

GENERAL STRUCTURAL NOTES

STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THESE DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK.

THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS, REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.

CODE REQUIREMENTS:
CONFORM TO THE 2014 OREGON STRUCTURAL SPECIALTY CODE (OSSC), BASED ON THE 2012 INTERNATIONAL BUILDING CODE (IBC).

TEMPORARY CONDITIONS:
STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.

CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

EXISTING CONDITIONS:
ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

ASSUMED FUTURE CONSTRUCTION:
VERTICAL: NONE
HORIZONTAL: NONE

DESIGN CRITERIA:
DESIGN WAS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE OSSC. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADS AND ALLOWABLES WERE USED FOR DESIGN, WITH LIVE LOADS (L.L.) REDUCED PER OSSC:

DESIGN CRITERIA		
GRAVITY SYSTEM CRITERIA		
ROOF LIVE/SNOW LOAD	25 PSF L.L. (ALSO SEE SNOW LOAD CRITERIA BELOW)	
FLOOR LIVE LOADS:	UNIFORM LOAD	CONCENTRATED LOAD
OFFICES	50 PSF L.L. + 15 PSF FOR PARTITIONS, OR 100 PSF L.L. (INCLUDING PARTITIONS) WHICHEVER IS MORE CRITICAL FOR MEMBER DESIGN	2,000 LBS.
CORRIDORS	100 PSF L.L.	2,000 LBS. (300 LBS. @ STAIRS)
VERTICAL FLOOR DEFLECTION (CLADDING DESIGN)	0.75" OR L/360 WHICHEVER IS LESS LONG TERM DEAD LOAD PLUS LIVE LOAD; 0.375" OR L/600 WHICHEVER IS LESS AT BRICK VENEER SUPPORTS	
VERTICAL FLOOR DEFLECTION (INTERIOR)	L/360 LIVE LOAD PER OSSC TABLE 1604.3	
NOTES:	1. LIVE LOADS REDUCED PER OSSC. 2. MEMBER DESIGNED FOR MORE CRITICAL OF UNIFORM OR CONCENTRATED LOAD.	

SNOW CRITERIA		
DESIGN ROOF SNOW LOAD	25 PSF MINIMUM IN ACCORDANCE WITH OSSC	
SNOW DRIFT	PER OSSC AS SHOWN ON PLANS	
GROUND SNOW LOAD	Pg= 5 PSF IN ACCORDANCE WITH 2013 SNOW LOAD ANALYSIS FOR OREGON	
FLAT ROOF SNOW LOAD	Pf = 4 PSF	
SNOW EXPOSURE FACTOR	Ce = 1.0	
SNOW LOAD IMPORTANCE FACTOR	Is = 1.1	
THERMAL FACTOR	Ct = 1.0	

GEOTECHNICAL CRITERIA		
DESIGN BASED ON REPORT BY:	MARQUESS & ASSOCIATES INC., DATED MAY 13, 2015	
ALLOWABLE SOIL PRESSURE: ON STRUCTURAL FILL	2000 PSF	
SHORT TERM LOADING	2666 PSF	

WIND CRITERIA		
RISK CATEGORY	III	
MAIN WIND FORCE RESISTING SYSTEM	Vult = 95 MPH ULTIMATE DESIGN WIND SPEED (3-SECOND GUST)	
COMPONENTS AND CLADDINGS	Vult = 95 MPH ULTIMATE DESIGN WIND SPEED (3-SECOND GUST)	
EXPOSURE CATEGORY	C	
IMPORTANCE FACTOR	I _w = 1.0	
GUST/INTERNAL PRESSURE	Gc _{pi} = +/- 0.18	

SEISMIC CRITERIA		
RISK CATEGORY	III	
SEISMIC DESIGN CATEGORY	D	
SITE CLASS	D	
IMPORTANCE FACTOR	I _e = 1.25	
MCE SPECTRAL ACCELERATION	S _e = 0.798	S ₁ = 0.424
SITE COEFFICIENT	F _a = 1.161	F _v = 1.576
DESIGN SPECTRAL ACCELERATION	S _{DS} = 0.628	S _{D1} = 0.445
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PER ASCE 7-10, SECTION 12.8	

X DIRECTION (E / W)			Y DIRECTION (N / S)		
SEISMIC LOAD RESISTING SYSTEM (SLRS)	SPECIAL REINFORCED CONCRETE SHEAR WALLS		SPECIAL REINFORCED CONCRETE SHEAR WALLS		
RESPONSE MODIFICATION FACTOR	R = 5		R = 5		
SEISMIC RESPONSE COEFFICIENT	C _s = 0.126		C _s = 0.126		
DESIGN BASE SHEAR	XXX KIPS		XXX KIPS		
REDUNDANCY FACTOR	rho = 1.3		rho = 1.3		
DESIGN INELASTIC STORY DRIFT	Delta = 0.25"		Delta = 0.25"		

SEISMIC LOAD RESISTING SYSTEM:
THE SEISMIC LOAD RESISTING SYSTEM (SLRS) FOR THE COMPLETED STRUCTURE IS AS FOLLOWS: CONCRETE SHEAR WALLS SUPPORTING STEEL ROOF AND CONCRETE ROOF DIAPHRAGMS.
REFERENCE SHEETS S30X THRU S30X FOR SLRS ELEVATIONS AND DETAILS. REFERENCE PLANS FOR ADDITIONAL SLRS COMPONENTS AND DETAILS.

REFER TO THE GENERAL STRUCTURAL NOTES AND PROJECT SPECIFICATIONS FOR DETAILING, INSTALLATION, TESTING AND INSPECTION REQUIREMENTS FOR MEMBERS THAT ARE PART OF THE SEISMIC LOAD RESISTING SYSTEM (SLRS).

DESIGN AND DETAILING WAS BASED ON CRITERIA FOR SEISMIC DESIGN CATEGORY D, EXCEPT...

STRUCTURAL OBSERVATION:
THE STRUCTURAL ENGINEER OF RECORD (SER) WILL PERFORM STRUCTURAL OBSERVATION BASED ON THE REQUIREMENTS OF THE OSSC AT THE STAGES OF CONSTRUCTION LISTED BELOW. CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SER TO PERFORM THESE OBSERVATIONS.

STRUCTURAL OBSERVATIONS			
ITEM	OBSERVED BY (2)		COMMENTS
	AOR	SER	
PRIOR TO FIRST CONCRETE POUR	X		REF. NOTES 1,3,4,5
DURING INITIAL STEEL ERECTION	X		REF. NOTES 1,3,4
AS REQUIRED TO ADDRESS STRUCTURAL ISSUES	X		REF. NOTES 1,3,4

- FOOTNOTES:**
- CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE SER IN ADVANCE.
 - SER - STRUCTURAL ENGINEER OF RECORD. AOR - ARCHITECT OF RECORD.
 - A FIELD REPORT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING EACH SITE VISIT.
 - STRUCTURAL OBSERVATION IS FOR THE GENERAL CONFORMANCE OF THE STRUCTURAL DRAWING, SPECIAL INSPECTION IS STILL REQUIRED.
 - AFTER REINFORCING STEEL HAS BEEN INSTALLED.

SPECIAL INSPECTION AND TESTING:
SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF THE OSSC AS SUMMARIZED IN THE SPECIAL INSPECTION AND TESTING PROGRAM ON SHEET S-004. CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

SUBMITTALS:
SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION OF ALL STRUCTURAL ITEMS, INCLUDING THE FOLLOWING:

ITEM	SUBMITTALS		COMMENTS
	SUBMITTAL (1,4)	DEFERRED SUBMITTAL (2,4)	
CONCRETE MIX DESIGNS	X		
CONCRETE REINFORCEMENT	X		
CONCRETE ANCHORAGES	X		
EMBEDDED STEEL ITEMS	X		
STRUCTURAL STEEL	X		
STEEL WELDING PROCEDURES	X		
STEEL JOISTS AND JOIST GIRDERS		X	
STEEL DECKING	X		
LIGHT GAUGE METAL FRAMING	X		
STEEL FASTENERS	X		
WINDOW WALL AND OTHER SYSTEMS		X	
MEP EQUIPMENT ANCHORAGE AND BRACING		X	REF. NOTES

FOOTNOTES:

- SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION OF STRUCTURAL ITEMS. IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE STRUCTURAL ENGINEER.
- DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON, AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE, CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE OSSC AND AS NOTED UNDER "DESIGN CRITERIA".
- THE CONTRACTOR SHALL COORDINATE SEISMIC RESTRAINTS OF MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE. CONNECTIONS TO STRUCTURE SHALL CONFORM TO ASCE 7-10 CHAPTER 13, BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF OREGON, AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION.
- FIELD ENGINEER DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM OR ADD TO THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION.

CONCRETE:
CONCRETE WORK SHALL CONFORM TO CHAPTER 19 OF THE OSSC. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD CYLINDER TESTS PER ASTM C39. MIX DESIGNS SHALL BE AS FOLLOWS:

CONCRETE MIX DESIGNS				
USE	f _c (PSI)	TEST AGE (DAYS)	MAX. W/CM RATIO (NOTE 1)	MAX. AGGREGATE SIZE
MISC. CONCRETE, CURBS, SIDEWALKS, ETC.	3,000	28	0.50	1"
INTERIOR SLABS ON GRADE	4,000	28	0.50	1"
SPREAD FOOTINGS	4,000	28	0.45	1"
WALLS	4,500	28	0.45	3/4"
MILD REINFORCED SLABS AND BEAMS	5,000	28	0.45	3/4"

- TABLE NOTES:**
- VERIFY WATER-CEMENTITIOUS MATERIAL RATIO WITH FLOOR COVERING MANUFACTURER FOR CONCRETE FLOORS WITH MOISTURE SENSITIVE FLOOR COVERINGS.
 - ESTABLISH WATER-CEMENTITIOUS MATERIAL RATIO PER ACI 318-11 CHAPTER 5.

PORTLAND CEMENT CONTENT MAY BE REPLACED UP TO 20% WITH FLYASH CONFORMING TO ASTM C618 (INCLUDING TABLE 2A) TYPE F OR TYPE C OR UP TO 50% WITH SLAG CEMENT CONFORMING TO ASTM C989. PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA. FOR MIX DESIGNS WITH f_c = 5,000 PSI OR LESS, SLAG CEMENT MAY BE SUBSTITUTED FOR FLYASH AT A 1:1 RATIO WITHOUT TEST DATA. WHEN SLAG CEMENT IS SUBSTITUTED IN HIGHER STRENGTH MIXES OR AT DIFFERENT RATIO, THE MIX STRENGTH MUST BE SUBSTANTIATED BY TEST DATA.

A WATER-REDUCING ADMIXTURE CONFORMING TO ASTM C494 USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS SHALL BE INCORPORATED IN CONCRETE DESIGN MIXES. A HIGH-RANGE WATER-REDUCING (HRWR) ADMIXTURE CONFORMING TO ASTM C494 TYPE F OR G MAY BE USED IN CONCRETE MIXES PROVIDING THEY DO NOT EXCEED 10%. AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C280 SHALL BE USED IN CONCRETE MIXES FOR ALL CONCRETE EXPOSED TO WEATHER. THE AMOUNT OF ENTRAINING AIR BY VOLUME SHALL BE AS FOLLOWS ± 1.5%:

CONCRETE MIX AIR CONTENT		
MAX. AGGREGATE SIZE	CONCRETE SUBJECT TO FREEZE/THAW	CONCRETE SUBJECT TO CONT. MOISTURE AND/OR DEICING CHEMICALS
3/8"	6.0%	7.5%
1/2"	5.5%	7.0%
3/4"	5.0%	6.0%
1"	4.5%	6.0%
1-1/2"	4.5%	5.5%

CONCRETE ELEMENTS SUBJECT TO FREEZE/THAW INCLUDE ALL [MISC. CONCRETE, CURBS, SIDEWALKS AND EXTERIOR SLABS.

THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS ALONG WITH TEST DATA COMPLIANT WITH ACI 318-11 OSSC SECTION 1905 A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE. NO WATER MAY BE ADDED TO CONCRETE IN THE FIELD UNLESS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER IN CONJUNCTION WITH THE CONCRETE MIX DESIGN.

SLEEVES, OPENINGS, CONDUIT, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE PLACING CONCRETE. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE THIRD OF THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON CENTER.

WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM 1/4" AMPLITUDE PER ACI 318 SECTION 11.6.9. (PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE EDGES, UNLESS NOTED OTHERWISE.)

VERIFY ALL BLOCK OUTS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING REQUIREMENTS.

THE CONTRACTOR SHALL PROTECT EXPOSED SLABS FROM DAMAGE DUE TO EQUIPMENT AND OTHER UNINTENDED LOADING DURING CONSTRUCTION.

REFERENCE SLAB ON GRADE DETAILS AND THE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION ON SUBGRADE REQUIREMENTS. REFERENCE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS INCLUDING CURING, FINISHING AND VAPOR BARRIER.

SHORING AND RE-SHORING:
SHORING AND RE-SHORING DESIGN IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL CONFORM TO 347R-14 AND ACI 347.2R-05. SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE CONCRETE STRENGTH IS AT LEAST 70 PERCENT OF DESIGN STRENGTH, AS DETERMINED BY FIELD CURED CYLINDERS. IN ADDITION, SHORING SHALL NOT BE REMOVED SOONER THAN THE FOLLOWING CUMULATIVE TIME PERIODS WITH SURROUNDING TEMPERATURE GREATER THAN OR EQUAL TO 50 DEGREES FAHRENHEIT:

SHORING AND RE-SHORING		
ELEMENT	MINIMUM REMOVAL TIME	COMMENTS
WALLS, COLUMNS AND BEAM SIDES	12 HOURS	WHERE FORMS ALSO SUPPORT FORMWORK FOR SLABS OR SOFFITS, THE REMOVAL TIME OF THE LATTER GOVERNS.
ONE WAY FLOOR SLABS		
LESS THAN 10'-0"	4 DAYS	FORM REMOVAL TIME MAY BE HALF OF THAT SHOWN WHERE FORMS WILL BE REMOVED WITHOUT DISTURBING SHORES.
CLEAR SPAN 10'-0" TO 20'-0"	7 DAYS	
CLEAR SPAN OVER 20'-0"	10 DAYS	
TWO-WAY CONVENTIONAL SLABS		
LESS THAN 10'-0"	7 DAYS	FORM REMOVAL TIME MAY BE HALF OF THAT SHOWN WHERE FORMS WILL BE REMOVED WITHOUT DISTURBING SHORES.
CLEAR SPAN 10'-0" TO 20'-0"	14 DAYS	
CLEAR SPAN OVER 20'-0"	21 DAYS	

REINFORCING STEEL:
ALL LONGITUDINAL FLEXURE REINFORCEMENT IN ABOVE GROUND LEVEL BEAMS, COLUMNS AND SHEAR WALLS SHALL BE ASTM A706 GRADE 60. ALL OTHER DEFORMED BAR REINFORCEMENT MAY BE ASTM A615 GRADE 60 OR ASTM A706 GRADE 60. ASTM A615 REINFORCEMENT MAY BE SUBSTITUTED FOR ASTM A706 REINFORCEMENT PROVIDED THAT THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED 78,000 PSI AND THE RATIO OF ACTUAL TENSILE STRENGTH TO ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25. MILL TEST CERTIFICATIONS FOR SUBSTITUTED BARS SHALL BE SUBMITTED TO THE SPECIAL INSPECTOR AND EOR PRIOR TO PLACEMENT.

SMOOTH WELDED WIRE FABRIC (WWF) SHALL BE ASTM A1064, UNLESS NOTED OTHERWISE. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. WELDING SHALL COMPLY WITH AWS D1.4. COLUMN SPIRALS SHALL BE PLAIN OR DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60. REINFORCING STEEL SHALL BE SECURELY TIED IN PLACE WITH #16 ANNEALED IRON WIRE.

BARS IN BEAMS AND SLABS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS OR APPROVED METAL OR PLASTIC CHAIRS, AS SPECIFIED BY THE CRSI MANUAL OF STANDARD PRACTICE. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES." ACI 315. SHOP DRAWINGS SHALL INCLUDE ELEVATIONS OF ALL BEAMS, WALLS AND COLUMNS SHOWING BAR LOCATIONS. LAP ALL REINFORCING BARS PER THE TYPICAL LAP SPlice LENGTH SCHEDULES, EXCEPT AS NOTED ON DRAWINGS. USE LAP LENGTH FOR SMALLER BAR WHEN SPLICING DIFFERENT BAR SIZES. BARS SPLICED WITH NONCONTACT LAPS SHALL BE SPACED NO FARTHER THAN 1/3 THE LAP LENGTH OR 6 INCHES. MECHANICAL SPLICES NOTED ON THE PLANS SHALL BE DAYTON SUPERIOR BAR-LOCK (ICC ESR-2495) OR TAPERLOCK COUPLERS (IAPMO ES-0319) OR APPROVED WITH A CURRENT EVALUATION APPROVAL REPORT.

BAR SIZE	TYP. WALL AND SLAB LAP SPlice LENGTH SCHEDULE (IN.)											
	WALL VERTICAL AND SLAB BOTTOM BARS (NOTE 7)					WALL HORIZONTAL AND SLAB TOP BARS (NOTE 7)						
	f _c = 3,000 PSI	f _c = 4,000 PSI	f _c = 5,000 PSI	f _c = 6,000 PSI	f _c = 7,000 PSI	f _c ≥ 8,000 PSI	f _c = 3,000 PSI	f _c = 4,000 PSI	f _c = 5,000 PSI	f _c = 6,000 PSI	f _c = 7,000 PSI	f _c ≥ 8,000 PSI
#3	14	12	12	12	12	12	18	16	14	12	12	12
#4	22	20	18	16	14	12	28	26	22	20	20	18
#5	32	28	26	24	22	20	42	36	32	30	28	26
#6	44	38	34	32	30	28	58	50	44	40	38	36
#7	70	62	54	50	46	44	92	78	70	64	60	56
#8	86	74	66	62	56	54	112	96	86	80	74	70
#9	104	92	82	74	70	66	136	118	106	96	90	84
#10	126	108	98	90	84	78	164	142	126	116	108	100
#11	148	128	116	106	96	92	192	166	150	136	128	118

BAR SIZE	TYP. BEAMS AND COLUMNS LAP SPlice LENGTH SCHEDULE (IN.)										
	f _c = 3,000 PSI		f _c = 4,000 PSI		f _c = 5,000 PSI		f _c = 6,000 PSI		f _c ≥ 8,000 PSI		
	BEAM TOP BARS	OTHER BARS	BEAM TOP BARS	OTHER BARS	BEAM TOP BARS	OTHER BARS	BEAM TOP BARS	OTHER BARS	BEAM TOP BARS	OTHER BARS	
#4	24	18	20	16	18	14	16	14	16	12	14
#5	30	22	26	20	18	14	20	16	20	16	14
#6	34	28	30	24	28	22	24	20	24	18	22
#7	50	38	43	34	40	30	36	28	34	26	32
#8	56	44	49	38	44	34	40	32	38	30	36
#9	70	56	61	48	56	42	50	40	48	36	44
#10	88	68	75	58	68	54	62	48	58	44	54
#11	104	80	91	70	82	64	74	58	68	54	64

BAR SIZE	TYP. FOUNDATION AND MAT LAP SPlice LENGTH SCHEDULE (IN.)									
	BOTTOM BARS (NOTE 7)					TOP BARS (NOTE 7)				
	f _c = 3,000 PSI	f _c = 4,000 PSI	f _c = 5,000 PSI	f _c = 6,000 PSI	f _c ≥ 8,000 PSI	f _c = 3,000 PSI	f _c = 4,000 PSI	f _c = 5,000 PSI	f _c = 6,000 PSI	f _c ≥ 8,000 PSI
#3	14	12	12	12	12	18	16	14	12	12
#4	18	16	14	14	12	24	20	18	16	14
#5	22	20	18	16	14	30	26	22	20	18
#6	28	24	22	20	18	36	32	28	26	24
#7	44	40	36	32	30	54	48	42	38	36
#8	54	48	42	38	36	64	54	48	42	38
#9	62	54	48	44	40	78	62	54	48	42
#10	70	60	54	50	46	90	78	70	64	60
#11	78	68	60	54	50	104	90	82	74	68

- TABLE NOTES:**
- MINIMUM LAP SPL

STATEMENT OF SPECIAL INSPECTIONS AND TESTING

TABLE 1 - REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARDS REFERENCE	INSPECTION		REMARKS
			FREQUENCY (NOTE 6)		
			CONTINUOUS	PERIODIC	
SOILS					
VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	1705.6	GEOTECHNICAL REPORT		X	BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL				X	
PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS				X	
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL			X		
PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY				X	

TABLE 2 - REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARDS REFERENCE	INSPECTION		REMARKS
			FREQUENCY (NOTE 6)		
			CONTINUOUS	PERIODIC	
FABRICATORS					
FABRICATORS	1704.2.5			X	SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP PER TABLE 2 AND AS REQUIRED ELSEWHERE IN THE SPECIAL INSPECTION PROGRAM. THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES AND SHALL REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENT. REFERENCE SECTION 1704.2.5.2 FOR APPROVED FABRICATOR EXCEPTION.
DEFERRED SUBMITTALS					
DEFERRED SUBMITTALS			X	X	SPECIAL INSPECTION REQUIREMENTS FOR DEFERRED SUBMITTAL ITEMS TO BE SPECIFIED BY THE SYSTEMS ENGINEER AND INCLUDED WITH DEFERRED SUBMITTAL DOCUMENTS.
CONCRETE					
GENERAL	1705.3 1901.4	ACI 318 1.3			SPECIAL INSPECTIONS OF CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1705.3 OF THE OSSC AND SECTION 1.3 OF ACI 318.
REINFORCING STEEL PLACEMENT	1910.4 1901.3.2	ACI 318 3.5 ACI 318 7.1 TO 7.7		X	REINFORCING TO COMPLY WITH ALL CODE PROTECTION, SPACING AND TOLERANCE LIMITS.
WELDING REINFORCING STEEL					
1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706	1705.2.2 1903.1	AWS D1.4 ACI 318: 3.5.2		X	
2. REINFORCING STEEL RESISTING FLEXURAL.			X		
3. SHEAR REINFORCEMENT			X		
4. OTHER REINFORCING STEEL				X	
PLACEMENT OF CAST-IN-PLACE BOLTS	1908.5 1909.1		X		ALL BOLTS VISUALLY INSPECTED
VERIFYING USE OF REQUIRED MIX DESIGN(S)	1904.2 1910.2 1910.3	ACI 318, CH. 4 ACI 318 5.2-5.4		X	
CONCRETE PLACEMENT, NON-SHRINK GROUT		ACI 318 5.9-5.10	X		
VERIFYING USE OF IN-SITU CONCRETE PRIOR TO REMOVAL OF FORMS AND SHORES FROM ELEVATED BEAMS AND SLABS		ACI 318 6.2		X	
VERIFICATION OF FORMWORK		ACI 318 6.1.1		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED
EMBEDDED ITEMS IN CONCRETE				X	ALL NON-STRUCTURAL EMBEDDED ITEMS, SUCH AS CONDUITS, PIPES AND SLEEVES, SHALL BE REVIEWED FOR CONFORMANCE WITH STRUCTURAL DOCUMENTS FOR SIZE, SPACING, LOCATION, EDGE DISTANCE AND TRIM REINFORING.
REINFORCING STEEL MECHANICAL COUPLERS, TERMINATORS AND FORMSAVERS		ICC EVALUATION REPORTS		X	
STEEL					
REFERENCE TABLE 2A FOR REQUIRED SPECIAL INSPECTIONS FOR STEEL					
COLD-FORMED STEEL FRAMING					
MATERIAL VERIFICATION OF WELD FILLER METALS		AWS D1.3 SECTION 7		X	MANUFACTURER'S CERTIFIED TEST REPORTS
VERIFYING USE OF PROPER WPS'S				X	RETAIN A RECORD OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS	1705.2.2.1			X	RETAIN A RECORD OF QUALIFICATION CARDS
COLD FORMED ROOF DECKS	1705.2.2.1.1	AWS D1.3		X	WELDING INSPECTION AND INSPECTOR QUALIFICATION
WELDED FRAMING CONNECTIONS	1705.2.2.1	AWS D1.3 SECTION 7		X	ALL WELDS VISUALLY INSPECTED PER AWS D1.3 7.1
POST INSTALLED CONCRETE ANCHORS					
POST INSTALLED ANCHORS INSTALLATION IN HARDENED CONCRETE AND COMPLETED MASONRY	1908.5 1909.1	ACI 318: 1.3, 3.8.6		X (NOTE 8)	INSPECTION REQUIREMENTS PER ICC EVALUATION REPORT

TABLE 2A - REQUIRED STRUCTURAL STEEL SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	INSPECTION				REMARKS
			INSPECTION (NOTES 5 AND 6)				
			CONTINUOUS	PERIODIC	OBSERVE	PERFORM	
STEEL							
CONTRACTOR QUALITY CONTROL REQUIREMENTS							
CONTRACTOR QUALITY CONTROL REQUIREMENTS		AISC 360 CHAPTER N			X	X	CONTRACTOR TO PROVIDE QUALITY CONTROL FOR ALL ITEMS INDICATED TO BE OBSERVE AND/OR PERFORM IN TABLE BELOW
STEEL FABRICATION							
FABRICATION OF STRUCTURAL ELEMENTS	1704.2.5.2	AISC 360 N2		X			REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
MATERIAL VERIFICATION OF STRUCTURAL STEEL	1705.2.1 2203.1 TABLE 1705.2	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 A3.1 AISC 360 N3.2		X			CERTIFIED MILL TEST REPORTS
FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	TABLE 1705.2	APPLICABLE ASTM STANDARDS		X			MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS, AND WASHERS		AISC 360 A3.3 AISC 360 N3.2 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS RCS 2.1		X			MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF ANCHOR BOLTS AND THREADED RODS		AISC 360 A3.4 AISC 360 N3.2 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS		X			MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	TABLE 1705.2	AISC 360 A3.5 AISC 360 N3.2 APPLICABLE AWS AS DOCUMENTS		X			MANUFACTURER'S CERTIFIED TEST REPORTS
STRUCTURAL STEEL WELDING							
VERIFYING USE OF PROPER WPS'S		AISC 360 N3.2					RETAIN A RECORD OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS	1705.2.2.1			X			RETAIN A RECORD OF QUALIFICATION CARDS
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS			X				
MULTIPASS FILLET WELDS			X				
SINGLE PASS FILLET WELDS GREATER THAN 5/16"	TABLE 1705.2	AWS D1.1 SECTION 6	X				ALL WELDS VISUALLY INSPECTED PER AWS D1.16.9
PLUG AND SLOT WELDS			X				
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"				X			
VERIFICATION OF FRAME JOINT DETAILS INCLUDING MEMBER AND COMPONENT LOCATIONS, BRACING, AND STIFFENERS	TABLE 1705.2	AISC 360 N5.7		X			
REINFORCING STEEL WELDING							
STEEL ELEMENTS OF COMPOSITE CONSTRUCTION							
INSTALLATION OF ROOF DECKING	1705.1.1	ICC EVALUATION REPORT		X			SPECIAL INSPECTIONS APPLY TO DECKING TYPE, DEPTH AND GAUGE, POWER ACTUATED FASTENERS, SCREWS, PROPRIETARY SIDE SEAM ATTACHMENTS, AND BUTTON PUNCHES AND SHEAR CONNECTORS
ROOF DECK WELDS	TABLE 1705.2	AWS D1.3 SECTION 7		X			ALL WELDS INSPECTED PER AWS D1.3 7.1
PLACEMENT AND INSTALLATION OF STEEL DECK						X	
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	1705.2	AISC 360 TABLE N6.1					X
HIGH-STRENGTH BOLTING							
SNUG-TIGHT HIGH STRENGTH BOLT INSTALLATION	1705.2.1			X			ALL CONNECTIONS VISUALLY INSPECTED AND VERIFIED SNUG
INSPECTION TASKS PRIOR TO BOLTING							
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS						X	
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS					X		
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH, IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)					X		
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL					X		
CONNECTING ELEMENTS< INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	1705.2	AISC 360 TABLE N5.6-1			X		
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED					X		
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS					X		
INSPECTION TASKS DURING BOLTING							
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	1705.2	AISC 360 TABLE N5.6-2 RCS SPECIFICATION			X		
INSPECTION TASKS AFTER BOLTING							
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	1705.2	AISC 360 TABLE N5.6-3					X

STATEMENT OF SPECIAL INSPECTIONS AND TESTING CONT.

TESTING

TABLE 6 - REQUIRED TESTING FOR SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	INSPECTION		REMARKS	
		CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		
			CONTINUOUS		PERIODIC
GEOTECHNICAL					
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1705.6	VARIABLES: GEOTECHNICAL REPORT OR MINIMUM PER IBC APPENDIX J107.5, WHICHEVER IS GREATER		X	BY THE GEOTECHNICAL ENGINEER
MATERIAL VERIFICATION		VARIABLES: CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X	BY THE GEOTECHNICAL ENGINEER
CONCRETE					
CONCRETE STRENGTH	1705.3	ASTM C39	EACH 150 CY NOR LESS THAN EACH 5000 SF OF SLAB OR WALL PLACED EACH SHIFT		FABRICATE SPECIMENS AT TIME FRESH CONCRETET IS PLACED
CONCRETE SLUMP	ASTM C172	ASTM C143			
CONCRETE AIR CONTENT	ASTM C 31	ASTM C231			
CONCRETE TEMPERATURE	ACI318:5.6,5.8	ASTM C1064			

TABLE N1 - REQUIRED ARCHITECTURAL SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	INSPECTION		REMARKS	
		CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		
			CONTINUOUS		PERIODIC
EXTERIOR INSULATION AND FINISH SYSTEMS					
EIFS APPLICATION	1705.15	APPROVED CONSTRUCTION DOCUMENTS	X	X	ALL EIFS APPLICATIONS EXCEPT FOR APPLICATIONS OVER WATER-RESISTIVE BARRIERS WITH A MEANS OF DRAINING MOISTURE TO THE EXTERIOR, OR OVER MASONRY OR CONCRETE WALLS
WATER-RESISTIVE BARRIER COATING APPLICATION	1705.15.1	APPROVED CONSTRUCTION DOCUMENTS ASTM E2570 MANUFACTURER'S WRITTEN INSTRUCTIONS		X	A WATER-RESISTIVE BARRIER COATING COMPLYING WITH ASTM E2570 REQUIRES SPECIAL INSPECTION OF THE WATER-RESISTIVE BARRIER COATING WHEN INSTALLED OVER A SHEATHING SUBSTRATE
FIRE-RESISTANT PENETRATIONS AND JOINTS					
FIRE RESISTANT PENETRAIONS AND JOINTS	1705.16	ASTM E2393 ASTM E2174 MANUFACTURER'S TESTING AND LISTING INSTRUCTIONS		X	IN HIGH-RISE BUILDINGS OR IN BUIDINGS ASSIGNED TO RISK CATEGORY III OR IV, SPECIAL INSPECTIONS FOR THROUGH-PENETRATIONS, MEMBRANE PENETRATION FIRESTOPS, FIRE-RESISTANT JOINT SYSTEMS AND PERIMETER FIRE BARRIER SYSTEMS THAT ARE TESTED AND LISTED

TABLE N2 - REQUIRED NON-STRUCTURAL SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	INSPECTION		REMARKS	
		CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		
			CONTINUOUS		PERIODIC
ARCHITECTURAL					
INSTALLATION AND ANCHORAGE OF SUSPENDED CEILING SYSTEMS	1705.11	ASCE 7-10 SECTION 13.5.6		X	REFERENCE ARCHITECTURAL FOR INFORMATION
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ARCHITECTURAL SYSTEMS AND THEIR COMPONENTS	1705.11.5			X	REFERENCE ARCHITECTURAL FOR INFORMATION
ELECTRICAL					
INSTALLATION OF ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS	1705.11.6			X	SEISMIC RESTRAINT OF ELECTRICAL COMPONENTS IS A CONTRACTOR RESPONSIBILITY AND IS LISTED HERE FOR INFORMATION ONLY. THE REGISTERED DESIGN PROFESSIONAL SHALL IDENTIFY INSPECTION POINTS, FREQUENCY, TYPE AND EXTENT OF SPECIAL INSPECTIONS. REFERENCE ELECTRICAL FOR FURTHER INFORMATION.
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED ELECTRICAL SYSTEMS AND THEIR COMPONENTS			X		
PROCESS MECHANICAL					
INSTALLATION OF PIPING SYSTEM MEANT TO CARRY FLAMMABLE, COMBUSTIBLE OR HIGHLY TOXIC CONTENTS AND ITS ASSOCIATED MECHANICAL UNITS	1705.11.6			X	SEISMIC RESTRAINT OF PROCESS MECHANICAL COMPONENTS IS A CONTRACTOR RESPONSIBILITY AND IS LISTED HERE FOR INFORMATION ONLY. THE REGISTERED DESIGN PROFESSIONAL SHALL IDENTIFY INSPECTION POINTS, FREQUENCY, TYPE AND EXTENT OF SPECIAL INSPECTIONS. REFERENCE MECHANICAL FOR FURTHER INFORMATION.
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR DESIGNATED MECHANICAL SYSTEMS AND THEIR COMPONENTS			X		
BUILDING MECHANICAL					
INSTALLATION AND ANCHORAGE OF HVAC DUCTWORK THAT WILL CONTAIN HAZARDOUS MATERIALS	1705.11.6			X	SEISMIC RESTRAINT OF BUILDING MECHANICAL COMPONENTS IS A CONTRACTOR RESPONSIBILITY AND IS LISTED HERE FOR INFORMATION ONLY. THE REGISTERED DESIGN PROFESSIONAL SHALL IDENTIFY INSPECTION POINTS, FREQUENCY, TYPE AND EXTENT OF SPECIAL INSPECTIONS. REFERENCE MECHANICAL FOR FURTHER INFORMATION
DESIGNATED SEISMIC SYSTEM VERIFICATION					
DESIGNATED SEISMIC SYSTEM VERIFICATION - VERIFY LABEL, ANCHORAGE OR MOUNTING CONFORMS TO THE CERTIFICATE OF COMPLIANCE	1705.11.4			X	REGISTERED DESIGN PROFESSIONAL SHALL IDENTIFY INSPECTION POINTS, FREQUENCY, TYPE AND EXTENT OF SPECIAL INSPECTIONS. VERIFY THE LABEL, ANCHORAGE, OR MOUNTING CONFORMS TO THE CERTIFICATE OF COMPLIANCE.

TABLE N4 - REQUIRED TESTING for SEISMIC RESISTANCE SPECIAL INSPECTIONS

SYSTEM OR MATERIAL	OSSC CODE REFERENCE	INSPECTION		REMARKS	
		CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		
			CONTINUOUS		PERIODIC
ARCHITECTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS					
PROJECT SPECIFIC DESIGN OR COMPONENT TESTING INCLUDING MOUNTING SYSTEMS OR ANCHORAGE IF CERTIFICATES OF COMPLIANCE ARE NOT AVAILABLE	1705.12 1705.12.3 1705.12.4	ASCE 7 13.2.1		X	SEISMIC RESTRAINT OF MECHANICAL AND ELECTRICAL COMPONENTS IS A CONTRACTOR RESPONSIBILITY AND IS LISTED HERE FOR INFORMATION ONLY. THE REGISTERED DESIGN PROFESSIONAL SHALL IDENTIFY INSPECTION POINTS, FREQUENCY, TYPE AND EXTENT OF SPECIAL INSPECTIONS. REFERENCE MECHANICAL AND ELECTRICAL FOR FURTHER INFORMATION. WHEN REQUIREMENTS OF 13.2.1 ARE MET BY SUBMITTAL OF MANUFACTURER'S CERTIFICATION, THE REGISTERED DESIGN PROFESSIONAL SHALL SPECIFY ON THE CONSTRUCTION DOCUMENTS THE REQUIREMENTS FOR CERTIFICATION.
DESIGNATED SEISMIC SYSTEMS					
COMPONENT CERTIFICATION BY ANALYSIS, TESTING, OR EXPERIENCE DATA WHEN $I_p > 1.0$	1705.12.3	ASCE 7 13.2.2		X	THE REGISTERED DESIGN PROFESSIONAL SHALL SPECIFY ON THE CONSTRUCTION DOCUMENTS THE REQUIREMENTS FOR CERTIFICATION.

STATEMENT OF SPECIAL INSPECTION NOTES:

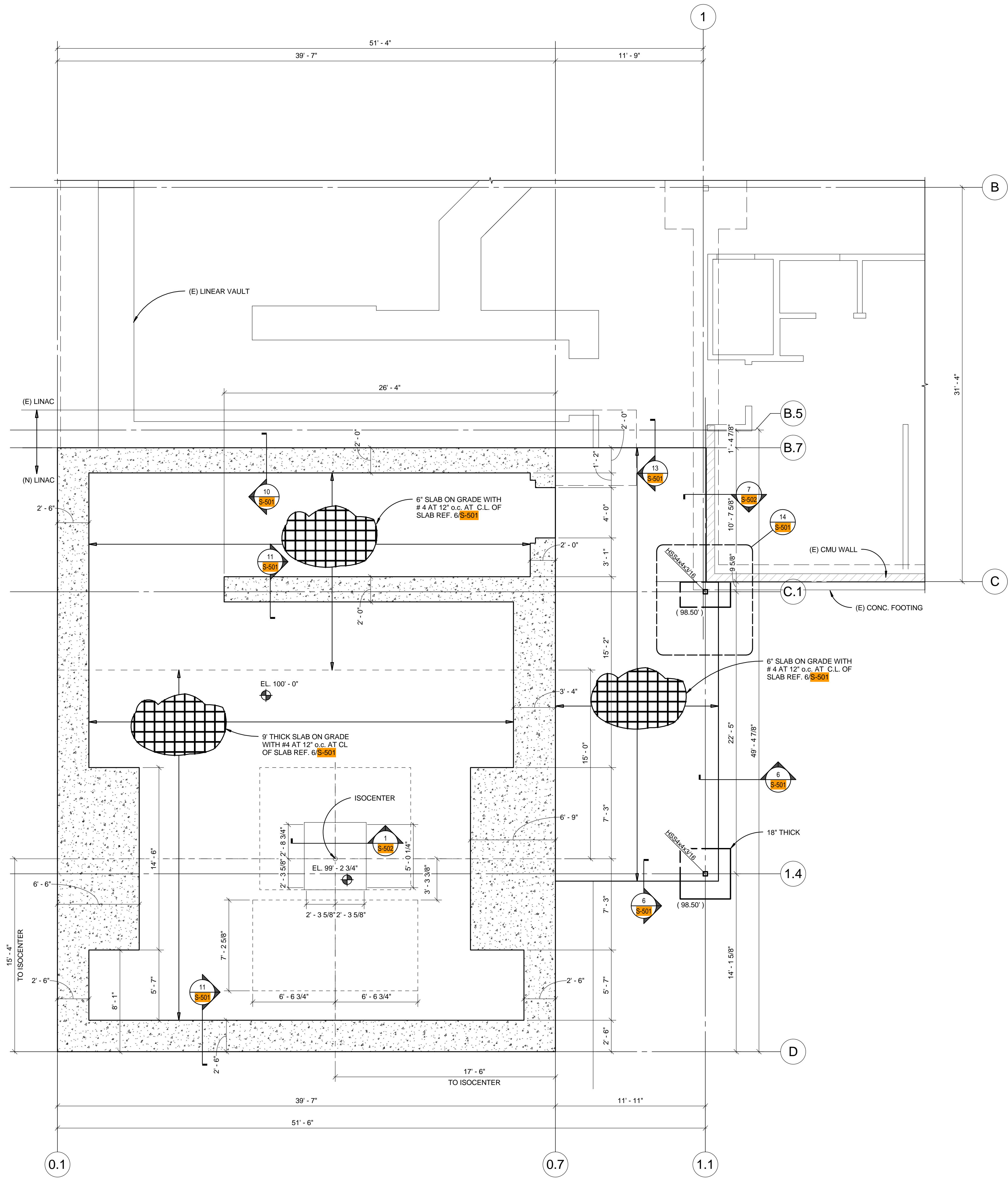
1. SPECIAL INSPECTIONS SHALL CONFORM TO SECTION 1705 OF THE 2014 OSSC, CONTRACT DOCUMENTS AND APPROVED SUBMITTALS. REFER TO TABLES 1 THROUGH 5 FOR SPECIAL INSPECTION AND TABLES 6, 7 AND 7A FOR TESTING REQUIREMENTS.
2. SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E329 (MATERIALS). THE INSPECTION AND TESTING AGENCY SHALL FURNISH TO THE [STRUCTURAL] [ENGINEER] [ARCHITECT] A COPY OF THEIR SCOPE OF ACCREDITATION. SPECIAL INSPECTORS SHALL BE APPROVED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED PER SECTION 6.1.4.1.1 OF AWS D1.1.
3. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE INSPECTION REPORTS.
4. THE SPECIAL INSPECTOR [AND GEOTECHNICAL ENGINEER] SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, [STRUCTURAL] [ENGINEER], [ARCHITECT], CONTRACTOR, AND OWNER. THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT STATING THAT THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED AND IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.
5. FOR STEEL INSPECTIONS PER AISC 360 AND 341 (TABLES 2A AND 4A):
QUALITY ASSURANCE (QA) IS REQUIRED FOR EACH ITEM IN TABLES UNLESS SPECIFICALLY NOTED OTHERWISE.
QUALITY CONTROL (QC) TO BE PROVIDED BY THE FABRICATOR, ERECTOR OR OTHER RESPONSIBLE CONTRACTOR AS APPLICABLE.
CONTRACTOR AND SPECIAL INSPECTOR TO DOCUMENT QUALITY CONTROL AS REQUIRED IN AISC 360 SECTION N3 AND AISC 341 SECTION J2.
6. INSPECTION TYPES
CONTINUOUS : THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.
PERIODIC : THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK.
OBSERVE : OBSERVE THESE FUNCTIONS ON A RANDOM, DAILY BASIS. OPERATIONS NEED NOT BE DELAYED PENDING OBSERVATIONS.
PERFORM : INSPECTIONS SHALL BE PERFORMED PRIOR TO THE FINAL ACCEPTANCE OF THE ITEM.
7. PERFORM INSPECTION PRIOR TO FINAL ACCEPTANCE OF THE ITEM FOR TEN WELDS TO BE MADE BY A GIVEN WELDER, WITH THE WELDER DEMONSTRATING UNDERSTANDING OF REQUIREMENTS AND POSSESSION OF SKILLS AND TOOLS TO VERIFY THESE ITEMS, THE PERFORM DESIGNATION OF THIS TASK SHALL BE REDUCED TO OBSERVE, AND THE WELDER SHALL PERFORM THIS TASK. SHOULD THE INSPECTOR DETERMINE THAT THE WELDER HAS DISCONTINUED PERFORMANCE OF THIS TASK, THE TASK SHALL BE RETURNED TO PERFORM UNTIL SUCH TIME AS THE INSPECTOR HAS RE-ESTABLISHED ADEQUATE ASSURANCE THAT THE WELDER WILL PERFORM THE INSPECTION TASKS LISTED
8. SPECIAL INSPECTION OF MECHANICAL POST INSTALLED ANCHORS SHALL BE IN STRICT CONFORMANCE WITH THE ICC REPORT AND MANUFACTURERS INSTALLATION REQUIREMENTS. ANCHOR INSTALLERS SHALL BE QUALIFIED AS REQUIRED BY JURISDICTION REQUIREMENTS.
• INSPECTION REPORTS SHALL IDENTIFY NAMES OF INSTALLERS.
• SPECIAL INSPECTOR SHALL PROVIDE DOCUMENTATION AT THE END OF ANCHOR INSTALLATIONS STATING THAT THE ANCHORS WERE INSPECTED PER APPROVED ANCHOR EVALUATION REPORT.
9. TABLE 7 ABBREVIATIONS:
NDT - NON-DESTRUCTIVE TESTING
CJP - COMPLETE JOINT PENETRATION
MT - MAGNETIC PARTICLE TESTING
RBS - REDUCED BEAM SECTION
10. DOCUMENT (D); INDICATES CONTRACTOR AND SPECIAL INSPECTOR TO PROVIDE DOCUMENTATION IN ACCORDANCE WITH AISC 341.

CONTRACTOR RESPONSIBILITY:

THE CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE MAIN WIND-OR SEISMIC-FORCE-RESISTING SYSTEM, OR A WIND-OR SEISMIC-RESISTING COMPONENT LISTED IN TABLES 4, 4A, 5, 7, 7A, N2, AND N4 SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:

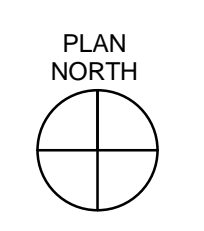
ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

1. ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL.
2. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND DISTRIBUTION OF THE REPORTS.
3. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.



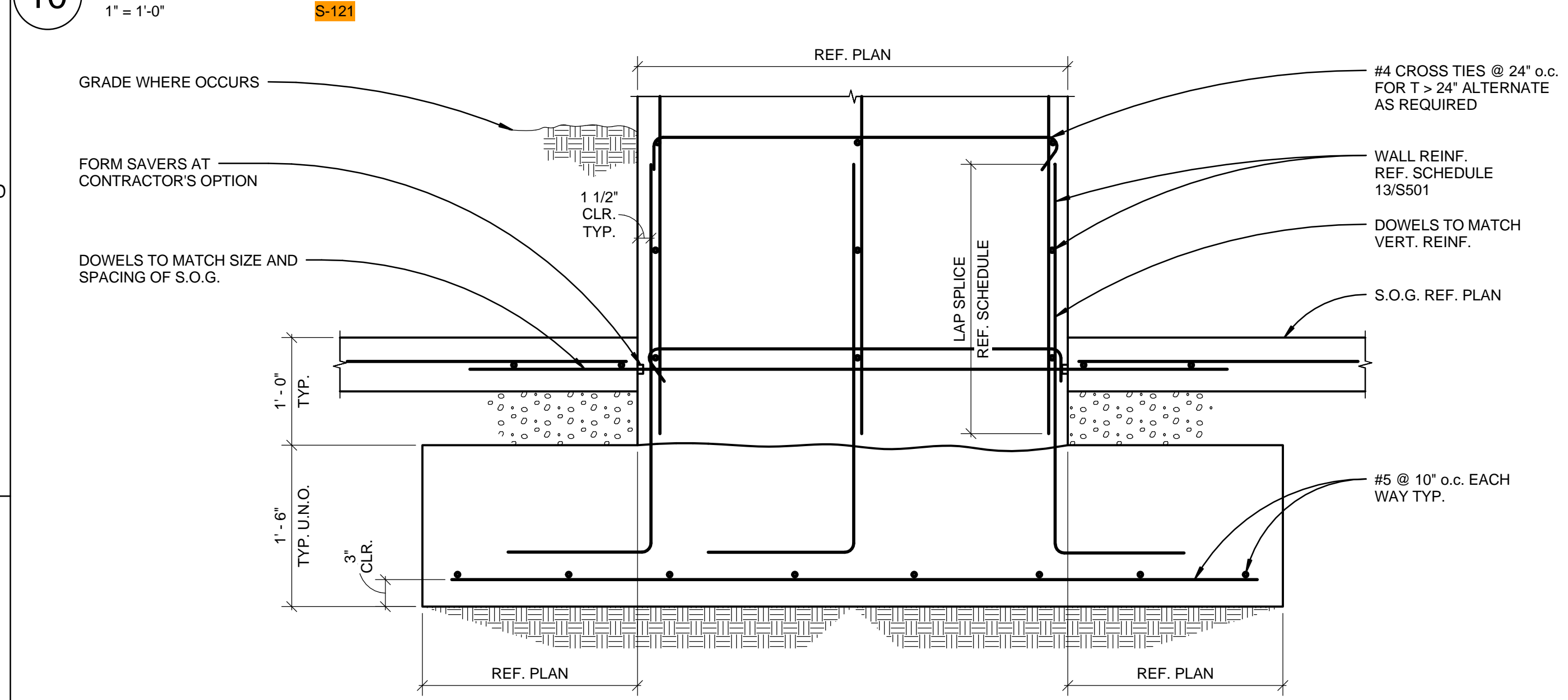
- NOTES:**
1. (XXX.XX) INDICATES BOTTOM OF FOOTING ELEVATION.
 2. EL. XXX.XX INDICATES TOP OF SLAB ELEVATION.
 3. INDICATES STEP IN ELEVATION. REF. 5 S-501.
 4. REF. SHEET S-501 FOR TYPICAL CONCRETE DETAILS.
 5. INDICATES CONCRETE WALLS. REF. 12 S-501 FOR REINFORCEMENT SCHEDULE.
 6. INDICATES EXISTING STRUCTURE.
 7. FIELD VERIFY EXISTING DIMENSIONS AND ELEVATIONS.
 8. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND ERECTION. NOTIFY ARCHITECT OF ANY SIGNIFICANT DISCREPANCIES FORM THAT SHOWN ON THE DRAWINGS.
 9. CONTRACTOR TO SHORE ALL EXISTING FRAMING AS REQUIRED FOR DEMOLITION AND RE-FRAMING WORK.
 10. COORDINATE DIMENSIONS, ELEVATIONS, OPENING LOCATIONS, AND EDGE CONDITIONS w/ ARCHITECTURAL DRAWINGS.
 11. CONTRACTOR TO COORDINATE ACCLETATOR PIT AND LOCATION w/ACCELERATOR SUPPLIERS (ELEKTA), ELECTRICAL AND ARCHITECTURAL.
 12. INDICATES AREA TO BE LEVEL AND FINE TROWELED SMOOTH TO WITHIN ± 1/16" AS MEASURED OVER 3'-3 3/8". REF. LINEAR ACCELERATOR SUPPLIER DRAWINGS.
 13. CONTRACTOR TO PROVIDE A MINIMUM OF 6" CONCRETE COVER AROUND ELECTRICAL FLOOR BOXES. REF. 5 AND 6 S-501.
 14. REFERENCE ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF FLOOR BOXES AND FLUSH FLOOR RACEWAY IN SLAB ON GRADE.
 15. CONTRACTOR TO COORDINATE LOCATION OF UNITS, WEIGHT AND CONCRETE CURB WITH MECHANICAL AND UNITS SUPPLIER.
 16. INDICATES EXISTING (E) CMU WALL.

1 FOUNDATION/GROUND FLOOR PLAN
1/4" = 1'-0"

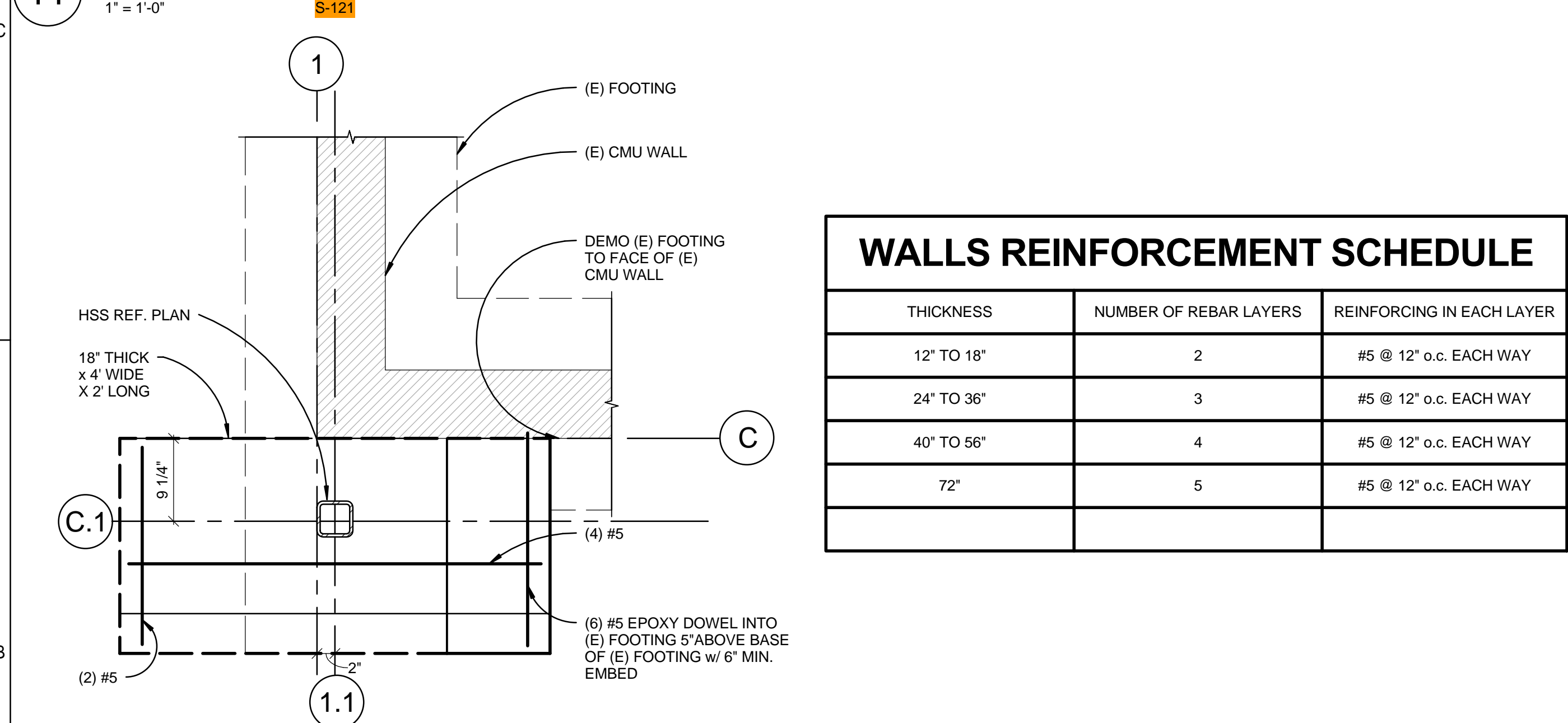


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10 ACCELERATOR VAULT WALL FOOTING

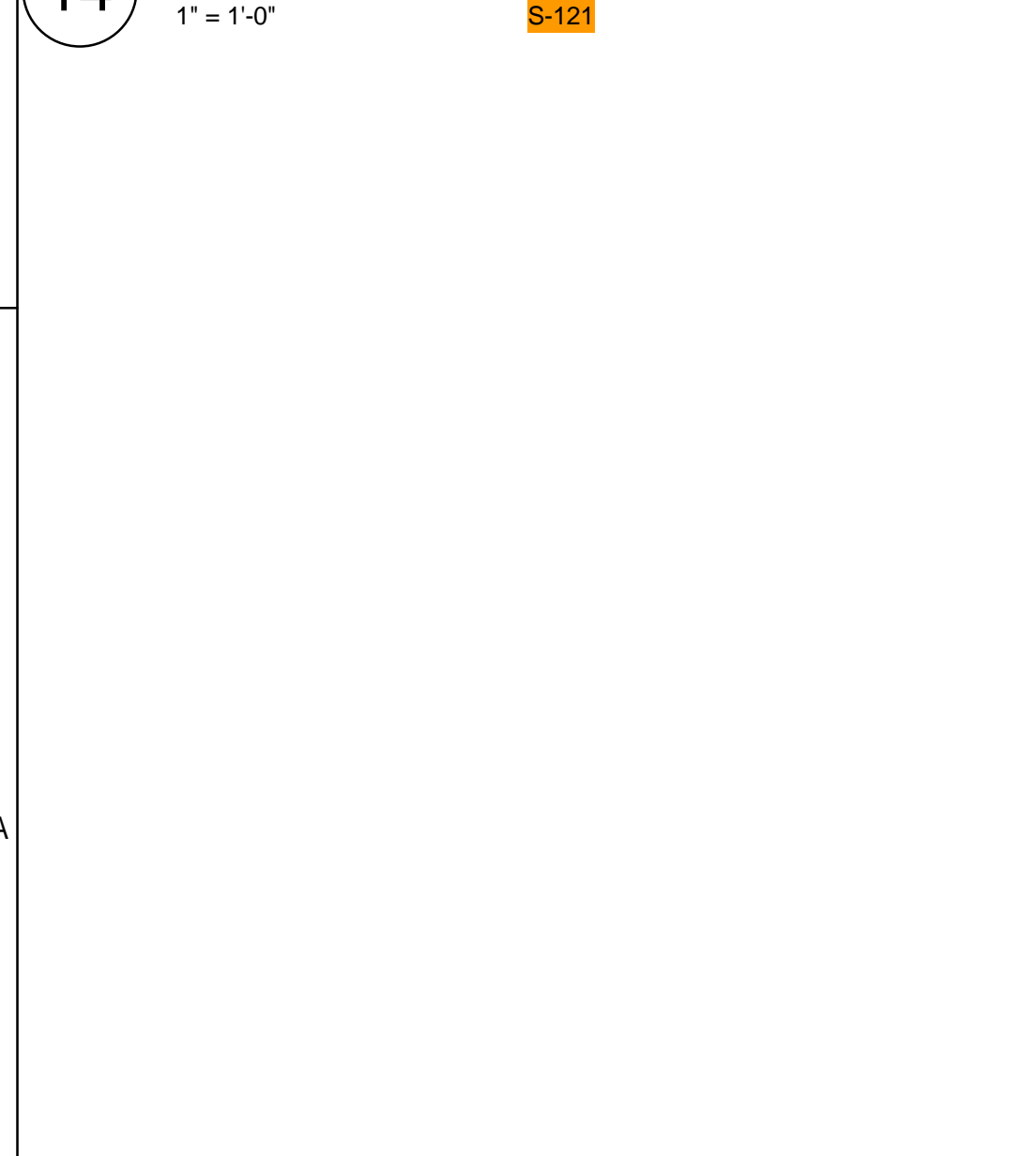


11 ACCELERATOR VAULT WALL FOOTING

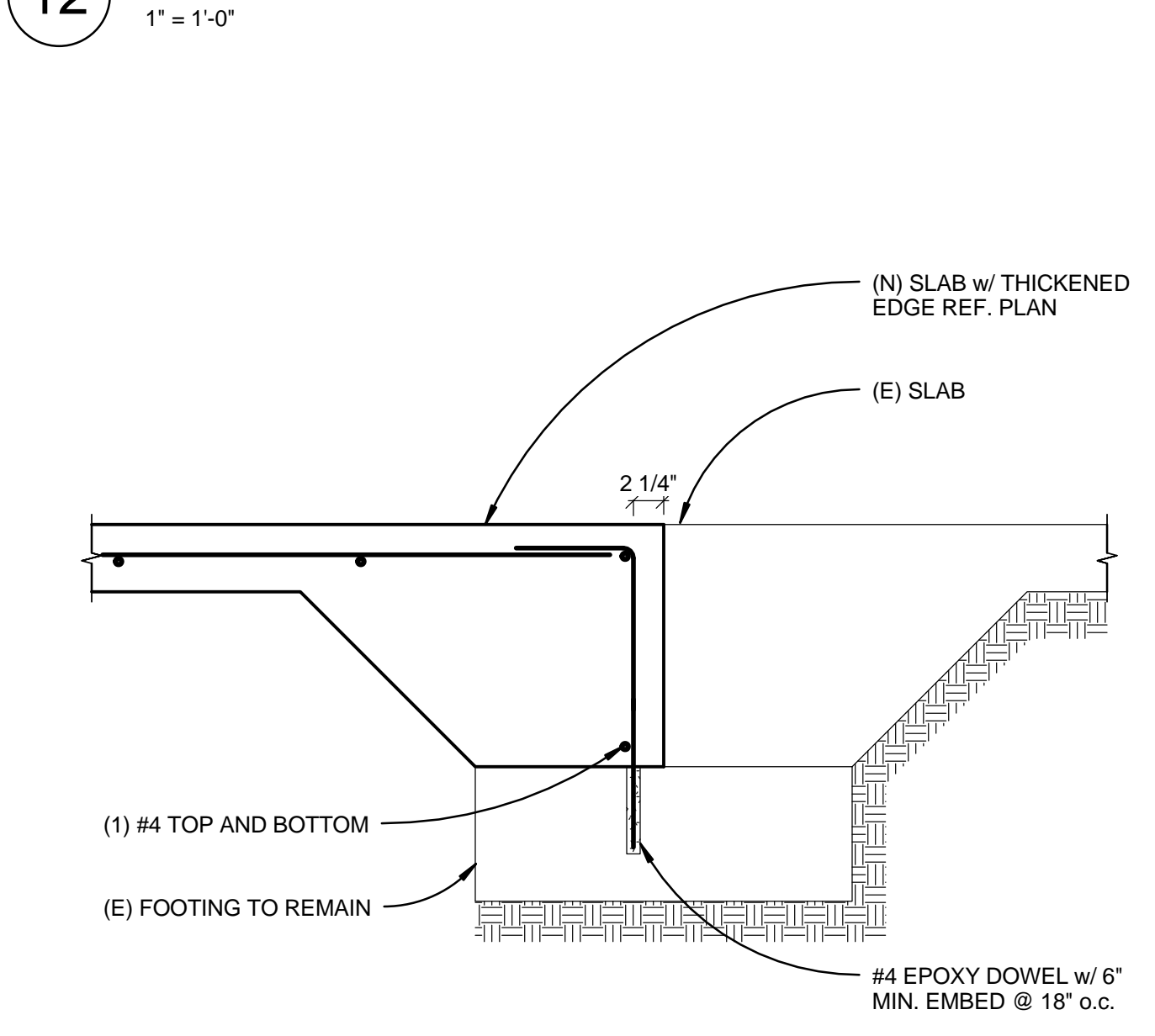


WALLS REINFORCEMENT SCHEDULE		
THICKNESS	NUMBER OF REBAR LAYERS	REINFORCING IN EACH LAYER
12" TO 18"	2	#5 @ 12" o.c. EACH WAY
24" TO 36"	3	#5 @ 12" o.c. EACH WAY
40" TO 56"	4	#5 @ 12" o.c. EACH WAY
72"	5	#5 @ 12" o.c. EACH WAY

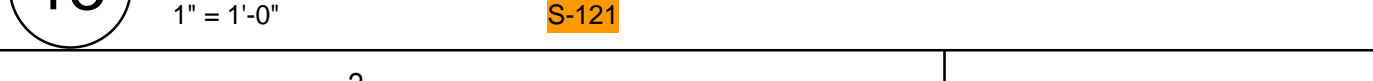
14 (N) FOOTING AT (E) FOOTING



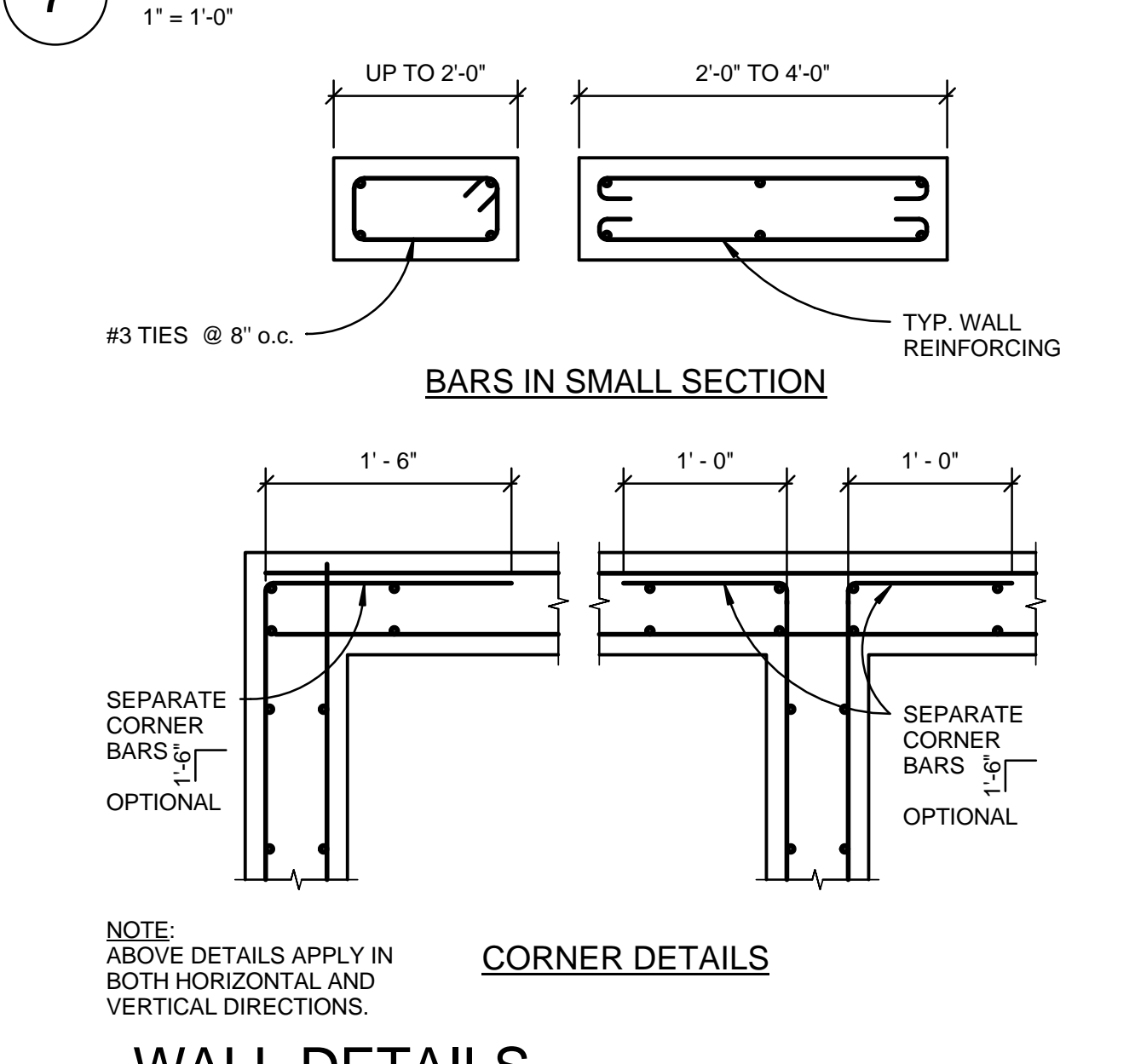
12 WALLS REINFORCEMENT SCHEDULE



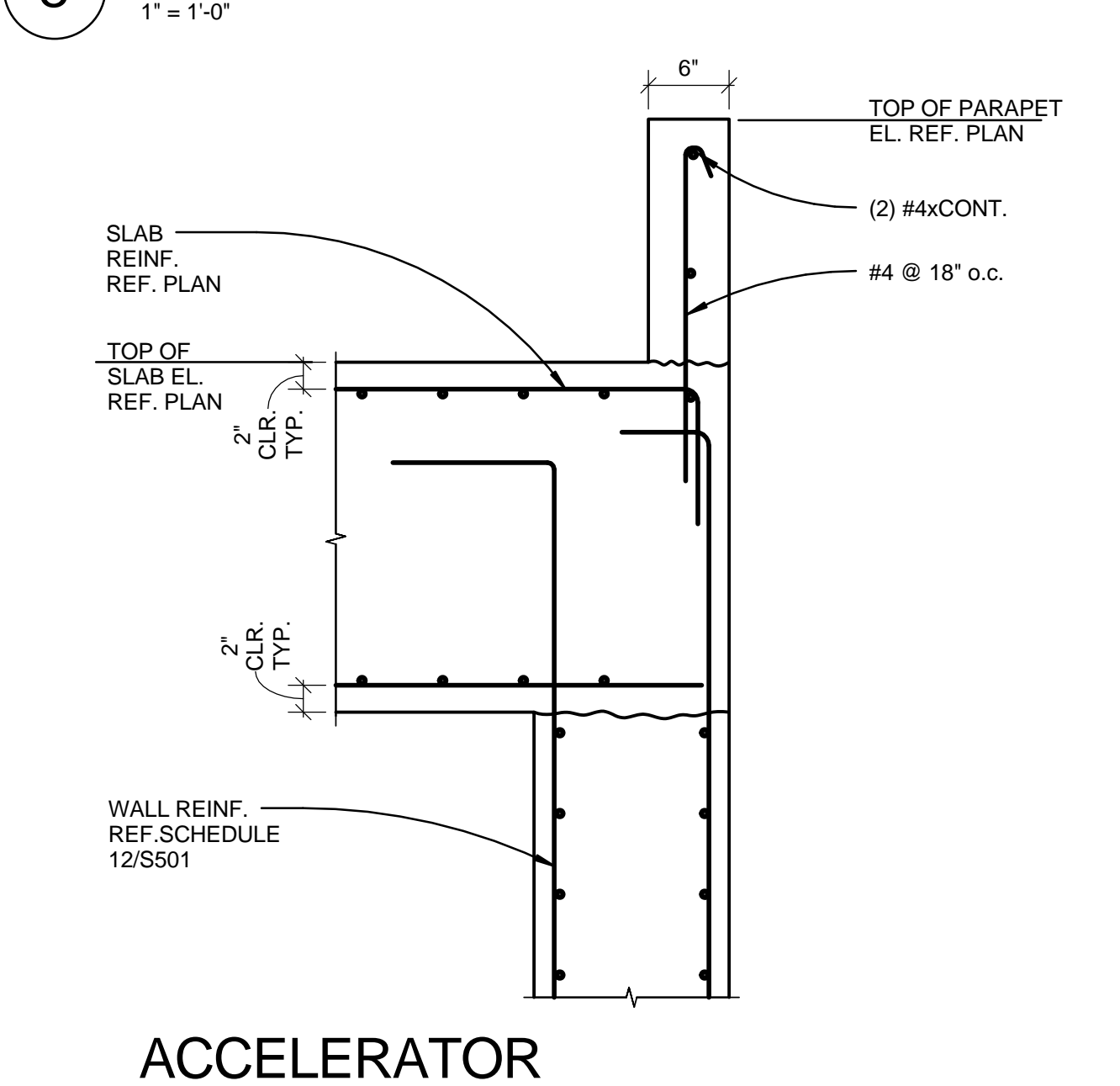
13 (E) SLAB TO (N) SLAB



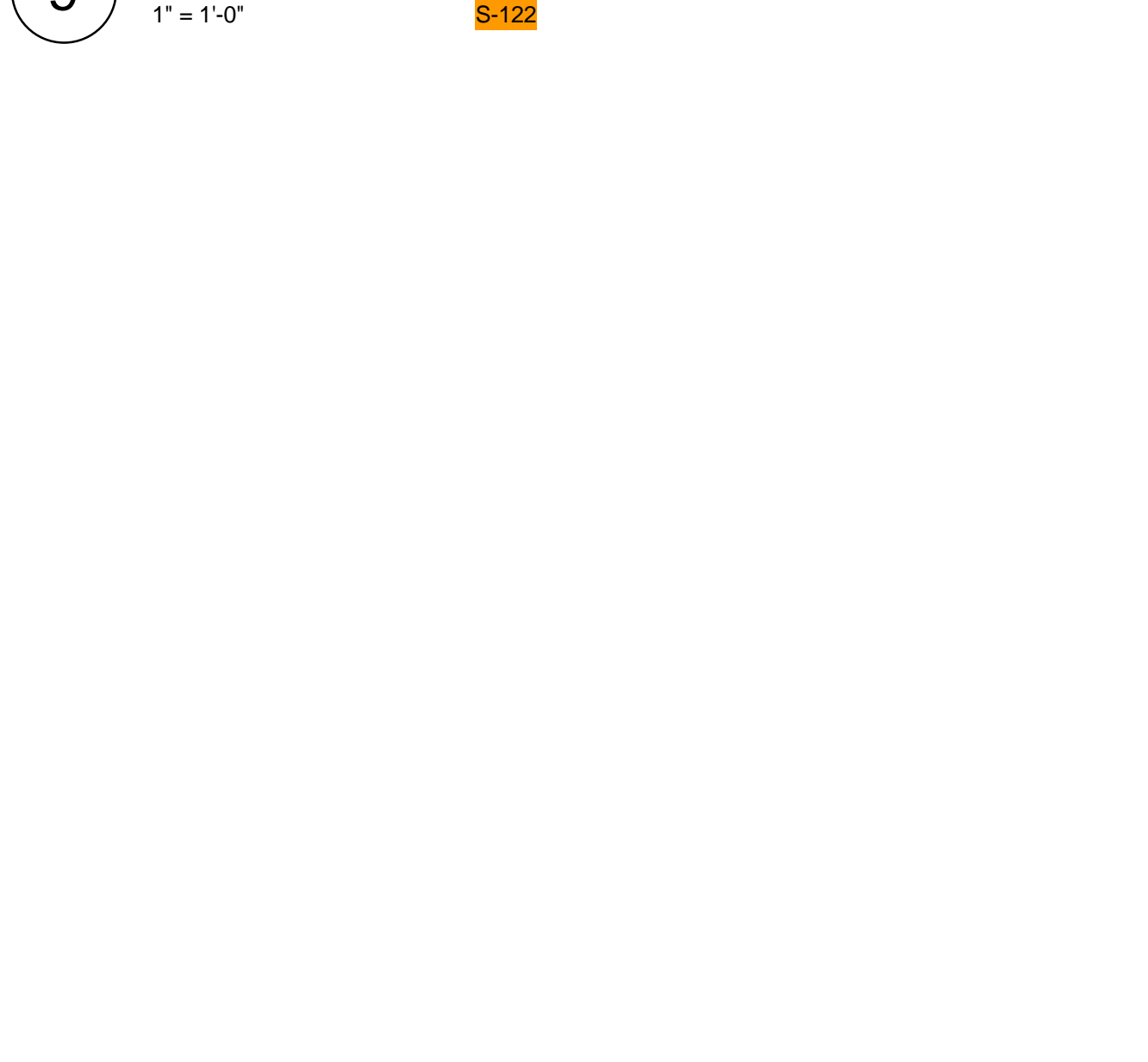
7 NOT USED



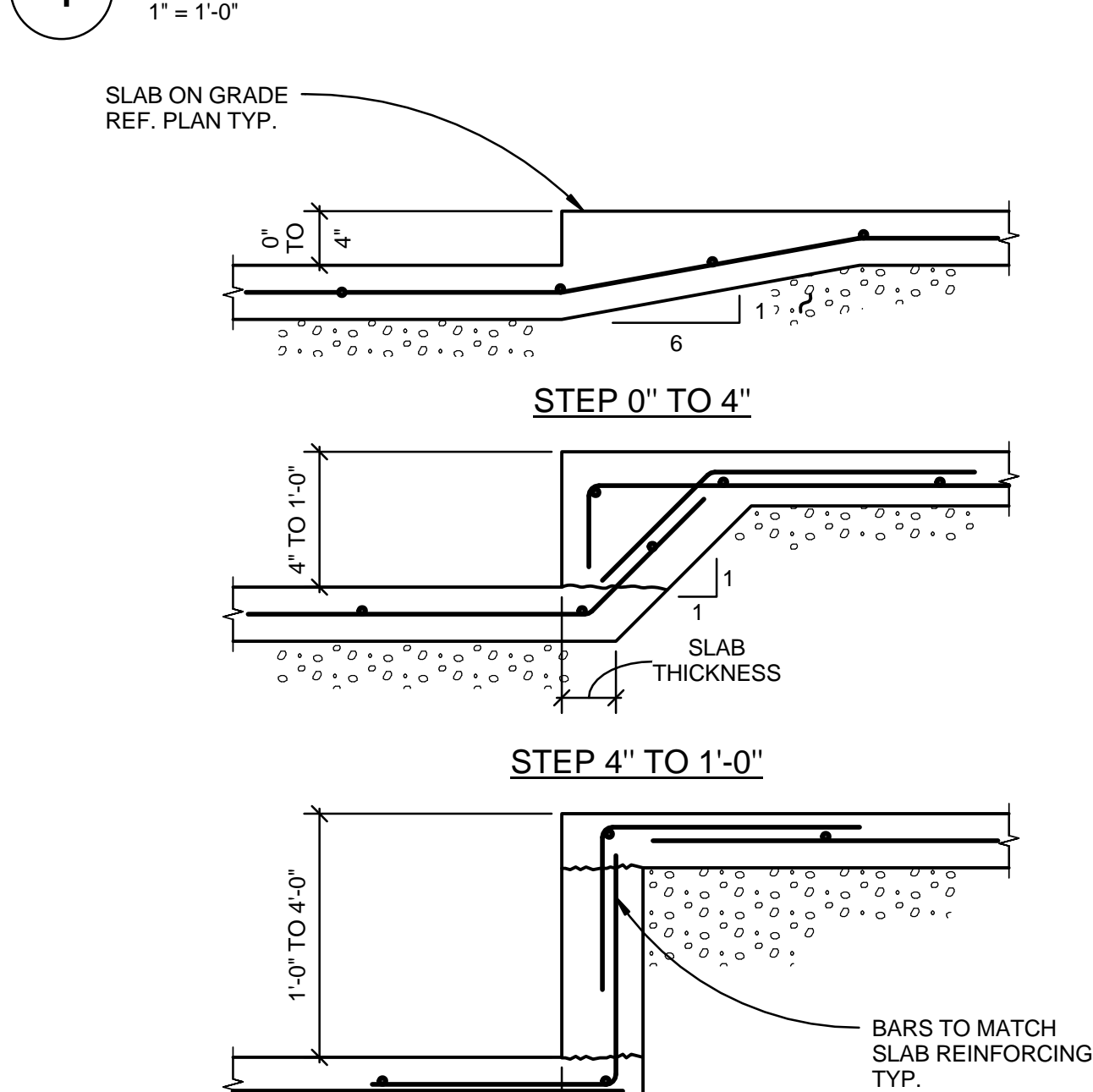
8 WALL DETAILS - DOUBLE LAYER REINFORCING



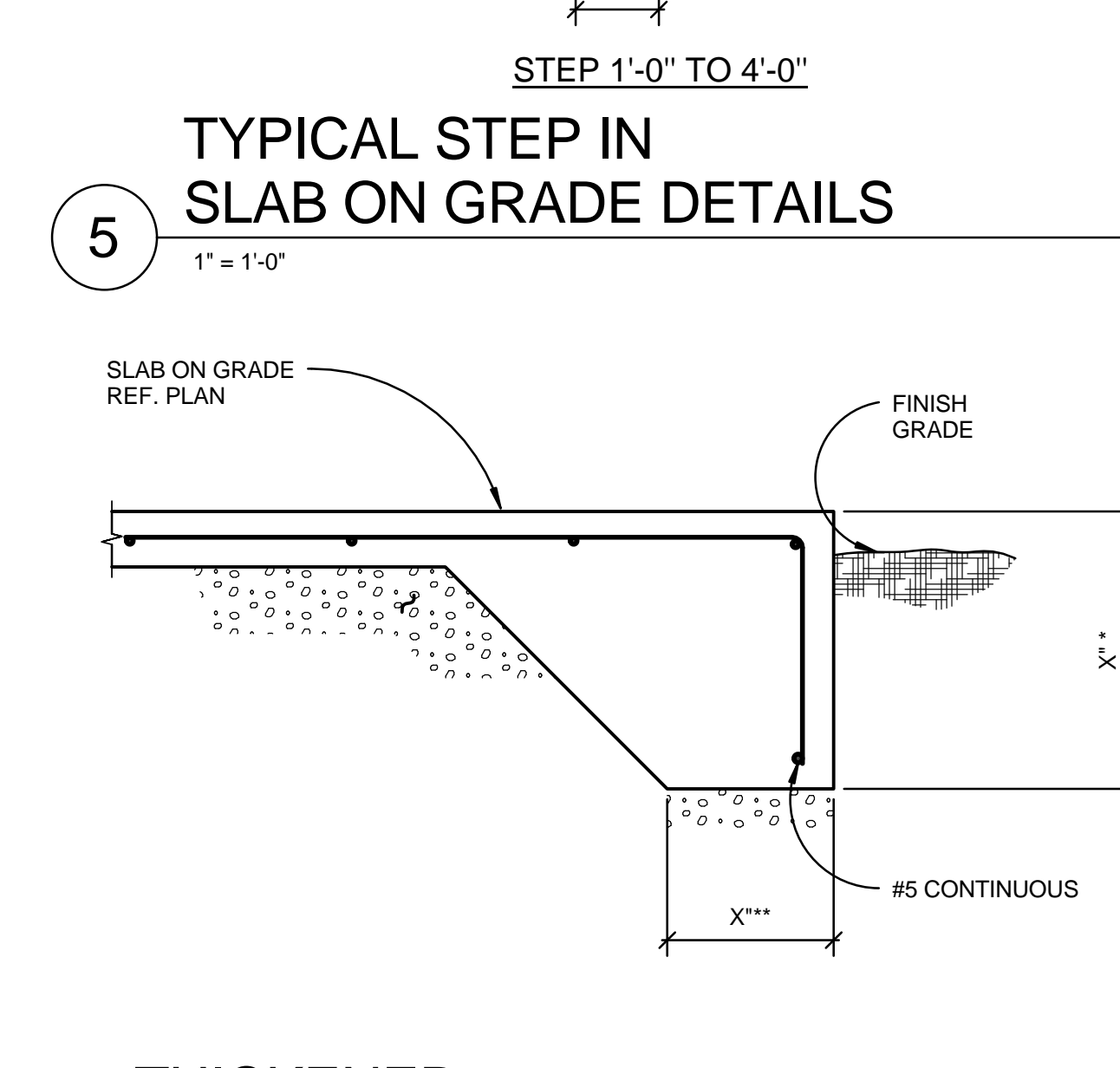
9 ACCELERATOR VAULT SLAB/WALL DETAIL



4 TYPICAL SLAB ON GRADE DETAILS



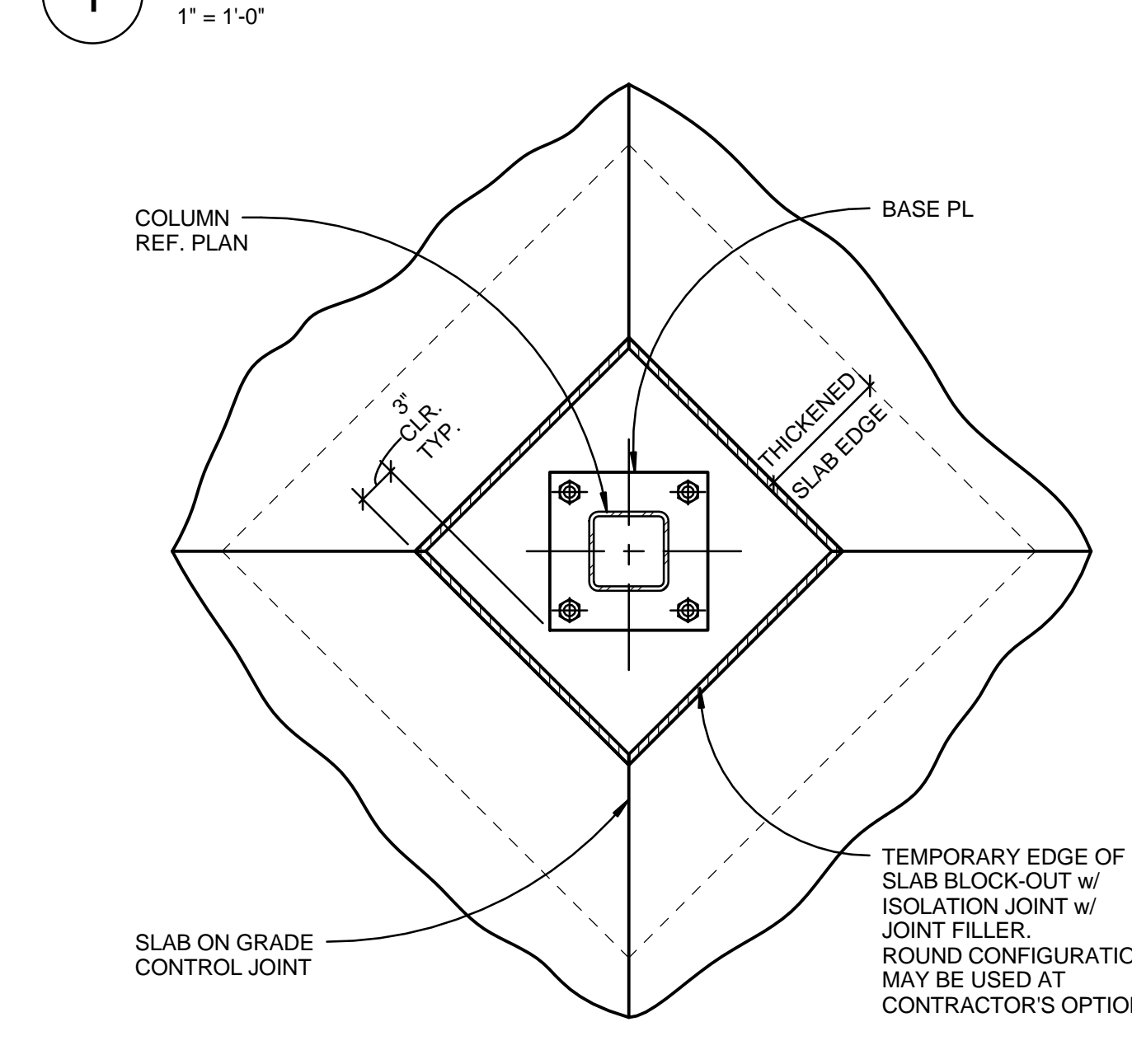
5 TYPICAL STEP IN SLAB ON GRADE DETAILS



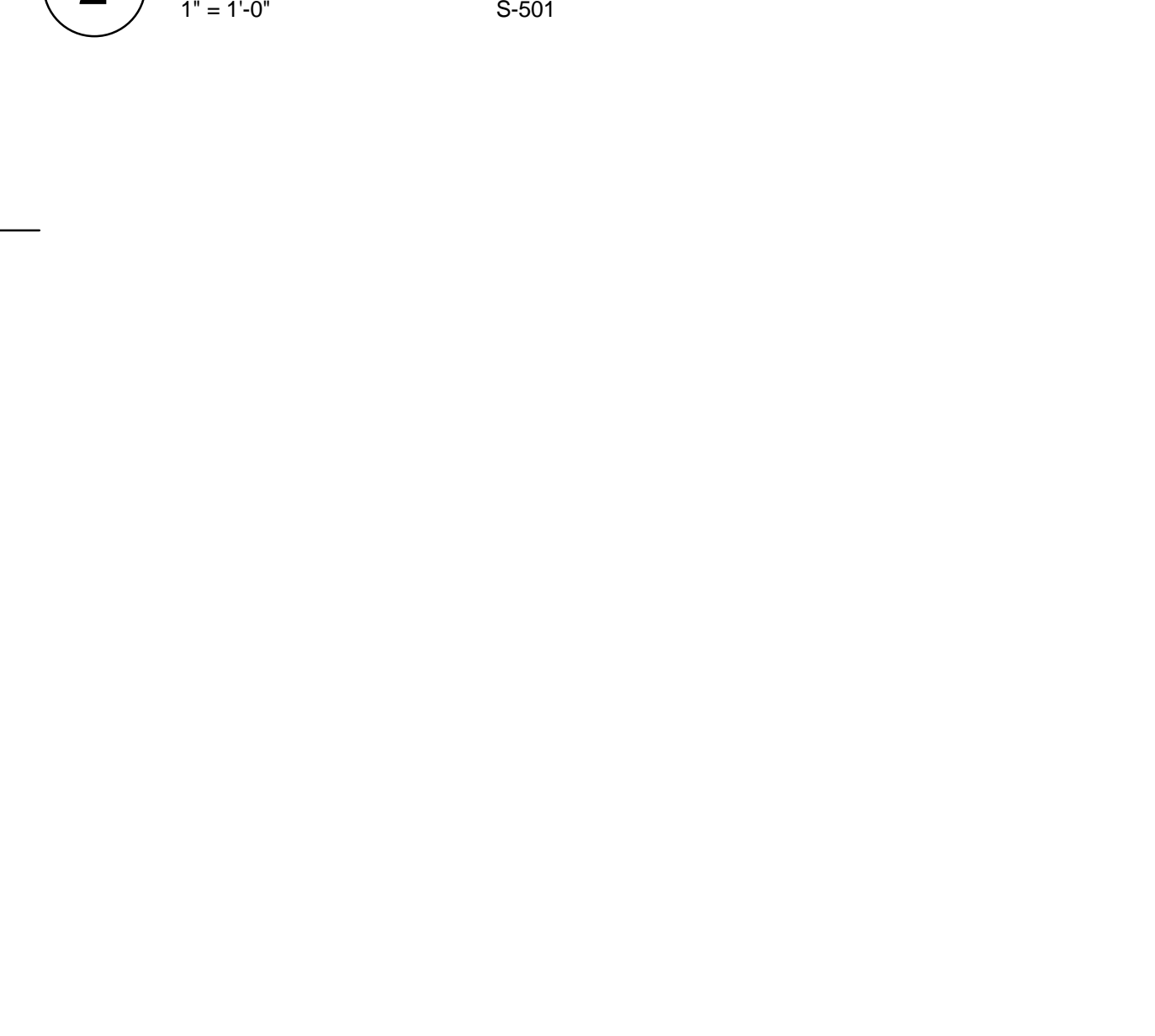
6 THICKENED SLAB ON GRADE EDGE DETAIL



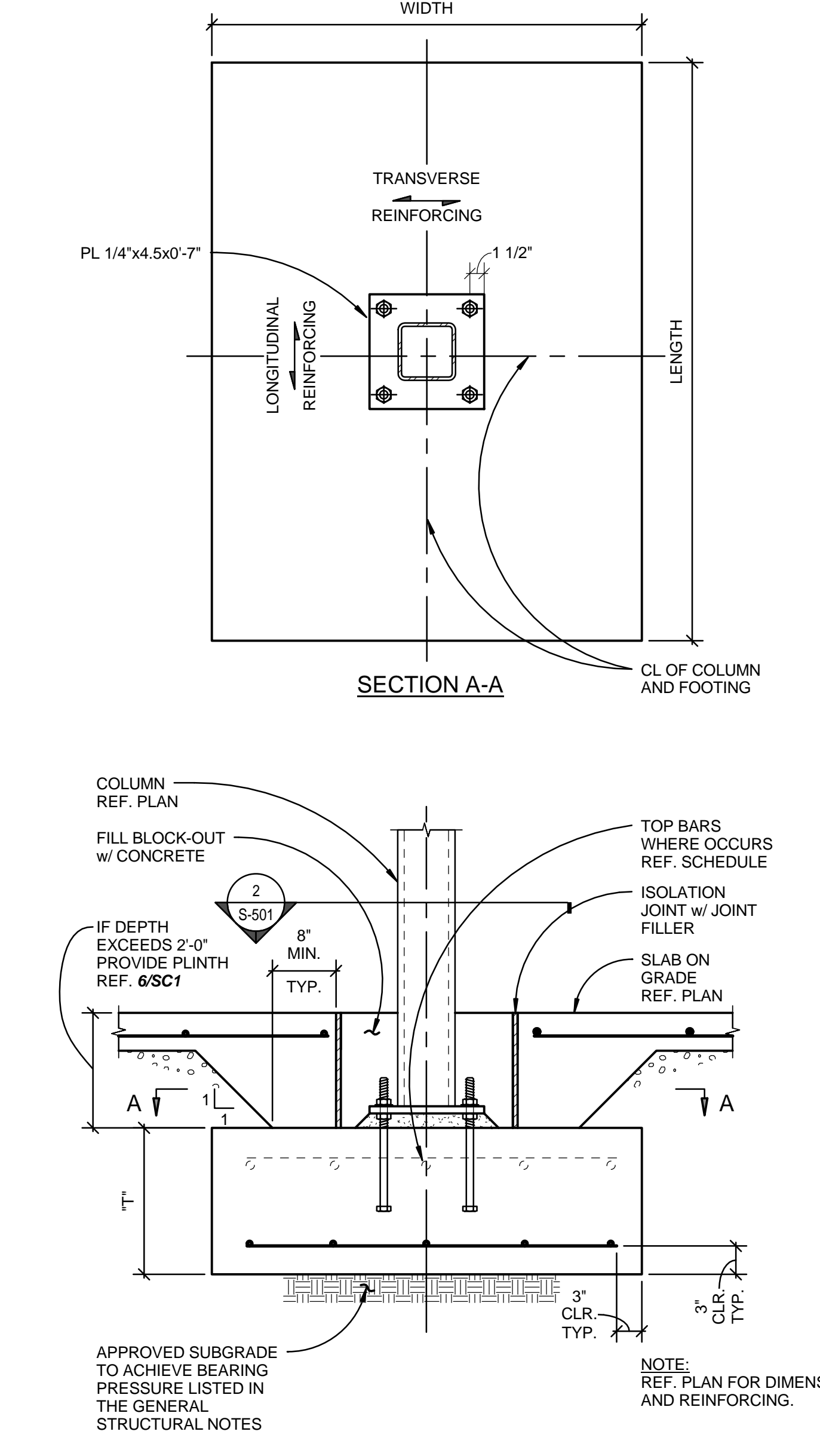
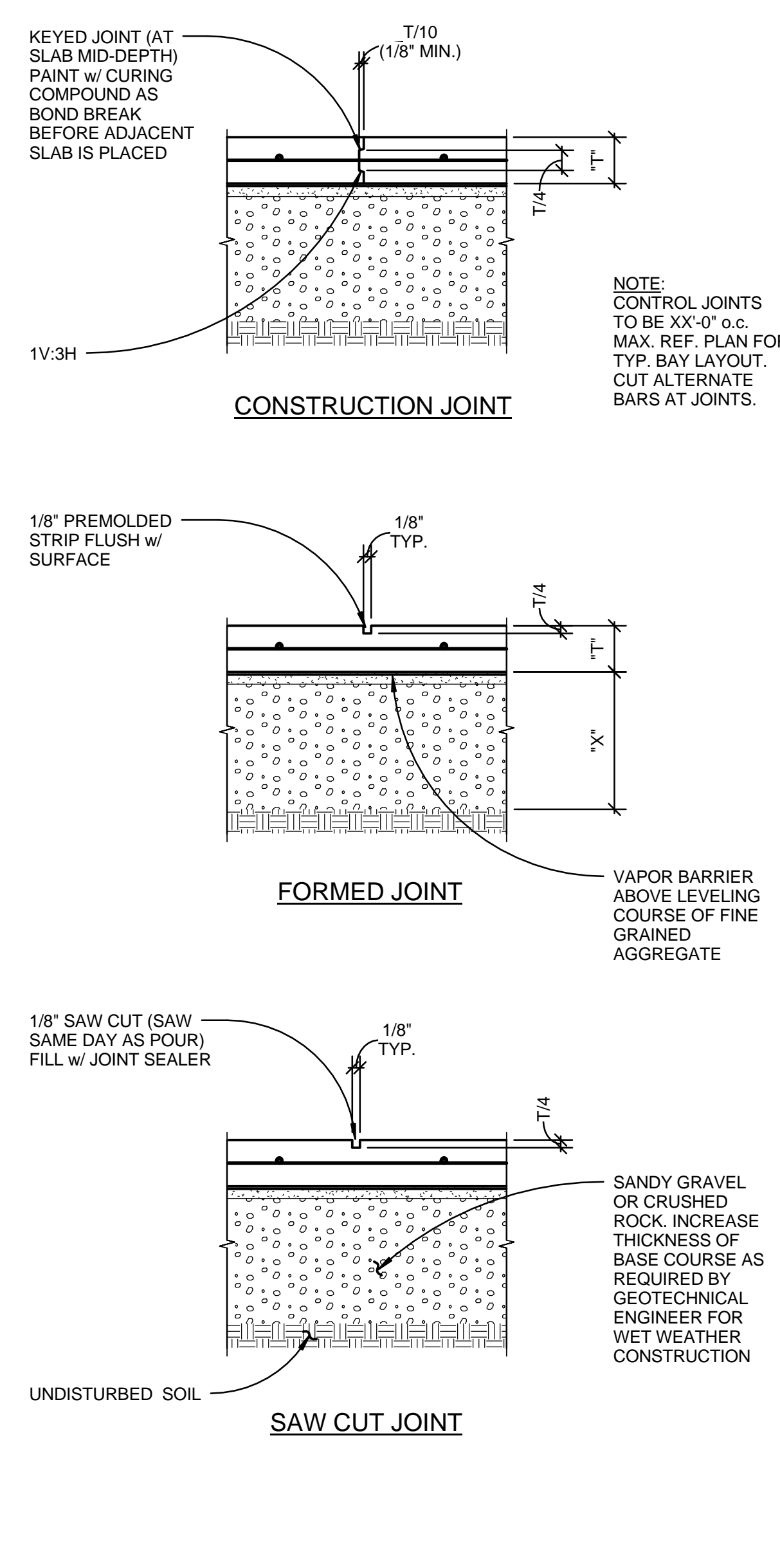
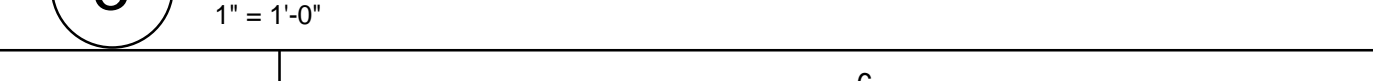
1 FOOTING DETAIL AT STEEL COLUMN

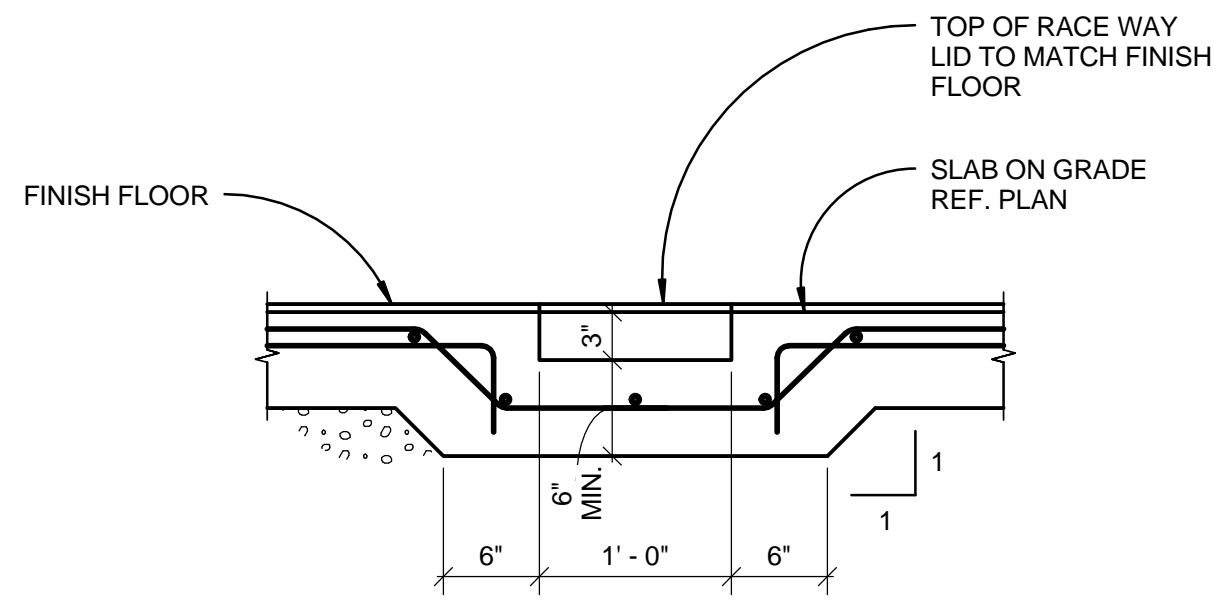


2 ISOLATION JOINT AT COLUMN



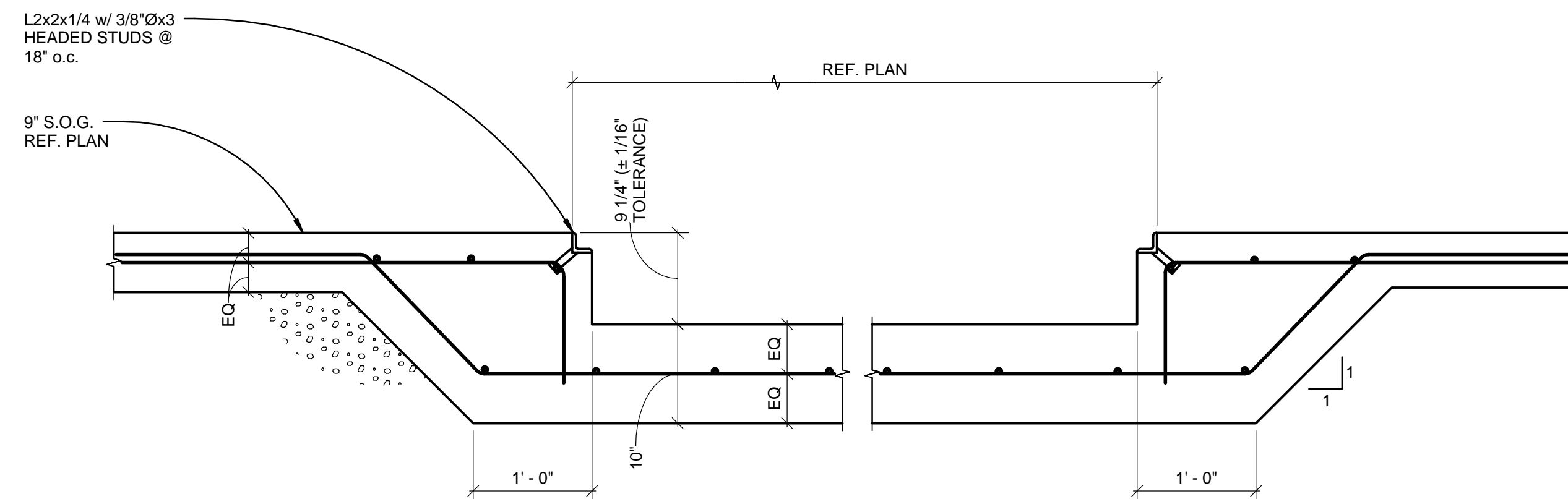
3 NOT USED



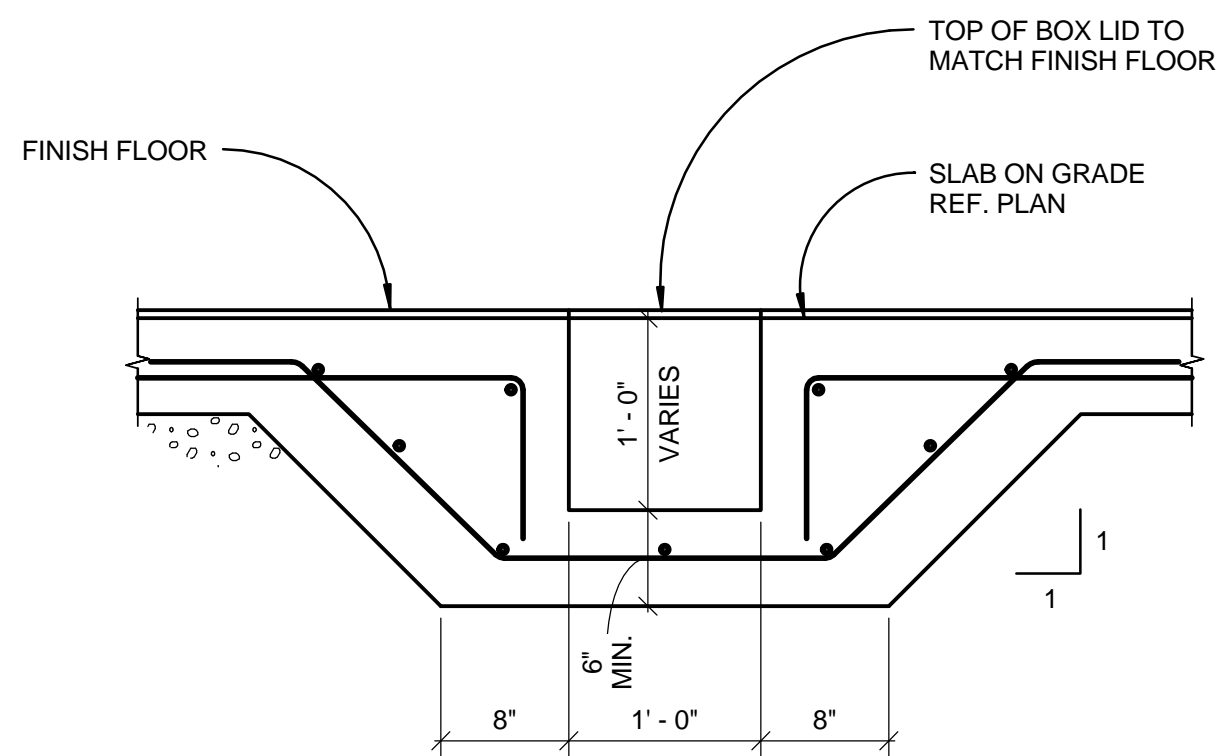


NOTE:
COORDINATE FINAL ELECTRICAL BOXES
BLOCKOUT DIMENSIONS WITH ELECTRICAL
AND ACCELERATOR SUPPLIER DRAWINGS

5 SLAB ON GRADE SECTION AT RACE WAY
1" = 1'-0"

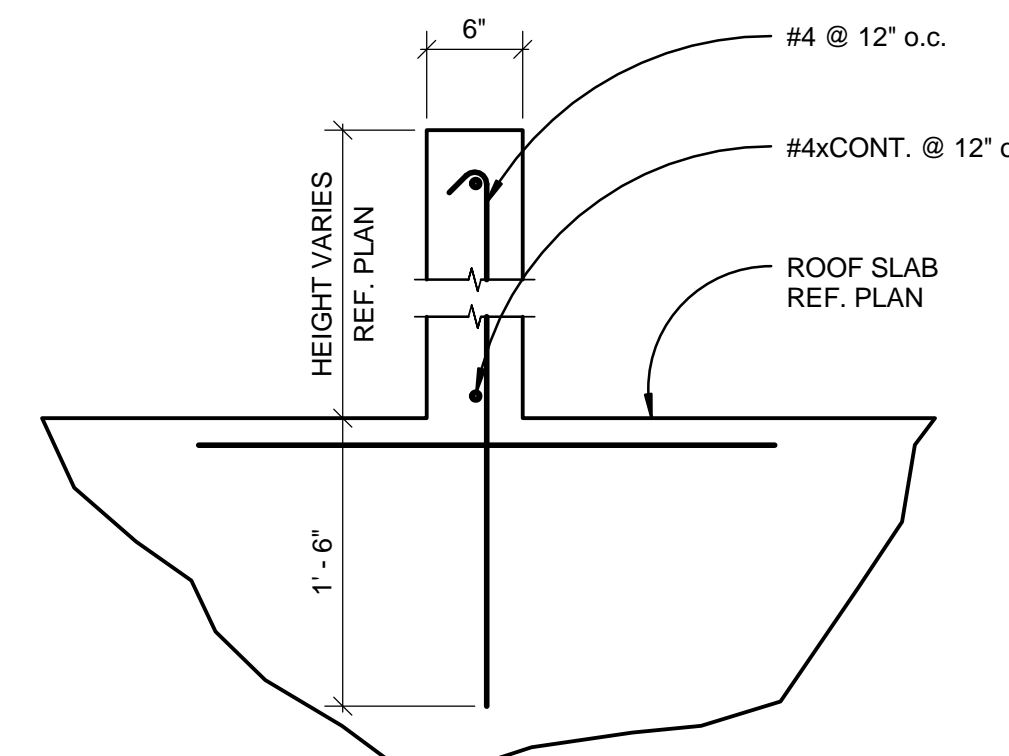


1 ACCELERATOR PIT SECTION
1" = 1'-0" S-121

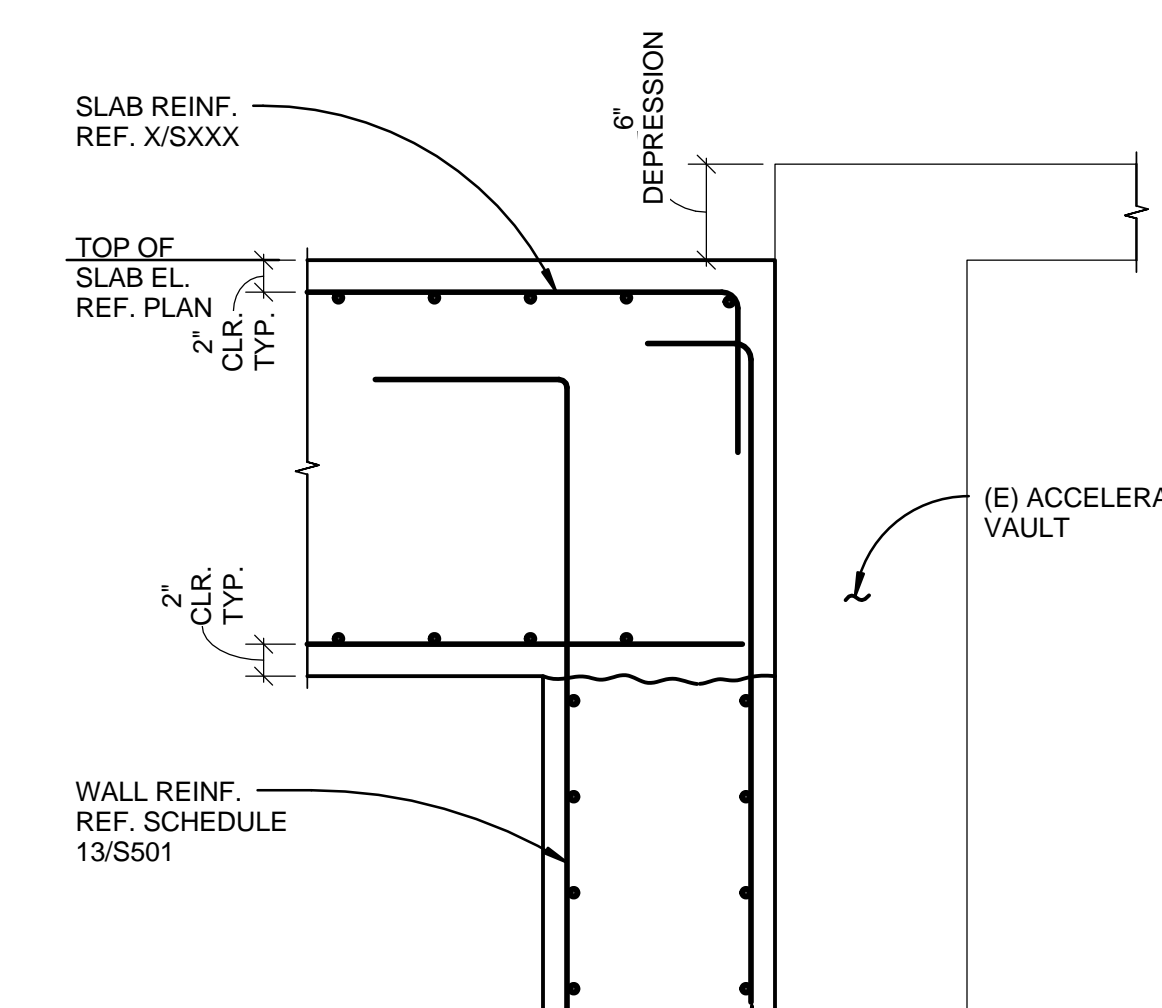


NOTE:
COORDINATE FINAL ELECTRICAL BOXES
BLOCKOUT DIMENSIONS WITH ELECTRICAL
AND ACCELERATOR SUPPLIER DRAWINGS

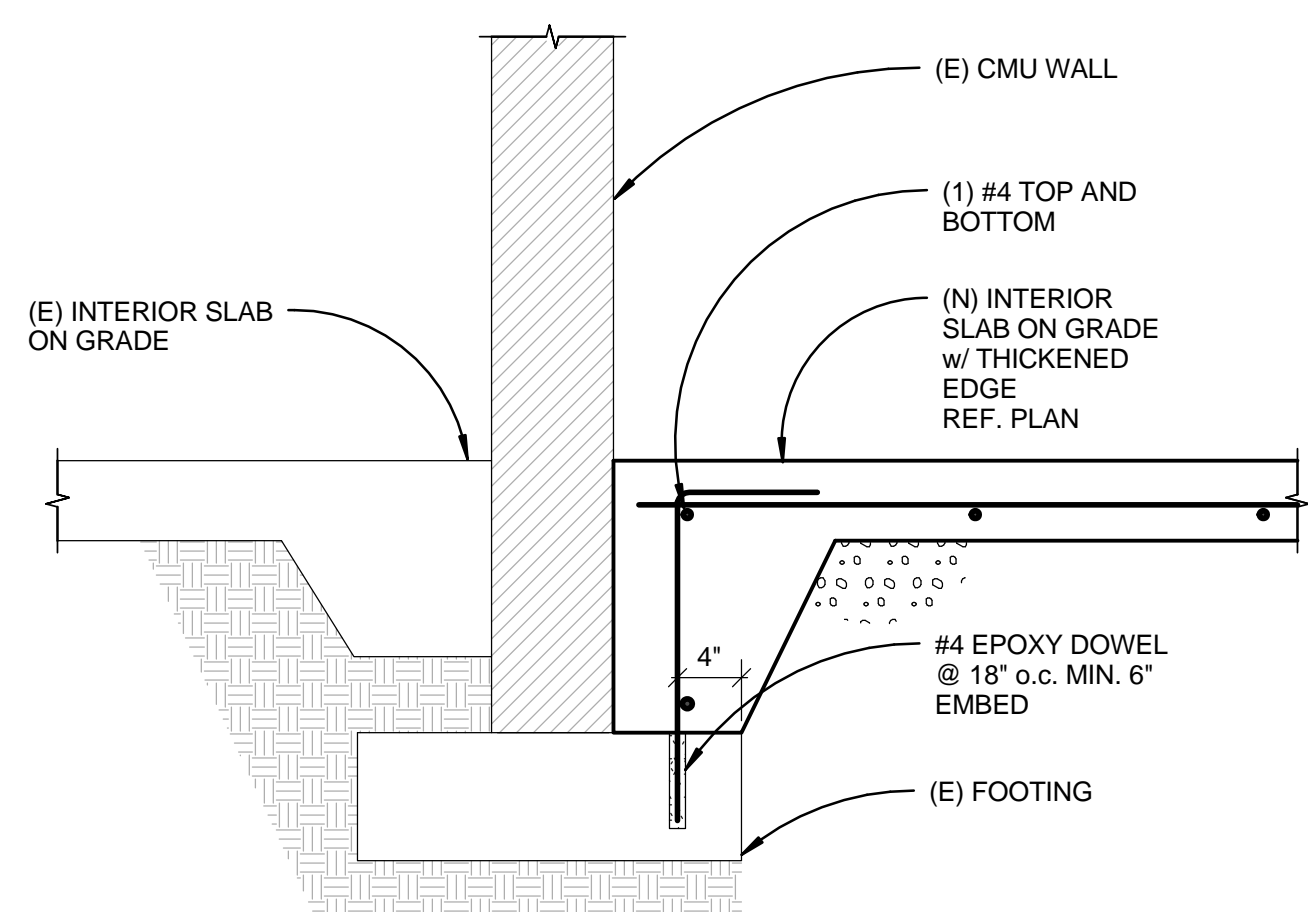
6 SLAB ON GRADE SECTION AT ELECTRICAL BOXES
1" = 1'-0"



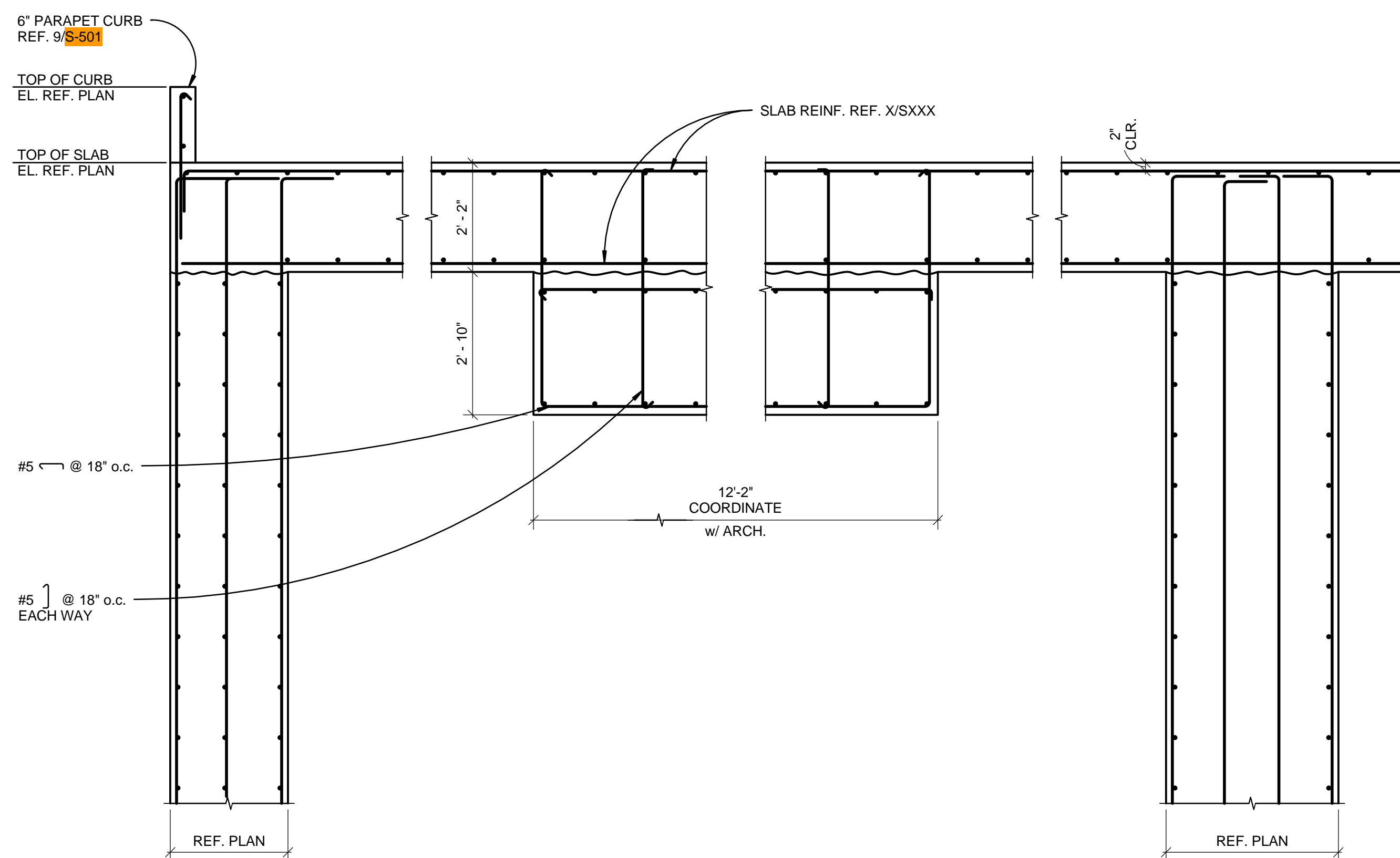
4 TYPICAL MECHANICAL CURB
1" = 1'-0"



2 ACCELERATOR VAULT SLAB/WALL DETAIL
1" = 1'-0" S-122



7 (N) SLAB AT (E) FOOTING
1" = 1'-0" S-121



3 ACCELERATOR VAULT SLAB REINFORCEMENT
1/2" = 1'-0" S-122

1 2 3 4 5 6

E

D

C

B

A

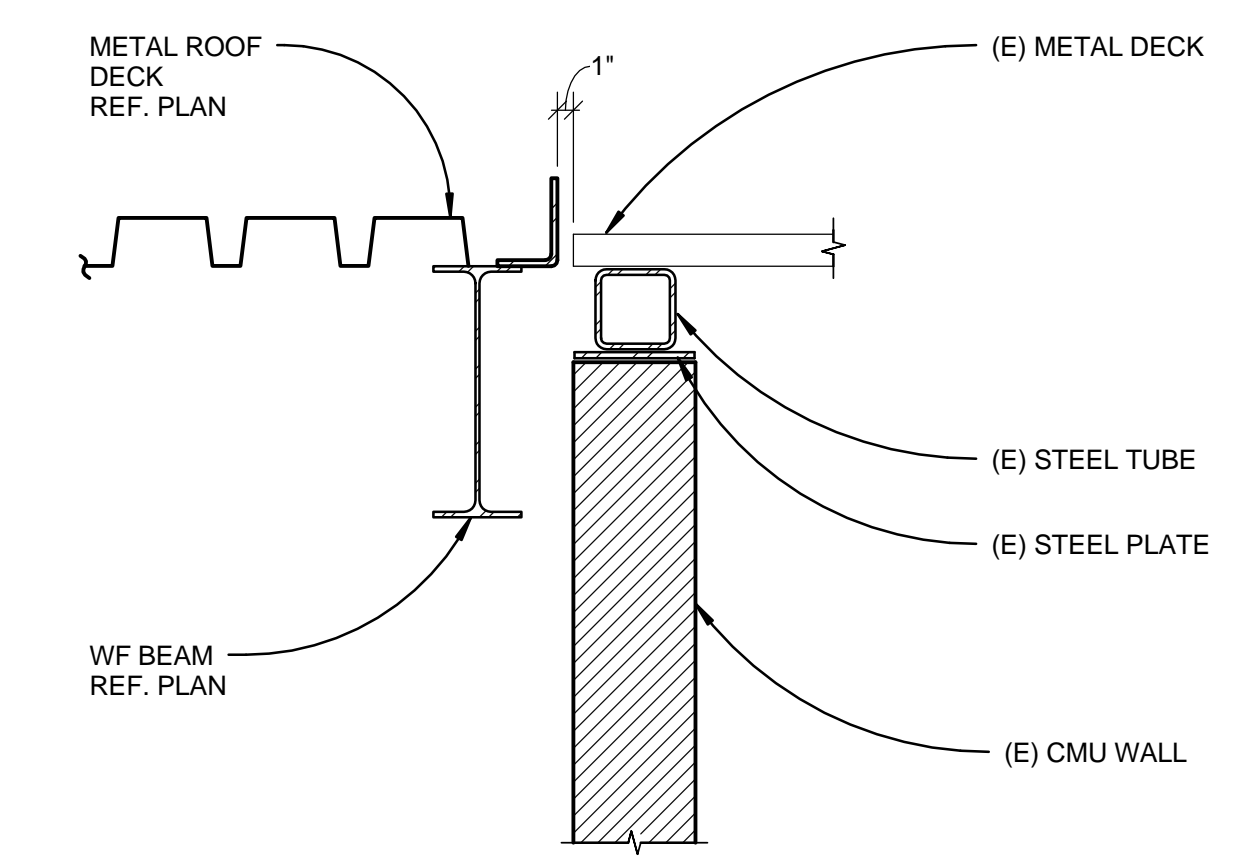
E

D

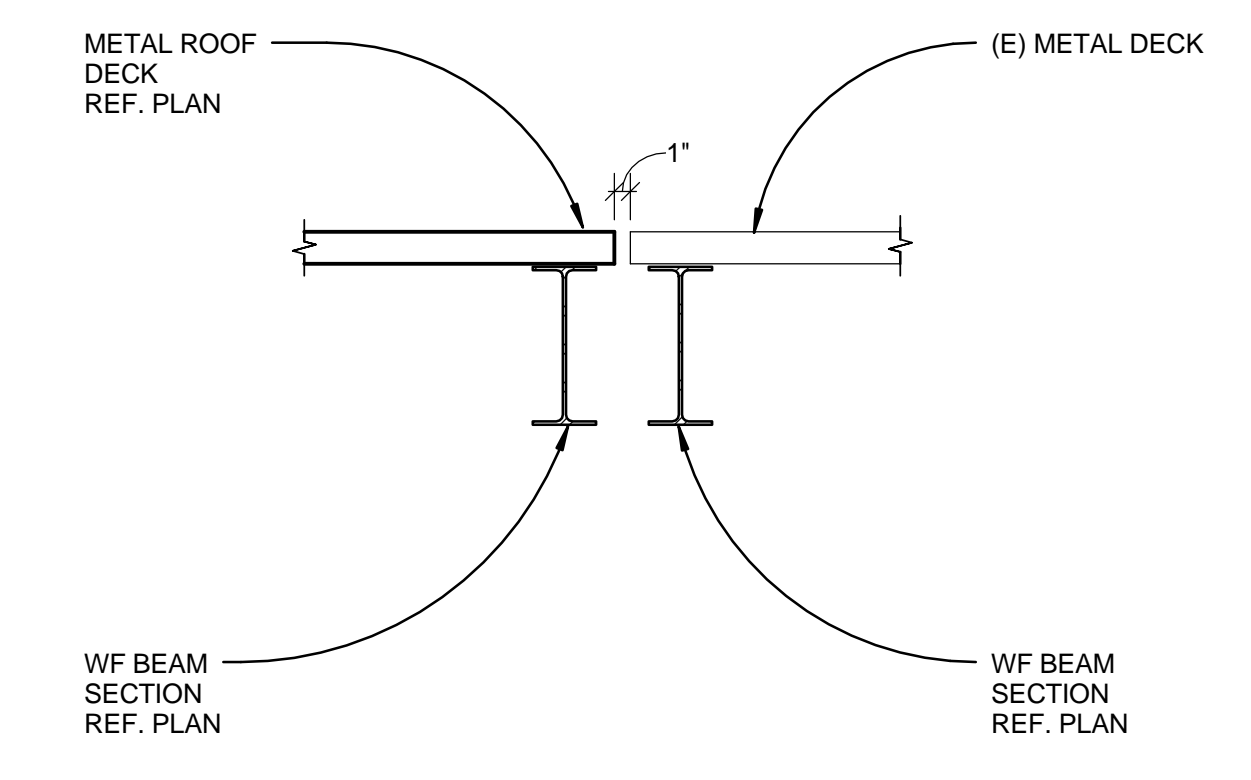
C

B

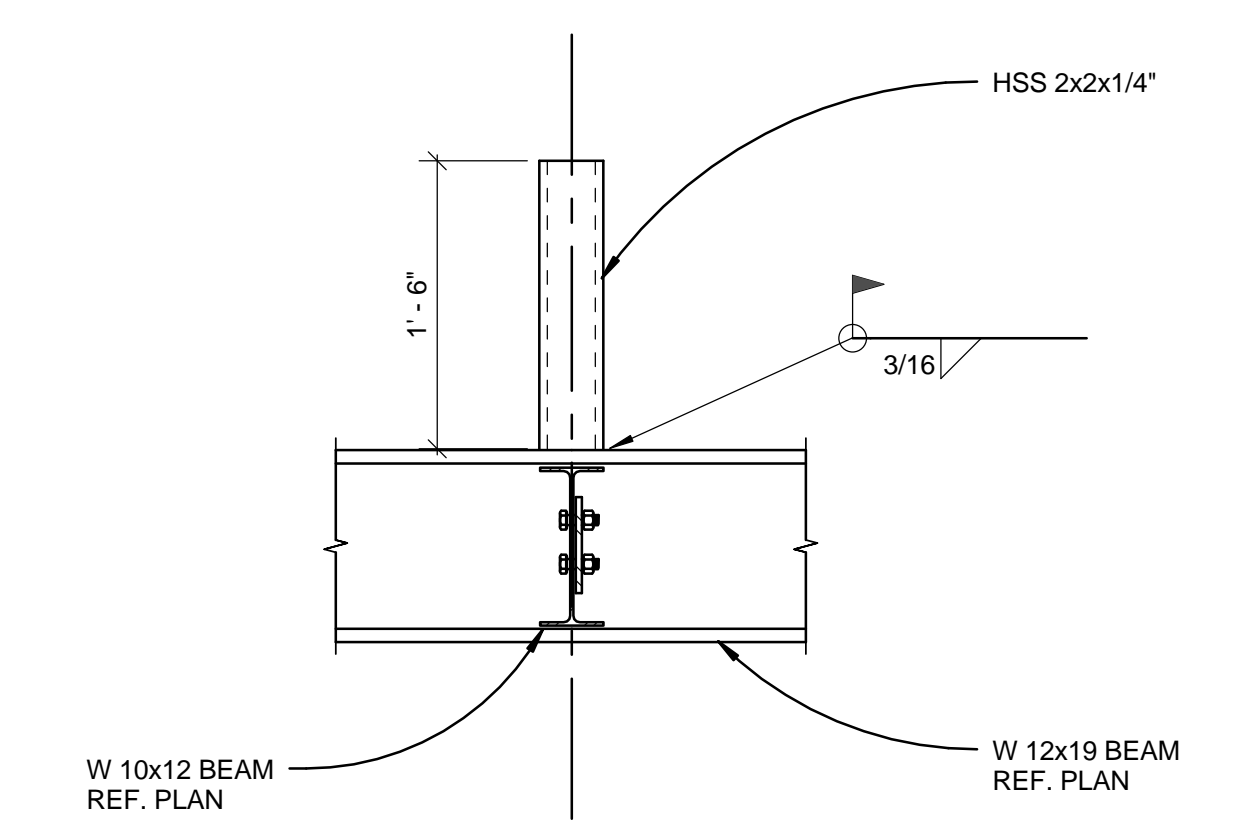
A



1 SEISMIC JOINT AT (E) CMU WALL
1" = 1'-0" S-122



2 SEISMIC JOINT AT (N) WF
1" = 1'-0" S-122



3 STEEL PARAPET SUPPORT
1" = 1'-0"

1 2 3 4 5 6

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