design west | architects

date:	3.27.24
project:	Hyde Park Middle School
by:	Michael Rigby
subject:	Addendum 01

CONTRACT ADDENDUM

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents. Prior to proceeding in accordance with these instructions, indicate your acceptance of these instructions for minor change to the work as consistent with the Contract Documents and return a copy to the Architect.

Items:

See attached Structural Clarification of Work.

Updated Sheet S-001

Michael Rigby 3.27.24

ISSUED BY Date
Architect

ACCEPTED BY Date
Contractor

STRUCTURAL NOTES :

A. GENERAL

1. THE STRUCTURAL NOTES ARE INTENDED TO COMPLEMENT THE PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONSTRUCTION DOCUMENTS. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL GOVERN OVER THE STRUCTURAL NOTES AND TYPICAL DETAILS.
2. THESE DRAWINGS (AND, WHERE APPLICABLE, ACCOMPANYING WRITTEN SPECIFICATIONS) ARE THE ONLY CONTRACT DOCUMENTS PROVIDED BY ARW ENGINEERS FOR THE PROJECT REPRESENTED HEREIN. NOTHING IN ANY DIGITAL MODEL OR DIGITAL FILE RELATED TO THIS PROJECT SHALL BE TAKEN TO SUPERSEDE ANY INFORMATION SHOWN IN THESE DRAWINGS (INCLUDING, BUT NOT LIMITED TO, DIMENSIONS, SIZES, ETC).
3. THE ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. THE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO AND MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONSULTANTS DRAWINGS. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENT AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
4. SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS. SUBMITTALS SHALL BE MADE IN A TIMELY MANNER AS INDICATED IN SPECIFICATIONS. REVIEW OF SUBMITTALS BY ARW ENGINEERS IS FOR GENERAL COMPLIANCE ONLY AND IS NOT INTENDED AS APPROVAL. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS. PREPARATION OF SHOP DRAWINGS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOUND IN THE ARCHITECTURAL, STRUCTURAL, AND OTHER CONSULTANTS DRAWINGS.
5. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION OF ANY AFFECTED ELEMENTS.
6. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL LOCATIONS AND SIZES OF MECHANICAL EQUIPMENT OR OTHER EQUIPMENT BEFORE FABRICATING AND ERECTING STRUCTURAL ELEMENTS. SIZES AND LOCATIONS THAT DIFFER FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT.
7. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ARCHITECT FOR ARCHITECT AND/OR ENGINEER APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS, OR SUBSTITUTIONS.
8. OBSERVATION VISITS TO THE SITE BY ARW ENGINEERS FIELD REPRESENTATIVES SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
9. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS AS NOTED IN THESE DOCUMENTS.
10. TYPICAL OR SIMILAR DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT SHOWN. TYPICAL OR SIMILAR DETAILS REFER TO THE CONDITION ADDRESSED AND ARE NOT NECESSARILY DETAILS LABELED “TYPICAL” OR “SIMILAR” IN THE PLANS AND DOCUMENTS.
11. DRAWINGS AND DETAILS HAVE BEEN PREPARED WITH THE INTENT TO VISUALLY REPRESENT INFORMATION PROVIDED IN SCALED FORM; HOWEVER CONTRACTOR/SUPPLIERS SHOULD NOT SCALE PLANS OR DETAILS FOR DIMENSIONAL INFORMATION.
12. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS COMPLETED. DESIGN OF ALL SHORING AND BRACING IS BY OTHERS AT NO ADDITIONAL COST TO THE OWNER.
13. ENGINEER SHALL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION SITE SAFETY, MEANS, METHODS AND SEQUENCING OF CONSTRUCTION. ENGINEER SHALL NOT BE RESPONSIBLE FOR FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATIONS IN THESE DOCUMENTS.
14. NOTICE OF COPYRIGHT: THESE STRUCTURAL DRAWINGS ARE HEREBY COPYRIGHTED BY ARW ENGINEERS, ALL RIGHTS RESERVED. THESE DOCUMENTS DEFINE A STRUCTURE AND ARE INSTRUMENTS OF SERVICE, FOR ONE USE ONLY. REPRODUCTION AND DISTRIBUTION OF THESE DRAWINGS IS ONLY ALLOWED AS REQUIRED FOR REGULATORY AGENCIES AND FOR CONVEYANCE OF INFORMATION TO PARTIES INVOLVED IN THE CONSTRUCTION OF THIS PROJECT. THESE DOCUMENTS SHALL NOT BE REPRODUCED OR COPIED, IN PART OR WHOLE BY ANY PARTY FOR USE IN PREPARATION OF SHOP DRAWINGS OR OTHER SUBMITTALS.
15. WHERE THE WORD "SHALL" OCCURS IN THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS, IT IS CONSIDERED A MANDATORY OBLIGATION AND SYNONYMOUS WITH THE PHRASE "HAS DUTY TO".

B. STATEMENT OF SPECIAL INSPECTIONS AND SPECIAL INSPECTIONS

1. THE DESIGNATED SEISMIC/WIND SYSTEMS AND SEISMIC/WIND-FORCE-RESISTING SYSTEMS THAT ARE SUBJECT TO SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.12 AND 1705.13 ARE IDENTIFIED ON THESE DOCUMENTS WITH A CIRCLE “L”. ALL OTHER ITEMS REQUIRING SPECIAL INSPECTION ARE IDENTIFIED IN THE SPECIAL INSPECTION SCHEDULE ON SHEETS S-012 AND S-013.
2. SPECIAL INSPECTIONS AND TESTING ARE TO BE PROVIDED AS REQUIRED BY IBC SECTIONS 1704 THROUGH 1705 AND OTHER APPLICABLE SECTIONS OF THE IBC. THE TYPE AND FREQUENCY OF TESTING AND SPECIAL INSPECTIONS SHALL BE AS NOTED IN THE SPECIAL INSPECTION SCHEDULE, JOB SPECIFICATIONS, AND ACCORDANCE WITH IBC SECTION 110 AND CHAPTER 17. CONTRACTOR SHALL COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS.
3. ALL TESTING AND SPECIAL INSPECTION SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH IBC 1704 AND AS OUTLINED IN THE JOB SPECIFICATIONS. REPORTS OF FINDINGS OR DISCREPANCIES SHALL BE NOTED AND FORWARDED TO THE CONTRACTOR, ARCHITECT, ENGINEERS, AND BUILDING OFFICIAL IN A TIMELY MANNER.
4. STRUCTURAL OBSERVATION VISITS SHALL BE PERFORMED BY A REPRESENTATIVE FROM ARW ENGINEERS IN ACCORDANCE WITH THE CONTRACT AS NEEDED TO OBSERVE THE CONSTRUCTION OF CRITICAL BUILDING ELEMENTS (I.E. FOOTINGS, BRACED FRAMES, MOMENT FRAMES, DRAG STRUTS AND THEIR CONNECTIONS, COLLECTORS, AND ROOF AND FLOOR DIAPHRAGMS). STRUCTURAL OBSERVATION REPORTS FOR EACH VISIT SHALL BE SENT DIRECTLY TO THE ARCHITECT FOR DISTRIBUTION TO THE CONTRACTOR AND BUILDING OFFICIAL. STRUCTURAL OBSERVATION VISITS SHALL NEITHER BE CONSTRUED AS SPECIAL INSPECTION NOR APPROVAL OF COMPLETED CONSTRUCTION.
5. IN ACCORDANCE WITH IBC 1704.4, THE CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR’S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER. THE STATEMENT SHALL BE SUBMITTED PRIOR TO THE CONSTRUCTION OF ANY SEISMIC/WIND-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC/WIND SYSTEM, OR COMPONENT IDENTIFIED IN THESE DOCUMENTS WITH A CIRCLE “L”.

C. BASIS OF DESIGN

1. GOVERNING BUILDING CODE : INTERNATIONAL BUILDING CODE (IBC) 2021
   RISK CATEGORY : III
2. SUSPENDED FLOOR LOADS
   a. LIVE LOAD = 40 PSF AT CLASSROOMS, 80 PSF AT CORRIDORS (UNREDUCED)
   b. DEAD LOAD = 70 PSF
3. ROOF LOADS
   a. FLAT-ROOF SNOW LOAD, P_f : 33 PSF
      1. GROUND SNOW LOAD, P_g : 43 PSF
      2. SNOW EXPOSURE FACTOR, C_e : 1.0
      3. SNOW LOAD IMPORTANCE FACTOR, I_s : 1.1
      4. THERMAL FACTOR, C_t : 1.0
      5. SLOPE FACTOR, C_S : 1.0
      6. SNOW DRIFT : SHOWN ON PLANS WHERE APPLICABLE.
   b. LIVE LOAD = 20 PSF
   c. DEAD LOAD = 20 PSF
4. WIND DESIGN
   a. BASIC WIND SPEED (3 SECOND GUST) : 110 MPH
   b. WIND EXPOSURE : C
   c. INTERNAL PRESSURE COEFFICIENT, GC_{PI} : 0.18
   d. COMPONENT AND CLADDING DESIGN WIND PRESSURE SHALL BE AS REQUIRED PER ASCE 7-16.
5. SEISMIC DESIGN :
   a. SEISMIC IMPORTANCE FACTOR, I_E : 1.25
   b. SITE CLASS : E
   c. MAPPED SPECTRAL RESPONSE ACCELERATIONS : $S_S = 1.079$, $S_1 = 0.363$
   d. SPECTRAL RESPONSE COEFFICIENTS : $S_{DS} = 0.863$, $S_{D1} = 0.617$
   e. SEISMIC DESIGN CATEGORY : D
   f. BASIC SEISMIC-FORCE-RESISTING SYSTEM : SPECIAL REINFORCED CONCRETE/MASONRY SHEARWALLS
   g. SEISMIC RESPONSE COEFFICIENT, C_S : .216
   h. RESPONSE MODIFICATION FACTOR, R : 5
   i. ANALYSIS PROCEDURE : EQUIVALENT LATERAL FORCE

D. FOUNDATION

1. GENERAL
   a. DESIGN SOIL PRESSURE : 3000 PSF
   b. SOILS REPORTS BY : A CACHE CORP
      REPORT # : 1220008 (HYDE PARK SITE) DATED NOVEMBER 12, 2022
      REPORT # : 1230024 (NIBLEY SITE) DATED DECEMBER 11, 2023
   c. SOIL PREPARATION UNDER FOUNDATIONS AND SLABS-ON-GRADE SHALL BE IN ACCORDANCE WITH THE SOILS REPORT. REFER TO THE SOILS REPORT FOR EACH SITE FOR SPECIFIC REQUIREMENTS AND INFORMATION.
      1. THE HYDE PARK SITE REQUIRES A MINIMUM OF 3 FEET OF STRUCTURAL FILL BELOW FOOTINGS TO ACHEIVE THE DESIGN SOIL PRESSURE NOTED.
      2. THE NIBLEY SITE FOOTINGS SHALL BE PLACED ON NATIVE UNDISTURBED OR COMPACTED SOILS OR COMPACTED STRUCTURAL FILL CONFORMING TO THE REQUIREMENTS LISTED IN THE REPORT.

      AD1
   d. TOP OF FOOTING ELEVATIONS SHOWN ON THE FOOTING AND FOUNDATION PLAN ARE BASED ON PRELIMINARY GRADING INFORMATION AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION. STEPS WHERE SHOWN ARE AT APPROXIMATE LOCATIONS. ACTUAL STEP LOCATIONS SHALL BE AT THE CONTRACTOR’S DISCRETION BASED UPON FIELD CONDITIONS. ALL EXTERIOR FOUNDATIONS SHALL BEAR A MINIMUM OF 30" INCHES BELOW LOWEST ADJACENT FINAL GRADE.
   e. ALL WALLS (EXCEPT CANTILEVERED RETAINING WALLS) SHALL BE ADEQUATELY BRACED AGAINST LATERAL MOVEMENT PRIOR TO BACKFILLING. DESIGN AND ERECTION OF BRACING/SHORING SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. BRACING SHALL REMAIN IN PLACE UNTIL SUPPORTING STRUCTURAL ELEMENTS ARE IN PLACE AND HAVE ATTAINED FULL STRENGTH.
   f. UNLESS NOTED OTHERWISE, ALL FOOTINGS AT COLUMNS SHALL BE CENTERED BELOW COLUMNS.
   g. UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL HAVE VERTICAL FACES FORMED WITH STANDARD FORMING MATERIALS (WOOD, METAL, ETC.). WITH PRIOR APPROVAL OF ARCHITECT AND ENGINEER, CONCRETE FOR FOOTINGS CAN BE PLACED IN EXCAVATED SOIL “FORMS” PROVIDED THAT THE DIMENSIONS ARE INCREASED 3” ON ALL SIDE.

E. CONCRETE

1. ALL CONCRETE MIX DESIGNS SHALL COMPLY WITH THE PROJECT SPECIFICATIONS AND THE REQUIREMENTS LISTED BELOW :
   a. FOOTINGS, GRADE BEAMS, FOUNDATION WALLS :
      1. WHERE THE TOP OF THE ELEMENT IS EXPOSED OR IS LOCATED WITHIN 30” OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F2) :
         a. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
         b. MAXIMUM W/C RATIO : 0.45
         c. MAXIMUM AGGREGATE SIZE : 1”
         d. AIR CONTENT : SEE SCHEDULE BELOW
      2. WHERE THE TOP OF THE ELEMENT IS NOT EXPOSED OR IS NOT LOCATED WITHIN 30” OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F0) :
         a. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
   b. INTERIOR SLABS ON GRADE (EXPOSURE CATEGORY F0) :
      1. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
   c. INTERIOR SUSPENDED SLABS (EXPOSURE CATEGORY F0) :
      1. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
   d. ICF WALLS:
      1. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
   e. TOTAL AIR CONTENT FOR CONCRETE EXPOSED TO CYCLES OF FREEZING AND THAWING SHALL BE DETERMINED IN ACCORDANCE WITH THIS SCHEDULE. TOLERANCE ON AIR CONTENT AS DELIVERED SHALL BE +/- 1.5 PERCENT.

NOMINAL MAXIMUM	TARGET AIR CONTENT, PERCENT	
AGGREGATE SIZE, IN.	F1	F2 AND F3
3/8	6	7.5
1/2	5.5	7
3/4	5	6
1	4.5	6
1-1/2	4.5	5.5
2	4	5
3	3.5	4.5

2. WATER USED IN MIXING CONCRETE SHALL CONFORM TO ASTM C1602.
3. NO CONDUIT, PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO ALUMINUM PRODUCTS SHALL BE EMBEDDED IN CONCRETE. PENETRATIONS THRU STRUCTURAL CONCRETE ELEMENTS MUST BE APPROVED BY THE ENGINEER AND SHALL BE BUILT INTO THE ELEMENT PRIOR TO CONCRETE PLACEMENT.
4. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, ETC. TO BE CAST IN TO CONCRETE, AND FOR EXTENT AND LOCATION OF DEPRESSIONS, CURBS, RAMPS, ETC.
5. UNLESS NOTED OTHERWISE, MINIMUM REINFORCING IN ALL CONCRETE FOUNDATION WALLS SHALL BE AS FOLLOWS:

THICKNESS	TOP & BOTTOM BARS	VERTICAL	HORIZONTAL
8”	(2) #5	#4 AT 18”O.C.	#4 AT 12”O.C.
14"	(2) #5	#4 AT 18"O.C. EACH FACE	#4 AT 12"O.C. EACH FACE

   UNLESS NOTED OTHERWISE, CONCRETE SLABS ON EARTH SHALL BE UNREINFORCED AS FOLLOWS: WHERE REINFORCING IS PROVIDED REINFORCING SHALL BE CONTINUOUSLY SUPPORTED AT 36”O.C. MAXIMUM SPACING.
6. UNLESS NOTED OTHERWISE, FOR NON-DETAILED OPENINGS IN CONCRETE WALLS LARGER THAN 12” AND SMALLER THAN 24” IN ANY DIRECTION ADD (2) #5 BARS ON ALL SIDES IN ADDITION TO REGULAR WALL REINFORCING AND EXTEND 24” EACH WAY BEYOND OPENING. IF 24” IS NOT AVAILABLE ON EVERY SIDE, NOTIFY STRUCTURAL ENGINEER FOR FURTHER DIRECTION. OPENINGS SHALL HAVE A MINIMUM OF 12" OF CONCRETE ABOVE THE OPENING, TYP.
7. CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE MADE AND LOCATED SO AS TO NOT IMPAIR THE STRENGTH OF THE STRUCTURE AND AS APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE 2 X 4 (SHAPED) KEYWAY IN ALL VERTICAL AND HORIZONTAL JOINTS UNLESS NOTED OR DETAILED OTHERWISE. ALL STEEL REINFORCING SHALL BE CONTINUOUS THROUGH COLD JOINTS UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS FOR COLD/CONSTRUCTION JOINTS FOR SLABS ON GRADE.
8. WHERE NEW CONCRETE IS PLACED AGAINST PREVIOUSLY HARDENED CONCRETE, THE JOINT SHALL BE CLEAN AND FREE OF LAITANCE. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE PREWETTED AND STANDING WATER REMOVED.

F. ANCHOR BOLTS/EMBEDDED BOLTS

1. ALL ANCHOR BOLTS SHALL HAVE ASTM A-563 HEAVY HEX NUT AND ASTM F-436 WASHERS AT STANDARD OR OVERSIZED HOLES PER AISC SPECIFICATION TABLE J3.3. WHERE HOLE SIZES DO NOT COMPLY WITH THE LIMITATIONS FOR OVERSIZED HOLES THE STRUCTURAL ENGINEER SHALL BE NOTIFIED TO DETERMINE STEEL PLATE WASHER REQUIREMENTS. ANCHOR BOLTS SHALL COMPLY WITH THE FOLLOWING :
   a. AT ALL ANCHOR BOLTS (UNLESS NOTED OTHERWISE) - ASTM F1554 GRADE 36 HEADED BOLTS. (ASTM A36 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER.)
2. EMBEDDED BOLTS IN MASONRY SHALL BE (UNLESS NOTED OTHERWISE) ASTM A-307 GRADE HEADED BOLTS.
3. SEE TYPICAL ANCHOR BOLT DETAIL FOR DEFINITIONS OF EMBEDMENT LENGTH, ETC.
4. FURNISH TEMPLATES AND OTHER DEVICES AS NECESSARY FOR PRESETTING ALL BOLTS PRIOR TO PLACING CONCRETE AND/OR GROUT.
5. IF THREADED RODS ARE USED AS PERMITTED ABOVE, THEY SHALL BE CLEAR OF SOIL AND DIRT.
6. WHERE REQUIRED FOR ERECTION, HOLES LARGER THAN OVERSIZED MAY BE PERMITTED WITH THE USE OF STEEL PLATE WASHERS AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

G. ADHESIVE/MECHANICAL ANCHORS

1. WITHOUT WRITTEN APPROVAL OF THE ENGINEER, CONTRACTOR SHALL NOT SUBSTITUTE POST-INSTALLED ANCHORS WHERE CAST-IN-PLACE ANCHORS ARE SPECIFIED IN THE DRAWINGS.
2. WHERE STRUCTURAL DETAILS SPECIFY SPECIFIC BRANDS AND/OR TYPES OF ADHESIVES OR ANCHORS, SUBSTITUTIONS OF OTHER BRANDS AND/OR TYPES IS NOT ALLOWED, WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
3. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. SUBSTITUTION REQUESTS SHALL INCLUDE AN ICC ESR OR IAPMO REPORT AND SUPPORTING CALCULATIONS INDICATING COMPLIANCE WITH DESIGN INTENT.
4. ALL ADHESIVE/MECHANICAL ANCHORS SHALL BE INSTALLED, INCLUDING HOLE DRILLING AND PREPARATION, IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO, OR APPROVED EQUAL), AS INDICATED BELOW, AND IN ACCORDANCE WITH ALL MANUFACTURER’S PRINTED INSTALLATION INSTRUCTIONS (MPII).
5. INSTALLERS SHALL BE, AT A MINIMUM, TRAINED FOR THE SPECIFIC APPLICATION INSTALLATION TECHNIQUE FOR THE SPECIFIC PRODUCT BY THE PRODUCT MANUFACTURERS FIELD EMPLOYEE OR SHALL POSSESS A TRAINING CARD OBTAINED BY THE MANUFACTURERS ONLINE TRAINING PROGRAM.
6. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. ADHESIVE ANCHORS SHALL NOT BE FULLY LOADED UNTIL CONCRETE HAS REACHED DESIGN STRENGTH.
7. ADHESIVE ANCHORS SHALL CONSIST OF REINFORCING BAR OR THREADED RODS AS INDICATED IN THESE DOCUMENTS.
8. UNLESS APPROVED BY THE ENGINEER OF RECORD, CONCRETE AND DRILLED ANCHOR HOLES SHALL BE DRY AND FREE OF WATER FOR 14 DAYS PRIOR TO ADHESIVE INSTALLATION. CONTACT THE ENGINEER OF RECORD FOR GUIDANCE IF THE CONTRACTOR CHOOSES TO INSTALL IN DAMP, WATER-SATURATED, OR WATER-FILLED HOLES.
9. CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION SHALL BE MONITORED BY THE CONTRACTOR. CONTRACTOR SHALL COMPLY WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) RELATIVE TO SUBSTRATE TEMPERATURE.
10. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT IN ACCORDANCE WITH ACI 318-19 26.7.2 (e) PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. CONTINUOUS SPECIAL INSPECTION SHALL BE PROVIDED FOR THESE ANCHORS.
11. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO CONCRETE SHALL BE:
    a. HILTI HIT-RE 500V3 (ESR-3814), OR HILTI HIT-HY 200-V3 (ESR-4868).
    b. SIMPSON SET-3G (ESR-4057), OR AT-XP (ER-263).
    c. DEWALT PURE 110+ (ESR-3298), OR AC200+ GOLD (ESR-4027-COLD WEATHER).
12. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO GROUTED MASONRY (CMU) SHALL BE:
    a. HILTI HIT-HY 270 (ESR-4143).
    b. SIMPSON SET-XP (ER-265), OR AT-XP (ER-281).
    c. DEWALT AC100+ GOLD (ESR-3200).
13. UNLESS NOTED OTHER WISE, ALL MECHANICAL ANCHORS INTO CONCRETE SHALL BE:
    a. HILTI KWIK BOLT-TZ2 (ESR-4266).
    b. SIMPSON STRONG-BOLT 2 (ESR-3037).
14. UNLESS NOTED OTHERWISE, ALL MECHANICAL ANCHORS INTO GROUTED MASONRY (CMU) SHALL BE:
    a. HILTI KWIK BOLT-TZ2 (ESR-4561).
    b. SIMPSON STRONG BOLT 2 (ER-240).
    c. DEWALT SCREWBOLT+ (ESR-4042).
15. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO CONCRETE SHALL BE:
    a. SIMPSON TITEN HD (ESR-2713).
    b. DEWALT SCREWBOLT+ (ESR-3889).
    c. HILTI KH-EZ (ESR-3027).
16. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO GROUTED MASONRY (CMU) SHALL BE:
    a. SIMPSON TITEN HD (ESR-1056).
    b. DEWALT SCREWBOLT+ (ESR-1678).
    c. HILTI KH EZ (ESR-3056).
17. ALL MASONRY CELLS WITHIN 8” OF THE ANCHOR SHALL BE SOLID GROUTED.
18. THE TESTING LABORATORY WILL PERFORM VISUAL INSPECTION OF ANCHORS AND DOWELS AS SPECIFIED IN THE SPECIAL INSPECTION SCHEDULE AND THE APPROVED INDEPENDENT EVALUATION REPORT. TENSION TESTING CAN BE REQUIRED AT THE DIRECTION OF THE STRUCTURAL ENGINEER OF RECORD OR THE SPECIAL INSPECTOR.
19. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON THAT HOLE AND SHIFT THE ANCHOR LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM SPACE OF (2) ANCHOR HOLE DIAMETERS OR 2 INCHES, WHICH EVER IS LARGER, OF SOUND CONCRETE/MASONRY BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT OR AN APPROVED ANCHORING ADHESIVE. AT CONTRACTORS OPTION, LOCATE EXISTING REINFORCEMENT PRIOR TO DRILLING/CORING. IF THE ANCHOR OR DOWEL CANNOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.
20. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.

H. SUSPENDED CONCRETE SLABS / SLABS ON METAL DECK

1. UNLESS NOTED OTHERWISE, ALL CONCRETE SLABS ON METAL DECK SHALL BE 5 1/2” TOTAL THICKNESS NORMAL WEIGHT CONCRETE WITH A WEIGHT LESS THAN 145 POUNDS PER CUBIC FOOT, REINFORCED WITH 6 X 6 - W1.4 X W1.4 WELDED WIRE FABRIC. REINFORCING STEEL SHALL BE CHAIRED TO 1” TOP COVER AT ALL BEAM LOCATIONS. EXCEPT WHERE SPECIFICALLY DETAILED, FIBER MESH MAY BE USED IN PLACE OF REINFORCEMENT IN SLABS ON DECK WHEN USED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT AND WHERE APPROVED BY THE ENGINEER. WHERE THE SLAB CONSTRUCTION IS USED TO OBTAIN A UL FIRE RATING, THE PROPOSED FIBER MESH SHALL HAVE UL ACCEPTANCE AS AN APPROVED ALTERNATIVE TO WELDED WIRE FABRIC.
2. AROUND OPENINGS IN SUSPENDED CONCRETE SLABS, ADD REINFORCING BARS EQUIVALENT TO BARS CUT BY OPENING WITH HALF ON EACH SIDE OF OPENING. BARS PARALLEL TO PRINCIPAL REINFORCING SHALL RUN FULL LENGTH OF SPAN. BARS PARALLEL TO TEMPERATURE REINFORCING SHALL RUN 24” BEYOND OPENING.
3. SLAB PENETRATIONS LESS THAN 6” IN ALL DIRECTIONS WITH A CLEAR SPACING OF AT LEAST 3 TIMES THE LONGEST DIMENSION, DO NOT REQUIRE SUPPLEMENTAL REINFORCING. OTHERWISE, THE PENETRATIONS SHALL BE FRAMED ON 4 SIDES WITH STEEL ANGLES OR BENT PLATES (SEE TYPICAL DETAIL) UNLESS NOTED OTHERWISE.
4. EVERY EFFORT SHALL BE MADE TO PROVIDE A LEVEL FINISHED FLOOR WHILE MAINTAINING THE MINIMUM INDICATED SLAB THICKNESS.
5. CONTROL JOINTS IN SUSPENDED CONCRETE SLABS AND CONCRETE SLABS ON DECK SHALL NOT BE USED UNLESS SPECIFICALLY APPROVED AND DETAILED BY THE ENGINEER.
6. SEE TYPICAL DETAILS WHEN SLABS ARE MADE COMPOSITE WITH STEEL BEAMS.
7. NO CONDUIT IS ALLOWED IN CONCRETE SLABS ON METAL DECK.
8. WHERE CONDUIT IS CLUSTERED TOGETHER TO RISE ABOVE SLAB OR PENETRATE SLAB, PENETRATION IN SLAB MUST BE SUPPORTED AS NOTED IN NOTE H.3 ABOVE.
9. CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING, BRACING, AND GUYING AS REQUIRED DURING ERECTION AND PLACEMENT OF SUSPENDED CONCRETE SLABS ON METAL DECK.
10. IN ALL SLABS NOT COVERED BY CARPET INSTALL #4 REINFORCING STEEL @ 12”O.C. EACH WAY.

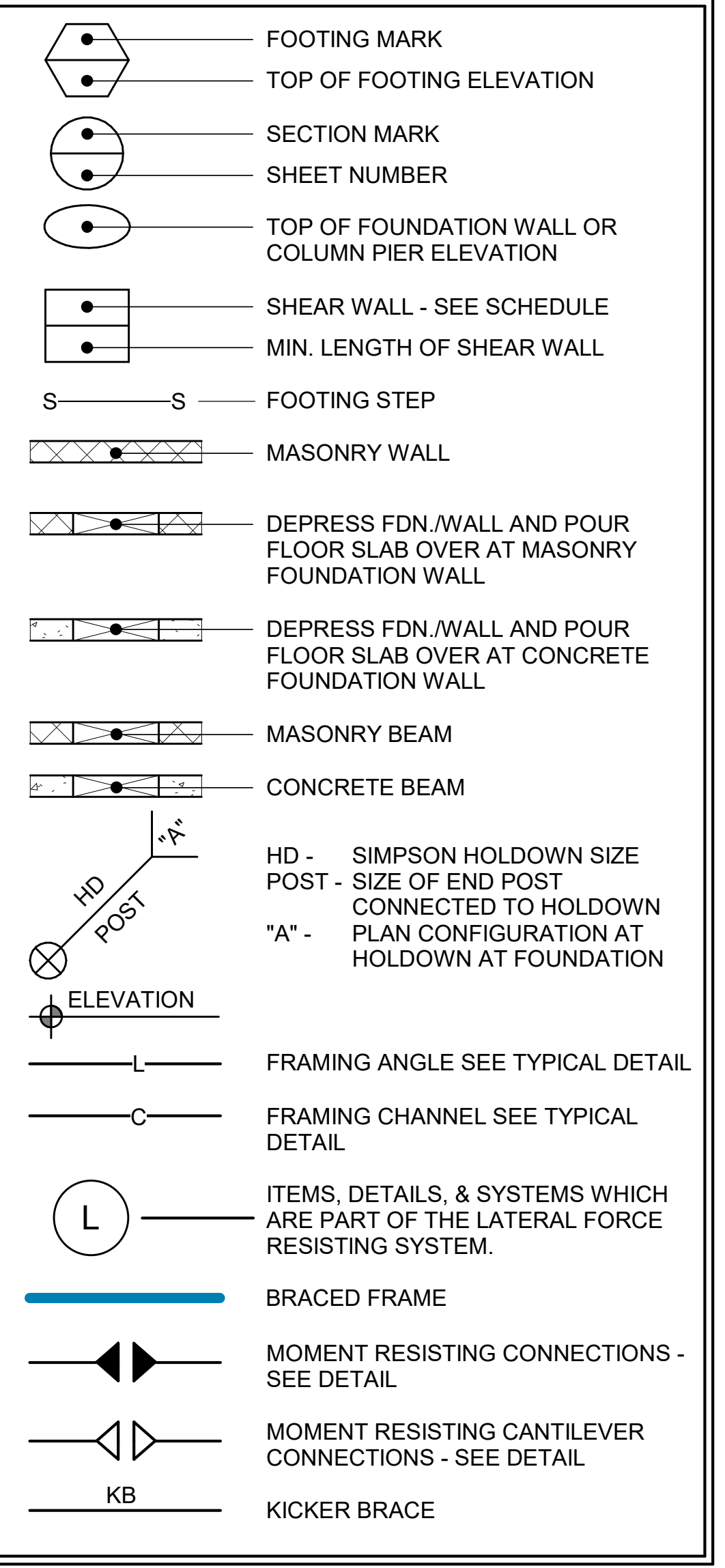
I. REINFORCING STEEL

1. REINFORCING BAR STRENGTH REQUIREMENTS:
   a. ALL REINFORCING BARS SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60 AND ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-1064 AND SHALL BE SUPPLIED IN FLAT SHEETS. ADEQUATELY TIE AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 117, TO MAINTAIN EXACT REQUIRED POSITION.
2. HEADED SHEAR STUD ASSEMBLIES SHALL CONFORM TO ASTM A1044.
3. STEEL DISCONTINUOUS FIBER REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO ASTM A820 AND SHALL HAVE A LENGTH TO DIAMETER RATIO NOT SMALLER THAN 50 AND NOT GREATER THAN 100.
4. HEADED DEFORMED BARS SHALL CONFORM TO ASTM A970. OBSTRUCTIONS OR INTERRUPTIONS OF THE BAR DEFORMATIONS, IF ANY, SHALL NOT EXTEND MORE THAN 2 BAR DIAMETERS FROM THE BEARING FACE OF THE HEAD.
5. ALL REINFORCING STEEL SHALL BE TIED IN PLACE AND ADEQUATELY SUPPORTED PRIOR TO PLACING CONCRETE. WET STABBING OF ANY REINFORCING STEEL IS NOT PERMITTED, UNLESS SPECIFICALLY DETAILED OTHERWISE OR APPROVED BY THE ENGINEER.
6. ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY 1/3.
7. UNLESS NOTED OTHERWISE, REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE :
   a. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ….. 3”
   b. EXPOSED TO EARTH OR WEATHER :
      1. #6 & LARGER ….. 2”
      2. #5 & SMALLER …..1-1/2”
   c. NOT EXPOSED TO WEATHER OR EARTH :
      1. SLABS, WALLS, JOISTS, #11 & SMALLER ….. 3/4”
      2. BEAMS, COLUMNS: MAIN REINFORCING OR TIES ….. 1-1/2”
   d. SLAB ON GRADE :
      1. PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE.
8. EXCEPT WHERE NOTED ON PLANS OR DETAILS CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT POINTS OF MINIMUM STRESS BY LAPPING PER THE REBAR LAP SCHEDULE.
9. REINFORCING STEEL MAY BE SPLICED WITH MECHANICAL COUPLERS THAT HAVE A TENSION CAPACITY OF AT LEAST 125% OF THE STRENGTH OF THE BAR. MECHANICAL COUPLERS SHALL BE A POSITIVE CONNECTING TYPE COUPLER, AND SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT. WHERE THESE ARE USED, SPLICES ON ADJACENT BARS SHALL BE STAGGERED AT LEAST 24 INCHES ALONG THE LENGTH OF THE BARS.
10. ALL VERTICAL REINFORCING IN STRUCTURAL ELEMENTS ABOVE SHALL BE SPLICED WITH MATCHING DOWELS EMBEDDED WITHIN THE FOOTINGS OR STRUCTURE BELOW. SPLICE LENGTHS SHALL COMPLY WITH REBAR LAP SCHEDULE. DOWELS INTO FOOTINGS SHALL TERMINATE WITH A STANDARD HOOK, AND SHALL EXTEND TO WITHIN 4” OF THE BOTTOM OF THE FOOTING, BUT NEED NOT EXTEND MORE THAN 20” INTO FOOTING. FOR MASONRY CONSTRUCTION SEE STRUCTURAL NOTE L.6.A.
11. DO NOT WELD REINFORCING EXCEPT AS NOTED ON PLANS, WHERE REINFORCING IS WELDED, USE ASTM A-706 REINFORCING.
12. REINFORCING BARS, TIES, AND TENDONS SHALL BE SUPPORTED BY NYLON CONES, PLASTIC-COATED TIE-WIRES, OR PLASTIC-COATED CHAIRS. REINFORCING IN FOOTINGS IS PERMITTED TO BE SUPPORTED ON CONCRETE DOBIES.
13. UNLESS NOTED OTHERWISE, HOOKS, STIRRUPS, TIES, AND OTHER BENDS IN REINFORCING STEEL SHALL MEET THE STANDARDS SET FORTH IN ACI 318/318R-19. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, ALL REINFORCEMENT SHALL BE BENT COLD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN ON THESE DRAWINGS OR OTHERWISE PERMITTED BY THE ENGINEER.
14. UNLESS SPECIFICALLY NOTED AND/OR DETAILED IN THE STRUCTURAL DRAWINGS CONDUIT SHALL NOT BE IN CONTACT WITH REINFORCING STEEL.

(STRUCTURAL NOTES CONTINUED ON SHEET S-002)

LEGEND OF SYMBOLS AND ABBREVIATIONS

AB = ANCHOR BOLT
ABV = ABOVE
ARCH = ARCHITECT
BLW = BELOW
BN = BOUNDARY NAILING
BS = BOUNDARY SCREW
BRB = BUCKLING RESTRAINED BRACE
BRBF = BUCKLING RESTRAINED BRACE FRAME
CJP = COMPLETE JOINT PENETRATION
CL = CENTERLINE
CMU = CONCRETE MASONRY UNIT
COL = COLUMN
CONC = CONCRETE
CP = CONCRETE PIER
DC = DEMAND CRITICAL
DIA / Ø = DIAMETER
DBA = DEFORMED BAR ANCHOR
DBE = DECK BEARING ELEVATION
ELEV = ELEVATION
EN = EDGE NAILING
EOD = EDGE OF DECK
FDN = FOUNDATION
FTG = FOOTING
FFE = FINISHED FLOOR ELEVATION
GB = CONCRETE GRADE BEAM
HSA = HEADED STUD ANCHOR
JBE = JOIST BEARING ELEVATION
KB = KICKER BRACE
MAX = MAXIMUM
MB = MASONRY BEAM
MC = MASONRY COLUMN
MECH = MECHANICAL
MEZZ = MEZZANINE
MIN = MINIMUM
MJ = MASONRY JAMB
MW = MASONRY WALL
NS, FS = NEAR SIDE, FAR SIDE
OAE = OR APPROVED EQUAL
OPP = OPPOSITE
PAF = POWDER ACTUATED FASTENER
PL = PLATE
REINF = REINFORCING
REQ'D = REQUIRED
SIM = SIMILAR
SSH = STEEL STUD HEADER
SSJ = STEEL STUD JAMB
SSS = STEEL STUD SILL
SSW = STEEL STUD WALL
TOB = TOP OF BEAM ELEVATION
TOC = TOP OF CONCRETE SLAB
TOF = TOP OF FOOTING
TOG = TOP OF GIRDER ELEVATION
TOM = TOP OF MASONRY
TOS = TOP OF STEEL ELEVATION
TYP = TYPICAL
UNO = UNLESS NOTED OTHERWISE



FOOTING MARK
TOP OF FOOTING ELEVATION
SECTION MARK
SHEET NUMBER
TOP OF FOUNDATION WALL OR COLUMN PIER ELEVATION
SHEAR WALL - SEE SCHEDULE
MIN. LENGTH OF SHEAR WALL
FOOTING STEP
MASONRY WALL
DEPRESS FDN./WALL AND POUR FLOOR SLAB OVER AT MASONRY FOUNDATION WALL
DEPRESS FDN./WALL AND POUR FLOOR SLAB OVER AT CONCRETE FOUNDATION WALL
MASONRY BEAM
CONCRETE BEAM
HD - SIMPSON HOLDOWN SIZE
POST - SIZE OF END POST CONNECTED TO HOLDOWN
"A" - PLAN CONFIGURATION AT HOLDOWN AT FOUNDATION
FRAMING ANGLE SEE TYPICAL DETAIL
FRAMING CHANNEL SEE TYPICAL DETAIL
ITEMS, DETAILS, & SYSTEMS WHICH ARE PART OF THE LATERAL FORCE RESISTING SYSTEM.
BRACED FRAME
MOMENT RESISTING CONNECTIONS - SEE DETAIL
MOMENT RESISTING CANTILEVER CONNECTIONS - SEE DETAIL
KICKER BRACE

Structural Sheet Index

design west | architects
255 SOUTH 300 WEST
LOGAN UT 84321
795 NORTH 400 WEST
SALT LAKE CITY UT 84103

HYDE PARK MIDDLE SCHOOL
250 W 200 S, HYDE PARK, UTAH
CACHE COUNTY SCHOOL DISTRICT

MARK:	DATE:	DESCRIPTION:
	03.27.24	ADDENDUM 1

BID PACKAGE 1

PROJECT #: 123005
DRAWN BY: BLP
CHECKED BY: J. Blazzard
ISSUED: 03.14.2024

STRUCTURAL NOTES
S-001