07230 - PERIMETER INSULATION

PART 1 – GENERAL

1.01 SCOPE:
A. Provide all of the labor, materials, equipment, and services to furnish and install the perimeter insulation.

1.02 QUALITY ASSURANCE:
A. Single source responsibility for insulation products: Obtain each type of building insulation from a single source with resources to provide products of consistent quality in appearance and physical properties without delaying progress of the Work.

1.03 SUBMITTALS:
A. Prior to installation, submit to the Architect for review the following:
1. Manufacturer's product data indicating density, insulating value, water absorption characteristics and recommended adhesive for the application.
2. Manufacturer's installation instructions.

1.04 DELIVERY AND STORAGE:
A. Deliver materials in original packages, containers, or bundles bearing manufacturer's labels indicating the brand name and descriptive data confirming compliance with requirements herein specified.

1.05 COORDINATING:
A. Coordinate shipment and delivery with job progress and other trades for timely installation to preclude delays and interferences and to minimize job storage time. Especially work closely with concrete installers to ensure proper installation.

PART 2 – PRODUCTS

2.01 PERIMETER INSULATION:
A. Product/manufacturer:
1. 2" Dow Styrofoam.
2. An approved equal.
B. Description:
1. Rigid, extruded polystyrene.
2. Compressive strength: 40 lbs./sq. in., min.
3. Water absorption: 0.1% by volume, max.
4. R-value: 5.0 deg. F./ft. sq./hr/Btu/in. min.

2.02 ADHESIVE:
A. Type as recommended by the insulation manufacturer for the application involved.

PART 3 – EXECUTION

3.01 PREPARATION:
A. Verify that substrate and adjacent materials, and insulation boards, are dry and ready to receive insulation and adhesive.
B. Verify that substrate is flat and free of irregularities and materials that will impede adhesive bond.
C. Verify that insulation boards are unbroken and free of damage, including board skin.

3.02 INSTALLATION:
A. Recess the insulation enough to allow the slab to remain at its full thickness above the insulation. Install over vapor barrier.

07240 - EXTERIOR INSULATION FINISH SYSTEM

PART 1 – GENERAL

1.01 SYSTEM DESCRIPTION
A. General: The Exterior Insulation and Finish System (EIFS), designed for use on noncombustible or combustible type construction. EIFS is installed over a code approved water-resistive barrier (sheet type) and consists of a drainage medium and drainage accessories, expanded polystyrene insulation board, adhesive or mechanical attachment method, base coat with reinforcing mesh and finish.
B. Acceptable system configuration options include:
C. Design Requirements:
1. Acceptable substrates for the Light Commercial MD System shall be:
a. Exterior grade gypsum sheathing meeting ASTM C 1396 (formerly C 79) requirements for water resistant core or Type X core at the time of application of the Light Commercial MD System.
b. Exterior sheathing having a water-resistant core with fiberglass mat facers meeting ASTM C 1177.
c. Exterior fiber reinforced cement or calcium silicate boards.
d. APA Exterior or Exposure 1 rated Plywood, Grade C-D or better, nominal 12.7 mm (1/2 in), minimum 4-ply.
e. APA Exposure 1 rated Oriented Strand Board (OSB), nominal 12.7 mm (1/2 in).
f. Unglazed brick, cement plaster, concrete, or masonry (water-resistive barrier not required).
2. Deflection of substrate systems shall not exceed 1/240 times the span.
3. The substrate shall be flat within 6.4 mm (1/4 in) in a 1.2 m (4 ft) radius.
4. The slope of inclined surfaces shall not be less than 6:12. The length of inclined surfaces shall not exceed 305 mm (12 in).
5. All areas requiring an impact resistance classification higher than "standard", as defined by ASTM E 2486 (formerly EIMA Standard 101.86), shall be as detailed in the drawings and described in the contract documents. Refer to Section 1.04.D.1.c of this specification.
6. Expansion joints:
a. Design and location of expansion joints in the EIFS is the responsibility of the project designer and shall be noted on the project drawings. As a minimum, expansion joints shall be placed at the following locations:
1) Where expansion joints occur in the substrate system.
2) Where building expansion joints occur.
3) At floor lines in wood frame construction.
4) At floor lines of non-wood framed buildings where significant movement is expected.
5) Where the EIFS abuts dissimilar materials.
6) Where the substrate type changes.
7) Where prefabricated panels abut one another.
8) In continuous elevations at intervals not exceeding 23 m (75 ft).
9) Where significant structural movement occurs such as changes in roofline, building shape or structural system.
7. Terminations
a. Prior to applying the EIFS, wall openings shall be treated with Flashing Tape. Refer to EIFS Installation Details.
b. The EIFS shall be held back from adjoining materials around openings and penetrations such as windows, doors and mechanical equipment a minimum of 6 mm (3/4 in) for sealant application. See EIFS Installation Details.
c. The systems shall be terminated a minimum of [illegible] mm (8 in) above finished grade.
d. Sealants
1) Shall be manufactured and supplied by others
2) Shall be compatible with the EIFS materials.
3) The sealant backer rod shall be closed
8. Vapor Retarders – The use and location of vapor retarders within a wall assembly is the responsibility of the project designer and shall comply with local building code requirements. The type and location shall be noted on the project drawings and specifications. Vapor retarders may be inappropriate in certain climates and can result in condensation within the wall assembly.
9. Dark Colors – The use of dark colors must be considered in relation to wall surface temperature as a function of local climatic conditions. Use of dark colors in high temperature climates can affect the performance of the system.
10. Flashing: Flashing shall be provided at all roof-wall intersections, windows, doors, chimneys, decks, balconies, and other areas as necessary to prevent water from getting behind the EIFS.

1.02 SUBMITTALS
A. Product Data: The contractor shall submit to the architect the manufacturer's product data sheets describing the products, which will be used on this project.
B. Shop Drawings for Panelized Construction: The panel fabricator shall prepare and submit to the owner/architect complete drawings showing: wall layout, connections, details, expansion joints, and installation sequence.
C. Samples: The contractor shall submit to the architect two (2) samples of the EIFS for each finish, texture and color to be used on the project. The same tools and techniques proposed for the actual installation shall be used. Samples shall be of sufficient size to accurately represent each color and texture being utilized on the project.
D. Test Reports: When requested, the contractor shall submit to the owner/architect copies of selected test reports verifying the performance of the EIFS.

1.03 QUALITY ASSURANCE
A. Qualifications
1. System Manufacturer:
a. Materials shall be manufactured at a facility covered by a current ISO 9001:2000 certification. Certification of the facility shall be done by a registrar accredited by the American National Standards Institute, Registrar Accreditation Board (ANSI-RAB).
2. Contractor: Shall be knowledgeable in the proper installation of Exterior Insulation and Finish Systems.
B. Regulatory Requirements:
1. The EPS shall be separated from the interior of the building by a minimum 15-minute thermal barrier.
2. The use and max. thickness of EPS shall be in accordance with the applicable building code(s).
C. Certification
1. The EIFS shall be recognized for the intended use by the applicable building code(s).

1.04 DELIVERY, STORAGE AND HANDLING
A. All EIFS materials shall be delivered to the job site in the original, unopened packages with labels intact.
B. Upon arrival, materials shall be inspected for physical damage, freezing, or overheating. Questionable materials shall not be used.
1. Materials shall be stored at the jobsite in a cool, dry location, out of direct sunlight, protected from weather and other sources of damage.
2. Maximum storage temperature shall not exceed 38° C (100 °F). NOTE: Minimize exposure of materials to temperatures over 32 °C (90 °A). Finishes exposed to temperatures over 43 °C (110 °F) for even short periods may exhibit skinning, increased viscosity and should be inspected prior to use.
C. Protect all products from inclement weather and direct sunlight.

1.05 PROJECT CONDITIONS
A. Environmental Requirements
1. Application of wet materials shall not take place during inclement weather unless appropriate protection is provided. Protect materials from inclement weather until they are completely dry.
B. Existing Conditions – The contractor shall have access to electric power, clean water, and a clean work area at the location where the EIFS materials are to be applied.

PART II PRODUCTS

2.01 MANUFACTURER
A. All components of the EIFS shall be supplied or obtained from Dryvit or its authorized distributors. Substitutions or additions of materials other than specified will void the warranty.

2.02 MATERIALS
A. Portland Cement: Shall be Type I or II, meeting ASTM C 150, white or gray in color, fresh and free of lumps.
B. Water: Shall be clean and free of foreign matter.

PART III EXECUTION

3.01 EXAMINATION
A. Prior to installation of the EIFS, the contractor shall verify that the substrate:
1. Is of a type listed in Section 1.04.C.1
2. Is flat within 6.4 mm (1/4 in) in a 1.2 m (4 ft) radius.3. Is sound, dry, connections are tight, has no surface voids, projections, or other conditions that may interfere with the Light Commercial MD System installation or performance.
B. Prior to the installation of the EIFS, the architect or general contractor shall ensure that all needed flashings and other weatherproofing details have been completed, if such completion is required prior to the EIFS application. Additionally the contractor shall ensure that:
1. Metal roof flashing has been installed in accordance with Asphalt Roofing Manufacturers Association (ARMA) Standards or as otherwise necessary.

07500 - SINGLE PLY ROOF MEMBRANE

PART 1 – GENERAL

1.1 DESCRIPTION

A. Mechanically Fastened Roofing System in conjunction with polyisocyanurate foam insulation board over the structural steel roof deck.

1.2 SCOPE

A. Provide all labor, material, tools, equipment, and supervision necessary to complete the installation of the 060-mil thick white reinforced TPO (Thermoplastic Polyolefin) membrane Mechanically-Fastened Roofing System including flashings and insulation as specified herein and as indicated on the drawings in accordance with the manufacturer's most current specifications and details.

B. The roofing contractor shall be fully knowledgeable of all requirements of the contract documents and shall make themselves aware of all job site conditions that will affect their [illegible]

C. The roofing contractor shall confirm all given information and advise the building owner, prior to bid of any conflicts that will affect their cost proposal.

D. Any contractor who intends to submit a bid using a roofing system other than the approved manufacturer must submit for pre-qualification in writing fourteen (14) days prior to the bid date. Any contractor who fails
to submit all information as requested will be subject to rejection. Bids stating "as per plans and specs" will be unacceptable.

1.3 SUBMITTALS

A. Prior to starting work, the roofing contractor must submit the following:

1. Shop drawings showing layout, details of construction and identification of materials.

2. Sample of the manufacturer's Membrane System Warranty.

3. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system and lists foremen who have received training from the manufacturer along with the dates training was received.

4. Certification from the membrane manufacturer indicating the fasteners are capable of providing a static backout resistance of 10 inch pounds minimum is required.

5. Certification from the membrane manufacturer indicating the membrane thickness over the reinforcing scrim (top ply membrane thickness) is nominal .15-mil or thicker.

6. Certification of the manufacturer's warranty reserve.

B. Upon completion of the installed work, submit copies of the manufacturer's final inspection to the specifier prior to the issuance of the manufacturer's warranty.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the job site in the manufacturer's original, unopened containers or wrappings with the manufacturer's name, brand name and installation instructions intact and legible. Deliver in sufficient quantity to permit work to continue without interruption.

B. Comply with the manufacturer's written instructions for proper material storage.

1. Store membrane in the original undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins. Membrane that has been exposed to the elements for approximately 7 days must be prepared with roof membrane cleaner prior to hot air welding.

2. Store curable materials (adhesives and sealants) between 60°F and 80°F in dry areas protected from water and direct sunlight. If exposed to lower temperature, restore to 60°F minimum temperature before using.

3. Store materials containing solvents in dry, well ventilated spaces with proper fire and safety precautions. Keep lids on tight. Use before expiration of their shelf life.

C. Insulation must be on pallets, off the ground and tightly covered with waterproof materials.

D. Any materials which are found to be damaged shall be removed and replaced at the applicator's expense.

1.5 WORK SEQUENCE

A. Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.

B. Do not disrupt activities in occupied spaces.

1.6 USE OF THE PREMISES

A. Before beginning work, the roofing contractor must secure approval from the building owner's representative for the following:

1. Areas permitted for personnel parking.
2. Access to the site.
3. Areas permitted for storage of materials and debris.
4. Areas permitted for the location of cranes, hoists and chutes for loading and unloading materials to and from the roof.

B. Interior stairs or elevators may not be used for removing debris or delivering materials except as authorized by the building superintendent.

1.7 EXISTING CONDITIONS

If discrepancies are discovered between the existing conditions and those noted on the drawings, immediately notify the owner's representative by phone and solicit the manufacturer approval prior to commencing with the work. Necessary repairs shall be taken to make the building watertight until the discrepancies are resolved.

1.8 SAFETY

The roofing contractor shall be responsible for all means and methods as they relate to safety and shall comply with all applicable local, state and federal requirements that are safety related. Safety shall be the responsibility of the roofing contractor. All related personnel shall be instructed daily to be mindful of the [illegible] requirement to maintain a safe environment for the facility's occupants including staff, visitors, customers and the occurrence of the general public near the site.

1.9 WORKMANSHIP

A. Applicators installing roofing, flashing and related work shall be factory trained and approved by the manufacturer they are representing.

B. All work shall be of highest quality and in strict accordance with the manufacturer's published specifications and to the building owner's satisfaction.

C. There shall be a supervisor on the job site at all times while work is in progress.

1.10QUALITY ASSURANCE

A. The TPO Membrane Roofing System must achieve a UL Class C.

B. (choose the appropriate paragraph and delete remainder)

The specified roofing assembly must have been successfully tested by a qualified testing agency to resist the design uplift pressures calculated according to

ANSI/SPRI WD-1 "Wind Design Standard Practice for Roofing Assemblies" American Society of Civil Engineers (ASCE 7)
International Building Code (IBC)

C. The membrane must be manufactured by the material supplier. Manufacturer's supplying membrane made by others are not acceptable.

D. Unless otherwise noted in this specification, the roofing contractor must strictly comply with the manufacturer's current specifications and details.

E. The roofing system must be installed by an applicator authorized and trained by the manufacturer in compliance with shop drawings as approved by the manufacturer. The roofing applicator shall be thoroughly experienced and upon request be able to provide evidence of having successful experience installing single-ply TPO roofing systems and having installed at least one (1) roofing application or several similar systems of equal or greater size within one year.

F. Provide adequate number of experienced workmen regularly engaged in this type of work who are skilled in the application techniques of the materials specified. Provide at least one thoroughly trained and experienced superintendent on the job at all times roofing work is in progress.

G. There shall be no deviations made from this specification or the approved shop drawings without the prior written approval of the specifier. Any deviation from the manufacturer's installation procedures must be supported by a written certification on the manufacturer's letterhead and presented for the specifier's consideration.

H. Upon completion of the installation, the applicator shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer in order to determine whether or not corrective work will be required before the warranty will be issued. Notify the building owner seventy-two (72) hours prior to the manufacturer's final inspection.

1.11 JOB CONDITIONS, CAUTIONS AND WARNINGS

Refer to manufacturer's specification for General Job Site Considerations.

A. Material Safety Data Sheets (MSDS) must be on location at all times during the transportation, storage and application of materials.

B. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent bucking of water.

C. When loading materials onto the roof, the Authorized Roofing Applicator must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.

D. Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.

E. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.

F. Provide protection, such as 3/4 inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.

G. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.

H. New roofing shall be complete and weathertight at the end of the work day.

I. Contaminants such as grease, fats and oils shall not be allowed to come in direct contact with the roofing membrane.

1.12WARRANTY

A. Provide manufacturer's 20 year Total System Warranty covering both labor and material with no dollar limitation. The maximum wind speed coverage shall be peak gusts of 90 mph measured at 10 meters above ground level. Certification is required with bid submittal indicating the manufacturer has reviewed and agreed to such wind coverage.

B. Pro-rated System Warranties shall not be accepted.

C. Evidence of the manufacturer's warranty reserve shall be included as part of the project submittals for the specifier's approval.

PART 2PRODUCTS

2.1 GENERAL

A. All components of the specified roofing system shall be products of Carlisle SynTec or accepted by Carlisle SynTec as compatible.

B. All products (including insulation, fasteners, fastening plates, prefabricated accessories and coverings) must be manufactured and/or supplied by the roofing system manufacturer and covered by their warranty.

2.2 MEMBRANE

A. Furnish Sure-Weld .060-mil thick white reinforced TPO (Thermoplastic Polyolefin) membrane as needed to complete the roofing system. Membrane thickness over the reinforcing scrim (top-ply thickness) shall be nominal .015-mil or thicker. Membrane sheets in rolls 12', 10' or 8' wide by 100' long.

B. Alternates shall be considered and must be approved in writing by Owner prior to purchase and installation.

2.3 INSULATION/UNDERLAYMENT

A. See Section 07220 Roof Deck Insulation

B. When applicable, insulation shall be installed in multiple layers. The first and second layer of insulation shall be mechanically fastened to the substrate in accordance with the manufacturer's published specifications.

2.4 FOAM TUBING AND FILLER

A. Cellular foam sponge tubing 50% larger than join with sealing insulation backup filler.

2.5 ADHESIVES AND CLEANERS

All products shall be furnished by the manufacturer and specifically formulated for the intended purpose.

2.6 FASTENERS AND PLATES

All fasteners and plates shall be as recommended by the manufacturer and specifically for roof membrane fastening.

2.7 METAL EDGING AND MEMBRANE TERMINATIONS

A. See Section 07661 – Prefabricated Aluminum Coping and Fascia
B. General: All metal edging s shall be tested and meet ANSI/SPRI ES-1 standards and comply with International Building Code.

C. Termination Bar: a 1" wide and .098" thick extruded aluminum bar pre-punched 6" on center; incorporates
a sealant ledge to support Lap Sealant and provide increased stability for membrane terminations.

2.8 WALKWAYS

A. Sure-Weld TPO Walkway Rolls installed per manufacturer's requirements or concrete pavers loose laid over an approved slip sheet (pavers not recommended for slopes greater than 2" in 12").

B. "Skypath" roof walkway pad as manufactured by Mats, Inc. open grid self-draining, non-porous walkway matting system, 36" wide x 5/8" thickness, furnished in roll format.

2.9 ROOF HATCH AND SAFETY POST

A. Roof Hatch: Bilco Type S or approved equal.

a. Furnish and install as located and specified within drawings.
b. Provide a 36" long x 30" wide single leaf, pre-assembled, and equipped with interior padlock hasps. Length shall denote the hinge side. Owner shall provide padlock.

B. Safety Post: Bilco LadderUP or approved equal

a. Provide Model LU-4 aluminum, mill finished.
b. Install on fixed ladder below roof hatch.
c. Must have a telescoping section that locks automatically when fully extended.

2.10 OTHER MATERIALS

A. All other materials not specifically described but required for proper completion and water tightness of the roof system shall be selected by the contractor, but subject to the approval of the Architect and Owner.

PART 3EXECUTION

3.1 GENERAL

A. Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, jobsite considerations and weather restrictions.

B. Position sheets to accommodate contours of the roof deck and shingle splices to avoid bucking water.

3.2 INSULATION PLACEMENT AND ATTACHMENT

A. Install insulation or membrane underlayment over the substrate with boards butted tightly

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CLIENT:
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PALM BEACH GARDENS, FL 33410

PROTOTYPE TEMPLATE:
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PROJECT INFORMATION:
TIRE KINGDOM®
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NORTH PORT, FLORIDA 34287

BID SET
BID SET
01/10/2020

PROJECT NO.:	2018-1035
DRAWN BY:	CJB
CHECKED BY:	EKB

ISSUE	DATE
PERMIT PLAN REVIEW	12-AUG-2019
BID SET	09-DEC-2019

REVISION	DATE

SHEET TITLE:
SPECIFICATIONS

SHEET NUMBER:
A10.5