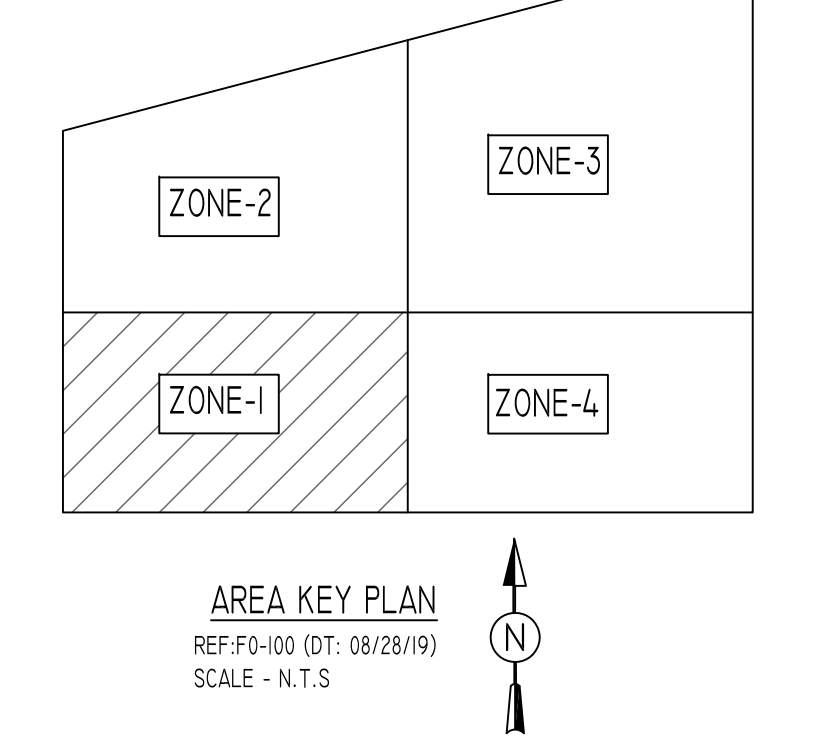


**COUPLER REINFORCEMENT DETAILS**

MARK	BAR DIA.	BAR SHAPE	QUANTITY	REMARK
CB01	#7	5'-4"	30	REFER SECTION 1
CB02	#9	8'-7"	30	REFER SECTION 1
CB03	#5	3'-3"	8	REFER SECTION 1



**TYPICAL REINFORCING BAR CLEARANCE TABLE**

LOCATION	MIN. COVER
FOOTINGS AGAINST EARTH	3" CLR
BOTTOM TOP	2" CLR
EXPOSED TO EARTH (#5 & SMALLER)	1 1/2" CLR
EXPOSED TO EARTH (#6 & LARGER)	2" CLR
PIER & BUTTRESS (MAIN REINF.)	2" CLR
PIER & BUTTRESS (TIES, REINF.)	1 1/2" CLR
BEAMS (STIRRUPS, MAIN REINF.)	1 1/2" CLR
SLABS, WALLS, JOISTS	1 1/2" CLR

**ALL BARS IN THIS DRAWING  
ASTM A615 GRADE 60  
BLACK UNCOATED**

**PIER SCHEDULE**

TYPE	PIER SIZE		REINFORCING		REMARK
	LENGTH	WIDTH	VERTICAL	HORIZONTAL	
P1	36'	36'	24 - #7	#3 @ 14"	
P2	48'	48'	24 - #9	#3 @ 16"	
P3	36'	36'	24 - #7	#4 @ 12"	1,3 LD SPLICE
P4	48'	48'	24 - #9	#4 @ 12"	1,3 LD SPLICE
B1	36'	36'	24 - #7	#3 @ 14"	
B2	24'	36'	16 - #7	#3 @ 14"	
B3	36'	24'	16 - #7	#3 @ 14"	

**FOOTING SCHEDULE**

TYPE	FOOTING SIZE		BOTTOM REINFORCING		F/C (KSI)
	LENGTH	WIDTH	LONG WAY	SHORT WAY	
F7	7'-0"	7'-0"	2'-6"	11 - #6	5
F8	8'-0"	8'-0"	2'-6"	11 - #7	5
F9	9'-0"	9'-0"	2'-6"	13 - #7	5
F11	11'-0"	11'-0"	3'-0"	19 - #7	5
F15	15'-0"	15'-0"	3'-0"	30 - #8	10
F16	16'-0"	16'-0"	3'-6"	30 - #9	10
F17	17'-0"	17'-0"	3'-6"	32 - #9	10
F18	18'-0"	18'-0"	4'-0"	38 - #9	10
F20	20'-0"	20'-0"	4'-0"	38 - #10	10
F20A	20'-0"	20'-0"	4'-6"	38 - #10	20 - #7
F21	21'-0"	21'-0"	4'-0"	40 - #10	10
F21A	21'-0"	21'-0"	4'-0"	40 - #10	20 - #7
F22	22'-0"	22'-0"	4'-0"	44 - #10	10
F16	11'-0"	16'-0"	2'-6"	12 - #9	5
F14.6	14'-0"	16'-0"	2'-6"	12 - #10	5
F15.7	15'-0"	17'-0"	2'-6"	16 - #10	5
F18.8	18'-0"	18'-0"	2'-6"	24 - #11	5
F14.0	14'-0"	10'-0"	3'-0"	16 - #10	5
F20.0	20'-0"	10'-0"	3'-0"	30 - #11	5
F20.30	20'-0"	10'-0"	4'-6"	20 - #10	20 - #7
F24.0	24'-0"	10'-0"	3'-0"	24 - #11 2L	5
WF4	4'-0"	4'-0"	2'-6"	#6 @ 2"	6 - #9

**FOR PIER**

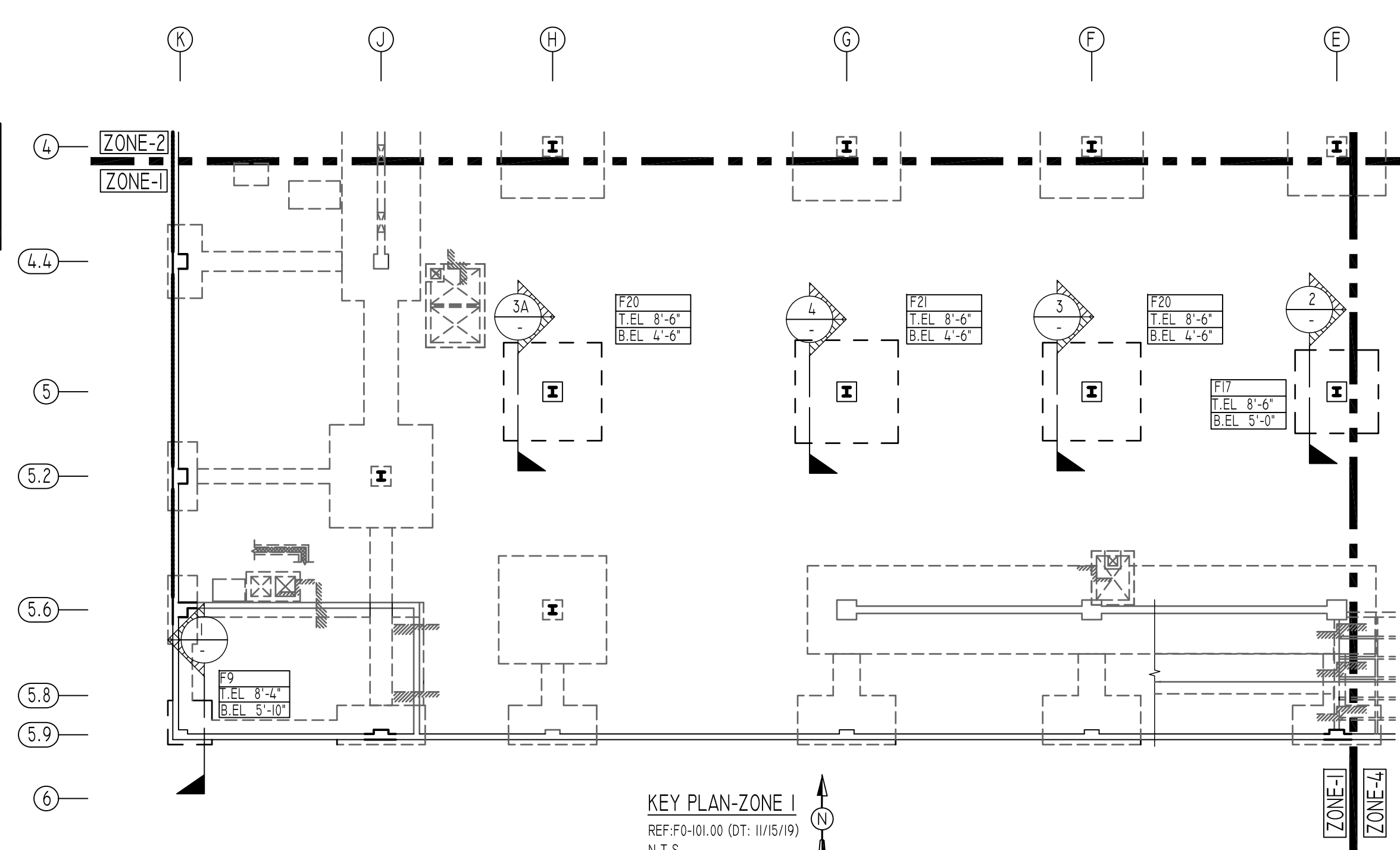
**LAP SCHEDULE**

SIZE	10000 PSI	
	LD	LAP
#3	10"	13"
#4	13"	17"
#5	16"	21"
#6	19"	25"
#7	22"	36"
#8	31"	41"
#9	35"	46"
#10	39"	51"
#11	43"	56"

**FOR FOOTING**

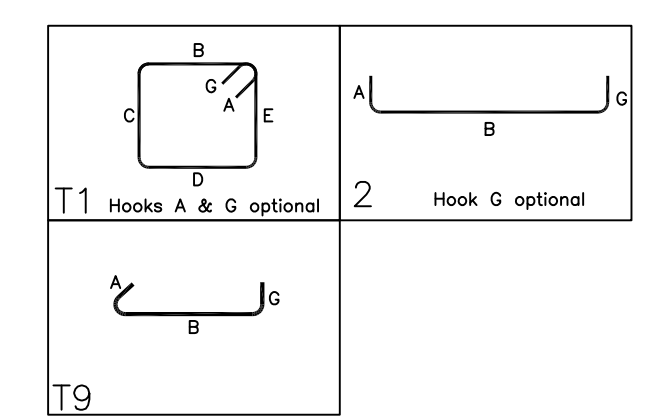
**LAP SCHEDULE**

SIZE	5000 PSI	
	TOP	OTHERS
#3	23"	17"
#4	30"	23"
#5	37"	29"
#6	45"	34"
#7	64"	50"
#8	73"	56"
#9	82"	63"
#10	93"	71"
#11	102"	78"



**Release Number: R1**

Bar Mark	Qty	Size	Total Length	Type	X	Y	Z	BENDING DETAILS	W	V	U	T	S	R	Q	P	O	N	M	L	K	J	I	H	G	F	E	D	C	B	A
3A01	3	#3	9'-1.8"	T1	0'-4.8"	2'-7.8"	1'-7.8"	2'-7.8"	1'-7.8"	0'-4.8"																					
3A03	43	#3	15'-8.8"	T1	0'-4.8"	3'-9"	3'-9"	3'-9"	3'-9"	0'-4.8"																					
3A04	240	#3	4'-5.8"	T9	0'-4.8"	3'-9"				0'-4.8"																					
7A03	16	#7	6'-3"	2	1'-2"	5'-1"																									
9A02	72	#9	8'-1"	2	1'-7"	6'-8"																									
9A03	24	#9	7'-7"	2	1'-7"	6'-0"																									



**Abbreviations:**  
 I.F.=Inside Face  
 O.F.=Outside Face  
 E.F.=Each Face  
 DWL=Dowel  
 V=Vertical  
 H=Horizontal  
 C.B.=Corner Bar  
 S.DWL=Slab Dowel  
 E.W.=Each Way  
 B/BOT=Bottom  
 T=Top  
 MDWL=Masonry Dowel  
 B.B.=Bond Beam  
 ALT.=Alternate  
 Approx.=Approximate

**OPNG=Opening**  
 BAL=Balance  
 BTW=Between  
 C=Construction Joint  
 CLR=CLEARANCE  
 CMU=Concrete Masonry Unit  
 CONT=Continuous  
 EA=Each  
 Elev.=Elevation  
 EMB=Embedment  
 SW=Short Way  
 LW=Long Way  
 (EP)=Epoxy Bar  
 (GA)=Galvanized

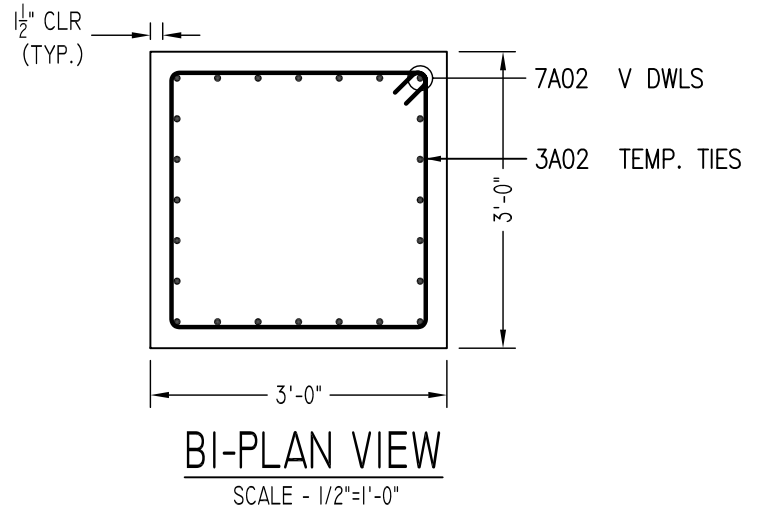
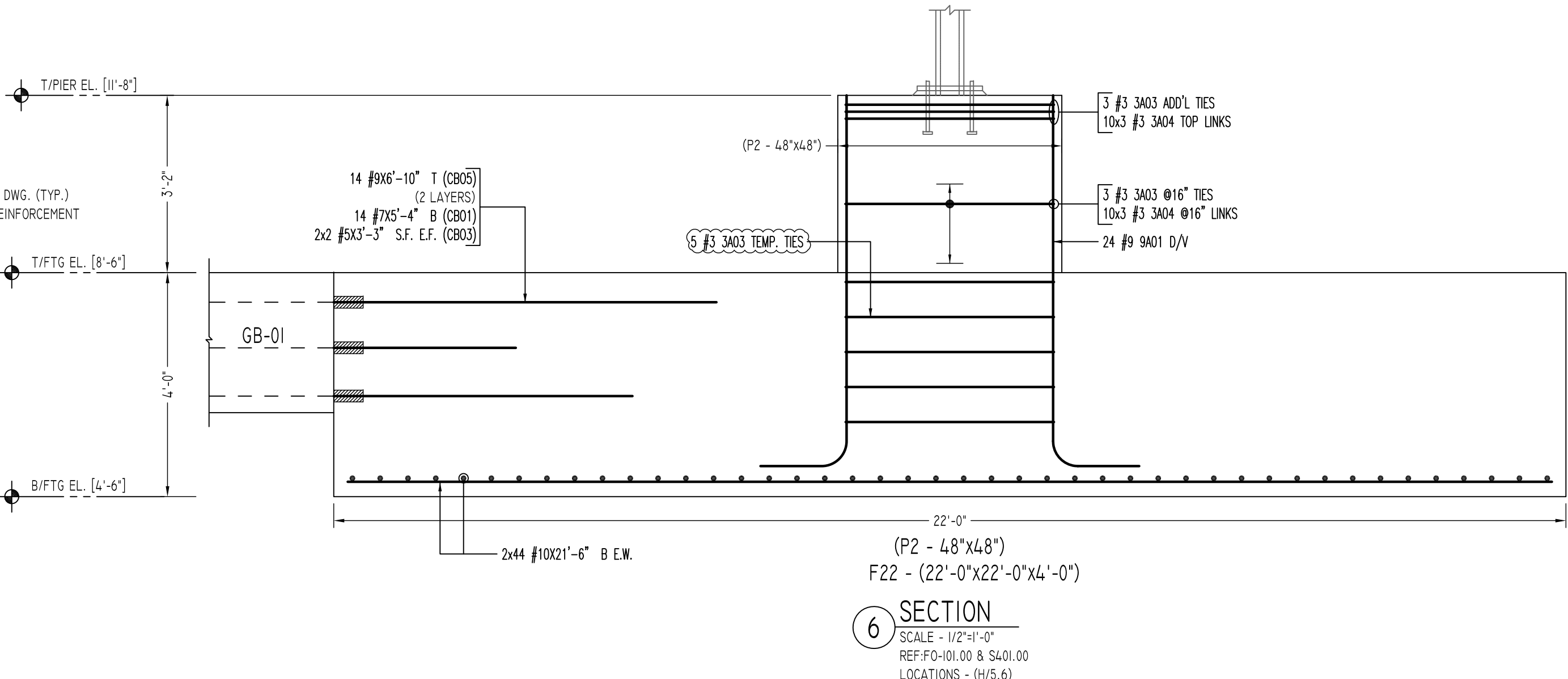
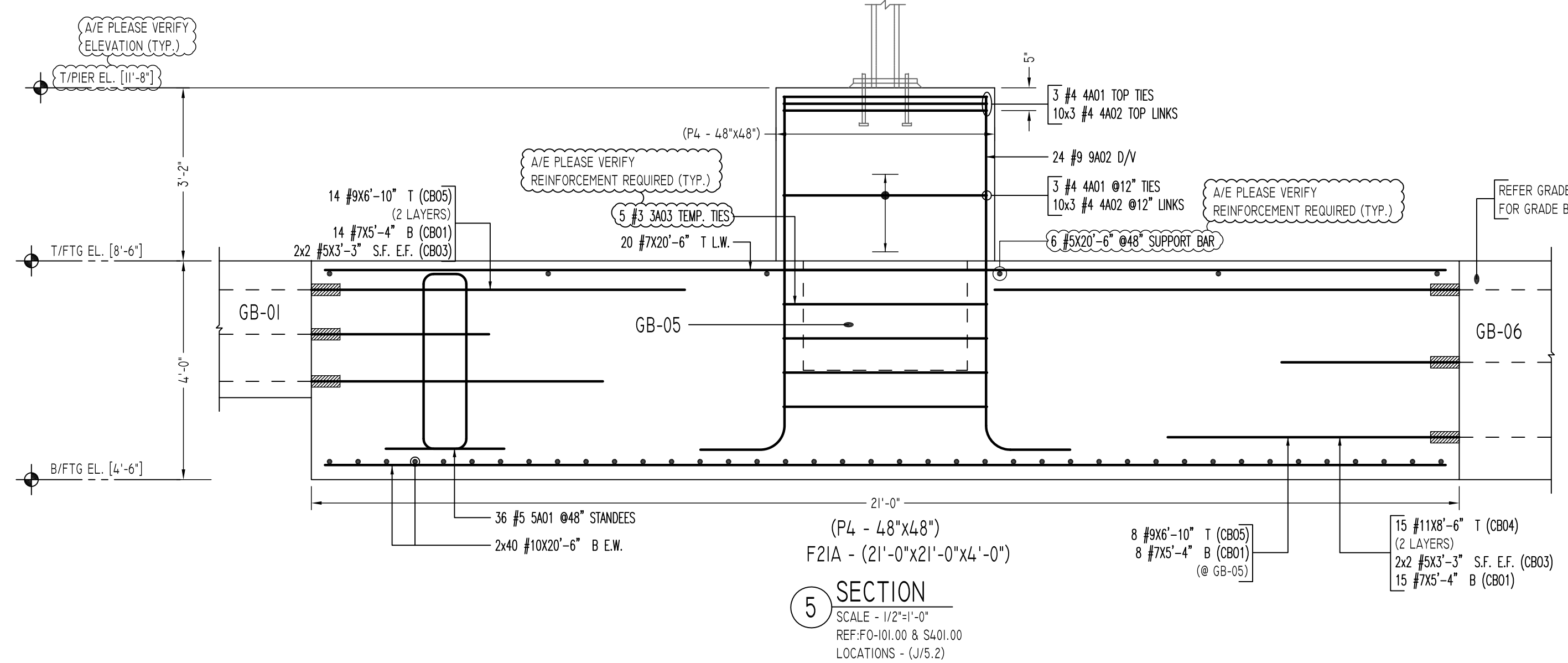
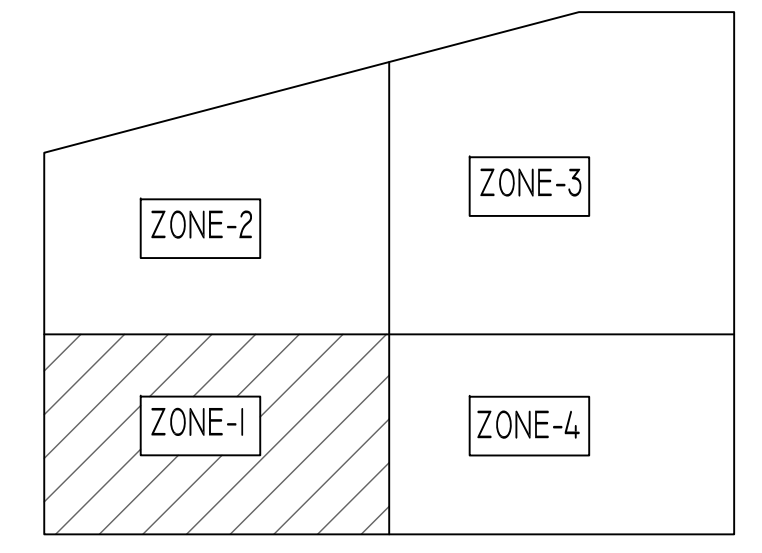
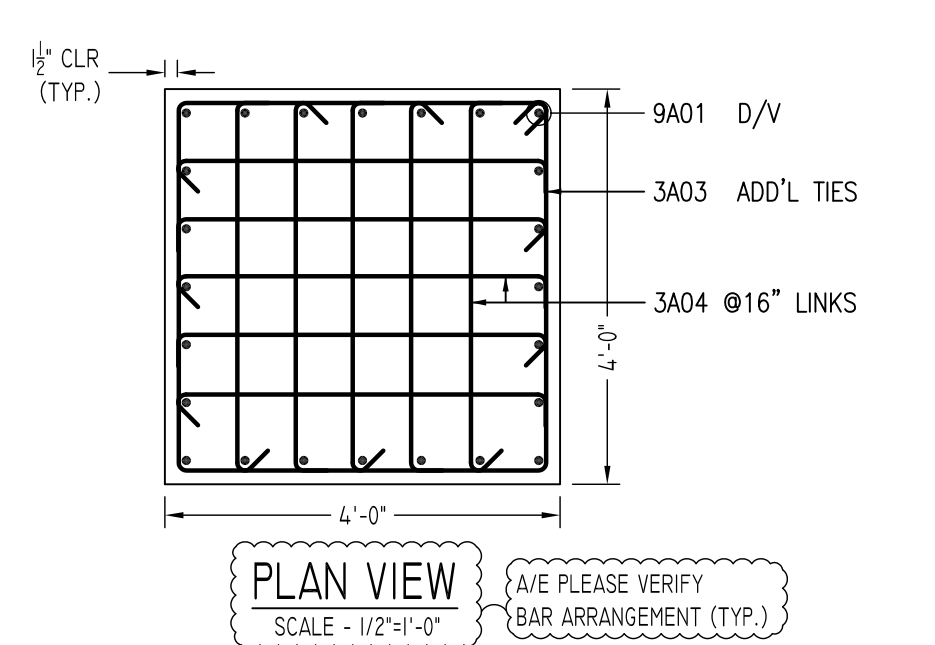
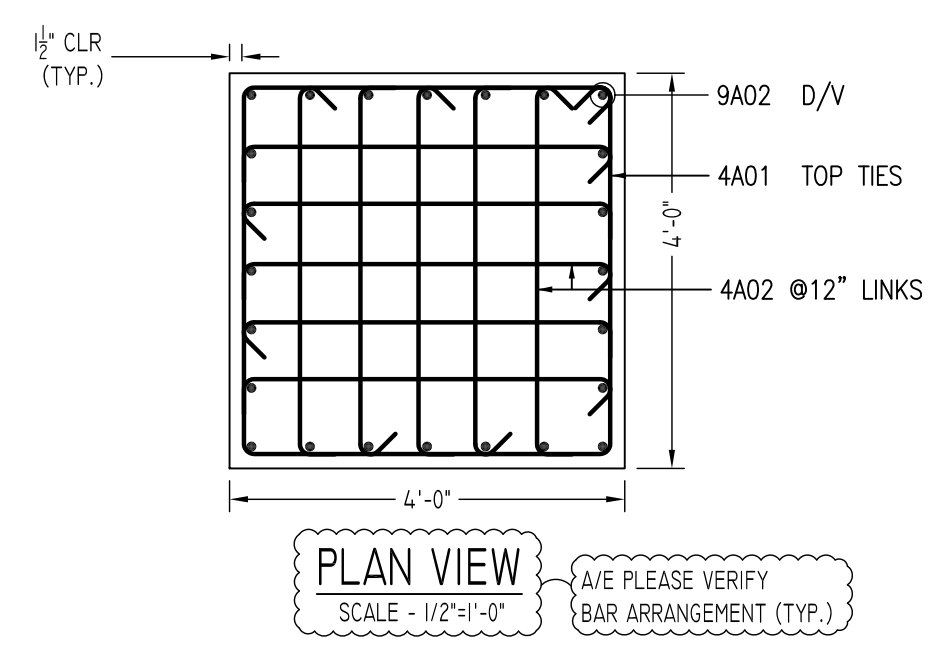
**NOTICE**

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REINFORCING STEEL PLACING DRAWINGS ONLY USE IN CONJUNCTION WITH CONTRACT DRAWINGS & SPECIFICATIONS. ELEVATIONS & DIMENSIONS SHOWN ON THIS DRAWING ARE FOR DETAILING PURPOSES ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION UNLESS VERIFIED BY ENGINEER OR CONTRACTOR.

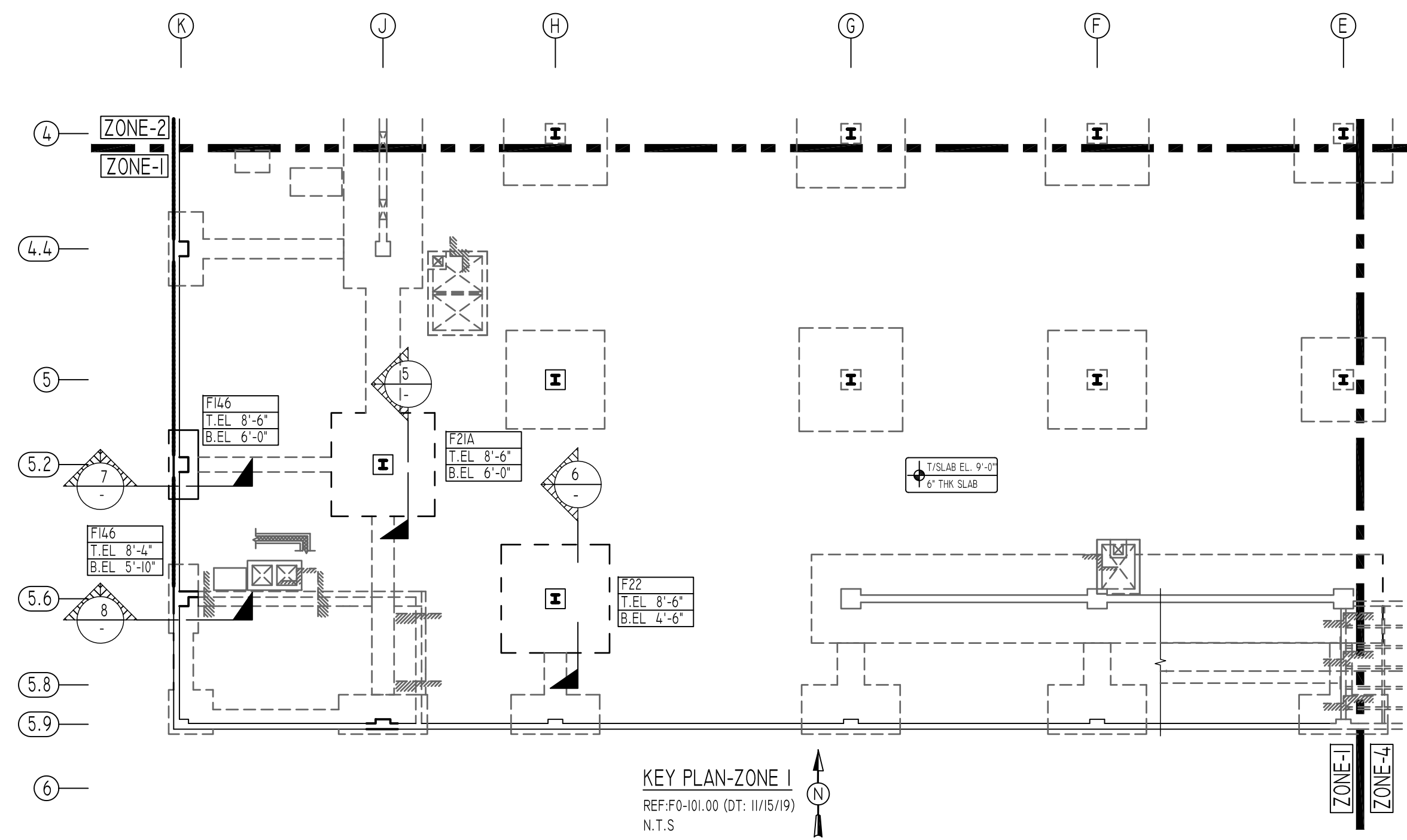
REVISION MARK	REVISION DETAILS	DATE
0	FOR APPROVAL	02/28/2020

PROJECT	JFK TERMINAL LOGISTICS CENTER
LOCATION	JAMAICA, NY, 11430.
ARCHITECT	CRAFT ARCHITECTS
ENGINEER	DESIMONE STRUCTURAL ENGINEERS
CUSTOMER	BENCHMARK CONTRACTING
DRAWN BY:	RSR/MRS
DATE:	02/28/20
REVIEWED BY:	T/L
JOB NO.	20015
DRAWING NO.:	SPREAD FOOTING & PIER REINFORCEMENT DETAILS ZONE-1
	R1



COUPLER REINFORCEMENT DETAILS				
MARK	BAR DIA.	BAR SHAPE	QUANTITY	REMARK
CB01	#7	5'-4"	51	REFER SECTION 5 & 6
CB03	#5	3'-3"	12	REFER SECTION 1
CB04	#9	8'-6"	15	REFER SECTION 5
CB05	#9	6'-10"	36	REFER SECTION 5 & 6

FOR PIER			FOR FOOTING		
SIZE	10000 PSI		SIZE	5000 PSI	
	LD	LAP		TOP	OTHERS
#3	10"	13"	#3	23"	17"
#4	13"	17"	#4	30"	23"
#5	16"	21"	#5	37"	29"
#6	19"	25"	#6	45"	34"
#7	27"	36"	#7	64"	50"
#8	31"	41"	#8	73"	56"
#9	35"	46"	#9	82"	63"
#10	39"	51"	#10	93"	71"
#11	43"	56"	#11	102"	78"

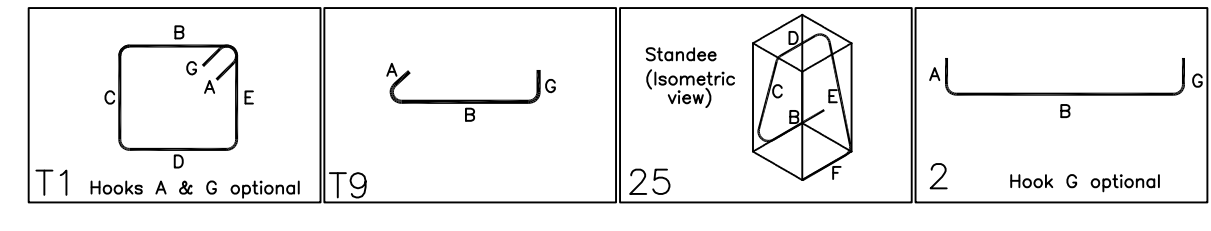


TYPE	FOOTING SIZE		BOTTOM REINFORCING		F/C (KSI)
	LENGTH X WIDTH	DEPTH	LONG WAY	SHORT WAY	
F7	7'-0"x7'-0"	2'-6"	11 - #6	11 - #6	5
F8	8'-0"x8'-0"	2'-6"	11 - #7	11 - #7	5
F9	9'-0"x9'-0"	2'-6"	13 - #7	13 - #7	5
F11	11'-0"x11'-0"	3'-0"	19 - #7	19 - #7	5
F15	15'-0"x15'-0"	3'-0"	30 - #8	30 - #8	10
F16	16'-0"x16'-0"	3'-6"	30 - #9	30 - #9	10
F17	17'-0"x17'-0"	3'-6"	32 - #9	32 - #9	10
F18	18'-0"x18'-0"	4'-0"	38 - #9	38 - #9	10
F20	20'-0"x20'-0"	4'-0"	38 - #10	38 - #10	10
F20A	20'-0"x20'-0"	4'-6"	38 - #10	38 - #10	20 - #7
F21	21'-0"x21'-0"	4'-0"	40 - #10	40 - #10	10
F21A	21'-0"x21'-0"	4'-0"	40 - #10	40 - #10	20 - #7
F22	22'-0"x22'-0"	4'-0"	44 - #10	44 - #10	10
F16	11'-0"x6'-0"	2'-6"	12 - #9	10 - #7	5
F146	14'-0"x6'-0"	2'-6"	12 - #10	16 - #7	5
F157	15'-0"x7'-0"	2'-6"	16 - #10	18 - #7	5
F188	18'-0"x8'-0"	2'-6"	24 - #11	16 - #8	5
F140	14'-0"x10'-0"	3'-0"	16 - #10	14 - #8	5
F200	20'-0"x10'-0"	3'-0"	30 - #11	16 - #9	5
F2030	20'-0"x30'-0"	4'-6"	20 - #10	40 - #10	20 - #7
F240	24'-0"x10'-0"	3'-0"	24 - #11	20 - #9	5
WF4	4'-0"x4'-0"	2'-6"	6 - #6	#6@12"	6 - #9

TYPICAL REINFORCING BAR CLEARANCE TABLE	
LOCATION	MIN. COVER
FOOTINGS AGAINST EARTH	3" CLR
BOTTOM	2" CLR
TOP	1 1/2" CLR
EXPOSED TO EARTH (#5 & SMALLER)	1 1/2" CLR
EXPOSED TO EARTH (#6 & LARGER)	2" CLR
PIER & BUTTRESS (MAIN REINF.)	2" CLR
PIER & BUTTRESS (TIES, REINF.)	1 1/2" CLR
BEAMS (STIRRUPS, MAIN REINF.)	1 1/2" CLR
SLABS, WALLS, JOISTS	1 1/2" CLR

TYPE	PIER SIZE		REINFORCING		REMARK
	LENGTH X WIDTH	VERTICAL	VERTICAL	HORIZONTAL	
P1	36"x36"	24 - #7	#3 @ 16"		
P2	48"x48"	24 - #9	#3 @ 16"		
P3	36"x36"	24 - #7	#4 @ 12"	1.3 LD SPLICE	
P4	48"x48"	24 - #9	#4 @ 12"	1.3 LD SPLICE	
P1	36"x36"	24 - #7	#3 @ 14"		
B2	24"x36"	16 - #7	#3 @ 14"		
B3	36"x24"	16 - #7	#3 @ 14"		

BENDING DETAILS											
Bar Mark	Qty	Size	Total Length	Type	X'	Y'	Z'	W'	V'	U'	T'
3A02	4	#3	11'-1.5"	T1	0'-4.5"	2'-7.5"	2'-7.5"	0'-4.5"			
3A03	16	#3	15'-8.5"	T1	0'-4.5"	3'-9"	3'-9"	0'-4.5"			
3A04	60	#3	4'-5.5"	T9	0'-4.5"	3'-9"		0'-4.5"			
4A01	6	#4	15'-9"	T1	0'-4.5"	3'-9"	3'-9"	3'-9"	0'-4.5"		
4A02	60	#4	4'-6"	T9	0'-4.5"	3'-9"		0'-4.5"			
5A01	36	#5	10'-5.5"	T5	1'-6"	3'-3.5"	0'-10"	3'-3.5"	1'-6"	3'-2.5"	1'-7.5"
7A02	48	#7	6'-2"	T2	1'-2"	5'-0"					
9A01	24	#9	8'-3.5"	T2	1'-7"	6'-8"					
9A02	24	#9	8'-1.5"	T2	1'-7"	6'-6"					



ALL BARS IN THIS DRAWING  
ASTM A615 GRADE 60  
BLACK UNCOATED

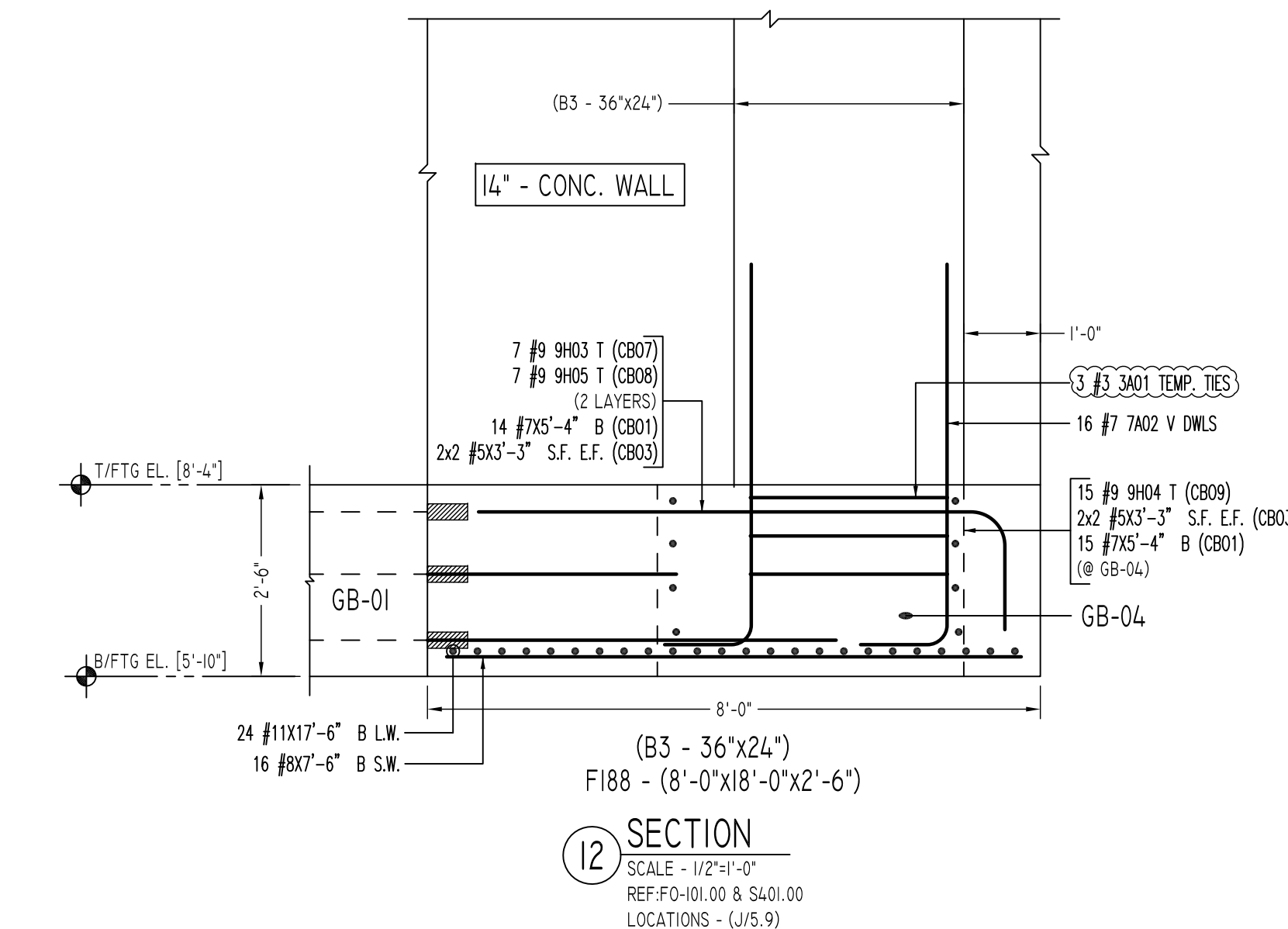
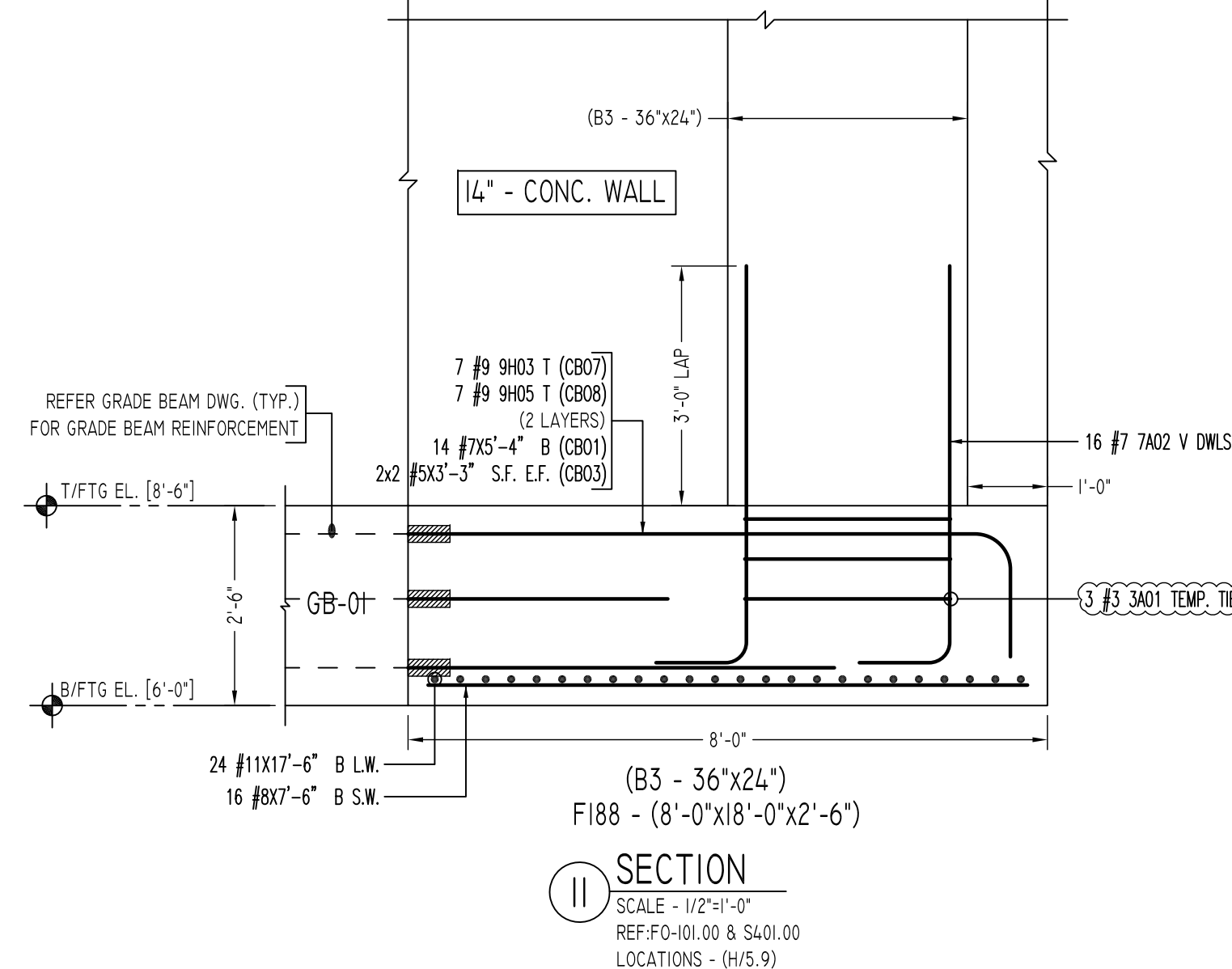
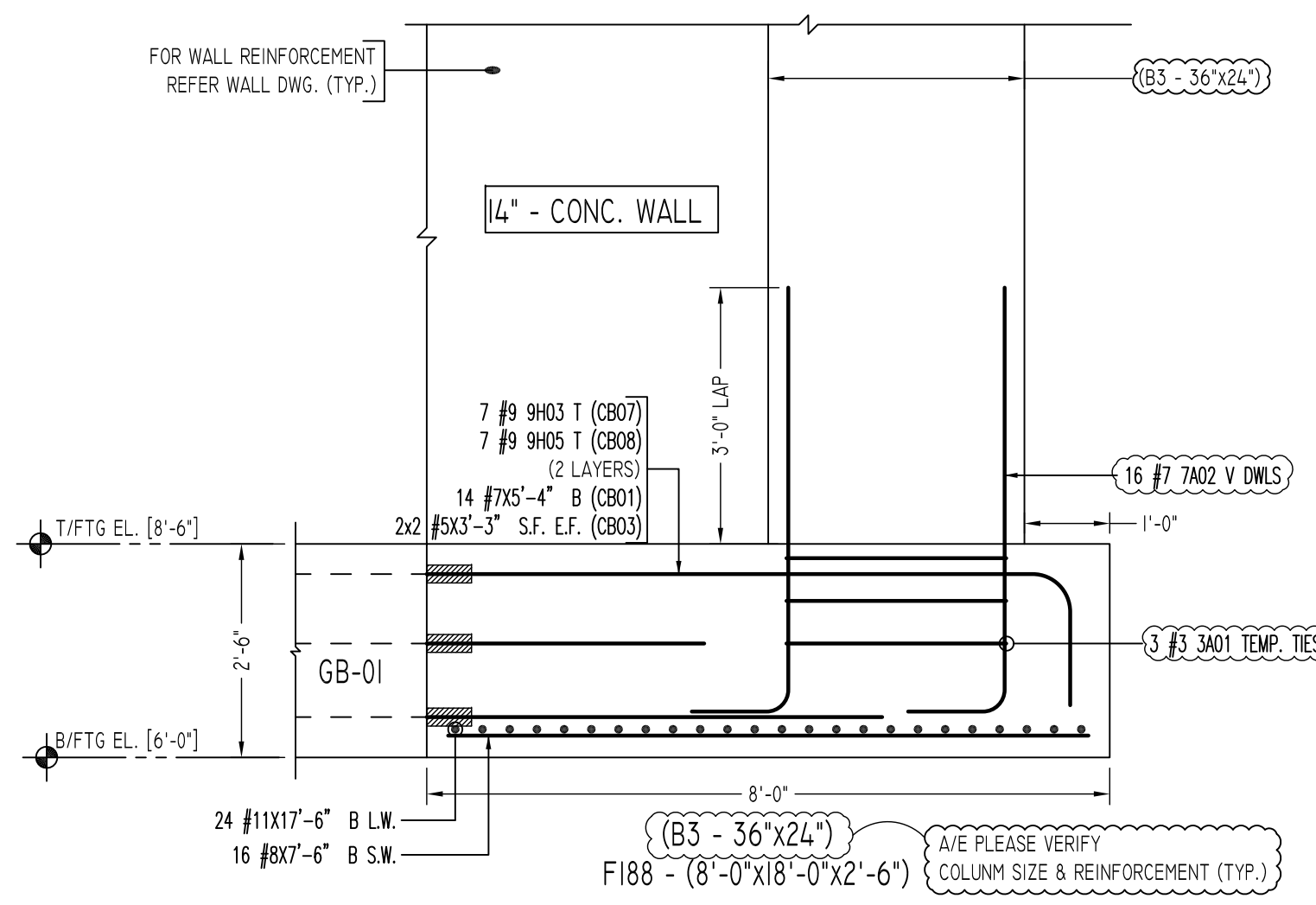
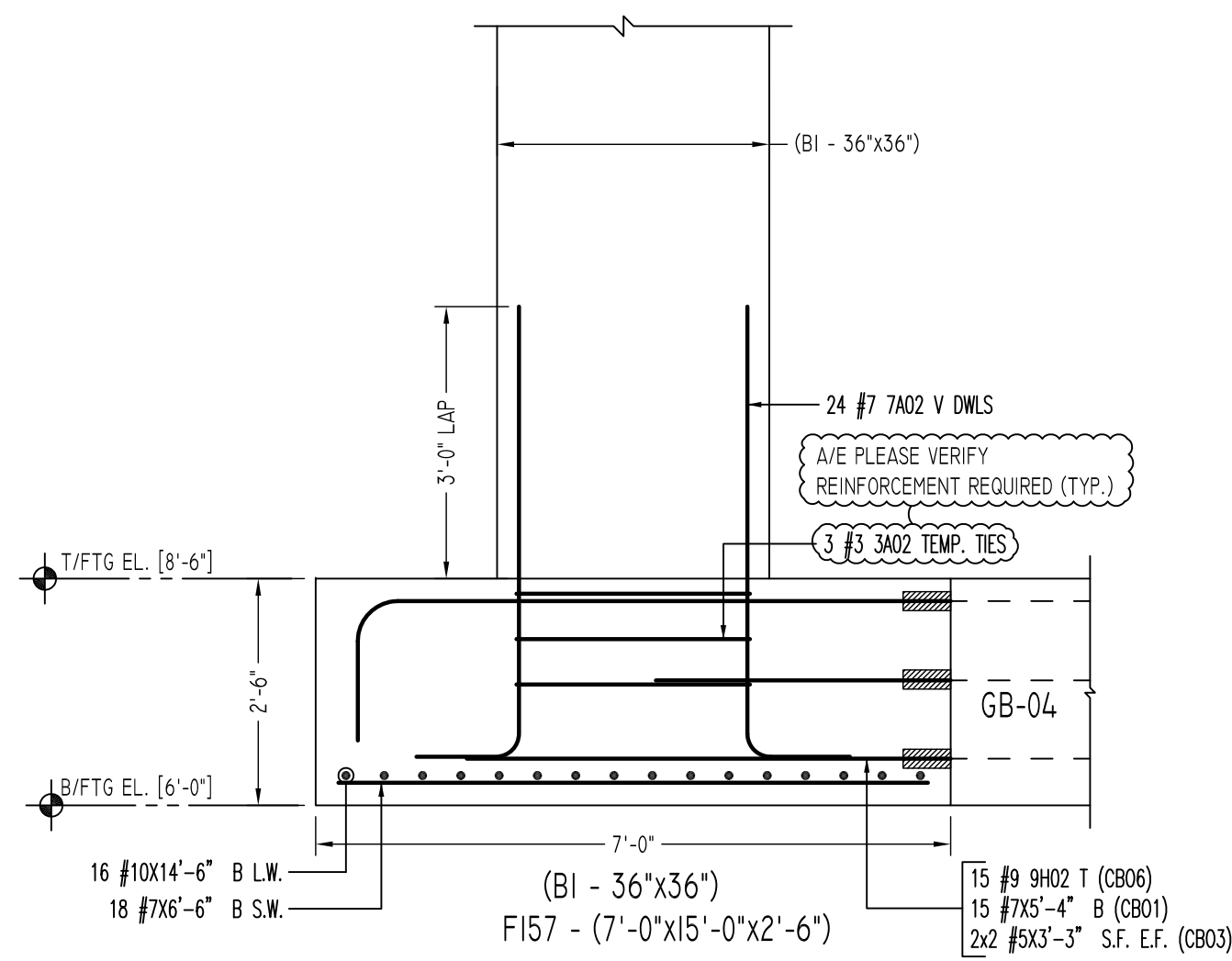
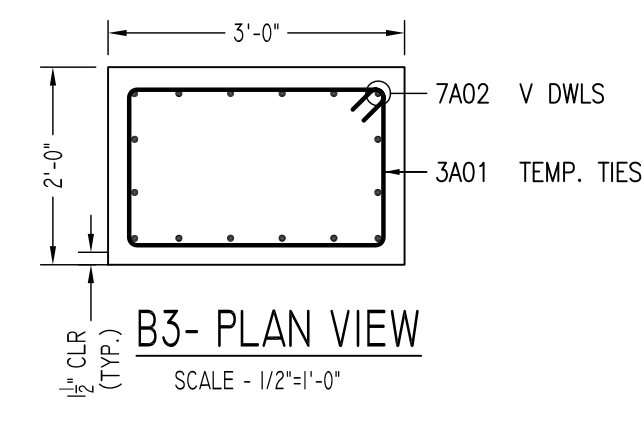
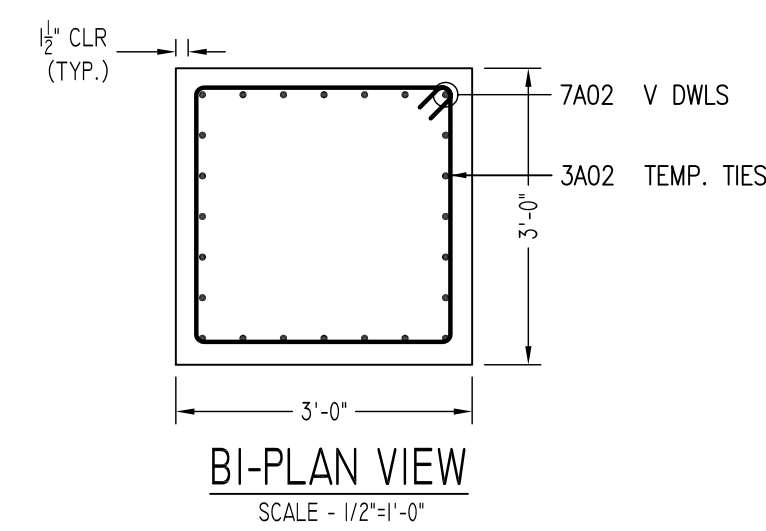
Abbreviations:  
I.F.=Inside Face  
O.F.=Outside Face  
E.F.=Each Face  
DWL=Dowel  
V=Vertical  
H=Horizontal  
C.B.=Corner Bar  
S.DWL=Slab Dowel  
E.W.=Each Way  
B/BOT=Bottom  
T=Top  
MDWL=Masonry Dowel  
B.B.=Bond Beam  
ALT.=Alternate  
Approx.=Approximate

OPNG=Opening  
BAL.=Balance  
BTW=Between  
CJ=Construction Joint  
CLR.=CLEARANCE  
CMU=Concrete Masonry Unit  
CONT.=Continuous  
EA.=Each  
Elev.=Elevation  
EMB=Embedment  
SW=Short Way  
LW=Long Way  
(BL)=Black Bar  
(EP)=Epoxy Bar  
(GA)=Galvanized

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REVISION MARK	REVISION DETAILS	DATE
0	FOR APPROVAL	02/28/2020

PROJECT	JFK TERMINAL LOGISTICS CENTER						
LOCATION	JAMAICA, NY, 11430.						
ARCHITECT	CRAFT ARCHITECTS						
ENGINEER	DESIMONE STRUCTURAL ENGINEERS						
CUSTOMER	BENCHMARK CONTRACTING						
DRAWN BY:	RSR/MRS	DATE:	02/28/20	REVIEWED BY:	T/L	JOB NO.:	20015
DRAWING TITLE:						DRAWING NO.:	
SPREAD FOOTING & PIER REINFORCEMENT DETAILS ZONE-1						R2	



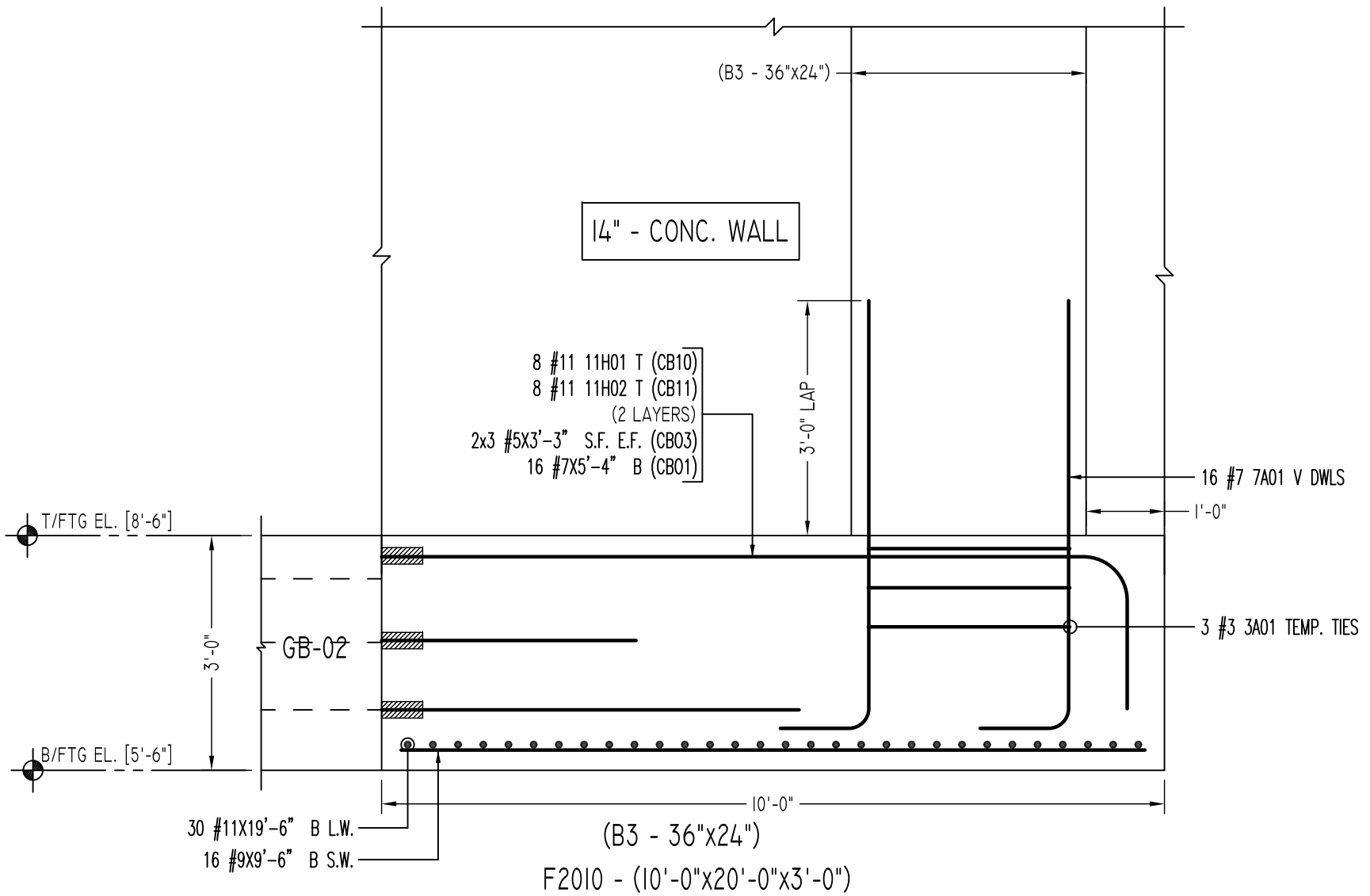
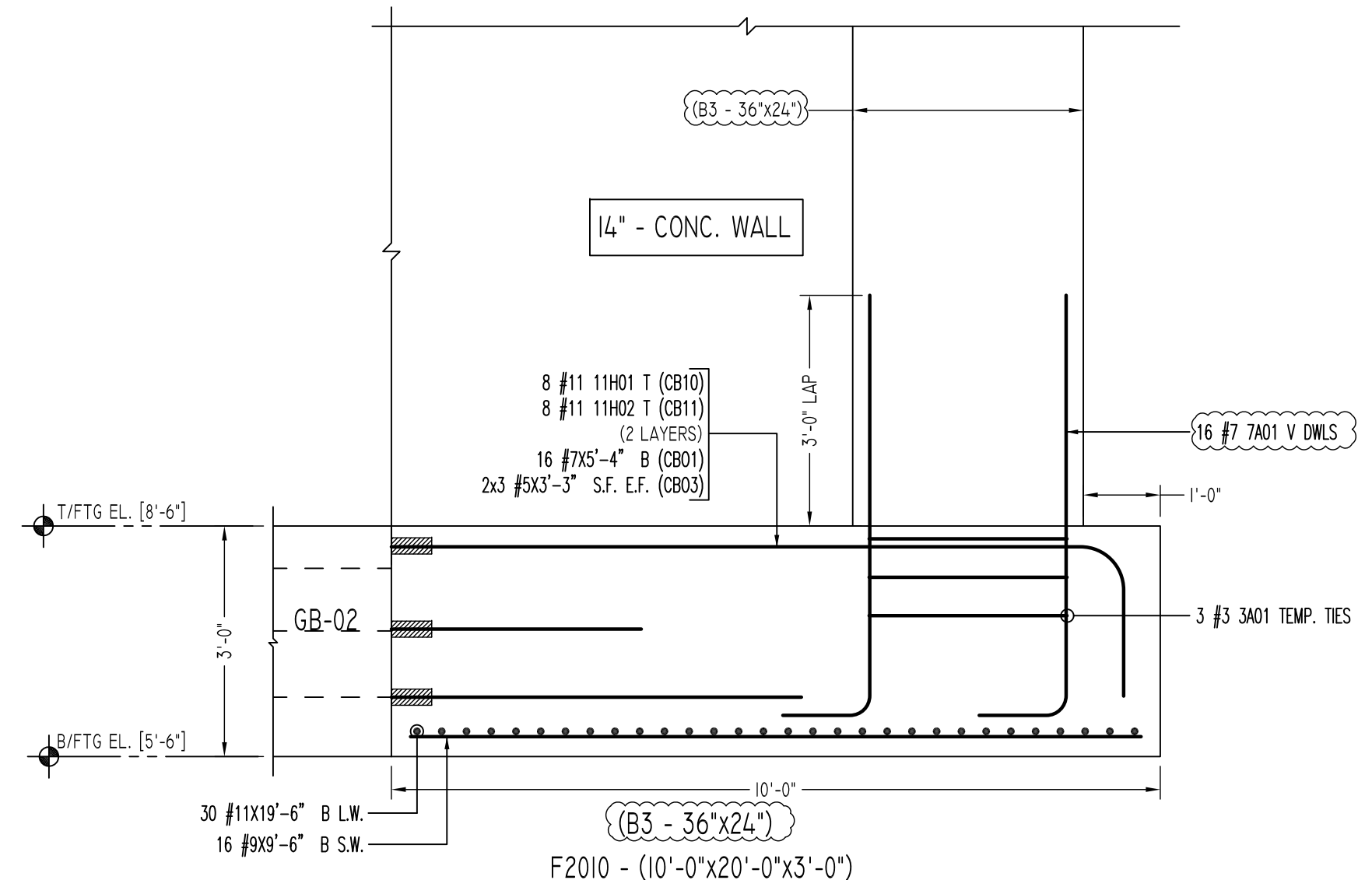
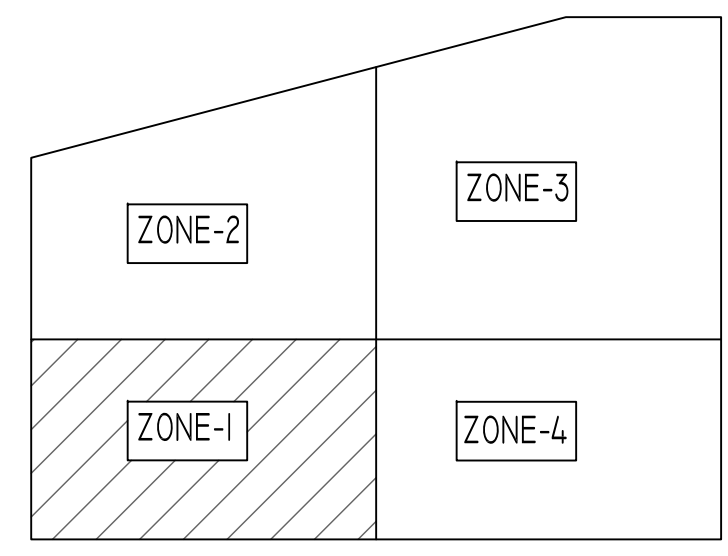
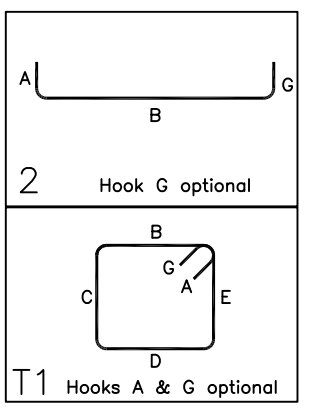
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SCALE - 1/2"=1'-0"  
REF:FO-101.00 & S401.00  
LOCATIONS - (K/4,4)

10 SECTION  
SCALE - 1/2"=1'-0"  
REF:FO-101.00 & S401.00  
LOCATIONS - (E/5,9)

11 SECTION  
SCALE - 1/2"=1'-0"  
REF:FO-101.00 & S401.00  
LOCATIONS - (H/5,9)

12 SECTION  
SCALE - 1/2"=1'-0"  
REF:FO-101.00 & S401.00  
LOCATIONS - (J/5,9)

Bar Mark	Qty	Size	Total Length	Type	X'	Y'	Z'	W'	V'	U'	T'	S'	R'	Q'	P'	O'	N'	M'	L'	K'	J'	I'	H'	G'	F'	E'
3A01	15	#3	9'-1 1/2"	T1	0'-4 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"	2'-7 1/2"



13 SECTION  
SCALE - 1/2"=1'-0"  
REF:FO-101.00 & S401.00  
LOCATIONS - (F/5,9)

14 SECTION  
SCALE - 1/2"=1'-0"  
REF:FO-101.00 & S401.00  
LOCATIONS - (G/5,9)

LOCATION	MIN. COVER
FOOTINGS AGAINST EARTH	3" CLR
BOTTOM	2" CLR
TOP	2" CLR
EXPOSED TO EARTH (#5 & SMALLER)	1 1/2" CLR
EXPOSED TO EARTH (#6 & LARGER)	2" CLR
PIER & BUTTRESS (MAIN REINF.)	2" CLR
PIER & BUTTRESS (TIES, REINF.)	1 1/2" CLR
BEAMS (STIRRUPS, MAIN REINF.)	1 1/2" CLR
SLABS, WALLS, JOISTS	1 1/2" CLR

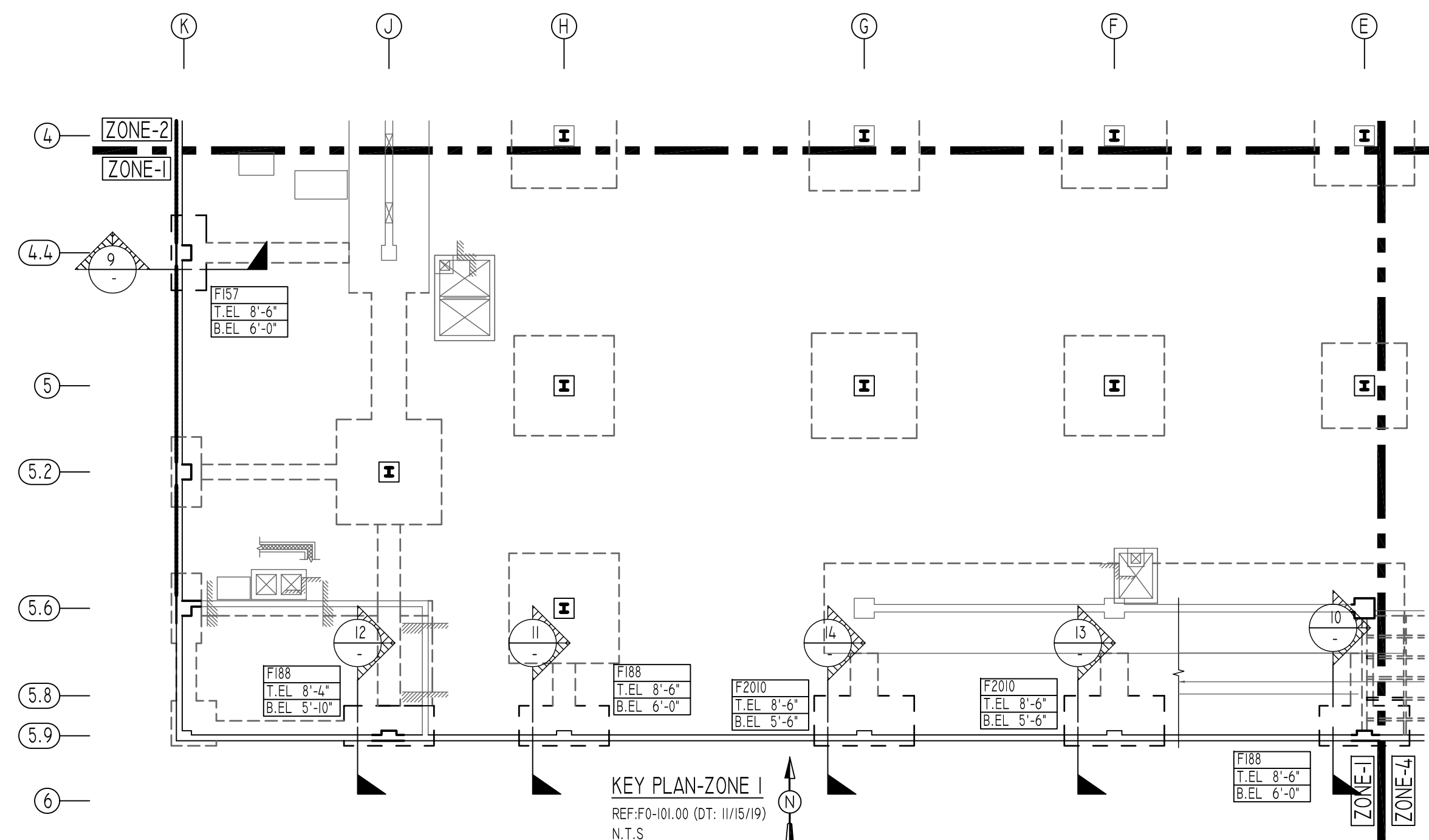
TYPE	FOOTING SIZE		BOTTOM REINFORCING		F/C (KSI)
	LENGTH	WIDTH	LONG WAY	SHORT WAY	
F7	7'-0"x7'-0"	2'-6"	11 - #6	11 - #6	5
F8	8'-0"x8'-0"	2'-6"	11 - #7	11 - #7	5
F9	9'-0"x9'-0"	2'-6"	13 - #7	13 - #7	5
F11	11'-0"x11'-0"	3'-0"	19 - #7	19 - #7	5
F15	15'-0"x15'-0"	3'-0"	30 - #8	30 - #8	10
F16	16'-0"x16'-0"	3'-6"	30 - #9	30 - #9	10
F17	17'-0"x17'-0"	3'-6"	32 - #9	32 - #9	10
F18	18'-0"x18'-0"	4'-0"	38 - #9	38 - #9	10
F20	20'-0"x20'-0"	4'-0"	38 - #10	38 - #10	10
F20A	20'-0"x20'-0"	4'-6"	38 - #10	20 - #7	10
F21	21'-0"x21'-0"	4'-0"	40 - #10	40 - #10	10
F21A	21'-0"x21'-0"	4'-0"	40 - #10	20 - #7	10
F22	22'-0"x22'-0"	4'-0"	44 - #10	44 - #10	10
F16	11'-0"x6'-0"	2'-6"	12 - #9	10 - #7	5
F14.6	14'-0"x6'-0"	2'-6"	12 - #10	16 - #7	5
F15.7	15'-0"x7'-0"	2'-6"	16 - #10	18 - #7	5
F18.8	18'-0"x8'-0"	2'-6"	24 - #11	16 - #8	5
F14.0	14'-0"x10'-0"	3'-0"	16 - #10	14 - #8	5
F20.0	20'-0"x10'-0"	3'-0"	30 - #11	16 - #9	5
F20.30	20'-0"x30'-0"	4'-6"	20 - #10	40 - #10	10
F24.0	24'-0"x10'-0"	3'-0"	24 - #11	20 - #9	5
WF.4	4'-0"x4'-0"	2'-6"	6 - #6	#6@2'	5

FOR PIER			FOR FOOTING		
SIZE	LD	LAP	SIZE	TOP	OTHERS
#3	10"	13"	#3	23"	17"
#4	13"	17"	#4	30"	23"
#5	16"	21"	#5	37"	29"
#6	19"	25"	#6	45"	34"
#7	27"	36"	#7	64"	50"
#8	31"	41"	#8	73"	56"
#9	35"	46"	#9	82"	63"
#10	39"	51"	#10	93"	71"
#11	43"	56"	#11	102"	78"

TYPE	PIER SIZE		REINFORCING		REMARK
	LENGTH	WIDTH	VERTICAL	HORIZONTAL	
P1	36"x36"	24 - #7	#3 @ 14"		
P2	48"x48"	24 - #9	#3 @ 16"		
P3	36"x36"	24 - #7	#4 @ 12"		I.3 LD SPLICE
P4	48"x48"	24 - #9	#4 @ 12"		I.3 LD SPLICE
B1	36"x36"	24 - #7	#3 @ 14"		
B2	24"x36"	16 - #7	#3 @ 14"		
B3	36"x24"	16 - #7	#3 @ 14"		

MARK	BAR DIA.	BAR SHAPE	QUANTITY	REMARK
CB01	#7	5'-4"	104	REFER SECTION 9, 10, 11, 12, 13 & 14
CB03	#5	3'-3"	32	REFER SECTION 9, 10, 11, 12, 13 & 14
CB06	#9	6'-7"	15	REFER SECTION 9
CB07	#9	7'-7"	21	REFER SECTION 10 & 11
CB08	#9	6'-11"	21	REFER SECTION 10 & 11
CB09	#9	17'-7"	15	REFER SECTION 12
CB10	#11	9'-7"	16	REFER SECTION 13 & 14
CB11	#11	9'-4"	16	REFER SECTION 13 & 14

ALL BARS IN THIS DRAWING  
ASTM A615 GRADE 60  
BLACK UNCOATED



Abbreviations:  
I.F. = Inside Face  
O.F. = Outside Face  
E.F. = Each Face  
D.W.L. = Dowel  
V = Vertical  
H = Horizontal  
C.B. = Corner Bar  
S.D.W.L. = Slab Dowel  
E.W. = Each Way  
B/BOT = Bottom  
T = Top  
M.D.W.L. = Masonry Dowel  
B.B. = Bond Beam  
ALT. = Alternate  
Approx. = Approximate

OPNG = Opening  
BAL. = Balance  
B.T.W. = Between  
C.J. = Construction Joint  
CLR. = CLEARANCE  
CMU = Concrete Masonry Unit  
CONT. = Continuous  
EA. = Each  
Elev. = Elevation  
EMB = Embedment  
SW = Short Way  
LW = Long Way  
(BL) = Black Bar  
(EP) = Epoxy Bar  
(GA) = Galvanized

**NOTICE**  
Shortages, improper fabrication or claims for any other reason must be reported to this company within a period of 15 days of delivery. This company reserves the right to field inspect prior to replacement or reconditioning of nonconforming material, and will not honor charges for work done in the field without specific authorization from this company.

REINFORCING STEEL PLACING DRAWINGS ONLY USE IN CONJUNCTION WITH CONTRACT DRAWINGS & SPECIFICATIONS. ELEVATIONS & DIMENSIONS SHOWN ON THIS DRAWING ARE FOR DETAILING PURPOSES ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION UNLESS VERIFIED BY ENGINEER OR CONTRACTOR.

REVISION MARK	REVISION DETAILS	DATE
0	FOR APPROVAL	02/28/2020

PROJECT	JFK TERMINAL LOGISTICS CENTER						
LOCATION	JAMAICA, NY, 11430.						
ARCHITECT	CRAFT ARCHITECTS						
ENGINEER	DESIMONE STRUCTURAL ENGINEERS						
CUSTOMER	BENCHMARK CONTRACTING						
DRAWN BY:	RSR/MRS	DATE:	02/28/20	REVIEWED BY:	T/L	JOB NO.:	20015
DRAWING TITLE:	SPREAD FOOTING & PIER REINFORCEMENT DETAILS ZONE-1		DRAWING NO.:	R3			