

**IOWANS** for  
Project  
Innovation



Iowa Can  
Deliver Better  
Projects

It's time for a change.

# Collaboration Fuels Innovation

There's no such thing as a "risk free" construction project. However, the collaboration inherent in Design-Build is delivering the most **innovative, cost and time-efficient** projects in virtually every state but ours.

We simply want APD methods like design-build and CMAR as options in Iowa's project delivery tool kit. **These impressive projects illustrate why.**

# The Proof Is in the Project

## Hawkeye Tennis & Recreation Complex University of Iowa

This was the University of Iowa's first design-build project. The project called for an aggressive project delivery schedule with the design and contract documents completed in three months and the entire project completed within one year. Shive-Hattery and Russell Construction worked together to create a \$12 million, 87,000-square-foot addition that integrates seamlessly with the existing structure.

Design-build collaboration allowed the project to be delivered on a fast-track while maximizing the University's value by including a number of additional "betterments" including:

- Additional windows to provide views of the turf area
- Acoustical ceilings
- A rain garden
- Expanded band storage
- Access road linking the new parking area North to Hawkeye Park Road.



**Owner: Board of Regents**  
**Cost: \$12 Million**  
**Schedule: 1 year**

# Geoffroy Residence Hall Iowa State University

Geoffroy Hall **delivered more** beds (+56%) that **cost less** (-43%) using design-build. To provide the most value possible for the budget, Opus' design-build team went above and beyond, including more of what the university wanted and designing the building to serve students for decades to come, including:

- Maximized bed count (12% more beds than ISU's minimum requirement at up to 45% lower cost per bed than comparable projects)
- A lobby entrance twice the size of the minimum requirement
- A nearly column-free structure that provides future flexibility
- Increased sustainability through LEED Gold Certified design and construction strategies
- A student-centered design with increased natural light and ample study and social spaces throughout the building.



**Owner: Board of Regents**  
**Budget: \$39 million**  
**Schedule: 20 months**

# Elizabeth Catlett Residence Hall University of Iowa

Design-build delivered IU's Catlett Hall in **21% less time** with **110% fewer change orders** when delivering **109% more beds**.

Elizabeth Catlett Hall addresses a critical shortage of university undergraduate housing. Each wing includes a community lounge and single-user, gender-inclusive restrooms.

The base structure houses the Catlett Market Place, a dining facility that serves approximately 2,000 meals per day, a large multi-purpose room, a conference room/classroom, fitness center, laundry facilities

Rocklin Learning Commons featuring a large group study lounge and ten private study rooms.

While the structure is built on a stretch of campus along the Iowa River that saw severe flooding in 2008, the design ensured that the lowest occupied level be built two feet above the 500-year flood level in preparedness for future flooding.



**Owner: Board of Regents**  
**Cost: \$79 Million**  
**Schedule: 24 months**

# Oakdale Biomedical Research Facility

## University of Iowa

The University of Iowa needed additional Biosafety Level 1 and Level 2 vivarium space to support its health science research and decided to build the Biomedical Research Support Facility (BRSF) on its Oakdale Research Campus.

The 51,520 SF project includes Surgery, CT Scanner, X-Ray, Orthopedic Prep/Recovery, Holding and Procedure rooms, Necropsy and Euthanasia, Gene Editing, multiple laboratories, and support spaces.

Through meetings and conversations with in-state General Contractors and the Master Builders of Iowa, the university determined design-build would yield the best results or “best value” for this complex project.

Design-build collaboration allowed the team to value-engineer many innovative solutions providing additional value to the project including a reconfiguration that increased the size of the building at no extra cost.



**Owner: Board of Regents**

**Cost: \$24.2 Million**

**Schedule: On time and on budget**

# Iowa Army National Guard AFRC Complex

It was important to the National Guard to have a one-story facility because it would allow for better flow among all units. However, the facility required a minimum square footage on a tight lot.

The result of this integrated design-build approach is a two-building campus consisting of a 113,000-square-foot Armed Forces Reserve Center and a 60,500-square-foot Field Maintenance Shop.

The Armed Forces Reserve Center houses 10 military units and serves as the headquarters for 60 full-time personnel and up to 500 weekend soldiers. In addition to a large drill hall for troop formations and community send offs, the center includes offices and classrooms, a weapon simulation laboratory, vault storage and auxiliary training area.



**Owner: State Armory Board**  
**Cost: \$38 million**  
**Schedule: 14 months**

# CSF Iowa Air National Guard

Supporting airmen and administrative staff, the one-story building replaces an existing outdated facility. It was designed to support the consolidation of many activities into one space, with ample parking for up to 324 vehicles.

In addition to providing new program and training spaces, the building features an upgraded medical clinic designed for efficiency and flow, making it possible to care for many soldiers at once. On weekends, up to 500 soldiers are served meals in the dining hall within two-hour periods.

Efficiency is paramount, so Opus carefully designed the new dining facility to ensure serving lines flow smoothly, while providing seating for 180 people. The building was designed to meet anti-terrorism and force protection requirements for buildings, such as blast-resistant windows and considerations for standoff distances.



**Owner: State Armory Board**  
**Cost: \$12.4 Million**  
**Schedule: 20 months**

# I-70 Manchester Bridge

The project included the construction of two 2,400-foot pre-stressed girder bridges, built to the outside of existing interstate bridges.

Construction occurred while maintaining three lanes of live traffic in each direction on the interstate and included the replacement of a 430-foot steel girder and overhead bridge truss with a pre-stressed girder bridge.

The project included new grading and concrete paving at the approaches to the I-70 bridges and the reconfiguration and reconstruction of the ramps at the I-70 and Manchester Road Interchange.



**Owner: MoDOT**  
**Cost: \$69 Million**  
**Schedule: 26 months**

# Hastings Bridge Design-Build Project

This \$120 Million Design-Build Project consists of a North American record-breaking freestanding tied-arch with a span of 545 feet. The most noticeable component of the new Hastings Bridge is the Main Span bridge with its two arch ribs which was floated down river and installed. The height of the arch ribs is 94 feet.

The final project cost was \$130 million; the innovative design alternative to MnDOT's baseline preliminary design led to the project coming in **\$80 million less than MnDOT's initial cost estimate.**

The north approach spans use 96 inch pre-stressed concrete girders up to 175 feet long and are the longest girders to be used in Minnesota and serve as the basis for MnDOT's new statewide long-span PPC MW Beams Standards.



**Owner: MnDOT**  
**Cost: \$120 Million**  
**Schedule: 32 Months**

# US 54 Champ Clark Mississippi River Bridge Project Replacement

Originally built in 1928 to accommodate Model A Fords – not the 4,000 cars and 18-wheelers that now cross the bridge every day

The existing bridge became functionally obsolete, so the Missouri Department of Transportation (MoDOT) and Illinois Department of Transportation (IDOT) partnered to fund a safer, low-maintenance bridge.

In addition to the scheduling benefits, design-build delivery allowed for higher DBE participation goals.



**Owner: MoDOT**  
**Cost: \$60 Million**  
**Schedule: 18 Months**

# I-35 Minneapolis Replacement Bridge

On Aug. 1, 2007, the I-35W bridge over the Mississippi River collapsed. MnDOT expedited an emergency design-build contract to replace the collapsed structure by the end of 2008.

The project included reconstruction of I-35W from Washington Ave. to 4th Street, approximately 3/4 of a mile in length. The river crossing included a 10-lane freeway (five lanes in each direction) with accommodations for future Light Rail Transit.

The projects also includes:

- 100-year life span
- 189 feet wide—the previous bridge was 113 ft wide
- 13 ft wide right shoulders and 14 ft wide left shoulders, the previous bridge had no shoulders
- MnDOT and its partners met and exceeded DBE minority participation goals
- Structural enhancements include the use of high-performance concrete to provide superior durability. There are also multiple levels of structural redundancy to provide a long-lasting bridge that will be economical to maintain.



**Owner: MnDOT**  
**Cost: \$234 Million**  
**Schedule: 9 months**

# The Phoenix Project

After 9/11, the Phoenix project was born, with intent to rebuild the damaged area before the one-year anniversary of the attack.

28 days before that anniversary, the Phoenix Project was complete — \$194 million under budget.

The contract's schedule was accelerated by four years, and if not for the nimble nature of the design-build contract, this challenge would have been nearly impossible to overcome.



**Owner: Pentagon Renovation Program**  
**Cost: \$501 Million**  
**Schedule: 1 year**

# US 60 Rogersville

The Rogersville Project Freeway in Missouri consisted of converting four miles of U.S. Highway 60 into an access-controlled freeway to facilitate safe and efficient traffic movement. MoDOT used a unique procurement strategy that allowed maximum innovation.

The design-build team devised two grade-separated interchange concepts, which enhanced traffic operations, improved safety, and significantly reduced right-of-way acquisition costs. The goal of maintaining the community as a whole was primarily achieved through the incorporation of an additional third structure crossing over U.S. Highway 60 into an enhanced and expanded roadway network.

The additional local roadways and crossing expanded the connectivity and mobility of Rogersville and provided for economic growth by creating appropriately sized parcels for development and the infrastructure to serve those areas.



**Owner: MoDOT**  
**Cost: \$35 Million**  
**Schedule: 29 months**

# Christopher Bond Bridge

The design-build team delivered this project for \$235 million. \$85 million less than the initial estimates of \$315 million.

The project included replacement of the existing Paseo Bridge over the Missouri River with an iconic, cable-stayed bridge and reconstruction and widening of 4 ½ miles of the I-35/I-29 Corridor from Downtown Kansas City to north of the Armour Road/Route 210 interchange. All work was completed while maintaining more than 100,000 vehicles per day through the Corridor.



**Owner: MoDOT**  
**Cost: \$235 Million**  
**Schedule: 31 months**

# US Hwy 52 in Rochester

The Minnesota Department of Transportation (MnDOT) had the task of improving the 11-mile highway known as ROC 52.

MnDOT stipulated a five-year construction duration and required that MnDOT design guidelines be followed for the project.

The ROC 52 project included widening the four-lane freeway to six lanes in each direction. Construction would include 27 bridges, including temporary and pedestrian bridges. Nine interchanges were also to be constructed.

This project was completed a year ahead of schedule.



**Owner: MnDOT**  
**Cost: \$236 Million**  
**Schedule: 4 years**

# Minnesota State Senate Building

The Minnesota Senate Building is a 293,000-square-foot facility designed to improve access to the legislative process for all of Minnesota.

Overcoming hurdles, including a three-month delay that changed the project scope, the building came to life in less than 27 months.

The facility offers offices for 67 senators and their support staff; features workspace for 360 people, a 250-seat theater-style hearing room and two 150-seat hearing rooms; and accommodates accessibility needs.



**Owner: State of Minnesota**  
**Cost: \$76,000,000 (building)**  
**\$13,600,000 (parking)**  
**Schedule: 27 months**

# Getting To Know SB 586

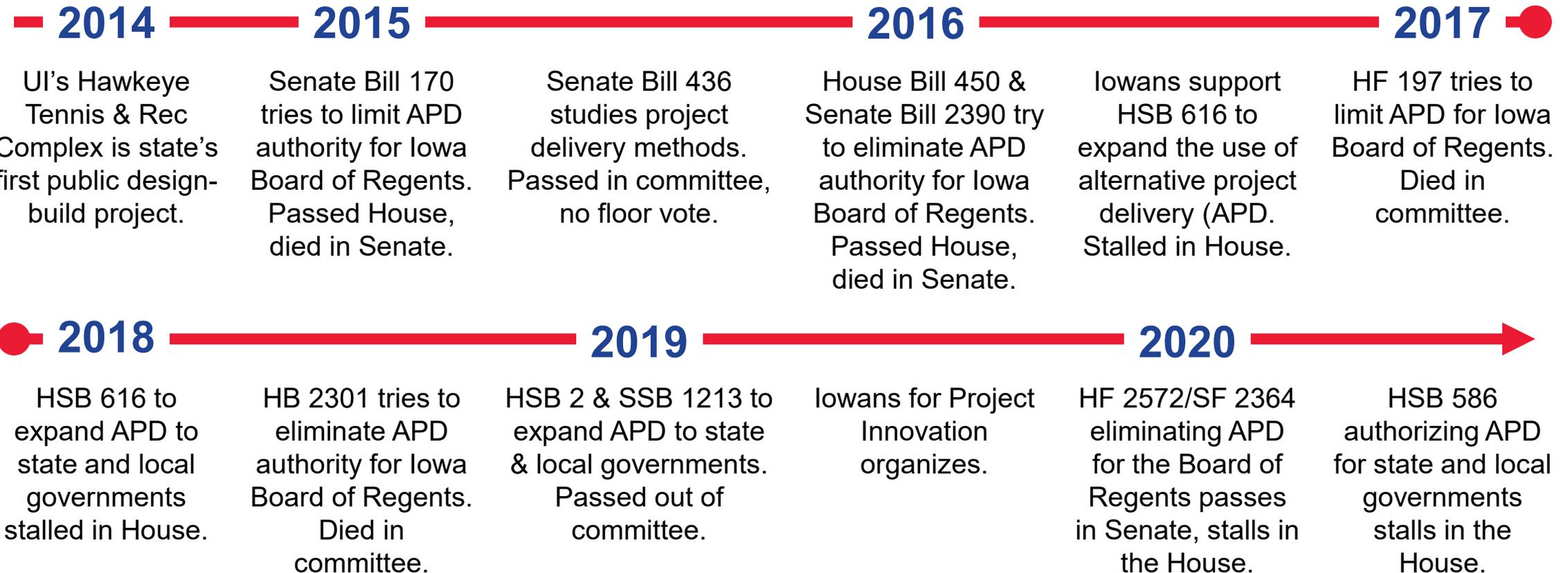
## **HSB 586 would:**

- Provide public Owners like cities, counties and school districts, the option to use alternative project delivery bid methods to select designers/builders/engineers to construct public buildings.
- Provide public Owners the discretion to determine what project delivery method is best suited for a specific building project that will provide the best value for their taxpayers.

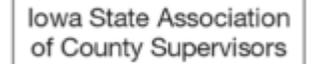
# Getting To Know HSB 586

Alternative Project Delivery legislation will provide the project tools our state needs to deliver the cost-efficient infrastructure taxpayers demand.

# History of APD Iowa



# Our Coalition



**IOWANS** for   
Project Innovation

**Iowans for Project Innovation**

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