Incident Assessment

Incident ID	CIV0761	
Location	Slobidskyi district, Kharkiv	
Coordinates	49.9471, 36.2699¹ (CIV0761A)	
Date	03/04/2022	
Time	Between 17:35 and 18:25 EET	

Description of the Events

Around 18:00 EET on 03/04/2022, several posts containing videos and images with injured individuals and dead human bodies started to appear on social media. Although taken at different locations, accompanying captions indicated that captured incidents occurred in Slobidskyi district of Kharkiv. Captured incidents are concentrated within an area of 0.86 km, with a visible increase in the distance between locations from ~0.05 km to ~0.55 km with the direction from the North towards the South. This increase corresponds to the decrease in the shot grouping and indicates possible direction from which the strike has originated. Possible munition used for the strike was identified as 9M27K based on the visual analysis of: parts present at some of the incidents' locations; injuries sustained by individuals; marks on damaged objects, such as trolleybuses, buildings and roads; and the type of submunitions reportedly collected at these locations.

Key Findings

At 18:25 EET on 03/04/2022, photos and videos depicting human casualties and damage to civilian objects in various urban locations began to appear on social media platforms, followed by footage from public media outlets. These visual materials, which include photographs and videos of munitions remnants, metal fragments, and fragmentation patterns depicted at the scene, suggest a possible connection between them and the aforementioned casualties and damage.

Based on the visual examination and analysis of depicted munition remnants, submunition fragmentation, wounds, and fragmentation patterns at the scenes of the CIVo761 incident, it was determined that it is likely a single artillery strike using 9N235 submunitions delivered by 9M27K1 rockets. As a result at least seven civilians were reported dead and many more injured and damaged civilian property. It was estimated that the strike likely occurred on 03/04/2022 sometime between 17:35 and 18:25 EET.

¹ https://maps.app.goo.gl/RTnNZHEziv4TNnUW7

Description of Searches

In order to identify the earliest user generated content, posts in open sources containing an identical imagery or visual materials taken at the CIVo761A location, as well as any other relevant visual materials that could be linked to the incident depicted on Source 1 Image 1 (see the section "Examinable Content"), multiple reverse image searches and textual search queries were carried out. These searches used words describing location and some of depicted objects, such as: 'Kharkiv', 'Slobidskyi', 'Shelling', 'Strike', '9M27K', 'Cargo Section', 'Playground', 'Cinema', 'Casualties', 'Residential Area'; and their combinations in English, Russian, and Ukrainian. These searches were made using the Google and Yandex search engines, as well as popular social media platforms (Twitter, YouTube, and Telegram).

Additionally, numerous search queries were conducted to identify any general information pertinent to the present assessment, such as past weather forecasts and media reports covering the ongoing armed conflict and associated events, with the relevant results subsequently being collected and analysed.

Background Summary of Significant Descriptive Content

Media Reports

- Objective.TV²;
- Al Jazeera³:
- ANews⁴;
- Суспільне Харків⁵;
- CNN^6 ;
- TSN.UA⁷;
- IZVESTIA⁸;
- LB.UA⁹;
- DEPO¹⁰.

https://www.objectiv.tv/objectively/2022/04/03/vo-vremya-obstrela-slobodskogo-rajona-harkova-pogibli-minimum-7-chelovek-prokuratura-foto/

 $https://tsn.ua/ru/ato/rossiyane-snova-obstrelyali-harkov-est-pogibshie-i-ranenye-sredi-nih-deti-{\tt 2028292}. \\ html$

https://izvestia.kharkov.ua/proisshestvija/v-harkove-okkupanty-obstreljali-slobodskoj-rajon-situacija -na-vecher-03-04-2022/

https://kh.depo.ua/rus/kh/obstril-tsivilnikh-kvartaliv-kharkova-politsiya-povidomila-pro-zbilshenny a-kilkosti-zagiblikh-foto-202204041437078

³ https://www.youtube.com/watch?v=eL-36Wxoppw&t=111s

⁴ https://twitter.com/anews/status/1511010710062440455

⁵ https://www.youtube.com/watch?v=7yKJD2zDFzo

⁶ https://www.cnn.com/2022/04/05/europe/kharkiv-ukraine-toys-explosives-intl-hnk/index.html

⁹ https://lb.ua/society/2022/04/03/512155_uvecheri_okupanti_obstrilyali.html

NGO Reports

• Easter Ukrainian Center for Civic Initiatives¹¹

Violations of international humanitarian law: Digest of events for the period from March 28 to April 08, 2022: "On April 3, 7 people were killed and 34 others were injured in shelling of a residential area in the Slobidskyi district of Kharkiv"

Other

• <u>UN OCHA</u>¹² 04/04/2022

Ukraine: Humanitarian Impact Situation Report (As of 12:00 p.m. (EET) on 4 April 2022): "On 3 April, intense shelling in the Slobidskyi district of Kharkiv – the country's second-largest city – left at least seven people dead and nearly three dozen injured, including three children, according to the oblast prosecutor's office. Additionally, at least 10 homes and a trolley bus depot were damaged."

Analysis of Examinable Content

SOURCE	DATE/ TIME	CAPTION	DESCRIPTION	VISUAL CONTENT / ASSOCIATED INCIDENT(S)
Source 1 Image 1 (S1I1) https://t.me /truexanews ua/38709	03/04/2022 18:25 EET	Original caption: In Russian: "Харьков, хуячит авиация! Все в укрытия!! На Одесской есть погибшие!!!!" Translation: "Kharkiv, the aviation is firing! All to the shelters!! There are dead [people] on Odesskaya!!!!"	A photo of two human bodies lying on the ground near a green garbage bin, yellow-blue street benches with a white plastic bag on one of them and a yellow-blue sandpit.	49.9471, 36.2699 Associated incident(s): CIV0761A

¹¹

https://www.kurvewustrow.org/sites/default/files/media/file/2022/eucci-report-mr-verletzungen-ukraine-digest-teil2-en.pdf

https://reliefweb.int/report/ukraine/ukraine-humanitarian-impact-situation-report-1200-pm-eet-4-a pril-2022

		1	I	
Source 2 https://t.me /truexanews ua/38716	03/04/2022 19:35 EET	Original caption: In Russian: "В результате обстрела Слободского района в Харькове ранены 23 человека, среди них дети, есть люди в крайне тяжелом состоянии — Олег Синегубов. Очень много людей погибло. Ждём официальную информацию." Translation: "As a result of the shelling of the Slobidskyi district in Kharkiv, 23 people were injured, including children, there are people in extremely serious condition - Oleg Sinegubov. A lot of people died. We are waiting for the official information."		
Source 2 Image 1 (S2I1)			A photo of two human bodies lying on the ground near a green garbage bin, yellow-blue street benches with a white plastic bag on one of them.	49.9471, 36.2699 Associated incident(s): CIV0761A

Source 2 Image 2 (S2I2)		See S3V1	49.9434, 36.2723 Associated incident(s): CIV0761F
Source 2 Image 3 (S2I3)		A photo of what appears to be ~2 cm metal fragments.	

	1	T	T	
https://t.me/truexanewsua/38739	03/04/2022 21:48 EET	Original caption: In Russian: "По последней информации, в результате сегодняшнего дневного авиаобстрела в Харькове погибли 7 человек, 34 раненых. Это просто ад. Люди вышли в магазин, погулять во двор, на детскую площадку и их лишили жизни." Translation: "According to the latest information, as a result of today's daytime air strike in Kharkiv, 7 people were killed and 34 were wounded. It's just hell. People went out to the store, to walk in the yard, to the playground, and they were deprived of their lives."		
Source 3 Image 1 (S3I1)			Two human bodies lying on a paved ground near street benches with a white plastic bag on one of them, a garbage bin, and a sandpit. The body in a light-grey coat lies on a pool of what appears to be blood.	49.9471, 36.2699 Associated incident(s): CIV0761A
Source 3 Image 2 (S3I2)			An elongated object resembling a metal pipe.	SHOT ON RECHT 7 AT DUAL CAMERA

	I		
Source 3 Video 1 (S3V1)		The video depicts what appears to be a wounded man lying on the pavement. The man is captured receiving medical assistance from passerbys. Buildings and trees are visible at the location.	49.9434, 36.2723 Associated incident(s): CIV0761F
Source 3 Video 2 (S3V2)		The video depicts people lying in the grass near a red brick residential building while receiving medical assistance. The voice of the operator claims that two people are injured due to a strike on what she believes to be a garage or a cabin.	49.9497. 36.2730 Associated incident(s): CIV0761C

Source 4 Video 1 (S4V1) https://t.me /truexanews ua/38754	03/04/2022 22:30 EET	Original caption: In Russian: "В Первые минуты после обстрела в одном из районов Харькова." Translation: "В The first minutes after shelling of one of the districts of Kharkiv."	The video appears to capture the same location and objects as seen on S1I1. It also shows a third person lying on the ground not visible in S1I1. Additionally, several yellow street kiosks, a red car, and a "MAXXIMUS" sign are seen in the vicinity.	49.9471, 36.2699 Associated incident(s): CIV0761A
https://twitt er.com/mari a avdv/stat us/1510923 2310285639 75	04/04/2022 13:12 EET	Original caption: "Yesterday at 6.30 pm on this playground 2 local residents were killed by the cluster munition. A total of 42 civilians wounded, incl 2 children, 7 people killed. Another brutal war crime in a Kharkiv residential area. The locals are horrified by this attack on innocent civilians."		

Source 5 Image 1 (S5I1)		The image appears to depict the same location and objects as seen on S1I1 on the next day, 04/04/2022. A loaf of bread is visible on the bench where previously a plastic bag was present. Human bodies appear to have been removed and what appeared to be a pool of blood covered with sand. Windows of the nearby apartment building appear to be shattered.	49.9471, 36.2699 Associated incident(s): CIV0761A
Source 5 Image 2 (S5I2)		An image depicts what appears to be multiple metal parts of various shapes, widths and lengths.	@maria_avdy

Source 5 Image 3 (S5I3)			An image depicts what marks of various sizes (a large oval mark and several smaller oval marks) on a paved road near a residential building.	49.9483, 36.2719 Associated incident(s): CIV0761E
Source 5 Image 4 (S5I4)			An image depicts a woman standing close to what appears to be a metal garage with marks visible on one of its sides. Another garage-like building, a two-storied residential building and a car are visible in the background.	49.9496, 36.2722 Associated incident(s): CIV0761B
Source 6 Image 1 (S6I1) https://t.me /prokuratur a_kharkiv/3 266	03/04/2022 21:43 EET	Огідіпаl caption: In Ukrainian: "◆ Окупанти продовжують нищити Харків: за фактом обстрілу Слобідського району із загиблими та пораненими розпочато розслідування За процесуального керівництва Харківської обласної прокуратури слідчими СВ Управління СБУ в Харківській області розпочато досудове розслідування за фактом порушення законів та звичаїв	An image depicts what appears to be the same bodies as depicted on S1I1 but at a later time which are partly covered with white fabric indicating their death. A plastic bag is visible on the bench.	XAPKIBCЬКА OБЛАСНА ПРОКУРАТУРА 49.9471, 36.2699 Associated incident(s): CIV0761A

війни, поєднаного з умисним вбивством (ч. 2 ст. 438 КК України). За даними слідства, 3 квітня 2022 року близько 18 години російські окупанти обстріляли житлові будинки у Слобідському районі м. Харкова. Внаслідок цього пошкоджено близько десяти будинків та тролейбусне депо. За попередньою інформацією, загинуло 7 людей. 34 особи отримали поранення, серед них троє дітей. Досудове розслідування триває. 🔀 Харківська обласна прокуратура (https://t.me/prokuratu ra kharkiv)"

Translation:

Occupiers continue to destroy Kharkiv: an investigation has been launched into the shelling of the Slobidskyi district with the dead and wounded. Under the procedural guidance of the Kharkiv Regional Prosecutor's Office, investigators of the Joint Investigation Unit of the SBU Directorate in the Kharkiv region have launched a pre-trial investigation into the violation of the laws and customs of war, combined with intentional murder (Part 2 of Article 438 of the Criminal Code of Ukraine). According to the investigation, on April 3, 2022, at about 6 p.m., Russian occupiers shelled residential buildings in the

		Slobidskyi district of Kharkiv. As a result, about ten houses and a trolleybus depot were damaged. According to the preliminary information, 7 people died. 34 people were injured, including three children. The pre-trial investigation is ongoing. Kharkiv Regional Prosecutor's Office (https://t.me/prokuratura_kharkiv)"		
Source 7 Video 1 (S7V1) https://ww w.youtube.c om/watch?v =u7-T-2Kp WRo	04/04/2022 10:08 EET	Original caption: In Ukrainian: "7 загиблих, 34 поранені: наслідки обстрілу Слобідського району Харкова оз.о4.2022. Внаслідок обстрілу Слобідського району Харкова військовими РФ, що стався ввечері з квітня, семеро людей загинули, 34 отримали поранення, повідомили у прокуратурі Харківщини." Translation: "7 dead, 34 injured: consequences of the shelling of the Slobidskyi district of Kharkiv o4/03/2022. As a result of shelling of the Slobidskyi district of Kharkiv by the Russian military, which occurred on the evening of April 3, seven people were killed and 34 were injured, the Kharkiv region prosecutor's office reported."	The first part of the footage depicts the same location and human bodies as S1I1 but at a later time when they are partly covered with white fabrics indicating their death. A plastic bag is visible on the bench. The second part of the footage depicts a body lying in the bushes close to the pavement near a two-storied residential building. The body is covered with a white fabric indicating their death. An ambulance car, a police car and several witnesses are captured at the scene. The third part depicts a purple parked car with a broken rear window. Under the rear of the car there is a metal pipe with holes. Another car is parked nearby.	Associated incident(s): CIV0761A (49.9471, 36.2699) CIV0761D (49.9480, 36.2716) CIV0761I (49.9480, 36.2719)

Source 8 Video 1 (S8V1) https://twitt er.com/ane ws/status/15 1101071006 2440455	04/04/2022 19:00 EET	Original caption: "#Russian shelling continued in the city of #Kharkiv on Sunday as more civilians lost their lives despite #Russia saying it will begin to withdraw its forces from large cities."	The footage appears to depict the same location and human bodies as seen on the first part of S7V1. Additional videos are taken from other angles, and depict a sign "MAXXIMUS", shattered windows of the nearby residential building, and a damaged yellow kiosk. Footage appears to capture the same locations, people and objects as seen on the second part of S7V1 footage. Footage also captures what appears to be a ~2cm cylindrical steel or metal shard.	UKRAINE-RUSSIA WAR UKRAIN
Source 9 Video 1 (S9V1) https://yout u.be/eL-36 Wxoppw	05/04/2022	Original caption: "Russian forces continue brutal shelling of Ukraine's Kharkiv"		Associated incident(s): CIV0761A (49.9471, 36.2699) CIV0761G (49.9427, 36.2683) CIV0761I (49.9480, 36.2719)

Source 10 Video 1 (S10V1) https://yout u.be/1Me5Y mzShOo	04/04/2022 12:38 EET	Original caption: In Ukrainian: "Обстрілами пошкоджено громадський транспорт Харкова — відео 3 квітня" Translation: "Public transport in Kharkiv damaged by shelling — video from April 3"	Associated incident(s): CIV0761G (49.9427, 36.2683)
https://t.me/truexanewsua/38873 https://web.archive.org/web/20220711162108/https://t.me/truexanewsua/38873	04/04/2022 12:10 EET	Original caption: In Russian: "Страшные последствия вчерашнего обстрела нескольких районов Харькова." Translation: "The terrible consequences of yesterday's shelling of several districts of Kharkiv."	

	1	
Source 11 Video 1 (S11V1)		49.9471, 36.2699 Associated incident(s):
Source 11 Video 2 (S11V2)		CIV0761A TP/XA 49.9427, 36.2683 Associated incident(s): CIV0761G

Source 12	04/04/2022	Original caption: In Ukrainian:	
https://ww	08:39 EET	"#поліція_Харківщини	
w.facebook.c		В результаті обстрілу	
om/police.k		російськими	
harkov/post		окупантами в Харкові	
s/pfbidojbn		четверо загиблих і 30	
vkaO96ghuF		постраждалих	
KNeh8RujK		Серед постраждалих	
ktqV8zapm5		троє дітей 3, 5 і 17	
kA75AFNPC		років. Всіх доставили в	
kecSDxKw8		лікарні Харкова. Росія	
BwPxZLAT		у своїй тваринній	
Hgzerfl		ненависті до	
		нескореної України	
		хоче усі українські	
		міста перетворити на	
		Бучу і Маріуполь.	
		Всі постраждалі і	
		загиблі - цивільні. Не	
		мають жодного	
		стосунку до військових.	
		Не дивлячись на	
		небезпечну ситуацію в	
		районі, на місце	
		трагедії оперативно	
		прибули слідчі. Всі	
		наслідки ворожого обстрілу вони ретельно	
		задокументували.	
		Окупанти обов'язково	
		відповідатимуть за всі	
		свої злочини проти	
		людяності.	
		Начальник ГУНП в	
		Харківській області	
		Володимир Тимошко	
		закликав харків'ян,	
		мешканців області не	
		виходити на вулиці під	
		час обстрілів.	
		- Залишайтеся в	
		укриттях, обстріли	
		росіянами житлових	
		кварталів не випадкові,	
		- підкреслив очільник	
		главку поліції Вони	
		знають, що вбивають	
		мирних мешканців і	
		руйнують наші	
		будинки. Бережіть себе і своїх близьких!	
		Сьогодні вже ніхто не	
		вірить у маячню	
		полонених росіян про	
		навчання і що вони не	
		знали, де перебувають.	
		Буча, Гостомель –	
		українські міста, в яких	
		Japanieski miera, s Akha	

армія рф цілеспрямовано знищувала цивільне населення. Ґвалтувала, катувала, грабувала і вбивала. Ординці продовжують доводити світу, що вони нелюди, які не здатні співчувати. Але ми їх обов'язково зупинимо. Всі разом. Кожного дня наші доблесні ЗСУ, нацгвардія, тер оборона і всі українці це доводять. Тримаймо стрій! Разом до перемоги! #stoprussia Володимир Тимошко Вячеслав Марков Сергій Болвінов"

Translation:

"#police of Kharkiv Re gion Four dead and 30 injured as a result of shelling by Russian occupiers in Kharkiv. Among the injured are three children aged 3, 5 and 17. All were taken to Kharkiv hospitals. Russia, in its animalistic hatred for unconquered Ukraine, wants to turn all Ukrainian cities into Bucha and Mariupol. All the injured and dead are civilians. They have no connection to the military. Despite the dangerous situation in the area, investigators quickly arrived at the scene of the tragedy. They carefully documented all the consequences of the enemy shelling. The occupiers will definitely be held accountable for all their crimes against humanity. Head of the Main Police Department in Kharkiv Region Volodymyr

	Tymoshko called on	
	Kharkiv residents and	
	residents of the region	
	not to go out into the	
	streets during shelling:	
	"Stay in shelters, Russian	
	shelling of residential	
	areas is not accidental,"	
	emphasized the head of	
	the main police	
	department police. "They	
	know that they are	
	killing civilians and	
	destroying our homes.	
	Take care of yourself and	
	your loved ones!"	
	Today, no one believes	
	the delusions of captured	
	Russians about training	
	and that they did not	
	know where they were. Bucha, Gostomel are	
	Ukrainian cities in which	
	the Russian army	
	purposefully destroyed	
	the civilian population.	
	Raped, tortured, robbed	
	and killed. The Horde	
	continues to prove to the	
	world that they are	
	inhumane, incapable of	
	compassion.	
	But we will definitely	
	stop them. All together.	
	Every day our valiant	
	Armed Forces of	
	Ukraine, National	
	Guard, TerOborona, and	
	all Ukrainians prove it.	
	Let's hold the line!	
	Together to victory!	
	#stoprussia	
	Volodymyr Tymoshko,	
	Vyacheslav Markov,	
	Serhiy Bolvinov"	
Source 12		
Image 1		
(S12I1)		
		національна ПОЛІЦІЯ
		поліція
		49.9471, 36.2699
		Associated incident(s):
		CIV0761A
		<u> </u>

Source 12 Image 2 (S12I2)		49.9471, 36.2699 Associated incident(s): CIV0761A
Source 12 Image 3 (S12I3)		49.9488, 36.2739 Associated incident(s): CIV0761H
Source 12 Image 4 (S12I4)		49.9480, 36.2719 Associated incident(s): CIV0761I
Source 12 Image 5 (S12I5)		Associated incident(s): CIV0761G (?)

Source 12 Image 6 (S12I6)			національна поліція
Source 13 Video 1 (S13V1) https://twitt er.com/alext omo/status/ 1510920963 499692035	04/04/2022 13:03 EET		49.9471, 36.2699 Associated incident(s): CIV0761A
Source 14 Video 1 (S14V1) https://ww w.youtube.c om/watch?v =7yKJD2zD Fzo	08/04/2022 19:13 EET	Interview with the injured man from CIV0761A	Associated incident(s): CIV0761A

Verification of Identified Materials

No traces of manipulation, tampering, or reuse of the visual materials identified in open sources were found.

An ample amount of textual and visual materials associated with the CIV0761 episodes were identified in open sources. These materials, provided by diverse unrelated sources, include both user-generated content, such as photos and videos, and footage produced by local and international media organisations. Some of these materials were captured at the locations of CIV0761 episodes at a different time and date, from a variety of angles and distances, and therefore served as material for mutual cross-referencing and verification. The locations of all CIV0761 incidents have been identified and mapped using publicly accessible mapping and satellite imagery services (Google Maps, Yandex Maps, Google Earth Pro).

The examination of the identified visual materials revealed no indications of possible manipulation. In addition, no information was found in public sources indicating that visual materials depicting any of the CIVo761 episodes may not have occurred, may have been staged, or may have occurred elsewhere.

Questions to Investigate

Where Was the Incident?

List of CIV0761 episodes with a brief description and respective coordinates:

- 1. CIV0761A. Two fatalities and one wounded man at the children's playground $(49.9471, 36.2699^{13});$
- 2. **CIV0761B.** *Marks and holes on a garage* (49.9496, 36.2722¹⁴);
- 3. CIVo761C. Wounded individuals on the ground near the red brick residential building (49.9497, 36.2730¹⁵);
- 4. **CIV0761D.** One fatality on the pavement near a residential building (49.9496. 36.2716¹⁶);
- 5. CIVo761E. Fragmentation pattern from cluster munition in an inner courtyard $(49.9483, 36.2719^{17});$
- 6. **CIV0761F.** A man on the ground near "SALUT" movie theatre (49.9434, 36.2723¹⁸);
- 7. CIV0761G. Damaged trolleybuses and buildings at the Trolleybus Depot No. 2 (49.9427, 36.2683¹⁹);
- 8. CIVo761H. An inner pipe from the cargo section of a 9M27K1 rocket near residential buildings (49.9488, 36.2739²⁰);

¹³ https://maps.app.goo.gl/RTnNZHEziv4TNnUW7

¹⁴ https://maps.app.goo.gl/6y6f1yvxWYZUXGUp7

¹⁵ https://maps.app.goo.gl/B3Zgpjuup3dr9CHS6

¹⁶ https://maps.app.goo.gl/6jM8K7kNNZLcfLUT9

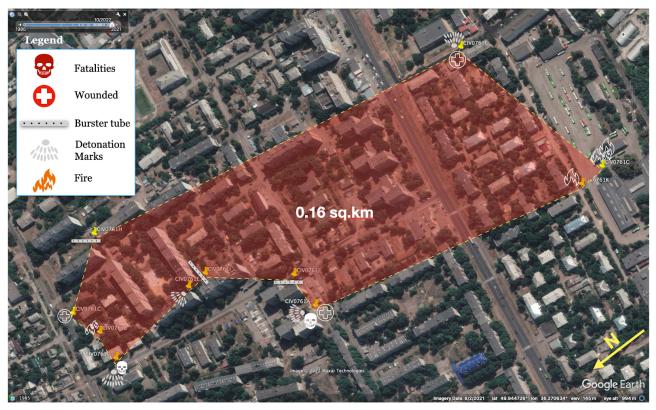
¹⁷ https://maps.app.goo.gl/u5ap6WjEqFJ2wvX96

¹⁸ https://maps.app.goo.gl/68PMWAZGKVzUQTJHA

¹⁹ https://maps.app.goo.gl/2j6xFgjbzLNbv8Af6

²⁰ https://maps.app.goo.gl/tStVTgogsFNsMtUP6

- 9. **CIVo761I.** A damaged purple car and an inner pipe of the cargo section of a 9M27K1 rocket(49.9480, 36.2719²¹);
- 10. **CIV0761J.** An inner pipe of the cargo section of a 9M27K rocket (49.9471, 36.2707^{22});
- 11. **CIVo761K.** A burning car near the entrance of the Trolleybus Depot No.2 (49.9432, 36.2683^{23}).



The CIV0761 episodes marked on the satellite imagery dated 02/08/2021 (Credit: Maxar Technologies/Google Earth Pro).

CIV0761A

Location of the CIV0761A episode has been identified in Slobidskyi district of Kharkiv at 49.9471, 36.2699²⁴.

The visual materials identified at the scene of CIvo761A depict human casualties (two fatalities and a wounded man) and damage to civilian infrastructure (residential and commercial buildings, kiosks, and playground equipment).

²¹ https://maps.app.goo.gl/MWouGQTEddaV6P7S7

²² https://maps.app.goo.gl/xS5sHe3FgSYVZ8xPA

²³ https://maps.app.goo.gl/ffTvwGBMXtHDi5fQ8

²⁴ https://maps.app.goo.gl/RTnNZHEziv4TNnUW7













The CIV0761A scene depicted on S11V1 (Top Left), S3I1 (Top Centre), S8V1 (Top Right), S5I1 (Bottom Centre), S4V1 (Bottom Left), and S13V1 (Bottom Right).

These visual materials depict distinct objects (signs, vehicles, commercial signs, etc.) at the scene of CIVo761A, allowing for an accurate reconstruction of their spatial arrangement. Kharkiv was identified as the probable location of the CIVo761A episode, as "Kharkiv" and/or "Slobidskyi district of Kharkiv" appeared in captions of identified visual materials multiple times.

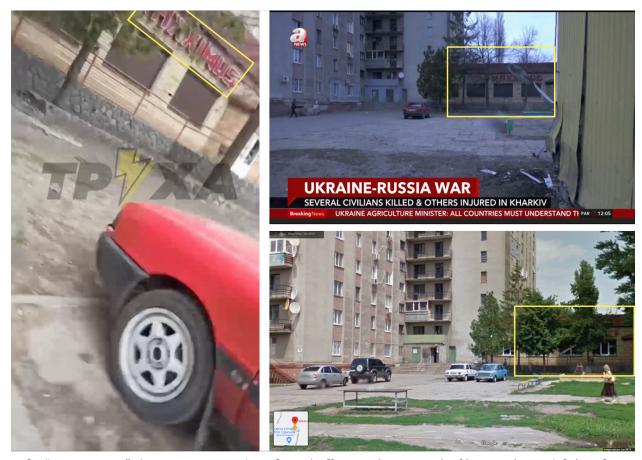
The location of the CIV0761A was identified based on the following objects visible at the CIV0761A scene or nearby:

- (i) The "MAXXIMUS" gym;
- (ii) The elements and the layout of the children's playground;
- (iii) A grey apartment building;
- (iv) The KYISET tobacco kiosk.

(i) The "MAXXIMUS" gym

"MAXXIMUS" is depicted in red capital Roman letters on S4V1 and S8V1, which were captured at the CIVo761A scene. This sign is used by the "MAXXIMUS" gym²⁵ in the Slobidskyi district of Kharkiv, Ukraine, at the coordinates 49.9473, 36.2700²⁶.

The "MAXXIMUS" gym was identified on Google Street View imagery taken in October 2011 and June 2015, indicating that it has been operating at this location since at least October 2011. Since June 2015 until the date of the CIV0761A episode, the location, exterior of the gym, and façade of the adjacent residential building have largely remained unchanged.



The "MAXXIMUS" sign as seen at various dates (Yellow Box) on S4V1 (Left), S8V1 (Top Right) and <u>Google Street View</u>²⁷ in June 2015 (Bottom Right) (Credit: Google Street View).

²⁵ http://maxximus.kh.ua/

²⁶ https://maps.app.goo.gl/zcdyH7XvMowmFWqv5

²⁷ https://maps.app.goo.gl/Xs7e7C2ucWrBfxP6A



Location of the "MAXXIMUS training club" marked on the satellite imagery dated 02/08/2021. The indicated view corresponds to the still from S8V1 and the Google Street View in the graphic above (Credit: Maxar Technologies/Google Earth Pro).

(ii) The elements and the layout of the children's playground

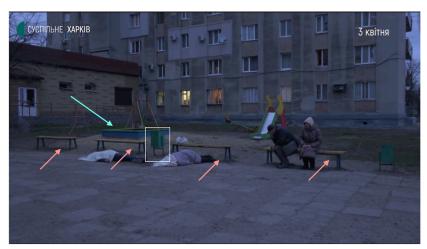
The children's playground visible on the materials at the CIVo761A scene was identified at 49.9471, 36.2699²⁸, approximately 20 m from the entrance to the "MAXXIMUS" gym. As seen on S5I1, S11V4, S7V1, and S8V1, the children's playground consists of: (1) a sandpit; (2) four street benches; (3) a garbage can; (3) a seesaw; (4) a children's slide; and (5) a children's swing.

25

²⁸ https://maps.app.goo.gl/vfc1QroqxBSZ7pmZ9



A cross-reference of objects depicted on S5I1 (Left) and S11V1 (Right). Street benches (White Arrows), a blue-yellow sandpit, a green garbage bin (White Box), a seesaw, and a children's slide (Purple Ellipse).





A comparison of the spatial layout of street benches (Pink Arrows), a sandpit (White Arrow), and a garbage bin (White Box) located in front of the "MAXXIMUS Training Club" depicted on: S7V1 (Top); S8V1 (Bottom Right); and the satellite imagery dated 02/08/2022 (Bottom Left) (Credit: Maxar Technologies/Google Earth Pro).

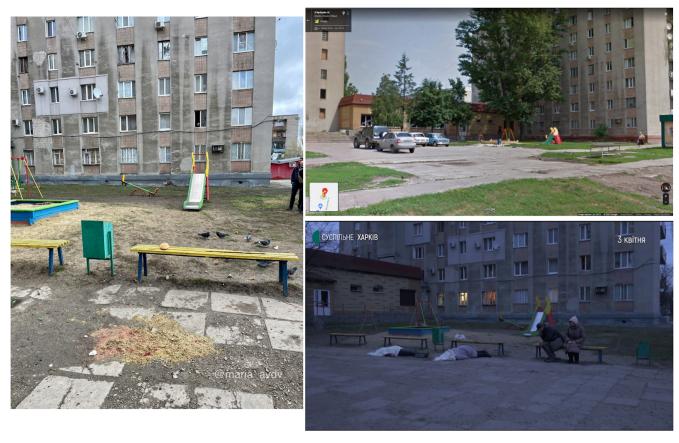
The features and spatial layout of the buildings depicted at the CIV0761A scene match those visible at the identified location captured on the Google Street View <u>imagery</u>²⁹ taken in October 2011 and June 2015 and on the satellite imagery dated 02/08/2021.

(iii) A grey apartment building

The shape and façade of a grey residential building depicted on S₅I₁ and S₇V₁ at the CIV₀76₁A scene are identical to those depicted by Google Street View at 49.9472, 36.2703³⁰.

²⁹ https://maps.app.goo.gl/sTqvp6S8UFqwfcmN8

³⁰ https://maps.app.goo.gl/PoSd1FP2zP4t8AGc9



The grey residential building depicted on S5I1 (Left), S7V1 (Bottom Right), and Google Street View in June 2021 (Top Right) (Credit: Google Street View).

(iv) The KYISET tobacco kiosk

S4V1 captured a cluster of vending kiosks, with a "KMCET" (KYISET) sign styled in white capital Cyrillic letters visible on one of them. On Google Street View <u>imagery</u>³¹ captured in June 2015, a kiosk with the same sign, size, and exterior was identified at 49.9468, 36.2705³², approximately 50 m away from the scene of CIV0761A. Additionally, the layout of the adjacent vending kiosks corresponds to the layout of vending kiosks captured on satellite imagery dated 02/08/2021.

 $^{^{31}}$ https://maps.app.goo.gl/tyqENYJQgYj191Ng9

³² https://maps.app.goo.gl/7ba6cUDqgy4B3xhL9



The KYISET tobacco kiosk (Yellow Box) visible on S4V1 (Left), the Google Street View imagery from June 2015 (Top Right) and satellite imagery on 02/08/2021 (Bottom Right) (Credit: Google Street View; Maxar Technologies/Google Earth Pro).

Hence, based on the geolocation and visual analysis of the abovementioned objects visible at the CIVo761A, the location of the CIVo761A episode was identified in the Slobidskyi district of Kharkiv, Ukraine, at 49.9471, 36.2699³³.

CIV0761J

The location of the CIV0761J episode has been identified in the Slobidskyi district of Kharkiv at 49.9471, 36.2707³⁴.

S9V1 depicts two persons wearing protective gear at the CIVo761J scene, with one of them holding a bent metal pipe with vent holes. This footage also depicts one of these individuals at the scene of CIVo761A with collected remnants and fragmentation, thus indicating a possible connection between these episodes and their proximity.

A two-storey residential building is visible behind the man holding a metal object. Based on the visual analysis of its facade, shape, direction, and spatial relation to the neighbouring building to its right, the building was geolocated on the Google Street View imagery taken in June 2015 at 49.9471, 36.2707³⁵, about 55 m from the scene of CIV0761A.

³³ https://maps.app.goo.gl/RTnNZHEziv4TNnUW7

³⁴ https://maps.app.goo.gl/xS5sHe3FgSYVZ8xPA

³⁵ https://maps.app.goo.gl/xS5sHe3FgSYVZ8xPA



A comparison between the two-storey residential building (Yellow Box) and the balcony of the residential building (Yellow Arrow) depicted at the CIV0761J scene on S9V1 (Top Left) with Google Street View imagery dated June 2015 (Bottom Left and Right). The same building marked on satellite imagery dated from 02/08/2021 (Top Right) (Credit: Google Street View; Maxar Technologies/Google Earth Pro).

The proximity of an element of the cargo section of an Uragan 9M27K cluster munition rocket identified at the scene of CIV0761J (see the section "What kind of munition was used?") to the CIV0761A scene, indicates the cargo section's possible relation to the depicted fatalities, damage, submunition fragments, and fragmentation patterns at the scene of CIV0761A. The date when S9V1 was posted, and the likely date when other CIV0761 scenes depicted on S9V1 were filmed (see the section "When was the incident?"), together with the accompanying voiceover on S9V1 and general context, indicate that these events resulted from a single artillery strike.

CIV0761B and CIV0761C

The locations of CIV0761B and CIV0761C episodes have been identified in the Slobidskyi district of Kharkiv at 49.9496, 36.2722³⁶ and 49.9497, 36.2730³⁷ respectively.

S5I4 depicts a fragmentation pattern formed by marks and holes visible on the garage in the inner court of a residential building. S3V2 depicts wounded people on the ground in front of a two-storey brick residential building. Both S6I4 and S3V2 were posted together with materials depicting the scene of CIVo761A, thus indicating a connection between these episodes and their possible proximity.

³⁶ https://maps.app.goo.gl/6y6f1yvxWYZUXGUp7

³⁷ https://maps.app.goo.gl/B3Zgpjuup3dr9CHS6

The locations of the scenes CIV0761B and CIV0761C were identified on the Google Street View imagery (from October 2011 and June 2015) by comparing marks, distinctive features of the residential buildings' facades, and the spatial layout depicted on S5I4 and S3V2. The identified locations were further confirmed on the satellite imagery from 02/08/2021.



Geolocation of CIV0761B (S5I4, Top Centre) and CIV0761C (S3V2, Top Right):

A residential two-storey brick building with grey-painted second floor (Yellow Box); a residential building with a gable roof in the background (White Triangle); a residential two-storey red brick building (Blue Box) with distinctive dark marks (Yellow Arrows) and a bricked-up window (White Box) as depicted on Google Street View in October 2011 and June 2015 (Centre and Bottom Right).

Satellite imagery dated 02/08/2021 (Bottom Centre) (Credit: Google Street View; Maxar Technologies/Google Earth Pro).

CIV0761D

The location of the CIV0761D episode has been identified in Slobidskyi district of Kharkiv at 49.9496, 36.2716³⁸.

A dead human body covered with a white cloth is depicted at the scene of CIVo761D on S7V1 and S8V1. Both materials also depict the scenes of CIVo761A, CIVo761E, and CIVo761I, indicating a connection between these episodes and their possible proximity. The location of the CIVo761D scene was identified on Google Street View imagery by comparing: (i) depicted features of the facades of residential buildings' located at the scene; (ii) the spatial layout depicted on S7V1 and S8V1 with Google Street View imagery from October 2011 and June 2015. The CIVo761D scene was geolocated at 49.9496, 36.2716³⁹, about 45 m from the scene of CIVo761B; about 85 m from the scene of CIVo761C; and about 120 m from the scene of CIVo761H. The identified location was further confirmed on the satellite imagery from 02/08/2021.

³⁸ https://maps.app.goo.gl/6jM8K7kNNZLcfLUT9

³⁹ https://maps.app.goo.gl/6jM8K7kNNZLcfLUT9











Comparison of the facades of two-storey buildings depicted on S7V1 and S8V1 (Top and Centre Right) with their imagery on Google Street View dated October 2011 and June 2015 (Top and Centre Left). The directions of camera filming S7V1 and S8V1 indicated on the satellite imagery from 02/08/2021 (Bottom) (Credit: Google Street View; Maxar Technologies/Google Earth Pro).

Based on the proximity of the dead human body to the fragmentation pattern depicted at the scene of CIVo761D, the impact marks on the garage at the scene of CIVo761B, and an element of the cargo section of an Uragan 9M27K cluster munition rocket identified at the scene of CIVo761H (see the section "What kind of munition was used?"), together with the context and the date when S7V1 and S8V1 were posted, it appears that the depicted damage was likely caused by a single artillery strike.

CIV0761E and CIV0761I

The locations of the CIV0761E and CIV0761I episodes have been identified in Slobidskyi district of Kharkiv at 49.9483, 36.2719⁴⁰ and 49.9480, 36.2719⁴¹ respectively.

S5I1 depicts a distinctive fragmentation pattern on the ground indicating the place of detonation of cluster munitions at the scene of CIV0761E near the children's playground; a residential building with marks from the impact of metal fragments at the bottom; a bucket on the pavement; and a car. S9V1 depicts an impacted residential building with a street sign "14", a children's playground, and a bucket on the pavement, similarly to S5I1. Furthermore, the imagery also depicts the scene of CIV0761A, thus indicating a connection between these episodes and their possible proximity.

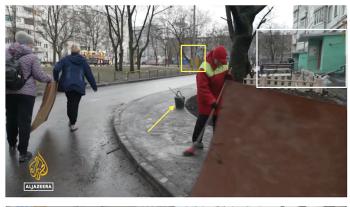
That said, while identified visual materials depicting the scene of CIVo761E provided sufficient material for geolocation, only close-up materials depicting the scene of CIVo761I were identified in open sources. Nevertheless, elements of the scene of CIVo761I are partially visible on S5I1 and S9V1. As such, the geolocation of CIVo761I can only be performed together with the geolocation of CIVo761E, which requires demonstrating the link between the objects depicted at both scenes.

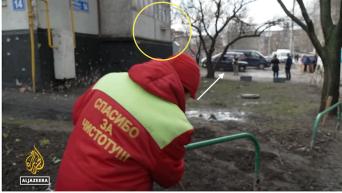
(i) Link between the scenes of CIV0761E and CIV0761I

The interrelation between the CIVo761E and CIVo761I was established via comparison of features visible on the residential building's facade, one of its entrances, and one of the balconies depicted on both S9V1 and S5I1. As demonstrated on the graphics below, S9V1 depicts an identical residential building, a children's playground, and a bucket on the pavement to those depicted on S5I1. Furthermore, S9V1 depicts an identical damaged purple car parked at the same spot as the car depicted on S5I1. This, in turn, confirms the interrelation between S5I3 and S9V1 and, hence, between the scenes of CIVo761E and CIVo761I, respectively.

41 https://maps.app.goo.gl/MWouGQTEddaV6P7S7

⁴⁰ https://maps.app.goo.gl/u5ap6WjEqFJ2wvX96







The objects used for cross-referencing S5I3 (Right) and S9V1 (Top and Bottom Left): yellow shield (Yellow Box), the residential building entrance (White Box), the balcony (Yellow Circle), a purple car (White Arrow), and a bucket (Yellow Arrow).

(ii) Geolocation of the CIV0761E and CIV0761I episodes

Upon establishing the interrelation between the CIVo761E and CIVo761I episodes, their geolocation was performed simultaneously based on the depicted objects, their direction, and their spatial layout. The location of the CIVo761E episode was identified at 49.9483, 36.2719⁴². It was further confirmed by the number "14" visible on one of the residential buildings, corresponding to 14 Monyushko street in Kharkiv, the actual street address of the identified residential building.

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⁴² https://maps.app.goo.gl/u5ap6WjEqFJ2wvX96



The objects used for cross-referencing S9V1 (Top Left, Top Right and Bottom Right): children's playground (Yellow Arrow), the residential building number 14 (Yellow Box), a purple car with a roof rack (White Box) and the residential building seen behind the purple car (Blue Box).

Hence, based on the coordinates of the CIV071E episode, the CIV0761I scene was identified at 49.9480, 36.2719⁴³.

Based on the proximity of the identified element of the cargo section of an Uragan 9M27K cluster munition rocket identified at the scene of CIV0761I and the fragmentation pattern and marks on the residential building visible at the scene of CIV0761E (see the section "What kind of munition was used?"), together with the context and the date when S9V1 and S5I3 were posted, it appears that the depicted damage was likely caused by the same artillery strike.

CIVo761H

The location of the CIV0761H episode has been identified in the Slobidskyi district of Kharkiv at 49.9488, 36.2739⁴⁴.

S12I3 depicts a metal pipe identified as an element of the cargo section of a 9M27K1 rocket (see the section "What kind of munition was used?") on the ground, in the vicinity of the children's playground located between two residential buildings. S12I3 was posted together with S12I1 and S12I2 depicting the scene of CIV0761A, and S12I4 depicting the scene of CIV0761I. This indicates a connection between these episodes and their possible proximity.

⁴³ https://maps.app.goo.gl/MWouGQTEddaV6P7S7

⁴⁴ https://maps.app.goo.gl/tStVTgogsFNsMtUP6

The CIVo761H episode was identified based on a comparison of features depicted on these sources and Google Street View and Yandex Panorama imagery taken in October 2011 and June 2015, and the satellite imagery dated 02/08/2021. Namely:

- (i) the spatial layout of the depicted children's playground;
- (ii) the spatial layout and features of the facades of buildings;
- (iii) the appearance of an unidentified low edifice visible in the middle of the children's playground.











Comparison of the facade of the residential building (Yellow Arrows) and of a brick object (Yellow Box) identified on S12I3 (Top Left) with the imagery available on Google Street View (Top Right) and Yandex Panorama (Centre Right). The direction of S12I3 (Bottom Left) and imagery identified on Google Street View (Bottom Right) indicated on satellite imagery confirm the spatial layout of these buildings (Credit: Google Street View; Yandex Panorama; Maxar Technologies/Google Earth Pro).

CIV0761G

The location of the CIV0761G episode has been identified in the Slobidskyi district of Kharkiv at 49.9427, 36.2683⁴⁵.

⁴⁵ https://maps.app.goo.gl/2j6xFgjbzLNbv8Af6

S9V1 and S1oV1 depict several trolleybuses with broken windshields, dents, and punctured wheels. A fire brigade is depicted working at the scene, indicating that some of the damaged trolleybuses were on fire at the time S1oV1 was filmed. In the vicinity, several administrative and residential buildings are visible. S9V1 also includes depicts the scenes of CIVo761A, CIVo761E, and CIVo761I.

The geolocation of the CIVo761G episode depicted on S9V1 and S1oV1 was performed based on the information on the strike on a trolleybus depot in Kharkiv⁴⁶ identified in open sources and indicated in the accompanying caption to S6I1. Two possible trolleybus depots were identified in Kharkiv via Google Maps: "Троллейбусное депо №2" ("Trolleybus depot No. 2") at 49.9428, 36.2684⁴⁷, and "Троллейбусное депо №3" ("Trolleybus depot No. 3") at 49.9629, 36.3652⁴⁸. Based on the visual comparison of the nearby residential buildings, their balconies, and their spatial layout on Google Street View and satellite imagery, it was established that the damaged trolleybuses depicted at the CIVo761G scene were located at Trolleybus depot No. 2, about 280 m from the scene of CIVo761F.

Based on the proximity of the scene of CIVo761G to the scene of CIVo761F, where a distinctive fragmentation pattern of a cluster submunition was identified, and the context and date when S1I2 and S3V1 were posted, it appears that the damage to the trolleybuses was likely caused as a result of the single artillery strike using cluster submunitions.

⁴⁶ https://ua.interfax.com.ua/news/general/820737.html

⁴⁷ https://maps.app.goo.gl/p8G2oyvGE6R8FmNP6

⁴⁸ https://maps.app.goo.gl/YYaMgyKFQZqQCJP26



An identical balcony of a residential building (Orange Arrow) and a bent handrail at the entrance to the "Trolleybus depot No. 2" (Blue Arrow) depicted on S9V1 (Centre Left and Top Right) and Google Street View imagery (Top Left) dated June 2015. The same green trolleybus (White Arrow) can be seen on both S9V1 and S10V1 (Centre Right). Satellite imagery depicting the same building from 02/08/2021 (Bottom Right) (Credit: Maxar Technologies/Google Earth Pro).

CIV0761K

The location of the CIV0761K episode has been identified in Slobidskyi district of Kharkiv at 49.9432, 36.2683⁴⁹.

S11V2 depicts what appears to be a burning car near a concrete fence with a diamond pattern, a white minivan, and residential buildings at the scene of CIVo761K. S11V2 was posted together with S11V1, which depicts CIVo761A, thus indicating a connection between these episodes and their possible proximity. Geolocation of the scene was performed by comparing distinctive features of the following objects and their layout with the Google Street View imagery taken in June 2015 and May 2021 and satellite imagery from 02/08/2021:

- (i) the concrete fence with a diamond pattern;
- (ii) the colour and shape of the garage with a gable roof;
- (iii) facades of the nearby residential buildings;

⁴⁹ https://maps.app.goo.gl/ffTvwGBMXtHDi5fQ8

(iv) the distinctive pattern on the building behind the fence indicating the scene's proximity to Trolleybus depot No.2.

The colour and exterior of the residential buildings depicted on S11V2 are identical to the colour and exterior of the building depicted on both S9V1 and the Google Street View image dated May 2021. The parked white minivan visible on S11V2 appears to be the same one visible on the Google Street View imagery taken in May 2021 and satellite imagery dated 02/08/2021. Based on the above mentioned comparison, the location of CIV0761K was identified at 49.9432, 36.2683⁵⁰, about 30 m away from the scene of CIV0761G.

Based on the general context, the fire depicted at the scenes of CIV0761K and CIV0761G, the proximity of CIV0761G to CIV0761K and other CIV0761 episodes, and the date when S11V2 was posted, it can be concluded that the burning car was likely damaged as a result of the same artillery strike using cluster submunitions.



⁵⁰ https://maps.app.goo.gl/ffTvwGBMXtHDi5fQ8



The location of the burning car depicted on S11V1 (Top Left and Centre Middle) was identified on Google Street View imagery taken in May 2021 and satellite imagery from 02/08/2021 by comparing: the facades of residential buildings (Yellow Box); the garage with gable roof (Yellow Circle); the diamond pattern on the concrete fence; and the visible distinctive pattern on one of the buildings at the Trolleybus Depot №2 (Yellow Arrow) (Credit: Google Street View, Maxar Technologies/Google Earth Pro).

CIV0761F

The location of the CIV0761F episode has been identified in Slobidskyi district of Kharkiv at 49.9434, 36.2723⁵¹.

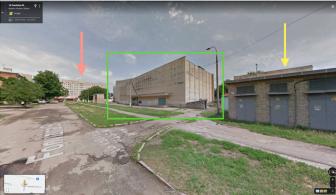
S3V1 depicts what appears to be an unconscious man on the ground assisted by another man. They are in the vicinity (about 2 m away) of a large building that has a ramp-shaped roof and a fragmentation pattern visible on the surface. The geolocation of the CIVo761F scene was performed by identifying a large pale yellow building whose distinctive external features and general architectural style suggest a theatre, a cinema, or some other public venue rather than a residential building. Online search queries made on Google Maps and Yandex Maps using various combinations of these words in English, Russian, and Ukrainian did not return any information relevant for the identification of the building.

S1I2 and S3V1 were posted together with visual materials depicting CIVo761A and CIVo761C, and were accompanied with a caption reporting casualties in the Slobidskyi district of Kharkiv, thus indicating a connection between these episodes and their possible proximity. The building was eventually identified as the "CAJIOT" ("SALUT") movie theatre via Google Street View. The "SALUT" movie theatre reportedly became defunct in 2004⁵² suggesting the possible reasons it was not marked in the online mapping services. Based on the location of

⁵¹ https://maps.app.goo.gl/68PMWAZGKVzUQTJHA

the movie theatre, the CIV0761F scene was identified at 49.9434, 36.2723⁵³, about 280 m from CIV0761G.







"SALUT" movie theatre (Green Box); a hospital (Red Arrow); and what appears to be an electrical substation (Yellow Arrow) as seen on the collage of S3V1 still frames (Left). Google Street View imagery taken in June 2015 (Top Right); a satellite imagery from 02/08/2021 (Bottom Right) (Credit: Google Earth Pro; Maxar Technologies/Google Earth Pro).

Based on the general context, the date when S1I2 and S3V1 were posted, their proximity to the scenes of CIvo761G and CIVo761K, and the distinctive fragmentation pattern visible near the unconscious man, the damage was likely caused by the same artillery strike.

When Was the Incident?

The strike depicted in all CIV0761 scenes likely occurred on 03/04/2022, between 17:35 and 18:00 EET.

CIV0761A

The likely date when the CIV0761A episode could have occurred is estimated to be 03/04/2022 between 17:35 and 18:00 EET, but no later than 18:25 EET.

CIV0761A was captured by S4V1, S1I1, S3I1, S6I1, and S5I1 and depicted gradual changes in the scene since shortly after the incident occurred and over the span of several hours, which

⁵³ https://maps.app.goo.gl/68PMWAZGKVzUQTJHA

narrowed possible range of date and time of CIV0761A by recreating the chronological course of events at its location. The time of CIV0761A was also confirmed verbally on S8V1 by a resident of the damaged residential building.

Date

The latest possible date of CIVo761A corresponds to the earliest date when visual materials depicting this incident appeared in open sources - **03/04/2022**. No other materials that are relevant to the incident or indicate that CIVo761A might have occurred earlier than **03/04/2022** were identified at the time of the assessment.

Time

The timeframe when the incident likely occurred was estimated **between 17:35 and 18:25 EET** based on the following information:

- (i) *Witness interview*. According to the interview captured on S8V1 (0:10–0:22) given by a female resident of the ground floor apartment of the impacted apartment building, she heard a loud noise that was followed by an explosion shattering the apartment's windows at 17:35–17:40 local time (i.e., EET).
- (ii) *Media reports*. According to the information reported⁵⁴ in the public media, 17:40 EET was stated as the approximate time of the strike in Slobidskyi district of Kharkiv on 03/04/2022.
- (iii) Changes in the scenery over time. S4V1 captured a man at the scene of CIV0761A who appeared to have sustained wounds to his right leg and arm and was lying on the ground. The video captured the voice of a witness assuring the wounded man that an ambulance was on its way. Since neither the wounded man nor an ambulance car are seen on any other visual materials taken at the scene, including S1I1 which was posted at 18:25 EET, it appears that S4V1 was likely taken earlier despite being posted at 22:35 EET.

It appears that between posting of S4V1 and S1I1, the wounded man was likely picked up and removed from the scene of CIVo761A, and possibly taken to the hospital. The wounds and associated circumstances described by a wounded man depicted on S14V1 match those seen on S4V1 (*see the* section Identified Casualties). While there is no information indicating the possible time when the wounded man was removed from the scene, since S1I1 did not depict the man at the scene of CIVo761A, it is likely that S4V1 was filmed in the period between the alleged strike (17:35 EET) and the time when S1I1 was posted (18:25 EET). During this time the man could have been transferred to the hospital. As such, the information that CIVo761A took place around 17:35–17:40 EET, as reported in open sources and further confirmed by the woman on S8V1, appears plausible.

⁵⁴





The change in the number of white grocery bags captured on the bench (White Circle) and the absence of the wounded man (Yellow Arrow) indicated that S4V1 (Left) was likely taken earlier than S1I1 (Right).



Visual materials taken at the scene of CIV0761A, sorted in chronological order (clockwise) depict:
(1) A wounded man visible on S4V1 and his disappearance from the scene on S1I1 (Yellow Arrow); (2)
A decrease in the number of plastic bags with bread loaves visible on the street bench and their
eventual disappearance from the scene leaving one loaf of bread (White Circle); (3) Initially
uncovered dead human bodies during the day were covered with a white cloth at dusk (White
Arrows); (4) A pool of what appears to be blood visible under the head of one the dead human bodies
was likely covered with sand (Purple Arrow).

CIV0761J

The likely date when the CIV0761J episode might have occurred is **03/04/2022 at 18:30 EET,** but **no later than 04/04/2022 at 13:12 EET,** based on:

- (i) **Date of the post.** S₅I₂ was posted on 04/04/2022 at 13:12 EET indicating the CIVo₇6₁J episode's latest possible date;
- (ii) *Context*. While S9V1 was uploaded on YouTube on 05/04/2022, the man depicted on S5I2 appears to be holding the identical remnants and metal fragments in the same order and is wearing the same uniform as the man depicted on S9V1, which was identified as a member of the Ukrainian Demining Team at the scene of CIV0761A;
- (iii) *Accompanying caption*. According to the caption, S₅I₂ depicts events associated with the strike that occurred "*Yesterday at 6.30 pm*", i.e., on 03/04/2022.





Identical remnants and metal fragments held in the same order by a man wearing the same uniform as depicted on S512 (Top) and S9V1 (Bottom).

CIV0761D and CIV0761I

The likely date when the CIV0761D and CIV0761I episodes might have occurred is **03/04/2022**, but **no later than 04/04/2022 at 10:08 EET**, based on:

(i) *Upload date*. S7V1 which depicts CIVo871D and CIVo761I, was uploaded to Youtube on 04/04/2022. According to the YouTube <u>DataViewer tool</u>,⁵⁵ maintained by Amnesty International, the time when S7V1 was uploaded to Youtube was identified as 10:08:42 EET (08:08:42 UTC) on 04/04/2022. This indicates that the depicted events were filmed after the sunrise could have only occurred before the <u>reported</u>⁵⁶ sunrise at 05:11:24 EET on 04/04/2022.

⁵⁵ https://citizenevidence.amnestyusa.org/

⁵⁶ https://voshod-solnca.ru/sun/%D1%85%D0%B0%D1%80%D1%8C%D0%BA%D0%BE%D0%B2



Youtube DataViewer

https://www.youtube.com/watch?v=u7-T-2KpWR Go

7 загиблих, 34 поранені: наслідки обстрілу Слобідського району Харкова

03.04.2022. Внаслідок обстрілу Слобідського району Харкова військовими РФ, що стався ввечері 3 квітня, семеро людей загинули, 34 отримали поранення, повідомили у прокуратурі Харківщини. Деталі: https://suspilne.media/224848-obstril-harkova-3-kvitna-7-ludej-zaginuli-kilkistporanenih-zbilsilasa-do-34-prokuratura/ Підпишіться та натисніть 🔔, щоб отримувати сповіщення про нові відео та трансляції Читайте новини Харкова на caйті: https://suspilne.media/regions/kharkiv-region/ У Facebook: https://www.facebook.com/suspilne.kharkiv B Instagram: https://www.instagram.com/suspilne.kharkiv/ У Telegram: https://t.me/suspilnekharkiv/ У Viber: http://bit.ly/suspilnekharkivviber Політика взаємодії з аудиторією на цифрових платформах Суспільного: https://corp.suspilne.media/document/533 https://kh.suspilne.media/ Усе про Суспільне читайте тут: https://corp.suspilne.media/

Video ID: u7-T-2KpWRo Upload Date (YYYY/MM/DD): 2022-04-04 Upload Time (UTC): 08:08:42 (convert to local time)

The time when S7V1 was uploaded to Youtube was identified as 10:08:42 EET (08:08:42 UTC) on 04/04/2022.

(ii) Reported date. "3 April" (in Ukrainian: "3 квітня") is visible at the top right corner of S7V1.







"3 April" ("3 квітня") (Yellow box) is indicated at the scene of CIV0761A on S7V1 (Left), which also depicts CIV0761I (Top Right) and CIV0761D (Bottom Right).

(iii) Accompanying caption. The caption on S7V1 states "03.04.2022" as the date of depicted events.

CIV0761C and CIV0761F

The likely date when the CIV0761C and CIV0761F episodes might have occurred is estimated to be **03/04/2022 no later than 19:35 EET,** based on:

- (i) **Date of the post.** S₃V₁ and S₃V₂ were posted on O₃/O₄/2O₂2 at 21:48 EET. S₂I₂, which is a still frame of S₃V₁ was posted on O₃/O₄/2O₂2 at 19:35 EET, further indicating that the depicted events took place no later than this date.
- (ii) *Context*. S₃V₁ and S₃V₂ were posted together with S₃I₁, which was established to depict CIV₀76₁A estimated to have occurred around 17:40 EET on 03/04/2022;
- (iii) **Accompanying caption.** Information in the caption states that the materials depict the aftermath of the airstrike that occurred on 03/04/2022 ("По последней информации, в результате сегодняшнего дневного авиаобстрела...").

CIV0761E and CIV0761B

The likely date when the CIV0761E and CIV0761B might have occurred is estimated to be **03/04/2022** at **18:30** EET, but no later than **04/04/2022** at **13:12** EET based on:

- (i) **Date of the post.** S5I3 and S5I4 depicting CIvo761E and CIVo761B respectively, were posted on 04/04/2022 at 13:12 EET, indicating the latest possible time and date when these incidents might have occurred. Furthermore, while S9V1 was posted on 05/04/2022 at 14:55 EET, it appears to depict the same bucket standing at the same spot as the one depicted on S5I3, further suggesting that these materials were taken around the same time.
- (ii) *Context*. S5I3 and S5I4 were posted together with S5I1 and S5I2 that depict the scene CIV0761A, which likely occurred between 17:35 and 18:25 EET on 03/04/2022.
- (iii) **Accompanying caption.** According to the accompanying caption to the Source 5 post, the depicted events occurred "Yesterday at 6.30 pm", i.e., on 03/04/2022.
- (iv) *Witness information*. A voice on S₃V₁ posted on O₃/O₄/2O₂₂ at 21:48 EET taken at the scene of CIVO761F located ~50m from the garage depicted at the scene of CIVO761B suggests that the smoke was coming after "something has hit the garage" [in Russian: "Что-то в гараж попало, вон дым идет"]. This further indicates that the damage at the scene of CIVO761B likely occurred on O₃/O₄/2O₂₂.

As such, while all of the images posted by Source 5 were taken and posted on 04/04/2022, it is likely that S5I3 and S5I4 depict the scenes of CIV0761E and CIV0761B, which likely occurred on 03/03/2022 at approx. 18:30 EET, but no later than 04/04/2022 at 13:12 EET.

CIV0761G and CIV0761K

The likely date when the CIV0761G and CIV0761K episodes might have occurred is **03/04/2022**, but no later than **04/04/2022** at **12:10** EET, based on:

- (i) **Date of the post.** The latest possible date of the episode is identified based on the earliest date of materials depicted on S10V1 and S11V2 which were posted on 04/04/2022 at 12:38 and 12:10 EET respectively.
- (ii) *Context*. S11V2 was posted together with S11V1 and depicts CIV0761A, which likely occurred between 17:35 and 18:25 EET on 03/04/2022.
- (iii) **Accompanying caption.** According to the accompanying caption to S10V1, the footage depicts the aftermath of the strike that occurred on 03/04/2022 "03.04.2022. Внаслідок обстрілу Слобідського району Харкова з квітня пошкоджені харківські тролейбуси та автобуси Каrsan." In the caption of S11V2 it is reported that it depicts the aftermath of the previous day's shelling of several districts in Kharkiv ("Страшные последствия вчерашнего обстрела нескольких районов Харькова."), further indicating that CIV0761G likely occurred on 03/04/2022.
- (iv) **Depicted events.** S10V1 depicts a fire brigade putting out a fire at Trolleybus Depot No.2, indicating that the footage was likely taken shortly after the strike occurred. S11V2 taken at the scene of CIV0761K, geolocated ~20 m from the Trolleybus Depot No.2 entrance (the scene of CIV0761G), and depicts a burning car, which indicates that the fire at these locations was a result of the same strike.

As such, while S10V1 and S11V2 were taken and posted on 04/04/2022 it is likely that the events depicted in the scenes occurred earlier, likely on 03/04/2022, but no later than 04/04/2022 at 12:10 EET, when the materials were posted.

CIVo761H

The likely date when CIV0761H might have occurred is **03/04/2022**, **but no later than 04/04/2022**, **at 08:39 EET**, based on:

- (i) *Date of the post*. The latest possible date of CIVo761H is identified based on the earliest date when the materials depicting it were published. S12I3 was posted 04/04/2022 at 08:39 EET.
- (ii) *Context*. S12I3 was posted together with S12I1 and S12I2 which depict the scene of CIV0761A, which likely occurred between 17:35 and 18:25 EET on 03/04/2022.
- (iii) **Accompanying caption.** According to the accompanying caption to S2I3, the photo depicts the aftermath of the strike in Kharkiv ("В результаті обстрілу російськими окупантами в Харкові").

(iv) The difference between the time of the post and the depicted time of the day. The post was published at 08:39 EET, but the dark conditions depicted in the posted materials suggest that the images were likely taken either at the scenes at least before the sunrise of 04/04/2022 at 06:03 EET, but more likely in the evening of 03/04/2022.

As such, while S12I3 was posted on 04/04/2022, it was estimated that the image was taken at the scene of CIV0761H on 03/04/2022, but no later than 04/04/2022 at 08:39 EET.

Who and What Was Present?

Casualties

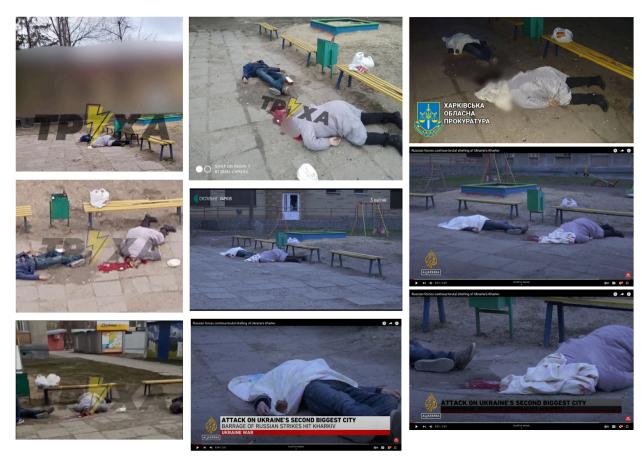
(i) Fatalities

CIV0761A

Visual materials taken at the scene of CIV0761A depict two human bodies, possibly those of a man and woman, wearing civilian clothing. There are strong indications that these two people were killed in this incident:

- (i) Their faces and upper parts of their bodies at were subsequently covered with white pieces of fabric;
- (ii) The severity of sustained injuries are indicated by what appears to be a pool of blood under one of the bodies indicating heavy blood loss;
- (iii) Their bodies remained at the CIV0761A scene for several hours after the strike, while the wounded man that was seen at the scene on S4V1 was removed.

The identified visual materials did not capture the presence of firearms or other weapons at the CIVo761A scene. The clothing of the bodies appears to be civilian and has no visible elements, labels, or other signs of a military nature.



Human bodies depicted at the scene of CIV0761A at various times of likely 03/04/2022.

Top Left: S1I1.Centre Left: S2I1. Bottom Left: A still from S4V1. Top Middle: S3I1. Centre Middle: A still from S7V1. Bottom Middle: A still from S9V1. Top Right: S6I1. Centre Right: A still from S9V1.

Bottom Right: A still from S9V1.

The bodies are captured on the ground in a close vicinity to a children's playground in a residential area of Kharkiv. From the identified visual materials, it is unclear what the individuals who appear to have been killed were doing at the moment of the strike. That said, based on the presence of white grocery bags depicted filled with loaves of bread (as seen on S7V1) it is likely that at least one of them was on their way back from a grocery store.

CIV0761D

S7V1 and S8V1 depict one human body on the pavement near a two-story residential building near the kindergarten, covered with a white cloth, indicating it was a fatality. The limited amount of identified visual materials prevents the identification of the body's gender or clothing. No information indicating the body was moved from its original place or what the person was doing at the scene during the strike was identified in open sources.



What appears to be a dead human body on the pavement covered with a white cloth.

Top: A still from S8V1. Bottom: A still from S7V1.

(ii) Wounded

CIV0761A

S4V1 depicts what appears to be a wounded man on the ground at the scene of CIVo761A attempting to take an upright position. The man was wearing casual civilian clothes with no visible military elements, labels, or signs that could indicate his link to the armed forces. No firearms or other weapons are depicted in the video.

The wounded man depicted was later identified on S14V1 (0:03–1:00) as Bogdan Tyitkov ("Богдан Тітков"), who, similarly to the wounded man depicted on S4V1, appears to have sustained injuries mostly to his right leg and arm. In the footage, Bogdan Tyitkov claimed

that his right arm bone was damaged and six "shards" were removed from his right leg, including his right shin.

His video interview on S14V1 was mixed with embedded clips from S4V1 depicting the wounded man at the scene of CIVo761A. Footage captures multiple bruises visible on his left arm, right arm, and right leg. Therefore, based on the wounds sustained by a man on the S14V1 footage, which correspond to the injuries sustained by the wounded man on S4V1, it appears likely that the wounded man depicted at the scene of CIVo761A is Bogdan Tyitkov, who, according to his interview, was on his way to the gym when the artillery strike occurred.



Comparison of wounds sustained by the man at the CIV0761A scene and Bogdan Tyitkov at the hospital. Left: A still from S4V1. Top right: A still from S14V1. Bottom right: A still from S14V1.

CIV0761C

S3V2 depicts people receiving what appears to be medical assistance. The voice recorded on S3V1 states that "there are two [people] wounded..." indicating that at least two people on S3V2 were wounded by the strike. It also mentions that the strike "hit the garage...", which appears to be the garage at the scene of CIVo761B. However, it is not possible to verify it due to the long distance from the scene of CIVo761C and low quality of S3V2. It is also not feasible to establish the condition of the wounded individuals, or identify the clothes they were wearing at that time of the artillery strike.



The wounded people depicted on the ground visible on still frames from S3V2.

CIV0761F

S₃V₁ depicts a man who appears to be unconscious on the pavement. Since no wounds, blood, or other information indicating possible wounds are visible on the video, the severity of his condition is unclear. The man is depicted wearing casual civilian clothes with no visible military elements, labels, or signs that could suggest his possible link to the armed forces. No firearms or other weapons were depicted on S₃V₁.



A wounded man in who appears to be unconscious on the pavement receiving medical assistance from another man depicted on: S1I1 (Left); Still frames from S3V1 (Centre and Right).

Damage to Civilian Infrastructure

CIV0761A

S₅I₁, S₇V₁, and S₁₃V₁ depict several damaged objects of civilian infrastructure located in the immediate vicinity of the incident location (~50 m): shattered windows of an apartment building; damage to the cladding and glass door of the MAXXIMUS fitness club; and torn-off cladding of the nearby kiosk.



Shattered windows of an apartment building depicted on S5I1 (Left). Broken door glass and marks on the cladding of the "MAXXIMUS" gym depicted on S7V1 (Top Right). Holes in the children's swing, likely caused by metal fragments from 9N235 submunitions depicted on S13V1 (Bottom Right).







Damaged cladding of the kiosk (Yellow Arrow) scene depicted on S11V1 (Left); S4V1 (Upper Right); and S8V1 (Bottom Right).

CIVo761B

S5I4 depicts a pattern formed by the holes and marks on a metal garage located in an inner courtyard formed by residential buildings. The size, shape, and direction of these marks indicate they may have been caused by a single explosion, possibly of the cluster submunition filled with metal fragments (see the section "What kind of munition was used?"), or other smaller-calibre artillery round.



The fragmentation pattern formed by marks and holes (Yellow Ellipse) under the garage's roof depicted on S5I4.

The strike is further indicated by the smoke captured on S₃V₂ at the scene of CIVo₇6₁C and seemingly wounded people on the ground ~50 m from the damaged garage. The strike was also indicated by the voice on the S₃V₂ stating that the smoke was coming from a garage that had been hit by something.

CIV0761G and CIV0761K

S9V1 and S1oV1 depict trolleybuses at Trolleybus depot No.2 at the scene of CIvo761G with broken windshields, clusters of dents, round holes visible in their trunks, and punctured wheels. The widespread nature and level of the damage suggest it was caused by a detonation of cluster submunitions or other smaller high explosive systems, such as an AGS-19 or 60 mm mortar. The fire brigade working at the scene depicted on S1oV1 indicates the presence of an active fire, suggesting that the footage was filmed immediately or shortly after the strike. S11V2 appears to depict a burning car at the scene of CIVo761K, which was geolocated to the immediate vicinity of Trolleybus depot No.2 at the scene of CIVo761, suggesting that the damage was likely caused by a single artillery strike provoking fire at both scenes.

The location of the "Gazelle" truck depicted on S12I5 with a damaged frontside and covered in white dust was not established. However, the pattern on the tiles visible on the wall behind it

closely resembles the pattern visible on the building at the Trolleybus depot No.2 and may indicate it is likely located in the immediate vicinity of either CIVo761G or CIVo761K.



Damaged trolleybuses depicted on S9V1 (Yellow Frame) and S10V1 (Blue Frame). A burning car depicted on S11V2 (Red Frame). A damaged "Gazelle" truck depicted on S12I5 likely located at the scene of CIV0761G (Green Frame).

CIV0761E

S5I3 and S9V1 at the scene of CIV0761E depict a fragmentation pattern, marks on the residential building, and holes on the green metal rails, which appear to be visually identical to those depicted at the scene of CIV0761A by S5I3 and S13V1. The size and shape of these fragmentation patterns appear to be strongly suggestive of smaller high explosive detonations consistent with submunitions.



Comparison of damage and fragmentation patterns depicted at the scene of CIV0761E scene by S5I1 (Bottom Left) and S8V1 (Top Left). The scene of CIV0761A on S13V1 (Top and Bottom Right) and S5I1 (Centre Right).

CIV0761I

S7V1 and S9V1 depict damage sustained by a dark purple car with a plate number "21242-58XA" located in the vicinity of CIV0761I. Damage includes multiple visible dents on the car's trunk, shattered side windows and the rear windshield. The nature of the damage, the presence of the cargo section of a 9M27K1 rocket at the scene and proximity to the fragmentation pattern at the scene of CIV0761E indicates that the damage was likely caused by an artillery strike using cluster submunitions.





Damage sustained by the purple car as depicted on S7V1 (Top) and S9V1 (Bottom).

What Kind of Munition Was Used?

Based on the analysis of the metal fragments, fragmentation patterns, munition remnants, marks on objects and wounds sustained by humans identified at the CIV0761 episodes it was established that they were likely caused by the artillery strike using **9N235 submunitions delivered by Uragan 9M27K1 rockets.**

CIV0761A and CIV0761J

The analysis of the information available in open sources, which includes photos and videos posted on social media, footage produced by media outlets, and other open source

information, indicates that the casualties and damage to civilian objects depicted at the scenes of CIV0761A and CIV0761J were likely caused by **9N235 anti-personnel** fragmentation submunitions delivered by a **220mm Uragan (Hurricane) 9M27K1 rocket.**



Collage of materials depicting remnants, fragmentation patterns, fragmentation, casualties, and damage at the scenes of CIV0761A and CIV0761J.

Identification of the munition that impacted the CIVo761A scene was performed based on the following information:

- (i) Comparison of the metal fragments with the reference imagery of an Uragan 9M27K1 rocket;
- (ii) Comparison of the shape and size of collected metal fragments with the reference imagery of 9N235 and 9N210 submunitions fragmentation;
- (iii) The shape and size of the wounds sustained by the man at the scene of CIVo761A;
- (iv) The shape and direction of the crater and fragmentation pattern at the place of submunitions' detonation;
- (v) Correlation between the direction of the submunitions' fragmentation pattern, fatalities, and marks on the objects;
- (vi) The shape and size of marks from the impact of the subminitions' elements.

(i) Comparison of the metal fragments with the reference imagery of an Uragan 9M27K1 rocket

The shape and size of the large metal pipe, and the position and diameter of its vent holes depicted at the location of CIVo761J on S9V1 appear consistent with the reference imagery of the cargo section of an Uragan 9M27K1 cluster munition rocket, which is identical to the 9M27K model but is the only modification capable of delivering 9N235 submunitions. What appear to be identical tubes have been <u>identified</u>⁵⁷ by Mark Hiznay, a weapons expert at Human Rights Watch, as being the burster tube for a 9M27K series rocket.

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⁵⁷ https://twitter.com/MarkHiznay/status/1500148385403359238



Visual comparison of the pipe found at the location of CIV0761J and depicted on on S9V1 (Left) with the reference imagery depicting cargo sections of an Uragan 9M27K clutter munition rocket (Credit: Mark Hiznay/Human Rights Watch).

(ii) Comparison of the shape and size of the collected metal fragments with a reference imagery of 9N235 and 9N210 submunitions fragmentation

The shape and size of small metal fragments collected at the scene of CIVo761A by Serhii Molchanov, a person identified as a member of the Ukrainian Demining Team on S9V1, were identified by him as fragmentation of a cluster submunition (0:24-0:26). Flat, wide fragments depicted on S5I2 and S9V1 appear to be consistent with the reference imagery of stabilisation fins on both 9N210 and 9N235 submunitions. While the small metal fragments collected appear to be more consistent with the reference imagery of 9N235 fragments rather than those of 9N210. In any case, both are high explosive artillery cluster submunitions that are aerially dispensed by Uragan or Smerch multiple rocket launcher systems, and are externally identical in size, shape, and colour.

Each submunition has six rectangular black metal pop-up stabilisation fins at the end opposite to its impact fuze. Their metal fragments are of different size, shape, and weight, which is reported to be "the only way to distinguish between the impact of a 9N210 and a 9N235 submunition". ⁵⁹ A 9N235 has pre-formed metal fragments, each weighing either 4.5 or 0.5-0.75 grams, while the weight of each metal fragment in a 9N210 is declared to be 2 grams.

https://www.hrw.org/sites/default/files/news_attachments/ukraine_clusters_briefing_note_final.pd f

⁵⁸ https://cat-uxo.com/explosive-hazards/submunitions/9n235-submunition

Based on the visual examination of S₅I₂ and S₉V₁, which depict metal fragments collected at the scene of CIVo₇6₁A scene, it appears that the fragments were likely dispersed by 9N₂₃₅ submunitions rather than 9N₂₁₀ based on their size and shape. It has been reported that 9N₂₃₅ submunitions can be delivered by either Uragan 9M₂₇K₁ or Smerch 9M₅₅K. Due to the fact that the metal pipe depicted at the location of CIVo₇6₁J was identified as an Uragan 9M₂₇K rocket and no remnants of any other munition were identified at the scene, it is likely that the submunitions were delivered by Uragan 9M₂₇K₁ rockets.



Visual comparison of remnants collected at the location of CIV0761A (Top Right: S512; Bottom Right: S9V1) with the reference imagery depicting remnants of 9N235 submunition after it explodes (Left). Some of the remnants appear to be visually consistent with stabilisation fins and metal fragments of a 9N235 submunition on the reference image (Credit: Mark Hiznay/Human Rights Watch).

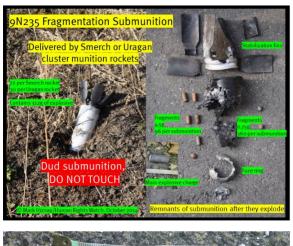


There is no apparent visual resemblance between the size and shape of pre-formed metal fragments collected at the location of CIV0761A (Top Right: S5I2; Bottom Right: S9V1); the reference imagery depicting pre-formed metal fragments of 9N210 submunition (Top Left); and pre-formed metal fragments collected near the ICRC office in Donetsk, Ukraine, in 2014 (Bottom Left) (Credit: Mark Hiznay/Human Rights Watch; Harriet Salem/Vice⁶⁰).

(iii) The shape and size of the wounds sustained by the man at the CIV0761A scene

The shape and size of wounds sustained by the man depicted on S14V1 (see the section "Wounded") indicate that they could have been caused by metal fragments of a cluster munition depicted on S5I2 and S9V1. Their shape and size appear to be consistent with elements collected at the scene of CIVo761A. The likely use of cluster munitions is further indicated by the same wounded man in his interview on S14V1, where he mentions that at least seven "shards" were removed from his right arm and right leg. It is not possible to identify whether the wounds were caused by the pre-formed metal fragments of 9N235 or 9N210 based solely on S14V1. However, the fragmentation pattern and an element of the cargo section of an Uragan 9M27K1 were identified at the scene of CIVo761A, indicating the man likely sustained wounds from the detonation of a 9N235 submunition.

⁶⁰









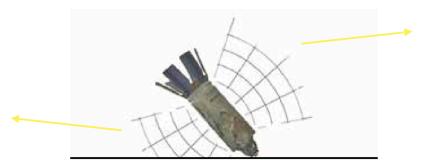
The size of wounds sustained by the man at the CIV0761A location depicted on S14V1 (Right) visually correspond to the size of the pre-formed metal fragments depicted on the reference imagery of 9N235 (Top Left) and 9N210 (Bottom Left) submunition (Credit: Mark Hiznay/Human Rights Watch;

Harriet Salem/Vice⁶¹).

(iv) The shape and direction of the crater and fragmentation pattern at the place of a submunition's detonation

Due to the cylindrical shape, the direction of the fragmentation pattern of 9N210 and 9N235 submunitions on a hard surface may indicate the direction from which the submunition came. The fragmentation will disperse radially, perpendicular to the axis of impact. It is recorded that both 9N210 and 9N235 create large semi-circular "splatter" fragmentation patterns with a radius of up to 1m.

⁶¹



Probable fragmentation dispersion from a 9N210 submunition on a flat, hard surface.

Fragmentation from such submunition is dispersed radially with the projected downward scarring on the side from which the submunition came (Credit: Roly Evans⁶²).



Fragmentation pattern on a hard surface caused by a 9N210 submunition impact outside the ICRC office on Universitetskaya Street, Donetsk, October 2014 (Credit: <u>Harriet Salem</u>⁶³).

At the scene of CIV0761A, a pattern typically formed by the fragmentation of a cluster submunition was identified. Its direction points in the direction of the children's swing and the "MAXXIMUS" gym and corresponds to the damage visible on these objects.

https://www.vice.com/en/article/8x733a/i-couldnt-move-for-five-minutes-from-fear-an-investigation-into-cluster-bombs-in-eastern-ukraine

⁶² https://commons.lib.jmu.edu/cgi/viewcontent.cgi?article=2781&context=cisr-journal



Comparison between fragmentation patterns of submunition depicted at the location of CIV0761A location. Middle: stills from S13V1. Right: A still from S11V1). Left: The reference image taken in Novosvitlivka, Luhansk province in October 2014 - submunition's impact mark from the HRW briefing note (Credit: Human Rights Watch).

(v) Correlation between the direction of submunition's fragmentation pattern, fatalities and mark on the objects

Multiple marks, dents, and holes are visible on the surface of the children's swing and the "MAXXIMUS" gym cladding depicted at the scene of CIV0761A appear to correlate with the direction of at least one fragmentation pattern that resulted from the submunition's detonation.



The size and amount of marks, and the direction of fragmentation of 9N235 submunition correspond to marks and holes on the children's slide visible at the CIV0761A scene (S13V1).



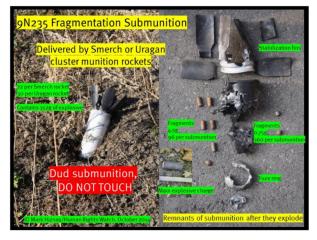
The mapping of events on a panoramic frame at the scene of CIV0761A (scene reconstructed using still frames from S11V1) indicates that the detonation of several submunitions caused depicted damage and casualties: (1) Damaged cladding of the kiosk (S8V1); (2) Possible location of submunitions' detonation (S8V1); (3) Fatalities (S3I1); (4) Fragmentation pattern on the soil (S13V1); (5) Fragmentation marks on the children's swing and the cladding of "MAXXIMUS" (S13V1).

(vi) The shape and size of marks from the impact of the subminitions' elements

S5I1, S8V1 and S13V1 depict holes visible on the nearby objects that likely resulted from the detonation of 9N235 submunitions. The fragmentation pattern identified as likely caused by a cluster submunitions is clearly visible on the ground next to the children's swing and the entrance of the "MAXXIMUS" gym (S13V1), pointing in their likely direction of origin.









Multiple marks and holes are depicted on the children's swing and the wall of the "MAXXIMUS" gym on S13V1 (Top Left); kiosk on S8V1 (Top Right), and the children's slide and residential building on S5I1 (Bottom Right) at the location of CIV0761A. The size of markings correspond to the size of the pre-formed metal fragments of a 9N235 submunition on the reference image (Left) (Credit: Mark Hiznay/Human Rights Watch).

Based on these findings, it appears that the damage to the objects of civilian infrastructure at the scene of CIV0761A was likely caused by metal fragments from detonated 9N235 submunitions delivered by 9M27K1 cluster munition rockets, which also caused deaths and injuries to civilians at the scene. Assessment of the orientation of the submunitions on impact was inconclusive due to the insufficient amount of visual materials depicting the places with fragmentation marks.

Other CIV0761 episodes

Based on the identified submunitions fragmentation, its pattern, and rocket remnants that were used in the artillery strike at the CIV0761A and CIV0761J scenes, it was established that the casualties and damaged objects of civilian infrastructure depicted in other CIV0761 scenes were possibly caused by the detonation of the same type of cluster submunitions as the ones identified at the locations of the CIV0761A and CIV0761J scenes, likely 9N235, which were delivered by an Uragan 9M27K1 rocket.

In the majority of identified visual materials that were taken in the scenes of other CIVo761 episodes, rocket remnants, casualties, damaged objects, fragmentation craters and marks visible on the surface were depicted in an isolated manner. That said, the identified damage, munition remnants, and submunition fragmentation cross-referenced with those identified in

CIV0761A and CIV0761J, as well as the date the artillery strike is estimated to occur, it appears likely that the casualties and damage were caused by the same artillery strike using cluster munitions. Namely, the fragmentation of 9N235 submunitions delivered by Uragan 9M27K1 cluster munition rockets.

The identification of the munition used in the artillery strike is based on an analysis of the following information:

- (i) The cargo section's pipe of an Uragan 9M27K cluster munition rocket visible at the scene;
- (ii) Fragmentation patterns captured at the scenes of CIVo761D, CIVo761E, and CIVo761F;
- (iii) The shape and size of marks on the damaged buildings and objects at the scenes of CIV0761E, CIV0761I, CIV0761G and CIV0761B.

(i) The cargo section's pipe of an Uragan 9M27K cluster munition rocket visible at the scene

Visual materials taken at the locations of CIV0761I and CIV0761H, which were identified as to be about 170 m from each other and 300 m from CIV0761A and CIV0761J, depict large hollow metal pipes with vent holes identical to the one depicted at the scene of CIV0761J. It appears to be consistent with the reference imagery of the cargo section of an Uragan 9M27K rocket.



A visual comparison of the pipe depicted at the location of CIV0761I on S12I4 (Top Left); S7V1 (Bottom Left and Top Right); and S9V1 (Bottom Right) with the reference imagery (Center) of cargo sections of a Uragan 9M27K cluster munition rocket (Credit: Human Rights Watch).



A visual comparison of the pipe depicted at the location of CIV0761H on S12I3 (Top) with the reference imagery (Bottom) of cargo sections of an Uragan 9M27K cluster munition rocket (Credit: Human Rights Watch).

Additionally, S12I6 and S3I2 depict metal pipes that are externally identical to the reference imagery of the cargo section of a 9M27K cluster munition rocket. While the location of these remnants was not established, their images were posted together with visual materials identified to be associated with other CIV0761 episodes. This further indicates that the casualties and widespread damage at the scene were likely caused by a single artillery strike using several Uragan 9M27K1 rockets delivering 9N235 submunitions.







Comparison of metal pipes with vent holes depicted on S12I6 (Bottom Left) and S3I1 (Bottom Right) with the reference imagery (Top) of an Uragan 9M27K rocket (Credit: Human Rights Watch).

(ii) Fragmentation patterns captured at the scenes of CIV0761D, CIV0761E, and CIV0761F

The fragmentation of 9N210 and 9N235 submunitions will disperse radially, perpendicular to the axis of impact. It is recorded that both 9N210 and 9N235 create large, semi-circular "splatter" fragmentation patterns with a radius of up to 1 m. Due to the cylindrical shape, the direction of the fragmentation pattern of 9N210 and 9N235 submunitions on a hard surface may indicate the orientation of that submunition on impact, and therefore the direction from which the submunition might have been launched.

The 9N210 and 9N235 submunitions are externally identical ⁶⁴ in their size, shape, and colour. Each submunition has six rectangular black metal stabilisation fins at the end opposite to their impact fuse. However, fragmentations of 9N235 and 9N210 submunitions are of different size, shape, and weight and are reported to be "the only way to distinguish between the impact of an 9N210 and an 9N235 submunition" Namely, 9N235 is filled with pre-formed metal fragments weighing 4.5 and 0.5 - 0.75 grams, while the weight of the fragments in 9N210 is 2 grams.

While the imagery depicting damage and fragmentation patterns in 9N210 and at the scenes of CIV0761D, CIV0761E and CIV0761F appears to have similarities and are consistent with the use of cluster submunitions, there are notable indicators suggesting that the artillery

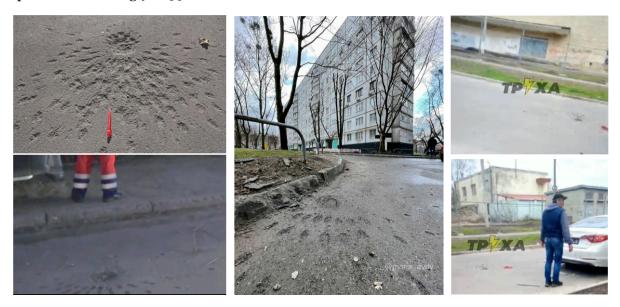
https://www.hrw.org/sites/default/files/news_attachments/ukraine_clusters_briefing_note_final.pd f

 $^{^{64}\,}https://cat-uxo.com/explosive-hazards/submunitions/9n235-submunition$

strike might have been carried out using 9N235 submunitions. For instance, the fragmentation pattern left on a surface after the detonation of a 9N210 submunition appears to be shorter and more tightly dispersed, with little to no space between them. The fragmentation patterns depicted at the scenes of CIV0761D, CIV0761E, and CIV0761F appear to be larger, with a wider space between individual marks.

The difference between these fragmentation patterns could be caused by the difference between the sizes of metal fragments filled in 9N210 and 9N235 submunitions. This suggests that the fragmentation marks were likely left by detonation of 9N235 rather than 9N210 submunitions.

Together with the cargo sections of several Uragan 9M27K rockets found at several scenes of CIV0761, including CIV0761J, it appears these submunitions were delivered by Uragan 9M27K1 rockets, which are reported to be the only modification of a Uragan 9M27K rocket capable of delivering 9N235 submunitions.



Comparison between reference imagery of a 9N210 cluster munition fragmentation pattern (Top Left) and fragmentation patterns likely caused by cluster submunitions depicted at the scenes of: CIV0761D (Bottom Left); CIV0761E (Centre); and CIV0761F (Top and Bottom Right) (Credit: Harriet Salem⁶⁶).

(iii) The shape and size of marks on the damaged buildings and objects at the scenes of CIV0761E, CIV0761I, CIV0761G and CIV0761B

On the surface of the damaged objects depicted at the scenes of CIVo761 (such as trolleybuses, residential buildings, garage, and other elements), multiple small round holes and marks forming clusters are visible. They appear to be consistent across the visual materials associated with the different scenes of CIVo761. The shape and size of these marks and holes appear to be consistent with those identified on the cladding of the "MAXXIMUS" gym, the cladding of the yellow vending kiosk, the children's swing and slide, and the

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⁶⁶ https://commons.lib.jmu.edu/cgi/viewcontent.cgi?article=2781&context=cisr-journal

residential building at the scene of CIVo761A scene, which were previously established as being likely impacted by metal fragments of detonated 9N235 submunitions.



Cluster of holes and marks depicted on the objects at the scene of CIV0761G scene on S10V1 (Left). The scenes of CIV0761E and CIV0761I on S8V1 (Centre). The scene of CIV0761B on S5I4 (Right).

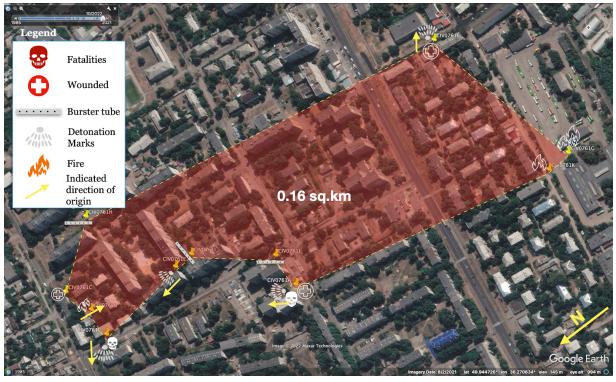
Therefore, based on the general context, the date when the visual materials were posted, the proximity of the identified cargo sections of 9M27K1 rockets, the fragmentation of cluster submunitions, and the fragmentation patterns depicting casualties and damage at the CIV0761 scenes, it appears that they were likely caused by the detonation of cluster submunitions. Possibly 9N235 submunitions, which were delivered by 9M27K1 rockets as part of the same artillery strike on 03/04/2022.

Is There Any Evidence of the Direction the Munition Came from?

It is not possible to establish the possible direction of the 9M27K1 rocket's origin with sufficient precision based on the information identified in open sources.

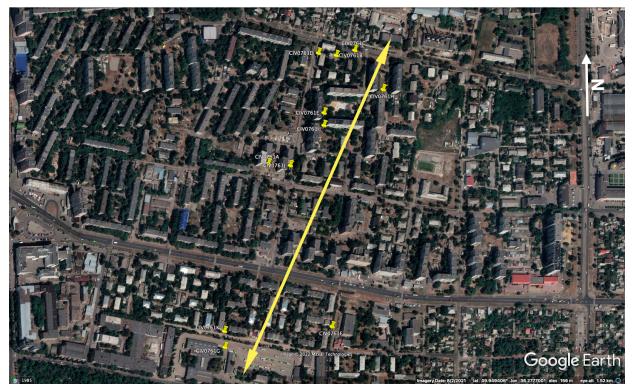
The estimation of the possible direction of origin of the 9M27K1 rockets used in the artillery strike could not be performed with sufficient accuracy due to:

- (i) The difference in direction of fragmentation patterns depicted at various CIV0761 episodes, which often point in different directions;
- (ii) The lack of imagery depicting sections of a 9M27K1 rocket being embedded in the ground at an angle which would indicate its possible direction of origin;
- (iii) The removal of the identified 9M27K1 rocket's sections from the place of impact, thus preventing the establishment of their original direction of origin.



Uragan remnants, 9N235 submunitions fragmentation marks, and their direction marked on satellite imagery from 02/08/2021 (Credit: Maxar Technologies/Google Earth Pro).

According to the analysis in the section "What kind of munition was used?", it was established that the strike was likely carried out by 9N235 submunitions delivered by Uragan 9M27K1 rockets. Based on the direction naturally formed by the coordinates of the identified scenes in CIV0761 episodes, it seems likely that Uragan 9M27K1 rockets were launched from either South/South-West or North/North-East, although this assessment is made with low confidence.



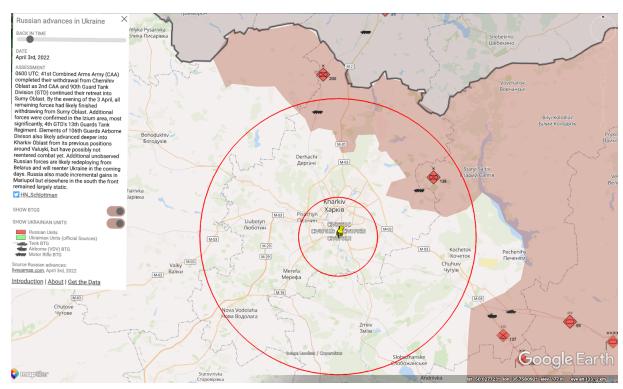
Possible direction of origin based on the locations of the CIV0761 sub-incidents (Credit: Maxar Technologies/Google Earth Pro).

According to the manufacturer, an Uragan 9M27K1 rocket has a minimum range of 10 km and a maximum range of 35 km. Due to the concentration of the identified CIV0761 episodes within an 800 m area, an area between 10 km and 30 km from the CIV0761A episode was marked on the satellite imagery to highlight the territory from which Uragan 9M27K1 rockets could have been launched.

Based on the information on the <u>UAWarData map</u>⁶⁷ collecting open source information on the movement and locations of the armed forces of Russia and Ukraine, on 03/04/2022 the territory to the North/North-East of Kharkiv within a 35 km range was reported to be under control of the Russian armed forces, in particular the 138th Separate Guards Motorized Rifle Brigade (*in Russian:* "138-я отдельная гвардейская мотострелковая бригада").

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⁶⁷ https://uawardata.com/



The maximum (35 km) and the minimum (10 km) ranges marked by red circles coincide with the presence of the Russian armed forces on 03/04/2022 within the possible range of an Uragan 9M27K1 rocket (Credit: Liveuamap/UAWarData).

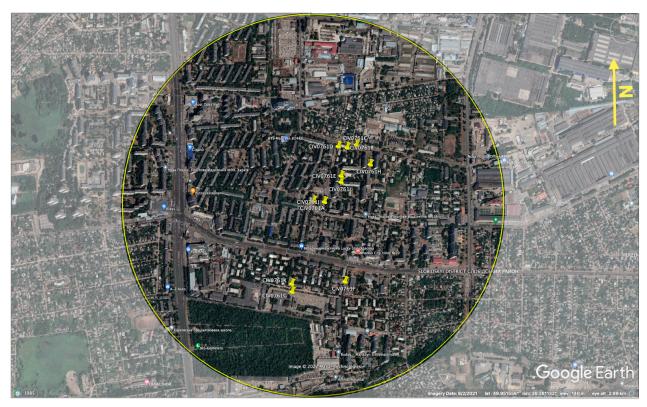
According to the information reported in open sources, the 138th Separate Guards Motorized Rifle Brigade (138th Brigade) consists, *inter alia*, of at least three rocket artillery divisions and is equipped⁶⁸ with the BM-21 Grad MLRS, indicating that the 138th Brigade employs artillery specialists trained to use the Russian MLRSs, including the BM-27 Uragan MLRS.

Note: Information concerning the location, composition, and weaponry at the disposal of the Russian or Ukrainian military formations engaged in the ongoing armed conflict identified in open sources does not include information on other military formations that might be present, their manoeuvres, a precise list of employed and destroyed weaponry, or any possible supply lines that could exist between these military formations.

What was the Location Used for?

Based on the cross-referenced information available in open sources, all CIvo761 episodes occurred in a residential area of the Slobidskyi district of Kharkiv. Within a 1 km area around CIVo761, only objects of civilian nature were identified, which include, *inter alia*, three ATB-Market grocery stores, shopping malls, a football field, a school, a trolleybus depot, a currently defunct "SALUT" cinema building, restaurants, a kindergarten, post offices, public schools, a park and a cemetery, a factory of building materials, a veterinary clinic, and two hospitals.

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The area of 1 km around CIV0761 indicating the possible area affected by cluster submunitions marked on the satellite imagery from 02/08/2021 (Credit: Maxar Technologies/Google Earth Pro).

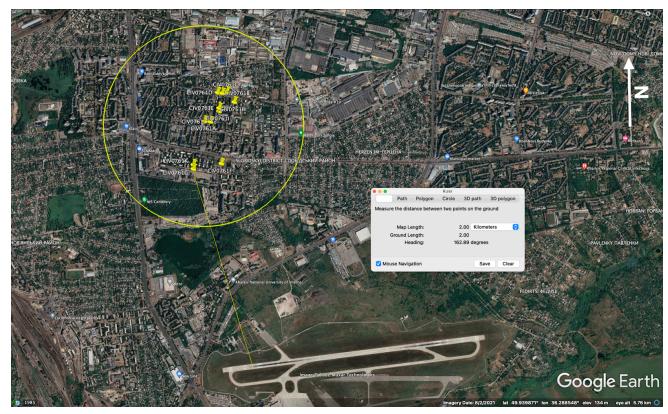
Were There Military Structures, Installations or Other Assets in the Area?

At the time of the incident no information indicating presence of military structures, installations, troops, vehicles or other military assets at the incident's location or within an area of 1 km was identified in open sources.

Kharkiv International Airport is located about 2 km away from the CIV0761G location toward the South at 49.9225, 36.2803⁶⁹.

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⁶⁹ https://maps.app.goo.gl/EXQErKKnxPyC5vDk6



Distance from the Kharkiv International Airport to the nearest CIV0761 sub-incident marked on satellite imagery (Credit: Maxar Technologies/Google Earth Pro).

Statements from Parties of the Conflict

Ukraine

The artillery strike in Kharkiv using cluster munitions on 03/04/2022 was confirmed by Oleh Synyehubov, the head of the Kharkiv Regional Civil-Military Administration in an <u>interview</u>⁷⁰ to the news outlet; on the <u>official website</u>⁷¹ of the Kharkiv military administration; and by the <u>Prosecutors office</u>⁷² of Kharkiv.

Russia

No public statements made by the Russian authorities concerning CIV0761 or any of its sub-incidents were identified.

Conclusion

On 03/04/2022 starting from 18:25 EET, photos and video footage depicting, together or separately, human casualties and damage caused to the objects of civilian infrastructure in various urban locations started to appear on social media and public media outlets. These

⁷⁰ https://www.youtube.com/watch?v=trCq_UDxJtI

⁷¹ https://kharkivoda.gov.ua/news/115156?sv

⁷² https://t.me/prokuratura kharkiv/3266

visual materials were often posted together with photos and videos of munition remnants, metal fragments, and fragmentation patterns, suggesting their possible link to the depicted casualties and damage.

The assessment of the photos and video footage that appeared on social media and later in media reports between 03/04/2022 and 06/04/2022 established that these events occurred in the Slobidskyi district, a residential district of Kharkiv, on 03/04/2022 at approximately 17:40 EET, as a result of an artillery strike using cluster munitions, likely 9N235 submunitions delivered by Uragan 9M27K1 rockets.

After establishing the authenticity of the materials, coordinates of all episodes forming the incident CIVo761 were geolocated by comparing depicted objects and their spatial layout with imagery available on online mapping services (Google Street View and Yandex Panorama), and satellite imagery. They were then marked on a map, showing that all of the identified CIVo761 sub-incidents occurred within a 0.16 km² area in Slobidskyi district.

The identification of the munition used in the artillery strike was performed by comparing identified fragmentation, marks and holes on the damaged objects, remnants of rockets, and fragmentation patterns depicted at the scenes of the CIVo761 with the reference imagery. It was subsequently established that 9N235 submunitions of Uragan 9M27K1 rockets bwere likely used in a strike. This artillery strike resulted in at least 7 casualties among the civilian population, including 3 fatalities, and the damage caused to objects of civilian infrastructure, such as residential buildings, children playground, vehicles, and trolleybuses at the Trolleybus depot No.2.

Based on the range of the Uragan MLRS, the munitions were assessed to have originated from a 10-35 km area from the location of the CIVo761 episodes. The possible direction was assessed to be either South/West or North/East based on the line of attack formed by the locations of these scenes. However, this was done with low confidence. According to the information identified in open sources, on 03/04/2022 the presence of Russian armed forces, possibly with trained artillery specialists capable of using Uragan MLRS, was reported within the 10-35 km area to the North/East.

In the course of this assessment, no information about the possible presence of military troops or objects used for military purposes in the affected area on 03/04/2022 was identified in open sources.

Based on the assessment of photos and video footage that appeared on social media and in media outlets between 03/04/2022 and 06/04/2022, it was established that the human casualties and the damage caused to the objects of civilian infrastructure that occurred in the Slobidskyi district of Kharkiv, on 03/04/2022 at approximately 17:40 EET likely resulted from a single artillery strike employing cluster submunitions. These were likely 9N235 submunitions delivered by Uragan 9M27K1 rockets.