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October 26, 2021

Mr. Charlie Sandberg
Parks and Recreation Director
City of Deer Park Texas 710 E. San Augustine
Deer Park, Texas 77536

Re: The Battleground at Deer Park Golf Course Club House Summary

Dear Mr. Sandberg,

I am writing to provide the information requested, in advance the November 2nd City Council meeting. We understand this information is for the purpose of Council authorization, and that further administration will be required in the event authorized. To summarize, the following is either attached, or commented upon:

1. The Project Documents are attached for your use, which include both plans and specifications.
2. The Intergovernmental Contract utilized is Omnia Partners, Public Sector, Contract Number R180903, for Roofing, Roofing Services. This delivery method provides local, best in class and pre-qualified vendors, party to the contract for your benefit. Region 4 ESC of Houston, Texas serves as the Lead Government Agency. Furthermore, contract protocols for use, which is related to compliance, is included within the project documents.
3. Despite the construction labor and material supply chain challenges, we believe the Rough Order of Magnitude Estimate provided this past February, remains viable. This has taken additional management and coordination, but we have a winning formula. Additionally, we have since located the same tile currently in place, which should help offset increased costs in other areas. At that time, there was enough available.

The estimate previously reported totaled \$429,196.00. Since then, we have observed a considerable amount of additional damaged wood decking than previously present. Several photos follow to demonstrate.

As such, we recommend adding a contingency allowance for repair or replacement of damaged wood decking. The contingency allowance will allow for immediate repair of these conditions, each day, when the existing roof has been removed and the building is vulnerable. This process is customary and is more manageable than other options which are more protracted and riskier. Each day, this process could be managed by job site logs, pre-priced unit cost calculations, and photographic confirmation. All unused contingency funds would be accounted for, then returned to the City at final billing.

If you agree, we recommend adding \$20,804.00, as contingency, for any additional unknown conditions discovered. This would total \$450,000.00, which is what we believe may have been anticipated by Council. This is entirely optional, however recommended. If the City is not in agreement with this process, we understand, and as stated, the prior estimate remains viable for the installation of tile roofing and components. The unknown, is the extent of damaged and deteriorated wood decking, because it is currently covered with tile.



If there is any further information that may be helpful, or if you or your colleagues would like to discuss further, please let Ben or me know. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "David M. Naber". The signature is stylized with a large, looped "D" and a long, horizontal stroke at the end.

David M. Naber
Tremco Incorporated

cc: Ben Gialanella

City of Deer Park 710 E. San Augustine Deer Park, Texas 77536

Battleground at Deer Park Golf Course
1600 Georgia Ave.
Deer Park, Texas 77536



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PERFORMANCE REQUIREMENTS

THE ROOF SYSTEM SHALL BE INSTALLED PER ASCE 7-10. SUBMITTAL OBTAINED BY CONTRACTOR FROM MANUFACTURER DEMONSTRATING PRODUCT COMPLIANCE WITH ASCE 7-10 AS CERTIFIED BY THE MANUFACTURER'S DESIGN PROFESSIONAL (WHETHER BY CONTRACT OR DIRECT EMPLOYMENT SHALL BE PROVIDED BY CONTRACTOR.

CONSTRUCTION CODES:

1. BUILDING CODE:	2018 INTERNATIONAL BUILDING CODE
2. ENERGY CODE:	2018 INTERNATIONAL ENERGY CONSERVATION CODE
3. MECHANICAL CODE:	2018 INTERNATIONAL MECHANICAL CODE
4. PLUMBING CODE:	2018 INTERNATIONAL PLUMBING CODE
5. FUEL CODE:	2018 INTERNATIONAL FUEL AND GAS CODE
6. ELECTRICAL CODE:	2020 NATIONAL ELECTRICAL CODE
7. WIND SPEED CODE:	ASCE 7-10

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1600 Georgia Ave.
Deer Park, Texas 77536

ISSUED FOR
CONSTRUCTION

SHEET NAME

COVER SHEET

SHEET NO.

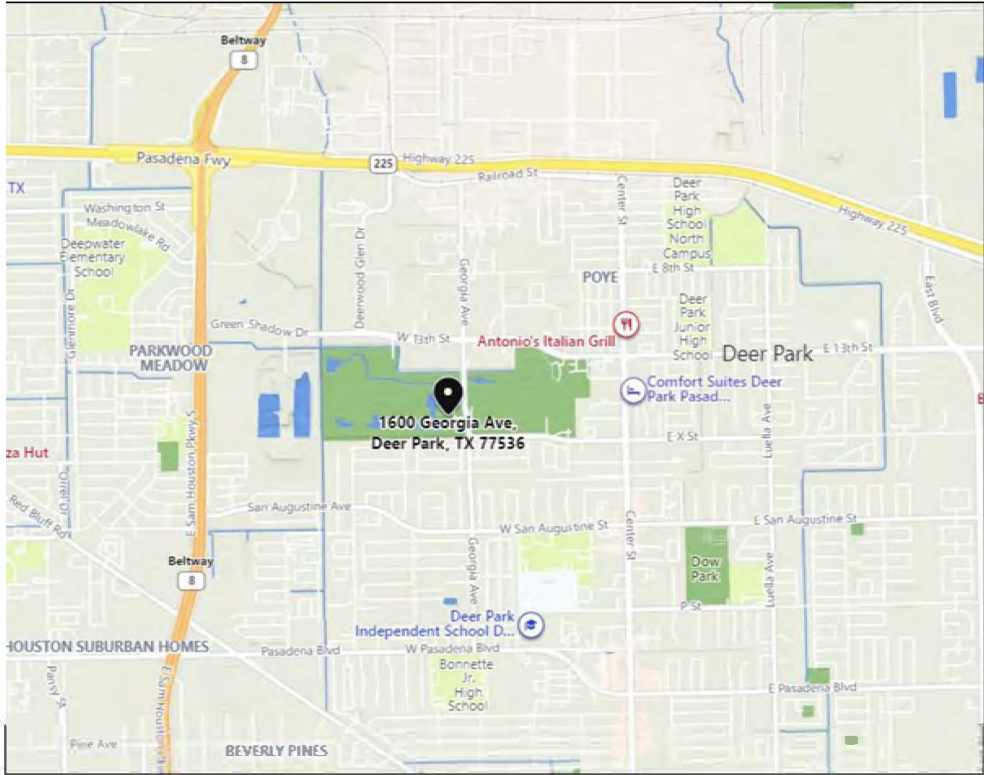
CS

Site Plan 

Construction Notes:

THE FOLLOWING IS SUPPLEMENTAL TO THE ROOF PLANS, DETAIL DRAWINGS, SPECIFICATIONS AND LOCAL GOVERNING CODES. FABRICATION, INSTALLATION, WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE MOST STRINGENT REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS, LATEST EDITION OF APPLICABLE BUILDING CODES WITH LOCAL AMENDMENTS, AND REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION (AHJ). SOME DETAILING HAS BEEN MODIFIED TO BE MORE STRINGENT THAN REFERENCED STANDARDS. THE CONSULTANTS DECISION WILL BE FINAL FOR DISCREPANCIES IN DETAILS, STANDARDS AND OTHER REQUIREMENTS.

1. DETAIL DRAWINGS PROVIDE THE TYPICAL STANDARD OF QUALITY. IF DISCREPANCIES APPEAR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER QUALITY, QUANTITY AND PRICE SHALL SUPERSEDE. SUBSTRATE THICKNESSES AND DECK CONFIGURATIONS ARE TYPICAL, SUBJECT TO THE SPECIFIC PROJECT REQUIREMENTS STIPULATED. NON-STANDARD OR SPECIAL CONDITIONS MAY REQUIRE SKETCHING FOR SUBMITTAL AND CONSULTANTS APPROVAL.
2. ROOF SLOPES ON THE DRAWINGS ARE CONCEPTUAL. PROVIDE POSITIVE DRAINAGE TO ALL POINTS OF WATER EGRESS. VERIFY TAPER IN SHOP DRAWINGS. PROVIDE TAPERED INSULATION CRICKETS (1/2" FT. MINIMUM SLOPE) AT HIGH SIDE OF ALL MECHANICAL UNITS AND OTHER PENETRATIONS FOR THE PURPOSE OF DIVERTING WATER AROUND THE UNIT AND PROVIDING POSITIVE DRAINAGE.
3. VERIFY ANCHORAGE AND ELEVATIONS OF INSTALLED DECKING WOOD BLOCKING. ADJUST ELEVATION WHEN REQUIRED TO MATCH THE INSTALLED AND FINAL THICKNESS OF THE PREPARED INSULATION AND GYPSUM SUBSTRATES. COORDINATE INSTALLATION PRACTICES THE CONSTRUCTION TEAM. COLLABORATE WITH OTHER TRADES.
4. VERIFY ADJOINING WALLS WHEN REQUIRED TO FACILITATE THE INSTALLATION OF THE NEW BASE FLASHING. ADJUST AS REQUIRED TO PROVIDE A FINISHED BASE FLASHING HEIGHT OF EIGHT (8) INCHES, FINISHED AND APPLIED. INFREQUENT EXCEPTIONS FOR UNCOMMON CONDITIONS, MAY BE GRANTED BY A REQUEST TO THE CONSTRUCTION TEAM THROUGH THE STIPULATED METHOD OF COMMUNICATION, FOR APPROVAL.
5. VERIFY INSTALLED CURBS ARE A MINIMUM OF SIXTEEN INCHES (16") IN HEIGHT, AND SUFFICIENT TO PROVIDE A MINIMUM BASE FLASHING HEIGHT OF EIGHT INCHES (8"), FINISHED AND APPLIED. PROVIDE OR COORDINATE WITH OTHER TRADES, REQUIRED UTILITY AND STRUCTURAL COMPONENTS OR CONNECTIONS, FOR THE FUNCTIONAL USE OF ALL CONTRACTOR SUPPLIED EQUIPMENT OR ACCESSORIES.



Site Plan

N

6. DIMENSIONAL LUMBER AND WOOD BLOCKING SHALL BE KILN DRIED, FIRE RETARDANT, AND KEPT DRY THROUGHOUT DURATION OF CONSTRUCTION. LUMBER AND BLOCKING SHALL BE MECHANICALLY FASTENED BY MEANS OF BOLTS OR SCREWS; NAILING IS NOT ACCEPTABLE. JOINTS OF MULTIPLE LAYERS OF WOOD BLOCKING SHALL BE STAGGERED FROM CONTINUOUS LENGTHS OF LUMBER NO LESS THAN TEN FEET LONG, EXCEPT CUT AS NEEDED AT CORNERS, ETC.

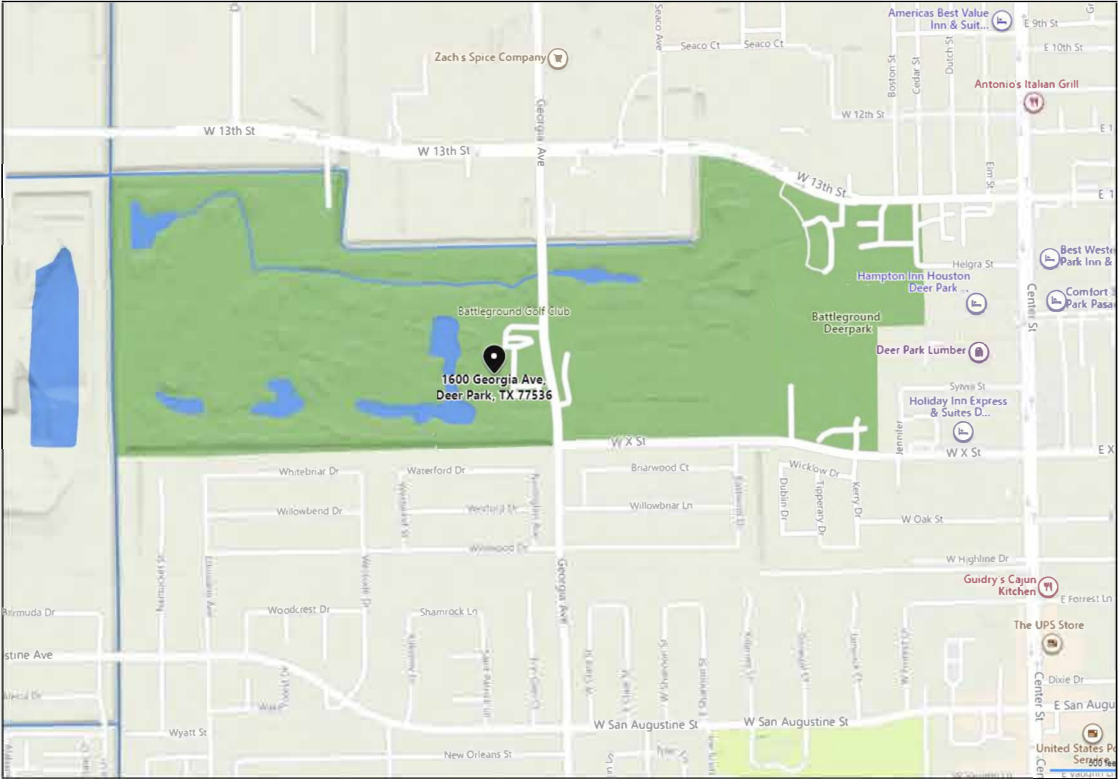
7. METAL EDGING, FLASHING, ETC. SHALL BE SUPPORTED BY WOOD BLOCKING ASSEMBLIES OF SAME THICKNESS OF THE ADJACENT RIGID INSULATION TO PROVIDE SECURE AND SOLID MOUNTING CONDITION. ANY ACCEPTANCE BLOCKING LESS THAN TWO INCHES THICK (NOMINAL) SHALL BE PLACED AT BOTTOM OF BLOCKING ASSEMBLY TO PROVIDE FULL DEPTH 2X BLOCKING FOR ATTACHMENT. WOOD BLOCKING SHALL BE SIZED SUCH THAT THE WOOD EXTENDS PAST THE EDGE OF THE METAL FLANGE OF THE FLASHING A MINIMUM OF ONE- AND ONE-HALF INCHES; CONFIRM EXTENSION DIMENSION PRIOR TO INSTALLATION.

8. ANY PLYWOOD SHALL BE INSTALLED IN ACCORDANCE WITH THE WRITTEN SPECIFICATIONS OF THE AMERICAN PLYWOOD ASSOCIATION (APA).

9. FOR THE PURPOSE OF PROTECTING INTERIOR FINISHES AND FACILITATE CONSTRUCTION PROGRESS, PHASED CONSTRUCTION IS ENCOURAGED WHENEVER NECESSARY AND TECHNICALLY PRACTICAL. THE INSTALLED MODIFIED BITUMINOUS BASE PLY MEMBRANE MAY SERVE AS A TEMPORARY ROOF DURING ROOF LEVEL CONSTRUCTION BY OTHER TRADES. UPON SUBSTANTIAL COMPLETION OF ROOF LEVEL CONSTRUCTION ACTIVITIES, AND APPROVAL FROM CONSULTANT, PROCEED WITH THE FULLY ADHERED FINISH MEMBRANE INSTALLATION AND RELATED COMPONENTS. COORDINATE INSTALLATION PRACTICES THE CONSTRUCTION TEAM. COLLABORATE WITH OTHER TRADES.

10. PROTECT INSTALLED ROOFING FROM ABUSE DURING CONSTRUCTION. COORDINATE AND COLLABORATE WITH ALL OTHER TRADES TO PRESERVE THE INTEGRITY OF INSTALLED ASSEMBLIES. IF EXCESSIVE ABUSE OCCURS, AN INFRA-RED MOISTURE ANALYSIS WITH REPORTING MAY BE REQUESTED, BY THE CONSULTANT, TO VERIFY DRY SUBSTRATE CONDITIONS AND TO DETECT CONSEQUENTIAL DAMAGE. REPORTING WILL OUTLINE CORRECTIVE MEASURES REQUIRED.

CONSTRUCTION NOTES CONTINUED ON SHEET CS.2



Key Plan

N

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Deer Park, Texas 77536

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SHEET NAME	
CONSTRUCTION NOTES	
SHEET NO.	
CS.1	

Construction Notes (continued):

11. ALL SHEET METAL COMPONENTS CORNERS, INTERSECTIONS, TERMINATIONS, ETC. SHALL BE CONSTRUCTED OF A SINGLE PIECE OF METAL WITH ADJACENT LEGS EXTENDING NO LESS THAN EIGHTEEN INCHES IN EACH DIRECTION WITH JOINTS FULLY SOLDERED, EXCEPT FOR PRE-FINISHED METAL.
12. ANY SEALANT USED SHALL BE COMPATIBLE WITH ADJACENT MATERIALS, PRIMED AND APPLIED PER MANUFACTURER'S WRITTEN SPECIFICATIONS AND COLOR MATCHED FROM MANUFACTURER'S FULL RANGE OF COLORS (AS SELECTED BY ARCHITECT) TO THE MATERIAL TO WHICH IT IS APPLIED.
13. GUTTER SIZES SHALL BE CALCULATED BY CONTRACTOR ACCORDING TO THE DESIGN CRITERIA OUTLINED IN SMACNA AND/OR OTHER AHJ. THE CONTRACTOR SHALL COMPLETE GUTTER SIZE CALCULATIONS TO CONFIRM REQUIRED SIZES AND SIZE ALL GUTTERS TO MATCH THE GOVERNING SIZE REQUIRED. GUTTERS SHALL BE INSTALLED WITH ADEQUATE SLOPE TO PROVIDE POSITIVE DRAINAGE TO DOWNSPOUTS. GUTTER EXPANSION JOINTS SHALL BE EQUALLY SPACED ALONG ENTIRE SPAN OF GUTTER AT INTERVALS NOT TO EXCEED THIRTY FEET. GUTTERS SHALL BE INSTALLED WITH SPACERS MADE OF 1/8" BY ONE INCH GALVANIZED STEEL SPACED NO MORE THAN THREE FEET ON CENTER AND SHALL HAVE EXTERNAL BRACKETS MADE OF 1/8" BY ONE INCH GALVANIZED STEEL AND WRAPPED WITH MATCHING PRE-FINISHED METAL (24 GAUGE) STAGGERED FROM SPACERS AND SPACED NO MORE THAN THREE FEET ON CENTER.
14. GUTTERS SHALL BE EQUIPPED WITH DOWNSPOUTS OF APPROPRIATE SIZE, AS DETERMINED BY CONTRACTOR USING SMACNA REQUIREMENTS, AT INTERVALS NOT TO EXCEED THIRTY FEET, NO LESS THAN FIVE FEET FROM NEAREST GUTTER LAP JOINT. ALL GUTTERS SHALL HAVE AT LEAST ONE DOWNSPOUT, GENERALLY LOCATED AT BUILDING CORNERS BUT LOCATED SO WATER WILL NOT NEED TO FLOW AROUND CORNERS. ALL DOWNSPOUTS SHALL BE SIZED EQUALLY BASED ON GOVERNING SIZE REQUIRED.
15. DOWNSPOUTS SHALL BE SECURED WITH MATCHING PRE-FINISHED METAL STRAPS SPACED NO MORE THAN FIVE FEET ON CENTER VERTICALLY. AT A MINIMUM, EACH DOWNSPOUT SHALL HAVE STRAP AT HIGHEST POINT WHERE DOWNSPOUT INTERSECTS WALL, AT BOTTOM OF DOWNSPOUT AT EXIT DISCHARGE LOCATION. DOWNSPOUTS EXTENDING TO THE GROUND SHALL BE PROTECTED WITH HEAVY GAUGE METAL PROTECTOR AS INDICATED AND BE PROVIDED WITH CONCRETE SPLASH BLOCK.
16. PROVIDE CONCRETE SPLASH BLOCKS WITH PROTECTIVE PADDING, AT EACH ROOF LEVEL DOWNSPOUT. REPLACE BROKEN SPLASH BLOCKS WHEN PRESENT.
17. PROVIDE SUITABLY SIZED SERVICE LINE PIPE ROLLER SUPPORT DEVICES ALL OTHER SERVICE LINES, SUCH AS CHILLED WATER LINES, GAS LINES, AND ETCETERA. ADHERE TO THE MANUFACTURER RECOMMENDATIONS FOR SIZING, SPACING, ELEVATION CHANGE, INTERSECTIONS AND CORNERS. PRIOR TO INSTALLING MANUFACTURED PIPE SUPPORTS AND UPON THE INSTALLATION OF THE FINISH PLY MEMBRANE, FURNISH AND INSTALL COMPATIBLE PROTECTIVE PADDING UNDER CONDENSATION LINES PIPE ROLLER SUPPORT PADS.
18. PIPES AND CONDUITS SHALL BE SUPPORTED BY PORTABLE PIPE HANGERS WITH COMPOSITE BASES AND GALVANIZED STEEL COMPONENTS. SPACING SHALL BE ACCORDING TO MANUFACTURER STANDARDS, BUT SHALL NOT EXCEED TEN FEET AND ONE FOOT FROM INTERSECTION AT ALL BENDS/CHANGES IN DIRECTION. WOOD, PLASTIC, FOAM, AND FIELD FABRICATED UNITS SHALL NOT BE ACCEPTABLE. COORDINATE LOCATION OF PIPES, CONDUITS, ETC. TO PROVIDE CLUSTERED CONFIGURATION TO MINIMIZE THE NUMBER OF PIPE SUPPORTS. ANY PIPING OR CONDUIT EXTENDING FROM ROOF SHALL RISE NO LESS THAN 16" ABOVE FINISHED ROOF PLANE BEFORE TURNING HORIZONTAL TO RUN ALONG ROOFTOP. ALL PIPING OR CONDUIT SHALL EITHER SLOPE AWAY FROM ROOF OPENING OR BE PROVIDED WITH DRIP LOOP.
19. WALKWAY PROTECTION PADS SHALL BE PROVIDED AROUND THE FULL PERIMETER OF ANY MOTORIZED OR POWERED ROOFTOP EQUIPMENT, ROOFTOP ACCESS HATCHES AND DOORWAYS, LADDERS AND OTHER ROOFTOP VERTICAL ACCESS, ELECTRICAL DISCONNECTS AND ANY OTHER HIGH TRAFFIC POINTS AND ACCESS OF ANY TYPE. UPON INSTALLATION OF THE SPECIFIED ROOFING, FURNISH AND INSTALL SPECIFIED PROTECTIVE PADDING AT ALL POINTS OF ACCESS OR EGRESS, AND AT DESIGNATED MECHANICAL UNITS REQUIRING REGULAR SERVICE, OR OTHERWISE SPECIFIED. DO NOT CROSS FIELD SEAMS UNLESS APPROVED BY THE CONSTRUCTION TEAM THROUGH THE STIPULATED METHOD OF COMMUNICATION, FOR APPROVAL. HEAT WELD PERIMETERS AND ADHERE THE FIELD OF THE PROTECTIVE PADDING. CONFIGURE WITH A WEEP SYSTEM, TO VENT ENTRAPPED MOISTURE, WHEN INSTALLING THE PROTECTIVE PADDING.
20. PROVIDE THOROUGH CLEANUP AND ENHANCEMENTS IDENTIFIED DURING THE FINAL INSPECTION, WITHIN TEN WORKING DAYS, UNLESS OTHERWISE BY THE CONSTRUCTION TEAM

21. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OTHER TRADES AND PROVIDE NECESSARY PROTECTION OF ROOF SURFACE, IN ACCORDANCE WITH ROOFING MANUFACTURER'S REQUIREMENTS, THROUGHOUT THE DURATION OF THE PROJECT.
22. PROTECT INSTALLED ROOFING FROM DAMAGE, DEBRIS, DISCOLORATION, ETC. AS A RESULT OF CONSTRUCTION ACTIVITIES. DO NOT USE COMPLETED ROOF AS WORK SURFACE. ADEQUATE PROTECTION OF ROOF MEMBRANE SHALL BE PROVIDED FOR ANY SUBSEQUENT WORK TO BE COMPLETED ON THE ROOF (MECHANICAL, ELECTRICAL, PLUMBING, ETC.).
23. CURBS, PENETRATIONS, ETC. SHALL BE CONSTRUCTED AS DETAILED. ANY INSTANCE WHERE A PREFABRICATED ITEM CAN BE USED IN LIEU OF FIELD CONSTRUCTED ITEMS DETAILS, IT SHALL BE THE CONTRACTOR'S OPTION TO SUBMIT A SUBSTITUTION FOR REVIEW AND APPROVAL BY THE ARCHITECT WITH NO ADDITIONAL TIME OR COST TO BE INCURRED BY THE OWNER. WHETHER PREFABRICATED OR FIELD CONSTRUCTED, ALL HORIZONTAL AND VERTICAL CLEARANCES SHALL BE IN ACCORDANCE WITH ALL GOVERNING JURISDICTIONS AND TRADE ORGANIZATIONS. EQUIPMENT CURBS SHALL BE EXTEND A MINIMUM OF SIXTEEN (16) INCHES ABOVE PLANE OF FINISHED ROOF SURFACE.
24. MECHANICALLY ATTACH ALL ROOF MOUNTED ACCESSORIES TO CURBS; TWELVE INCHES O.C., MINIMUM TWO MECHANICAL FASTENERS PER SIDE. INSTALLATION OF ROOF MOUNTED ACCESSORY TIE DOWN COMPONENTS.
25. PROVIDE OR COORDINATE WITH OTHER TRADES, REQUIRED UTILITY AND STRUCTURAL COMPONENTS OR CONNECTIONS, FOR THE FUNCTIONAL USE OF ALL CONTRACTOR SUPPLIED EQUIPMENT OR ACCESSORIES.
26. FLOOD TEST ALL PRIMARY AND OVERFLOW ROOF DRAINS TO DETECT LEAKS PRIOR TO INTERIOR FINISH WORK BEGINNING. COORDINATE AND CONDUCT FLOOD TESTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE OR AT THE DIRECTION OF THE ARCHITECT, COMPLETE TEST AND PROVIDE PHOTO DOCUMENTATION AND REPORT OF COMPLETED FLOOD TESTS. ANY FLOOD TEST COMPLETED WITHOUT THE NOTIFICATION OF THE ARCHITECT WILL NOT BE ACCEPTED AND MUST BE RETESTED.
27. ENSURE TIGHTNESS AND FUNCTIONALITY ALL ROOF DRAIN COMPONENTS AND ACCESSORIES. REPLACE BROKEN COMPONENTS WHEN PRESENT.
28. SHEET METAL EDGING, FASCIA, COPING SHALL BE SECURED BY CONTINUOUS CLEAT COMPLYING WITH REQUIREMENTS OF THE NATIONAL ROOFING CONTRACTORS' ASSOCIATION (NRCA). FASTEN ALL CONTINUOUS CLEATS NO LESS THAN SIX INCHES ON CENTER, STAGGERED UNLESS SPECIFICALLY ALLOWABLE BY NRCA. CLEAT JOINTS SHALL BE STAGGERED FROM ATTACHMENT MATERIALS (BLOCKING) AND ATTACHED MATERIALS (COPING, FASCIA, ETC.) WITH ALL JOINTS IN EXPOSED SHEET METAL WORK HAVING BACKUP AND COVER PLATES. EXPOSED SHEET METAL EDGES SHALL BE HEMMED.
29. PARAPETS AND OTHER WALLS RECEIVING COPING SHALL BE TOPPED WITH BEVELED OR SLOPED (ONE HALF INCH PER FOOT MINIMUM) WOOD IN SUCH A WAY TO NOT CREATE GAPS TO DRAIN TOWARD ROOF SIDE OF WALL, NOT TO EXTERIOR, UNLESS SPECIFICALLY INDICATED OTHERWISE.
30. IN-PLACE MOCK-UPS OF SHEET METAL FASCIA, EDGES, COPINGS, PARAPET CAPS, GUTTERS, DOWNSPOUTS, EXPANSION JOINTS, ETC. SHALL BE COORDINATED, CONSTRUCTED AND APPROVED PRIOR TO FULLY EXECUTING THE SHEET METAL WORK INDICATED HEREIN. APPROVED MOCK-UPS MAY BE INCORPORATED INTO THE FINAL WORK.
31. SHEET METAL SHALL BE SEPARATED FROM LUMBER AND BLOCKING BY ROOFING MATERIAL OR SECONDARY WATERPROOFING MEMBRANE AS REQUIRED TO PROVIDE COMPLETE SEPARATION. SECONDARY WATERPROOFING MEMBRANES SHALL BE PROVIDED AT ALL FASCIA AND COPING TO COVER FULL SPAN OF FASCIA AND COPING. A SECONDARY WATERPROOFING MEMBRANE SHALL BE PROVIDED AT EDGE NAILERS TO FULLY COVER AND PROTECT WOOD BLOCKING. ENSURE SECONDARY WATERPROOFING MEMBRANE IS COMPATIBLE AND STABLE WITH ROOFING ASSEMBLY FOR DURATION OF EXPOSURE TO UV RAYS.
32. SHEET METAL FASCIA SECURED BY CLEAT SHALL HAVE PROFILE TALLER THAN SIX INCHES. WHERE FASCIA GREATER THAN SIX INCHES IN HEIGHT ARE REQUIRED, THE FASCIA SHALL BE CONSTRUCTED WITH MULTIPLE TIERS OF APPROXIMATELY EQUAL HEIGHTS, EACH FASCIA PROFILE HAVING ITS OWN CONTINUOUS CLEAT. MULTIPLE PROFILE FASCIA ASSEMBLIES SHALL HAVE SECONDARY SELF-ADHERED WATERPROOFING MEMBRANE MATERIAL AT EACH CLEAT SHINGLED FROM BOTTOM TO TOP TO PROVIDE COMPLETE WATERTIGHT FASCIA ASSEMBLY.
33. EXPOSED FASTENERS USED TO SECURE FLASHING, COUNTERFLASHING, CURBED DEVICES ETC. SHALL BE STAINLESS STEEL WITH BONDED NEOPRENE WASHERS. FASTENERS SHALL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS LISTED ABOVE OR BY SPECIFIC MANUFACTURER REQUIREMENTS FOR PROJECT SPECIFIC CONDITIONS.

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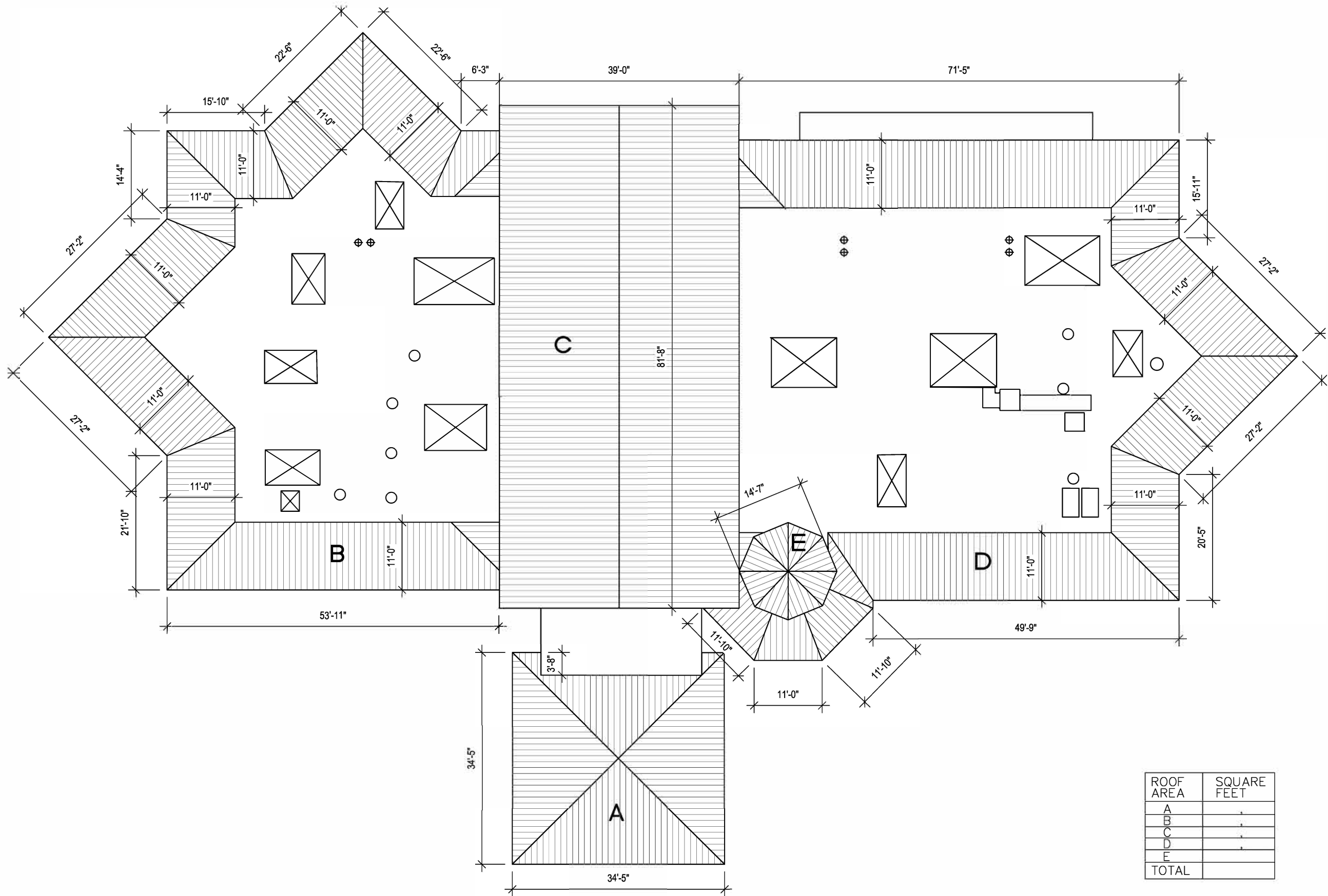
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SHEET NAME

CONSTRUCTION NOTES

SHEET NO.

CS.2



ROOF PLAN

SCALE 1/16" = 1'-0"

ROOF AREA	SQUARE FEET
A	.
B	.
C	.
D	.
E	.
TOTAL	

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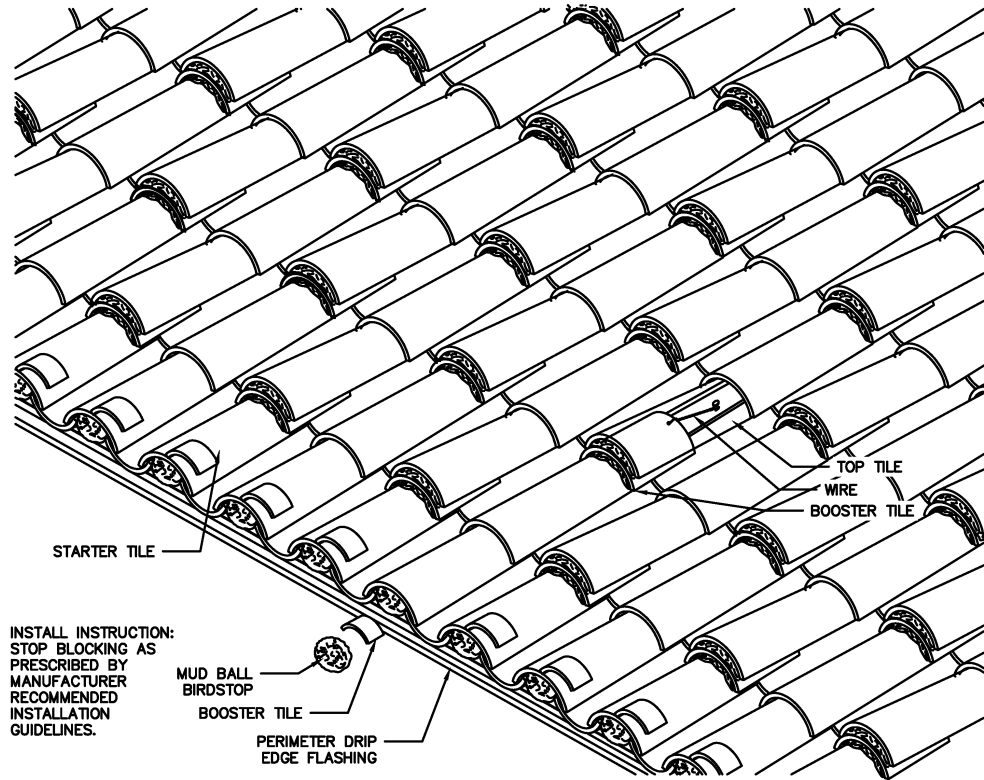
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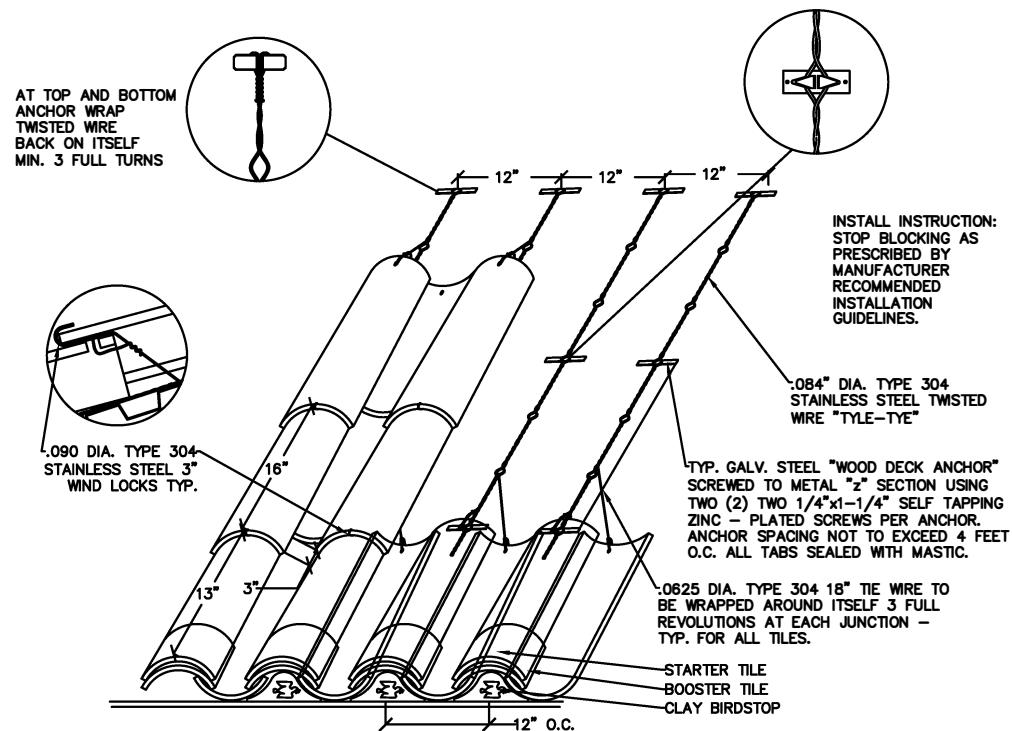
ROOF PLAN

SHEET NO.

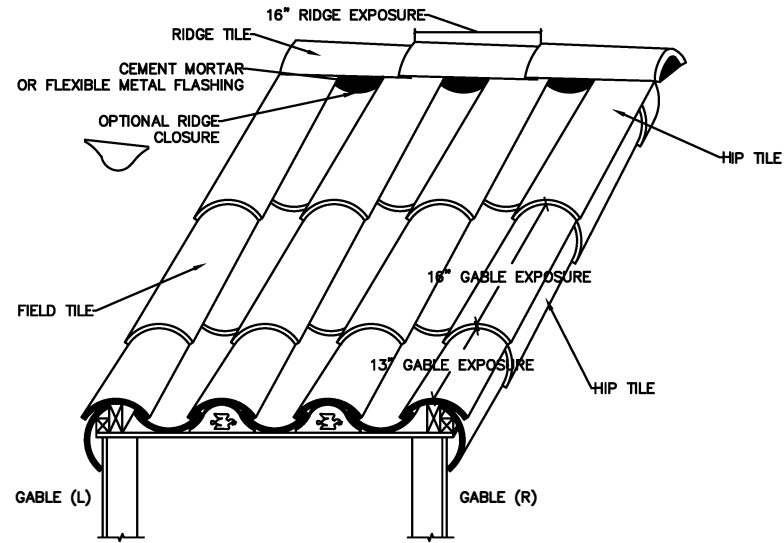
R1.0



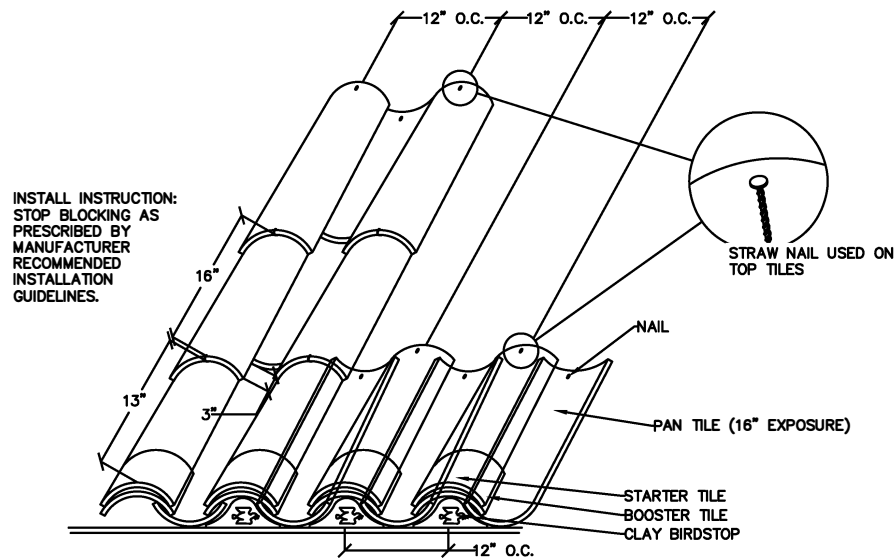
1 TWO PIECE MORTAR BOOSTING
N/A



3 FIELD DETAIL
N/A



2 FIELD DETAIL
N/A



4 NAIL ON SYSTEM
N/A



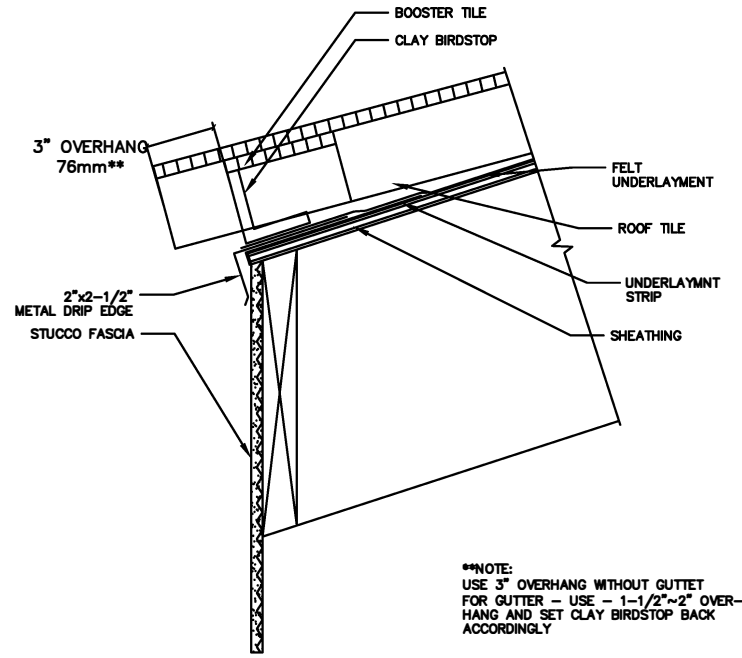
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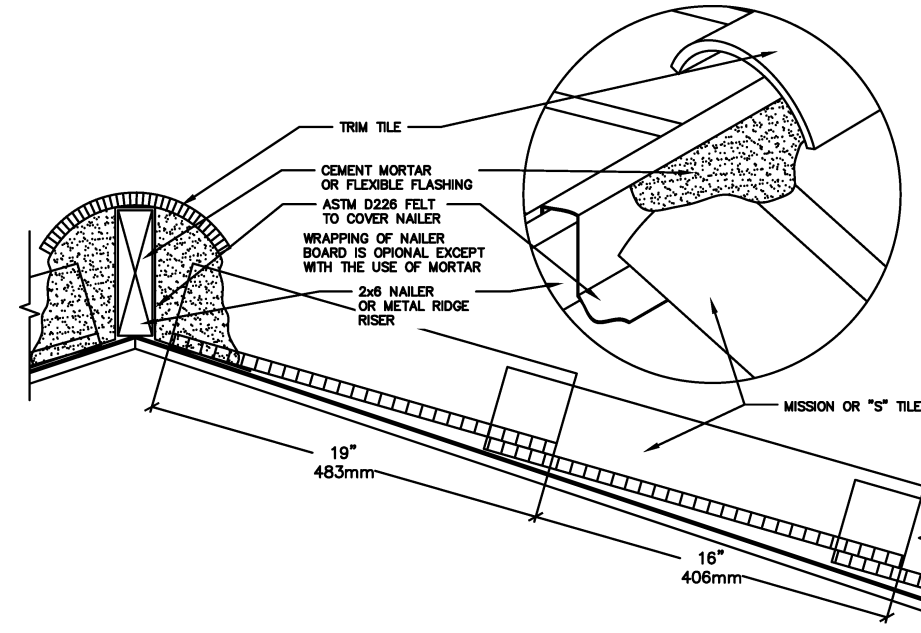
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5

EAVE STUCCO FASCIA

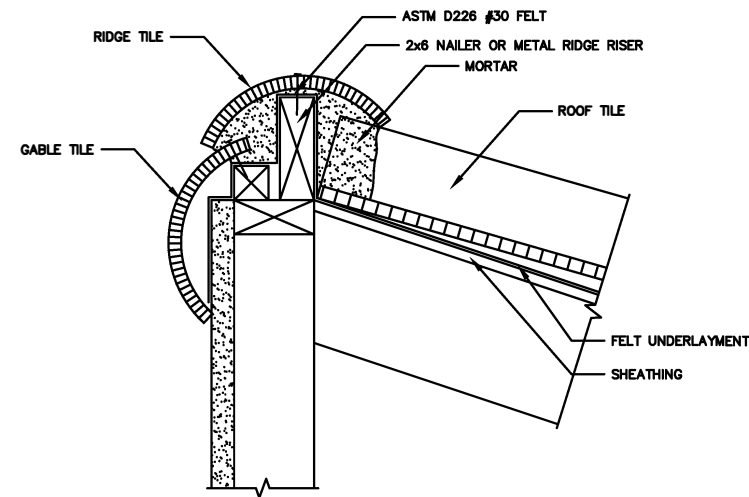
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RIDGE & HIP PLATE END DETAIL

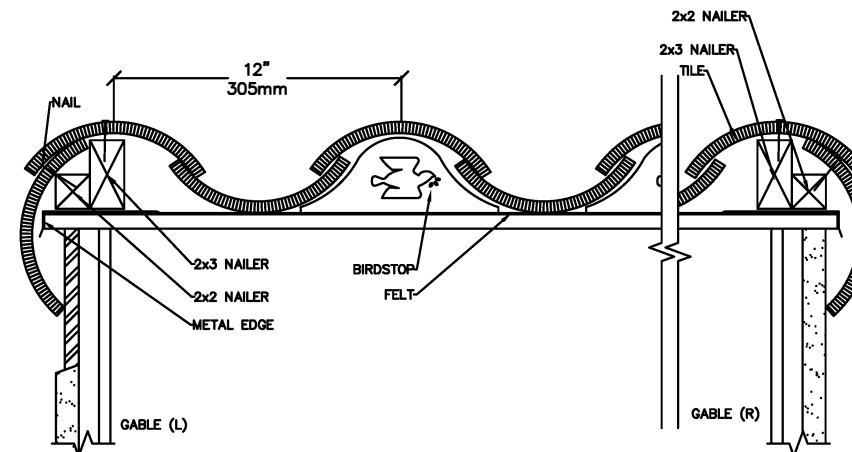
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7

TILE RIDGE: SINGLE SLOPE

N/A



8

GABLE / EAVE DETAIL

N/A

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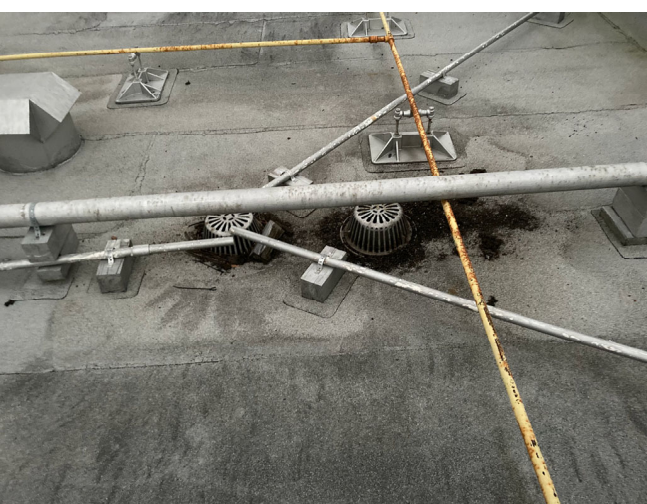
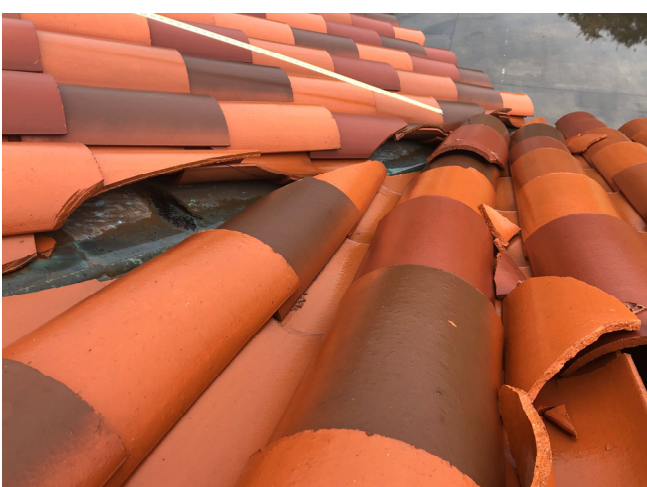
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SHEET NO.

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The City of Deer Park, Texas
710 E. San Augustine Street
Deer Park, Texas 77536

REVISION DATES:
07.13.2021

DATE ISSUED
01.19.2021

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SHEET TITLE:
Existing Roofing Conditions

PAGE NO.:



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Deer Park, Texas 77536

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Existing Roofing Conditions

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SECTION 01 10 00

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Related documents include Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Pricing must be in accordance with the Omnia Partners Public Sector Contract Number R180903, Roofing, Roofing Services and Job Order Contracting (JOC). This delivery method provides local, best in class and pre-qualified vendors, party to the intergovernmental contract. Region 4 ESC of Houston, Texas serving as the Lead Government Agency.
 - 1. Certified Proposal Number: TX-R180903-312727
 - 2. Service Request Number 5043643
 - 3. The most current form of the contracts terms and conditions apply, for the benefit of the City of Deer Park.
- C. The intent of this project will be to bring the clay tile roofing systems to acceptable condition and keep the inside of the Golf Club dry & safe from a wet environment

1.2 DEFINITIONS

- A. Roofing Terminology: See glossary of terms within the latest edition of the National Roofing Contractors Association (NRCA), Roofing and Waterproofing Manual, and other stipulated resources, for definition of terms related to roofing work in this Section.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Roof plan showing types and orientation of roof deck and orientation of roofing.
 - 2. Fastening spacings and patterns.
 - 3. Prefinished sheet metal color charts.
 - 4. Tile color chart with all manufacturers written instructions for installation, and detail drawings.
 - 5. Anticipated scheduling.
 - 6. Safety Plan.
 - 7. Key employee list with regular and after hour points of contact.
 - 8. Site plan indicating progress by area and dates, set up, storage, portable toilets, and all other relevant details for construction.

1.4 INFORMATIONAL SUBMITTALS

- A. Contractor's Product Certificate: Submit certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.
- B. Key Personal Roster: Provide list of key personal with primary and secondary telephone number, and electronic mail addresses.
- C. Qualification Data: For Installer, Manufacturer, Professional Engineer, and Roofing Inspector.
 - 1. Indicating manufacturer has verified compatibility of roofing system components, including but not limited to: Roofing membrane, flashing sheets, adhesives, and sealants.

1.5 CLOSEOUT SUBMITTALS

- A. Executed copies of all warranties.
- B. Maintenance Data: To include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Installer shall have approval by manufacturer of accepted roofing system for application and issuance of specified warranty for a minimum of three (3) years. Proof of license agreement dated at least three years prior to date of bid opening.
- B. Installer shall have approval by manufacturer of accepted roofing system for application and issuance of specified warranty. Proof of license agreement dated at least three years prior to date of bid opening.
- C. Installer shall be an experienced single firm specializing in the type of roofing and sheet metal work specified with a minimum of five (5) years of previous successful experience on projects similar in size and scope.
- D. No subcontracting of sheet metal fabrication or installation will be accepted. Contractor must have a sheet metal shop on the company premises.
- E. Installer shall have a competent Superintendent, who is not performing roofing work, on site at all time while work is in progress, with full authority to act on behalf of the Contractor as his agent.
- F. Installing Contractors shall:
 - 1. Provide all means, methods and equipment to provide a safe, well organized work environment. Utilize toe rails, safety lines, and all other prudent equipment necessary to provide a safe workplace in accordance with stipulated projects requirements and Authorities Having Jurisdiction (AHJ).
 - 2. Contractors shall be deemed viable by the owner and all technical representatives.

3. Contractors must be considered approved or certified to install the roof system(s) established as the Basis of Design.
 4. Contractors must provide evidence of their companies' approval or certification by providing certificates of approval from the company specified as the basis of design.
 5. Upon request, provide a completed qualification statement and other relevant applications when requested by the Owner or Roofing Consultant. Qualification statements and other relevant applications may be requested from the Roofing Consultants office.
- H. Roofing Inspector Qualifications: A technical representative of manufacturer experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification.
- J. Retain paragraph below if Work of this Section is extensive or complex enough to justify a preinstallation conference. Preinstallation roofing conference is recommended with or without a preliminary roofing conference.
- G. Pre-installation Roofing Conference: Conduct conference at Project site.
1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 2. Review drawings and specifications.
 3. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 4. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 5. Examine substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 6. Review structural loading limitations of roof deck during and after roofing.
 7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 8. Review governing requirements for insurance and certificates, when applicable.
 9. Review temporary protection requirements for roofing system during and after installation.
 10. Review roof observation and repair procedures after roofing installation.
- 1.7 DELIVERY, STORAGE, AND HANDLING
- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. 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. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration 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.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.8 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.
- B. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
 1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of roofing sheet securely in place with joints and edges sealed.
 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.
 3. Remove temporary plugs from roof drains at end of each day.
 4. Remove and discard temporary seals before beginning work on adjoining roofing.

1.9 WARRANTY

- A. Manufacturer: Manufacturer's standard warranty form, covering work of this Section and extended system components indicated, in which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within the twenty (20) year period.
- B. Installer Warranty: Installer's warranty signed by Installer, covering the Work of this Section and extended system components indicated for a period of five (5) years.

SECTION 07 32 00

CLAY TILE ROOFING

PART 1 GENERAL

1.1 SCOPE

- A. Installation of Clay Tile Roofing assembly, associated carpentry, and sheet metal flashing.
- B. Summary Scope of Work includes:
 - 1. Coordination with management, mobilization, safety protection, and staging.
 - 2. Careful demolition of existing clay tile roofing system, flashing, and accessories.
 - 3. Onsite storage for all undamaged clay tile.
 - 4. Furnishment of new Clay Tile components and accessories.
 - 5. Inspection of existing wood roof decks, fascia, soffit, and trims. Attachment, repair or replacement where required to bring deteriorated conditions, sound.
 - 6. Installation of self-adhered waterproof membrane, shingle fashioned.
 - 7. Installation of Clay Tile Roofing assembly, with all required components, closures, accessories, methods of attachments, and flashing.
 - 8. Installation of new sheet metal flashing, trims, and drainage components.
 - 9. Demobilization of all construction related debris and storage area.
- C. Construction configuration:
 - 1. Wood deck
 - 2. Plywood substrate.
 - 3. Self-adhered waterproof membrane.
 - 4. Clay Tile Roofing assembly.
 - 5. Accessories.
- D. The intent of the Clay Tile Roofing assembly is to provide a weatherproof assembly(s) with aesthetically similar appearance to the existing clay tile assembly in place.

1.2 REFERENCES

- A. ASTM C 144 - Standard Specification for Aggregate for Masonry Mortar.
- B. ASTM C 150 - Standard Specification for Portland Cement.
- C. ASTM C 1167 - Standard Specification for Clay Roof Tiles.
- D. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
- E. ASTM D 1002 - Standard Test Method for Apparent Shear Strength of Single-Lap-Joint Adhesively Bonded Metal Specimens by Tension Loading.
- F. ASTM D 2626 - Standard Specification for Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing.
- G. ASTM D 2822 - Standard Specification for Asphalt Roof Cement.
- H. IAPMO UES Evaluation Report 0411 - Clay Roof Tiles.
- I. IAPMO UES ER-2015 - TRI Concrete and Clay Roof Tile Installation Manual

- J. ICC Evaluation Service Evaluation Report - ESR-1017 Clay Roof Tile.
- K. California Title 24 - California's Energy Efficiency Standards for Residential and Nonresidential Buildings.
- L. TRI Cold & Snow Concrete and Clay Tile Design Criteria for Cold and Snow Regions.
- M. TRI Concrete and Clay Roof Tile Installation Manual Fifth Edition
- N. FRSA/TRI Florida High Wind Tile Installation Manual, Revised Fifth Edition, 2014.

1.3 DESIGN REQUIREMENTS

- A. Clay Roof Tile materials and installation shall conform to the requirements of ICC-ES, ESR-1017.
- B. Roofing tile materials and installation shall conform to the requirements of the applicable building code.

1.4 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Shop Drawings: Indicate metal flashing profiles, joint locations, fastening locations, and installation details. Indicate tile layout with location of cut and special shaped tiles identified.
- C. Selection Samples: For each finish product specified, two complete sets of tile colors representing manufacturer's full range of available colors and patterns.
- D. Verification Samples: For each finish product specified, two full size samples representing actual product, color, and patterns.
- E. Certificates of Compliance: Submit to certify compliance with referenced standards.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum five years documented experience producing concrete roof tile and member of Tile Roof Institute.
- B. Installer Qualifications: Minimum five years documented experience installing products specified in this section and/or supervision by a manufacturers authorized installation representative.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Mock-up shall be a minimum of a 10 foot (3.05 M) by 10 foot (3.05 M) area and include the edge, ridge, valley and other typical transition conditions anticipated.
 - 3. Do not proceed with remaining work until installation workmanship and appearance is approved by Architect.
 - 4. Accepted mock-up may remain as part of Work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging with labels intact until ready for installation.
- B. Deliver products to project site in manufacturer's unopened pallets, labeled with data indicating compliance with specified requirements.
- C. Maintain dry storage area for products of this section until installation of products.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Do not overload the roof. Distribute stacks of tile uniformly on roof at not greater than 12 inches (305 mm) in height.

1.8 WARRANTY

- A. Roof Tile: Manufacturer's Transferable Limited 50-year Clay Product warranty.
- B. Installation Warranty: Warrants products of this section, as installed, to be in accord with the Contract Documents and free from faults and defects in materials and workmanship for a period of 3 years after completion.

1.9 EXTRA MATERIALS

- A. Provide an additional 1 percent of installed roof tiles, but not less than one full square, for Owner's use in roof maintenance.
- B. Furnish extra materials packaged with protective covering for storage and identified with labels clearly describing contents.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with the requirements of this section, products from by one of the following manufacturers
 - 1. MCA Clay Roof Tile.
 - 2. Boral Tile.

2.2 CLAY ROOF TILE

- A. Clay Tile General:
 - 1. Made with up to 59 percent recycled raw materials and are 100 percent recyclable.
 - 2. Class A fire rated.
 - 3. Cool Roof and Energy Star rated.
 - 4. Color: Match existing colors
 - 5. Size: Match existing sizes
 - 6. Architect to have final approval of size and color

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify surfaces are uniform free of ridges, warp or voids, smooth, clean and dry
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result under the project conditions.

3.3 INSTALLATION:

- A. Underlayment: Install in accordance with the manufacturer's instructions.
 - 1. For roof slopes of 3:12 to less than 4:12, two layers are required.
 - 2. For pitches of 4/12 and greater: Minimum one layer is required.
 - 3. Insulation stops are required in configurations recommended by manufacturer.
- B. Flashings: Install Ribbed Valley Metal according to Manufacturer's installation instructions.
 - 1. Sides of dormers, chimneys and other walls, extend flashing at least 6 inches up vertical surface.
 - a. Extend flashing under tile at least 4 inches (102 mm) and turn edge up 1-1/2 inches (38 mm).
 - b. Lap Joints: 3 inches (76 mm), minimum.
 - 2. At wood saddles and returns, line with manufacturer's recommend flashing extending up roof slope not less than 14 inches, and up vertical walls not less than 6 inches, and thoroughly counter flash.
 - 3. Make all counter flashing plugged, pointed and secure.
- C. Birdstops, boosters and starters for profiled tiles only:
 - 1. Install clay birdstops along entire length of all eaves.
 - 2. Install first course of pan tile leaving a 2 to 3 inch overhang at eave.
 - 3. Install 3 inch (76 mm) booster tiles on top of birdstops.
 - 4. Install 15 inch (381 mm) starter tiles on top of booster tiles along perimeter of all eaves.
- D. Eave Closures:
 - 1. Prefabricated metal eave closure; profile to match tile, fastened at minimum 18 inches (457 mm) on center along eave.
- E. Fasteners:
 - 1. Follow manufacturer's installation recommendations.
- F. Install field tile in courses beginning at eave working up incline of roof deck.
 - 1. Follow manufacturer's installation recommendations and guidelines
 - 2. As an alternate, end caps can be embedded in cement mortar for a more rustic appearance.

3. As an alternate, cover tiles can be added using booster tiles laid dry or laid in cement mortar.
 4. Install hip and ridge tiles:
 - a. Provide cement mortar or other approved materials at all hips and ridges to completely fill voids and to weatherproof the roof.
 - b. All hip, ridge and first row of cover tiles after gable roll shall be set in cement mortar and fastened by non-corrosive nails.
 5. All tiles in contact with cement mortar shall be immersed in water for two minutes before laying.
 6. To avoid color problems on roof:
 - a. Load roof tiles from different pallets.
 - b. Visually inspect application from the ground level after installing 100 tiles.
 - c. Visually verify that roof tile color is uniform and even, and verify that tile courses are straight and true.
 7. Correct any color or installation problems before proceeding with the installation.
 8. Complete installation to provide weather tight service.
- G. Flashing at Plumbing Stacks, Pipes, Turbines, Vents, Etc:
1. Follow manufacturer's installation recommendations.
- H. Coatings: Apply color coordinated paint to all exposed metal flashings.
- 3.4 CLEANING
- A. Remove all broken tile, debris and excess tile from roof.
 - B. Sweep cut tiles clean.
- 3.5 REPAIR AND REPLACEMENT
- A. Damaged Tile:
 1. Break out damaged roof tile.
 2. Repair torn underlayment.
 3. Drive fastener flush.
 4. Apply minimum 3/8 inch (10 mm) by 2 inch (51 mm) bead of approved adhesive on tile in course below replacement tile.
 5. Immediately set replacement tile in position assuring proper contact.
 - B. Damaged Small Valley and Hip Cuts:
 1. Apply a minimum of 3/8 inch (10 mm) by 2 inch (51 mm) bead of approved adhesive at head of cut tile.
 2. Immediately set tile in course above in position assuring proper contact.
- 3.6 PROTECTION
- A. Protect installed products until completion of project.
 - B. Touch-up, repair or replace damaged products before Substantial Completion.