

SECTION 02361 - TERMITE CONTROL

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings, General Conditions and Supplementary General Conditions and other Division-1 Specification Sections, apply to this Section.

SUMMARY

This Section includes the following for termite control:

Soil treatment.

DEFINITIONS

EPA: Environmental Protection Agency.

PCO: Pest control operator.

SUBMITTALS

Product Data: Treatments and application instructions, including EPA-Registered Label.

Product Certificates: Signed by manufacturers of termite control products certifying that treatments furnished comply with requirements.

Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

Warranties: Special warranties specified in this Section.

QUALITY ASSURANCE

Applicator Qualifications: A PCO who is licensed according to regulations of authorities having jurisdiction to apply termite control treatment in jurisdiction where Project is located and who is experienced and has completed termite control treatment similar to that indicated for this Project and whose work has a record of successful in-service performance.

Regulatory Requirements: Formulate and apply termiticides, and label with a Federal registration number, to comply with EPA regulations and authorities having jurisdiction.

PROJECT CONDITIONS

Environmental Limitations: To ensure penetration, do not treat soil that is water saturated or frozen. Do not treat soil while precipitation is occurring. Comply with EPA-Registered Label requirements and requirements of authorities having jurisdiction.

COORDINATION

Coordinate soil treatment application with excavating, filling, and grading and concreting operations. Treat soil under footings, grade beams, and ground-supported slabs, before construction.

WARRANTY

General Warranty: Special warranty specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and

run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

Special Warranty: Written warranty (5 Years), signed by applicator and Contractor certifying that termite control work, consisting of applied soil termiticide treatment, will prevent infestation of subterranean termites. If subterranean termite activity or damage is discovered during warranty period, re-treat soil and repair or replace damage caused by termite infestation.

PART 2 - PRODUCTS

SOIL TREATMENT

Termiticide: Provide an EPA-registered termiticide complying with requirements of authorities having jurisdiction, in a soluble or emulsible, concentrated formulation that dilutes with water or foaming agent, and formulated to prevent termite infestation. Use only soil treatment solutions that are not harmful to plants. Provide quantity required for application at the label volume and rate for the maximum termiticide concentration allowed for each specific use, according to the product's EPA-Registered Label.

Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

AgrEvo Environmental Health, Inc.; a Company of Hoechst and Schering, Berlin.
American Cyanamid Co.; Agricultural Products Group; Specialty Products Department.
Bayer Corp.; Garden & Professional Care.
DowElanco.
FMC Corp.; Pest Control Specialties.
Zeneca Professional Products.

PART 3 - EXECUTION

EXAMINATION

Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for moisture content of the soil, interfaces with earthwork, slab and foundation work, landscaping, and other conditions affecting performance of termite control. Proceed with application only after unsatisfactory conditions have been corrected.

PREPARATION

General: Comply with the most stringent requirements of authorities having jurisdiction and with manufacturer's written instructions for preparing substrate. Remove all extraneous sources of wood cellulose and other edible materials such as wood debris, tree stumps and roots, stakes, formwork, and construction waste wood from soil and around foundations.

Soil Treatment Preparation: Remove foreign matter and impermeable soil materials that could decrease treatment effectiveness on areas to be treated. Loosen, rake, and level soil to be treated, except previously compacted areas under slabs and footings. Termiticides may be applied before placing compacted fill under slabs if recommended by termiticide manufacturer.

Fit filling hose connected to water source at the site with a backflow preventer, complying with requirements of authorities having jurisdiction.

APPLICATION, GENERAL

General: Comply with the most stringent requirements of authorities having jurisdiction and with manufacturer's EPA-Registered Label for products.

APPLYING SOIL TREATMENT

Application: Mix soil treatment termiticide solution to a uniform consistency. Provide quantity required for application at the label volume and rate for the maximum specified concentration of termiticide, according to manufacturer's EPA-Registered Label, to the following so that a continuous horizontal and vertical termiticidal barrier or treated zone is established around and under building construction. Distribute the treatment evenly.

Slabs-on-Grade and Basement Slabs: Under ground-supported slab construction, including footings, building slabs, and attached slabs as an overall treatment. Treat soil materials before concrete footings and slabs are placed.

Masonry: Treat voids.

Penetrations: At expansion joints, control joints, and areas where slabs will be penetrated.

Building perimeter: Treat entire perimeter upon building completion.

Avoid disturbance of treated soil after application. Keep off treated areas until completely dry.

Protect termiticide solution, dispersed in treated soils and fills, from being diluted until ground-supported slabs are installed. Use waterproof barrier according to EPA-Registered Label instructions.

Post warning signs in areas of application.

Reapply soil treatment solution to areas disturbed by subsequent excavation, grading, landscaping, or other construction activities following application.

End of SECTION 02361

SECTION 02514 - PORTLAND CEMENT CONCRETE PAVING

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work specified in this section.

DESCRIPTION OF WORK:

Extent of portland cement concrete paving is shown on drawings, including but not limited to concrete curbs, equipment pads, ramps, sidewalks and walkways.

Prepared subbase is specified in "Earthwork" section.

Concrete and related materials are specified in Division 3.

Joint fillers and sealers are specified in Division 7.

QUALITY ASSURANCE:

Codes and Standards: Comply with local governing regulations if more stringent than herein specified.

JOB CONDITIONS:

Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

Utilize flagmen, barricades, warning signs and warning lights as required.

PART 2 - PRODUCTS

MATERIALS:

Forms - General: Coat forms with a non-staining form release agent that will not discolor or deface surface of concrete.

Curbs: Steel of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use straight forms, free of distortion and defects. (Note: wood forms for curbs are not allowed.)

Use flexible spring steel forms to form radius bends as required.

~~Shape: Standard profile for 6" tall curb with 12" gutter.~~ Not Applicable

Sidewalks: Steel or wood of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use straight forms, free of distortion and defects.

~~Truncated Dome Detectable Warning Pavers: Provide ADA compliant embedded tiles of 80 % recycled glass aggregate content with cast in color. Product shall be equal to ECG Paver Tiles of Elizabeth City, NC.~~

Welded Wire Mesh: Welded plain cold-drawn steel wire fabric, ASTM A 185.

Reinforcing Bars: Deformed steel bars, ASTM A 615, Grade 40.

Cast Iron Sidewalk flumes: Provide 4" deep by top width required to cover storm pipe. Provide textured (checkered plate) exposed surface. See sidewalk storm drainage from canopy walkway covers.

Concrete Materials: Comply with requirements of applicable Division 3 sections for concrete materials, admixtures, bonding materials, curing materials, and others as required.

Expansion Joint Materials: Comply with requirements of applicable Division 7 sections for preformed expansion joint fillers and sealers.

Low VOC Liquid-Membrane Forming Curing Compound: Complying with ASTM C 309, Type I, Class A unless other type acceptable to Architect. Moisture loss not more than 0.55 gr./sq. cm. when applied at 200 sq. ft./gal.

Available Products: Subject to compliance with requirements, products, which may be incorporated in the work, include, but are not limited to, the following:

- "Masterseal"; Master Builders.
- "Ecocure"; Euclid Chemical Co.
- "Clear Seal"; A.C. Horn.
- "Sure Cure"; Kaufman Products Inc.
- "Kure-N-Seal"; Sonneborn-Contech.
- "Klearseal"; Seton Industries.

CONCRETE MIX, DESIGN AND TESTING:

Comply with requirements of applicable Division 3 sections for concrete mix design, sampling and testing, and quality control, and as herein specified.

Design mix to produce standard-weight concrete consisting of portland cement, aggregate, water-reducing or high-range water-reducing admixture (super-plasticizer), air-entraining admixture and water to produce the following properties:

Compressive Strength: 4000 psi for drive ways, 3000 for sidewalks ,minimum at 28 days, unless otherwise indicated.

Slump Range: 8" for concrete containing HRWR admixture (super-plasticizer); 3"-5" for other concrete.

Air Content: 5% to 8%.

PART 3 - EXECUTION

SURFACE PREPARATION:

Remove loose material from compacted subbase surface immediately before placing concrete.

FORM CONSTRUCTION:

Set forms to required grades and lines, rigidly braced and secured. Install sufficient quantity of forms to allow continuous progress of work and so that forms can remain in place at least 24 hours after concrete placement.

REINFORCEMENT:

Locate, place and support reinforcement as specified in Division 3 sections, unless otherwise indicated.

CONCRETE PLACEMENT:

General: Comply with requirements of ACI 330R for mixing and placing concrete, and as herein specified.

Do not place concrete until subbase and forms have been checked for line and grade. Moisten subbase if required to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.

Place concrete using methods, which prevent segregation of mix. Consolidate concrete along face of forms and adjacent to transverse joints with internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocation of reinforcing, dowels, and joint devices.

Use bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surface.

Deposit and spread concrete in a continuous operation between transverse joints, as far as possible. If interrupted for more than 1/2-hour, place a construction joint.

Curbs: Automatic machine may be used for curb placement at Contractor's option. If machine placement is to be used, submit revised mix design and laboratory test results, which meet or exceed minimums specified. Machine placement must produce curbs and gutters to require cross-section, lines, grades, finish, and jointing as specified for formed concrete.

JOINTS:

General: Construct expansion, weakened-plane (contraction), and construction joints true-to-line with face perpendicular to surface of concrete. Construct transverse joints at right angles to the centerline, unless otherwise indicated.

Weakened-Plane (Contraction) Joints: Provide weakened- plane (contraction) joints, sectioning concrete into areas as shown on drawings. Construct weakened-plane joints for a depth equal to at least 1/4 concrete thickness, as follows:

Tooled Joints: Form weakened-plane joints in fresh concrete by grooving top portion with a recommended cutting tool and finishing edges with a jointer.

Construction Joints: Place construction joints at end of placements and at locations where placement operations are stopped for a period of more than 1/2-hour, except where such pours terminate at expansion joints.

Construct joints as shown or, if not shown, use standard metal keyway-section forms.

Expansion Joints: Provide premolded joint filler for expansion joints abutting concrete curbs, catch basins, manholes, inlets, structures, walks and other fixed objects, unless otherwise indicated.

Locate expansion joints at 30' maximum for each walk and curb run, unless otherwise indicated.

Extend joint fillers full-width and depth of joint, and not less than 1/2" or more than 1" below finished surface. Fill within 1/8" of finish surface with joint sealer.

Fillers and Sealants: Comply with the requirements of applicable Division 7 sections for preparation of joints, materials, installation, and performance.

CONCRETE FINISHING:

After striking-off and consolidating concrete, smooth surface by screeding and floating. Use hand methods only where mechanical floating is not possible. Adjust floating to compact surface and produce uniform texture.

After floating, test surface for trueness with a 10' straightedge. Distribute concrete as required to remove surface irregularities, and refloat repaired areas to provide a continuous smooth finish.

Work edges of slabs, gutters, back top edge of curb, and formed joints with an edging tool, and round to 1/2" radius, unless otherwise indicated. Eliminate tool marks on concrete surface.

After completion of floating and troweling when excess moisture or surface sheen has disappeared, complete surface finishing, as follows:

Broom finish, by drawing a fine-hair broom across concrete surface, perpendicular to line of traffic. Repeat operation if required to provide a fine line texture acceptable to Architect.

On inclined slab surfaces, provide a coarse, non-slip finish by scoring surface with a stiff-bristled broom, perpendicular to line of traffic.

Do not remove forms for 24 hours after concrete has been placed. After form removal, clean ends of joints and point-up any minor honeycombed areas. Remove and replace areas or sections with major defects, as directed by Architect.

CURING:

Protect and cure finished concrete paving, complying with applicable requirements of Division 3 sections. Use membrane-forming curing and sealing compound or approved moist-curing methods.

REPAIRS AND PROTECTIONS:

Repair or replace broken or defective concrete, as directed by Architect.

Sweep concrete walks and wash free of stains, discolorations, dirt and other foreign material just prior to final inspection.

END OF SECTION 02514