

**SECTION 03410
SACON CONCRETE PANELS**

PART 1 - GENERAL

1.01 SCOPE OF THE WORK

- A. Work of this Section covers the furnishing of all labor, equipment, appliances and materials, and in performing all operations in connection with the construction of SACON™ (Shock Absorbing CONcrete) pre-cast bullet stops and backstops, of the dimensions indicated on the contract drawings, complete in place and accepted in accordance with the drawings and specifications and as directed by the CTARNG. Work shall include, but shall not be limited to furnishing/casting panels (including test and spare panels), any shipping costs, testing, manufacturers on-site representation, installation and cleanup
- B. SACON™ is a foamed, fiber-reinforced concrete that has a density and compressive strength capable of absorbing bullet impacts and penetration. It has been developed and tested by the U.S. Army Corps of Engineers through its Engineering Research and Development Center (ERDC) and U.S. Army. Through a Co-operative Research Agreement with the ERDC, the Terran Corporation has advanced the concept of SACON™ to a commercial product.
- C. Due to this agreement, SACON™ is proprietary item available only from the Terran Corporation. The contact for Terran is as follows:
- Brad Huntsman, SACON Program Manager
Terran Corporation
4080 Executive Drive
Beavercreek, OH 45430
(937) 320-3601
blhuntsman@terrancorp.com
- D. Technical specifications for SACON™, as provided by the Terran Corporation, are included in these specifications (Attachment A). SACON™ as required for this project shall conform to these specifications. These specifications shall be referred to as the "Manufacturers Specifications".
- E. In addition to the bullet stops and back stops indicated on the contract drawings the Contractor shall cast additional SACON™ precast panels to include four (4) additional bullet stops (8-"L" Blocks), four (4) base blocks

and twenty (20) linear feet of back stop. These panels will be stockpiled onsite for future use as replacements by the CTARNG.

1.02 QUALITY ASSURANCE

- A. Comply with Manufacturer's Specifications.

1.04 REFERENCES

- A. Whenever reference is made to the "Form 814A" in these Specifications, it shall refer to "State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 814A", dated 1995, and its latest supplements and revisions.
- B. When reference is made to a particular section of "Form 814A", it will be construed to include all related articles referred to in said Section.
- C. See also Manufacturer's Specifications.

1.05 SUBMITTALS

- A. Comply with Manufacturer's Specifications.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Comply with Manufacturer's Specifications.

PART 3 - EXECUTION

3.01 METHOD OF CONSTRUCTION

- A. Comply with Manufacturer's Specifications.
- B. The Contractor shall have the option of having the SACON panels cast at Terran's facility in Dayton, Ohio and shipping them to the site or casting the panels on-site under license to SACON. An on-site casting location will be provided by the CTARNG. Regardless of the option selected, all work shall be done in accordance with the Manufacturer's Specifications and any additional conditions required by the manufacturer. The Contractor's bid price shall

include all shipping costs/fees associated with the construction of the panels. Spare panels shall be stacked at an on-site location as directed by the CTARNG.

- C. Reinforced Concrete pads and granular material shall be constructed in accordance with Sections 03300 and 02234 respectively.
- D. The Contractor shall have a representative of Terran on-site during any on-site casting, testing, installation and any other operations required by the manufacturer to ensure proper construction and installation of the units.
- E. Live fire testing of the test panels as required by Section 3.3.4.2 of the manufacturers specifications shall be performed by the CTARNG using a CTARNG weapon and ammunition.
- F. The Contractor shall layout panel locations as indicated on the contract documents. Panels shall be erected using equipment acceptable to the manufacturer. Install panels in accordance with the manufacturers recommendations and instructions. A representative of SACON shall be on-site during the installation of the panels.
- G. During the bidding process the Contractor shall coordinate with SACON to determine any special requirements/fees/costs associated with the procurement and installation of the panels.
- H. The Contractor shall cleanup the site following the construction/installation of the panels. If panels are cast on site, the Contractor shall restore the area to pre-construction condition or better.

END OF SECTION