SECTION 071113 - BITUMINOUS DAMPPROOFING

1. GENERAL
	* + 1. RELATED DOCUMENTS

Retain or delete this article in all Sections of Project Manual.

* + - * 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
			1. SUMMARY
				1. Section Includes:

Cold-applied, emulsified-asphalt dampproofing.

* + - 1. SUBMITTALS
				1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer’s installation instructions shall be provided along with product data.
				3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
				4. Product Data: For each type of product.
			2. FIELD CONDITIONS

Retain "Weather Limitations" paragraph below if any application is exterior.

* + - * 1. Weather Limitations: Proceed with application only when existing and forecasted weather conditions permit dampproofing to be performed according to manufacturers' written instructions.

Retain "Ventilation" paragraph below if enclosed or interior applications are included in Project.

* + - * 1. Ventilation: Provide adequate ventilation during application of dampproofing in enclosed spaces. Maintain ventilation until dampproofing has cured.
1. PRODUCTS
	* + 1. MANUFACTURERS
				1. Source Limitations: Obtain primary dampproofing materials and primers from single source from single manufacturer. Provide **[protection course] [drainage panels] [and]** auxiliary materials recommended in writing by manufacturer of primary materials.
			2. PERFORMANCE REQUIREMENTS
				1. VOC Content: Products shall comply with VOC content limits of authorities having jurisdiction unless otherwise indicated.
			3. COLD-APPLIED, EMULSIFIED-ASPHALT DAMPPROOFING

* + - * 1. [Manufacturers:](http://www.specagent.com/Lookup?ulid=5976) Subject to compliance with requirements, provide products by the following:

[BASF Corporation](http://www.specagent.com/Lookup?uid=123457094121).

[Henry Company](http://www.specagent.com/Lookup?uid=123457094118).

[Karnak Corporation](http://www.specagent.com/Lookup?uid=123457094122).

[W.R. Meadows, Inc](http://www.specagent.com/Lookup?uid=123457094120).

Approved equivalent.

Retain one or more of "Trowel Coats," "Fibered Brush and Spray Coats," and "Brush and Spray Coats" paragraphs below; coordinate with applications retained in Part 3.

* + - * 1. Trowel Coats: ASTM D1227, Type II, Class 1.
				2. Fibered Brush and Spray Coats: ASTM D1227, Type II, Class 1.
				3. Brush and Spray Coats: ASTM D1227, Type III, Class 1.
			1. AUXILIARY MATERIALS
				1. Furnish auxiliary materials recommended in writing by dampproofing manufacturer for intended use and compatible with bituminous dampproofing.

Product in "Emulsified-Asphalt Primer" paragraph below is water based and generally contains few or no VOCs.

* + - * 1. Emulsified-Asphalt Primer: ASTM D1227, Type III, Class 1, except diluted with water as recommended in writing by manufacturer.

Retain "Asphalt-Coated Glass Fabric" paragraph below if required for items such as flashings and corner protection stripping at internal and external corners, changes in plane, and construction joints; revise to suit Project.

* + - * 1. Asphalt-Coated Glass Fabric: ASTM D1668, Type I.

Retain first or second option in "Patching Compound" paragraph below to suit Project.

* + - * 1. Patching Compound: **[Epoxy or latex-modified repair mortar] [Asbestos-free fibered mastic]** of type recommended in writing by dampproofing manufacturer.

Retain protection-course type from four "Protection Course" paragraphs below if required for backfill locations; revise text or insert another product to suit Project. Delete paragraphs if only wall-cavity dampproofing is required or drainage panels without a protection course are required. Verify acceptability of protection-course type with dampproofing manufacturer. Indicate locations if more than one type of protection course is required.

* + - * 1. Protection Course: ASTM D6506, semirigid sheets of fiberglass or mineral-reinforced-asphaltic core, pressure laminated between two asphalt-saturated fibrous liners.

Thickness: Nominal **[1/8 inch] [1/4 inch]**.

Adhesive: Rubber-based solvent type recommended in writing by waterproofing manufacturer for protection course type.

* + - * 1. Protection Course: Fan folded, with a core of extruded-polystyrene board insulation faced on **[one side] [or] [both sides]** with plastic film, nominal thickness 1/4 inch, with a compressive strength of not less than 8 psi per ASTM D1621, and maximum water absorption by volume of 0.6 percent per ASTM C272.
				2. Protection Course: Extruded-polystyrene board insulation, unfaced, ASTM C578, Type X, 1/2 inch thick.

Roll-roofing type of protection course in "Protection Course" paragraph below is for minimum protection where backfilling is used.

* + - * 1. Protection Course: Smooth-surfaced roll roofing complying with ASTM D6380, Class S, Type III.
			1. MOLDED-SHEET DRAINAGE PANELS

Retain this article if molded-sheet drainage panels are required.

Retain "Nonwoven-Geotextile-Faced, Molded-Sheet Drainage Panel" paragraph below if specifying molded-sheet drainage panels in this Section; revise to suit Project. If not indicated on Drawings, insert thickness requirement only after coordinating required thickness with required flow rate. See waterproofing Sections for examples of other types of molded-sheet drainage panel if required.

* + - * 1. Nonwoven-Geotextile-Faced, Molded-Sheet Drainage Panel: Composite subsurface drainage panel acceptable to dampproofing manufacturer and consisting of a studded, nonbiodegradable, molded-plastic-sheet drainage core; with a nonwoven, needle-punched geotextile facing with an apparent opening size not exceeding No. 70 sieve laminated to one side of the core, with or without a polymeric film bonded to the other side; and with a vertical flow rate through the core of **[**9 to 21 gpm per ft.**] <Insert value>**.
			1. INSULATION DRAINAGE PANELS

Retain this article if insulation drainage panels are required. Verify acceptability of insulation drainage panel with dampproofing manufacturer.

Retain Insulation Drainage Panels" paragraph below if insulation drainage panels are required over dampproofing and the panels are not specified in another Section. If not indicated on Drawings, insert thickness requirement. See waterproofing Sections for examples of other types of insulation drainage panel if required.

* + - * 1. Insulation Drainage Panels: Unfaced or geotextile-faced, extruded-polystyrene board insulation according to ASTM C578, **[Type IV, 25-psi]** , or **[Type VI, 40-psi]** , minimum compressive strength; fabricated with shiplap or channel edges and with one side having grooved drainage channels.

[Manufacturers:](http://www.specagent.com/Lookup?ulid=12766) Subject to compliance with requirements, provide products by one of the following:

Carlisle Coatings and Waterproofing

DuPont

[Owens Corning](http://www.specagent.com/Lookup?uid=123457094139).

[T. Clear Corporation, a subsidiary of Fin Pan Inc](http://www.specagent.com/Lookup?uid=123457094140).

Approved equivalent.

1. EXECUTION
	* + 1. EXAMINATION
				1. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for surface smoothness, maximum surface moisture content, and other conditions affecting performance of the Work.
				2. Proceed with application only after substrate construction and penetrating work have been completed and unsatisfactory conditions have been corrected.
			2. PREPARATION
				1. Clean, prepare, and treat substrates according to manufacturer's written instructions. Provide clean, dust-free, and dry substrates for dampproofing application.
				2. Mask or otherwise protect adjoining exposed surfaces from being stained, spotted, or coated with dampproofing. Prevent dampproofing materials from entering and clogging weep holes and drains.
				3. Clean substrates of projections and substances detrimental to dampproofing work; fill voids, seal joints, and remove bond breakers if any.
				4. Apply patching compound to patch and fill tie holes, honeycombs, reveals, and other imperfections**[; cover with asphalt-coated glass fabric]**.
			3. APPLICATION, GENERAL
				1. Comply with manufacturer's written instructions for dampproofing application, cure time between coats, and drying time before backfilling unless otherwise indicated.

Apply dampproofing to provide continuous plane of protection.

Apply additional coats if recommended in writing by manufacturer or to achieve a smooth surface and uninterrupted coverage.

* + - * 1. Where dampproofing footings and foundation walls, apply from finished-grade line to top of footing; extend over top of footing and down a minimum of 6 inches over outside face of footing.

Both subparagraphs below provide for continuity of plane of protection; for best results, supplement with details on Drawings.

Extend dampproofing 12 inches onto intersecting walls and footings, but do not extend onto surfaces exposed to view when Project is completed.

Generally, retain subparagraph below. Corners are usually the weakest link in dampproofing protection.

Install flashings and corner protection stripping at internal and external corners, changes in plane, construction joints, cracks, and where indicated as "reinforced," by embedding an 8-inch-wide strip of asphalt-coated glass fabric in a heavy coat of dampproofing. Dampproofing coat for embedding fabric is in addition to other coats required.

* + - * 1. Where dampproofing exterior face of inner wythe of exterior masonry cavity walls, lap dampproofing at least 1/4 inch onto flashing, masonry reinforcement, veneer ties, and other items that penetrate inner wythe.

Both subparagraphs below provide for continuity of plane of protection; for best results, supplement with details on Drawings.

Extend dampproofing over outer face of structural members and concrete slabs that interrupt inner wythe.

Lap dampproofing at least 1/4 inch onto shelf angles supporting veneer.

If retaining paragraph below, coordinate with Section 042000 "Unit Masonry."

* + - * 1. Where dampproofing interior face of above-grade, exterior [concrete] [and] [masonry] [single-wythe masonry] walls, continue dampproofing through intersecting walls by keeping vertical mortar joints at intersection temporarily open or by dampproofing wall before constructing intersecting walls.
			1. COLD-APPLIED, EMULSIFIED-ASPHALT DAMPPROOFING

Retain one or more paragraphs in this article to suit required dampproofing applications.

In "Concrete Foundations( and Parged Masonry Foundation Walls)" paragraph below, the last option (trowel coat) is better for rough-exterior, below-grade surfaces and where thick film is required.

* + - * 1. Concrete Foundations[ and Parged Masonry Foundation Walls]: Apply **[two brush or spray coats at not less than** 1.5 gal./100 sq. ft. **for first coat and** 1 gal./100 sq. ft. **for second coat] [one fibered brush or spray coat at not less than** 3 gal./100 sq. ft.**] [or] [one trowel coat at not less than** 4 gal./100 sq. ft.**]**.

In "Unparged Masonry Foundation Walls" paragraph below, the last option (trowel coat) is better for rough-exterior, below-grade surfaces and where thick film is required.

* + - * 1. Unparged Masonry Foundation Walls: Apply **[primer and two brush or spray coats at not less than** 1.5 gal./100 sq. ft. **for first coat and** 1 gal./100 sq. ft. **for second coat] [primer and one fibered brush or spray coat at not less than** 3 gal./100 sq. ft.**] [or] [primer and one trowel coat at not less than** 5 gal./100 sq. ft.**]**.
				2. Unexposed Face of Concrete Retaining Walls: Apply one brush or spray coat at not less than 1.25 gal./100 sq. ft..
				3. Unexposed Face of Masonry Retaining Walls: Apply primer and one brush or spray coat at not less than 1.25 gal./100 sq. ft..
				4. Concrete Backup for **[Brick Veneer Assemblies] [Stone Veneer Assemblies] [and] [Dimension Stone Cladding]**: Apply one brush or spray coat at not less than 1 gal./100 sq. ft..
				5. Masonry Backup for **[Brick Veneer Assemblies] [Stone Veneer Assemblies] [and] [Dimension Stone Cladding]**: Apply primer and one brush or spray coat at not less than 1 gal./100 sq. ft..
				6. Exterior Face of Inner Wythe of Cavity Walls: Apply primer and one brush or spray coat at not less than 1 gal./100 sq. ft..

Retain "Interior Face of Exterior Concrete Walls" or "Interior Face of (Single-Wythe )Exterior Masonry Walls" paragraph below, or both if required; revise to suit Project. Dampproofing the interior face of exterior concrete or masonry walls where the wall is furred and finished can result in moisture being trapped between the dampproofing membrane and the wall finish. Consider ventilation requirements for the space behind the furring and wall finish.

* + - * 1. Interior Face of Exterior Concrete Walls: Where above grade and indicated to be furred and finished, apply one brush or spray coat at not less than 1 gal./100 sq. ft..
				2. Interior Face of **[Single-Wythe ]**Exterior Masonry Walls: Where above grade and indicated to be furred and finished, apply primer and one brush or spray coat at not less than 1 gal./100 sq. ft..
			1. PROTECTION COURSE INSTALLATION

Retain this article for backfill locations if required; delete if only wall-cavity dampproofing or drainage panels without a protection course are required.

* + - * 1. Install protection course over completed-and-cured dampproofing. Comply with dampproofing-material and protection-course manufacturers' written instructions for attaching protection course.

Retain first subparagraph below for extruded-polystyrene-board protection course; retain second for asphalt-board-type protection course.

Support protection course over cured coating with spot application of adhesive type recommended in writing by protection-board manufacturer.

Install protection course [**on same day**] [**within 24 hours**] of dampproofing installation (while coating is tacky) to ensure adhesion.

* + - 1. DRAINAGE PANEL INSTALLATION

Retain this article for backfill locations if required; delete if only wall-cavity dampproofing is required, if drainage panels without a protection course are required, or if drainage panels are specified in another Section.

Retain "Molded-Sheet Drainage Panels" or "Insulation Drainage Panels" paragraph below if required; revise to suit Project.

* + - * 1. Molded- Sheet Drainage Panels: Install panels, with geotextile facing away from wall substrate, according to manufacturer's written instructions. Use adhesive or another method that does not penetrate dampproofing. Lap edges and ends of geotextile to maintain continuity. Protect installed molded-sheet drainage panels during subsequent construction.

Retain subparagraph below if installing thermal insulation or protection course before installing molded-sheet drainage panels.

Install **[thermal insulation specified in Section 072100 "Thermal Insulation,"] [protection course]** before installing drainage panels.

* + - * 1. Insulation Drainage Panels: Install panels over dampproofed surfaces. Use adhesive or another method that does not penetrate dampproofing. Cut and fit panels to within 3/4 inch of projections and penetrations.

Ensure that drainage channels are aligned and free of obstructions.

* + - 1. PROTECTION

Retain first paragraph below if insulation drainage panels are required and may be exposed for a period.

* + - * 1. Protect installed insulation drainage panels from damage due to UV light, harmful weather exposures, physical abuse, and other causes. Provide temporary coverings where panels are subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.
				2. Correct dampproofing that does not comply with requirements; repair substrates and reapply dampproofing.

END OF SECTION 071113