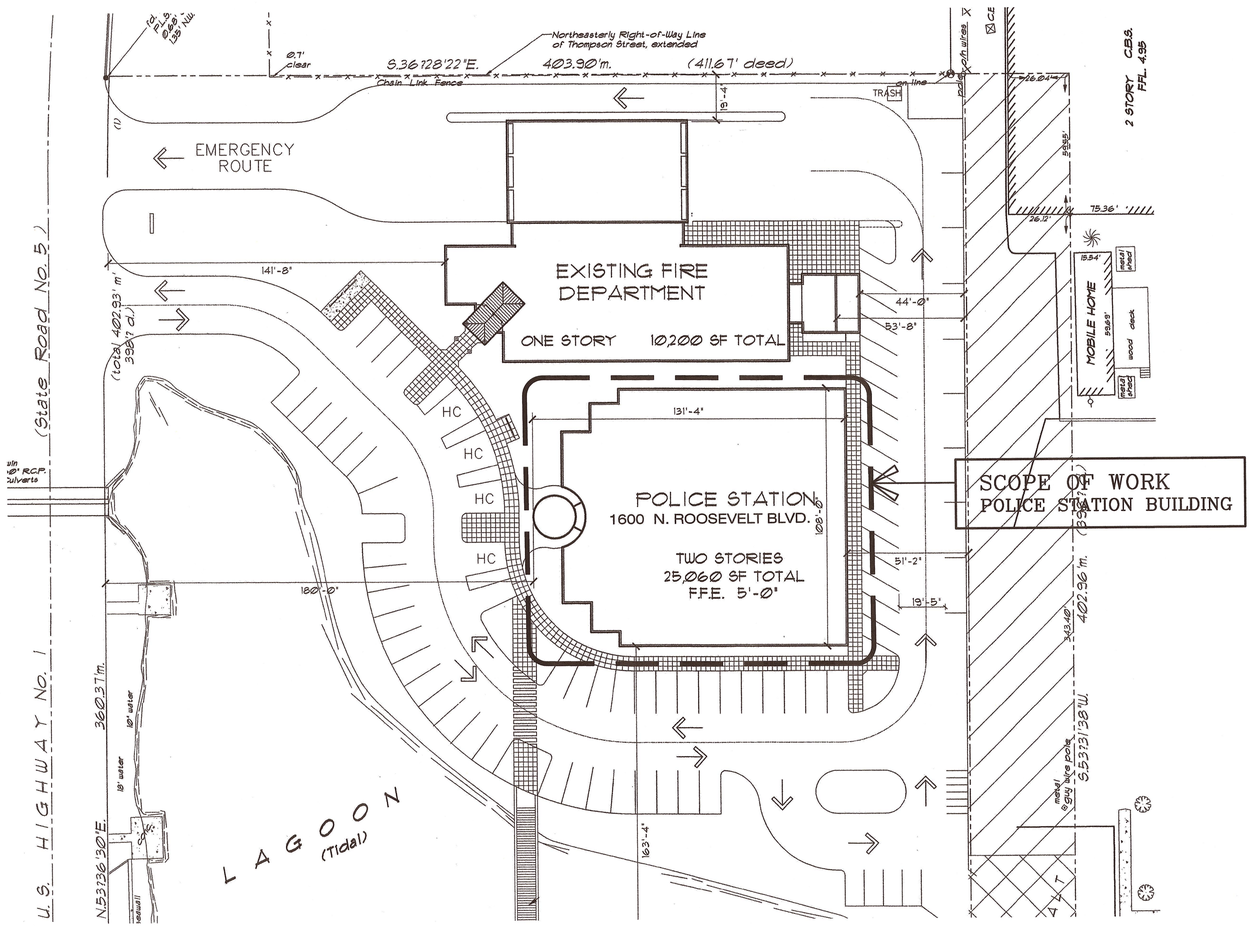
CITY OF KEY WEST POLICE DEPARTMENT

1600 NORTH ROOSEVELT BOULEVARD
ROOF REPLACEMENT



SITE PLAN

PLAN INFORMATION BASED ON THE BUILDINGS ORIGINAL CONSTRUCTION DRAWINGS DATE 01-17-2000 PROVIDED BY THE CITY FOR USE.

SCALE : 1" = 30'-0"

KEY WEST CITY COMMISSIONERS

MAYOR CRAIG CATES

COMMISSIONER JIMMY WEEKLEY,	DISTRICT I
COMMISSIONER MARK ROSSI,	DISTRICT II
COMMISSIONER BILLY WARDLOW,	DISTRICT III
COMMISSIONER TONY YANIZ,	DISTRICT IV
COMMISSIONER TERI JOHNSTON,	DISTRICT V
COMMISSIONER CLAYTON LOPEZ,	DISTRICT VI

CITY MANAGER JAMES K. SCHOLL

SHEET INDEX

A-1	COVER SHEET - SITE PLAN
A-2	EXISTING ROOF PLAN - DETAILS
A-2.1	EXISTING ROOF - PHOTOS
A-3	PROPOSED ROOF PLAN - DETAILS
A-3.1	ROOF DETAILS
A-4	SPECIFICATIONS
S-1	WIND LOADING

DESIGN CRITERIA FOR ROOF REPLACEMENT

FLORIDA BUILDING CODE 2010; RISK CATEGORY IV; EXPOSURE D AND ULTIMATE WIND SPEED = 200 MPH

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ROOF
REPLACEMENT

1600 NORTH ROOSEVELT BLVD.
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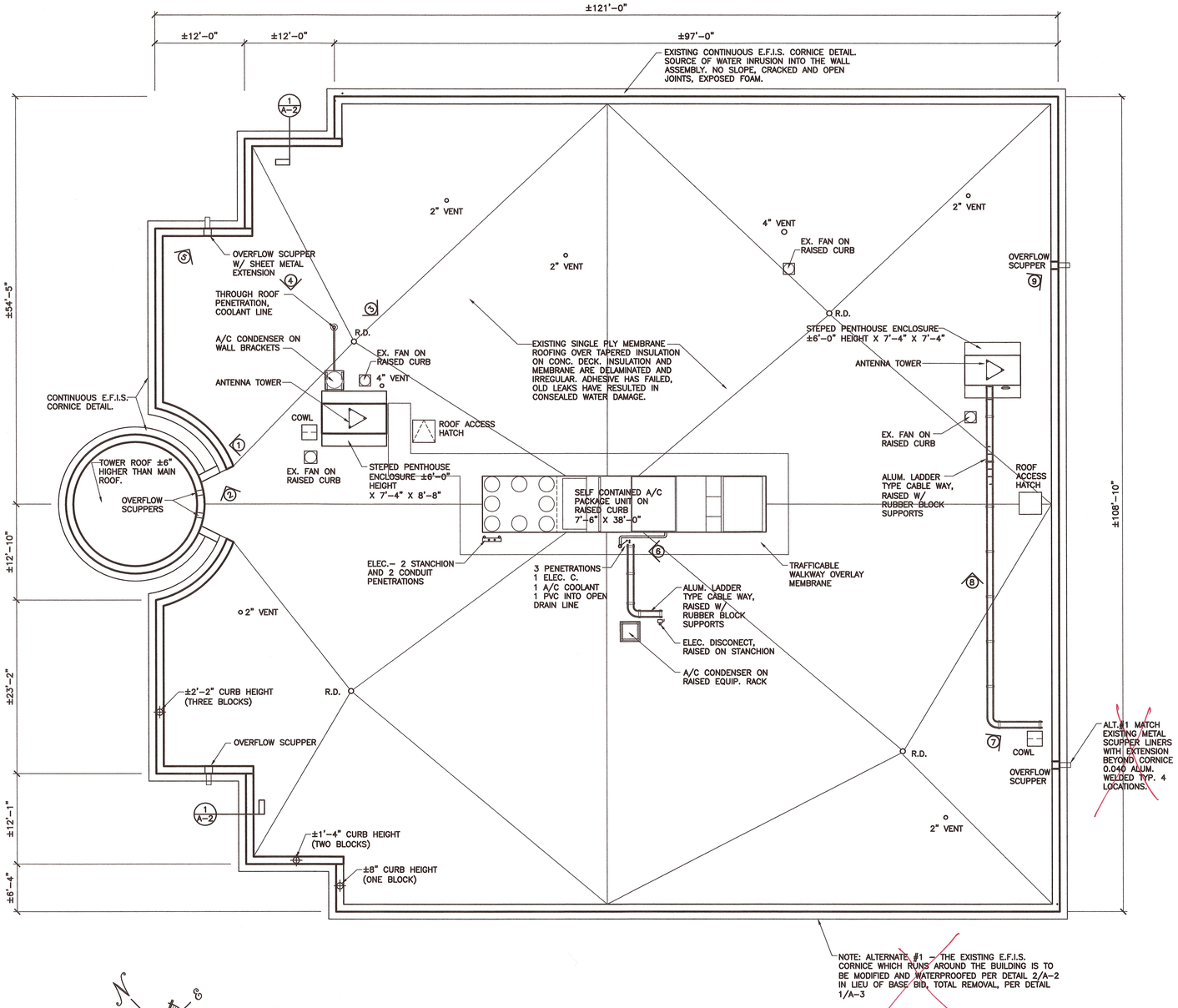
DATE
08-06-14 50% REVIEW
09-18-14 95% REVIEW
09-26-14 BID

REVISIONS

DRAWN BY

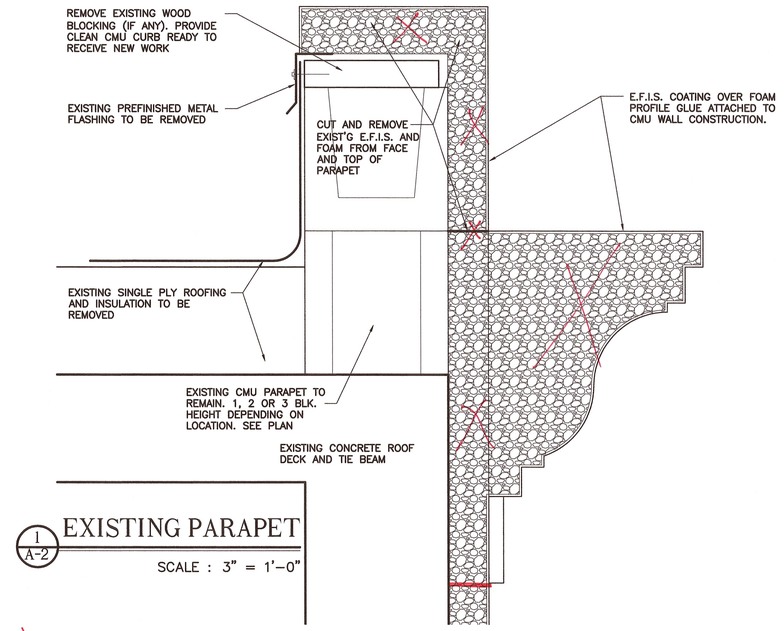
PROJECT NUMBER
1304

A-1



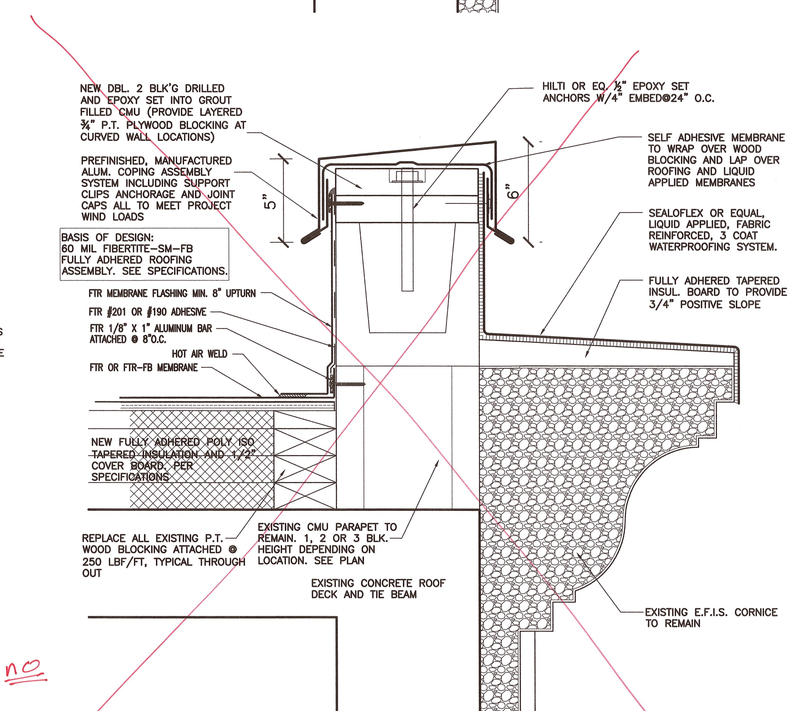
EXISTING ROOF PLAN

SCALE : 1/8" = 1'-0"



1/A-2 EXISTING PARAPET

SCALE : 3" = 1'-0"



no

2/A-2 ALTERNATE #1 - NEW PARAPET TREATMENT

SEE DETAIL 1/A-3 FOR BASE BID PARAPET TREATMENT SCALE : 3" = 1'-0"

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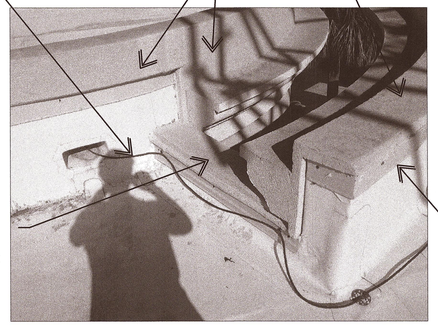
A-2

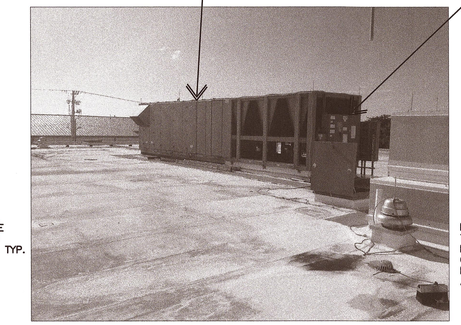
KEY WEST POLICE DEPARTMENT - ROOF REPLACEMENT

KEY WEST, FLORIDA

1/A-2 ENTRY 'TOWER' CORNICE DETAILS

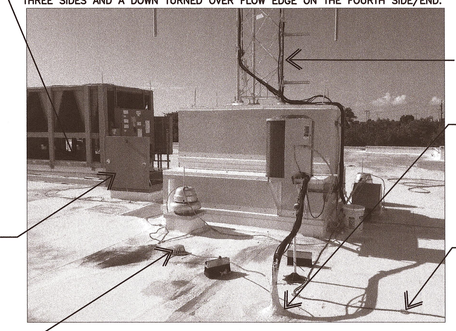


2/A-2 ENTRY 'TOWER' CORNICE DETAILS

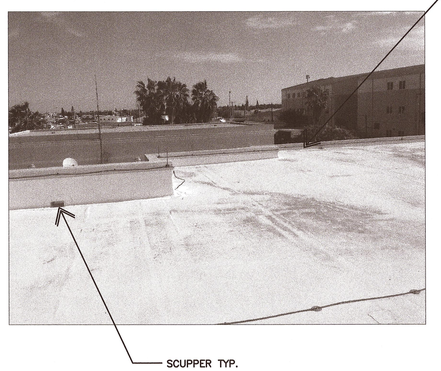


3/A-2 A/C EQUIPMENT

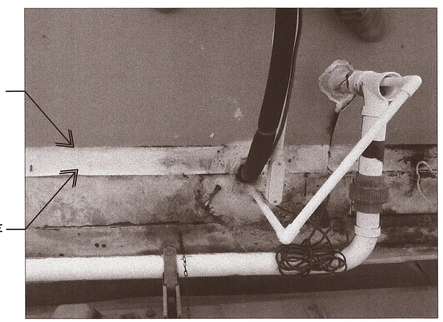
NOTE: THE OPEN PORTION OF THE EQUIPMENT INCLUDES AN EXISTING MEMBRANE IN THE BOTTOM OF THE "TRAY" APPROX. 10" ABOVE THE MAIN ROOF LEVEL. ALL EQUIPMENT IS SUPPORTED BY A METAL FRAME APPROX. 4 TO 6" ABOVE THE MEMBRANE. THERE ARE NO PENETRATIONS, PROVIDE AN ADDITIONAL MEMBRANE OVER EXISTING WHICH CAN SLIDE IN FROM THE END OF THE UNIT, BELOW THE EQUIPMENT SUPPORT FRAME. FULLY ADHERE WITH UPTURN EDGES UNDER THE EXISTING CURB CAP SIMILAR TO THE EXISTING MEMBRANE. INSURE COMPATIBILITY OF MATERIALS, PROVIDE A WATER TIGHT SEAL AT THREE SIDES AND A DOWN TURNED OVER FLOW EDGE ON THE FOURTH SIDE/END.



4/A-2 STEPPED PENTHOUSE & ANTENNA



5/A-2 RAISED, STEPPED CURB AND SCUPPER



6/A-2 MULTIPLE PENETRATION

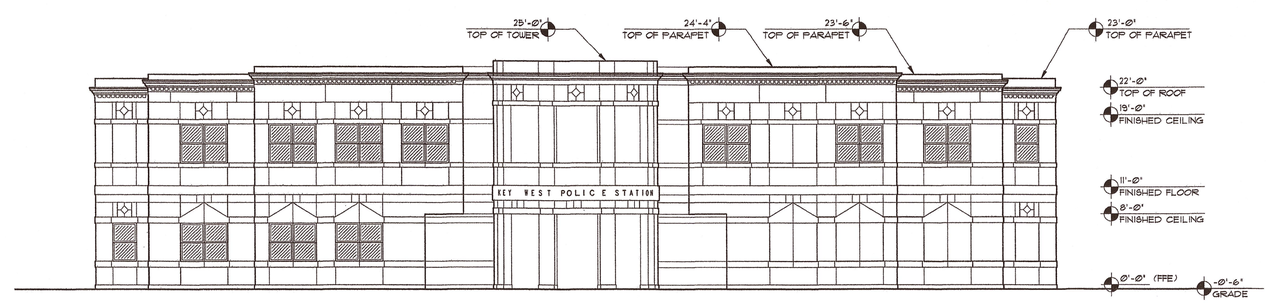
PROVIDE NEW PITCH POCKET
PER DTL.1/A-3.1
AND TYPICAL PENETRATION
FLASHING AT PVC CONDENSATE LINE

7/A-2 CABLE WAY AND COWL

8/A-2 ALUM. LADDER TYPE CABLE TRAY

9/A-2 SCUPPER EXTENSION AND PARAPET

PROVIDE NEW CORNICE TREATMENT
AND COPING OVER TOP OF
PARAPET PER DETAIL 1/A-3
REMOVE EXISTING E.F.I.S.
FROM PARAPET



10/A2.1 EXISTING FRONT ELEVATION - NORTH

PROVIDED FOR REFERENCE AND APPROXIMATE HEIGHT OF THE BUILDING ONLY.

1/8"=1'-0"

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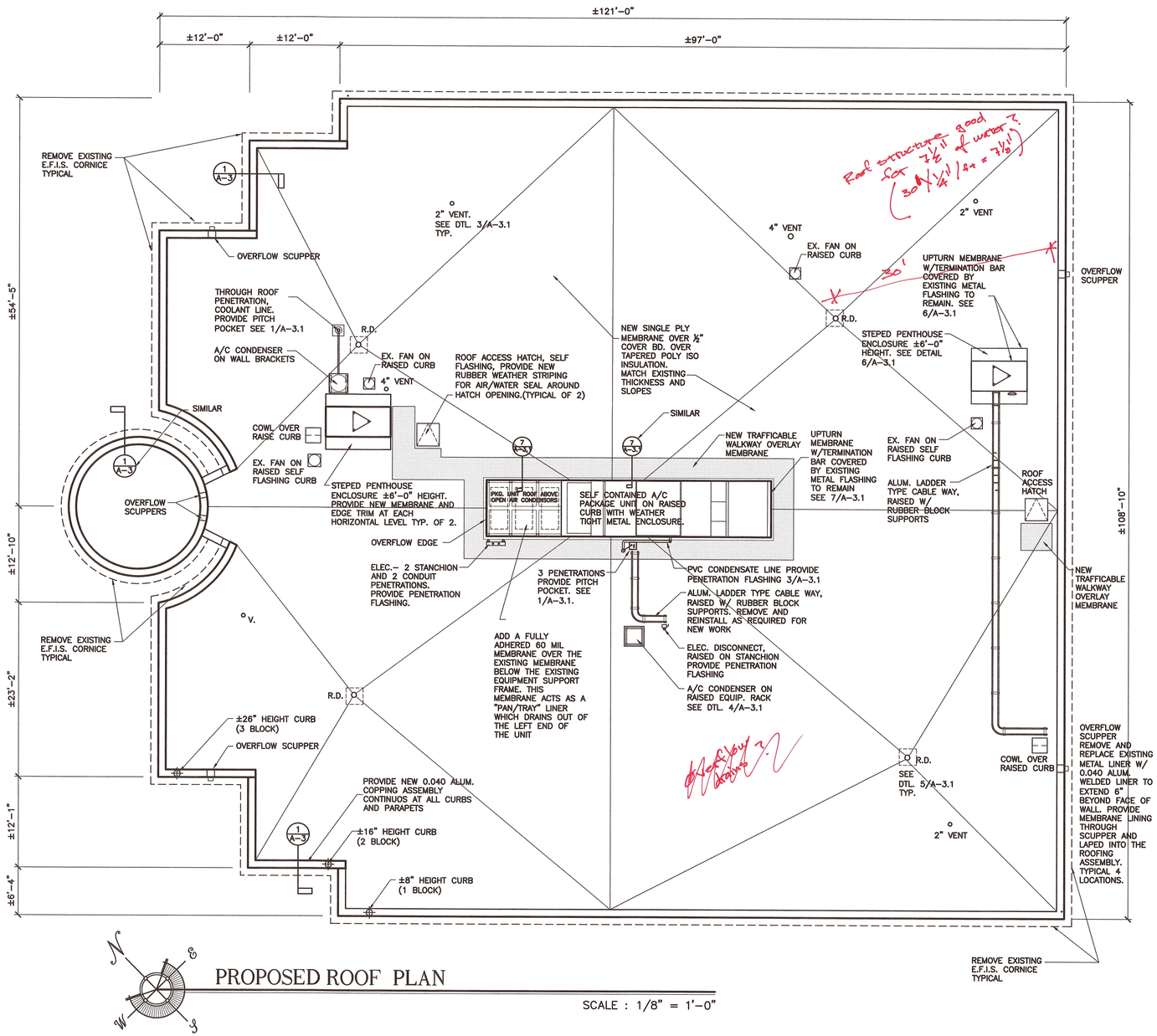
A-2.1

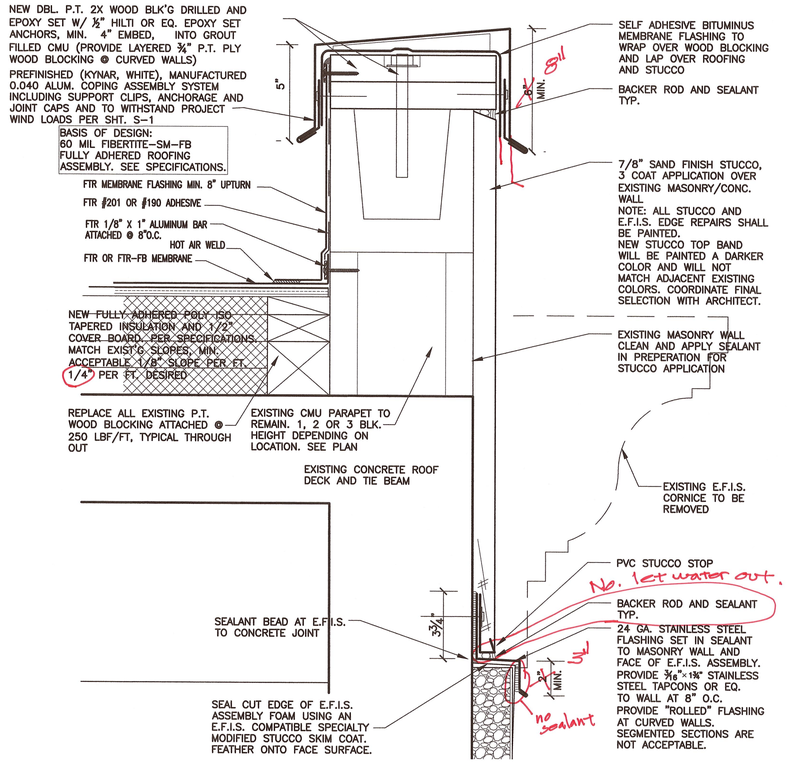
KEY WEST POLICE DEPARTMENT - ROOF REPLACEMENT

KEY WEST, FLORIDA



PROPOSED ROOF PLAN

SCALE : 1/8" = 1'-0"



NEW PARAPET DTL. - BASE BID

SCALE : 3" = 1'-0"

SCOPE OF WORK

THE BUILDING SHALL BE OCCUPIED AND OPERATIONAL THROUGHOUT THE COURSE OF THE WORK.

ROOF REPLACEMENT; SHALL CONSIST OF THE REMOVAL OF ALL EXISTING SINGLE PLY MEMBRANE ROOFING, FLASHING AND PARAPET TREATMENTS AS WELL AS EXISTING POLY ISO INSULATION. NEW WORK TO INCLUDE INSTALLATION OF A FULLY ADHERED FIBERTITE, 60 MIL, SINGLE PLY ROOFING SYSTEM (BASIS OF DESIGN) OR EQUAL INCLUDING INSULATION WITH COVER BOARD OVER THE EXISTING CONCRETE DECK. ALL IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATIONS AND WARRANTY REQUIREMENTS AS WELL AS THESE CONTRACT DOCUMENTS INCLUDING SPECIFICATIONS. THE WORK WILL INCLUDE REVISED FLASHING AND COPING DETAILS FOR THE EXISTING RAISED CMU CURB/PARAPET AROUND THE PERIMETER OF THE BUILDING. THIS INCLUDES PARTIAL REMOVAL OF EXISTING E.F.I.S., CLEANING OF EXPOSED SURFACES AND MODIFICATION AND WATERPROOFING OF THE EXISTING CONTINUOUS CORNICE. SEE DETAIL 1/A-3.

NEW ROOFING SYSTEM DETAILS SHALL BE APPLIED TO EXISTING CONDITIONS INCLUDING CURBS, RADIO TOWER STEPPED PENTHOUSE/BASE (TWO), PACKAGE A/C EQUIPMENT CURB (±7'-6"X±38'-0"), PENETRATIONS, VENTS, SCUPPERS, CABLE WAYS AND LIGHTNING PROTECTION. SEE DRAWINGS AND SPECIFICATIONS.

EXISTING CURB MOUNTED FANS, COWLS AND OTHER ITEMS INCLUDING LADDER TYP CABLE WAYS ARE TO BE REMOVED OR DISCONNECTED AND REINSTALLED AS REQUIRED TO ACCOMMODATE NEW WORK. ANY DISRUPTION OF EXISTING FUNCTIONS, OR SERVICES, SHALL BE COORDINATED WITH THE OWNER. NO DISRUPTION OF COMMUNICATIONS WILL BE ALLOWED.

ALTERNATES

ALT. #1 – MODIFY AND WATERPROOF THE EXISTING CORNICE PER DETAIL 2/A-2 IN LIEU OF TOTAL REMOVAL PER DETAIL 1/A-3

ALT.#2 – REPLACE TWO EXISTING ROOF ACCESS HATCHES WITH NEW BILCO OR EQ. CODE COMPLIANT HATCHES OF THE SAME SIZE IN LIEU OF NEW WEATHERSTRIPING (AIR/WATER SEAL) OF THE TWO EXISTING HATCHES PER BASE BID NOTES.

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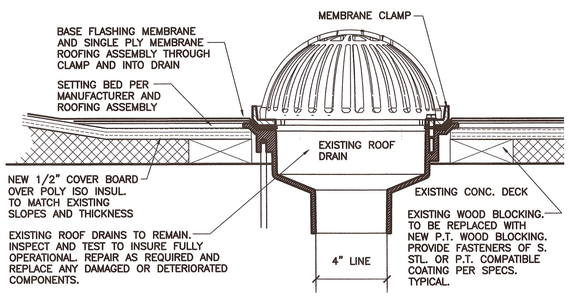
A-3

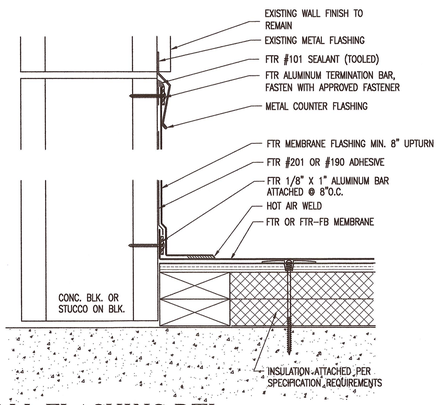
KEY WEST POLICE DEPARTMENT - ROOF REPLACEMENT

KEY WEST, FLORIDA



5 A3.1 ROOF DRAIN DTL.

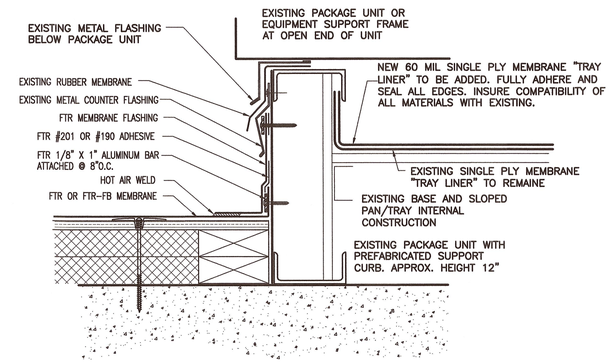
SCALE : 3" = 1'-0"



6 A3.1 WALL FLASHING DTL.

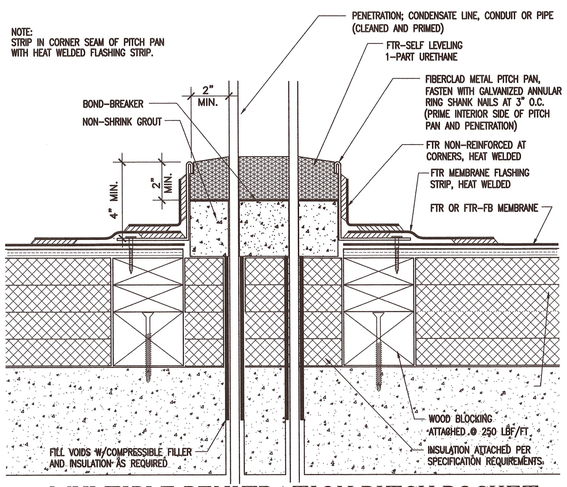
NOTE: EXISTING METAL FLASHING MAY CONSIST OF A SURFACE MOUNT REGLET IN SOME LOCATIONS. IN THIS EVENT INSURE THAT UPPER SEALANT IS REPLACED

SCALE : 3" = 1'-0"



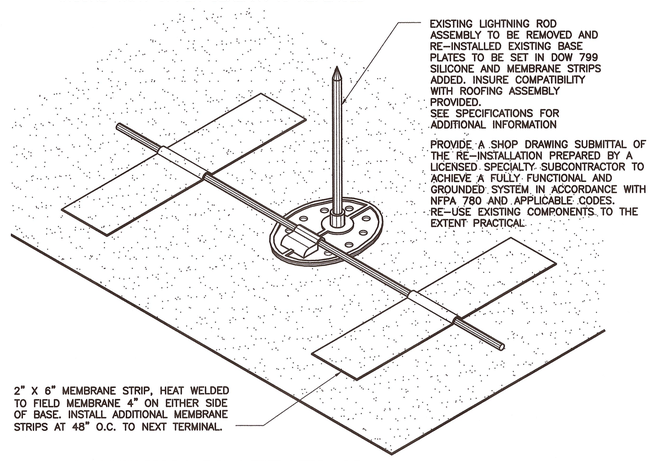
6 A3.1 PACKAGE AC EQUIP. CURB FLASHING DTL.

SCALE : 3" = 1'-0"



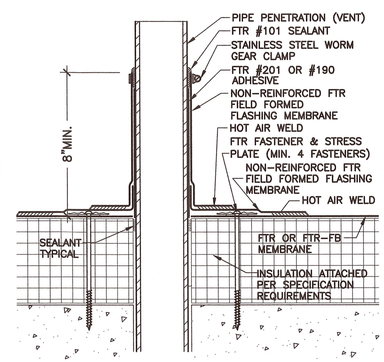
1 A3.1 MULTIPLE PENITRATION PITCH POCKET

SCALE : 3" = 1'-0"



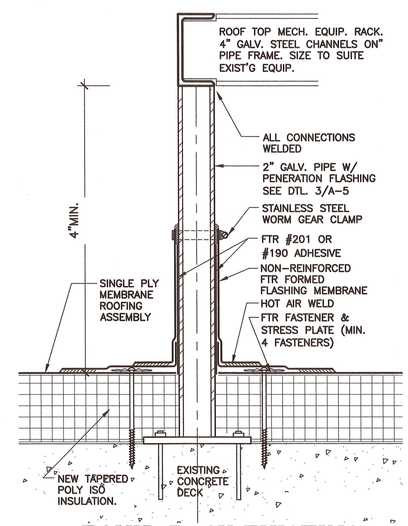
2 A3.1 LIGHTNING PROTECTION

SCALE : 3" = 1'-0"



3 A3.1 PENETRATION FLASHING

SCALE : 3" = 1'-0"



4 A3.1 EQUIP. RACK-EXISTING

SCALE : 3" = 1'-0"

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A-3.1

KEY WEST POLICE DEPARTMENT - ROOF REPLACEMENT

KEY WEST, FLORIDA

01800 - GENERAL REQUIREMENTS

Project Description The Contractor shall furnish all labor and materials required and necessary for re-roofing the building such that the result is a complete habitable, weatherproof, safe and secure finish building, suitable for human occupancy in accordance with Specifications, Drawing and Project Documents.

The General Conditions of the Contract, AIA Document A201, latest edition, are hereby made a part of these Construction Documents and shall apply to this Project.

The Florida Building Code 2010 Edition, as amended by Governing Local Ordinances and requirements of the State of Florida "Coastal Zone Protection Act", together with applicable requirements of governing public agencies and the following listed codes shall apply to this project.

Florida Existing Building Code, 2010 Edition
National Electric Code 2008 Edition.
Florida Plumbing Code, 2010 Edition
Florida Mechanical Code, 2010 Edition.
Florida Fuel Gas Code, 2010 Edition.

FEMA- Coordinate all building items required to be above flood elevation for project and other FEMA regulations that apply to the project.

Contractor shall visit the site to become familiar with existing conditions and requirements of construction prior to bidding.

Contractor shall complete new work in conformance with these drawings. Notify Architect if conflicts appear or are uncovered during the progress of the work prior to any field modifications or construction. Deviations from permitted drawings without Architects prior written approval shall be at the Contractors responsibility. Contractor is to verify all dimensions of project prior to proceeding with construction. Notify architect of any conflicts or problems so solutions can be achieved prior to construction. In event of conflict between drawings and specifications the most stringent requirements shall apply. Verification shall include, but is not limited to, coordination of site work, existing conditions, buildings and utilities.

Live Loads used in design:

A. Roof..... 20 PSF

B. Wind Velocity.....200 MPH, risk category 4, exp. 'D'
FL. BUILDING CODE 2010

Should any conflicting statement or alternate wind load requirements be found in the drawings or specifications it is in error and shall be disregarded.

General Notes:

A. The building will remain occupied and fully functional throughout the course of construction. Coordinate site access, staging areas and construction hours with owner. Provide temporary safety barriers and overhead walkway covers at building access points.

B. Engineer's approval must be secured for structural revisions, if any. Coordinate with Architect.

C. Contractor to verify all dimensions before proceeding with any work.

D. Provide temporary bracing and precautions necessary to withstand all construction and/or wind loads. Provide temporary refuse shute or other precautions necessary to protect the building from dirt or damage during construction.

E. Submit shop and erection drawings for all items required by the drawing or elsewhere in the specifications for written approval. The manufacture or fabrication of any items prior to written approval of shop drawings will be entirely at the risk of the contractor.All references to standards to be of the latest issue applicable.

F. This project is in a coastal salt water environment. Contractor shall consider this in selections of materials used in the exterior and non-air conditioned areas. All materials shall be salt resistant.

G. Manufactured assemblies; such as roofing, soffits, panels, coping assemblies, flashing assemblies and other external assemblies incorporated into the project shall require detailed shop drawing submittals. Miami Dade N.O.A'S providing tested assembly installation details and windload compliance are required. Manufacturers recommendations and requirements (including warranty requirements) shall be incorporated along with the latest industry standards and best practices.

H. Waterproofing, vapor barriers, waterstop, air seals,, etc. shall be as indicated in the Specifications and as per manufacturer and industry standards.

I. Contractor to provide all required fire blocking as required by Code.

J. Contractor to take all precautions to prevent mold from growing in or on the building. Do not use materials that have mold on them for construction, seal work in progress each night to keep water out.

K. All penetrations of fire rated construction shall be treated with dampers, seals or collars rated for the specific application and UL listed.

L. When working within occupied or partially occupied buildings it is the contractors responsibility to provide safe access and to maintain in operation all features of existing life safety systems including alarms, detectors, lighting and exit ways throughout the course of construction.

DIVISION 2 - SITE AND CIVIL WORK

02250 - Demolition shall include the removal of all items as indicated on the drawings, as well as incidental items necessary for new work to progress. All work shall be done in a workman like manner with minimal disturbance to existing to remain; All unwanted material to be removed from the site and properly disposed of. Unless noted otherwise, patch all areas to remain to match existing in areas damaged by demolition.

DIVISION 3 - CONCRETE REPAIRS - None anticipated. Coordinate with Architect if hidden conditions are encountered in the course of the work.

DIVISION 4 - MASONRY (Not used)
DIVISION 5 - METALS (See flashing and sheet metal)
DIVISION 6 - WOOD AND PLASTICS

06100 - Rough Carpentry all framing lumber shall be dry southern pine, 19% MC, No. 2 or better, (Fb = 975 PSI Minimum). Member sizes noted on drawings are nominal. Provide 1"x4" cross bridging not over 8 feet o.c. for all wood joist and 2 x solid blocking between joist at all supports.

06130 Pressure Treated: All wood indicated shall be pressured-treated with chemicals to protect from decay and insects. Dry after treatment. All metal connectors to be by Simpson Strong-Tie Company or equal approved in writing by the engineer and to be stainless steel finish, unless otherwise noted. All connectors to be installed with all Manufacture specified fasteners before loading. All fasteners used in pressure treated shall be stainless steel. Alternate connector/fastener materials may be approved on submittal of manufacturers data indicating compatibility with specific pressure treatment chemicals used in this project. ? why?

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

07190 - Liquid applied water proof membrane - Provide Sealoflex waterbased, waterproofing system. Concrete or plywood decks. All surfaces clean and free of grease, dirt, oils or particles. Concrete shall be primed with Dampseal 101, Sealoment Plus or Sealbont Primer; per manufacturers recommendations for the project. Waterproofing System shall consist of a base coat with embed fabric while wet a saturation coat and when dry, 2 coats of Sealoflex Finish Coat (white).

At joints or cracks in substrate, lap 6" with base coat, fabric and saturation coat and allow to dry prior to applying the system to the entire area.

07210 - Insulation - Provide a tapered insulation installation as shown on drawings and as follows:

A. Polyisocyanurate board insulation: provide rigid, cellular thermal insulation with glass-fiber-reinforced polyisocyanurate closed-cell foam core. Complying with ASTM C1289 and complying with FS HH-1-1972/1, class 2; aged R- Values of 8 and 7.2 at 40 and 75 Deg. F. (4.4. and 23.9 Deg. C), respectively; and as follows:

1. Surface burning characteristics: maximum flame spread and smoke developed values of 25 and 50; respectively.
2. Thickness 1" for specification criteria (see drawings for required thickness at each location). Comply with manufacture's recommendations and specification for the current installation. Seal all joints as required.

B. All insulation shall be formalidehyde free.

07315 - Roofing Shop Drawings : All roofing assemblies require shop drawing submittals. The submittal shall include all components of the assembly including base sheets (if any), insulation if integral to the assembly such as tapered insulation to achieve roof slopes, cover board, membranes and attachment, including edge conditions. The submittal shall include N.O.A. test data for the entire assembly, as a unit, or for each component used, including anchorage/ attachment to its supporting substrate on down to the structural deck.

Documentation that the project specific roofing assembly meets design wind loading is required. This can be accomplished by submittal of N.O.A. test data or by signed and sealed certification by a Florida Registered Engineer. Provide manufacture's requirements and installation instructions for review.

07550 - Membrane Roofing - Provide membrane roofing utilizing a fully adhered 60 mil. single-ply system; Basis of Design as noted sheet A-3. Contractor to provide a complete roofing system, following all of the manufacturers specifications and details, and provide a roofing membrane manufacturer's 20 year warranty on the roofing system. All flashing material to be coordinated with other roofing systems and or existing conditions. Provide manufacturer's requirements, installation instructions and valid N.O.A. of system showing that the system meets the pressure requirements shown on S-1. Single ply assemblies by other manufacturers with similar characteristics and equal performance and warranty are acceptable. It is the contractors responsibility to document equality of products proposed.

Note: Assembly is installed over tapered insulation and shall provide a minimum of 1/8" slope per foot. The installation is intended to match the existing roof drainage patterns and slopes. 1/4" slope per foot is desirable and shall be provided if consistent with existing conditions.

07620 - Flashing and sheet metal:

A. This section to include; metal flashing and base flashing, stops, built-in metal scuppers and miscellaneous sheet metal accessories.
B. Material shall be pre-finished 24 ga. min. stainless steel, commercial quality, except as noted otherwise. Coordinate finish with roofing assembly recommendations and requirements.
C. Shapes shall match existing or detailed profiles of flashing and stops.
D. Shop-fabricate work to the extent possible. Comply with details shown and applicable requirements of SMACNA "Architectural sheet metal manual" and material manufacturer recommendations.

07920 - Sealants

A. All sealants used in conjunction with roofing shall be compatible with and as recommended by the roofing assembly manufacturer.
B. Siliconized Acrylic Caulk - 25 years, paintable, non-staining, mildew resistant. For interior and exterior use, wood and masonry, as a filler for cracks voids and holes in preparation for paint or other finish. - See existing wood preparation.
C Polyseamseal all purpose adhesive caulk, paintable, non-staining, mildew resistant. For interior and exterior use as a filler and joint seal at tile, tub and counters.
D. Silicone Rubber Sealant - FSTT-S-001543, class A, one part non-sag low modules silicone rubber sealant. For interior and exterior use in working joints where some movement is anticipated, wood, masonry, metal and glass. Provide backer rod depth control in all joints in excess of 1/4"
E. All interior architectural caulks and sealants to have a VOC limit of 250 g/L.

DIVISION 8-14 NOT USED
DIVISION 15 - MECHANICAL

Note: Mechanical work is limited to temporary movement and reconnection of existing roof top equipment to facilitate re-roofing work. All work shall be done by a licensed subcontractor.

1. The work to be done under this heading includes the furnishing of all labor, materials, equipment, permits, fees, inspections, tests, etc. required to provide a complete and operational HVAC system as currently exists.
2. All work shall be done in accordance with the latest edition of the Florida Building Code and all local codes. Contractor shall coordinate w/local utility for any special requirements.
3. All work shall be coordinated with other trades to avoid interference with progress of The work and in strict compliance with all applicable codes and standards.
4. All outside equipment re-installed as result of the current work shall be secured to withstand project windloads (200 M.P.H. see Sheet S-1).
5. All equipment shall be re-installed maintaining recommended clearances for air flow and service.
6. Outside air intake for AHU shall be minimum 10'-0" away from exhaust or plumbing vent.
7. Contractor shall visit the jobsite prior to bid and become familiar with the existing conditions that may affect his work. Any clarifications required shall be brought to architect's attention within 10 days prior to the bid date.

DIVISION 16 - ELECTRICAL

16010 - General Electric Notes:

Note: Electrical work is limited to temporary movement and reconnection of existing roof top equipment to facilitate re-roofing work. All work shall be done by a licensed subcontractor.

1. All work shall be in accordance with the National Electrical code and other applicable codes and standards.
2. The contractor is responsible for evaluating field conditions by visiting the site prior to commencing bidding/work.
3. The contractor shall satisfactorily repair/replace equipment or part of structure damaged as a result of his work. Surfaces and finishes areas shall be restored to match adjacent areas.
4. All material removed shall be disposed of as directed by owner.
5. All material shall be U.L. approved.
6. The electrical contractor is responsible to provide a functioning system.
7. All exterior boxes, outlets, switches, etc. to be weatherproof exterior type items.
8. All switches, outlets, and thermostats to meet handicap code requirements in all commercial projects, common public areas and any residential handicap spaces.

16046 - Lightning Protection

Note: The existing building is equipped with a lightning protection system. This system will have to be disconnected and reinstalled as re roofing progresses.

Note:

1. Work shall be done in accordance with NFPA780-Standard for installation of lightning protection systems.
2. Any replacement components shall be per UL96-Lighting Protection Components.
3. Connect conduits using mechanical connections or exothermic welding process; protect adjacent construction elements and finishes from damage.
4. Insure compatibility of all adhesives with roofing assembly.
5. At the end of the work perform a field inspection to insure all connections are made and that the system is complete providing protection to the entire structure and is properly grounded.

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KEY WEST
POLICE DEPARTMENT
ROOF
REPLACEMENT

1600 NORTH ROOSEVELT BLVD.
KEY WEST, FL.

SEAL

THESE DRAWINGS MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION BY WILLIAM P. HORN

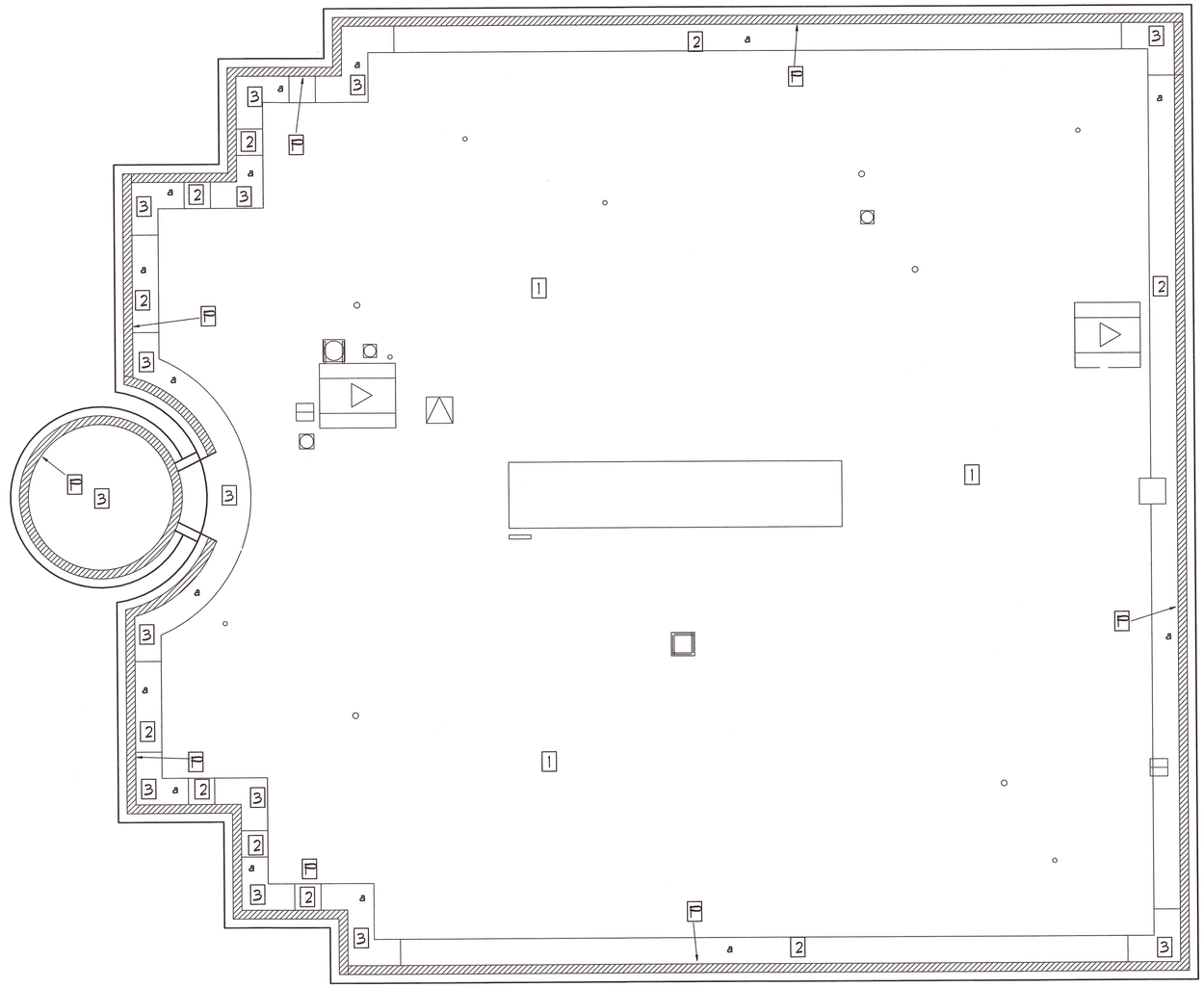
DATE
08-06-14 50% REVIEW
09-18-14 95% REVIEW
09-26-14 BID

REVISIONS

DRAWN BY

PROJECT NUMBER
1304

A-4



ROOF PLAN N.T.S.

SEE ARCHITECTURAL DRAWINGS FOR BUILDING DIMENSIONS AND ROOFTOP FEATURES

ROOF AREAS:

SEE ARCH DWGS. FOR MEMBRANE SPECIFICATIONS

- 1 INTERIOR ZONES
- 2 END ZONES
- 3 CORNER ZONES
- F PARAPET SURFACE

ULTIMATE DESIGN PRESSURES PER ZONE		
ZONE 1:	-110.2 PSF	+43.1 PSF
ZONE 2:	-169.6 PSF	+43.1 PSF
ZONE 3:	-236.6 PSF	+43.1 PSF
P:	-268.2 PSF	+86.9 PSF

ASD* DESIGN PRESSURES PER ZONE		
ZONE 1:	-66.2 PSF	+43.1 PSF
ZONE 2:	-101.8 PSF	+43.1 PSF
ZONE 3:	-142.0 PSF	+43.1 PSF
P:	-161.0 PSF	+86.9 PSF

*FOR IMPACT RESISTANT COVERINGS TESTED FOR NEGATIVE PRESSURES PER SEC 1609.1.2.3 OF THE 2010 FLORIDA BUILDING CODE

a=3'

LEAST HORIZONTAL DIMENSION = 6.4'
h=MEAN EXIST. ROOF HEIGHT=22'
NOTE:
a = 10% OF LEAST HORIZONTAL DIMENSION OR 0.4h WHICHEVER IS SMALLER BUT NOT LESS THAN 4% OF LEAST HORIZONTAL DIMENSION OR 3 FT.

ROOF AREA NEGATIVE AND POSITIVE PRESSURES COMPONENTS AND CLADDING

NOT TO SCALE

SEE ARCHITECTURAL DRAWINGS FOR ADDITONAL INFORMATION

WIND DESIGN CRITERIA

UPWIND EXPOSURE D
V_{ULT} 200 MPH ASCE 7-10
V_{ASD} 155 MPH (SEC 1609.3.1 FBC)
RISK CATEGORY IV
STRUCTURE IS ENCLOSED
PRESSURE COEFFICIENTS +/- 0.18

Check structure for depth of water during heavy rain.

P.E. No. 45406

REVISIONS	DATE

ROOF MEMBRANE COMP. & CLADDING DESIGN PRESSURES

THIS PLAN IS TO ACCOMPANY ARCHITECTURAL PLANS FOR THE
KEY WEST POLICE DEPARTMENT
1600 NORTH ROOSEVELT BLVD.
KEY WEST, FLORIDA
BY WILLIAM P. HORN, ARCHITECT

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DATE: SEPTEMBER 24, 2014

SHEET S1