The research and development (R&D) tax credit was created in 1981 to encourage businesses to invest in the development of new or improved business components to promote economic growth in the United States. Thousands of companies from diverse industries benefit from this tax incentive. The R&D tax credit provides more than $10 billion in tax savings to U.S. businesses annually, although it is underutilized, particularly by small and medium-sized companies. Many states also have R&D-type credits that follow federal qualification guidelines.

The federal R&D tax credit provides significant benefits to taxpayers, with up to 10 percent of qualifying expenses (eligible wages, contractor costs, and supplies). This benefit is a potential one-for-one reduction in tax liability for the current year and the past three years. Accordingly, the credit can provide immediate and long-term tax liability relief in 2020 that will increase cash flow and capital within the construction industry.

Recent changes in law resulting from the Tax Cuts and Jobs Act (TCJA) and the 2015 Protecting Americans from Tax Hikes (PATH) Act have made the R&D credit even more lucrative by providing taxpayers with potentially larger credits for tax years ending after December 31, 2017. No changes in R&D benefit or utilization were noted within the recently passed 2020 Coronavirus Aid, Relief, and Economic Security (CARES) Act. All of these changes in the laws make the R&D credit a very powerful planning tool to reduce construction taxpayers’ tax liability and increase their cash flow.

Construction industry considerations

The R&D credit is a legislated federal tax subsidy and is available to businesses in most industries, including — but not limited to — construction. Eligible companies are allowed to go back and amend the prior three years’ returns, with up to 10 percent of qualifying investments potentially eligible for significant federal tax refunds. Most

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states have related R&D credits that may provide immediate refund opportunities as well.

The construction industry continues to take on more risk as contractors increase design responsibility. The industry has also moved toward using innovative construction materials to create higher-performing, more reliable, energy-efficient, and higher-quality structures. Customers, architects, and engineers continue to raise the bar on innovation. This fuels the expectation that contractors will develop new processes and engineering solutions — activities that could qualify for the R&D credit.

Building integrated modeling (BIM) allows all of the designers to work as a team and identify design conflicts at the outset. A high level of advanced design capability enables the joint team to design new structures and incorporate systems that have never been accomplished before. New design technologies are creating entirely new possibilities in terms of what can be manufactured and built. Advanced 3D printer applications and BIM are enabling designers to create a new generation of products, goods, and building structures.

Large contractors for mechanical, electrical, and plumbing and fire protection/security systems have used 3D computer-aided design (CAD) software to draw their distribution systems and create fabricated systems. Time constraints are such that both the building and systems design teams design concurrently. Architectural and engineering firms have been using 2D CAD systems for years. Because A&E firms and contractors typically work independently, they cannot be certain that their systems will actually fit together upon installation; BIM has the potential to alleviate this problem.

Pursuant to Internal Revenue Code Section 41, qualifying activities may be categorized as any research expenditures toward a new or improved product, process, or internally developed software or other technologies. Successful efforts are great, but do be aware that expenditures for failures count equally.

Examples of qualifying construction activities include:
- new material combinations and evaluation of their performance properties;
- innovative assembly or construction methods;
- BIM, including 3D modeling concepts, information technology, and interoperable software;
- unique bridge or roadway designs;
- unique construction or innovation techniques in untested environments;
- building designs to support unique structures;
- design and development of unique energy-efficient buildings and/or features;
- construction manufacturing efficiency;
- request for proposal/request for quotation technical solutions;
- engineering change notice/engineering change request activity; and
- value engineering applications.

Examples of nonqualifying construction activities include:
- participating in meetings with the city or county to obtain zoning review of plans;
- producing drawings or promotional materials;
- participating in marketing efforts;
- assisting in the review or development of bid packages related to building or component construction; and
- participating in building construction scheduling or construction oversight services to verify that the building and its components are constructed according to the design specifications.

Summary of the impact of the TCJA, the PATH Act, and the CARES Act on R&D tax credit opportunities

The PATH Act made the R&D tax credit permanent, providing significant tax relief and giving the construction industry clarity on the status of this lucrative tax credit moving forward. Although the CARES Act did not directly impact or change the qualification requirements, the TCJA legislative changes positively impacted overall benefits. The TCJA effectively increased all R&D benefits after 2017 by 21 percent due to an increase in the Section 280C adjustment from 65 percent to 79 percent. The TCJA also expanded the availability of the R&D tax credit for certain taxpayers. For
corporate taxpayers, for example, it eliminated the Section 55 alternative minimum tax (AMT) and amended Section 38(c)(6) to treat a corporation as having zero tentative minimum tax. These amendments removed a hurdle that had previously prevented some corporate taxpayers from using credits determined under Section 41(a), due to the Section 38(c) tentative minimum tax limitation.

However, all taxpayers, corporate and personal, are subject to a minimum tax requirement specifying that a credit cannot exceed the excess of the taxpayer’s net income tax over 25 percent of the taxpayer’s net regular tax liability above $25,000 (Section 38(c)(1)).

**TCJA and R&D expense planning**

The current R&D accounting methods under Section 174 remain the same for tax years beginning before January 1, 2022. However, for tax years beginning after December 31, 2021, the TCJA eliminates the option to deduct current R&D expenditures. Proposed tax treatment will require taxpayers to capitalize and amortize R&D expenses over five tax years.

The TCJA also changed the formal language from “research or experimental expenditures” to “specified research or experimental expenditures” and added a special rule prescribing that any amount paid or incurred in connection with the development of software is treated as a “specified research or experimental expenditure”; this rule may restrict a company’s ability to deduct software development expenditures after December 31, 2021.

**ASC Topic 730 safe harbor planning opportunity**

On September 11, 2017, the Internal Revenue Service’s Large Business & International Division (which deals with companies with more than $10 million in assets) issued a directive to provide a “safe harbor” for determining qualified research expenditures (QREs) for R&D tax credit purposes. Essentially, the safe harbor provides that if expenditures for activities are identified as research and development under generally accepted accounting principles (U.S. GAAP), then they will be considered as qualifying and eligible research and development expenditures for R&D tax credit purposes. ASC Topic 730, *Research and Development – General* (U.S. GAAP), contains specific guidance for some aspects of the accounting for R&D costs. Pursuant to ASC Topic 730, research is defined as a planned search or critical investigation aimed at the discovery of new knowledge with the hope that such knowledge will be useful in developing a new product or service, developing a new process or technique, or in bringing about a significant improvement to an existing product or process. Development is the translation of research findings or other knowledge into a plan or design for a new product or process or for a significant improvement to an existing product or process, whether intended for sale or use. Development includes the conceptual formulation, design, testing of product alternatives, construction of prototypes, and operations of pilot plants. R&D includes those activities aimed at developing or significantly improving a product, process, or technique, whether the product or process is intended for sale or use. The costs of R&D activities are charged to expense when incurred. The amount of R&D costs charged to expense in each period for which an income statement is presented is a required disclosure. The IRS “safe harbor” guidance will allow the construction industry to minimize the audit risks associated with claiming R&D credits and potentially maximize refund opportunities.

**Payroll tax relief**

The PATH Act of 2015 also permitted application of the R&D credit against the employer’s OASDI (Social Security) portion of the payroll taxes for “qualified small businesses.” A qualified small business is defined as one with an income of less than $5 million for the tax year and no gross receipts for any tax year before the five-year period ending with the current tax year.

The payroll credit is limited to $250,000 per year for up to five years, and any unused portion may be carried forward to future years. The tax credit may also be claimed if the business uses a certified professional.
employer organization. This provision offers qualified small businesses the ability to utilize the R&D credit against payroll taxes; they may not have previously had the opportunity to benefit from the credit if the company had no taxable income.

**AMT relief**
Another benefit added as part of the PATH Act of 2015 was the ability to employ the R&D credit to offset the AMT for taxpayers with $50 million or less in average annual gross receipts based on the three preceding tax years.

**General qualification guidelines**
The R&D credit is calculated by determining the amount of QREs for the company’s current and prior years. The QREs are made up of wages, supplies used in the R&D, and 65 percent of funds paid to third-party contractors. In order to meet the definition of qualifying research expenditures, research activities performed in the United States must satisfy a four-part test:

1. The work is being performed to develop a new or improved business component (a product, process, technique, formula, invention, or computer software component).
2. The activities are performed to discover information that is technological in nature. The activities involve physical, biological, engineering, or computer sciences.
3. The research is performed to eliminate technical uncertainty, determine if a desired result can be achieved, investigate how to achieve it, or determine the specific design of a product.
4. The activities will include a process of experimentation involving identification of the technical uncertainties, alternatives to consider in eliminating said uncertainties, and a process for evaluating alternatives.

The TCJA, PATH Act, and CARES Act have significantly increased the R&D value and created opportunities to evaluate its utility as a part of taxpayers’ year-end tax planning. In addition to the federal credit many states have their own R&D credit, potentially making this credit even more beneficial. Effectively using the R&D credit will help you increase your company’s cash flow by reducing year-end taxes and quarterly estimate payments. In addition, you might be eligible to claim the credit for prior years. Review what your company has expended over the past few years on qualifying activities. Do not leave money on the table!