ABBREVIATIONS

@	AT
&	AND
ABV	ABOVE
AB	ANCHOR BOLTS
AC	ASPHALTIC CONCRETE
ADDNL	ADDITIONAL
AFF	ABOVE FINISH FLOOR
AGG	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
BLKG	BLOCKING
BLW	BELOW
BEV	BEVELED
BLDG	BUILDING
BM	BEAM
BOC	BOTTOM OF CONCRETE
BOF	BOTTOM OF FOOTING
BOT	BOTTOM
BRBF	BUCKLING RETRAINED BRACED FRAME
BRCG	BRACING
BRG	BEARING
BRG PL	BEARING PLATE
BTWN	BETWEEN
CC	CENTER TO CENTER
CIP	CAST IN PLACE
CJ	CONSTRUCTION JOINT
CTR	CENTER
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINOUS
CP	COMPLETE PENETRATION
DBL	DOUBLE
DEPR	DEPRESSED
DF	DOUGLAS FIR
DIA, Ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
(E)	EXISTING
EA	EACH
EF	EACH FACE
EBF	ECCENTRICALLY BRACED FRAME
E.W.	EACH WAY
E.J.	EXPANSION JOINT
EL	ELEVATION
EN	EDGE NAIL
EOS	EDGE OF SLAB
ES	EACH SIDE
EQ	EQUAL
EXP B	EXPANSION BOLT
EXT	EXTERIOR
FAB	FABRICATE
FD	FLOOR DRAIN
FF	FINISH FLOOR
FG	FINISH GRADE
FLG	FLANGE
FND	FOUNDATION
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FT (')	FOOT/FEET
FTG	FOOTING
GA	GAGE
GALV	GALVANIZED
GT	GROUT
HAS	HEADED ANCHOR STUD
HDR	HEADER
HK	HOOK
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IN (")	INCH
INT	INTERIOR
JT	JOINT
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LS	LAG SCREW
LT WT	LIGHT WEIGHT
LG	LONG
MAX	MAXIMUM
MB	MACHINE BOLT
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
(N)	NEW
N.I.C.	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
o.c.	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
OPH	OPPOSITE HAND
PCC	PRECAST CONCRETE
PC	PIECE
PERP	PERPENDICULAR
PL	PLATE
PP	CENTER LINE
PPT	PRESSURE PRESERVATIVE TREATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
R	RADIUS
REINF	REINFORCEMENT
REQD	REQUIRED
S.A.D.	SEE ARCHITECTURAL DRAWINGS
S.C.D.	SEE CIVIL DRAWINGS
S.E.D.	SEE ELECTRICAL DRAWINGS
S.M.D.	SEE MECHANICAL DRAWINGS
S.P.D.	SEE PLUMBING DRAWINGS
SIM	SIMILAR
S.J.	SHRINKAGE JOINT OR SEISMIC JOINT
SOG	SLAB ON GRADE
SQ	SQUARE
SS	STAINLESS STEEL
STAG	STAGGER
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUC	STRUCTURAL
SYMM	SYMMETRICAL
THK	THICK
T.O.C.	TOP OF CONCRETE
T.O.F.	TOP OF FOOTING
T.O.S.	TOP OF STEEL
T.O. SLAB	TOP OF SLAB
T.O.W.	TOP OF WALL
TS	TUBE STEEL
TYP	TYPICAL
T&B	TOP & BOTTOM
TM	TOP MOST
BM	BOTTOM MOST
U.O.N.	UNLESS OTHERWISE NOTED
VERT	VERTICAL
w/	WITH
WSA	WELDED STUD ANCHOR
WWF	WELDED WIRE FABRIC

REINFORCEMENT DEVELOPMENT LENGTHS & SPLICE TABLES

(GR60 EXCEPT AS NOTED)

REINFORCEMENT DEVELOPMENT LENGTHS
(LENGTH IN INCHES)

REINFORCED CONCRETE	f'c=3000 PSI AT 28 DAYS								
REINF LOCATION	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
TOP	15	29	36	43	63	72	81	91	101
OTHER	12	22	28	33	48	55	62	70	78

REINFORCEMENT LAP SPLICES
(LENGTH IN INCHES)

REINFORCED CONCRETE	f'c=3000 PSI AT 28 DAYS								
REINF LOCATION	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
TOP	20	38	47	56	82	94	106	119	132
OTHER	16	29	37	43	63	72	81	91	102

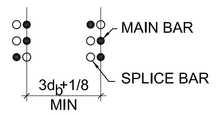
REINFORCED CONCRETE	f'c=4000 PSI AT 28 DAYS								
REINF LOCATION	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
TOP	13	25	31	37	54	62	70	79	87
OTHER	12	19	24	29	42	48	54	61	67

REINFORCED CONCRETE	f'c=4000 PSI AT 28 DAYS								
REINF LOCATION	REINFORCEMENT SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
TOP	17	33	41	49	71	81	91	103	114
OTHER	16	25	32	38	55	63	71	80	88

1. ALL #3 BARS ARE GR40, UON.
2. WHERE ADJACENT LAPS ARE SEPARATED BY LESS THAN 3" ABOVE VALUES WILL BE INCREASED BY 30%.

   TOP REINFORCING IS HORIZONTAL REINFORCEMENT THAT HAS MORE THAN TWELVE INCHES OF CONCRETE BELOW IT.

   USE WELDED SPLICE OR MECHANICAL CONNECTOR IF THE LAP SPLICE REINFORCEMENT DOES NOT HAVE A MINIMUM SPACING $3d_b$+1/8" AND A MINIMUM COVER OF d_b+ 1/8"



   WELDED SPLICE * (DIRECT BUTT SPLICES-FULL PENETRATION)

   #5 AND SMALLER SINGLE-BEVEL GROOVE WELD
   #6 AND LARGER DOUBLE-BEVEL GROOVE WELD WELDS SHALL HAVE THE ABILITY TO DEVELOP 125 PERCENT OF THE YIELD STRENGTH FOR THE SPLICED REINFORCEMENT (75 KSI)

   * BARS WITH CARBON EQUIVALENT (CE) ABOVE 0.75 SHALL NOT BE WELDED. WELDED SPLICES SHALL NOT BE USED IN THE REGION OF WALL-TO-FOUNDATION INTERFACE.

   MECHANICAL CONNECTORS

   MECHANICAL CONNECTORS SHALL BE TENSION-COMPRESSION TYPE WITH THE ABILITY TO DEVELOP 125% OF THE YIELD STRENGTH FOR THE SPLICED REINFORCEMENT (75 KSI). ALSO, MECHANICAL CONNECTORS SHALL HAVE AND BE INSTALLED PER AN EVALUATION REPORT FROM ICBO EVALUATION SERVICE, INC.

A. GENERAL

1. THE INTENT OF THESE DRAWINGS IS TO SHOW ALL ITEMS NECESSARY TO COMPLETE THE FOUNDATION. FOR ITEMS, METHODS AND/OR MATERIALS NOT SHOWN, THE MINIMUM REQUIREMENTS OF THE 2007 CBC SHALL GOVERN. ALL WORK AND CONSTRUCTION SHALL COMPLY WITH ALL OTHER APPLICABLE BUILDING CODES, SOIL REPORTS, REGULATIONS AND SAFETY REQUIREMENTS.
2. TYPICAL DETAILS AND NOTES ON THESE SHEETS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.
3. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING AND FORMWORK, ETC., AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING THE CONSTRUCTION OF THIS BUILDING. SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL FLOORS, ROOF AND WALL SHEATHING HAVE BEEN ENTIRELY CONSTRUCTED. SHORING DRAWINGS AND CALCULATIONS SHALL BE SEALED BY A REGISTERED ENGINEER AND SUBMITTED TO ARCHITECT/ENGINEER FOR REVIEW.
4. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS BEFORE PREPARING SHOP DRAWINGS, FABRICATION OR CONSTRUCTION. SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR SIZE AND LOCATIONS OF PIPES, SLEEVES, PITS, VENTS, DUCTS, ETC. AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
5. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
6. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
7. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAIL IS GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
8. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT LIMITED TO BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
9. OPENINGS, POCKETS, ETC., LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, WALLS, UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS. FOR ANY FURTHER RESTRICTIONS ON OPENINGS IN STRUCTURAL ELEMENTS, SEE APPLICABLE SECTIONS BELOW.
10. PIPES LARGER THAN 1 1/2" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHEN WHERE SPECIFICALLY APPROVED. NO CONDUITS SHALL BE PLACED IN CONCRETE FILL OVER METAL DECKING.

C. DESIGN BASIS

1. REFERENCE CODE

   2007 CALIFORNIA BUILDING CODE, VOLUME 2
   ASCE 7-05, AISC 360-05, AISC 341-05, ACI 318-05
2. DESIGN LOADS:

   DEAD LOADS: THE ACTUAL WEIGHT OF ALL PERMANENT CONSTRUCTION AND FIXED EQUIPMENT, INCLUDING 2 PSF FOR FIRE SPRINKLER SYSTEM.

   * OFFICE AREAS/ CLASSROOMS 50 PSF
   * HIGH DENSITY STORAGE & FILE ROOMS 125 PSF
   * CORRIDORS, STAIRS 100 PSF
   * PARTITION LOAD ALLOWANCE IN OFFICE AND ADMINISTRATIVE AREAS 15 PSF
   * ASSEMBLY ROOMS/ AREAS, AUDITORIUMS 100 PSF
   * ROOF 20 PSF
   * SLABS ON GRADE 80 PSF
   * BASEMENT WALLS:

     SOIL
     AT REST PRESSURE 45 PCF + 8H PSF
     SEISMIC INCREMENT 12H PSF

     VOLCANIC ROCK FILL
     AT-REST PRESSURE 10 PCF + 4H PSF
     SEISMIC INCREMENT 3H PSF

   WIND LOADS: BASIC WIND SPEED ..... 85 MPH
   EXPOSURE C
   IMPORTANCE FACTOR 1.15

SEISMIC LOADS:

SEISMIC LOADS ARE DETERMINED IN ACCORDANCE WITH 2007 CBC, GEOTECHNICAL REPORT BY TRC DATED JULY 17, 2008 AND ASCE 7-05 USING THE FOLLOWING DESIGN CRITERIA:

* SITE CLASSIFICATION: CLASS D
* DESIGN FACTORS: Fa = 1.0 Fv = 1.5
  Sms = 1.72 Sm1 = 1.44
  Sds = 1.15 Sd1 = 0.96
* OCCUPANCY CATEGORY III:
* I = 1.25
* R = 6 (SPECIAL CONCENTRIC BRACED FRAME); R=5 (SPECIAL REINFORCED CONCRETE SHEARWALL)
* SEISMIC DESIGN CATEGORY: E
* REDUNDANCY FACTORS: SPECIAL CONCENTRIC BRACED FRAME φ =1.3
  SPECIAL REINFORCED CONCRETE SHEARWALL φ =1.0
* MAXIMUM STORY DRIFT: 1.5 INCHES

D. FOUNDATION

1. DESIGN OF BOTH STRUCTURES HAS BEEN BASED UPON THE GEOTECHNICAL INVESTIGATION AND SUPPLEMENTAL REPORT PERFORMED BY: TRC DATED JULY 17, 2008 (REPORT NO. 1620-46).
2. ALL CONSTRUCTION SHALL COMPLY WITH THE RECOMMENDATIONS OF THE SOILS REPORT. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR ANY GEOTECHNICAL ASPECTS OF THIS PROJECT.
3. IT IS RECOMMENDED THAT SOIL ENGINEERS a) REVIEW THE FOUNDATION PLANS PRIOR TO CONSTRUCTION, AND b) OBSERVE THE INSTALLATION OF THE FOUNDATION.
4. ANY SLOPES SHALL BE CONSTRUCTED AT A MAXIMUM GRADIENT OF 2:1 (HORIZONTAL TO VERTICAL). FILL AND CUT SLOPES SHOULD BE VEGETATED AS SOON AS POSSIBLE TO MINIMIZE EROSION OF SOIL. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION. SEE CIVIL DWGS FOR BUILDING PAD SECTION.
5. ANY VERTICAL SOIL CUTS MUST BE PROVIDED WITH PROPER SHORING TO PROTECT THE WORKERS AND ADJACENT PROPERTY. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND THE PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES. ALL WORK AND CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES, CALIFORNIA OSHA REGULATIONS AND SAFETY REQUIREMENTS.
6. AN ADEQUATE DRAINAGE SYSTEM SHALL BE PROVIDED TO COLLECT AND TRANSPORT RUNOFF WATER TO THE DISCHARGE FACILITIES. ALL RETAINING WALLS SHALL HAVE AT THE BOTTOM, PERFORATED BACK-OF-WALL DRAINS AND WEEP HOLES AT 6'-0" O.C. MAXIMUM.
7. ALL BUILDING PADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH GEOTECHNICAL REPORTS REFERRED TO IN NOTE #1 ABOVE.
8. COMPACTION OF OVER EXCAVATION & FILL MATERIAL SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT REFERRED TO IN NOTE #1 ABOVE.
9. A) PASSIVE PRESSURES

   ENGINEERED FILL ..... =300 psf/ft

   NEGLECT THE UPPER 12 INCHES FOR DESIGN, UNLESS FOUNDATIONS ARE CONFINED BY CONCRETE SLABS OR ASPHALT PAVEMENTS. FOR PIERS, APPLY VALUES OVER EFFECTIVE WIDTH OF TWO PIER DIAMETERS.

   B) SOIL DESIGN CRITERIA USED FOR FOUNDATION DESIGN SHALL BE AS FOLLOWS:

   FOUNDATION DESIGN PARAMETERS BUILDINGS WILL BE SUPPORTED ON A COMBINATION OF CONTINUOUS AND SPREAD FOOTINGS, AS RECOMMENDED IN THE GEOTECHNICAL INVESTIGATION, THE MINIMUM DEPTH OF FOOTINGS IS ANTICIPATED TO BE 18" BELOW THE LOWEST ADJACENT FINISHED GRADE TAKEN AS THE BOTTOM OF INTERIOR SLAB-ON-GRADE OR THE FINISHED EXTERIOR GRADE, WHICHEVER IS LOWEST.

   ALLOWABLE SOIL BEARING PRESSURES USED FOR PRELIMINARY DESIGN PURPOSES ARE AS FOLLOWS:

   * DEAD LOAD 3000 PSF
   * DEAD LOAD PLUS LIVE LOAD 4500 PSF
   * ALL LOADS, INCLUDING WIND OR SEISMIC LOADS 6000 PSF

   THE SETTLEMENT HAS BEEN ESTIMATED AS FOLLOWS:

   * TOTAL SETTLEMENT 1"
   * DIFFERENTIAL SETTLEMENT 1/2"-3/4"
     ALLOWABLE COEFFICIENT OF FRICTION = 0.30

E. REINFORCING STEEL

1. REINFORCING STEEL DETAILING, FABRICATION, AND PLACEMENT SHALL CONFORM TO THE "CALIFORNIA BUILDING CODE", CHAPTER 19A; "THE MANUAL OF STANDARD PRACTICE OF THE WESTERN CONCRETE REINFORCING STEEL INSTITUTE", LATEST EDITION; AND THE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY", ACI 318-05; UNLESS NOTED OTHERWISE.
2. REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:

   DEFORMED BARS, #3 ..... ASTM A615, GRADE 40
   DEFORMED BARS, #4 AND LARGER ..... ASTM A615, GRADE 60
   WELDED REINFORCEMENT, WHEN SPECIFIED ..... ASTM A706 BY ENGINEER
   WELDED WIRE FABRIC, WWF (SMOOTH WIRE) ..... ASTM A185
   SMOOTH WIRE NOT IN WWF ..... ASTM A185
   DEFORMED WIRE FABRIC, DWF (DEFORMED WIRE) ..... ASTM A497
   DEFORMED WIRE NOT IN DWF ..... ASTM A496
   SPIRAL REINFORCEMENT, SMOOTH ..... ASTM A615
   SPIRAL REINFORCEMENT, DEFORMED ..... ASTM A615
   EPOXY COATED REINFORCING, WHEN SPECIFIED ..... ASTM A775 and A615 BY ENGINEER
3. ALL BARS SHALL HAVE A MINIMUM "LAP SPLICE" OR "DEVELOPMENT LENGTH" PER APPROPRIATE TABLES ON S-001, U.O.N.
4. REINFORCING SPACING GIVEN ARE MAXIMUM ON CENTER AND ALL REINFORCING IS CONTINUOUS UNLESS OTHERWISE NOTED.
5. ALL REINFORCING STEEL SHALL BE SECURELY WIRED AND PROPERLY SUPPORTED ABOVE GROUND AND AWAY FROM THE FORM.
6. REINFORCING BAR FABRICATION LAPS AND PLACING SHALL CONFORM TO THE MANUAL OF STANDARD PRACTICE OF THE WESTERN CONCRETE REINFORCING STEEL INSTITUTE, UNLESS OTHERWISE NOTED ON DRAWINGS.
7. DOWEL ALL VERTICAL REINFORCING IN WALLS AND COLUMNS FROM FOUNDATION WITH THE SAME SIZE REINFORCING. (U.0.N.)
8. SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN 2'-0" CLEAR DISTANCE.
9. SPLICE CONTINUOUS BARS IN SPANDRELS, GRADE BEAMS, WALL BEAMS, ETC. AS FOLLOWS:
   TOP BARS AT MID-SPAN.
   BOTTOM BARS AT CENTERLINE SUPPORT (U.O.N.)
10. DO NOT WELD STRUCTURAL REINFORCING STEEL UNLESS EXPLICITLY DIRECTED BY THE STRUCTURAL ENGINEER OF RECORD.

F. CONCRETE

1. THE MINIMUM 28 DAYS STRENGTH AND TYPE OF CONCRETE SHALL BE AS FOLLOWS:

   A) SLABS ON GRADE ..... 150 PCF f'c=4000 PSI
   B) FOUNDATIONS & GRADE BEAMS..... 150 PCF f'c=4000 PSI
   C) COLUMNS & RETAINING WALLS..... 150 PCF f'c=4000 PSI
   D) LIGHTWEIGHT CONCRETE TOPPING SLABS..... 110 PCF f'c=3500 PSI
2. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF MAIN BARS, TIES, ET... AND DENOTE CLEAR COVERAGE. CONCRETE COVER SHALL BE AS FOLLOWS, U.O.N. ON DRAWINGS:

   A) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ..... 3"

   B) CONCRETE EXPOSED TO EARTH OR WEATHER BUT PLACED IN FORMS:
   #6 THROUGH #18 BARS ..... 2"
   #5 BARS, W31 OR D31 WIRE, AND SMALLER ..... 1 1/2"

   C) CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
   SLABS, WALLS OR JOISTS:
   #14 OR #18 BARS..... 1 1/2"
   #11 BARS AND SMALLER..... 3/4"
   BEAMS AND COLUMNS:
   PRIMARY REINFORCEMENT, STIRRUPS, HOOPS, TIES, SPIRALS .....1 1/2"
   SHELLS AND FOLDED PLATE MEMBERS:
   #6 AND LARGER BARS ..... 3/4"
   #5 BARS, W31 OR D31 WIRE, AND SMALLER ..... 1/2"
3. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE SLABS OR WALLS UNLESS SPECIFICALLY DETAILED.
4. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR ALL MOLDS, GROOVES, ORNAMENTS, CLIPS AND GROUNDS TO BE CAST IN CONCRETE.
5. FORMS SHALL BE PROPERLY CONSTRUCTED CONFORMING TO CONCRETE SURFACE AS SHOWN ON THE DRAWINGS, SUFFICIENTLY TIGHT TO PREVENT LEAKAGE, SUFFICIENTLY STRONG AND BRACED TO MAINTAIN THEIR SHAPE AND ALIGNMENT UNTIL NO LONGER NEEDED TO SUPPORT THE CONCRETE.
6. HORIZONTAL CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS AND THE HARDENED CONCRETE SURFACE SHALL BE CLEANED BY SAND-BLASTING OR OTHER APPROVED MEANS TO EXPOSE FIRMLY EMBEDDED AGGREGATES PRIOR TO POURING ADDITIONAL CONCRETE IN CONTACT WITH THESE SURFACES. VERTICAL CONSTRUCTION JOINTS CONFORM TO ALL PLANS AND DETAILS.
7. FORMS AND SHORING SHALL NOT BE REMOVED UNTIL THE CONCRETE HAS ATTAINED SUFFICIENT STRENGTH TO WITHSTAND ALL LOADS TO BE IMPOSED WITHOUT EXCESSIVE STRESS, CREEP OR DEFLECTION.
8. ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCING, DOWELS, BOLTS, ANCHORS, PIPES, SLEEVES, ETC. SHALL BE SECURELY POSITIONED IN THE FORMS BEFORE PLACING THE CONCRETE.
9. SEE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF PIPES, SLEEVES, PITS AND DETAILS NOT SHOWN ON THESE STRUCTURAL DRAWINGS. ALL DIMENSIONS ARE TO BE CHECKED AND VERIFIED WITH THE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS.
10. MINIMUM EMBEDMENT FOR ANCHOR BOLTS IN CONCRETE SHALL BE 8", U.O.N.
11. THE CONTRACTOR SHALL INFORM THE ARCHITECT/ENGINEER AT LEAST 2 DAYS PRIOR TO POURING ANY STRUCTURAL CONCRETE SO THAT HE MAY HAVE THE OPPORTUNITY OF REVIEWING THE WORK PRIOR TO PLACEMENT.
12. BARS SHALL CLEAN OF RUST, GREASE OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
13. REINFORCING BAR SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS. MINIMUM SPLICE LENGTH FOR REINFORCING STEEL BARS IN MASONRY SHALL BE 48 BAR DIAMETERS, 24" MIN. MINIMUM SPLICE LENGTH FOR REINFORCING STEEL BARS IN CONCRETE SHALL BE AS PER APPLICABLE TABLES ON THIS SHEET. LAP ALL HORIZONTAL BARS AT CORNERS AND INTERSECTIONS. STAGGER ALL SPLICES, U.O.N. ON PLANS.
14. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
15. WHERE WELDING OF REINFORCING IS APPROVED BY THE STRUCTURAL ENGINEER, IT SHALL BE DONE BY AWS CERTIFIED WELDERS USING E90XX OR APPROVED ELECTRODES. WELDING PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF STRUCTURAL WELDING CODE REINFORCING STEEL, AWS-D1.4, LATEST REVISION. REINFORCING BARS TO BE WELDED SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-706.
16. ALL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CODE SECTION 1906A.4 AND THE TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.
17. ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUSTS, CHIPS, OR OTHER FOREIGN MATTER PRIOR TO PLACING THE ADJACENT CONCRETE. SURFACE SHALL BE ROUGHENED BY EXPOSING CLEAN AGGREGATE SOLIDLY EMBEDDED IN MORTAR MATRIX.
18. THE CONTRACTOR SHALL SUBMIT THE PROPOSED LOCATIONS OF THE CONSTRUCTIONS JOINTS TO THE ENGINEER FOR APPROVAL BY THE STRUCTURAL ENGINEER BEFORE STARTING CONSTRUCTION.
19. THE WATER / CEMENT RATIO FOR SLAB-ON-GRADE SHALL NOT EXCEED 0.45.

If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch _____

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NO. ISSUES/REVISIONS DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4
KEYPLAN

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

SHEET TITLE:
GENERAL STRUCTURAL NOTES

SHEET NO:
S-001

G. STRUCTURAL STEEL

1. ALL FABRICATION AND ERECTION SHALL CONFORM TO THE AISC SPECIFICATIONS AND AMERICAN IRON AND STEEL SPECIFICATION MANUAL (LATEST EDITION). THE DESIGN AND ERECTION OF LIGHT GAGE STEEL STRUCTURAL MEMBERS SHALL CONFORM TO AISI (LATEST EDITION), EXCEPT AS NOTED OR AS REQUIRED BY THE CALIFORNIA BUILDING CODE. WELDING SHALL CONFORM TO THE AWS SPECIFICATIONS.
2. WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE BEST PRACTICE AND WITHIN THE TOLERANCES SPECIFIED IN THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL.
3. IT IS SPECIFICALLY NOTED THAT BURNED HOLES ARE NOT ACCEPTABLE UNLESS SPECIAL PERMISSION IS GIVEN BY ENGINEER.
4. ALL SHOP FABRICATED WORK SHALL BE DONE IN A SHOP APPROVED BY THE GOVERNING AGENCY. FABRICATOR SHALL SUBMIT PROGRAM OF WELDING INSPECTION TO ENGINEER FOR APPROVAL.
5. ALL STRUCTURAL STEEL SHALL BE AS FOLLOWS UNO:

   ALL WF, WT SHAPES..... A992 GRADE 50
   CONNECTION PL & MISC STEEL (UNO)..... ASTM A36
   GUSSET & COLLECTOR PLATES.....ASTM A572 GRADE 50

   STRUCTURAL TUBING.....ASTM A500 GRADE B.
   ANGLE, CHANNELS..... ASTM A36
6. ALL HIGH STRENGTH BOLTS SHALL BE ASTM A325-N TYPE UNLESS OTHERWISE NOTED.
7. ALL BOLTS USED FOR ERECTION SHALL BE ASTM A325 TYPE WITH THREADS EXCLUDED FROM SHEAR PLANES.
8. ALL PLAIN ANCHORS SHALL BE A36; ALL ANCHOR BOLTS SHALL COMPLY WITH ASTM F1554 GRADE 105. 3" MINIMUM CONCRETE COVER WILL BE PLACED AROUND ALL ANCHOR BOLTS EXPOSED TO THE WEATHER, U.N.O.
9. WELDING MATERIALS: PER AWS D1.1, TYPE REQUIRED FOR MATERIALS BEING WELDED.
10. PROVIDE CONTINUOUS INSPECTION FOR ALL FABRICATION AND WELDING OF STRUCTURAL STEEL IN ACCORDANCE WITH CODE REQUIREMENTS. ALL COMPLETE PENETRATION GROOVE WELDS IN JOINTS AND SPLICES SHALL BE TESTED 100 PERCENT IN ACCORDANCE WITH CBC. USE ONE OF THE APPROVED METHODS OF TIGHTENING HIGH STRENGTH BOLTS.
11. A WELDING SEQUENCE SHALL BE PLANNED TO MINIMIZE RESIDUAL STRESSES AND DISTORTIONS OF INDIVIDUAL MEMBERS AND THE BUILDING FRAME. ALL DETAILING, FABRICATION, AND ERECTION SHALL COMPLY WITH AISC, LATEST EDITION.
12. UNLESS OTHERWISE NOTED, ALL STIFFENER PLATES ARE 3/8" THICK MINIMUM AND ALL BUTT WELDS ARE FULL PENETRATION WELDS. ERECTION CLIPS, TEMPORARY BRACING, ETC., REQUIRED BY THE CONTRACTOR ARE NOT SHOWN.
13. SUBMIT SHOP DRAWINGS FOR THE FABRICATION AND ERECTION OF ALL ASSEMBLIES OF STRUCTURAL STEEL WORK. INCLUDE PLANS AND ELEVATIONS AT NOT LESS THAN 1" TO 1'-0" SCALE, AND INCLUDE DETAILS OF SECTIONS AT NOT LESS THAN 3" TO 1'-0" SCALE.
14. NO FINISH FABRICATION SHALL BE COMMENCED OR MATERIAL DELIVERED TO THE JOB UNTIL THE ENGINEER HAS REVIEWED AND APPROVED THE SHOP DRAWINGS.
15. ALL STRUCTURAL STEEL SHALL BE PAINTED WITH ONE SHOP COAT OF ZINC CHROMATE PRIMER OR EQUAL. AFTER ERECTION, FIELD CONNECTIONS SHALL BE TOUCHED UP. DO NOT PAINT PORTION OF STEEL TO BE EMBEDDED IN CONCRETE, HEADED ANCHOR STUDS, OR AREAS TO RECEIVE FIRE PROOFING.
16. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE. USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC MANUAL OF STEEL CONSTRUCTION LATEST EDITION.
17. THE USE OF E70T-4 WELDING WIRE IS NOT ALLOWED FOR ANY APPLICATION.
18. WRITTEN WELDING PROCEDURE SPECIFICATIONS (WPS) PER THE RECOMMENDATIONS OF THE AMERICAN WELDING SOCIETY (AWS) SHALL BE DEVELOPED BY THE FABRICATOR/ERECTOR AND SUBMITTED FOR REVIEW BY THE ENGINEER PRIOR TO ANY WELDING OF THE STRUCTURAL STEEL. THE WELDING PROCEDURES SHALL INCLUDE ALL THE WELDED JOINTS AND CONFIGURATIONS TO BE USED ON THIS PROJECT-ONLY WPS WHICH ARE RELEVANT TO THIS PROJECT SHALL BE SUBMITTED. ALL WELDED JOINTS SHALL BE PRE-QUALIFIED PER AWS OR BE QUALIFIED BY TEST PER AWS. A PROCEDURE QUALIFICATION RECORD (PQR) SHALL BE INCLUDED WITH THE WPS IF THE WELDING PROCEDURE OR JOINT IS QUALIFIED BY TESTING. THE ELECTRODE MANUFACTURER AND PRODUCT/TRADE NAME SHALL BE IDENTIFIED IN THE WPS IN ADDITION TO THE AWS ELECTRODE CLASSIFICATION NAME. A COPY OF THE ELECTRODE MANUFACTURER'S TECHNICAL DATA SHEETS WITH THE RECOMMENDED WELDING PARAMETERS SHALL BE SUBMITTED WITH THE WPS.
19. DO NOT WELD ANY STRUCTURAL STEEL MEMBER OR CONNECTION UNLESS EXPLICITLY CALLED OUT IN THE CONTRACT DOCUMENTS.
20. WELD SYMBOLS SHOW FINAL WELD REQUIRED. THE CHOICE TO WELD IN THE FIELD OR IN THE SHOP SHALL BE UP TO THE CONTRACTOR AND SHALL BE INDICATED IN THE FABRICATOR'S SHOP DRAWINGS.
21. FOR ALL CJP & PJP WELDS AT LATERAL FORCE RESISTING ELEMENTS PROVIDE CVN TOUGHNESS OF 20 FT. LB @ -20°F AND 40 FT. LB @ 70°F. FOR ALL FILLET WELDS PROVIDE CVN TOUGHNESS OF 20 FT. LB @ -20°F.
22. HOT ROLLED SHAPES WITH FLANGES 1½ INCHES THICK AND THICKER SHALL PROVIDE A MINIMUM CVN TOUGHNESS OF 20 FT. LB @ 70°F.
23. THE LATER FORCE RESISTING ELEMENTS AS DEFINED IN NOTE 21 ABOVE SHALL INCLUDE A BRACED FRAME BEAMS, COLUMNS AND CONNECTION PLATES AS SHOWN ON SHEET S501 - S503 AND ALL COLLECTOR BEAMS AND THEIR ATTACHMENTS.

H. METAL DECKING

1. UNLESS OTHERWISE NOTED ON THE DRAWINGS DECKING SHALL BE AS MANUFACTURED BY VERCO MANUFACTURING INC., OR EQUAL AS APPROVED BY THE ENGINEER OF RECORD.
2. THE MINIMUM BASE THICKNESS OF METAL MATERIAL SHALL BE AS NOTED ON PLANS.
3. FURNISH DECKING IN MINIMUM LENGTHS OF THREE SPANS EXCEPT WHERE SINGLE OR DOUBLE SPANS ARE INDICATED ON THE DRAWINGS.
4. STRUCTURAL PROPERTIES SHALL BE EQUAL TO THOSE OF THE DECKING TYPES INDICATED ON THE DRAWINGS AS APPROVED BY ICBO.
5. FURNISH ALL ACCESSORIES REQUIRED TO PROVIDE A COMPLETE INSTALLATION INCLUDING FILLERS FOR END PANELS, FRICTION CAPS FOR CLOSING SHOP FABRICATED ACCESS HOLES FOR WELDING, FLASHING AT COLUMNS AND CLOSURES FOR CELL ENDS, ROOF AND FLOOR DRAIN RECESSES, AND OTHER ACCESSORIES AS REQUIRED. ACCESSORIES SHALL BE FORMED FROM GALVANIZED STANDARD COMMERCIAL GRADE STEEL OR BETTER.
6. WELDING MATERIALS: PER AWS D1.3 - SPECIFICATIONS FOR WELDING SHEET STEEL IN STRUCTURES.
7. SHEAR STUDS, INCLUDING INSTALLATION EQUIPMENT SHALL BE AS MANUFACTURED BY NELSON STUD WELDING DIVISION, GREGORY INDUSTRIES, LORAIN, OHIO, TYPES S3L OR H4L, OR EQUAL, AND SHALL CONFORM TO AWS D1.1 (LATEST EDITION). FERRULES SHALL BE SUITABLE FOR USE WITH GALVANIZED METAL DECK WHERE INDICATED.
8. WHERE LARGE PREDETERMINED OPENINGS FOR DUCTS AND SIMILAR ELEMENTS PASSING THROUGH THE PANEL UNITS OCCUR, FURNISH PREFABRICATED UNITS TO FIT JOB CONDITIONS; WHERE OTHER HOLES OR OPENING ARE REQUIRED IN DECKING AFTER ERECTION, SUCH HOLES SHALL BE REINFORCED PER THE DRAWINGS.
9. PROVIDE ALL CLOSURES, END PLATES, PROFILE PLATES AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION. WELD IN PLACE.
10. SUPPORT AT COLUMNS: WHERE, DUE TO CUTTING OF DECK UNITS AT COLUMNS, BEARING SUPPORT IS NOT PROVIDED FOR THE END OF A WEB, SUCH WEB SHALL BE WELDED TO THE COLUMN OR STRUCTURAL STEEL MATERIAL AT THE COLUMN OR EQUIVALENT SUPPORT SHALL BE PROVIDED. THE WELDING OR EQUIVALENT SUPPORT SHALL BE SUFFICIENT FOR THE SUPPORT OF THE DECK, CONSTRUCTION LOADS. PROVIDE L3x3x1/4 MINIMUM WITH A 3/16" CONTINUOUS FILLET WELD FOR SUPPORT AT SUCH LOCATIONS, AND SUBJECTED TO THE S.E.O.R. APPROVAL.
11. SUBMIT SHOP DRAWINGS FOR THE FABRICATION AND ERECTION OF ALL ASSEMBLIES IN ACCORDANCE WITH THE SPECIFICATIONS.
12. NO WORK OF FABRICATION SHALL BE COMMENCED OR MATERIAL DELIVERED TO THE JOB UNTIL THE ENGINEER HAS REVIEWED AND APPROVED THE SHOP DRAWINGS.
13. ALL CONCRETE AND METAL DECK ASSEMBLIES SHALL BE REINFORCED WITH A MINIMUM OF WELDED WIRE FABRIC 6x6 W2.9 x W2.9, U.O.N.
14. SEE ROOF FRAMING PLANS & DETAILS FOR EXTENT OF DECK TYPES.
15. DECK SIDE SEAMS SHALL BE CRIMPED TOGETHER AT WELD POINTS BEFORE MAKING TOP OR SIDE SEAM WELDS.
16. WELDS AT DECK LAPS SHALL BE MADE THROUGH BOTH SHEETS TO STRUCTURAL STEEL.
17. SEE TYPICAL DETAILS SHEETS FOR REINFORCEMENT REQUIRED FOR OPENINGS IN THE DECK SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MAJOR OPENING SIZES AND LOCATIONS. OTHER SMALLER OPENINGS ARE NOT SHOWN AND ARE SUBJECT TO REVIEW AND APPROVAL BY THE STATE REPRESENTATIVE.
18. NEW DECK SHALL BE WELDED TO ALL ROOF BEAMS, ANGLES, ETC. PER 9/S103.
19. DECK DIMENSIONS AT MECHANICAL EQUIP. AND SHAFT OPENINGS ARE TO BE PROVIDED BY THE MECHANICAL SUBCONTRACTOR. COORDINATION WITH THE DECK SUBCONTRACTOR SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
20. ALL DECKS WITH CONCRETE FILL SHALL BE VENTED.
21. ALL METAL DECKING SHALL BEAR A MINIMUM OF 2" ON ALL STRUCTURAL STEEL SUPPORT MEMBERS.

I. CONSTRUCTION JOINTS

1. ALL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE w/ CBC SECTION 1906A.4 AND THE TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON THE STRUCTURAL
2. ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUST, CHIPS, OR OTHER FOREIGN MATTER PRIOR TO PLACING THE ADJACENT CONCRETE. THE SURFACES SHALL BE ROUGHENED BY EXPOSING CLEAN AGGREGATE SOLIDLY EMBEDDED IN MORTAR MATRIX.

   THE CONTRACTOR SHALL SUBMIT THE PROPOSED LOCATIONS OF CONSTRUCTION JOINTS TO THE ENGINEER FOR APPROVAL BY THE STRUCTURAL ENGINEER BEFORE STARTING CONSTRUCTION.

J. STATEMENT OF SPECIAL INSPECTION

1. SPECIAL INSPECTION IN CONFORMANCE w/ CHAPTER 17A OF THE 2007 CBC IS REQUIRED AND SHALL BE PROVIDED FOR THE FOLLOWING WORK, UNDER SUPERVISION OF AN OUTSIDE SPECIAL INSPECTION TESTING AGENCY EMPLOYED BY THE OWNER. SEE PROJECT SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO THOSE LISTED BELOW:
   A) DURING THE TAKING OF TEST SPECIMENS AND PLACING OF STRUCTURAL CONCRETE WITH AN f'c GREATER THAN 2500 PSI.
   B) ALL STRUCTURAL STEEL WELDING.
   C) REINFORCING STEEL (WHERE F'c GRATER THEN 2500 PSI OR REINFORCEMENT IS WELDED)
   D) WELDED REINFORCING BARS: CBC SECTION 1903A.4 & ACI 318
   E) USE OF STRUCTURAL EPOXIES
   F) USE OF A325 OR A325-S.C., A490-SC BOLTS
   G) BOLTS EMBEDDED IN CONCRETE OR MASONRY
   H) SOIL COMPACTION REQUIREMENTS
   I) ADHESIVE AND DRILLED-IN EXPANSION ANCHORS
   J) ERICO TYPE "S4" REINFORCING AND COUPLERS. SEE 6/S-501. TEST 10% OF EACH TYPE TO THE REQUIREMENTS OF A "TYPE 2" CONNECTION PER ACI

   THE SPECIAL INSPECTION REQUIREMENTS FOR THE SEISMIC-FORCE-RESISTING SYSTEM SHALL BE PER THE CBC 2007 AND ARE LISTED IN THE TABLE BELOW:

TASK	DESCRIPTION	INSPECTION FREQUENCY	CODE REFERENCE
STRUCTURAL STEEL WELDING	• SINGLE-PASS FILLET NOT EXCEEDING 5/16" IN SIZE	PERIODIC	CBC 2007 TABLE 1704A.3 & AWS D1.1 & AISC 341
	• ROOF AND DECK WELDING		CBS 2007 TABLE 1704A.3 & AWS D1.3
	• ALL OTHER WELDING	CONTINUOUS	CBC 2007 TABLE 1704A.3 & AWS D1.1 & AISC 341

I. HEADED STUDS

1. MATERIAL: AUTOMATIC END WELDED STUDS SHALL BE NELSON GRANULAR FLUXFILLED SHEAR CONNECTOR OR ANCHOR STUDS (OR APPROVED EQUAL). STUDS SHALL BE MANUFACTURED OF C-1015 COLD ROLLED STEEL WHICH CONFORM TO ASTM SPECIFICATIONS A-108-58-T.
2. INSTALLATION: THE STUDS SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE STUD AND THE PLATE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE STUD AND THE PLATE. THE STUD SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8" INCH AND UNDER, AND 3/16" FOR OVER 5/8" DIAMETER. WELDING SHALL BE DONE ONLY BY QUALIFIED WELDERS APPROVED BY THE WELDING INSPECTOR.
3. INSPECTION AND TESTS: INSPECTION, IN ACCORDANCE WITH TITLE 24, SECTION 1704A.3, OF ALL THE SHOP AND FIELD WELDING OPERATIONS FOR THE AUTOMATIC END WELDED STUDS SHALL BE MADE BY A QUALIFIED WELDING INSPECTOR (APPROVED BY THE OFFICE OF THE STATE ARCHITECT). THE TYPE AND CAPACITY OF THE WELDING EQUIPMENT SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE CHECKED AND APPROVED BY A WELDING INSPECTOR. AT THE BEGINNING OF EACH DAY'S WORK, A MINIMUM OF TWO TEST STUD WELDS SHALL BE MADE WITH THE EQUIPMENT TO BE USED TO METAL WHICH IS THE SAME AS THE ACTUAL WORK PIECE. THE TEST STUDS SHALL BE SUBJECTED TO A 90% BEND TEST BY STRIKING THEM WITH A HEAVY HAMMER. AFTER THE ABOVE TEST, THE WELD SECTION SHALL NOT EXHIBIT ANY TEARING OUT OR CRACKING. TESTING OF END-WELDED STUDS SHALL BE IN ACCORDANCE WITH SECTION 1704A.3, PART 2, TITLE 24. PER AWS D1.1, STUDS SHALL BE BENT 30Ø FROM PEERPENDICULAR. STUDS MAY BE LEFT IN PLACE AFTE TESTING. RFI 263
4. STEEL SHEAR STUDS MATERIAL WELDING AND INSPECTION, SHALL BE IN ACCORDANCE WITH AWS "STRUCTURAL WELDING CODE", AWS D1.1-98, SECTION 7. ALL STUDS SHALL BE 3/4" DIAMETER, SPACED AT 12" o.c. MAXIMUM, U.O.N. THE LENGTH SHALL BE AS INDICATED IN DETAIL 14/S-103.

M. CURTAIN WALL DESIGN WINDOW SYSTEM

CURTAIN WALL DESIGN/BUILD SYSTEM

1. DEFERRED APPROVAL - SEE INCREMENT 3.

If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch

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NO. ISSUES/REVISIONS DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4
KEYPLAN

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

SHEET TITLE:
GENERAL STRUCTURAL NOTES

SHEET NO:
S-002

N. DRILLED-IN EXPANSION BOLTS AND ADHESIVE ANCHORS IN CONCRETE

1. ALL DRILLED-IN EXPANSION ANCHORS SHALL BE SIMPSON STRONG-BOLT (ICC-ESR #1771) OR HILTI KWIK BOLT TZ (ICC-ESR #1917) OR HILTI HSL3 (ICC-ESR #1545) ANCHORS OR AN EQUAL APPROVED BY THE ENGINEER OF RECORD.

2. ALL ADHESIVE ANCHORS SPECIFIED SHALL BE SIMPSON 'SET-XP' (ICC-ESR #2508) OR HILTI RE 500 SD (ICC-ESR #2322) OR AN APPROVED EQUAL BY THE ENGINEER OF RECORD AND SHALL NOT BE USED FOR OVERHEAD APPLICATIONS.

3. DRILLED-IN EXPANSION ANCHORS & ADHESIVE ANCHORS SHALL BE TENSION TESTED IN ACCORDANCE WITH THE FOLLOWING:
   A) 10%: WHERE USED FOR CONNECTION OF SILL PLATES.
   B) 50% WHERE USED FOR NON-STRUCTURAL APPLICATIONS SUCH AS EQUIPMENT ANCHORAGE.
   C) 100% FOR THE ATTACHMENT OF ALL OTHER STRUCTURAL ATTACHMENTS.

4. THE TENSION TESTING OF THE EXPANSION ANCHORS SHALL BE DONE IN THE PRESENCE OF THE PROJECT INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY. IF ANY ANCHORS FAIL THE TENSION-TESTING REQUIREMENTS, TWICE THE NUMBER OF ANCHORS SHALL BE TESTED AT THE CONSTRUCTOR'S EXPENSE. ANCHORS WHICH FAIL THE TENSION TEST MUST BE REMOVED, REPLACED AND RETESTED AT THE CONSTRUCTOR'S EXPENSE.

O. ANCHORAGE

1. FOR STRUCTURAL ANCHORAGE OF MECHANICAL EQUIPMENT SEE MECHANICAL DRAWINGS.
2. FOR STRUCTURAL ANCHORAGE OF ELECTRICAL EQUIPMENT SEE ELECTRICAL DRAWINGS.
3. FOR STRUCTURAL ANCHOR OF PLUMBING EQUIPMENT SEE PLUMBING DRAWINGS.
4. ALL PIPES, DUCTS, AND CONDUITS SHALL BE SUPPORTED AND BRACED PER DSA REQUIREMENTS, THE SMACNA "GUIDELINES FOR SEISMIC RESTRAINS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS, R-0120 UNSTRUT "SEISMIC BRACING SYSTEMS OR OTHER DSA PRE APPROVED SYSTEM. FINAL SUPPORT AND BRACING CONSTRUCTION DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD FOR GENERAL CONFORMANCE WITH THE ORIGINAL DESIGN INTENT.

5. FOR ALL VIBRATION ISOLATORS AND THEIR ANCHORAGES, CONTRACTOR/ MANUFACTURER SHALL PROVIDE CALCULATIONS, DETAIL, AND/ OR TEST DATA TO SUBSTANTIATE THE ISOLATOR'S CAPACITY FOR VERTICAL AND LATERAL LOADS OR USE DSA PRE-APPROVED ISOLATORS. ALL ANCHORAGE WITH ISOLATORS FOR EQUIPMENT SHALL BE DETAILED ON DRAWING.

6. SPACING AND DETAILS OF THE SUPPORT AND BRACING OF FIRE SPRINKLER PIPING SHALL COMPLY WITH THE 1996 EDITION OF NFPA 13 AND CHAPTER 35 OF THE CALIFORNIA AMENDMENTS. PROVIDE STRUCTURAL ENGINEER OF RECORD WITH ANCHORAGE DETAILS AND CALCULATIONS FOR THE CONNECTION OF SWAY BRACING TO THE STRUCTURE. DESIGN LOADS FOR THE ANCHORAGE MAY BE COMPUTED PER TABLE 4-14,4,3,5,3 OF NFPA 13 OR BY A RATIONAL ANALYSIS OF THE PIPING SYSTEM, WHERE APPLICABLE. DETAILS FOR THE SUPPORT AND BRACING MAY BE REFERRED TO AN DSA PRE-APPROVED ANCHORAGE SYSTEM ALL SHOP DRAWINGS OF THE SPRINKLER SYSTEM SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. THE ALLOWABLE VALUES FOR ANCHORS IN TABLE 4-6.4.3.5.4 MAY NOT COMPLY WITH THE REQUIREMENTS OF THE CODE. REFER TO THE ADOPTED CBC FOR ALLOWABLE LOADS ON THE SPECIFIC FASTENER TYPE. CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THESE REQUIREMENTS. THE ALLOWABLE VALUES FOR EXPANSION ANCHORS SHALL BE DETERMINED IN ACCORDANCE WITH CBC SECTION 1912A AND IR 19-1.

7. CONTRACTOR SHALL INSTALL AND COMPLY WITH THE "SMACNA GUIDELINES FOR SEISMIC RESTRAINTS OF KITCHEN EQUIPMENT" FOR ALL KITCHEN EQUIPMENT SUPPORTS.

ADHESIVE TYPE ANCHORS: A307 THREADED RODS WITH SIMPSON 'SET-XP' ADHESIVE OR HILTI 'RE 500 SD' ADHESIVE (ONLY FOR USE AT OR BELOW GRADE APPLICATION OR CONDITIONED SPACES)

TABLE 2A

2,500 PSI NORMAL WEIGHT CONCRETE

Diameter (Inches)	Embedment (Inches)	Installation Torque (ft-lbs)	V_{Ult} (lb)	T_{Ult} (lb)	Pull Test (lb)	Torque Test (ft-lbs)
1/2	2 3/4	50	1905	2359	3539	50
	3 1/2	50	4264	1816	2724	50
	5	50	4264	2597	3895	50
5/8	3 3/8	85	5447	2390	3585	80
	4 3/8	85	5943	3139	4708	80
	6 1/8	85	6809	3563	5345	80
3/4	4 1/8	180	9267	2750	4125	150
	6	180	10555	4985	7477	150
	7 1/2	180	11583	5139	7709	150
1	5 1/4	230	9763	4018	6027	250
	7 1/2	230	9763	6569	9854	250
	9 3/4	230	9763	7781	11672	250

MECHANICAL ANCHORAGE NOTES

1. ANCHOR DIAMETER REFERS TO THE THREAD SIZE OF THE WEDGE ANCHOR.

2. APPLY PROOF TEST LOADS TO WEDGE ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH AND APPLY LOAD.

3. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S).

4. ANCHORS SHALL NOT BE USED AT OR BELOW GRADE.

5. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.

6. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
   HYDRAULIC RAM METHOD: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR WEDGE AND SLEEVE TYPE ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE.

   TORQUE TEST:
   ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH MUST ATTAIN THE SPECIFIED TORQUE WITHIN 1/2 TURN OF THE NUT. ALL TESTING REQUIREMENTS SHALL BE IN COMPLIANCE W/ DSA IR 19-1

   EXCEPTIONS:
   UNDERCUT ANCHORS THAT ARE SO DESIGNED TO ALLOW VISUAL CONFIRMATION OF FULL SET, NEED NOT BE TENSION OR TORQUE TESTED. IF THE MANUFACTURER'S INSTALLATION TORQUE IS LESS THAN THE SPECIFIED TEST TORQUE , USE THE MANUFACTURER'S SPECIFIED INSTALLATION TORQUE FOR TESTING THE ANCHORS.

7. TESTING MUST OCCUR 24 HOURS MINIMUM AFTER INSTALLATION OF THE SUBJECT ANCHORS.

8. WHEN INSTALLING DRILLED-IN ANCHORS AND /OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS.

9. ALL MECHANICAL ANCHORS (WEDGE TYPE OR SCREW ANCHORS) ARE REQUIRED TO BE INSTALLED WITH SPECIAL INSPECTION AS SET FORTH IN SECTION 1701 OF THE 2007 CBC. ANCHORS SHALL BE INSTALLED PER THE APPROPRIATE ICC-ES CODE REPORT.

10. THE TABULATED VALUES ARE FOR ANCHORS WITH GREATER THAN CRITICAL SPACE AND EDGE DISTANCES.

11. THE TABULATED VALUES FOR LIGHT WEIGHT CONCRETE ARE FOR ANCHORS INSTALLED IN LIGHTWEIGHT EXPANDED SHALE AGGREGATE CONCRETE HAVING THE SPECIFIED COMPRESSIVE STRENGTH AT THE TIME OF INSTALLATION. CONCRETE AGGREGATE MUST COMPLY WITH U.B.C. STANDARD NO. 19-3

12. IF ANY ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME CATEGORY, NOT PREVIOUSLY TESTED, SHALL BE TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS THE TEST REQUIREMENTS. THE INITIAL TESTING FREQUENCY SHALL THEN BE RESUMED.

EXPANSION TYPE CONCRETE WEDGE ANCHOR DESIGN & TEST VALUES, SIMPSON STRONG-BOLT CONCRETE ANCHORS (ICC-ES REPORT #1771).

TABLE 1A

3,000 PSI NORMAL WEIGHT CONCRETE

Diameter (Inches)	Embedment (Inches)	Installation Torque (ft-lbs)	V_{Ult} (lb)	T_{Ult} (lb)	Pull Test (lb)	Torque Test (ft-lbs)
1/2	2 3/4	50	1650	1532	2298	50
	3 1/2	50	4264	1573	2359	50
	5	50	4264	1599	2399	50
5/8	3 3/8	85	5447	2070	3105	80
	4 3/8	85	5943	2566	3849	80
	6 1/8	85	6809	2913	4370	80
3/4	4 1/8	180	6062	2381	3572	150
	6	180	10555	4317	6475	150
	7 1/2	180	11583	4451	6676	150
1	5 1/4	230	9763	3479	5219	250
	7 1/2	230	9763	4266	6399	250
	9 3/4	230	9763	5054	7581	250

THESE VALUES REFLECT OF ICC REPORT STRENGTH DESIGN VALUES FOR SHEAR AND TENSION. SPECIAL INSPECTION IS REQUIRED PER SECTION 4.4 OF ICC REPORT.

TABLE 1B

4,000 PSI NORMAL WEIGHT CONCRETE

Diameter (Inches)	Embedment (Inches)	Installation Torque (ft-lbs)	V_{Ult} (lb)	T_{Ult} (lb)	Pull Test (lb)	Torque Test (ft-lbs)
1/2	2 3/4	50	1905	2359	3539	50
	3 1/2	50	4264	1816	2724	50
	5	50	4264	2597	3895	50
5/8	3 3/8	85	5447	2390	3585	80
	4 3/8	85	5943	3139	4708	80
	6 1/8	85	6809	3563	5345	80
3/4	4 1/8	180	9267	2750	4125	150
	6	180	10555	4985	7477	150
	7 1/2	180	11583	5139	7709	150
1	5 1/4	230	9763	4018	6027	250
	7 1/2	230	9763	6569	9854	250
	9 3/4	230	9763	7781	11672	250

THESE VALUES REFLECT OF ICC REPORT STRENGTH DESIGN VALUES FOR SHEAR AND TENSION. SPECIAL INSPECTION IS REQUIRED PER SECTION 4.4 OF ICC REPORT.

TABLE 1C

3 1/4" LIGHTWEIGHT CONCRETE OVER 2" METAL DECK (F'c=3500 PSI)

ANCHOR DIA (INCHES)	EMBEDMENT DEPTH FROM BOTTOM OF FLUTE (INCHES)	STREGTH DESIGN VALUES (POUNDS)		TENSION TEST (P0UNDS)	TORQUE TEST (FT-LBS)
		SHEAR	TENSION		
1/2	3 1/2"	3500	770	1155	40

THE ABOVE VALUES WERE CACULATED USING IR 19-1. & ICC ESR-1771 MIN. DISTANCE FROM CENTER OF BOLT TO THE EDGE OF THE LOWER FLUTE IS 1 1/4"

SCREW ANCHORS
SIMPSON TITEN HD SCREW ANCHORS (ICCESR-2713)

3,000 PSI NORMAL WT CONCRETE				
ANCHOR DIA (INCHES)	MIN. EMBED DEPTH (INCHES)	STRENGTH DESIGN VALUES (POUNDS)		TORQUE TEST (FT-LBS)
		SHEAR	TENSION	
3/8"	3 1/4"	1713	1441	10
1/2"	4"	2874	2347	10
3/4"	6 1/4"	5610	3842	10

THESE VALUES REFLECT STRENGTH DESIGN VALUES IN ICC REPORT. THESE ANCHORS REQUIRE SPECIAL INSPECTION AS SET FORTH IN SECTION 4.4 OF ICC REPORT. WELDING TO THESE ANCHORS IS NOT PERMITTTED.

3,000 PSI LIGHTWEIGHT CONCRETE OVER METAL DECK ANCHORS INSTALLED IN THE TOP OF ASSEMBLY.				
ANCHOR DIA (INCHES)	MIN. EMBED DEPTH (INCHES)	STRENGTH DESIGN VALUES (POUNDS)		TORQUE TEST (FT-LBS)
		SHEAR	TENSION	
3/8"	2 3/4"	817	552	10
1/2"	3 1/4"	1057	981	10

ADDITIONAL LAP SPLICE AND DEVELOPMENT LENGTH REQUIREMENTS AT THE BOTTOM OF ALL CONCRETE WALLS AND PILASTER.

REINFORCEMENT DEVELOPMENT LENGTHS, l_d (in); NWC; f'_c = 4000 psi									
REINF LOCATION	REINFORCEMENT SIZE								
	#3, GR 40	#4	#5	#6	#7	#8	#9	#10	#11
TOP	16	31	39	47	68	78	87	98	109
OTHER	15	24	30	36	52	60	67	76	84

REINFORCEMENT DEVELOPMENT LENGTHS, l_d (in); LWC f'_c = 3500 psi									
REINF LOCATION	REINFORCEMENT SIZE								
	#3, GR 40	#4	#5	#6	#7	#8	#9	#10	#11
TOP	22	43	54	65	94	108	121	137	152
OTHER	18	33	42	50	73	83	93	105	117

REINFORCEMENT LAP SPLICE LENGTHS (CLASS B), l_d (in); NWC f'_c = 4000 psi									
REINF LOCATION	REINFORCEMENT SIZE								
	#3, GR 40	#4	#5	#6	#7	#8	#9	#10	#11
TOP	21	41	51	62	89	102	114	128	142
OTHER	20	32	39	47	68	78	88	99	110

REINFORCEMENT LAP SPLICE LENGTHS (CLASS B), l_d (in); LWC f'_c = 3500 psi									
REINF LOCATION	REINFORCEMENT SIZE								
	#3, GR 40	#4	#5	#6	#7	#8	#9	#10	#11
TOP	29	56	71	85	123	141	158	179	198
OTHER	24	43	55	65	95	108	121	137	153

Notes:
1. Lengths are calculated per ACI 318-05, Sec 12.2. In addition, all lengths have been multiplied by 1.25 per Sec 21.7.2.3 for use in shear walls. Divide by 1.25 for development and splice lengths for other applications.

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NO. ISSUES/REVISIONS DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

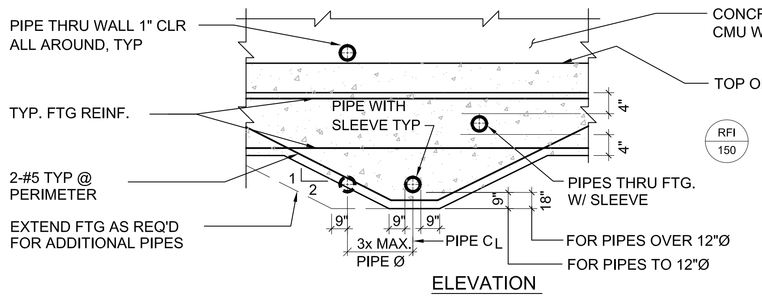
CIP2 DESIGN-BUILD PROJECT
BUILDING 4
KEYPLAN

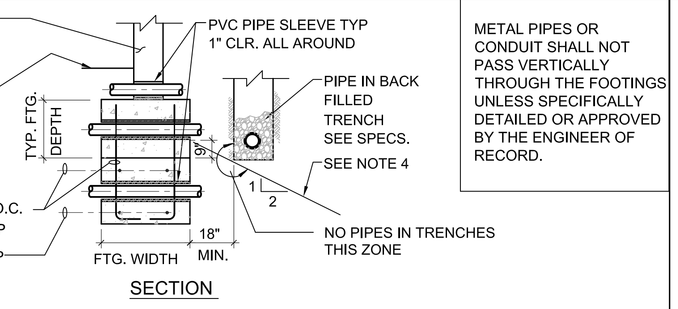
PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

SHEET TITLE:
GENERAL STRUCTURAL NOTES

SHEET NO:
S-003

If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch





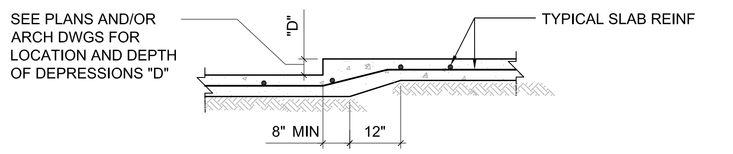
METAL PIPES OR CONDUIT SHALL NOT PASS VERTICALLY THROUGH THE FOOTINGS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ENGINEER OF RECORD.

NOTES:

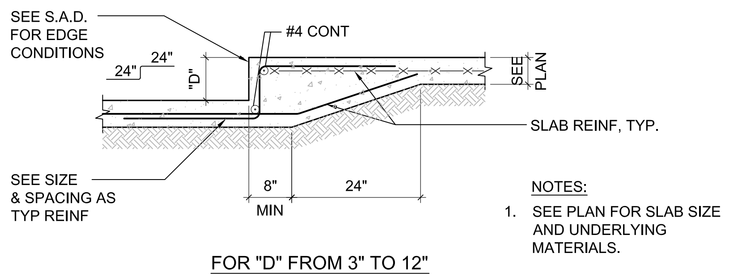
1. DEPTHS OF FOOTINGS MAY BE DETERMINED BY LOCATION OF CONDUIT AND METAL PIPING. ALL METAL PIPES SHALL RUN THROUGH METAL OR SCH. 80 PVC. SLEEVES AND SHALL HAVE 1" CLR ALL THE WAY AROUND. (RFI 91)
2. WHERE CL METAL PIPES CROSS UNDER FOOTINGS WITHIN 3 FT (ELECT. CONDUIT 2FT) OF THE BOTTOM, FOUNDATIONS SHALL BE EXTENDED PER ABOVE DETAIL.
3. WHERE CL METAL PIPES CROSS UNDER FOOTINGS WITHIN 3 FT (ELECT. CONDUIT 2FT) OF THE BOTTOM, FOUNDATIONS SHALL BE STEPPED AND DETAIL 12/- FOLLOWED IF ANY OF THE FOLLOWING CONDITIONS ALSO EXIST (UNLESS OTHERWISE AUTHORIZED BY ENGINEER OF RECORD):
   a) THERE ARE MULTIPLE PIPES WHERE THE CL SPACING BETWEEN PIPES IS LESS THAN 3 TIMES THE DIAMETER OF THE LARGER PIPE SLEEVE.
   b) THERE ARE PIPE SLEEVES 12"Ø OR LARGER.
4. PIPES OR CONDUIT RUNNING PARALLEL TO FOOTINGS SHALL NOT PASS BELOW OR WITHIN THE 1:2 INFLUENCE OF ANY CONTINUOUS OR ISOLATED FOOTINGS. FOUNDATIONS SHALL BE STEPPED AND LOWERED AND DETAIL 6/- FOLLOWED WHERE SUCH A CONDITION EXISTS.
5. WHERE GROUPS OF METAL PIPES OR ELECT CONDUIT WITH A COMBINED WIDTH "W" GREATER THAN 5 FT CROSS UNDER FOOTINGS LESS THAN 5 FT BELOW THE BOTTOM OF THE FOOTING, THE FOOTINGS SHALL BE STEPPED AND DETAIL 12/- FOLLOWED.
6. ALL ELECT CONDUIT PASSING THROUGH CONCRETE FOOTINGS SHALL BE WRAPPED IN 1/2" THICK FOAM. 3/4" CLR AROUND ELECT. CONDUIT FILLED W/ FOAM. (RFI 99)
7. ALL PIPE SLEEVES FOR FIRE PROTECTION SHALL BE 2" CLR ALL THE WAY AROUND. (RFI 99)

NOTE: DETAIL DOES NOT APPLY TO ALL PIPES PASSING BELOW THE TGRADE BEAM AT DEPTH DEEP THAN 18" (RFI 244)

13 PIPE @ FOOTING DETAIL
N.T.S.



FOR "D" LESS THAN OR EQUAL TO 3"

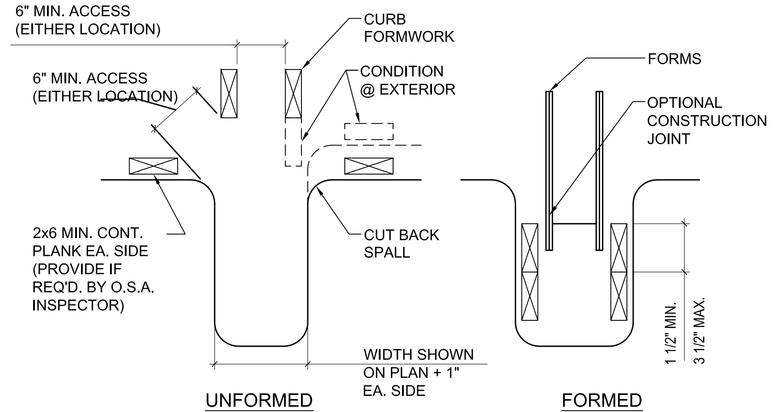


FOR "D" FROM 3" TO 12"

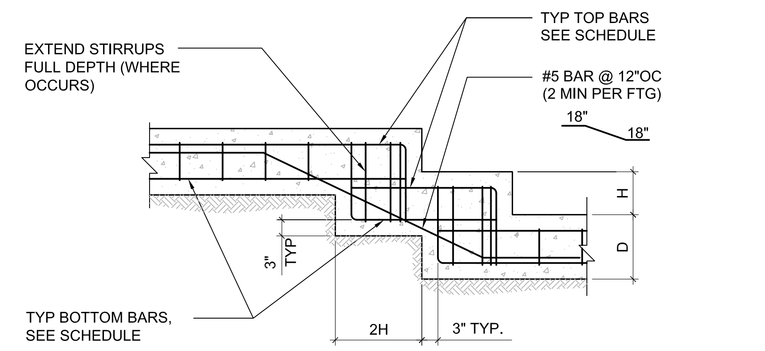
NOTES:
1. SEE PLAN FOR SLAB SIZE AND UNDERLYING MATERIALS.

14 DEPRESSED SLAB DETAIL
N.T.S.

NOTES:
1. FORMWORK NOT PERMITTED BELOW GRADE UNLESS FOOTING AND WALL ARE FULLY FORMED.
2. STAKES NOT PERMITTED WITHIN FOOTING SECTION.
3. FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATION. PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE.

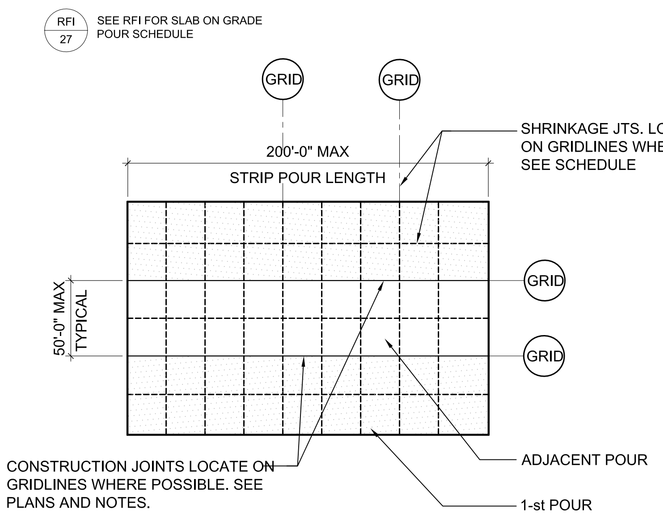


10 TYPICAL FOUNDATION FORMING
N.T.S.



NOTES:
H = FTG. STEP (18" MAX.) D = FTG. DEPTH (SEE SCHEDULE)

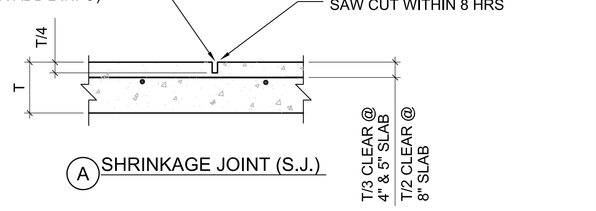
6 STEPPED FOOTING DETAIL
N.T.S.



STRIP POUR PATTERN JOINT LAYOUT

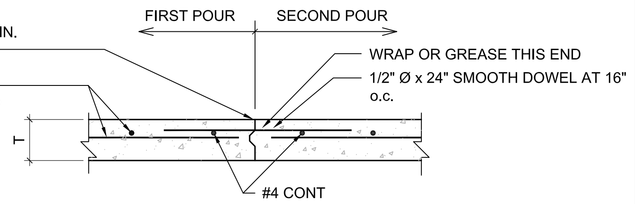
SAWCUT PERPENDICULAR TO STRIPS W/ IN 4 HOURS OF SLAB PLACEMENT. SPACING NOT TO EXCEED SPACING PER TABLE. USE THE "SOFF-CUT" PROCEDURE. FILL w/ EPOXY SEALANT. (SEE ALSO SPEC'S FOR ADD'L INFO)

SHRINKAGE JOINTS SHALL ALSO BE LOCATED PARALLEL TO CONSTRUCTION JOINTS & CENTERED. USE STANDARD SAW CUT WITHIN 8 HRS



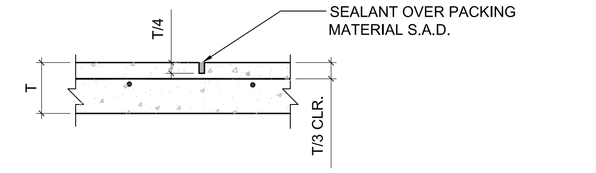
NOTES:
REINFORCING CONTINUOUS THRU JOINT.

A SHRINKAGE JOINT (S.J.)



NOTES:
REINFORCING NOT CONTINUOUS THRU JOINT. PLACE SLAB-ON-GRADE & LOCATE CONSTRUCTION JOINTS UTILIZING POUR STRIP METHOD w/ SPACING NOT TO EXCEED 50 FEET IN WIDTH U.N.O. AVOID REENTRANT CORNERS. MAX. ONE POUR LENGTH SHALL NOT EXCEED 200 FEET.

B CONSTRUCTION JOINT (C.J.)

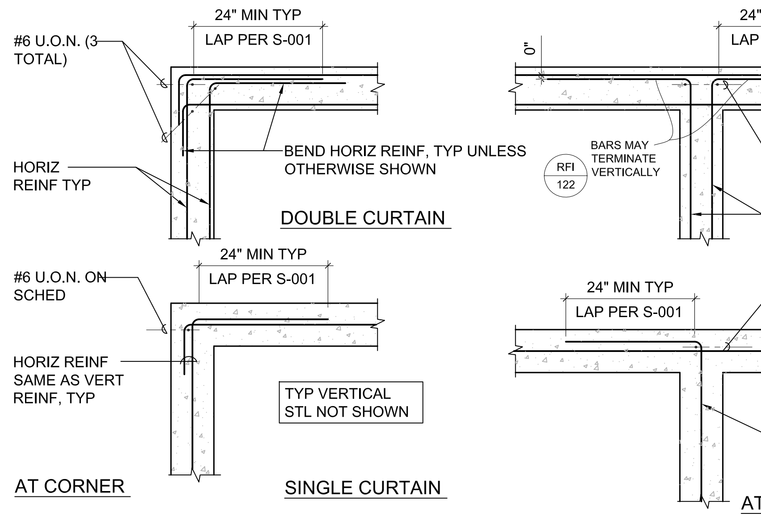


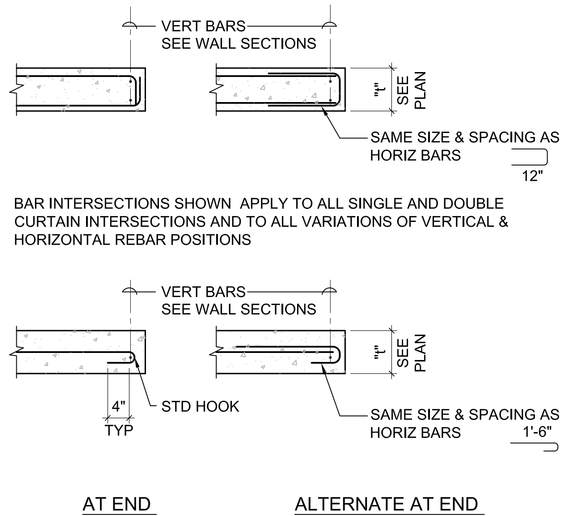
NOTES:
REINFORCING CONTINUOUS THRU JOINT.

C EXPANSION JOINT AT EXTERIOR SLAB ONLY

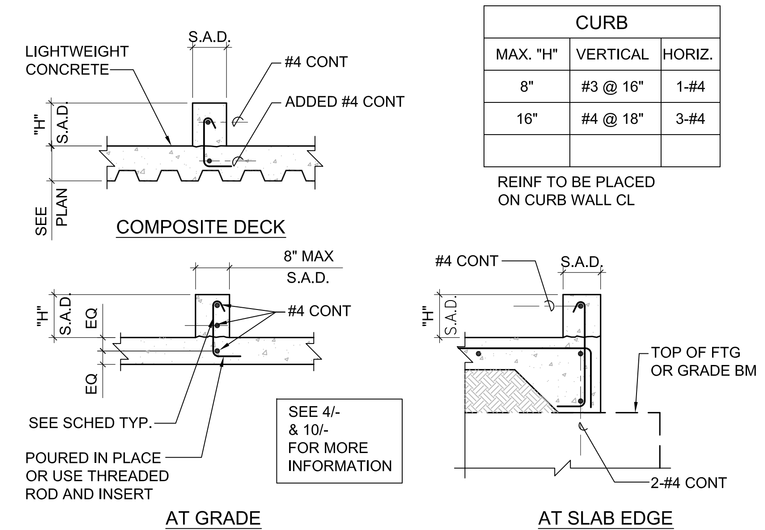
SLAB SCHEDULE		
SLAB THICKNESS	MAXIMUM SPACING OF SHRINKAGE JOINT	MIN REINFORCEMENT
2" – 3"	4'–0"	6x6–W4.5xW4.5
3 1/2" – 4"	8'–0"	#4 @ 16" EW
5"	10'–0"	#4 @ 12" EW

2 TYPICAL SLAB JOINTS
N.T.S.





15 CONCRETE WALL / FOOTING REINFORCEMENT
N.T.S.

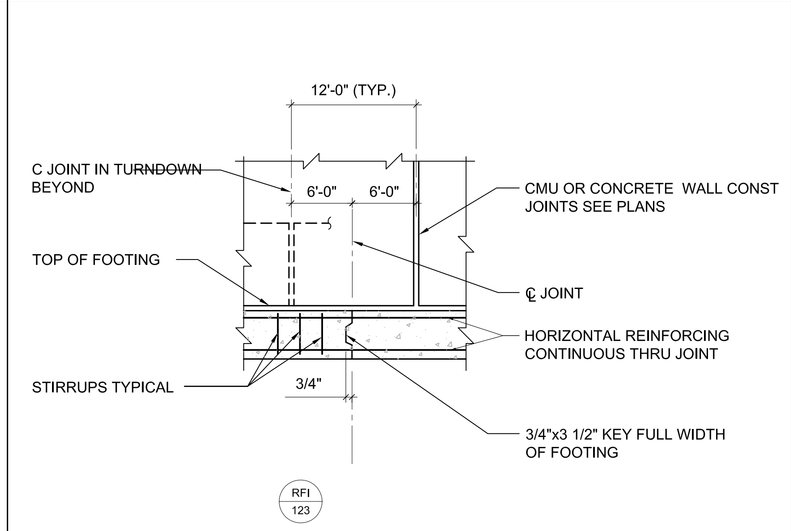


CURB		
MAX. "H"	VERTICAL	HORIZ.
8"	#3 @ 16"	1-#4
16"	#4 @ 18"	3-#4

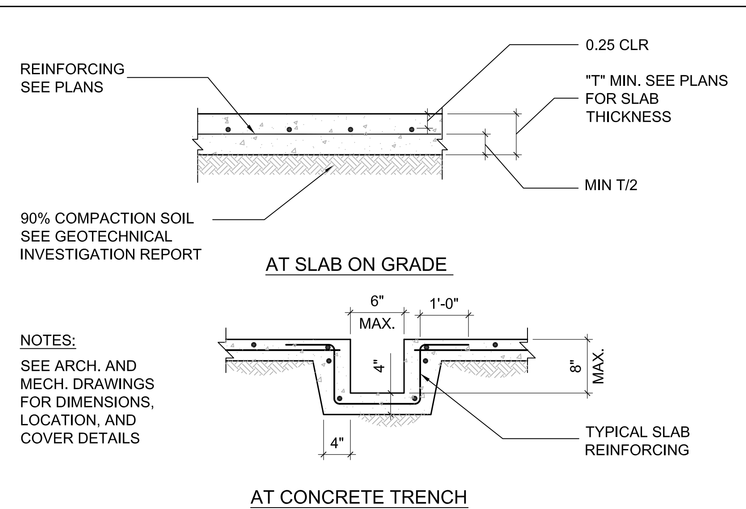
REINF TO BE PLACED ON CURB WALL CL

SEE 4/- & 10/- FOR MORE INFORMATION

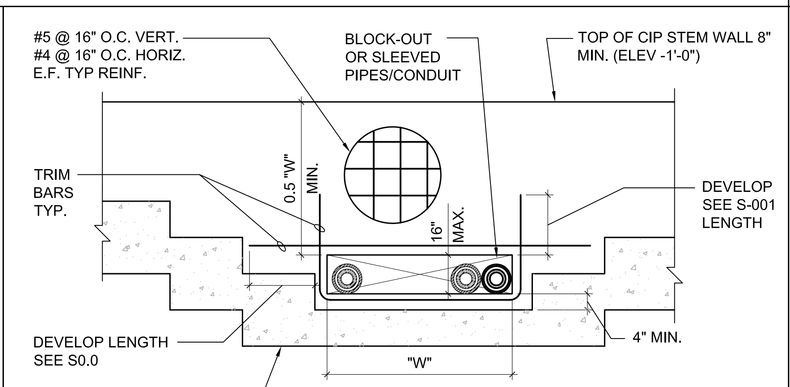
7 TYPICAL CONCRETE CURB
N.T.S.



3 FOOTING CONSTRUCTION JOINT
N.T.S.

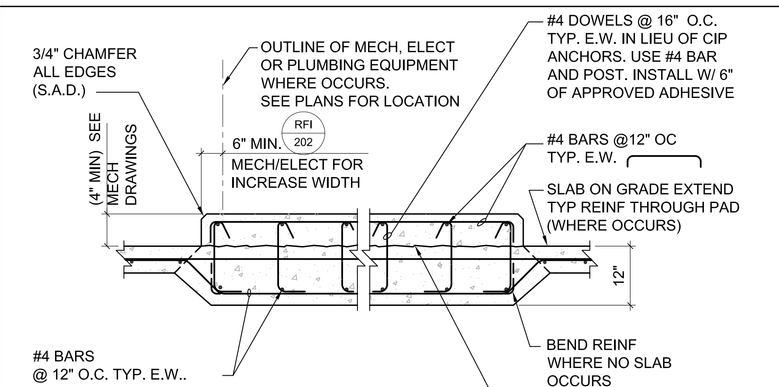


16 TYPICAL CONCRETE TRENCH DETAIL
N.T.S.



TRIM BAR SCHEDULE		
WIDTH "W"	HORIZ.	VERT.
6 FT (MAX)	2-#4	2-#4
8 FT (MAX)	2-#5	2-#4
12 FT (MAX)	2-#6	2-#5

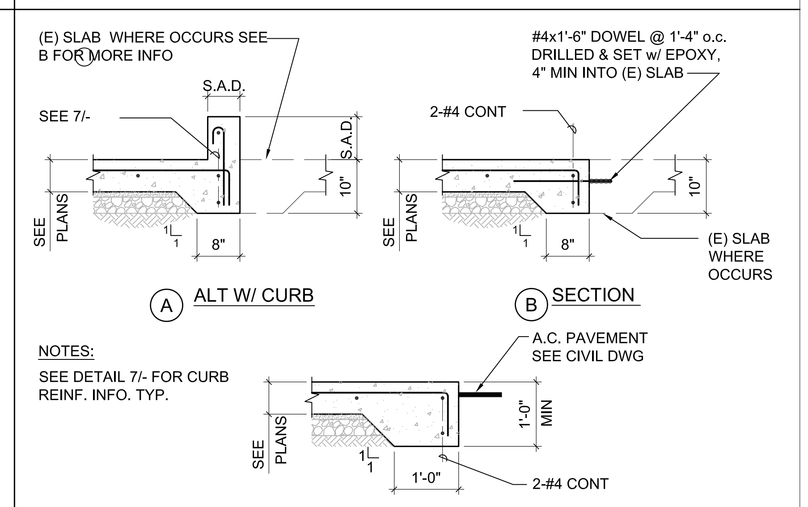
12 ELEVATION AT PIPING PENETRATIONS
N.T.S.



KWIK BOLT TZ EMBEDMENT		
Ø	MIN EMBED (IN.)	MIN EDGE DIST.
3/8	2	4
1/2	3 1/4	6

NOTES:
SEE ARCH'L AND MECH'L DRAWINGS FOR SIZE AND LOCATION OF PADS. MECH'L EQUIPMENT MIN ATTACHMENT 5/8"Ø HILTI KWIK BOLT TZ @ 12" o.c. (PER TABLE). SEE MECHANICAL DRAWINGS FOR MORE INFORMATION. (RFI 202)

8 RAISED CONCRETE SLAB ON GRADE
N.T.S.



4 EDGE OF EXTERIOR SLAB
3/4"=1'-0"

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NO. ISSUES/REVISIONS DATE

PROJECT RECORD SET

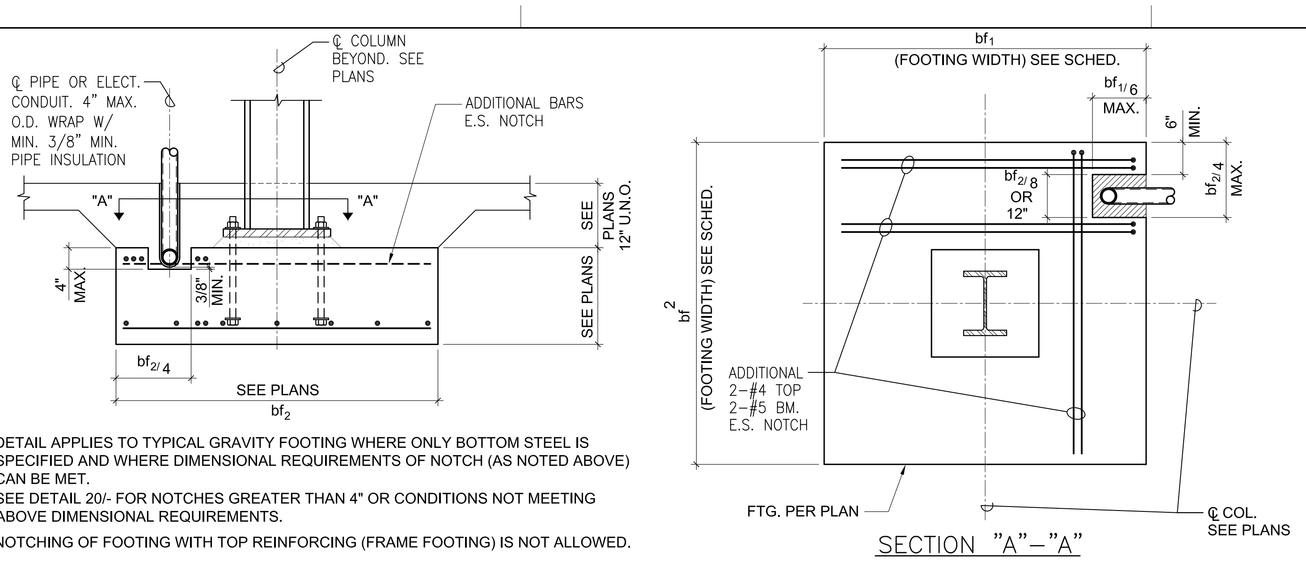
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

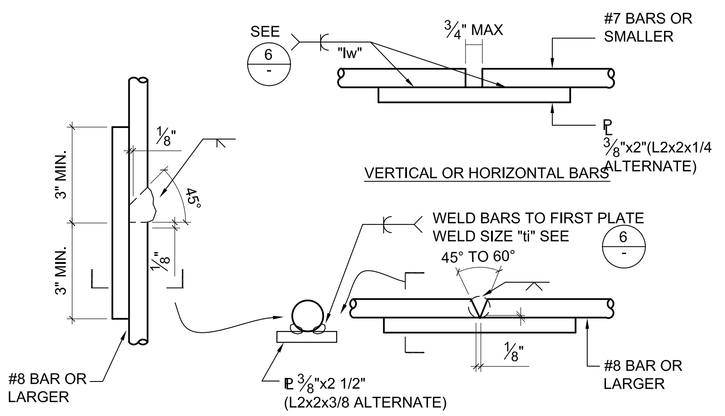
SHEET TITLE:
TYPICAL FOUNDATION DETAILS

SHEET NO:
S-101



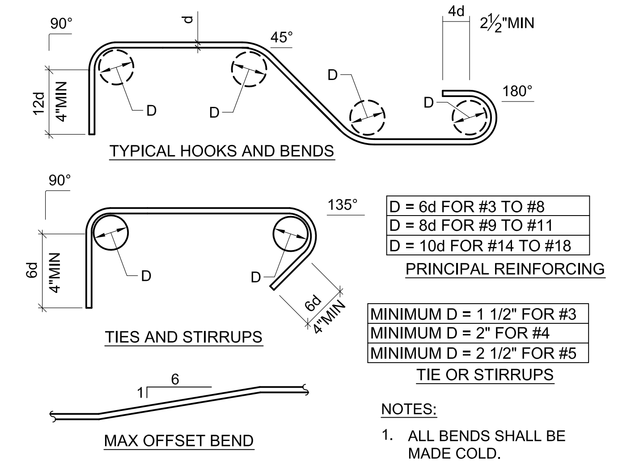
1. DETAIL APPLIES TO TYPICAL GRAVITY FOOTING WHERE ONLY BOTTOM STEEL IS SPECIFIED AND WHERE DIMENSIONAL REQUIREMENTS OF NOTCH (AS NOTED ABOVE) CAN BE MET.
2. SEE DETAIL 20/- FOR NOTCHES GREATER THAN 4" OR CONDITIONS NOT MEETING ABOVE DIMENSIONAL REQUIREMENTS.
3. NOTCHING OF FOOTING WITH TOP REINFORCING (FRAME FOOTING) IS NOT ALLOWED.

13 TYPICAL SECTION @ FTG. NOTCH
N.T.S.



NOTES:
1. ALL BARS TO BE WELDED TO BE ASTM A706
2. ALL WELDING OR REINFORCING BARS TO COMPLY WITH AWS D1.4

5 WELDED SPLICE IN REBAR
N.T.S.



D = 6d FOR #3 TO #8
D = 8d FOR #9 TO #11
D = 10d FOR #14 TO #18

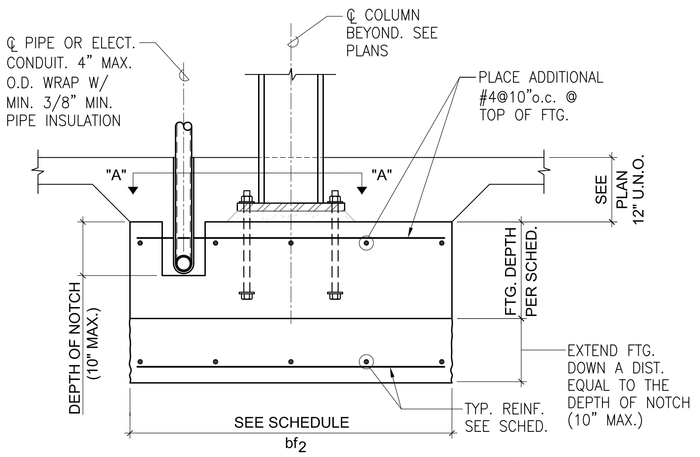
PRINCIPAL REINFORCING

MINIMUM D = 1 1/2" FOR #3
MINIMUM D = 2" FOR #4
MINIMUM D = 2 1/2" FOR #5

TIE OR STIRRUPS

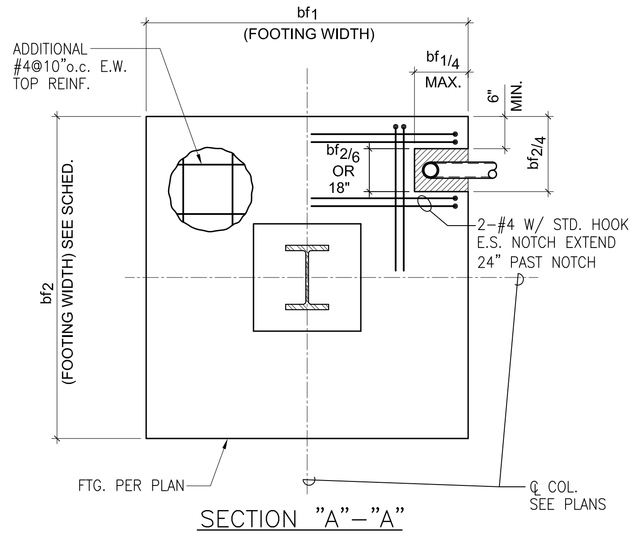
NOTES:
1. ALL BENDS SHALL BE MADE COLD.

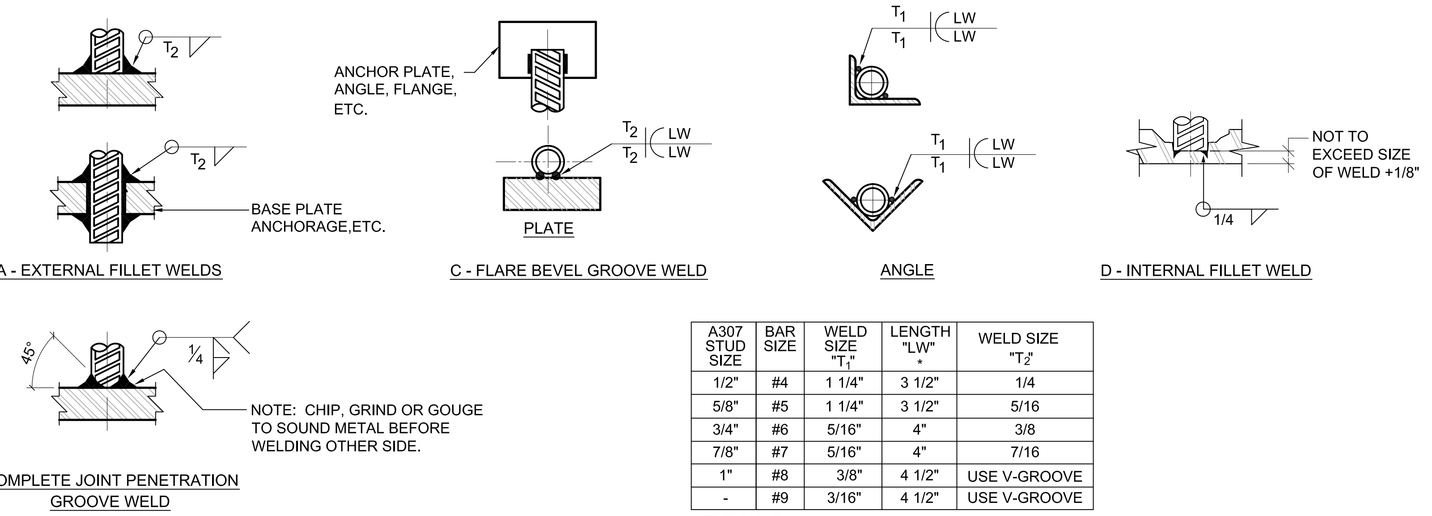
1 REBAR HOOKS & BENDS
N.T.S.



1. DETAIL APPLIES TO TYPICAL GRAVITY FOOTING WHERE ONLY BOTTOM STEEL IS SPECIFIED AND WHERE DIMENSIONAL REQUIREMENTS OF NOTCH (AS NOTED ABOVE) CAN BE MET.
2. NOTCHING OF FOOTING WITH TOP REINFORCING (FRAME FOOTING) IS NOT ALLOWED.

14 TYPICAL SECTION @ FTG. NOTCH
N.T.S.

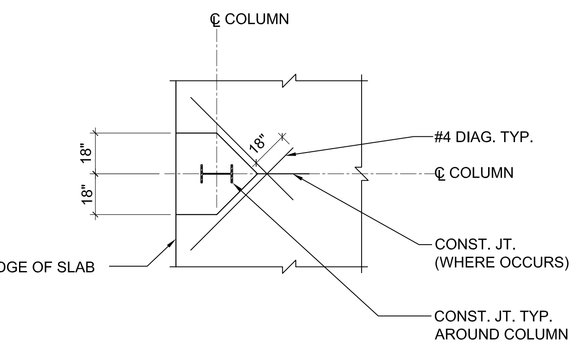




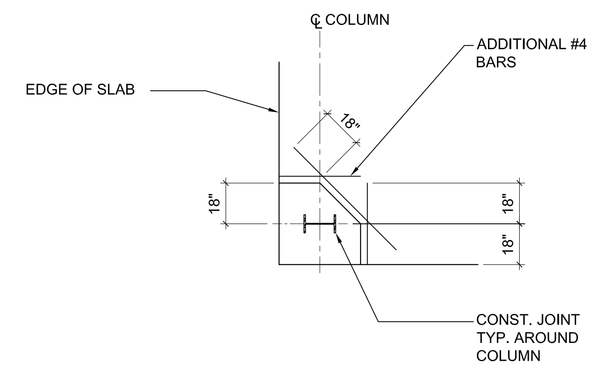
A307 STUD SIZE	BAR SIZE	WELD SIZE "T1" *	LENGTH "LW" *	WELD SIZE "T2"
1/2"	#4	1 1/4"	3 1/2"	1/4
5/8"	#5	1 1/4"	3 1/2"	5/16
3/4"	#6	5/16"	4"	3/8
7/8"	#7	5/16"	4"	7/16
1"	#8	3/8"	4 1/2"	USE V-GROOVE
-	#9	3/16"	4 1/2"	USE V-GROOVE

* TYP. U.N.O.

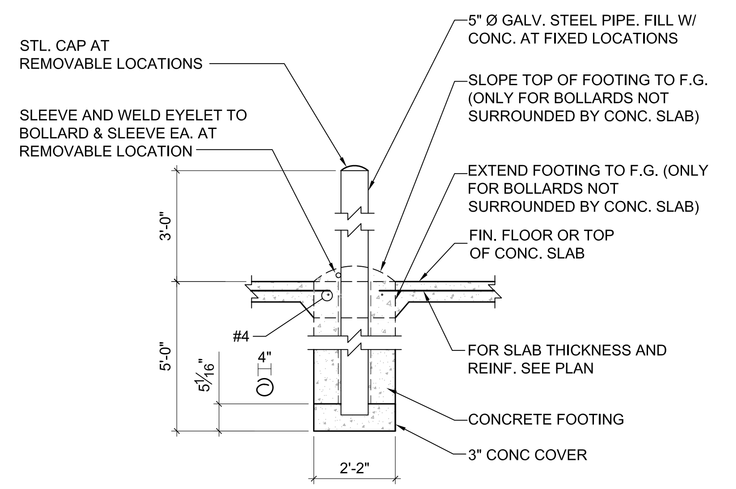
6 REINFORCING BAR WELDS TO PLATES OR STEEL SHAPES
N.T.S.



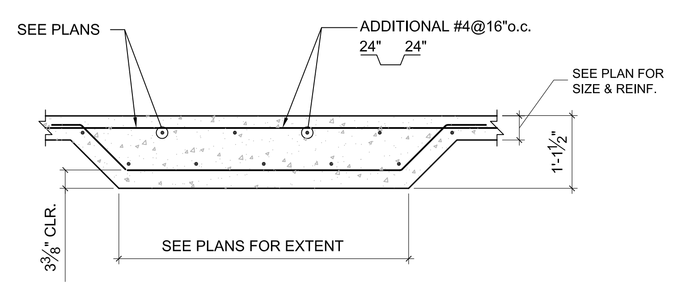
15 COLUMN BLOCKOUT DETAIL
N.T.S.



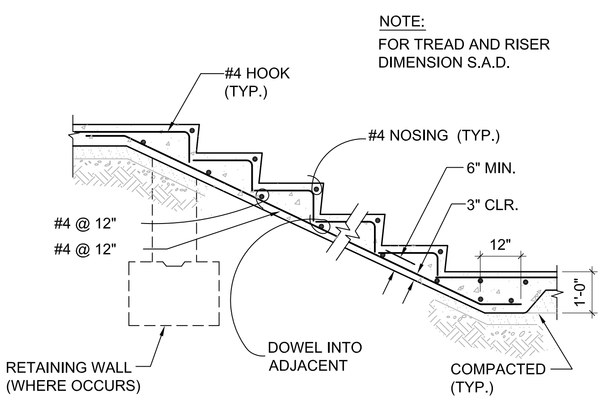
11 COLUMN BLOCKOUT DETAIL
N.T.S.



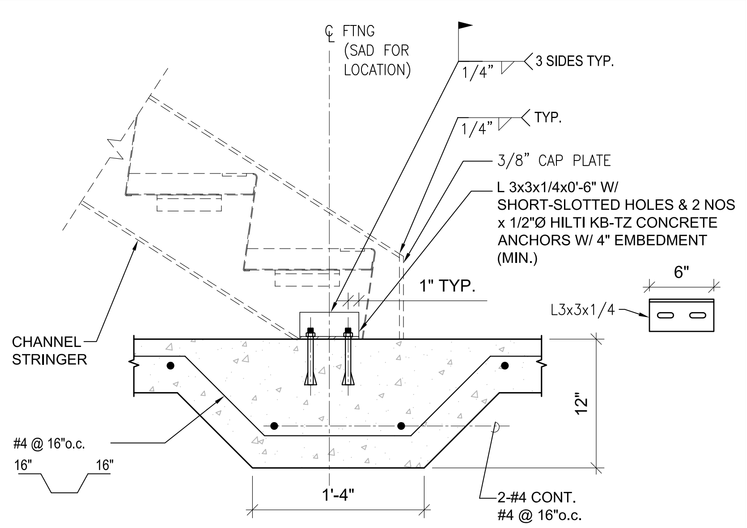
7 BOLLARD DETAIL
N.T.S.



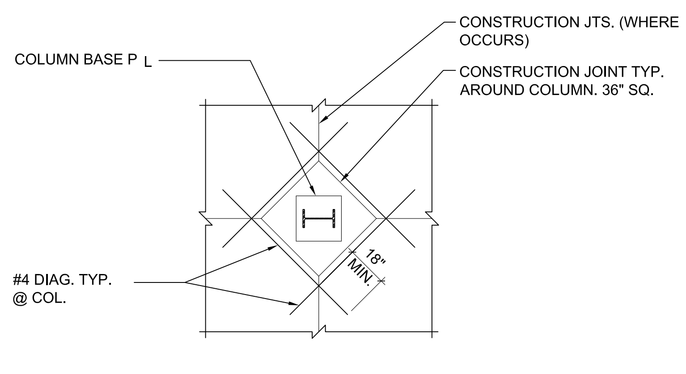
3 TYPICAL SECTION @ THICKENED SLAB
N.T.S.



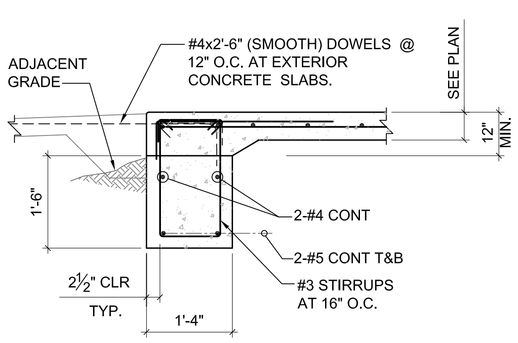
16 CONCRETE STAIR SECTION
N.T.S.



12 THICKENED SLAB FOOTING @ STAIR
N.T.S.



8 COLUMN BLOCKOUT DETAIL
N.T.S.



4 SLAB EDGE AT EXTERIOR SLAB
N.T.S.

If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch _____

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

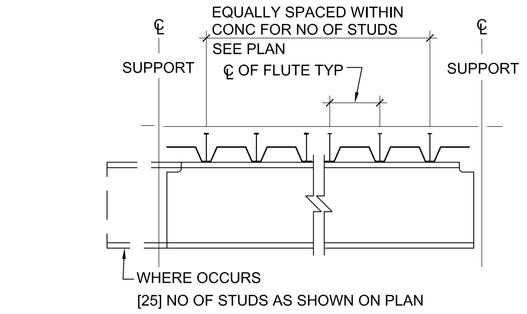
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

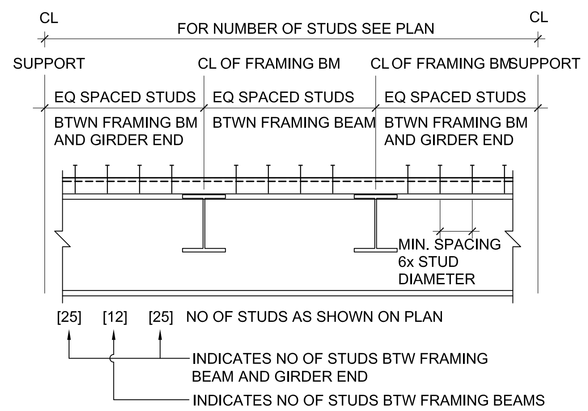
PROJECT NO.: 07012.00	DRAWN BY: AY
DATE: 03/09/09	CHECKED BY: CB
SCALE: AS NOTED	

SHEET TITLE:
TYPICAL FOUNDATION DETAILS

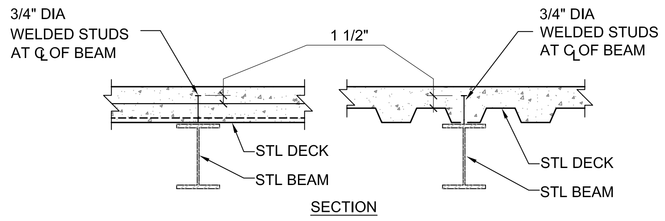
SHEET NO:
S-102



BEAM ELEVATION



GIRDER ELEVATION



SECTION

NOTES:
1. WELDED STUD SHALL BE HEADED STUDS OF A TYPE IN CONFORMANCE WITH THE DESIGN CODES AND THE SPECIFICATIONS.
2. ALL WELDED STUD SHALL BE 3/4" DIAMETER & SHALL EXTEND 1 1/2" MIN. ABOVE TOP OF DECK., SEE DETAIL 11/-.
3. STUDS SHALL BE WELDED IN ACCORDANCE W/ AWS D1.1-04, SECTION 7.

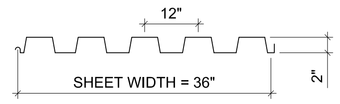
14 WELDED HEADED ANCHOR STUD DETAILS
N.T.S.

DECK MARK (SEE PLAN)	DECK DEPTH AND SECTION TYPE SEE 5/—	DECK WELDS, SEE 10/— 12/—						REMARKS
		WELD (A)		WELD (B)		ATTACHMENT (C)		
		SIZE AND TYPE	# PER SHEET	SIZE AND TYPE	SPAC-ING	SIZE AND TYPE	SPAC-ING	
1	W2 FORMLOK	1/2"Ø PUDDLE	4	1/2"Ø PUDDLE	12"	B.P.	36"	3 1/4" LTWT. CONC. FILL
2	W2 FORMLOK	1/2"Ø PUDDLE	4	1/2"Ø PUDDLE	12"	B.P.	36"	4 1/4" LTWT. CONC. FILL

1. SEE PLANS FOR ADDITIONAL WELDING REQUIREMENTS.
2. ALL CONCRETE TOPPING SHALL BE REINFORCED WITH WWF 6x6-W2.9xW2.9, U.O.N.
3. SIZES FOR WELD 'A' AND 'B' INDICATE THE SIZE OF THE EFFECTIVE FUSION AREA.

9 STEEL DECK SCHEDULE
N.T.S.

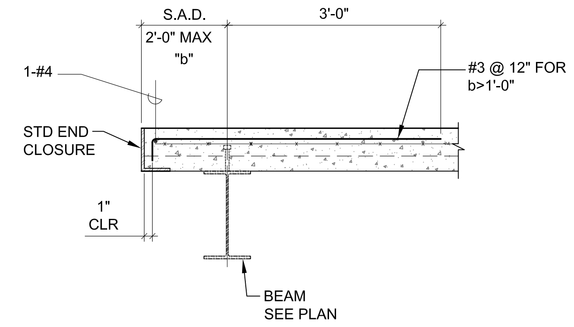
MINIMUM SECTION PROPERTIES					
SECTION TYPE	THICK-NESS (GA.)	I (IN 4 /FT)	+S (IN 3 /FT)	-S (IN 3 /FT)	DECK EMBOSSED (COMPOSITE)
W2-FORMLOK	18 GA.	.555	.510	.511	YES



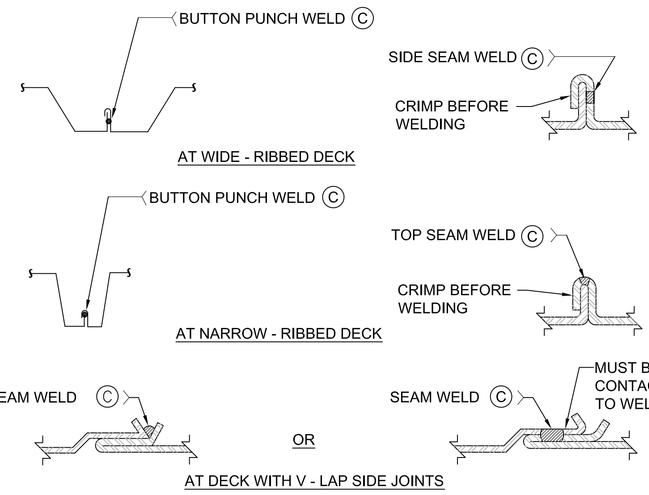
TYPE W2-FORMLOK

ICC REPORT # ER-2078P

5 METAL DECK PROFILE
N.T.S.

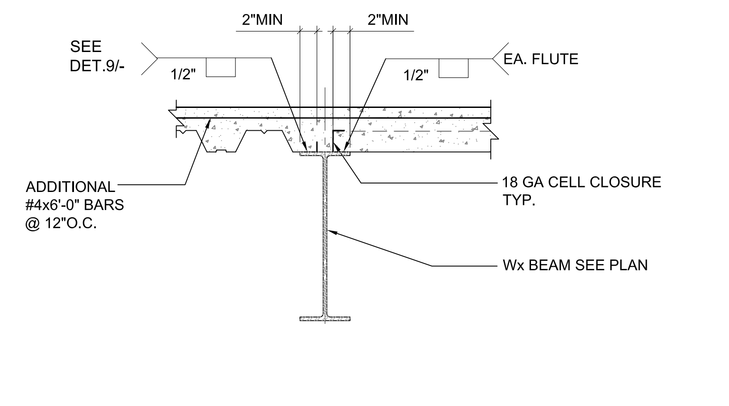


1 EDGE DETAIL - DECK PERPENDICULAR
N.T.S.

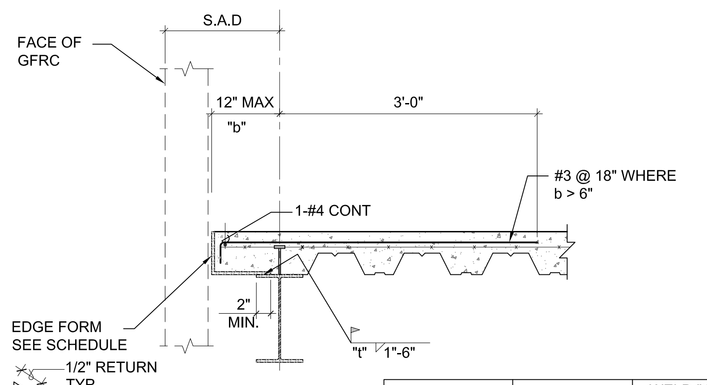


SEE DETAIL 9/- FOR DECK WELDING.

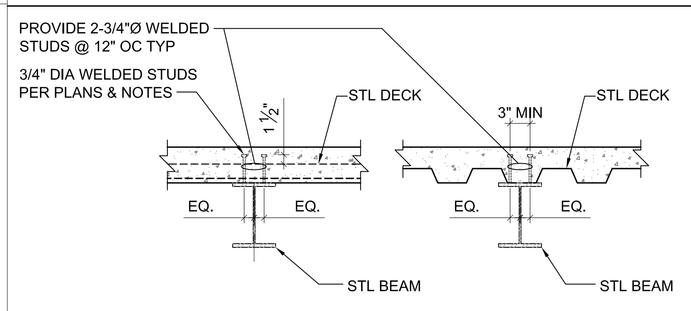
10 METAL DECK WELD DETAILS
N.T.S.



6 DETAIL AT DECK CHANGE
N.T.S.

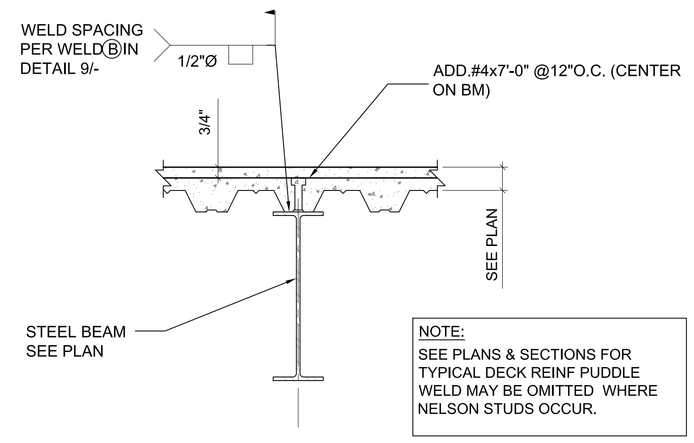


OVERHANG	EDGE FORM	WELD "t" SIZE
b ≤ 6"	14 GA	1/8"
6 < b ≤ 9"	12 GA	5/32"
9 < b ≤ 12"	10 GA	3/16"



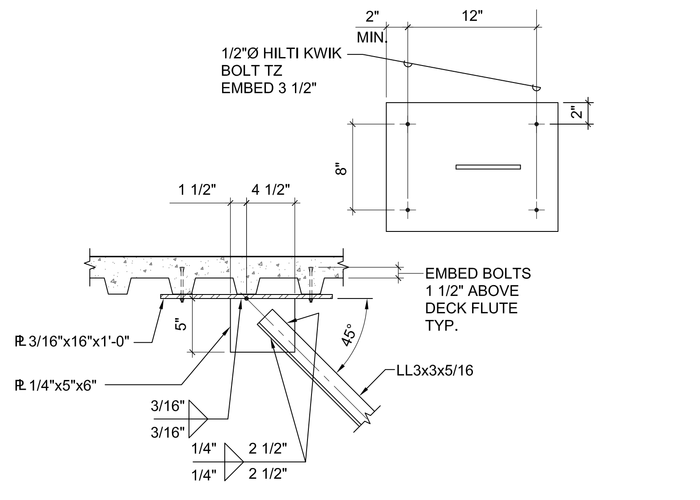
NOTES:
1. SEE 14/ - FOR ADDITIONAL INFORMATION.
2. SEE PLAN & PLAN NOTES FOR STUD SPACING.

15 WELDED HEADED ANCHOR STUDS AT COLLECTOR & FRAME BEAMS
N.T.S.

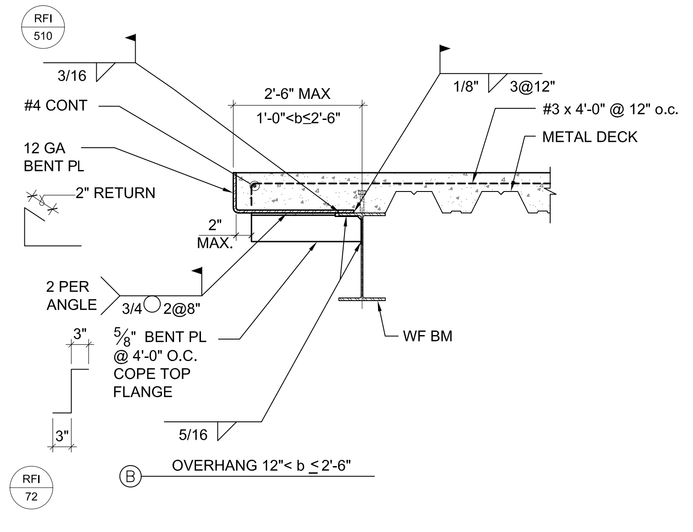


NOTE:
SEE PLANS & SECTIONS FOR TYPICAL DECK REINF PUDDLE WELD MAY BE OMITTED WHERE NELSON STUDS OCCUR.

11 BEAM PARALLEL TO DECK
N.T.S.

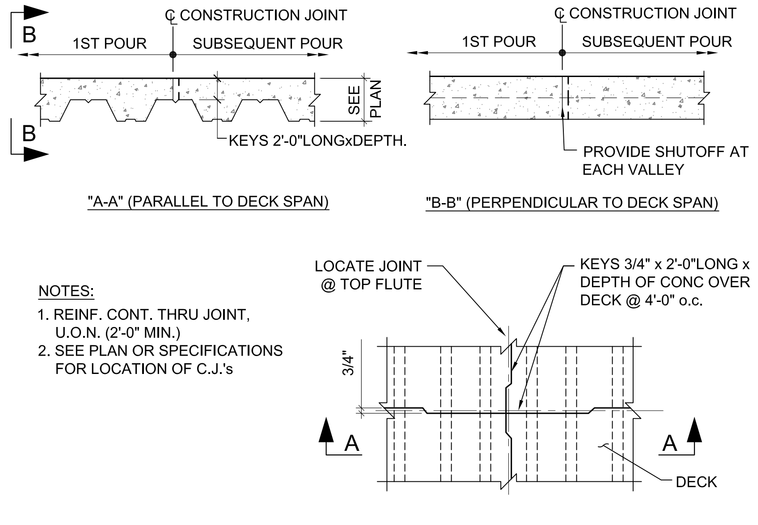


7 TYP. BRACE @ COMPOSITE DECK
N.T.S.



NOTE:
1) ALL GAGES SHOWN ARE MINIMUM DECK. CONTRACTOR TO VERIFY ADEQUACY OF EDGE FORM FOR CONC PLACEMENT.
2) SEE OTHER DETAILS FOR EXTERIOR STUD OR GFRC ATTACHMENTS.

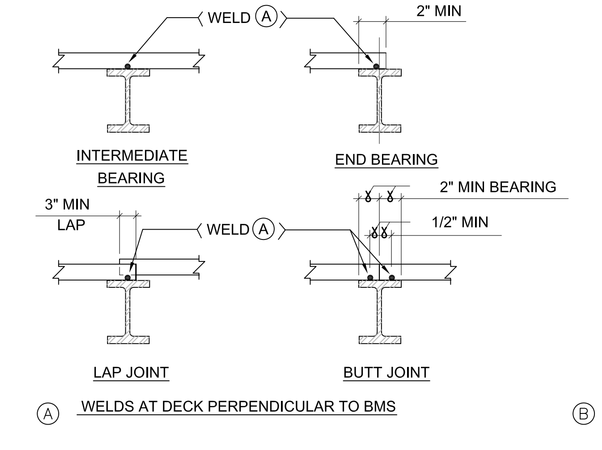
4 TYPICAL COMPOSITE PARALLEL METAL DECK EDGE DETAIL
N.T.S.



NOTES:
1. REINF. CONT. THRU JOINT, U.O.N. (2'-0" MIN.)
2. SEE PLAN OR SPECIFICATIONS FOR LOCATION OF C.J.'s

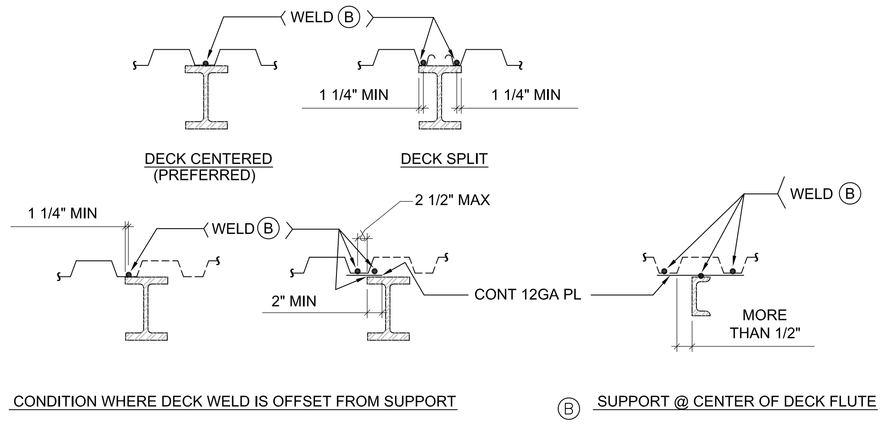
16 CONSTRUCTION JOINT IN CONCRETE / DECK
N.T.S.

SEE DETAIL 9/- FOR DECK WELDING.



(A) WELDS AT DECK PERPENDICULAR TO BMS

SEE STEEL DECK WELDING SCHEDULE, NOTES AND OTHER DETAILS



(B) CONDITION WHERE DECK WELD IS OFFSET FROM SUPPORT

(B) SUPPORT @ CENTER OF DECK FLUTE

12 STEEL DECK TO BEAM WELD DETAILS
N.T.S.

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NO. ISSUES/REVISIONS DATE

PROJECT RECORD SET

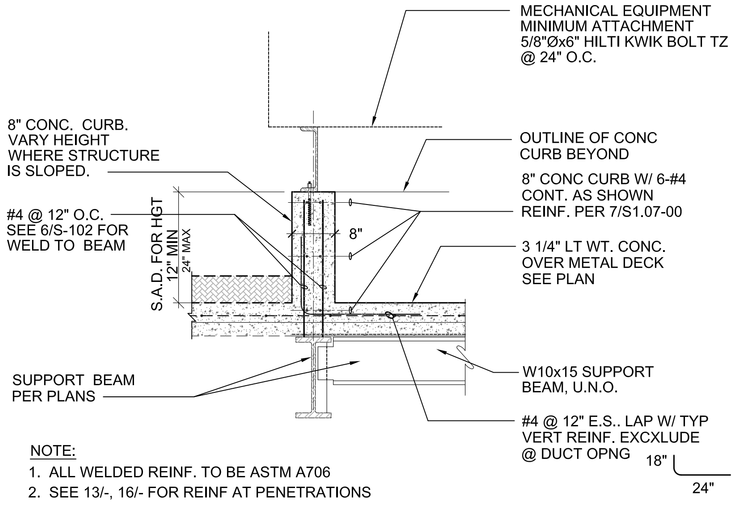
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4
KEYPLAN

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

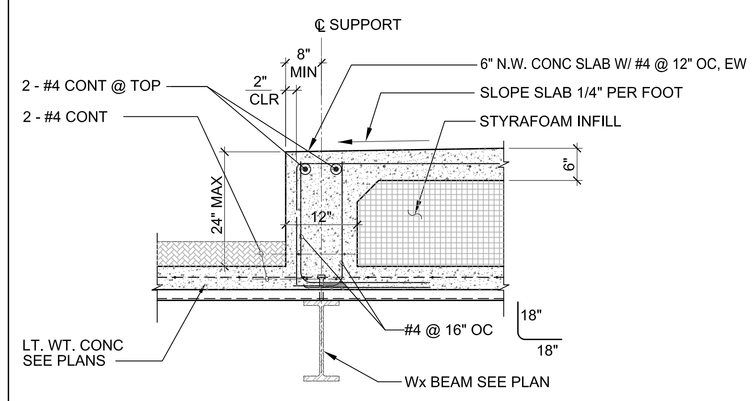
SHEET TITLE:
GENERAL STEEL DETAILS

SHEET NO:
S-103



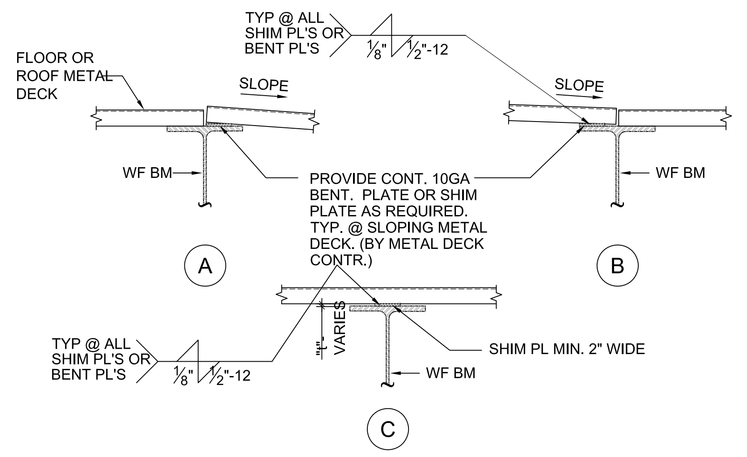
NOTE:
1. ALL WELDED REINF. TO BE ASTM A706
2. SEE 13/-, 16/- FOR REINF AT PENETRATIONS

13 MECH. UNIT SUPPORT @ ROOF (CURB SUPPORT)
SCALE: 3/4"=1'-0"



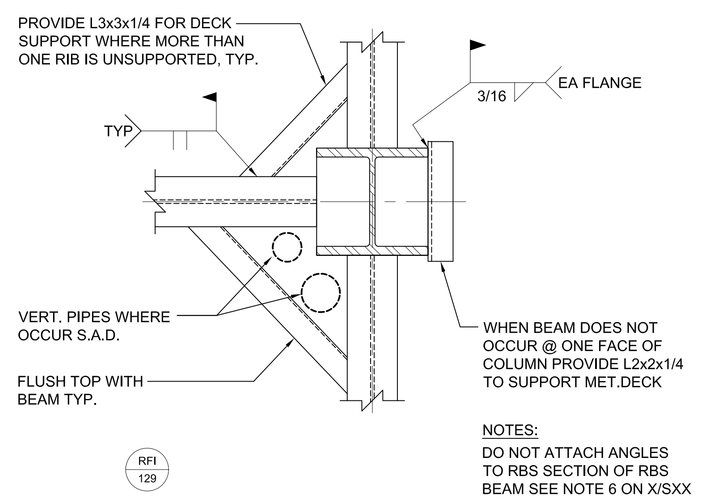
NOTES:
1) S.A.D. FOR ROOFING.
2) SEE MECH. DRAWINGS FOR EQUIPMENT.
3) SEE 16/- OR 3/- FOR FRAMING AT SMALL AND LARGE OPENINGS.

9 MECH. UNIT SUPPORT @ ROOF (PAD SUPPORT)
SCALE: 3/4"=1'-0"



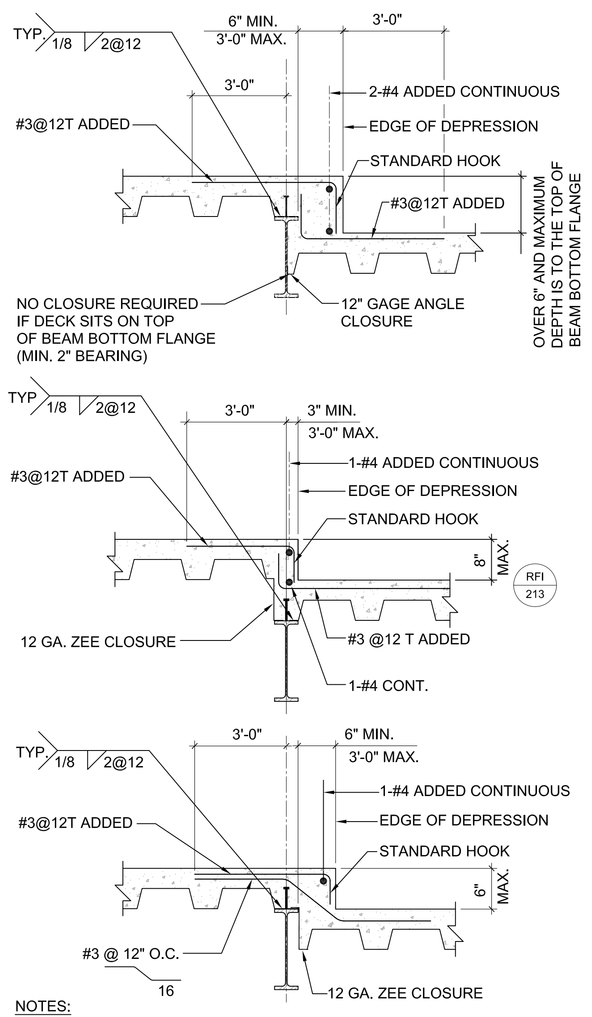
NOTES:
1. FOR BEAM SIZES SEE PLANS (TYP)

5 TYPICAL SHIM PLATE DETAIL
N.T.S.



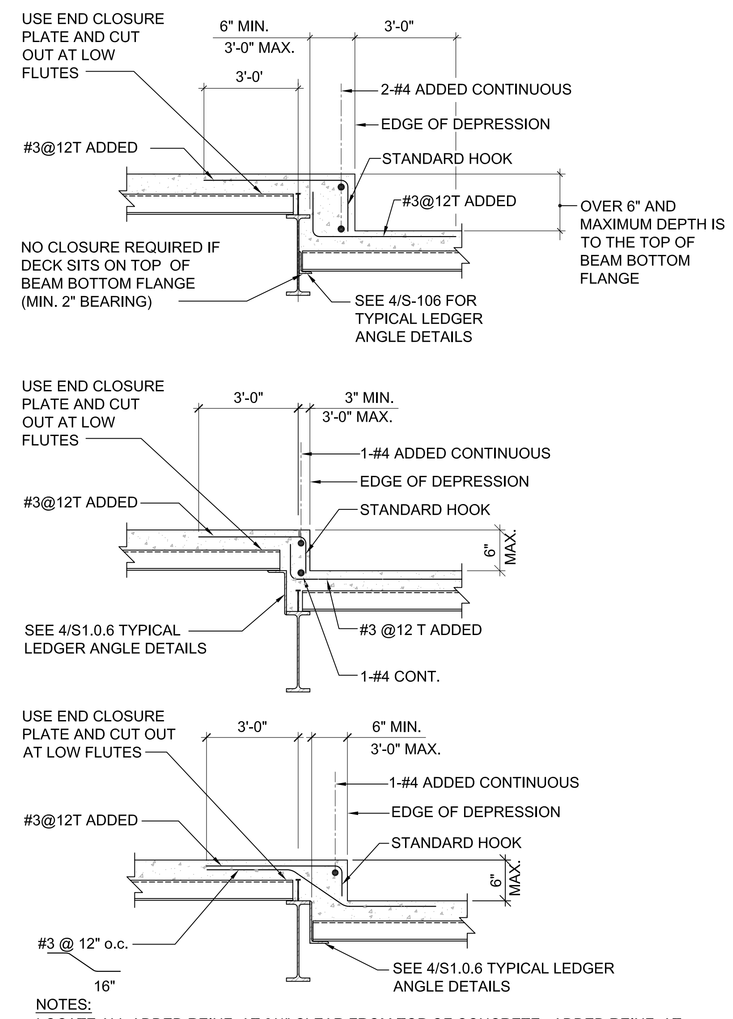
NOTES:
DO NOT ATTACH ANGLES TO RBS SECTION OF RBS BEAM SEE NOTE 6 ON X/SXX

1 METAL DECK SUPPORT @ COLUMN
N.T.S.



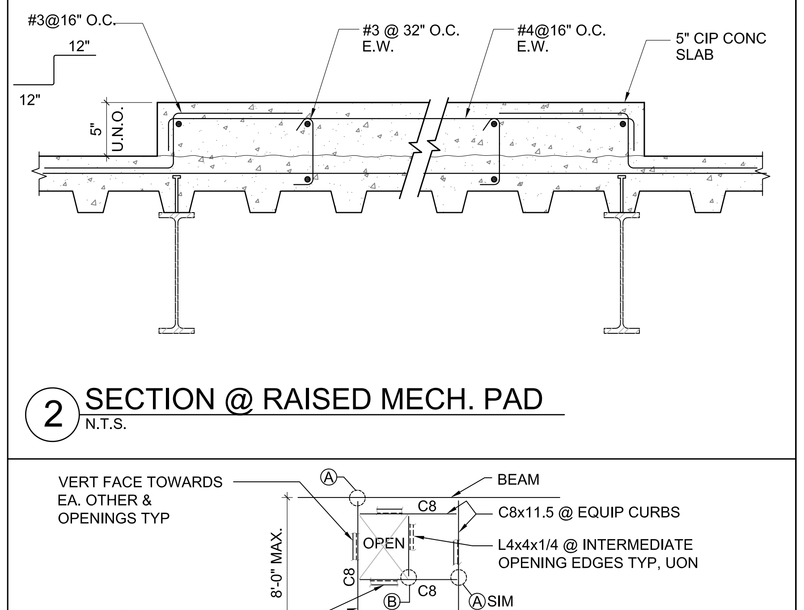
NOTES:
LOCATE ALL ADDED REINF. AT 3/4" CLEAR FROM TOP OF CONCRETE. ADDED REINF. AT METAL DECK EDGE TAKES PRECEDENCE OVER ANY OTHER REINF. AND IS LOCATED AT THE OUTERMOST LAYER.

11 TYPICAL METAL DECK DETAILS @ SLAB DEPRESSIONS
N.T.S.

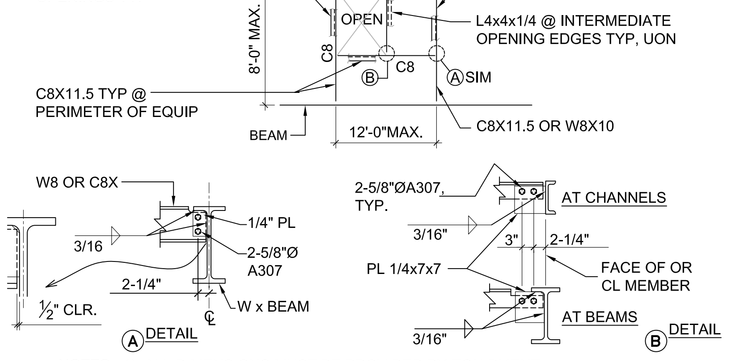


NOTES:
LOCATE ALL ADDED REINF. AT 3/4" CLEAR FROM TOP OF CONCRETE. ADDED REINF. AT METAL DECK EDGE TAKES PRECEDENCE OVER ANY OTHER REINF. AND IS LOCATED AT THE OUTERMOST LAYER. SEE SPECIFIC DETAILS FOR ANY ADDITIONAL REQUIREMENTS.

7 TYPICAL METAL DECK DETAILS @ SLAB DEPRESSIONS
N.T.S.

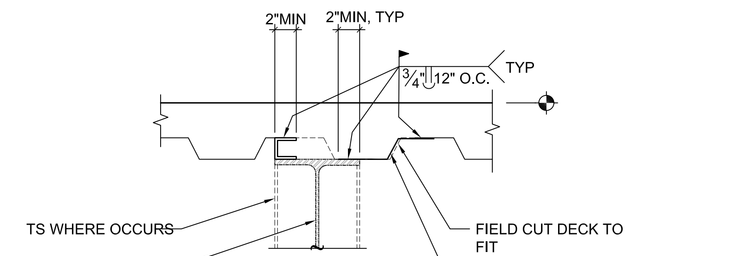


2 SECTION @ RAISED MECH. PAD
N.T.S.

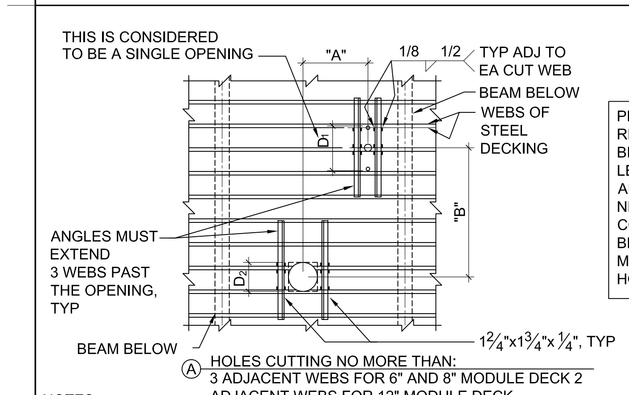


NOTES:
1) ALL DIMENSIONS MUST BE PROVIDED BY EQUIPMENT MANUFACTURER BEFORE FABRICATION BEGINS.
2) UON ON PLANS, ALL C8X OR W8X NOTED BELOW SHALL BE W8X13 OR C8X11.5.
3) METAL DECK & CONCRETE NOT SHOWN FOR CLARITY.

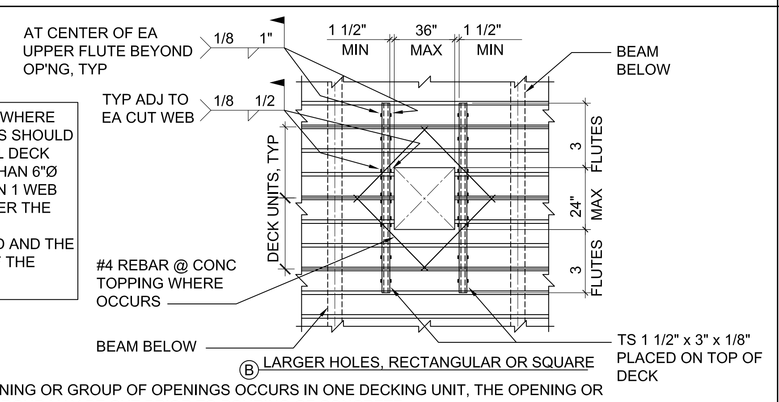
3 FRAMING AT SMALL MECH. EQUIPMENT & LARGE OPENINGS
N.T.S. MAX. EQUIP. WT=1000#



15 TYPICAL DECK SPLICE AT SUPPORT
N.T.S.



PRIOR TO CONCRETE POUR (WHERE REQUIRED), SMALL OPENINGS SHOULD BE BLOCKED OUT AND METAL DECK LEFT INTACT. HOLES LESS THAN 6"Ø AND CUTTING NO MORE THAN 1 WEB NEED NO REINFORCING. AFTER THE CONCRETE HAS CURED, THE BLOCKOUT CAN BE REMOVED AND THE METAL DECK IN THE AREA OF THE HOLE REMOVED.

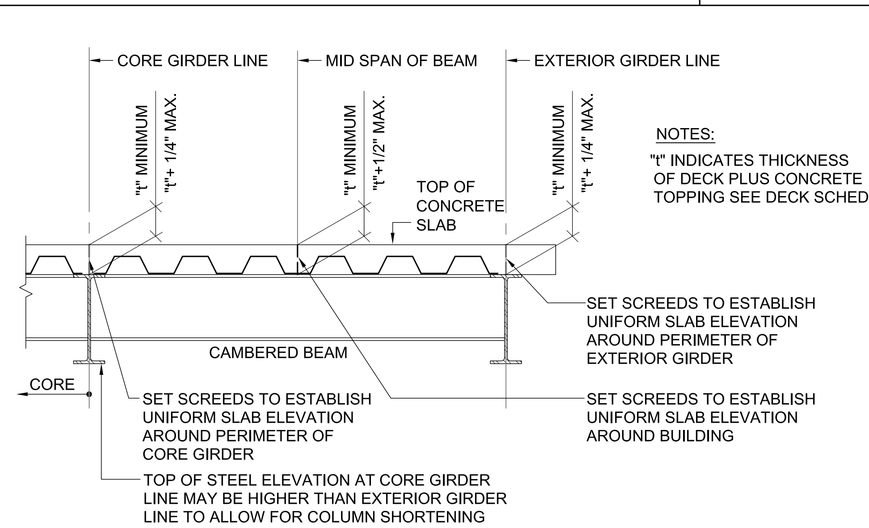


NOTES:
1. ANGLES SHALL BE PLACED ON TOP OF DECK.
2. IF DIMENSION "A" IS GREATER THAN 4D , 4D OR 32", WHICHEVER IS LARGER, THEN THERE IS NO RESTRICTION ON DIMENSION "B".
3. IF DIMENSION "B" IS GREATER THAN 4D , 4D OR 32", WHICHEVER IS LARGER, THEN THERE IS NO RESTRICTION ON DIMENSION "A".
4. IF DIMENSION "A" & "B" ARE LESS THAN 4D , 4D , OR 32", WHICHEVER IS LARGER, THE OPENING GROUP WILL BE CONSIDERED AS A SINGLE HOLE, AND MUST BE REINFORCED AS REQUIRED FOR THE LARGER OPENING.

NOTES:
1. IF THE OPENING OR GROUP OF OPENINGS OCCURS IN ONE DECKING UNIT, THE OPENING OR OPENING GROUP MAY BE CUT PRIOR TO POURING OF CONCRETE.
2. IF, AS SHOWN IN THE DETAIL ABOVE, THE OPENING OR OPENING GROUP CUTS THROUGH TWO DECKING UNITS, THE DECKING SHALL NOT BE CUT UNTIL CONCRETE HAS BEEN PLACED AND CURED. AT TIME OF POURING, SUITABLE SLEEVES OR BULKHEADS SHALL BE PLACED AROUND THE OPENING.
3. ADD REBAR AT CORNERS OF OPENING.
4. WHEN MAXIMUM DIMENSION OF AN OPENING OR OPENING GROUP EXCEEDS 24"(PERP TO DECK) OR 36"(PARALLEL TO DECK), PLACE HEADER BEAM AROUND OPENING, SEE 3/-.
5. NO TRIM BAR IS NEEDED AROUND PENETRATIONS IF THEY DO NOT INTERRUPT SLAB REINFORCING..

RFI 252

16 SMALL MECHANICAL UNIT OR DECK OPENING WITH OR WITHOUT TOPPING (MAX. WT. = 200 LBS)
N.T.S.



NOTES:
"t" INDICATES THICKNESS OF DECK PLUS CONCRETE TOPPING SEE DECK SCHEDULE

NOTES:
1. PROVIDE UPWARD CAMBER AT MID SPAN FOR ALL BEAMS WHERE INDICATED. BEAMS NOT CAMBERED HAVE TO HAVE MILL CAMBER PLACED IN UPWARD POSITION.
2. AFTER STEEL ERECTION, SURVEY THE TOP ELEVATION OF THE STRUCTURAL STEEL, SET ADJUSTABLE SCREEDS TO FINISHED SLAB ELEVATION AND MINIMUM SLAB THICKNESS AT SUPPORTS AND TO MINIMUM SLAB THICKNESS AT MID SPAN OF CAMBERED BEAMS.
3. CONCRETE SHOULD BE PLACED TO PRODUCE A FLAT FINISHED CONCRETE SURFACE FROM THE CORE TO THE PERIMETER BETWEEN SUPPORTS AND MID SPAN CONTROL POINTS. AS A MINIMUM, TOP OF SLAB SHALL NOT BE OUT OF LEVEL BY MORE THAN ALLOWED BY ACI AND SPECIFICATIONS.

8 PROCEDURE FOR CONSTRUCTION OF SLAB ON CAMBERED BEAMS
N.T.S.

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

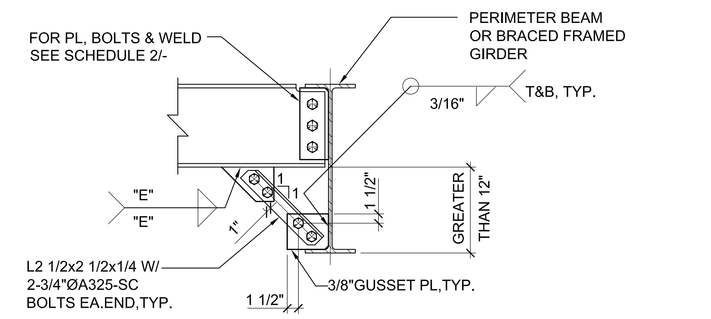
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

PROJECT NO.: 07012.00	DRAWN BY: AY
DATE: 03/09/09	CHECKED BY: CB
SCALE: AS NOTED	

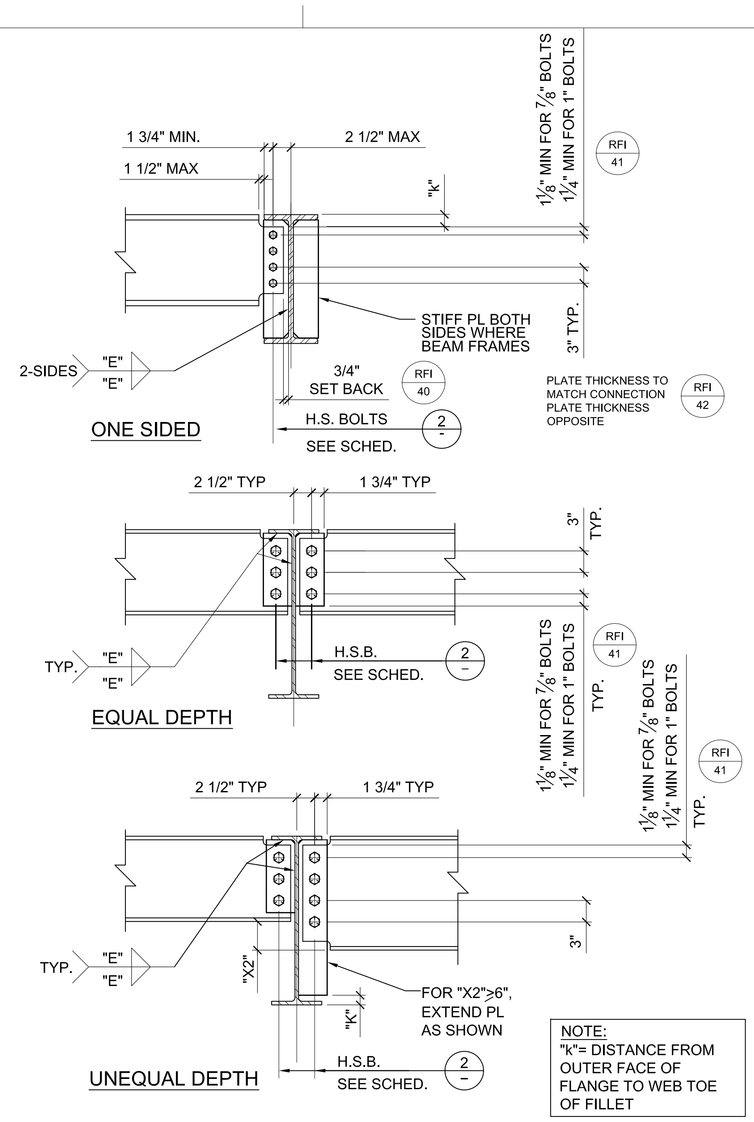
SHEET TITLE:
GENERAL STEEL DETAILS

SHEET NO:
S-104



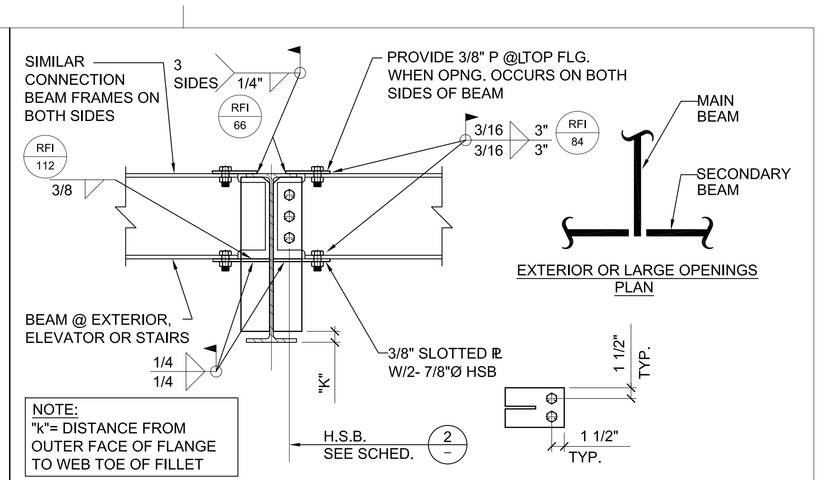
DETAIL OCCURS AT PERIMETER OF ALL BUILDINGS (INCLUDING THOSE SEPARATED BY SEISMIC JOINTS), AND ON AT LEAST ONE SIDE OF ALL MOMENT FRAMES U.O.N. ON PLANS. ALSO OCCURS @ BRACED FRAMES AND COLLECTOR BEAMS. WITH CONNECTING BEAMS (AT 1/3 SPAN, MAX)

10 BEAM CONNECTION @ PERIMETER BEAM, MOMENT FRAMES & BRACED FRAMES
N.T.S.



NOTE:
"k"= DISTANCE FROM OUTER FACE OF FLANGE TO WEB TOE OF FILLET

6 NON-MOMENT STEEL CONNECTION BEAM TO BEAM OR BEAM TO GIRDER
N.T.S.



NOTE:
"K"= DISTANCE FROM OUTER FACE OF FLANGE TO WEB TOE OF FILLET

SEE (6) FOR ADDITIONAL INFORMATION

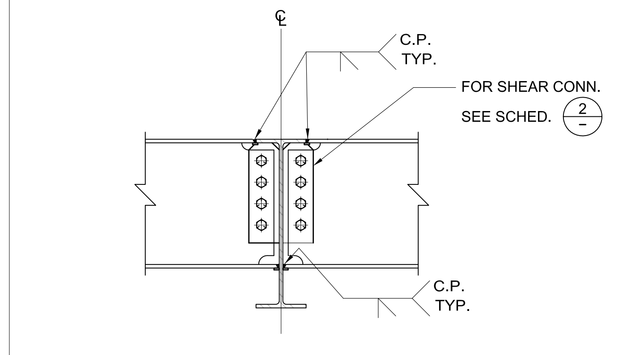
1 BEAM TO BEAM CONN. @ EXTERIOR OVERHANGS AND INTERIOR OPENINGS
N.T.S.

BEAM CONNECTION SCHEDULE				
BEAM SIZE	CONNECTION		WELD "E"	REMARKS
	PLATE "t"	BOLTS		
C6, W6	1/4"	2-3/4"Ø	3/16"	
C8-C10, W8-W10	3/8"	2-7/8"Ø	5/16"	
W12	3/8"	3-7/8"Ø	5/16"	
W14	3/8"	3-7/8"Ø	5/16"	
W16	3/8"	4-7/8"Ø	5/16"	
W18	1/2"	5-7/8"Ø	5/16"	
W21	1/2"	5-1"Ø	3/8"	
W24	1/2"	6-1"Ø	3/8"	
W27	1/2"	7-7/8"Ø	3/8"	
W30	1/2"	8-7/8"Ø	3/8"	
W33	1/2"	9-7/8"Ø	3/8"	

RFI 61
RFI 100
RFI 92
A490N

1. USE A325-N BOLTS.
2. USE PLATE--Fy=36 ksi Fu=58 ksi
3. USE A325-SC BOLTS (PRE-TENSIOND) WHERE INDICATED ON PLANS.
   SEE (1), (4), (6) FOR ITEM NOT NOTED HERE.

2 BEAM CONNECTION SCHEDULE
NO SCALE



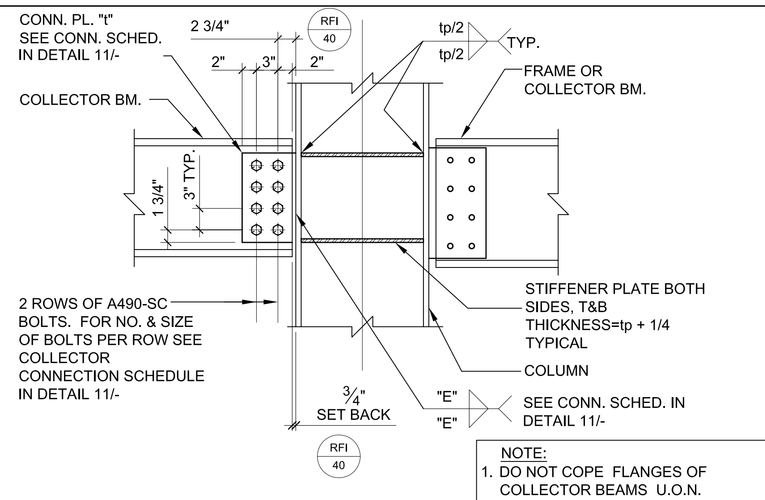
15 MOMENT BM TO GIRDER CONNECTION
N.T.S.

FRAMED BEAM CONNECTION SCHEDULE			
BEAM SIZE	CONNECTION		WELD "E"
	PLATE "t"	BOLTS	
W10	3/4"	2 - 1"Ø - 2 VERT. ROWS	3/8"
W14	3/4"	3 - 1"Ø - 2 VERT. ROWS	3/8"
W16	3/4"	4 - 1"Ø - 2 VERT. ROWS	3/8"
W18	3/4"	5 - 1"Ø - 2 VERT. ROWS	3/8"
W21	3/4"	5 - 1"Ø - 2 VERT. ROWS	3/8"
W24	3/4"	6 - 1"Ø - 2 VERT. ROWS	3/8"
W27	3/4"	7 - 1"Ø - 2 VERT. ROWS	3/8"
W30	3/4"	8 - 1"Ø - 2 VERT. ROWS	3/8"
W33	3/4"	9 - 1"Ø - 2 VERT. ROWS	3/8"

RFI 86
RFI 65

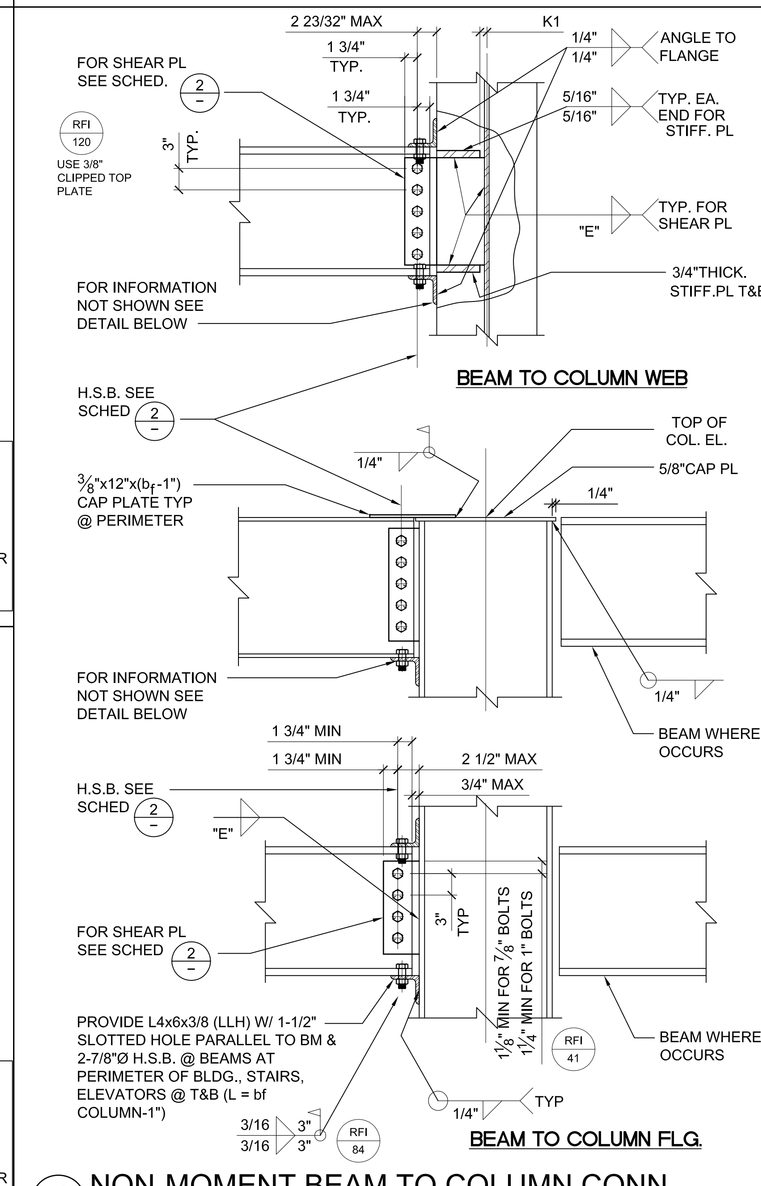
1. USE A490-SC STD BOLTS
2. USE PLATE - Fy=50ksi Fu=65 ksi
3. STEEL BEAM, Fy = 50 ksi
4. BASED ON LRFD

11 FRAMED BEAM COLLECTOR CONNECTION SCHEDULE
N.T.S.

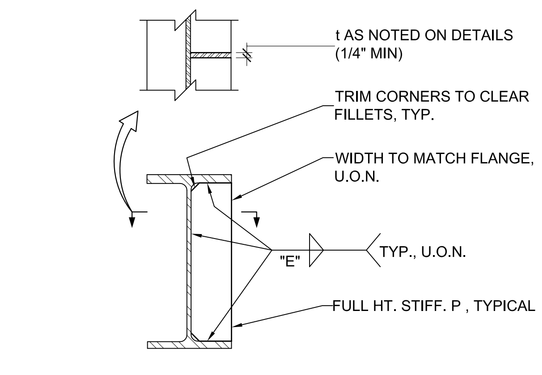


NOTE:
1. DO NOT COPE FLANGES OF COLLECTOR BEAMS U.O.N.
2. SEE DETAIL 4/- FOR ANGLES @ PERIMETER BEAMS
3. DETAIL APPLIES UNLESS 6/S-107 OR 10/S-107 IS SPECIFICALLY REFERENCED ON DRAWINGS

7 COLLECTOR CONNECTION BEAM TO COLUMN FLANGE
N.T.S.



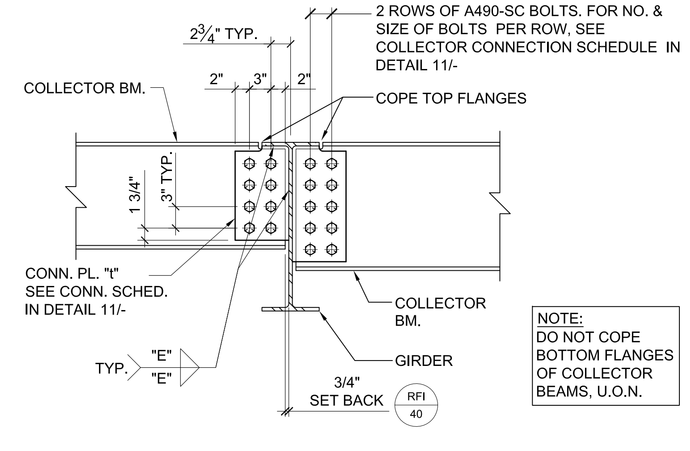
4 NON-MOMENT BEAM TO COLUMN CONN.
N.T.S.



SECTION

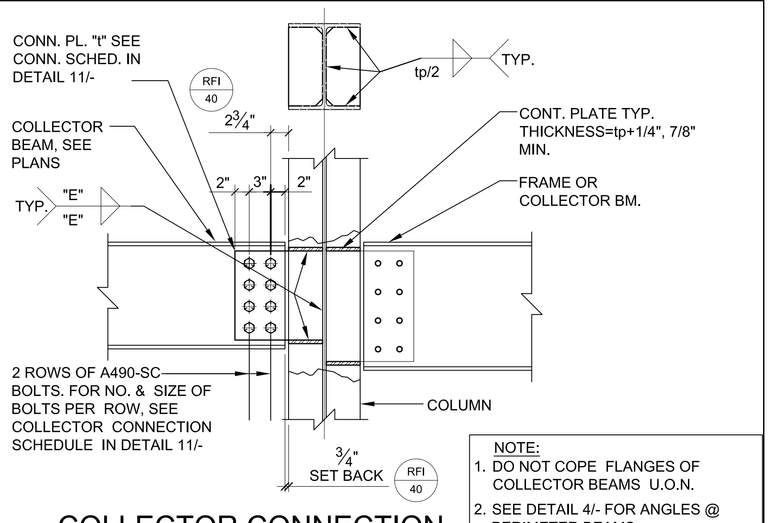
NOTE:
SEE 2/- FOR STIFFENER PLATE WELD "E"

16 BEAM WEB STIFFENER DETAIL
N.T.S.



NOTE:
DO NOT COPE BOTTOM FLANGES OF COLLECTOR BEAMS, U.O.N.

12 BEAM TO BEAM COLLECTOR CONNECTION DETAIL
N.T.S.



NOTE:
1. DO NOT COPE FLANGES OF COLLECTOR BEAMS U.O.N.
2. SEE DETAIL 4/- FOR ANGLES @ PERIMETER BEAMS
3. DETAIL APPLIES UNLESS 6/S-107 OR 10/S-107 IS SPECIFICALLY REFERENCED ON DRAWINGS

8 COLLECTOR CONNECTION BEAM TO COLUMN WEB
N.T.S.

If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

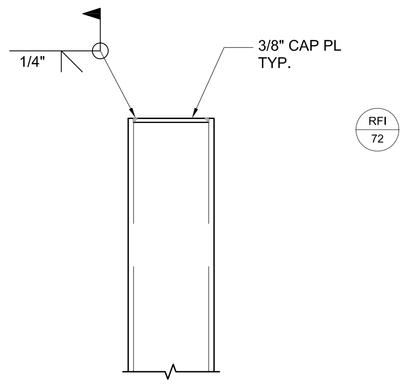
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4
KEYPLAN

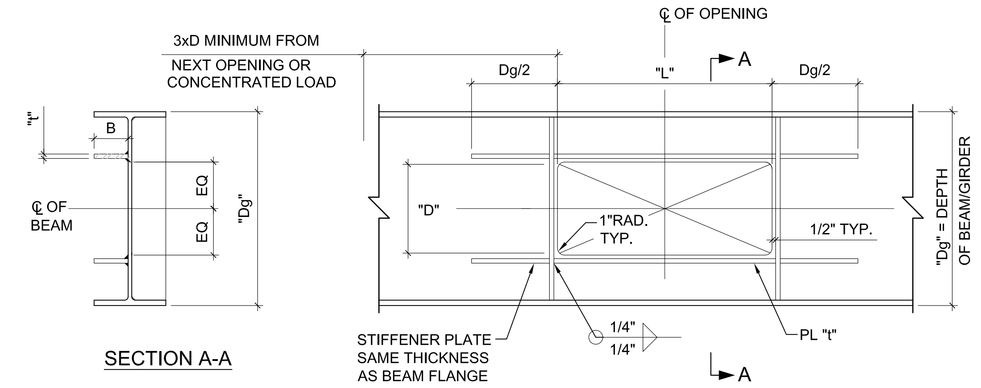
PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

SHEET TITLE:
GENERAL STEEL DETAILS

SHEET NO:
S-105



13 TYPICAL HSS CAP PLATE
N.T.S.

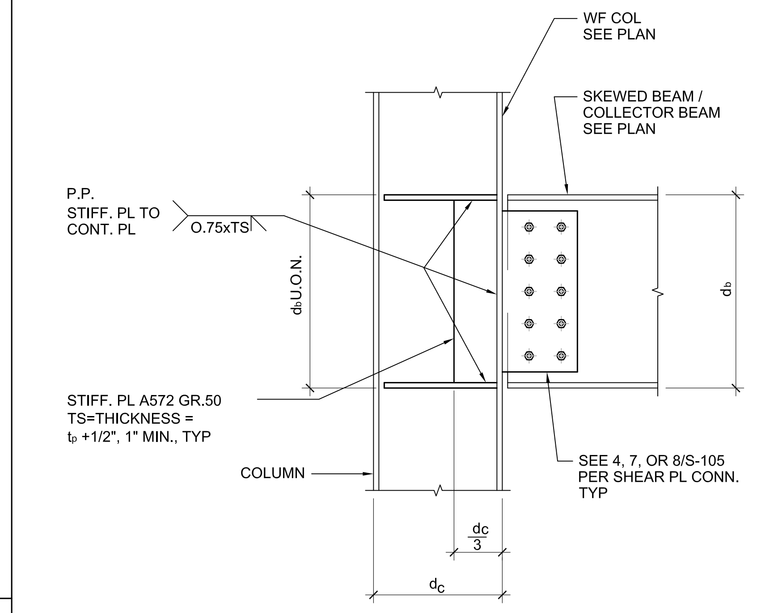


SECTION A-A

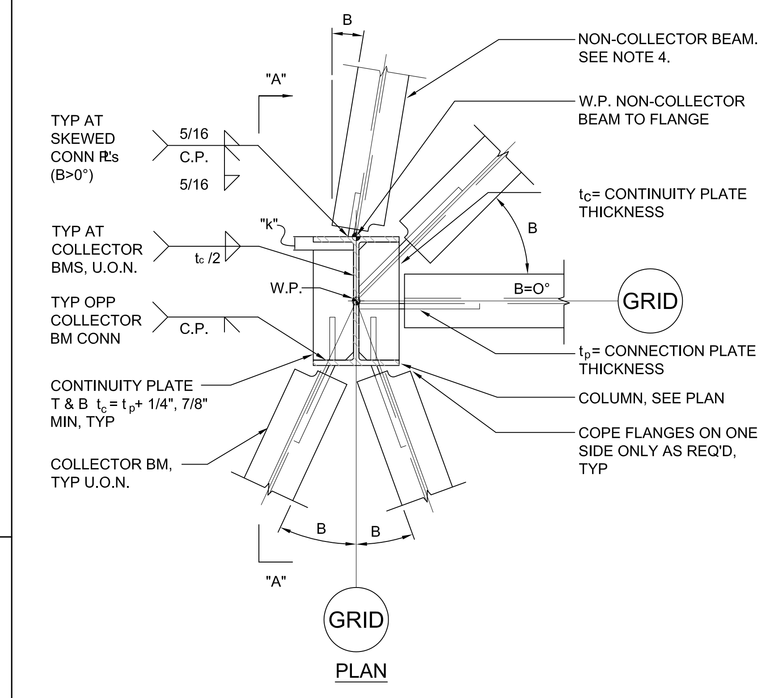
BEAM/ GIRDER SIZE	MAXIMUM SIZE OF OPENING (IN)		REINFORCING PLATES (IN)	
	D	L	t	B
W16	5 1/2	16	THICKNESS OF PLATES TO EQUAL THICKNESS OF BEAM FLANGES.	2 1/2
W18	6	18		2 1/2
W21	7	21		3
W24	8	24		3 1/2
W27	9	27		3 1/2
W30	10	30		4
W36	12	32		6

NOTES:
1. SEE PLANS FOR LOCATION OF PENETRATION.
2. PENETRATIONS NOT PERMITTED AT COLLECTOR BEAMS.

9 BEAM REINF. @ PIPE PENETRATION
N.T.S.



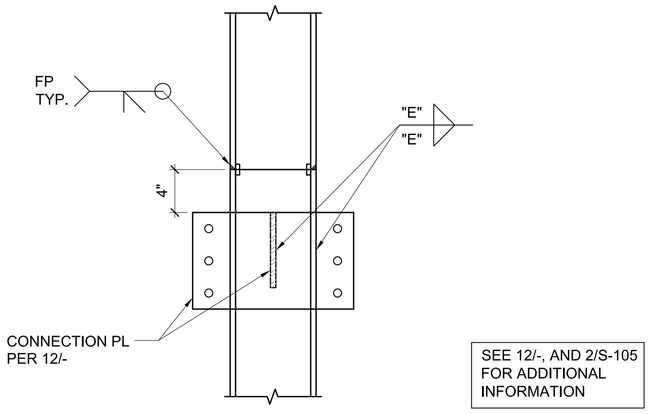
SECTION "A"-"A"



PLAN

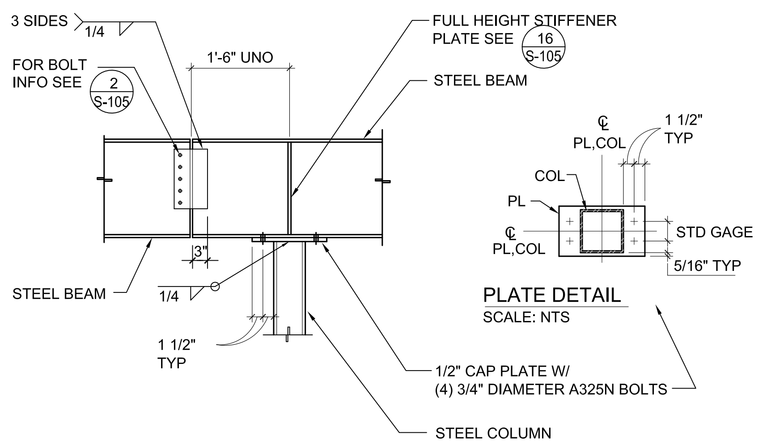
NOTES:
1. SEE TYPICAL BEAM & COLLECTOR TO COLUMN CONNECTION DETAILS FOR INFORMATION NOT SHOWN.
2. ALL WORK POINTS (W.P.) TO BE LOCATED AT GRID INTERSECTION (COLUMN CENTROID) FOR COLLECTOR BEAMS.
3. CONTINUITY PLATES ARE REQUIRED TOP & BOTTOM OF CONNECTION PLATE FOR BEAM FRAMING INTO FLANGE OF COLUMN.
4. AT NON-COLLECTOR BEAMS, WORK POINTS MAY BE LOCATED AWAY FROM COLUMN CENTROID, SEE PLAN FOR SUCH CONDITION.

3 NON-MOMENT SKEWED BEAM TO COLUMN CONNECTION DETAIL
N.T.S.

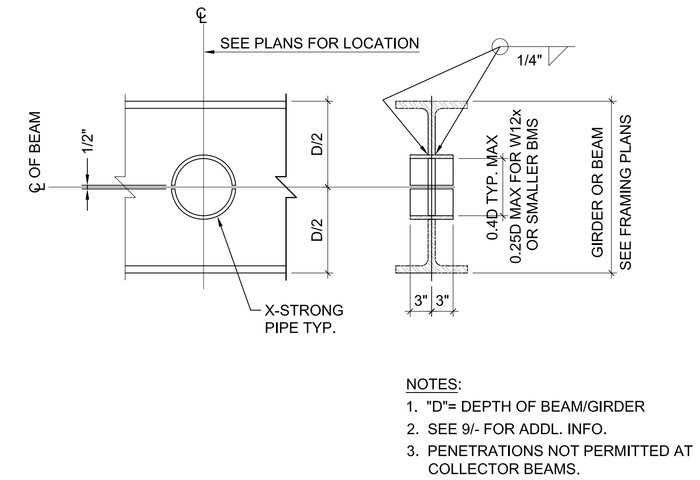


SEE 12/-, AND 2/S-105 FOR ADDITIONAL INFORMATION

14 MIDHEIGHT CONNECTION @ HSS COLUMN
N.T.S.

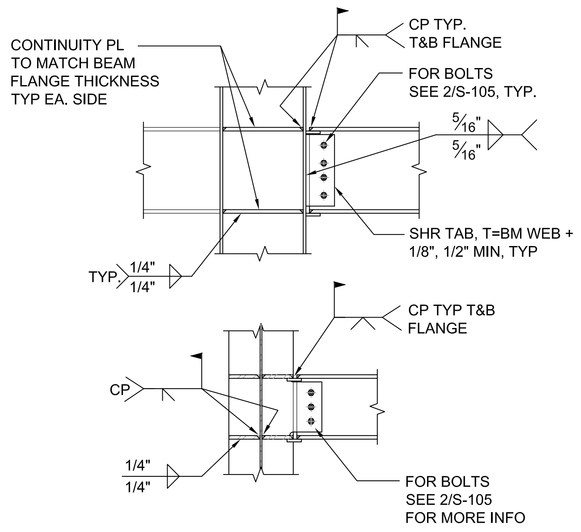


10 STEEL BEAMS TO COLUMN CONN.
N.T.S.

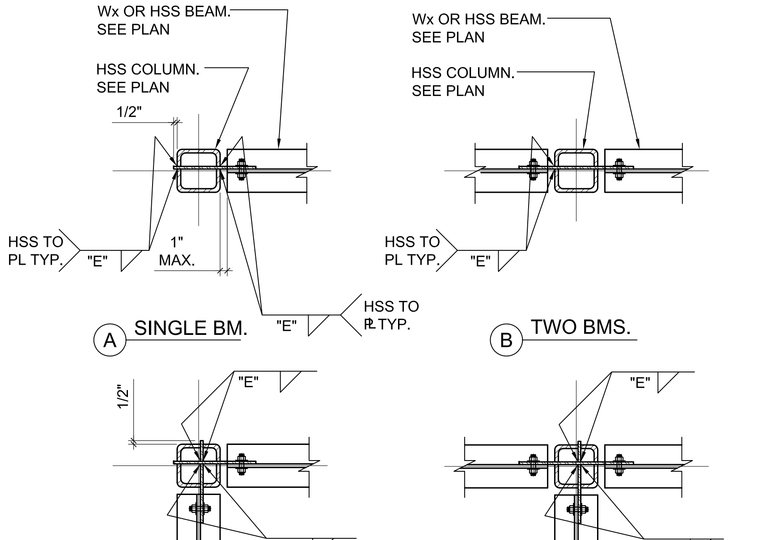


NOTES:
1. "D"= DEPTH OF BEAM/GIRDER
2. SEE 9/- FOR ADDL. INFO.
3. PENETRATIONS NOT PERMITTED AT COLLECTOR BEAMS.

6 BEAM REINF. @ PIPE PENETRATION
N.T.S.

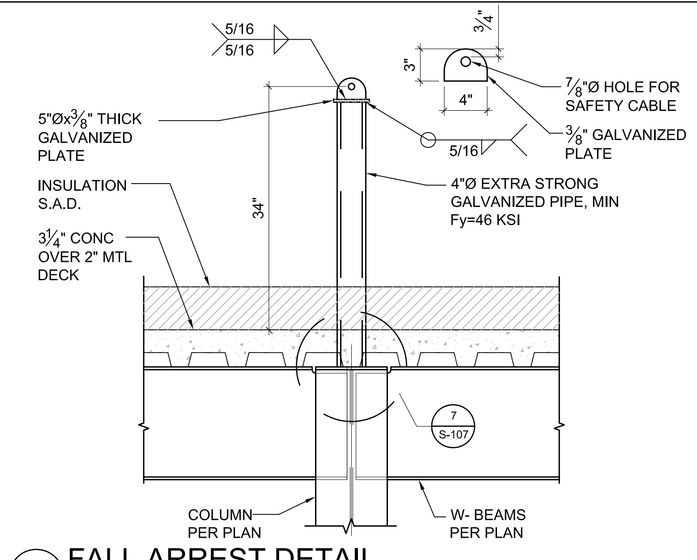


15 BEAM TO COL. MOMENT GRAVITY CONN.
N.T.S.

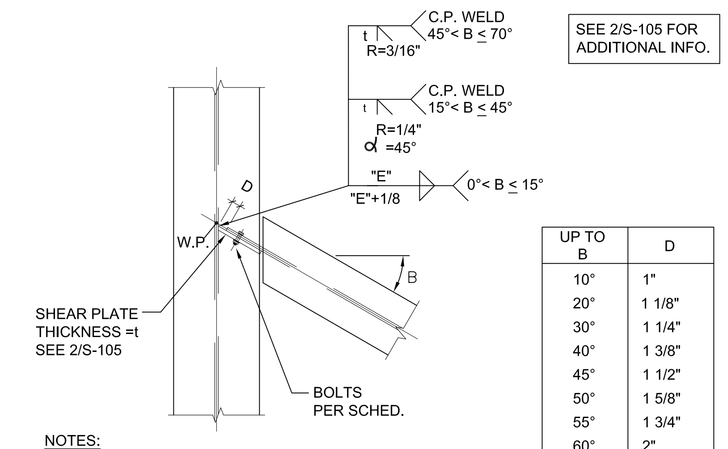


NOTE:
1. SEE DETAIL 2/S-105 FOR INFO. NOT SHOWN.
2. SEE 8/- FOR ADDITIONAL REINFORCING AT PERIMETER CONDITIONS.
3. SEE 13/- FOR CAP PL TYP.
4. SEE 14/- FOR MIDHEIGHT HSS CONNECTION AT 12C, 12D, 12E, 12F.
5. SLOTS FOR HSS CONNECTIONS SHALL BE 1/8" MAXIMUM OVERSIZED.

12 HSS COLUMN TO BEAM
N.T.S.



7 FALL ARREST DETAIL
SCALE: 1"=1'-0"

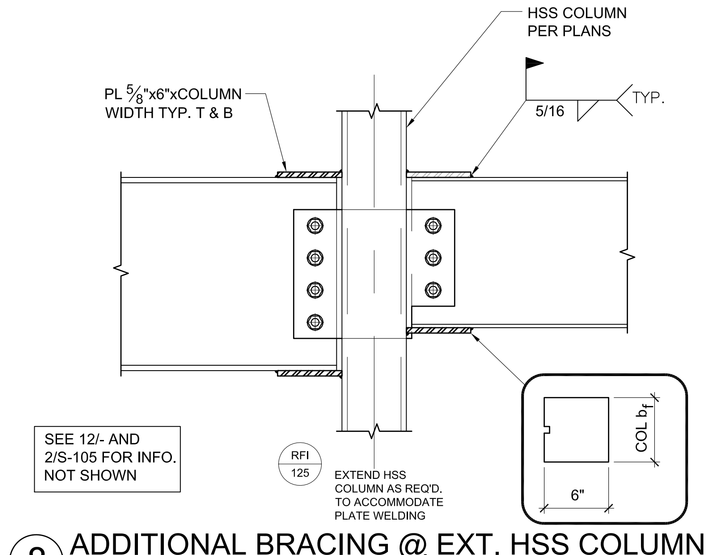


SEE 2/S-105 FOR ADDITIONAL INFO.

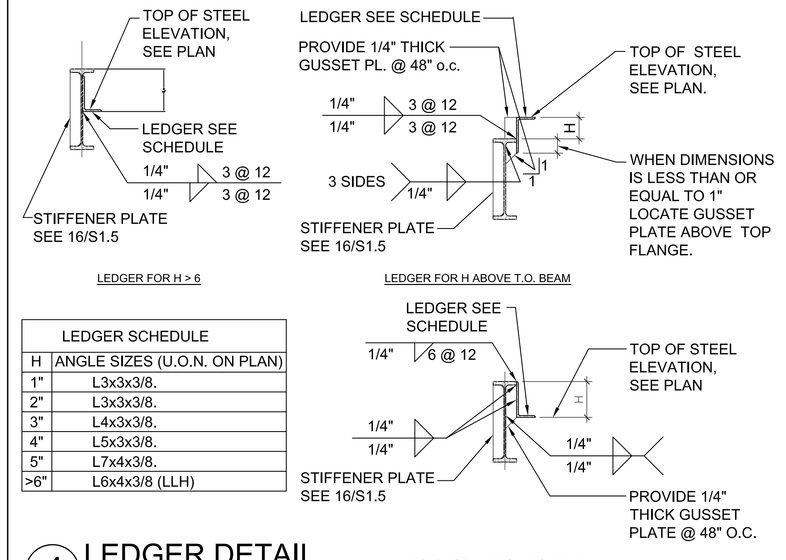
UP TO B	D
10°	1"
20°	1 1/8"
30°	1 1/4"
40°	1 3/8"
45°	1 1/2"
50°	1 5/8"
55°	1 3/4"
60°	2"
65°	2 3/8"
70°	3"

NOTES:
SEE NON-MOMENT BEAM CONNECTION SCHEDULE AND DETAILS FOR INFO. NOT SHOWN.

16 SKEWED BEAM TO BEAM CONN.
N.T.S.



8 ADDITIONAL BRACING @ EXT. HSS COLUMN
N.T.S.



LEDGER SCHEDULE	
H	ANGLE SIZES (U.O.N. ON PLAN)
1"	L3x3x3/8.
2"	L3x3x3/8.
3"	L4x3x3/8.
4"	L5x3x3/8.
5"	L7x4x3/8.
>6"	L6x4x3/8 (LLH)

4 LEDGER DETAIL
N.T.S.

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

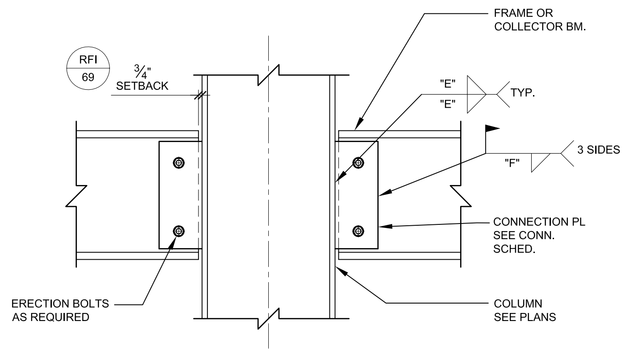
SKYLINE COLLEGE
SAN MATEO COUNTY
COMMUNITY COLLEGE
DISTRICT

CIP2 DESIGN-BUILD
PROJECT
BUILDING 4

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

SHEET TITLE:
GENERAL STEEL
DETAILS

SHEET NO:
S-106

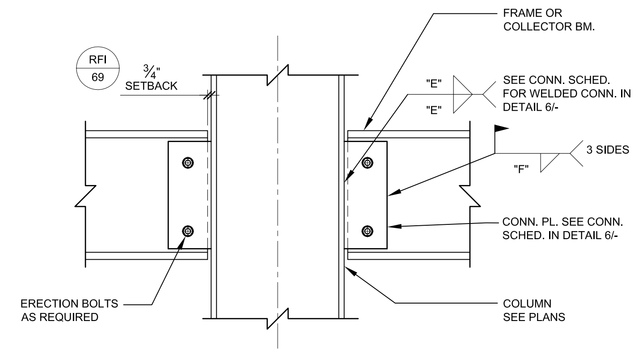


WELDED COLLECTOR CONNECTION				
BEAM SIZE	CONNECTION			REMARKS
	PLATE	"E"	"F"	
W21	15"x13"x3/4"	7/16"	7/16"	
W24	18"x13"x3/4"	1/2"	1/2"	
W27	20"x13"x3/4"	9/16"	9/16"	

RFI 102

1. ALL PLATES - Fy=50 ksi Fu=65 ksi
2. DO NOT COPE FLANGES OF COLLECTOR OR BEAMS U.O.N.
3. SEE DETAIL 4/S-105 FOR ANGLES @ PERIMETER BEAMS.
4. PERPENDICULAR BEAM & CONNECTIONS NOT SHOWN FOR CLARITY.
5. SEE 8/S-105 FOR ADDITIONAL REQUIREMENTS AT WEAK-AXIS COLUMN CONNECTIONS.

10 COLLECTOR CONNECTION SCHEDULE (TYPE 2)
SCALE: NONE



WELDED COLLECTOR CONNECTION				
BEAM SIZE	CONNECTION			REMARKS
	PLATE	"E"	"F"	
W16	11"x8"x3/4"	3/8"	3/8"	
W18	12"x8"x3/4"	3/8"	3/8"	
W21	15"x9"x3/4"	7/16"	7/16"	
W24	18"x8"x3/4"	1/2"	1/2"	

RFI 102

RFI 69

1. ALL PLATES - Fy=50 ksi Fu=65 ksi
2. DO NOT COPE FLANGES OF COLLECTOR OR BEAMS U.O.N.
3. SEE DETAIL 4/S-105 FOR ANGLES @ PERIMETER BEAMS.
4. PERPENDICULAR BEAM & CONNECTIONS NOT SHOWN FOR CLARITY.
5. SEE 8/S-105 FOR ADDITIONAL REQUIREMENTS AT WEAK-AXIS COLUMN CONNECTIONS.

6 COLLECTOR CONNECTION SCHEDULE (TYPE 1)
SCALE: NONE

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

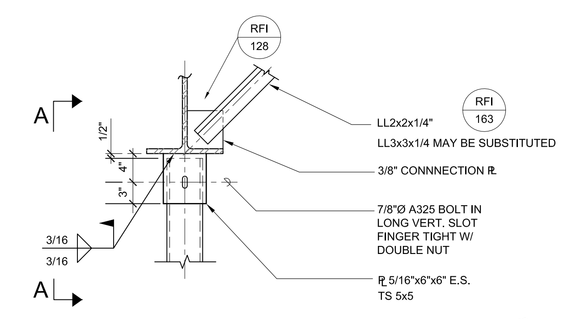
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

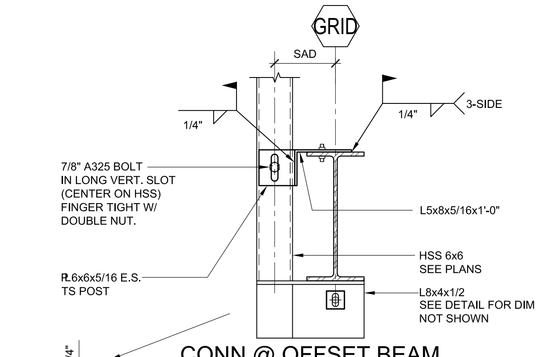
PROJECT NO.: 07012.00	DRAWN BY: AY
DATE: 03/09/09	CHECKED BY: CB
SCALE: AS NOTED	

SHEET TITLE:
GENERAL STEEL DETAILS

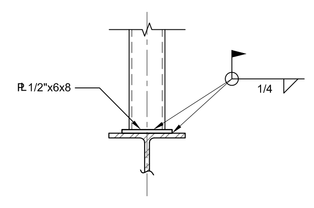
SHEET NO:
S-107



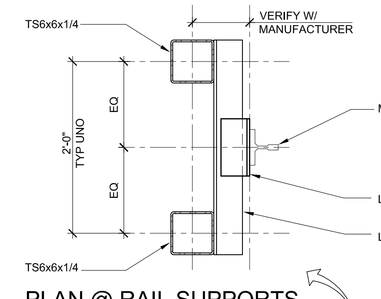
CONN @ UNDERSIDE OF BEAM



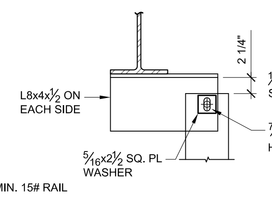
CONN @ OFFSET BEAM

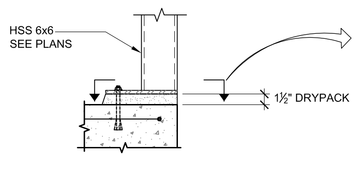


CONN @ TOP OF BEAM

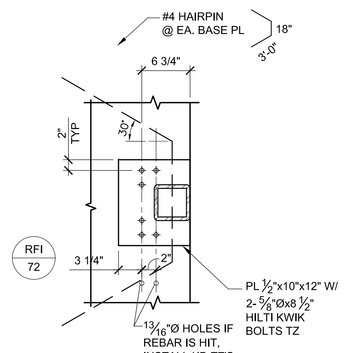


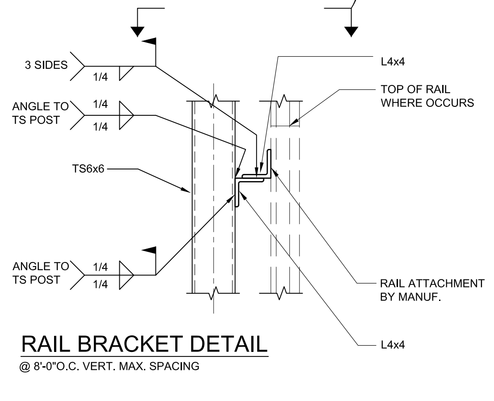
PLAN @ RAIL SUPPORTS





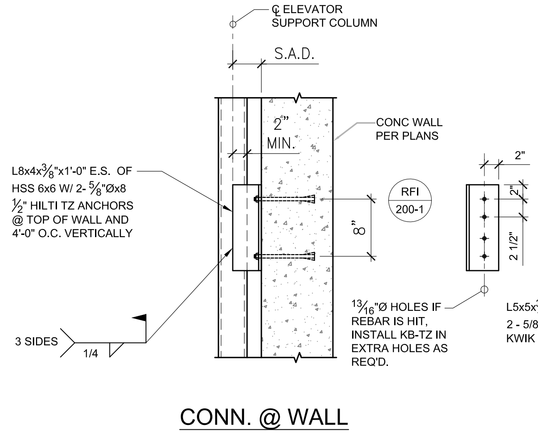
BASE PL DETAIL



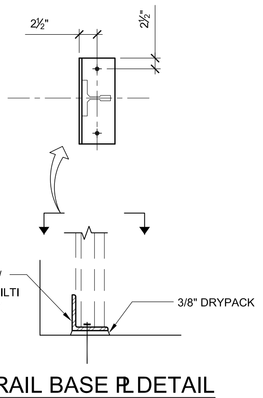


RAIL BRACKET DETAIL
@ 8'-0"O.C. VERT. MAX. SPACING

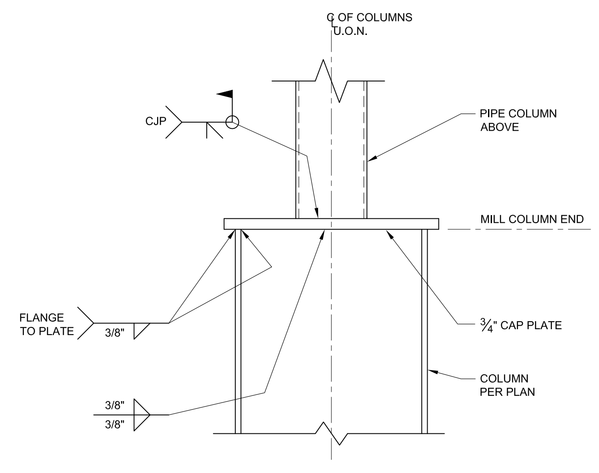
16 ELEVATOR RAIL SUPPORT DETAIL
N.T.S.



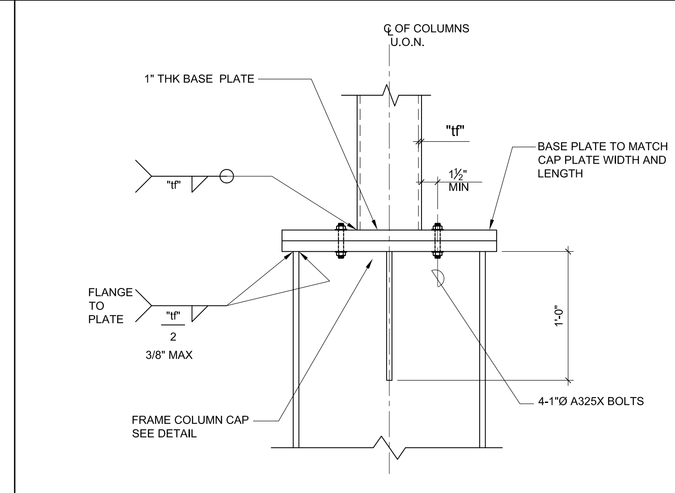
CONN. @ WALL



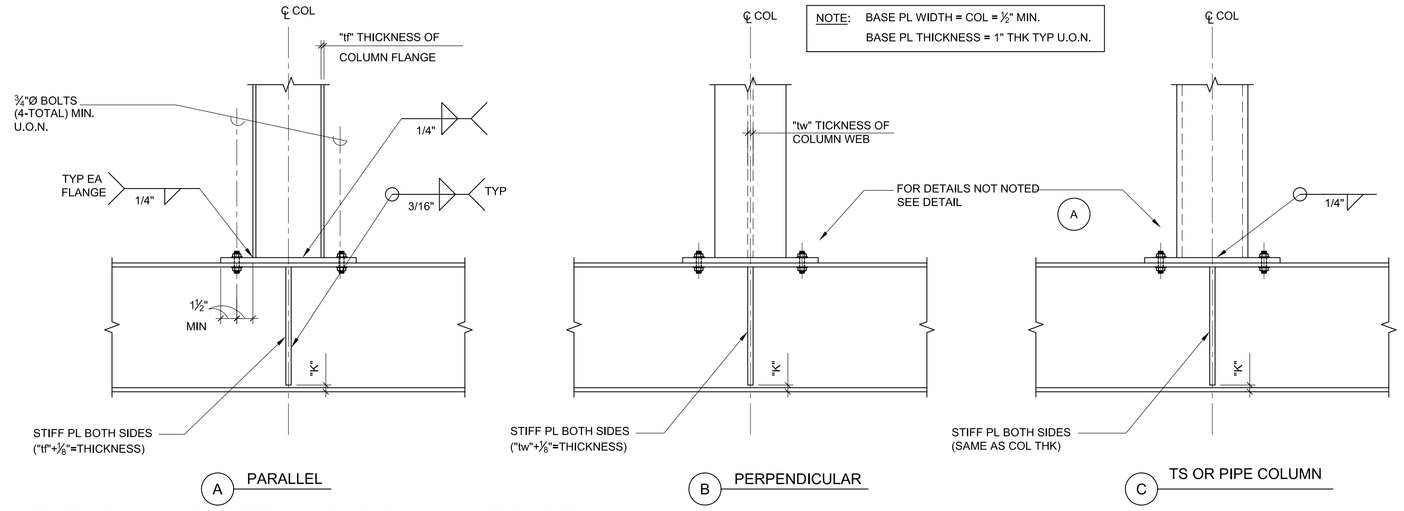
RAIL BASE PL DETAIL



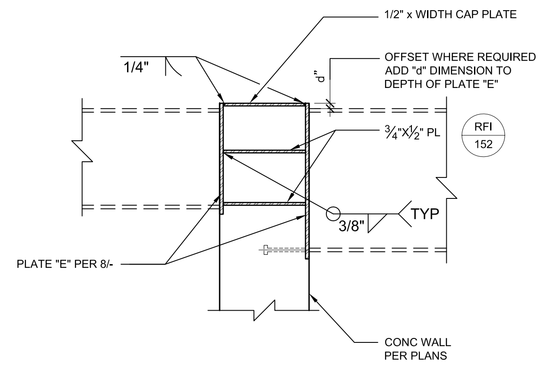
7 POST TO COLUMN DETAIL
SCALE: 1½"=1'-0"



3 TS COLUMN TO FRAME COLUMN DETAIL
SCALE: 1½"=1'-0"

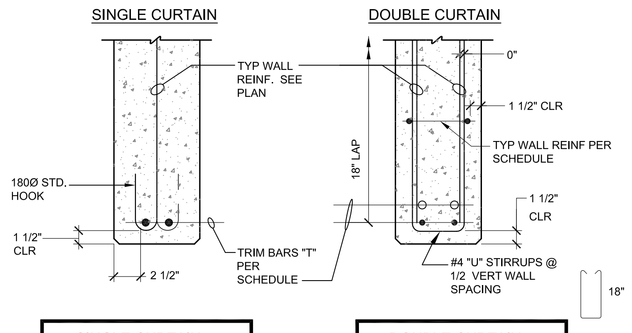


8 TYPICAL NON-FRAME COLUMN TO BEAM
SCALE: 1½"=1'-0"



SEE 3/- FOR ADDITIONAL INFORMATION.

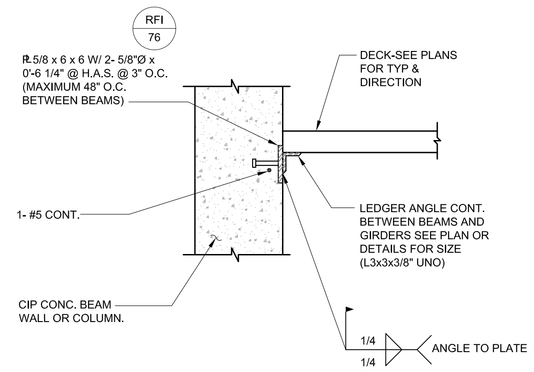
13 SECTION @ BACK - BACK EMBED PLATES
N.T.S.



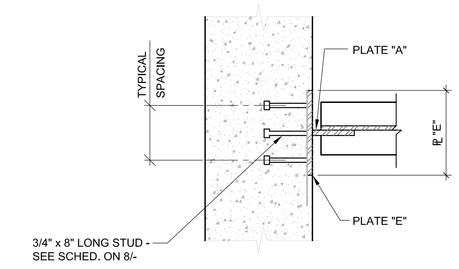
SINGLE CURTAIN	
MAX SPAN	TRIM BAR "T"
4'-0"	2 - #5
8'-0"	2 - #6

DOUBLE CURTAIN	
MAX SPAN	TRIM BAR "T"
6'-0"	2 - #5
10'-0"	2 - #6
14'-0"	4 - #6

9 REINF. @ LINTEL OPENINGS
N.T.S.

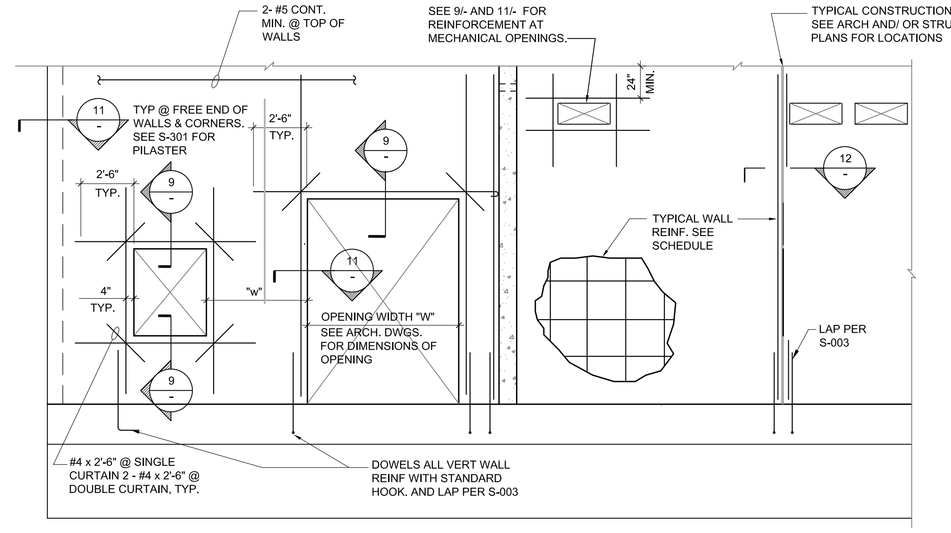


5 SECTION
3/4"=1'-0"



NOTE:
FOR PLATE "E"& STUD SEE 8/-.

1 PLAN VIEW BEAM / GIRDER TO BEAM / WALL
N.T.S.



10 TYPICAL REINF. AT CIP WALLS
SCALE: 3/4"=1'-0"

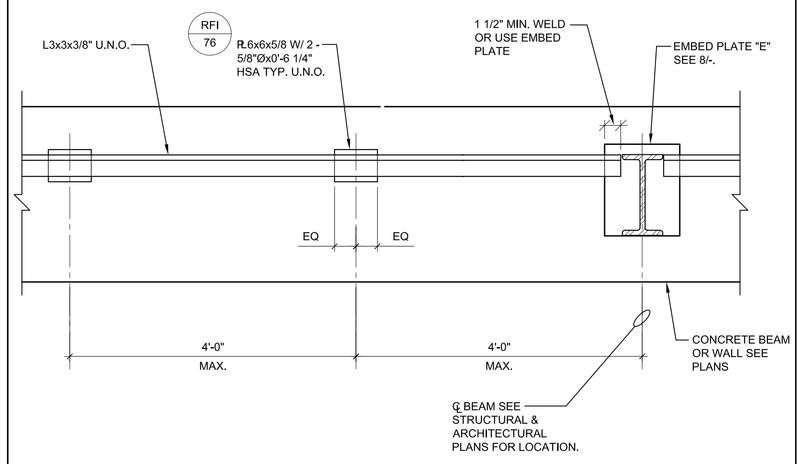
MINIMUM REINFORCEMENT IN CIP CONC WALLS			
WALL SIZE	TYPICAL HORIZ. REINF.	TYPICAL VERT. REINF.	JAMB AND END OF WALL REINF.
8" CIP WALL	#5@14"	#5@14"	2-#5
10" CIP WALL	#6@12" EA. FACE	#6@16" EA. FACE	2-#6

NOTE:
USE THIS SCHEDULE WHERE REINFORCING ISNOT SHOWN OTHERWISE ON SECTIONS, DETAILS OR WALL ELEVATIONS.

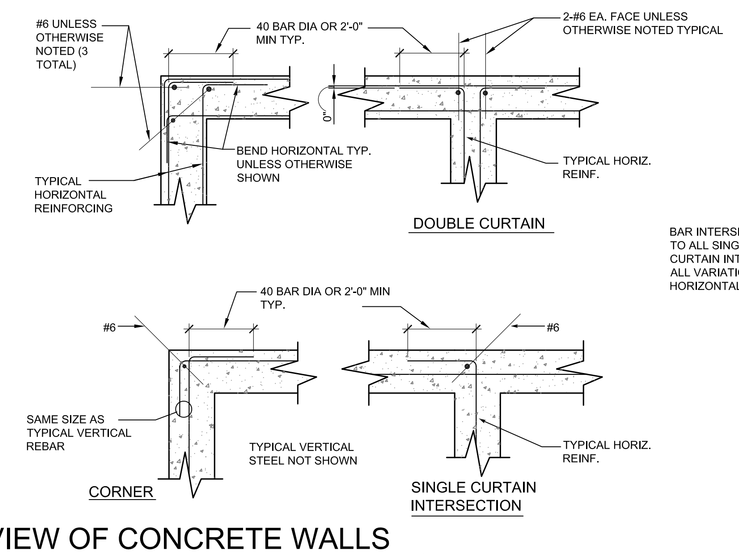
NOTES:

1. VERTICAL REINF. FOR WALLS SHALL BE CONTINUOUS FROM FOOTING TO TOP OF WALL OR FLOOR TO FLOOR WITHOUT SPLICE EXCEPT AS NOTED IN DETAIL.
2. HOLD BARS ACCURATELY IN PLACE IN WALLS DURING CONCRETE PLACEMENT.
3. THE TERM "STANDARD HOOK" SHALL MEAN EITHER:
   - 180 HOOK PLUS AN EXTENSION OF 4 BAR DIAMETERS OR 2 1/2".
   - 90 HOOK PLUS AN EXTENSION OF 12 BAR DIAMETERS.
4. ALL ANGLES AND BENT STRAPS AT TOP ANCHORAGE ARE TO BE INSTALLED TIGHT AGAINST WALL.
5. LAP BARS PER SCHEDULE S-001. EXCEPT AT BASE. LAP VERTICAL DOWELS PER S-003 AT BASE OF WALL.
6. FOR WALL EMBEDS SEE 8/-.
7. SEE 6/S-801 FOR MORE INFO.

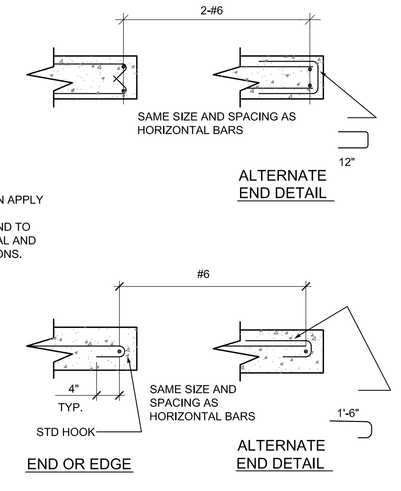
RFI 108



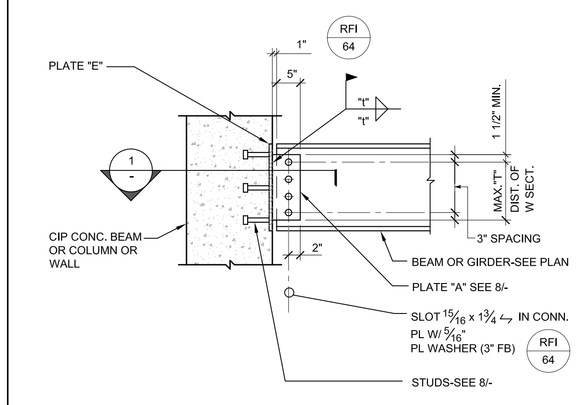
2 BEAM & LEDGER CONNECTION TO CONCRETE BEAM WALL
N.T.S.



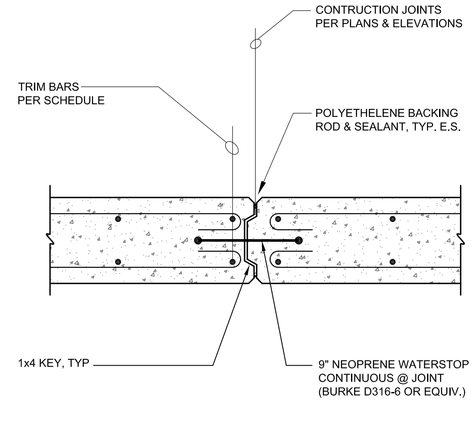
BAR INTERSECTIONS SHOWN APPLY TO ALL SINGLE AND DOUBLE CURTAIN INTERSECTIONS AND TO ALL VARIATIONS OF VERTICAL AND HORIZONTAL REBAR POSITIONS.



11 PLAN VIEW OF CONCRETE WALLS
N.T.S.



3 BEAM TO CONCRETE WALL / BEAM
N.T.S.



12 CONCRETE WALL CONSTRUCTION JOINT
N.T.S.

BEAM CONNECTION SCHEDULE										
BEAM/ GIRDER SIZE	PLATE "A" THICKNESS INCH	PLATE "E" THICKNESS INCHES	PLATE "E" WIDTH INCHES	PLATE "E" DEPTH INCHES	WELD t INCH	NO. OF H.S. ASTM A-325-N 7/8" DIA. BOLTS	STUD DIAMETER INCH	NO. OF 8" LONG STUDS WELDED TO PLATE "E"	HORIZ. STUD SPACING	VERTICAL STUD SPACING
W8	3/8	1/2	10	10	1/4"	2	3/4	4(2-ROWS)	6"	6"
W10	3/8	3/4	10	12	1/4"	3	3/4	4(2-ROWS)	6"	8"
W12	3/8	3/4	10	14	1/4"	3	3/4	6(2-ROWS)	6"	5 1/2"
W14	3/8	3/4	12	16	1/4"	3	3/4	6(2-ROWS)	9"	6 1/2"
W16	3/8	3/4	12	18	5/16"	4	3/4	6(2-ROWS)	9"	7 1/2"
W18	3/8	3/4	12	18	3/8"	5	3/4	6(2-ROWS)	9"	7 1/2"
W21	3/8	3/4	12	21	3/8"	6	3/4	8(2-ROWS)	9"	6"
W24	3/8	3/4	12	24	3/8"	7	3/4	8(2-ROWS)	9"	7"
* HSS 8X	3/8	1/2	10	10	1/4	2	3/4	4(2-ROWS)	5"	5"

RFI 64

NOTES:

1. A325N BOLTS SHALL BE IN ACCORDANCE WITH APPROVED METHODS PER C.B.C. SECTION 2205A.11
2. PROVIDE LONGER DEPTH PLATE WHERE CONCRETE BEAM EXTENDS ABOVE TOP OF DECK. LOCATE PLATE 1" ABOVE TOP OF BEAM.
3. SEE 1/-,3/- FOR ADDITIONAL INFORMATION.

* PROVIDE PLATE "A" E.S. OF HSS

8 BEAM CONNECTION SCHEDULE
N.T.S.

If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch

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NO. ISSUES/REVISIONS DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4
KEYPLAN

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

SHEET TITLE:
TYPICAL DETAILS

SHEET NO:
S-108

ABBREVIATIONS

@	AT
&	AND
ABV	ABOVE
AB	ANCHOR BOLTS
AC	ASPHALTIC CONCRETE
ADDNL	ADDITIONAL
AFF	ABOVE FINISH FLOOR
AGG	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
BLKG	BLOCKING
BLW	BELOW
BEV	BEVELED
BLDG	BUILDING
BM	BEAM
BOC	BOTTOM OF CONCRETE
BOF	BOTTOM OF FOOTING
BOT	BOTTOM
BRBF	BUCKLING RETRAINED BRACED FRAME
BRCG	BRACING
BRG	BEARING
BRG PL	BEARING PLATE
BTWN	BETWEEN
CC	CENTER TO CENTER
CIP	CAST IN PLACE
CJ	CONSTRUCTION JOINT
CTR	CENTER
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINOUS
CP	COMPLETE PENETRATION
DBL	DOUBLE
DEPR	DEPRESSED
DF	DOUGLAS FIR
DIA, ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
(E)	EXISTING
EA	EACH
EF	EACH FACE
EBF	ECCENTRICALLY BRACED FRAME
E.W.	EACH WAY
E.J.	EXPANSION JOINT
EL	ELEVATION
EN	EDGE NAIL
EOS	EDGE OF SLAB
ES	EACH SIDE
EQ	EQUAL
EXP B	EXPANSION BOLT
EXT	EXTERIOR
FAB	FABRICATE
FD	FLOOR DRAIN
FF	FINISH FLOOR
FG	FINISH GRADE
FLG	FLANGE
FND	FOUNDATION
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FT (')	FOOT/FEET
FTG	FOOTING
GA	GAGE
GALV	GALVANIZED
GT	GROUT
HAS	HEADED ANCHOR STUD
HDR	HEADER
HK	HOOK
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IN (")	INCH
INT	INTERIOR
JT	JOINT
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LS	LAG SCREW
LT WT	LIGHT WEIGHT
LG	LONG
MAX	MAXIMUM
MB	MACHINE BOLT
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
(N)	NEW
N.I.C.	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
o.c.	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
OPH	OPPOSITE HAND
PCC	PRECAST CONCRETE
PC	PIECE
PERP	PERPENDICULAR
PL	PLATE
PP	CENTER LINE
PPT	PRESSURE PRESERVATIVE TREATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
R	RADIUS
REINF	REINFORCEMENT
REQD	REQUIRED
S.A.D.	SEE ARCHITECTURAL DRAWINGS
S.C.D.	SEE CIVIL DRAWINGS
S.E.D.	SEE ELECTRICAL DRAWINGS
S.M.D.	SEE MECHANICAL DRAWINGS
S.P.D.	SEE PLUMBING DRAWINGS
SIM	SIMILAR
S.J.	SHRINKAGE JOINT OR SEISMIC JOINT
SOG	SLAB ON GRADE
SQ	SQUARE
SS	STAINLESS STEEL
STAG	STAGGER
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUC	STRUCTURAL
SYMM	SYMMETRICAL
THK	THICK
T.O.C.	TOP OF CONCRETE
T.O.F.	TOP OF FOOTING
T.O.S.	TOP OF STEEL
T.O. SLAB	TOP OF SLAB
T.O.W.	TOP OF WALL
TS	TUBE STEEL
TYP	TYPICAL
T&B	TOP & BOTTOM
TM	TOP MOST
BM	BOTTOM MOST
U.O.N.	UNLESS OTHERWISE NOTED
VERT	VERTICAL
w/	WITH
WSA	WELDED STUD ANCHOR
WWF	WELDED WIRE FABRIC

A. GENERAL

1. THE FOLLOWING STRUCTURAL SHEETS S–109 – S–112 ARE INTENDED TO ONLY ADDRESS THE CONSTRUCTION OR INTERIOR METAL STUD SYSTEMS. SEE INCREMENT #2 FOR STRUCTURAL DESIGN OF THE BUILDING SYSTEM.
2. THE INTENT OF THESE DRAWINGS IS TO SHOW ALL ITEMS NECESSARY TO COMPLETE THE LIGHT GAGE METAL FRAMING. FOR ITEMS, METHODS AND/OR MATERIALS NOT SHOWN. THE MINIMUM REQUIREMENTS OF THE 2007 CBC SHALL GOVERN. ALL WORK AND CONSTRUCTION SHALL COMPLY WITH ALL OTHER APPLICABLE BUILDING CODES, SOIL REPORTS, REGULATIONS AND SAFETY REQUIREMENTS.
3. TYPICAL DETAILS AND NOTES ON THESE SHEETS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.
4. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING AND FORMWORK, ETC., AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING THE CONSTRUCTION OF THIS BUILDING. SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL FLOORS, ROOF AND WALL SHEATHING HAVE BEEN ENTIRELY CONSTRUCTED. SHORING DRAWINGS AND CALCULATIONS SHALL BE SEALED BY A REGISTERED ENGINEER AND SUBMITTED TO ARCHITECT/ENGINEER FOR REVIEW.
5. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS BEFORE PREPARING SHOP DRAWINGS, FABRICATION OR CONSTRUCTION. SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR SIZE AND LOCATIONS OF PIPES, SLEEVES, PITS, VENTS, DUCTS, ETC. AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
6. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
7. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
8. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAIL IS GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
9. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT LIMITED TO BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
10. OPENINGS, POCKETS, ETC., LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, WALLS, UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS. FOR ANY FURTHER RESTRICTIONS ON OPENINGS IN STRUCTURAL ELEMENTS, SEE APPLICABLE SECTIONS BELOW.

B. DESIGN BASIS

1. REFERENCE CODE

   2007 CALIFORNIA BUILDING CODE, VOLUME 2

2. DESIGN LOADS:

   DEAD LOADS: THE ACTUAL WEIGHT OF ALL PERMANENT CONSTRUCTION AND FIXED EQUIPMENT.

*	OFFICE AREAS/ CLASSROOMS	50 PSF
*	HIGH DENSITY STORAGE & FILE ROOMS	125 PSF
*	CORRIDORS, STAIRS	100 PSF
*	PARTITION LOAD ALLOWANCE IN OFFICE AND ADMINISTRATIVE AREAS	15 PSF
*	ASSEMBLY ROOMS/ AREAS, AUDITORIUMS	100 PSF
*	ROOF	20 PSF
*	SLABS ON GRADE	80 PSF

WIND LOADS: BASIC WIND SPEED ..... 85 MPH
EXPOSURE C

SEISMIC LOADS:

SEISMIC LOADS WILL BE DETERMINED IN ACCORDANCE WITH 2007 CBC AND ASCE 7–05 USING THE FOLLOWING
DESIGN CRITERIA:

* SITE CLASSIFICATION: CLASS D
* DESIGN FACTORS: Fa = 1.0 Fv = 1.5
  Sms = 1.72 Sm1 = 1.44
  Sds = 1.15 Sd1 = 0.96
* SEISMIC USE GROUP III:
* I = 1.25
* R = 6 (SPECIAL CONCENTRIC BRACED FRAME); R=5 (SPECIAL REINFORCED CONCRETE SHEARWALL)
* SEISMIC DESIGN CATEGORY: E

C. METAL STUDS

1. ALL LIGHTGAGE METAL FRAMING SHALL BE AS NOTE BELOW:
   EXTERIOR STUDS: GALVANIZED
   INTERIOR STUDS: GALVANIZED
2. ALL LIGHTGAGE METAL FRAMING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISI "SPECIFICATIONS FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBER" LATEST EDITION.
3. ALL LIGHTGAGE METAL FRAMING SHALL CONFORM WITH THE FOLLOWING:

GALVANIZED STUDS: 12, 14 AND 16 GAUGE	ASTM A653, GRADE 50 (Fy = 50,000 psi)
GALVANIZED STUDS: 18 GAUGE	ASTM A653 GRADE 33 (Fy = 33,000 psi)
GALVANIZED TOP TRACK: 12, 14, AND 16 GAUGE SLIPTRACK SYSTEMS OR EQUAL	ASTM A653 GRADE 50 (Fy = 50,000 psi) INTERIOR VERTICAL PARTITIONS
GALVANIZED TOP TRACK: 18 GAUGE SLIPTRACK SYSTEMS OR EQUAL	ASTM A653 GRADE 33 (Fy = 33,000 psi) INTERIOR VERTICAL PARTITIONS
GALVANIZED TRACK END CLOSURES, BRIDGING AND ACCESSORIES	ASTM A653, GRADE 33, U.N.O.) (Fy = 33,000 psi)

4. DOUBLE VERTICAL STUDS SHALL BE STITCH WELDED TOGETHER ON BOTH FLANGE WITH 1/16" GROOVE WELDS X 1" LONG AT 12" ON CENTER, U.N.O.
5. BOTTOM STUD TRACKS FOR INTERIOR PARTITIONS SHALL MATCH THE SIZE AND GAGE OF THE WALL STUDS AND SHALL HAVE 1.5" FLANGES (U.N.O.). TOP TRACKS AT INTERIOR PARTITION SHALL HAVE 2" FLANGES MATCH THE SIZE AND GAGE OF TYPICAL STUDS BUT SHALL BE 14 GA. MIN, AND SHALL BE MANUFACTURED BY SLIP TRACK SYSTEMS OR EQUAL. RFI 285
6. MINIMUM SECTION PROPERTIES FOR STEEL STUDS AT INTERIOR AND EXTERIOR PARTITIONS AND THOSE STUDS REFERENCED ON ARCHITECTURAL DRAWING SHALL BE AS FOLLOWS:

MIN. GA (THICKNESS)	STUD / TRACK TYPE	STUD / TRACK SIZE	EFFICTIVE I in^4	EFFICTIVE S in^3
18 GA (.0451") 43 mils	400S138–43	4"	0.776	0.382
16 GA (.0566") 54 mils	400S138–54	4"	0.953	0.457
16 GA (.0566") 54 mils	400S162–54	4"	1.098	0.533
18 GA (.0451") 43 mils	400S200–43	4"	1.047	0.509
16 GA (.0566") 54 mils	400S200–54	4"	1.292	0.580
14 GA (.0713") 68 mils	400S200–68	4"	1.589	0.766
18 GA (.0451") 43 mils	400T200–43	4"	0.811	0.311
16 GA (.0566") 54 mils	400T200–54	4"	1.037	0.397
18 GA (.0451") 43 mils	600S138–43	6"	2.042	0.670
16 GA (.0566") 54 mils	600S138–54	6"	2.518	0.809
18 GA (.0451") 43 mils	600S162–43	6"	2.316	0.767
16 GA (.0566") 54 mils	600S162–54	6"	2.860	0.927
18 GA (.0451") 43 mils	600S200–43	6"	2.683	0.873
16 GA (.0566") 54 mils	600S200–54	6"	3.319	1.002
14 GA (.0713") 68 mils	600S200–68	6"	4.101	1.317
18 GA (.0451") 43 mils	600T200–43	6"	2.076	0.565
16 GA (.0566") 54 mils	600T200–54	6"	2.641	0.717
18 GA (.0451") 43 mils	800S200–43	8"	5.302	1.293
16 GA (.0566") 54 mils	1000S200–54	10"	11.278	1.805

THESE VALUES ARE TAKEN FROM THE SSMA CATALOG, ICC #4943P & THE DIETRICH CATALOG ICC #4784.

7. MINIMUM SECTION PROPERTIES FOR PROPRIETARY JAMSTUDS: FOR ALTERNATE METAL STUD JAMBS.

MIN. GA (THICKNESS)	STUD TYPE	STUD SIZE	EFFICTIVE I in^4	EFFICTIVE S in^3
18 GA (.0451") 43 mils	400JS250–43	4"	1.242	0.561
16 GA (.0566") 54 mils	400JS250–54	4"	1.591	0.709
12 GA (.1017") 97 mils	400JS250–97	4"	2.730	1.364
16 GA (.0566") 54 mils	400JS350–54	4"	1.821	0.739
18 GA (.0451") 43 mils	600JS250–43	6"	3.168	0.968
16 GA (.0566") 54 mils	600JS250–54	6"	4.056	1.217
16 GA (.0566") 54 mils	600JS350–54	6"	4.565	1.265

NOT USED

THESE VALUES ARE TAKEN FROM THE STEEL NETWORK JAMSTUD SECTION PROPERTIES TABLE.

8. ALL SHEET METAL SCREWS SHALL PROTRUDE 1/4" THROUGH METAL FRAMING. RFI 286
9. AS A MINIMUM ANCHOR TRACK TO CONCRETE WITH HILTI 0.145" DIAMETER X–DNI (ICC #2388) LOW VELOCITY POWDER DRIVEN INSERTS @ 16" o.c. OR APPROVED EQUAL. THE INSERTS SHALL HAVE A MINIMUM 1 1/2" EMBEDMENT INTO THE CONCRETE AND SHALL BE LOCATED A MINIMUM 3" FROM ANY CONCRETE EDGE. THE INSERTS SHALL BE PLACED ADJACENT TO EACH WALL STUD AT A MAXIMUM DISTANCE OF 3". POWDER DRIVEN ANCHORS SHALL NOT BE USED IN CONCRETE CURBS OR EXTERIOR WALLS EXCEPT AS SHOWN ON TYPICAL DETAILS.
10. CONTRACTOR SHALL COMPLY WITH ALL OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS AND RECOMMENDATIONS. ALL METAL STUDS SHALL HAVE STIFFENED FLANGES. SEE DRAWINGS FOR SPECIFIC DETAILS ON CONNECTIONS, BRACING, BRIDGING, ETC. CONTRACTOR SHALL PROVIDE ALL ACCESSORIES INCLUDING. BUT NOT LIMITED TO, TRACKS, CLIPS, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATIONS, AND AS RECOMMENDED BY THE MANUFACTURER FOR THE STEEL MEMBERS USED.
11. ALL METAL STUDS TO BE MANUFACTURED BY MEMBERS OF THE STEEL STUD MANUFACTURER'S ASSOCIATION, SSMA (ICC #4943P), U.N.O.
12. SEE ARCH PLAN FOR SPECIAL METAL STUD FRAMING WHERE INDICATED.
13. FOR FASTENERS INSTALLED IN CONCRETE, MINIMUM SPACING BETWEEN FASTENERS IS 4" o.c. AND MINIMUM EDGE DISTANCE IS 3", TYP. U.N.O.
14. FOR SHEET METAL SCREWS INSTALLED IN LIGHT GAUGE METAL FRAMING, MINIMUM SPACING BETWEEN FASTENERS IS 1 1/2" o.c. AND MINIMUM EDGE DISTANCE IS 3/4" TYP. U.N.O.
15. AS MINIMUM PROVIDE (2) #10 SMS AT EACH LIGHT GAUGE METAL MEMBER CONNECTION, U.N.O.

D. CURTAIN WALL / STOREFRONT DESIGN WINDOW SYSTEM

1. CURTAIN WALL SYSTEM SHALL BE DESIGNED AND BRACED TO MEET ALL GRAVITY, SEISMIC AND WIND LOADING CRITERIA AS STIPULATED ON THE GENERAL STRUCTURAL NOTES, SECTION B (DESIGN BASIS).
2. THE DESIGN AND DETAILING OF THE CURTAIN WALL SYSTEM SHALL MEET ALL APPLICABLE SECTIONS OF THE 2007 C.B.C. WITH STATE AMENDMENTS.
3. THE CURTAIN WALL SYSTEM SHALL ACCOMMODATE INTERSTORY DRIFTS PER 2007 CBC WITH STATE AMENDMENTS SECTION 1633A2.4.2. THE GENERAL CONTRACTOR SHALL SUBMIT COMPLETE STRUCTURAL PLANS, SECTIONS, AND CALCULATIONS STAMPED AND SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA. SUBMITTALS SHALL BE IN ACCORDANCE WITH DIVISION 1. ALL PLANS AND SECTIONS SHALL BE DRAWN TO SCALE. THE GENERAL CONTRACTOR SHALL ALLOW TWO WEEKS FOR THE ENGINEER OF RECORD TO REVIEW THE ABOVE REFERENCED CURTAIN WALL CALCULATIONS AND SHOP DRAWINGS.

E. DRILLED-IN EXPANSION BOLTS AND ADHESIVE ANCHORS IN CONCRETE

SEE S–003

NOTES

1. ANCHOR DIAMETER REFERS TO THE THREAD SIZE OF THE WEDGE ANCHOR.
2. APPLY PROOF TEST LOADS TO WEDGE ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH AND APPLY LOAD.
3. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S).
4. SHALL NOT BE USED AT OR BELOW GRADE.
5. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.
6. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:

   HYDRAULIC RAM METHOD: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR WEDGE AND SLEEVE TYPE ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE.

   TORQUE TEST:

   ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH MUST ATTAIN THE SPECIFIED TORQUE WITHIN 1/2 TURN OF THE NUT. ALL TESTING REQUIREMENTS SHALL BE IN COMPLIANCE W/ DSA IR 19–1

   EXCEPTIONS:

   UNDERCUT ANCHORS THAT ARE SO DESIGNED TO ALLOW VISUAL CONFIRMATION OF FULL SET, NEED NOT BE TENSION OR TORQUE TESTED. IF THE MANUFACTURER'S INSTALLATION TORQUE IS LESS THAN THE SPECIFIED TEST TORQUE , USE THE MANUFACTURER'S SPECIFIED INSTALLATION TORQUE FOR TESTING THE ANCHORS.
7. TESTING MUST OCCUR 24 HOURS MINIMUM AFTER INSTALLATION OF THE SUBJECT ANCHORS.
8. WHEN INSTALLING DRILLED–IN ANCHORS AND /OR POWDER DRIVEN PINS IN EXISTING NON–PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS.
9. THESE TENSION VALUES ARE ONLY APPLICABLE WHEN THE ANCHORS ARE INSTALLED WITH SPECIAL INSPECTION AS SET FORTH IN SECTION 306 AND 1701 OF THE CODE.
10. THE TABULATED VALUES ARE FOR ANCHORS WITH SPACE AND EDGE DISTANCES AS PROVIDED IN TABLE 3 OF ICC ESR–1917
11. THE TABULATED VALUES FOR LIGHT WEIGHT CONCRETE ARE THE ANCHORS INSTALLED IN LIGHTWEIGHT EXPANDED SHALE AGGREGATE CONCRETE HAVING THE COMPRESSIVE STRENGTH AT THE TIME OF INSTALLATION. CONCRETE AGGREGATE MUST COMPLY WITH U.B.C. STANDARD NO. 19–3
12. FOR WEDGE ANCHORS INSTALLED IN LIGHT WEIGHT CONCRETE TO RESIST SEISMIC OR WIND LOADS, THE ALLOWABLE TENSION AND SHEAR CAPACITY OF ANCHORS SHALL BE TAKEN AS 60% OF THE ALLOWABLE VALUE LISTED IN ICC REPORT #1917.
13. IF ANY ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME CATEGORY, NOT PREVIOUSLY TESTED, SHALL BE TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS THE TEST REQUIREMENTS. THE INITIAL TESTING FREQUENCY SHALL THEN BE RESUMED.

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

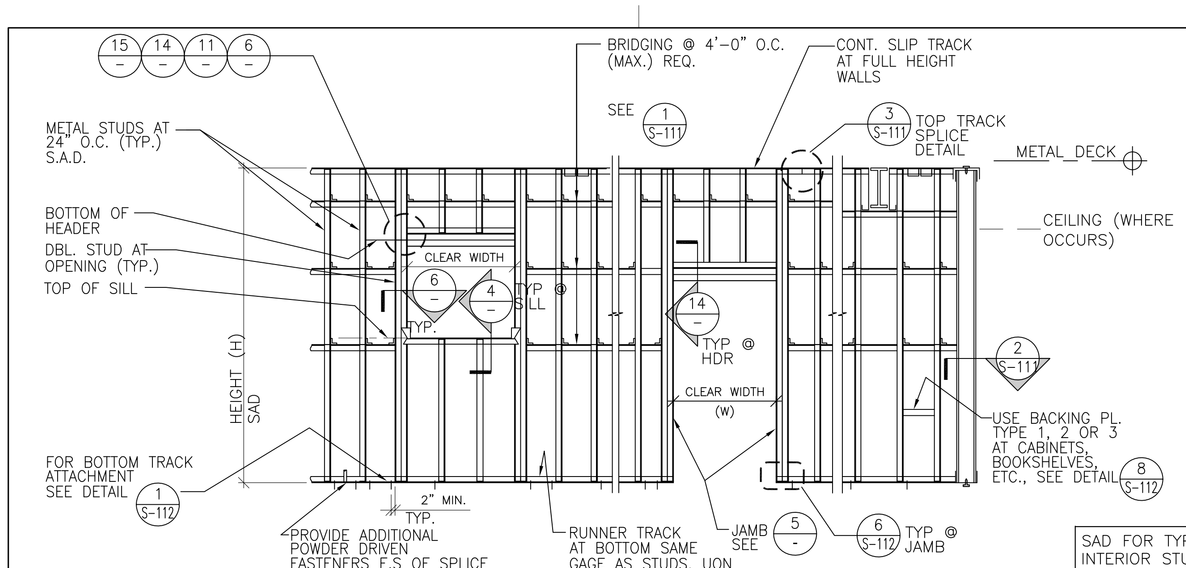
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4
ADDITION

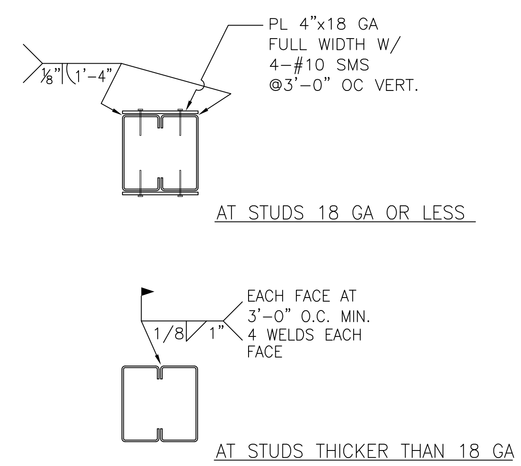
PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

SHEET TITLE:
GENERAL STRUCTURAL NOTES

SHEET NO:
S–109



13 TYPICAL INTERIOR NON-BEARING METAL STUD WALL ELEVATION
N.T.S.



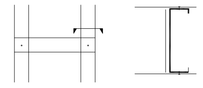
9 TYPICAL INTERIOR METAL STUD STITCH CON. DETAIL
N.T.S.

JAMB SCHEDULE								
WIDTH OF OPENING "W"	1 HOUR FIRE RATED WALL SYSTEM				2 HOUR FIRE RATED WALL SYSTEM			
	4" WALL		6" WALL		4" WALL		6" WALL	
	STANDARD	JAMSTUD*	STANDARD	JAMSTUD*	STANDARD	JAMSTUD*	STANDARD	JAMSTUD*
W ≤ 2'-0"	400S138-43	400JS250-43	600S138-43	600JS250-43	400S162-54	400JS250-43	600S162-54	600JS250-43
2'-0"< W ≤4'-0"	400S138-54	400JS250-43	600S138-54	600JS250-43	400S200-54	400JS250-43	600S200-54	600JS250-43
4'-0"< W ≤6'-0"	400S162-54	NOT USED 400JS250-54	600S162-54	NOT USED 600JS250-54	400S200-68	NOT USED 400JS250-54	600S200-68	NOT USED 600JS250-54
6'-0"< W ≤8'-0"	2-400S138-54	400JS250-54	2-600S138-54	600JS250-54	2-400S138-54	400JS350-54	2-600S138-54	600JS250-54
8'-0"< W ≤12'-0"	2-400S138-54	400JS350-54	2-600S138-54	600JS350-54	2-400S200-68	400JS250-97	2-600S200-68	600JS350-54

1. 1-HOUR FIRE RATED WALL IS TWO-SIDED, WITH SINGLE GYP ON EACH SIDE.
2. 2-HOUR FIRE RATED WALL IS TWO-SIDED, WITH DOUBLE GYP ON EACH SIDE.
3. SEE 13/S-111 FOR TOP REINFORCEMENT FOR OPENINGS GREATER THAN 6'-0".

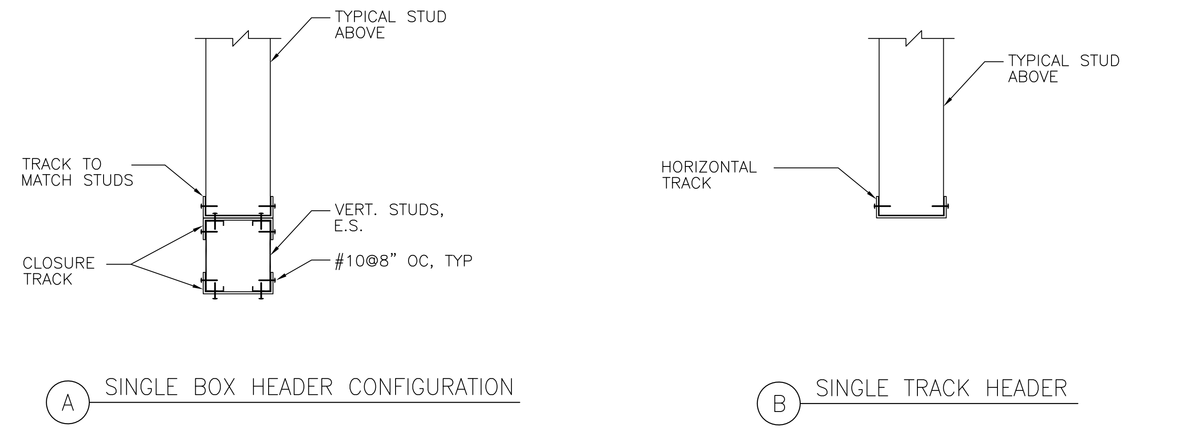
5 TYPICAL INTERIOR & ALTERNATE METAL STUD JAMB SCHEDULE
N.T.S.

RFI 429.1 NOTCHED BLOCKING ACCEPTABLE WHEN NO VERTICAL STUDS ARE INTERUPTED



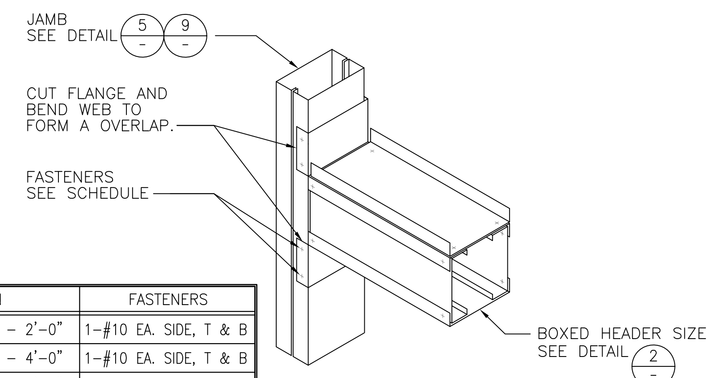
RFI 429 BLOCKING IS ISIMILAR TO DETAIL 1/S-111, HORIZONTAL STRAPING NOT REQUIRED

HEADERS ARE INTENDED TO CARRY WEIGHT OF INTERUPTED STUD



NOTE:
FOR CONNECTION OF HEADER TO JAMB SEE DETAIL 6 -

14 TYPICAL INTERIOR HEAD CONNECTION DETAILS
N.T.S.



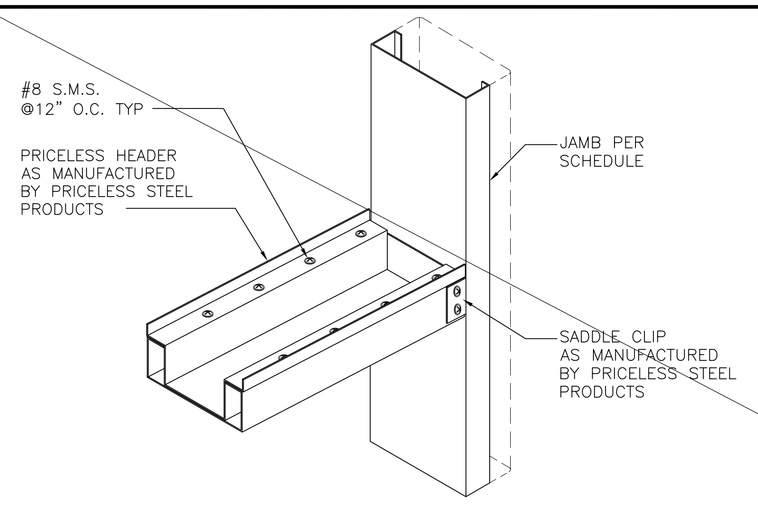
SPAN	FASTENERS
0'-0" - 2'-0"	1-#10 EA. SIDE, T & B
2'-1" - 4'-0"	1-#10 EA. SIDE, T & B
4'-1" - 8'-0"	2-#10 EA. SIDE, T & B
8'-1" - 12'-0"	3-#10 EA. SIDE, T & B
12'-1" - 16'-0"	3-#10 EA. SIDE, T & B

6 TYPICAL INTERIOR HEAD AND SILL TO JAMB CONNECTION DETAIL
N.T.S.

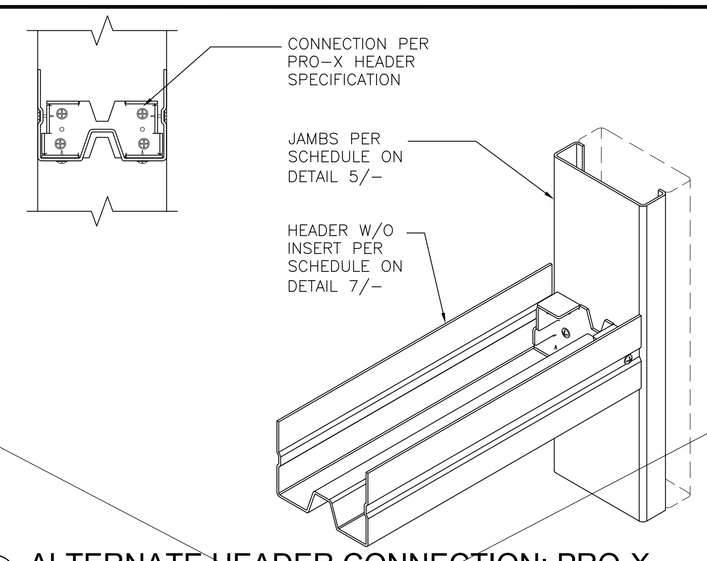
HEADER SCHEDULE				
WIDTH OF OPENING "W"	CONN. TYPE	1 HOUR FIRE RATED WALL SYSTEM	CONN. TYPE	2 HOUR FIRE RATED WALL SYSTEM
W ≤ 2'-0"		BLOCKING ONLY		BLOCKING ONLY
2'-0"< W ≤4'-0"	B	(1)-HORIZONTAL TRACK 16GA x 200 LEG	B	(1)-HORIZONTAL TRACK 16GA x 200 LEG
4'-0"< W ≤6'-0"	A	(2)-VERTICAL STUDS 400S138-43 (2)-CLOSURE TRACKS 18GA x 200 LEG	A	(2)-VERTICAL STUDS 400S138-43 (2)-CLOSURE TRACKS 18GA x 200 LEG
6'-0"< W ≤8'-0"	A	(2)-VERTICAL STUDS 600S138-43 (2)-CLOSURE TRACKS 18GA x 200 LEG	A	(2)-VERTICAL STUDS 600S162-43 (2)-CLOSURE TRACKS 18GA x 200 LEG
8'-0"< W ≤12'-0"	A	(2)-VERTICAL STUDS 800S200-43 (2)-CLOSURE TRACKS 18GA x 200 LEG	A	(2)-VERTICAL STUDS 1000S200-54 (2)-CLOSURE TRACKS 18GA x 200 LEG

2 HEADER SCHEDULE RFI 285
N.T.S.

NOTES:
1) TRACKS NOTED ABOVE TO MATCH WALL THICKNESS



15 ALTERNATE HEADER CONNECTION: PRICELESS HEADER
N.T.S.



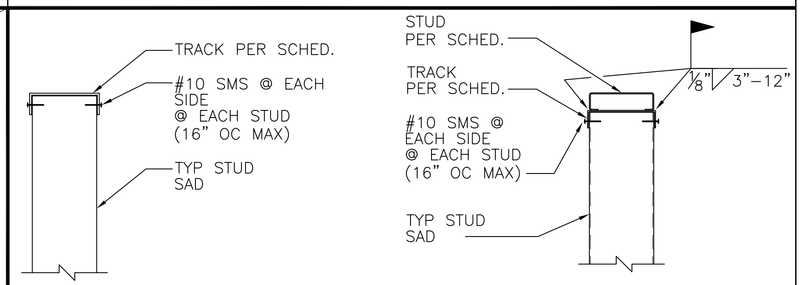
11 ALTERNATE HEADER CONNECTION: PRO-X
N.T.S.

ALTERNATE HEADER SCHEDULE: PRICELESS		
WIDTH OF OPENING "W"	1 HOUR FIRE RATED WALL SYSTEM	2 HOUR FIRE RATED WALL SYSTEM
W ≤ 2'-0"	BLOCKING ONLY	BLOCKING ONLY
2'-0"< W ≤4'-0"	"D" x HDR200-33	"D" x HDR200-33
4'-0"< W ≤6'-0"	"D" x HDR200-43	"D" x HDR250-43
6'-0"< W ≤8'-0"	"D" x HDR450-68	"D" x HDR450-68
8'-0"< W ≤12'-0"	-	-

ALTERNATE HEADER SCHEDULE: PRO-X		
WIDTH OF OPENING "W"	1 HOUR FIRE RATED WALL SYSTEM	2 HOUR FIRE RATED WALL SYSTEM
W ≤ 2'-0"	BLOCKING ONLY	BLOCKING ONLY
2'-0"< W ≤4'-0"	"D" x X425-33	"D" x X425-43
4'-0"< W ≤6'-0"	"D" x X425-54	"D" x X425-54
6'-0"< W ≤8'-0"	"D" x X425-68	"D" x XTC425-68
8'-0"< W ≤12'-0"	-	-

7 ALTERNATE INTERIOR METAL STUD HEADER SCHEDULE
N.T.S.

NOTES:
1) FOR 8'-0"≤W<12'-0" OPENING SEE DETAIL 2/-
2) "D"-WIDTH TO MATCH TYPICAL STUD



B SILL : UP TO 8'-0" OPENING WIDTH

A SILL : 8'-0" TO 16'-0" OPENING WIDTH

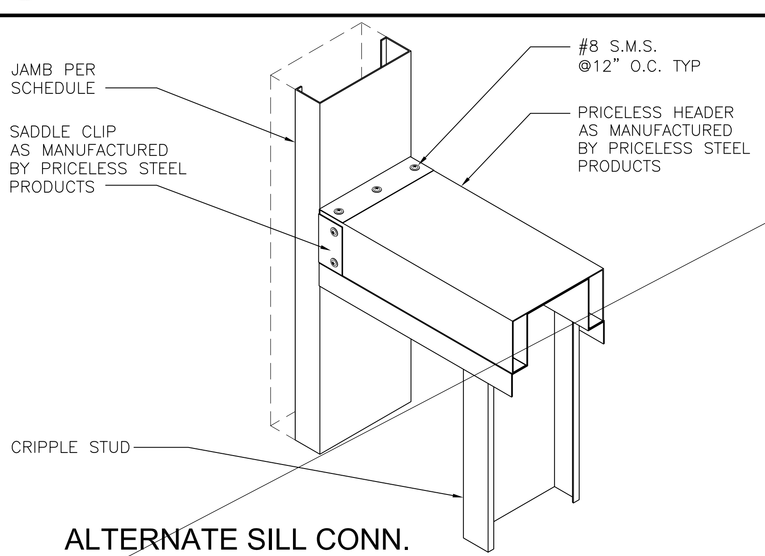
NOTE:
FOR CONNECTION OF SILL TO JAMB SEE DETAIL 6 - SIM.

SILL SCHEDULE				
WIDTH OF OPENING "W"	1 HOUR FIRE RATED WALL SYSTEM			
	TRACK		STUD	
	4" Wall	6" WALL	4" WALL	6" WALL
W ≤ 2'-0"	BLOCKING ONLY	BLOCKING ONLY	N/A	N/A
2'-0"<W≤4'-0"	400T200-43	600T200-43	N/A	N/A
4'-0"<W≤6'-0"	400T200-43	600T200-43	N/A	N/A
6'-0"<W≤8'-0"	400T200-43	600T200-43	N/A	N/A
8'-0"<W≤12'-0"	See Note 1	See Note 1	400S200-43	600S200-43

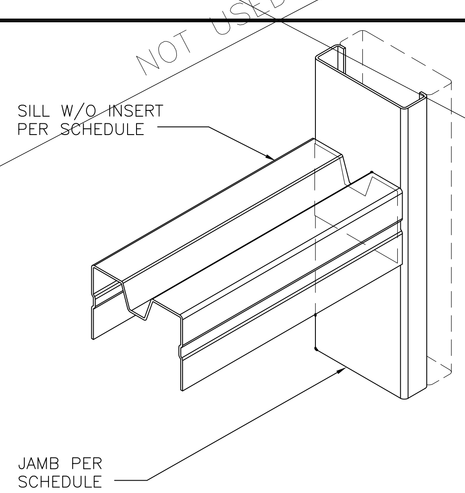
SILL SCHEDULE				
WIDTH OF OPENING "W"	2 HOUR FIRE RATED WALL SYSTEM			
	TRACK		STUD	
	4" Wall	6" WALL	4" WALL	6" WALL
W ≤ 2'-0"	BLOCKING ONLY	BLOCKING ONLY	N/A	N/A
2'-0"<W≤4'-0"	400T200-43	600T200-43	N/A	N/A
4'-0"<W≤6'-0"	400T200-43	600T200-43	N/A	N/A
6'-0"<W≤8'-0"	400T200-43	600T200-43	N/A	N/A
8'-0"<W≤12'-0"	400T200-43	600T200-43	400S138-43	600S138-43

NOTES:
1. USE THE SAME GAGE AS THE INFILL STUD.

4 TYPICAL INTERIOR SILL CONNECTION DETAILS
N.T.S.



16 ALTERNATE SILL CONN. PRICELESS SILL
N.T.S.



12 ALTERNATE PRO-X SILL TO JAMB CONNECTION
N.T.S.

ALTERNATE SILL SCHEDULE: PRICELESS		
WIDTH OF OPENING "W"	1 HOUR FIRE RATED WALL SYSTEM	2 HOUR FIRE RATED WALL SYSTEM
W ≤ 2'-0"	BLOCKING ONLY	BLOCKING ONLY
2'-0"< W ≤4'-0"	"D" x HDR200-33	"D" x HDR200-33
4'-0"< W ≤6'-0"	"D" x HDR200-33	"D" x HDR200-33
6'-0"< W ≤8'-0"	"D" x HDR200-33	"D" x HDR200-33
8'-0"< W ≤12'-0"	"D" x HDR250-43	"D" x HDR300-54

ALTERNATE SILL SCHEDULE: PRO-X		
WIDTH OF OPENING "W"	1 HOUR FIRE RATED WALL SYSTEM	2 HOUR FIRE RATED WALL SYSTEM
W ≤ 2'-0"	BLOCKING ONLY	BLOCKING ONLY
2'-0"< W ≤4'-0"	"D" x X425-33	"D" x X425-33
4'-0"< W ≤6'-0"	"D" x X425-33	"D" x X425-33
6'-0"< W ≤8'-0"	"D" x X425-33	"D" x X425-33
8'-0"< W ≤12'-0"	"D" x X425-43	"D" x X425-54

8 ALTERNATE INTERIOR METAL STUD SILL SCHEDULE
N.T.S.

NOTES:
1) "D" - WIDTH TO MATCH TYPICAL STUD

If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch

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NO. ISSUES/REVISIONS DATE

PROJECT RECORD SET

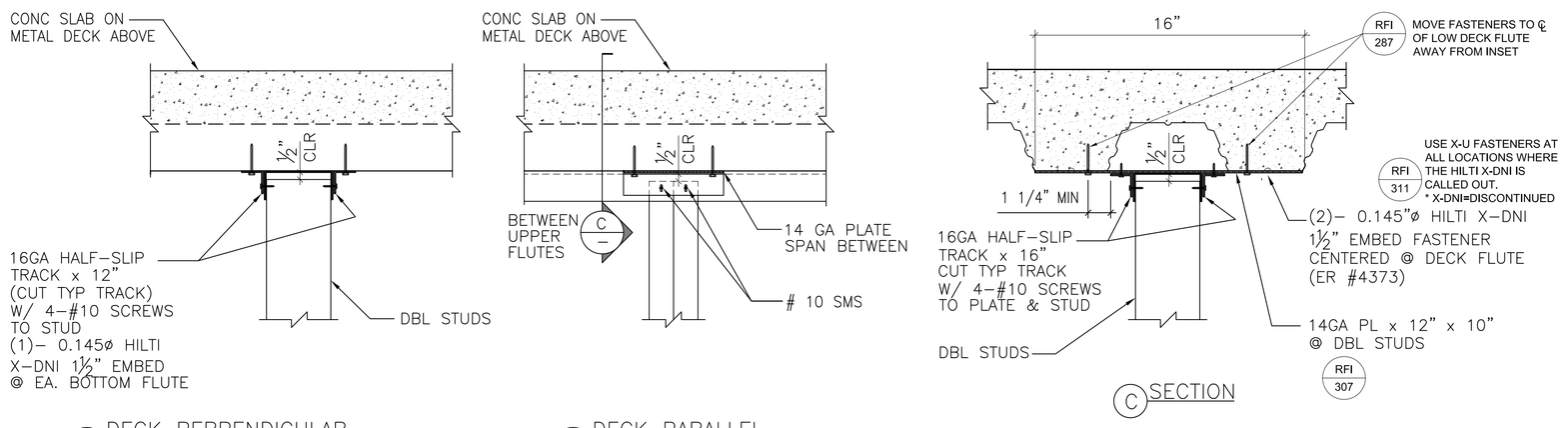
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4
KEYPLAN

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

SHEET TITLE:
INTERIOR METAL STUDS DETAILS

SHEET NO:
S-110



A DECK PERPENDICULAR TO WALL

B DECK PARALLEL TO WALL

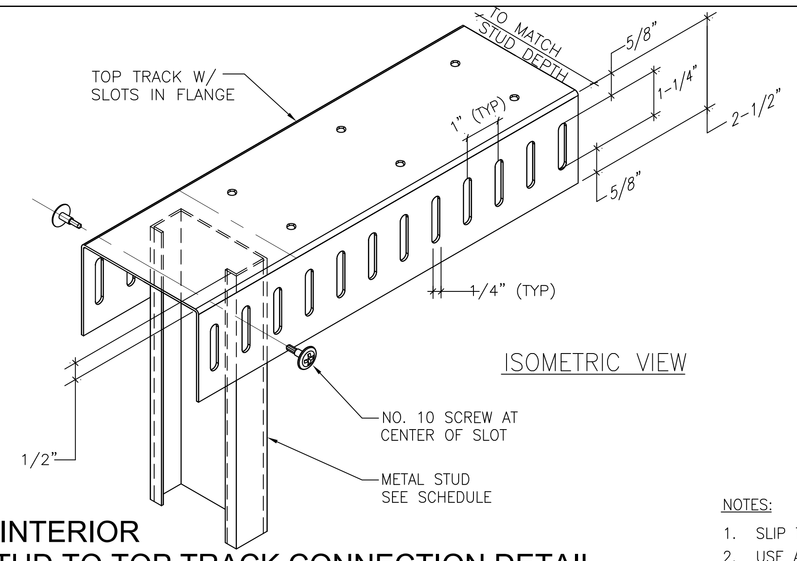
C SECTION

NOTE:

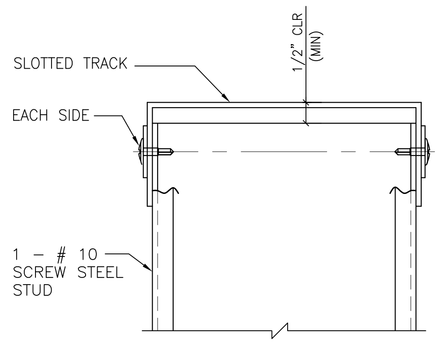
1. DETAIL APPLIES FOR JAMBS AT OPENINGS GREATER THAN 6'-0" AND AT DBL STUDS FOR LARGE WALL EQUIPMENT
2. SEE 4/- FOR TYPICAL ATTACHMENT EITHER SIDE OF JAMB

RFI 307 — IF WALL IS DIRECTLY UNDERNEATH THE DECK FLUTE WALL PLATE IS NOT REQUIRED

13 TYPICAL INTERIOR DOUBLE STUD WALL TOP CONNECTION
N.T.S.



ISOMETRIC VIEW

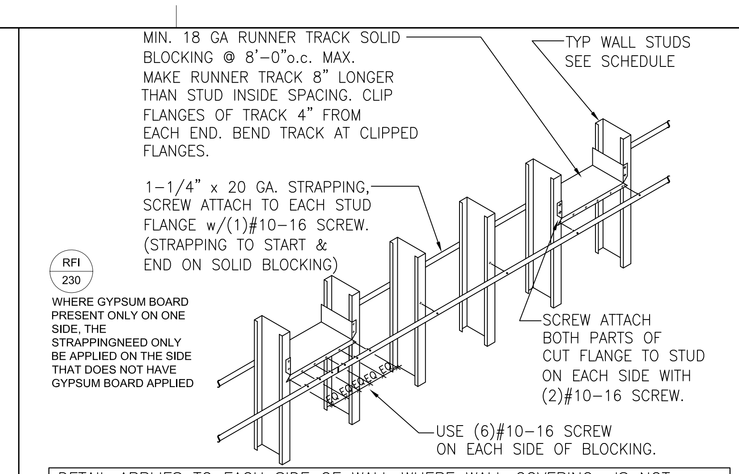


SECTION

NOTES:

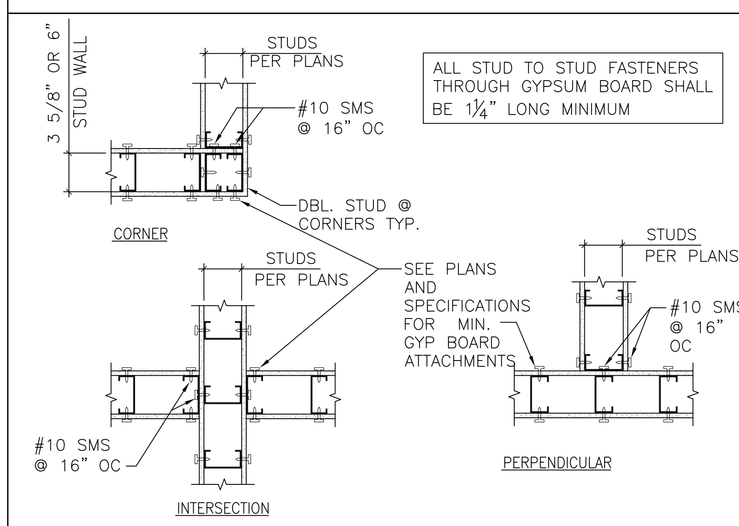
1. SLIP TRACK (ESR #1042) 14 GA. MIN. RFI 285
2. USE AT LOCATIONS SLOPED ≤ 5/8" PER FT.
3. SEE 4/- WHERE WALL IS PARALLEL TO METAL DECK.

14 TYPICAL INTERIOR METAL STUD TO TOP TRACK CONNECTION DETAIL
N.T.S.



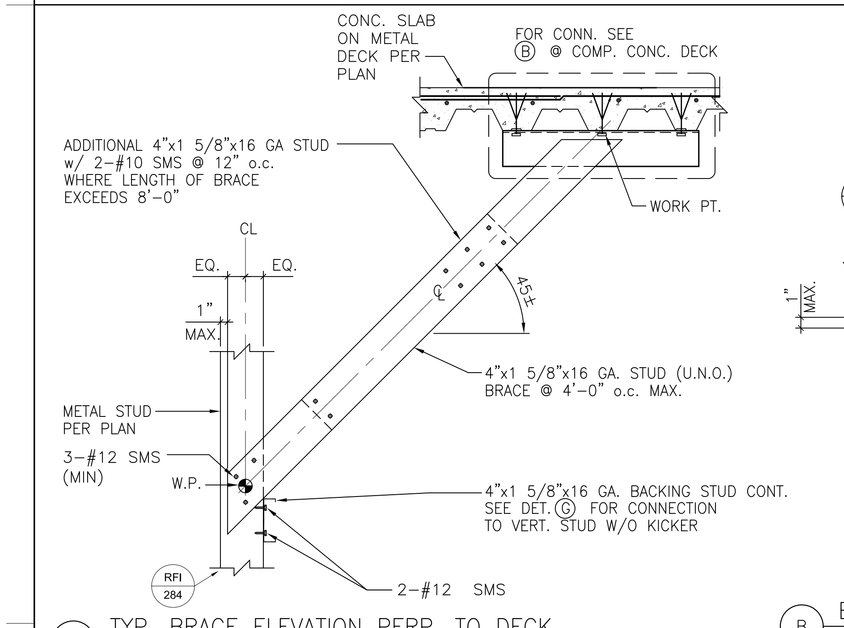
DETAIL APPLIES TO EACH SIDE OF WALL WHERE WALL COVERING IS NOT REQUIRED OR IS NOT FULL HEIGHT. (WHENEVER THERE IS NOT FULL HEIGHT GYPSUM BOARD) SPACE BRACING MAXIMUM OF 4'-0" ON CENTER VERTICALLY. RFI 230

1 TYPICAL INTERIOR LATERAL BRIDGING OF METAL STUDS
N.T.S.

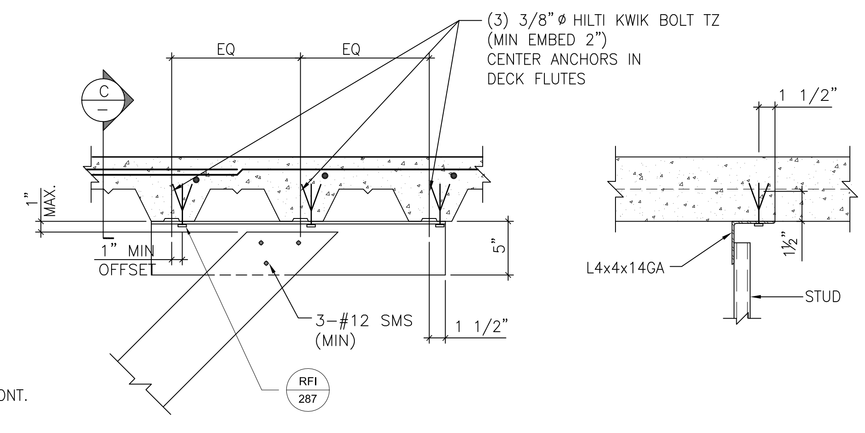


ALL STUD TO STUD FASTENERS THROUGH GYPSUM BOARD SHALL BE 1¼" LONG MINIMUM

2 TYPICAL INTERIOR STUD CONNECTION @ WALL INTERSECTIONS
N.T.S.

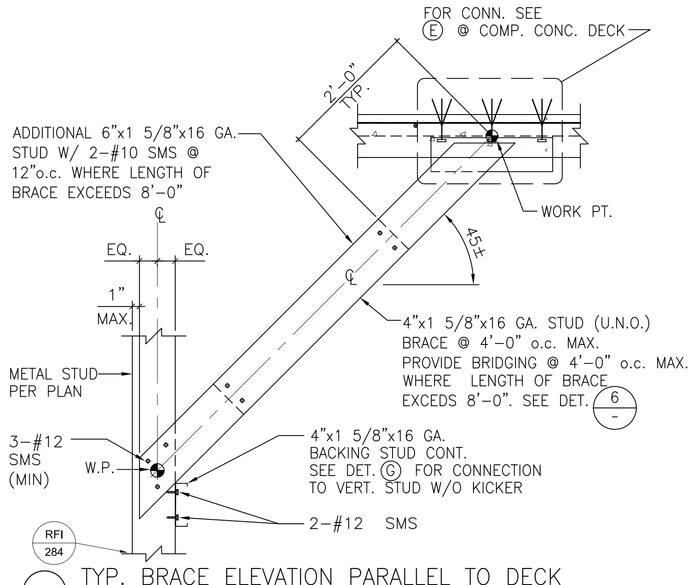


A TYP. BRACE ELEVATION PERP. TO DECK

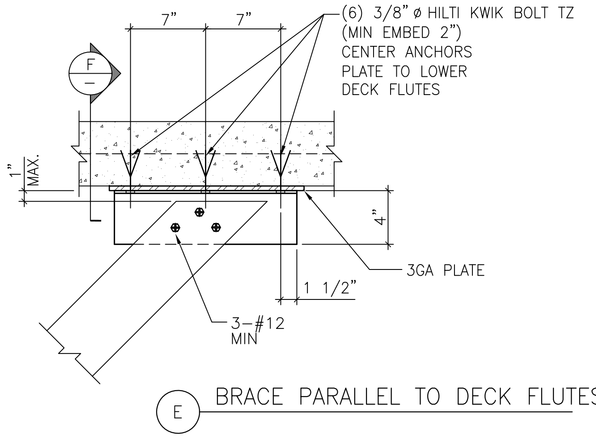


B BRACE PERPENDICULAR TO DECK FLUTES

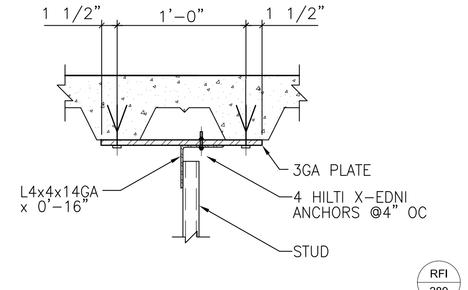
C SECTION



D TYP. BRACE ELEVATION PARALLEL TO DECK

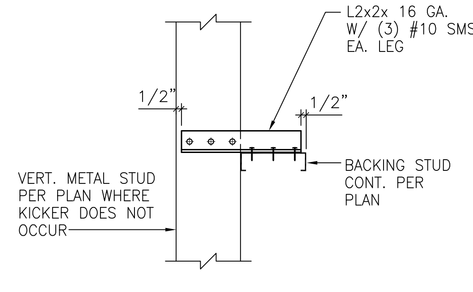


E BRACE PARALLEL TO DECK FLUTES



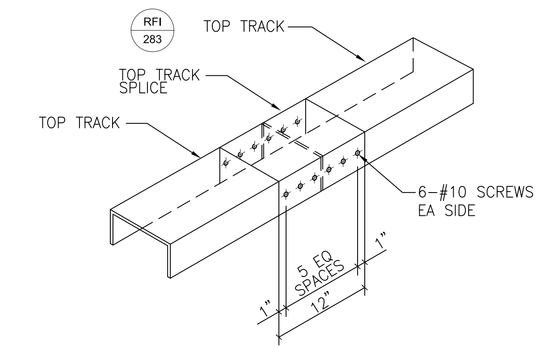
F SECTION

NOTE: PLATE NOT REQ'D IF BRACE ATTACHES DIRECTLY TO LOW FLUTE RFI 289

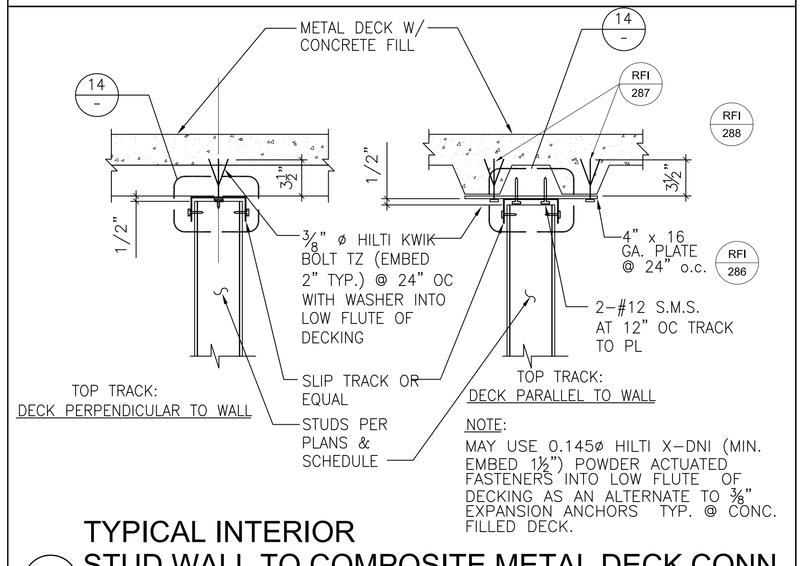


G BACKING STUD TO VERT. STUD CONNECTION

16 TYPICAL INTERIOR METAL STUD BRACE DETAILS TO METAL DECKING
N.T.S.



3 TYPICAL INTERIOR METAL STUD TOP TRACK SPLICE CONN. DETAIL
N.T.S.



NOTE: MAY USE 0.145ø HILTI X-DNI (MIN. EMBED 1½") POWDER ACTUATED FASTENERS INTO LOW FLUTE OF DECKING AS AN ALTERNATE TO ⅜" EXPANSION ANCHORS TYP. @ CONC. FILLED DECK.

4 TYPICAL INTERIOR STUD WALL TO COMPOSITE METAL DECK CONN.
N.T.S. (TO STEEL DECK WITH CONCRETE FILL)

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

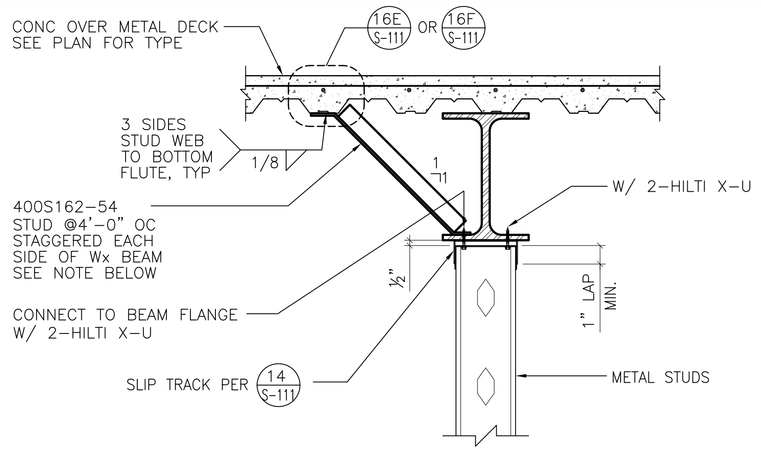
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

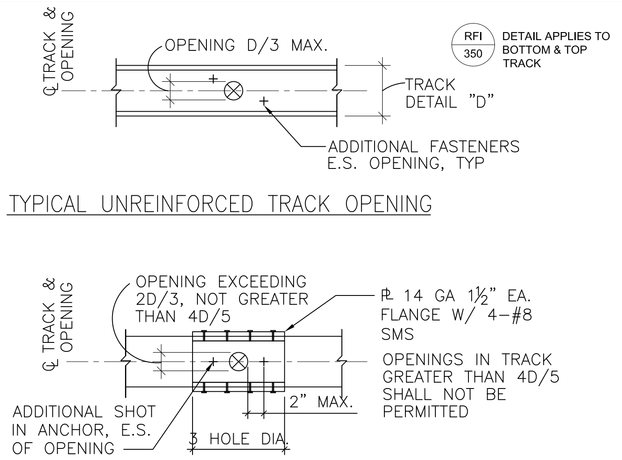
PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

SHEET TITLE:
INTERIOR METAL STUDS DETAILS

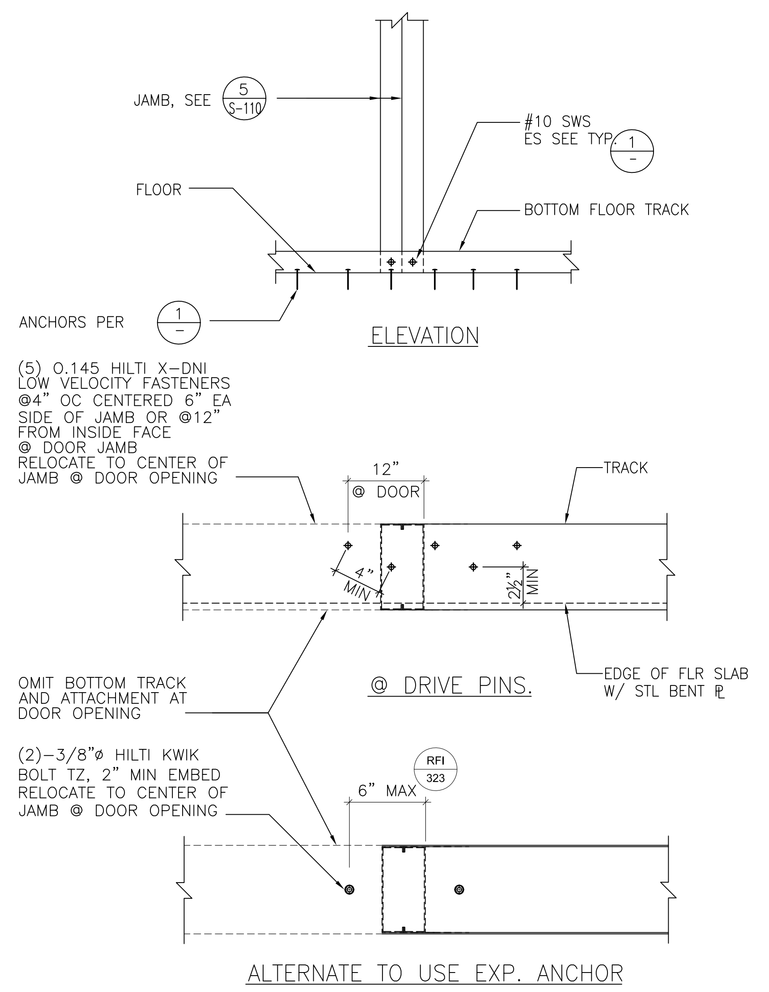
SHEET NO:
S-111



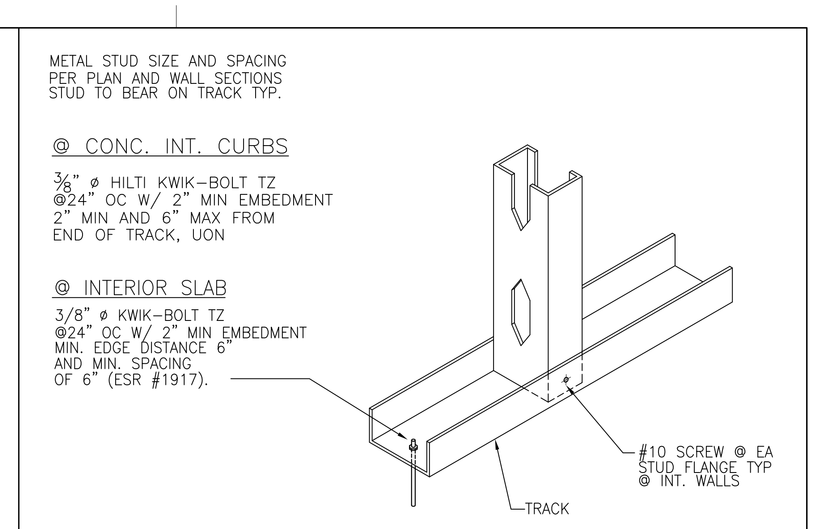
13 TYPICAL INTERIOR NON-BEARING STUD TO Wx BEAM CONN.
N.T.S.



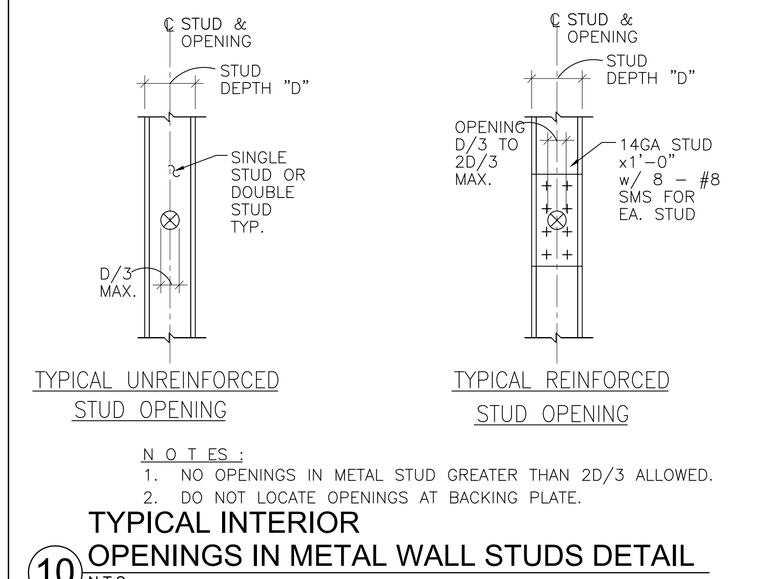
9 TYPICAL INTERIOR OPENINGS IN METAL STUD BOT. TRACK DETAIL
N.T.S.



6 TYPICAL INTERIOR JAMB STUD BOTTOM CONN. TO CONCRETE
N.T.S.

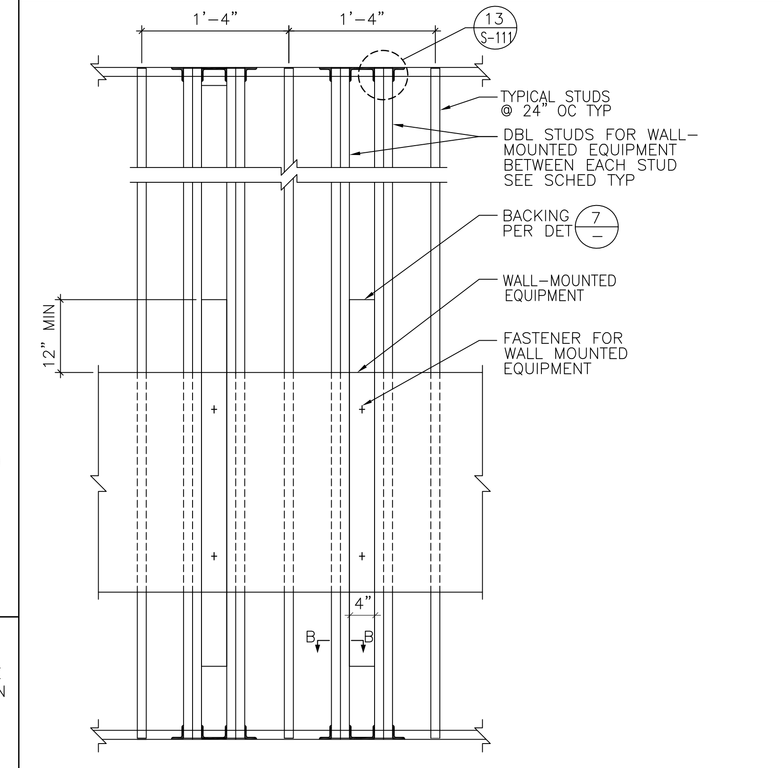


1 TYPICAL INTERIOR STUD WALL BOTTOM TRACK CONN. TO CONCRETE
N.T.S.



N O T E S :
1. NO OPENINGS IN METAL STUD GREATER THAN 2D/3 ALLOWED.
2. DO NOT LOCATE OPENINGS AT BACKING PLATE.

10 TYPICAL INTERIOR OPENINGS IN METAL WALL STUDS DETAIL
N.T.S.



A FRAMING ELEVATION

DOUBLE STUDS SCHEDULE:		
STUD SIZE "W"	DOUBLE STUD SIZE	MAX SPAN
4" STUD	(2) 4"(D)x1 5/8"(W)x14 GA STUDS	15'-0"
6" STUD	(2) 6"(D)x1 5/8"(W)x14 GA STUDS	15'-0"

NOTES:
USE DETAIL FOR WALL HUNG ITEMS HEAVIER THAN 300#/FT UP TO 600#/FT. OF WIDTH OR 1200# POINT LOAD

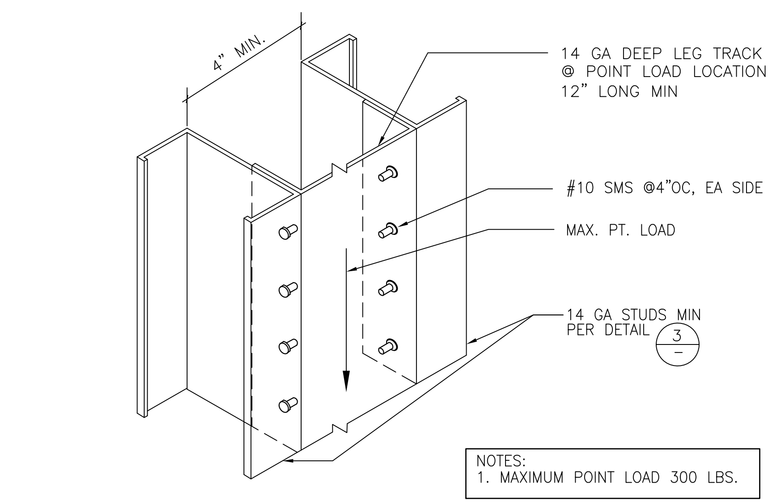
TYP 1/8 1@12

B SECTION

3 TYPICAL INTERIOR STUD FRAMING @ LARGER WALL EQUIPMENT
N.T.S.

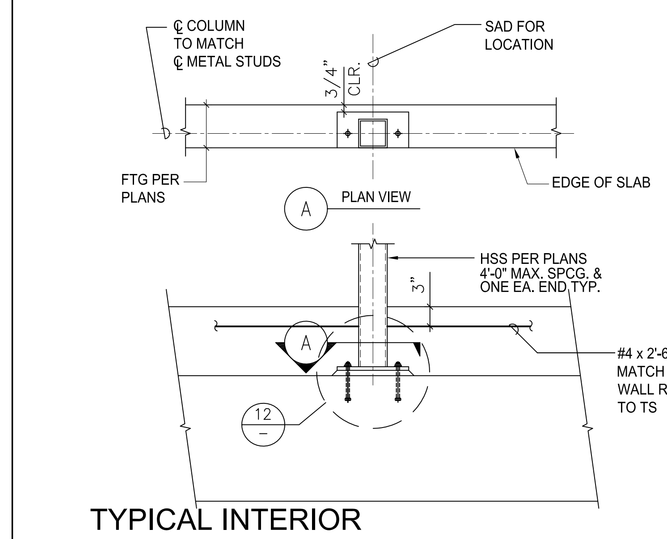
TYPICAL BACKING STUD SCHEDULE			
BACKING TYPE SEE 8/-	STUD DEPTH (IN)	STUD GAGE	MAX STUD SPACING (IN)
TYPE 1	4"	18 GA	12"
	6"	18 GA	12"
TYPE 2	4"	16 GA	12"
	6"	16 GA	12"
TYPE 3	4"	14 GA	12"
	6"	14 GA	12"
TYPICAL FOR MAXIMUM FLOOR TO FLOOR HEIGHTS OF 15'-0"			

11 TYPICAL INTERIOR BACKING PLATE CONNECTION SCHEDULE
N.T.S.

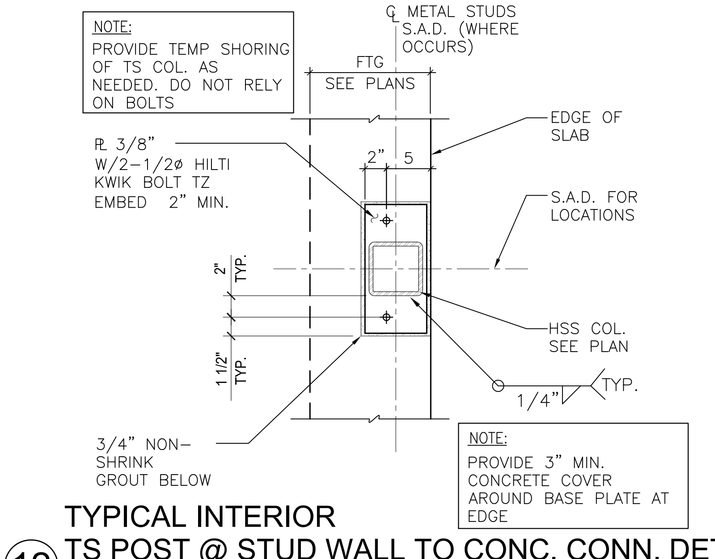


NOTES:
1. MAXIMUM POINT LOAD 300 LBS.

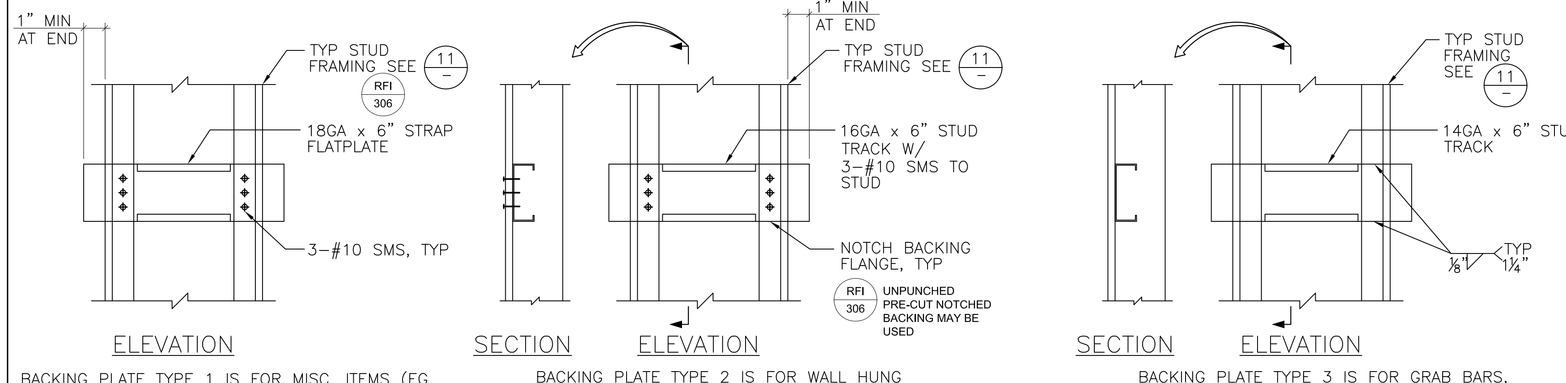
7 TYPICAL INTERIOR BACKING PLATE CONNECTION (FOR WALL MOUNTED EQUIP.)
N.T.S.



16 TYPICAL INTERIOR TS POST @ STUD WALL SECTION
N.T.S.



12 TYPICAL INTERIOR TS POST @ STUD WALL TO CONC. CONN. DETAIL
N.T.S.



8 TYPICAL INTERIOR BACKING PLATE CONNECTION DETAIL
N.T.S.

If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch

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NO. ISSUES/REVISIONS DATE

PROJECT RECORD SET

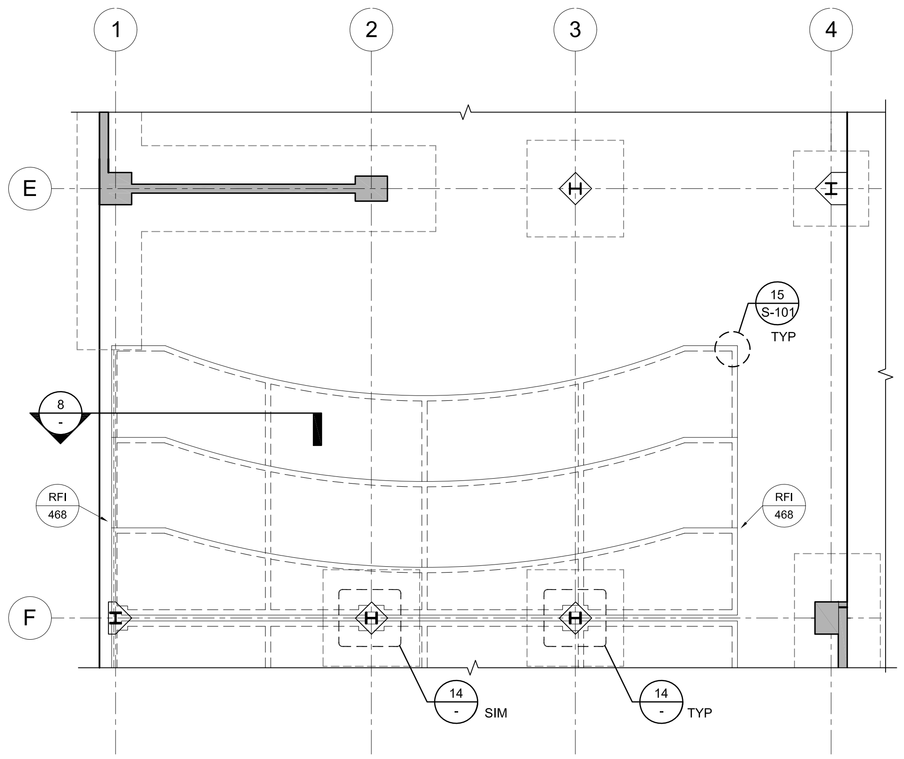
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

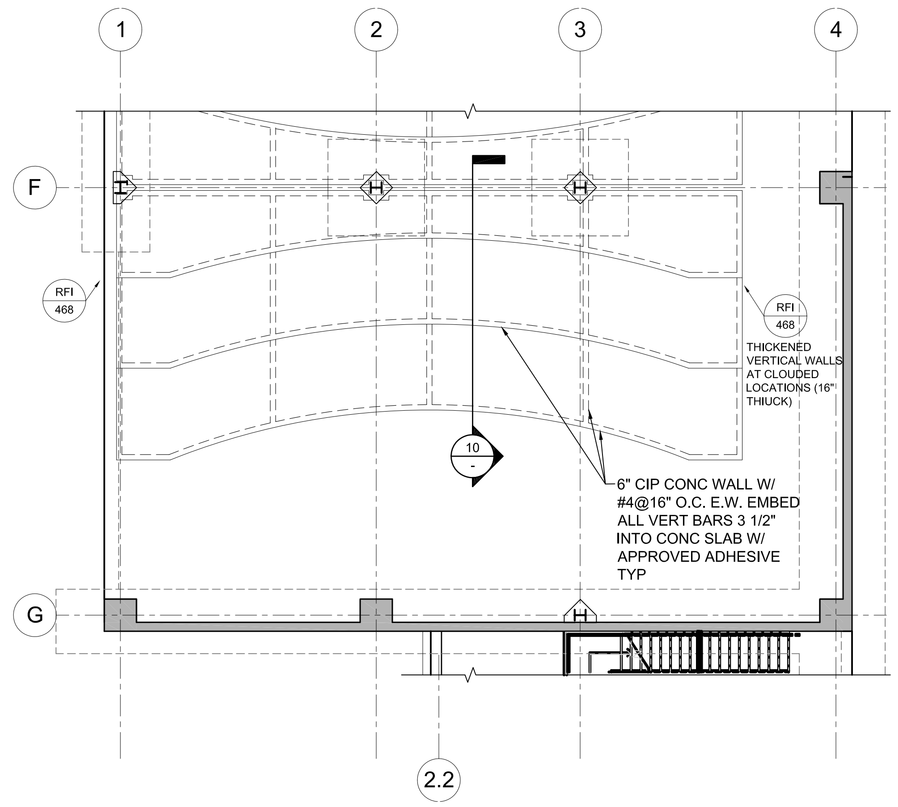
PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE: AS NOTED

SHEET TITLE:
INTERIOR METAL STUDS DETAILS

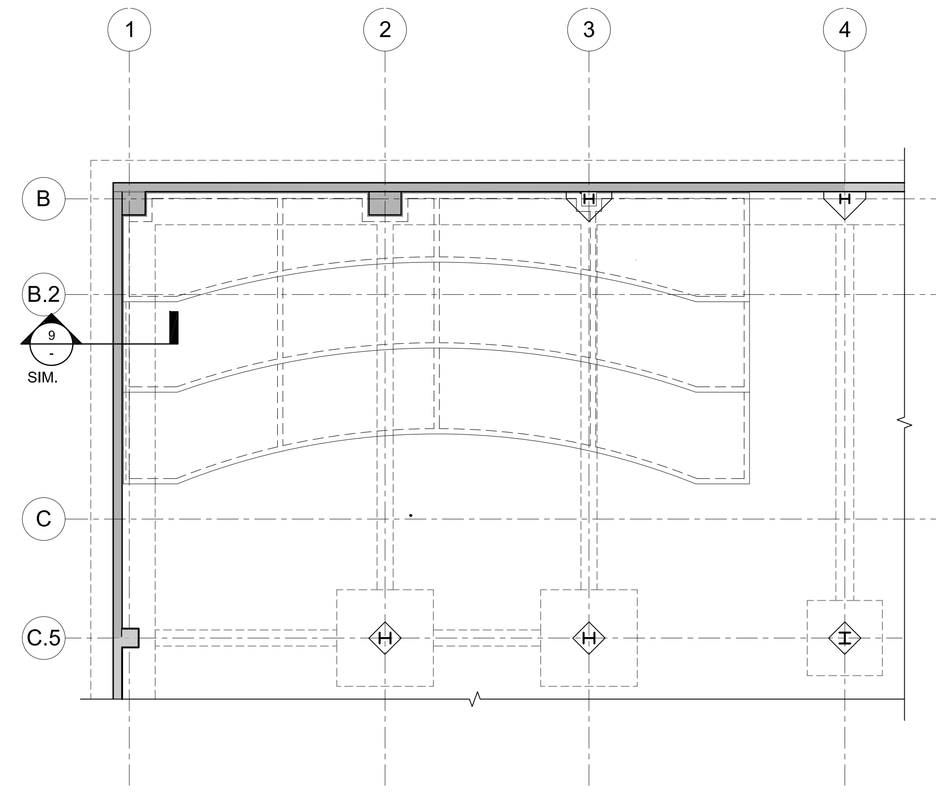
SHEET NO:
S-112



22 ENLARGED PLAN @ CLASSROOMS
SCALE: 1/8" = 1'-0"



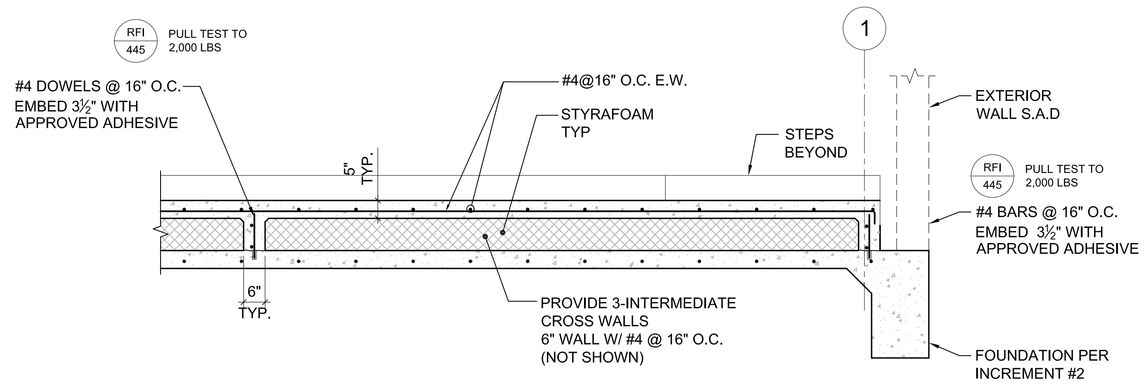
17 ENLARGED PLAN @ CLASSROOMS
SCALE: 1/8" = 1'-0"



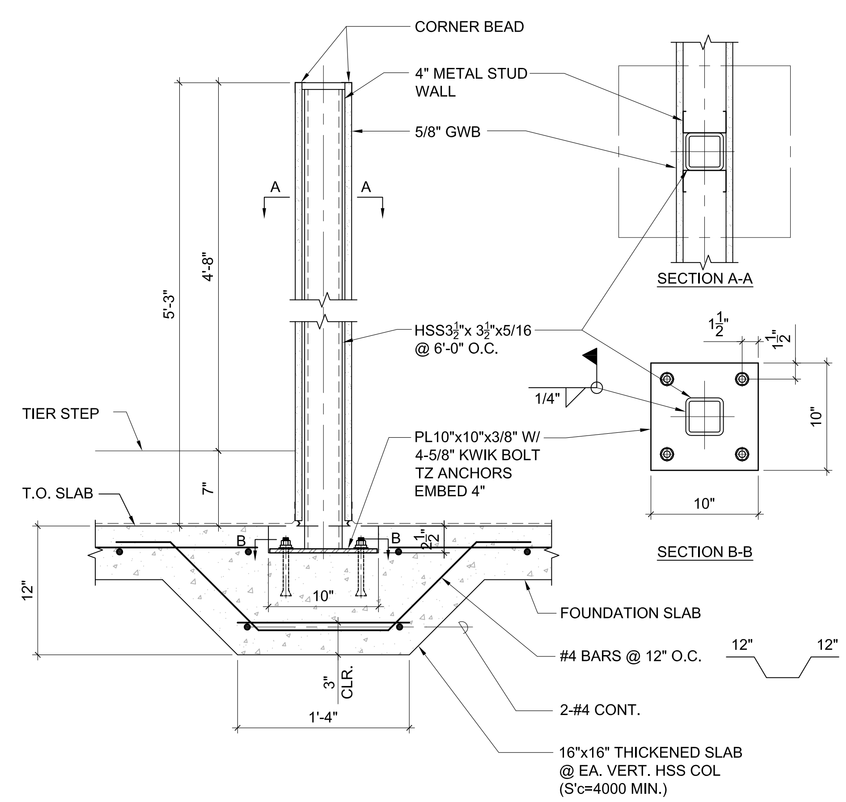
7 ENLARGED PLAN @ CLASSROOMS
SCALE: 1/8" = 1'-0"

1) SEE INCREMENT #2 FOR STRUCTURAL DESIGN NOTES AND MATERIAL REQUIREMENTS.
2) SEE 18/A-911 FOR CONTINUOUS CANT. ALONG EDGE OF CIP CONCRETE TIERS.

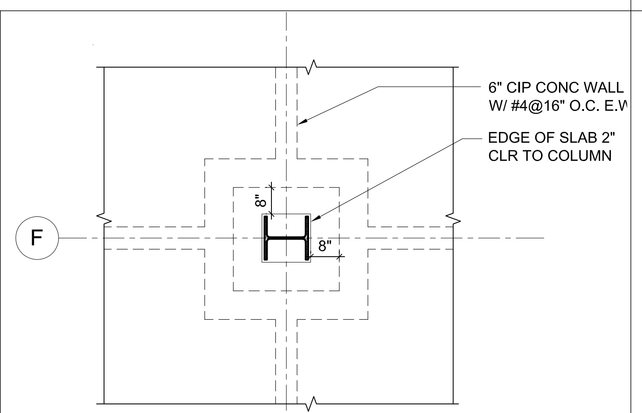
23 GENERAL NOTES
NO SCALE



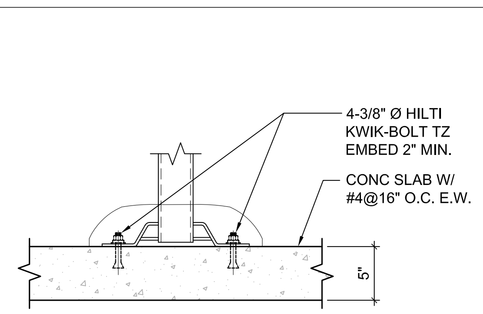
8 SECTION
SCALE: 1/4" = 1'-0"



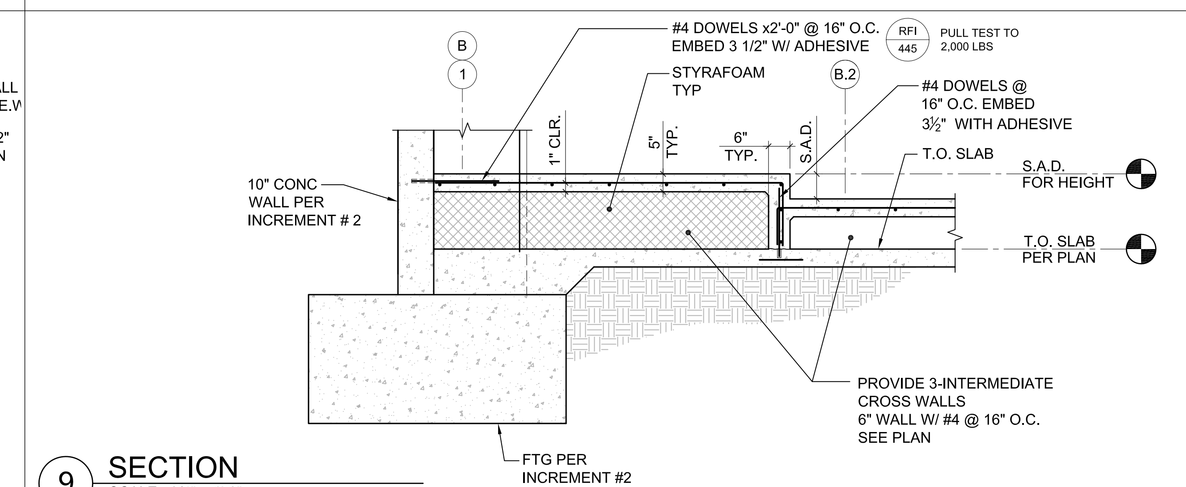
25 PARTIAL HEIGHT WALL DETAIL
SCALE: 1/2" = 1'-0"



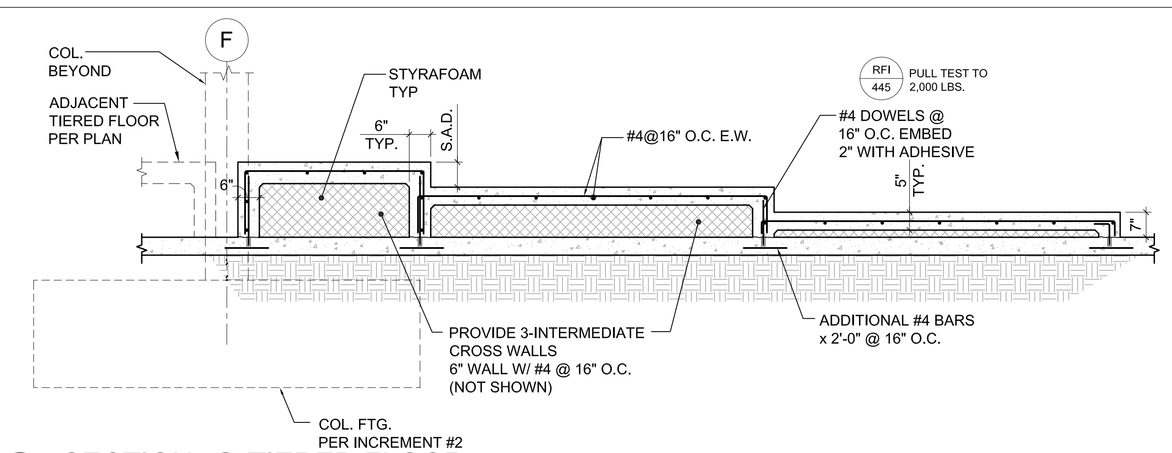
14 ENLARGED PLAN
SCALE: 1/2" = 1'-0"



15 DESK CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



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



10 SECTION @ TIERED FLOOR
SCALE: 1/4" = 1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

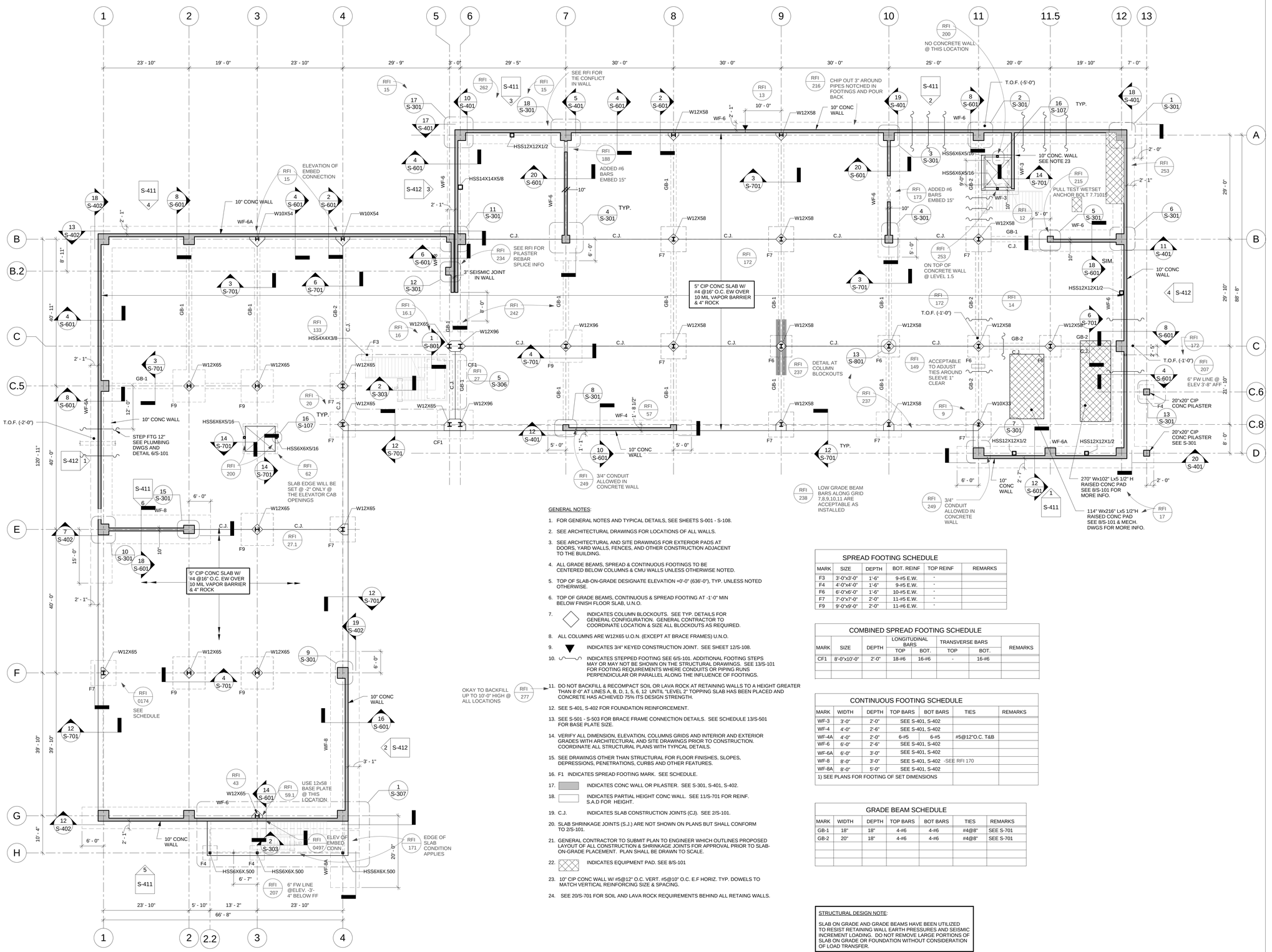
SKYLINE COLLEGE
SAN MATEO COUNTY
COMMUNITY COLLEGE
DISTRICT

CIP2 DESIGN-BUILD
PROJECT
BUILDING 4

PROJECT NO.:	07012.00	DRAWN BY:	AY
DATE:	03/09/09	CHECKED BY:	CB
SCALE:	As indicated		

SHEET TITLE:
TIERED CLASSROOMS-PLANS & SECTIONS

SHEET NO:
S-113



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

GENERAL NOTES:

1. FOR GENERAL NOTES AND TYPICAL DETAILS, SEE SHEETS S-001 - S-108.
2. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL WALLS.
3. SEE ARCHITECTURAL AND SITE DRAWINGS FOR EXTERIOR PADS AT DOORS, YARD WALLS, FENCES, AND OTHER CONSTRUCTION ADJACENT TO THE BUILDING.
4. ALL GRADE BEAMS, SPREAD & CONTINUOUS FOOTINGS TO BE CENTERED BELOW COLUMNS & CMU WALLS UNLESS OTHERWISE NOTED.
5. TOP OF SLAB-ON-GRADE DESIGNATE ELEVATION +0'-0" (636'-0"), TYP. UNLESS NOTED OTHERWISE.
6. TOP OF GRADE BEAMS, CONTINUOUS & SPREAD FOOTING AT -1'-0" MIN BELOW FINISH FLOOR SLAB, U.N.O.
7. INDICATES COLUMN BLOCKOUTS. SEE TYP. DETAILS FOR GENERAL CONFIGURATION. GENERAL CONTRACTOR TO COORDINATE LOCATION & SIZE ALL BLOCKOUTS AS REQUIRED.
8. ALL COLUMNS ARE W12X65 U.O.N. (EXCEPT AT BRACE FRAMES) U.N.O.
9. INDICATES 3/4" KEYED CONSTRUCTION JOINT. SEE SHEET 12/S-108.
10. INDICATES STEPPED FOOTING SEE 6/S-101. ADDITIONAL FOOTING STEPS MAY OR MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS. SEE 13/S-101 FOR FOOTING REQUIREMENTS WHERE CONDUITS OR PIPING RUNS PERPENDICULAR OR PARALLEL ALONG THE INFLUENCE OF FOOTINGS.
11. DO NOT BACKFILL & RECOMPACT SOIL OR LAVA ROCK AT RETAINING WALLS TO A HEIGHT GREATER THAN 8'-0" AT LINES A, B, D, 1, 5, 6, 12 UNTIL "LEVEL 2" TOPPING SLAB HAS BEEN PLACED AND CONCRETE HAS ACHIEVED 75% ITS DESIGN STRENGTH.
12. SEE S-401, S-402 FOR FOUNDATION REINFORCEMENT.
13. SEE S-501 - S-503 FOR BRACE FRAME CONNECTION DETAILS. SEE SCHEDULE 13/S-501 FOR BASE PLATE SIZE.
14. VERIFY ALL DIMENSION, ELEVATION, COLUMNS GRIDS AND INTERIOR AND EXTERIOR GRADES WITH ARCHITECTURAL AND SITE DRAWINGS PRIOR TO CONSTRUCTION. COORDINATE ALL STRUCTURAL PLANS WITH TYPICAL DETAILS.
15. SEE DRAWINGS OTHER THAN STRUCTURAL FOR FLOOR FINISHES, SLOPES, DEPRESSIONS, PENETRATIONS, CURBS AND OTHER FEATURES.
16. F1 INDICATES SPREAD FOOTING MARK. SEE SCHEDULE.
17. INDICATES CONC WALL OR PILASTER. SEE S-301, S-401, S-402.
18. INDICATES PARTIAL HEIGHT CONC WALL. SEE 11/S-701 FOR REINF. S.A.D FOR HEIGHT.
19. C.J. INDICATES SLAB CONSTRUCTION JOINTS (CJ). SEE 2/S-101.
20. SLAB SHRINKAGE JOINTS (S.J.) ARE NOT SHOWN ON PLANS BUT SHALL CONFORM TO 2/S-101.
21. GENERAL CONTRACTOR TO SUBMIT PLAN TO ENGINEER WHICH OUTLINES PROPOSED LAYOUT OF ALL CONSTRUCTION & SHRINKAGE JOINTS FOR APPROVAL PRIOR TO SLAB-ON-GRADE PLACEMENT. PLAN SHALL BE DRAWN TO SCALE.
22. INDICATES EQUIPMENT PAD. SEE 8/S-101
23. 10" CIP CONC WALL W/ #5@12" O.C. VERT. #5@10" O.C. E.F HORIZ. TYP. DOWELS TO MATCH VERTICAL REINFORCING SIZE & SPACING.
24. SEE 20/S-701 FOR SOIL AND LAVA ROCK REQUIREMENTS BEHIND ALL RETAING WALLS.

OKAY TO BACKFILL UP TO 10'-0" HIGH @ ALL LOCATIONS (RFI 277)

SPREAD FOOTING SCHEDULE

MARK	SIZE	DEPTH	BOT. REINF	TOP REINF	REMARKS
F3	3'-0"x3'-0"	1'-6"	9-#5 E.W.	-	
F4	4'-0"x4'-0"	1'-6"	9-#5 E.W.	-	
F6	6'-0"x6'-0"	1'-6"	10-#5 E.W.	-	
F7	7'-0"x7'-0"	2'-0"	11-#5 E.W.	-	
F9	9'-0"x9'-0"	2'-0"	11-#6 E.W.	-	

COMBINED SPREAD FOOTING SCHEDULE

MARK	SIZE	DEPTH	LONGITUDINAL BARS		TRANSVERSE BARS		REMARKS
			TOP	BOT.	TOP	BOT.	
CF1	8'-0"x10'-0"	2'-0"	18-#6	16-#6	-	16-#6	

CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	DEPTH	TOP BARS	BOT BARS	TIES	REMARKS
WF-3	3'-0"	2'-0"	SEE S-401, S-402			
WF-4	4'-0"	2'-6"	SEE S-401, S-402			
WF-4A	4'-0"	2'-0"	6-#5	6-#5	#5@12"O.C. T&B	
WF-6	6'-0"	2'-6"	SEE S-401, S-402			
WF-6A	6'-0"	3'-0"	SEE S-401, S-402			
WF-8	8'-0"	3'-0"	SEE S-401, S-402		-SEE RFI 170	
WF-8A	8'-0"	5'-0"	SEE S-401, S-402			
1) SEE PLANS FOR FOOTING OF SET DIMENSIONS						

GRADE BEAM SCHEDULE

MARK	WIDTH	DEPTH	TOP BARS	BOT BARS	TIES	REMARKS
GB-1	18"	18"	4-#6	4-#6	#4@8"	SEE S-701
GB-2	20"	18"	4-#6	4-#6	#4@8"	SEE S-701

STRUCTURAL DESIGN NOTE:

SLAB ON GRADE AND GRADE BEAMS HAVE BEEN UTILIZED TO RESIST RETAINING WALL EARTH PRESSURES AND SEISMIC INCREMENT LOADING. DO NOT REMOVE LARGE PORTIONS OF SLAB ON GRADE OR FOUNDATION WITHOUT CONSIDERATION OF LOAD TRANSFER.

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NO. ISSUES/REVISIONS DATE

PROJECT RECORD SET

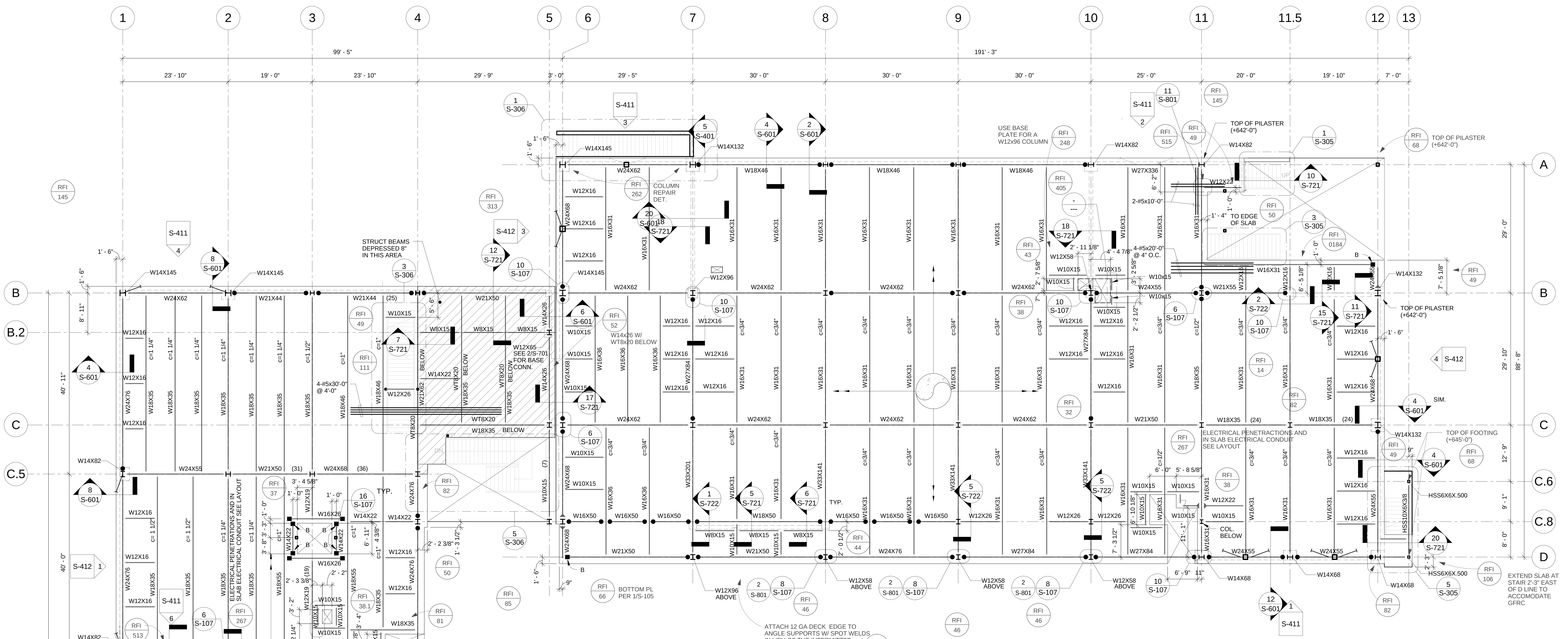
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT BUILDING 4

PROJECT NO.: 07055.00
DRAWN BY: AY
DATE: 05.15.2009
CHECKED BY: CB
SCALE: 3/32" = 1'-0"

SHEET TITLE:
FOUNDATION PLAN

SHEET NO:
S-201



LEVEL 2 FRAMING PLAN

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

LEGEND

B — BOTTOM PL PER 1/S-105

T&B — TOP & BOTTOM PL PER 1/S-105

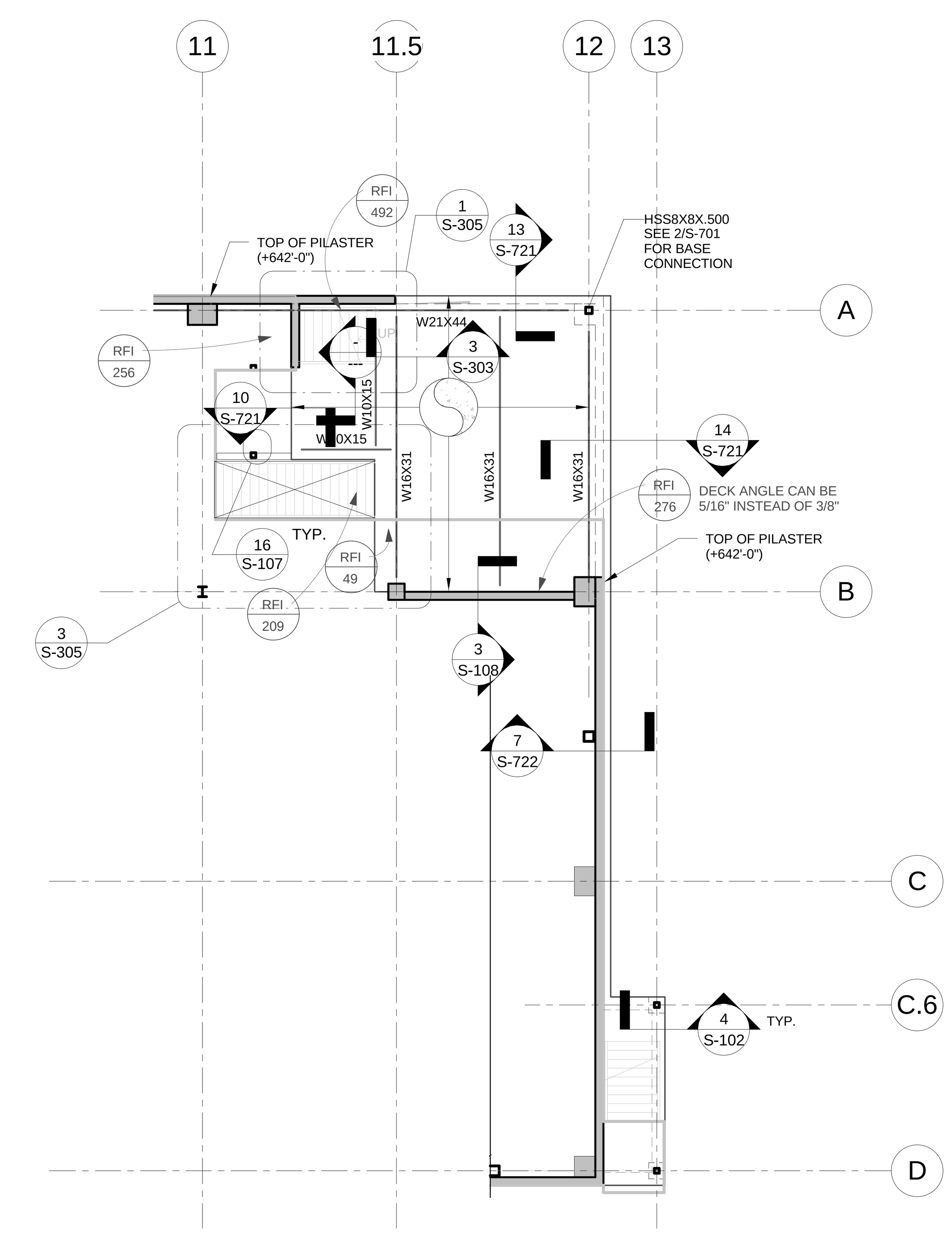
CONNECTION PER 10/S-105

GENERAL NOTES:

1. FOR GENERAL NOTES AND TYPICAL DETAILS. SEE SHEETS S-001 - S-108.
2. "C" INDICATES BEAM CAMBER.
3. FOR METAL DECK PROPERTIES, ATTACHMENTS AND DETAILS SEE SHEET S-103.
4. SEE DRAWINGS OTHER THAN STRUCTURAL FOR FLOOR AND WALL FINISHES, SLOPES, DEPRESSIONS, PENETRATIONS, CURBS AND EXACT NUMBERS AND LOCATIONS OF EQUIPMENT SUPPORTED ON THE ROOF AND / OR SUSPENDED BELOW THE ROOF. SEE MECHANICAL DRAWINGS FOR ROOF MOUNTED EQUIPMENT SUPPORTS.
5. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL WALLS.
6. DENOTES 4 1/4" LT. WT. TOPPING OVER 2"x18 GA GALVANIZED METAL (3 SPAN MIN. EXCEPT WHERE NOTED). SEE SHEETS S-103 FOR ADDITIONAL DETAILS PROVIDE MINIMUM #4 @ 16" O.C. E.W.
7. UNLESS OTHERWISE SHOWN, USE W8x15 TO SUPPORT ALL FLOOR MOUNTED OR SUSPENDED MECHANICAL EQUIPMENT GREATER THAN 200#, OR DECK OPENING GREATER THAN 24" PERPENDICULAR TO METAL DECK DIRECTION. SEE DETAIL 3/S-104.
8. SEE DETAIL 16/S-104 FOR SUPPORT AT SMALL FLOOR OPENINGS.
9. INDICATES TYPICAL MECHANICAL / PLUMBING PENETRATION. SEE 3 & 16/S-104 FOR SUPPORT.
10. ALL STEEL BEAMS SHOWN BEAR ON THE CENTER OF STEEL COLUMNS AND SHALL BE EQUALLY SPACED BETWEEN BEARING POINTS & GRIDLINES AS SHOWN U.N.O.
11. STEEL BEAMS WHICH HAVE SPECIFIED OR INCIDENTAL SHOP CAMBER SHALL BE PLACED WITH CAMBER UP IN ALL LOCATIONS U.O.N.
12. INDICATES BEAM TO COLUMN OR BEAM TO BEAM COLLECTOR CONNECTION. SEE DETAILS 7 & 8/S-105 U.O.N. ALL COLLECTOR BEAMS TO HAVE 2- 3/4" DIAMETER STUDS @ 12" O.C. SEE 15/S-103.
13. INDICATES MOMENT CONNECTION (GRAVITY ONLY).
14. TOP OF SLAB = +15'-0" (651'-0") U.O.N.
15. TOP OF ALL CONCRETE PILASTERS EQUAL (+647'-0") U.N.O.
16. ALL WT SECTIONS ON FRAMING PLANS SHALL BE CENTERED ON BEAMS BELOW AND ATTACHED WITH A 4" DOUBLE SIDED 5/16" FILLET WELD AT 12" O.C.
17. VERIFY ALL DIMENSION, ELEVATIONS, COLUMN GRIDS AND INTERIOR AND EXTERIOR GRADES WITH ARCHITECTURAL, DRAWINGS PRIOR TO CONSTRUCTION.
18. S.A.D. FOR LOCATION AND EXTENT OF TAPERED INSULATION.
19. T.O.S. DENOTES TOP OF STEEL ELEVATION.
20. ALL MECHANICAL UNITS FLOOR PENETRATIONS AND PADS SHOWN ARE APPROXIMATE. GENERAL CONTRACTOR TO COORDINATE WITH UNIT MANUFACTURER, ARCHITECTURAL, AND MECHANICAL DRAWINGS FOR ACTUAL SIZE AND LOCATION.
21. ALL BEAMS AT THIS LEVEL COMPOSITE W/ 3/4" DIA. WELDED STUDS @ 12" O.C. MAX. U.O.N. AND MARKED AS ( ). FOR ADDITIONAL WELD STUDS AT ALL COLLECTORS. SEE 15/S-103.
22. INDICATES STEEL DEPRESSION AS INDICATE S.A.D.
23. INDICATES DIAGONAL BRACE UP FROM 2ND OR 3RD LEVEL.
24. INDICATES DIAGONAL BRACE DOWN FROM ROOF OR 3RD LEVEL.
26. INDICATES OPEN TO BELOW.
27. SEE S-204 FOR ADDITIONAL NOTES RELATED TO ROOF AREAS.
28. INDICATES BEAM CONTINUOUS OVER COLUMN SEE 5/S-722.
29. INDICATES KICKER PER DETAIL 16/S-801.

RFI 272

STRUCTURAL DESIGN NOTE
SECOND FLOOR DIAPHRAGM HAS BEEN DESIGNED TO SUPPORT THE RETAINING WALL EARTH PRESSURES AND INCREMENT LOADING.



LEVEL 1.5 FRAMING PLAN

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

WRNS STUDIO LLP
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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

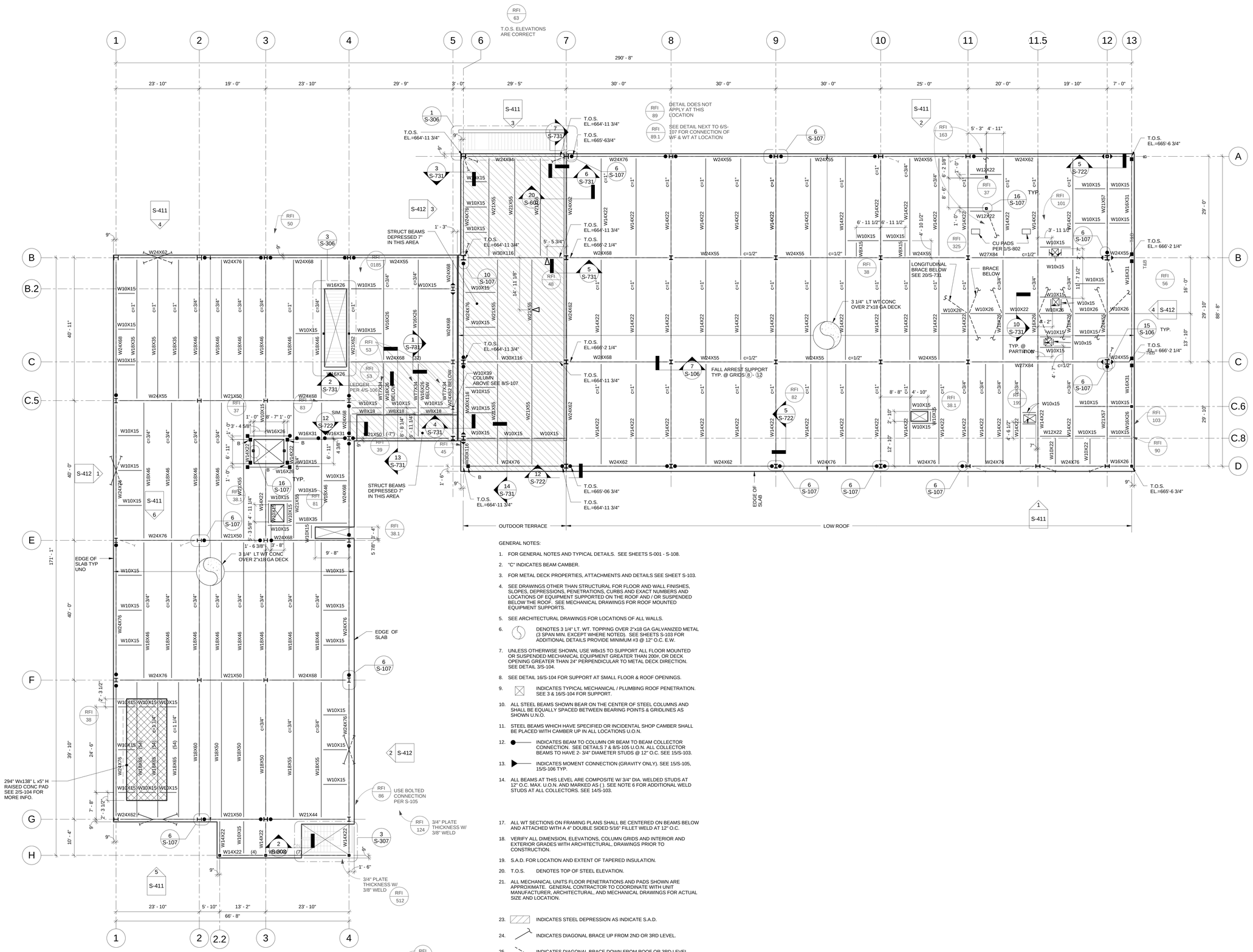
CIP2 DESIGN-BUILD PROJECT BUILDING 4

PROJECT NO.: 07055.00 DRAWN BY: AY
DATE: 05.15.2009 CHECKED BY: CB
SCALE: As indicated

SHEET TITLE:
LEVEL 2 FRAMING PLAN

SHEET NO:
S-202

If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch



1 LEVEL 3 FRAMING PLAN

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

LEGEND

- B — BOTTOM PL PER 1/S-105
- T&B — TOP & BOTTOM PL PER 1/S-105
- CONNECTION PER 10/S-105

GENERAL NOTES:

1. FOR GENERAL NOTES AND TYPICAL DETAILS. SEE SHEETS S-001 - S-108.
2. "C" INDICATES BEAM CAMBER.
3. FOR METAL DECK PROPERTIES, ATTACHMENTS AND DETAILS SEE SHEET S-103.
4. SEE DRAWINGS OTHER THAN STRUCTURAL FOR FLOOR AND WALL FINISHES, SLOPES, DEPRESSIONS, PENETRATIONS, CURBS AND EXACT NUMBERS AND LOCATIONS OF EQUIPMENT SUPPORTED ON THE ROOF AND / OR SUSPENDED BELOW THE ROOF. SEE MECHANICAL DRAWINGS FOR ROOF MOUNTED EQUIPMENT SUPPORTS.
5. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL WALLS.
6. DENOTES 3 1/4" LT. WT. TOPPING OVER 2"x18 GA GALVANIZED METAL (3 SPAN MIN. EXCEPT WHERE NOTED). SEE SHEETS S-103 FOR ADDITIONAL DETAILS PROVIDE MINIMUM #3 @ 12" O.C. E.W.
7. UNLESS OTHERWISE SHOWN, USE W8x15 TO SUPPORT ALL FLOOR MOUNTED OR SUSPENDED MECHANICAL EQUIPMENT GREATER THAN 200#, OR DECK OPENING GREATER THAN 24" PERPENDICULAR TO METAL DECK DIRECTION. SEE DETAIL 3/S-104.
8. SEE DETAIL 16/S-104 FOR SUPPORT AT SMALL FLOOR & ROOF OPENINGS.
9. INDICATES TYPICAL MECHANICAL / PLUMBING ROOF PENETRATION. SEE 3 & 16/S-104 FOR SUPPORT.
10. ALL STEEL BEAMS SHOWN BEAR ON THE CENTER OF STEEL COLUMNS AND SHALL BE EQUALLY SPACED BETWEEN BEARING POINTS & GRIDLINES AS SHOWN U.N.O.
11. STEEL BEAMS WHICH HAVE SPECIFIED OR INCIDENTAL SHOP CAMBER SHALL BE PLACED WITH CAMBER UP IN ALL LOCATIONS U.O.N.
12. INDICATES BEAM TO COLUMN OR BEAM TO BEAM COLLECTOR CONNECTION. SEE DETAILS 7 & 8/S-105 U.O.N. ALL COLLECTOR BEAMS TO HAVE 2- 3/4" DIAMETER STUDS @ 12" O.C. SEE 15/S-103.
13. INDICATES MOMENT CONNECTION (GRAVITY ONLY). SEE 15/S-105, 15/S-106 TYP.
14. ALL BEAMS AT THIS LEVEL ARE COMPOSITE W/ 3/4" DIA. WELDED STUDS AT 12" O.C. MAX. U.O.N. AND MARKED AS ( ). SEE NOTE 6 FOR ADDITIONAL WELD STUDS AT ALL COLLECTORS. SEE 14/S-103.
17. ALL WT SECTIONS ON FRAMING PLANS SHALL BE CENTERED ON BEAMS BELOW AND ATTACHED WITH A 4" DOUBLE SIDED 5/16" FILLET WELD AT 12" O.C.
18. VERIFY ALL DIMENSION, ELEVATIONS, COLUMN GRIDS AND INTERIOR AND EXTERIOR GRADES WITH ARCHITECTURAL, DRAWINGS PRIOR TO CONSTRUCTION.
19. S.A.D. FOR LOCATION AND EXTENT OF TAPERED INSULATION.
20. T.O.S. DENOTES TOP OF STEEL ELEVATION.
21. ALL MECHANICAL UNITS FLOOR PENETRATIONS AND PADS SHOWN ARE APPROXIMATE. GENERAL CONTRACTOR TO COORDINATE WITH UNIT MANUFACTURER, ARCHITECTURAL, AND MECHANICAL DRAWINGS FOR ACTUAL SIZE AND LOCATION.
23. INDICATES STEEL DEPRESSION AS INDICATE S.A.D.
24. INDICATES DIAGONAL BRACE UP FROM 2ND OR 3RD LEVEL.
25. INDICATES DIAGONAL BRACE DOWN FROM ROOF OR 3RD LEVEL.
26. PROVIDE 2-W10x22 TEMPORARY SUPPORT BEAMS AT ELEV. #1. NOT SHOWN ON PLANS).
27. INDICATES OPEN TO BELOW.
28. CONC PARTIAL HT WALL OR CURB SEE PLAN.
29. SEE S-204 FOR ADDITIONAL NOTES RELATED TO ROOF AREAS.
30. INDICATES BEAM PENETRATION. SEE 6/S-106. S.P.D. FOR LOCATION.

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

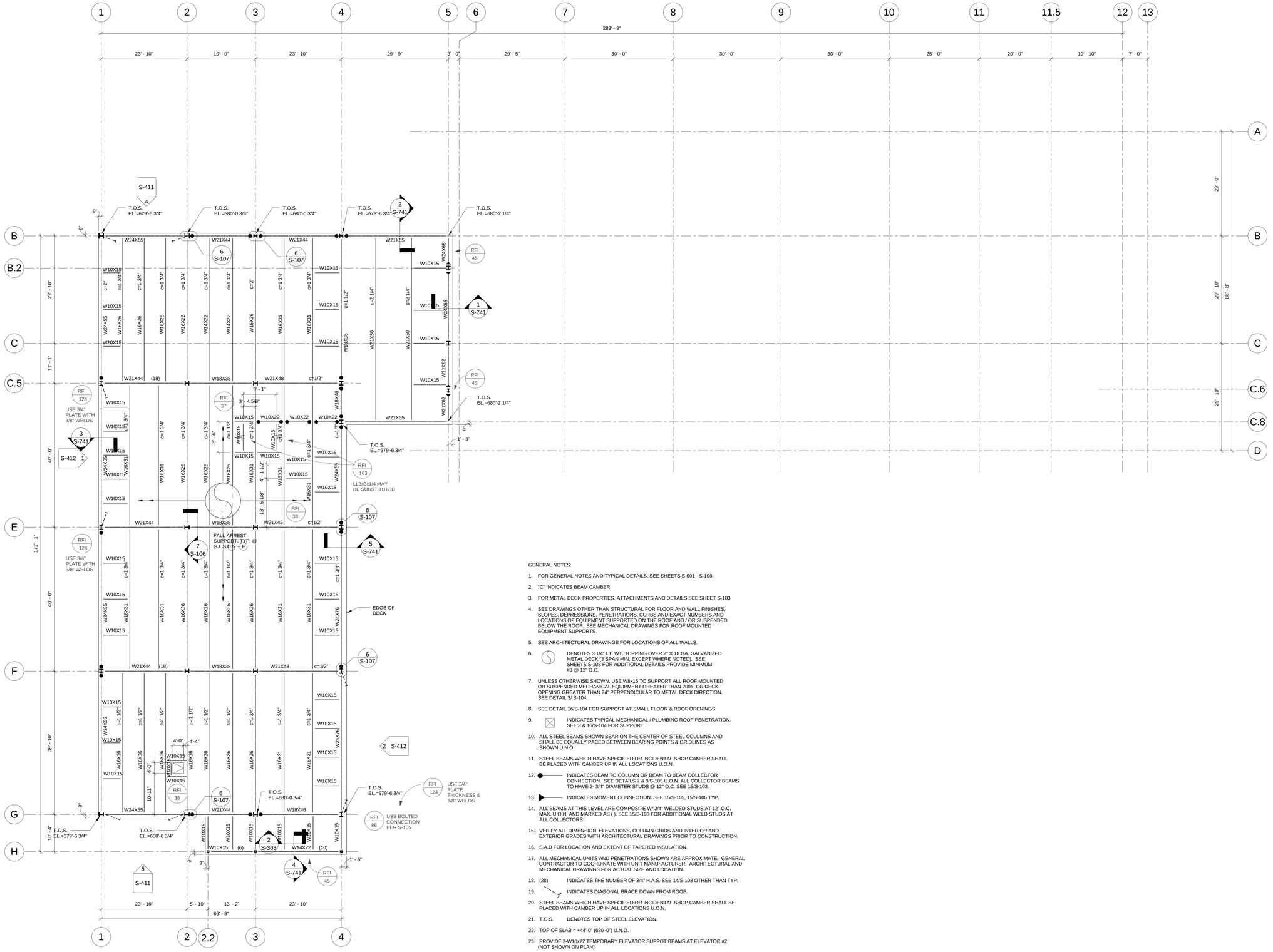
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

PROJECT NO.: 07055.00 DRAWN BY: AY
DATE: 05.15.2009 CHECKED BY: CB
SCALE: As indicated

SHEET TITLE:
LEVEL 3 FRAMING PLAN

SHEET NO:
S-203



1 ROOF FRAMING PLAN

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

GENERAL NOTES:

1. FOR GENERAL NOTES AND TYPICAL DETAILS, SEE SHEETS S-001 - S-108.
2. "C" INDICATES BEAM CAMBER.
3. FOR METAL DECK PROPERTIES, ATTACHMENTS AND DETAILS SEE SHEET S-103.
4. SEE DRAWINGS OTHER THAN STRUCTURAL FOR FLOOR AND WALL FINISHES, SLOPES, DEPRESSIONS, PENETRATIONS, CURBS AND EXACT NUMBERS AND LOCATIONS OF EQUIPMENT SUPPORTED ON THE ROOF AND / OR SUSPENDED BELOW THE ROOF. SEE MECHANICAL DRAWINGS FOR ROOF MOUNTED EQUIPMENT SUPPORTS.
5. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL WALLS.
6. DENOTES 3 1/4" LT. WT. TOPPING OVER 2" X 18 GA. GALVANIZED METAL DECK (3 SPAN MIN. EXCEPT WHERE NOTED). SEE SHEETS S-103 FOR ADDITIONAL DETAILS PROVIDE MINIMUM #3 @ 12" O.C.
7. UNLESS OTHERWISE SHOWN, USE W8x15 TO SUPPORT ALL ROOF MOUNTED OR SUSPENDED MECHANICAL EQUIPMENT GREATER THAN 200#, OR DECK OPENING GREATER THAN 24" PERPENDICULAR TO METAL DECK DIRECTION. SEE DETAIL 3/ S-104.
8. SEE DETAIL 16/S-104 FOR SUPPORT AT SMALL FLOOR & ROOF OPENINGS.
9. INDICATES TYPICAL MECHANICAL / PLUMBING ROOF PENETRATION. SEE 3 & 16/S-104 FOR SUPPORT.
10. ALL STEEL BEAMS SHOWN BEAR ON THE CENTER OF STEEL COLUMNS AND SHALL BE EQUALLY PACED BETWEEN BEARING POINTS & GRIDLINES AS SHOWN U.N.O.
11. STEEL BEAMS WHICH HAVE SPECIFIED OR INCIDENTAL SHOP CAMBER SHALL BE PLACED WITH CAMBER UP IN ALL LOCATIONS U.O.N.
12. INDICATES BEAM TO COLUMN OR BEAM TO BEAM COLLECTOR CONNECTION. SEE DETAILS 7 & 8/S-105 U.O.N. ALL COLLECTOR BEAMS TO HAVE 2- 3/4" DIAMETER STUDS @ 12" O.C. SEE 15/S-103.
13. INDICATES MOMENT CONNECTION. SEE 15/S-105, 15/S-106 TYP.
14. ALL BEAMS AT THIS LEVEL ARE COMPOSITE W/ 3/4" WELDED STUDS AT 12" O.C. MAX. U.O.N. AND MARKED AS ( ). SEE 15/S-103 FOR ADDITIONAL WELD STUDS AT ALL COLLECTORS.
15. VERIFY ALL DIMENSION, ELEVATIONS, COLUMN GRIDS AND INTERIOR AND EXTERIOR GRADES WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
16. S.A.D FOR LOCATION AND EXTENT OF TAPERED INSULATION.
17. ALL MECHANICAL UNITS AND PENETRATIONS SHOWN ARE APPROXIMATE. GENERAL CONTRACTOR TO COORDINATE WITH UNIT MANUFACTURER. ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ACTUAL SIZE AND LOCATION.
18. (28) INDICATES THE NUMBER OF 3/4" H.A.S. SEE 14/S-103 OTHER THAN TYP.
19. INDICATES DIAGONAL BRACE DOWN FROM ROOF.
20. STEEL BEAMS WHICH HAVE SPECIFIED OR INCIDENTAL SHOP CAMBER SHALL BE PLACED WITH CAMBER UP IN ALL LOCATIONS U.O.N.
21. T.O.S. DENOTES TOP OF STEEL ELEVATION.
22. TOP OF SLAB = +44'-0" (680'-0") U.N.O.
23. PROVIDE 2-W10x22 TEMPORARY ELEVATOR SUPPOT BEAMS AT ELEVATOR #2 (NOT SHOWN ON PLAN).

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

SKYLINE COLLEGE

SAN MATEO COUNTY
COMMUNITY COLLEGE
DISTRICT

CIP2 DESIGN-BUILD PROJECT BUILDING 4

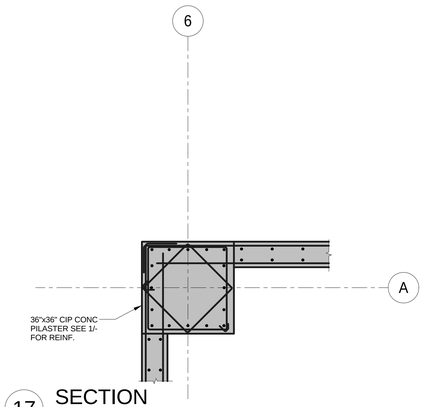
PROJECT NO.: 07055.00 DRAWN BY: AY
DATE: 05.15.2009 CHECKED BY: CB
SCALE: 3/32" = 1'-0"

SHEET TITLE:

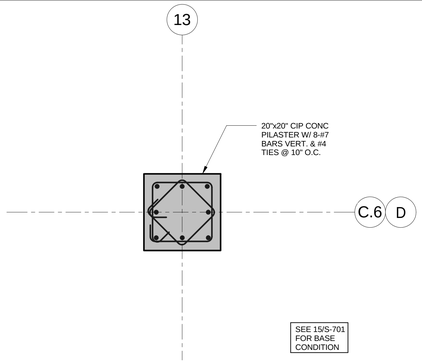
ROOF FRAMING PLAN

SHEET NO:

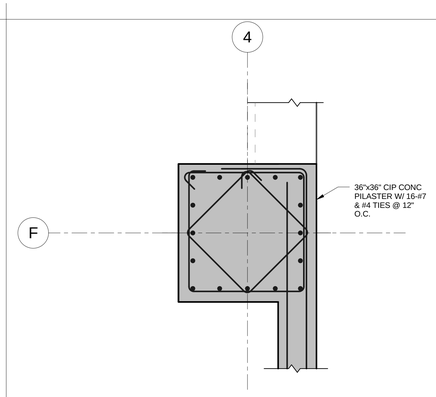
S-204



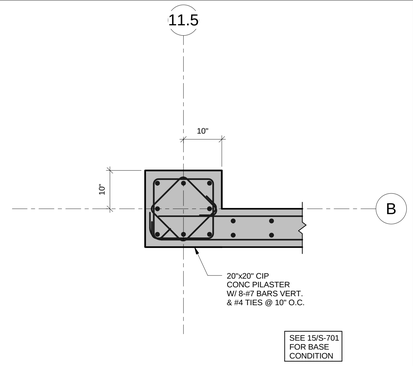
17 SECTION
SCALE: 1/2" = 1'-0"



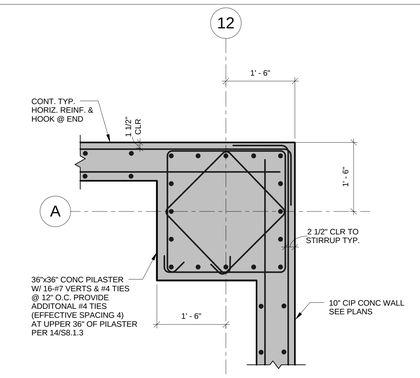
13 ENLARGED PLAN
SCALE: 3/4" = 1'-0"



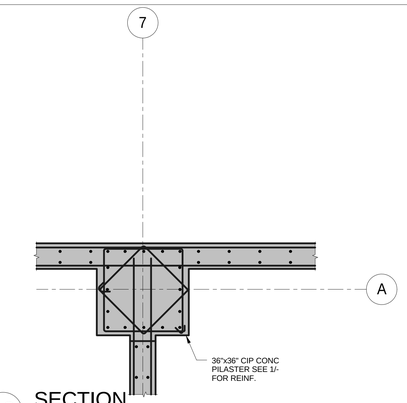
9 ENLARGE PLAN
SCALE: 3/4" = 1'-0"



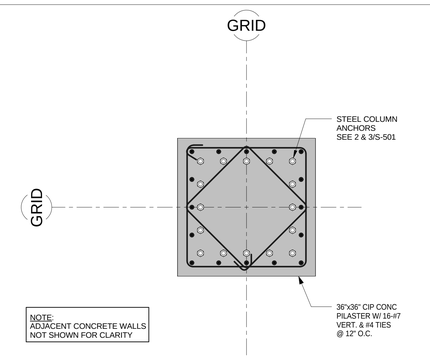
5 ENLARGE PLAN
SCALE: 3/4" = 1'-0"



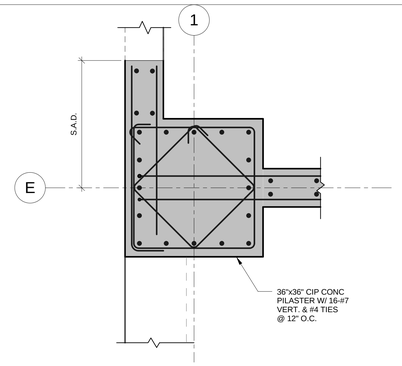
1 ENLARGE PLAN
SCALE: 3/4" = 1'-0"



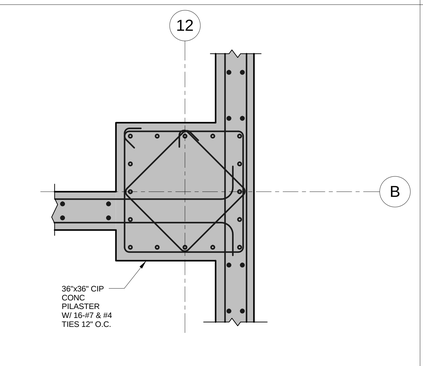
18 SECTION
SCALE: 1/2" = 1'-0"



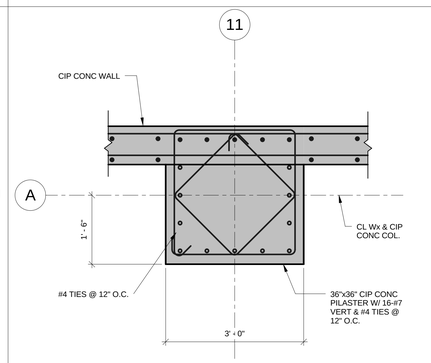
14 TYP. PILASTER @ FRAME COLUMN ABOVE
SCALE: 3/4" = 1'-0"



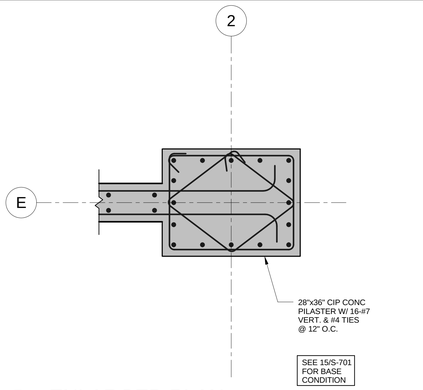
10 ENLARGE PLAN
SCALE: 3/4" = 1'-0"



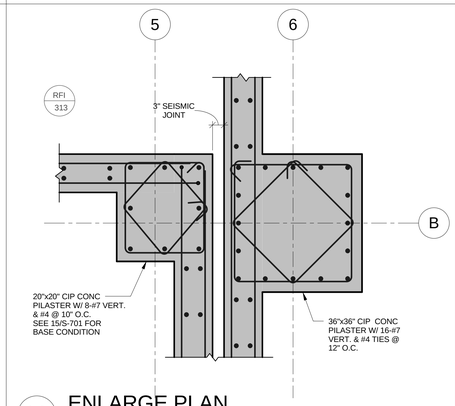
6 ENLARGE PLAN
SCALE: 3/4" = 1'-0"



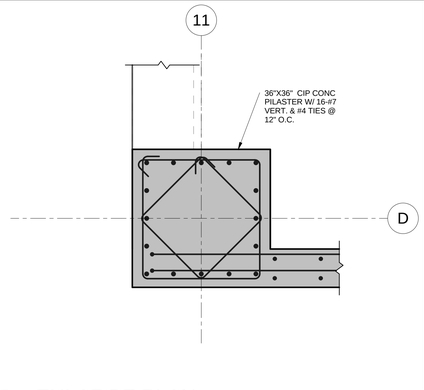
2 ENLARGE PLAN
SCALE: 3/4" = 1'-0"



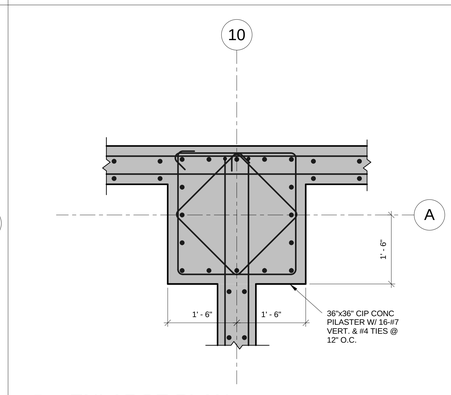
15 ENLARGED PLAN
SCALE: 3/4" = 1'-0"



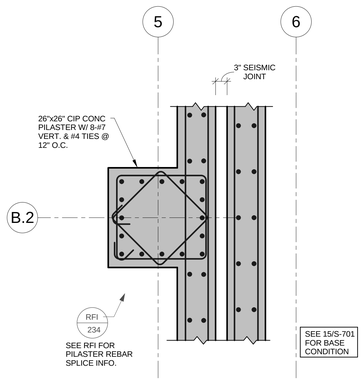
11 ENLARGE PLAN
SCALE: 3/4" = 1'-0"



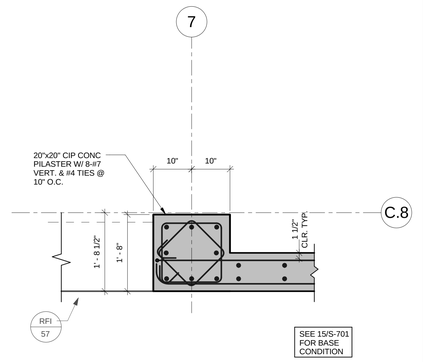
7 ENLARGE PLAN
SCALE: 3/4" = 1'-0"



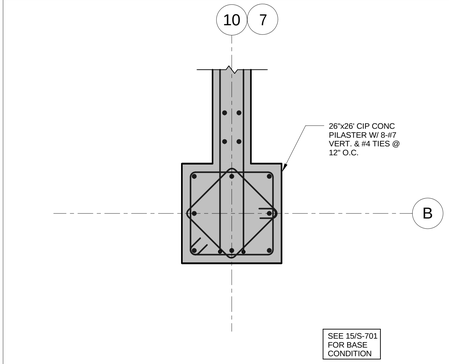
3 ENLARGE PLAN
SCALE: 3/4" = 1'-0"



12 ENLARGE PLAN
SCALE: 3/4" = 1'-0"



8 ENLARGE PLAN
SCALE: 3/4" = 1'-0"



4 ENLARGE PLAN
SCALE: 3/4" = 1'-0"

If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

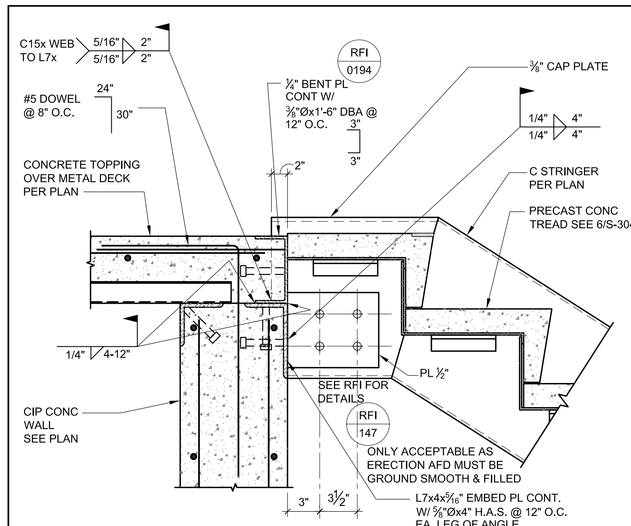
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

PROJECT NO.: 07055.00
DRAWN BY: AY
DATE: 07/23/08
CHECKED BY: CB
SCALE: As indicated

SHEET TITLE:
ENLARGED PLANS

SHEET NO:
S-301



17 SECTION AT TOP OF LANDING (ST01)
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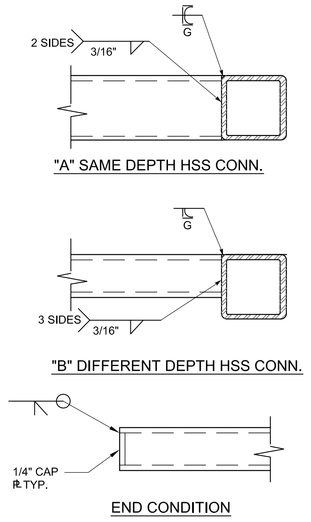
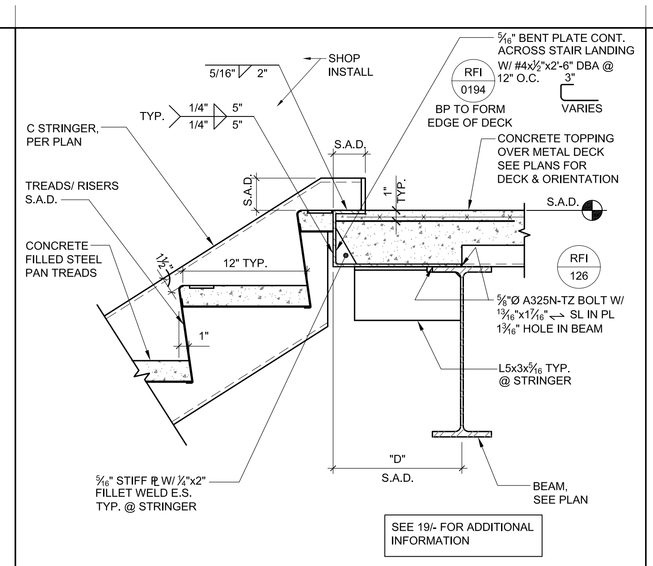
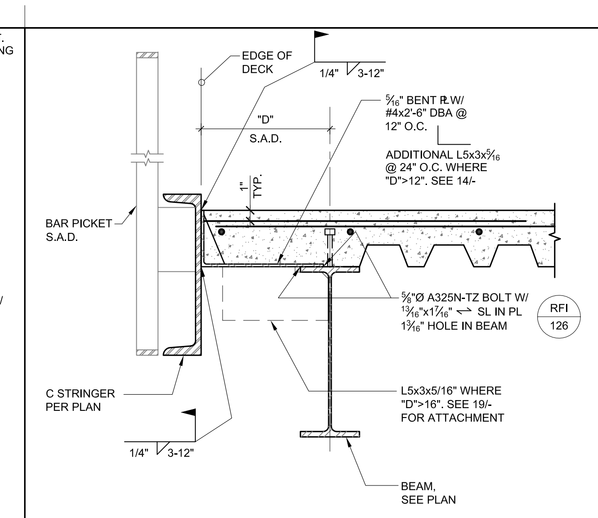


13 TYPICAL HSS CONNECTIONS
SCALE: 1½"=1'-0"



9 SECTION AT STAIRS
SCALE: 1½"=1'-0"



5 SECTION @ EDGE OF DECK
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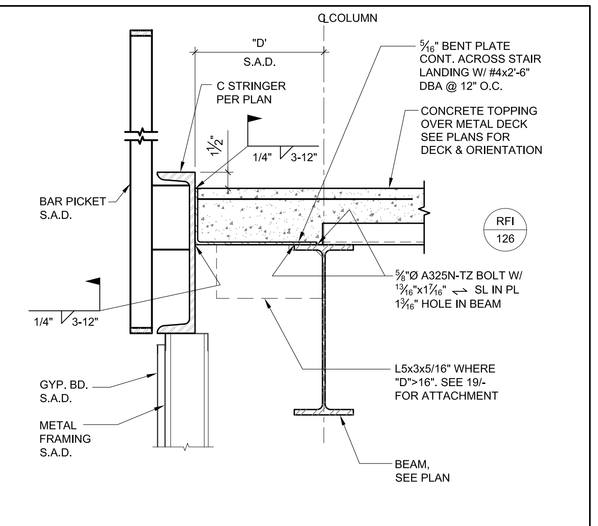
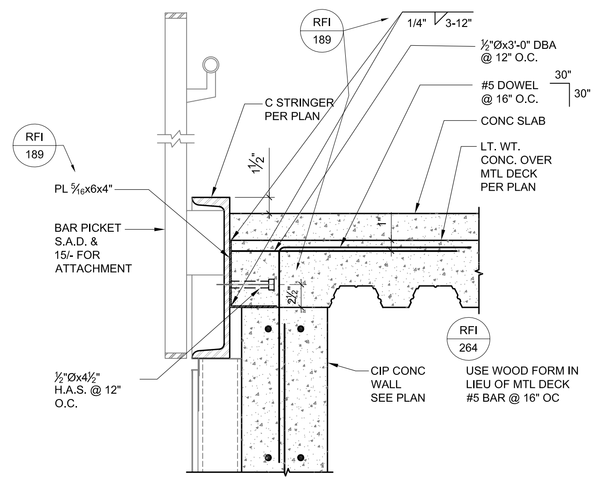
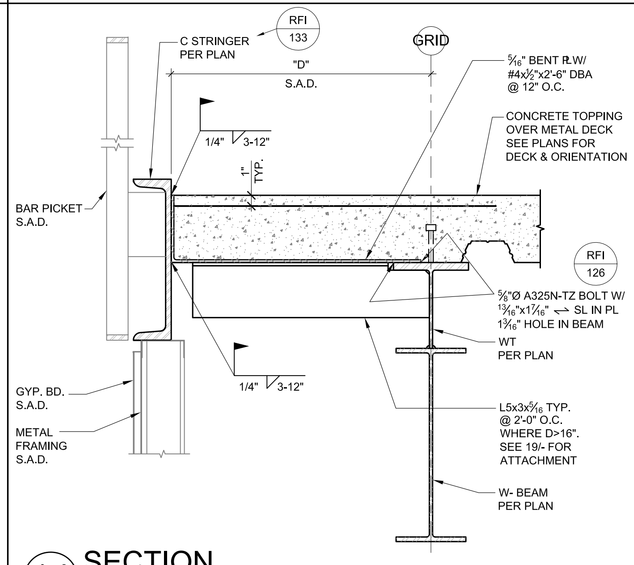


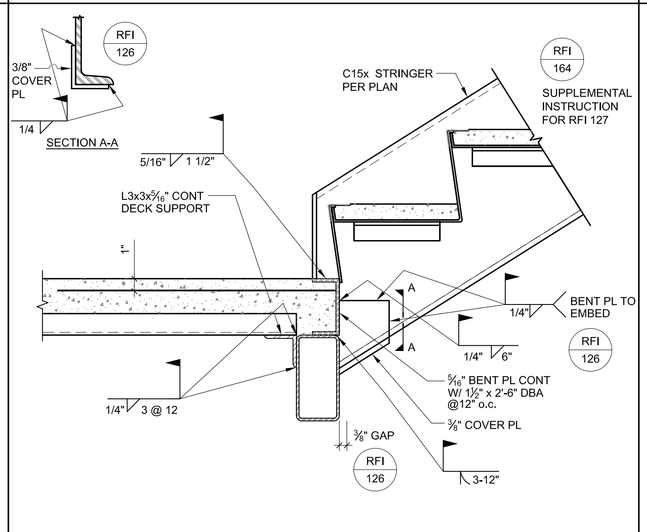
1 SECTION AT GUARDRAIL
SCALE: 1½"=1'-0"



18 SECTION
SCALE: 1½"=1'-0"



14 SECTION
SCALE: 1½"=1'-0"



10 SECTION AT STRINGER
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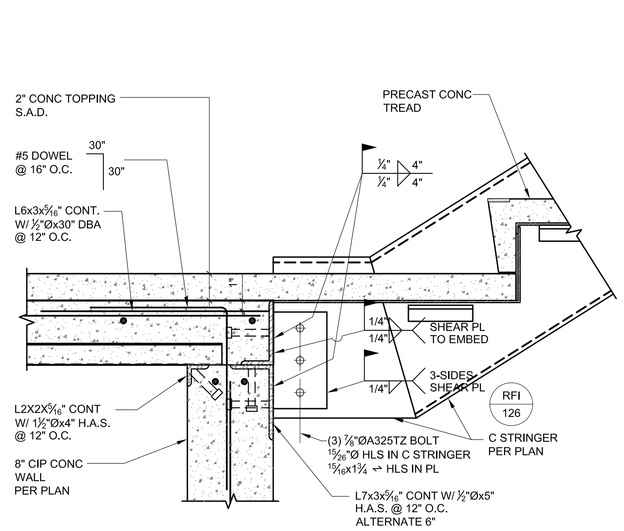
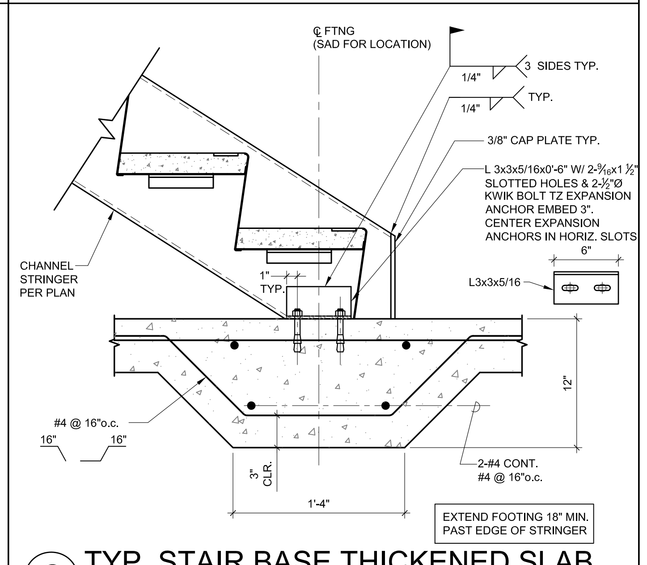
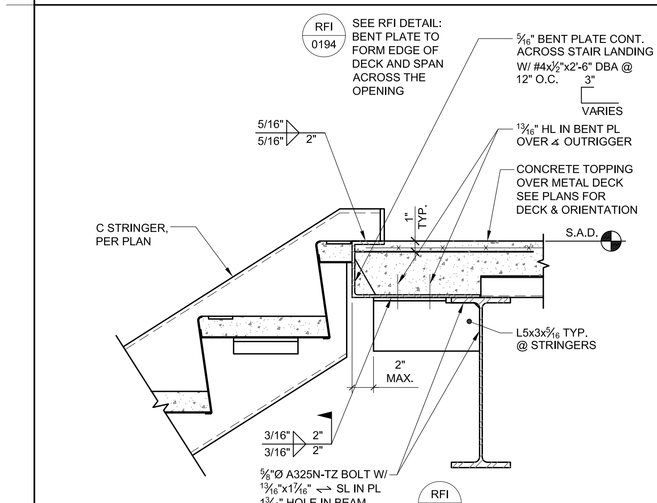


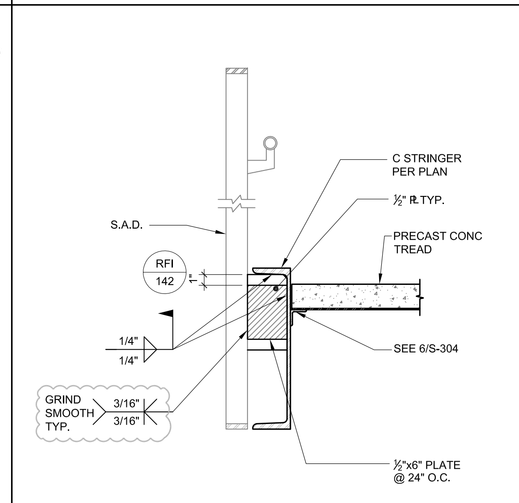
6 SECTION @ MID LANDING - ST05
SCALE: 1½"=1'-0"



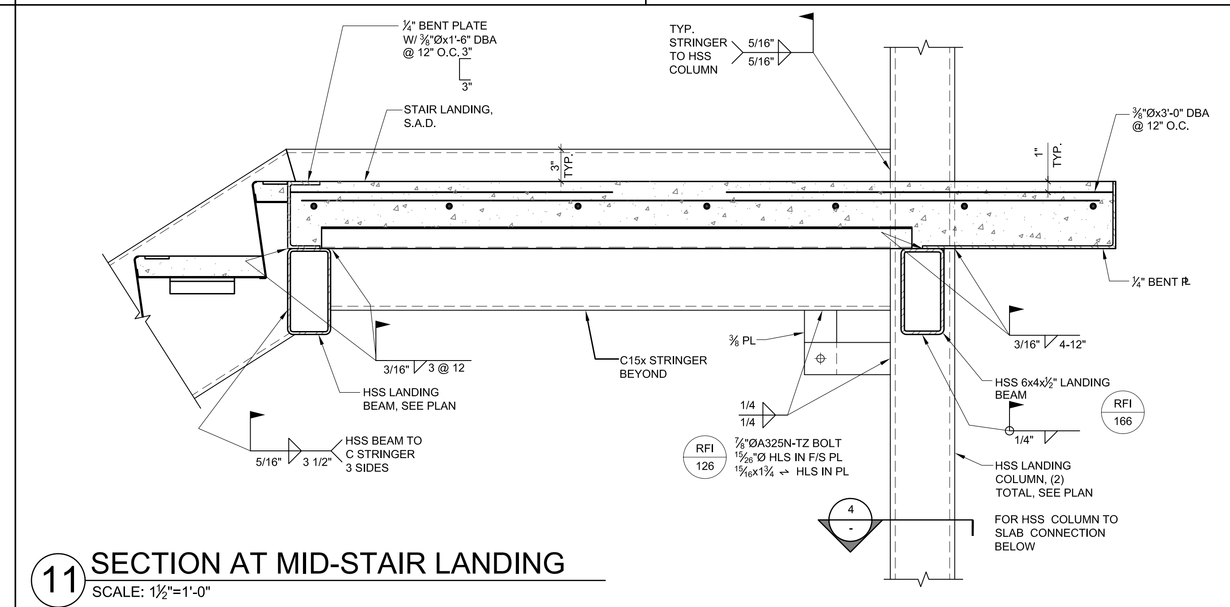
2 TYP. STAIR BASE THICKENED SLAB
SCALE: 1½"=1'-0"



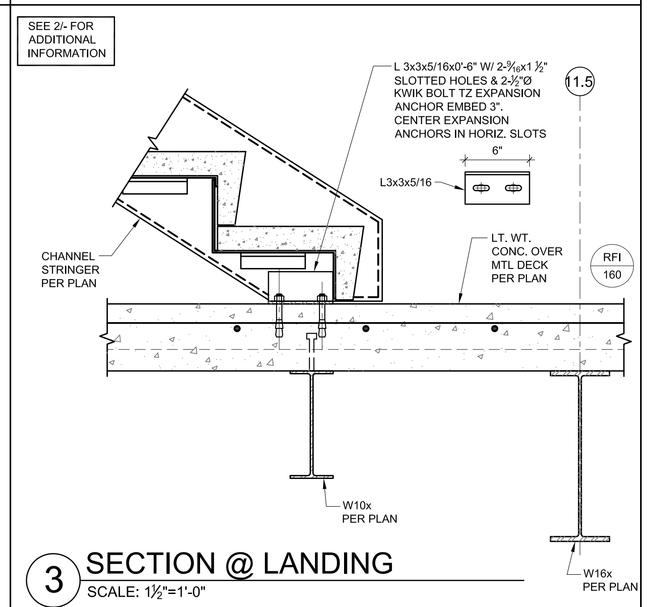
19 SECTION AT STAIRS
SCALE: 1½"=1'-0"



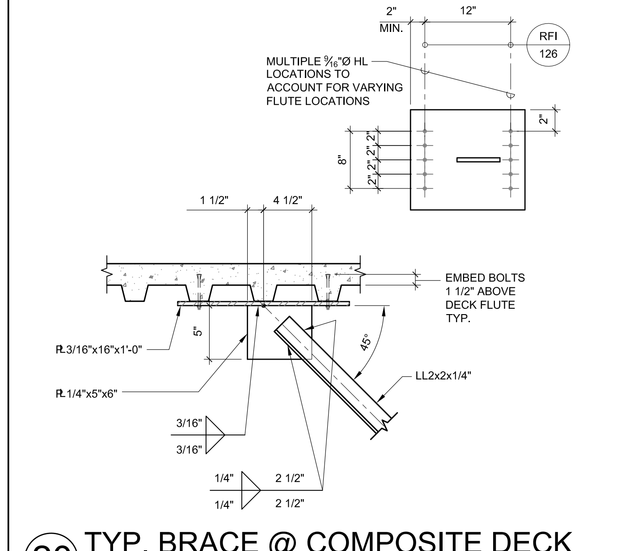
15 SECTION
SCALE: 1½"=1'-0"



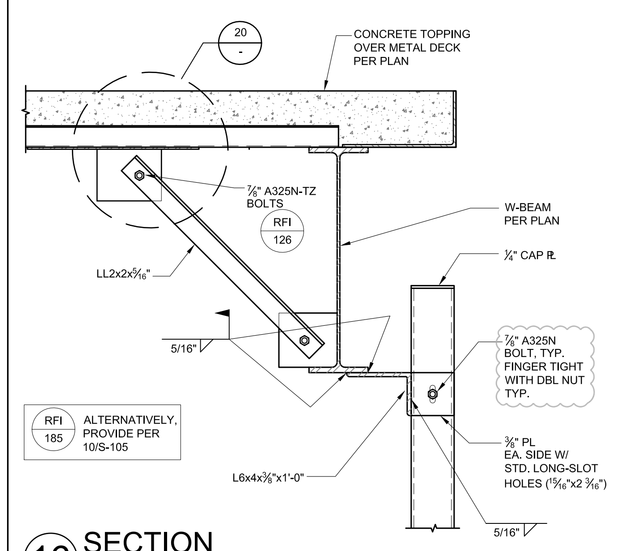
11 SECTION AT MID-STAIR LANDING
SCALE: 1½"=1'-0"



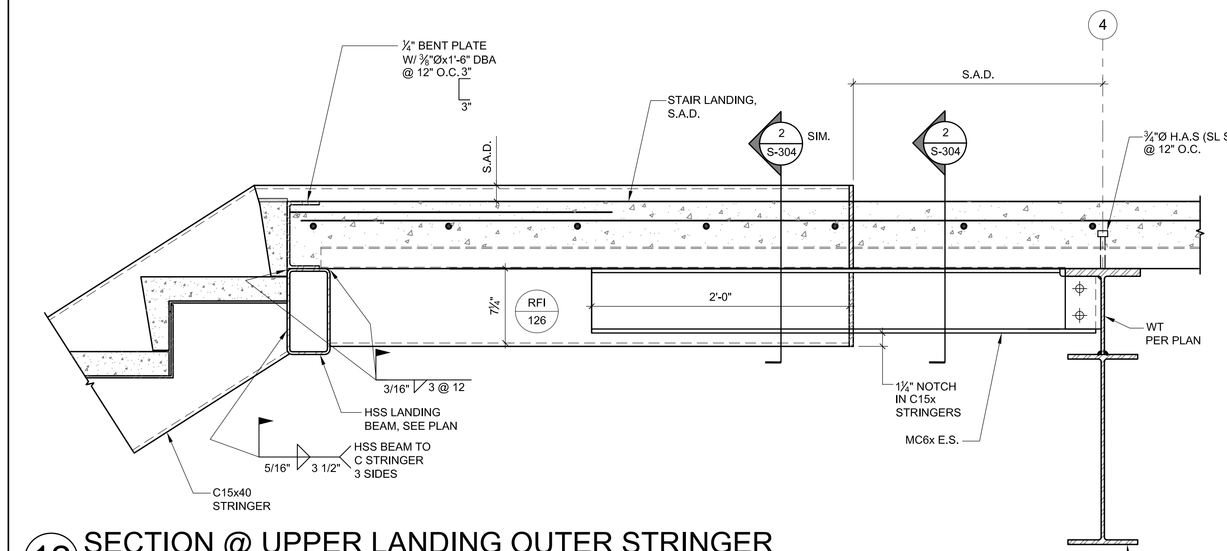
3 SECTION @ LANDING
SCALE: 1½"=1'-0"



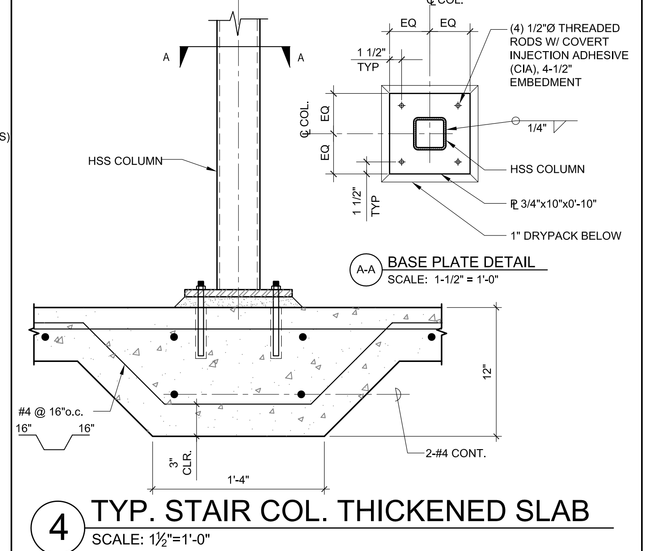
20 TYP. BRACE @ COMPOSITE DECK
SCALE: 1"=1'-0"



16 SECTION
SCALE: 1½"=1'-0"



12 SECTION @ UPPER LANDING OUTER STRINGER
SCALE: 1½"=1'-0"



4 TYP. STAIR COL. THICKENED SLAB
SCALE: 1½"=1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

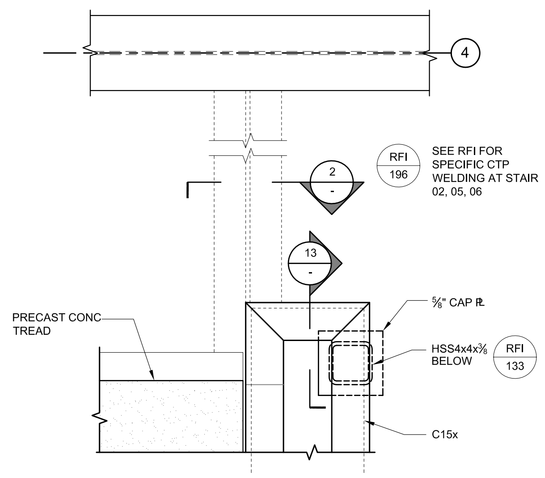
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

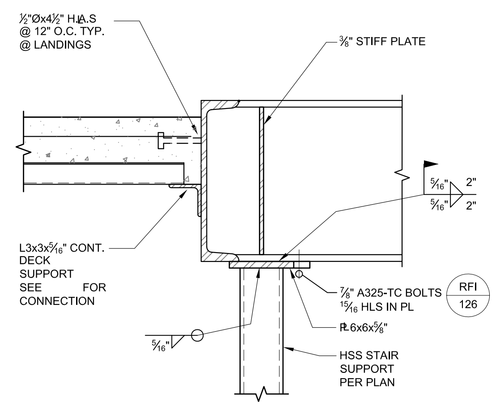
PROJECT NO.:	07012.00	DRAWN BY:	AY
DATE:	03/09/09	CHECKED BY:	CB
SCALE:			

SHEET TITLE:
TYPICAL STAIR DETAILS

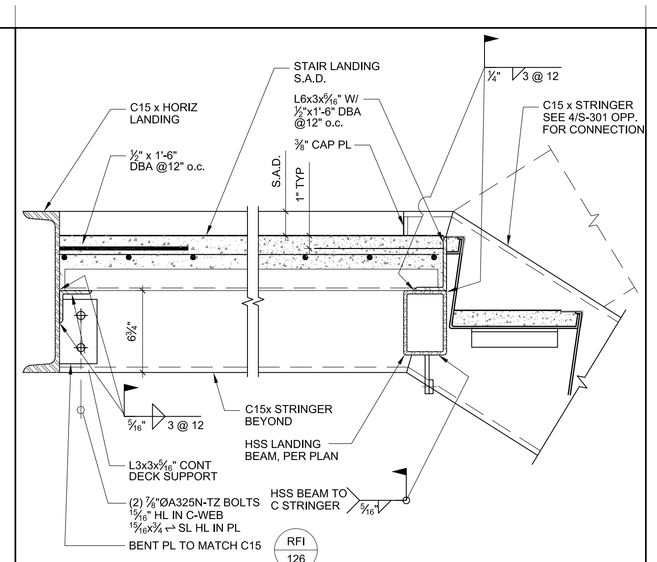
SHEET NO:
S-303



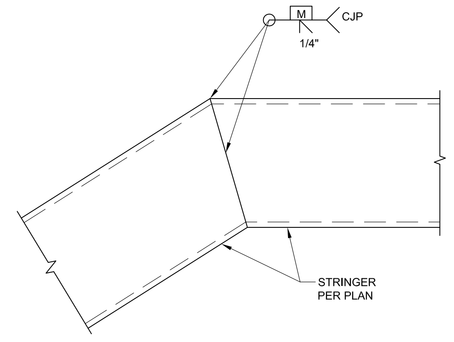
17 ENLARGED PLAN -ST05 - LEVEL 2
SCALE: 1½"=1'-0"



13 SECTION
SCALE: 1½"=1'-0"



9 SECTION AT MID-STAIR LANDING (STAIR #06)
SCALE: 1½"=1'-0"



5 TYPICAL STRINGER TO STRINGER CONNECTION
SCALE: 1½"=1'-0"

RFI 134 SEE RFI FOR RESPONSE TO INDIVIDUAL NUMBERS

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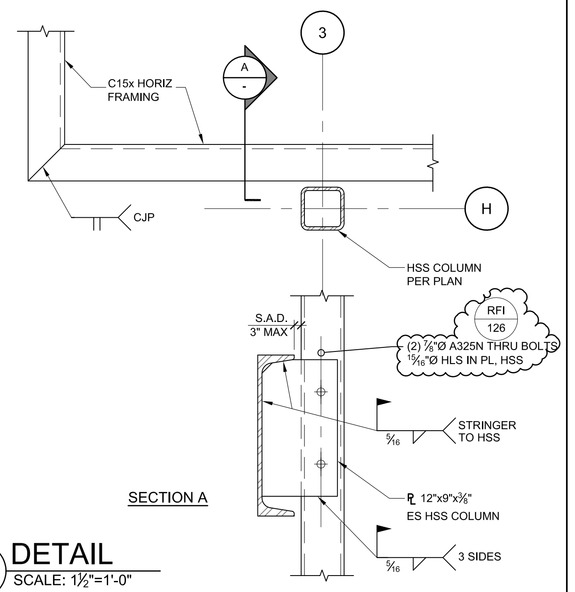
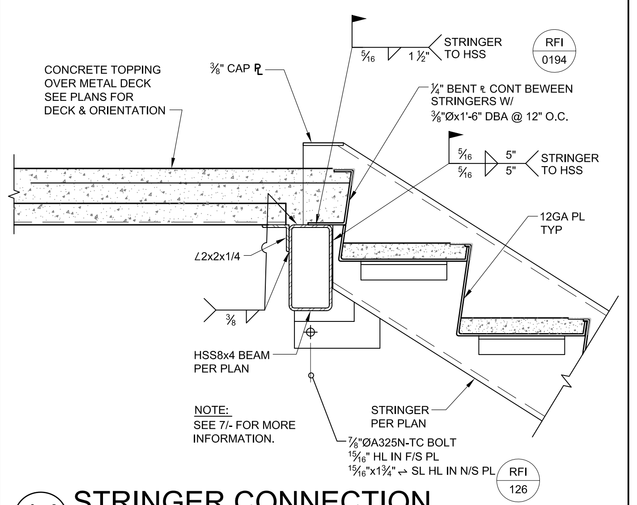
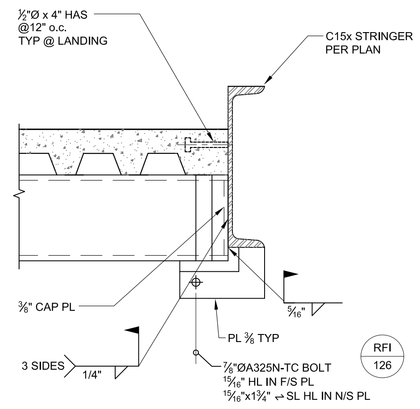
NO.	ISSUES/REVISIONS	DATE



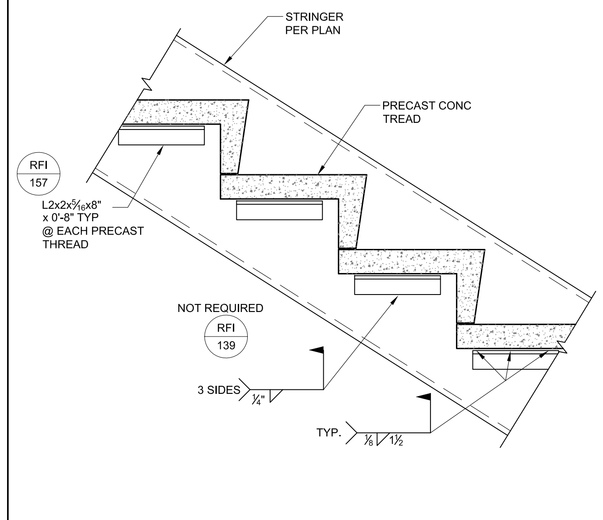
18 DETAIL
SCALE: 1½"=1'-0"



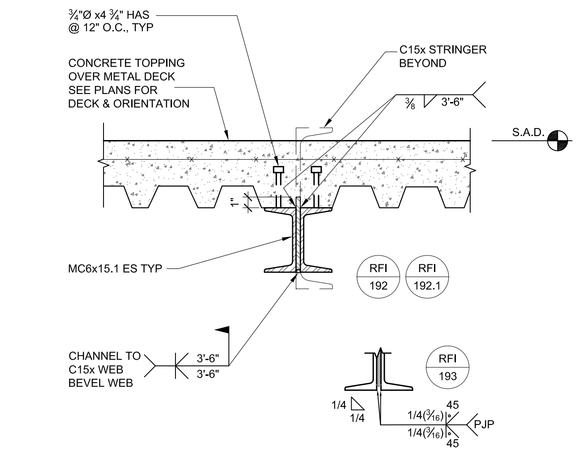
14 STRINGER CONNECTION
SCALE: 1½"=1'-0"



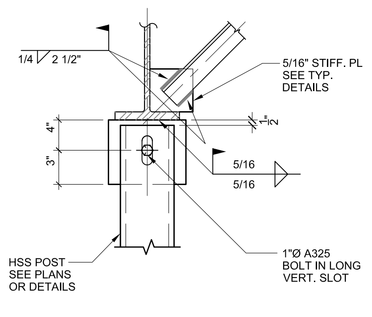
10 SECTION
SCALE: 1½"=1'-0"



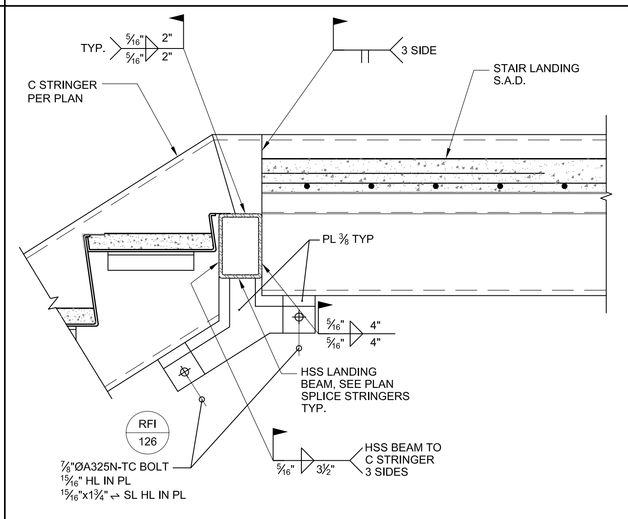
6 TYPICAL PRECAST CONC. TREAD
SCALE: 1½"=1'-0"



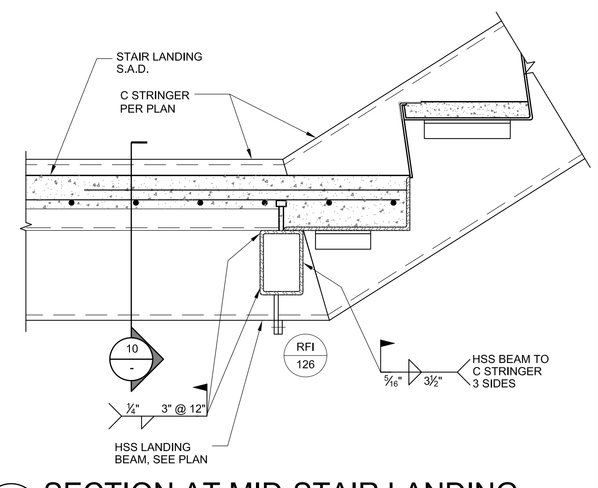
2 DETAIL
SCALE: 1½"=1'-0"



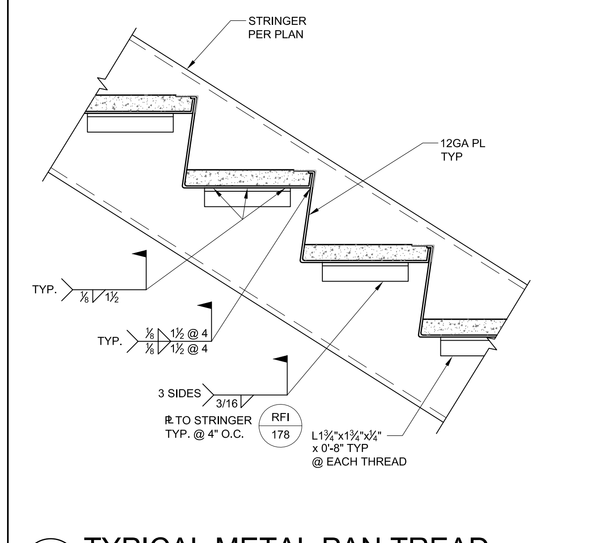
19 SECTION AT POST
SCALE: 1½"=1'-0"



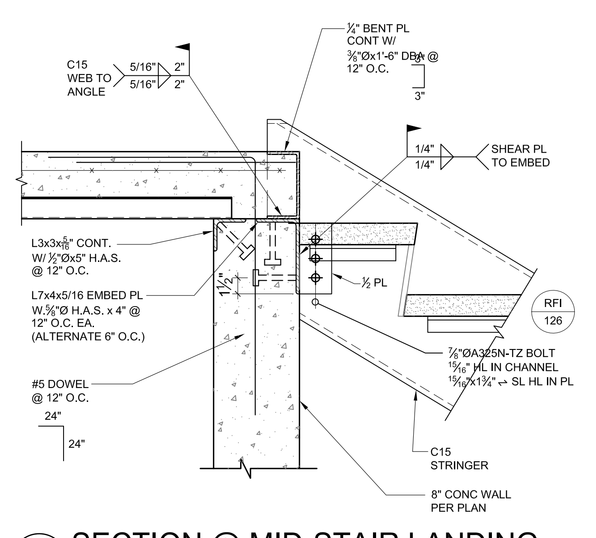
15 SECTION AT MID-STAIR LANDING
SCALE: 1½"=1'-0"



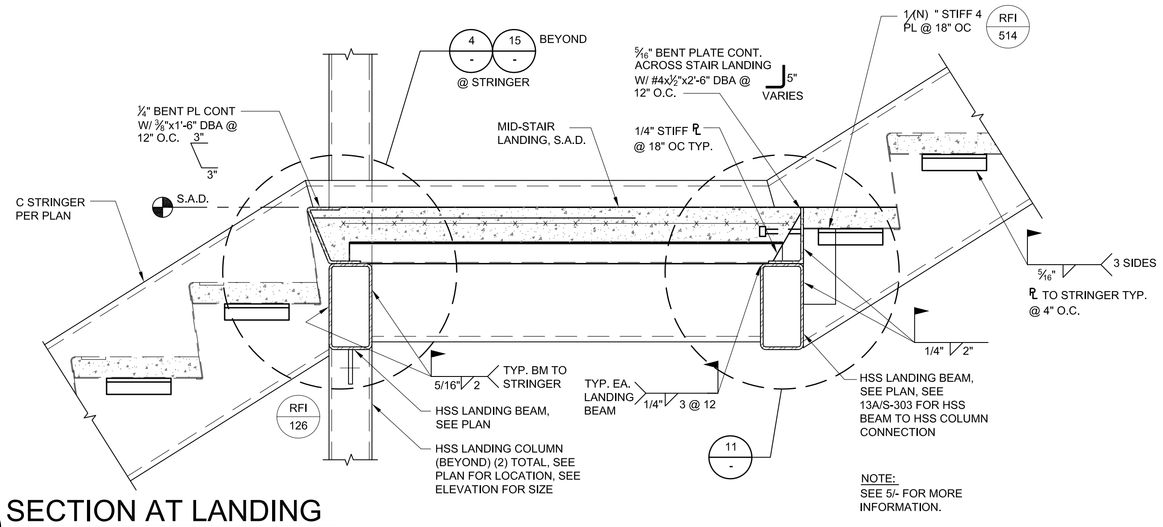
11 SECTION AT MID-STAIR LANDING
SCALE: 1½"=1'-0"



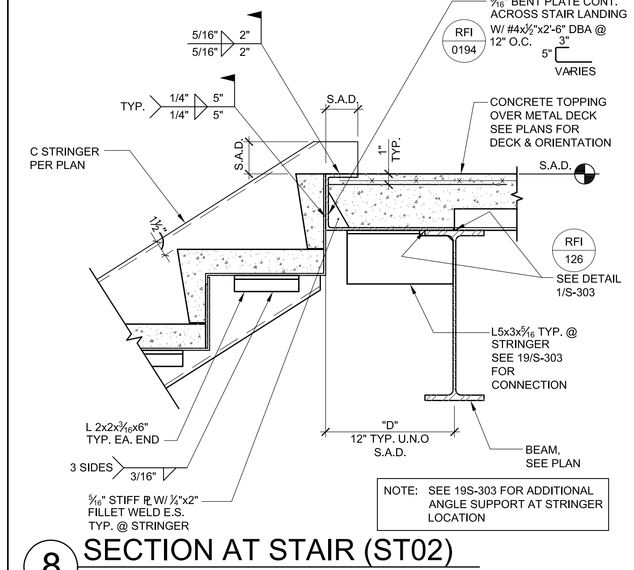
7 TYPICAL METAL PAN TREAD
SCALE: 1½"=1'-0"



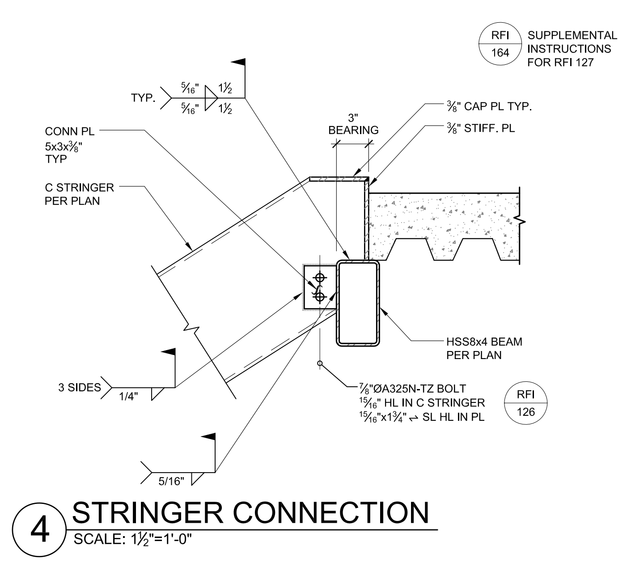
3 SECTION @ MID-STAIR LANDING
SCALE: 1½"=1'-0"



16 SECTION AT LANDING
SCALE: 1½"=1'-0"



8 SECTION AT STAIR (ST02)
SCALE: 1½"=1'-0"



4 STRINGER CONNECTION
SCALE: 1½"=1'-0"

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PROJECT RECORD SET

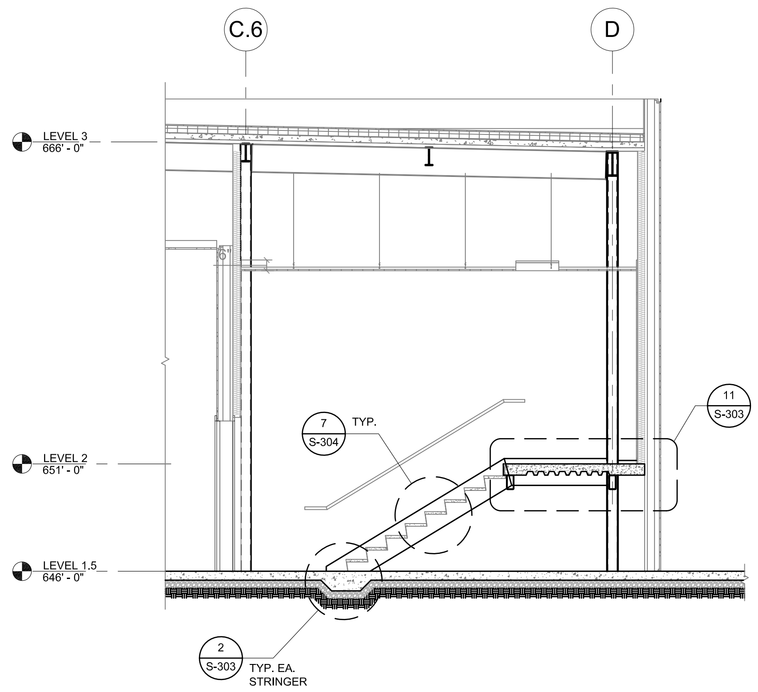
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

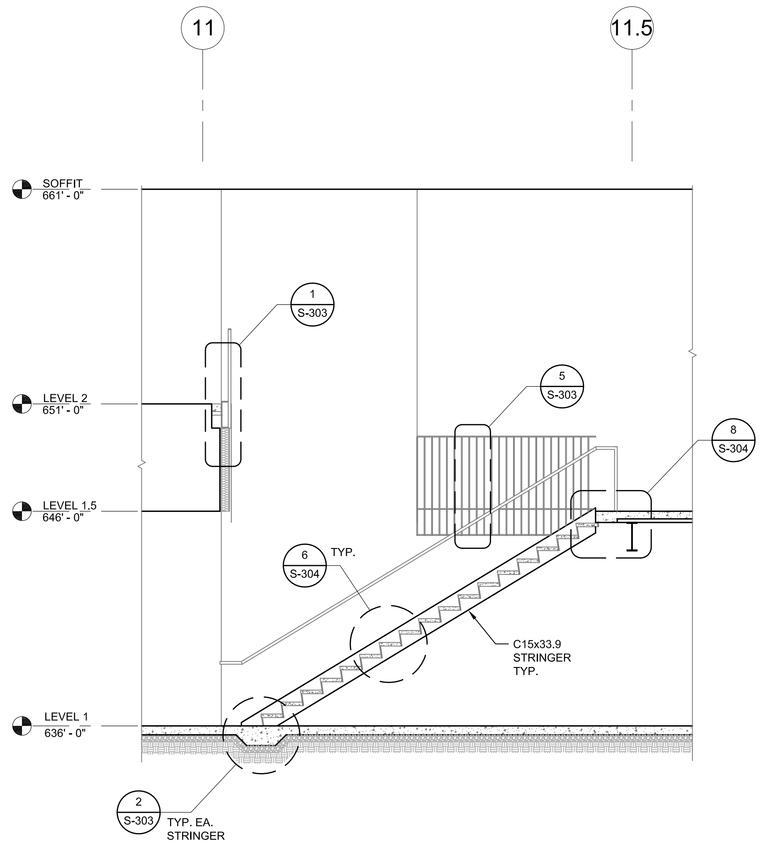
PROJECT NO.: 07012.00	DRAWN BY: AY
DATE: 03/09/09	CHECKED BY: CB
SCALE:	

SHEET TITLE:
TYPICAL STAIR DETAILS

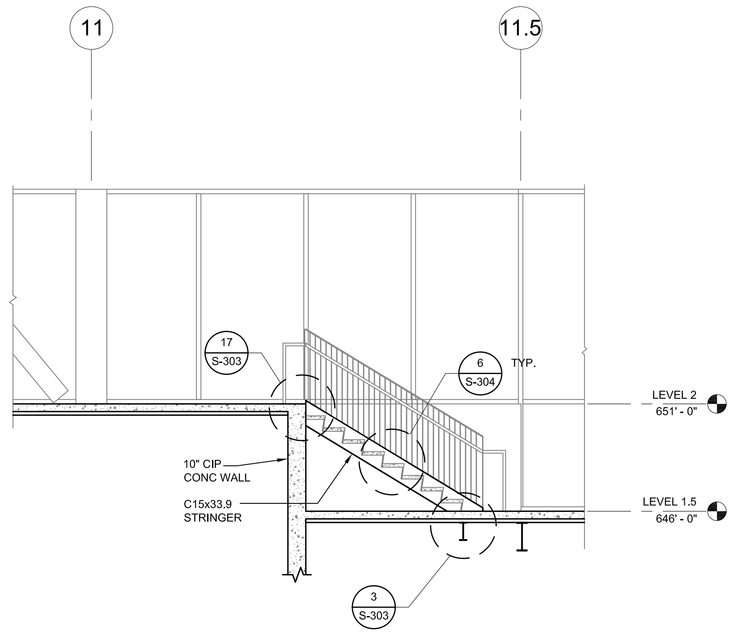
SHEET NO:
S-304



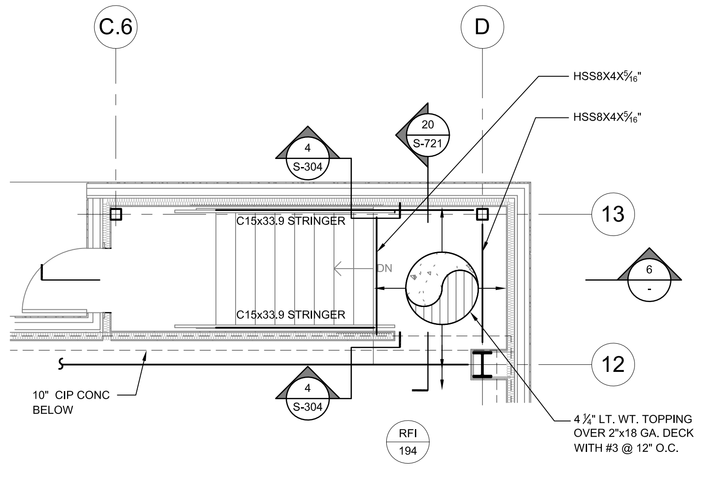
6 NORTHEAST STAIR - ST03
1/4" = 1'-0"



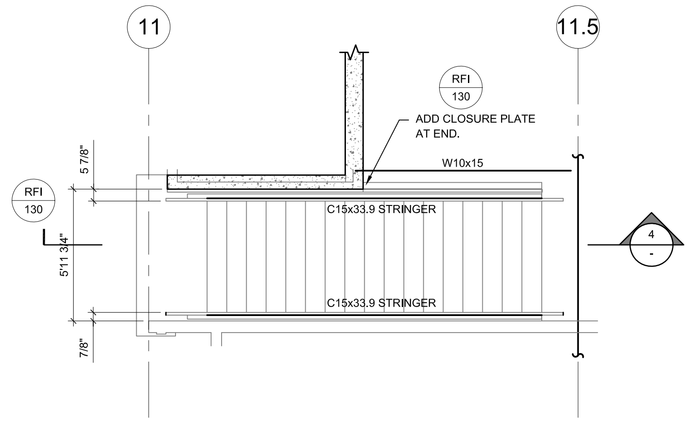
4 NORTH LOBBY STAIR - ST02
1/4" = 1'-0"



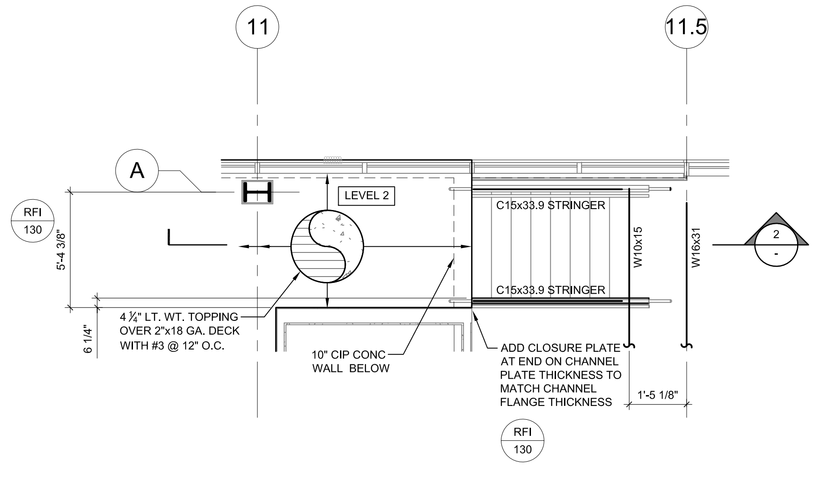
2 NORTH LOBBY STAIR - ST01
1/4" = 1'-0"



5 NORTHEAST STAIR - ST03 - LEVEL 2
1/4" = 1'-0"



3 NORTH LOBBY STAIR - ST02 - LEVEL 2
1/4" = 1'-0"



1 NORTH LOBBY STAIR - ST01 - LEVEL 2
1/4" = 1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY
COMMUNITY COLLEGE
DISTRICT

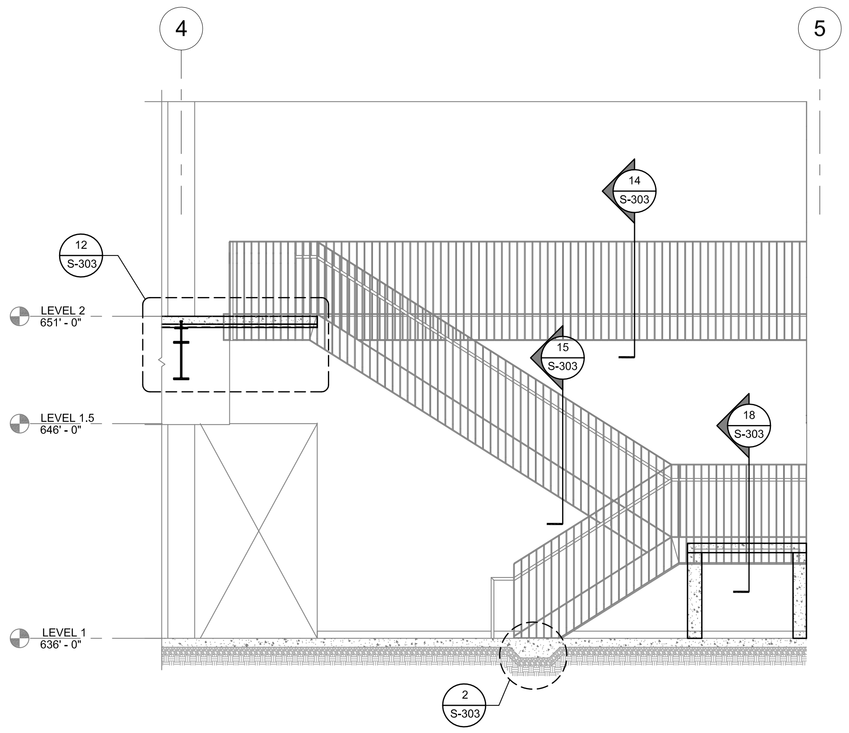
CIP2 DESIGN-BUILD
PROJECT
BUILDING 4
KEYPLAN

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE:

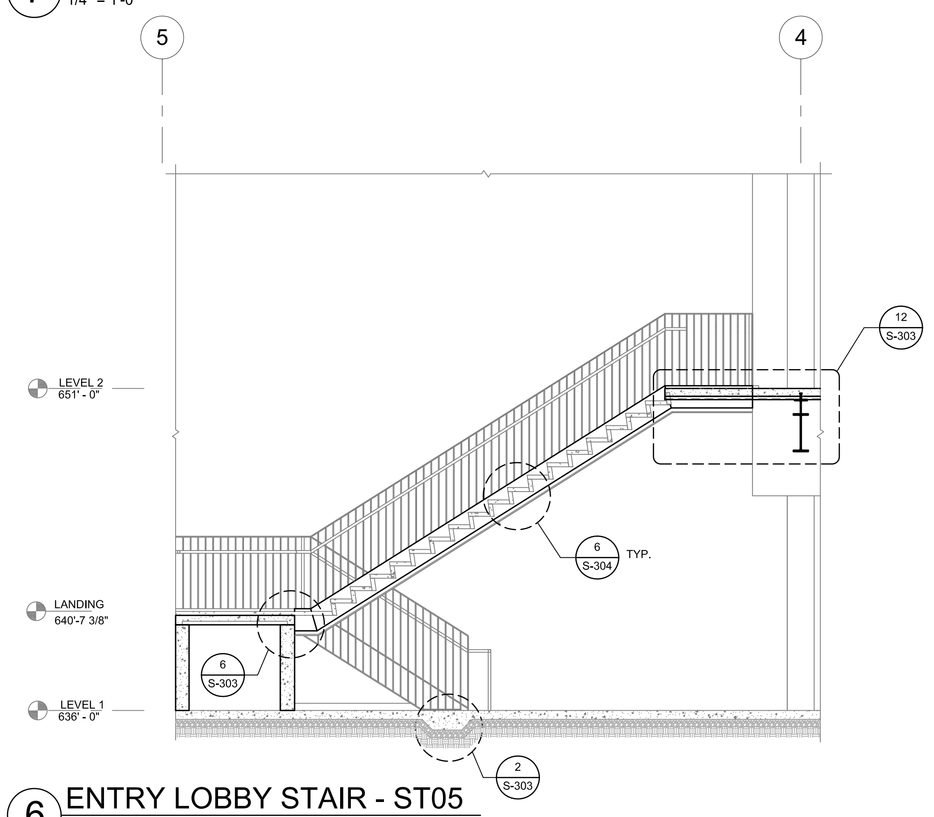
SHEET TITLE:
ENLARGED
STAIR PLANS
AND SECTIONS

SHEET NO:
S-305

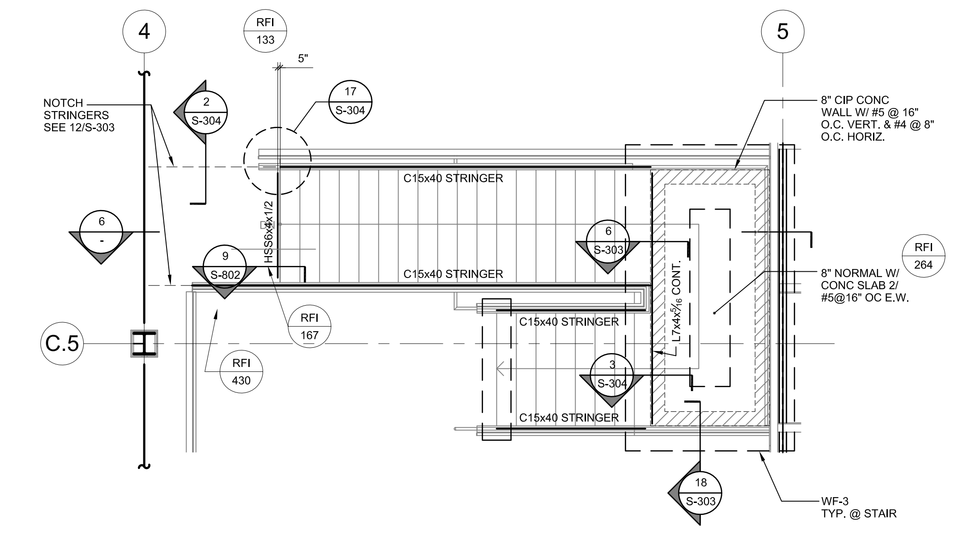
If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch



7 ENTRY LOBBY STAIR - ST05 - EAST ELEVATION
1/4" = 1'-0"

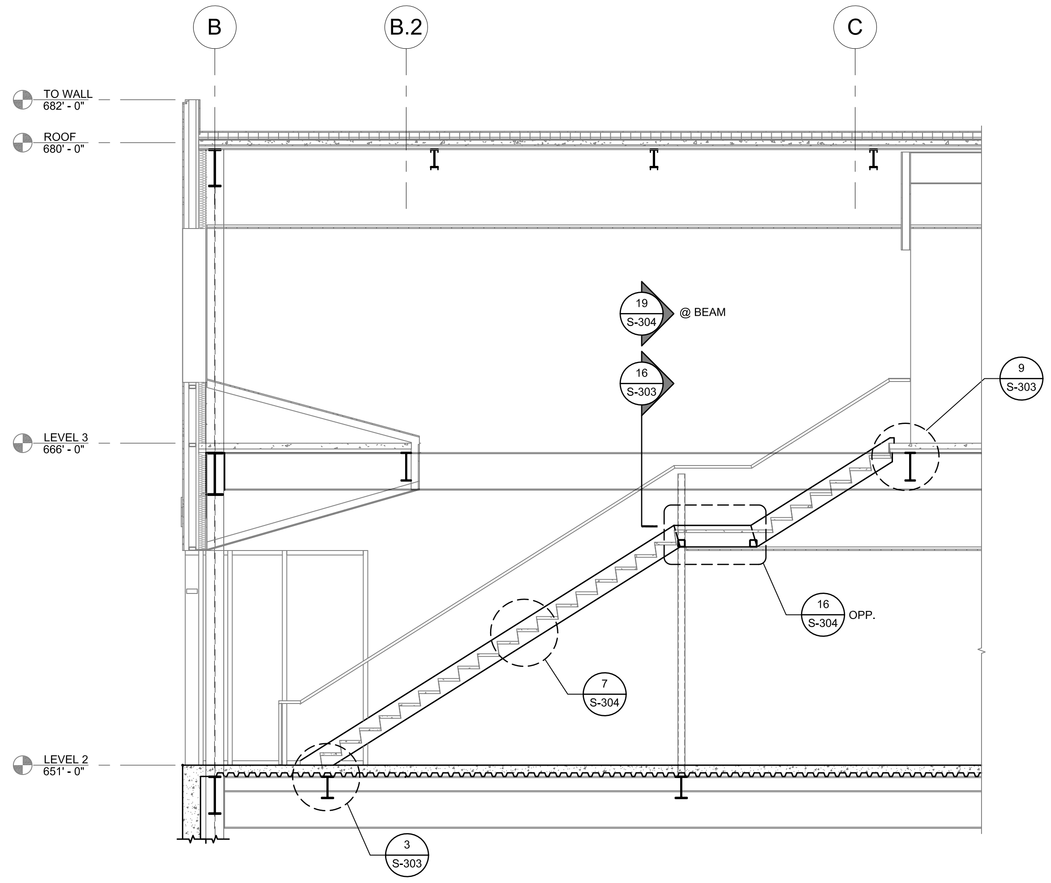


6 ENTRY LOBBY STAIR - ST05
1/4" = 1'-0"

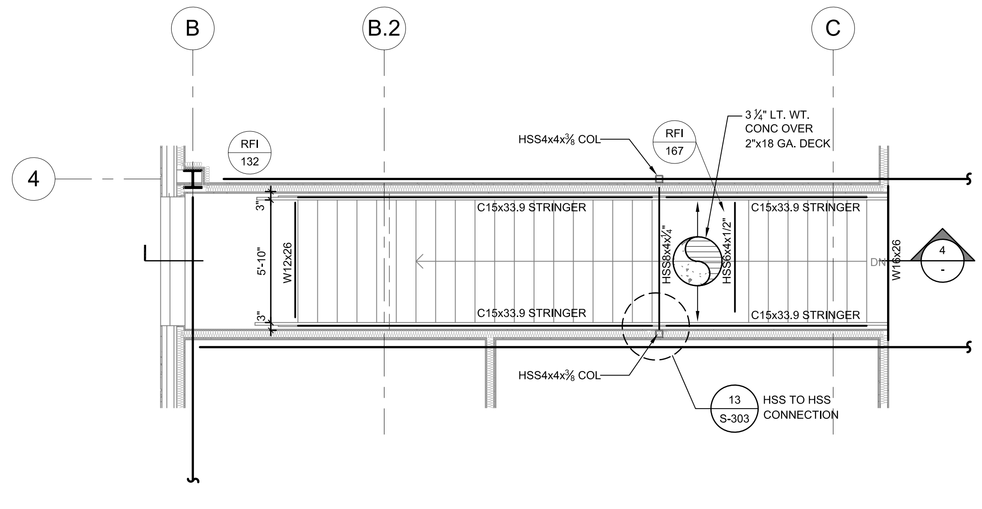


5 ENTRY LOBBY STAIR - ST05 - LEVE 2
1/4" = 1'-0"

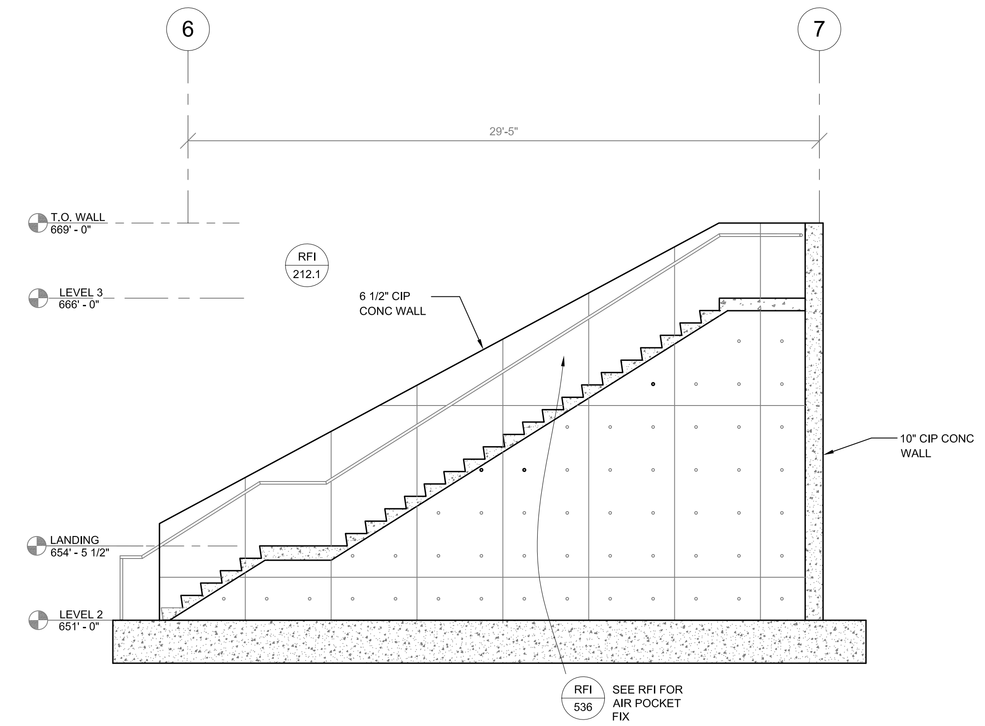
RFI 235 STAIR WELDS



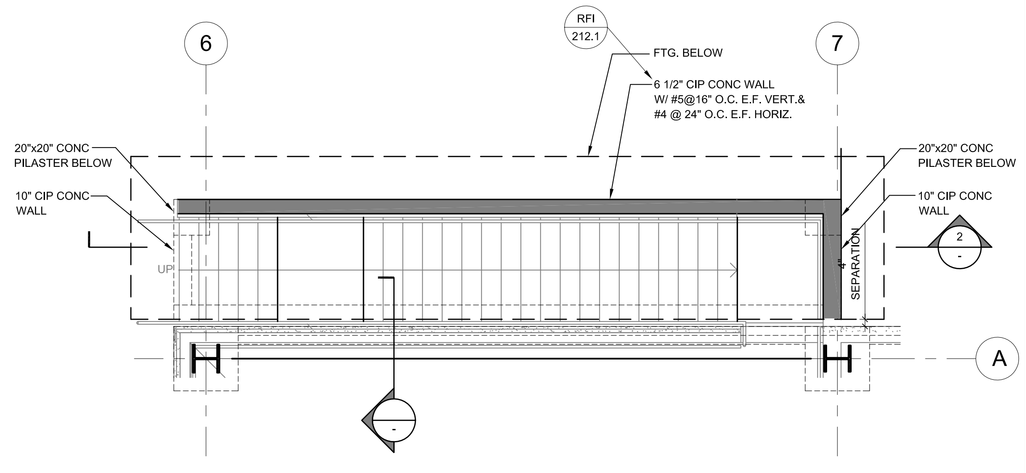
4 SOUTHWEST STAIR - ST04
1/4" = 1'-0"



3 SOUTHWEST STAIR - ST04 - LEVE 3
1/4" = 1'-0"



2 TERRACE STAIR - ST07
1/4" = 1'-0"



1 TERRACE STAIR - ST07- LEVEL 2
1/4" = 1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY
COMMUNITY COLLEGE
DISTRICT

CIP2 DESIGN-BUILD
PROJECT
BUILDING 4

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE:

SHEET TITLE:
ENLARGED
STAIR PLANS
AND SECTIONS

SHEET NO:
S-306

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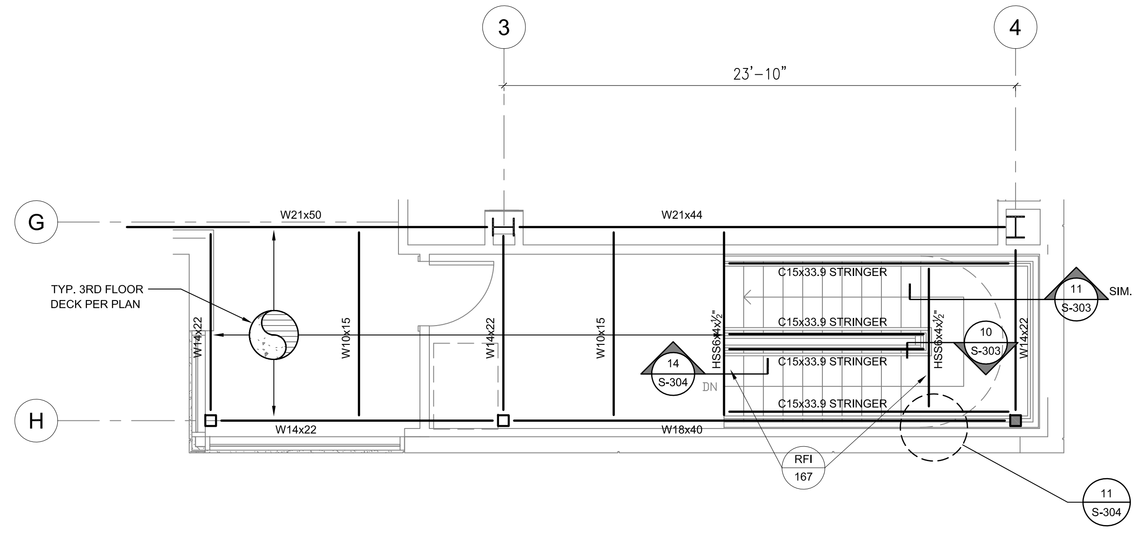
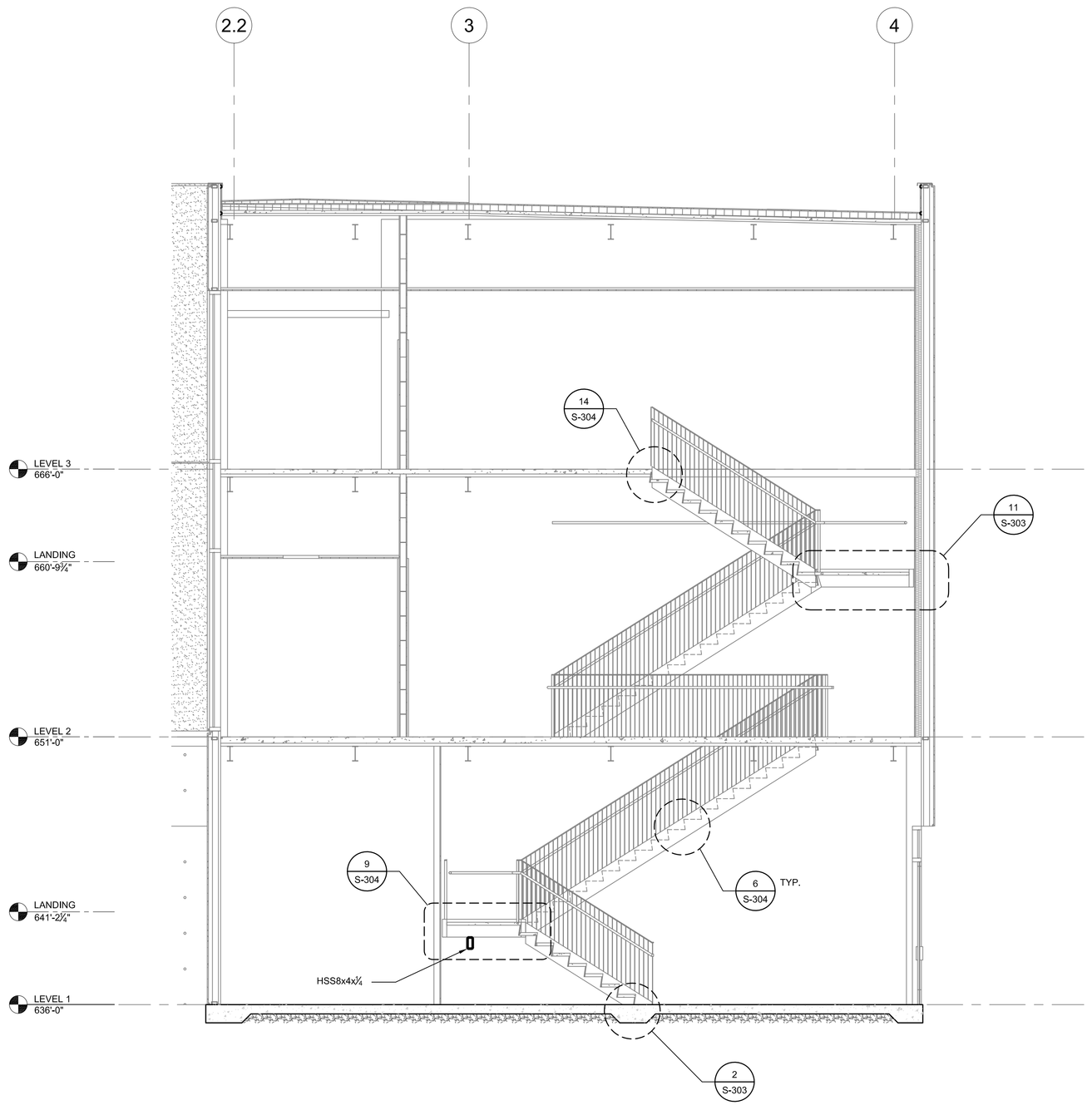
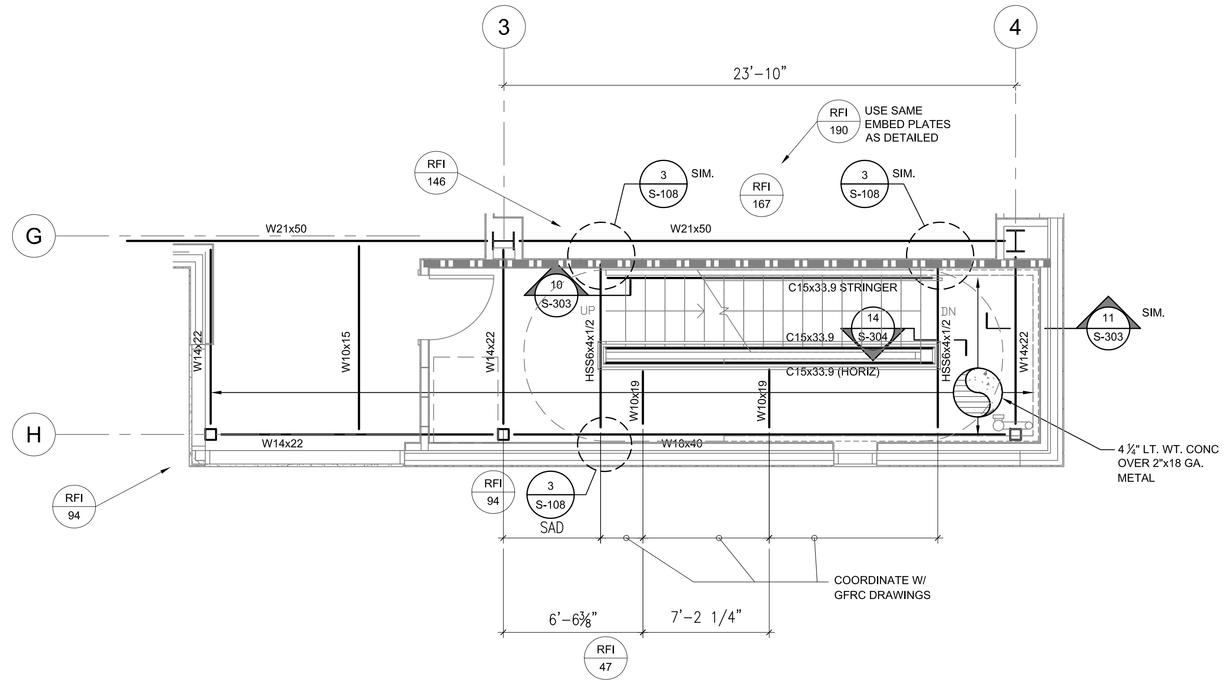


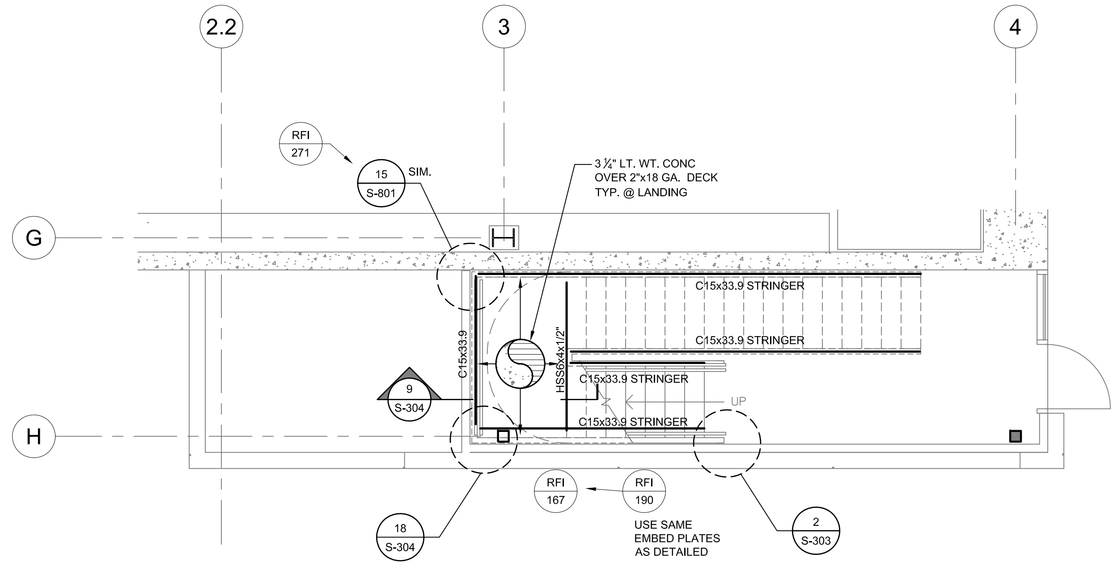
3 SOUTHEAST STAIR - ST06 - LEVEL 3
1/4" = 1'-0"



4 SOUTHEAST STAIR - ST06
1/4" = 1'-0"



2 SOUTHEAST STAIR - ST06 - LEVEL 2
1/4" = 1'-0"



1 SOUTHEAST STAIR - ST06 - LEVEL 1
1/4" = 1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

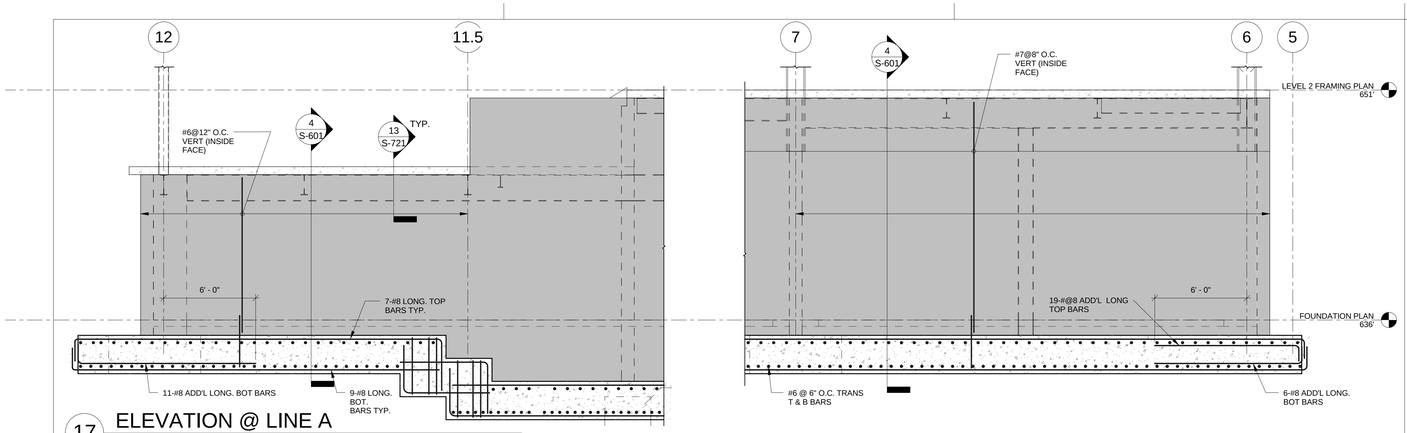
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

PROJECT NO.:	07012.00	DRAWN BY:	AY
DATE:	03/09/09	CHECKED BY:	CB
SCALE:			

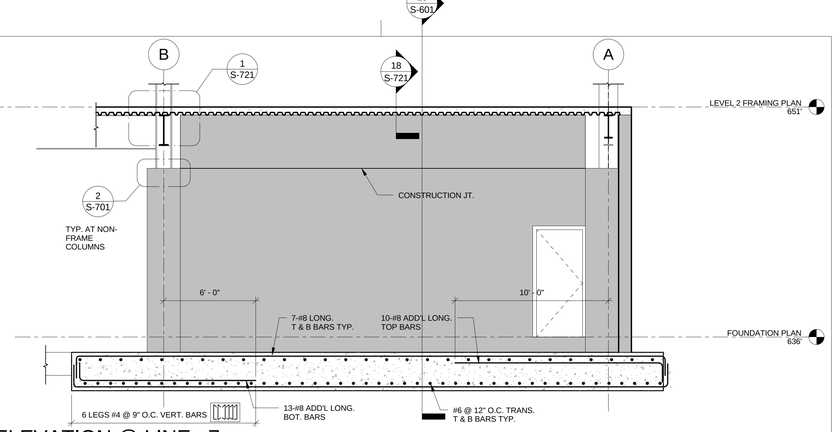
SHEET TITLE:
ENLARGED STAIR PLANS

SHEET NO:
S-307



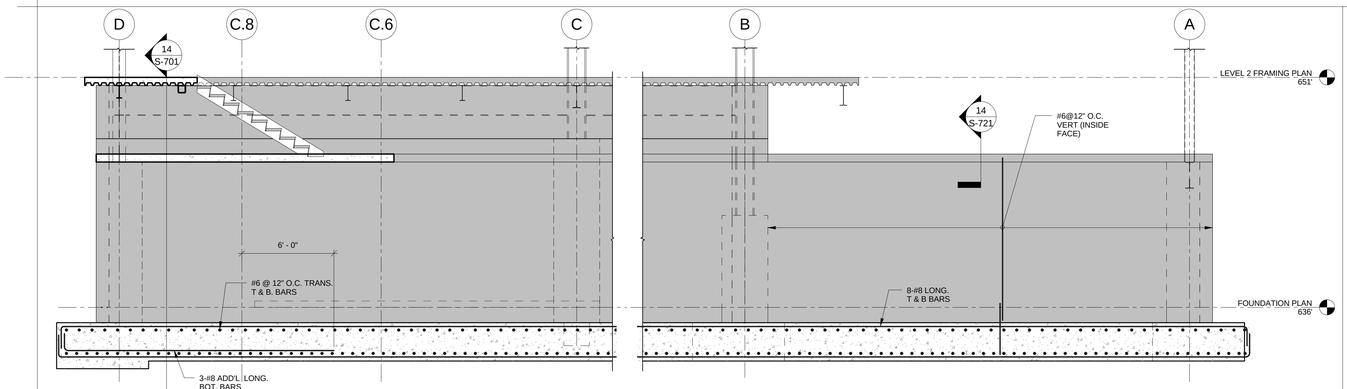
17 ELEVATION @ LINE A

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



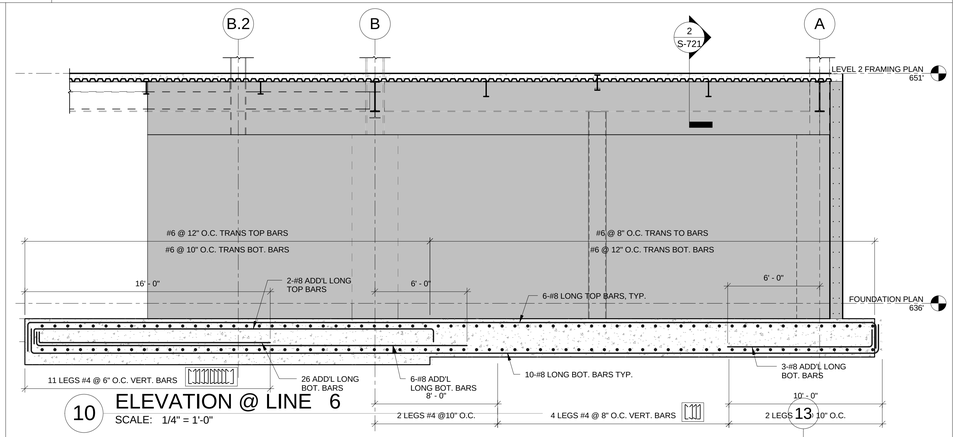
5 ELEVATION @ LINE 7

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



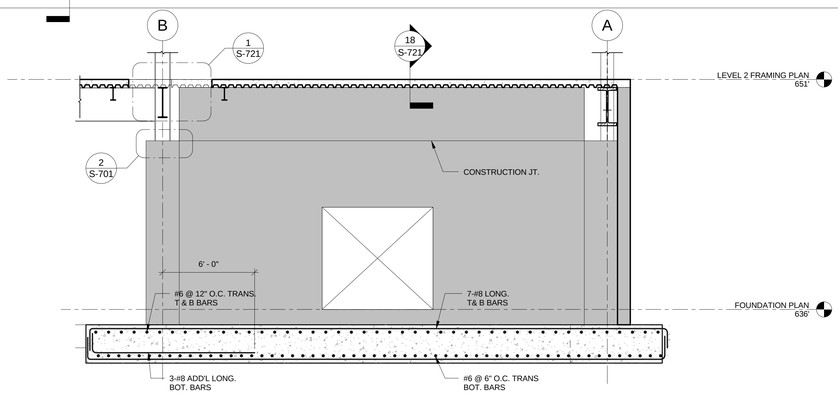
18 ELEVATION @ LINE 12

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



10 ELEVATION @ LINE 6

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



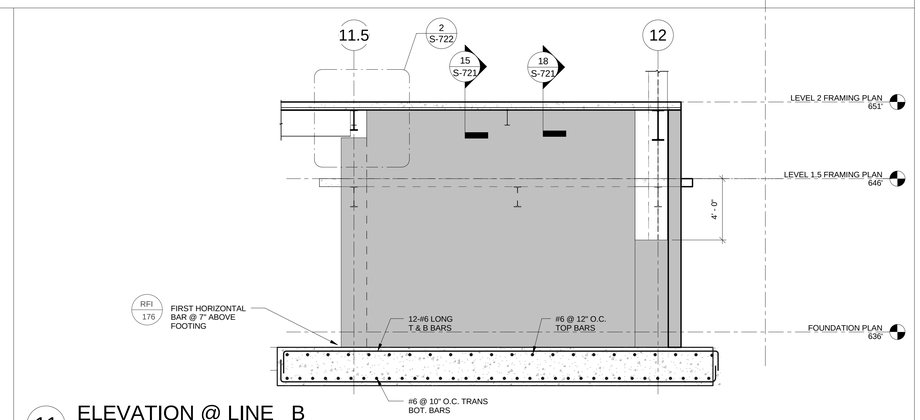
19 ELEVATION @ LINE 10

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

1. SEE ARCHITECTURAL DRAWING & SPECIFICATIONS FOR CONCRETE FINISH.
2. ALL FORM TIES TO BE LEFT EXPOSED.
3. SEE S-108 FOR TYPICAL WALL REINFORCING AT OPENINGS & CONSTRUCTION JOINTS.
4. SEE S-601 FOR TYP. WALL REINFORCING.
5. S.A.D. FOR EXTERIOR DRAINAGE SYSTEM.
6. SEE CIVIL DRAWINGS FOR DRAINAGE TIE TO MAIN SYSTEM.

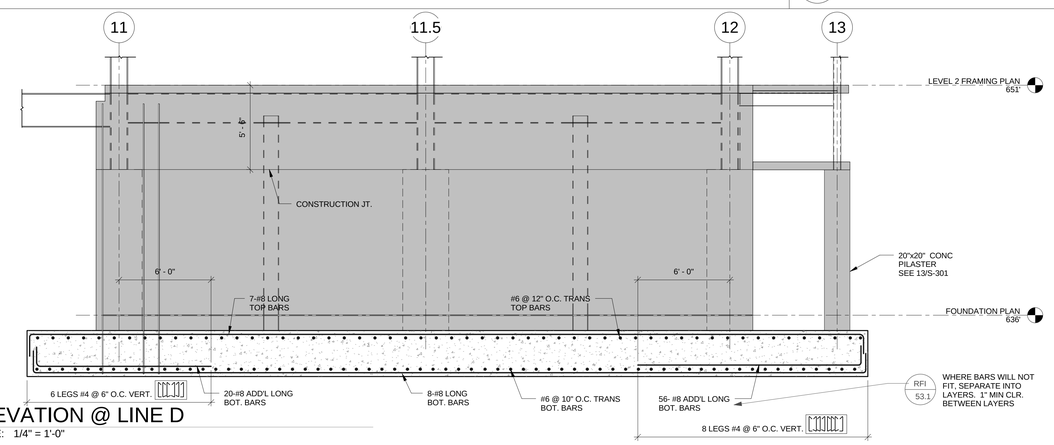
15 TYPICAL CONCRETE WALL NOTES

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



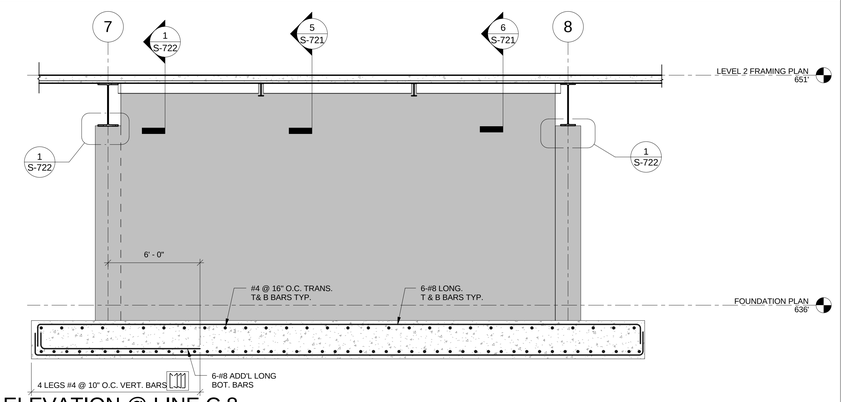
11 ELEVATION @ LINE B

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



20 ELEVATION @ LINE D

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



12 ELEVATION @ LINE C.8

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

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

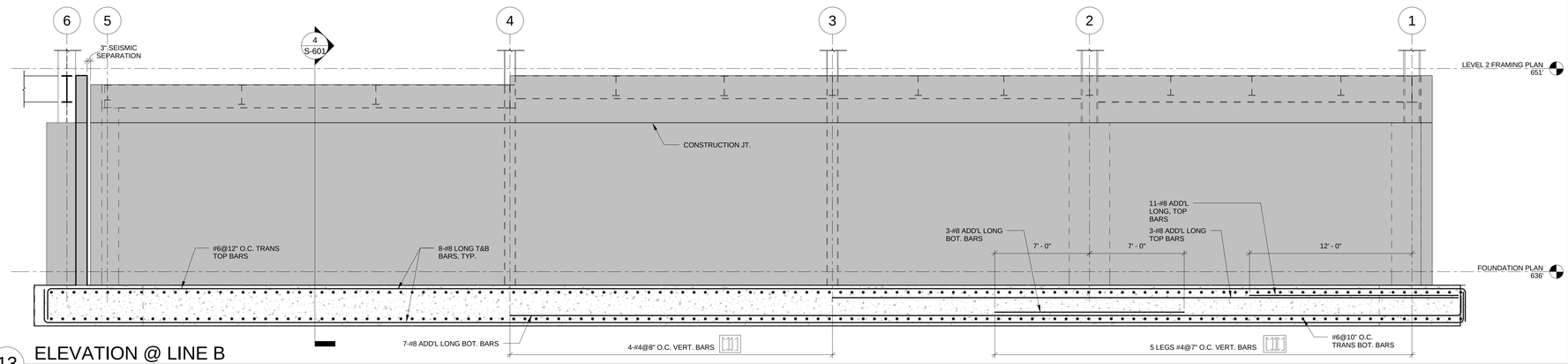
SKYLINE COLLEGE
SAN MATEO COUNTY
COMMUNITY COLLEGE
DISTRICT

CIP2 DESIGN-BUILD
PROJECT
BUILDING 4

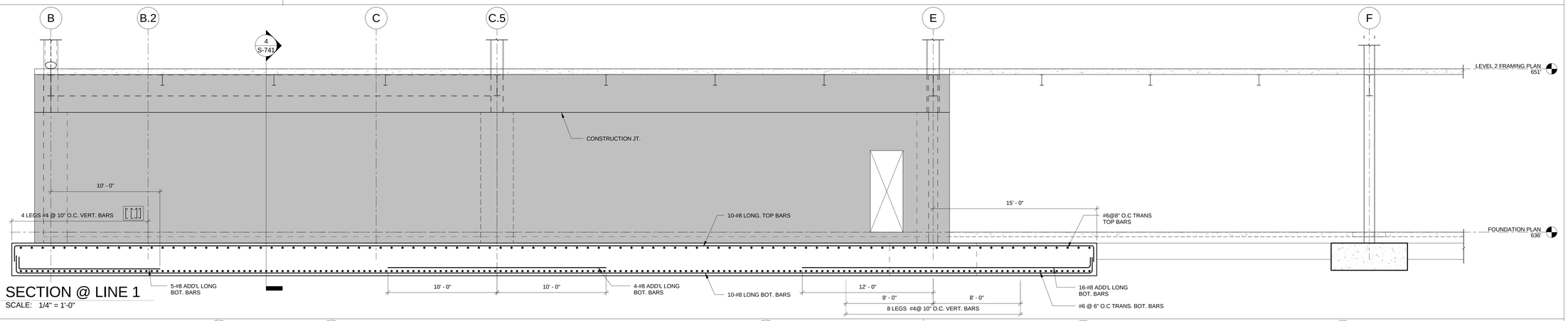
PROJECT NO.: 07055.00
DRAWN BY: AY
DATE: 07/18/08
CHECKED BY: CB
SCALE: 1/4" = 1'-0"

SHEET TITLE:
CONCRETE WALL
ELEVATIONS

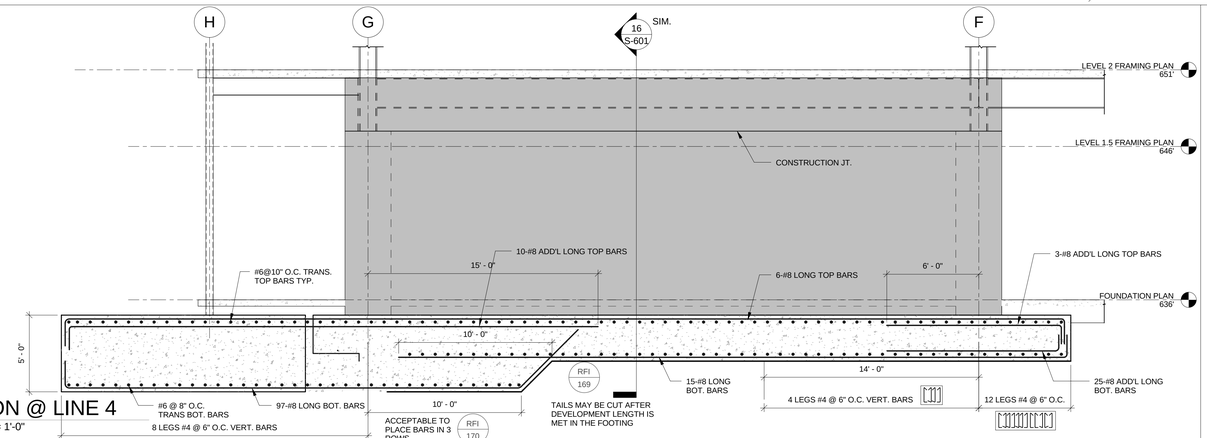
SHEET NO:
S-401



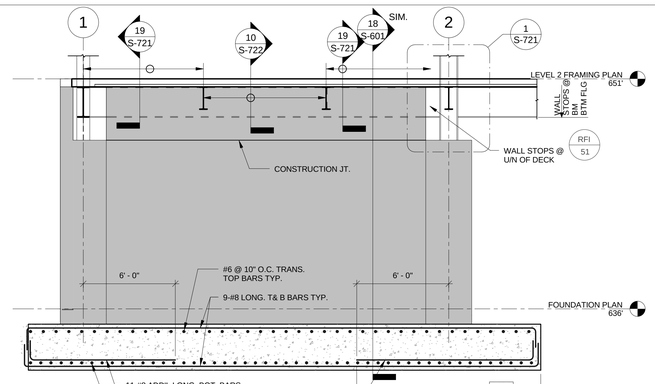
13 ELEVATION @ LINE B
SCALE: 1/4" = 1'-0"



18 SECTION @ LINE 1
SCALE: 1/4" = 1'-0"



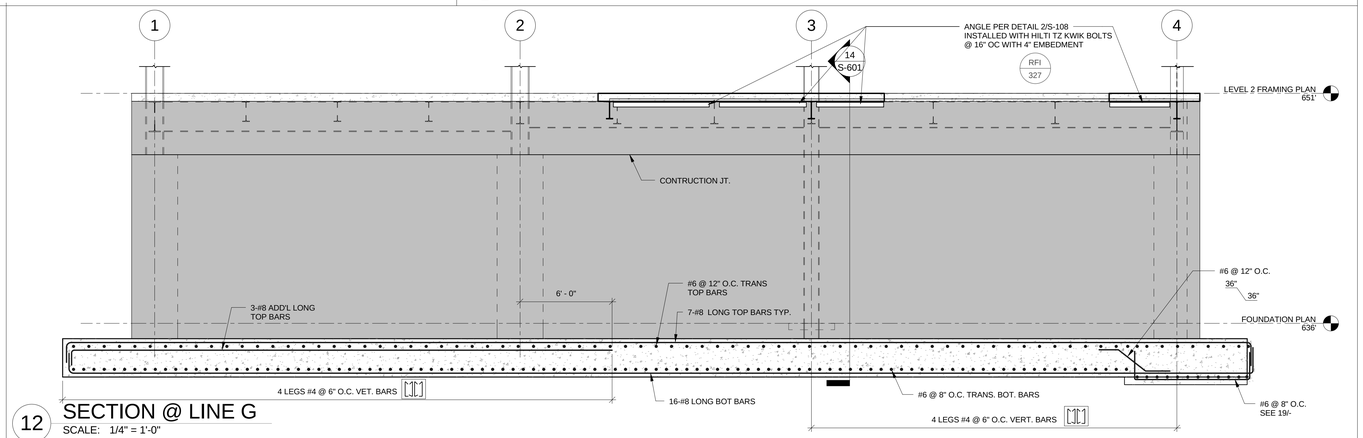
19 SECTION @ LINE 4
SCALE: 1/4" = 1'-0"



7 SECTION @ LINE E
SCALE: 1/4" = 1'-0"

1. SEE ARCHITECTURAL DRAWING & SPECIFICATIONS FOR CONCRETE FINISH.
2. ALL FORM TIES TO BE LEFT EXPOSED.
3. SEE S-108 FOR TYPICAL WALL REINFORCING AT OPENINGS & CONSTRUCTION JOINTS.
4. SEE S-601 FOR TYP. WALL REINFORCING.
5. S.A.D. FOR EXTERIOR DRAINAGE SYSTEM.
6. SEE CIVIL DRAWINGS FOR DRAINAGE TIE TO MAIN SYSTEM.

16 TYPICAL CONCRETE WALL NOTES
SCALE: 1/4" = 1'-0"



12 SECTION @ LINE G
SCALE: 1/4" = 1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

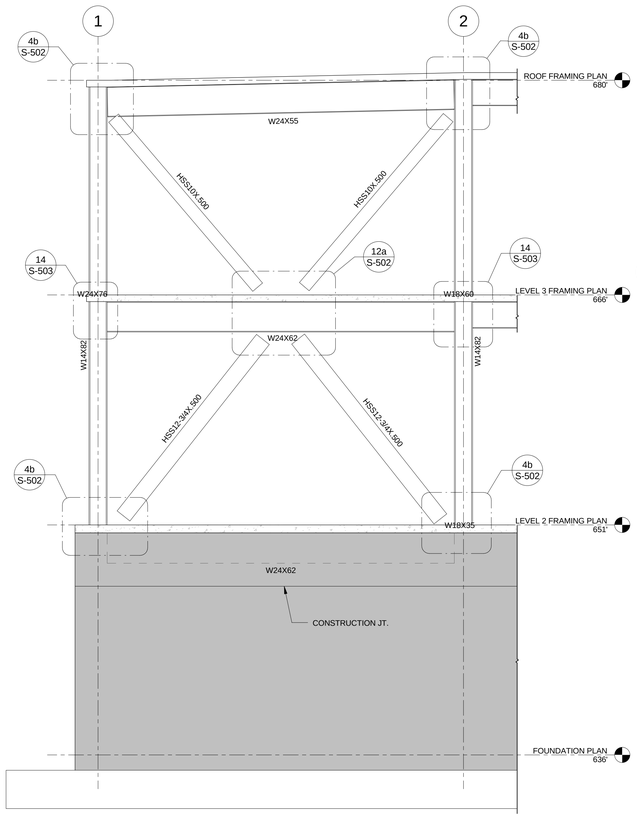
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

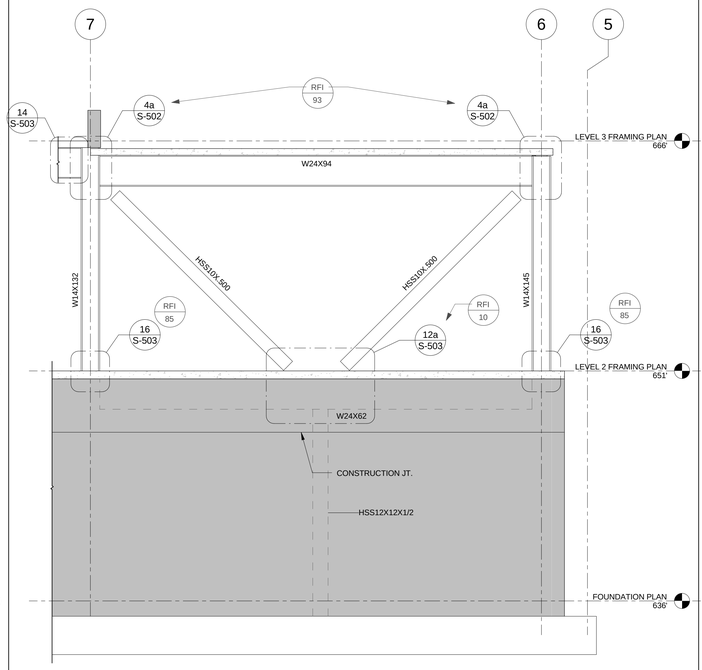
PROJECT NO.:	07055.00	DRAWN BY:	AY
DATE:	05.15.2009	CHECKED BY:	CB
SCALE:	1/4" = 1'-0"		

SHEET TITLE:
CONCRETE WALL ELEVATIONS

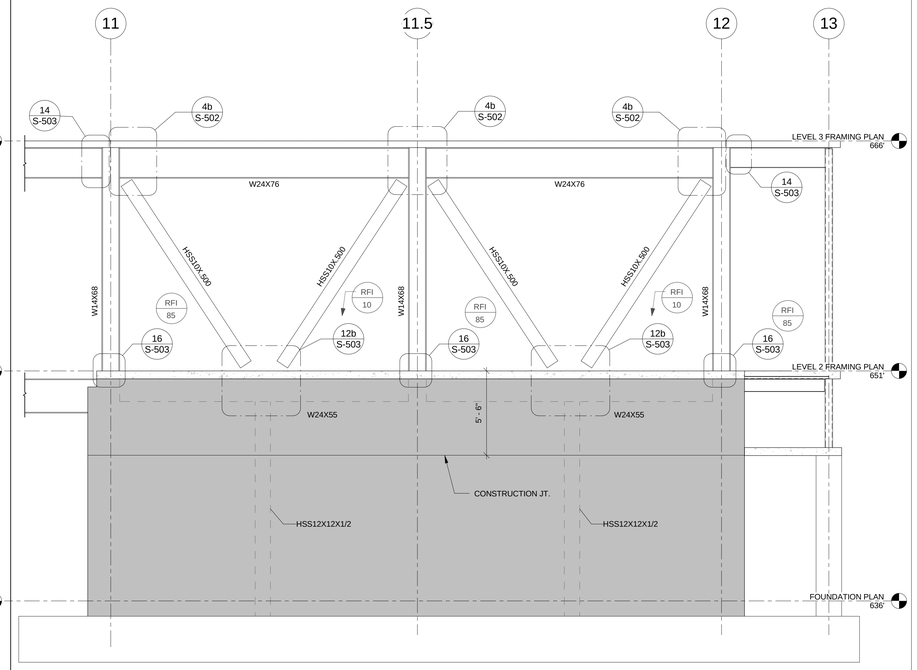
SHEET NO:
S-402



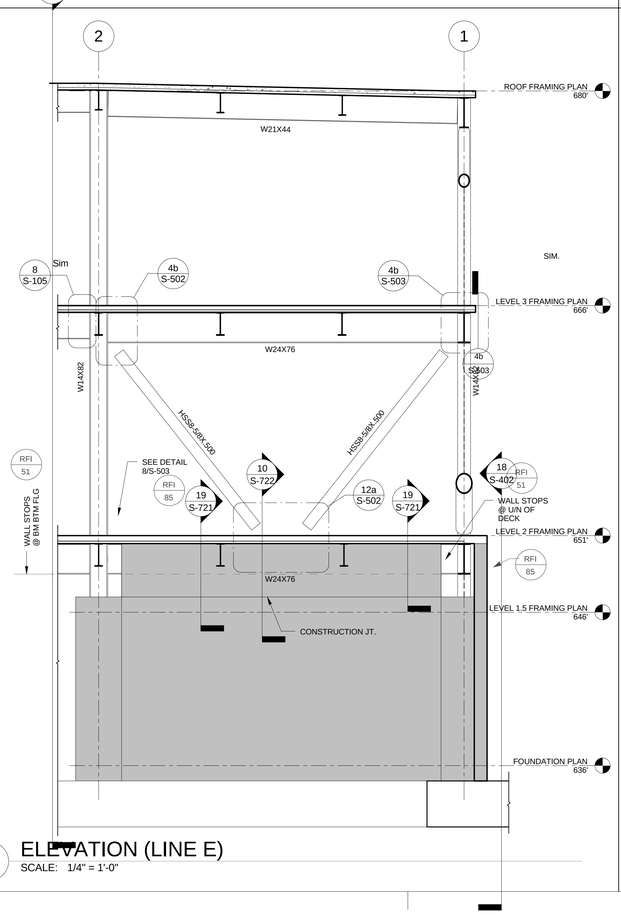
5 ELEVATION (LINE G)
SCALE: 1/4" = 1'-0"



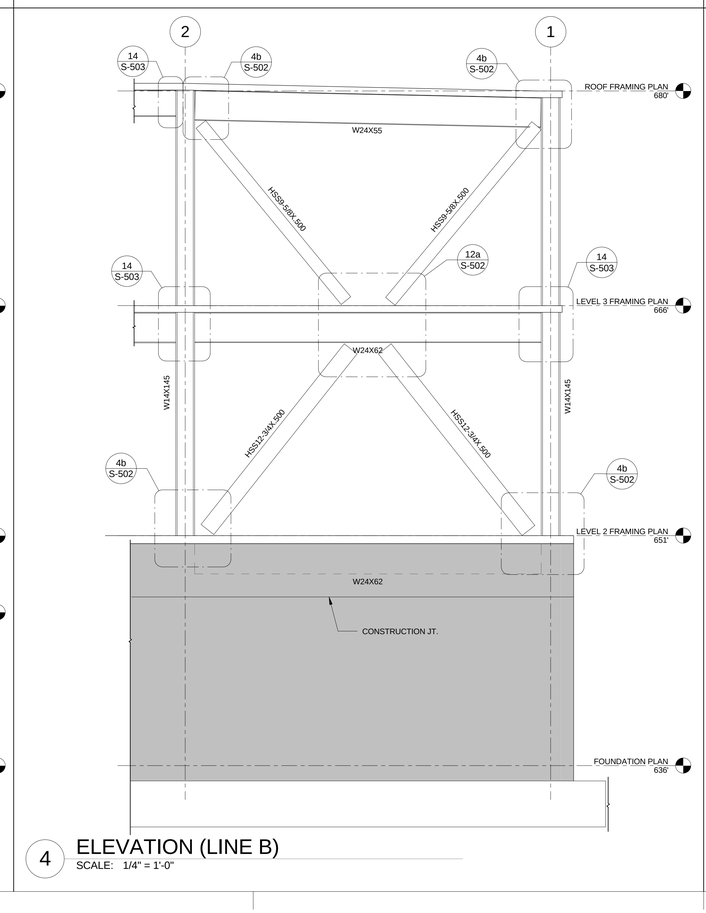
3 ELEVATION (LINE A)
SCALE: 1/4" = 1'-0"



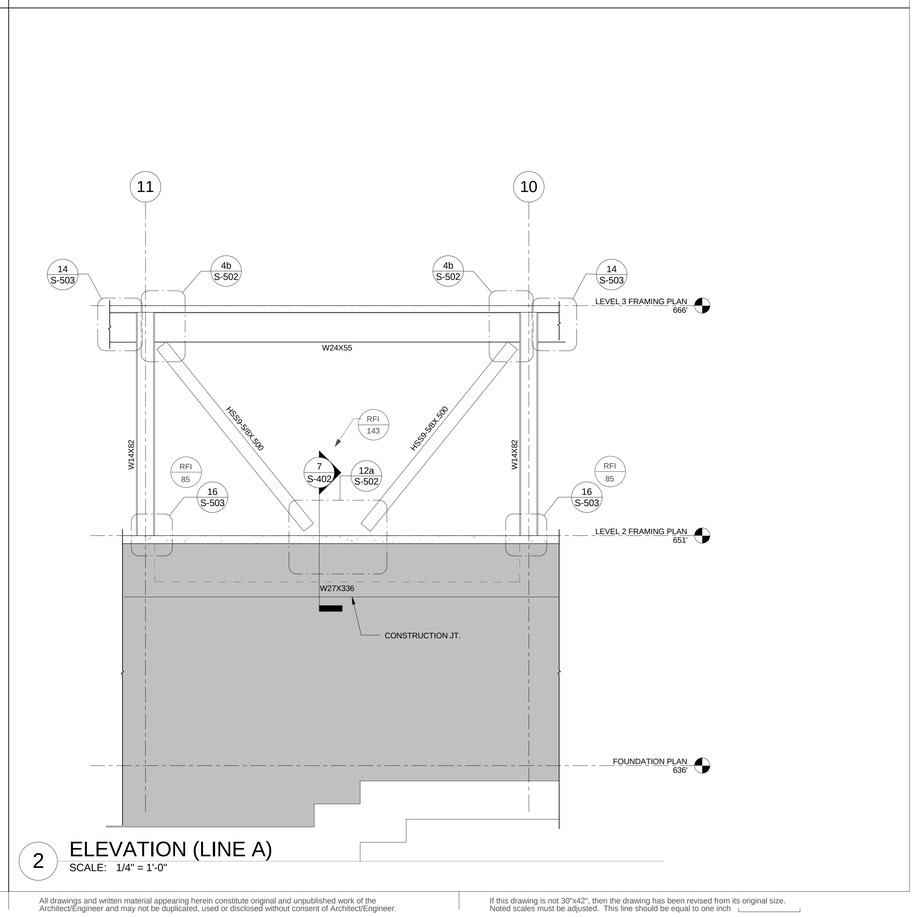
1 ELEVATION (LINE D)
SCALE: 1/4" = 1'-0"



6 ELEVATION (LINE E)
SCALE: 1/4" = 1'-0"



4 ELEVATION (LINE B)
SCALE: 1/4" = 1'-0"



2 ELEVATION (LINE A)
SCALE: 1/4" = 1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

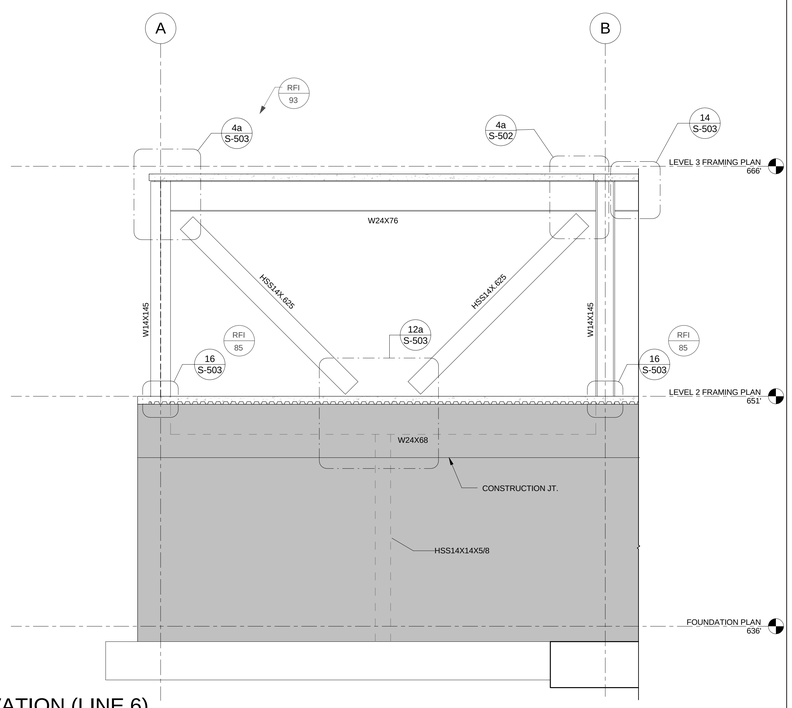
CIP2 DESIGN-BUILD PROJECT BUILDING 4

PROJECT NO.: 07055.00
DRAWN BY: AY
DATE: 05.15.2009
CHECKED BY: CB
SCALE: 1/4" = 1'-0"

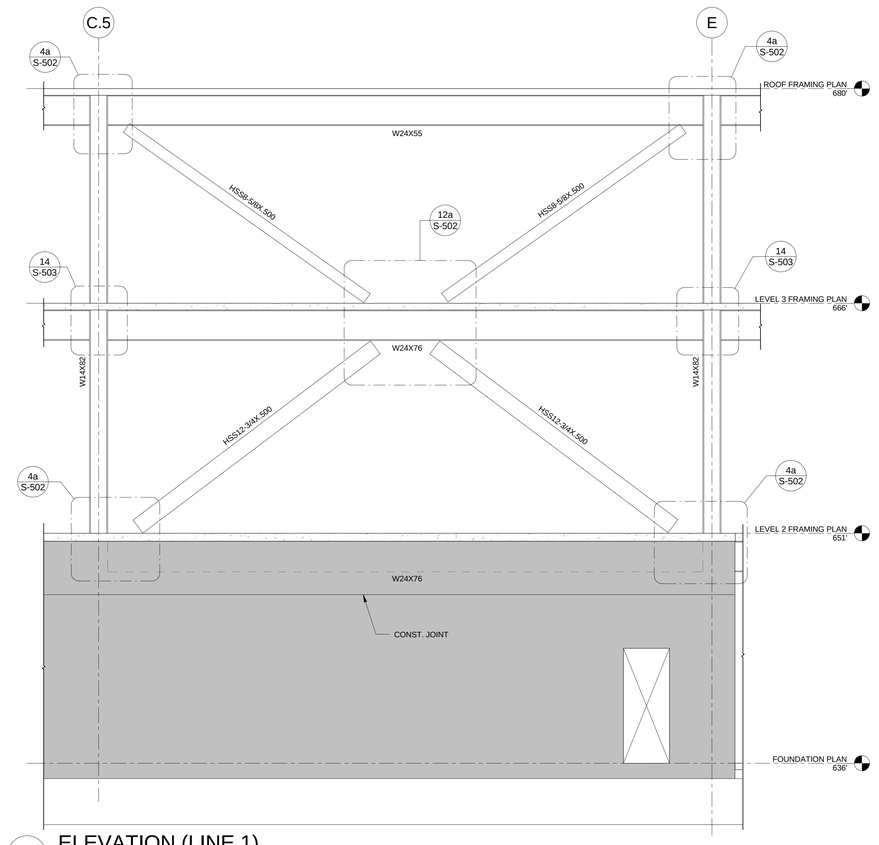
SHEET TITLE:
BRACE FRAME ELEVATIONS

SHEET NO:
S-411

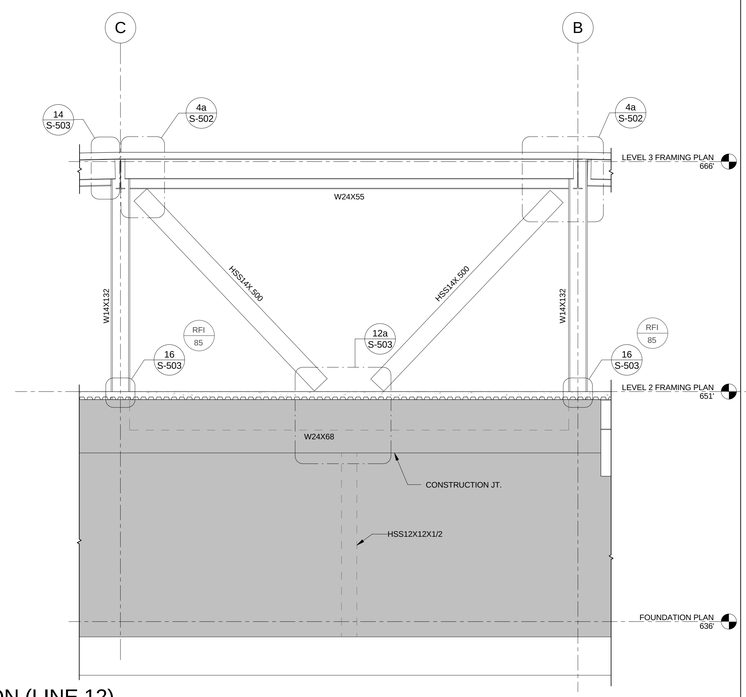
If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch



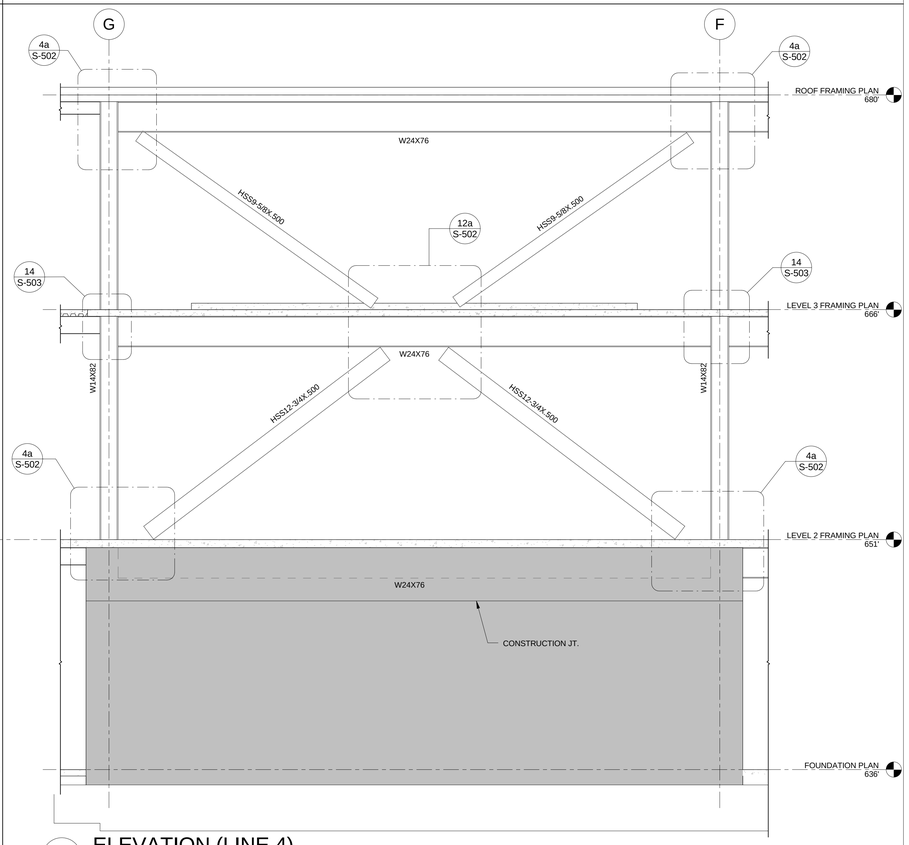
3 ELEVATION (LINE 6)
SCALE: 1/4" = 1'-0"



1 ELEVATION (LINE 1)
SCALE: 1/4" = 1'-0"



4 ELEVATION (LINE 12)
SCALE: 1/4" = 1'-0"



2 ELEVATION (LINE 4)
SCALE: 1/4" = 1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

PROJECT NO.: 07055.00
DRAWN BY: AY
DATE: 05.15.2009
CHECKED BY: CB
SCALE: 1/4" = 1'-0"

SHEET TITLE:
BRACE FRAME ELEVATIONS

SHEET NO:
S-412

ONE STORY BRACED FRAMES

Location		Bracing Member			Connections										Base Plate Type	Notes
		Level 2			Connection at Level 2				Connection Below Level 3							
			Weld A		Weld B		Weld C		Weld B		Weld C					
Grid	Between	Size	Size	Length	Plate "P"	Size	Length	Size	Length	Plate "P"	Size	Length	Size	Length		
6	A & B	HSS14x0.625	5/8	28	1 1/4	5/8	98	-	-	1 1/4	7/8	48	1 1/8	34	B	Grid A (attach to column web level 3)
"	"	"	"	"	1 1/4	3/4	48	7/8	42						B	Grid B (attach to column flange level 3)
12	B & C	HSS14x0.500	1/2	28	1 3/16	5/8	100	-	-	1 1/4	3/4	44	7/8	34	B	
A	6 & 7	HSS10x0.500	1/2	20	7/8	1/2	79	-	-	7/8	5/8	33	5/8	32	B	Grid 6 (W14x145 column)
"	"	"	"	"	"	"	"	-	-	7/8	5/8	33	5/8	32	B	Grid 7 (W14x132 column)
A	10 & 11	HSS9.625x0.500	1/2	18	7/8	1/2	73	-	-	7/8	5/8	28	5/8	28	B	
D	11 & 11.5	HSS10x0.500	1/2	20	1 1/16	1/2	66	-	-	1 1/8	5/8	32	5/8	34	B	
D	11.5 & 12	HSS10x0.500	1/2	20	1 1/16	1/2	66	-	-	1 1/8	5/8	32	5/8	34	B	
E	1 & 2	HSS8.625x0.500	1/2	18	7/8	1/2	62	-	-	7/8	5/8	31	7/8	19	A	Grid 1 (attach to column web level 3)
"	"	"	"	"	"	"	"	-	-	7/8	5/8	26	5/8	25	B	Z

2. ALL BRACES TO CONFORM TO ARCHITECTURAL SPECIFICATION #099000.
3. HSS BRACE "SLOT" SHALL BE 1/8" GREATER THAN THE WIDTH OF THE GUSSET WHERE SLOT WIDTH IS GREATER THAN 1/8" THE WELD SIZE SHALL BE INCREASED ACCORDINGLY THE WIDTH OF SLOT SHALL NOT BE GRATER THEN THE THICKNESS OF THE GUSSET PL PLUS 3/8".

RFI 72

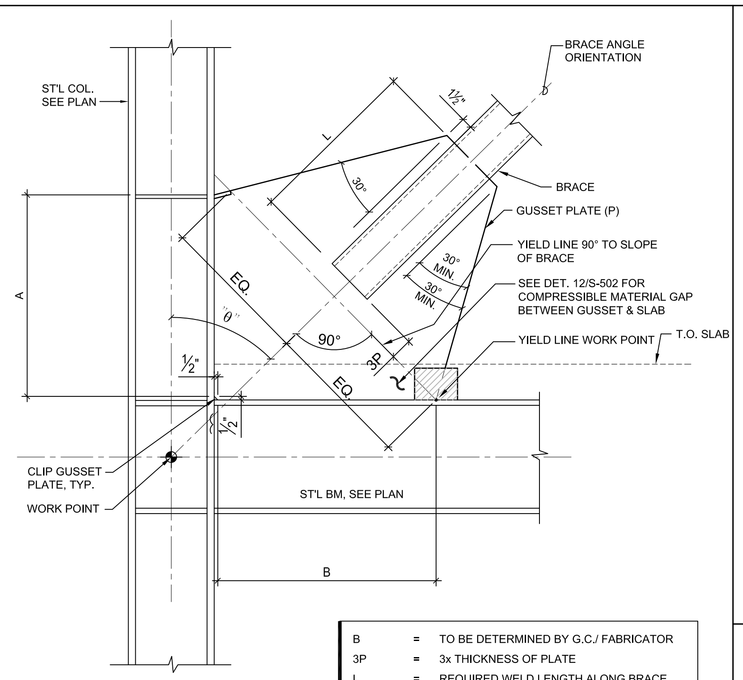
RFI 19

TWO-STORY BRACED FRAMES

Location		Bracing Member						Connections														Base Plate Type
		Level 2			Level 3			Connection at Level 2				Connection Below Level 3				Connection Above Level 3				Connection Below Roof				
			Weld A			Weld A		Weld B		Weld C		Weld B		Weld C		Weld B		Weld C		Weld B		Weld C		
Grid	Between	Size	Size	Length	Size	Size	Length	Plate "P"	Size	Length	Size	Length	Plate "P"	Size	Length	Size	Length	Plate "P"	Size	Length	Size	Length	Plate "P"	Size	Length	Size	Length	
1	C.5 & E	HSS12.750x0.500	1/2	26	HSS8.625x0.500	1/2	16	1 1/2	3/4	50	3/4	36	1 1/2	1/2	116	-	-	1	1/2	93	-	-	1	9/16	38	9/16	25	A
4	F & G	HSS12.750x0.500	1/2	26	HSS9.625x0.500	1/2	18	1 1/2	3/4	50	3/4	36	1 1/2	1/2	116	-	-	1 1/8	1/2	99	-	-	1 1/8	9/16	42	9/16	28	A
B	1 & 2	HSS12.750x0.500	1/2	26	HSS9.625x0.500	1/2	18	1 1/4	5/8	39	5/8	42	1 1/4	1/2	83	-	-	1	1/2	69	-	-	1	5/8	30	5/8	30	A
G	1 & 2	HSS12.750x0.500	1/2	26	HSS10x0.500	1/2	20	1 1/4	5/8	39	5/8	42	1 1/4	1/2	83	-	-	1	1/2	73	-	-	1	3/4	32	3/4	35	A

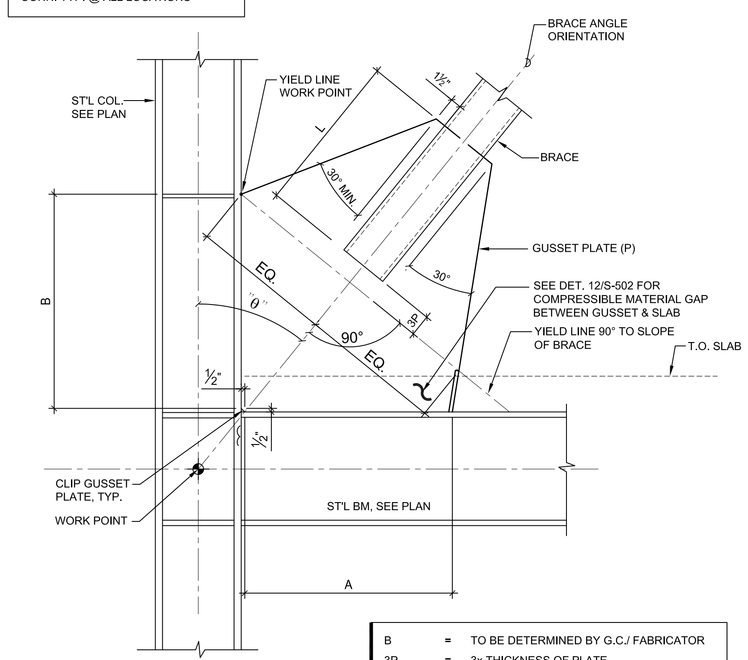
RFI 72 RFI 72 RFI 72 RFI 72

13 BRACE FRAME CONNECTION SCHEDULE
NO SCALE



YIELD LINE WORK POINT AT BEAM

NOTE:
SEE DETAIL 16/S-500 FOR OVER-SLOT REINFORCEMENT PLATE AT BRACE CONN. TYP. @ ALL LOCATIONS

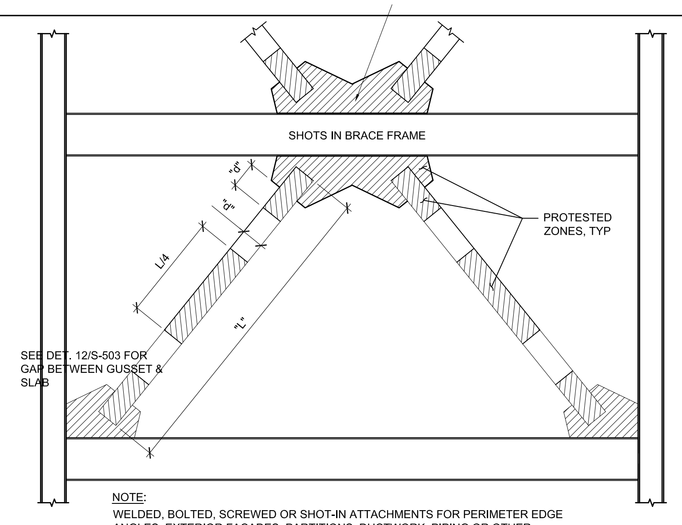


YIELD LINE WORK POINT AT COLUMN

16 TYPICAL BRACE TO BEAM CONNECTION
SCALE:1"=1'-0"

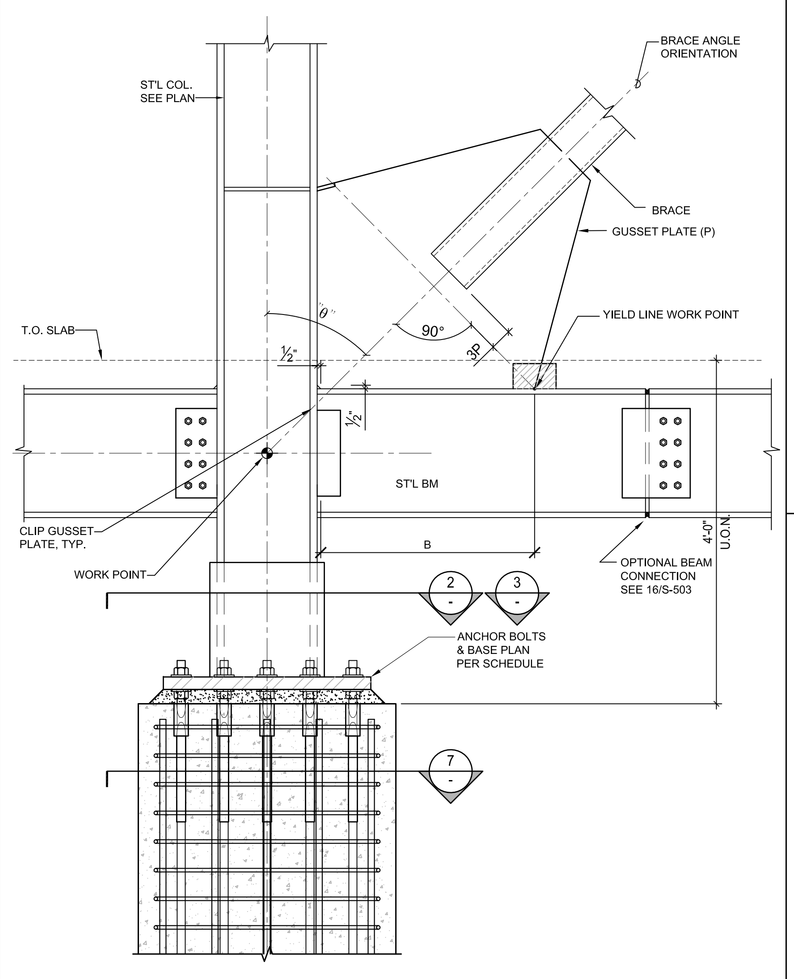
RFI 503

DUE TO THE VERY SMALL PENETRATION (⅛") AND SMALL POTENTIAL REDUCTION IN AREA, SHOT P1- HOLE DO NOT NEED TO BE WELDED

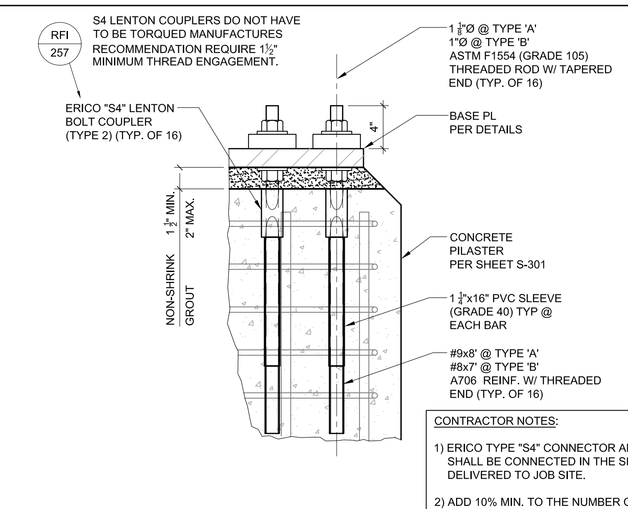


NOTE:
WELDED, BOLTED, SCREWED OR SHOT-IN ATTACHMENTS FOR PERIMETER EDGE ANGLES, EXTERIOR FACADES, PARTITIONS, DUCTWORK, PIPING OR OTHER CONSTRUCTION SHALL NOT BE PLACED WITHIN THE PROTECTED ZONES.

10 BRACE FRAME PROTECTED ZONE
SCALE: 1/4"=1'-0"



12 TYPICAL BRACE TO COLUMN BASE CONNECTION
SCALE:1"=1'-0"

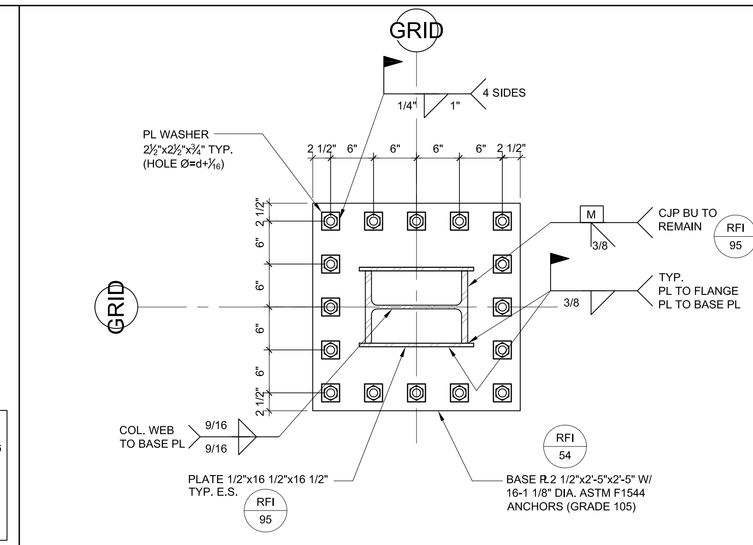


CONTRACTOR NOTES:

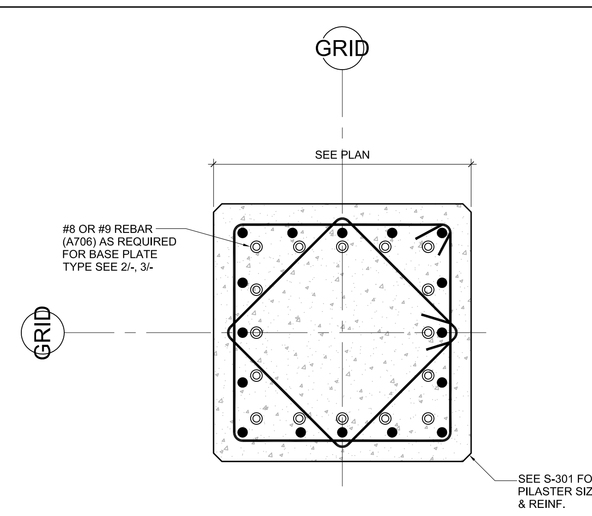
1) ERICO TYPE "S4" CONNECTOR AND REINFORCING SHALL BE CONNECTED IN THE SHOP AND DELIVERED TO JOB SITE.

2) ADD 10% MIN. TO THE NUMBER OF PIECES AS 10% WILL BE RANDOMLY TESTED BY THE APPROVED TESTING AGENCY.

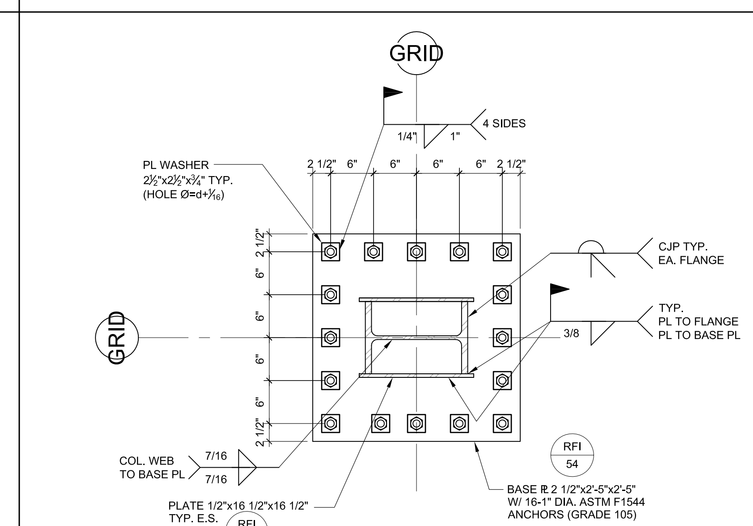
6 ENLARGED SECTION @ COUPLER
SCALE:1½"=1'-0"



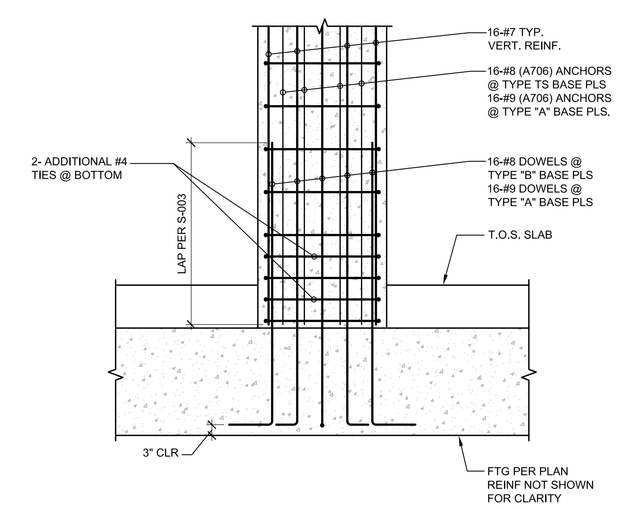
2 BASE PLATE AT FRAME (TYPE-A)
SCALE:1"=1'-0"



7 TYPICAL SECTION @ CONCRETE PILASTER (NON-SPECIFIC)
SCALE:1"=1'-0"



3 BASE PLATE AT FRAME (TYPE-B)
SCALE:1"=1'-0"



8 SECTION @ PILASTER BASE FRAME ABOVE
SCALE:1"=1'-0"

GENERAL BRACE FRAME CONNECTION NOTES

1. ALL DETAILS INCORPORATED INTO SUBTITLED SHOP DRAWINGS SHALL BE DRAWN TO SCALE.
2. GENERAL CONTRACTOR SHALL SUBMIT COMPREHENSIVE SHOP DRAWING FOR EACH BRACE/GUSSET ASSEMBLY AS REQUIRED BY PLANS & SPECIFICATIONS. EACH CONNECTION SHALL BE FULLY DETAILED WITH THE INFORMATION GIVEN IN DETAILS, ALL APPLICABLE SCHEDULES, OR THAT INFORMATION WHICH CAN BE DETERMINED FROM GIVEN MEMBER SIZES AND PLAN GEOMETRY.
3. SEE SHEETS S502, S503 FOR ADDITIONAL BRACE FRAME REQUIREMENTS.

SUGGESTED DETAILING SEQUENCE FOR BRACE TO BEAM COLUMN CONNECTION.

1. DETERMINE BRACE ANGLE ORIENTATION AND CONNECTION WORK POINT BASED UPON PLAN DIMENSIONS AND MEMBER SIZES.
2. DETERMINE LENGTH OF WELD ALONG TUBE STEEL BRACE TO GUSSET PLATE. SET ANGLE TO 30 DEGREES (FIXED AND MIN.) AS NOTED.
3. ENSURE YIELD LINE IS PERPENDICULAR TO BRACE ANGLE.
4. DETERMINE YIELD LINE WORK POINT. YIELD LINE WORK POINT OCCURS AT BEAM OR COLUMN DEPENDING UPON GEOMETRY. THIS CAN BE FOUND BY LOWERING ASSEMBLY ALONG BRACE ORIENTATION LINE UNTIL EITHER BEAM OR COLUMN IS INTERSECTED.
5. VERIFY EXTENSION OF YIELD LINE DOES NOT INTERSECT THE PLATE DIMENSION "A".
6. NOTIFY THE STRUCTURAL ENGINEER IF ANY OF THE ABOVE ITEMS CAN NOT BE MET.
7. DETAILER MAY ADJUST THE "A" AND "L" DIMENSIONS (+/-1/8")", AS NEEDED IN ORDER TO FACILITATE FABRICATION OF THE PLATE.
8. PROVIDE BRACE OVERSLOT REINFORCEMENT PLATE AS SHOWN IN DETAIL 16/S-502.

4 FABRICATION NOTES
SCALE:1"=1'-0"

If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch

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NO. ISSUES/REVISIONS DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4
KEYPLAN

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE:

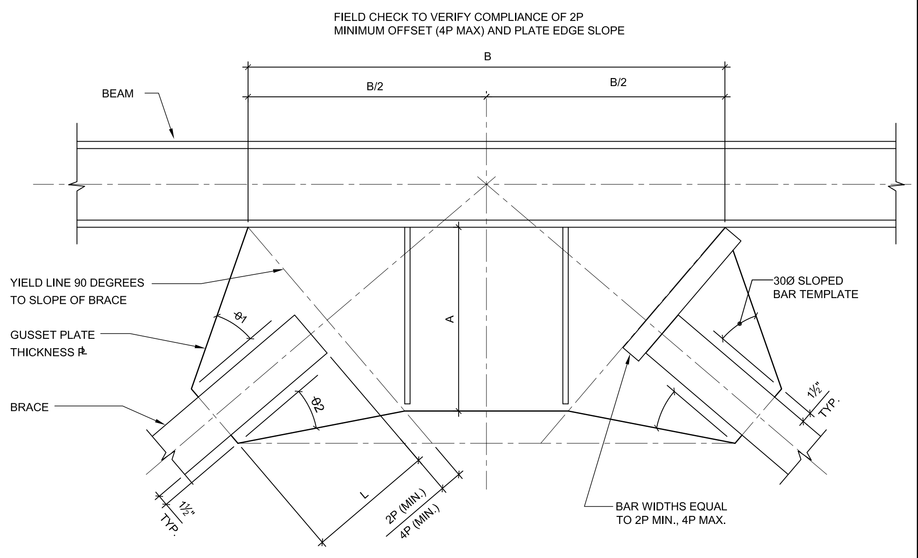
SHEET TITLE:
BRACE FRAME DETAILS

SHEET NO:
S-501

TYPICAL NOTES:

1. THE DETAILS PROVIDE GENERAL GUIDELINE FOR BRACE CONNECTION CONFIGURATION ONLY. THE CONTRACTOR SHALL SUBMIT DETAILING SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE FABRICATING ALL STEEL COMPONENTS. SEE 4/S-501 FOR DETAILING PROCEDURE & ADDITIONAL REQUIREMENTS.
2. P, L, A, B, C, D,... ETC. ARE NOTATIONAL VARIABLES TO IDENTIFY BRACE & GUSSET CONNECTION WELD SIZE, LENGTH, ETC. THESE NOTATIONAL VARIABLES ARE UNIQUE AND MAY VARY AT EACH BRACE CONNECTION. FOR SIZES OF BRACE MEMBERS, GUSSET PLATES "P", WELDING LENGTHS "L", WELD SIZE "A", "B" AND "C" SEE BRACE CONNECTION SCHEDULES ON DRAWING SHEETS S-501.
3. STIFFENER PLATE TYPE "S1" SHALL BE ⅜" MIN. THICKNESS AND FULL DEPTH. SEE 16/S-105
4. THE THICKNESS OF STIFFENER PLATE TYPE "S2 SHALL BE 3/4" THICK. WELD STIFFENER PLATE TO THE ADJACENT STEEL WITH DOUBLE SIDES 5/16" FILLET WELD ALL AROUND.
5. THE THICKNESS OF STIFFENER TYPE "S3" SHALL BE ½", WELD STIFFENER PLATE TO THE ADJACENT STEEL WITH DOUBLE SIDES 5/16" FILLET WELD ALL AROUND.
6. FOR BASE PLATE TYPES AND DETAILS, SEE DRAWING SHEET S-501.
7. ALL WELDS SHOWN CAN EITHER BE SHOP OF FIELD WELDS AND ARE AT THE DISCRETION OF THE GENERAL CONTRACTOR.
8. PROVIDE BRACE OVERSLOT REINFORCEMENT PLATE AS SHOWN IN DETAIL 16/- TYP.
9. SEE 16/S-503 FOR TYPICAL BEAM TO COLUMN CONNECTION AT BRACED FRAMES.
10. SEE 10/S-501 FOR PROTECTED ZONE.
11. SEE S-002 FOR CVN WELDING REQUIREMENTS.

13 TYPICAL BRACE CONNECTION NOTES
SCALE:1"=1'-0"



*CORNER OF BAR SHOULD INTERSECT WITH EDGE OF GUSSET PLATE PRIOR TO HITTING BEAM FLANGE

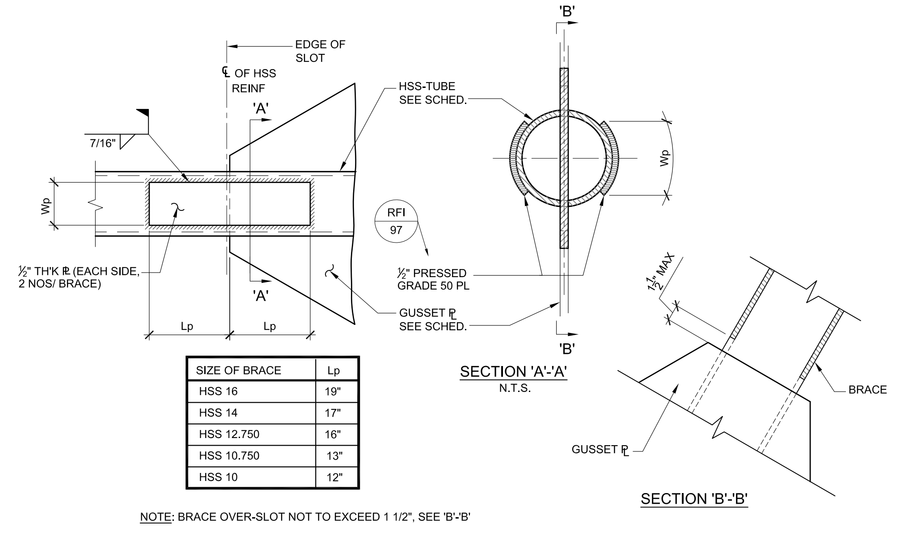
θ1 = 30° MINIMUM
θ2 = 30° FIXED

FIELD CHECK NOTES

INSPECTOR OF RECORD TO VERIFY:

1. THAT THE 2P MINIMUM (4P MAX.) OFFSET IS MAINTAINED EACH END OF BRACE BEFORE WELDING OF BRACE AND AFTER WELDING OF BRACE (INCLUDE DIAGRAM OF FIELD CHECK METHOD).
2. VERIFY 1½" OFFSET AND ANGLE SLOPE ALONG EDGE OF GUSSET PLATE.
3. ISOLATION OF GUSSET PLATE YIELD LINE FROM SLAB (IF DETAILED) AND STIFFENER PLATE LOCATIONS, PER DET. 2/S9.2.
4. DISCUSS INSPECTION CRITERIA WITH STRUCTURAL ENGINEER PRIOR TO WELDING OF BRACES.

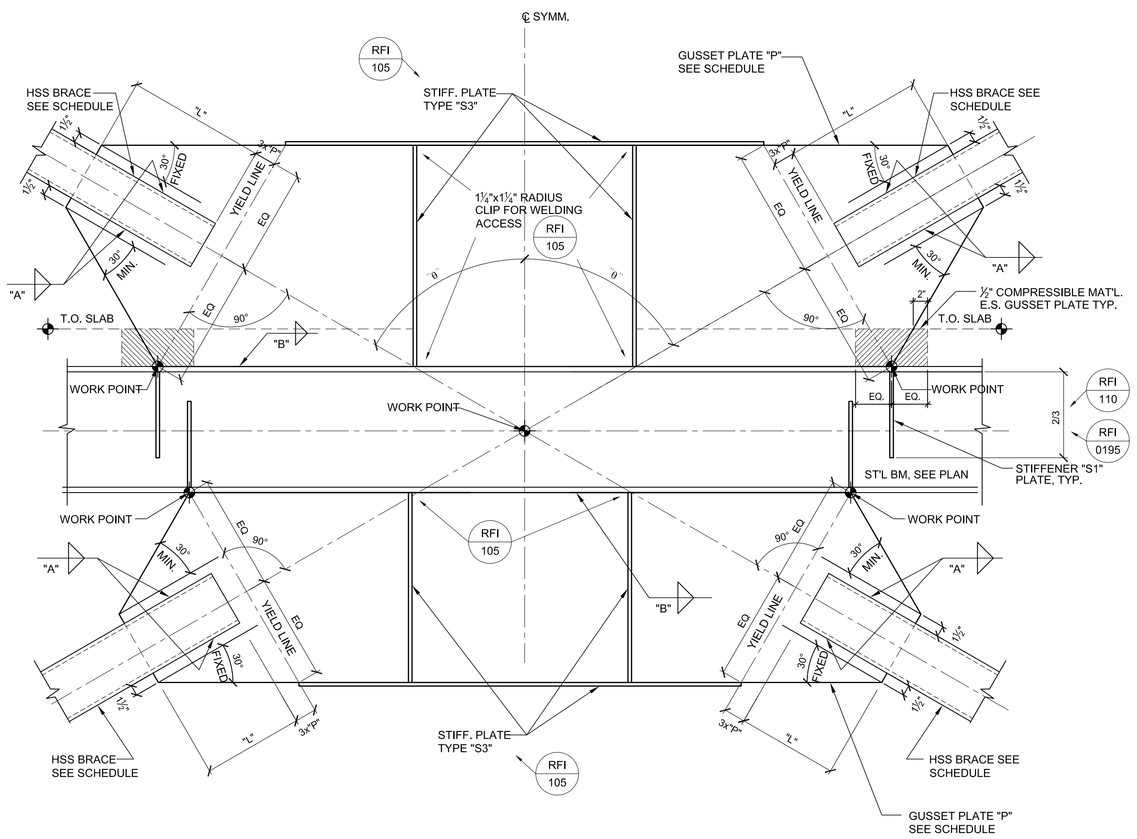
15 FIELD CHECKS
SCALE:1"=1'-0"



SIZE OF BRACE	Lp
HSS 16	19"
HSS 14	17"
HSS 12.750	16"
HSS 10.750	13"
HSS 10	12"

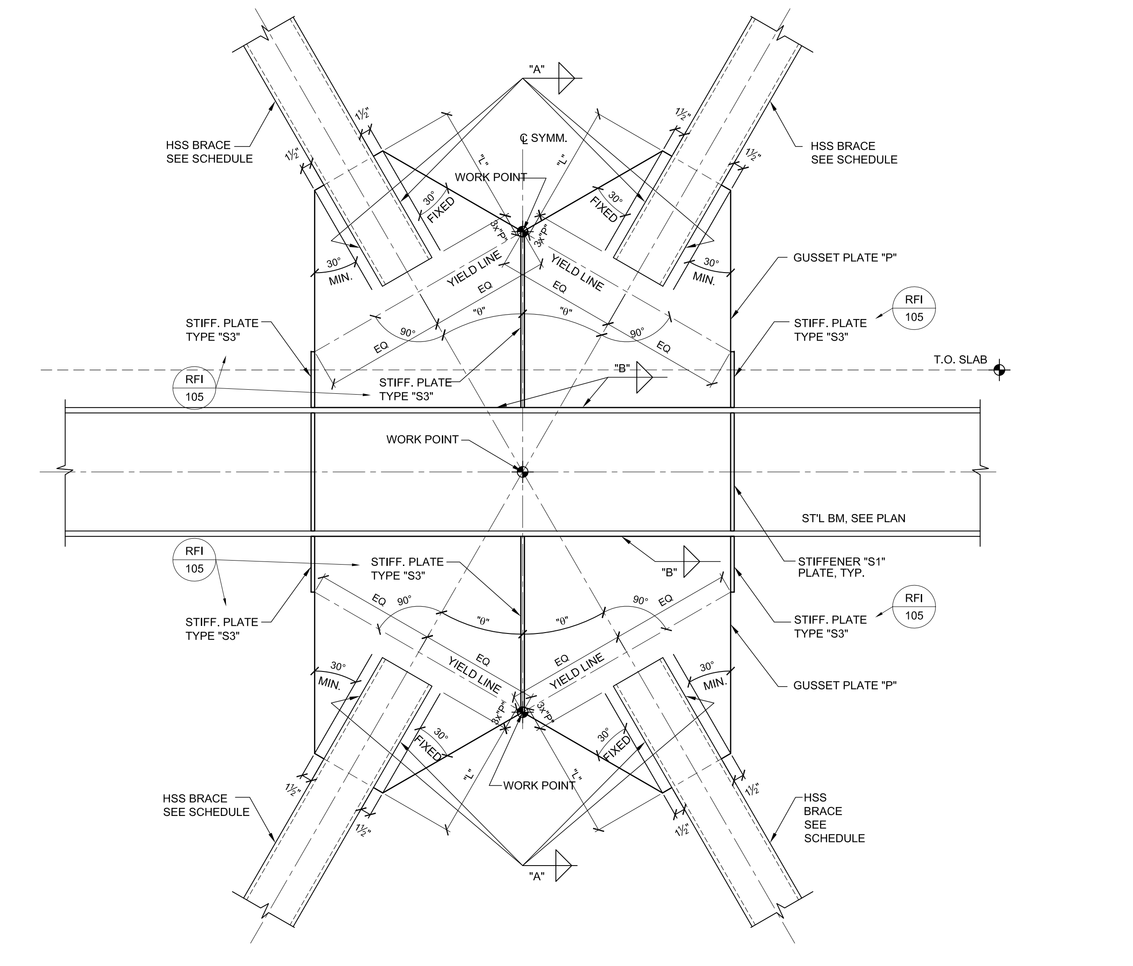
NOTE: BRACE OVER-SLOT NOT TO EXCEED 1 1/2", SEE 'B'-'B'

16 BRACE OVER-SLOT REINFORCEMENT PLATE
SCALE:1"=1'-0"



NOTE:
LENGTH OF WELD "B" IS PER SCHEDULE.
LENGTH OF WELD "C" IS A MINIMUM PER THE SCHEDULE
SEE 161 FOR REINFORCEMENT PLATES

a YIELD LINES START AT THE FLANGE OF BEAM/THE TOP OF FLOOR SLAB

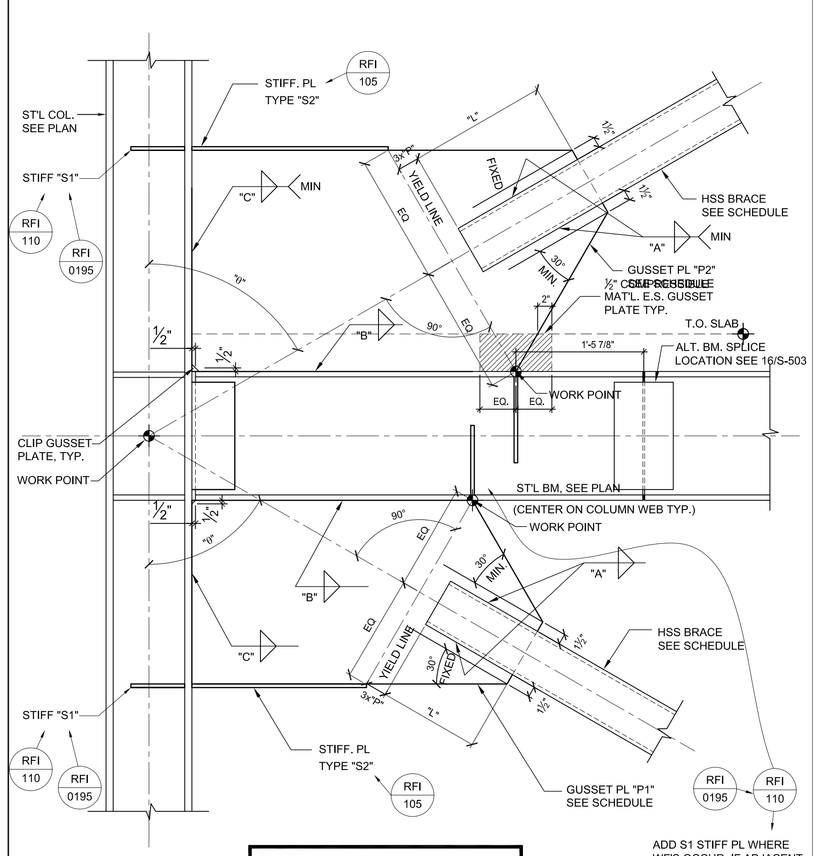


NOTE:
LENGTH OF WELD "C" IS PER SCHEDULE.
LENGTH OF WELD "B" IS A MINIMUM PER THE SCHEDULE

NOTE:
SEE DETAIL 16/- FOR OVER-SLOT REINFORCEMENT PLATE AT BRACE CONN. TYP. @ ALL LOCATIONS

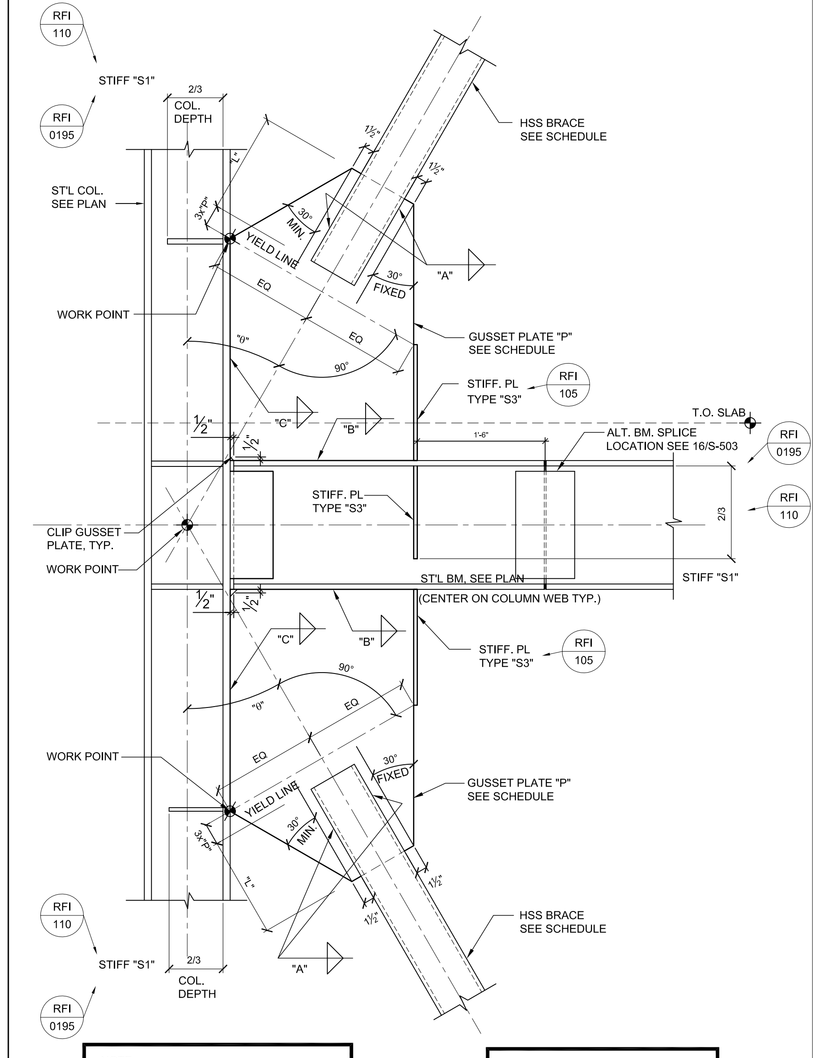
b YIELD LINES START AT THE CENTER LINE OF GUSSET PLATES

12 TYPICAL TWO-SIDED BRACE TO BEAM CONNECTION
SCALE:1"=1'-0"



NOTE:
LENGTH OF WELD "B" IS PER SCHEDULE.
LENGTH OF WELD "C" IS A MINIMUM PER THE SCHEDULE
SEE 161 FOR REINFORCEMENT PLATES

a YIELD LINES START AT THE TOP OF FLOOR SLAB/FLANGE OF BEAM



NOTE:
LENGTH OF WELD "C" IS PER SCHEDULE.
LENGTH OF WELD "B" IS A MINIMUM PER THE SCHEDULE

NOTE:
SEE DETAIL 16/- FOR OVER-SLOT REINFORCEMENT PLATE AT BRACE CONN. TYP. @ ALL LOCATIONS

b YIELD LINES START AT THE FLANGE OF COLUMN

4 TYPICAL TWO-SIDED BRACE TO BEAM/COLUMN CONNECTION
SCALE:1"=1'-0"

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NO.	ISSUES/REVISIONS	DATE

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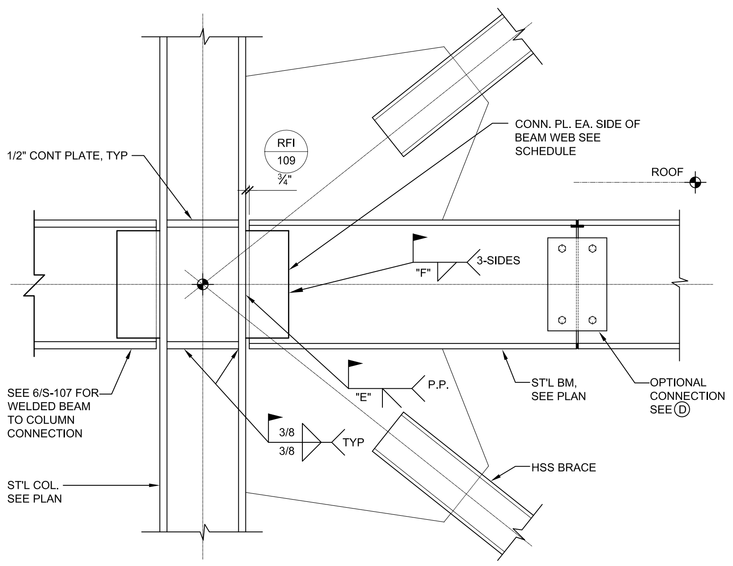
SKYLINE COLLEGE
SAN MATEO COUNTY
COMMUNITY COLLEGE
DISTRICT

CIP2 DESIGN-BUILD
PROJECT
BUILDING 4
KEYPLAN

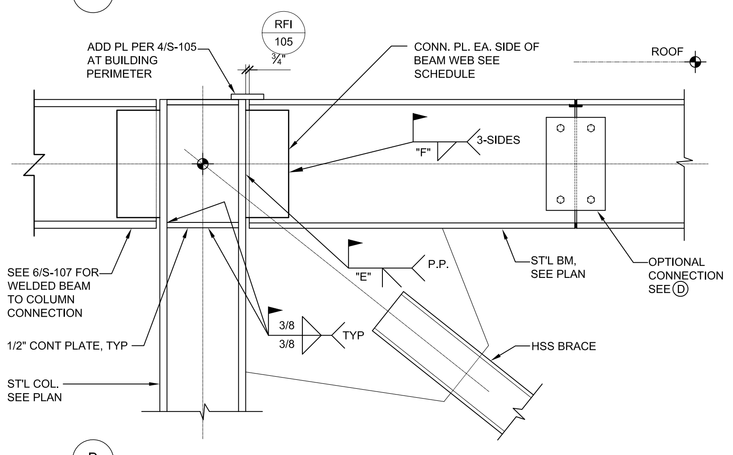
PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE:

SHEET TITLE:
BRACE FRAME DETAILS

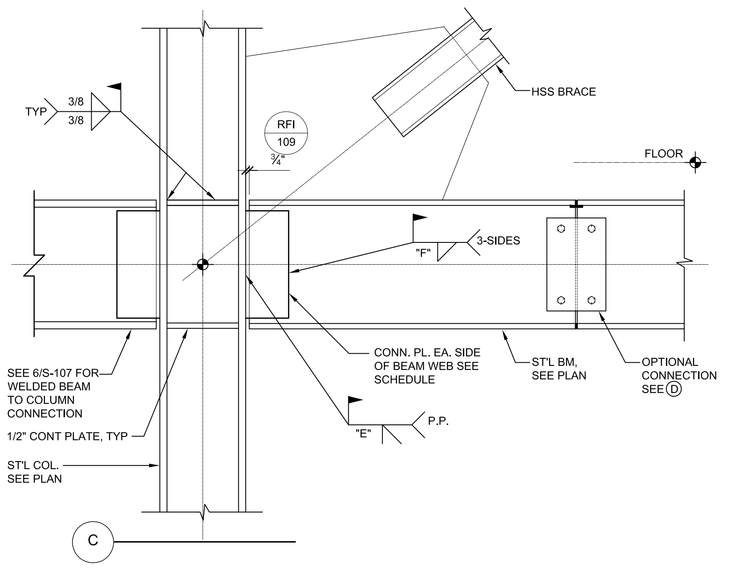
SHEET NO:
S-502



A



B



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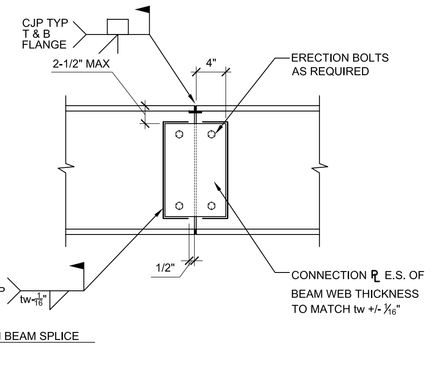


D OPTION BEAM SPLICE

NOTES:
1. SEE S-501 - S-503 FOR ADDITIONAL BRACE INFORMATION.
2. ALL CONNECTION PLATES ARE GRADE 50.

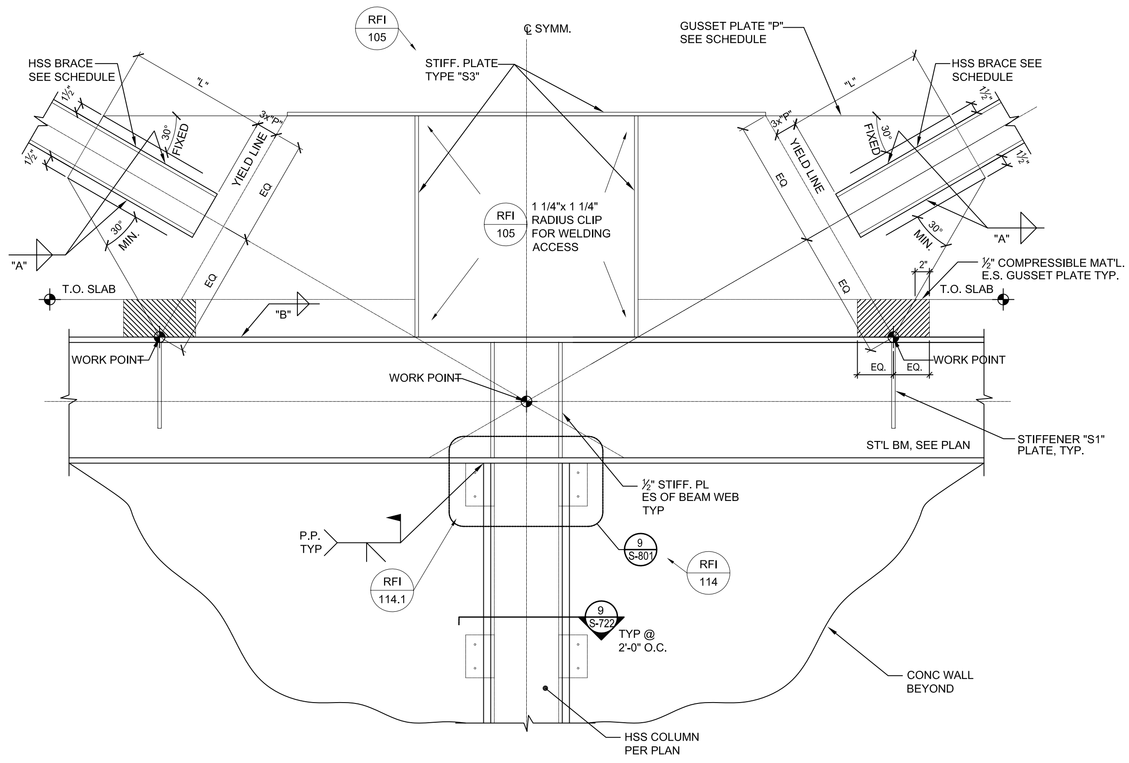
RFI 102

FRAME BEAM CONNECTION SCHEDULE (ALL WELDED)				
BEAM SIZE	CONNECTION			REMARKS
	PLATE	"E"	"F"	
W18	12"x8"x5/8"	3/8"	7/16"	BOTH SIDES
W21	15x8"x5/8"	3/8"	7/16"	BOTH SIDES
W24	18"x8"x5/8"	3/8"	7/16"	BOTH SIDES
W27	20"x8"x3/4"	1/2"	1/2"	BOTH SIDES

RFI 109

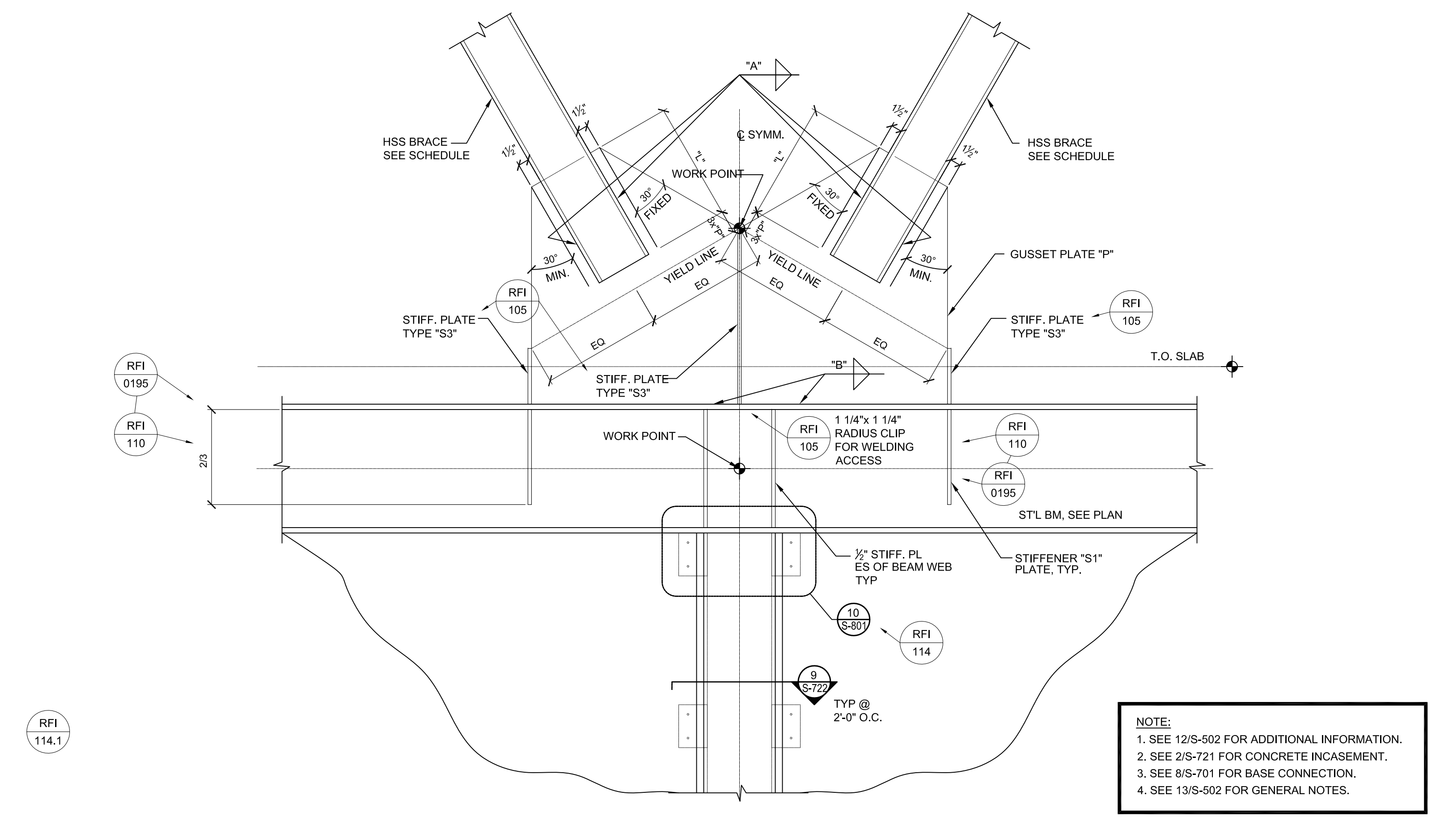
16 BRACE FRAME BEAM TO COLUMN CONNECTION DETAILS
SCALE:1"=1'-0"

RFI 114,1



a YIELD LINES START AT THE FLANGE OF BEAM/THE TOP OF FLOOR SLAB

RFI 114,1

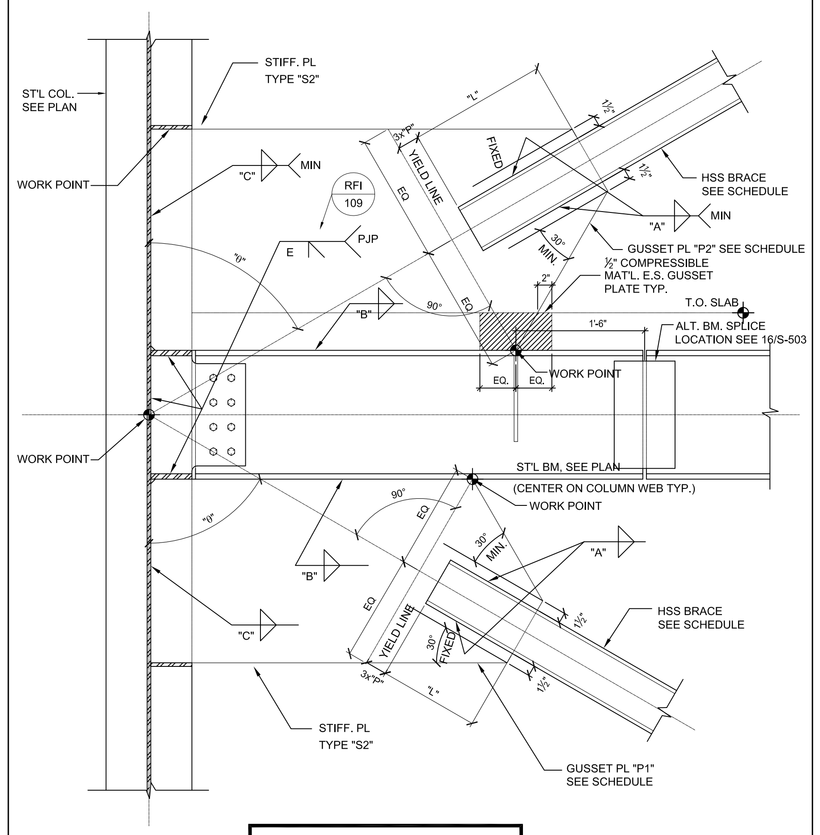


RFI 114,1

NOTE:
1. SEE 12/S-502 FOR ADDITIONAL INFORMATION.
2. SEE 2/S-721 FOR CONCRETE INCASEMENT.
3. SEE 8/S-701 FOR BASE CONNECTION.
4. SEE 13/S-502 FOR GENERAL NOTES.

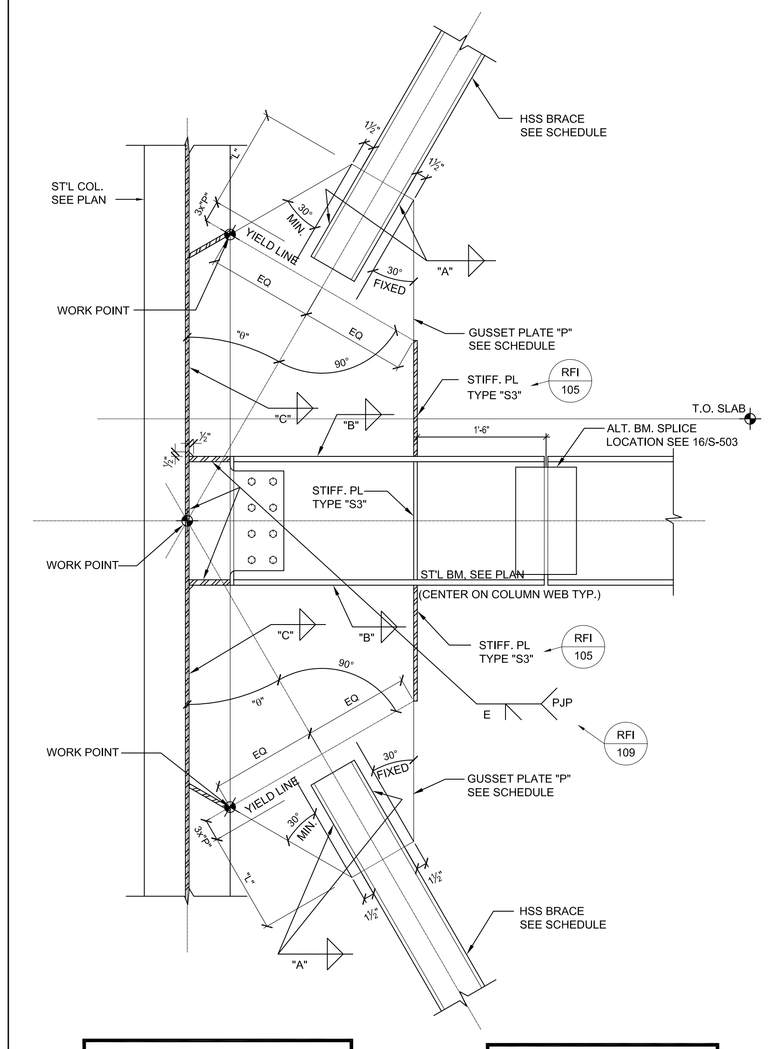
b YIELD LINES START AT THE CENTER LINE OF GUSSET PLATES

12 TYPICAL TWO-SIDED BRACE TO BEAM CONNECTION WITH COLUMN
SCALE:1"=1'-0"



NOTE:
LENGTH OF WELD "B" IS PER SCHEDULE.
LENGTH OF WELD "C" IS A MINIMUM PER THE SCHEDULE

a YIELD LINES START AT THE TOP OF FLOOR SLAB/FLANGE OF BEAM



NOTE:
LENGTH OF WELD "C" IS PER SCHEDULE.
LENGTH OF WELD "B" IS A MINIMUM PER THE SCHEDULE

NOTE:
SEE DETAIL 16/- FOR OVER-SLOT REINFORCEMENT PLATE AT BRACE CONN. TYP. @ ALL LOCATIONS

b YIELD LINES START AT THE FLANGE OF COLUMN

4 TYPICAL BRACE TO BEAM/COLUMN (WEAK AXIS)
SCALE: 1"=1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

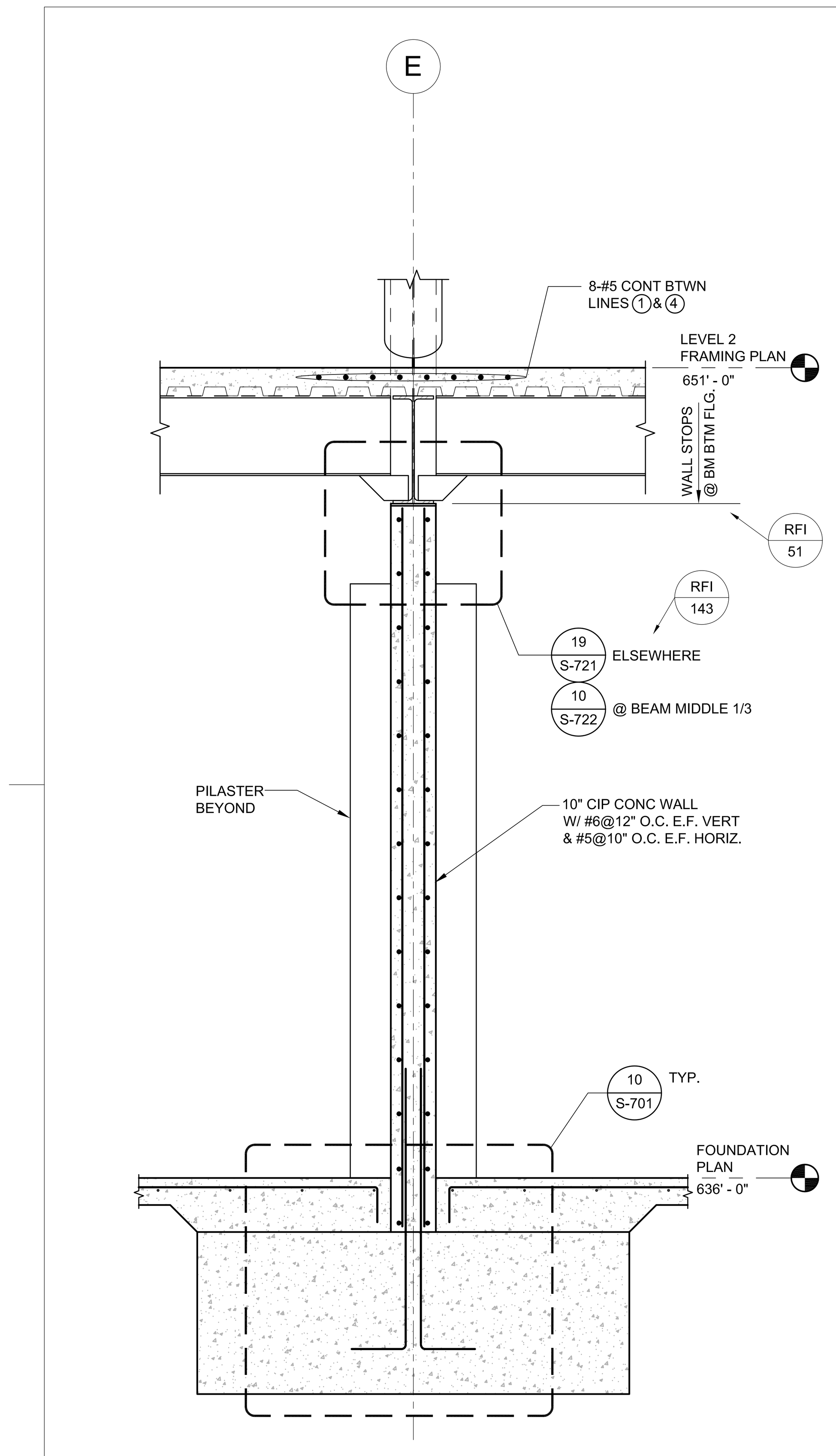
CIP2 DESIGN-BUILD PROJECT
BUILDING 4
KEYPLAN

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE:

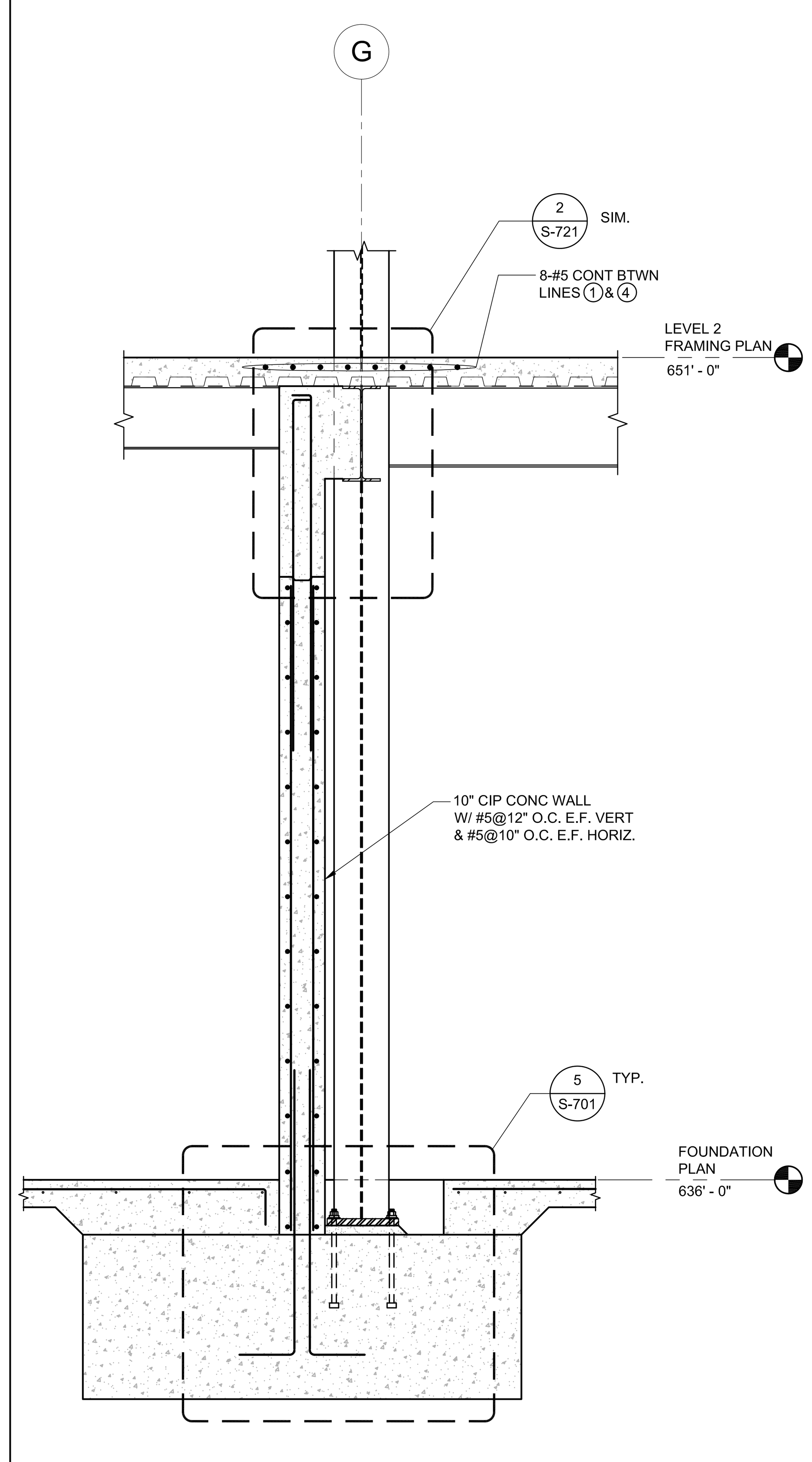
SHEET TITLE:
BRACE FRAME DETAILS

SHEET NO:
S-503

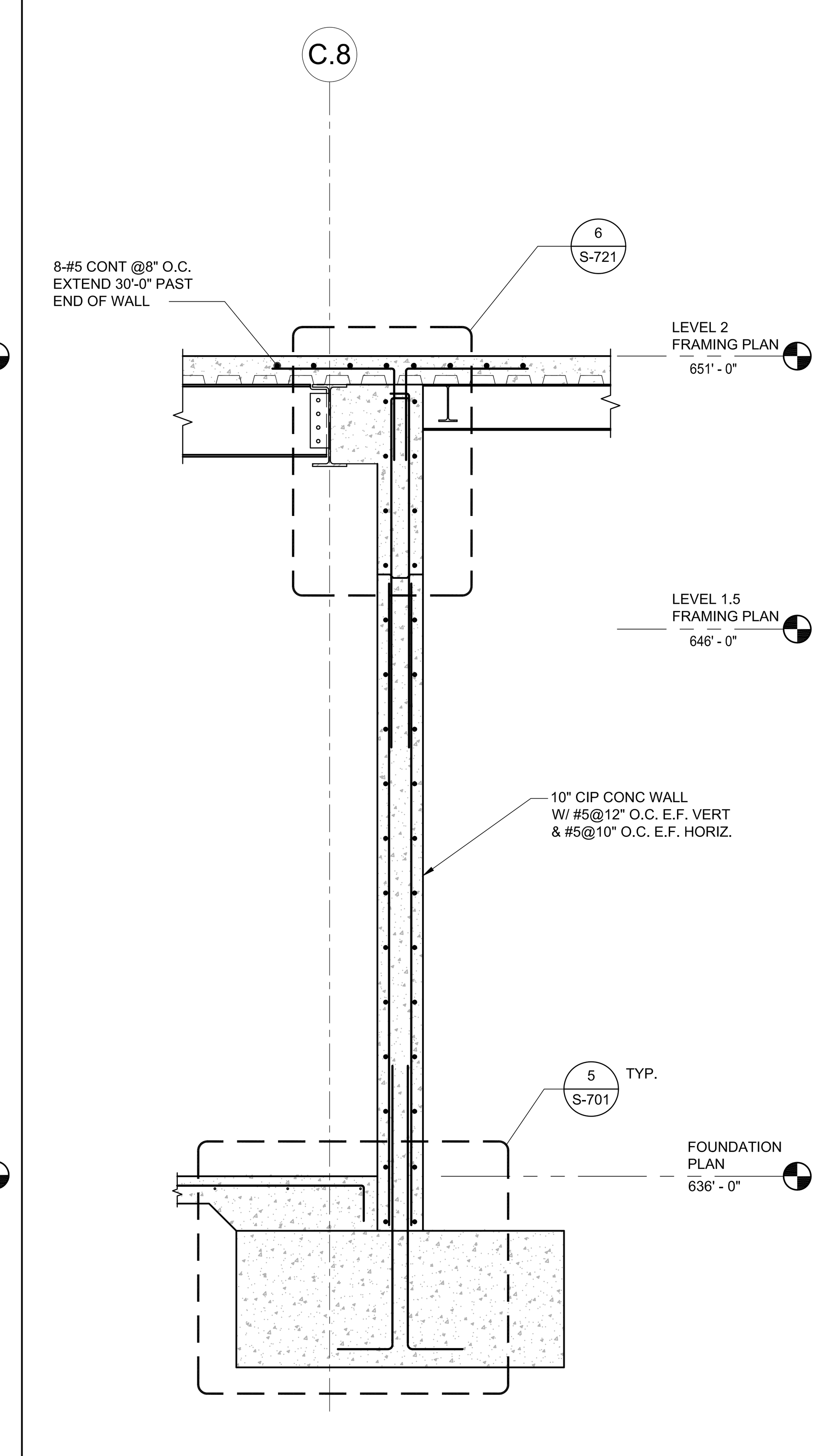
If this drawing is not 30"x42", then the drawing has been revised from its original size. Noted scales must be adjusted. This line should be equal to one inch



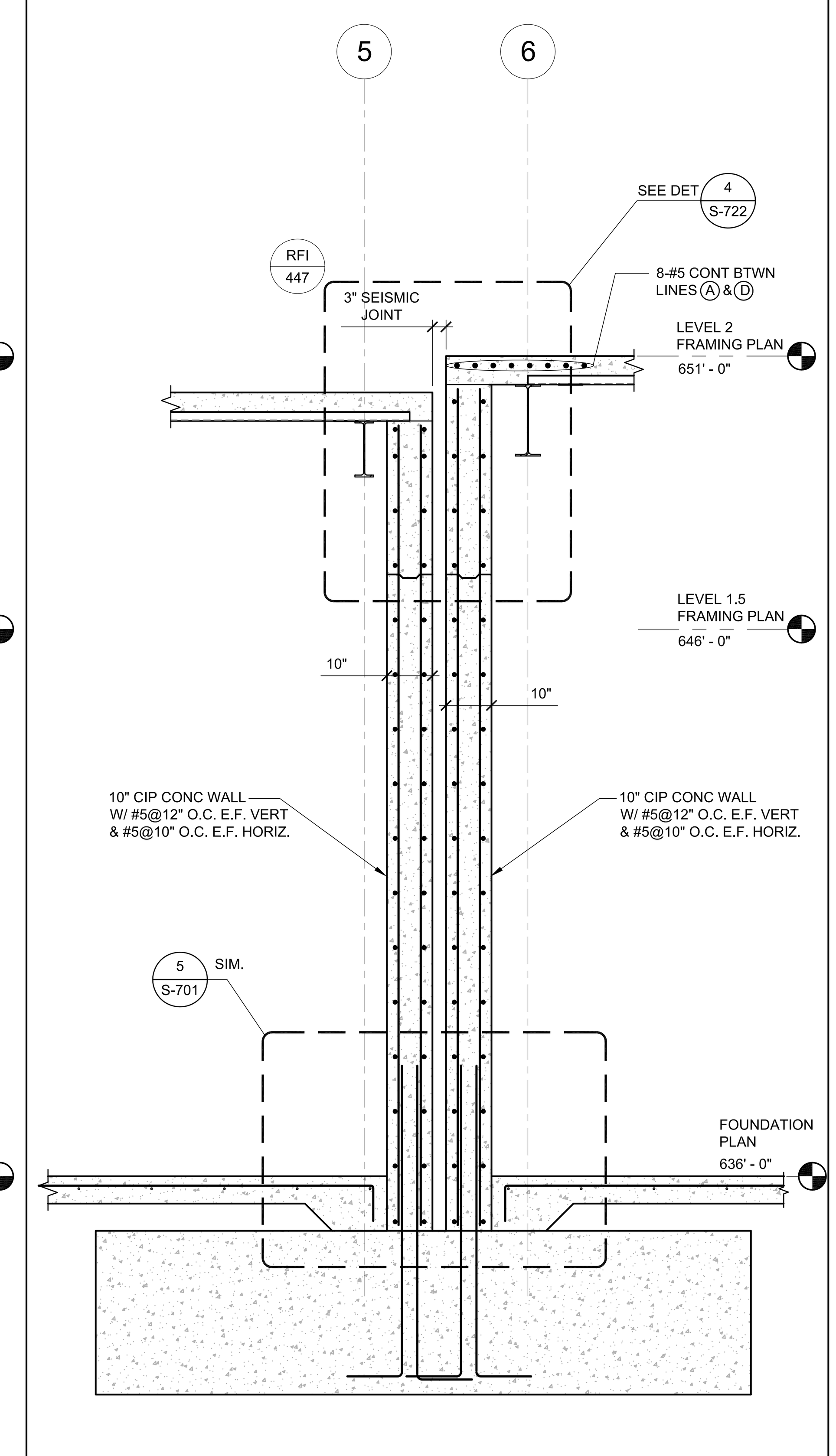
18 SECTION
SCALE: 1/2"=1'-0"



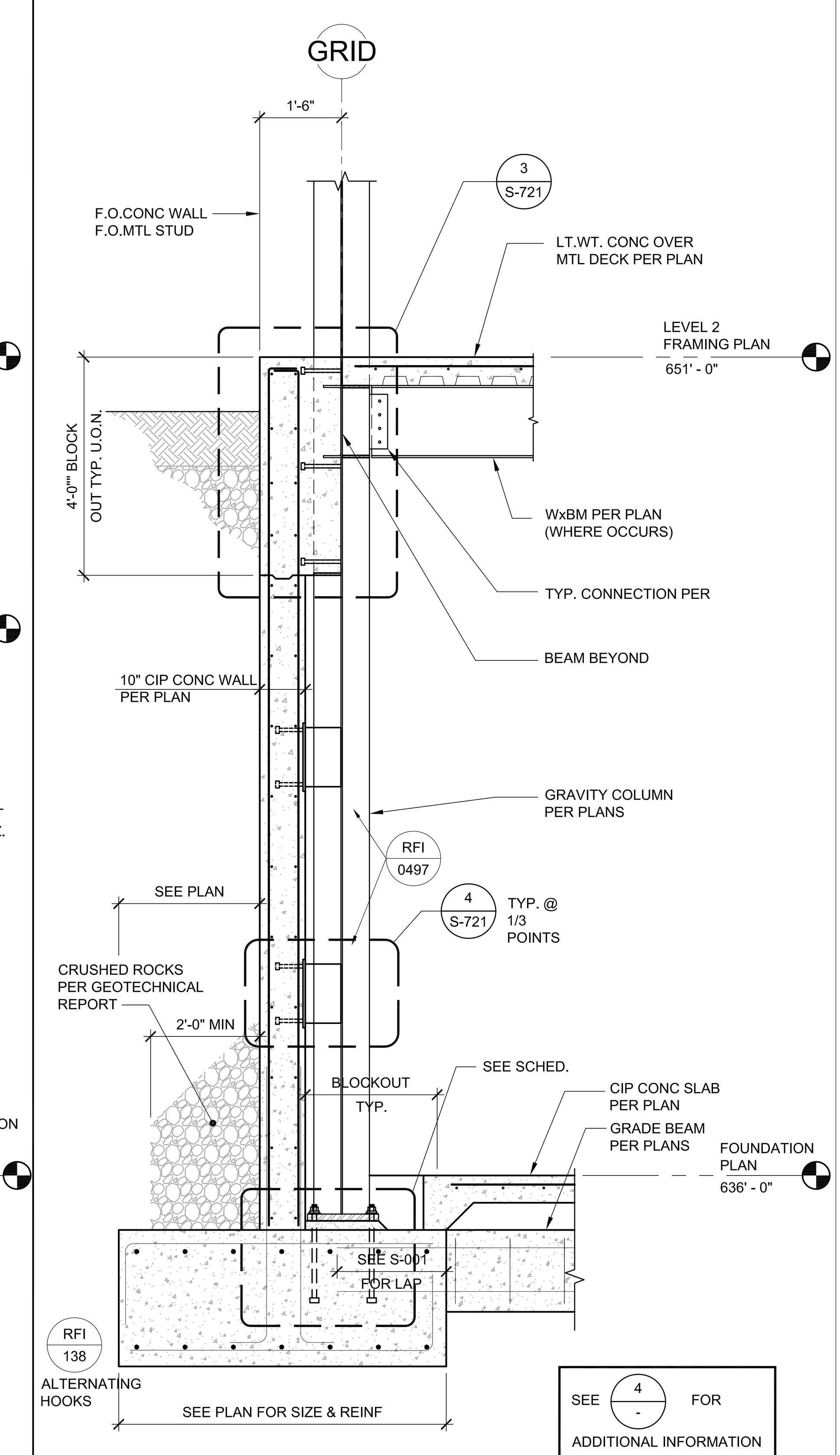
14 SECTION
SCALE: 1/2"=1'-0"



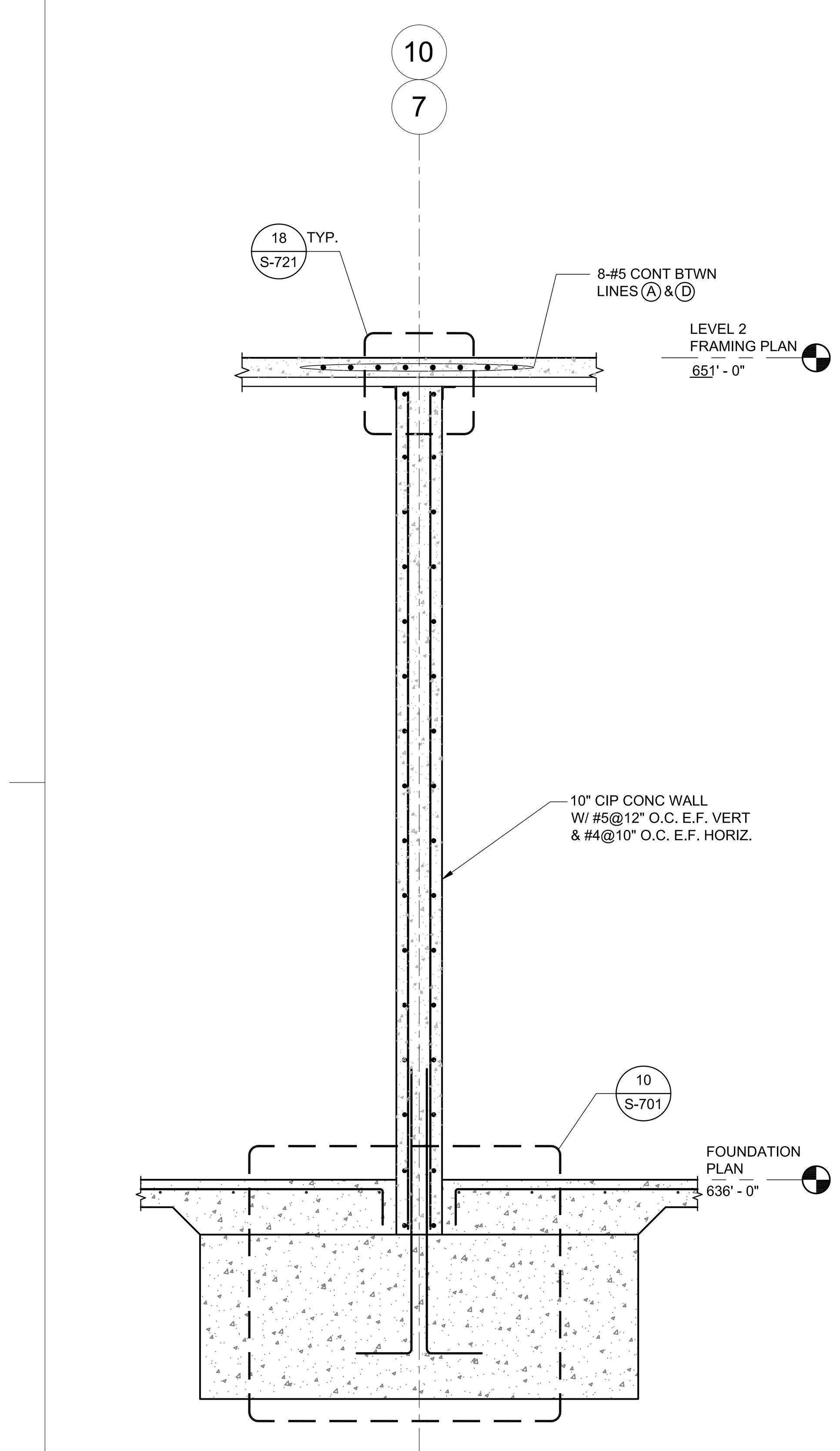
10 SECTION
SCALE: 1/2"=1'-0"



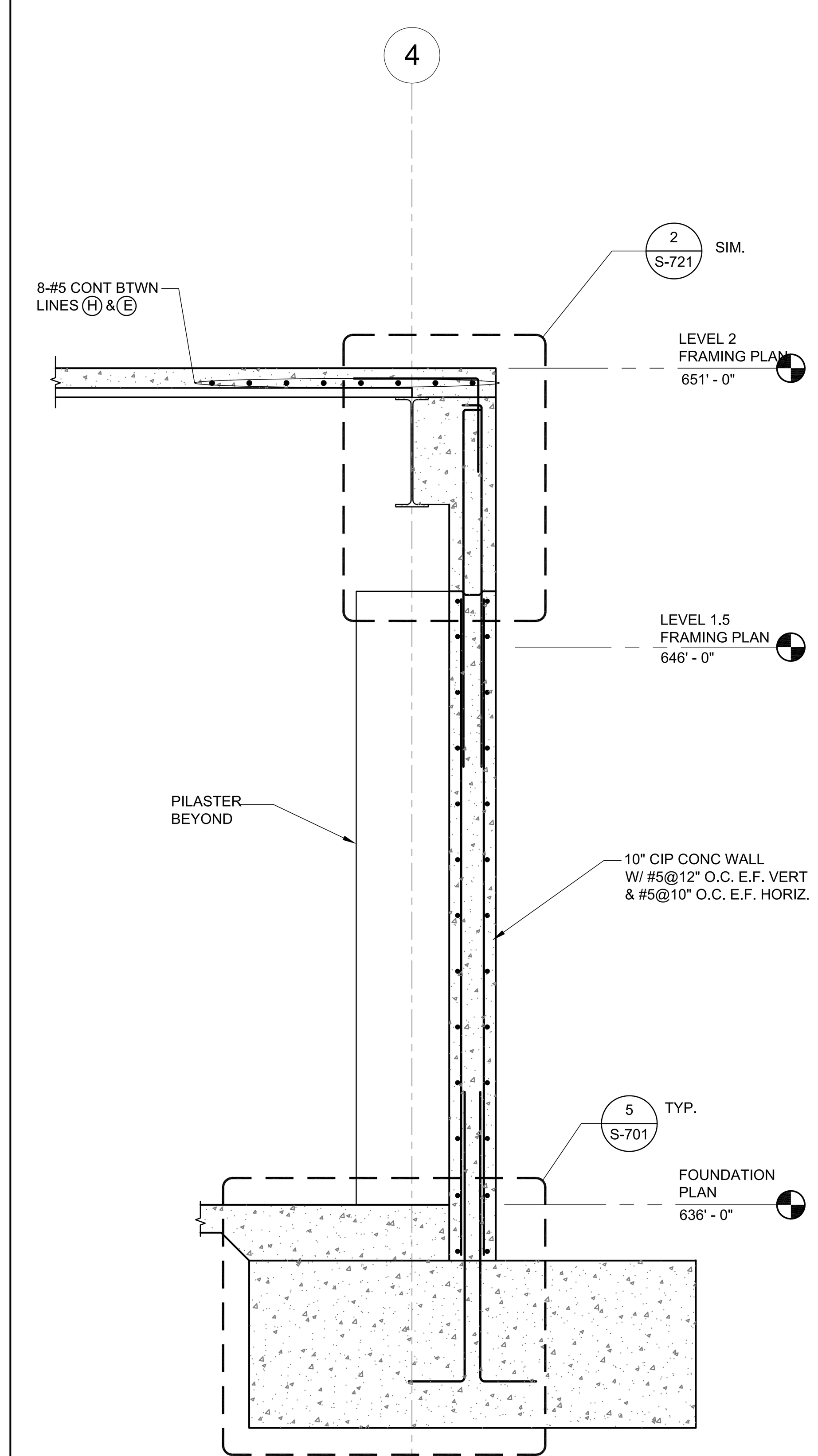
6 SECTION
SCALE: 1/2"=1'-0"



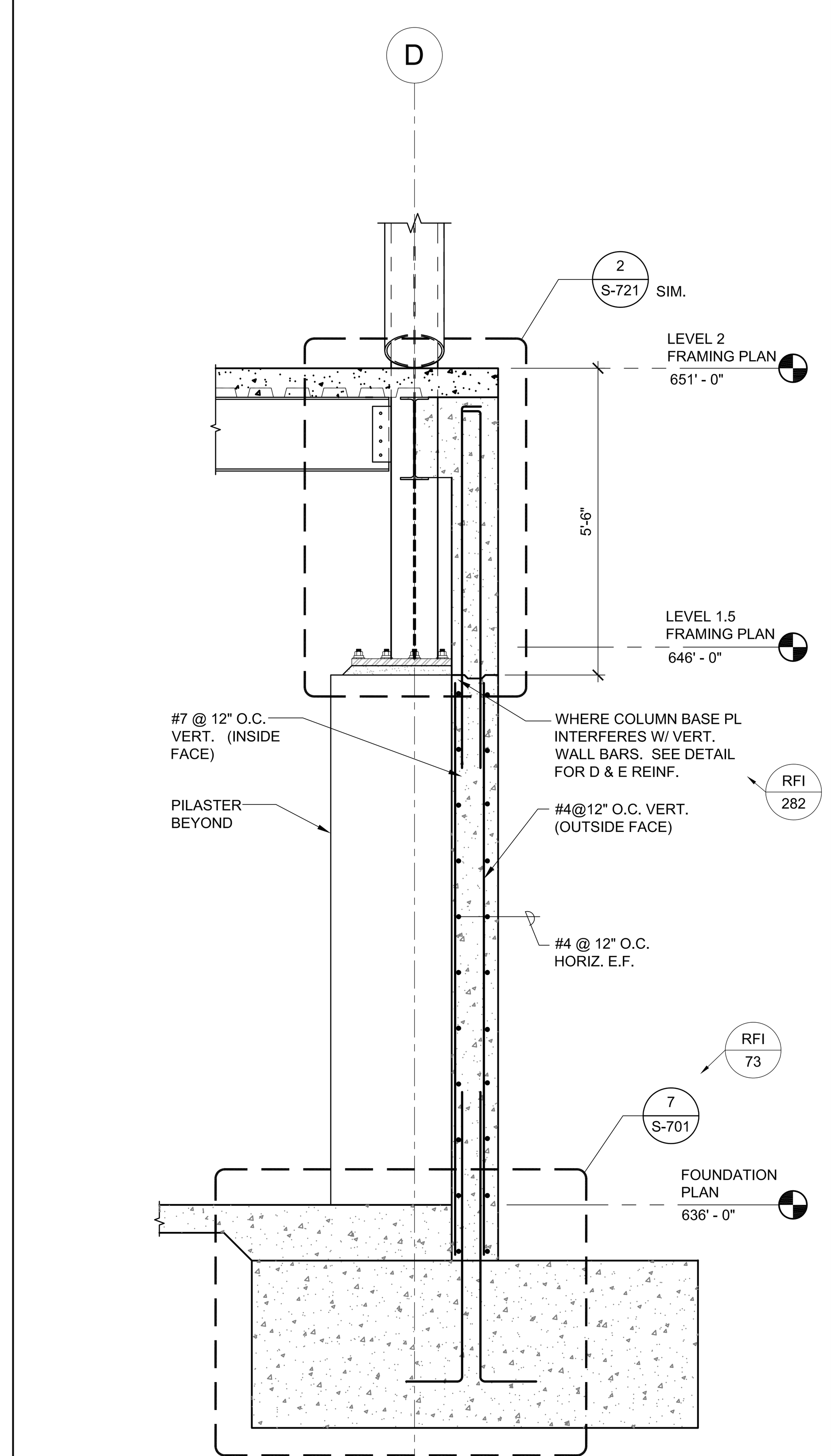
2 RETAINING WALL SECTION @ COLUMN
SCALE: 1/2"=1'-0"



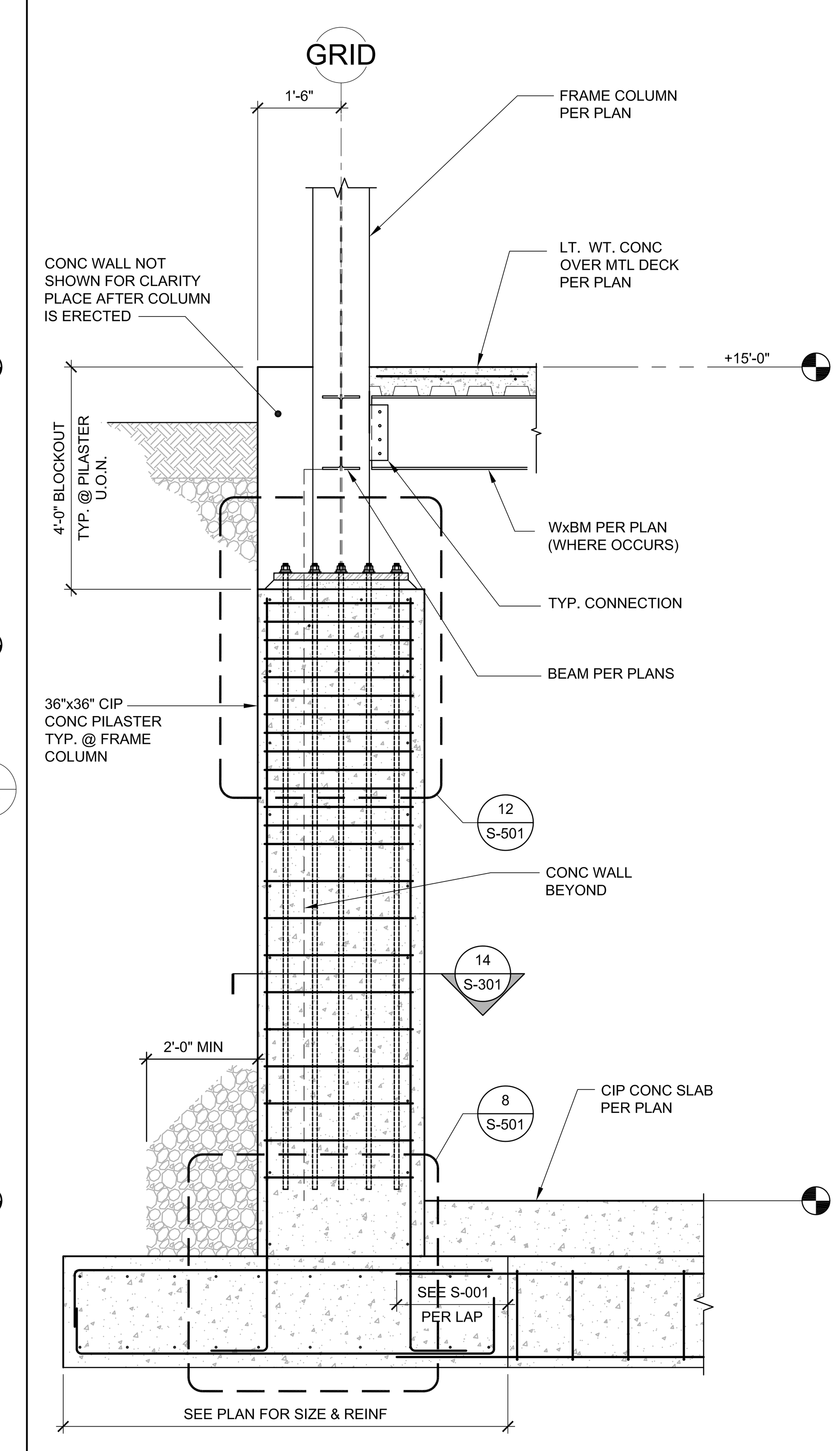
20 SECTION
SCALE: 1/2"=1'-0"



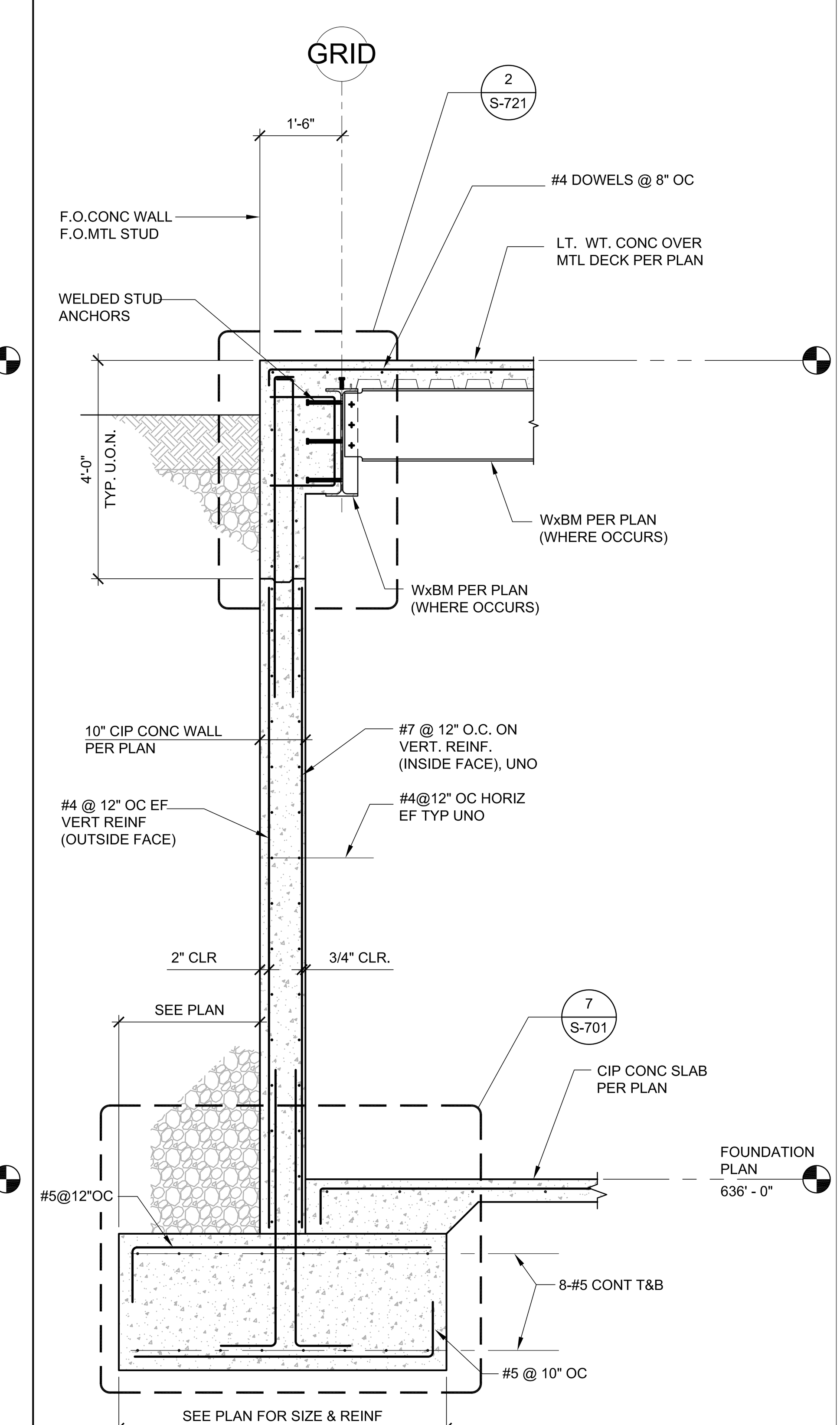
16 SECTION
SCALE: 1/2"=1'-0"



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



8 SECTION @ FRAME COLUMN
SCALE: 1/2"=1'-0"



4 SECTION AT RETAINING WALL
SCALE: 1/2"=1'-0"

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PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

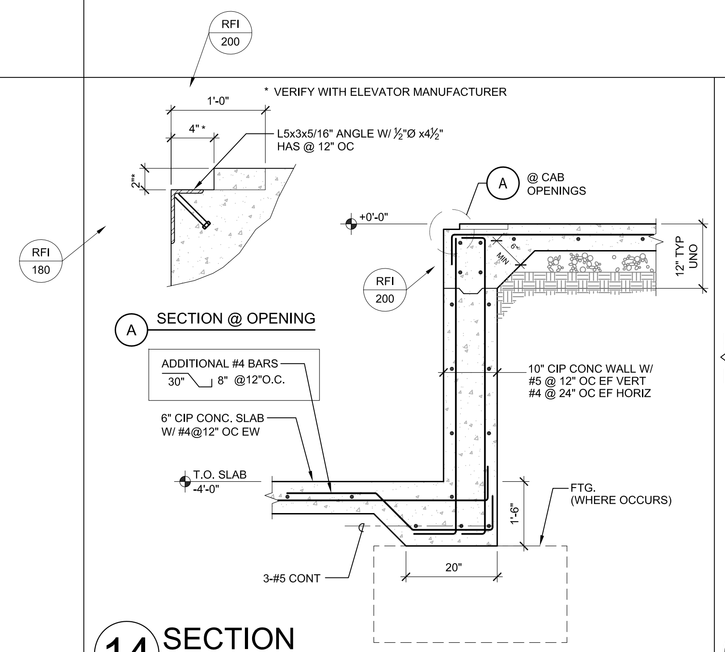
CIP2 DESIGN-BUILD PROJECT
BUILDING 4

KEYPLAN

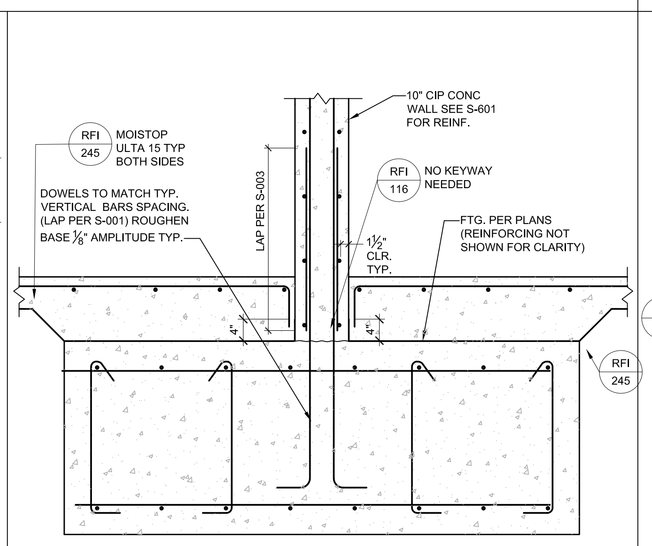
PROJECT NO.: 07012.00	DRAWN BY: AY
DATE: 03/09/09	CHECKED BY: CB
SCALE:	

SHEET TITLE:
FOUNDATION SECTIONS

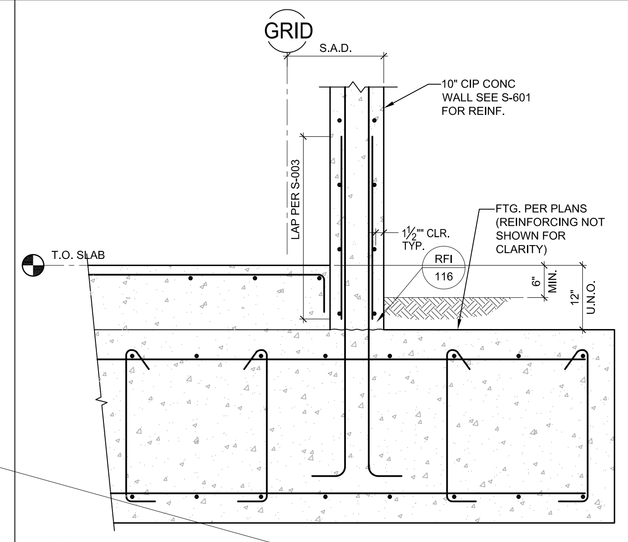
SHEET NO:
S-601



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



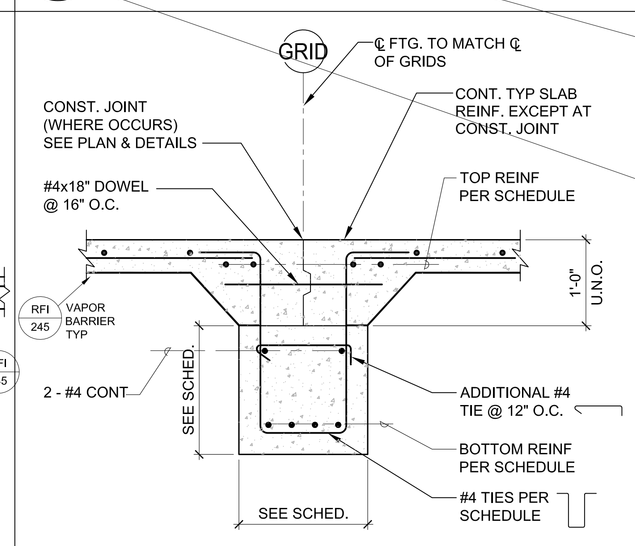
10 SECTION @ INTERIOR WALL
SCALE: 3/4"=1'-0"



RFI 247
ANCHOR BOLT PATTER @ B/3 SLOTTED ⅛" N
ANCHOR BOLT PATTERN @ B/4 SLOTTED ⅛" N
ANCHOR BOLT PATTERN @ B.2/5 SLOTTED ⅛" E
ANCHOR BOLT PATTERN @ B/12 SLOTTED 3/16" N

RFI 268
BASEPLATE GROUT THICKNESS GROUTED WITH NON-SHRINK GROUT UP TO 3", PER MANUFACTURER RECOMMENDATIONS. USE ⅜" PEA GRAVEL OVER 3"

5 SECTION @ CIP WALL
SCALE: 3/4"=1'-0"

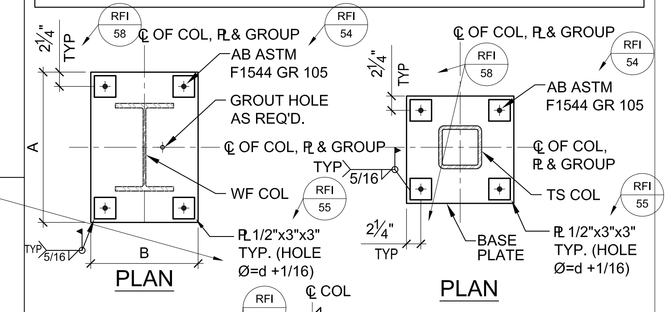


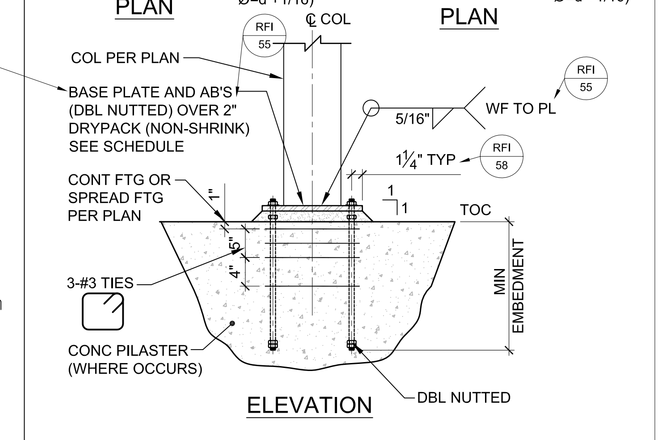
6 SECTION @ GRADE BEAM
SCALE: 1"=1'-0"

GRAVITY COLUMN BASE PLATE/ANCHOR BOLT SCHEDULE					
COLUMN SIZE	BASE PLATE SIZE (AxB)	PLATE THK	ANCHOR BOLTS	MIN EMB'T	REMARKS
HSS4x4x5/16	15"x15"	3/4"	4 - 3/4"Ø	14"	RFI 54
HSS8x8x1/2	17"x17"	3/4"	4 - 3/4"Ø	14"	
W10x33	19"x19"	7/8"	4 - 3/4"Ø	14"	
W10x54	20x14"	1 1/4"	4 - 3/4"Ø	14"	
W12x58	22"x14"	1 1/4"	4 - 1"Ø	14"	
W12x65	22"x22"	1 1/2"	4 - 1"Ø	14"	
W12x96	22"x22"	1 1/2"	4 - 1"Ø	14"	
HSS12x12x1/2	14"x23 1/2"	2 1/2"	6 - 1 1/4"Ø	24"	SEE 8/
HSS14x14x5/8	14"x23 1/2"	2 1/2"	6 - 1 1/4"Ø	24"	SEE 8/

NOTES:
1. BASE PLATE SIZE ARE TYP. U.O.N.
2. DIM. A IS PARALLEL TO COLUMN WEB.
3. t = THICKNESS OF COLUMN WEB OR FLANGE OR WALL (AS APPLICABLE).

RFI 58





2 GRAVITY COLUMN BASE PLATE SCHEDULE
SCALE: NTS

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

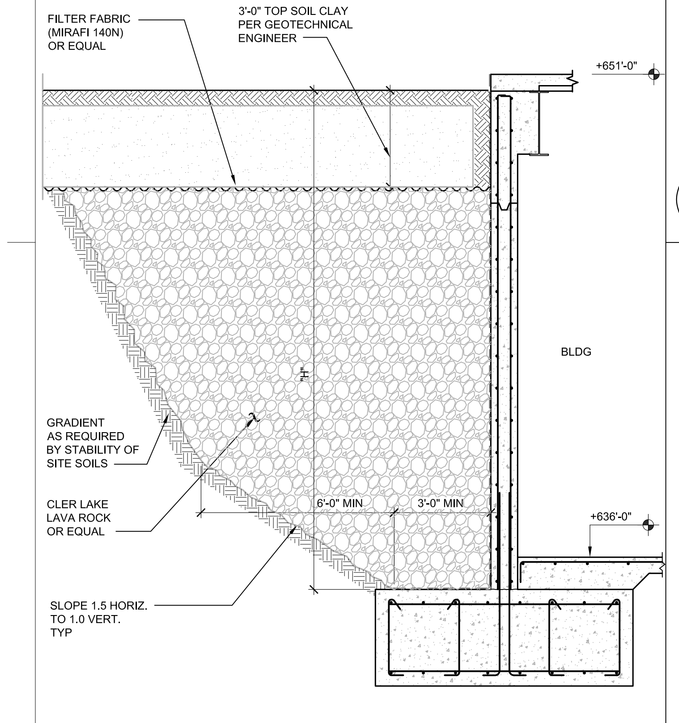
PROJECT NO.:	07012.00	DRAWN BY:	AY
DATE:	03/09/09	CHECKED BY:	CB
SCALE:			

SHEET TITLE:
FOUNDATION DETAILS

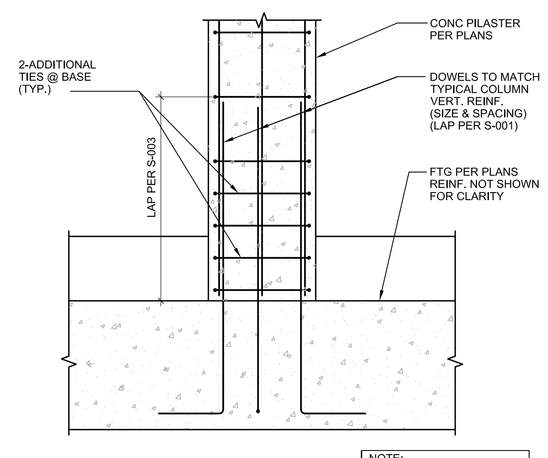
SHEET NO:
S-701

1. ALL BACKFILL MATERIALS AND PLACEMENT TO BE OBSERVED BY GEOTECHNICAL ENGINEER OF RECORD.
2. BACKFILL MATERIAL SHALL BE PLACED AS SHOWN AND SHALL BE "CLEAR LAKE LAVA ROCK" OR EQUAL WITH DENSITY OF 60 PCF AND INTERIOR FRICTION ANGLE OF 45°.
3. ALL BACKFILL SHALL BE COMPACTED IN 12" LIFTS AND CONSOLIDATED WITH LIGHT VIBRATORY EQUIPMENT.
4. SAD FOR DRAINAGE SYSTEM AND RETAINING WALL WATERPROOFING.
5. CLEAR LAKE LAVA ROCK SHALL BE USED AT ALL LOCATIONS WHERE THE RETAINED HEIGHT IS GREATER THAN 8'-0".

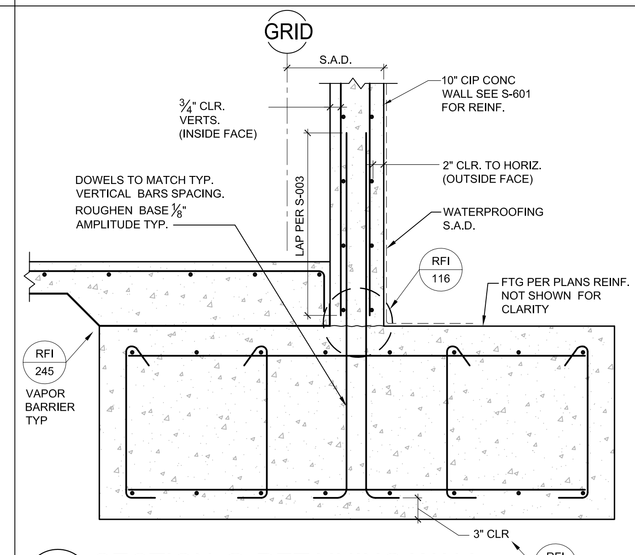
TYPICAL RETAINING WALL BACKFILL NOTES



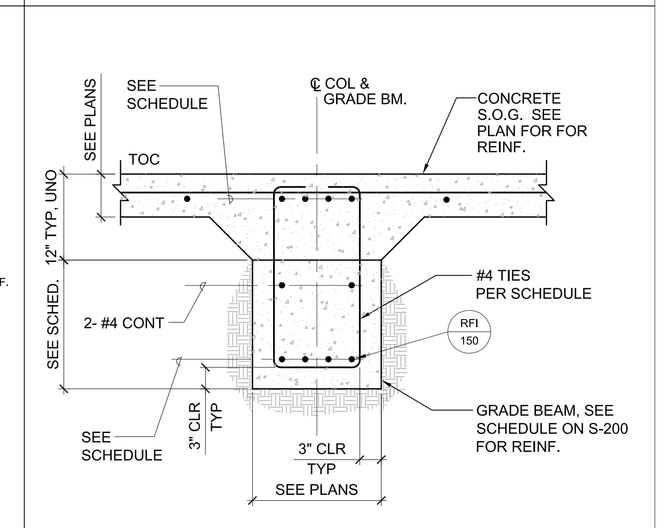
20 SECTION @ RETAINING WALL
SCALE: 3/8"=1'-0"



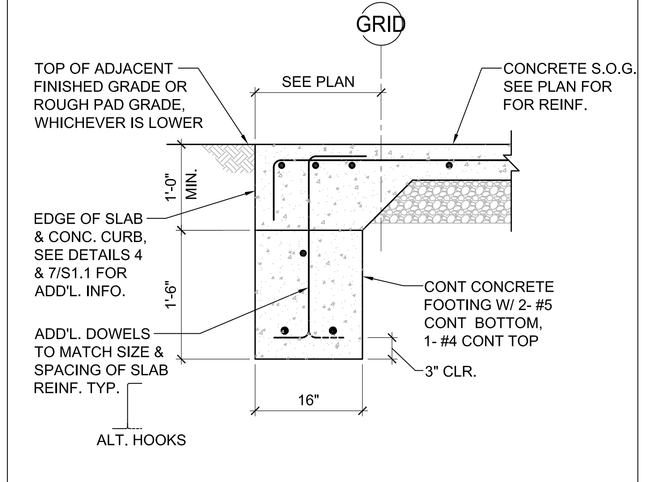
15 SECTION @ PILASTER BASE
SCALE: 3/4"=1'-0"



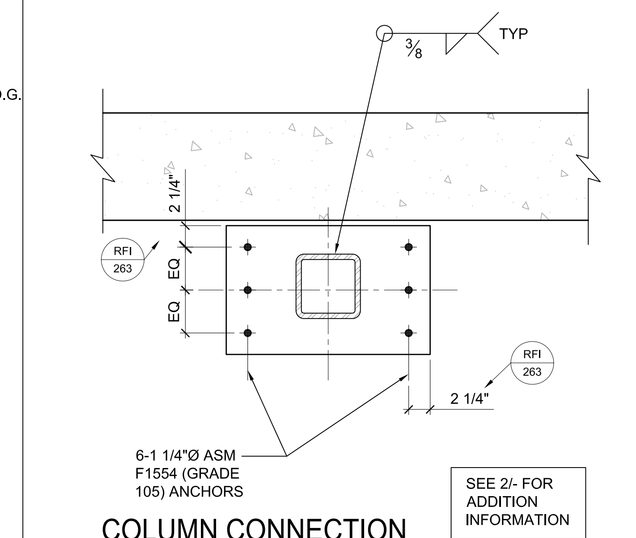
7 SECTION @ RETAINING WALL
SCALE: 3/4"=1'-0"



3 TYPICAL GRADE BEAM DETAIL
SCALE: 1"=1'-0"



12 EDGE OF SLAB @ GRADE BEAM DETAIL
SCALE: 1"=1'-0"



8 COLUMN CONNECTION @ EXTERIOR WALL
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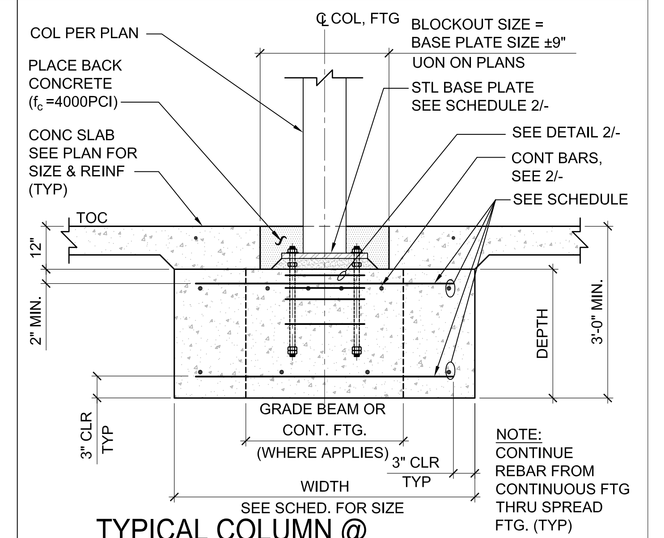

4 TYPICAL COLUMN @ INTERIOR SPREAD FOOTING
SCALE: NTS

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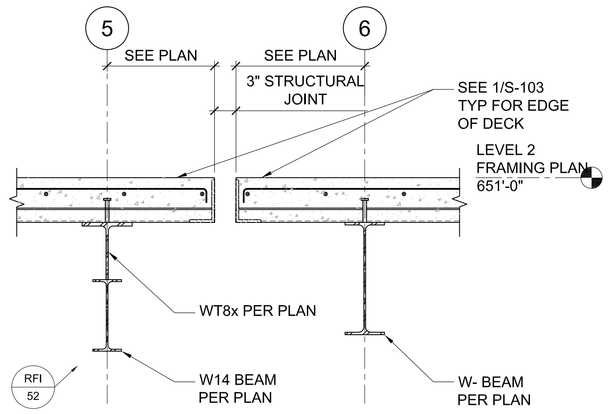

17 SECTION
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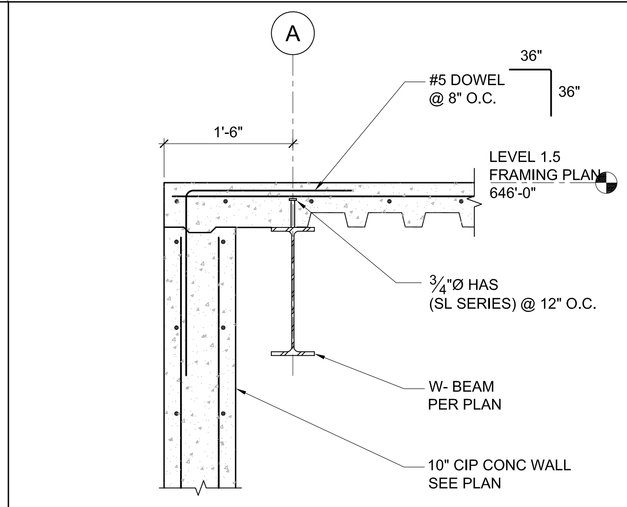
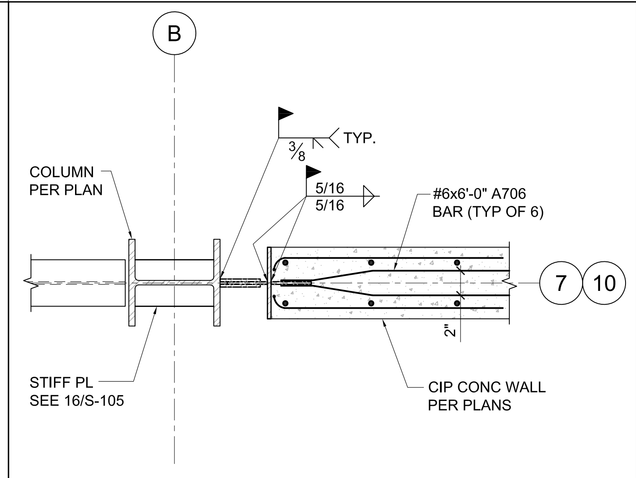


SEE 2/- FOR ADDITIONAL INFORMATION

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



9 SECTION @ COLLECTOR
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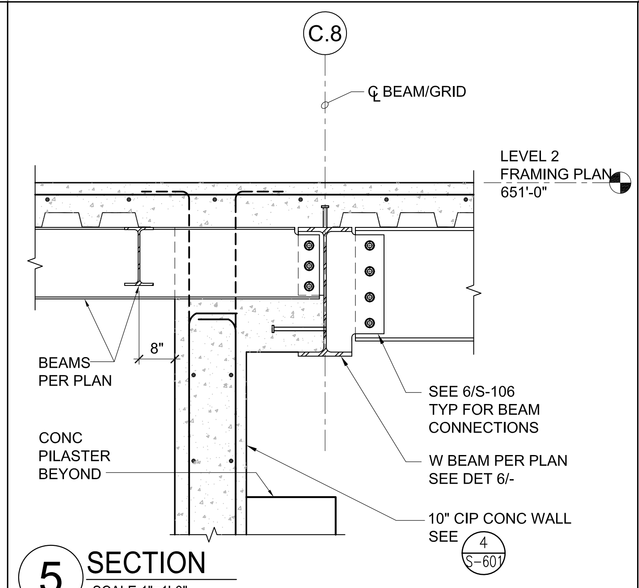

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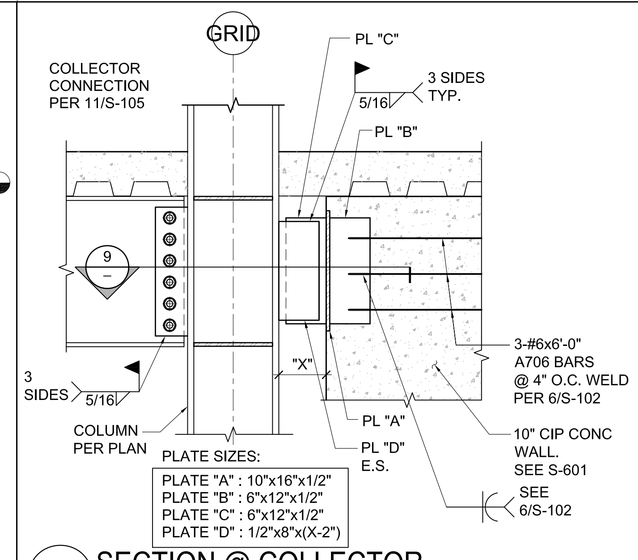

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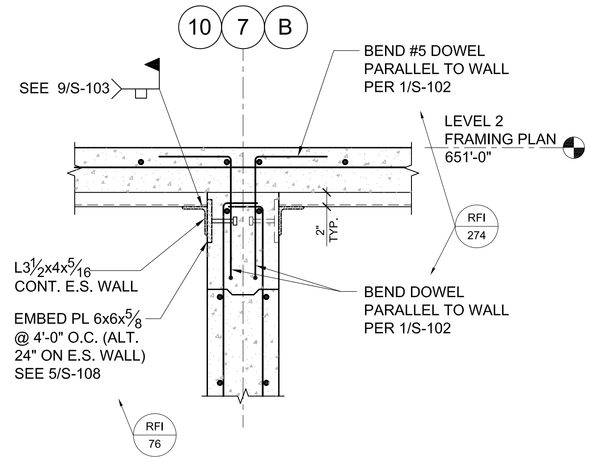

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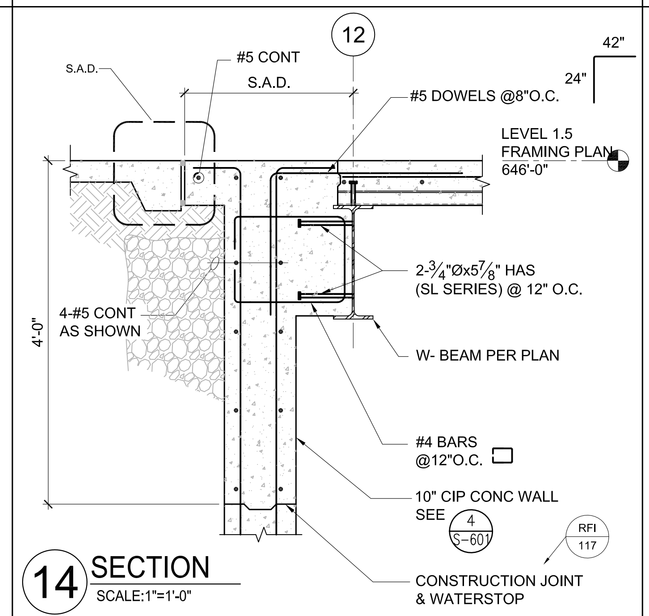

14 SECTION
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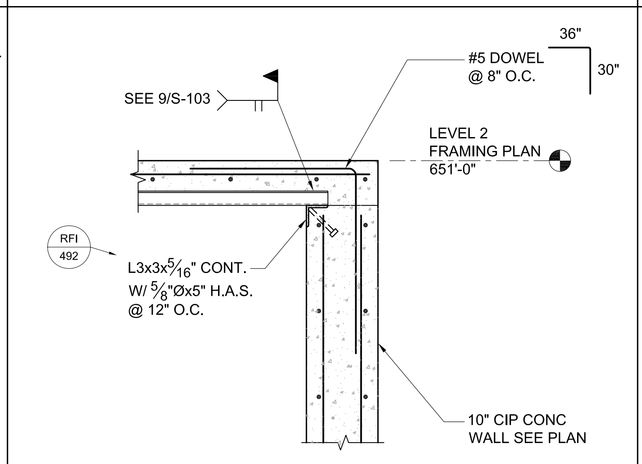

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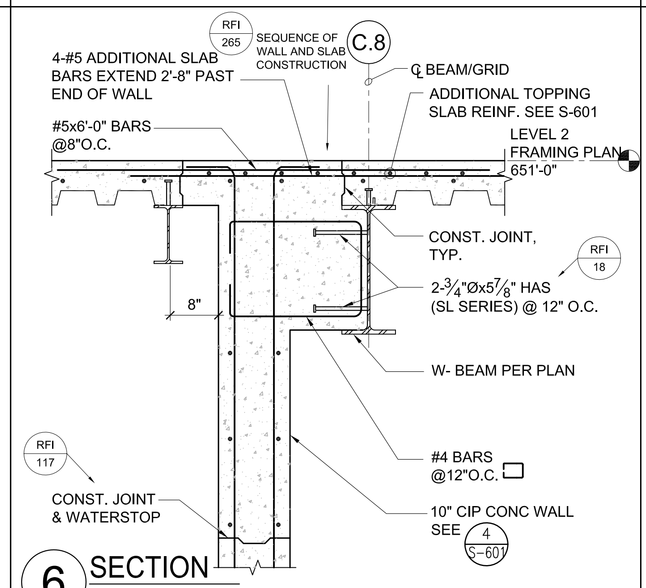

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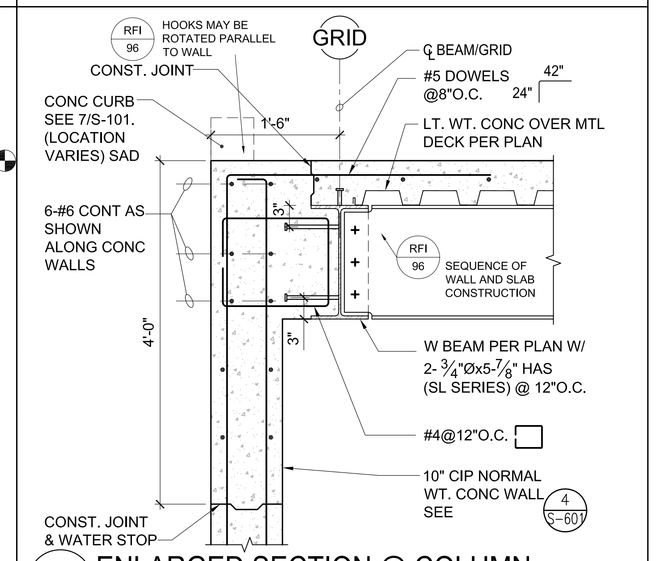

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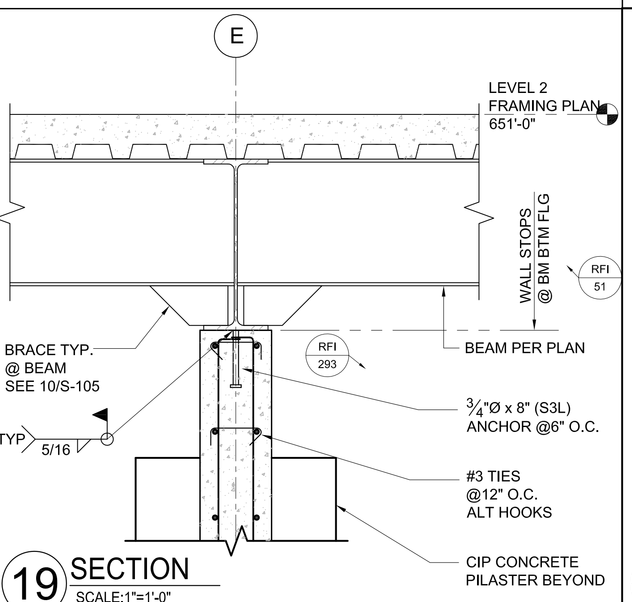

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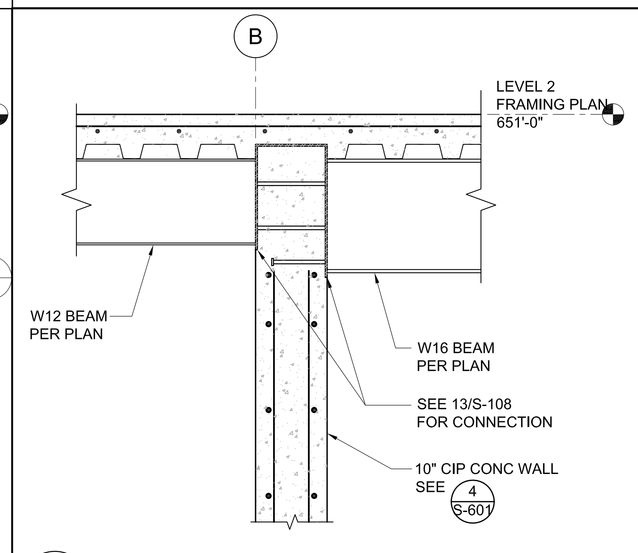

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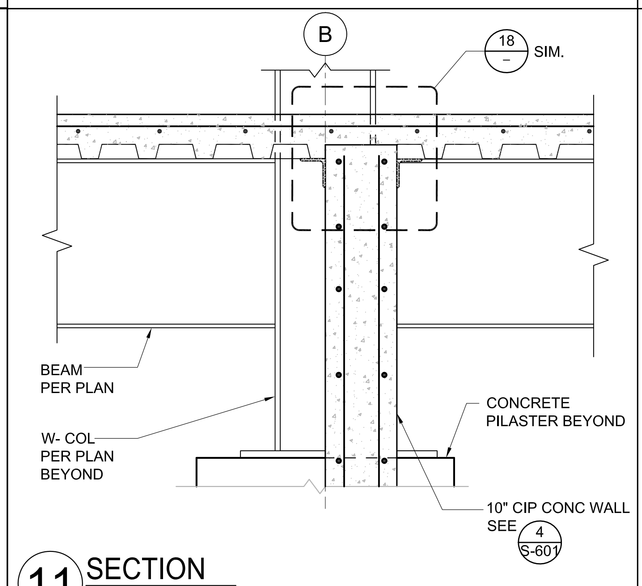

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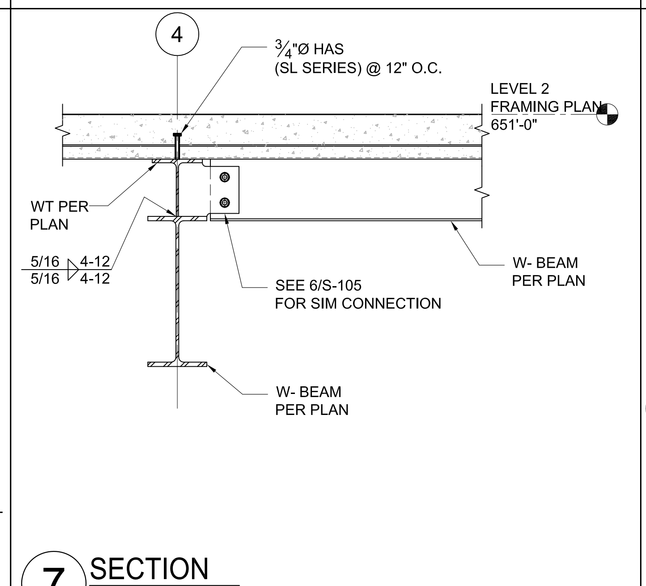

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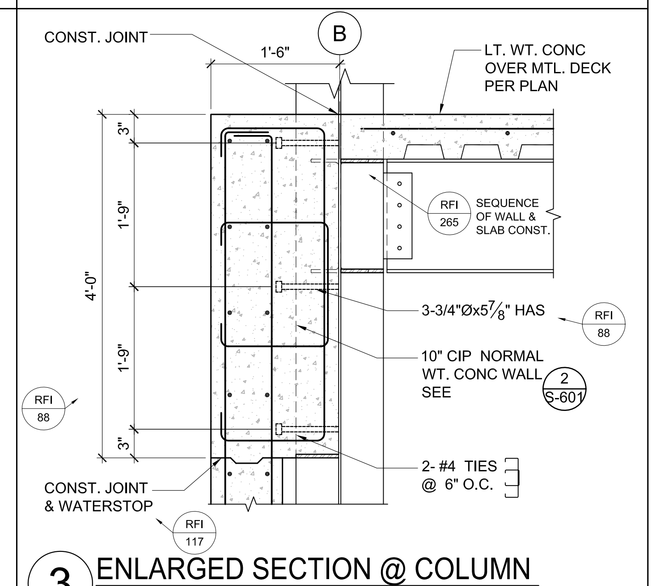

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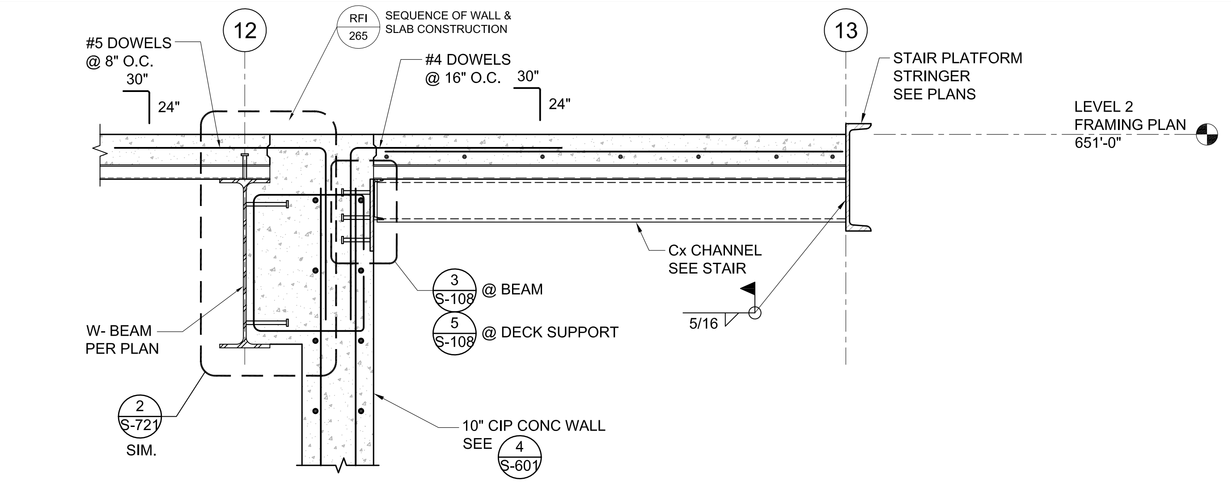

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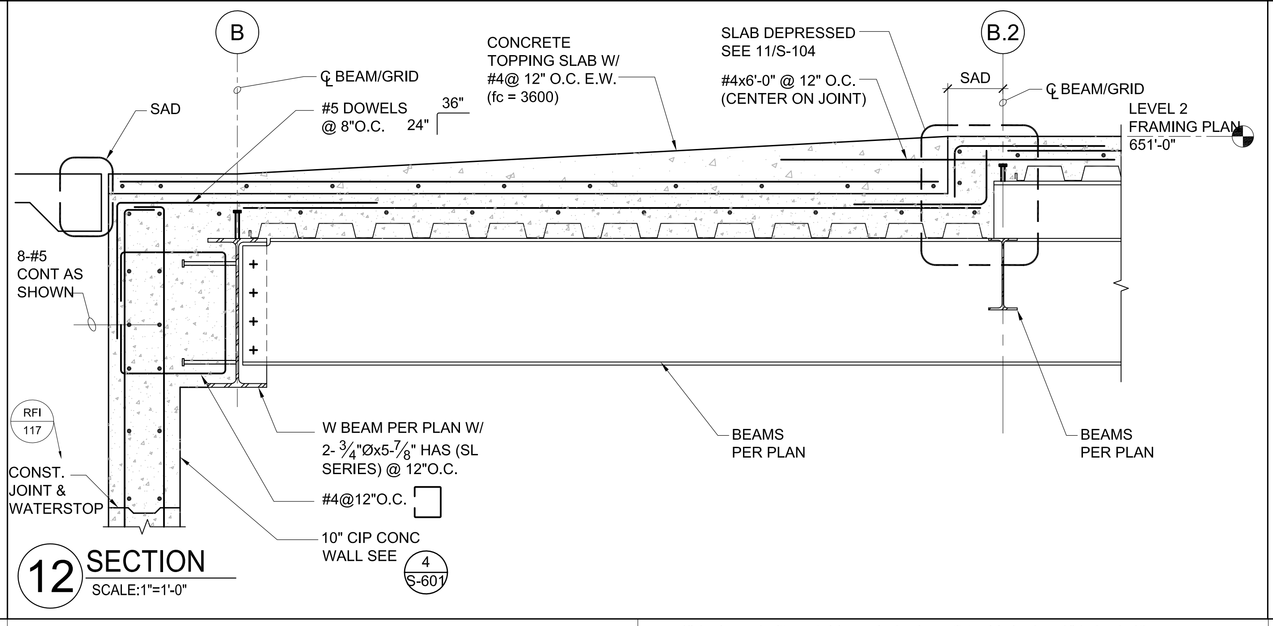

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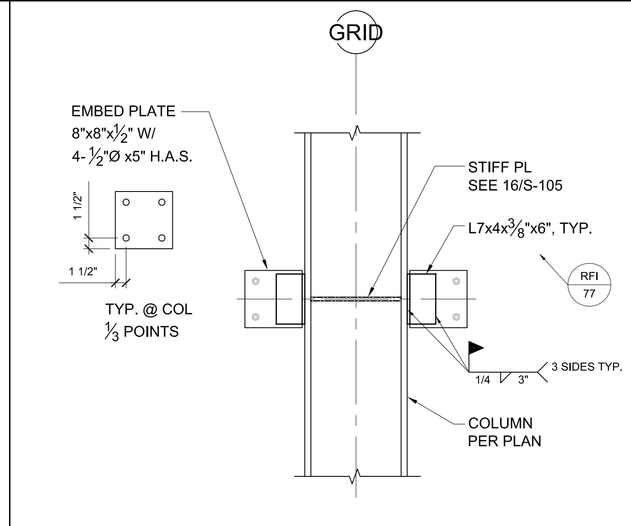

4 COLUMN BRACE
SCALE:1"=1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

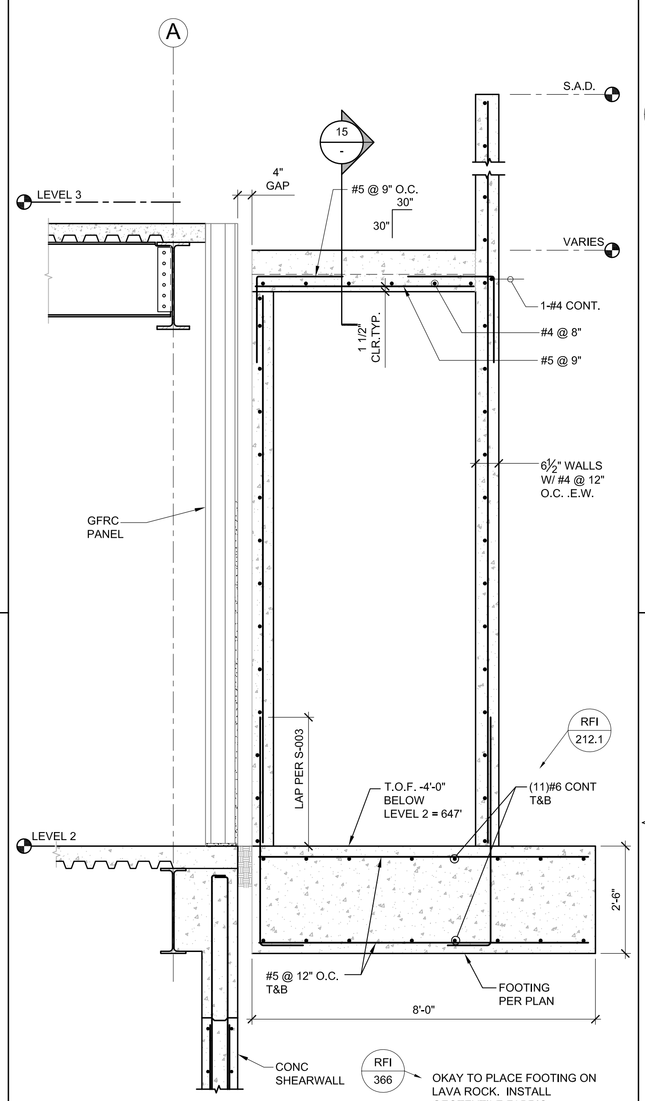
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE:

SHEET TITLE:
LEVEL 2 DETAILS

SHEET NO:
S-721



14 SECTION AT STAIR #7
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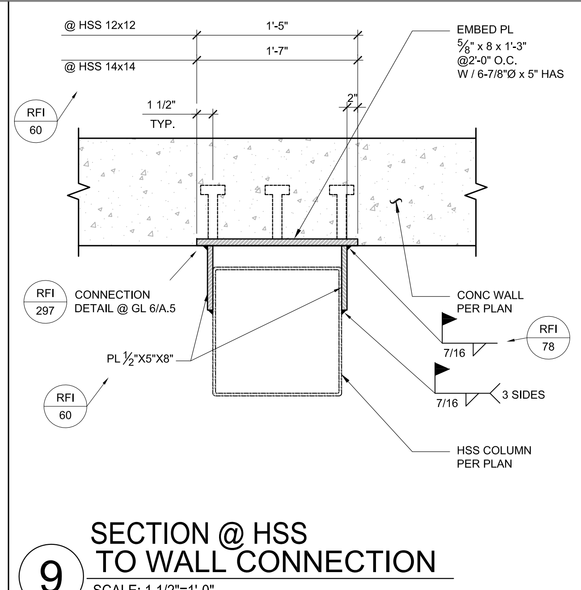

9 SECTION @ HSS TO WALL CONNECTION
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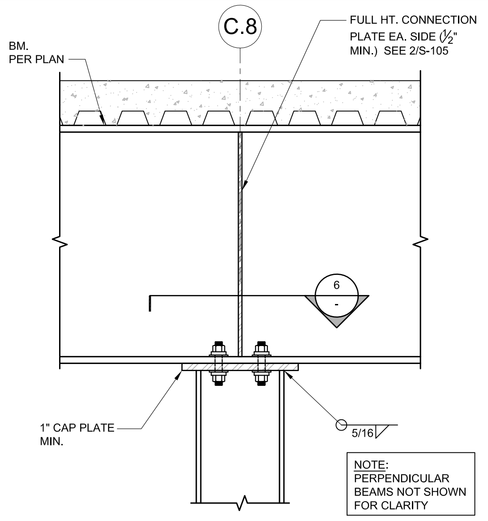
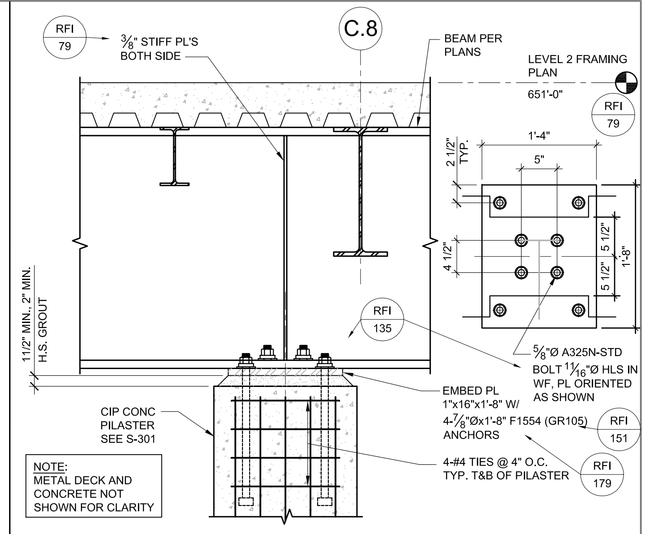


5 CANTILEVER BEAM CONN.
SCALE:1"=1'-0"



1 BEAM CONN. @ CONC. PILASTER
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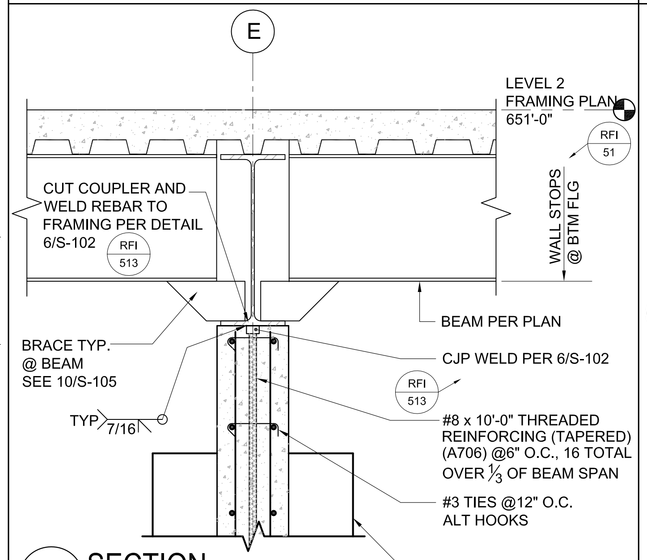

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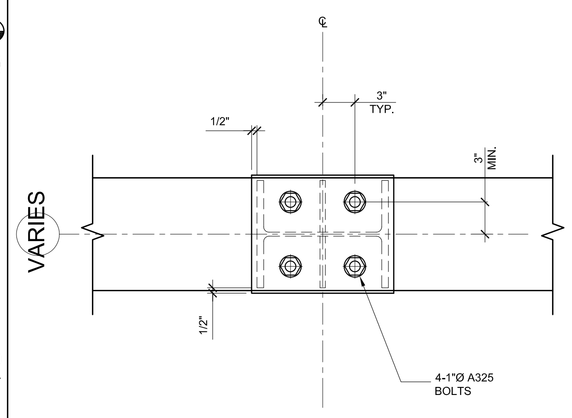
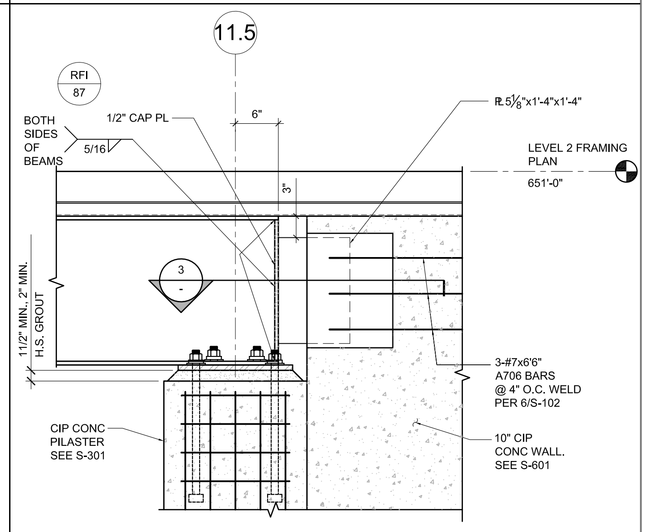


6 CANTILEVER BEAM CONN.
SCALE: 1 1/2"=1'-0"



2 SECTION @ PILASTER CONNECTION (COLLECTOR)
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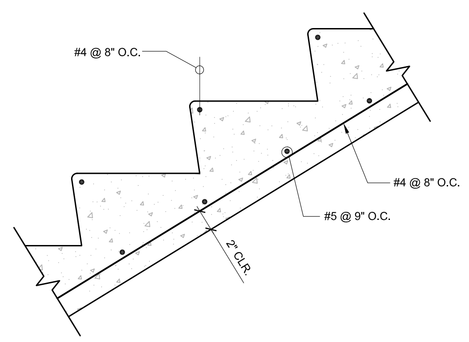

15 SECTION
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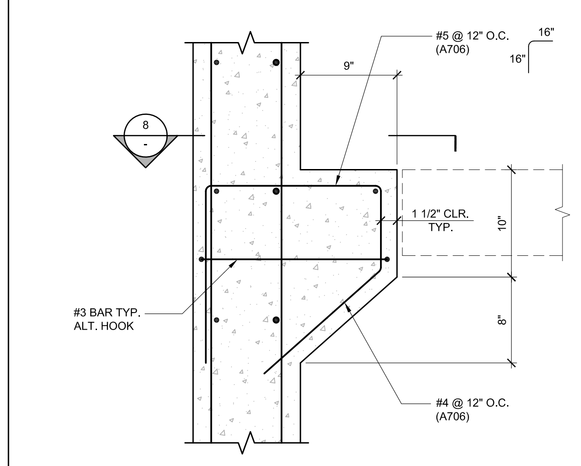

11 SECTION @ CORBELL
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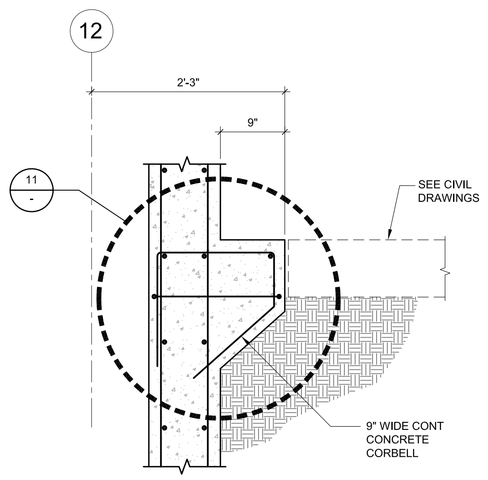

7 SECTION @ CORBELL
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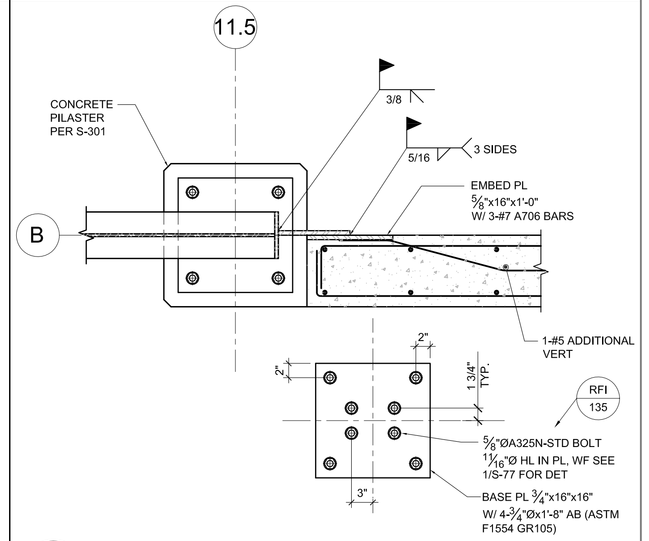

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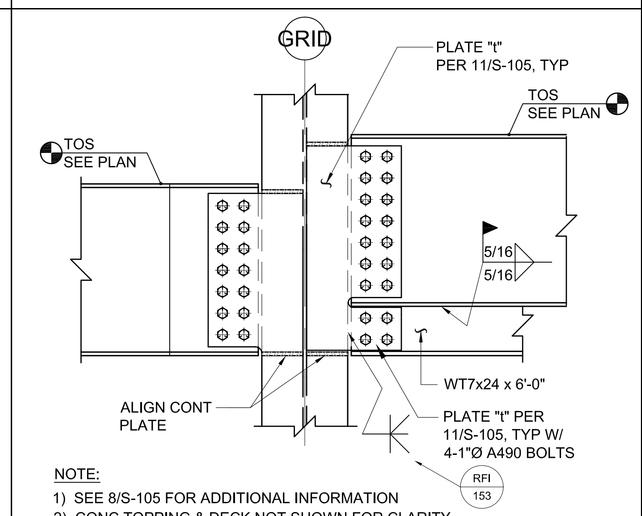

12 COLLECTOR CONNECTION
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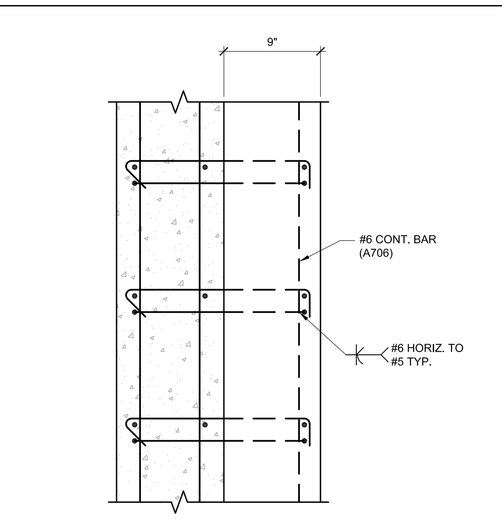
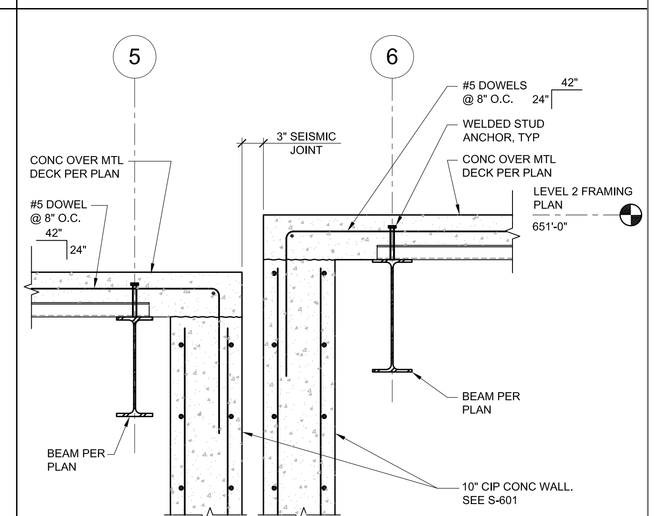


8 CANTILEVER BEAM CONN.
SCALE: 1 1/2"=1'-0"



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

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NO. ISSUES/REVISIONS DATE

PROJECT RECORD SET

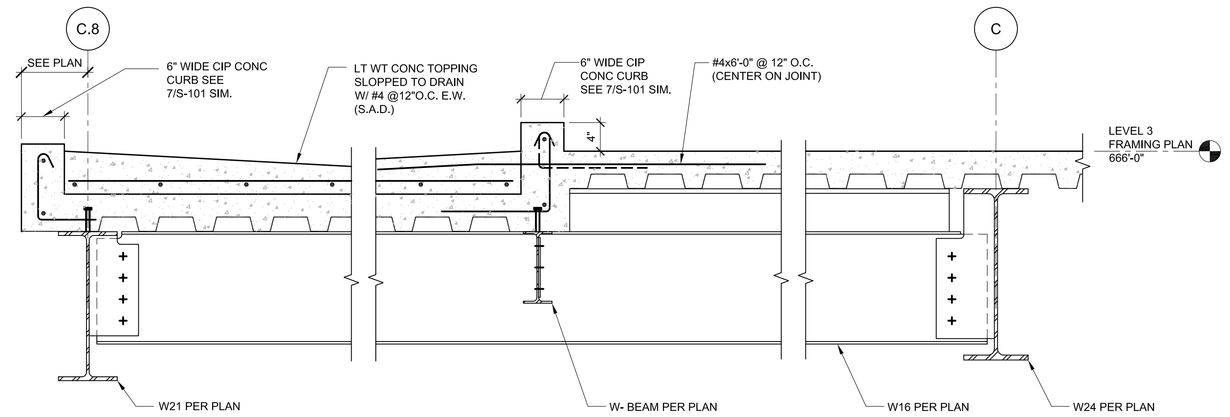
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE:

SHEET TITLE:
LEVEL 2 DETAILS

SHEET NO:
S-722



13 SECTION
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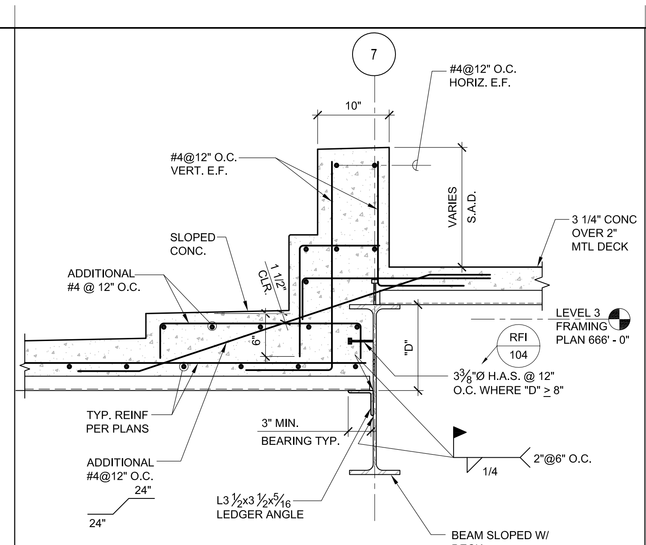

5 SECTION
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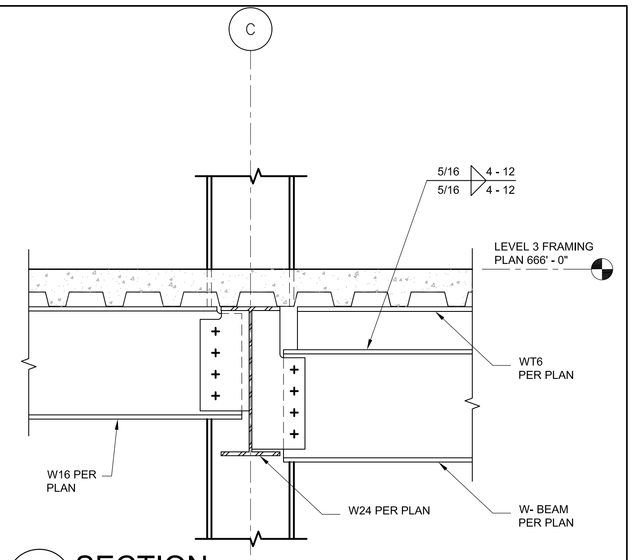

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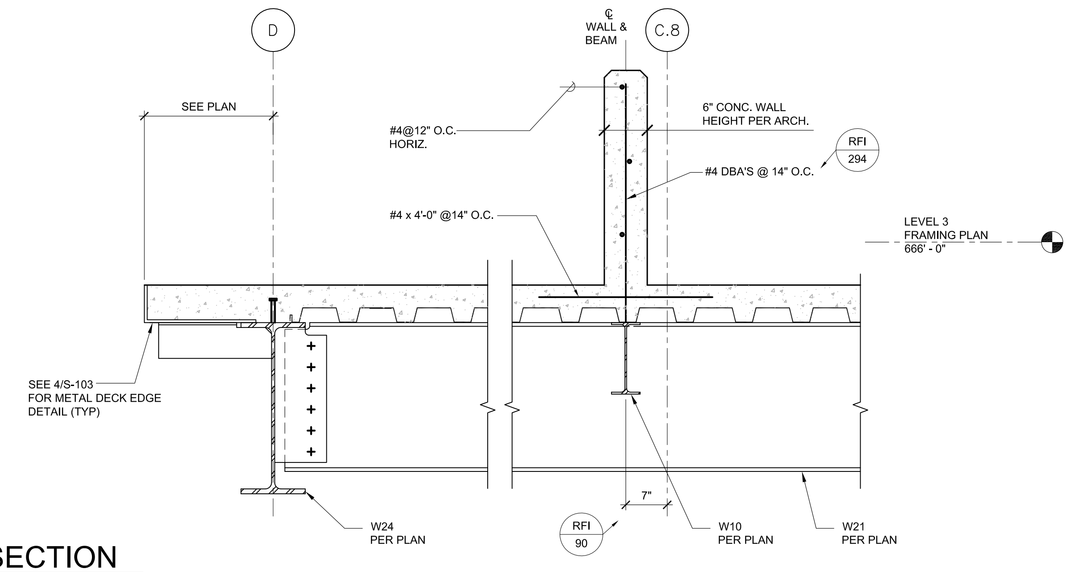

14 SECTION
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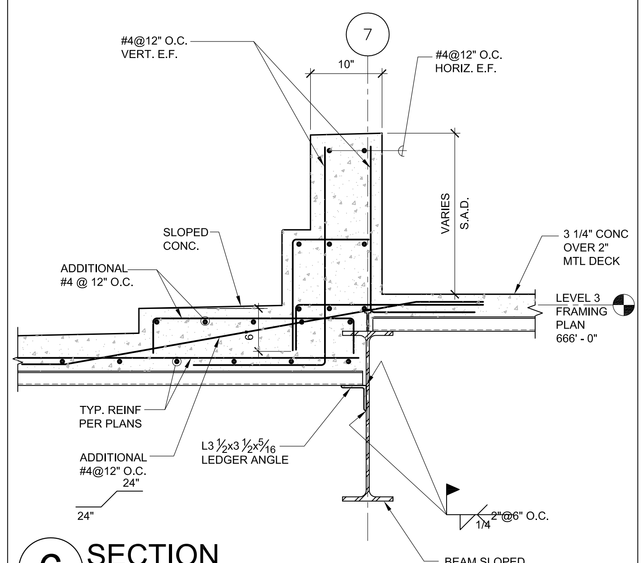

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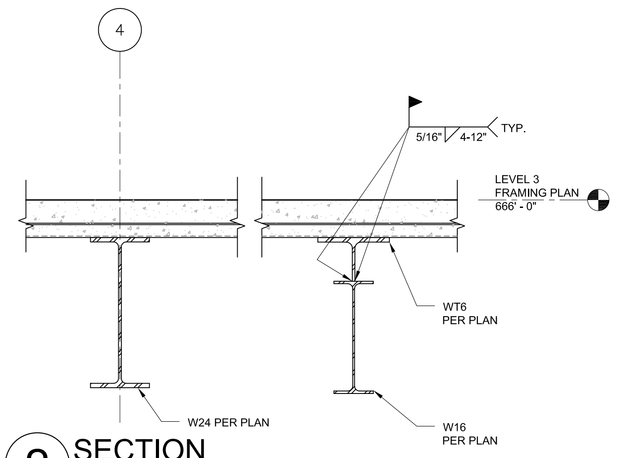
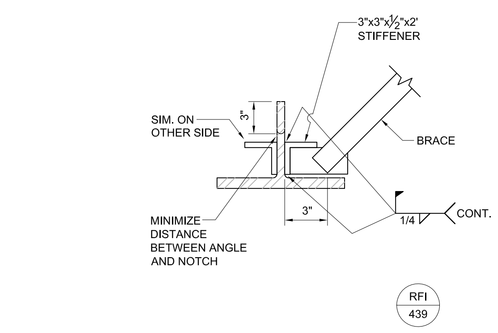
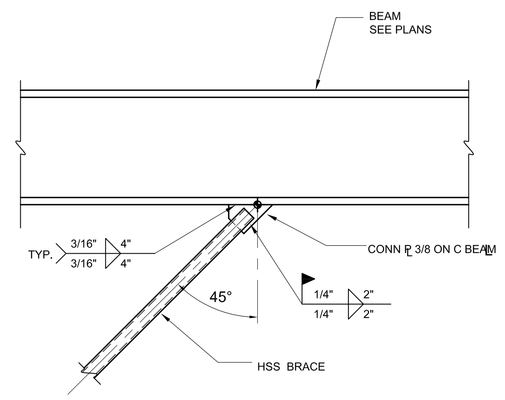


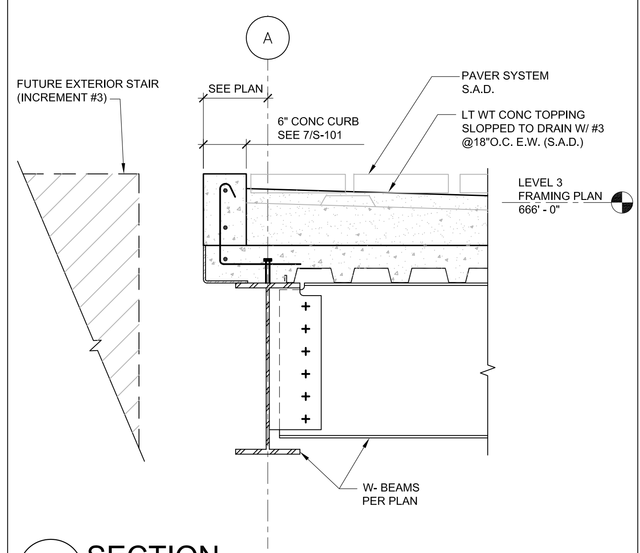
2 SECTION
SCALE:1"=1'-0"



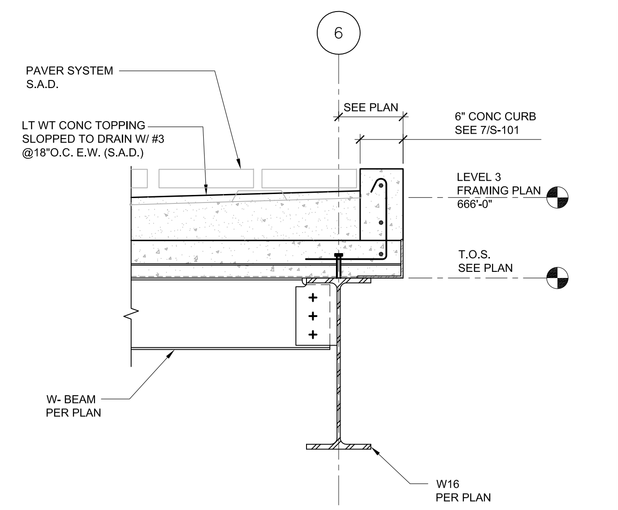
19 DETAIL @ NOTCH
SCALE: 1 1/2"=1'-0"



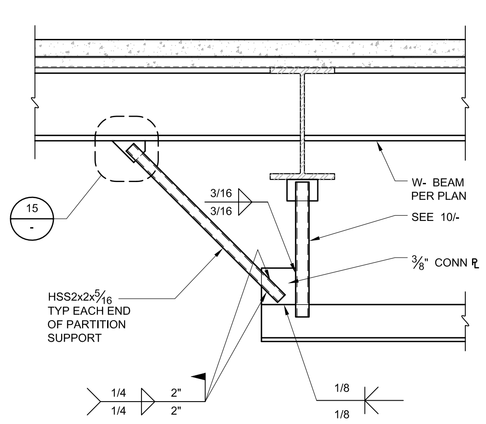
15 TYPICAL DIAGONAL BRACE CINN
SCALE:1"=1'-0"



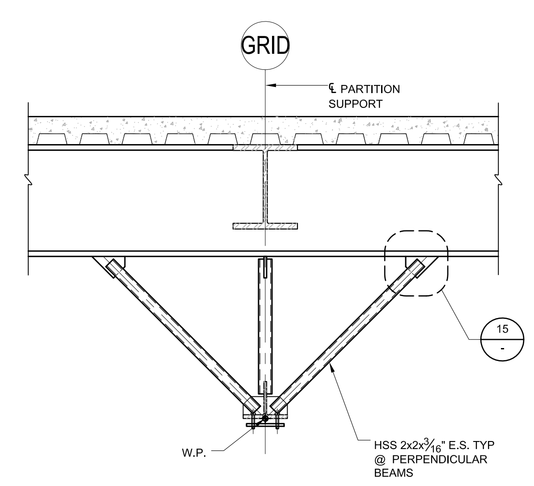
7 SECTION
SCALE:1"=1'-0"



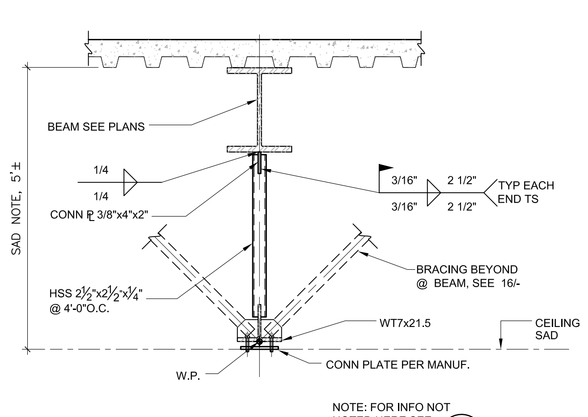
3 SECTION
SCALE:1"=1'-0"



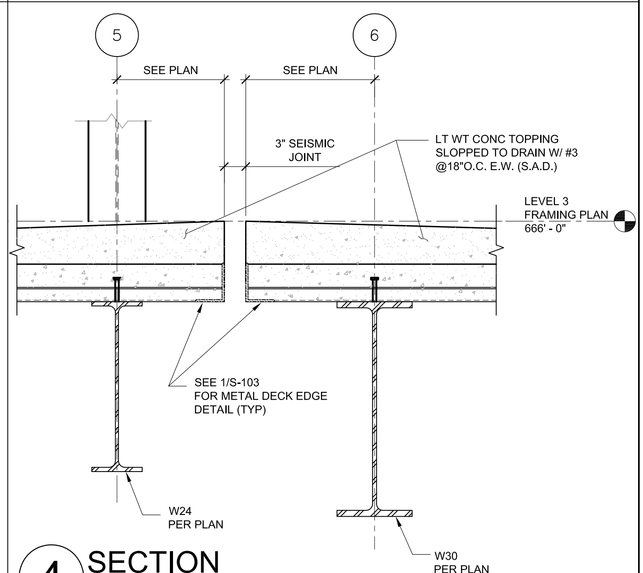
20 LONGITUDINAL BRACE @ PARTITION SUPPORT
SCALE: 3/4"=1'-0"



16 TRANSVERSE BRACE @ PARTITION SUPPORT
SCALE: 3/4"=1'-0"



10 SECTION @ FOLDING PARTITION HEAD
SCALE: 3/4"=1'-0"



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

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WRNS STUDIO, LLP
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Hensel Phelps Construction Co.

Crosby group
Structural Engineering
726 Main St.,
Redwood City,
CA 94063
tel. (650) 367-8100
fax. (650) 367-8189

NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

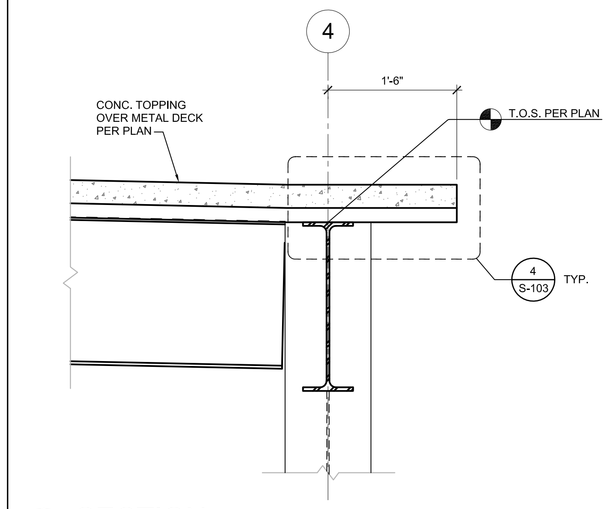
SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4
KEYPLAN

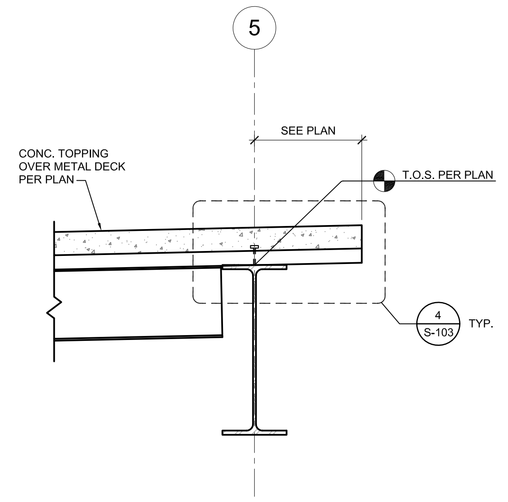
PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE:

SHEET TITLE:
LEVEL 3 DETAILS

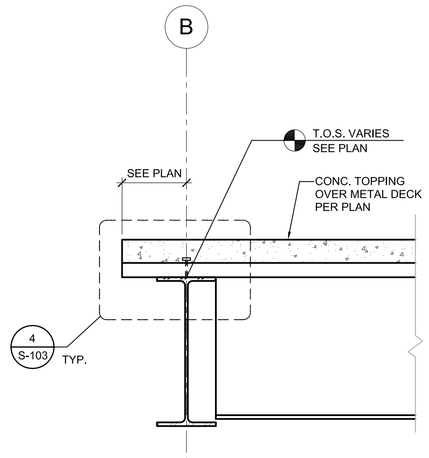
SHEET NO:
S-731



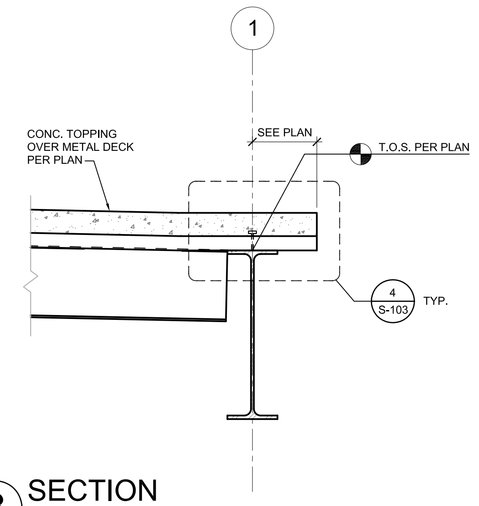
5 SECTION
1" = 1'-0"



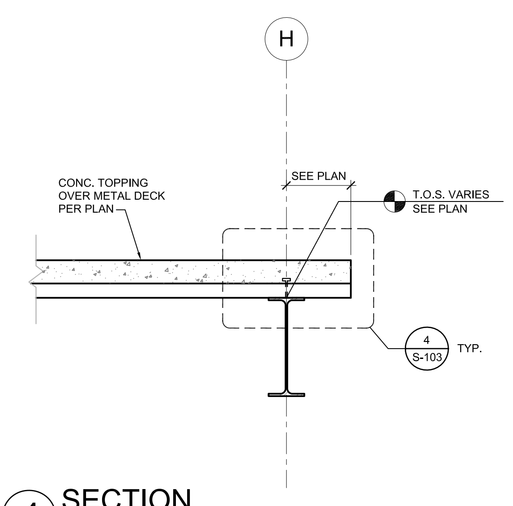
1 SECTION
1" = 1'-0"



2 SECTION
1" = 1'-0"



3 SECTION
1" = 1'-0"



4 SECTION
1" = 1'-0"

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CALIFORNIA 94107
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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY
COMMUNITY COLLEGE
DISTRICT

CIP2 DESIGN-BUILD
PROJECT
BUILDING 4

PROJECT NO.: 07012.00 DRAWN BY: AY
DATE: 03/09/09 CHECKED BY: CB
SCALE:

SHEET TITLE:
HIGH ROOF
DETAILS

SHEET NO:
S-741

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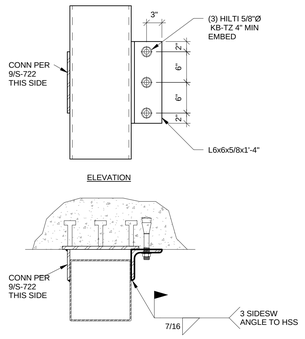
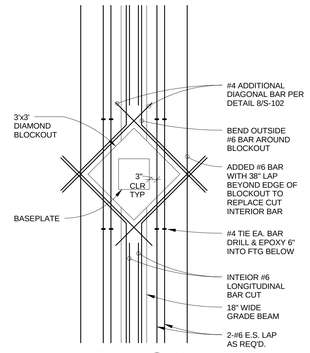


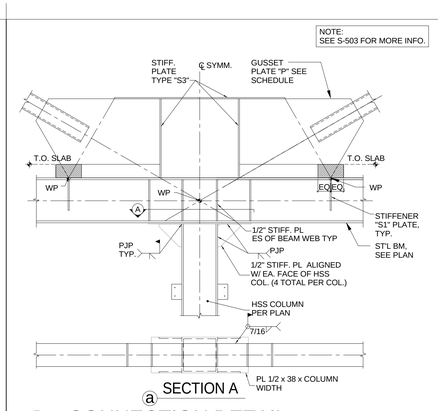
17 HSS CONN @ WALL

SCALE: 1" = 1'-0"



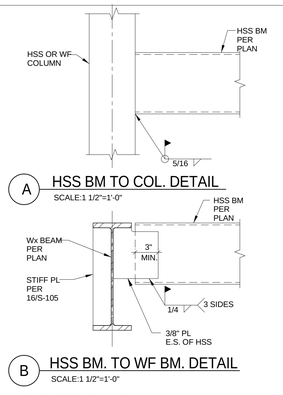
13 REINF. DETAIL @ BLOCKOUT INT. COL.

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



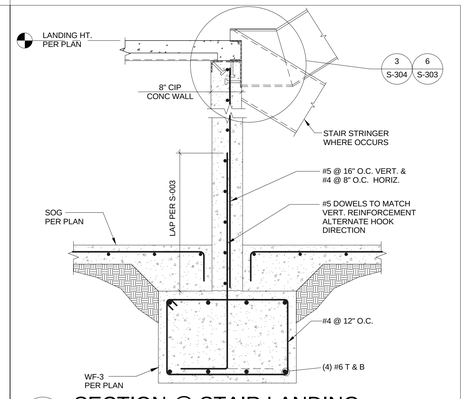
9 CONNECTION DETAIL

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



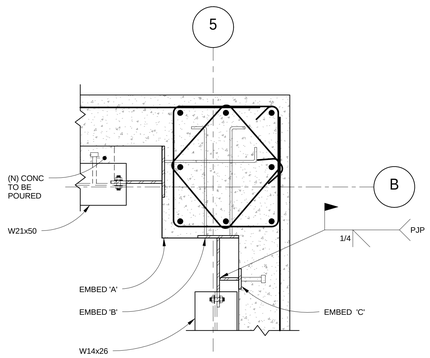
5 SECTIONS

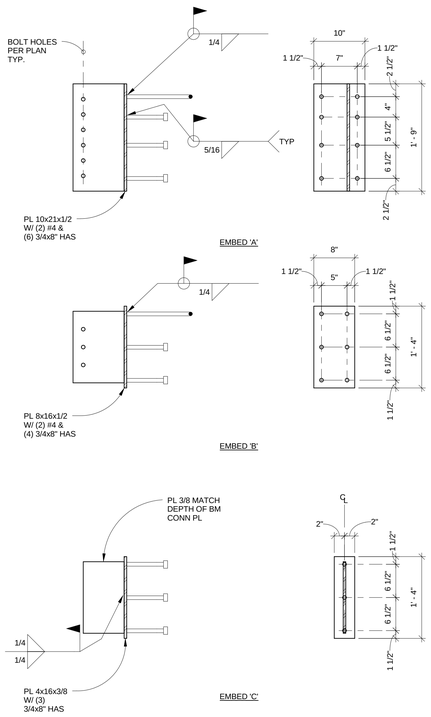
SCALE: 1 1/2" = 1'-0"



1 SECTION @ STAIR LANDING

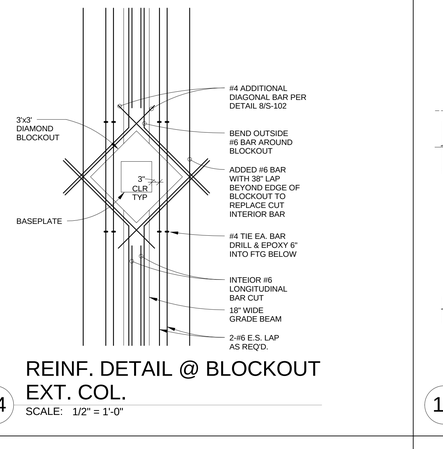
SCALE: 3/4" = 1'-0"





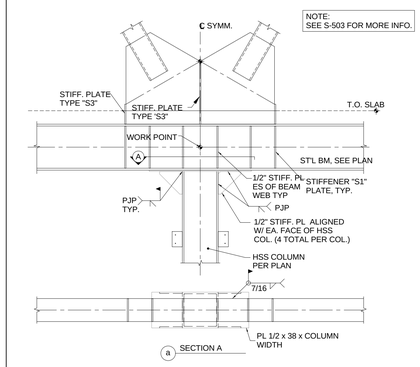
20 CONN> @ B/5 PILASTER

SCALE: 1" = 1'-0"



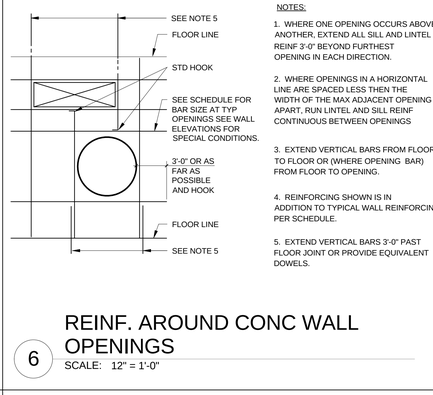
14 REINF. DETAIL @ BLOCKOUT EXT. COL.

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



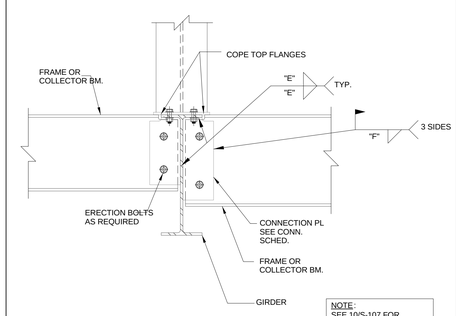
10 CONNECTION DETAIL

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



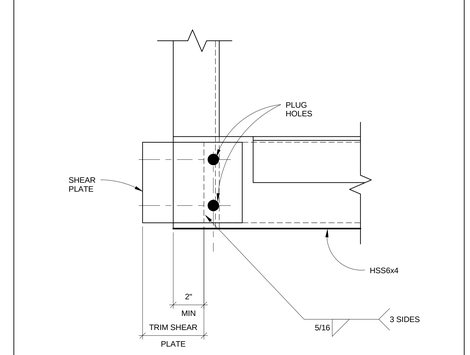
6 REINF. AROUND CONC WALL OPENINGS

SCALE: 12" = 1'-0"



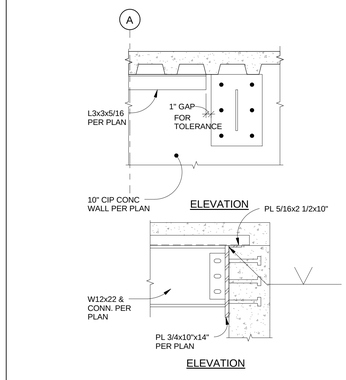
2 COLLECTOR DETAIL

SCALE: 1" = 1'-0"



15 SECTION

SCALE: 3" = 1'-0"

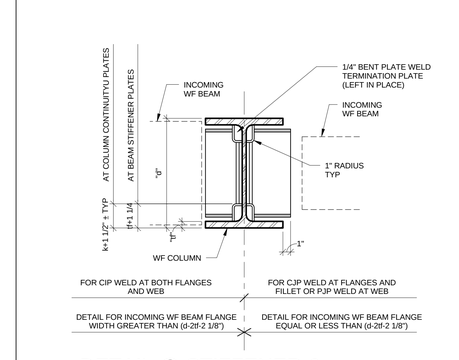


11 SECTION

SCALE: 1" = 1'-0"

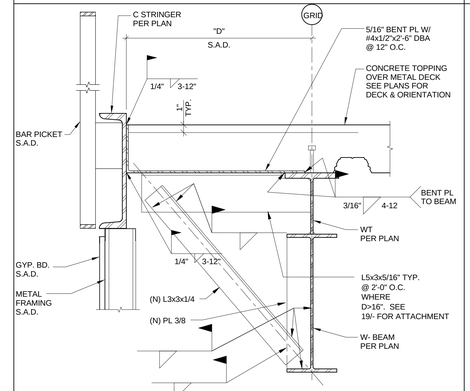
7 DETAIL @ SHEAR TAB DEPTH > WT DEPTH

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



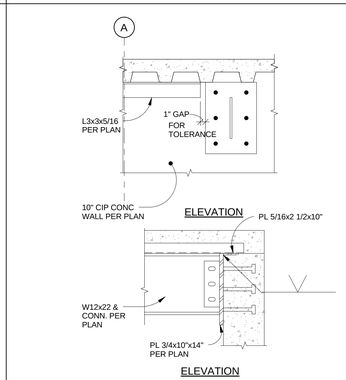
3 DETAIL @ STIFFENER & CONT. PLATES

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



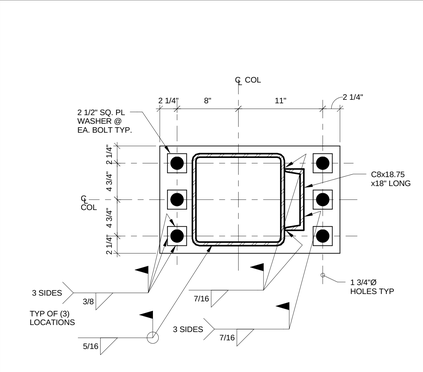
16 SECTION

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



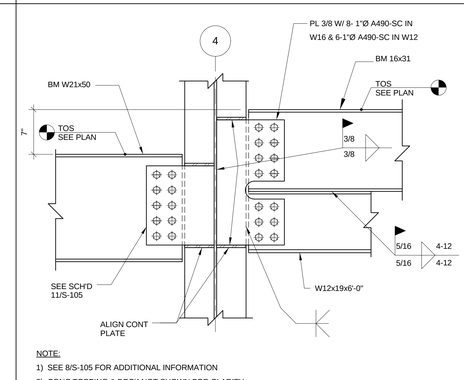
12 SECTION

SCALE: 1" = 1'-0"



8 COLUMN BASE @ GRID A/6.5

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



4 COLLECTOR CONN.

SCALE: 1" = 1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

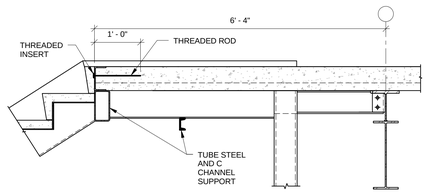
SKYLINE COLLEGE
SAN MATEO COUNTY
COMMUNITY COLLEGE
DISTRICT

CIP2 DESIGN-BUILD
PROJECT
BUILDING 4

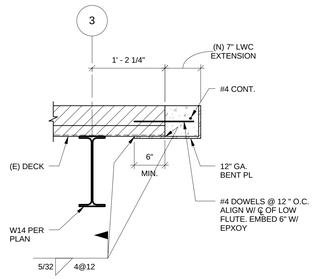
PROJECT NO.: 07055.00 DRAWN BY: AY
DATE: 05.15.2009 CHECKED BY: CB
SCALE: As indicated

SHEET TITLE:
RFI

SHEET NO:
S-801

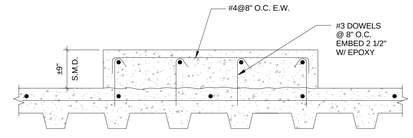


9 SECTION
SCALE: 3/4" = 1'-0"



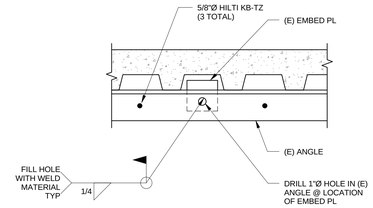
NOTE: TEST EPOXY DOWELS TO 2,000 LB.

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

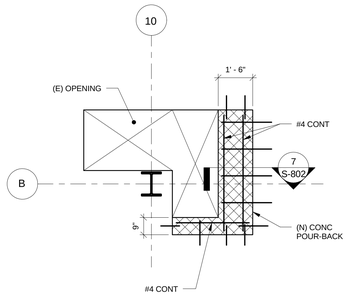


NOTE: #3 DOWELS HSLAL BE PULL-TESTED TO A VALUE OF 1800 LB.

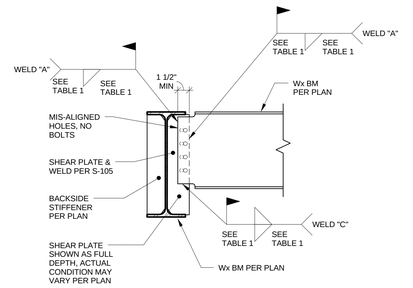
1 DETAIL @ RAISED EQUIP. PAD
SCALE: 1 1/2" = 1'-0"



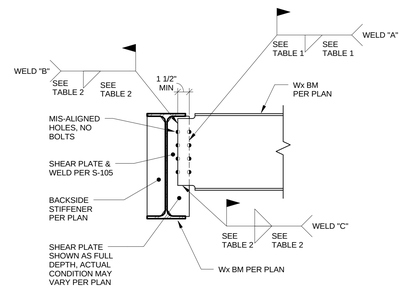
10 DETAIL @ SLAB SUPPORT - LEVEL 1.5
SCALE: 1 1/2" = 1'-0"



6 PARTIAL PLAN @ B/10
SCALE: 3/8" = 1'-0"

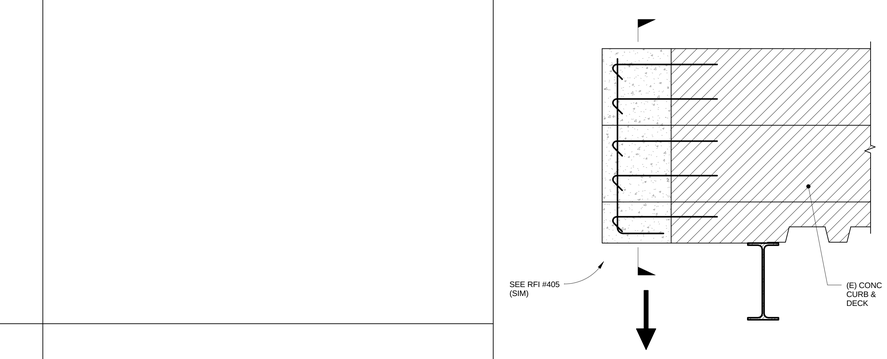


CONDITION 1 - NO INTERRUPTION OF BOLT HOLES

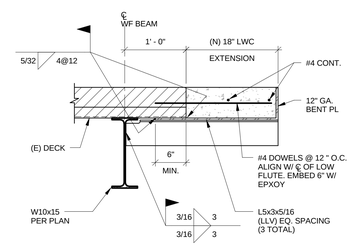


CONDITION 2 - INTERRUPTION OF BOLT HOLES

3 WELDED BM. CONN.
SCALE: 1 1/2" = 1'-0"

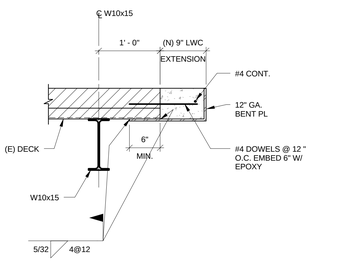


12 SECTION
SCALE: 1 1/2" = 1'-0"



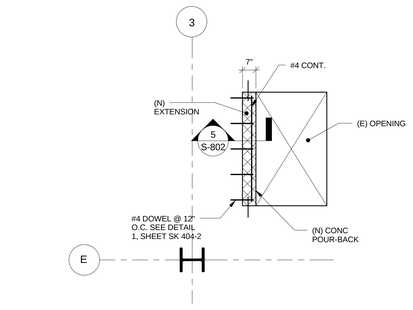
NOTE: TEST EPOXY DOWELS TO 2,000 LB.

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



NOTE: TEST EPOXY DOWELS TO 2,000 LB.

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



4 PARTIAL PLAN @ E/3
SCALE: 3/8" = 1'-0"

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NO.	ISSUES/REVISIONS	DATE

PROJECT RECORD SET

SKYLINE COLLEGE
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CIP2 DESIGN-BUILD PROJECT
BUILDING 4

PROJECT NO.: 07055.00 DRAWN BY: AY
DATE: 05.15.2009 CHECKED BY: CB
SCALE: As indicated

SHEET TITLE:
RFI

SHEET NO:
S-802