

SIGNAGE SCHEDULE - LEVEL 2

SIGN NO.	LOCATION	ROOM NO.	SIGN TYPE	SIGN/ROOM NAME TEXT	ROOM NO. TEXT	MOUNTING TYPE	NOTES
P2-01	PARKING 2	-	5	2	-	I	
P2-02	PARKING 2	-	5	2	-	I	
P2-03	PARKING 2	-	7	↑ PARK ↑ EXIT & PARK	-	F	
P2-04	PARKING 2	-	5	2	-	I	
P2-06	PARKING 2	-	12	-	-	-	REFER TO INTERIOR ELEVATIONS
P2-07	PARKING 2	-	11A	-	-	D	
P2-08	PARKING 2	-	5	2	-	I	
P2-09	PARKING 2	-	7	→ EXIT   ↑ PARK ⊘ DO NOT ENTER	-	F	
P2-10	PARKING 2	-	5	2	-	I	
P2-11	PARKING 2	-	5	2	-	I	
P2-12	PARKING 2	-	7	→ EXIT & PARK	-	F	
P2-13	PARKING 2	-	5	2	-	I	
P2-14	PARKING 2	-	5	2	-	I	
P2-15	PARKING 2	-	5	2	-	I	
P2-16	PARKING 2	-	5	2	-	I	
P2-17	PARKING 2	-	7	→ EXIT   ← → PARK	-	F	
P2-18	PARKING 2	-	5	2	-	I	
P2-19	PARKING 2	-	10	-	-	D	
P2-20	PARKING 2	-	10	-	-	D	
P2-21	PARKING 2	-	10	-	-	D	
P2-22	PARKING 2	-	10	-	-	D	
P2-23	PARKING 2	-	10	-	-	D	
P2-24	PARKING 2	-	10	-	-	D	
P2-25	PARKING 2	-	12	-	-	-	REFER TO INTERIOR ELEVATIONS
P2-26	PARKING 2	-	5	2	-	I	
P2-27	PARKING 2	-	5	2	-	I	
P2-28	PARKING 2	-	5	2	-	I	
P2-29	PARKING 2	-	7	↑ ONE WAY ⊘ WRONG WAY	-	F	
P2-30	PARKING 2	-	12	-	-	-	REFER TO INTERIOR ELEVATIONS
P2-31	PARKING 2	-	10	-	-	D	
P2-32	PARKING 2	-	10	-	-	D	
P2-33	PARKING 2	-	10	-	-	D	
P2-35	PARKING 2	-	12	-	-	-	REFER TO INTERIOR ELEVATIONS
P2-36	PARKING 2	-	11A	-	-	D	
P2-37	PARKING 2	-	10	-	-	D	
P2-38	PARKING 2	-	12	-	-	-	REFER TO INTERIOR ELEVATIONS
P2-40	ELEV. 'C'	100	6	-	-	A	
P2-41	ELEV. 'C'	100	5	2	-	I	
P2-42	ELEV. 'C'	100	4	IN CASE OF FIRE USE STAIRS	-	A	
P2-43	ELEV. 'C'	100	2	-	-	C	
P2-44	PARKING 2	-	5	2	-	I	
P2-45	PARKING 2	-	7	↑ EXIT   → ↑ PARK ⊘ WRONG WAY	-	F	
P2-46	PARKING 2	-	7	→ EXIT & PARK	-	F	
P2-47	PARKING 2	-	5	2	-	I	
P2-48	PARKING 2	-	5	2	-	I	
P2-49	PARKING 2	-	5	2	-	I	
P2-50	PARKING 2	-	10	-	-	D	
P2-51	PARKING 2	-	10	-	-	D	
P2-52	PARKING 2	-	10	-	-	D	
P2-53	PARKING 2	-	12	-	-	-	REFER TO INTERIOR ELEVATIONS
P2-54	PARKING 2	-	7	↑ ONE WAY ⊘ WRONG WAY	-	F	
P2-55	PARKING 2	-	5	2	-	I	
P2-56	PARKING 2	-	12	-	-	-	REFER TO INTERIOR ELEVATIONS
P2-57	PARKING 2	-	10	-	-	D	
P2-58	PARKING 2	-	10	-	-	D	
P2-59	PARKING 2	-	10	-	-	D	
P2-60	PARKING 2	-	10	-	-	D	
P2-61	PARKING 2	-	10	-	-	D	
P2-62	PARKING 2	-	10	-	-	D	
P2-63	PARKING 2	-	5	2	-	I	
P2-64	PARKING 2	-	7	↑ EXIT   → ↑ PARK ⊘ DO NOT ENTER	-	F	

**FERRARO CHOI**

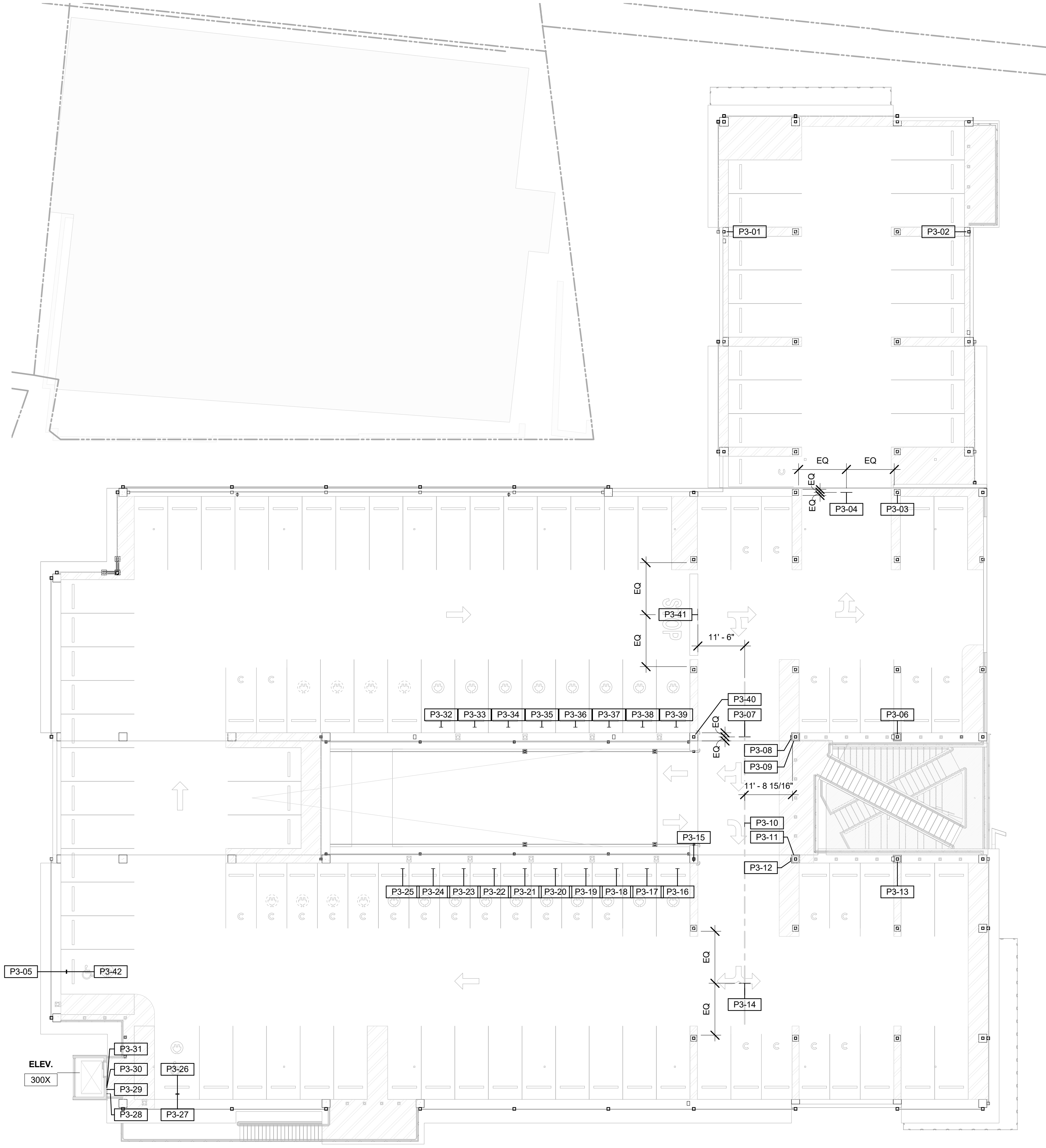
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**WAILUKU CIVIC COMPLEX  
 PHASE 1B**  
 100% FINAL DESIGN  
 [Signature]

SHEET TITLE:  
**WAYFINDING PLAN  
 & SCHEDULE -  
 PARKING GARAGE  
 - LEVEL 2**  
 CADD FILE:

PROJECT: 2017-001  
 DRAWN: FCA  
 DATE: 7/25/2019  
 PHASE: SHEET: **1B A903**  
 OF SHEETS:

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SIGNAGE SCHEDULE - LEVEL 3

SIGN NO.	LOCATION	ROOM NO.	SIGN TYPE	SIGN/ROOM NAME TEXT	ROOM NO. TEXT	MOUNTING TYPE	NOTES
P3-01	PARKING 3	-	5	3	-	I	
P3-02	PARKING 3	-	5	3	-	I	
P3-03	PARKING 3	-	5	3	-	I	
P3-04	PARKING 3	-	7	↑ PARK ↑ EXIT & PARK	-	F	
P3-05	PARKING 3	-	11A	-	-	D	
P3-06	PARKING 3	-	5	3	-	I	
P3-07	PARKING 3	-	7	→ EXIT   ↑ PARK ⊘ DO NOT ENTER	-	F	
P3-08	PARKING 3	-	5	3	-	I	
P3-09	PARKING 3	-	5	3	-	I	
P3-10	PARKING 3	-	7	→ EXIT & PARK	-	F	
P3-11	PARKING 3	-	5	3	-	I	
P3-12	PARKING 3	-	5	3	-	I	
P3-13	PARKING 3	-	5	3	-	I	
P3-14	PARKING 3	-	7	→ EXIT   ↔ PARK	-	F	
P3-15	PARKING 3	-	5	3	-	I	
P3-16	PARKING 3	-	10	-	-	D	
P3-17	PARKING 3	-	10	-	-	D	
P3-18	PARKING 3	-	10	-	-	D	
P3-19	PARKING 3	-	10	-	-	D	
P3-20	PARKING 3	-	10	-	-	D	
P3-21	PARKING 3	-	10	-	-	D	
P3-22	PARKING 3	-	10	-	-	D	
P3-23	PARKING 3	-	10	-	-	D	
P3-24	PARKING 3	-	10	-	-	D	
P3-25	PARKING 3	-	10	-	-	D	
P3-26	PARKING 3	-	10	-	-	D	
P3-27	PARKING 3	-	11A	-	-	D	
P3-28	ELEV. 'C'	100	2	-	-	C	
P3-29	ELEV. 'C'	100	5	3	-	I	
P3-30	ELEV. 'C'	100	4	IN CASE OF FIRE USE STAIRS	-	A	
P3-31	ELEV. 'C'	100	6	-	-	A	
P3-32	PARKING 3	-	10	-	-	D	
P3-33	PARKING 3	-	10	-	-	D	
P3-34	PARKING 3	-	10	-	-	D	
P3-35	PARKING 3	-	10	-	-	D	
P3-36	PARKING 3	-	10	-	-	D	
P3-37	PARKING 3	-	10	-	-	D	
P3-38	PARKING 3	-	10	-	-	D	
P3-39	PARKING 3	-	10	-	-	D	
P3-40	PARKING 3	-	5	3	-	I	
P3-41	PARKING 3	-	7	↑ EXIT   → ↑ PARK ⊘ DO NOT ENTER	-	F	
P3-42	PARKING 3	-	10	-	-	D	

WAILUKU CIVIC COMPLEX PHASE 1B  
100% FINAL DESIGN

WAYFINDING PLAN & SCHEDULE - PARKING GARAGE - LEVEL 3

SHEET TITLE:

PROJECT: 2017-001

DRAWN: FCA

DATE: 7/25/2019

PHASE: SHEET: 1B A904

OF SHEETS: OF

REVISIONS:

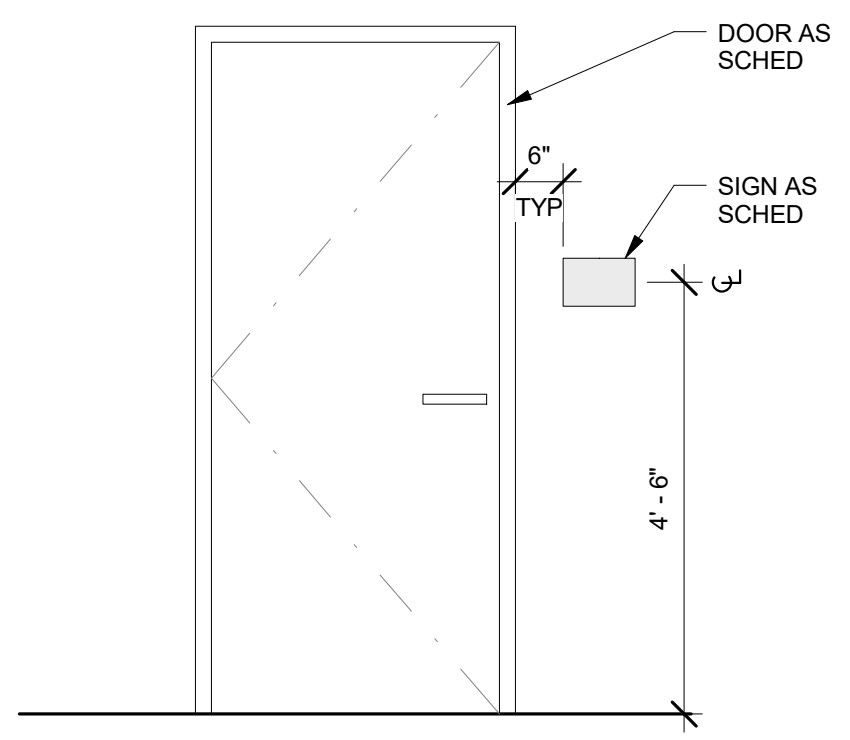
CADD FILE:

SIGNATURE: [Signature] LICENSE EXPIRATION DATE: 4/30/20  
THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A LICENSED ARCHITECT UNDER THE PROFESSIONAL ARCHITECTURE ACT OF THE STATE OF HAWAII. I AM NOT PROVIDING ANY PROFESSIONAL ARCHITECTURAL SERVICES UNDER ANY OBSERVATION, SEAL, OR DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS.

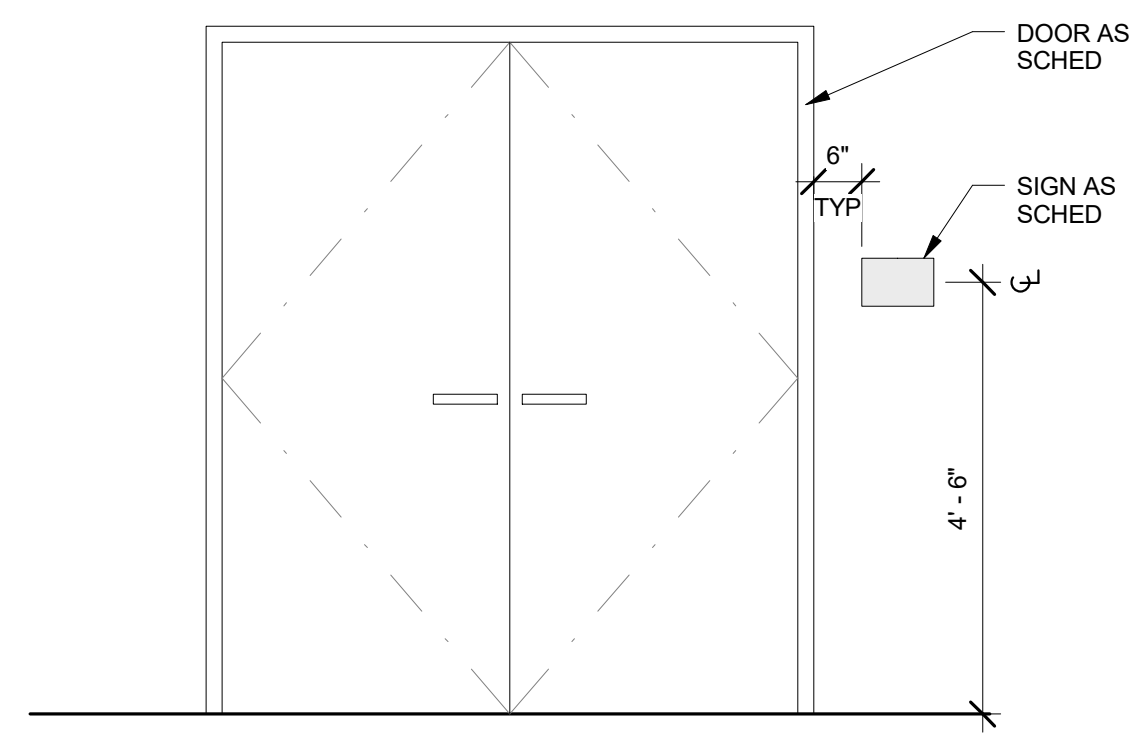
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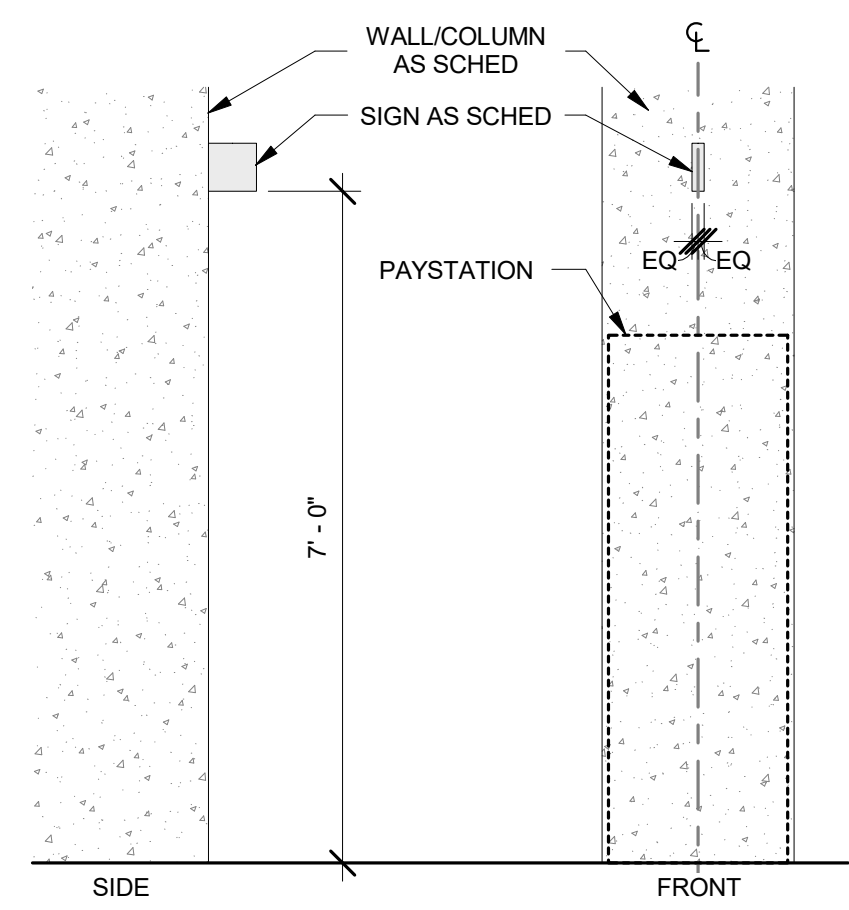




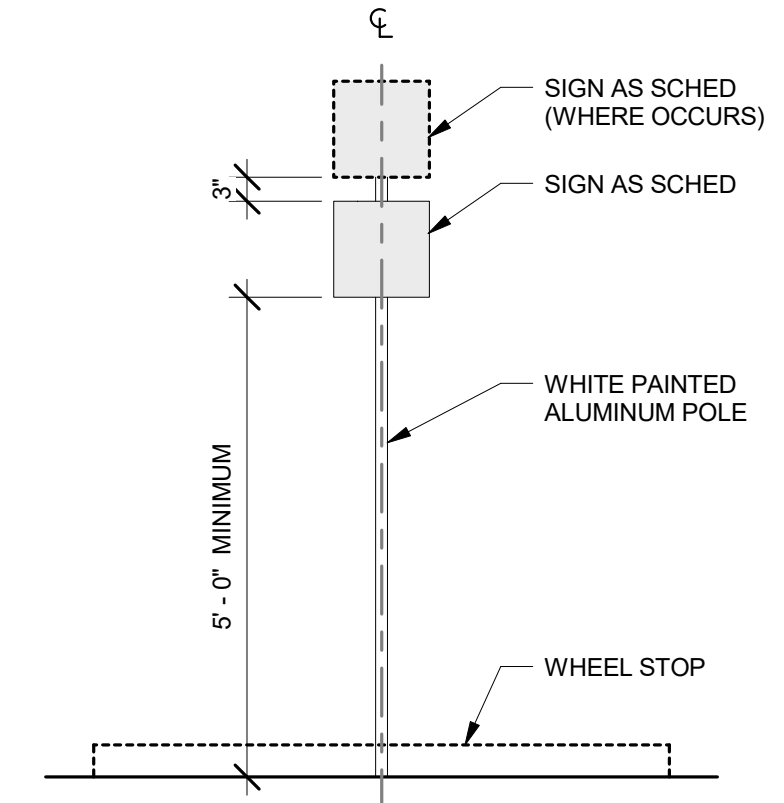
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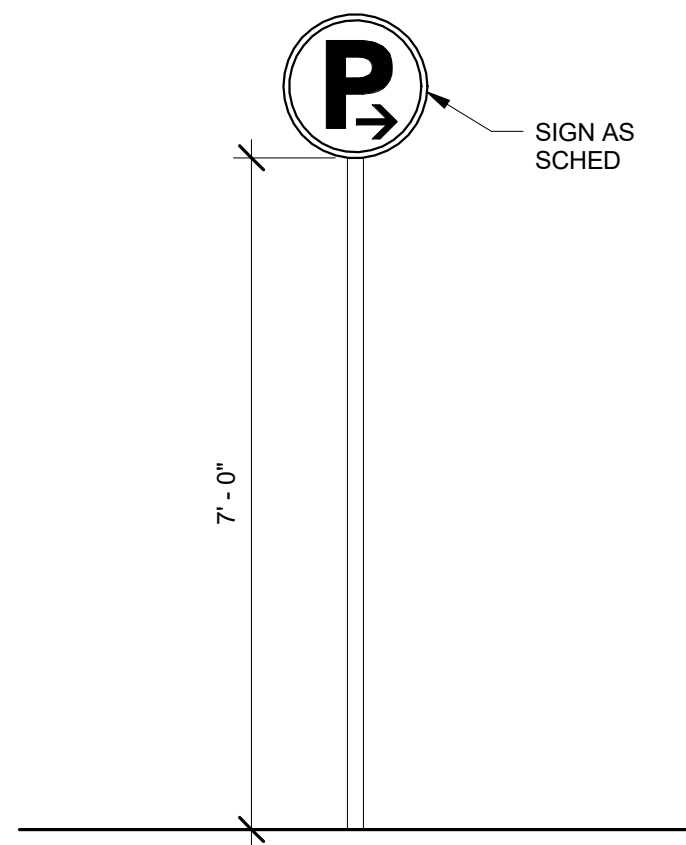
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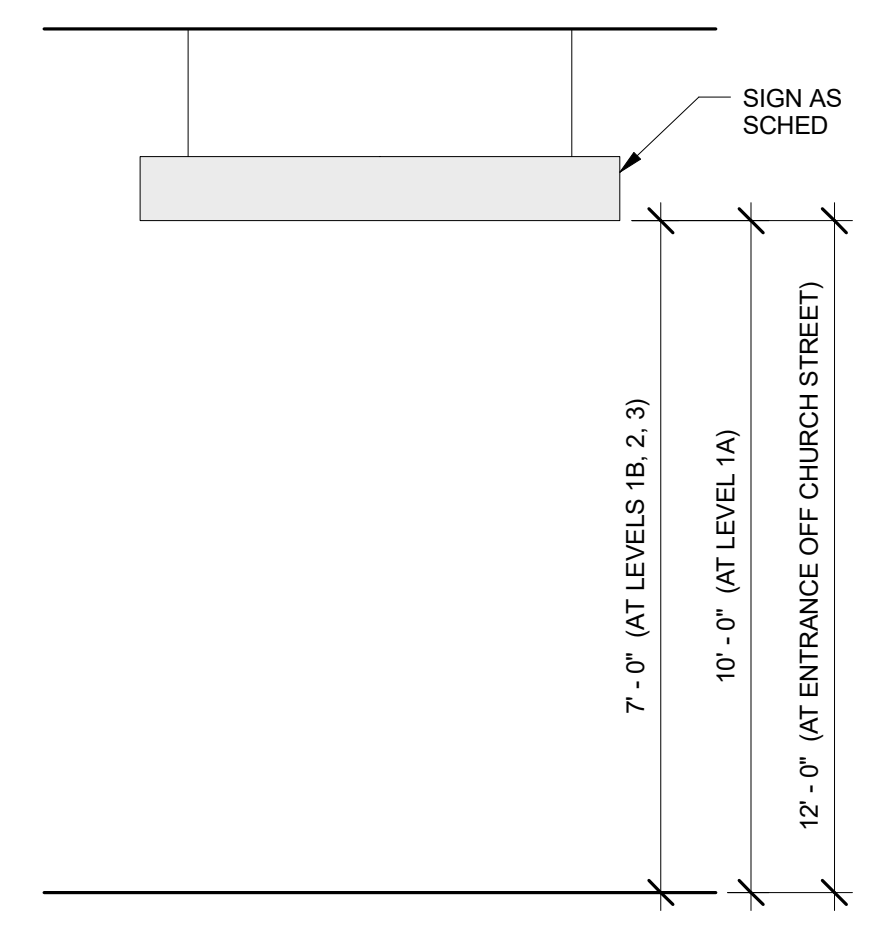
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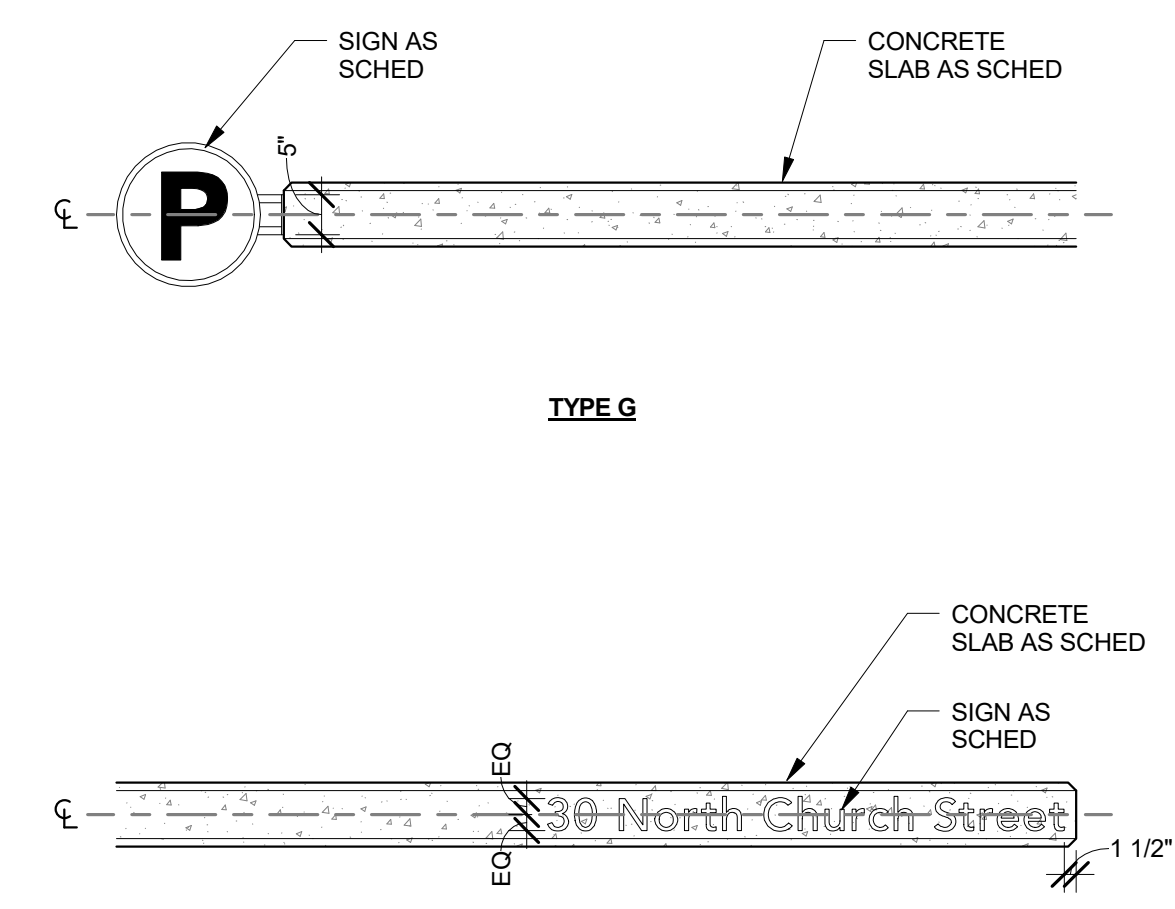
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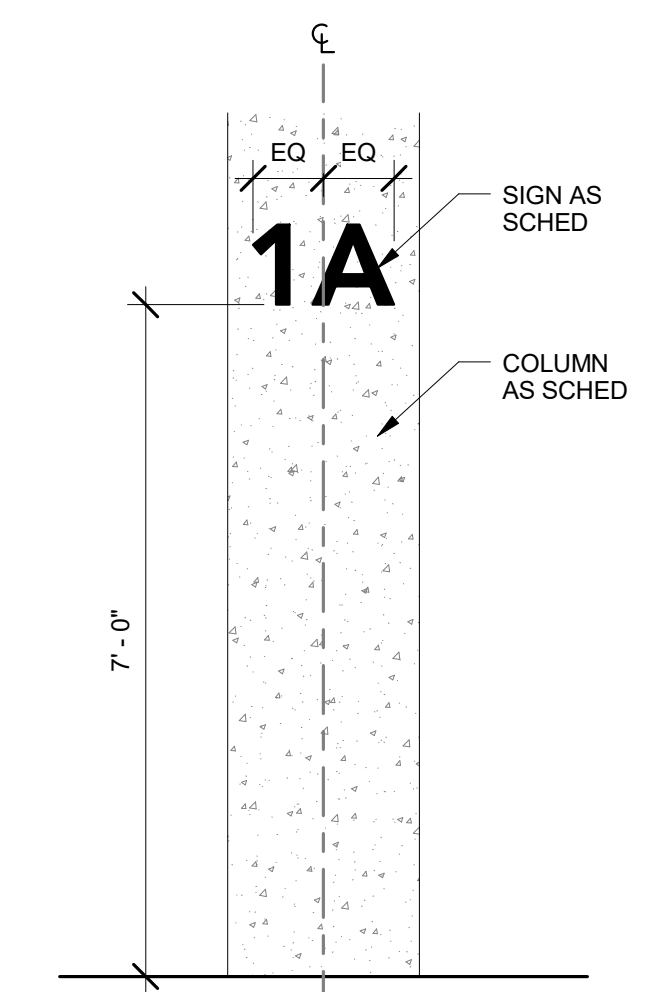
TYPE E



TYPE F



TYPE G



TYPE I

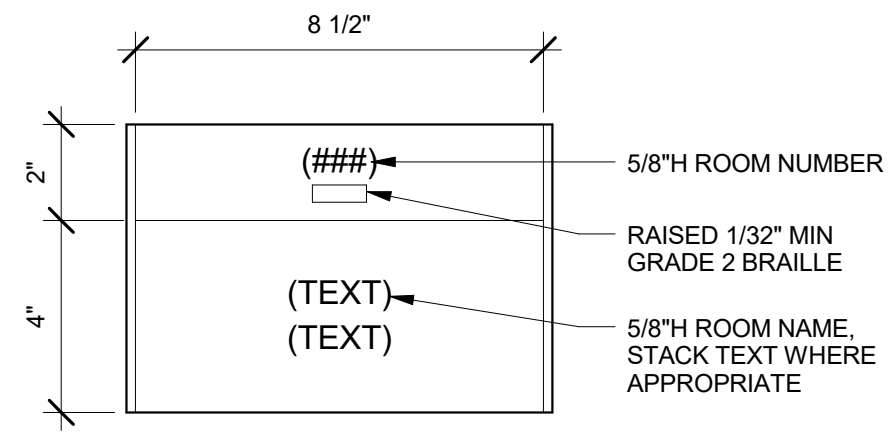
**SIGNAGE MOUNTING TYPES**  
 GENERAL NOTES:  
 • ALL SIGNS SHALL COMPLY WITH ADA STANDARDS FOR ACCESSIBLE DESIGN SECTION 703.

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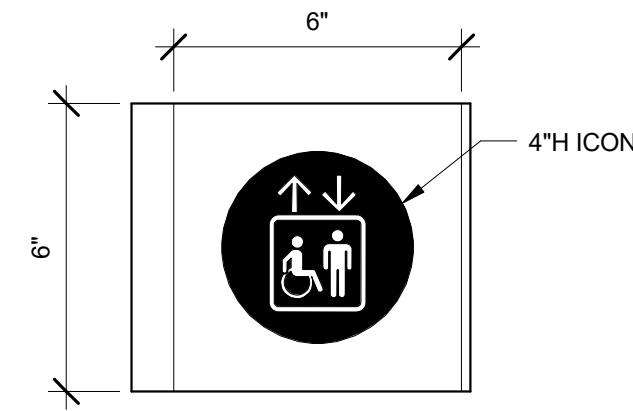
**WAILUKU CIVIC COMPLEX PHASE 1B**  
 100% FINAL DESIGN  
 [PUVABUUPUVUWOP]

SHEET TITLE:  
**SIGNAGE MOUNTING TYPES**  
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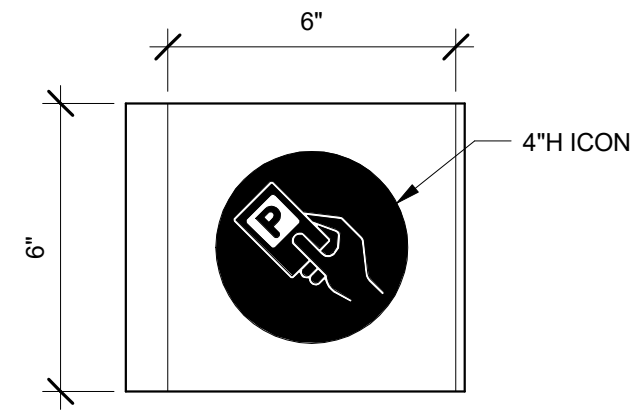
PROJECT:	2017-001	REVISIONS:	◀◀◀◀◀◀◀◀◀◀
DRAWN:	FCA		
DATE:	7/25/2019		
PHASE:	1B	SHEET:	A910
		OF	SHEETS



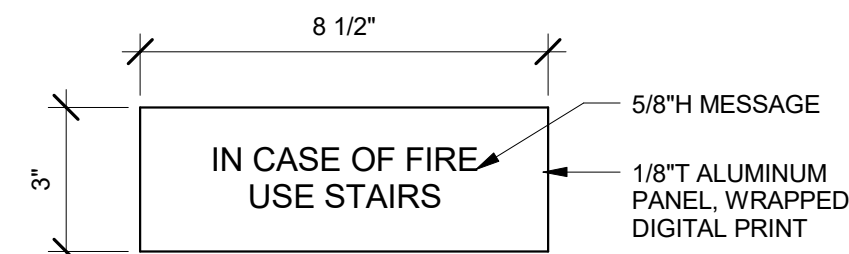
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ROOM ID



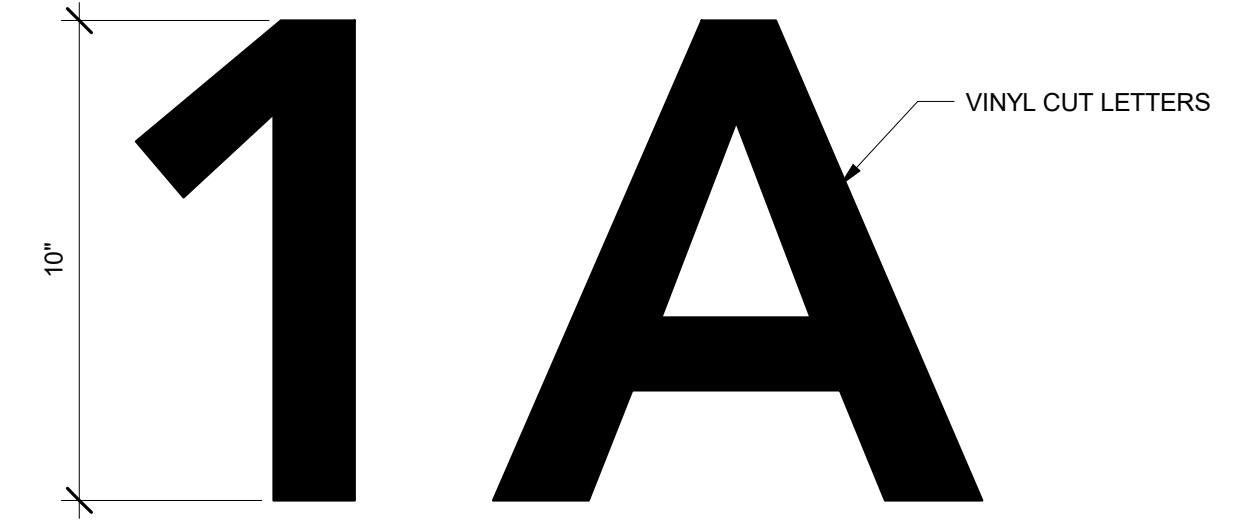
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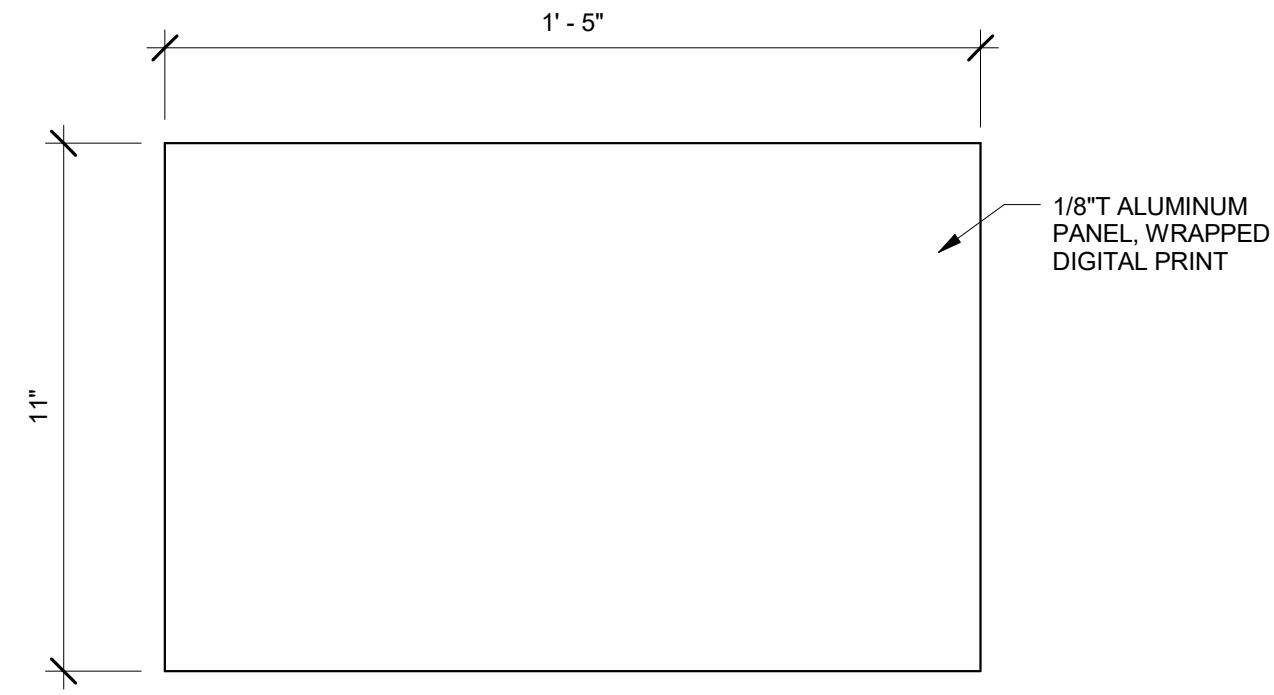
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PAYSTATION FLAG



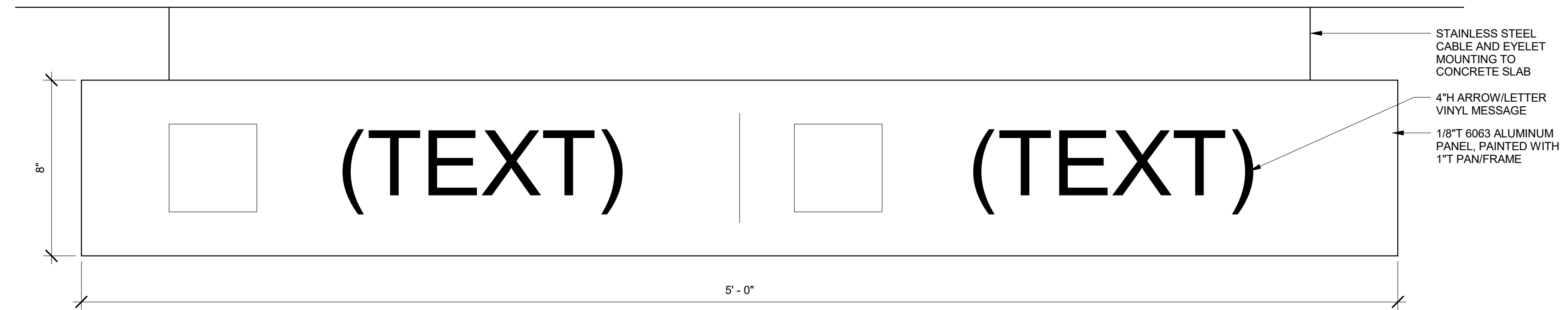
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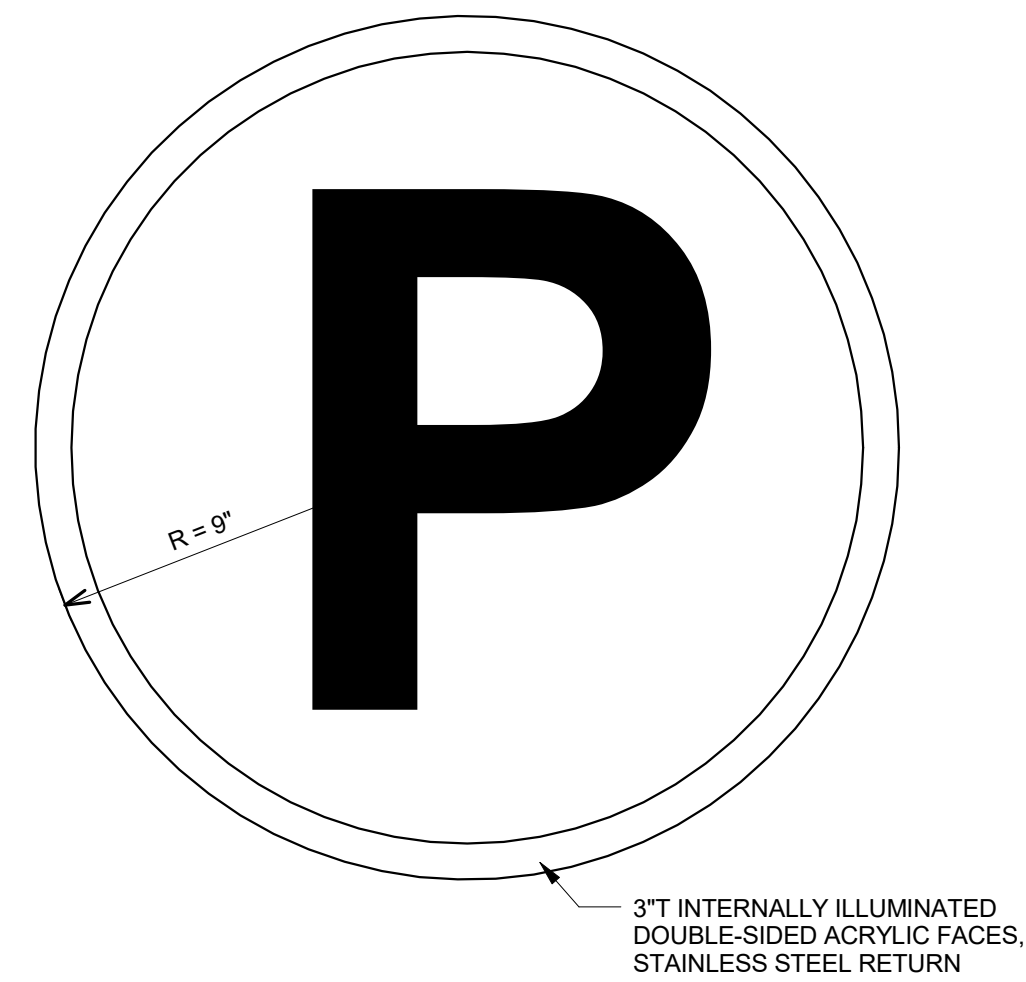
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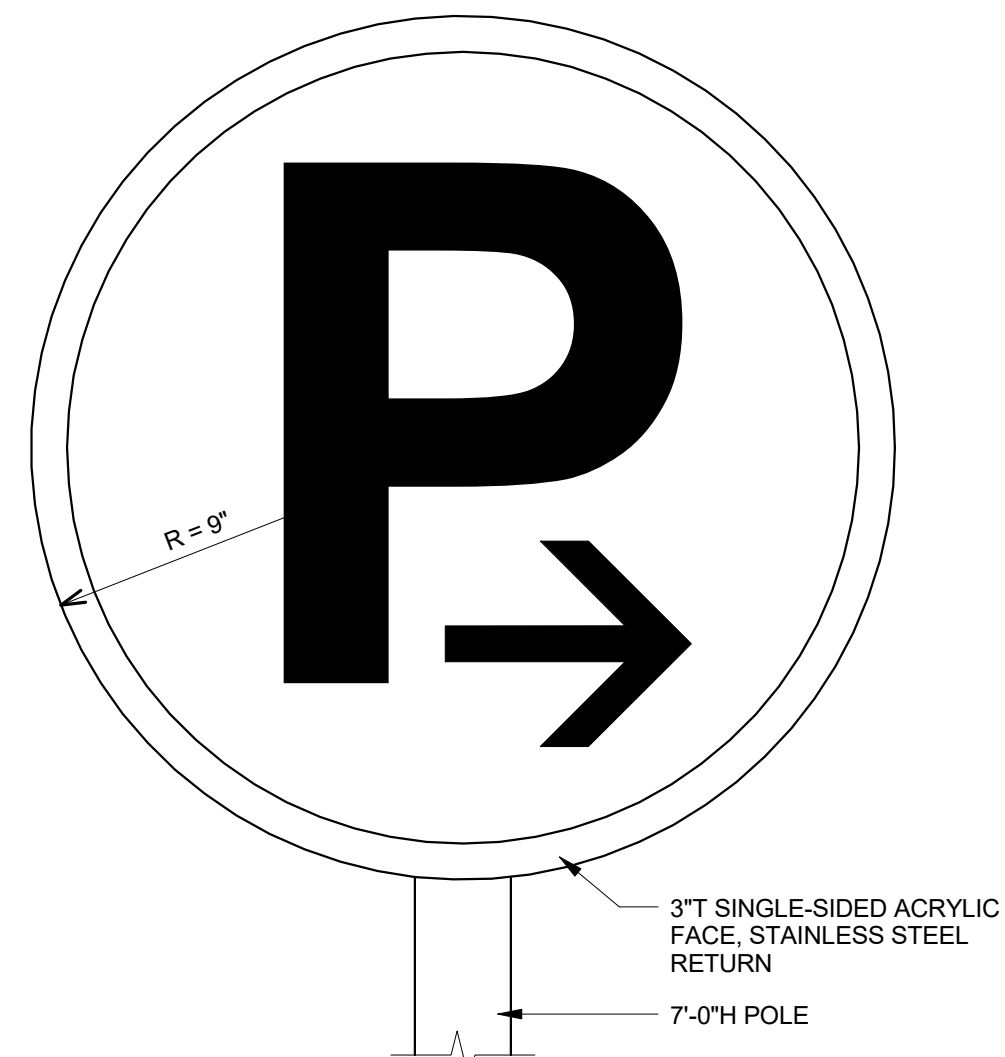
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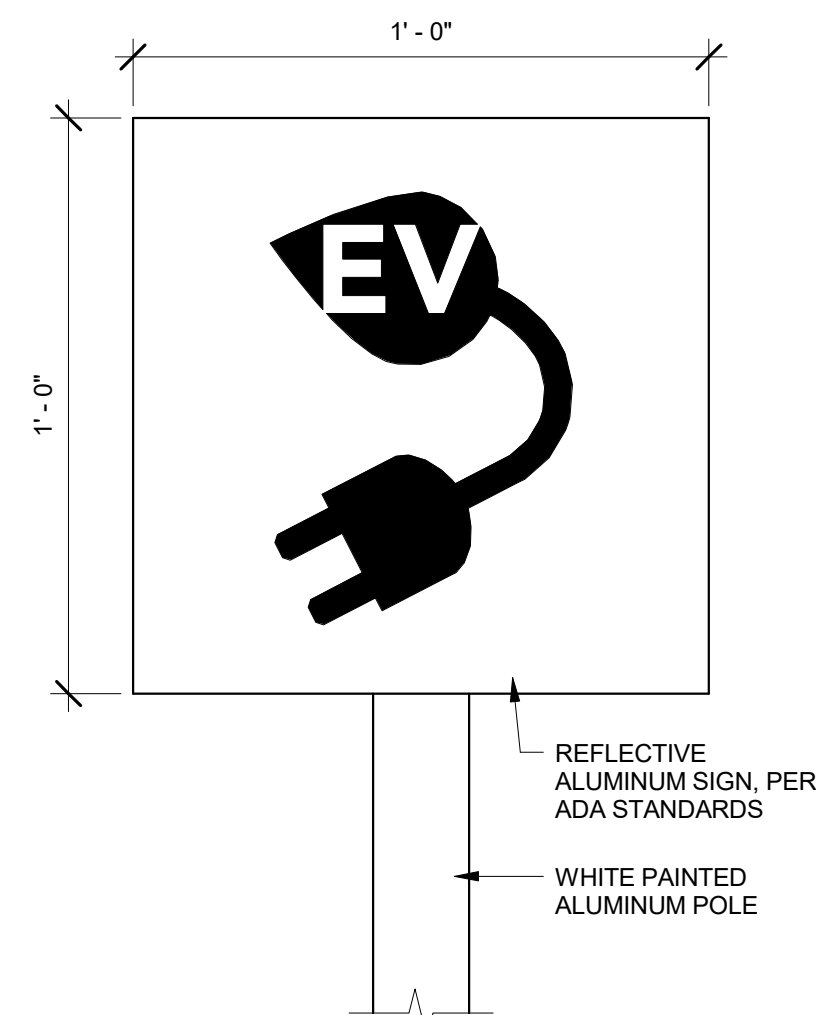
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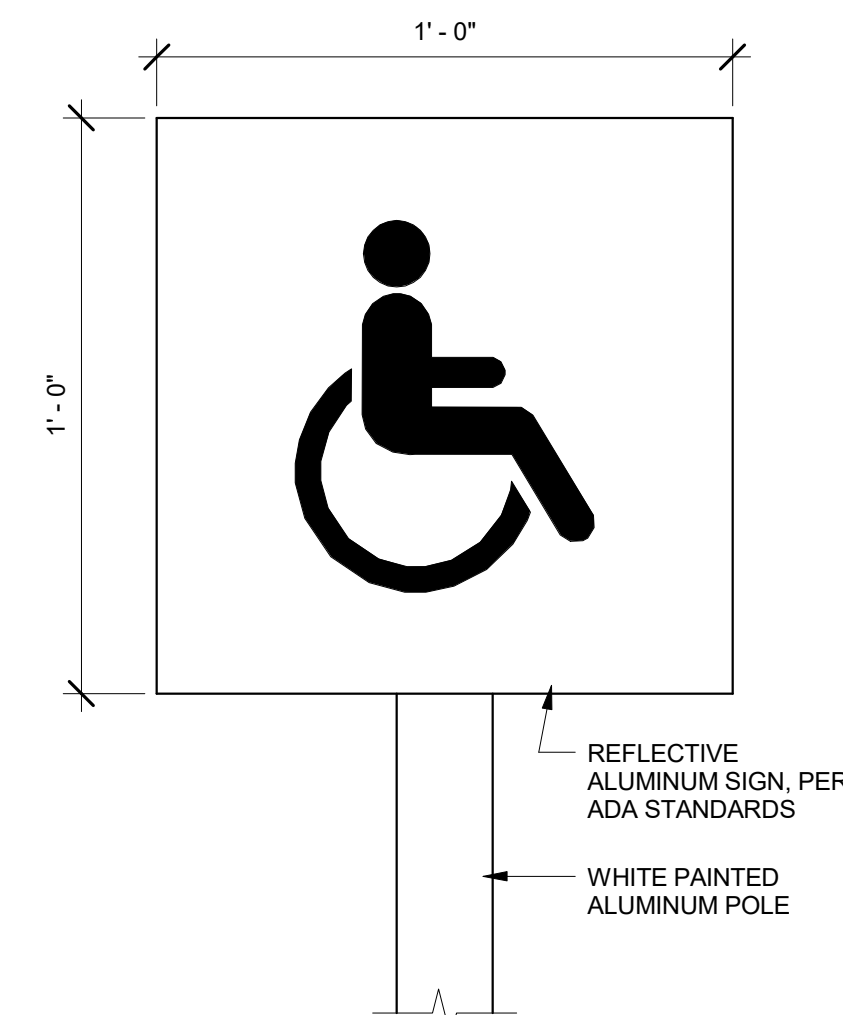
**TYPE 8**  
PARKING ID



**TYPE 9**  
PARKING ID DIRECTIONAL



**TYPE 10**  
ELECTRIC VEHICLE ID



**TYPE 11A**  
ACCESSIBILITY ID



**TYPE 11B**  
ACCESSIBILITY ID

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

SHEET TITLE:  
**WAYFINDING AND SIGNAGE TYPES**

REVISIONS:

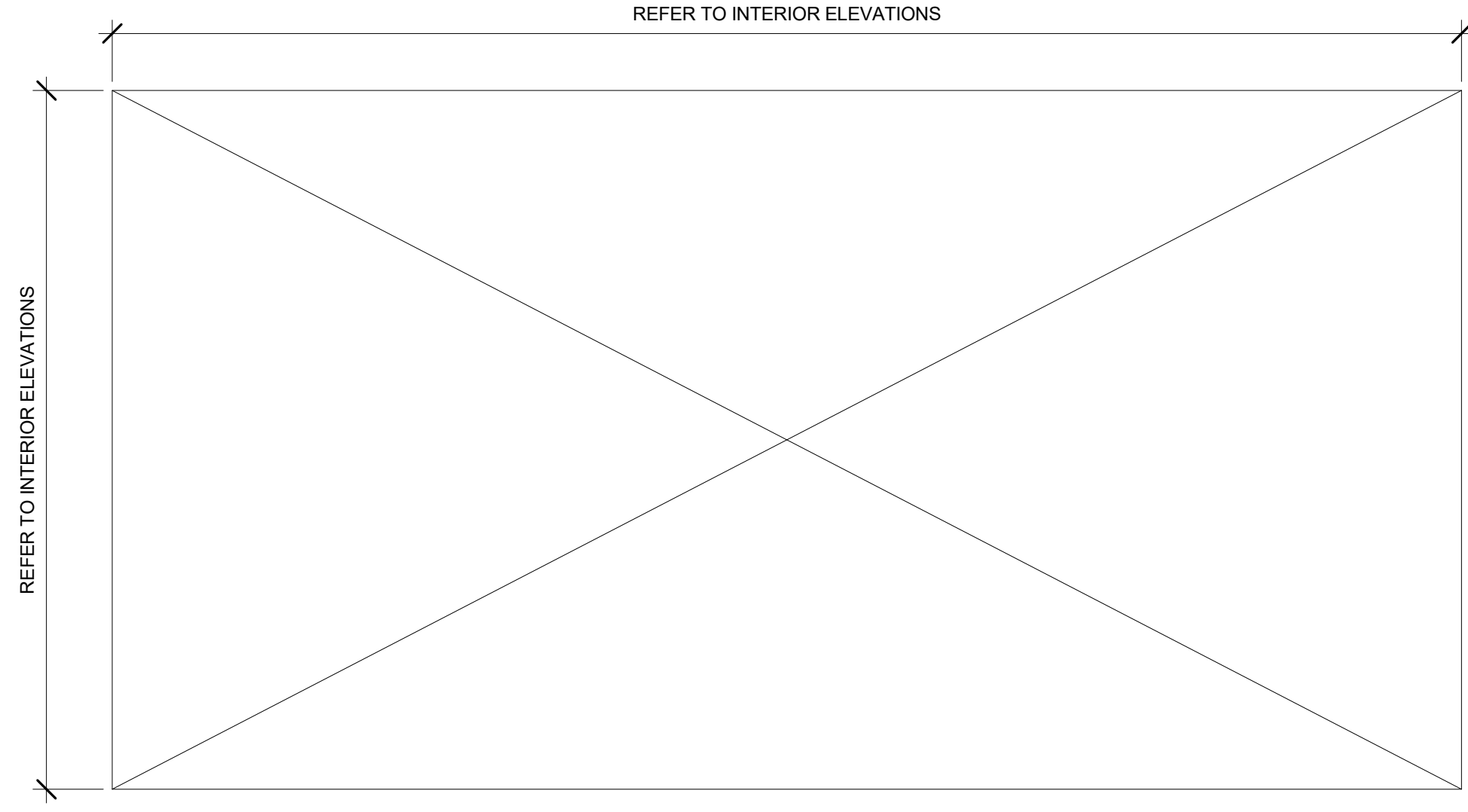
PROJECT:	2017-001
DRAWN:	FCA
DATE:	7/25/2019
PHASE:	1B
SHEET:	A911
OF SHEETS:	

SIGNATURE  
LICENSE EXPIRATION DATE: 4/30/20

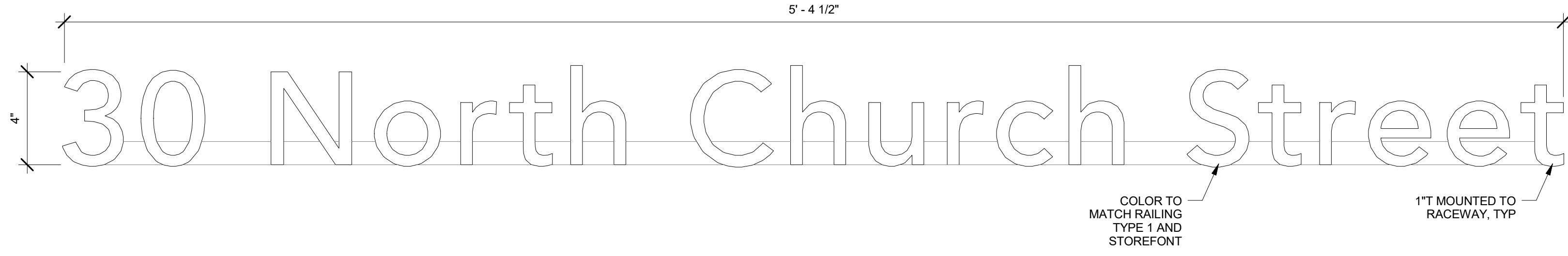
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**TYPE 12**  
LARGE VINYL WALL GRAPHIC



**TYPE 13**  
ADDRESS

PROJECT: 2017-001  
 DRAWN: FCA  
 DATE: 7/25/2019  
 PHASE: SHEET: 1B A912  
 OF SHEETS: OF SHEETS

REVISIONS:  
 ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲

SHEET TITLE:  
 WAYFINDING AND SIGNAGE TYPES  
 CADD FILE:

WAILUKU CIVIC COMPLEX PHASE 1B  
 100% FINAL DESIGN  
 [PUV] [A912] [UP] [WU] [WOP]

SIGNATURE  
 LICENSE EXPIRATION DATE 4/30/20  
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND I AM A LICENSED ARCHITECT UNDER THE PROFESSIONAL ARCHITECTURE LAW OF THE STATE OF HAWAII, CHAPTER 91-15, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS.

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**GENERAL NOTES**

- A. SEE ALSO:
  1. SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS
  2. SPECIAL NOTES ON DRAWINGS
- B. DISCREPANCIES - CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AND SHALL REPORT ANY DISCREPANCIES IN WRITING TO THE ARCHITECT BEFORE COMMENCING WORK OR ORDERING MATERIALS.
- C. STRUCTURAL DRAWINGS INDICATE ONLY THE BASIC STRUCTURAL FRAME. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND OTHER DRAWINGS FOR ORNAMENTS, GROOVES, CLIPS, GROUND, SLAB DEPRESSIONS, CURBS, EQUIPMENT PADS, PENETRATIONS, NON-BEARING WALLS AND OTHER NON-STRUCTURAL ITEMS.
- D. PRIOR TO FABRICATION, SHOP DRAWINGS REQUIRED BY THE SPECIFICATIONS SHALL BE REVIEWED AND APPROVED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT.
- E. ARCHITECTURAL PLANS ARE CONSIDERED AS PART OF THE STRUCTURAL DESIGN DRAWINGS AND ARE TO BE USED TO DEFINE AND DETAIL CONFIGURATION INCLUDING, BUT NOT LIMITED TO RELATIVE LOCATION OF MEMBERS, ELEVATIONS, LOCATIONS OF ALL OPENINGS, DEPRESSIONS, SLOPES, JOINTS, DIMENSIONS, ETC. PROVIDE WRITTEN NOTIFICATION OF ANY DISCREPANCIES TO THE ARCHITECT.
- F. OPENING SIZES AND LOCATIONS WHEN INDICATED ON DRAWINGS ARE FOR INFORMATION ONLY AND SHALL BE VERIFIED WITH THE APPROPRIATE DRAWING AND/OR SUPPLIER BEFORE CONSTRUCTION.
  1. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL FLOOR AND WALL OPENINGS.
  2. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS REQUIRED FOR DUCTS, PIPES AND PIPE SLEEVES.
  3. OPENING OR POCKETS LARGER THAN 6 INCHES NOT INDICATED IN STRUCTURAL DRAWINGS SHALL NOT BE PLACED WITHOUT WRITTEN NOTIFICATION OF THE ARCHITECT.
  4. CONDUIT AND PIPES TO BE EMBEDDED IN CONCRETE SHALL SATISFY THE REQUIREMENTS OF ACI 318-05 SECTION 6.3.
- G. GENERAL NOTES AND TYPICAL DETAILS SHALL BE USED WHERE APPLICABLE, UNLESS NOTED OTHERWISE. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE CONFLICTS ARISE BETWEEN DRAWINGS AND SPECIFICATIONS, GENERALLY THE MOST STRINGENT WILL GOVERN. CONTACT THE ARCHITECT IN WRITING OF CLARIFICATION IS REQUIRED.
- H. ALL OMISSIONS AND/OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING BEFORE PROCEEDING WITH ANY WORK INVOLVED.
- I. DIMENSIONS SHALL NOT BE SCALED FROM THE PLANS, SECTIONS AND/OR DETAILS OF THE STRUCTURAL DRAWINGS.

**CONSTRUCTION NOTES**

- A. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHOD OF CONSTRUCTION. PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES AND GIN POLES, ETC.
- B. ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED AND INSPECT SAME IN THE FIELD. OBSERVATION AND SPECIAL INSPECTION VISITS BY THE STRUCTURAL ENGINEER'S FIELD REPRESENTATIVE SHALL NOT INCLUDE INSPECTIONS OF THE ABOVE ITEMS.
- C. COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE AND FEDERAL LAWS, INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ADOPTED PURSUANT THERETO.
- D. CONSTRUCTION LOADS INCLUDING MATERIALS SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING, RESHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
- E. SUPERVISE AND DIRECT THE WORK SO AS TO MAINTAIN SOLE RESPONSIBILITY FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. AS A PART OF THIS RESPONSIBILITY, RETAIN THE SERVICES OF A LICENSED STRUCTURAL ENGINEER TO DESIGN AND SUPERVISE ANY SCAFFOLDING FOR WORKMEN, AND ALL SHORING OF FORMS AND ELEMENTS OF CONSTRUCTION.
- F. SUPERVISE AND DIRECT THE WORK SO AS TO MAINTAIN SOLE RESPONSIBILITY FOR COORDINATING THE WORK OF ALL TRADES AND THE CHECKING OF ALL DIMENSION. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND SHALL BE RESOLVED BEFORE PRECEDING WITH THE WORK.
- G. SUPERVISE AND DIRECT THE WORK SO AS TO MAINTAIN SOLE RESPONSIBILITY FOR ALL EXCAVATIONS PROCEDURES INCLUDING DEWATERING, LAGGING, SHORING, AND PROTECTION OF ADJACENT STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.

**EARTHWORK NOTES**

- A. SUBGRADE PREPARATION:
  1. PRIOR TO CONSTRUCTION, AREAS TO BE GRADED SHOULD BE CLEARED OF ORGANICS, AND DEBRIS. NEAR SURFACE SOILS CONTAINING ROOTS, ORGANIC AND OTHER DELETERIOUS MATERIALS SHOULD BE STRIPPED. DEEPER STRIPPING SHOULD BE REQUIRED TO REMOVE ROOTS IN LOCALIZED AREAS. THE DEPRESSIONS CAUSED BY REMOVAL OF TREES AND SHRUBS SHOULD BE BACKFILLED WITH COMPACTED STRUCTURAL FILL. THE STRIP SOIL SHOULD NOT BE REUSED AS FILL MATERIAL.
  2. AFTER THE SITE HAS BEEN CLEARED AND GRUBBED, IT IS RECOMMENDED THAT THE ENTIRE FOOTPRINT OF THE PARKING STRUCTURE BE EXCAVATED DOWN TO BOTTOM FOOTING ELEVATION; THE SOIL SHOULD THEN BE SCARIFIED TO A DEPTH OF 6 INCHES, MOISTURE CONDITIONED TO NEAR OPTIMUM MOISTURE, AND THEN COMPACTED WITH A ROLLER WEIGHING NOT LESS THAN 20,000 POUNDS. COMPACTION WITH THE COMPACTION MACHINE SHALL CONTINUE UNTIL A) AT LEAST 90 PERCENT OF THE MAXIMUM DRY DENSITY (ASTM D1557) HAS BEEN ACHIEVED AND B) A FIRM AND UNYIELDING SURFACE HAS BEEN ACHIEVED. IF SOFT OR LOOSE SPOTS ARE ENCOUNTERED THAT CANNOT BE RE-COMPACTED, THE LOOSE/SOFT AREAS SHALL BE REMOVED TO FIRM MATERIAL AND THE RESULTING DEPRESSION SHALL BE FILLED WITH PROPERLY COMPACTED FILL.
  3. THE SUBGRADE SOIL SHALL BE MOISTURE CONDITIONED TO WITHIN 0 & 3 PERCENT OF THE WET-SIDE OF OPTIMUM MOISTURE CONTENT AND COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (AS DETERMINED BY THE ASTM D 1557 TEST PROCEDURE).
  4. WHERE FILL IS PLACED ON EXISTING GROUND THAT IS STEEPER THAN 5 HORIZONTAL TO 1 VERTICAL, THE EXISTING GROUND SURFACE SHALL BE BENCHED INTO FIRM SOIL AS THE FILL IS PLACED.
- B. FILL MATERIALS:
  1. STRUCTURAL FILL AND BACKFILL MATERIAL SHALL CONSIST OF SOIL WHICH IS FREE OF ORGANICS AND DEBRIS. THE MATERIAL SHALL BE NO MORE EXPANSIVE THAN THE ON-SITE SOIL AND HAVE NO PARTICLE LARGER THAN 3 INCHES IN GREATEST DIMENSION. STRUCTURAL FILL SHOULD BE USED BENEATH AND TO 3 FEET BEYOND THE EDGES OF SLAB ON GRADE, MATS, AND FOOTINGS.
  2. JETTING SHOULD NOT BE PERMITTED. FILL MATERIALS SHOULD BE PLACED IN LEVEL LIFTS LESS THAN 8 INCHES IN LOOSE THICKNESS AND MOISTURE CONTENT. NONVIBRATORY, FOOTED ROLLERS SHOULD BE USED TO COMPACT FINE GRAINED SOILS. A SMOOTH DRUM VIBRATORY ROLLER SHOULD BE USED TO COMPACT COARSE GRAINED FILL AND BACKFILL MATERIALS. WHERE FILL WILL BE USED PLACED AND COMPACTED IN CONFINED AREAS, SUCH AS BENEATH OR ADJACENT TO FOOTINGS AND UTILITY TRENCHES, FILL LIFTS SHOULD NOT EXCEED 6 INCHES IN LOOSE THICKNESS. CAPILLARY ROCK SHOULD BE COMPACTED WITH AT LEAST TWO PASSES OF A VIBRATORY PLATE. THE PLACEMENT AND COMPACTION OF FILL SHALL BE OBSERVED AND TESTED BY QUALIFIED PERSONNEL.
- C. BACKFILL BEHIND RETAINING WALLS:
  1. BACKFILL AGAINST BASEMENT WALLS AND PIT WALLS SUPPORTED AT THE TOP AND BOTTOM BY SLABS SHALL HAVE CURED FOR A MINIMUM OF 7 DAYS UNLESS THE WALLS ARE ADEQUATELY BRACED. RETAINING WALL BACKFILL SHALL EXTEND FROM THE STEM OF THE RETAINING WALL TO 6 INCHES BEYOND THE HEEL OF THE WALL FOOTING OR THE FOOTING EXCAVATION LINE, WHICHEVER IS GREATER.
  2. FOR GRANULAR RETAINING WALL BACKFILL, THE TOP 1 FOOT OF THE BACKFILL SHALL BE "CAPPED" WITH FINE-GRAINED CLAY OR SILT TYPE SOIL, OR CAPPED BY AN IMPERVIOUS SURFACE SUCH AS CONCRETE OR ASPHALTIC CONCRETE. DRAINAGE FOR THE RETAINING WALL BACKFILL SHALL BE ACCOMPLISHED BY PROVIDING 4-INCH DIAMETER WEEPHOLES SPACED 8- FEET ON-CENTER (HORIZONTALLY AS WELL AS VERTICALLY) OR BY USING A MINIMUM 4-INCH DIAMETER PERFORATED PVC FOOTING DRAIN PIPE. A 2-FOOT THICK LAYER OF CRUSHED GRAVEL, WHICH IS WRAPPED WITH GEOTEXTILE FILTER FABRIC, SHALL BE PLACED ABOVE THE PIPE; THE CRUSHED GRAVEL SHALL BE CONTINUOUS FROM WEEP-HOLE TO WEEP-HOLE, OR IN THE CASE OF A FOOTING DRAIN PIPE, LAID THROUGHOUT THE FULL LENGTH OF THE PIPE. GEOTEXTILE FABRIC SHALL BE PROPEX GEOTEX 601 OR SIMILAR.
  3. FOR WALLS BACKFILLED ON BOTH SIDES, THE FILL MATERIALS SHALL BE PLACED IN SUCH A MANNER, THAT THE DIFFERENCE IN HEIGHT OF FILL SHALL NOT EXCEED 2'-0 AT ANY ONE TIME.
- D. SLAB ON GRADE SUBGRADE:
  1. THE SUBGRADE SOIL SHOULD BE MOISTURE CONDITIONED TO WITHIN 0 & 3 PERCENT OF THE WET SIDE OF OPTIMUM MOISTURE CONTENT, AND COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D 1557 TEST PROCEDURE.
  2. THE SELECT BORROW SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D 1557 TEST PROCEDURE. EACH LIFT SHALL NOT EXCEED 6" IN COMPACTED THICKNESS. MATERIAL SHALL BE 1.5" MINUS AND CONTAIN LESS THAN 15% PASSING THE #200 SIEVE.
  3. THE #3 FINE GRAVEL SHALL BE COMPACTED BY MEANS OF A VIBRATORY PLATE COMPACTOR MAKING A MINIMUM OF 4 PASSES.

- 4. THE CONCRETE THICKNESS, REINFORCING AND CURING COMPOUND RECOMMENDATIONS ARE TO BE PROVIDED BY OTHERS.
- 5. EXTERIOR SLABS (SIDEWALK FOR EXAMPLE) MAY ELIMINATE THE #3 FINE GRAVEL AND VAPOR BARRIER; CONCRETE MAY BE PLACED ON 12 INCHES OF SELECT BORROW.
 

THE ABOVE DETAIL IS NOT TO BE USED FOR PAVEMENT DESIGN OR CONCRETE THAT WILL BE SUBJECTED TO VEHICLE TRAFFIC.
- E. ALL EXCAVATIONS SHALL BE PROTECTED AND GUARDED BY THE CONTRACTOR AGAINST DANGER TO LIFE, LIMB, AND PROPERTY.
- F. SHORING, SHEETING, CRIFING AND LAGGING, AS REQUIRED TO PRESERVE THE EXCAVATIONS, EARTH BANKS, ADJACENT STRUCTURES AND PROPERTY FREE FROM DAMAGE RESULTING FROM THE WORK SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR.

**CONCRETE NOTES**

- A. ALL CONCRETE SHALL DEVELOP THE FOLLOWING MINIMUM ULTIMATE COMPRESSIVE STRENGTHS, WITH CORRESPONDING MAXIMUM SIZE OF AGGREGATES AND WATER CEMENT RATIOS AS FOLLOWS (UNLESS SHOWN ELSEWHERE IN SCHEDULES):

ELEMENT	28 DAY STRENGTH (PSI)	MAXIMUM SIZE AGGREGATE	WATER/CEMENT RATIO
1. FOUNDATION	4000.00	1 1/2"	0.55
2. SLAB ON GRADE	4000.00	3/4"	0.45
3. BEAM AND SLAB	5000.00	3/4"	0.45
4. POST TENSIONED BEAMS AND SLABS	5000.00	3/4"	0.45
5. COLUMNS AND CONCRETE WALLS	5000.00	3/4"	0.45
6. RETAINING WALLS	4000.00	3/4"	0.55

- B. ADMIXTURES: USE OF ADMIXTURE NOT SPECIFIED SHALL BE SUBJECTED TO ARCHITECT APPROVAL.
- C. UNLESS OTHERWISE SHOWN, CONSTRUCTION JOINTS SHALL BE LOCATED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ARCHITECT. THEY SHALL BE LOCATED AS TO NOT IMPAIR THE STRENGTH OF THE STRUCTURE AND TO MINIMIZE SHRINKAGE STRESSES. PROVIDE DOWEL AS DIRECTED AND THOROUGHLY AND ROUGHEN SURFACES BEFORE PROCEEDING WITH NEXT POUR. (THIS REQUIREMENT APPLIES TO FLOORS AND WALLS).
- D. THE USE OF ANY CALCIUM CHLORIDE IN ANY CONCRETE IS PROHIBITED.
- E. PROVIDE SYNTHETIC REINFORCING FIBERS TO PARKING STRUCTURE SLAB ON GRADE AT RATE OF 3.6 KG PER CUBIC METER OF CONCRETE.

**CONCRETE MASONRY NOTES**

- A. ALL STANDARD UNITS SHALL BE 2-CELL, UNLESS OTHERWISE SHOWN  $f_m = 1,500$  PSI IN CONFORMANCE WITH ASTM C90, NORMAL WEIGHT.
- B. MINIMUM REINFORCING, UNLESS OTHERWISE SHOWN, SHALL BE:

WALL THICKNESS	VERTICAL REINF.	HORIZONTAL REINF.
8"	#5 AT 24" O.C.	2- #4 AT 24" O.C.

NOTE: PROVIDE 2-#4 HORIZ. AT TOP OF WALLS WITH CONNECTIONS AS SHOWN. REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS AND INTERSECTIONS.

PROVIDE DOWELS TO MATCH ALL WALL REINFORCING FROM ABUTTING MEMBERS. WHERE THERE IS INSUFFICIENT DEPTH TO OBTAIN PROPER EMBEDMENT, EXTEND DOWEL TO FACE OF MEMBER AND HOOK UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- C. ALL CELLS SHALL BE SOLIDLY FILLED WITH GROUT.
- D. PROVIDE 1 -#5 AROUND ALL OPENING INCLUDING JAMBS; ALL BARS TO EXTEND A MINIMUM OF 24 INCHES BEYOND THE EDGE OF THE OPENING. ALSO, PROVIDE 1-#5 VERTICAL AT ALL CORNERS AND INTERSECTIONS. HORIZONTAL BAR LAPS AT CORNERS AND INTERSECTIONS SAME AS IN TYPICAL CONCRETE DETAILS PROVIDE 2-#5 VERTICAL AT EACH SIDE OF EXPANSION AND CONTROL JOINTS.
- E. REINFORCEMENT GRADE, BAR BENDS, DETAILS, ETC., SHALL BE THE SAME AS FOR CONCRETE.
- F. CONCRETE BLOCK UNITS SHALL BE LAID IN RUNNING BOND PATTERN UNLESS OTHERWISE SPECIFIED AND/OR SHOWN.
- G. MORTAR SHALL CONFORM TO ASTM C270, TYPE S FOR USE BELOW GRADE AND ABOVE GRADE.
- H. GROUT SHALL CONFORM TO ASTM C476 WITH A MINIMUM STRENGTH OF 13.8 MPA (2000 PSI).

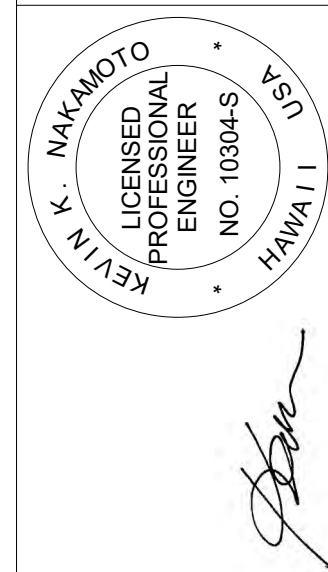
**REINFORCING STEEL NOTES**

- A. STRENGTHS - UNLESS OTHERWISE NOTED ON PLANS, ALL REINFORCING BARS SHALL BE ASTM A615M, GRADE 60. FOR COLUMNS AND FOOTINGS, USE ASTM A615M, GARDE 80. PROVIDED REINFORCING STEEL TO BE WELDED SHALL COMPLY WITH ASTM A706, GRADE 60.
- B. SPLICES:
  1. ALL SPLICES SHALL BE IN ACCORDANCE WITH ACI 318.
- C. MINIMUM CONCRETE CLEAR COVER:
  1. FOOTINGS, ETC., POURED AGAINST EARTH ..... 3"
  2. FOOTINGS, ETC., POURED AGAINST FORMS AND LATER EXPOSED TO EARTH ..... 2"
  3. WALLS AND SLABS EXPOSED TO WEATHER OR GROUND:
    - (A) #5 BAR OR SMALLER ..... 1 1/2"
    - (B) #6 BAR OR LARGER ..... 2"
  4. SLABS AND WALLS (PROTECTED) ..... 3/4"
- D. BAR BENDS, HOOKS, AND OFFSETS SHALL BE IN ACCORDANCE WITH THE ACI RECOMMENDATIONS.
- E. SPECIAL SPACER CHAIRS: PLASTIC SPACER "CHAIRS" SHALL BE USED TO MAINTAIN REQUIRED MINIMUM CONCRETE CLEAR COVER FOR ALL BEAM, COLUMN, AND WALL REINFORCING AT FACES EXPOSED TO WEATHER.
- F. WELD REINFORCING STEEL COMPLYING WITH AWS D1.4. DO NOT WELD REINFORCING STEEL OTHER THAN THOSE CONFORMING TO ASTM A706.
- G. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.4.
- H. REINFORCING STEEL COUPLERS SHALL DEVELOP 125% OF BAR YIELD STRENGTH AND BAR ULTIMATE STRENGTH

**LEGEND/ABBREVIATION**

- APPROX. - APPROXIMATE
- ARCH. - ARCHITECTURAL
- BOT. - BOTTOM
- C.J. - CONSTRUCTION JOINT
- COL. - COLUMN
- CONC. - CONCRETE
- CONT. - CONTINUOUS
- DIA. - DIAMETER
- DWGS. - DRAWINGS
- E.F. - EACH FACE
- ELEV./EL - ELEVATION
- E.S. - EACH SIDE
- E.W. - EACH WAY
- EXIST. - EXISTING
- EXP. - EXPANSION
- HOR. - HORIZONTAL
- JT. - JOINT
- MIN. - MINIMUM
- NTS - NOT TO SCALE
- O.C. - ON CENTER
- O.H. - OPPOSITE HAND
- REINF. - REINFORCEMENT
- SIM. - SIMILAR
- S.J. - SAWCUT JOINT
- SL - SLOPE
- SQ. - SQUARE
- T&B - TOP AND BOTTOM
- t - THICKNESS
- TEMP. - TEMPERATURE
- TYP. - TYPICAL
- TOC - TOP OF CONCRETE
- TOF - TOP OF FOOTING
- TOS - TOP OF STEEL
- TS - TUBULAR SECTION
- U.N.O. - UNLESS NOTED OTHERWISE
- W.P. - WORK POINT
- VERT. - VERTICAL

**FERRARO CHOI**



THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A duly Licensed Professional Engineer under the laws of the State of Hawaii. I am duly Licensed under the laws of the State of Hawaii. License No. 10304-S. License Expiration Date: 4/30/20

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

**GENERAL NOTES**

PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET		
<b>1B</b>	<b>S001</b>		
	OF		
	SHEETS		
		CADD FILE:	



**STRUCTURAL STEEL NOTES**

- A. UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL MEMBERS, BOLTS, ANCHOR BOLTS, LIGHT GAUGE ETC., SHALL CONFORM TO.
  - 1. WIDE FLANGE: ASTM A992 (Fy = 50 KSI)
  - 2. CHANNELS, ANGLES AND PLATES: ASTM A36M (Fy = 36 KSI)
  - 3. RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS): ASTM A500 GRADE B (Fy = 46 KSI)
  - 4. STEEL PIPE: ASTM A53 GRADE B (Fy = 35 KSI)
  - 6. BOLTS: ASTM A325M
  - 7. ANCHOR BOLTS: ASTM F1554, HOT DIP GALVANIZED PER ASTM F2329
- B. WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST AISC AND AWS CODES.
- C. CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF MEMBERS CONNECTED, UNLESS DETAILED OTHERWISE.
- D. SHOP COAT - REMOVE MILL SCALE, SLAG AND OTHER BOND REDUCERS BEFORE APPLYING SHOP COAT OR APPROVED PRIMER. PRIME FIELD WELDS AND ABRADED PARTS TO THE SATISFACTION OF THE CONTRACTING OFFICER BEFORE APPLYING FINISH PAINT.
- E. PLATE INSERTS EMBEDDED IN CONCRETE SHALL HAVE THE ANCHORS WELDED TO DEVELOP THE FULL STRENGTH OF THE ANCHORS.
- F. UNLESS SHOWN OTHERWISE, EMBEDDED BOLTS, ANCHORS, PLATES, INSERTS, ETC., EXTERIOR STEEL AND STEEL EXPOSED TO ELEMENTS SHALL BE HOT-DIPPED GALVANIZED.
- G. UNLESS A LARGER SIZE OF FILLET WELD IS SPECIFIED ON THE PLANS, PROVIDE MINIMUM SIZE OF WELD PER AISC TABLE J2.4.
- H. WELDING SHALL COMPLY WITH AWS SPECIFICATIONS AND SHALL BE PERFORMED BY CERTIFIED WELDERS WITH THE ELECTRIC ARC PROCESS WITH E70XX ELECTRODES (70 KSI).
- I. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE PLANS. WHERE NO CAMBER IS INDICATED, MILL CAMBER SHALL BE DETAILED UPWARD.
- J. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO FABRICATION OR PREPARATION OF SHOP DRAWINGS OF ALL STRUCTURAL STEEL WORK TO THE ARCHITECT FOR REVIEW AND COMMENT PRIOR TO FABRICATION.
- K. SHAPES AND PLATES EXPOSED TO THE ELEMENTS SHALL BE HOT-DIPPED GALVANIZED.
- L. WELDING AND BOLTING SPECIAL INSPECTION SHALL BE AS REQUIRED BY AISC.

**POST-TENSIONED CONCRETE NOTES**

- A. GENERAL
  - 1. POST-TENSIONED CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE FOLLOWING DOCUMENTS (LATEST EDITION), EXCEPT AS MODIFIED BELOW:
    - a. ACI 301-05 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE"
    - b. ACI 318-05 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
    - c. PTI "POST-TENSIONING MANUAL"
    - d. PTI "SPECIFICATION FOR UNBONDED SINGLE STRAND TENDONS"
    - e. PTI "FIELD PROCEDURES MANUAL FOR UNBONDED SINGLE STRAND TENDONS"
  - 2. SHOP DRAWINGS: SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT, AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS.
  - 3. SHOP DRAWING CHECK: THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH THE BLUELINE SETS OF SHOP DRAWINGS A MINIMUM OF THREE WEEKS PRIOR TO FABRICATION. THE REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. THE REVIEW DOES NOT GUARANTEE IN ANY WAY THAT THE SHOP DRAWINGS ARE CORRECT NOR DOES IT INFER THAT THEY SUPERSEDE THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL REVIEW AND APPROVE THE SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ENGINEER.
- B. POST-TENSIONING
  - 1. FIELD FOREMAN: THE FIELD FOREMAN RESPONSIBLE FOR THE PLACEMENT OF ALL POST-TENSIONING SHALL HAVE A MINIMUM OF THREE (3) YEARS IN THIS CAPACITY FOR THIS TYPE OF CONSTRUCTION.
  - 2. PT STEEL QUALITY: ONE SAMPLE OF EACH REEL OR HEAT SHALL BE TESTED BY AN APPROVED LABORATORY. TEST RESULTS OR MILL CERTIFICATES SHALL BE SUBMITTED TO THE ENGINEER BEFORE STRESSING OF TENDONS. POST-TENSIONING TENDONS SHALL BE OF LOW-RELAXATION QUALITY, AND SHALL CONFORM TO THE FOLLOWING:
    - a. SEVEN WIRE STRAND ASTM DESIGNATION ..... A-416
    - b. 1/2" DIAMETER TENDON AREA ..... 0.153 IN. SQ.
    - c. ULTIMATE STRENGTH ..... 270 KSI
    - d. EFFECTIVE LONG TERM STRESS (fse) ..... 174 KSI

TENDON STRESSES SHALL CONFORM TO THE FOLLOWING:

- a. MAXIMUM JACKING STRESS ..... 216 KSI
- b. MAXIMUM STRESS IMMEDIATELY AFTER PRESTRESS TRANSFER ..... 200 KSI
- c. MAXIMUM ANCHORAGE STRESS IMMEDIATELY AFTER PRESTRESS TRANSFER ..... 189 KSI
- 3. EFFECTIVE FORCE: EFFECTIVE FORCE SHALL BE 26.6 KIPS PER LOW-RELAXATION TENDON, WHEN TENDON LENGTH IS LESS THAN 120 FEET AND STRESSED FROM ONE END. TENDONS STRESSED FROM TWO ENDS HAVE THE SAME EQUIVALENT FORCE AT 240 FEET LONG. FOR VARIANCE FROM THIS VALUE, CONTRACTOR SHALL PROVIDE FRICTION AND LONG-TERM LOSS CALCULATIONS FOR THE ENGINEER'S APPROVAL.
- 4. PT HARDWARE: ALL ANCHORAGES, WEDGES, COUPLERS AND MISCELLANEOUS HARDWARE SHALL HAVE AN APPROVED ICC-ESR REPORT AND APPROVED BY THE ENGINEER.
- 5. TENDONS: UNBONDED STRANDS SHALL BE ENCASED IN SLIPPAGE SHEATHING WHICH SHALL CONSIST OF A SEALED DURABLE WATERPROOF PLASTIC TUBING CAPABLE OF PENETRATION OF MOISTURE AND CEMENT PASTE, AND WHICH WILL CONTAIN A RUST-INHIBITING GREASE COATING. TEARS IN THE SHEATHING SHALL BE REPAIRED TO RESTORE THE WATER TIGHTNESS OF THE SHEATING. HEAT-SEALED SHEATHING SHALL NOT BE USED UNLESS THE WATER TIGHTNESS OF THE SHEATHING IS GUARANTEED BY THE CONTRACTOR.
- 6. SHOP DRAWINGS: THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING TENDON LAYOUT, DEAD-END AND STRESSING-END LOCATIONS, INCLUDING ANCHORAGE DETAILS AND TENDON SUPPORT LAYOUTS WITH DETAILS NECESSARY FOR INSTALLATION FOR THE ENGINEER'S REVIEW.
- 7. TENDON PLACEMENT: CARE SHALL BE TAKEN THAT TENDONS ARE LOCATED AND HELD IN THEIR DESIGNED POSITIONS. TOLERANCES FOR THE LOCATION OF THE PRESTRESSING STEEL SHALL NOT BE MORE THAN ±1/8" VERTICALLY, EXCEPT AS NOTED OR APPROVED BY THE ENGINEER. ACCESS TO STRESSING ENDS SHALL BE MAINTAINED WHERE SHOWN.
- 8. TENDON ADJUSTMENTS: SLIGHT DEVIATIONS IN THE HORIZONTAL SPACING OF THE SLAB TENDONS WILL BE PERMITTED WHEN REQUIRED TO AVOID OPENINGS, INSERTS, AND DOWELS WHICH ARE SPECIFICALLY LOCATED, WHERE LOCATIONS OF TENDONS SEEM TO INTERFERE WITH EACH OTHER, ONE TENDON MAY BE MOVED HORIZONTALLY IN ORDER TO AVOID THE INTERFERENCE.
- 9. TWISTING: TWISTING OR ENTWINING OF INDIVIDUAL WIRED OR STRANDS WITHIN A BUNDLE OR A BEAM SHALL NOT BE PERMITTED.
- 10. STRAND BUNDLES: THE MAXIMUM ALLOWABLE NUMBER OF STRANDS PER BUNDLE IS FOUR (4) FOR SLABS AND SIX (6) FOR BEAMS.
- 11. PROFILES: PROFILES SHALL CONFORM TO CONTROLLING POINTS SHOWN ON THE DRAWINGS AND SHOULD BE IN AN APPROXIMATE PARABOLIC DRAPE BETWEEN SUPPORTS, UNLESS NOTED OTHERWISE. LOW POINTS ARE AT MIDSPAN UNLESS NOTED OTHERWISE. HARPED TENDONS SHALL BE STRAIGHT BETWEEN HIGH AND LOW POINT CONTROLS.
- 12. PRESTRESS COVER: ALL DIMENSIONS SHOWING THE LOCATION OF PRESTRESSING TENDONS ARE TO THE CENTER OF GRAVITY OF THE TENDONS (CGS) UNLESS NOTED OTHERWISE.
- 13. MINIMUM CHAIRING: TENDONS SHALL BE SECURED TO A SUFFICIENT NUMBER OF POSITIONING DEVICES TO ENSURE CORRECT LOCATION DURING AND AFTER THE PLACING OF THE CONCRETE, AND SHALL BE SUPPORTED AT A MINIMUM OF 3'-6" ON CENTER. CHAIRS GREATER THAN 2.5" IN SIZE SHALL BE STAPLED TO THE FORMWORK.
- 14. ANCHORS: ANCHORAGES SHALL BE RECESSED A MINIMUM OF TWO (2) INCHES. PLACE TWO (2) CONTINUOUS #4 BARS BEHIND ALL ANCHORAGES, UNLESS NOTED OTHERWISE. SPLICES SHALL BE 24" MINIMUM AND STAGGERED.
- 15. BLOCKOUTS: ALL POCKETS OR BLOCKOUTS REQUIRED FOR ANCHORAGE SHALL BE ADEQUATELY REINFORCED SO AS NOT TO DECREASE THE STRENGTH OF THE STRUCTURE. ALL POCKETS SHOULD BE WATERPROOFED TO ELIMINATE WATER LEAKAGE THROUGH OR INTO THE POCKET.
- 16. PIPES: PLASTIC OR METAL CONDUITS MAY BE EMBEDDED IN THE SLAB PROVIDING THAT THE FOLLOWING CRITERIA ARE MET:
  - a. PIPES OTHER THAN ELECTRICAL CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY THE ENGINEER. MAXIMUM PIPE SIZE SHALL BE 1" DIA. AND LOCATED WITHIN THE MIDDLE THIRD OF THE SLAB. MINIMUM SPACING SHALL BE SIX (6) TIMES THE PIPE DIAMETER. PIPES SHALL NOT IMPAIR THE STRENGTH OF THE MEMBER.
  - b. CONDUITS MUST NOT INTERRUPT THE POST-TENSIONED CABLES.
  - c. COLUMN AREAS SHOULD BE AVOIDED.
  - d. IT IS UNDESIRABLE TO HAVE EXCESS AMOUNTS OF CONDUIT ENTERING THE SLAB FROM ONE LOCATION. IF THIS CONDITION EXISTS, THE CONDUITS MUST BE FANNED OUT IMMEDIATELY.
- 17. PENETRATIONS: PENETRATIONS SHALL NOT BE PERMITTED IN BEAMS OR DROP CAPS EXCEPT AS SHOWN IN PT DRAWINGS OR TYPICAL DETAILS.
- 18. INSERTS: ALL INSERTS AND SLEEVES SHALL BE CAST IN PLACE WHENEVER POSSIBLE. DRILLED AND POWER-DRIVEN FASTENERS WILL BE PERMITTED ONLY WHEN IT CAN BE SHOWN THAT THE INSERTS WILL NOT SPALL THE CONCRETE AND ARE LOCATED TO AVOID THE TENDONS AND ANCHORAGES. THE CONTRACTOR MUST LOCATE TENDONS ON THE SURFACE SLAB.
- 19. CHLORIDES: GROUT OR CONCRETE CONTAINING CHLORIDES SHALL NOT BE USED.

- 20. PUMPED CONCRETE: IF CONCRETE IS PLACED BY THE PUMP METHOD, THEN HORSES SHALL BE PROVIDED TO SUPPORT THE HOSE. THE HOSE SHALL NOT BE ALLOWED TO RIDE ON THE TENDONS.
- 21. CONCRETE CONSOLIDATION: THE CONTRACTOR SHALL TAKE PRECAUTIONS TO ASSURE COMPLETE CONSOLIDATION AND DENSIFICATION OF CONCRETE BEHIND ALL POST-TENSIONING ANCHORAGES.
- 22. CONCRETE STRENGTH AT STRESSING: PERFORM TENSIONING AFTER CONCRETE HAS REACHED A MINIMUM OF 80% OF THE SPECIFIED 28 DAY COMPRESSIVE STRENGTH. A MINIMUM OF TWO CYLINDERS MUST ATTAIN REQUIRED COMPRESSIVE STRENGTH BEFORE CONCRETE TENSIONING OPERATIONS MAY BEGIN. CONDUCT STRESSING WITHIN THE FIRST 96 HOURS AFTER POURING.
- 23. TENDON STRESSING: TENSIONING SHALL BE DONE BY JACKING UNDER IMMEDIATE CONTROL OF A PERSON EXPERIENCED IN THIS TYPE OF WORK. CONTINUOUS INSPECTION AND RECORDING OF ELONGATIONS IS REQUIRED DURING ALL STRESSING OPERATIONS.
- 24. CALIBRATION: THE RAM AND ATTENDANT GAUGE USED SHALL HAVE BEEN CALIBRATED WITHIN SIXTY (60) DAYS OF THEIR USE.
- 25. STRESSING SEQUENCE: UNIFORMLY DISTRIBUTED TENDONS SHALL BE STRESSED BEFORE CONCENTRATED BEAM STRIP (BANDED) TENDONS, AND SLAB TENDONS SHALL BE STRESSED BEFORE BEAM TENDONS.
- 26. ELONGATIONS: INDIVIDUAL TENDONS FIELD READINGS OF ELONGATIONS AND/OR STRESSING FORCES SHALL NOT VARY BY MORE THAN ± 7% FROM CALCULATED REQUIRED VALUES SHOWN ON THE SHOP DRAWINGS. IF THE MEASURED ELONGATIONS VARY FROM CALCULATED VALUES BY MORE THAN ± 7%, THE CONTRACTOR SHALL PROVIDE FRICTION CALCULATIONS AND/OR OTHER JUSTIFICATION TO THE SATISFACTION OF THE ENGINEER.
- 27. MEMBER FORCES: THE POST-TENSIONED FORCE PROVIDED IN THE FIELD OF EACH STRUCTURAL MEMBER SHALL NOT BE LESS THAN THE VALUES NOTED ON THE STRUCTURAL DRAWINGS. IN THIS CONTEXT, STRUCTURAL MEMBERS ARE BEAMS OR SLABS, WHETHER WITH BANDED OR DISTRIBUTED TENDONS, EACH SERVING THEIR RESPECTIVE TRIBUTARY.
- 28. TENDON ENDS: DO NOT BURN OFF TENDON ENDS UNTIL THE ENTIRE FLOOR SYSTEM HAS BEEN SATISFACTORILY STRESSED AND THE ENGINEER'S APPROVAL IS OBTAINED. THE STRESSING END SHALL BE FULLY ENCAPSULATED WITH PLASTIC COATED ANCHORS AND GREASE CAPPED WEDGES.
- 29. GROUTING OF STRESSING POCKETS: STRESSING POCKETS SHALL BE FILLED WITH NON-SHRINK GROUT AFTER STRESSING PAINTING AND GREASE-CAPPING TO STOP MOISTURE PENETRATION.
- 30. D-SHORING: SLABS OR BEAMS MAY BE DE-SHORED WHEN ALL TENDONS HAVE BEEN SATISFACTORILY STRESSED AND THE ENGINEER'S APPROVAL IS OBTAINED, UNLESS SHORING IS REQUIRED TO CARRY FLOORS ON ABOVE LEVELS.

**C. INSPECTION**

- 1. GENERAL: IN ADDITION TO THE INSPECTIONS REQUIRED BY SECTION 1701 OF THE IBC, THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR DURING CONSTRUCTION ON THE TYPES OF WORK IN THIS SECTION.
- 2. CONCRETE: DURING THE TAKING OF TEST SPECIMENS AND PLACING OF ALL REINFORCED CONCRETE AND PNEUMATICALLY PLACED CONCRETE.
- 3. REINFORCING STEEL AND PRESTRESSING STEEL:
  - a. DURING ALL STRESSING OF PRESTRESSED AND POST-TENSIONED CONCRETE, THE CONTRACTOR SHALL SUBMIT RECORDS OF FIELD-MEASURED ELONGATION AND JACKING FORCE FOR EACH TENDON.
  - b. DURING THE PLACING OF REINFORCING STEEL, TENDONS AND PRESTRESSING STEEL FOR ALL STRUCTURAL CONCRETE. TENDON PLACEMENT AND INTEGRITY OF THE PROTECTIVE WRAPPING FOR POST-TENSIONED TENDONS SHALL BE INSPECTED PRIOR TO PLACEMENT OF CONCRETE.

**D. SPECIAL NOTES TO OWNER**

- 1. UNDER NORMAL CONDITIONS, AND FOR CONVENTIONAL BUILDINGS SUCH AS THE SUBJECT MATTER, REINFORCED CONCRETE AS WELL AS POST-TENSIONED CONCRETE DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP AND RESTRAINING EFFECTS OF VERTICAL AND OTHER STRUCTURAL ELEMENTS TO WHICH THE BEAMS/SLABS ARE TIED.
- 2. THE CRACKS FORMED ARE NORMALLY COSMETIC. THE SLAB MAINTAINS ITS SERVICEABILITY AND STRENGTH REQUIREMENTS. DUE TO SPECIAL FEATURES OF UNBONDED POST-TENSIONING, IT IS POSSIBLE THAT A NUMBER OF HAIR CRACKS, WHICH WOULD NORMALLY SPREAD OVER A WIDE AREA, WILL INTEGRATE INTO A SINGLE CRACK WITH A WIDTH EXCEEDING 1/32 INCH. IT IS EMPHASIZED THAT ALTHOUGH SPECIAL EFFORT IS MADE TO REDUCE THE POTENTIAL CAUSES AND NUMBER OF SUCH CRACK, IT IS NOT PRACTICAL TO PROVIDE TOTAL ARTICULATION BETWEEN THE FLOOR SYSTEM AND ITS SUPPORTS AND THEREBY ACHIEVE COMPLETE INHIBITION OF ALL CRACKS.
- 3. MOST SUCH CRACKS DEVELOP OVER THE FIRST THREE YEARS OF THE LIFE OF THE FLOOR SYSTEM. CRACKS WHICH ARE WIDER THAN 0.01 INCH MAY NEED TO BE PRESSURE EPOXIED. REFER TO THE NOTES UNDER "ALLOWANCES".
- 4. THE OBJECT OF THE JOINTS PROVIDED IS TO ALLOW MOVEMENT. MOVEMENTS DUE TO CREEP AND SHRINKAGE MAY BE NOTICEABLE AT JOINTS UP TO TWO YEARS AFTER CONSTRUCTION BEYOND WHICH MOVEMENTS DUE TO VARIATIONS IN TEMPERATURE WILL PERSIST.

**DESIGN DATA**

- A. GRAVITY LOADS:
  - 1. SUPERIMPOSED DEAD LOADS
    - a. UTILITIES, ELECT. AND MECH. HUNG ..... 5 PSF
    - b. PHOTOVOLTAIC PANELS ..... 5 PSF
    - c. WATER PROOFING ..... 1 PSF
  - 2. FLOOR LIVE LOADS
- FLOOR LOADS
  - a. UTILITIES, ELECT. AND MECH. .... 100 PSF
  - b. MECHANICAL/ELECTRICAL ..... 125 PSF EQUIPMENT ROOMS
  - c. PARKING ..... 40 PSF
  - d. CORRIDOR
  - GROUND LEVEL ..... 100 PSF
  - ABOVE GROUND LEVEL ..... 80 PSF
  - e. STORAGE ..... 100 PSF
  - LIGHT ..... 125 PSF
- B. LATERAL LOADS:
  - 1. WIND LOADS
    - a. ULTIMATE DESIGN WIND SPEED, V<sub>ULT</sub> ..... 209 KPH (130 MPH)
    - NOMINAL DESIGN WIND SPEED, V<sub>SD</sub> ..... 162 KPH (100 MPH)
    - b. RISK CATEGORY ..... II
    - c. WIND EXPOSURE ..... C
    - d. ENCLOSURE CLASSIFICATION
    - PARKING ..... OPEN
    - e. INTERNAL PRESSURE COEFFICIENT, GC<sub>ri</sub>
    - PARKING ..... 0
    - f. TOPOGRAPHIC FACTOR, K<sub>zt</sub> ..... 1.2
    - g. WIND DIRECTIONALITY FACTOR, K<sub>d</sub> ..... 0.85
  - 2. SEISMIC LOADS
    - a. RISK CATEGORY - II (PARKING GARAGE)
    - b. IMPORTANCE FACTOR, I<sub>e</sub> = 1.0 (PARKING GARAGE)
    - c. S<sub>s</sub> = 0.97g, S<sub>1</sub> = 0.248g
    - d. SITE CLASS - "D"
    - e. S<sub>DS</sub> = 0.719g, S<sub>DI</sub> = 0.315g
    - f. SEISMIC DESIGN CATEGORY - "D"
  - 3. SEISMIC FORCE RESISTING SYSTEM
  - PARKING GARAGE
    - a. BEARING WALL SYSTEM, SPECIAL REINFORCED CONCRETE SHEARWALL
    - b. RESPONSE MODIFICATION FACTOR, R = 5.00
    - c. DEFLECTION AMPLIFICATION FACTOR, Cd = 5.00
    - d. OVER-STRENGTH FACTOR, Ω = 2.50
    - e. SEISMIC RESPONSE COEFFICIENT, Cs = 0.144
    - f. BASE SHEAR, V:
      - SMALL PARKING, V = 319.00 KIPS
      - BIG PARKING, V = 2,294.00 KIPS
  - 4. FOUNDATIONS:

FOUNDATIONS HAS BEEN DESIGNED BASED ON THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL SOILS REPORT FOR PROPOSED WAILUKU CIVIC COMPLEX PROJECT LOCATED IN WAILUKU, MAUI, HAWAII, DATED JULY 30, 2018, PREPARED BY ISLAND GEOTECHNICAL ENGINEERING, INC.

**PARKING STRUCTURE:**  
ALLOWABLE BEARING CAPACITY - 2500 PSF  
BEARING CAPACITY SHALL BE INCREASED 1/3 FOR MOMENTARY LOADS DUE TO WINDS OR SEISMIC FORCE.

**RETAINING WALLS:**  
ACTIVE EARTH PRESSURE - 30 PCF (LEVEL BACKFILL)  
AT-REST EARTH PRESSURE - 45 PCF  
PASSIVE RESISTANCE - 200 PCF  
FRICTIONAL RESISTANCE - 0.40

**DESIGN CODE AND STANDARDS**

- INTERNATIONAL BUILDING CODE (IBC), 2006 EDITION, AND AS AMENDED BY THE HAWAII STATE CODE FOR THE COUNTRY OF MAUI
- AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES - ASCE 7-05
- AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENT FOR STRUCTURAL CONCRETE AND COMMENTARY - ACI 318-05
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, ANSI/AISC-360
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION, SEISMIC DESIGN MANUAL, ANSI/ AISC 341-10

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SIGNATURE  
THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A duly Licensed Professional Engineer in the State of Hawaii. (COMMERCIAL AND CONSUMER AFFAIRS)

**WAILUKU CIVIC COMPLEX PHASE 1B**

100% FINAL DESIGN

[PUNAHOU] [PUNAHOU]

SHEET TITLE:	GENERAL NOTES			
REVISIONS:	<table border="1"> <tr> <td>2017-001</td> <td>LC</td> <td>7/25/2019</td> </tr> </table>	2017-001	LC	7/25/2019
2017-001	LC	7/25/2019		
PROJECT:	1B S002			
DRAWN:	LC			
DATE:	7/25/2019			
PHASE	SHEET			
OF	SHEETS			
CADD FILE:				



SOILS SPECIAL INSPECTIONS AND TESTS		
VERIFICATION AND INSPECTION	INSPECTION FREQUENCY	
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	PERIODIC	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	PERIODIC	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	PERIODIC	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	CONTINUOUS	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	PERIODIC	

CONCRETE CONSTRUCTION SPECIAL INSPECTIONS AND TESTS		
VERIFICATION AND INSPECTION	INSPECTION FREQUENCY	
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	PERIODIC	
2. REINFORCING BAR WELDING: A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706 B. INSPECT SINGLE-PASS FILLET WELDS, MAX 8mm C. INSPECT ALL OTHER WELDS.	PERIODIC PERIODIC CONTINUOUS	
3. INSPECT ANCHORS CAST IN CONCRETE	PERIODIC	
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS: A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	CONTINUOUS PERIODIC	
5. VERIFY USE OF REQUIRED DESIGN MIX.	PERIODIC	
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	CONTINUOUS	
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	CONTINUOUS	
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	PERIODIC	
9. INSPECT POST TENSIONED CONCRETE FOR: A. APPLICATION OF PRESTRESSING FORCES B. GROUTING OF BONDED PRESTRESSING TENDONS.	CONTINUOUS CONTINUOUS	
10. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	PERIODIC	
11. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	PERIODIC	

STRUCTURAL STEEL SPECIAL INSPECTIONS		INSPECTION FREQUENCY
<b>INSPECTION TASKS PRIOR TO WELDING</b>		
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE		CONTINUOUS
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE		CONTINUOUS
MATERIAL IDENTIFICATION (TYPE/GRADE)		PERIODIC
WELDER IDENTIFICATION SYSTEM		PERIODIC
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)		PERIODIC
CONFIGURATION AND FINISH OF ACCESS HOLES		PERIODIC
FIT-UP OF FILLET WELDS • DIMENSIONS (ALIGNMENT, GAPS AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION)		PERIODIC
CHECK WELDING EQUIPMENT		PERIODIC
<b>INSPECTION TASKS DURING WELDING</b>		
USE OF QUALIFIED WELDERS		PERIODIC
CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • EXPOSURE CONTROL		PERIODIC
NO WELDING OVER CRACKED TACK WELDS		PERIODIC
ENVIRONMENTAL CONDITIONS • WIND SPEED WITHIN LIMITS • PRECIPITATION AND TEMPERATURE		PERIODIC
WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE/FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) • PROPER POSITION (F, V, H, OH)		PERIODIC
WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS		PERIODIC
<b>INSPECTION TASKS AFTER WELDING</b>		
WELDS CLEANED		PERIODIC
SIZE, LENGTH AND LOCATION OF WELDS		CONTINUOUS
WELDS MEET VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD/BASE-METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY		CONTINUOUS
ARC STRIKES		CONTINUOUS
k-AREA		CONTINUOUS
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)		CONTINUOUS
REPAIR ACTIVITIES		CONTINUOUS
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER		CONTINUOUS

STRUCTURAL STEEL SPECIAL INSPECTIONS (CONT.)		INSPECTION FREQUENCY
<b>INSPECTION TASKS PRIOR TO BOLTING</b>		
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS		PERIODIC
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		PERIODIC
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)		PERIODIC
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL		PERIODIC
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		PERIODIC
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED		CONTINUOUS
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		PERIODIC
<b>INSPECTION TASKS DURING BOLTING</b>		
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED		PERIODIC
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		PERIODIC
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING		PERIODIC
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES		PERIODIC
<b>INSPECTION TASKS AFTER BOLTING</b>		
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS		CONTINUOUS

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SIGNATURE  
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE OBSERVATION AND CONTROL OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS, LAND SURVEYORS, PLANNERS, ENGINEERS, AND CONSUMERS AFFAIRS)  
LICENSE EXPIRATION DATE: 4/30/20

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

SHEET TITLE:

**SPECIAL INSPECTION NOTES**

CADD FILE:

REVISIONS:

2017-001

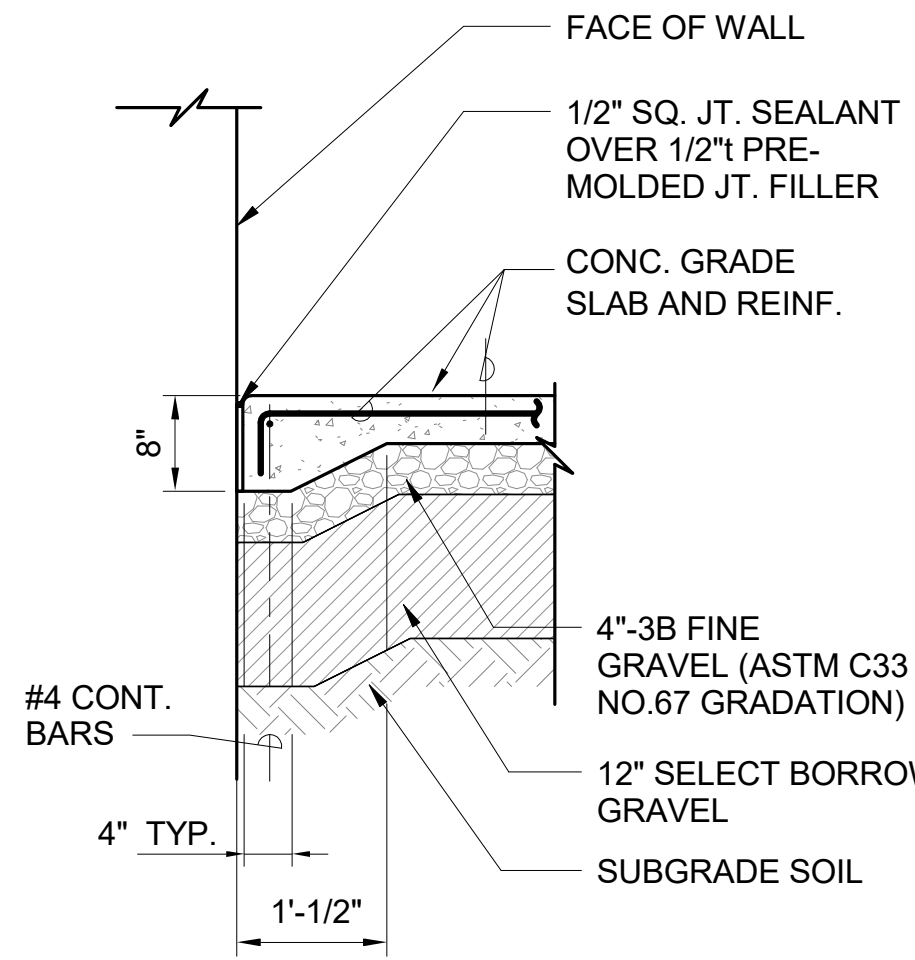
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7/25/2019

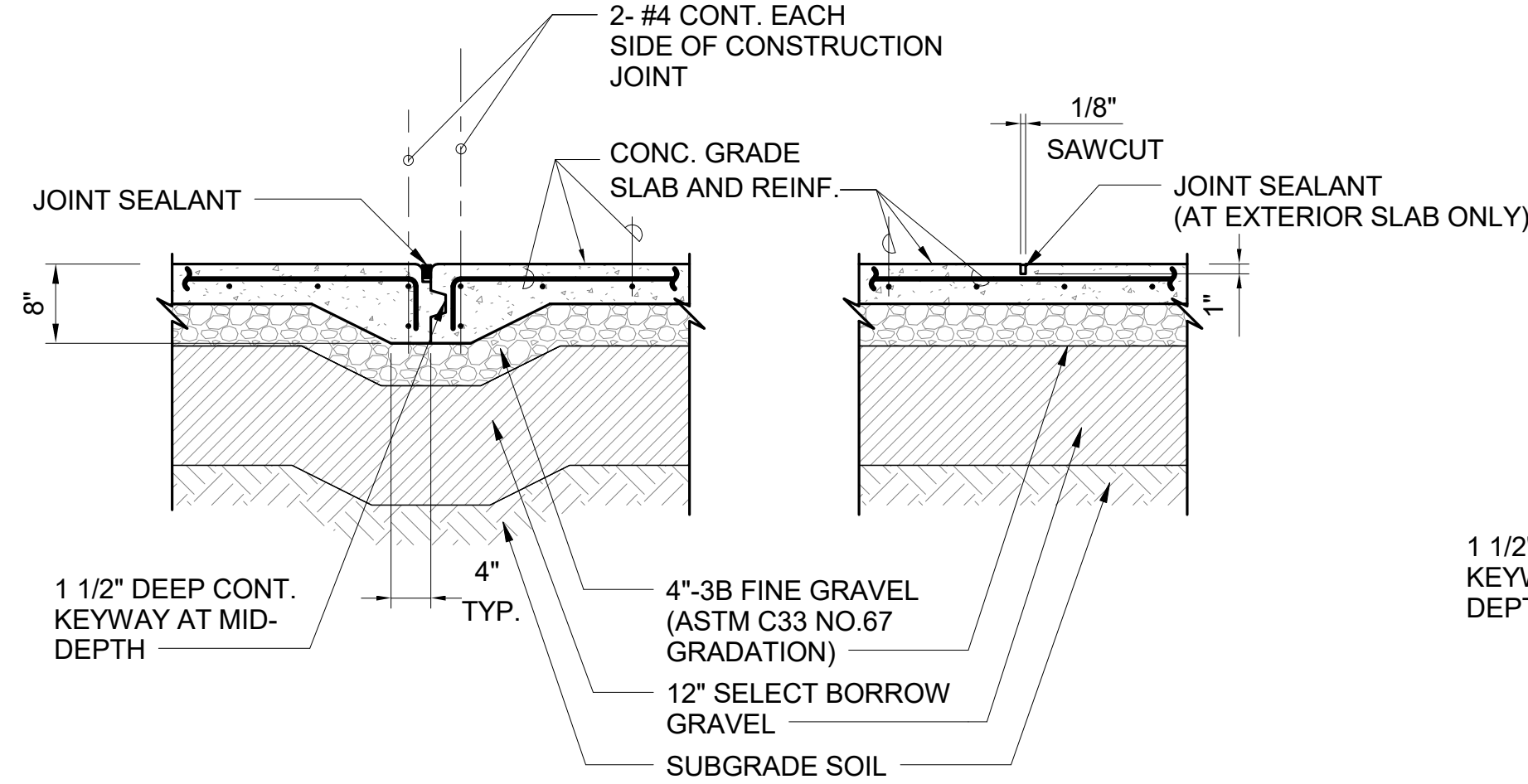
SHEET

**1B S003**

OF SHEETS

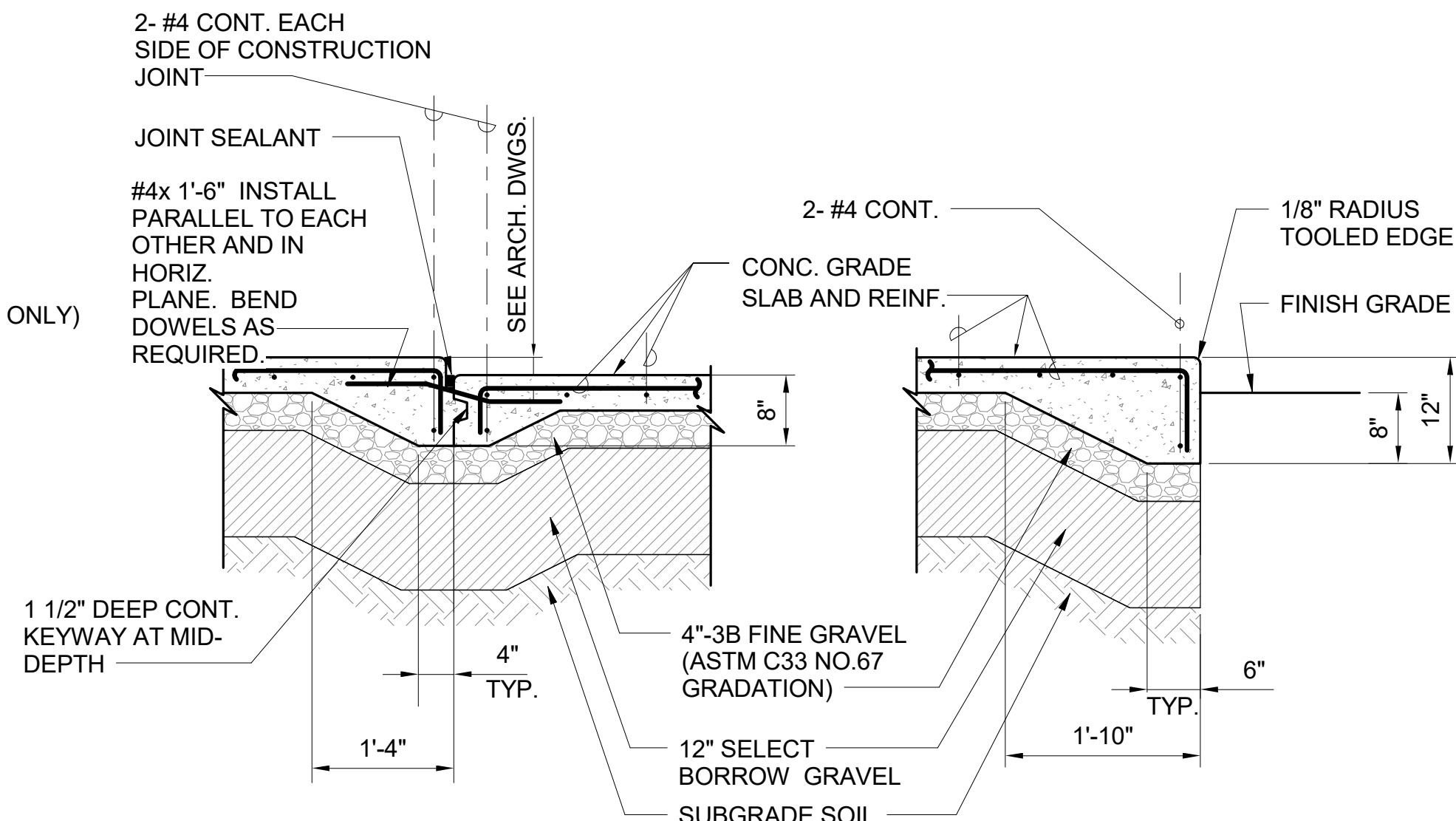


AT INTERIOR



CONSTRUCTION JOINT (C.J.)

SAWCUT JOINT (S.J.)



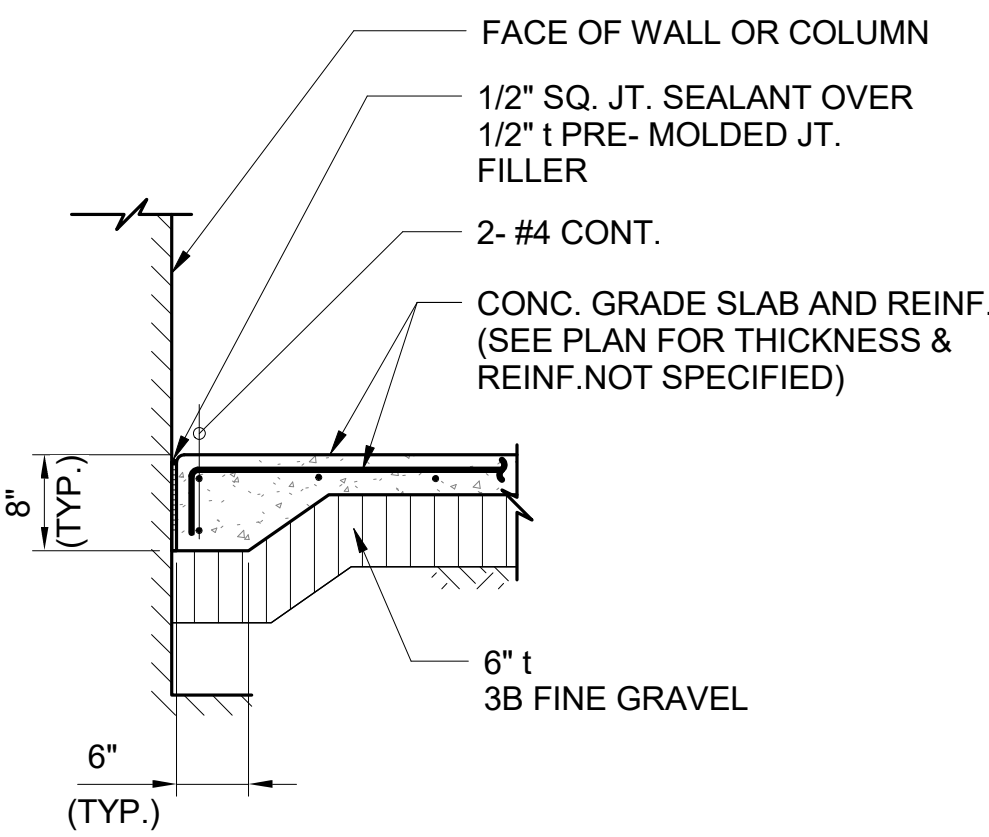
DEPRESSED SLAB

AT EXTERIOR

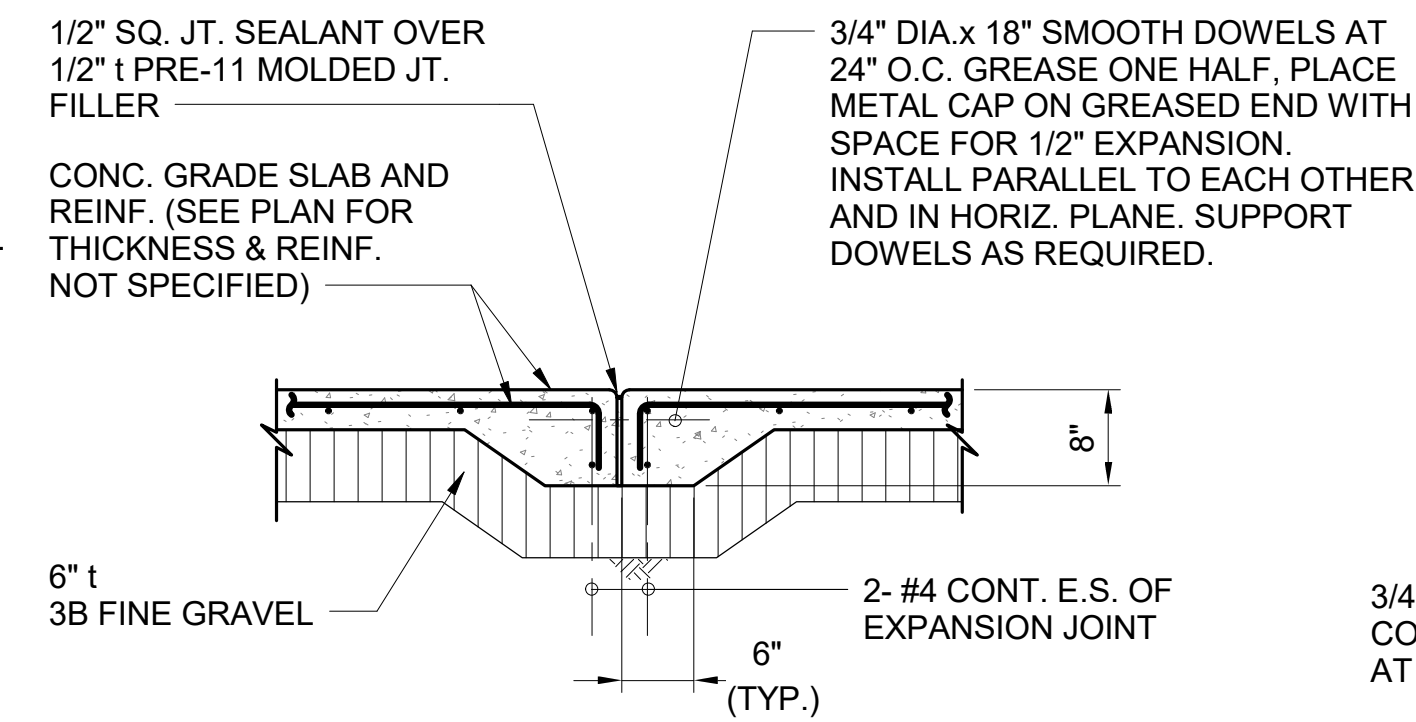
**NOTE:**

1. ALL TYPICAL CONC. SLAB ON GRADE DETAILS SHALL GOVERN EXCEPT WHEN SPECIALLY DETAILED FOR PARTICULAR CONDITIONS.
2. SAW CUT CONC. SLAB ON GRADE AS SOON AS POSSIBLE WITHOUT DAMAGING GRADE SLAB BUT NO LATER THAN 8 HRS. AFTER CONCRETE POUR.
3. FOR EXTERIOR CONCRETE SLAB ON GRADE CONDITIONS, DELETE VAPOR BARRIER.
4. PROVIDE 18" TO 24" SELECT GRANULAR FILL UNDERNEATH THE SLAB CUSHION IF HIGHLY EXPENSIVE CLAYS ARE ENCOUNTERED AT THE SLAB SUBGRADE LEVEL.

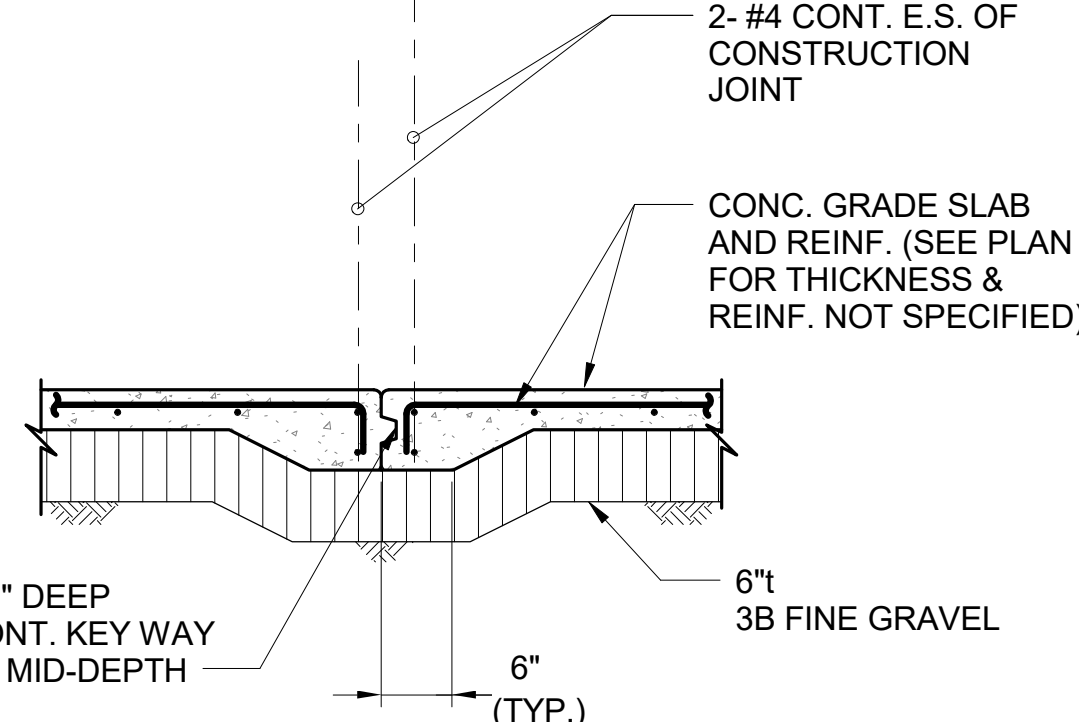
**1** TYPICAL INTERIOR GRADE SLAB DETAILS  
S004 SCALE: NTS



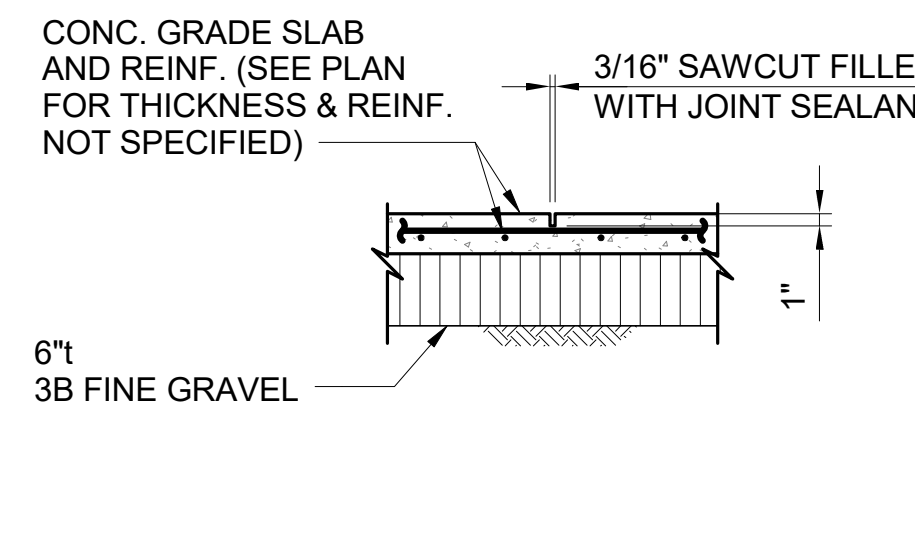
AT WALL OR COLUMN



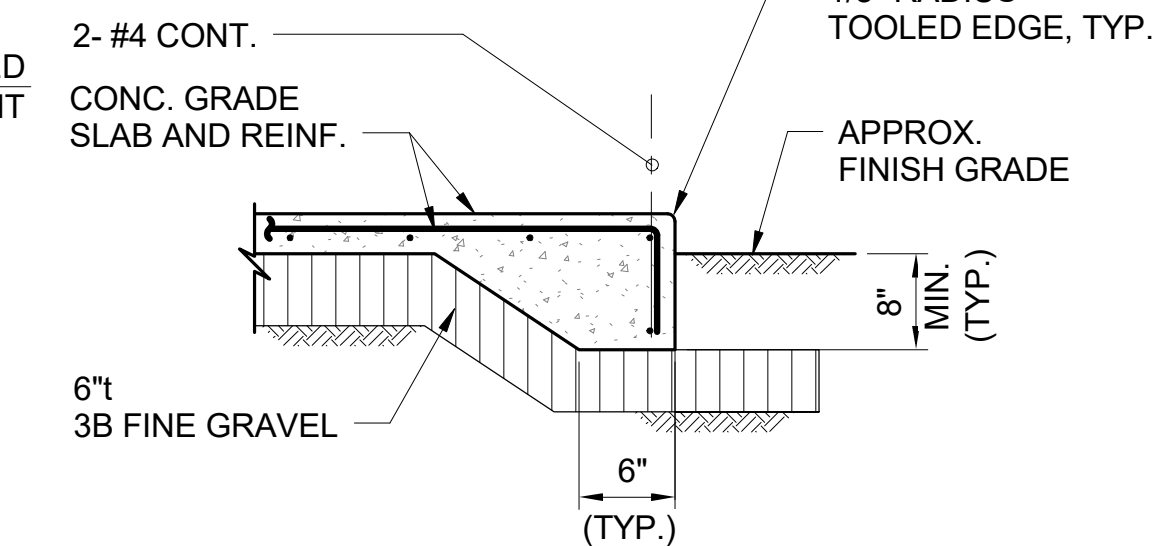
EXPANSION JOINT



CONSTRUCTION JOINT

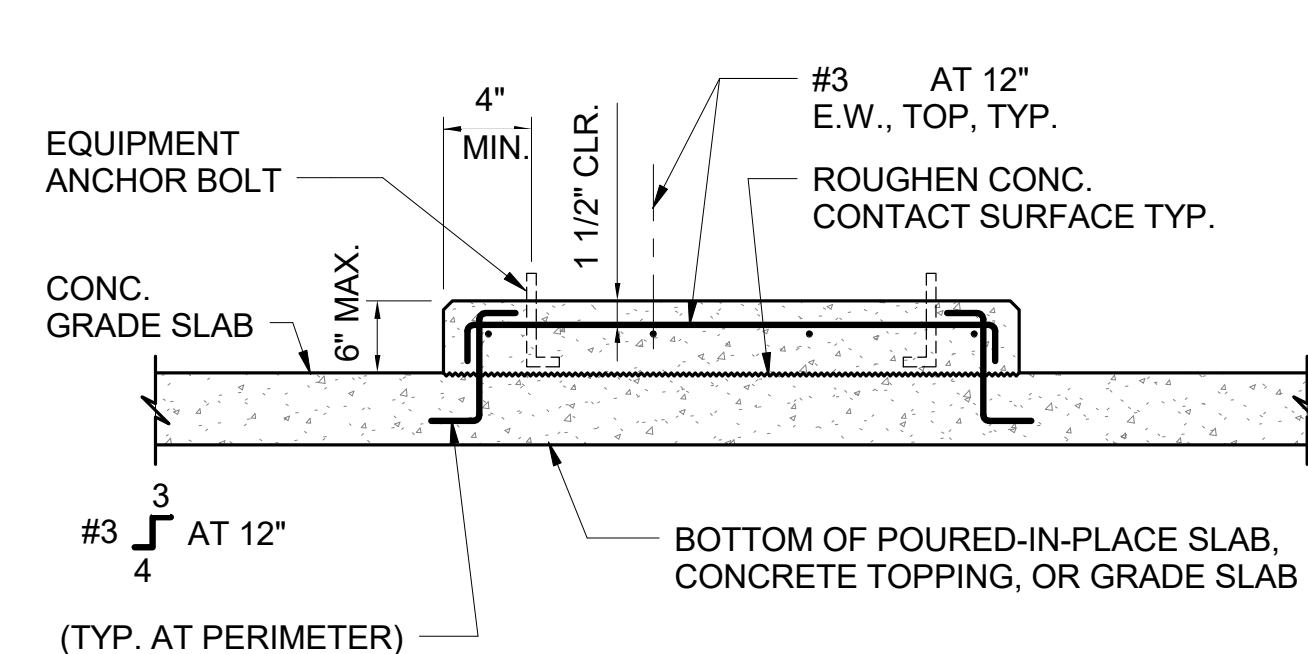


SAWCUT JOINT

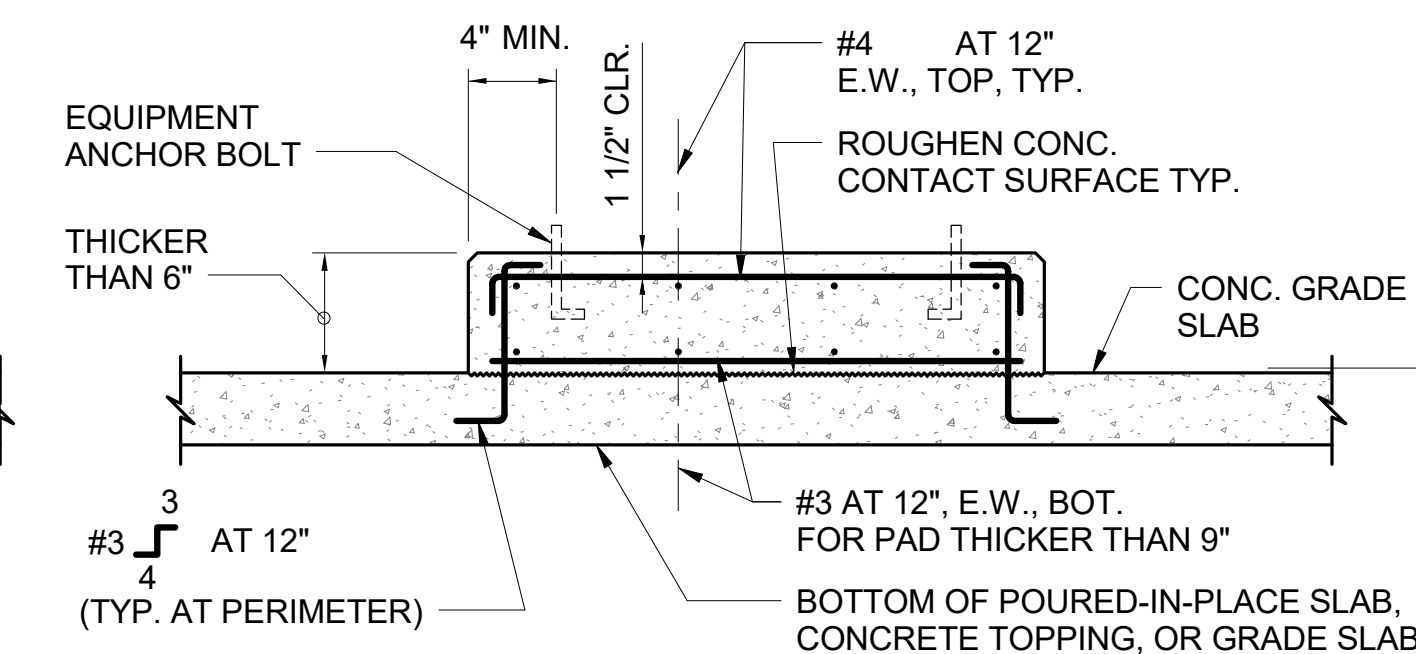


AT EXTERIOR EDGE

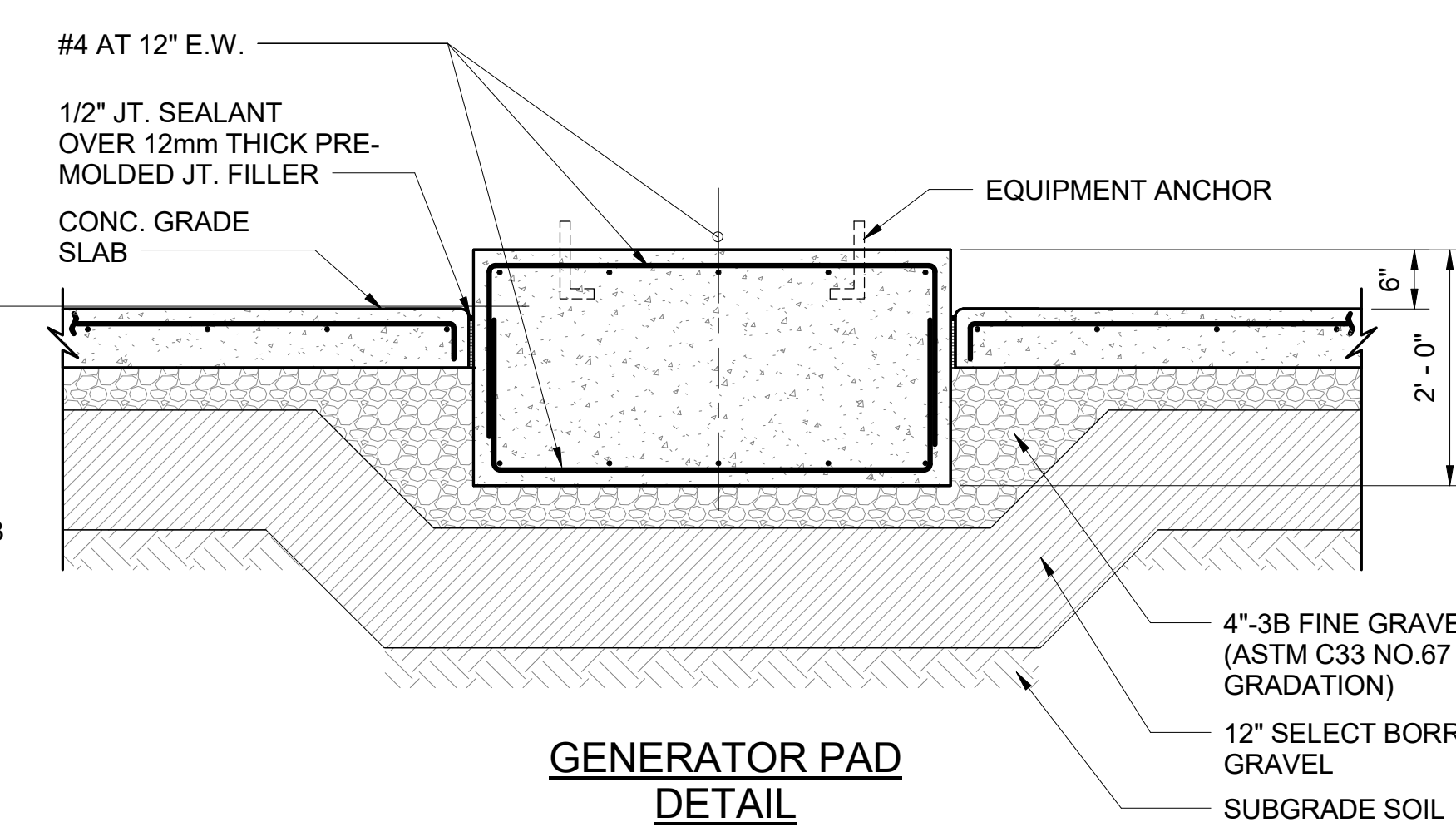
**2** TYPICAL EXTERIOR GRADE SLAB DETAILS  
S004 SCALE: NTS



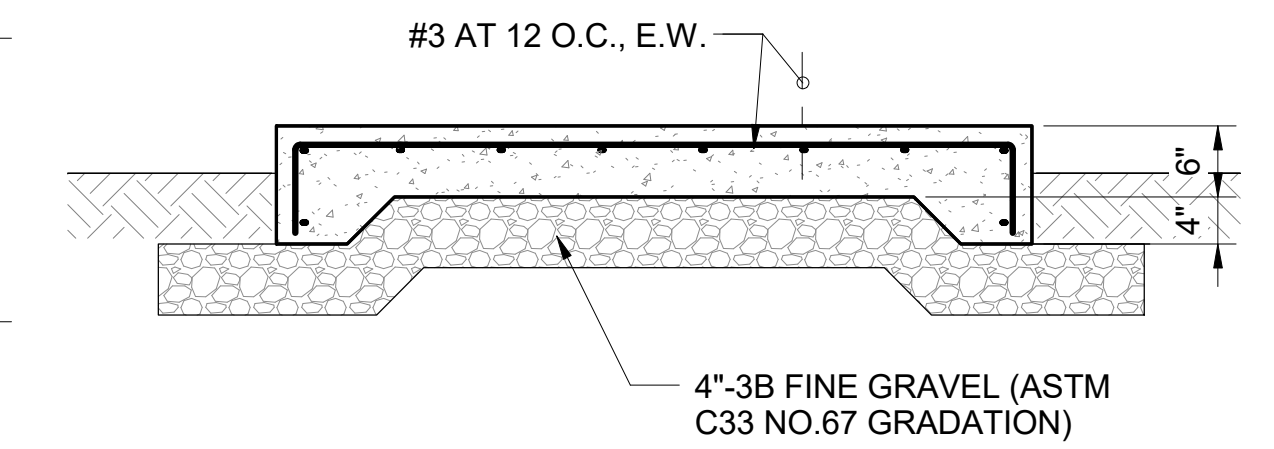
SECTION AT CONC. PAD < 6" t



SECTION AT CONC. PAD > 6" t



GENERATOR PAD  
DETAIL



INDEPENDENT CONCRETE PAD

**NOTES:**

1. CONTRACTOR TO COORDINATE PLAN DIMENSIONS OF CONCRETE PADS AND ANCHOR BOLTS WITH MECHANICAL AND ELECTRICAL DRAWINGS AND EQUIPMENT.
2. CONTRACTOR MAY USE 50 DIA. BOLTS WITH EXPANSION SHIELDS IN LIEU OF #3 BARS.

**3** TYPICAL CONCRETE PAD DETAILS  
S004 SCALE: NTS

**4** GENERATOR PAD DETAIL  
S004 SCALE: 3/4" = 1'-0"

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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND I AM A MEMBER OF THE BOARD OF ARCHITECTURE AND CONSUMER AFFAIRS.

**WAILUKU CIVIC COMPLEX PHASE 1B**

100% FINAL DESIGN

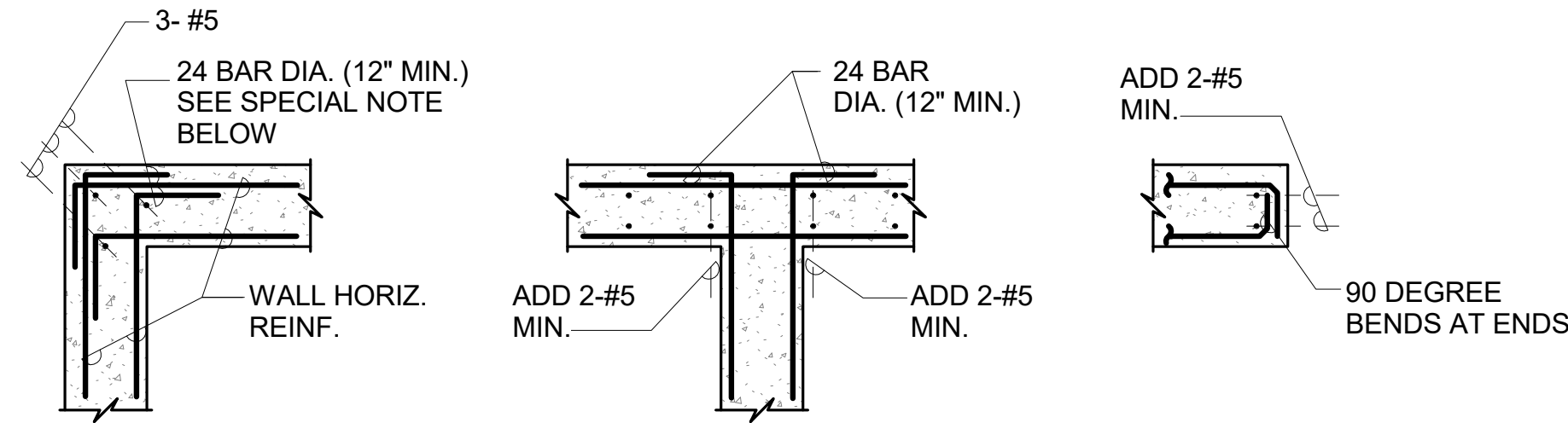
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PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	TYPICAL SLAB ON GRADE DETAILS
DRAWN:	ALM				
DATE:	7/25/2019				
PHASE:	SHEET				
	<b>1B</b>				
	<b>S004</b>				
	OF				
	SHEETS				

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**TYPICAL WALL REINFORCEMENT NOTES**

- MINIMUM WALL REINFORCEMENT SHOWN IN SCHEDULE SHALL GOVERN FOR ALL WALLS WHERE REINFORCEMENT IS NOT SHOWN ON PLANS, SECTIONS, ELEVATIONS, ETC.
- WHERE WALL IS DISCONTINUOUS, EXTEND ALL WALL REINFORCING TO WITHIN 2 INCHES OF TOP OR END OF WALL OR SLAB AND PROVIDE STANDARD 90 DEGREE HOOK.
- STAGGER SPLICES IN HORIZONTAL WALL REINFORCEMENT.
- FOR SPECIAL REINFORCEMENT IN BASEMENT TYPE WALLS AND SHEAR WALLS, SEE SPECIFIC SECTIONS, DETAILS AND NOTES.
- SEE TYPICAL WALL OPENING DETAIL FOR ADDED BARS AROUND OPENINGS.
- WHERE A BEAM FRAMES INTO WALL, ADD 4 - #6 X 6'-0" HORIZONTAL BELOW THE BEAM. CENTER BARS UNDER BEAM AND PLACE 2 BARS ON EACH FACE OF WALL.
- WHERE COLUMNS OCCUR WITHIN A WALL, RUN WALL REINFORCING CONTINUOUS THROUGH COLUMNS. WHERE COLUMNS OCCUR AT END OF WALL, RUN WALL REINFORCING TO FAR SIDE OF COLUMN AND TERMINATE BARS WITH STANDARD HOOK.
- PROVIDE DOWELS TO MATCH ALL WALL REINFORCING FROM ABUTTING MEMBERS. DOWELS SHALL LAP A MINIMUM 32 BAR DIAMETERS WITH WALL REINFORCEMENT AND SHALL BE EMBEDDED IN ABUTTING MEMBER A MINIMUM OF 32 BAR DIAMETERS UNLESS OTHERWISE SHOWN. WHERE THERE IS INSUFFICIENT DEPTH TO OBTAIN PROPER EMBEDMENT, EXTEND DOWEL TO FACE OF MEMBER AND HOOK UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



SPECIAL NOTE:

CONTRACTOR MAY SUBSTITUTE 7'-0" LONG 90 DEGREE BENT BAR CENTERED AT CORNER IN LIEU OF OUTER CORNER HOOKS (SAME SIZE AND SPACING AS HORIZ. REINF.)

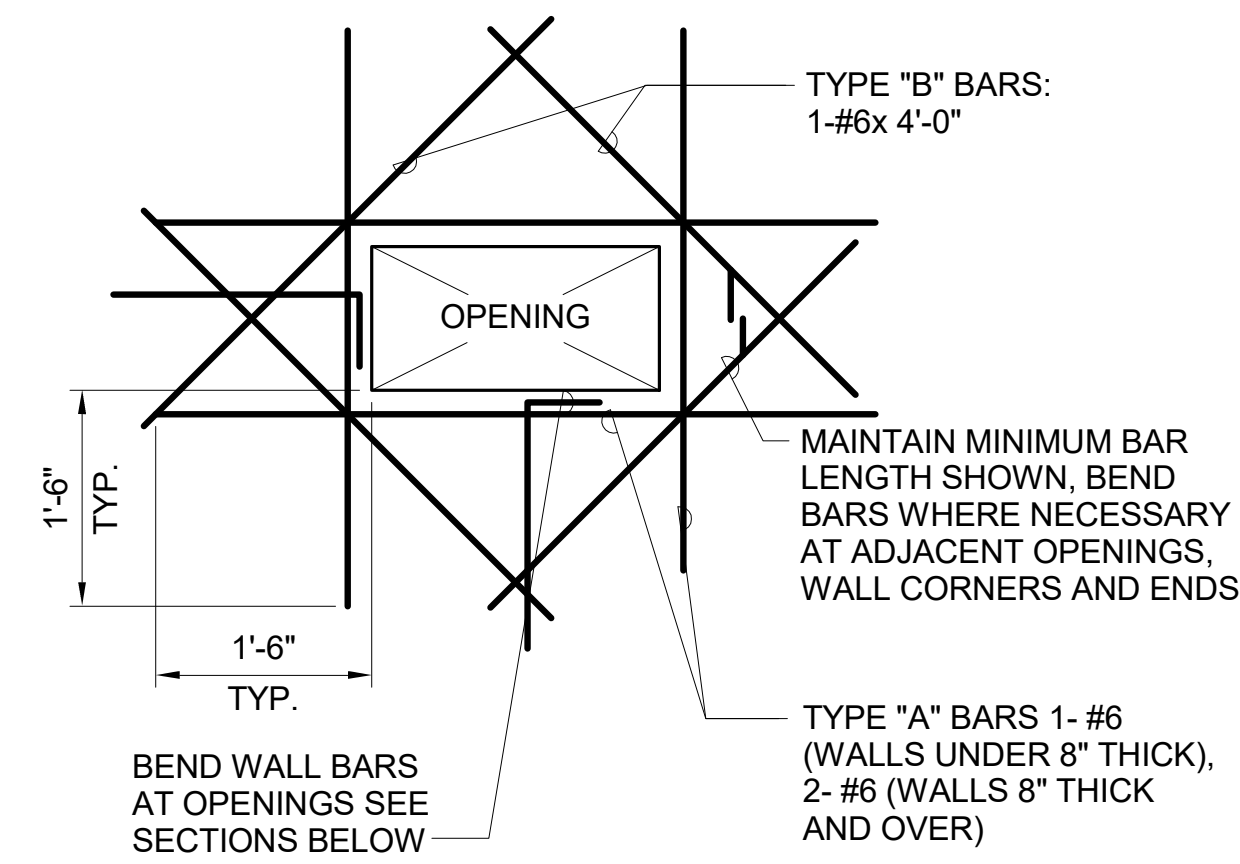
**PLAN AT CORNER**

**PLAN AT INTERSECTION DOUBLE LAYER**

**PLAN AT END**

NOTES:

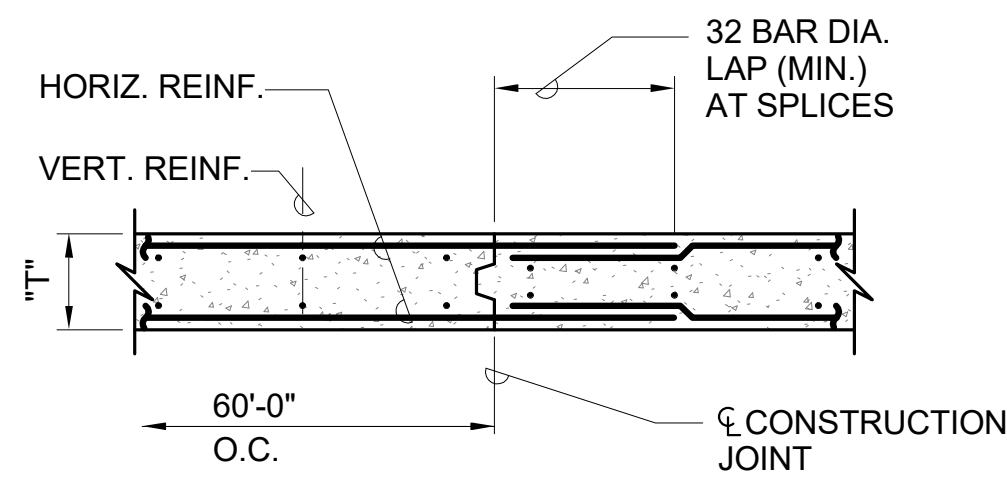
- SEE OTHER DETAILS AND NOTES FOR SIZE AND SPACING OF REINFORCING.



**ELEVATION**

CONCRETE CLASS	SPLICE TYPE CLASS B		
	3000 PSI	4000 PSI	5000 PSI
#4	2'-6"	2'-3"	2'-0"
#5	3'-0"	2'-6"	2'-3"
#6	3'-6"	3'-3"	2'-9"
#8	6'-0"	5'-3"	4'-9"
#9	6'-9"	5'-9"	5'-3"
#10	7'-6"	6'-6"	5'-9"
#11	8'-3"	7'-3"	6'-3"

**CONDITION OF WALL REINFORCING**

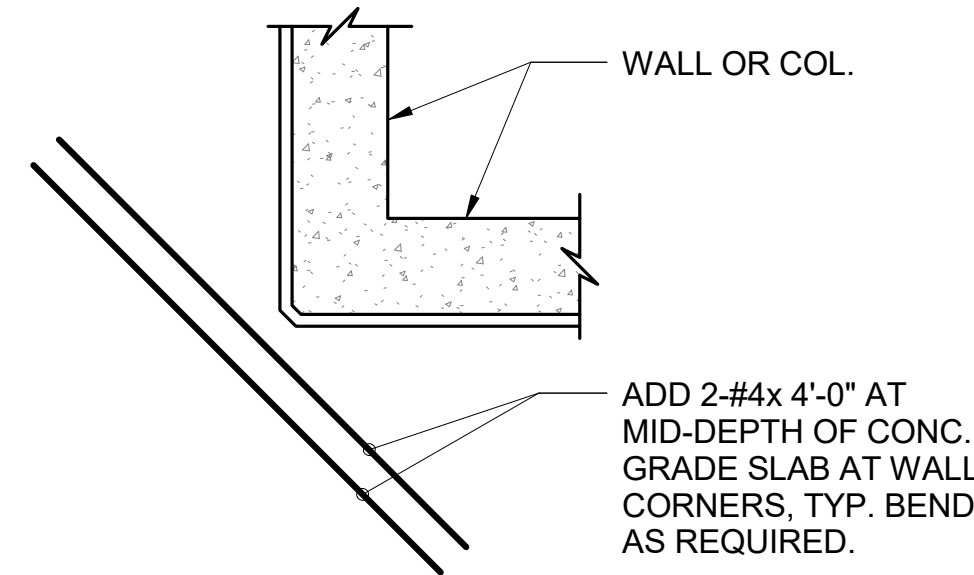


**PLAN**

NOTES:

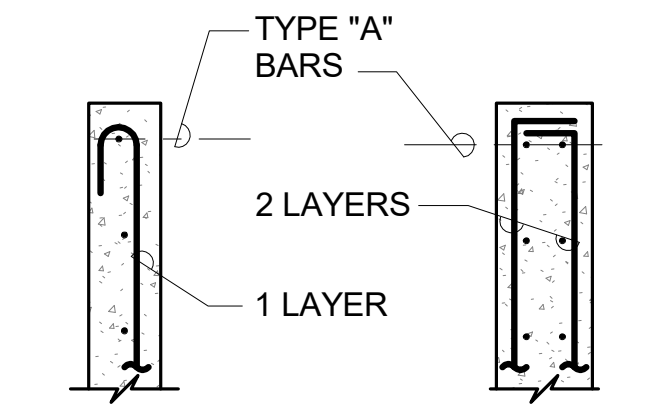
- MECHANICALLY ROUGHEN CONSTRUCTION JOINT OR USE 1" DEEP x 1/2" WIDE KEYS.
- PROVIDE WALL VERTICAL CONSTRUCTION JOINTS AT 60' O.C. MAXIMUM.

**CONDITION AT VERTICAL CONSTRUCTION JOINT**



**PLAN AT WALL OR COLUMN**

**ADDED REINFORCING DETAIL**



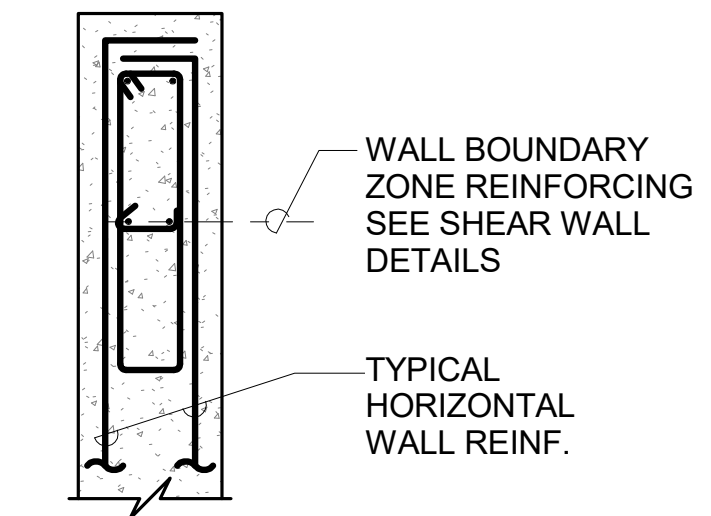
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**SECTION**

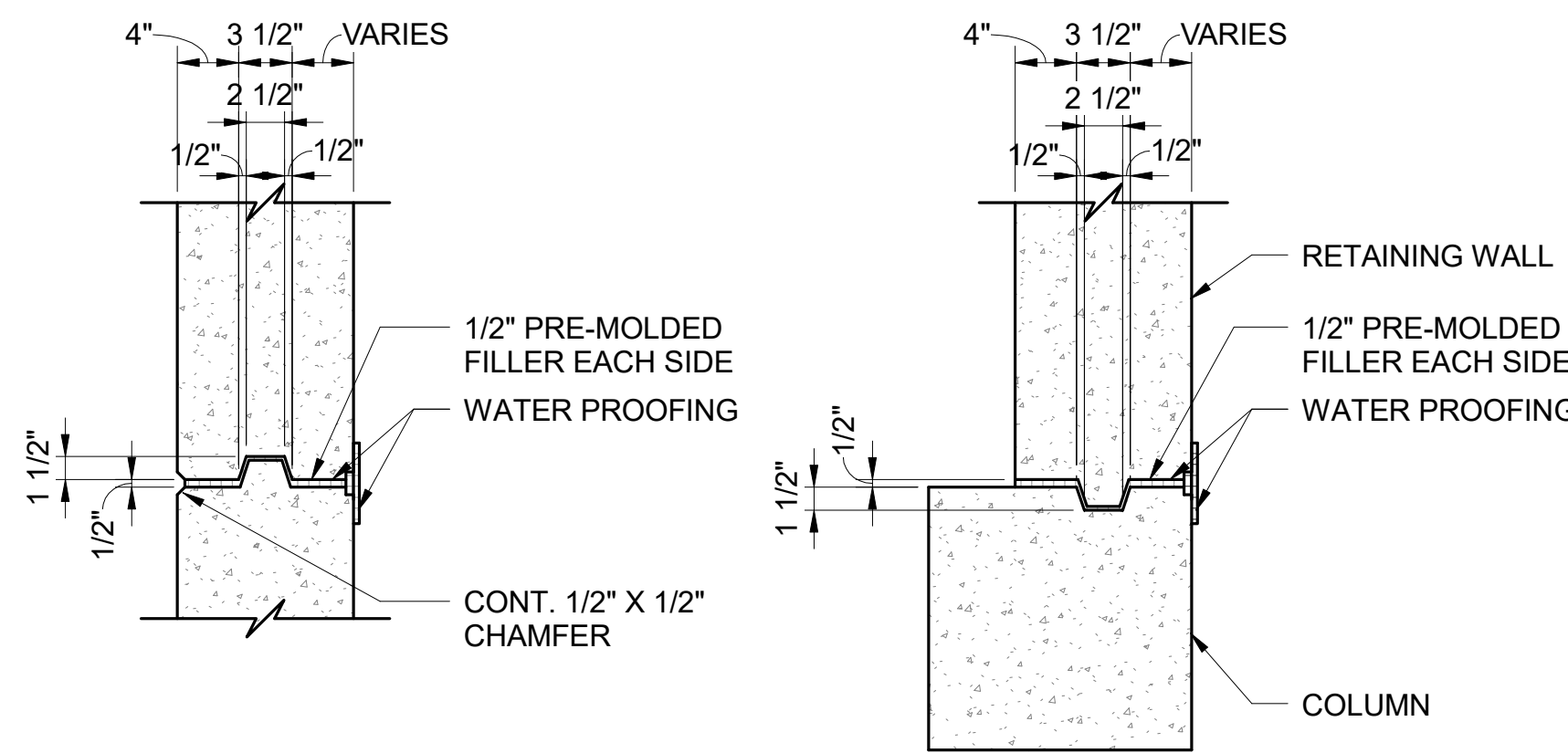
NOTES:

- WHERE SIDES, TOP OR BOTTOM OF OPENINGS ARE IN LINE, "A" BARS SHALL BE CONTINUOUS EXCEPT WHERE OPENINGS ARE MORE THAN 8'-0" APART.
- OMIT TYPE "B" BARS FOR OPENING EQUAL TO AND LESS THAN 1'-0" SQR.
- FOR WALL RECESS DEEPER THAN 1/3 OF THE WALL THICKNESS, PROVIDE TYPICAL WALL OPENING REINFORCEMENT AROUND RECESS. AT WALL RECESSES LESS THAN 1/3 OF WALL THICKNESS, RECESS WALL REINFORCING AS REQUIRED. DO NOT CUT REINFORCING. (RECESSING BENDS SHALL BE OFFSET BEND 1:6 TO CLEAR RECESS)

**CONDITION AT WALL OPENING**



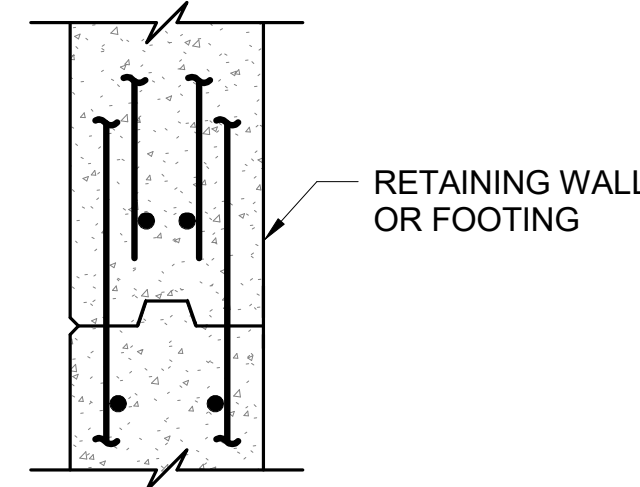
**CONDITION AT WALL BOUNDARY ZONES**



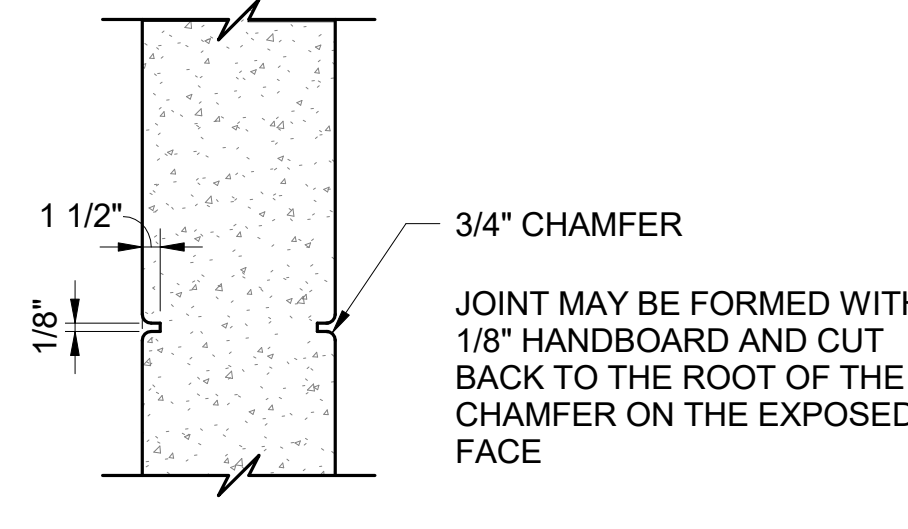
**WALL TO WALL**

**COLUMN TO RETAINING WALL**

**EXPANSION JOINT SECTION**



**CONSTRUCTION JOINT SECTION**

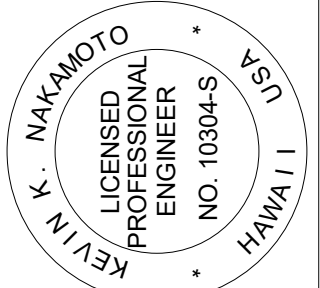


**PLAN**

**TYPICAL CONTRACTION JOINT DETAIL**

MIN. WALL REINFORCING SCHEDULE			
WALL MARK	WALL THICKNESS	LAYERS	HORIZ. AND VERT. BARS
W-1	6"	1	#4 AT 12" O.C.
W-2	8"	2	#4 AT 16" O.C., E.F.
W-2A	8"	2	#4 AT 8" O.C., E.F.
W-3	10"	2	#4 AT 16" O.C., E.F.
W-3A	10"	2	#4 AT 8" O.C., E.F.
W-4	12"	2	#4 AT 12" O.C., E.F.
W-5	14"	2	#4 AT 12" O.C., E.F.

**FERRARO CHOI**



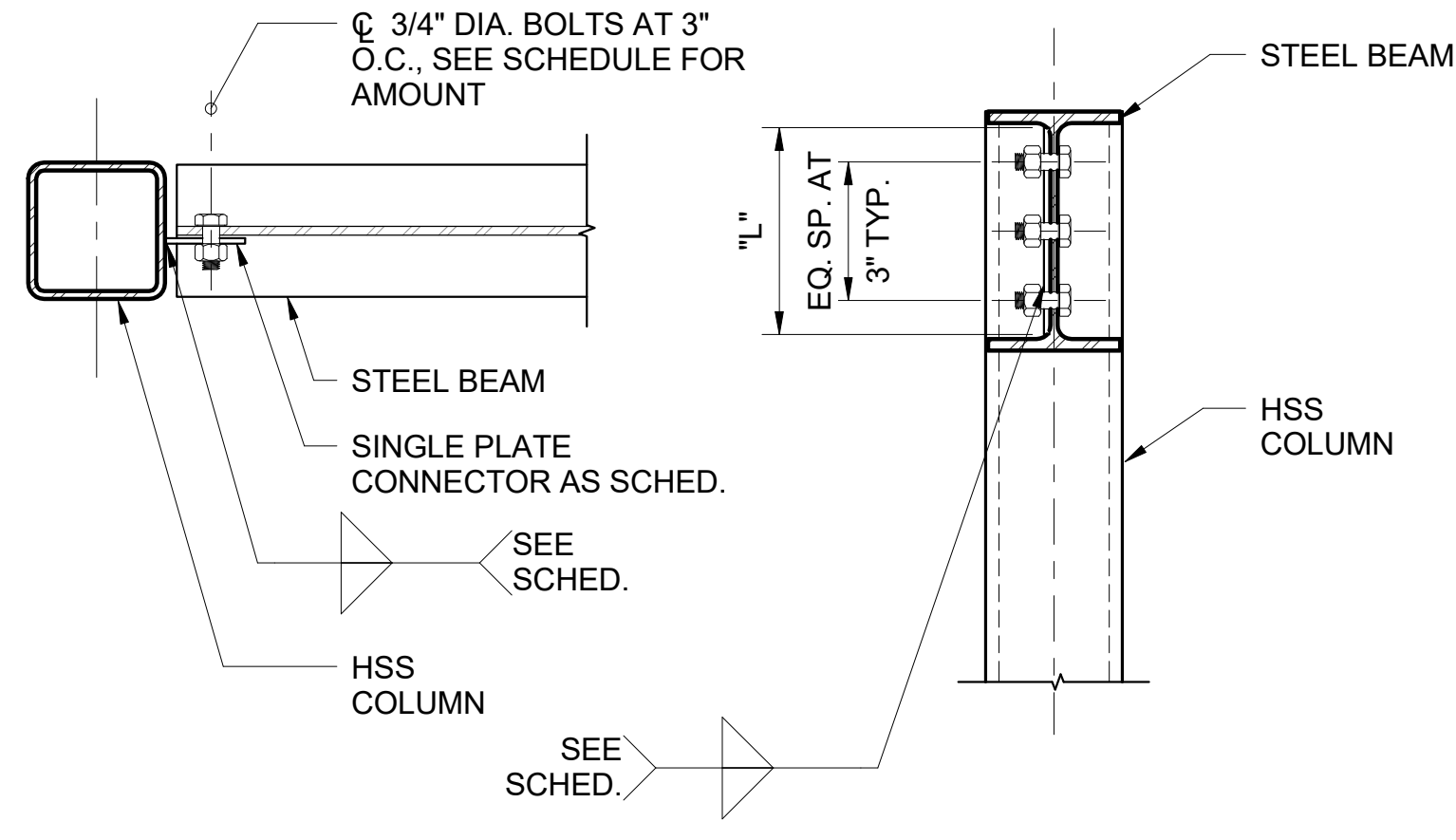
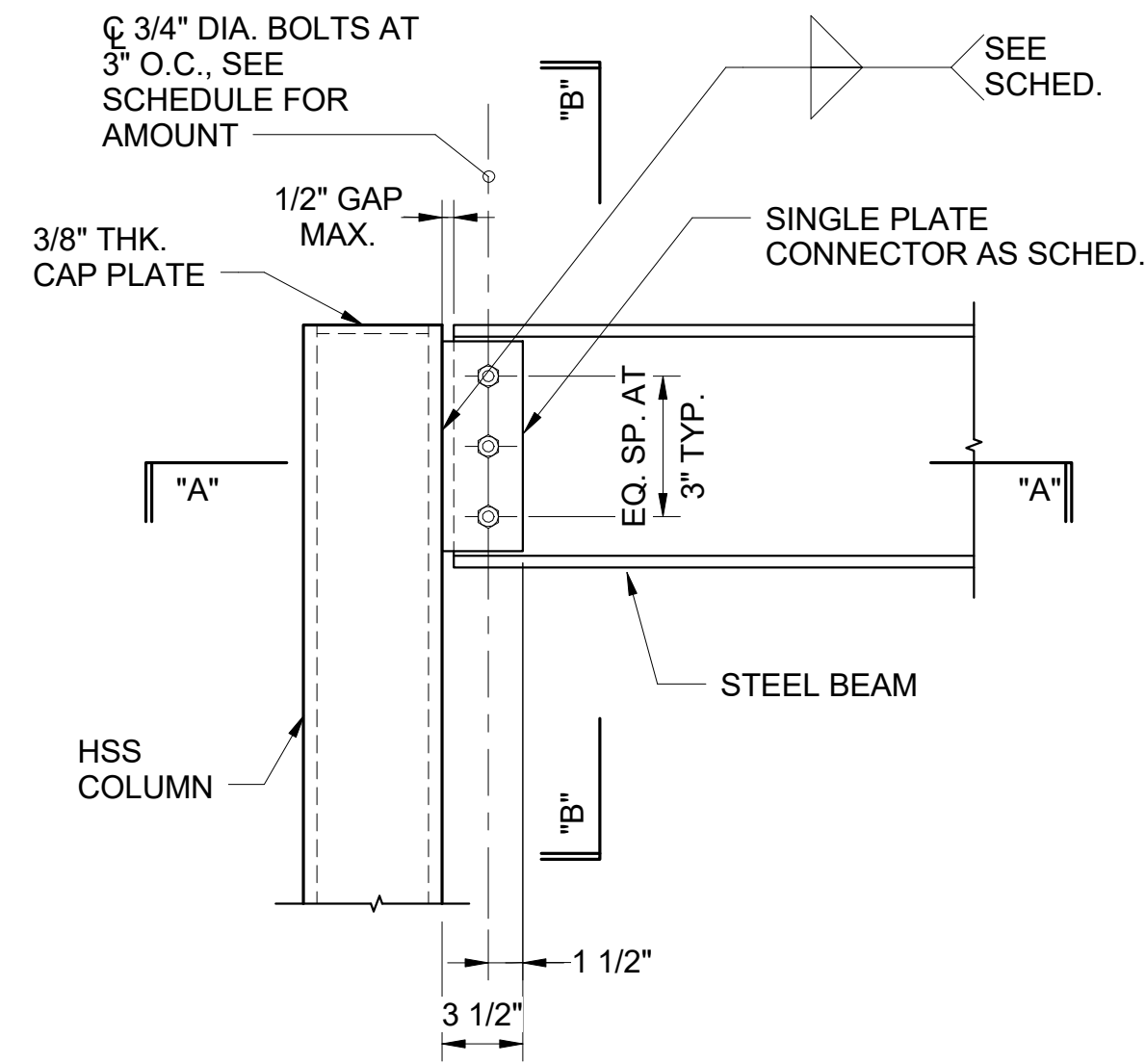
KEVIN K. MAKIMOTO  
LICENSED PROFESSIONAL ENGINEER  
NO. 10304-S  
HAWAII, USA  
LICENSE EXPIRATION DATE: 4/30/20  
SIGNATURE: *[Signature]*  
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND I AM A MEMBER OF THE BOARD OF ARCHITECTURE AND CONSUMER AFFAIRS  
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**WAILUKU CIVIC COMPLEX PHASE 1B**  
100% FINAL DESIGN  
[PUNYUJUBUJUBUJUBU]

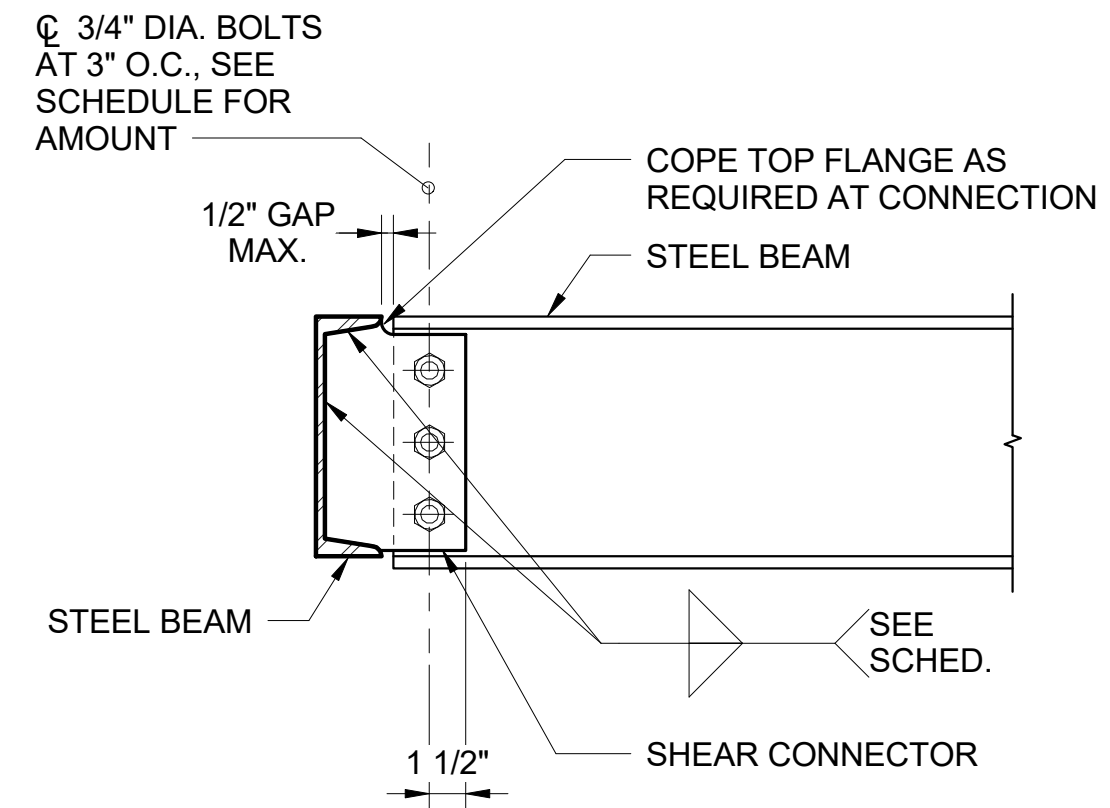
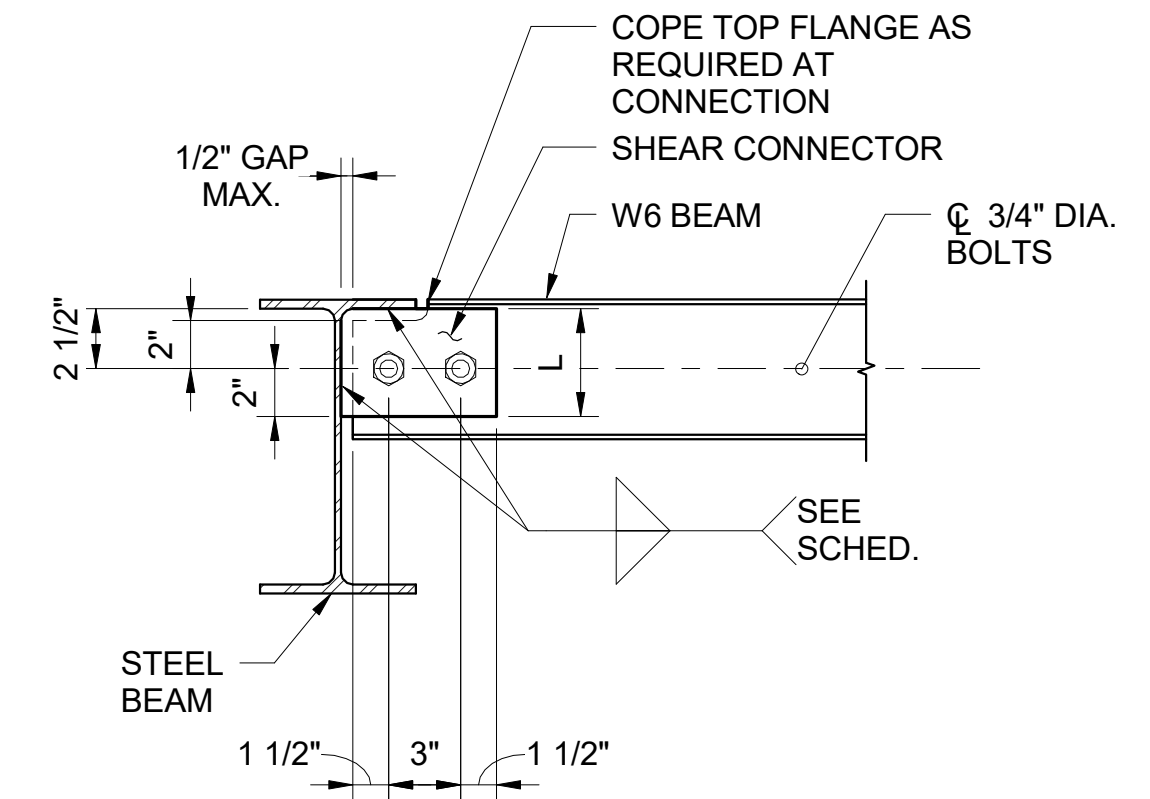
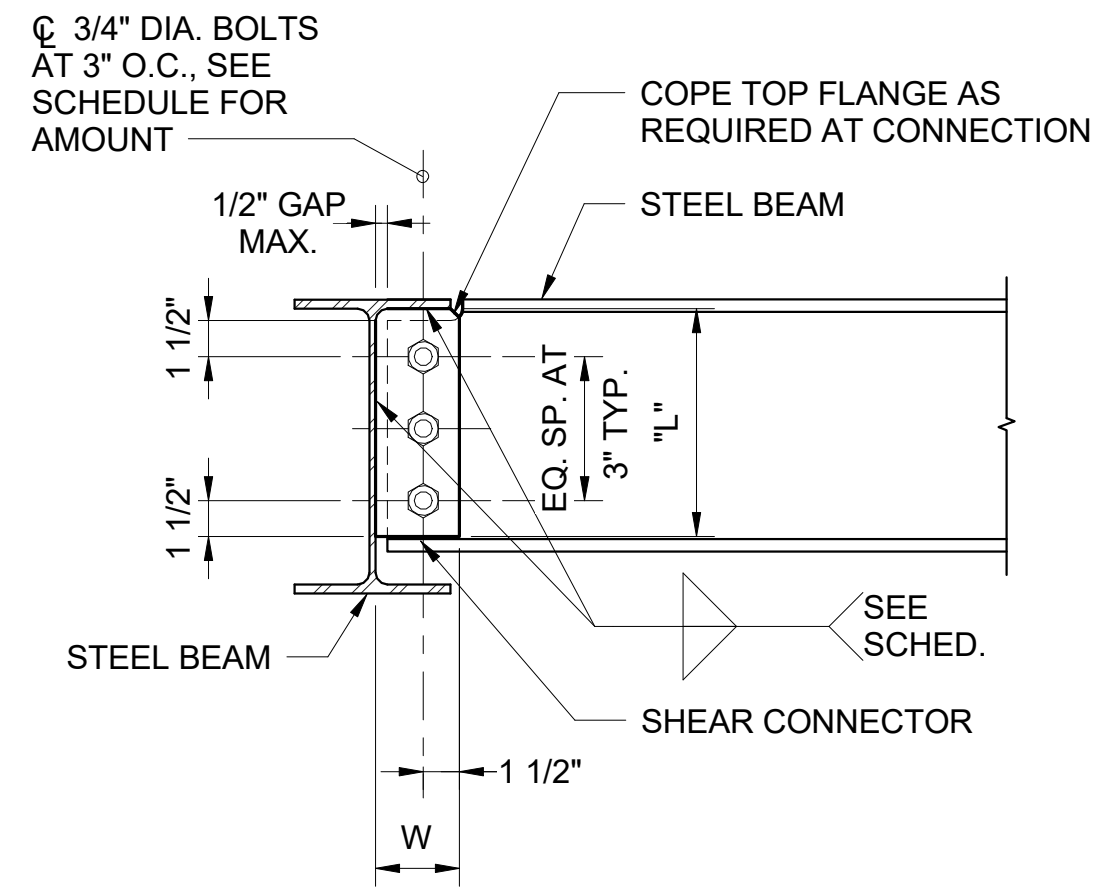
SHEET TITLE:  
**TYPICAL CONCRETE WALL DETAILS**

PROJECT:	2017-001	REVISIONS:	ALM	DATE:	7/25/2019	PHASE:	SHEET	1B	OF	S005	SHEETS





**TYPICAL STEEL BEAM TO COLUMN CONNECTION DETAIL**

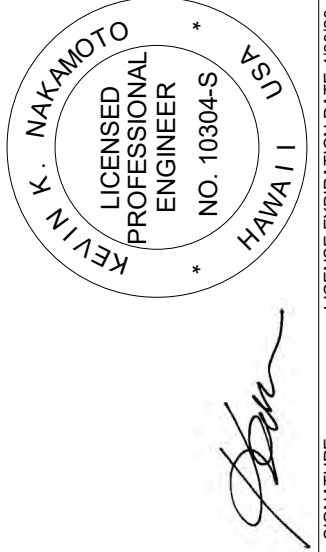


**TYPICAL STEEL BEAM TO GIRDER WEB CONNECTION DETAIL**

BEAM CONNECTION (BOLTING/WELDING) SCHEDULE							
GIRDER/ BEAM SIZE	NO. OF BOLTS (A325)	BOLT DIAMETER	SHEAR CONNECTOR				REMARKS
			SINGLE PLATE BEAM TO GIRDER WEB (Wx Lx t)	WELD SIZE	SINGLE PLATE BEAM TO HSS COLUMN (Wx Lx t)	WELD SIZE	
W10	3	3/4"	3.5"x 9"x 3/8"	3/16"	3.5"x 9"x 3/8"	3/16"	SINGLE-SIDE CONNECTION
C10	3	3/4"	3.5"x 9"x 3/8"	3/16"	3.5"x 9"x 3/8"	3/16"	SINGLE-SIDE CONNECTION

**1 TYPICAL STEEL CONNECTION DETAILS**  
S006 SCALE: NTS

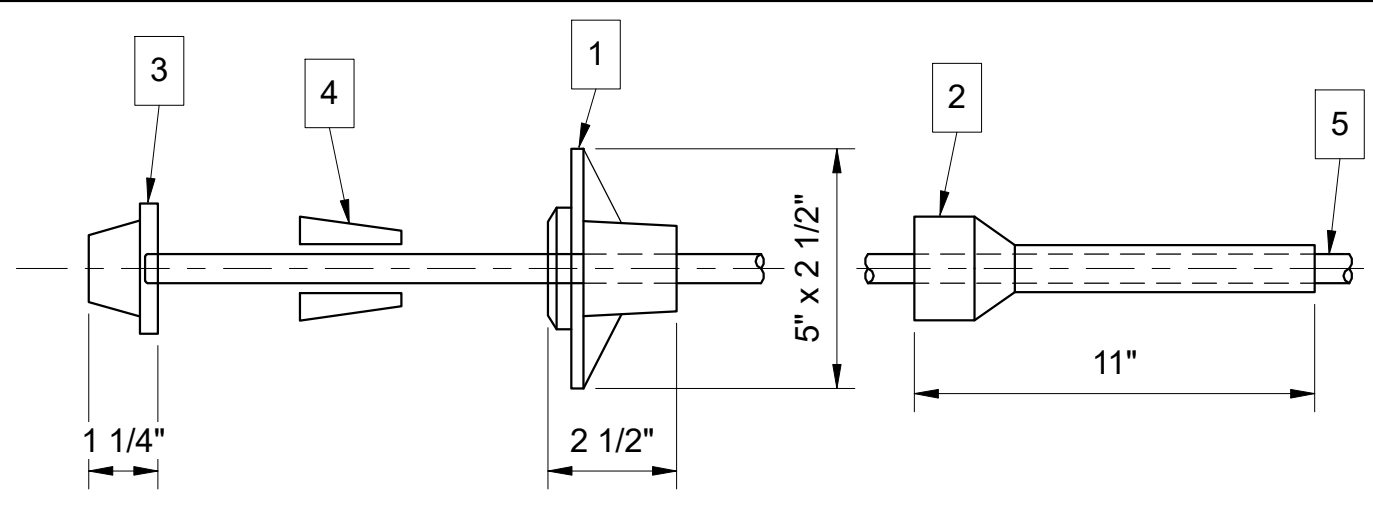
**FERRARO CHOI**



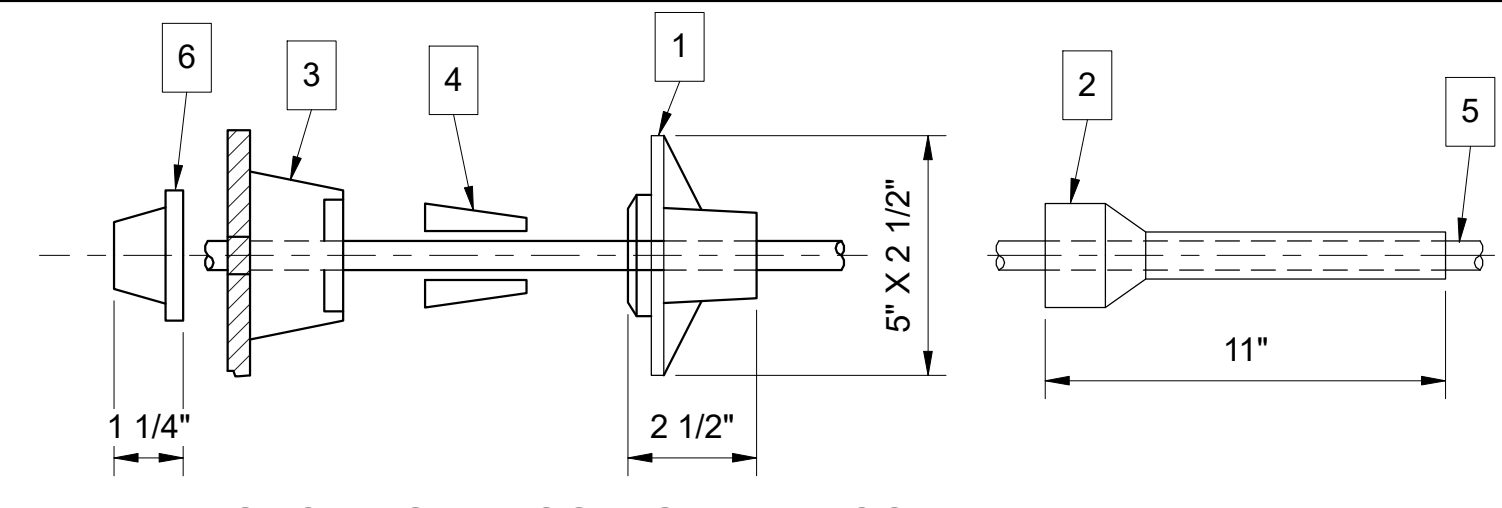
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NO. 10304-S  
HAWAII  
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100% FINAL DESIGN  
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PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	TYPICAL STEEL CONNECTION DETAILS
DRAWN:	LC				
DATE:	7/25/2019				
PHASE	1B	SHEET	S006	CADD FILE:	
		OF	SHEETS		

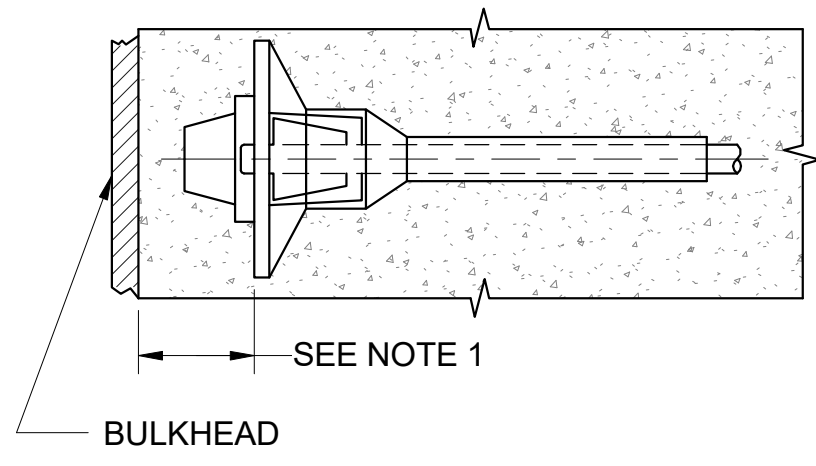


**S5CP+ DEAD END ASSEMBLY**



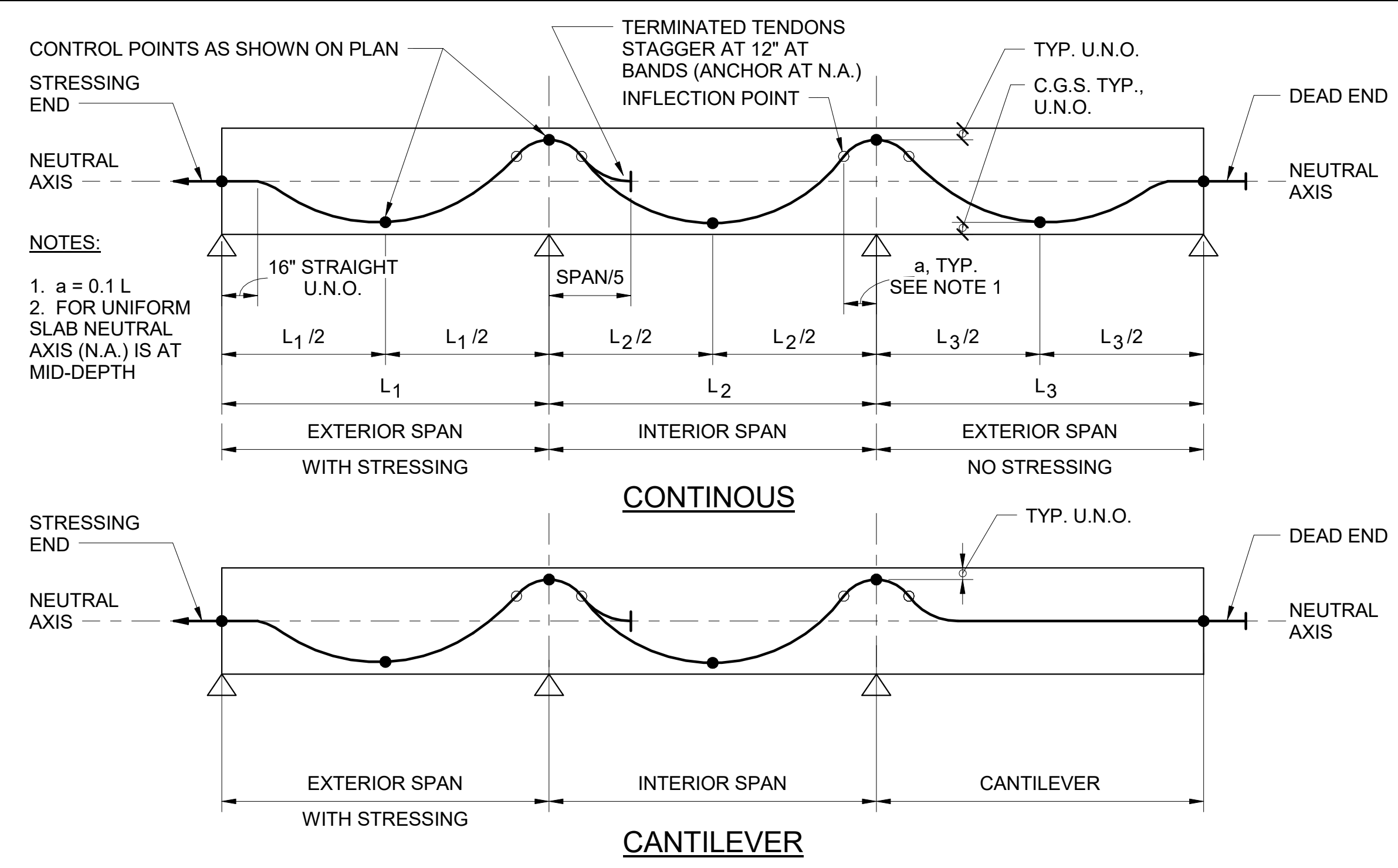
**S5CP+ STRESSING END ASSEMBLY**

ITEM	DESCRIPTION
1	ANCHORAGE S5CP+
2	PROTECTION SLEEVE S5CP+
3	END CAP S5CP+
4	MONOWEDGES TYPE 1.5
5	STRAND (GREASED AND COATED)



ITEM	DESCRIPTION
1	ANCHORAGE S5CP+
2	PROTECTION SLEEVE S5CP+
3	GROMMET S5CP+
4	MONOWEDGES TYPE 1.5
5	STRAND (GREASED AND COATED)
6	END CAP S5CP+

1. LOCATE ANCHOR AT BULKHEAD PER PROJECT PLANS.
2. INSTALL GROMMET FLUSH BETWEEN BULKHEAD AND ANCHOR FOR TIGHT SEAL.
3. SLIDE SLEEVE TIGHT AGAINST ANCHOR. BE SURE NO BARE STRAND IS EXPOSED. TAPE IF NECESSARY.
4. AFTER POURING, AT TIME OF STRESSING, REMOVE GROMMET AND INSERT WEDGES.
5. AFTER STRESSING, CUT STRAND TO WITHIN 1/8" OF END OF END CAP AND GREASE END CAP PRIOR TO INSERTING IT TIGHT AGAINST ANCHOR.
6. PATCH STRESSING POCKET PER PROJECT PLANS.



- NOTES:**
1.  $a = 0.1L$
  2. FOR UNIFORM SLAB NEUTRAL AXIS (N.A.) IS AT MID-DEPTH

**ENCAPSULATED SYSTEM FOR TENDONS IN CORROSIVE ENVIRONMENT (DEAD END)**

1  
S007

SCALE: NTS

**ENCAPSULATED SYSTEM FOR TENDONS IN CORROSIVE ENVIRONMENT (STRESSING END)**

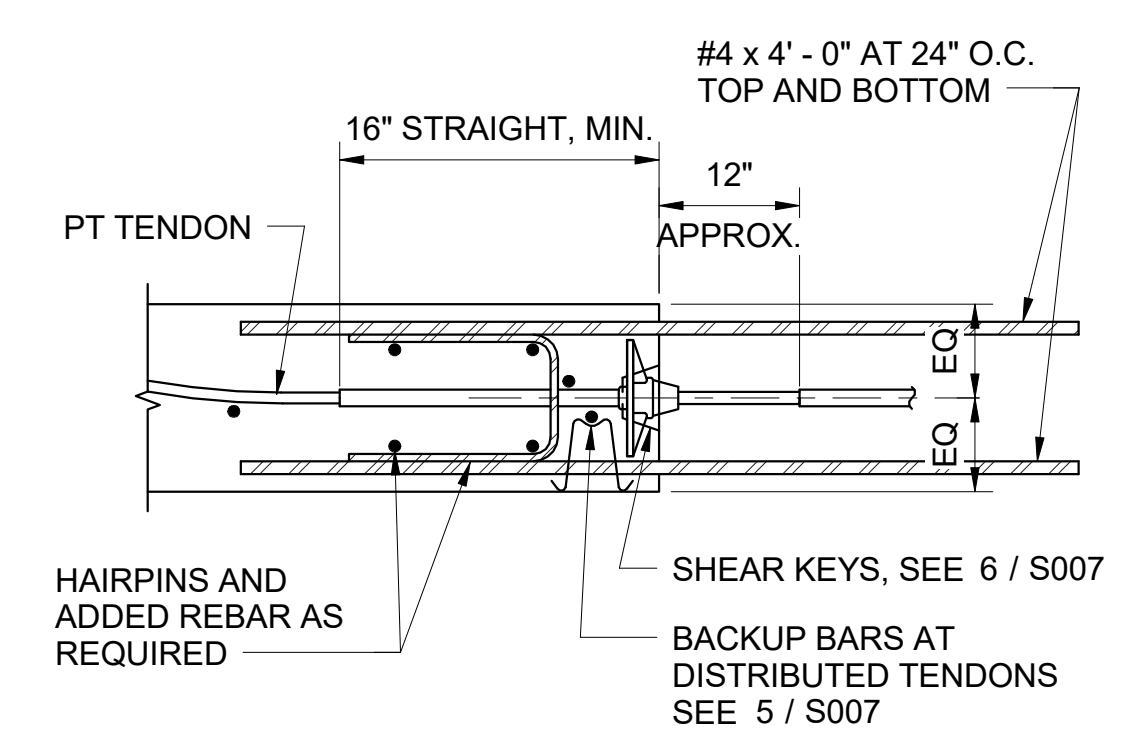
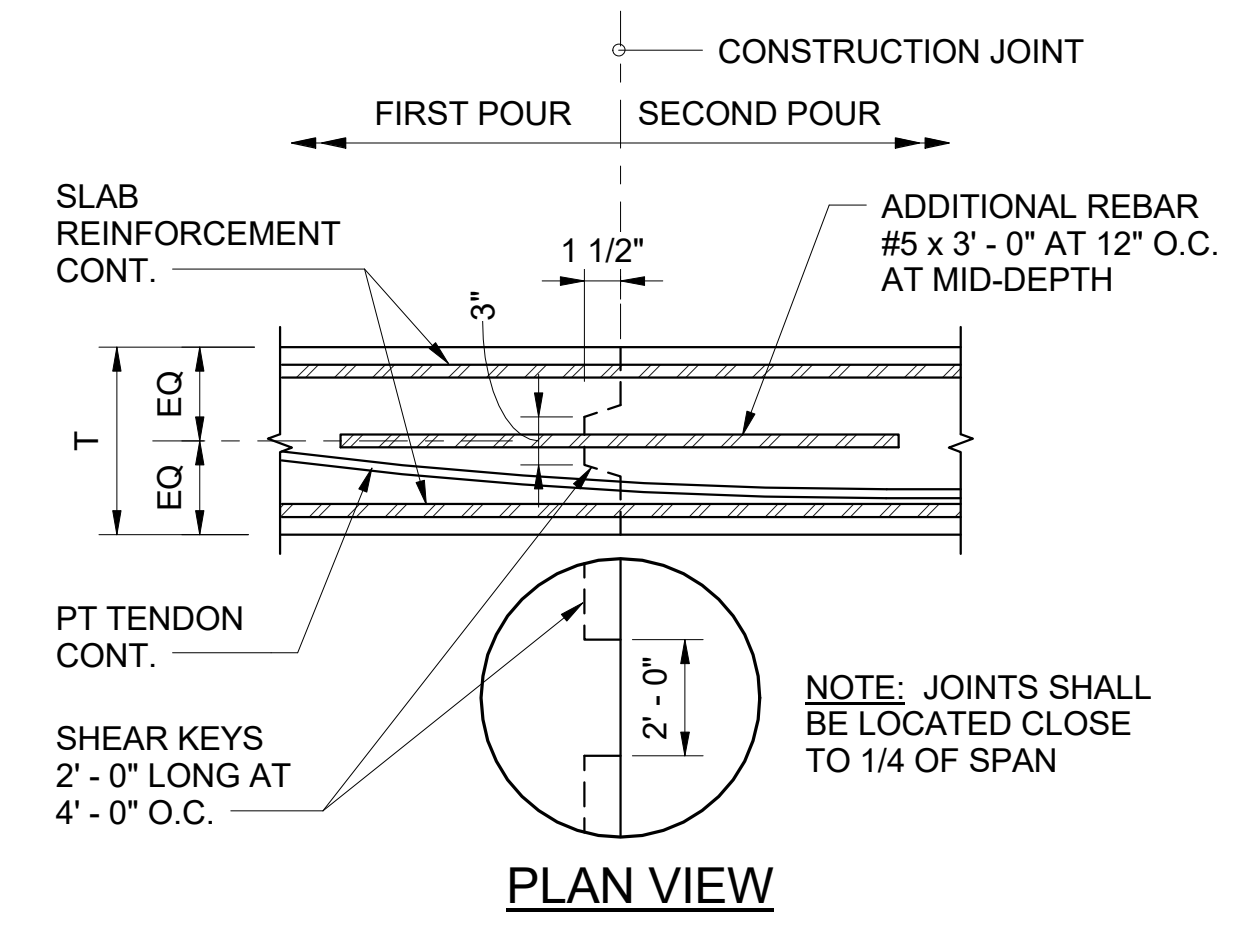
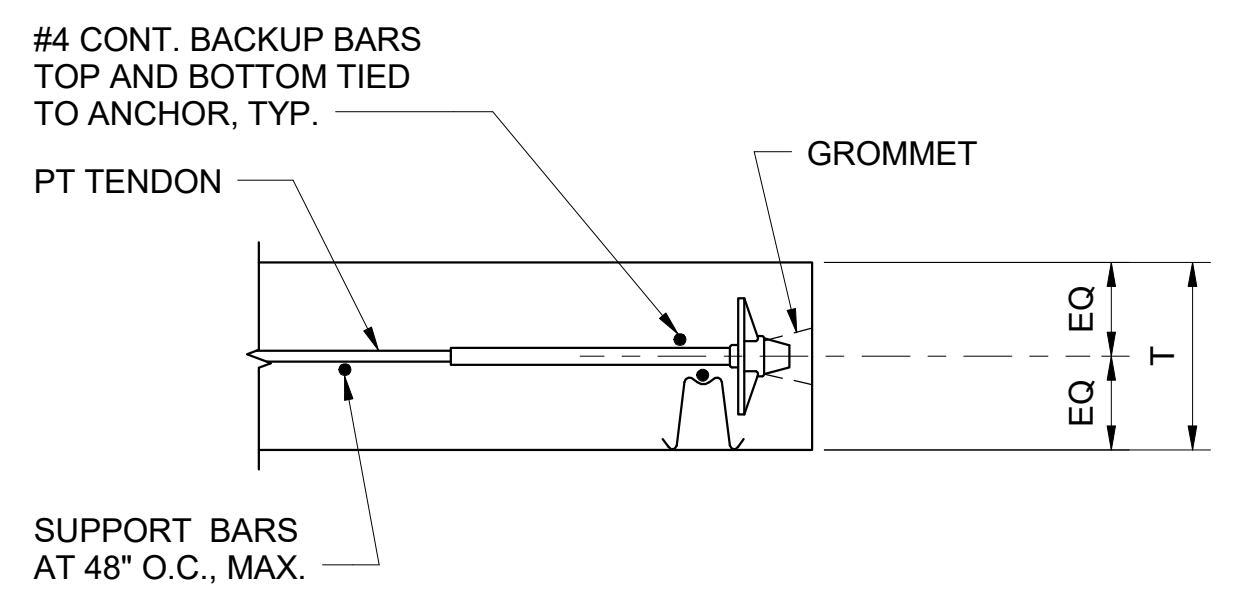
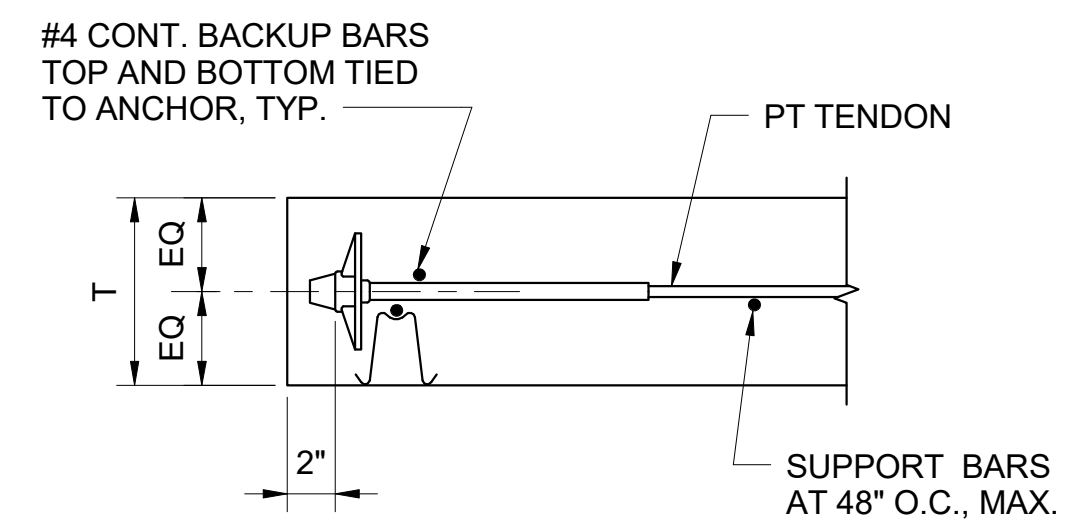
2  
S007

SCALE: NTS

**PROFILE FOR REVERSED PARABOLA TENDONS**

3  
S007

SCALE: NTS



**DISTRIBUTED TENDON ANCHORAGE AT DEAD END**

4  
S007

SCALE: NTS

**DISTRIBUTED TENDON ANCHORAGE AT STRESSING END**

5  
S007

SCALE: NTS

**CONSTRUCTION JOINT WITH NO INTERMEDIATE STRESSING**

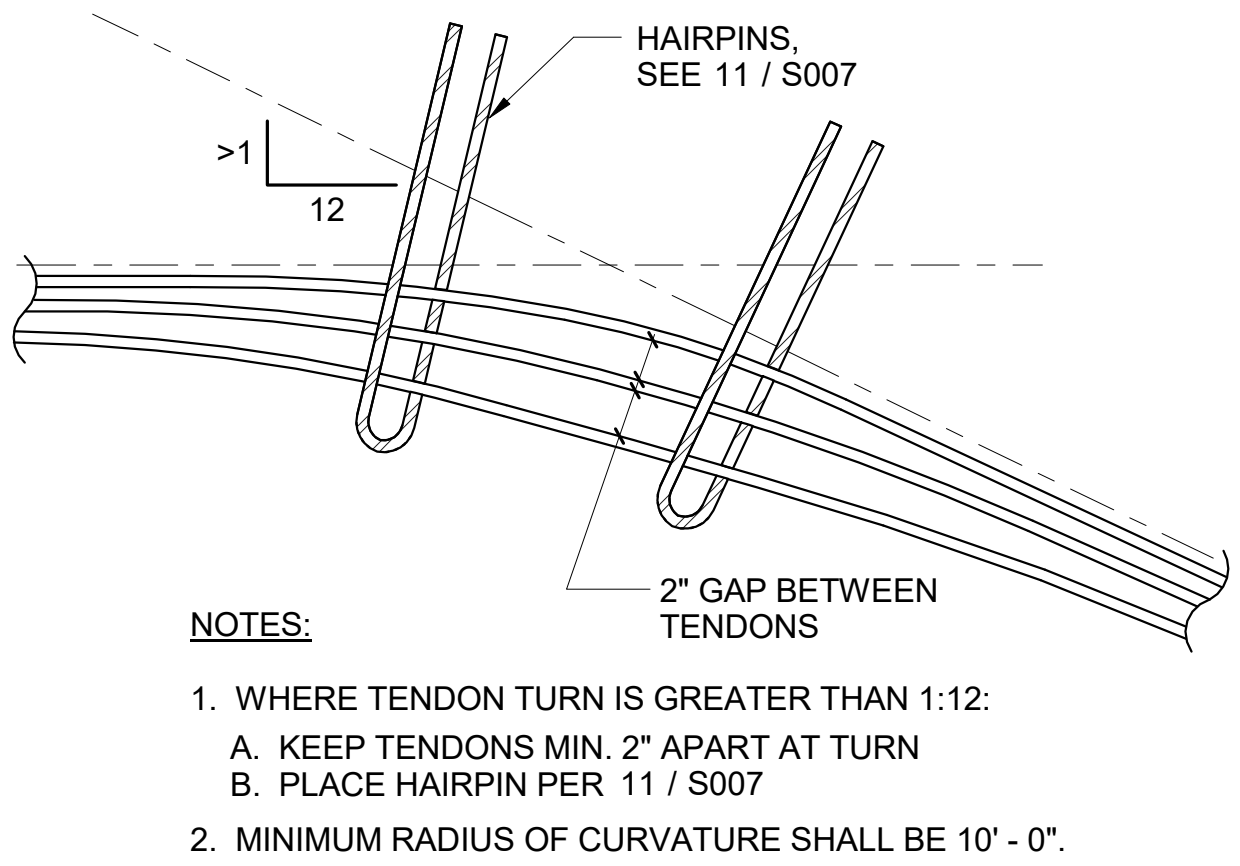
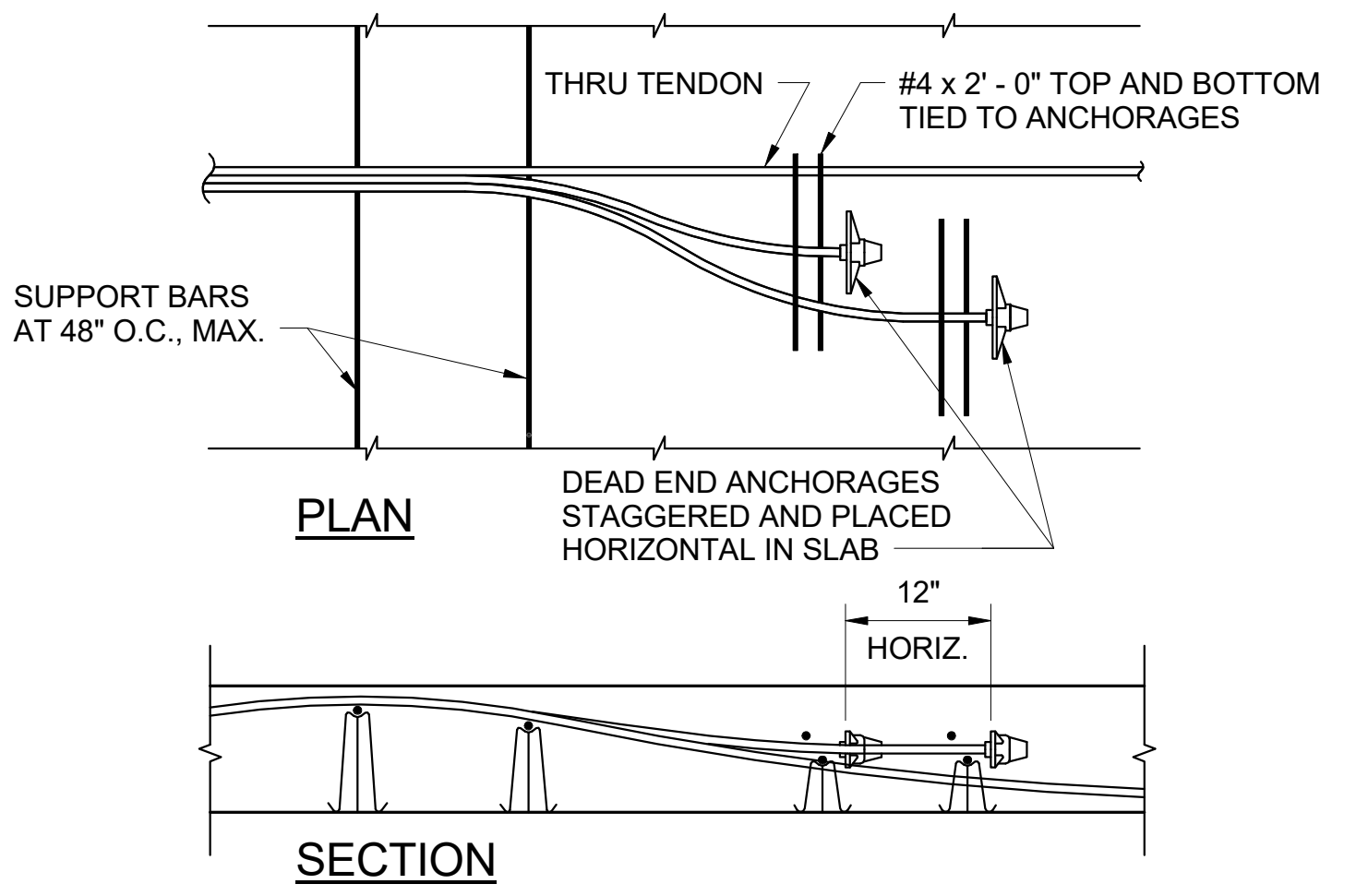
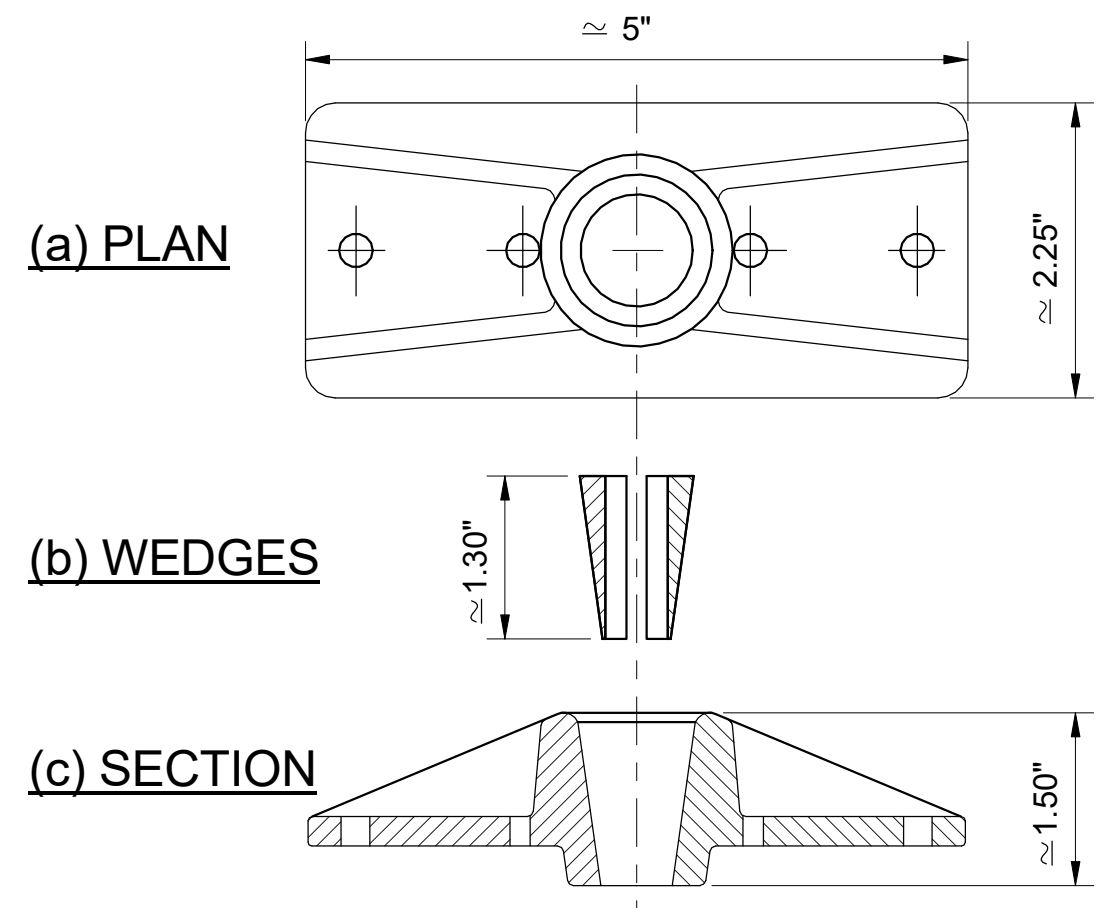
6  
S007

SCALE: NTS

**CONSTRUCTION JOINT WITH INTERMEDIATE STRESSING**

7  
S007

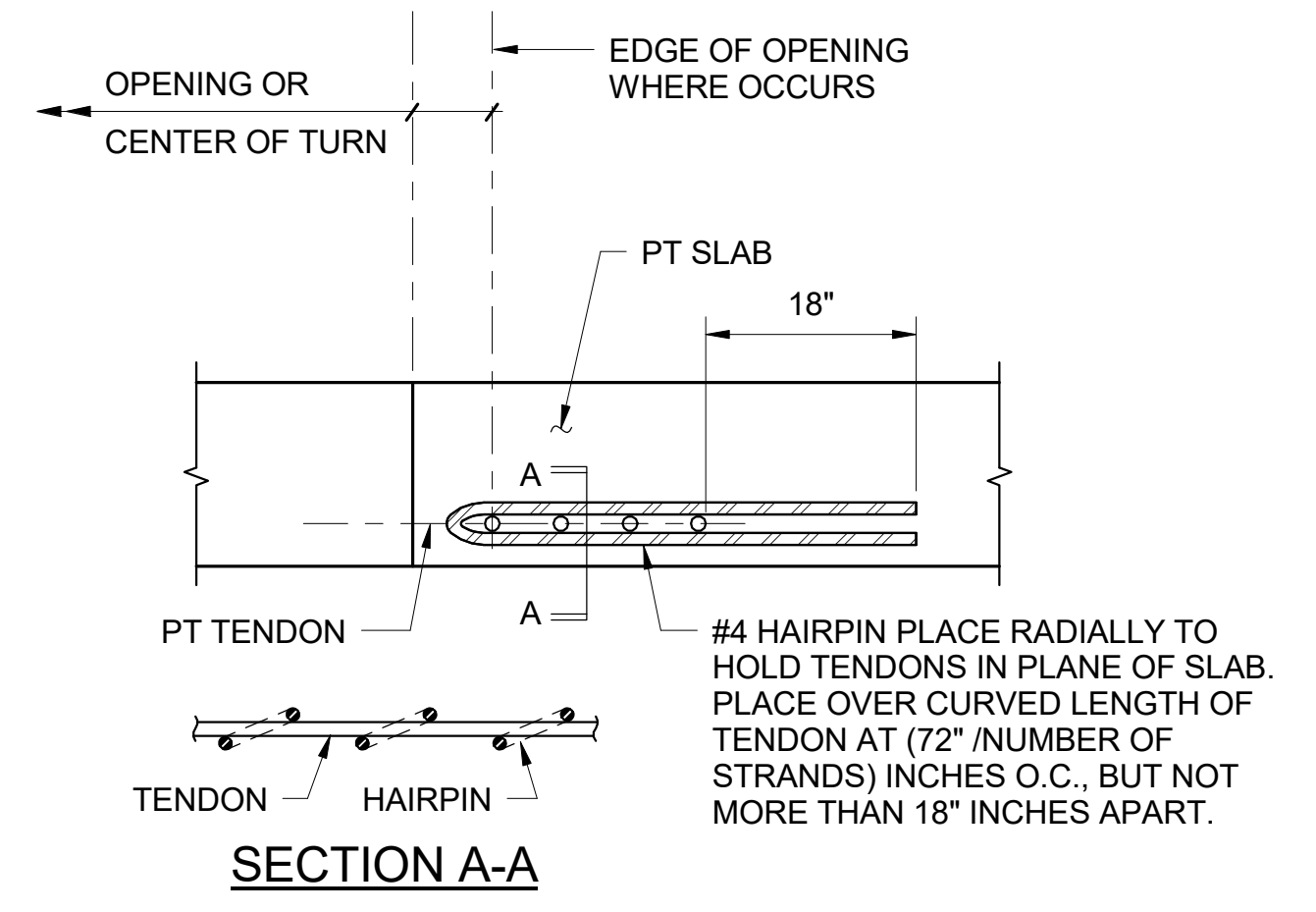
SCALE: NTS



**TENDONS PLACEMENT FOR TURNS GREATER THAN 1:12**

10  
S007

SCALE: NTS



**HAIRPIN AT TENDON TURNS**

11  
S007

SCALE: NTS

**GENERIC MONOSTRAND ANCHORAGE**

8  
S007

SCALE: NTS

**PLACEMENT OF ADDED TENDONS**

9  
S007

SCALE: NTS

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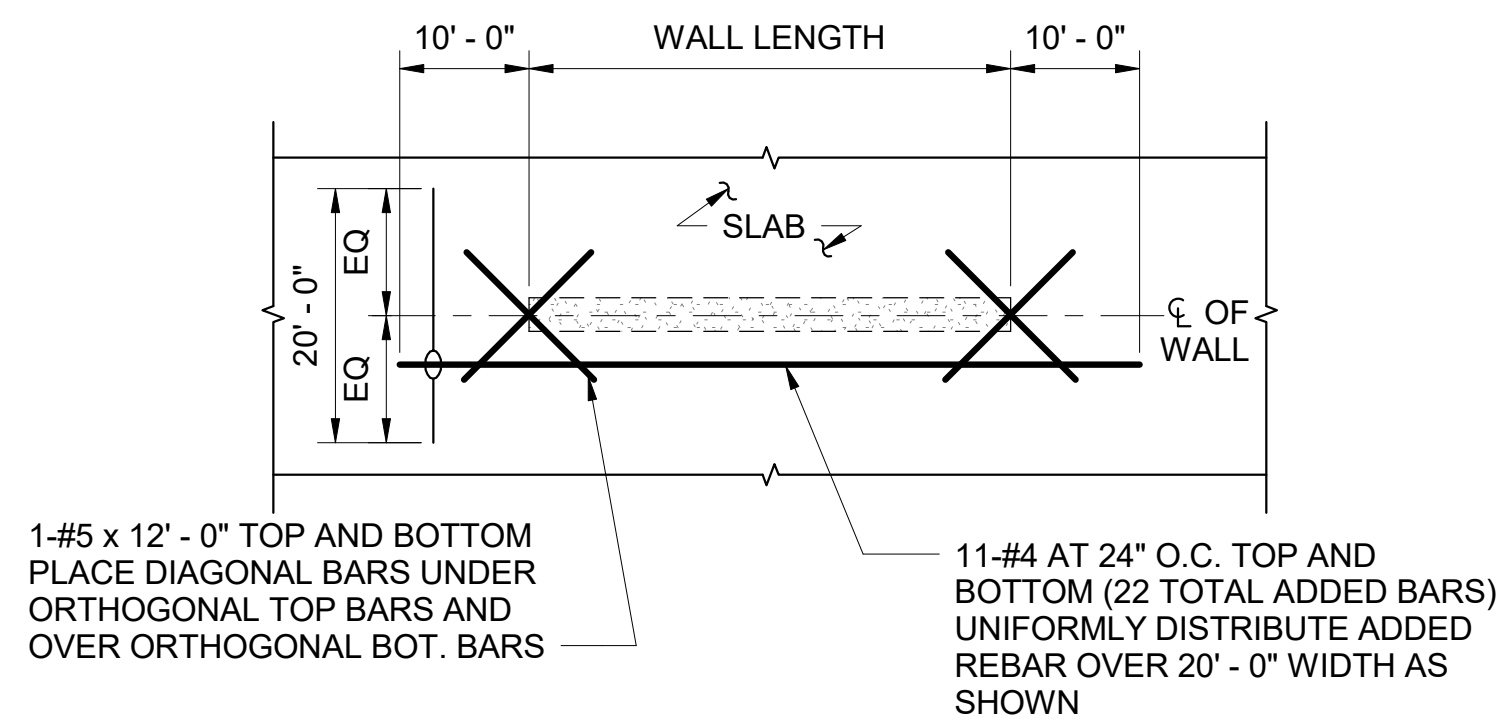
**WAILUKU CIVIC COMPLEX PHASE 1B**

100% FINAL DESIGN

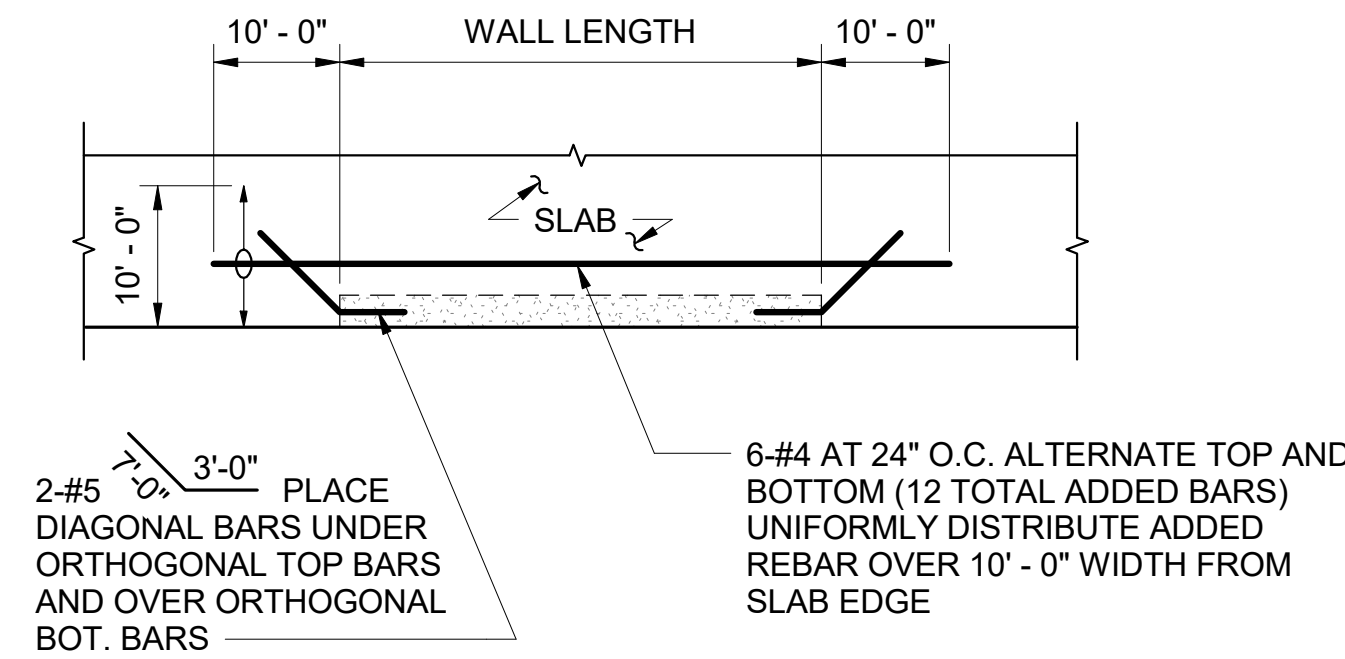
PUVABUUPUNUWOP

SHEET TITLE:	TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
PROJECT:	2017-001
DRAWN:	LC
DATE:	7/25/2019
PHASE	SHEET
1B	S007
OF	SHEETS

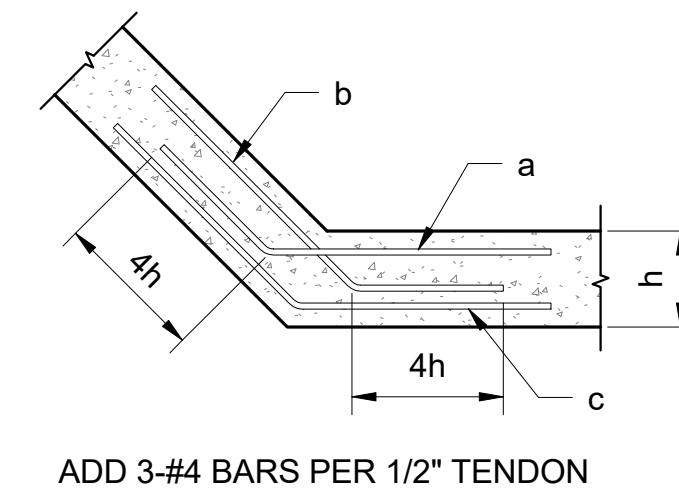
COPYRIGHT PROTECTED UNDER THE 1990 ARCHITECTURAL WORKS COPYRIGHT PROTECTION ACT



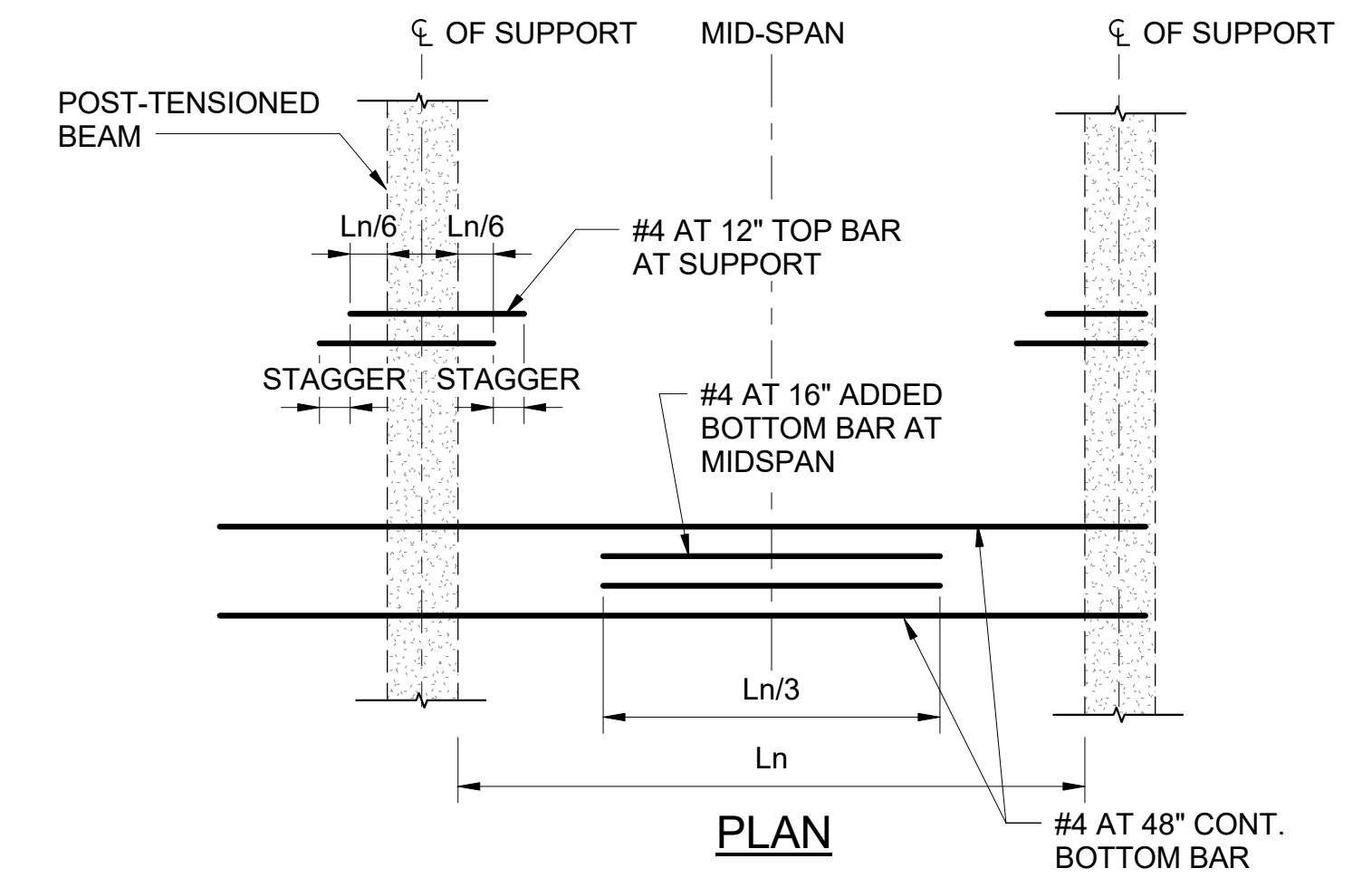
**1 ADDED REBAR AT WALLS**  
S008 SCALE: 1" = 1'-0"



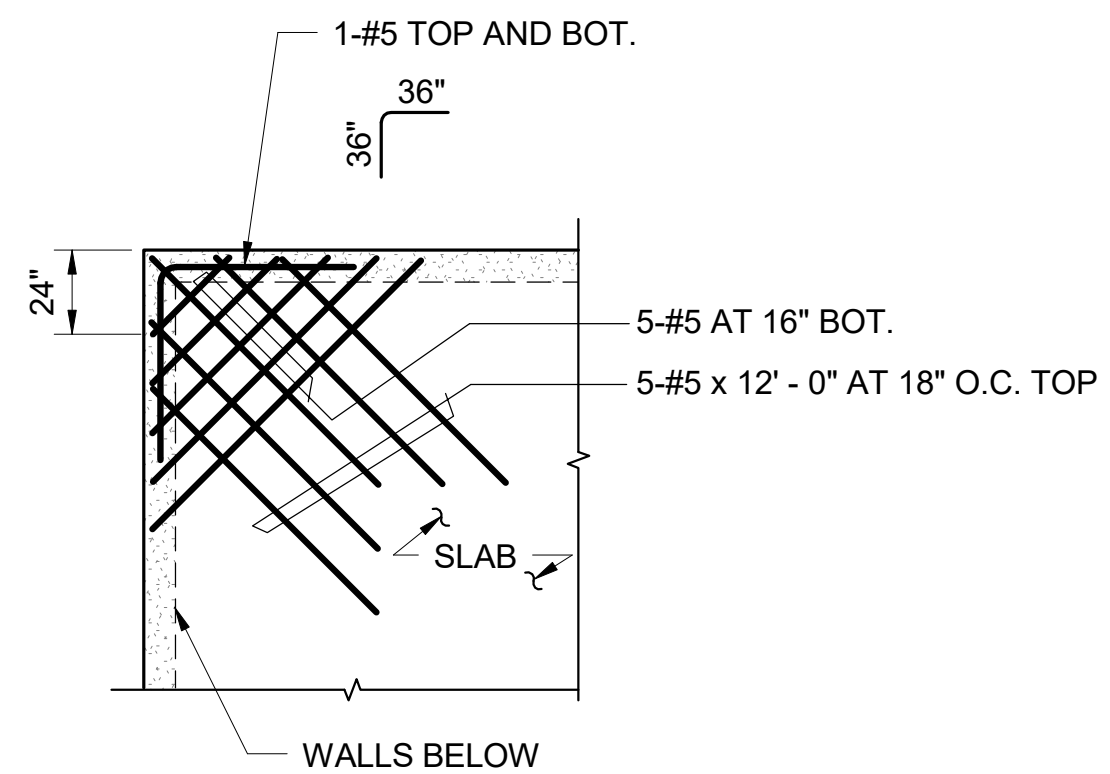
**2 ADDED REBAR AT EXTERIOR WALLS**  
S008 SCALE: NTS



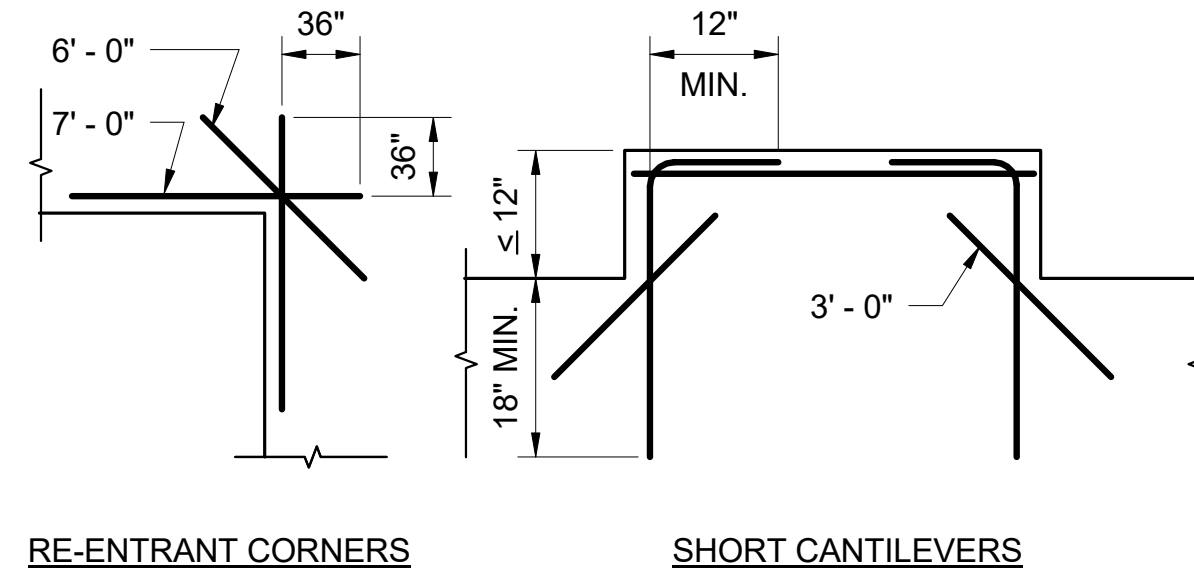
**3 ADDED REINFORCEMENT AT RAMP BENT**  
S008 SCALE: 3/4" = 1'-0"



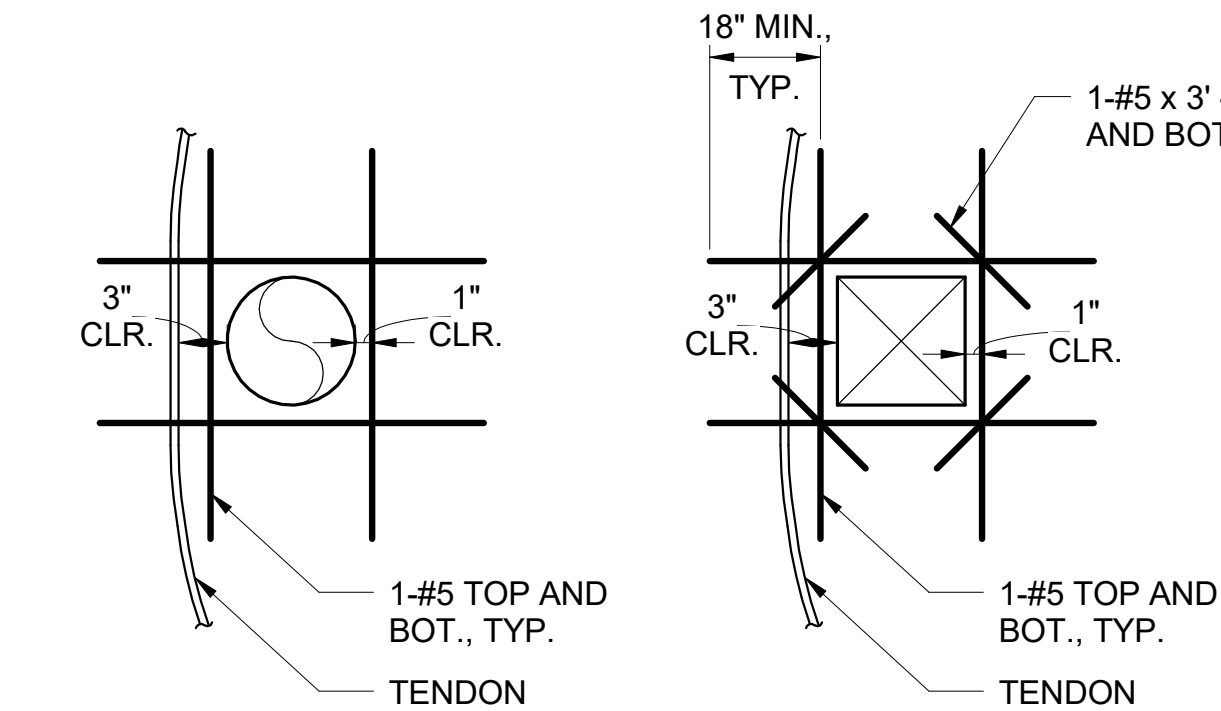
**4 ARRANGEMENT OF BARS IN SLAB**  
S008 SCALE: NTS



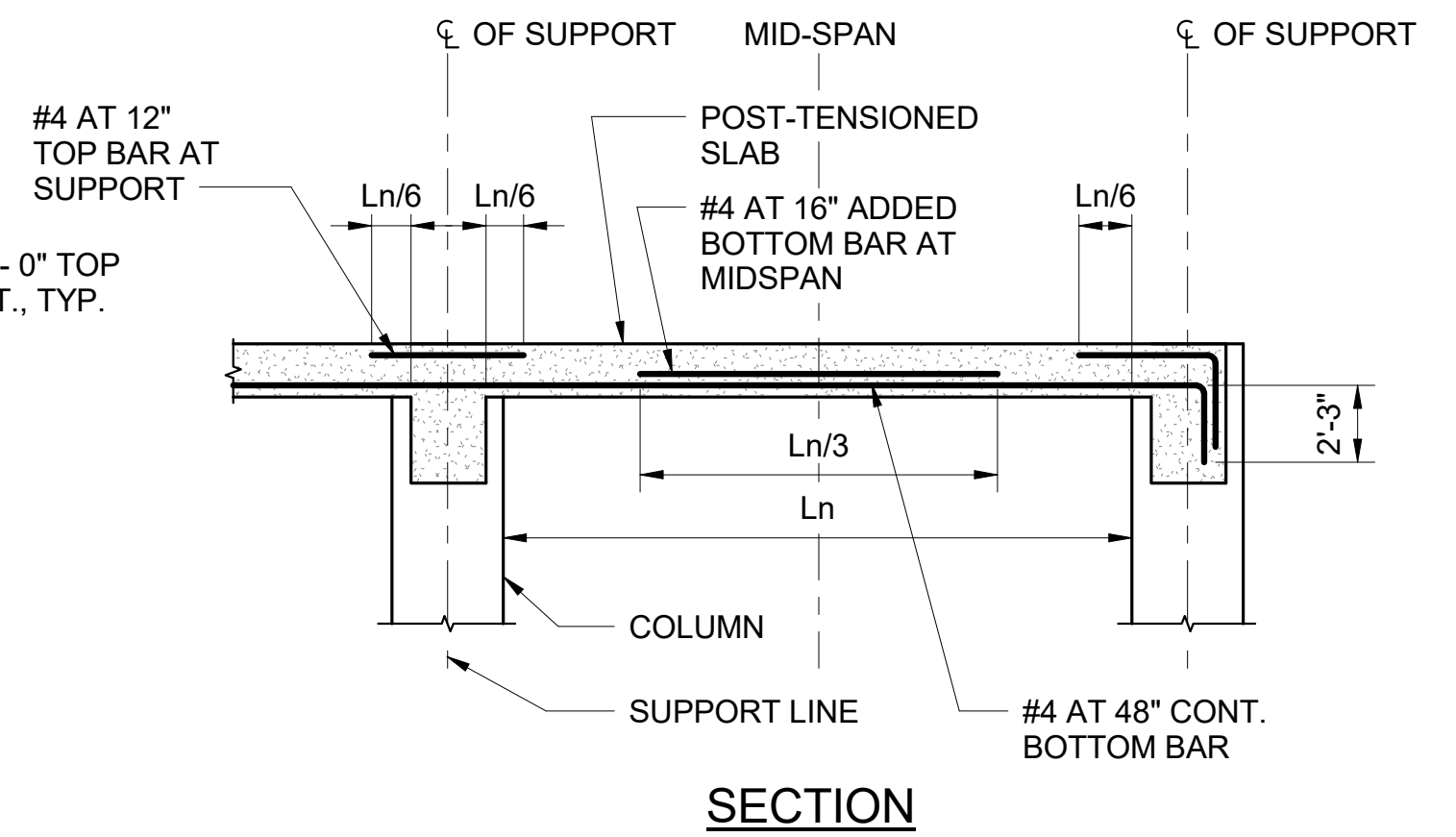
**5 TRIM BARS AT SUPPORTED SLAB CORNERS**  
S008 SCALE: NTS



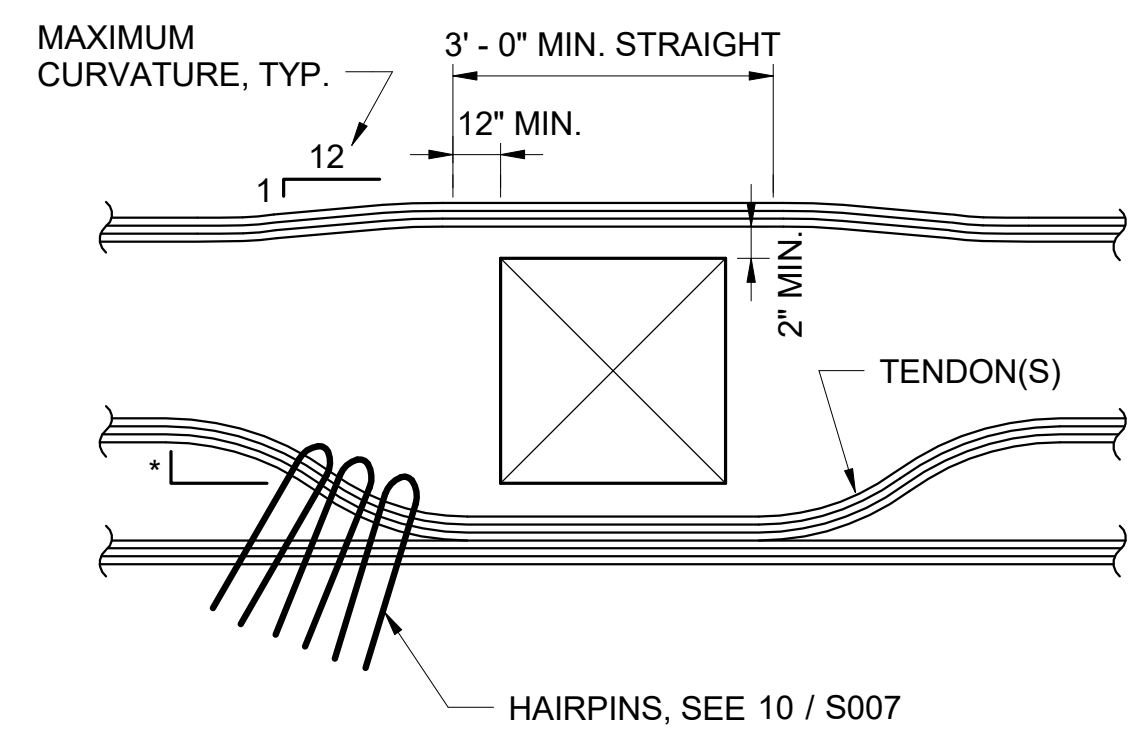
**6 TRIM BARS AT SLAB EDGES**  
S008 SCALE: 1" = 1'-0"



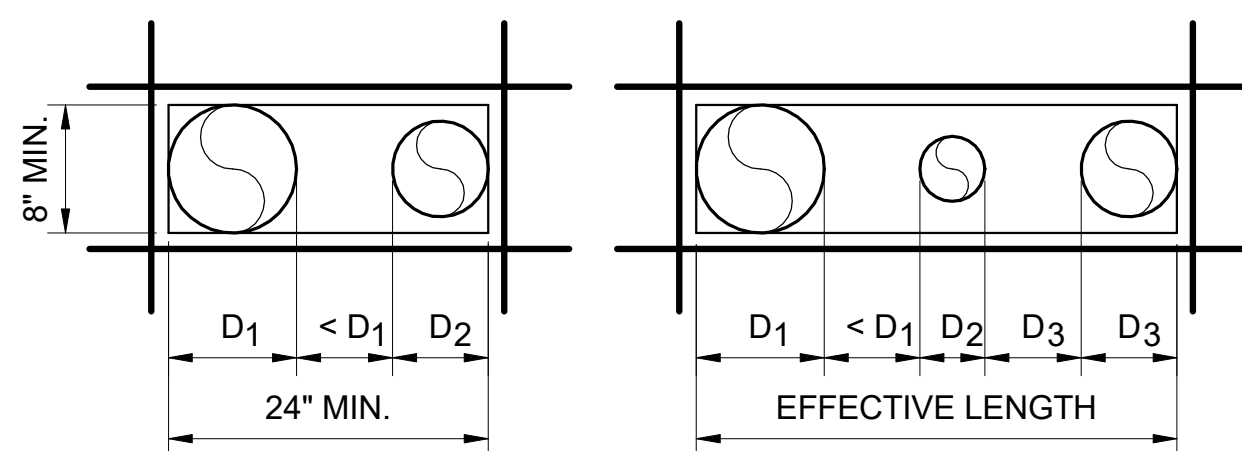
**7 TRIM BARS AT SMALL OPENING IN SLAB (10" TO 24")**  
S008 SCALE: NTS



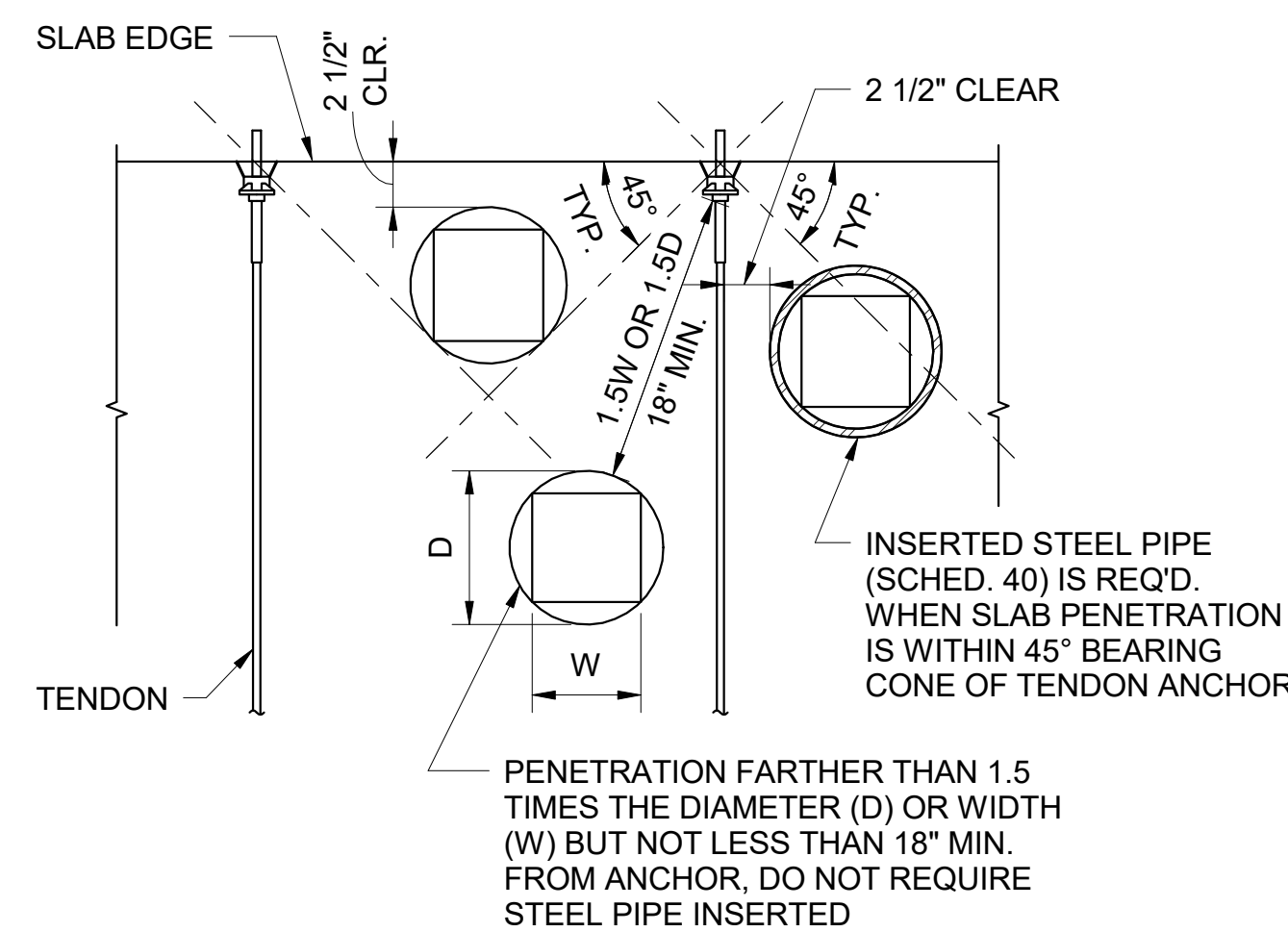
**8 ARRANGEMENT OF BARS IN SLAB**  
S008 SCALE: NTS



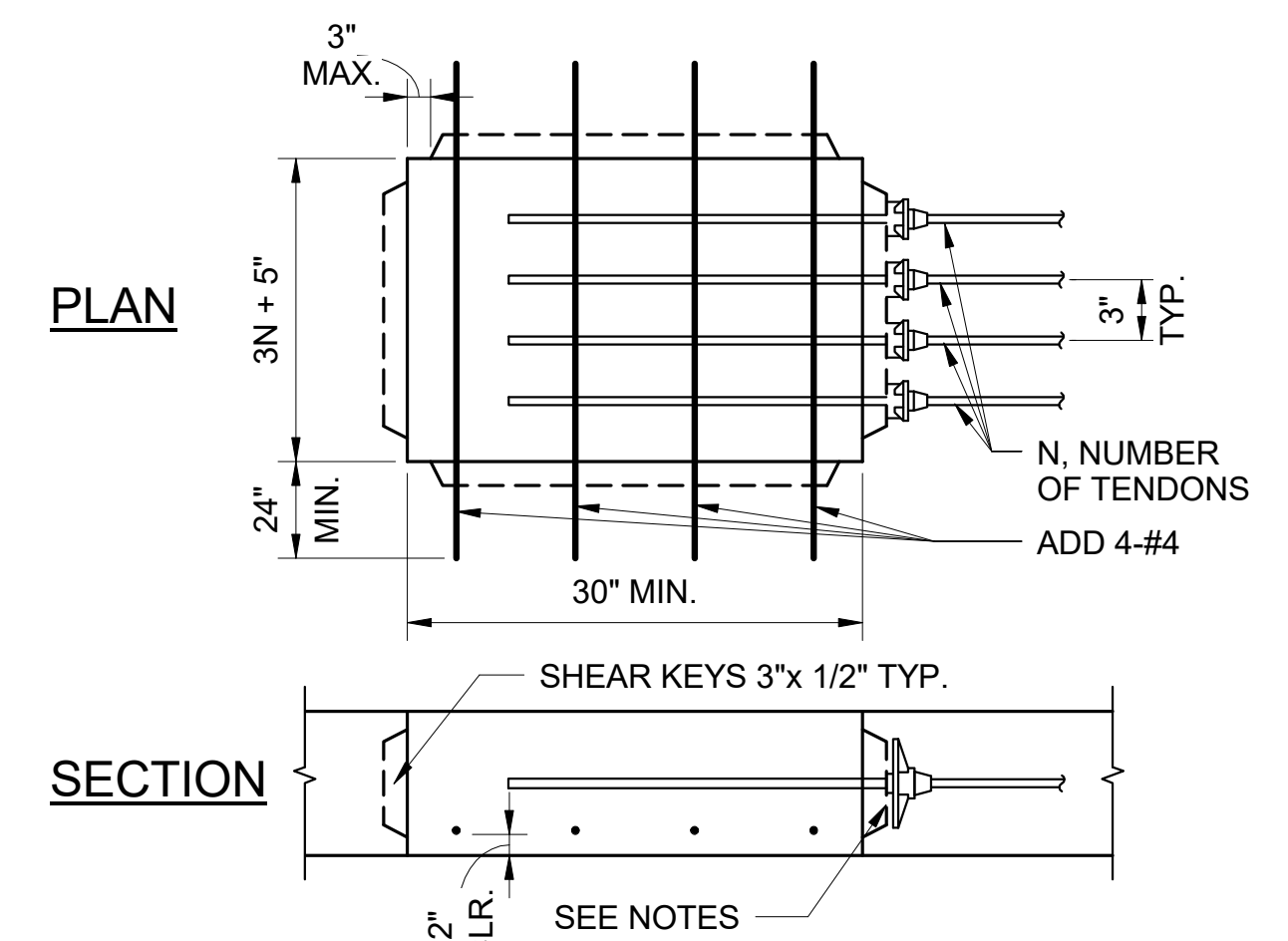
**9 TENDON PLACEMENT AT OPENING IN SLAB (>24")**  
S008 SCALE: NTS



**10 TRIM BARS FOR MULTIPLE SMALL OPENINGS**  
S008 SCALE: NTS



**11 OPENINGS AT PT ANCHORAGE**  
S008 SCALE: NTS



**12 STRESSING BLOCKOUT**  
S008 SCALE: NTS

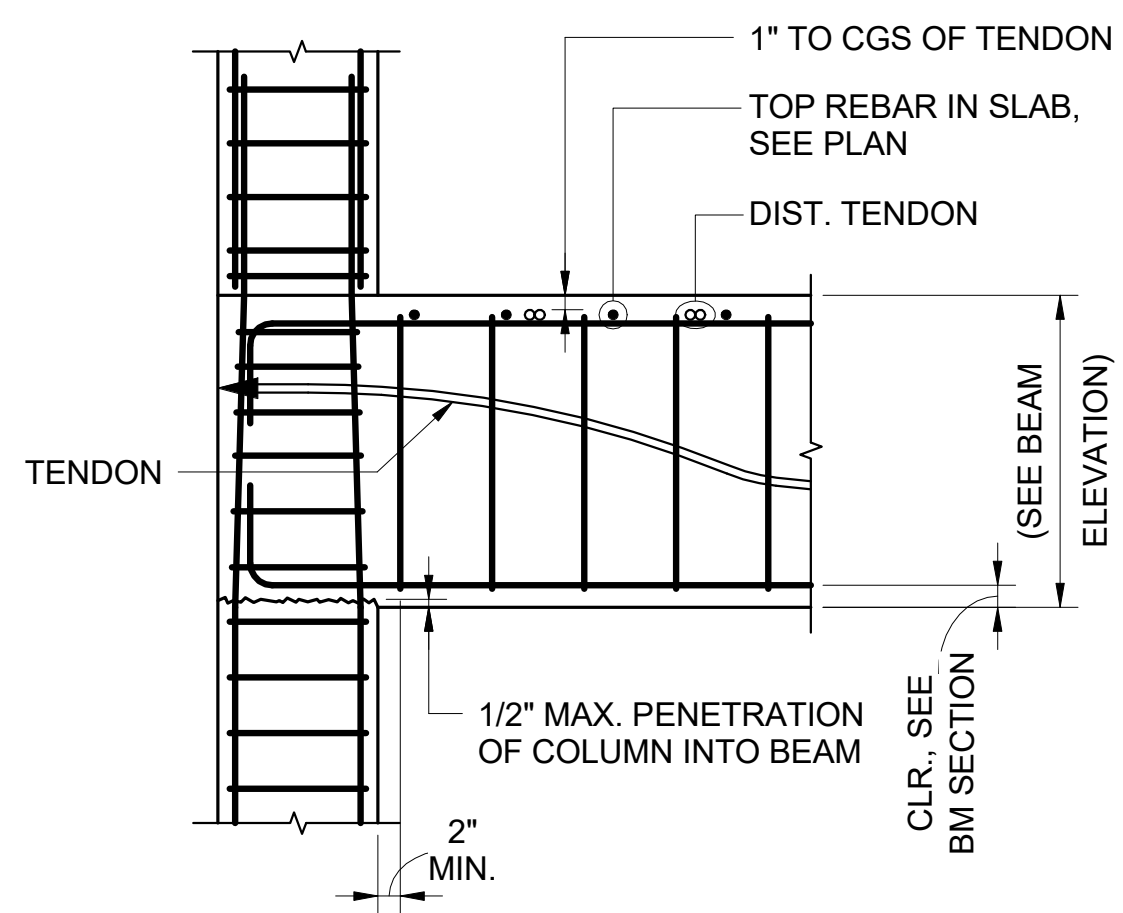
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SIGNATURE: [Signature]

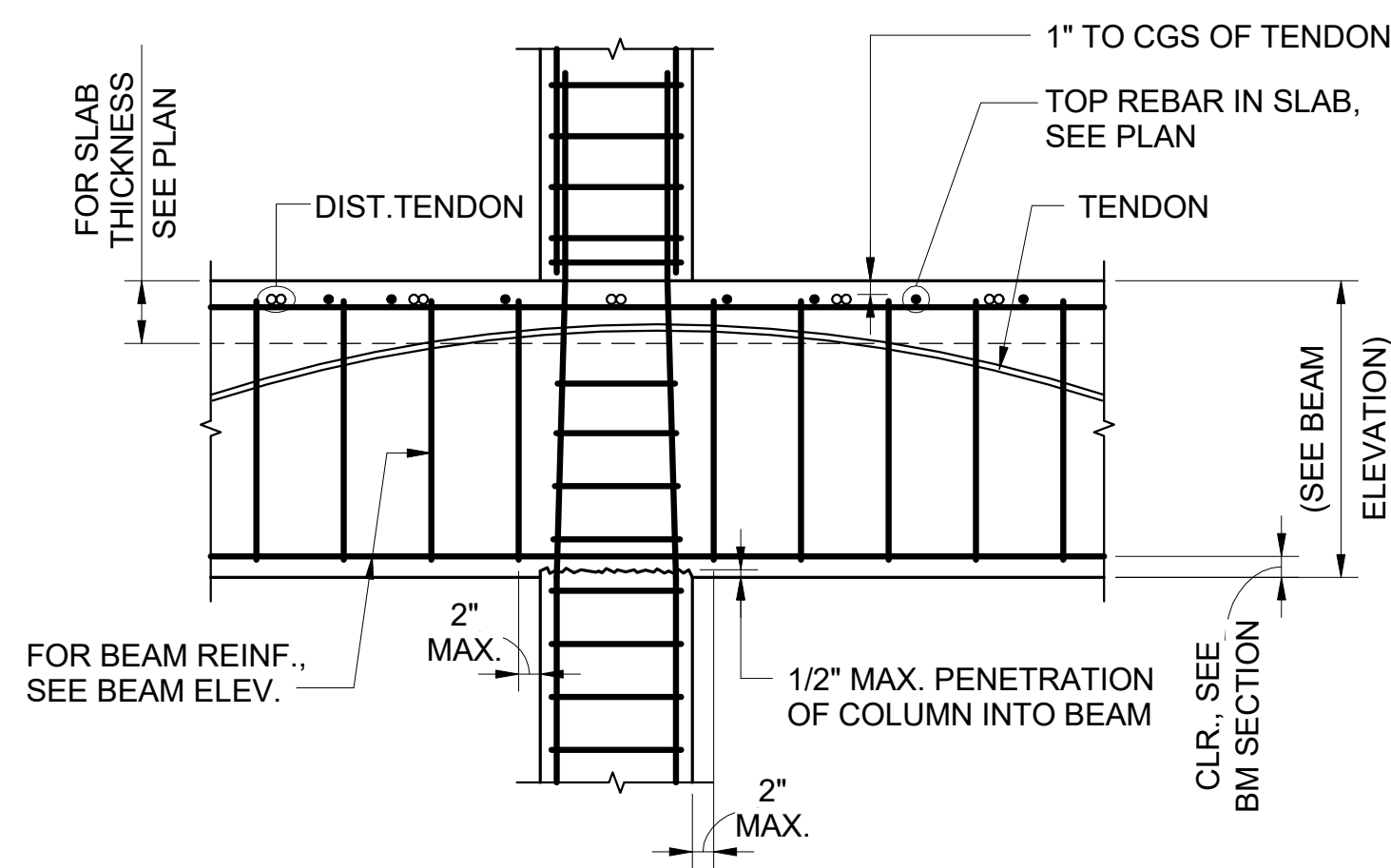
**WAILUKU CIVIC COMPLEX PHASE 1B**  
100% FINAL DESIGN  
[Signature]

PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	<b>1B</b>	<b>S008</b>	
		OF	SHEETS

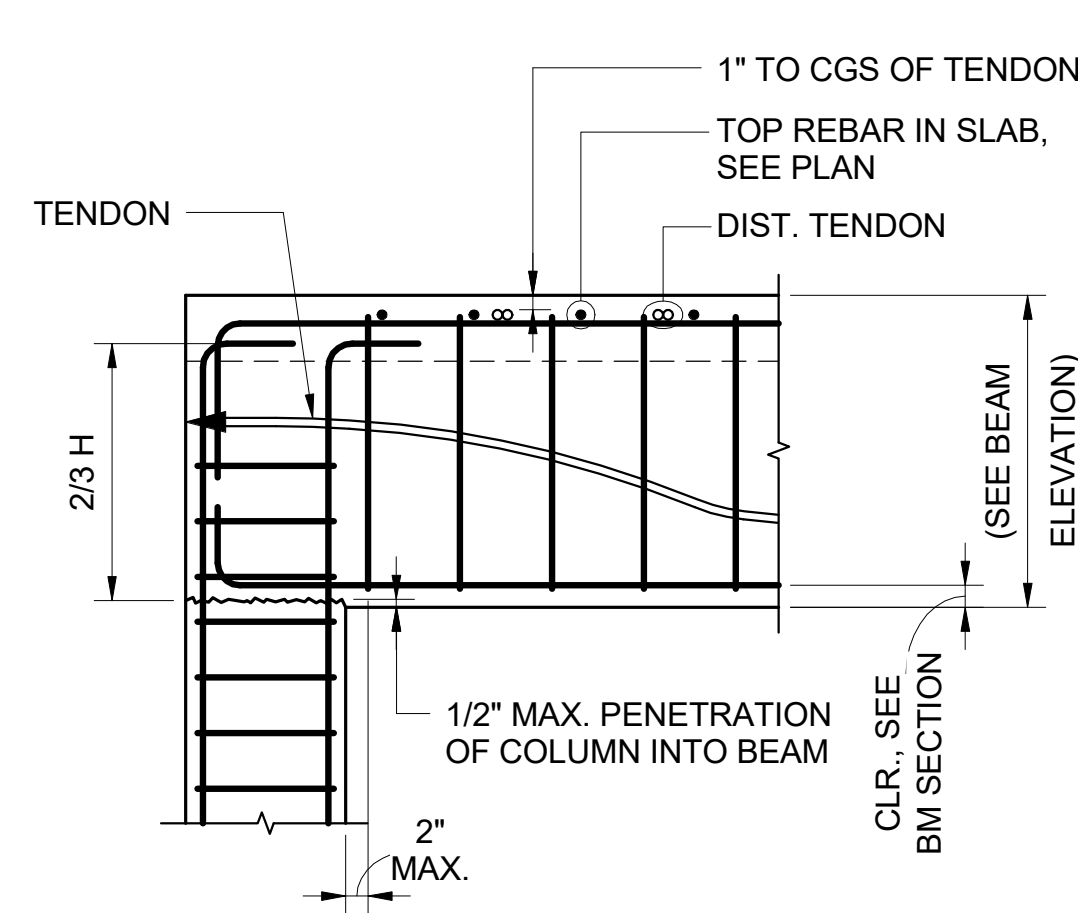




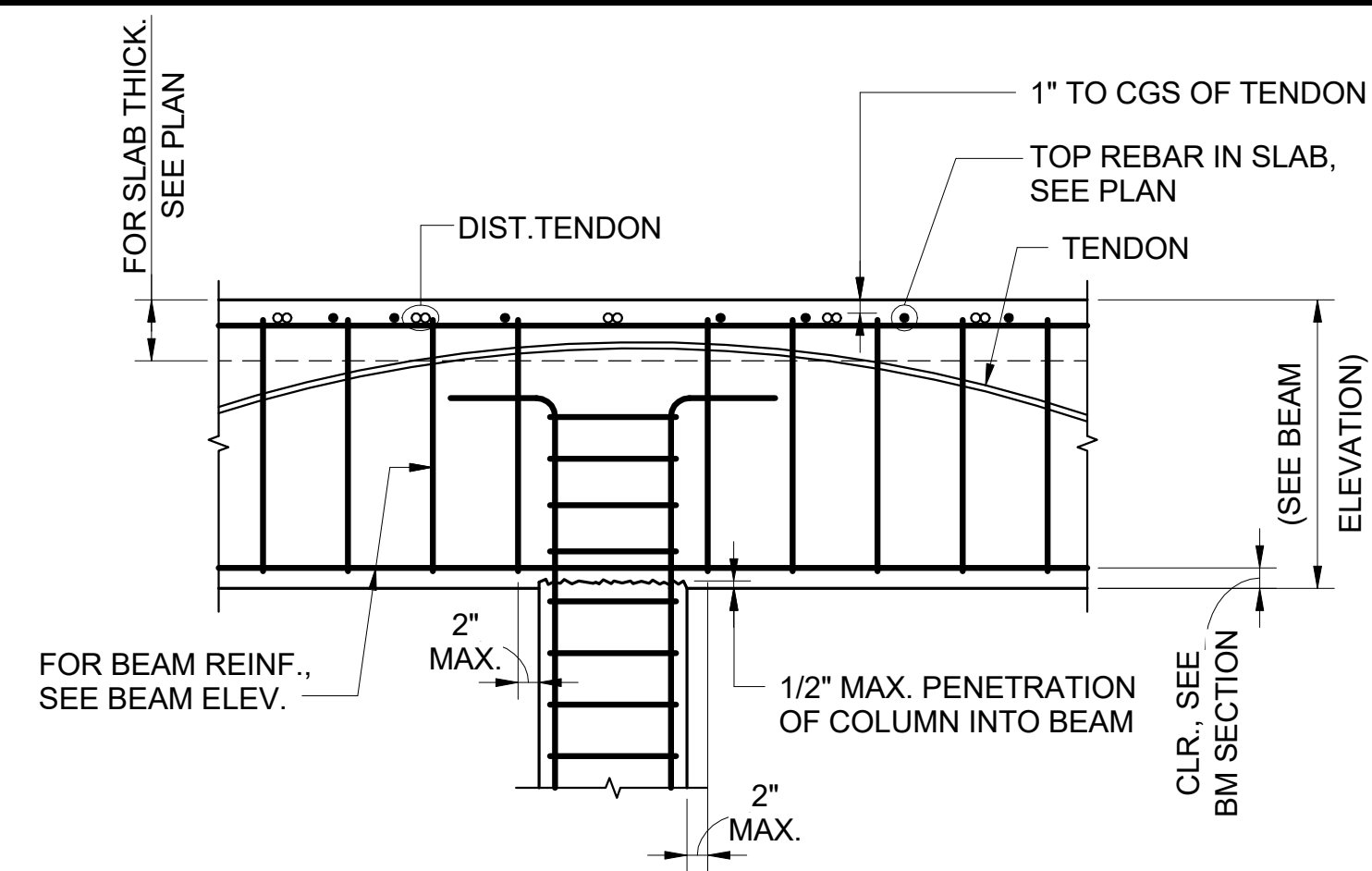
**1 EXTERIOR BEAM COLUMN CONN.**  
S009 SCALE: NTS



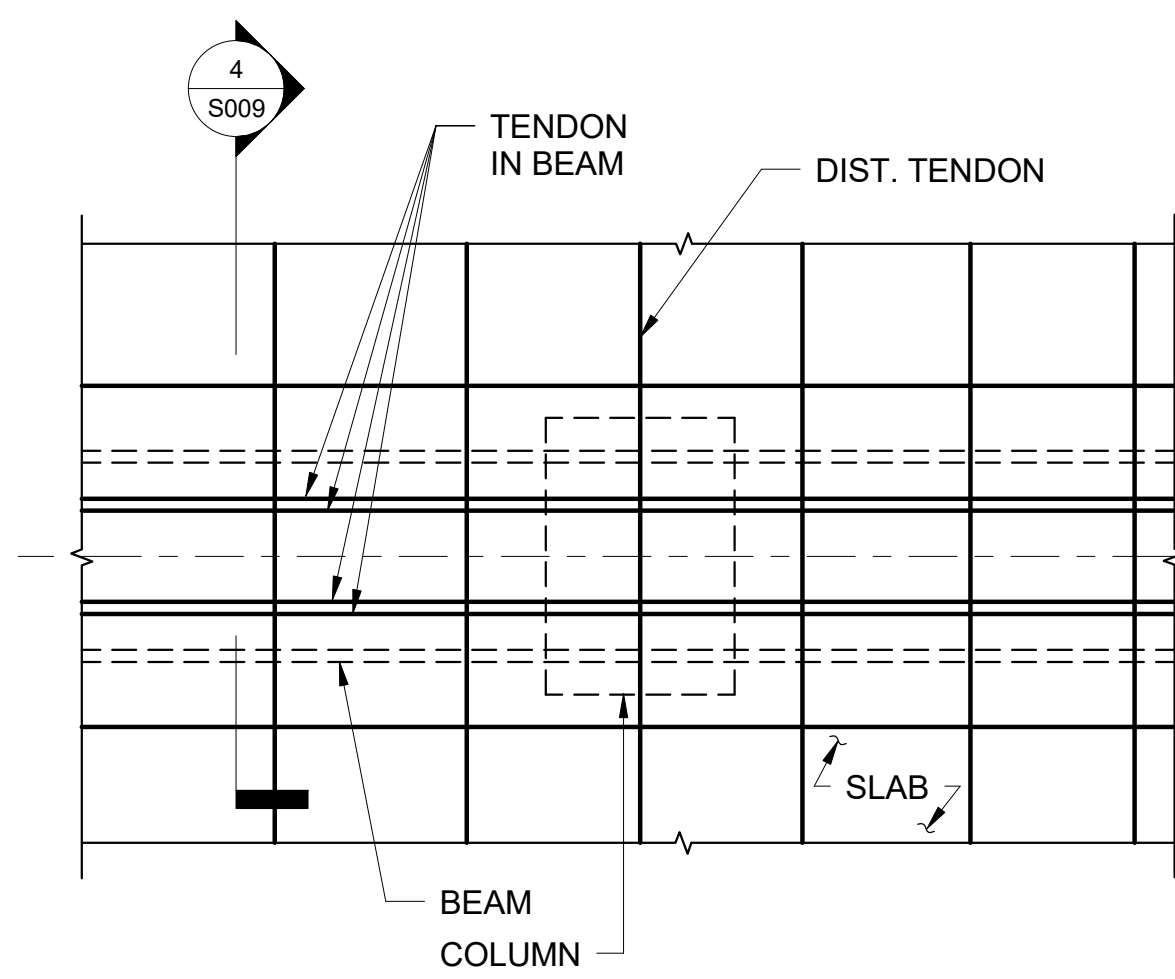
**2 TYP. COLUMN/BM SECTION**  
S009 SCALE: NTS



**3 TYP. BEAM/END COLUMN CONNECTION AT ROOF**  
S009 SCALE: NTS

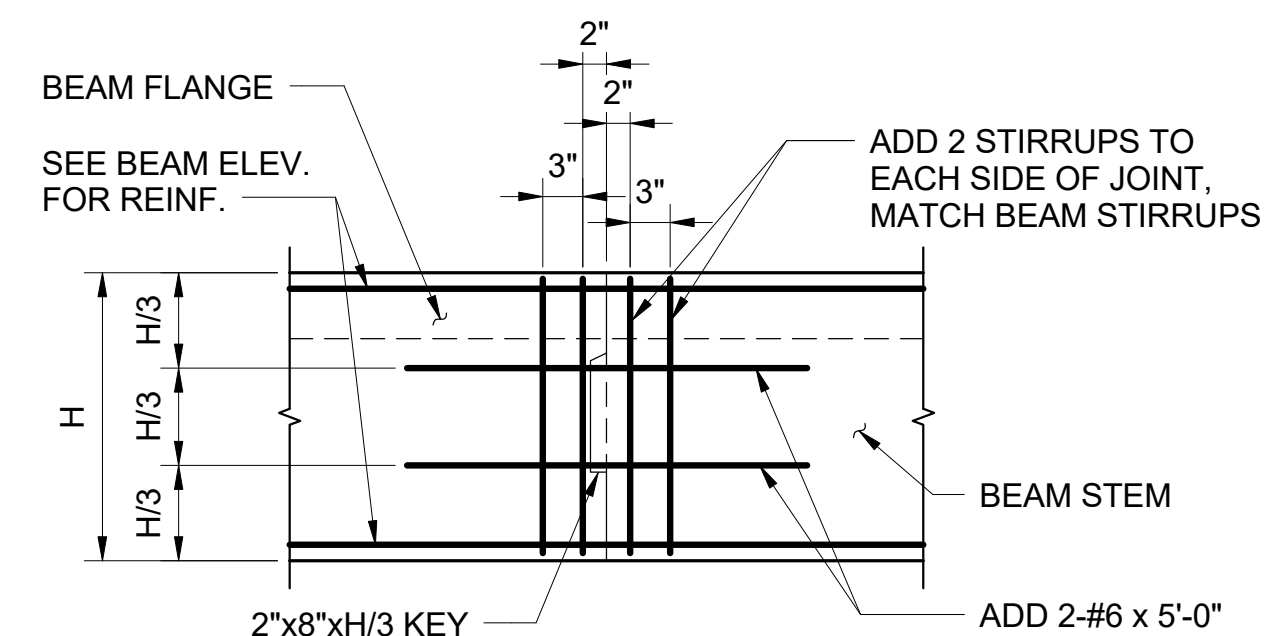


**4 TYP. FLOOR BEAM-COLUMN CONN.**  
S009 SCALE: NTS

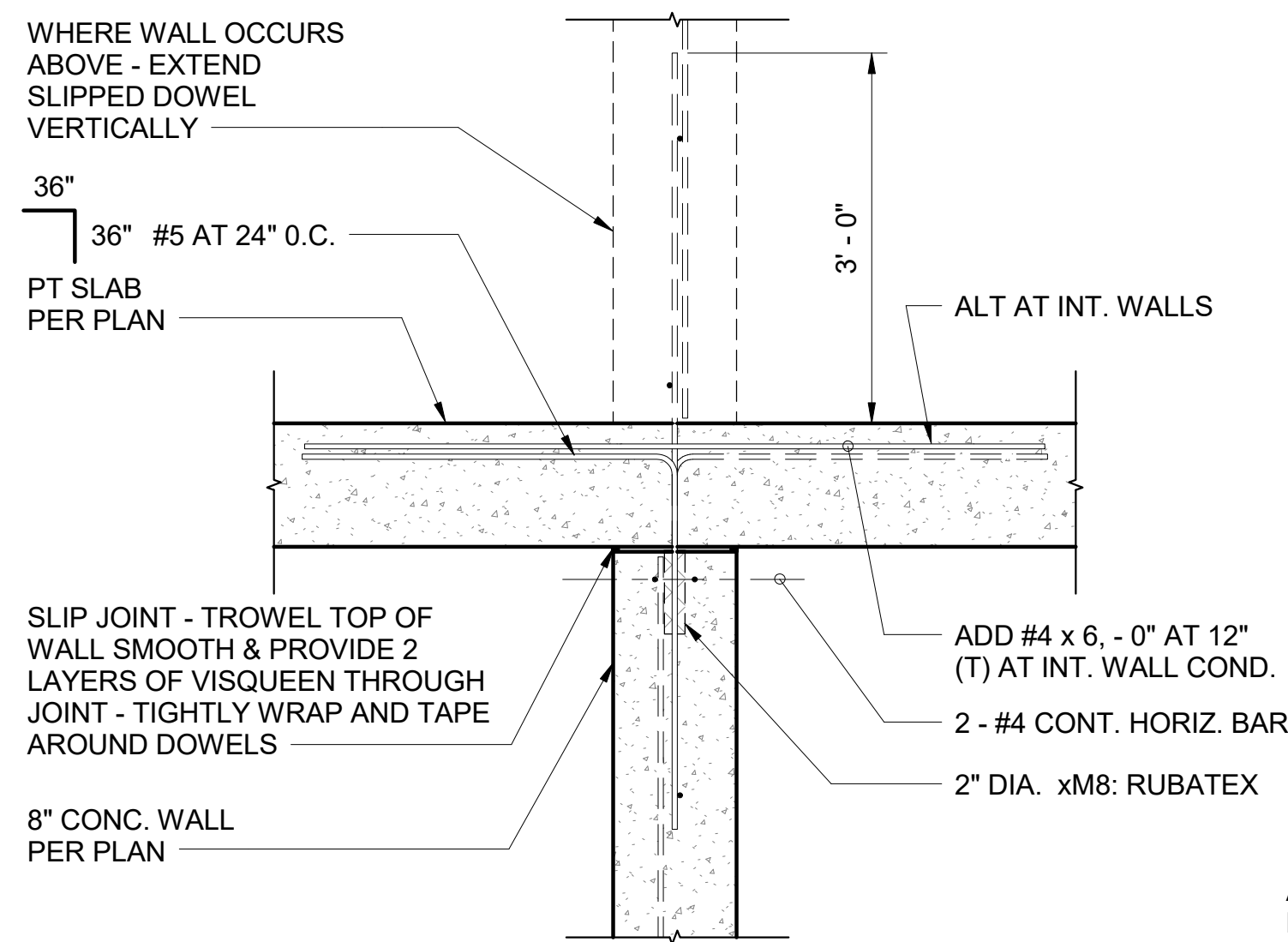


NOTES:  
FOR CLARITY, TOP REINFORCEMENT IN DISTRIBUTED NOT SHOWN, SEE PLANS.

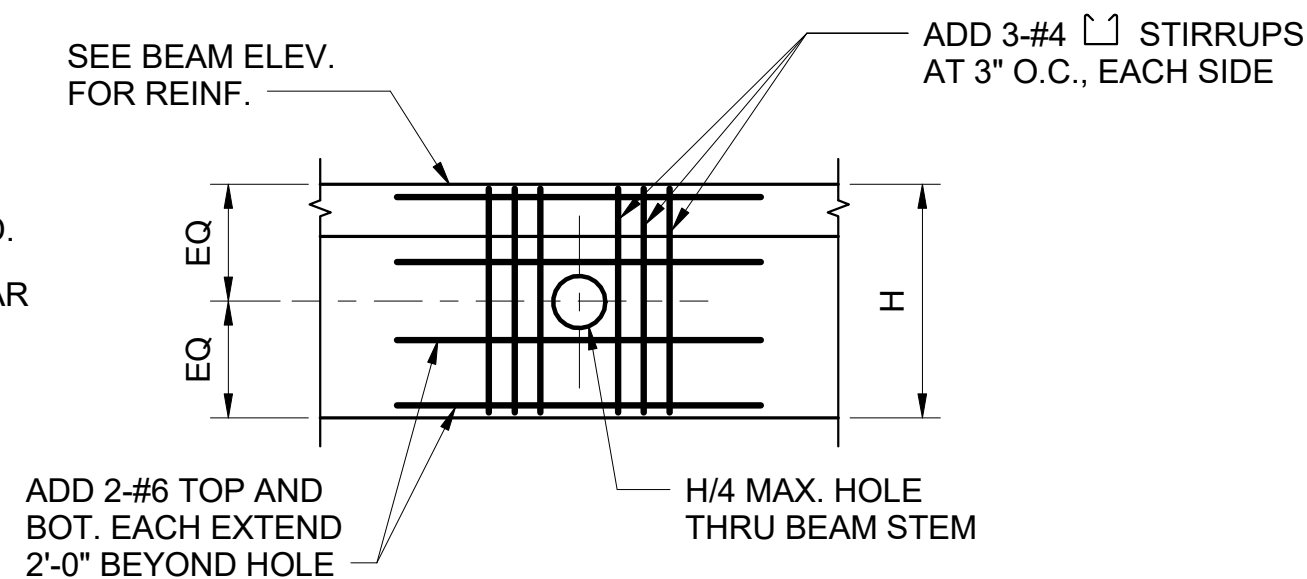
**5 PLAN VIEW OF INTERIOR COLUMN**  
S009 SCALE: NTS



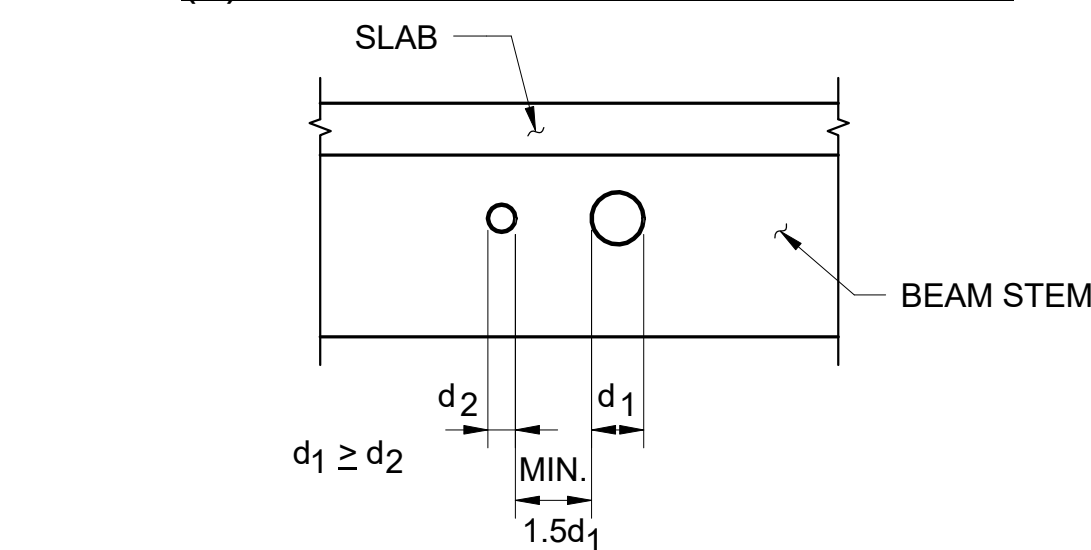
**6 BEAM CONSTRUCTION JOINT**  
S009 SCALE: NTS



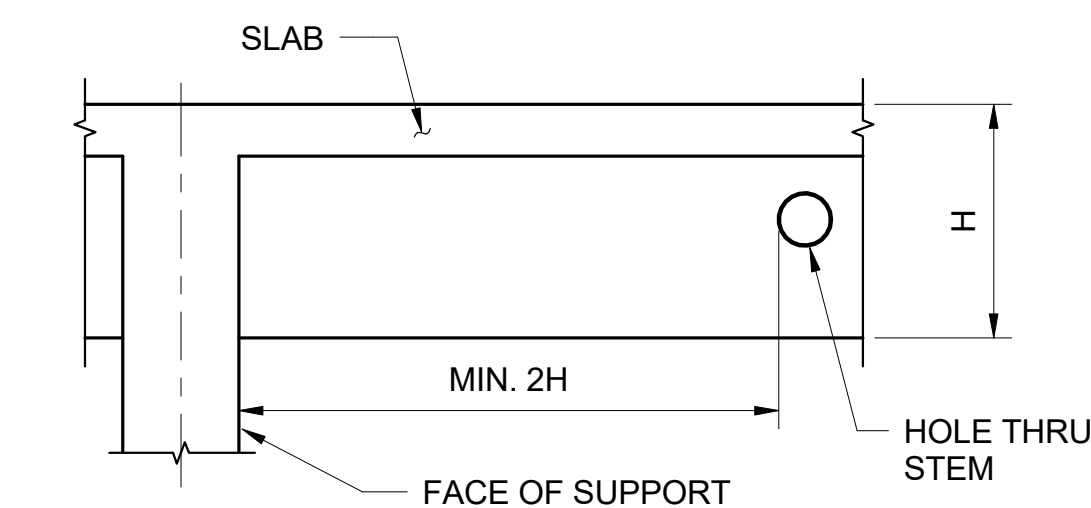
**7 TYP. CONC. WALL TO DECK DETAIL**  
S009 SCALE: 3/4" = 1'-0"



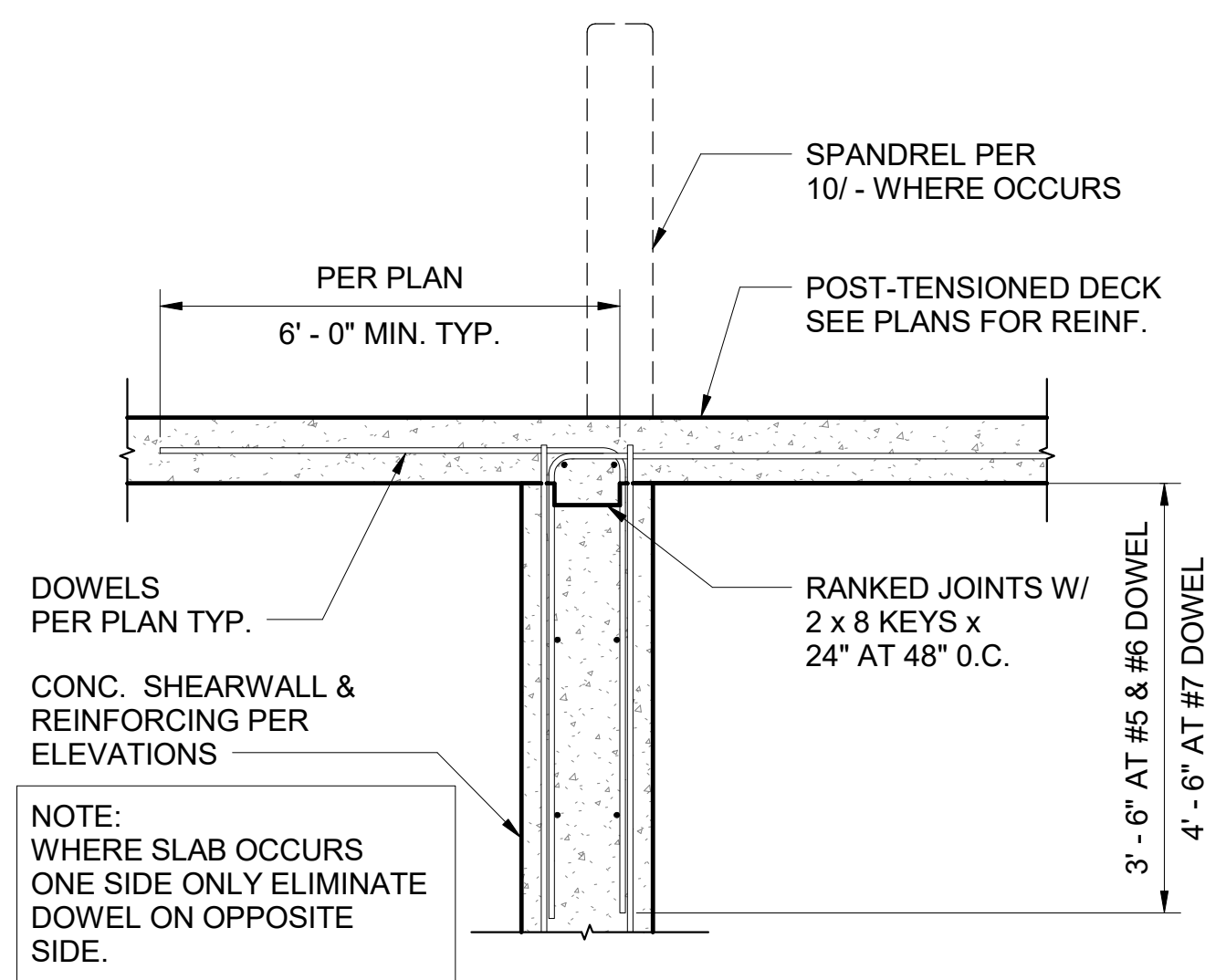
**(a) ADDED REBAR AROUND HOLES**



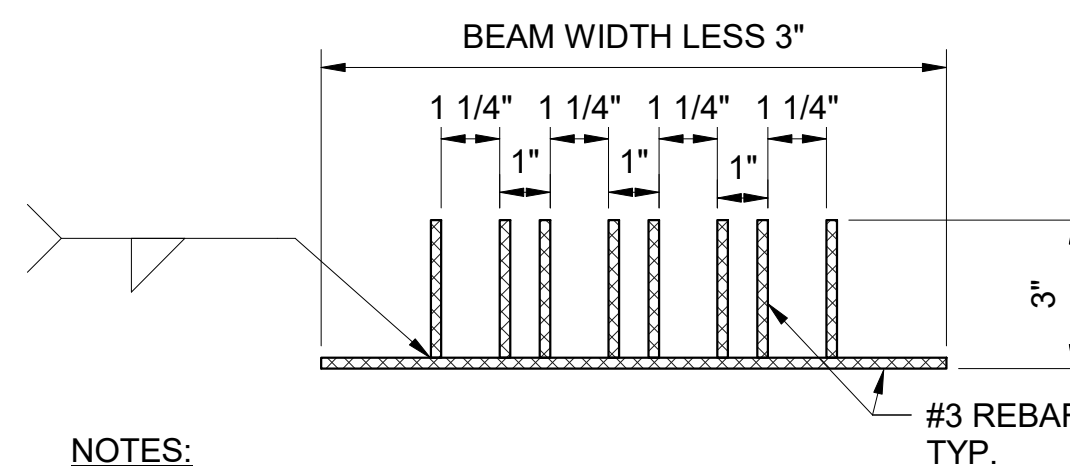
**(b) HOLES NEXT TO ONE ANOTHER**



**(c) HOLES NEXT TO SUPPORTS**

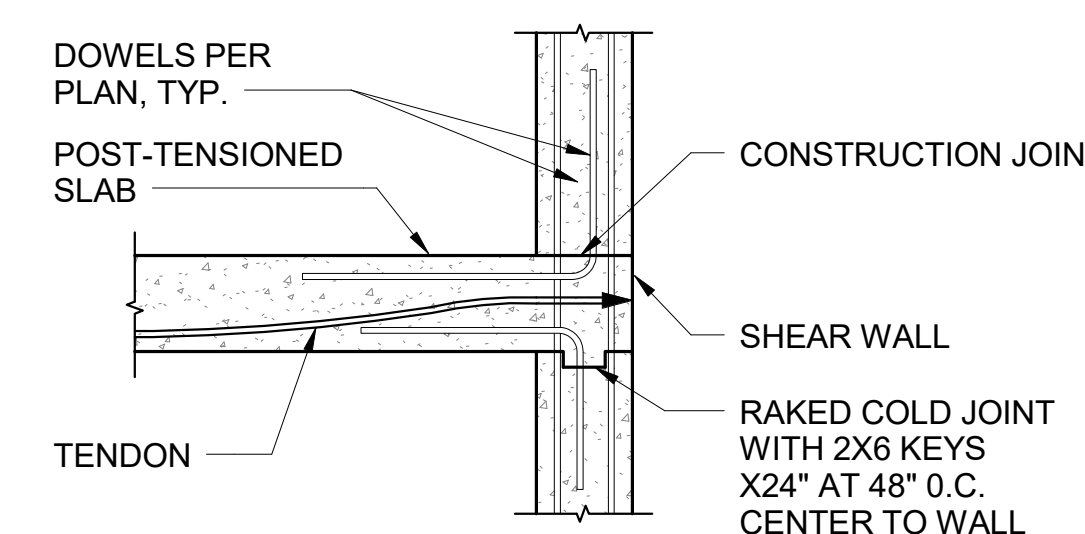


**8 SHEARWALL TO ROOF SLAB CONNECTION DETAIL**  
S009 SCALE: 3/4" = 1'-0"



NOTES:  
1. SUPPORT CHAIRS AT 42" O.C. MAX. SPACING IN BEAM WITH MORE THAN NINE (9) TENDONS.  
2. FILL SUPPORT CHAIR SLOTS UNIFORMLY WITH TENDONS.

**9 TENDON SUPPORT CHAIR**  
S009 SCALE: NTS



**10 TYP. SLAB TO SHEARWALL CONN.**  
S009 SCALE: NTS

**11 PENETRATION THRU BEAM STEM**  
S009 SCALE: NTS

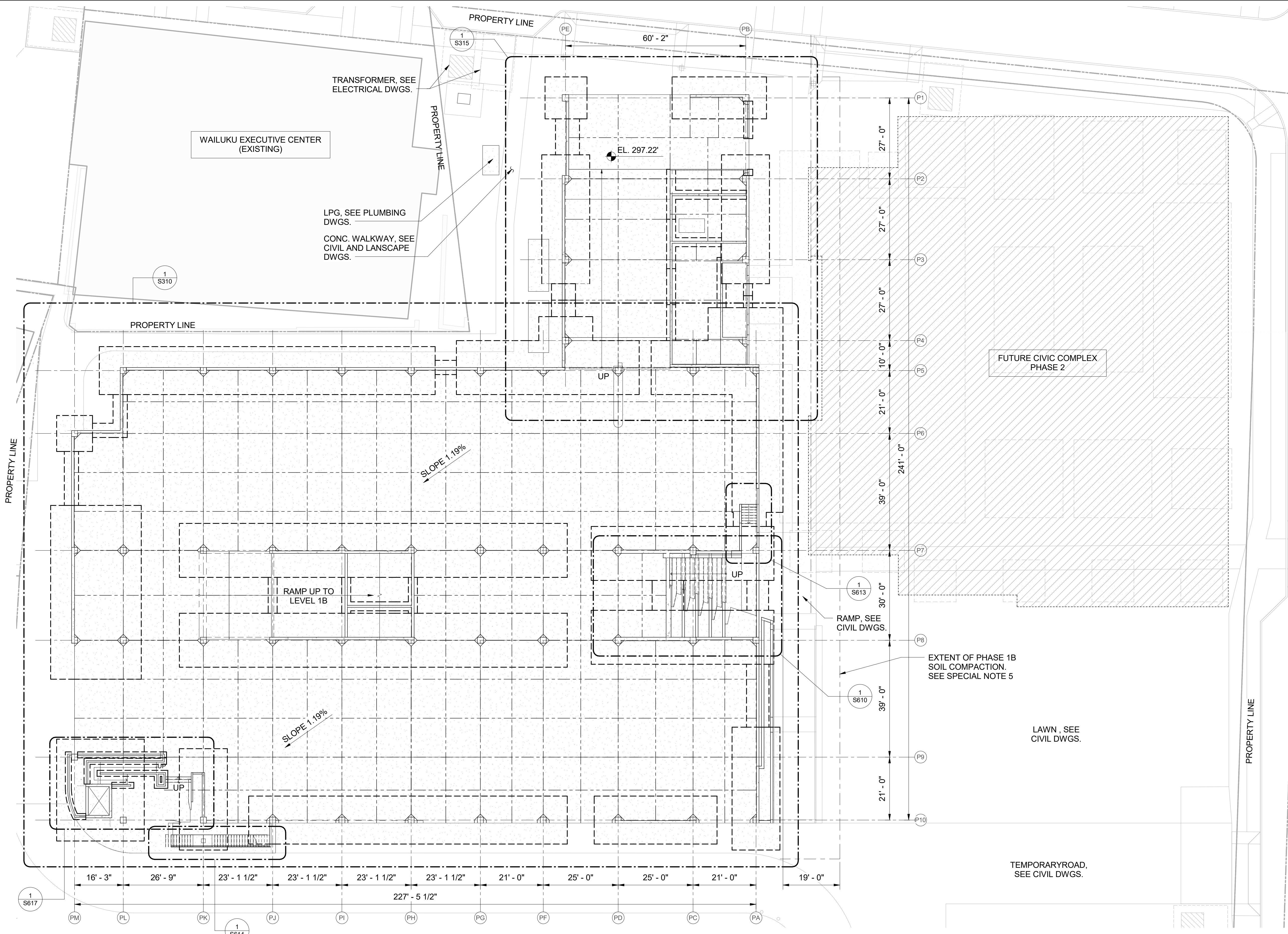
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**WAILUKU CIVIC COMPLEX PHASE 1B**  
100% FINAL DESIGN  
[PUVAVUJUPUVUJUP]

SHEET TITLE:  
**TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS**  
CADD FILE:

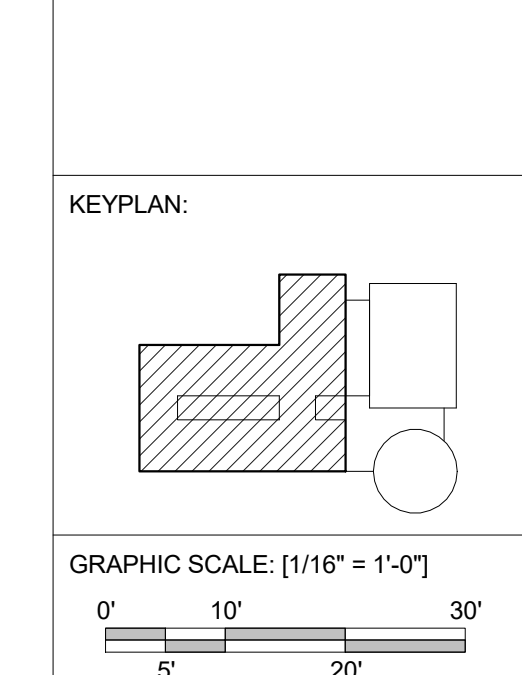
PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET		
	<b>1B</b>	<b>S009</b>	
		OF	
		SHEETS	



- SPECIAL NOTES:**
1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
  2. SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.
  3. THICKNESS OF GRADE SLAB SHOWN ARE MINIMUM AND SHALL BE MAINTAINED AT ALL SLOPED AND DEPRESSED PORTIONS.
  4. CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION OF ALL CONCRETE PADS WITH MECH/ELECT. DRAWINGS AND THE SIZE OF ACTUAL EQUIPMENT SUPPLIED.
  5. CONTRACTOR SHALL PERFORM SOIL COMPACTION TEST PRIOR TO CONSTRUCTION OF PHASE II FOUNDATION. SOIL COMPACTION SHALL EXTEND 20FT FROM EXTERIOR EDGE OF PF- 7 FOOTING.

- LEGEND:**
- CONCRETE COLUMN
  - ▬ CONCRETE SHEAR WALL
  - ▭ PHASE 2

- REFERENCE DRAWINGS:**
- S001 GENERAL NOTES
  - S002 GENERAL NOTES
  - S003 SPECIAL INSPECTION NOTES
  - S004 TYPICAL SLAB ON GRADE DETAILS
  - S005 TYPICAL CONCRETE WALL DETAILS
  - S310 PARKING GARAGE FOUNDATION PLAN
  - S315 PARKING GARAGE FOUNDATION PLAN & FLOOR FRAMING PLAN - LEVEL 2
  - S410 TYPICAL FOOTING SCHEDULE AND DETAILS
  - S411- FOOTING DETAILS
  - S421
  - S422 TYPICAL CONCRETE COLUMN DETAILS
  - S425- SHEARWALL PLANS, S426 SCHEDULE AND ELEVATIONS



**1** OVERALL FOUNDATION AND FRAMING PLAN - LEVEL 1A  
 S110 SCALE: 1/16" = 1'-0"

**PROJECT:** 2017-001

**REVISIONS:**

NO.	DATE	DESCRIPTION
1	7/25/2019	LC
2		
3		
4		
5		

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

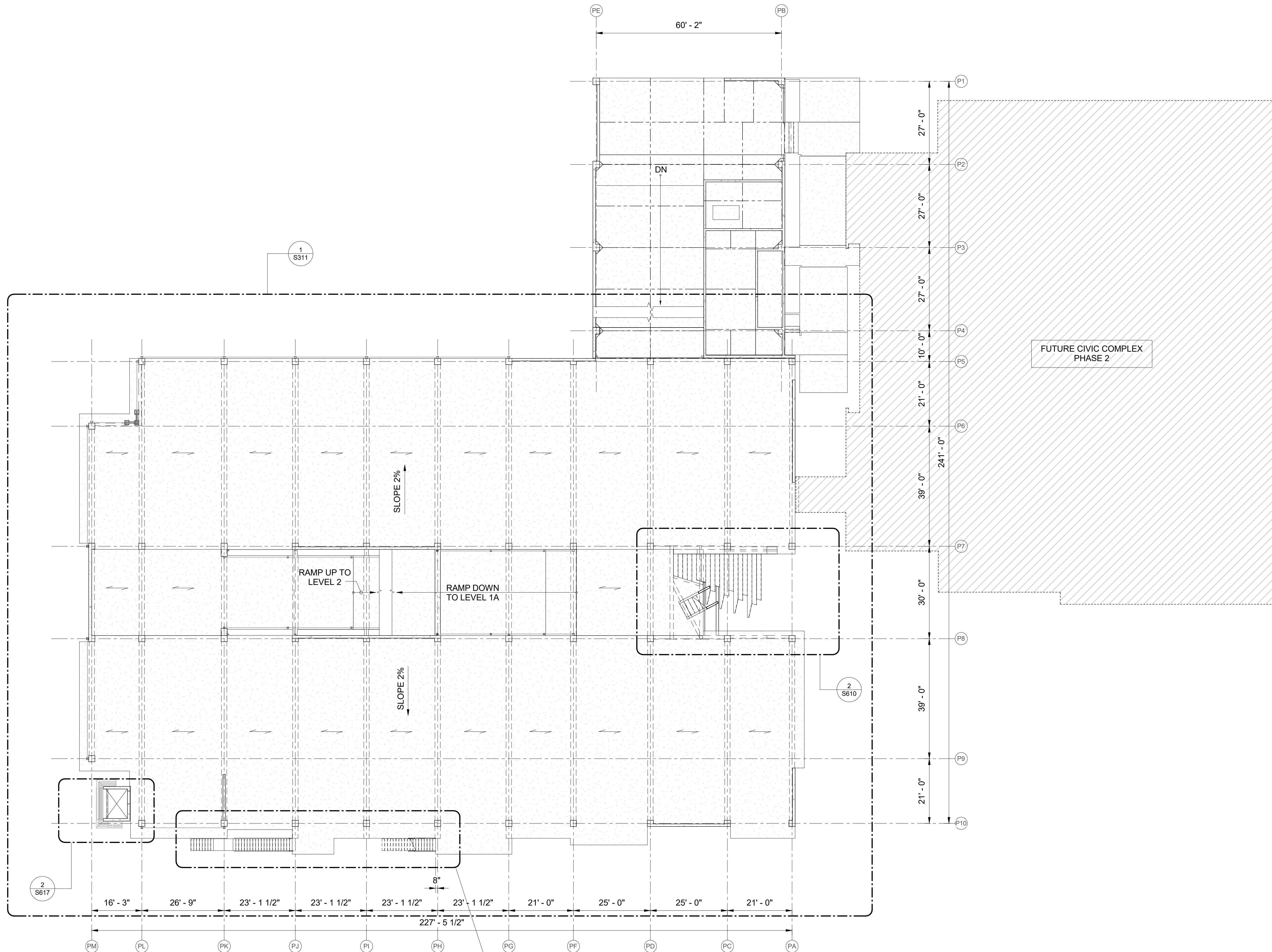
**WAILUKU CIVIC COMPLEX PHASE 1B**  
 100% FINAL DESIGN  
 PUYA... (signature)

**OVERALL FOUNDATION PLAN**

**1B S110**  
 SHEET OF SHEETS

**CADD FILE:**

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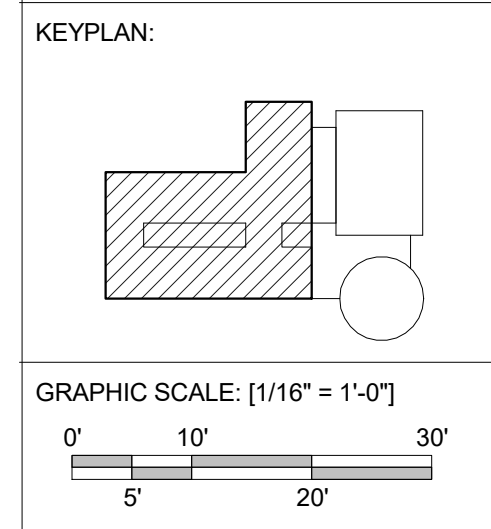


**1 OVERALL FLOOR FRAMING PLAN - LEVEL 1B**  
 SCALE: 1/16" = 1'-0"

- SPECIAL NOTES:**
1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
  2. SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.
  3. CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION OF ALL CONCRETE PADS WITH MECH/ELECT. DRAWINGS AND THE SIZE OF ACTUAL EQUIPMENT SUPPLIED.

- LEGEND:**
- CONCRETE COLUMN
  - ▬ CONCRETE SHEAR WALL
  - ▨ PHASE 2
  - ↔ SLAB SYMBOL

- REFERENCE DRAWINGS:**
- S001 GENERAL NOTES
  - S002 GENERAL NOTES
  - S005 TYPICAL CONCRETE WALL DETAILS
  - S007 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
  - S008 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
  - S009 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
  - S311 PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 1B
  - S422 TYPICAL CONCRETE COLUMN DETAILS
  - S423 TYPICAL CONCRETE SLAB DETAILS AND SCHEDULE
  - S424 TYPICAL CONCRETE BEAM DETAILS
  - S425-SHEARWALL PLANS, S426 SCHEDULE AND ELEVATIONS
  - S427- POST TENSIONED
  - S442 BEAM PROFILES



<p><b>PROJECT:</b> 2017-001</p> <p><b>REVISIONS:</b></p> <table border="1"> <tr> <th>NO.</th> <th>DESCRIPTION</th> </tr> <tr> <td>1</td> <td>LC</td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>3</td> <td></td> </tr> <tr> <td>4</td> <td></td> </tr> <tr> <td>5</td> <td></td> </tr> </table>		NO.	DESCRIPTION	1	LC	2		3		4		5		<p><b>DATE:</b> 7/25/2019</p>	
		NO.	DESCRIPTION												
1	LC														
2															
3															
4															
5															
<p><b>DRAWN:</b> LC</p>		<p><b>PHASE:</b> 1B</p>													
<p><b>SHEET:</b> S111</p>		<p><b>OF SHEETS:</b> 11</p>													
<p><b>PROJECT:</b> 2017-001</p>		<p><b>REVISIONS:</b></p>													
<p><b>DRAWN:</b> LC</p>		<p><b>DATE:</b> 7/25/2019</p>													
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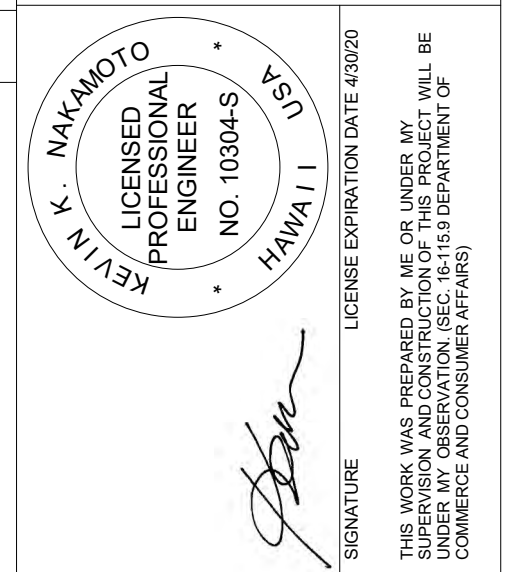
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**CADD FILE:** [FILE PATH]

**100% FINAL DESIGN**

**FERRARO CHOI**

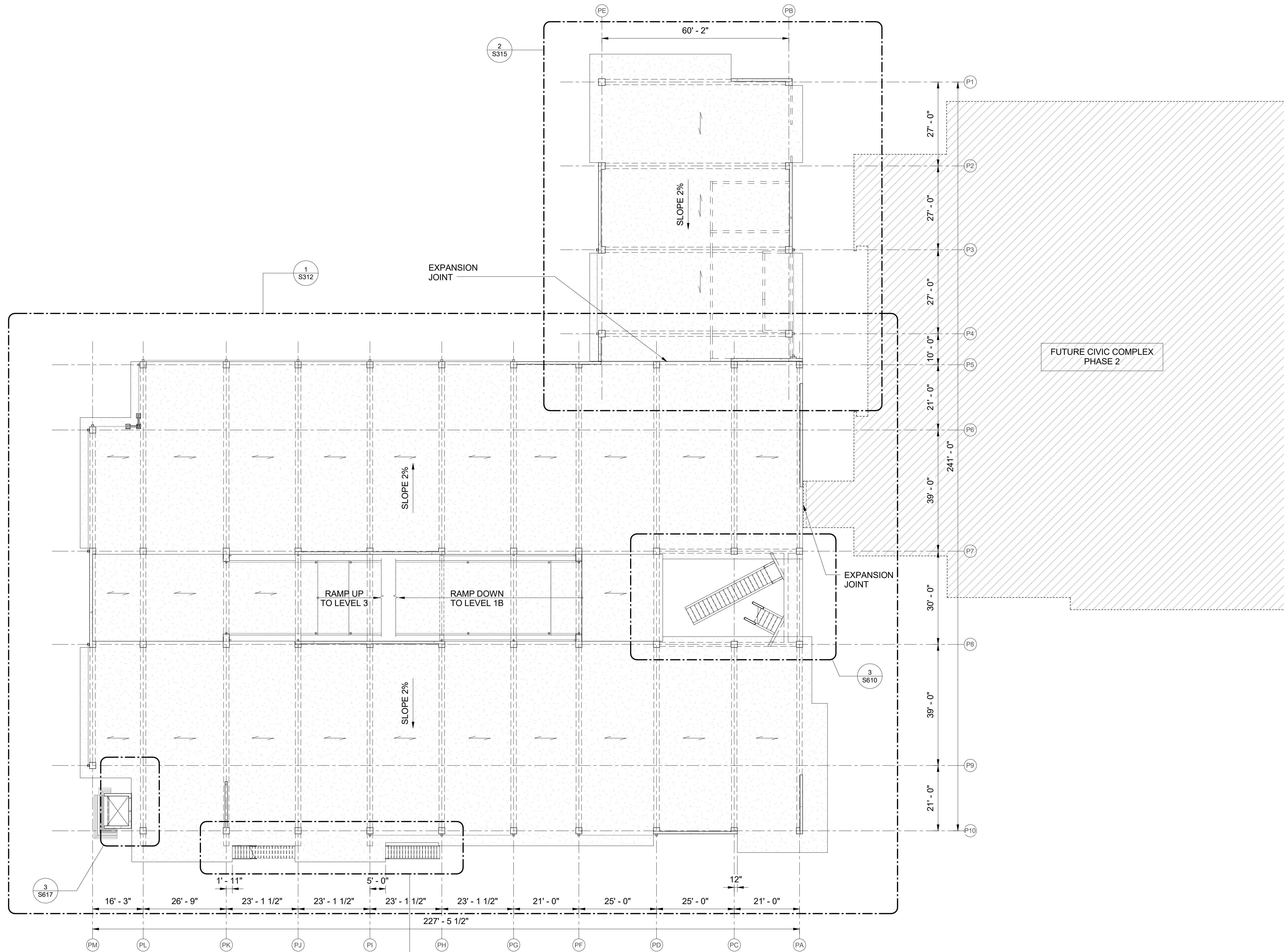
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**WAILUKU CIVIC COMPLEX PHASE 1B**

**100% FINAL DESIGN**



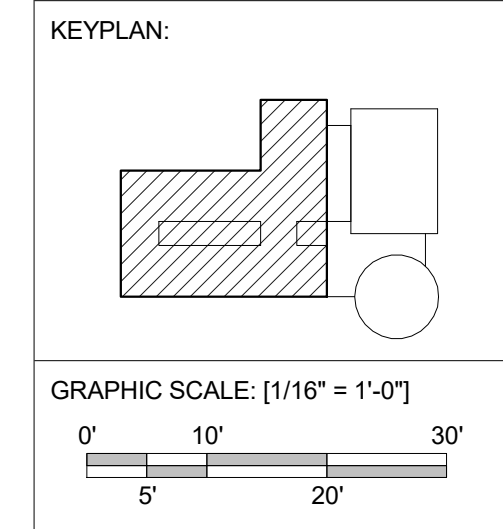


**1** OVERALL FLOOR FRAMING PLAN - LEVEL 2  
 S112 SCALE: 1/16" = 1'-0"

- SPECIAL NOTES:**
1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
  2. SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.
  3. CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION OF ALL CONCRETE PADS WITH MECH/ELECT. DRAWINGS AND THE SIZE OF ACTUAL EQUIPMENT SUPPLIED.

- LEGEND:**
- CONCRETE COLUMN
  - ▬ CONCRETE SHEAR WALL
  - ▨ PHASE 2
  - ↗ SLAB SYMBOL

- REFERENCE DRAWINGS:**
- S001 GENERAL NOTES
  - S002 GENERAL NOTES
  - S005 TYPICAL CONCRETE WALL DETAILS
  - S007 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
  - S008 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
  - S009 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
  - S312 PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 2
  - S422 TYPICAL CONCRETE COLUMN DETAILS
  - S423 TYPICAL CONCRETE SLAB DETAILS AND SCHEDULE
  - S424 TYPICAL CONCRETE BEAM DETAILS
  - S425 - SHEARWALL PLANS, SCHEDULE AND ELEVATIONS
  - S427- POST TENSIONED BEAM PROFILES



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**OVERALL FLOOR FRAMING PLAN - LEVEL 2**

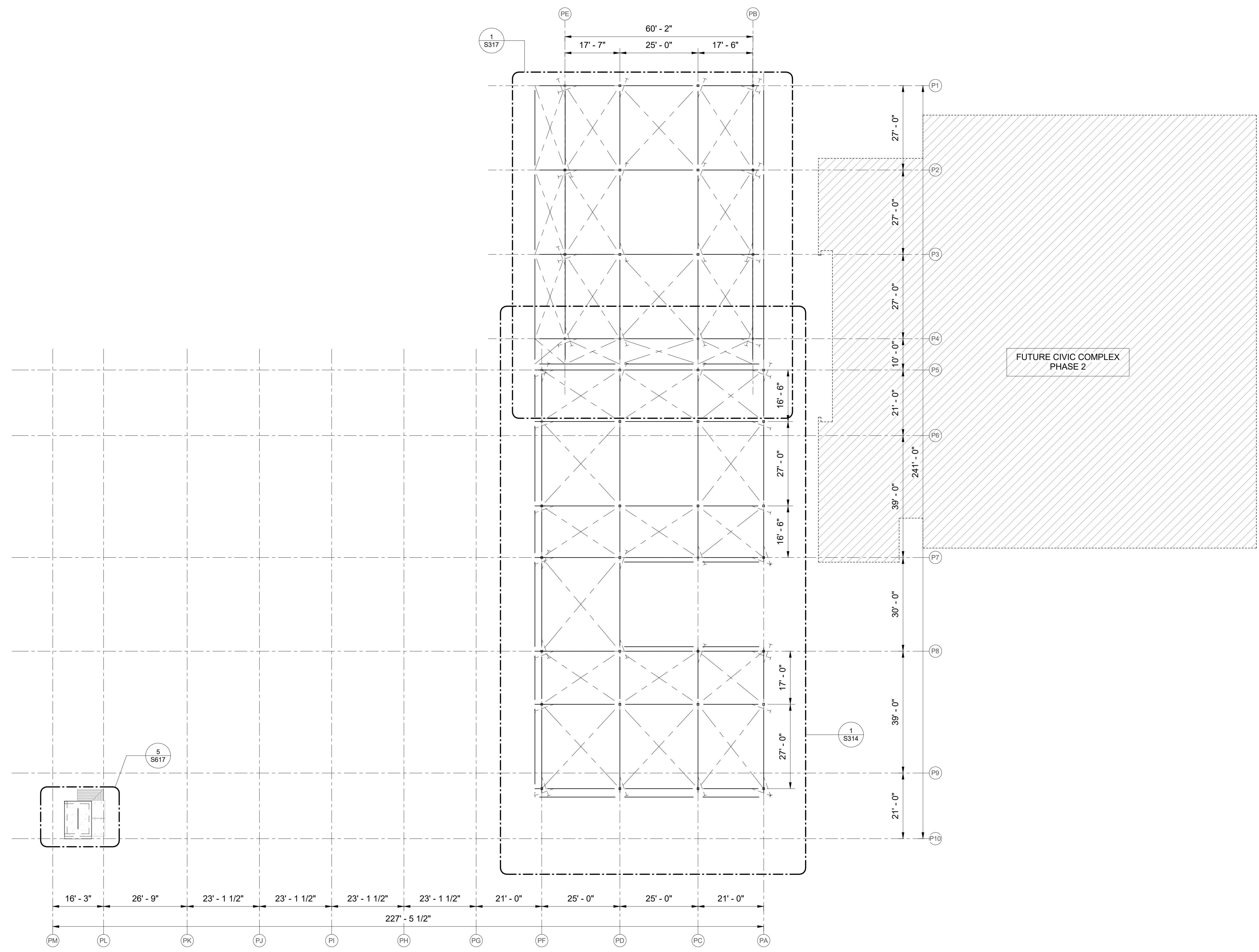
**1B S112**  
 SHEET OF SHEETS

**PROJECT:** 2017-001  
**DRAWN:** LC  
**DATE:** 7/25/2019  
**REVISIONS:**


**CADD FILE:**



**1** OVERALL FLOOR FRAMING PLAN - LEVEL 4  
 S114 SCALE: 1/16" = 1'-0"



- SPECIAL NOTES:**
1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
  2. SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.
  3. CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION OF ALL CONCRETE PADS WITH MECH/ELECT. DRAWINGS AND THE SIZE OF ACTUAL EQUIPMENT SUPPLIED.

- LEGEND:**
- CONCRETE COLUMN
  - ▬ CONCRETE SHEAR WALL
  - ▨ PHASE 2

**REFERENCE DRAWINGS:**

- S001 GENERAL NOTES
- S002 GENERAL NOTES
- S005 TYPICAL CONCRETE WALL DETAILS
- S006 TYPICAL STEEL CONNECTION DETAILS
- S314 PARKING GARAGE FLOOR FRAMING PLAN - ROOF LEVEL
- S316 PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 3 & ROOF LEVEL
- S422 TYPICAL CONCRETE COLUMN DETAILS
- S423 TYPICAL CONCRETE SLAB DETAILS AND SCHEDULE

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

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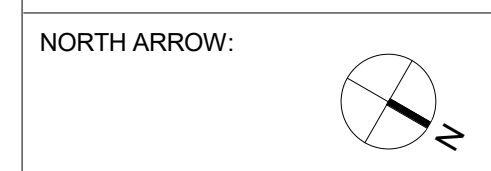
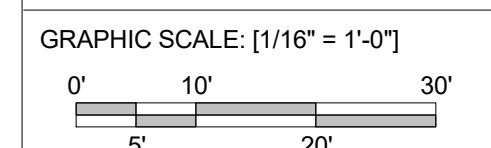
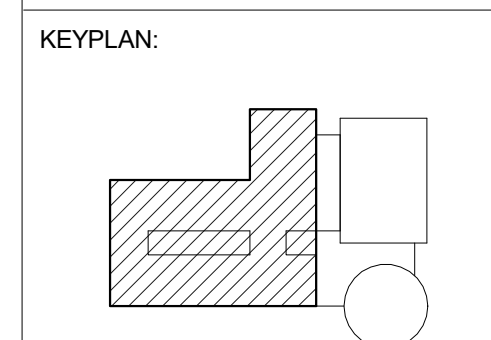
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**WAILUKU CIVIC COMPLEX PHASE 1B**  
 100% FINAL DESIGN  
 [PUV/80/10/UP/UV/10/0P]

**OVERALL ROOF FRAMING PLAN - ROOF LEVEL**

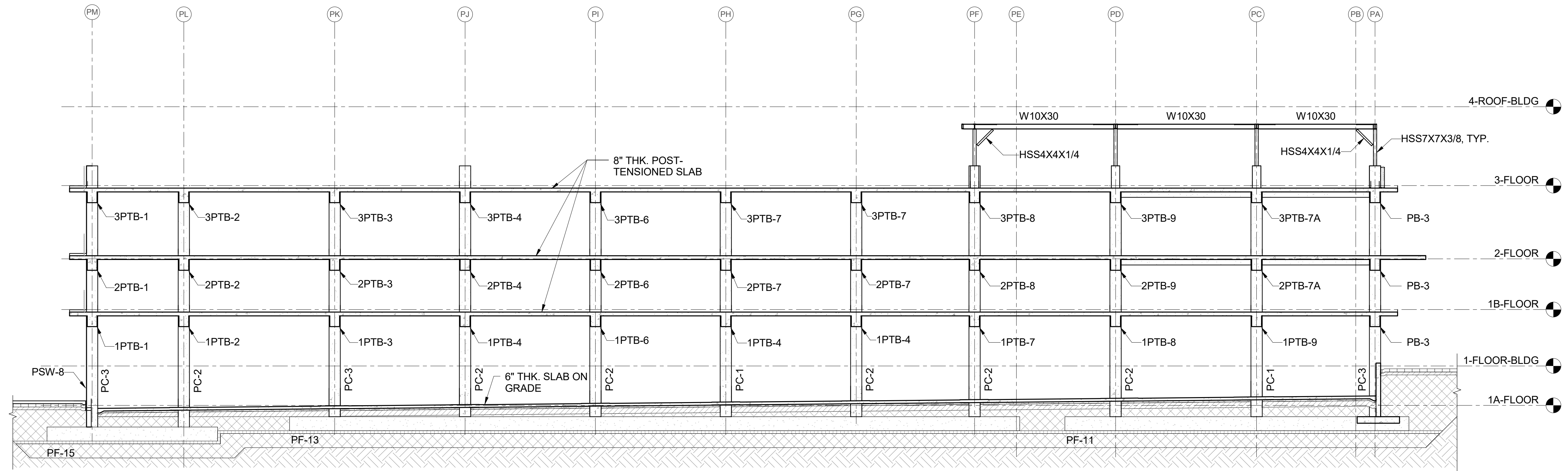
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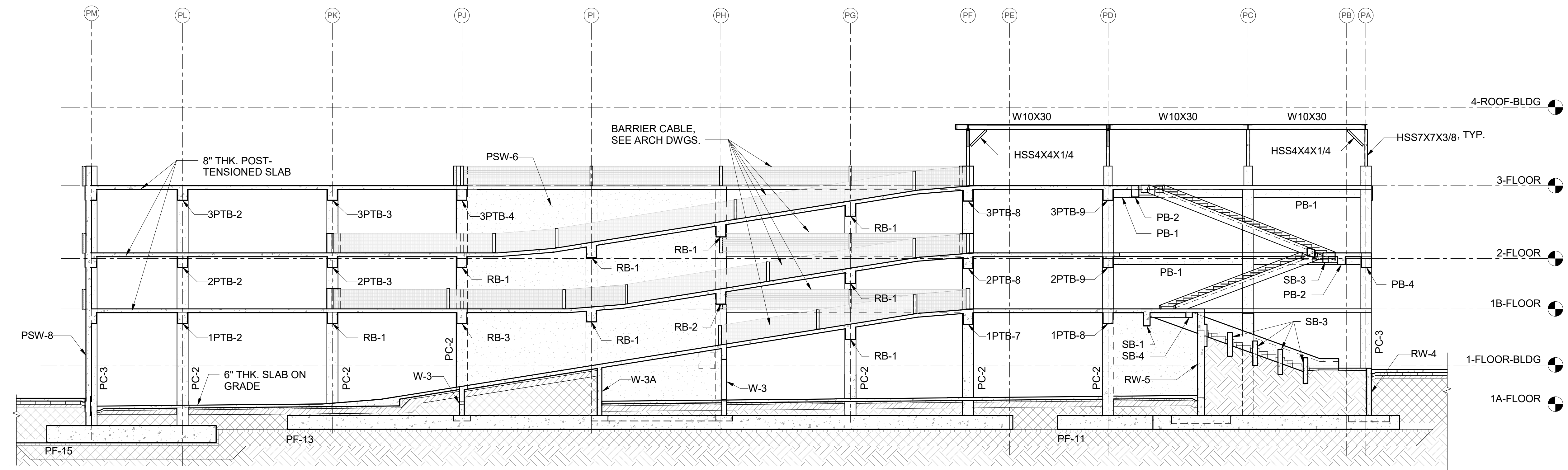


PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET	OF	SHEETS
1B	S114		





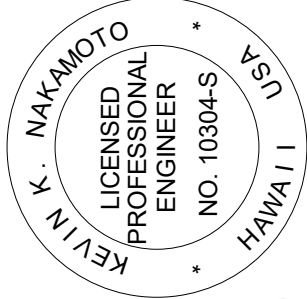
**1 BUILDING SECTION**  
 S210 SCALE: 3/32" = 1'-0"



**2 BUILDING SECTION**  
 S210 SCALE: 3/32" = 1'-0"



**FERRARO CHOI**

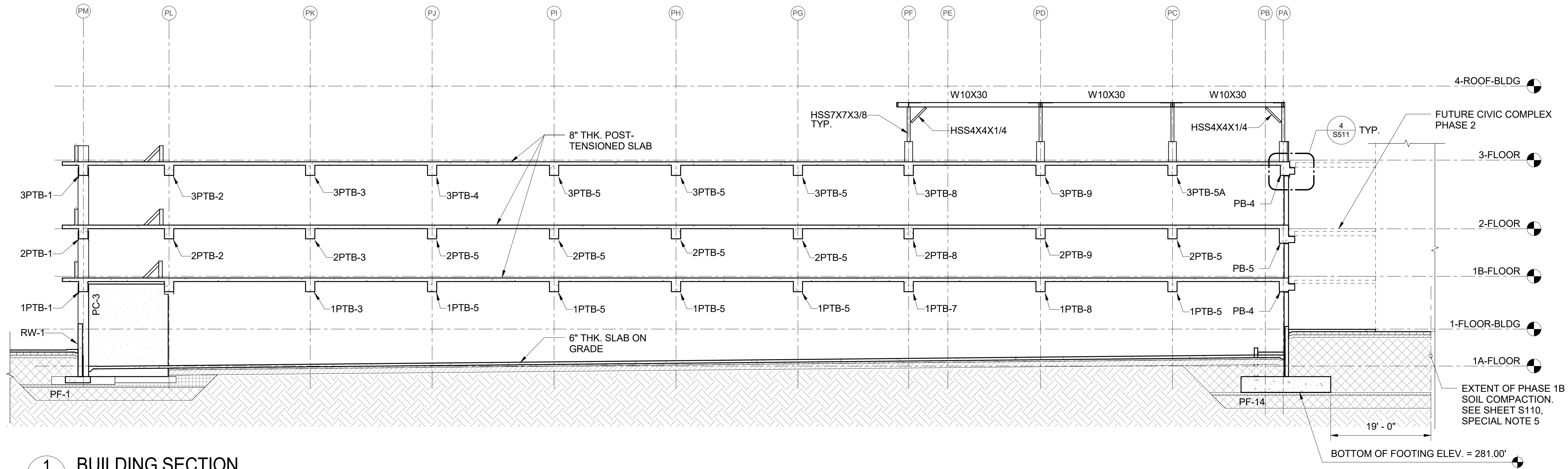


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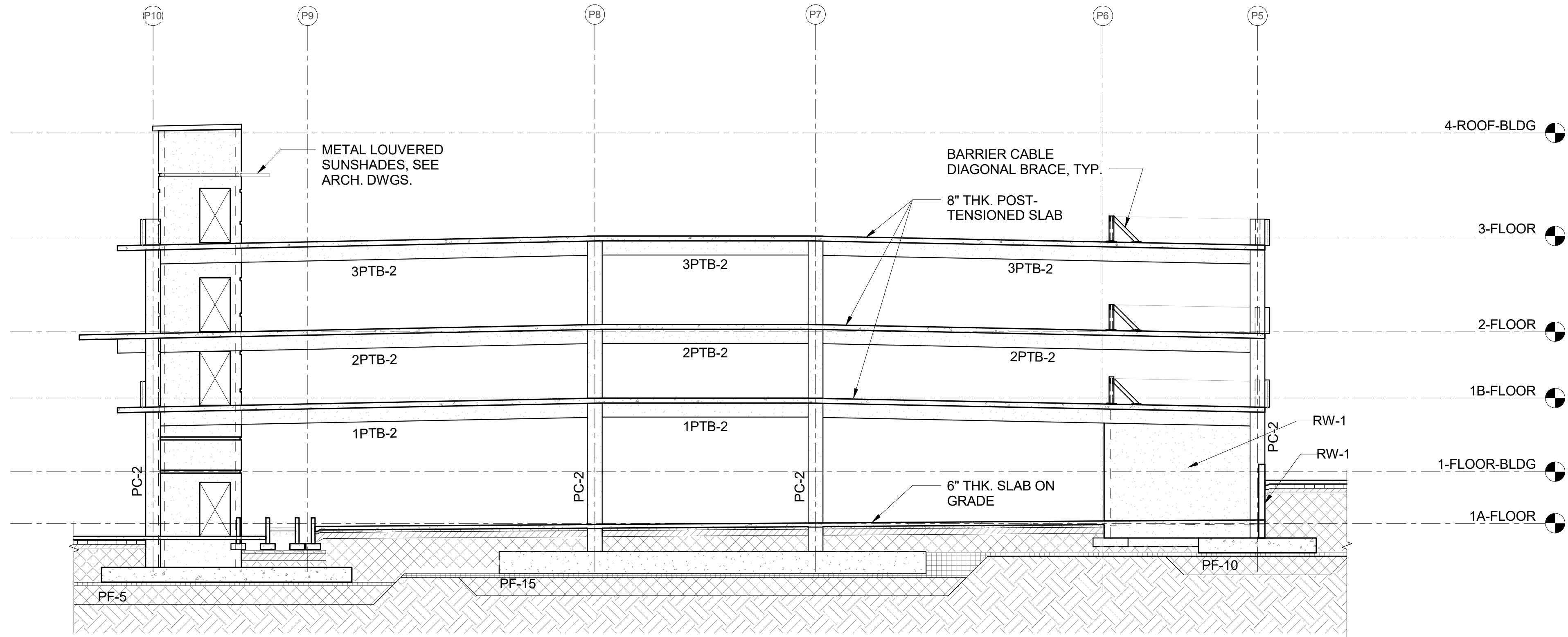
**WAILUKU CIVIC COMPLEX PHASE 1B**  
 100% FINAL DESIGN  
 [PUNAHU] [UP] [UW] [OW] [P]

PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	PARKING GARAGE BUILDING SECTIONS
DRAWN:	LC				
DATE:	7/25/2019				
PHASE	1B	SHEET	S210	CADD FILE:	
		OF	SHEETS		

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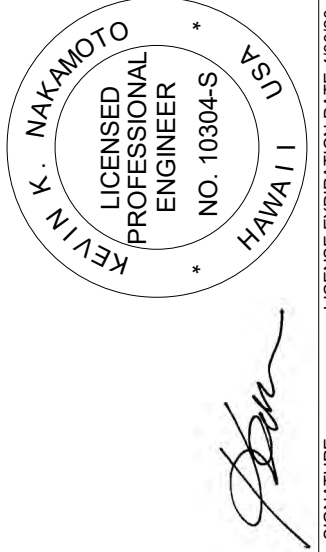
**1 BUILDING SECTION**  
S211 SCALE: 3/32" = 1'-0"



**2 BUILDING SECTION**  
S211 SCALE: 3/32" = 1'-0"



# FERRARO CHOI



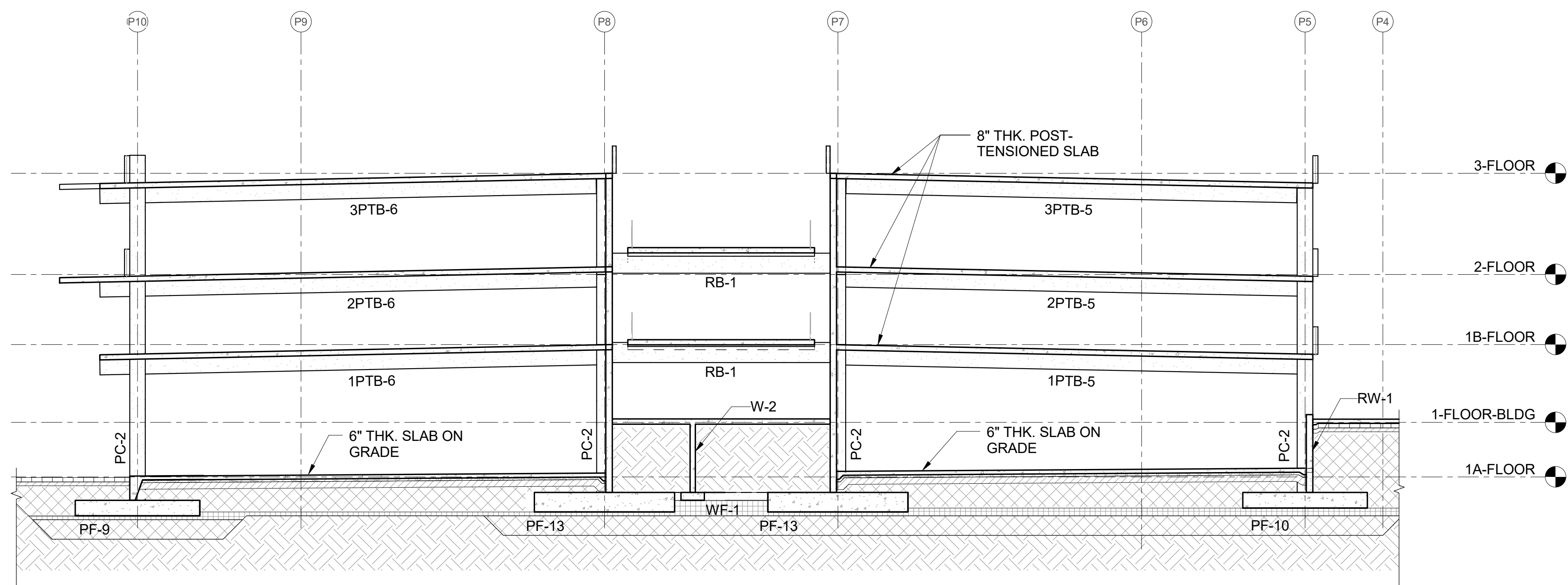
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## WAILUKU CIVIC COMPLEX PHASE 1B

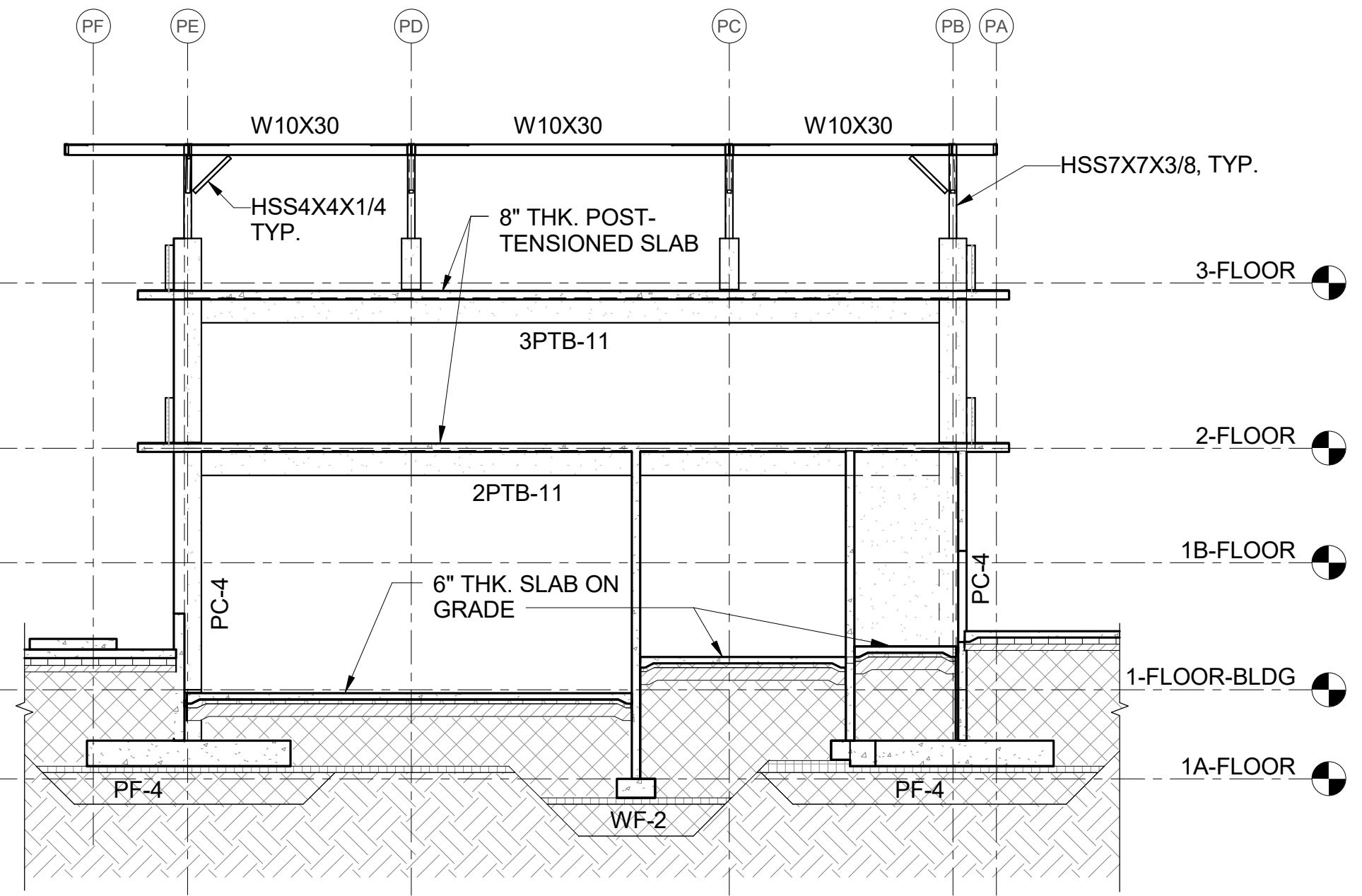
100% FINAL DESIGN  
[PUY/BU/UP/WU/WOP]

SHEET TITLE:  
**PARKING GARAGE BUILDING SECTIONS**

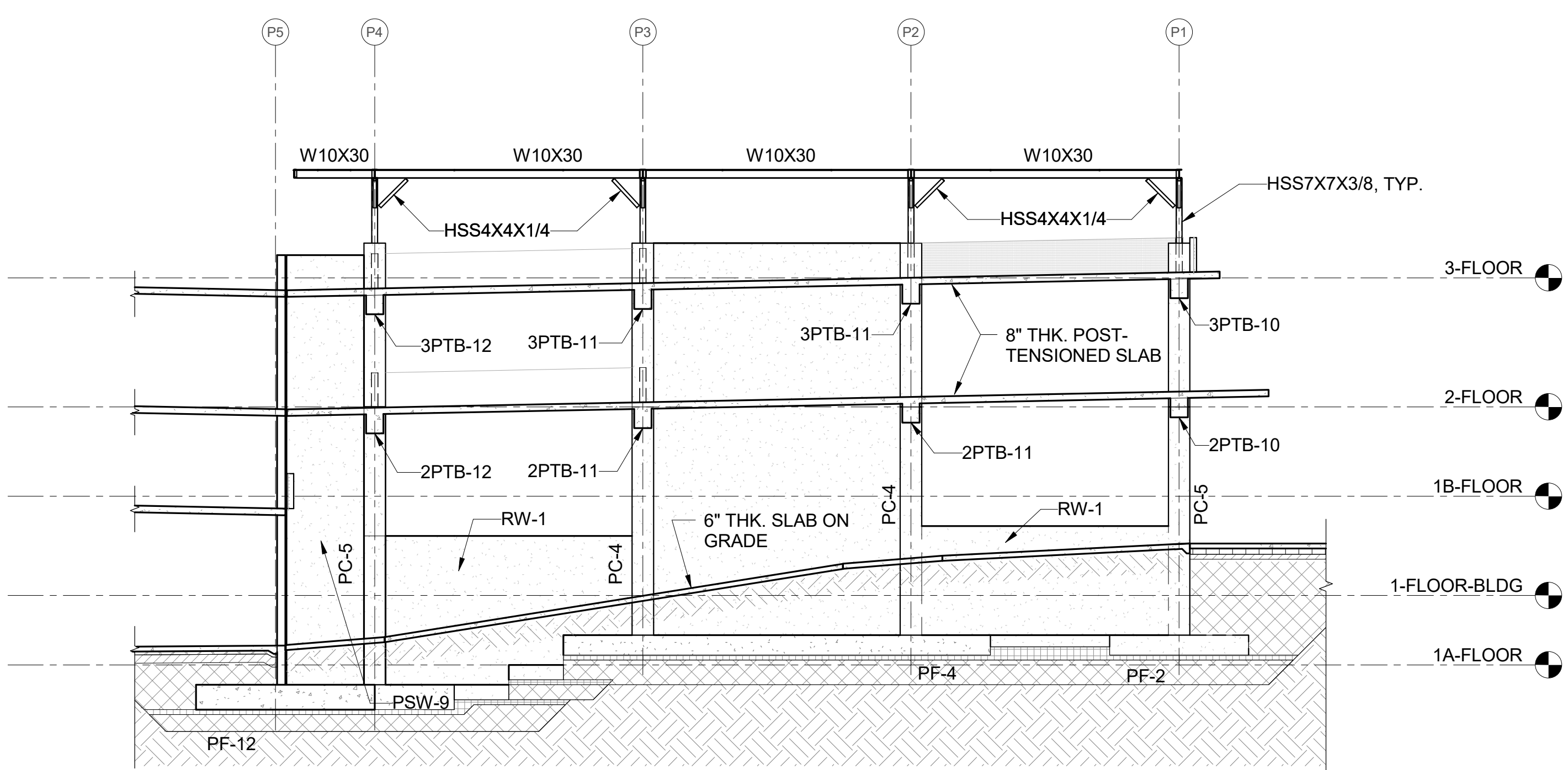
PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET	OF	
1B	S211		
		SHEETS	



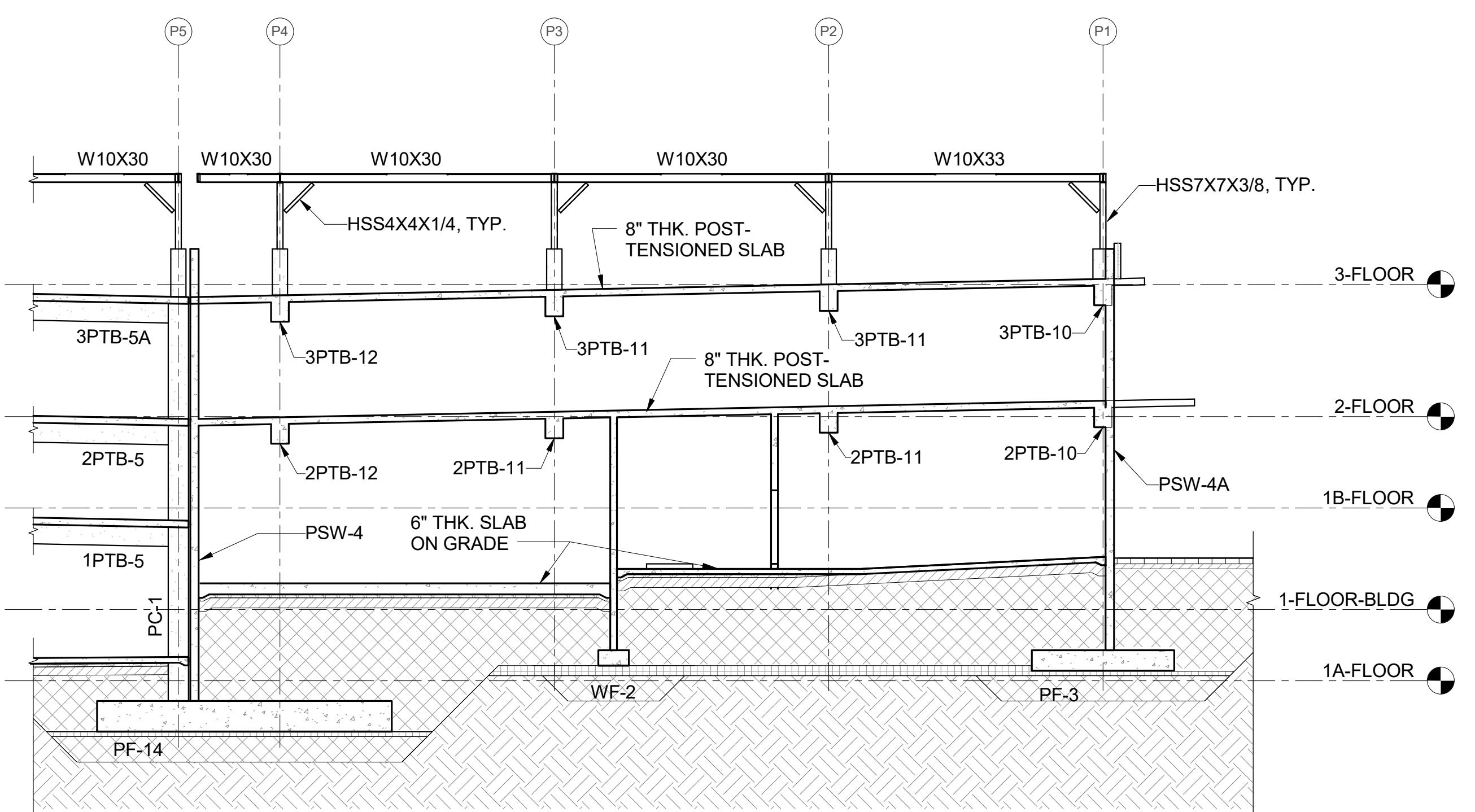
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S212 SCALE: 3/32" = 1'-0"



**2 BUILDING SECTION**  
S212 SCALE: 3/32" = 1'-0"



**3 BUILDING SECTION**  
S212 SCALE: 3/32" = 1'-0"



**4 BUILDING SECTION**  
S212 SCALE: 3/32" = 1'-0"



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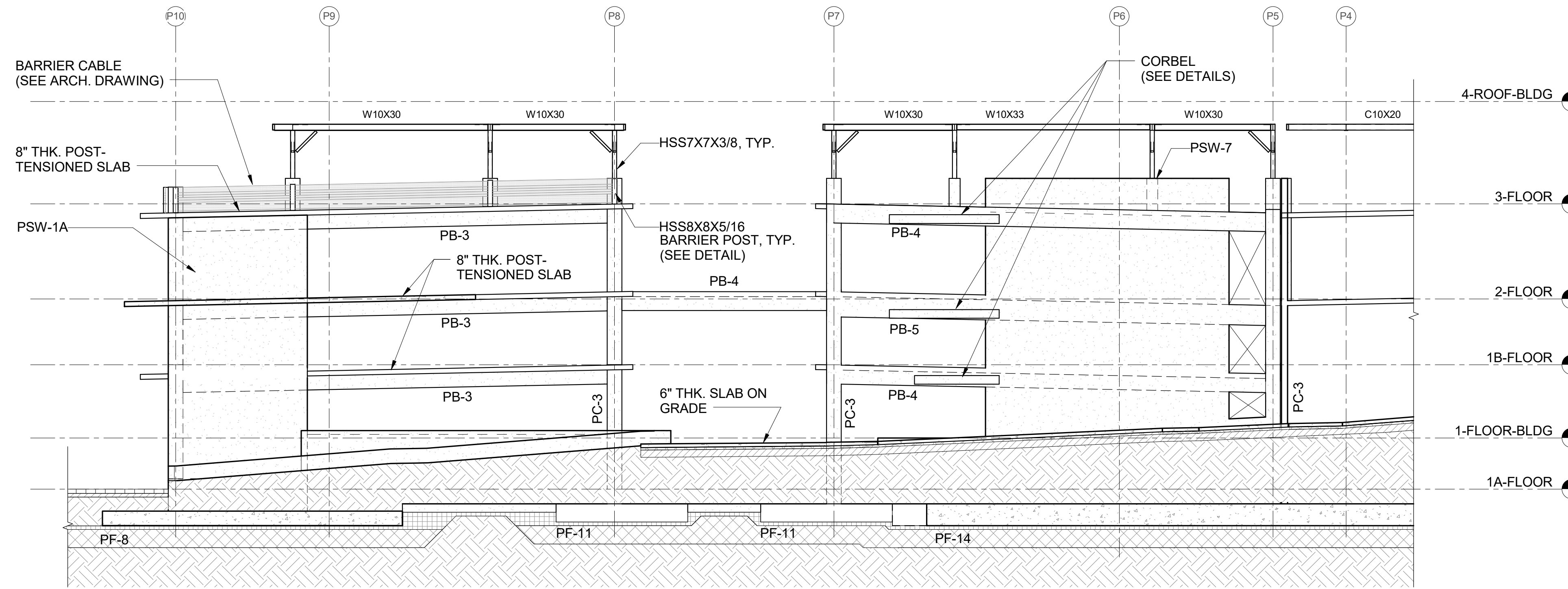
KEVIN K. MAKIMOTO  
LICENSED PROFESSIONAL ENGINEER  
NO. 10304-S  
HAWAII, USA  
SIGNATURE: *[Signature]*  
LICENSE EXPIRATION DATE: 4/30/20

THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A MEMBER OF THE ENGINEERING BOARD UNDER THE OBSERVATION OF THE BOARD OF PROFESSIONAL ENGINEERS AND SURVEYORS OF THE STATE OF HAWAII (DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS)

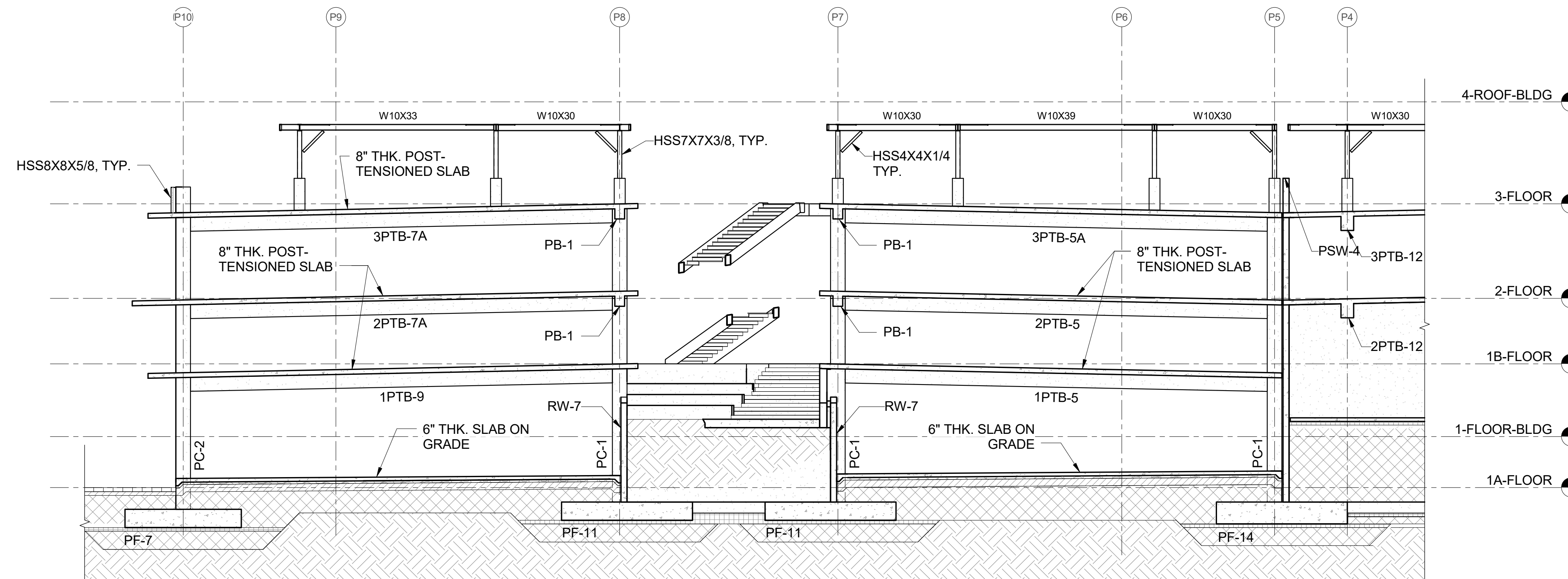
**WAILUKU CIVIC COMPLEX PHASE 1B**  
100% FINAL DESIGN  
[Professional Seal]

PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	PARKING GARAGE BUILDING SECTIONS	CADD FILE:	
DRAWN:	LC						
DATE:	7/25/2019						
PHASE	1B	SHEET	S212	OF	SHEETS		





**1** FRAME ELEVATION ALONG GRIDLINE PA  
 S213 SCALE: 3/32" = 1'-0"



**2** FRAME ELEVATION ALONG GRIDLINE PC  
 S213 SCALE: 3/32" = 1'-0"

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KEVIN K. MAKIMOTO  
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 NO. 10304-S  
 HAWAII, USA  
 LICENSE EXPIRATION DATE: 4/30/20

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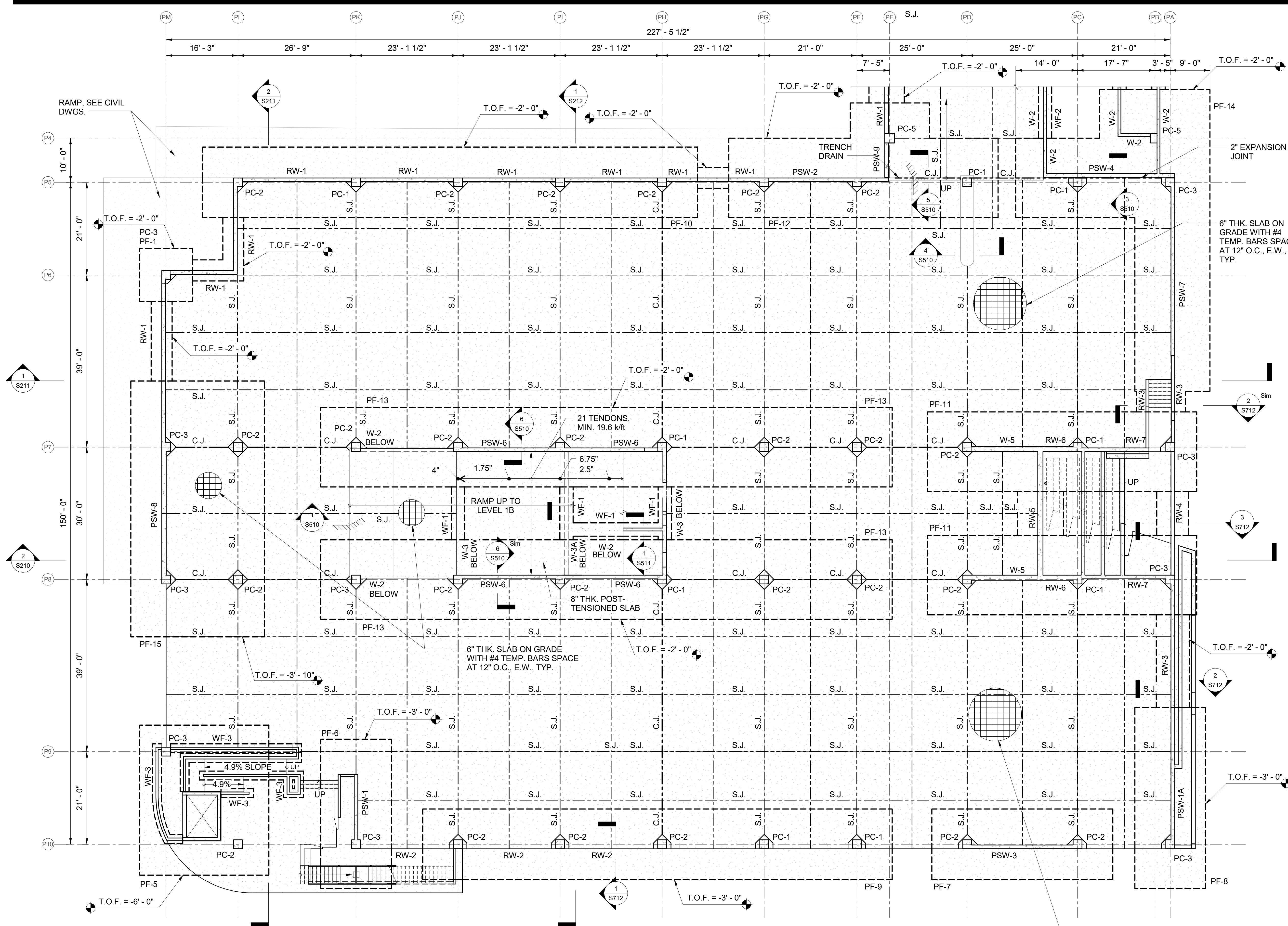
Signature: *[Signature]*

**WAILUKU CIVIC COMPLEX PHASE 1B**  
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 [PUY/8/20/19] [UP/10/19] [01P]

SHEET TITLE:  
**PARKING GARAGE FRAME ELEVATION**  
 CADD FILE:

PROJECT:	2017-001	REVISIONS:	
DRAWN:	RT		
DATE:	7/25/2019		
PHASE	SHEET		
<b>1B</b>	<b>S213</b>		
OF	SHEETS		

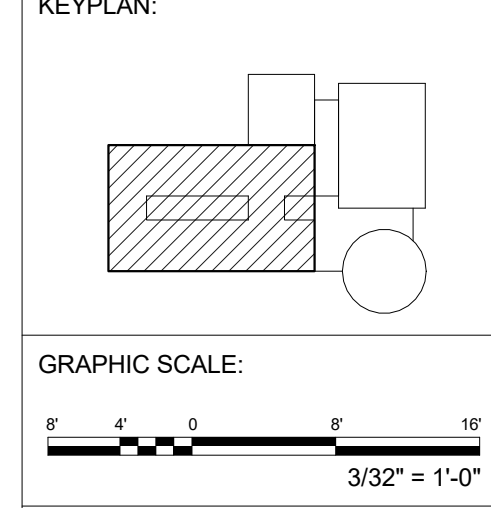




- SPECIAL NOTES:**
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
  - SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.
  - THICKNESS OF GRADE SLAB SHOWN ARE MINIMUM AND SHALL BE MAINTAINED AT ALL SLOPED AND DEPRESSED PORTIONS.
  - ELEV. 286' - 0" = ELEV. 0

- LEGEND:**
- CONCRETE COLUMN
  - CONCRETE SHEAR WALL
  - SLAB SLOPE
  - CONCRETE COLUMN MARK
  - COLUMN FOOTING MARK
  - WALL MARK
  - WALL FOOTING MARK
  - RETAINING WALL MARK
  - SAWCUT JOINT
  - CONSTRUCTION JOINT
  - TOP OF FOOTING

- REFERENCE DRAWINGS:**
- S001 GENERAL NOTES
  - S002 GENERAL NOTES
  - S003 SPECIAL INSPECTION NOTES
  - S004 TYPICAL SLAB ON GRADE DETAILS
  - S005 TYPICAL CONCRETE WALL DETAILS
  - S110 OVERALL FOUNDATION PLAN
  - S315 PARKING GARAGE FOUNDATION PLAN & FLOOR FRAMING PLAN - LEVEL 2
  - S410 TYPICAL FOOTING SCHEDULE AND DETAILS
  - S411- FOOTING DETAILS
  - S421 TYPICAL CONCRETE COLUMN DETAILS
  - S425- SHEARWALL PLANS, S426 SCHEDULE AND ELEVATIONS



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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND I AM A MEMBER OF THE ENGINEERING SOCIETY OF HAWAII (E.S.H.) AND THE HAWAIIAN SOCIETY OF PROFESSIONAL ENGINEERS (H.S.P.E.).

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

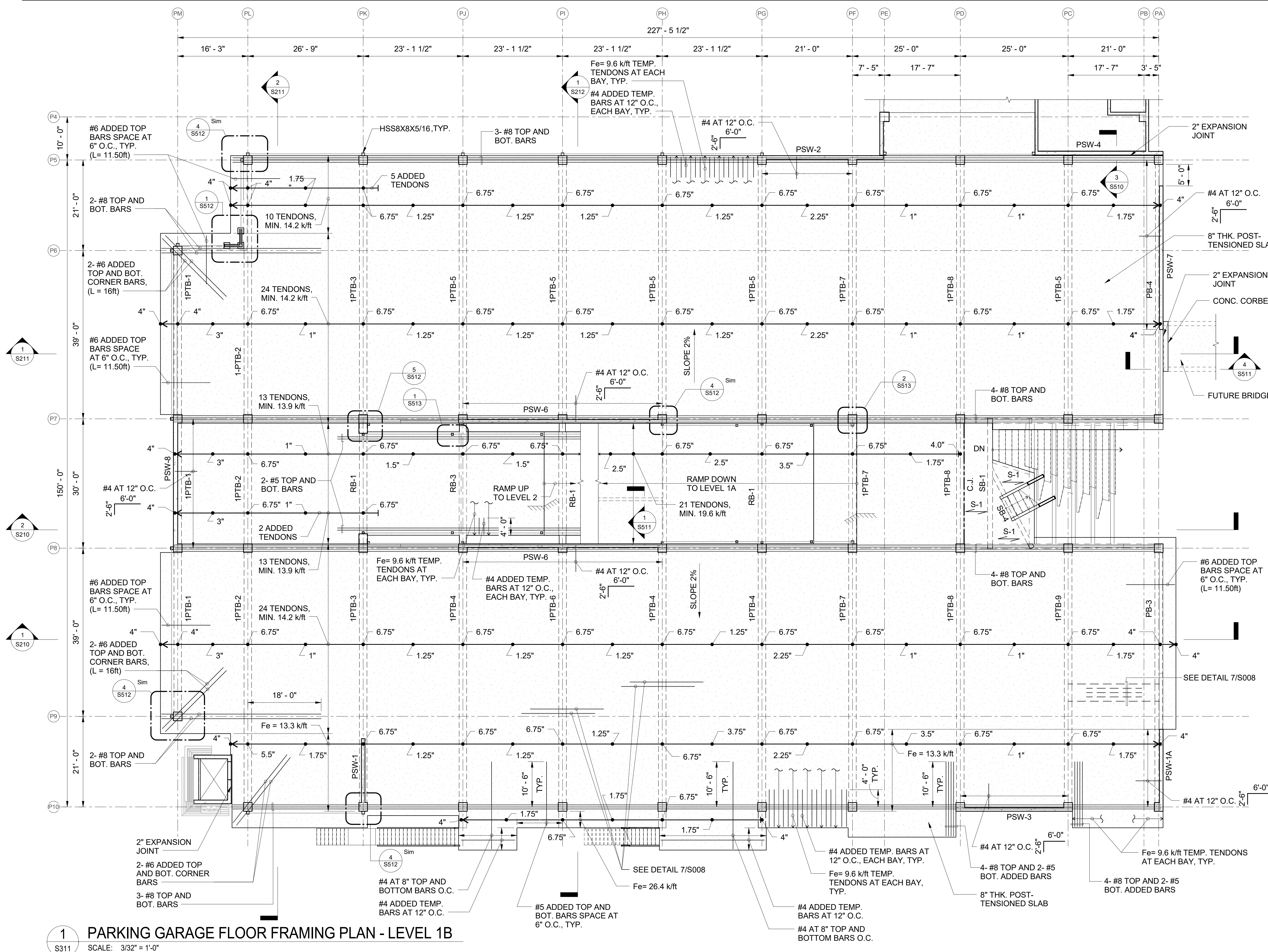
**PARKING GARAGE FOUNDATION PLAN**

PROJECT:	2017-001
DRAWN:	LC
DATE:	7/25/2019
PHASE:	SHEET
	<b>1B S310</b>
	OF SHEETS

**1 PARKING GARAGE FOUNDATION PLAN**  
SCALE: 3/32" = 1'-0"

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**SPECIAL NOTES:**

- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.

**LEGEND:**

- CONCRETE COLUMN
- PSW-1 CONCRETE SHEAR WALL
- SLAB SLOPE
- PB-1 CONCRETE BEAM MARK
- PTB-1 POST-TENSIONED BEAM MARK
- 4" TENDON DRAPED FROM BOTTOM OF PT-SLAB
- SLAB SYMBOL

**REFERENCE DRAWINGS:**

- S001 GENERAL NOTES
- S002 GENERAL NOTES
- S005 TYPICAL CONCRETE WALL DETAILS
- S007 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
- S008 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
- S009 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
- S111 OVERALL FLOOR FRAMING PLAN - LEVEL 1B
- S422 TYPICAL CONCRETE COLUMN DETAILS
- S423 TYPICAL CONCRETE SLAB DETAILS AND SCHEDULE
- S424 TYPICAL CONCRETE BEAM DETAILS
- S425-SHEARWALL PLANS, S426 SCHEDULE AND ELEVATIONS
- S427- POST TENSIONED S442 BEAM PROFILES

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DATE: 7/25/2019

**WAILUKU CIVIC COMPLEX PHASE 1B**

100% FINAL DESIGN

PROJECT: 2017-001

**PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 1B**

SHEET TITLE:

DATE: 7/25/2019

PHASE: 1B

SHEET: S311

OF SHEETS: 1

**KEYPLAN:**

**GRAPHIC SCALE:**

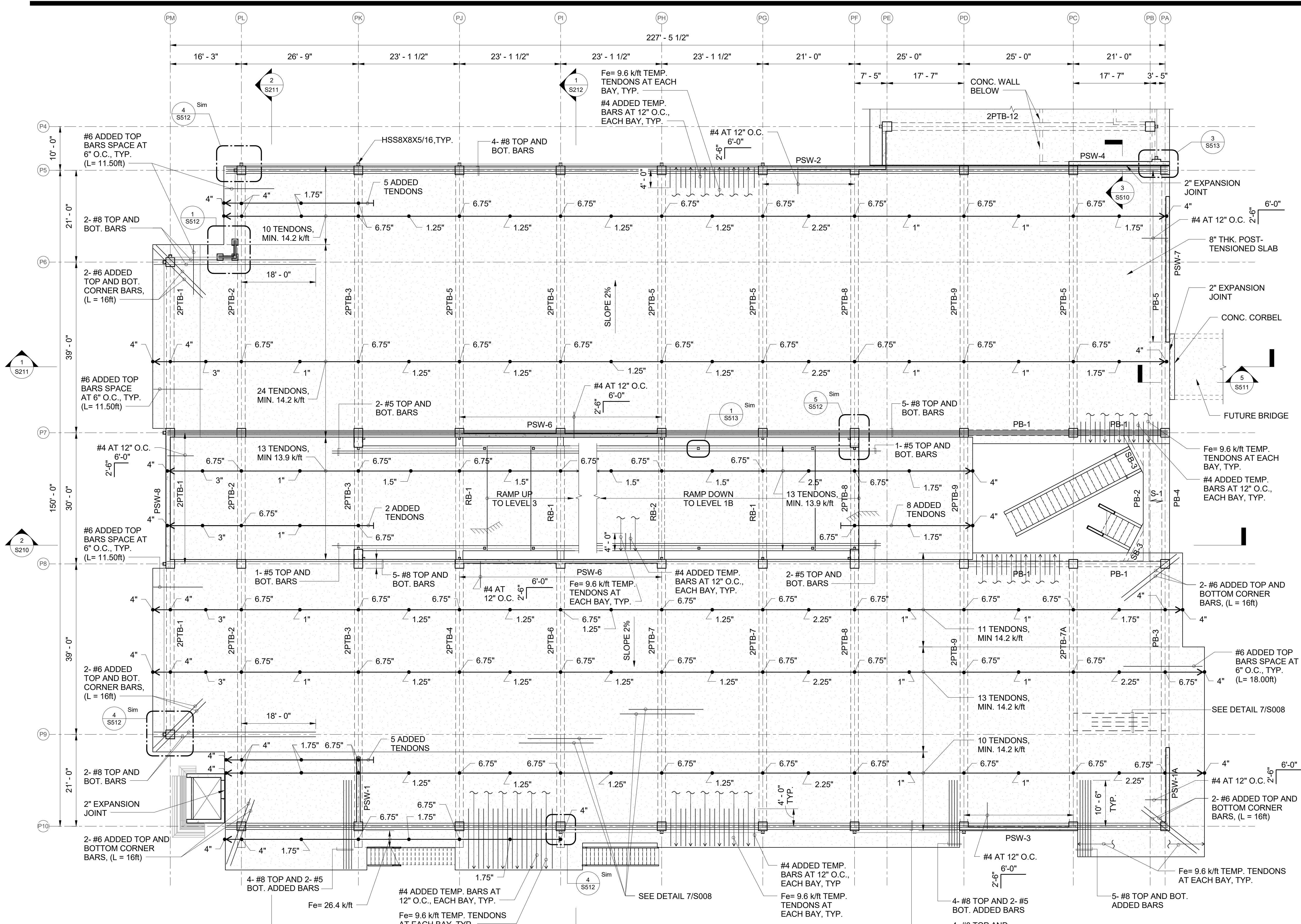
1" = 3/32" = 1'-0"

**NORTH ARROW:**

**1 PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 1B**

SCALE: 3/32" = 1'-0"

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**SPECIAL NOTES:**

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2. SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.

**LEGEND:**

- CONCRETE COLUMN
- PSW-1 CONCRETE SHEAR WALL
- SLAB SLOPE
- PB-1 CONCRETE BEAM MARK
- PTB-1 POST-TENSIONED BEAM MARK
- 4" TENDON DRAPED FROM BOTTOM OF PT-SLAB
- SLAB SYMBOL

**REFERENCE DRAWINGS:**

- S001 GENERAL NOTES
- S002 GENERAL NOTES
- S005 TYPICAL CONCRETE WALL DETAILS
- S007 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
- S008 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
- S009 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
- S112 OVERALL FLOOR FRAMING PLAN - LEVEL 2
- S315 PARKING GARAGE FOUNDATION PLAN & FLOOR FRAMING PLAN - LEVEL 2
- S422 TYPICAL CONCRETE COLUMN DETAILS
- S423 TYPICAL CONCRETE SLAB DETAILS AND SCHEDULE
- S424 TYPICAL CONCRETE BEAM DETAILS
- S425-SHEAR WALL PLANS, SCHEDULE AND ELEVATIONS
- S427- POST TENSIONED BEAM PROFILES
- S442 BEAM PROFILES

**KEYPLAN:**

**GRAPHIC SCALE:**  
 0 4 8 12 16  
 3/32" = 1'-0"

**NORTH ARROW:**

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

## WAILUKU CIVIC COMPLEX PHASE 1B

### 100% FINAL DESIGN

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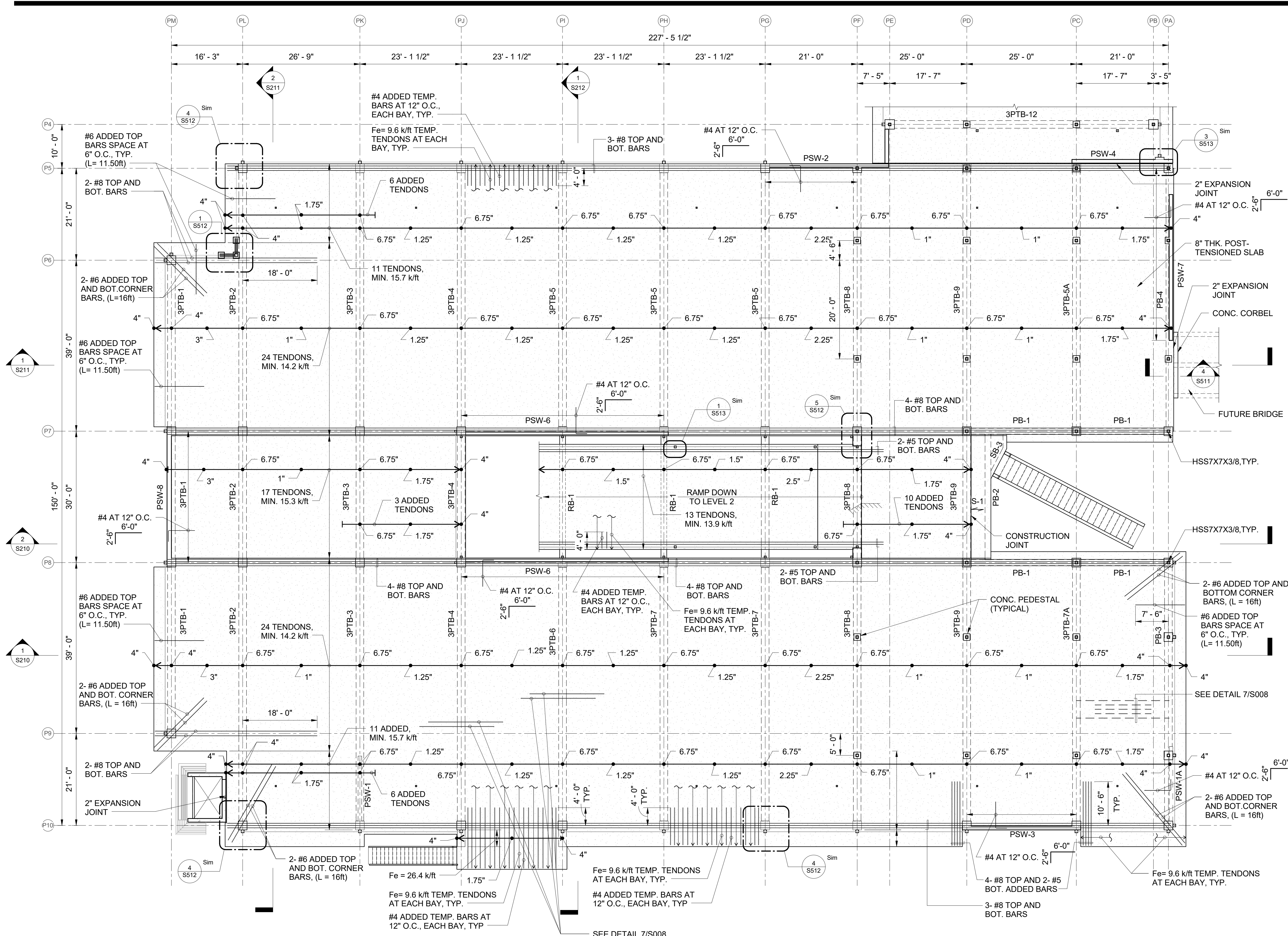
**SHEET TITLE:**  
 PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 2

PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	1B	S312	OF
			SHEETS

**1 PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 2**  
 S312 SCALE: 3/32" = 1'-0"

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**SPECIAL NOTES:**

- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.

**LEGEND:**

- CONCRETE COLUMN
- PSW-1 CONCRETE SHEAR WALL
- SLAB SLOPE
- PB-1 CONCRETE BEAM MARK
- PTB-1 POST-TENSIONED BEAM MARK
- 4" TENDON DRAPED FROM BOTTOM OF PT-SLAB
- SLAB SYMBOL

**REFERENCE DRAWINGS:**

- S001 GENERAL NOTES
- S002 GENERAL NOTES
- S005 TYPICAL CONCRETE WALL DETAILS
- S007 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
- S008 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
- S009 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
- S113 OVERALL FLOOR FRAMING PLAN - LEVEL 3
- S316 PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 3 & ROOF LEVEL
- S422 TYPICAL CONCRETE COLUMN DETAILS
- S423 TYPICAL CONCRETE SLAB DETAILS AND SCHEDULE
- S424 TYPICAL CONCRETE BEAM DETAILS
- S425-SHEARWALL PLANS, S426 SCHEDULE AND ELEVATIONS
- S427- POST TENSIONED BEAM PROFILES

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**WAILUKU CIVIC COMPLEX PHASE 1B**

**100% FINAL DESIGN**

PROJECT: 2017-001  
 DRAWN: LC  
 DATE: 7/25/2019  
 SHEET: 1B S313 OF SHEETS

**PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 3**

SHEET TITLE:

REVISIONS:

KEYPLAN:

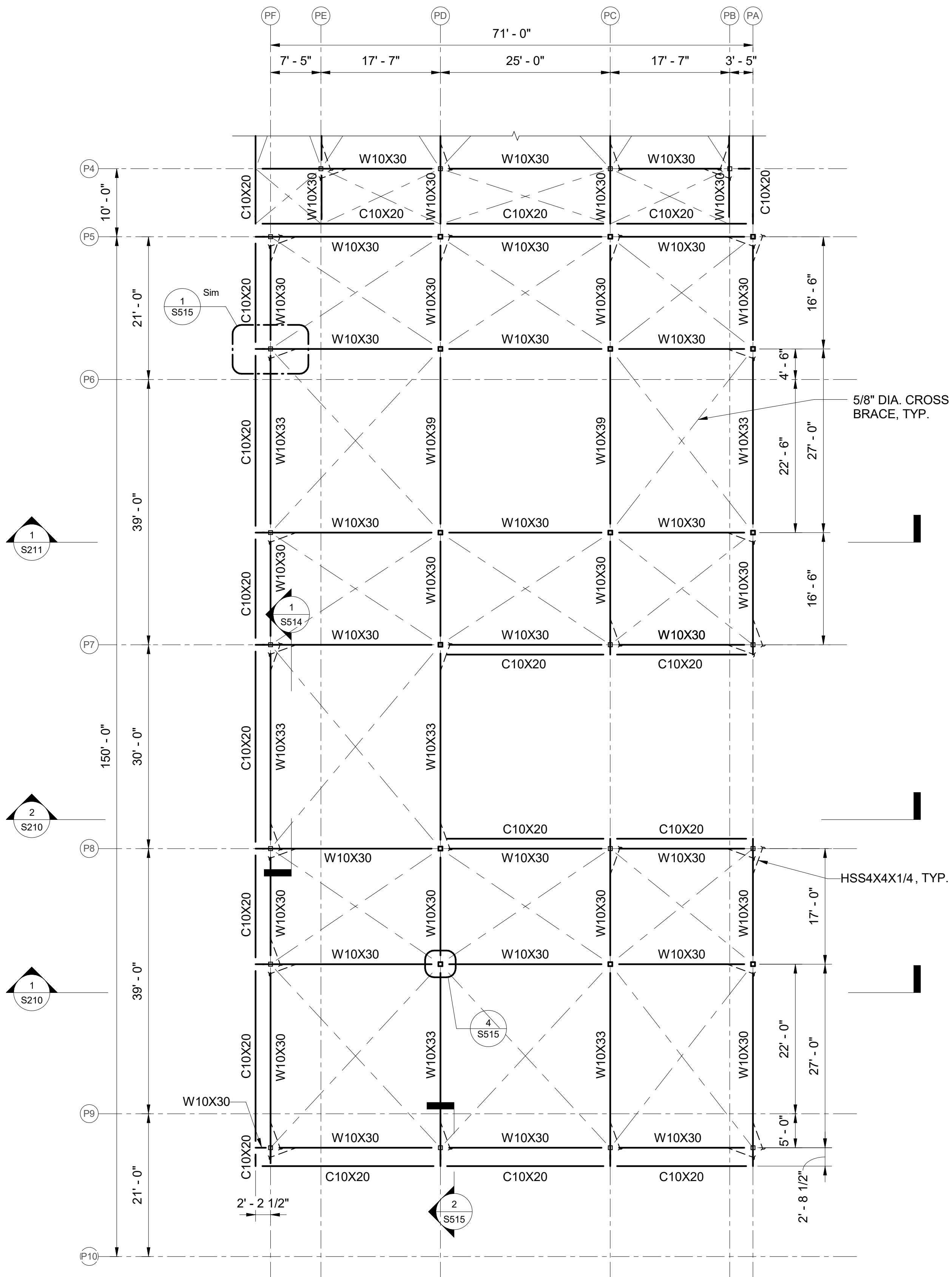
GRAPHIC SCALE:  
 3/32" = 1'-0"

NORTH ARROW:

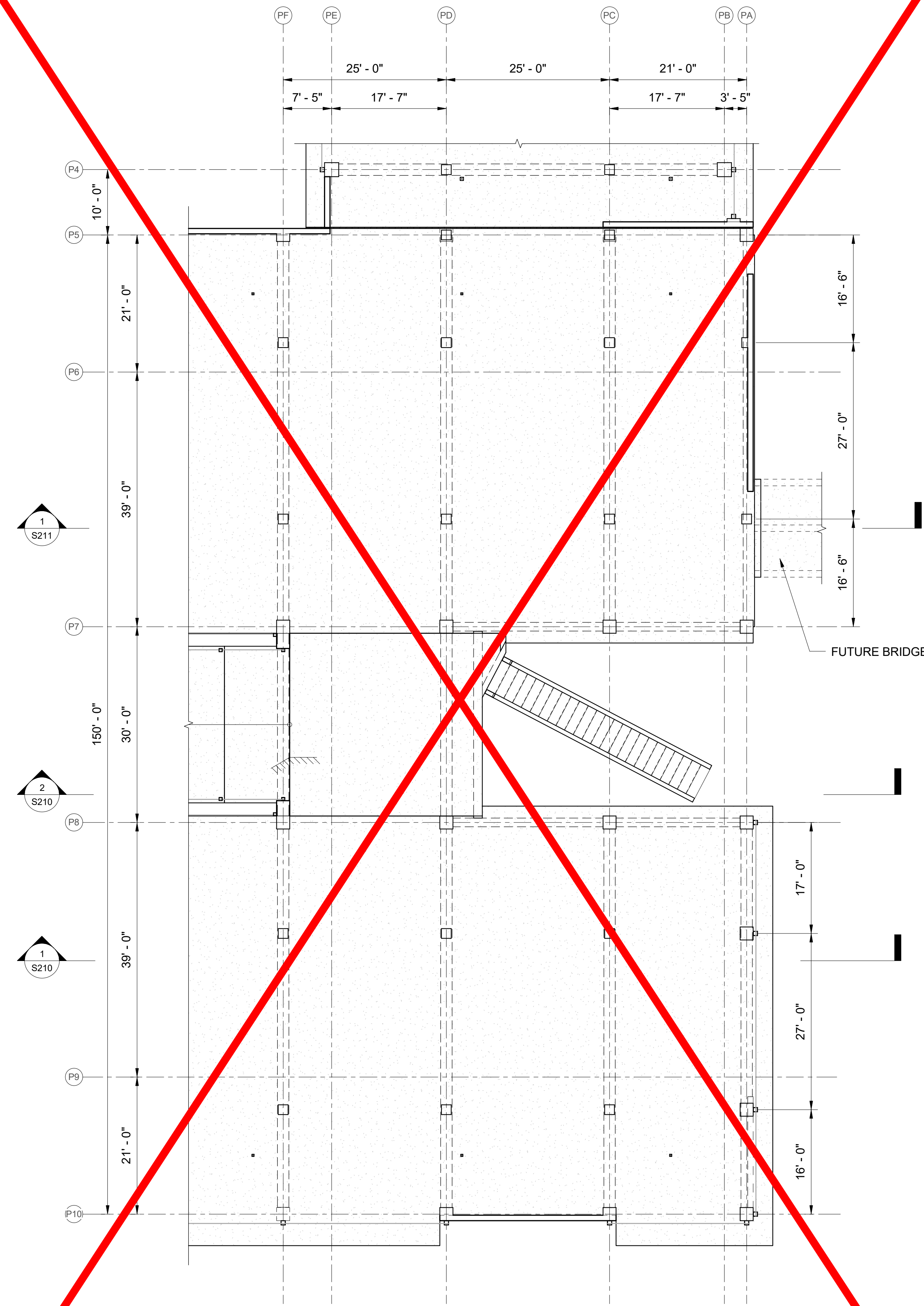
**1** PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 3  
 S313 SCALE: 3/32" = 1'-0"

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**1** PARKING GARAGE FLOOR FRAMING PLAN - ROOF LEVEL - BASE BID  
SCALE: 3/32" = 1'-0"



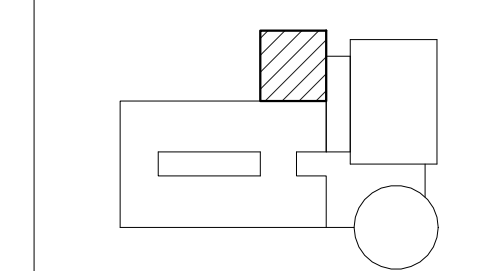
~~**2** PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 0  
DEDUCTIVE ALTERNATIVE NO. D-1~~  
SCALE: 3/32" = 1'-0"

- SPECIAL NOTES:**
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
  - SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.

**LEGEND:**  
Wx/Cx STEEL BEAM

- REFERENCE DRAWINGS:**
- S001 GENERAL NOTES
  - S002 GENERAL NOTES
  - S005 TYPICAL CONCRETE WALL DETAILS
  - S006 TYPICAL STEEL CONNECTION DETAILS
  - S114 OVERALL ROOF FRAMING PLAN - ROOF LEVEL
  - S316 PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 3 & ROOF LEVEL
  - S422 TYPICAL CONCRETE COLUMN DETAILS
  - S423 TYPICAL CONCRETE SLAB DETAILS AND SCHEDULE

KEYPLAN:



GRAPHIC SCALE: [3/32" = 1'-0"]  
3/32" = 1'-0"

NORTH ARROW:

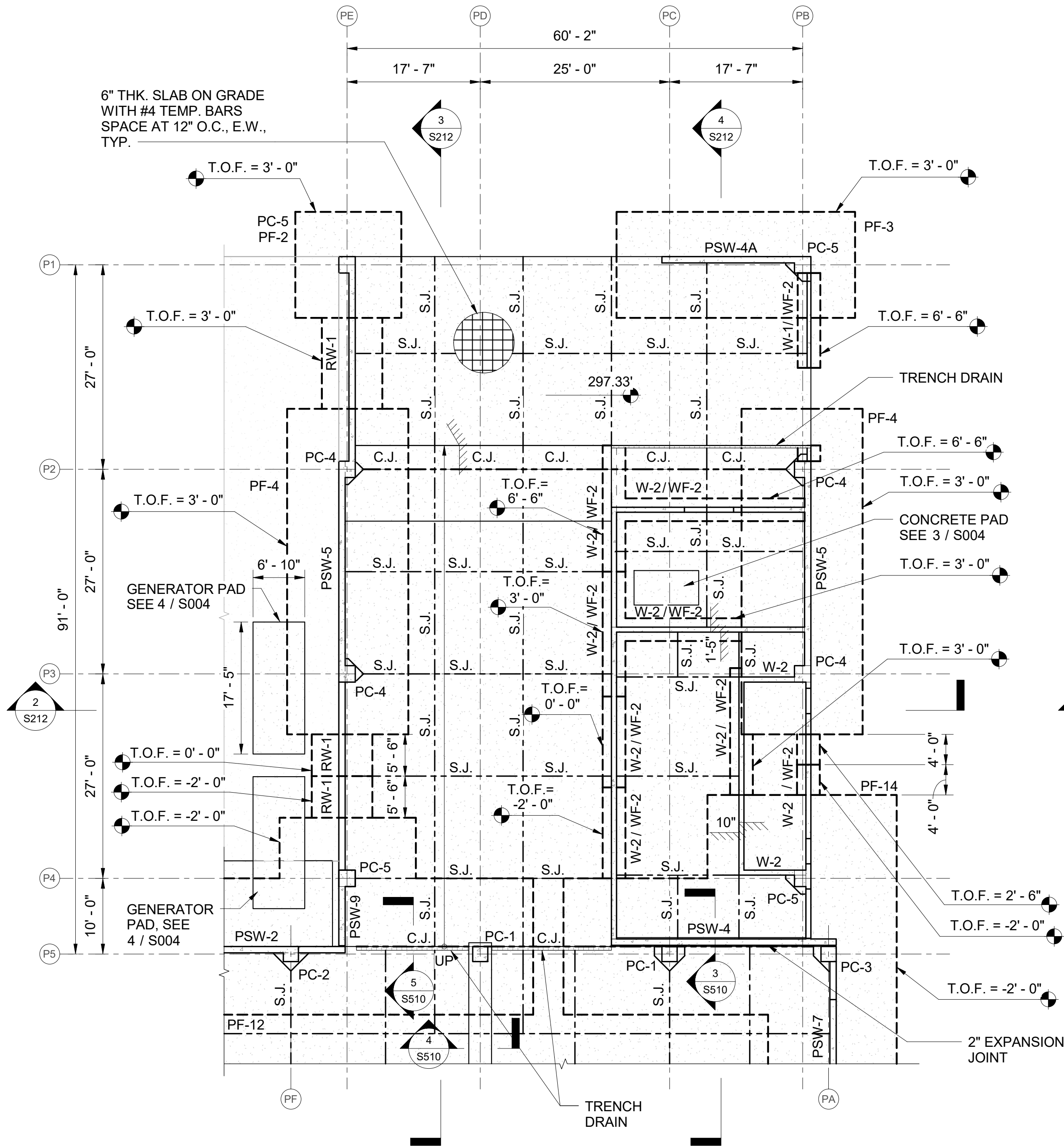
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LICENSE EXPIRATION DATE: 4/30/20  
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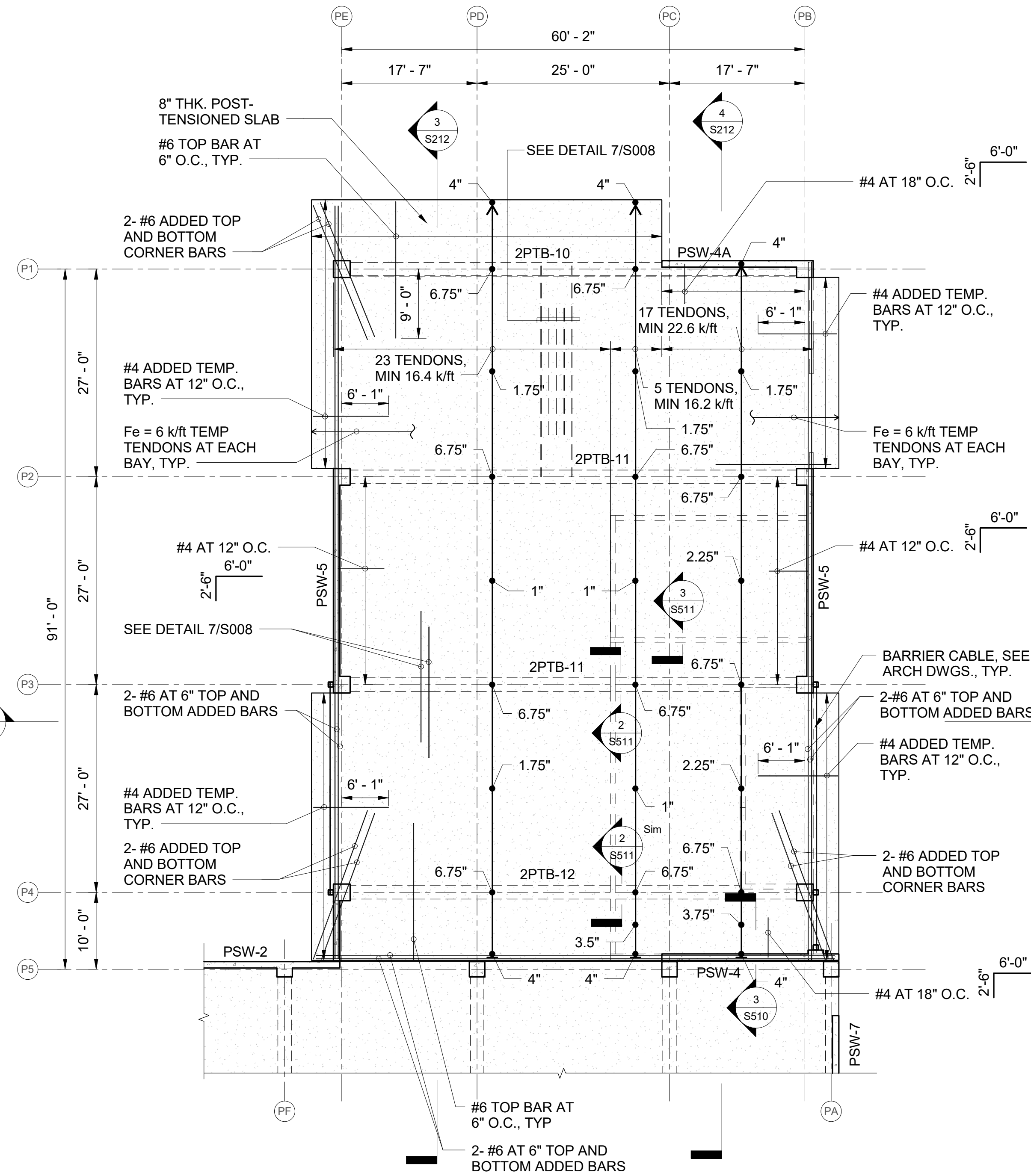
**WAILUKU CIVIC COMPLEX PHASE 1B**  
100% FINAL DESIGN

**PARKING GARAGE FLOOR FRAMING PLAN - ROOF LEVEL**

PROJECT:	2017-001
DRAWN:	LC
DATE:	7/25/2019
PHASE:	1B
SHEET:	S314
OF SHEETS:	10



**1** PARKING GARAGE FOUNDATION PLAN  
S315 SCALE: 3/32" = 1'-0"



**2** PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 2  
S315 SCALE: 3/32" = 1'-0"

- SPECIAL NOTES:**
1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
  2. SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.
  3. THICKNESS OF GRADE SLAB SHOWN ARE MINIMUM AND SHALL BE MAINTAINED AT ALL SLOPED AND DEPRESSED PORTIONS.
  4. ELEV. 286' - 0" = ELEV. 0

- LEGEND:**
- CONCRETE COLUMN
  - PSW-1 CONCRETE SHEAR WALL
  - SLAB DEPRESSION
  - PC-1 CONCRETE COLUMN MARK
  - PF-1 COLUMN FOOTING MARK
  - W-1 WALL MARK
  - WF-1 WALL FOOTING MARK
  - RW-1 RETAINING WALL MARK
  - S.J. SAWCUT JOINT
  - C.J. CONSTRUCTION JOINT
  - T.O.F. TOP OF FOOTING
  - PTB-1 POST-TENSIONED BEAM MARK
  - 4" TENDON DRAPED FROM BOTTOM OF PT-SLAB

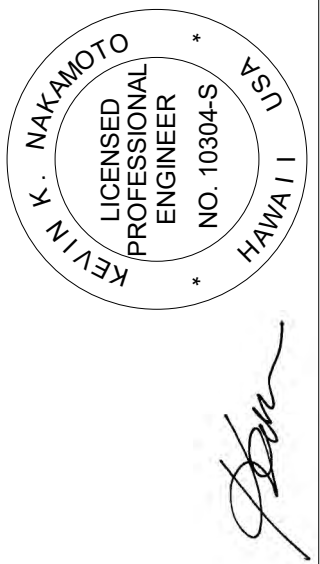
- REFERENCE DRAWINGS:**
- S001 GENERAL NOTES
  - S002 GENERAL NOTES
  - S004 TYPICAL SLAB ON GRADE DETAILS
  - S005 TYPICAL CONCRETE WALL DETAILS
  - S007-TYPICAL POST TENSIONED BEAMS AND SLAB DETAILS
  - S009 TYPICAL FOOTING
  - S310 PARKING GARAGE FOUNDATION PLAN
  - S312 PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 2
  - S410-TYPICAL FOOTING SCHEDULE AND DETAILS
  - S422 TYPICAL CONCRETE COLUMN DETAILS
  - S423 TYPICAL CONCRETE SLAB DETAILS AND SCHEDULE
  - S424 TYPICAL CONCRETE BEAM DETAILS
  - S425-SHEARWALL PLANS, SCHEDULE AND ELEVATIONS
  - S426 SCHEDULE AND ELEVATIONS
  - S427-POST TENSIONED BEAM PROFILES
  - S442 BEAM PROFILES

**KEYPLAN:**

**GRAPHIC SCALE:** [3/32" = 1'-0"]

**NORTH ARROW:**

**FERRARO CHOI**



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

**PARKING GARAGE FOUNDATION PLAN & FLOOR FRAMING PLAN - LEVEL 2**

PROJECT:	2017-001
DRAWN:	LC
DATE:	7/25/2019
PHASE:	1B
SHEET:	S315
OF SHEETS:	OF

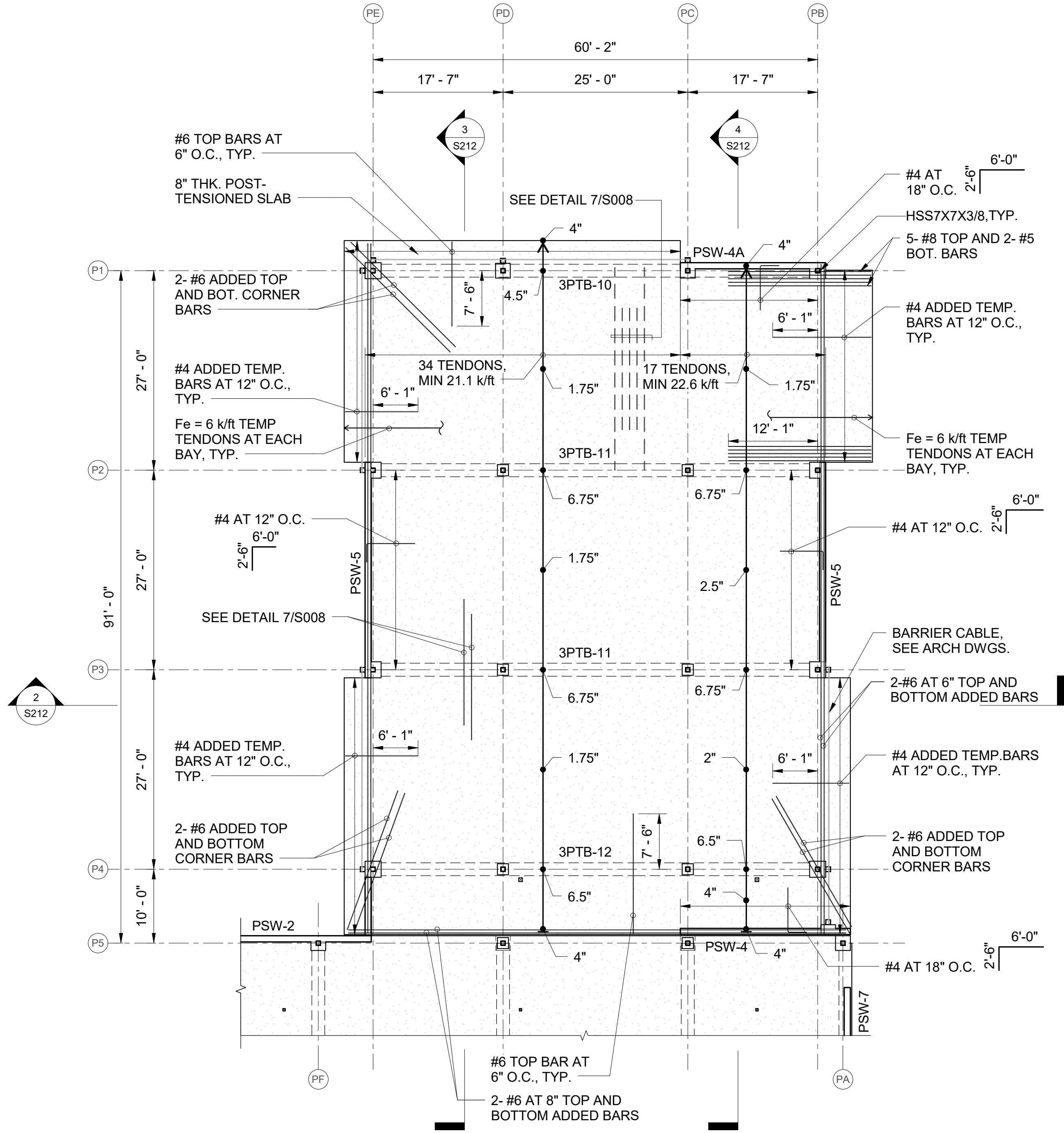
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TEL 808.533.8880 FAX 808.599.3769 www.ferrarchoi.com

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KEY PLAN

CADD FILE:



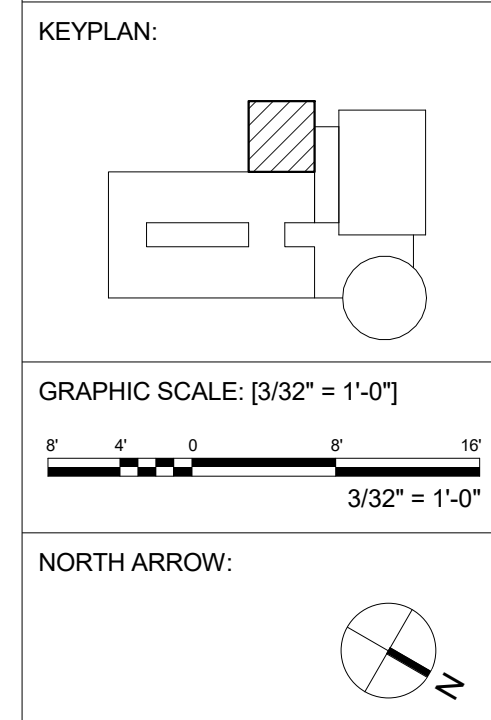


**1** PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 3  
 S316 SCALE: 3/32" = 1'-0"

- SPECIAL NOTES:**
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
  - SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.

- LEGEND:**
- CONCRETE COLUMN
  - PSW-1  CONCRETE SHEAR WALL
  - PTB-1  POST-TENSIONED BEAM MARK
  - 4"  TENDON DRAPED FROM BOTTOM OF PT-SLAB

- REFERENCE DRAWINGS:**
- S001 GENERAL NOTES
  - S002 GENERAL NOTES
  - S005 TYPICAL CONCRETE WALL DETAILS
  - S006 TYPICAL STEEL CONNECTION DETAILS
  - S007 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
  - S008 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
  - S009 TYPICAL POST-TENSIONED BEAMS AND SLAB DETAILS
  - S113 OVERALL FLOOR FRAMING PLAN - LEVEL 3
  - S313 PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 3
  - S314 PARKING GARAGE FLOOR FRAMING PLAN - ROOF LEVEL
  - S422 TYPICAL CONCRETE COLUMN DETAILS
  - S423 TYPICAL CONCRETE SLAB DETAILS AND SCHEDULE
  - S424 TYPICAL CONCRETE BEAM DETAILS
  - S425-SHEARWALL PLANS, SCHEDULE AND ELEVATIONS
  - S427- POST TENSIONED BEAM PROFILES



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KEVIN K. MAKIMOTO  
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 NO. 10304-S  
 HAWAII

SIGNATURE: *[Signature]*  
 LICENSE EXPIRATION DATE: 4/30/20  
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**WAILUKU CIVIC COMPLEX PHASE 1B**  
 100% FINAL DESIGN  
 [PUYARUJUPUVUWUP]

**PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 3**

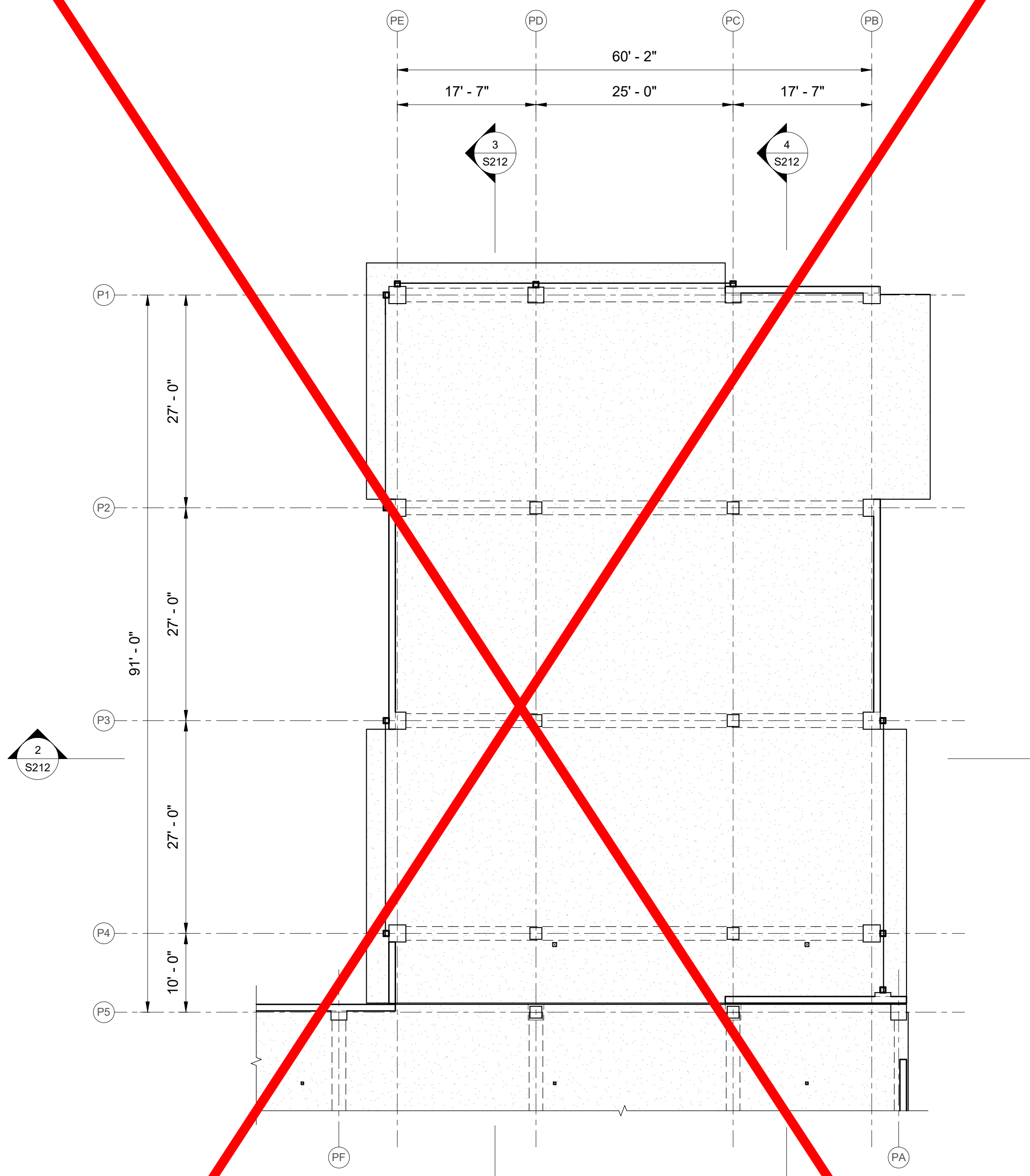
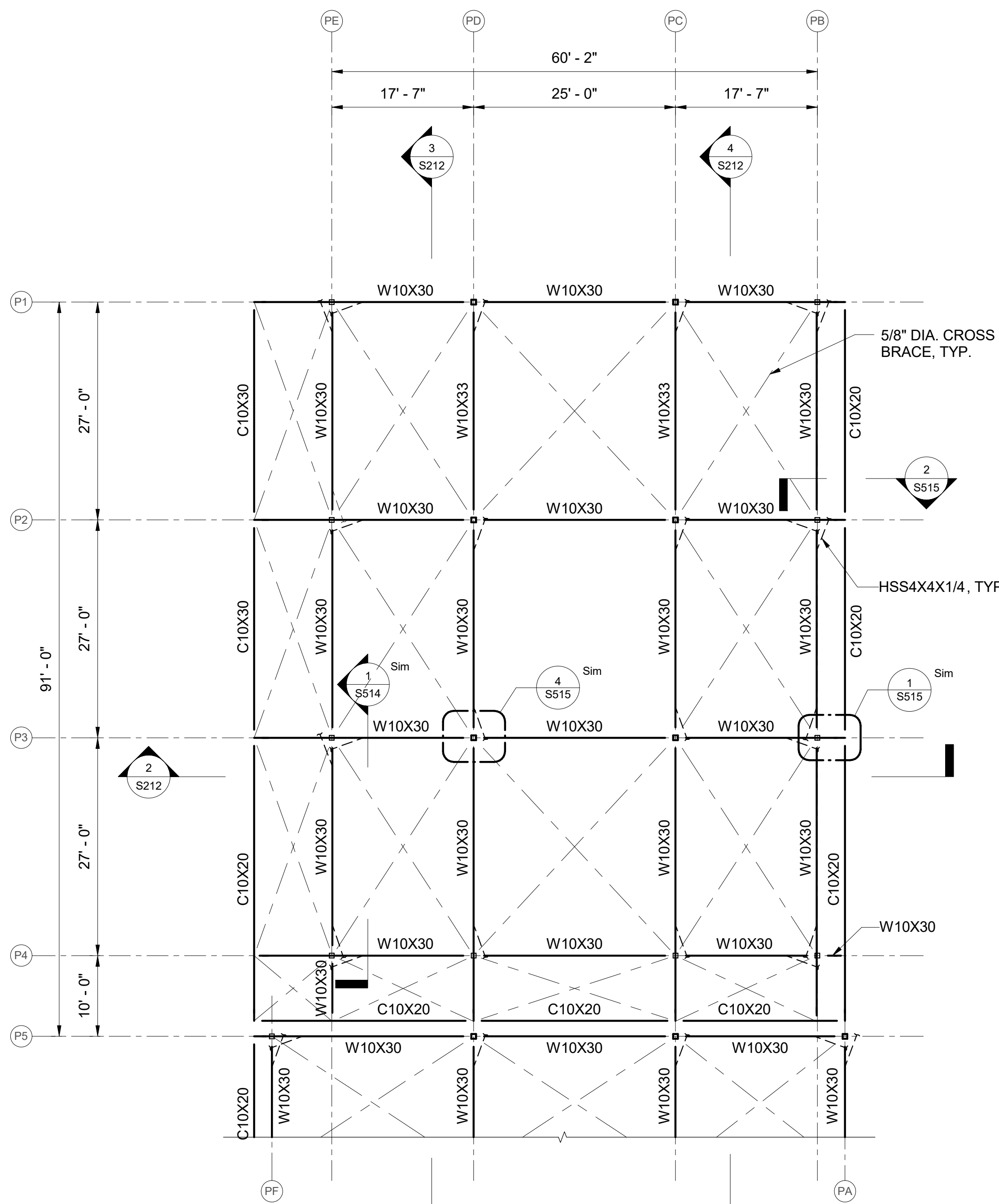
SHEET TITLE:

PROJECT:	REVISIONS:	DATE:	PHASE:	SHEET:	OF:
2017-001	LC	7/25/2019	1B	S316	

CADD FILE:

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1 PARKING GARAGE FLOOR FRAMING PLAN - ROOF LEVEL - BASE BID  
 S317 SCALE: 3/32" = 1'-0"

2 ~~PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 3~~  
~~DEDUCTIVE ALTERNATIVE NO. D 4~~  
 S317 SCALE: 3/32" = 1'-0"

**SPECIAL NOTES:**

- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR SLOPE TO DRAINS, FLOOR ELEVATIONS, DEPRESSED SLAB AREAS, ETC.

**LEGEND:**

Wx/Cx STEEL BEAM

**REFERENCE DRAWINGS:**

- S001 GENERAL NOTES
- S002 GENERAL NOTES
- S005 TYPICAL CONCRETE WALL DETAILS
- S006 TYPICAL STEEL CONNECTION DETAILS
- S114 OVERALL ROOF FRAMING PLAN - ROOF LEVEL
- S316 PARKING GARAGE FLOOR FRAMING PLAN - LEVEL 3 & ROOF LEVEL
- S422 TYPICAL CONCRETE COLUMN DETAILS
- S423 TYPICAL CONCRETE SLAB DETAILS AND SCHEDULE

KEYPLAN:

GRAPHIC SCALE: [3/32" = 1'-0"]

3/32" = 1'-0"

NORTH ARROW:

PROJECT:	2017-001
REVISIONS:	LC
DRAWN:	7/25/2019
DATE:	
PHASE:	1B
SHEET:	S317
OF SHEETS:	

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**WAILUKU CIVIC COMPLEX PHASE 1B**

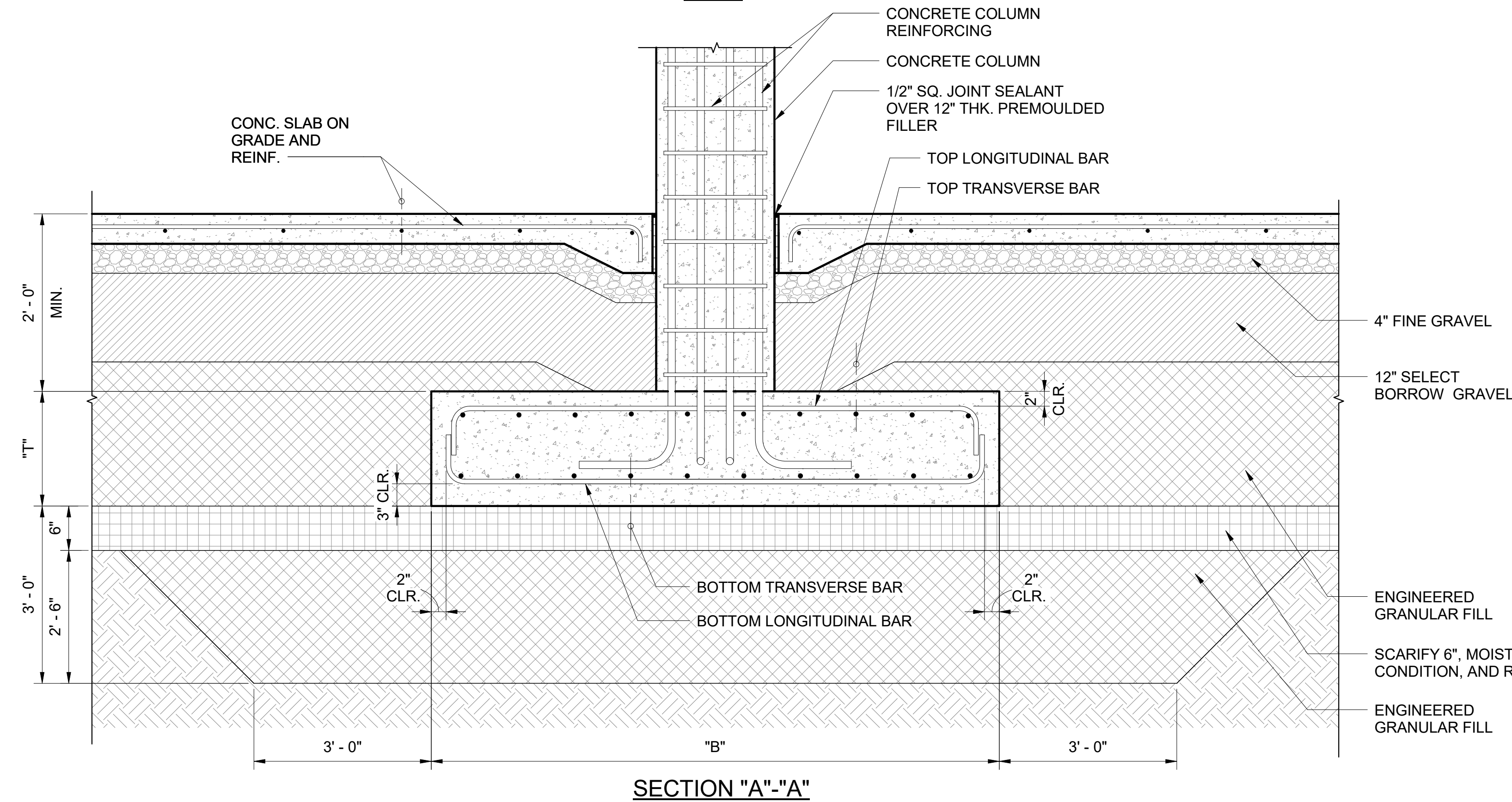
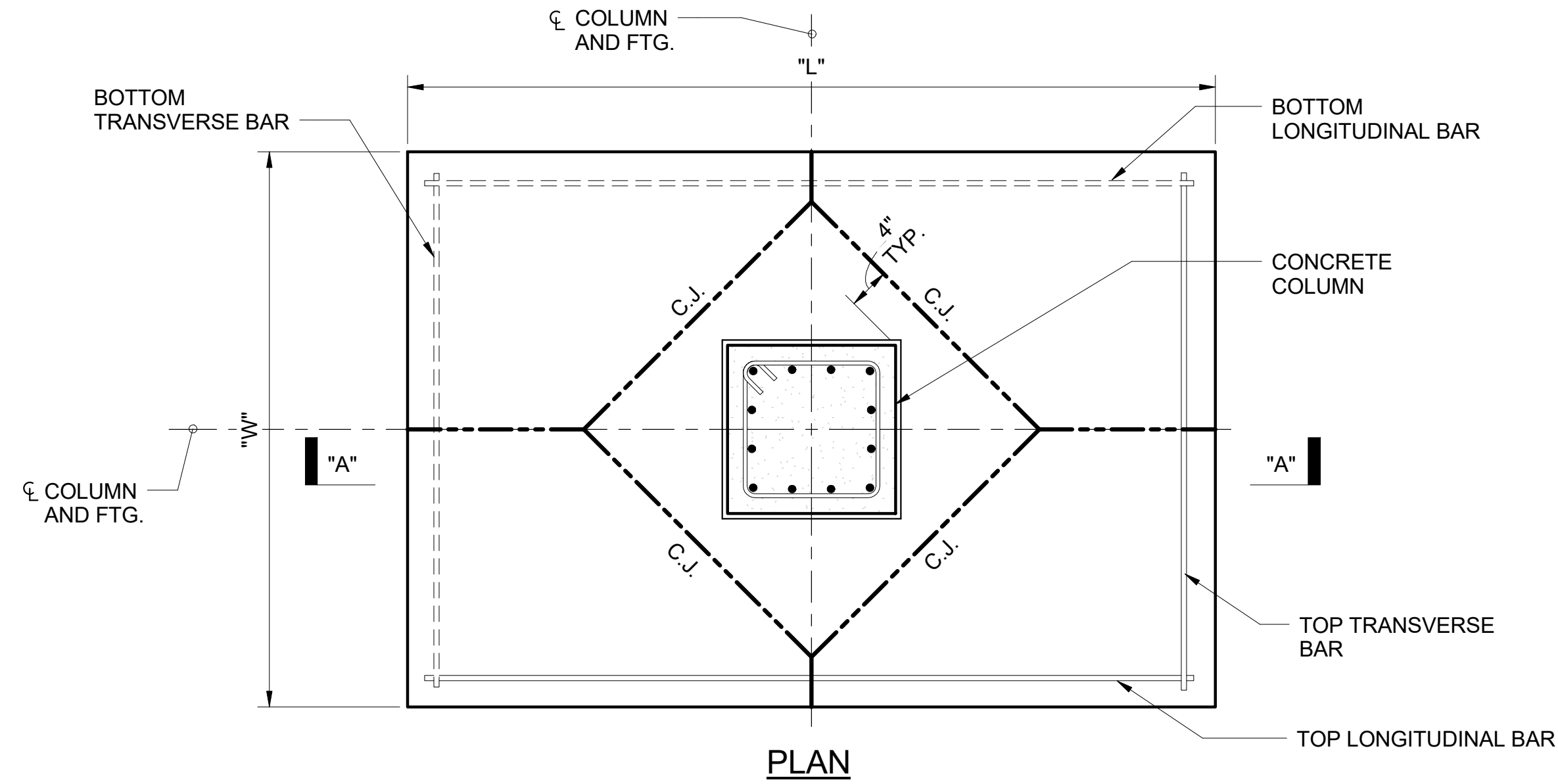
100% FINAL DESIGN

PUVABUJUPUWUWUP

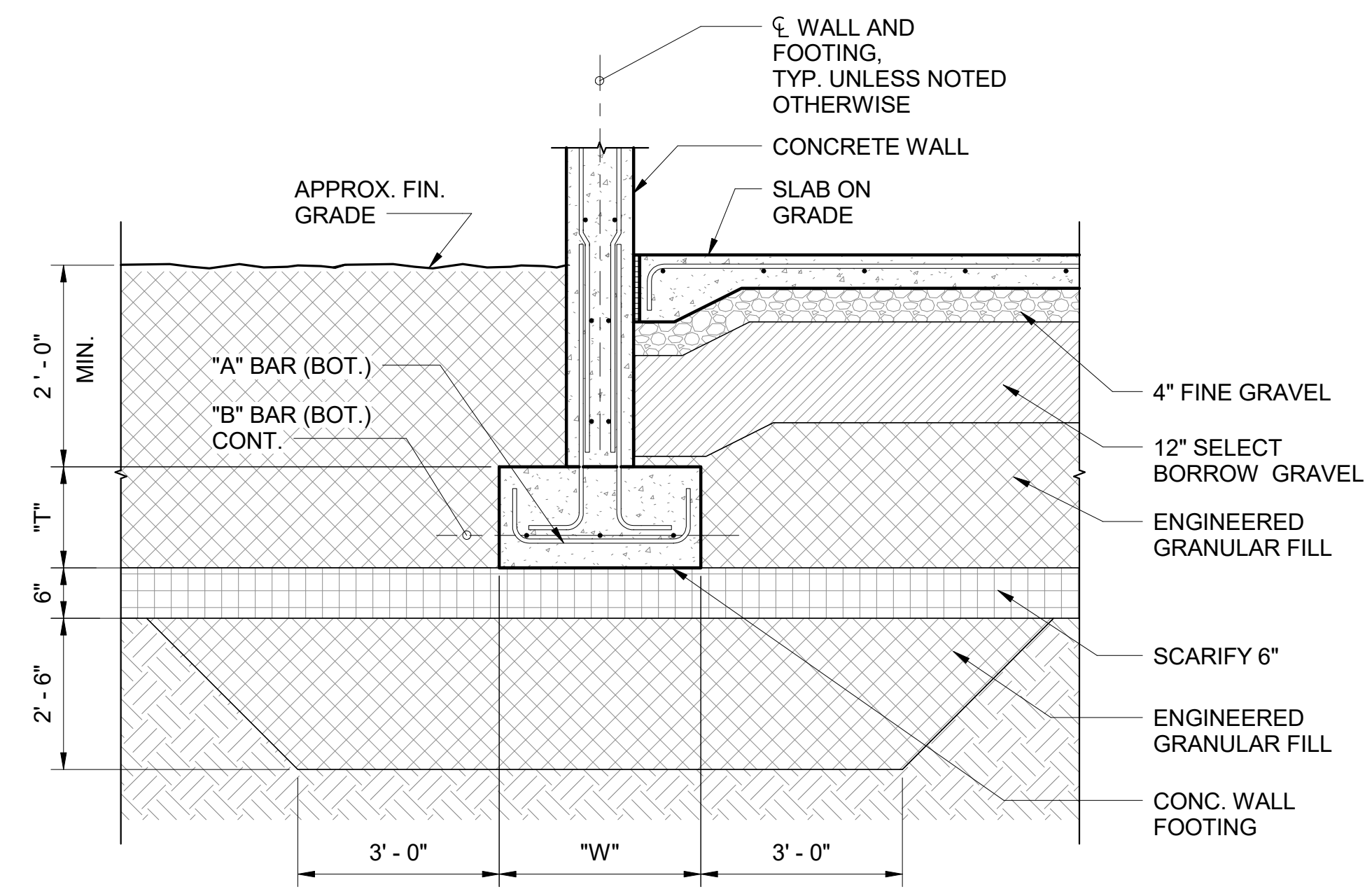
SHEET TITLE: PARKING GARAGE FLOOR FRAMING PLAN - ROOF LEVEL

CADD FILE: PUVABUJUPUWUWUP

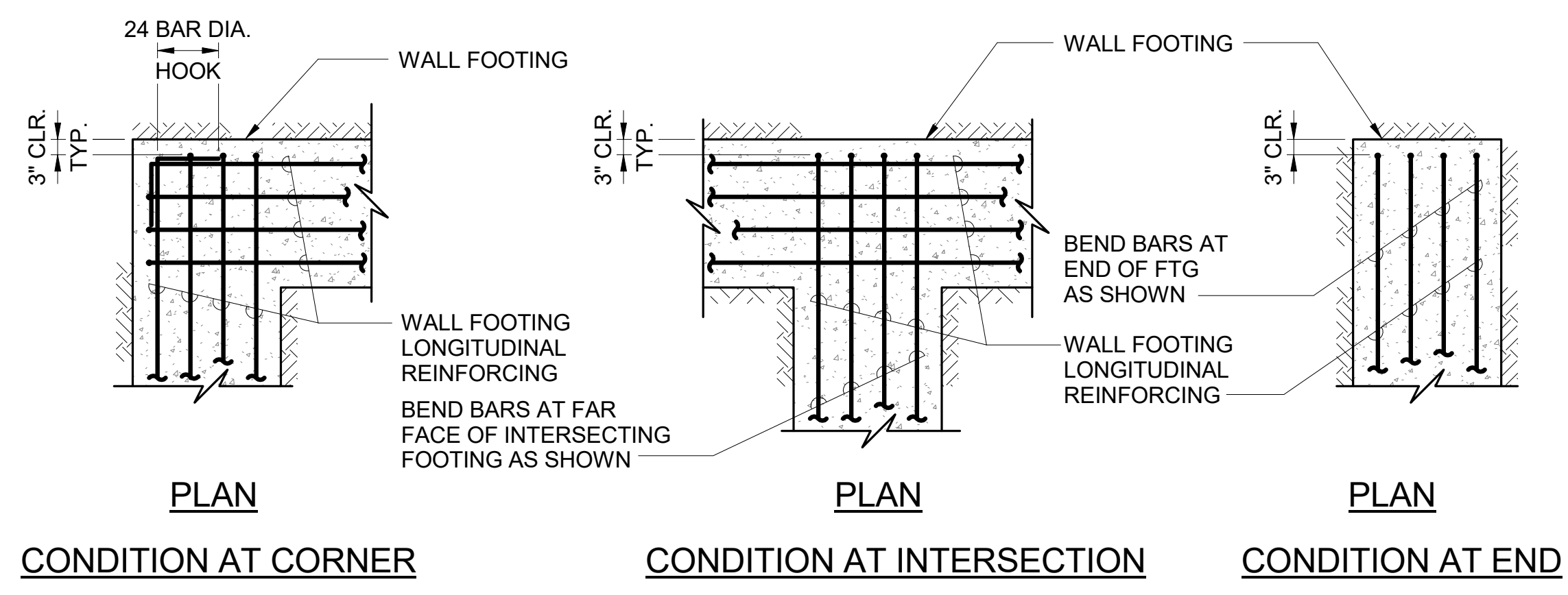
WALL FOOTING SCHEDULE					
MARK	DIMENSION		REINFORCEMENT		REMARKS
	WIDTH	THICKNESS	"A" - BAR	"B" - BAR	
WF-1	3'-0"	12"	#6 AT 12"	7 - #6	
WF-2	3'-0"	18"	#6 AT 12"	7 - #6	
WF-3	2'-0"	10"	#4 AT 12"	3 - #4	



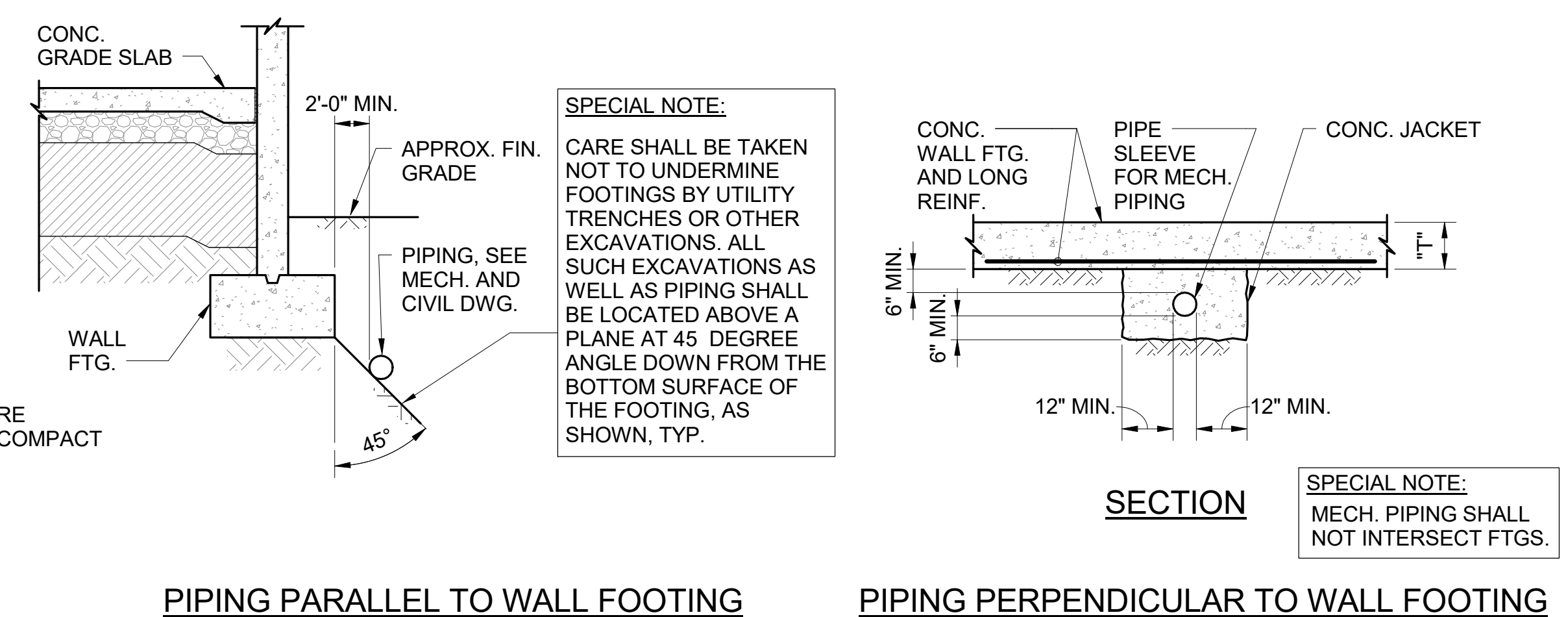
**1** TYPICAL COLUMN FOOTING DETAILS  
S410 SCALE: NTS



**2** TYPICAL WALL FOOTING DETAIL  
S410 SCALE: NTS



**3** TYPICAL WALL FOOTING DETAILS  
S410 SCALE: NTS



**4** WALL FOOTING DETAILS WITH UTILITIES  
S410 SCALE: NTS

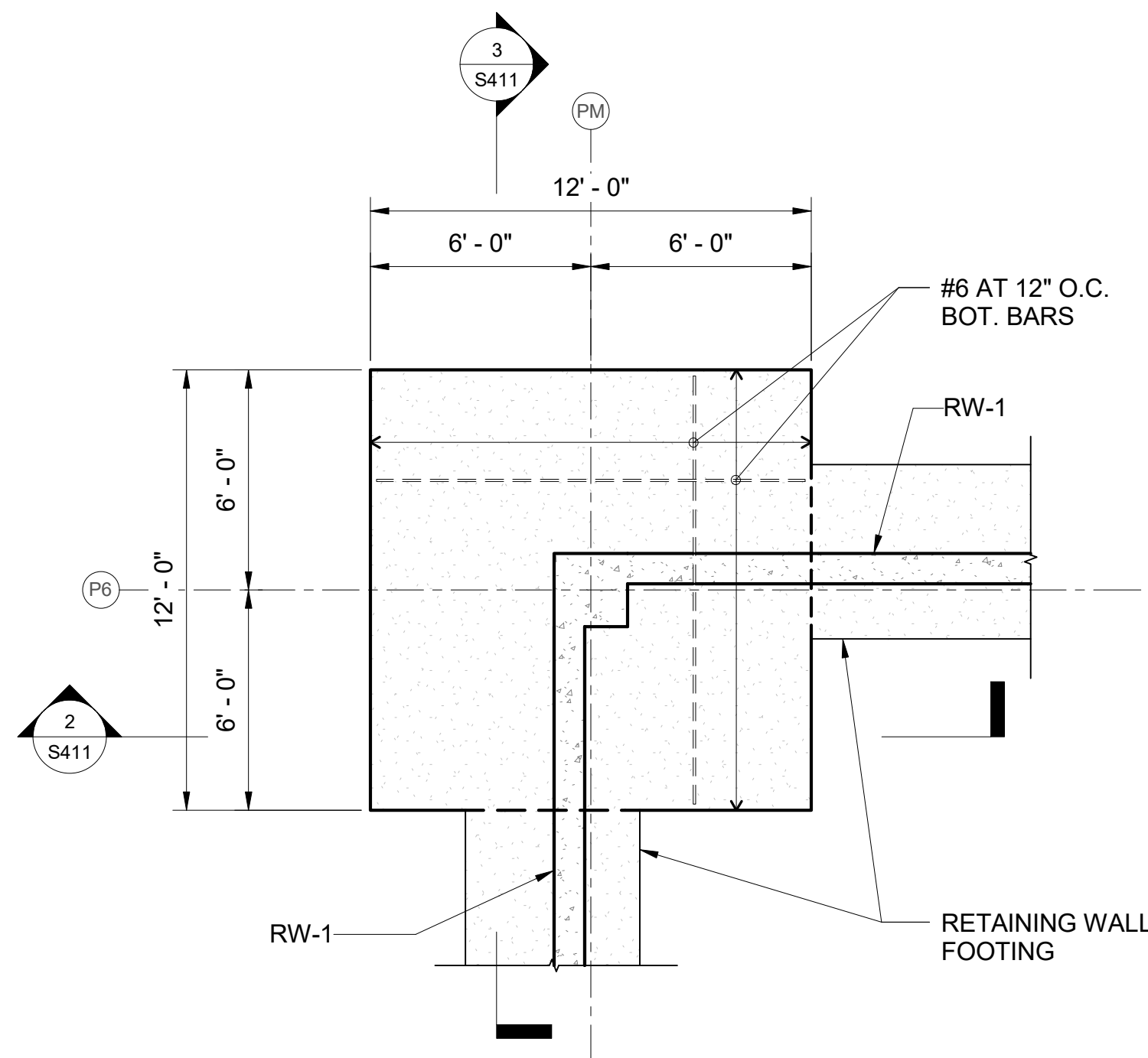
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NO. 10304-S  
HAWAII  
LICENSE EXPIRATION DATE 4/30/20  
SIGNATURE

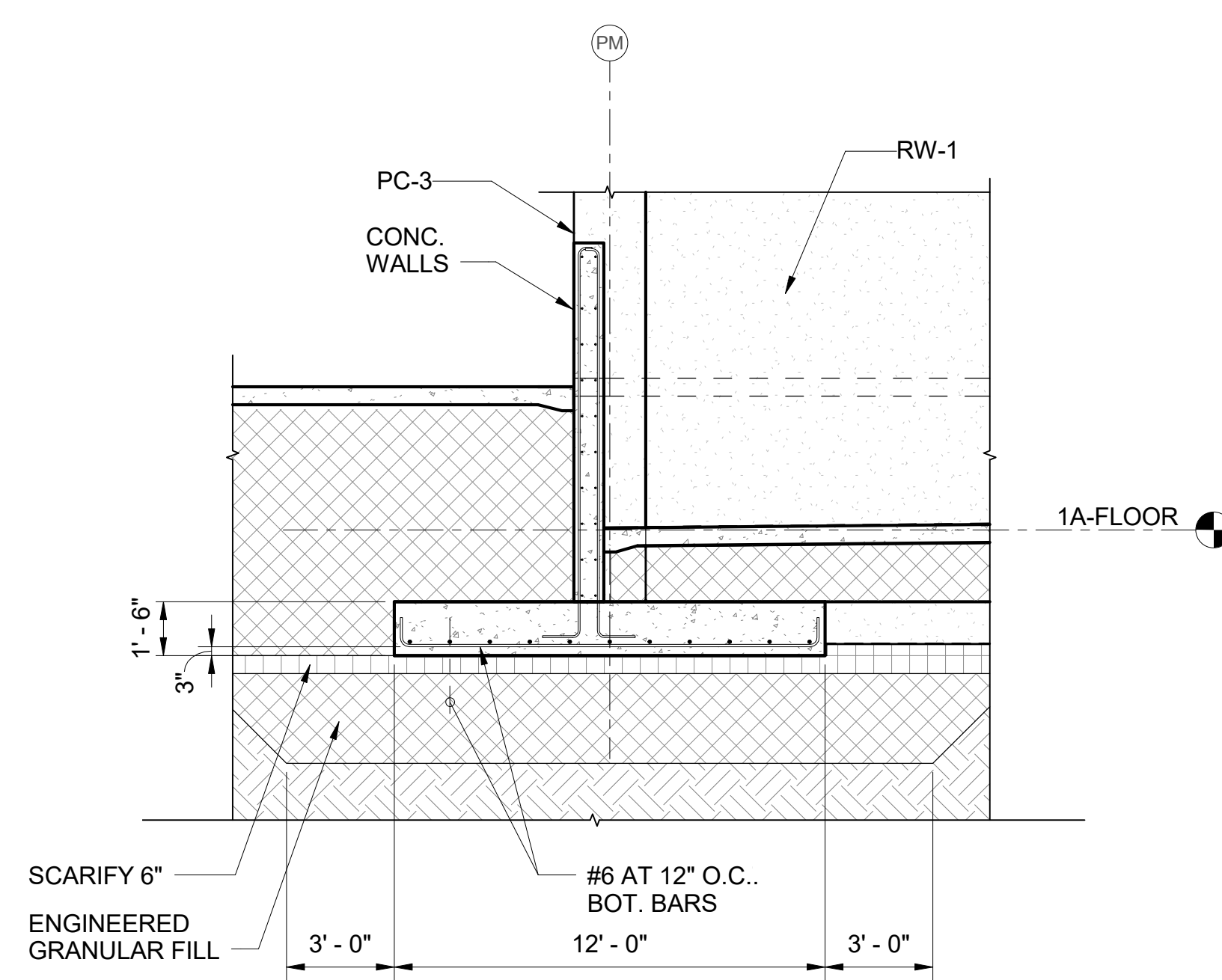
**WAILUKU CIVIC COMPLEX PHASE 1B**  
100% FINAL DESIGN  
[PUNAHOU] [UJMW] [WOP]

SHEET TITLE:		TYPICAL FOOTING SCHEDULE AND DETAILS	
PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	<b>1B</b>	<b>S410</b>	OF SHEETS

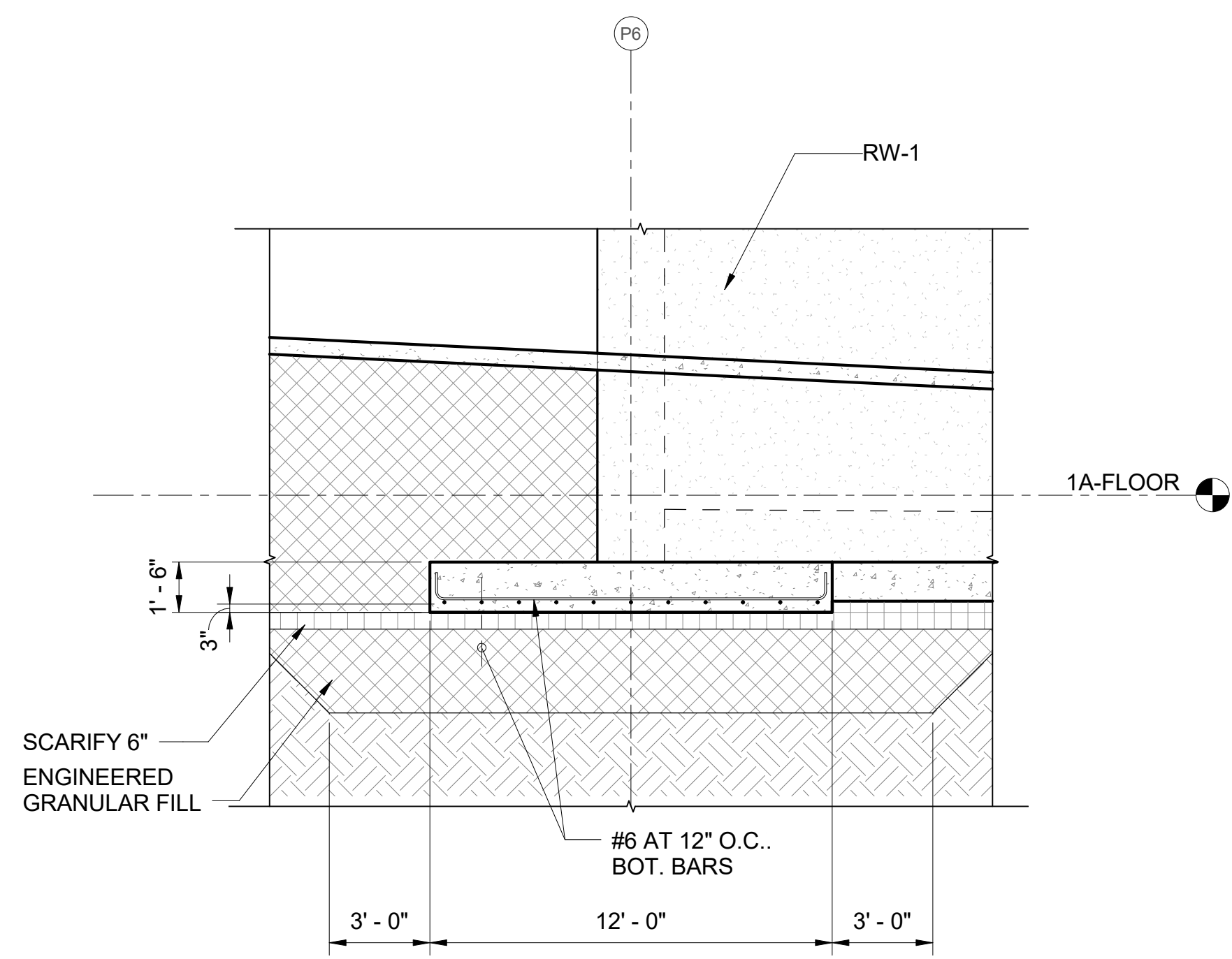




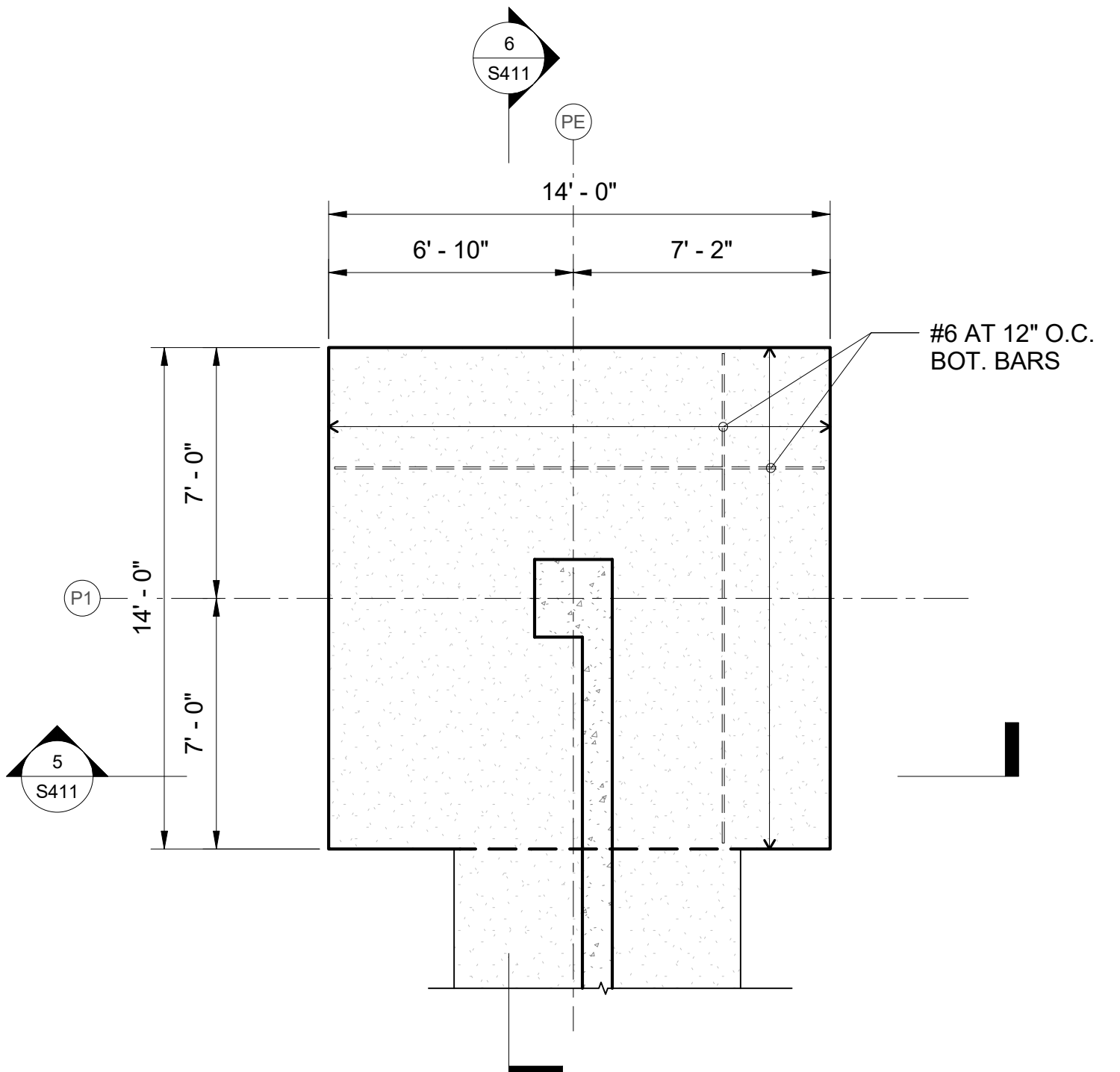
**1 PF-1 DETAIL**  
S411 SCALE: 1/4" = 1'-0"



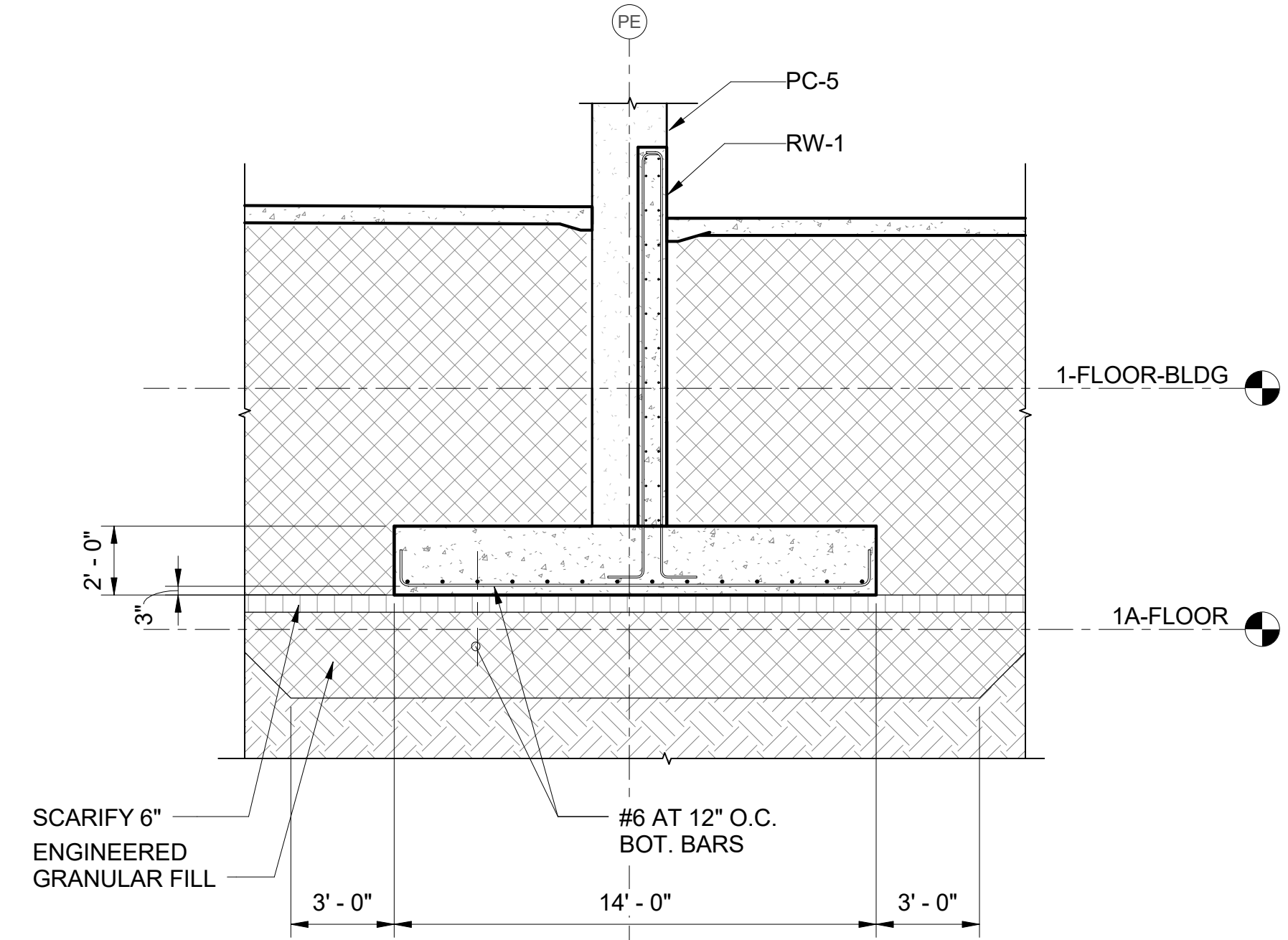
**2 PF-1 SECTION**  
S411 SCALE: 1/4" = 1'-0"



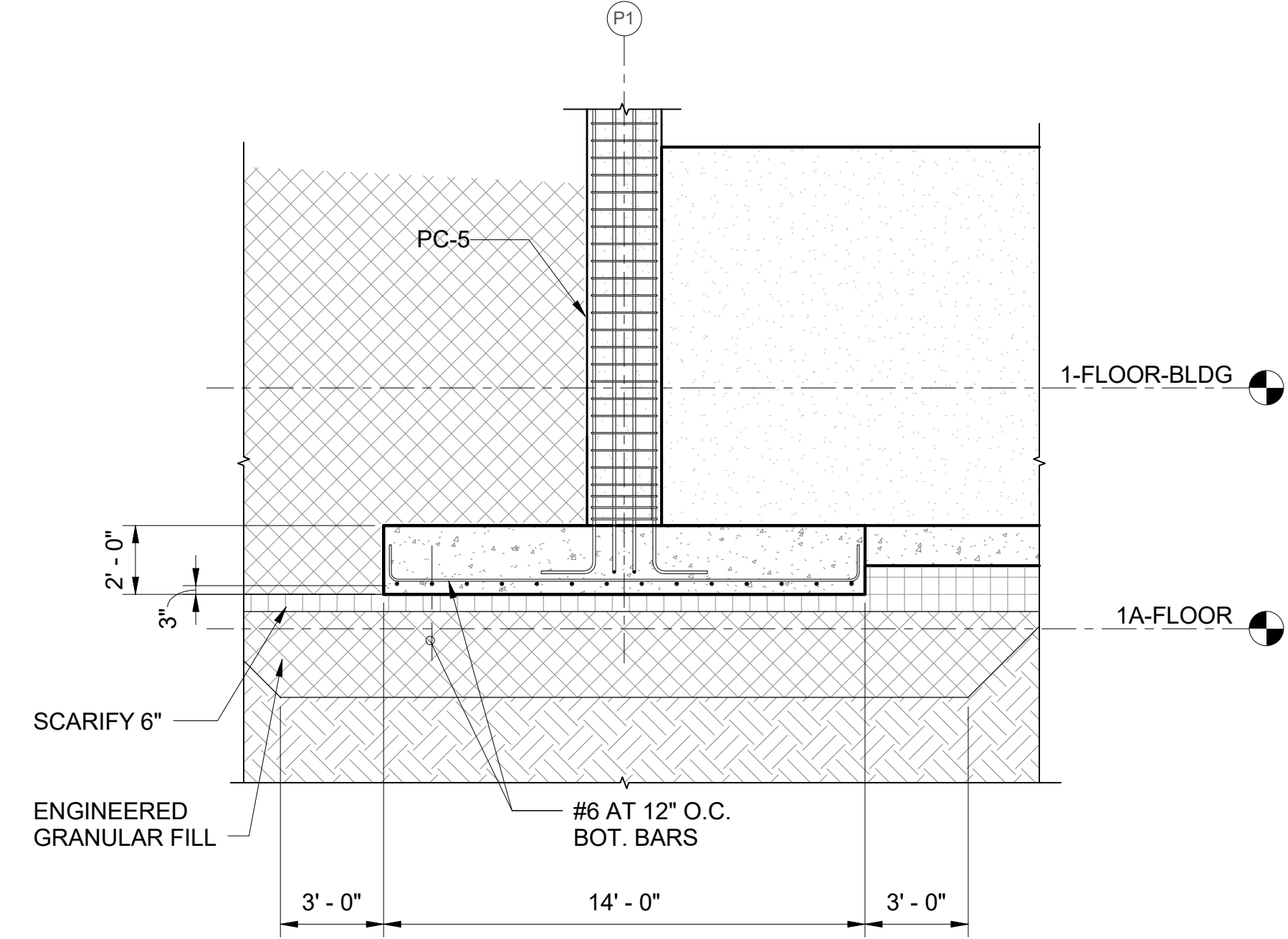
**3 PF-1 SECTION**  
S411 SCALE: 1/4" = 1'-0"



**4 PF-2 DETAIL**  
S411 SCALE: 1/4" = 1'-0"



**5 PF-2 SECTION**  
S411 SCALE: 1/4" = 1'-0"



**6 PF-2 SECTION**  
S411 SCALE: 1/4" = 1'-0"



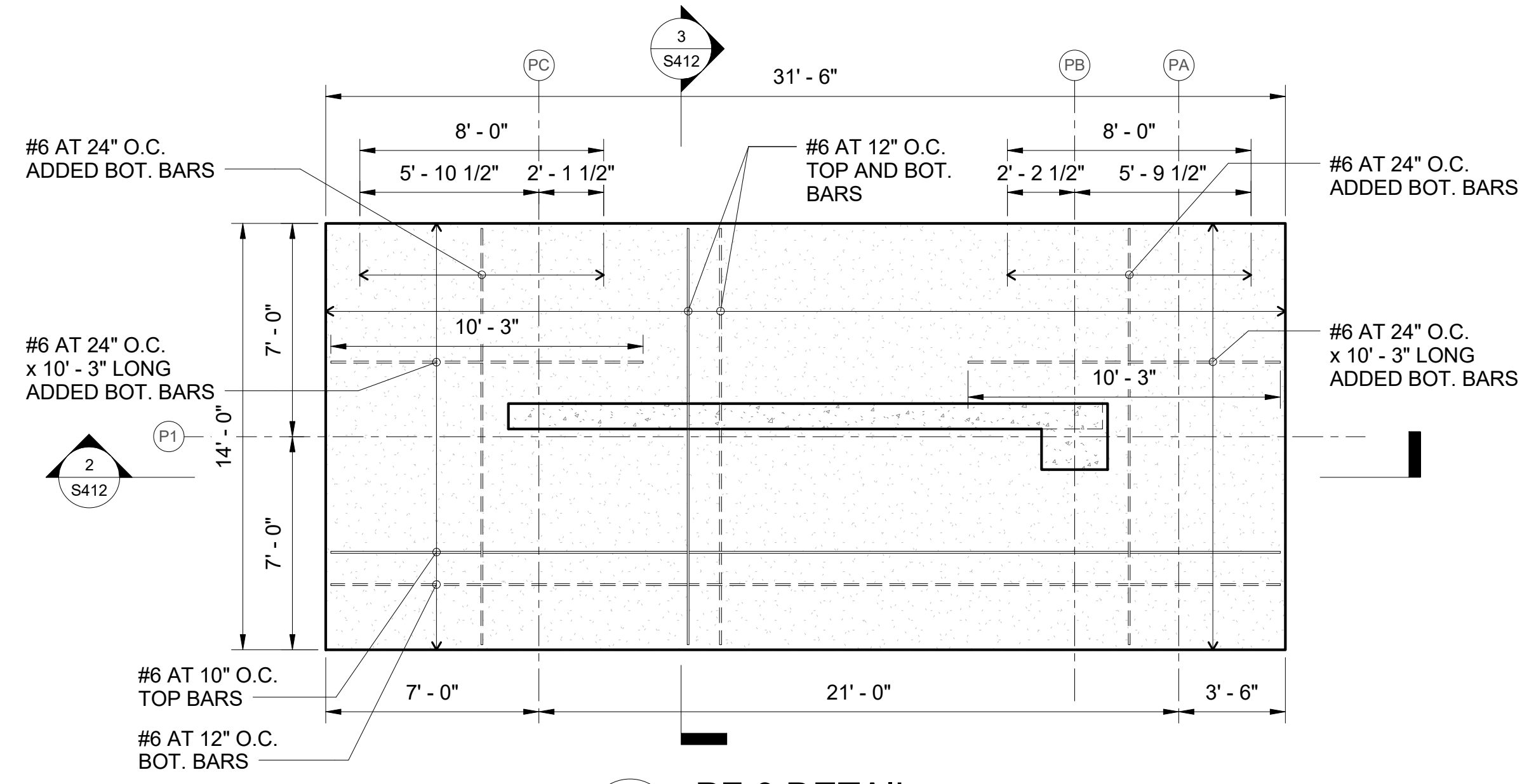
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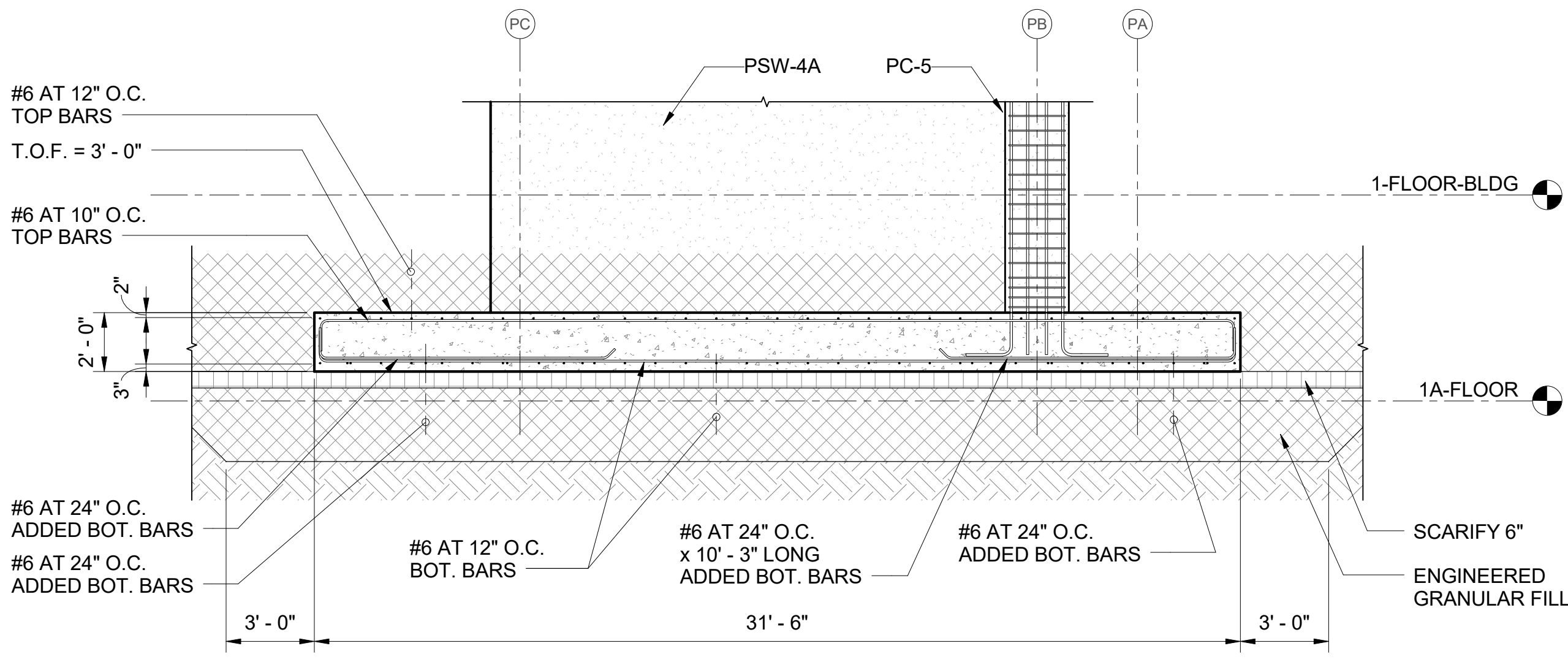
**WAILUKU CIVIC COMPLEX PHASE 1B**  
100% FINAL DESIGN  
[PUVABUUPUWUWUP]

PROJECT:	2017-001	REVISIONS:		SHEET TITLE:	FOOTING DETAILS
DRAWN:	LC				
DATE:	7/25/2019				
PHASE	1B	SHEET	S411	CADD FILE:	
		OF	SHEETS		

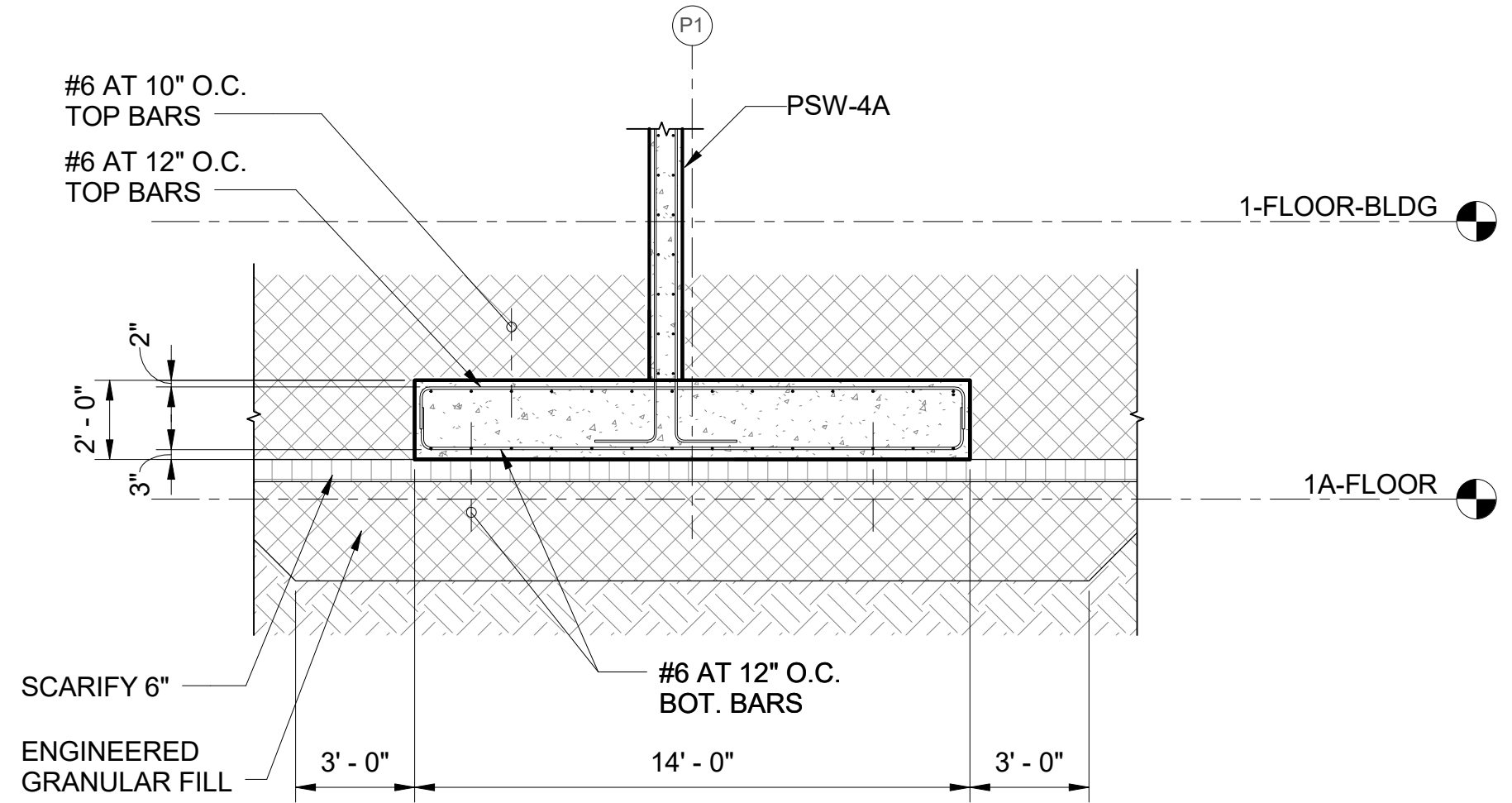




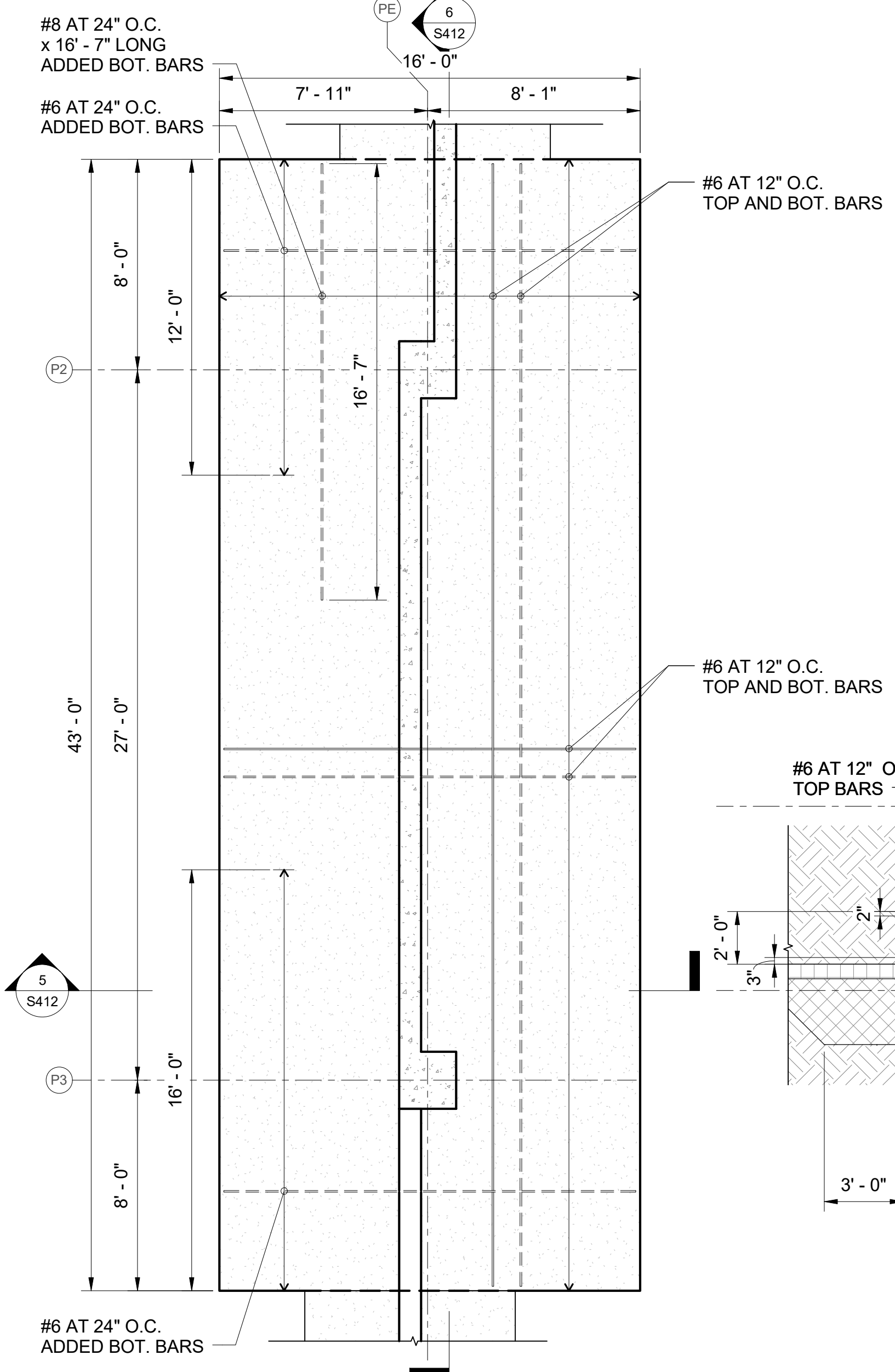
**1 PF-3 DETAIL**  
S412 SCALE: 1/4" = 1'-0"



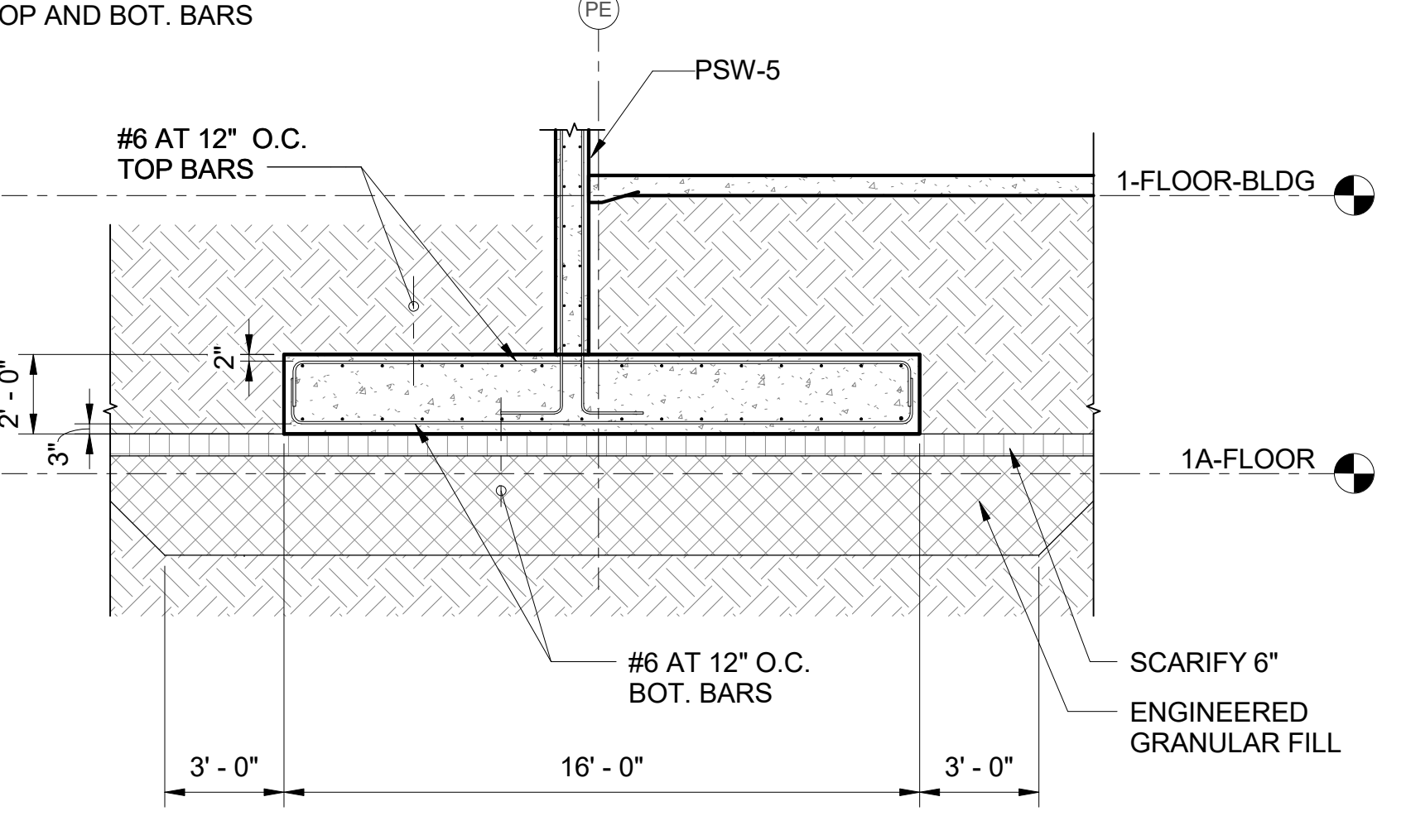
**2 PF-3 SECTION**  
S412 SCALE: 1/4" = 1'-0"



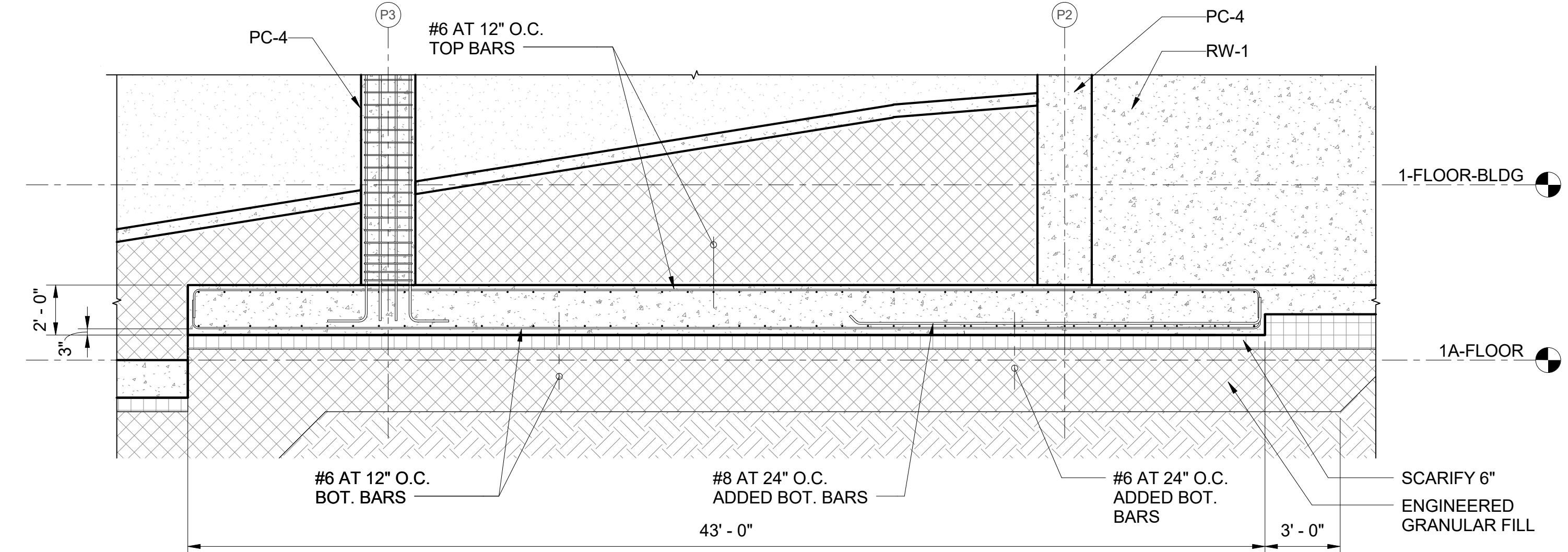
**3 PF-3 SECTION**  
S412 SCALE: 1/4" = 1'-0"



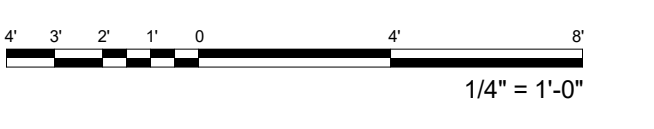
**4 PF-4 DETAIL**  
S412 SCALE: 1/4" = 1'-0"



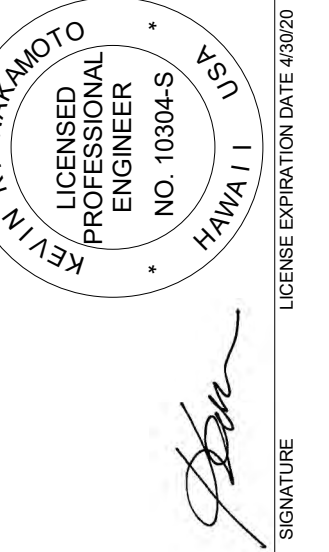
**5 PF-4 SECTION**  
S412 SCALE: 1/4" = 1'-0"



**6 PF-4 SECTION**  
S412 SCALE: 1/4" = 1'-0"



**FERRARO CHOI**



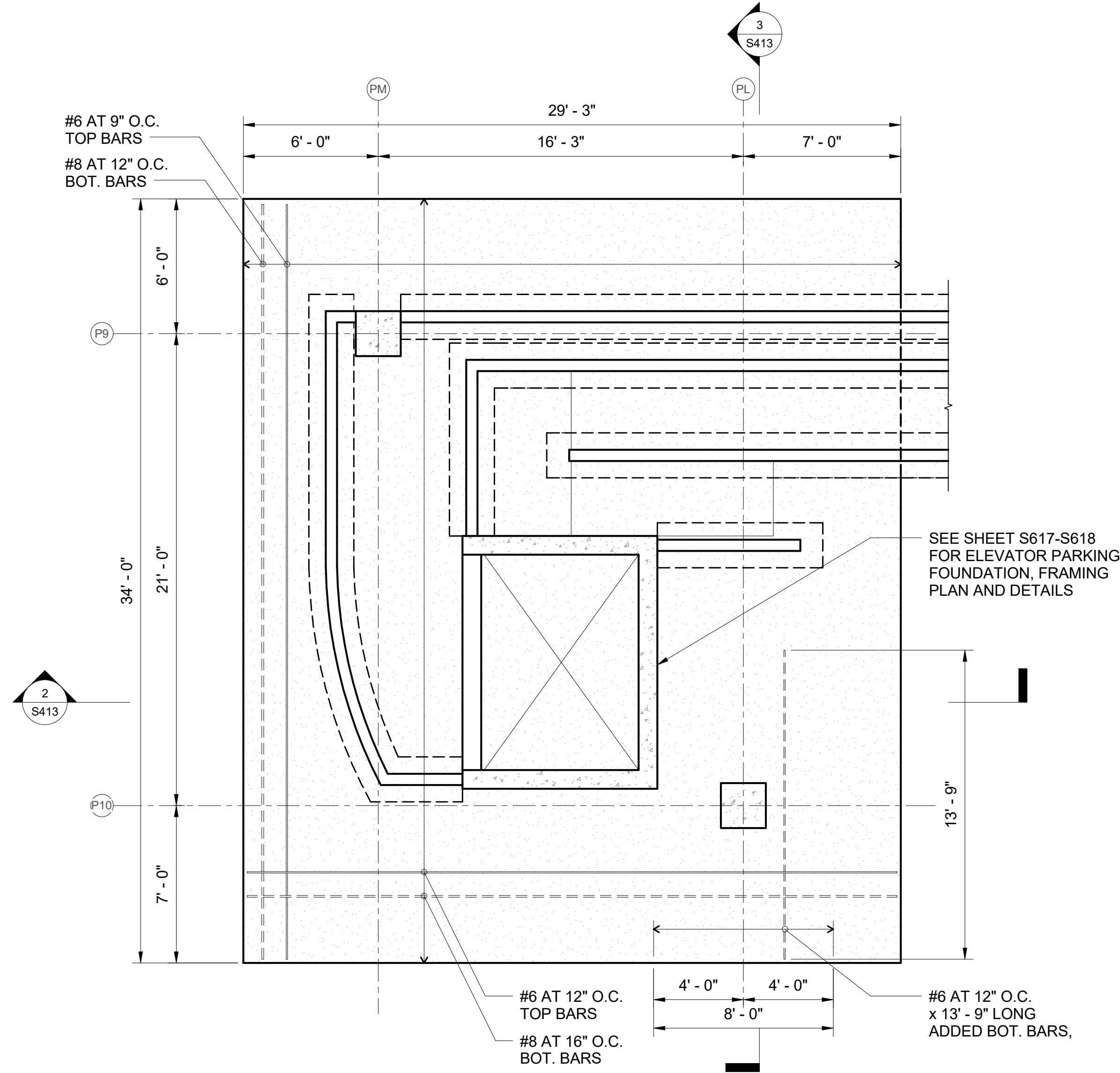
**WAILUKU CIVIC COMPLEX PHASE 1B**  
100% FINAL DESIGN

SHEET TITLE:  
**FOOTING DETAILS**

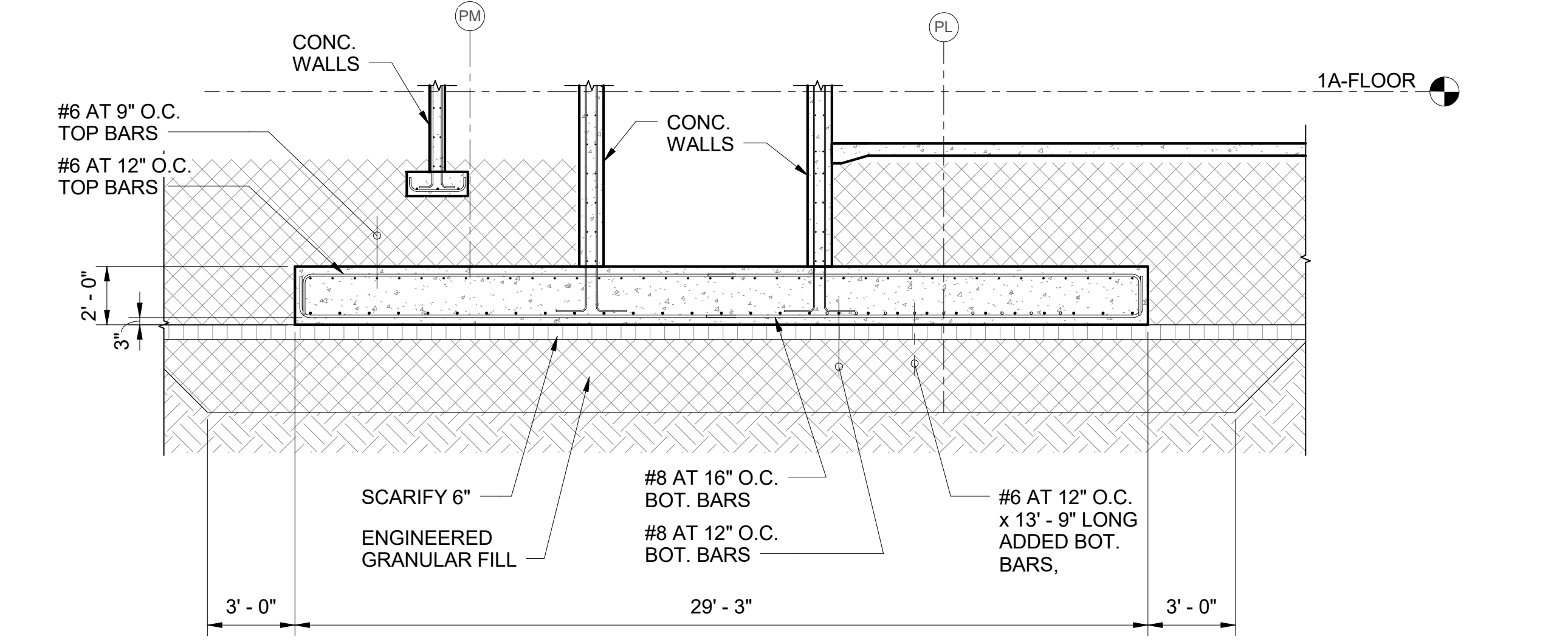
PROJECT:	2017-001
DRAWN:	LC
DATE:	7/25/2019
PHASE	SHEET
<b>1B</b>	<b>S412</b>
OF	SHEETS

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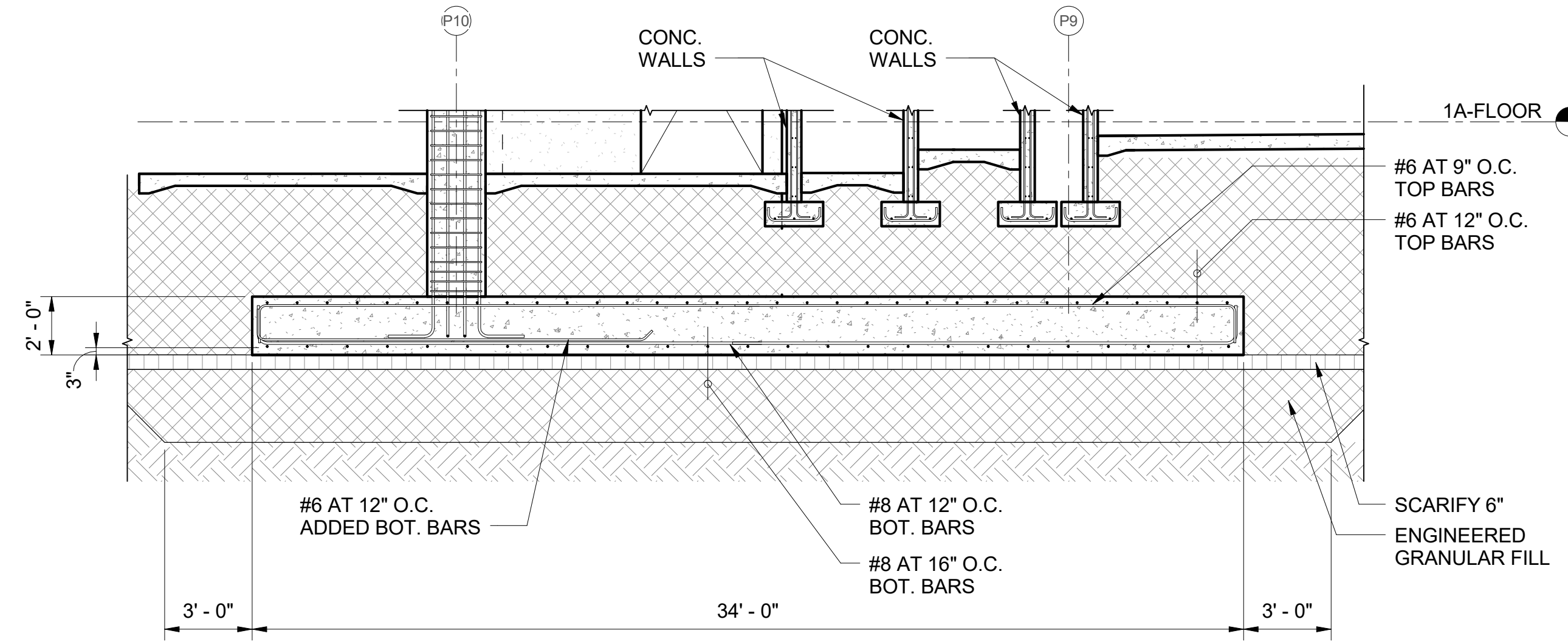
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**1 PF-5 DETAIL**  
 S413 SCALE: 1/4" = 1'-0"



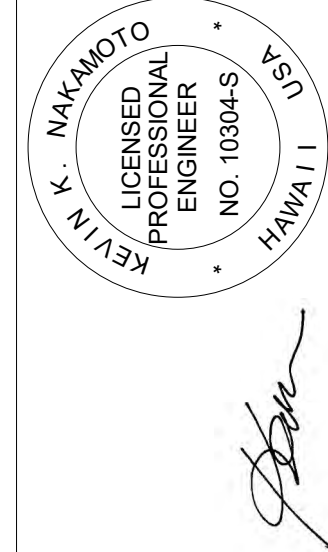
**2 PF-5 SECTION**  
 S413 SCALE: 1/4" = 1'-0"



**3 PF-5 SECTION**  
 S413 SCALE: 1/4" = 1'-0"



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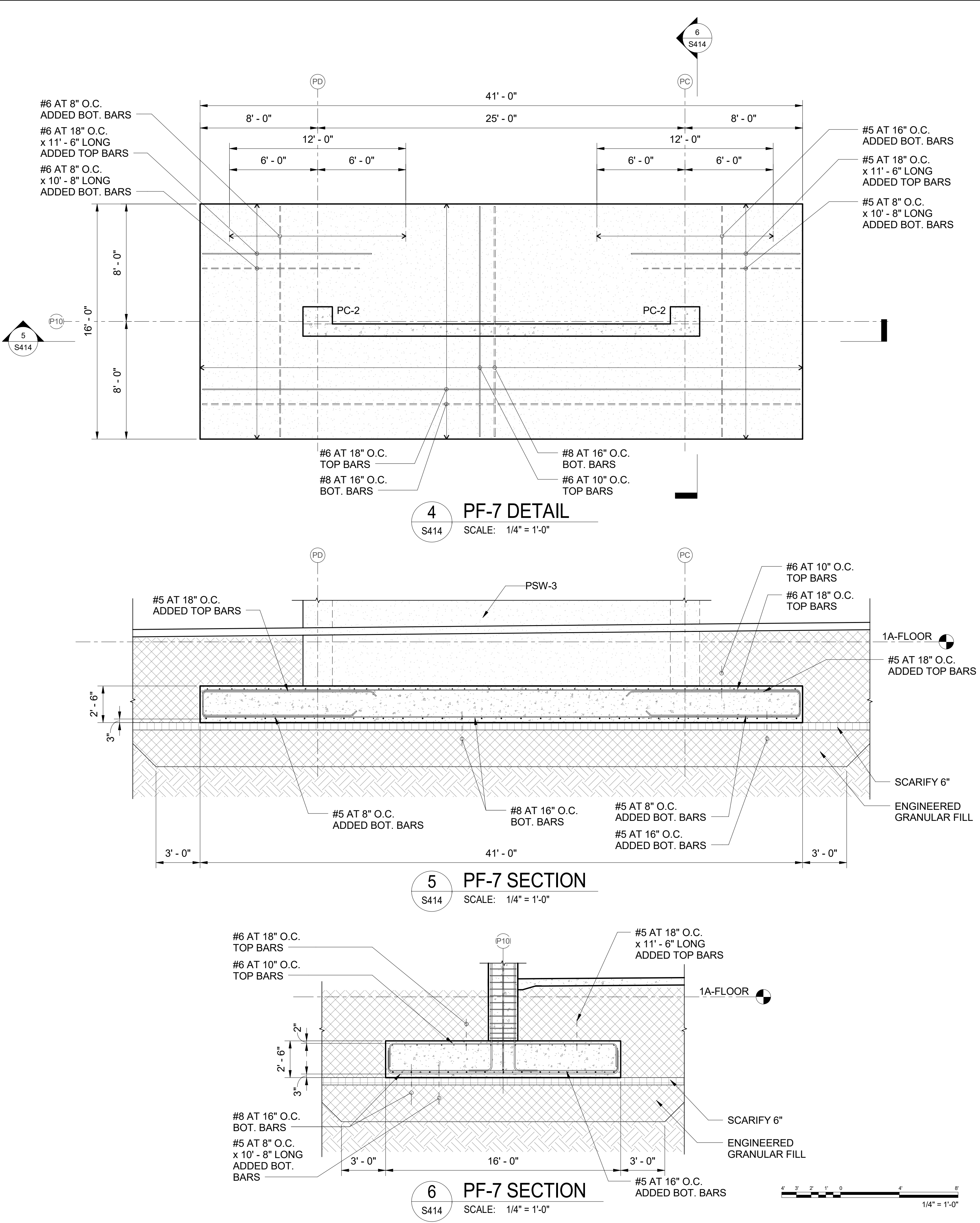
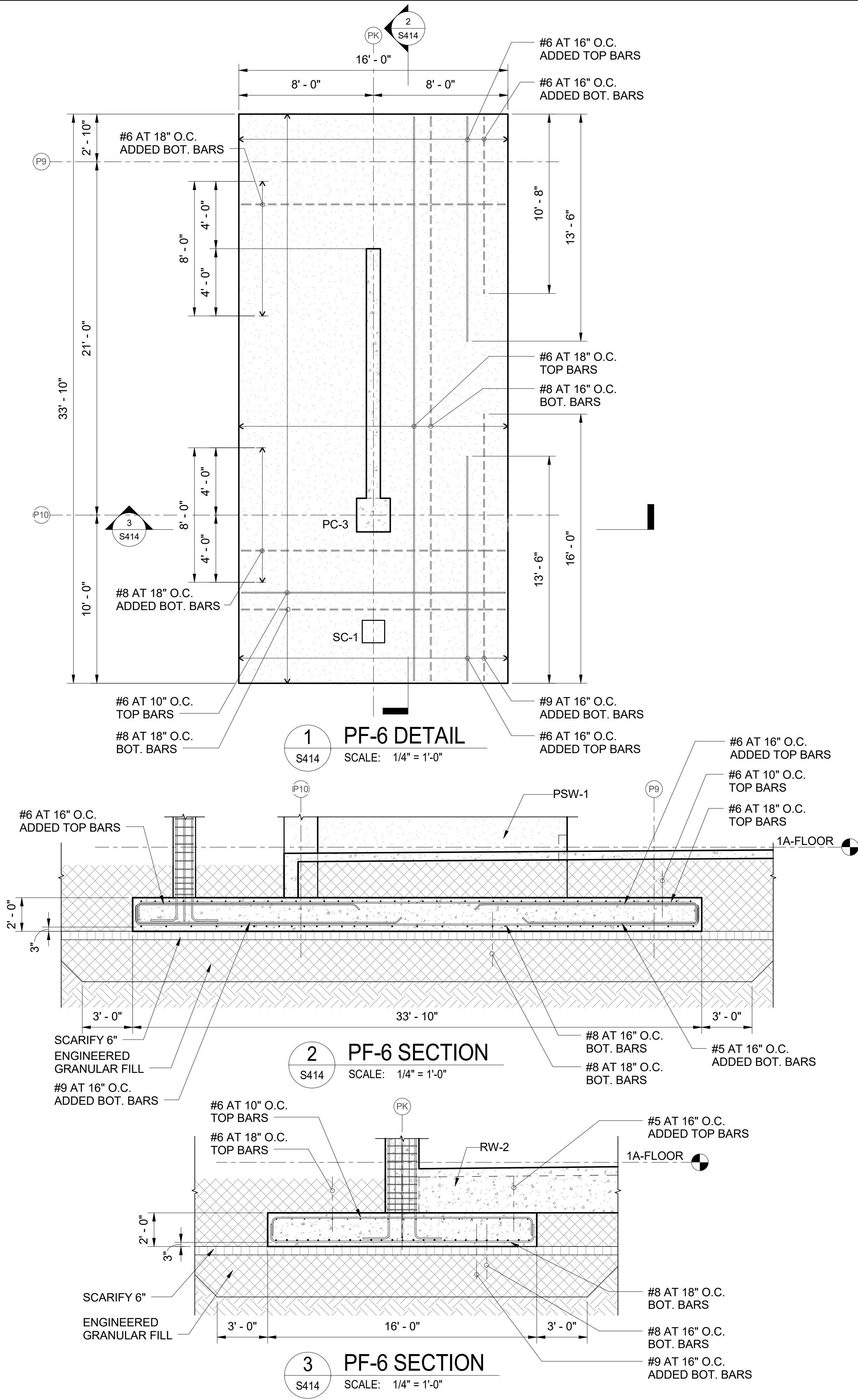


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SHEET TITLE:  
**FOOTING DETAILS**

PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET		
<b>1B</b>	<b>S413</b>		
OF	SHEETS		



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**KEVIN K. MAKIMOTO**  
 LICENSED PROFESSIONAL ENGINEER  
 NO. 10304-S  
 HAWAII  
 LICENSE EXPIRATION DATE: 6/30/20

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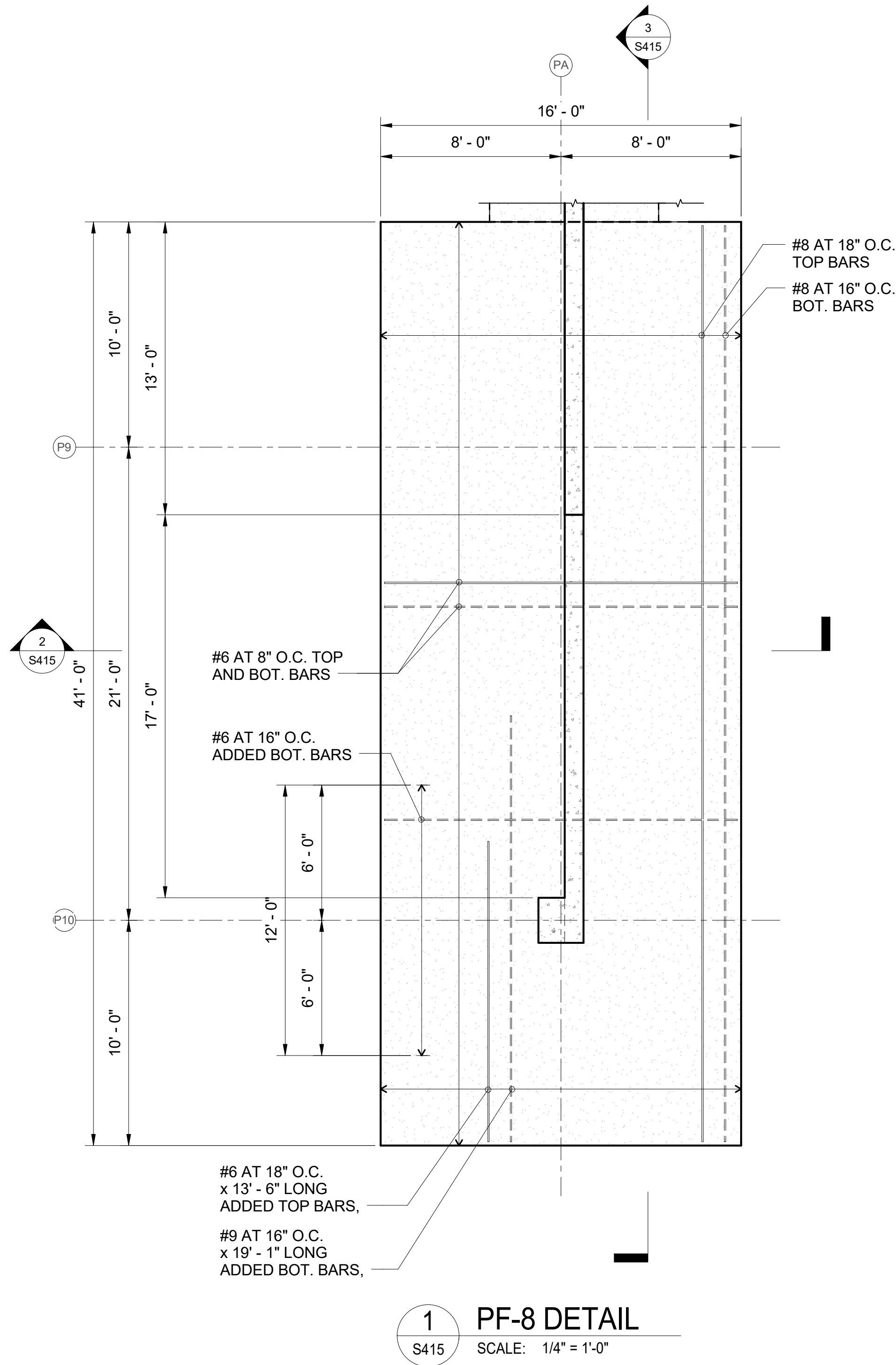
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FOOTING DETAILS	CADD FILE:

PROJECT:	REVISIONS:
2017-001	LC
	7/25/2019

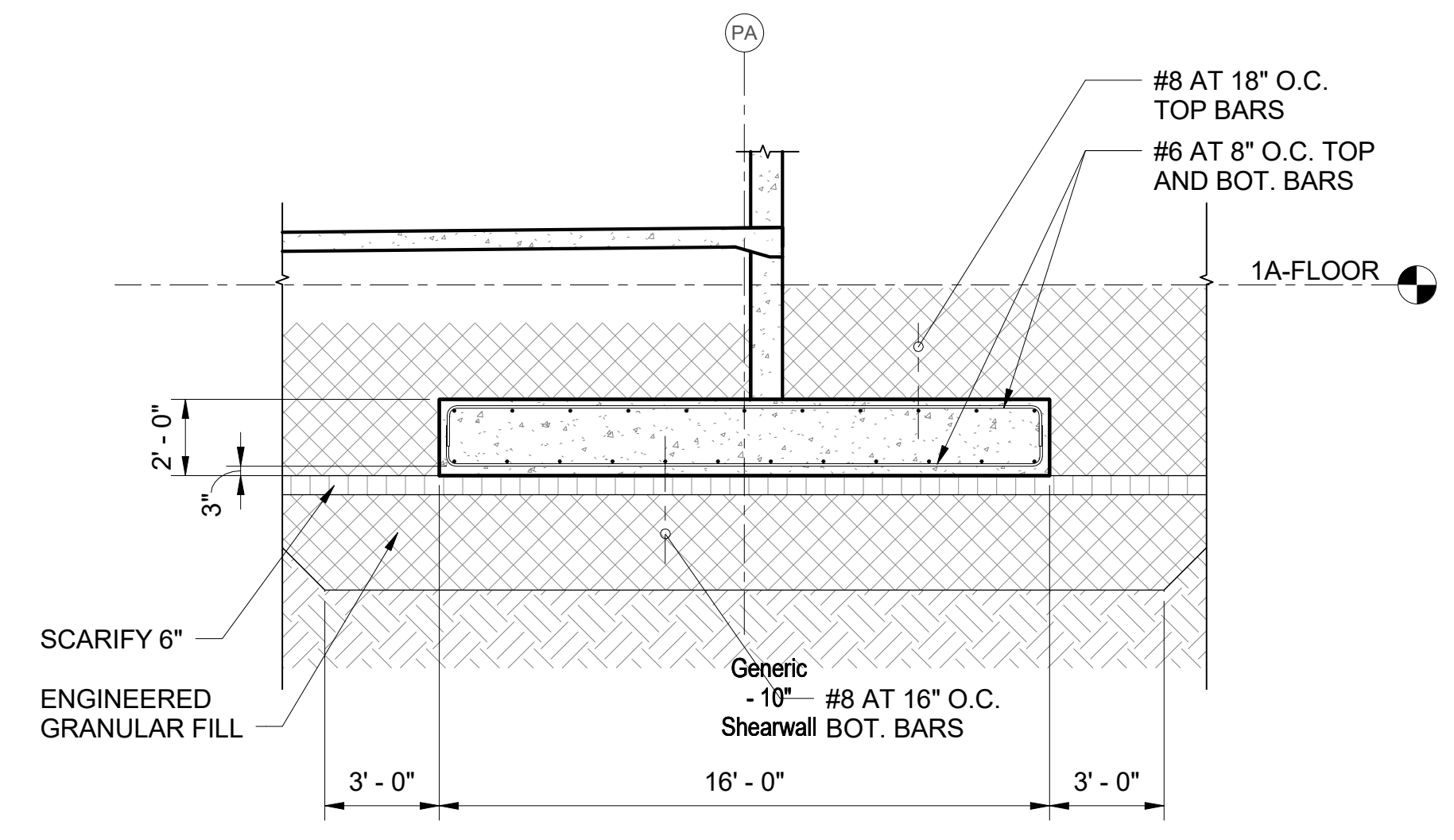
PHASE	SHEET	OF
1B	S414	SHEETS

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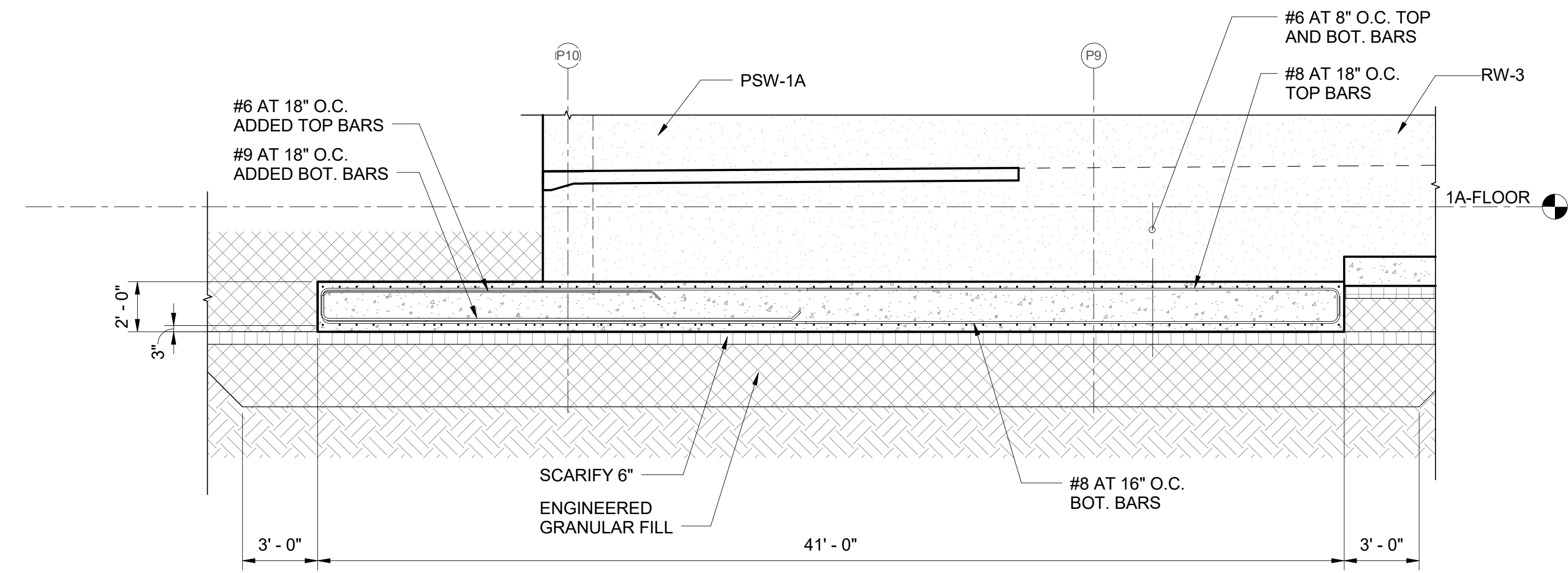




**1 PF-8 DETAIL**  
S415 SCALE: 1/4" = 1'-0"



**2 PF-8 SECTION**  
S415 SCALE: 1/4" = 1'-0"



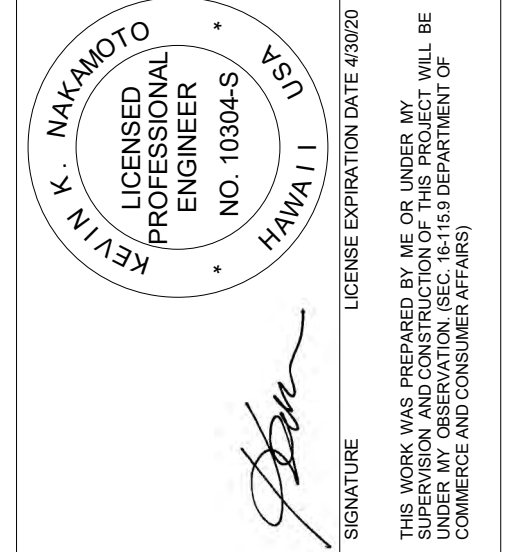
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S415 SCALE: 1/4" = 1'-0"



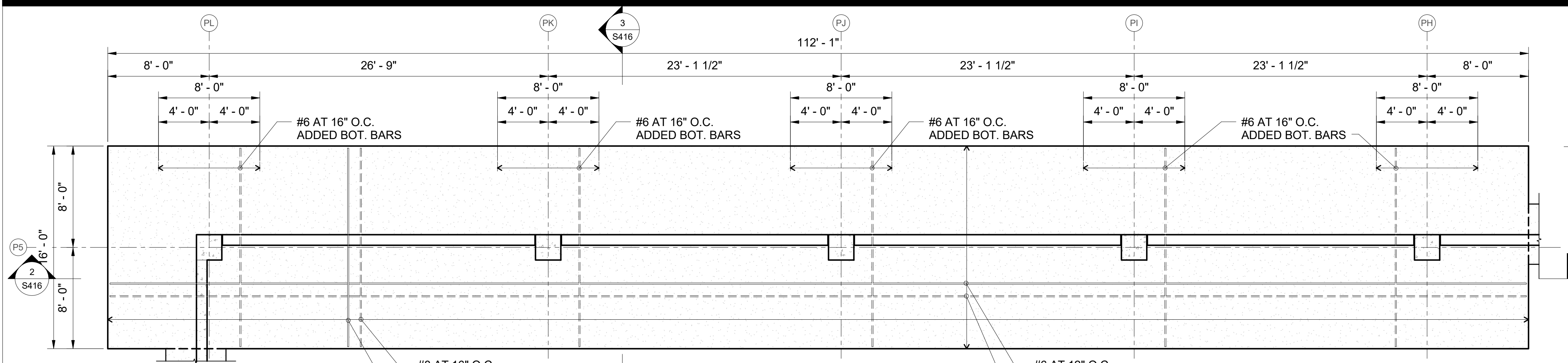
PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET		
<b>1B</b>	<b>S415</b>		
OF	SHEETS		

SHEET TITLE:  
**FOOTING DETAILS**

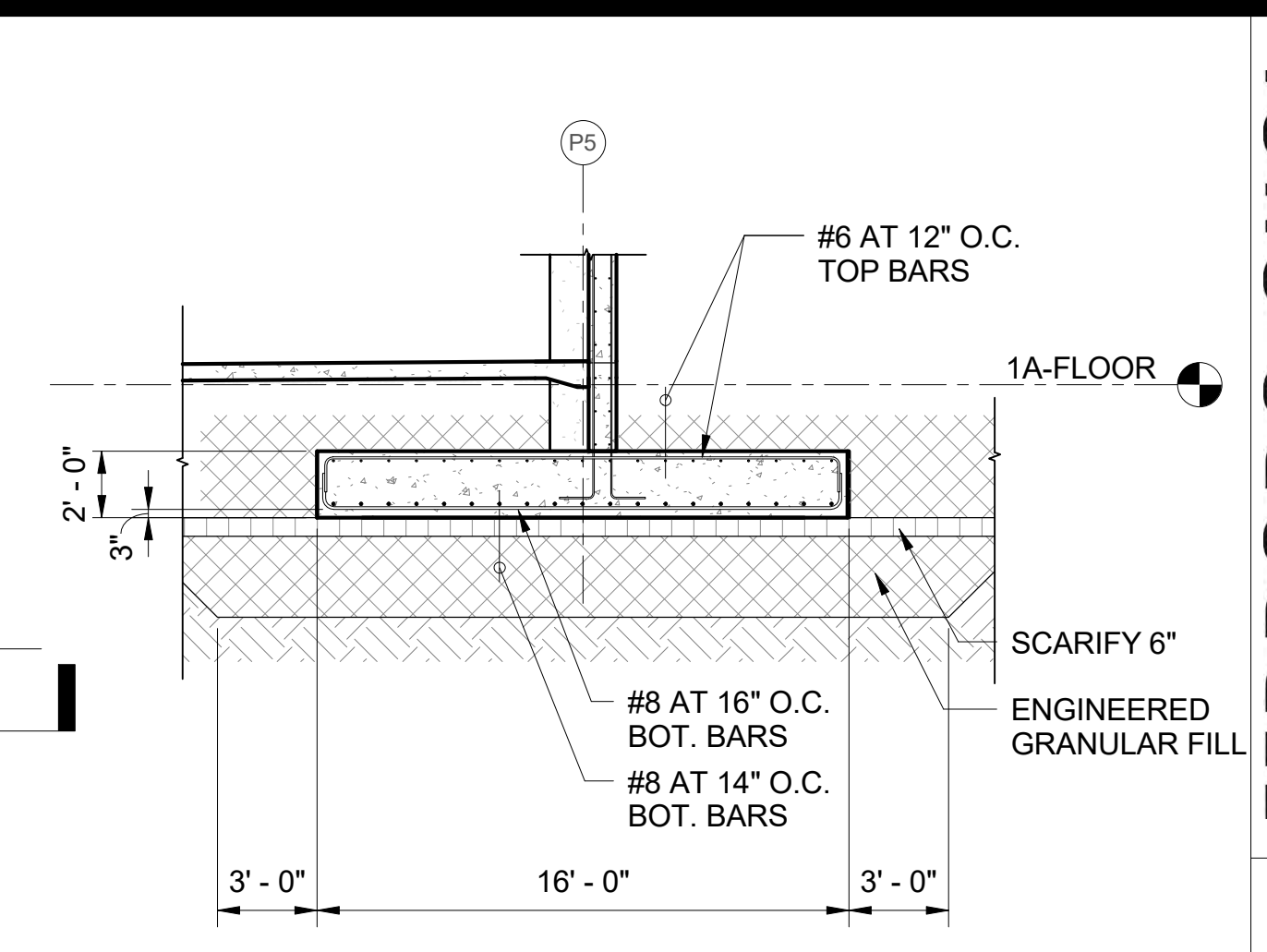
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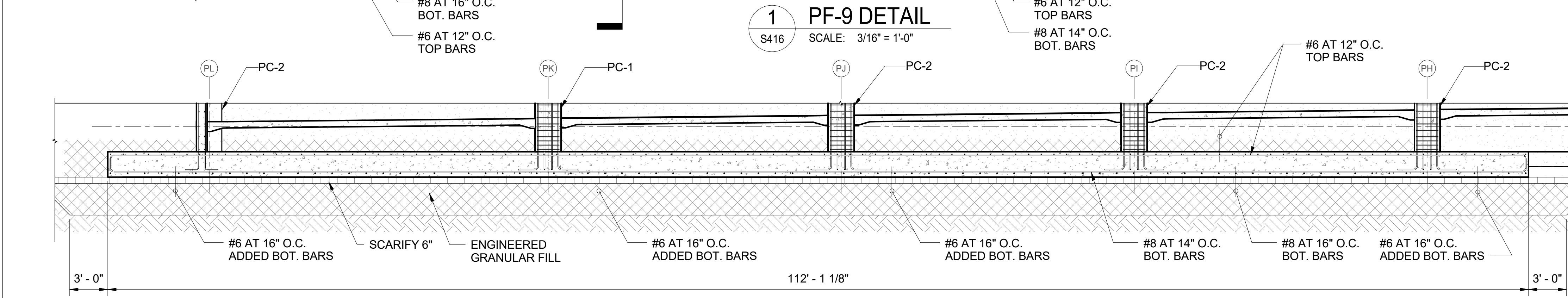
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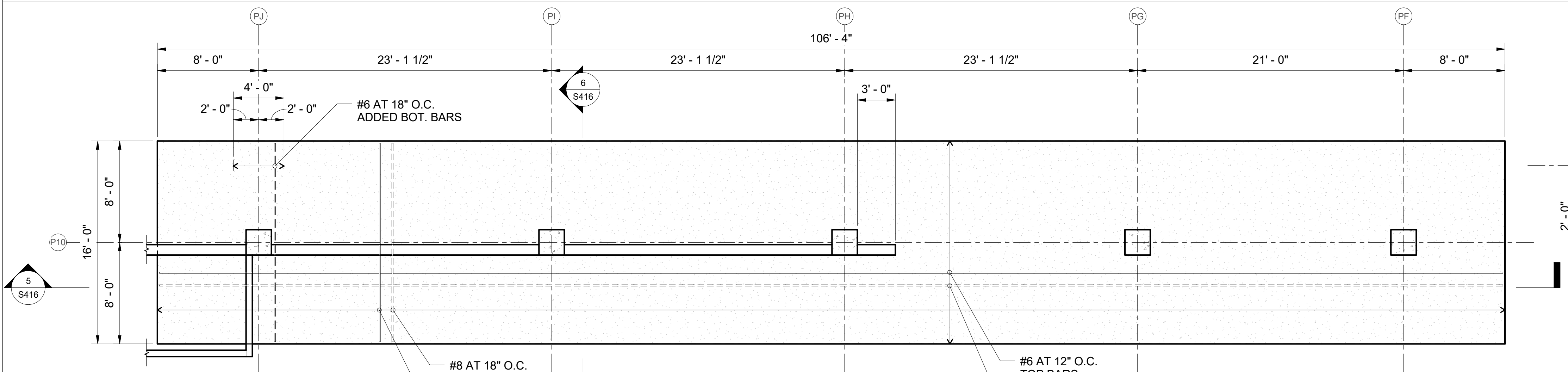
**1 PF-9 DETAIL**  
S416 SCALE: 3/16" = 1'-0"



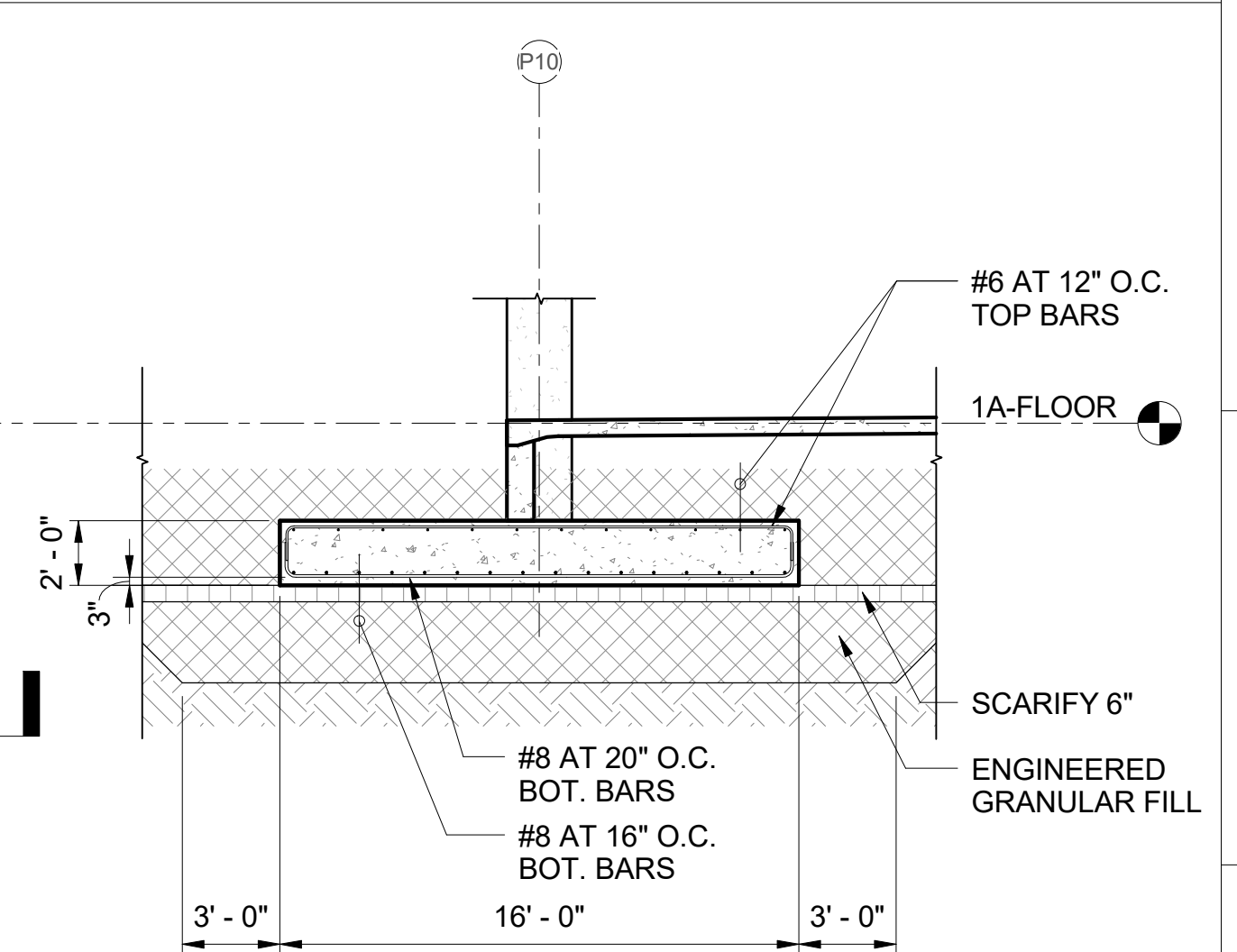
**3 PF-9 SECTION**  
S416 SCALE: 3/16" = 1'-0"



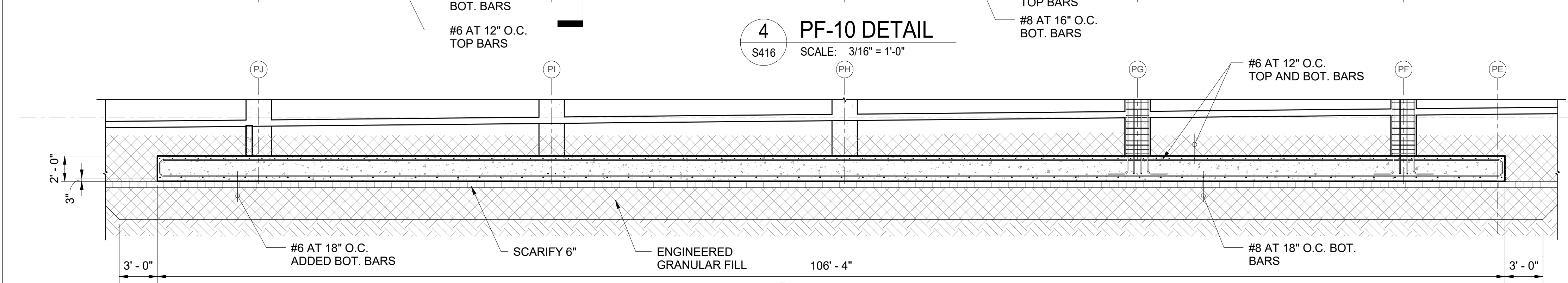
**2 PF-9 SECTION**  
S416 SCALE: 3/16" = 1'-0"



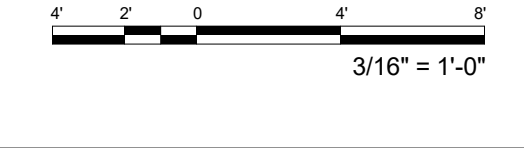
**4 PF-10 DETAIL**  
S416 SCALE: 3/16" = 1'-0"



**6 SECTION**  
S416 SCALE: 3/16" = 1'-0"



**5 SECTION**  
S416 SCALE: 3/16" = 1'-0"



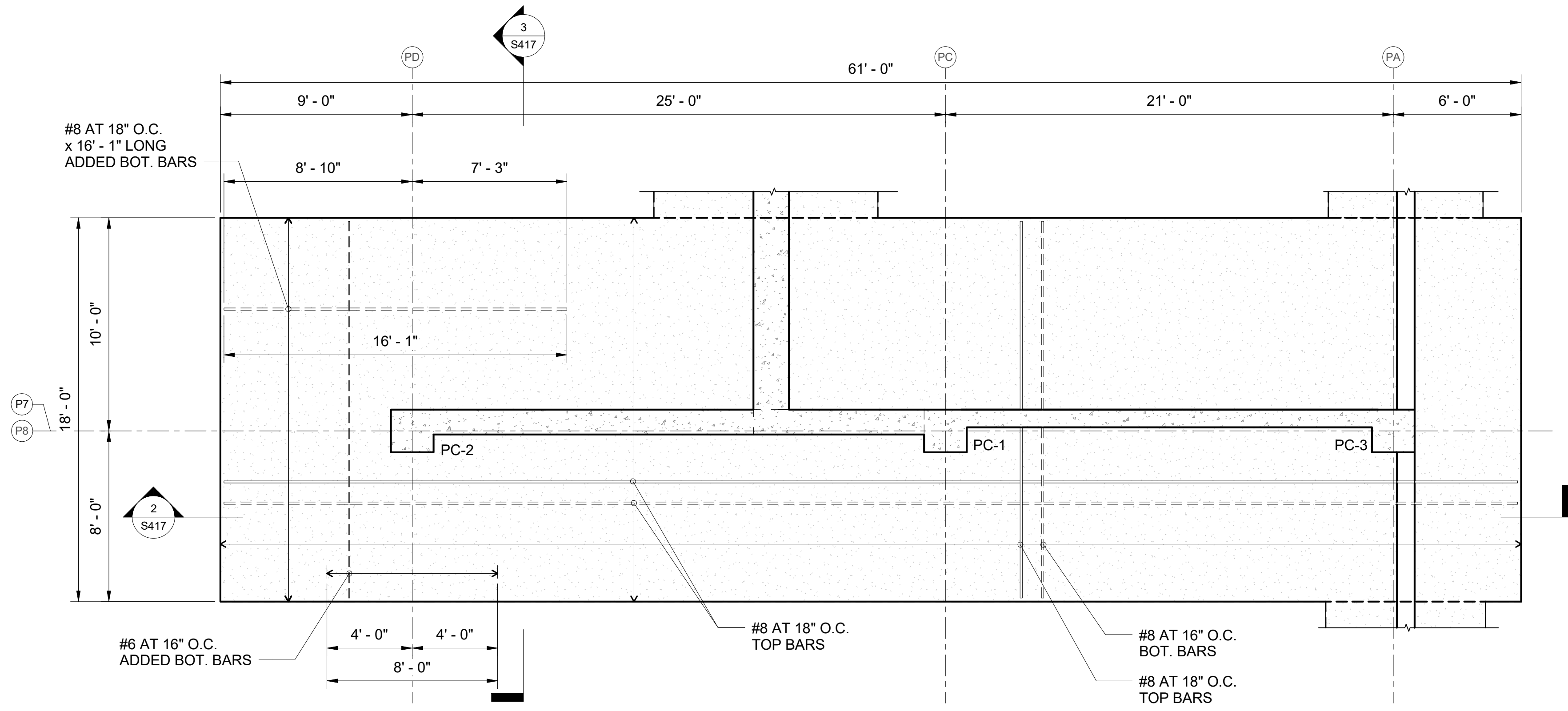
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SIGNATURE: *[Signature]*  
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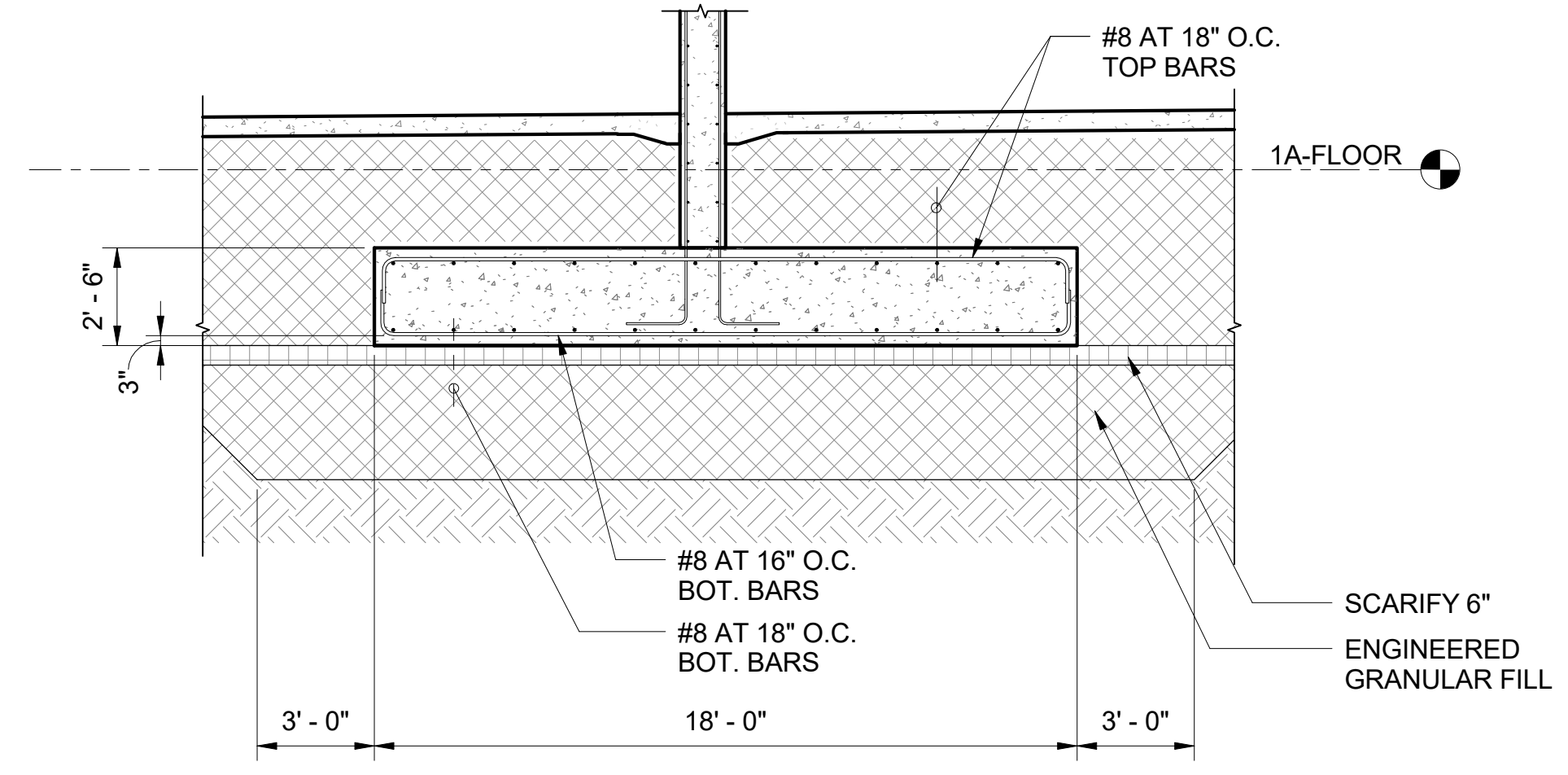
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100% FINAL DESIGN  
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SHEET TITLE:		FOOTING DETAILS	
PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	<b>1B</b>	<b>S416</b>	
	OF	SHEETS	
			CADD FILE:

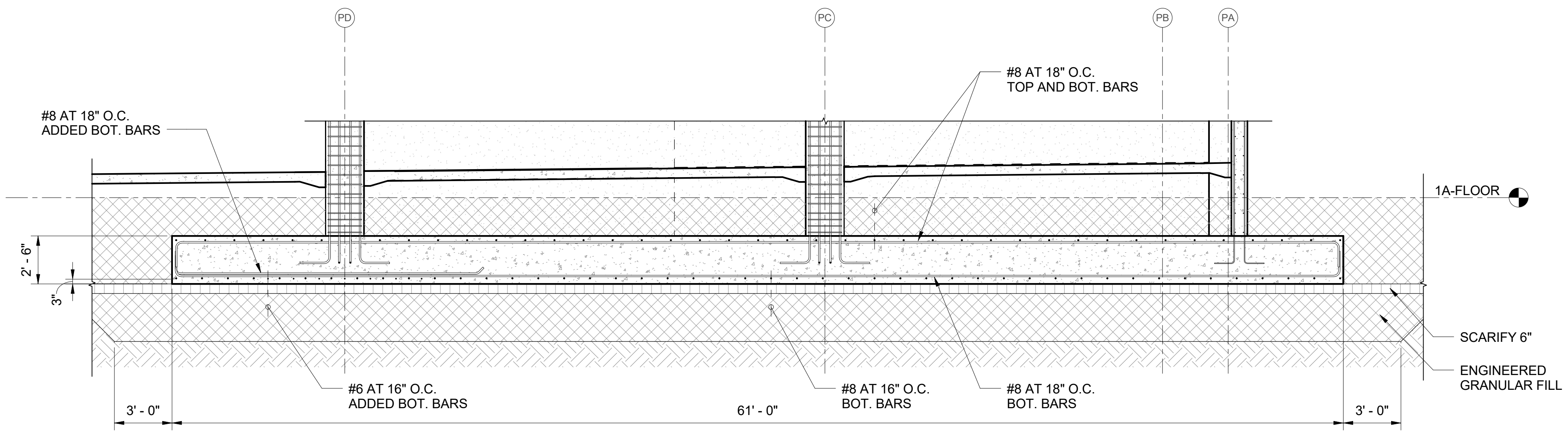
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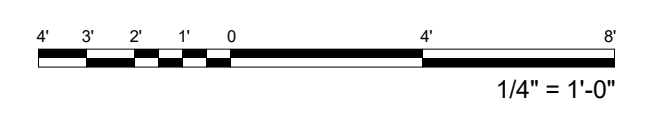
**1 PF-11 DETAIL**  
 S417 SCALE: 1/4" = 1'-0"



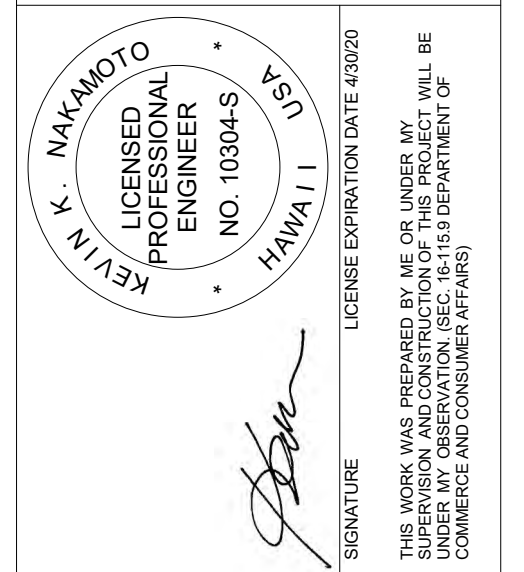
**3 PF-11 SECTION**  
 S417 SCALE: 1/4" = 1'-0"



**2 PF-11 SECTION**  
 S417 SCALE: 1/4" = 1'-0"



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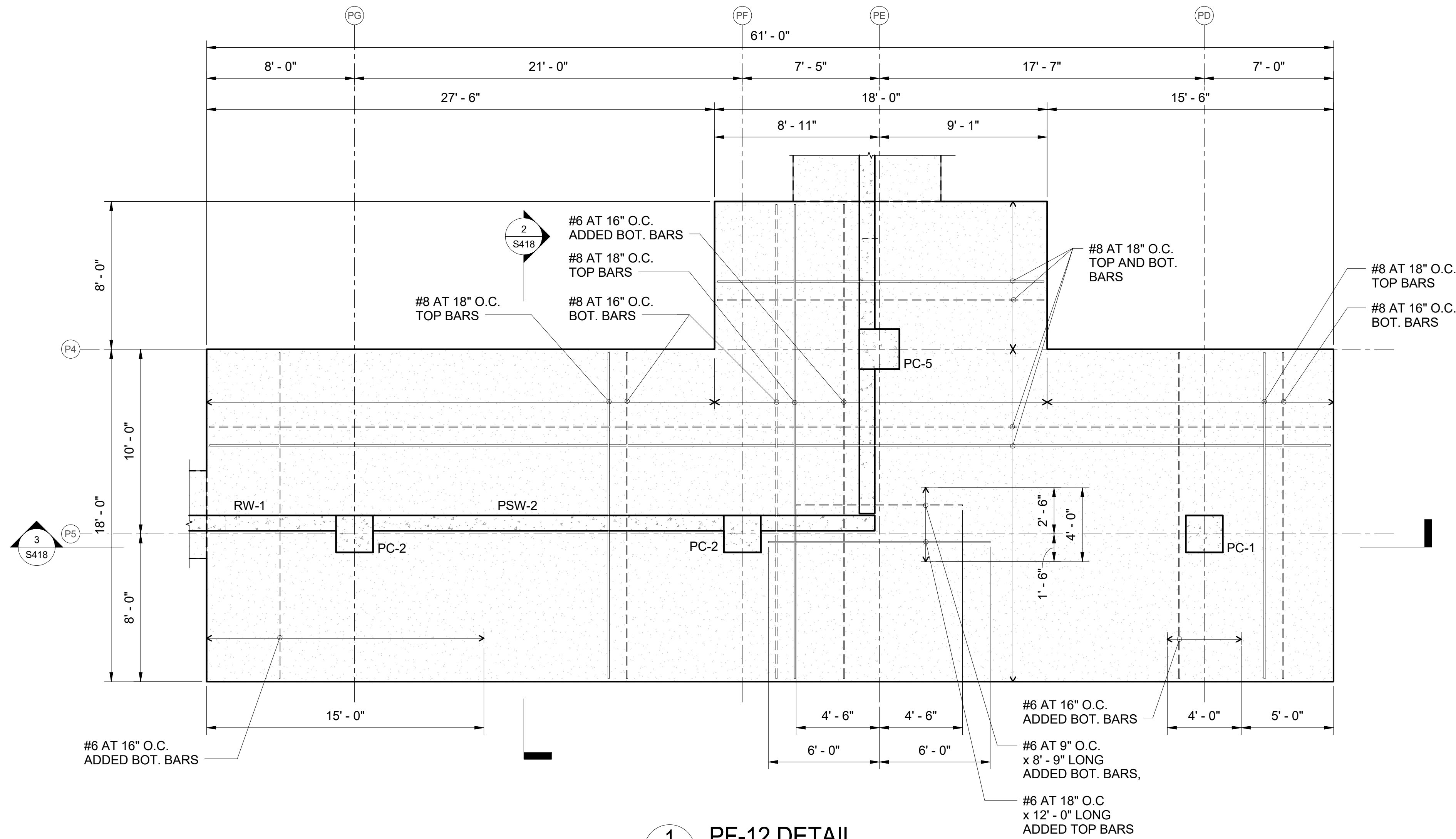


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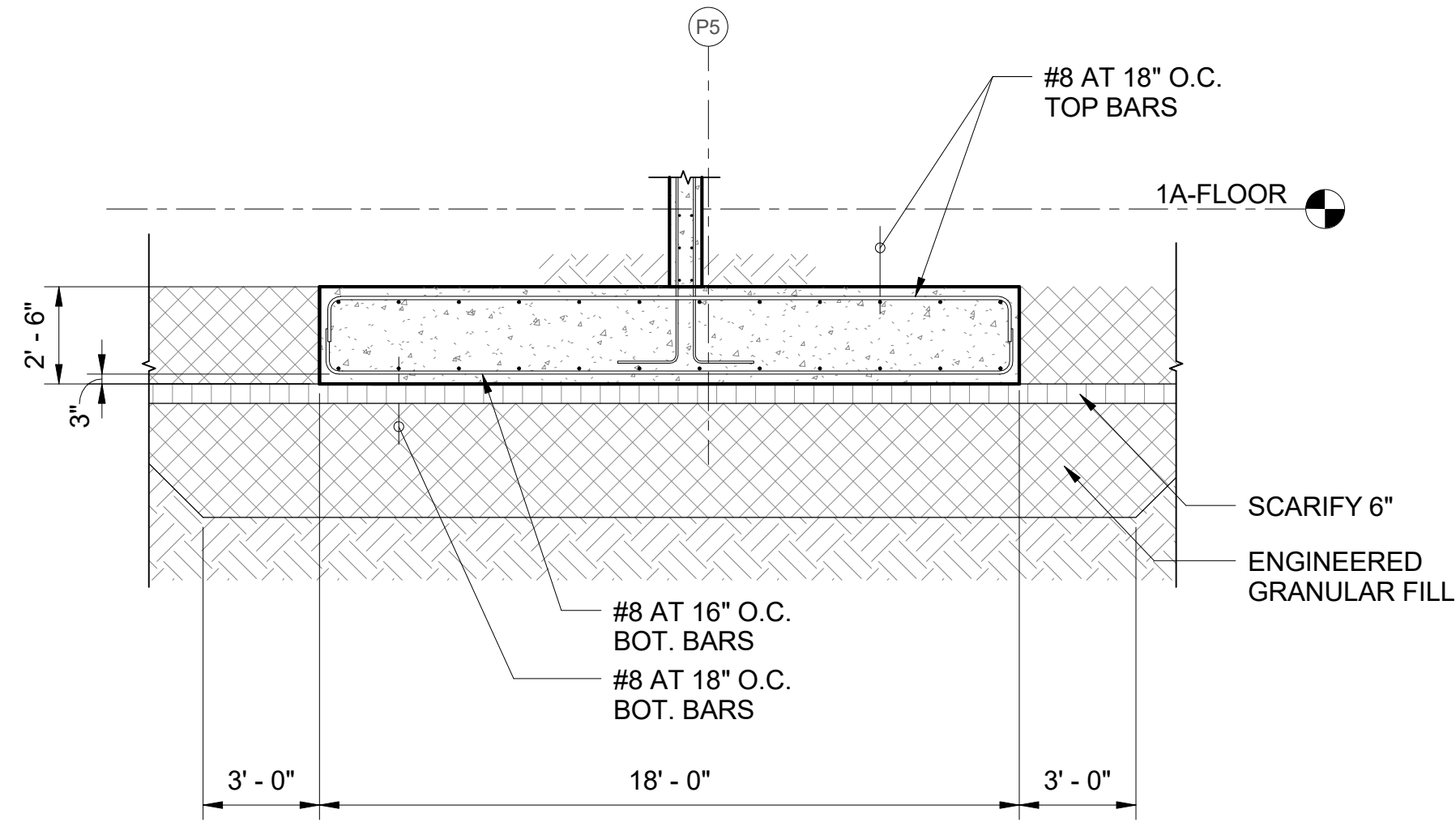
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**FOOTING DETAILS**

PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET		
<b>1B</b>	<b>S417</b>		
OF	SHEETS		

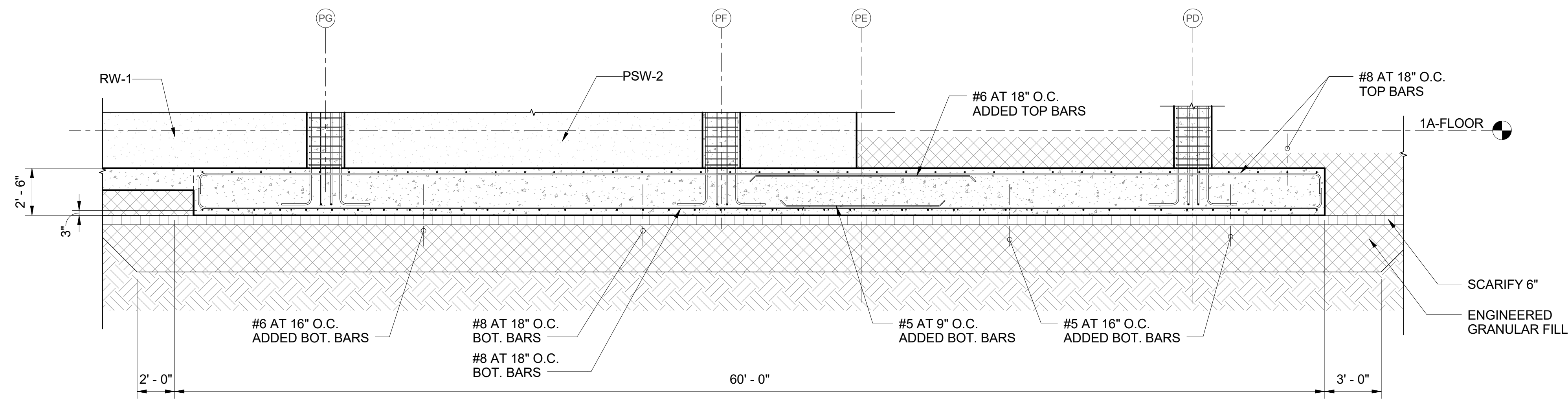




1 PF-12 DETAIL  
S418 SCALE: 1/4" = 1'-0"



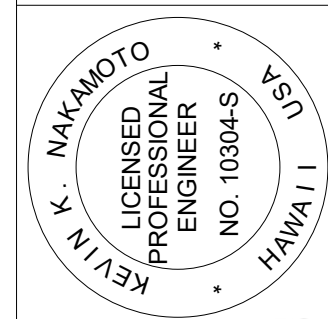
2 PF-12 SECTION  
S418 SCALE: 1/4" = 1'-0"



3 PF-12 SECTION  
S418 SCALE: 1/4" = 1'-0"



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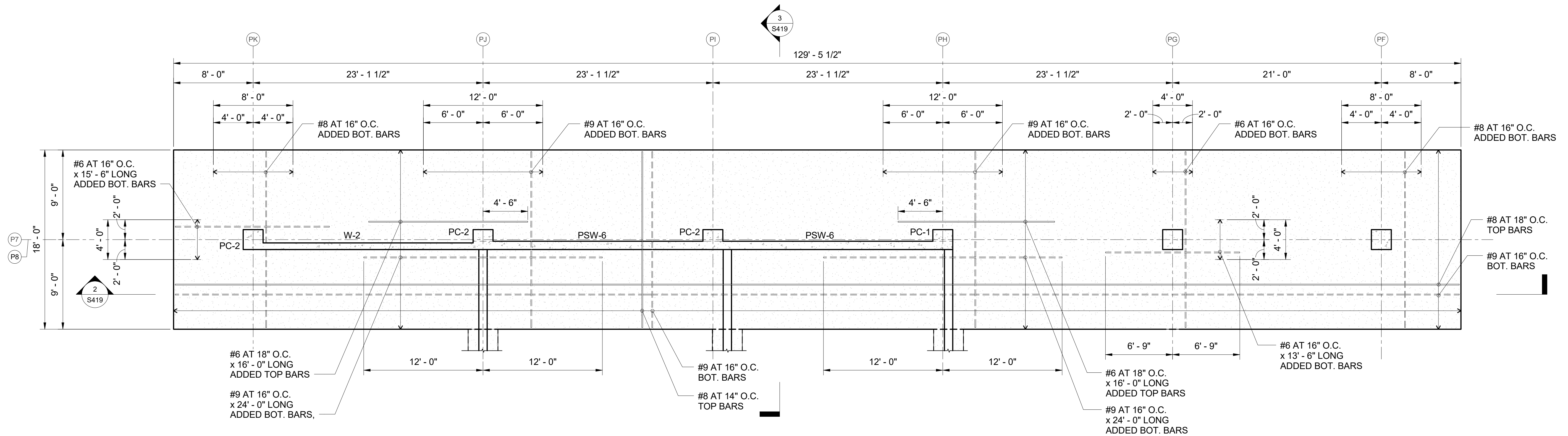
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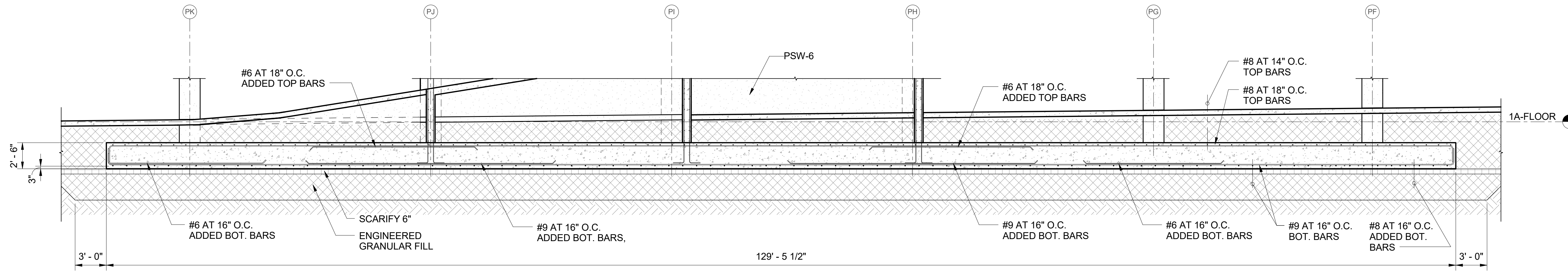
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**FOOTING DETAILS**

PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET		
	<b>1B S418</b>		
	OF	SHEETS	

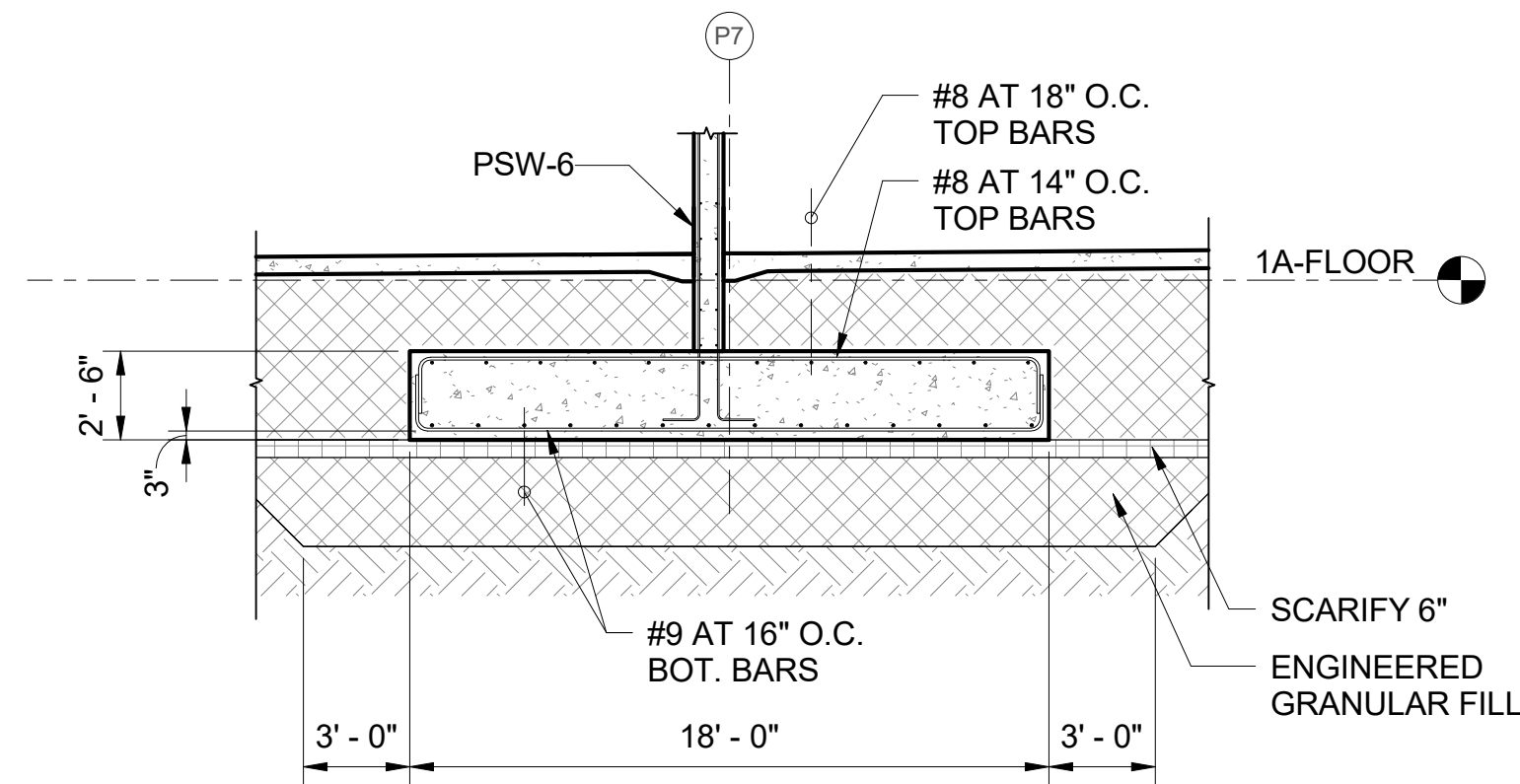
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**1 PF-13 DETAIL**  
S419 SCALE: 3/16" = 1'-0"



**2 PF-13 SECTION**  
S419 SCALE: 3/16" = 1'-0"



**3 PF-13 SECTION**  
S419 SCALE: 3/16" = 1'-0"



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NO. 10304-S  
HAWAII  
LICENSE EXPIRATION DATE 4/30/20  
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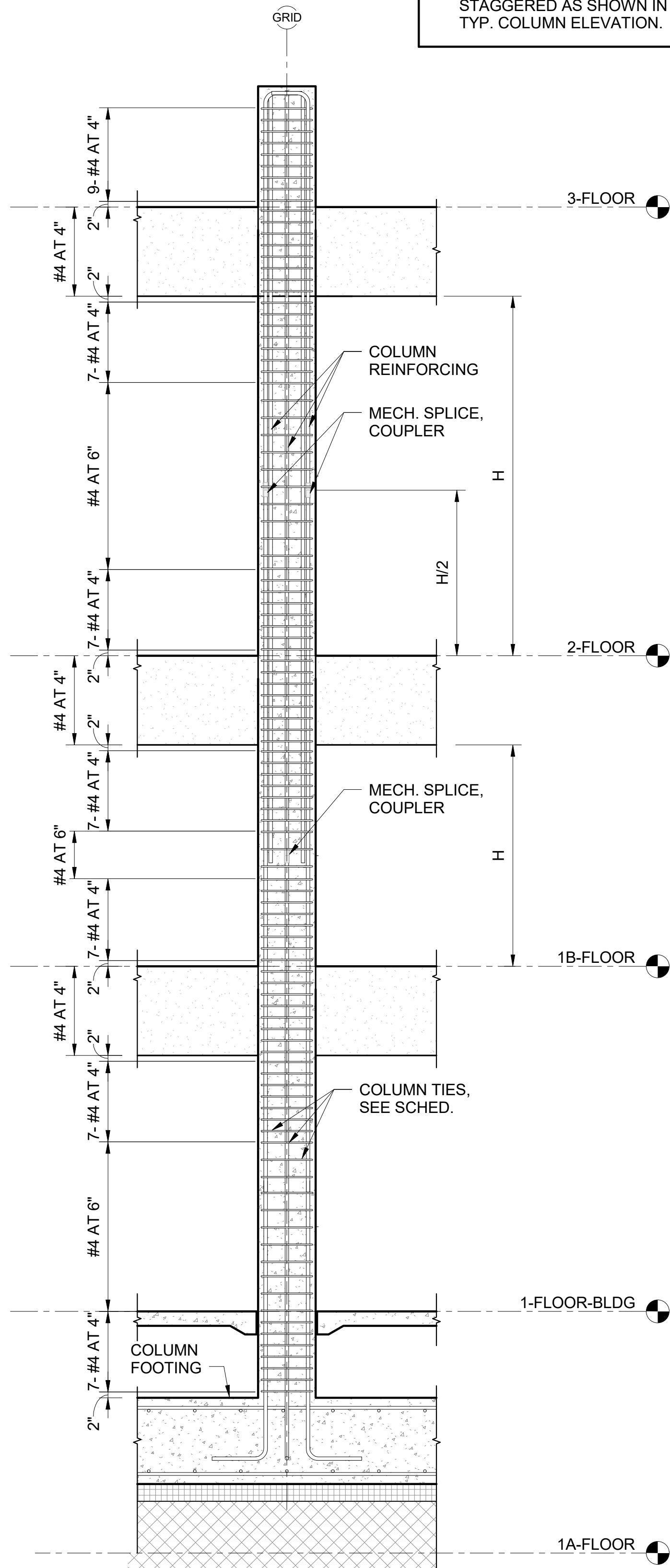
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SHEET TITLE:		REVISIONS:	
FOOTING DETAILS		2017-001	LC
CADD FILE:		DATE:	7/25/2019
PROJECT:	1B S419	PHASE SHEET	OF SHEETS









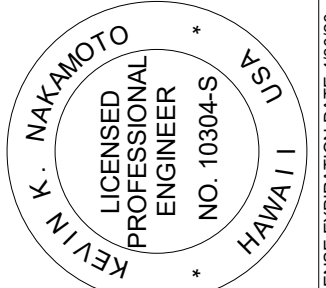
NOTE:  
 1.0 ALL COLUMN VERT. REINFORCING SHALL BE ASTM A615 GRADE 80 AND SHALL BE MECHANICAL SPLICE.  
 2.0 MECHANICAL SPLICE SHALL BE STAGGERED AS SHOWN IN THE TYP. COLUMN ELEVATION.

1 TYPICAL COLUMN ELEVATION  
 S422 SCALE: 3/8" = 1'-0"

COLUMN SCHEDULE

COLUMN MARK	PC-1	PC-2	PC-3	PC-4	PC-5
LEVEL					
LEVEL 2 TO LEVEL 3					
	SIZE: 24" X 24"	SIZE: 24" X 24"	SIZE: 24" X 24"	SIZE: 26" X 26"	SIZE: 26" X 26"
	MAIN BARS: 16- #10 VERT. BARS	MAIN BARS: 20- #10 VERT. BARS	MAIN BARS: 8- #10 VERT. BARS	MAIN BARS: 20- #10 VERT. BARS	MAIN BARS: 16- #10 VERT. BARS
	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES
LEVEL 1B TO LEVEL 2					
	SIZE: 24" X 24"	SIZE: 24" X 24"	SIZE: 24" X 24"	SIZE: 26" X 26"	SIZE: 26" X 26"
	MAIN BARS: 20- #10 VERT. BARS	MAIN BARS: 16- #10 VERT. BARS	MAIN BARS: 8- #10 VERT. BARS	MAIN BARS: 20- #10 VERT. BARS	MAIN BARS: 16- #10 VERT. BARS
	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES
TOP OF FOOTING TO LEVEL 1B					
	SIZE: 24" X 24"	SIZE: 24" X 24"	SIZE: 24" X 24"	SIZE: 26" X 26"	SIZE: 26" X 26"
	MAIN BARS: 20- #10 VERT. BARS	MAIN BARS: 16- #10 VERT. BARS	MAIN BARS: 8- #10 VERT. BARS	MAIN BARS: 20- #10 VERT. BARS	MAIN BARS: 16- #10 VERT. BARS
	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES	TIES: 1- #4 CLOSE TIES, 2- #4 CROSS TIES

FERRARO CHOI



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

SIGNATURE

LICENSE EXPIRATION DATE: 4/30/20

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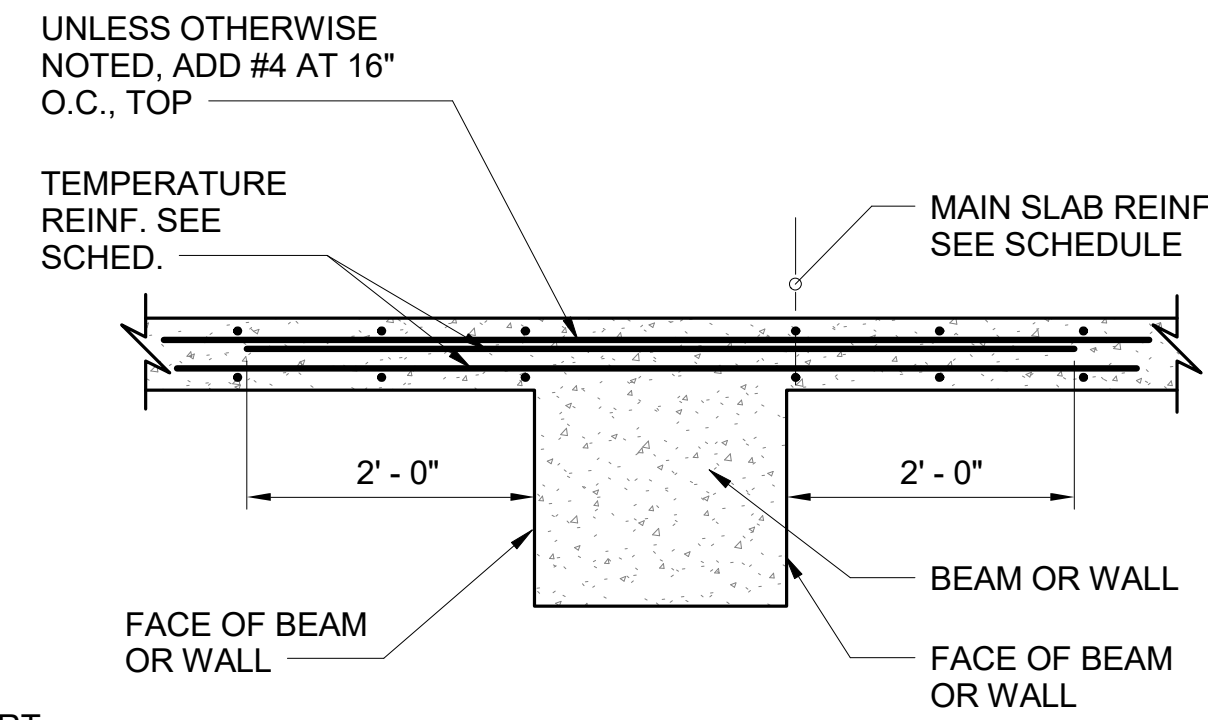
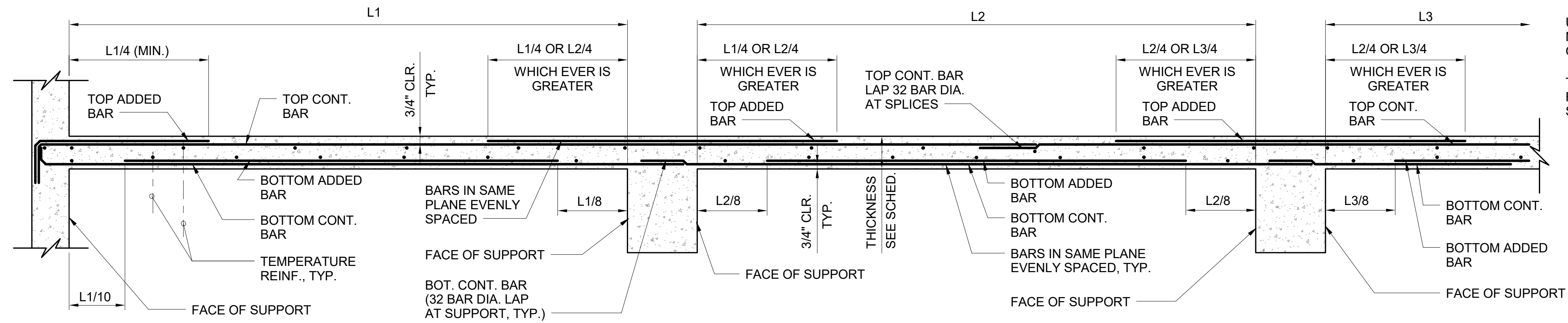
WAILUKU CIVIC COMPLEX PHASE 1B  
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TYPICAL CONCRETE COLUMN DETAILS

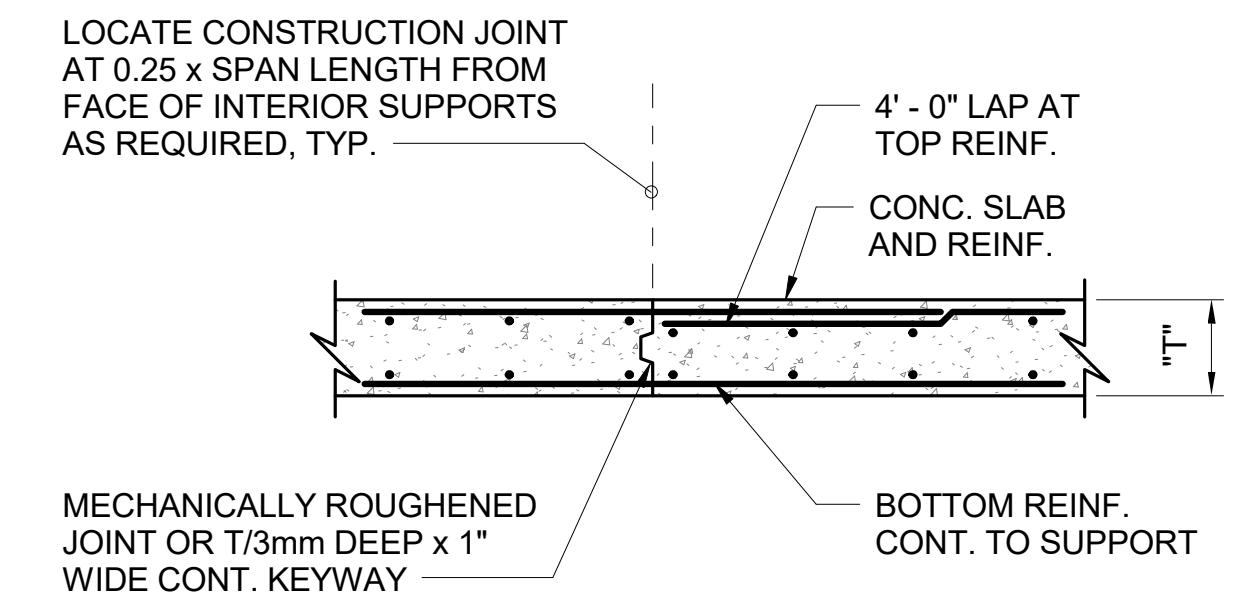
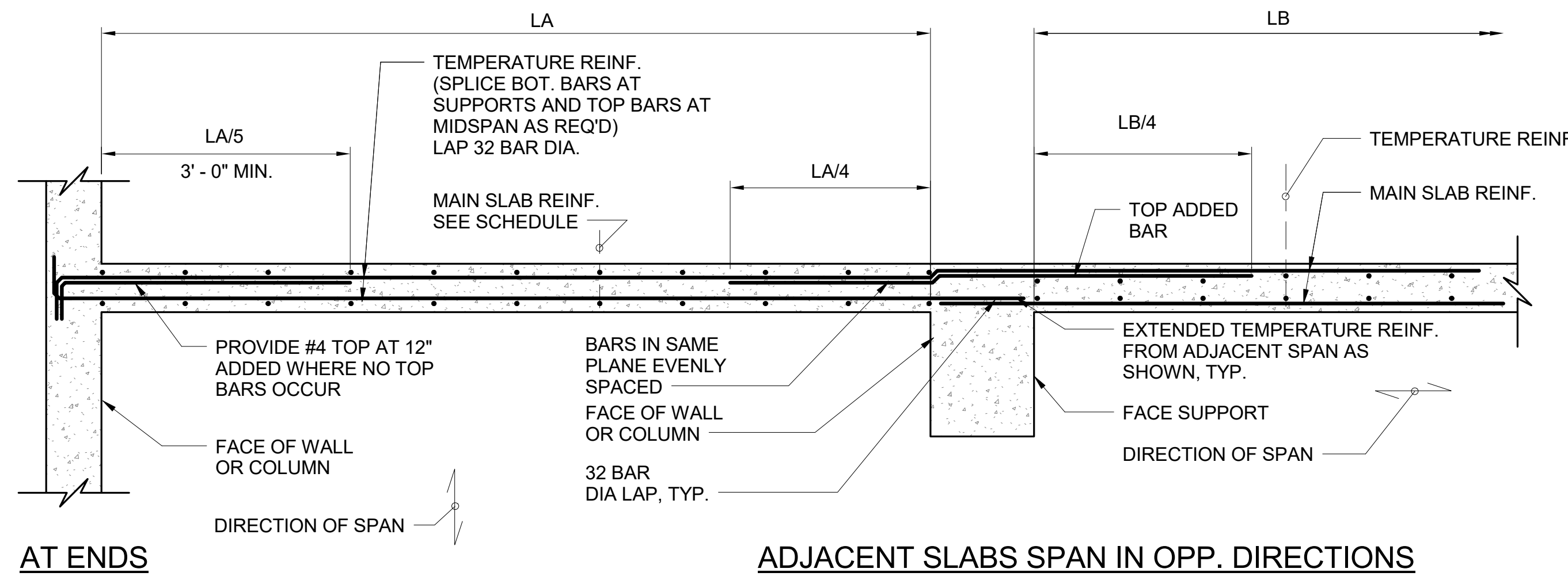
REVISIONS:

PROJECT: 2017-001  
 DRAWN: LC  
 DATE: 7/25/2019  
 SHEET: 1B S422  
 OF SHEETS: 1

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**END SUPPORT      END SPAN      AT INTERIOR SUPPORT      INTERIOR SPAN      2ND INTERIOR SUPPORT**  
**SLAB REINFORCING**



**AT ENDS      ADJACENT SLABS SPAN IN OPP. DIRECTIONS**  
**TYPICAL TEMPERATURE REINFORCING SLAB ELEVATION**

**POURED-IN-PLACE SLAB CONSTRUCTION JOINT DETAIL**

**TYPICAL SLAB REINFORCING**

**1 TYPICAL CONCRETE SLAB DETAILS**  
 S423 SCALE: NTS

CONCRETE SLAB SCHEDULE									
MARK	TYPE	THICKNESS (INCHES)	TOP REINFORCEMENT			BOTTOM REINFORCEMENT		TEMP. BAR	REMARKS
			CONTINUOUS BAR	LEFT ADDED BAR	RIGHT ADDED BAR	CONTINUOUS BAR	ADDED BAR		
S-1	ONE WAY	8"	#4 AT 12" O.C.			#4 AT 12" O.C.		#4 AT 14" O.C. TOP AND BOTTOM BARS	
S-2	ONE WAY	8"	#4 AT 12" O.C.			#4 AT 12" O.C.		#4 AT 14" O.C. TOP AND BOTTOM BARS	

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**TYPICAL CONCRETE SLAB DETAILS AND SCHEDULE**

PROJECT: 2017-001      REVISIONS:      SHEET TITLE:

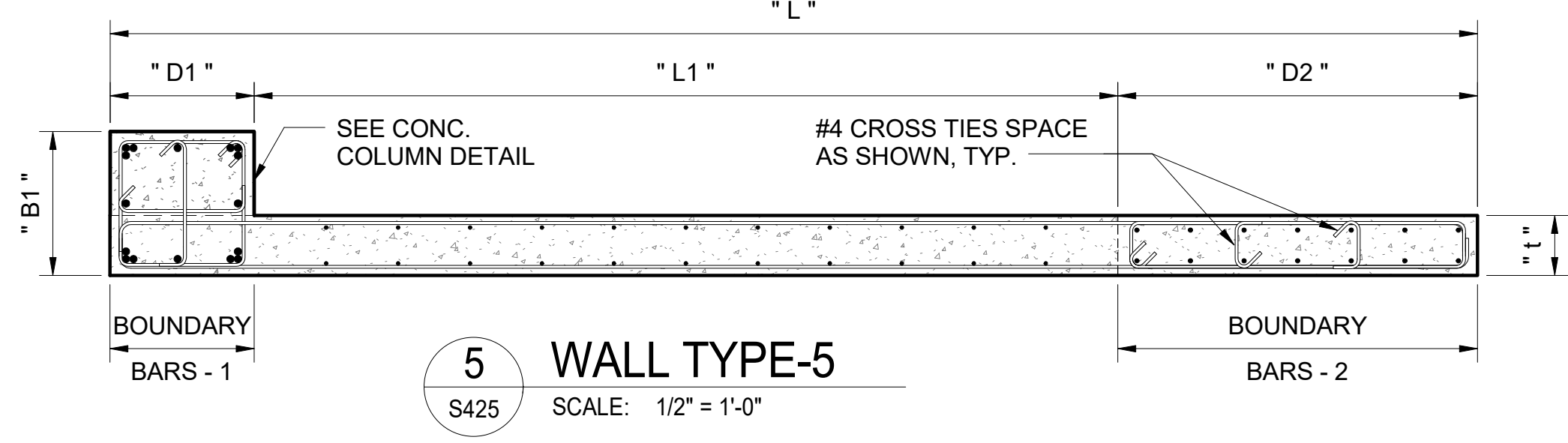
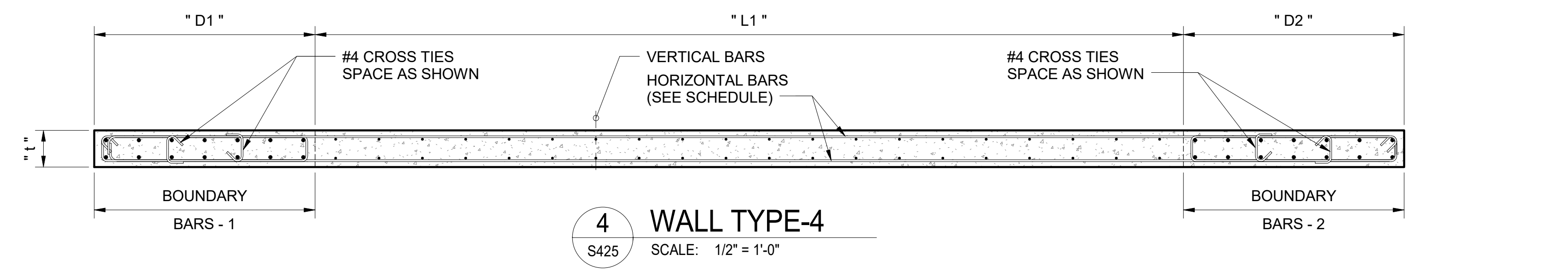
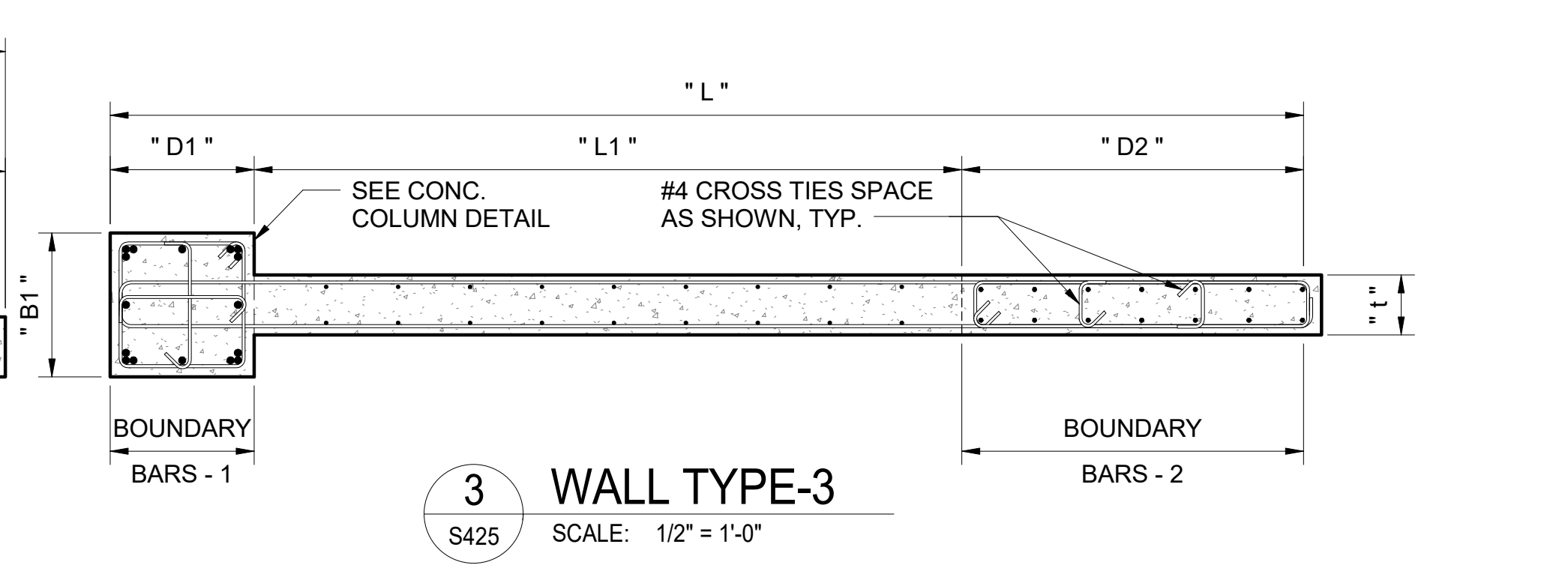
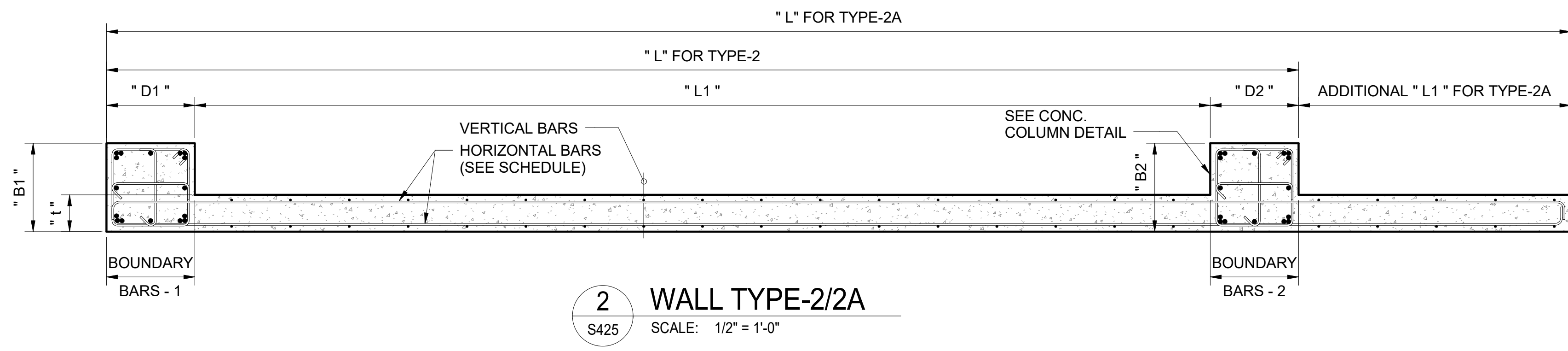
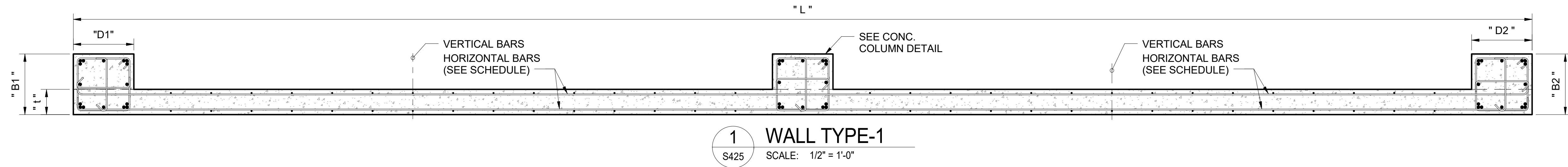
DRAWN: LC      DATE: 7/25/2019      SHEET: 1B OF S423

PHASE: 1B      SHEET: S423      OF: SHEETS

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PARKING BLDG. CONCRETE SHEARWALL REINFORCING SCHEDULE

MARK	WALL TYPE	LEVEL	LENGTH OF WALL		WALL THICKNESS		SHEARWALL END CONDITIONS						WALL REBARS AT L1		REMARKS
			"L"	"t"	D1	B1	BOUNDARY BARS - 1		D2	B2	BOUNDARY BARS - 2		VERTICAL BARS	HORIZONTAL BARS	
			ft-in	inch	inch	inch	VERTICAL	TIES	inch	inch	REBARS	TIES			
PSW-1	TYPE -3	TOP OF FOOTING TO LEVEL 1B	16' - 10"	10"	24"	24"	SEE PC-1 DETAIL		36"	-	16 - #6 VERT.	#4 TIES AT 6" O.C.	#5 AT 12" O.C., E.F.	#4 AT 12" O.C., E.F.	
		LEVEL 1B TO 2ND FLOOR	16' - 10"	10"	24"	24"	SEE PC-1 DETAIL		48"	-	14 - #6 VERT.	#4 TIES AT 6" O.C.	#5 AT 12" O.C., E.F.	#4 AT 12" O.C., E.F.	
		2ND FLOOR TO 3RD FLOOR	16' - 10"	10"	24"	24"	SEE PC-1 DETAIL		60"	-	8 - #5 VERT.	#4 TIES AT 6" O.C.	#4 AT 12" O.C., E.F.	#4 AT 12" O.C., E.F.	
PSW-1A	TYPE -5	TOP OF FOOTING TO LEVEL 1B	19' - 0"	10"	24"	24"	SEE PC-1 DETAIL		48"	-	16 - #6 VERT.	#4 TIES AT 6" O.C.	#5 AT 12" O.C., E.F.	#4 AT 9" O.C., E.F.	
		LEVEL 1B TO 2ND FLOOR	19' - 0"	10"	24"	24"	SEE PC-1 DETAIL		48"	-	14 - #6 VERT.	#4 TIES AT 6" O.C.	#5 AT 12" O.C., E.F.	#4 AT 12" O.C., E.F.	
		2ND FLOOR TO 3RD FLOOR	19' - 0"	10"	24"	24"	SEE PC-1 DETAIL		60"	-	8 - #5 VERT.	#4 TIES AT 6" O.C.	#4 AT 12" O.C., E.F.	#4 AT 12" O.C., E.F.	
PSW-2	TYPE -2A	TOP OF FOOTING TO LEVEL 1B	29' - 2"	10"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#5 AT 12" O.C., E.F.	#4 AT 10" O.C., E.F.	
		LEVEL 1B TO 2ND FLOOR	29' - 2"	10"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#5 AT 12" O.C., E.F.	#4 AT 12" O.C., E.F.	
		2ND FLOOR TO 3RD FLOOR	29' - 2"	10"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#5 AT 12" O.C., E.F.	#4 AT 12" O.C., E.F.	
PSW-3	TYPE -2	TOP OF FOOTING TO LEVEL 1B	27' - 0"	10"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#6 AT 10" O.C., E.F.	#4 AT 12" O.C., E.F.	
		LEVEL 1B TO 2ND FLOOR	27' - 0"	10"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#6 AT 10" O.C., E.F.	#4 AT 12" O.C., E.F.	
		2ND FLOOR TO 3RD FLOOR	27' - 0"	10"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#6 AT 10" O.C., E.F.	#4 AT 12" O.C., E.F.	
PSW-4	TYPE -4	TOP OF FOOTING TO 2ND FLOOR	29' - 8"	10"	16"	-	10 - #5 VERT.	#4 TIES AT 6" O.C.	16"	-	6 - #5 VERT.	#4 TIES AT 6" O.C.	#4 AT 10" O.C.	#4 AT 10" O.C.	
		2ND FLOOR TO 3RD FLOOR	23' - 0"	10"	16"	-	10 - #5 VERT.	#4 TIES AT 6" O.C.	16"	-	6 - #5 VERT.	#4 TIES AT 6" O.C.	#4 AT 10" O.C.	#4 AT 10" O.C.	
PSW-4A	TYPE -5	TOP OF FOOTING TO 2ND FLOOR	19' - 6"	10"	48"	-	12 - #5 VERT.	#4 TIES AT 6" O.C.	26"	26"	SEE PC-2 DETAIL		#4 AT 10" O.C.	#4 AT 10" O.C.	
		2ND FLOOR TO 3RD FLOOR	19' - 6"	10"	16"	-	10 - #5 VERT.	#4 TIES AT 6" O.C.	26"	26"	SEE PC-2 DETAIL		#4 AT 10" O.C.	#4 AT 10" O.C.	
PSW-5	TYPE -2	TOP OF FOOTING TO 2ND FLOOR	29' - 2"	10"	26"	26"	SEE PC-2 DETAIL		26"	26"	SEE PC-2 DETAIL		#4 AT 10" O.C.	#4 AT 10" O.C.	
		2ND FLOOR TO 3RD FLOOR	29' - 2"	10"	26"	26"	SEE PC-2 DETAIL		26"	26"	SEE PC-2 DETAIL		#4 AT 10" O.C.	#4 AT 10" O.C.	
PSW-6	TYPE -1	TOP OF FOOTING TO LEVEL 1B	48' - 3"	10"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#5 AT 12" O.C., E.F.	#4 AT 12" O.C., E.F.	
		LEVEL 1B TO 2ND FLOOR	48' - 3"	10"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#5 AT 12" O.C., E.F.	#4 AT 12" O.C., E.F.	
		2ND FLOOR TO 3RD FLOOR	48' - 3"	10"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#5 AT 12" O.C., E.F.	#4 AT 12" O.C., E.F.	
PSW-7	TYPE -4	TOP OF FOOTING TO LEVEL 1B	33' - 3"	10"	28"	-	14 - #8 VERT.	#4 TIES AT 6" O.C.	28"	-	14 - #8 VERT.	#4 TIES AT 6" O.C.	#6 AT 12" O.C., E.F.	#5 AT 8" O.C., E.F.	
		LEVEL 1B TO 2ND FLOOR	33' - 3"	10"	28"	-	12 - #8 VERT.	#4 TIES AT 6" O.C.	28"	-	12 - #6 VERT.	#4 TIES AT 6" O.C.	#5 AT 12" O.C., E.F.	#5 AT 12" O.C., E.F.	
		2ND FLOOR TO 3RD FLOOR	33' - 3"	10"	28"	-	10 - #5 VERT.	#4 TIES AT 6" O.C.	28"	-	10 - #5 VERT.	#4 TIES AT 6" O.C.	#4 AT 12" O.C., E.F.	#4 AT 12" O.C., E.F.	
PSW-8	TYPE -2	TOP OF FOOTING TO LEVEL 1B	32' - 0"	12"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#5 AT 12" O.C., E.F.	#5 AT 9" O.C., E.F.	
		LEVEL 1B TO 2ND FLOOR	32' - 0"	12"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#5 AT 16" O.C., E.F.	#5 AT 12" O.C., E.F.	
		2ND FLOOR TO 3RD FLOOR	32' - 0"	12"	24"	24"	SEE PC-1 DETAIL		24"	24"	SEE PC-1 DETAIL		#5 AT 16" O.C., E.F.	#4 AT 12" O.C., E.F.	
PSW-9	TYPE -5	TOP OF FOOTING TO 2ND FLOOR	10' - 0"	10"	-	-	-	-	26"	26"	SEE PC-2 DETAIL		#4 AT 10" O.C.	#4 AT 10" O.C.	
		2ND FLOOR TO 3RD FLOOR	10' - 0"	10"	-	-	-	-	26"	26"	SEE PC-2 DETAIL		#4 AT 10" O.C.	#4 AT 10" O.C.	



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KEVIN K. MAKIMOTO  
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 LICENSE EXPIRATION DATE: 4/30/20

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**WAILUKU CIVIC COMPLEX PHASE 1B**  
 100% FINAL DESIGN  
 [Professional Seal]

SHEET TITLE: SHEARWALL PLANS AND SCHEDULE

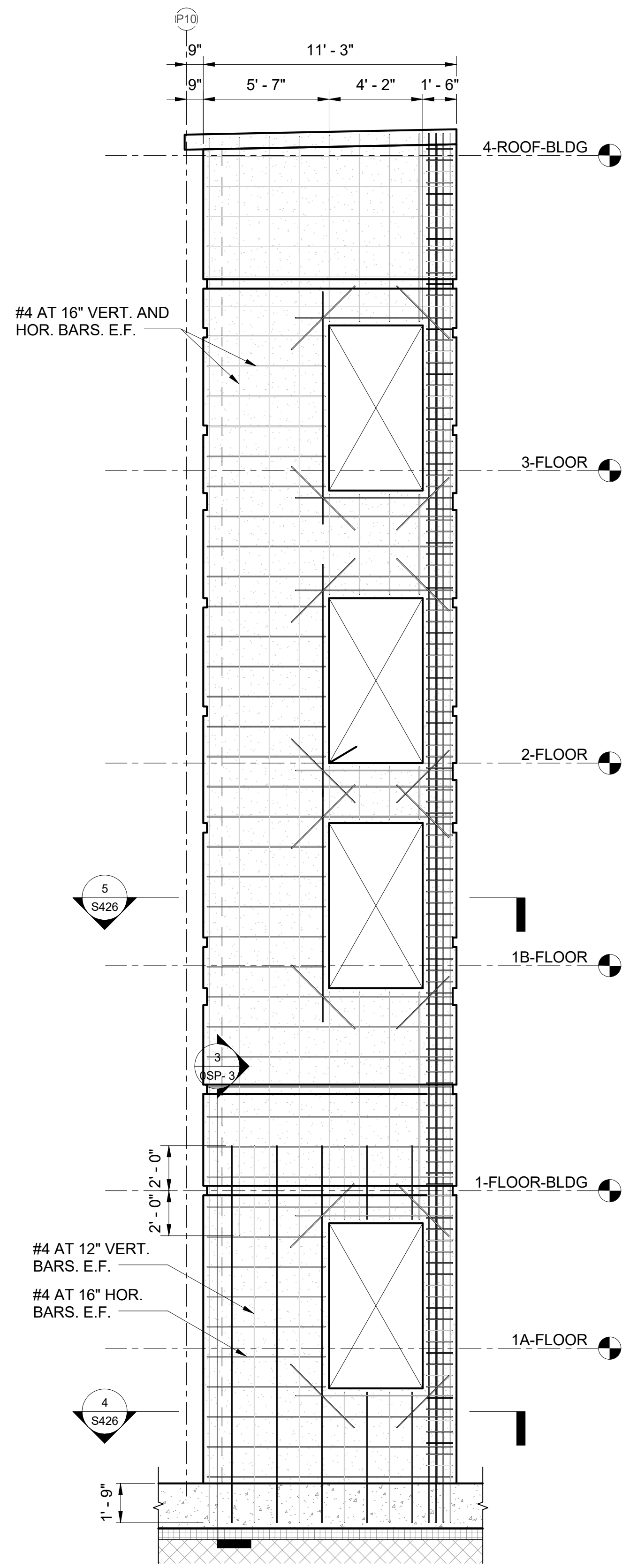
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 DRAWN: ALM  
 DATE: 7/25/2019  
 SHEET: 1B S425 OF SHEETS

REVISIONS:

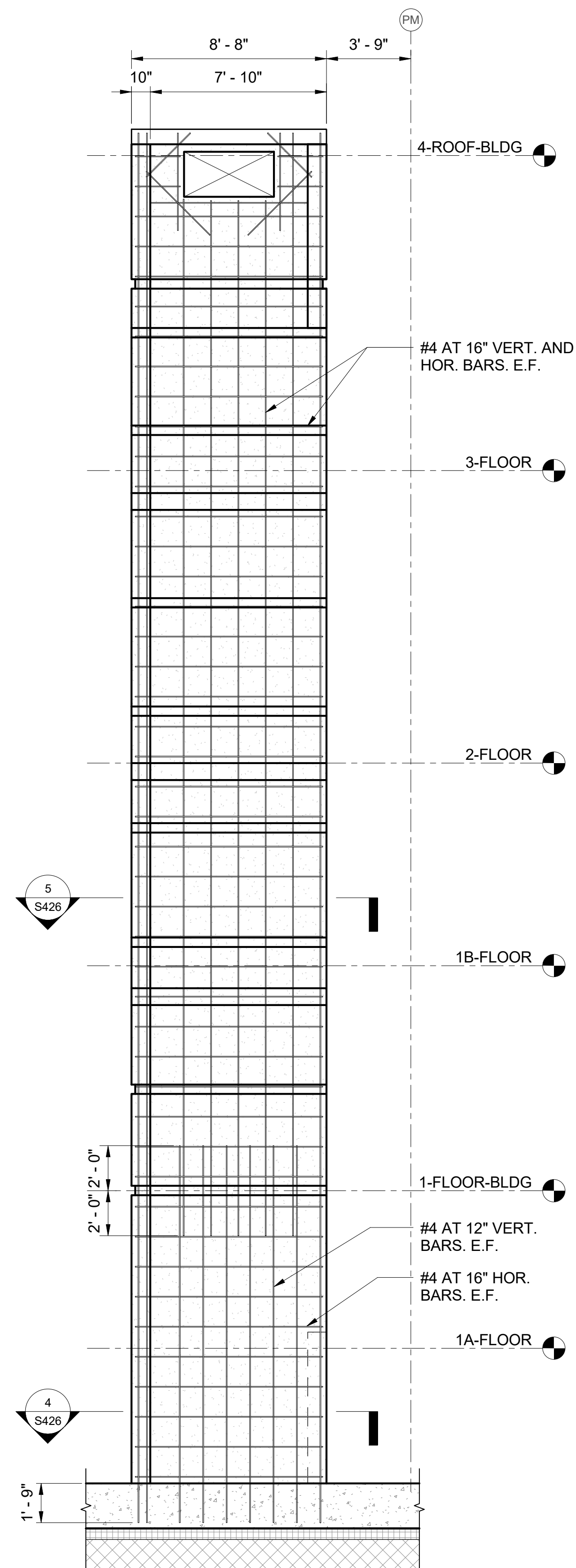
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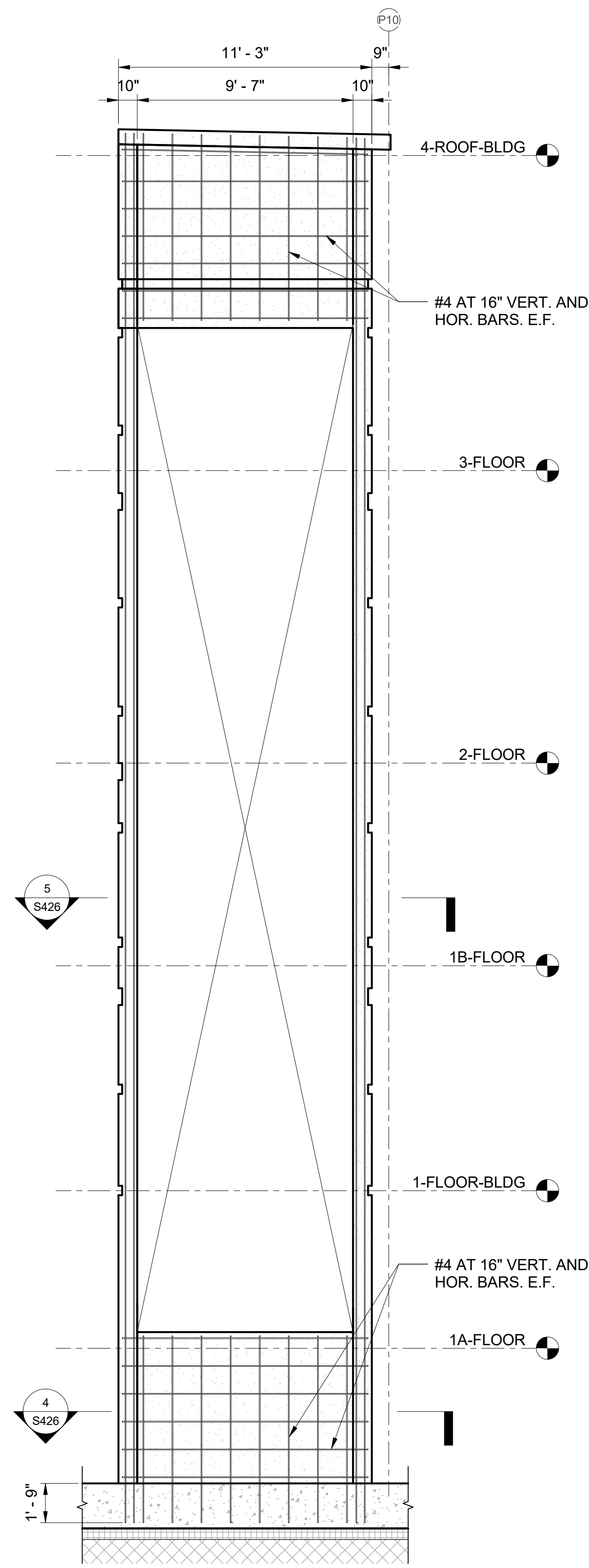
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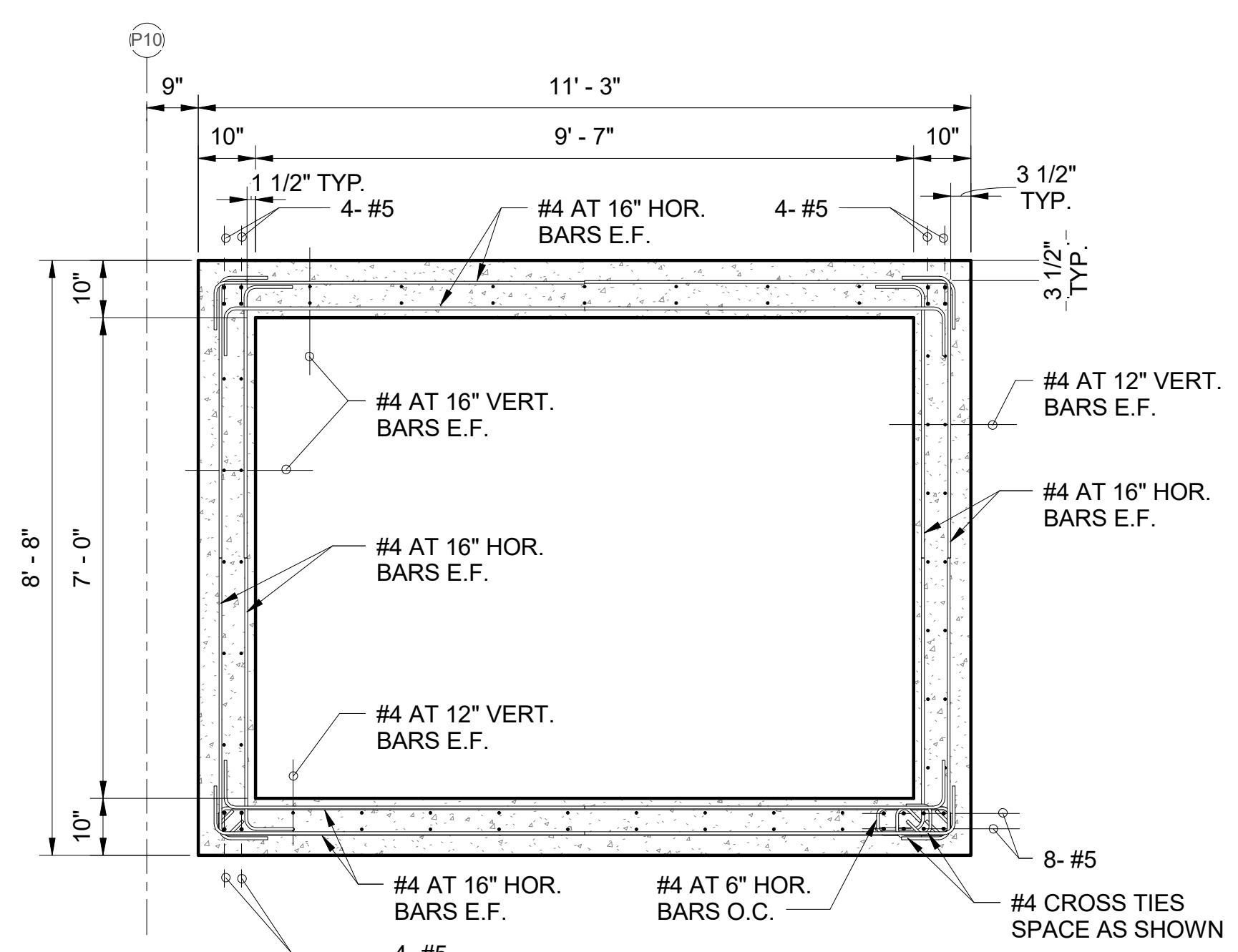
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S426 SCALE: 1/4" = 1'-0"



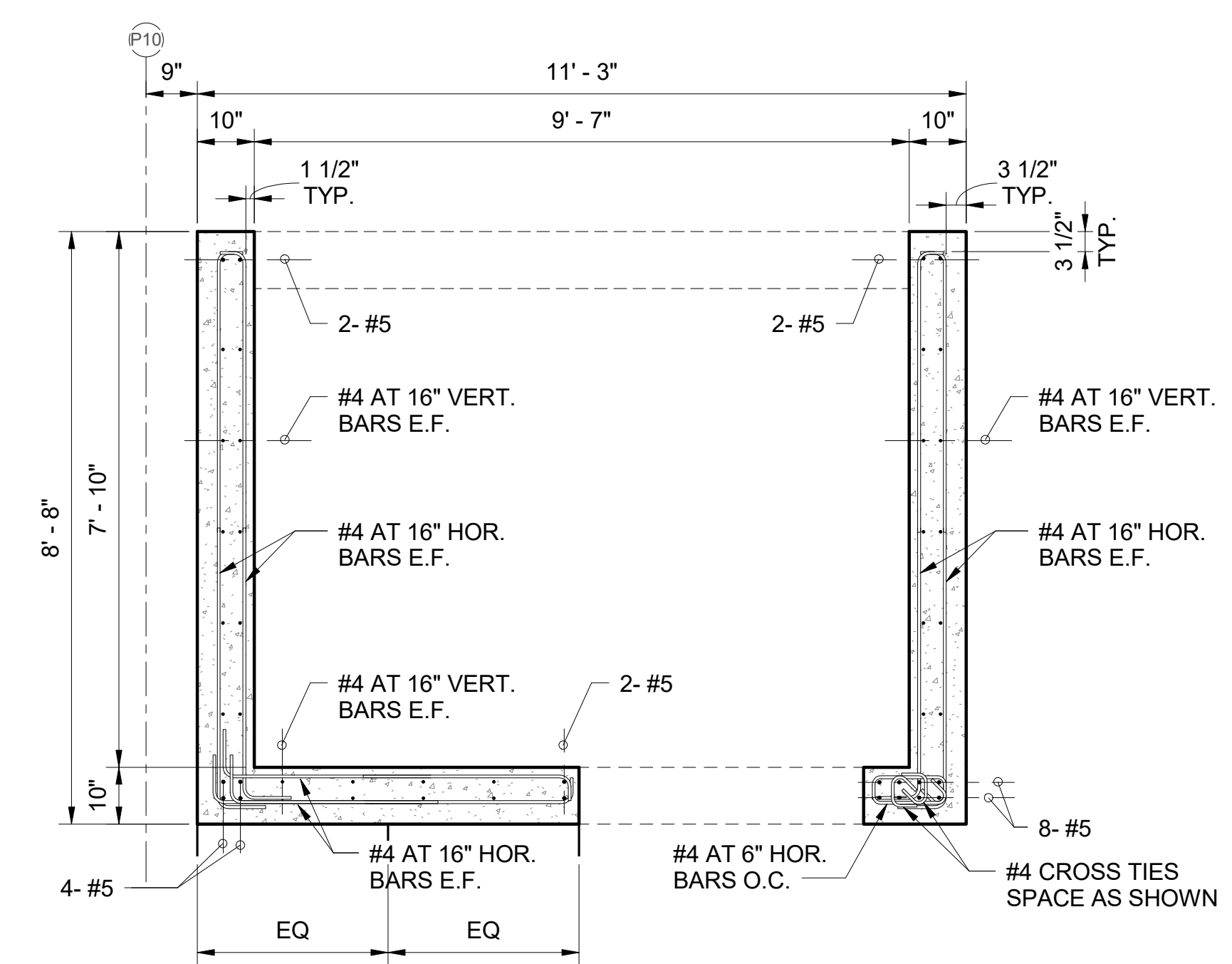
**2 PSW-10 ELEVATOR SHEARWALL**  
S426 SCALE: 1/4" = 1'-0"



**3 PSW-10 ELEVATOR SHEARWALL**  
S426 SCALE: 1/4" = 1'-0"



**4 PSW-10 PLAN**  
S426 SCALE: 1/2" = 1'-0"



**5 PSW-10 PLAN**  
S426 SCALE: 1/2" = 1'-0"



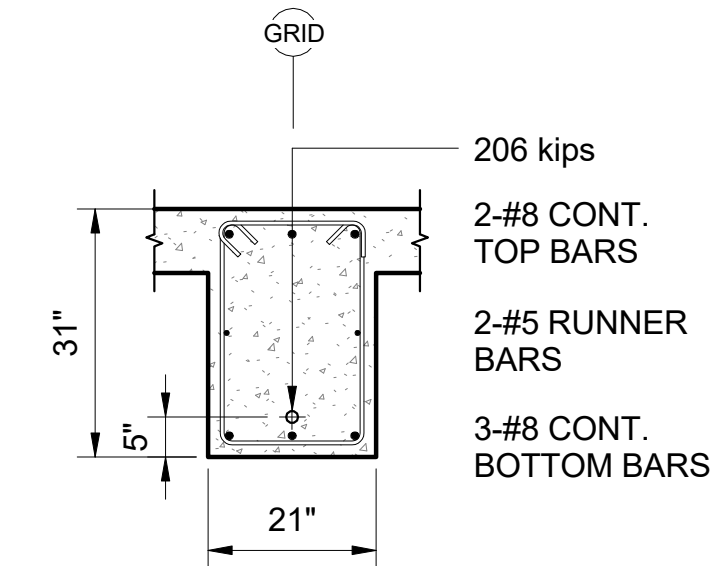
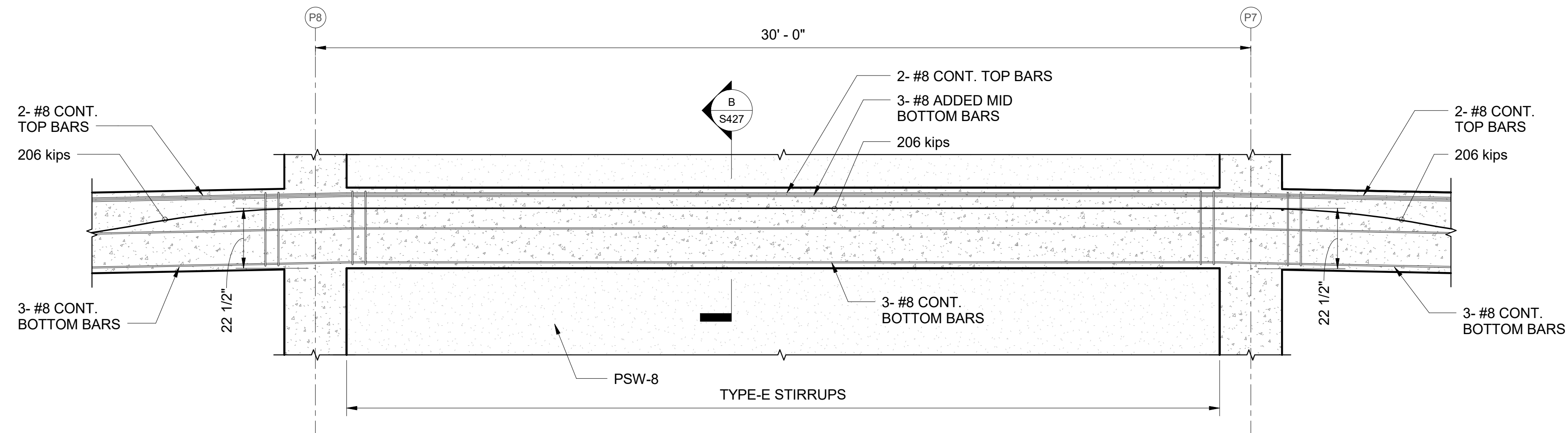
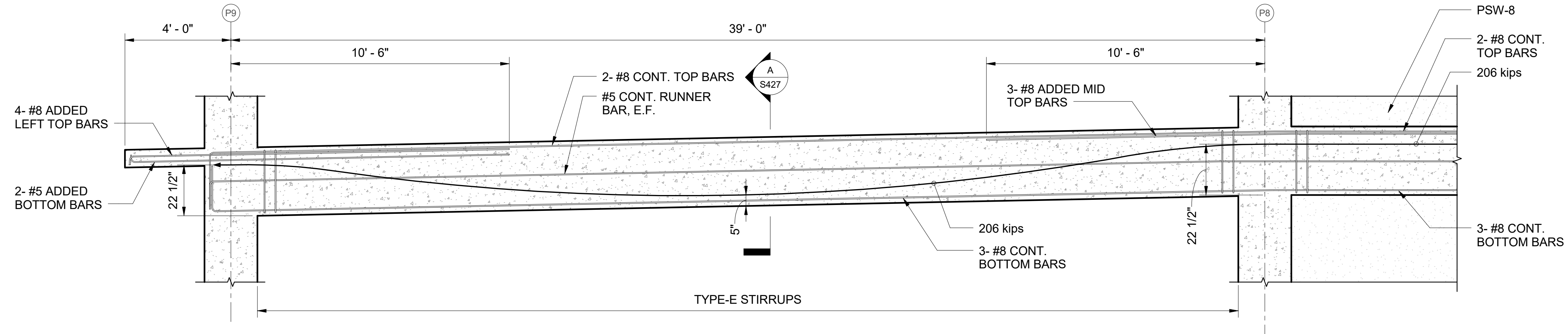
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KEVIN K. MAKIMOTO  
LICENSED PROFESSIONAL ENGINEER  
NO. 10304-S  
HAWAII  
LICENSE EXPIRATION DATE: 6/30/20  
SIGNATURE: *[Signature]*  
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND I AM A MEMBER OF THE BOARD OF ARCHITECTURE AND CONSUMER AFFAIRS

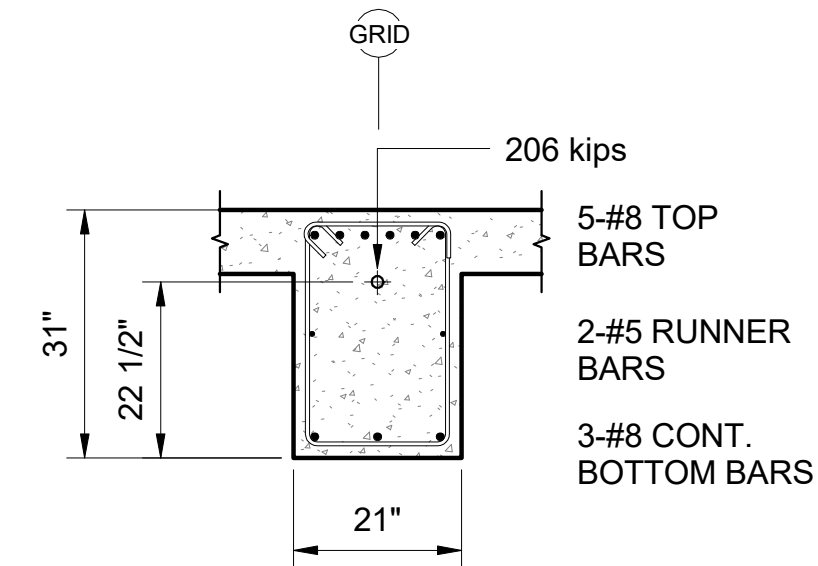
**WAILUKU CIVIC COMPLEX PHASE 1B**  
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PROJECT:	2017-001	REVISIONS:	
DRAWN:	LC		
DATE:	7/25/2019		
PHASE:	SHEET		
	<b>1B S426</b>		
	OF		
	SHEETS		
CADD FILE:			

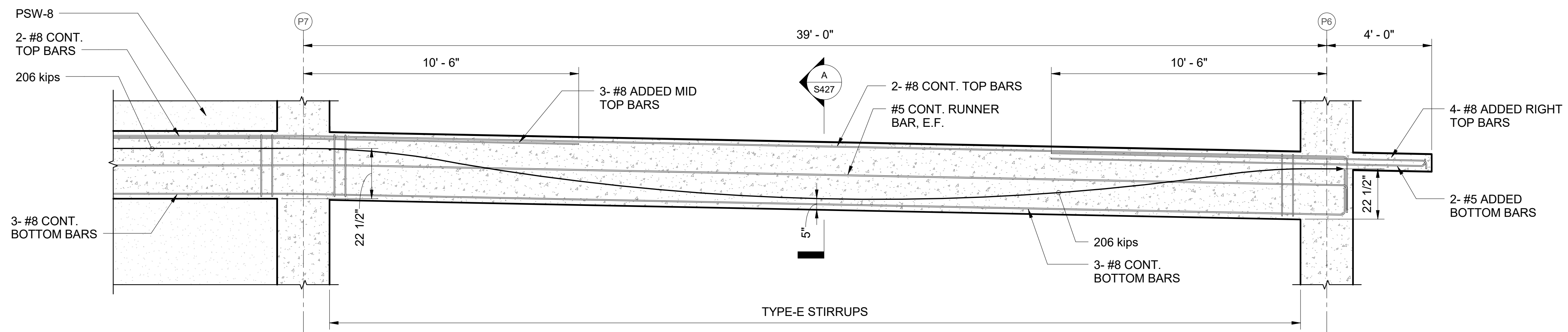




**A SECTION**  
S427 SCALE: 1/2" = 1'-0"

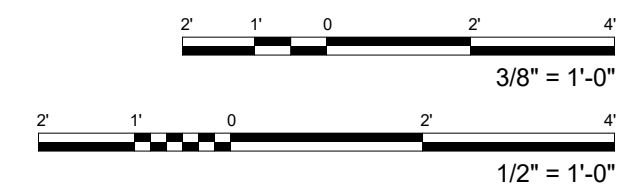


**B SECTION**  
S427 SCALE: 1/2" = 1'-0"

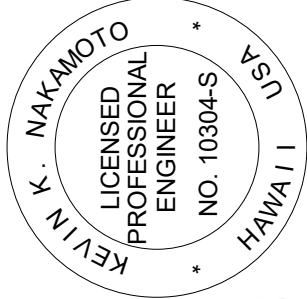


STIRRUPS SCHEDULE	
MARK	STIRRUPS
TYPE-A	#4 STIRRUPS, ALL AT 10"
TYPE-B	#4 STIRRUPS, ALL AT 12"
TYPE-C	#4 STIRRUPS, 1 AT 12", REST AT 14"
TYPE-D	#4 STIRRUPS, 1 AT 12", REST AT 16"
TYPE-E	#4 STIRRUPS, 1 AT 12", REST AT 20"

**1 1PTB-1 PROFILE**  
S427 SCALE: 3/8" = 1'-0"



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**WAILUKU CIVIC COMPLEX PHASE 1B**  
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SHEET TITLE:  
**POST TENSIONED BEAM PROFILES**

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DRAWN:	LC		
DATE:	7/25/2019		
PHASE	SHEET		
<b>1B</b>	<b>S427</b>		
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