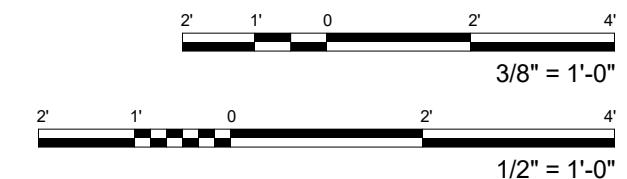


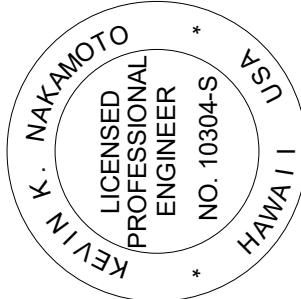
POST TENSIONED BEAM SCHEDULE																
MARK	TYPE ("B"x"D")	PT FORCE					TENDON DRAPE AT MIDSPAN	TOP REINFORCEMENT				BOTTOM REINFORCEMENT			RUNNER BAR	REMARKS
		"A" (kips)	"B" (kips)	"C" (kips)	FORCE A+B (kips)	FORCE A+C (kips)		CONTINUOUS BAR	LEFT ADDED BAR	MID ADDED BAR	RIGHT ADDED BAR	CONTINUOUS BAR	LEFT ADDED BAR	RIGHT ADDED BAR		
1PTB-2	21 x 31	434	-	-	-	-	20"	2- #8	4- #8	4- #8	4- #8	3- #8	-	-	#5 E.F.	
1PTB-7	21 x 31	492	-	-	-	-	21"	2- #8	4- #8	4- #8	4- #8	3- #8	-	-	#5 E.F.	
1PTB-8	21 x 31	372	177	177	549	549	21"	2- #8	5- #8	5- #8	5- #8	3- #8	-	-	#5 E.F.	

STIRRUPS SCHEDULE	
MARK	STIRRUPS
TYPE-A	#4 STIRRUPS, ALL AT 10"
TYPE-B	#4 STIRRUPS, ALL AT 12"
TYPE-C	#4 STIRRUPS, 1 AT 12", REST AT 14"
TYPE-D	#4 STIRRUPS, 1 AT 12", REST AT 16"
TYPE-E	#4 STIRRUPS, 1 AT 12", REST AT 20"

1 1PTB-2/ 1PTB-7/ 1PTB-8 PROFILE
S428 SCALE: 3/8" = 1'-0"



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LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII

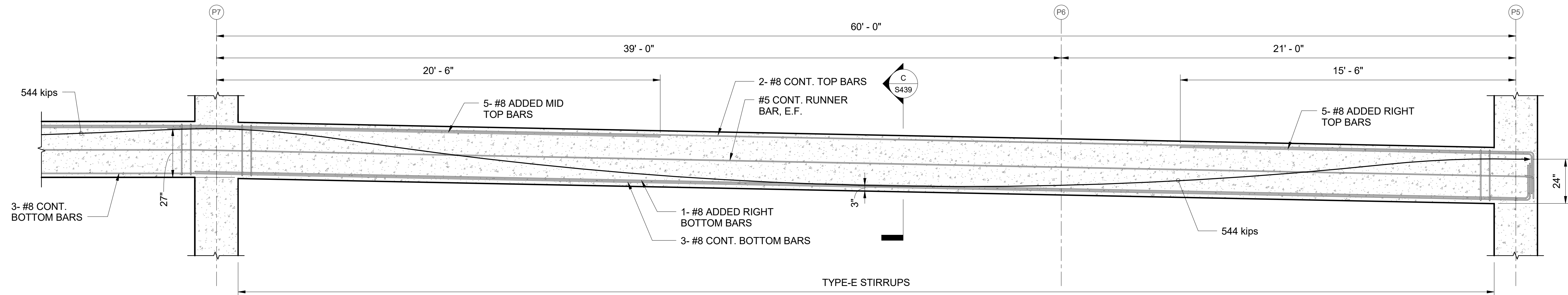
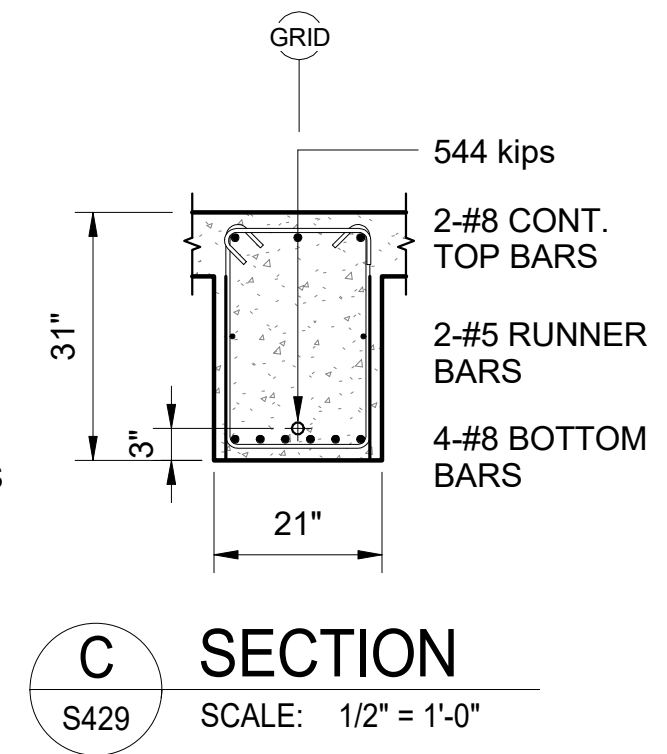
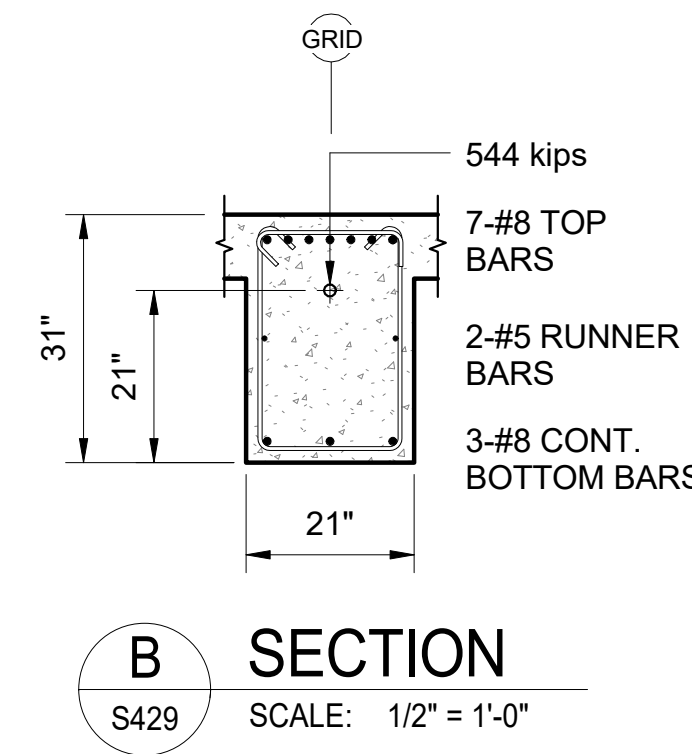
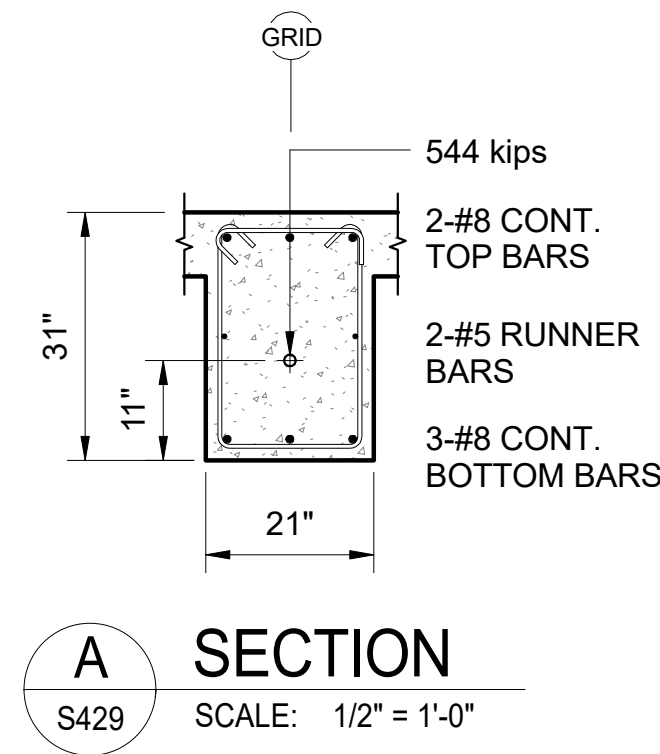
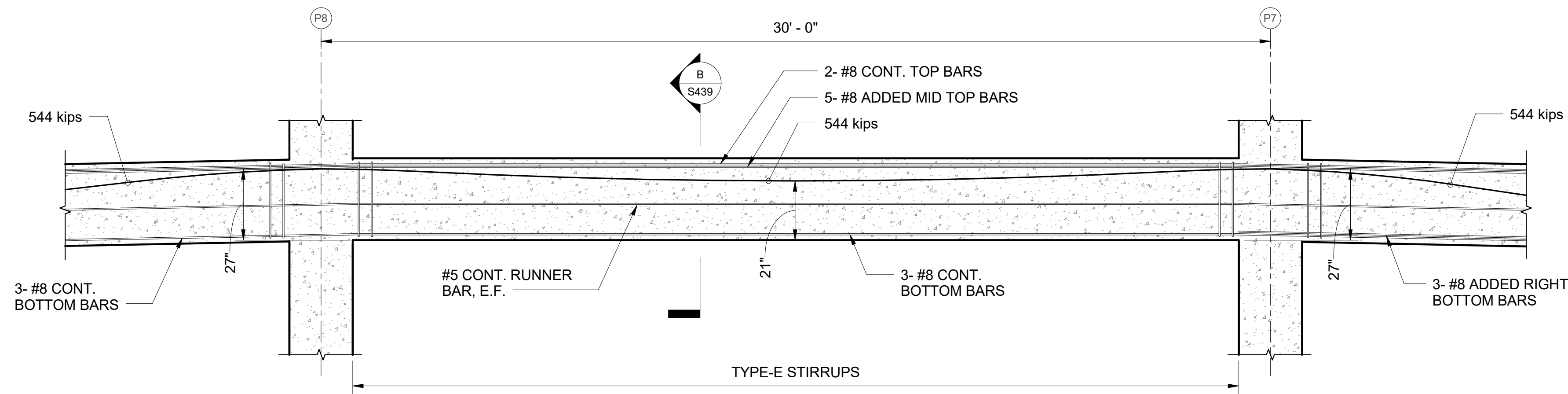
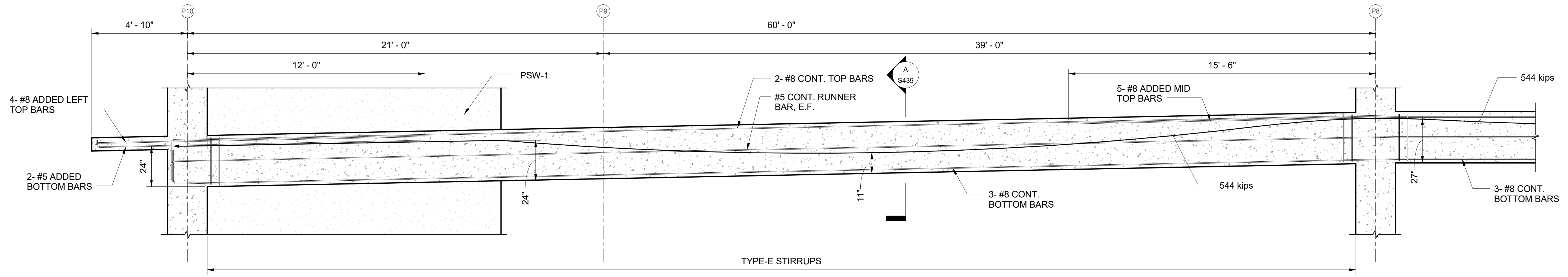
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SHEET TITLE:
POST TENSIONED BEAM PROFILES

PROJECT:	2017-001
DRAWN:	LC
DATE:	7/25/2019
PHASE:	SHEET
	1B S428
	OF SHEETS

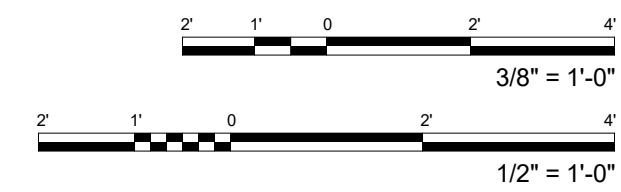
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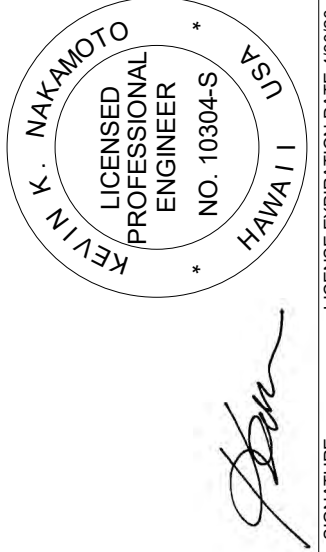


1 1PTB-3 PROFILE
S429 SCALE: 3/8" = 1'-0"

STIRRUPS SCHEDULE	
MARK	STIRRUPS
TYPE-A	#4 STIRRUPS, ALL AT 10"
TYPE-B	#4 STIRRUPS, ALL AT 12"
TYPE-C	#4 STIRRUPS, 1 AT 12", REST AT 14"
TYPE-D	#4 STIRRUPS, 1 AT 12", REST AT 16"
TYPE-E	#4 STIRRUPS, 1 AT 12", REST AT 20"



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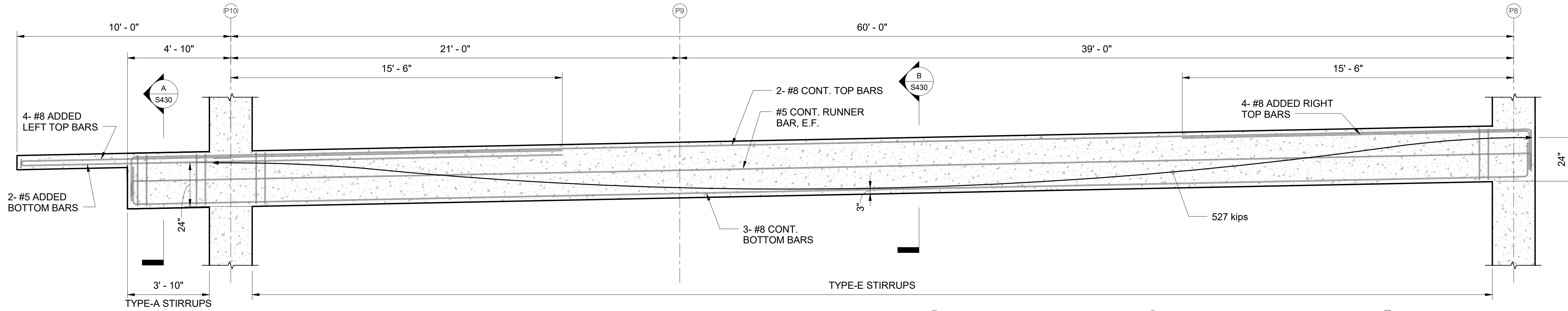


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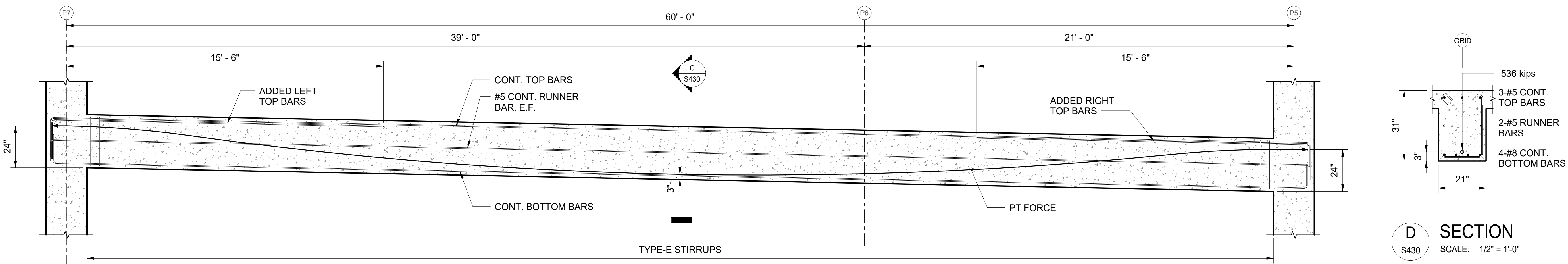
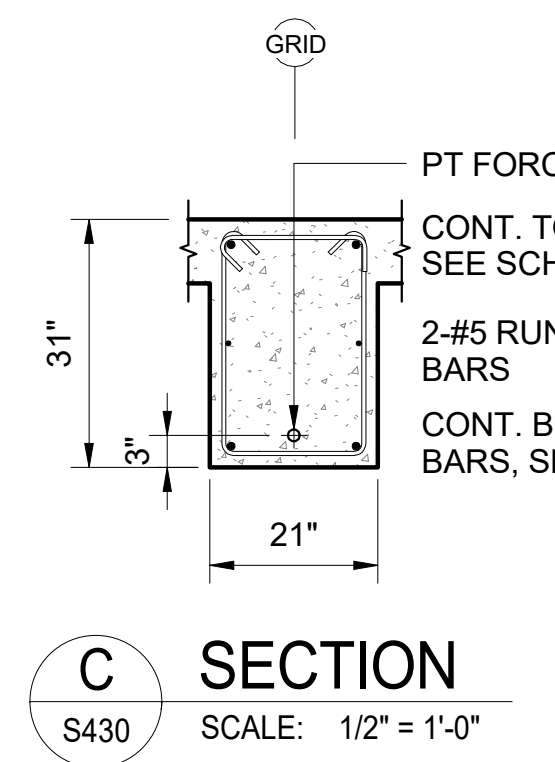
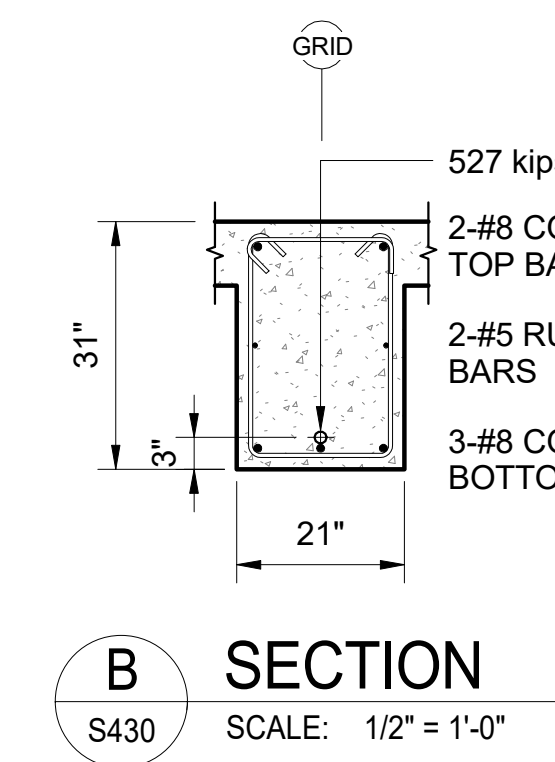
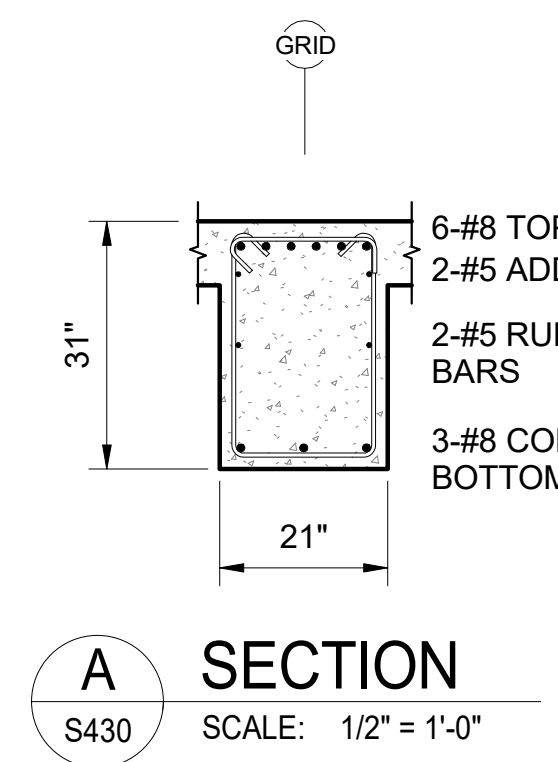
PROJECT:	2017-001	REVISIONS:	△
DRAWN:	LC		△
DATE:	7/25/2019		△
PHASE:	SHEET		△
	1B S429		△
	OF SHEETS		△

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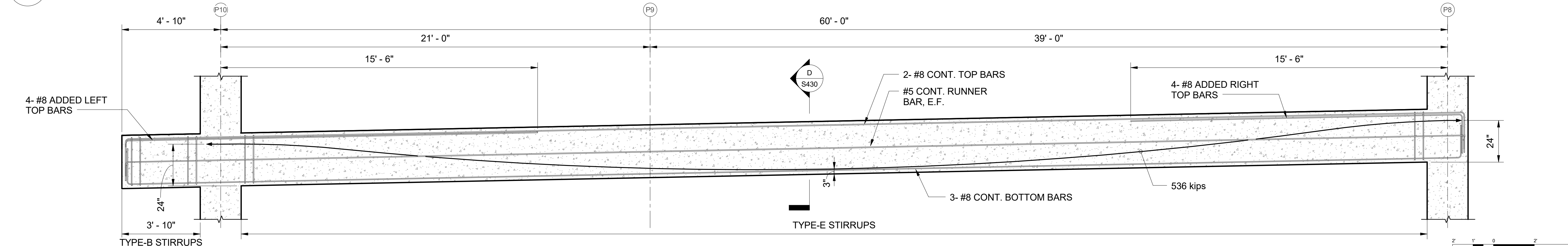
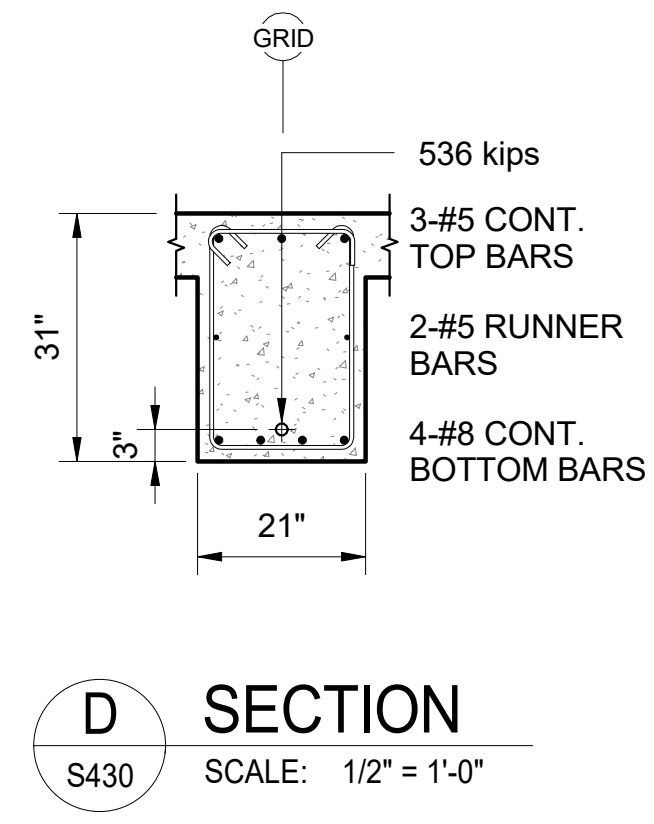


1 1PTB-4 PROFILE
S430 SCALE: 3/8" = 1'-0"

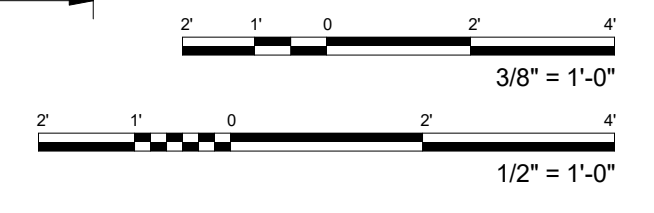
MARK	TYPE ("B"x"D")	PT FORCE (kips)	TOP REINFORCEMENT			BOTTOM REINFORCEMENT		RUNNER BAR	REMARKS
			CONTINUOUS BAR	LEFT ADDED BAR	RIGHT ADDED BAR	CONTINUOUS BAR	ADDED BAR		
1PTB-5	21 x 31	541	2- #8	4- #8	4- #8	3- #8	-	#5 E.F.	
1PTB-9	21 x 31	536	2- #8	4- #8	4- #8	3- #8	-	#5 E.F.	



2 1PTB-5/ 1PTB-9 PROFILE
S430 SCALE: 3/8" = 1'-0"



3 1PTB-6 PROFILE
S430 SCALE: 3/8" = 1'-0"



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HAWAII
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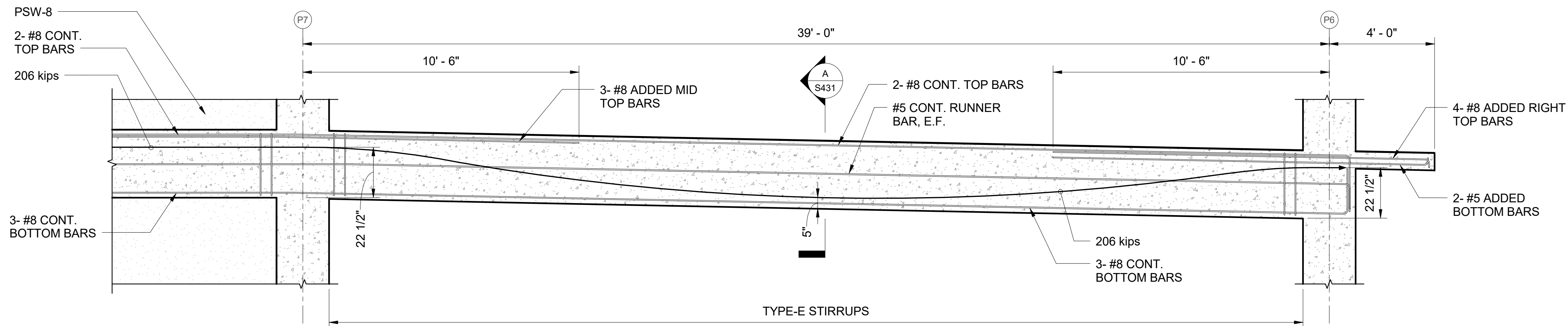
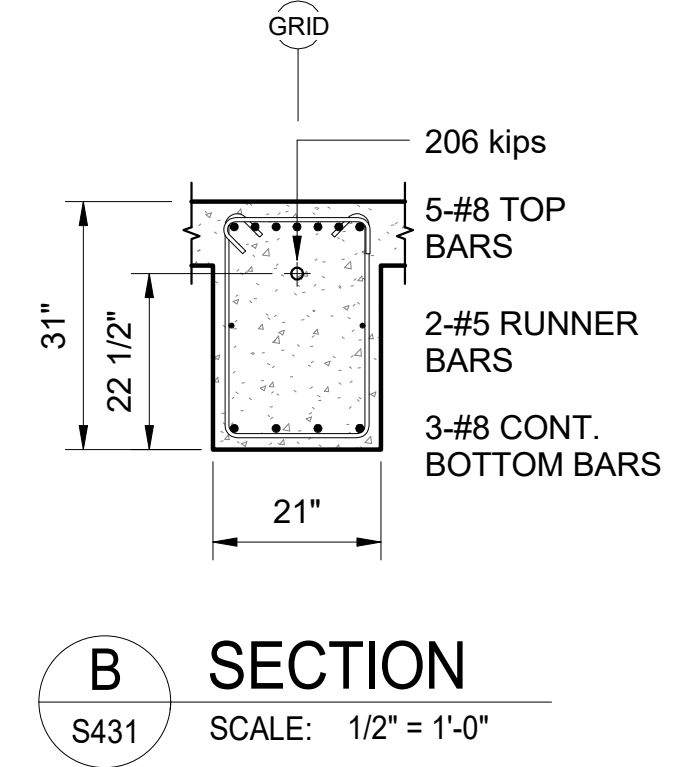
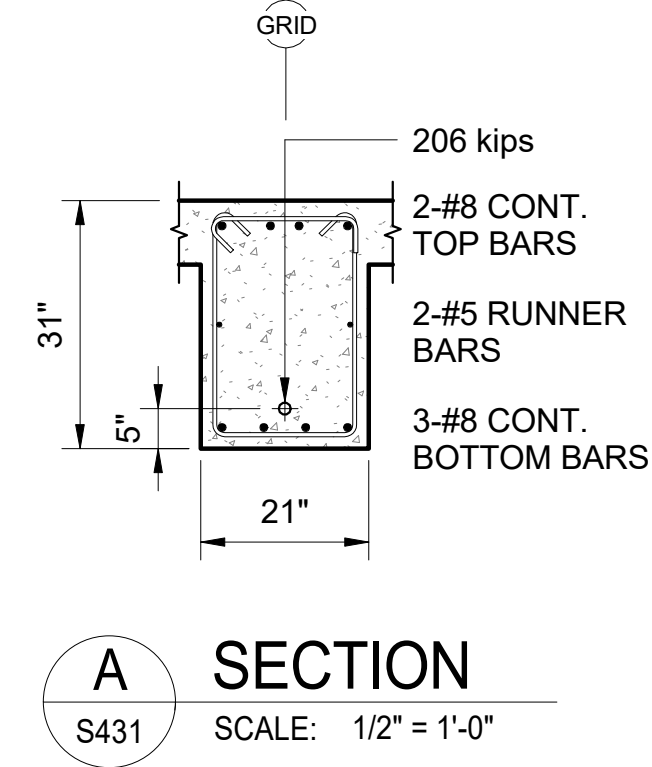
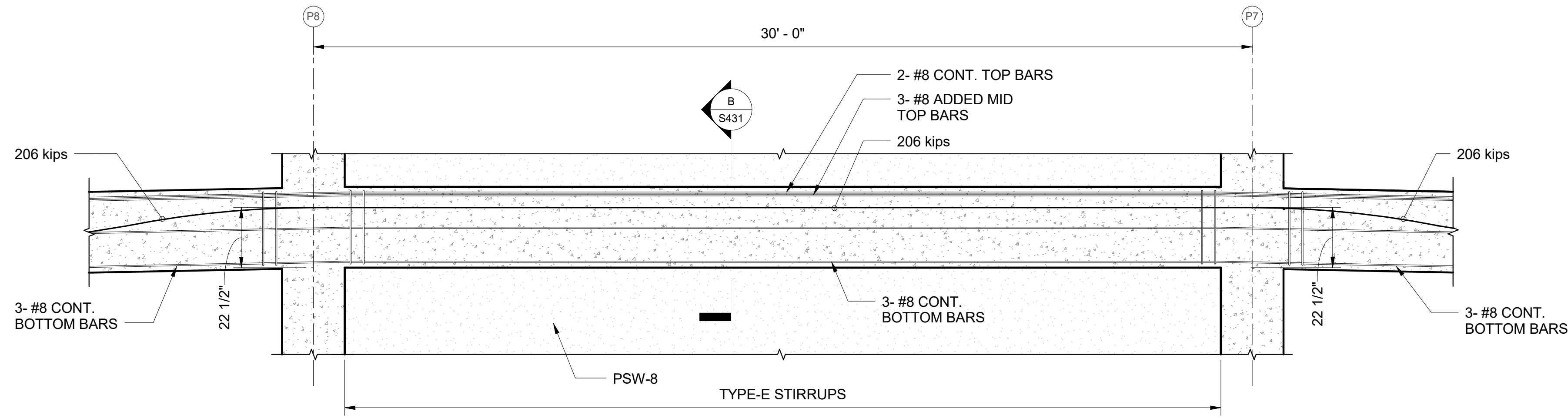
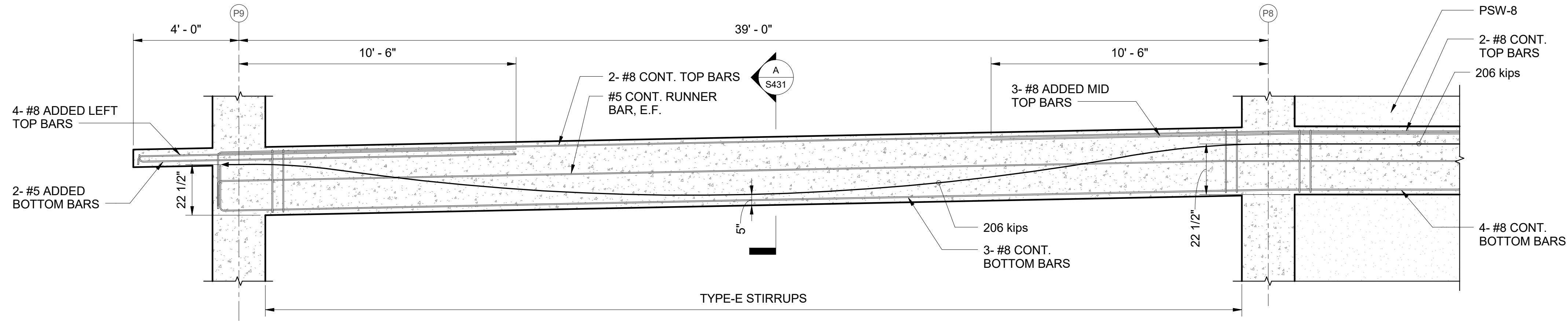
PROJECT:	2017-001
DRAWN:	LC
DATE:	7/25/2019
PHASE:	SHEET
	1B S430
	OF SHEETS

REVISIONS:

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

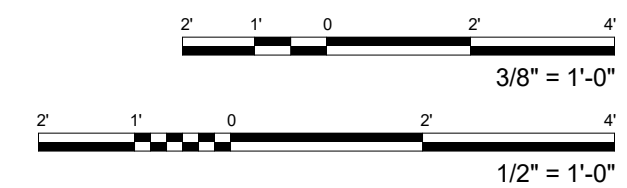
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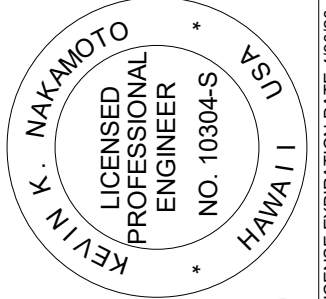


STIRRUPS SCHEDULE	
MARK	STIRRUPS
TYPE-A	#4 STIRRUPS, ALL AT 10"
TYPE-B	#4 STIRRUPS, ALL AT 12"
TYPE-C	#4 STIRRUPS, 1 AT 12", REST AT 14"
TYPE-D	#4 STIRRUPS, 1 AT 12", REST AT 16"
TYPE-E	#4 STIRRUPS, 1 AT 12", REST AT 20"

1 2PTB-1 PROFILE
S431 SCALE: 3/8" = 1'-0"



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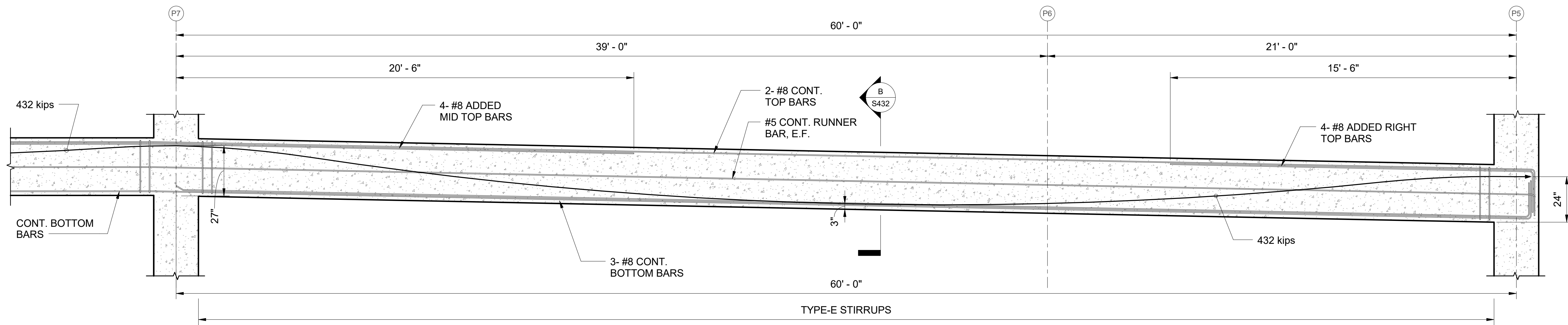
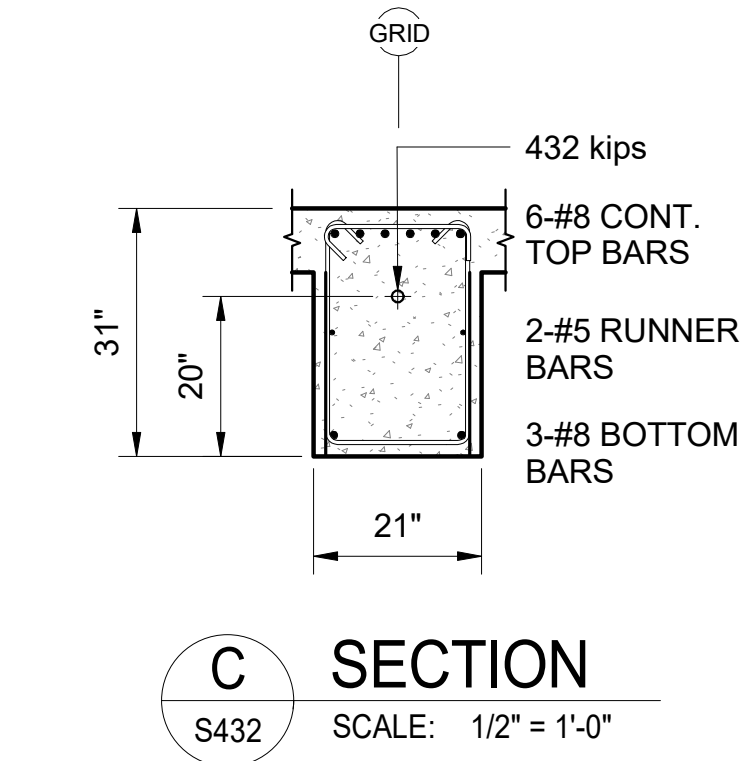
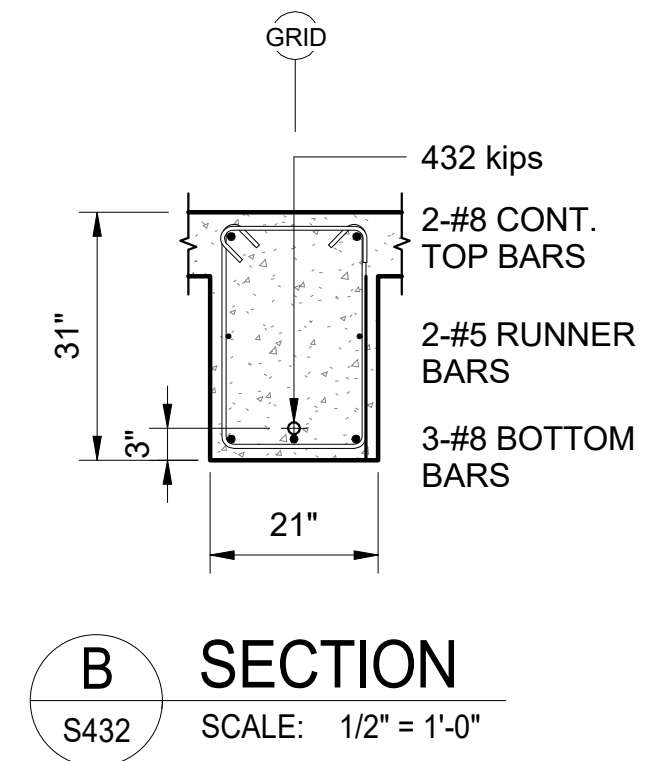
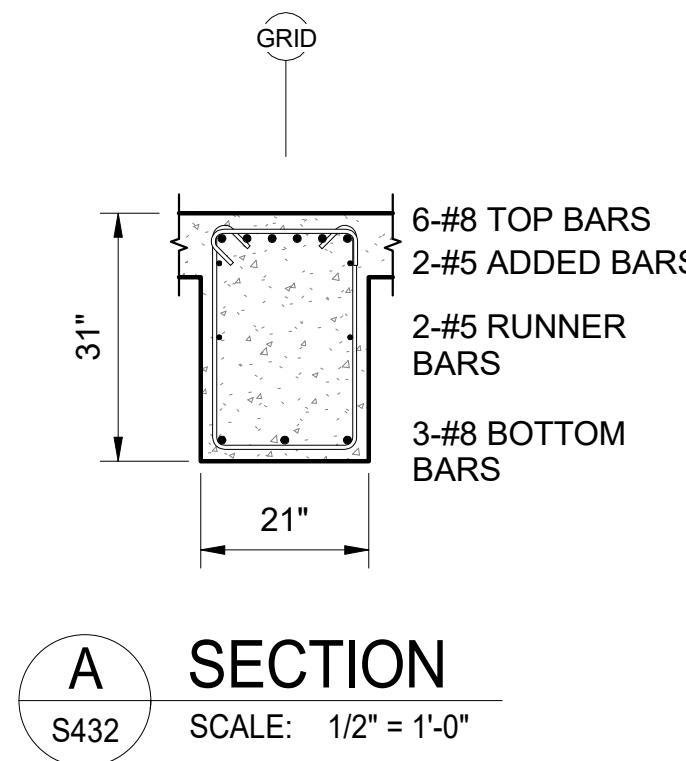
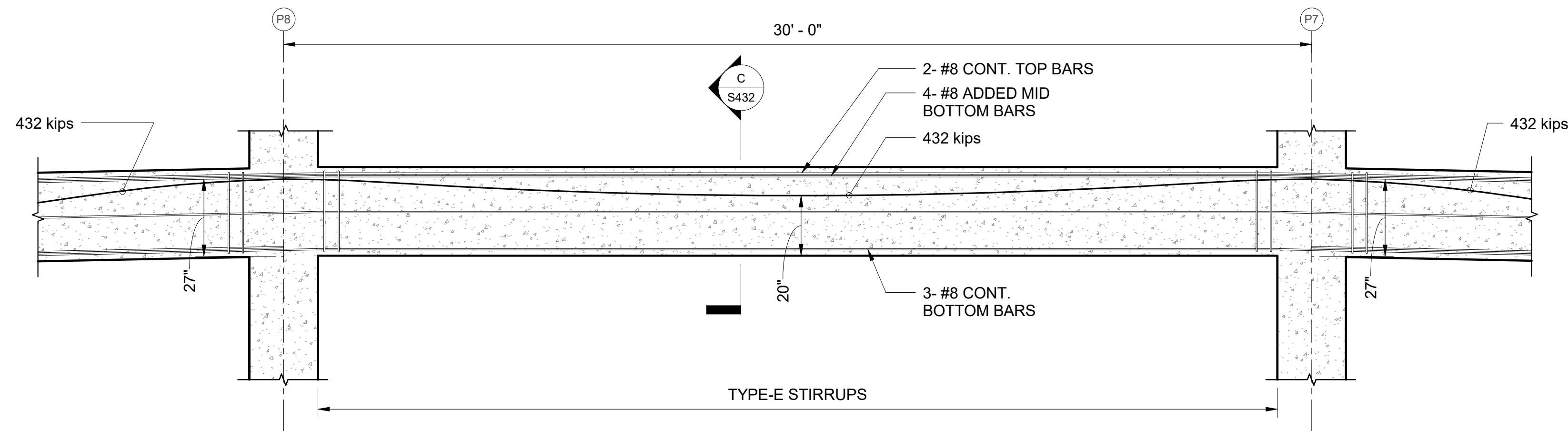
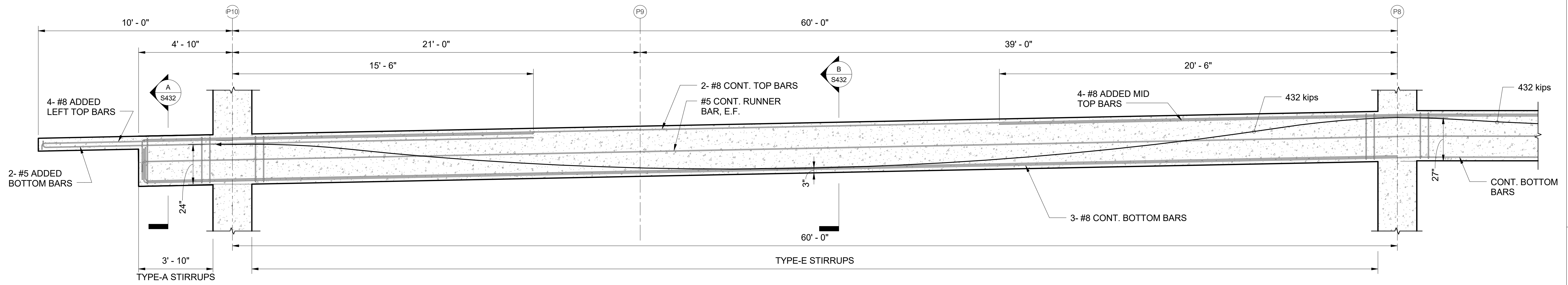
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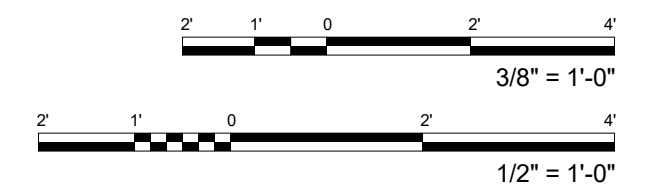
PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	1B S431		
		OF	SHEETS

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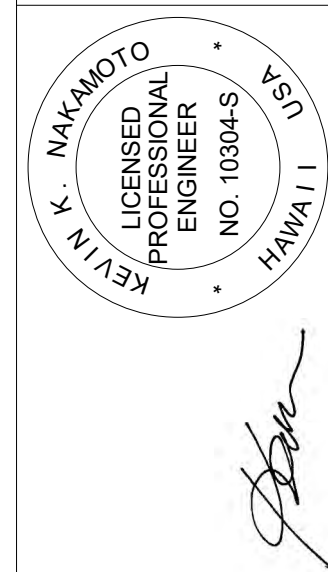


STIRRUPS SCHEDULE	
MARK	STIRRUPS
TYPE-A	#4 STIRRUPS, ALL AT 10"
TYPE-B	#4 STIRRUPS, ALL AT 12"
TYPE-C	#4 STIRRUPS, 1 AT 12", REST AT 14"
TYPE-D	#4 STIRRUPS, 1 AT 12", REST AT 16"
TYPE-E	#4 STIRRUPS, 1 AT 12", REST AT 20"

1 2PTB-2 PROFILE
S432 SCALE: 3/8" = 1'-0"



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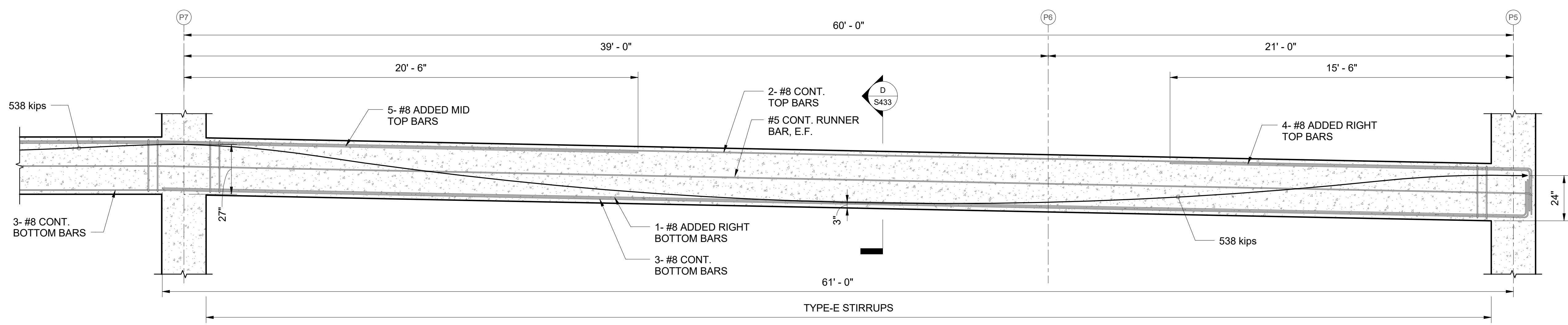
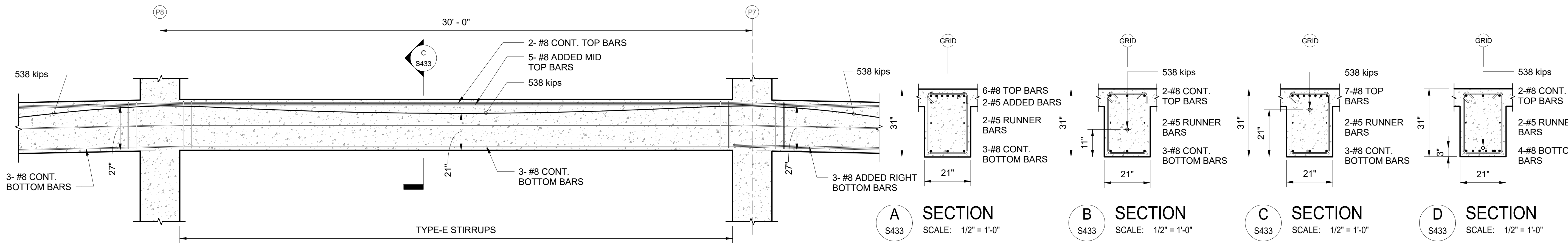
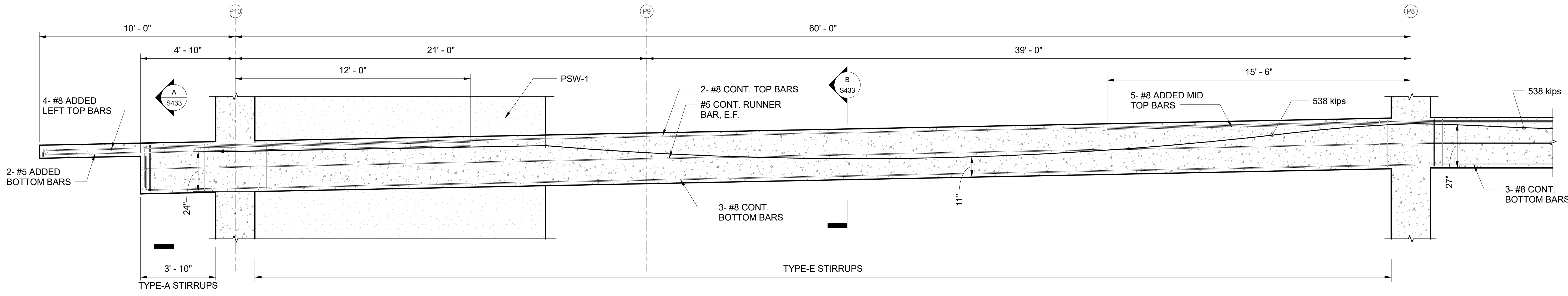
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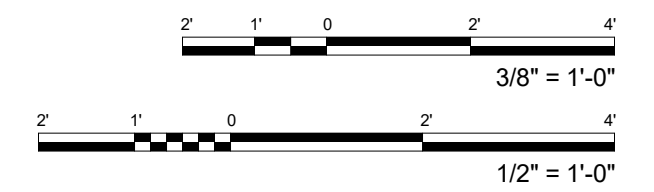
PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	1B S432		
		OF	SHEETS

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STIRRUPS SCHEDULE	
MARK	STIRRUPS
TYPE-A	#4 STIRRUPS, ALL AT 10"
TYPE-B	#4 STIRRUPS, ALL AT 12"
TYPE-C	#4 STIRRUPS, 1 AT 12", REST AT 14"
TYPE-D	#4 STIRRUPS, 1 AT 12", REST AT 16"
TYPE-E	#4 STIRRUPS, 1 AT 12", REST AT 20"

1 2PTB-3 PROFILE
S433 SCALE: 3/8" = 1'-0"



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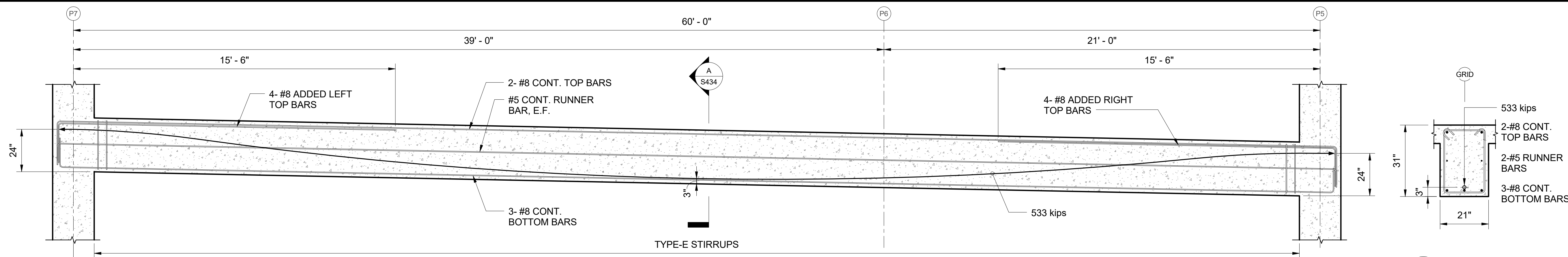
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HAWAII
LICENSE EXPIRATION DATE: 4/30/20
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PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	1B	S433	
			OF SHEETS

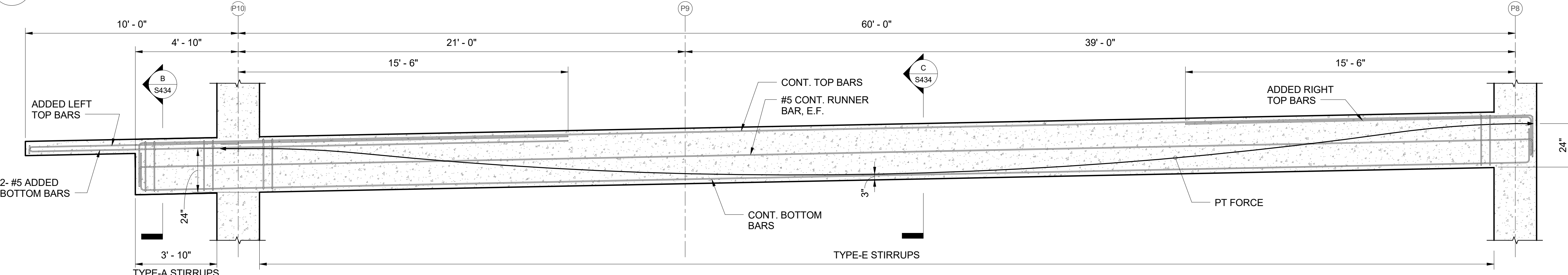
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A SECTION
S434 SCALE: 1/2" = 1'-0"

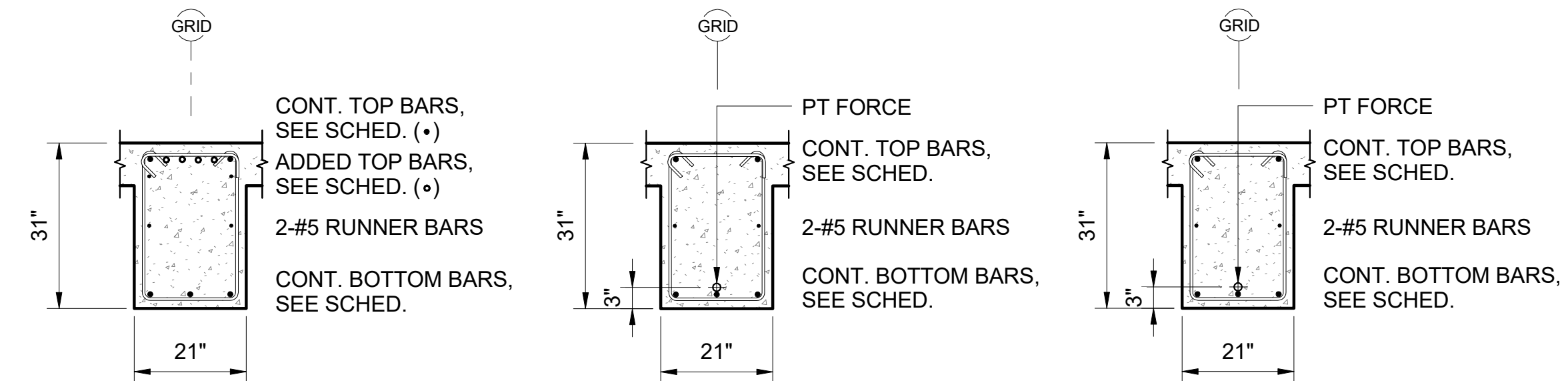
1 2PTB-5 PROFILE
S434 SCALE: 3/8" = 1'-0"



B SECTION
S434 SCALE: 1/2" = 1'-0"

C SECTION
S434 SCALE: 1/2" = 1'-0"

2 2PTB-4/ 2PTB-6 PROFILE
S434 SCALE: 3/8" = 1'-0"



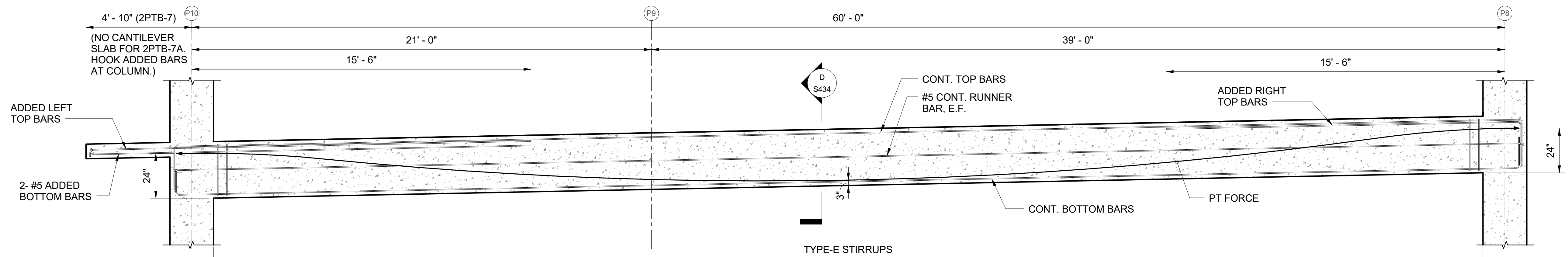
B SECTION
S434 SCALE: 1/2" = 1'-0"

C SECTION
S434 SCALE: 1/2" = 1'-0"

D SECTION
S434 SCALE: 1/2" = 1'-0"

MARK	TYPE ("B"x"D")	PT FORCE (kips)	TOP REINFORCEMENT			BOTTOM REINFORCEMENT		RUNNER BAR	REMARKS
			CONTINUOUS BAR	LEFT ADDED BAR	RIGHT ADDED BAR	CONTINUOUS BAR	ADDED BAR		
2PTB-4	21 x 31	522	2- #8	4- #8	4- #8	3- #8	-	#5 E.F.	
2PTB-6	21 x 31	518	2- #8	4- #8	4- #8	3- #8	-	#5 E.F.	

MARK	TYPE ("B"x"D")	PT FORCE (kips)	TOP REINFORCEMENT			BOTTOM REINFORCEMENT		RUNNER BAR	REMARKS
			CONTINUOUS BAR	LEFT ADDED BAR	RIGHT ADDED BAR	CONTINUOUS BAR	ADDED BAR		
2PTB-7	21 x 31	531	2- #8	4- #8	4- #8	3- #8	-	#5 E.F.	
2PTB-7A	21 x 31	527	2- #8	4- #8	4- #8	3- #8	-	#5 E.F.	



D SECTION
S434 SCALE: 1/2" = 1'-0"

3 2PTB-7/ 2PTB-7A PROFILE
S434 SCALE: 3/8" = 1'-0"

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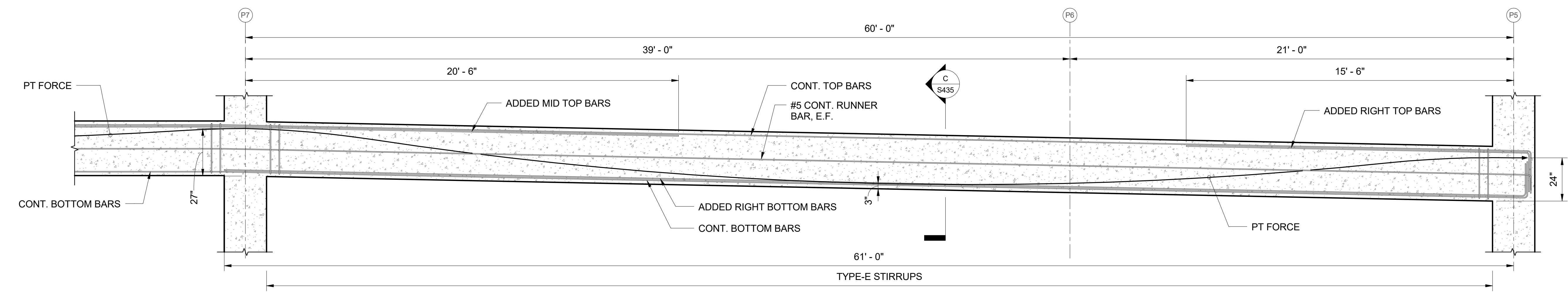
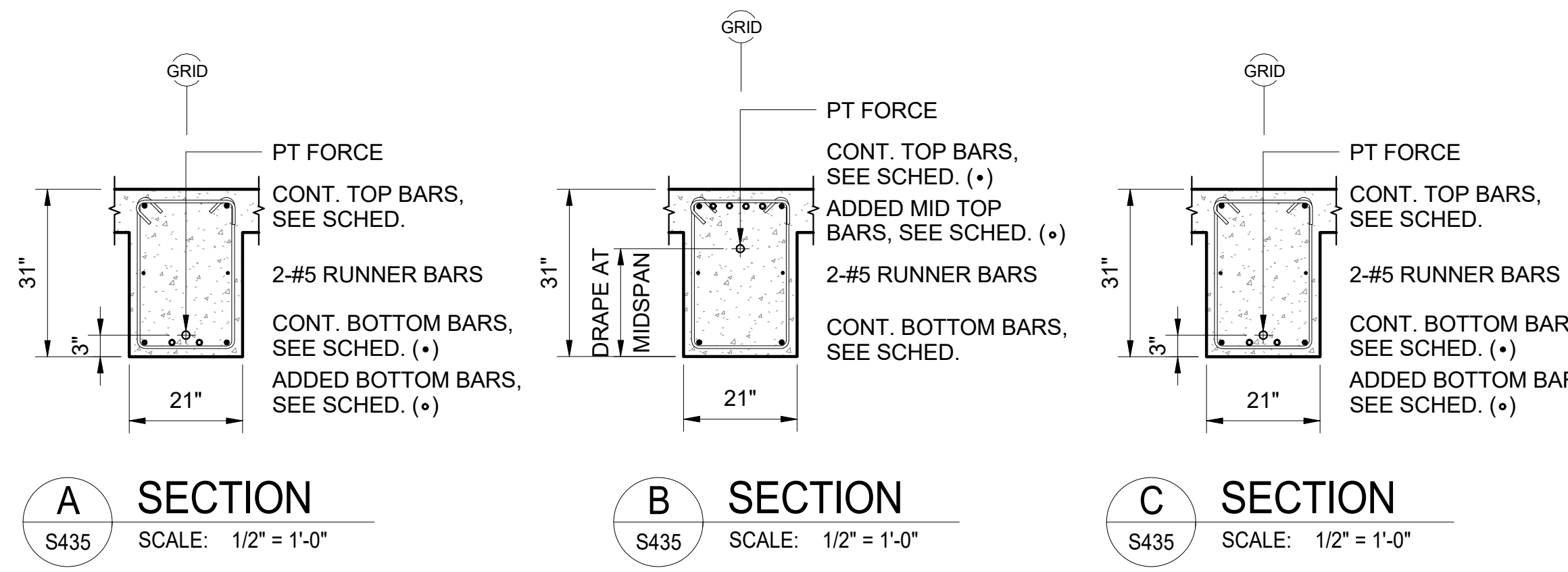
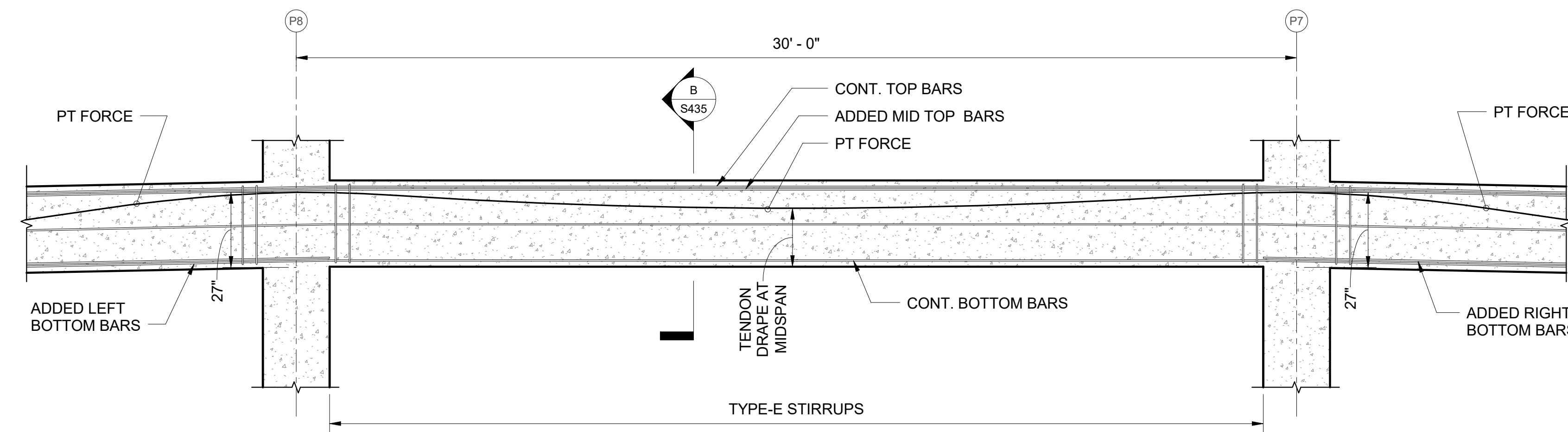
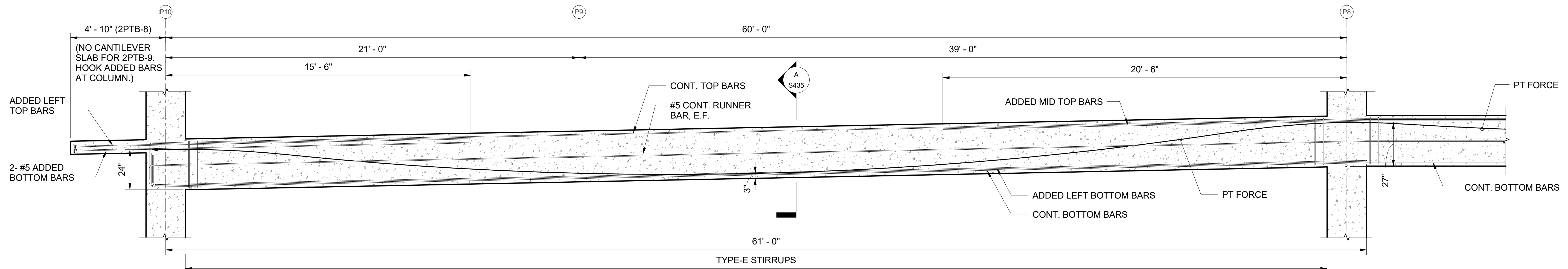
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POST TENSIONED BEAM PROFILES

PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET	OF	
1B	S434		

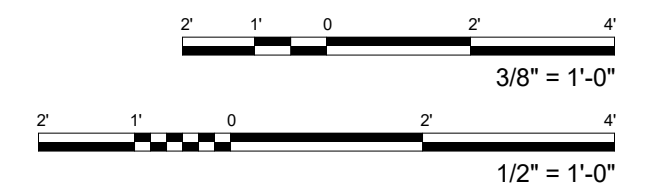
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POST TENSIONED BEAM SCHEDULE												
MARK	TYPE ("B"x"D")	PT FORCE (kips)	TENDON DRAPE AT MIDSPAN	TOP REINFORCEMENT				BOTTOM REINFORCEMENT			RUNNER BAR	REMARKS
				CONTINUOUS BAR	LEFT ADDED BAR	MID ADDED BAR	RIGHT ADDED BAR	CONTINUOUS BAR	LEFT ADDED BAR	RIGHT ADDED BAR		
2PTB-8	21 x 31	486	21"	2- #8	4- #8	4- #8	4- #8	3- #8	-	-	#5 E.F.	
2PTB-9	21 x 31	542	23"	2- #8	5- #8	5- #8	5- #8	3- #8	-	-	#5 E.F.	

STIRRUPS SCHEDULE	
MARK	STIRRUPS
TYPE-A	#4 STIRRUPS, ALL AT 10"
TYPE-B	#4 STIRRUPS, ALL AT 12"
TYPE-C	#4 STIRRUPS, 1 AT 12", REST AT 14"
TYPE-D	#4 STIRRUPS, 1 AT 12", REST AT 16"
TYPE-E	#4 STIRRUPS, 1 AT 12", REST AT 20"

1 2PTB-8/ 2PTB-9 PROFILE
S435 SCALE: 3/8" = 1'-0"



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NO. 10304-S
HAWAII, USA
LICENSE EXPIRATION DATE 4/30/20
SIGNATURE: [Signature]

WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[PUVABUUBUPUVUWUP]

SHEET TITLE: POST TENSIONED BEAM PROFILES

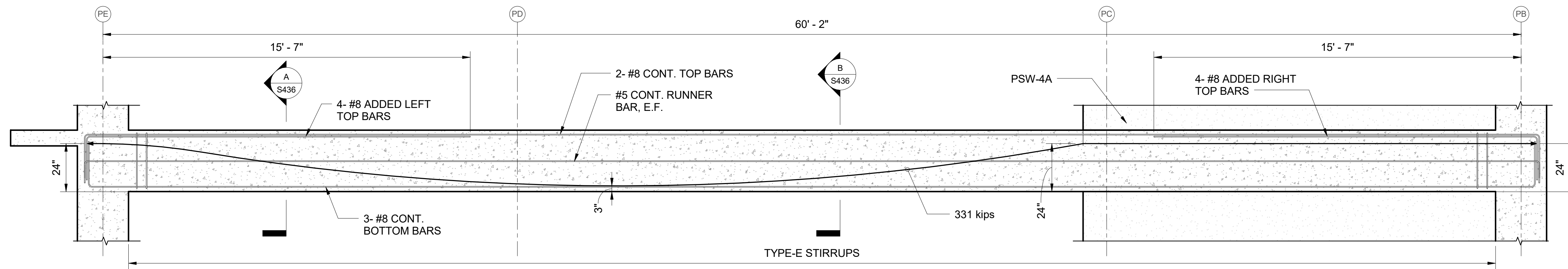
PROJECT: 2017-001 REVISIONS: LC

DRAWN: DATE: 7/25/2019

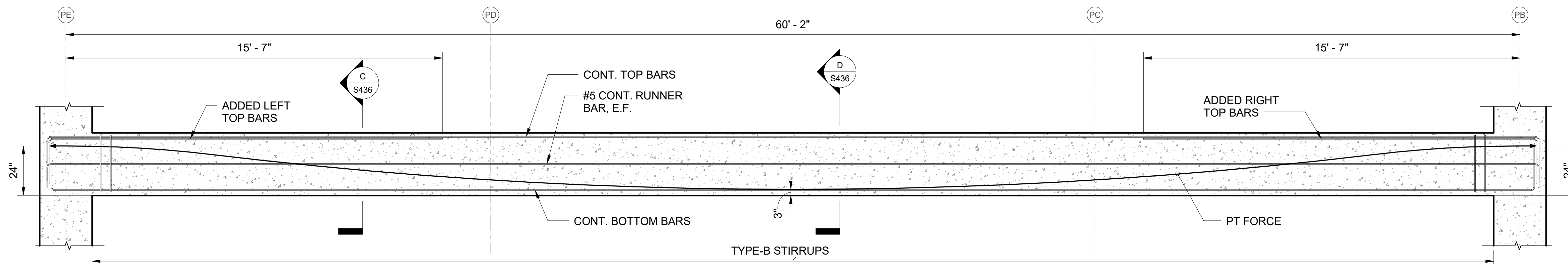
PHASE SHEET 1B S435 OF SHEETS

CADD FILE:

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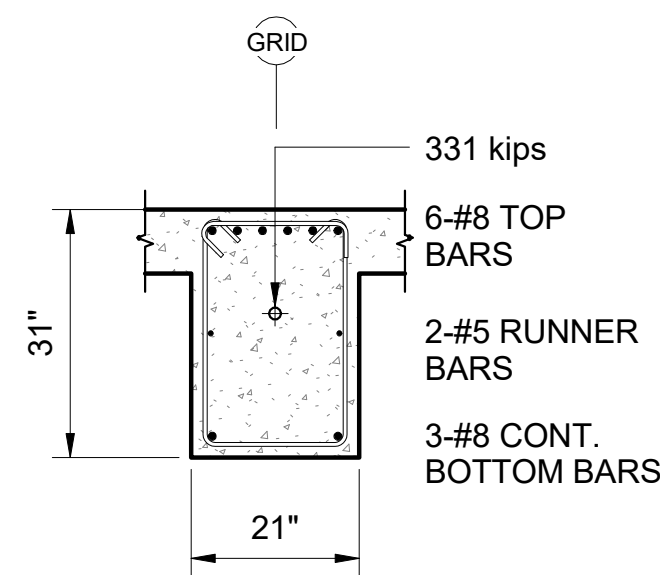


2 2PTB-10 PROFILE
S436 SCALE: 3/8" = 1'-0"

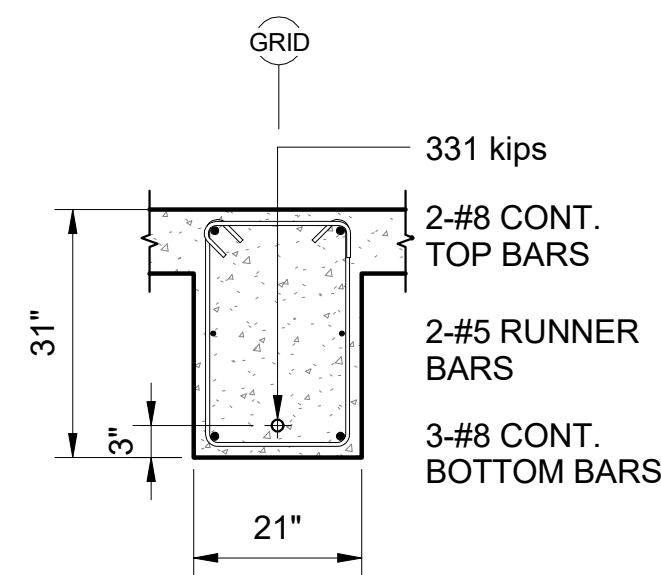


POST TENSIONED BEAM SCHEDULE									
MARK	TYPE ("B"x"D")	PT FORCE (kips)	TOP REINFORCEMENT			BOTTOM REINFORCEMENT		RUNNER BAR	REMARKS
			CONTINUOUS BAR	LEFT ADDED BAR	RIGHT ADDED BAR	CONTINUOUS BAR	ADDED BAR		
2PTB-11	21 x 31	654	2- #8	5- #8	5- #8	4- #8	-	#5 E.F.	
2PTB-12	21 x 31	509	2- #8	5- #8	5- #8	4- #8	-	#5 E.F.	

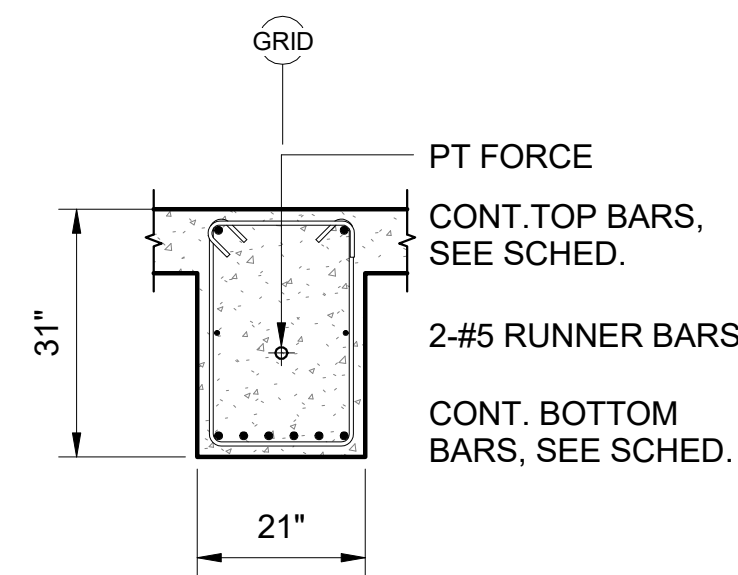
3 2PTB-11/ 2PTB-12 PROFILE
S436 SCALE: 3/8" = 1'-0"



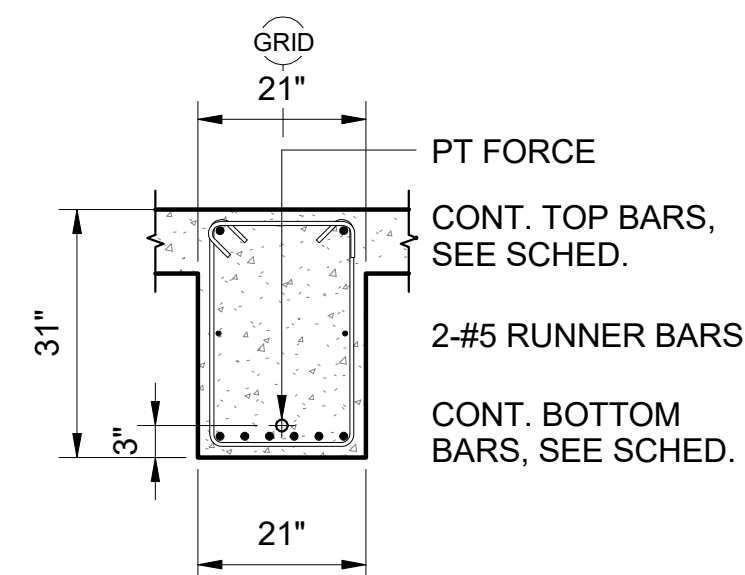
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S436 SCALE: 1/2" = 1'-0"



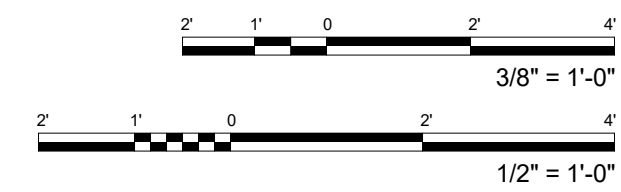
B SECTION
S436 SCALE: 1/2" = 1'-0"



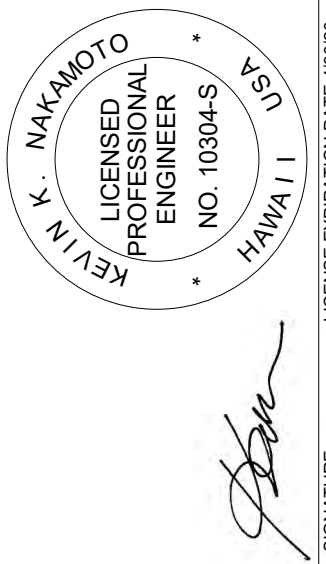
C SECTION
S436 SCALE: 1/2" = 1'-0"



D SECTION
S436 SCALE: 1/2" = 1'-0"



FERRARO CHOI



KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII
LICENSE EXPIRATION DATE: 4/30/20
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER UNDER MY OBSERVATION, SEC. 10-115, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS.

WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN

SHEET TITLE:
POST TENSIONED BEAM PROFILES

PROJECT: 2017-001

REVISIONS:
LC

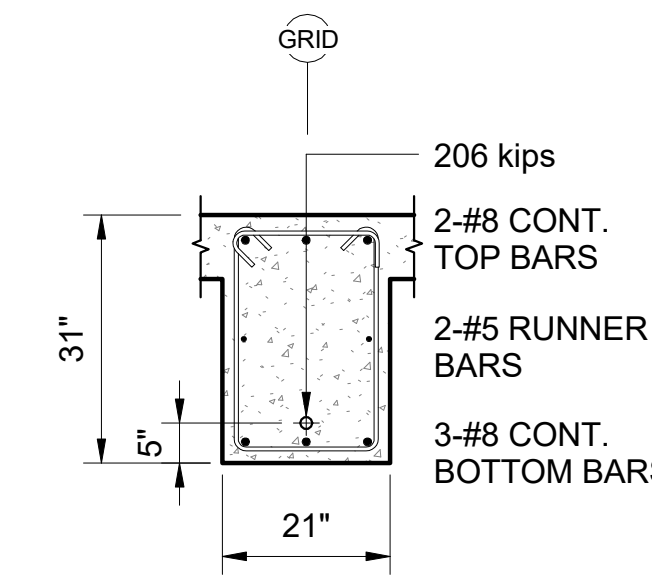
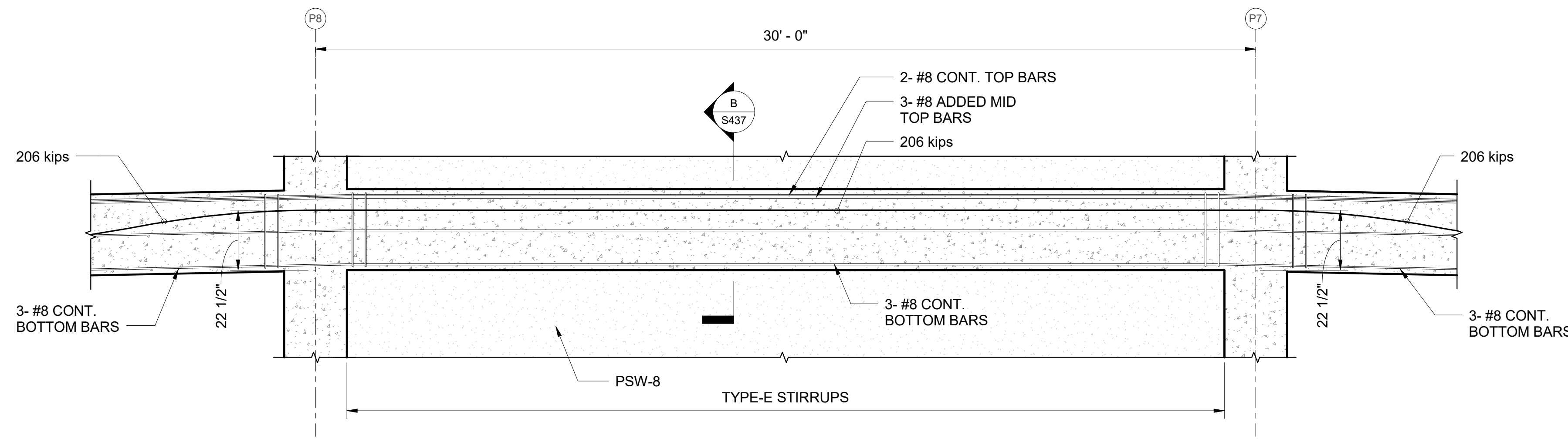
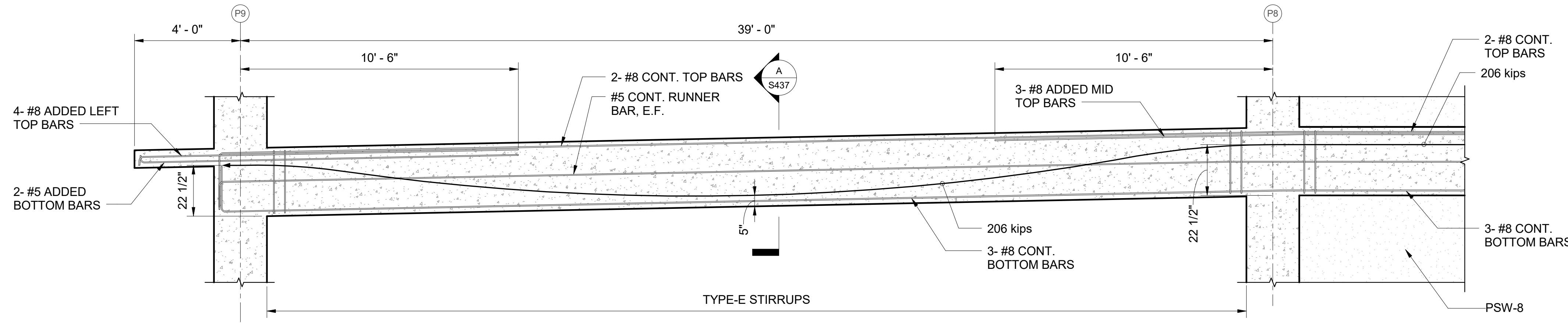
DATE: 7/25/2019

PHASE: 1B

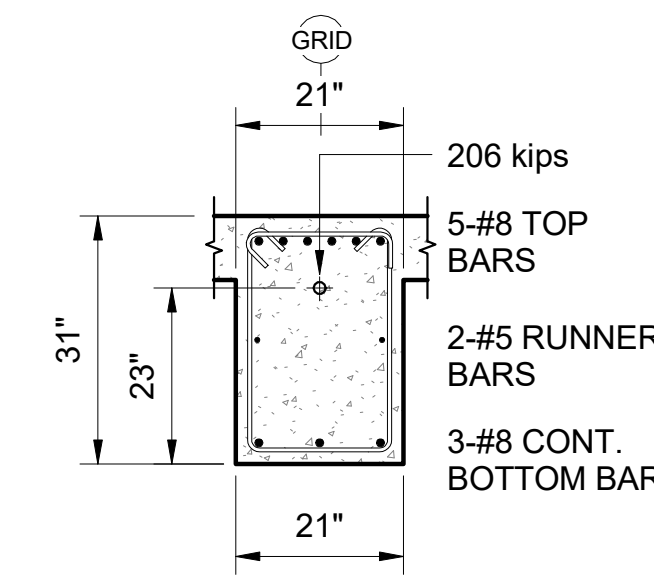
SHEET: S436

OF SHEETS

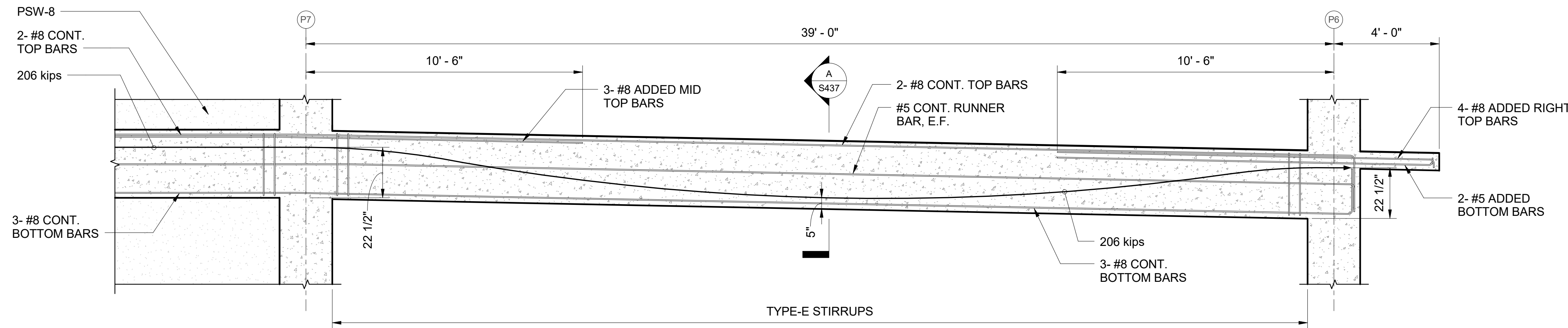
CADD FILE:



A SECTION
S437 SCALE: 1/2" = 1'-0"

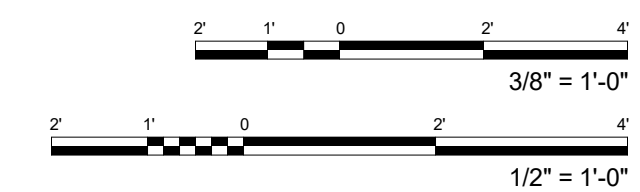


B SECTION
S437 SCALE: 1/2" = 1'-0"

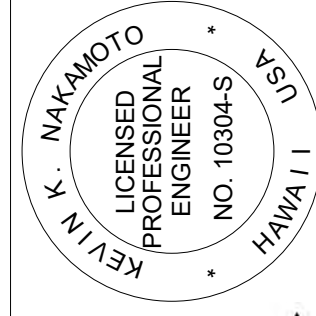


STIRRUPS SCHEDULE	
MARK	STIRRUPS
TYPE-A	#4 STIRRUPS, ALL AT 10"
TYPE-B	#4 STIRRUPS, ALL AT 12"
TYPE-C	#4 STIRRUPS, 1 AT 12", REST AT 14"
TYPE-D	#4 STIRRUPS, 1 AT 12", REST AT 16"
TYPE-E	#4 STIRRUPS, 1 AT 12", REST AT 20"

1 3PTB-1 PROFILE
S437 SCALE: 3/8" = 1'-0"



FERRARO CHOI



KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII, USA
LICENSE EXPIRATION DATE: 4/30/20
SIGNATURE
THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A MEMBER OF THE ENGINEERING SOCIETY OF HAWAII UNDER MY OBSERVATION (SECTION 10-15.10 DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS)

WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[PUYARUJUPUJUVUJUVUJUP]

SHEET TITLE:
POST TENSIONED BEAM PROFILES

PROJECT: 2017-001

REVISIONS:

LC

7/25/2019

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△

PHASE

SHEET

1B

S437

OF

SHEETS

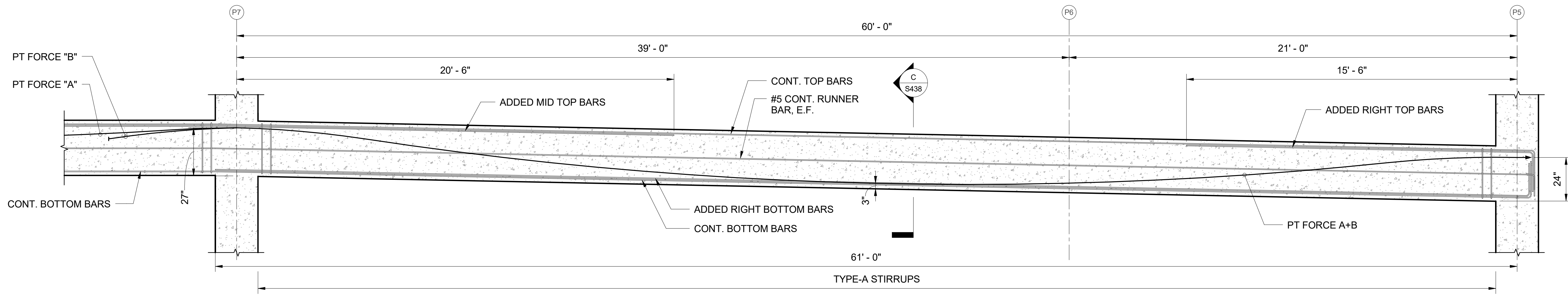
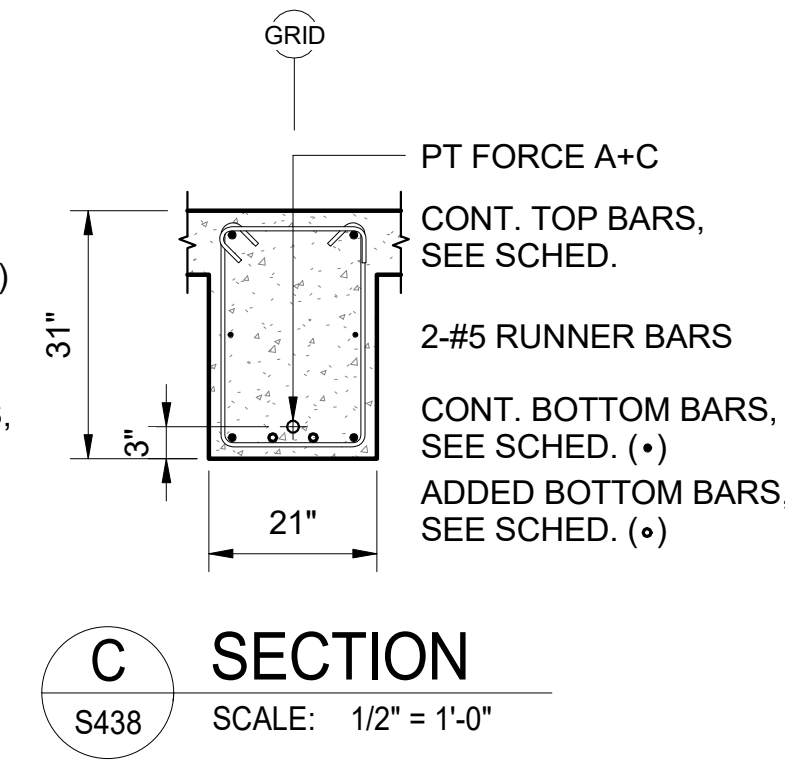
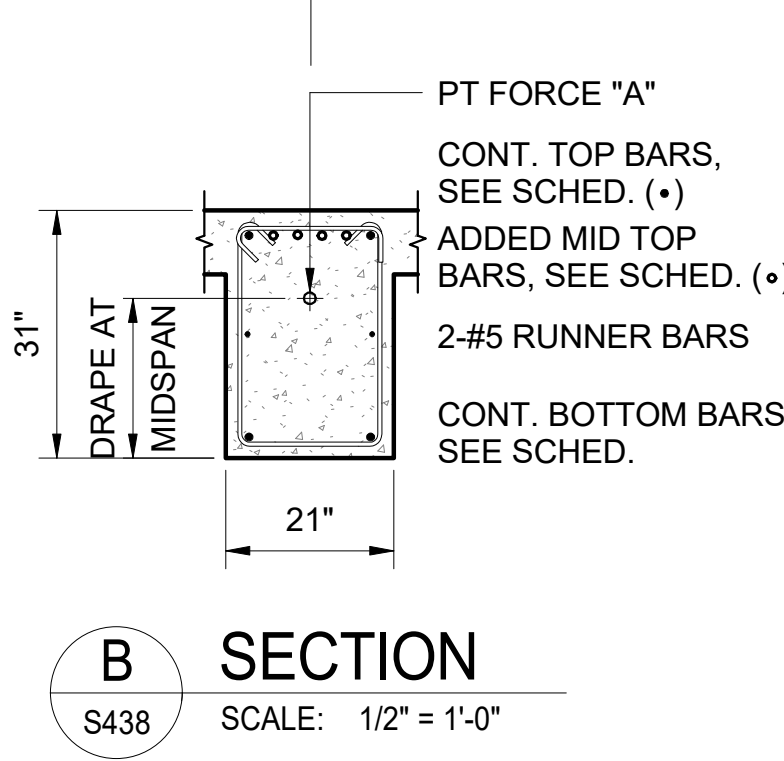
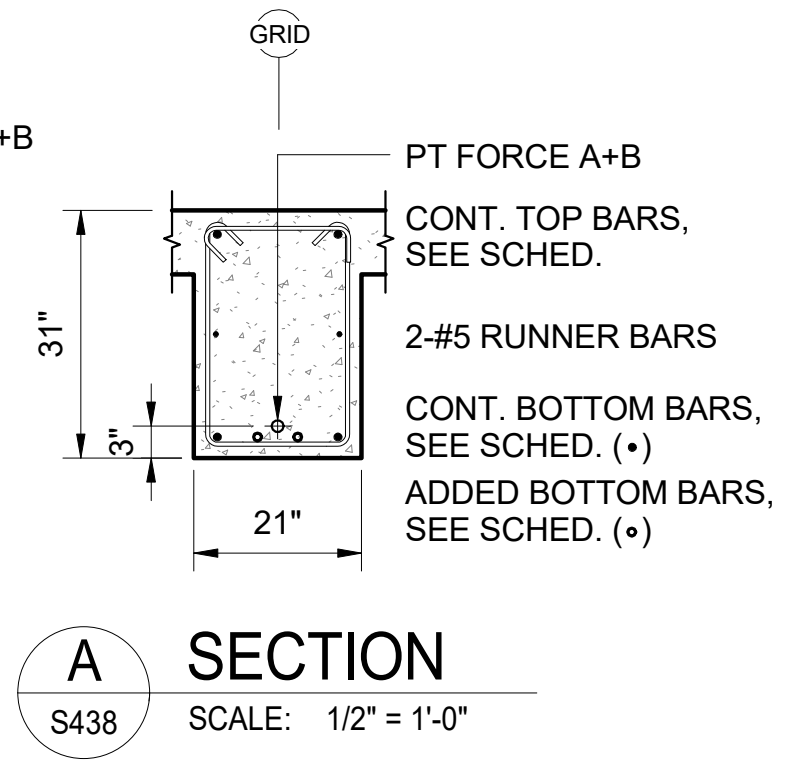
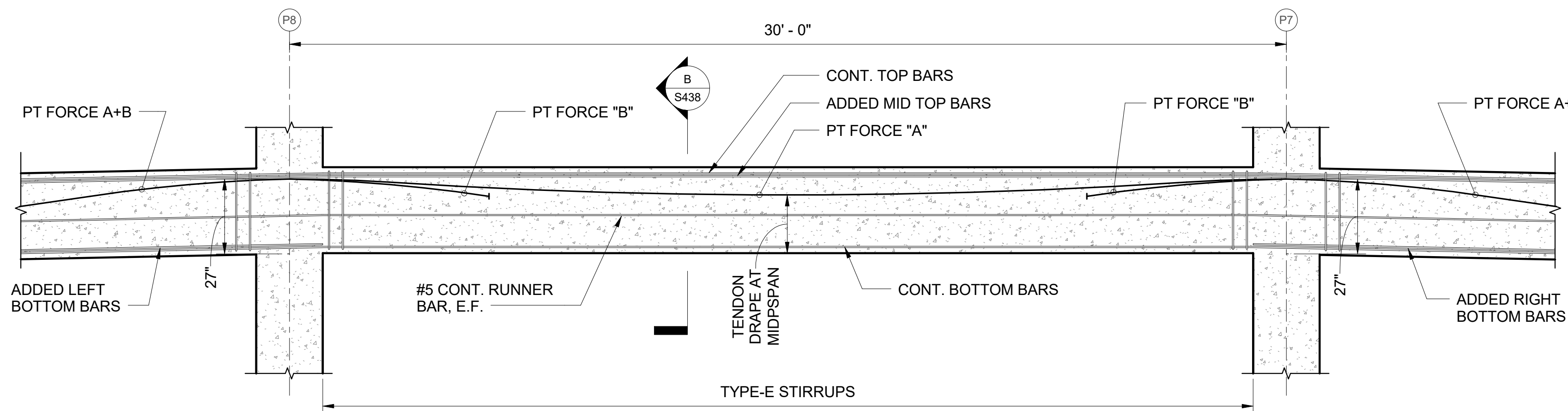
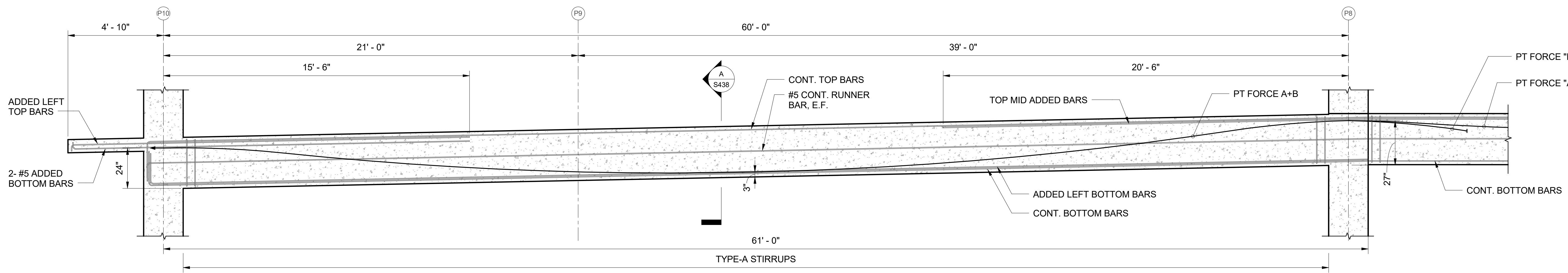
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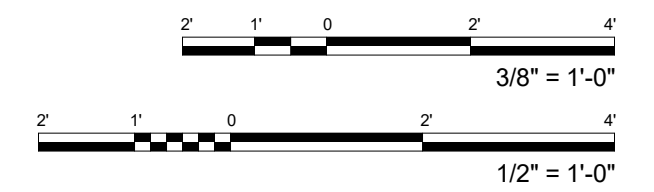
CADD FILE:



MARK	TYPE ("B"x"D")	PT FORCE					TENDON DRAPE AT MIDSPAN	TOP REINFORCEMENT				BOTTOM REINFORCEMENT			RUNNER BAR	REMARKS
		"A" (kips)	"B" (kips)	"C" (kips)	FORCE A+B (kips)	FORCE A+C (kips)		CONTINUOUS BAR	LEFT ADDED BAR	MID ADDED BAR	RIGHT ADDED BAR	CONTINUOUS BAR	LEFT ADDED BAR	RIGHT ADDED BAR		
3PTB-2	21 x 31	489	-	-	-	-	20"	2- #8	4- #8	4- #8	4- #8	3- #8	-	-	#5 E.F.	
3PTB-8	21 x 31	588	-	-	-	-	22"	2- #8	4- #8	4- #8	4- #8	4- #8	-	-	#5 E.F.	
3PTB-9	21 x 31	479	174	174	653	653	22"	2- #8	5- #8	5- #8	5- #8	5- #8	-	-	#5 E.F.	

MARK	STIRRUPS	
	STIRRUPS	
TYPE-A	#4 STIRRUPS, ALL AT 10"	
TYPE-B	#4 STIRRUPS, ALL AT 12"	
TYPE-C	#4 STIRRUPS, 1 AT 12", REST AT 14"	
TYPE-D	#4 STIRRUPS, 1 AT 12", REST AT 16"	
TYPE-E	#4 STIRRUPS, 1 AT 12", REST AT 20"	

1 3PTB-2/ 3PTB-8/ 3PTB-9 PROFILE
S438 SCALE: 3/8" = 1'-0"



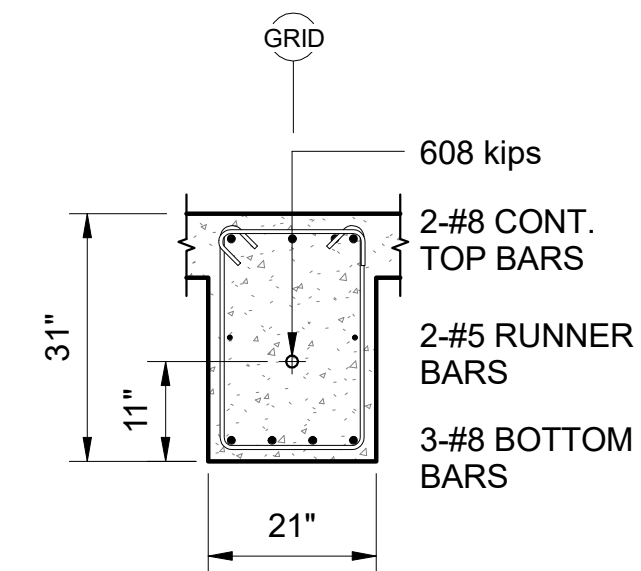
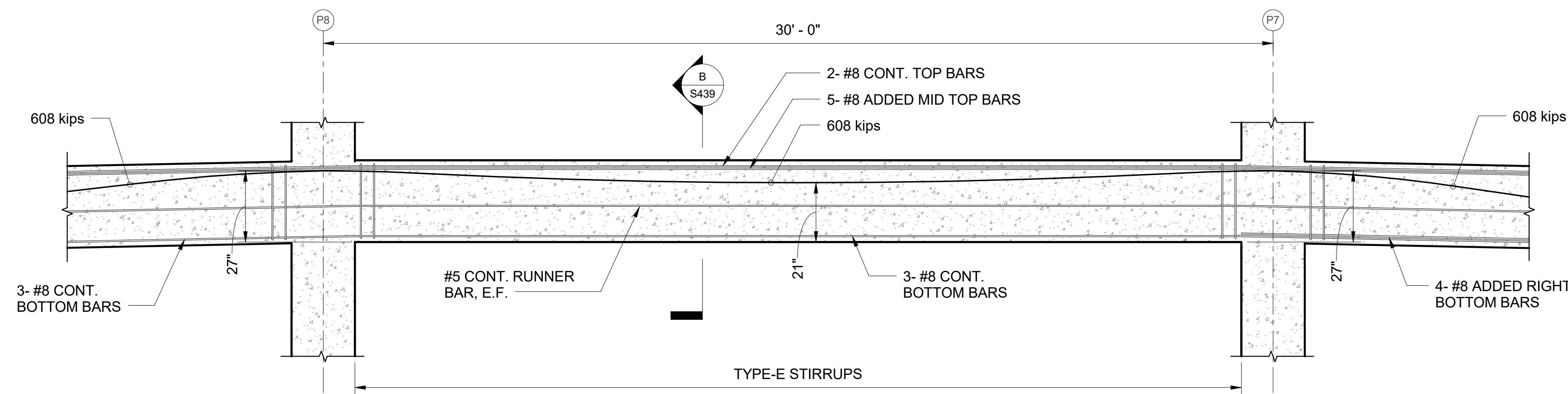
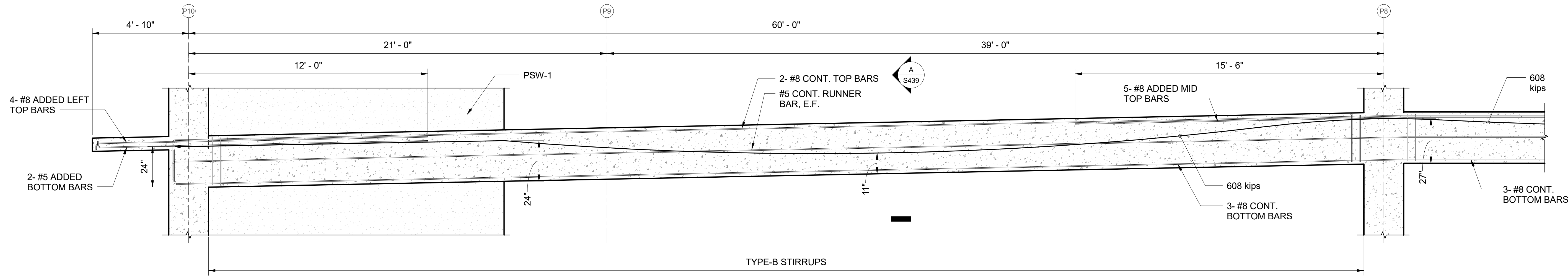
FERRARO CHOI
FERRARO CHOI AND ASSOCIATES LTD
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1240 ALA MOANA BLVD. STE. 510, HONOLULU, HI 96814
TEL 808.533.8880 FAX 808.599.3769 www.ferrarchoi.com

KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII
LICENSE EXPIRATION DATE: 4/30/20
SIGNATURE: [Signature]

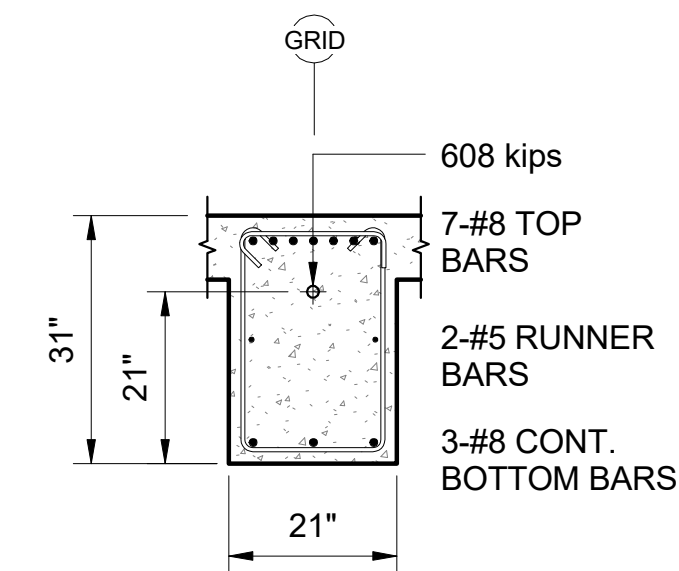
WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[PUY/80/10/01P/010/01P]

SHEET TITLE: POST TENSIONED BEAM PROFILES
CADD FILE:

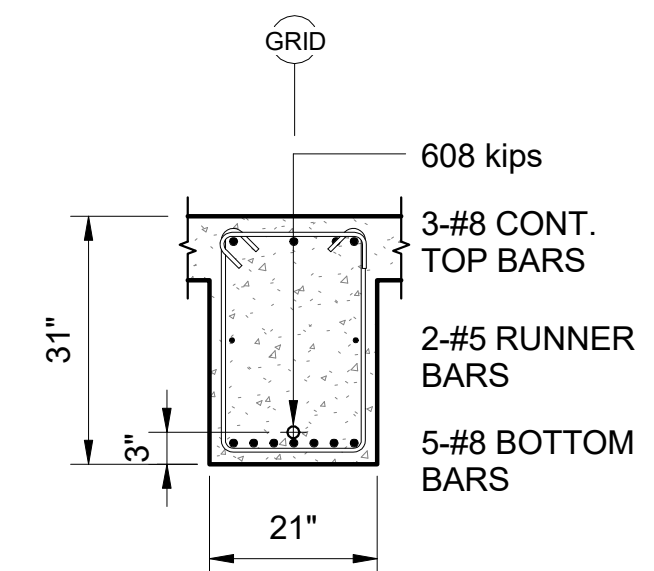
PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	1B	S438	
			OF SHEETS



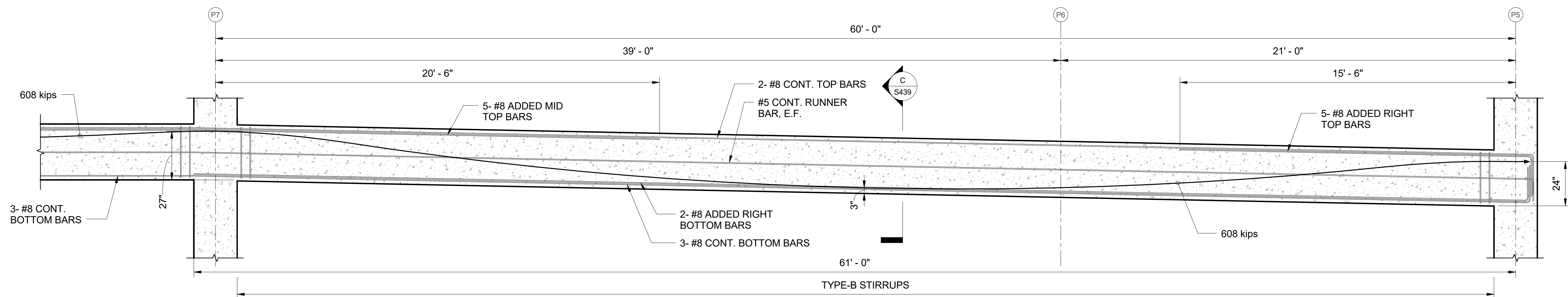
A SECTION
S439 SCALE: 1/2" = 1'-0"



B SECTION
S439 SCALE: 1/2" = 1'-0"

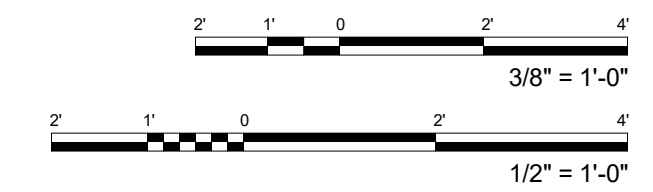


C SECTION
S439 SCALE: 1/2" = 1'-0"



STIRRUPS SCHEDULE	
MARK	STIRRUPS
TYPE-A	#4 STIRRUPS, ALL AT 10"
TYPE-B	#4 STIRRUPS, ALL AT 12"
TYPE-C	#4 STIRRUPS, 1 AT 12", REST AT 14"
TYPE-D	#4 STIRRUPS, 1 AT 12", REST AT 16"
TYPE-E	#4 STIRRUPS, 1 AT 12", REST AT 20"

1 3PTB-3 PROFILE
S439 SCALE: 3/8" = 1'-0"



FERRARO CHOI



KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII, USA
SIGNATURE: [Signature]
LICENSE EXPIRATION DATE: 4/30/20

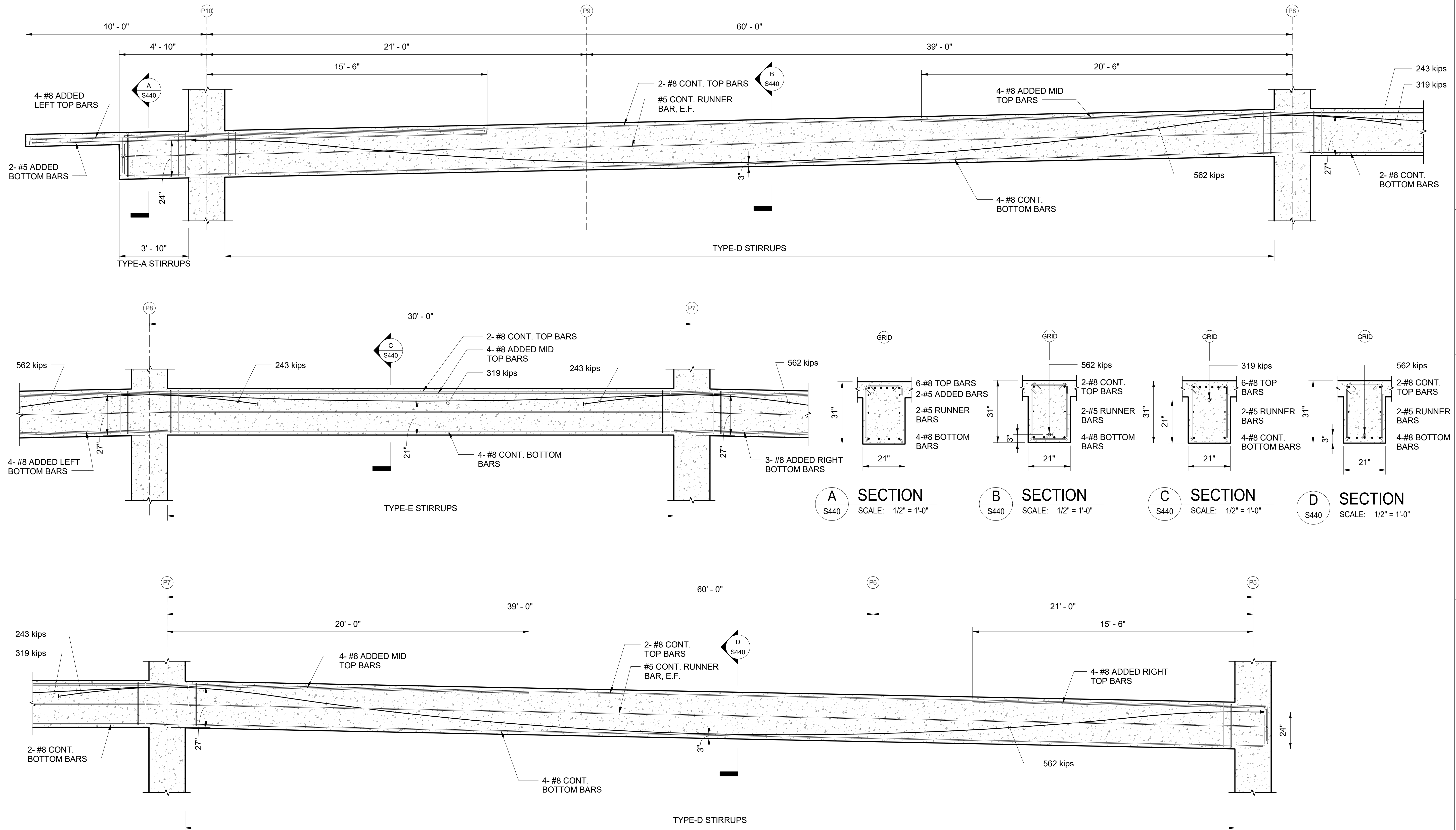
WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[Stamp]

SHEET TITLE:
POST TENSIONED BEAM PROFILES

PROJECT:	2017-001	REVISIONS:	△
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	1B	S439	
	OF	SHEETS	△

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A SECTION
S440 SCALE: 1/2" = 1'-0"

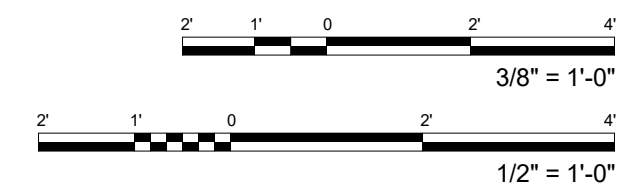
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S440 SCALE: 1/2" = 1'-0"

C SECTION
S440 SCALE: 1/2" = 1'-0"

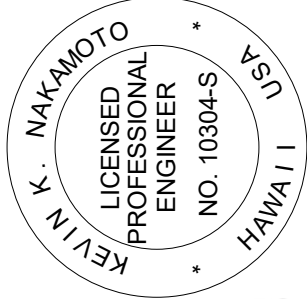
D SECTION
S440 SCALE: 1/2" = 1'-0"

1 3PTB-4 PROFILE
S440 SCALE: 3/8" = 1'-0"

STIRRUPS SCHEDULE	
MARK	STIRRUPS
TYPE-A	#4 STIRRUPS, ALL AT 10"
TYPE-B	#4 STIRRUPS, ALL AT 12"
TYPE-C	#4 STIRRUPS, 1 AT 12", REST AT 14"
TYPE-D	#4 STIRRUPS, 1 AT 12", REST AT 16"
TYPE-E	#4 STIRRUPS, 1 AT 12", REST AT 20"



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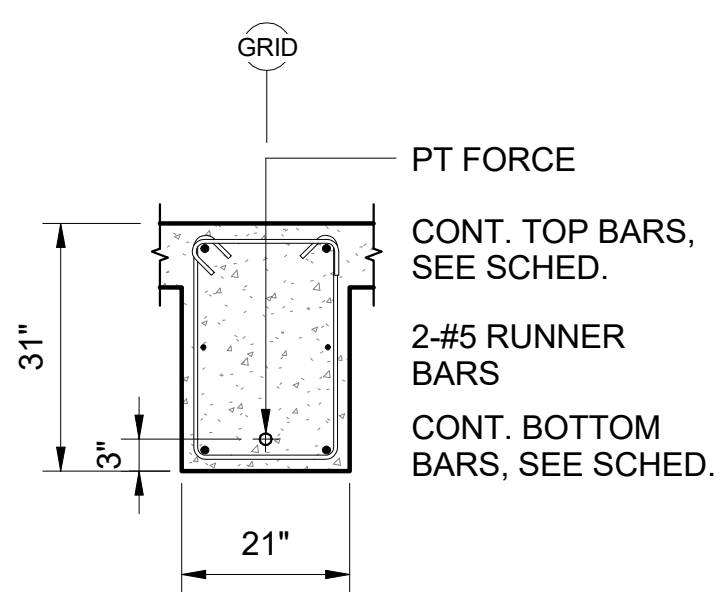
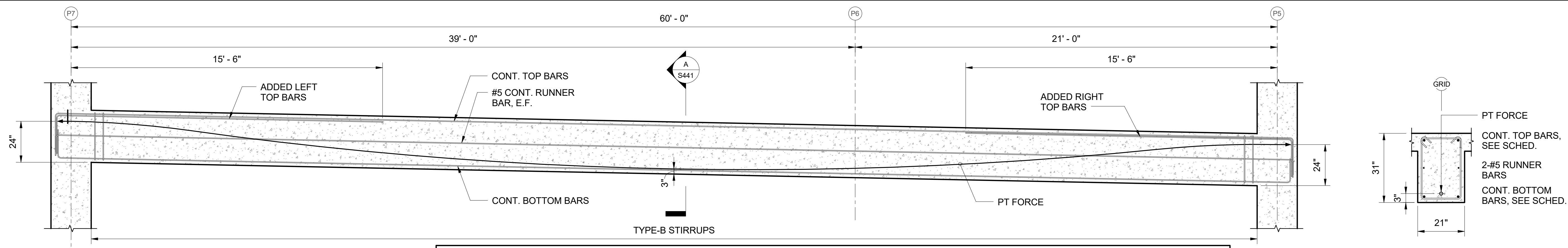
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**WAILUKU
CIVIC COMPLEX
PHASE 1B**
100% FINAL DESIGN

**POST TENSIONED
BEAM PROFILES**

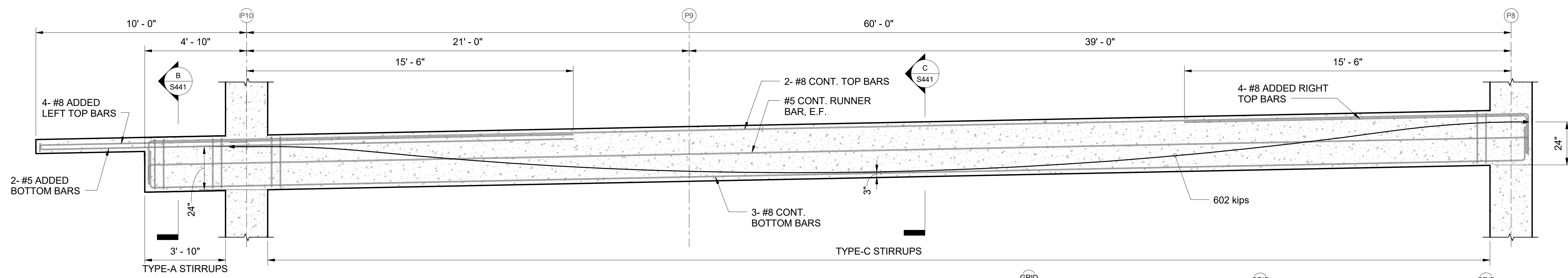
PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET 1B S440	OF SHEETS:	

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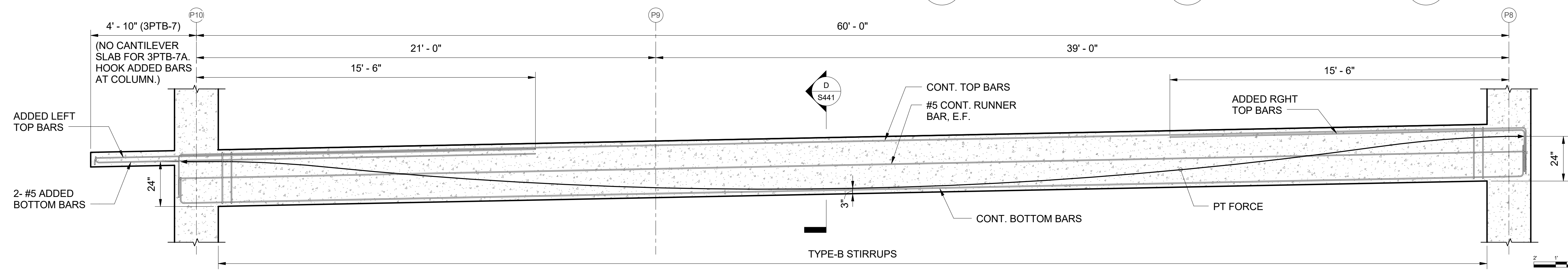
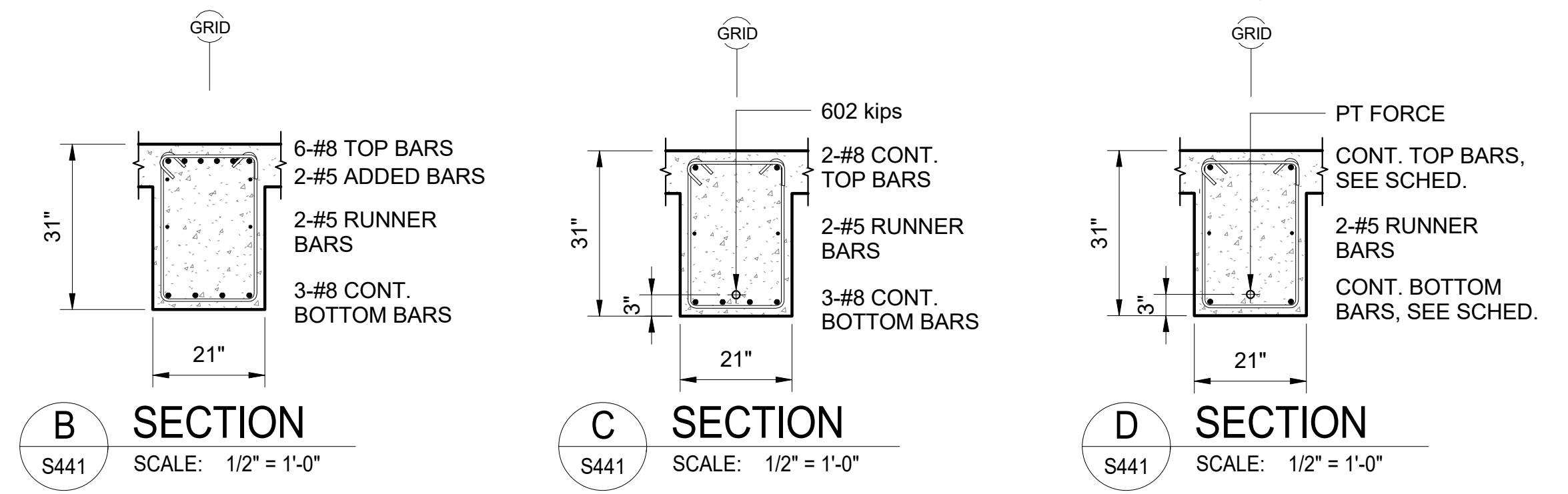
1 3PTB-5/ 3PTB-5A PROFILE
S441 SCALE: 3/8" = 1'-0"

MARK	TYPE ("B"x"D")	PT FORCE (kips)	TOP REINFORCEMENT			BOTTOM REINFORCEMENT		RUNNER BAR	REMARKS
			CONTINUOUS BAR	LEFT ADDED BAR	RIGHT ADDED BAR	CONTINUOUS BAR	ADDED BAR		
3PTB-5	21 x 31	619	2- #8	4- #8	4- #8	3- #8	-	#5 E.F.	
3PTB-5A	21 x 31	650	2- #8	4- #8	4- #8	3- #8	-	#5 E.F.	



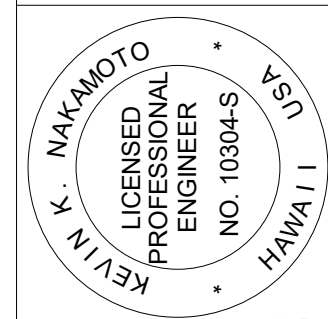
2 3PTB-6 PROFILE
S441 SCALE: 3/8" = 1'-0"

MARK	TYPE ("B"x"D")	PT FORCE (kips)	TOP REINFORCEMENT			BOTTOM REINFORCEMENT		RUNNER BAR	REMARKS
			CONTINUOUS BAR	LEFT ADDED BAR	RIGHT ADDED BAR	CONTINUOUS BAR	ADDED BAR		
3PTB-7	21 x 31	614	2- #8	4- #8	4- #8	3- #8	-	#5 E.F.	
3PTB-7A	21 x 31	646	2- #8	4- #8	4- #8	3- #8	-	#5 E.F.	



3 3PTB-7/ 3PTB-7A PROFILE
S441 SCALE: 3/8" = 1'-0"

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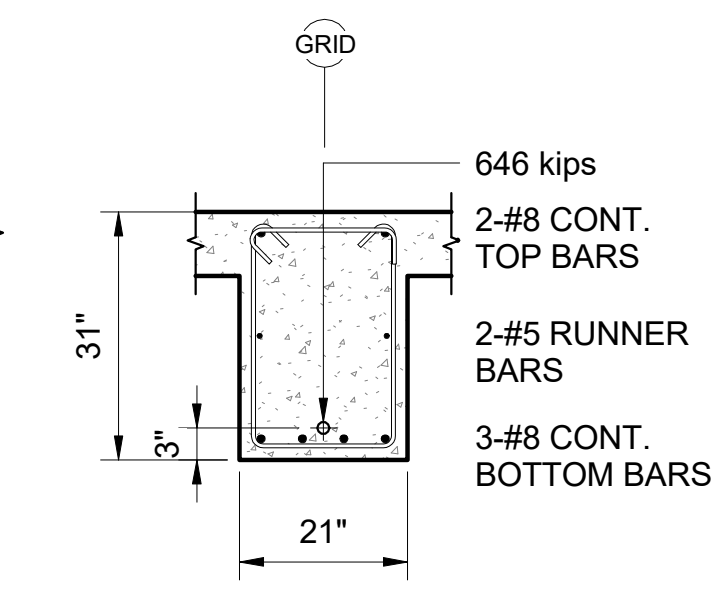
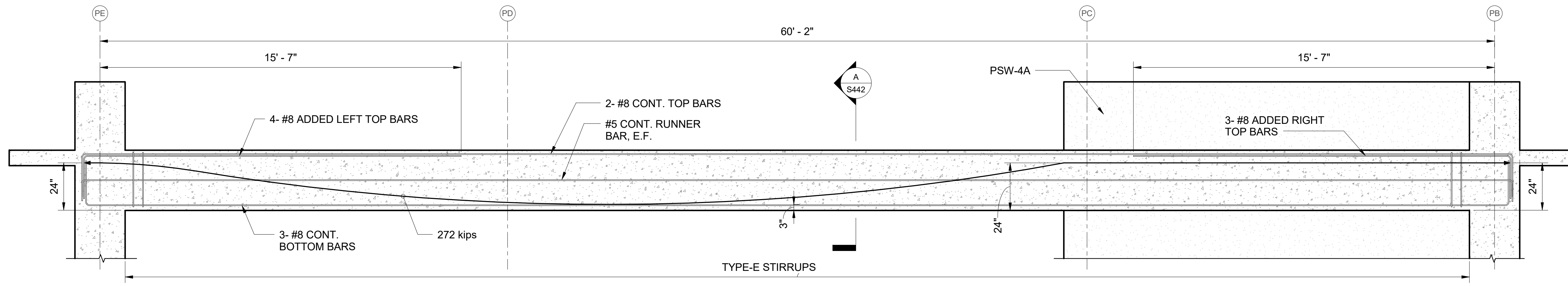


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TEL 808.533.8880 FAX 808.598.3769 www.ferrarochoi.com

WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[PUNYUJUPUNYUJUP]

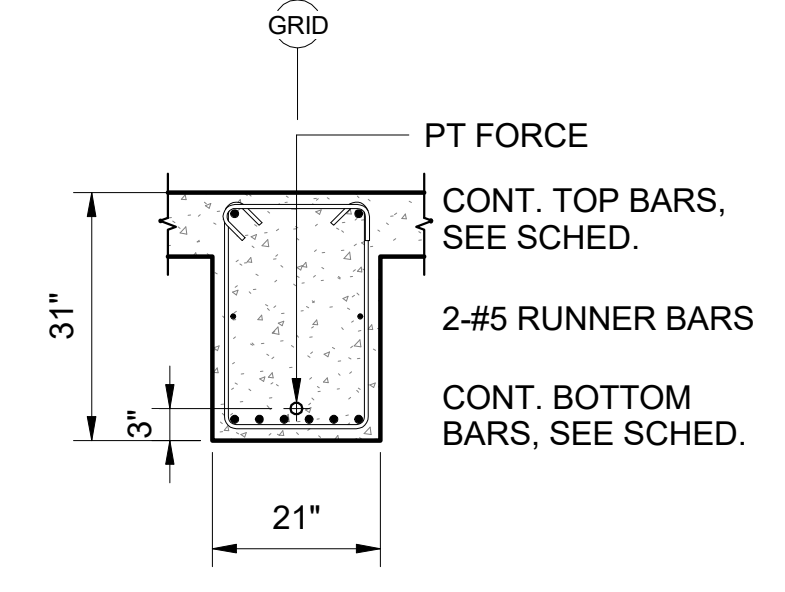
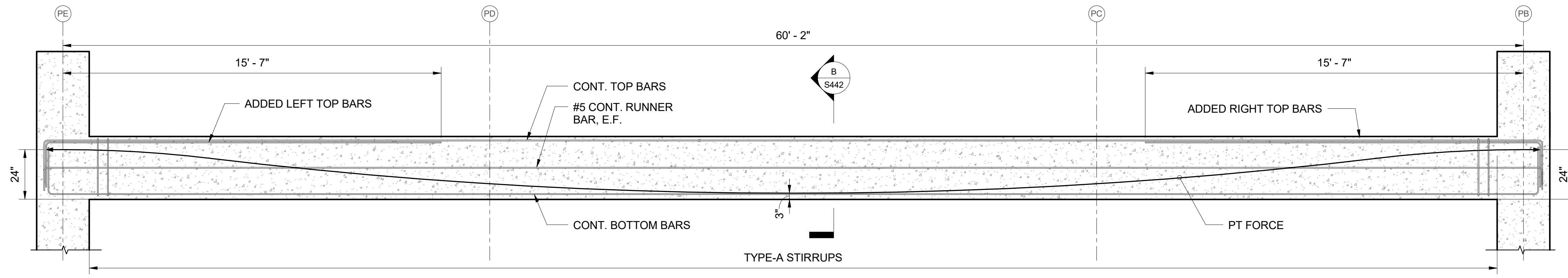
PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	POST TENSIONED BEAM PROFILE
DRAWN:	LC				
DATE:	7/25/2019				
PHASE:	S441				
SHEET:	1B				
OF:	SHEETS				

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A SECTION
S442 SCALE: 1/2" = 1'-0"

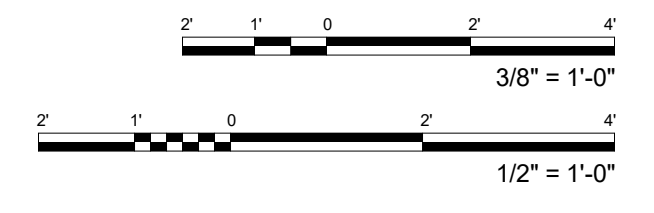
1 3PTB-10 PROFILE
S442 SCALE: 3/8" = 1'-0"



B SECTION
S442 SCALE: 1/2" = 1'-0"

2 3PTB-11/ 3PTB-12 PROFILE
S442 SCALE: 3/8" = 1'-0"

POST TENSIONED BEAM SCHEDULE									
MARK	TYPE ("B"x"D")	PT FORCE (kips)	TOP REINFORCEMENT			BOTTOM REINFORCEMENT		RUNNER BAR	REMARKS
			CONTINUOUS BAR	LEFT ADDED BAR	RIGHT ADDED BAR	CONTINUOUS BAR	ADDED BAR		
3PTB-11	21 x 31	737	2- #8	5- #8	5- #8	4- #8	-	#5 E.F.	
3PTB-12	21 x 31	634	2- #8	5- #8	5- #8	4- #8	-	#5 E.F.	



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KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII

WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[PUY/ARU/ADU/UP/UU/UV/OW/OP]

PROJECT: 2017-001

DRAWN: LC

DATE: 7/25/2019

PHASE: 1B

SHEET TITLE:
POST TENSIONED BEAM PROFILES

REVISIONS:

CADD FILE:

PROJECT: 2017-001

DRAWN: LC

DATE: 7/25/2019

PHASE: 1B

SHEET TITLE:
POST TENSIONED BEAM PROFILES

CADD FILE:

REVISIONS:

CADD FILE:

PROJECT: 2017-001

DRAWN: LC

DATE: 7/25/2019

PHASE: 1B

SHEET TITLE:
POST TENSIONED BEAM PROFILES

CADD FILE:

REVISIONS:

CADD FILE:

PROJECT: 2017-001

DRAWN: LC

DATE: 7/25/2019

PHASE: 1B

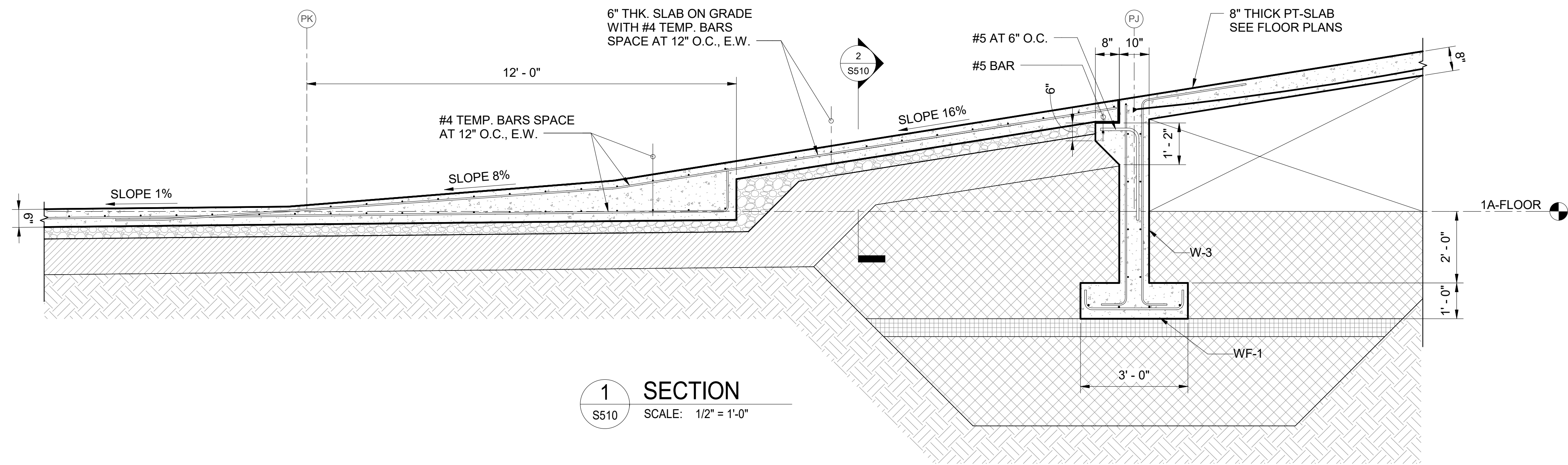
SHEET TITLE:
POST TENSIONED BEAM PROFILES

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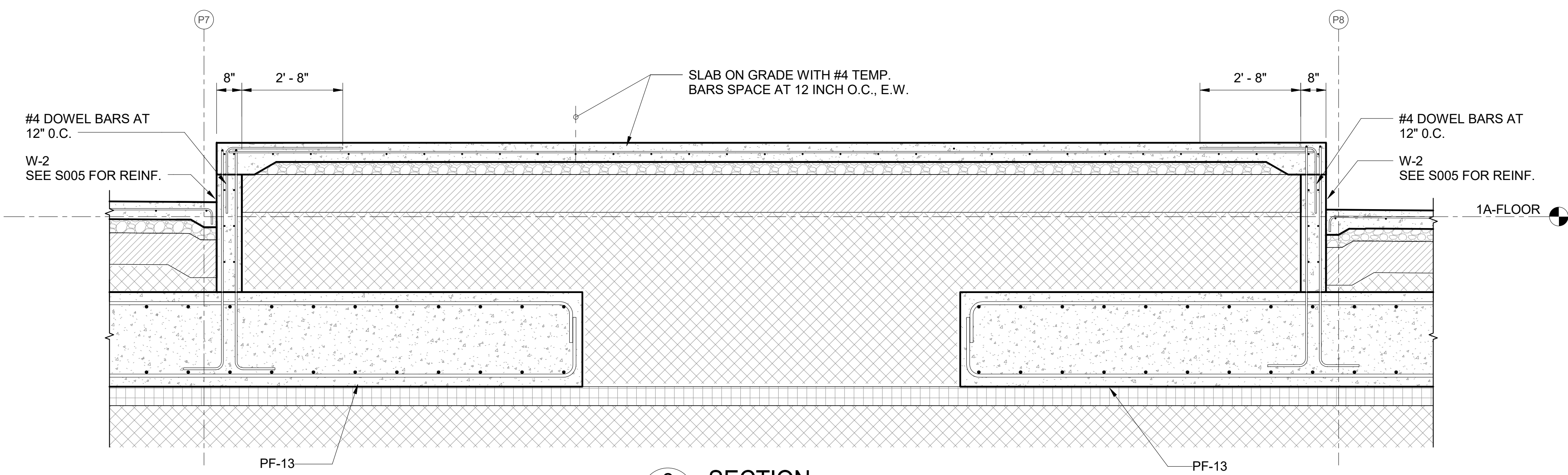
REVISIONS:

CADD FILE:

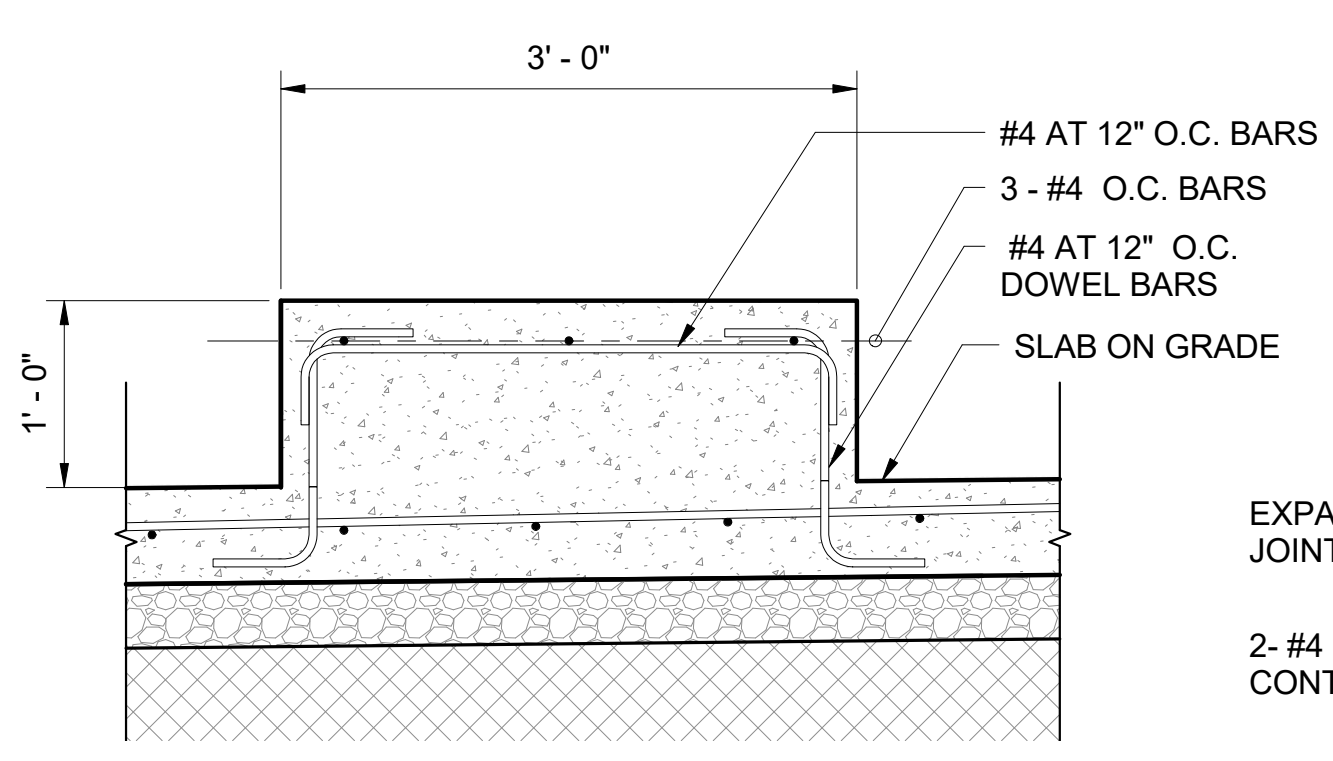
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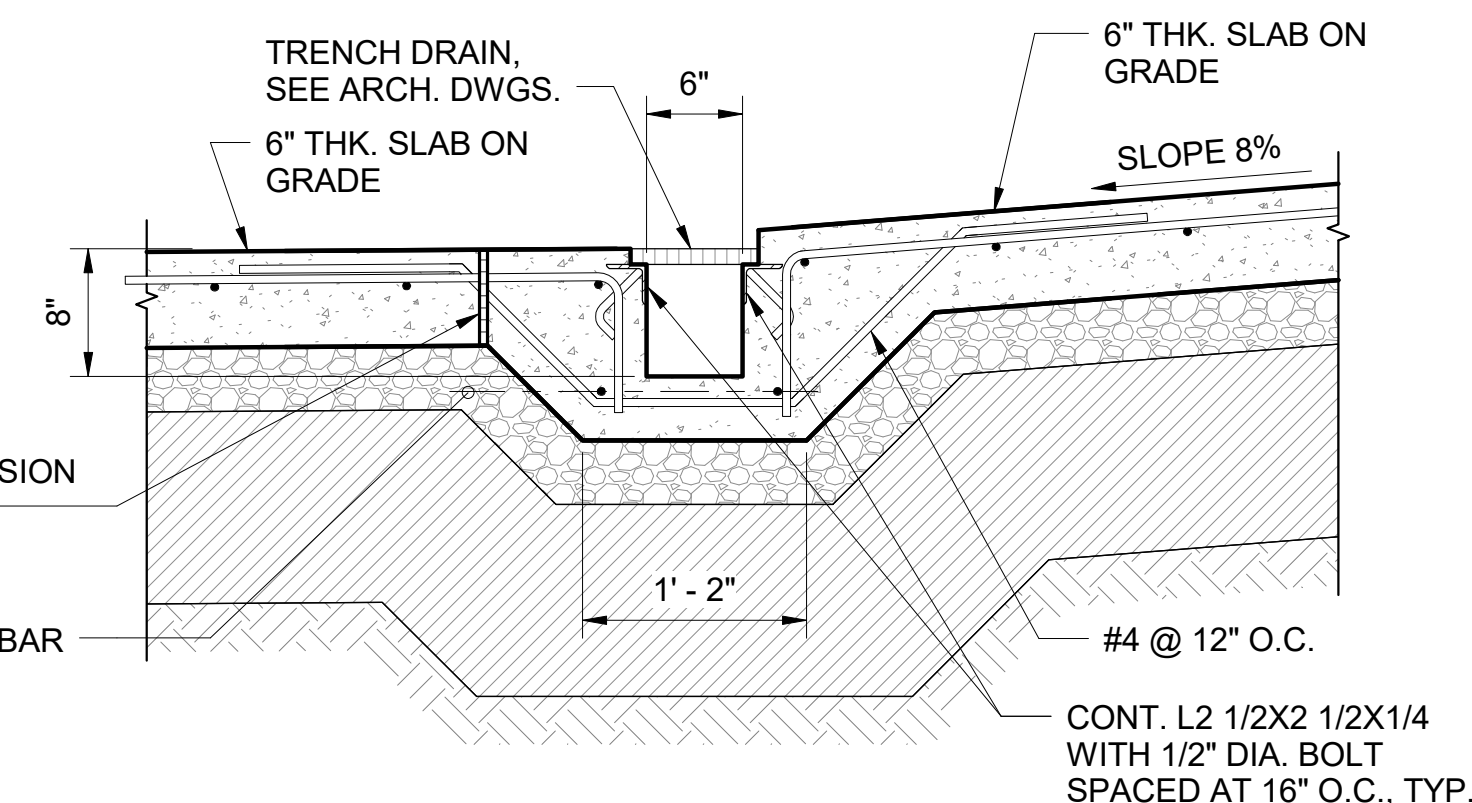
1 SECTION
S510 SCALE: 1/2" = 1'-0"



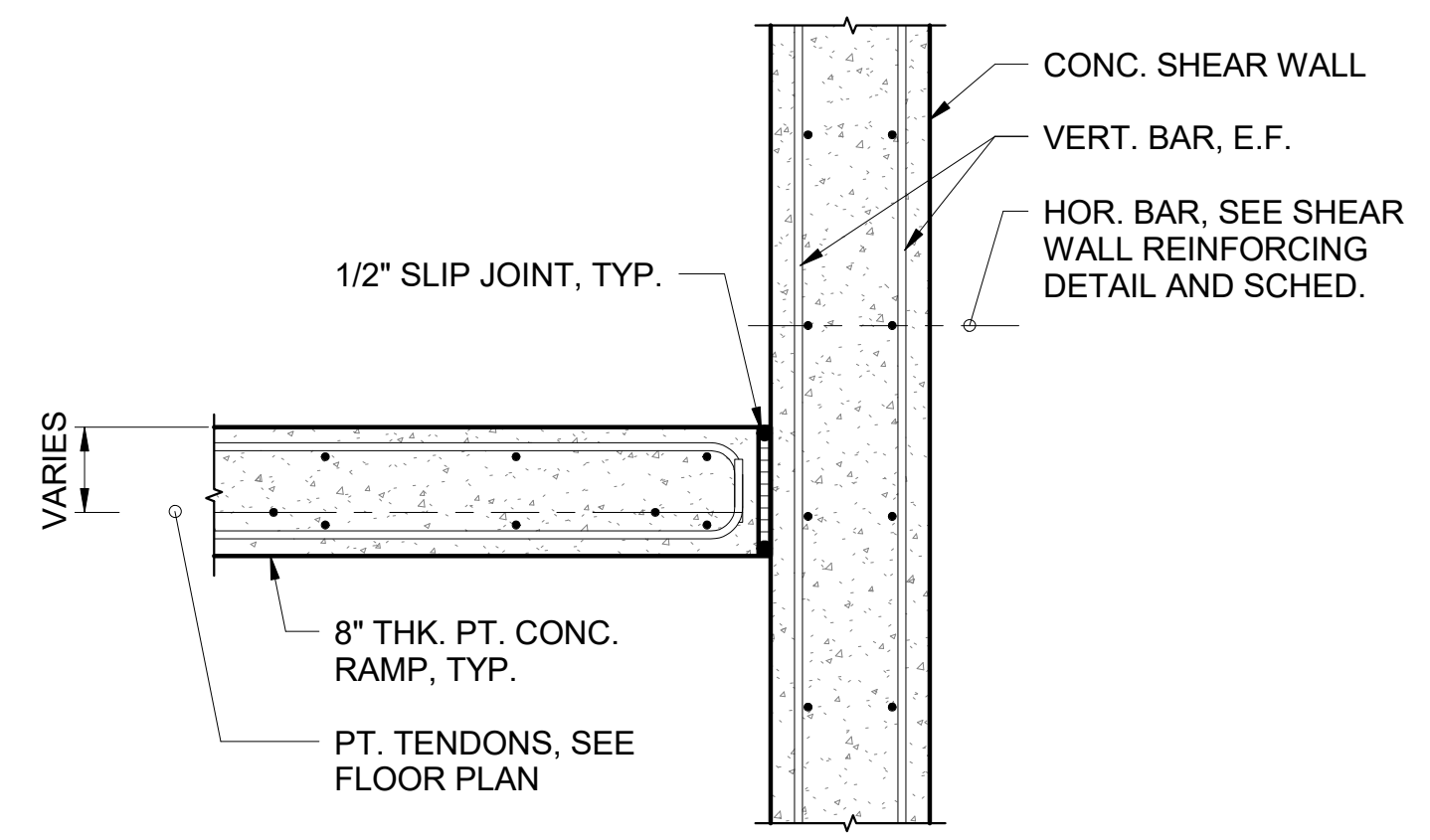
2 SECTION
S510 SCALE: 1/2" = 1'-0"



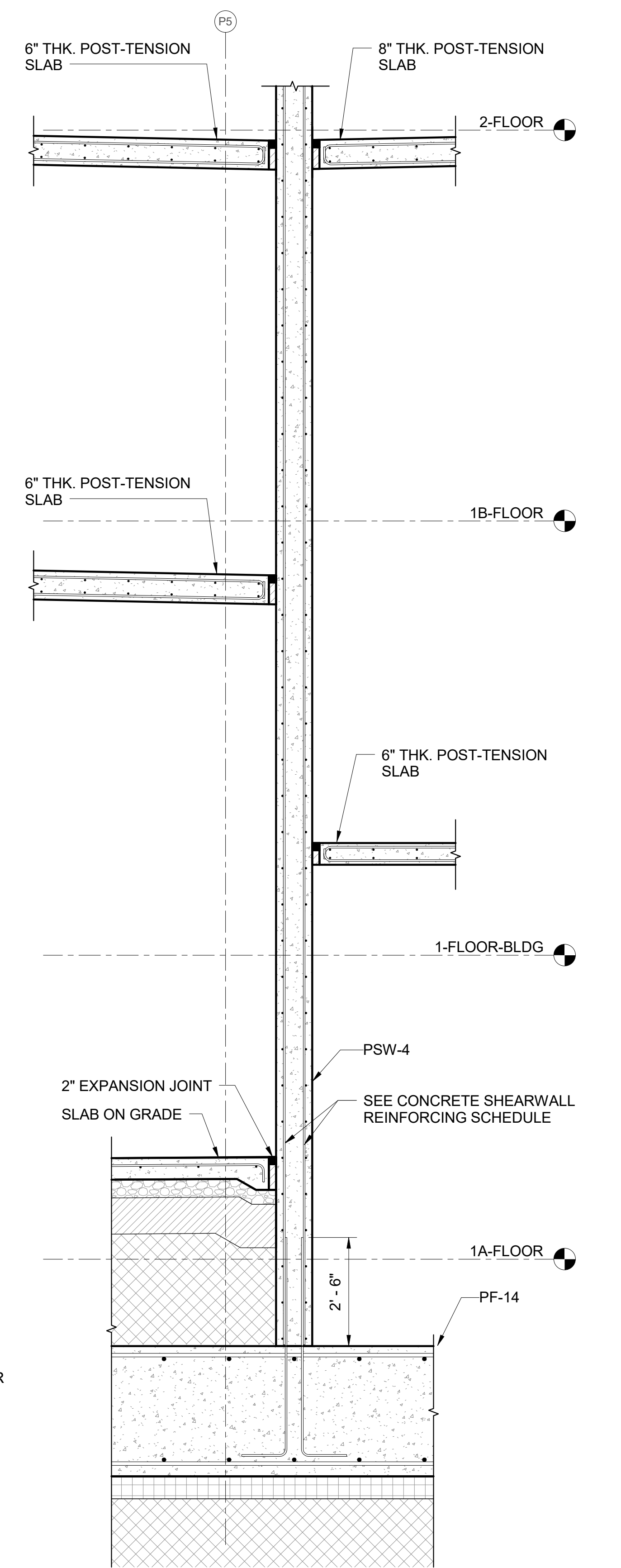
4 CURB DETAIL
S510 SCALE: 1" = 1'-0"



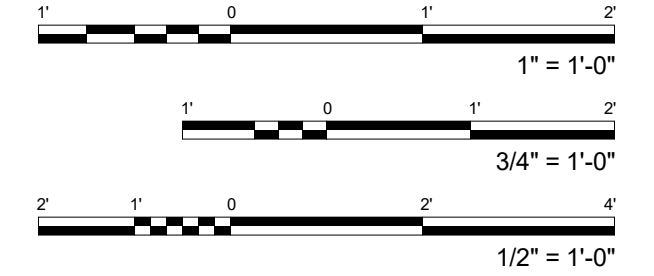
5 TRENCH DETAIL
S510 SCALE: 1" = 1'-0"



6 SECTION
S510 SCALE: 1" = 1'-0"



3 SECTION
S510 SCALE: 1/2" = 1'-0"

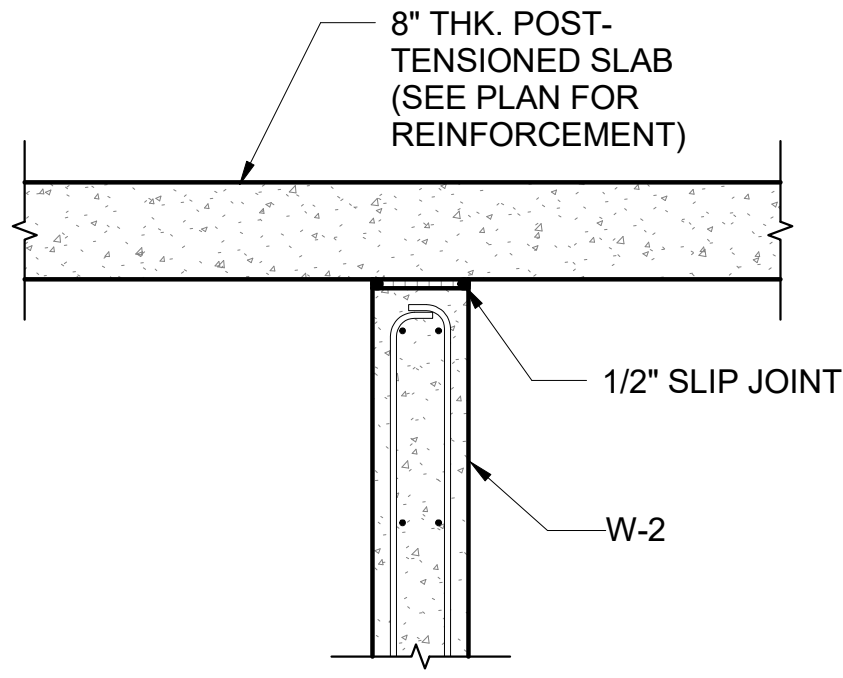


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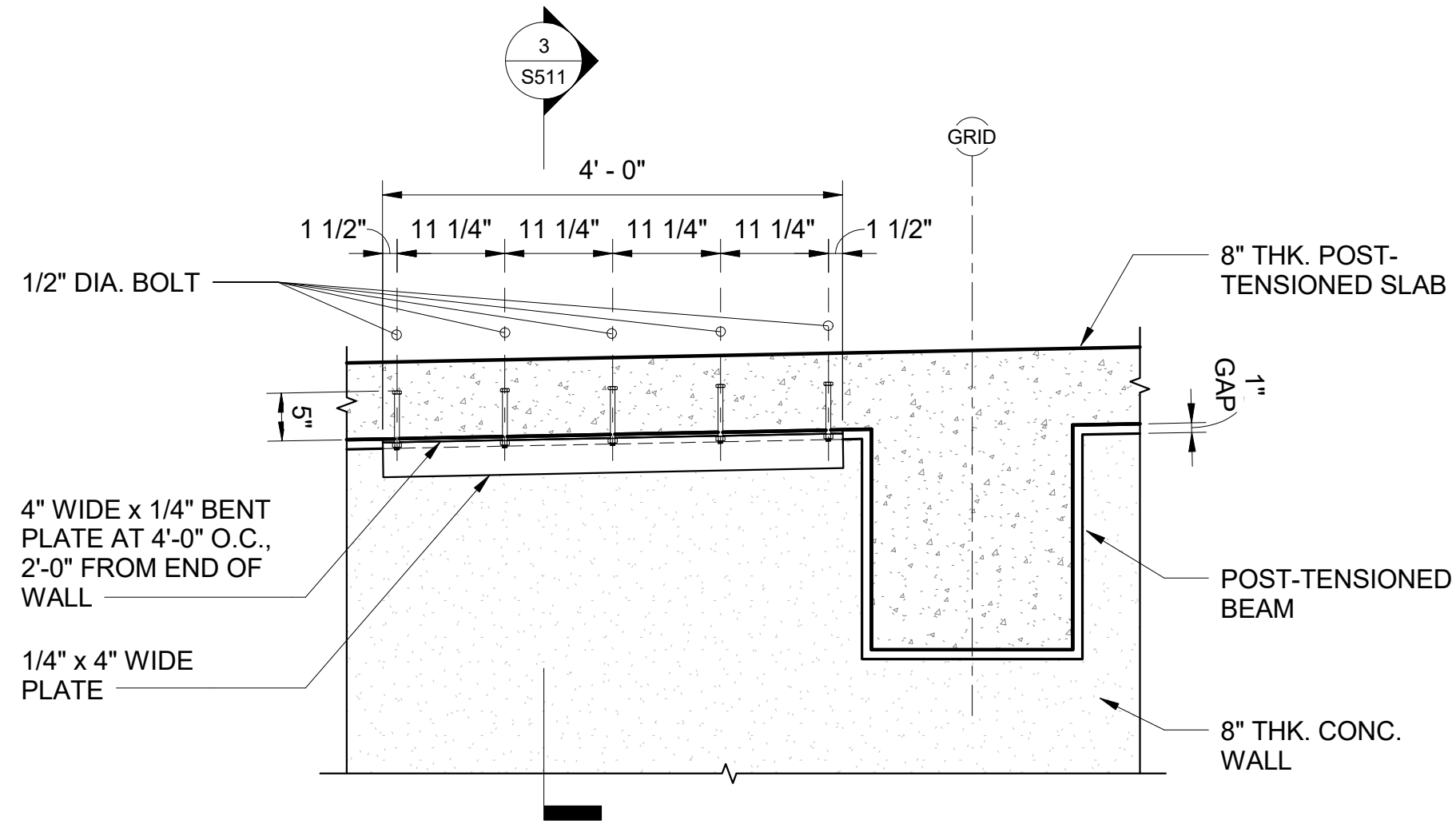
KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII, USA
LICENSE EXPIRATION DATE 4/30/20
SIGNATURE
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND I AM A MEMBER OF THE ENGINEERING BOARD OF PROFESSIONAL ENGINEERS UNDER THE OBSERVATION AND SUPERVISION OF THE BOARD OF COMMERCE AND CONSUMER AFFAIRS.

WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[PUVABUUPUJUVUWUP]

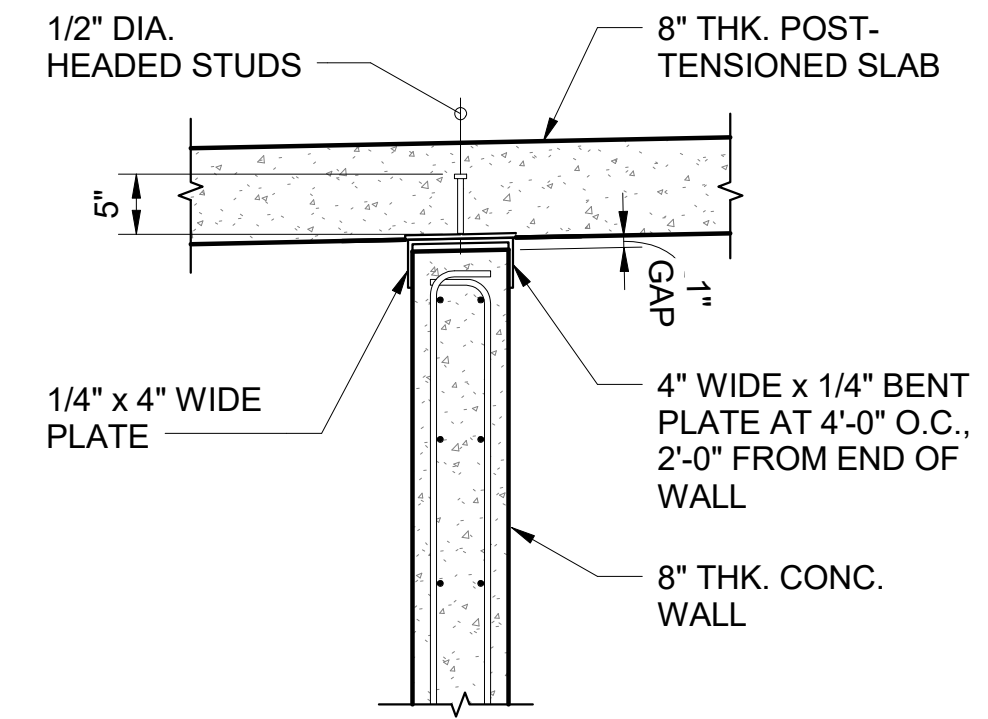
SHEET TITLE:		SECTIONS AND DETAILS	
PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	1B S510		
	OF		
	SHEETS		
			CADD FILE:



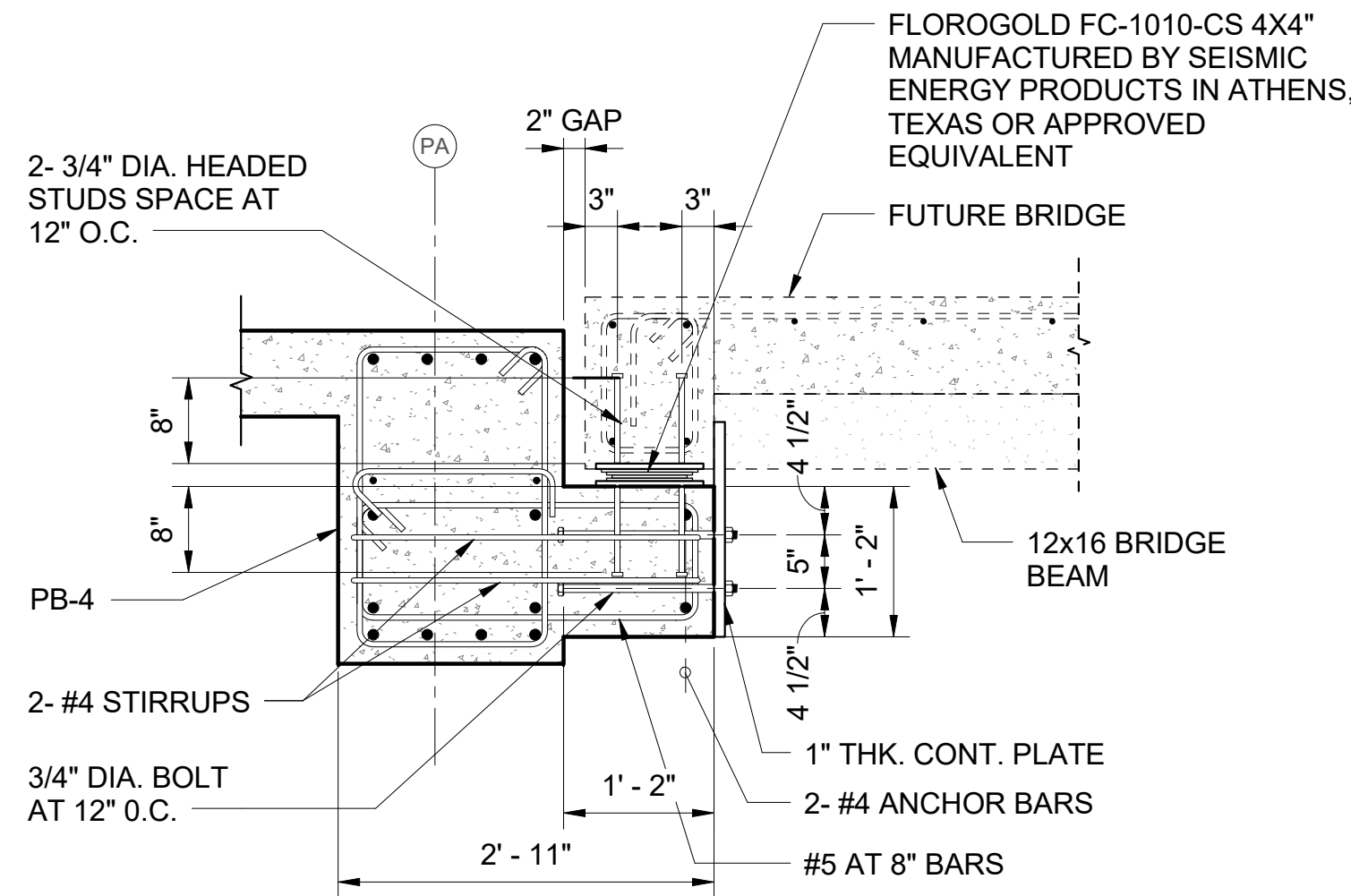
1 SECTION
S511 SCALE: 3/4" = 1'-0"



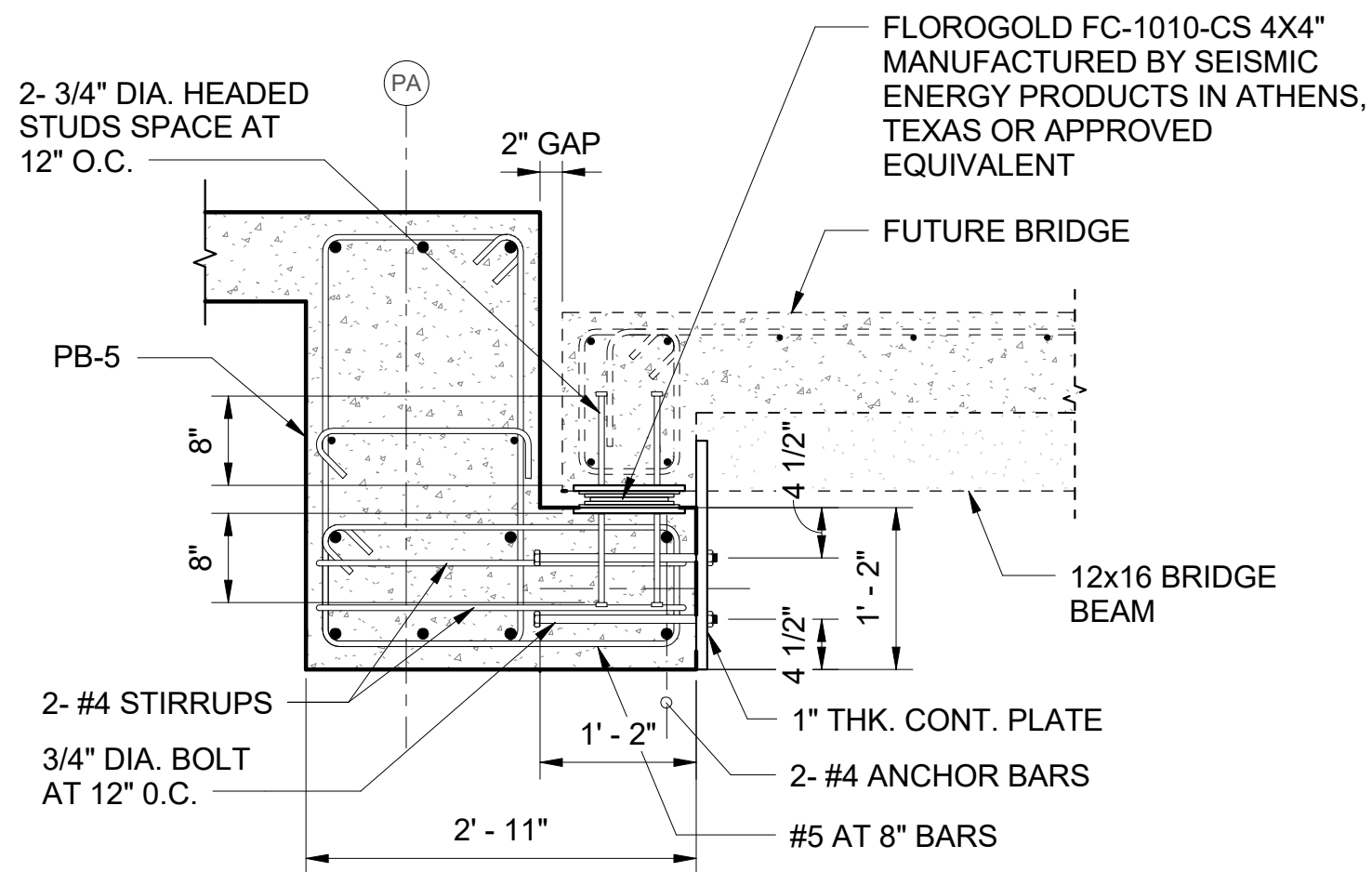
2 SECTION
S511 SCALE: 3/4" = 1'-0"



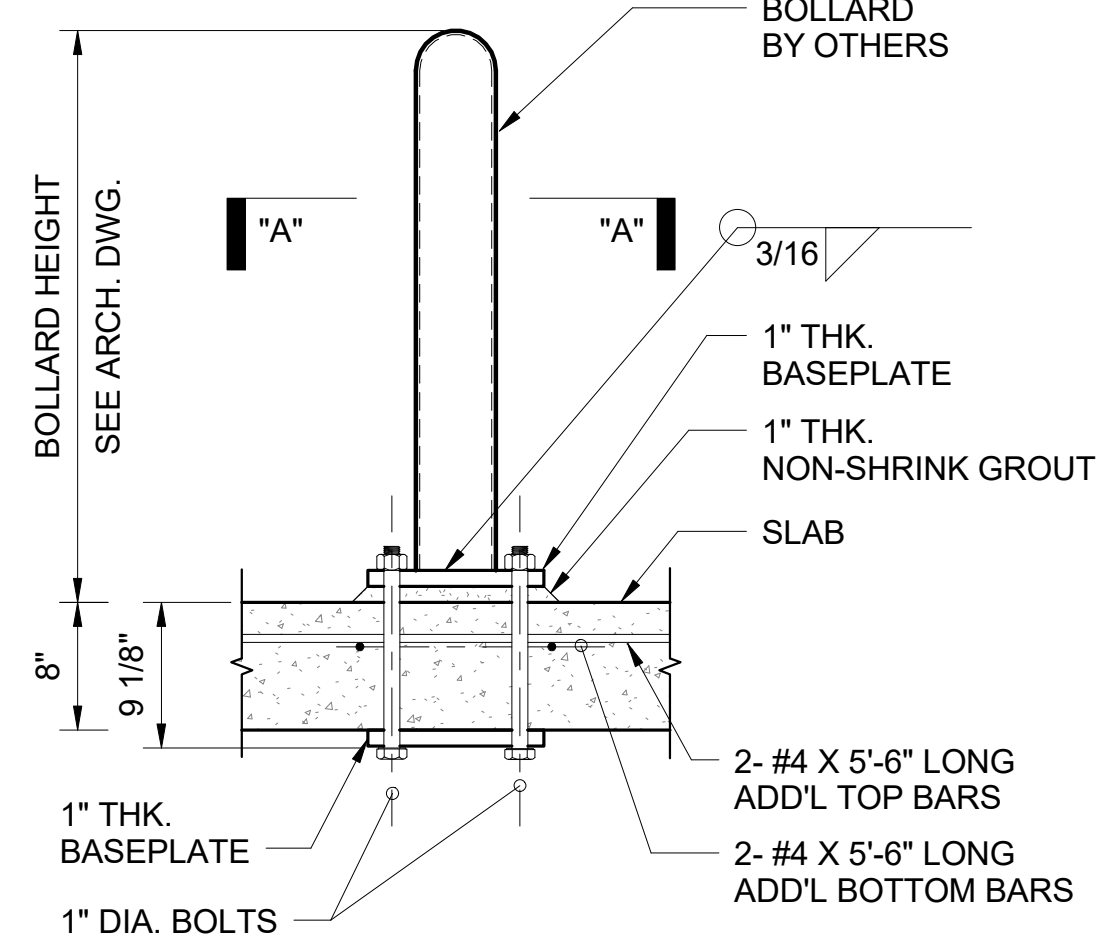
3 SECTION
S511 SCALE: 3/4" = 1'-0"



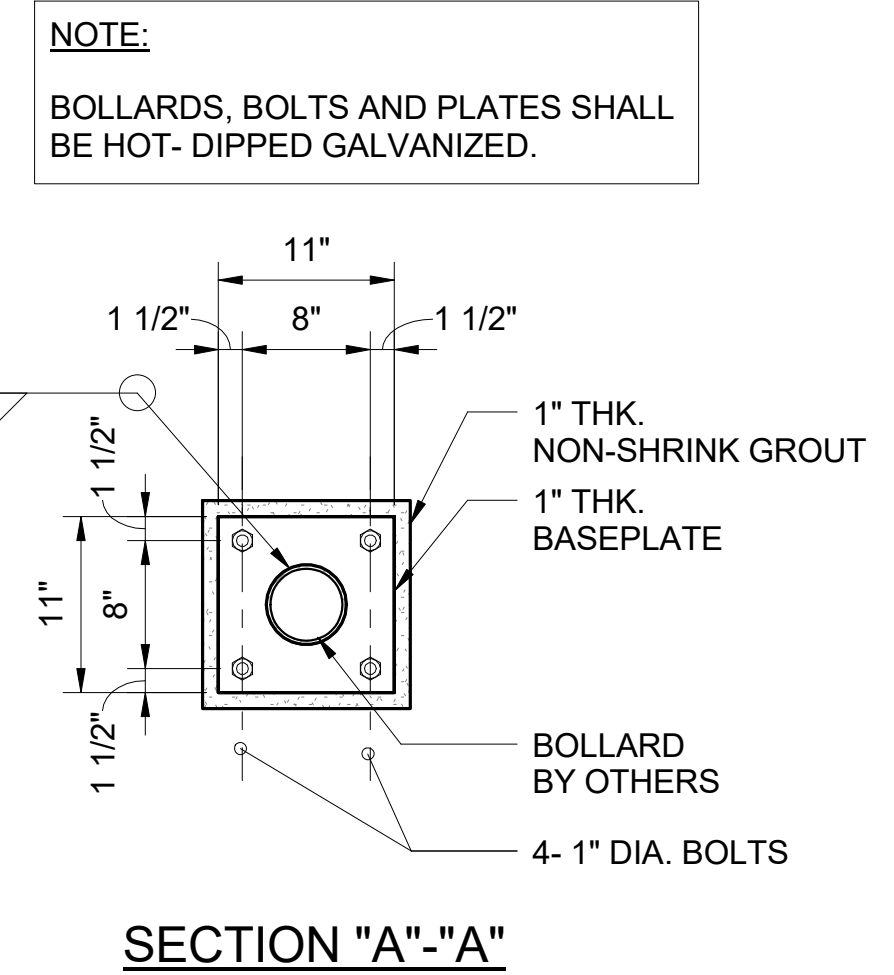
4 CORBEL DETAIL AT 1B AND 3RD FLOOR
S511 SCALE: 3/4" = 1'-0"



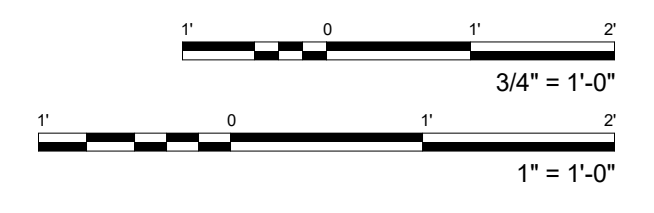
5 CORBEL DETAIL AT 2ND FLOOR
S511 SCALE: 3/4" = 1'-0"



6 TYPICAL BOLLARD DETAIL
S511 SCALE: 1" = 1'-0"



SECTION "A"- "A"



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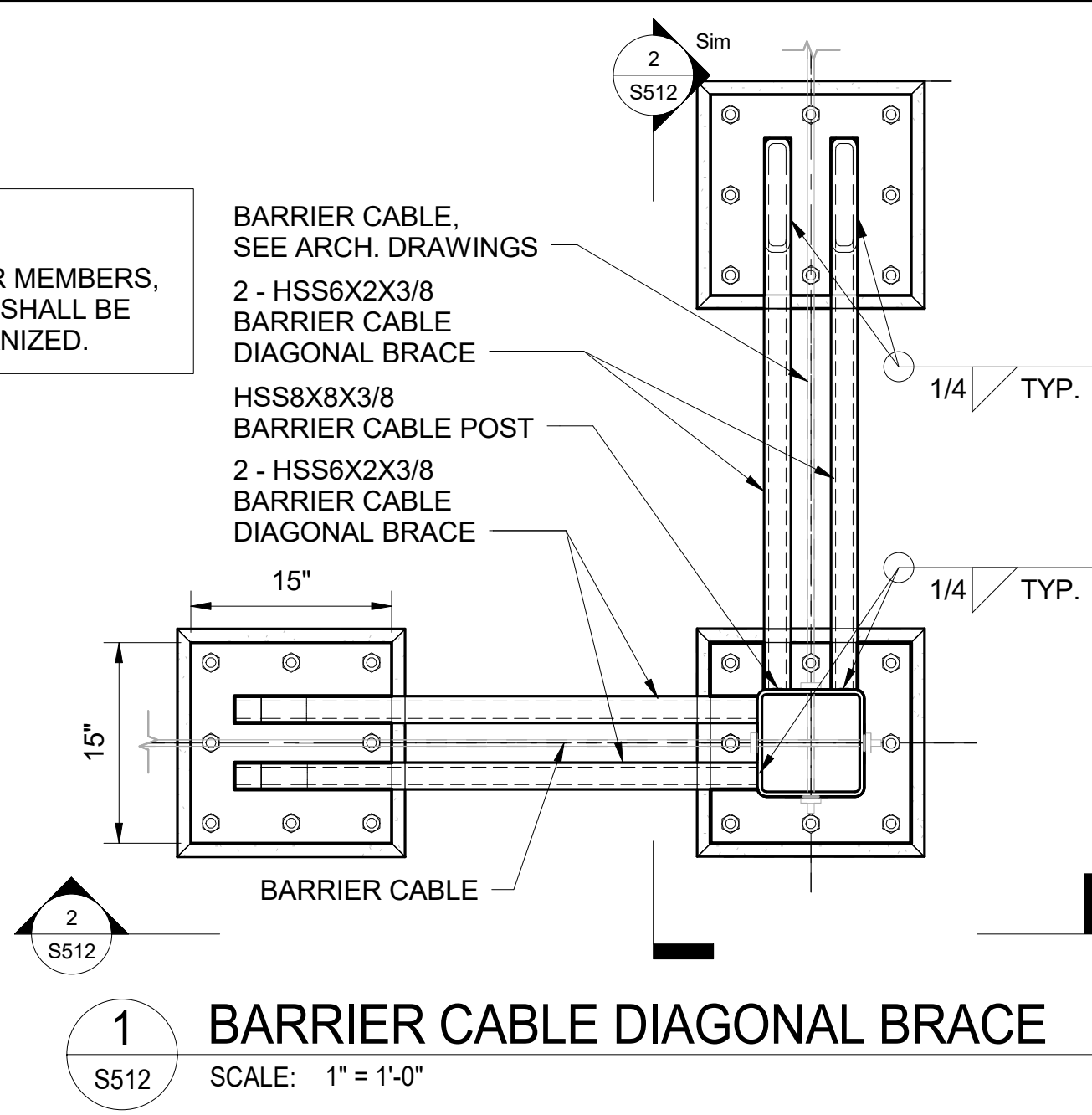
KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII
LICENSE EXPIRATION DATE 4/30/20
SIGNATURE: *[Signature]*
THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A MEMBER OF THE ENGINEERING SOCIETY OF HAWAII UNDER THE OBSERVATION OF THE BOARD OF ENGINEERS OF THE DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS.

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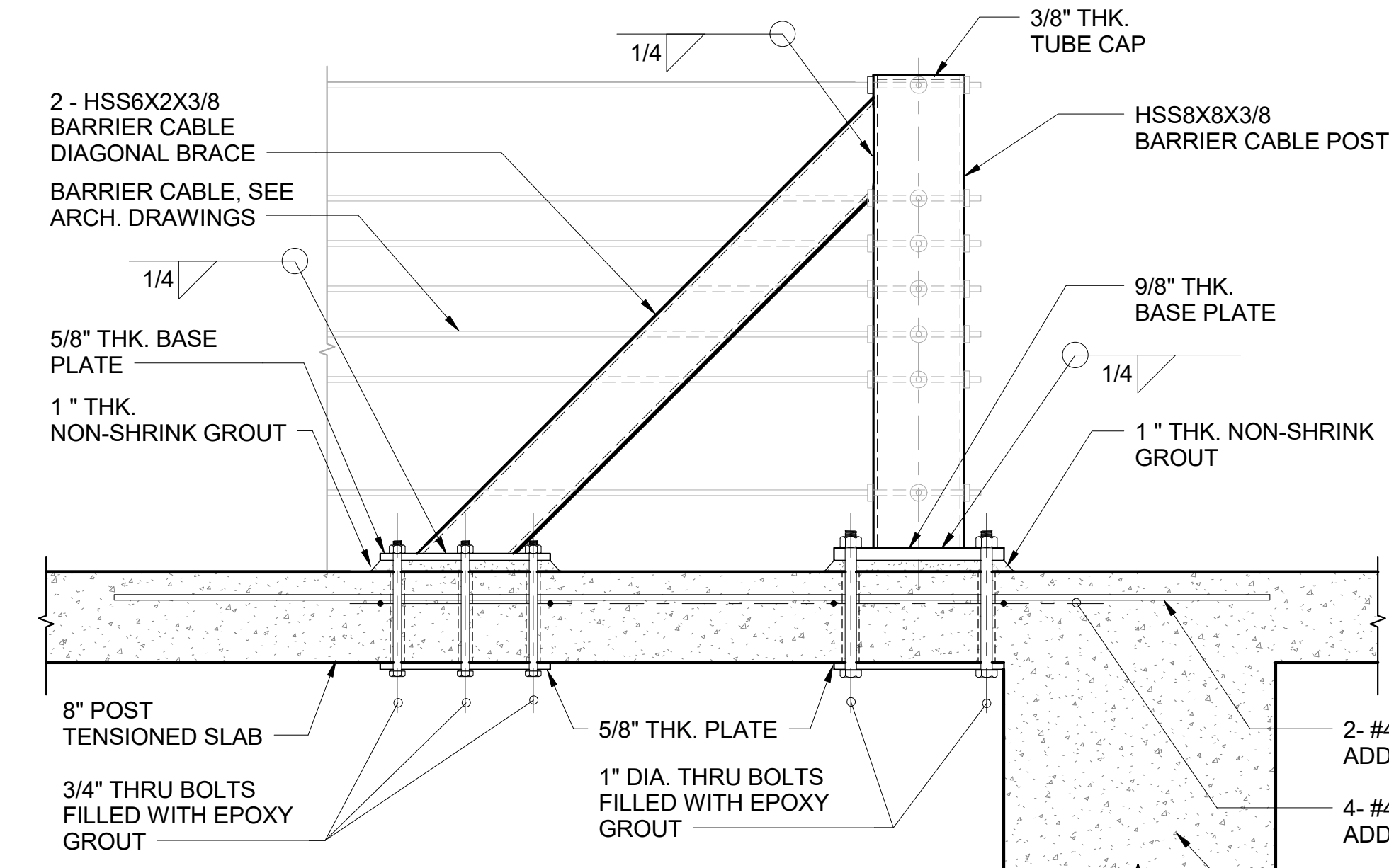
PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	SECTIONS AND DETAILS
DRAWN:	LC				
DATE:	7/25/2019				
PHASE:	1B	SHEET:	S511	CADD FILE:	
		OF SHEETS:			

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NOTE:
ALL CRASH BARRIER MEMBERS, BOLTS AND PLATES SHALL BE HOT-DIPPED GALVANIZED.

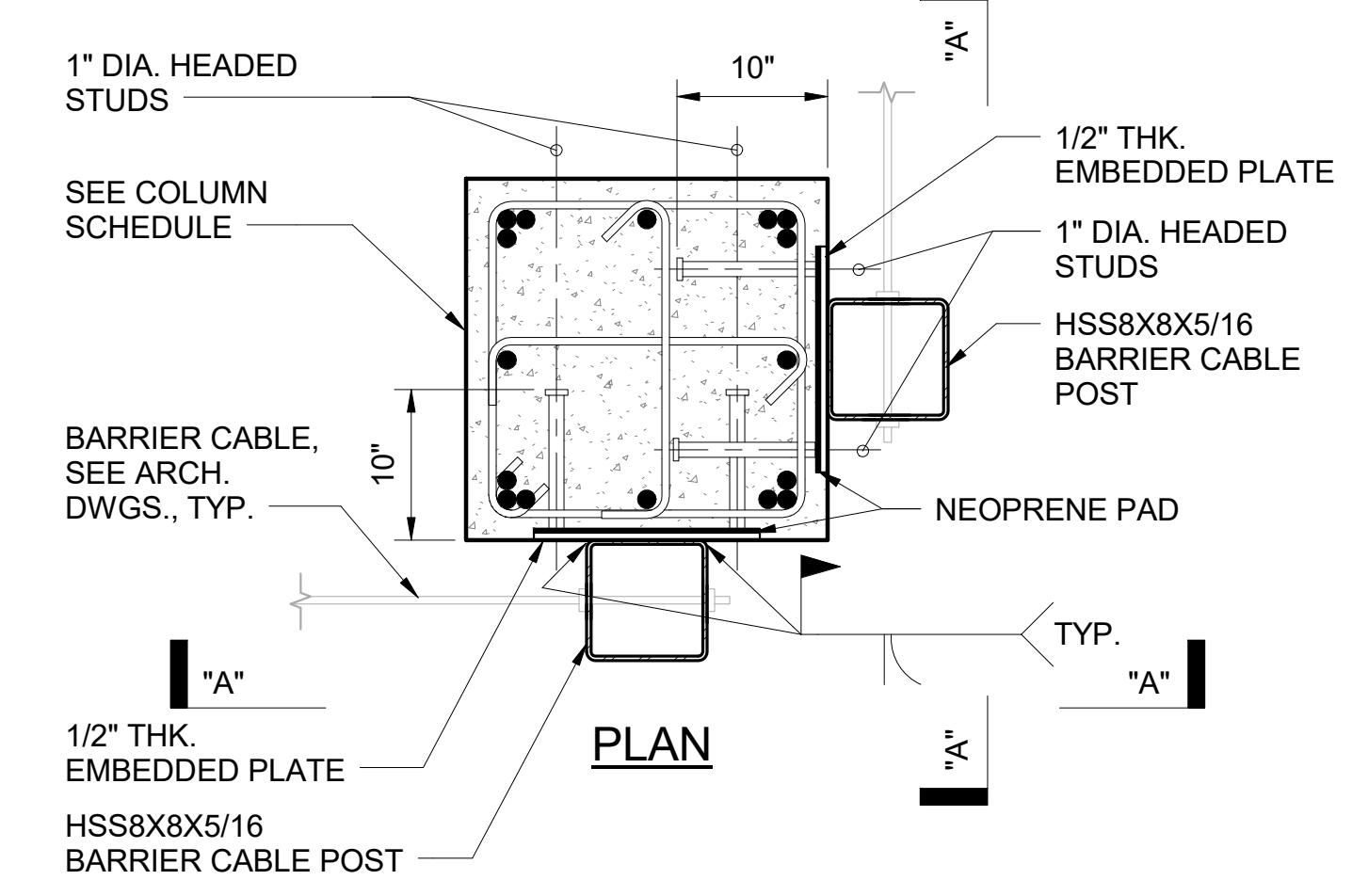


1 BARRIER CABLE DIAGONAL BRACE
SCALE: 1" = 1'-0"

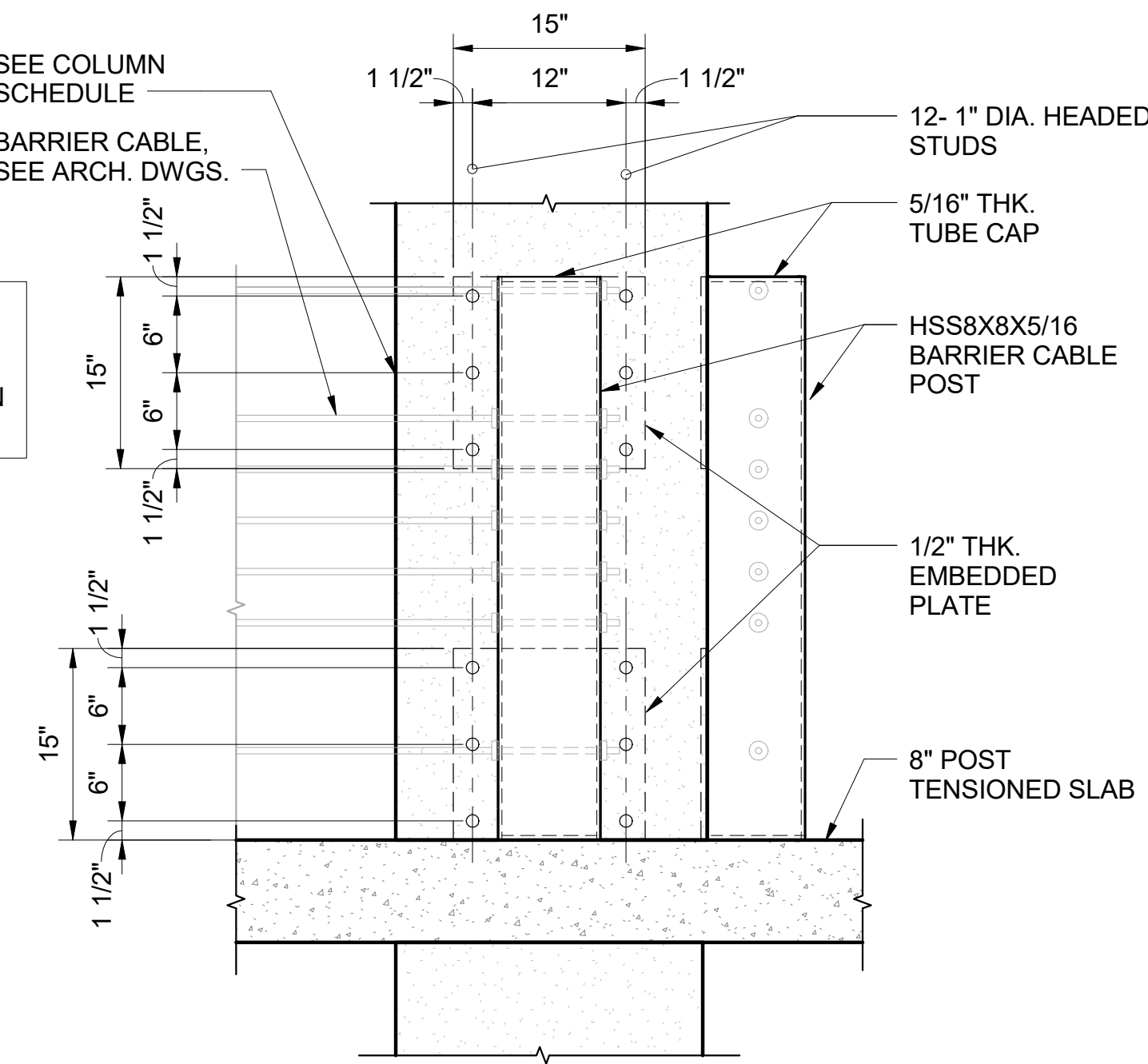


2 SECTION
SCALE: 1" = 1'-0"

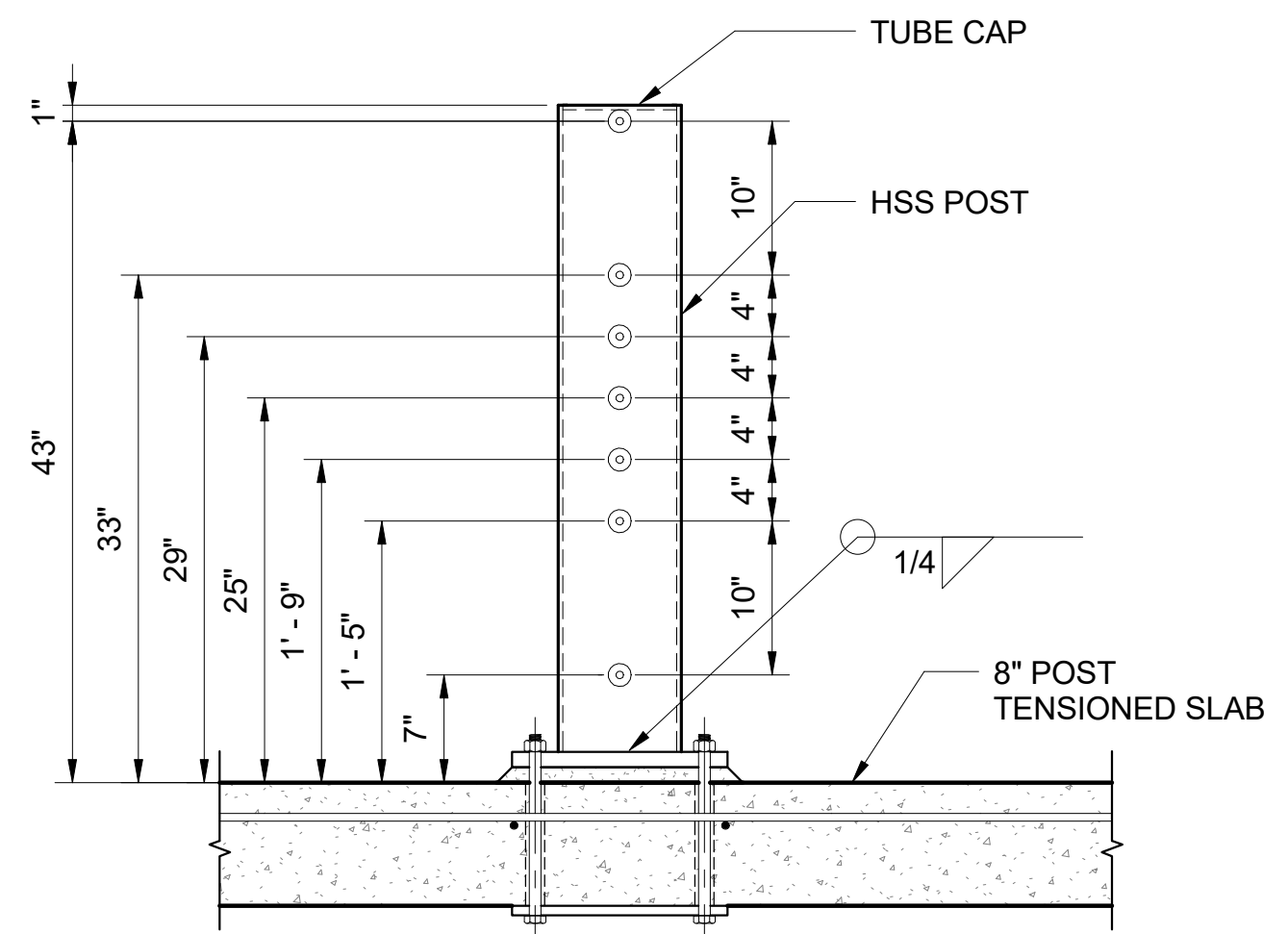
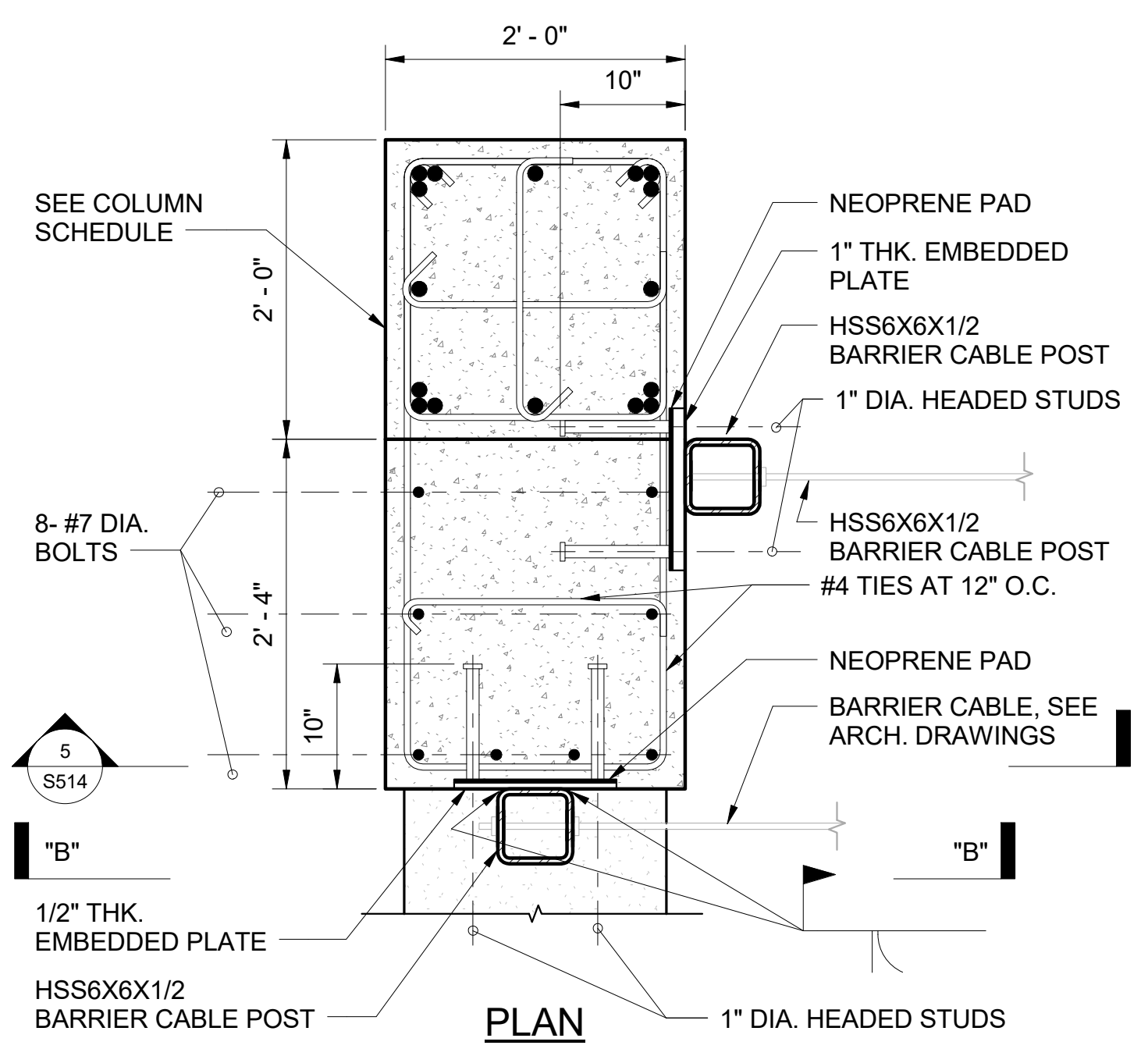
NOTE:
POST TENSIONED SLAB AND BEAM REINFORCEMENTS ARE NOT SHOWN FOR CLARITY.



4 BARRIER CABLE POST TYPE 1
SCALE: 1" = 1'-0"



5 BARRIER CABLE POST TYPE 2
SCALE: 1" = 1'-0"



3 BARRIER CABLE POST HOLE LOCATION
SCALE: 1" = 1'-0"

NOTE:
POST, PLATES AND BOLTS SHALL BE HOT-DIPPED GALVANIZED.



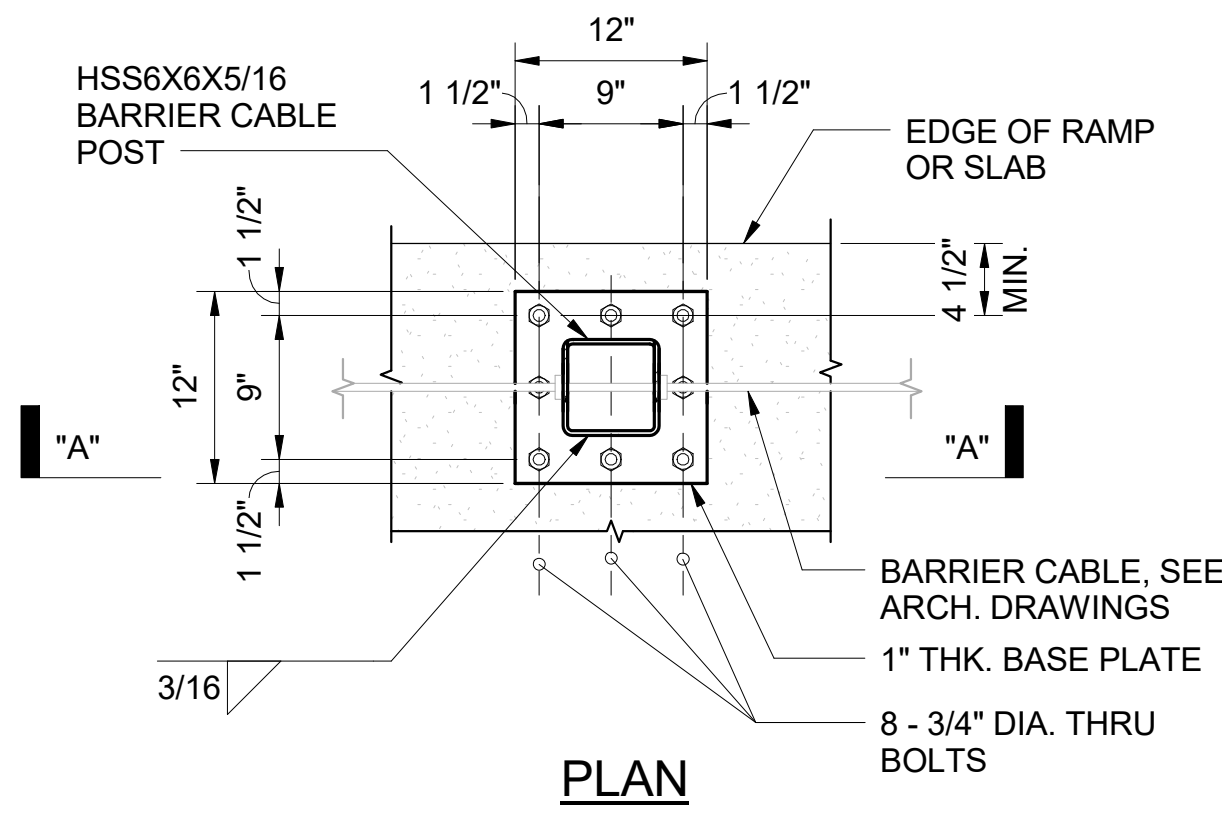
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HAWAII
LICENSE EXPIRATION DATE 4/30/20
SIGNATURE

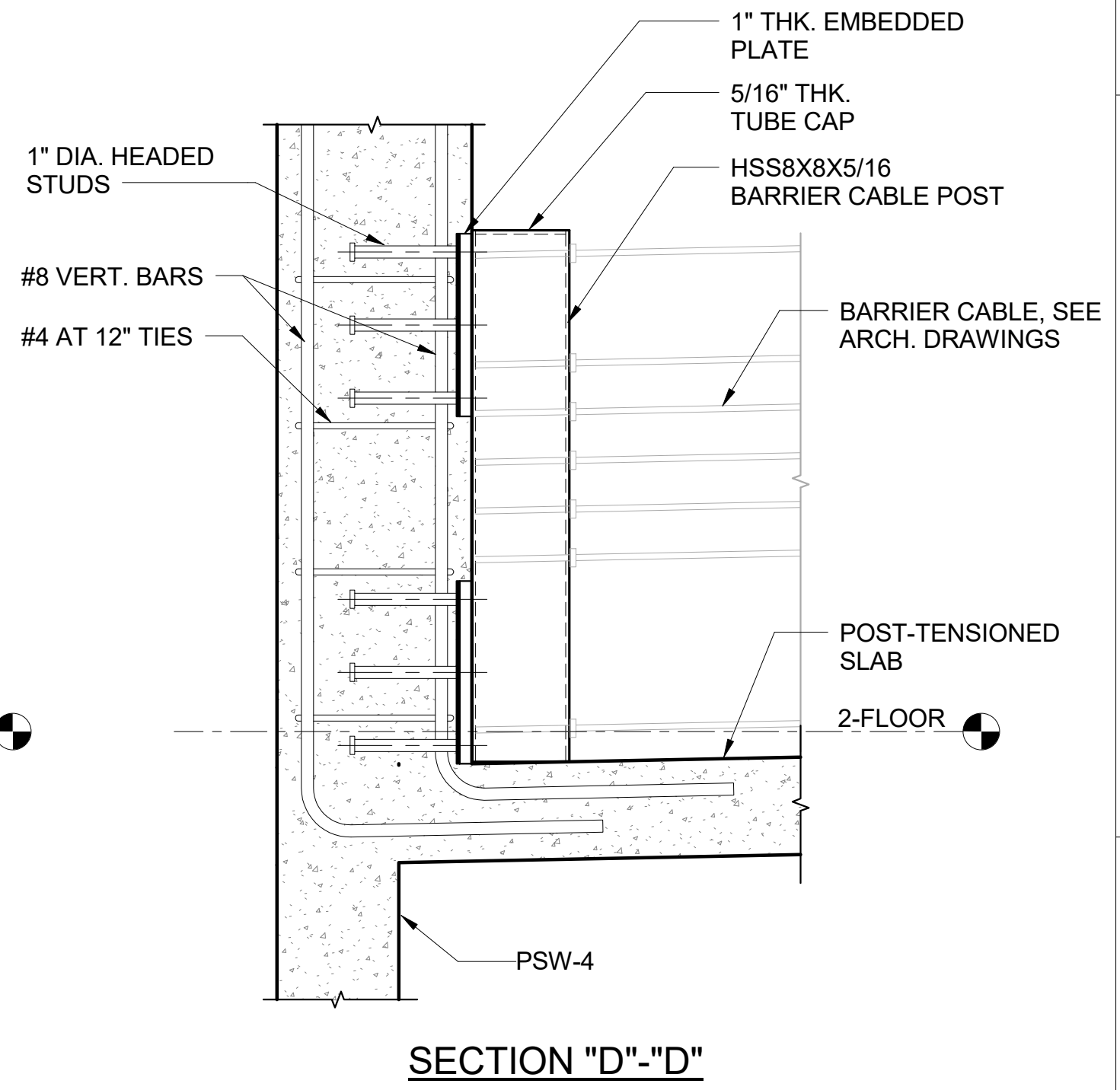
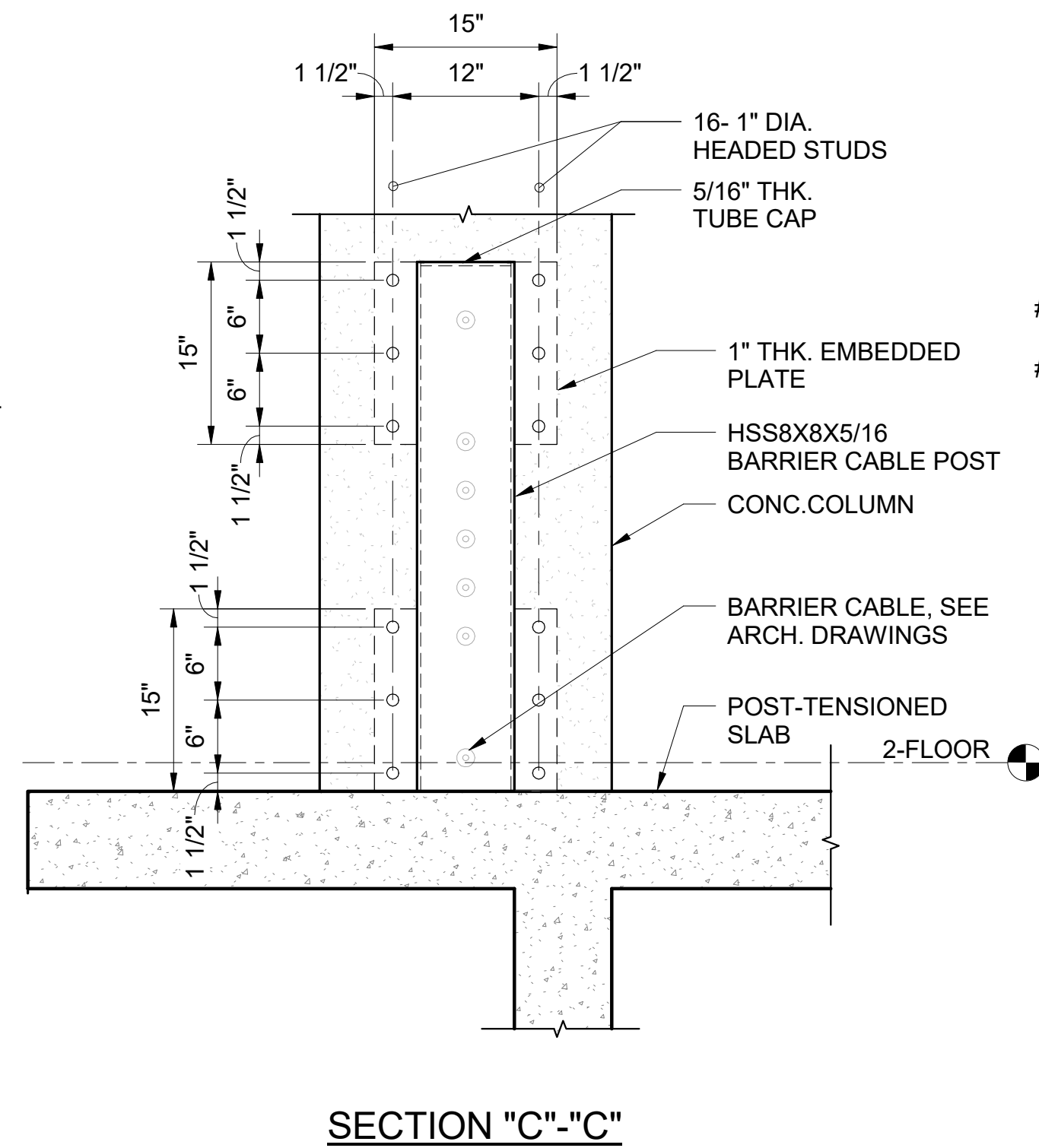
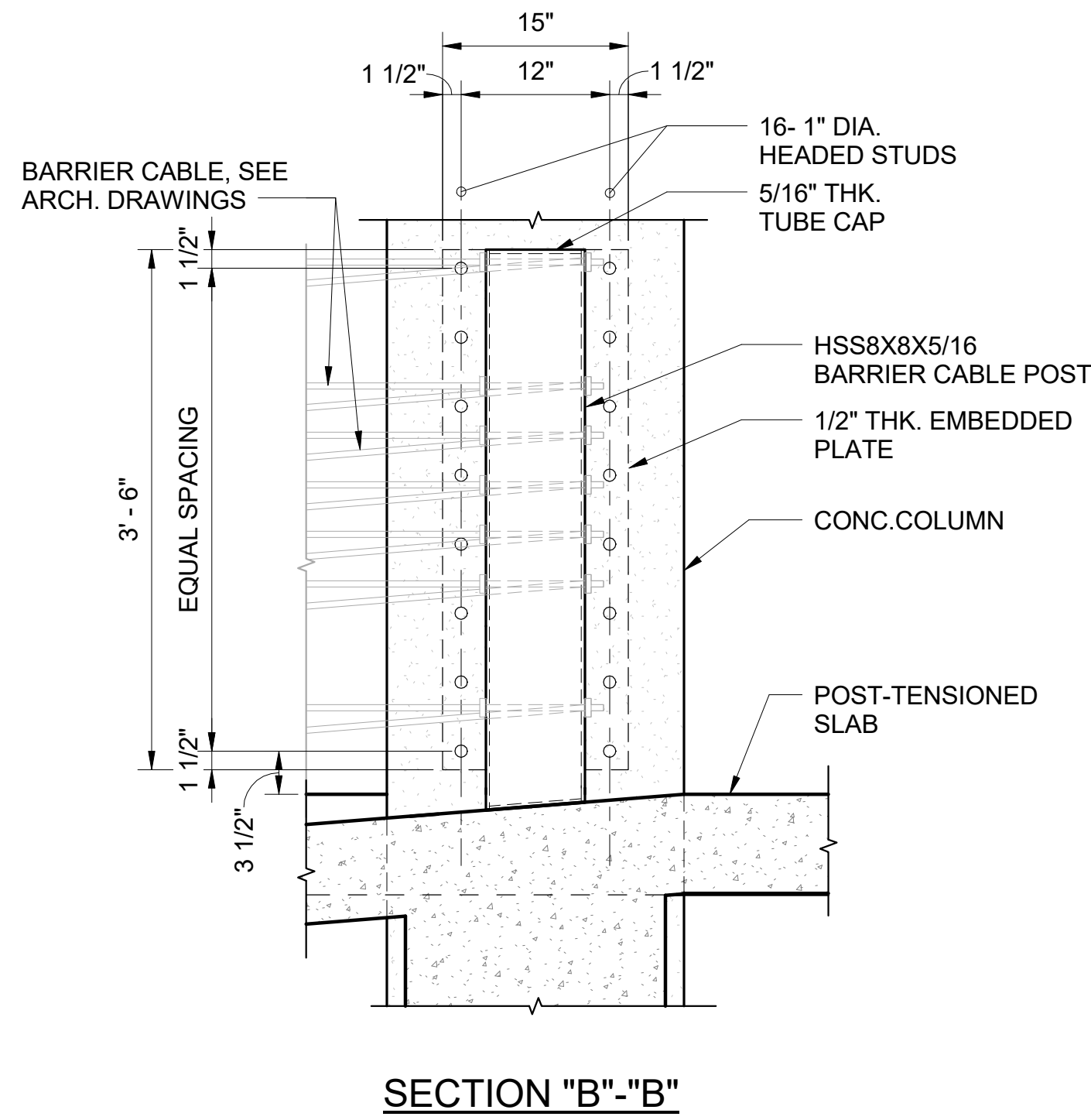
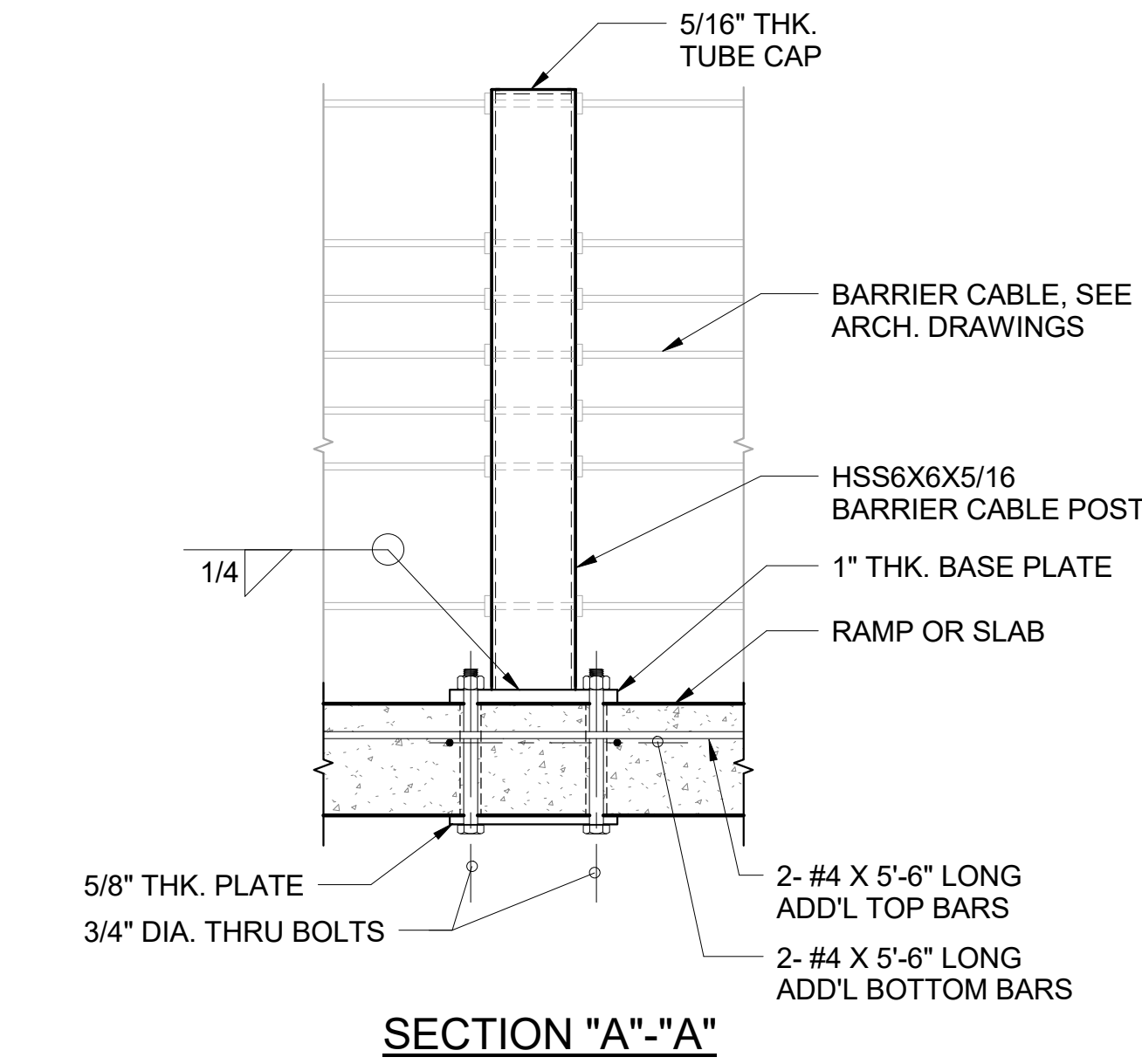
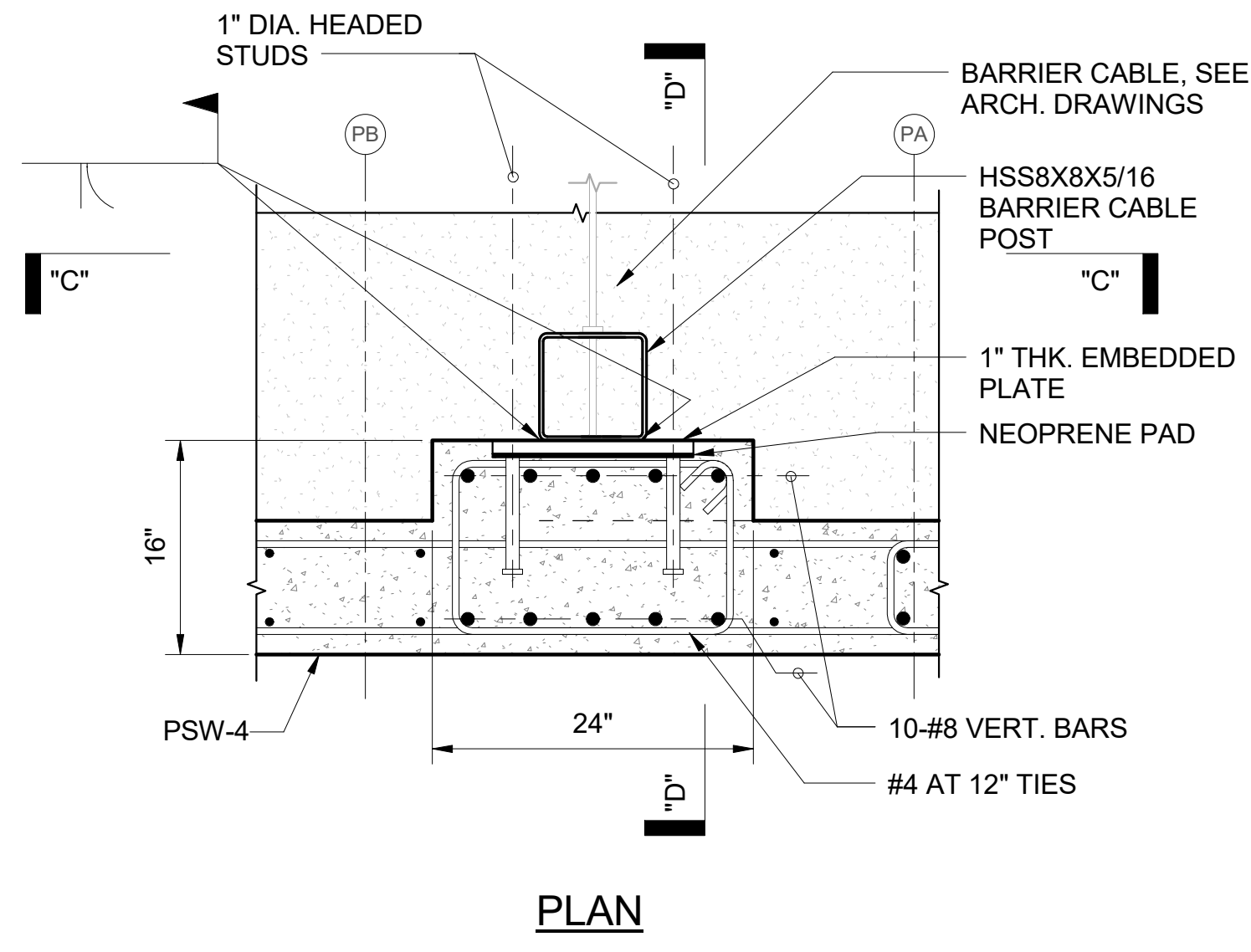
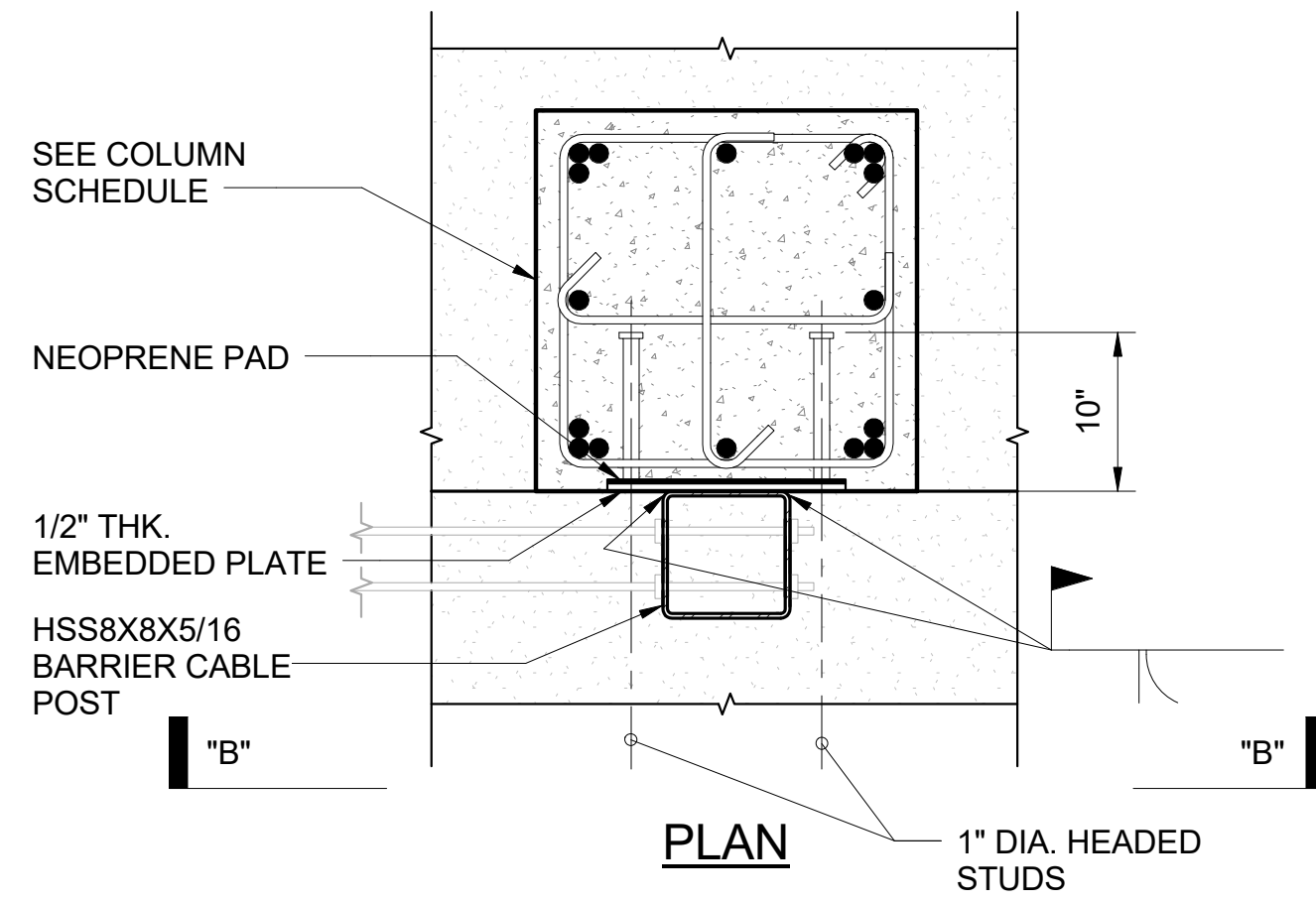
WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
PUVABUJUPUVUWUP

PROJECT:	2017-001	REVISIONS:	
DRAWN:	RT		
DATE:	7/25/2019		
PHASE:	SHEET		
	1B	S512	
	OF	SHEETS	

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NOTE:
SAME DETAIL FOR SLOPING SLAB OR RAMP.



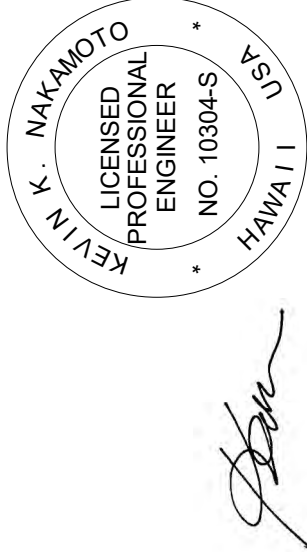
1 BARRIER CABLE POST TYPE 3
S513 SCALE: 1" = 1'-0"

2 BARRIER CABLE POST TYPE 4
S513 SCALE: 1" = 1'-0"

3 CABLE RAILING POST TYPE 5
S513 SCALE: 1" = 1'-0"



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100% FINAL DESIGN

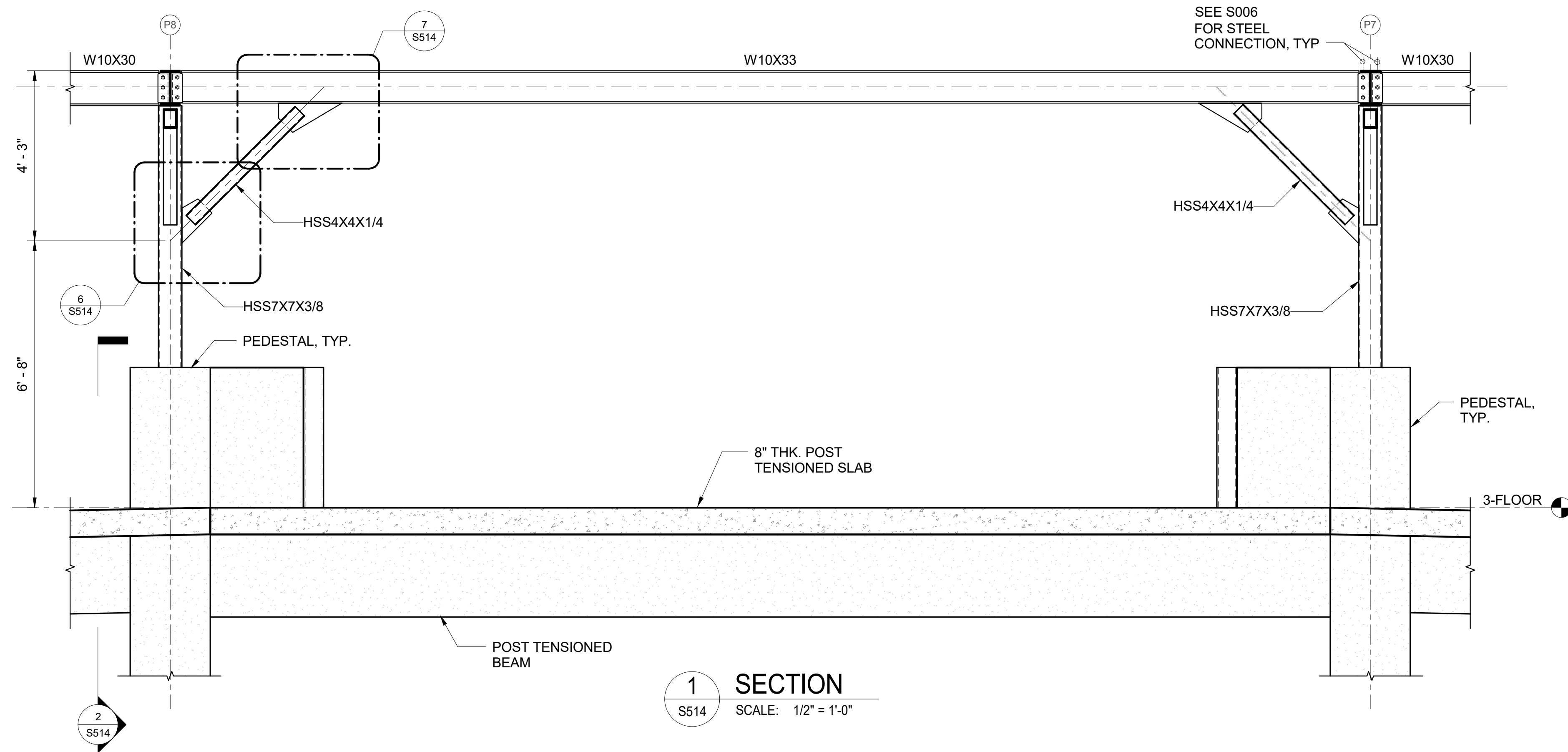
SHEET TITLE:
SECTION AND DETAILS

PROJECT:	2017-001
DRAWN:	RT
DATE:	7/25/2019
PHASE	SHEET
1B	S513
OF	SHEETS

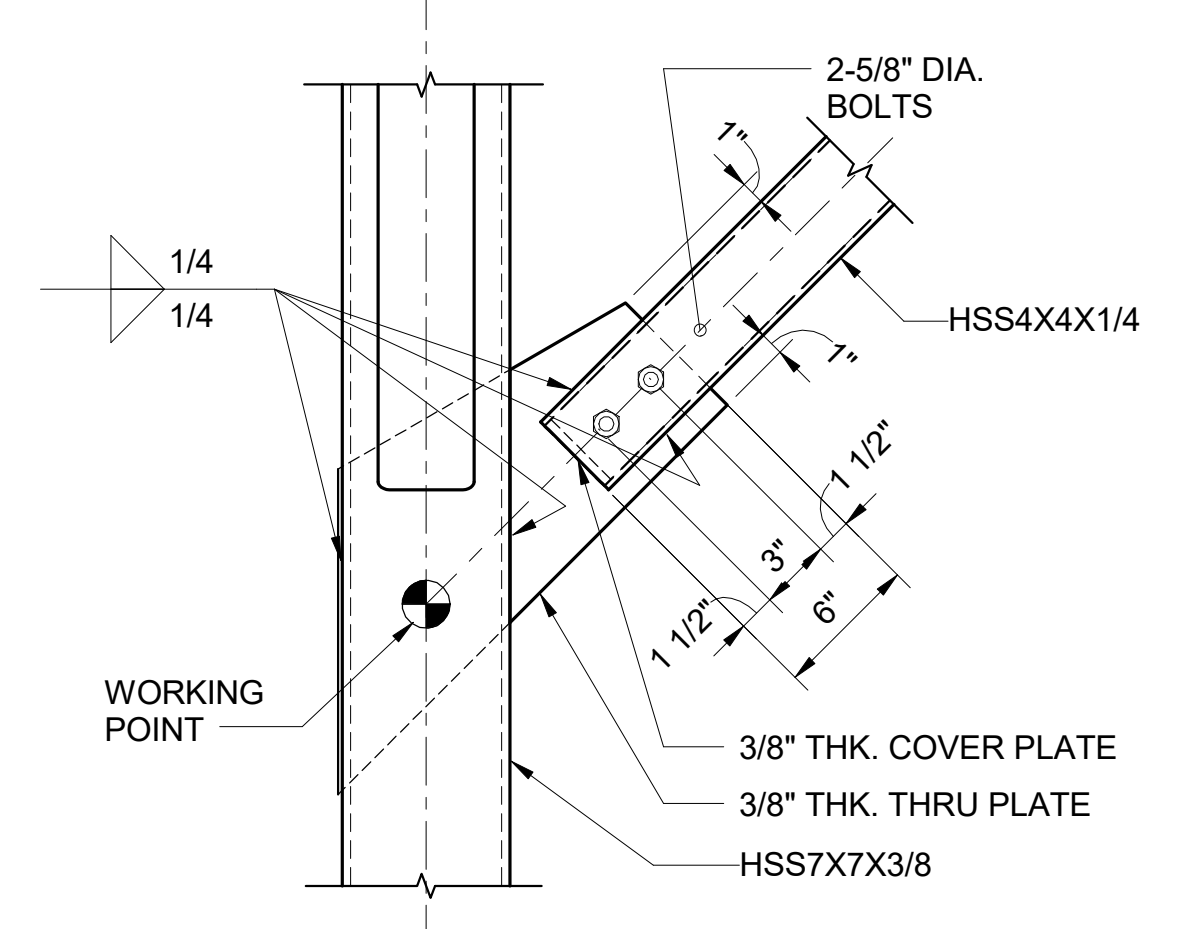
REVISIONS:

REVISIONS:	2017-001
DATE:	7/25/2019
BY:	RT
DESCRIPTION:	

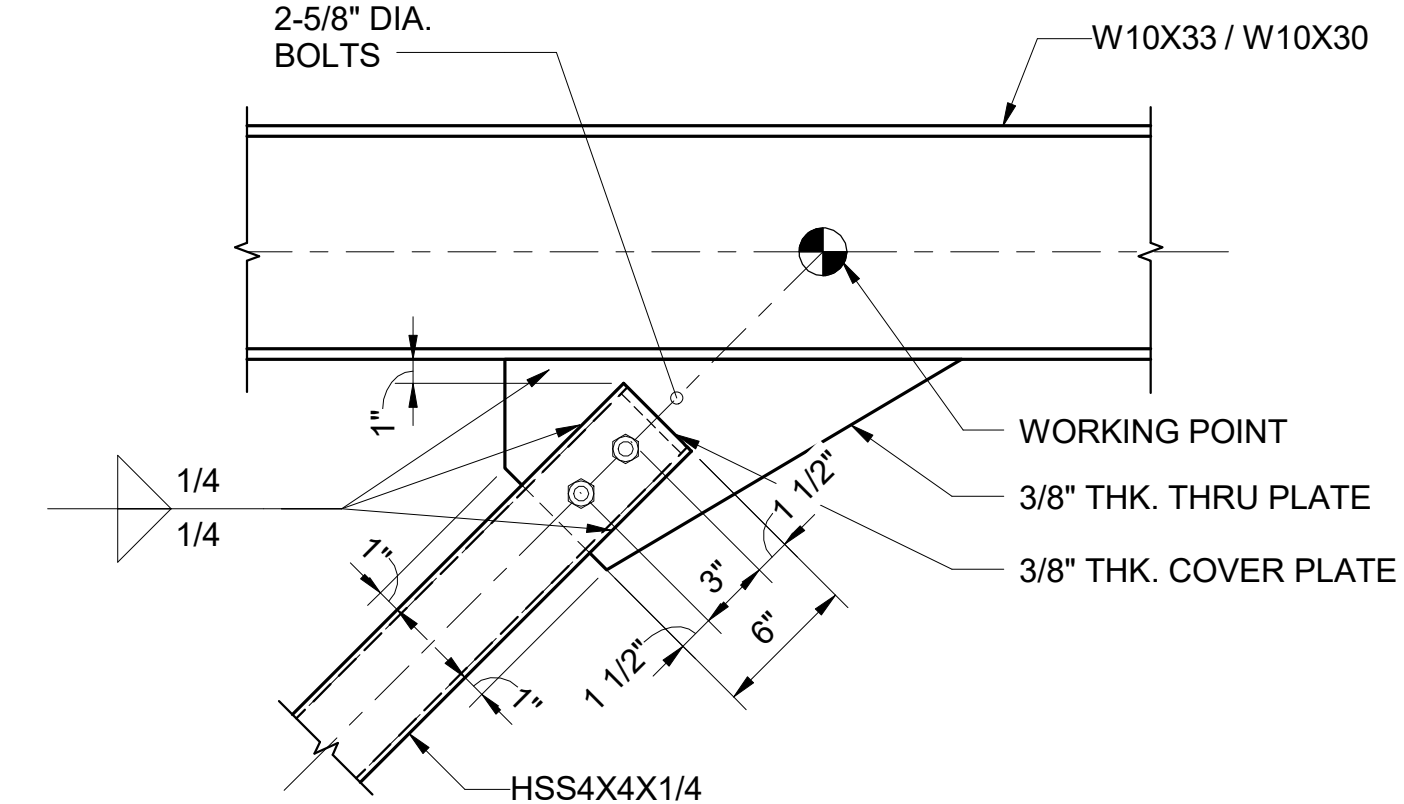
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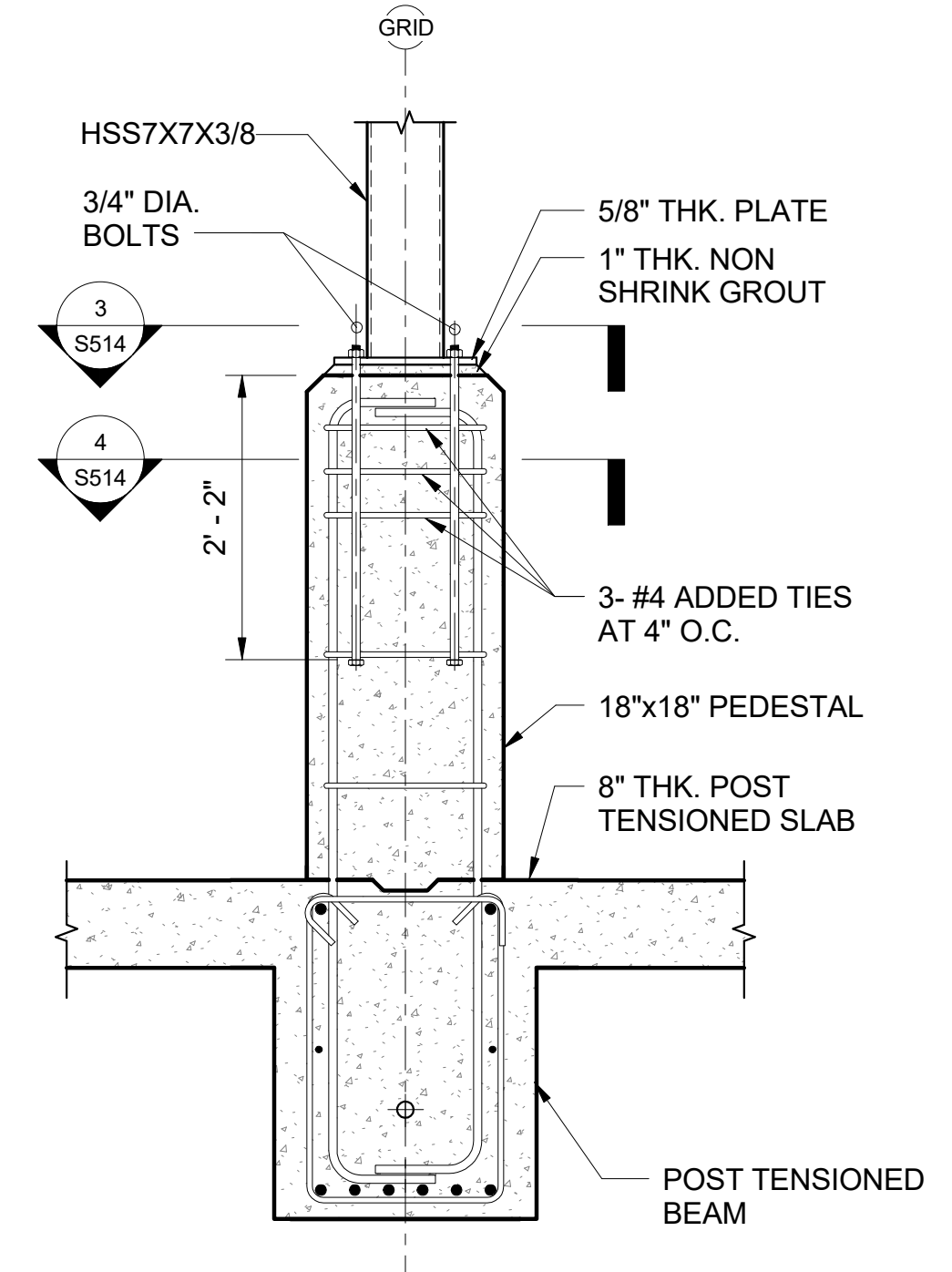
1 SECTION
S514 SCALE: 1/2" = 1'-0"



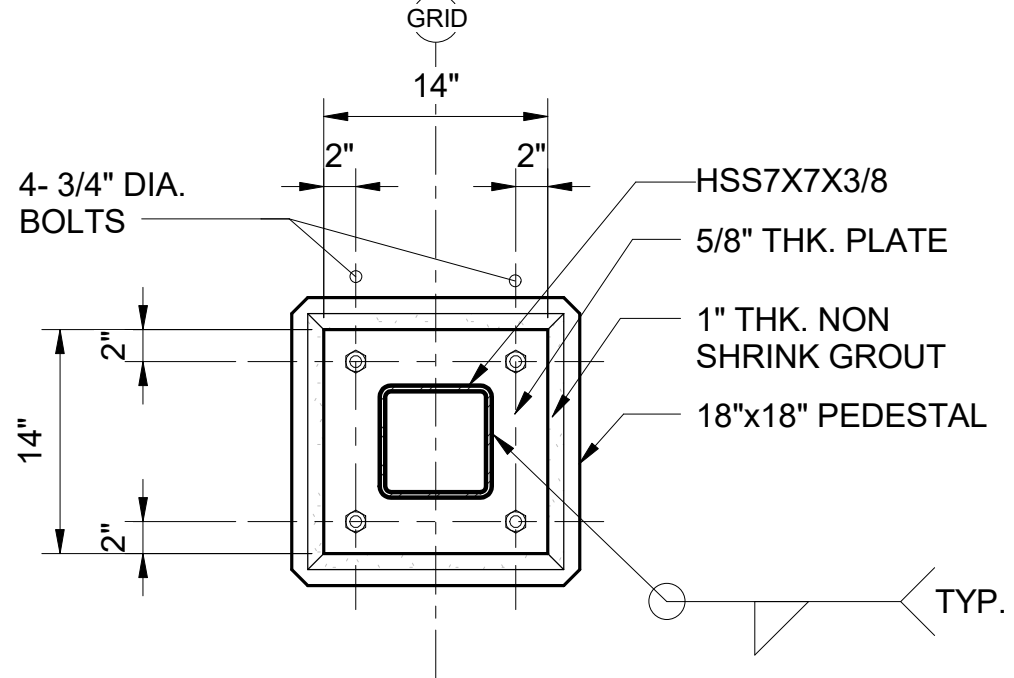
6 DETAIL
S514 SCALE: 1 1/2" = 1'-0"



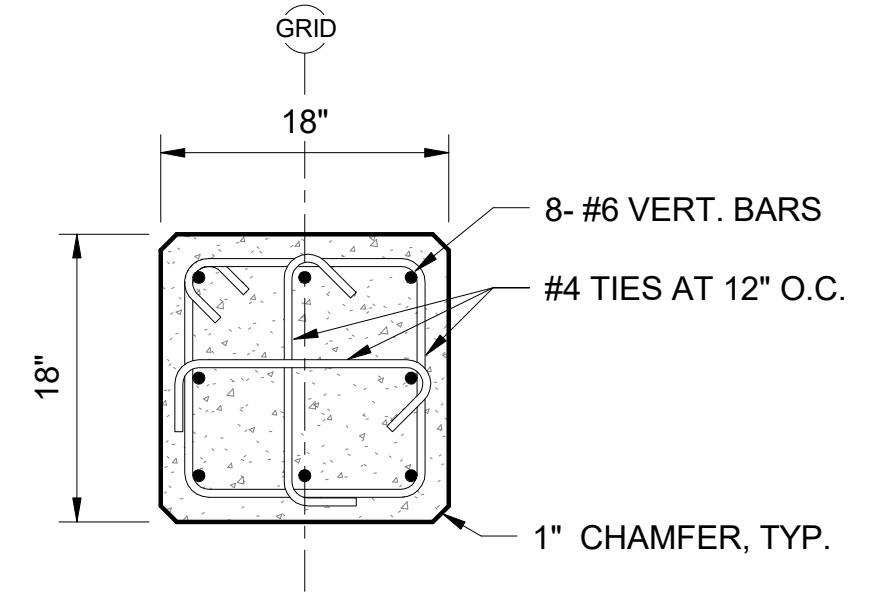
7 DETAIL
S514 SCALE: 1 1/2" = 1'-0"



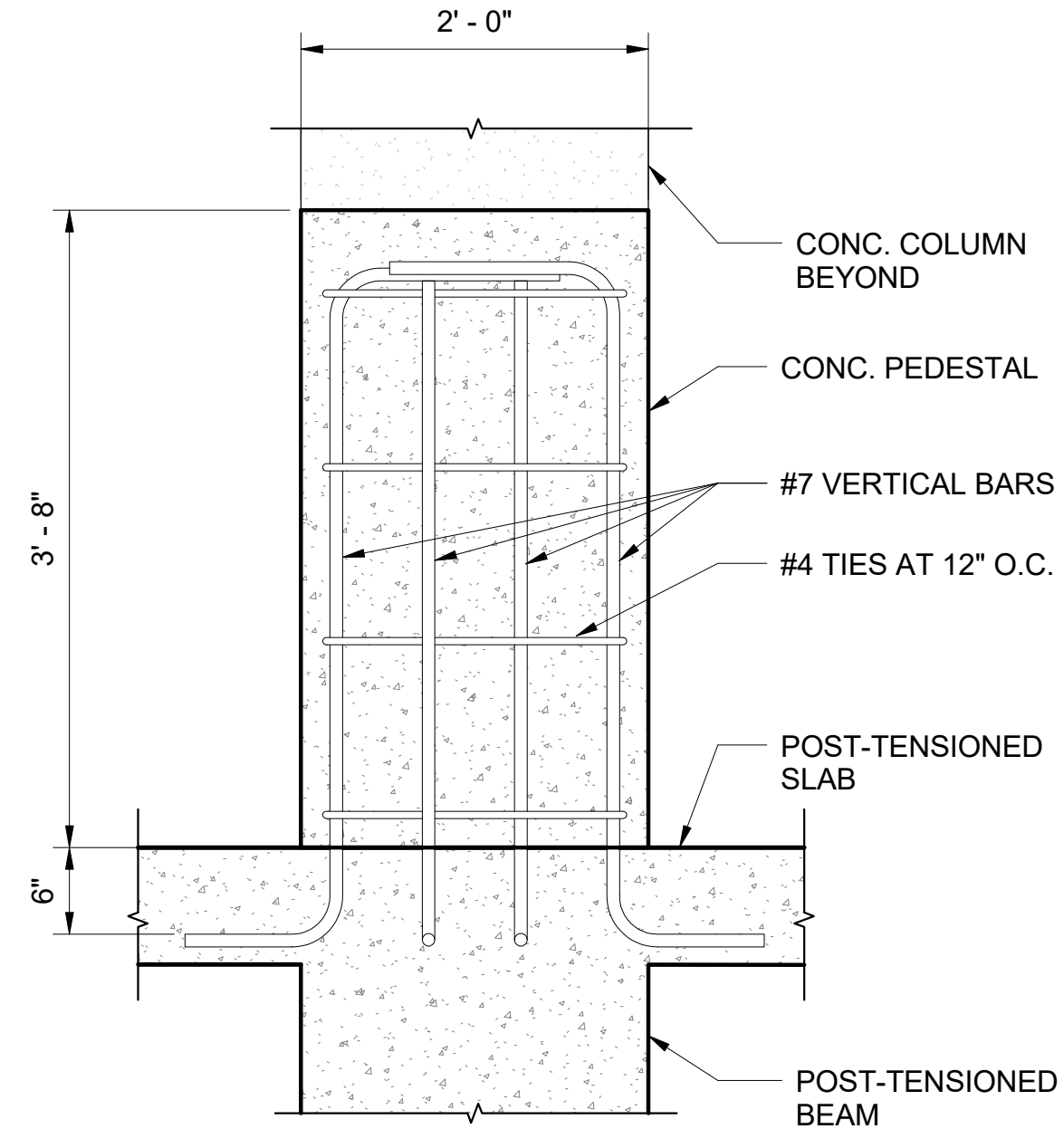
2 SECTION
S514 SCALE: 3/4" = 1'-0"



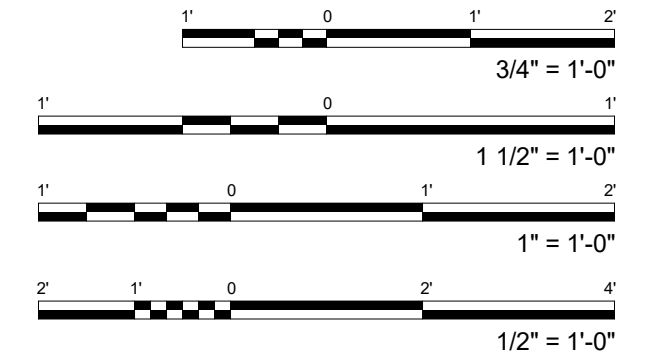
3 BASEPLATE DETAIL
S514 SCALE: 1" = 1'-0"



4 PEDESTAL DETAIL
S514 SCALE: 1" = 1'-0"



5 CONCRETE PEDESTAL DETAIL
S514 SCALE: 1" = 1'-0"



PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET		
1B	S514		
OF	SHEETS		

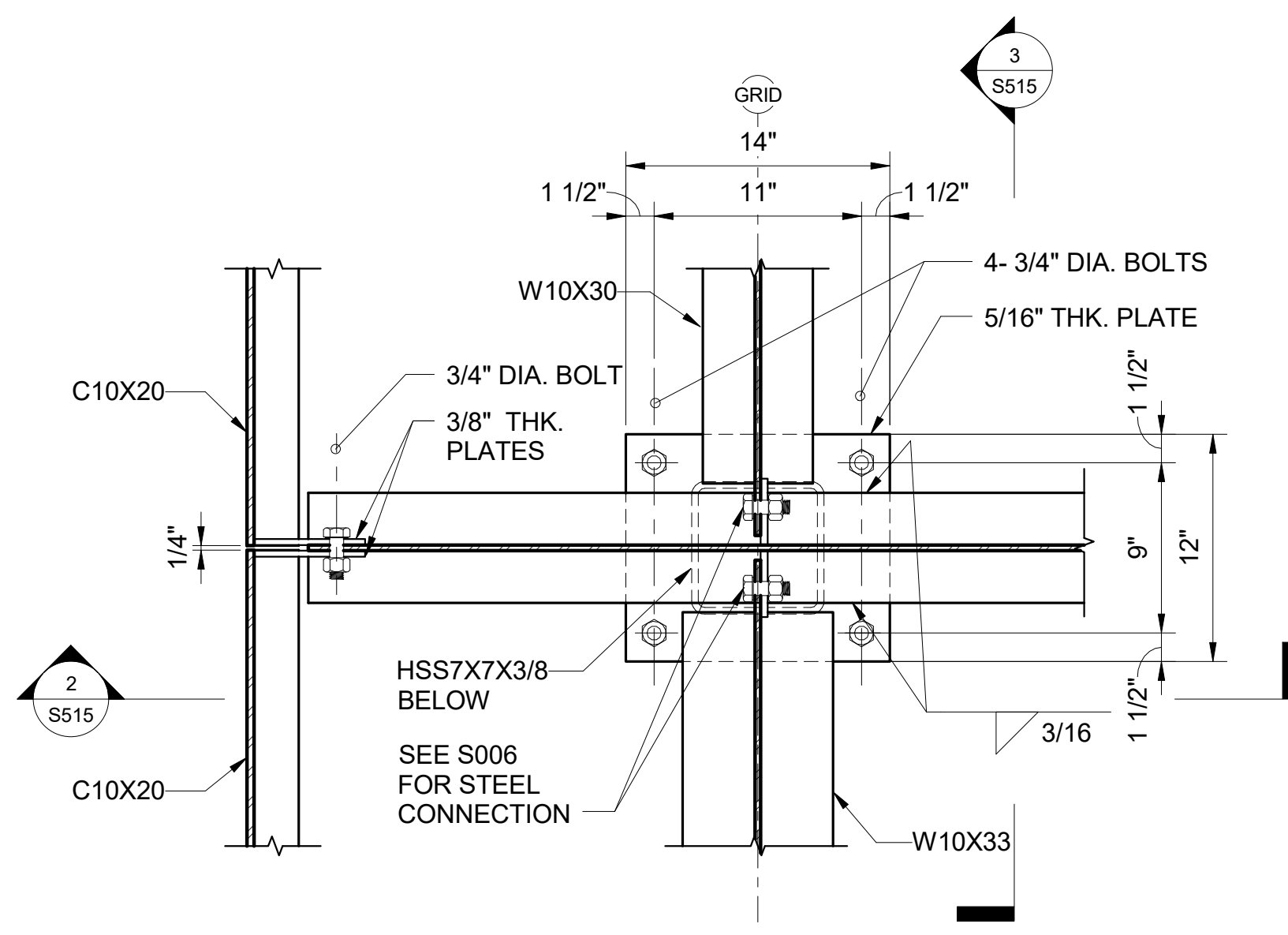
SHEET TITLE:
SECTIONS AND DETAILS

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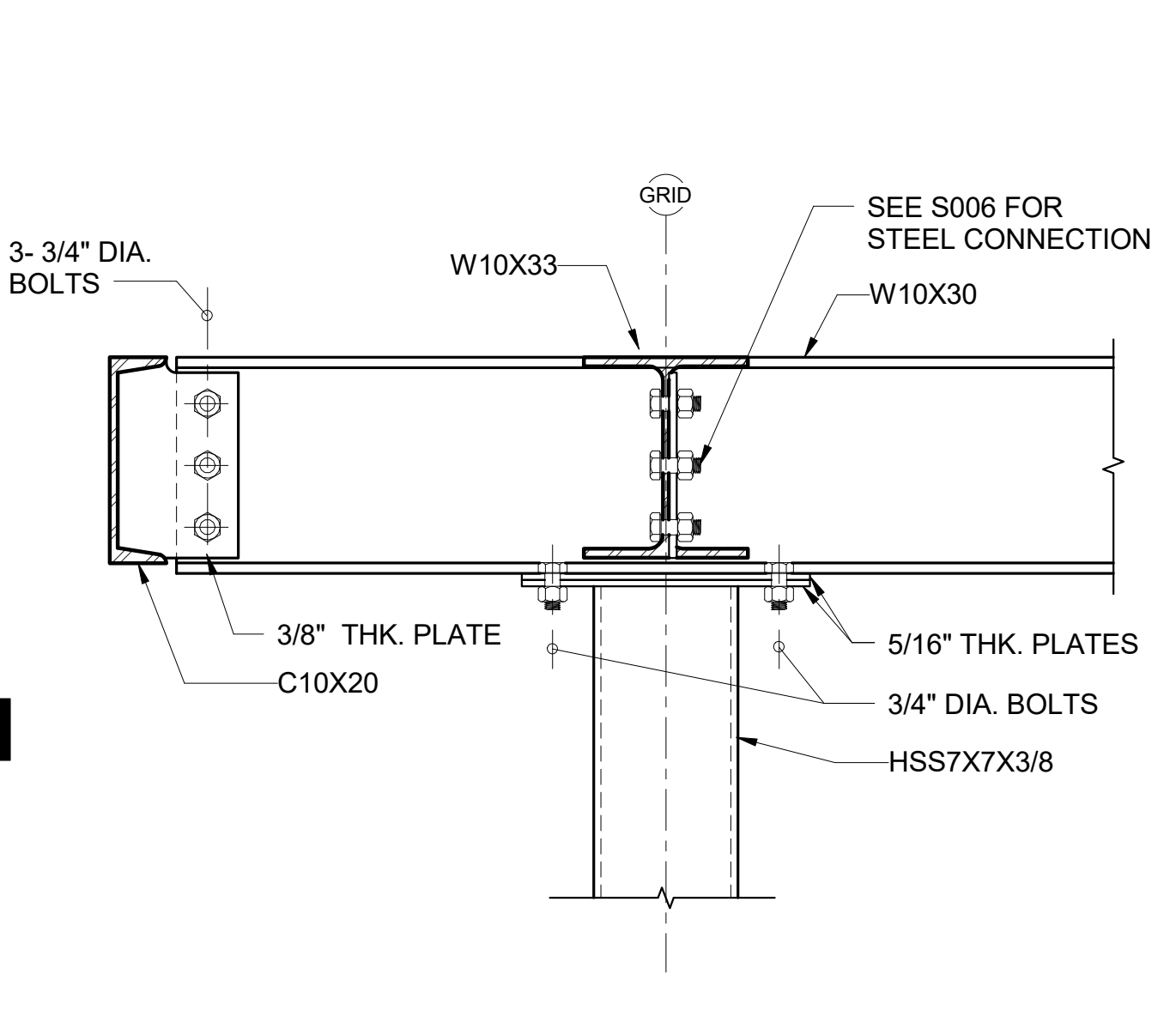
KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII
SIGNATURE
LICENSE EXPIRATION DATE: 4/30/20

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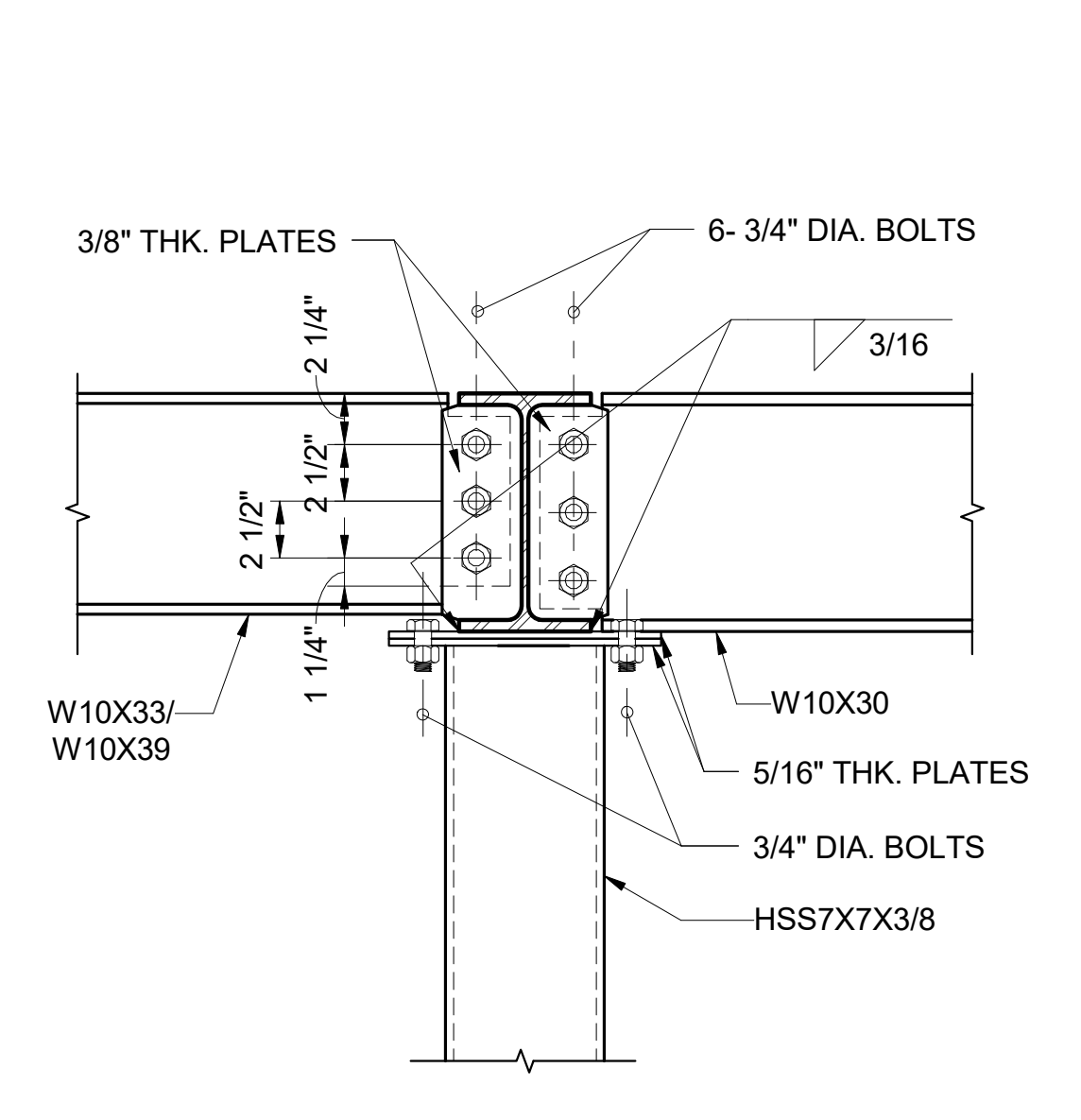
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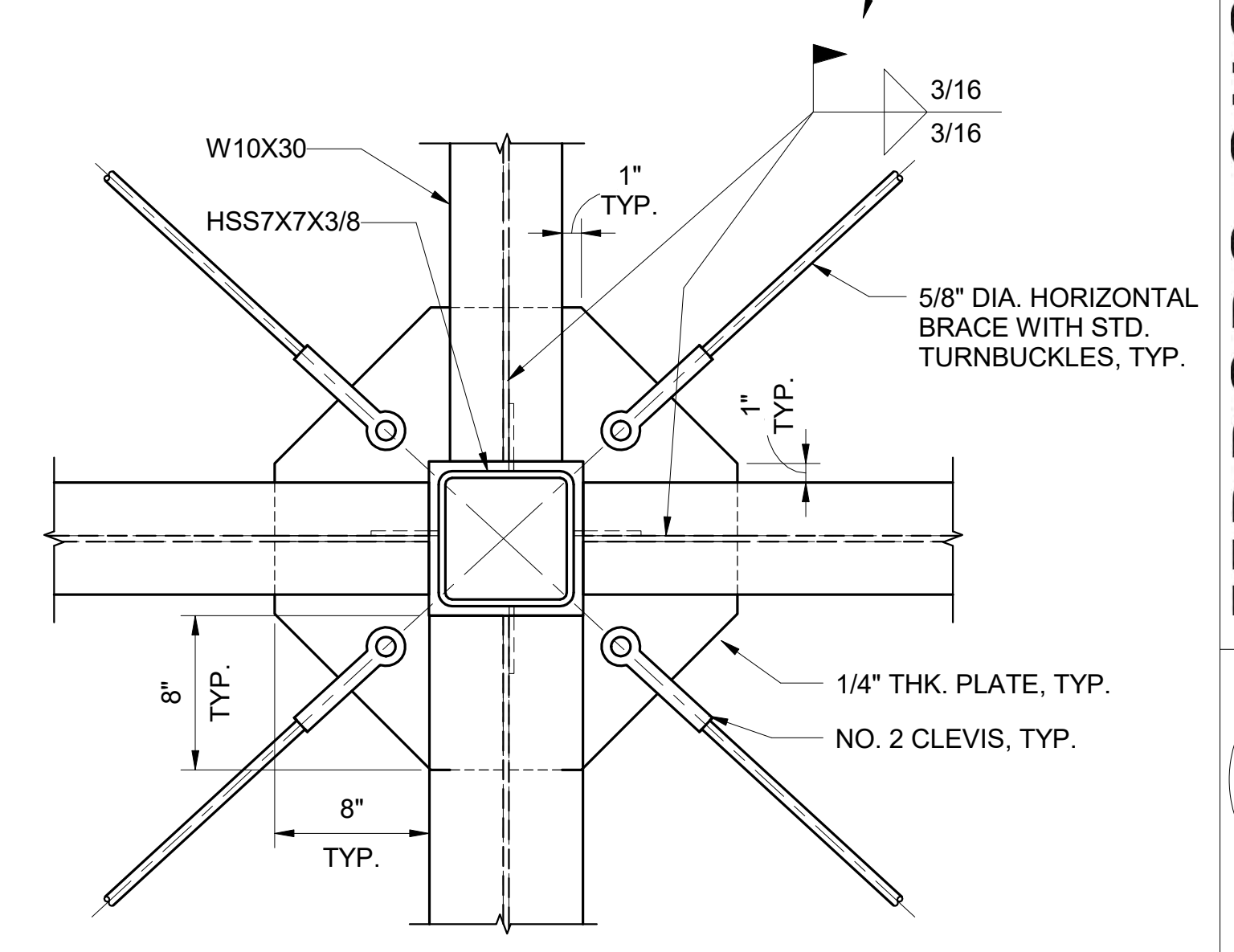
1 DETAIL
S515 SCALE: 1 1/2" = 1'-0"



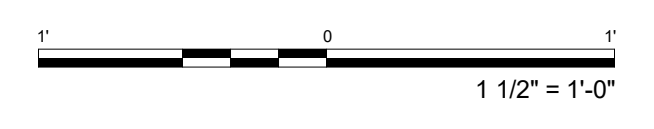
2 SECTION
S515 SCALE: 1 1/2" = 1'-0"



3 SECTION
S515 SCALE: 1 1/2" = 1'-0"



4 DETAIL
S515 SCALE: 1 1/2" = 1'-0"

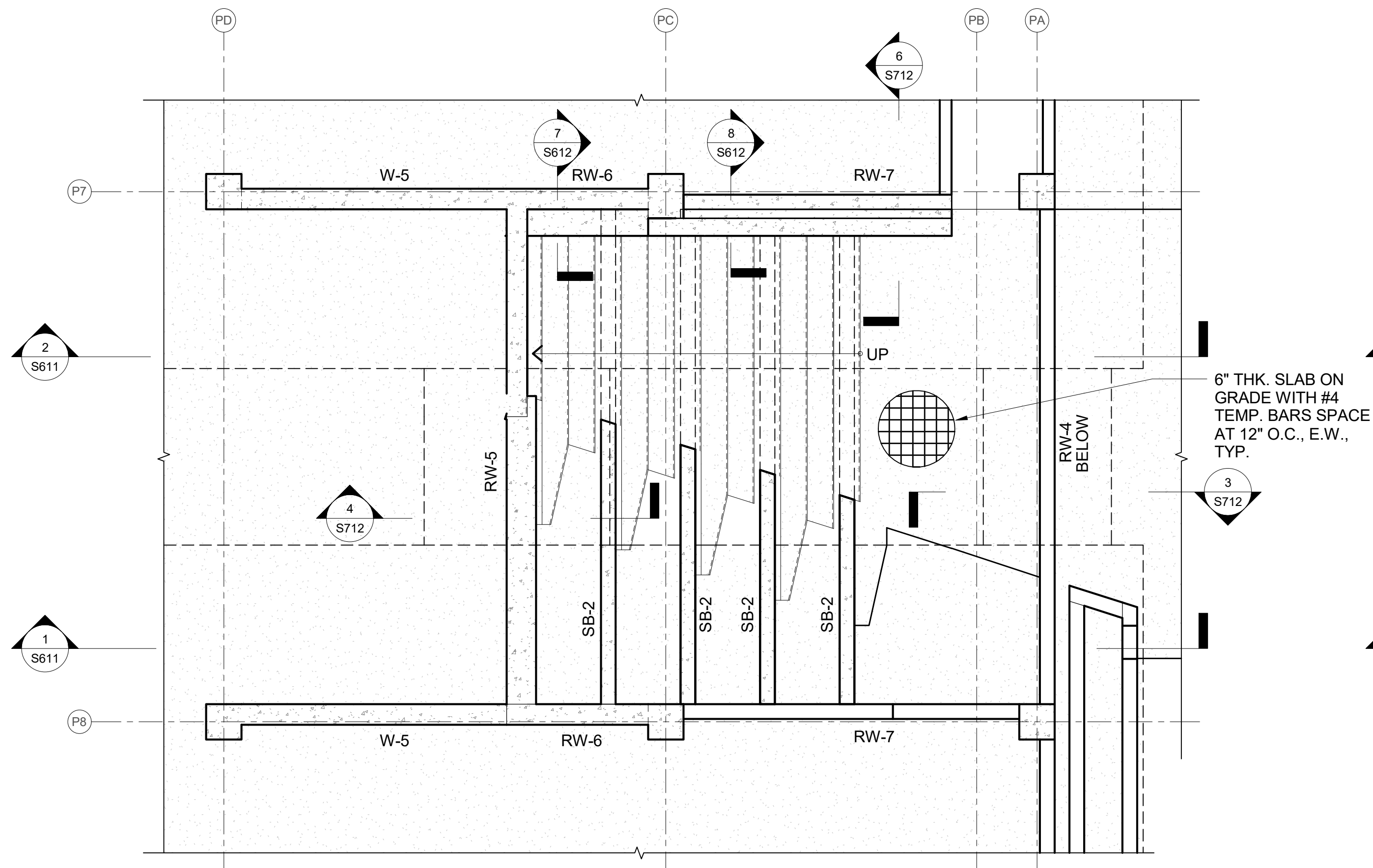


PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET		
1B	S515		
OF	SHEETS		

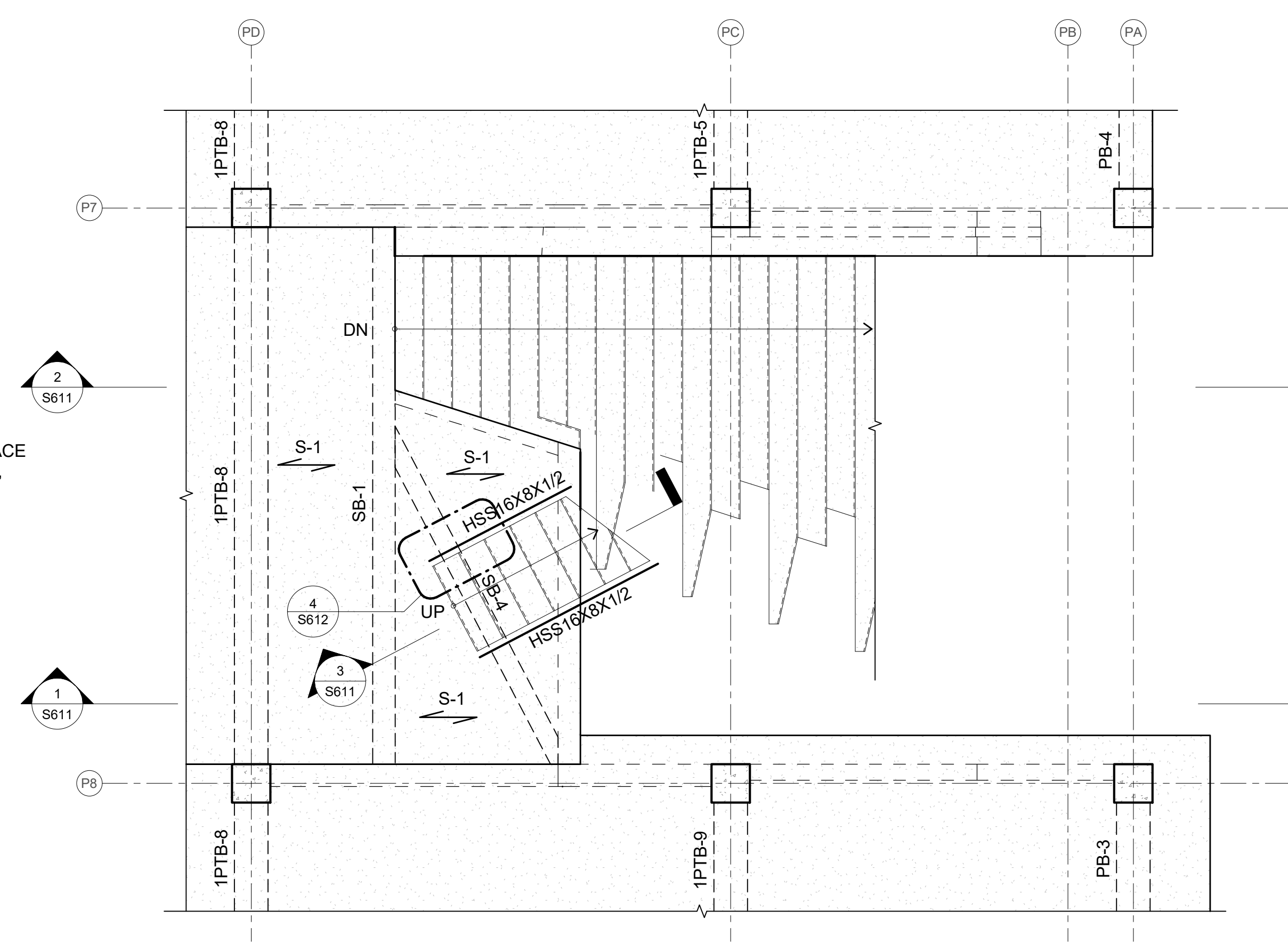
WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[PUVABUUPUVUWUP]

KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII
SIGNATURE: [Signature]
LICENSE EXPIRATION DATE: 4/30/20
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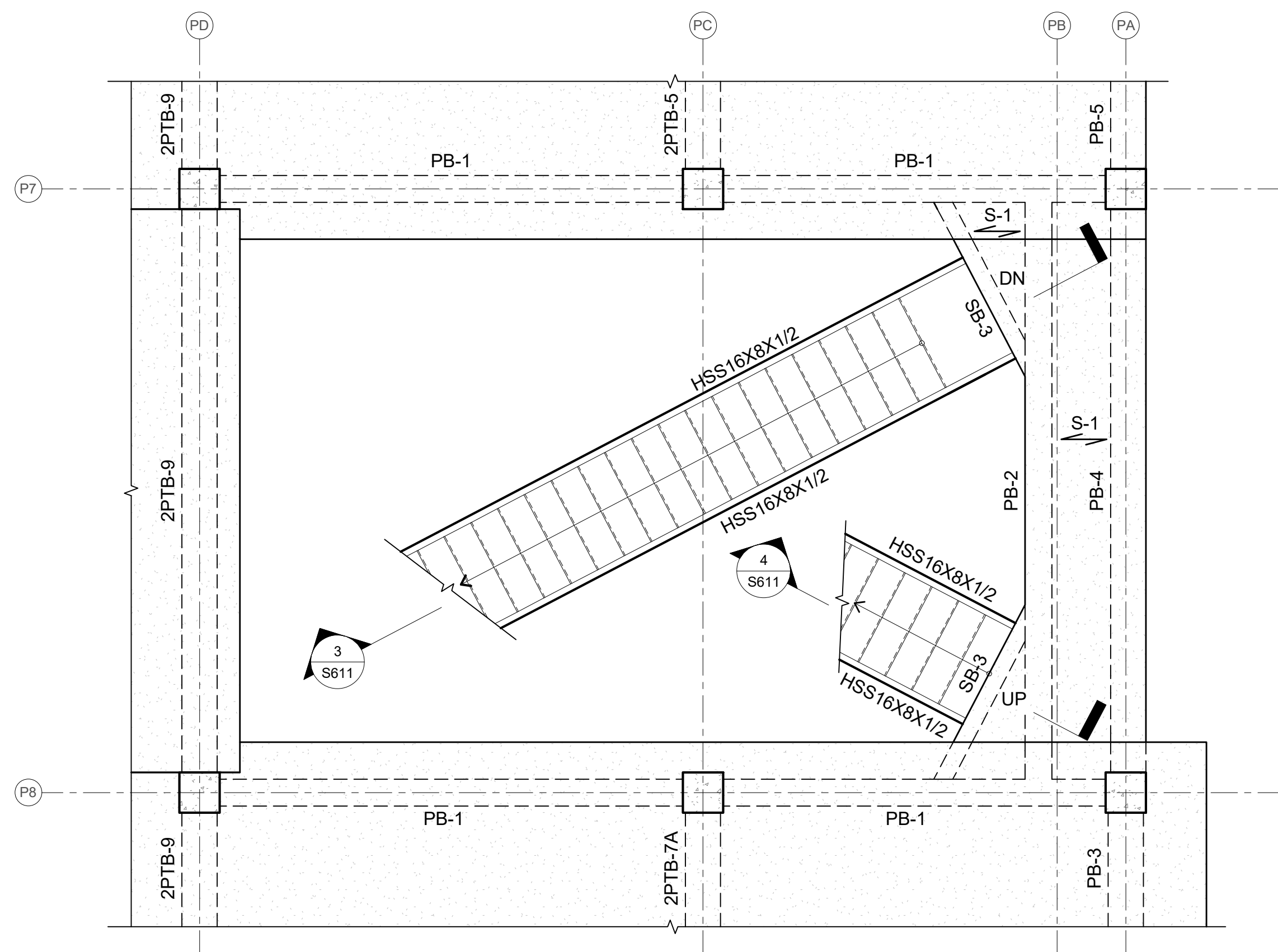
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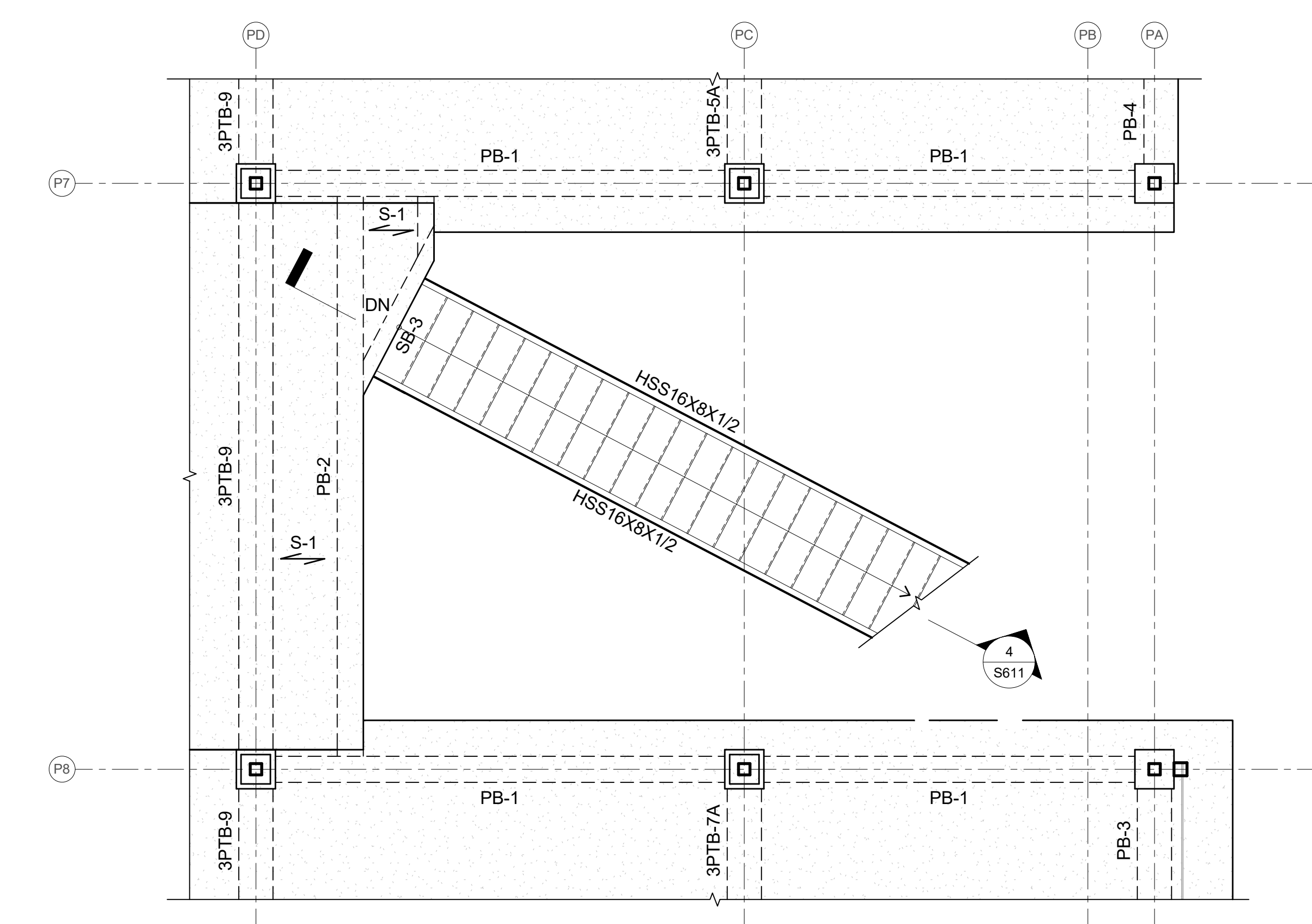
1 CENTRAL STAIR FOUNDATION PLAN
SCALE: 3/16" = 1'-0"



2 CENTRAL STAIRS FRAMING PLAN AT LEVEL 1B
SCALE: 3/16" = 1'-0"



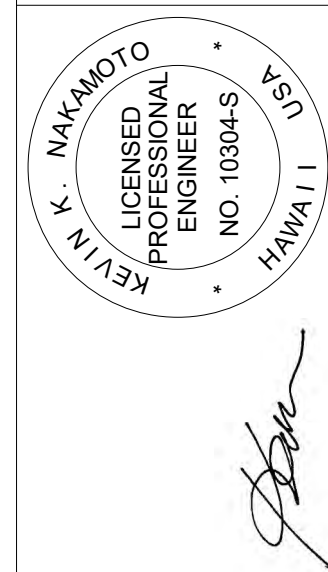
3 CENTRAL STAIRS FRAMING PLAN AT LEVEL 2
SCALE: 3/16" = 1'-0"



4 CENTRAL STAIRS FRAMING PLAN AT LEVEL 3
SCALE: 3/16" = 1'-0"



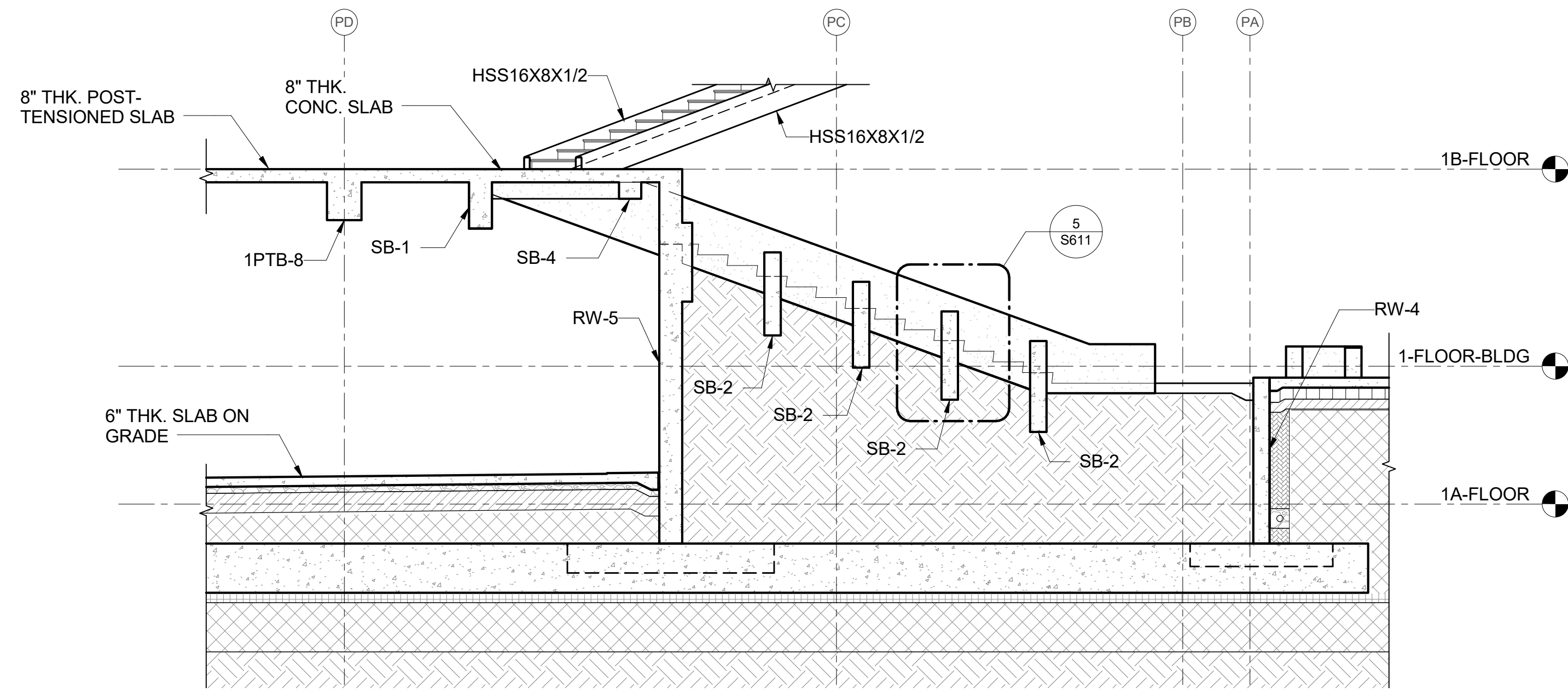
FERRARO CHOI



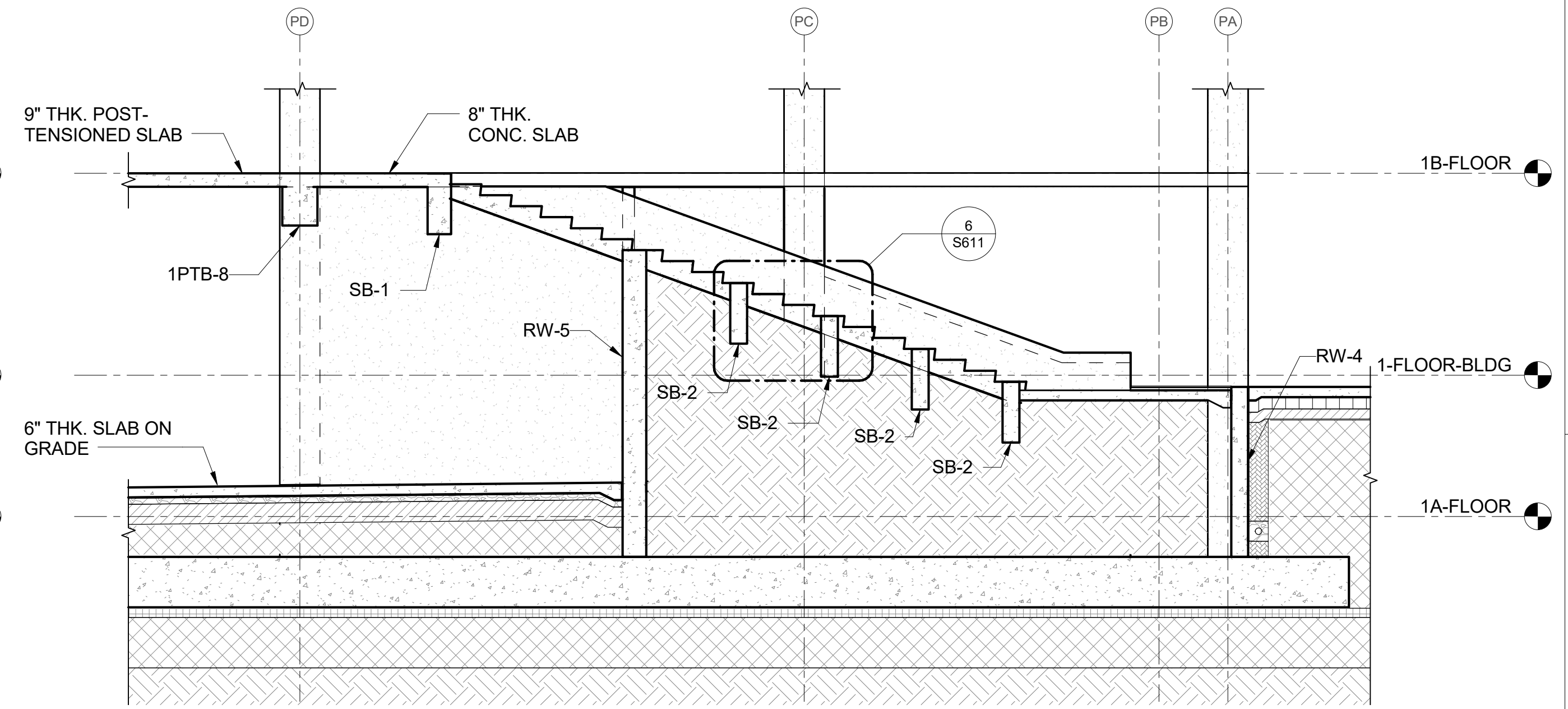
THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE OBSERVATION AND CONTROL OF THE BOARD OF COMMERCE AND CONSUMER AFFAIRS.
SIGNATURE: *Kevin K. Makimoto*
LICENSE EXPIRATION DATE: 4/30/20

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[PUY/8/20/10/UP/UV/010/01P]

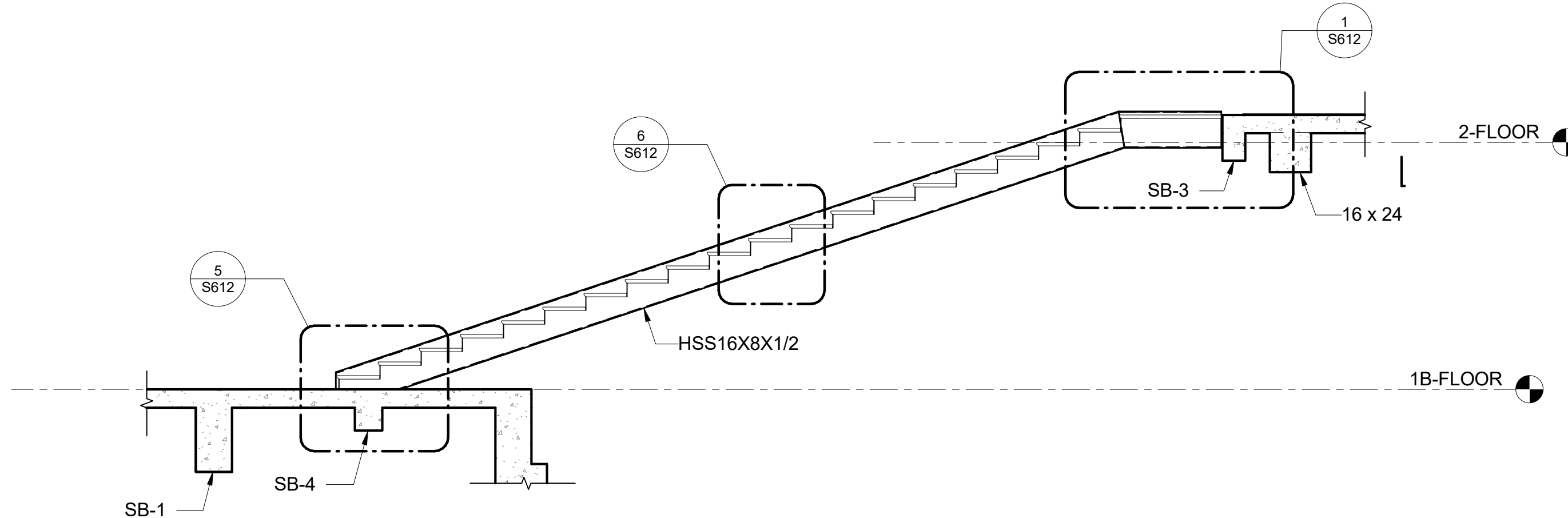
PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	CENTRAL STAIR FRAMING PLANS
DRAWN:	LC				
DATE:	7/25/2019				
PHASE	SHEET				
1B	S610				
	OF				
	SHEETS				
					CADD FILE:



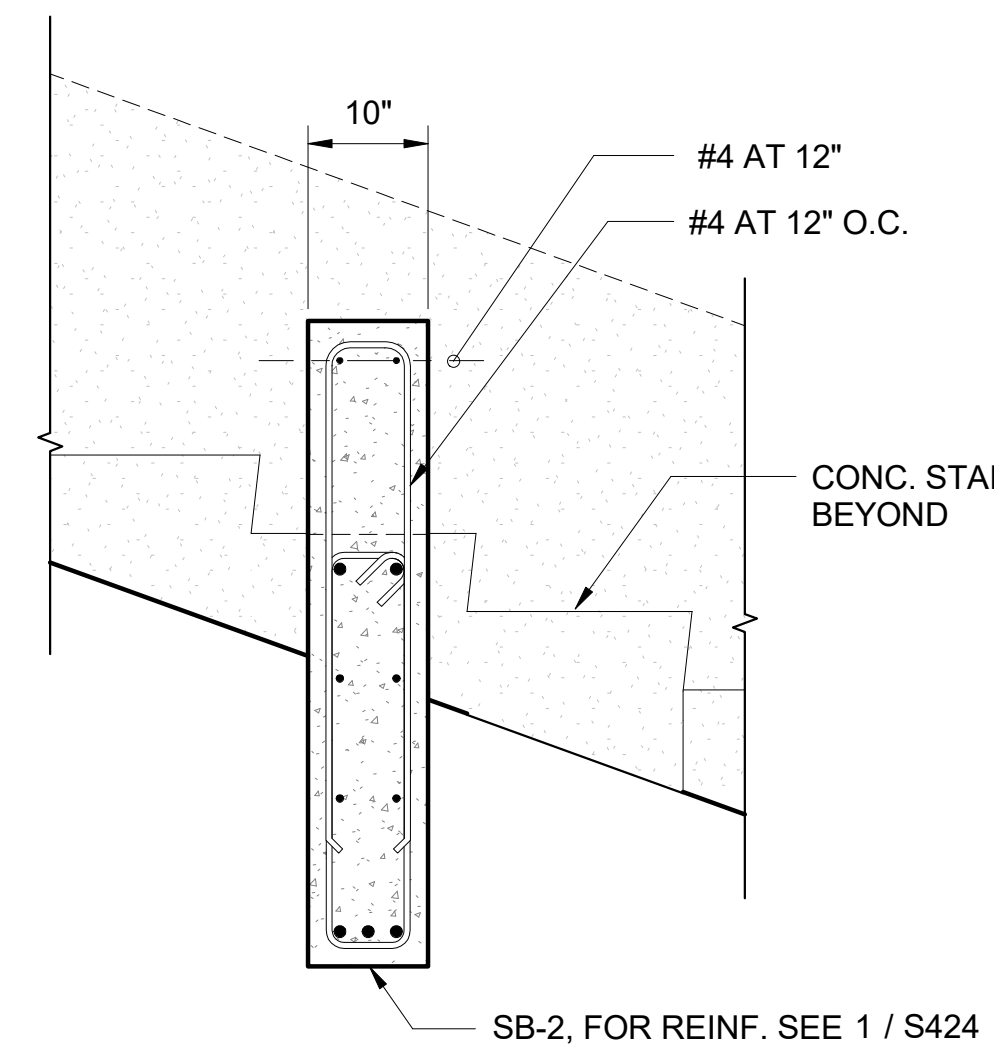
1 CENTRAL STAIR DETAILED SECTION
S611 SCALE: 3/16" = 1'-0"



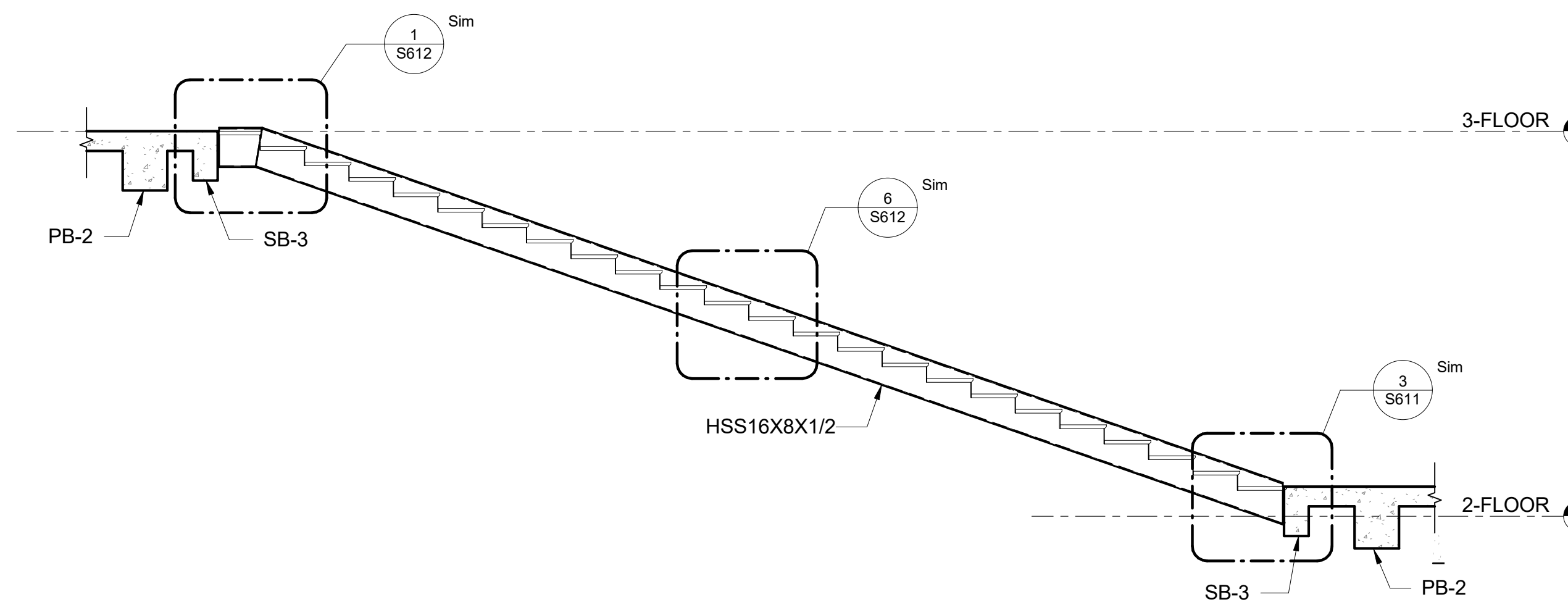
2 CENTRAL STAIR DETAILED SECTION
S611 SCALE: 3/16" = 1'-0"



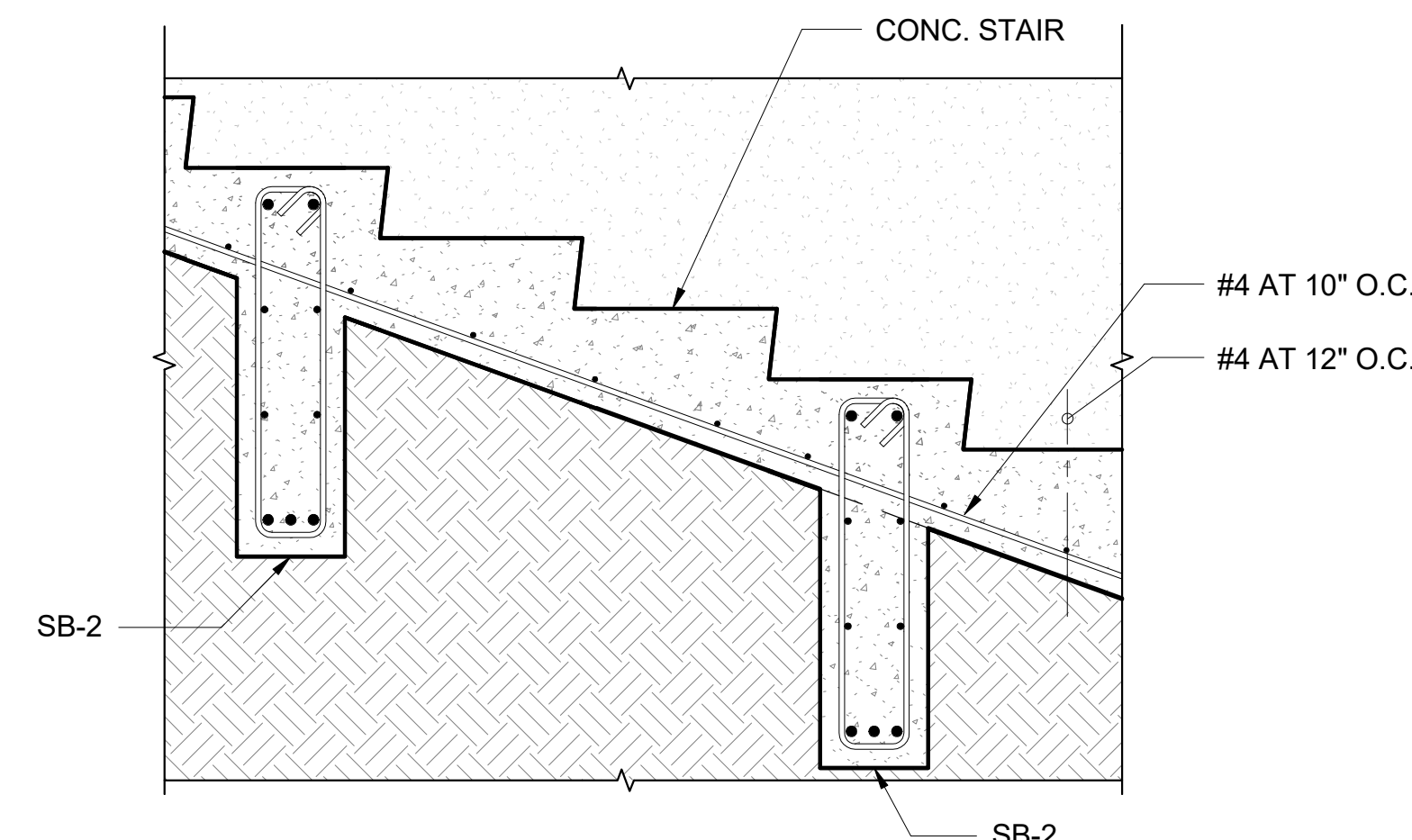
3 CENTRAL STAIR DETAILED SECTION
S611 SCALE: 1/4" = 1'-0"



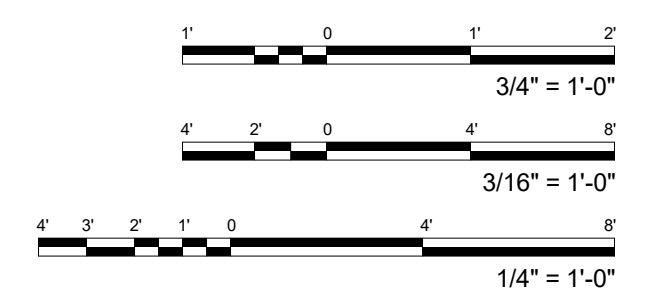
5 DETAIL
S611 SCALE: 3/4" = 1'-0"



4 CENTRAL STAIR DETAILED SECTION
S611 SCALE: 1/4" = 1'-0"



6 DETAIL
S611 SCALE: 3/4" = 1'-0"



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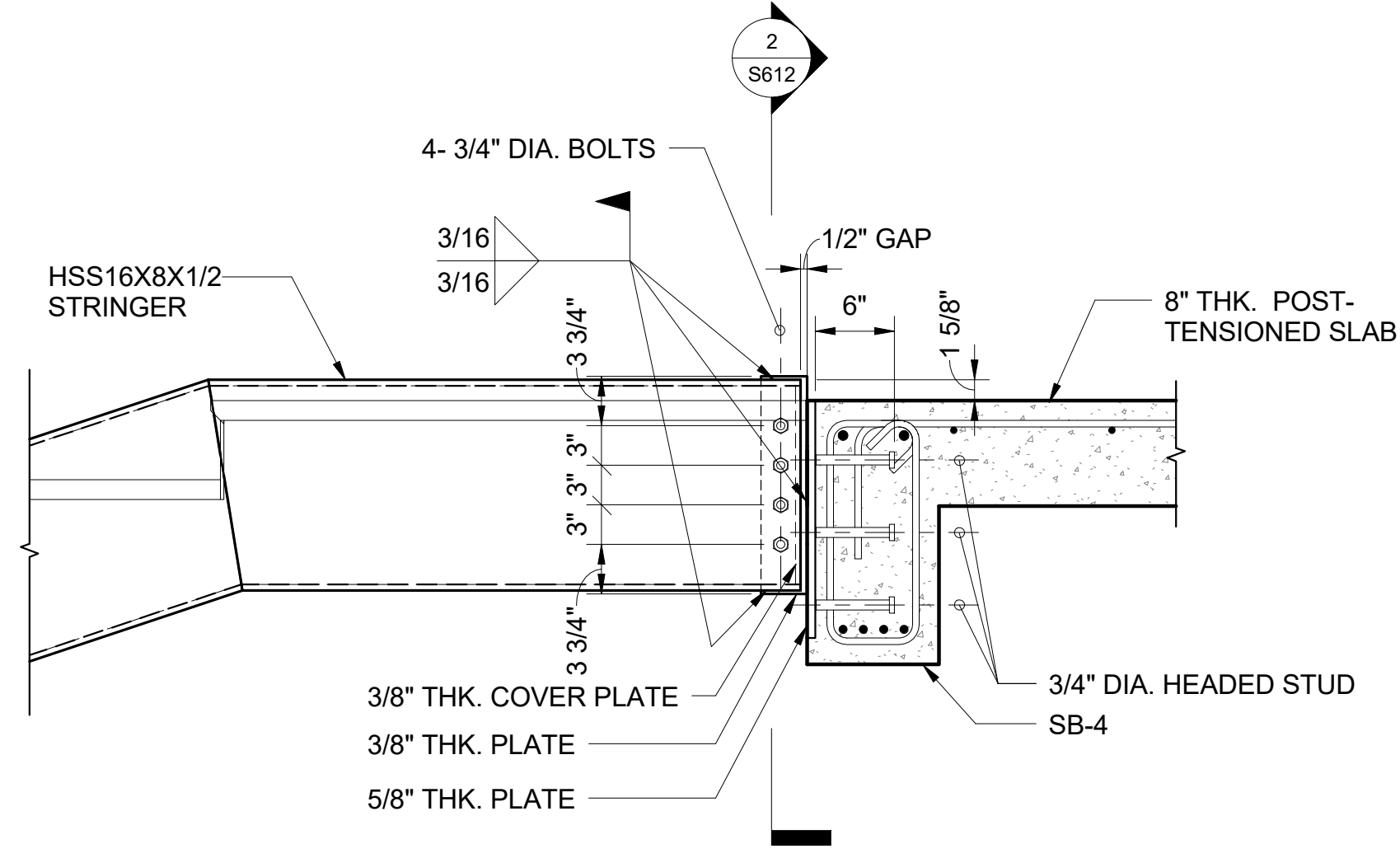


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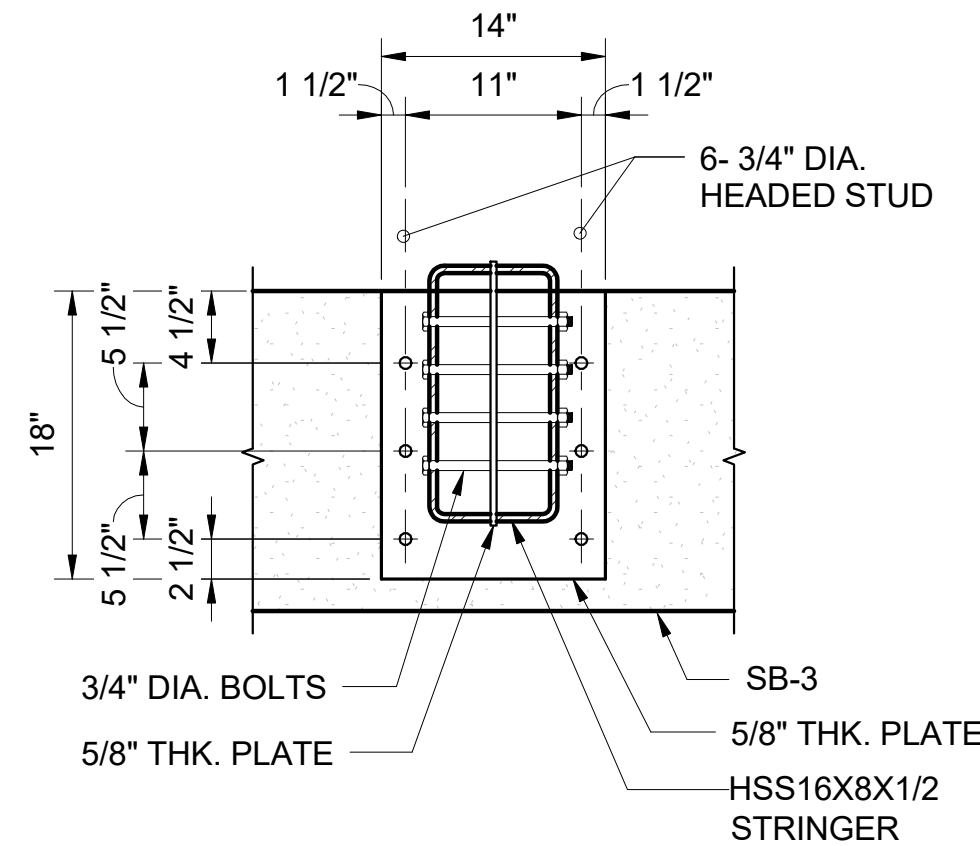
WAILUKU CIVIC COMPLEX PHASE 1B
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PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	CENTRAL STAIR DETAILED SECTIONS	CADD FILE:	
DRAWN:	LC						
DATE:	7/25/2019						
PHASE	SHEET						
1B	S611						

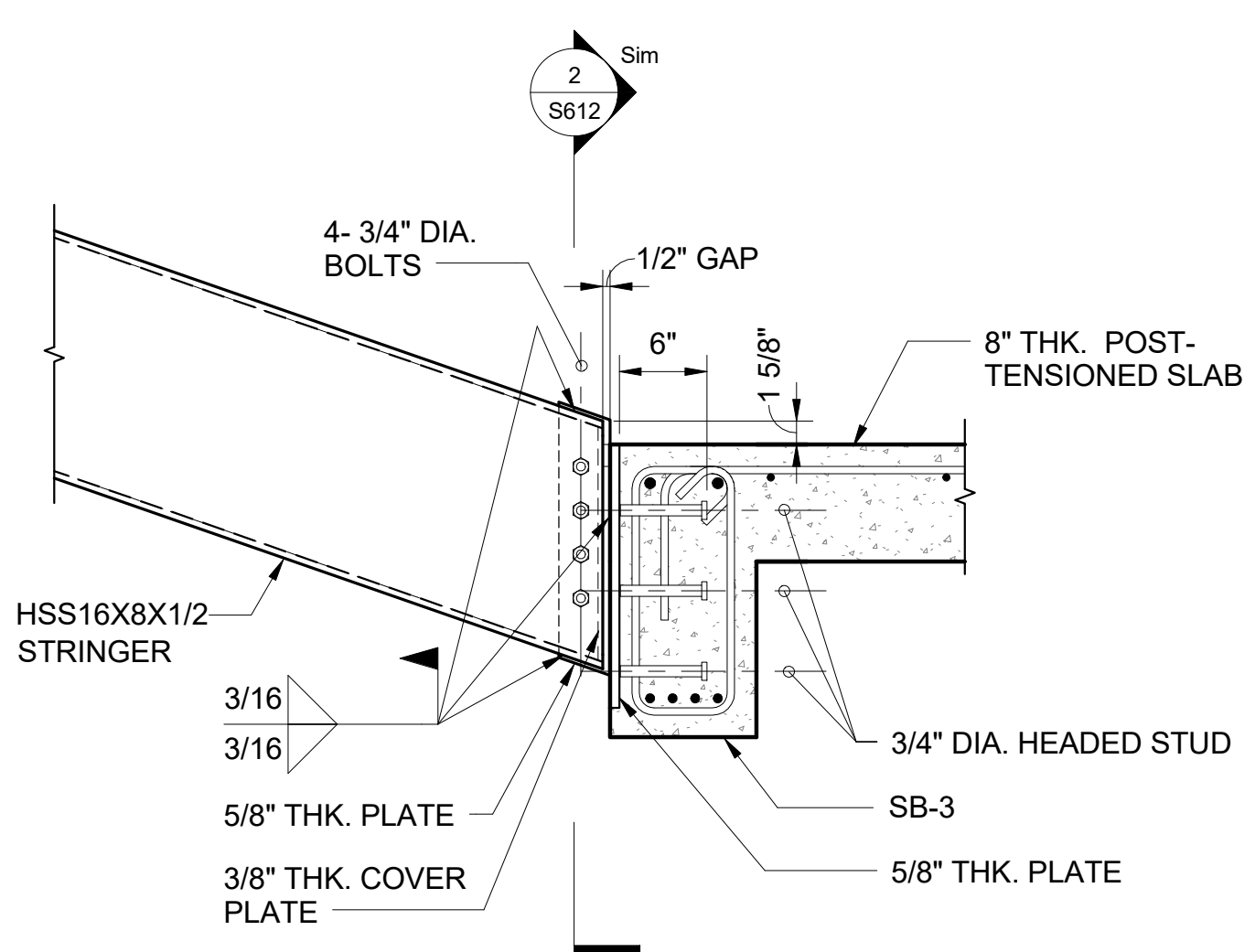
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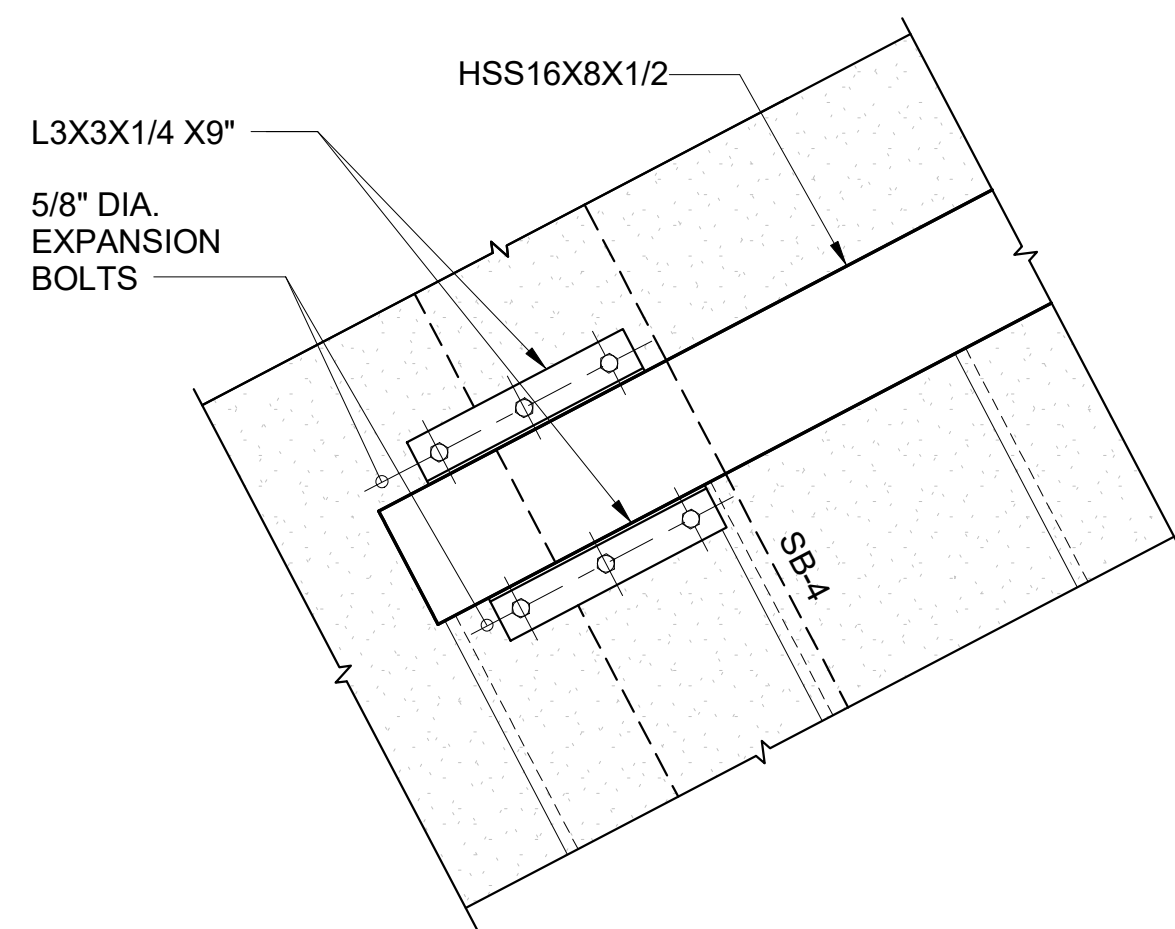
1 SECTION
S612 SCALE: 1" = 1'-0"



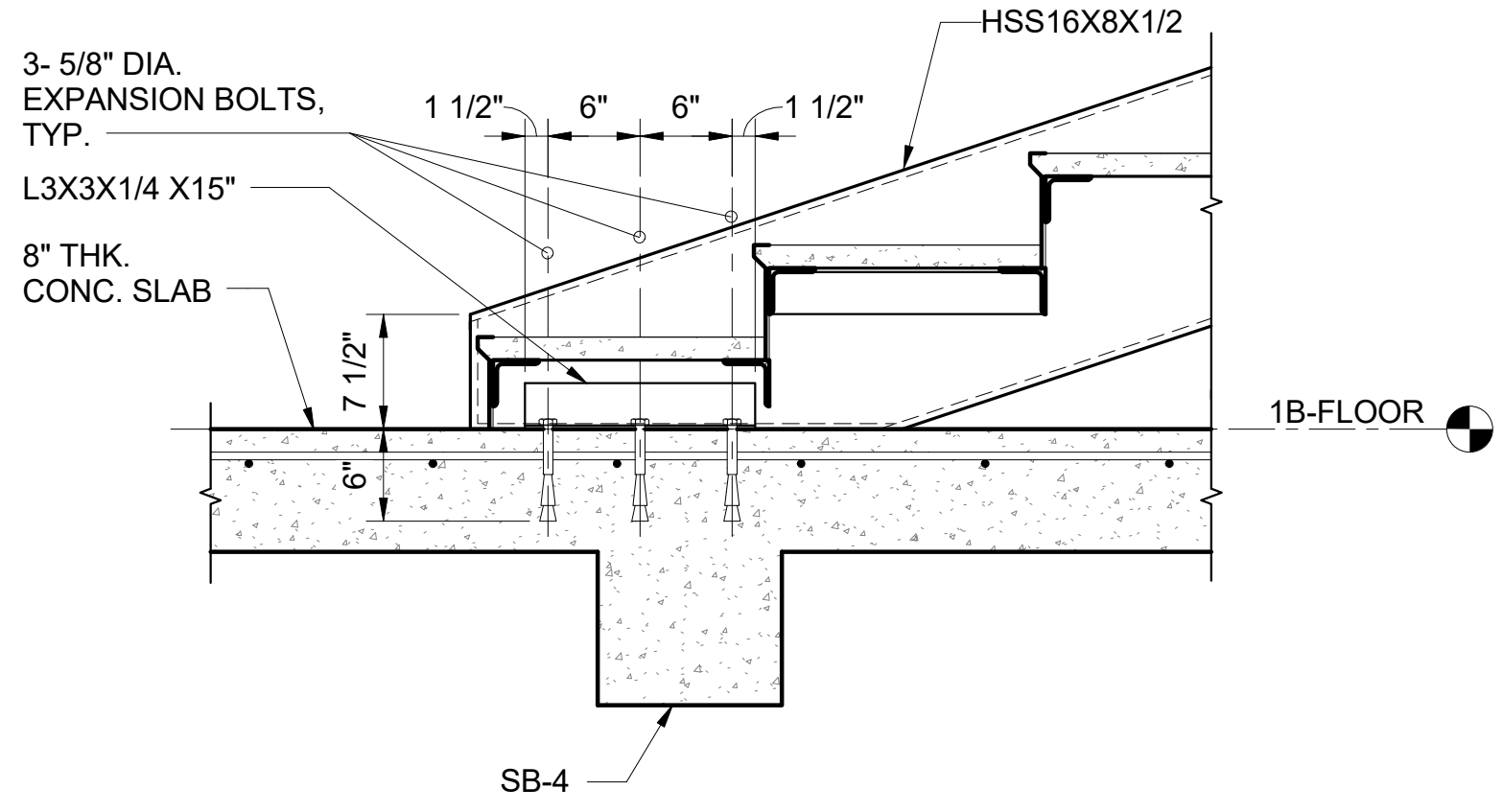
2 SECTION
S612 SCALE: 1" = 1'-0"



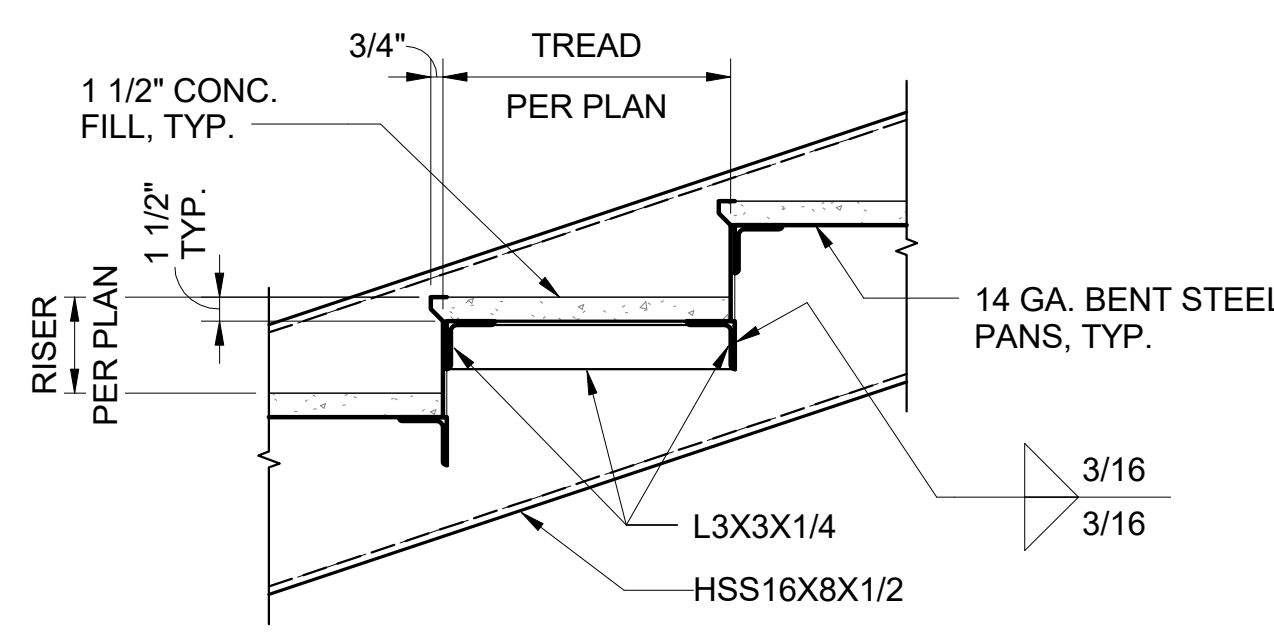
3 SECTION
S612 SCALE: 1" = 1'-0"



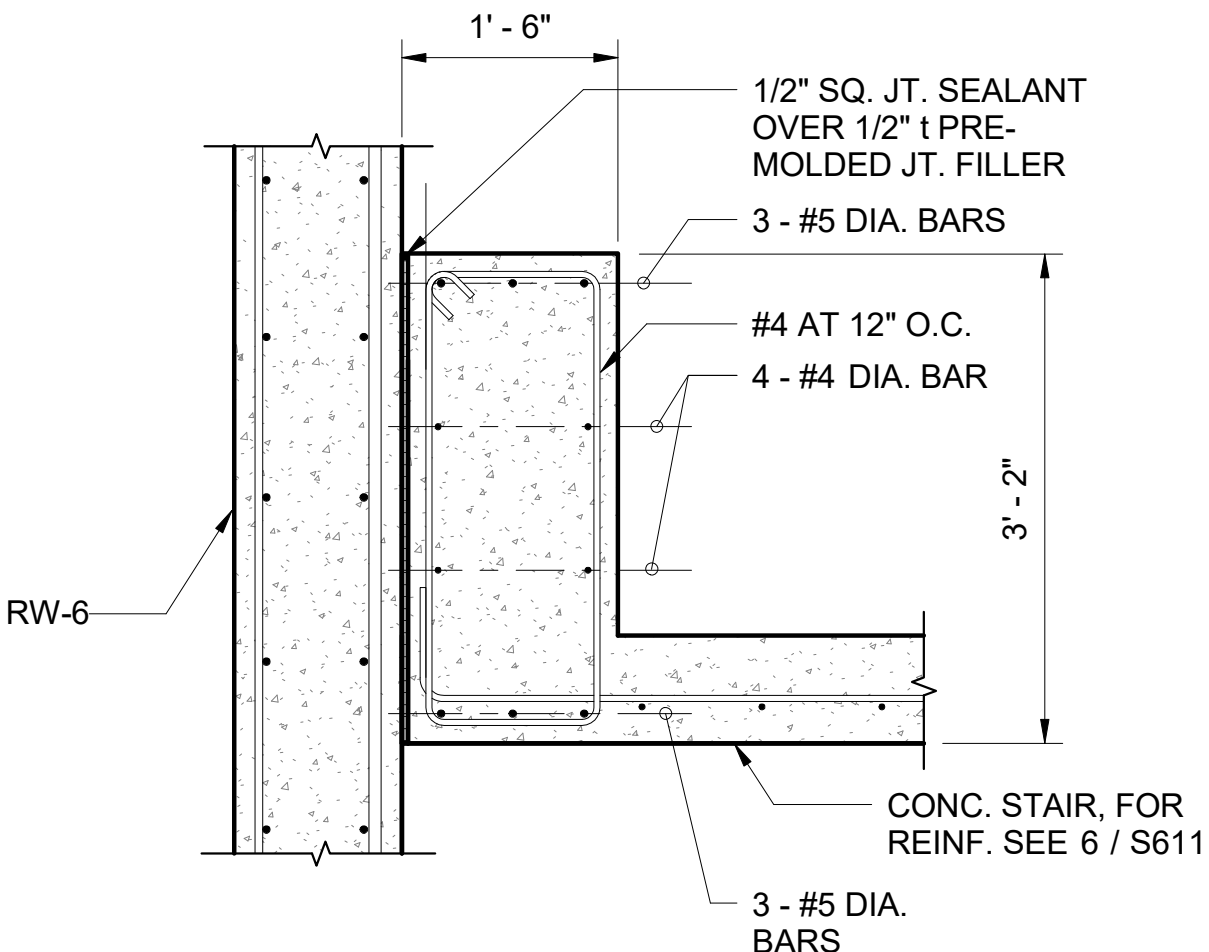
4 DETAIL
S612 SCALE: 1" = 1'-0"



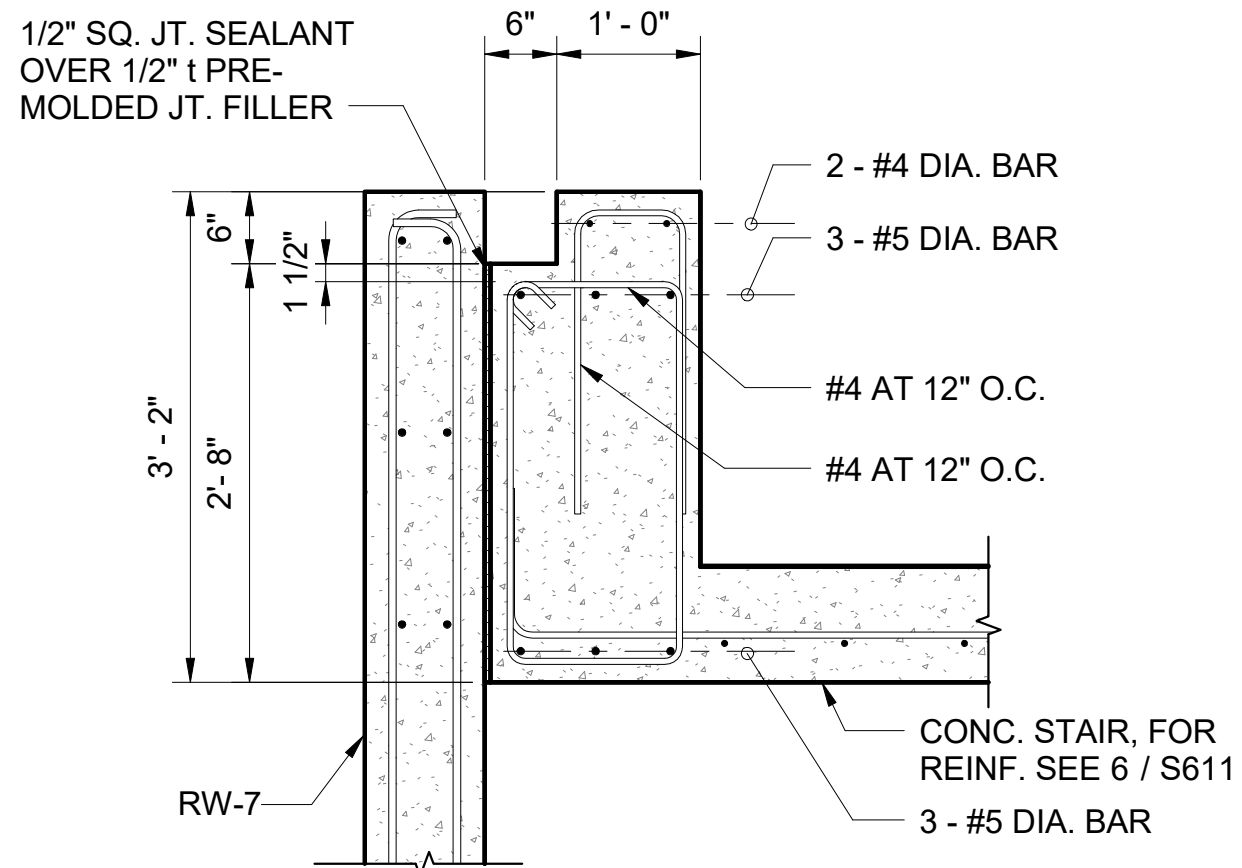
5 SECTION
S612 SCALE: 1" = 1'-0"



6 TYPICAL TREAD DETAIL
S612 SCALE: 1" = 1'-0"

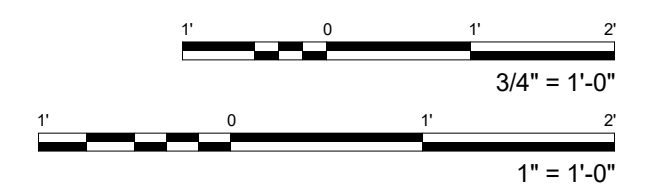


7 SECTION
S612 SCALE: 3/4" = 1'-0"



8 SECTION
S612 SCALE: 3/4" = 1'-0"

NOTE:
ALL EXTERIOR STEEL STAIRS INCLUDING ITS CONNECTIONS SHOULD BE HOT-DIPPED GALVANIZED.



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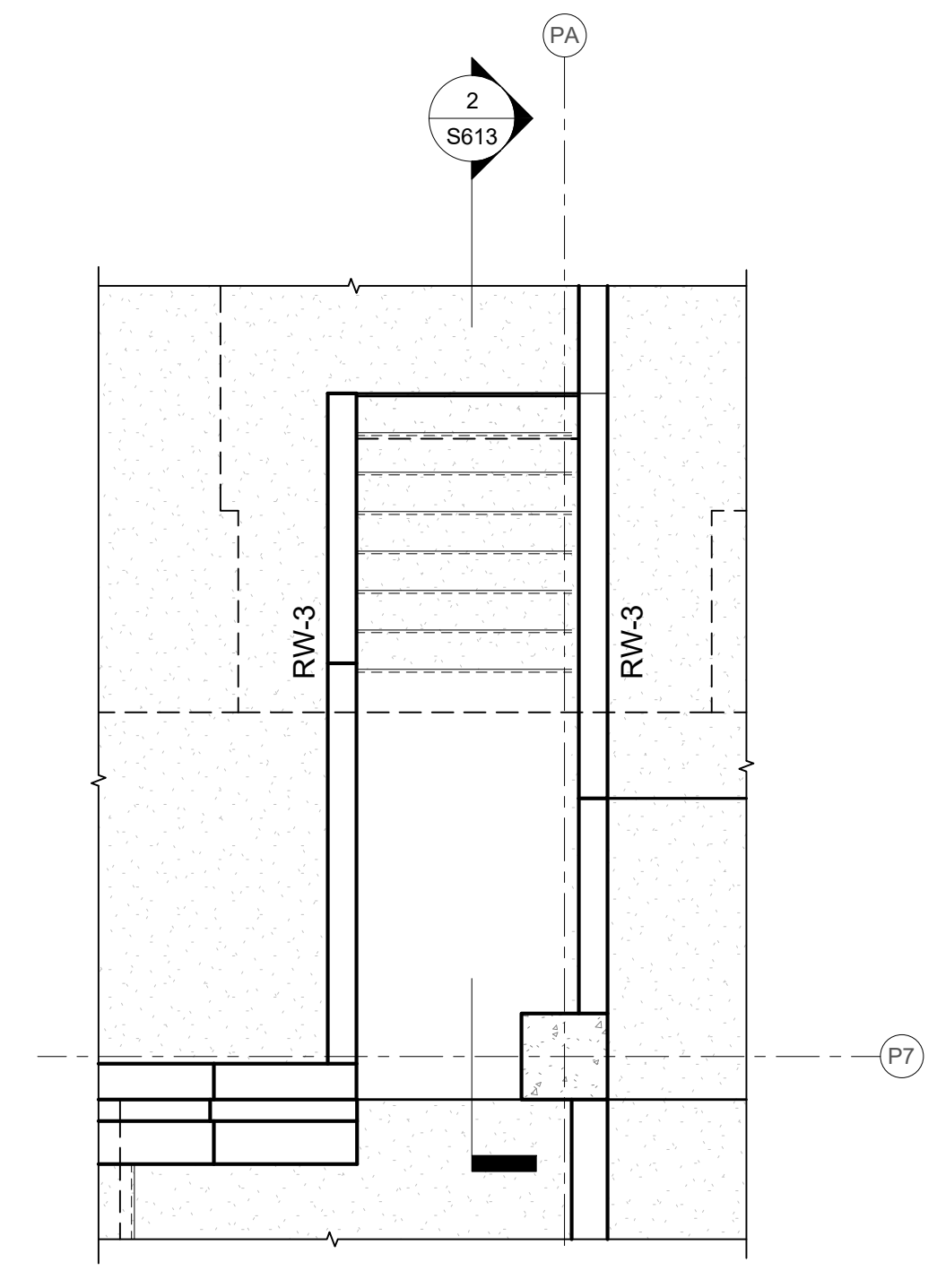
KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII
LICENSE EXPIRATION DATE 4/30/20
SIGNATURE: [Signature]
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WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[Seal]

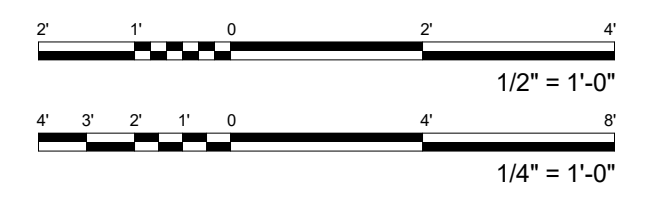
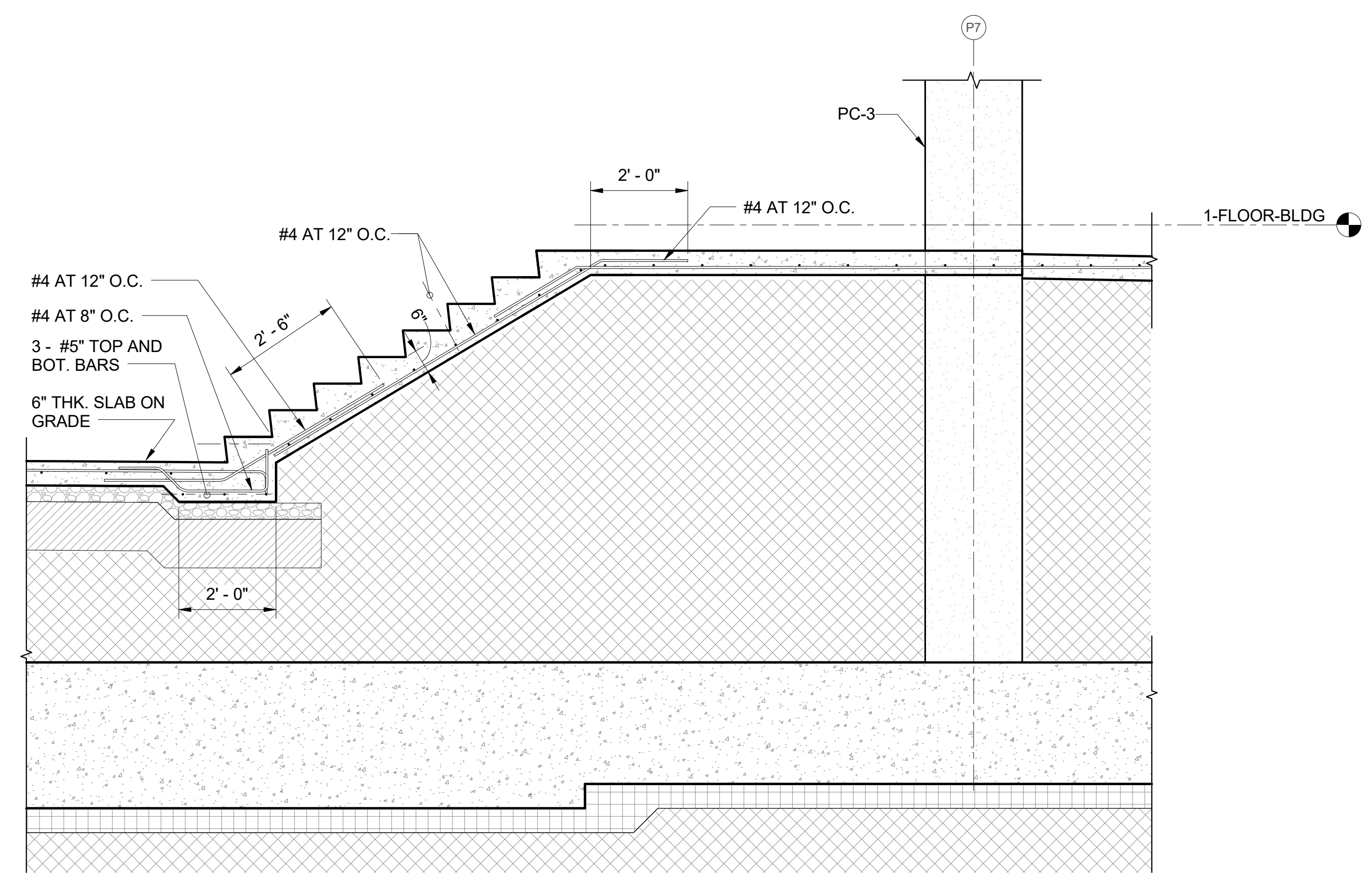
PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	CENTRAL STAIR SECTION AND DETAILS
DRAWN:	LC				
DATE:	7/25/2019				
PHASE:	S612				
SHEET:	1B				
OF SHEETS:					

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1 CENTRAL EGRESS STAIR FOUNDATION
 S613 SCALE: 1/4" = 1'-0"



2 CENTRAL EGRESS STAIR DETAILED SECTION
 S613 SCALE: 1/2" = 1'-0"



PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	CENTRAL EGRESS FRAMING PLAN AND SECTION
DRAWN:	LC				
DATE:	7/25/2019				
PHASE	SHEET				
1B	S613				
OF	SHEETS			CADD FILE:	

WAILUKU CIVIC COMPLEX PHASE 1B
 100% FINAL DESIGN
 [PUY/BUU/UP/WUW/UP]

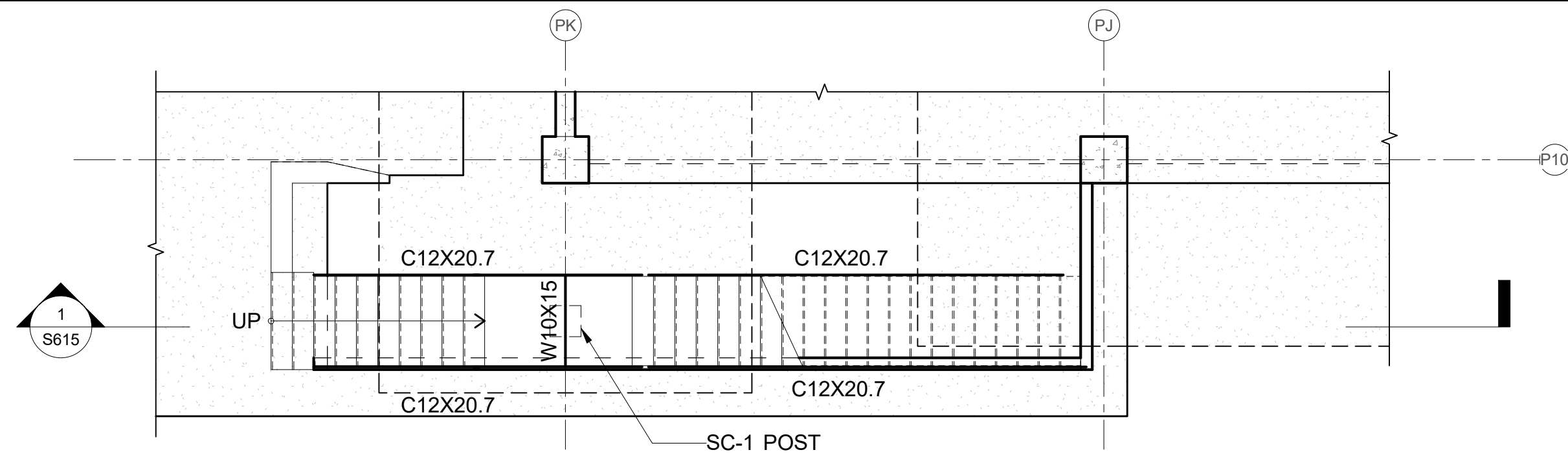


[Signature]
 SIGNATURE

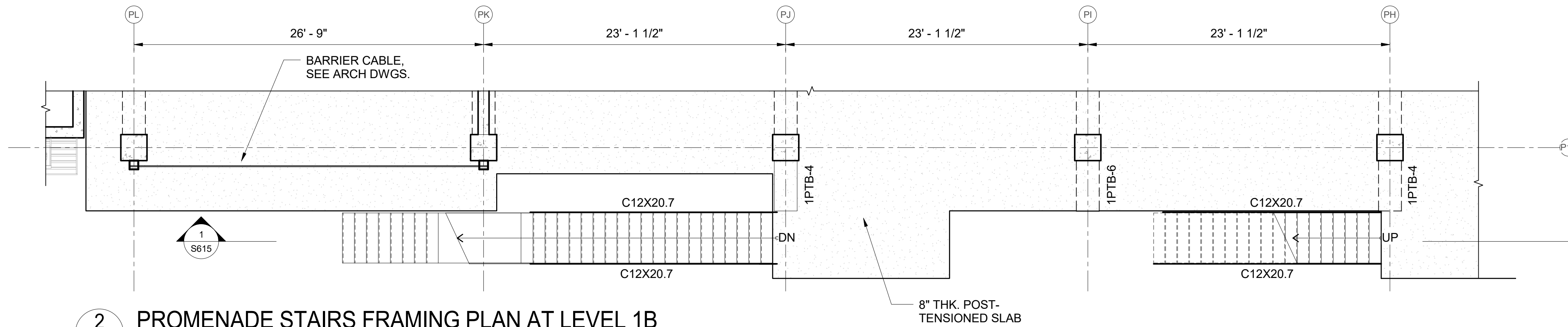
LICENSE EXPIRATION DATE: 4/30/20
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FERRARO CHOI

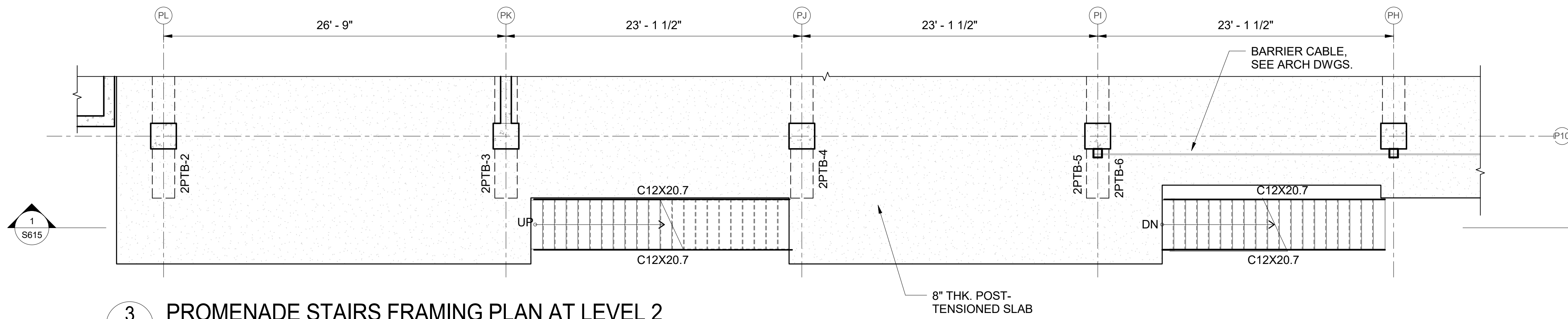
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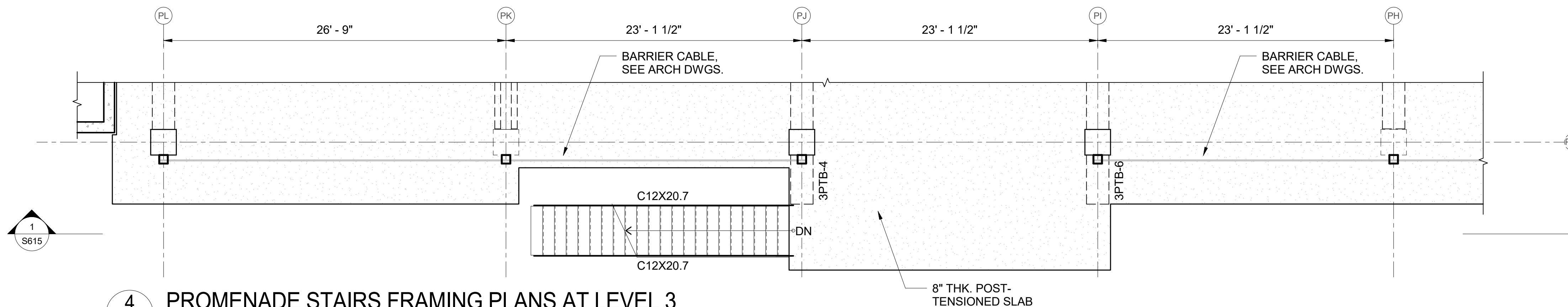
1 PROMENADE STAIRS FRAMING PLAN AT FOUNDATION
S614 SCALE: 3/16" = 1'-0"



2 PROMENADE STAIRS FRAMING PLAN AT LEVEL 1B
S614 SCALE: 3/16" = 1'-0"



3 PROMENADE STAIRS FRAMING PLAN AT LEVEL 2
S614 SCALE: 3/16" = 1'-0"

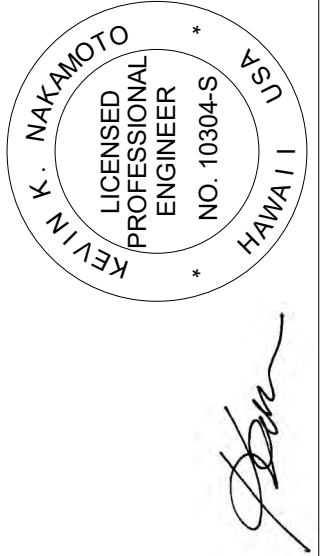


4 PROMENADE STAIRS FRAMING PLANS AT LEVEL 3
S614 SCALE: 3/16" = 1'-0"

NOTE:
ALL STEEL MEMBERS, PLATES, AND BOLTS SHALL BE HOT-DIPPED GALVANIZED.



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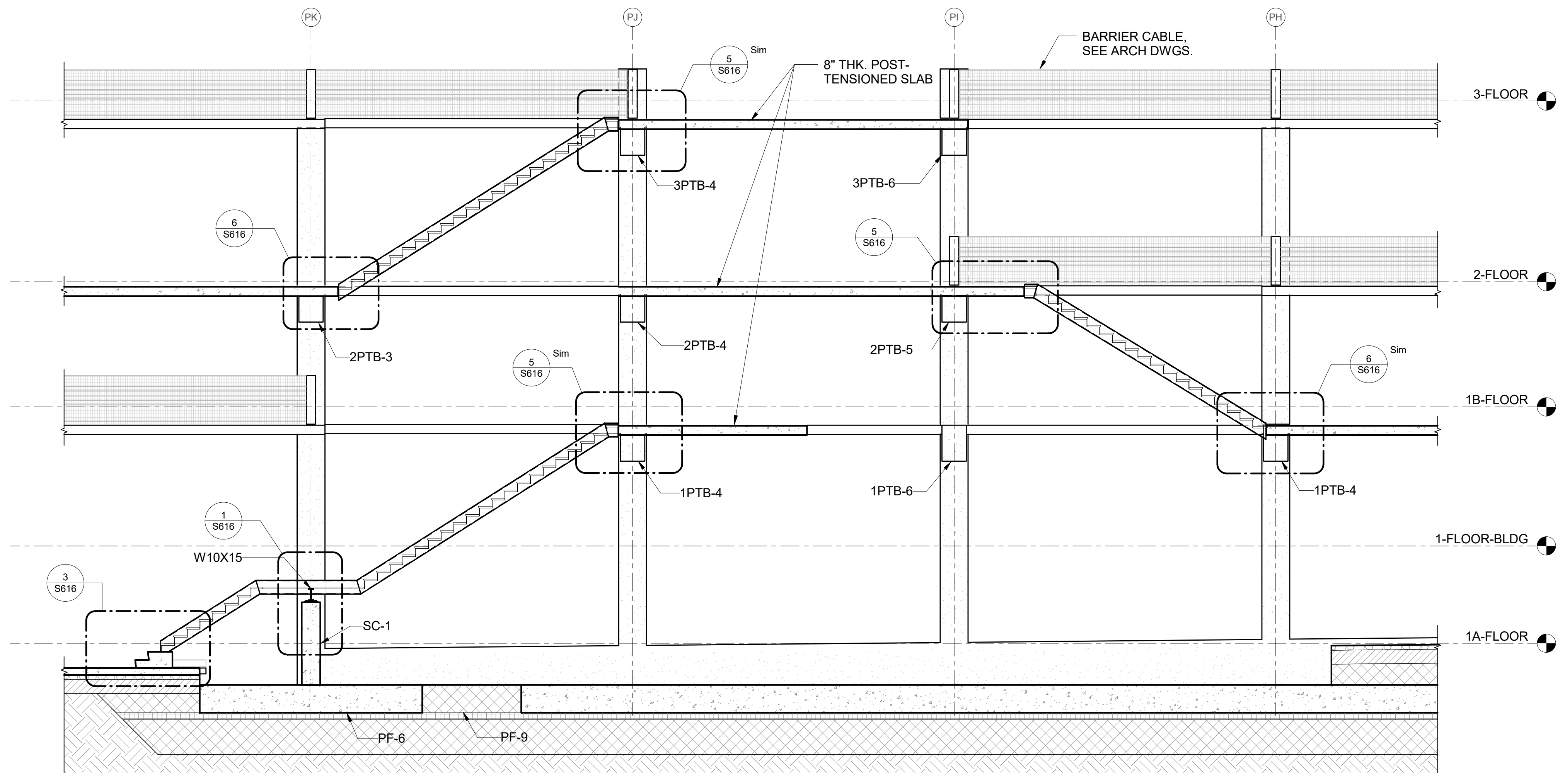


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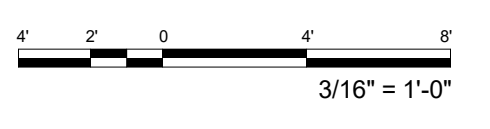
WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[PUY/80/00/UP/00/00/0P]

SHEET TITLE:
PROMENADE STAIRS FRAMING PLANS

PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET		
1B	S614		
OF	SHEETS		




1 PROMENADE STAIRS DETAILED SECTION
 S615 SCALE: 3/16" = 1'-0"

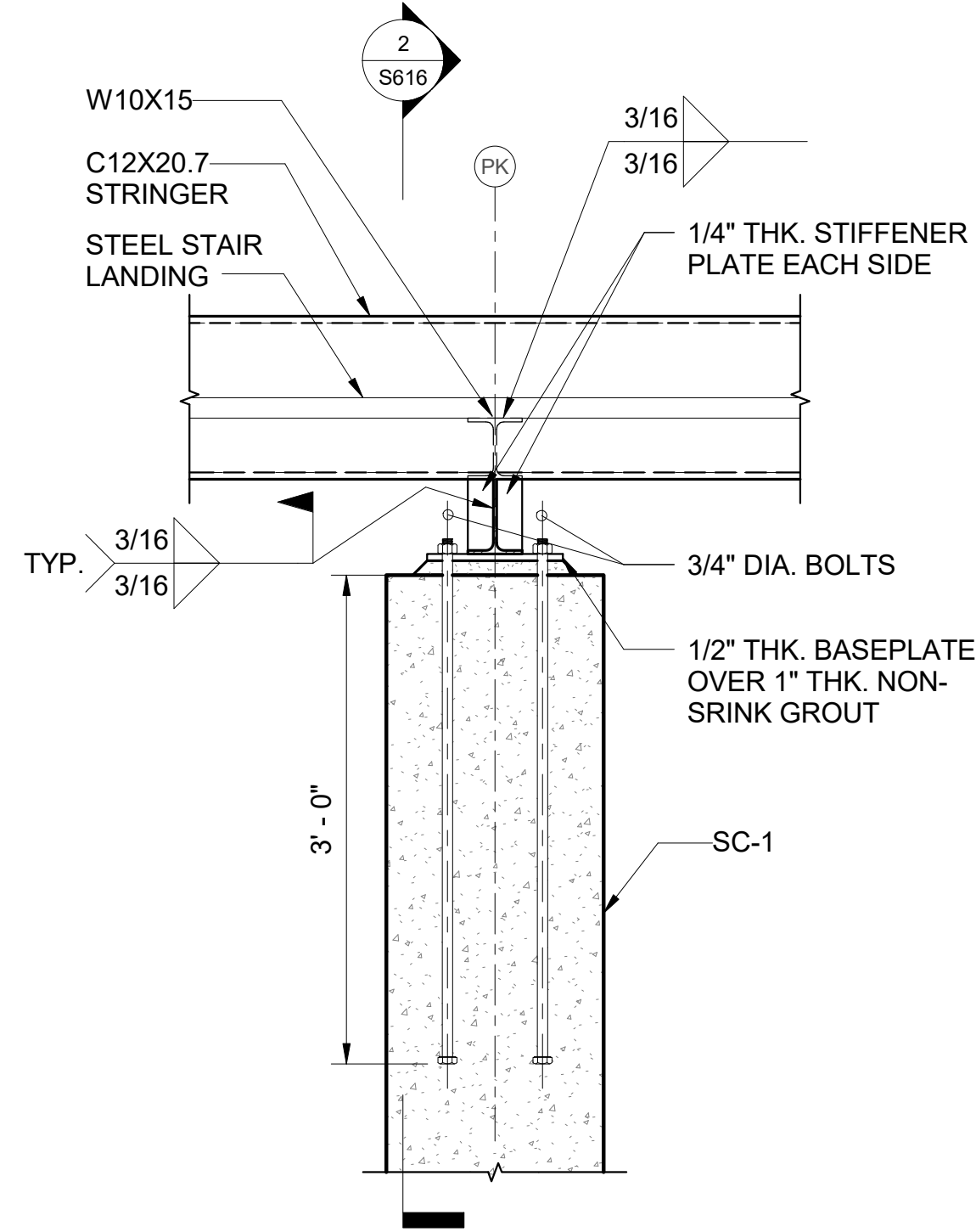


PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	PROMENADE STAIRS DETAILED SECTION
DRAWN:	LC		△		
DATE:	7/25/2019		△		
PHASE	SHEET		△		
1B	S615		△		
OF	SHEETS		△		CADD FILE:

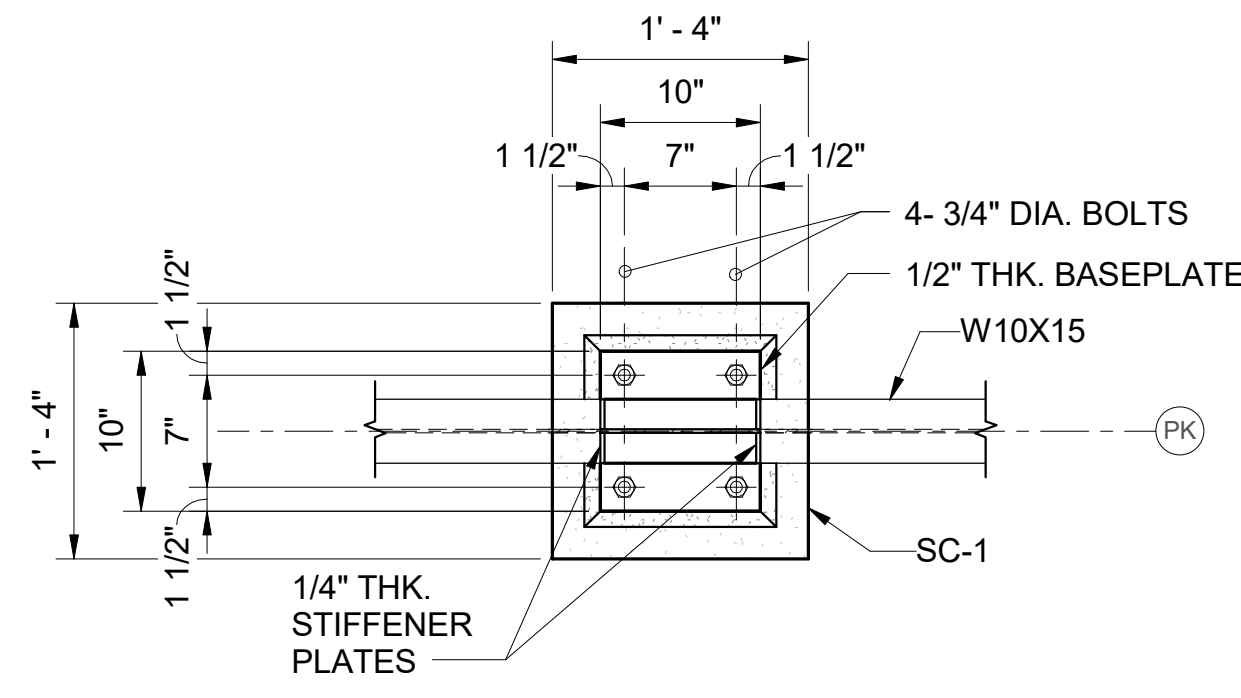
WAILUKU CIVIC COMPLEX PHASE 1B
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 PUYA000UP000000P


 KEVIN K. MAKIMOTO
 LICENSED PROFESSIONAL ENGINEER
 NO. 10304-S
 HAWAII
 LICENSE EXPIRATION DATE: 4/30/20
 SIGNATURE: *[Signature]*
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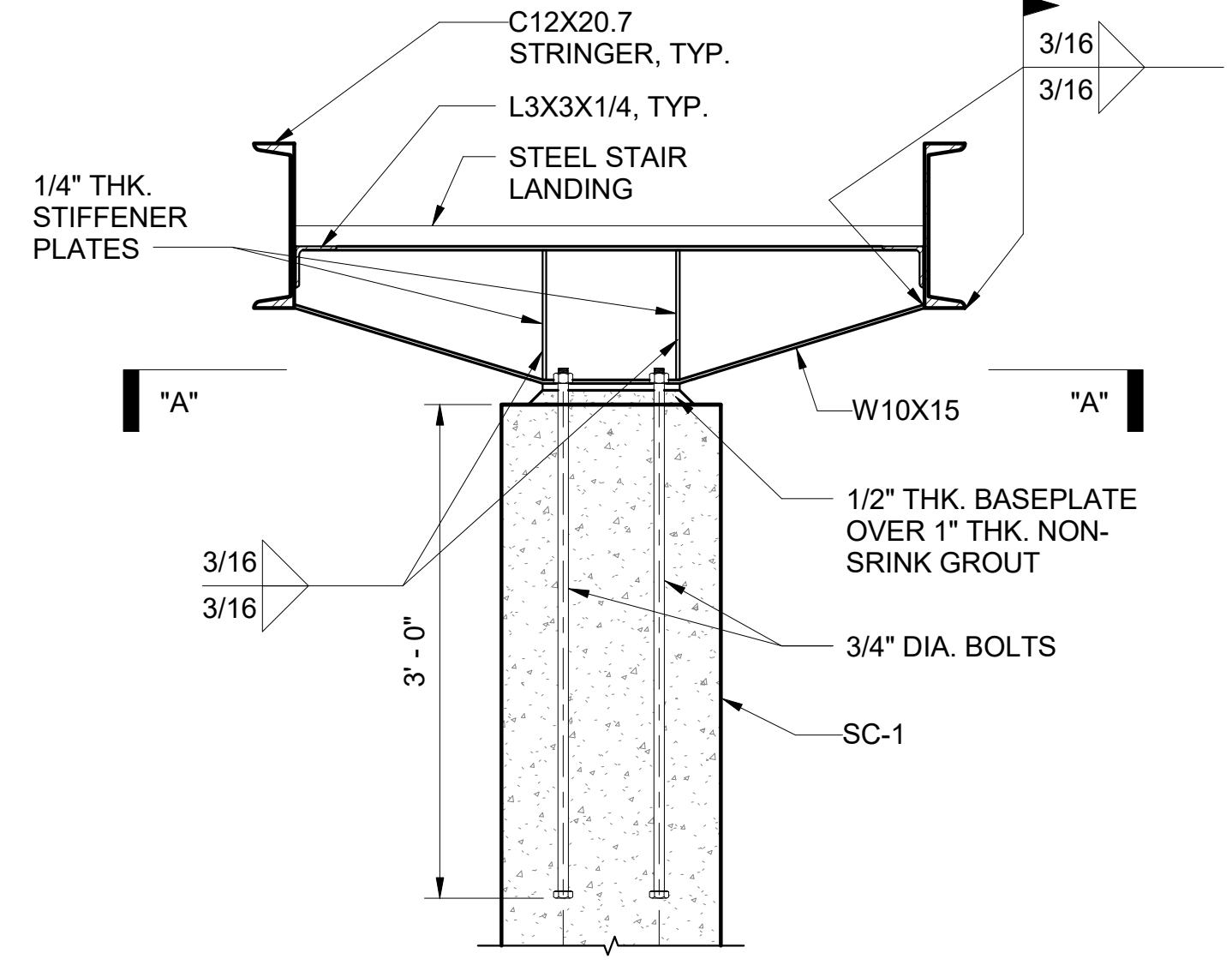
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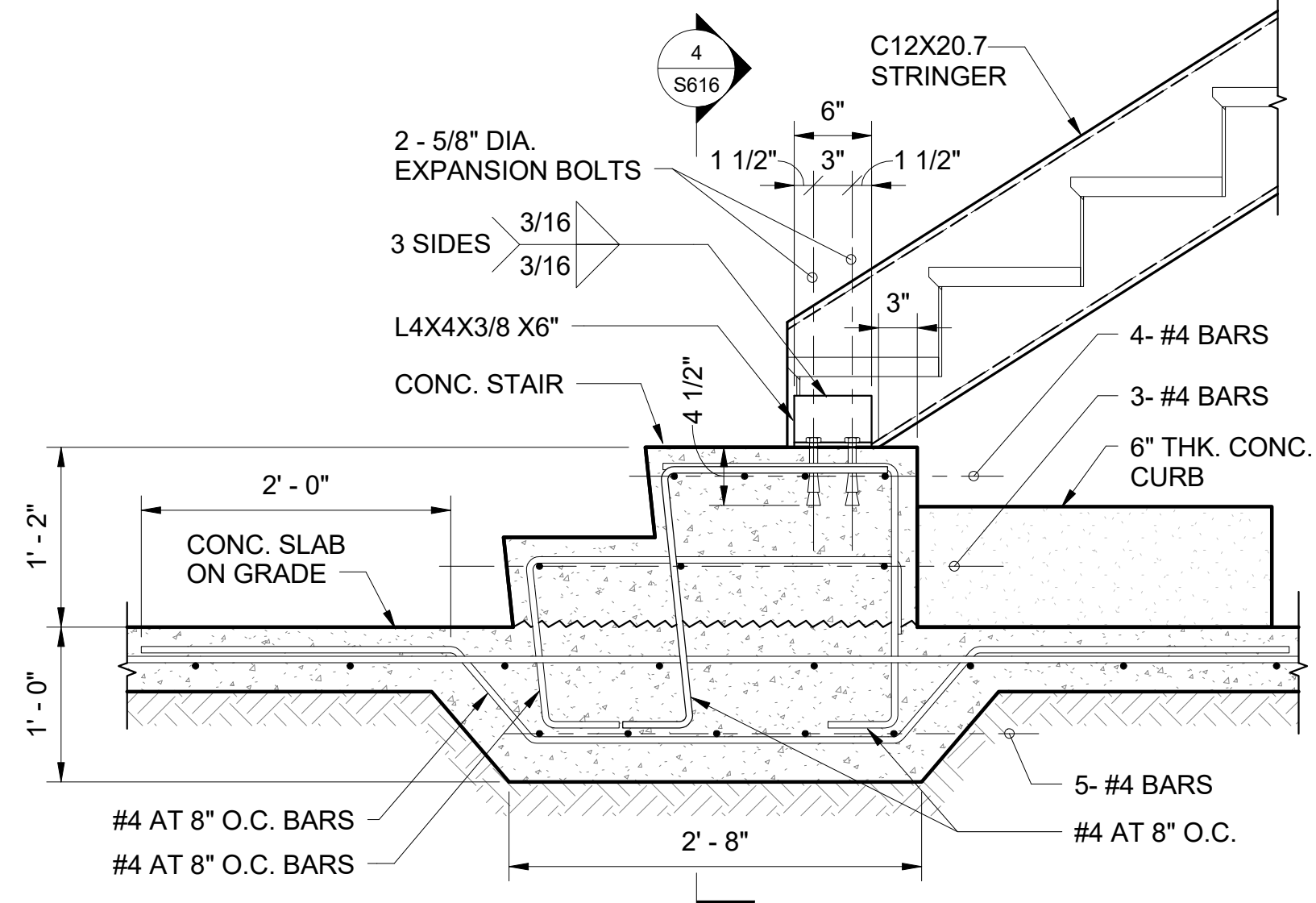
1 DETAIL
S616 SCALE: 1" = 1'-0"



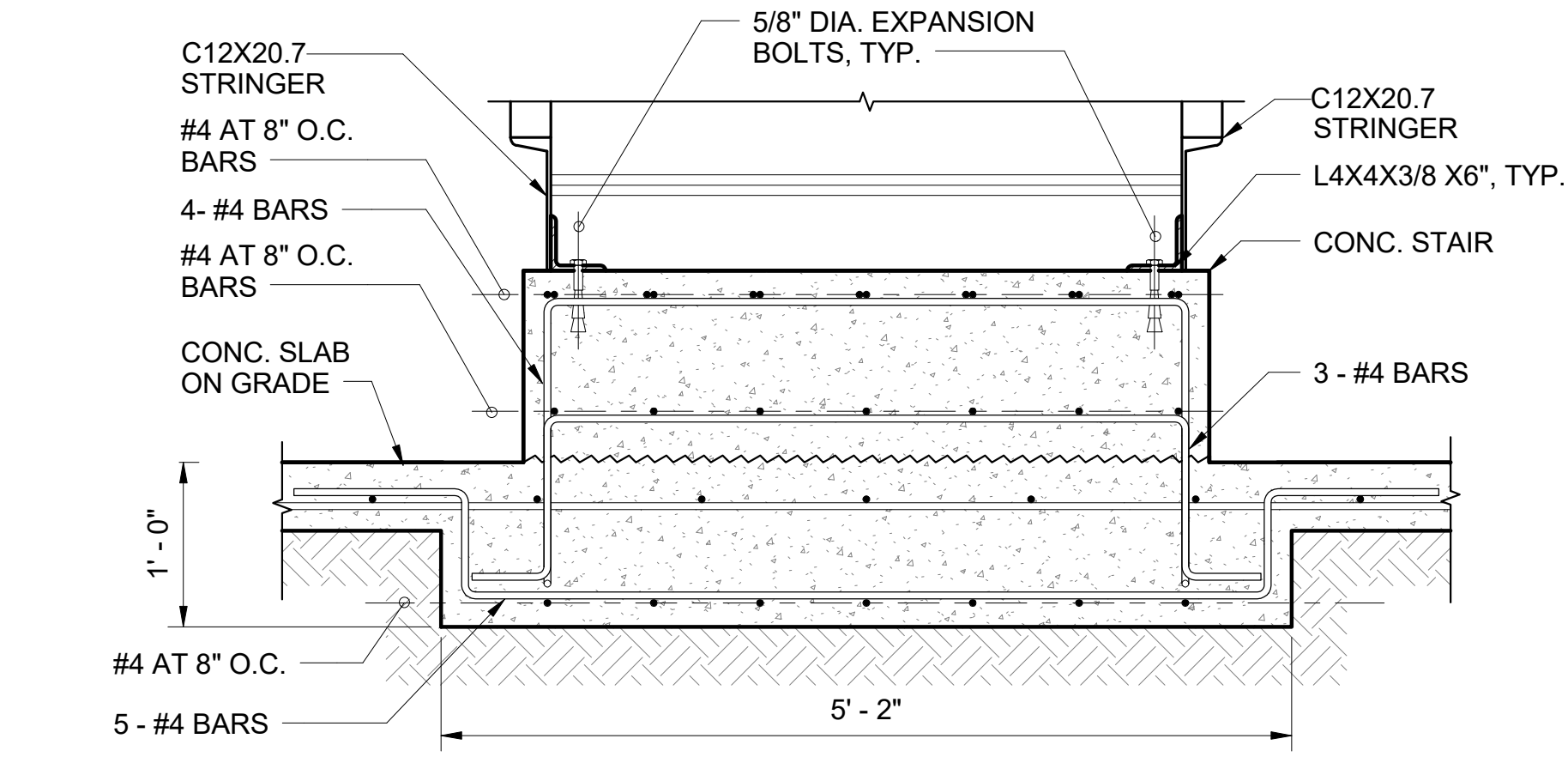
PLAN "A"- "A"



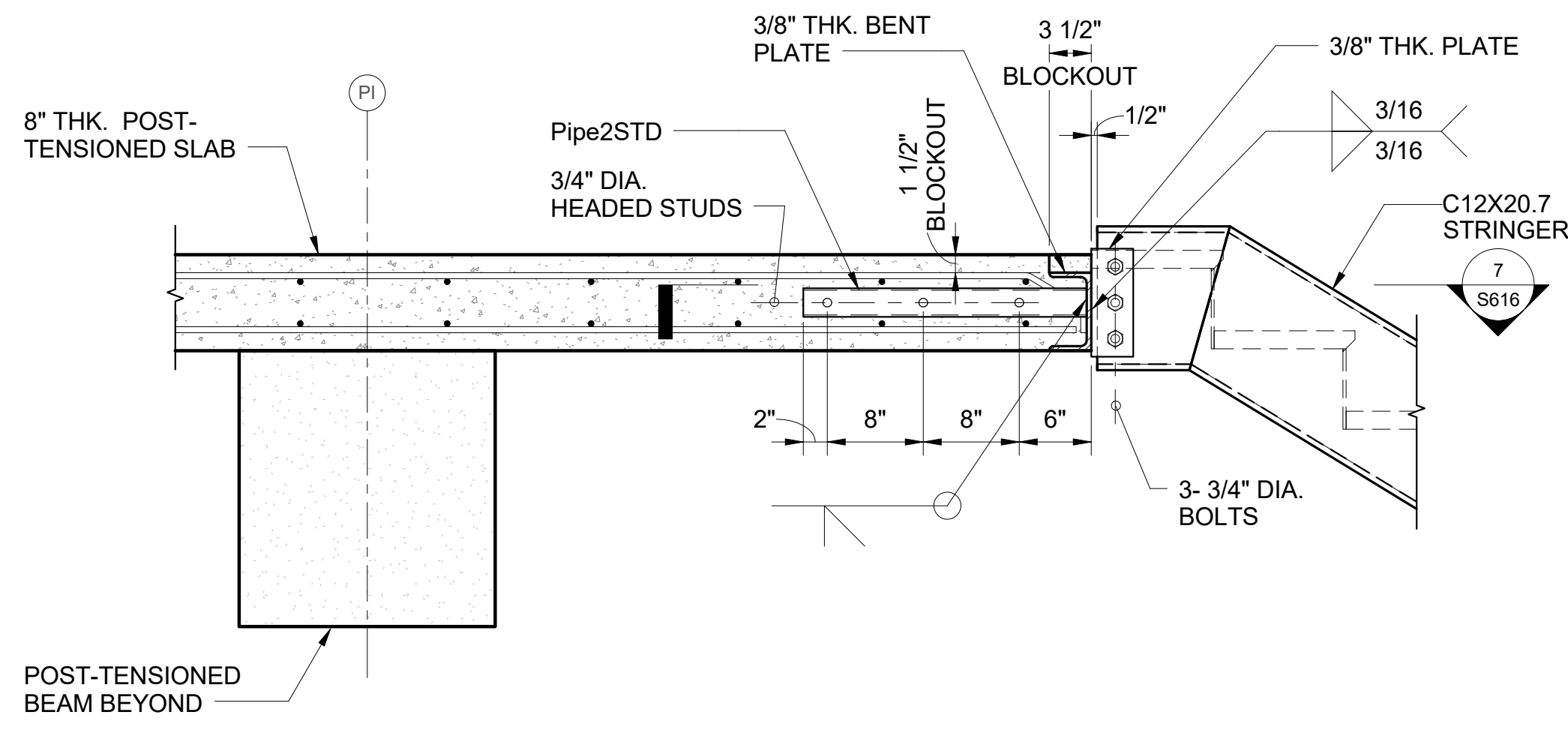
2 SECTION
S616 SCALE: 1" = 1'-0"



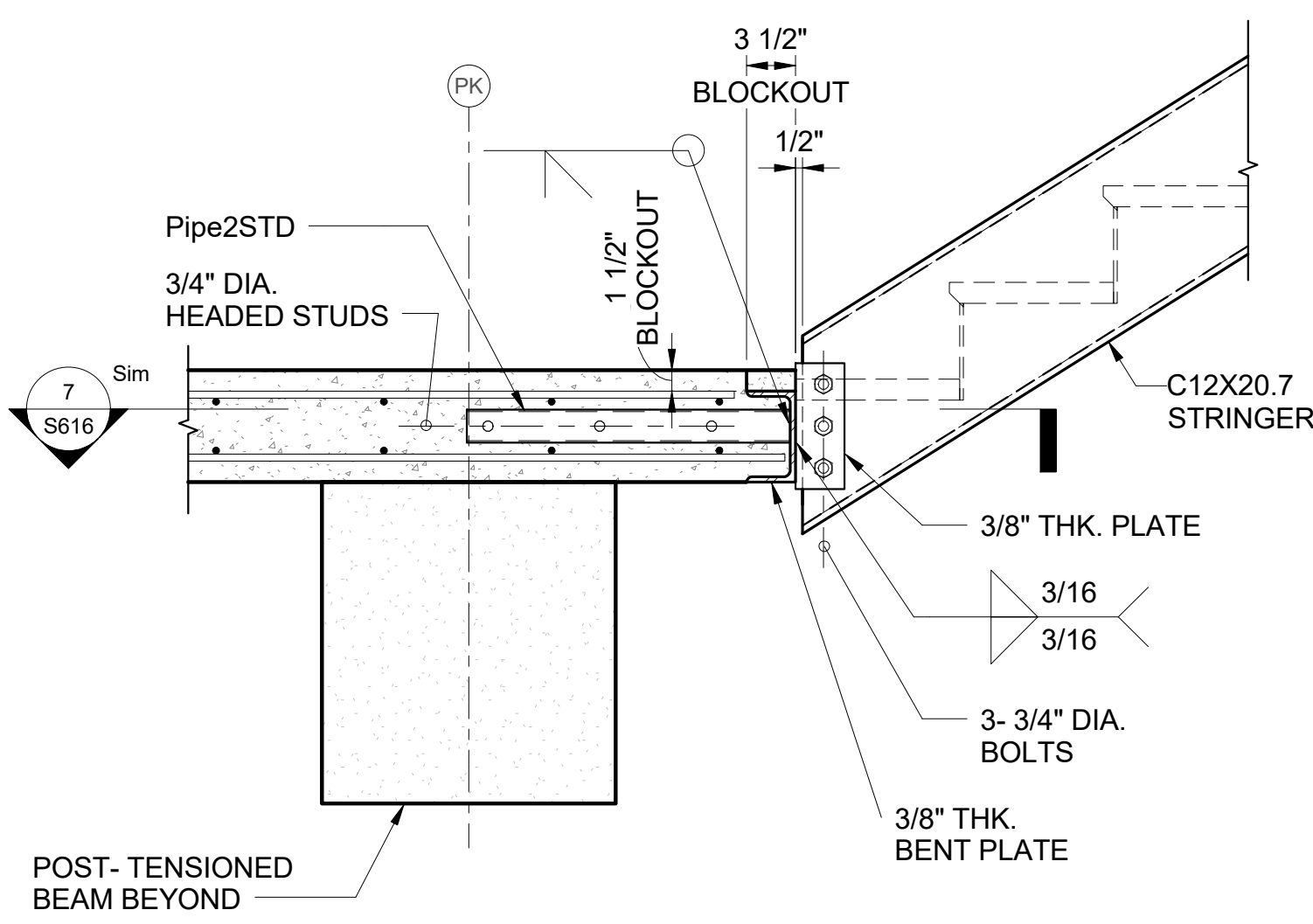
3 DETAIL
S616 SCALE: 1" = 1'-0"



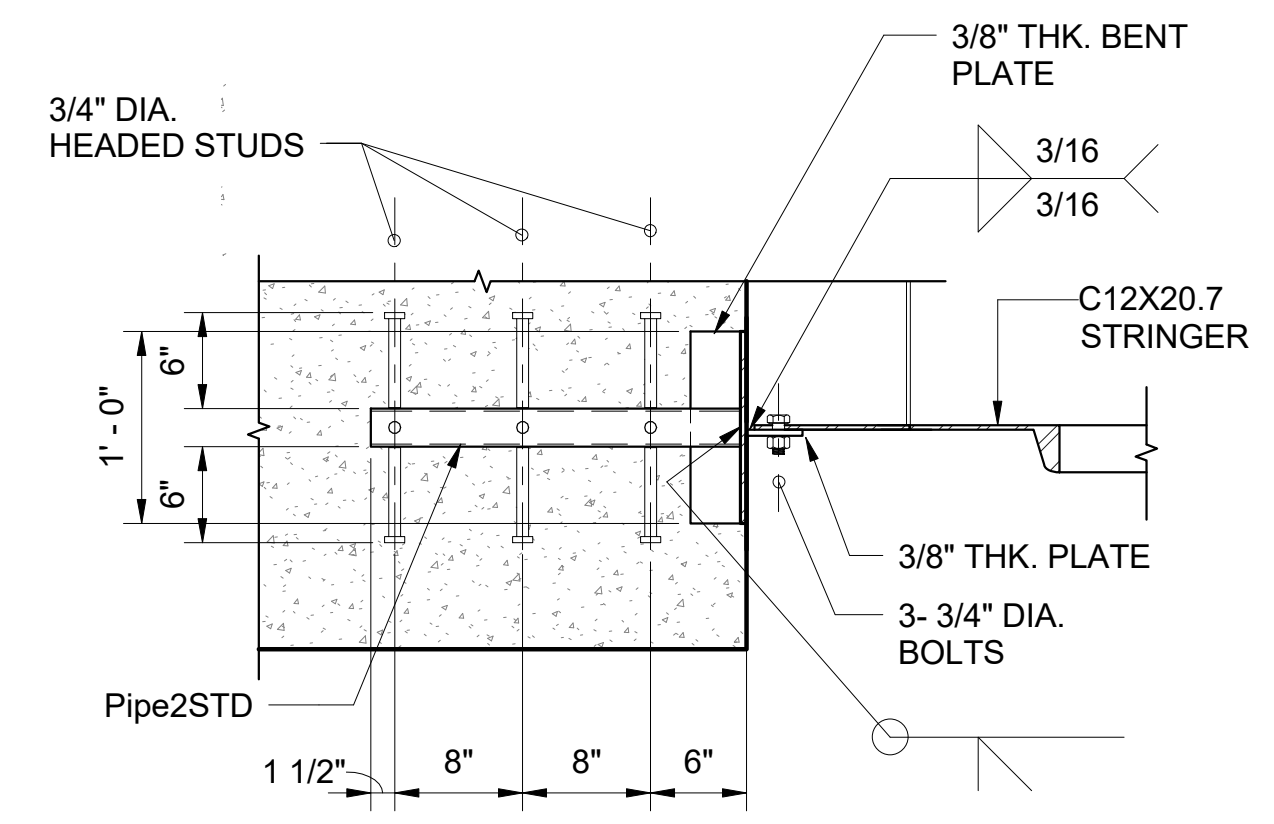
4 SECTION
S616 SCALE: 1" = 1'-0"



5 DETAIL
S616 SCALE: 1" = 1'-0"



6 DETAIL
S616 SCALE: 1" = 1'-0"



7 SECTION
S616 SCALE: 1" = 1'-0"



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LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII

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DATE: 7/25/2019

WAILUKU CIVIC COMPLEX PHASE 1B

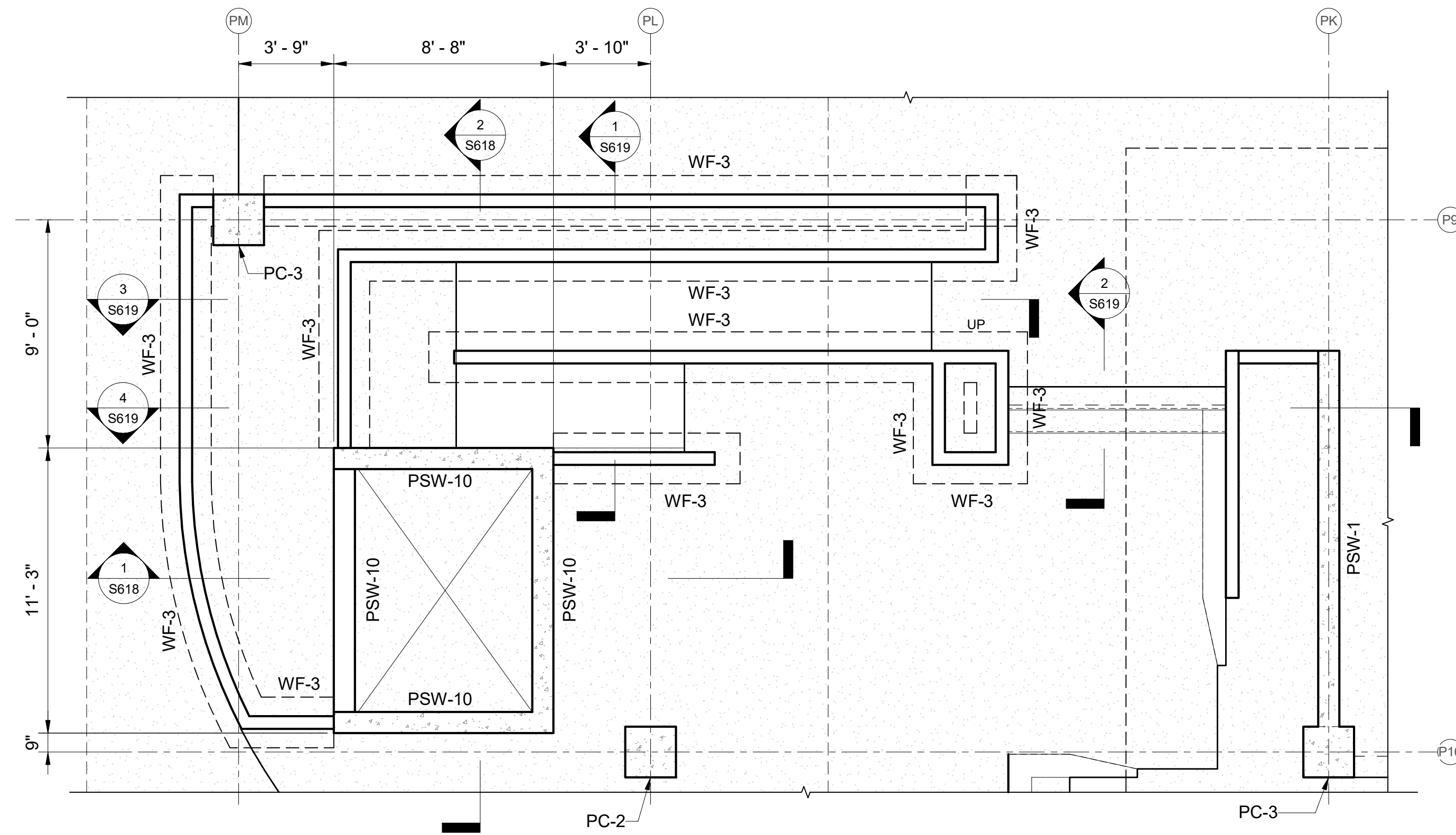
100% FINAL DESIGN

PROMENADE STAIR SECTION AND DETAILS

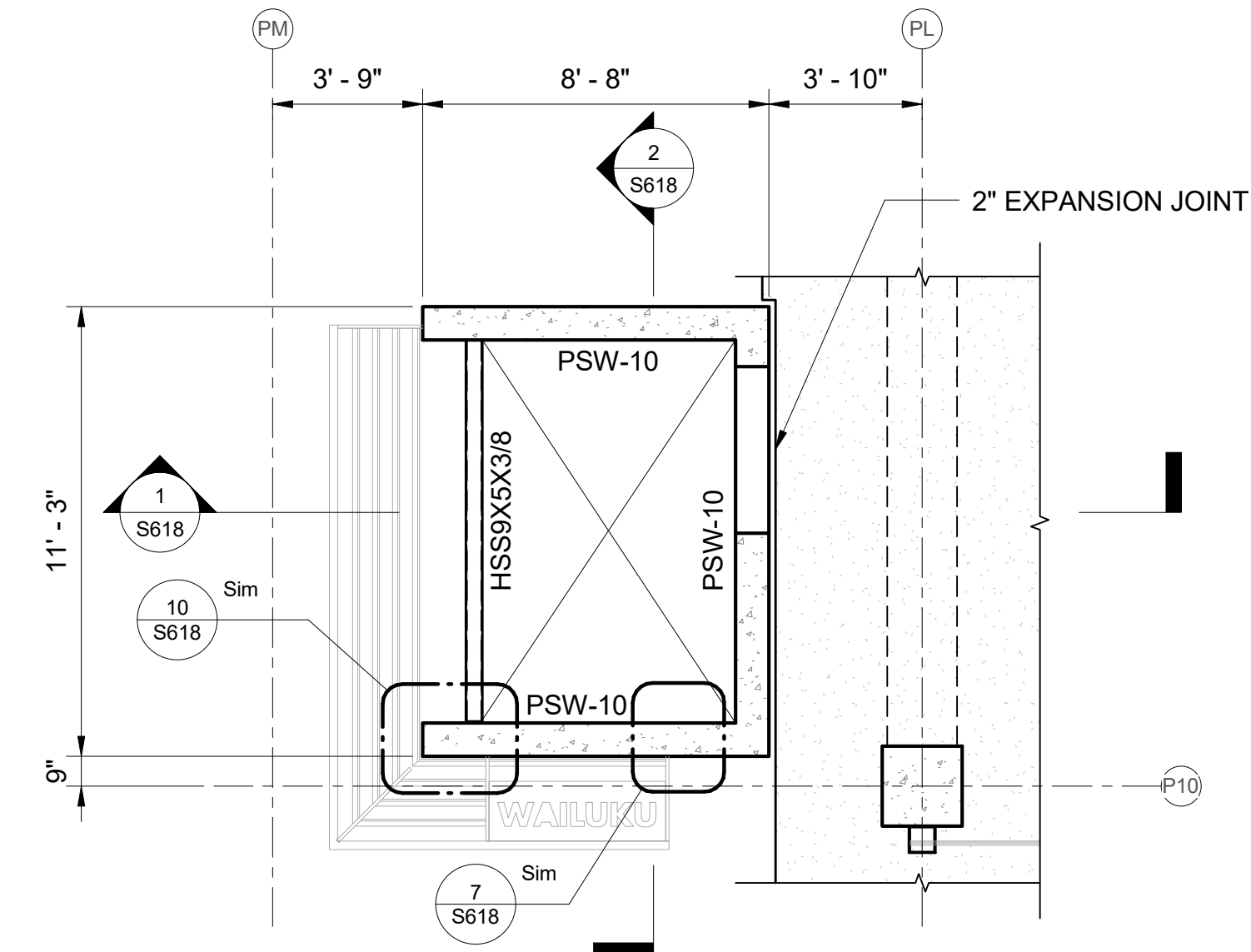
CADD FILE:

PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	1B	S616	
		OF	SHEETS

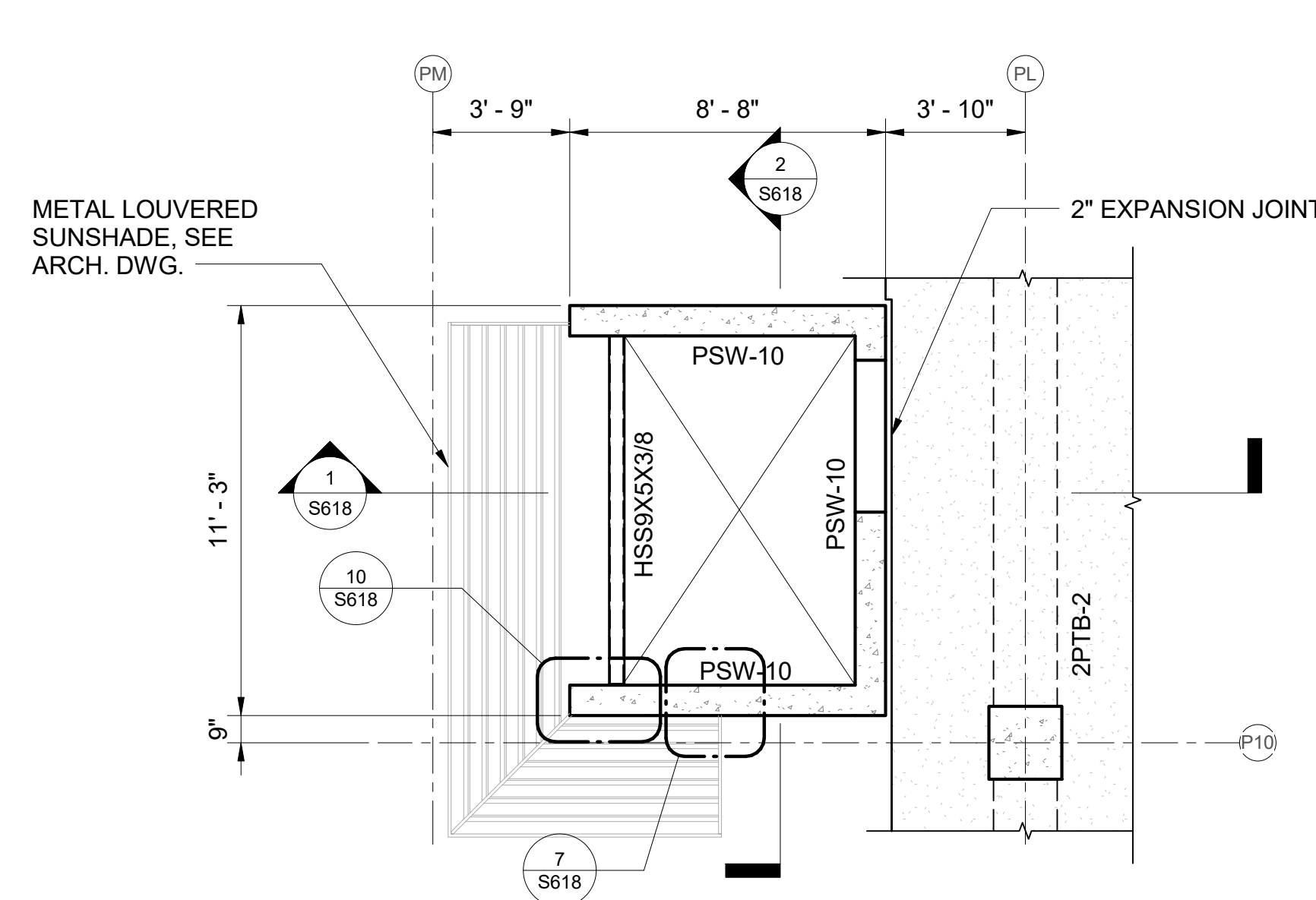
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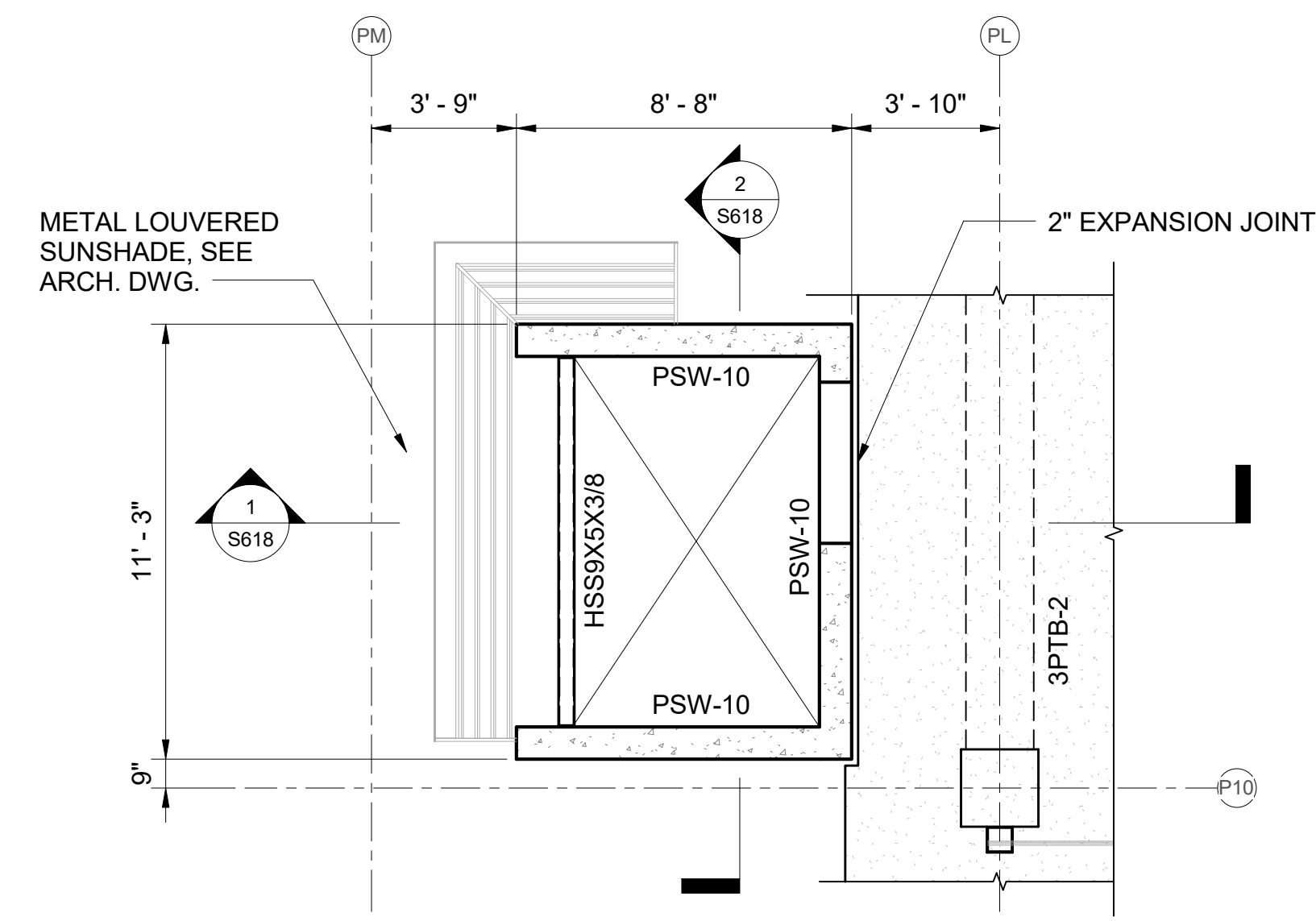
1 ELEVATOR PARKING FOUNDATION PLAN
 S617 SCALE: 1/4" = 1'-0"



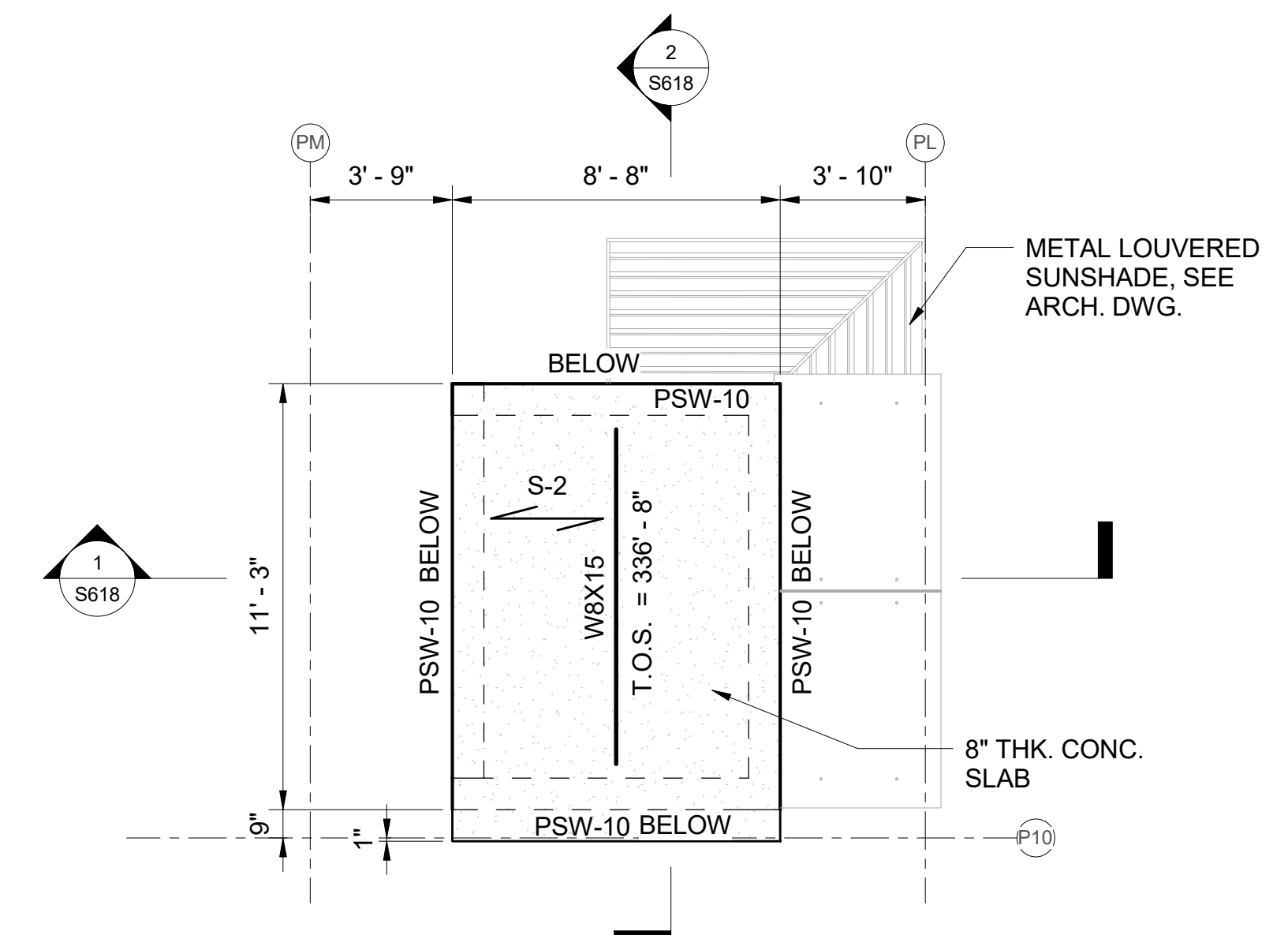
2 ELEVATOR PARKING FRAMING AT LEVEL 1B
 S617 SCALE: 1/4" = 1'-0"



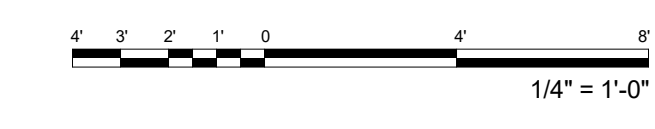
3 ELEVATOR PARKING FRAMING AT LEVEL 2
 S617 SCALE: 1/4" = 1'-0"



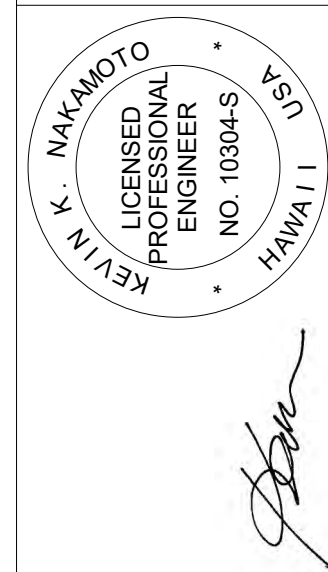
4 ELEVATOR PARKING FRAMING AT LEVEL 3
 S617 SCALE: 1/4" = 1'-0"



5 ELEVATOR PARKING FRAMING AT ROOF
 S617 SCALE: 1/4" = 1'-0"



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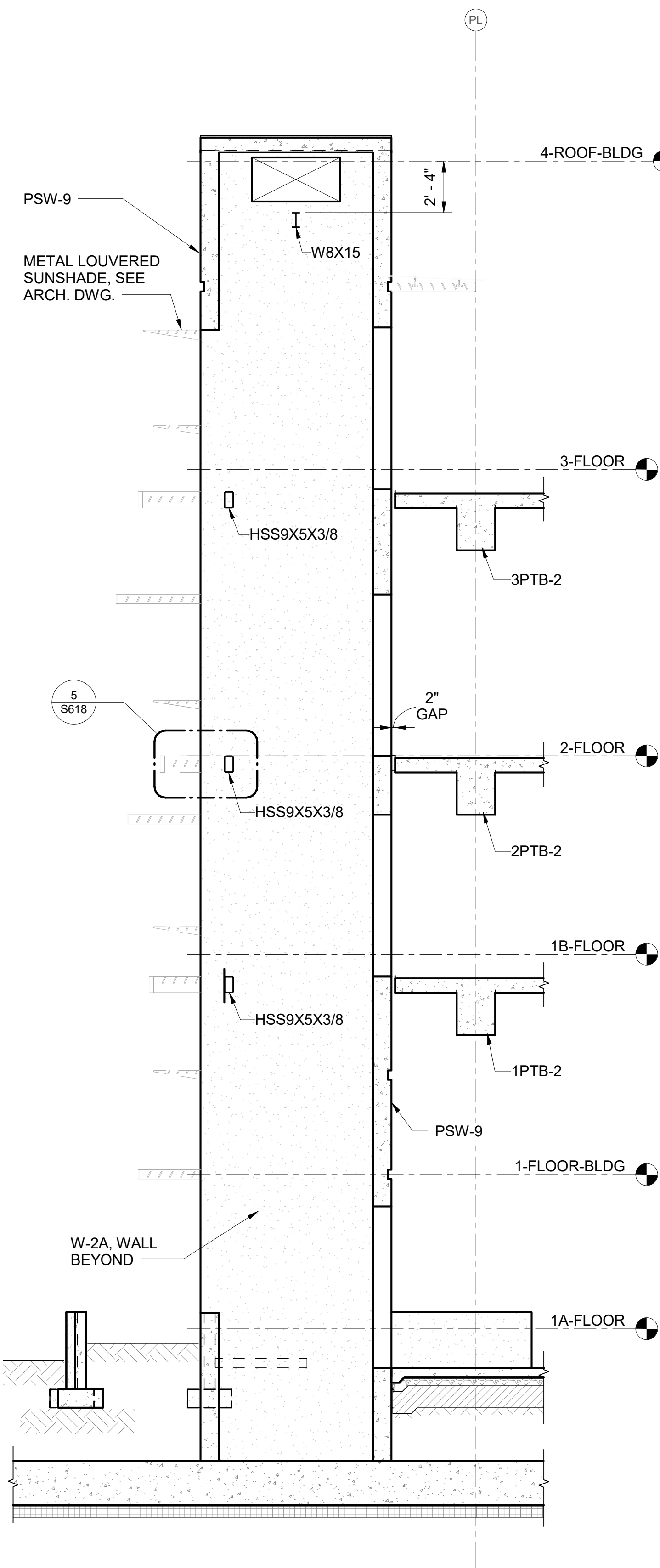
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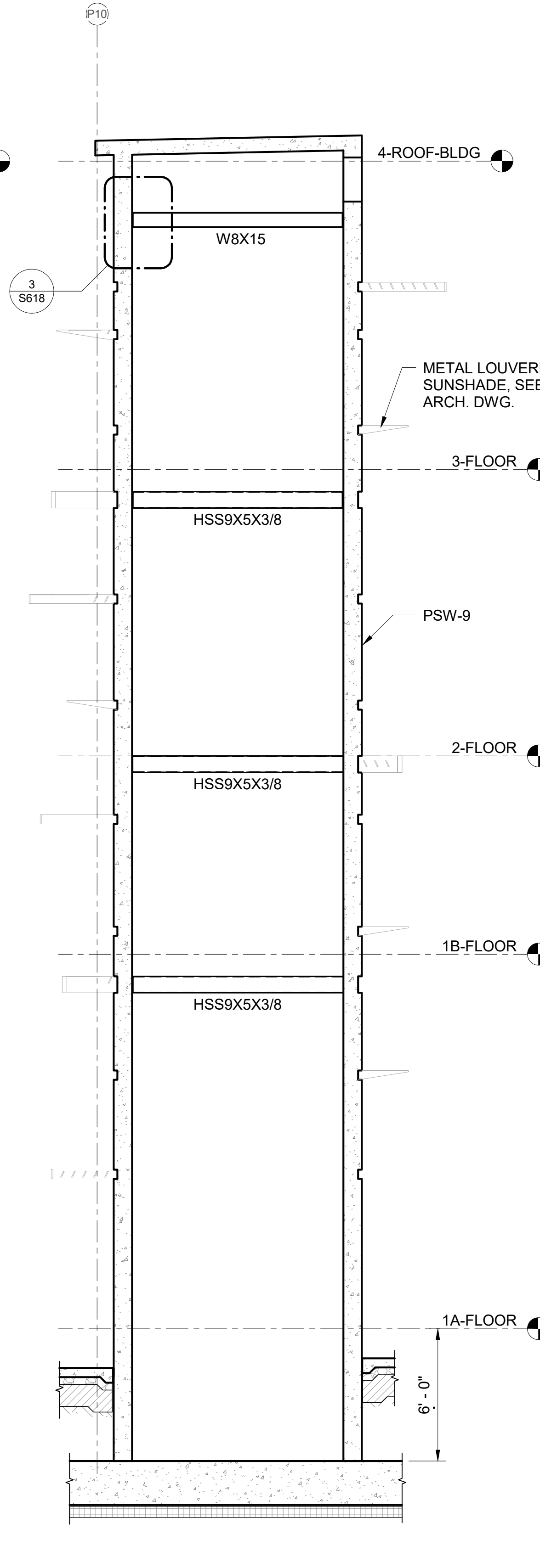
ELEVATOR PARKING FRAMING PLANS

PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET		
1B	S617		
OF	SHEETS		

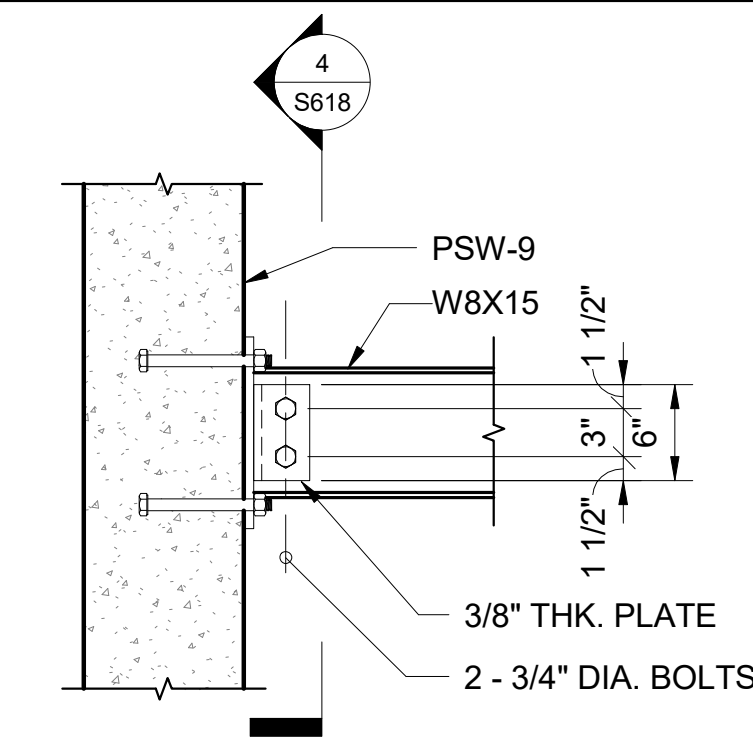
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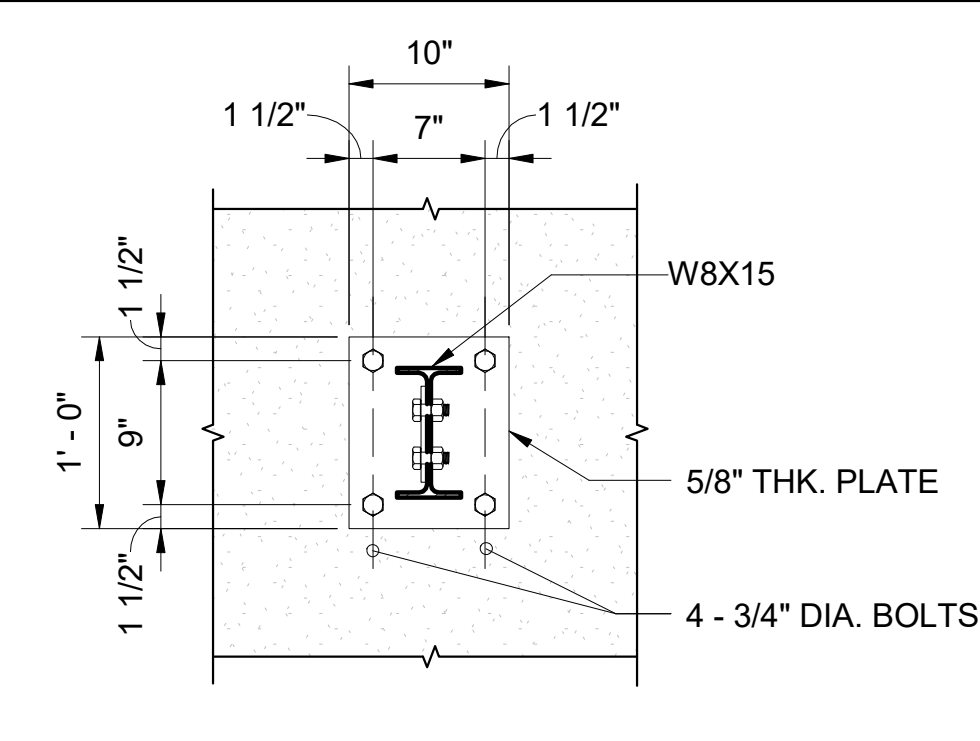
1 DETAILED SECTION
S618 SCALE: 1/4" = 1'-0"



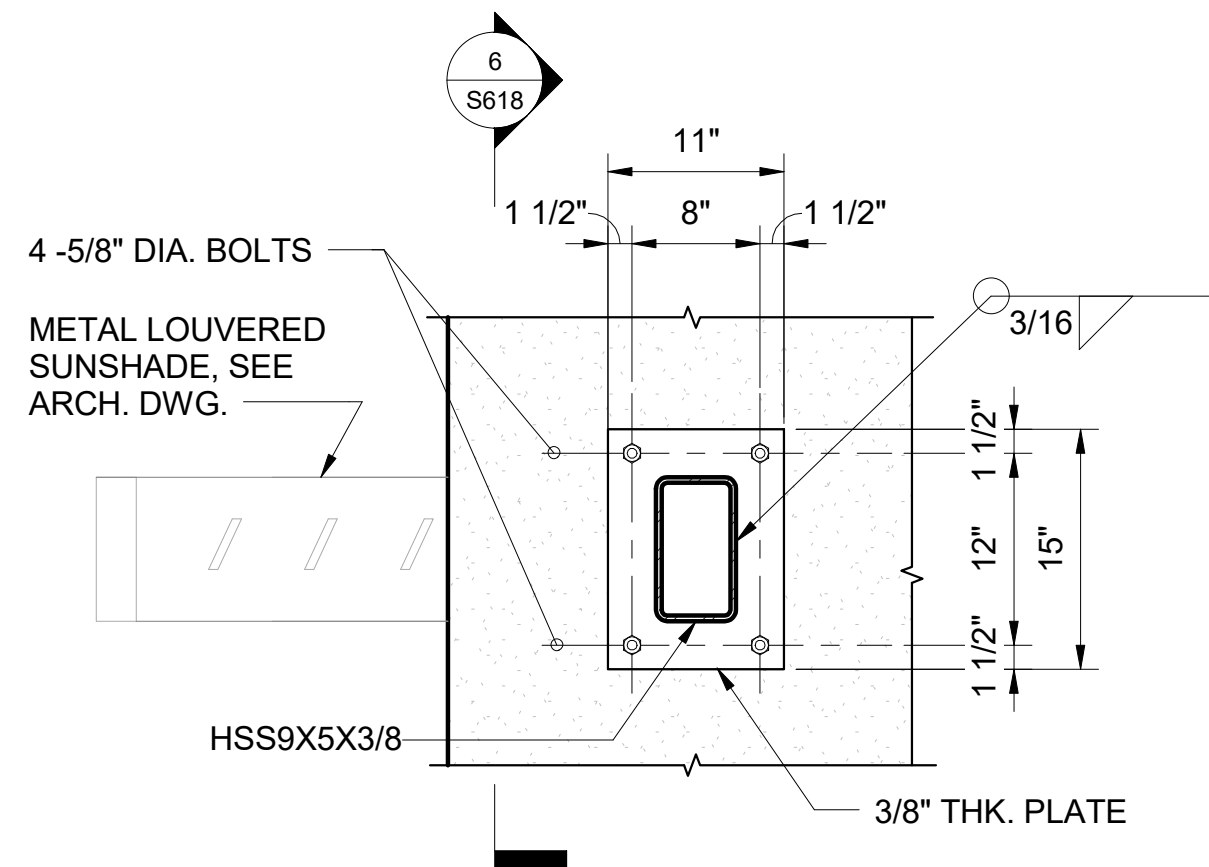
2 DETAILED SECTION
S618 SCALE: 1/4" = 1'-0"



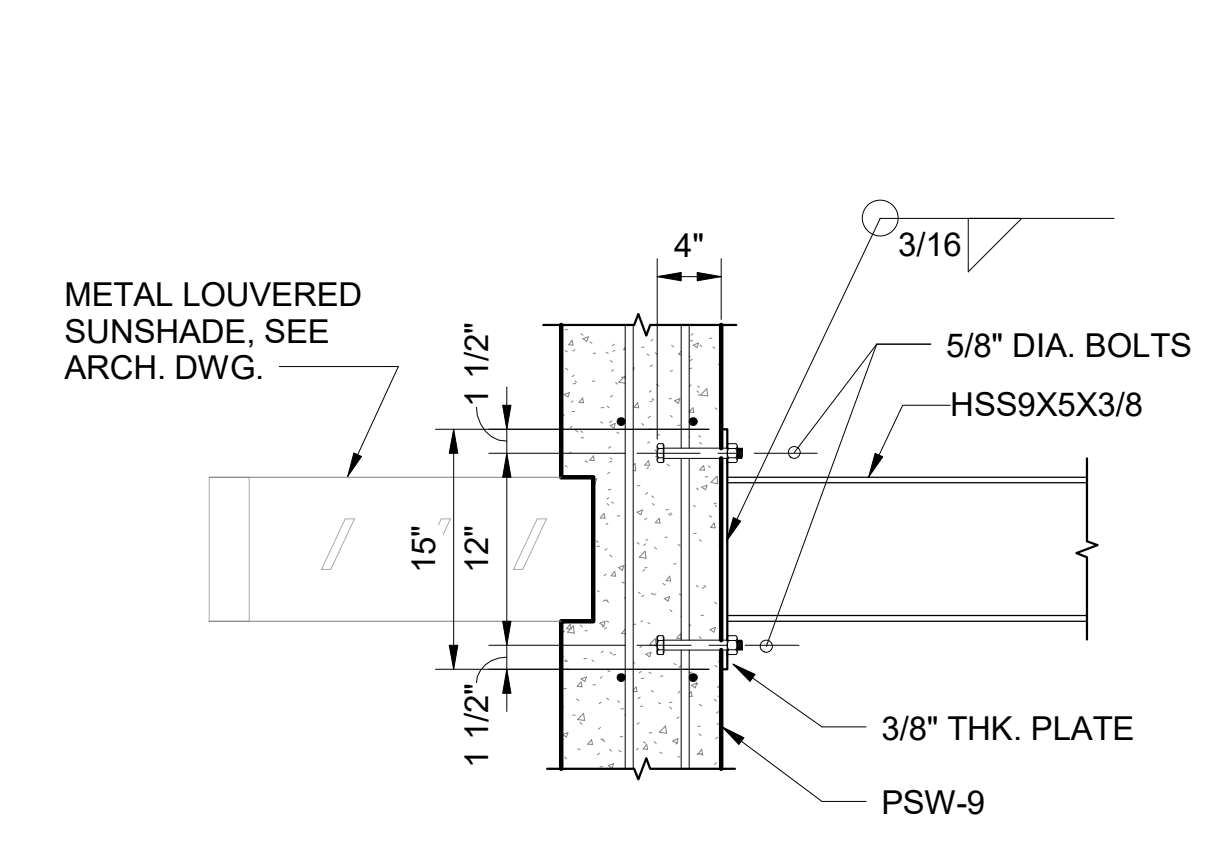
3 DETAIL
S618 SCALE: 1" = 1'-0"



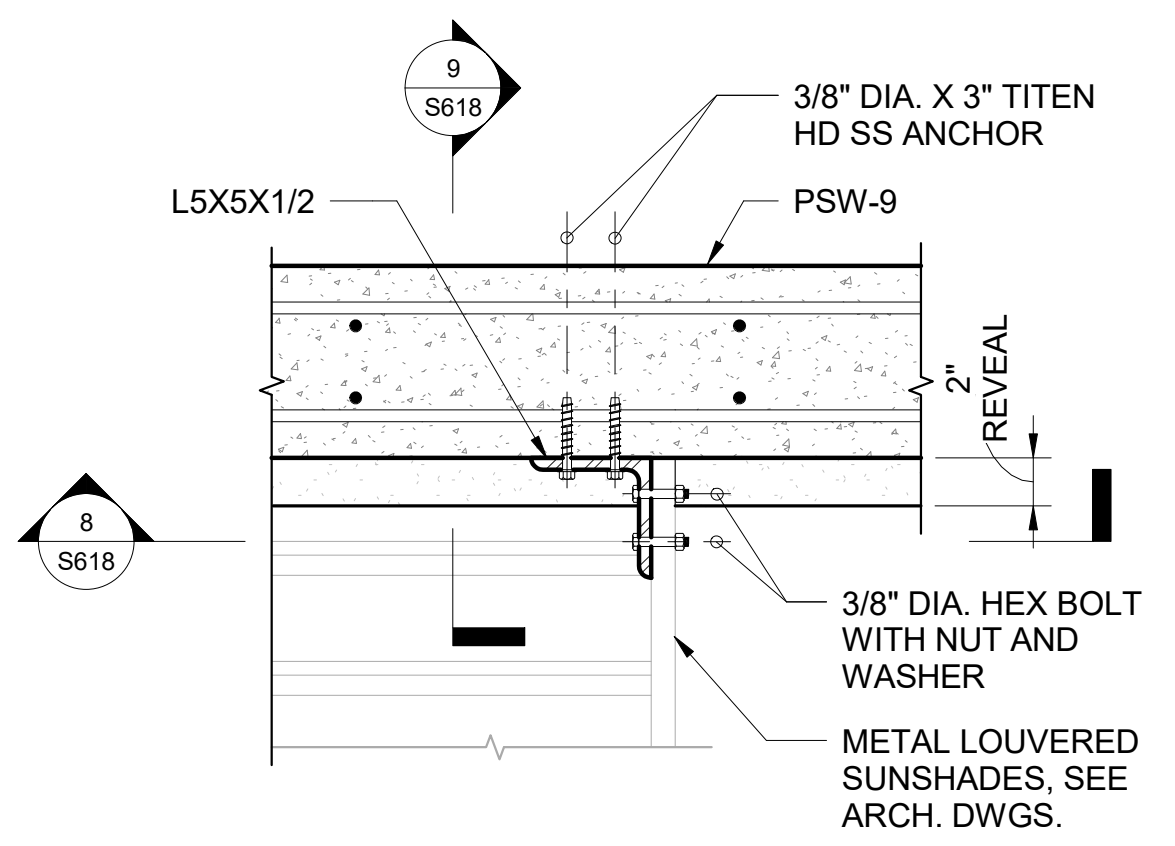
4 SECTION
S618 SCALE: 1" = 1'-0"



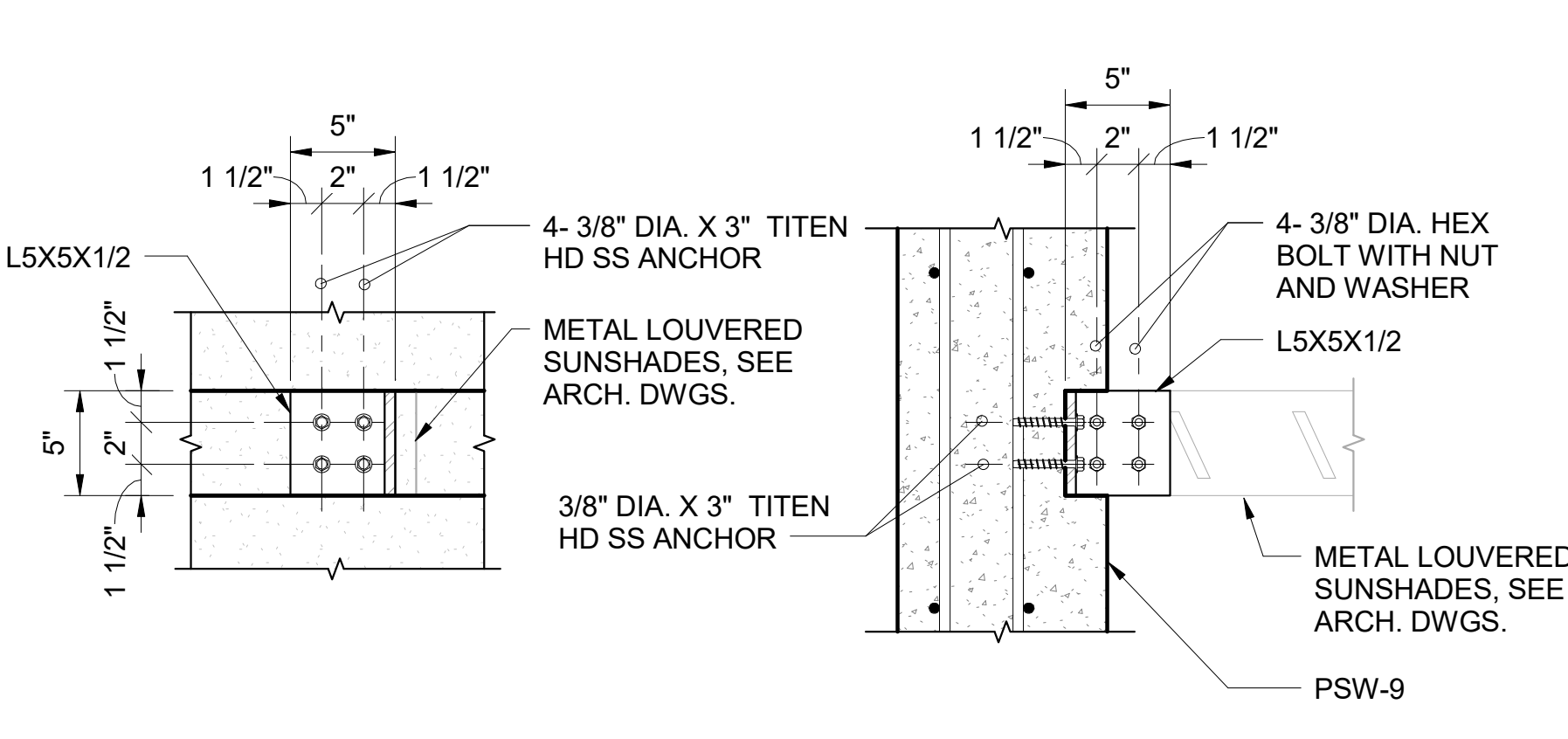
5 DETAIL
S618 SCALE: 1" = 1'-0"



6 SECTION
S618 SCALE: 1" = 1'-0"

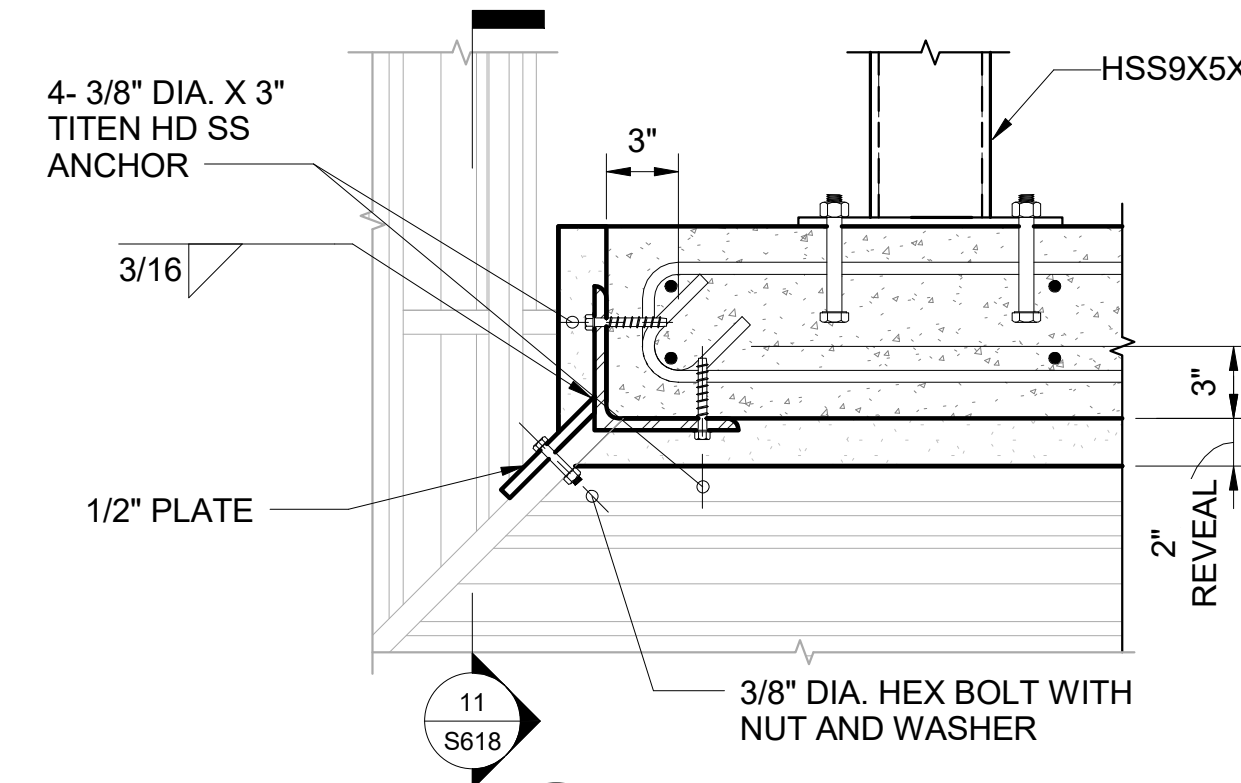


7 DETAIL
S618 SCALE: 1 1/2" = 1'-0"

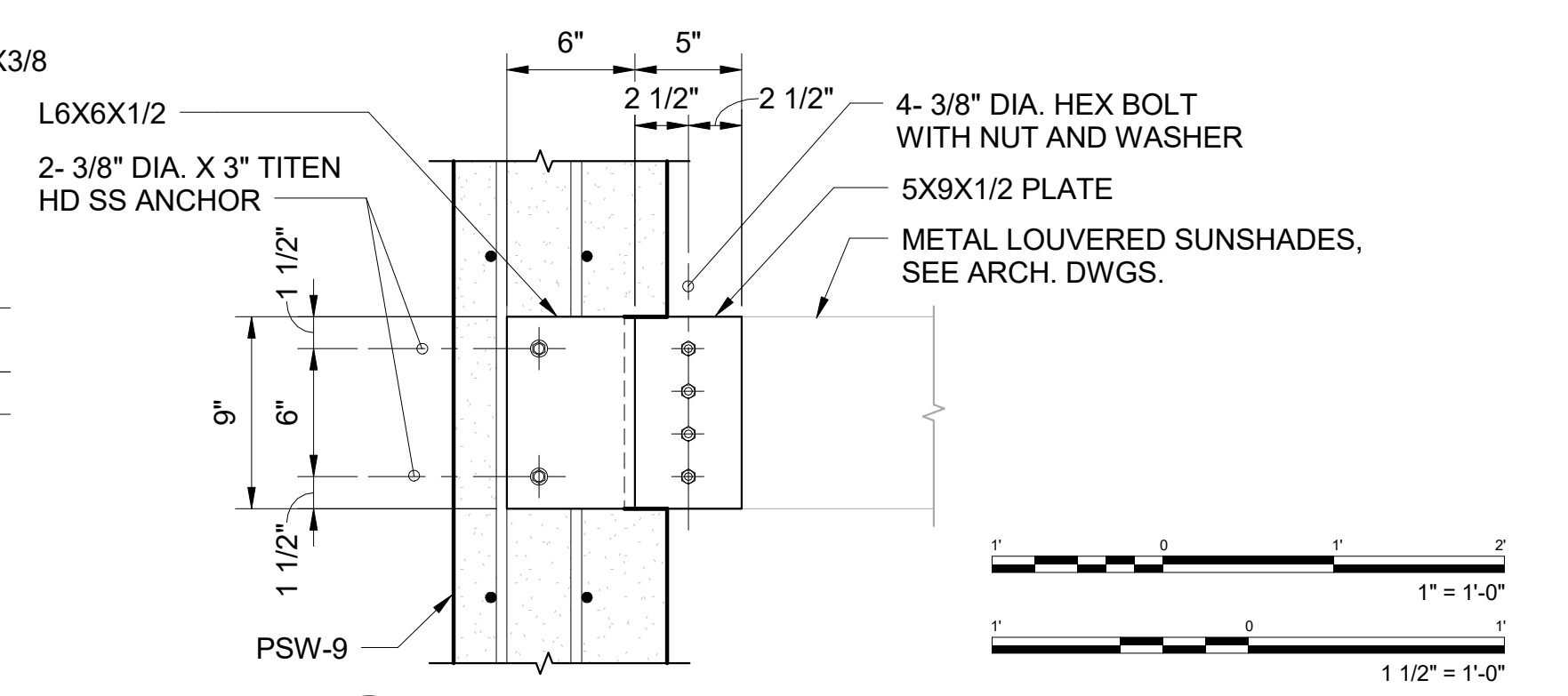


8 SECTION
S618 SCALE: 1 1/2" = 1'-0"

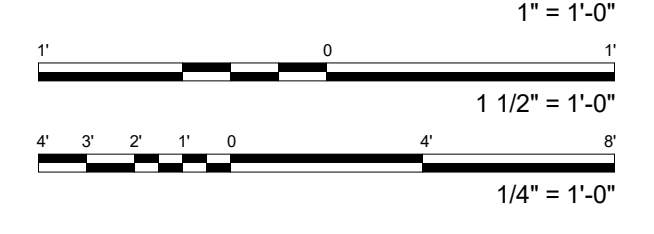
9 SECTION
S618 SCALE: 1 1/2" = 1'-0"



10 DETAIL
S618 SCALE: 1 1/2" = 1'-0"



11 SECTION
S618 SCALE: 1 1/2" = 1'-0"



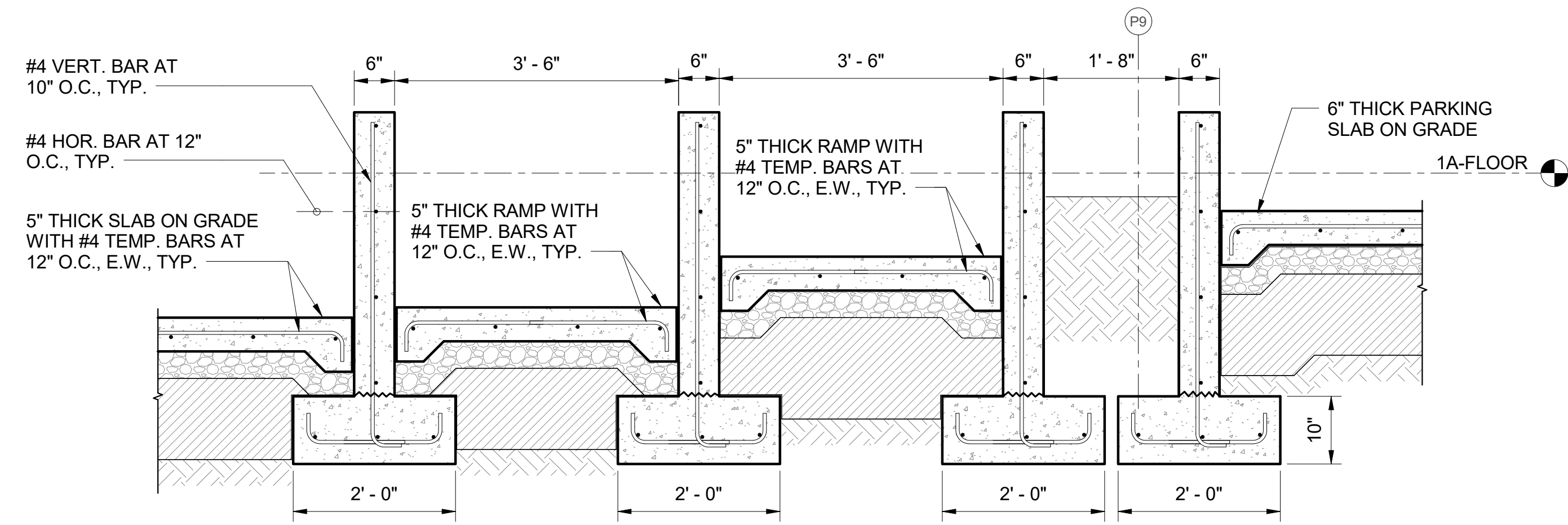
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KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII
SIGNATURE
LICENSE EXPIRATION DATE: 4/30/20
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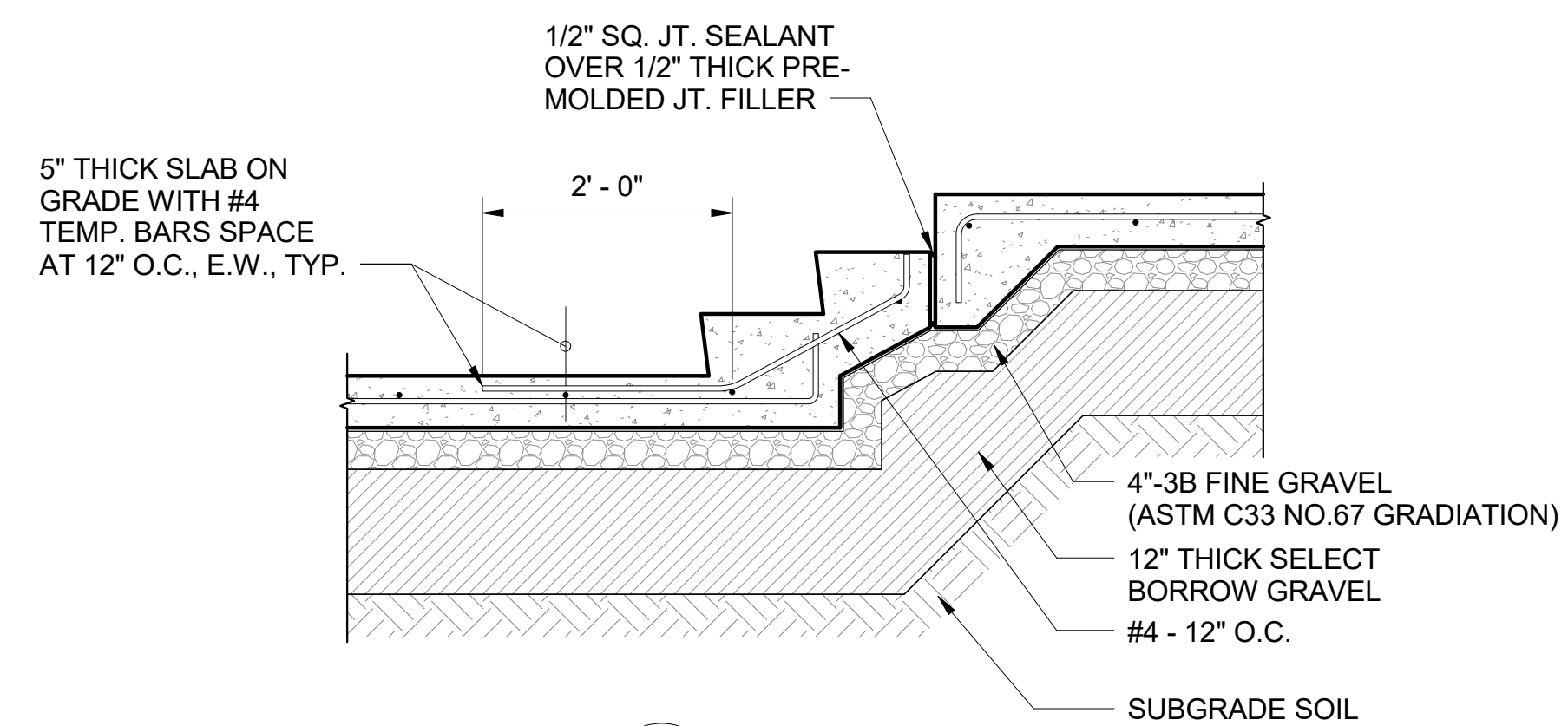
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100% FINAL DESIGN
ELEVATOR PARKING DETAILED SECTIONS AND DETAILS
CADD FILE: P:\W\2017\001\1B\010.DWG

PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	1B	S618	
		OF	SHEETS

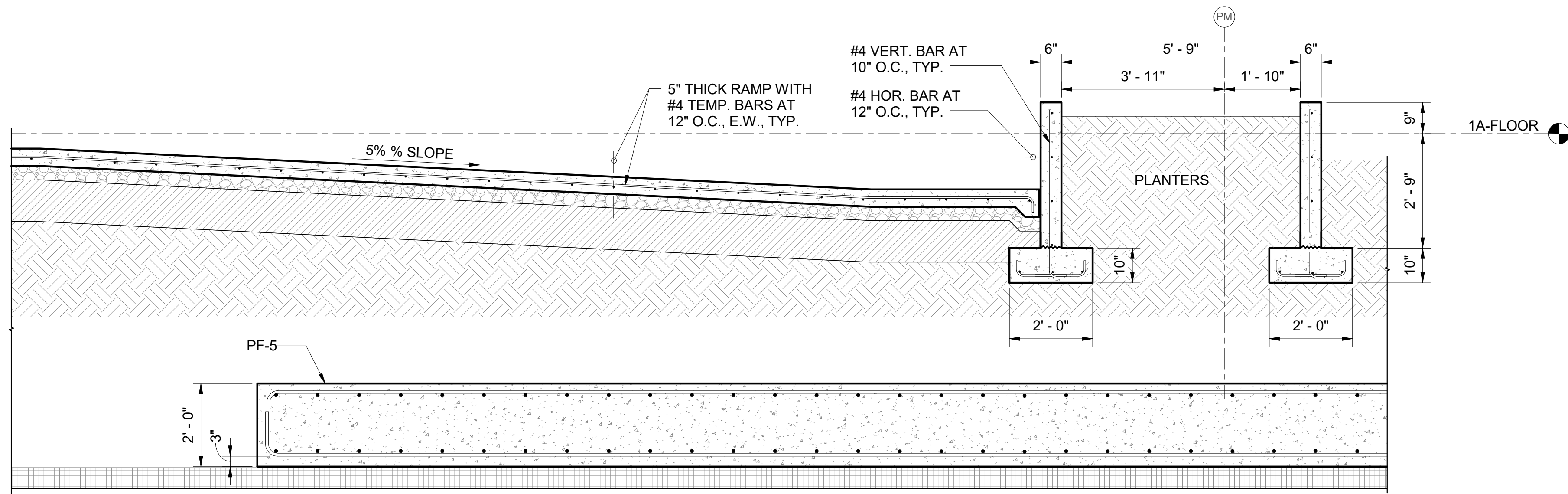
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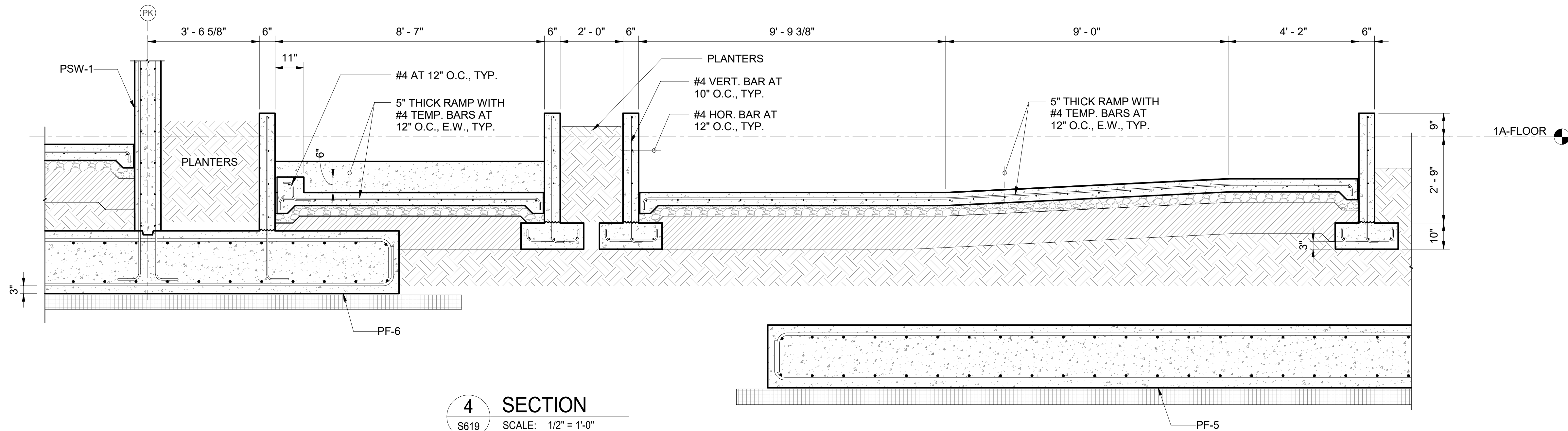
1 SECTION
S619 SCALE: 3/4" = 1'-0"



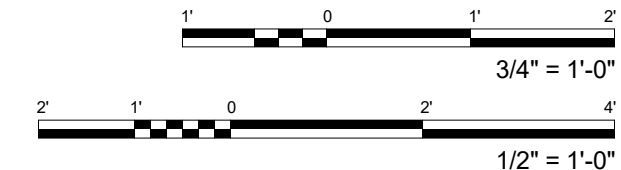
2 SECTION
S619 SCALE: 3/4" = 1'-0"



3 SECTION
S619 SCALE: 1/2" = 1'-0"



4 SECTION
S619 SCALE: 1/2" = 1'-0"



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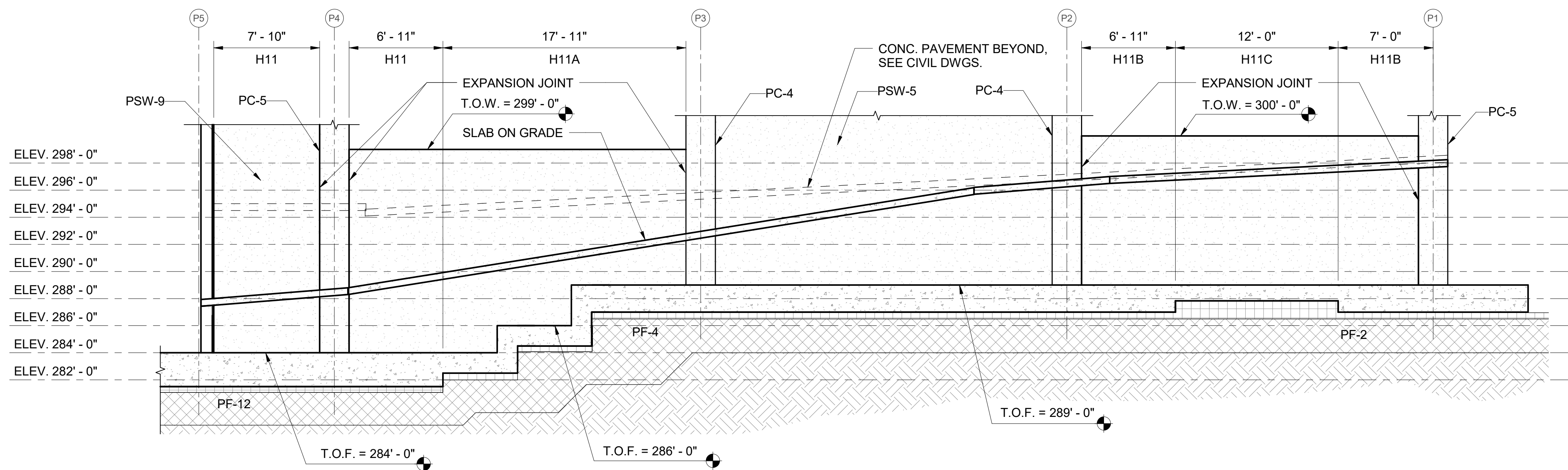
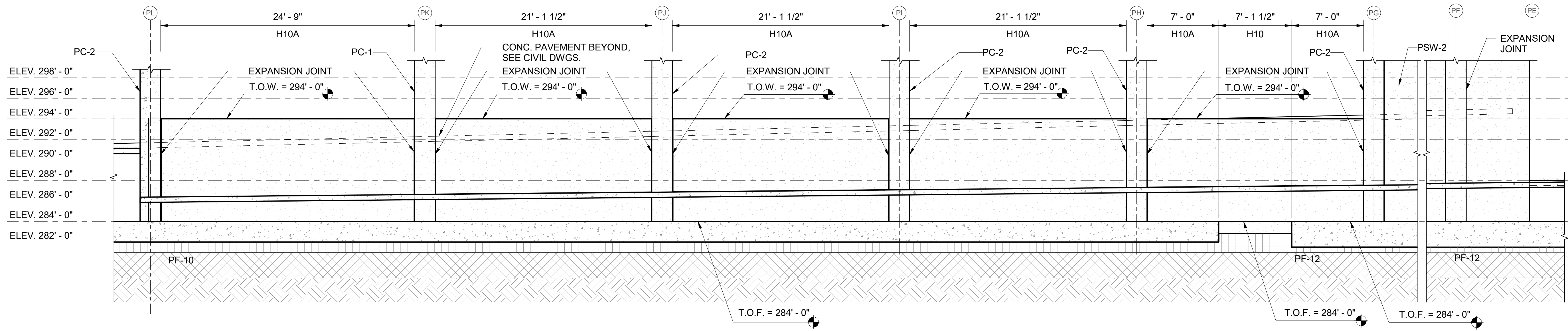
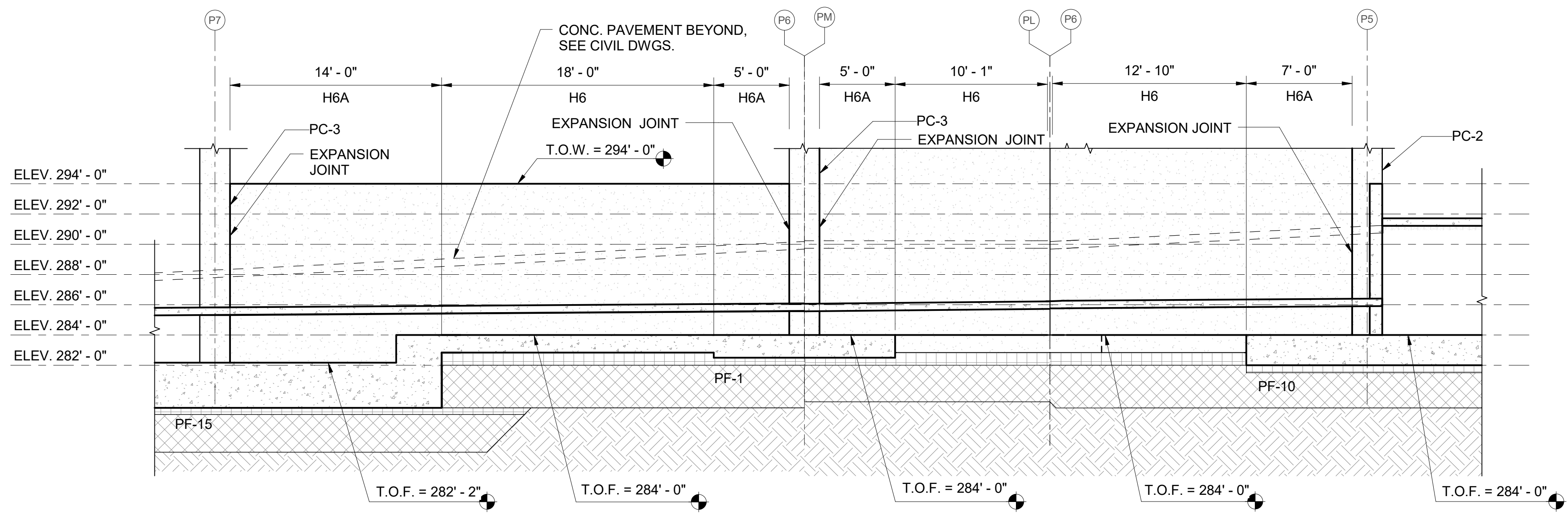
KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII

WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[PUVABUUBUJUVUWUP]

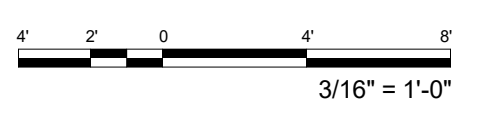
SHEET TITLE:
LOBBY SECTIONS AND DETAILS

PROJECT:	2017-001
DRAWN:	LC
DATE:	7/25/2019
PHASE:	SHEET
	1B S619
	OF SHEETS

CADD FILE:



5 RETAINING WALL (RW-1) PROFILE
S710 SCALE: 3/16" = 1'-0"



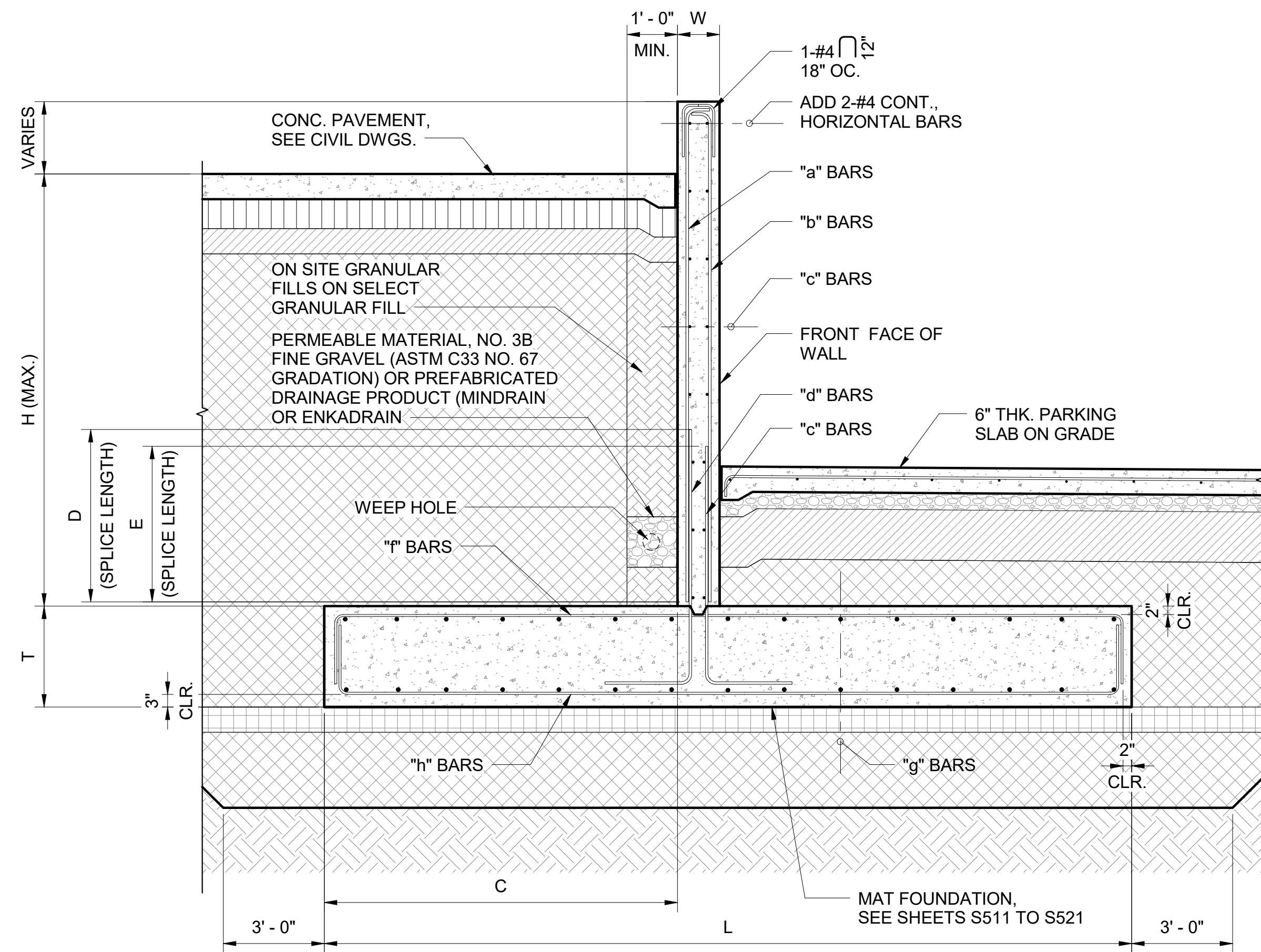
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TEL 808.533.8880 FAX 808.599.3769 www.ferrarochoi.com

KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII USA
LICENSE EXPIRATION DATE 4/30/20

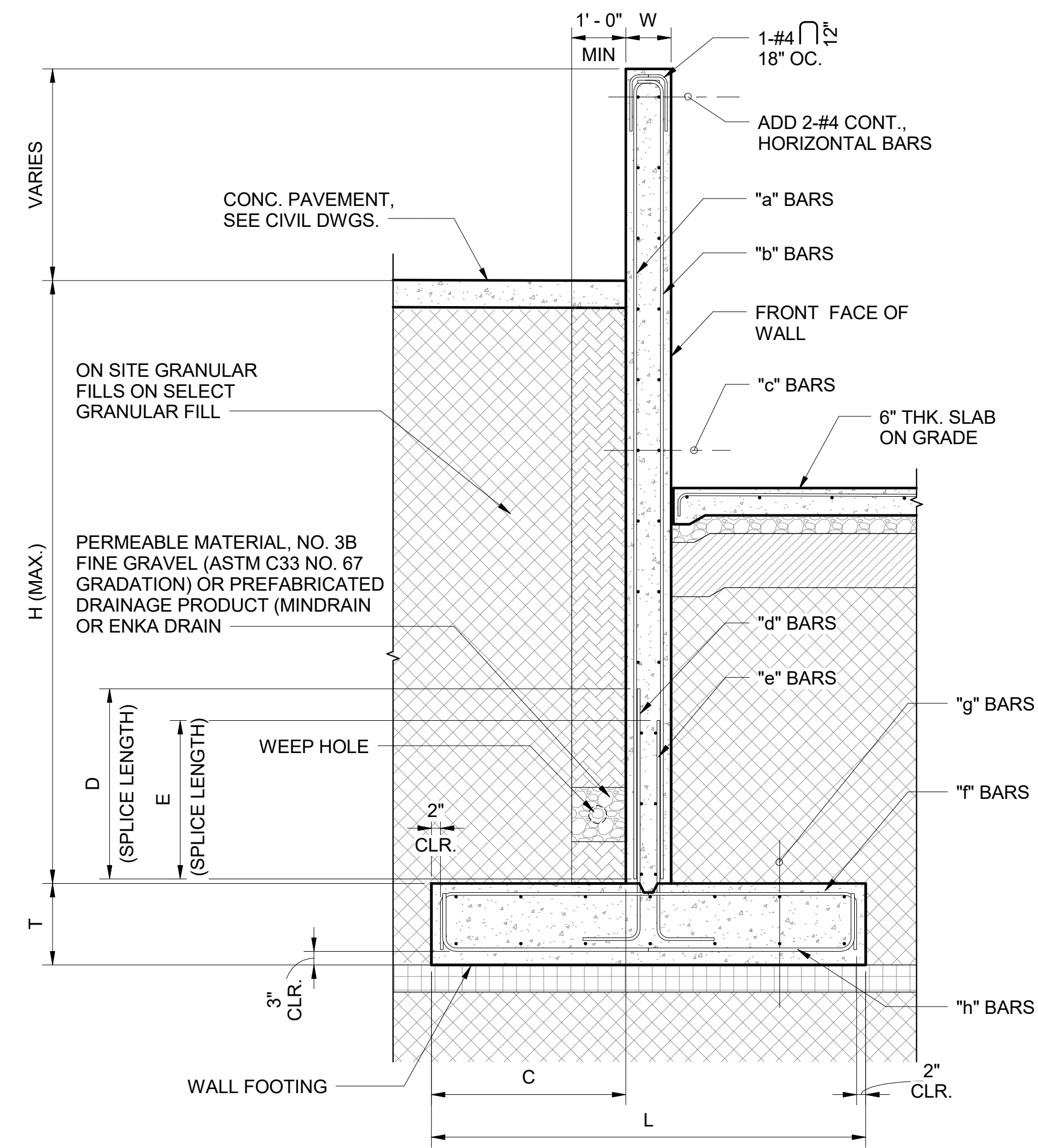
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WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[Signature]

PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	RETAINING WALL (RW-1) PROFILE	CADD FILE:	
DRAWN:	RT						
DATE:	7/25/2019						
PHASE	SHEET						
1B	S710						
	OF						
	SHEETS						

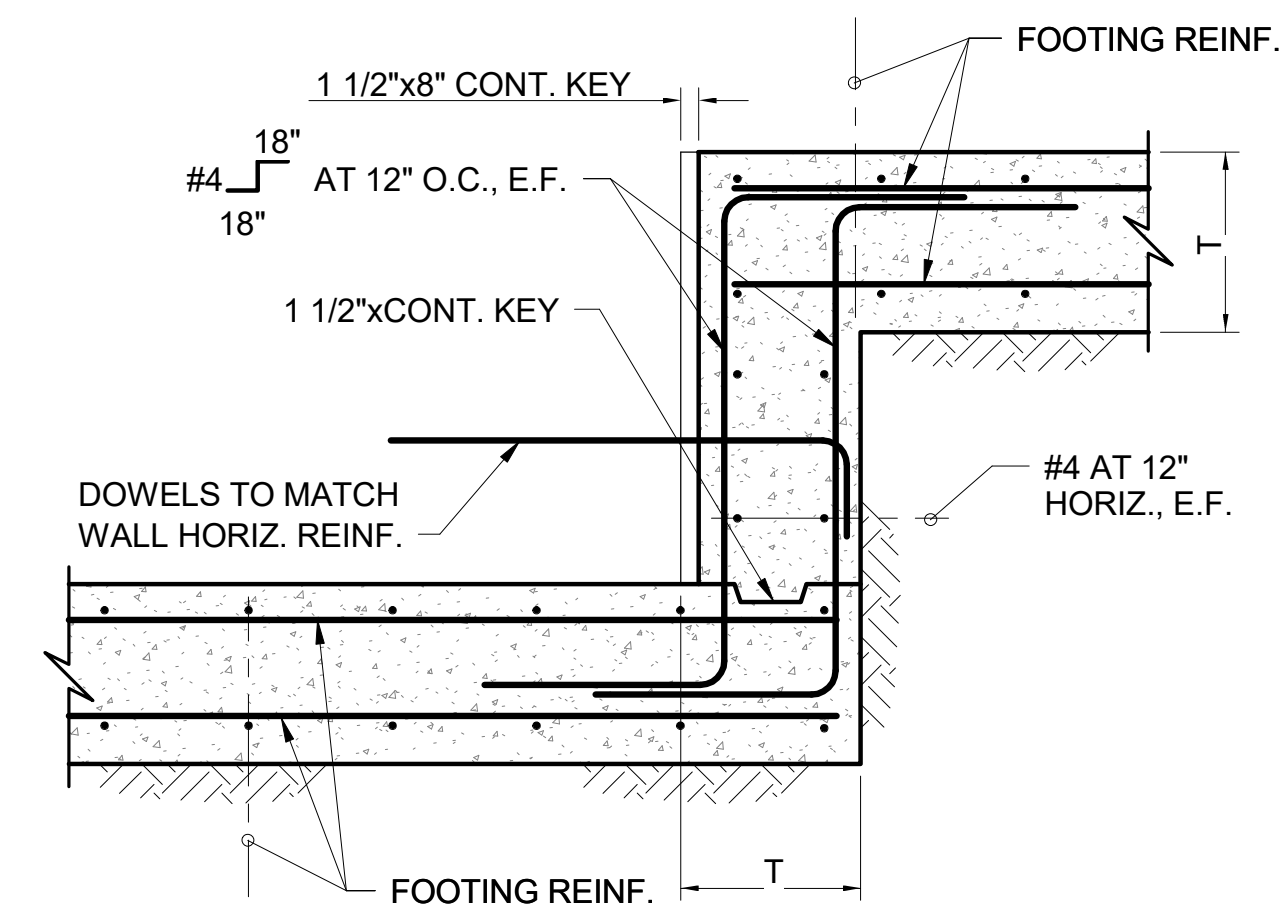


1 RETAINING WALL SECTION (RW-1) TYPE 1
S711 SCALE: 1/2" = 1'-0"

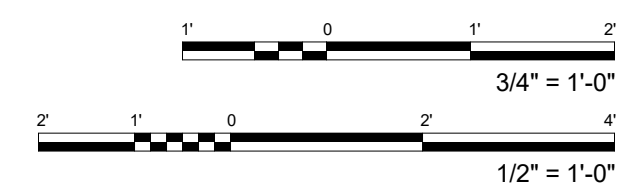


2 RETAINING WALL SECTION (RW-1) TYPE 2
S711 SCALE: 1/2" = 1'-0"

RETAINING WALL SCHEDULE (RW-1)								
WALL MARK	H6	H6A	H10	H10A	H11	H11A	H11B	H11C
H (MAX.)	6'-0"	6'-0"	10'-0"	10'-0"	11'-0"	11'-0"	11'-0"	11'-0"
W	10"	10"	10"	10"	10"	10"	10"	10"
T	1'-2"	SEE FOT. SCHED	1'-2"	SEE FOT. SCHED	SEE FOT. SCHED	1'-6"	SEE FOT. SCHED	1'-2"
L	4'-9"	SEE FOT. SCHED	8'-9"	SEE FOT. SCHED	SEE FOT. SCHED	8'-0"	SEE FOT. SCHED	8'-0"
C	1'-0"	SEE FOT. SCHED	1'-0"	SEE FOT. SCHED	SEE FOT. SCHED	3'-7"	SEE FOT. SCHED	3'-7"
D	NONE	NONE	3'-0"	3'-0"	4'-6"	4'-6"	3'-0"	3'-0"
E	NONE	NONE	2'-6"	2'-6"	2'-6"	2'-6"	3'-0"	3'-0"
"a" BARS	#5 AT 12" O.C.	#5 AT 12" O.C.	#6 AT 12" O.C.	#6 AT 12" O.C.	#7 AT 12" O.C.	#7 AT 12" O.C.	#6 AT 16" O.C.	#6 AT 16" O.C.
"b" BARS	#5 AT 12" O.C.	#5 AT 12" O.C.	#5 AT 12" O.C.	#5 AT 12" O.C.	#5 AT 12" O.C.	#5 AT 12" O.C.	#6 AT 16" O.C.	#6 AT 16" O.C.
"c" BARS	#4 AT 12" O.C.	#4 AT 12" O.C.	#4 AT 12" O.C.	#4 AT 12" O.C.	#4 AT 12" O.C.	#4 AT 12" O.C.	#4 AT 12" O.C.	#4 AT 12" O.C.
"d" BARS	NONE	NONE	#6 AT 6" O.C.	#6 AT 6" O.C.	#7 AT 6" O.C.	#7 AT 6" O.C.	#6 AT 8" O.C.	#6 AT 8" O.C.
"e" BARS	NONE	NONE	#5 AT 12" O.C.	#5 AT 12" O.C.	#5 AT 12" O.C.	#5 AT 12" O.C.	#6 AT 8" O.C.	#6 AT 8" O.C.
"f" BARS	#5 AT 12" O.C.	SEE FOT. SCHED	#6 AT 10" O.C.	SEE FOT. SCHED	SEE FOT. SCHED	#5 AT 18" O.C.	SEE FOT. SCHED	#5 AT 12" O.C.
"g" BARS	#5 AT 18" O.C.	SEE FOT. SCHED	#5 AT 18" O.C.	SEE FOT. SCHED	SEE FOT. SCHED	#5 AT 18" O.C.	SEE FOT. SCHED	#5 AT 12" O.C.
"h" BARS	#5 AT 18" O.C.	SEE FOT. SCHED	#5 AT 18" O.C.	SEE FOT. SCHED	SEE FOT. SCHED	#6 AT 12" O.C.	SEE FOT. SCHED	#5 AT 12" O.C.
TYPE	TYPE 2	TYPE 1	TYPE 2	TYPE 1	TYPE 1	TYPE 2	TYPE 1	TYPE 2

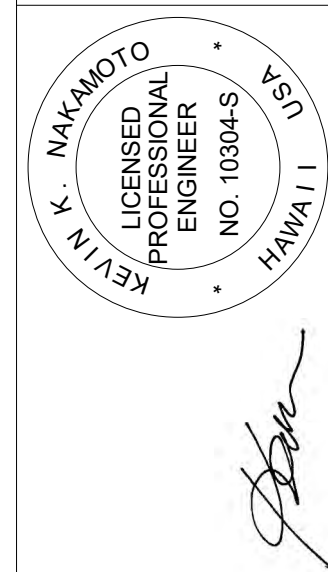


3 STEP FOOTING DETAIL
S711 SCALE: 3/4" = 1'-0"



NOTE:
WALL VERTICAL BARS CAN BE ROTATED ON SITE TO MAINTAIN STANDARD HOOK LENGTH.

FERRARO CHOI

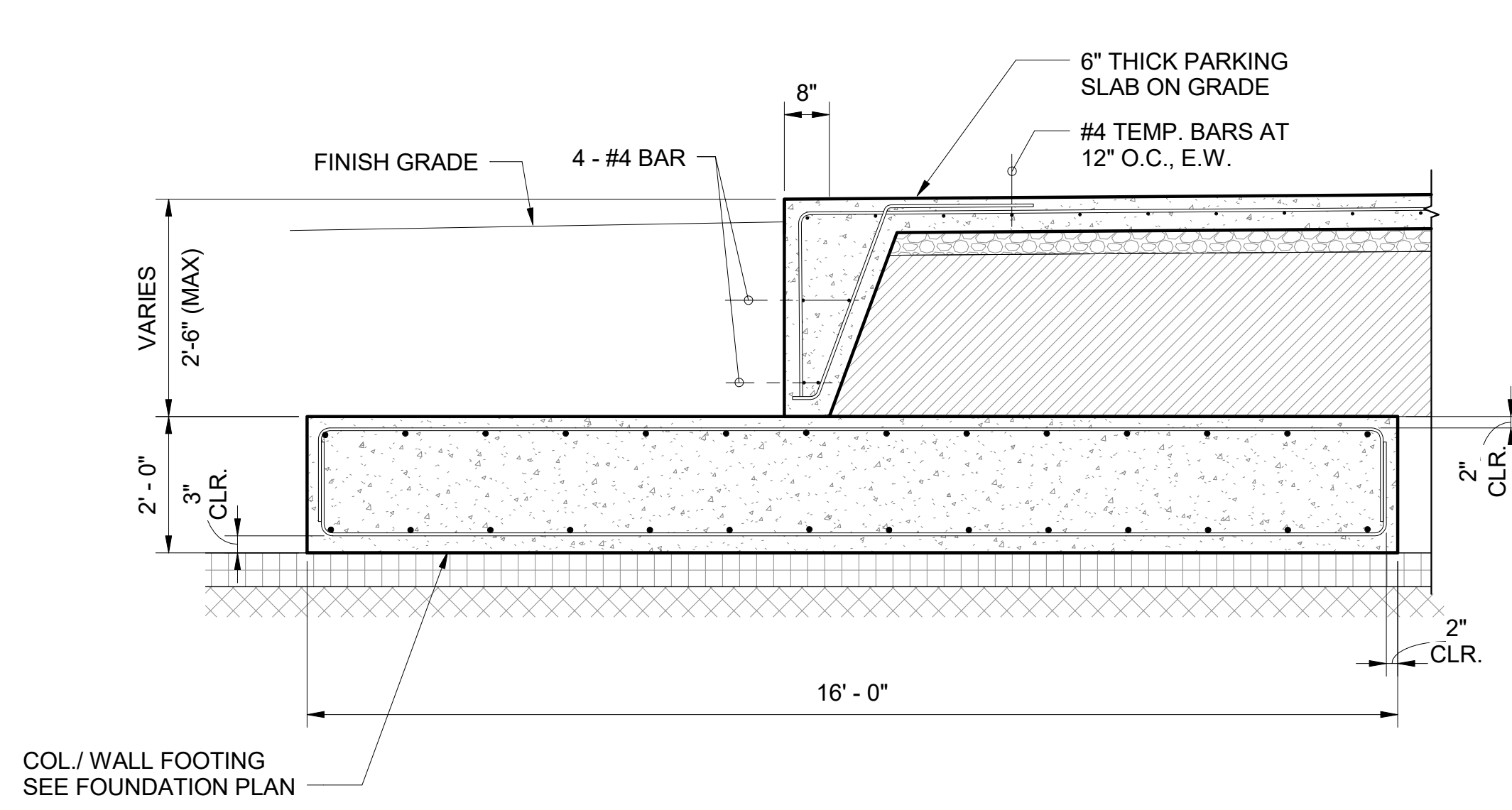


WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[Signature]

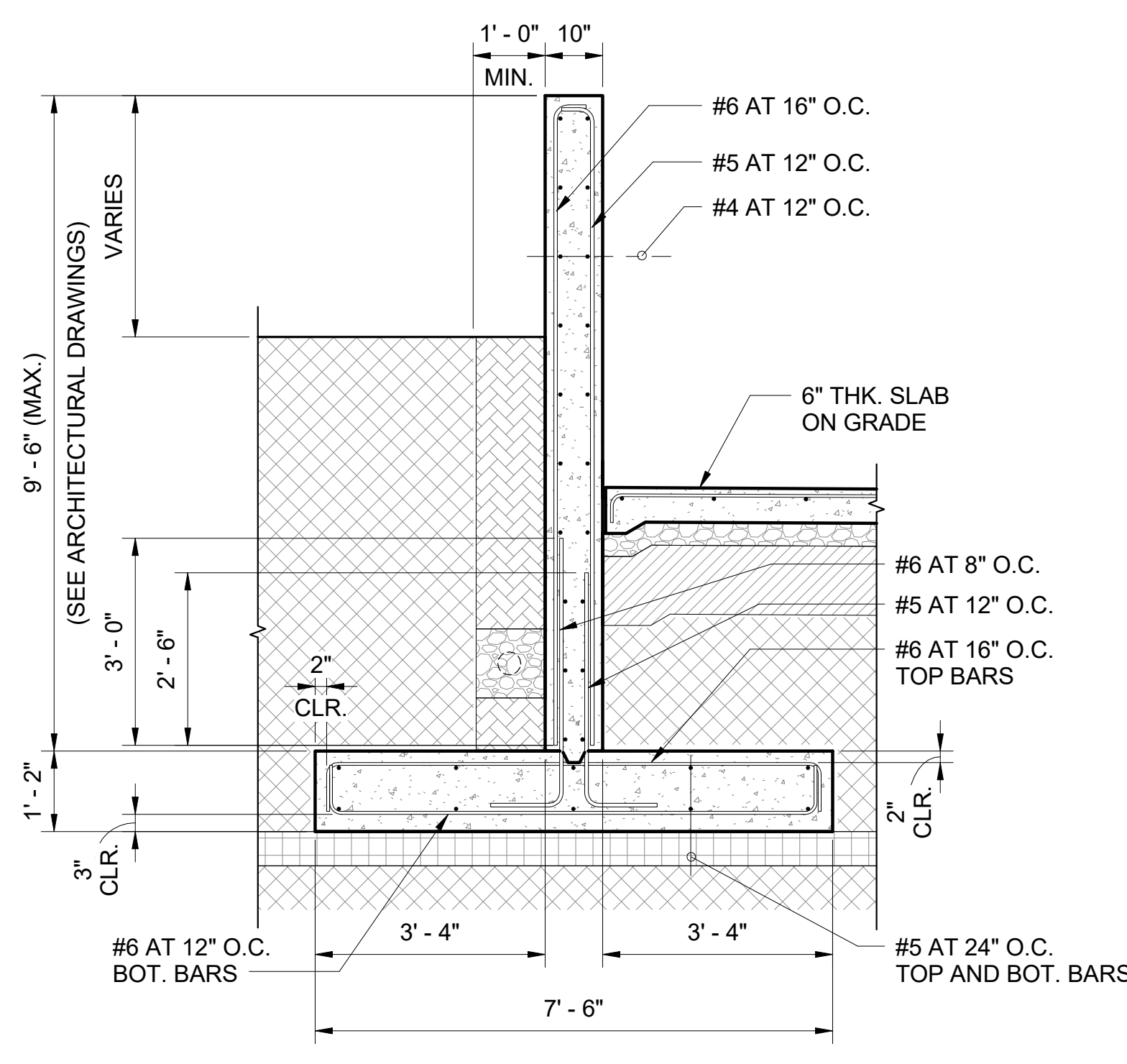
SHEET TITLE:
RETAINING WALL SECTIONS

PROJECT:	2017-001	REVISIONS:	LC
DRAWN:	7/25/2019		
DATE:			
PHASE	SHEET	OF	
1B	S711		

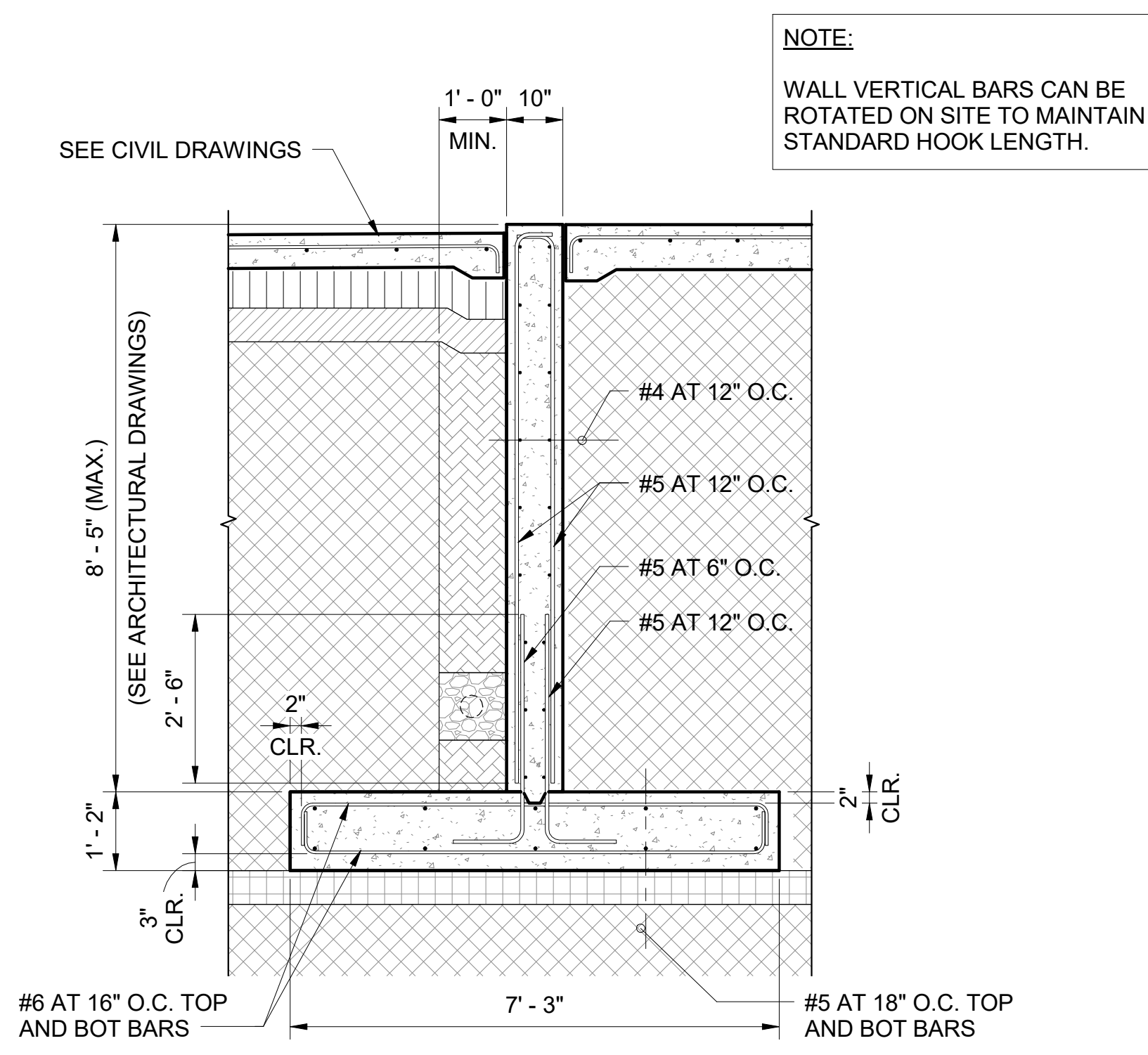
FERRARO CHOI AND ASSOCIATES LTD
ARCHITECTURE / INTERIOR ARCHITECTURE / RESEARCH
1240 ALA MOANA BLVD., STE. 510, HONOLULU, HI 96814
TEL 808.533.8880 FAX 808.599.3769 www.ferrarochoi.com



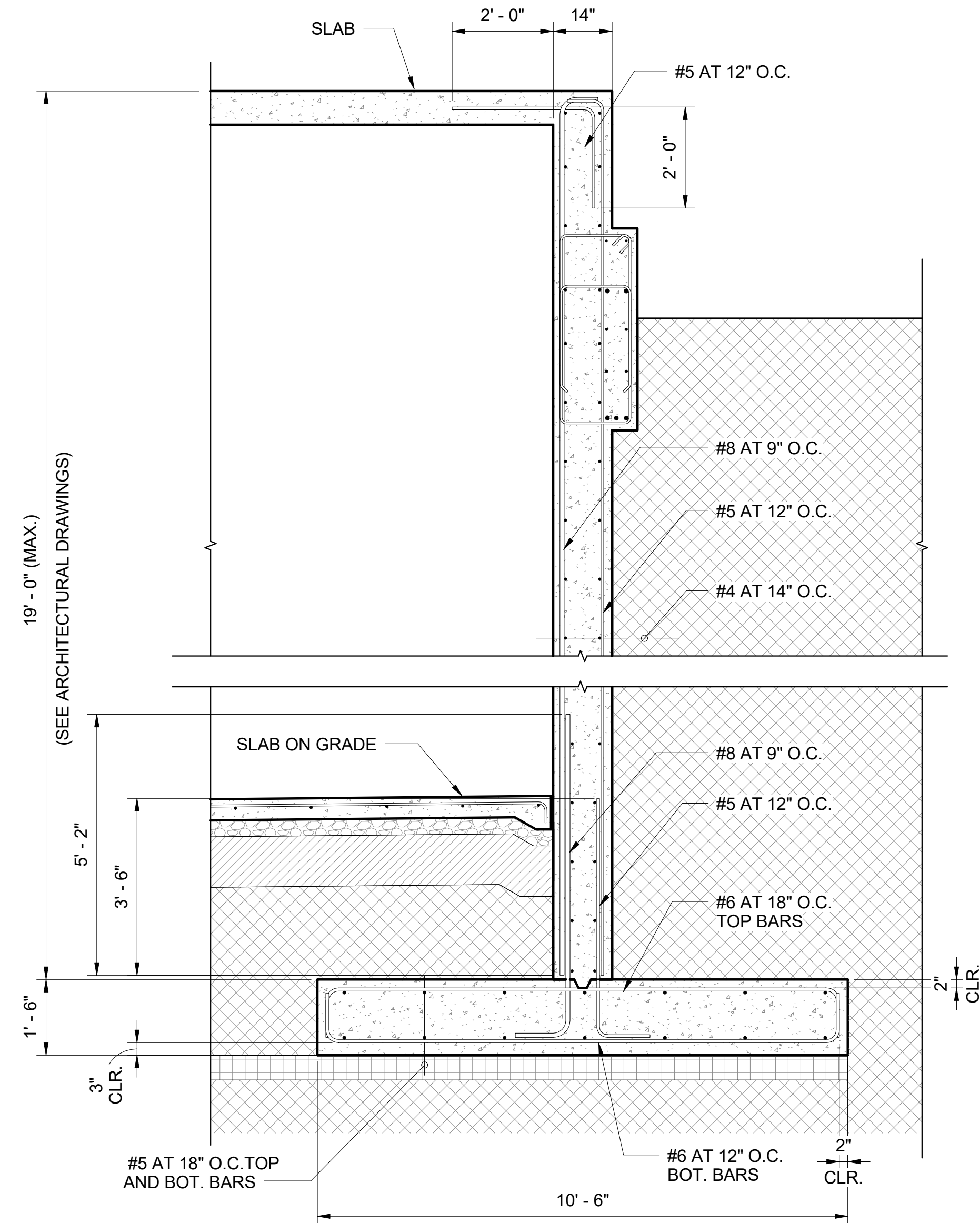
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S712 SCALE: 1/2" = 1'-0"



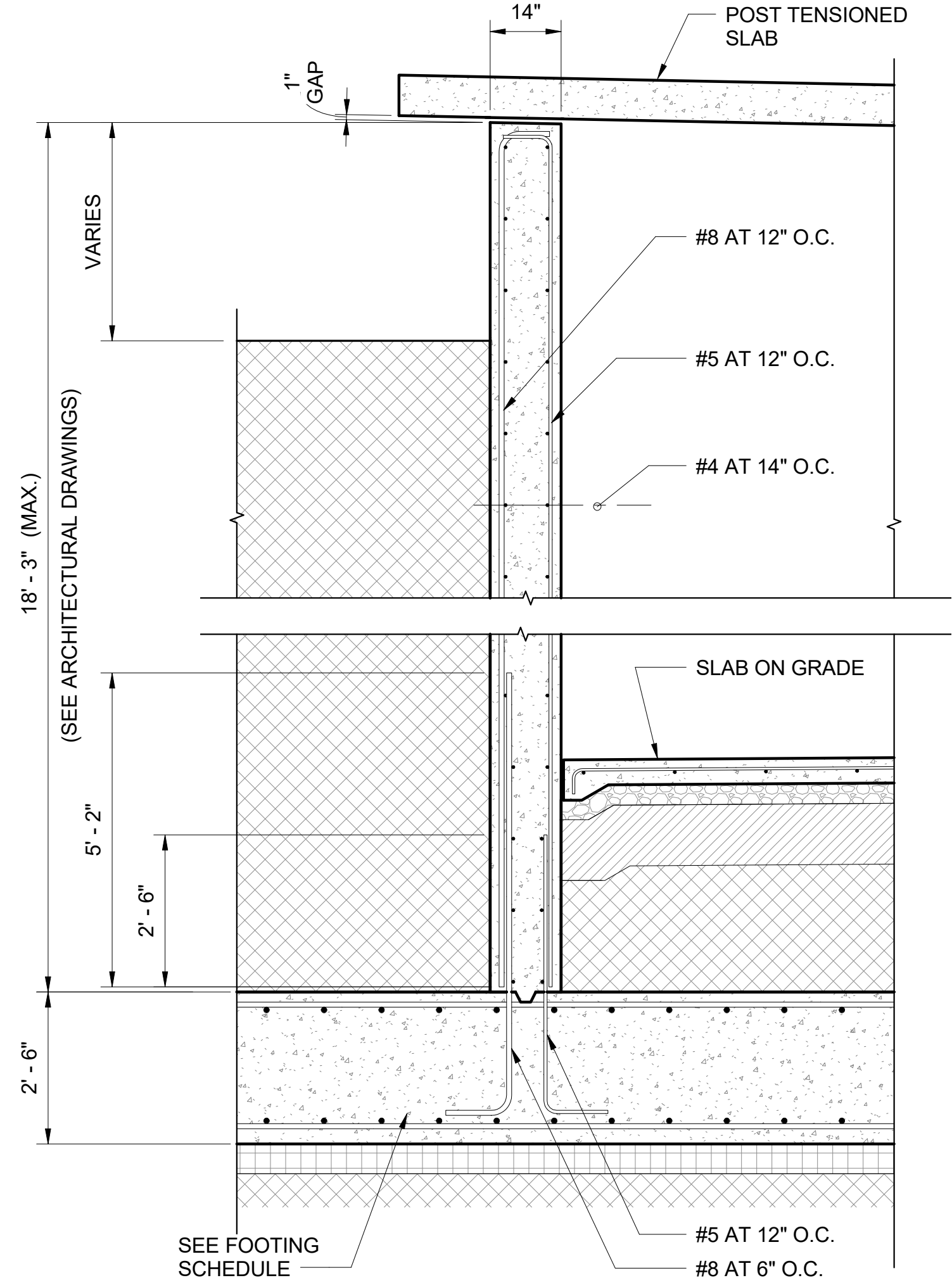
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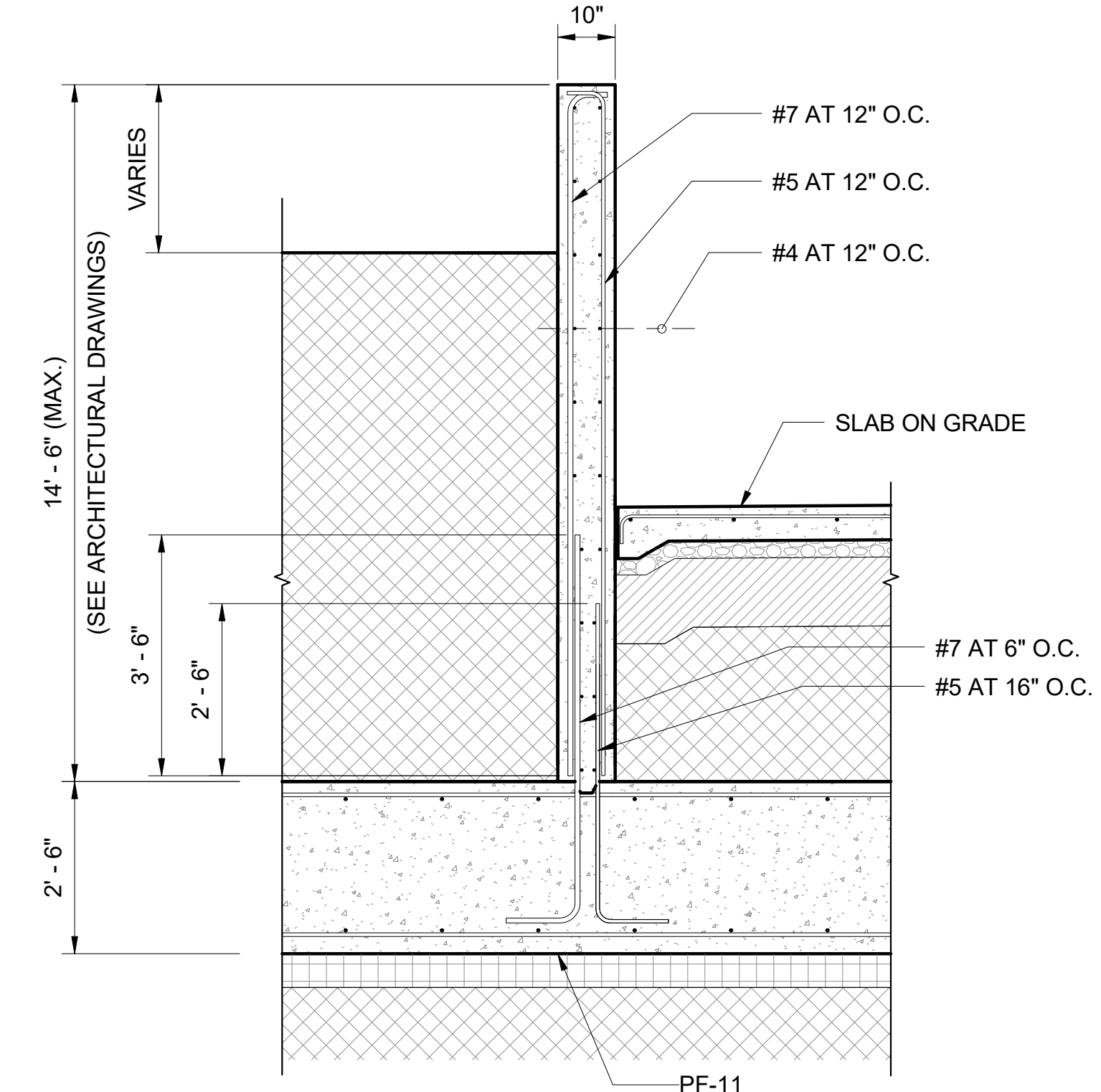
3 RETAINING WALL SECTION (RW-4)
S712 SCALE: 1/2" = 1'-0"



4 RETAINING WALL SECTION (RW-5)
S712 SCALE: 1/2" = 1'-0"



5 RETAINING WALL SECTION (RW-6)
S712 SCALE: 1/2" = 1'-0"



6 RETAINING WALL SECTION (RW-7)
S712 SCALE: 1/2" = 1'-0"

NOTE:
WALL VERTICAL BARS CAN BE ROTATED ON SITE TO MAINTAIN STANDARD HOOK LENGTH.



FERRARO CHOI



KEVIN K. MAKIMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10304-S
HAWAII
SIGNATURE
LICENSE EXPIRATION DATE: 4/30/20
THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A MEMBER OF THE HAWAIIAN BOARD OF ARCHITECTURE AND CONSUMER AFFAIRS
FERRARO CHOI AND ASSOCIATES LTD
ARCHITECTURE / INTERIOR ARCHITECTURE / RESEARCH
1240 ALA MOANA BLVD. STE. 510, HONOLULU, HI 96814
TEL 808.533.8880 FAX 808.599.3769 WWW.FERRAROCIOI.COM

WAILUKU CIVIC COMPLEX PHASE 1B
100% FINAL DESIGN
[PUYARU] [UP] [UW] [OW] [OP]

PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	RETAINING WALL SECTIONS
DRAWN:	RT				
DATE:	7/25/2019				
PHASE	SHEET				
1B	S712				
	OF				
	SHEETS				
					CADD FILE:

MECHANICAL LEGEND

Table with 3 columns: SYMBOLS, ABBR., DESCRIPTION. Sections include AIR DISTRIBUTION, WATER DISTRIBUTION, EQUIPMENT, and MISCELLANEOUS.

MECHANICAL SPECIFICATIONS

PART 1 - GENERAL
A. CONFORM TO APPLICABLE LAWS AND REGULATIONS OF THE STATE OF HAWAII AND (CITY & COUNTY, COUNTY) OF MAUI.
1. INTERNATIONAL BUILDING CODE (2006) AND LOCAL AMENDMENTS.
2. UNIFORM PLUMBING CODE (2006) AND LOCAL AMENDMENTS.
... (K) ALL VFD'S SHALL HAVE 3% INPUT LINE REACTOR, INTEGRAL DISCONNECT AND ABILITY TO TREND POWER CONSUMPTION.

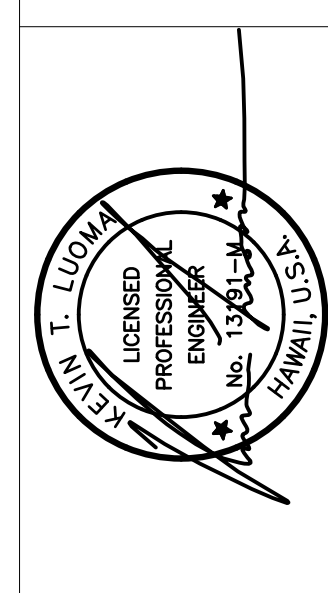
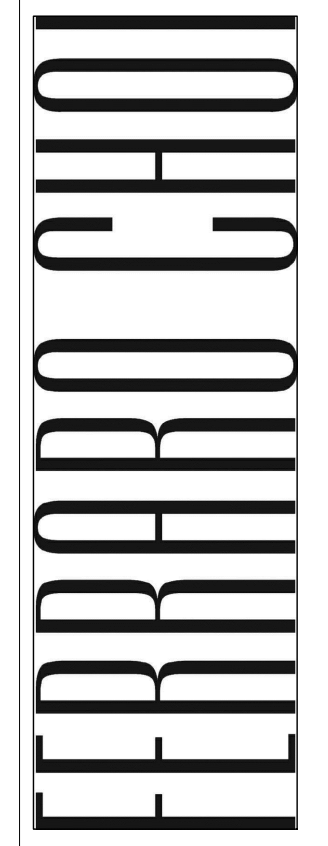
MECHANICAL SYSTEMS COMMISSIONING

MECHANICAL SYSTEMS COMMISSIONING SHALL BE REQUIRED IN ACCORDANCE WITH THE BUILDING ENERGY CONSERVATION CODE OF THE CITY AND COUNTY OF HONOLULU, REVISED ORDINANCES OF HAWAII, CHAPTER 32, SECTION 503.2.9.

PART 1 - SYSTEM COMMISSIONING
A. GENERAL:
1. COMMISSIONING IS A PROCESS THAT VERIFIES AND DOCUMENTS THAT THE SELECTED BUILDING SYSTEMS HAVE BEEN DESIGNED, INSTALLED, AND FUNCTION ACCORDING TO THE OWNER'S PROJECT REQUIREMENTS AND CONSTRUCTION DOCUMENTS.

PART 2 - SYSTEMS TESTING, ADJUSTING AND BALANCING
A. GENERAL:
1. ALL HVAC SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS. AIR AND WATER FLOW RATES SHALL BE MEASURED AND ADJUSTED TO DELIVER FINAL FLOW RATES WITHIN 10 PERCENT OF DESIGN RATES.

WSP USA Buildings Inc.
1001 Bishop Street Suite 2400
Honolulu Hawaii 96813 USA
Telephone 808 536 1737
Facsimile 808 537 5829
honolulu@wsp.com



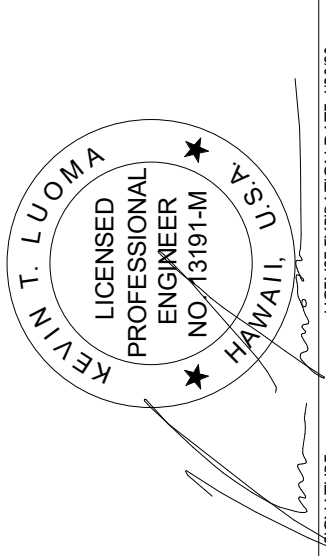
Y OESWNSW
OXOAIUT USOY
UP OEUOAF
FECA AP OESOUOUP
PUIVBUU OUP UVCUOWOP

Table with 5 columns and 4 rows containing project information and dates.

COUNTY OF MAUI MAUI COUNTY CODE, CHAPTER 16.16A ENERGY CODE
To the best of my knowledge, this project's design substantially conforms to the Energy Code for:
Building Component Systems
Electrical Component Systems
Mechanical Component Systems
Signature: [Handwritten Signature] Date: 10/05/2018
Name: KEVIN LUOMA
Title: MECHANICAL ENGINEER
License No: 13191-M

DEPARTMENT OF HEALTH NOTES

THE AIR CONDITIONING AND VENTILATION SYSTEM SHALL COMPLY WITH TITLE II, ADMINISTRATION RULES, DEPARTMENT OF HEALTH, CHAPTER 39, AIR CONDITIONING AND VENTILATION REQUIREMENTS.



THE WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF HAWAII. SEE ME IN HIS DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS.

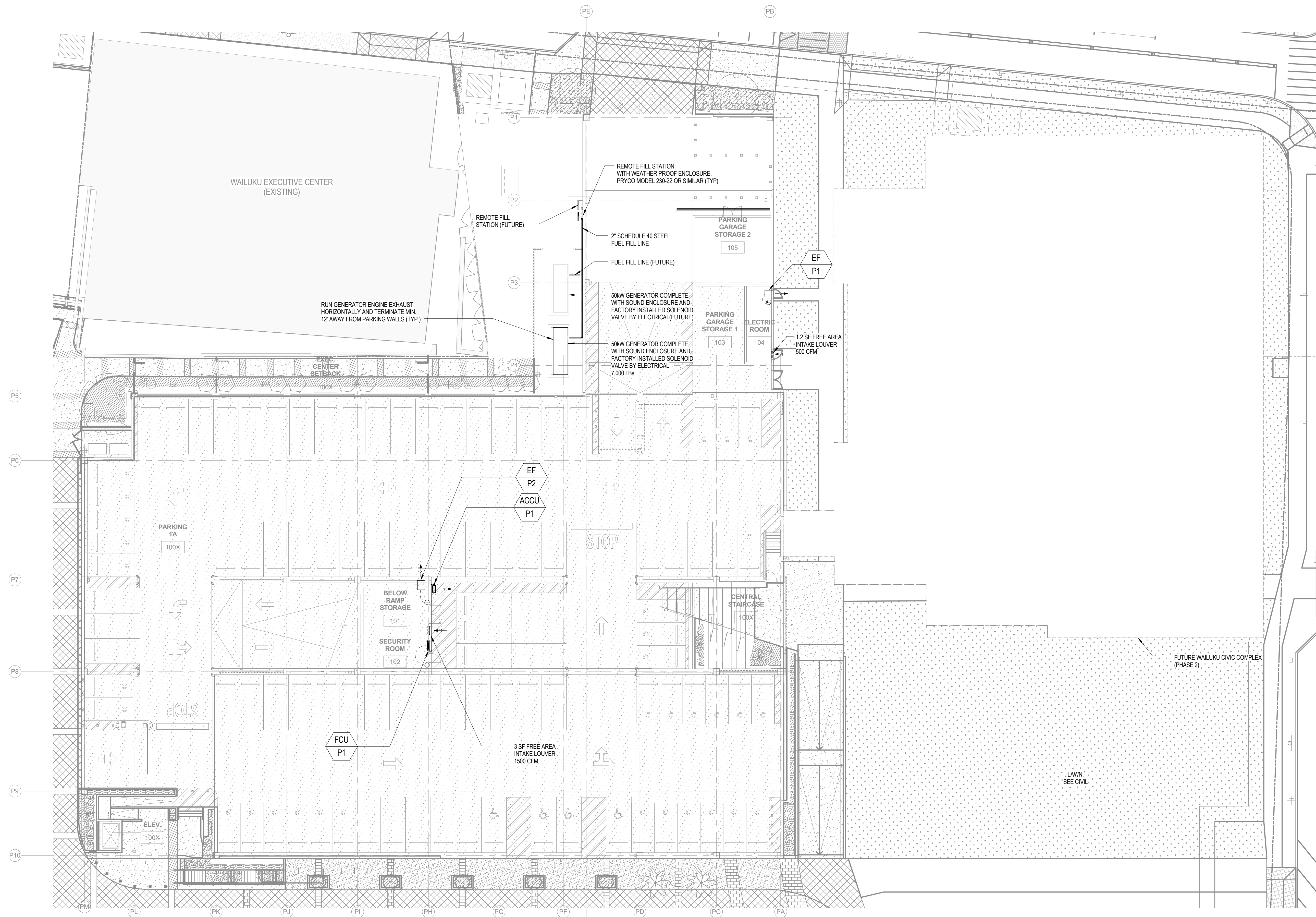
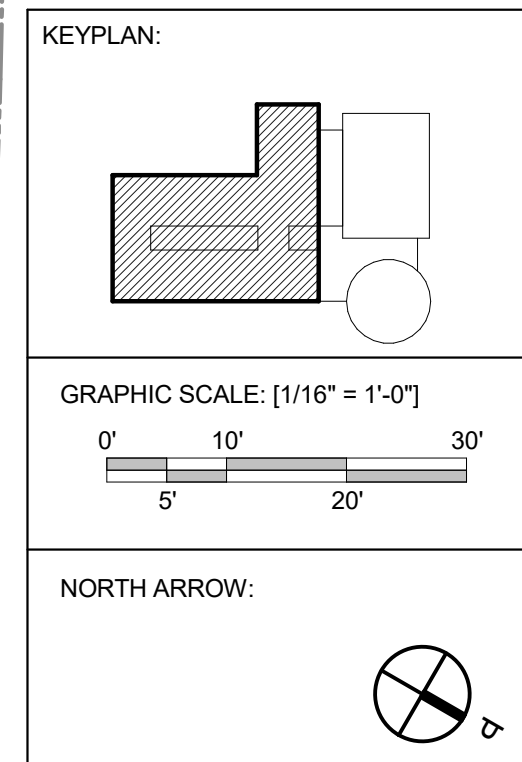
**WAILUKU CIVIC COMPLEX
 PHASE 1B
 100% FINAL DESIGN**

100% FINAL DESIGN
 [Signature]

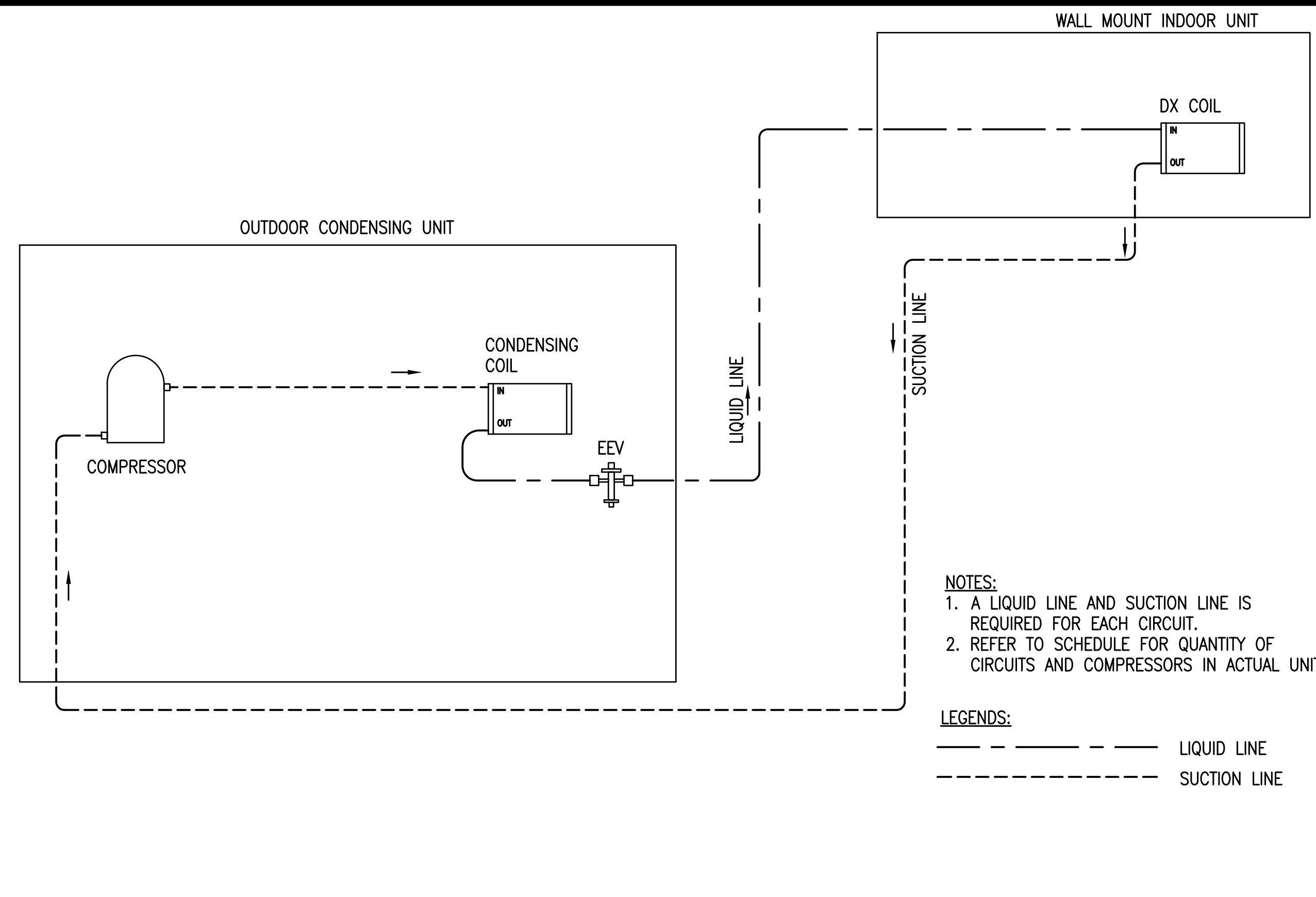
**OVERALL FLOOR
 MECHANICAL PLAN
 - LEVEL 1A**

SHEET TITLE:
 CADD FILE:

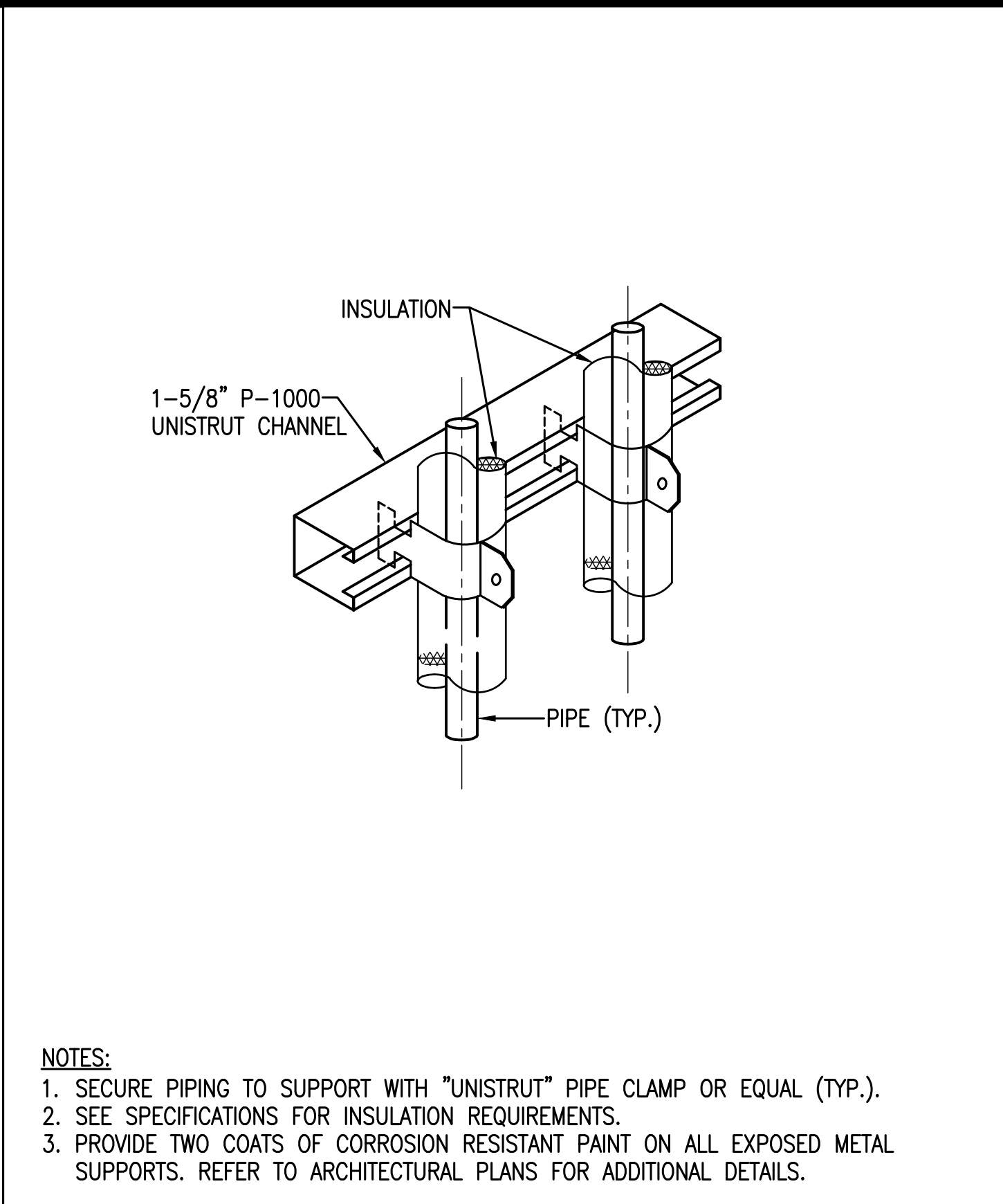
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DRAWN:	WSP
DATE:	7/25/2019
PHASE	SHEET
1B M101A	1
OF	SHEETS



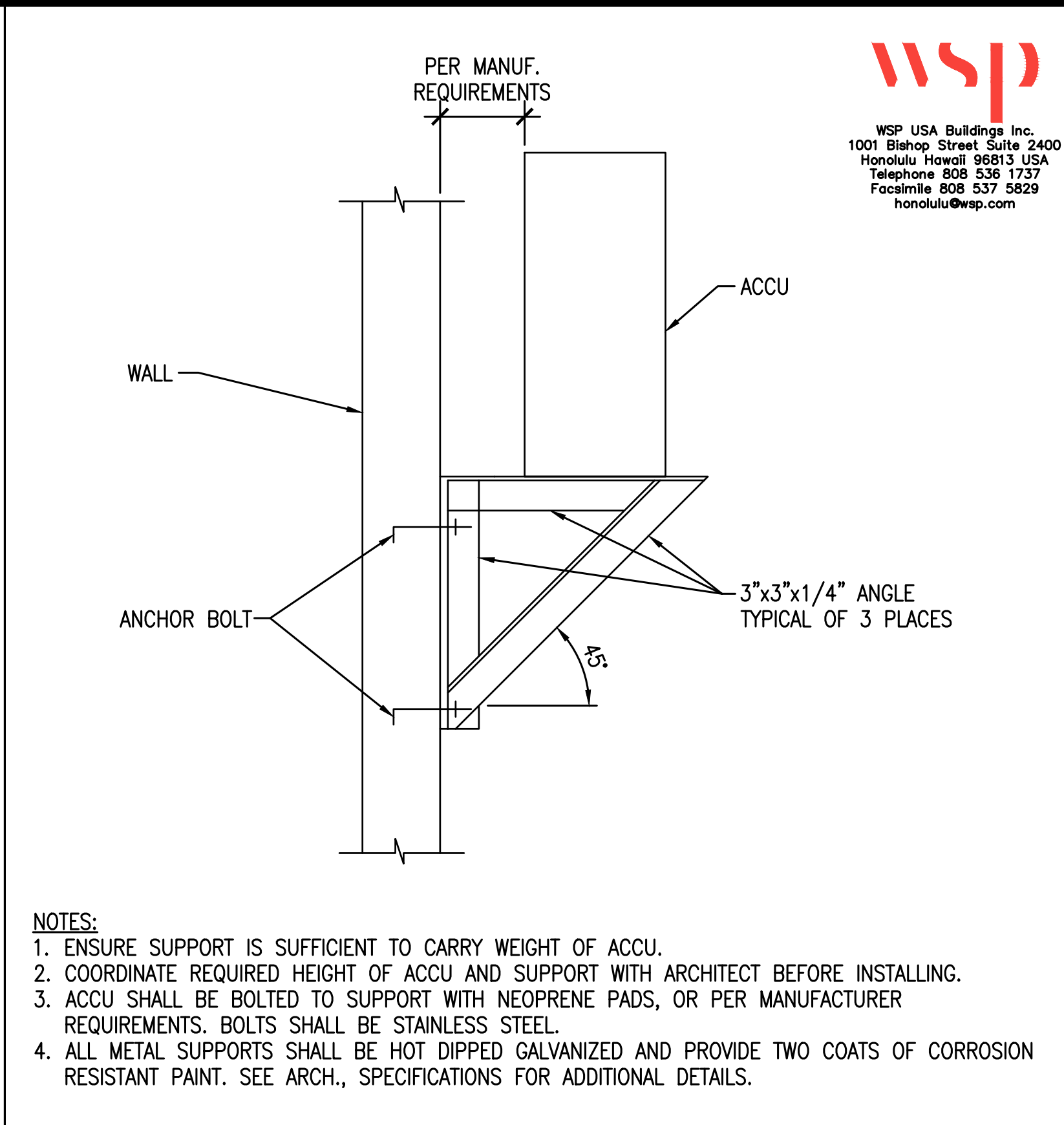
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 1/16" = 1'-0"



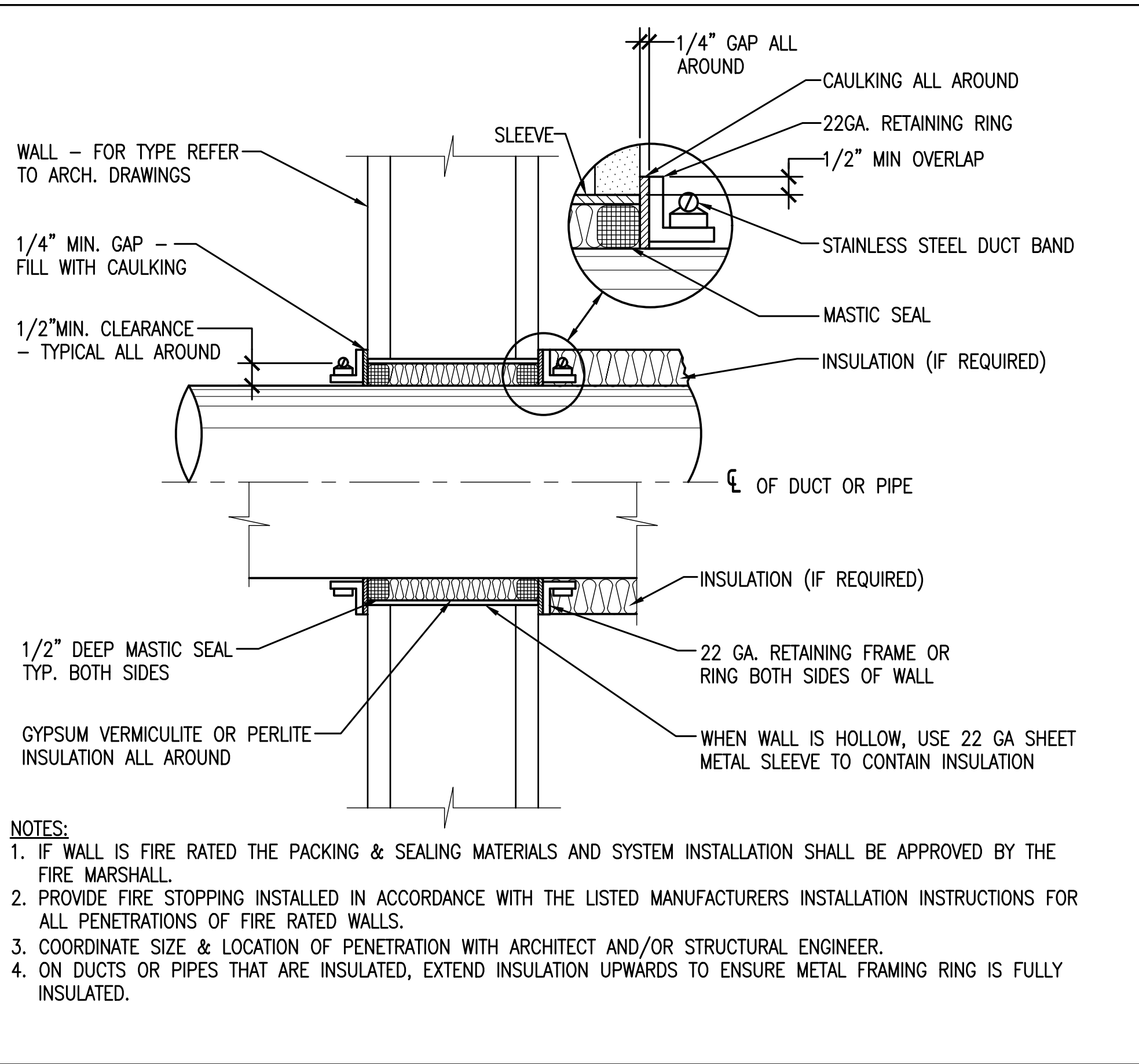
5 SPLIT SYSTEM REFRIGERANT PIPING DETAIL
NOT TO SCALE



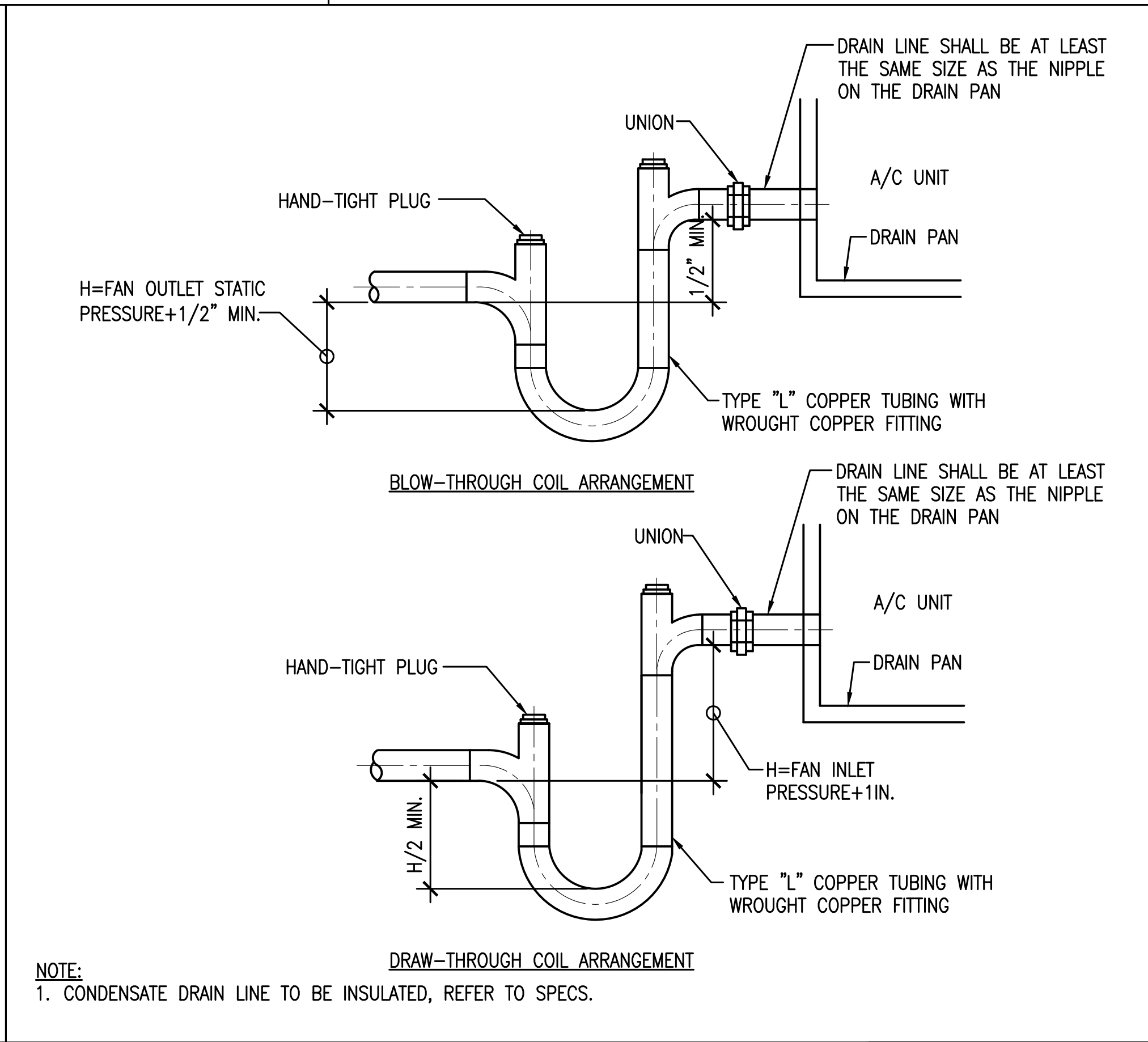
3 REFRIGERANT PIPE SUPPORT DETAIL
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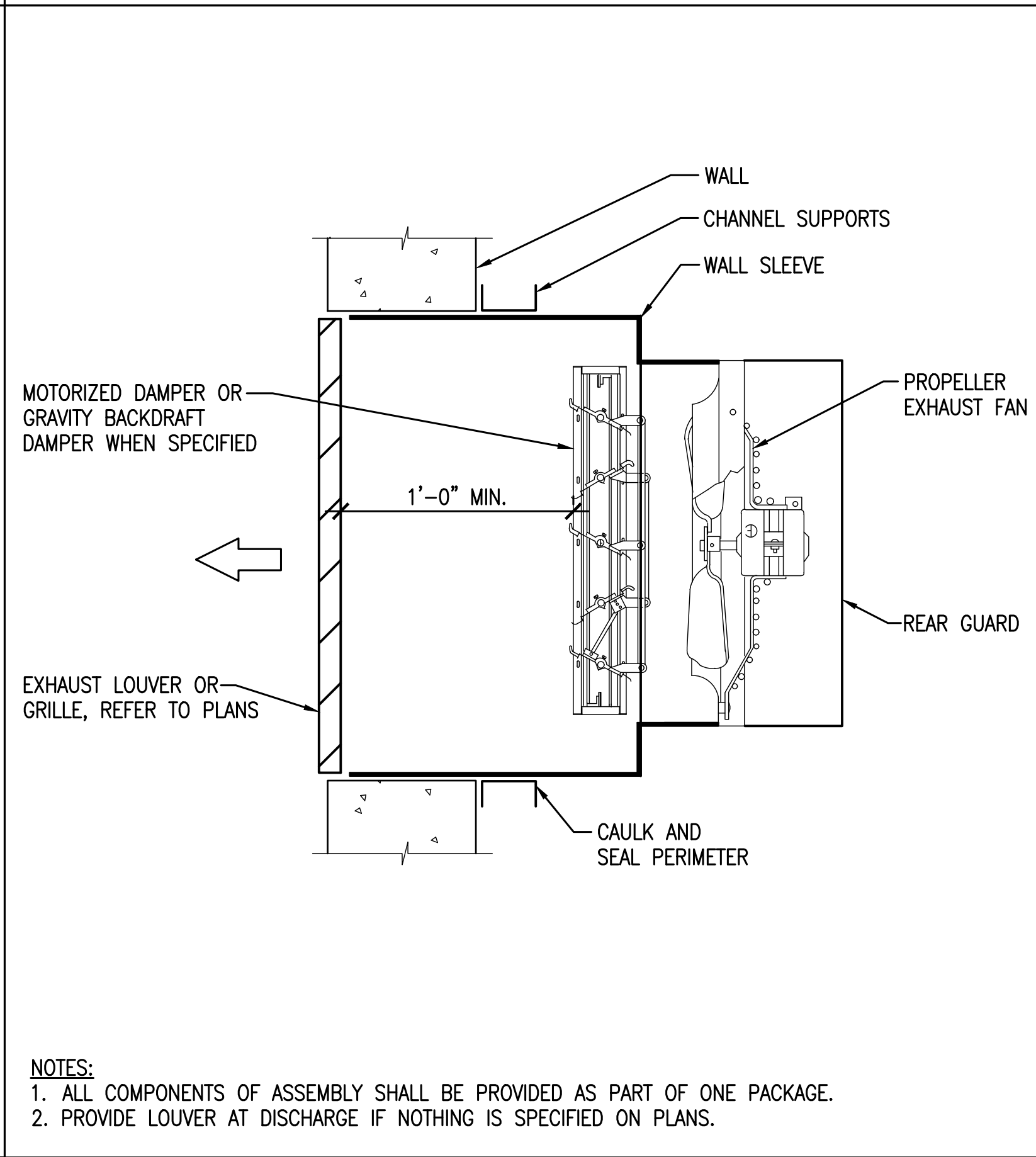
1 ACCU WALL MOUNTING DETAIL
NOT TO SCALE



6 DUCT OR PIPE WALL PENETRATION DETAIL
NOT TO SCALE



4 CONDENSATE DRAIN DETAILS
NOT TO SCALE

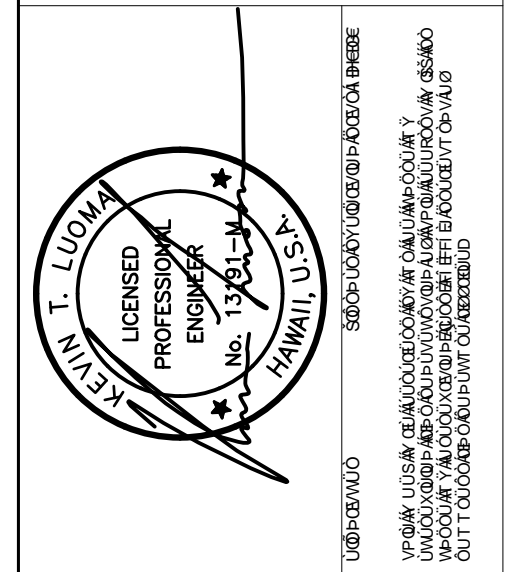


2 FAN-PROPELLER TYPE DETAIL
NOT TO SCALE

wsp

WSP USA Buildings Inc.
1001 Bishop Street Suite 2400
Honolulu Hawaii 96813 USA
Telephone 808 536 1737
Facsimile 808 537 5829
honolulu@wsp.com


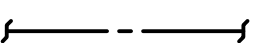
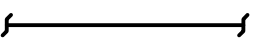



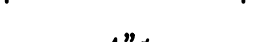
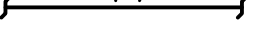
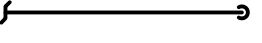
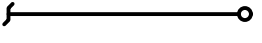











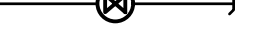

FERRARO CHOI



Y OESWSW
ÔXÔAOUT ÛSÒY
ÛP OÛOAFÓ

FEEÁ **AP OESÓUÓP**
PUVÁRÓUÓUP ÛUÓVÓÓP

ÚPÁRÓUÓUÁRÓK	ÓGFI ÉÉEF	ÚPÁRÓUÓUÁRÓK	ÚPÁRÓUÓUÁRÓK	ÚPÁRÓUÓUÁRÓK
ÓUÁRÉY ÁRÓK	Y UÚ	ÓUÁRÉY ÁRÓK	ÓUÁRÉY ÁRÓK	ÓUÁRÉY ÁRÓK
ÓRÉYÁRÓK	7/25/2019	ÓRÉYÁRÓK	ÓRÉYÁRÓK	ÓRÉYÁRÓK
ÚPÁRÓUÓUÁRÓK	F0 M201	ÚPÁRÓUÓUÁRÓK	ÚPÁRÓUÓUÁRÓK	ÚPÁRÓUÓUÁRÓK
ÚRÓ	ÚRÓ	ÚRÓ	ÚRÓ	ÚRÓ

PLUMBING LEGEND		
SYMBOLS	ABBR.	DESCRIPTION
PLUMBING		
	ABBR	PIPE DESIGNATION ABBREVIATION
	CW	COLD WATER
	SAN	SANITARY OR WASTE
	V	VENT
	GAS	GAS SERVICE (SNG OR LPG)
	LPG	LIQUIDIFIED PROPANE GAS
	SD	STORM DRAIN
	φ	PIPE DIAMETER
		PIPING TURNED DOWN
		PIPING TURNED UP
	P.O.C.	POINT OF CONNECTION
		CONTINUATION
VALVES/SPECIALTIES		
	HB	WATER HOSE BIBB
	WCO	WALL CLEANOUT
	COTG/FCO	CLEANOUT TO GRADE OR FLOOR CLEANOUT
	AD/FD	AREA/FLOOR DRAIN
	DS	DOWN SPOUT
		FLOOR SLAB/PENETRATION
		STOP VALVE IN CAST IRON BOX WITH CONCRETE SURROUND
		ISOLATION BALL VALVE (NORMALLY OPEN)
		GAS VALVE
		REVISION DELTA
EQUIPMENT		
	SP	ELEVATOR SUMP PUMP
EQUIPMENT TYPE		
EQUIPMENT NUMBER		

PLUMBING NOTES

PART 1 – GENERAL

A. CONFORM TO APPLICABLE LAWS AND REGULATIONS OF THE STATE OF HAWAII AND COUNTY OF MAUI.

- INTERNATIONAL BUILDING CODE (2006) AND LOCAL AMENDMENTS
- UNIFORM PLUMBING CODE (2006) AND LOCAL AMENDMENTS
- NFPA STANDARD 1: UNIFORM FIRE CODE (2012) AND LOCAL AMENDMENTS
- NFPA STANDARD 54 (2012)
- NFPA STANDARD 58 (2010)

B. GENERAL NOTES:

- THIS PLAN MUST NOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY PURPOSE OTHER THAN ORIGINALLY INTENDED WITHOUT APPROVAL FROM WSP.
- CHECK EXISTING ELECTRICAL EARTHING TO METALLIC PLUMBING SERVICES. PROVIDE TEMPORARY EARTHING CABLES BETWEEN SERVICES, WHICH ARE TO BE CUT, TERMINATED OR EXTENDED. CONFIRM WITH SITE ELECTRICIAN FOR SAFE PROCEDURES.
- ALL DIMENSIONS ARE IN FEET & INCHES UNLESS NOTED OTHERWISE (UNO).
- ALL PIPE PENETRATIONS THROUGH FIRE-RATED WALLS AND HORIZONTAL ASSEMBLIES SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRESTOP SYSTEM IN ACCORDANCE WITH 2006 IBC AND WITH RATINGS AS DETERMINED BY ASTM E 814 OR UL 1479.

C. SPECIAL CONDITIONS:

- ALL MATERIALS AND WORKMANSHIP IS TO BE IN ACCORDANCE WITH BUILDING STANDARDS. CURRENT BUILDING STANDARDS ARE AVAILABLE FROM THE BUILDING ENGINEER. ANY DEVIATION FROM BUILDING STANDARD IS TO BE APPROVED BY THE BUILDING ENGINEER BEFORE PROCEEDING WITH WORK. GC'S ARE RESPONSIBLE FOR BEING COGNIZANT OF BUILDING REGULATIONS. GC'S WILL BE EXPECTED TO INCLUDE ALL REQUIREMENTS IN THEIR BIDS TO COMPLY WITH BUILDING REGULATIONS.
- THE CONTRACTOR SHALL TAKE INTO ACCOUNT ALL RESPONSIBILITIES ASSOCIATED WITH WORKING IN AN OCCUPIED SPACE. CONTRACTOR SHALL TAKE PREVENTATIVE MEASURES NOT TO DISTURB TENANTS. COORDINATE ALL WORK AND NECESSARY SHUT DOWN WITH THE BUILDING MANAGEMENT. ANY WORK WITHIN OTHER OCCUPIED SPACES OR DISRUPTIONS TO THE BUILDING UTILITIES SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THE WORK WILL BE PERFORMED DURING OFF HOURS.
- ALL CORE PENETRATIONS SHALL BE PROTECTED BY AN APPROVED THROUGH-PENETRATION FIRESTOP SYSTEM.
- PROVIDE SEISMIC RESTRAINTS ON NEW EQUIPMENT, DUCTWORK AND PIPING IN ACCORDANCE WITH 2006 IBC SEISMIC REQUIREMENTS AS REQUIRED.
- CONTRACTOR SHALL REPAIR ANY DAMAGES INCURRED TO BACK OF HOUSE AREAS TO ORIGINAL CONDITION BEFORE CONSTRUCTION.
- ALL EQUIPMENT SUPPORTS AND PIPING SHALL NOT OBSTRUCT EQUIPMENT ACCESS AREAS FOR MAINTENANCE SERVICE AND REPAIRS.
- ENSURE THAT ALL EQUIPMENT STRUCTURAL OR STEEL SUPPORTS ARE HOT-DIPPED GALVANIZED AFTER FABRICATION, AND THAT ALL EXPOSED SUPPORTS SHALL BE PAINTED, COLOR TO MATCH ADJACENT AREAS.

D. CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME AWARE OF EXISTING CONDITIONS.

E. CONTRACTOR SHALL OBTAIN AND PAY FOR APPLICABLE PERMITS, LICENSES, FEES AND OTHER CHARGES FOR WORK NOTED. SUBCONTRACTORS SHALL BE LICENSED FOR WORK THEY PERFORM.

F. CONTRACTOR SHALL MAINTAIN A SET OF CONTRACT DRAWINGS AT THE JOB SITE, MARKING THEM TO SHOW VARIATIONS BETWEEN THE CONSTRUCTION DOCUMENTS AND THE ACTUAL INSTALLATION. THE VARIATIONS SHALL BE SUBMITTED TO THE CONTRACTING OFFICER ENGINEER AS THE RECORD SET PRIOR TO PROJECT COMPLETION.

G. EXISTING CONDITIONS ARE SHOWN IN AN APPROXIMATE WAY AND HAVE NOT BEEN SURVEYED. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AS PART OF THE WORK, PRIOR TO THE SUBMITTING OF HIS BID, AND BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL CONDITIONS. REASONABLE MODIFICATIONS TO INDICATE LOCATION AND ARRANGEMENT TO SUIT JOB CONDITIONS SHALL NOT CONSTITUTE BASIS FOR REQUESTING OF ADDITIONAL FUNDS FROM THE OWNER.

H. DRAWINGS ARE DIAGRAMMATIC AND CLOSE COORDINATION WITH OTHER TRADES IS NECESSARY.

I. PRIOR TO ORDERING MATERIALS AND PROCURING EQUIPMENT, THE CONTRACTOR SHALL BE REQUIRED TO VERIFY ALL EXISTING CONDITIONS, EQUIPMENT, MATERIALS, SIZES AND DIMENSIONS THAT AFFECT HIS WORK. SHOW ALL DISCREPANCIES ON SHOP DRAWINGS AND NOTIFY THE ENGINEER IN WRITING OF SUCH DISCREPANCIES PRIOR TO PROCUREMENT.

J. THE CONTRACT REQUIRES THE FIRE PROTECTION, CONTROLS, AND MECHANICAL CONTRACTORS TO CAREFULLY COORDINATE THEIR WORK WITH EACH OTHER, THE GENERAL CONTRACTOR, AND OTHER TRADES. PRIORITY SHALL BE GIVEN IN THE FOLLOWING ORDER:

- GRAVITY SLOPED PLUMBING PIPING.
- EQUIPMENT AND DUCTWORK.
- FORCED AND PRESSURE PIPING SUCH AS WATER AND FIRE SPRINKLER PIPING.

K. CONTRACTOR SHALL MEASURE SITE WATER PRESSURE IN FIELD AT THE START OF CONSTRUCTION. IF SITE PRESSURE EXCEEDS 80 PSI A PRV WITH PRV BY-PASS SHALL BE PROVIDED TO ENSURE PROPER FUNCTION OF PLUMBING FIXTURES.

L. CONTRACTOR SHALL REVIEW QUANTITY OF CONTROL PANELS SHOWN ON THE PLANS FOR THE BMS SYSTEM AND NOTIFY OWNER AND WSP IF THEY INTEND TO INSTALL MORE THAN SHOWN OR RELOCATE THEM FROM THEIR CURRENT LOCATIONS.

M. ALL EXTERIOR PIPING SHALL BE PAINTED PER A COLOR SELECTED BY THE ARCHITECT. PAINT SHALL BE CORROSION RESISTANT.

N. ALL NON-STAINLESS STEEL METAL SUPPORTS EXPOSED TO ELEMENTS SHALL BE PAINTED WITH TWO COATS OF CORROSION RESISTANT PAINT AND SHALL MATCH ADJACENT ARCHITECTURAL COLORS AND FINISHES.

PART 2 – PRODUCTS

A. MATERIALS: ALL MATERIALS EXCEPT OWNER-FURNISHED ITEMS SHALL BE NEW AND FREE FROM DEFECTS.

- WATER PIPING: ASTM B88 HARD DRAWN, TYPE L COPPER WITH CAST BRONZE OR WROUGHT COPPER FITTINGS WITH ASTM B32 SOLDER, GRADE 951A.
- WASTE AND VENT PIPING: SERVICE WEIGHT CAST IRON WITH NO HUB FITTINGS AND STAINLESS STEEL COUPLINGS. UNDERGROUND PIPING SHALL BE SOLID WALL DWV TYPE PVC.
- VALVES: VALVES UP TO 2": TWO-PIECE BRONZE WITH S/S FULL PORT BALL.

PART 3 – EXECUTION

A. GENERAL:

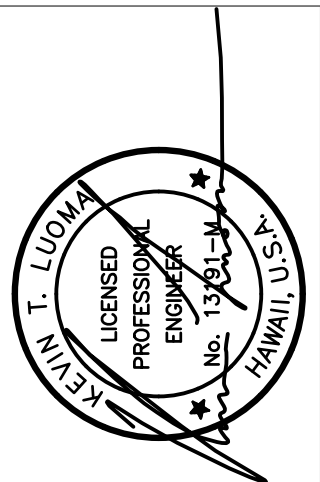
- COORDINATE ROUTING OF NEW PIPING, AND ELECTRICAL WORK. AVOID INTERFERENCES BY DETERMINING THE EXACT ROUTE OF EACH PIPE AND DUCT. PROVIDE OFFSETS AND ROUTING ADJUSTMENTS AS REQUIRED TO MAINTAIN PROPER CLEARANCES AND PIPE SLOPES. FURNISH ANCHOR BOLTS, SLEEVES, INSERTS AND SUPPORTS REQUIRED FOR THIS WORK.
- EQUIPMENT AND PIPING SUPPORTS SHALL BE PROVIDED IN STRICT CONFORMANCE WITH APPLICABLE CODES AND/OR MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE SEISMIC RESTRAINTS FOR EQUIPMENT OVER 400 LBS OR AS REQUIRED BY SMACNA SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS, INCLUDING APPENDIX E.
- INSTALL ALL EQUIPMENT IN STRICT CONFORMANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- COVER OR SECURELY CLOSE OPEN ENDS OF PIPE AND DUCTS TO PREVENT THE ENTRANCE OF DUST AND DEBRIS.
- PROVIDE DIELECTRIC CONNECTIONS WHEREVER JOINING DISSIMILAR METALS.
- PROVIDE STOP VALVES AT EVERY FIXTURE AND APPLIANCE.
- ENSURE CLEANOUTS PROVIDED BEFORE ANY STORM DRAINAGE OR SANITARY PIPING ROUTES FROM ABOVE GROUND TO UNDERGROUND. LOCATE ALL CLEANOUTS AT 18" AFF.

B. CLEANUP:

- CLEANUP ALL AREAS OF DEBRIS AT THE END OF EACH DAY AND AT THE END OF THE WORK.



FERRARO CHOI



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D@ A6-B; : LHI F9'5B8'9EI -DA9BH'G7 <981 @					
DESIGNATION	FIXTURE TYPE	COMPONENTS	MANUFACTURER	MODEL NO.	DESCRIPTION
: LHI F9G					
HB	HOSE BIBB (EXTERIOR)	-	ZURN	Z1341-BFP	EXPOSED, ANTI SIPHON, WALL FAUCET COMPLETE WITH Z1399-BFP EXTERNAL BACKFLOW PREVENTER, ALL BRONZE INTERIOR, VANDAL RESISTANT OPERATING STEM, ROUGH BRONZE EXTERIOR, 3/4" MALE HOSE CONNECTION.
FD	FLOOR DRAIN	-	ZURN	Z415B	DURA COATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS AND TYPE "B" POLISHED NICKEL BRONZE, LIGHTY DUTY STRAINER.
TD	TRENCH DRAIN	-	ZURN	Z886-HD	CHANNELS ARE 6"-8" LONG, HIGH DENSITY POLYETHYLENE, 6-3/4" WIDE REVEAL AND HAVE A 4" THROAT. CHANNEL HAVE A MECHANICAL CONNECTION BETWEEN CHANNEL SECTION THAT WILL NOT SEPARATE DURING INSTALLATION, MECHANICALLY LOCK INTO THE CONCRETE SORROUND EVERY 10". CHANNELS HAVE REBAR CLIPS STANDARD TO SECURE TRENCH, DGC GRATES THAT LOCK DOWN TO FRAME, DUCTILE IRON SLOTTED GRATE CONFORMING TO ASTM SPECIFICATION A536-84.
AD	AREA DRAIN	-	ZURN	Z150-DT	SQUARE TOP PROM DECK DRAIN, DURA COATED CAST IRON BODY WITH ROTATABLE LIGHT DUTY SQUARE PROMENADE FRAME WITH SEPAGE OPENINGS, FRAME CLAMPS AND DECORATIVE LIGHT DUTY HEEEL -PROOF GRATE WITH 3/16 WIDE SLOTS.

: LHI F9'FCI ; <I-B'G7 <981 @				
(MINIMUM PIPE SIZE UNLESS OTHERWISE NOTED)				
FIXTURE	HOT WATER	COLD WATER	WASTE	VENT
AREA DRAIN	-	-	SEE PLANS	-
FLOOR DRAIN	-	-	3"	3"
TRENCH DRAIN	-	-	4"	-
HB (WALL MOUTNED)	-	3/4"	-	-
HB (EXTERIOR)	-	3/4"	-	-

89D5 FHA9BHC: 'K 5H9F'GI DD@ : @CK 'F9EI #F9A9BHG			
DF9A-@9'8 : 'B9K A9H9F'BI A69F'FA#BL "'B9K			
DESCRIPTION	F.U.	GPM	GPD
A. PROPOSED: DOMESTIC	69.0	36	1,440
B. PROPOSED: IRRIGATION			
C. PROPOSED: OTHER			
D. TOTAL PROPOSED	69.0	36	1,440
E. DEMOLITION: DOMESTIC			
DEMO PERMIT #: DATE:			
F. NET CHANGE	69.0	36	1,440
G. EXISTING TO REMAIN: DOMESTIC			
H. GRAND TOTAL	69.0	36	1,440
B9K 'D@ A6-B; : LHI F9G			
FIXTURE	NO.	F.U. (EACH)	TOTAL F.U.
HOSE BIBB (HB)	23	3.0	69.0
TOTAL			69.0
D@ A6-B; : LHI F9G'HC'69'89AC @G-98			
FIXTURE	NO.	F.U. (EACH)	TOTAL F.U.
N/A			0
TOTAL			0

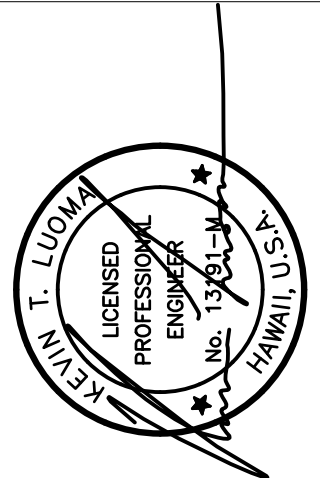
- NOTES:**
- IRRIGATION FOR THIS SITE IS SEPERATELY METERED (METER NUMBER: NEW).
 - A/C WORK WILL NOT AFFECT WATER DEMAND.
 - AUTOMATIC FIRE SPRINKLER FOR THIS BUILDING IS SEPERATELY METERED (METER NUMBER: NEW). NEW METER IS ADEQUATE TO SERVICE THE AFS SYSTEM, INCLUSIVE OF THIS PROJECT'S SCOPE OF WORK.

GI AD'DI AD'G7 <981 @														
DESIGNATION	SERVICE	LOCATION	CONFIGURATION	FLOW RATE (GPM)	TOTAL PUMP HEAD (FT. OF WATER)	ELECTRICAL DATA					DESIGN BASIS MANUF.	DESIGN BASIS MODEL NO.	REMARKS	
						MINIMUM MOTOR HP	SPEED (RPM)	VOLTAGE	PHASE	HERTZ				OPERATING WEIGHT (LBS)
SP-1	ELEVATOR SUMP PUMP	ELEVATOR PIT	SUMP PUMP	50	17	1	3,350	115	1	60	15	GRUNDFOS	AP12	SEE NOTES

- NOTES:**
- ALL PUMPS SHALL BE PROVIDED WITH APPROPRIATE MOTOR CONTROLLER AND DISCONNECT SWITCH BY THE MECHANICAL CONTRACTOR.
 - ALL PUMPS SHALL BE CONSTRUTED WITH STAINLESS STEEL VOLUTE & SHAFT, COMPOSITE IMPELLER, AND SYNTHETIC RESIN IMPREGNATED CARBON BEARING.
 - ALL PUMP MOTORS SHALL BE EC-TYPE (BRUSHLESS DC) MOTORS.
 - ALL PUMPS SHALL BE PROVIDED WITH FLOAT SWITCH FOR AUTOMATIC START AND STOP, CONTINUOUS SUBMERSON WITH DRY RUN MAXIMUM OF 5 MINUTES.
 - PROVIDE STAND-ALONE CONTROL PANEL CAPABLE OF TIEING PUMPS TO BAS. BAS SHALL CONTROL PUMP STATUS ALARM WHEN PUMP IS IN OPERATION.
 - ALL PUMPS SHALL BE CAPABLE TO MAINTAIN LESS THAN 20 STARTS EVERY 3 MINUTES PER HOUR AND 5 MINUTES MAXIMUM DRY RUN BEFORE SIGNALING BAS.
 - ALL PUMPS TO BE CONNECTED TO ELEVATOR EQUIPMENT POWER SOURCE. Ie GENERATORS, BACKUP POWER SOURCE

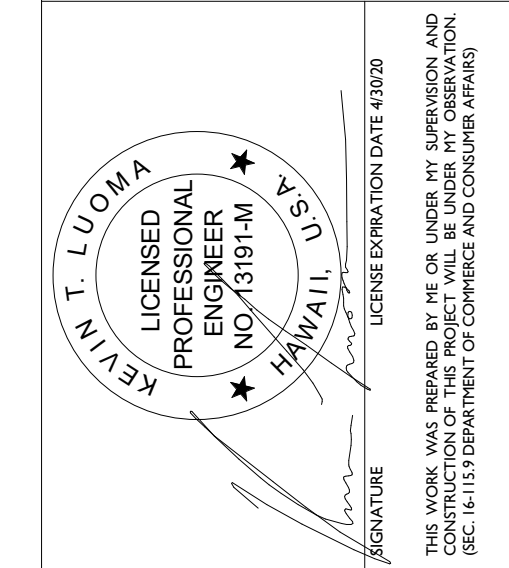
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1001 Bishop Street Suite 2400
Honolulu Hawaii 96813 USA
Telephone 808 536 1737
Facsimile 808 537 5829
honolulu@wsp.com

FERRARO CHOI



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UP OEUOFO
FEEA AP OESOUOP
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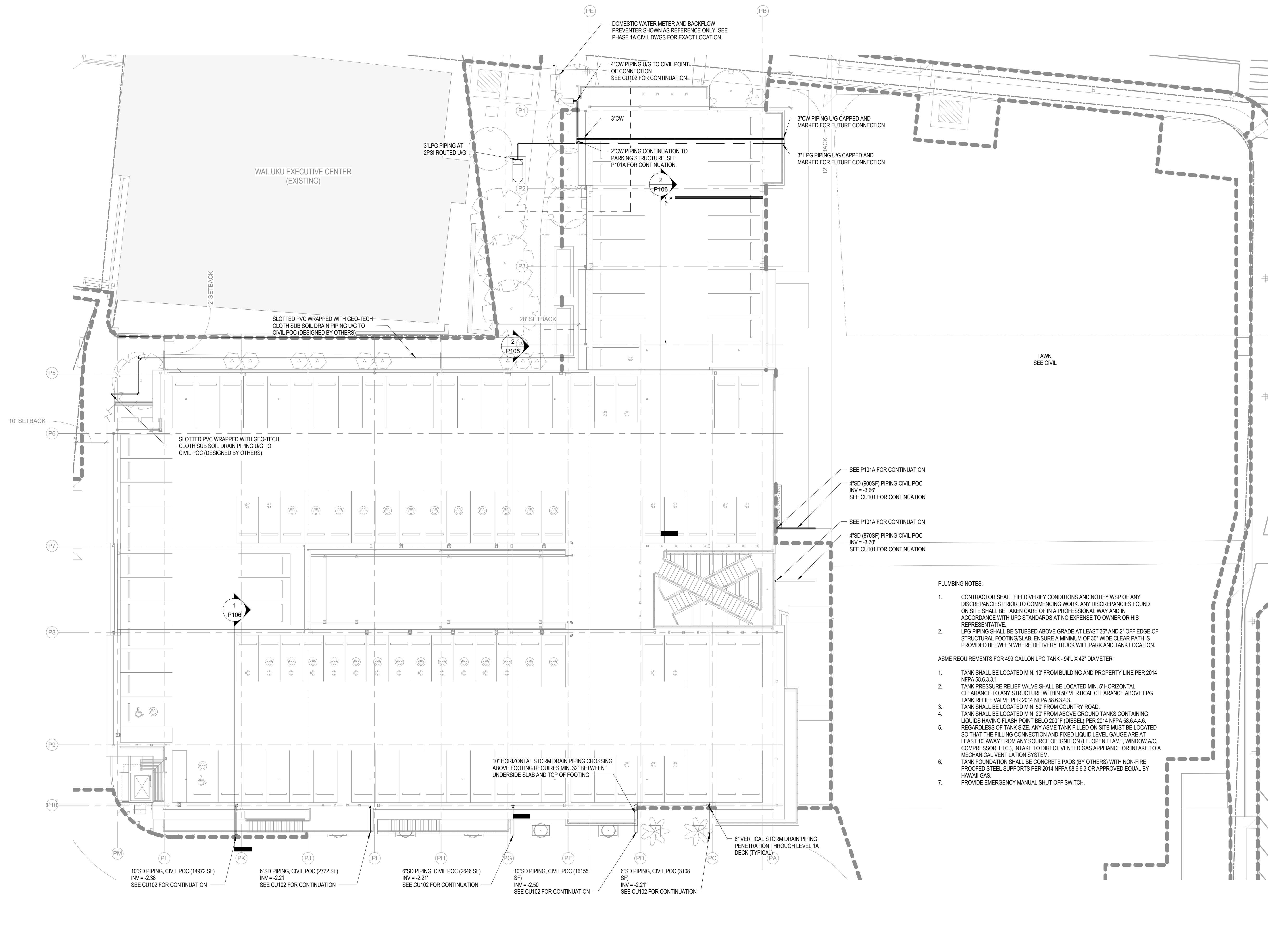
DESIGNATION	DATE	REVISION	BY	DATE
FO	7/25/2019	P002	UAB	



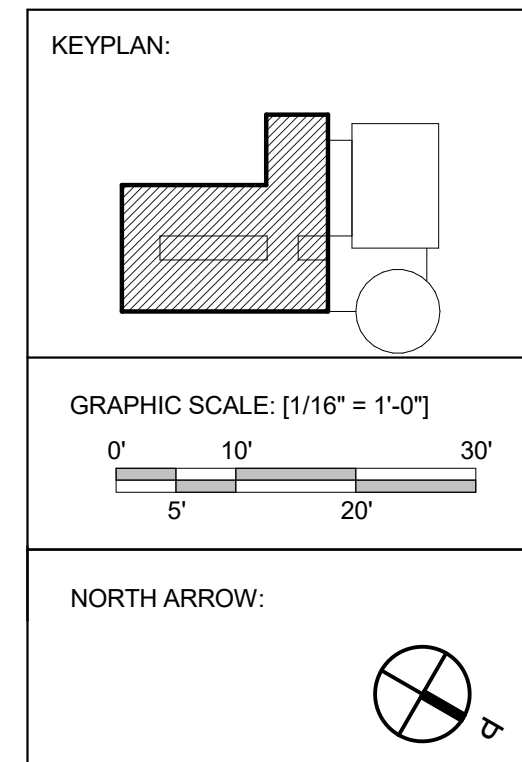
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100% FINAL DESIGN
 [PUYR0U0UPJUVJW0P]

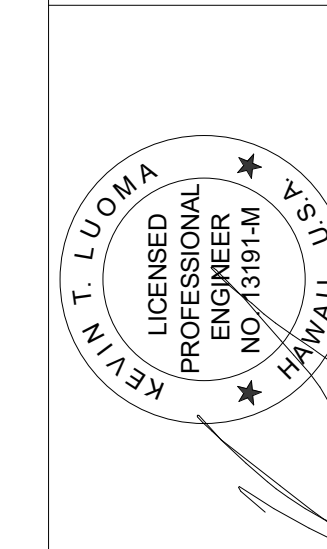
PLUMBING SITE PLAN

PROJECT:	2017-301
REVISIONS:	2017-301
DRAWN:	WSP
DATE:	7/25/2019
PHASE:	1B
SHEET:	P100
OF:	SHEETS



- PLUMBING NOTES:**
- CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND NOTIFY WSP OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK. ANY DISCREPANCIES FOUND ON SITE SHALL BE TAKEN CARE OF IN A PROFESSIONAL WAY AND IN ACCORDANCE WITH UPC STANDARDS AT NO EXPENSE TO OWNER OR HIS REPRESENTATIVE.
 - LPG PIPING SHALL BE STUBBED ABOVE GRADE AT LEAST 36" AND 2" OFF EDGE OF STRUCTURAL FOOTING/SLAB. ENSURE A MINIMUM OF 30" WIDE CLEAR PATH IS PROVIDED BETWEEN WHERE DELIVERY TRUCK WILL PARK AND TANK LOCATION.
- ASME REQUIREMENTS FOR 499 GALLON LPG TANK - 94" L X 42" DIAMETER:**
- TANK SHALL BE LOCATED MIN. 10' FROM BUILDING AND PROPERTY LINE PER 2014 NFPA 58.6.3.3.1
 - TANK PRESSURE RELIEF VALVE SHALL BE LOCATED MIN. 5' HORIZONTAL CLEARANCE TO ANY STRUCTURE WITHIN 50' VERTICAL CLEARANCE ABOVE LPG TANK RELIEF VALVE PER 2014 NFPA 58.6.3.4.3.
 - TANK SHALL BE LOCATED MIN. 50' FROM COUNTRY ROAD.
 - TANK SHALL BE LOCATED MIN. 20' FROM ABOVE GROUND TANKS CONTAINING LIQUIDS HAVING FLASH POINT BELOW 200°F (DIESEL) PER 2014 NFPA 58.6.4.4.6.
 - REGARDLESS OF TANK SIZE, ANY ASME TANK FILLED ON SITE MUST BE LOCATED SO THAT THE FILLING CONNECTION AND FIXED LIQUID LEVEL GAUGE ARE AT LEAST 10' AWAY FROM ANY SOURCE OF IGNITION (I.E. OPEN FLAME, WINDOW A/C, COMPRESSOR, ETC.), INTAKE TO DIRECT VENTED GAS APPLIANCE OR INTAKE TO A MECHANICAL VENTILATION SYSTEM.
 - TANK FOUNDATION SHALL BE CONCRETE PADS (BY OTHERS) WITH NON-FIRE PROOFED STEEL SUPPORTS PER 2014 NFPA 58.6.6.3 OR APPROVED EQUAL BY HAWAII GAS.
 - PROVIDE EMERGENCY MANUAL SHUT-OFF SWITCH.

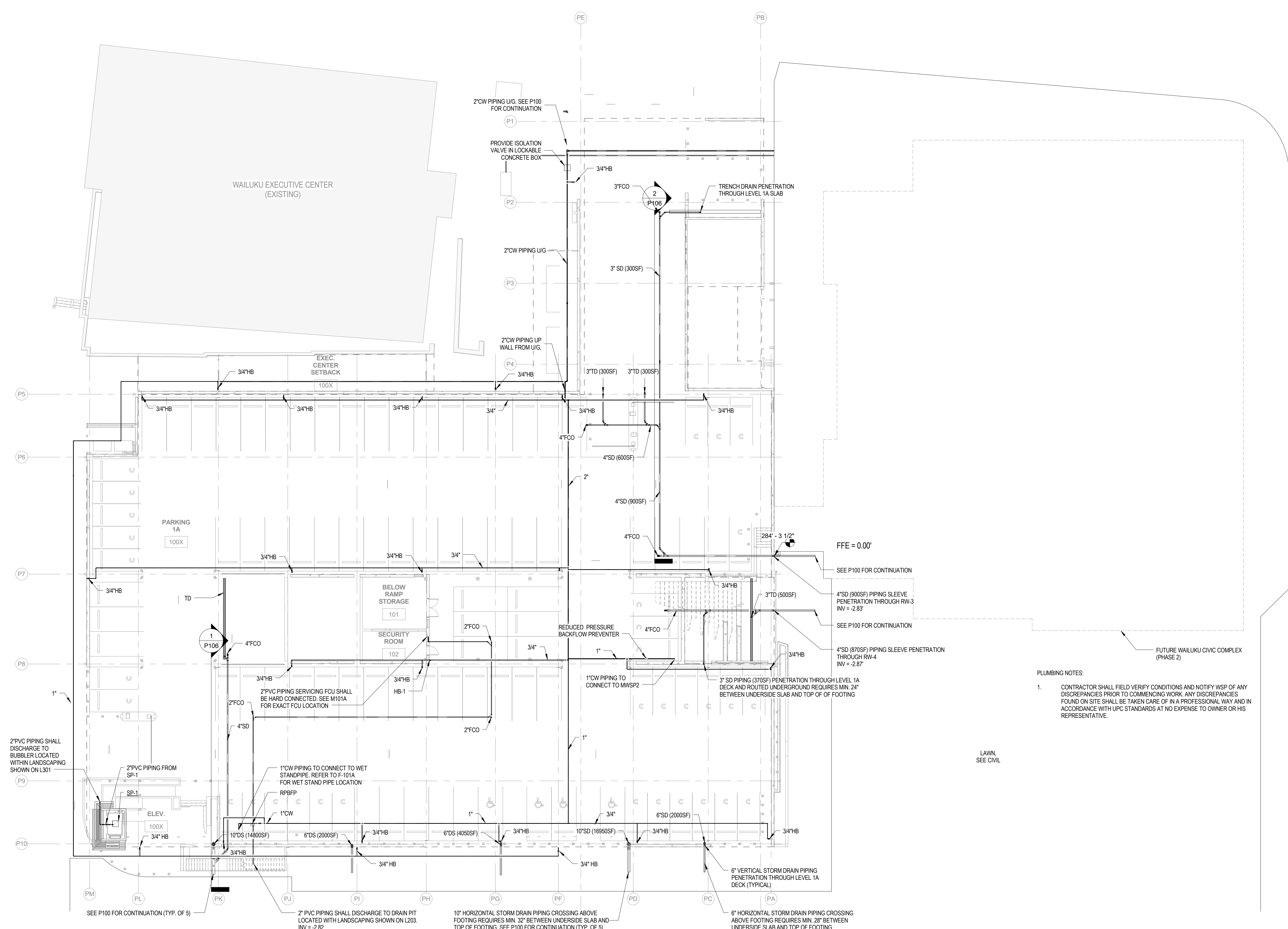




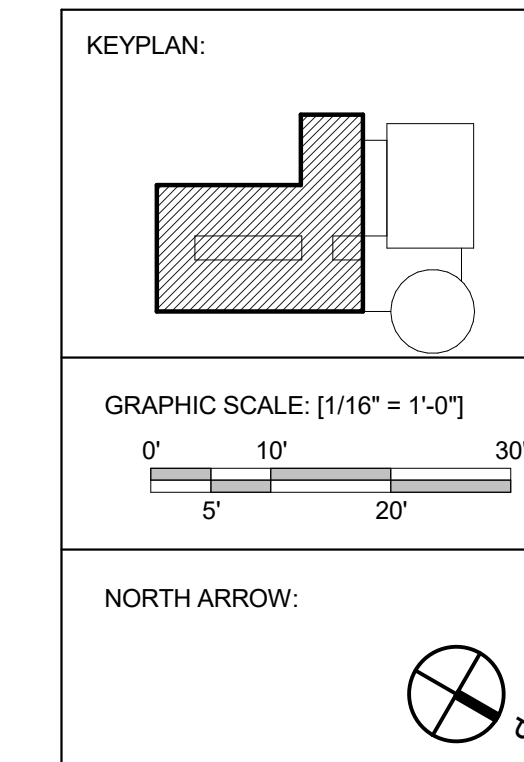
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100% FINAL DESIGN
PHASE 1B

OVERALL FLOOR PLUMBING PLAN - LEVEL 1A

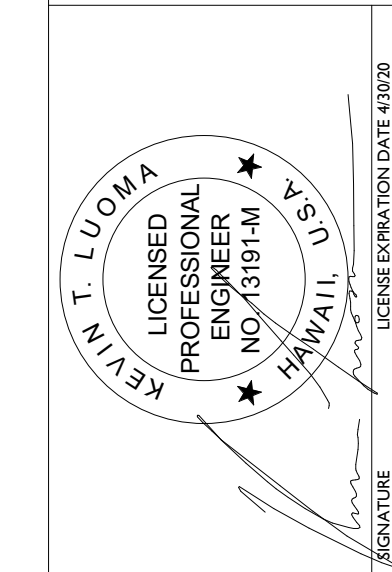
PROJECT:	2017-001
DRAWN:	WSP
DATE:	7/25/2019
PHASE SHEET	1B P101A
OF SHEETS	OF



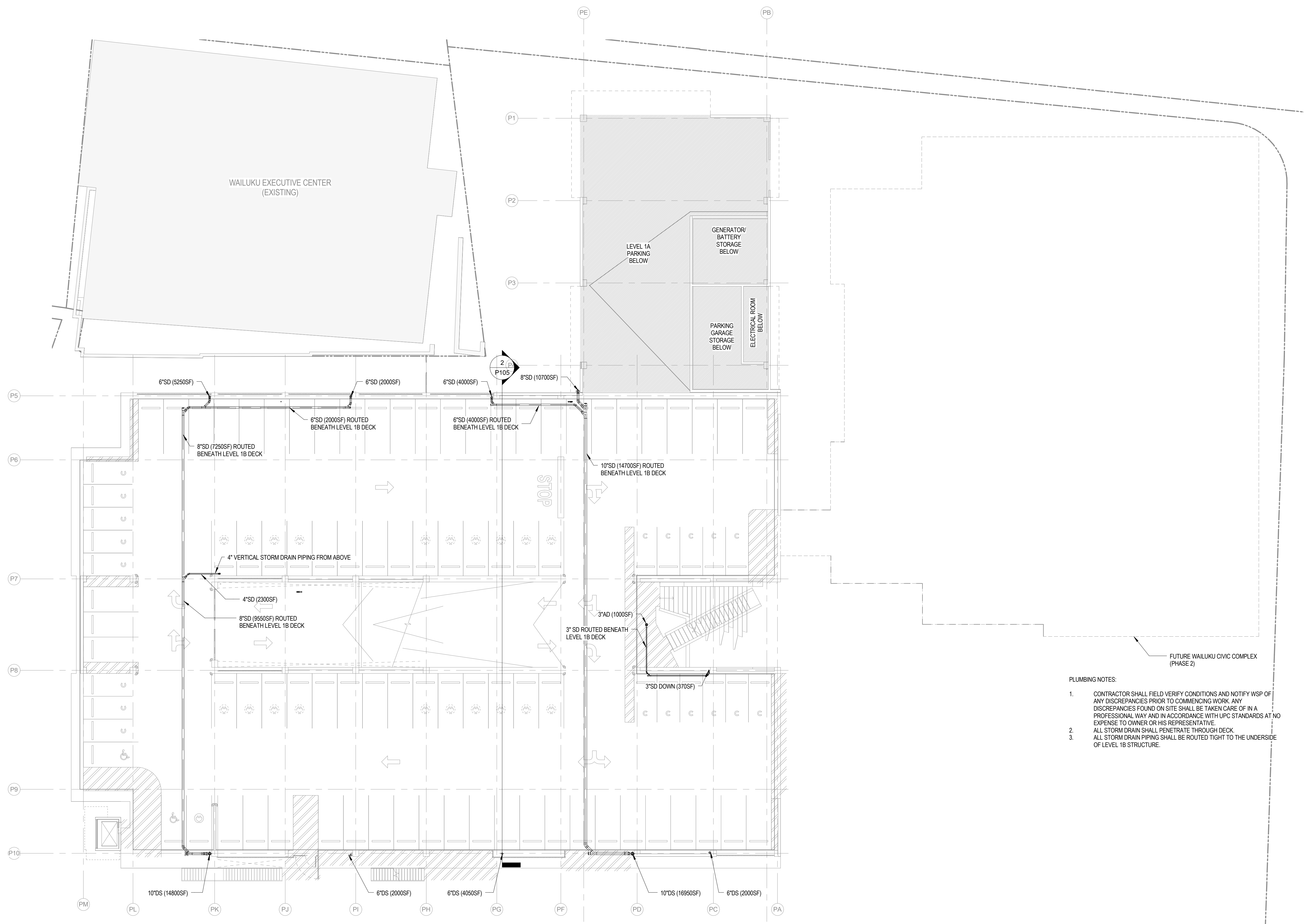
- PLUMBING NOTES:**
- CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND NOTIFY WSP OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK. ANY DISCREPANCIES FOUND ON SITE SHALL BE TAKEN CARE OF IN A PROFESSIONAL WAY AND IN ACCORDANCE WITH UPC STANDARDS AT NO EXPENSE TO OWNER OR HIS REPRESENTATIVE.



1 OVERALL PLUMBING PLAN - LEVEL 1A
 1/16" = 1'-0"



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- PLUMBING NOTES:**
1. CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND NOTIFY WSP OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK. ANY DISCREPANCIES FOUND ON SITE SHALL BE TAKEN CARE OF IN A PROFESSIONAL WAY AND IN ACCORDANCE WITH UPC STANDARDS AT NO EXPENSE TO OWNER OR HIS REPRESENTATIVE.
 2. ALL STORM DRAIN SHALL PENETRATE THROUGH DECK.
 3. ALL STORM DRAIN PIPING SHALL BE ROUTED TIGHT TO THE UNDERSIDE OF LEVEL 1B STRUCTURE.

FUTURE WAILUKU CIVIC COMPLEX (PHASE 2)

KEYPLAN:

GRAPHIC SCALE: [1/16" = 1'-0"]

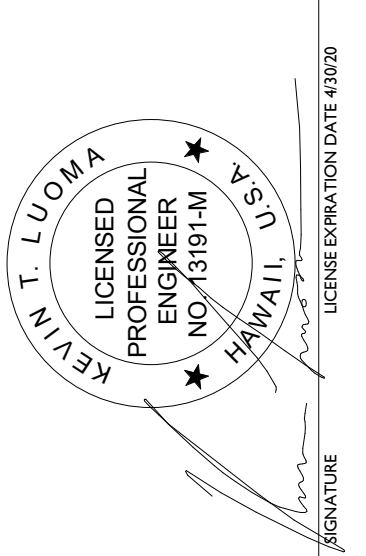
NORTH ARROW:

1 OVERALL FLOOR PLUMBING PLAN - LEVEL 1B
 1/16" = 1'-0"

WAILUKU CIVIC COMPLEX PHASE 1B
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 [PUVABUUBUPUVUWUWUP]

SHEET TITLE:
 OVERALL FLOOR PLUMBING PLAN - LEVEL 1B
CADD FILE:

PROJECT:	REVISIONS:	DATE:	PHASE	SHEET	OF
2017/2001	WSP	7/25/2019	1B	P101B	SHEETS



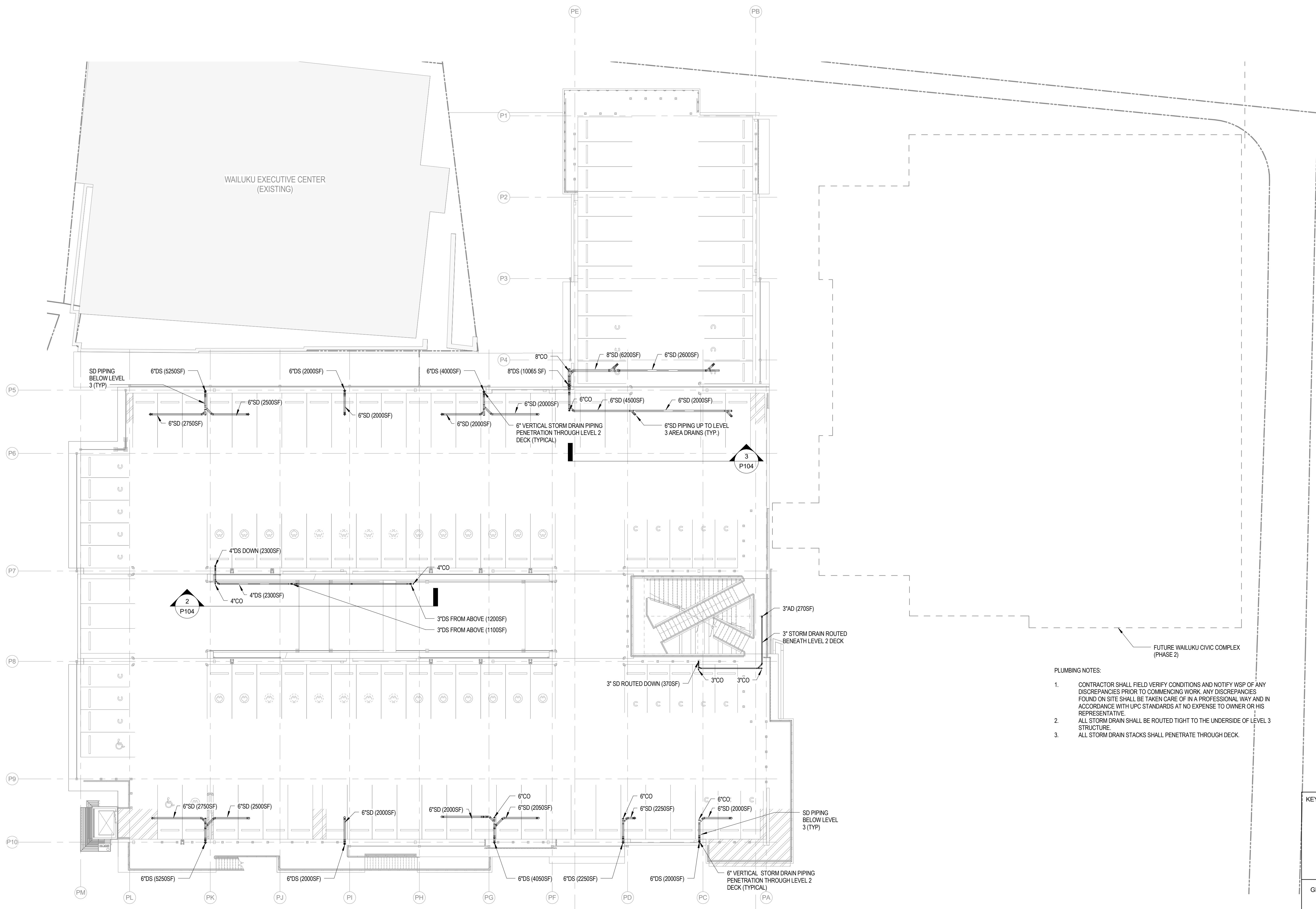
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WAILUKU CIVIC COMPLEX PHASE 1B
100 % FINAL DESIGN
PHASE 1B

OVERALL FLOOR PLUMBING PLAN - LEVEL 2

PROJECT:	2017/2001
DRAWN:	WSP
DATE:	7/25/2019
PHASE:	1B
SHEET:	P102
OF:	SHEETS

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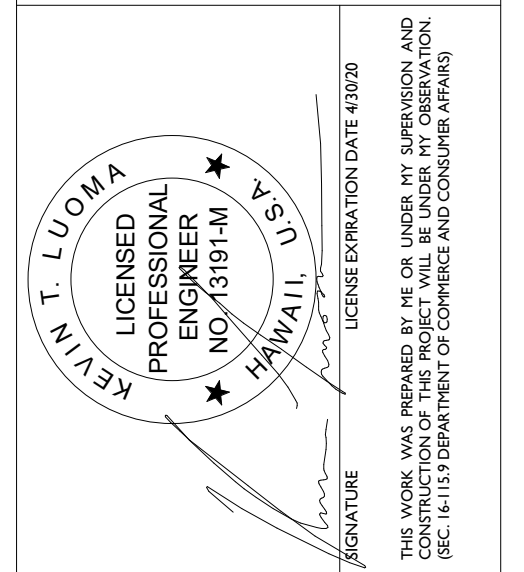
- PLUMBING NOTES:**
- CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND NOTIFY WSP OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK. ANY DISCREPANCIES FOUND ON SITE SHALL BE TAKEN CARE OF IN A PROFESSIONAL WAY AND IN ACCORDANCE WITH UPC STANDARDS AT NO EXPENSE TO OWNER OR HIS REPRESENTATIVE.
 - ALL STORM DRAIN SHALL BE ROUTED TIGHT TO THE UNDERSIDE OF LEVEL 3 STRUCTURE.
 - ALL STORM DRAIN STACKS SHALL PENETRATE THROUGH DECK.

KEYPLAN:

GRAPHIC SCALE: [1/16" = 1'-0"]

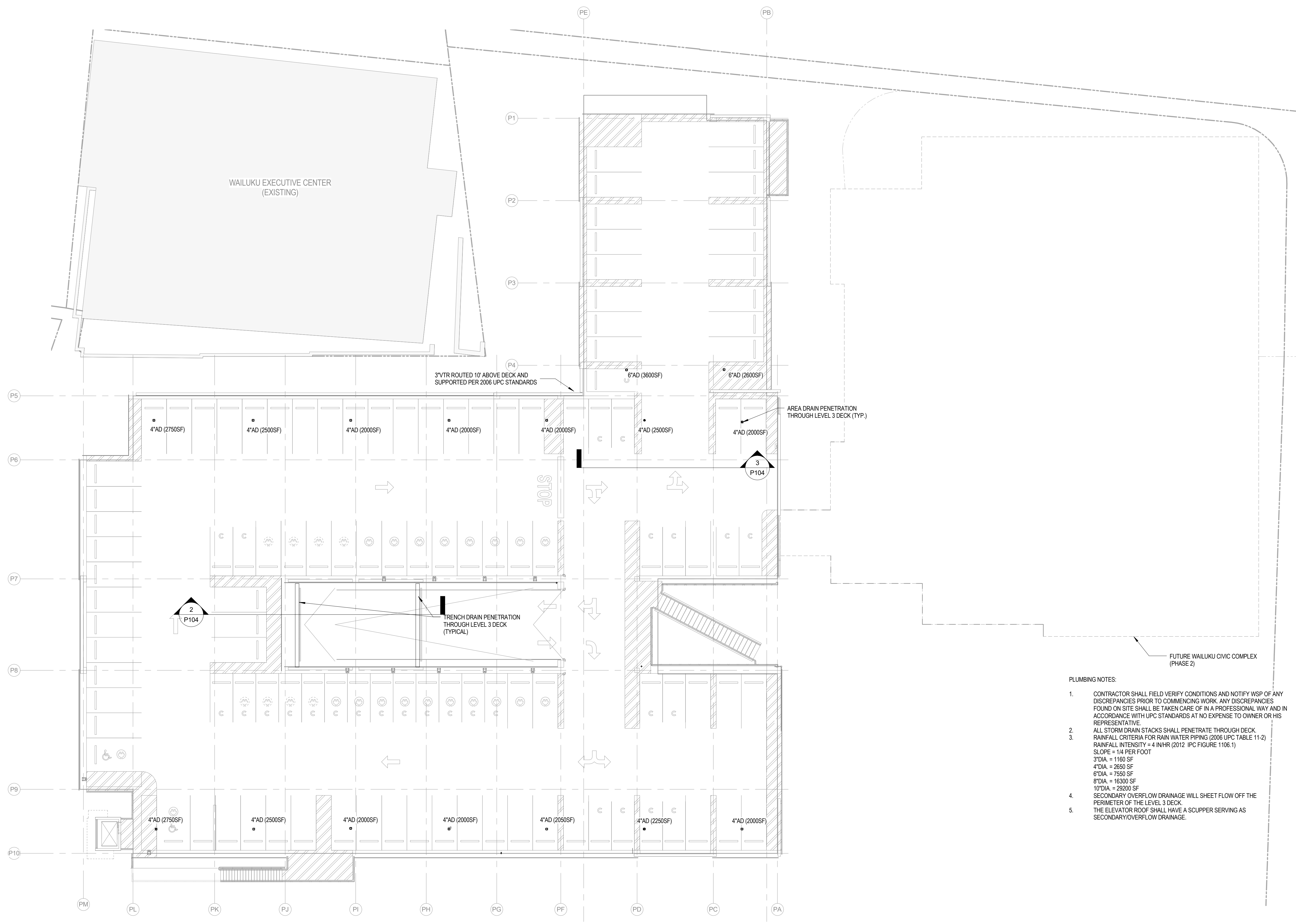
NORTH ARROW:

1 OVERALL FLOOR PLUMBING PLAN - LEVEL 2
 1/16" = 1'-0"



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 [Signature]

SHEET TITLE:
OVERALL FLOOR PLUMBING PLAN - LEVEL 3
 CADD FILE:



- PLUMBING NOTES:**
1. CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND NOTIFY WSP OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK. ANY DISCREPANCIES FOUND ON SITE SHALL BE TAKEN CARE OF IN A PROFESSIONAL WAY AND IN ACCORDANCE WITH UPC STANDARDS AT NO EXPENSE TO OWNER OR HIS REPRESENTATIVE.
 2. ALL STORM DRAIN STACKS SHALL PENETRATE THROUGH DECK.
 3. RAINFALL CRITERIA FOR RAIN WATER PIPING (2006 UPC TABLE 11-2)
 RAINFALL INTENSITY = 4 IN/HR (2012 IPC FIGURE 1106.1)
 SLOPE = 1/4 PER FOOT
 3\"/>
 4. SECONDARY OVERFLOW DRAINAGE WILL SHEET FLOW OFF THE PERIMETER OF THE LEVEL 3 DECK.
 THE ELEVATOR ROOF SHALL HAVE A SCUPPER SERVING AS SECONDARY/OVERFLOW DRAINAGE.

KEYPLAN:

GRAPHIC SCALE: [1/16" = 1'-0"]

NORTH ARROW:

1 OVERALL FLOOR PLUMBING PLAN - LEVEL 3
 1/16" = 1'-0"

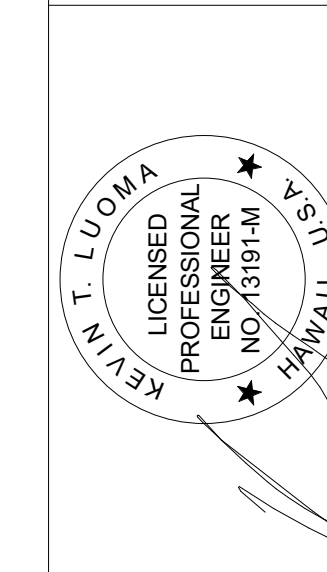
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DRAWN:	WSP		
DATE:	7/25/2019		
PHASE	SHEET		
1B	P103		
OF	SHEETS		



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1240 ALA MOANA BLVD. STE 510, HONOLULU, HI 96814
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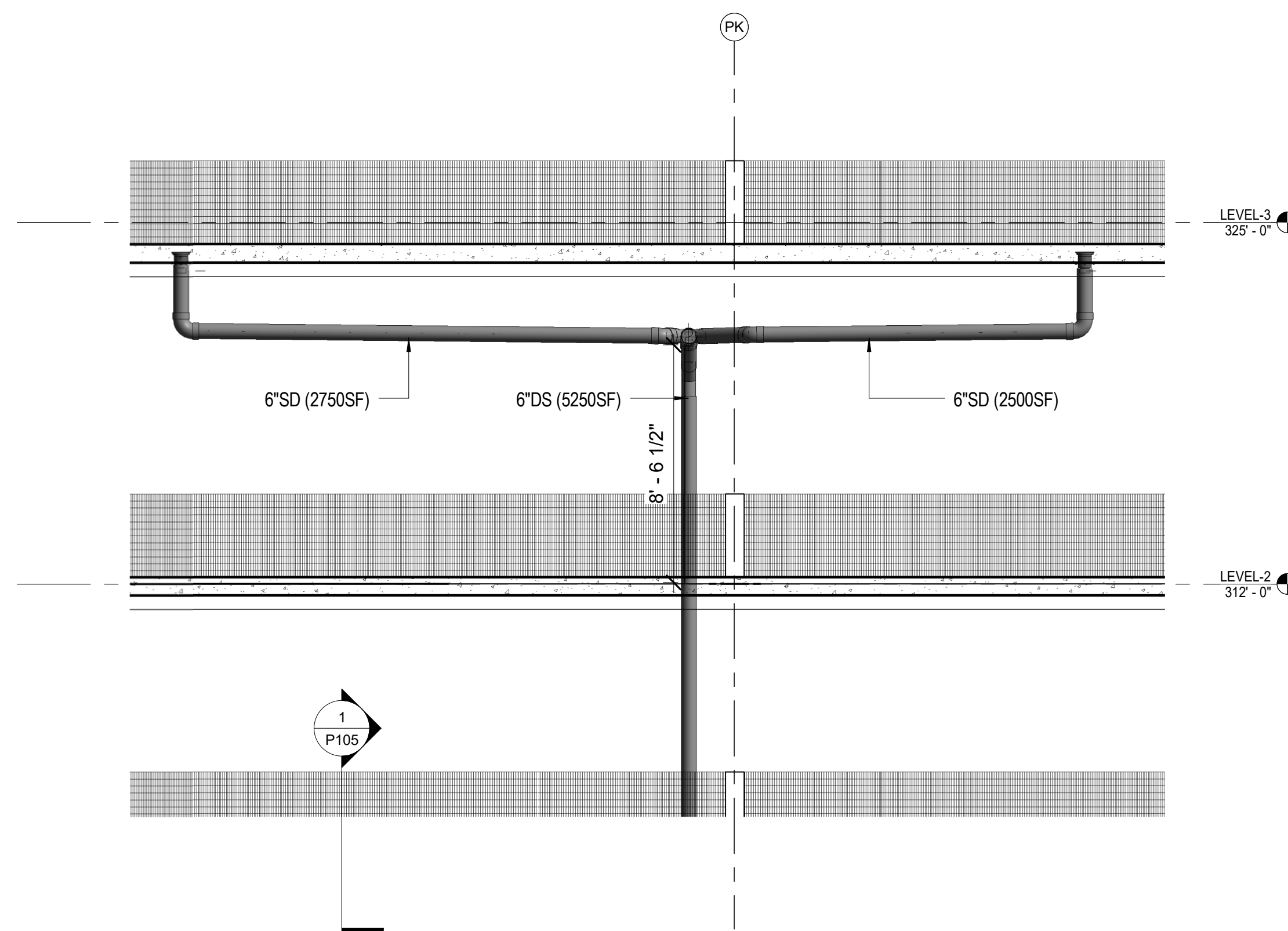


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SIGNATURE: KEVIN T. LUOMA
LICENSE EXPIRATION DATE: 4/30/20

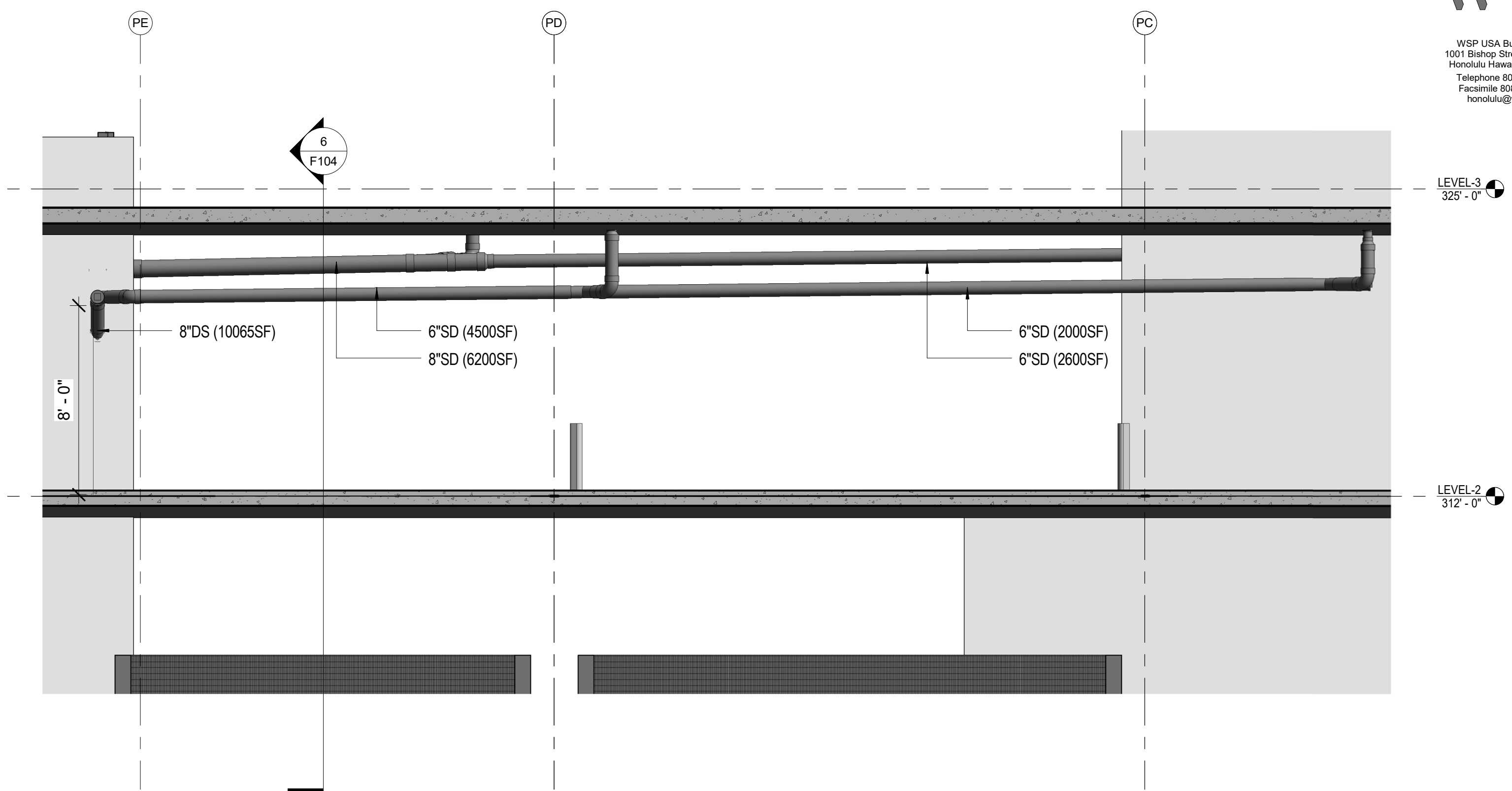
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P104

SHEET TITLE:
PLUMBING STORM DRAIN SECTIONS
CADD FILE:

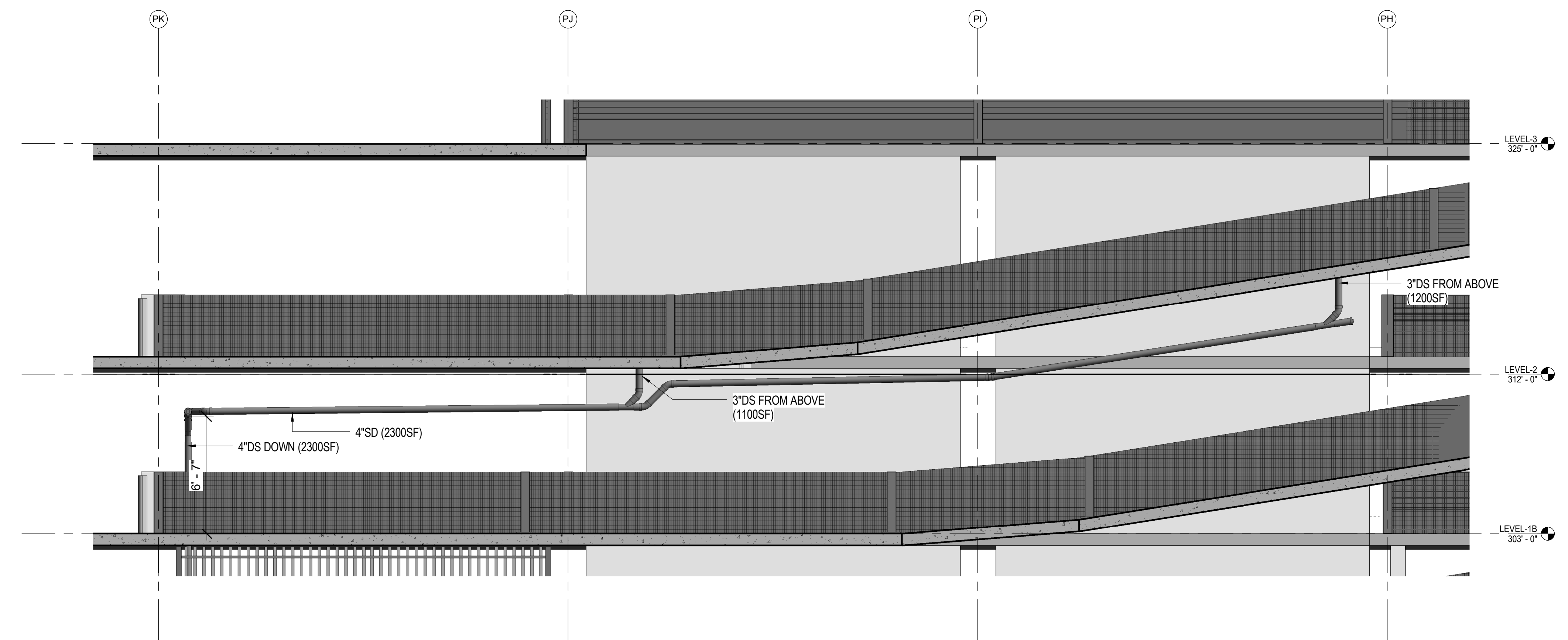
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DRAWN:	Author		
DATE:	7/25/2019		
PHASE	SHEET		
1B	P104		
OF	SHEETS		



1 P5/PK LEVEL 2 DRAINAGE SECTION VIEW
1/4" = 1'-0"



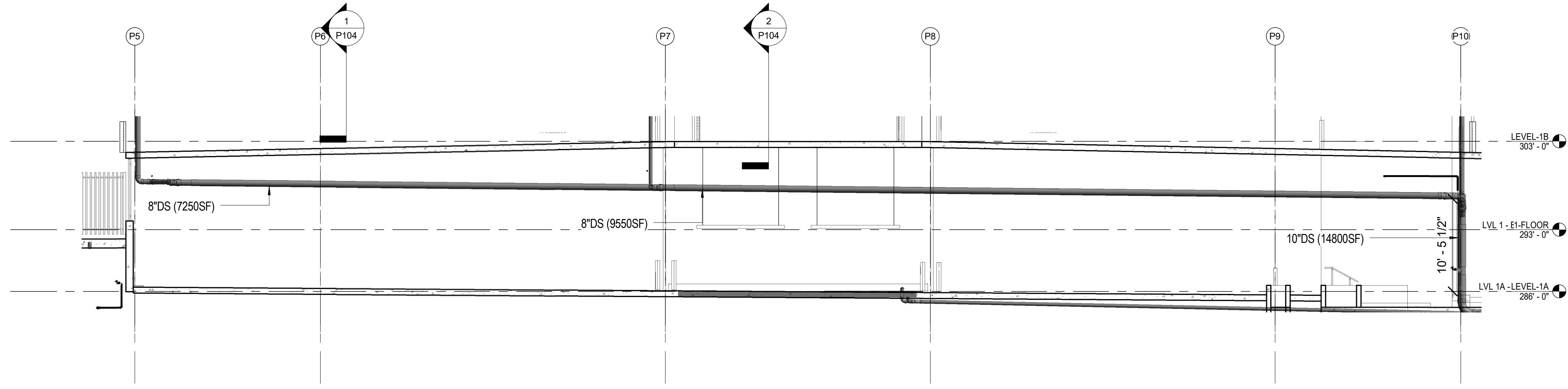
3 P5/PE TO P5/PB LEVEL 2 DRAINAGE SECTION VIEW
1/4" = 1'-0"



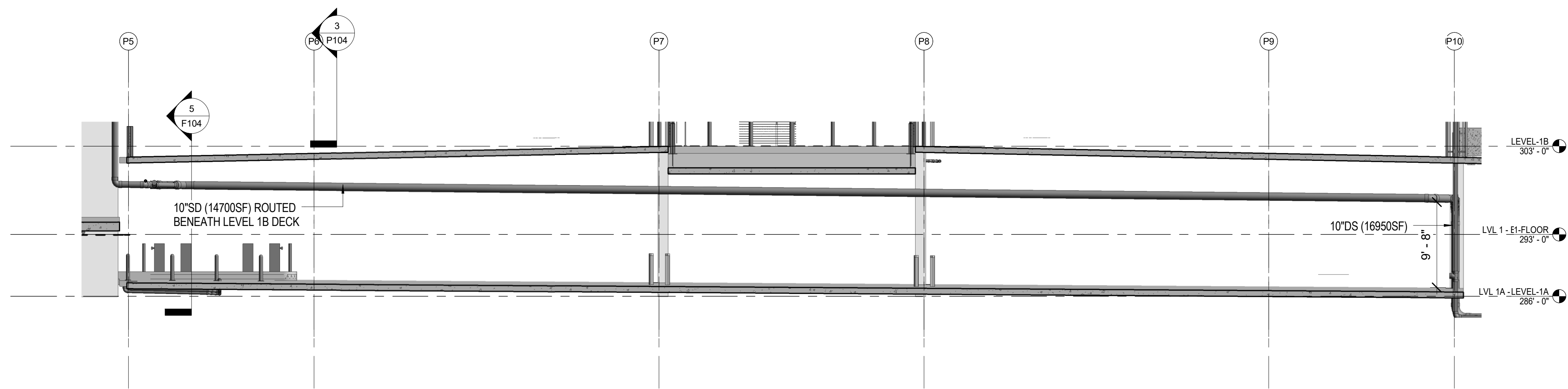
2 P7/PK TO P7/PH LEVEL 2 DRAINAGE SECTION VIEW
1/4" = 1'-0"

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 LICENSED PROFESSIONAL ENGINEER
 NO. 73191(HI)
 HAWAII
 LICENSE EXPIRATION DATE 4/30/20
 SIGNATURE
 THE WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONTROL AND I AM A duly Licensed Professional Engineer in the State of Hawaii, and I am duly Licensed in the Department of Commerce and Consumer Affairs.



1 P5/PK TO P10/PK LEVEL 1B DRAINAGE SECTION VIEW
 1/8" = 1'-0"

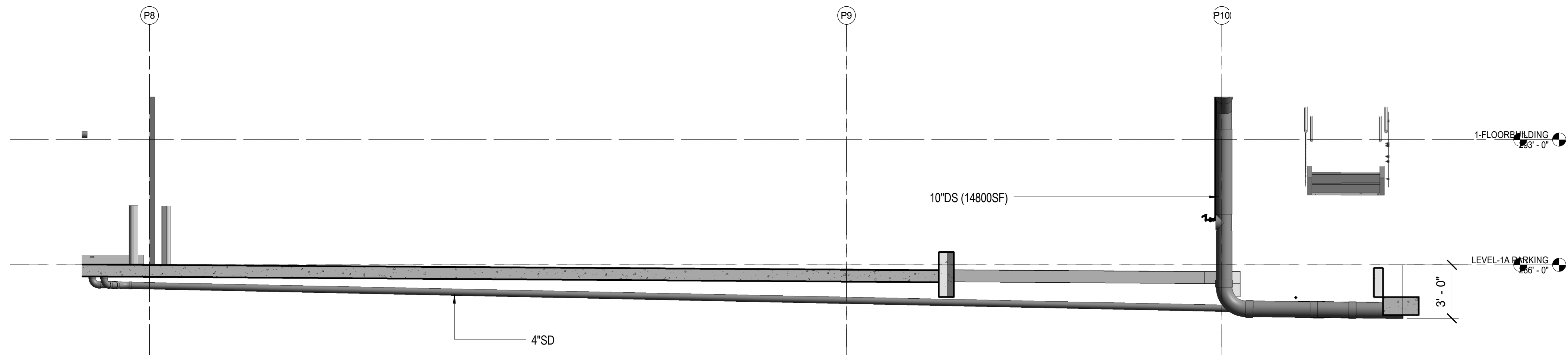


2 P5/PG TO P10/PD LEVEL 1B DRAINAGE SECTION VIEW
 1/8" = 1'-0"

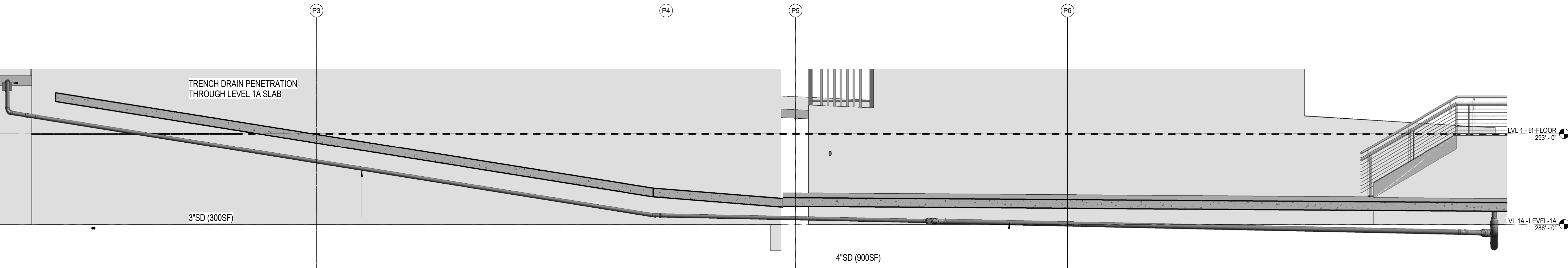
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 PHASE 1B
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SHEET TITLE:
 PLUMBING STORM
 DRAIN SECTIONS
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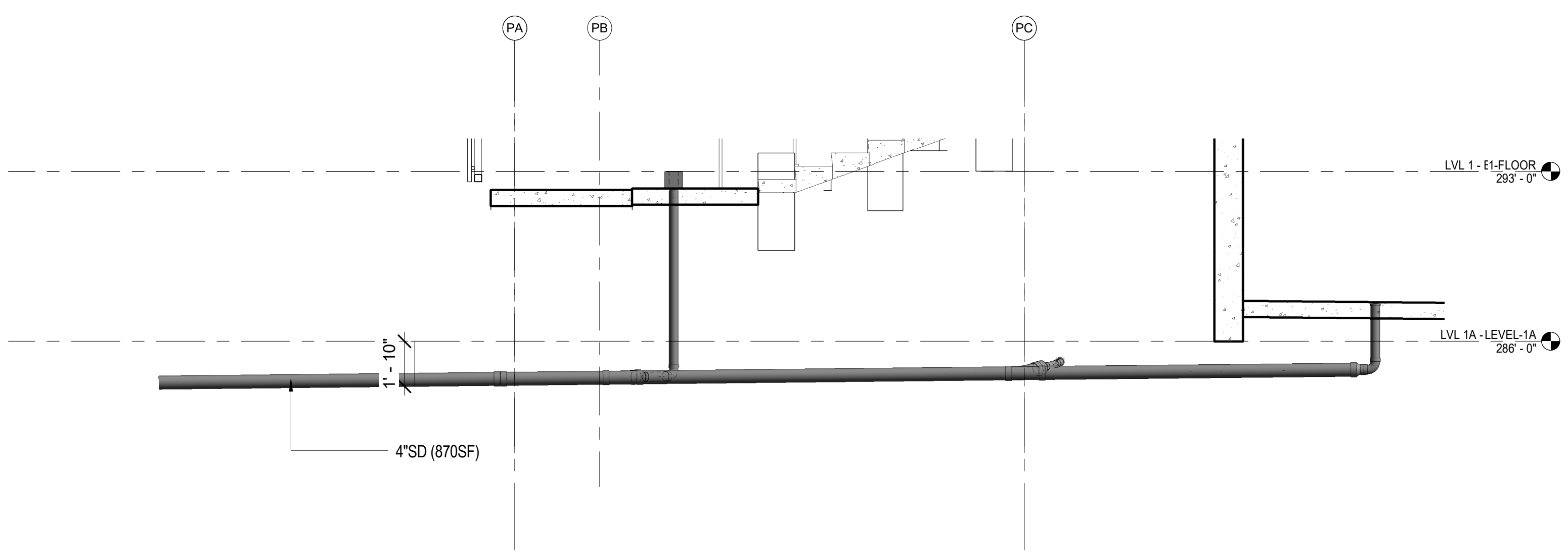
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DRAWN:	Author		
DATE:	7/25/2019		
PHASE	SHEET		
1B	P105		
OF	SHEETS		



1 P8/PK TO P10/PK LEVEL 1A DRAINAGE SECTION VIEW
1/4" = 1'-0"



2 P2/PD TO P7/PD LEVEL 1A DRAINAGE SECTION VIEW
1/4" = 1'-0"



3 P7/PD TO P7/PA LEVEL 1A DRAINAGE SECTION VIEW
1/4" = 1'-0"

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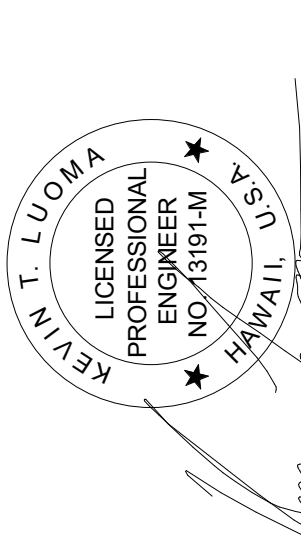
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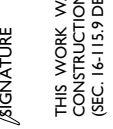
KEVIN T. LUOMA
LICENSED PROFESSIONAL ENGINEER
NO. 13191/HI
HAWAII
LICENSE EXPIRATION DATE 4/30/20
SIGNATURE
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SHEET TITLE:
PLUMBING STORM DRAIN SECTIONS
CADD FILE:

PROJECT:	2017-001	REVISIONS:	
DRAWN:	Author		
DATE:	7/25/2019		
PHASE	SHEET		
1B	P106		
OF	SHEETS		



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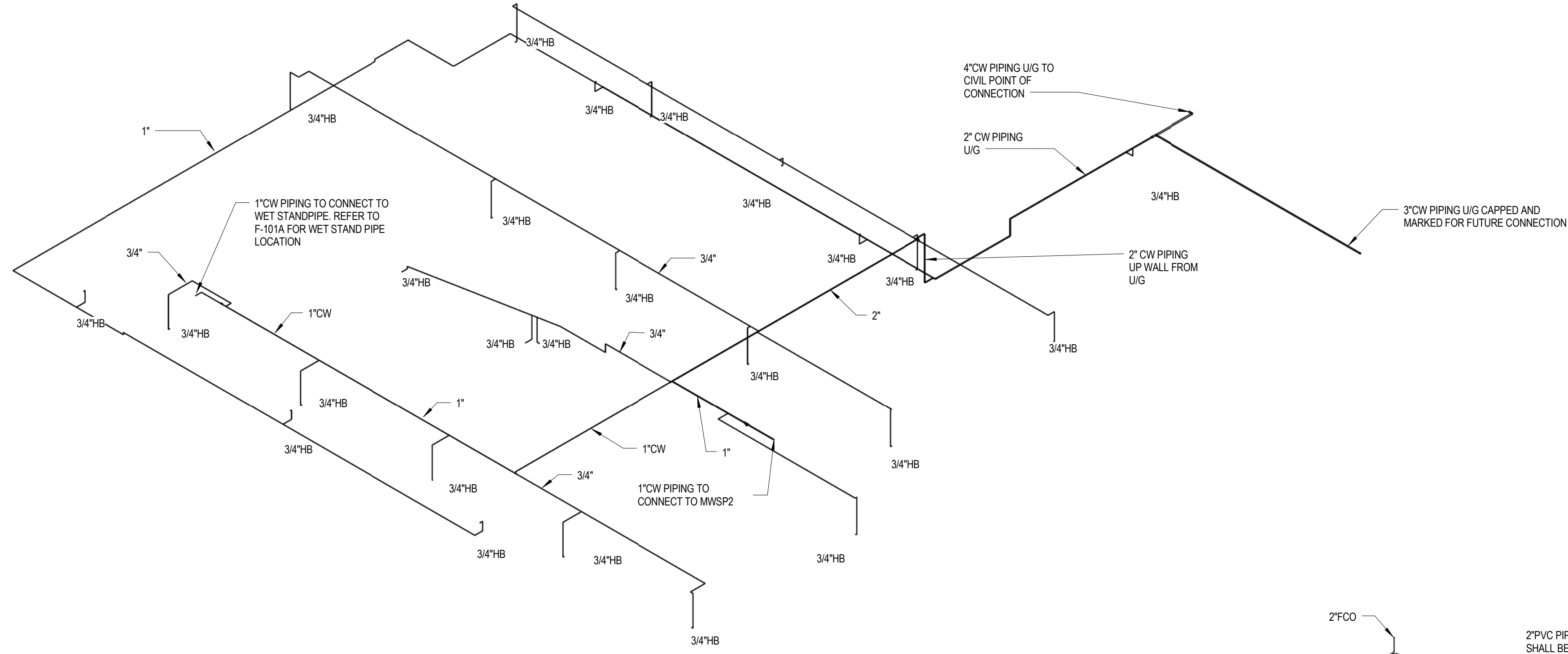
 LICENSE EXPIRATION DATE 4/30/20

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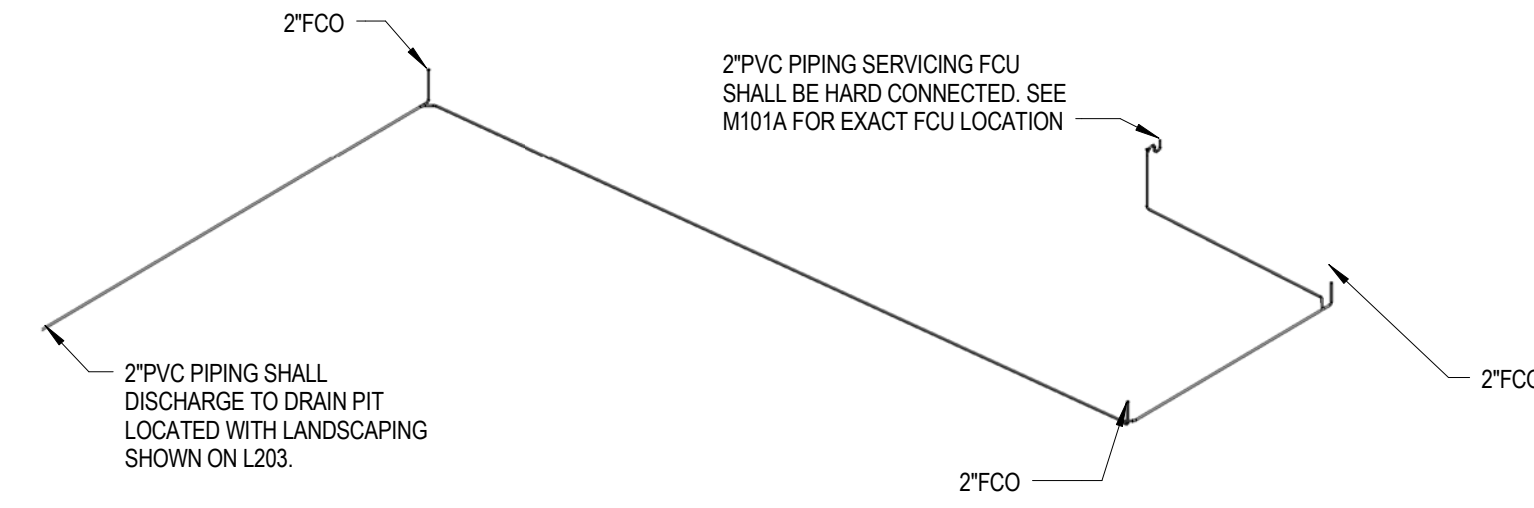
WAILUKU CIVIC COMPLEX PHASE 1B

100 % FINAL DESIGN





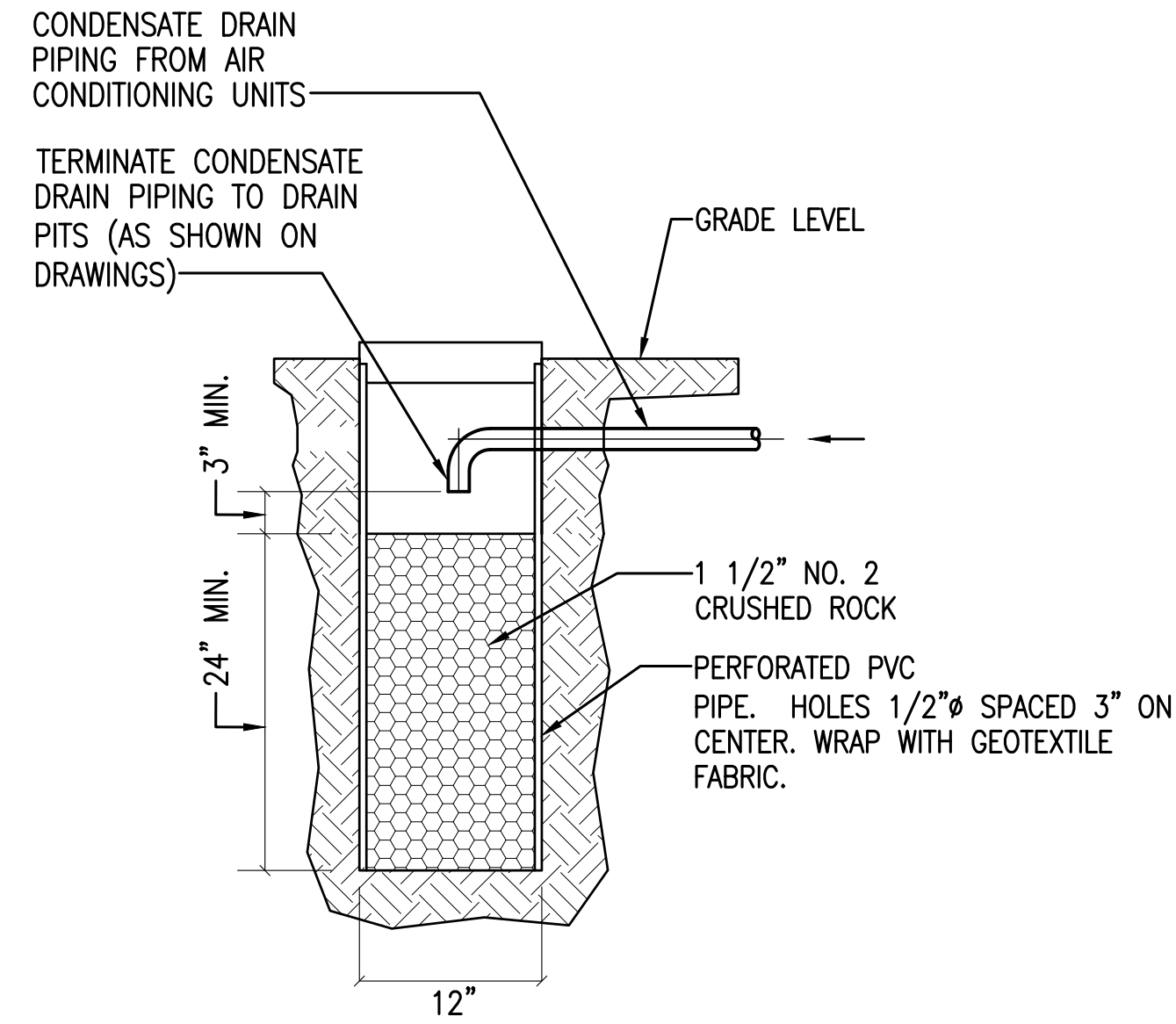
1 PLUMBING ISOMETRIC VIEW - COLD WATER



2 PLUMBING ISOMETRIC VIEW - SANITARY/VENT

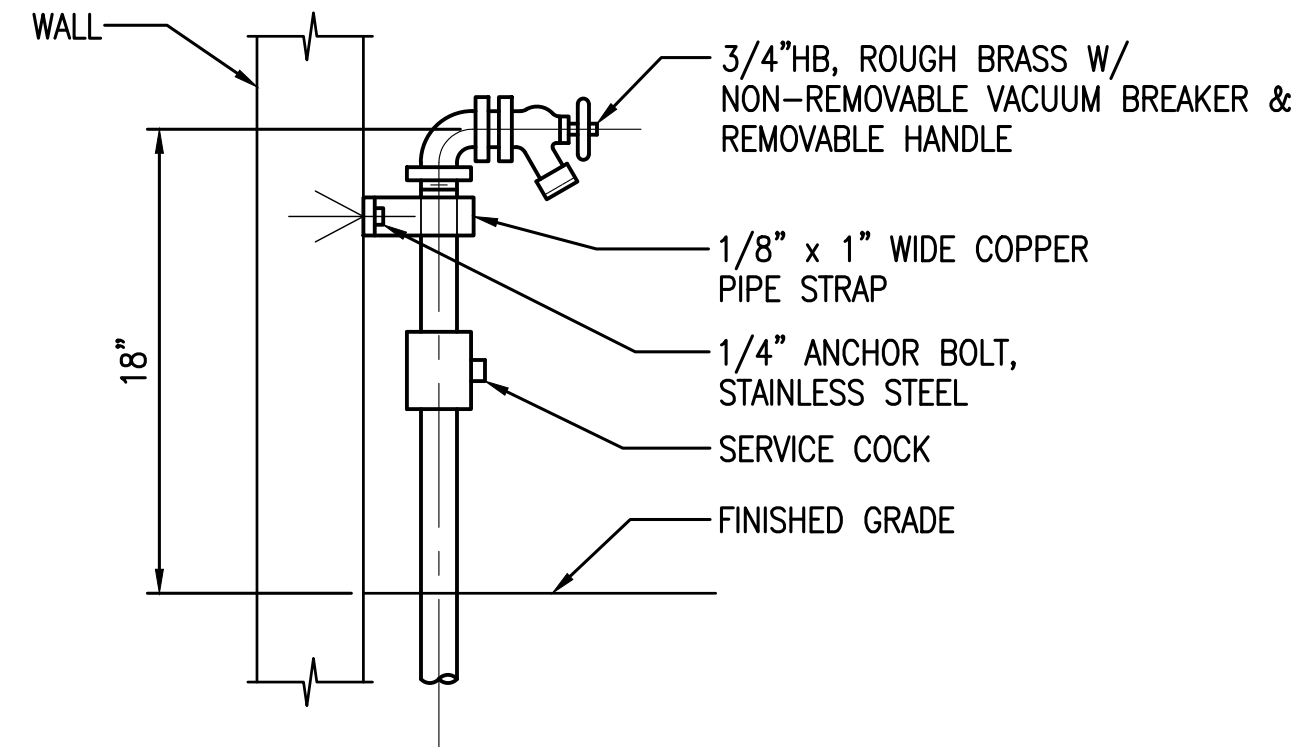
PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	PLUMBING ISOMETRIC VIEW
DRAWN:	WSP				
DATE:	7/25/2019				
PHASE	1B	SHEET	P200	CADD FILE:	
		OF	SHEETS		

LARGE DRAINAGE DISCHARGES NEED TO BE COORDINATED WITH A CIVIL ENGINEER

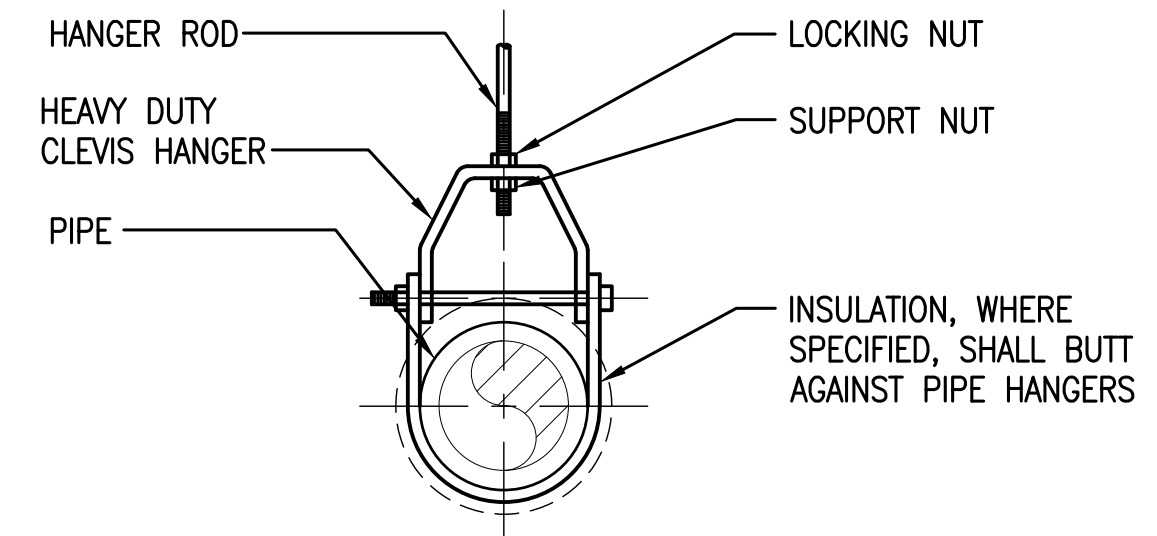


- NOTES:**
1. CIVIL ENGINEER SHALL REVIEW DETAIL TO ENSURE SOILS AROUND DRAIN PIT WILL ALLOW CONDENSATE TO PERMEATE INTO GROUND.
 2. PROVIDE ACCESSIBLE SCREW-ON COVER OR MINIMUM 2" THICK CONCRETE COVER WITH REBAR 4" ON CENTER FOR MAINTENANCE. CONCRETE COVER SHALL HAVE LIP TO FIT INSIDE 12" PIPE TO MINIMIZE WATER/DEBRIS PENETRATION AND PREVENT MOVEMENT. COVER SHALL BE RATED FOR THE TYPE OF TRAFFIC THAT WILL BE ON IT.
 3. DRAIN PIT PIPE SHALL BE A MINIMUM 3" IN HEIGHT. LENGTH SHALL BE LONGER IF NECESSARY TO REACH GRADE LEVEL.
 4. LOCATE IN LANDSCAPING WHEREVER FEASIBLE.

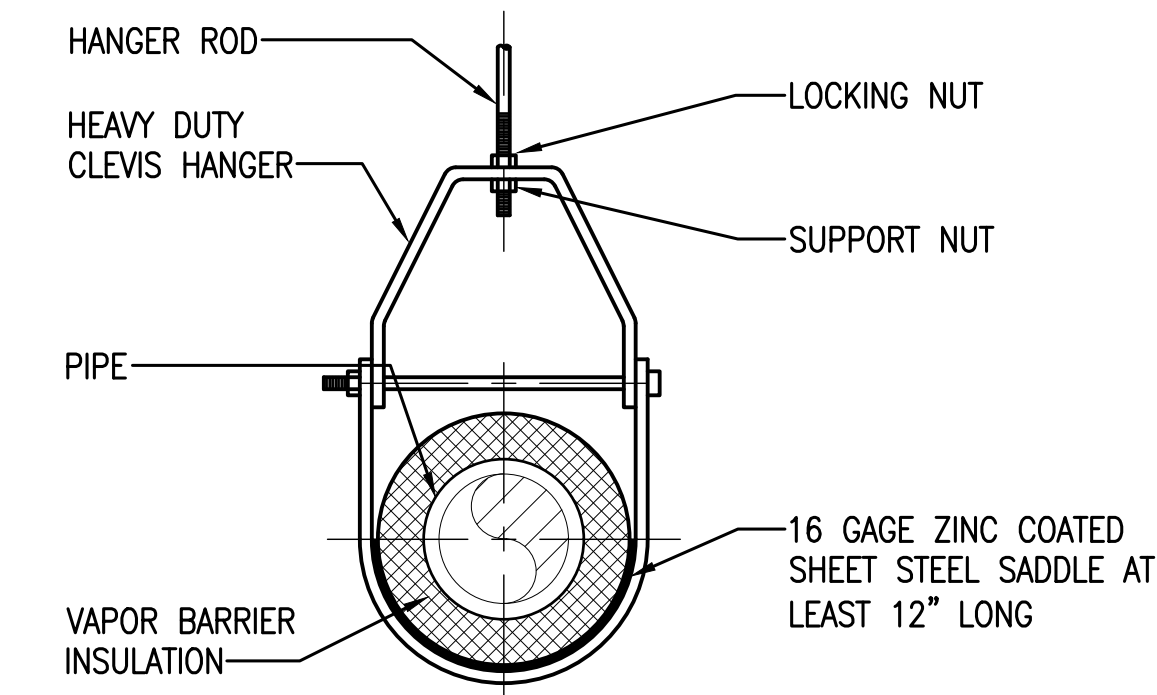
5 DRAIN PIT DETAIL
NOT TO SCALE



3 EXPOSED HOSE BIB DETAIL
NOT TO SCALE

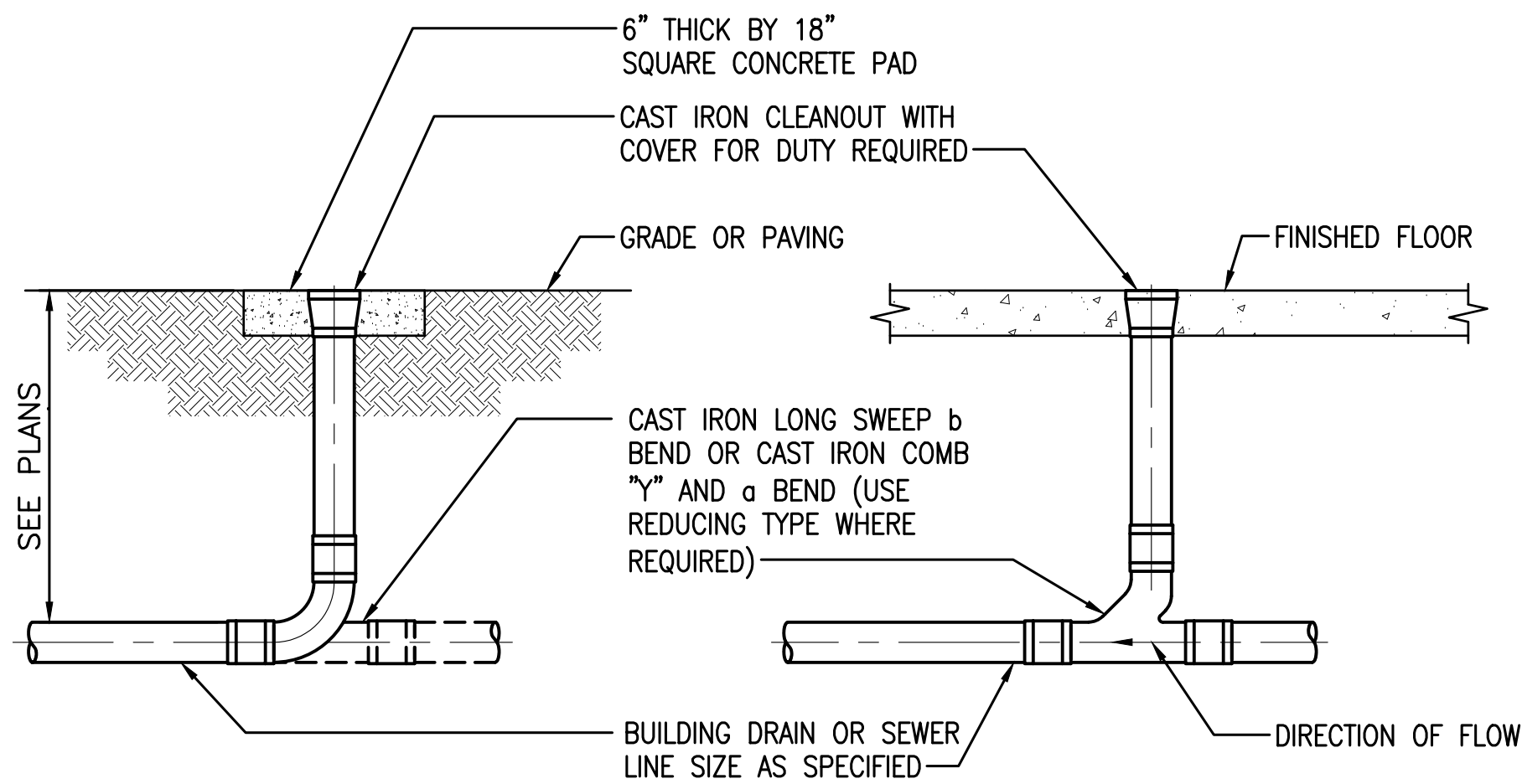


CLEVIS HANGER
SINGLE HORIZONTAL RUNS, NO VAPOR BARRIER INSULATION



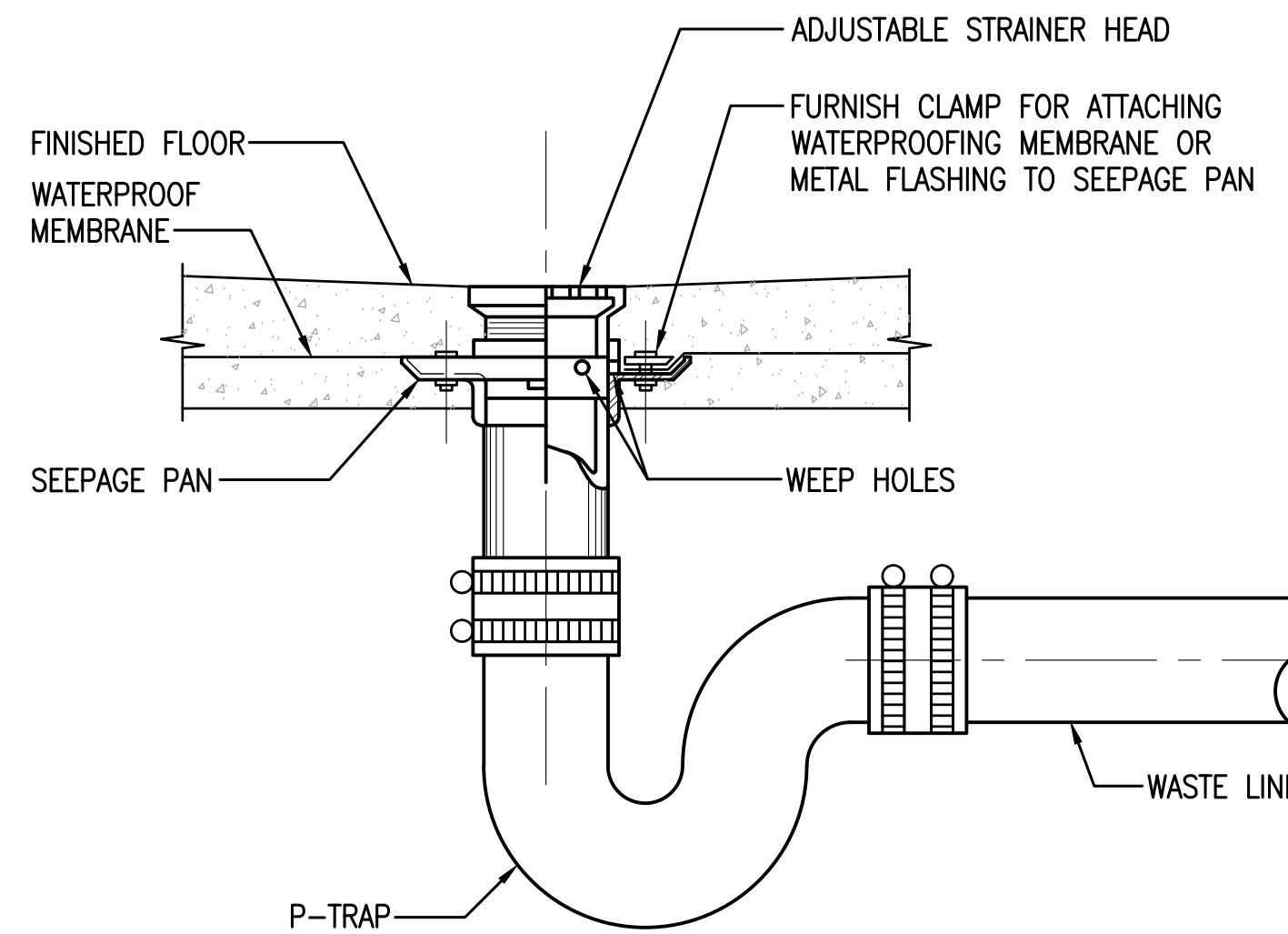
CLEVIS HANGER
SINGLE HORIZONTAL RUNS, VAPOR BARRIER INSULATION

1 PIPE SUPPORTS
NOT TO SCALE



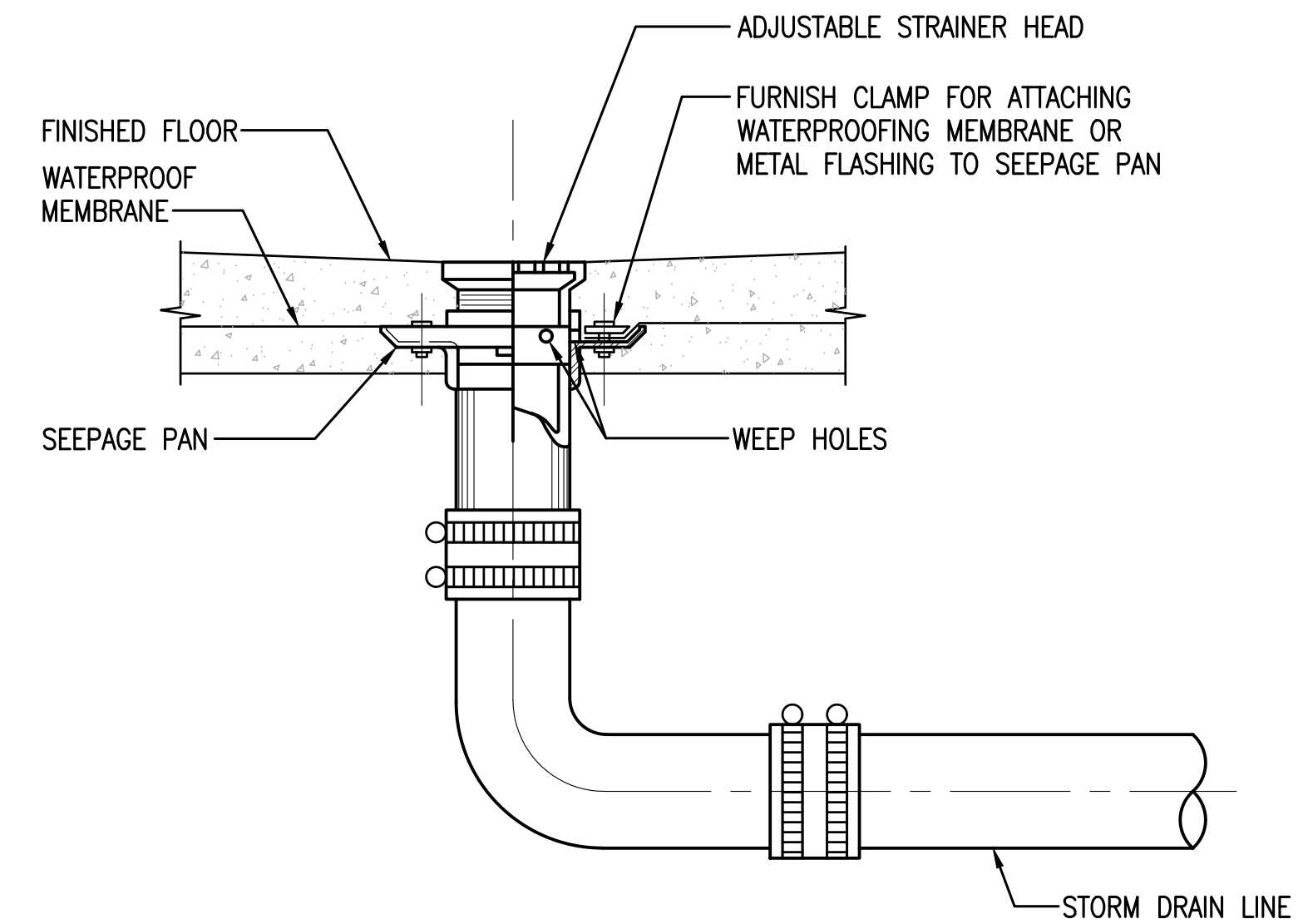
- NOTE:**
1. IF CLEANOUT IS SUBJECT TO VEHICULAR TRAFFIC, PROVIDE CLEANOUT COVER THAT SHALL BE SUPPORTED INDEPENDENTLY OF PIPING.

6 CLEANOUT DETAILS
NOT TO SCALE



- NOTES:**
1. REFER TO STRUCTURAL DRAWINGS AND NOTES FOR PIPE PENETRATIONS.
 2. PROVIDE TRAP PRIMER TO ALL FLOOR DRAINS UNLESS OTHERWISE NOTED ON PLANS.
 3. ALL FLOOR DRAINS TO BE FINISHED FLUSH WITH FINISHED FLOOR.

4 FLOOR DRAIN DETAIL
NOT TO SCALE

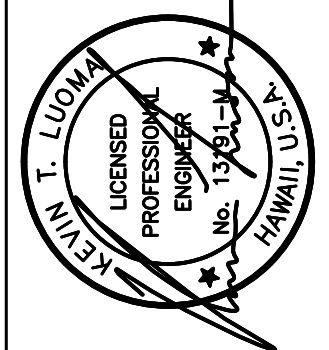


- NOTES:**
1. REFER TO STRUCTURAL DRAWINGS AND NOTES FOR PIPE PENETRATIONS.
 2. ALL AREA DRAINS TO BE FINISHED FLUSH ROOF TOPPING SLAB.

2 AREA DRAIN DETAIL
NOT TO SCALE

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FERRARO CHOI



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