### **GENERAL NOTES**

- 1. THE CONTRACTOR IS ADVISED THAT ALL PLANS, DIMENSIONS, AND DETAILS DEPICT FIELD CONDITION AS SHOWN. MINOR VARIATIONS ARE TO BE EXPECTED AND ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE APPROVED BY THE
- ARCHITECT IN WRITING PRIOR TO PROCEEDING. 2. THE CONTRACTOR SHALL FIELD CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING WORK PRIOR TO FABRICATION OF ANY NEW MATERIALS. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PROVIDE A SKETCH OF THE CONDITION WITH THEIR PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. DO NOT COMMENCE WORK UNTIL CONDITION IS RESOLVED AND MODIFICATION IS APPROVED BY THE ENGINEER.
- 3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF UTILITIES IN THE IMMEDIATE VICINITY OF CONSTRUCTION SO AS TO PREVENT DAMAGE TO THEM. SHOULD DAMAGE TO SUCH UTILITIES OCCUR, THE CONTRACTOR SHALL BE REQUIRED TO REPAIR SUCH DAMAGE AT THEIR OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER.
- 4. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE GENERAL CONTRACTOR AND REVIEWED BY THE ENGINEER. IF THE CONTRACTOR OR OWNER FAILS TO OBTAIN ENGINEER'S REVIEW OF THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. SHOP DRAWINGS ARE REVIEWED BY THE ENGINEER AS A CONVENIENCE TO THE GENERAL
- CONTRACTOR AND ARE NOT A CONTRACT DOCUMENT. 5. LOADS GREATER THAN THE DESIGN LIVE LOADS SHALL NOT BE PLACED ON THE STRUCTURE. A CONCRETE STRUCTURE MAY NOT SUPPORT IT'S DESIGN LIVE LOAD FOR 28 DAYS. CONTRACTOR SHALL SUPPORT ADJACENT STRUCTURES, UTILITIES, AND EXCAVATIONS AS REQUIRED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL TEMPORARY FORM WORK, SHEETING, SHORING AND UNDERPINNING SEALED BY A PROFESSIONAL ENGINEER AS A PART OF THE CONTRACTOR'S WORK
- THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR THE QUANTITY, LOCATION, AND DIMENSION OF HOLES THROUGH FLOOR AND ROOF: CHASES, INSERTS, OPENINGS, SLEEVES, WASHERS, DRIPS, REVEALS, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS, REFER TO ARCHITECTURAL DRAWINGS FOR THE FOLLOWING INFORMATION: a. LOCATION AND THICKNESS OF MASONRY PARTITIONS
- b. FULL EXTENT OF MASONRY INFILL AREAS c. LOCATION AND THICKNESS OF STUD PARTITIONS d. LOCATION AND SIZE OF WINDOWS, DOORS AND WALL OPENINGS e. STAIRS, FLOOR AND WALL FINISHES
- DETAIL DIMENSIONS AND SECTION DETAILS AS REQUIRED THIS STRUCTURE HAS BEEN DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE CONSTRUCTION OF THE BUILDING IS TO BE COMPLETED. THE STABILITY OF THE STRUCTURE PRIOR TO COMPLETION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THIS RESPONSIBILITY EXTENDS TO ALL RELATED ASPECTS OF THE CONSTRUCTION ACTIVITY INCLUDING, BUT NOT LIMITED TO, ERECTION METHODS, ERECTION SEQUENCE, TEMPORARY BRACING, FORMS, SHORING, USE OF
- EQUIPMENT AND SIMILAR CONSTRUCTION PROCEDURES. 8. THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING, SHORING, AND UNDERPINNING AS NECESSARY TO PREVENT ANY LATERAL OR VERTICAL MOVEMENTS TO, AND TO INSURE THE STRUCTURAL INTEGRITY OF EXISTING BUILDINGS, STREETS, AND ANY EXISTING UTILITY LINES.
- 9. BRACING, SHEETING, SHORING, ETC., REQUIRED TO INSURE THE STRUCTURAL INTEGRITY OF THE EXISTING BUILDINGS OR NEW CONSTRUCTION, SIDEWALKS. UTILITIES ETC., SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER ENGAGED BY THE CONTRACTOR. DETAILED SIGNED AND SEALED SHOP DRAWINGS SHALL BE PREPARED INDICATING ALL WORK TO BE PERFORMED. SUBMIT THE SHOP DRAWINGS IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS.

### FOUNDATIONS AND BACKFILL

- 1. SOIL BEARING CAPACITY OF 2,000 PSF WAS UTILIZED IN THE DESIGN OF THE FOUNDATION SYSTEM
- 2. PLACE EXTERIOR FOOTINGS AND FROST WALLS EXPOSED TO WEATHER AT LEAST 36" BELOW THE ADJACENT OUTSIDE FINISHED GRADE TO PROTECT FROM FROST
- 3. THE OWNER SHALL ENGAGE THE SERVICES OF A REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER TO MONITOR AND INSPECT ALL EARTH WORK AND TO PERFORM THE SPECIAL INSPECTIONS REQUIRED BY THE SCHEDULE OF SPECIAL INSPECTIONS. THE GEOTECHNICAL ENGINEER SHALL SUPERVISE THE PLACING OF THE COMPACTED FILL AND ALL THE MATERIALS AND EQUIPMENT USED FOR THIS PURPOSE. THE GEOTECHNICAL ENGINEER SHALL CERTIFY, BY SEAL AND SIGNATURE, THAT THE EARTH-WORK IS IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, PLANS AND SPECIFICATIONS.
- 4. PRIOR TO CONCRETE PLACEMENT THE FOUNDATION BOTTOM SHALL BE COMPACTED USING A WALK BEHIND VIBRATORY ROLLER OR GAS-POWERED
- 5. IF SOIL OF THE BEARING CAPACITY NOTED ABOVE IS NOT ENCOUNTERED AT THE ELEVATIONS SHOWN ON PLAN, UNSUITABLE SOILS SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S DIRECTION. 6. IF BEDROCK IS ENCOUNTERED AT OR ABOVE FOUNDATION SUBGRADE ELEVATION.
- THE BEDROCK SURFACE SHALL BE OVER EXCAVATED A MINIMUM OF SIX INCHES AND BACKFILLED WITH CRUSHED STONE TO THE SUBGRADE ELEVATION. 7. THE GEOTECHNICAL ENGINEER SHALL APPROVE SAMPLES OF ALL CONTRACTOR
- PROPOSED COMPACTED FILL MATERIAL. IMPORTED STRUCTURAL FILL SHALL BE FREE OF ORGANIC MATTER, ASH, CINDERS AND DEMOLITION DEBRIS. 8. CONTROL OF MOISTURE FOR PLACING FILL WILL BE BASED ON THE RESULTS OF
- ASTM D-1557 MODIFIED PROCTOR TESTS. 9. ALL COMPACTED FILL SHALL HAVE A DENSITY OF AT LEAST 98% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D-1557 MODIFIED PROCTOR TEST. PLACING
- OF FILL WITH MOISTURE CONTENT OUTSIDE THE LIMITS FOR PROPER COMPACTION SHALL NOT BE PERMITTED. 10. THE EXISTING SUBGRADE IN ALL FILL AND CUT AREAS SHALL BE COMPACTED TO A FIRM, STABLE CONDITION AS DETERMINED BY THE GEOTECHNICAL ENGINEER, PRIOR TO PLACEMENT OF FILLS AND EXCAVATION FOR FOOTINGS 11. FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8" IN THICKNESS AND SHALL BE MIXED, SPREAD, AND PLACED IN SUCH A WAY AS TO PRODUCE A
- UNIFORM THICKNESS OF MATERIAL AFTER PLACING. 12. EACH LAYER OF FILL MATERIAL SHALL BE COMPACTED ON ALL PORTIONS OF THE SURFACE OF EACH LIFT OF FILL BY RUBBER TIRE ROLLERS, SHEEP'S FOOT ROLLERS, VIBRATORY ROLLERS, ETC. AS NECESSARY TO ATTAIN THE MAXIMUM DRY DENSITY NOTED ABOVE AND AS APPROVED BY THE GEOTECHNICAL ENGINEER.
- 13. WHENEVER IN PLACE DENSITIES ARE FOUND TO BE BELOW LIMITS ACCEPTABLE TO THE GEOTECHNICAL ENGINEER, ADDITIONAL ROLLING TO PRODUCE THE SPECIFIED DENSITIES SHALL BE REQUIRED. 14. PLACING OF FILL WHEN FREE WATER IS STANDING ON THE EXISTING SURFACE
- SHALL NOT BE PERMITTED. 15. PLACING OF FILL IN A FROZEN CONDITION OR ON TOP OF FROZEN MATERIAL SHALL NOT BE PERMITTED
- 16. SUBGRADE SUITABILITY SHALL BE VERIFIED BY GEOTECHNICAL ENGINEER WITHIN 24 HOURS PRIOR TO PLACING CONCRETE FOUNDATIONS AND CONCRETE SLABS ON GRADE TO CONFIRM THAT NO DETERIORATION HAS OCCURRED SUBSEQUENT TO TESTING PERFORMED AT TIME OF FILL PLACEMENT. UNSUITABLE CONDITIONS SHALL BE CORRECTED PER GEOTECHNICAL ENGINEER'S RECOMMENDATION.
- 17. EXCAVATIONS SHOULD BE BACKFILLED OR HAVE CONCRETE PLACED AS SOON AS POSSIBLE DURING CONSTRUCTION TO MINIMIZE ADVERSE AFFECTS TO SUBGRADE
- CONDITIONS. GRADING DEPRESSIONS SHOULD BE AVOIDED. 18. WATER SHALL BE PREVENTED FROM ENTERING OPEN EXCAVATIONS. ANY ACCUMULATED WATER SHALL BE REMOVED AS SOON AS POSSIBLE. IT IS
- RECOMMENDED THAT CONCRETE BE PLACED THE SAME DAY THE EXCAVATION IS 19. THE CONTRACTOR SHALL PROVIDE FOR DEWATERING AS REQUIRED DURING EXCAVATION AND CONSTRUCTION.

- ALL WORK SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE" (AMERICAN CONCRETE INSTITUTE, ACI 301) AND THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318), LATEST EDITIONS, UNLESS
- NOTED OTHERWISE IN THE DRAWINGS OR PROJECT SPECIFICATIONS. CONSTRUCTION TOLERANCES SHALL CONFORM TO THE "SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS" (ACI 117), LATEST
- 3. SHOP DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE "GUIDE TO PRESENTING REINFORCING STEEL DESIGN DETAILS" (ACI 315) AND THE "ACI
- DETAILING MANUAL" (SP-066), LATEST EDITIONS. 4. CONCRETE MATERIALS SHALL BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
- PORTLAND CEMENT ASTM C150 HYDRAULIC CEMENT **ASTM C1157**  FLY ASH AND NATURAL POZZOLAN ASTM C618 SLAG CEMENT ASTM C989 SILICA FUME **ASTM C1240**  NORMAL WEIGHT AGGREGATE ASTM C33 LIGHTWEIGHT AGGREGATE ASTM C330 MIXING WATER **ASTM C1602**  ADMIXTURES WATER REDUCTION AND SETTING TIME MODIFICATION ASTM C494 PRODUCING FLOWING CONCRETE ASTM C107
- INHIBITING CHLORIDE-INDUCED CORROSION ASTM C1582 REINFORCING MATERIALS: REINFORCING BARS PLAIN-STEEL
   ASTM A615, GRADE 60, DEFORMED REINFORCING BARS LOW-ALLOY-STEEL ASTM A706, DEFORMED

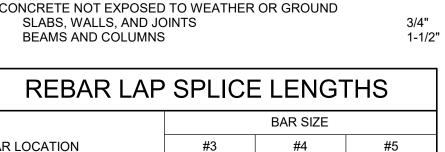
ASTM C260

1-1/2"

(WELDABLE) REINFORCING BARS EPOXY-COATED ASTM A775 WELDED WIRE FABRIC ASTM A1064

AIR ENTRAINMENT

- EPOXY-COATED WELDED WIRE FABRIC ASTM A884, CLASS A COATING 6. REINFORCING SHALL COMPLY WITH ACI FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT, AND THE FOLLOWING BAR SPLICE LOCATIONS SHALL CONFORM TO ACI 318
- HORIZONTAL REINFORCING BARS IN WALLS AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS. UNLESS DETAILED CALCULATIONS ARE PROVIDED, REINFORCING BARS
- DEVELOPMENT LENGTHS, EMBEDMENT DEPTHS AND LAP SPLICE DISTANCES FOR fc = 4000psi, NORMAL-WEIGHT CONCRETE, SHALL BE PER BELOW 7. EMBEDDED AND MISCELLANEOUS STEEL SHALL COMPLY WITH ASTM A36. 8. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4" AT 45 DEGREES
- UNLESS NOTED OTHERWISE 9. SHALLOW INTERIOR FOUNDATIONS AND SLABS ON GRADE ARE NOT DESIGNED FOR OR INTENDED TO BE EXPOSED TO FREEZE/THAW CYCLING OR RESIST FROST HEAVE FORCES. GENERAL CONTRACTOR TO COORDINATE CONSTRUCTION AND PROVIDE INTERIOR FOOTINGS BELOW FROST PENETRATION AS REQUIRED FOR WINTER CONSTRUCTION.
- 10. PROVIDE WALL AND SLAB THRU-SLEEVE PLAN SUBMITTALS FOR REVIEW OF STRUCTURAL ENGINEER OF RECORD PRIOR TO PLACING CONCRETE. 11. CORE-DRILLING CONCRETE WALLS, SLABS, BEAMS OR COLUMNS WITHOUT
- REINFORCING LOCATION SCANS AND PRIOR APPROVAL OF STRUCTURAL ENGINEER OF RECORD SHALL NOT BE PERMITTED. 12. CONDUITS AND PIPES SHALL NOT BE EMBEDDED IN ELEVATED CONCRETE SLABS SUPPORTED BY METAL DECK OR CONCRETE SLABS ON GRADE.
- 13. NON-SHRINK GROUT SHALL CONFORM TO ASTM C1107 AND ACHIEVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 8,000 psi. 14. STRUCTURAL ADHESIVES SHALL ONLY BE USED WITH PRIOR PERMISSION OF THE STRUCTURAL ENGINEER OF RECORD OR AS SHOWN ON CONSTRUCTION
- DOCUMENTS. THE BASIS OF DESIGN FOR ADHESIVES IS HY-200 BY "HILTI" OR SET BY "SIMPSON" - THE USE OF ANY OTHER STRUCTURAL ADHESIVES SHALL BE SUBJECT TO REVIEW BY THE EOR PRIOR TO INSTALLATION. 15. MINIMUM WIRE WELDED FABRIC REQUIREMENTS FOR SLABS
- 4" FLOOR SLAB ON GRADE 5" FLOOR SLAB ON GRADE 44-W4 0xW4 0 16. COLD-WEATHER CONCRETE PLACEMENT SHALL COMPLY WITH THE PROVISIONS OF ACI 306R. THE USE OF CALCIUM CHLORIDE, SALT, AND OTHER MATERIALS CONTAINING ANTI- FREEZE AGENTS OR CHEMICAL ACCELERATORS SHALL NOT
- BE PERMITTED UNLESS ACCEPTED IN THE MIX DESIGN. 17. HOT-WEATHER CONCRETE PLACEMENT SHALL COMPLY WITH THE PROVISIONS OF
- 18. MINIMUM CONCRETE CLEAR COVER SHALL BE PROVIDED FOR REINFORCEMENT PER ACI AND THE FOLLOWING:
- CONCRETE CAST AGAINST EARTH & PERMANENTLY CONCRETE EXPOSED TO EARTH OR WEATHER
- #6 & LARGER #5 & SMALLER CONCRETE NOT EXPOSED TO WEATHER OR GROUND SLABS, WALLS, AND JOINTS



REBAR LAP SPLICE LENGTHS									
				BAR SIZE					
BAR LOCATION	#3		#4			#5			
	ld	ls	ldh	ld	ls	ldh	ld	ls	ldh
VERT. & HORIZ. WALL BARS	20"	25"	8"	25"	33"	10"	32"	41"	12"
FOOTING TOP BARS	20"	25"	8"	25"	33"	10"	32"	41"	12"
FOOTING BOTTOM BARS	15"	19"	8"	19"	25"	10"	24"	31"	12"
				BA	AR SIZ	ZE			
		#6		#7			#8		
	ld	ls	ldh	ld	ls	ldh	ld	ls	ldh
VERT. & HORIZ. WALL BARS	38"	50"	15"	55"	71"	17"	62"	81"	19"
FOOTING TOP BARS	38"	50"	15"	55"	71"	17"	62"	81"	19"
FOOTING BOTTOM BARS	29"	38"	15"	42"	54"	17"	47"	62"	19"
1 30 THO DOTTOW BAILO		00	10	72	J-T	17	T1	02	13

 VALUES ABOVE ARE FOR NORMAL WEIGHT CONCRETE ONLY. • Ia = MINIMUM TENSION DEVELOPMENT LENGTH

### I<sub>dh</sub> = MINIMUM 90 DEGREE HOOKED BAR DEVELOPMENT LENGTH • I<sub>s</sub> = MINIMUM LENGTH OF LAP SPLICES IN TENSION CONCRETE MIX DESIGN CRITERIA

O O NOTICE TE WINK BESTON ON THE NUMBER OF THE PROPERTY OF THE					•
	EXPOSURE CLASS	MAX. w/c RATIO	MIN. f'c	AIR CONTENT	CEMENT TYPE
FOOTINGS AND FOUNDATION WALLS	F1,S0,W0,C1	0.55	3,500	5%	l or II
INTERIOR SLABS ON GRADE	F0,S0,W0,C1	0.50	4,000	N/A	l or II
INTERIOR ELEVATED SLABS	F0,S0,W0,C1	0.50	4,000	N/A	l or II
EXTERIOR SLABS	F3,S0,W0,C2	0.40	5,000	6%	l or ll

## **CONCRETE MASONRY**

- 1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF TMS 402/ACI 530/ASCE 5: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES LATEST EDITION.
- 2. THE OWNER SHALL ENGAGE A TESTING AND INSPECTION AGENCY TO PERFORM THE SPECIAL INSPECTIONS REQUIRED BY THE SCHEDULE OF SPECIAL

CONFORMING TO ASTM C476 WITH A MINIMUM GROUT STRENGTH OF 3,000 PSI AT 28

- 3. HOLLOW MASONRY UNITS SHALL BE GRADE N-1 CONFORMING TO ASTM C-90, UNLESS NOTE OTHERWISE WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI (MASONRY ASSEMBLY  $F'_m = 2,000 PSI$ ). 4. ALL FILL FOR MASONRY WALLS SHALL BE PEA GRAVEL CONCRETE OR GROUT
- DAYS. FILL SHALL BE PLACED IN 5'-0" LIFTS IN ACCORDANCE TO INTERNATIONAL MASONRY INSTITUTE GUIDELINES AND ACI 530.1 / ASCE 6 FOR LOW LIFT GROUTING. 5. ALL MORTAR SHALL BE TYPE "M" CONFORMING TO ASTM C270 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS. 6. ALL MORTAR FOR MASONRY OTHER THAN VENEER SHALL BE PORTLAND CEMENT LIME MORTAR, NOT MASONRY CEMENT.
- 7. VERTICAL WALL REINFORCING SHALL BE INTERMEDIATE GRADE DEFORMED BARS OF NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60. 8. JOINT REINFORCING SHALL BE 0.148" RODS MIN. CONFORMING TO ASTM A-951. 9. ALL MORTAR JOINTS IN MASONRY WALLS (HORIZONTAL AND VERTICAL) SHALL BE
- FULL MORTAR BEDDING 10. ALL SECTIONS OF BEARING WALLS HAVING A HORIZONTAL PLAN DIMENSION OF 2'-0" OR LESS SHALL BE OF SOLID (CONCRETE FILLED) MASONRY CONSTRUCTION FOR
- THE FULL HEIGHT OF THE WALL SECTION. 11. PROVIDE A MINIMUM OF ONE COURSE OF SOLID BLOCK UNDER ALL JOIST AND SLAB BEARING ENDS FOR THE FULL WIDTH OF THE WALL, UNLESS NOTED OTHERWISE.
- 12. BRACE AND SHORE ALL NEW MASONRY WALLS AS REQUIRED UNTIL ROOF AND FLOOR DECKS HAVE BEEN COMPLETELY INSTALLED. 13. THE TOP OF ALL MASONRY WALLS SHALL BE BRACED TO THE STEEL FRAMING. SEE
- TYPICAL DETAILS ON FRAMING SECTIONS AND DETAIL DRAWINGS. 14. BACKFILL AGAINST MASONRY WALLS SHALL BE PLACED AT EQUAL HEIGHTS ON EACH SIDE OF WALL UP TO FINAL GRADE.
- 15. QUALITY ASSURANCE PROGRAM TO BE PROVIDED PER SECTION 3.1 OF TMS 402/ACI 16. FILL ALL BLOCK CORES SOLID FROM FOUNDATION TO SLAB ON GRADE. 17. BOND BEAMS WITH HORIZONTAL REINFORCEMENT NOT LESS THAN (2) #5 REBAR SHALL BE PROVIDED CONTINUOUSLY AT STRUCTURALLY CONNECTED ROOF AND

FLOOR LEVELS, AT THE TOP OF WALLS, AT THE BOTTOM OF WALLS OR IN THE TOP

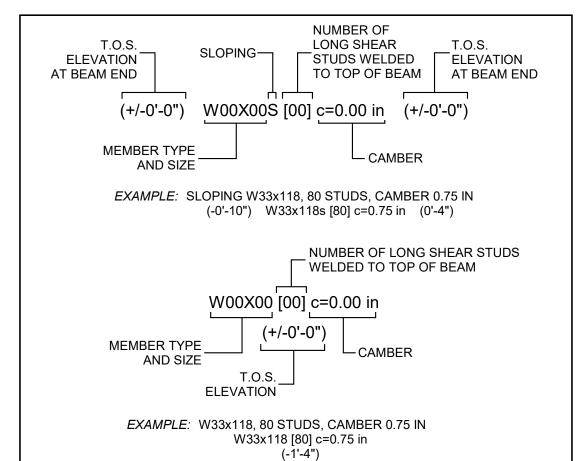
- OF THE FOUNDATION WHEN DOWELING INTO THE WALL. 18. ALL MASONRY WORK TO BE EXECUTED IN HOT OR COLD WEATHER SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS FOR COLD WEATHER CONSTRUCTION FOUND IN TMS 402/ACI 530 WITH THE FOLLOWING ADDITIONS: FOR ALL CONDITIONS WHEN TEMPERATURES FALL BELOW 40 DEGREES F, THE TEMPERATURE OF THE NEWLY LAID MASONRY OR NEWLY GROUTED MASONRY SHALL BE MAINTAINED ABOVE 30 DEGREES F FOR A MINIMUM OF 24 HOURS USING
- THE METHODS DESCRIBED IN TMS 402/ACI 530. 19. UNLESS NOTED OTHERWISE ON THE DRAWINGS OR IN THE SPECIFICATIONS, THE FOLLOWING MINIMUM REINFORCING SHALL BE USED. ALL CORES WITH REINFORCING SHALL BE GROUTED SOLID.

LOCATION	REINFORCING
BENEATH STEEL BEAMS	(2) #5 BARS - (1) PER CORE
BENEATH STEEL OR CONCRETE LINTELS	(1) #5 BAR
INTERIOR NON-LOAD BEARING WALLS VERTICAL HORIZONTAL CORNERS, EA. SIDE OF EA. OPENING, ENDS OF WALLS, EA. SIDE OF EXPANSION/CRACK CONTROL JOINTS	#4 BARS @ 48" o.c. JOINT REINFORCING @ 16" o.c (1) #5 BAR
TOP OF WALL, BOTTOM AND TOP OF EA. OPENING	(1) #5 BAR - EXTEND 24" OR 40 BAR DIAMETERS PAST OPENII

- 1. DESIGN, FABRICATION AND ERECTION OF THE STRUCTURAL STEEL SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS, EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE SHOWN: AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", INCLUDING THE "COMMENTARY" AND SUPPLEMENTS THERETO AS ISSUED AISC "SPECIFICATIONS FOR ARCHITECTURALLY EXPOSED STRUCTURAL
- AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A-325 OR
- AMERICAN WELDING SOCIETY (AWS) D1.1 "STRUCTURAL WELDING CODE-AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
- ACI 318-"BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" 2. THE OWNER SHALL ENGAGE A TESTING AND INSPECTION AGENCY TO PERFORM THE SPECIAL INSPECTIONS REQUIRED BY THE SCHEDULE OF SPECIAL INSPECTIONS.
- 3. ALL CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR'S ENGINEER FOR THE FORCES INDICATED. ALL FORCES NOTED ON THE DRAWINGS ARE ASD VALUES. DESIGN CALCULATIONS SHALL BE SUBMITTED AS PER THE SHOP DRAWING NOTES AND SPECIFICATIONS.
- 4. STEEL MATERIALS SHALL BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS WIDE FLANGE STEEL SHAPES **ASTM A-992**  OTHER ROLLED STEEL SHAPES ASTM A-36 HSS (TUBULAR SHAPES ) ASTM A-500 GRADE B
- ASTM A-53. TYPE E OR S, GRADE B STEEL PIPE BOLTS ASTM F3125, GRADE F1852, TYPE 1 ANCHOR RODS ASTM F1554 GR36 ASTM A29, TYPE A SHEAR STUDS
- 5. SEAMS OF HSS SECTIONS SHALL BE MADE WITH CONTINUOUS FULL PENETRATION BUTT WELDS. 6. MEMBERS INDICATED AS AESS STEEL ON THE PLANS SHALL CONFORM TO THE SPECIFICATIONS FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL.
- CONTRACTOR SHALL VERIFY WITH ARCHITECT IF MOCK UPS ARE REQUIRED BEFORE PROCEEDING WITH FABRICATION AND / OR ERECTION. 7. PROVIDE CONTINUOUS MINIMUM SIZED FILLET WELDS PER AISC. FILLER MATERIALS SHALL HAVE A MINIMUM YIELD STRENGTH OF 58 KSI. EXPOSED WELDS SHALL BE
- GROUND SMOOTH 8. ALL EXTERIOR EXPOSED STRUCTURAL STEEL SHALL BE GALVANIZED UNLESS

MEMBERS SHALL BE PAINTED WITH A SHOP PRIMER UNLESS NOTED OTHERWISE.

- NOTED OTHERWISE. 9. STRUCTURAL STEEL SURFACE PREPARATION SHALL CONFORM TO SSPC-SP3.
- 10. SHOP AND FIELD HOLES SHALL BE PUNCHED OR DRILLED. 11. GENERAL CONTRACTOR SHALL VERIFY ALL ROOFTOP EQUIPMENT SIZES, WEIGHTS AND LOCATIONS AND COORDINATE FRAMING FOR EQUIPMENT AND ROOF PENETRATION OPENINGS WITH THE STEEL FABRICATOR AND M.E.P. CONTRACTOR



### STEEL JOISTS

INSPECTIONS.

- 1. OPEN WEB K. KCS. LH AND DLH SERIES JOISTS SHALL BE DESIGNED. FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD SPECIFICATIONS AND LOAD TABLES" AS ADOPTED BY THE STEEL JOIST INSTITUTE. 2. DESIGN OF JOISTS SHALL BE BY MANUFACTURER'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. ALL SUBMISSIONS SHALL BEAR THIS ENGINEER'S SEAL
- AND SIGNATURE. 3. THE OWNER SHALL ENGAGE A TESTING AND INSPECTION AGENCY TO PERFORM THE SPECIAL INSPECTIONS REQUIRED BY THE SCHEDULE OF SPECIAL
- 4. STANDARD ROOF JOISTS HAVE BEEN DESIGNED FOR ADDITIONAL SNOW LOADS UTILIZING THE EQUIVALENT UNIFORM LOADING METHOD. 5. JOISTS DESIGNATED AS SPECIAL JOISTS (SPXX), DUE TO NON-UNIFORM LOAD CONDITIONS SHALL BE DESIGNED FOR THE SPECIAL LOADS INDICATED AT A SPECIFIC LOCATION IN ADDITION TO THE UNIFORM LOADS SPECIFIED. THE SPECIAL JOIST SIZES INDICATED ON PLAN ARE THE MINIMUM SIZES REQUIRED AS

DETERMINED BY S.J.I. PROCEDURES FOR EVALUATING NON-UNIFORM LOAD

SPECIAL JOISTS. SEE DRAWINGS FOR JOIST LOADING DIAGRAMS 6. JOIST MANUFACTURER SHALL SPACE JOISTS PER DIMENSIONS ON THESE CONTRACT DRAWINGS. WHERE NO DIMENSIONS ARE PROVIDED JOISTS SHALL BE EQUALLY SPACED BETWEEN COLUMN CENTERLINES. ALL STEEL JOISTS SHALL BE ERECTED AT SPACING INDICATED ON REVIEWED JOIST SHOP DRAWINGS.

CONDITIONS. THE JOIST SUPPLIER SHALL BE RESPONSIBLE FOR FINAL DESIGN OF

- REFER TO "SJI" SPECIFICATIONS FOR REQUIRED JOIST BRIDGING. 8. BRIDGING SHALL BE WELDED OR BOLTED AND ANCHORED AT END WALLS OR BEAMS. 9. EXTEND BOTH BOTTOM CHORD ANGLES OF JOISTS AT COLUMN CENTERLINES TO 1"
- OF FACE OF COLUMN. 10. STEEL JOISTS SHALL BE DESIGNED AND INSTALLED TO RESIST THE UPLIFT LOADS AS INDICATED WITHIN THE DESIGN LOADS. JOIST SUPPLIER SHALL PROVIDE ADDITIONAL JOISTS BRIDGING AT THE FIRST PANEL POINT AS REQUIRED TO RESIST THE WIND UPLIFT LOADS SPECIFIED IN THE DESIGN LOAD CRITERIA. 11. GENERAL CONTRACTOR SHALL VERIFY ALL ROOFTOP EQUIPMENT SIZES, WEIGHTS AND LOCATIONS AND COORDINATE FRAMING FOR EQUIPMENT AND ROOF PENETRATION OPENINGS WITH THE JOIST FABRICATOR AND M.E.P. CONTRACTOR. 12. MECHANICAL EQUIPMENT NOT SHOWN ON THESE STRUCTURAL DRAWINGS SHALL
- NOT BE PLACED DIRECTLY ON THE JOISTS WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER. 13. NO LOAD EXCEEDING 100 POUNDS SHALL BE HUNG FROM THE JOISTS UNLESS THE LOAD IS APPLIED WITHIN 6 INCHES OF A PANEL POINT OR THE JOIST IS PROPERLY STRENGTHENED. ALL COSTS ASSOCIATED WITH JOIST STRENGTHENING SHALL BE
- INCLUDED IN THE CONTRACTOR'S BID. 14. PROVIDE BOLTED ERECTION CONNECTION FOR JOIST CLOSEST TO THE CENTERLINE OF STEEL COLUMNS.
- 15. STEEL JOISTS SHALL BE SHOP PAINTED WITH AN APPROVED CORROSION RESISTANT PRIMER.

### METAL DECK

- 1. METAL DECK SHALL BE DESIGNED, DETAILED, AND FABRICATED IN ACCORDANCE WITH THE "ROOF DECK DESIGN MANUAL" AND "FLOOR DECK DESIGN MANUAL" OF THE STEEL DECK INSTITUTE, LATEST EDITION. COMPOSITE STEEL FLOOR DECK
- SHALL BE IN CONFORMANCE WITH THE "STANDARD FOR COMPOSITE STEEL FLOOR DECK" OF THE STEEL DECK INSTITUTE, LATEST EDITION. THE OWNER SHALL ENGAGE A TESTING AND INSPECTION AGENCY TO PERFORM THE SPECIAL INSPECTIONS REQUIRED BY THE SCHEDULE OF SPECIAL
- INSTALL IN ACCORDANCE WITH SDI SUGGESTED SPECIFICATIONS UNLESS NOTED OTHERWISE ON THE DRAWINGS. INDIVIDUAL DECK SHEETS SHALL BE MINIMUM THREE SPAN CONTINUOUS. WITH LAPS TO BE PLACED OVER SUPPORTS. 4. METAL DECK PROPERTIES ARE BASED ON PRODUCTS MANUFACTURED BY
- VULCRAFT, INC. DECKS BY OTHER MANUFACTURER'S MAY BE SUPPLIED PROVIDED LOAD CARRYING CAPACITY BASED ON MANUFACTURER'S STANDARD LOAD TABLES, DEFLECTION CHARACTERISTICS, AND UL FIRE RATINGS EQUAL TO OR EXCEEDING THOSE OF MATERIALS SPECIFIED AND IF APPROVED BY THE PRIME PROFESSIONAL AND STRUCTURAL ENGINEER. METAL DECK SUPPLIER SHALL PROVIDE ADDITIONAL REINFORCEMENT FOR ALL ADDITIONAL FRAMING, CLOSURE ANGLES AND PLATES, POUR STOPS, SCREED
- ANGLES, AND ROOF SUMP PANS AS REQUIRED AT THE EDGES OF ALL ROOF AND FLOOR OPENINGS AND AT ALL SLAB DEPRESSIONS OR CHANGES OF DECK DIRECTION PER SECTION AND DETAIL DRAWINGS. INCLUDING THOSE WHICH HAVI NOT BEEN DETAILED. COORDINATE SIZE, LOCATION, AND QUANTITY OF OPENINGS WITH M.E.P. CONTRACTOR THROUGH GENERAL CONTRACTOR.
- SEE DECK ATTACHMENT SCHEDULE FOR DECK ATTACHMENT REQUIREMENTS. 7. NO MECHANICAL OR ELECTRICAL PIPING, FIXTURES, AND UNITS OR SYSTEMS MAY BE HUNG DIRECTLY FROM THE ROOF DECK.
- 8. METAL DECK SHALL BE DESIGNED AND INSTALLED TO RESIST UPLIFT LOADS AS INDICATED WITHIN THE DESIGN LOADS. 9. METAL DECK UNITS 22 GAGE AND LIGHTER SHALL BE WELDED TO THE SUPPORTING STEEL FRAMING WITH WELDING WASHERS, AS REQUIRED AND SPECIFIED BY THE DECK MANUFACTURER. WASHERS SHALL BE SPACED IN ACCORDANCE WITH THE

11. STEEL DECK SUPPLIER SHALL SUBMIT SHOP DRAWINGS.

METAL DECK MANUFACTURER'S RECOMMENDATIONS. ALL WELDS AND BURN AREAS SHALL BE CLEANED AND PAINTED WITH AN APPROVED PRIMER. 10. PRIOR TO AND DURING CONCRETE PLACEMENT, THE FLOOR DECK SHALL BE PLANKED TO PREVENT DAMAGE TO THE DECK. CONCENTRATED AND IMPACT LOADS SHALL BE AVOIDED.

12. PROVIDE FLEXIBLE RUBBER CLOSURES BETWEEN FLUTES OF METAL DECKING AND

GOVERNING DESIGN CODE			
2018 INTERNATIONAL BUILDING CODE			
ASCE 7-16, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURE			
BUILDING RISK CATEGORY	III		

DESIGN FLOOR LIVE LOADS	
CLASSROOMS	40 PSF
CORRIDORS ABOVE FIRST FLOOR	80 PSF
MECHANICAL UNIT LOADS	SEE MECH DWGS
HANDRAILS, GUARDS AND GRAB BARS	PER 1607.8

DESIGN DEAD LOADS - NOT INCL. STRUCTURE SELF WEIGHT FLOOR 15 PSF

SEISMIC DESIGN DATA					
SEISMIC IMPORTANCE FACTOR (Ie)	1.25				
MAPPED SPECTRAL ACCELERATION (Ss)	0.153				
MAPPED SPECTRAL ACCELERATION (S1)		0.046			
SITE CLASS	D (ASSUMED				
DESIGN SPECTRAL RESPONSE COEFF. (Sds)	0.163				
DESIGN SPECTRAL RESPONSE COEFF. (Sd1)	0.074				
SEISMIC DESIGN CATEGORY	В				
ANALYSIS PROCEDURE	EQUIV. LATER	RAL FORCE			
SEISMIC FORCE RESISTING SYSTEM	CANTILEVERE SYSTEMS	ED COLUMN			
DESIGN BASE SHEAR (V)	2.3 KIPS				
RESPONSE MODIFICATION COEFF. (R)					
SEISMIC RESPONSE COEFF. (Cs)	0.163				

### ADDITIONAL NOTES:

- a. THE CONTRACTOR IS CAUTIONED AS TO NOT STORE ANY CONSTRUCTION MATERIALS OR UNDERTAKE ANY CONSTRUCTION OPERATION WILL EXCEED THE DESIGN LIVE LOAD CAPACITIES NOTED.
- b. THE STRUCTURE HAS BEEN DESIGNED FOR THE DEAD AND LIVE LOADS INDICATED ABOVE, ANY INCREASE OF LOADS DUE TO CHANGE IN USAGE OR CONSTRUCTION MATERIALS, ETC. SHALL HAVE THE WRITTEN APPROVAL OF THE ENGINEER.
- c. THE STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF THE ROOFS. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR THE METHODS OF CONSTRUCTION AND SHALL PROVIDE ALL GUYS, BRACING AND SHORING REQUIRED TO

ACCOMMODATE ALL INTERIM LOADING CONDITIONS THROUGHOUT

THE CONSTRUCTION PHASE. d. WEIGHT OF EQUIPMENT SHOWN ON THE STRUCTURAL DRAWINGS HAVE BEEN CONSIDERED IN THE DESIGN OF THE FRAMING. ANY ADDITIONAL EQUIPMENT NOT SHOWN ON THE STRUCTURAL DRAWINGS AND EXCEEDING 300 POUNDS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

## **SHOP DRAWINGS**

- 1. DUPLICATION/PHOTOCOPYING OF THESE STRUCTURAL DRAWINGS SHALL NOT BE PERMITTED FOR SHOP DRAWINGS. THIS INCLUDES PARTIAL AND/OR COMPLETE DUPLICATION OF PLAN SHEETS AS BACKGROUNDS FOR SHOP DRAWINGS. ALL SECTIONS INCLUDED IN THESE CONTRACT DRAWINGS MAY NOT BE
- DUPLICATED/PHOTOCOPIED ON ANY SHOP DRAWINGS. . ORIGINAL SHOP DRAWINGS SHALL BE SUBMITTED FOR THE ARCHITECT/ENGINEER REVIEW FOR THE FOLLOWING ITEMS AND AS PER THE SPECIFICATIONS: a. CONCRETE AND MASONRY REINFORCING b. CONCRETE MIX DESIGNS FOUNDATIONS
- ELEVATED SLABS SLAB ON GRADE LISTING FIBER MESH REINFORCEMENT & DOSAGE RATE c. MASONRY CERTIFICATIONS AND GROUT DESIGN d. STEEL JOIST AND DECKING
- e. STRUCTURAL STEEL CONTRACTOR SHALL SUBMIT, FOR REVIEW, DRAWINGS AND CALCULATIONS FOR ALL PERFORMANCE ASSEMBLIES IDENTIFIED IN THE GENERAL NOTES AND SPECIFIC MATERIAL NOTES AS WELL AS LISTED BELOW. THE DESIGN OF THESE ASSEMBLIES IS THE RESPONSIBILITY OF THE CONTRACTOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. ALL SUBMITTALS SHALL BEAR THIS ENGINEER'S SEAL AND SIGNATURE. REVIEW SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT REQUIREMENTS AS INDICATED ON THE DRAWINGS AND IN THE GENERAL

ABBREVIATION LIST

LLH

LLV

LSH

LSV

O.C.

T.F.

TYP

Long Leg Horizontal

Long Side Horizontal

Long Leg Vertical

Long Side Vertical

N.T.S. Not To Scale

REINF. Reinforcing

REM. To Remain S.F. Step Footing

Plate

STIFF PL Stiffener Plate

T.B.R. To Be Removed

T&B Top and Bottom

T.O.S. Top of Steel

T.O.W. Top of Wall

T.P. Top of Pier

VERT. Vertical

V.I.F. Verify In Field

Typical

WWF Welded Wire Fabric

XE Extended End - Type R

Top of Footing

U.N.O. Unless Noted Otherwise

On Center

A.F.F. Above Finish Floor BCX Bottom Chord Extension

B.O.F. Bottom of Footing

CANT. Cantilever

CJ Control Joints

CONT. Continuous

DIA. Diameter

E.E. Each End

E.S. Each Side

E.W. Each Way

F.F. Finish Floor

F.S. Flat Strap

GALV Galvanized

HORIZ Horizontal

Angle

GA Gage

EXIST Existing

E.F. Each Face

B.S. Both Sides (sections)

Center Line

DBA Deformed Bar Anchor

B.S. Brick Shelf Elevation (plans)

CMU Concrete Masonry Units

HSS Hollow Structural Section



I REPORTS PLANS SPECIFICATIONS AND COMPLITER FILES RELATING TO THIS CRABTREE ROHRBAUGH & ASSOCIATES RETAINS ALL COMMON LAW. STATUTE AN F THE MATERIAL HEREIN OR SUBSTANTIAL USE WITHOUT WRITTEN PERMISSION OF NITED STATES AND WILL BE SUBJECT TO LEGAL PROSECUTION. CRABTREE, ROHRBAUGH & ASSOCIATES, INC 2019

REVISIONS MM-DD-YR NAME DESCRIPTION OF CHANGES

**M** 

GENERAL NOTES AND LOADS

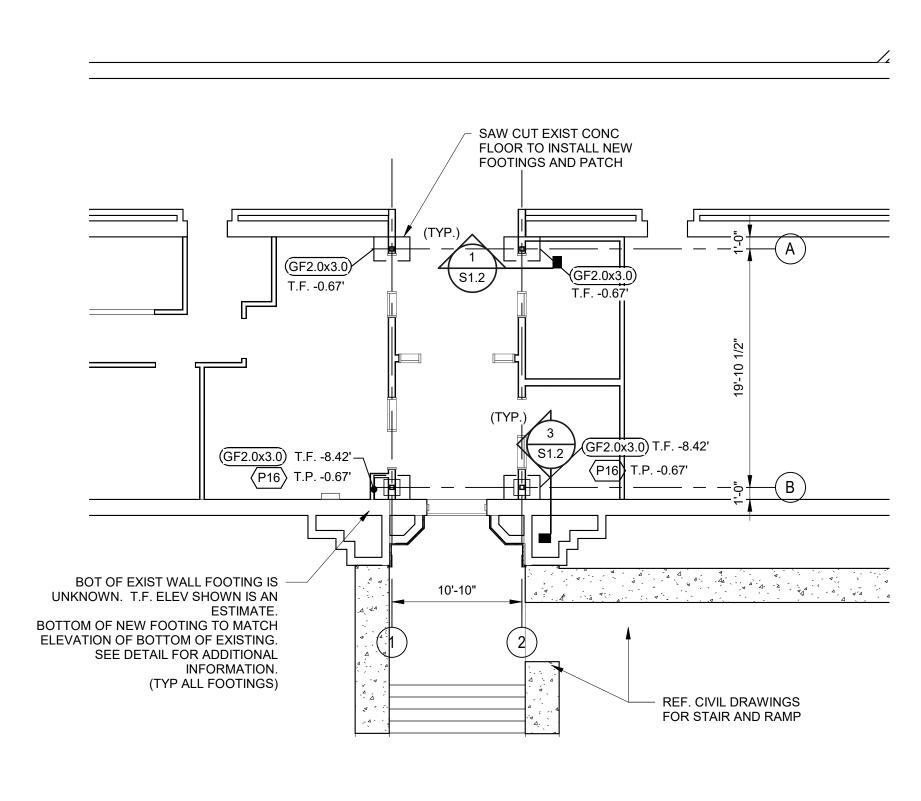
As indicated

FILENAME:

02/09/2024

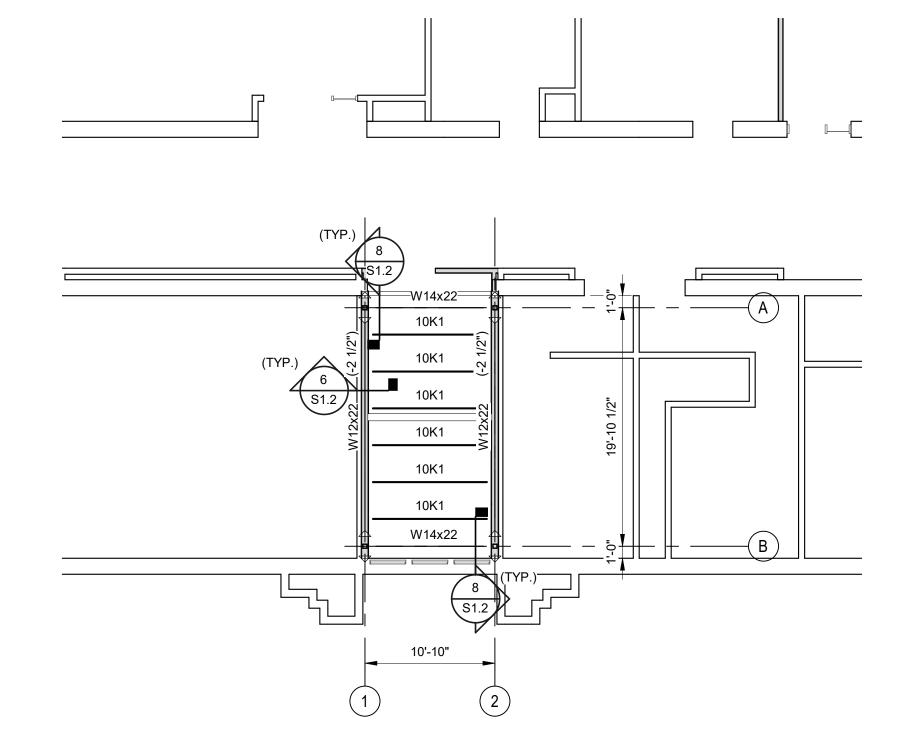
3378.1

**PROJECT** 



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

1. FINISH FLOOR ELEVATION = 0'-0"



Partial Second Floor Framing Plan

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

- NOTES:

  1. FINISH FLOOR ELEVATION (U.N.O.): 14'-0"

  2. TOP OF STEEL ELEVATION (U.N.O.): 13'-8"

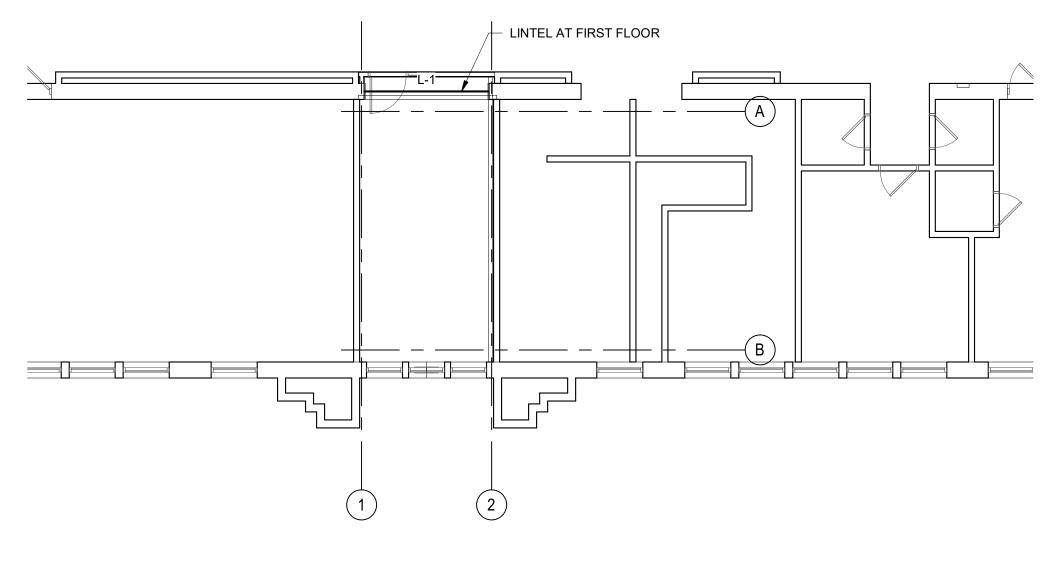
  3. VARIATIONS IS TOP OF STEEL ELEVATION (T.O.S.) SHALL BE NOTES AS (+/- 0'-0")

  4. PROVIDE CONTINUOUS L4x4x1/4" ANGLE AT ALL SLAB EDGES AND OPENINGS, UNLESS NOTED OTHERWISE. SLAB EDGE ANGLE MUST OVERLAP FLOOR FRAMING BY A MINIMUM OF 2".

  5. SECOND FLOOR DECK TO BE AS FOLLOWS:

   4" CONCRETE ON 1-1/2" COMPOSITE METAL DECK.
- PROFILE: VLI THICKNESS: 20 GA.
- FINISH: GALVANIZED - SLAB REINFORCEMENT: 66-W2.9xW2.9 - MAX FRAMING SPACING = 3'-0"





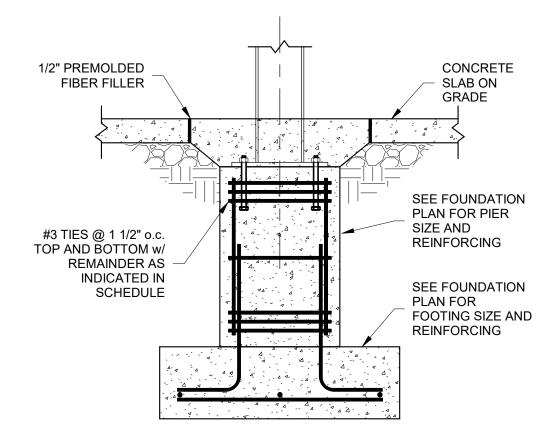
<sup>3</sup> Partial Plan - Lintels S1.1 SCALE: 1/8" = 1'-0"



T.P. \*\*\*.\*\*' Top of Pier Marker T.F. \*\*\*.\*\*' Top of Footing Marker Pier Size Marker Column Footing Size Marker

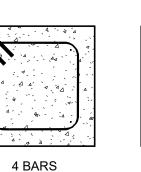
Steel Symbol Legend Denotes Beam to Column Cantilever Moment Connection to be Designed by Fabricator for Forces Indicated N Denotes Beam Cantilever - Beam to Extend over top of Column.Moment

Connection to be Designed by Fabricator for Forces Indicated



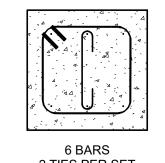
Typical Pier Detail SCALE: N.T.S

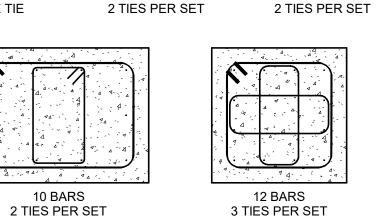
Schedule - Square Concrete Pier VERTICAL BARS (2) #3 @ 12" o.c.



10 BARS

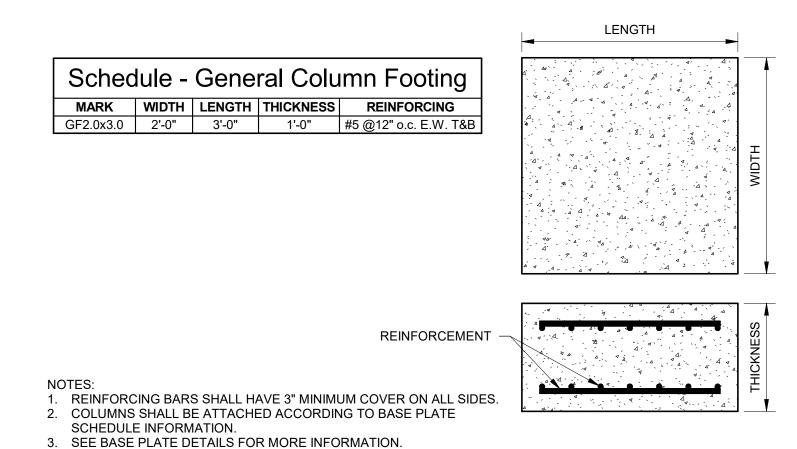
SINGLE TIE



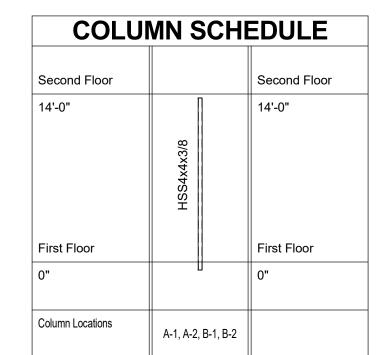


1. ALL TIE SIZES TO BE (3) - #3 BARS AT 1 1/2" o.c. (T&B) REMAINDER @ 12" o.c. 2. SEE FOUNDATION PLAN FOR PIER SIZES

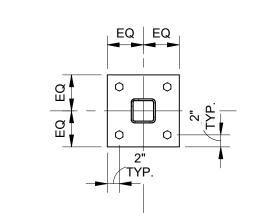
Square and Rectangular Concrete Pier Schedule SCALE: N.T.S



Column Footing Schedule Detail

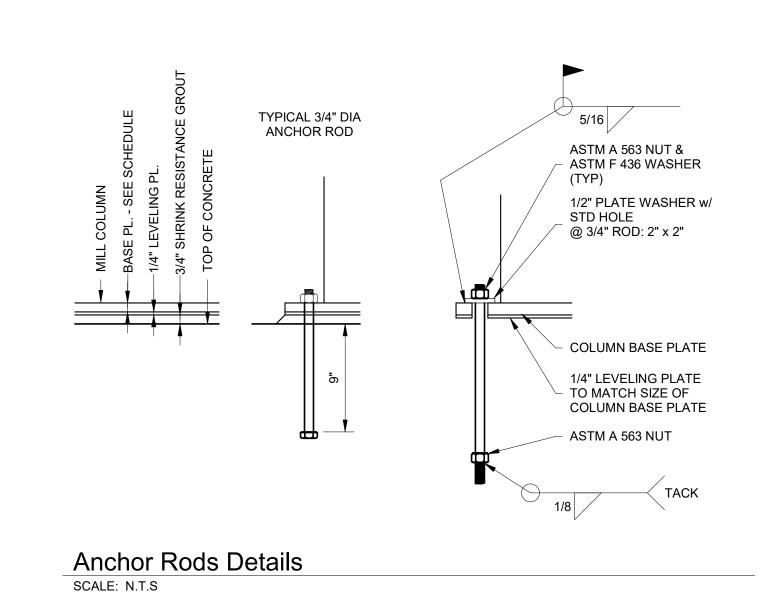


A-1	HSS4x4x3/8	Base Plate : Type 1
A-2	HSS4x4x3/8	Base Plate : Type 1
B-1	HSS4x4x3/8	Base Plate : Type 1
B-2	HSS4x4x3/8	Base Plate : Type 1



BASE PL. TYPE 1 COLUMN: HSS4x4 BASE PLATE: 12x12x3/4" ANCHOR RODS: 3/4" DIA.

Base Plate Types SCALE: N.T.S



TION NOT

610.398.0904

barryisett.com

ALL REPORTS, PLANS SPECIFICATIONS AND COMPUTER FILES RELATING TO THIS PROJECT ARE THE PROPERTY OF CRABTREE, ROHRBAUGH & ASSOCIATES.

CRABTREE ROHRBAUGH & ASSOCIATES RETAINS ALL COMMON LAW, STATUTE AND OTHER RESERVED RIGHTS INCLUDING THE COPYRIGHT THERETO. REPRODUCTION

OF THE MATERIAL HEREIN OR SUBSTANTIAL USE WITHOUT WRITTEN PERMISSION OF CRABTREE, ROHRBAUGH & ASSOCIATES VIOLATES THE COPYRIGHT LAWS OF THE UNITED STATES AND WILL BE SUBJECT TO LEGAL PROSECUTION.

© CRABTREE, ROHRBAUGH & ASSOCIATES, INC 2019

REVISIONS 01 MM-DD-YR NAME DESCRIPTION OF CHANGES

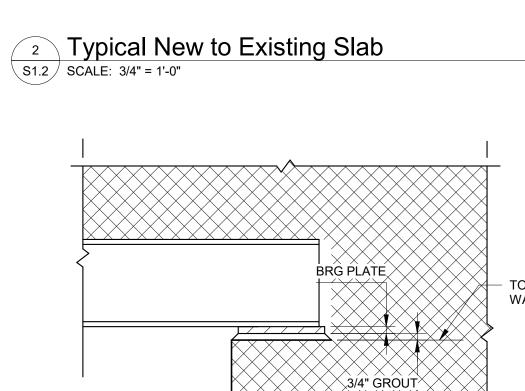
ARC

**PROJECT** FOUNDATION AND FRAMING 3378.1 PLOT SCALE: As indicated FILENAME:

02/09/2024

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS FOR THE ENTIRE PROJECT BEFORE PROCEEDING WITH THE WORK.

# Typical Interior Column Footing at Exist S1.2 | SCALE: 3/4" = 1'-0"



NOTE: DOWELS ARE NOT REQUIRED IF BOTH SLABS

BEAR 4" MIN ON A FOUNDATION WALL OR

NEW CONCRETE SLAB

W.W.F.

SEE NOTES.

1/2" DIA. x 18" LONG

SMOOTH DOWELS @

24" o.c. - EPOXY INTO

EXISTING SLAB AND

CONCRETE

**GREASE END INTO NEW** 

EXIST CONCRETE

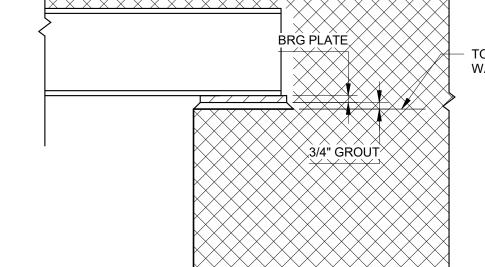
SAWCUT EXISTING SLAB -

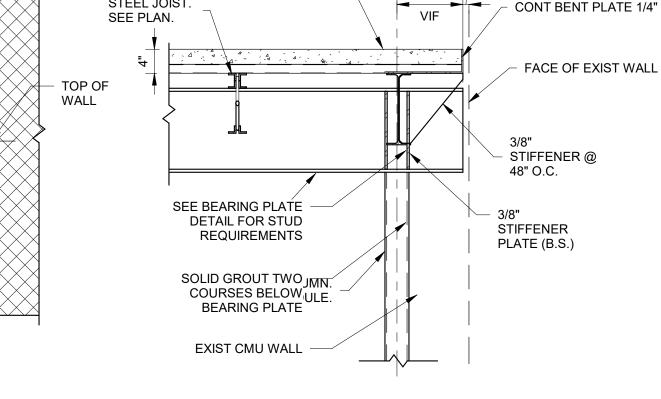
(SIKADUR 32 HI-MOD OR

OLD CONCRETE TO NEW

PROVIDE BONDING AGENT

APPROVED EQUAL) TO BOND





SEE PLAN

Typical Detail Of New Footing Adjacent

**EXISTING** WALL AND FOOTING

DOWEL - EPOXY

3 To Existing

S1.2 / SCALE: 3/4" = 1'-0"

STEEL JOIST.

GROUT INTO

**EXISTING** 

FOOTING

MATCH BOTTOM OF NEW

FOOTING w/ BOTTOM OF

FLOOR SLAB ON DECK.

SEE PLAN.

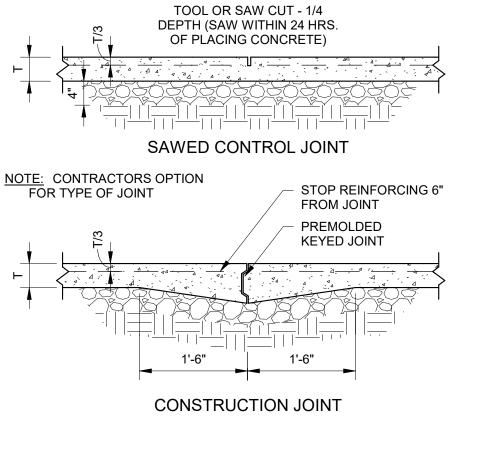
**EXIST FOOTING** 

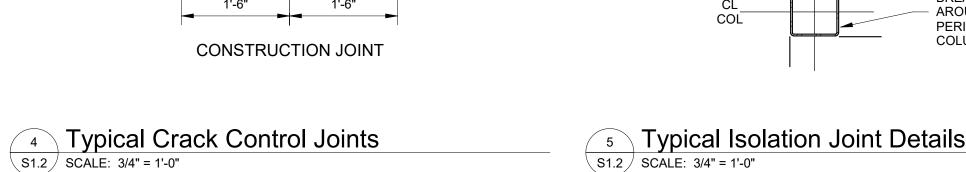
COL & BASE PLATE

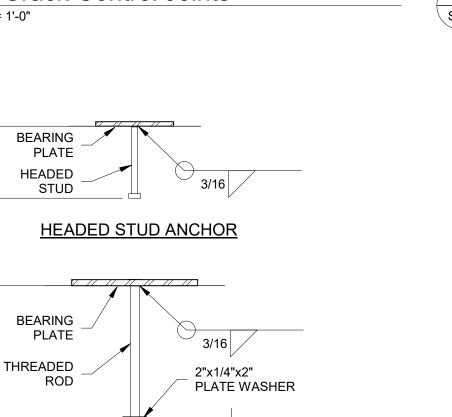
SEE PLAN FOR

REINFORCEMENT









9 Typical Bearing Plate Anchorage
S1.2 SCALE: N.T.S

THREADED ROD ANCHOR

TACK

# 3 5/8" (V.I.F.) $\mathbf{Q}$ BEAM FLOOR SLAB ON DECK. SEE PLAN. L4x4x1/4 CONT NOTES:

1. JOIST CONNECTION TO BEAM SHALL BE BY THE JOIST MANUFACTURER. PROVIDE SLOTTED HOLES FOR BOLTED CONNECTIONS. STRUCTURAL STEEL FABRICATOR TO COORDINATE BOLTED CONNECTION LOCATIONS WITH JOIST MANUFACTURER.

Typical Single Joist Bearing on Beam
S1.2 SCALE: 3/4" = 1'-0"

# GENERAL LINTEL SCHEDULE FOR MASONRY PARTITIONS AND MECHANICAL WALL OPENINGS

7 Typical Lintel Bearing On Exist CMU S1.2 SCALE: 3/4" = 1'-0"

MARK	NOMINAL WALL WIDTH	MASONRY OPENING	DETAIL	LINTEL
(L)	6" WALLS	4'-0" OR LESS	т	(2) L3x2 1/2x1/4
(L)	8" WALLS	6'-0" OR LESS	Т	(2) L5x3 1/2x5/16
(L)	8" WALLS	6'-0" UP TO 8'-0"	1	(2) L6x3 1/2x5/16
(L)	8" WALLS	8'-0" UP TO 12'-0"	I	W12x22 + 7"x3/8" PL
(L)	10" WALLS	3'-0" OR LESS	Т	(2) L6x3 1/2x3/8
(L)	10" WALLS	3'-0" UP TO 6'-0"	I	W8x21 + 9"x3/8" PL
(L)	10" WALLS	6'-0" UP TO 12'-0"	I	W12x26 + 9"x3/8" PL
(L)	12" WALLS	3'-0" OR LESS	Щ	(3) L5x3 1/2x5/16
(L)	12" WALLS	3'-0" UP TO 6'-0"	I	W8x21 + 11"x3/8" PL
(L)	12" WALLS	6'-0" UP TO 12'-0"	I	W12x26 + 11"x3/8" PL
(L)	16" WALLS	3'-0" OR LESS	I	W8x31 + 15"x3/8" PL
(L)	16" WALLS	3'-0" UP TO 8'-0"	I	W12x40 + 15"x3/8" PL

- COMPLY WITH ALL THE REQUIREMENTS OF THE "CONCRETE MASONRY NOTES". PROVIDE LINTELS FOR ALL ARCHITECTURAL OPENINGS AND MECHANICAL PENETRATIONS GREATER THAN 12" WIDE THROUGH MASONRY WALLS PER LINTEL SCHEDULES. SEE ARCHITECTURAL, MECHANICAL AND OTHER CONTRACT DRAWINGS FOR SIZE AND LOCATION.
- GENERAL CONTRACTOR SHALL COORDINATE THE LOCATION AND ELEVATION OF ALL LINTELS FOR MECHANICAL WORK. ALL MASONRY OPENINGS FOR MECHANICAL WORK WITHIN 2'-0" HORIZONTALLY OF DOOR/WINDOW JAMBS SHALL BE RELOCATED IN THE WALL TO A LOCATION THAT IS EITHER OVER OR UNDER THE WINDOW OPENING. (MECHANICAL OPENINGS SHALL NOT BE LOCATED WITHIN MASONRY PIERS).
- LINTEL PLATES ARE TYPICALLY THE NOMINAL WIDTH OF MASONRY WALL MINUS 1 INCH. 6. IF NOMINAL MASONRY THICKNESS IS NOT SHOWN WITHIN THIS SCHEDULE, USE THE NEXT GREATER WALL THICKNESS. FOR ALL STEEL ANGLE, WIDE FLANGE AND HSS LINTELS: PROVIDE 8" MINIMUM END
- BEARING FOR LINTELS BEARING ON WALL PARALLEL TO LINTEL AND 6" MINIMUM END BEARING FOR LINTELS BEARING ON WALL PERPENDICULAR TO LINTEL (SEE BEARING PLATE SCHEDULE FOR PLATE SIZES). WHERE BEARING IS NOT AVAILABLE DUE TO OTHER STRUCTURAL FRAMING, FRAME LINTEL TO STRUCTURAL FRAMING. 3. ALL 7" WIDE CONTINUOUS PLATES WELDED TO LINTEL MEMBERS SHALL HAVE 3/16" FILLET
- WELDS 3" LONG AT 12" o.c. 9. ALL 11" WIDE (OR GREATER WIDTH) CONTINUOUS PLATES WELDED TO LINTEL MEMBERS
- SHALL HAVE 3/16" FILLET WELDS 6" LONG SPACED AT 12" o.c. 0. ALL LINTELS WITH CONTINUOUS SUSPENDED PLATES SHALL HAVE THOSE PLATES SUSPENDED SUCH THAT THE BOTTOM OF THE LINTEL RESTS ON THE NEAREST COURSING LINE AND THE SUSPENDED PLATE IS A MINIMUM OF 2" IN DEPTH AND A MAXIMUM OF 8" IN DEPTH TO THE BOTTOM OF PLATE. 5/16" HANGERS PLATES SHALL BE ATTACHED TO THE LINTEL AND SUSPENDED PLATE WITH A 3/16" FILLET WELD. THE LAST HANGER PLATE
- SHALL BE NO FURTHER THAN 2" FROM EACH END OF THE SUSPENDED PLATE. 11. ALL CONTINUOUS PLATES WELDED TO LINTEL MEMBERS SHALL BE THE SAME LENGTH OF THE MASONRY OPENING.
- 12. ALL STEEL WIDE FLANGE LINTELS SHALL BE ON THE CENTERLINE OF LOAD BEARING C.M.U. ABOVE LINTEL OR ON COLUMN CENTERLINES. 3. PROVIDE DOWELS THE SAME SIZE AS WALL REINFORCEMENT WELDED TO THE TOP OF ALL WIDE FLANGE AND HSS LINTELS/BEAMS AT THE LESSER OF THE WALL REINFORCING
- 14. ALL LINTEL PLATES IN EXTERIOR WALLS SHALL BE GALVANIZED.

	BEARING PLATE SCHEDULE					
MARK	DETAIL	BEARING PLATE	ANCHORS	REMARKS		
BP - 1		"W" x 3/8" x 1'-0"	(2) 3/4" DIA. x 6" @ 8" o.c. HEADED STUD ANCHORS (SEE DETAIL)	TYPICAL BEAM/LINTEL BEARING PLATE UNLESS NOTED OTHERWISE		
DI - I		"W" x 3/8" x 1'-4"	(2) 3/4" DIA. x 6" @ 8" o.c. HEADED STUD ANCHORS (SEE DETAIL)	TYPICAL BEAM/LINTEL BEARING PLATE UNLESS NOTED OTHERWISE		
BD 2		"W" x 1/2" x 1'-0"	(2) 3/4" DIA. x 6" @ 8" o.c. HEADED STUD ANCHORS (SEE DETAIL)			
BP - 2		"W" x 1/2" x 1'-4"	(2) 3/4" DIA. x 6" @ 8" o.c. HEADED STUD ANCHORS (SEE DETAIL)			
NOTES:						

- BEARING PLATES REQUIRED FOR ALL STEEL BEAMS, LINTELS AND OPEN WEB STEEL JOIST WHICH BEAR ON MASONRY WALLS WITH AN EXCEPTION TO ANGLE LINTELS UNLESS NOTED OTHERWISE. COMPLY WITH ALL THE REQUIREMENTS OF THE "MASONRY WALL LINTEL NOTES" AND "CONCRETE
- BEAM BEARING PLATES SHALL BE "BP-1", UNLESS NOTED OTHERWISE. ALL JOISTS BEARING PLATES SHALL BE "JP-1", UNLESS NOTED OTHERWISE. "W" = WIDTH OF BEARING PLATES SHALL BE THE NOMINAL WIDTH OF THE CMU BELOW MINUS 1 1/2
- PROVIDE A MINIMUM OF (2) COURSES OF SOLID GROUTED MASONRY BELOW BEAM BEARING PLATES, 6. ALL STUDS AND THREADED ROD ANCHORS SHALL BE ASTM A307 OR A36 STEEL. SEE ANCHOR DETAILS THIS DRAWING.

INDEPENDENT OF MASONRY WALLS. WELDING OF BOTH ENDS OF BEAMS AND LINTELS TO BEARING

thickness

- PROVIDE 1/2" NON-SHRINK GROUT UNDER BEARING PLATES WITH LOOSE THREADED ROD ANCHORS. PROVIDE NON-SHRINK GROUT IN VOIDS UNDER BEARING PLATES WITH WELDED STUDS OR ROD ANCHORS THAT ARE BEARING ON MASONRY THAT WAS CONSTRUCTED UNEVENLY. PROVIDE 3000 PSI PEA GRAVEL CONCRETE FILL AROUND ALL ANCHORS.
- 10. WELD ALL JOISTS, BEAMS AND LINTELS TO PLATES WITH A MINIMUM OF 2" LONG 1/8" FILLET WELDS FOR K-SERIES JOISTS, (2) 2" LONG - 1/4" FILLET WELDS FOR LH AND DLH-SERIES JOISTS AND (2) 2" LONG - 1/4" FILLET WELDS FOR STEEL BEAMS, UNLESS NOTED OTHERWISE. 1. ALL STEEL BEAMS AND LINTELS SHALL BE WELDED TO METAL BEARING PLATES AT ONE END ONLY DURING WINTER CONSTRUCTION TO ALLOW FREE EXPANSION AND CONTRACTION OF THE STEEL

PLATES SHALL OCCUR AFTER TEMPERATURES HAVE STABILIZED.

**Schedule - Masonry Bearing Wall Steel Lintel** Coordinate PL with wall thickness Coordinate PL with wall

1 1/2" VLI	36" COVERAGE	
36/7 PATTERN 36/5 PATTERN 36/4 PATTERN 36/3 PATTERN		

Schedule - Deck Fastening				
TYPE	DECK FASTENING			
Concrete on 1 1/2" mposite Metal Deck	5/8" Puddle Welds in 36/4 Pattern; #10 Side Lap Fasteners @ 12" max o.c.			

Deck Fastening Schedule

Bear	n Conne Sche	ection V edule	alues
SIZE	VERTICAL (kips)	MIN. ROWS OF BOLTS	MOMENT (ft-kips)
W12	12.0	2	20.0
W14	14.0	3	N/A

1. UNLESS INDICATED OTHERWISE ON THE PLANS BEAM END CONNECTIONS SHALL BE DESIGNED FOR THE REACTIONS INDICATED 2. BOLT DIAMETER SHALL BE 3/4" MINIMUM. 3. ALL CONNECTIONS SHALL HAVE A MINIMUM

OF (2) ROWS OF BOLTS, AND AS INDICATED

FOR BIDDING PURPOSES. STRUCTURAL STEEL SHALL BE DEFINED TO INCLUDE MISCELLANEOUS STEEL ITEMS (I.E. ANGLES, LINTELS, AND OTHER SUCH ITEMS) AS DEFINED IN THE AISC "CODE OF STANDARD PRACTICE" SECTION 2, ARTICLES 2.1 AND 2.2, WHETHER SHOWN ON CIVIL, ARCHITECTURAL, STRUCTURAL, PLUMBING, HVAC OR ELECTRICAL BID DOCUMENTS. BIDDERS SHALL REFER TO ALL BID DOCUMENTS AND INCLUDE THESE ITEMS IN THEIR BID.



OR

ŭ

0

Z

CONTROL

PREMOLDED

JOINT FILLER

INSTALL BOND

PERIMETER OF

BREAKER

AROUND

COLUMN

ALL AROUND

CONTROL

- JOINT

(TYP)

CRABTREE ROHRBAUGH & ASSOCIATES RETAINS ALL COMMON LAW, STATUTE AND OTHER RESERVED RIGHTS INCLUDING THE COPYRIGHT THERETO. REPRODUCTION OF THE MATERIAL HEREIN OR SUBSTANTIAL USE WITHOUT WRITTEN PERMISSION OF CRABTREE, ROHRBAUGH & ASSOCIATES VIOLATES THE COPYRIGHT LAWS OF THE UNITED STATES AND WILL BE SUBJECT TO LEGAL PROSECUTION.
© CRABTREE, ROHRBAUGH & ASSOCIATES, INC 2019

REVISIONS 01 MM-DD-YR NAME DESCRIPTION OF CHANGES

ARC

4

ROHRB

**DETAILS & SCHEDULES** As indicated FILENAME:

02/09/2024

**PROJECT** 

3378.1