



1 BUILDING SECTION
A7
1/4"=1'-0"

SPECIFICATIONS:

DIVISION 7: THERMAL AND MOISTURE PROTECTION

SECTION 7A: BUILDING INSULATION

GENERAL PROVISIONS

- 1. SCOPE: FURNISH AND INSTALL FIBERGLASS INSULATION AND ROOF INSULATION TO PROVIDE A COMPLETELY INSULATED THERMAL SHELL WITH NO BREAKS OR PENETRATIONS.
- 2. NOTES: INSULATION VALUES SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AND/OR VALUES SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, WHICHEVER REQUIREMENT PROVIDES THE GREATER "R" VALUE.
- 3. QUALITY CONTROL: THE OWNER SHALL BE NOTIFIED WHEN THE INSULATION IS IN PLACE, PRIOR TO THE INSTALLATION OF FINISH MATERIALS.

MATERIALS

- 1. FIBERGLASS INSULATION CONCEALED IN WALLS BY OWENS-CORNING OR JOHNS-MANVILLE, 5 1/2" R-19, FIBERGLASS ROLL INSULATION WITH KRAFT TYPE VAPOR BARRIER ON INSIDE FACE.
- 2. FIBER GLASS INSULATION EXPOSED ABOVE CEILING BY OWENS-CORNING OR JOHNS-MANVILLE, 5 1/2" R-19, FIBERGLASS ROLL INSULATION WITH INTEGRAL FOIL REINFORCED KRAFT FACING ON INSIDE FACE WITH FLAME HAZARD RATING OF 25/50 OR LESS.
- 3. ROOF INSULATION BOARD: CLOSED CELL POLYISOCYANURATE FOAM CORE WITH FACTORY-LAMINATED FOIL FACES. FOAM CORES WITH FLAME SPREAD OF 25 OR LESS AND COMPRESSIVE STRENGTH OF 20 PSI OR GREATER (ASTM D-1821) WITH A MINIMUM AGED R VALUE OF .25 BY ONE (1) OF THE FOLLOWING APPROVED MANUFACTURERS:
 - A. AC FOAM SUPREME BY ATLAS INDUSTRIES
 - B. THERMA ROOF PLUS BY R-MAX
 - C. TEM-PRO SP BY THE TEMPLE EASTEX

THE LISTED INSULATIONS ARE AVAILABLE THROUGH QUALIFIED ROOFING INSTALLERS. SEE NATIONAL ACCOUNTS INDEX.

PERFORMANCE

- 1. INSTALLATION:
 - A. FIBERGLASS INSULATION: STAPLE AND/OR TAPE IN PLACE WITH VAPOR BARRIER SIDE INWARD. ALL JOINTS SHALL BE LAPPED TO PREVENT MOISTURE VAPOR MIGRATION. ALL PENETRATIONS AND PLUMBING AND ELECTRICAL BOXES SHALL BE INSULATED ON THE OUTWARD SIDE. ANY JOINTS NOT OVER WOOD FRAMING OR BLOCKING SHALL BE TAPED THOROUGHLY. STUFF AROUND DOOR FRAMES AND CLOSELY SPACED FRAMING MEMBERS.
 - B. ROOF INSULATION: USE MECHANICAL FASTENERS WITH STEEL OR WOOD DECK. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS OF SIX (6) PER BOARD MINIMUM. STAPLER PAINS AND JOINTS AT ADJACENT PANEL MID POINT.
 - C. PERIMETER FOUNDATION INSULATION: INSTALL FROM TOP OF SLAB DOWNWARD 24" WHEN FOUNDATION DEPTH PERMITS. OTHERWISE INSULATION SHALL EXTEND FROM TOP TO BOTTOM OF SLAB AND THEN HORIZONTALLY UNDER SLAB 24" TOWARD INTERIOR OF BUILDING.
 - D. MASONRY CAVITY WALL INSULATION: INSTALL IN CAVITY WHEN SHOWN BETWEEN MASONRY WALL REINFORCING AS WALL IS BEING LAID.
 - E. CONCRETE BLOCK CELL INSULATION: INSTALL WHEN SHOWN IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

SECTION 7B: POLYVINYL-CHLORIDE ROOFING

PART 1 GENERAL

1.1. SECTION INCLUDES

- 1.1.1. DURO-LAST® PVC THERMOPLASTIC MEMBRANE ATTACHED WITH MECHANICAL FASTENERS
- 1.1.2. DURO-GUARD® ISO II (FLAT), ATTACHED WITH MECHANICAL FASTENERS
- 1.1.3. ATLAS FR-10 FIRE RATED SLIP SHEET, ATTACHED WITH MECHANICAL FASTENERS
- 1.1.4. PREFABRICATED FLASHINGS, CORNERS, PARAPETS, STACKS, VENTS, AND RELATED DETAILS
- 1.1.5. FASTENERS, ADHESIVES, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE ROOFING INSTALLATION.
- 1.1.6. TRAFFIC PROTECTION.

1.2. REFERENCES

- 1.2.1. NRCA - THE NRCA ROOFING AND WATERPROOFING MANUAL
- 1.2.2. ASCE 7 - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
- 1.2.3. UL - ROOFING MATERIALS AND SYSTEMS DIRECTORY, ROOFING SYSTEMS (TGF R10128)
- 1.2.4. ASTM C 1289 - STANDARD SPECIFICATION FOR FACED RIGID CELLULAR POLYISOCYANURATE THERMAL INSULATION BOARD
- 1.2.5. ASTM D 751 - STANDARD TEST METHODS FOR COATED FABRICS
- 1.2.6. ASTM D 4434 - STANDARD SPECIFICATION FOR POLY(VINYL CHLORIDE) SHEET ROOFING
- 1.2.7. ASTM E 108 - STANDARD TEST METHODS FOR FIRE TESTS OF ROOF COVERINGS
- 1.2.8. ASTM E 119 - STANDARD TEST METHODS FOR FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS.

1.3. SYSTEM DESCRIPTION

- 1.3.1. GENERAL: PROVIDE INSTALLED ROOFING MEMBRANE AND BASE FLASHINGS THAT REMAIN WATERTIGHT; DO NOT PERMIT THE PASSAGE OF WATER, AND RESIST SPECIFIED UPLIFT PRESSURES, THERMALLY INDUCED MOVEMENT, AND EXPOSURE TO WEATHER WITHOUT FAILURE.
- 1.3.2. MATERIAL COMPATIBILITY: PROVIDE ROOFING MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER UNDER CONDITIONS OF SERVICE AND APPLICATION REQUIRED. AS DEMONSTRATED BY ROOFING MEMBRANE MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

1.3.3. PHYSICAL PROPERTIES:

- 1.3.3.1. ROOF PRODUCT MUST MEET THE REQUIREMENTS OF TYPE III PVC SHEET ROOFING AS DEFINED BY ASTM D 4434 AND MUST MEET OR EXCEED THE FOLLOWING PHYSICAL PROPERTIES:
 - 1.3.3.2. THICKNESS: 50 MIL NOMINAL, IN ACCORDANCE WITH ASTM D 751.
 - 1.3.3.3. THICKNESS OVER SCRIMS: 50 MIL IN ACCORDANCE WITH ASTM D 751.
 - 1.3.3.4. BRAKING STRENGTHS: ≥ 390 (MD) AND ≥ 438 (XMD) IN ACCORDANCE WITH ASTM D 751. TAB METHOD.
 - 1.3.3.5. ELONGATION AT BREAK: ≥ 31% (MD) AND ≥ 31% (XMD) IN ACCORDANCE WITH ASTM D 751. TAB METHOD.
 - 1.3.3.6. HEAT AGING IN ACCORDANCE WITH ASTM D 3045: 176 °F FOR 56 DAYS, NO SIGNIFICANT CRACKING, CHIPPING OR CRAZING, (IN ACCORDANCE WITH ASTM D 4434).
 - 1.3.3.7. FACTORY APPLIED SAM S: 2417 LBF. IN ACCORDANCE WITH ASTM D 511 GRAB METHOD.
 - 1.3.3.8. TENSILE STRENGTH: ≥ 132 LBF. (MD) AND ≥ 163 LBF. (XMD) IN ACCORDANCE WITH ASTM D 751, PROCEDURE B.
 - 1.3.3.9. TENSILE ELONGATION: ≥ 7% IN ACCORDANCE WITH ASTM D 511, PROCEDURE B.
 - 1.3.10. AGING AND WEATHERING: NO CRACKING, CHECKING, CRAZING, EROSION OR CHALKING AFTER 5,000 HOURS IN ACCORDANCE WITH ASTM G 154.
 - 1.3.3.11. LINEAR DIMENSIONAL CHANGE: < 0.5% IN ACCORDANCE WITH ASTM D 1204 AT 176 ± 2 °F FOR 6 HOURS.
 - 1.3.3.12. WATER ABSORPTION: < 1.7% IN ACCORDANCE WITH ASTM D 570 AT 158 °F FOR 166 HOURS.
 - 1.3.3.13. STATIC PUNCTURE RESISTANCE: ≥ 56 LBS. IN ACCORDANCE WITH ASTM D 5602.
 - 1.3.3.14. DYNAMIC PUNCTURE RESISTANCE: ≥ 147 FT-LBF. IN ACCORDANCE WITH ASTM D 5635.

1.3.4. COOL ROOF RATING COUNCIL (CRR):

- 1.3.4.1. MEMBRANE MUST BE LISTED ON CRR WEBSITE:
 - 1.3.4.1.1. INITIAL SOLAR REFLECTANCE: ≥ 88%
 - 1.3.4.1.2. INITIAL THERMAL EMITTANCE: ≥ 87%
 - 1.3.4.1.3. INITIAL SOLAR REFLECTIVE INDEX (SRI): ≥ 111
 - 1.3.4.1.4. 3-YEAR AGED SOLAR REFLECTANCE: ≥ 88%
 - 1.3.4.1.5. 3-YEAR AGED THERMAL EMITTANCE: ≥ 84%
 - 1.3.4.1.6. 3-YEAR AGED SOLAR REFLECTIVE INDEX (SRI): ≥ 82

1.3.5. INSULATION

- 1.3.5.1. PROVIDE OVERALL THERMAL RESISTANCE FOR ROOFING SYSTEM AS FOLLOWS:
 - 1.3.5.1.1. MINIMUM R-VALUE: 30
 - 1.3.5.2. INSTALL USING A MINIMUM OF TWO LAYERS
 - 1.3.5.3. CONFIGURATION AS INDICATED ON THE DRAWINGS.

1.4. SUBMITTALS

- 1.4.1. SUBMIT UNDER PROVISIONS OF SECTION 01300.
- 1.4.2. DURO-LAST DATA SHEETS ON EACH PRODUCT TO BE USED, INCLUDING:
 - 1.4.2.1. PREPARATION INSTRUCTIONS AND RECOMMENDATIONS.
 - 1.4.2.2. STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS.
- 1.4.3. INSTALLATION METHODS.
- 1.4.3.1. MAINTENANCE REQUIREMENTS.
- 1.4.3.2. SHOP DRAWINGS: INDICATE INSULATION PATTERN, OVERALL MEMBRANE LAYOUT, FIELD SEAM LOCATIONS, JOINT OR TERMINATION DETAIL, CONDITIONS, AND LOCATION OF FASTENERS.
- 1.4.3.3. VERIFICATION SAMPLES: FOR EACH PRODUCT SPECIFIED, TWO SAMPLES, REPRESENTING ACTUAL PRODUCT, COLOR, AND FINISH.
- 1.4.3.4. 4 INCH BY 6 INCH SAMPLE OF ROOFING MEMBRANE, OF COLOR SPECIFIED.
- 1.4.3.5. 4 INCH BY 6 INCH SAMPLE OF WALKWAY PAD.
- 1.4.3.6. TERMINATION BAR, FASCIA BAR WITH COVER, DRIP EDGE AND GRAVEL STOP IF TO BE USED.
- 1.4.3.7. EACH FASTENER TYPE TO BE USED FOR INSTALLING MEMBRANE, INSULATION/RECOVER BOARD, TERMINATION BAR AND EDGE DETAILS.
- 1.4.4. INSTALLER CERTIFICATION: CERTIFICATION FROM THE ROOFING SYSTEM MANUFACTURER THAT INSTALLER IS APPROVED AND AUTHORIZED, OR LICENSED BY MANUFACTURER TO INS ROOFING SYSTEM.
- 1.4.5. MANUFACTURER'S WARRANTIES.

1.5. QUALITY ASSURANCE

- 1.5.1. PERFORM WORK IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 1.5.2. MANUFACTURER QUALIFICATIONS: A MANUFACTURER SPECIALIZING IN THE PRODUCTION OF PVC MEMBRANE SYSTEMS AND UTILIZING A QUALITY CONTROL MANUAL DURING THE PRODUCTION OF THE MEMBRANE ROOFING SYSTEM THAT HAS BEEN APPROVED BY AND IS INSPECTED BY THE ROOFING MEMBRANE MANUFACTURER.
- 1.5.3. INSTALLER QUALIFICATIONS: COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS OF THE ROOFING SYSTEM IN THIS PROJECT AND APPROVED BY THE ROOFING SYSTEM MANUFACTURER.
- 1.5.4. SOURCE LIMITATIONS: OBTAIN COMPONENTS FOR MEMBRANE ROOFING SYSTEM FROM A SINGLE MANUFACTURER. THERE SHALL BE NO DEVIATIONS FROM THE ROOF MEMBRANE MANUFACTURER'S SPECIFICATIONS OR THE APPROVED SHOP DRAWINGS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE MANUFACTURER.

1.6. REGULATORY REQUIREMENTS

- 1.6.1. CONFORM TO APPLICABLE CODE FOR ROOF ASSEMBLY WIND UPLIFT AND FIRE HAZARD REQUIREMENTS.
- 1.6.2. FIRE EXPOSURE: PROVIDE MEMBRANE ROOFING MATERIALS WITH THE FOLLOWING FIRE-TEST-RESPONSE CHARACTERISTICS. MATERIALS SHALL BE IDENTIFIED WITH APPROPRIATE MARKINGS OF APPLICABLE TESTING AND INSPECTING AGENCY.
 - 1.6.2.1. EXTERIOR FIRE-TEST EXPOSURE:
 - 1.6.2.1.1. CLASS A: ASTM E 108, FOR APPLICATION AND ROOF SLOPES INDICATED.
 - 1.6.2.2. FIRE-RESISTANCE RATINGS: COMPLY WITH ASTM E 119 FOR FIRE-RESISTANCE-RATED ROOF ASSEMBLIES OF WHICH ROOFING SYSTEM IS A PART.
 - 1.6.2.3. CONFORM TO APPLICABLE CODE FOR ROOF ASSEMBLY FIRE HAZARD REQUIREMENTS.
- 1.6.3. WIND UPLIFT:
 - 1.6.3.1. ROOFING SYSTEM DESIGN: PROVIDE A ROOFING SYSTEM DESIGNED TO RESIST UPLIFT PRESSURES CALCULATED ACCORDING TO THE CURRENT EDITION OF THE ASCE-7 SPECIFICATION MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.

1.7. PRE-INSTALLATION MEETING

- 1.7.1. CONVEENE MEETING NOT LESS THAN ONE WEEK BEFORE STARTING WORK OF THIS SECTION.
- 1.7.2. REVIEW METHODS AND PROCEDURES RELATED TO ROOF DECK CONSTRUCTION AND ROOFING SYSTEM INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:
 - 1.7.2.1. MEET WITH OWNER, ARCHITECT, OWNER'S INSURER IF APPLICABLE, TESTING AND INSPECTING AGENCY REPRESENTATIVE, ROOFING INSTALLER, ROOFING SYSTEM MANUFACTURER'S REPRESENTATIVE, DECK INSTALLER, AND INSTALLERS WHOSE WORK INTERFACES WITH OR AFFECTS ROOFING INCLUDING INSTALLERS OF ROOF ACCESSORIES AND ROOF-MOUNTED EQUIPMENT.
 - 1.7.2.2. REVIEW AND FINALIZE CONSTRUCTION SCHEDULE AND VERIFY AVAILABILITY OF MATERIALS, INSTALLER'S PERSONNEL, EQUIPMENT, AND FACILITIES NEEDED TO MAKE PROGRESS AND AVOID DELAYS.
 - 1.7.2.3. EXAMINE DECK SUBSTRATE CONDITIONS AND FINISHES FOR COMPLIANCE WITH REQUIREMENTS, INCLUDING FLATNESS AND FASTENING.
 - 1.7.2.4. REVIEW STRUCTURAL LOADING LIMITATIONS OF ROOF DECK DURING AND AFTER ROOFING.

1.7.2.5. REVIEW BASE FLASHINGS, SPECIAL ROOFING DETAILS, ROOF DRAINAGE, ROOF PENETRATIONS, EQUIPMENT CURBS, AND CONDITION OF OTHER CONSTRUCTION THAT WILL AFFECT ROOFING SYSTEM.

- 1.1.1.6. REVIEW GOVERNING REGULATIONS AND REQUIREMENTS FOR INSURANCE AND CERTIFICATES IF APPLICABLE.
- 1.1.1.7. REVIEW TEMPORARY PROTECTION REQUIREMENTS FOR ROOFING SYSTEM DURING AND AFTER INSTALLATION.
- 1.1.1.8. REVIEW ROOF OBSERVATION AND REPAIR PROCEDURES AFTER ROOFING INSTALLATION.
- 1.8. DELIVERY, STORAGE AND HANDLING:
 - 1.8.1. DELIVER ROOFING MATERIALS TO PROJECT SITE. ORIGINAL CONTAINERS WITH SEALS, SERIALS, BRAND AND LABELED WITH MANUFACTURER'S NAME, PRODUCT BRAND NAME AND TYPE, DATE OF MANUFACTURE, AND INSTRUCTIONS FOR STORING AND MIXING WITH OTHER COMPONENTS IN THEIR ORIGINAL UNDAMAGED CONTAINERS IN A CLEAN, DRY, PROTECTED LOCATION AND WITHIN THE TEMPERATURE RANGE REQUIRED BY ROOFING SYSTEM MANUFACTURER. PROTECT STORED LIQUID MATERIAL FROM DIRECT SUNLIGHT.
 - 1.8.2. STORE LIQUID MATERIALS IN THEIR ORIGINAL UNDAMAGED CONTAINERS IN A CLEAN, DRY, PROTECTED LOCATION AND WITHIN THE TEMPERATURE RANGE REQUIRED BY ROOFING SYSTEM MANUFACTURER. PROTECT STORED LIQUID MATERIAL FROM DIRECT SUNLIGHT.
 - 1.8.3. PROTECT ROOF INSULATION MATERIALS FROM PHYSICAL DAMAGE FROM DECONTAMINATION BY SUNLIGHT, MOISTURE, SOILING, AND OTHER SOURCES. STORE IN A DRY LOCATION, COMPLY WITH INSULATION MANUFACTURER'S WRITTEN INSTRUCTIONS FOR HANDLING, STORING, AND PROTECTING DURING INSTALLATION.
 - 1.8.4. STORE ROOF MATERIALS AND PLACE EQUIPMENT IN A MANNER TO AVOID PERMANENT DEFLECTION OF DECK.
 - 1.8.5. STORE AND DISPOSE OF SOLVENT-BASED MATERIALS, AND MATERIALS USED WITH SOLVENT-BASED MATERIALS, IN ACCORDANCE WITH REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.

1.9. WARRANTY

- 1.9.1. CONTRACTOR'S WARRANTY: THE CONTRACTOR SHALL WARRANT THE ROOF APPLICATION WITH RESPECT TO WORKMANSHIP AND PROPER APPLICATION FOR TWO (2) YEARS FROM THE EFFECTIVE DATE OF THE WARRANTY ISSUED BY THE MANUFACTURER.
- 1.9.2. MANUFACTURER'S WARRANTY: MUST BE NO-DOLLAR LIMIT TYPE AND PROVIDE FOR COMPLETION OF REPAIRS, REPLACEMENT OF MEMBRANE OR TOTAL REPLACEMENT OF THE ROOFING SYSTEM AT THE THEN-CURRENT MATERIAL AND LABOR PRICES THROUGHOUT THE LIFE OF THE WARRANTY, IN ADDITION THE WARRANTY MUST MEET THE FOLLOWING CRITERIA:
 - 1.9.2.1. WARRANTY PERIOD: 15 YEARS FROM DATE ISSUED BY THE MANUFACTURER.
 - 1.9.2.2. NO EXCLUSIONS FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.
 - 1.9.2.3. NO EXCLUSION FOR DAMAGE CAUSED BY PONDING WATER.
 - 1.9.2.4. NO EXCLUSION FOR DAMAGE CAUSED BY BIOLOGICAL GROWTH.
 - 1.9.2.5. ISSUED DIRECT FROM AND SERVICED BY THE ROOF MEMBRANE MANUFACTURER.
 - 1.9.2.6. TRANSFERABLE FOR THE FULL TERM OF THE WARRANTY.
 - 1.9.2.7. NO ADDITIONAL CHARGE FOR THE WARRANTY.

PART 2 PRODUCTS

- 2.1. MANUFACTURER:
 - 2.1.1. MANUFACTURER: DURO-LAST ROOFING, INC. WHICH IS LOCATED AT: 525 KOPLEY DRIVE, SAGINAW, MI 48601. TELEPHONE: 800-248-0280.
 - 2.1.2. ALL ROOFING SYSTEM COMPONENTS TO BE PROVIDED OR APPROVED BY DURO-LAST ROOFING, INC.
 - 2.1.3. SUBSTITUTIONS: NOT PERMITTED.
- 2.2. ROOFING SYSTEM COMPONENTS
 - 2.2.1. ROOFING MEMBRANE: DURO-LAST® PVC THERMOPLASTIC MEMBRANE CONFORMING TO ASTM D 4434, TYPE III, FABRIC-REINFORCED, PVC MEMBRANE PROPERTIES AS FOLLOWS:
 - 2.2.1.1. THICKNESS: 50 MIL
 - 2.2.1.2. EXPOSED FACE COLOR:
 - 2.2.1.2.1. WHITE
 - 2.2.2. ACCESSORY MATERIALS: PROVIDE ACCESSORY MATERIALS SUPPLIED BY OR APPROVED FOR USE BY DURO-LAST ROOFING, INC.
 - 2.2.2.1. SHEET FLASHING: MANUFACTURER'S STANDARD REINFORCED PVC SHEET FLASHING.
 - 2.2.2.2. DURO-LAST FACTORY PREFABRICATED FLASHINGS: MANUFACTURER USING MANUFACTURER'S STANDARD REINFORCED PVC MEMBRANE.
 - 2.2.2.2.1. STACK FLASHINGS
 - 2.2.2.2.2. CURB FLASHINGS
 - 2.2.2.2.3. INSIDE AND OUTSIDE CORNERS
 - 2.2.2.2.4. VINYL COATED METAL CUPPERS INSERTS
 - 2.2.2.2.5. VINYL COATED PITCH PANS
 - 2.2.3. SEALANTS AND ADHESIVES: COMPATIBLE WITH ROOFING SYSTEM AND SUPPLIED BY DURO-LAST ROOFING, INC.
 - 2.2.3.1. DURO-GAULK® PLUS
 - 2.2.3.2. STRIP MASTIC
 - 2.2.4. SLIP SHEET: COMPATIBLE WITH ROOFING SYSTEM AND SUPPLIED BY DURO-LAST ROOFING, INC.

2.2.5. FASTENERS AND PLATES: FACTORY-COATED STEEL FASTENERS AND METAL OR PLASTIC PLATES MEETING CORROSION-RESISTANCE PROVISIONS IN FMG 4470, DESIGNED FOR FASTENING MEMBRANE AND INSULATION TO SUBSTRATE SUPPLIED BY DURO-LAST ROOFING, INC.

- 2.2.6. CLEAT PLATES: #14 HEAVY DUTY FASTENERS
- 2.2.6.1. #14 HEAVY DUTY FASTENERS
- 2.2.6.2. 3 INCH METAL PLATES
- 2.2.6.3. TERMINATION AND EDGE DETAILS, SUPPLIED BY DURO-LAST ROOFING, INC.
- 2.2.7. TERMINATION BAR.
- 2.2.7.1. 2-PIECE COMPRESSION METAL SYSTEM
- 2.2.7.2. VINYL COATED METAL, SUPPLIED BY DURO-LAST ROOFING, INC. 24 GAUGE, HOT-DIPPED GALVANIZED, GRADE 90 METAL WITH A MINIMUM OF 7 MIL OF DURO-LAST MEMBRANE LAMINATED TO ONE SIDE.
- 2.2.9. TWO-WAY ROOF VENTS: SUPPLIED BY DURO-LAST ROOFING, INC. INSTALL A MINIMUM OF 1 VENT FOR EACH 1,000 FT² (93 MF) OF ROOF AREA.
- 2.2.10. COATED GLASS SLIP SHEET.
- 2.2.10.1. ATLAS FR-10 FIRE RATED SLIP SHEET.
- 2.2.10.2. 2 PLIES
- 2.2.11. WALKWAYS:
 - 2.2.11.1. PROVIDE NON-SKID, MAINTENANCE-FREE WALKWAY PADS IN AREAS OF HEAVY FOOT TRAFFIC AND AROUND MECHANICAL CURBS.
 - 2.2.11.2. DURO-LAST ROOF TRAK® III WALKWAY PAD.

2.3. ROOF INSULATION

- 2.3.1. GENERAL:
 - 2.3.1.1. PROVIDE PREFORMED ROOF INSULATION BOARDS THAT COMPLY WITH REQUIREMENTS AND REFERENCED STANDARDS, AS SELECTED FROM MANUFACTURER'S STANDARD SIZES. PROVIDE PREFORMED SADDLES, CRICKETS, AND OTHER INSULATION SHAPES WHERE INDICATED FOR SLOPING TO DRAIN. FABRICATE TO SLOPES INDICATED.
 - 2.3.2. POLYISOCYANURATE BOARD INSULATION: COMPLYING WITH ASTM C 1289, TYPE II, FELT OR GLASS-FIBER MAT Facer ON BOTH MAJOR SURFACES. MATERIAL AS SUPPLIED BY DURO-LAST.
 - 2.3.2.1. DURO-GUARD® ISO II (FLAT)
 - 2.3.2.2. DURO-GUARD® ISO II (FLAT)
- 2.4. ROOF INSULATION ACCESSORIES
 - 2.4.1. GENERAL: PROVIDE ROOF INSULATION ACCESSORIES APPROVED BY THE ROOF MEMBRANE MANUFACTURER AND AS PROVIDED BY INSULATION MANUFACTURER FOR THE INTENDED USE.
 - 2.4.2. FASTENERS: PROVIDE DURO-LAST FACTORY-COATED STEEL FASTENERS AND METAL OR PLASTIC PLATES MEETING CORROSION-RESISTANCE PROVISIONS IN FMG 4470, DESIGNED FOR FASTENING INSULATION AND/OR INSULATION COVER BOARDS IN CONFORMANCE TO SPECIFIED DESIGN REQUIREMENTS.
 - 2.4.2. MANUFACTURER'S WARRANTY: THE CONTRACTOR SHALL WARRANT THE ROOF APPLICATION WITH RESPECT TO WORKMANSHIP AND PROPER APPLICATION FOR TWO (2) YEARS FROM THE EFFECTIVE DATE OF THE WARRANTY ISSUED BY THE MANUFACTURER.

- 3.3.3.5. IF MORE THAN ONE LAYER OF INSULATION IS USED, ALL JOINTS BETWEEN SUBSEQUENT LAYERS SHALL BE OFFSET BY AT LEAST 6 INCHES.
- 3.3.3.6. MECHANICAL ATTACHMENT: USE ONLY FASTENERS, STRESS PLATES AND FASTENING PATTERNS ACCEPTED FOR USE BY THE ROOF MANUFACTURER. FASTENING PATTERNS MUST MEET APPLICABLE DESIGN REQUIREMENTS.
- 3.3.3.6.1. INSTALL FASTENERS IN ACCORDANCE WITH THE ROOF MANUFACTURER'S REQUIREMENTS. FASTENERS THAT ARE IMPROPERLY INSTALLED MUST BE REPLACED OR CORRECTED.
- 3.3.3.7. INSTALL MECHANICAL FASTENERS THROUGH TOP LAYER TO ATTACH DURO-GUARD® ISO II (FLAT) INSULATION. INSTALL ALL LAYERS IN PARALLEL COURSES WITH END JOINTS STAGGERED 50% AND ADJACENT BOARDS BUTTED TOGETHER WITH NO GAPS GREATER THAN 1/4 INCH.
- 3.3.4. ROOF MEMBRANE: 50 MIL, DURO-LAST® PVC THERMOPLASTIC MEMBRANE.
- 3.3.4.1. USE ONLY FASTENERS, STRESS PLATES AND FASTENING PATTERNS ACCEPTED FOR USE BY THE ROOF MANUFACTURER. FASTENING PATTERNS MUST MEET APPLICABLE DESIGN REQUIREMENTS.
- 3.3.4.2. INSTALL FASTENERS IN ACCORDANCE WITH THE ROOF MANUFACTURER'S REQUIREMENTS. FASTENERS THAT ARE IMPROPERLY INSTALLED MUST BE REPLACED OR CORRECTED.
- 3.3.4.3. FASTENERS TO THE STRUCTURAL DECK MECHANICAL FASTENERS. FASTENING PATTERNS THAT IN ACCORDANCE WITH THE ROOF MANUFACTURER'S REQUIREMENTS CUT MEMBRANE TO FIT NEATLY AROUND ALL PENETRATIONS AND ROOF PROJECTIONS.
- 3.3.4.5. INSTALL ROOFING MEMBRANE AND POSITIONED WITH A MINIMUM 6 INCH OVERLAP.
- 3.3.5. SEAMING: WELD OVERLAPPING SHEETS TOGETHER USING HOT AIR. MINIMUM WELD WIDTH IS 1-1/2 INCHES.
- 3.3.5.2. CHECK FIELD WELDED SEAMS FOR CONTINUITY AND INTEGRITY AND REPAIR ALL IMPERFECTIONS BY THE END OF EACH WORK DAY.
- 3.3.6. MEMBRANE TERMINATION REQUIREMENT: ALL MEMBRANE TERMINATIONS SHALL BE COMPLETED IN ACCORDANCE WITH THE MEMBRANE MANUFACTURER'S REQUIREMENTS.
- 3.3.6.1. PROVIDE SECURITY AT ALL MEMBRANE TERMINATIONS AT THE PERIMETER OF EACH ROOF LEVEL, ROOF SECTION, CURB FLASHING, SKYLIGHT, EXPANSION JOINT, INTERIOR WALL, PENTHOUSE, AND OTHER SIMILAR CONDITION.
- 3.3.6.2. PROVIDE SECURITY AT ANY ANGLE CHANGE WHERE THE SLOPE OR COMBINED SLOPES EXCEEDS TWO INCHES IN ONE HORIZONTAL FOOT.
- 3.3.7. FLASHINGS: COMPLETE ALL FLASHINGS AND TERMINATIONS AS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH THE MEMBRANE MANUFACTURER'S REQUIREMENTS.
- 3.3.7.1. MEMBRANE TERMINATION REQUIREMENT: ALL MEMBRANE TERMINATIONS SHALL BE COMPLETED IN ACCORDANCE WITH THE MEMBRANE MANUFACTURER'S REQUIREMENTS.
- 3.3.7.1.1. DO NOT APPLY FLASHING OVER EXISTING THRU-WALL FLASHINGS OR WEEP HOLES.
- 3.3.7.1.2. PROVIDE FLASHING ON A VERTICAL SURFACE BEFORE THE SEAM IS COMPLETED.
- 3.3.7.1.3. EXTEND FLASHING MEMBRANE A MINIMUM OF 6 INCHES (152 MM) ONTO THE MAIN ROOF SHEET BEYOND THE MECHANICAL SECURITY.
- 3.3.7.1.4. PROVIDE SECURITY TO INSURE THAT THE FLASHING DOES NOT BRIDGE LOCATIONS WHERE THERE IS A CHANGE IN DIRECTION (E.G. WHERE THE PARAPET MEETS THE ROOF DECK).
- 3.3.7.2. FLASH ALL PIPES, SUPPORTS, SOIL STACKS, COLD VENTS, AND OTHER PENETRATIONS PASSING THROUGH THE ROOFING MEMBRANE AS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH THE MEMBRANE MANUFACTURER'S REQUIREMENTS.
- 3.3.7.2.1. FLASH ALL PIPES, SUPPORTS, SOIL STACKS, COLD VENTS, AND OTHER PENETRATIONS PASSING THROUGH THE ROOFING MEMBRANE AS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH THE MEMBRANE MANUFACTURER'S REQUIREMENTS.
- 3.3.7.2.2. UTILIZE CUSTOM PREFABRICATED FLASHINGS SUPPLIED BY THE MEMBRANE MANUFACTURER.
- 3.3.7.2.3. EXISTING FLASHINGS: REMOVE WHEN NECESSARY TO ALLOW NEW FLASHING TO TERMINATE DIRECTLY TO THE PENETRATION.
- 3.3.7.3. FLASHINGS: REMOVE WHEN NECESSARY TO ALLOW NEW FLASHING TO TERMINATE DIRECTLY TO THE PENETRATION.
- 3.3.7.3.1. FLASHINGS: REMOVE WHEN NECESSARY TO ALLOW NEW FLASHING TO TERMINATE DIRECTLY TO THE PENETRATION.
- 3.3.7.3.2. FLASHINGS: REMOVE WHEN NECESSARY TO ALLOW NEW FLASHING TO TERMINATE DIRECTLY TO THE PENETRATION.
- 3.3.7.3.3. FLASHINGS: REMOVE WHEN NECESSARY TO ALLOW NEW FLASHING TO TERMINATE DIRECTLY TO THE PENETRATION.
- 3.3.8. ROOF DRAINS:
 - 3.3.8.1. COORDINATE INSTALLATION OF ROOF DRAINS AND VENTS SPECIFIED IN SECTION 15140 - PLUMBING AS FOLLOWS:
 - 3.3.8.2. REMOVE EXISTING FLASHING AND ASPHALT AT EXISTING DRAINS IN PREPARATION FOR SEALANT AND MEMBRANE.
 - 3.3.8.3. PROVIDE A SMOOTH CLEAN SURFACE ON THE MATING SURFACE BETWEEN THE CLAMPING RING AND THE DRAIN BASE.
 - 3.3.8.4. PROVIDE A SMOOTH CLEAN SURFACE ON THE MATING SURFACE BETWEEN THE CLAMPING RING AND THE DRAIN BASE.
 - 3.3.8.5. PROVIDE A SMOOTH CLEAN SURFACE ON THE MATING SURFACE BETWEEN THE CLAMPING RING AND THE DRAIN BASE.
- 3.3.9. EDGE DETAILS:
 - 3.3.9.1. PROVIDE EDGE DETAILS AS INDICATED ON THE DRAWINGS. INSTALL IN ACCORDANCE WITH THE MEMBRANE MANUFACTURER'S REQUIREMENTS.
 - 3.3.9.2. JOIN INDIVIDUAL SECTIONS IN ACCORDANCE WITH THE MEMBRANE MANUFACTURER'S REQUIREMENTS.
 - 3.3.9.3. COORDINATE INSTALLATION OF METAL FLASHING AND COUNTER FLASHING SPECIFIED IN SECTION 07820 - FLASHING.
 - 3.3.9.4. COORDINATE INSTALLATION OF ROOF SPECIALTIES: COORDINATE INSTALLATION OF COPINGS, COUNTER FLASHING SYSTEMS, GUTTERS, DOWNSPOUTS, AND ROOF EXPANSION ASSEMBLIES SPECIFIED IN SECTION 0710.
 - 3.3.10. WALKWAYS:
 - 3.3.10.1. PROVIDE WALKWAYS IN ACCORDANCE WITH THE MEMBRANE MANUFACTURER'S REQUIREMENTS.
 - 3.3.11. PROVIDE WALKWAYS WHERE INDICATED ON THE DRAWINGS.
 - 3.3.12. PROVIDE WALKWAY PADS AT ROOF HATCHES, ACCESS DOORS, ROOFTOP LADDERS AND ALL OTHER TRAFFIC CONCENTRATION POINTS REGARDLESS OF TRAFFIC FREQUENCY. PROVIDED IN AREAS RECEIVING REGULAR TRAFFIC TO SERVICE ROOFTOP UNITS OR WHERE A PASSAGEWAY OVER THE SURFACE IS REQUIRED.
 - 3.3.13. DO NOT INSTALL WALKWAYS OVER FLASHINGS OR FIELD SEAMS UNLESS MANUFACTURER'S WARRANTY INSPECTION HAS BEEN COMPLETED.
 - 3.3.14. DO NOT INSTALL WALKWAYS OVER FLASHINGS OR FIELD SEAMS UNLESS MANUFACTURER'S WARRANTY INSPECTION HAS BEEN COMPLETED.
 - 3.3.15. WATER CUT-OFFS:
 - 3.3.15.1. PROVIDE WATER CUT-OFFS ON A DAILY BASIS AT THE COMPLETION OF WORK AND AT THE ONSET OF INCLEMENT WEATHER.
 - 3.3.15.2. PROVIDE WATER CUT-OFFS TO ENSURE THAT WATER DOES NOT FLOW BENEATH THE COMPLETED SECTIONS OF THE NEW ROOFING SYSTEM.
 - 3.3.15.3. REMOVE WATER CUT-OFFS PRIOR TO THE RESUMPTION OF WORK.
 - 3.3.15.4. THE INTEGRITY OF THE WATER CUT-OFF IS THE SOLE RESPONSIBILITY OF THE ROOFING CONTRACTOR.
 - 3.3.15.5. ANY MEMBRANE CONTAMINATED BY THE CUT-OFF MATERIAL SHALL BE CLEANED OR REMOVED.
 - 3.4. FIELD QUALITY CONTROL:
 - 3.4.1. THE MEMBRANE MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE A COMPREHENSIVE FINAL INSPECTION AFTER COMPLETION OF THE ROOF SYSTEM. ALL APPLICATION ERRORS SHALL BE ADDRESSED AND FINAL PUNCH LIST COMPLETED.
 - 3.5. PROTECTION:
 - 3.5.1. PROTECT INSTALLED ROOFING PRODUCTS FROM CONSTRUCTION OPERATIONS UNTIL COMPLETION OF PROJECT.
 - 3.5.2. WHERE TRAFFIC IS AN ANTICIPATED OVER COMPLETED ROOFING MEMBRANE, PROTECT FROM DAMAGE USING DURABLE MATERIALS THAT ARE COMPATIBLE WITH MEMBRANE.
 - 3.5.3. REPAIR OR REPLACE DAMAGED PRODUCTS AFTER WORK IS COMPLETED.

progressive | a e

PROGRESSIVE ARCHITECTURE ENGINEERING, P.C.
330 South Tryon Street, Suite 500 | Charlotte, NC 28202 | 704.731.8800 | www.progressiveae.com

100% LOUISIANA CONTRACTORS ASSOCIATION

POPEYE'S HOLDINGS, LLC. ARCHITECTURAL PROFESSIONAL SEAL
NO. 51348
ARCHITECT
J. PHILIP DOHERTY
REGISTERED ARCHITECT
NORTH CAROLINA
NOVEMBER 14, 2020
FOR CONSTRUCTION

ISSUANCE PERMIT SUBMITTAL 08/14/2020

NO.	DATE	DESCRIPTION

BUILDING SECTION A7