



RCS 13830 Precast Concrete Buildings

OKLAHOMA DEPARTMENT OF TRANSPORTATION

Weigh Station Buildings Project

The Oklahoma DOT (ODOT) is constructing new state-of-the-art commercial truck weigh and inspection stations for heavy trucks entering Oklahoma. A total of nine POE weigh stations will be built along major highway entrances around the state's border.

The \$100 million dollar project consists of building eight permanent, manned stations at key ports of entry into Oklahoma, along with a ninth unmanned "virtual" station that will allow regulators to use special equipment to weigh and check trucks as they move along the highway.

CONSTRUCTION CHALLENGE

In collaboration with Telco Supply Company and the Oklahoma State DOT, Oldcastle Infrastructure provided a "turnkey" solution for the ODOT Port of Entry Precast Weight Station Buildings. Oldcastle Infrastructure's turnkey scope of work consisted of the manufacturing, outfitting and installation of (2) two RCS 13830 Precast Concrete POE Buildings.

PRECAST SOLUTION

The ODOT, using metal office trailers in the past, knew it was essential, going forward, to provide a more secure and durable building

DESIGN & CONSTRUCTION TEAM

General Contractor

Telco Supply Co., Sulphur, OK

Owner

Oklahoma Dept. of Transportation

Precaster

Oldcastle Infrastructure

Manufacturing Facility

Oldcastle Infrastructure
Newnan, Georgia

Construction Services:

Provided by Oldcastle Services

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to house the DOT employees that weigh and regulate the trucking industry on Oklahoma's highways. They chose precast concrete construction as the solution.

The turnkey project involved the manufacturing and complete out-fitting of Oldcastle Infrastructure's RCS 13830 Precast Concrete Buildings with all specified equipment. In addition, the fully out-fitted buildings were shipped, off loaded and installed at the POE sites near Oklahoma City. The RCS 13830 Precast Concrete Buildings were manufactured at our Newnan, GA facility.

SCOPE OF WORK

Precast Structure

A. STRUCTURE ENGINEERING

Detailed engineering and drawings

B. PRECAST CONCRETE SHELL

Size: (1) RCS 1430 Light Weight Precast Concrete POE Precast Office Building

Outside Dimension: 30' Long x 13' 8" Wide x 10.1' High

Finished Inside Dimension: 29' Long x 12' 8" Wide x 9' High

Weight: Approximate finished weight: ~82,700 pounds

Specifications: Floor load: 200 PSF
Roof load: 60 PSF
Wind load: 150 MPH, Exp "C", I=1.15

Bullet Resistance: UL752 Level 4 Equivalent (.30-06 at 15 Ft.)

Fire rating: Two Hour Equivalent

Seismic Zone: Up to 50% Gravity acceleration per IBC2006. Higher ratings are available to 300% Gravity acceleration

C. FINISHES

Exterior Walls: Solid Precast Concrete, 4" Thick with Textured Thorocoat finish,

Interior Wall & Ceiling: Nudo White 1/2" FRP board

Insulation: R-11 in walls and ceiling

Floor: Vinyl composition tile with rubber base molding

Roofing: White Elastomeric coating

Stud Partition Walls: Restroom & Closet walls

D. DOORS AND OPENINGS

Doors: (2) 3'-6" x 7'-0" 16 gauge steel door with 14 gauge steel frame

Locks: High Security Lockset with changeable core and Panic hardware

Other Door Hardware: (2) NRP Stainless steel hinges, anti-pick plate; kick plate, hydraulic door closer, weather strip, aluminum threshold, door sweep

Door Hood: (2) 54"w x 30" d door rain hoods, (2) Door drip cap

Interior Doors: (2) 3' x 7' Interior steel doors with hardware;

Windows: (5) 5' x 4' Shatterproof Tinted Windows rated 150 MPH with 1- 5/16" tempered, tinted, hurricane resistant glass

E. POWER

Power Service: 200A 1Ø 120/240V

Disconnect Switch: (1) SQ D, D224NRB, 200A Exterior Disconnect Switch

Main Distribution Panel: (1) SQ D NQ series, MB panel, 200A 1Ø, 40 space

Surge Suppression: (1) Raycap/AC Data B82XXR-G at MDP

Convenience Receptacles: (6) 20A, 125V

Dedicated Receptacles: (~32) 120V, 15A Receptacles

Exterior GFI Receptacle: (2) 20A, 125V

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F. ENVIRONMENTAL SYSTEM

HVAC: (1) 3 Ton, 240V, 1Ø wall mounted HVAC system
Controls: (1) Auto heat/cool thermostat controller
Restroom Exhaust fan: (1) Restroom exhaust fan

G. ALARMS

Alarms: (1) 25 pair split 66 block in storage room with intrusion smoke

H. LIGHTING

Interior: (4) 4' 2 tube Lithonia fluorescent light fixtures with acrylic lens covers
(2) 2' x 2' surface mtd fluorescent fixtures
Exterior: (2) 100W HPS Exterior light with photocell Lithonia TWA series
Emergency: (2) Emergency fixture with dual flood lights
Switches: (2) 20A light switches

I. GROUNDING

Grounds: Standard Commercial service grounding per NEC.

K. ADDITIONAL ITEMS

Telco, Computer, Radio: Install other conduits only as required
Counter: Plastic laminate counter with ledge
Storage shelves/Cabinet: Plastic laminate storage shelves in storeroom & storage cabinet in restroom
Restroom: Block outs for plumbing & floor drain provided by Oldcastle.
IT equipment box/cabinet: IT equipment box/cabinet in storage room

About Oldcastle Infrastructure

Oldcastle Infrastructure, A CRH Company, is the leading provider of building materials, products and services for infrastructure projects to several market sectors nationwide, including: Building Structures, Communications, Energy, Transportation and Water.

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