



Staff Report

To: Planning Commission

Through: Chris Kerr, Community Development Director *C.K.*

From: Dan Handel, AICP, Planner

Meeting Date: September 14, 2023 (Prepared September 7, 2023)

Item: MOC 23-02 "Fleet Sales West Shop Building" at 2175 N. Pacific Highway

Tax Lot: 051W08A001800

Issue before the Planning Commission

Action on a Type III land use application, Modification of Conditions (MOC) 23-02, requesting to modify a Condition of Approval associated with an approved Design Review for the subject property.

Executive Summary

The subject property is 2175 N. Pacific Hwy, a 5.57-acre property in the Commercial General (CG) zoning district that is developed with an industrial manufacturing building and occupied by Fleet Sales West. The company manufactures and sells fleet vehicles (tow trucks, auto loader wreckers, flatbed carriers) to other businesses.

On April 13, 2023, the Planning Commission approved an application package to construct a 7,200 square foot shop building on the property to increase the company's manufacturing output capacity (DR 22-24 & VAR 22-13).



Vicinity Map (subject property outlined in yellow, with the approved expansion outlined in red)

Through this Modification of Conditions application, the applicant is requesting to remove a condition of approval that requires burial of aboveground power lines along the N. Pacific Highway frontage or payment of a fee-in-lieu.

Recommendation

Staff recommends that the Planning Commission consider the staff report and its attachments and modify the condition as recommended in Attachment 101.

Actions

The Planning Commission may act on the land use application to:

- 1. Approve per staff recommendations,
- 2. Approve with modified conditions, or
- 3. Deny, based on WDO criteria or other City provisions.

If the Planning Commission were to act upon the recommendation, staff would prepare a final decision for approval with the conditions that staff recommends.

Attachment List

- 101. Recommended Modification to Conditions of Approval
- 102. Analyses & Findings
- 103. Government Technology article “Despite Being Safer, Underground Power Lines Are Very Expensive”
- 104. Applicant’s Exhibit 4 “Construction Cost Estimate”

Modified Condition of Approval Recommended by Staff

Staff recommends the Planning Commission approve the following ~~striketrough~~ and underline modifications to the conditions of approval for DR 22-24 & VAR 22-13. Section references are to the [Woodburn Development Ordinance \(WDO\)](#).

6. Power line burial: To meet 3.02.04B, the applicant shall either bury the existing power lines along the N. Pacific Hwy frontage of the property or pay a fee-in-lieu of ~~\$67,715,442,000~~ to the City. This condition is due prior to building permit issuance.

Analyses & Findings

This staff report analyzes the application materials and finds through statements how the application materials relate to and meet applicable provisions such as criteria, requirements, and standards. They confirm that a given standard is met or if not met, they call attention to it, suggest a remedy, and have a corresponding recommended condition of approval. Symbols aid locating and understanding categories of findings:

<i>Symbol</i>	<i>Category</i>	<i>Indication</i>
✓	Requirement (or guideline) met	No action needed
✗	Requirement (or guideline) not met	Correction needed
⊖	Requirement (or guideline) not applicable	No action needed
▲	<ul style="list-style-type: none"> • Requirement (or guideline) met with condition of approval • Other special circumstance benefitting from attention 	Modification to condition of approval

Land Use & Zoning

<i>Comprehensive Plan Land Use Designation</i>	Commercial
<i>Zoning District</i>	Commercial General (CG)
<i>Overlay Districts</i>	n/a
<i>Existing Use</i>	Fleet vehicle manufacturing and sales



Zoning Map Excerpt (site outlined in yellow)

<i>Cardinal Direction</i>	<i>Adjacent Zoning</i>
North	CG
East	CG
South	CG
West	Industrial Park (IP)

The subject property is Lot 1 of the Industrial Park Addition #2 subdivision plat, recorded on March 31, 1975, therefore it is a legal lot of record.

The applicable provisions of the [Woodburn Development Ordinance \(WDO\)](#) appear in bold below and on the following pages.

Applicable Provisions

4.02 Review, Interpretation and Enforcement

4.02.07 Modification of Conditions

Any request to modify a condition of approval is to be considered pursuant to the procedure and the standards and criteria applicable to a new application of the type of permit or zone change that is proposed to be amended, except that the modification of a condition limiting the use of property may only be considered as a Type IV Official Zoning Map Change application.

Staff Finding

On April 13, 2023, the Planning Commission held a public hearing and approved an application package for a 7,200 square foot shop building on the property to increase the company's manufacturing output capacity (DR 22-24 & VAR 22-13).

Through this Modification of Conditions application, the applicant is requesting to modify a condition of approval associated with DR 22-24. Pursuant to 4.02.07, the review for this MOC application is a Type III process because the DR application was reviewed at the Type III level.

✓ The provision is met.

3.02.04 Underground Utilities

B. Street: All permanent utility service within ROW resulting from development shall be underground, except where overhead high-voltage (35,000 volts or more) electric facilities exist as the electric utility documents and the developer submits such documentation.

1. Developments along Boundary Streets shall remove existing electric power poles and lines and bury or underground lines where the following apply:

- a. A frontage with electric power poles and lines is or totals minimum 250 feet; and
- b. Burial or undergrounding would either decrease or not increase the number of electric power poles. The developer shall submit documentation from the electric utility.

Where the above are not applicable, a developer shall pay a fee in-lieu, excepting residential development that has 4 or fewer dwellings and involves no land division.

2. Fees in-lieu: Per Section 4.02.12.

As noted in the staff report for DR 22-24 & VAR 22-13, there are overhead power lines running along the N. Pacific Hwy frontage of the subject property and the frontage is exactly 250 feet long therefore the undergrounding provisions of 3.02.04B were and are applicable. Portland General Electric (PGE) representative Ken Spencer provided a cost estimate of \$400,000 for materials and labor associated with the undergrounding effort along this property frontage and also informed staff that it would result in the removal of one pole but the addition of three new poles.

The applicant had requested to pay a fee in-lieu of undergrounding, as allowed by 3.02.04B and 4.02.12. The fee-in-lieu that was recommended by staff via Condition 6 (copied below) and approved by the Planning Commission was \$568 per lineal foot of frontage with aboveground power lines.

Condition of Approval 6.

Power line burial: To meet 3.02.04B, the applicant shall either bury the existing power lines along the N. Pacific Hwy frontage of the property or pay a fee-in-lieu of \$142,000 to the City. This condition is due prior to building permit issuance.

This fee amount is based on past practice through past land use case files and final decisions (several examples include ANX 2020-02 Valentina Estates No. 2, PUD 22-01 Mill Creek Meadows, CU 21-01 US Market gas station, and DR 22-26 Chick-Fil-A restaurant). The \$568 number comes from a Pacific Gas and Electric (PG&E) October 2017 estimated range of \$1.16 to \$5 million per mile to remove electric power poles and bury the lines. ("[Despite Being Safer, Underground Power Lines Are Very Expensive](https://www.govtech.com/fs/infrastructure/despite-being-safer-underground-power-lines-are-very-expensive.html)" e.Republic LLC Government Technology "FutureStructure Infrastructure" series. October 23, 2017. <<https://www.govtech.com/fs/infrastructure/despite-being-safer-underground-power-lines-are-very-expensive.html>>. Accessed September 7, 2023. Attachment 103)

Staff considered 60% of the \$5 million upper limit as a reasonable benchmark for burying lines in Woodburn. This resulted in a per-mile estimate of \$3 million, or roughly \$568 per foot.

Through this Modification of Conditions application, the applicant is requesting to remove Condition of Approval 6 and, as a result, to not bury power lines along the N. Pacific Highway frontage nor pay a fee-in-lieu. This request effectively amounts to a Variance request to not meet the requirement of 3.02.04B. Because the original application included a Variance application, the request can procedurally move forward as a Modification of Conditions application.

5.03.12 Variance

A. Purpose: The purpose of this Type III Variance is to allow use of a property in a way that would otherwise be prohibited by this Ordinance. Uses not allowed in a particular zone are not subject to the variance process. Standards set by statute relating to siting of manufactured homes on individual lots; siding and roof of manufactured homes; and manufactured home and dwelling park improvements are non-variable.

B. Criteria: A variance may be granted to allow a deviation from development standard of this ordinance where the following criteria are met:

1. Strict adherence to the standards of this ordinance is not possible or imposes an excessive burden on the property owner, and

Applicant's Response (narrative page 10):

Since the requirement to underground existing powerlines along the Hwy. 99 frontage would result in the installation of more power poles than existing conditions, the applicant initially proposed to pay a fee-in-lieu of undergrounding the overhead lines, However, when the Staff Report for the Design Review and Variance applications was issued, the applicant learned that the fee-in-lieu for burial of the power lines was more than expected. The attached Construction Cost Estimate [Attachment 104] demonstrates that the cost of the shop building totals \$446,000 and includes slab, electrical, building, architectural/planning, and plumbing costs. During the land use review, the applicant proposed non-conforming development upgrades including sidewalks, landscaping, parking lot improvements, and bike parking improvements. With the addition of a required driveway connection to the adjacent parcel, these non-conforming upgrades total \$65,700, or roughly 13% of the project cost when including the building improvements. If a \$142,000 fee-in-lieu is added to the other non-conforming upgrade costs, a total of \$207,000, or 32%, of the total project cost will be dedicated towards non-conforming upgrades.

Based on the anticipated return on investment, the applicant budgeted approximately \$500,000 towards the shop building project. It is cost-prohibitive for the project to move forward if the \$142,000 fee-in-lieu payment is required and development costs increase to \$653,700. Due to the limited increase in business revenue from the project, and the relatively small impact of the proposed development, the requirement to bury the power lines or pay a fee-in-lieu presents an excessive economic burden on the property owner.

Staff Finding

There are two options to satisfy this criterion – adherence to the standards is (1) not possible, or (2) imposes an excessive burden.

Regarding the first option, it is possible to meet the burial requirement. There are no unique site characteristics at play here that would preclude the requirement being met (such as shape, grade/elevation, access, natural features, etc.), the applicant's issue is simply the cost of either completing the burial or paying a fee-in-lieu. The applicant therefore makes a case for the second option – that having to meet this requirement would impose an excessive burden and result in the project not being feasible.

The fact that a required improvement (or optional fee-in-lieu) adds expense to a project does not by itself constitute an excessive burden. The proposed expansion is 7,200 square feet, which

represents a substantial 26.6% increase in building area for the property. As identified through the nonconformance redevelopment provisions in section 1.04.03C3, the City prioritizes site upgrades to meet current code requirements for redevelopment projects of a significant size. If this wasn't a priority, existing development would continuously remain nonconforming and would hinder the City's long-term economic development, environmental sustainability, safety, and aesthetic goals that are outlined throughout the Comprehensive Plan and implemented through the Development Ordinance.

Furthermore, there are no apparent existing site conditions that would impede undergrounding work to be done and the applicant has already proposed to construct street frontage improvements within the vicinity of the existing power poles and lines (new sidewalk and landscape strip with street trees).

Acknowledging that undergrounding power lines is likely to be more cost effective on a larger scale (such as block-by-block or street-by-street) rather than through a piecemeal property-by-property approach, the City allows the option to pay a fee in-lieu of undergrounding. In this case, the conditioned fee of \$142,000 amounted to a 64.5% savings compared to the \$400,000 cost estimate provided by PGE for the undergrounding work.

✘ The criterion supports denial.

2. Variance to the standards will not unreasonably impact existing or potential uses or development on the subject property or adjacent properties.

Applicant's Response:

The requested modification to Condition of Approval No. 6 does not unreasonably impact existing or potential uses or development on the site or adjacent properties. The scale and impact of the new shop building is relatively small. This project is located where public utilities and services are fully available. With the addition of only 2 employees, the development will have no perceived impact on the existing transportation system. The size of the shop building is also relatively modest when compared to the scale of other industrial and commercial structures in the vicinity of the site. The impacts of use will be fully mitigated by the required landscape screening, public sidewalk and tree improvements along both street frontages, and the new driveway providing a cross connection to the adjacent commercial use.

Staff Finding

Approval of the request would mean the existing power lines and poles stay as they are today. The Fleet Sales West business already has operations on the subject property and is already served by utilities, as are the adjacent properties to the north, west, and south, which are all developed with commercial or industrial uses. Future redevelopment of the subject property or adjacent properties would not be dependent upon burial of these power lines. Staff therefore

concur that approval of the request would not unreasonably impact existing or potential uses or development on the subject property or adjacent properties.

✓ The criterion supports approval.

C. Factors to Consider: A determination of whether the criteria are satisfied involves balancing competing and conflicting interests. The factors that are listed below are not criteria and are not intended to be an exclusive list and are used as a guide in determining whether the criteria are met.

1. The variance is necessary to prevent unnecessary hardship relating to the land or structure, which would cause the property to be unbuildable by application of this Ordinance. Factors to consider in determining whether hardship exists, include:

a. Physical circumstances over which the applicant has no control related to the piece of property involved that distinguish it from other land in the zone, including but not limited to, lot size, shape, and topography.

b. Whether reasonable use similar to other properties can be made of the property without the variance.

c. Whether the hardship was created by the person requesting the variance.

2. Development consistent with the request will not be materially injurious to adjacent properties. Factors to be considered in determining whether development consistent with the variance materially injurious include, but are not limited to:

a. Physical impacts such development will have because of the variance, such as visual, noise, traffic and drainage, erosion and landslide hazards.

b. Incremental impacts occurring as a result of the proposed variance.

Applicant's Response:

Fleet Sales West currently builds tow trucks, auto loader wreckers, and flatbed carriers within a 27,104 sq. ft. manufacturing warehouse on the subject property. An existing gravel yard around the building is used for parking unfinished truck chassis. Once an online order is received, incomplete vehicles are moved from the storage yard to the warehouse where they are then finished to the buyer's specifications. The approved 7,200 sq. ft. shop building will moderately increase the capacity of Fleet Sales West to meet the market need for customized utility vehicles. Based on the anticipated return on investment, the applicant budgeted approximately \$500,000 towards the shop building project.

At the Pre-Application Conference for File Numbers DR 22-24 and VAR 22-13, PGE staff determined that the requirement to bury existing powerlines along the N. Pacific Hwy. frontage would increase the number of power poles. Therefore, a fee-in-lieu of undergrounding existing overhead lines along the Hwy. 99E frontage may be provided, consistent with Section 3.02.04 standards. However, when the Staff Report Design Review application was issued, the applicant learned that the fee-in-lieu cost would be \$142,000 and there was not time to fully evaluate updated costs for the project. The attached Construction Cost Estimate demonstrates that the cost of the shop building totals \$446,000 and includes slab, electrical, building, architectural/planning, and plumbing costs. During the land

use review, the applicant proposed non-conforming development upgrades including sidewalks, landscaping, parking lot improvements, and bike parking improvements. With the addition of a required driveway connection to the adjacent parcel, these non-conforming upgrades total \$65,700, or roughly 13% of the project cost when including the building improvements. With the addition of a \$142,000 fee-in-lieu cost, a total of \$207,000, or 32%, of the total project cost will be dedicated towards non-conforming upgrades. It is cost-prohibitive for the development to move forward if the project cost increases to \$653,700 because of the \$142,000 fee-in-lieu payment.

It is reasonable to conclude that the requirement to bury power lines or payment of a \$142,000 fee-in-lieu is neither proportional to the impacts of the proposed development nor necessary improvements for this section Hwy. 99E. With the installation of the sidewalk and street tree improvements, public facilities and utilities and services will be fully improved and available for the proposed use. The previously submitted Transportation Engineer Memo concluded that the development has a very limited impact on the transportation system in the area with the addition of only 2 employees. The scale of the building is relatively small when compared to the other industrial and commercial uses in the vicinity of the site. The impact of the use is fully mitigated by the required landscape screening, sidewalk and tree improvements along both street frontages, and a new driveway connection to the adjacent commercial use.

Previously the City and ODOT opted to not underground overhead power lines when the Hwy. 99E and Hwy. 214 intersection was upgraded due to exorbitantly high costs. Therefore, it is unlikely that future undergrounding of these utilities along the site's Hwy. 99E frontage will ever be economically feasible. Based on all of the above factors, the applicant is requesting approval of a Modification to Condition No. 6 to eliminate the requirement to either bury or pay a fee-in-lieu to the City.

Staff Finding

Regarding the first factor, the presence of PGE power poles and aboveground lines along the subject property frontage is entirely out of the applicant's control. City GIS aerial imagery dating back to at least the year 2000 shows aboveground power lines along the frontage, and Marion County Assessor data indicates the current property owner purchased the property in 2010. Furthermore, at the time they were installed, the planning and installation of power lines was likely coordinated between PGE, ODOT, and the City on behalf of property owners along 99E.

Aboveground power lines were the norm historically, and they were a significant contributor to the industrialization and growth of cities throughout the 1900s. They have come under scrutiny more recently, particularly in the western US, because of their potential to start wildfires and for service outages during extreme weather. As a result, it is standard practice today for developers to install underground lines to serve new developments.

✓ The first factor supports approval.

Regarding the second factor, approval of the request would mean the existing aboveground power lines and poles stay as they are today. The Fleet Sales West business already has operations on the subject property and is already served by utilities, as are the adjacent properties to the north, west, and south, which are all developed with commercial or industrial uses.

The purpose of the undergrounding requirement is to improve streetscape aesthetics, improve transportation safety by reducing the number of sight obstructions within and adjacent to rights-of-way, and improve reliability of electric utility services during times of extreme weather (high heat, high winds, winter storms, etc.). As such, allowing the aboveground power lines to remain, or not collecting a proportionate share fee-in-lieu from the property owner for their future burial, would mean these hazards would be allowed to continue unchecked.

✗ The second factor supports denial.

3. Existing physical and natural systems, such as but not limited to traffic, drainage, dramatic land forms or parks will not be adversely affected because of the variance.

Applicant's Response:

The applicant's previously submitted Grading and Erosion Control Plan and Utility Plan indicates that drainage will be managed so that natural systems will not be impacted by the new building construction and other site improvements. There are no dramatic land forms associated with the subject site (see Exhibit 3). Therefore, existing physical and natural systems will not be adversely affected because of the requested modification to Condition No. 6.

Staff Finding

Regarding the third factor, approval of the request would mean the existing electrical system (aboveground power lines and poles along the frontage) stays as it is today.

The purpose of the undergrounding requirement is to improve streetscape aesthetics, improve transportation safety by reducing the number of sight obstructions within and adjacent to rights-of-way, and improve reliability of electric utility services during times of extreme weather (high heat, high winds, winter storms, etc.). As such, allowing the aboveground power lines to remain, or not collecting a proportionate share fee-in-lieu from the property owner for their future burial, would mean these hazards would be allowed to continue unchecked.

✗ The third factor supports denial.

4. Whether the variance is the minimum deviation necessary to make reasonable economic use of the property;

Applicant's Response:

The attached Construction Cost Estimate demonstrates that the cost of the shop building totals \$446,000 and includes slab, electrical, building, architectural/planning, and plumbing costs. During the land use review, the applicant proposed non-conforming development upgrades including sidewalks, landscaping, parking lot improvements, and bike parking improvements. With the addition of a required driveway connection to the adjacent parcel, these non-conforming upgrades total \$65,700, or roughly 13% of the project cost when including the building improvements. However, if a \$142,000 fee-in-lieu is added to the other non-conforming upgrade costs, a total of \$207,000, or 32%, of the total project cost will be dedicated towards non-conforming upgrades.

Based on the anticipated return on investment, the applicant budgeted approximately \$500,000 towards the shop building project. It is cost-prohibitive for development to move forward if the project cost increases to \$653,700 because of a \$142,000 fee-in-lieu payment. Since the applicant will still be installing frontage improvements and upgrading on-site landscaping, parking lot, and bike parking improvements, the requested modification to Section 3.02.04 standards is the minimum deviation to make reasonable economic use of the property.

Staff Finding

The request is not necessary in order to make reasonable use of the property because the applicant already utilizes the existing 27,104 square foot facility on the property to operate a fleet manufacturing business. It appears that the business is doing well because the applicant seeks to expand the facility with a 7,200 square foot shop building to increase manufacturing output (a substantial 26.6% increase in building area for the property).

✘ The fourth factor supports denial.

5. Whether the variance conflicts with the Woodburn Comprehensive Plan.

Staff Finding

The purpose of the undergrounding requirement is to improve streetscape aesthetics, improve transportation safety by reducing the number of sight obstructions within and adjacent to rights-of-way, and improve reliability of electric utility services during times of extreme weather (high heat, high winds, winter storms, etc.).

Through Goal F-1 and Policy F-1.14, the Comprehensive Plan specifically addresses the topic of burial of aboveground power lines along the 99E corridor. The policy states that the City will explore funding options for such work. One such option is requiring it through development and redevelopment projects as either the actual undergrounding work itself or via a proportionate share fee-in-lieu.

Indirectly, the Comprehensive Plan discusses safety within the transportation system as part of Goal H-3 and associated policies, and environmental sustainability throughout the goals and policies in section J. Burial of existing aboveground power lines supports these goals and policies.

✘ The fifth factor supports denial.

6. If and where a variance includes a request to vary from minimum public improvements per Section 3.01, from Section 5.02.04E about Street Adjustment factors, those factors are applicable as Variance additional factors.

Staff Finding

This request is specifically about the requirement to bury aboveground power lines, not regarding public improvement requirements in Section 3.01.

➡ The sixth factor is not applicable.

Conclusion

As outlined throughout these findings, the requirement to bury aboveground power lines (or pay a fee-in-lieu) is possible for the applicant and does not rise to the level of an excessive burden. The long-term safety, economic, and environmental benefits that the community gains by requiring the undergrounding work or obtaining a fee-in-lieu for their future burial, outweigh the short-term financial costs borne by the applicant. Staff therefore recommends denial of the Variance request to remove the undergrounding requirement.

✘ Staff recommends denial of the Variance request to remove the undergrounding requirement.

In light of a recent precedent, staff does support a modification to Condition 6 to revise the fee-in-lieu rate. As part of the Design Review application for Chick-Fil-A (DR 22-26), for which a public hearing was held on July 27, 2023 (roughly three months after the Fleet Sales West Shop Building project public hearing), staff and the applicant discussed the undergrounding requirement at length. Staff ultimately recommended to the Planning Commission a revised fee-in-lieu rate, one that is more reasonable and comparable to the local Willamette Valley economy and cost of power line burial. The revised rate is \$270.86 per lineal foot, which represents the low-end estimate provided in PG&E's 2017 report for "most of PG&E's territory" and has been updated to reflect increased inflation between 2017 and today.

Applying the revised rate to the 250 feet of power lines along the subject property's N. Pacific Hwy frontage, the revised fee-in-lieu would be \$67,715. This would amount to an approximate 83.1% savings compared to the \$400,000 cost estimate that PGE provided for the undergrounding work.

▲ Staff recommends modifying the condition to align with the new fee-in-lieu rate identified through the recent Chick-fil-A application.



FUTURESTRUCTURE INFRASTRUCTURE

Despite Being Safer, Underground Power Lines Are Very Expensive

With conversation swirling about the role power lines played recent California wildfires, some say burying the lines would simply be too costly.

October 23, 2017 • David R. Baker, San Francisco Chronicle

(TNS) -- Underground power lines don't sway in the wind. Tree branches blown sideways by a gale can't hit them. They don't sit on wooden poles that can fall down.

They would, in other words, seem to be an ideal way to prevent wildfires in a place like California, which has a history of big blazes sparked by overhead power lines tangling with trees. Investigators are now trying to determine whether that combination triggered the wildfires that tore through the Wine Country this month.

Unfortunately, underground power lines are also very expensive.



And if Pacific Gas and Electric Co., whose overhead lines are facing scrutiny as a possible cause of the North Bay fires, were to bury more of its system, that cost would be borne by the company's customers. It would not come out of PG&E's profits. Placing more lines underground could even raise those profits, since under California regulations, utilities make a guaranteed rate of return on the value of all the equipment they own.

"We think it's so expensive that it's really not feasible," said Mark Toney, executive director of The Utility Reform Network watchdog group.

A new underground distribution line across most of PG&E's territory costs about \$1.16 million per mile, according to data filed with state regulators during the utility's most recent general rate case. That's more than twice the price of a new overhead line, which

costs about \$448,800 per mile. Most of the difference comes from the expense of digging a trench for the cable.

ADVERTISEMENT

Prices rise within cities, where the work is more complex. A [2015 San Francisco report](#) found that recent costs for moving power lines underground in Oakland had averaged \$2.8 million per mile, while similar work in San Jose had cost \$4.6 million per mile.

And burying high-voltage transmission lines — the kind usually strung from immense steel towers across long distances — can cost as much as \$5 million per mile, according to PG&E.

The utility operates more than 134,000 miles of overhead power lines of one voltage or another across Northern and Central California. So while placing power lines underground in areas filled with flammable vegetation may sound sensible, it is far from cheap: It would cost well over \$100 billion to do across PG&E's entire territory.

“Do we want to tear up the whole Oakland hills — a high fire hazard area — to do undergrounding?” asked Michael Picker, president of the California Public Utilities Commission. “There's never going to be a perfect solution. A lot depends on how much people are willing to spend to approach the next level of safety.”

San Francisco has particularly painful experience with the costs of burying lines.

For 10 years starting in 1996, the city worked with PG&E to place underground 45.8 miles of overhead lines, with the utility estimating a cost of \$1 million per mile. Instead, the final price came in at [\\$3.8 million per mile](#).

California regulations use a formula for allocating some money each year from utility customers' bills to undergrounding projects in cities that want to bury their power lines. San Francisco's 10-year project ran so far over budget that it used up all the money that would be available to the city through 2032, according to a city report. That brought undergrounding within the city to a halt.

Price is not the only pitfall.

Repair crews have no trouble spotting a knocked-over power pole or downed line. But when an underground line fails, operators first have to figure out where the problem occurred, without being able to see it — though sensors attached to the power lines can help narrow things down. Then they have to dig.

“You may know it’s within a certain distance, but you don’t know exactly where it is,” said Andrew Phillips, director of transmission studies at the Electric Power Research Institute, a think tank serving the utilities industry. “And fixing it is very expensive, and that means the outage time is a lot longer.”

There’s also the issue of cutting trenches through environmentally sensitive areas. And in more urban settings, workers who don’t know the location of an underground line may dig into it, a problem that plagues natural gas pipelines as well. The power research institute’s office in Charlotte, N.C., recently lost power for an afternoon after someone accidentally hit an underground power cable in the neighborhood, Phillips said.

“Some guy with a backhoe was working on the traffic light, and he dug into the line — and everyone had to go home,” he said.

Most undergrounding takes place in towns and cities, for aesthetic reasons.

Urban streetscapes already contain a maze of infrastructure below the surface — water and sewer pipes, fiber-optic cable — so undergrounding can often be combined with other jobs to minimize the disruption.

PG&E undergrounds about 30 miles of electric lines each year. Other utilities have been more aggressive. San Diego Gas and Electric Co., a far smaller utility, says that 60 percent of its lines are now underground. That even includes small stretches of rural lines running through areas considered particularly prone to wildfires. The city of San Diego also placed a high priority on moving lines underground and set up its own funding system to support the work.

At the current pace, moving all of California’s utility lines underground would take 1,000

years, according to the California Public Utilities Commission.

PG&E has replaced hundreds of toppled or damaged power poles in the North Bay since the Oct. 8 windstorm and the wildfires that followed. It remains unclear whether PG&E's equipment may have helped start the fires or whether the fires damaged the equipment.

Either way, PG&E does not consider undergrounding a panacea.

“We serve urban areas, and we also serve really rural areas, so where's the tipping point where undergrounding makes sense?” said PG&E spokesman Keith Stephens. “We want to provide safe and reliable service that's also affordable. So it's a balance of those three things.”

Moving

power lines underground can help prevent fires

— at a price

Miles of overhead power lines in PG&E territory: 134,000

Cost of underground lines, per mile: \$1.16 million to \$5 million

Miles of power lines PG&E undergrounds per year: 30

©2017 the San Francisco Chronicle Distributed by Tribune Content Agency, LLC.

Stay on top of the latest state & local government technology trends.

Sign up for GovTech Today. Delivered daily to your inbox.

Email Address*

FREE NEWSLETTER SIGN UP

ADVERTISEMENT



Most Read

Professors Find AI Most Useful for Lesson Plans, Discussions

NYPD Gang Database Violates Civil Rights, Report Finds

Colorado's Effort to Combat UI Fraud Comes With Its Own Problems

Digital SAT on Track for Spring 2024 Launch in U.S.

New Online Tool Helps Californians Navigate Fair Chance Act



Stay on top of the latest state & local government technology trends.

Sign up for GovTech Today. Delivered daily to your inbox.

Email Address*

FREE NEWSLETTER SIGN UP

Events

Webinars

Papers

Explainers

About

Privacy & AI

Contact

Advertise



Sponsored: Articles and Q&A Videos

Sponsored: In Case You Missed It

Industry Academy

Industry Navigator

Stay Up To Date

Get smart with GovTech. Your guide to technology in state & local government.

[SIGN UP FOR NEWSLETTERS](#)

[GET THE MAGAZINE](#)

©2023 All rights reserved. e.Republic LLC
California Residents - Do Not Sell My Personal Information



CONSTRUCTION COST ESTIMATE WITHOUT FEE-IN-LIEU

Project Name:	Fleet Sales West Shop			
Owner:	James Walsh			
Estimated On:	4-25-2023			
Location:	2175 N Pacific Highway			
Estimated By:	Build Logic LLC			
Contractor:	Build Logic LLC			
Description	Unit	Qty	Unit Cost	Total Price
A. Structural				
Slab	Bid			\$171,000
Electrical	Bid			\$30,000
Sidewalks	Flat Rate		\$35,000	\$35,000
Building				\$210,000
			Subtotal:	\$446,000
B. Architectural/ Planning				
Planning/Admin				\$21,000
			Subtotal:	\$21,000
C. Plumbing				
Rough in	Bid		\$14,000	\$14,000
			Subtotal:	\$14,000
D. Plants and Misc.				
Plants				\$4,000
EV Plug				\$5,000
Parking				\$2,500
Driveway to mall				\$18,000
Bike parking				\$1,200
			Subtotal:	\$30,700
			GRAND TOTAL :	\$511,700