

ADDENDUM NUMBER TWO

March 1, 2019

To all bidders of record for the work titled:

Madison School District #321 Middle School HVAC Remodel

Project Number: 746

Please notify everyone concerned, including suppliers as to the issuance and contents of this Addendum prior to the date of bid opening. This Addendum is a part of the contract documents and modifies them as follows:

This Addendum consists of 3 pages(s) including attached drawing(s).

I. GENERAL

Structural Drawings for the Bid Alternate #1 Orchestra Wall

II. SPECIFICATIONS

N/A

III. DRAWINGS

A. Replace Sheet S1.0 – General Structural Notes and Typical Details, with attached

B. Replace Sheet S2.0 – Foundation & Floor Framing Plan, with Attached

End of Addendum #1

GENERAL REQUIREMENTS:

- THE STRUCTURAL SYSTEMS AND MEMBERS DEPICTED HEREIN HAVE BEEN DESIGNED PRIMARILY TO SAFEGUARD AGAINST MAJOR STRUCTURAL DAMAGE AND LOSS OF LIFE. NOT TO LIMIT DAMAGE OR MAINTAIN FUNCTION (IBC SECTION 101.3).
- THESE DRAWINGS, AND THEIR ASSOCIATED STRUCTURAL CALCULATIONS, HAVE BEEN PERFORMED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE STRUCTURAL ENGINEERS IN THIS OR SIMILAR LOCALITIES. THEY NECESSARILY ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKMAN WHO HAVE A WORKING KNOWLEDGE OF THE INTERNATIONAL BUILDING CODE CONVENTIONAL FRAMING REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR FRAMING ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, IT IS UNDERSTOOD THAT THE CONTRACTOR WILL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR ALL MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
- THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION SUCH THAT DESIGN LIVE LOAD PER SQUARE FOOT AS STATED HEREIN IS NOT EXCEEDED. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION IS USED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, AND SHALL COORDINATE ALL DETAILS.
- WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN. TYPICAL DETAILS ARE NOT NECESSARILY INDICATED ON THE PLANS, BUT SHALL APPLY NONE-THE-LESS, WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. DETAILS MAY SHOW ONLY ONE SIDE OF CONNECTION OR MAY OMIT INFORMATION FOR CLARITY.
- ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ARCHITECT'S DRAWINGS PRIOR TO START OF CONSTRUCTION. RESOLVE ANY DISCREPANCY WITH THE ARCHITECT AND STRUCTURAL ENGINEER.
- ANY INSPECTIONS, SPECIAL (IBC CHAPTER 17) OR OTHERWISE THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR BY THESE PLANS SHALL BE DONE BY AN INDEPENDENT INSPECTION COMPANY OR THE BUILDING DEPARTMENT. SITE VISITS BY THE STRUCTURAL ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION, UNLESS SPECIFICALLY CONTRACTED FOR.
- SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS. THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. ITEMS NOT IN ACCORDANCE WITH CONTRACT DRAWINGS SHALL BE FLAGGED UPON HIS REVIEW. VERIFY ALL DIMENSIONS WITH ARCHITECT. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM ORIGINAL CONTRACT DRAWINGS SHALL BE CLOUDED. ANY OF THE AFFORMENTIONED ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED APPROVED AFTER THE STRUCTURAL ENGINEER'S REVIEW, UNLESS NOTED ACCORDINGLY. ANY ENGINEERING PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF A STRUCTURAL ENGINEER REGISTERED IN THE APPROPRIATE STATE. THE SHOP DRAWINGS DO NOT REPLACE THE ORIGINAL CONTRACT DRAWINGS. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE STRUCTURAL ENGINEER ARE NOT TO BE CONSIDERED CHANGES TO ORIGINAL DRAWINGS. THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY THE OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY. REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. ALLOW (5) WORKING DAYS FOR THE STRUCTURAL ENGINEER'S REVIEW. ONE COPY OF EACH SUBMITTAL WILL BE RETAINED FOR THE STRUCTURAL ENGINEER'S RECORDS.

BASIS FOR DESIGN:

- BUILDING CODE: 2012 EDITION OF THE IBC WITH CITY/COUNTY AMENDMENTS.
RISK CATEGORY = II

VERTICAL LOADS:

LOCATION	LIVE / SNOW LOAD	DEAD LOAD
ROOF	35 PSF	20 PSF

DEFLECTION LIMITS:

ELEMENTS	LIVE LOAD	TOTAL LOAD
BEAMS	L/600	L/600

FOUNDATION NOTES:

- IN LIEU OF A GEOTECHNICAL REPORT, THE FOUNDATION HAS BEEN DESIGNED ACCORDING TO THE RECOMMENDATIONS OF CHAPTER 18 OF THE IBC.
- THE SOIL DESIGN VALUES LISTED BELOW HAVE BEEN APPROVED BY THE CITY/COUNTY BUILDING DEPARTMENT, CONTINGENT THAT THE SOIL ON THE SITE PREDOMINATELY CONSISTS OF SAND AND/OR GRAVEL.

SPECIFIC SOIL CLASSIFICATIONS SHOULD BE ONE OF THE FOLLOWING: SANDY GRAVEL OR GRAVEL (GW OR GP), SAND (SW AND SP), SILTY SAND (SM), CLAYEY SAND (SC), SILTY GRAVEL (GM), OR CLAYEY GRAVEL (GC). THESE SOIL CLASSIFICATIONS CAN BE FOUND IN TABLE 1806.2 OF CHAPTER 18 OF THE IBC.

VERIFICATION OF SOIL CLASSIFICATION IS THE RESPONSIBILITY OF THE CONTRACTOR.

THE SOIL DESIGN VALUES FOR THE FOUNDATION ARE:

ALLOWABLE BEARING PRESSURE	1500 PSF
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- A ONE-THIRD INCREASE IN BEARING PRESSURES IS ALLOWED WITH SEISMIC OR WIND LOAD COMBINATIONS. LATERAL BEARING AND LATERAL SLIDING RESISTANCE MAY BE COMBINED.

FOUNDATION BEARING DEPTH
36" BELOW FINISHED GRADE

- ALL FOUNDATIONS SHALL BEAR ON COMPACTED ENGINEERED FILL OR COMPETENT NATIVE SOIL. SUBBASE COMPACTED TO 95% DRY DENSITY (STANDARD PROCTOR). GRADE IS DEFINED AS LOWEST ADJACENT GRADE WITHIN 5 FEET OF THE BUILDING FOR PERIMETER FOOTINGS. WHERE EXTERIOR PAVING OR CONCRETE IS DIRECTLY ADJACENT TO BUILDINGS, GRADE IS DEFINED AS TOP OF EXTERIOR PAVING AT LEAST 5 FEET FROM BUILDING. CONCRETE FOOTING EXCAVATIONS SHALL BE CLEAN AND FREE OF LOOSE DEBRIS OR UN-COMPACTED MATERIAL AT TIME OF CONCRETE PLACEMENT.
- CONCRETE SLABS ON GRADE SHALL BE SUPPORTED ON A 4 INCH LAYER OF SELECT FILL MATERIAL OR ACCORDING TO THE SPECIFICATIONS OF THE SOIL REPORT. FILL MATERIAL SHOULD BE MOISTENED, BUT NOT SATURATED JUST PRIOR TO PLACING CONCRETE.
- BACKFILL AGAINST RESTRAINED WALLS SHALL NOT BE PLACED UNTIL AFTER THE WALLS ARE SUPPORTED BY THE COMPLETION OF INTERIOR FLOOR SYSTEMS AND CONCRETE OR GROUT STRENGTH HAS REACHED THE 28 DAY STRENGTH LISTED BELOW.

CONCRETE:

1. MINIMUM 28 DAY CONCRETE STRENGTH SHALL BE AS FOLLOWS:

USE:	CONCRETE STRENGTH:	MAX W/C RATIO	AIR ENTRAINMENT
FOUNDATIONS	6000 PSI *	0.40	N/A
CONCRETE SLABS ON GRADE	3500 PSI	0.45	N/A

- * NOTE: MINIMUM 2500 PSI AT DAY 3. USE 6000 PSI OR AT CONTRACTORS OPTION HIGHLY ADDITIVE MAY BE USED.
- ALL NORMAL WEIGHT CONCRETE SHALL BE REGULAR WEIGHT OF 150 POUNDS PER CUBIC FOOT USING HARD-ROCK AGGREGATES. AGGREGATE USED IN CONCRETE SHALL CONFORM TO ASTM C33.
- LAP SPLICES FOR BEAMS AND FLOOR SLABS SHALL BE ACCORDING TO CHAPTER 12 OF ACI 318 OR LAP SCHEDULE ON THESE DRAWINGS.

STAGGER SPLICES A MINIMUM OF ONE LAP LENGTH. NO TACK WELDING OF REINFORCING BARS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE WITH THE STRUCTURAL ENGINEER. LATEST ACI CODE AND DETAILING MANUAL APPLY. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES.

- ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING STEEL NOT NOTED AS "CLEAR OR CLR" ARE TO CENTER OF STEEL. MINIMUM COVER FOR NON-PRESTRESSED CONCRETE REINFORCING SHALL BE AS FOLLOWS:

LOCATION:	MINIMUM COVER	TOLERANCE
CAST AGAINST EARTH (FOOTINGS)	3"	± 3/8"
SLABS ON GRADE	1 1/2"	± 1/4"
EXPOSED TO EARTH OR WEATHER - #5 AND SMALLER	1 1/2"	± 3/8"
EXPOSED TO EARTH OR WEATHER - #6 AND LARGER	2"	± 3/8"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND ROOF SLAB	1"	3/8"
STRUCTURAL SLABS AND WALLS	3/4"	3/8"
BEAMS AND COLUMNS (PRIMARY) REINFORCEMENT, TIES, STIRRUPS AND SPIRALS	1 1/2"	3/8"

- MAXIMUM SLUMP FOR ALL CONCRETE SHALL BE 4". SLUMP FOR EXTERIOR SLABS SHALL BE 6". PORTLAND CEMENT SHALL CONFORM TO ASTM C150. TYPE V CEMENT SHALL BE USED FOR CONCRETE IN CONTACT WITH ALKALINE SOIL, AND TYPE II ELSEWHERE.
- NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY THE TESTING AGENCY.
- CONCRETE PLACEMENT AND QUALITY SHALL BE PER RECOMMENDATIONS IN ACI 614, ACI 301 AND ACI 318. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND AND UNDER FLOOR DUCTS, ETC. CAST CLOSURE POUR, WHERE SHOWN ON PLANS AROUND COLUMNS AFTER COLUMN DEAD LOAD IS APPLIED. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING CONCRETE.

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.

- ALL CONCRETE SLABS ON GRADE SHALL BE DIVIDED INTO AREAS BY CONTROL JOINTS (KEYED OR SAW CUT) SUCH THAT ONE SLAB AREA DOES NOT EXCEED 250 SQUARE FEET, OR BE MORE THAN TWO TIMES LONGER THAN THE SLAB AREA WIDTH. THE FOUNDATION PLAN SHOWS A SUGGESTED METHOD OF CONTROL JOINT LAYOUT. IT IS RECOMMENDED THAT SAW CUTS BE MADE WITHIN 16 HOURS OF CONCRETE BATCHING.

KEYED CONTROL JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING. ALL OTHER JOINTS MAY BE SAW CUT.

- HORIZONTAL PIPES AND ELECTRICAL CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE AND SLABS ON GRADE EXCEPT WHERE SPECIFICALLY APPROVED OR NOTED BY THE STRUCTURAL ENGINEER. PIPES AND CONDUITS SHALL NOT IMPAIR THE STRENGTH OF THE WORK.
- FLY ASH MAY BE USED ONLY IF PERMITTED BY ARCHITECTURAL SPECIFICATIONS AND SHALL BE LIMITED TO 18 PERCENT OF CEMENTITIOUS MATERIALS AND SHALL HAVE A REPLACEMENT FACTOR OF 1.2 RELATIVE TO CEMENT REPLACED. NO FLY ASH ADDITIVES SHALL BE USED IN FLATWORK OR ARCHITECTURALLY EXPOSED CONCRETE.
- COLD/HOT WEATHER CONCRETE CONSTRUCTION. PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH IN COMPLIANCE WITH ACI 305 AND 306.
- CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY AND APPROVED BY THE STRUCTURAL ENGINEER.

REINFORCING STEEL:

- ASTM A615 GRADE 60 (FY = 60 KSI) DEFORMED BARS FOR ALL BARS #4 AND LARGER. ASTM A615 GRADE 40 (FY = 40 KSI) DEFORMED BARS FOR ALL BARS #3 AND SMALLER. GRADE 60 DEFORMED BARS SHALL BE USED FOR CONCRETE WALLS, BEAMS, ELEVATED SLABS AND COLUMN REINFORCING.
- WELDING OF REINFORCING BARS SHALL BE MADE ONLY TO ASTM A706 GRADE 60 BARS AND ONLY USING E60 SERIES RODS. WELDING OF REINFORCING BARS SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS.
- REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

MASONRY (CONCRETE BLOCK):

MINIMUM 28 DAY MASONRY STRENGTH SHALL BE 1500 PSI.

- VERTICAL REINFORCING: #5 AT 16 INCHES ON CENTER FULL HEIGHT OF WALL, CENTERED IN GROUTED CELL AND AT ALL WALL INTERSECTIONS, CORNERS, WALL ENDS, JAMBS, OVER LINTELS, AND EACH SIDE OF CONTROL JOINTS. MINIMUM UNLESS NOTED OTHERWISE ON PLANS/DETAILS. TIE AT 8" VERTICALLY WITH SINGLE WIRE LOOP TIE OR EQUIVALENT. DOWEL ALL REINFORCING TO FOUNDATION WITH DOWELS TO MATCH AND LAP VERTICAL WALL OR COLUMN REINFORCING.
- CONTROL JOINTS: UNLESS NOTED OTHERWISE ON THE PLANS, PLACE CONTROL JOINTS IN MASONRY WALLS SUCH THAT NO STRAIGHT RUN OF WALL EXCEEDS 24'-0". CONTROL JOINTS SHALL NOT OCCUR AT WALL CORNERS, INTERSECTIONS, ENDS, WITHIN 24" OF CONCENTRATED POINTS OF BEARING OR JAMBS, OR OVER OPENINGS UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS.
- HORIZONTAL REINFORCING: MINIMUM UNLESS NOTED OTHERWISE ON PLANS/DETAILS (2) #4 BARS IN CENTER OF 16 INCH DEEP MINIMUM CONTINUOUS GROUTED BOND BEAM AT ELEVATED FLOOR AND ROOF LINES. FOR 8 INCH THICK WALLS, ONE #4 BAR IN CENTER OF 8 INCH DEEP CONTINUOUS GROUTED BOND BEAM AT INTERVALS NOT TO EXCEED 48 INCHES ON CENTER AND AT TOP OF PARAPET OR FREE STANDING WALLS.

FOR 12 INCH THICK WALLS, TWO #5 BARS IN CENTER OF 8 INCH DEEP CONTINUOUS GROUTED BOND BEAM AT INTERVALS NOT TO EXCEED 48 INCHES ON CENTER AND AT TOP OF PARAPET OR FREE STANDING WALLS.

HORIZONTAL BARS AT TOP OF PARAPET OR FREE STANDING WALLS SHALL BE PLACED 8 INCHES DOWN FROM THE TOP IN AN UPSIDE DOWN BOND BEAM BLOCK.

PLACE HORIZONTAL BARS CONTINUOUS THROUGH CONTROL JOINTS. PROVIDE BENT BARS PER TYPICAL DETAILS. TO MATCH HORIZONTAL BOND BEAM REINFORCING, AT CORNERS AND WALL INTERSECTION TO MAINTAIN BOND BEAM CONTINUITY.

GENERAL STRUCTURAL NOTES

(APPLY UNLESS NOTED OTHERWISE ON PLANS/DETAILS)

4. TENSION LAP SPLICES OF REINFORCING STEEL IN MASONRY SHALL BE AS FOLLOWS:

REBAR SIZE	STANDARD LAP	RETAINING WALLS (AT FACE OF WALL)
#4	24"	30"
#5	30"	46"
#6	43"	55"
#7	60"	64"
#8	72"	72"

- REINFORCING PLACEMENT TOLERANCES: ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING STEEL NOT NOTED AS "CLEAR" OR "CLR" ARE TO CENTER OF STEEL. TOLERANCES FOR PLACEMENT OF VERTICAL REINFORCING SHALL BE (8) 1/2" PERPENDICULAR TO WALL AND (2) 1/2" ALONG THE LENGTH OF THE WALL. PROVIDE 1/2" CLEARANCE BETWEEN MASONRY UNITS AND REINFORCING, AND REINFORCING RUNNING IN THE SAME DIRECTION. LAPS MAY BE BESIDE OR OVER THE REINFORCING BEING SPLICED.

BLOCK QUALITY: CONCRETE BLOCK SHALL BE HOLLOW LIGHTWEIGHT LOAD-BEARING CONCRETE MASONRY UNITS CONFORMING TO ASTM 90-75 WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI. USE BOND BEAM UNITS AT HORIZONTAL REINFORCING.

- MORTAR: MORTAR MIX SHALL CONFORM TO REQUIREMENTS OF THE IBC STANDARDS, TYPE M OR S. MORTAR SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS.

GROUT: GROUT SHALL CONFORM TO REQUIREMENTS OF CHAPTER 21 OF THE IBC FOR COARSE GROUT. USE SUFFICIENT WATER FOR GROUT TO FLOW INTO ALL JOINTS OF THE MASONRY WITHOUT SEGREGATION. GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. ALL CELLS IN CONCRETE BLOCKS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT. ALL MASONRY BELOW FINISHED FLOOR OR GRADE SHALL BE GROUTED SOLID. ALL GROUT SHALL BE MECHANICALLY VIBRATED.

GROUT LIFTS OF 5 FEET OR LESS IS RECOMMENDED. FOR HIGHER GROUT LIFTS, CLEANOUTS (3"x3") AT THE BOTTOM OF ALL VERTICALLY REINFORCED CELLS SHALL BE PROVIDED. IN ADDITION, MECHANICAL DEVICES SHALL BE USED TO POSITION AND SECURE REINFORCING WHEN GROUT LIFTS EXCEED 5 FEET IN HEIGHT. IN SOLID GROUTED MASONRY, CLEANOUTS SHALL NOT BE SPACED MORE THAN 32' 0".

- BLOCK CONSTRUCTION: ALL BLOCKS SHALL BE PLACED IN RUNNING BOND CONSTRUCTION (UNLESS OTHERWISE NOTED) WITH ALL VERTICAL CELLS IN ALIGNMENT.

MISCELLANEOUS LINTELS:
FOR MISCELLANEOUS OPENINGS (4'-8" OR LESS) NOT SHOWN ON PLANS OR IN A SCHEDULE, BUT REQUIRED BY OTHER DISCIPLINES (MECHANICAL, ELECTRICAL, PLUMBING, ETC.) THE FOLLOWING OPTIONS MAY BE USED IN 8" MASONRY WALLS.

OPTION #1: GROUTED REINFORCED MASONRY LINTEL. REINFORCE WITH (2) #4 HORIZONTAL BARS IN BOTTOM OF BOND BEAM OR LINTEL BLOCK AND SHALL BE GROUTED SOLID TO A MINIMUM DEPTH OF 12 INCHES. ALL LINTEL REINFORCING AND GROUT SHALL EXTEND 16 INCHES PAST JAMBS.

OPTION #2: DOUBLE ANGLE LINTELS: USE (2) L3"x3 1/2"x1/4" BACK-TO-BACK. PROVIDE 12" MINIMUM OF GROUT OVER LINTELS. BEARING FOR STEEL ANGLE LINTELS SHALL BE 4" (4) 1" AT EACH JAMB.

OPTION #3: POWERS STEEL LINTEL: PS-8. GROUT LINTEL 8" DEEP. BEARING FOR POWERS STEEL LINTELS SHALL BE 4" (4) 1" AT EACH JAMB.

THESE LINTELS, OR THE OPENING THEY SPAN, SHALL NOT BE PLACED SO AS TO INTERFERE WITH THE REQUIREMENTS OF OTHER STRUCTURAL ELEMENTS (I.E. BOND BEAMS, LINTELS, CONTROL JOINTS, CONCENTRATED POINTS OF BEARING, ETC.) WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.

SOLID GROUT SHALL BE PROVIDED BETWEEN WEBS AND MASONRY FACE SHELLS FOR FULL LENGTH OF ALL STEEL LINTELS. MORTAR MAY BE USED FOR GROUT FOR THIS PURPOSE ONLY. FACE UNITS, SOAPS, ROMANS, ETC., SHALL BE LAID WITH FULL HEAD AND BED JOINTS.

FOR ADDITIONAL INFORMATION AT OPENINGS IN MASONRY WALLS, SEE TYPICAL DETAILS.

STEEL:

- MATERIALS: ROLLED W SHAPES, SHALL CONFORM TO ASTM A992 (FY=50 KSI). ALL OTHER STRUCTURAL STEEL SHAPES, ROLLED SECTIONS, BARS AND PLATES SHALL CONFORM TO ASTM A36 (FY = 36 KSI). ALL PIPE STEEL SHALL BE ASTM A501 (FY = 36 KSI) OR ASTM A53, TYPE E OR S, GRADE B (FY = 35 KSI). ALL TUBULAR STEEL SHALL BE ASTM A500 (FY = 46 KSI).
- ALL BOLTS AND STUDS SHALL BE ASTM A307, UNLESS NOTED OTHERWISE. ALL EXPANSION BOLTS TO HAVE CURRENT ICC REPORT RATING FOR MATERIAL INTO WHICH INSTALLATION TAKES PLACE. HEADED STUDS SHALL CONFORM TO ALL REQUIREMENTS OF THE LATEST EDITION OF THE "RECOMMENDED PRACTICES FOR STUD WELDING" AND THE "STRUCTURAL WELDING CODE" PUBLISHED BY AWS. ALL BOLTS, ANCHOR BOLTS, EXPANSION BOLTS, ETC. SHALL BE INSTALLED WITH STEEL WASHERS AT FACE OF WOOD OR AT SLOTTED HOLES IN STEEL SECTIONS.
- ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITION.
- WELDING SHALL BE BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES. ALL WELDING SHALL USE E70 SERIES LOW HYDROGEN RODS UNLESS NOTED OTHERWISE. ALL WELDING PER LATEST AMERICAN WELDING SOCIETY STANDARDS. ALL WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT HIS DISCRETION. ALL FULL PENETRATION WELDS SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY.

STEEL TO STEEL BOLTED CONNECTIONS: HIGH STRENGTH BOLTS SHALL BE ASTM A325N AND SHALL BE INSTALLED AS BEARING-TYPE CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANE (TYPE "N" CONNECTION UNLESS NOTED OTHERWISE). BOLTS MAY BE TIGHTENED USING ANY ALSO APPROVED METHOD.

- DRYPACK SHALL BE 5,000 PSI FIVE STAR NON-SHRINK GROUT OR EQUIVALENT. INSTALL DRYPACK UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED. AT COLUMNS, INSTALL DRYPACK UNDER BASE PLATES AFTER COLUMN HAS BEEN PLUMBED BUT PRIOR TO FLOOR OR ROOF INSTALLATION.

SPECIAL INSPECTION ITEMS:

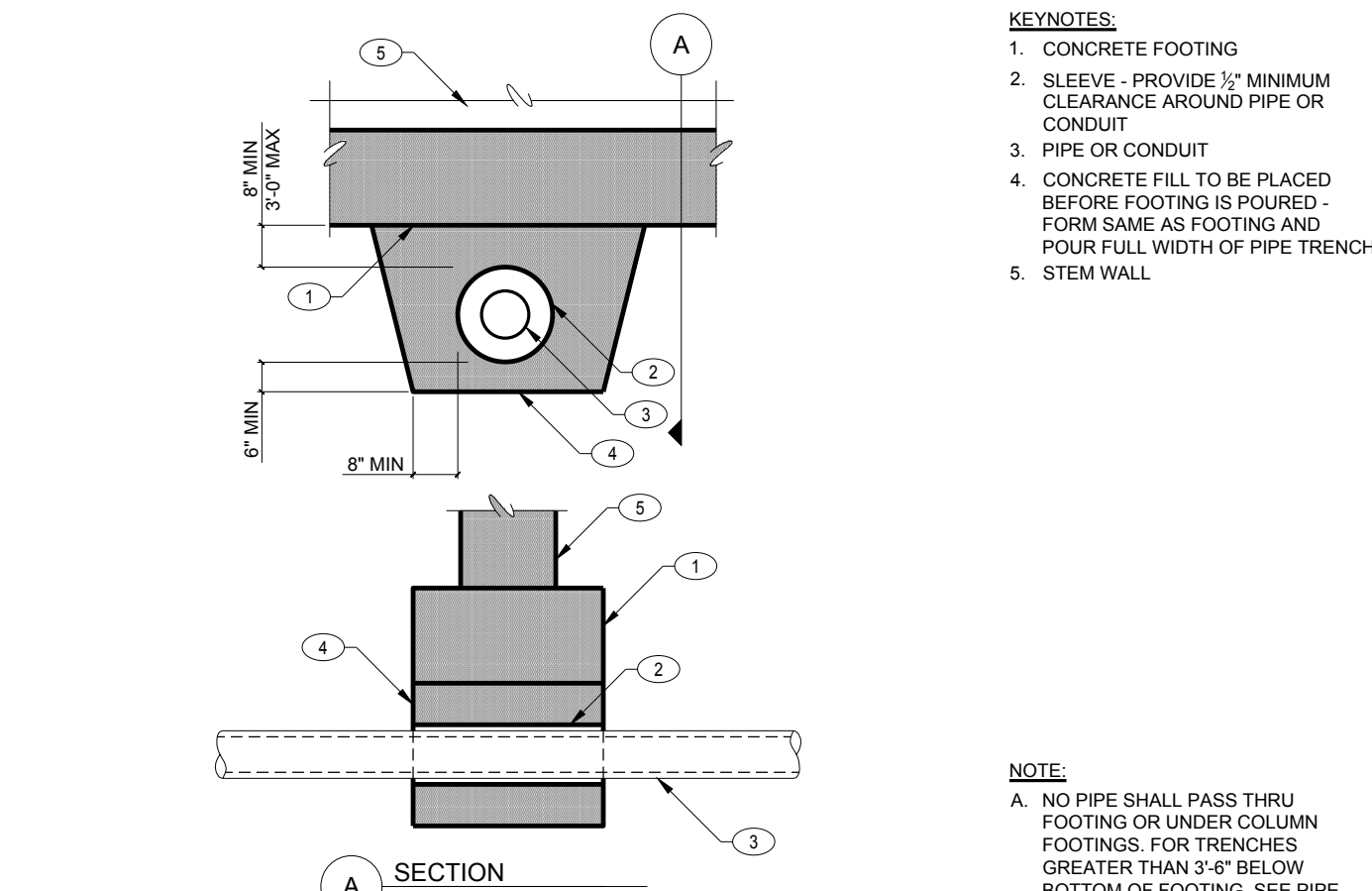
- THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR DURING CONSTRUCTION OF CERTAIN TYPES OF WORK. PER IBC SECTION 1705 AND THE STRUCTURAL ENGINEER OF RECORD, SPECIAL INSPECTION IS (IS NOT) REQUIRED AS FOLLOWS:

TYPE OF WORK:	REQUIRED:	REMARKS:
FIELD WELDING	YES	AFTER WORK IS COMPLETE

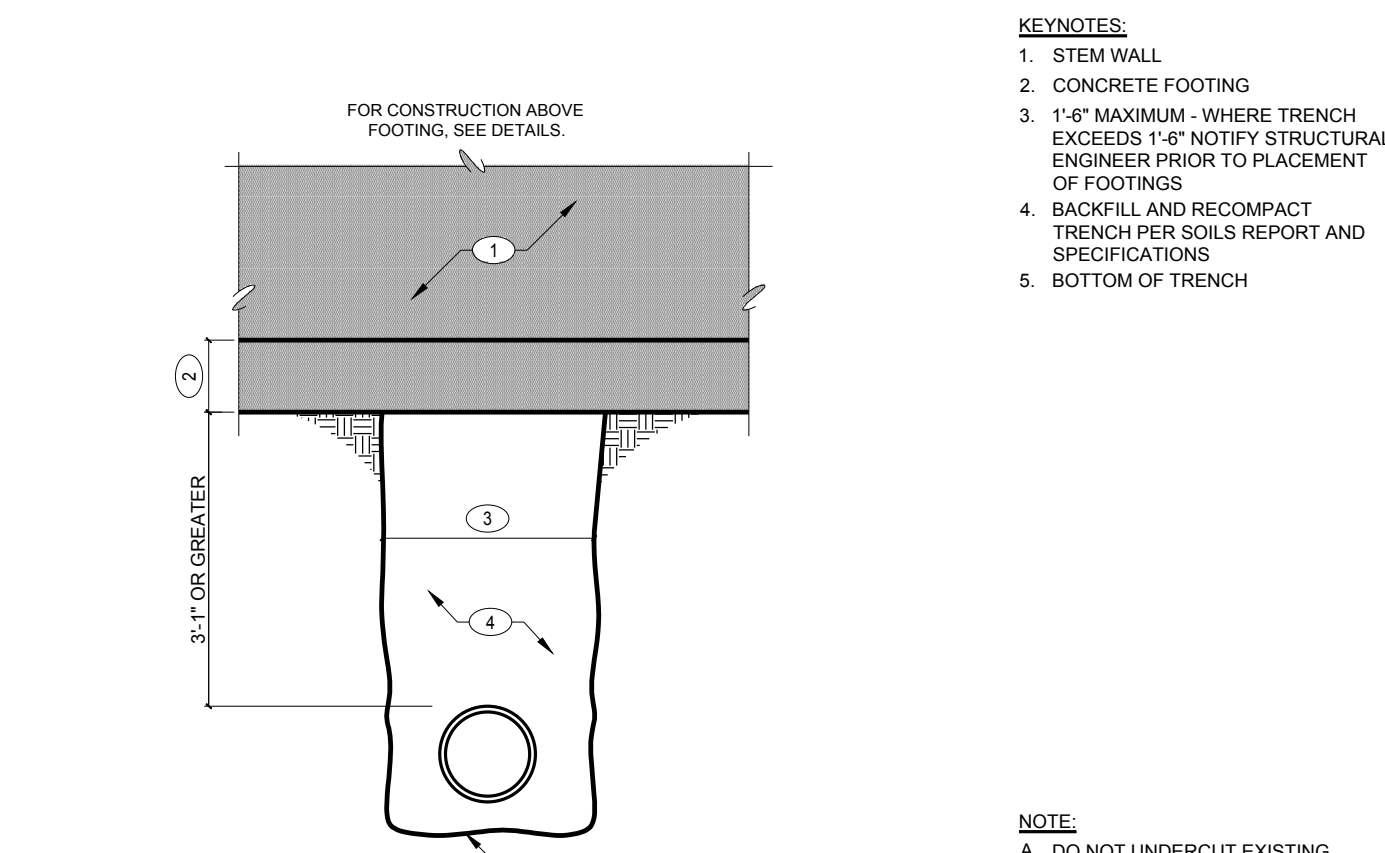
2. QUALITY ASSURANCE PROGRAM:

- THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
- THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE STRUCTURAL ENGINEER OF RECORD. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.

ABBREVIATIONS		
A.B.C. --- AGGREGATE BASE COURSE	GLB (GULM) --- GULF-AMINATED BEAM	
A.C. --- AIR CONDITIONER	I.F.W. --- INSIDE FACE OF WALL	
A.F.F. --- ABOVE FINISHED FLOOR	HORIZ. --- HORIZONTAL	
A.L.T. --- ALTERNATE	KRIP --- 1000 POUNDS	
A.B. --- ANCHOR BOLT	L.L. --- LIVE LOAD	
A.T. (AT MEASUREMENT)	LBS (#) --- POUNDS	
B --- BEAM	LLH --- LONG LEG HORIZONTAL	
B.F.F. --- BELOW FINISHED FLOOR	LLV --- LONG LEG VERTICAL	
B.O.F. --- BOTTOM OF BEAM	MIN. --- MINIMUM	
B.O.D. --- BOTTOM OF DECK	MAX. --- MAXIMUM	
B.O.F. --- BOTTOM OF FOOTING	MFRS --- MANUFACTURER(S)	
B.R.G. --- BEARING	M.C.J. --- MASONRY CONTROL JOINT	
CLIP. --- CAST IN PLACE	MCH. --- MECHANICAL	
C.L. --- CENTERLINE	N/A --- NOT APPLICABLE	
C.L.B. --- CENTERLINE OF BEAM	N.T.S. --- NOT TO SCALE	
C.L.C. --- CENTERLINE OF COLUMN	O.C. --- ON CENTER	
C.L.F. --- CENTERLINE OF FOOTING	O.F.W. --- OUTSIDE FACE OF WALL	
C.L.W. --- CENTERLINE OF WALL	OPP. --- OPPOSITE	
C.L.R. --- CLEAR	P.C. --- PRECAST CONCRETE	
CONC --- CONCRETE	PLF --- POUNDS PER LINEAR FOOT	
C.C.J. --- CONCRETE CONTROL JOINT	PREFAB --- PREFABRICATED	
C.S.J. --- CONCRETE SAWCUT JOINT	PSF --- POUNDS PER SQUARE FOOT	
C.M.U. --- CONCRETE MASONRY UNIT	PSI --- POUNDS PER SQUARE INCH	
CONN. --- CONNECTION	REINF. --- REINFORCING	
CONT. --- CONTINUOUS	SLH --- SHORT LEG HORIZONTAL	
DL --- DEAD LOAD	SLV --- SHORT LEG VERTICAL	
d or DIA. --- DIAMETER	SIM. --- SIMILAR	
DN. --- DOWN	SQ. --- SQUARE	
DWG(S) --- DRAWING(S)	STD. --- STANDARD	
E.O.S. --- EDGE OF SLAB	T.O.B. --- TOTAL LOAD	
EQ. --- EQUAL	T.O.D. --- TOP OF DECK	
EQUIP. --- EQUIPMENT	T.O.F. --- TOP OF FOOTING	
EXP. BOLT --- EXPANSION BOLT	T.O.L. --- TOP OF LEDGER	
EXP. JT (E.J.) --- EXPANSION JOINT	T.O.P. --- TOP OF PLATE	
(E) --- EXISTING	T.O.M. --- TOP OF MASONRY	
F.M. --- FACE OF MEMBER	T.O.P. --- TOP OF WALL	
F.O.S. --- FACE OF STEEL	TYP. --- TYPICAL	
F.O.W. --- FACE OF WALL	U.N.O. --- UNLESS NOTED OTHERWISE	
G.A. --- GAUGE	VERT. --- VERTICAL	
GALV. --- GALVANIZED	W.W.F. --- WELDED WIRE FABRIC	
G.S.N. --- GENERAL STRUCTURAL NOTES	W/ --- WITH	
	W/O --- WITHOUT	

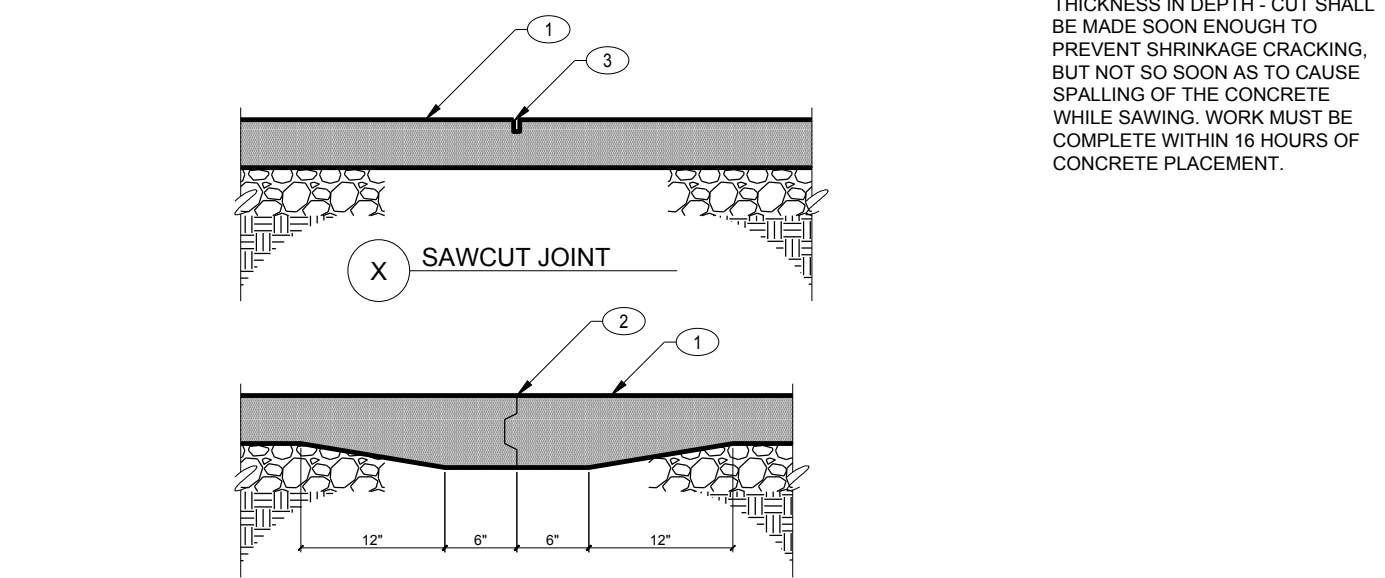


T1 PIPE PASSING UNDER WALL FOOTING IN SHALLOW TRENCH
NO SCALE



T2 PIPE PASSING BELOW FOOTING IN DEEP TRENCH
NO SCALE

- CONCRETE SLAB ON GRADE
- CONTROL KEYED JOINT
- SAWCUT 1" WIDE x 1/2" SLAB THICKNESS IN DEPTH - CUT SHALL BE MADE SOON ENOUGH TO PREVENT SHRINKAGE CRACKING, BUT NOT SO SOON AS TO CAUSE SPALLING OF THE CONCRETE. WHILE DRAWING WORK MUST BE COMPLETE WITHIN 16 HOURS OF CONCRETE PLACEMENT.



- KEYED JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING PLACEMENT UNLESS SPECIFICALLY NOTED ON THE PLANS.
- "TOOL WET JOINT", "ZIP STRIP", ETC SHALL MATCH SAWCUT REQUIREMENTS

T3 CONTROL JOINTS IN CONCRETE SLAB ON GRADE
NO SCALE

- KEYNOTES:
- CONCRETE FOOTING
 - SLEEVE - PROVIDE 1/2" MINIMUM CLEARANCE AROUND PIPE OR CONDUIT
 - PIPE OR CONDUIT
 - CONCRETE SHALL BE PLACED BEFORE FOOTING IS POURED - FORM SAME AS FOOTING AND POUR FULL WIDTH OF PIPE TRENCH
 - STEM WALL

NOTE:
A. NO PIPE SHALL PASS THRU FORMS OR UNDER COLUMN FOOTINGS FOR TRENCHES GREATER THAN 3'-6" BELOW BOTTOM OF FOOTING. SEE PIPE PASSING BELOW WALL FOOTING DETAIL.

- KEYNOTES:
- STEM WALL
 - CONCRETE FOOTING
 - 1"8" MAXIMUM - WHERE TRENCH EXCEEDS 1'-0" NOTIFY STRUCTURAL ENGINEER PRIOR TO PLACEMENT OF FOOTING
 - BACKFILL AND RECOMPACT TRENCH PER SOILS REPORT AND SPECIFICATIONS
 - BOTTOM OF TRENCH

- NOTE:
A. DO NOT UNDERCUT EXISTING FOOTINGS
B. NO PIPES OR OTHER UTILITIES SHALL PASS THRU WALL FOOTINGS OR UNDER COLUMN FOOTINGS

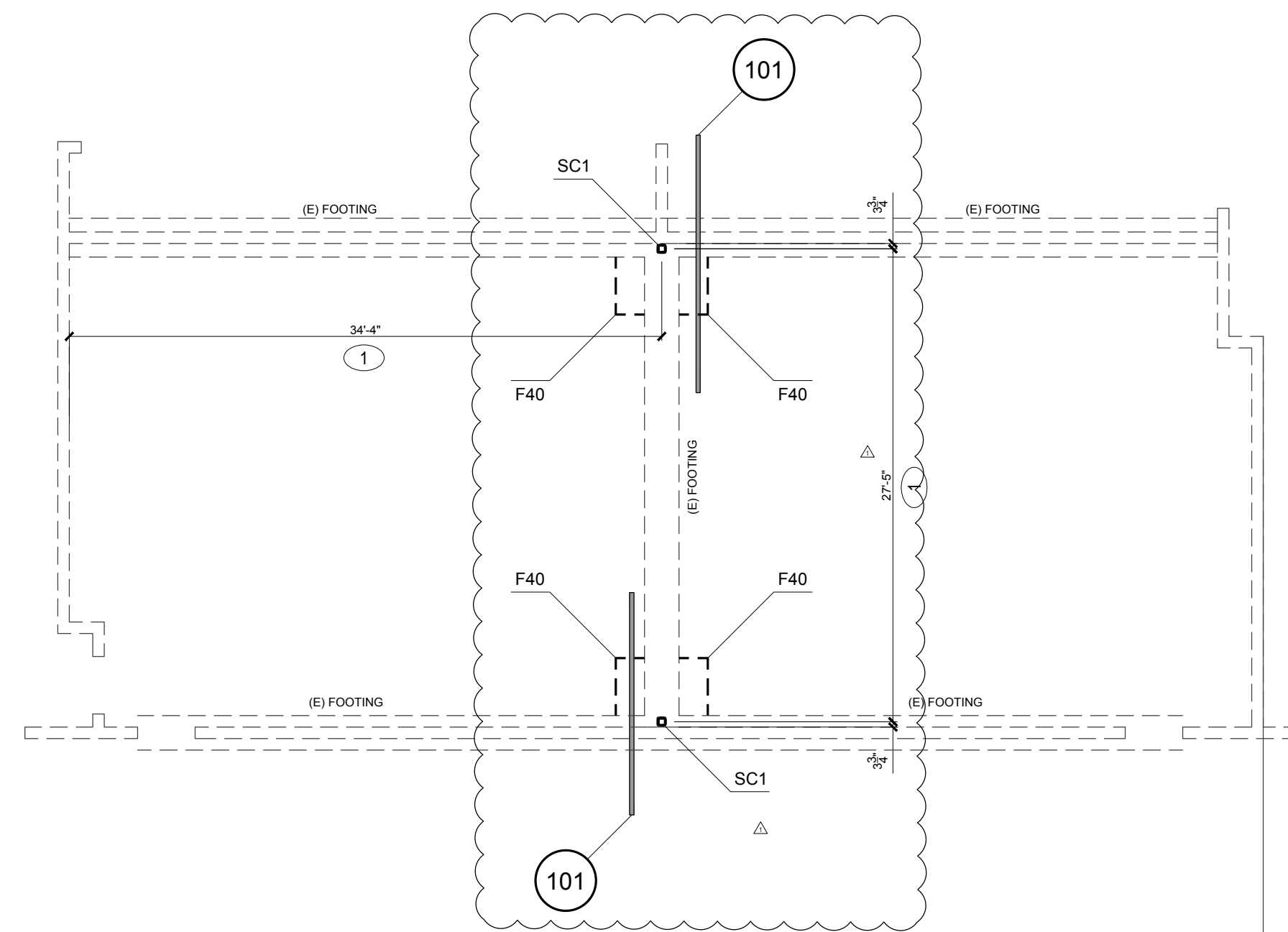
- KEYNOTES:
- CONCRETE SLAB ON GRADE
 - CONTROL KEYED JOINT
 - SAWCUT 1" WIDE x 1/2" SLAB THICKNESS IN DEPTH - CUT SHALL BE MADE SOON ENOUGH TO PREVENT SHRINKAGE CRACKING, BUT NOT SO SOON AS TO CAUSE SPALLING OF THE CONCRETE. WHILE DRAWING WORK MUST BE COMPLETE WITHIN 16 HOURS OF CONCRETE PLACEMENT.

- NOTE:
A. KEYED JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING PLACEMENT UNLESS SPECIFICALLY NOTED ON THE PLANS.
B. "TOOL WET JOINT", "ZIP STRIP", ETC SHALL MATCH SAWCUT REQUIREMENTS

SHEET INDEX

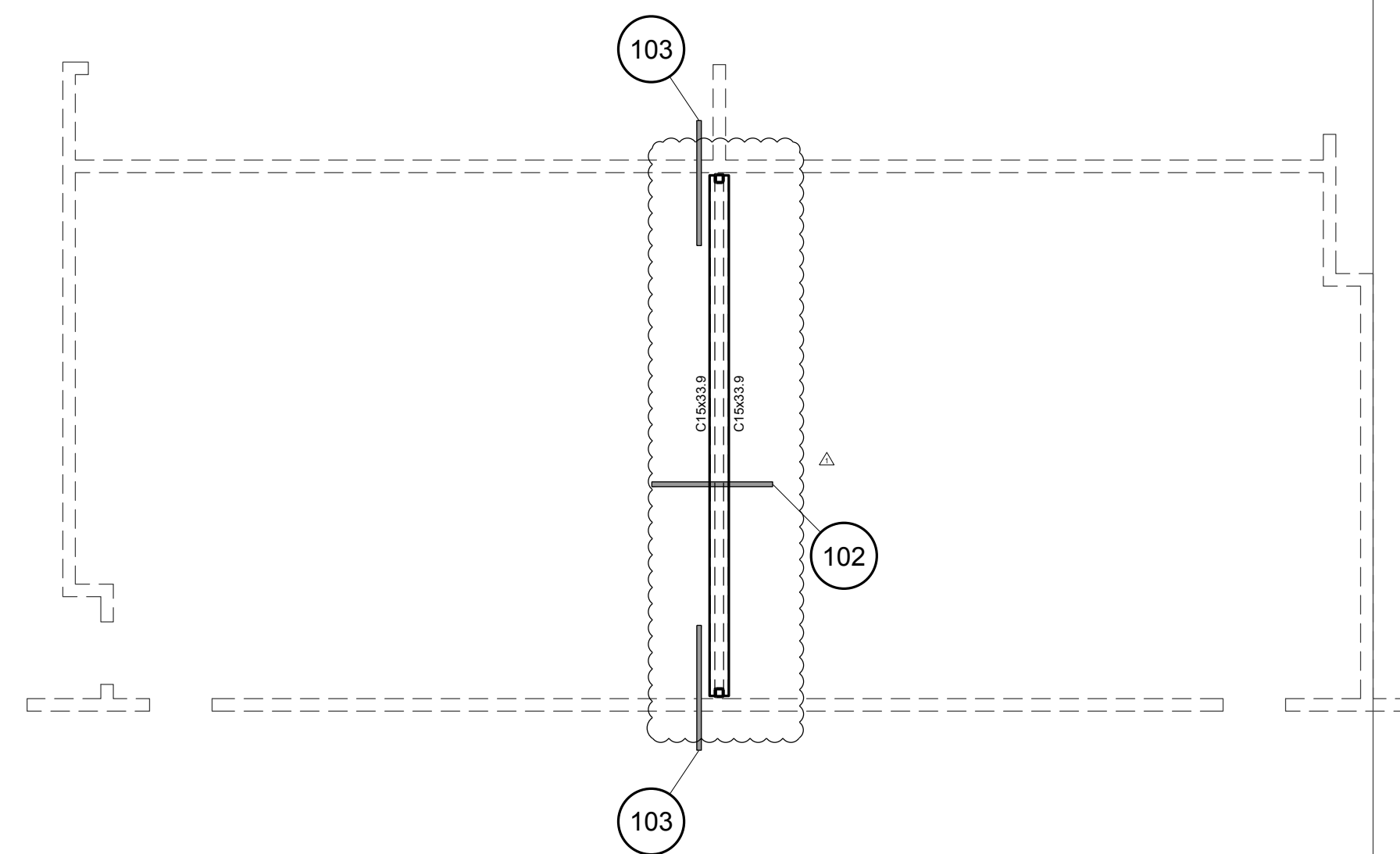
SHEET	DESCRIPTION	DETAILS
S1.0	GENERAL STRUCTURAL NOTES & TYPICAL DETAILS	T-SERIES
S2.0	FOUNDATION & FLOOR FRAMING PLAN	100 SERIES

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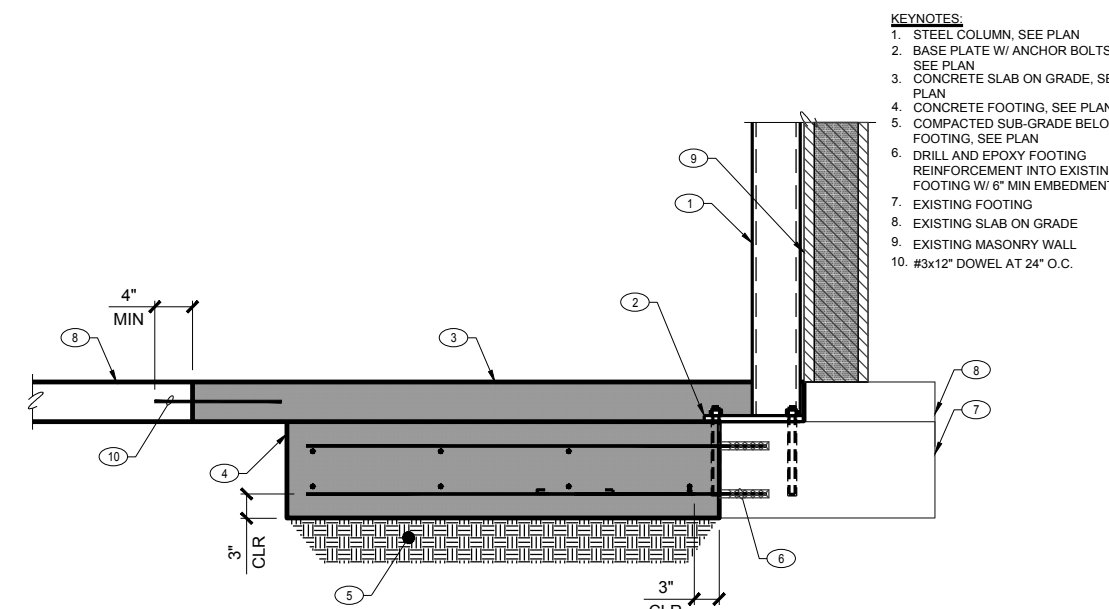
FOUNDATION PLAN

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



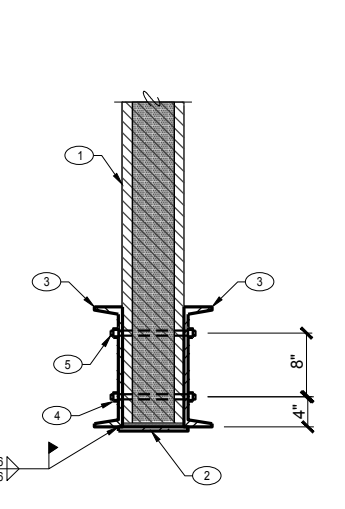
FLOOR FRAMING PLAN

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



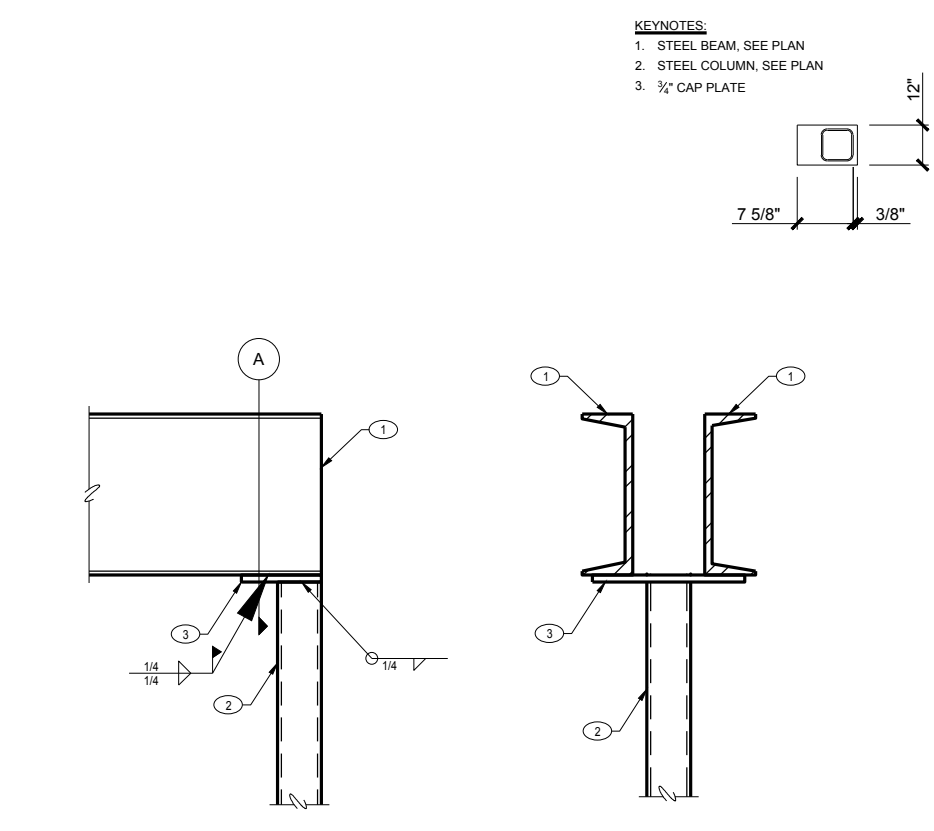
101 TYPICAL STEEL COLUMN AT FOUNDATION

NO SCALE



102 EXISTING MASONRY WALL AT STEEL BEAM

NO SCALE



103 STEEL BEAM AT STEEL BEAM

SS_RT307

NO SCALE

PLAN NOTES

- VERIFY ALL DIMENSIONS WITH ALL ARCHITECTURAL DRAWINGS.
- ALL SCHEDULED MARK DESIGNATIONS MAY NOT NECESSARILY BE FOUND ON THIS PLAN. SCHEDULES ARE TYPICAL TO THIS PROJECT.
- F40 - AS SHOWN ON PLAN INDICATES A CONCRETE FOOTING. SEE FOOTING SCHEDULE FOR ADDITIONAL INFORMATION.
- SC1, SC2, ETC. - AS SHOWN ON PLAN INDICATES A STEEL COLUMN. SEE STEEL COLUMN SCHEDULE FOR ADDITIONAL INFORMATION. COLUMNS START AT THE LEVEL THEY ARE CALLED OUT ON.
- FOR CLARITY, DETAILS MAY SHOW ONLY ONE SIDE OF FRAMING CONDITION.

STEEL COLUMN (SC) SCHEDULE

MARK	SIZE	BASE CONNECTION
SC1	HSS5 1/2" x 5 1/2" x 3/16"	3/4" x 12" x 1'-0" PLATE W/ (4) 3/4" Ø x 8" TITEN HD ANCHORS

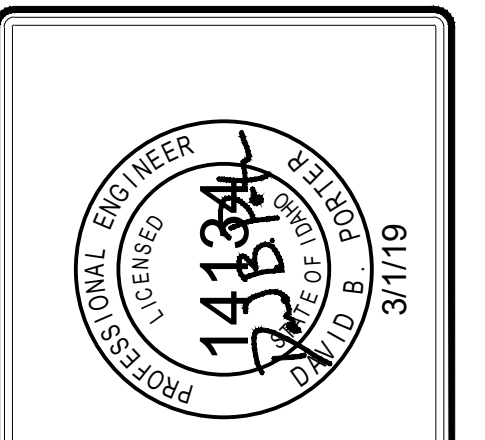
FOOTING SCHEDULE

NOTES:
1. FOR CONSTRUCTION ABOVE FOOTING, SEE DETAILS.
2. FOR MINIMUM CLEARANCE (CLR) OF REINFORCING, SEE GENERAL STRUCTURAL NOTES (GSN).

MARK	LENGTH	WIDTH	THICKNESS	FOOTING REINFORCING	REMARKS
F40	40"	24"	12"	#5 AT 12" O.C. EACH WAY TOP AND BOTTOM	---

PLAN KEYNOTES

- COORDINATE LOCATION OF COLUMNS W/ ARCH



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Idaho Falls, Idaho 83401
(208) 227-8404
Fax (208) 227-8405

PROJECT: **MADISON MIDDLE SCHOOL**
ADDRESS: ADDRESS2
DRAWING TITLE: **FOUNDATION & FLOOR FRAMING PLAN**

REVISION:

#	DATE	COMMENT
1	3.1.19	ADDENDUM #2

DRAWN BY: BWM JOB NO: 101
CHECKED BY: BWM DATE: JUNE 2017
PLOT DATE: 9/2/2016

DRAWING NO. FILE: **S2.0**
OF -

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JOB NO.: IF-17-161 PROJECT MANAGER: MTB CAD OPERATOR: NKR

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