <p><b>SAFETY REPAIR 8</b></p>
	<p><b>Photo No. 18</b></p> <p><b>Location:</b> Car Parking Level 5, South Wing Column Lines A/23-25 (looking south)</p> <p><b>Description:</b> Uneven concrete deck joint due spalls in concrete and asphalt.</p> <p><b>SAFETY REPAIR 9</b></p>



**Photo No. 19**

**Location:**  
Underside of  
Suburban Bus  
Level, South Wing  
Column Lines  
D-E/24 (looking  
southeast)

**Description:**  
Water leaking from  
joint on to  
concourse ceiling.

**SAFETY  
REPAIR 10**



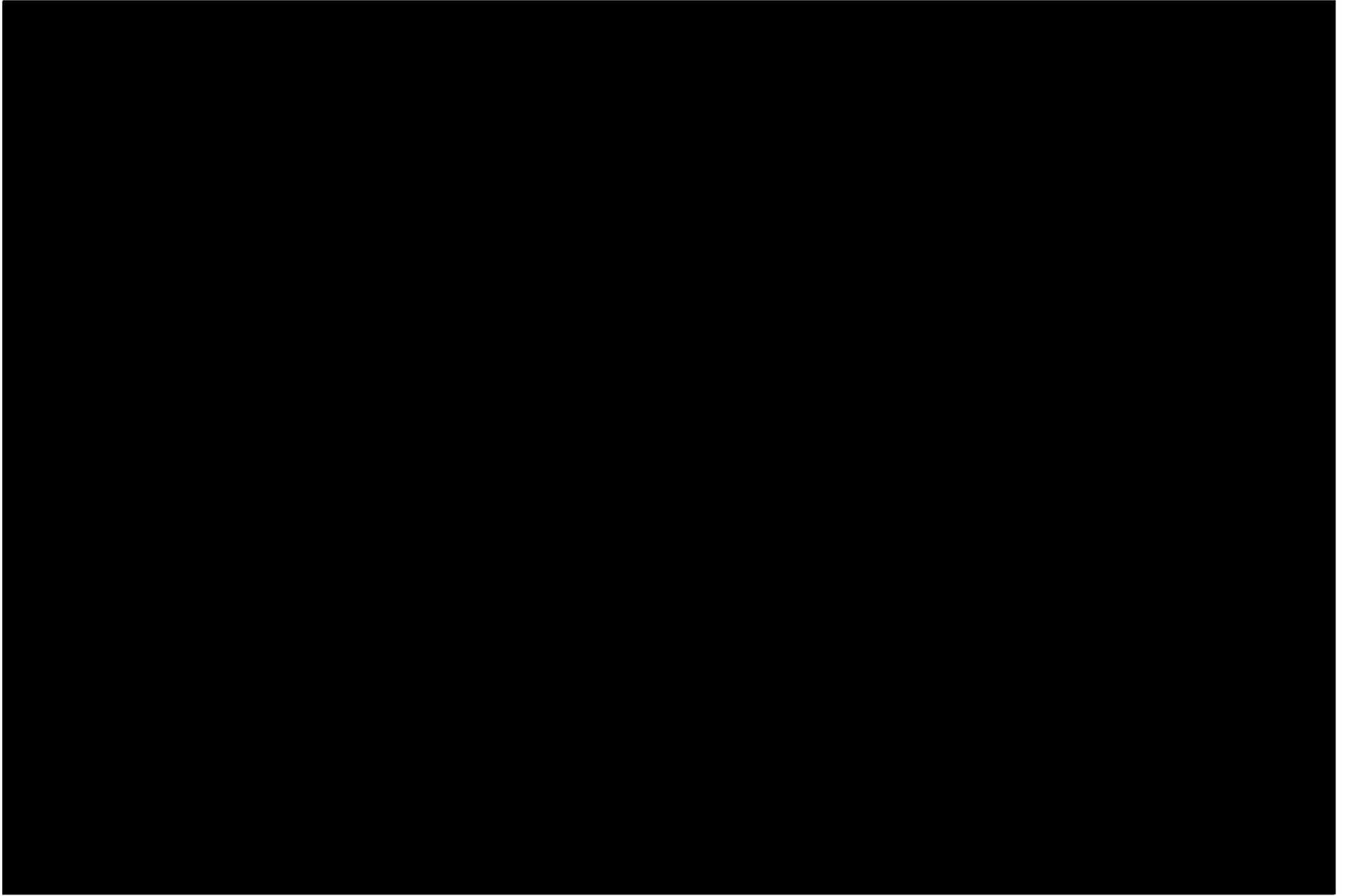
**Photo 20**

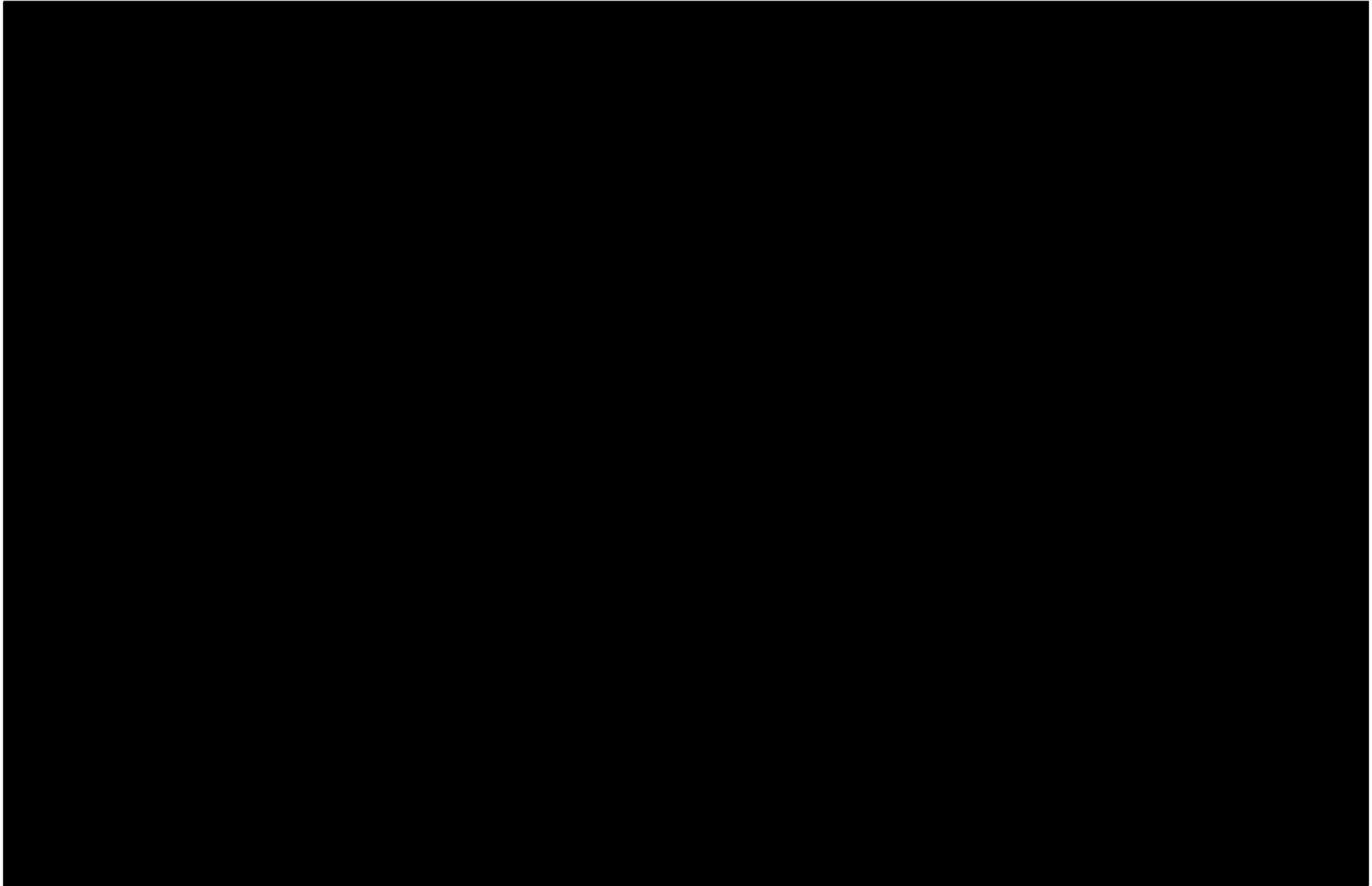
**Location:**  
Suburban  
Concourse Level,  
South Wing  
Column Lines  
J-K/24 (looking  
north)

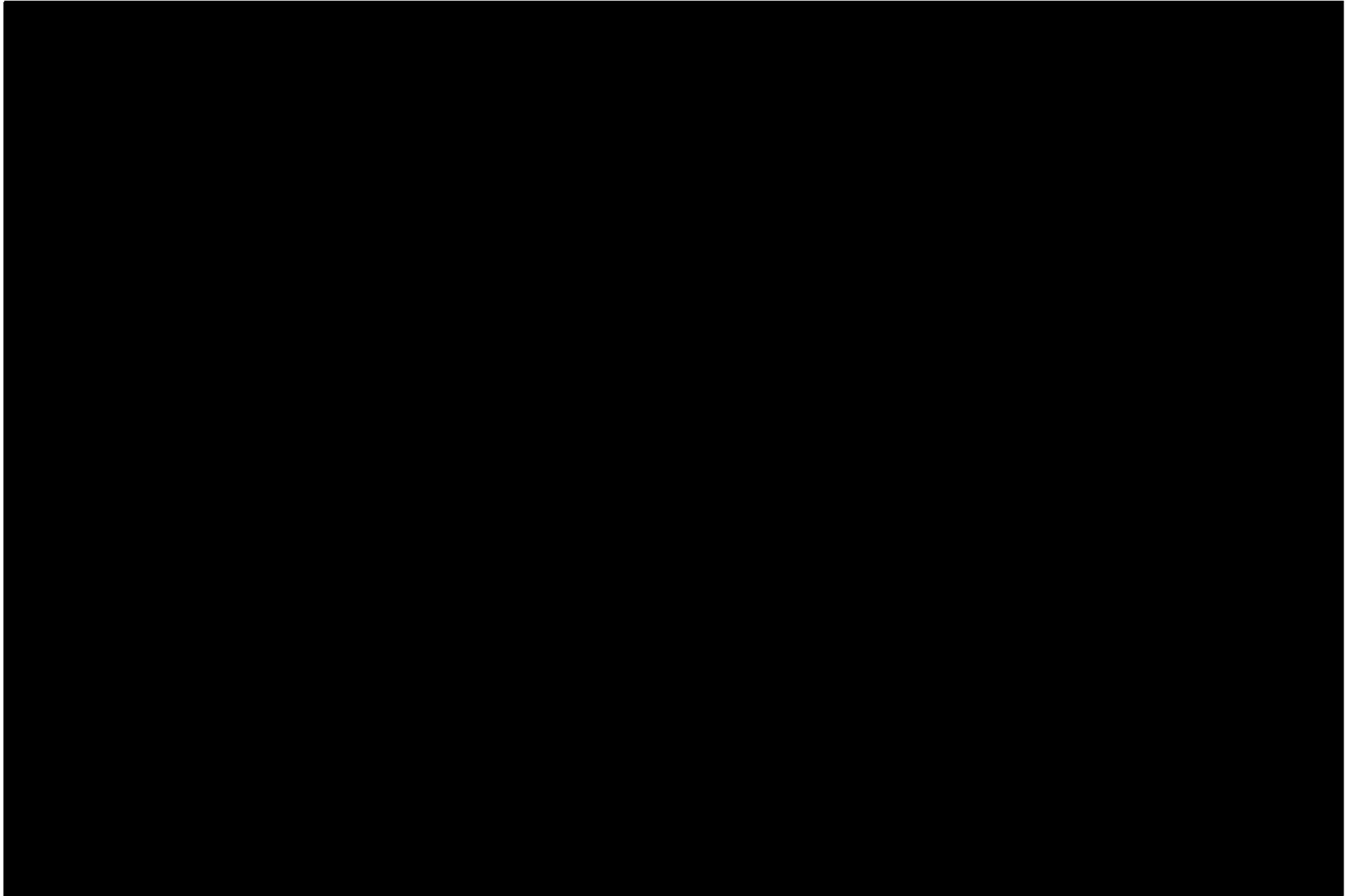
**Description:**  
Tarps and thin  
plastic sheets used  
to divert water  
leaking through  
ceilings at  
expansion joints.

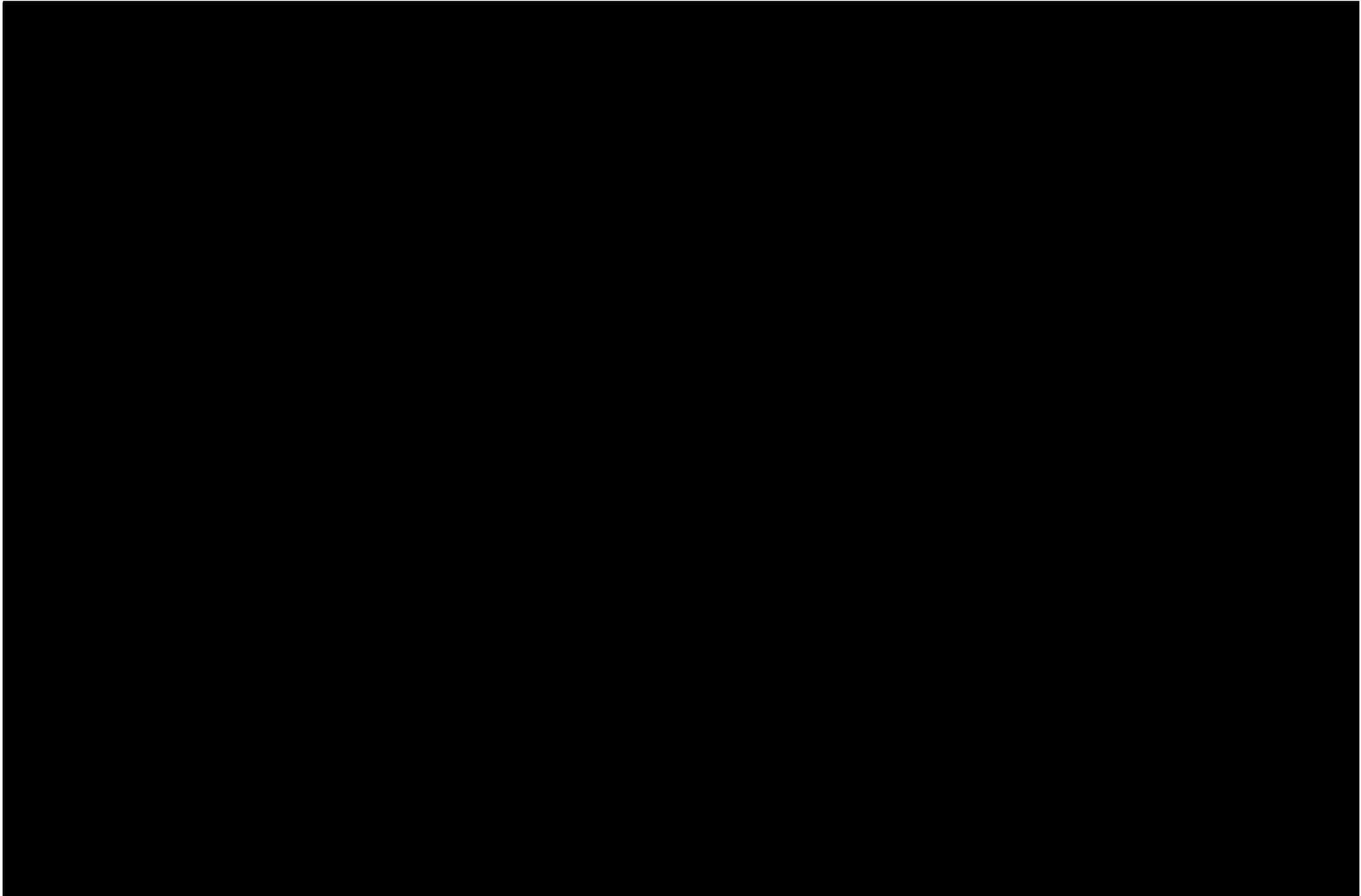
**SAFETY  
REPAIR 10**

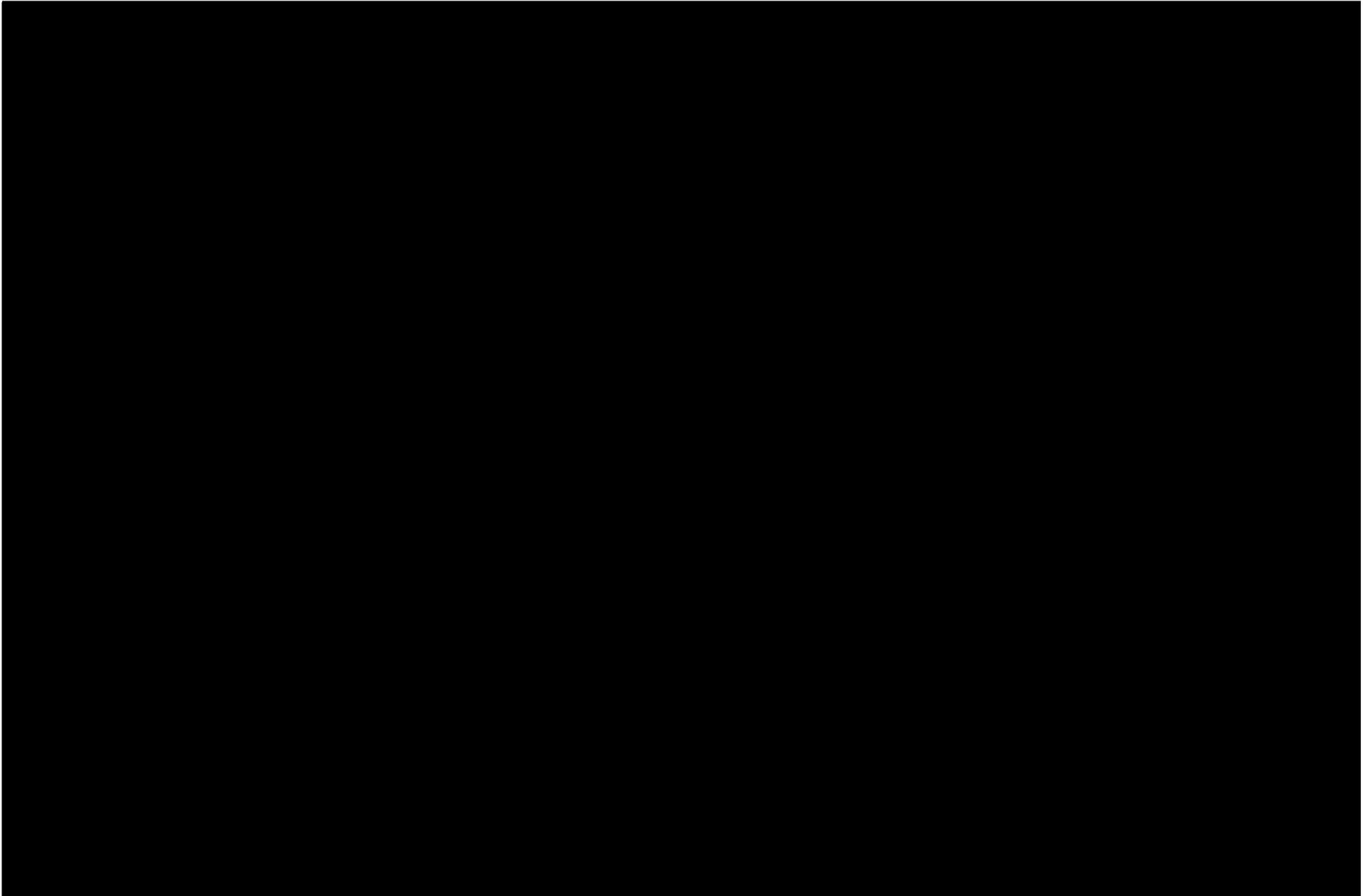
	<p><b>Photo No. 21</b></p> <p><b>Location:</b> West Truss, Bottom of Bottom Chord, Column Lines 1/L1-L2 (looking north)</p> <p><b>Description:</b> Concrete encasement spalled off the bottom of the bottom chord exposing rebar and post-tensioning strands. Two of the four strands are severely corroded.</p> <p><b>PRIORITY REPAIR 2</b></p>
	<p><b>Photo No. 22</b></p> <p><b>Location:</b> West Truss, Bottom of Bottom Chord, Column Lines 1/L1-L2 (looking up and north)</p> <p><b>Description:</b> Severely corroded post-tensioning strands with several broken wire (close up of Photo 21 above)</p> <p><b>PRIORITY REPAIR 2</b></p>

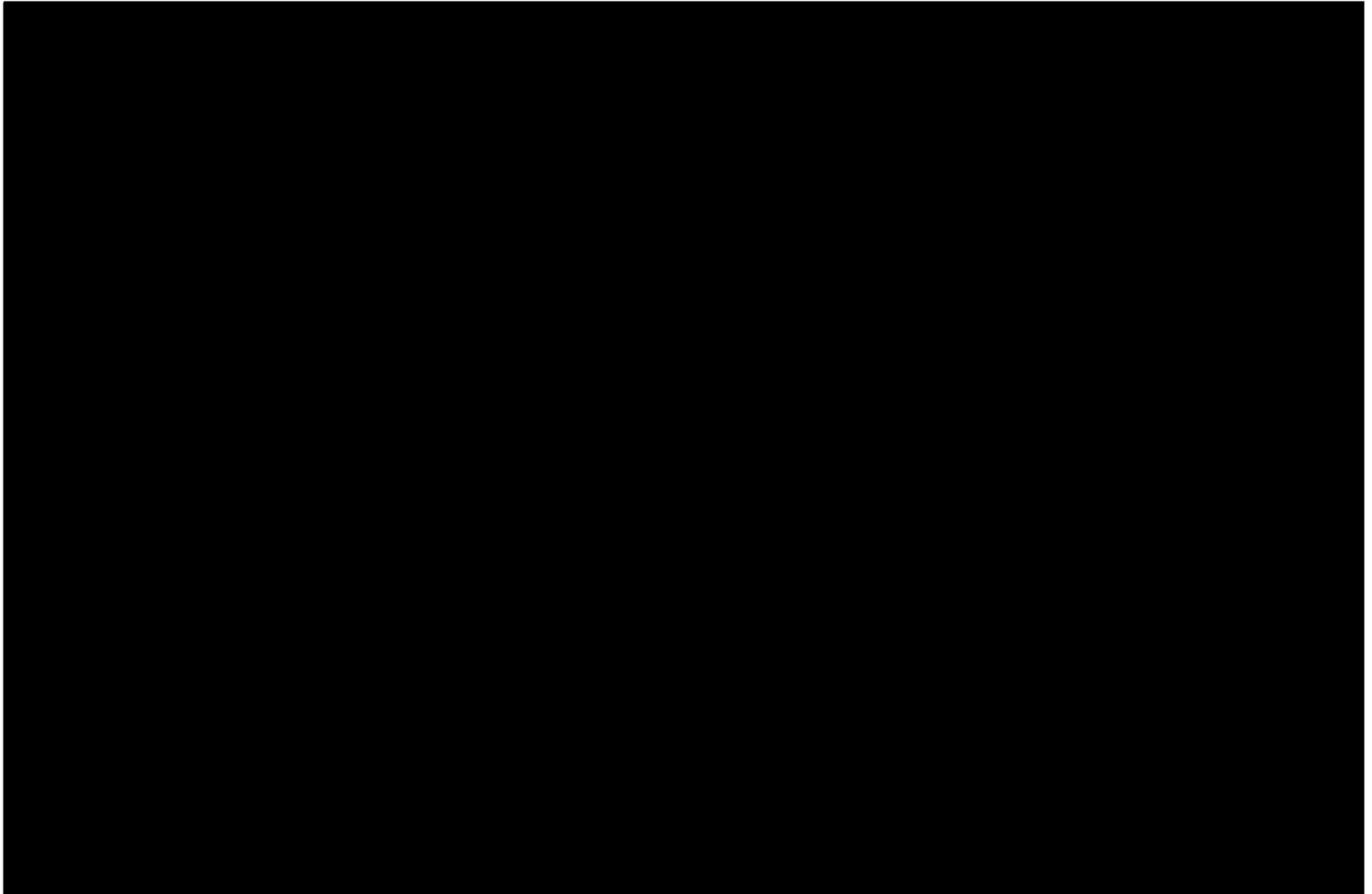




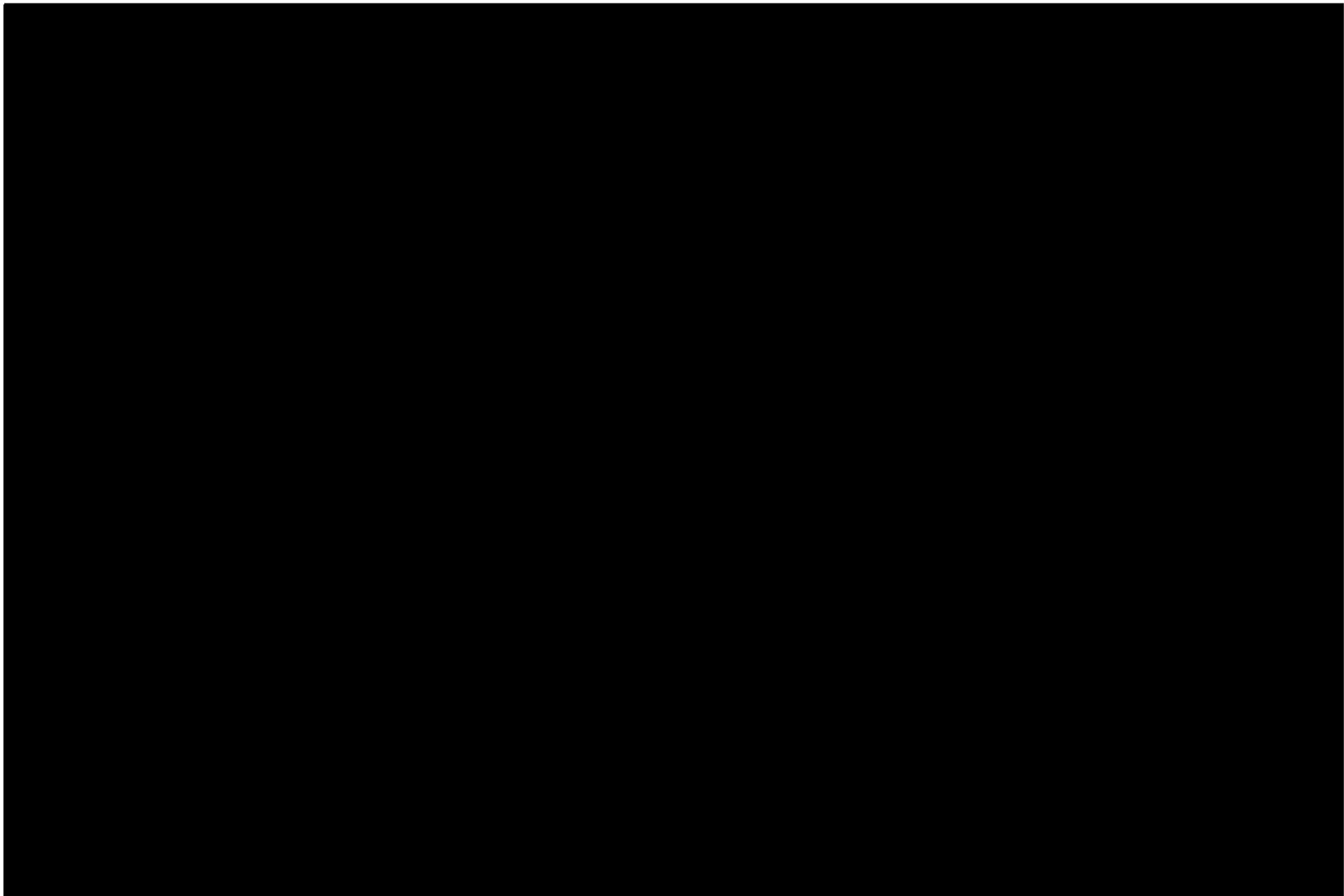


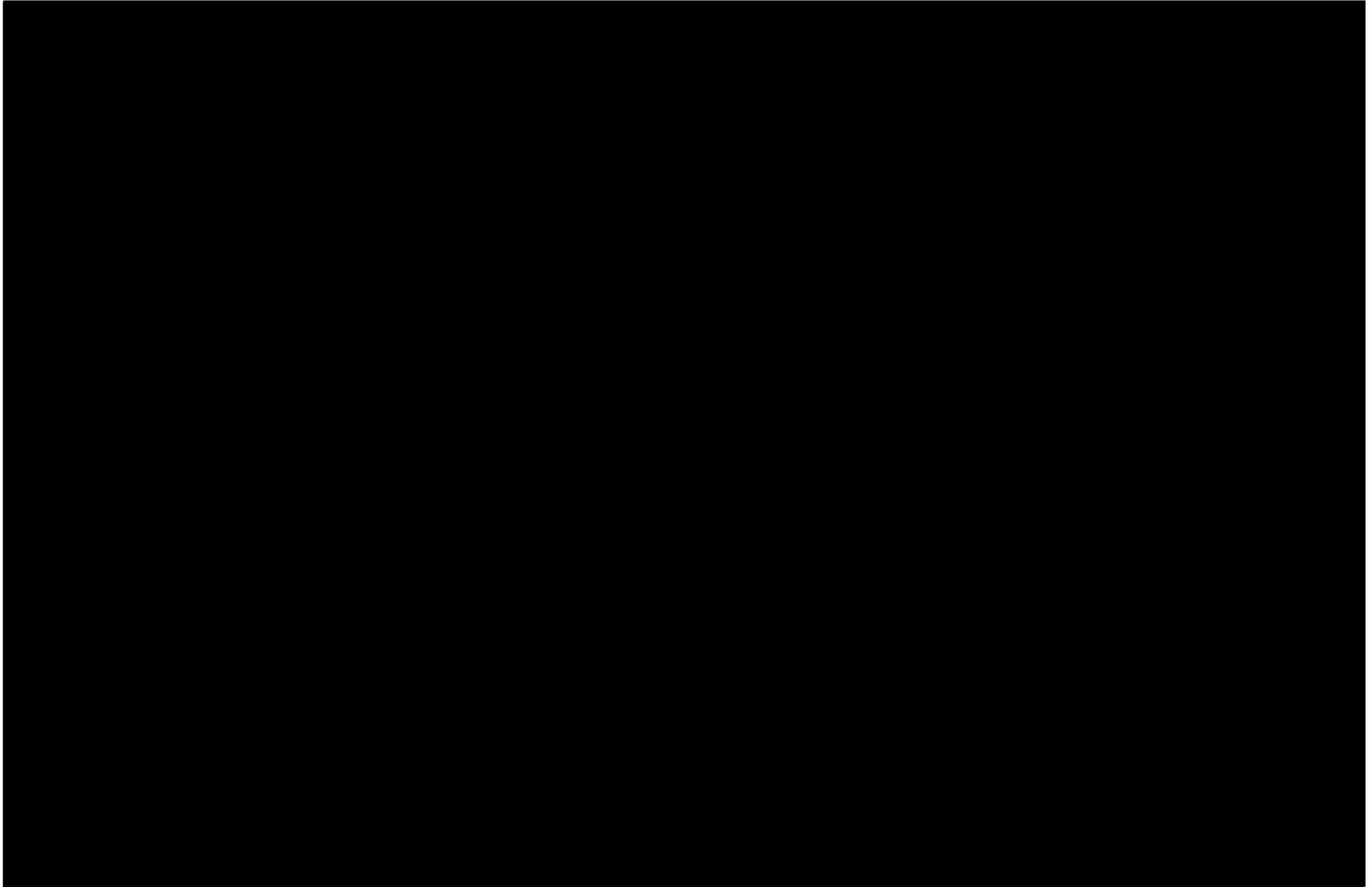


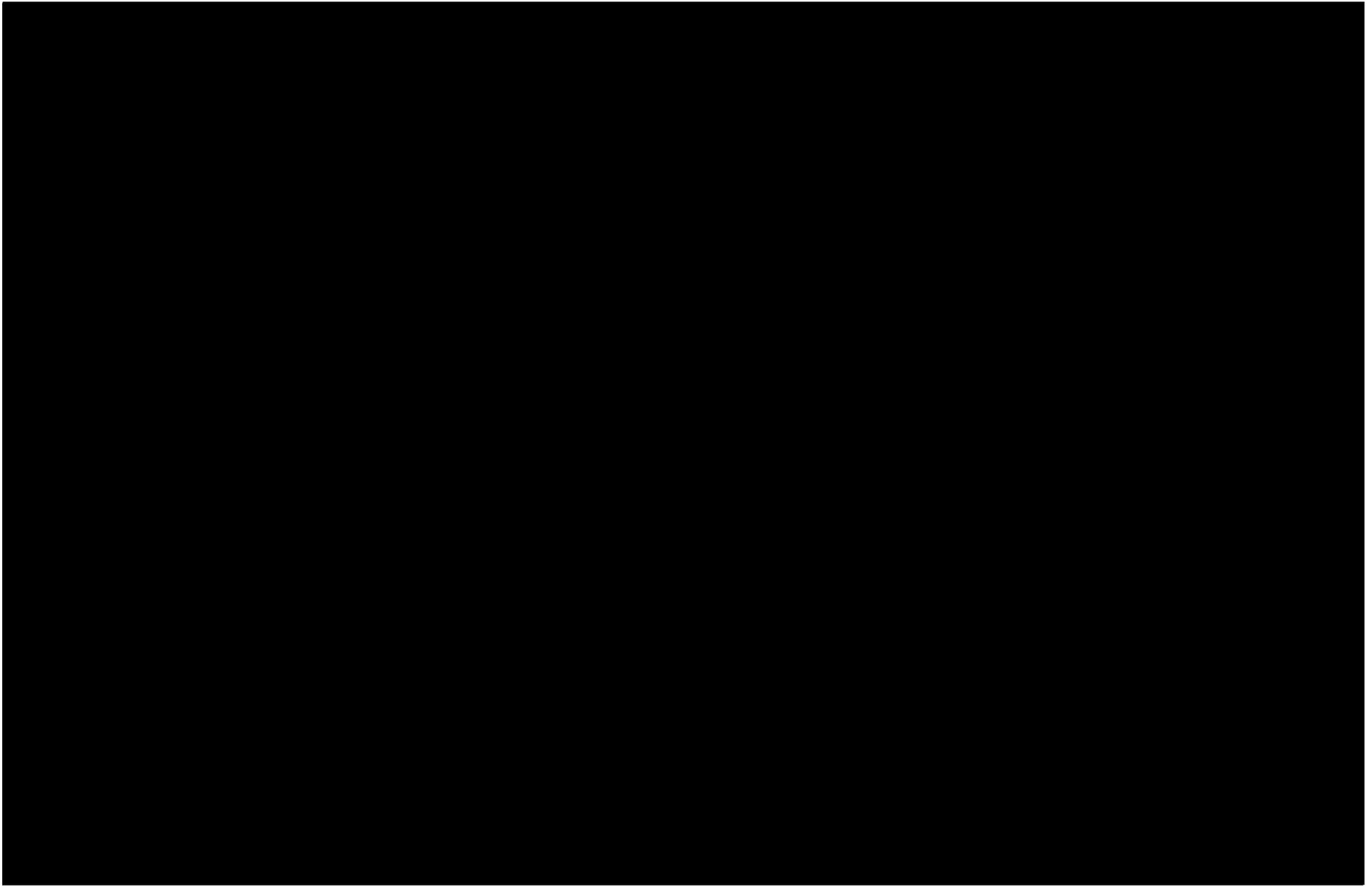


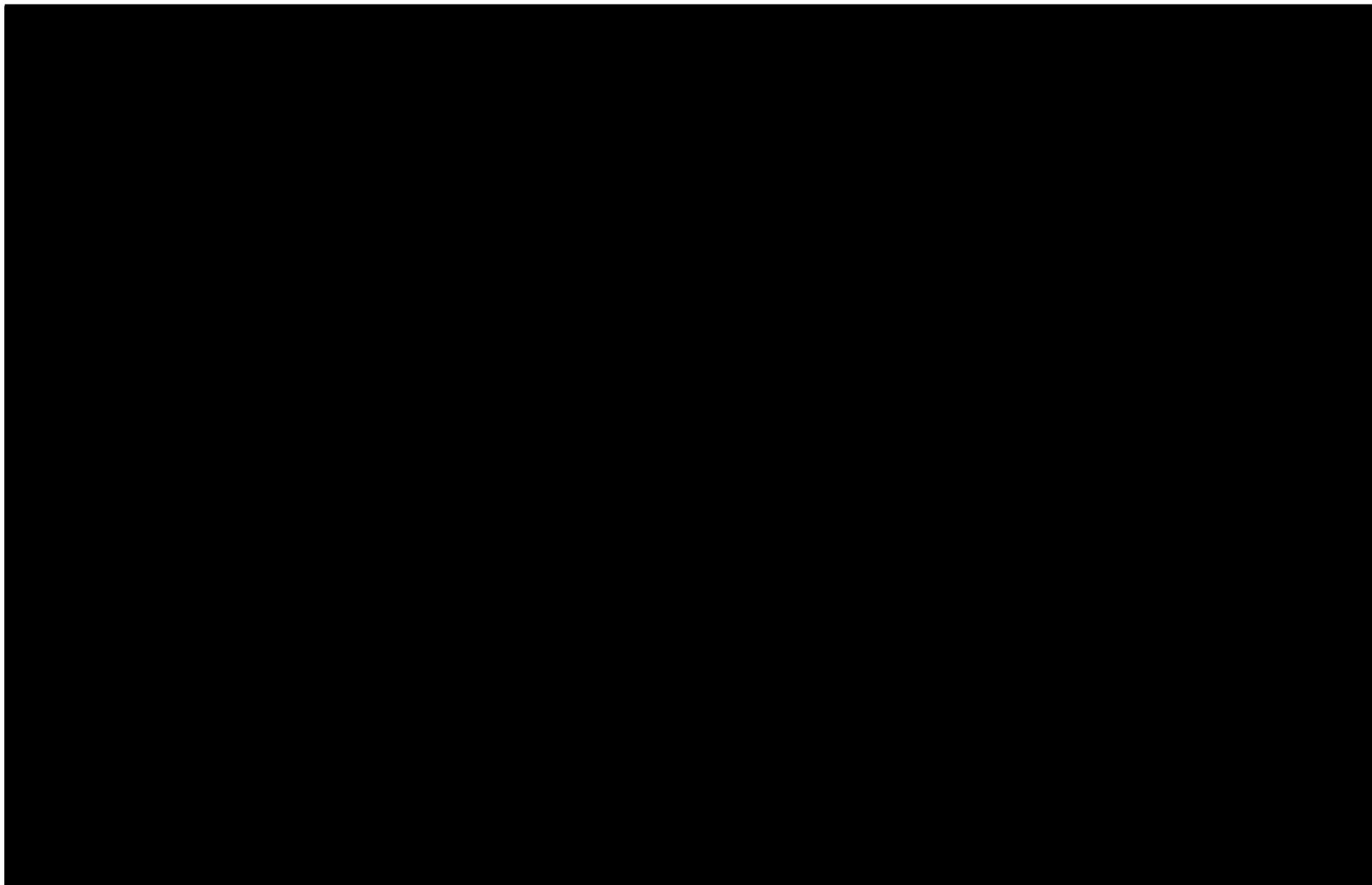


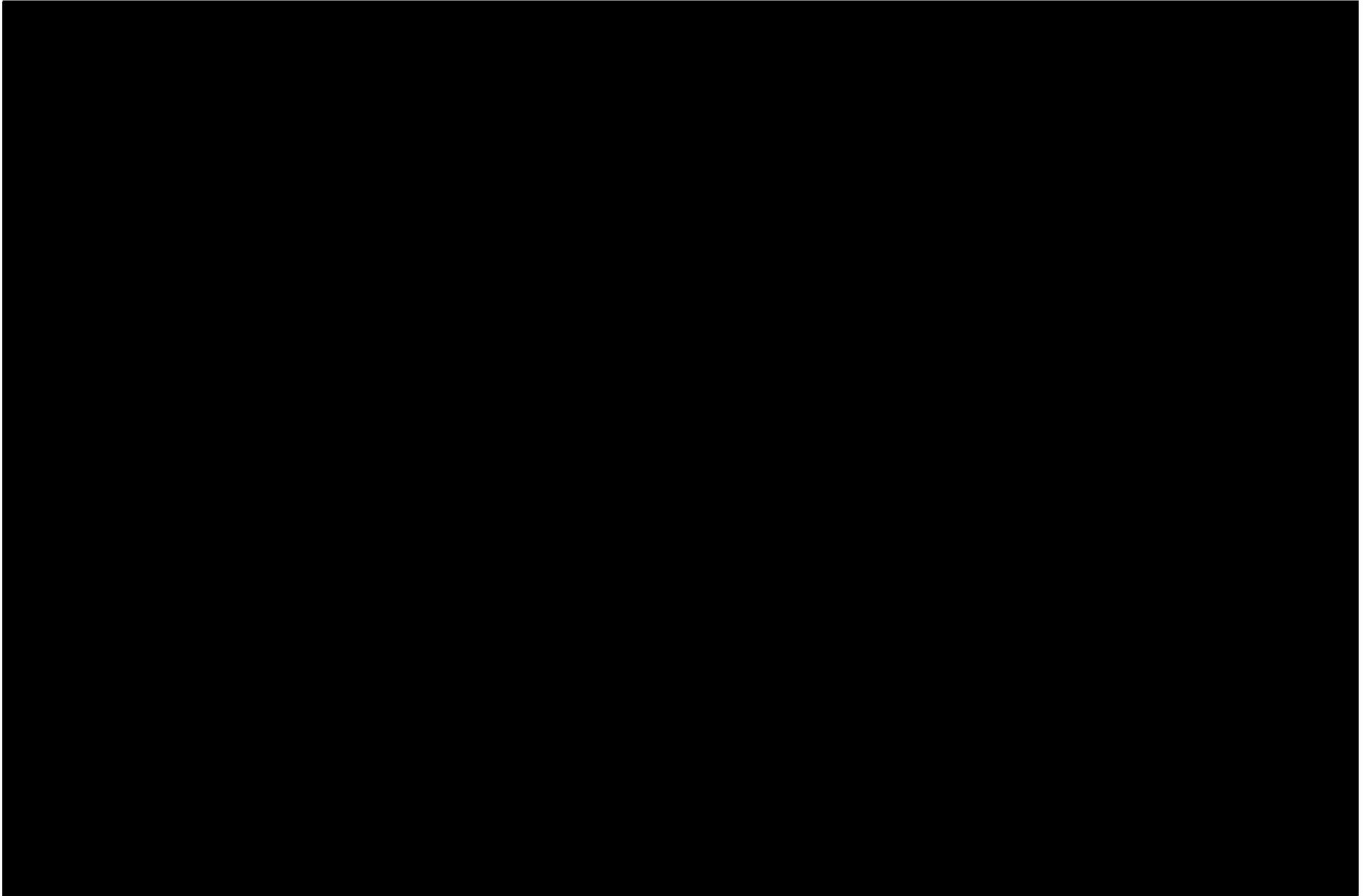


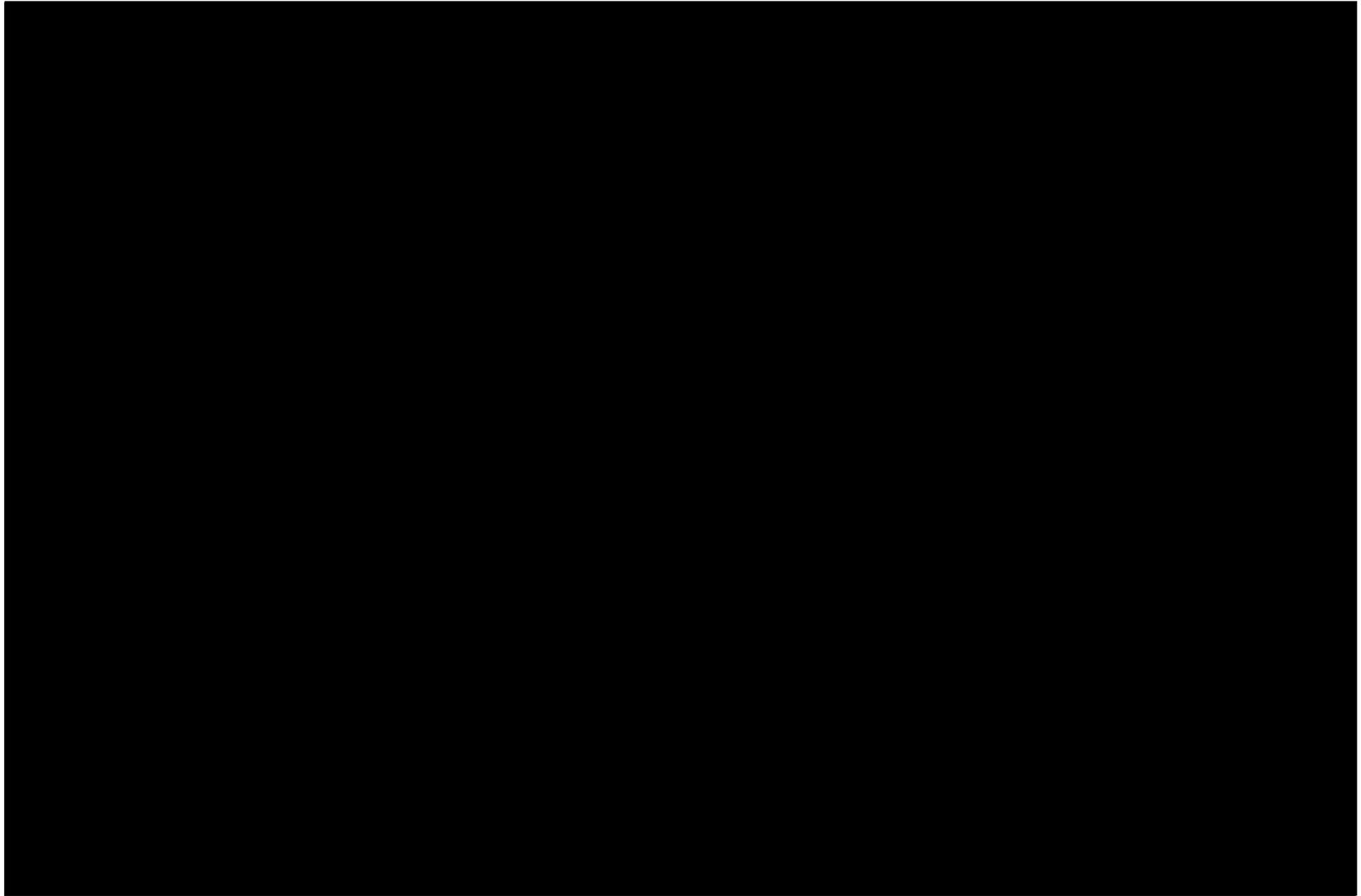


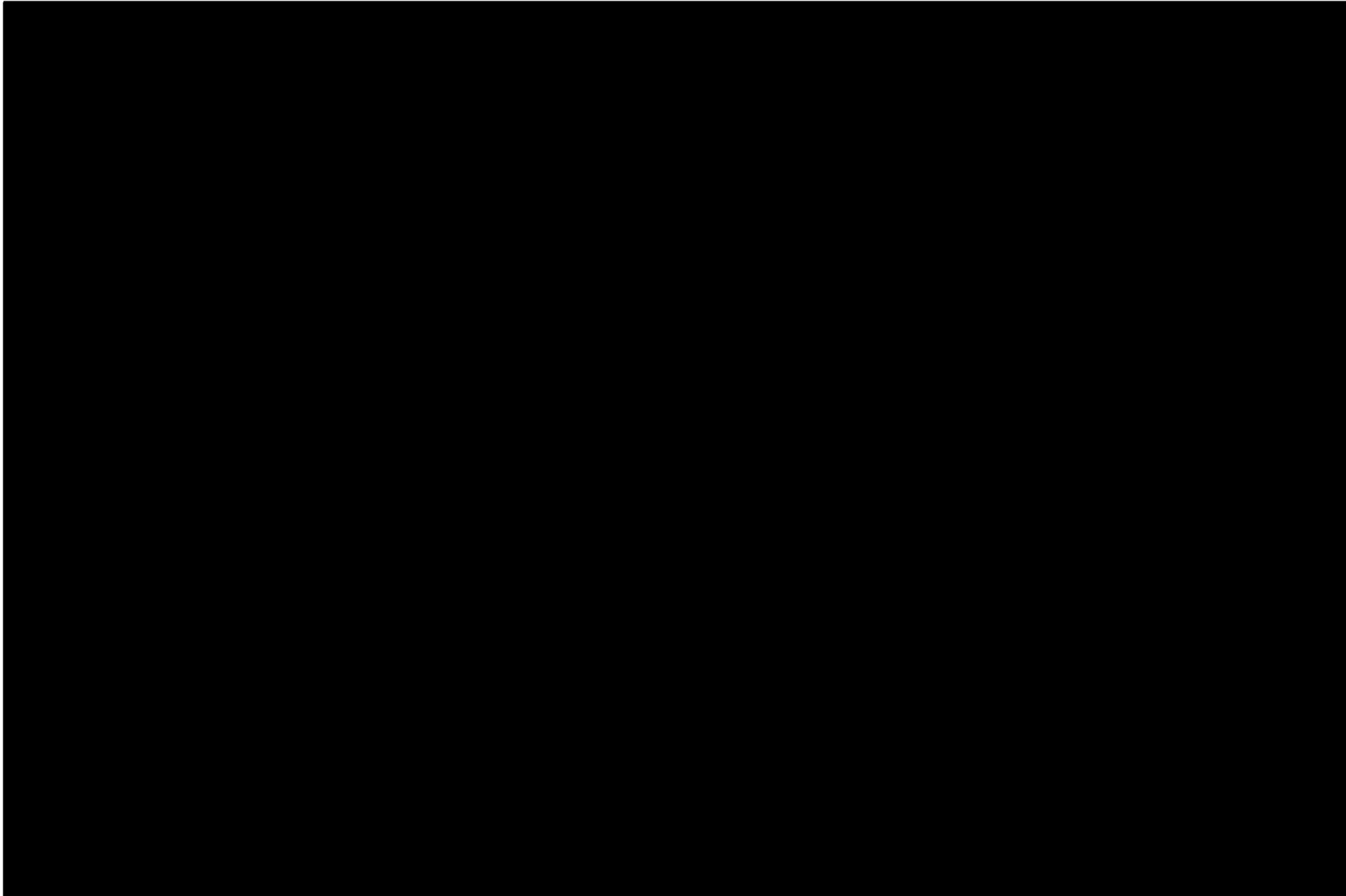




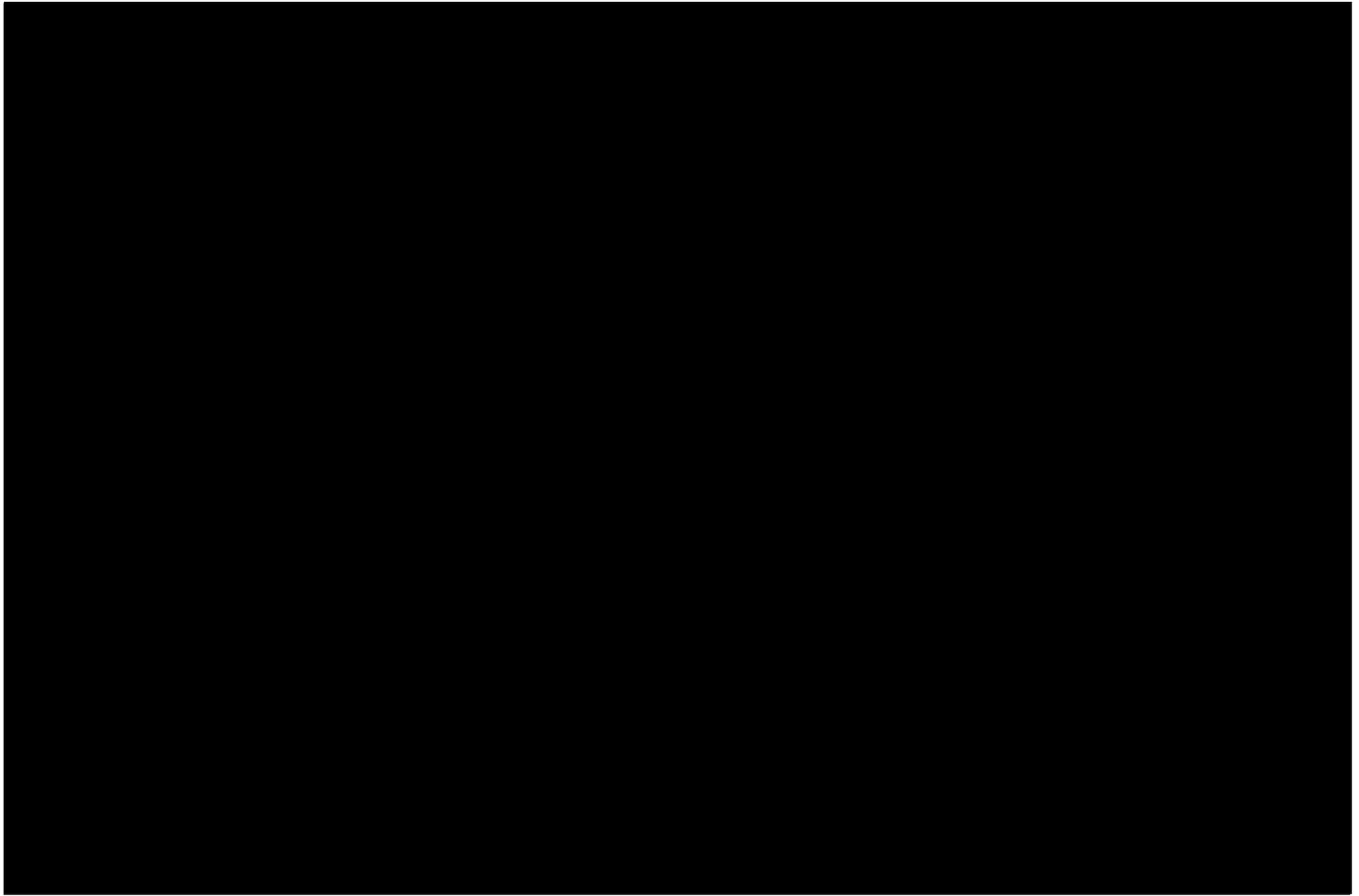


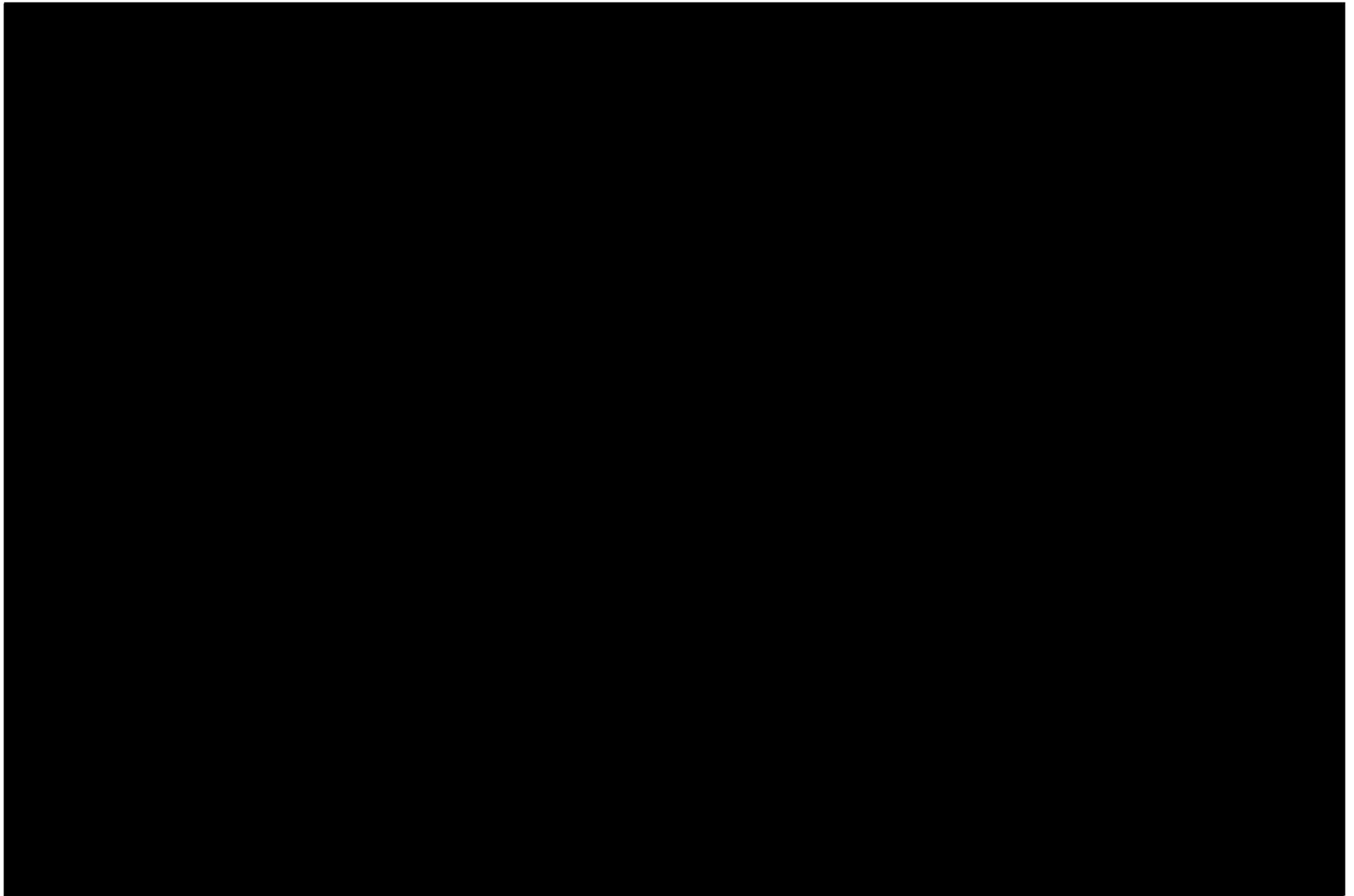


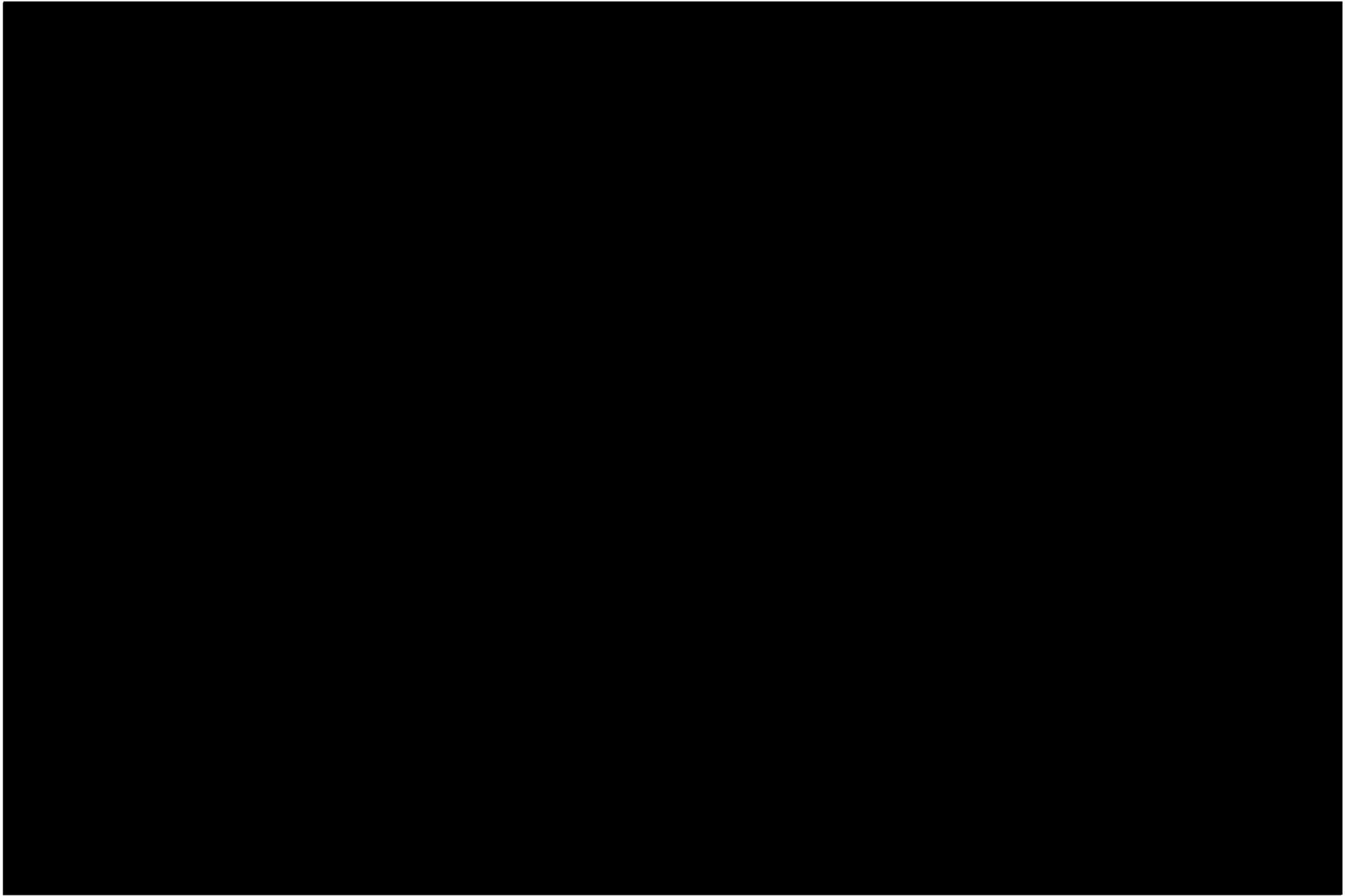


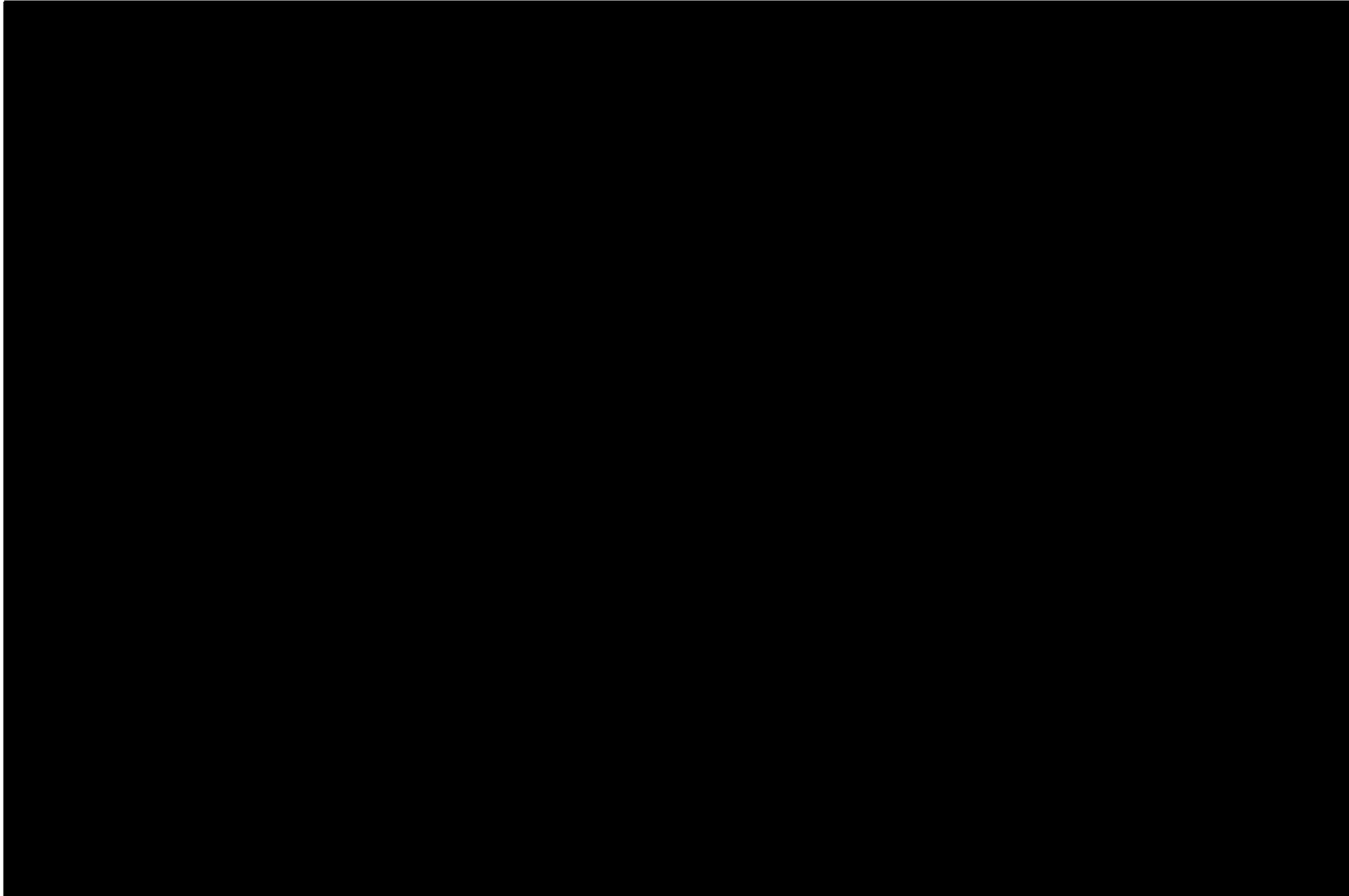


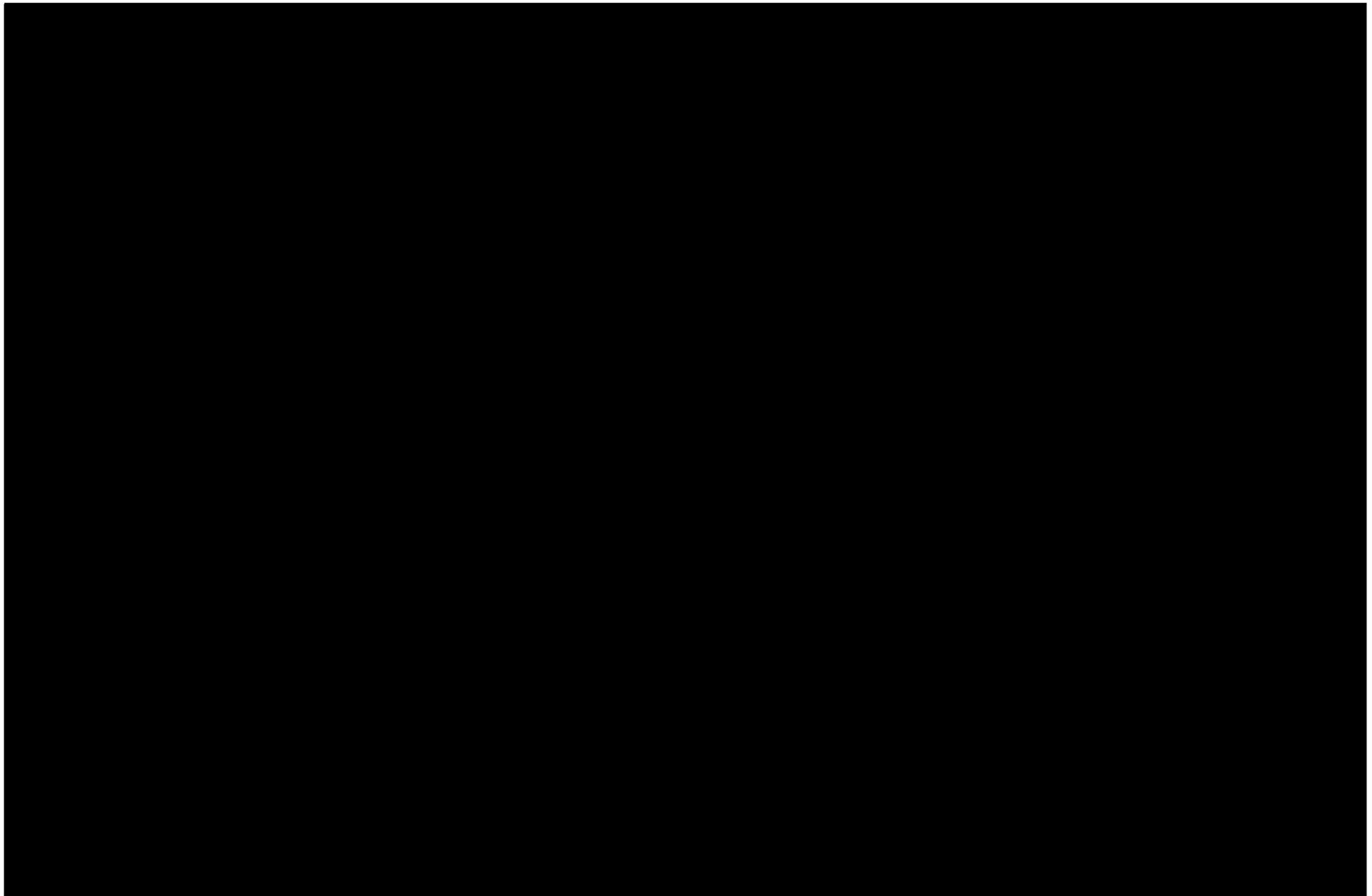


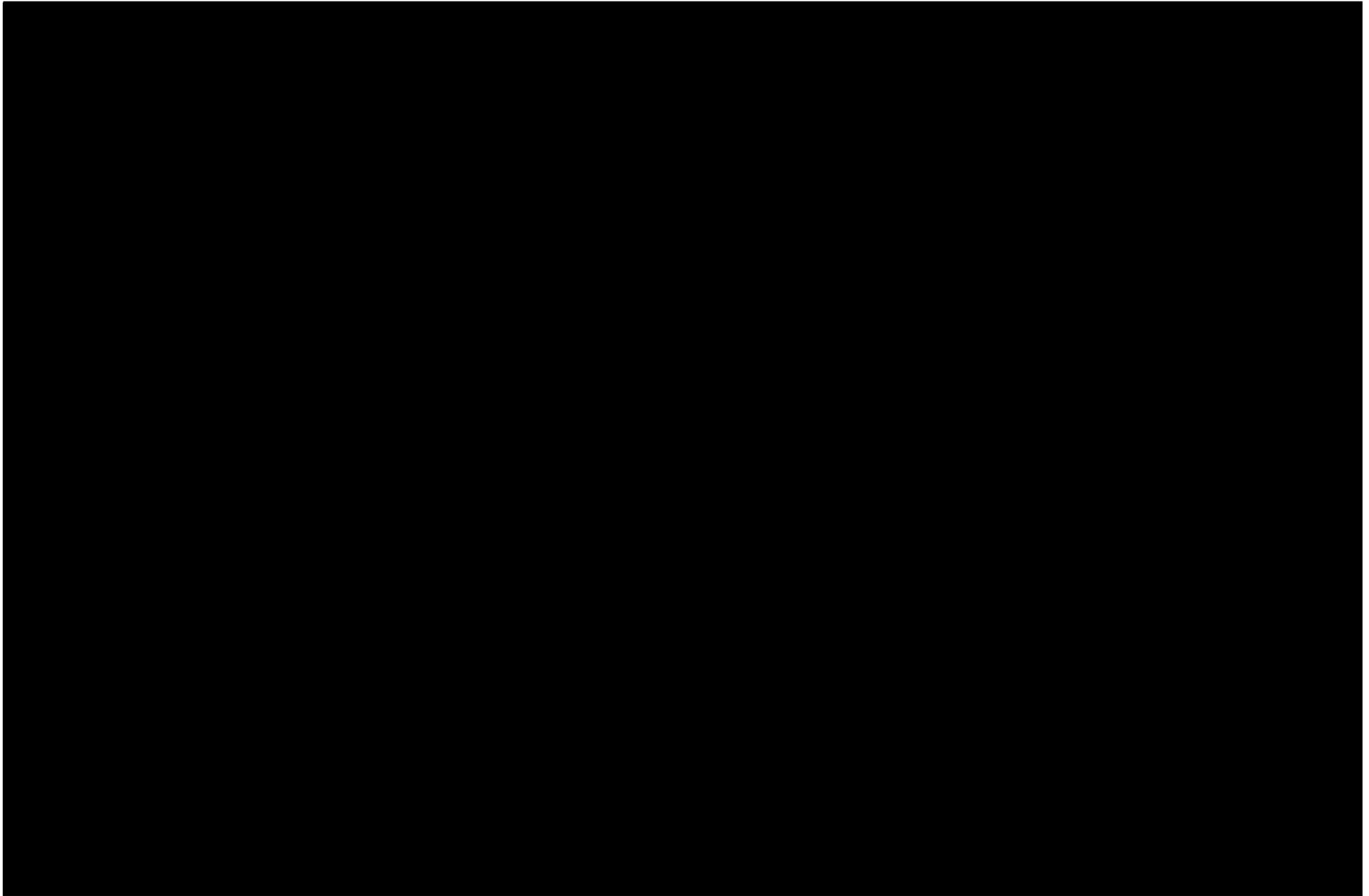






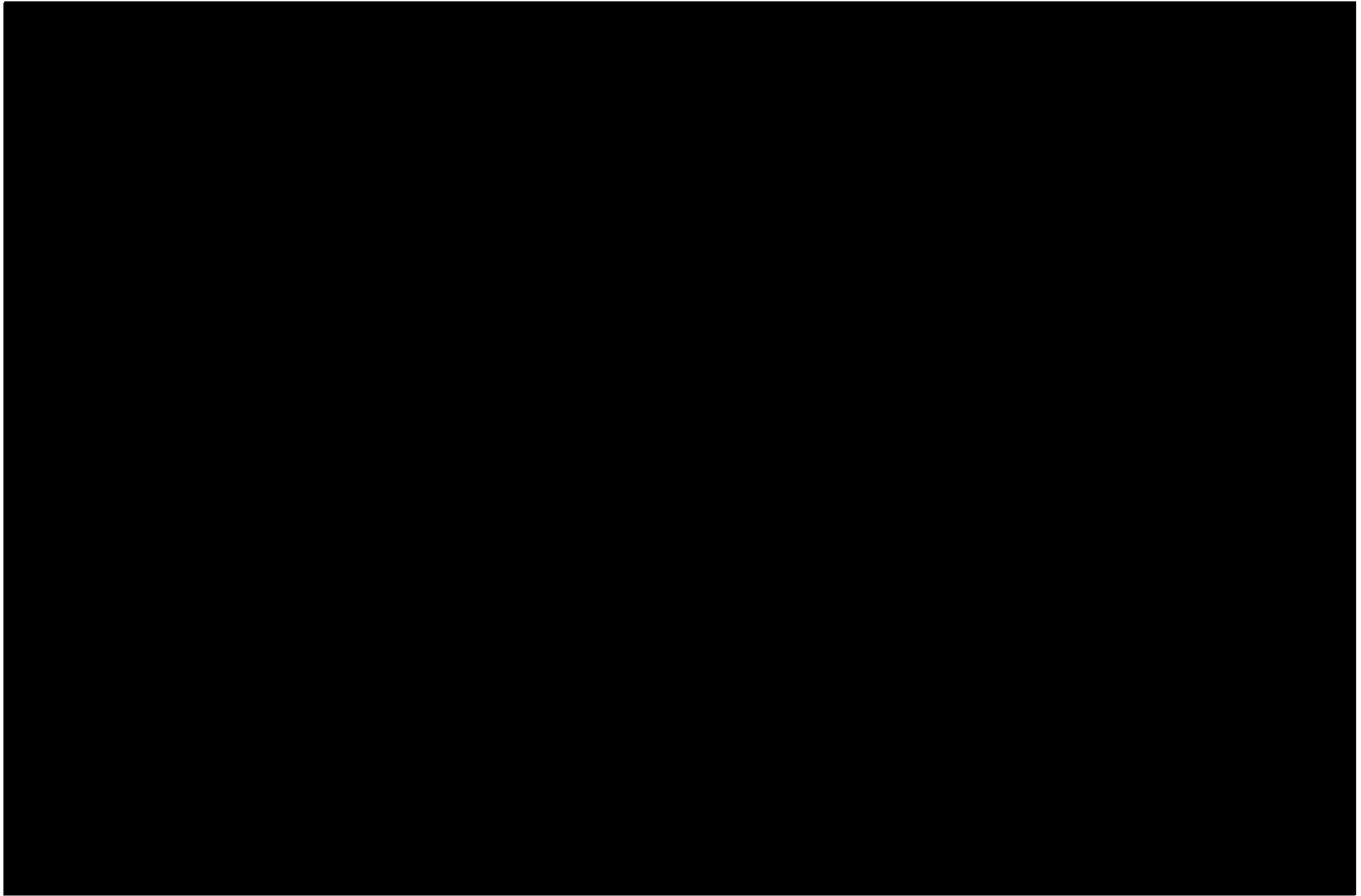


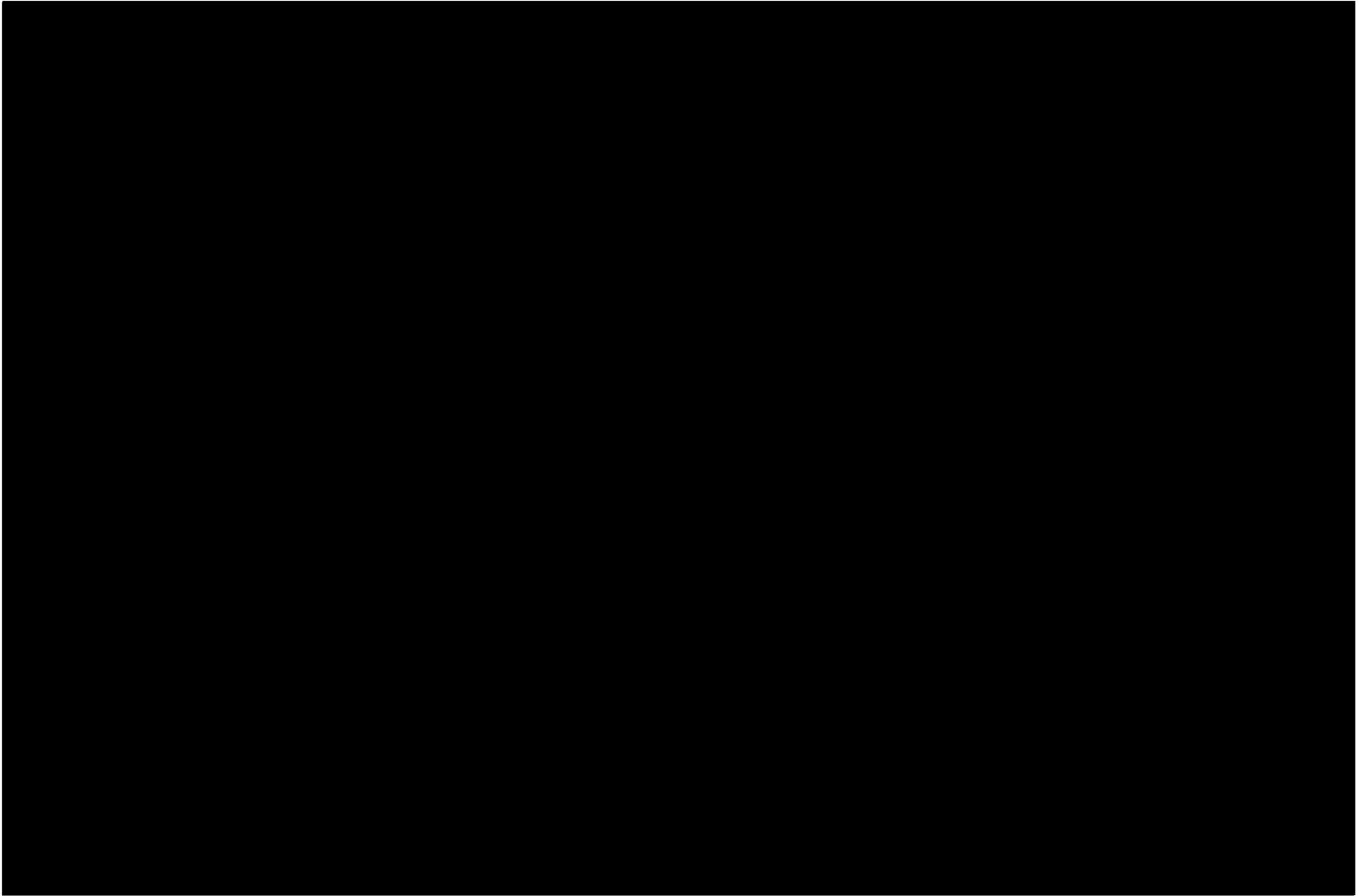


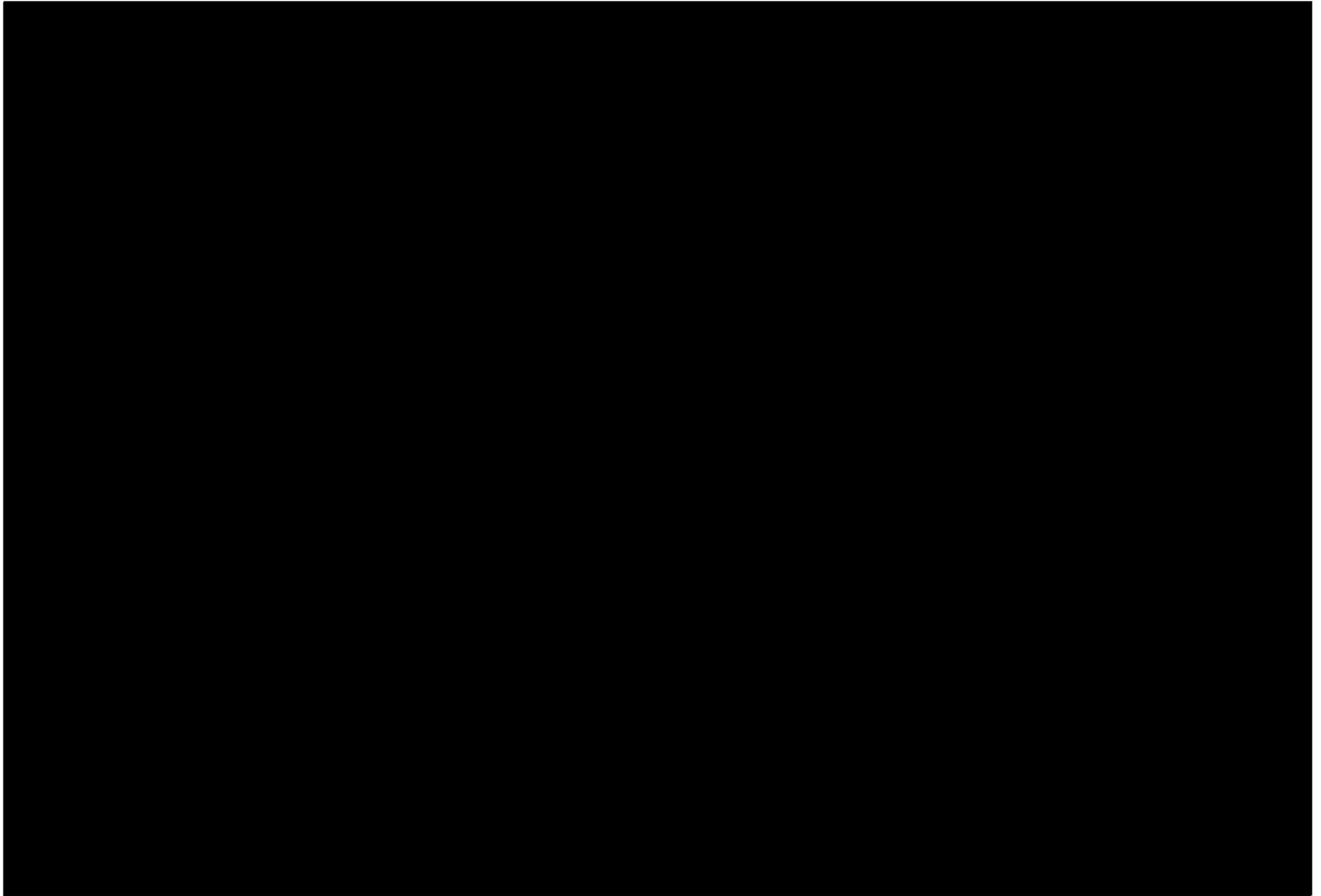


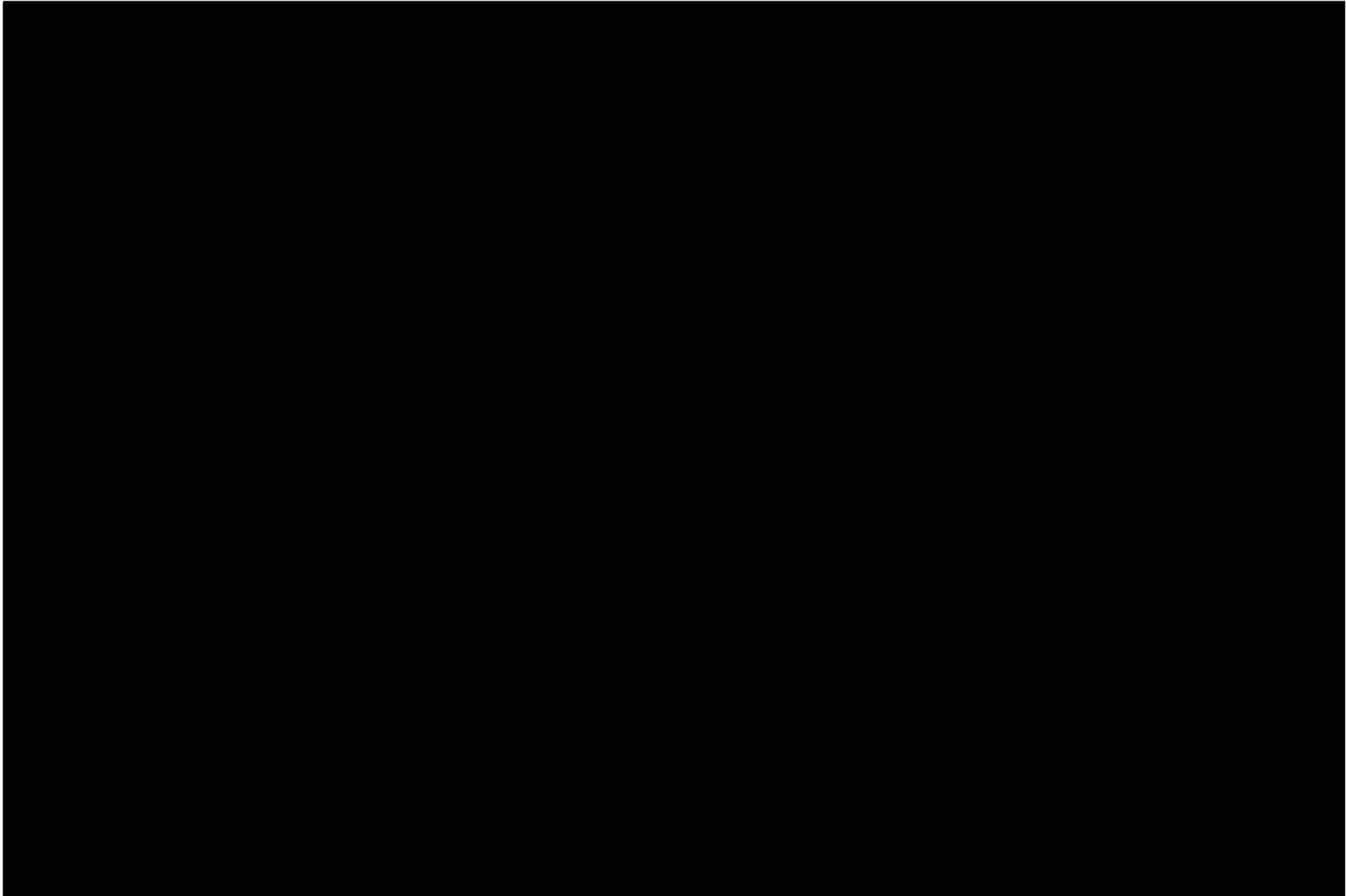


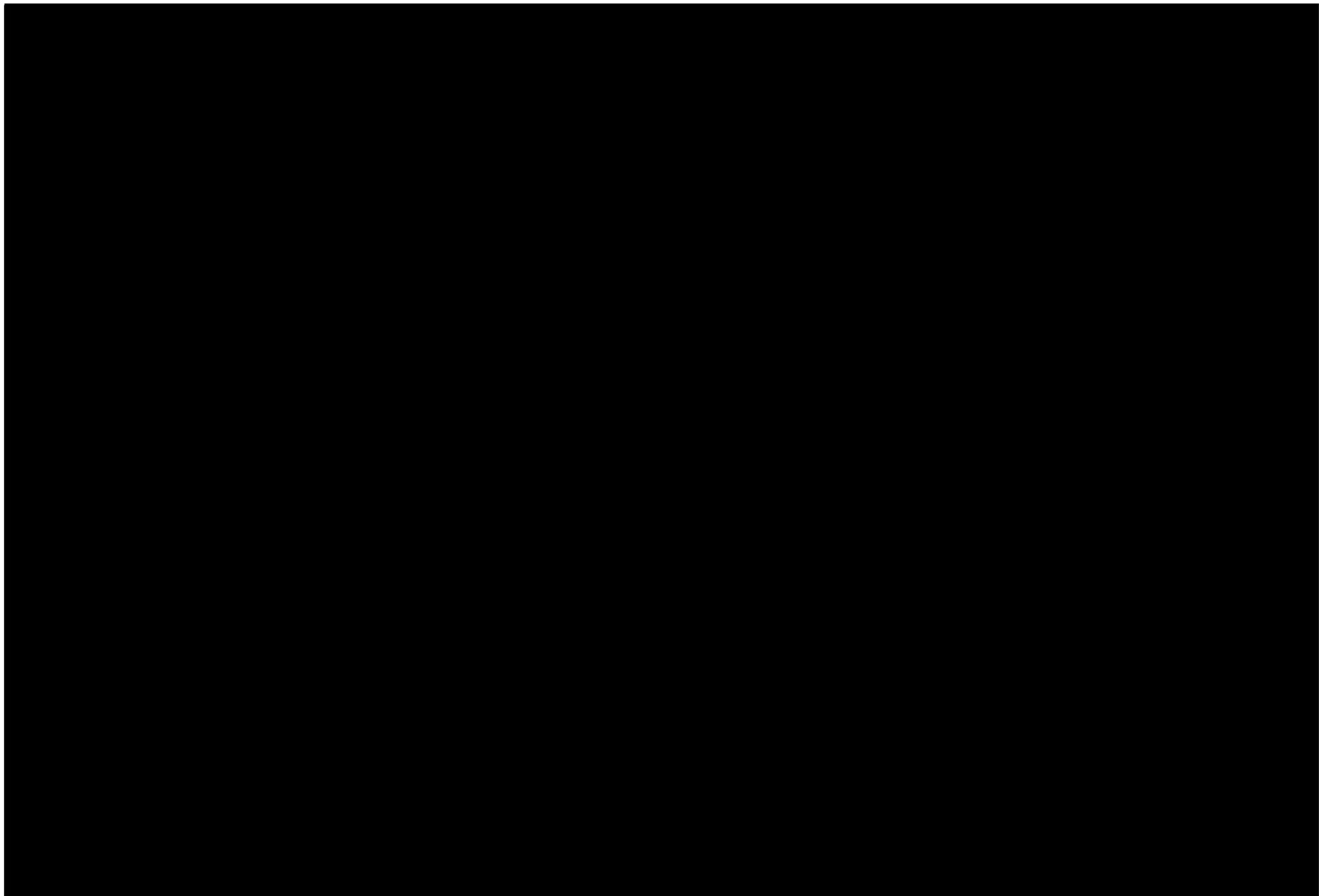


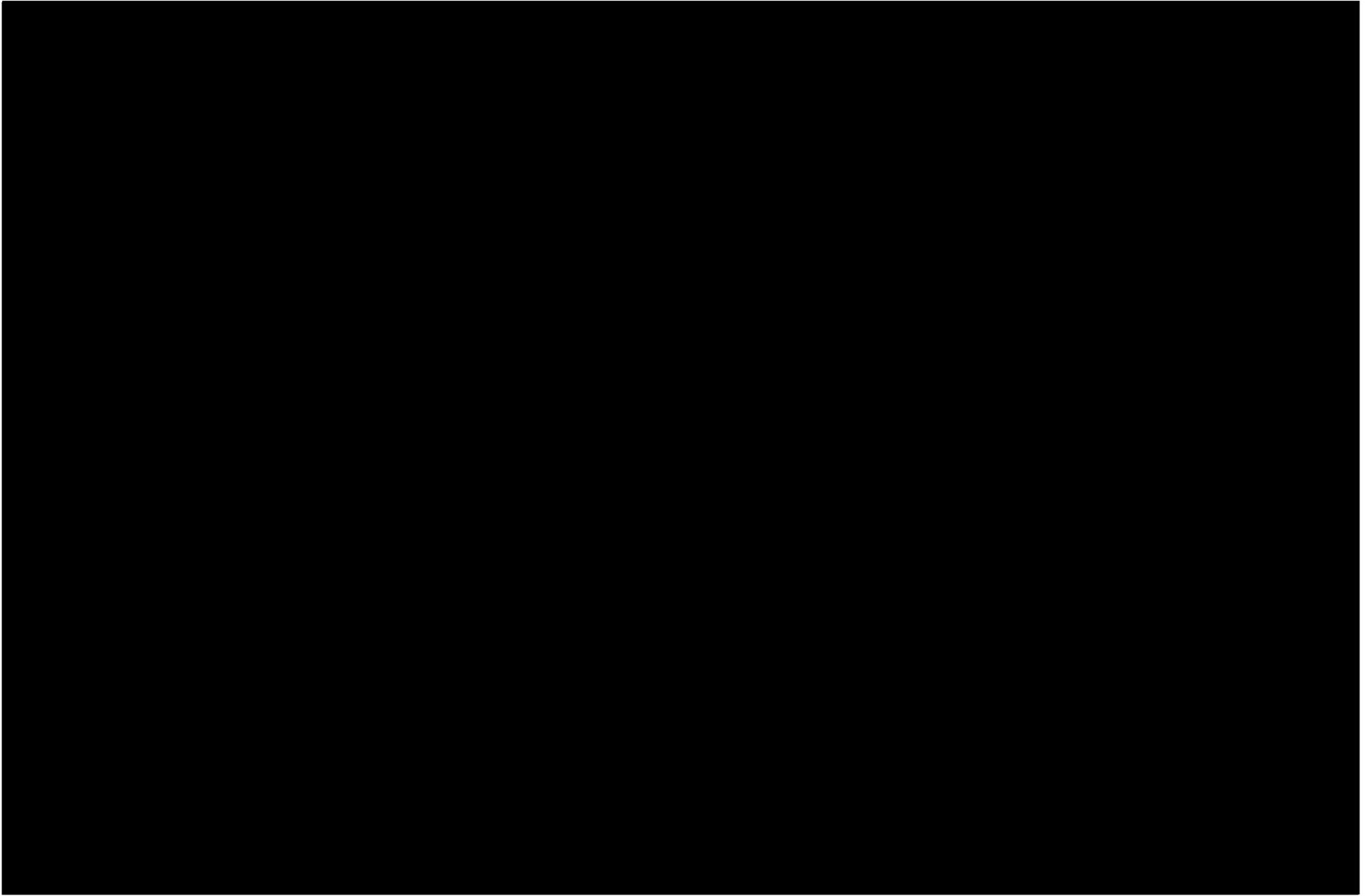


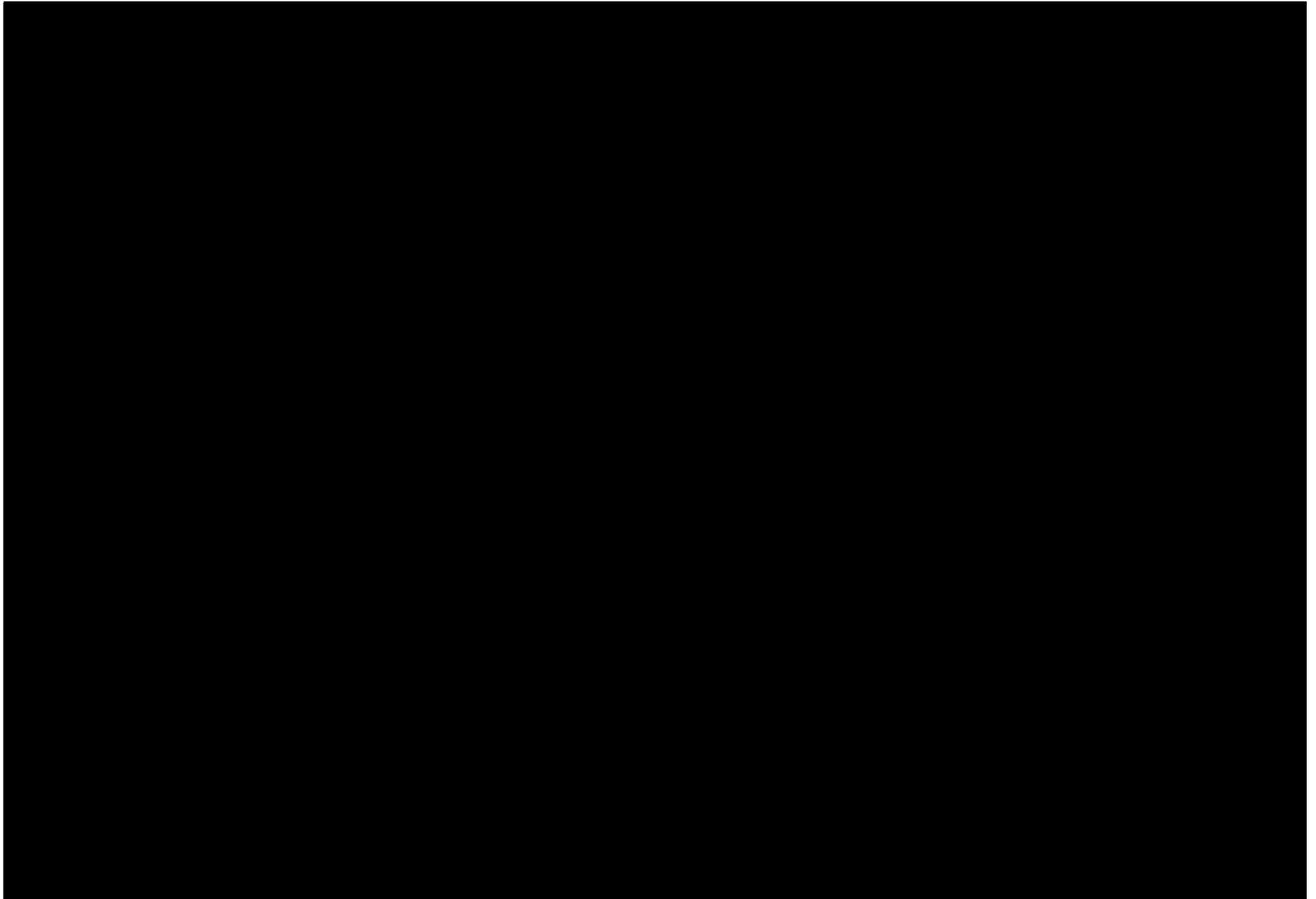


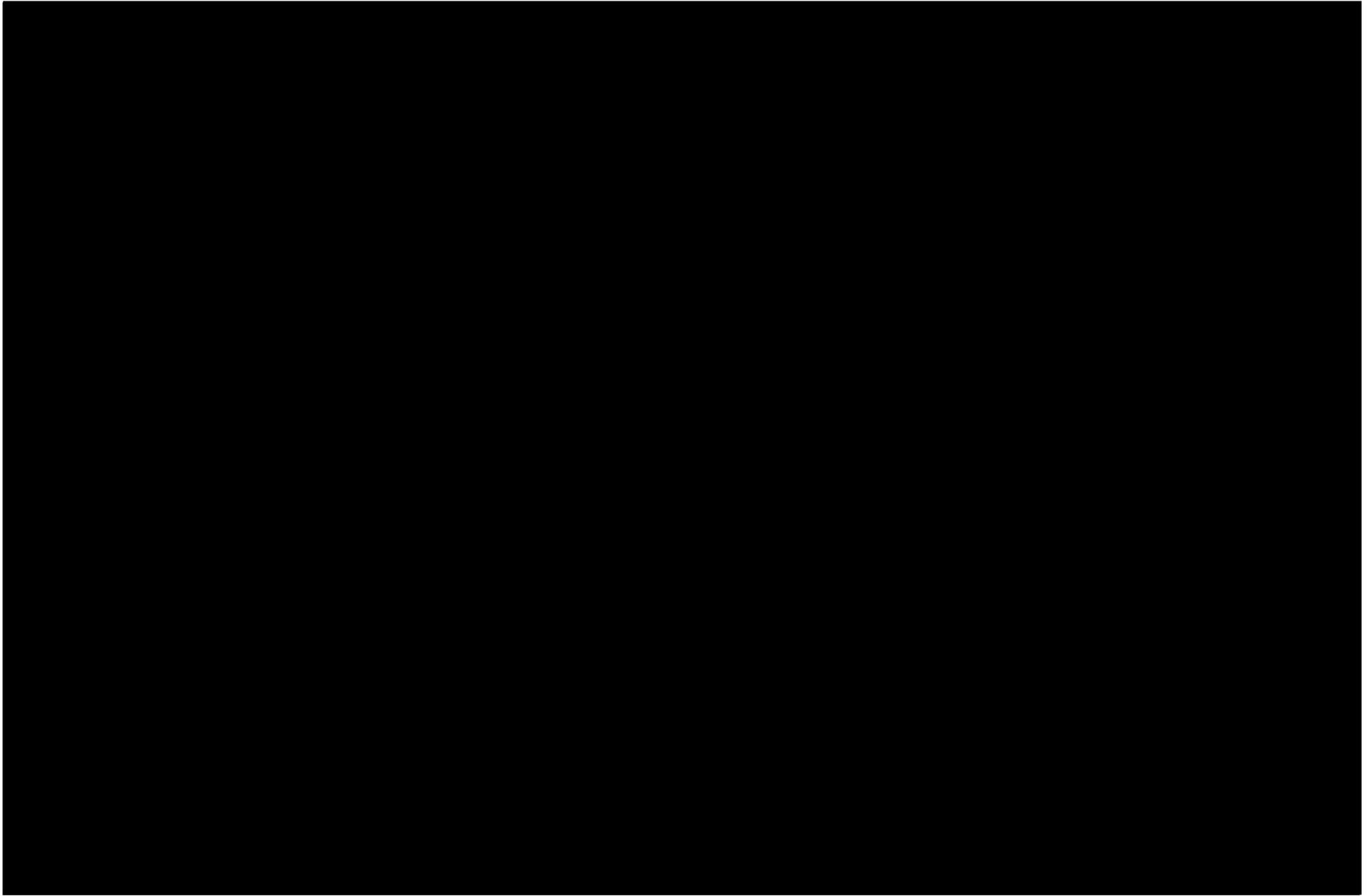


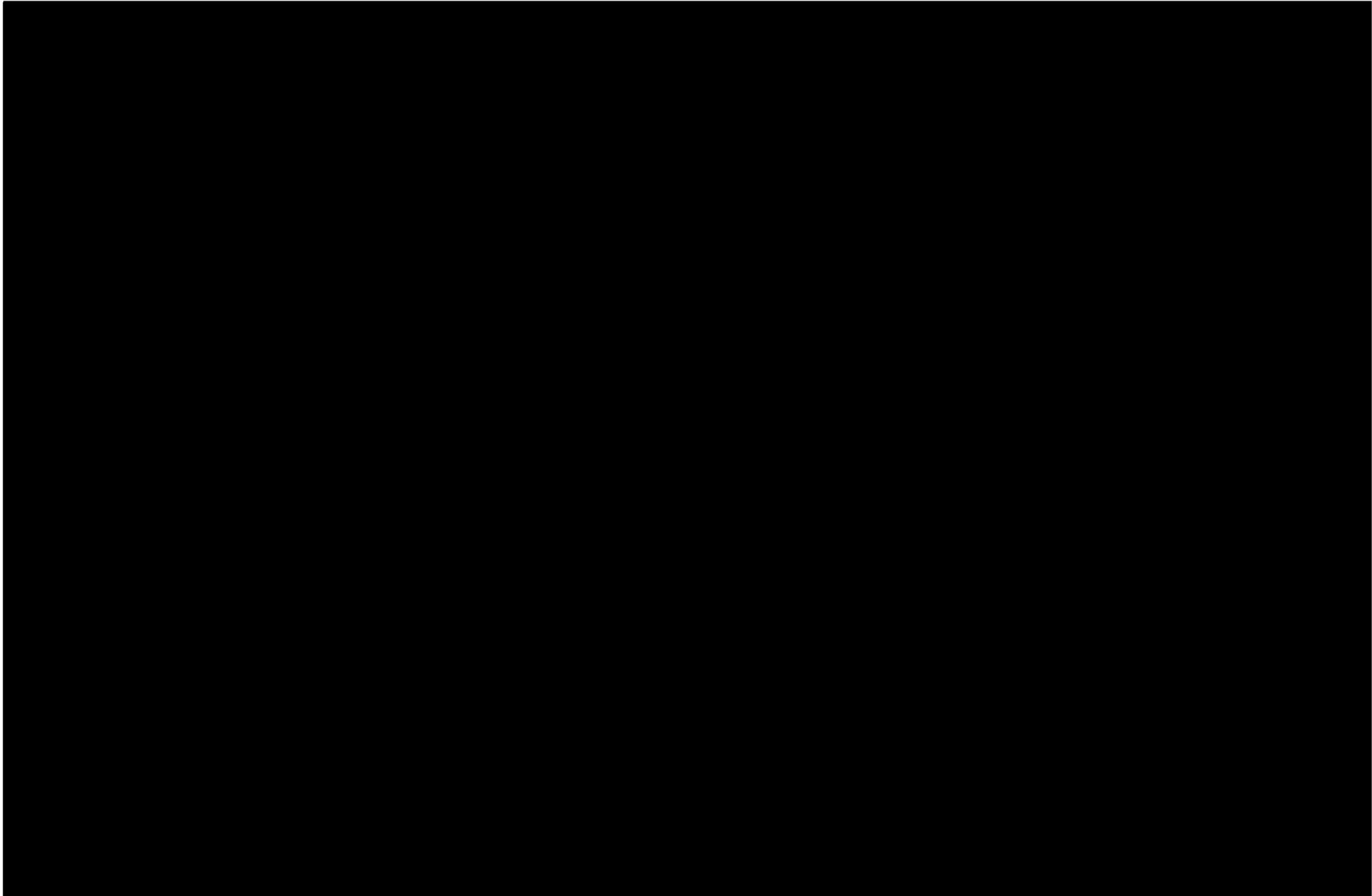


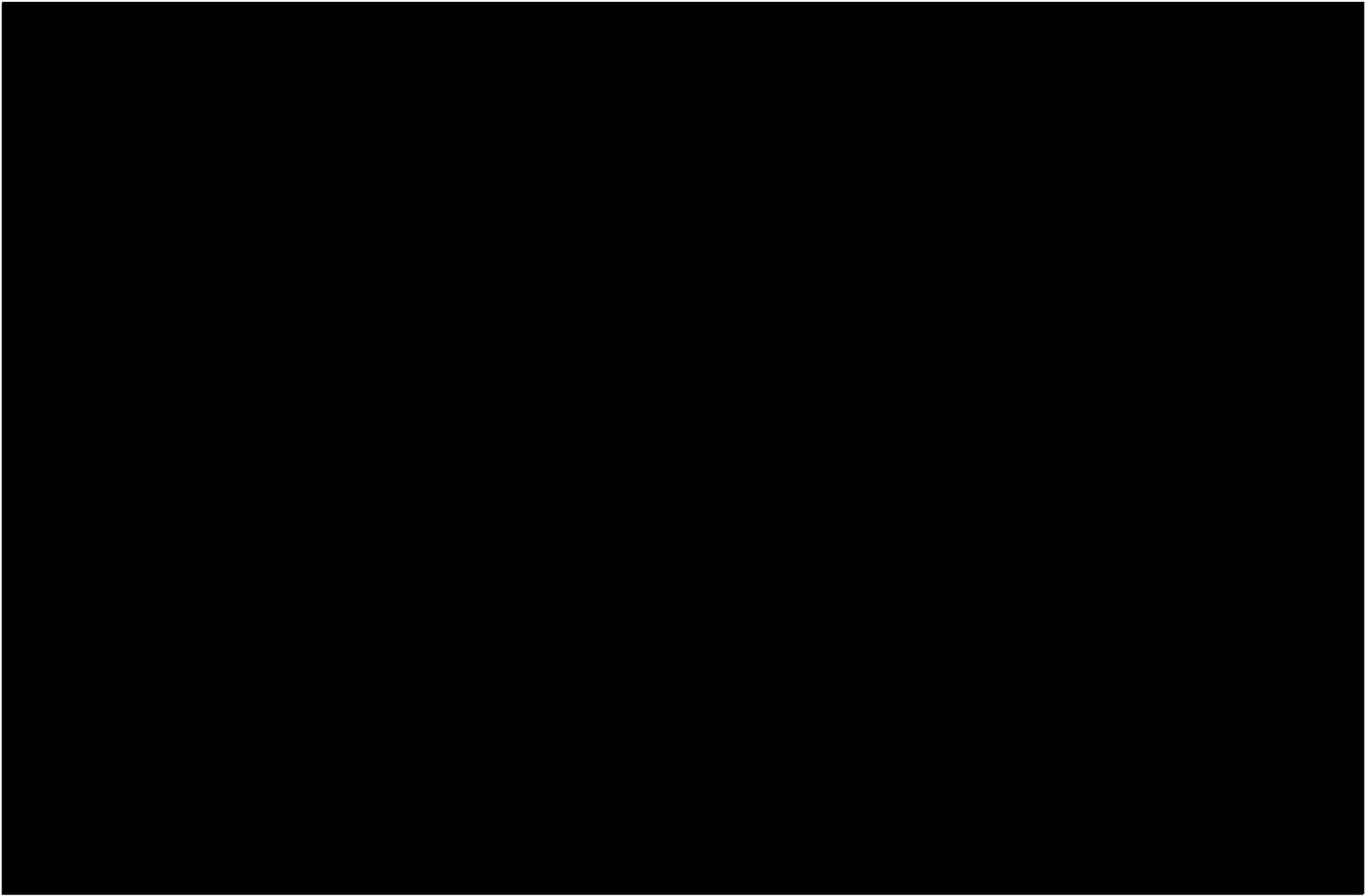


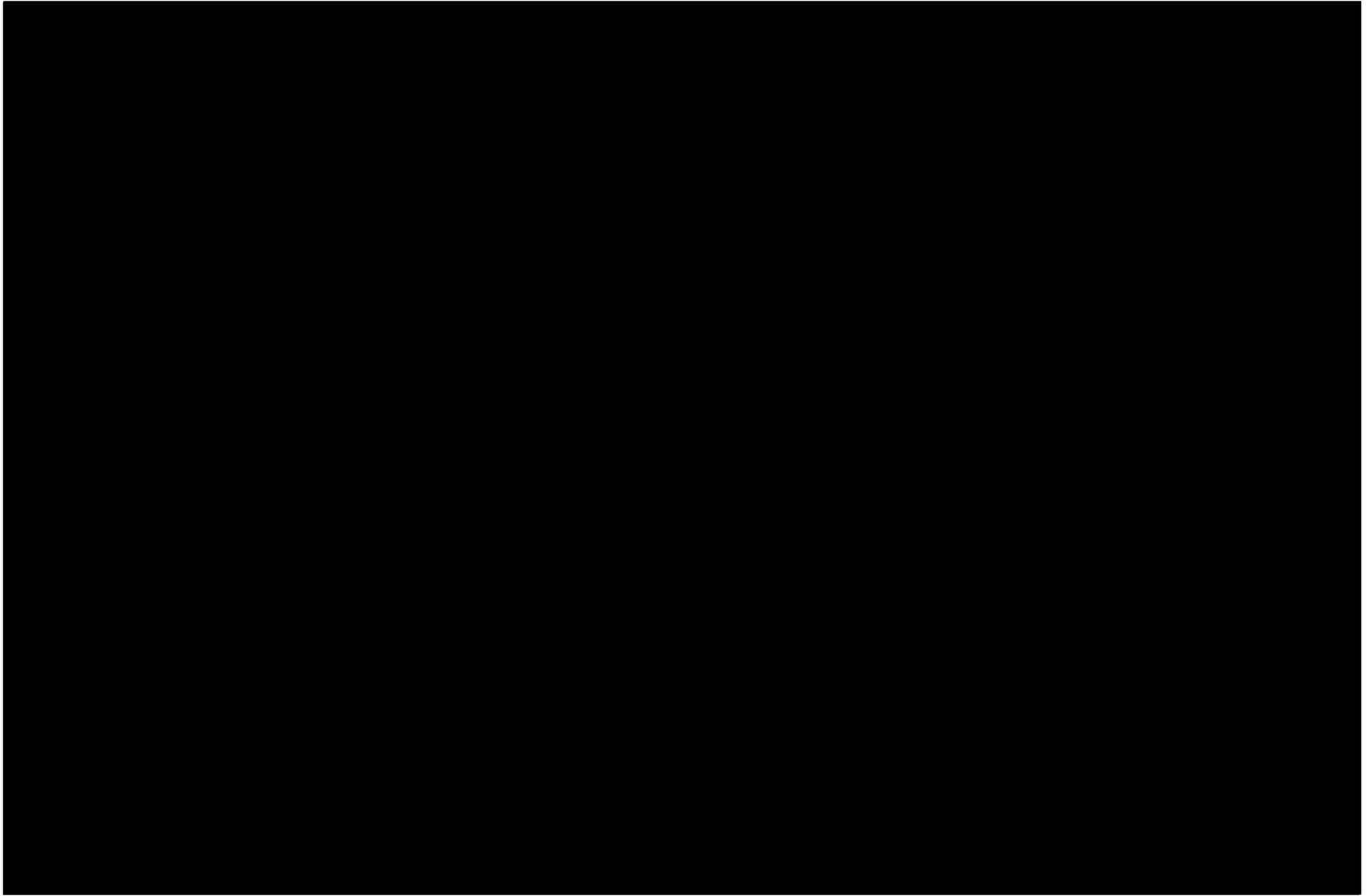


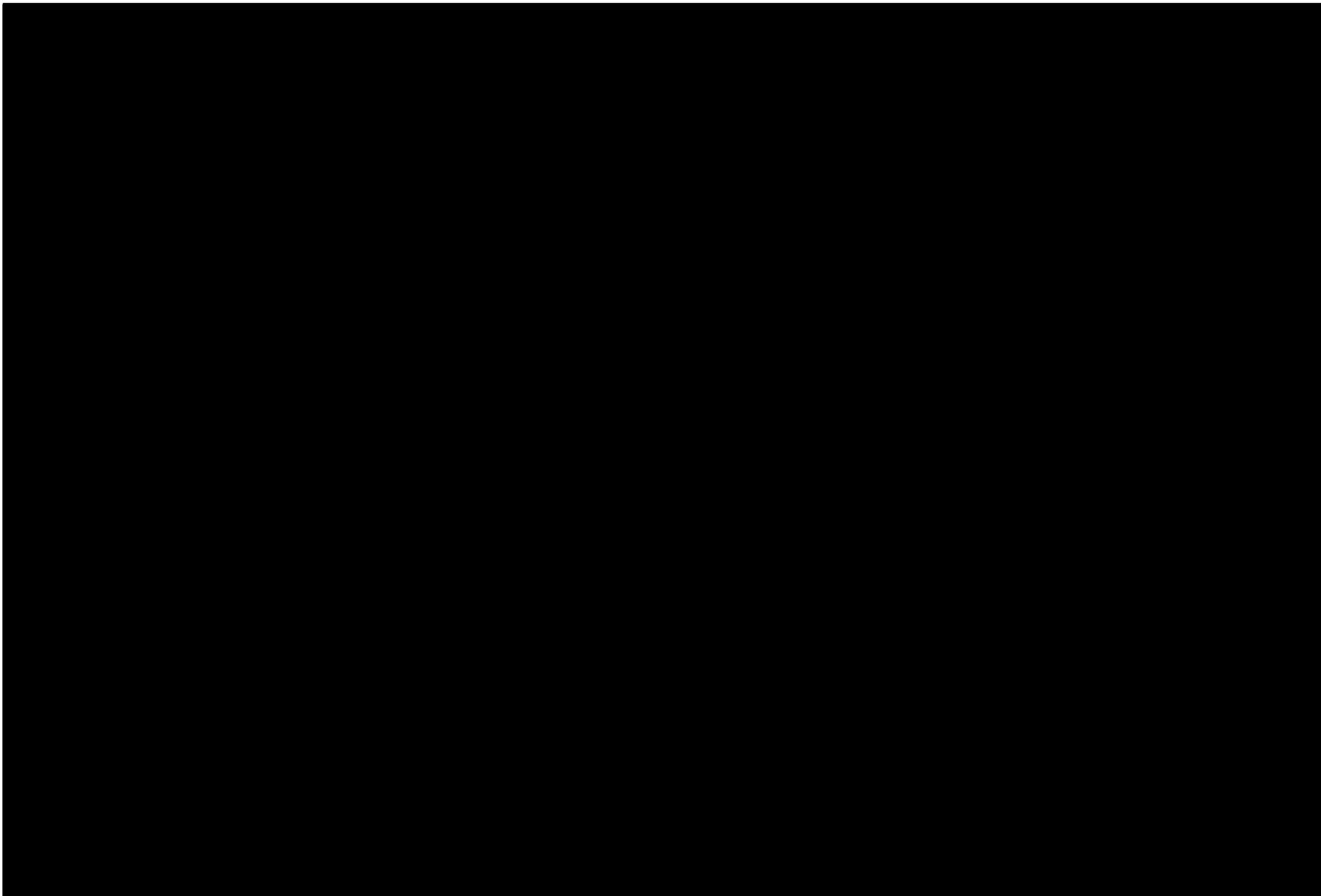


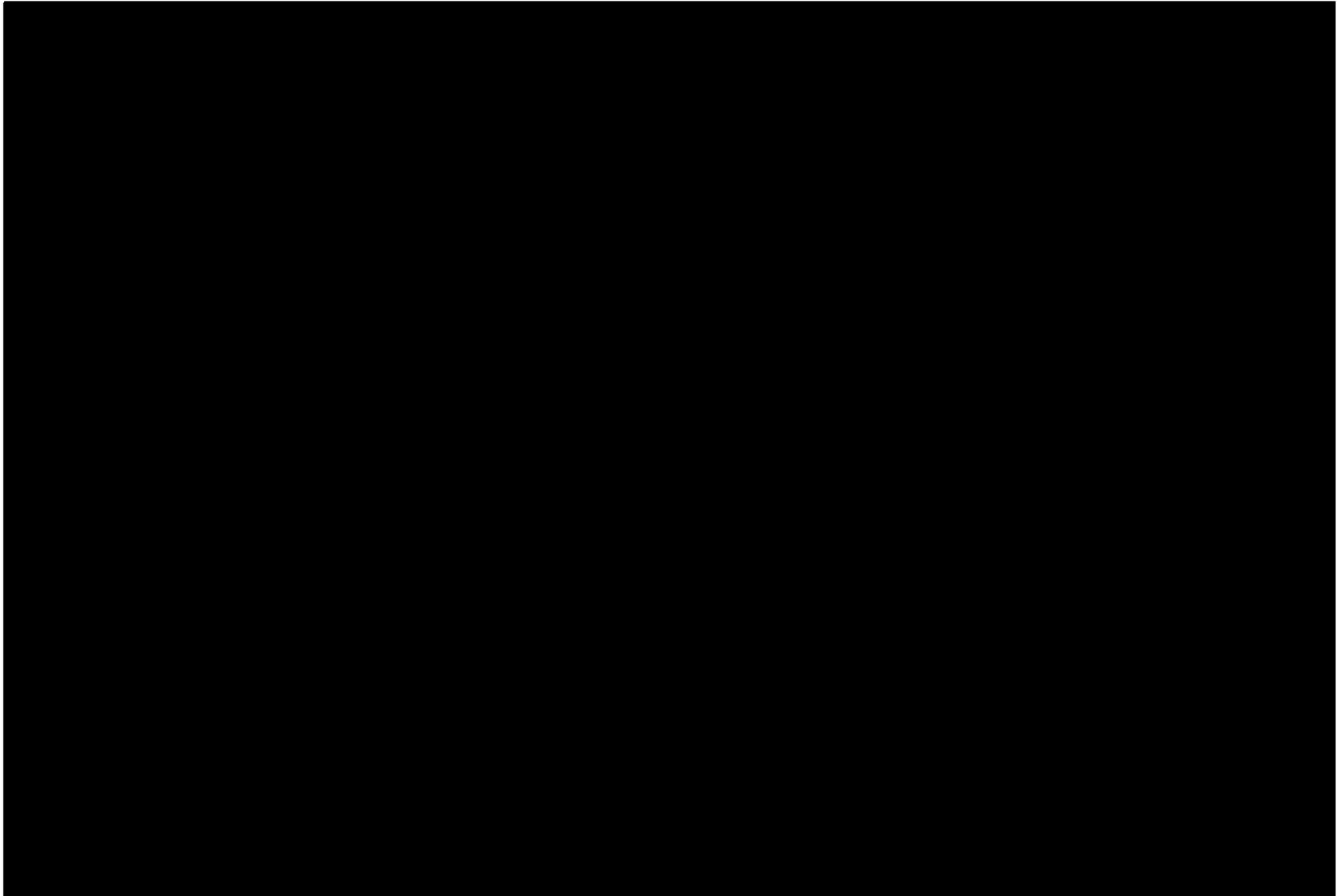


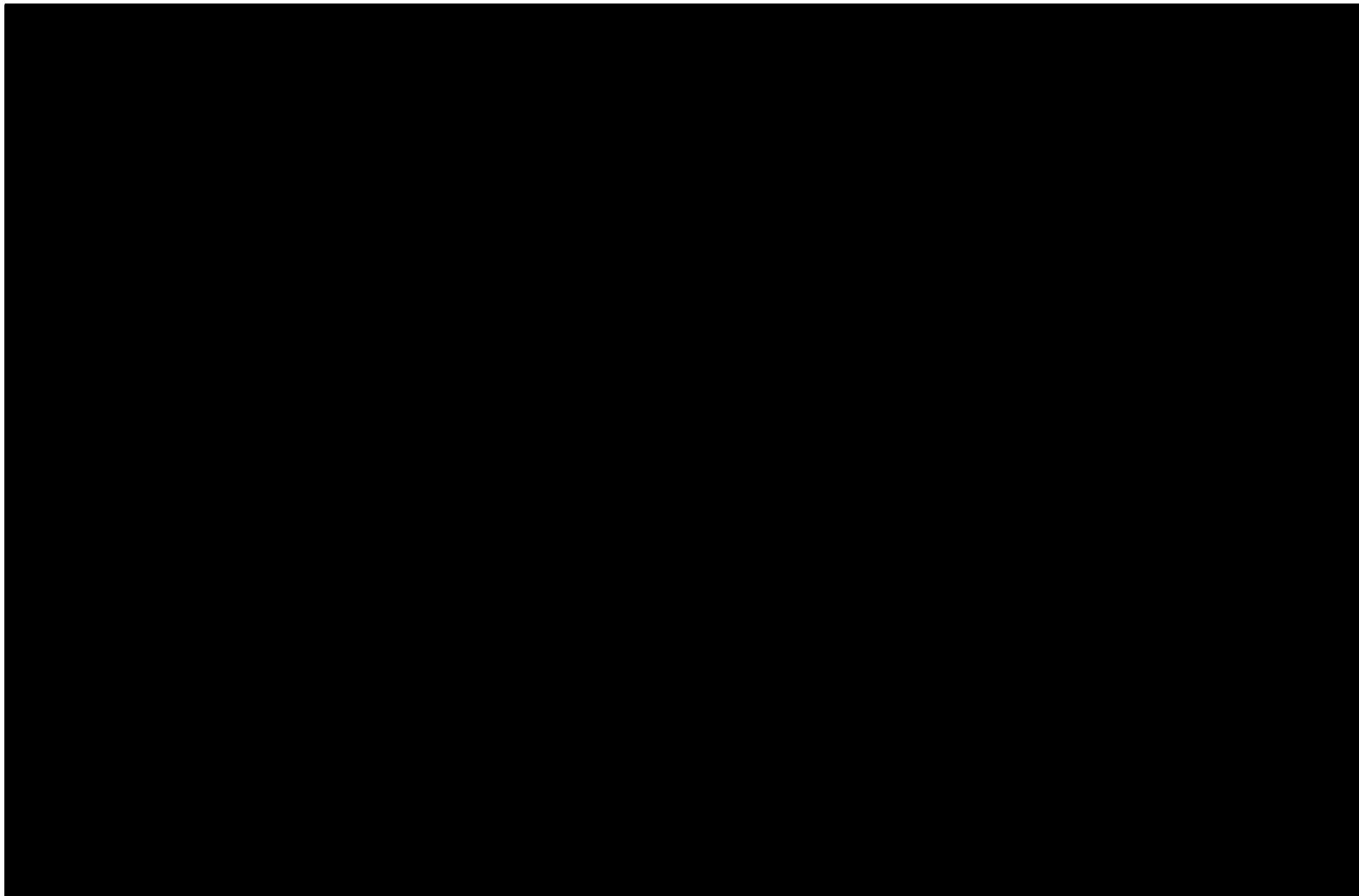












**APPENDIX A  
REFERENCES**

1. Port Authority Facility Condition Survey Program, Guidelines for Condition Survey of Buildings.
2. NYC Building Code, Title 27, Subchapter 5
3. Condition Survey Report of the Port Authority Bus Terminal, Bus & Parking Slabs, December 2012
4. The following CADD drawings were provided by The Port Authority of NY & NJ:

-  01\_LOCATION PLAN.dwg
-  02\_LOWER BUS LEVEL PLAN.dwg
-  03\_LOWER BUS LEVEL FRAMING.dwg
-  04\_MAIN CONCOURSE LEVEL PLAN.dwg
-  05\_MAIN CONCOURSE LEVEL FRAMING PLAN.dwg
-  06\_SUBURBAN CONCOURSE.dwg
-  07\_SUBURBAN BUS LEVEL.dwg
-  08\_SUBURBAN BUS LEVEL FRAMING.dwg
-  09\_UPPER BUS LEVEL.dwg
-  10\_UPPER BUS LEVEL FRAMING.dwg
-  11\_CAR PARKING LEVEL 5.dwg
-  12\_CAR PARKING LEVEL 5 FRAMING.dwg
-  13\_CAR PARKING LEVEL 6.dwg
-  14\_CAR PARKING LEVEL 6 FRAMING.dwg
-  15\_CAR PARKING LEVEL 7.dwg
-  16\_CAR PARKING LEVEL 7 FRAMING.dwg
-  17\_ACCESS TUNNEL.dwg

**APPENDIX B  
DATA INPUT SHEET**

BUILDING DATA SHEET

<b>ID</b>	PABT	<b>INSPECTION CYCLE</b>	
<b>FACILITY</b>	PORT AUTHORITY BUS TERMINAL	<b>BASELINE INSPECTION</b>	
<b>BLDG NO.</b>		<b>LAST INSPECTIONS</b>	2012
<b>DATE BUILT</b>	1950	<b>GENERAL CONDITION</b>	GOOD
<b>USAGE</b>	BUS PASSENGER TERMINAL AND PARKING SPACE	<b>COMMENTS</b>	
<b>NUMBER OF STORIES</b>	NORTH WING - 4, SOUTH WING - 7		
<b>BASEMENT</b>	NORTH WING - 2, SOUTH WING - 4		
<b>STRUCTURE HEIGHT</b>	99' - 6"	<b>CONTRACT NUMBERS</b>	
<b>TOTAL FLOOR AREA</b>	1,614,000 SF		
<b>LENGTH</b>	797' - 4 3/4" (ALONG 40 <sup>TH</sup> STREET)		
<b>WIDTH</b>	453' - 2 1/8" (ALONG 8 <sup>TH</sup> AVENUE)	<b>HEIGHT &gt; 72'?</b>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
<b>FRAMING TYPE</b>	STRUCTURAL STEEL FRAME WITH WIDE FLANGE BEAMS AND COLUMNS ENCASED IN CONCRETE		
<b>FLOOR TYPE</b>	CAST-IN-PLACE CONCRETE SLAB		
<b>EXTERIOR WALL</b>	Concrete Cavity walls with brick masonry exterior	<b>DATE OF DATA INPUT</b>	9/30/2014
<b>ROOF TYPE</b>	NORTH - ASPHALT, SOUTH - PAVED	<b>REVISION DATE:</b>	
<b>SPECIAL ELEMENTS</b>			

**APPENDIX C  
IMMEDIATE ACTION LETTERS**



August 25, 2014

Mr. C. John Lin, P.E.  
Assistant Chief Engineer  
Quality Assurance Division  
THE PORT AUTHORITY OF NY & NJ  
100 Mulberry Street,  
3 Gateway Center, 3<sup>rd</sup> Floor  
Newark, New Jersey 07102

Attention: Camille Dagher, PE  
Project Manager

REF: Expert Professional Services – Performance of Condition Survey for Buildings As Requested on a “Call-In” Basis PA Agreement 405-14-014, P.O. 4900010549

Subject: 2014 CONDITION SURVEY OF THE PORT AUTHORITY BUS TERMINAL, BUS AND PARKING LEVEL SLABS

Dear Mr. Dagher,

During the 2014 Condition Survey of the PABT we identified several areas of cracked and hollow sounding concrete on the underside of the slabs and encased steel framing of the Upper Bus Level and the 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> floor car parking levels. In addition, we identified several areas of cracked and hollow concrete on the West Truss of the South Wing parking levels. The total area is approximately 555 SF.

Small pieces of loose concrete were removed during the inspection. However, larger sections of deteriorated concrete could not be removed using hand tools. This condition presents a potential safety hazard to the traffic and pedestrians below. Therefore, it is recommended that the cracked and hollow concrete be removed on an immediate basis. A location plan and photos of the typical conditions have been attached.

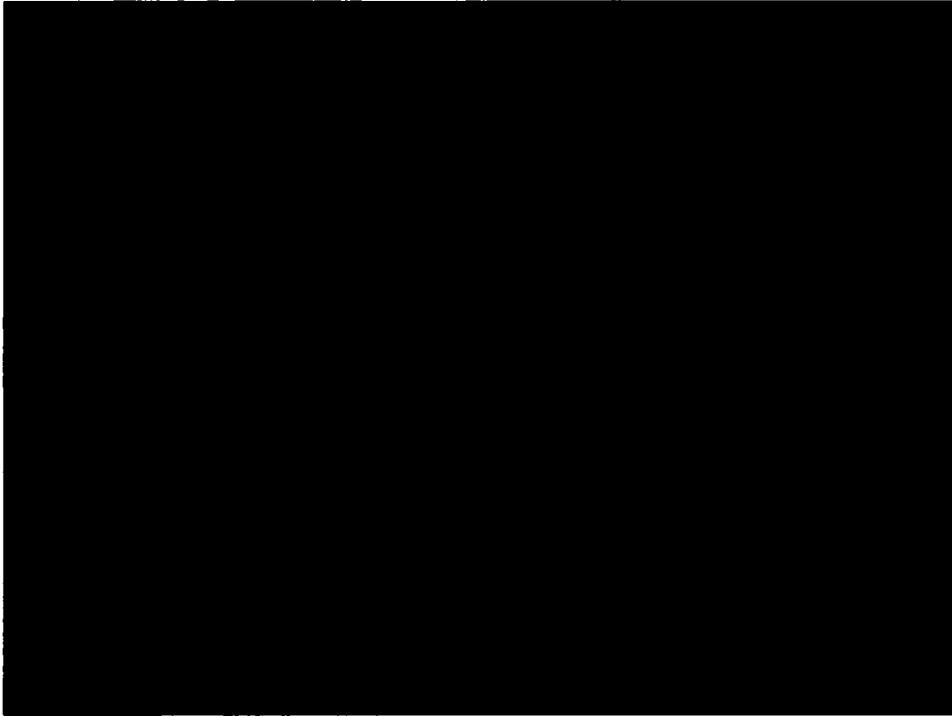
Should you have any questions or require additional information do not hesitate to contact me.

Sincerely,  
URS Corporation – New York

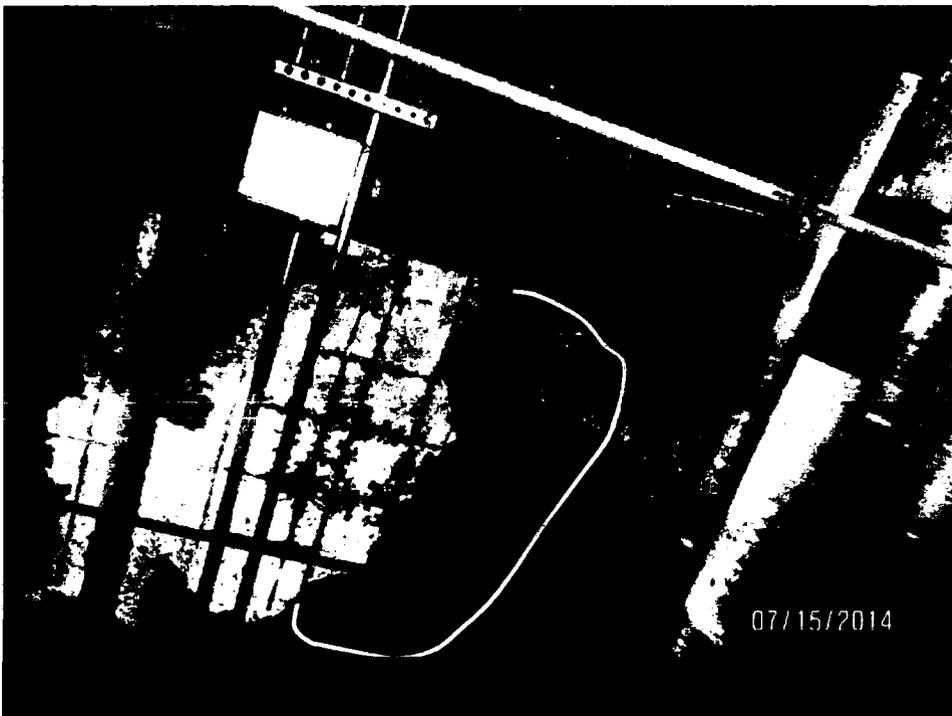
  
Richard J. Sansone, PE  
Project Manager

URS Corporation  
1 Penn Plaza, Suite 600  
New York, NY 10119  
Tel: 212.736.4444  
Fax: 212.629.4249

**PORT AUTHORITY BUS TERMINAL  
BUS & PARKING LEVEL SLABS - PHOTOGRAPHS**

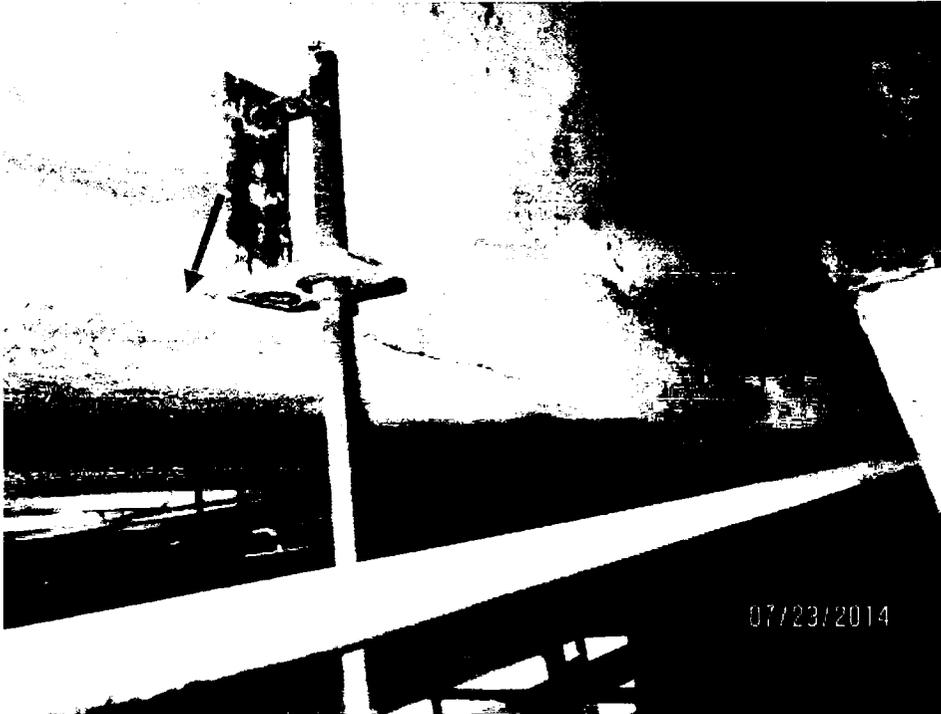


**Photo 1:** Underside of the Upper Bus Level 4<sup>th</sup> floor framing at the entrance (N-S Girder) – Crack and Hollow area on the underside (13 sf)

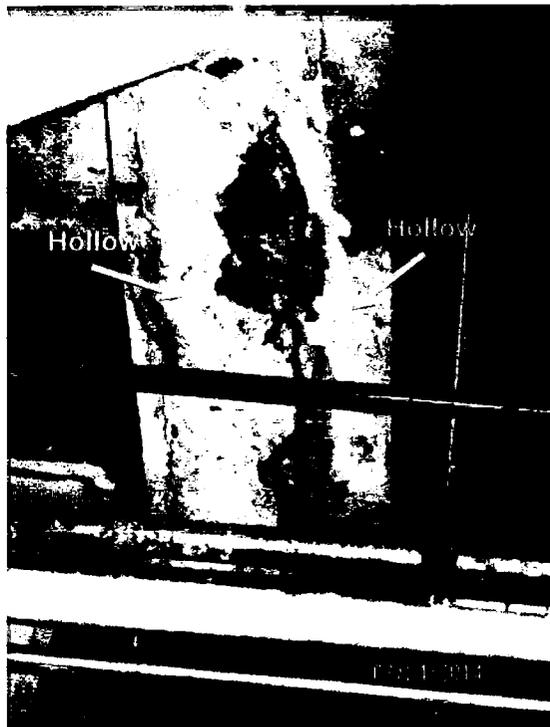


**Photo 2:** Underside of the Upper Bus Level 4<sup>th</sup> floor slab – Hollow and Delaminated area (8 sf) next to the spall.

PORT AUTHORITY BUS TERMINAL  
BUS & PARKING LEVEL SLABS - PHOTOGRAPHS



**Photo 3:** Underside of parking level 6, truss line 3 between panel points U0-U1, looking south – Cracked and Hollow underside of top chord, 15' x 1' (15 sf).



**Photo 4:** Underside of the Parking Level 6 (truss line 27 at panel point U0, looking south) – Delaminated and Hollow area (2 SF) around the spall.

PORT AUTHORITY BUS TERMINAL  
BUS & PARKING LEVEL SLABS - PHOTOGRAPHS

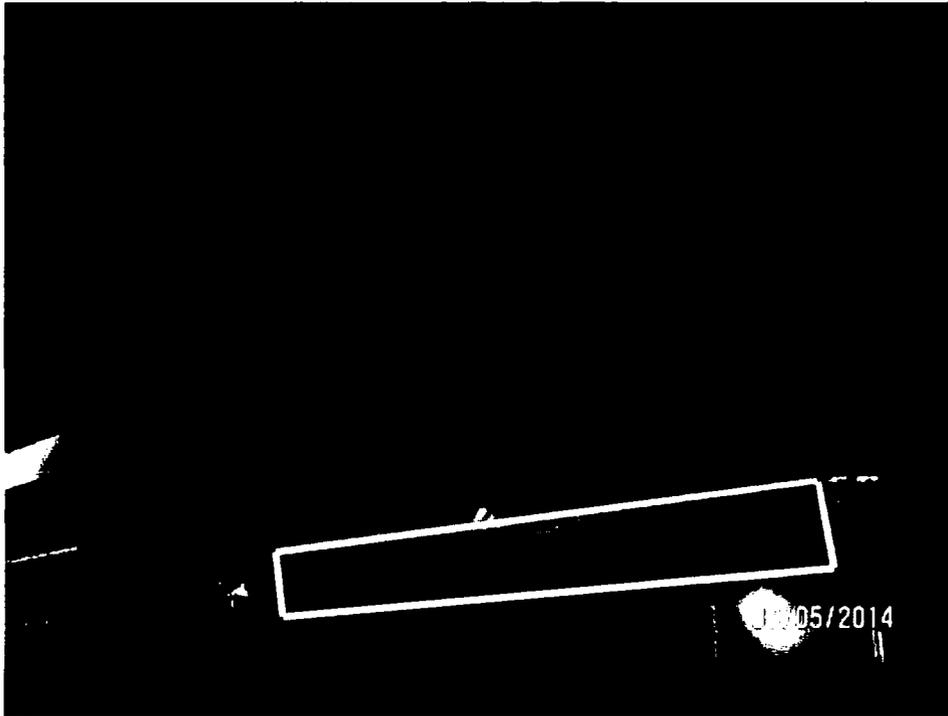


**Photo 5:** West Truss, Top Chord (between panel points U1-U2, looking NW) – Hollow and Cracked Top Face (54 SF) and East Face (20 SF)



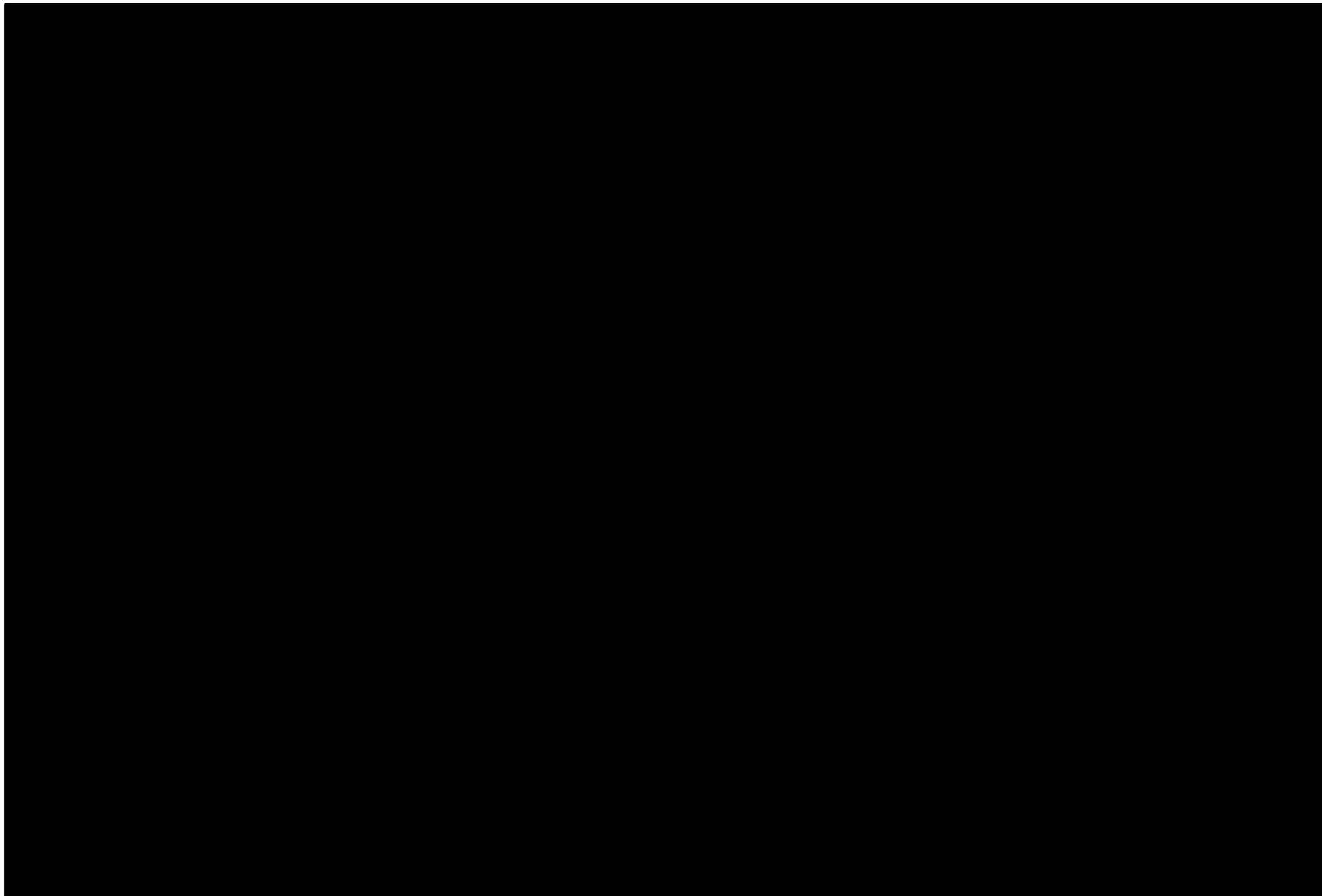
**Photo 6:** West Truss, Vertical Post at panel point U4, looking north – loose, but attached by wire mesh (4 SF) concrete between the post and ramp fascia.

**PORT AUTHORITY BUS TERMINAL  
BUS & PARKING LEVEL SLABS - PHOTOGRAPHS**

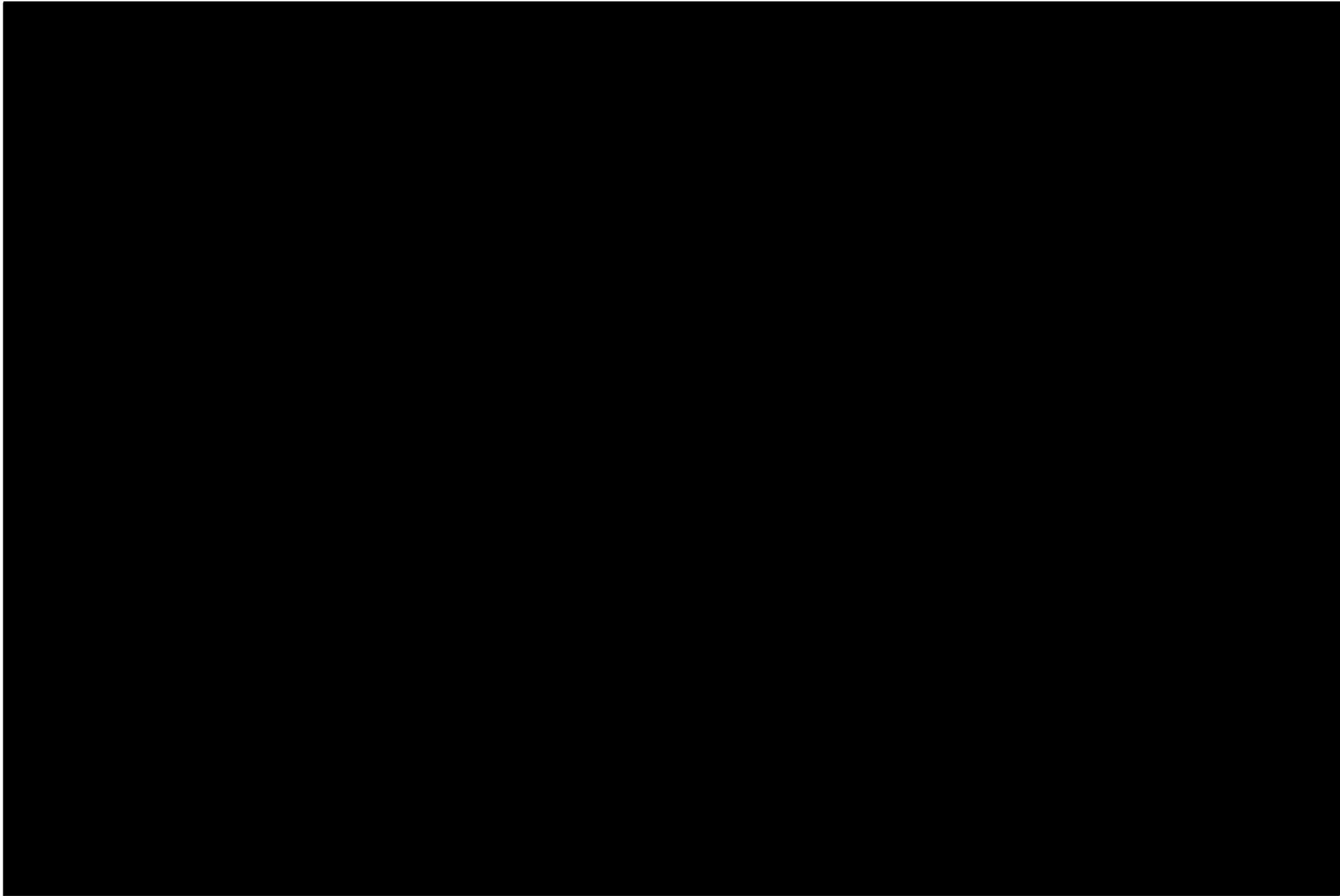


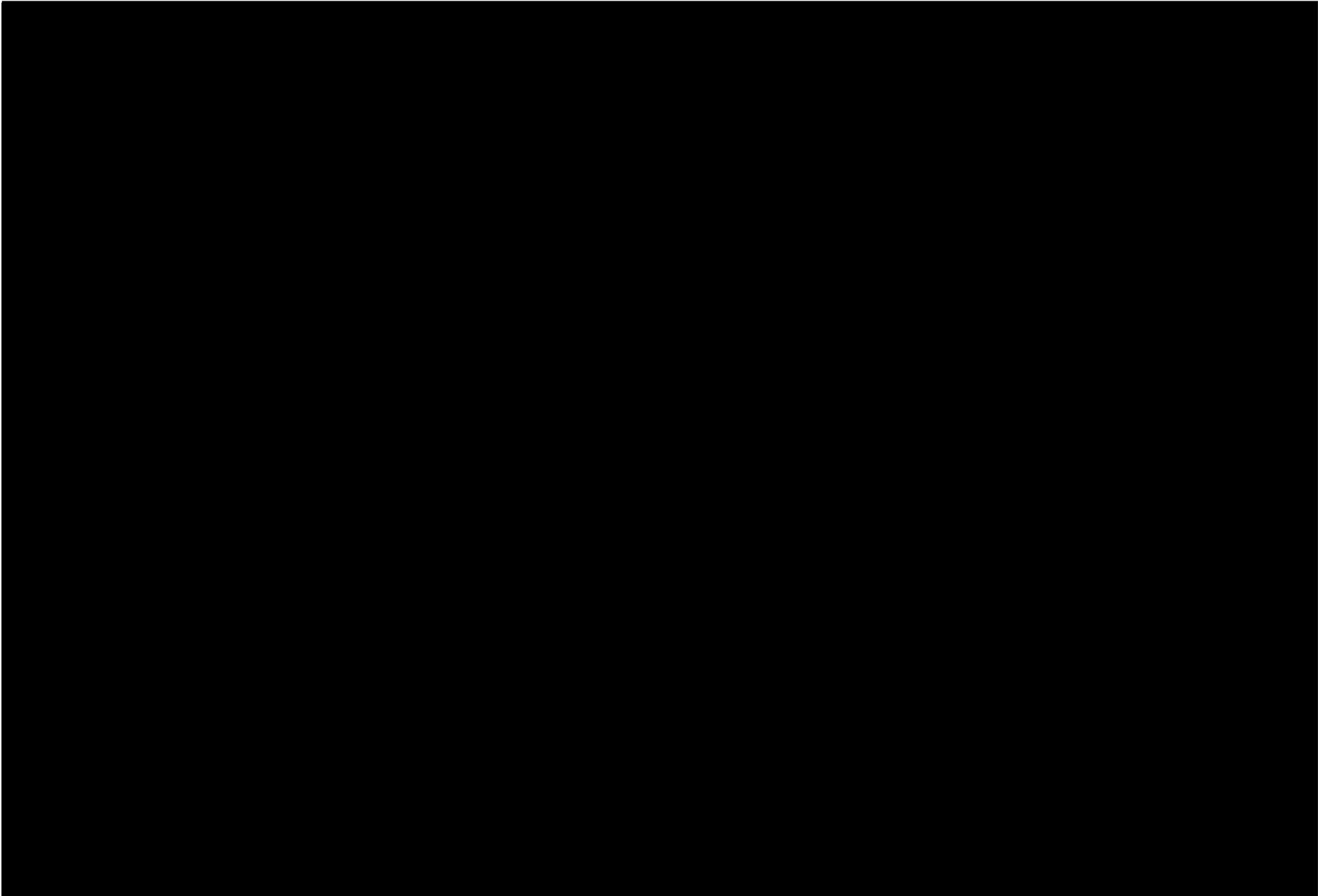
**Photo 7: West Truss, panel point L5 Underside of bottom chord, looking SW  
– Cracked and Hollow Area (14 SF)**

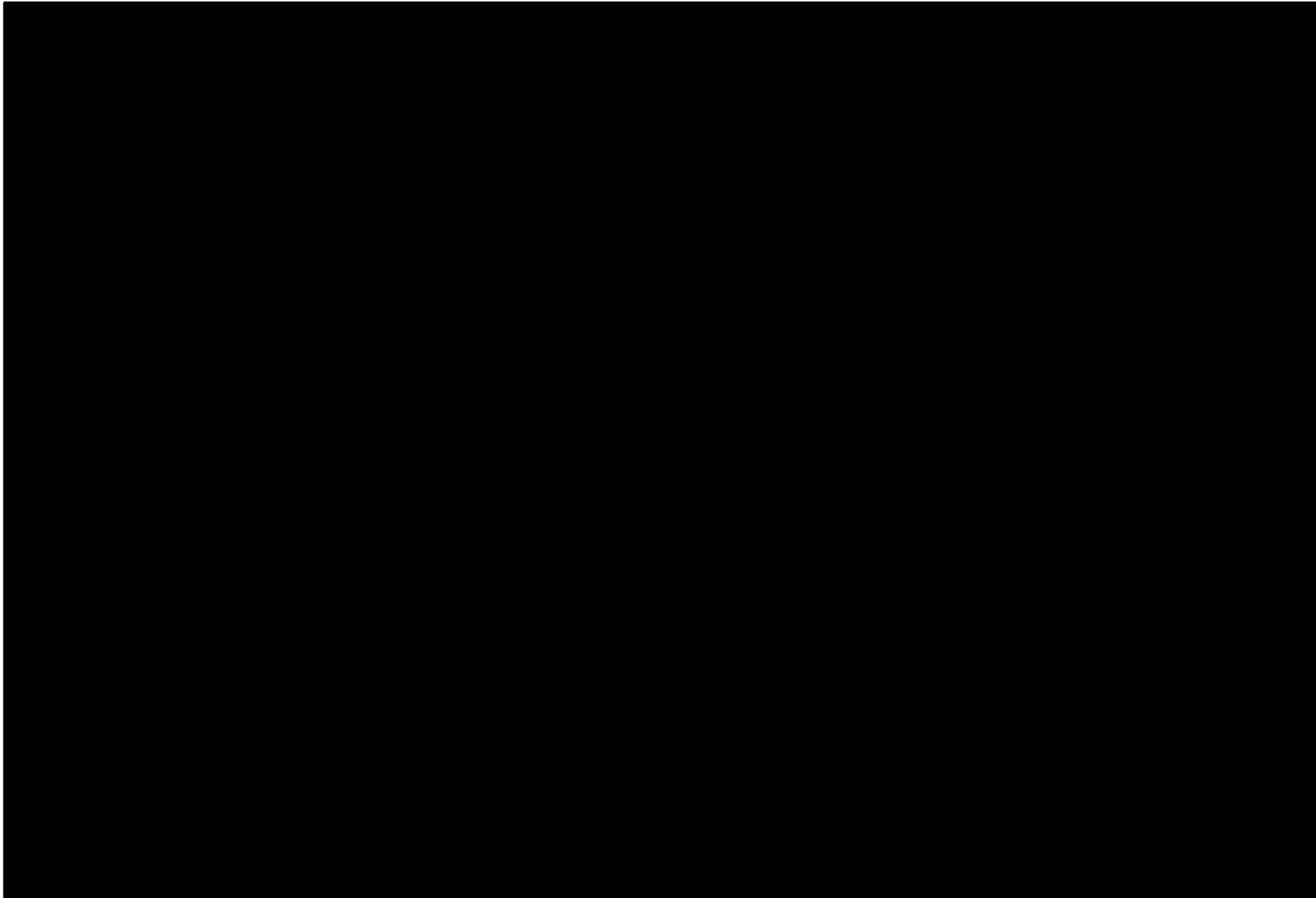


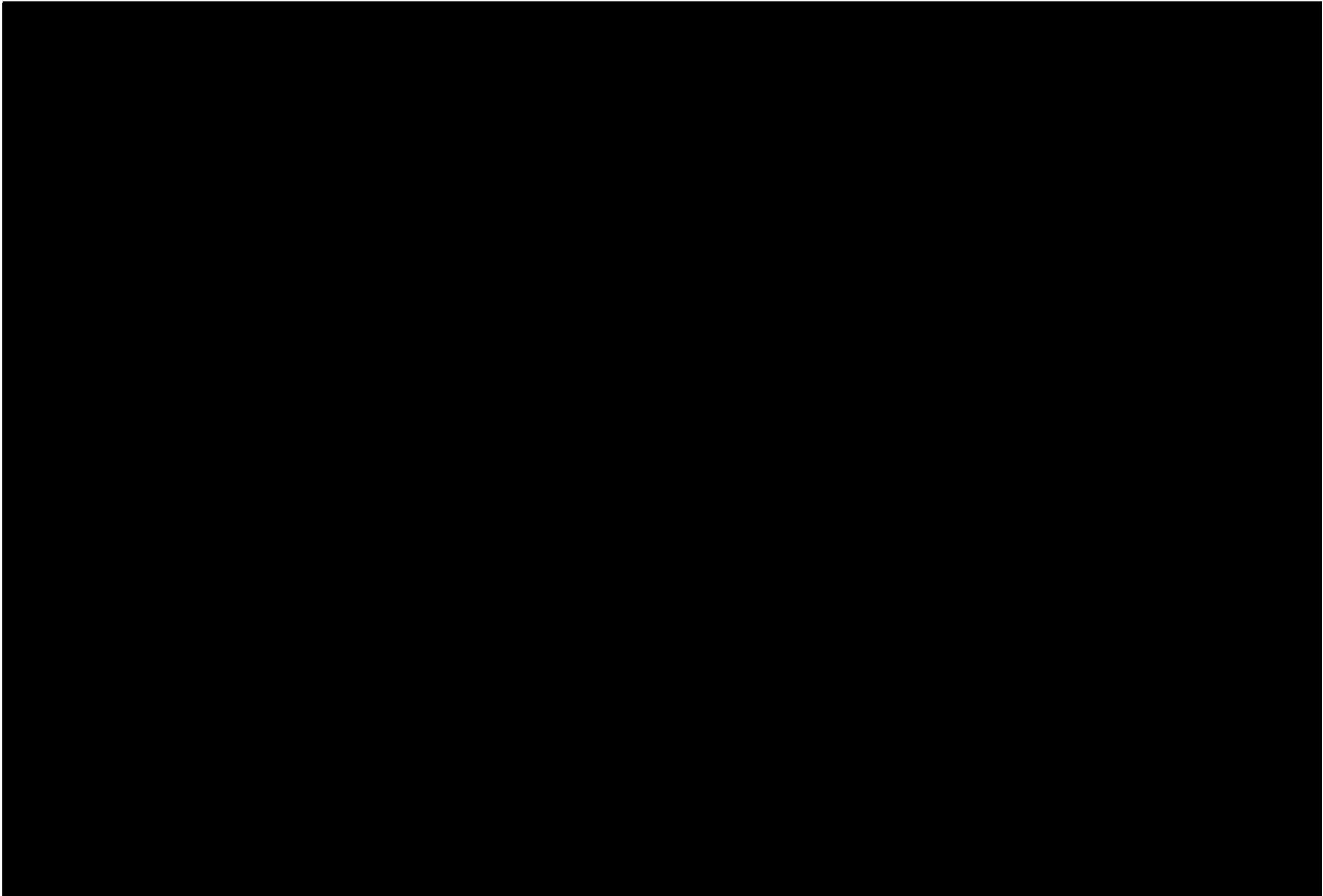


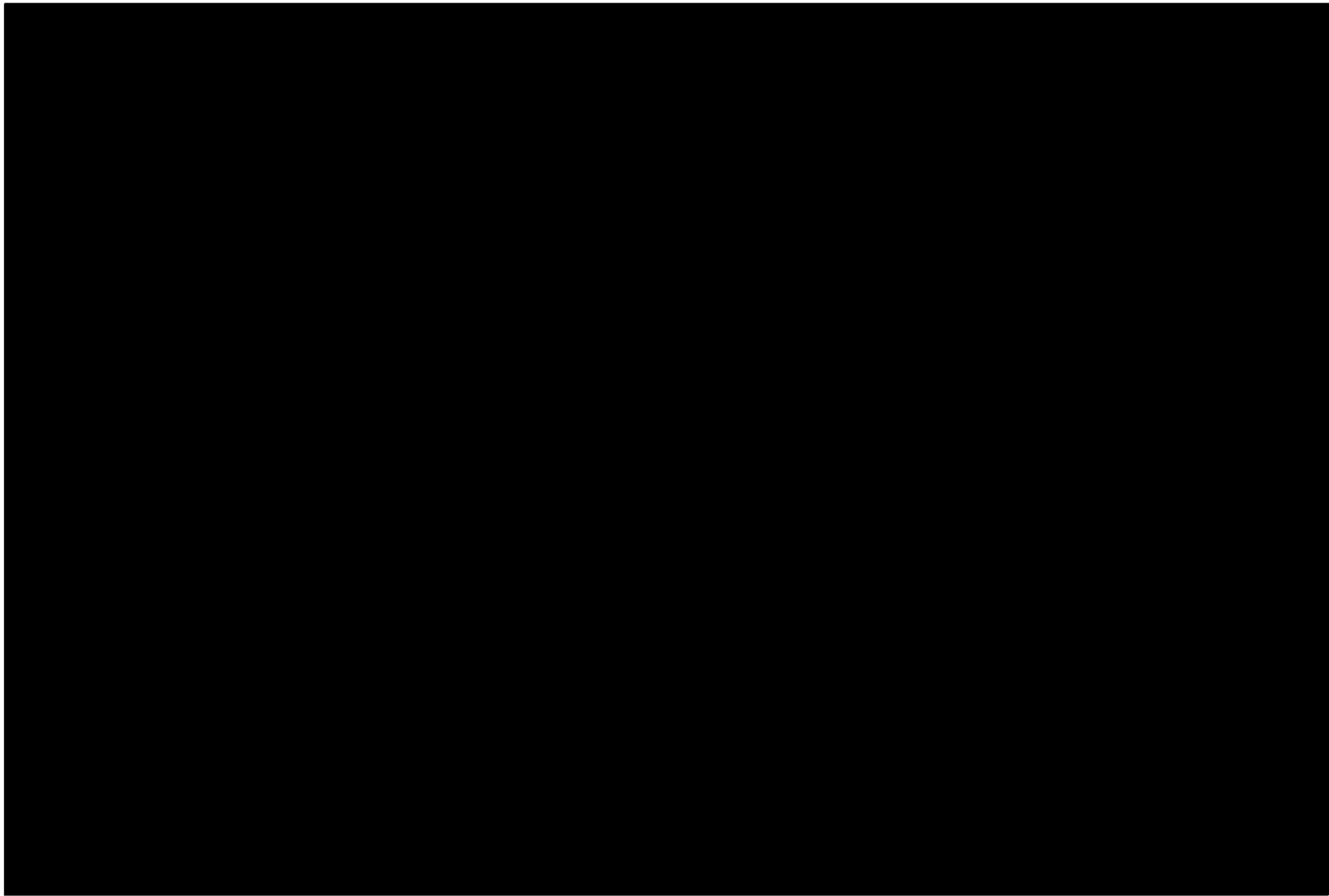


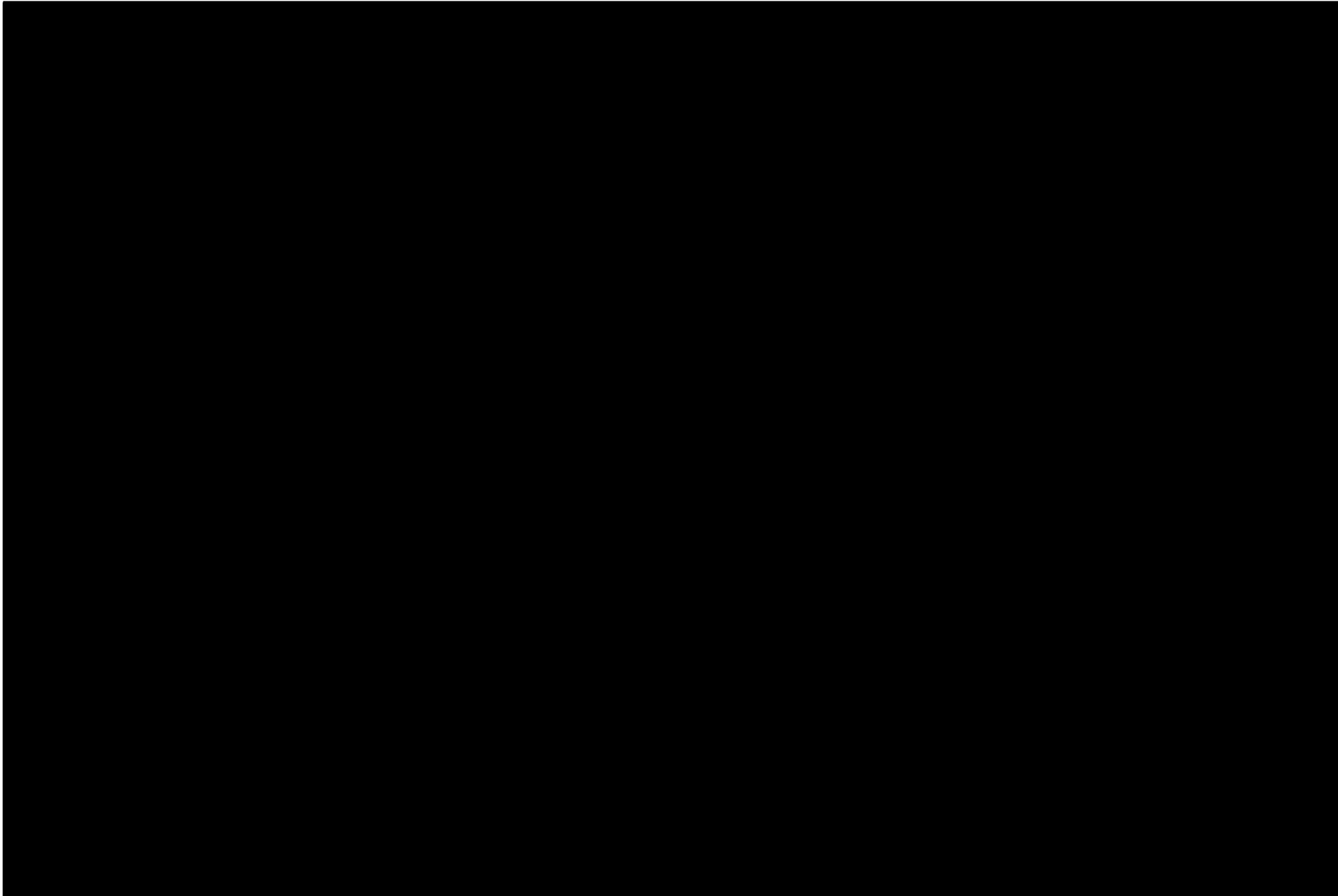


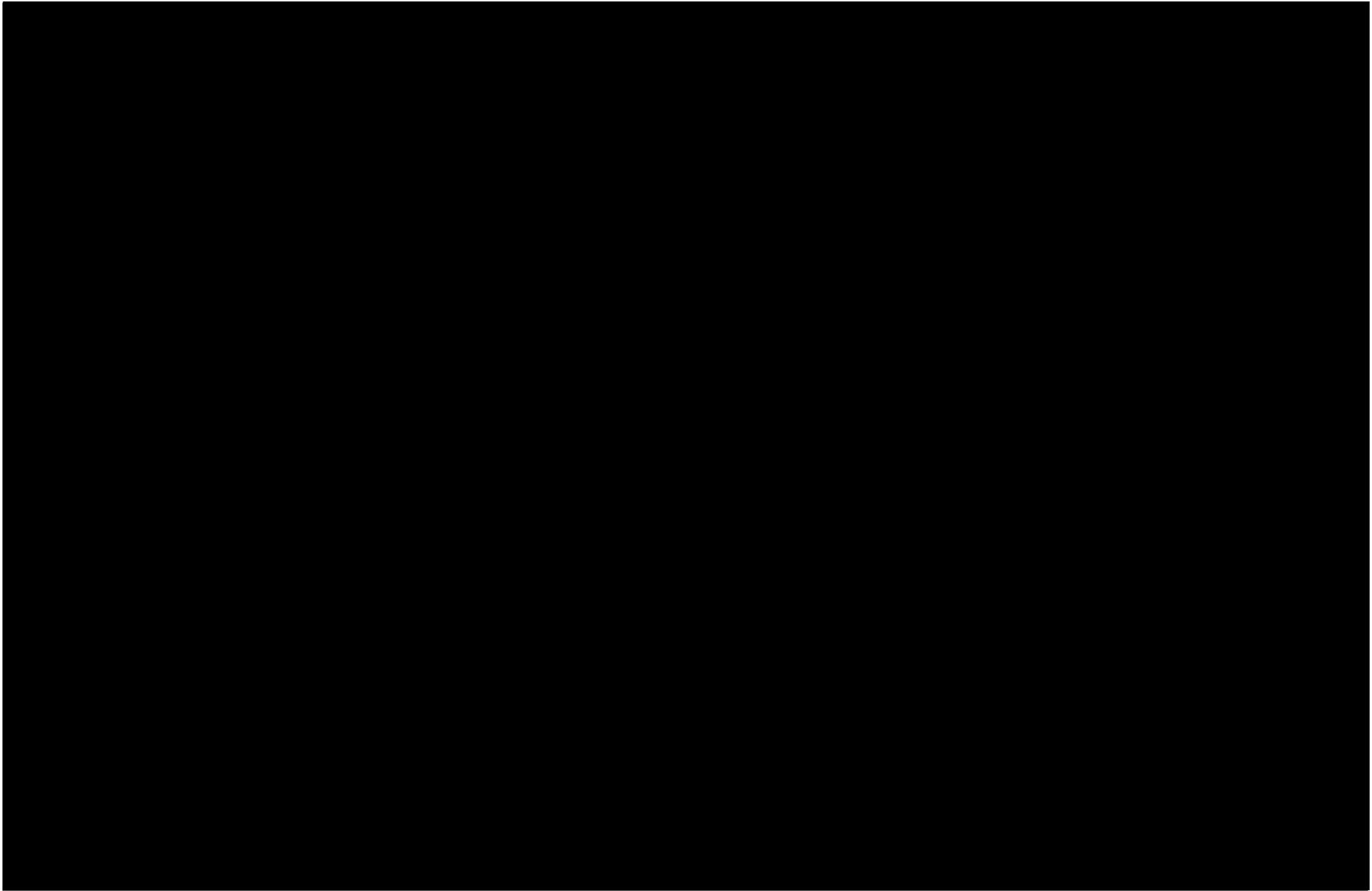


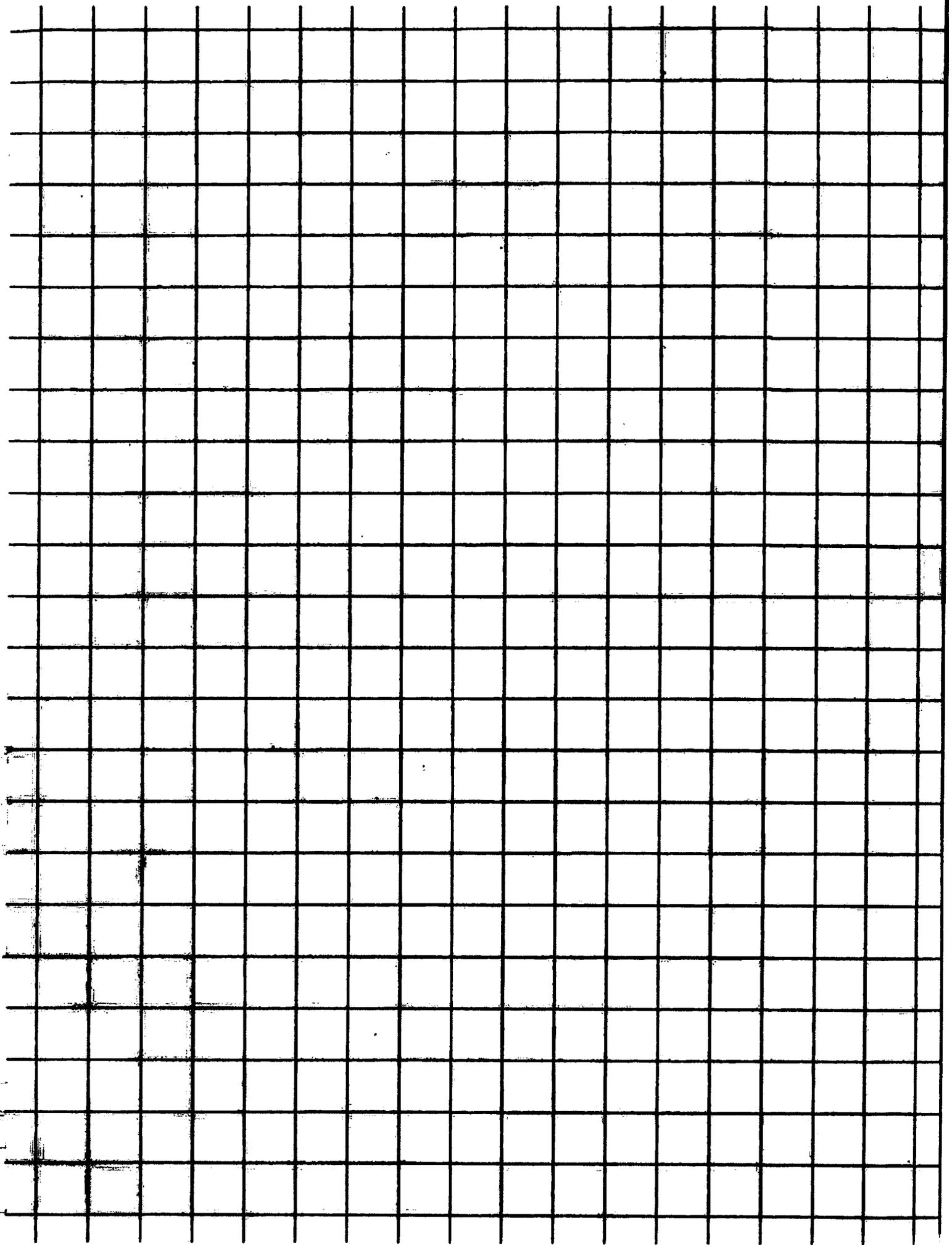












	WO	WO		SEC	WO	NEED
FAC	NUMBER	TYPE	WO DESCRIPTION	SUBS	STATUS	DATE
PABT	149774	CO	DAILY PLUMBING REPAIRS FROM INSP.REPORT	301	COMPLT	1/5/2015
PABT	149776	EM	REINSTALL LOOSE HANDRAIL GATE 204 S/W 3RD FLOOR.	301	COMPLT	1/5/2015
PABT	149778	CO	INSTALL FIRST AID KIT AND BULLETIN BOARD IN NEW OCC.	301	COMPLT	1/6/2015
PABT	149779	CO	REPLACE DAMAGED LOW POINT BOX AND PIPING.	301	COMPLT	1/6/2015
PABT	149780	CO	REPLACE LEAKING PIPING IN CEILING.	301	COMPLT	1/7/2015
PABT	149782	CO	RPR MAN DOORS FROM INSPECTION # 2240091 WO# 142761-1.	301	COMPLT	1/7/2015
PABT	149787	CO	REPLACE DAMAGED LOW POINT BOX AND PIPING.	301	COMPLT	1/8/2015
PABT	149790	EM	EMERGENCY SPRINKLER REPAIR WET 2 LANES BOWLING.	301	COMPLT	1/8/2015
PABT	149788	CO	REPLACE DAMAGED LOW POINT BOX AND PIPING.	301	COMPLT	1/9/2015
PABT	149792	EM	REPLACE SPRINKLER HEAD DISPATCH BOOTH.	301	COMPLT	1/10/2015
PABT	149793	EM	REPAIR SPRINKLER PIPE.	301	COMPLT	1/10/2015
PABT	149783	CO	RPR MAN DOORS FROM INSPECTION REPORT# 2244308 WO #142408-1	301	COMPLT	1/12/2015
PABT	149784	CO	RPR MAN DOORS FROM INSPECTION REPORT 2244313 WO# 142052-1	301	COMPLT	1/12/2015
PABT	149795	CO	WINTER OPERATION OF STEAM HOT WATER.	301	COMPLT	1/12/2015
PABT	149796	CO	CLEAR MAIN LINE STOPPAGE POLICE LOCKER RM B-3 LEVEL	301	COMPLT	1/12/2015
PABT	149798	CO	CHECK FOR AIR LEAK ON SPRINKLER SYTEM 3RD FL N/W GATE 316	301	COMPLT	1/12/2015
PABT	149799	CO	MAKE REAIR TO MANUAL DOOR STAIRWAY F 2ND FLOOR LANDING	301	COMPLT	1/12/2015
PABT	149800	CO	MAKE STRUCTAL REPAIRS AS PER 4-0 E-MAILS	301	COMPLT	1/12/2015
PABT	149805	EM	PATCH / REPIAR HOLE IN FLOOR. GATES 315-317 N/W.	301	COMPLT	1/13/2015
PABT	149806	EM	REPAIR REMOVE SAFETY YELLOW FLOOR TILE.	301	COMPLT	1/13/2015
PABT	149807	CO	REPLACE DAMAGED LOW POINT BOX AND PIPING.	301	COMPLT	1/14/2015
PABT	149808	EM	REMOVE UNSAFE / BROKEN BENCH.	301	COMPLT	1/14/2015
PABT	149812	EM	REMOVE HANGING /FALLING METAL CEILING FROM GATE 211DOOR# 4.	301	COMPLT	1/15/2015
PABT	149816	CO	RPR MAN DOORS MANAGERS REAR RESTROOM. PLACE HINGES.	301	COMPLT	1/16/2015
PABT	149817	CO	RPR MAN DOORS REPLACE DOOR CLOSRES.	301	COMPLT	1/16/2015
PABT	149819	CO	REBUILD DRY SPRINKLER VALVE	301	COMPLT	1/16/2015
PABT	149820	CO	PATCH HOLES IN FLOOR.	301	COMPLT	1/16/2015
PABT	149821	CO	CLEAR ROADWAY DRAINS.	301	COMPLT	1/17/2015
PABT	149824	CO	DAILY PLUMBING REPAIRS FROM INSP.REPORT	301	COMPLT	1/20/2015
PABT	149825	EM	MAKE EMERGENCY SPRINKLER PIPING REPAIRS.	301	COMPLT	1/20/2015
PABT	149826	CO	T/S AND REPAIR LOW AIR SPRINKLER SYSTEM.	301	COMPLT	1/21/2015
PABT	149828	CO	RPR MAN DOORS VENT BLDG 9TH AVE OFFICE DOOR.	301	COMPLT	1/21/2015
PABT	149833	CO	MAKE REPAIR GATE 60, LOOSE METAL DOOR FRAME	301	COMPLT	1/22/2015
PABT	149834	EM	13	301	COMPLT	1/23/2015
PABT	149829	CO	REPAIR STEAM LEAK SOUTH WING 4TH FLOOR	301	COMPLT	1/24/2015
PABT	149836	CO	REPAIR STEAM LEAK SOUTH WING 4TH FLOOR	301	COMPLT	1/24/2015
PABT	149838	EM	INVESTIGATE LOW WATER PRES. MAKE REPAIRS AFTER RESTORED,	301	COMPLT	1/24/2015
PABT	149840	EM	RESPOND TO STEAM LEAK OUTSIDE THE A/C PLANT	301	COMPLT	1/26/2015
PABT	149844	CO	CLEAR, SNAKE COMPACTOR DRAINS	301	COMPLT	1/28/2015
PABT	149845	CO	T/S AND REPAIR PUMPS.	301	COMPLT	1/29/2015
PABT	149846	CO	T/S AND REPAIR NO POWER TO WATER COOLER.	301	COMPLT	1/29/2015
PABT	149847	CO	RPR MAN DOORS FROM REPORT.	301	COMPLT	1/29/2015
PABT	149848	CO	REPAIR FLOOR TILE.	301	COMPLT	1/29/2015
PABT	149851	CO	T/S AND REPAIR	301	COMPLT	1/29/2015
PABT	149849	CO	MAKE REPAIRS FROM DUTY 4-0 LIST DATED 1/29/15.	301	COMPLT	1/30/2015
PABT	149850	CO	SECURE LOOSE HANDRAIL GATE 230 FRONT.	301	COMPLT	1/30/2015
PABT	150252	CO	DAILY PLUMBING REPAIRS FROM INSP.REPORT	301	COMPLT	2/2/2015
PABT	150253	CO	NON - PLUMBING REPAIRS FROM INSPECTION REPORT.	301	COMPLT	2/2/2015
PABT	150256	CO	INVESTIGATE LAELS S/W 2ND FLOOR RE-INSTALL BIBS IN CEILING.	301	COMPLT	2/4/2015
PABT	150255	CO	INSTALL TV AND AED EQUIPMENT. J.REYES.	301	COMPLT	2/4/2015
PABT	150258	EM	REPAIR LEAK ON DRY 9 N/W SPRINKLER SYSTEM	301	COMPLT	2/4/2015
PABT	150263	CO	T/S AND REPAIR SPRINKLER SYSTEM	301	COMPLT	2/4/2015
PABT	150259	CO	REPLACE DOOR CLOSER.	301	COMPLT	2/5/2015
PABT	150261	CO	REMOVE 60' OF 4" DRAIN PIPING.	301	COMPLT	2/6/2015
PABT	150265	CO	RPR MAN DOORS./ REPLACE OVERHEAD CLOSER.	301	COMPLT	2/6/2015
PABT	150266	CO	REPAIR FLOOR TILE.	301	COMPLT	2/6/2015
PABT	150267	CO	REPAIR FLOOR TILE.	301	COMPLT	2/6/2015
PABT	150271	EM	REPLACING A DEFECTIVE STOP FLOAT SANITARY PIT EAST EQUIP R	301	COMPLT	2/6/2015
PABT	150269	CO	REPLACE DRAIN PIPING IN MER # 3.	301	COMPLT	2/7/2015

PABT	150275	CO	T/S STOP FLOAT SANITARY PIT EAST EQUIP ROOM	301	COMPLT	2/10/2015
PABT	150277	CO	SNAKE TROUGH DRAIN IN FRAMES SPACE.	301	COMPLT	2/12/2015
PABT	150279	CO	SEMI-ANN: INSPECT & SERIVCE, DRUM DRIPS & LOW POINTS:MPC F15	301	COMPLT	2/12/2015
PABT	150278	EM	SECURE LOOSE STAIRWAY TREAD TICKET PLAZA. S/W MAIN LEVEL.	301	COMPLT	2/13/2015
PABT	150280	EM	T/S AND REPAIR LOW AIR DRY SPRINKLER SYSTEM # 9	301	COMPLT	2/15/2015
PABT	150281	EM	T/S AND REPAIR SPRINKLER LEAL N/W DRY.	301	COMPLT	2/16/2015
PABT	150282	EM	T/ AND REPAIR WET 1 NW SPRINKLER SYSTEM.	301	COMPLT	2/16/2015
PABT	150283	EM	T/S AND REPAIR SPRINKLER SYSTEM WET 1 S/W.	301	COMPLT	2/16/2015
PABT	150284	CO	REMOVE WLL TILE FROM MENS RESTROOM.	301	COMPLT	2/17/2015
PABT	150294	EM	T/S AND REPAIR LEAKING SPRINKLER SYSTEM DRY 6 S/W.	301	COMPLT	2/18/2015
PABT	150288	CO	T/S AND REPAIR LOW AIR DRY SPRINKLER SYSTEM # 9	301	COMPLT	2/18/2015
PABT	150298	CO	REPAIRED FROZEN DRAIN LINE AND PUMPED WATER FROM PIT	301	COMPLT	2/19/2015
PABT	150291	CO	INSPECT AND MAKE REPAIRS TO FLOOR TILES IN GREYHOUND.	301	COMPLT	2/19/2015
PABT	150293	CO	T/S AND REPAIR AIR COMPRESSORS FIRE SPRINKLER SYSTEMS.	301	COMPLT	2/19/2015
PABT	150295	CO	RPR MAN DOORS.	301	COMPLT	2/19/2015
PABT	150300	CO	T/S AND REPAIR AIR LEAKS IN FIRE SPRINKLER COMPRSSOR LINE.	301	COMPLT	2/20/2015
PABT	150301	EM	T/S AND REAPIR LEAKING SPRINKLER SYSTEM DRY 6 3RD FLOOR.	301	COMPLT	2/22/2015
PABT	150302	CO	REPAIR DOORS FROM 4-0 REPORT	301	COMPLT	2/23/2015
PABT	150307	CO	INSPECT AND CHANGE OIL IN AIR COMPRESSORS.	301	COMPLT	2/26/2015
PABT	150306	EM	REPAIR LEAK IN AIR COMPRESSOR SUPPLY LINE CHECK FOR LEAKS.	301	COMPLT	2/26/2015
PABT	150318	EM	REPAIR DRY 11 NW 3RD FLOOR.	301	COMPLT	2/28/2015
PABT	150316	CO	SECURE DRY 4 S/W AND REPLACE DAMAGED PIPING.	301	COMPLT	2/28/2015
PABT	150315	CO	SECURE HPS AND LPS STEAM LINES IN LBL.	301	COMPLT	2/28/2015
PABT	150311	CO	NON - PLUMBING REPAIRS FROM INSPECTION REPORT.	301	COMPLT	3/2/2015
PABT	150308	CO	DAILY PLUMBING REPAIRS FROM INSP.REPORT	301	COMPLT	3/2/2015
PABT	150317	CO	RPR MAN DOORS AS E-MAIL.	301	COMPLT	3/2/2015
PABT	150820	CO	SNAKE 2 DRAIN LINE.	301	COMPLT	3/4/2015
PABT	150821	EM	SECURE BRONZE PANELS NW	301	COMPLT	3/4/2015
PABT	150822	CO	REPAIR LOOSE PANEL SAFETY ISSUE FROM SAFETY MEETING.	301	COMPLT	3/5/2015
PABT	150823	CO	SNAKE PIT S/W B-3 LEVEL.	301	COMPLT	3/5/2015
PABT	150827	EM	REPAIR METAL CURBLINE 232 BETWEEN DOORS 1 & 2.	301	COMPLT	3/6/2015
PABT	150824	CO	OPEN SLOTTED CILING FOR FRAMES PLUMBER.	301	COMPLT	3/6/2015
PABT	150828	CO	RPR MAN DOORS FROM E-MAIL DUTY 4-0 DATED 3/7/15 OAKES.	301	COMPLT	3/9/2015
PABT	150836	CO	RPR MAN DOORS BOTTOM PIVOT.	301	COMPLT	3/10/2015
PABT	150835	CO	REINSTALL HANDRAIL TO GATE 203. 4-0 OAKES REPORT LOOSE	301	COMPLT	3/10/2015
PABT	150837	CO	RE-INSTALL BOLLARD GATE 205 REAR OF PLATFORM.	301	COMPLT	3/11/2015
PABT	150839	CO	RPR MAN DOORS FROM PM # 2240092 WO # 143698-1	301	COMPLT	3/11/2015
PABT	150842	EM	T/S AND REPAIR LOW AIR ISSUE.	301	COMPLT	3/11/2015
PABT	150843	EM	T/S AND REPAIR LOW AIR PRESSURE SWITCH.	301	COMPLT	3/11/2015
PABT	150845	EM	ASSIST QAD/STRUCTURAL INTEGRITY INSPECTING MAKE REPAIRS	301	COMPLT	3/11/2015
PABT	150840	CO	RPR MAN DOORS REPLACE MISSING CLOSER FROM PM2244318 WO143782	301	COMPLT	3/11/2015
PABT	150841	CO	REPLACE DAMAGED SHEETROCK TO M/S.	301	COMPLT	3/12/2015
PABT	150846	CO	RPR MAN DOORS REPLACE TOP PIVOT.	301	COMPLT	3/12/2015
PABT	150848	CO	RELOCATE LOW POINT FROM INSIDE ROOM TO OUTSIDE.	301	COMPLT	3/13/2015
PABT	150849	CO	T/S AND REPAIR PARTIALLY CLOGGED PUMP	301	COMPLT	3/13/2015
PABT	150850	CO	REPLACE DAMAGED 1" LOW POINT PIPE.	301	COMPLT	3/13/2015
PABT	150852	CO	DAILY PLUMBING REPAIRS FROM INSP.REPORT	301	COMPLT	3/17/2015
PABT	150856	CO	REMOVE CEILING IN OPS ROOM.	301	COMPLT	3/19/2015
PABT	150855	CO	MAKE REPAIRS IN SWPRV STATION	301	COMPLT	3/19/2015
PABT	150858	CO	RPR MAN DOORS FRPM DUTY 40 LIST. NW & SW SUBWAY ENT. DOORS.	301	COMPLT	3/23/2015
PABT	150867	EM	SECURE TROUGH ROADWAY PLATE S/W 7TH FLOOR.	301	COMPLT	3/25/2015
PABT	150866	CO	CLEAR STOPPAGE IN COMPACTOR ROOM.	301	COMPLT	3/25/2015
PABT	150869	CO	LOCKSMITH TO T/S AND MAKE REPAIRS TO THE KEYSWITCH FOR F11	301	COMPLT	3/26/2015
PABT	150868	CO	RPR MAN DOORS D.READE ENT.	301	COMPLT	3/26/2015
PABT	150871	CO	DAILY PLUMBING REPAIRS FROM INSP.REPORT	301	COMPLT	3/30/2015
PABT	150874	CO	RPR MAN DOORS FROM PM 2240042 WO#145210-1	301	COMPLT	3/30/2015
PABT	150873	CO	RPR MAN DOORS FITTERS STOCK ROOM.	301	COMPLT	3/30/2015
PABT	150877	CO	RPR MAN DOORS WING/FLOOR STAFF/PUBLIC	301	COMPLT	4/1/2015
PABT	150876	EM	REPAIR/ REPLACE BROKEN FLOOR TILE S/W UBL CONE OVER TILE.	301	COMPLT	4/1/2015
PABT	151444	EM	REMOVE AND REPLACE PUMP #1 AND CHANGE CHECK VALVE	301	COMPLT	4/6/2015
PABT	151446	CO	PAINT OFFICE AND REPLACE DAMAGED CEILING TILES.	301	COMPLT	4/7/2015
PABT	151445	CO	RPR MAN DOORS FROM INSPECTION REPORT 2240042 WO#145208-1	301	COMPLT	4/7/2015
PABT	151447	EM	RESECURE BIRD NETTING IN THE ROADWAY GATE 222.	301	COMPLT	4/7/2015

PABT	151448	CO	REMOVE 165 DEGREE SPRINKLER HEAD.	301	COMPLT	4/8/2015
PABT	151450	CO	REPLACE ELBOW AND PIPE TO DRY 6 LOW POINT BOX.	301	COMPLT	4/12/2015
PABT	151451	CO	RESTORE HPS TO COMPLEX.	301	COMPLT	4/12/2015
PABT	151449	CO	DAILY PLUMBING REPAIRS FROM INSP.REPORT	301	COMPLT	4/13/2015
PABT	151452	EM	REPAIR LOOSE STWY TREAD.DUTY 40-STRATTON AND 6-8 FRANK.	301	COMPLT	4/13/2015
PABT	151455	CO	REPAIR BROKEN CONCRETE SIDEWALK.	301	COMPLT	4/14/2015
PABT	151456	CO	OPERATIONS UNIT SUPPORT	301	COMPLT	4/14/2015
PABT	151461	CO	PAINT OFFICE IN MANAGERS OFFICE AHEAD OF FURNITURE DELIV	301	COMPLT	4/16/2015
PABT	151462	EM	SECURE TROUGH ROADWAY PLATE S/W 7TH FLOOR	301	COMPLT	4/16/2015
PABT	151463	CO	RPR MAN DOORS FROM 4-0 OAKES LIST.	301	COMPLT	4/17/2015
PABT	151464	CO	WELD CHAIN AND PADLOCK TO GATES.	301	COMPLT	4/20/2015
PABT	151467	CO	NON - PLUMBING REPAIRS FROM INSPECTION REPORT.	301	COMPLT	4/22/2015
PABT	151468	CO	RPR MAN DOORS S/W MAIN LEVEL 40 ST EXIT DOOR.	301	COMPLT	4/22/2015
PABT	151472	CO	REPLACE FLANGE AND SANITARY PIPING.	301	COMPLT	4/25/2015
PABT	151471	CO	REPAIR OR REMOVE DAMAGED HANDRAIL TO MER EAST EQUIP. ROOM.	301	COMPLT	4/27/2015
PABT	151476	CO	TRAILWAYS BATHROOM CHECK SEWAGE PUMPS FOR PROPER OPERATION	301	COMPLT	4/27/2015
PABT	151478	EM	CLEAR MAIN LINE STOPPAGE BY GERYHOUND DISTCHER BOOTH	301	COMPLT	4/27/2015