GENERAL NOTES

1. ALL STRUCTURAL WORK SHALL BE COORDINATED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND SHALL CONFORM TO THE PROJECT SPECIFICATIONS, INCLUDING THE 2020 NEW YORK STATE BUILDING CODE, INCORPORATING THE 2018 IBC & 2018 IEBC. ALL GOVERNING STANDARDS LISTED IN THESE NOTES SHALL BE THE EDITION REFERENCED IN THIS GOVERNING CODE.
2. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING, BRACING, AND SHEETING AND SHALL MAKE SAFE ALL FLOORS, ROOFS, WALLS, AND ADJACENT PROPERTY AS PROJECT CONDITIONS REQUIRE. SHORING AND SHEETING SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE PROJECT JURISDICTION, HIRED BY THE CONTRACTOR, WHO SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR THE OWNER'S REVIEW.
3. DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION GIVEN IN STRUCTURAL DRAWINGS ARE BASED ON INFORMATION CONTAINED IN VARIOUS ORIGINAL DESIGN AND CONSTRUCTION DOCUMENTS PROVIDED BY THE OWNER, AND LIMITED FIELD OBSERVATIONS AND MEASUREMENTS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PERTAINING TO EXISTING CONDITIONS BY ACTUAL MEASUREMENT AND OBSERVATION AT THE SITE. ALL DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN IN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER OF RECORD FOR EVALUATION BEFORE THE AFFECTED CONSTRUCTION IS PUT IN PLACE.
4. THE CONTRACT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. THESE NOTES HIGHLIGHT RATHER THAN REPLACE THE SPECIFICATIONS CONTAINED IN THE PROJECT MANUAL.

FOUNDATIONS

1. BUILDING FOUNDATIONS SHALL BEAR ON UNDISTURBED SOIL HAVING A MINIMUM BEARING CAPACITY OF 5000 PSF. ADEQUACY OF BEARING STRATUM SHALL BE VERIFIED IN FIELD PRIOR TO PLACING CONCRETE. ALL NECESSARY ADJUSTMENTS TO THE BOTTOM OF FOOTINGS TO BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
2. DO NOT PLACE BACKFILL AGAINST BASEMENT WALLS UNTIL ALL FLOORS BRACING THESE WALLS ARE IN PLACE AND HAVE ATTAINED THEIR 28-DAY STRENGTH.
3. ALL EXTERIOR FOOTINGS SHALL BE PLACED A MINIMUM OF 4' - 0" BELOW FINAL GRADE.
4. CONCRETE SHALL BE POURED IN DRY EXCAVATIONS. CONTRACTOR SHALL NOTE SOIL AND WATER CONDITIONS AS SHOWN BY BORINGS INCLUDED IN THE REFERENCED GEOTECHNICAL SUBSURFACE INVESTIGATION REPORT(S) AND DEPTHS OF FOOTING AS SHOWN ON FOUNDATION PLANS.

CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE FOLLOWING GOVERNING STANDARDS:
   A. AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR CONCRETE" (ACI 318)
   B. ACI "MANUAL OF CONCRETE PRACTICE", LATEST EDITION
   C. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE"
2. ALL INTERIOR CONCRETE COMPOSITE ON METAL DECK SHALL BE LIGHT WEIGHT CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED. THIS CONCRETE SHALL BE CATEGORIZED TYPE F0, C0, S0, AND W0 PER ACI 318-14 TABLE 19.3.1.1.
3. ALL OTHER CONCRETE (INCLUDING EXTERIOR CONCRETE, EXPOSED-TO-WEATHER CONCRETE, AND EXTERIOR CONCRETE COMPOSITE ON METAL DECK) SHALL CATEGORIZED TYPE F3, C2, S1, AND W1 PER ACI 318-14, TABLE 19.3.1.1, AND SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED. ALL OTHER INTERIOR CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM COMPRESSIVE STREGNTH OF 4,500 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED. 1
4. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60 OR A775 EPOXY COATED WHEN CALLED OUT ON PLAN. REINFORCING STEEL SHALL BE DETAILED ACCORDING TO THE ACI "DETAILS AND DETAILING OF REINFORCEMENT" (ACI 315).
5. REINFORCING STEEL TO BE WELDED TO CONFORM TO ASTM A706 GRADE 60.
6. COORDINATE SIZE AND LOCATION OF ALL OPENINGS AND PIPE SLEEVES WITH ALL OTHER DISCIPLINES. MINIMUM CONCRETE BETWEEN SLEEVES SHALL BE 6".
7. ALL GROUT SHALL BE NONSHRINK WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI.
8. MINIMUM CONCRETE COVER FOR REINFORCING STEEL IN CAST-IN-PLACE NON-PRESTRESSED MEMBERS SHALL BE AS FOLLOWS:
   A. ALL CONCRETE CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND: 3"
   B. ALL CONCRETE EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
      a. 2" (#6 THROUGH #18 BARS)
      b. 1-1/2" (#5 BAR, W31 OR D31 WIRE, AND SMALLER)
   C. NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
      a. SLABS, JOISTS, AND WALLS:
         - 1-1/2" (#14 THROUGH #18 BARS)
         - 3/4" (#11 BAR AND SMALLER)
      b. BEAMS, COLUMNS, PEDESTALS, AND TENSION TIES (STIRRUPS, TIES, SPIRALS, HOOPS, AND PRIMARY REINFORCEMENT): 1-1/2"
9. SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. NO CONCRETE WORK SHALL COMMENCE WITHOUT APPROVED SHOP DRAWINGS.
10. CLEAN AND ROUGHEN TO 1/4" AMPLITUDE ALL EXISTING CONCRETE SURFACES TO RECEIVE NEW CONCRETE PRIOR TO PLACEMENT.
11. SEE OTHER DRAWINGS IN THIS PROJECT FOR SIZE AND LOCATIONS OF EQUIPMENT PADS, INSERT AND EMBED ITEMS.
12. REINFORCING DOWELS, WATER STOPS, AND OTHER EMBED ITEMS SHALL BE INSTALLED AND SECURED PRIOR TO CONCRETE PLACEMENT. "WET-SETTING" OF EMBEDDED ITEMS IS NOT PERMITTED.
13. WELDED WIRE REINFORCEMENT IN COMPOSITE CONSTRUCTION SHALL HAVE TENSION SPLICES AND BE ANCHORED AT DISCONTINUOUS EDGES.
14. SEE CONCRETE SPECIFICATION 030136 FOR PATCHING AND INFILL OF EXISTING CONCRETE.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE FOLLOWING GOVERNING STANDARDS:
   A. AISC 360 "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS".
   B. AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
   C. AMERICAN WELDING SOCIETY (AWS D1.1) "STRUCTURAL WELDING CODE - STEEL".
   D. RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
   A. WIDE FLANGE BEAMS, COLUMNS, AND STRUCTURAL TEES: ASTM A992.
   B. HOLLOW STRUCTURAL SECTIONS: ASTM A500, GRADE C.
   C. CHANNELS, ANGLES, AND PLATES: ASTM A36 UNLESS OTHERWISE NOTED.
   D. BOLTED CONNECTIONS SHALL BE PER ASTM F3125. GRADES ARE TO BE SELECTED AS FOLLOWS:
      a. STANDARD BEAM TO BEAM/GIRDER: ASTM F3125, GRADES A325, F1852, A490 OR F2280 BOLTS IN SNUG-TIGHTENED JOINTS (3/4" DIAMETER MINIMUM WITH HARDENED WASHERS).
      b. BEAM/GIRDER TO COLUMN CONNECTIONS, COLUMN SPLICES AND BOLTS EXPERIENCING TENSION LOADS (UNLESS OVERSIZED OR SLOTTED HOLES ARE USED, IN WHICH CASE SLIP-CRITICAL JOINTS SHALL BE USED): ASTM F3125, GRADES A325, F1852, A490 OR F2280 BOLTS IN PRETENSIONED JOINTS (3/4" DIAMETER MINIMUM WITH HARDENED WASHERS).
      c. MOMENT CONNECTIONS AND BRACED FRAME CONNECTIONS: ASTM F3125, GRADES A325, F1852, A490 OR F2280 BOLTS IN SLIP CRITICAL JOINTS (3/4" DIAMETER MINIMUM WITH HARDENED WASHERS). FAYING SURFACES SHALL BE CLASS A UNLESS OTHERWISE NOTED.
      d. PER AISC 341, ALL BOLTS SHALL BE INSTALLED AS PRETENSIONED HIGH STRENGTH BOLTS AND MEET THE REQUIREMENTS FOR SURFACE PREPARATION FOR SLIP CRITICAL CONNECTIONS WITH CLASS A SLIP COEFFICIENT OR HIGHER. THE AVAILABLE SHEAR STRENGTH OF BOLTED JOINTS USING STANDARD HOLES SHALL BE CALCULATED AS THAT FOR BEARING TYPE JOINTS.
   E. ANCHOR RODS: ASTM F1554, GRADE 36.
3. STEEL CONNECTION SHALL BE STANDARD AISC FRAMED BEAM CONNECTIONS, AND SHALL BE DESIGNED BY A LICENSED ENGINEER WORKING FOR THE FABRICATOR, WHO SHALL PROVIDE CALCULATIONS, UTILIZING LRFD LOADS AND PROCEDURES.
   A. UNLESS OTHERWISE NOTED ON PLAN, PROVIDE CONNECTIONS BASED ON MINIMUM SHEAR CAPACITY REQUIREMENTS IN THE FOLLOWING TABLE.

MINIMUM SHEAR CAPACITY REQUIREMENTS	
BEAM DEPTH (NOMINAL)	MIN. SHEAR CAPACITY LRFD (Kips)
8", 10"	24
12", 14"	42
16"	62
18"	78
21"	88
24", 27"	108
30"	126
33"	142
36"	155
40"+	165

   B. REINFORCING IS TO BE PROVIDED AT CONNECTIONS WHERE CUTS REDUCE THE SHEAR OR MOMENT CAPACITY BELOW THAT REQUIRED TO SUSTAIN THE REACTION. FLANGES AND WEBS ARE TO BE REINFORCED WHERE THE LOCAL CAPACITY TO SUSTAIN CONNECTION LOADS ARE INADEQUATE.
   C. CONNECTIONS SHALL BE DESIGNED FOR SHEAR AND ECCENTRICITY, CONSIDERING THAT THE CONNECTIONS ARE AN EXTENSION OF THE BEAMS AND GIRDERS.
4. MINIMUM WELD SIZE IS 1/4" FILLET UNLESS NOTED OTHERWISE.
5. ALL BEAMS EXCEPT CANTILEVER BEAMS SHALL BE FABRICATED AND INSTALLED WITH NATURAL CAMBER UP. CANTILEVER BEAMS SHALL BE FABRICATED AND INSTALLED SO THAT NATURAL CAMBER RAISES CANTILEVER END.
6. FIELD CUTTING OR BURNING OF STEEL IS PROHIBITED EXCEPT WITH THE EXPRESS WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD. (IN WHICH CASE ALL BURNING OF STEEL MUST CONFORM TO THE THERMAL CUTTING REQUIREMENTS OF AISC AND AWS)
7. WELDING SHALL BE PERFORMED BY CERTIFIED, AWS-QUALIFIED WELDERS. WELDING ELECTRODES FOR CARBON STEEL SHALL BE AWS 5.1, CLASS E70XX. FOR ASTM A572 GRADE 50 KSI PLATE USE ELECTRODE E7018 OR APPROVED EQUAL.
8. SHOP PAINT EXTERIOR EXPOSED STEEL MEMBERS, STEEL MEMBERS NOT ENCASED IN CONCRETE OR SPRAY FIREPROOFED, AND ALL STEEL MEMBERS AT THE EXTERIOR WALL WITH TNEMEC #10-99 "OR APPROVED EQUAL EXCEPT FOR MEMBERS TO BE HOT DIPPED GALVANIZED.
9. ALL EXTERIOR EXPOSED STEEL AND STEEL SUPPORTING EXTERIOR SHALL BE HOT DIP GALVANIZED. HOT DIP GALVANIZING SHALL CONFORM TO ASTM A123, REPAIR SCRATCHES OR ABRAIDED GALVANIZED SURFACE WITH ZINC RICH PAINT.
10. LINTELS SHALL BE INSTALLED OVER ALL OPENINGS IN MASONRY WALLS AS FOLLOWS:

MASONRY LINTELS	LINTEL
4'-0" OR LESS	L4x3-1/2x5/16 LLV
4'-1" to 7'-0"	L6x3-1/2x5/16 LLV

   A. 3-1/2" LEGS ARE HORIZONTAL.
   B. PROVIDE ONE ANGLE FOR EACH 4" OF WALL THICKNESS.
   C. PROVIDE L5x5x5/16 ANGLES FOR 6" THICK WALLS AND PARTITIONS WITH OPENINGS UP TO 6' - 0".
   D. PROVIDE MINIMUM 6" BEARING AT EACH END.
   E. LINTELS OVER 6' - 4" SHALL BE FIREPROOFED.
11. SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. NO FABRICATION OF STEEL SHALL COMMENCE WITHOUT APPROVED SHOP DRAWINGS.
12. PROVIDE MECHANICALLY GALVANIZED BOLTS FOR EXTERIOR APPLICATIONS.

STEEL DECK

1. STEEL DECKING WORK SHALL CONFORM TO THE AISI NORTH AMERICAN "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."
2. STEEL DECKING UNITS AND ACCESSORY ITEMS SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A1008 OR A653 WITH A MINIMUM YIELD STRENGTH OF 33,000 PSI. BEFORE FORMING, THE STEEL SHEET SHALL RECEIVE A HOT DIP GALVANIZED COATING CONFORMING TO ASTM A653, GRADE 90.
3. STEEL DECKING SHALL BE SHORED AS REQUIRED BY PLANS OR BY SPAN AND LOAD CONDITIONS TO SUPPORT WET WEIGHT OF CONCRETE AND ALL CONSTRUCTION LOADS. SEE S6.01 FOR MAXIMUM UNSHORED SPAN INFORMATION AND STEEL DECK BASIS OF DESIGN.
4. THE SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED BY APPROVED METHOD (TO BE SHOWN ON SHOP DRAWINGS) BETWEEN SUPPORTS, AT INTERVALS TO PROVIDE SUFFICIENT DIAPHRAGM STRENGTH TO MAINTAIN BUILDING ALIGNMENT AND TO SUSTAIN LOCAL CONSTRUCTION LOADS WITHOUT DISTORTION OR SEPARATION, MAXIMUM SPACING SHALL BE 3'-0" BETWEEN SUPPORT BEAMS. END LAPS OF SHEETS SHALL BE A MINIMUM OF 2 INCHES.
5. EXCEPT AS OTHERWISE NOTED, DECK SHALL BE ATTACHED TO STRUCTURAL STEEL BY 3/4"Ø FUSION WELDS @ 12" ON CENTER AT END AND INTERIOR SUPPORTS PERPENDICULAR TO THE DECK SPAN AND AT EDGE AND INTERIOR SUPPORTS PARALLEL TO THE DECK SPAN. WELDS MAY BE OMITTED IN RIBS IN WHICH SHEAR CONNECTORS ARE TO BE APPLIED, EXCEPT THAT EACH DECK SECTION SHALL HAVE SUFFICIENT WELDS TO ADEQUATELY SECURE THE DECK, BRING THE DECK INTO DIRECT CONTACT WITH THE SUPPORTING STEEL AND TO PROVIDE SUFFICIENT DIAPHRAGM STRENGTH TO MAINTAIN BUILDING ALIGNMENT.
6. AS AN ALTERNATE TO PUDDLE WELDS FOR STEEL DECK ATTACHMENT TO STRUCTURAL STEEL, HILTI X-HSN-24 OR X-ENP-19 POWDER ACTUATED FASTENERS, OR AN APPROVED EQUAL, WITH EQUIVALENT OR GREATER CAPACITY TO THE SPECIFIED ATTACHMENT MAY BE USED. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL SUBMIT ALTERNATE FASTENING PATTERN TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL. SUBMITTAL SHALL INCLUDE PROPOSED ALTERNATE PATTERN AND ANY CALCULATIONS OR SUPPORTING MANUFACTURER DATA NEEDED TO DEMONSTRATE THAT THE PATTERN MEETS OR EXCEEDS THE CAPACITY OF THE SPECIFIED ATTACHMENT.
7. POWDER ACTUATED FASTENERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL BE CERTIFIED AND TRAINED BY THE MANUFACTURER'S REPRESENTATIVE ON PROPER USE PRIOR TO INSTALLATION.
8. PRIOR TO FABRICATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE STEEL DECKING SHOWING DECK GAUGE, SIZE, AND LAYOUT AS WELL AS CLOSURE CONDITIONS, WELDS TO SUPPORTS AND SIDE LAP DETAILS.
9. ALL REINFORCED OPENINGS IN STEEL DECK SHALL BE INSTALLED BY STEEL DECK SUBCONTRACTOR. STEEL DECK SUBCONTRACTOR TO PROVIDE REINFORCING AS PER TYPICAL DETAILS.
10. AT STEEL DECK WITHOUT CONCRETE FILL THE FOLLOWING MAY BE ATTACHED WITHOUT SPECIFIC APPROVAL OF THE STRUCTURAL ENGINEER: ACOUSTICAL TILE AND GYPSUM BOARD CEILING ONLY; NO PIPING, DUCTING OR CONDUIT. MAXIMUM CEILING WEIGHT = 3.5 PSF. MAXIMUM WIRE HANGER LOAD = 60 LBS.
11. WHERE SUSPENSION OF HANGER WIRES ARE REQUIRED BY OTHERS, VERIFY AND COORDINATE LOCATIONS, PATTERNS, SPACING, ETC. WITH THE APPROPRIATE TRADE. DRILL OR PUNCH HOLES AT BOTTOM OF DECK FLUTES OF SUFFICIENT SIZE TO PASS SUPPORT WIRES. WIRE SUPPORTS SHALL BE LOOPED AND SECURED WITH A MINIMUM OF THREE (3) TIGHT TURNS AROUND A MINIMUM 1-1/2" x 12" LONG FURRING CHANNEL OR NO. 3x12" LONG REINFORCING BAR CENTERED ABOVE THE HOLE AND LAID IN THE DECK FLUTES.
12. USE OF METAL DECK IS NOT PERMITTED WITH CONCRETE IN EXPOSURE CATEGORY C2 & FE, AS DEFINED BY ACI 318-14, TABLE 19.3.1.1.

POST-INSTALLED ADHESIVE AND MECHANICAL ANCHORS

1. POST INSTALLED ANCHORAGE SHALL BE INSTALLED BY QUALIFIED PERSONNEL PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII), AS INCLUDED IN THE ANCHOR PACKAGING, TO INTACT BASE MATERIAL. INSTALLATION OF ANCHORS SHALL BE CARRIED OUT BY AN INSTALLER TRAINED TO INSTALL THE SPECIFIED ANCHORS. NOTIFY ENGINEER OF RECORD PRIOR TO INSTALLATION IF BASE MATERIAL CONDITION DEVIATES FROM STRUCTURAL DRAWINGS OR ASSUMPTIONS AND CONDITIONS OF THE MPII. ALL HOLES SHALL BE DRY AND HAMMER DRILLED UNLESS OTHERWISE NOTED, AND ALL CONCRETE BASE MATERIAL TO RECEIVE ADHESIVE ANCHORS SHALL HAVE A MINIMUM AGE OF 21 DAYS.
2. INSTALLATION OF ADHESIVE ANCHORS IN A HORIZONTAL OR UPWARDLY INCLINED ORIENTATION AND SUPPORTING A SUSTAINED TENSION LOAD SHALL BE PERFORMED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR APPROVED EQUAL. PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS PROVIDE OWNER AND ENGINEER OF RECORD WITH DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL HORIZONTAL OR UPWARDLY INCLINED ADHESIVE ANCHORS SUPPORTING SUSTAINED TENSION LOADS ARE TRAINED AND CERTIFIED.
   A. OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING THE PISTON PLUG SYSTEM SPECIFIED BY THE MPII AND PRODUCED BY THE CORRESPONDING MANUFACTURER FOR THE ANCHOR SYSTEM BEING INSTALLED.
3. EXISTING REINFORCING BARS IN THE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. REINFORCING BARS SHALL NOT BE CUT WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD. UNLESS NOTED ON THE DRAWINGS THAT THE EXISTING REBARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS BY A MEANS APPROVED BY THE ENGINEER OF RECORD.
4. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS, PROXIMITY OF ANCHORS TO EDGE OF CONCRETE, AND EMBEDMENT DEPTH INTO THE SUBSTRATE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING, EDGE CLEARANCES, AND EMBEDMENT DEPTHS INDICATED ON THE DRAWINGS.
5. UNLESS OTHERWISE INDICATED, POST INSTALLED ANCHORAGE SHALL BE ADHESIVE TYPE HILTI HIT-HY 200-R INTO CONCRETE OR HILTI HIT-HY 270 INTO BRICK MASONRY, GROUT FILLED CMU OR UNGROUTED CMU BASE MATERIAL. PROVIDE MESH SCREEN IN UNGROUTED CMU, UNREINFORCED MASONRY CONSTRUCTION, AND BRICK MASONRY WITH HOLES OR VOIDS.
6. SUBSTITUTION REQUESTS FOR ALTERNATE ANCHORAGE PRODUCTS SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO USE. THIS SHALL INCLUDE MANUFACTURER PRODUCT DATA AND CALCULATIONS DEMONSTRATING THAT THE PROPOSED SUBSTITUTE CAN ACHIEVE THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY THE MANUFACTURER OR SUCH OTHER METHOD AS APPROVED BY THE ENGINEER OF RECORD. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC-ES EVALUATION REPORT SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE, SEISMIC USE, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF MPII. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE AND MUST PROVIDE INFORMATION ON THESE ITEMS. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE ENGINEER OF RECORD PRIOR TO USE.

SPECIAL INSPECTIONS (BCNYS 2020)

1. INSPECTIONS REQUIRED BY THE LOCAL JURISDICTION SHALL BE PERFORMED BY A TESTING AGENCY PROVIDED BY THE OWNER FOR THE FOLLOWING ITEMS:
   A. INSPECTION OF FABRICATORS (IBC 1704.2.5)
   B. STEEL CONSTRUCTION (IBC 1705.2)
      a. STRUCTURAL STEEL (IBC 1705.2.1)
         1. STRUCTURAL STEEL WELDING (AISC 360, AWS D1.1)
         2. HIGH STRENGTH BOLTS (AISC 360)
   C. CONCRETE CONSTRUCTION (IBC 1705.3, TABLE 1705.3)
      a. WELDING OF REINFORCING BARS (IBC 1705.3.1, TABLE 1705.3)
      b. MATERIALS TESTS (IBC 1705.3.2, TABLE 1705.3)
      c. POST-INSTALLED ANCHORS (IBC TABLE 1705.3, ACI 318 CHAPTER 17)
   D. SOILS (IBC 1705.6, TABLE 1705.6)
   E. FABRICATED ITEMS (IBC 1705.10)
2. STRUCTURAL OBSERVATIONS REQUIRED BY THE LOCAL JURISDICTION AND IBC 1704.5 SHALL BE PERFORMED BY A REGISTERED DESIGN PROFESSIONAL PROVIDED BY THE OWNER. STRUCTURAL OBSERVATIONS SHALL BE THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.
3. TESTING AGENCY FOR THE INSPECTIONS SHALL FILE ALL APPROPRIATE FORMS WITH THE BUILDING DEPARTMENT.

STANDARD ABBREVIATIONS

ADD'L	ADDITIONAL
ADJ.	ADJACENT
A/E	DESIGN TEAM OF RECORD
ALT.	ALTERNATE
ANCH.	ANCHOR
APPROX.	APPROXIMATE/APPROXIMATELY
ARCH.	ARCHITECT/ARCHITECTURAL
BLDG.	BUILDING
BM.	BEAM
B.O.	BOTTOM OF
BOT.	BOTTOM
BRG.	BEARING
BSMT.	BASEMENT
CANT.	CANTILEVER
CFS	COLD FORMED STEEL
C.I.P.	CAST IN PLACE
C.J.	CONTRACTION JOINT
CLG.	CEILING
CLR.	CLEAR
CMU	CONCRETE MASONRY UNIT
COL.	COLUMN
COMP.	COMPOSITE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
COORD.	COORDINATE/COORDINATION
CONTR.	CONTRACTOR
COTR	CONTRACT OFFICER'S TECHNICAL REPRESENTATIVE
CTR.	CENTER
DBL.	DOUBLE
DEMO	DEMOLITION/DEMOLISH
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
D.L.	DEAD LOAD
DN.	DOWN
DTL.	DETAIL
DWG(S)	DRAWING(S)
DWL.	DOWEL
EA.	EACH
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMBED.	EMBEDMENT
E.O.	EDGE OF
ENGR.	ENGINEER
E.O.R.	ENGINEER OF RECORD
EQ.	EQUAL
E.S.	EACH SIDE
E.W.	EACH WAY
EXP.	EXPANSION
EXT.	EXTERIOR
FDN.	FOUNDATION
FIN.	FINISH
FLR.	FLOOR
FRMG.	FRAMING
F.S.	FAR SIDE
FT.	FEET
FTG.	FOOTING
GA.	GAGE
GALV.	GALVANIZED
G.B.	GRADE BEAM
HDR.	HEADER
HGR.	HANGER
HORIZ.	HORIZONTAL
H.P.	HIGH POINT
HT.	HEIGHT
HVAC	HEATING, VENTILATION, & AIR CONDITIONING
I.D.	INSIDE DIAMETER
I.F.	INSIDE FACE
I.J.	ISOLATION JOINT
INFO	INFORMATION
INT.	INTERIOR
JT.	JOINT
K	KIP
LB.	POUND
L.L.	LIVE LOAD
LLBB	LONG LEGS BACK-TO-BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
L.P.	LOW POINT
L.W.	LIGHTWEIGHT
L.W.	LONG WAY
MAS.	MASONRY
MAX.	MAXIMUM
MECH.	MECHANICAL
MEP	MECH., ELECT., PLUMBING, & FIRE PROTECTION
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MPII	MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS
N.F.	NEAR FACE
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
N.W.	NORMAL WEIGHT
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OPNG.	OPENING
OPP.	OPPOSITE
PC.	PIECE
P/C	PRECAST
PED.	PEDESTAL
PERP.	PERPENDICULAR
PL.	PLATE
PLF	POUNDS PER LINEAR FOOT
PREFAB.	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
P-T	POST-TENSIONED
REINF.	REINFORCE(D)/REINFORCEMENT
REQ'D	REQUIRED
REV.	REVISION
SCHED.	SCHEDULE
SECT.	SECTION
S.I.F.	STEP IN FOOTING
SLBB	SHORT LEGS BACK-TO-BACK
SIM.	SIMILAR
S.O.G.	SLAB ON GRADE
SPEC.	SPECIFICATION
SQ.	SQUARE
S.S.	STAINLESS STEEL
STD.	STANDARD
STIFF.	STIFFENER
STL.	STEEL
S.W.	SHORT WAY
SYM.	SYMMETRIC
T & B	TOP & BOTTOM
TEMP.	TEMPORARY/TEMPERATURE
THK.	THICK(NESS)
T.O.	TOP OF
TR.	TRANSFER
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W/	WITH
W.P	WORK POINT
W.W.R.	WELDED WIRE REINFORCEMENT
#	NUMBER/SIZE
Ø	DIAMETER

STANDARD ABBREVIATIONS FOR EXISTING STRUCTURES

C.I.	CAST IRON
(E)	EXISTING MEMBER OR DIMENSION
EXIST.	EXISTING
T.C.	TERRA COTTA
U-P	UNDERPINNING
V.I.F.	VERIFY IN FIELD

STANDARD ABBREVIATIONS FOR WOOD STRUCTURES

NO.	NUMBER
N.S.	NEAR SIDE
ACT.	ACTUAL
GLULAM	GLUE LAMINATED TIMBER
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
NOM.	NOMINAL
PSL	PARALLEL STRAND LUMBER
P.T.	PRESERVATIVE TREATED
R.O.	ROUGH OPENING
SQ.	SQUARE
T&G	TONGUE & GROOVE

STRUCTURAL DELEGATED DESIGN

1. THE FOLLOWING SCOPE ITEMS ARE DELEGATED DESIGN ELEMENTS. FOR EACH ITEM NOTED HERE, PROVIDE DRAWINGS AND CALCULATIONS SIGNED/SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK FOR ARCHITECT AND ENGINEER REVIEW. DESIGN SHALL CONFORM TO THE LOADS AND STANDARDS PER THE STRICTEST OF THE REQUIREMENTS NOTED ON THESE DRAWINGS, CONTRACT SPECIFICATIONS, AND THE APPLICABLE BUILDING CODE
   A. STRUCTURAL STEEL CONNECTIONS
   B. STRUCTURAL STEEL BRACED FRAME CONNECTIONS
   C. STRUCTURAL STEEL MOMENT CONNECTIONS

THIS LIST DOES NOT INCLUDE DELEGATED DESIGN ITEMS THAT ARE NOT PART OF THE BASE STRUCTURAL SYSTEM, SUCH AS METAL STAIRS. SEE THE PROJECT SPECIFICATIONS FOR ADDITIONAL DELEGATED DESIGN ITEMS.

THIS LIST DOES NOT INCLUDE UNDERPINNING. SEE SHEET S5.02 FOR UNDERPINNING REQUIREMENTS.

COLD FORMED METAL FRAMING

1. ALL COLD FORMED METAL FRAMING WORK SHALL COMPLY WITH THE AISI NORTH AMERICAN "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", AS WELL AS ANSI A42.4 "SPECIFICATIONS FOR INTERIOR LATHING AND FURRING."
2. ALL PLYWOOD APPLIED TO METAL JOISTS SHALL BE SCREWED AND GLUED TO THE JOISTS. THE ADHESIVE SHALL BE AN APA APPROVED ELASTOMERIC ADHESIVE.
3. INSTALL METAL FRAMING IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS, UNLESS OTHERWISE INDICATED. ALL MATERIALS SHALL BE GALVANIZED.
4. ALL LOAD BEARING STUDS, JOISTS, AND ACCESSORIES SHALL BE MADE OF THE MINIMUM TYPE, SIZE, GAUGE, AND SPACING SHOWN ON DRAWINGS AND PROVEN IN THE CALCULATIONS.
5. SUBMIT SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS FOR ALL LOAD BEARING COLD FORMED METAL FRAMING (JOISTS, STUDS, ETC.) PRIOR TO FABRICATION. SHOP DRAWINGS SHALL INDICATE PLACING OF ALL FRAMING MEMBERS SHOWING TYPE, SIZE, GAGE, NUMBER, LOCATION AND SPACING. THEY SHALL ALSO INDICATE SUPPLEMENTAL STRAPPING, BRACING, SPLICES, BRIDGING, ACCESSORIES AND DETAILS REQUIRED FOR PROPER INSTALLATION. SEE SPECIFICATIONS, LOADING DIAGRAMS AND SCHEDULE FOR STRUCTURAL PERFORMANCE CRITERIA.
6. SHOP DRAWINGS SHALL SHOW SIZE AND LENGTH OF WELDS FOR ALL WELDED CONNECTIONS AND TYPE, SIZE AND NUMBER OF SCREWS FOR ALL SCREWED CONNECTIONS. SUBMIT MANUFACTURER DATA GIVING STRENGTH VALUES FOR ALL FASTENERS USED. WELDED CONNECTIONS SHALL BE WIRE BRUSHED AND COATED WITH A ZINC RICH PAINT.
7. ALL GALVANIZED STUDS AND/OR JOISTS, 10, 12, 14 AND 16 GAGE, SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF ASTM A446, WITH A MINIMUM YIELD OF 50,000 PSI.
8. ALL GALVANIZED 18 AND 20 GAGE STUDS AND/OR JOISTS, AND ALL GALVANIZED TRACK, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF ASTM A653, WITH A MINIMUM YIELD OF 33,000 PSI.
9. ALL STUDS, JOIST AND ACCESSORIES SHALL BE PRIMED WITH RUST - INHIBITIVE PAINT MEETING THE PERFORMANCE REQUIREMENTS OF TT-P-636C, OR SHALL BE FORMED FROM STEEL HAVING A G-60 GALVANIZED COATING.
10. FRAMING COMPONENTS MAY BE PRE-ASSEMBLED INTO PANELS PRIOR TO ERECTING. PREFABRICATED PANELS SHALL BE SQUARE WITH COMPONENTS ATTACHED IN A MANNER AS TO PREVENT RACKING.
11. AXIALLY LOADED STUDS SHALL BE INSTALLED IN A MANNER WHICH WILL ASSURE THE ENDS OF THE STUDS ARE POSITIONED AGAINST THE INSIDE TRACK WEB, PRIOR TO STUD AND TRACK ATTACHMENT.
12. STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED TO THE FLANGES OR WEBS OF BOTH UPPER AND LOWER TRACKS.
13. WALL STUD BRIDGING SHALL BE ATTACHED IN A MANNER TO PREVENT STUD ROTATION. BRIDGING ROWS SHALL BE SPACED ACCORDING TO THE FOLLOWING SCHEDULE. WALLS UP TO 10'-0" HEIGHT: ONE ROW AT MID-HEIGHT. WALLS EXCEEDING 10'-0" HEIGHT; BRIDGING ROWS SPACED NOT TO EXCEED 5'-0" ON-CENTER.
14. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TEMPORARY BRACING AND SHORING AS REQUIRED UNTIL ERECTION IS COMPLETED AND ALL ATTACHED ADJACENT FRAMING IS COMPLETE.
15. SPLICES IN AXIALLY LOADED STUDS ARE NOT PERMITTED.
16. JOISTS SHALL BE LOCATED DIRECTLY OVER BEARING STUDS OR LOAD DISTRIBUTION MEMBER TO BE PROVIDED AT THE TOP TRACK.

FRAMING LUMBER

1. ALL FRAMING LUMBER WORK SHALL CONFORM TO THE FOLLOWING GOVERNING STANDARDS:
   A. AMERICAN WOOD COUNCIL "WOOD FRAME CONSTRUCTION MANUAL FOR ONE- AND TWO-FAMILY DWELLINGS"
   B. AMERICAN WOOD COUNCIL "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION","NDS SUPPLEMENT: DESIGN VALUES FOR WOOD CONSTRUCTION", AND "SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC".
2. FRAMING LUMBER SHALL HAVE EACH PIECE GRADE STAMPED, SHALL BE SURFACED DRY (EXCEPT STUDS, WHICH SHALL BE KILN DRIED) AND SHALL CONFORM TO THE FOLLOWING SPECIES AND GRADES:
   A. RAFTERS AND JOISTS: DOUGLAS FIR-LARCH #2, SPRUCE PINE FIR #2, OR HEM FIR # 2
   B. BEAMS, GIRDERS AND HEADERS: DOUGLAS FIR-LARCH #1, SPRUCE PINE FIR #1, OR HEM FIR #1
   C. STUDS AND PLATES: DOUGLAS FIR-LARCH STUD GRADE, SPRUCE PINE FIR STUD GRADE, OR HEM FIR STUD GRADE
3. TIMBER LUMBER SHALL CONFORM TO THE FOLLOWING SPECIES AND GRADES:
   A. POST AND TIMBER: DOUGLAS FIR-LARCH #1, SPRUCE PINE FIR #1, OR HEM FIR #1
   B. BEAMS AND STRINGERS: DOUGLAS FIR-LARCH #1, SPRUCE PINE FIR #1, OR HEM FIR #1
4. PRESERVATIVE-TREATED WOOD: PROVIDE TREATED LUMBER COMPLYING WITH ACQ-D (CARBONATE). COPPER AZOLE (CA-B), OR SODIUM BORATE (SBX (DOT) WITH NaS10/2) AT ALL LUMBER IN CONTACT WITH CONCRETE OR MASONRY, OR AS OTHERWISE INDICATED ON ARCHITECTURAL OR STRUCTURAL DRAWINGS. ACZA TREATMENT IS NOT PERMITTED. TREATED LUMBER AND/OR PLYWOOD SHALL BEAR THE LABEL OF AN ACCREDITED AGENCY SHOWING 0.40 PCF RETENTION. WHERE LUMBER AND/OR PLYWOOD IS CUT OR DRILLED AFTER TREATMENT, THE TREATED SURFACE SHALL BE FIELD-TREATED WITH COPPER NAPTHENATE (THE CONCENTRATION OF WHICH SHALL CONTAIN A MINIMUM OF 2% COPPER METAL) BY REPEATED BRUSHING, DIPPING, OR SOAKING UNTIL THE WOOD ABSORBS NO MORE PRESERVATIVE. REFER TO NOTES 2 AND 3 FOR SPECIES AND GRADE OF TIMBER, UNLESS OTHERWISE NOTED ON PLAN.
5. ALL WOOD FRAMING INCLUDING DETAILS FOR BRIDGING, BLOCKING, FIRE STOPPING, ETC., SHALL CONFORM TO THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" AND ITS SUPPLEMENTS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE NFPA "MANUAL FOR HOUSE FRAMING" OR THE GOVERNING LOCAL/STATE BUILDING CODE.
6. FASTENING SHALL BE IN ACCORDANCE WITH THE MOST RESTRICTIVE OF THE GOVERNING LOCAL/STATE BUILDING CODE AND THE MANUFACTURER'S RECOMMENDED FASTENING SCHEDULES.
7. ALL FLUSH FRAMED CONNECTIONS SHALL BE MADE WITH APPROVED GALVANIZED STEEL JOIST OR BEAM HANGERS, MINIMUM 18 GAUGE, INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
8. USE DOUBLE TRIMMERS AND HEADERS AT ALL FLOOR OPENINGS WHERE BEAMS ARE NOT DESIGNATED.
9. PROVIDE CROSS BRIDGING AT A MAXIMUM OF 8'-0" ON CENTER.
10. NO NEW OR EXISTING JOISTS SHALL BE CUT OR NOTCHED WITHOUT APPROVAL.

NOTE: SEE THE "TYPICAL NOTCH REINFORCEMENT DETAIL" AND "TYPICAL BEAM WEB PENETRATION" DETAIL ON S5.05 FOR ALLOWANCES TO BE INCLUDED IN THE BID QUANTITIES

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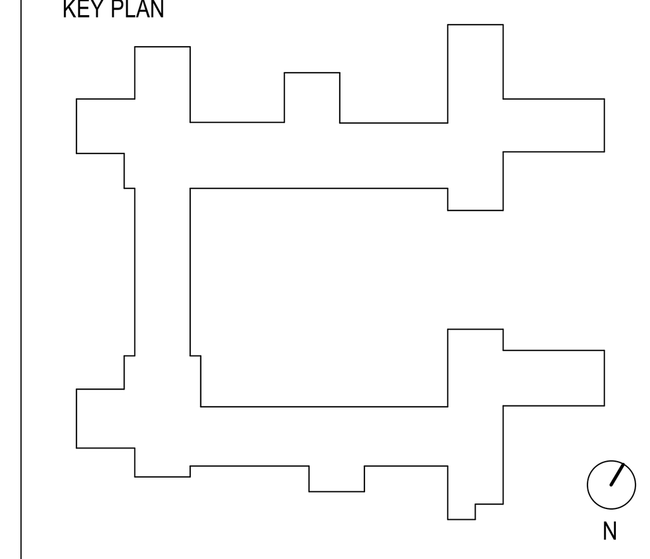
STAMP

KEY PLAN



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ISSUED: **11/05/2021**

REVISIONS

4/29/2022	Bulletin #1	01

ISSUE

GENERAL NOTES

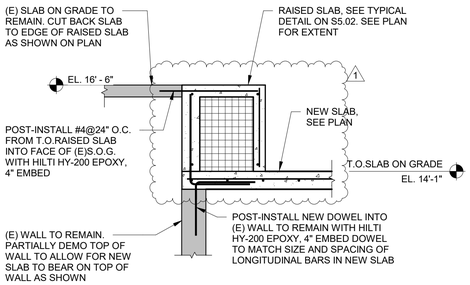
GOODY CLANCY PROJECT NUMBER: 07400

DRAWN: Author	DATE: 11/05/2021	
CHECKED: Checker	SCALE: 1" = 1'-0"	

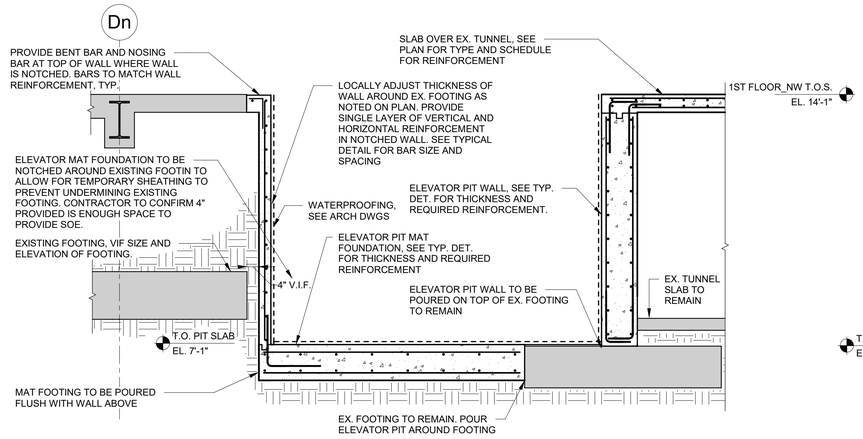
DRAWING NO.:

S0.01

SILMAN: #18518



1 S3.01 SECTION
1/2" = 1'-0"



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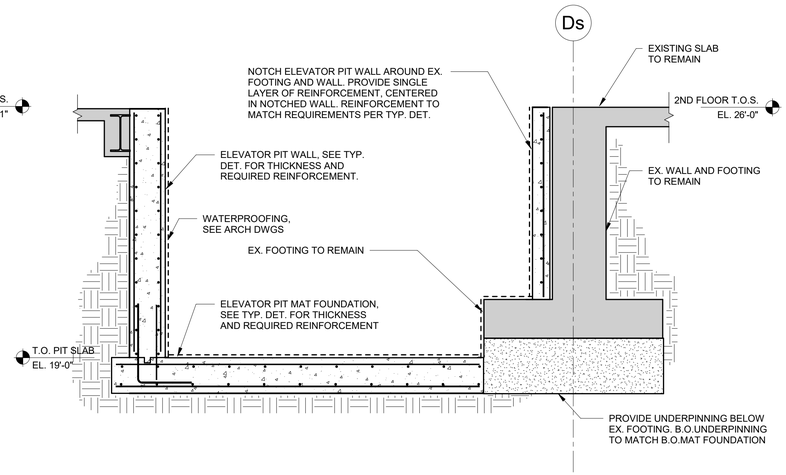

3 S3.01 SECTION
1/2" = 1'-0"

5 S3.01 SECTION
1/2" = 1'-0"

4 S3.01 SECTION
1/2" = 1'-0"

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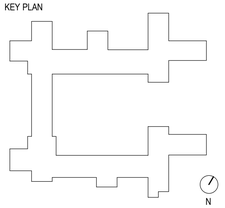

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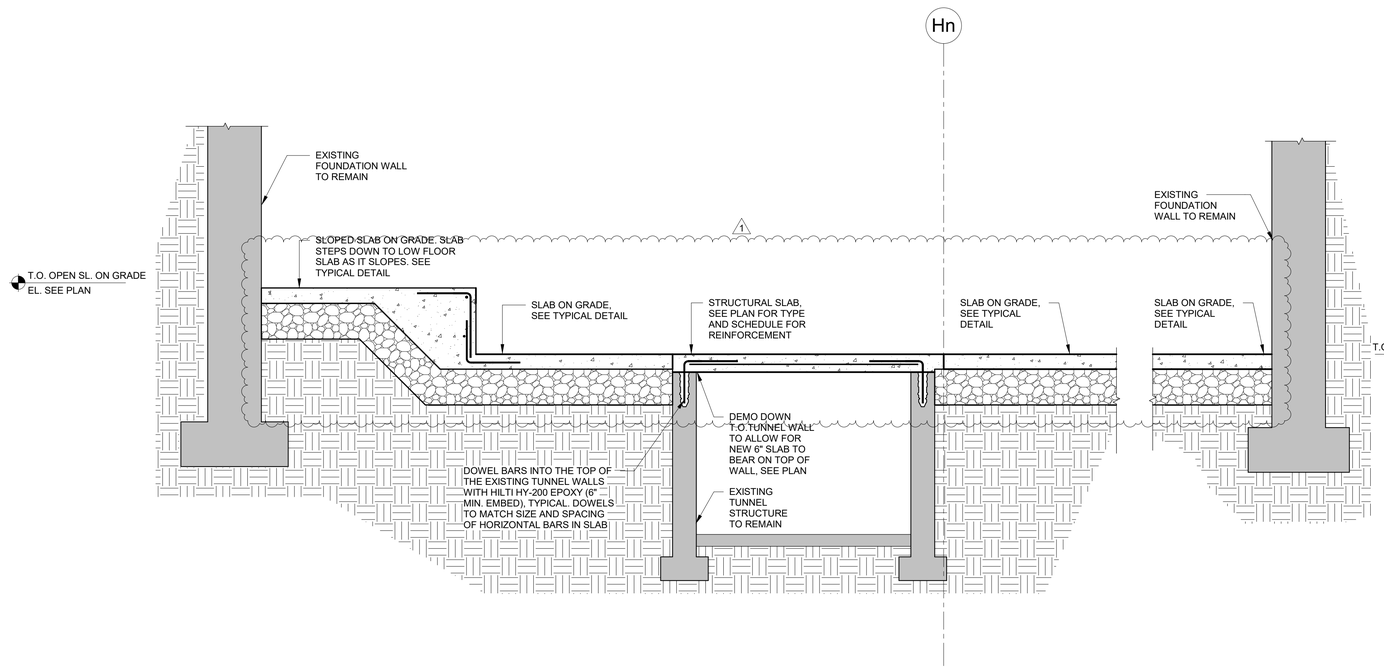

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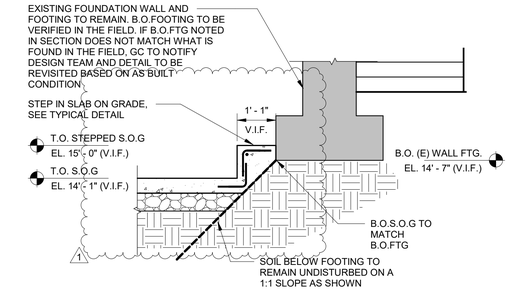

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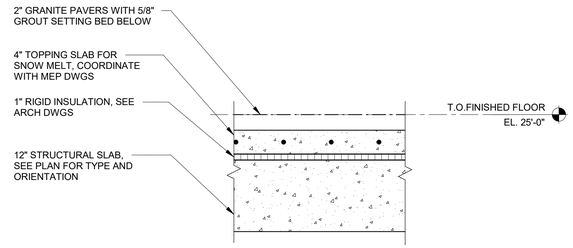
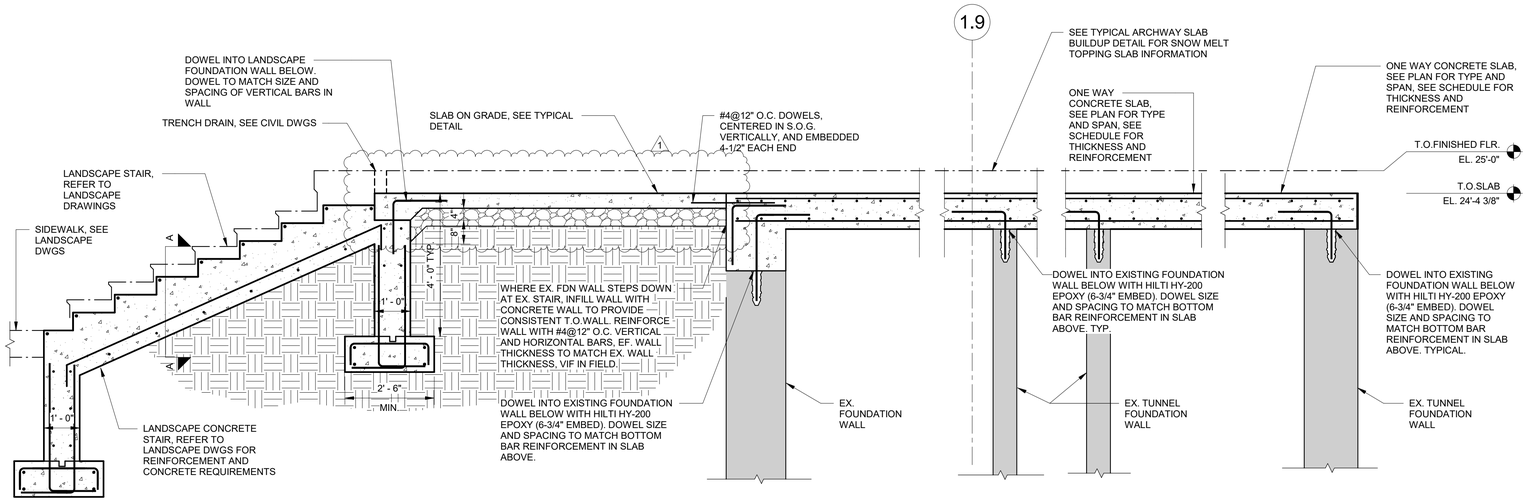


TYPICAL ARCHWAY SLAB BUILDUP
N.T.S.



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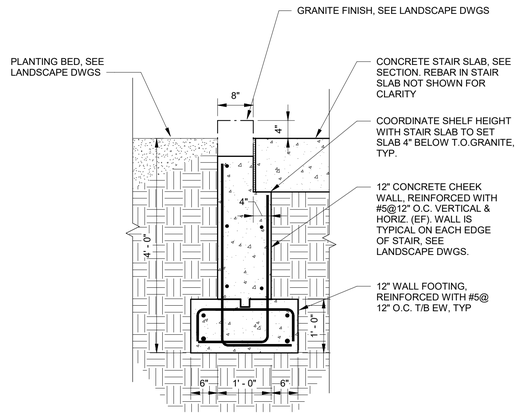

SECTION A-A - CHEEKWALL TYPICAL DETAIL
N.T.S.

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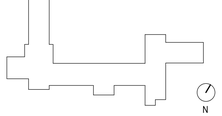

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REVISIONS

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FOUNDATION SECTIONS

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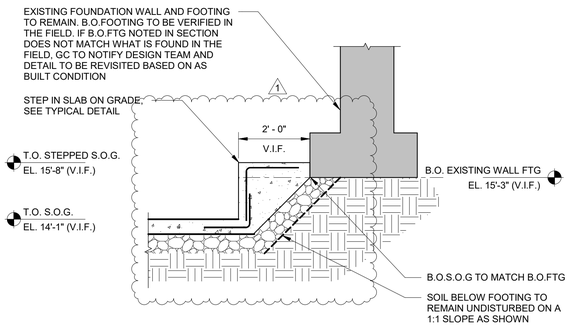
DRAWN:	Author	DATE: 11/05/2021
CHECKED:	Checker	SCALE: As indicated

DRAWING NO.:

S3.02

SILMAN: #18518



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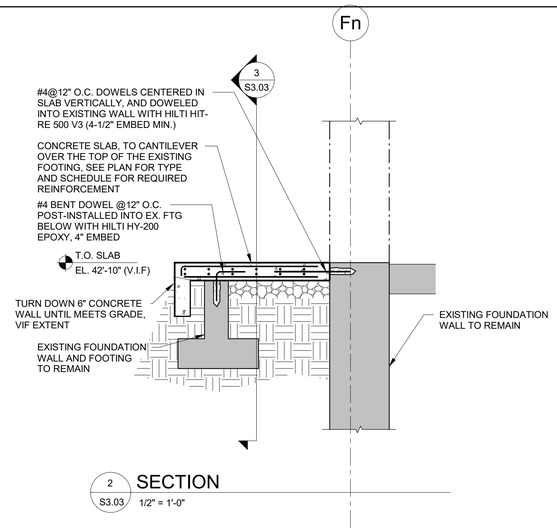

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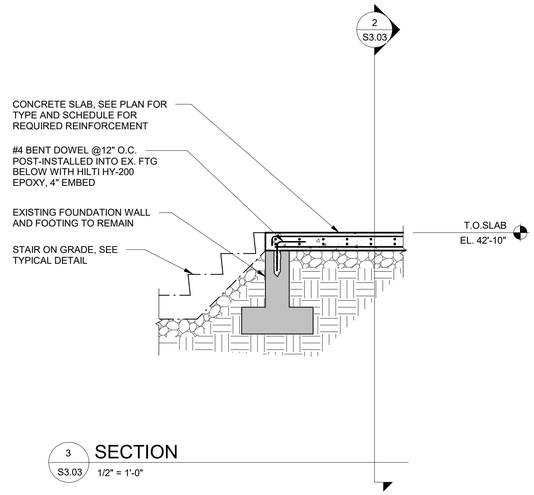

3 S3.03 SECTION
1/2" = 1'-0"

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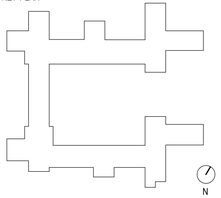

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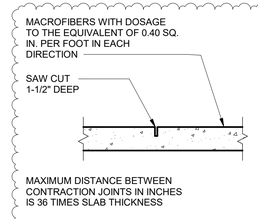
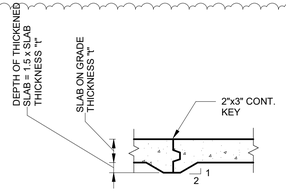
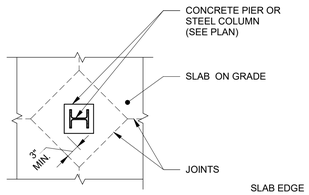


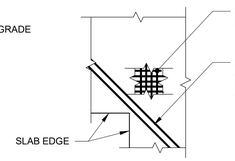
SAWED CONTRACTION JOINT



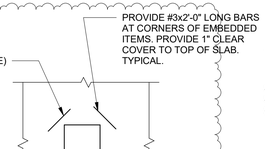
CONSTRUCTION JOINT



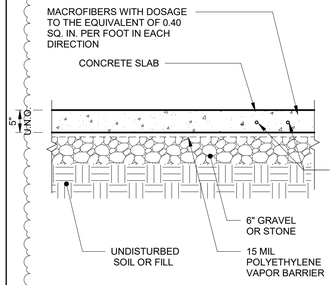
ISOLATION JOINT AT COLUMN



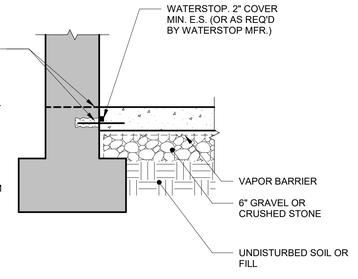
ADDITIONAL REINFORCEMENT AT ALL RE- ENTRANT CORNERS



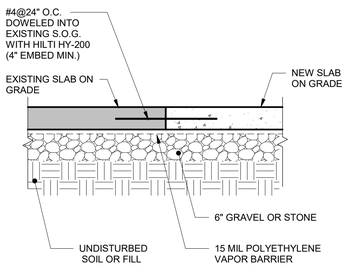
TYPICAL ADDITIONAL REINFORCEMENT AT EMBEDDED ITEMS IN SLAB ON GRADE



SLAB ON GRADE



SLAB-ON-GRADE & WALL/DOORWAY SILL INTERFACE



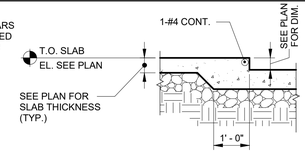
JOINT BETWEEN NEW AND EXISTING SLAB ON GRADE

NOTES:

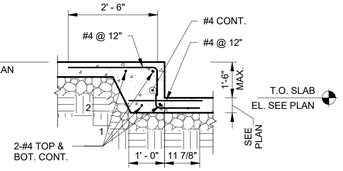
1. SLAB ON GRADE SHALL BE PLACED IN ALTERNATING STRIPS WHERE EACH SINGLE STRIP DOES NO EXCEED 36 TIMES SLAB THICKNESS WIDTH IN INCHES. ALTERNATIVELY, LARGE BLOCK PLACEMENTS WITH INTERIOR CONTRACTION JOINTS ARE ACCEPTABLE IF THE CONTRACTION JOINTS ARE MADE IN BOTH DIRECTIONS AT SPECIFIED INTERVALS IN A TIMELY MANNER.
2. SAWED CONTRACTION JOINTS SHALL BE LOCATED AT A MAXIMUM SPACING IN INCHES OF 36 TIMES THE SLAB THICKNESS. JOINTS SHALL BE SAWED NO LATER THAN 24 HOURS AFTER CONCRETE IS PLACED.
3. GRAVEL OR CRUSHED STONE BASE SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.

TYPICAL SLAB ON GRADE

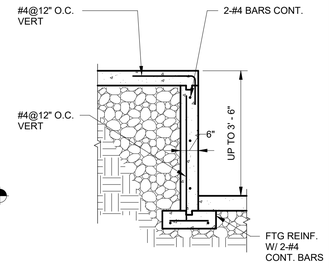
N.T.S.



STEP LESS THAN OR EQUAL TO SLAB THICKNESS



STEP GREATER THAN SLAB THICKNESS



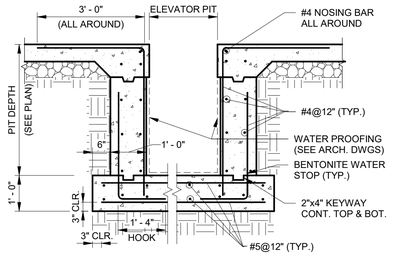
STEP IN SLAB ON GRADE (1'-6") - (3'-6")

TYPICAL STEP IN SLAB ON GRADE

N.T.S.

ASSUMED PIT FLOOR REACTIONS	
RAIL STACK LOAD	19.52 KIPS
COUNTERWEIGHT BUFFER LOAD	36.54 KIPS
RAIL LOAD	11.87 KIPS

NOTE:
- LOADS ARE SHOWN AS DOUBLED FOR IMPACT.
- SEE ELEVATOR MANUFACTURER CUT SHEET FOR ORIENTATION OF LOADS IN PIT.
- IF REACTION MAGNITUDES OR ORIENTATION OF REACTIONS IN PIT DO NOT MATCH FINAL ELEVATOR DESIGN THEN FURTHER STUDY OF THE ELEVATOR PIT DESIGN MAY BE REQUIRED.



TYPICAL ELEVATOR PIT (INTERIOR WATERPROOFING)

N.T.S.

TYPICAL STEPPED WALL FOOTING

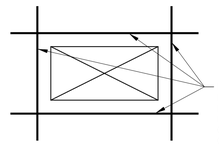
N.T.S.

NOTES:

1. PIER SIZE TO BE 3" LARGER THAN COLUMN BASE PLATE ALL ROUND U.N.O. ON PLAN.
2. SEE PLAN AND FOOTING SCHEDULE FOR FOOTING SIZE AND REINFORCING.
3. IF PIER HEIGHT IS LESS THAN 2'-6", EXTEND COLUMN DOWELS INTO FOOTING. SEE COLUMN SCHEDULE FOR SIZE AND REINFORCING.
4. T = SLAB THICKNESS - SEE PLANS.

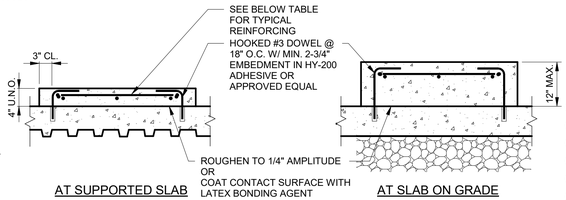
TYPICAL STEEL COLUMN/PIER AND FOOTING

N.T.S.



TYPICAL ADDITIONAL REINFORCEMENT AT OPENING IN SLAB ON GRADE

N.T.S.



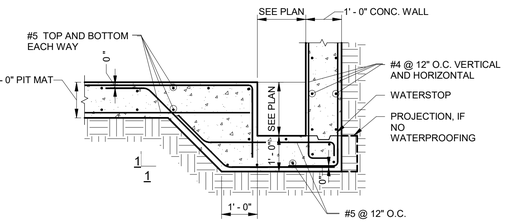
EQUIPMENT PAD TEMPERATURE AND SHRINKAGE REINFORCING	
PAD THICKNESS	REINFORCING
4"-5"	#3 @ 12" O.C. EACH WAY
6"-9"	#4 @ 12" O.C. EACH WAY
10"-12"	#5 @ 12" O.C. EACH WAY

NOTES:

1. FOR SIZE AND LOCATION SEE ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. CONCRETE FOR PADS SHALL BE NORMAL WEIGHT WITH f'c = 4,000 PSI.

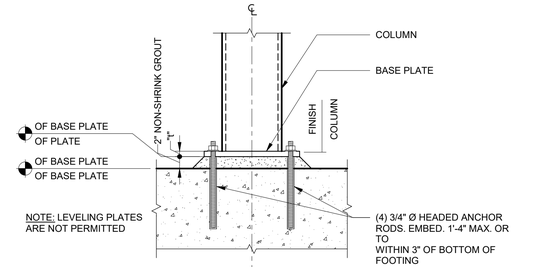
TYPICAL EQUIPMENT PAD

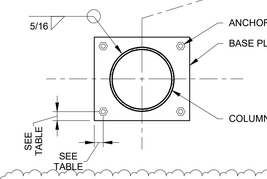
N.T.S.



TYPICAL ELEVATOR SUMP PIT

N.T.S.

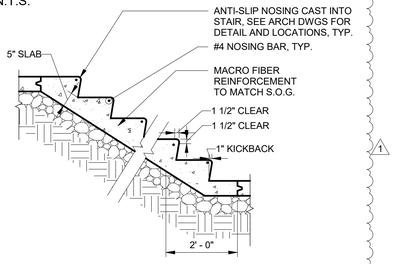




ANCHOR BOLT SIZE	HOLE Ø IN BASE PL	EDGE DISTANCE FROM CENTER LINE OF BOLT HOLE
3/4" Ø	1-5/16" Ø	2"
7/8" Ø	1-9/16" Ø	2"
1" Ø	1-13/16" Ø	2"
1-1/4" Ø	2-1/16" Ø	2-1/2"
1-1/2" Ø	2-5/16" Ø	2-1/2"

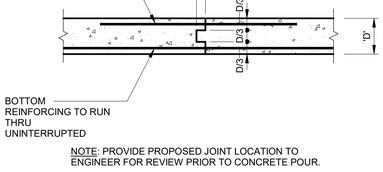
TYPICAL COLUMN BASE PLATE AT PIPE OR TUBE COLUMN

N.T.S.



TYPICAL STAIR ON GRADE

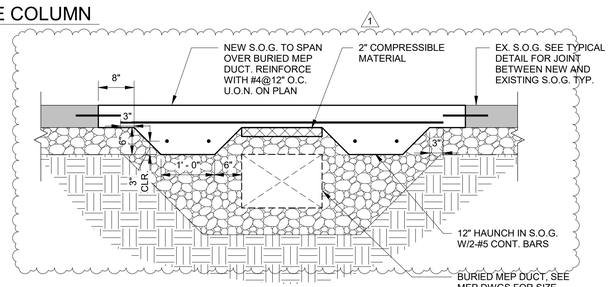
N.T.S.



NOTE: PROVIDE PROPOSED JOINT LOCATION TO ENGINEER FOR REVIEW PRIOR TO CONCRETE POUR.

TYPICAL CONSTRUCTION JOINT IN FRAMED SLAB OR BEAM

N.T.S.



SPANNING SLAB ON GRADE OVER BURIED MEP DUCTWORK TYPICAL DETAIL

N.T.S.

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Silman
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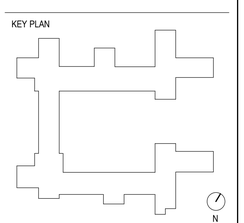
617 695 6700

STAMP

KEY PLAN



Bid Set

ISSUED: **11/05/2021**

REVISIONS

4/29/2022	Bulletin #1	01

ISSUE
TYPICAL DETAILS

GOODY CLANCY PROJECT NUMBER: 07400

DRAWN:	Author	DATE: 11/05/2021
CHECKED:	Checker	SCALE: As indicated

DRAWING NO.:

S5.01

SILMAN: #18518

4/29/2022 11:47:39 AM
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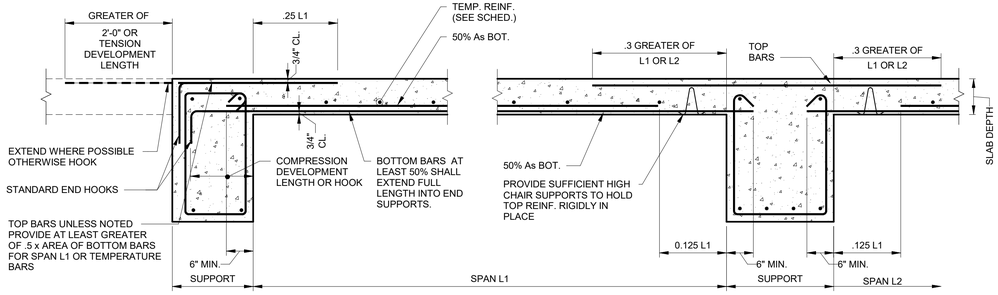
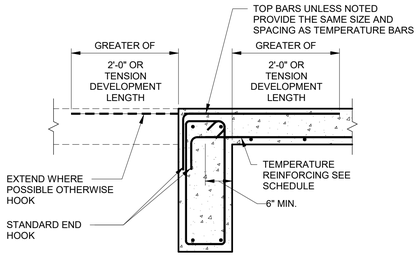


NON-CONTINUOUS END

NOTE: MAXIMUM TOP AND BOTTOM BAR SPACING NOT TO EXCEED 12" O.C.

CONTINUOUS END

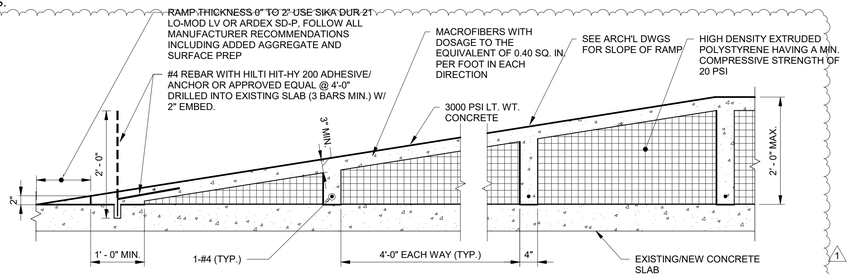
ONE-WAY SLAB TEMP. REINF. (GRADE 60 STEEL)	
SLAB THICKNESS	TEMPERATURE REINFORCING
4"	#4 @ 12"
5"	#4 @ 12"
6"	#4 @ 12"
7"	#4 @ 12"
8"	#4 @ 12"
9"	#4 @ 12"
10"	#5 @ 12"
11"	#5 @ 12"
12"	#5 @ 12"



TYPICAL DETAIL AT SUPPORTS PARALLEL TO MAIN REINFORCING IN ONE-WAY SLAB

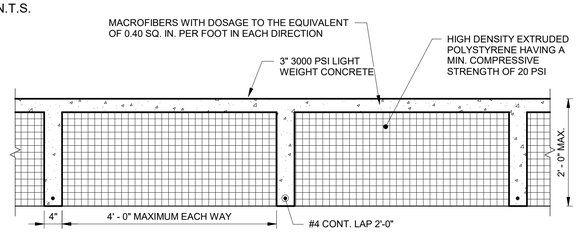
TYPICAL ONE-WAY SLAB

N.T.S.



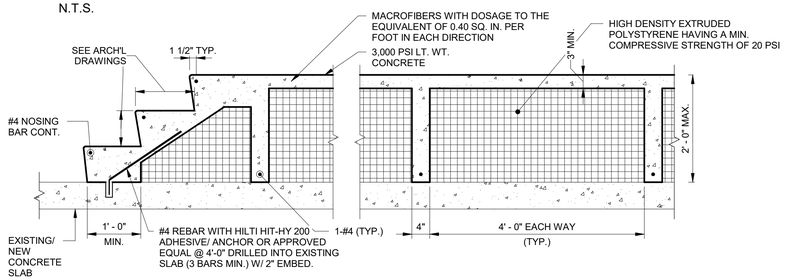
TYPICAL RAISED SLAB WITH RAMP

N.T.S.



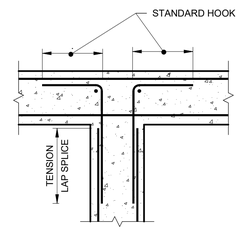
TYPICAL RAISED SLAB

N.T.S.

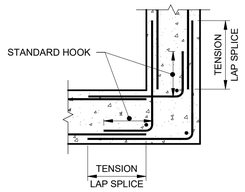


TYPICAL RAISED SLAB AT STAIR

N.T.S.



TEE-INTERSECTION



CORNER

NOTE: FOR TENSION LAP SPLICE LENGTH AND DEVELOPMENT LENGTH SEE TABLE.

TYPICAL HORIZONTAL REINFORCEMENT AT CORNERS & JUNCTIONS OF WALLS AND BEAMS

N.T.S.

DEFORMED BAR TENSION DEVELOPMENT LENGTH (Ld)								
FOR NORMAL WEIGHT STONE CONCRETE & UNCOATED BARS								
BAR SIZE	3000 PSI CONCRETE		4000 PSI CONCRETE		5000 PSI CONCRETE		6000 PSI CONCRETE	
	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	17	25	15	22	13	20	12	18
#4	22	33	19	29	17	26	16	24
#5	28	42	24	36	22	32	20	30
#6	33	50	29	43	26	39	24	35
#7	48	72	42	63	38	56	34	51
#8	55	83	48	72	43	64	39	59
#9	62	93	54	81	48	72	44	66
#10	70	105	61	91	54	81	50	74
#11	78	116	67	101	60	90	55	82

DEFORMED BAR TENSION LAP SPLICE - CLASS B								
FOR NORMAL WEIGHT STONE CONCRETE & UNCOATED BARS								
BAR SIZE	3000 PSI CONCRETE		4000 PSI CONCRETE		5000 PSI CONCRETE		6000 PSI CONCRETE	
	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	22	33	19	28	17	25	16	23
#4	29	43	25	37	23	34	21	31
#5	36	54	31	47	28	42	26	38
#6	43	65	37	56	34	50	31	46
#7	63	94	54	81	49	73	45	67
#8	72	107	62	93	56	83	51	76
#9	81	121	70	105	63	94	57	86
#10	91	136	79	118	71	106	64	96
#11	101	151	87	131	78	117	71	107

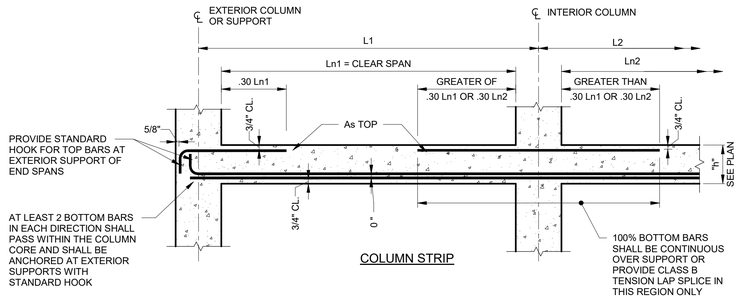
DEFORMED TENSION BAR NOTES:

1. FOR HORIZONTAL REINFORCEMENT WITH 12 INCH OR MORE FRESH CONCRETE CAST BELOW IT, TENSION DEVELOPMENT LENGTH/ TENSION LAP SPLICE LENGTH SHALL BE 1.3X THE VALUES GIVEN.
2. FOR EPOXY-COATED BARS:
   A. WHERE CONCRETE COVER IS LESS THAN 3X BAR DIAMETER, OR CLEAR SPACING IS LESS THAN 6X BAR DIAMETER, TENSION DEVELOPMENT LENGTH/ TENSION LAP SPLICE LENGTH SHALL BE 1.5X THE VALUES GIVEN.
   B. WHERE CONCRETE COVER IS EQUAL TO OR GREATER THAN 3X BAR DIAMETER AND CLEAR SPACING IS GREATER THAN 6X BAR DIAMETER, TENSION DEVELOPMENT LENGTH/ TENSION LAP SPLICE LENGTH SHALL BE 1.2X THE VALUES GIVEN.

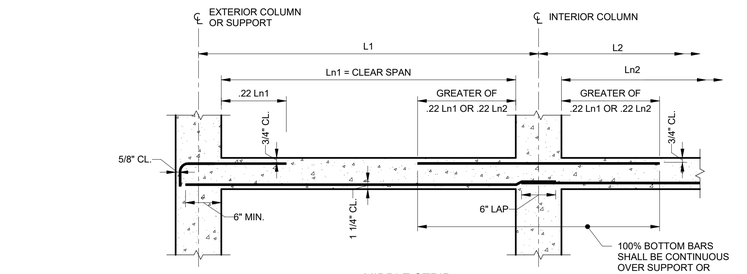
CASE 1: CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN DB, CLEAR COVER NOT LESS THAN DB, AND STIRRUPS OR TIES THROUGHOUT LD NOT LESS THAN THE CODE MINIMUM OR CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN 2DB AND CLEAR COVER NOT LESS THAN DB.
CASE 2: OTHER CASES

DEFORMED BAR COMPRESSION LAP SPLICE				
FOR NORMAL WEIGHT STONE CONCRETE & UNCOATED BARS				
BAR SIZE	3000 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI CONCRETE	6000 PSI CONCRETE
#3	12	12	12	12
#4	15	15	15	15
#5	19	19	19	19
#6	23	23	23	23
#7	27	27	27	27
#8	30	30	30	30
#9	34	34	34	34
#10	39	39	39	39
#11	43	43	43	43

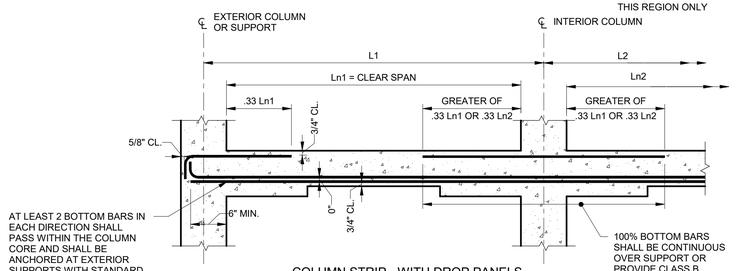
DEFORMED BAR COMPRESSION DEVELOPMENT LENGTH (Ldc)				
FOR NORMAL WEIGHT STONE CONCRETE & UNCOATED BARS				
BAR SIZE	3000 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI CONCRETE	6000 PSI CONCRETE
#3	9	8	8	8
#4	11	10	9	9
#5	14	12	12	12
#6	17	15	14	14
#7	20	17	16	16
#8	22	19	18	18
#9	25	22	21	21
#10	28	25	23	23
#11	31	27	26	26



COLUMN STRIP



MIDDLE STRIP



COLUMN STRIP - WITH DROP PANELS

NOTE: SAME REINFORCEMENT PROFILE BOTH DIRECTIONS. TRANSVERSE DIRECTION NOT SHOWN FOR CLARITY.

TYPICAL TWO-WAY SLAB

N.T.S.

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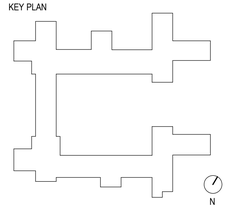
KEY PLAN



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ISSUED: **11/05/2021**

REVISIONS

4/29/2022	Bulletin #1	01

ISSUE

TYPICAL DETAILS

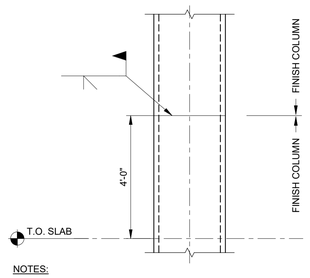
GOODY CLANCY PROJECT NUMBER: 07400

DRAWN:	Author	DATE:	11/05/2021
CHECKED:	Checker	SCALE:	As indicated

DRAWING NO.:

S5.02

SILMAN: #18518

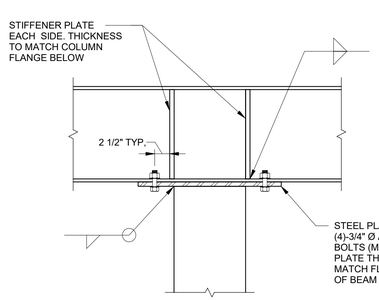


NOTES:

1. DETAIL SPLICE AND PROVIDE MATERIALS IN ACCORDANCE WITH AISC ENGINEERING FOR STEEL CONSTRUCTION HANDBOOK AND ALL OSHA REQUIREMENTS.
2. MAXIMUM LENGTH OF COLUMN TO BE LESSER OF 30'-0" OR 2 STORIES.
3. PROVIDE ALIGNMENT PLATES AS REQUIRED FOR COLUMN ERECTION. REMOVE ALIGNMENT PLATES AFTER COLUMN IS INSTALLED.

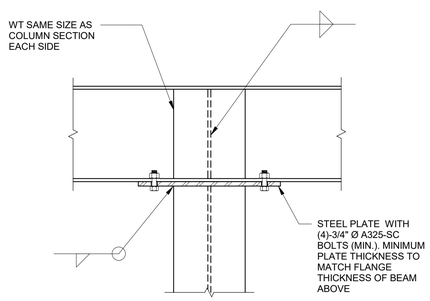
TYPICAL HSS COLUMN SPLICE

N.T.S.



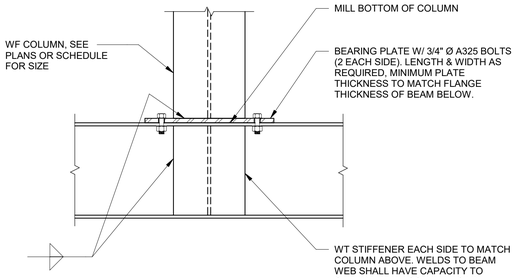
TYPICAL BEAM CONTINUOUS OVER COLUMN (PARALLEL WEBS)

N.T.S.



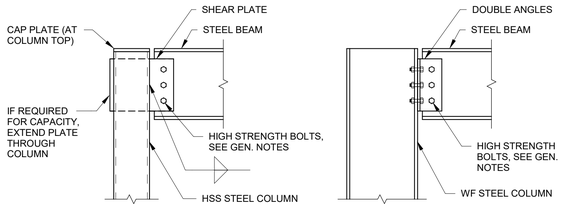
TYPICAL BEAM CONTINUOUS OVER COLUMN (PERPENDICULAR WEBS)

N.T.S.



TYPICAL STIFFENER PLATE AT BEAM-SUPPORTED COLUMN (PERPENDICULAR WEBS)

N.T.S.



BEAM TO HSS COLUMN

BEAM TO WF COLUMN FLANGE

BEAM TO WF COLUMN WEB

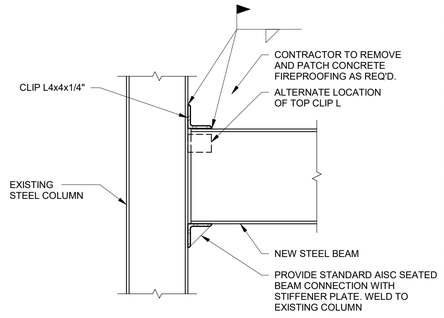
WF BEAM TO WF BEAM

NOTES:

1. CONNECTION DETAILS SHOWN ABOVE ARE SCHEMATIC ONLY. THE CONTRACTOR MAY SUBMIT ALTERNATE DETAILS FROM THOSE SHOWN ABOVE, BUT IN ANY CASE THE CONTRACTOR IS RESPONSIBLE FOR PRODUCING STEEL SHOP DRAWINGS IN ACCORDANCE WITH THE PROJECT GENERAL NOTES AND AISC GUIDELINES. CALCULATIONS SHALL BE SUBMITTED AS REQUIRED IN THE GENERAL NOTES AND ELSEWHERE IN THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL DETAIL THE PROJECT CONNECTIONS FOR THE LOADS AS INDICATED IN THE CONTRACT DOCUMENTS, PER AISC GUIDELINES. THE SCHEMATIC DETAILS ABOVE ARE NOT SUGGESTIVE OF SPECIFIC CAPACITIES. THE NUMBER AND SIZE OF BOLTS, SIZE AND LENGTH OF WELDS, AND SIZE OF STEEL PIECES MUST BE DETERMINED PER AISC GUIDELINES AND THE CONTRACT DOCUMENTS.
3. PROVIDE FULL DEPTH CONNECTIONS AT ALL PERIMETER BEAM CONNECTIONS AND AT BEAM CONNECTIONS TO PERIMETER BEAMS, UNLESS OTHERWISE NOTED.

TYPICAL SUGGESTED SHEAR CONNECTIONS AT GRAVITY LOADS ONLY

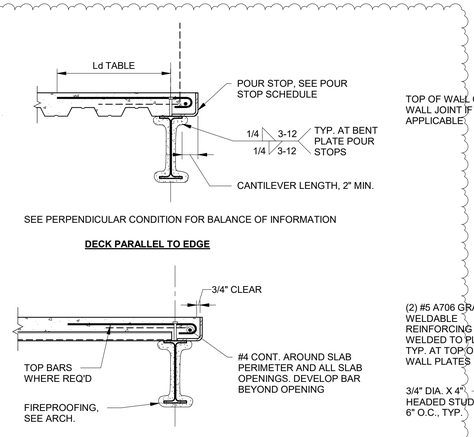
N.T.S.



NOTE: IF EXISTING CONNECTIONS ON COLUMN INTERFERE WITH THIS DETAIL, CONTRACTOR SHALL SUBMIT ALTERNATE DETAIL FOR REVIEW.

TYPICAL CONNECTION OF NEW BEAM TO EXISTING COLUMN

N.T.S.



SEE PERPENDICULAR CONDITION FOR BALANCE OF INFORMATION

DECK PARALLEL TO EDGE

SEE PARALLEL CONDITION FOR BALANCE OF INFORMATION

DECK PERPENDICULAR TO EDGE

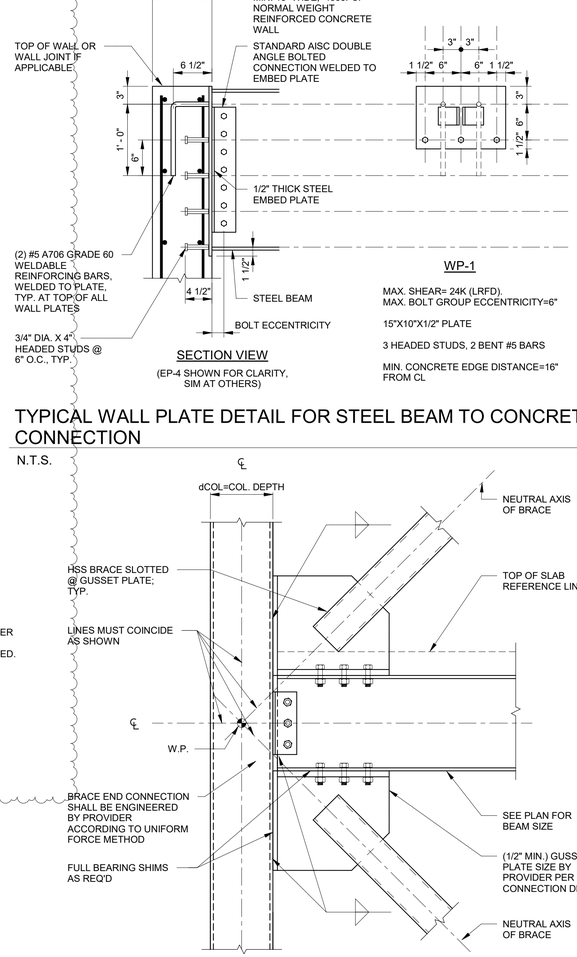
POUR STOP SCHEDULE				
SLAB CANTILEVER	BENT PLATE THICKNESS	BAR SIZE	SPACING	Ld
LESS THAN 6"	POUR STOP BY DECK MANUFACTURER	- -	- -	- -
0'-6" - 0'-11"		#4	12"	2'-0"
1'-0" - 1'-6"	5/16"	#4	12"	3'-0"
1'-7" - 1'-11"	3/8"	#5	12"	4'-0"
2'-0" - 2'-6"	1/2"	#5	12"	4'-6"

NOTES:

1. SEE ARCHITECTURAL SLAB EDGE DRAWINGS FOR TYPICAL CANTILEVER DIMENSIONS.
2. CONFIRM SLAB CANTILEVERS LARGER THAN 2'-6" WITH E.O.R.
3. BAR SIZE AND SPACING ABOVE APPLY U.O.N. IN SECTIONS
4. SLAB EDGE IS DESIGNED TO SUPPORT ONE STORY OF FACADE LOADING.
5. POUR STOP IS SIZED FOR WET WEIGHT OF CONCRETE ONLY. SLAB CANTILEVER PROVIDES BALANCE OF STRUCTURAL CAPACITY FOR PERIMETER WALLS OR FACADE. F'c NEEDS TO BE ACHIEVED BEFORE FACADE LOAD CAN BE INSTALLED.

TYPICAL CONCRETE SLAB ON METAL DECK SLAB EDGE CONDITION

N.T.S.



SECTION VIEW

(EP-4 SHOWN FOR CLARITY, SIM AT OTHERS)

WP-1

MAX. SHEAR= 24K (LRFD).
MAX. BOLT GROUP ECCENTRICITY=6"

15"X10"X1/2" PLATE

3 HEADED STUDS, 2 BENT #5 BARS

MIN. CONCRETE EDGE DISTANCE=16" FROM CL

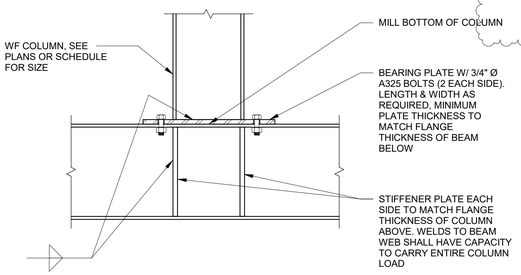
TYPICAL WALL PLATE DETAIL FOR STEEL BEAM TO CONCRETE WALL CONNECTION

N.T.S.

NOTE: CONNECTION DETAILS SHOWN ABOVE ARE SCHEMATIC DETAILS ONLY. CONTRACTOR SHALL DETAIL BRACE CONNECTIONS BASED ON AXIAL LOADS INDICATED IN LATERAL FRAME ELEVATIONS AND SHALL PROVIDE SIGNED AND SEALED CALCULATIONS PRIOR TO SUBMISSION OF SHOP DRAWINGS

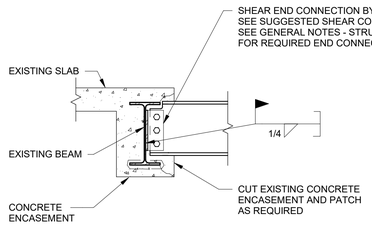
TYPICAL HSS LATERAL BRACE CONNECTION AT COLUMN

N.T.S.



TYPICAL FLAT HSS TUBE LINTEL IN EXISTING MASONRY WALL

N.T.S.



NOTE: IF EXISTING CONNECTIONS INTERFERE WITH THIS DETAIL, CONTRACTOR SHALL SUBMIT ALTERNATE DETAIL FOR REVIEW.

TYPICAL CONNECTION OF NEW BEAM TO EXISTING BEAM

N.T.S.

TYPICAL STIFFENER PLATE AT BEAM-SUPPORTED COLUMN (PARALLEL WEBS)

N.T.S.

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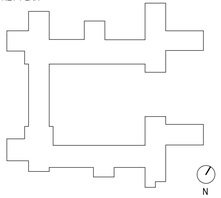

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TYPICAL DETAILS

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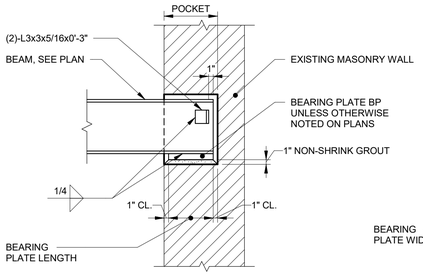
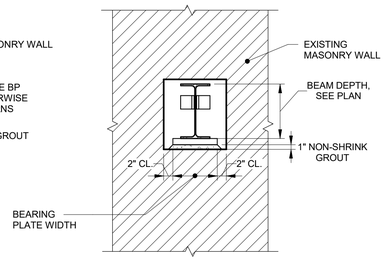


NOTE: FILL HOLLOWS IN WALL UNDER BEARING PLATE SOLID WITH MORTARED BRICK BEFORE PLACING PLATE. (MINIMUM 2 COURSES)

SECTION

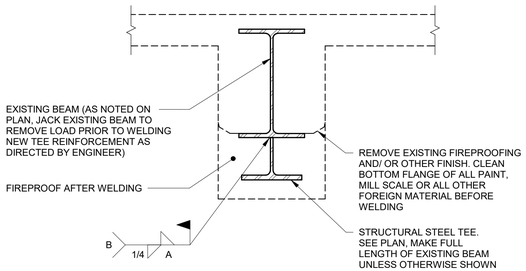


NOTE: CUT POCKET IN WALL AS SHOWN. AFTER BEAM IS INSTALLED BRICK UP POCKET SOLID. FULL MORTAR BEDDING IN ALL H & V BRICK JOINTS. TO POCKET FACES AND TO BEAM. (ALTERNATE: GROUT SOLID)

ELEVATION

TYPICAL BEAM BEARING ON EXISTING WALL

N.T.S.

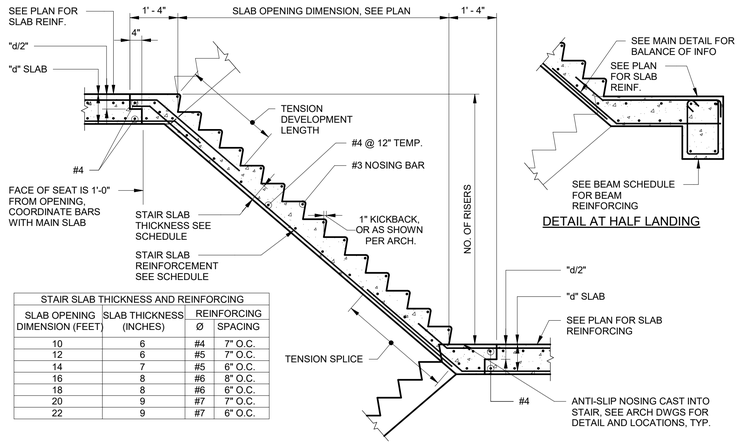


EXISTING BEAM REINFORCING SCHEDULE

MARK	EXISTING BEAM SIZE	WT REINFORCING SIZE	A	B	COMMENTS
B1	12I28.5	WT6x53	CONT.	-	
B2	12I36.5	WT6x36	CONT.	-	
B3	8I17.5	WT6x15	4-12	18" EACH SIDE & RETURN @ ENDS	
B4	8I17.5	WT6x36	CONT.	-	
B5	12I36.5	WT6x68	CONT.	-	
B6	15I38.5	WT6x48	6-12	57" EACH SIDE & RETURN @ ENDS	
B7	15I38.5	3/8"x7-3/4" PLATE	4-12	8" EACH SIDE & RETURN @ ENDS	SIM. DETAIL FOR PLATE REINFORCING
B8	12I28.5	WT6x9.5	4-12	12" EACH SIDE & RETURN @ ENDS	

TYPICAL WT REINFORCING OF EXISTING STEEL BEAM

N.T.S.



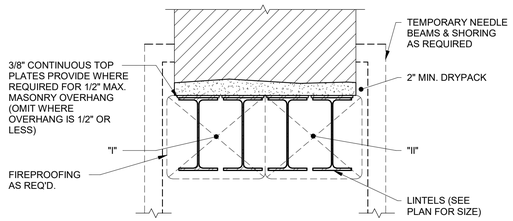
DETAIL AT HALF LANDING

STAIR SLAB THICKNESS AND REINFORCING

SLAB OPENING DIMENSION (FEET)	SLAB THICKNESS (INCHES)	REINFORCING Ø	REINFORCING SPACING
10	6	#4	7" O.C.
12	6	#5	7" O.C.
14	7	#5	6" O.C.
16	8	#6	8" O.C.
18	8	#6	6" O.C.
20	9	#7	7" O.C.
22	9	#7	6" O.C.

TYPICAL CONCRETE STAIR

N.T.S.



SEQUENCE OF CONSTRUCTION:

1. PROVIDE NEEDLING AND SHORING AS REQUIRED FOR EXISTING WALL ABOVE.
2. INSTALL BEARING PLATE AT EACH END FOR LINTEL BEAM BEARING ON EXISTING WALL.
3. CHASE OUT EXISTING MASONRY AT "I" AND INSTALL NEW LINTEL BEAM(S) "I".
4. PROVIDE CONTINUOUS DRYPACK ABOVE LINTEL.
5. AFTER DRYPACK AT "I" HAS SET REPEAT STEPS 2 THRU 4 FOR LINTEL BEAM(S) "II".
6. INSTALL BOLT AND PIPE SEPARATORS AT LINTEL SPAN 1/3 POINTS AND AT EACH END.
7. REMOVE WALL BELOW LINTEL AT NEW OPENING.

TYPICAL MULTI WF LINTEL IN EXISTING INTERIOR MASONRY WALL

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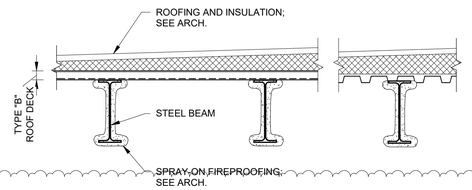
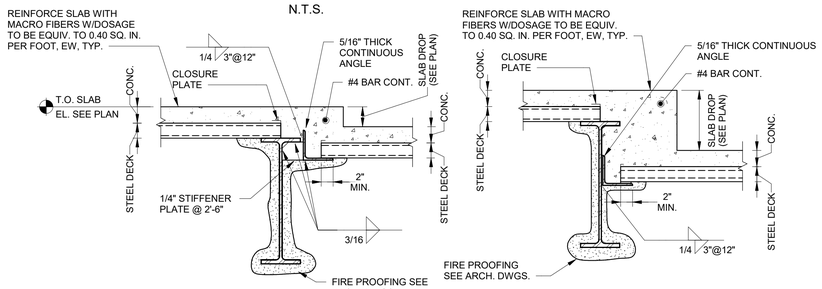


AT BEAM PERPENDICULAR TO SPAN OF DECK

AT BEAM PARALLEL TO SPAN OF DECK

TYPICAL METAL ROOF DECK CONSTRUCTION

N.T.S.



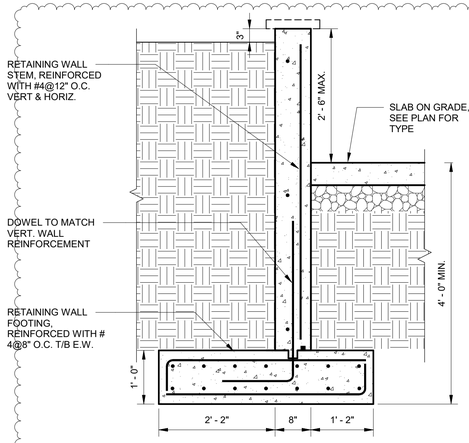
DETAIL AT SLAB DROP 5" OR LESS

DETAIL AT SLAB DROP GREATER THAN 5"

NOTE: FOR NOTES AND INFORMATION NOT SHOWN SEE TYPICAL FLOOR CONSTRUCTION

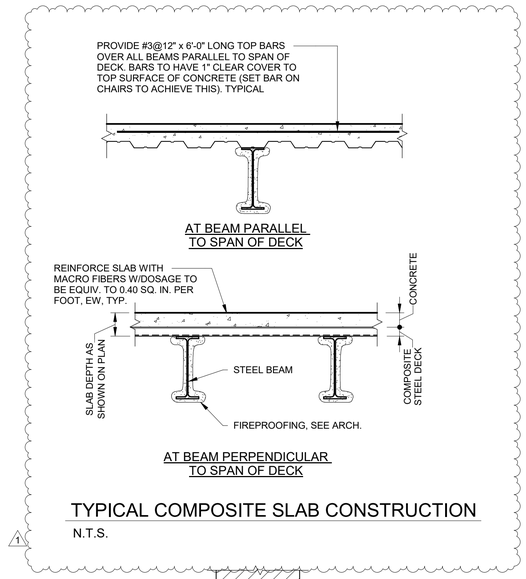
TYPICAL STEP IN SLAB ON METAL DECK

N.T.S.



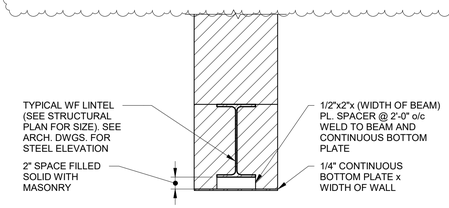
TYPICAL CONCRETE RETAINING WALL DETAIL (MAX. STEM HEIGHT 2'-6" ABOVE GRADE)

N.T.S.



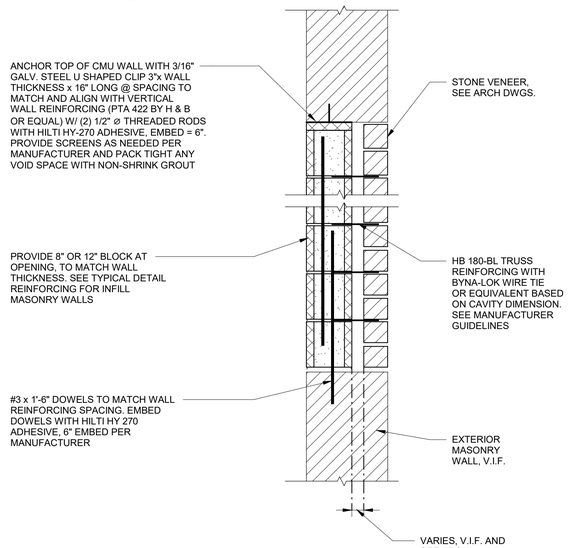
TYPICAL COMPOSITE SLAB CONSTRUCTION

N.T.S.



TYPICAL FIREPROOFED STEEL LINTEL IN EXTERIOR MASONRY WALL

N.T.S.



NOTES:

1. REINFORCE AND GROUT FIRST AND LAST COURSE OF INFILL, TYPICAL. REINFORCE AND GROUT BALANCE OF COURSES PER TYPICAL DETAIL.
2. INSTALL DOWELS AND THREADED RODS AS CLOSE TO CENTERLINE OF EXISTING WALL AS POSSIBLE.
3. REPAIR BRICK AT EDGES OF OPENINGS AS REQUIRED PER TYPICAL DETAIL.

TYPICAL DETAIL - INFILL OF EXISTING OPENING IN EXTERIOR WALL

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