SCOTT SYSTEM

SECTION 03121 FORM LINERS FOR ARCHITECTURAL CONCRETE

Display hidden notes to specifier by using "Tools"/"Options"/"View"/"Hidden Text".

** NOTE TO SPECIFIER ** Scott System, form liners and brick inlay systems.

This section is based on the products of Scott System, which is located at:

109 General Fellows Road, Greenwich, NY 12834.

Tel: (518) 383-0500 Fax: (518) 992-5140

Email: info@scottsystem.com

Web: http://www. www.scottsystem.com

SECTION 03121 - FORM LINERS FOR ARCHITECTURAL CONCRETE

PART 1 GENERAL 1.1 SECTION INCLUDES ** NOTE TO SPECIFIER **

Delete items below not required for project.

A. Elastomeric form liners for texturing architectural concrete.

B. Form liner accessories of fasteners, sealants, rustication and backup strips, form release agents and sealers as scheduled or required.

1.2 RELATED SECTIONS ** NOTE TO SPECIFIER ** Delete any sections below not relevant to this project; add others as required.

A. Section 03100 - Concrete Formwork.

B. Section 03120 - Architectural Cast-In-Place Concrete Formwork.

C. Section 03330 - Architectural Concrete.

D. Section 03350 - Concrete Finishes.

E. Section 03400 - Precast Concrete.

F. Section 03450 - Architectural Precast Concrete - Plant Cast.

G. Section 03460 - Architectural Precast Concrete - Site Cast.

H. Section 03470 - Tilt-Up Concrete.

1.3 REFERENCES ** NOTE TO SPECIFIER ** Delete references from the list below that are not actually required by the text of the edited section.

A. American Concrete Institute (ACI):

1. ACI 117 - Standard Tolerances for Concrete Construction and Materials.

2. ACI 301 - CH. 13, Specifications for Structural Concrete.

3. ACI 303R-91 - Guide to Cast-in-Place Architectural Concrete.

4. ACI 309 72 [78] - CH. 7, Recommended Practice for Consolidation of Concrete.

5. ACI 347 78 - CH. 5.2, Recommended Practice for Concrete Formwork.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. [Product Data]: Installation instructions and [Product Data] verifying compliance with specifications.

C. Shop Drawings: Form liner layout and termination details. Indicate backup, rustication, reveal, and chamfer strip locations. Include jointing, form tie location and pattern of placement.

D. Samples: 24 inches by 24 inches of each pattern scheduled or required.

E. Certification: Manufacturer product compliance with regulations controlling VOC's.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A minimum of 3 years manufacturing experience with form liners like those required for this Project.

B. Installer Qualifications: A minimum of 3 years' experience with form liners like those required for this Project.

C. Architect/Engineer's review for aesthetic criteria. Contractor responsible for design of formwork and back-up of form liner for structural stability and sufficiency. ** NOTE TO SPECIFIER ** Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

1. Provide full scale mock-up using contract materials, methods, and workmanship. Incorporate formwork accessories and minimum one vertical and one horizontal form liner joint. Include concrete mix, forming system, form release agents, placement rate, form pressures, joint sealing, vibrating, and stripping practices. Demonstrate patching

and repair procedures for spawled concrete, and voids caused by honeycombing or bug holes.

2. Approved mock-up shall be the standard by which Work will be evaluated.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Cover form liners to protect from oil, dirt, and UV exposure.

B. Do not use damaged products. Do not install products not bearing product trade name and manufacturer's name.

C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Scott System, which is located at:

109 General Fellows Road, Greenwich, NY 12834.

Tel: (518) 383-0500 Fax: (518) 992-5140

Email: info@scottsystem.com

Web: http://www. www.scottsystem.com

** NOTE TO SPECIFIER ** Delete one of the following two paragraphs: coordinate with requirements of Division 1 section on product options and substitutions.

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MATERIALS ** NOTE TO SPECIFIER ** Flex-Liner™ elastomeric formliners are placed in either precast beds or in poured-in-place forms. After curing the forms are removed revealing the pattern created by the form liner. Flex-Liners™ are reusable approximately 100 times.

A. Scott System Flex-Liner elastomeric form liner for creating textures in poured-in-place or precast concrete.

1. Pattern and Texture: ** NOTE TO SPECIFIER ** Delete pattern series not required. Insert pattern number(s) of series required.

a. Scott Systems Pattern Series: Stone #__.

b. Scott Systems Pattern Series: Fractured #__.

c. Scott Systems Pattern Series: Wood #__.

d. Scott Systems Pattern Series: Flute #__.

e. Scott Systems Pattern Series: Low Profile #__.

f. Scott Systems Pattern Series: Brick & Block #__.

g. Scott Systems Pattern Series: Custom pattern as indicated on drawing.

2. Physical Characteristics:

a. Hardness - D2240 - Shore A: 70.

b. Tensile Properties PSI - D412 565.0 S100%.

c. Elongation D412 - percent: 294.3% ELONG.

d. Tear Strength D624 & D3489 die C: 168.9 PLI.

e. Tensile Strength (Ultimate) D412: 1569.3 PSI.

f. Abrasion - Taber H22: .0698 WTLOS.

(a) Taber Abrasion D3489 MG/1000 cycles: .25636% by weight.

g. Color: Gray. h. TCLP - Hg Test for Disposal: Passes.

2.3 ACCESSORIES

A. Form Release Agents:

1. Scott Lease 440.

2. Cressett 880.

PART 3 EXECUTION

** NOTE TO SPECIFIER ** Design Limitations:

Experience shows that radius walls and columns must be studied carefully to see that the addition of a textures form liner to the radius form will not cause the liner to "key" into the set concrete. Keyed liner cannot strip unless it is not bonded to form sections and can be peeled from the set concrete after the form has been moved away. Sectioning of column forms will eliminate this problem. Never try to match textures end to end, i.e., a fractured fin pattern butted together. Either use longer pieces of form liner or specify a rustication joint line. Light textures may get lost on a tall building. Try to view the texture sample from a distance with sidelight for the best visual perspective of the texture.

** NOTE TO SPECIFIER ** Limitations:

Exposure to steam curing will soften and destroy the surface of Flex-Liners™ after extended use. Use of some types of release agents will adversely affect the elastomeric urethane. Flex-Liner™ should not be used on small, non-repetitive types of projects. 3.1 FORM LINER PREPARATION

A. Verify lines and levels of formwork and form liner patterns are within allowable tolerances.

B. On multiple use liners, clean liner before each use. Do not use damaged liner when continued use or repair would diminish the aesthetics of the Work.

C. Apply release agent according to manufacturer's directions. Schedule concrete pour immediately after application of release agent to avoid precipitation, dust, and debris. Protect reinforcing steel from exposure to release agents.

3.2 FORM LINER INSTALLATION

** NOTE TO SPECIFIER ** Form liners expand and contract with changes in temperature.

A. Store and use form liner panels at temperatures between 40 degrees F and 140 degrees F.

B. Prevent cement paste from bleeding form liner joints, form liner accessories' joints, and tie holes.

C. Anchor liner to form on centers not to exceed 18 inches (457 mm). Decrease centers as necessary to accommodate form stripping pressures without damaging liner intended for multiple use.

3.3 CONCRETE PLACEMENT

A. Thoroughly vibrate concrete to achieve consolidation and minimize voids. Internally vibrate into previous lift to avoid lift lines. Avoid vibrator contact with the form liner.

3.4 FORM LINER ACCESSORY INSTALLATION

A. Place rustication lines located as indicated within acceptable industry tolerances.

B. Form corners indicated to be chamfered with PVC chamfer. Chamfered corners shall be smooth, solid, unbroken continuous lines.

3.5 FORM LINER MAINTENANCE

A. Proper cleaning and storage of form liner is required to obtain acceptable results. Prevent matrix build-up on the liner surface. Scrub the liner surface with a stiff bristle scrub brush dipped repeatedly in one of the approved release agents. All excess release agent shall be blown or wiped off before the form and liner is put back into service.

B. Storage of form liner shall be out of direct sunlight and in temperatures below 140 degrees F (60 degrees C). Store flat (not rolled) to avoid elastomeric sheet "set".

END OF SECTION