2022 COLORADO UNDERGROUND UTILITY DAMAGE REPORT

Annual report summary of Colorado Underground Facility Damages based on data provided by the Common Ground Alliance (CGA) Damage Information Reporting Tool (DIRT)

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TABLE OF CONTENTS

NOTES ABOUT REPORT

PURPOSE

The underground facility damage data presented in this report originates from the Common Ground Alliance (CGA) DIRT report data and is summarized and published by the Utility Notification Center of Colorado (UNCC), DBA Colorado 811, as mandated by C.R.S. 9-1.5-103(7)(b)(c)(d) & 9-1.5-105(2.6) (a)(I) and (2.6) (b). This report is intended to be viewed by various stakeholders, including underground utility/facility owner/operators, locating/marking professionals, excavation, and construction sector stakeholders, industry associations, regulatory bodies, and the public.

Colorado 811 encourages these viewer groups to use the data for positive change in underground utility safety and damage prevention efforts.

SUBMITTING DAMAGE INCIDENTS

Colorado facility owners and operators must adhere to state regulations, which mandate the submission of underground facility damage details through the CGA Damage Information Reporting Tool (DIRT) within 90-days of service restoration following any underground facility damage incident. Excavators are also obliged to report such damages as soon as possible and post the damage(s) by contacting Colorado 811.

To participate and submit your Colorado underground facility damage data via the online CGA DIRT tool submission, please register as a stakeholder at www.cga-DIRT.com.

CGA DIRT DATA

The Common Ground Alliance (CGA) and Colorado 811 have urged various industry stakeholders to submit facility damage information to DIRT as a central repository for this type of data. **However, the challenge from a data quality perspective is that this process can result in numerous submissions from a variety of different entities for the same damage incident, encompassing reports from facility owners, locators, excavators, government agencies, industry associations, loss recovery firms, and insurance companies.**

CGA initially aimed to analyze the data separately submitted by the various sources to provide a diverse perspective on the same incident. Regrettably, CGA now aggregates all damage reports from various Colorado stakeholders, **leading to a significant overestimation of DIRT reported damages in the State of Colorado in the annually published CGA National Damage Report due to multiplication data submitted for the same incidents.** To minimize the duplication issues, Colorado 811 discontinued submitting excavator damage ticketing data to DIRT and relies on other entities data submissions, even though Colorado 811 continues to collect a limited data set of this information for internal notification purposes only.

As a result, this report only focuses on facility owner/operators who submitted damage incidents found in CGA DIRT tool and does not include data collected by Colorado 811. More details on the specific data used in this report are in the methodology section.

DATA DISCLAIMER

The Utility Notification Center of Colorado (UNCC), DBA Colorado 811 is not responsible for any actions taken based on or resulting of the data or interpretation of any information presented in this report. UNCC, DBA Colorado 811, does not guarantee the accuracy of the data provided by the CGA DIRT tool.

EXECUTIVE SUMMARY

2022 CGA DIRT Data for Colorado Reported Underground Facility Damages Increased Year-over-Year (YoY)

- A total of 4,349 total underground facility damages were reported to the CGA DIRT Tool for 2022 at the state-level; this is a 34% increase from 2021 (3,249 total damages in 2021).
- Three-quarters of damages are from urban counties; however, rural counties are seeing a sharper increase of 52% in YoY reported damages (1,179 vs. 769 total damages in 2022 and 2021, respectively).

2022 Increases Driven by a Surge in Telecommunication Facility Damages

- Colorado underground damages associated with telecommunication facilities increased by 279% YoY (1,663 vs. 439 total damages in 2022 and 2021, respectively).
- The upsurge is most likely associated to increased activity in the broadband sector as the state aims to connect 99% of households to high-speed broadband by 2027 (currently at 90% in 2022).

DIRT's Reported Leading Cause of Damages in Colorado Remains 'No Notification Made to 811'; Although, a Spike seen with 'Damages Due to No Response from Locator' is noted.

- One-in-five damages listed in DIRT reported the cause was due to 'No notification made to One-Call Center/811' making it the leading cause in Colorado.
- One notable change in 2022 was the YoY increase in underground damages caused by 'No response from operator/contract locator' (9% vs. less than 1% of total damage causes in 2022 and 2021, respectively).
- According to a national CGA study titled *Insights into Improving the Delivery of Accurate, On-Time Locates*, a third of locate technicians surveyed point to a heavy workload as one of the biggest challenges to providing timely and accurate locates. Anecdotally, the local industry has echoed that locate ticket volume is a growing issue with current locator staffing levels not being able to easily accommodate an increased locate ticket volume, supported by with the evidence shown in the increasing volume of excavator renotification requests submitted to Colorado 811.

Ongoing vigilance in contacting 811 before digging activity is crucial, as one-third of reported incidents revealed that 811 had NOT been notified prior to excavation.

- 32% of underground facility damages reported 811 had not been contacted prior to excavation. This has been slightly trending upwards since 2019 (29%).
- A higher rate of no 811 notifications were seen with damages reported in rural vs. urban counties (37% vs. 31%, respectively). It is important to continue to raise 811 awareness in rural counties especially as the state builds out its broadband capacity.

METHODOLOGY

CGA DIRT DATA

The data source used for this analysis is obtained through the CGA DIRT Tool. To prepare the data for analysis, the following steps are conducted:

- Filter to Colorado incidents
- Filter to underground damage incidents
- Filter to facility owner/operators reported incidents

The period for the data set is from 2018-2022, where the DIRT current spec version (2018.0 Current) is used. Colorado 811 does not guarantee accuracy of the DIRT data set.

METRIC DEFINITIONS

Damage: Any impact or exposure that results in the need to repair an underground facility due to weakening or the partial or complete destruction of the facility, including, but not limited to, the protective coating, lateral support, cathodic protection, or housing for the line, device, or facility. There does not need to be a release of product.

Damages per 1K Tickets: A calculated rate defined by taking the reported types of damages divided by total Colorado 811 ticket volumes. Then the calculated number is multiplied by 1,000 to get a per 1K ticket rate.

DIRT: Damage Information Reporting Tool (DIRT), which is the data repository managed by CGA.

Facility Damage: The type of facility (e.g., gas, electricity, water, etc.) that is impacted by the damage incident.

Incident: A reported damage event entered in DIRT.

Population: All state and county population information obtained through U.S. Census data.

Rural vs. Urban County: This report defines an urban county where the population per square mile is equal or greater than the state average, which is based on 2022 U.S. Census estimates.

Ticket: A submitted request by either a homeowner or professional excavator to Colorado 811 for a utility locate prior to digging.

2022 RESULTS

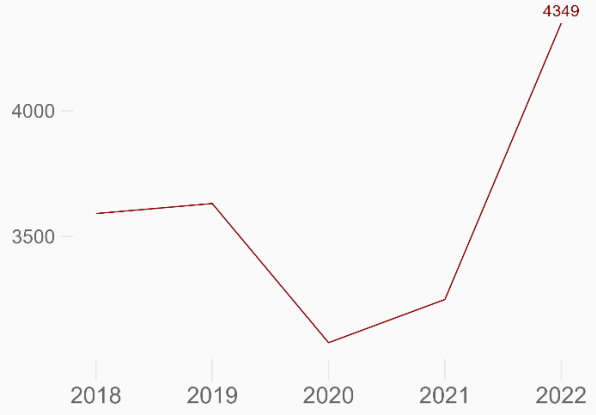
INCREASE IN REPORTED DAMAGES

A total of 4,349 total underground facility damages were reported to DIRT for 2022 in the State of Colorado at the state-level; this is a 34% increase from 2021.

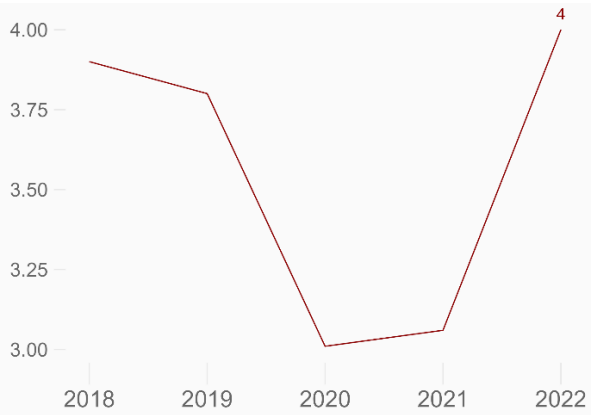
Overall Tending

As shown in the two charts and table below, reported Colorado underground facility damages to CGA DIRT in 2022 increased in both overall volume and per 1K ticket rate compared to last year. In fact, 2022 had the highest level of damages recorded since 2018.

2018-22 Total Damages



2018-22 Total Damages per 1K Tickets



2018-22 Total Damage Table

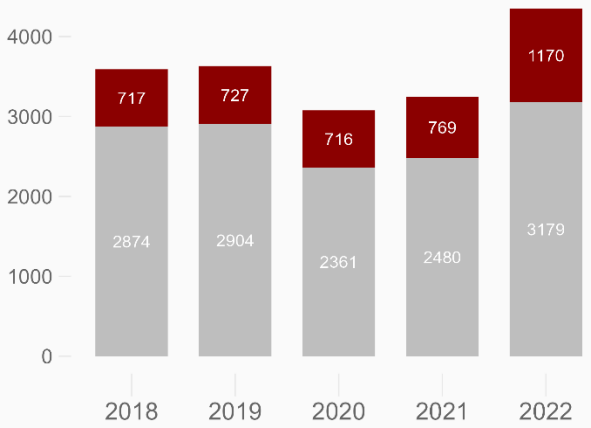
Metric	2018	2019	2020	2021	2022
Total Underground Facility Reported Damages	3,591	3,631	3,077	3,249	4,349
Total Colorado 811 Tickets (in thousands)	920K	955K	1,024K	1,063K	1,089K
Damages per 1K Tickets Rate	**3.9**	**3.8**	**3.0**	**3.1**	**4.0**

Urban vs. Rural County Damages

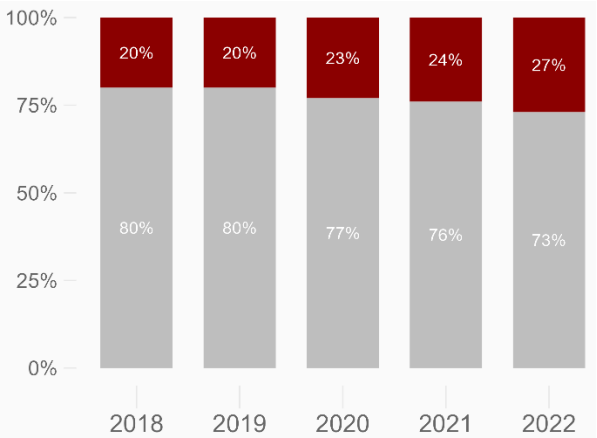
While three-quarters of the damages reported in DIRT in Colorado are from urban counties, rural counties experienced a sharper 52% increase in year-over-year reported damages (1,170 in 2022 compared to 769 in 2021). The percentage of total damages reported by rural counties is on the upward trend, rising from 20% in 2019 to 27% in 2022. It is imperative to prioritize safety

excavation practices and 811 awareness across all state levels, not exclusively in urban areas. (See charts below for detailed information on reported damages by urban and rural counties.)

2018-22 Total Damages by Urban/Rural Counties



2018-22 % of Total Damages by Urban/Rural Co.



SPIKE WITH TELECOMMUNICATION FACILITY DAMAGES

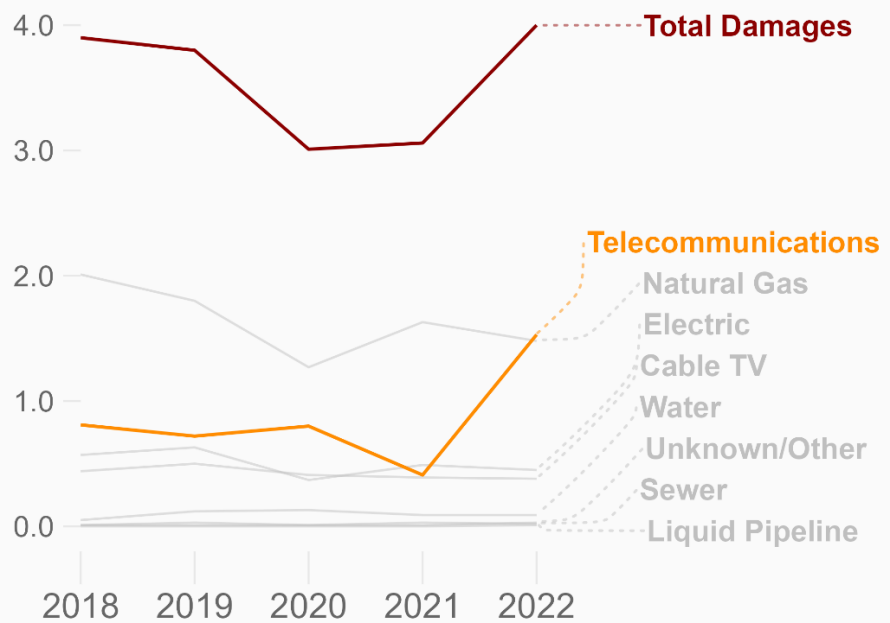
DIRT data shows Colorado incidents involving underground damages to telecommunication facilities surged by 279% YoY (1,663 damages in 2022 compared to 439 total damages in 2021).

Overall Trending

The state increase in 2022 YoY underground damages was primarily due to damages associated with telecommunication facilities when looking at facility types, according to facility owner submitted incidents to DIRT.

In 2022, approximately two out of every five underground damages were related to telecommunication facilities, which was almost doubled when compared to about one out of every ten damages recorded in 2021. This surge made telecommunications the leading facility type for damage in the State of Colorado for 2022 (1.53 telecommunication damages per 1,000 tickets in 2022), where previously since 2018 natural gas was the highest occurrence of facility type damage (1.48 natural gas damages per 1,000 tickets in 2022). Electric (0.45 damages per 1,000 tickets) and Cable TV (0.38 damages per 1,000 tickets) completed the top four. (See chart below for reference.)

2018-22 Total Damages per 1K Tickets by Facility Type



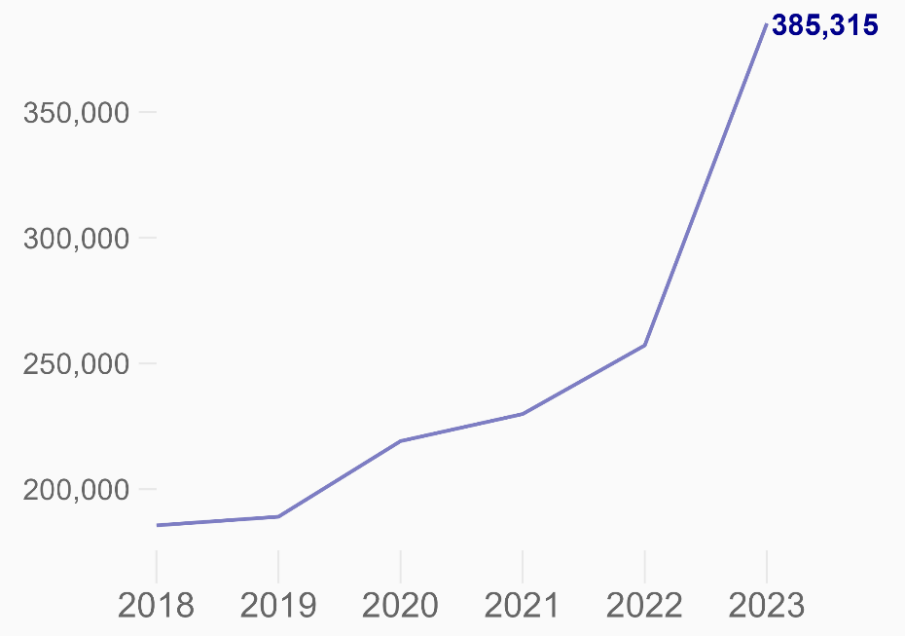
Colorado's Broadband Goals

The increase in telecommunication facility underground damages was likely attributed to heightened activity in the broadband sector as the state aims to connect 99% of households to high-speed broadband by 2027 (current coverage is at 90% in 2022). Federal funding from the Broadband Equity and Deployment (BEAD) of the 2021 infrastructure law is facilitating this effort, leading to increased spending on excavating and laying fiber lines across all communities in the state.

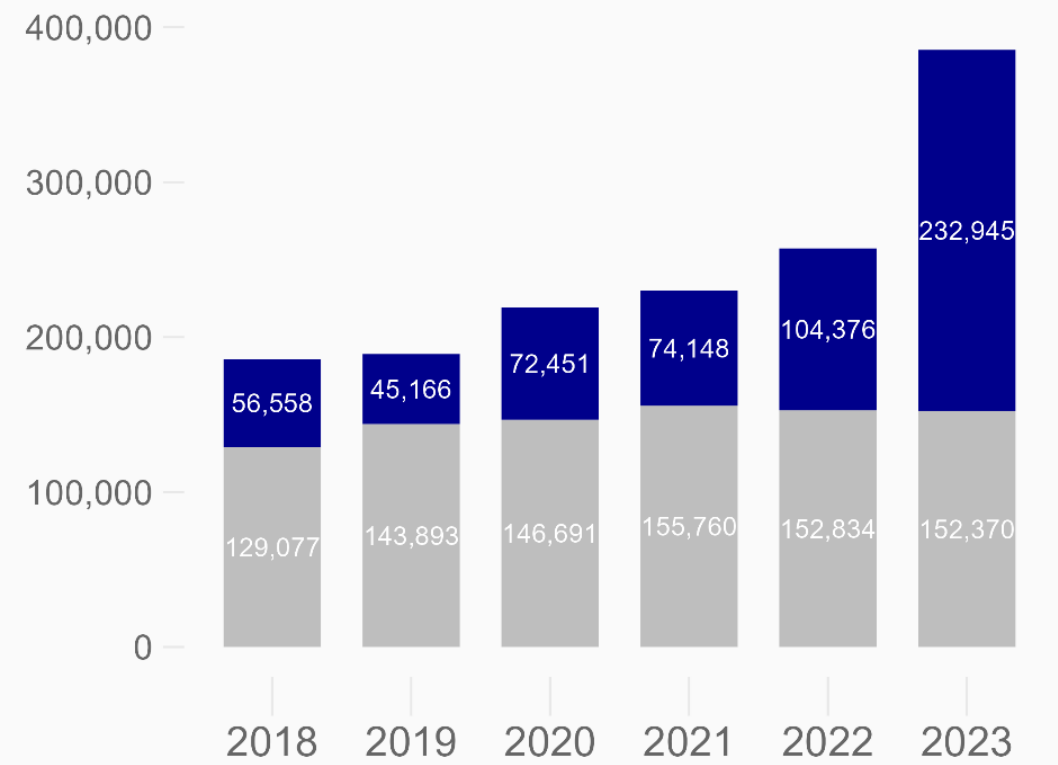
Fiber-to-the-home projects are encountering various older telecom facility types, posing challenges in locating them during the installation of new fiber lines. This has led to an increase in the complexity of locate requests, placing additional strain on already overwhelmed locate technicians (refer to 'No Response from Locator' in the following section for details on the challenges being faced by locate companies due to an increasingly heavier workload.)

This issue is also notable and supported by reviewing data from Colorado 811 tickets, where locate requests for directional boring excavation jobs have risen by 50% in 2023 YTD (though October) compared to the previous year. The upswing is attributed to the heightened activity associated with fiber projects where for 2023 YTD fiber related project tickets has outpaced non-fiber projects (230K+ tickets for fiber vs. 150K for non-fiber projects). Refer to the charts below for further details.

2018-23 YTD (thru Oct): Total CO811 Tickets with a Boring Excavation



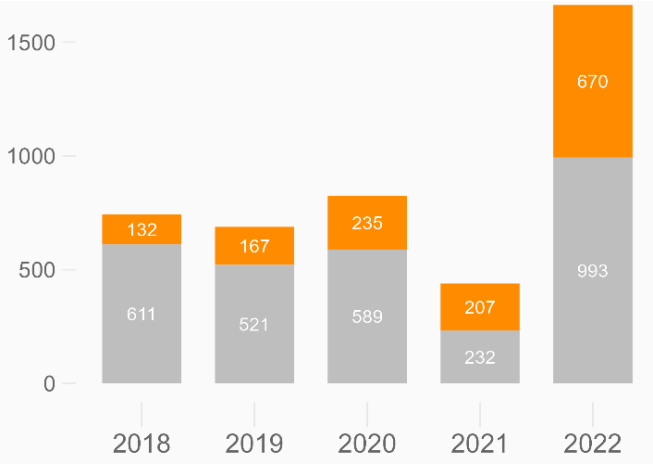
2018-23 YTD (thru Oct): Total CO811 Boring Tickets by Non-Fiber/Fiber Projects



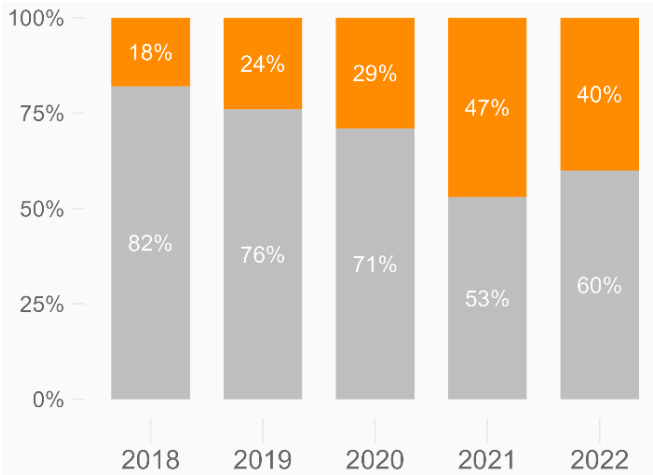
As a result, the incidence of telecom facility caused damages is expected to remain elevated as long as spending persists to meet the state's broadband goals by 2027.

Continuing efforts to raise awareness and educate on excavation best practices, particularly in rural communities where many of these projects are underway, is crucial. The accompanying charts highlight how 40% of all telecom facility damages are reported from rural counties, a higher rate compared to overall damages where rural counties accounted for 27% of all incidents reported in 2022.

2018-22 Total Telecom Damages by Urban/Rural Counties



2018-22 % of Total Telecom Damages by Urban/Rural Counties



TOP UNDERGROUND FACILITY DAMAGE CAUSE CONTINUES TO BE NO 811 NOTIFICATION, BUT INCREASE SEEN WITH NO LOCATOR RESPONSE

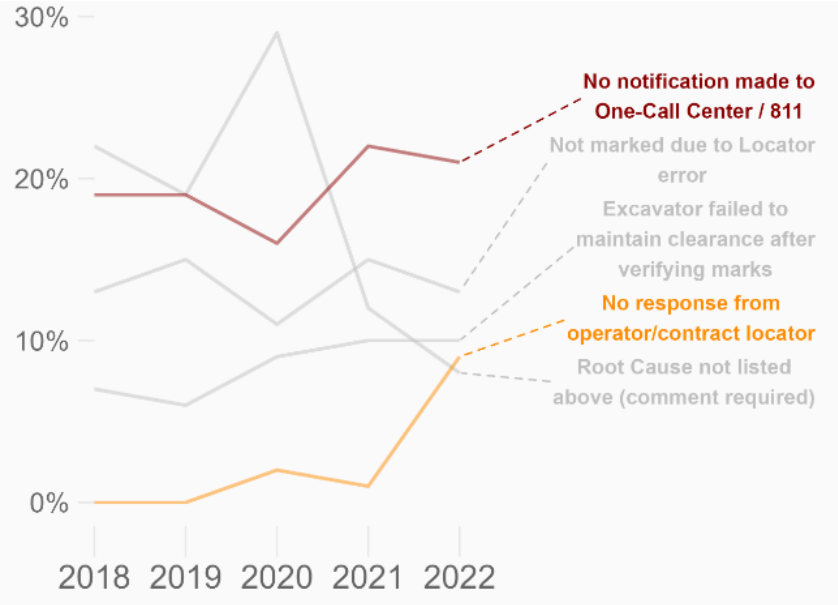
No Colorado 811 Notification

One-in-five underground facility owner submitted damages in DIRT listed that the damage cause was due to 'No notification made to One-Call Center/811' making it the leading root cause in Colorado. 'No 811 notification' has been the leading damage cause since 2018 when excluding incidents that did not list a root cause.

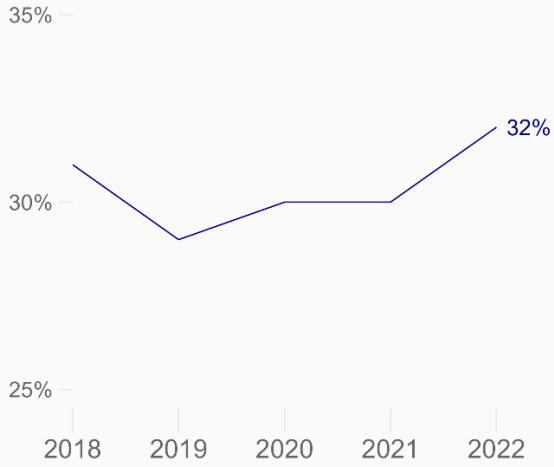
When looking at all underground damage incidents that indicated whether 811 was notified prior to any excavation, roughly a third (32%) specified no initial 811 notification was made, which has been trending slightly upward since 2019 where 29% of all reported damages indicated no 811 notifications.

Rural counties report a higher rate of no 811 notification vs. urban counties (37% vs. 31% in 2022 for rural and urban counties, respectively). It will remain important to continue to raise awareness in rural counties to notify 811 prior to any excavation activities especially with the current state efforts to increase broadband access to all communities.

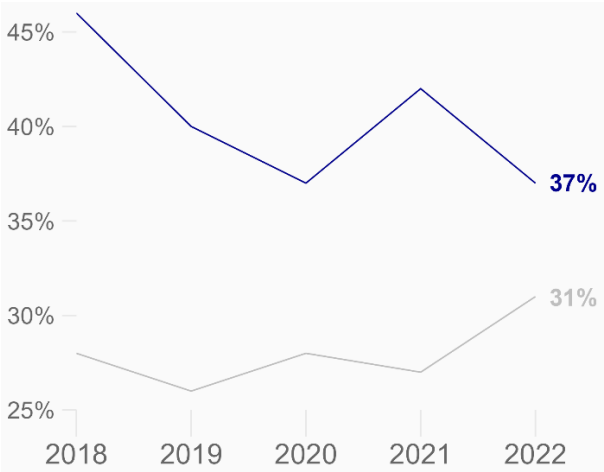
2018-22 Top 5 Reported Damage Causes



2018-22 % of Damages w/ NO 811 Notification



2018-22 % of Damages w/ NO 811 Notification by Urban/Rural



No Response from Locator

One notable change for Colorado in 2022 was the YoY increase in underground damages caused by 'No response from operator/contract locator' (9% vs. less than 1% of total damage causes in 2022 and 2021, respectively).

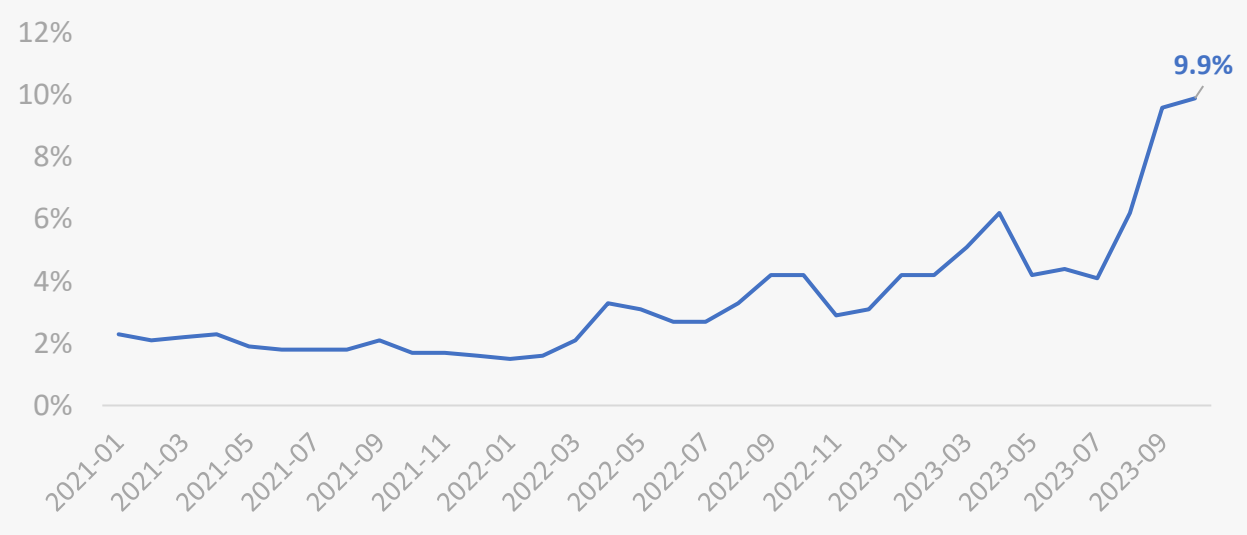
According to a national CGA study titled *Insights into Improving the Delivery of Accurate, On-Time Locates*, a third of locate technicians surveyed point to a heavy workload as one of the biggest challenges to providing timely and accurate locates. Anecdotally, the local industry has echoed that ticket volume increases is a growing issue with current locator staffing levels not being able to accommodate the increased workload.

This is an area that is increasingly a challenge within the industry and is anticipated to continue to be an issue throughout 2023 and beyond.

For example, the chart below highlights the percentage of Colorado 811 tickets that are excavator renotifications, which is a type of ticket that excavators submit alerting the facility owners when their original locate request is not fulfilled. At the time of publishing this report, the percentage of excavator renotifications has reached an all-time high where almost one in every ten tickets is an excavator renotification.

Local locating companies are likely experiencing volume increases never seen before and are not able to keep pace with increased ticket volumes due to staffing shortages that will continue to put pressure on the industry and increase the need to complete locate requests in a timely fashion; otherwise, excavation safety and damage costs are expected to continue to increase in a similar fashion.

2021-23 YTD (thru Oct): % of Total CO811 Tickets that are Excavator Renotifications

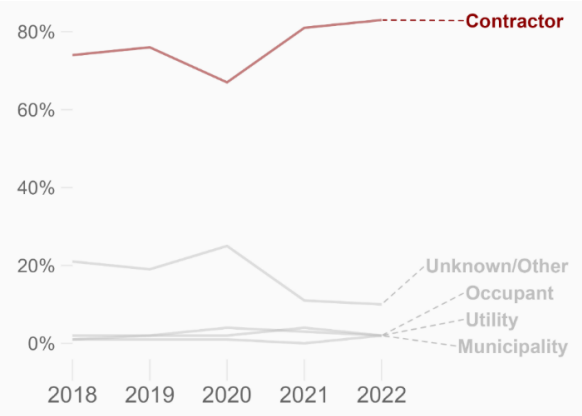


NO CHANGES SEEN WITH EXCAVATION PRACTICES

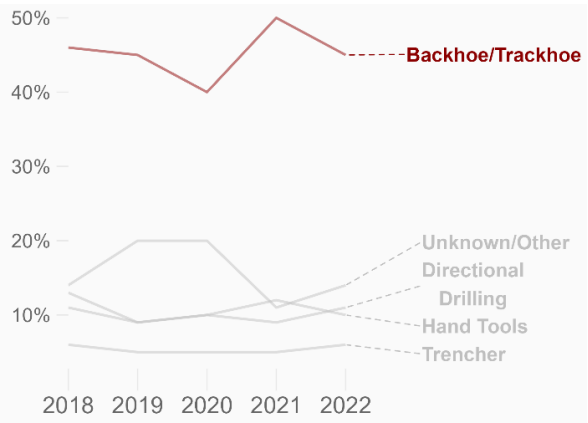
Excavator Type and Excavating Equipment

No notable changes were seen when looking at trending by excavator and excavating equipment type damages. Most damages being reported via DIRT for excavation types are from contractors (83% of total). For excavation equipment, backhoe/trackhoe nearly makes up half (45%) of all reported damages.

2018-22 Top 5 Damages by Excavator Type



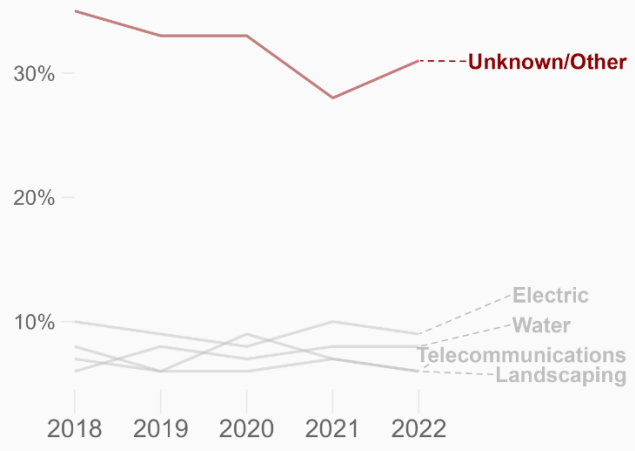
2018-22 Top 5 Damages by Excavating Equipment



Work Performed

The DIRT tool requests incidents to record the type of work being performed; however, as evident in the chart below, this data is a challenge to collect based on a third of all entries do not identify this type of information. The next leading type of work performed is electric (9%), water (8%), telecom (6%), and landscaping (6%).

2018-22 Top 5 Damages by Work Performed



APPENDIX

COLORADO MAP OF DIRT UNDERGROUND REPORTED FACILITY DAMAGES PER 1K TICKETS BY COUNTY

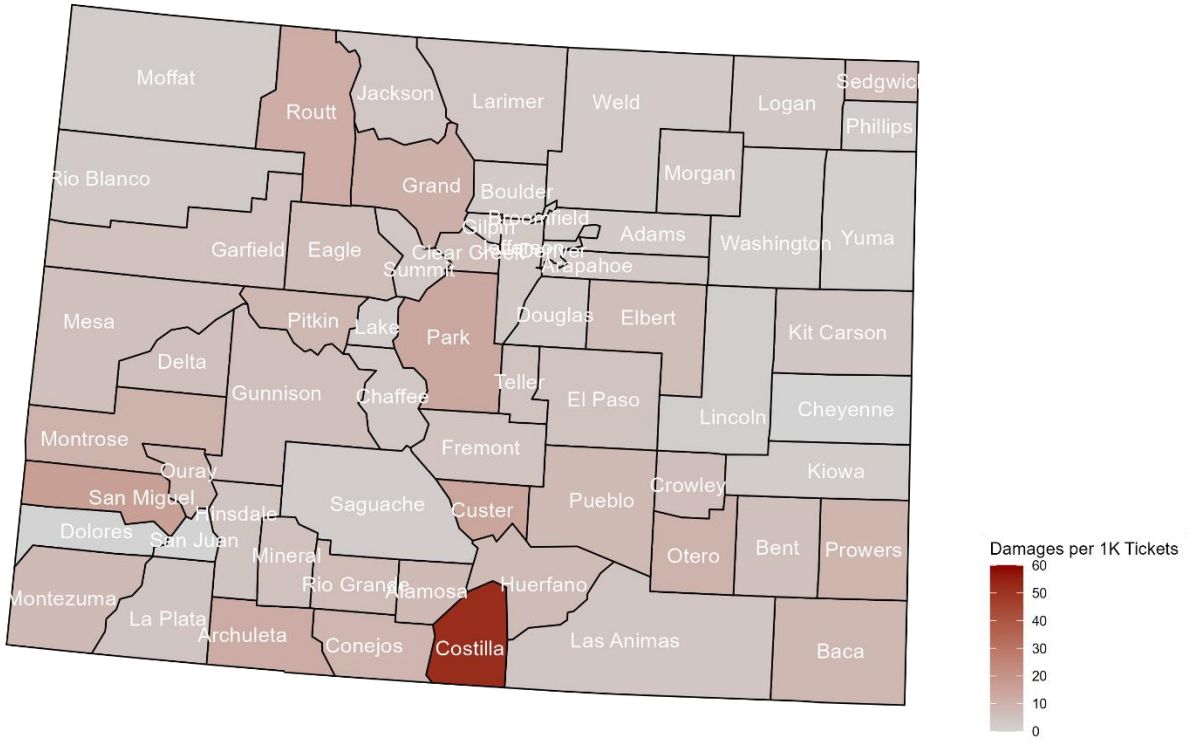


TABLE OF DIRT UNDERGROUND REPORTED FACILITY DAMAGES BY COUNTY

County	County Type	Population (2022 US Census Est.)	Total Tickets	Pop. per Sq Mi	Pop. per Ticket	Damages	% of Damages without One Call/811 Notification	Damages per 1K Tickets
Adams	Urban	527,575	95,657	452	5.5	250	26%	2.6
Alamosa	Rural	16,592	1,903	23	8.7	15	47%	7.9
Arapahoe	Urban	655,808	104,409	822	6.3	363	27%	3.5
Archuleta	Rural	14,003	4,888	10	2.9	60	40%	12.3
Baca	Rural	3,432	693	1	5.0	6	33%	8.7
Bent	Rural	5,399	530	4	10.2	3	67%	5.7
Boulder	Urban	327,468	64,934	451	5.0	169	34%	2.6
Broomfield	Urban	76,121	14,257	2,305	5.3	15	27%	1.1
Chaffee	Rural	20,223	3,722	20	5.4	13	23%	3.5
Cheyenne	Rural	1,732	712	1	2.4	-	-	-
Clear Creek	Rural	9,355	1,628	24	5.7	11	9%	6.8
Conejos	Rural	7,579	978	6	7.7	9	56%	9.2
Costilla	Rural	3,603	484	3	7.4	25	84%	51.7
Crowley	Rural	5,614	454	7	12.4	3	100%	6.6
Custer	Rural	5,335	920	7	5.8	13	23%	14.1
Delta	Rural	31,602	4,912	28	6.4	30	33%	6.1
Denver	Urban	713,252	104,068	4,662	6.9	347	32%	3.3
Dolores	Rural	2,455	264	2	9.3	-	-	-
Douglas	Urban	375,988	92,710	448	4.1	266	46%	2.9
Eagle	Rural	55,285	8,648	33	6.4	58	47%	6.7
Elbert	Rural	27,799	10,490	15	2.7	71	37%	6.8
El Paso	Urban	740,567	133,115	348	5.6	685	28%	5.2
Fremont	Rural	49,621	4,639	32	10.7	22	55%	4.7
Garfield	Rural	62,271	8,404	21	7.4	45	42%	5.4
Gilpin	Rural	5,891	831	39	7.1	2	0%	2.4
Grand	Rural	15,769	5,748	9	2.7	64	33%	11.1
Gunnison	Rural	17,267	3,287	5	5.3	21	43%	6.4
Hinsdale	Rural	775	233	1	3.3	1	0%	4.3
Huerfano	Rural	7,082	1,353	5	5.2	10	50%	7.4
Jackson	Rural	1,302	265	1	4.9	1	100%	3.8
Jefferson	Urban	576,143	94,173	754	6.1	340	34%	3.6
Kiowa	Rural	1,424	1,431	1	1.0	3	100%	2.1

County	County Type	Population (2022 US Census Est.)	Total Tickets	Pop. per Sq Mi	Pop. per Ticket	Damages	% of Damages without One Call/811 Notification	Damages per 1K Tickets
Kit Carson	Rural	6,961	1,758	3	4.0	7	43%	4.0
Lake	Rural	7,327	3,301	19	2.2	6	50%	1.8
La Plata	Rural	56,607	9,400	34	6.0	40	50%	4.3
Larimer	Urban	366,778	79,943	141	4.6	303	28%	3.8
Las Animas	Rural	14,327	2,262	3	6.3	9	67%	4.0
Lincoln	Rural	5,510	1,331	2	4.1	2	0%	1.5
Logan	Rural	20,823	2,068	11	10.1	7	86%	3.4
Mesa	Rural	158,636	26,615	48	6.0	152	28%	5.7
Mineral	Rural	931	365	1	2.6	2	50%	5.5
Moffat	Rural	13,177	4,507	3	2.9	9	56%	2.0
Montezuma	Rural	26,468	2,842	13	9.3	22	23%	7.7
Montrose	Rural	43,811	7,473	20	5.9	77	21%	10.3
Morgan	Rural	29,239	4,335	23	6.7	14	43%	3.2
Otero	Rural	18,303	1,756	15	10.4	18	56%	10.3
Ouray	Rural	5,100	2,583	9	2.0	23	26%	8.9
Park	Rural	17,939	3,648	8	4.9	50	12%	13.7
Phillips	Rural	4,449	571	7	7.8	1	0%	1.8
Pitkin	Rural	16,876	3,117	17	5.4	27	44%	8.7
Prowers	Rural	11,854	1,564	7	7.6	15	80%	9.6
Pueblo	Urban	169,544	21,733	71	7.8	173	31%	8.0
Rio Blanco	Rural	6,569	1,857	2	3.5	5	20%	2.7
Rio Grande	Rural	11,325	1,554	12	7.3	11	36%	7.1
Routt	Rural	25,007	5,785	11	4.3	70	31%	12.1
Saguache	Rural	6,623	1,135	2	5.8	2	50%	1.8
San Juan	Rural	803	128	2	6.3	-	-	-
San Miguel	Rural	8,003	2,019	6	4.0	33	27%	16.3
Sedgwick	Rural	2,295	314	4	7.3	2	0%	6.4
Summit	Rural	30,565	11,993	50	2.5	46	33%	3.8
Teller	Rural	24,857	6,265	45	4.0	31	35%	5.0
Washington	Rural	4,812	897	2	5.4	1	0%	1.1
Weld	Urban	350,176	103,870	88	3.4	268	26%	2.6
Yuma	Rural	9,899	1,870	4	5.3	2	50%	1.1
COLORADO		**5,839,926**	**1,089,599**	**56**	**5.4**	**4,349**	**32%**	**4.0**

TABLE OF 2018-22 DIRT UNDERGROUND FACILITY REPORTED DAMAGES BY FACILITY TYPE

	2018, N = 3,591[1]	**2019**, N = 3,631[1]	**2020**, N = 3,077[1]	**2021**, N = 3,249[1]	**2022**, N = 4,349[1]
Facility Damage					
Natural Gas	1,849 (51%)	1,722 (47%)	1,302 (42%)	1,728 (53%)	1,612 (37%)
Telecommunications	743 (21%)	688 (19%)	824 (27%)	439 (14%)	1,663 (38%)
Electric	523 (15%)	598 (16%)	378 (12%)	519 (16%)	487 (11%)
Cable TV	408 (11%)	478 (13%)	417 (14%)	419 (13%)	419 (9.6%)
Water	47 (1.3%)	110 (3.0%)	135 (4.4%)	96 (3.0%)	93 (2.1%)
Sewer	8 (0.2%)	25 (0.7%)	9 (0.3%)	31 (1.0%)	25 (0.6%)
Unknown/Other	10 (0.3%)	6 (0.2%)	8 (0.3%)	13 (0.4%)	34 (0.8%)
Liquid Pipeline	3 (<0.1%)	4 (0.1%)	4 (0.1%)	4 (0.1%)	16 (0.4%)

[1]n (%)

TABLE OF 2018-22 DIRT UNDERGROUND FACILITY REPORTED DAMAGES BY EXCAVATOR TYPE

	2018, N = 3,591[1]	**2019**, N = 3,631[1]	**2020**, N = 3,077[1]	**2021**, N = 3,249[1]	**2022**, N = 4,349[1]
Excavator Type					
Contractor	2,660 (74%)	2,743 (76%)	2,061 (67%)	2,626 (81%)	3,618 (83%)
Unknown/Other	757 (21%)	685 (19%)	769 (25%)	353 (11%)	435 (10%)
Occupant	84 (2.3%)	90 (2.5%)	116 (3.8%)	104 (3.2%)	85 (2.0%)
Utility	28 (0.8%)	55 (1.5%)	74 (2.4%)	129 (4.0%)	96 (2.2%)
Municipality	22 (0.6%)	20 (0.6%)	24 (0.8%)	13 (0.4%)	83 (1.9%)
Developer	22 (0.6%)	21 (0.6%)	20 (0.6%)	11 (0.3%)	13 (0.3%)
Farmer	8 (0.2%)	8 (0.2%)	8 (0.3%)	8 (0.2%)	7 (0.2%)
County	8 (0.2%)	8 (0.2%)	5 (0.2%)	4 (0.1%)	10 (0.2%)
State	0 (0%)	1 (<0.1%)	0 (0%)	1 (<0.1%)	2 (<0.1%)
Railroad	2 (<0.1%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

[1]n (%)

TABLE OF 2018-22 DIRT UNDERGROUND FACILITY REPORTED DAMAGES BY EXCAVATION EQUIPMENT

	2018, N = 3,591[1]	**2019**, N = 3,631[1]	**2020**, N = 3,077[1]	**2021**, N = 3,249[1]	**2022**, N = 4,349[1]
Excavation Equipment					
Backhoe/Trackhoe	1,649 (46%)	1,634 (45%)	1,236 (40%)	1,637 (50%)	1,945 (45%)
Unknown/Other	505 (14%)	730 (20%)	613 (20%)	353 (11%)	590 (14%)
Hand Tools	383 (11%)	340 (9.4%)	317 (10%)	387 (12%)	445 (10%)
Directional Drilling	461 (13%)	326 (9.0%)	293 (9.5%)	289 (8.9%)	467 (11%)
Trencher	214 (6.0%)	185 (5.1%)	163 (5.3%)	164 (5.0%)	279 (6.4%)
Boring	125 (3.5%)	161 (4.4%)	253 (8.2%)	195 (6.0%)	221 (5.1%)
Auger	157 (4.4%)	143 (3.9%)	108 (3.5%)	128 (3.9%)	204 (4.7%)
Grader/Scraper	60 (1.7%)	56 (1.5%)	32 (1.0%)	45 (1.4%)	115 (2.6%)
Bulldozer	9 (0.3%)	25 (0.7%)	21 (0.7%)	15 (0.5%)	17 (0.4%)
Drilling	2 (<0.1%)	8 (0.2%)	23 (0.7%)	7 (0.2%)	32 (0.7%)
Probing Device	10 (0.3%)	11 (0.3%)	4 (0.1%)	13 (0.4%)	8 (0.2%)
Vacuum Equipment	4 (0.1%)	7 (0.2%)	10 (0.3%)	11 (0.3%)	7 (0.2%)
Farm Equipment	11 (0.3%)	4 (0.1%)	4 (0.1%)	4 (0.1%)	15 (0.3%)
Milling Equipment	1 (<0.1%)	1 (<0.1%)	0 (0%)	1 (<0.1%)	4 (<0.1%)

[1]n (%)

TABLE OF 2018-22 DIRT UNDERGROUND FACILITY REPORTED DAMAGES BY WORK PERFORMED

	2018, N = 3,591[1]	**2019**, N = 3,631[1]	**2020**, N = 3,077[1]	**2021**, N = 3,249[1]	**2022**, N = 4,349[1]
Work Performed					
Unknown/Other	1,244 (35%)	1,208 (33%)	1,023 (33%)	925 (28%)	1,337 (31%)
Electric	342 (9.5%)	313 (8.6%)	259 (8.4%)	327 (10%)	384 (8.8%)
Water	216 (6.0%)	290 (8.0%)	229 (7.4%)	266 (8.2%)	330 (7.6%)
Telecommunications	284 (7.9%)	223 (6.1%)	265 (8.6%)	231 (7.1%)	280 (6.4%)
Landscaping	236 (6.6%)	226 (6.2%)	200 (6.5%)	239 (7.4%)	251 (5.8%)
Natural Gas	199 (5.5%)	217 (6.0%)	183 (5.9%)	212 (6.5%)	235 (5.4%)
Sewer	164 (4.6%)	217 (6.0%)	189 (6.1%)	200 (6.2%)	218 (5.0%)
Cable TV	119 (3.3%)	123 (3.4%)	140 (4.5%)	159 (4.9%)	221 (5.1%)
Fencing	147 (4.1%)	163 (4.5%)	132 (4.3%)	96 (3.0%)	176 (4.0%)
Road Work	112 (3.1%)	91 (2.5%)	53 (1.7%)	62 (1.9%)	149 (3.4%)
Pole	98 (2.7%)	109 (3.0%)	61 (2.0%)	97 (3.0%)	100 (2.3%)
Grading	118 (3.3%)	91 (2.5%)	39 (1.3%)	89 (2.7%)	123 (2.8%)
Bldg. Construction	52 (1.4%)	73 (2.0%)	69 (2.2%)	86 (2.6%)	138 (3.2%)
Irrigation	58 (1.6%)	48 (1.3%)	60 (1.9%)	76 (2.3%)	59 (1.4%)
Curb/Sidewalk	39 (1.1%)	44 (1.2%)	46 (1.5%)	34 (1.0%)	80 (1.8%)
Storm Drain/Culvert	44 (1.2%)	46 (1.3%)	25 (0.8%)	45 (1.4%)	75 (1.7%)
Driveway	45 (1.3%)	34 (0.9%)	20 (0.6%)	28 (0.9%)	50 (1.1%)
Drainage	31 (0.9%)	37 (1.0%)	40 (1.3%)	16 (0.5%)	15 (0.3%)
Site Development	16 (0.4%)	12 (0.3%)	11 (0.4%)	17 (0.5%)	47 (1.1%)
Street Light	5 (0.1%)	36 (1.0%)	11 (0.4%)	21 (0.6%)	28 (0.6%)
Bldg. Demolition	11 (0.3%)	10 (0.3%)	5 (0.2%)	9 (0.3%)	13 (0.3%)
Traffic Sign	2 (<0.1%)	1 (<0.1%)	2 (<0.1%)	0 (0%)	15 (0.3%)
Liquid Pipeline	4 (0.1%)	5 (0.1%)	5 (0.2%)	3 (<0.1%)	2 (<0.1%)
Waterway Improvement	0 (0%)	6 (0.2%)	3 (<0.1%)	5 (0.2%)	4 (<0.1%)
Agriculture	2 (<0.1%)	1 (<0.1%)	5 (0.2%)	2 (<0.1%)	7 (0.2%)
Engineering/Surveying	0 (0%)	2 (<0.1%)	1 (<0.1%)	1 (<0.1%)	8 (0.2%)
Traffic Signal	2 (<0.1%)	3 (<0.1%)	0 (0%)	3 (<0.1%)	1 (<0.1%)
Milling	1 (<0.1%)	1 (<0.1%)	1 (<0.1%)	0 (0%)	0 (0%)
Steam	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (<0.1%)
Public Transit Authority	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (<0.1%)
Railroad	0 (0%)	1 (<0.1%)	0 (0%)	0 (0%)	0 (0%)

[1]n (%)

TABLE OF 2018-22 DIRT UNDERGROUND FACILITY REPORTED DAMAGES BY DAMAGE CAUSE

	2018, N = 3,591[1]	**2019**, N = 3,631[1]	**2020**, N = 3,077[1]	**2021**, N = 3,249[1]	**2022**, N = 4,349[1]
Damage Cause					
No notification made to One-Call Center / 811	673 (19%)	684 (19%)	506 (16%)	729 (22%)	904 (21%)
Root Cause not listed above (comment required)	797 (22%)	703 (19%)	888 (29%)	380 (12%)	330 (7.6%)
Not marked due to Locator error	454 (13%)	548 (15%)	335 (11%)	479 (15%)	586 (13%)
Excavator dug prior to verifying marks by test-hole (pothole)	406 (11%)	466 (13%)	300 (9.7%)	383 (12%)	316 (7.3%)
Excavator failed to maintain clearance after verifying marks	267 (7.4%)	205 (5.6%)	278 (9.0%)	324 (10.0%)	432 (9.9%)
Marked inaccurately due to Locator error	324 (9.0%)	217 (6.0%)	112 (3.6%)	127 (3.9%)	202 (4.6%)
Improper excavation practice not listed above	142 (4.0%)	225 (6.2%)	80 (2.6%)	217 (6.7%)	194 (4.5%)
Marks faded, lost, or not maintained	117 (3.3%)	158 (4.4%)	114 (3.7%)	117 (3.6%)	140 (3.2%)
Excavator failed to protect/shore/support facilities	49 (1.4%)	45 (1.2%)	36 (1.2%)	63 (1.9%)	295 (6.8%)
No response from operator/contract locator	8 (0.2%)	9 (0.2%)	51 (1.7%)	19 (0.6%)	390 (9.0%)
Excavator dug prior to valid start date/time	51 (1.4%)	53 (1.5%)	60 (1.9%)	75 (2.3%)	139 (3.2%)
Excavator dug outside area described on ticket	56 (1.6%)	74 (2.0%)	57 (1.9%)	56 (1.7%)	109 (2.5%)
Excavator dug after valid ticket expired	56 (1.6%)	50 (1.4%)	37 (1.2%)	68 (2.1%)	91 (2.1%)
Not marked due to Incorrect facility records/maps	85 (2.4%)	62 (1.7%)	44 (1.4%)	48 (1.5%)	45 (1.0%)
Marked inaccurately due to Incorrect facility record/maps	10 (0.3%)	17 (0.5%)	55 (1.8%)	24 (0.7%)	40 (0.9%)
Site marked but incomplete at damage location	18 (0.5%)	21 (0.6%)	24 (0.8%)	36 (1.1%)	33 (0.8%)
Unlocatable facility	21 (0.6%)	24 (0.7%)	29 (0.9%)	22 (0.7%)	32 (0.7%)
Not marked due to Tracer wire issue	13 (0.4%)	4 (0.1%)	21 (0.7%)	18 (0.6%)	16 (0.4%)
Marked inaccurately due to Tracer wire issue	12 (0.3%)	12 (0.3%)	17 (0.6%)	17 (0.5%)	12 (0.3%)
Excavator provided incorrect notification information	12 (0.3%)	5 (0.1%)	5 (0.2%)	17 (0.5%)	14 (0.3%)
Marked inaccurately due to Abandoned Facility	5 (0.1%)	4 (0.1%)	8 (0.3%)	14 (0.4%)	5 (0.1%)
Not marked due to Abandoned facility	6 (0.2%)	6 (0.2%)	6 (0.2%)	7 (0.2%)	11 (0.3%)
Previous damage	5 (0.1%)	11 (0.3%)	6 (0.2%)	6 (0.2%)	5 (0.1%)
Deteriorated facility	1 (<0.1%)	23 (0.6%)	1 (<0.1%)	2 (<0.1%)	5 (0.1%)
Improper backfilling	3 (<0.1%)	4 (0.1%)	7 (0.2%)	1 (<0.1%)	2 (<0.1%)
One-Call Center error	0 (0%)	1 (<0.1%)	0 (0%)	0 (0%)	1 (<0.1%)

[1]n (%)