

**SPECIFICATIONS
FOR ROOFING
AT
NORTH LAKE, EVERS, DENIA, SOUTH LAKE
FOR THE
CITY OF DENTON**

PROJECT NUMBER: 20171026-30



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SECTION 07411
STRUCTURAL STANDING SEAM METAL ROOF SYSTEM

PART 1 - GENERAL

1.01 AREAS INCLUDED

- A. North Lake, Evers, Denia, South Lake

1.02 DESCRIPTION

- A. Work Included: The contractor shall provide all material, labor, and administration and other items to provide a complete standing seam metal roof system complying with performance requirements indicated and capable of withstanding structural movement, thermally induced movement and exposure to weather without failure or infiltration of water into the building interior.
- B. Coordinate standing seam metal roof system with roofing substructure work.
- C. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary General Conditions, and Sections in Division 1 of these Specifications.

1.03 SECTION INCLUDES

- A. Preformed and prefinished standing seam metal roof system with continuous mechanically seamed ribs, concealed clips and fastening devices.
- B. Color coordinated ridge, hip, valley, gable, eave, corner, rake, headwall, counterflashings and miscellaneous flashings and attaching devices.
- C. Provide concealed clips, fasteners, closures and factory and field applied sealants as necessary to meet design criteria and ensure a weathertight installation.
- D. Self-adhering bituthane membrane roofing underlayment.

1.04 SYSTEM DESCRIPTION

- A. Design Requirements:
1. The standing seam structural metal roof system, including: panels, flashings, attachment clips and attachment screws shall be designed by the metal roof system manufacturer per to meet the following design criteria:
 - a) A basic wind speed of 100 mph.
 - c) Listing of applicable loads by roof zones (interior, edges and corners).
 - d) The building importance factor is one - Essential Facilities.
 - e) Roof snow load is zero.
 - f) The building exposure factor is "C", open terrain.

2. The standing seam metal roof system manufacturer shall provide an engineered analysis of the roofing system, sealed by a registered Structural Engineer employed by the manufacturer and licensed in the State of Texas, verifying that the product and attachment methods will resist wind pressures imposed upon it pursuant to the design criteria and that the roofing system fully complies with all specified requirements.
 3. The panel system shall bear fully documented proof that it has been independent laboratory evaluated using the U.S. Army Corps of Engineers Guide Specification (CEGS) 07416.
 - a) Testing shall include establishment of ultimate and allowable system uplift capacities for both the "field" and "areas of discontinuity".
 - b) "Proof" shall be defined as both the manufacturer and the product being included in the document entitled: "List of Approved Standing Seam Metal Roof Systems" as published by the U.S. Army Corps of Engineers.
 4. Provide factory preformed panel system that has been pretested and certified by manufacturer to comply with specified requirements under installed conditions.
 5. Provide factory engineered and tested end lap (splice) details at roof third points, per ASTM 2140 water immersion testing.
 6. Provide continuous mechanically seamed ribs that inherently increase load span capability, stiffness and flexural stress handling capacity.
 7. Provide continuous butyl sealant within the confines of the female flange.
 8. Provide factory-preformed panel that has been tested and approved for a Class 4 Impact (Hail) resistance rating per UL 2218. Listing shall be present on the UL website (Refer to Underwriters Laboratories website at www.ul.com).
 9. On-site or field manufactured panels are prohibited.
- B. Structural Requirements:
1. Panel structural properties determined in accordance with latest edition of American Iron and Steel Institute's "Cold Formed Steel Design Manual," using "effective width" concepts.
 2. Wind uplift design for roof assemblies shall be calculated by the standing seam metal roofing system manufacturer per ASTM E 1592. Calculations shall include establishment of ultimate and allowable roof system uplift capacities for both the "field" and "areas of discontinuity".
 3. Provide confirmation of positive and negative buckling moments and uplift capacity determined by full-scale tests.
- C. Substrate Criteria:
1. Standing Seam Metal Roofing System: Engineer standing seam metal roof system installed over thermal blocks at each purlin over vinyl faced insulation over existing steel purlins that are that is capable of withstanding the design loads when applied at 90° to the surface and spaced as shown on the approved shop drawings.
 2. Thermal blocking over each existing steel purlin.
 3. Vinyl faced insulation to achieve an R-value of 20 as recommended by roofing manufacturer.
- D. Environmental Requirements: Actual independent laboratory certified test results must be submitted.
1. Resistance to air infiltration: Tite Lok Plus™ .002 cfm per linear foot of joint when tested in accordance with ASTM E 1680 at static test pressure differential of 12 psf.

2. Resistance to water infiltration: Tite-Lok Plus™ – No leakage through panel joints when tested in accordance with ASTM E 1646 at static test pressure differential of 12 psf.

1.05 SUBMITTALS

- A. Product Data: Submit manufacturer's specifications, engineered detail drawings, and installation instructions.
- B. Shop Drawings:
 1. Submit three (3) sets of full size (24"x36") approval / design drawings produced by the standing seam metal roof system manufacturer indicating thickness and dimensions of parts, fastenings and anchoring methods, details and locations of seams, transitions and other provisions necessary for thermal expansion and contraction.
 2. Indicate roof terminations, clearly showing flashings and change of direction caps.
 3. Clearly indicate locations of field and factory applied sealant.
 4. Show locations, spacing patterns and types of hold-down clips and fasteners.
 5. Provide (24"x36") blue line or Auto CAD produced drawings provided by the standing seam metal roof system manufacturer showing a complete roof plan, roof panel layout, and cross section details for every individual condition of the entire roof system.
- C. Samples:
 1. Submit two (2) samples, twelve inch (12") long by full width of panel, showing proposed metal gauge and seam profile.
 2. Submit color samples on metal for Architect's selection from manufacturer's standard color offering.
- D. Test Reports: Submit verification the panel system meets the Environmental Conditions for the indicated test pressures and performance listed for Air and Water Infiltration.
- E. Engineered Design Calculations:
 1. Submit panel system manufacturer's design calculations verifying the panel system meets the specified building code as defined in Section 1.04 System Description, A. Design Requirements listed above.
 2. Design calculations shall be sealed by a registered Structural Engineer employed by the standing seam metal roof system manufacturer and licensed in the State of Texas.
- F. Certification:
 1. Submit manufacturer's certification that materials and finishes meet specified requirements.
 2. Submit written verification of panel Applicator's factory installation training performed by the standing seam metal roof system manufacturer and a copy of the Panel Applicator's "Authorized Applicator" certificate.

1.06 QUALITY ASSURANCE

A. Manufacturer's Qualifications:

1. Minimum twenty (20) years experience in the fabrication of standing seam metal roof systems on projects of similar size and scope. Upon request, submit a minimum of five (5) project references for Architect's review. List project address, date of installation, Architects and Owner's name and telephone numbers.
2. No other manufacturer of standing seam metal roof systems will be accepted without prior written approval of the Architect and based upon the manufacturer verifying the product can meet or exceed all performance criteria listed in these specifications.
3. Requests to be listed as an approved manufacturer must be submitted in writing a minimum fifteen (15) days prior to bid date accompanied by product literature, technical information, sealed engineer's calculations verifying conformance, and a product sample. Approved manufacturers will only be set forth in a written and issued addendum.
4. No substitutions will be permitted after the bid date.

B. Applicator Qualifications:

1. Panel Applicator must have a minimum of five (5) years experience in the application of standing seam metal roof systems.
2. Panel Applicator must be factory trained by the standing seam metal roof system manufacturer prior to the bid date in order to obtain a contract for installation.
3. Use adequate members of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work in this Section.
4. Use equipment of adequate size, capacity and numbers to accomplish the work of this Section in a timely manner.
5. Upon request, submit a minimum of five (5) successfully completed projects of similar size and scope. List project address, date of installation, Architect and Owner's name and telephone numbers.
6. Single Source Responsibility: Provide all items of the standing seam metal roof system work specified herein by a single roofing contractor to provide undivided responsibility.

C. Regulatory Requirements: Comply with all requirements of applicable building codes and other agencies having jurisdiction for positive and negative design loads of standing seam metal roof systems.

1.07 DELIVERY, STORAGE AND HANDLING

A. Delivery:

1. Delivery of material shall be made only after suitable facilities for its storage and protection area available on the site.
2. Protect products and accessories from damage and discoloration during transit and at project site.
3. Upon receipt of prefinished preformed metal panels, flat sheets, flashings and panel accessories, Panel Applicator shall examine each container for damage and for completeness of the consignment.

B. Storage:

1. Store materials out of the weather in a clean, dry place. One end of each container should be slightly elevated and covered with a loose weatherproof covering to prevent condensation.
2. Panels and/or flashings with strippable film must not be stored in areas exposed to direct sunlight.
3. Care should be taken to prevent contact with any substance that may cause discoloration.
4. Store materials to provide ventilation and prevent bending, abrasion or twisting.
5. Do not overload roof structure with stored materials. Do not permit material storage or traffic on completed roof surfaces.

C. Handling:

1. Care should be taken to avoid gouging, scratching or denting.
2. Do not allow traffic on completed roof. If required, provide cushioned walk boards.
3. Protect installed products from damage caused by foreign objects and construction until completion of project.
4. Comply with pertinent provisions of Supplementary General Conditions.

1.08 WARRANTY

- A. Furnish manufacturer's standard twenty (20) year, non-prorated material and labor written finish warranty stating that architectural fluorocarbon finish will be:
1. Free from fading or color change in excess of five (5) NBS units as measured per ASTM 2244-68.
 2. Will not chalk in excess of a numerical rating of seven (7) when measured in accordance with standard procedures specified in ASTM D 659-74.
 3. Will not peel, crack, chip or delaminate.
- B. Furnish a written warranty signed by the Panel Applicator for a two (2) year period from the date of substantial completion of the building guaranteeing materials and workmanship for weathertightness of the roofing system, flashings, penetrations and against all leaks.
- C. Special Weathertight Warranty: Furnish manufacturer's 20 year, full system, non-prorated, no dollar limit weathertight warranty to be jointly signed by the manufacturer and the Panel Applicator.
- D. Protect products and accessories from damage and discoloration during transit and at project site. Store sheets and components in dry storage area to prevent condensation.
- E. Do not overload roof structure with stored materials. Do not permit material storage or traffic on completed roof surfaces.

1.09 PRE-INSTALLATION CONFERENCE

- A. Convene prior to commencing work of this Section.

- B. Attendants: Panel Applicator, installer of each component of associated work, installers of deck or substrate construction to receive roofing work, Architect, Owner or Owner's Representative, Roofing system manufacturer's technical representative and General Contractor.
- C. Record discussion, decisions and agreements reached and furnish a copy to each attendant.
- D. Review installation procedures and coordination required with related Work.
- E. Tour representative areas of roofing substrates, inspect and discuss condition of substrates, roof drains, curbs, penetrations, wood nailers and other preparatory work performed by other trades.
- F. Review structural loading limitations of steel deck and inspect deck for loss of flatness and as required for mechanical fastening.
- G. Review roofing system requirements (approved manufacturer's shop drawings, specifications and other contract documents.
- H. Review required submittals.
- I. Review and finalize construction schedule related to roofing work and verify availability of materials, installer's personnel, equipment and facilities needed to avoid delays.
- J. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing.
- K. General Contractor to document the meeting with written minutes and copy all in attendance.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Standing Seam Metal Roof System: Alternate manufacturers must be approved per written and issued addendum a minimum of fifteen (15) days prior to the bid date.
 - 1. Petersen Aluminum
 - 2. McElroy Metals
- B. Substitutions:
 - 1. Approved manufacturers will only be set forth in a written and issued addendum.
 - 2. Alternate manufacturers must fully comply with all specified requirements.

2.02 MATERIALS

- A. Panels:
 - 1. Prefinished Galvalume® sheet, ASTM AZ50 made of 55% aluminum, 1.6% silicon and the balance zinc as described in ASTM specification A792.

2. Panels shall be 22-gauge with a Polyvinylidene (Kynar 500) Finish.
3. No end laps are acceptable.
4. Onsite or field manufactured panel profiles are prohibited.
5. Seam Size:
 - a) Male leg: 2" high, on Tite-Lok Plus™
 - b) Female leg: 2" high, on Tite-Lok Plus™
6. Provide butyl sealant within the confines of female seam flange, on the bottom edge of female seam flange, designed to seal against adjacent male panel leg.

B. Clip/Fastener Assemblies:

1. Typical clip, UL-90 requirements:
 - a) Wind Rated Fasteners: As per approved manufacturer's engineered shop drawings.
 - b) Wind Rated Clip: Sliding 22-gauge galvanized steel hook in combination with a double fastened 18-gauge galvanized steel base, both at F_y (MIN) = 33 ksi. Clip hook shall have a shop installed hot-melt butyl sealant for continuity of seal at clip locations.
2. Typical Low Clip Requirements:
 - a) UL-90 Fasteners: As per approved manufacturer's engineered shop drawings.
 - b) Sliding 26-gauge at $F_y=40$ ksi (MIN) galvanized steel hook in combination with a double fastened 18-gauge at $F_y = 50$ ksi (MIN) galvanized steel base. Clip hook shall have a shop installed hot-melt butyl sealant for continuity of seal at clip locations.
3. Standard Flashing Fasteners: Same as Wind Rated Fasteners specified above.

C. Accessories:

1. Provide manufacturer's standard accessories and other items essential to completeness of the standing seam metal roof installation.
2. Roof Jacks: Manufacturer's standard EPDM with an aluminum sealing base ring; for openings twelve inches (12") or smaller.
3. Gutters and downspouts will be fabricated to the same gauge and specification as panel.

D. Field Sealants:

1. Color coordinated primerless silicone, urethane, or high grade, non-curing butyl as recommended and engineered by panel manufacturer.
2. Do not use sealants containing asphalt.

2.03 FABRICATION

A. Panels:

1. Provide factory formed panel widths of sixteen inch (16"), with a two inch (2") high standing seam.
2. On-site or field manufactured panels are prohibited.
3. No end laps are acceptable.
4. Roof panels shall have flush horizontal and vertical surfaces to facilitate sealing at terminations. Panel configurations that create voids and require supplemental closure devices are acceptable.

B. Seams:

1. Panel seams shall interlock entire length of seam, by means of a mechanically driven rib seamer.
2. Design standing seam to lock up and resist joint disengagement during design wind uplift conditions as calculated to comply with local building codes and design uplift criteria.
3. Provide factory sealant within confines on trailing edge of female seam leg to aid in resistance of leaks and provide panel-to-panel seal while allowing expansion and contraction movement, and the seams shall be continuously locked or crimped together by mechanical means during installation.

C. Clips:

1. Provide Wind Rated Clips designed to allow panels to thermally expand and contract and provide a minimum of \pm one inch (1") of thermal movement. Clips shall incorporate a self-centering feature to allow a minimum of one-half inch (1/2") of movement in either direction for a total movement of one inch (1").
2. Clips shall be designed to meet positive and negative pressures as calculated and engineered by the standing seam metal roofing system manufacturer.
3. Provide required thermal blocks at each clipper manufacturer's requirements.

D. Engineer panels to use concealed anchors that permit expansion and contraction, including at roof end laps (splices).

E. Trim/Flashings:

1. Prefinished sheet metal designed by the manufacturer in the same gauge, material and finish as the standing seam metal roofing system.
2. Locations, design, sealing and fastening methods as per the manufacturer's approved engineered shop drawings.

2.04 FINISH

A. Fluorocarbon Coating:

1. Full strength 70% Kynar 500® coating baked on for fifteen (15) minutes at 450°F to dry-film thickness of 1.0 mil.
2. 15% reflective gloss (ASTM D 523). (Low Gloss).
3. 0.3 mil baked on epoxy primer.
4. Backer side of panels to be painted with an off-white polyester coating.
5. Top Side Color: As selected by Architect from manufacturer's full range of colors including metallics.

PART 3 - EXECUTION

3.01 CONNECTING WORK

A. General: Provide metal roofing panels of full length from eave to ridge when possible.

1. Field cutting by torch is not permitted.
2. Do not apply roofing during inclement weather.
3. Do not apply roofing to damp or frozen deck surface.

4. Do not expose materials vulnerable to water, wind or sun damage in quantities greater than can be weatherproofed during the same day.
5. Rigidly fasten point of fixity (high center) of metal roof panels and allow free eave movement due to thermal expansion and contraction per the approved shop drawings.
6. Install screws fasteners with power tools having controlled torque.
7. Locate and space fasteners per the approved shop drawings in true vertical and horizontal alignment.
8. Install all flashings per the approved shop drawings as work progresses. Position roof jacks only in the flat of the panel; do not alter standing seam ribs.

- B. The Panel Applicator shall examine all surfaces on which their work is to be applied, and shall notify the Architect in writing if not suitable to receive their work. Work on any surface shall constitute acceptance of this surface by the Panel Applicator. After beginning installation, install approximately 500 square feet of panels for Architect's approval, before proceeding with substantial work.

3.02 FIELD MEASUREMENTS

- A. Panel Applicator must take field measurements to verify or supplement dimensions indicated prior to fabrication of any materials. Where field measurements cannot be made without delaying the work, either establish opening dimensions and proceed with fabricating panels without field measurements or allow for trimming panel units.

3.03 METAL ROOFING INSTALLATION

- A. Workmanship shall conform to standards set forth in the architectural sheet metal manual as published by SMACNA.
- B. Comply with manufacturer's instructions for assembly, installation, and erection in order to achieve a weathertight installation. Install in accordance with approved shop drawings.
1. Anchor securely in place using clips and fasteners spaced in accordance with manufacturer's recommendations for design wind load criteria.
 2. Panels should be installed in such a manner that horizontal lines are true and level and vertical lines are plumb.
 3. Field apply sealant to penetrations, transitions, and other locations as necessary for an airtight, waterproof installation.
 4. Remove all protective film, if any, before installation of materials.
- C. Dissimilar Metals: Do not allow panels or flashings to come into contact with dissimilar metals.

3.05 CLEAN UP

- A. Clean exposed surfaces of work promptly after completion of installation.
- B. Only minor scratches and abrasions will be allowed to be touched up. Any other damaged material shall be replaced.

C. Leave work areas clean, free from grease, dirt, finger marks, stains and stains.

D. Remove scrap and debris from surrounding grounds and work areas daily.

3.06 PROTECTION

A. Metal Roofing: Protect work as required to ensure that the standing seam metal roof system will be without damage at time of final completion.

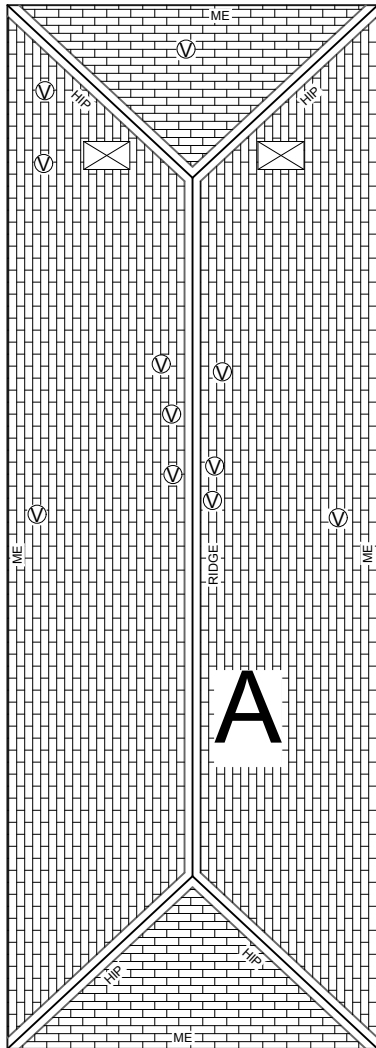
END OF SECTION 07411

GENERAL ROOF NOTES

- A. PROVIDE ALL REQUIRED UTILITY / STRUCTURAL COMPONENTS AND/OR CONNECTIONS FOR THE FUNCTIONAL USE OF ALL CONTRACTOR SUPPLIED EQUIPMENT OR APPLIANCES, REGARDLESS OF ANY OMISSIONS OR INCONSISTENCIES ENCOUNTERED IN THE CONSTRUCTION DOCUMENTS.
- B. THE WORD 'PROVIDE' SHALL MEAN 'FURNISH AND INSTALL COMPLETE AND READY TO USE.'
- C. IF DISCREPANCIES APPEAR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER QUALITY, QUANTITY, AND PRICE SHALL SUPERSEDE.
- D. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE PROJECT AND THE ON-SITE / OFF-SITE CONDITIONS PRIOR TO BIDDING OR COMMENCING WORK.
- E. ALL ROOF DETAILS FOR METAL BUILDING AND METAL ROOF CONSTRUCTION ARE FOR BASIS OF DESIGN, FOR BOTH PRE-MANUFACTURED METAL BUILDING SYSTEMS AND METAL ROOF SYSTEMS. FINAL DETAILS SHALL BE SUBMITTED BY METAL BUILDING MANUFACTURER AND METAL ROOF SYSTEM MANUFACTURER AND COORDINATED WITH ARCHITECTURAL THROUGH THE SUBMITTAL PROCESS PRIOR TO CONSTRUCTION TO ACTIVATE AND PROVIDE A SINGLE SOURCE 20 YEAR NDL WARRANTY WITH WEATHERTIGHTNESS PROTECTION AS SPECIFIED FOR METAL BUILDING AND METAL ROOF SYSTEM.

SPECIFIC ROOF NOTES -

- 1. PROVIDE PRE-FINISHED HIGH EAVE CLOSURE TRIM.
- 2. PROVIDE PRE-FINISHED HIP CLOSURE.
- 3. PROVIDE PRE-FINISHED RIDGE CAP AS DETAILED AND SPECIFIED.
- 4. REMOVE EXISTING SHINGLE ROOF DOWN TO SUBSTRATE AND REPLACE WITH NEW STANDING SEAM ROOF SYSTEM AS SPECIFIED.
- 5. WRAP FASCIA WITH MATCHING PREFINISHED METAL.



1

OVERALL ROOF PLAN - DENIA

NOT TO SCALE



02/28/18

ROOF LEGEND



SHINGLE ROOF SYSTEM AS SPECIFIED



Contractor shall verify all substrates, dimensions, penetrations, curbs, etc. those shown are typical but may not be all inclusive.

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DATE: 02/28/18

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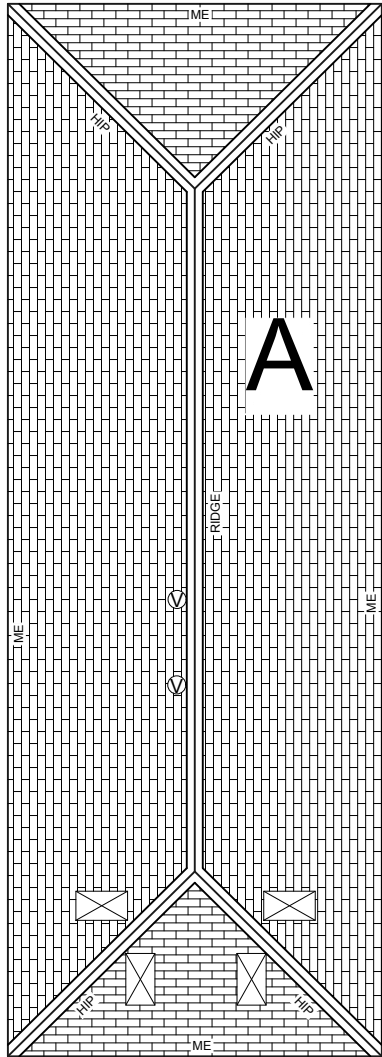
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PROJECT FOR
CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND
SOUTH LAKE
DENTON, TEXAS

R1.01

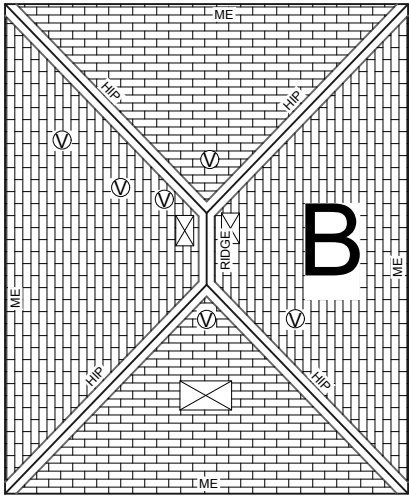
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
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- 5. WRAP FASCIA WITH MATCHING PREFINISHED METAL.



02/28/18

ROOF LEGEND

 SHINGLE ROOF SYSTEM AS SPECIFIED



1

OVERALL ROOF PLAN - EVERS PARK

NOT TO SCALE



Contractor shall verify all substrates, dimensions, penetrations, curbs, etc. those shown are typical but may not be all inclusive.

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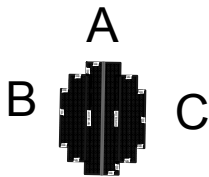
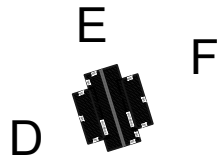
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PROJECT FOR
CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND
SOUTH LAKE
DENTON, TEXAS

R1.02

GENERAL ROOF NOTES

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1

OVERALL SITE PLAN - NORTH LAKES

NOT TO SCALE



02/28/18

ROOF LEGEND



SHINGLE ROOF SYSTEM AS SPECIFIED



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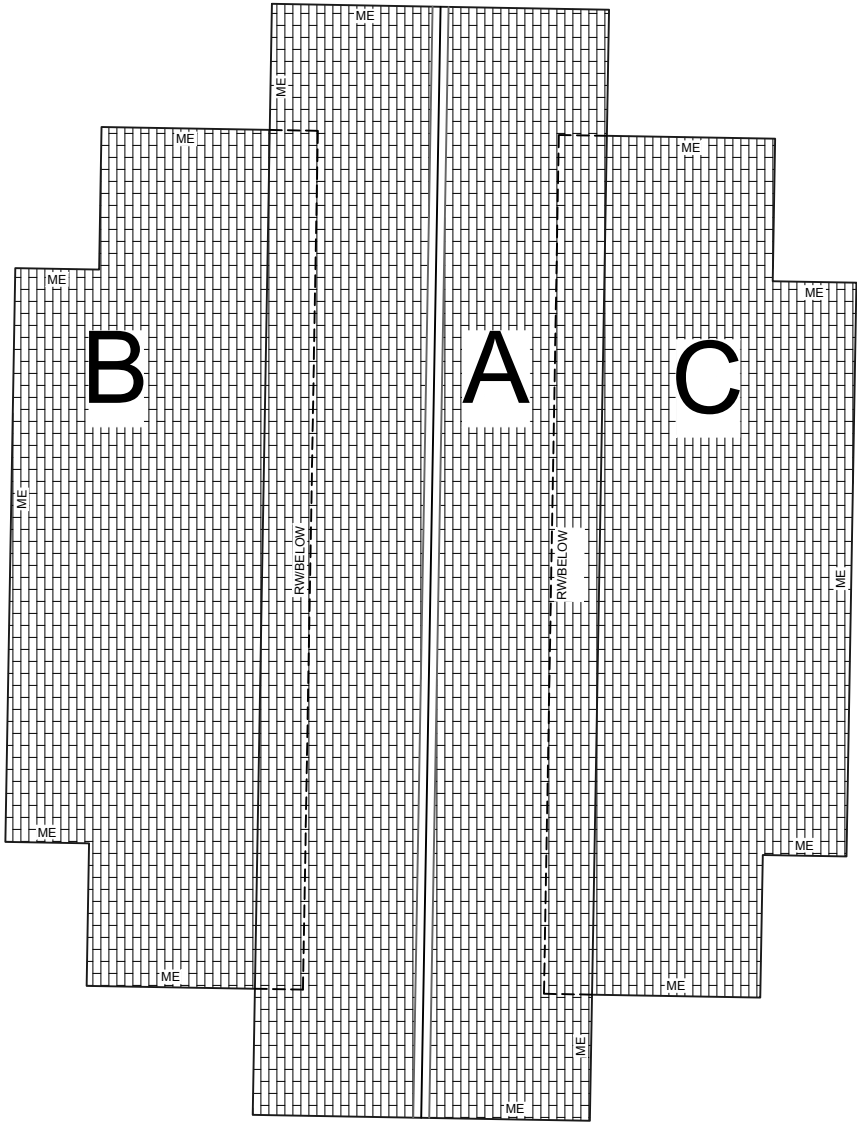
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PROJECT FOR
CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND
SOUTH LAKE
DENTON, TEXAS

R1.03

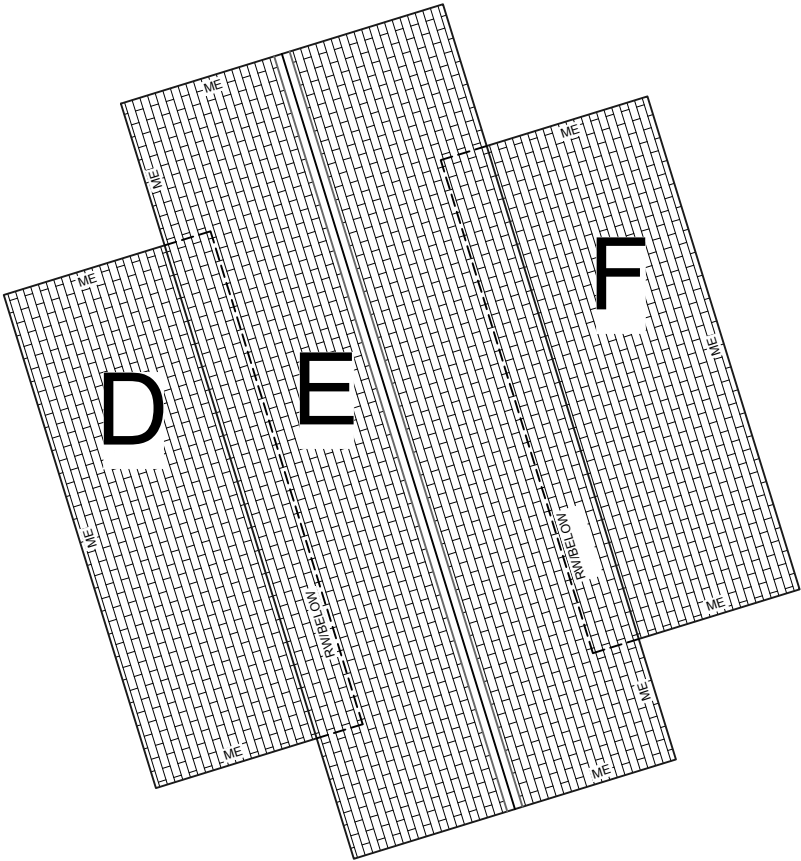
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SPECIFIC ROOF NOTES -

- 1. PROVIDE PRE-FINISHED HIGH EAVE CLOSURE TRIM.
- 2. PROVIDE PRE-FINISHED HIP CLOSURE.
- 3. PROVIDE PRE-FINISHED RIDGE CAP AS DETAILED AND SPECIFIED.
- 4. REMOVE EXISTING SHINGLE ROOF DOWN TO SUBSTRATE AND REPLACE WITH NEW STANDING SEAM ROOF SYSTEM AS SPECIFIED.
- 5. WRAP FASCIA WITH MATCHING PREFINISHED METAL.



02/28/18

ROOF LEGEND

SHINGLE ROOF SYSTEM AS SPECIFIED



1

OVERALL ROOF PLAN - NORTH LAKES

NOT TO SCALE



Contractor shall verify all substrates, dimensions, penetrations, curbs, etc. those shown are typical but may not be all inclusive.

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PROJECT NO. 20171026-30

DATE: 02/28/18

DRAWN BY: CB

100% CONST. DOCS

PROJECT FOR
CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND
SOUTH LAKE
DENTON, TEXAS

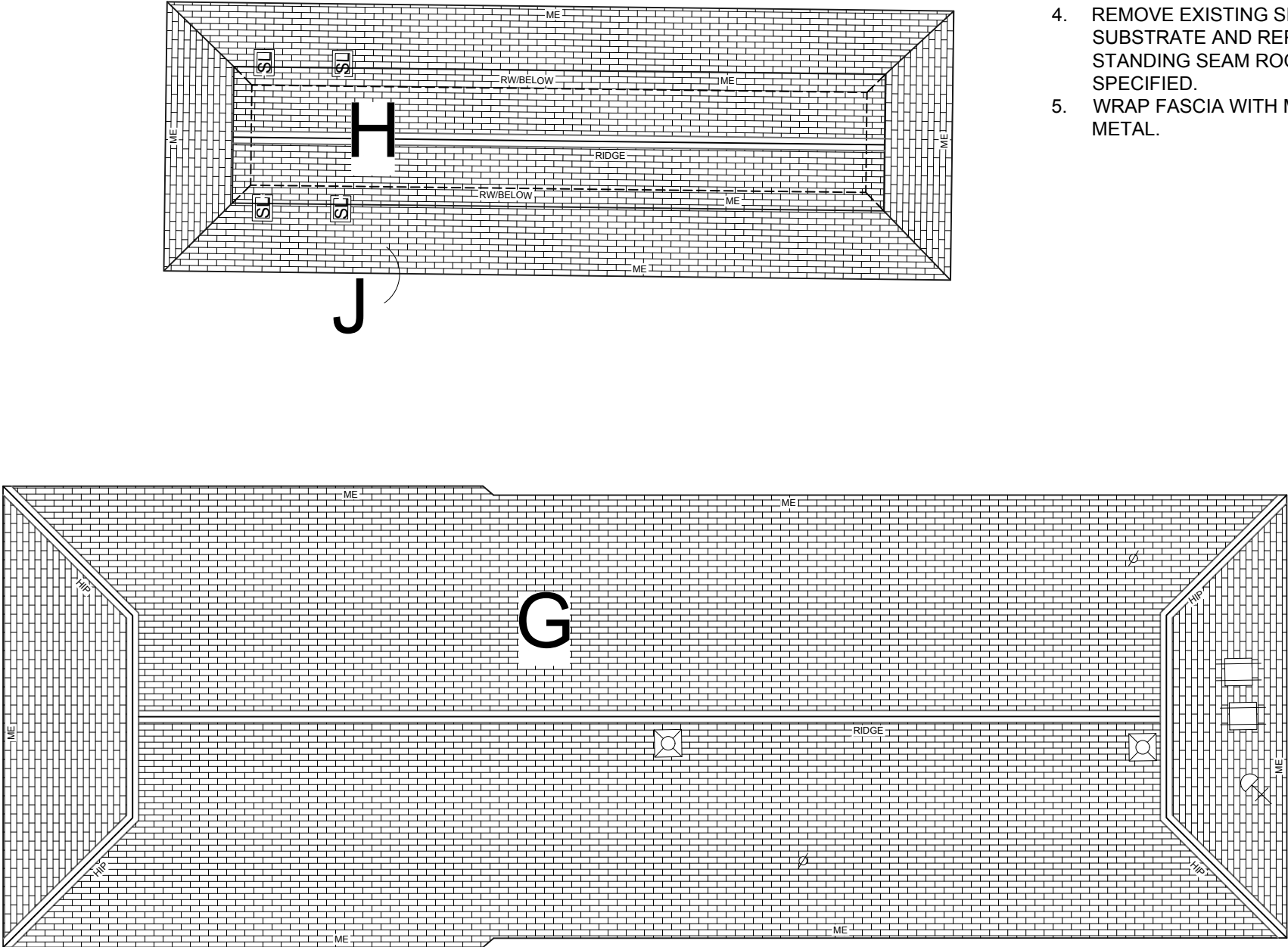
R1.04

GENERAL ROOF NOTES

- A. PROVIDE ALL REQUIRED UTILITY / STRUCTURAL COMPONENTS AND/OR CONNECTIONS FOR THE FUNCTIONAL USE OF ALL CONTRACTOR SUPPLIED EQUIPMENT OR APPLIANCES, REGARDLESS OF ANY OMISSIONS OR INCONSISTENCIES ENCOUNTERED IN THE CONSTRUCTION DOCUMENTS.
- B. THE WORD 'PROVIDE' SHALL MEAN 'FURNISH AND INSTALL COMPLETE AND READY TO USE.'
- C. IF DISCREPANCIES APPEAR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER QUALITY, QUANTITY, AND PRICE SHALL SUPERSEDE.
- D. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE PROJECT AND THE ON-SITE / OFF-SITE CONDITIONS PRIOR TO BIDDING OR COMMENCING WORK.
- E. ALL ROOF DETAILS FOR METAL BUILDING AND METAL ROOF CONSTRUCTION ARE FOR BASIS OF DESIGN, FOR BOTH PRE-MANUFACTURED METAL BUILDING SYSTEMS AND METAL ROOF SYSTEMS. FINAL DETAILS SHALL BE SUBMITTED BY METAL BUILDING MANUFACTURER AND METAL ROOF SYSTEM MANUFACTURER AND COORDINATED WITH ARCHITECTURAL THROUGH THE SUBMITTAL PROCESS PRIOR TO CONSTRUCTION TO ACTIVATE AND PROVIDE A SINGLE SOURCE 20 YEAR NDL WARRANTY WITH WEATHERTIGHTNESS PROTECTION AS SPECIFIED FOR METAL BUILDING AND METAL ROOF SYSTEM.

SPECIFIC ROOF NOTES -

- 1. PROVIDE PRE-FINISHED HIGH EAVE CLOSURE TRIM.
- 2. PROVIDE PRE-FINISHED HIP CLOSURE.
- 3. PROVIDE PRE-FINISHED RIDGE CAP AS DETAILED AND SPECIFIED.
- 4. REMOVE EXISTING SHINGLE ROOF DOWN TO SUBSTRATE AND REPLACE WITH NEW STANDING SEAM ROOF SYSTEM AS SPECIFIED.
- 5. WRAP FASCIA WITH MATCHING PREFINISHED METAL.



1

OVERALL ROOF PLAN - NORTH LAKES

NOT TO SCALE



02/28/18

ROOF LEGEND



SHINGLE ROOF SYSTEM AS SPECIFIED



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DATE: 02/28/18

DRAWN BY: CB

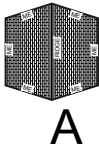
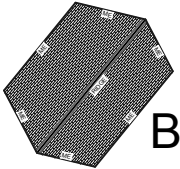
100% CONST. DOCS

PROJECT FOR
CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND
SOUTH LAKE
DENTON, TEXAS

R1.05

GENERAL ROOF NOTES

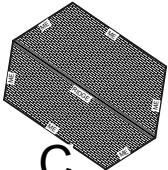
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1

OVERALL SITE PLAN - SOUTH LAKES

NOT TO SCALE



02/28/18

ROOF LEGEND



SHINGLE ROOF SYSTEM AS SPECIFIED



Texas Registered
Engineering Firm F-6498
1320 Spinks Road
Flower Mound, TX
(972)874-1388

Contractor shall verify all
substrates, dimensions,
penetrations, curbs, etc.
those shown are typical
but may not be all inclusive.

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PROJECT FOR
CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND
SOUTH LAKE
DENTON, TEXAS

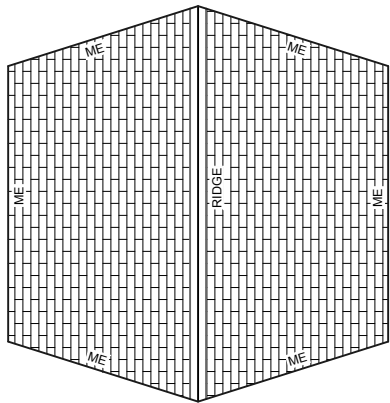
R1.06

GENERAL ROOF NOTES

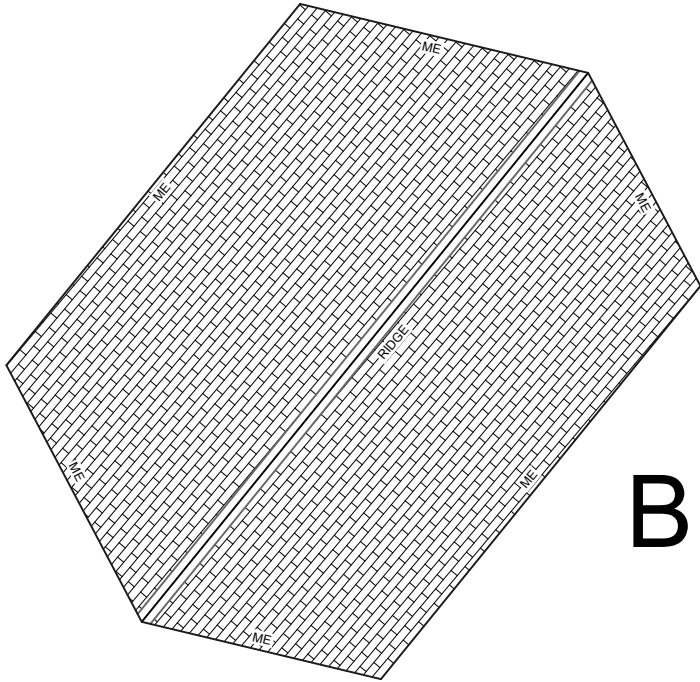
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SPECIFIC ROOF NOTES -

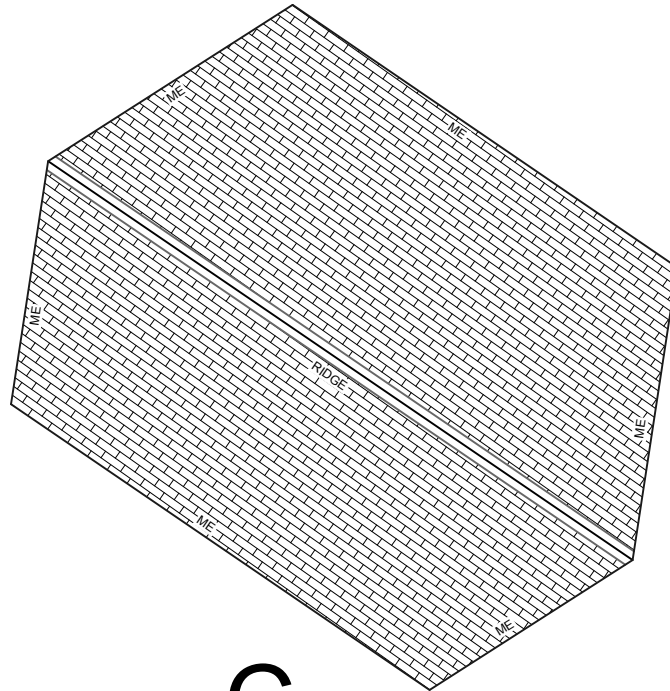
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- 2. PROVIDE PRE-FINISHED HIP CLOSURE.
- 3. PROVIDE PRE-FINISHED RIDGE CAP AS DETAILED AND SPECIFIED.
- 4. REMOVE EXISTING SHINGLE ROOF DOWN TO SUBSTRATE AND REPLACE WITH NEW STANDING SEAM ROOF SYSTEM AS SPECIFIED.
- 5. WRAP FASCIA WITH MATCHING PREFINISHED METAL.



A



B



C



02/28/18



1

OVERALL ROOF PLAN - SOUTH LAKES

NOT TO SCALE

ROOF LEGEND



SHINGLE ROOF SYSTEM AS SPECIFIED



Contractor shall verify all substrates, dimensions, penetrations, curbs, etc. those shown are typical but may not be all inclusive.

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PROJECT FOR
CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND
SOUTH LAKE
DENTON, TEXAS

R1.07

ARCHITECTURAL METAL ROOF PANEL

PANEL CLIP—MIN. TWO
FASTENERS PER CLIP

SLIP SHEET

UNDERLAYMENT

T-TYPE DOWNSLOPE
PERIMETER EDGE-METAL FLASHING

FOLD PANEL
PANS TO ENGAGE
EDGE METAL

OPTIONAL: INSTALL
SEALANT AT ENDS OF
VERTICAL SEAMS

CONTINUOUS CLEAT AS SPEC.

SLOPE



02/28/18



PROJECT FOR: CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND SOUTH LAKE
DENTON, TEXAS

R2.01
OF
6

DETAIL NAME: STANDING SEAM - EAVE

PROJECT NO: 20171026-30

100% CONSTRUCTION DOCUMENTS

SCALE : NOT TO SCALE

DATE: 02/28/18

DRAWN BY: CB

ARCHITECTURAL
METAL ROOF PANEL

SLOPE

SLIP SHEET

UNDERLAYMENT
AS SPEC.

ROOF AND
WALL PROFILE

FOLD PANEL PANS TO
ENGAGE EDGE METAL

T-TYPE RAKE EDGE
METAL AS SPEC.

CONTINUOUS CLEAT



02/28/18



PROJECT FOR: CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND SOUTH LAKE
DENTON, TEXAS

R2.02
OF
6

DETAIL NAME: STANDING SEAM - RAKE

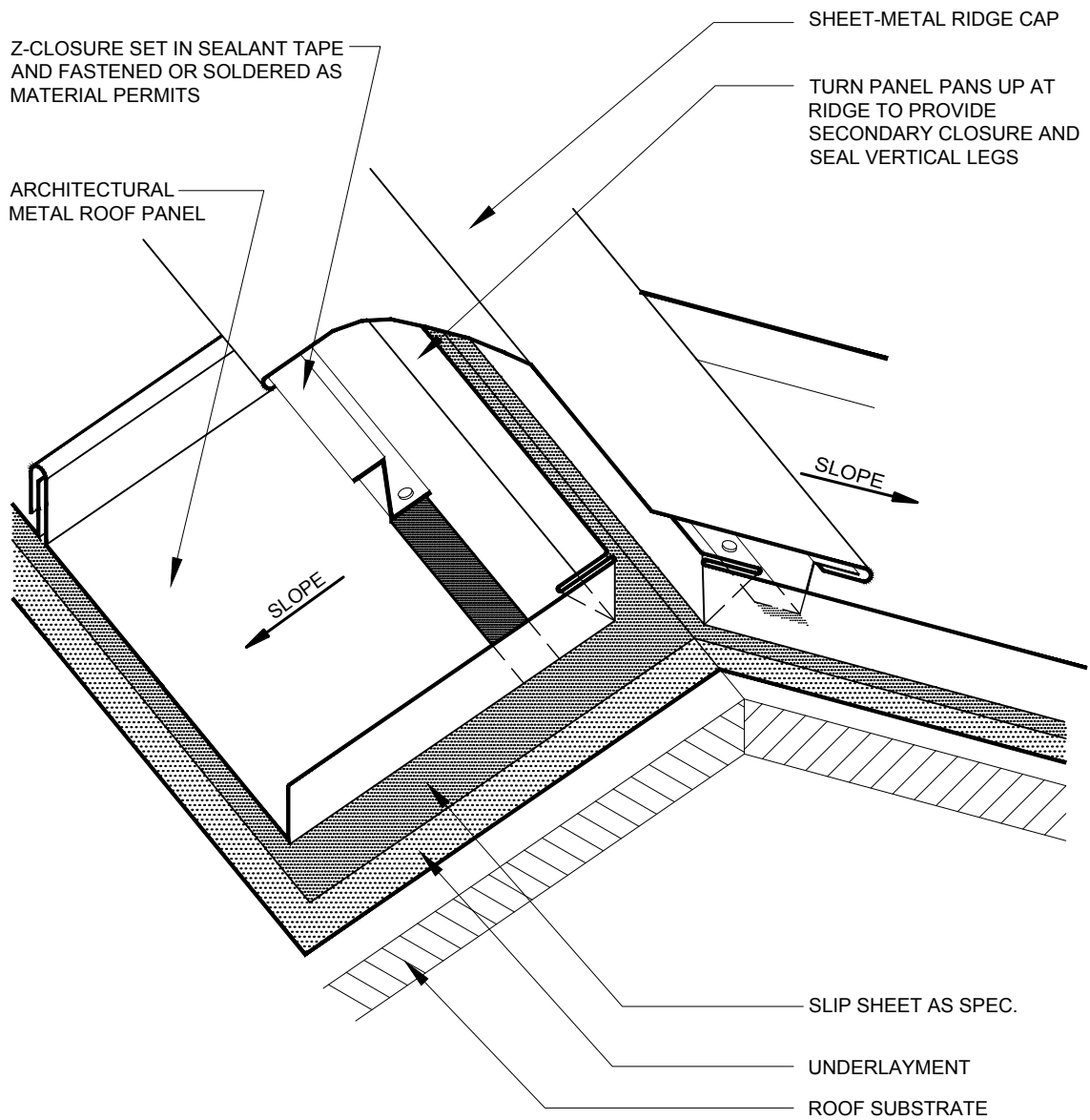
PROJECT NO: 20171026-30

100% CONSTRUCTION DOCUMENTS

SCALE : NOT TO SCALE

DATE: 02/28/18

DRAWN BY: CB



02/28/18



PROJECT FOR: CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND SOUTH LAKE
DENTON, TEXAS

R2.03
OF
6

DETAIL NAME: STANDING SEAM - RIDGE

PROJECT NO: 20171026-30

100% CONSTRUCTION DOCUMENTS

SCALE : NOT TO SCALE

DATE: 02/28/18

DRAWN BY: CB

SHEET-METAL HIP CAP

Z-CLOSURE SET IN SEALANT TAPE
AND FASTENED OR SOLDERED AS
MATERIAL PERMITS

ARCHITECTURAL
METAL ROOF
PANEL

SLOPE

SLOPE

SLIP SHEET
AS SPEC.

UNDERLAYMENT

ROOF SUBSTRATE

TURN PANEL PANS UP TO
PROVIDE SECONDARY
CLOSURE AND SEAL
VERTICAL LEGS



02/28/18



PROJECT FOR: CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND SOUTH LAKE
DENTON, TEXAS

R2.04
OF
6

DETAIL NAME: STANDING SEAM - HIP

PROJECT NO: 20171026-30

100% CONSTRUCTION DOCUMENTS

SCALE : NOT TO SCALE

DATE: 02/28/18

DRAWN BY: CB

REMOVABLE SHEET-METAL
COUNTERFLASHING

2" MIN.

4" MIN.

SELF-ADHERING MEMBRANE

SHEET-METAL
ROOF-TO-WALL FLASHING

SLOPE

SLOPE

ARCHITECTURAL
METAL ROOF PANEL

PANEL CLIP - MIN. TWO
FASTENERS PER CLIP

SLIP SHEET AS SPEC.

UNDERLAYMENT

ROOF SUBSTRATE

TURN PANEL PANS UP AT HEADWALL
TO PROVIDE SECONDARY CLOSURE
AND SEAL VERTICAL LEGS

Z-CLOSURE SET IN SEALANT TAPE
AND FASTENED OR SOLDERED AS
MATERIAL PERMITS - DO NOT SEAL
VERTICAL LEGS.



02/28/18



PROJECT FOR: CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND SOUTH LAKE
DENTON, TEXAS

R2.05
OF
6

DETAIL NAME: STANDING SEAM - HEAD WALL

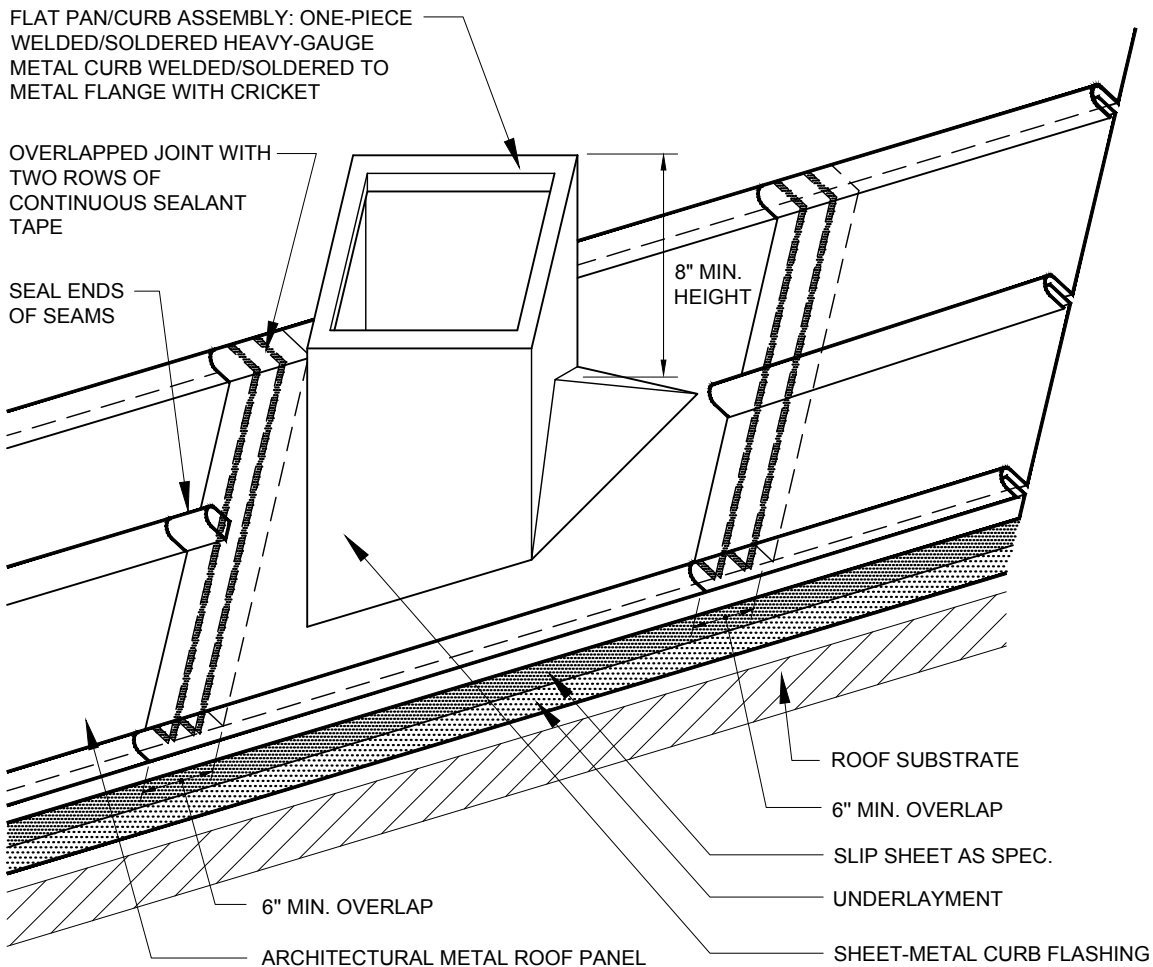
PROJECT NO: 20171026-30

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SCALE : NOT TO SCALE

DATE: 02/28/18

DRAWN BY: CB



NOTES:

1. PROPER STRUCTURAL SUPPORT AND ATTACHMENT IS REQUIRED UNDER ALL SIDES OF RAISED CURB.
2. CURB-MOUNTED EQUIPMENT SHOULD BE WEATHERPROOF AND HAVE A WEATHERPROOF INTERLOCK OR SUFFICIENT OVERLAP WITH THE CURB.
3. PRE-MANUFACTURED CURBS ARE AVAILABLE.
4. THIS DETAIL FIXES THE RAISED CURB TO THE ARCHITECTURAL METAL PANELS.



02/28/18



PROJECT FOR: CITY OF DENTON PARK DEPARTMENT
VARIOUS PARK BUILDINGS
NORTH LAKE, EVERS, DENIA AND SOUTH LAKE
DENTON, TEXAS

R2.06
OF
6

DETAIL NAME: STANDING SEAM - CURB

PROJECT NO: 20171026-30

100% CONSTRUCTION DOCUMENTS

SCALE : NOT TO SCALE

DATE: 02/28/18

DRAWN BY: CB