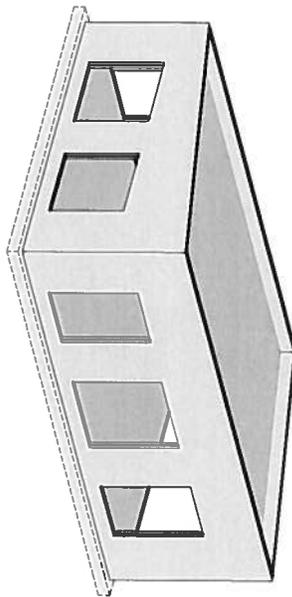


CONSTRUCTION INFORMATION

for a STRONGER HOME

APPENDIX CONTINUED-Part 1 TO THE 4TH EDITION APRIL 2018



THE ROOF DESIGN SHOWN IN THIS APPENDIX SHOULD NOT BE USED IN COMBINATION WITH AN EXISTING MASONRY OR CONCRETE WALL SYSTEM.

THIS IS A GUIDANCE DOCUMENT ONLY. REFERENCED BY THE U.S.V.I. BUILDING CODE.

ALL CONSTRUCTION MUST COMPLY WITH THE U.S.V.I. BUILDING CODE.

YOU ARE REQUIRED TO OBTAIN THE NECESSARY BUILDING PERMITS FROM THE DEPARTMENT OF PLANNING AND NATURAL RESOURCES.

SIGNED AND SEALED DRAWINGS FOR PERMIT MUST BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND NATURAL RESOURCES (DPNR) DIVISION OF PERMITS.

STRUCTURES LOCATED IN SPECIAL FLOOD HAZARD AREAS SHALL BE DESIGNED BY A U.S.V.I. REGISTERED DESIGN PROFESSIONAL AND CERTIFIED TO COMPLY WITH ASCE 24-14 FLOOD RESISTANT DESIGN AND CONSTRUCTION.

PREFACE

THIS APPENDIX TO THE U.S. VIRGIN ISLANDS CONSTRUCTION INFORMATION FOR A STRONGER HOME, 4TH EDITION, PRESENTS RECOMMENDATIONS FOR THE SUPPORT OF A CONCRETE ROOF SUPPORTED BY EITHER CAST-IN-PLACE CONCRETE WALLS OR CONCRETE MASONRY UNIT WALLS. IN KEEPING WITH THE INTENTION OF THE OVERALL DOCUMENT TO PROVIDE RESILIENT RESIDENTIAL HOME CONSTRUCTION TECHNIQUES, THIS APPENDIX GUIDANCE DOCUMENT IS INTENDED TO BE USED IN CONJUNCTION WITH THE BUILDING CODES OF THE U.S.V.I. NATIONAL INCORPORATES SEISMIC AND WIND CRITERIA BASED UPON THE LATEST BUILDING CODES OF THE AMERICAN NATIONAL CIVIL ENGINEERS ASSOCIATION (ASCE) 7-18 (ASCE 7-18) MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES. THIS APPENDIX DOES NOT SATISFY ALL THE BUILDING DESIGN REQUIREMENTS, SUCH AS FOUNDATION, NON-STRUCTURAL ELEMENTS, MECHANICAL, ELECTRICAL, PLUMBING, EGRESS REQUIREMENTS, VENTILATION, ETC.

ALL RECOMMENDED DESIGN WORK, INCLUDING THOSE PARTS COVERED BY THIS DOCUMENT, SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL, SUCH AS A REGISTERED PROFESSIONAL ENGINEER OR A LICENSED ARCHITECT IN U.S.V.I. WHEN THESE GUIDANCE DRAWINGS ARE USED FOR A PROJECT, THEY SHOULD BE MODIFIED AS NEEDED IN ORDER TO COMPLY WITH ALL OF THE APPLICABLE CODE REQUIREMENTS FOR A GIVEN PROJECT SITE, THEN SIGNED AND SEALED IN ACCORDANCE WITH U.S.V.I. LAWS, BUILDING CODE, AND DEPARTMENT OF PLANNING AND NATURAL RESOURCES (DPNR) REQUIREMENTS.

THE FOLLOWING BOUNDARY CONDITIONS SHALL BE MET IN ORDER TO USE THIS APPENDIX. THIS APPENDIX IS NOT VALID IF THE PROJECT PARAMETERS ARE OUTSIDE OF THESE BOUNDARY CONDITIONS.

1. SINGLE STORY BUILDING WITH MAXIMUM MEAN ROOF HEIGHT AS SHOWN IN THE APPENDIX.
2. MONOSLOPE ROOF AS SHOWN IN THE APPENDIX.
3. BUILDING WIDTH AND LENGTH AS SHOWN IN THE APPENDIX.
4. BUILDING LOCATED IN THE FOLLOWING TOPOGRAPHY CONDITIONS.
 - A. WIND EXPOSURE B WITH NO ABRUPT CHANGES IN TOPOGRAPHY AS DEFINED IN ASCE 7-18.
 - B. WIND EXPOSURE D WITH NO ABRUPT CHANGES IN TOPOGRAPHY AS DEFINED IN ASCE 7-18.
 - C. WIND EXPOSURE B WITH TOPOGRAPHIC EFFECTS CAUSED BY ABRUPT CHANGES IN TOPOGRAPHY AS DEFINED IN ASCE 7-18 WITH THE BUILDING CONSTRUCTED ON THE UPPER ONE-HALF OF A HILL, RIDGE OR ESCARPMENT OR NEAR THE CREST OF AN ESCARPMENT WITH AN EQUIVALENT Kc VALUE OF 2 OR LESS.

DRAWING INDEX

SHEET NUMBER	TITLE SHEET AND PREFACE	SHEET NAME
AS-000	TITLE SHEET AND PREFACE	GENERAL NOTES
AS-001	GENERAL NOTES	WIND CALC PRESSURES
AS-002	WIND CALC PRESSURES	REINFORCEMENT DIAGRAMS
AS-003	REINFORCEMENT DIAGRAMS	FOUNDATION PLAN
AS-101	FOUNDATION PLAN	ROOF PLAN
AS-102	ROOF AND REAR ELEVATIONS	FRONT AND REAR ELEVATIONS
AS-201	FRONT AND REAR ELEVATIONS	SIDE ELEVATIONS
AS-202	SIDE ELEVATIONS	FOUNDATION DETAILS
AS-201	FOUNDATION DETAILS	FOUNDATION DETAILS
AS-202	FOUNDATION DETAILS	TYPICAL CMU DETAILS
AS-310	TYPICAL CMU DETAILS	TYPICAL CMU DETAILS
AS-311	TYPICAL CMU DETAILS	ROOF DETAILS
AS-320	ROOF DETAILS	ROOF DETAILS
AS-321	ROOF DETAILS	ROOF DETAILS

ORIGINAL SHEET SIZE: 11 x 17
OTHERWISE SCALED AND INDICATED

DATE	REVISIONS	APPR.

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DEPARTMENT OF PLANNING AND NATURAL RESOURCES

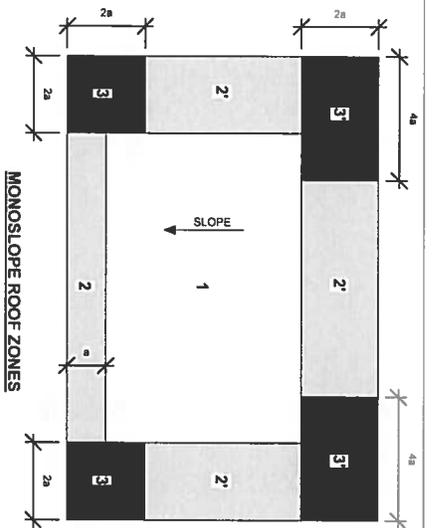
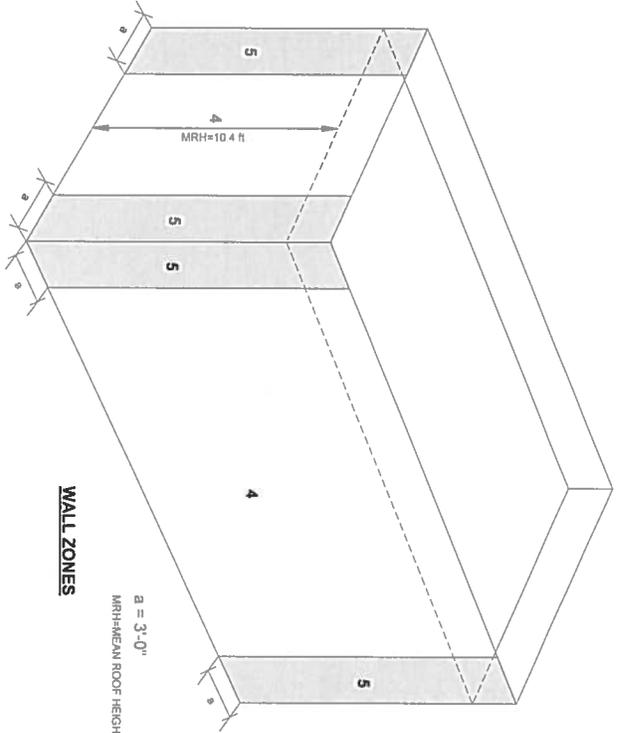
BY COMMISSIONER DAWN L. HENRY

DRAWING TITLE TITLE SHEET AND PREFACE

SHEET NUMBER
AS-000

SHEET 1 OF 14

COMPONENTS AND CLADDING (C&C) NOMINAL DESIGN PRESSURE SCHEDULE				
COMPONENT	ZONE	EFFECTIVE WIND AREA (SQ. FT.)	DESIGN PRESSURE (PSF)	
			POSITIVE	NEGATIVE
ROOF ELEMENTS	1	100	20.4	-43.6
		50	18.9	-43.6
		10	23.8	-73.5
	2	100	20.4	-70.1
		50	18.9	-68.6
		10	23.8	-86.4
	2'	100	20.4	-85.0
		50	18.9	-83.5
		10	23.8	-98.4
	3	100	20.4	-77.5
		50	18.9	-68.6
		10	23.8	-138.1
	3'	100	20.4	-103.4
		50	18.9	-88.4
		10	113.3	N/A
2	100	100.0	N/A	
	50	104.0	N/A	
	10	128.7	N/A	
2'	100	119.4	N/A	
	50	115.4	N/A	
	10	139.0	N/A	
3	100	111.7	N/A	
	50	100.0	N/A	
	10	180.2	N/A	
3'	100	139.5	N/A	
	50	136.5	N/A	
	10	120.5	N/A	
4	100	N/A	-97.3	
	50	N/A	-85.9	
	10	N/A	-81.0	
5	100	N/A	-111.2	
	50	N/A	-94.1	
	10	N/A	-86.7	
EXTERIOR WALL ELEMENTS	4	100	48.1	-52.6
		50	45.8	-50.2
		10	53.7	-71.5
5	100	48.1	-60.5	
	50	48.1	-55.7	
	10	45.8	-55.7	



WIND PRESSURE DIAGRAMS
REFER TO "COMPONENTS AND CLADDING"
TABLE FOR NOMINAL DESIGN PRESSURES

NOTES:

1. DESIGN WIND PRESSURES SHALL BE USED IN THE DESIGN OF ALL COMPONENTS AND CLADDING.
2. REFER TO THE WIND PRESSURE DIAGRAM FOR ZONE LOCATIONS AND EXTENTS.
3. POSITIVE PRESSURES ACT TOWARD COMPONENT SURFACES AND NEGATIVE PRESSURES ACT AWAY FROM COMPONENT SURFACES.
4. LINEAR INTERPOLATION BETWEEN EFFECTIVE WIND AREAS MAY BE USED TO OBTAIN THE REQUIRED COMPONENT AND CLADDING DESIGN PRESSURE.

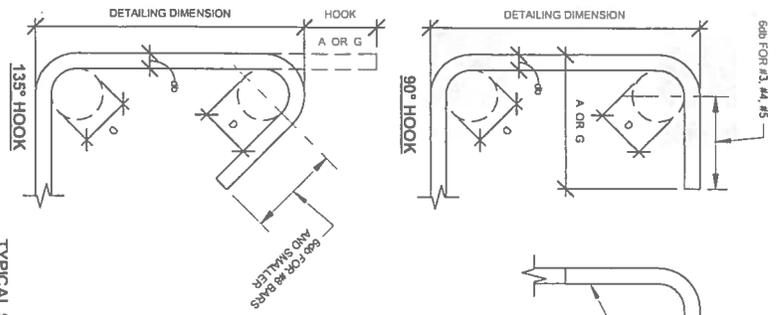
ORIGINAL SHEET SIZE: 11 x 17
OTHERWISE SCALES ARE INACCURATE

SHEET NUMBER
AS-002
SHEET 3 OF 14

DEPARTMENT OF PLANNING AND NATURAL RESOURCES
BY COMMISSIONER DAWN L. HENRY
DRAWING TITLE: **WIND-C&C PRESSURES**

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DATE	REVISIONS	APPR.

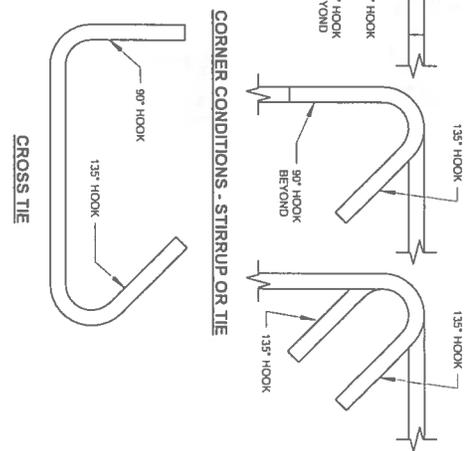


STIRRUP AND TIE HOOKS

BAR SIZE	D (INCHES)	90° HOOK A OR G (INCHES)	135° HOOK A OR G (INCHES)
#3	1 1/2	4	4
#4	2	4 1/2	4 1/2
#5	2 1/2	6	5 1/2

D = INSIDE DIAMETER OF BEND
db = DIAMETER OF BAR

TYPICAL STIRRUP AND TIE HOOK TYPES

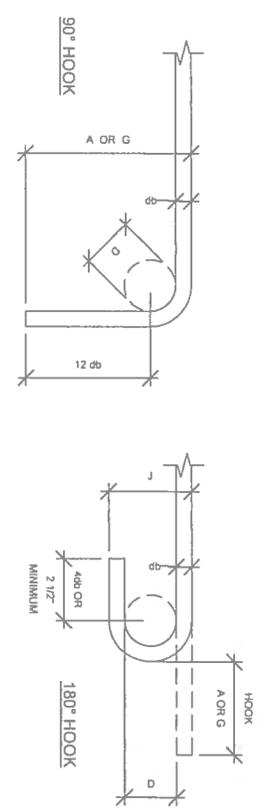


END HOOK DIMENSIONS

BAR SIZE	FINISHED BEND DIAMETER (INCHES)	180° HOOKS		90° HOOK
		A OR G (INCHES)	J (INCHES)	A OR G (INCHES)
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#5	4 1/2	8	6	12

D = INSIDE DIAMETER OF BEND
db = DIAMETER OF BAR

TYPICAL END HOOK TYPES



ORIGINAL SHEET SIZE: 11 X 17
OTHERWISE SCALES ARE INACCURATE

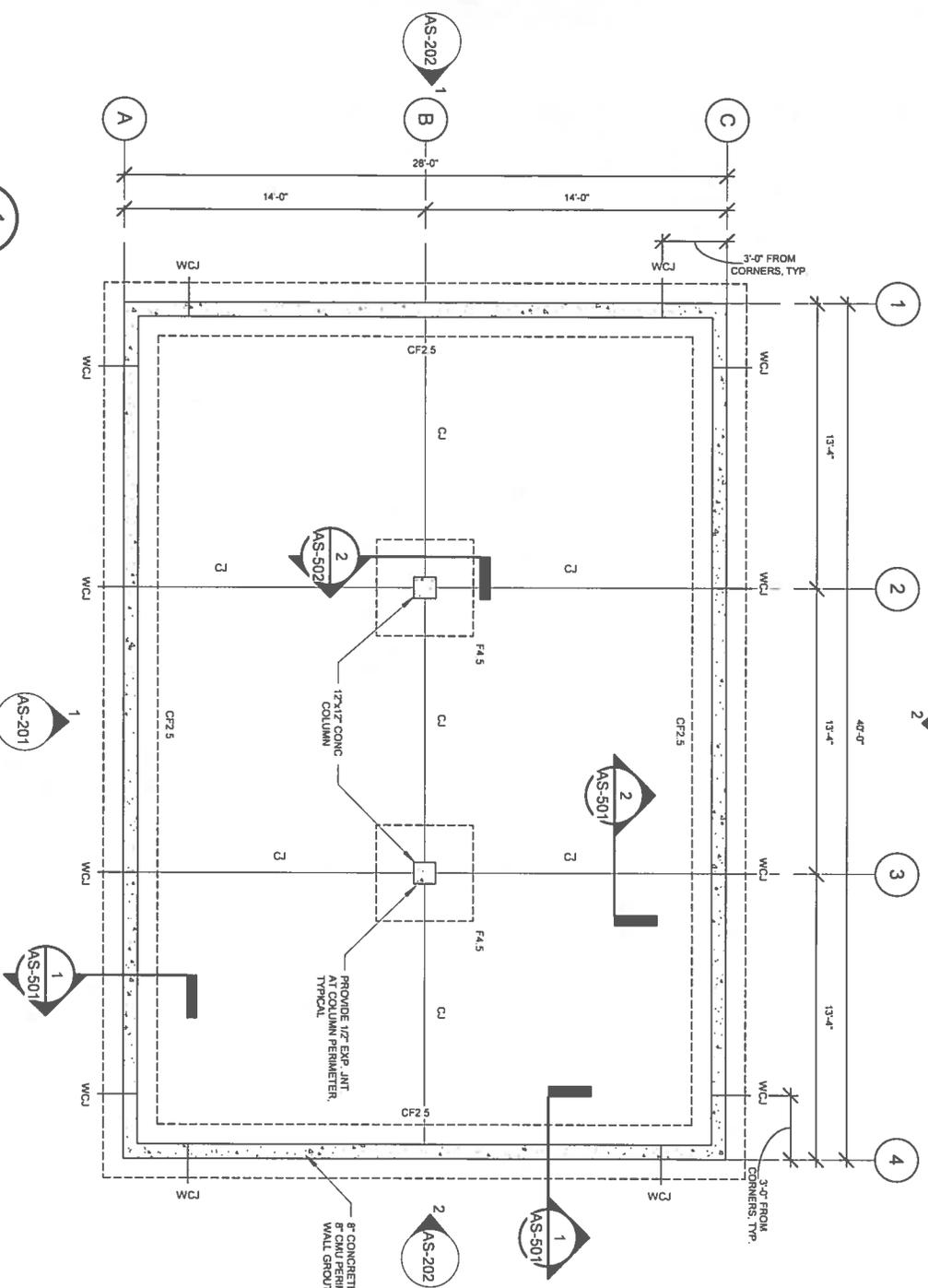
DEPARTMENT OF PLANNING AND NATURAL RESOURCES
BY COMMISSIONER DAWN L. HENRY
DRAWING TITLE: **REINFORCEMENT DIAGRAMS**

SHEET NUMBER
AS-003
SHEET 4 OF 14

Note: Prior to construction contact U.S.V.I. Department of Planning and Natural Resources, Division of Permits for building requirements in the Virgin Islands. This information has been developed solely as guidance and is believed to meet the U.S.V.I. Building Code. All drawings must be separately approved by DPNR, Division of Permits upon submission of a building permit application.

DATE	REVISIONS	APPR.

1 FOUNDATION PLAN
 3/16" = 1'-0"



FOUNDATION NOTES:

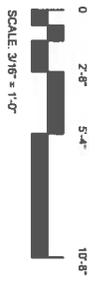
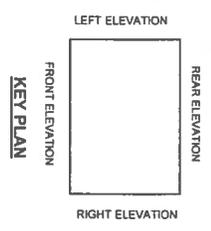
- 1 SLAB ON GRADE SHALL BE A MINIMUM 4" THICK CONCRETE WITH WWF 1 1/4" x 1 1/4" IN 6" x 6" PATTERN AT TOP 16-DEPTH PLACED ON 10 MIL POLY WAPOR BARRIER OVER COMPACTED SOIL.
- 2 TOP OF SLAB ELEVATION IS AT 0'-0" (DATUM ELEVATION). ALL OTHER ELEVATIONS ARE REFERENCED AS * OR - FROM DATUM.
- 3 TOP OF EXTERIOR FTG. = 1'-4" BELOW F. MIN. TOP OF INTERIOR FTG. = 1'-0" BELOW FINISH FLOOR SLAB ELEVATION AT FLAT SITE WITH LEVEL GROUND ON ALL SIDES OF STRUCTURE.
- 4 COORDINATE WITH OTHER DISCIPLINES AND TRADES FOR LOCATIONS AND DIMENSIONS OF OPENINGS, RECESSES, SLEEVES, AND PIPING.
- 5 DIMENSIONS INDICATED ARE FROM FACE OF WALL, UNLESS NOTED OTHERWISE.

FOUNDATION LEGEND:

- = 8" CONCRETE WALL OR 8" CMU WALL
- = FOOTING
- = 2'-6" WIDE x 1'-0" DEEP CONT. FTG. W/ (3) #5 BARS LONGITUDINAL CONTINUOUS, HOOKED AT CORNERS EACH WAY BOTTOM
- = 4'-6" x 4'-6" x 1'-0" THICK PAD FTG. W/ (5) #5 BARS EACH WAY BOTTOM
- = SLAB CONTROL JOINT, (SEE ZBAS-501)
- = WALL CONTROL JOINT, (SEE CONCRETE CONTROL JOINT OR VERTICAL MASONRY CONTROL JOINT)
- = 12"x12" CONCRETE COLUMN

PROVIDE 1/2" EXP. INT. WIRE AT COLUMN PERIMETER, TYPICAL

8" CONCRETE OR 8" CMU WALL GROUTED SOLID

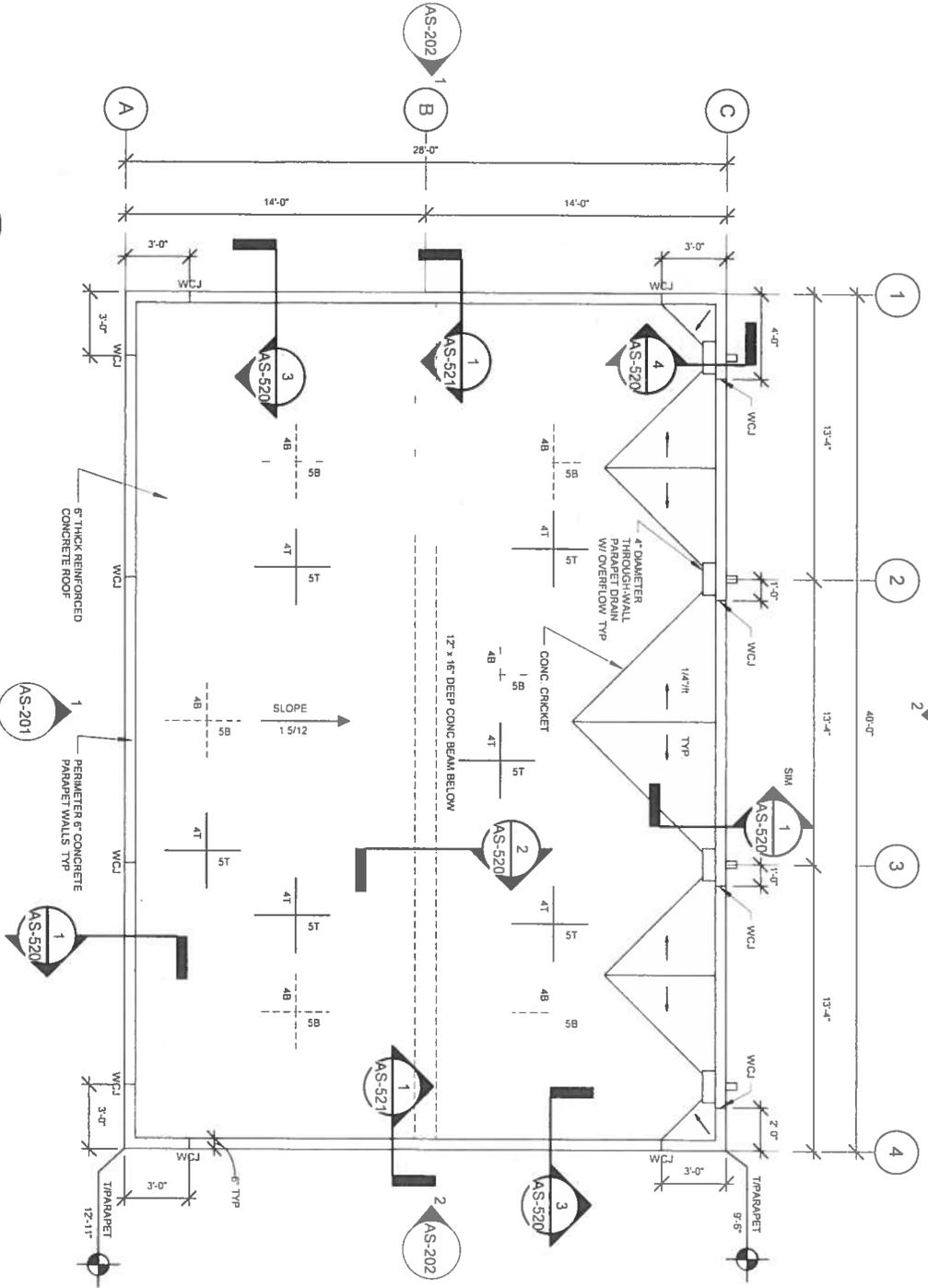


SCALE 3/16" = 1'-0"
 ORIGINAL SHEET SIZE 11 X 17
 OTHERWISE SCALES ARE INACCURATE

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DATE	REVISIONS	APPR.

1 ROOF PLAN
 AS-102
 3/16" = 1'-0"

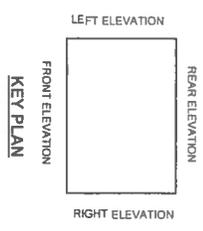


ROOF NOTES:

- 1 ROOF SHALL BE 6-INCH THICK FORMED AND POURED CONCRETE SEE PLAN FOR REINFORCEMENT REQUIREMENTS
- 2 ROOF SLOPE SHALL BE 1:5:12
- 3 REFERENCE ELEVATION DRAWINGS FOR WALL HEIGHTS
- 4 CONCRETE FORMWORK, ALL FORMWORK SHALL BE DESIGNED TO BE CAPABLE OF SUPPORTING THE WEIGHT OF ALL ACCUMULATED CONCRETE, BRACING, AND OTHER TEMPORARY SUPPORTS FOR A MINIMUM OF 28 DAYS OR UNTIL TESTING SHOWS THAT CONCRETE HAS REACHED DESIGN STRENGTH.
- 5 FORMWORK RESPONSIBILITY: THE DESIGN, CONSTRUCTION AND SAFETY OF ALL FORMWORK SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ALL FORMS, SHORES, BACKSHORES, FALSEWORK, BRACING, AND OTHER TEMPORARY SUPPORTS SHALL BE ENGINEERED TO SUPPORT ALL LOADS IMPOSED ON THE FORMWORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL FORMWORK EQUIPMENT. LIVE LOADS (INTERNAL LOADS DUE TO WIND, AND WET CONCRETE IMBALANCE).
- 6 FORMWORK TOLERANCES: ALL TOLERANCES FOR CONCRETE FORMWORK SHALL COMPLY WITH STANDARD 117-10 "TOLERANCES FOR CONCRETE CONSTRUCTION" AND MATERIALS.
- 7 PROVIDE A LIQUID-APPLIED MEMBRANE ON THE ROOF AND ON THE INTERIOR AND TOP SIDES OF THE PARAPETS. THE LIQUID MEMBRANE SHALL BE APPLIED TO THE ROOF AND PARAPETS FOR USE OVER CONCRETE.

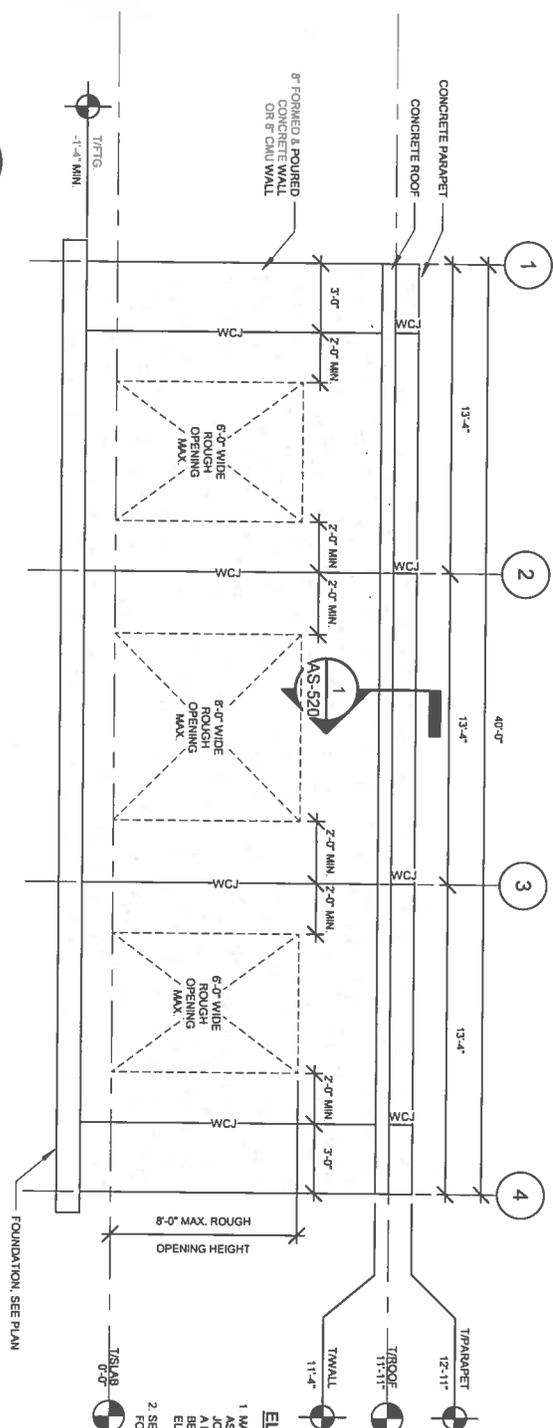
ROOF LEGEND:

- 4B / 1S = #5 BARS AT 12" C/C LONGITUDINAL BOTTOM, CONT
- 1S / 4B = #4 BARS AT 12" C/C TRANSVERSE BOTTOM, CONT
- 4T / 1S = #5 BARS AT 12" C/C LONGITUDINAL TOP, CONT
- 1S / 4T = #4 BARS AT 12" C/C TRANSVERSE TOP, CONT



SCALE: 3/16" = 1'-0" ORIGINAL SHEET SIZE: 11 x 17
 OTHERWISE SCALES ARE INACCURATE

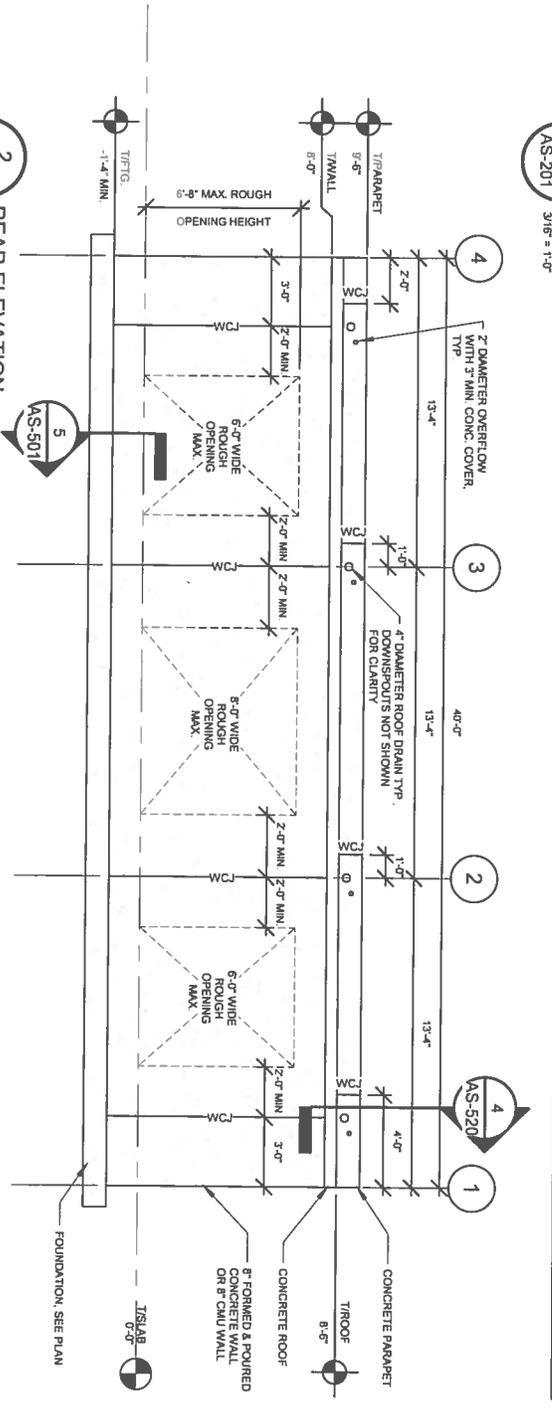
DATE	REVISIONS	APPR



1 FRONT ELEVATION
3/16" = 1'-0"

ELEVATION NOTES:

- MAXIMUM ROUGH OPENING SIZES ARE PROVIDED ON THE ELEVATIONS. AS GUIDANCE, OPENINGS SHALL BE LOCATED BETWEEN WALL CONTROL JOINTS AS SHOWN. THE EDGE OF THE ROUGH OPENINGS SHALL REMAIN A MINIMUM OF 2'-0" EACH SIDE OF WALL CONTROL JOINTS AND SHALL BE FINISHED TO MATCH THE FINISH SIZES SHOWN ON THE ELEVATIONS. NO OPENINGS SHALL BE INSTALLED AT CORNER LOCATIONS.
- SEE DETAIL 2AS-5111 FOR ADDITIONAL REINFORCING AT WALL OPENINGS FOR CMU WALLS AND CONCRETE WALLS.



2 REAR ELEVATION
3/16" = 1'-0"



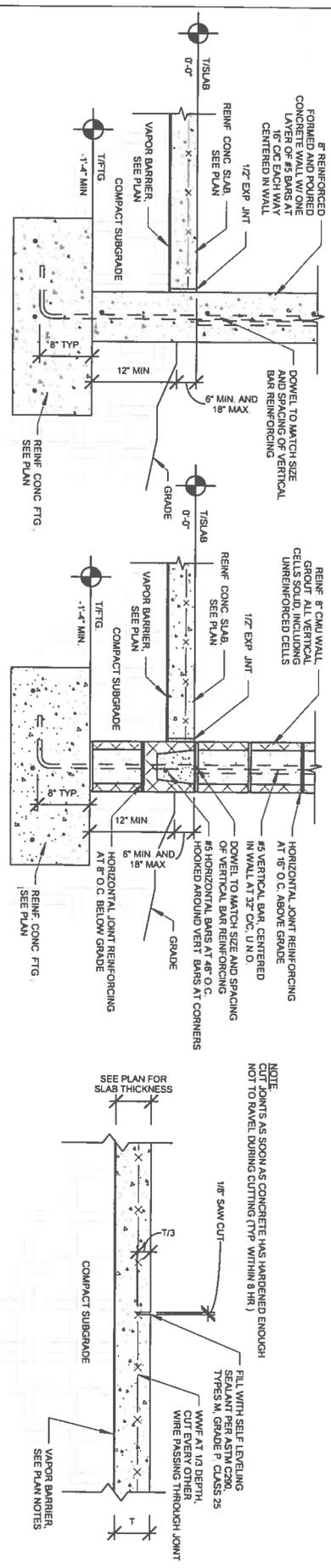
SCALE 3/16" = 1'-0"
ORIGINAL SHEET SIZE 11 x 17
OTHERWISE SCALES ARE INACCURATE

DATE	REVISIONS	APPR.

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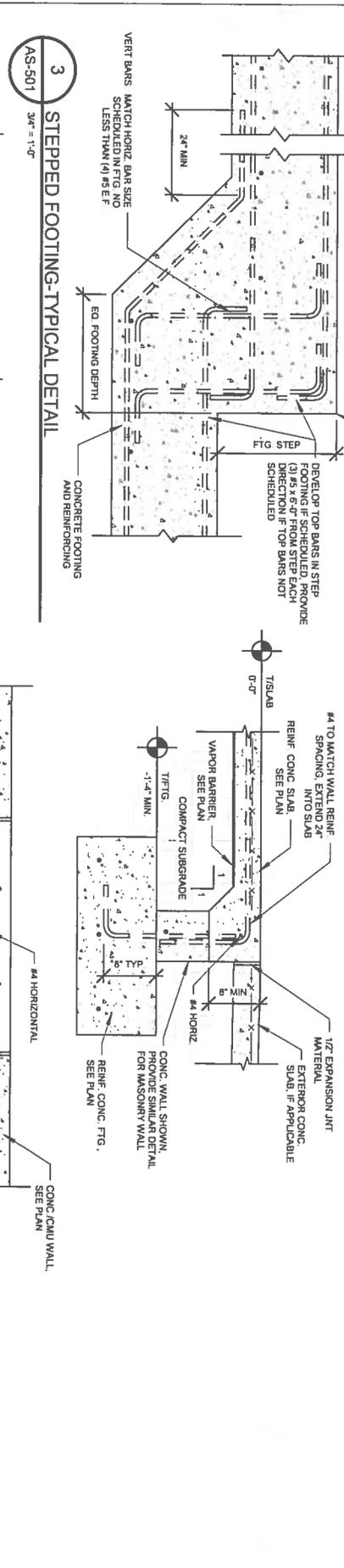
DEPARTMENT OF PLANNING AND NATURAL RESOURCES
BY COMMISSIONER DAWN L. HENRY
DRAWING TITLE **FRONT AND REAR ELEVATIONS**

SHEET NUMBER **AS-201**
SHEET 7 OF 14

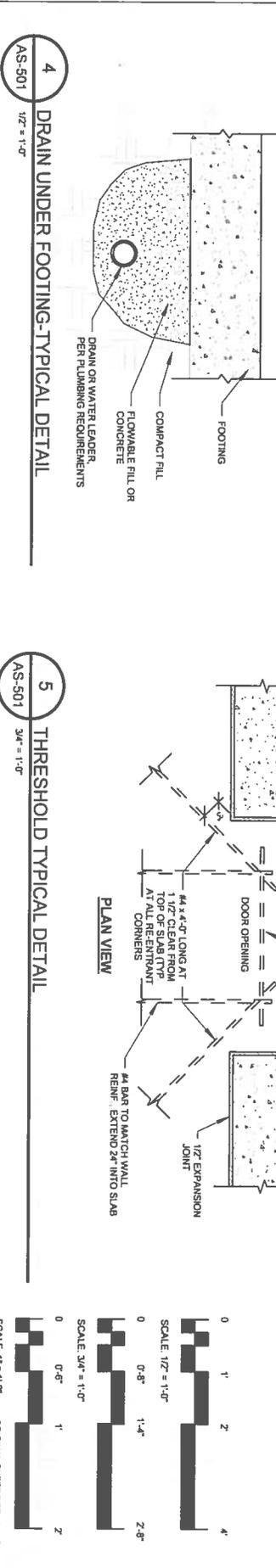


1 TYPICAL FOUNDATION DETAIL
AS-501 3/4" = 1'-0"

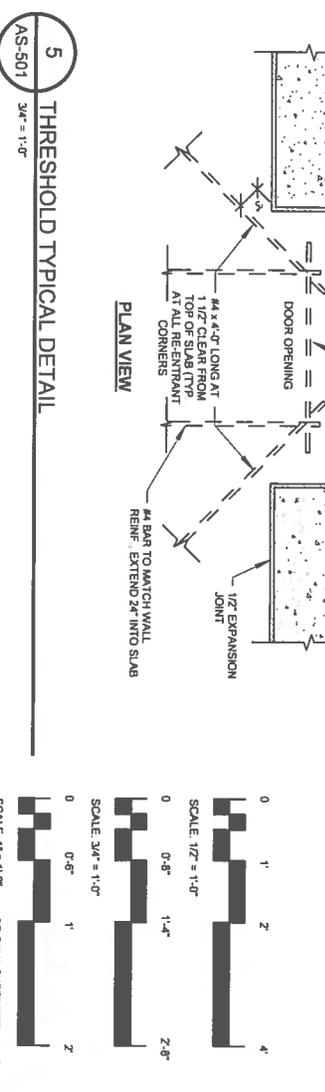
2 SLAB-ON-GRADE CONTROL JNT. DETAIL
AS-501 1" = 1'-0"



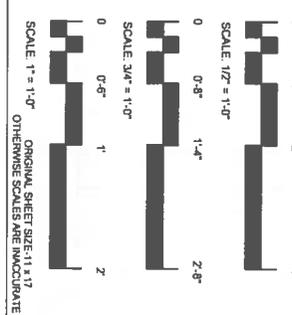
3 STEPPED FOOTING-TYPICAL DETAIL
AS-501 3/4" = 1'-0"



4 DRAIN UNDER FOOTING-TYPICAL DETAIL
AS-501 1/2" = 1'-0"



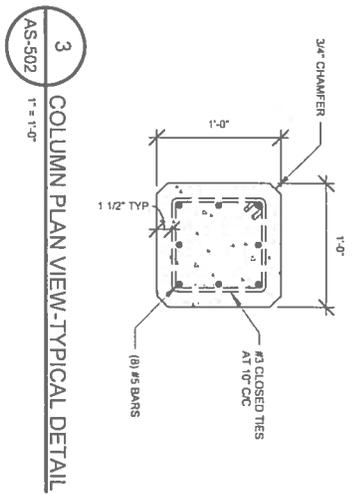
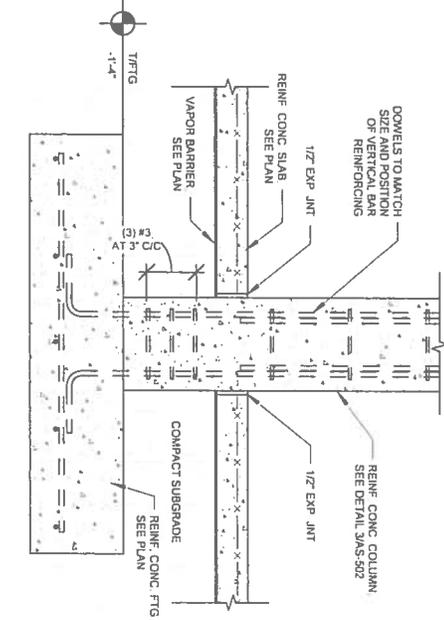
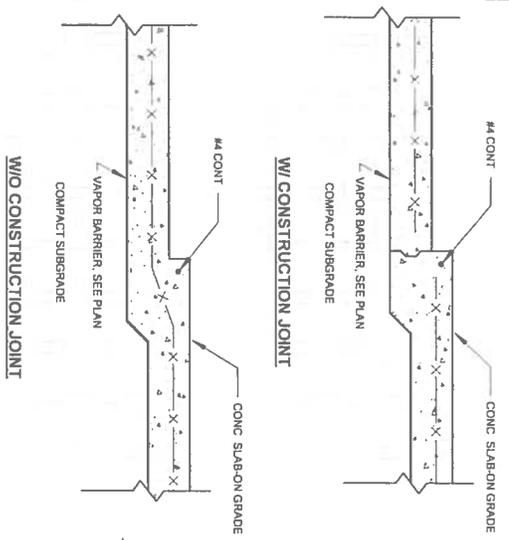
5 THRESHOLD TYPICAL DETAIL
AS-501 3/4" = 1'-0"



SCALE 1" = 1'-0"
ORIGINAL SHEET SIZE 11x17
OTHERWISE SCALES ARE INCOMPATIBLE

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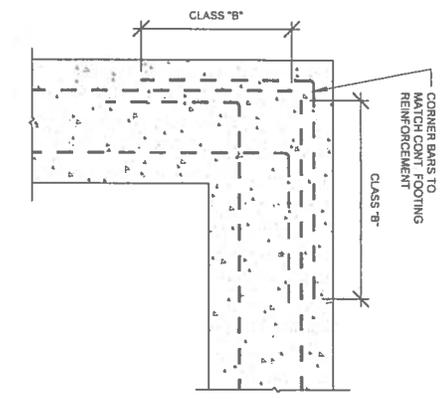
DATE	REVISIONS	APPR.



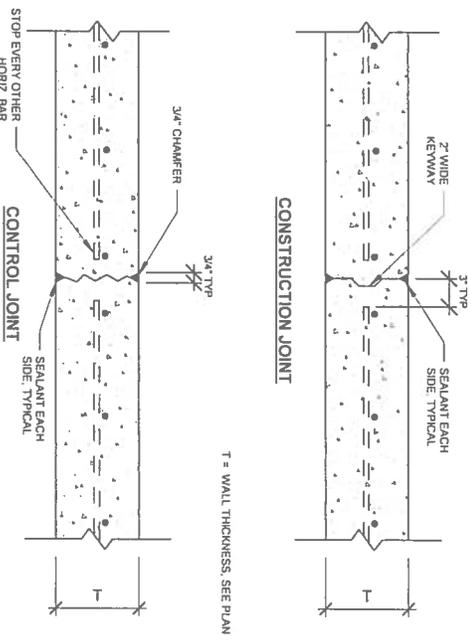
1 SLAB RECESS-TYPICAL DETAILS
 AS-502
 1" = 1'-0"

2 COLUMN FOOTING DETAIL
 AS-502
 3/4" = 1'-0"

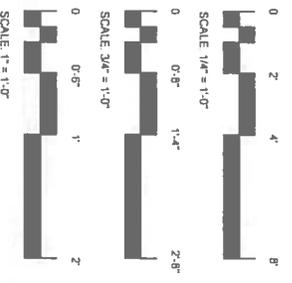
3 COLUMN PLAN VIEW-TYPICAL DETAIL
 AS-502
 1" = 1'-0"



4 FOUNDATION AT CORNER-TYPICAL DETAIL
 AS-502
 1/4" = 1'-0"



5 CONCRETE VERTICAL JOINTS-TYPICAL DETAILS
 AS-502
 1" = 1'-0"



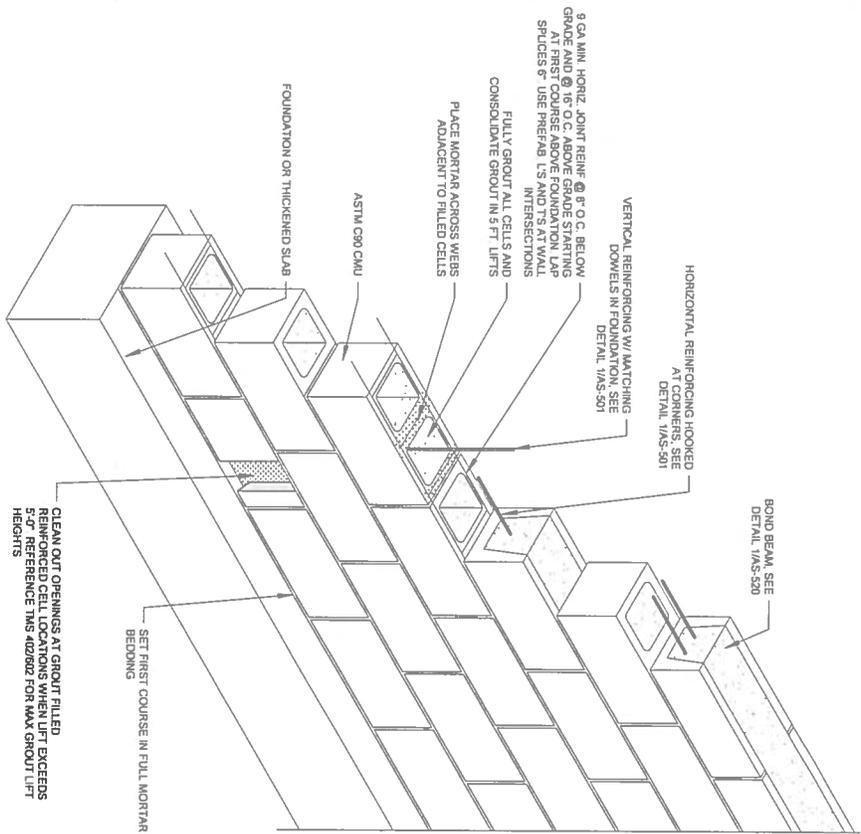
ORIGINAL SHEET SIZE: 11 X 17
 OTHERWISE SCALES ARE INACCURATE

DEPARTMENT OF PLANNING AND NATURAL RESOURCES
 BY COMMISSIONER DAWN L. HENRY
 DRAWING TITLE FOUNDATION DETAILS

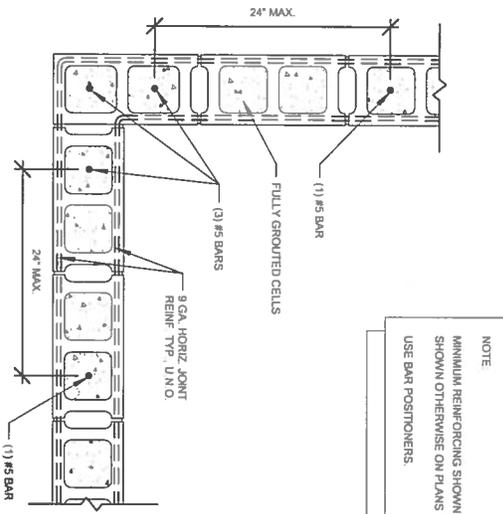
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DATE	REVISIONS	APPR.

SHEET NUMBER
 AS-502
 SHEET 10 OF 14



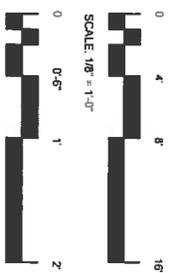
1
TYPICAL MASONRY WALL CONSTRUCTION
AS-510
1/8" = 1'-0"



NOTE
MINIMUM REINFORCING SHOWN APPLIES UNLESS SHOWN OTHERWISE ON PLANS OR SECTIONS.
USE BAR POSITIONERS.

2
TYPICAL CMU CORNER DETAIL
AS-510
1" = 1'-0"

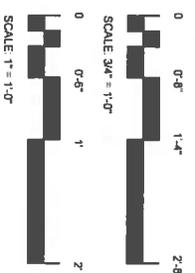
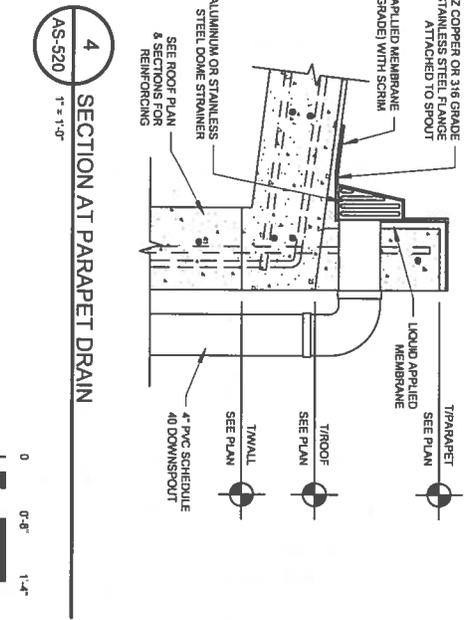
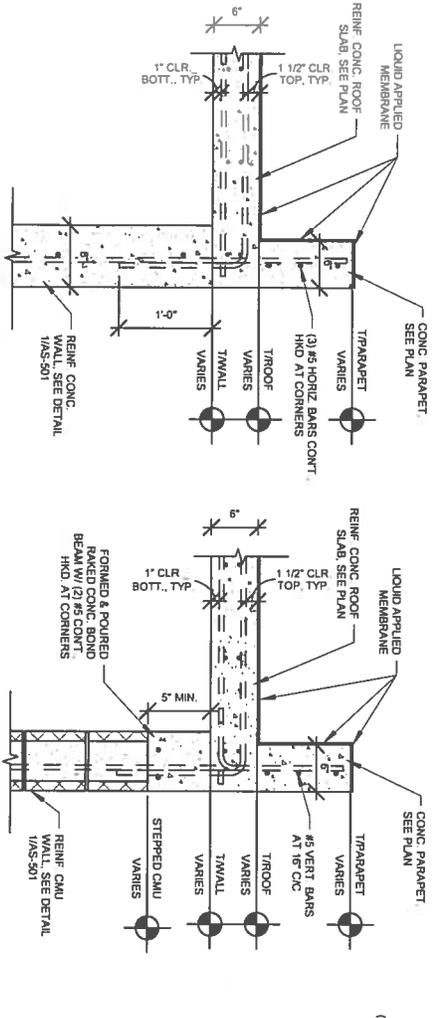
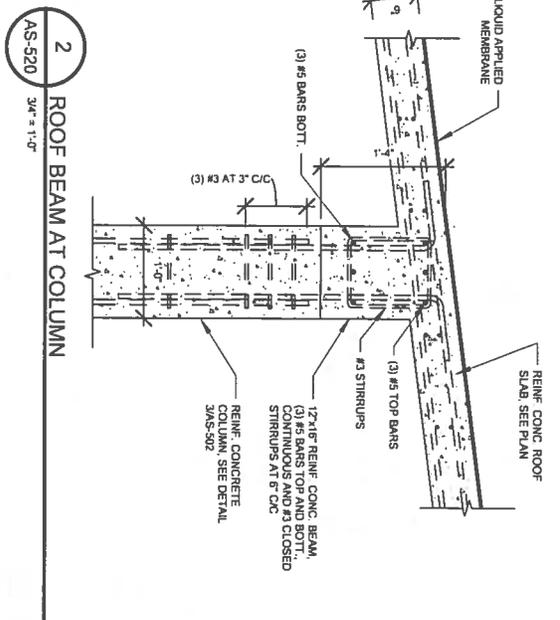
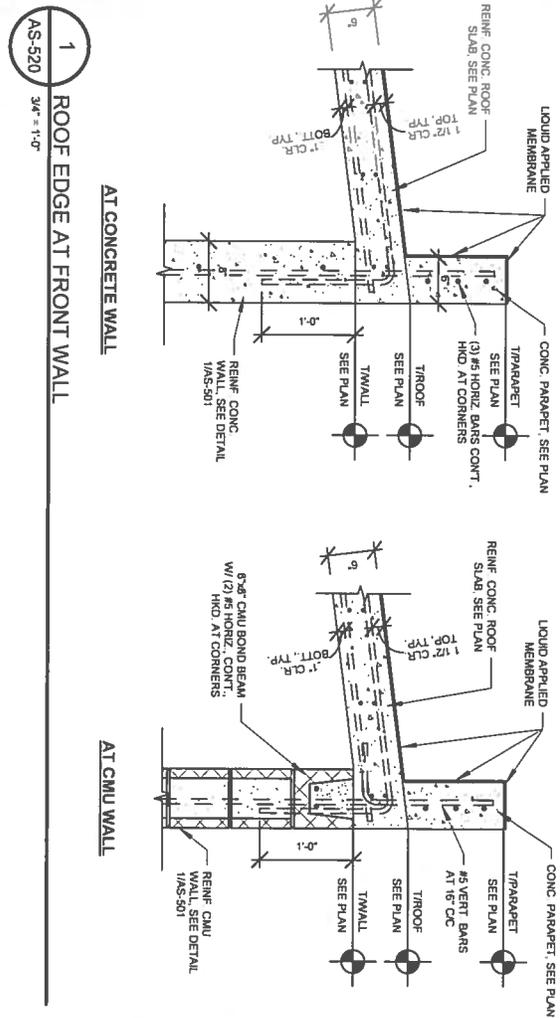
NOTE: SPACE ADDITIONAL #5 VERT BARS AT 24" O.C. IN FIELD OF WALL PER DTL. 1/AS-501



ORIGINAL SHEET SIZE: 11x17
OTHERWISE SCALES ARE INAPPROPRIATE

Note: Prior to construction contact U.S.V.I. Department of Planning and Natural Resources, Division of Permits for building requirements in the Virgin Islands. This information has been developed solely as guidance and is believed to meet the U.S.V.I. Building Code. All drawings must be separately approved by DPNR, Division of Permits upon submission of a building permit application.

DATE	REVISIONS	APPR.



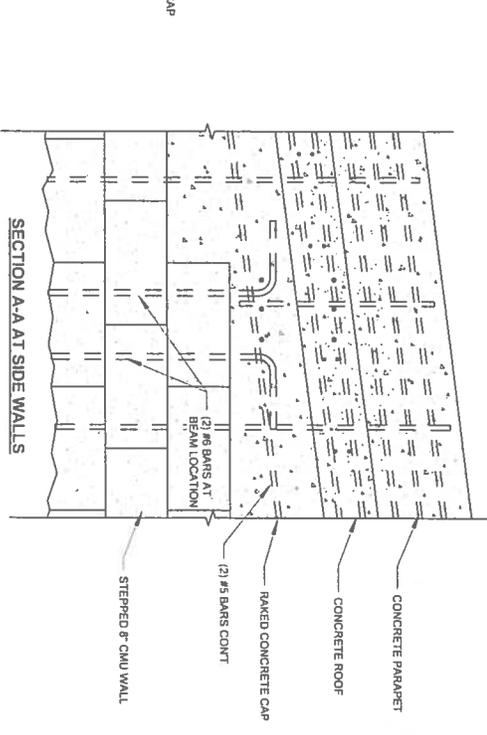
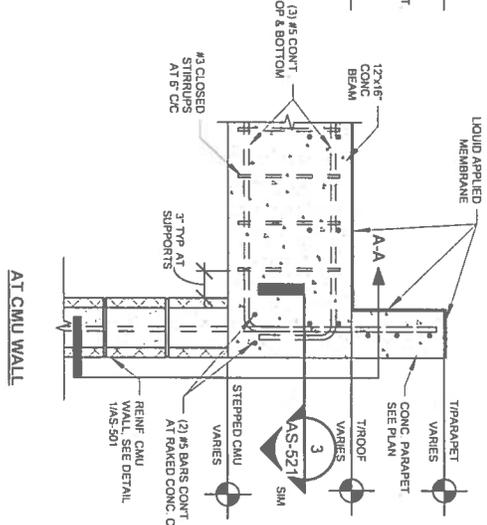
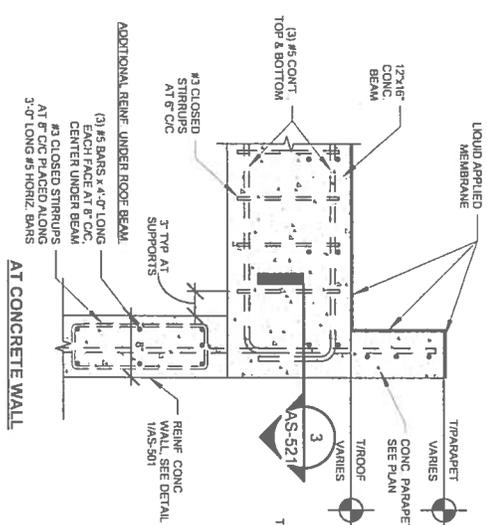
ORIGINAL SHEET SIZE: 11 x 17
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AS-520
SHEET NUMBER
SHEET 13 OF 14

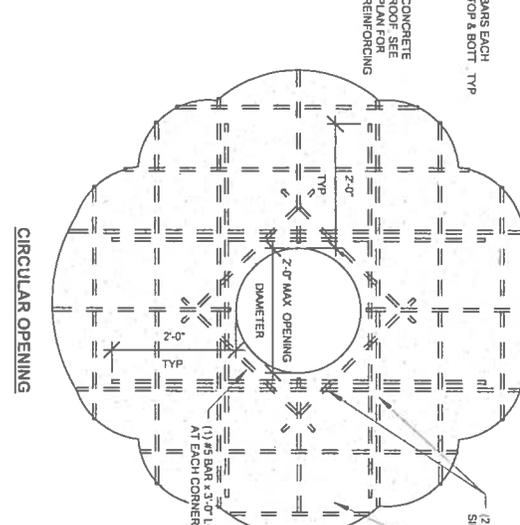
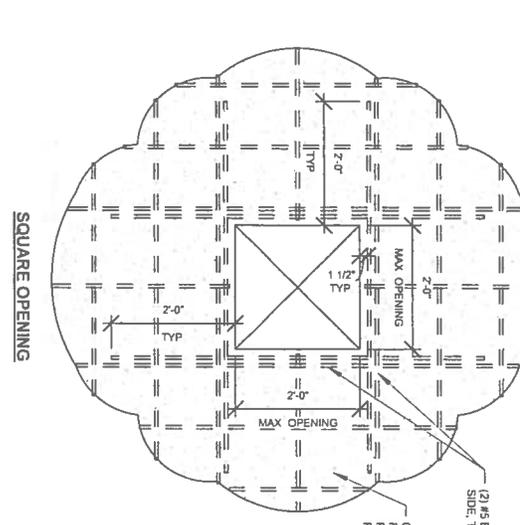
DEPARTMENT OF PLANNING AND NATURAL RESOURCES
BY COMMISSIONER DAWN L. HENRY
DRAWING TITLE: **ROOF DETAILS**

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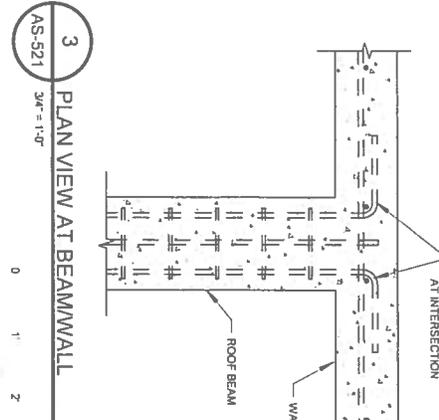
DATE	REVISIONS	APPR



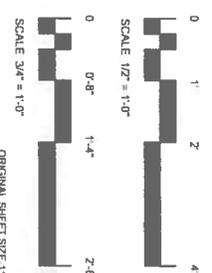
1 ROOF BEAM AT WALL
3/4" = 1'-0"



2 TYPICAL ROOF OPENING DETAIL
1/2" = 1'-0"



3 PLAN VIEW AT BEAM WALL
3/4" = 1'-0"



ORIGINAL SHEET SIZE 11 x 17
OTHERWISE SCALES ARE INACCURATE

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