



Arizona
Department
of Housing

STATE OF ARIZONA

DEPARTMENT OF HOUSING

MANUFACTURED HOUSING AND BUILDING DIVISION

MINIMUM STANDARDS FOR MANUFACTURED HOUSING FOUNDATIONS IN SHALLOW SHEET FLOODING AREAS OF NO GREATER THAN ONE FOOT ABOVE GRADE, AND FOR AREAS OF MILD SLOPING TERRAIN

STATE OF ARIZONA
REVIEWED for CODE
COMPLIANCE

Review does not imply compliance with the requirements of local codes and ordinances governing zoning, fire zones, fire separation, and site development requirements.

Date... 2/01/2021 ... By... PES...

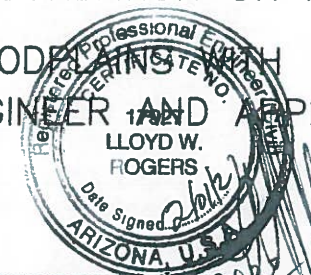
Approval No... F-LDDO SUP...

Sheet 1 of... 10

Review of this document does not authorize or approve any omission or deviation from applicable codes and standards.

GENERAL COMMENTS

1. THESE STANDARDS ARE CONSIDERED THE MINIMUM REQUIREMENT AND THE OWNER/ CONTRACTOR SHALL CHECK WITH THE LOCAL GOVERNMENTAL AGENCY TO SEE IF THEIR STANDARDS ARE MORE RESTRICTIVE AND THE OWNER / CONTRACTOR SHALL USE THE MOST STRINGENT STANDARDS.
2. THESE STANDARDS INCORPORATE FEMA P85,2ND EDITION, NOV. 2009 HUD PART II 24 CFR PARTS 3280 AND 3285, PART III 24 CFR PART 3286, 2018 IRC AND STATE OF ARIZONA MHBD STANDARDS.
3. THE OWNER / CONTRACTOR SHALL GET THE REGULATORY FLOOD ELEVATION INFORMATION AS DETERMINED BY THE LOCAL FLOODPLAIN ADMINISTRATOR/ MANAGER BEFORE START OF CONSTRUCTION.
4. THESE STANDARDS MAY NOT MEET FHA,VA AND FmHA REQUIREMENTS FOR LOANS. THE OWNER / CONTRACTOR SHALL CHECK WITH THESE GOVERNMENTAL AGENCIES TO DETERMINE THEIR STANDARDS.
5. THE OWNER / CONTRACTOR IS HEREBY NOTIFIED THAT IN MANY AREAS OF THE STATE THE DEPTH OF FROST MAY CONTROL THE DEPTH OF FOOTINGS FOR FOUNDATIONS.
6. THE STATE MHBD STAFF/ ISA STAFF WILL INSPECT HOMES SET UNDER THESE STANDARDS.
7. FACTORY BUILT HOMES (OFF FRAME) CAN USE SHEET 6 OF 10, 8 OF 10, TABLE A,C AND G FOR THE PERIMETER WALL AND MARRIAGE LINE PIERS.
8. THESE INSTALLATION STANDARDS DO NOT ADDRESS POSSIBLE LATERAL MIGRATION OF AN ADJACENT WASH TOWARDS AND INTO THE POSSIBLE LATERAL MIGRATION OF AN ADJACENT WASH TOWARDS AND INTO THE MH FOUNDATION OR FILL PAD.
9. MH FOUNDATIONS OR FILL PAD EROSION PROTECTION FOR INSTALLATIONS WITHIN FLOODED AREAS WITH BASE FLOOD ELEVATION DEPTHS GREATER THAN 1.0 FEET SHALL BE DESIGNED BY AN ARIZONA REGISTERED CIVIL ENGINEER AND APPROVED BY ALL APPROPRIATE LOCAL GOVERNMENTAL AGENCIES AND BY MHBD.



revised 2/01/21

TITLE SHEET SHEET 1 OF 10

EXPIRES 03/31/2022

CONSTRUCTION NOTES

1. WHEN THE HOME IS SET ON A FILL PAD WHICH HAS BEEN CONSTRUCTED AT OR ABOVE THE BASE FLOOD ELEVATION, VINYL (i.e, BREAK-AWAY) OR OTHER APPROVED SKIRTING MAY BE USED AROUND THE HOME.
2. FILL PAD SHALL BE CONSTRUCTED TO FEMA P85, 2ND EDITION, NOV. 2009 HUD, 2018 IRC AND MHBD STANDARDS.
3. WHEN A FILL PAD IS CONSTRUCTED (SHEET 5/10 & 6/1'0) THE STANDARD PRECAST CONCRETE 16"X16"X3.5" FOOTING OR THE ALTERNATIVE FOOTING CAN BE USED ALONG THE I BEAMS. TABLE "G" IS TO BE USED FOR FOOTINGS ALONG THE MARRIAGE LINE WHICH ARE GREATER THAN 2,000 psi IF THE LOADINGS ARE LESS THAN 2,000psi THE STANDARD PRE Poured OR ALTERNATIVE FOOTINGS MAY BE USED.
4. BUILDING EQUIPMENT MUST BE ELEVATED AT OR ABOVE THE REGULATORY FLOOD ELEVATION ON A STAND OF BLOCK, METAL OR TREATED WOOD.
5. WHEN HOMES ARE ON PIERS BUILT IN ACORDANCE WITH THESE STANDARDS, THE HOME MUST BE TIED DOWN WITH GROUND ANCHORS OR OTHER APPROVED ANCHORING SYSTEMS FOR GROUND ANCHORING. THERE MUST BE 6 TIE DOWNS ALONG THE LONG SIDES(HOMES UNDER 50'), 7 TIE DOWNS ALONG THE LONG SIDES(HOMES 52' TO 65') AND 8 TIE DOWNS ALONG THE LONG SIDES(HOMES OVER 66'). LONGITUDINAL BRACING PER THE HOME MANUFACTURER OR Xi2, LLB SYSTEMS PER THE MANUFACTURERS RECOMMENDATIONS ON BOTH ENDS FOR LONGITUDINAL BRACING.
6. RIBBON FOOTINGS MAY BE USED INSTEAD OF THE STANDARD PRECAST CONCRETE 16"X16"X3.5" FOOTINGS.
7. PERMANENT FLOOD VENTS WITH A MINIMUM OF TWO VENTS/ ACCESS OPENINGS ON BOTH ENDS OF THE ENCLOSED AREA, HAVING A TOTAL NET AREA OF NOT LESS THAN 1 SQ. IN. FOR EVERY 1 SQ. FT. OF ENCLOSED AREA SUBJECT TO FLOODING. THE BOTTOM OF ALL FLOOD VENTS SHALL BE NO HIGHER THAN ONE FOOT ABOVE ADJACENT GRADE. VENTS MAY BE EQUIPPED WITH SCREENS, LOUVERS, VALVES, OR OTHER COVERINGS OR DEVICES PROVIDED THEY PERMIT THE AUTOMATIC ENTRY AND EXIT OF FLOODWATER. (REFER TO FEMA TECHNICAL BULLETIN 1-08 FOR MORE GUIDANCE)
8. WHEN HOMES ARE ON STEM WALL FOUNDATIONS, IF THE OWNER/CONTRACTOR USES TIE DOWNS OTHER THAN THE SIMPSON PA STRAPS SHOWN ON THE PLANS THEY SHALL SHOW THE INSPECTOR THAT WHAT THEY ARE USING MEETS OR EXCEEDS THE SIMPSON PA STRAPS.
9. NATURAL GRADE MEANS THE GROUND SURFACE PRIOR TO DISTURBANCE(i.e., GRADING ACTIVITY, PLACEMENT OF FILL PAD) .
10. HIGHEST ADJACENT NATURAL GRADE MEANS THE HIGHEST NATURAL GRADE MEASURED IMMEDIATELY NEXT TO THE BUILDING.
11. FINISHED GRADE MEANS THE GROUND SURFACE WHICH RESULTS AFTER GRADING ACTIVIES(PLACEMENT AND COMPACTION OF FILL, EXCAVATING OF DRAINAGE SWALES).
12. ALL REBAR TO BE GRADE 60, ALL WELDED WIRE FABRIC OR MESH TO BE 65KSI, UNLESS NOTED OTHERWISE.
13. THE PLANS WERE SET UP SHOWING DOUBLE WIDE HOMES BUT CAN ALSO BE MODIFIED FOR SINGLE AND TRIPLE WIDE HOMES.

STATE OF ARIZONA
REFER TO SHEET #1

FEB 01 2021

Review of this document does not
authorize or approve any omission or
deviation from the applicable standard

F-LD00 SUP



EXPIRES 03/31/22

ABBREVIATIONS

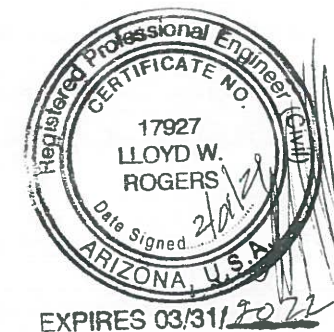
1. BFE— THE COMPUTED ELEVATION TO WHICH FLOODWATER IS ANTICIPATED TO RISE DURING THE BASE FLOOD. THE FLOOD HAVING A ONE PERCENT CHANCE OF BEING EQUALLED OR EXCEEDED IN ANY GIVEN YEAR. THIS IS ALSO REFERRED TO AS THE 100— YEAR FLOOD.
2. RFE— REGULATORY FLOOD ELEVATION; ELEVATION WHICH IS ONE FOOT ABOVE THE BASE FLOOD ELEVATION OR HIGHER FOR A WATERCOURSE FOR WHICH THE BASE FLOOD ELEVATION OR BASE FLOOD DEPTH HAS BEEN DETERMINED. ASK THE LOCAL FLOODPLAIN ADMINISTRATOR /MANAGER HAVING FLOODPLAIN AUTHORITY TO DETERMINE THE LOCAL REGULATORY FLOOD ELEVATION.
3. TYP— TYPICAL
4. L— LENGTH
5. W— WIDTH
6. MIN.— MINIMUM
7. MAX.— MAXIMUM
8. D50— THE DIAMETER OF RIP—RAP STONES FOR WHICH 50% OF IS SMALLER BY WEIGHT.
9. LLB— A PROPRIETARY PRODUCT TO BE USED FOR LONGITUDINAL BRACING UNDER A MANUFACTURED HOME.
10. Xi2— A PROPRIETARY PRODUCT TO BE USED FOR LONGITUDINAL BRACING UNDER A MANUFACTURED HOME.
11. ISA— INSPECTION SERVICE AGREEMENT.
12. FHA— FEDERAL HOUSING AUTHORITY.
13. VA— VETERANS AFFAIRS.
14. FmHA.— FARMERS HOME ADMINISTRATION.
15. U/S.— UPSTREAM.
16. D/S— DOWNSTREAM.
17. MH.— MANUFACTURED HOME.
18. W/I— WITHIN.

**STATE OF ARIZONA
REFER TO SHEET #1**

FEB 01 2021

**Review of this document does not
authorize or approve any omission or
deviation from the applicable standard.**

F-LD00 SUP



EXPIRES 03/31/2022

TABLE "A" STEM WALL FOOTING DEPTH FOR INSTALLATION IN FLOODPLAIN UP TO BFE OF 0.5 FT.

GROUND SLOPE ft./ft.	LESS THAN-0.014	0.014-0.04	0.041-0.06	0.061-0.07	OVER 0.07
FOOTING DEPTH-WITHIN 10 FT. EACH DIRECTION OF EACH U/S CORNER.	24"	30"	36"	36"	ENGINEER DESIGN
FOOTING DEPTH-REMAINDER OF STEM WALL	18"	18"	18"	24"	ENGINEER DESIGN

TABLE "B" I-BEAM PIER FOOTING THICKNESS FOR INSTALLATION IN FLOODPLAIN UP TO BFE OF 0.5 FT.

GROUND SLOPE ft./ft.	LESS THAN-0.011	0.011-0.022	0.0221-0.047	0.0471-0.07	OVER 0.07
FOOTING THICKNESS-	6"	8"	10"	12"	ENGINEER DESIGN

TABLE "C" STEM WALL FOOTING DEPTH FOR INSTALLATION IN FLOODPLAIN BFE 0.5 FT TO 1.0 FT.

GROUND SLOPE ft./ft.	LESS THAN-0.004	0.004-0.008	0.0081-0.022	0.0221-0.026	OVER 0.026
FOOTING DEPTH-WITHIN 10 FT. EACH DIRECTION OF EACH U/S CORNER.	42"	48"	54"	54"	ENGINEER DESIGN
FOOTING DEPTH-REMAINDER OF STEM WALL	18"	18"	18"	24"	ENGINEER DESIGN

TABLE "D" I-BEAM PIER FOOTING THICKNESS FOR INSTALLATION IN FLOODPLAIN BFE 0.5 FT TO 1.0 FT.

GROUND SLOPE ft./ft.	LESS THAN-0.01	0.01-0.02	0.021-0.026	OVER 0.026
FOOTING THICKNESS-	6"	8"	10"	ENGINEER DESIGN

TABLE "E" PIER FOOTING DEPTH FOR INSTALLATION IN FLOODPLAIN UP TO BFE 0.5 FT.

GROUND SLOPE ft./ft.	LESS THAN-0.008	0.008-0.038	0.0381-0.07	OVER 0.07
FOOTING DEPTH-	18"	24"	30"	ENGINEER DESIGN

TABLE "F" PIER FOOTING DEPTH FOR INSTALLATION IN FLOODPLAIN BFE 0.5 FT TO 1.0 FT.

GROUND SLOPE ft./ft.	LESS THAN-0.01	0.01-0.025	0.0251-0.047	0.0471-0.07	OVER 0.07
FOOTING DEPTH-	30"	36"	42"	48"	ENGINEER DESIGN

NOTE:

FOOTING AND CUTOFF WALL DEPTHS ARE MEASURED FROM NATURAL (UNDISTURBED) GRADE DOWN TO THE BOTTOM OF THE FOOTER OR CUTOFF WALL.

Review of this document does not authorize or approve any omission or deviation from the applicable standard.

F-1000 SUP

MH FOUNDATIONS, OR FILL PAD EROSION PROTECTION, FOR INSTALLATIONS WITHIN FLOODPLAINS WITH A BASE FLOOD ELEVATION DEPTH GREATER THAN 1.0 FOOT SHALL BE DESIGNED BY AN ARIZONA-REGISTERED CIVIL ENGINEER, AND APPROVED BY ALL APPROPRIATE LOCAL GOVERNMENTAL AGENCIES AND BY THE MHB.

revised 2/01/21

TABLE "G" MARRIAGE LINE FOOTING DIMENSIONS FOR INSTALLATION IN FLOODPLAIN UP TO BFE 1.0 FT.

MARRIAGE LINE LOADING LBS.	SOIL LOADING PSI			
	1000	2000	3000	4000
2000	1.5'X1.5'X4"	1.33'X1.33'X4"	1.33'X1.33'X4"	1.33'X1.33'X4"
3000	1.75'X1.75'X6"	1.33'X1.33'X4"	1.33'X1.33'X4"	1.33'X1.33'X4"
4000	2'X2'X6"	1.5'X1.5'X4"	1.33'X1.33'X4"	1.33'X1.33'X4"
5000	2.25'X2.25'X8"	1.75'X1.75'X6"	1.33'X1.33'X4"	1.33'X1.33'X4"
6000	2.5'X2.5'X8"	1.75'X1.75'X6"	1.5'X1.5'X4"	1.33'X1.33'X4"
7000	2.75'X2.75'X8"	2'X2'X6"	1.75'X1.75'X6"	1.33'X1.33'X4"
8000	3'X3'X10"	2'X2'X6"	1.75'X1.75'X6"	1.5'X1.5'X4"
9000	3'X3'X10"	2.25'X2.25'X8"	1.75'X1.75'X6"	1.5'X1.5'X4"

FOOTNOTE 1- IF THE THICKNESS IN THIS TABLE IS SMALLER THAN IN TABLE B OR D THEN USE THE LARGER.

FOOTNOTE 2- FOOTINGS SHALL HAVE 3-#4 REBAR BOTH DIRECTIONS

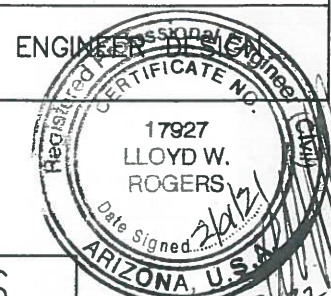
TABLES "H"&"I" ARE FOR PADS WHERE THE LONG DIMENSION OF THE HOME IS PARALLEL TO FLOOD FLOW AND UP TO A 32 FOOT DOUBLE WIDE HOME.

TABLE "H" FILL PAD THICKNESS AND EROSION PROTECTION IN FLOODPLAIN UP TO BFE 0.5 FT

	GROUND SLOPE ft./ft.	LESS THAN-0.012	0.012-0.026	OVER 0.026
U/S END & 10 FOOT FROM U/S CORNERS	PAD THICKNESS TOE DOWN DEPTH RIP-RAP SIZING	12" 2.0' D50=6"	12" 2.0' D50=6"	ENGINEER DESIGN
REMAINDER OF PAD	PAD THICKNESS TOE DOWN DEPTH RIP-RAP SIZING	12" NONE REQUIRED NONE REQUIRED	12" 2.0' D50=6"	ENGINEER DESIGN

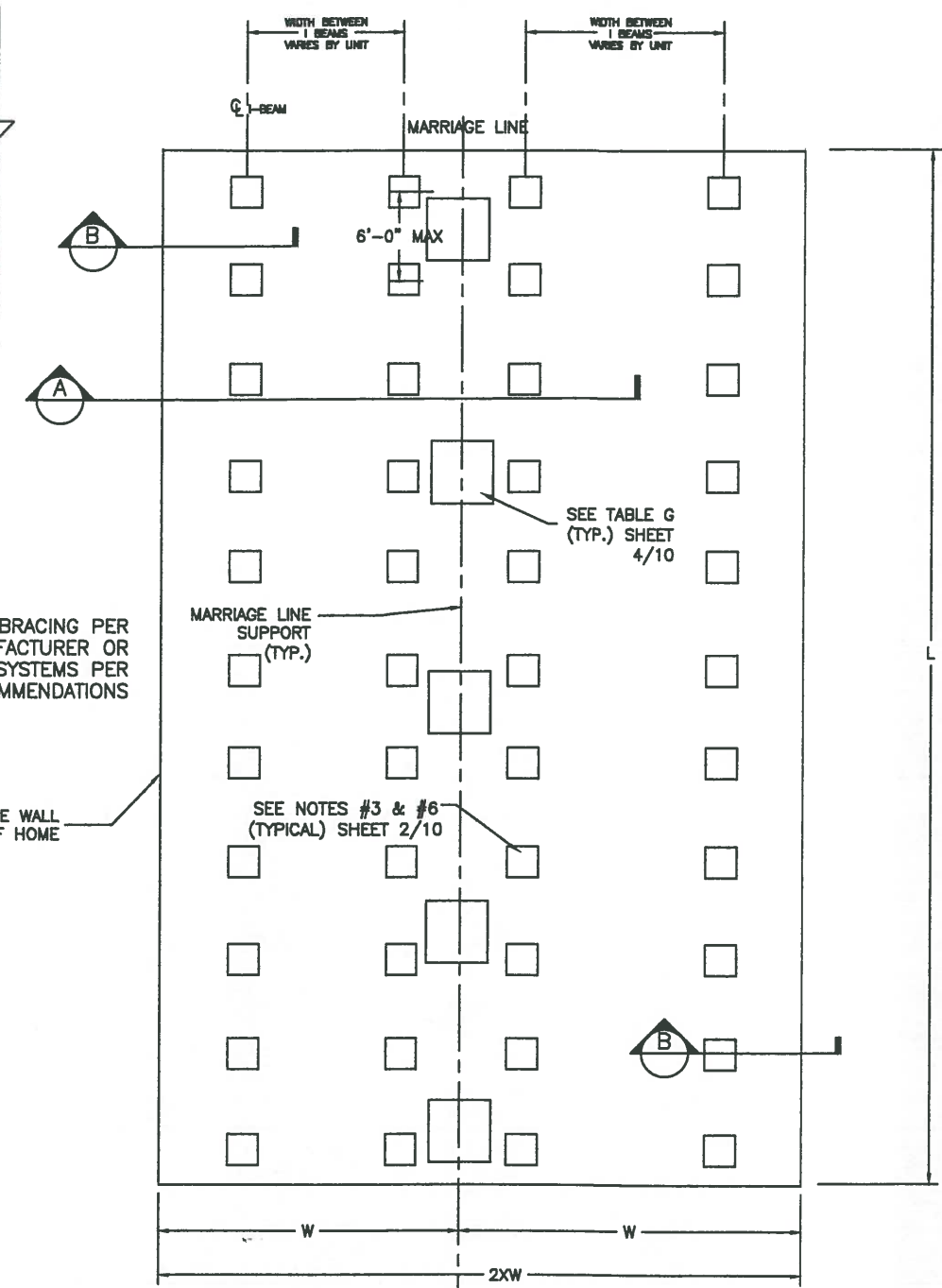
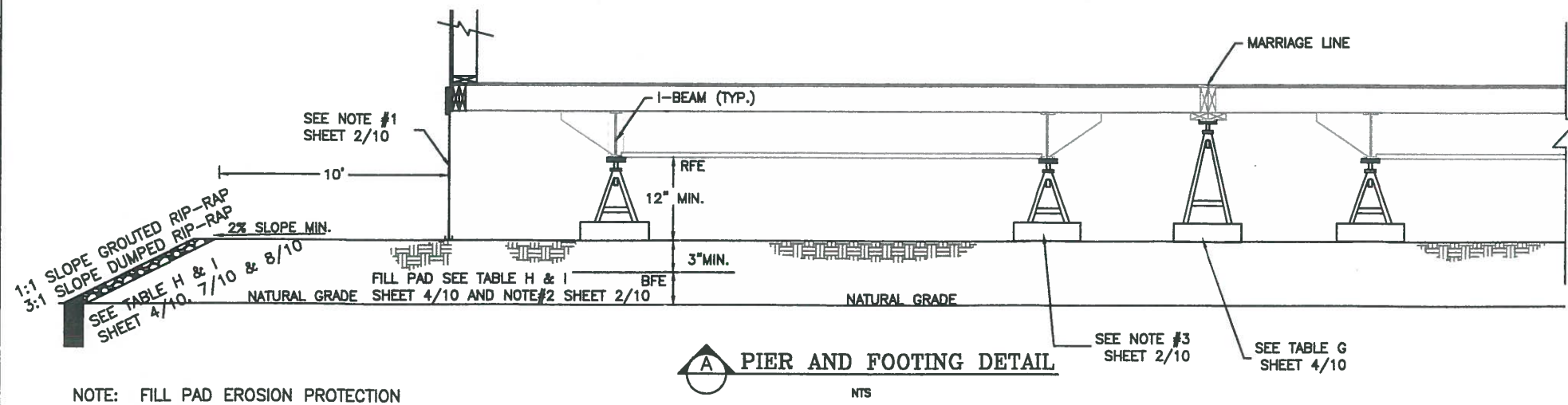
TABLE "I" FILL PAD THICKNESS AND EROSION PROTECTION IN FLOODPLAIN BFE 0.5 FT. TO 1.0 FT.

	GROUND SLOPE ft./ft.	LESS THAN-0.004	0.004-0.012	0.0121-0.016	0.0161-0.022	OVER 0.022
U/S EDGE & CORNERS	PAD THICKNESS TOE DOWN DEPTH RIP-RAP SIZING	18" 2.0' D50=6"	18" 2.0' D50=6"	18" 3.0' D50=6"	18" 3.0' D50=9"	ENGINEER DESIGN
SIDES, D/S EDGE & CORNERS.	PAD THICKNESS TOE DOWN DEPTH RIP-RAP SIZING	18" NONE REQUIRED NONE REQUIRED	18" 2.0' D50=6"	18" 2.0' D50=9"		ENGINEER DESIGN

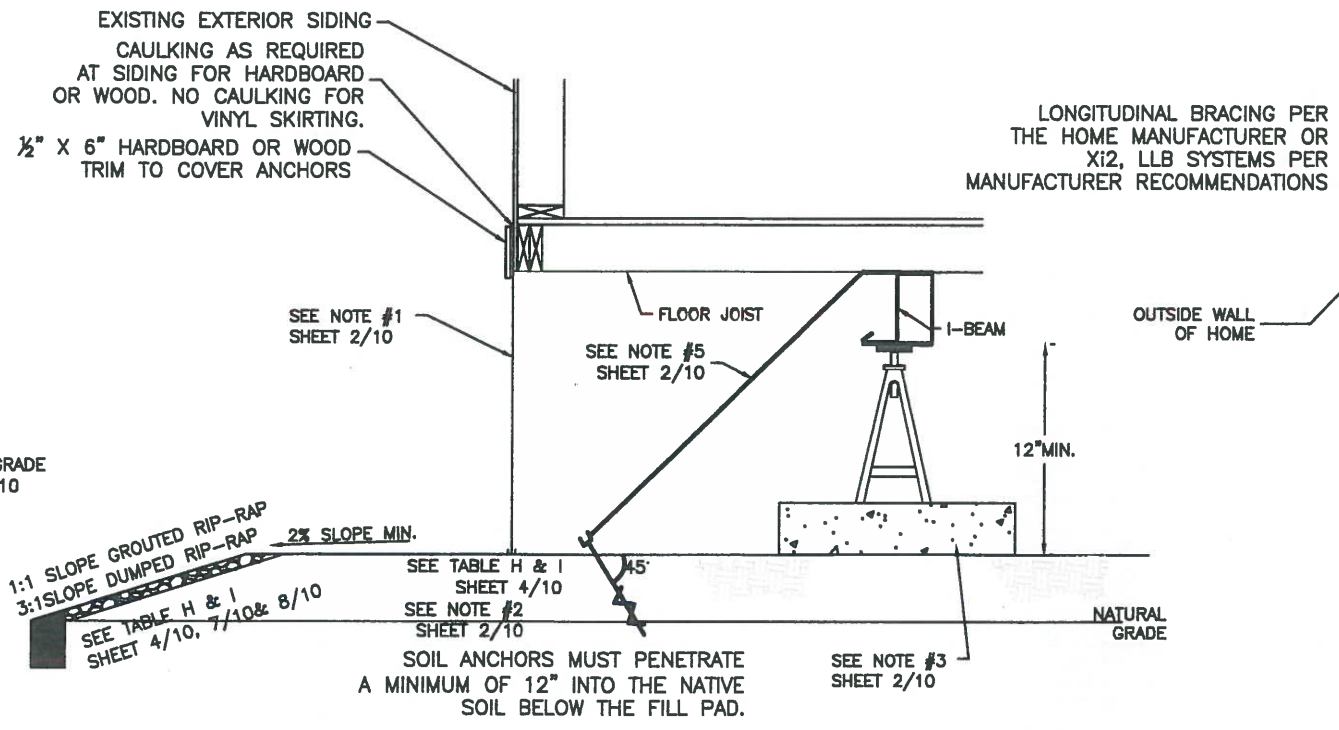
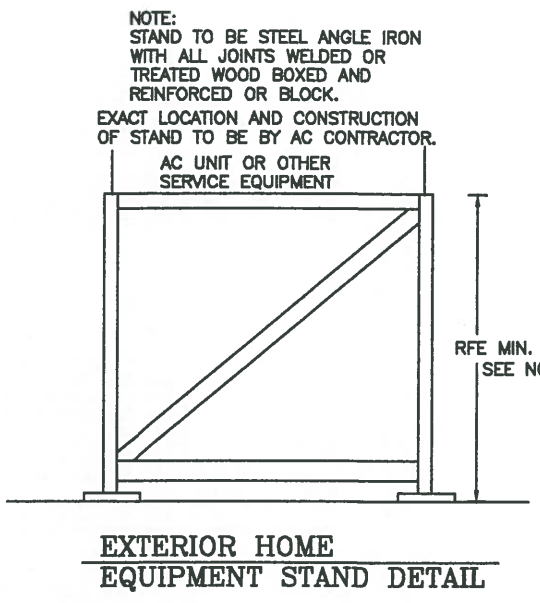


FOOTINGS AND CUTOFF WALL DEPTHS AND DIMENSIONS IN SHALLOW FLOODPLAIN

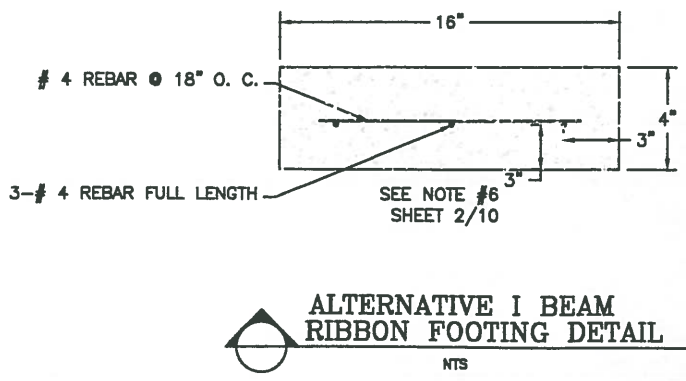
EXPIRES 03/31/2022 SHEET 4 OF 10



NOTE: FILL PAD EROSION PROTECTION MUST BE INSTALLED ALONG THE ENTIRE PERIMETER OF THE FILL PAD.



- A. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE, AND THE 2018 IRC CODE. THE PERMANENT FOUNDATION GUIDE FOR MANUFACTURED HOUSING, HUD- 7584, SEPTEMBER 1996; AND THE STATE OF ARIZONA RULES TITLE 4, CHAPTER 34, ARTICLE 2.
 - B. CONCRETE SHALL BE PER ASTM C-94 AND HAVE A 28 DAY STRENGTH OF 3,000 psi. THERE SHALL BE A MINIMUM OF 5 SACKS OF CEMENT PER CUBIC YARD AND CONFORM TO ASTM C-150 TYPE II. THE AGGREGATE PER ASTM C-33. THE SLUMP SHALL NOT BE MORE THAN 4".
 - C. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 AND LAP 30 BAR DIAM. REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS.
 - D. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND DIMENSIONS BEFORE STARTING WORK.
 - E. MASONRY BLOCK SHALL CONFORM TO ASTM C-90, TYPE I, GRADE N-1. MORTAR SHALL BE TYPE "S" CONFORMING TO ASTM C-270. GROUT SHALL CONFORM TO ASTM C-476, WITH A 28-DAY STRENGTH OF 2,000psi.
 - F. WOOD WITHIN 8" OF GROUND AND SILLS TO CONCRETE OR BLOCK TO BE PRESSURE TREATED TO FOUNDATION GRADE STANDARD FOR USE IN GROUND CONTACT PER REQUIREMENTS OF AMERICAN WOOD PRESERVES BUREAU STANDARD A.W.P.B.- FDN FOR USE IN GROUND CONTACT.
 - G. THE FILL PAD ALIGNMENT SHALL BE SUCH THAT THE LONG DIMENSION IS PARALLEL WITH THE FLOW OF THE FLOOD WATER.
 - H. THE BOTTOM OF THE STRUCTURAL FRAME MUST BE ELEVATED AT OR ABOVE THE RFE.
- revised 2/01/21



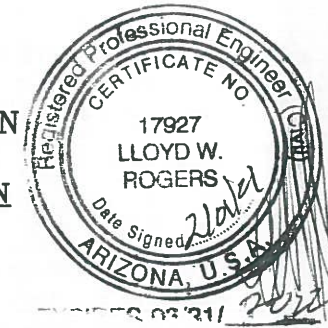
STATE OF ARIZONA REFER TO SHEET #1

FEB 01 2021

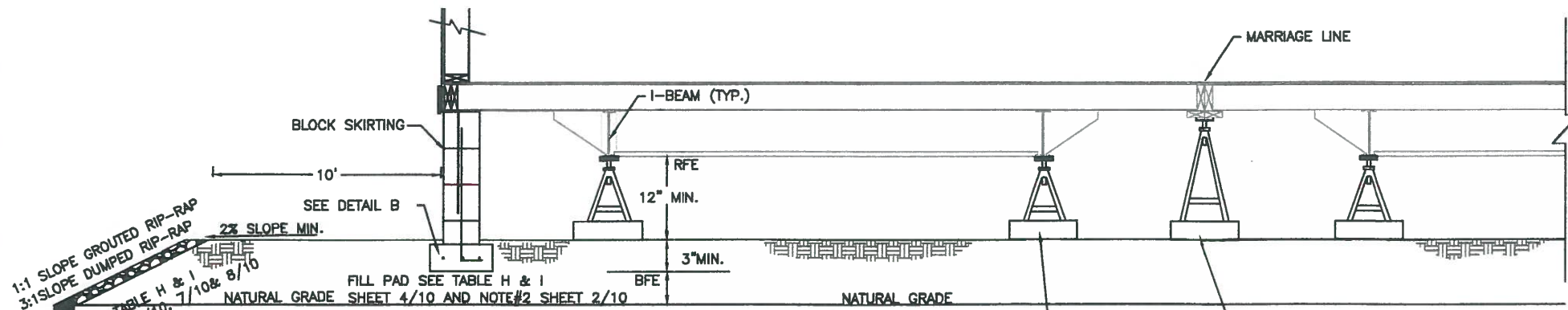
Review of this document does not authorize or approve any omission or deviation from the applicable standard.

F-LD00 SUP

FLOOD FLOW DIRECTION
GENERAL FOOTING PLAN



PIER INSTALLATION ON EROSION-STABILIZED FILL PAD IN SHALLOW FLOODPLAIN

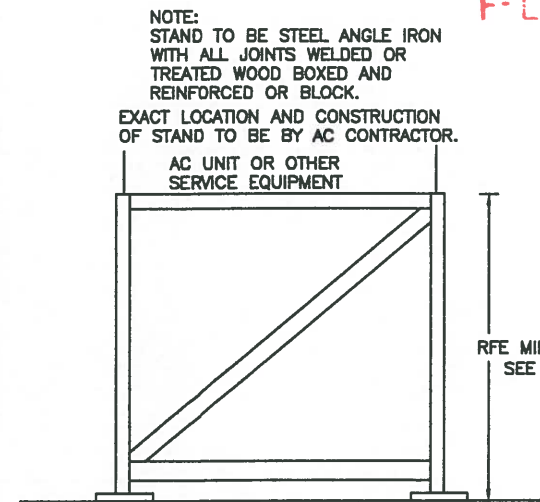


**STATE OF ARIZONA
REFER TO SHEET #1**

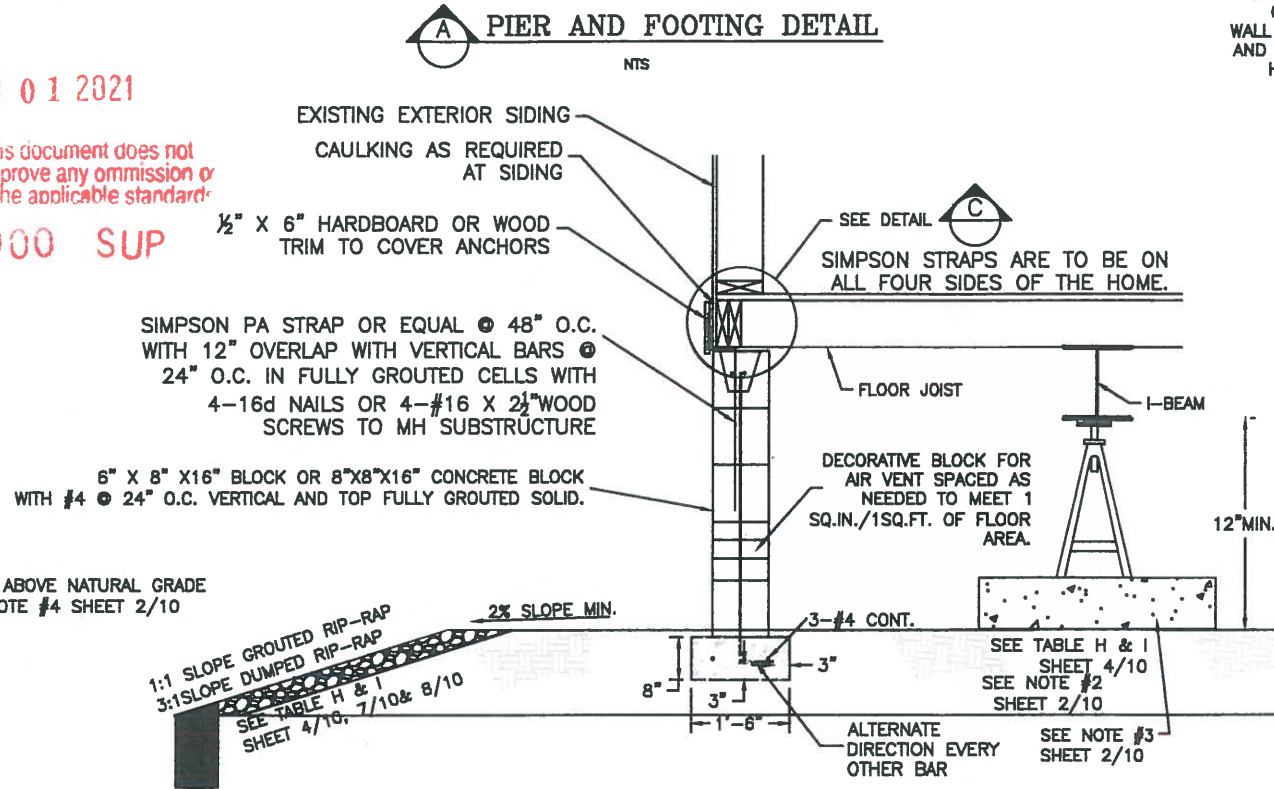
FEB 01 2021

Review of this document does not authorize or approve any omission or deviation from the applicable standard.

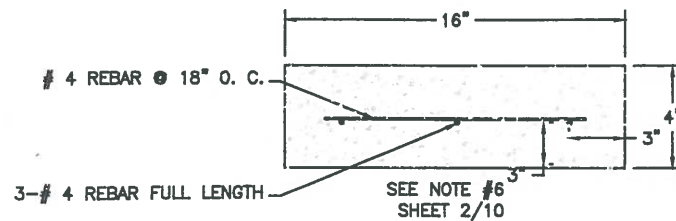
F-LD00 SUP



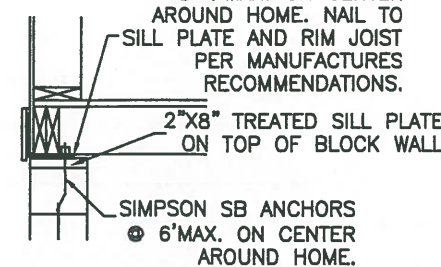
**EXTERIOR HOME
EQUIPMENT STAND DETAIL**



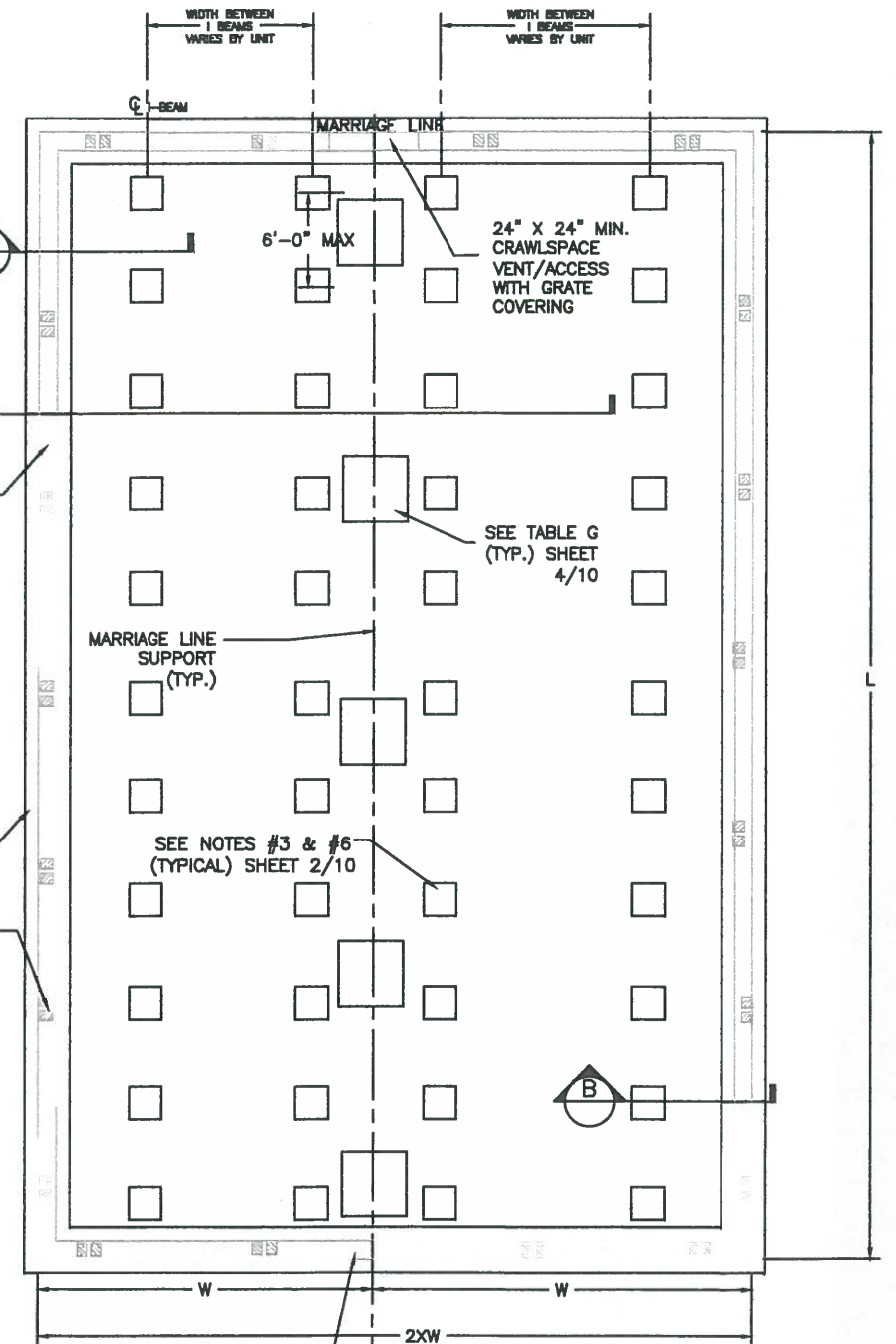
B STEM WALL FOOTING DETAIL



**ALTERNATIVE I BEAM
RIBBON FOOTING DETAIL**



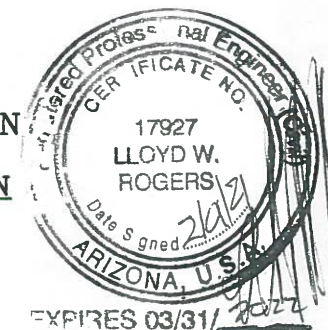
**ALTERNATIVE
WALL AND HOME TIE DOWNS**



24" X 24" MIN. CRAWLSPACE VENT/ACCESS WITH GRATE COVERING
SEE SHEET 7/10 AND 8/10 FOR DETAILS OF FILL PAD AROUND THE HOME.

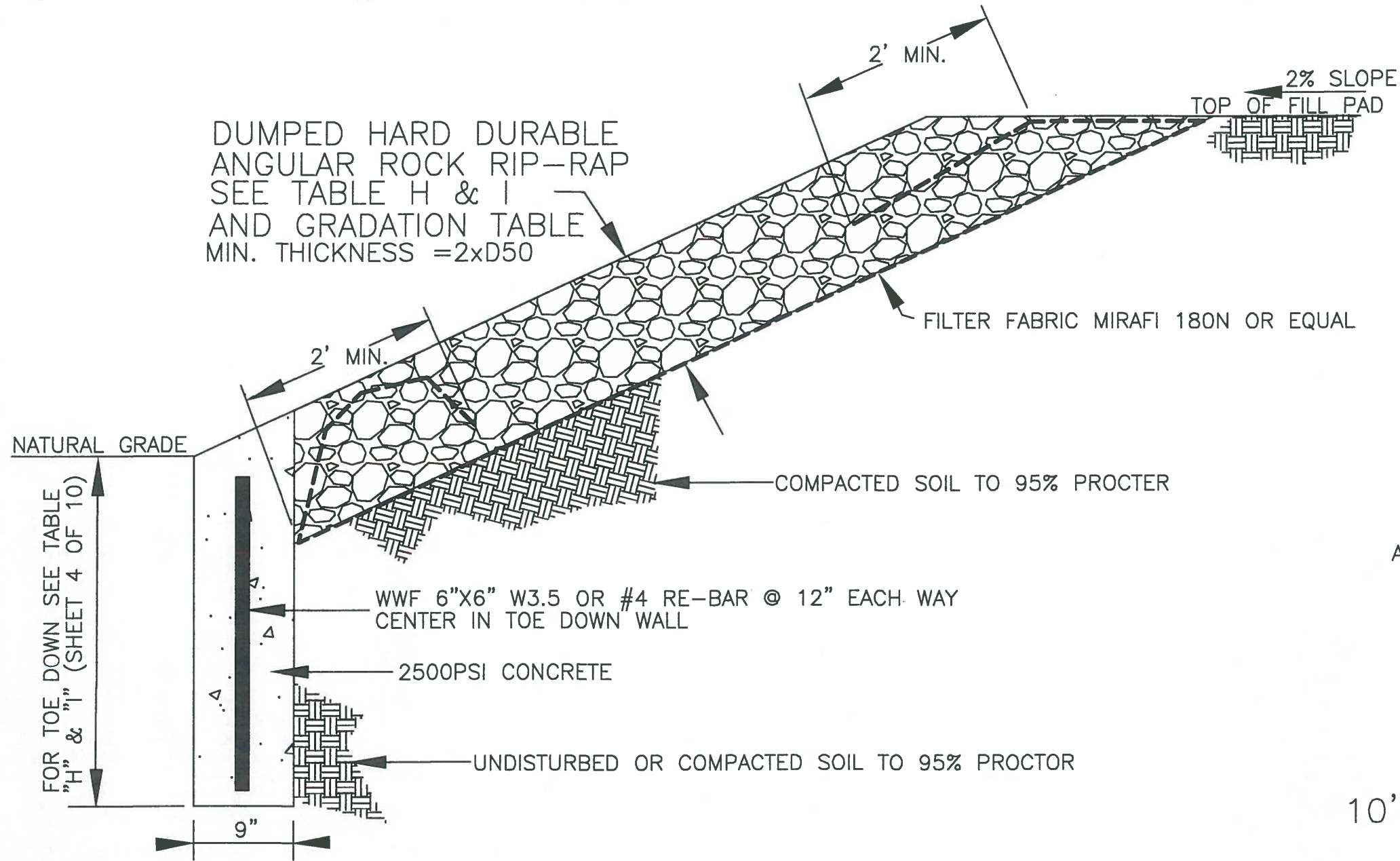
**FLOOD FLOW DIRECTION
GENERAL FOOTING PLAN**

- A. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE, AND THE 2018 IRC CODE, THE PERMANENT FOUNDATION GUIDE FOR MANUFACTURED HOUSING, HUD-7584, SEPTEMBER 1996; AND THE STATE OF ARIZONA RULES TITLE 4, CHAPTER 34, ARTICLE 2.
- B. CONCRETE SHALL BE PER ASTM C-94 AND HAVE A 28 DAY STRENGTH OF 3,000 psi. THERE SHALL BE A MINIMUM OF 5 SACKS OF CEMENT PER CUBIC YARD AND CONFORM TO ASTM C-150 TYPE II. THE AGGREGATE PER ASTM C-33. THE SLUMP SHALL NOT BE MORE THAN 4".
- C. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 AND LAP 30 BAR DIAM. REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS.
- D. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND DIMENSIONS BEFORE STARTING WORK.
- E. MASONRY BLOCK SHALL CONFORM TO ASTM C-90, TYPE I, GRADE N-1. MORTAR SHALL BE TYPE "S" CONFORMING TO ASTM C-270. GROUT SHALL CONFORM TO ASTM C-476, WITH A 28-DAY STRENGTH OF 2,000psi.
- F. WOOD WITHIN 8" OF GROUND AND SILLS TO CONCRETE OR BLOCK TO BE PRESSURE TREATED TO FOUNDATION GRADE STANDARD FOR USE IN GROUND CONTACT PER REQUIREMENTS OF AMERICAN WOOD PRESERVES BUREAU STANDARD A.W.P.B.- FDN FOR USE IN GROUND CONTACT.
- G. THE FILL PAD ALIGNMENT SHALL BE SUCH THAT THE LONG DIMENSION IS PARALLEL WITH THE FLOW OF THE FLOOD WATER.



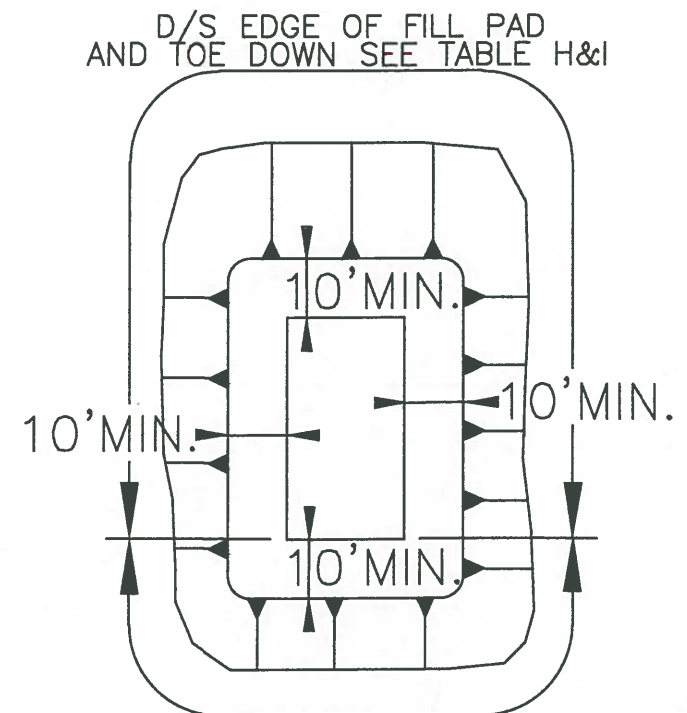
**STEM WALL INSTALLATION ON EROSION-STABILIZED
FILL PAD IN SHALLOW FLOODPLAIN**

3:1 SLOPE DETAIL DUMPED ROCK RIP-RAP



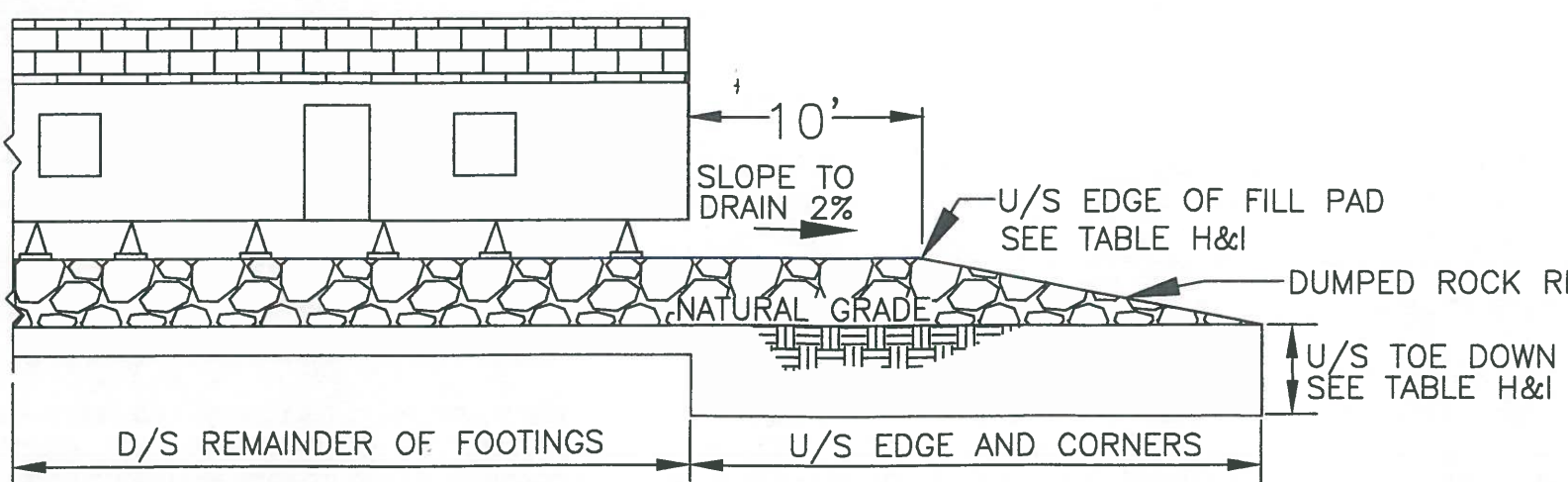
LOOSE ROCK RIP-RAP GRADATION	
% PASSING	SIZE
100-90	2.0 D50
85-70	1.5 D50
50-30	1.0 D50
15-5	0.67 D50
0-5	0.33 D50

HARD DURABLE ANGULAR ROCK WITH GRADATION AS SHOWN AND SG OF 2.6 MIN.



U/S EDGE OF FILL PAD AND TOE DOWN SEE TABLE H&I

FLOOD FLOW DIRECTION

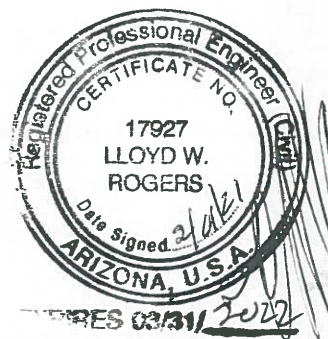


STATE OF ARIZONA
REFER TO SHEET #1

FEB 01 2021

Review of this document does not authorize or approve any omission or deviation from the applicable standard.

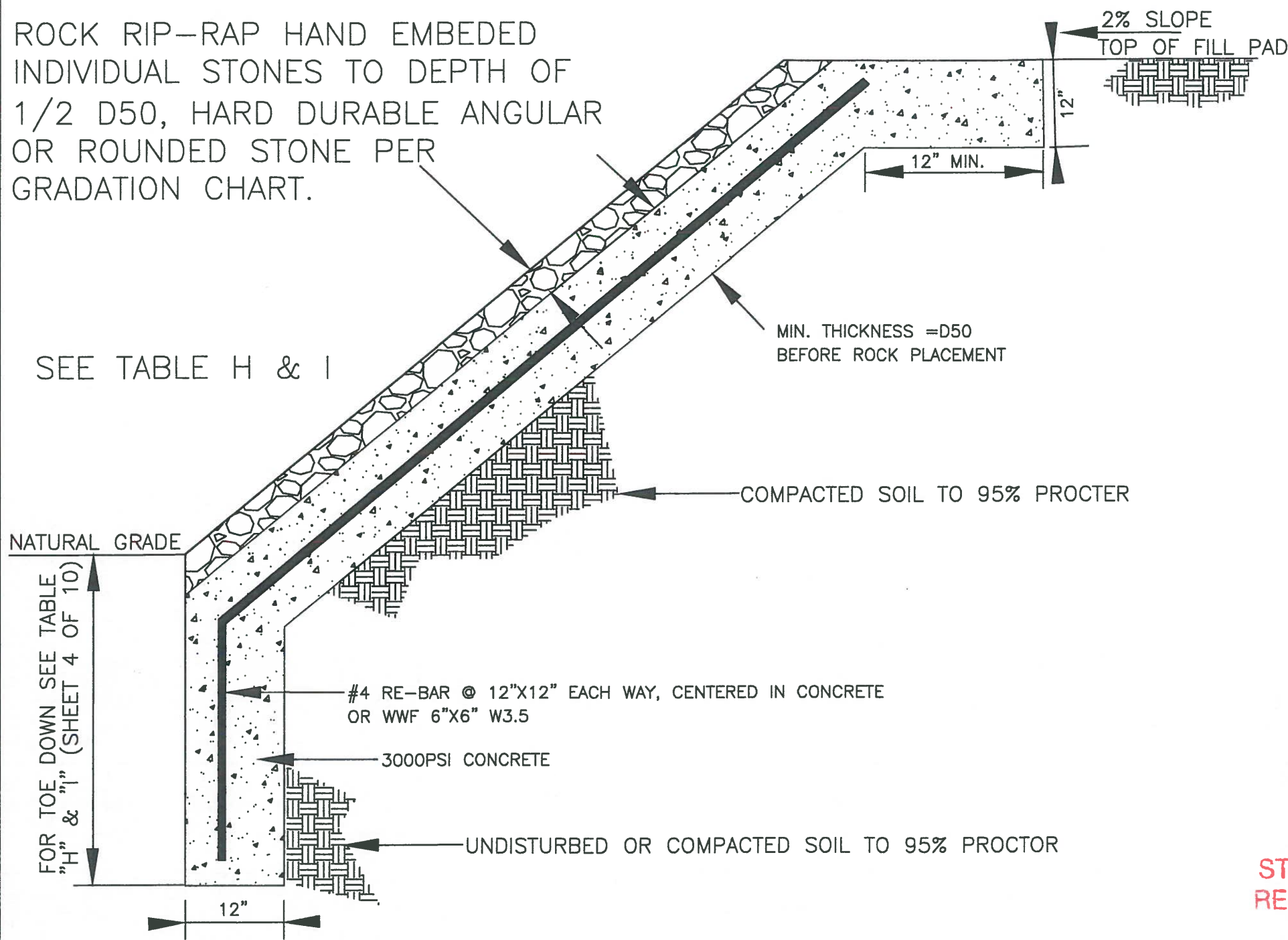
F-LD00 SUP



DUMPED RIP-RAP EROSION STABILIZATION OF FILL PAD IN SHALLOW FLOODPLAIN

1:1 SLOPE DETAIL GROUTED ROCK RIP-RAP

ROCK RIP-RAP HAND EMBEDDED INDIVIDUAL STONES TO DEPTH OF 1/2 D50, HARD DURABLE ANGULAR OR ROUNDED STONE PER GRADATION CHART.



% PASSING	SIZE
100	1.5 D50
0	0.67 D50

SEE TABLE H & I

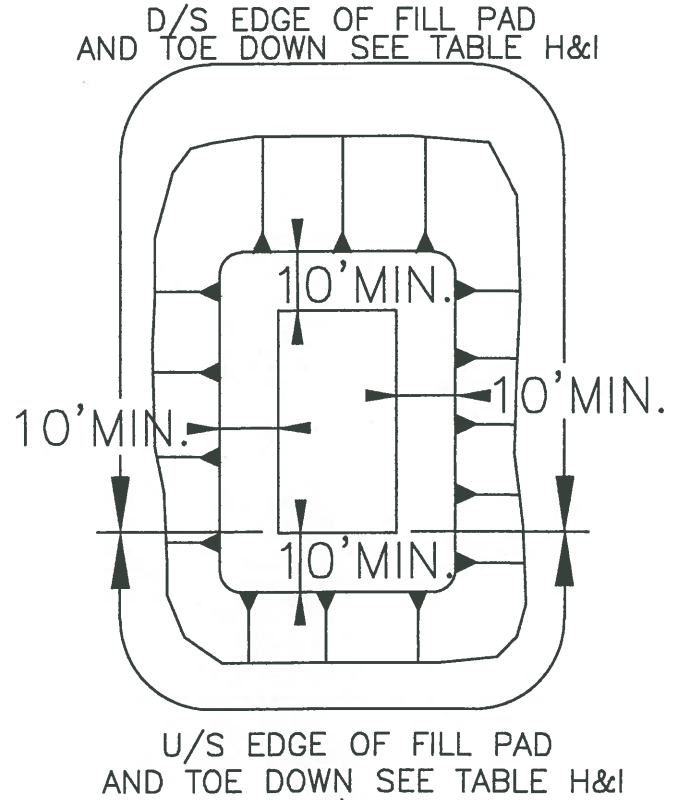
MIN. THICKNESS = D50 BEFORE ROCK PLACEMENT

COMPACTED SOIL TO 95% PROCTER

#4 RE-BAR @ 12"X12" EACH WAY, CENTERED IN CONCRETE OR WWF 6"X6" W3.5

3000PSI CONCRETE

UNDISTURBED OR COMPACTED SOIL TO 95% PROCTER



U/S EDGE OF FILL PAD AND TOE DOWN SEE TABLE H&I

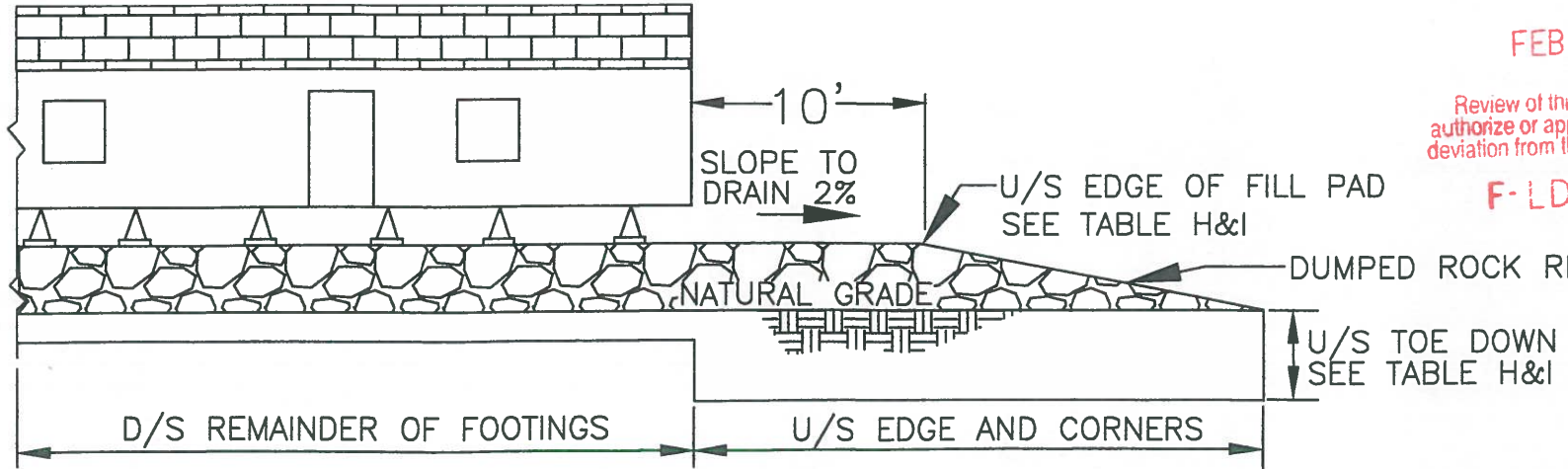
FLOOD FLOW DIRECTION

STATE OF ARIZONA REFER TO SHEET #1

FEB 01 2021

Review of this document does not authorize or approve any omission or deviation from the applicable standards.

F-LD00 SUP



U/S EDGE OF FILL PAD SEE TABLE H&I

DUMPED ROCK RIP-RAP

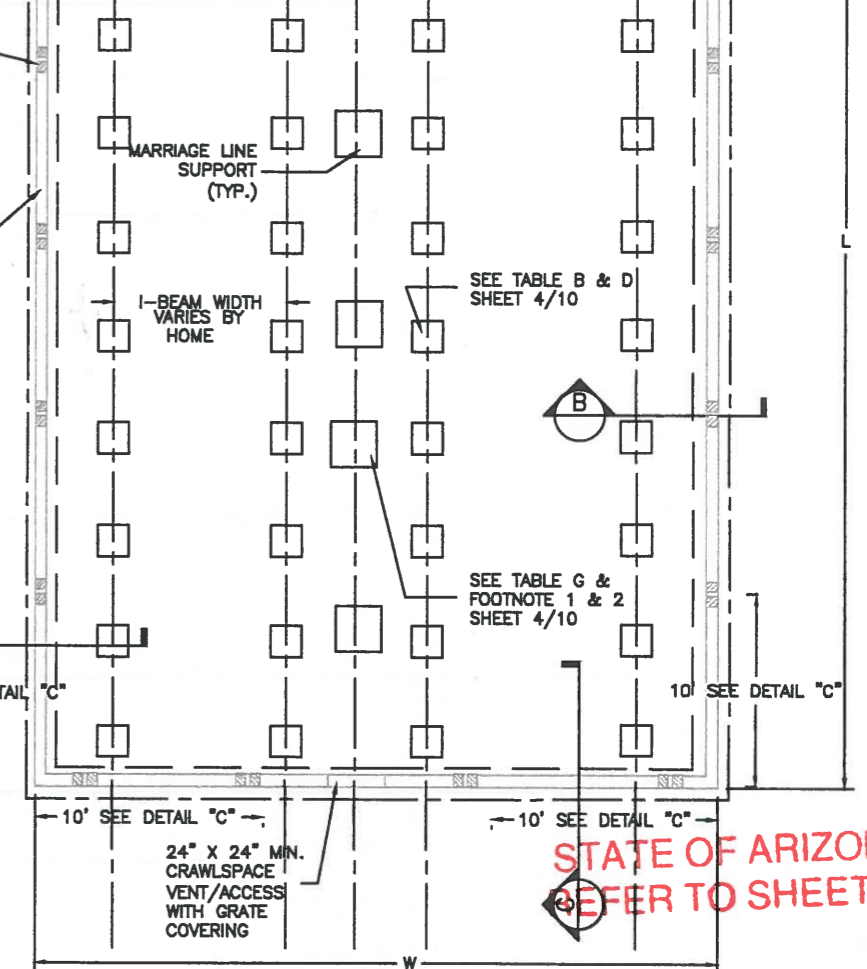
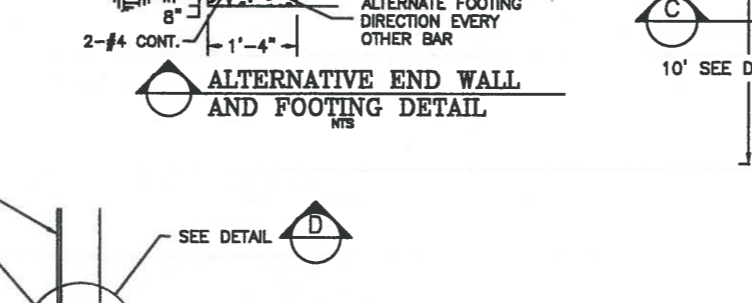
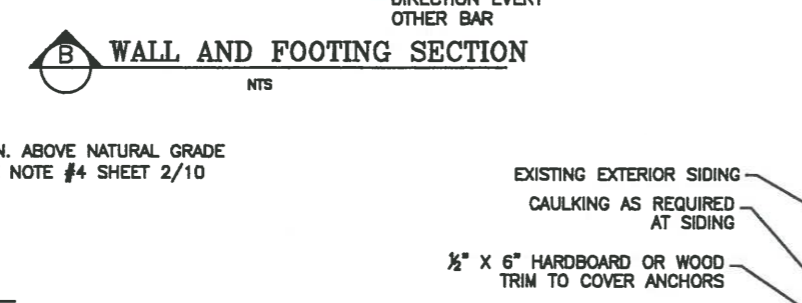
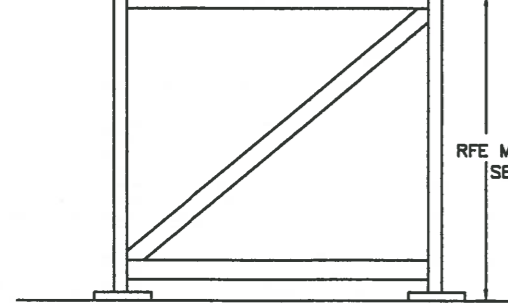
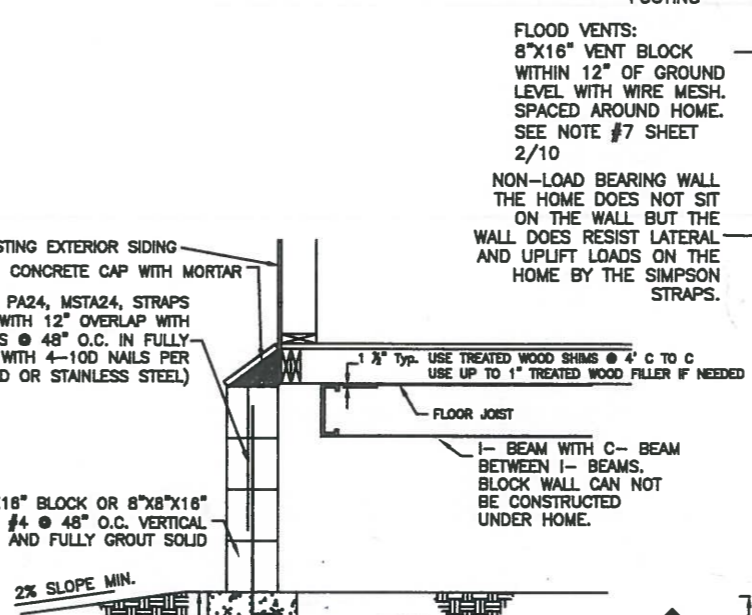
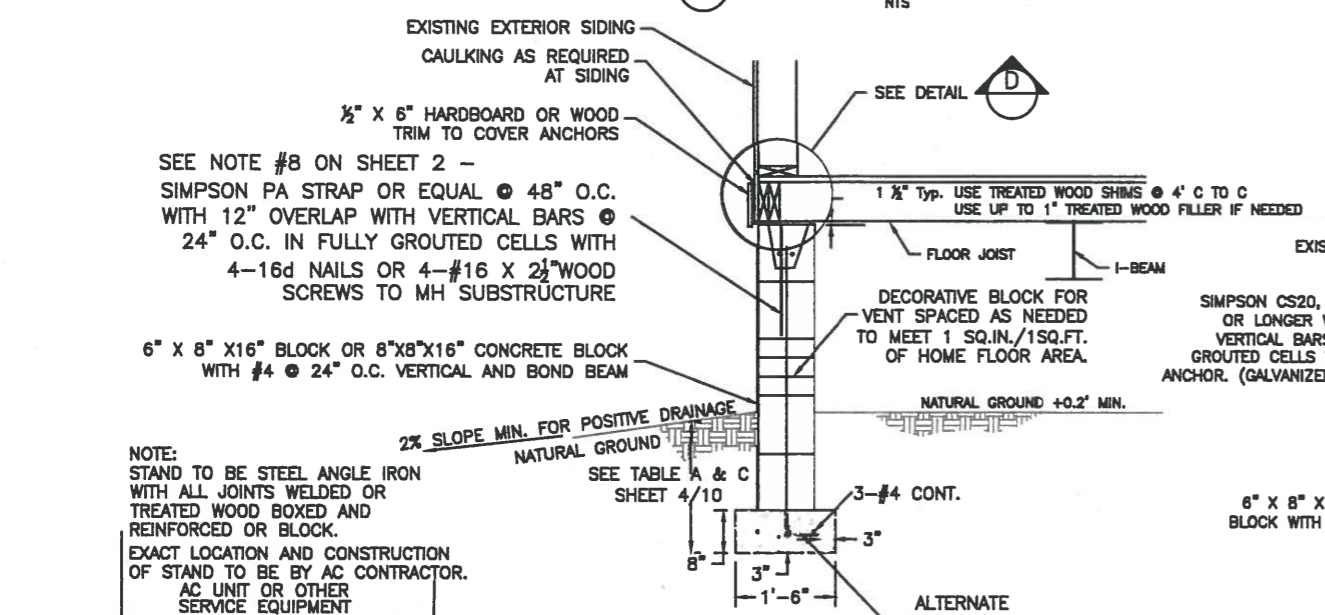
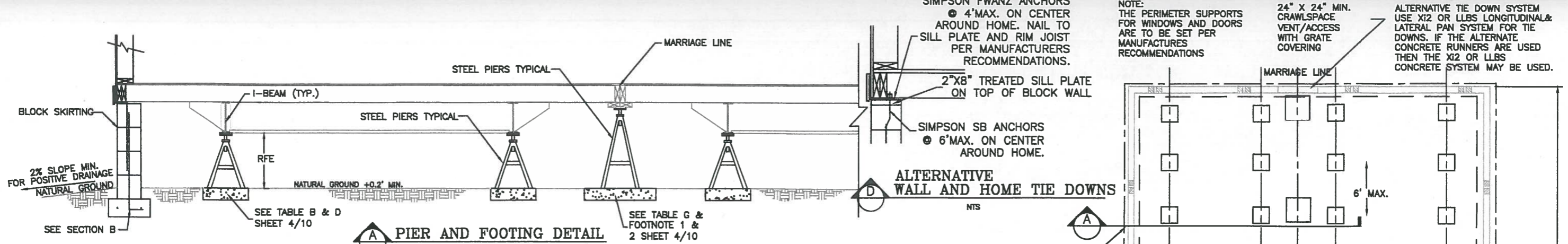
U/S TOE DOWN SEE TABLE H&I

D/S REMAINDER OF FOOTINGS

U/S EDGE AND CORNERS

GROUTED RIP-RAP EROSION STABILIZATION OF FILL PAD IN SHALLOW FLOODPLAIN

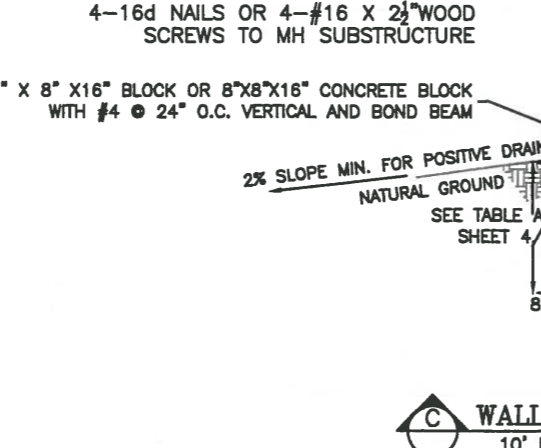
revised 2/01/21



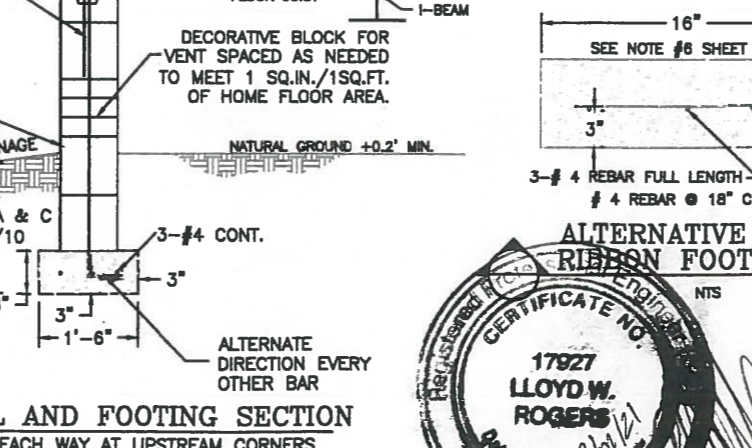
EXTERIOR HOME EQUIPMENT STAND DETAIL

- A. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE, AND THE 2018 IRC CODE. THE PERMANENT FOUNDATION GUIDE FOR MANUFACTURED HOUSING, HUD-7584, SEPTEMBER 1996; AND THE STATE OF ARIZONA RULES TITLE 4, CHAPTER 34, ARTICLE 2.
- B. CONCRETE SHALL BE PER ASTM C-94 AND HAVE A 28 DAY STRENGTH OF 3,000 psi. THERE SHALL BE A MINIMUM OF 5 SACKS OF CEMENT PER CUBIC YARD AND CONFORM TO ASTM C-150 TYPE II. THE AGGREGATE PER ASTM C-33. THE SLUMP SHALL NOT BE MORE THAN 4".
- C. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 AND LAP 30 BAR DIAM. REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS.
- D. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND DIMENSIONS BEFORE STARTING WORK.
- E. MASONRY BLOCK SHALL CONFORM TO ASTM C-90, TYPE I, GRADE N-1. MORTAR SHALL BE TYPE "S" CONFORMING TO ASTM C-270. GROUT SHALL CONFORM TO ASTM C-476, WITH A 28-DAY STRENGTH OF 2,000psi.
- F. WOOD WITHIN 8" OF GROUND AND SILLS TO CONCRETE OR BLOCK TO BE PRESSURE TREATED TO FOUNDATION GRADE STANDARD FOR USE IN GROUND CONTACT PER REQUIREMENTS OF AMERICAN WOOD PRESERVES BUREAU STANDARD A.W.P.B.- FDN FOR USE IN GROUND CONTACT.
- G. HOME INSTALLED WITH LONG DIMENSION PARALLEL TO FLOOD FLOW.

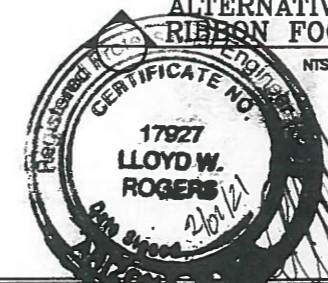
WALL AND FOOTING SECTION



ALTERNATIVE I BEAM RIBBON FOOTING DETAIL



revised 2/01/21



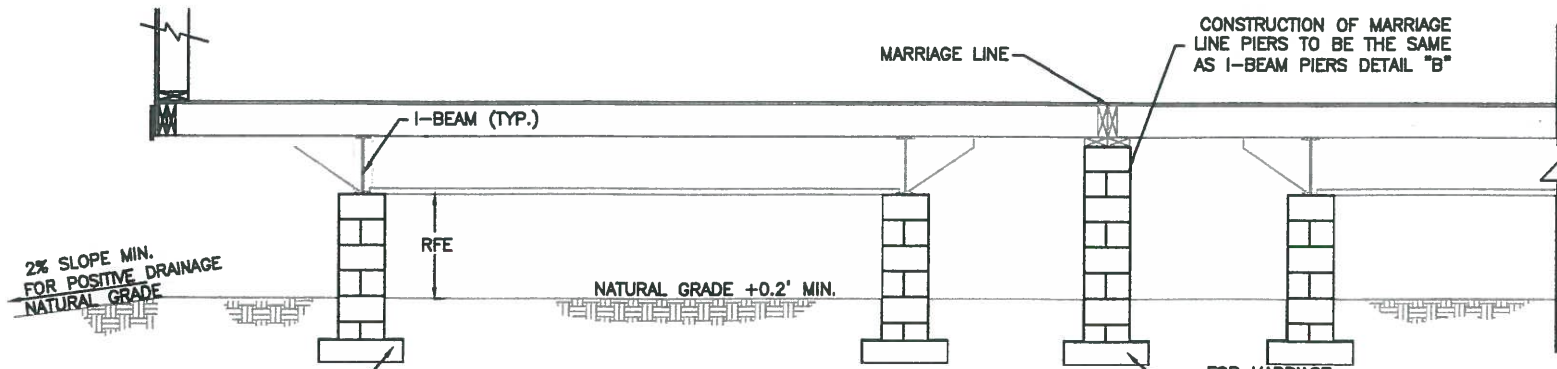
STEM WALL INSTALLATION AT GRADE IN SHALLOW FLOODPLAINS

DIRECTION OF FLOOD FLOW GENERAL FOOTING PLAN

FEB 01 2021

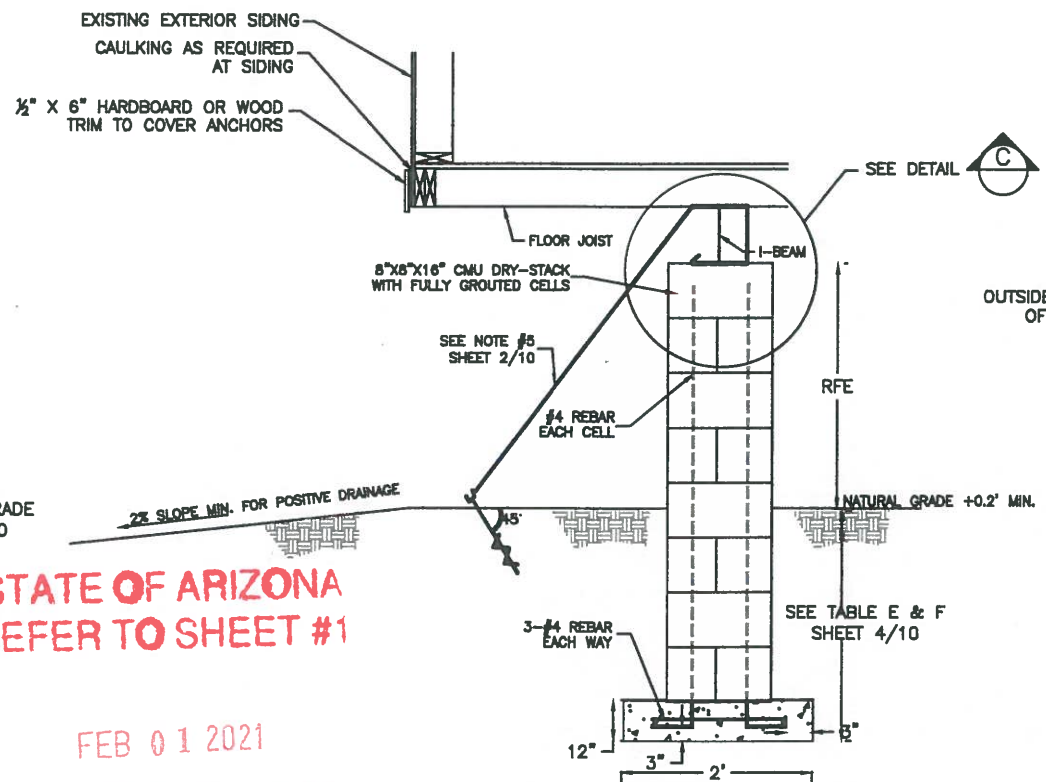
Review of this document does not authorize or approve any omission or deviation from the applicable standard.

F.LDOOSUP



A PIER AND FOOTING DETAIL
NTS

SEE DETAIL B & D FOR FOOTING SIZE AND TABLE E & F FOR FOOTING DEPTH (TYPICAL) SHEET 4/10



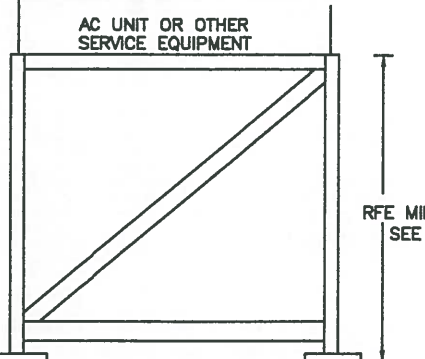
B PIER AND FOOTING DETAIL
NTS

STATE OF ARIZONA REFER TO SHEET #1

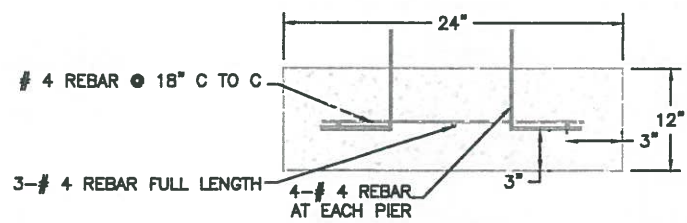
FEB 01 2021

Review of this document does not authorize or approve any omission or deviation from the applicable standard.

F-LDOO SUP

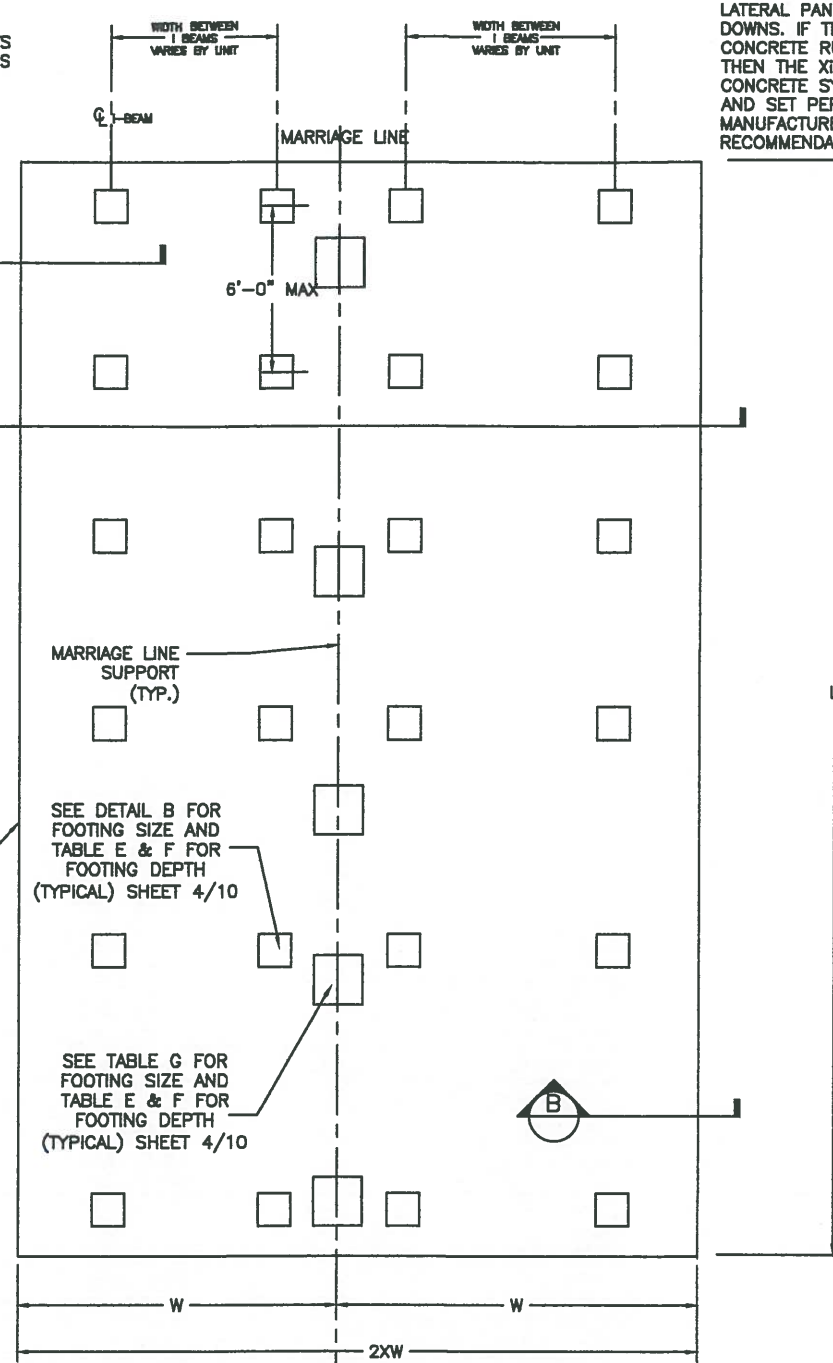


EXTERIOR HOME EQUIPMENT STAND DETAIL

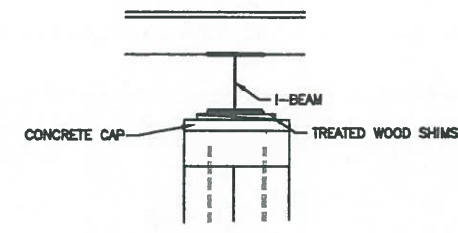


ALTERNATIVE I BEAM RIBBON FOOTING DETAIL
NTS

NOTE: THE PERIMETER SUPPORTS FOR WINDOWS AND DOORS ARE TO BE SET PER MANUFACTURERS RECOMMENDATIONS



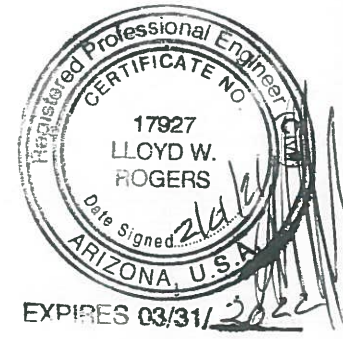
GENERAL FOOTING PLAN
NTS



C PIER CAP DETAIL
NTS

- A. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE, AND THE 2018 IRC CODE, THE PERMANENT FOUNDATION GUIDE FOR MANUFACTURED HOUSING, HUD- 7584 SEPTEMBER 1996; AND THE STATE OF ARIZONA RULES TITLE 4, CHAPTER 34, ARTICLE 2.
- B. CONCRETE SHALL BE PER ASTM C-94 AND HAVE A 28 DAY STRENGTH OF 3,000 psi. THERE SHALL BE A MINIMUM OF 5 SACKS OF CEMENT PER CUBIC YARD AND CONFORM TO ASTM C-150 TYPE II. THE AGGREGATE PER ASTM C-33. THE SLUMP SHALL NOT BE MORE THAN 4".
- C. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 AND LAP 30 BAR DIAM. REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS.
- D. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND DIMENSIONS BEFORE STARTING WORK.
- E. MASONRY BLOCK SHALL CONFORM TO ASTM C-90, TYPE I, GRADE N-1. MORTAR SHALL BE TYPE "S" CONFORMING TO ASTM C-270. GROUT SHALL CONFORM TO ASTM C-476, WITH A 28-DAY STRENGTH OF 2,000psi.
- F. WOOD WITHIN 8" OF GROUND AND SILLS TO CONCRETE OR BLOCK TO BE PRESSURE TREATED TO FOUNDATION GRADE STANDARD FOR USE IN GROUND CONTACT PER REQUIREMENTS OF AMERICAN WOOD PRESERVES BUREAU STANDARD A.W.P.B.- FDN FOR USE IN GROUND CONTACT.
- G. HOME INSTALLATION WITH LONG DIMENSION PARALLEL TO FLOOD FLOW.

revised 2/01/21



PIER INSTALLATION WITHOUT FILL PAD IN SHALLOW FLOODPLAIN