### **DESIGN NOTES**

ESIGN BASIS:		
IBC 2018	INTERNATIONAL BUILDING CODE	
ASCE 7-16	MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES	
ACI 318-14	MANUAL FOR CONCRETE CONSTRUCTION	
TMS 402-16	BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES	
AISC 360-16	SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS	

# PROJECT LOADS

DEAD LOAD:

ACTUAL WEIGHT OF STRUCTURE + WEIGHT OF MEP UNITS

+ 5 PSF FOR MISC. MEP LOADS

UNIFORM (PSF) CONC. (LBS) ROOF LIVE LOAD:

# WIND LOAD PER ASCE 7-16

IND LOAD I LIVAGOL I-IO		
WIND BORN DEBRIS:	NOT APPLICAE	31
BUILDING RISK CATEGORY:	II	
BASIC WIND SPEED	115 MPH	
DIRECTIONALITY FACTOR (Kd):	0.85	
WIND EXPOSURE:	В	
TOPOGRAPHIC FACTOR (Kzl):	1.0	
GUST EFFECT FACTOR (G <sub>f</sub> ):	0.85	
ENCLOSURE CLASSIFICATION:	ENCLOSED	
INTERNAL PRESSURE COEFF:	±0.18	
MWFRS DESIGN PROCEDURE:	ENVELOPE	
MMEDS	POS. NEG.	
<u>MWFRS</u>	(PSF) (PSF)	
	(101) (101)	
WINDWARD / LEEWARD:	21.0 -14.2	2

### COMPONENTS AND CLADDING

**ROOF PRESSURE:** 

ROOF	SURFACE PRESSURE (PSF)			
AREA	10SF	50SF	100SF	500SF
NEG. ZONE 1	-23.8	-22.4	-21.8	-21.8
NEG. ZONE 2	-39.9	-30.1	-25.8	-25.8
NEG. ZONE 3	-60.1	-36.1	-25.8	-25.8
POS. ALL ZONES	9.7	8.3	7.7	7.7

-25.2

-11.1

CLIDEACE DDECCLIDE (DCE)

WALL	SURFACE PRESSURE (PSF)			
_AREA	10SF	50SF	100SF	500SF
NEG. ZONE 4	-25.8	-23.3	-22.2	-19.8
NEG. ZONE 5	-31.9	-26.9	-24.7	-19.8
POS. ALL ZONES	23.8	21.3	20.2	17.7
** REFER TO ASCE 7-16, CHAPTER 30 FOR ZONE DEFINITIONS**				

### SEISMIC DESIGN CRITERIA

RISK CATEGORY:	II	
SEISMIC IMPORTANCE FACTOR (Is):	Is = 1.0	
MAPPED SPECTRAL RESPONSE ACC'L:	$S_s = 0.20g$	$S_1 = 0.06g$
SITE CLASS:	D	
SPECTRAL RESPONSE ACCELERATIONS:	$S_{ds} = 0.21g$	$S_{d1} = 0.09g$
SEISMIC DESIGN CATEGORY:	В	

SEISMIC DESIGN FACTORS	
BASIC SEISMIC-FORCE- RESISTING SYSTEM(S):	ORDINARY REINFORCED MASONRY SHEAR WALLS
RESPONSE MODIFICATION FACTOR:	R = 2
SEISMIC RESPONSE COEFFICIENT:	$C_{s} = 105$
DESIGN BASE SHEAR:	$F_x = F_y = 14.7k$
SNOW LOADS	
GROUND SNOW LOAD:	25 PSF
FLAT ROOF SNOW LOAD:	17.5 PSF

### CONTRACTOR'S NOTES

GENERAL NOTES: GENERAL CONTRACTOR SHALL ENGAGE A SURVEYOR TO PROVIDE LOCATIONS OF ALL EXISTING UTILITES, TRENCHES, ETC. TO ENSURE THAT NEW FOUNDATIONS WILL NOT INTERFERE, UNDERMINE, OR BEAR ON EXISTING UTILITIES. GENERAL CONTRACTOR SHALL FIELD VERIFY EXISTING SIZES, DIMENSIONS, NOTES OR CONDITIONS PRIOR TO ANY DETAILING, OR FABRICATION OF MATERIALS.

TEMPORARY FACILITIES: THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE STRUCTURE S FULLY COMPLETED. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE, AND TO ENSURE THE STABILITY OF THE BUILDING AND ITS COMPONENT PARTS, AND THE ADEQUACY OF TEMPORARY OR INCOMPLETE CONNECTIONS, DURING ERECTION. THIS INCLUDES THE ADDITION OF ANY SHORING, SHEETING, TEMPORARY GUYS, BRACING OR TIE DOWNS THAT MIGHT BE NECESSARY. SUCH MATERIAL IS NOT SHOWN ON THE DRAWINGS. IF APPLIED, THEY SHALL BE REMOVED AS CONDITIONS PERMIT AND SHALL REMAIN THE

<u>CONSTRUCTION PROCEDURES:</u> THE ENGINEER HAS NO EXPERTISE IN, AND TAKES NO RESPONSIBILITY FOR, CONSTRUCTION MEANS AND METHODS OR JOB SITE SAFETY DURING CONSTRUCTION. PROCESSING AND/OR APPROVING SUBMITTALS MADE BY THE CONTRACTOR WHICH MAY CONTAIN INFORMATION RELATED TO CONSTRUCTION METHODS OR SAFETY ISSUES, OR PARTICIPATION IN MEETINGS WHERE SUCH ISSUES MIGHT BE DISCUSSED. SHALL NOT BE CONSTRUED AS VOLUNTARY ASSUMPTION BY THE ENGINEER OF ANY RESPONSIBILITY FOR SAFETY PROCEDURES. IT IS SOLELY THE RESPONSIBILITY OF EACH CONTRACTOR TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE ENGINEER IS NOT ENGAGED IN, AND

INSPECTION: ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH THE BUILDING CODE AND ALL LOCAL ORDINANCES. THE OWNER SHALL HIRE AN EXPERIENCED QUALIFIED INSPECTOR TO PERFORM ALL REQUIRED SPECIAL INSPECTION WORK. THE CONTRACTOR SHALL HIRE AN EXPERIENCED QUALIFIED INSPECTOR TO PERFORM ALL OTHER INSPECTION WORK. INSPECTION SHALL CONSIST OF, BUT NOT BE LIMITED TO, VISUAL OBSERVATIONS OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE DESIGN INTENT. THE ENGINEER WILL NOT PERFORM THE REQUIRED INSPECTION AS PART OF THIS PRESENT CONTRACT WITH THE ARCHITECT/OWNER. UNDER THIS PRESENT CONTRACT. THE ENGINEER MAY VISIT THE SITE TO ASCERTAIN GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS. HOWEVER, SUCH VISITS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHOULD IT BE CONSTRUED TO RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE CONSTRUCTION CONTRACT. HOWEVER, IF DESIRED, JMT CONSULTANTS, INC. MAY BE HIRED UNDER A SEPARATE CONTRACT TO PERFORM THIS INSPECTION WORK.

SUBMITTALS: SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY CONTRACTOR FOR REVIEW BY THE ENGINEER. ALL CONTRACTOR MODIFICATIONS (INCLUDING PRODUCTS SUBMISSION) MUST BE IDENTIFIED IN WRITING AS A PROPOSED "AS EQUAL" CHANGES AT TIME OF SUBMISSION. IF A CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS OR FAILS TO FOLLOW THE ABOVE "AS EQUAL" PROCEDURE, THE FIRM, JMT CONSULTANTS, INC., WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT.

CONTRACT DOCUMENTS: THE STRUCTURAL DRAWINGS AND SPECIFICATIONS ARE ONE PART OF THE CONTRACT DOCUMENT SET AND SHALL BE USED IN CONJUNCTION WITH THE REMAINING PARTS OF THE CONTRACT DOCUMENTS. "DRAWINGS" MEANS THE LATEST STRUCTURAL DESIGN DRAWINGS AND "SPECIFICATIONS" MEANS THE LATEST PROJECT SPECIFICATIONS. IN CASES WHERE REQUIREMENTS INDICATED ON THE STRUCTURAL DRAWINGS DIFFER FROM THE SPECIFICATIONS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AND ASSUME THE MORE STRINGENT REQUIREMENT UNTIL OTHERWISE NOTIFIED IN WRITING BY THE ARCHITECT OR ENGINEER. ADDITIONALLY WHERE REFERENCED CODES AND STANDARDS IDENTIFIED IN THE PLANS, NOTES, OR SPECIFICATIONS CONFLICT THE MORE STRINGENT OR CONSERVATIVE PROVISIONS SHALL CONTROL. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY SUCH CONFLICTS DISCOVERED.

<u>DRAWING SET CONVENTION/STANDARD:</u> ALL DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS ARE INTENDED TO BE TYPICAL WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL, OR DETAIL TITLE, OR NOTE. CENTERLINES OF COLUMNS AND FOUNDATIONS COINCIDE WITH GRID LINE INTERSECTIONS, UON, CENTERLINES OF GRADE BEAMS AND WALLS COINCIDE WITH CENTERLINES OF FOUNDATIONS, UON. CENTERLINES OF FLOOR FRAMING BEAMS AND GIRDERS COINCIDE WITH COLUMN CENTERLINES, UON. FOR BEAMS OVERHANGING A SUPPORT, THE SIZE OF THE CANTILEVER MEMBER SHALL MATCH THE BACKSPAN MEMBER, UON. ELEVATIONS INDICATED ON STRUCTURAL DRAWINGS ARE BASED ON A 0'-0" ELEVATION EQUATING TO 0'-0" PROJECT DATUM ELEVATION INDICATED ON THE ARCHITECTURAL DRAWINGS. USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS OR USE ANY DIMENSIONS TAKEN FROM ELECTRONIC DRAWING FILES.

1. PROTECTION: PROTECT EXISTING CONSTRUCTION TO REMAIN DURING REMOVAL, CUTTING AND PATCHING TO PREVENT

2. CUTTING: CUT EXISTING CONSTRUCTION USING METHODS LEAST LIKELY TO DAMAGE ELEMENTS TO BE RETAINED OR ADJOINING CONSTRUCTION. IN GENERAL, WHERE CUTTING IS REQUIRED, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT HAMMERING AND CHOPPING. CUT HOLES AND SLOTS NEATLY TO SIZE REQUIRED WITH MINIMUM DISTURBANCE OF ADJACENT SURFACES. TEMPORARILY COVER OPENINGS WHEN NOT IN USE. CUT THROUGH CONCRETE AND MASONRY USING A CUTTING MACHINE SUCH AS CARBORUNDUM SAW OR DIAMOND CORE DRILL.

3. CUT-OFF PIPE OR CONDUIT IN WALLS OR PARTITIONS TO BE REMOVED, RELOCATED OR ABANDONED. CUT-OFF PIPE OR CONDUIT IN WALLS OR PARTITIONS TO BE REMOVED. CAP VALVE OR PLUG AND SEAL THE REMAINING PORTION OF PIPE OR CONDUIT TO PREVENT ENTRANCE OF MOISTURE OR OTHER FOREIGN MATTER AFTER BY-PASSING AND CUTTING. 4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL UTILITIES THAT ARE INVOLVED IN THE DEMOLITION

ACTIVITIES AND COORDINATE THEIR REMOVAL OR RELOCATION WITH THE OWNERS REPRESENTATIVE. WORK AT NO COST TO OWNER.

# CONCRETE NOTES

# **MATERIALS**:

1. EXPOSURE CLASS FOR FOOTINGS AND GRADE BEAMS: F2. S0. W0. C1.

2. EXPOSURE CLASS FOR INTERIOR SLAB ON GROUND: F0, S0, W0, C0. 2. NORMAL-WEIGHT CONCRETE (NWC) MINIMUM CURED DENSITY SHALL BE 145 PCF

3. NORMAL-WEIGHT CONCRETE AGGREGATE SHALL CONFORM TO ASTM C33

4. NO ADMIXTURES SHALL CONTAIN CALCIUM CHLORIDE.

5. CONCRETE EXPOSED TO THE WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 6% ± 1.5%

1. DEFORMED BARS SHALL CONFORM TO ASTM A615, GRADE 60 OR ASTM A706, GRADE 60

# 2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064

# EXECUTION:

1. JOINTS IN STRUCTURAL FRAMING MEMBERS AND WALLS ARE PROHIBITED, UNLESS DETAILED IN THE DRAWINGS. 2. REFER TO TYPICAL DETAILS AND SPECIFICATIONS FOR PLACEMENT CRITERIA OF NON-ALUMINUM CONDUIT. 3. CHAMFER ALL EXPOSED CONCRETE CORNERS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS AND REQUIREMENTS 4. PROVIDE CONTINUOUS WATERSTOPS, AS DESCRIBED IN THE SPECIFICATIONS, AT EACH CONSTRUCTION JOINT OF

ANY CONCRETE ELEMENT EXPOSED TO SOIL OR WATER.

5. PROVIDE WATERSTOPS, EXTENDING FROM TOP OF FOOTING TO 4'-0" ABOVE GRADE. 6. PROVIDE A 1-1/2" BY 3-1/2" CONTINUOUS KEY AT EACH JOINT REQUIRING WATERSTOP.

7. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL JOINTING AND WATERPROOFING REQUIREMENTS. 8. LOADS GREATER THAN THE DESIGN LIVE LOADS SHALL NOT BE PLACED ON THE STRUCTURE. A CONCRETE

STRUCTURE MAY NOT SUPPORT ITS DESIGN LIVE LOAD FOR 28 DAYS. CONTRACTOR SHALL SUPPORT ADJACENT STRUCTURES, UTILITIES, AND EXCAVATIONS AS REQUIRED FOR COMPLETION OF WORK.

9. ONE SET OF COMPRESSIVE TEST CYLINDERS FOR EACH 50 CUBIC YARDS POURED, BUT NOT LESS THAN ONE SET FOR EACH DAY'S POUR AND EACH CLASS OF CONCRETE, ALONG WITH SLUMP TESTS SHALL BE PERFORMED BY A TESTING LABORATORY APPROVED BY THE STRUCTURAL ENGINEER.

1. DETAIL REINFORCEMENT BASED ON THE PROJECT REQUIREMENTS AND APPLICABLE CODES / STANDARDS NOTED. 2. ALL LAP SPLICES ARE TO BE ACI STANDARD CLASS B TENSION LAP SPLICES. WHERE BARS OF DIFFERENT SIZES LAP, PROVIDE LAP SPLICE LENGTH FOR LARGER BAR.

3. WHERE A 90-DEG. HOOK IS GRAPHICALLY INDICATED, PROVIDE ACI STANDARD 90-DEG. HOOK. WHERE A 135-DEG. HOOK IS GRAPHICALLY INDICATED, PROVIDE ACI STANDARD 135-DEG. HOOK. WHERE A 180-DEG. HOOK IS GRAPHICALLY INDICATED, PROVIDE ACI STANDARD 180-DEG. HOOK.

CONTINUOUS. ALL WALL STEEL SHALL HAVE A MINIMUM EXTENSION INTO THE SUPPORTS IN ACCORDANCE WITH THE

4. WHERE SHEETS OF WELDED WIRE FABRIC ARE GRAPHICALLY INDICATED TO LAP, PROVIDE ACI STANDARD FULL TENSION WELDED WIRE FABRIC LAP SPLICE.

5. FOR BARS INDICATED IN GROUPS, PROVIDE BARS OF EACH GROUP AT EQUAL SPACING, UON.

6. WHERE DOWELS ARE INDICATED BUT NOT SIZED, PROVIDE DOWELS THAT MATCH SIZE AND LOCATION OF MAIN REINFORCEMENT AND LAP SPLICE WITH THE MAIN REINFORCEMENT. 7. WHERE CONCRETE ELEMENTS INTERSECT WALLS, PROVIDE DOWELS TO EXTEND WALL REINFORCEMENT

LATEST ADDITION OF THE ACI CODE. 8. REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE PROTECTION (CLEAR COVER), UON.

SURFACES NOT FORMED: 3" FORMED SURFACES IN CONTACT WITH SOIL/ WATER, OR EXPOSED TO WEATHER: 2" INTERIOR OR EXTERIOR WALLS BEAMS, GIRDER, AND COLUMNS: 2"

SLABS AND JOISTS, TOP BARS: 3/4" SLABS AND JOISTS, BOTTOM BARS AND WALLS:

CONCRETE BLOCK: ASTM C90, NORMAL WEIGHT - TYPE I, GRADE N1 MORTAR: ASTM C270 GROUT: ASTM C476 REINFORCING BARS: ASTM A615, GRADE 60 JOINT REINFORCEMENT: ASTM A951, LADDER TYPE

EXTERIOR JT REINF: GALVANIZE PER ASTM A153 INTERIOR JT REINF: GALVANIZE PER ASTM A641 1. THE MINIMUM COMPRESSIVE STRENGTH OF THE MASONRY (F'M) SHALL BE 2,000 PSI, UON. THIS STRENGTH SHALL BE OBTAINED IN ACCORDANCE WITH THE ABOVE REFERENCED SPECIFICATIONS FOR MASONRY STRUCTURES.

2. ALL BLOCK DIMENSIONS INDICATED ON STRUCTURAL PLANS ARE NOMINAL DIMENSIONS. 3. ALL MASONRY UNITS SHALL BE PLACED WITH FULL FACESHELL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS. WEBS SHALL ALSO HAVE FULL MORTAR COVERAGE AROUND ALL GROUTED CELLS. 4. CONCRETE BLOCK BELOW BEAM BEARING POINTS SHALL BE FILLED SOLID FOR A MINIMUM OF TWO COURSES IN DEPTH AND A MINIMUM OF 32" IN WIDTH, UON. ALL PORTIONS OF MASONRY WALLS HAVING A HORIZONTAL CROSS

SECTION OF 4 SQ. FT. OR LESS SHALL BE OF FILLED SOLID DOWN TO FOOTINGS. 5. MASONRY WALL SHALL BE REINFORCED AS SHOWN ON DRAWINGS. IF NO REINFORCEMENT IS SHOWN, PROVIDE VERTICAL #5 BARS @ 32" O.C.

6. ALL MASONRY WALLS SHALL HAVE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. MAXIMUM. 7. ALL WALLS AT INTERSECTIONS AND CORNERS SHALL BE INTERLOCKED WITH METAL TIES, ANCHORS, OR JOINT REINFORCEMENT. SEE THE SPECIFICATIONS FOR REQUIREMENTS.

8. ALL CELLS WITH VERTICAL REINFORCING SHALL BE GROUTED SOLID. 9. THE MINIMUM SPLICE LENGTH FOR ALL VERTICAL REINFORCING BARS SHALL BE 48 BAR DIAMETERS.

10. CALCIUM CHLORIDE SHALL NOT BE USED IN MORTAR OR GROUT. 11.ALL MORTAR SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS. 12.PROVIDE CONTROL JOINTS AT 24' O.C. AND ON EACH SIDE OF EACH OPENING IN CMU WALLS. FILL JOINTS WITH

WEATHERPROOF ELASTOMERIC SEALANT MEETING STANDARDS OF ASTM C920. 13. CONCRETE GROUT, CONFORMING TO ASTM C476, NOT MORTAR, SHALL BE USED AT CELLS AND BOND BEAMS CONTAINING REINFORCING BARS. DO NOT FILL CELLS NOT CONTAINING REINFORCING BARS, EXCEPT BELOW GRADE,

UNLESS SO INDICATED. 14. LOAD BEARING MASONRY WALLS SHALL BE LATERALLY BRACED UNTIL ALL FLOOR / ROOF DIAPHRAGM IS IN PLACE. 15. AT ALL NON-LOAD BEARING MASONRY WALLS (INTERIOR AND EXTERIOR), PROVIDE A 3/4" CAULKED JOINT BETWEEN

UNDERSIDE OF BEAM, JOIST, DECK, OR STRUCTURE AND TOP OF MASONRY WALL 16. PROVIDE A 2 SQUARE INCH INSPECTION HOLE AT THE BOTTOM CELL FOR EACH LIFT TO ALLOW VISUAL INSPECTION

AND TO REMOVE MORTAR DROPPING PRIOR TO GROUTING. 17. ALL MASONRY SHALL BE RUNNING BOND UNLESS NOTED OTHERWISE. 18. SLEEVE ALL PLUMBING OR FIRE PROTECTION PIPING THROUGH CMU WALL.

19. AT LOAD-BEARING MASONRY WHERE JOISTS OR BEAMS BEAR ON MASONRY WALLS, GROUT POCKET SOLID WITH GROUT TO THE SAME FINISH FACE AS MASONRY ABOVE AND BELOW. DO THIS ONLY AFTER JOIST SEAT CONNECTION

### STEEL BAR JOIST NOTES

1. JOIST BRIDGING SHALL NOT BE USED TO SUPPORT CONDUIT, PIPING, DUCTWORK, ETC.

2. JOISTS SHALL NOT BE FIELD MODIFIED EXCEPT AS SHOWN. 3. STEEL JOISTS SHALL BE OPEN WEB STEEL JOISTS OF THE SIZES AND SERIES SHOWN ON THE DRAWINGS. JOISTS, BRIDGING AND SPACING OF BRIDGING SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS" OF THE STEEL JOIST INSTITUTE, EXCEPT WHERE OTHERWISE INDICATED BY THE DRAWINGS OR SPECIFICATIONS.

4. WHERE ANGLE BRACES ARE SHOWN ON STRUCTURAL SECTIONS, JOIST MANUFACTURER SHALL RESOLVE AN AXIAL LOAD OF 2000 POUNDS FROM THE BRACE INTO THE JOIST - TYPICAL UNLESS NOTED OTHERWISE.

5. IN ADDITION TO WHAT IS CALLED FOR ON PLAN, BAR JOISTS SHALL BE DESIGNED TO SUPPORT AN ADDITIONAL CONCENTRATED LOAD OF 300 POUNDS AT TOP OR BOTTOM CHORD AT ANY ONE LOCATION ALONG THE SPAN.

6. AT THE END OF EACH ROOF JOIST, PROVIDE A CONTINUOUS ROW OF BRIDGING AT THE LAST BOTTOM CHORD PANEL POINT FOR UPLIFT. TYPICAL AT EACH END OF JOIST.

7. CONTRACTOR SHALL SUBMIT ERECTION PLANS AND DETAIL SHOP DRAWINGS FOR REVIEW BY ENGINEER BEFORE FABRICATION. 8. MANUFACTURER SHALL DESIGN JOISTS FOR LOADS PROVIDED ON DRAWINGS AND ALL APPLICABLE DESIGN AND BUILDING CODES. MANUFACTURER SHALL SUBMIT SIGNED AND SEALED CALCULATIONS FOR REVIEW BY ENGINEER

DECKING NOTES

BEFORE FABRICATION.

STEEL FOR DECK: ASTM A446, MINIMUM YIELD STRENGTH OF 33 KSI

HOT-DIP GALVANIZING: ASTM A525 G60

1. DECK SHALL BE HOT-DIP GALVANIZED, UON. SEE SPECIFICATIONS FOR A LISTING OF ACCEPTABLE METAL ROOF

2. THE DESIGN, MANUFACTURE AND ERECTION OF STEEL ROOF DECK AND ITS ANCHORAGE SHALL, AT A MINIMUM, BE IN ACCORDANCE WITH CODES / STANDARDS NOTED. 3. PROVIDE STEEL DECK WITH DEPTH INDICATED ON THE DRAWINGS AND MINIMUM THICKNESS OF 20 GAGE, UON.

4. DESIGN AND DETAIL ROOF DECK AND ITS ANCHORAGE TO SUPPORTING MEMBERS TO SUPPORT SCHEDULED DESIGN LOADS, INDICATED DIAPHRAGM SHEAR, AND INDICATED ROOF UPLIFT, ROOF DIAPHRAGM LOADS AND ROOF UPLIFT LOADS SHALL BE ASSUMED TO BE APPLIED SIMULTANEOUSLY. 5. ROOF DECK AND ITS ANCHORAGE TO STRUCTURAL FRAMING SHALL BE CAPABLE OF WITHSTANDING A MINIMUM NET

UPLIFT FORCE OF 40 POUNDS PER SQUARE FOOT. 6. NO LOAD SHALL BE HUNG DIRECTLY FROM STEEL ROOF DECK WITHOUT THE PRIOR REVIEW AND APPROVAL OF THE DECK SUPPLIER AND THE STRUCTURAL ENGINEER OF RECORD.

7. CONFORM TO MANUFACTURER'S SPECIFICATIONS FOR MAXIMUM UNSHORED SPANS DURING CONSTRUCTION. 8. DECK SHALL HAVE WELDED SIDELAPS @ 12" O.C, 3/4" PUDDLE WELDS @ SUPPORTS (ONE PER FLUTE), AND WELDS AT 12" O.C. ALONG EDGE BEAMS AT PERIMETER OF BUILDING, UNLESS OTHERWISE NOTED.

POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS.

ANCHORAGE TO STRUCTURE NOTES

2. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.

3. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. 4. THE FOLLOWING MANUFACTURER'S HAVE BEEN PREAPPROVED FOR SUBMITTAL; POWERS FASTENERS, HILTI, &

5. SUBMITTAL OF ALL PROPOSED PRODUCTS, WITH TECHNICAL DATA AND CURRENT ICC-ERS REPORTS IS REQUIRED

FOR REVIEW AND APPROVAL BY EOR. ADDITIONAL APPLICATION CALCULATIONS MAY BE REQUIRED BY THE EOR. 6. HOLES SHALL BE DRILLED AND CLEANED IN STRICT ACCORDANCE WITH THE CURRENT MANUFACTURER'S

PUBLISHED INSTALLATION INSTRUCTIONS (MPII).

7. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT THE TIME OF ANCHOR INSTALLATION IN ACCORDANCE WITH ACI 318-11 D.2.2. 8. MANUFACTURER'S FIELD REPRESENTATIVE SHALL PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE

USED, PRIOR TO COMMENCEMENT OF WORK. ONLY TRAINED INSTALLERS SHALL PERFORM POST INSTALLED ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND BE MADE AVAILABLE TO THE EOR AS REQUESTED

9. PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT FOR THE ANCHOR.

10. ANCHORS ARE TO BE 3/4" DIAMETER WITH A MINIMUM EMBEDMENT OF 6". UON.

11. INSTALL ANCHORS TO MEET THE REQUIREMENTS INDICATED IN THE DRAWINGS, THE CURRENT I.C.B.O. REPORT, AND THE MANUFACTURER'S RECOMMENDATIONS.

12. MASONRY ANCHORS ARE TO BE INSTALLED IN SOLID MASONRY OR IN HOLLOW MASONRY THAT HAS BEEN GROUTED SOLID AT LEAST ONE COURSE ABOVE AND ONE COURSE BELOW THE ANCHOR, UON.

MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR CRACKED, UNCRACKED AND SEISMIC CONCRETE RECOGNITION. ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED, UNCRACKED AND SEISMIC CONCRETE RECOGNITION.

MASONRY ANCHORS (SOLID GROUTED CONCRETE MASONRY)

MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC01 OR AC106. ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-

MASONRY ANCHORS (HOLLOW CONCRETE MASONRY/UNREINFORCED CLAY BRICK MASONRY): ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED IN ACCORDANCE WITH ICC-ES AC58 OR AC60. THE APPROPRIATE SCREEN TUBE SHALL BE USED AS RECOMMENDED BY THE ADHESIVE MANUFACTURER.

1. CONCRETE SHALL NOT BE POURED ON FROZEN GROUND.

I. SAMPLES OF ALL MATERIALS THAT THE CONTRACTOR PROPOSES TO USE FOR COMPACTED FILL SHALL BE APPROVED. BY THE GEOTECHNICAL ENGINEER AND STRUCTURAL ENGINEER. COMPACTED FILL SHALL CONSIST OF LOCAL MATERIAL FREE OF DELETERIOUS MATTER AND CLASSIFIED SC, GC, GM, OR SM PER ASTM D-2487

2. THE CONTROL OF THE MOISTURE FOR PLACING THE FILL WILL BE BASED ON THE RESULTS OF COMPACTION TESTS PER ASTM D-1557. ALL COMPACTED FILL SHALL HAVE A DENSITY OF AT LEAST 95% FOR COHESIONLESS SOILS AND 90% FOR COHESIVE SOILS OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557. 3. PRIOR TO PLACEMENT OF ANY FILLS, THE SITE SHALL BE STRIPPED OF ALL TOPSOIL, VEGETATION, ROCKS, AND ORGANIC MATERIALS AND THE EXPOSED SUBGRADE SHALL BE COMPACTED IN PLACE TO A CONFIRMED DENSITY OF 95%

OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. 4. 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. 5. COMPACTED FILL PLACED WITHIN 4 FEET OF STRUCTURES AND PIPES SHOULD BE PLACED IN HORIZONTAL LIFTS NOT TO EXCEED 4 INCHES THICKNESS AND COMPACTED WITH HAND TAMPERS OR LIGHT COMPACTION EQUIPMENT TO THE

SAME STANDARD. HEAVY COMPACTION EQUIPMENT SHOULD NOT BE ALLOWED WITHIN 4 FEET OF STRUCTURES UNLESS A MINIMUM 2 FEET DEPTH OF FILL COVERS THE STRUCTURES. 6. THE CONTRACTOR SHALL TAKE ALL MEASURES REQUIRED TO PROVIDE FOR FREE DRAINAGE OF THE SITE AND TO

PREVENT PONDING OF WATER. SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. 7. PLACING OF FILL CONTAINING ORGANIC MATTER; PLACING OF FILL WITH MOISTURE CONTENT TOO HIGH OR TOO LOW FOR PROPER COMPACTION; PLACING OF FILL WHEN FREE WATER IS STANDING ON THE EXISTING FILL SURFACE; PLACING OF FILL IN A FROZEN CONDITION OR ON TOP OF FROZEN MATTER WILL NOT BE PERMITTED. 8. THE GEOTECHNICAL ENGINEER SHALL SUPERVISE THE PLACING OF THE COMPACTED FILL AND ALL THE MATERIAL AND

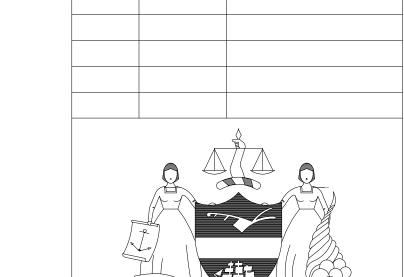
EQUIPMENT USED FOR THIS PURPOSE AND SHALL MAKE SUCH SOILS TESTS AS MAY BE REQUIRED FOR THE COMPLETION

2. PROVIDE PROTECTION AS REQUIRED TO SUPPORT LATERAL LOADS DURING EXCAVATION. 3. FILL ALL VOIDS AND REPLACE DISTURBED SOIL WITH LEAN CONCRETE. 4. CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS AND ALL EXCAVATIONS SHALL BE KEPT FREE OF

5. CONTRACTOR SHALL REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL LOCATIONS OF

TRENCHES, PITS, CONDUITS, ETC. NOT SHOWN ON STRUCTURAL DRAWINGS. 6. A SOIL BEARING CAPACITY MUST BE FIELD VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER 7. IF SOIL OF THIS BEARING CAPACITY IS NOT ENCOUNTERED AT THE ELEVATIONS INDICATED ON THE CONTRACT DRAWINGS, FOOTINGS SHALL BE LOWERED OR INCREASED IN SIZE AS DIRECTED BY THE STRUCTURAL ENGINEER. ELEVATIONS SHOWN ON PLAN ARE TO THE BOTTOM OF THE FOOTING

. DESIGN ALLOWABLE BEARING CAPACITY OF 2,000 PSF HAS BEEN ASSUMED IN STRUCTURAL FOUNDATION DESIGN BASED ON LETTER REPORT BY AEG, LLC DATED 6/3/2019.



3.25.2021

DESCRIPTION

ADDENDUM #1

PROJECT COORDINATOR

Philadelphia Parks & Recreation and Department of Public Property 1515 Arch Street, 11th Floor Philadelphia, PA 19102 Contact: Tara Rasheed, 215-683-0252

SEAL

REVISIONS



### **PROJECT TEAM**

ARCHITECT:

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**STRUCTURAL ENGINEER:** 

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# SYSTEMS ENGINEER:

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**CITY OF PHILADELPHIA** 

**DEPARTMENT OF PUBLIC PROPERTY** 

1515 ARCH STREET 11TH FLOOR, ONE PARKWAY BUILDING PHILADELPHIA, PENNSYLVANIA

PROJECT TITLE NELSON PLAYGROUND

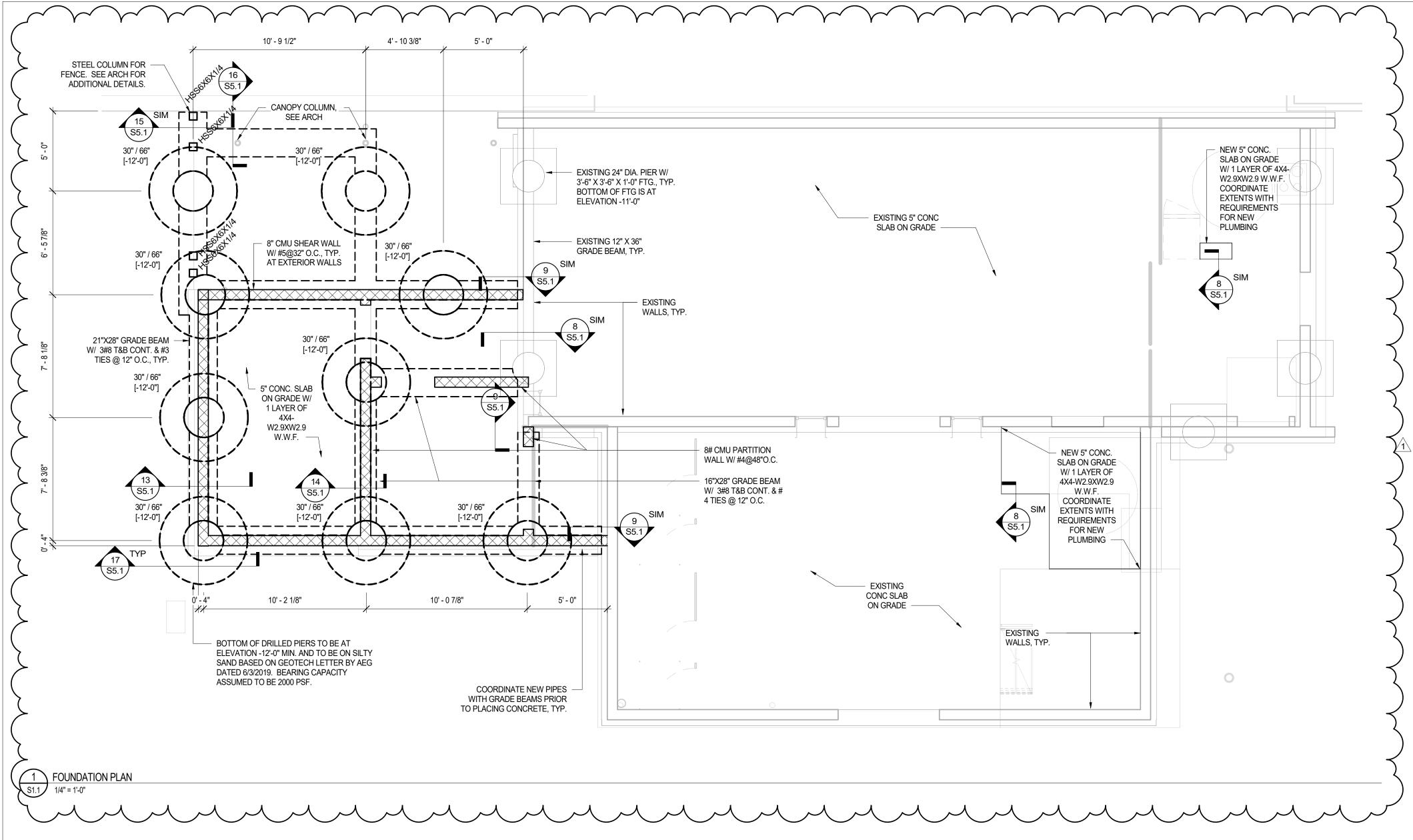
**DRAWING TITLE** 

PROJECT NO. DRAWING NO. 18-00355-001

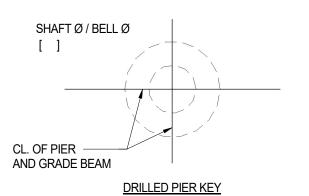
**GENERAL NOTES** 

**DATE:** 07.24.2020 **SCALE**: AS NOTED DRAWN BY:

CHECKED BY: CR | FILE: NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE



# FOUNDATION PLAN NOTES



[0'-0"] INDICATES ELEVATION OF FINISH FLOOR SLAB. SEE

[ ]: NUMBER INSIDE OF BRACKETS INDICATES BOTTOM OF

CIVIL DRAWINGS FOR DATUM.

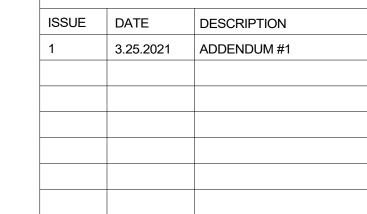
FOOTING ELEVATION

- JOINTS IN FINISHES. ALL FLOOR JOINTS SHOULD COINCIDE DIRECTLY UNDER A JOINT IN THE ARCHITECTURAL FINISH ABOVE. SEE ARCHITECTURAL DRAWINGS. NOTE: FOOTINGS HAVE NOT BEEN DROPPED FOR
  - CIVIL, PLUMBING, OR ELECTRICAL LINES. SEE GENERAL NOTES FOR CRITERIA.

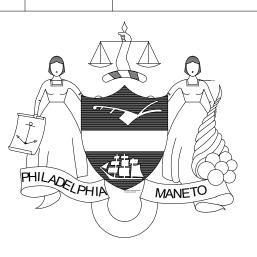
NOTE: CONTRACTOR SHALL COORDINATE EXACT LOCATIONS

OF ALL FLOOR JOINTS WITH THE ARCHITECTURAL

- NOTE: UNLESS NOTED OTHERWISE ON PLANS, BOTTOM OF GRADE BEAM SHALL BE [-3'-0"] BELOW FINISH FLOOR
- NOTE: MAXIMUM SPACING OF VERTICAL CONTROL JOINTS IN EXTERIOR MASONRY VENEER IS 16'-0" FROM CORNERS AND 32'-0" FOR INTERMEDIATE VERTICAL JOINTS. SEE ARCHITECT FOR EXACT LOCATIONS.
- NOTE: UNLESS NOTED OTHERWISE FOUNDATION SLAB IS 5" CONCRETE SLAB ON A POLYETHYLENE VAPOR BARRIER (SEE ARCHITECT) ON 4" GRAVEL ON GRADE REINFORCED WITH W.W.F.4x4-W2.9xW2.9.
- NOTE: GENERAL CONTRACTOR SHALL ENGAGE A SURVEYOR TO PROVIDE LOCATIONS OF ALL EXISTING UTILITES, TRENCHES, ETC. TO ENSURE THAT NEW FOUNDATIONS WILL NOT INTERFERE, UNDERMINE, OR BEAR ON EXISTING UTILITIES.



REVISIONS



PROJECT COORDINATOR

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# PROJECT TEAM

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DEPARTMENT OF PUBLIC PROPERTY

1515 ARCH STREET 11TH FLOOR, ONE PARKWAY BUILDING PHILADELPHIA, PENNSYLVANIA

PROJECT TITLE NELSON PLAYGROUND

PROJECT NO.

CITY OF PHILADELPHIA

DRAWING TITLE

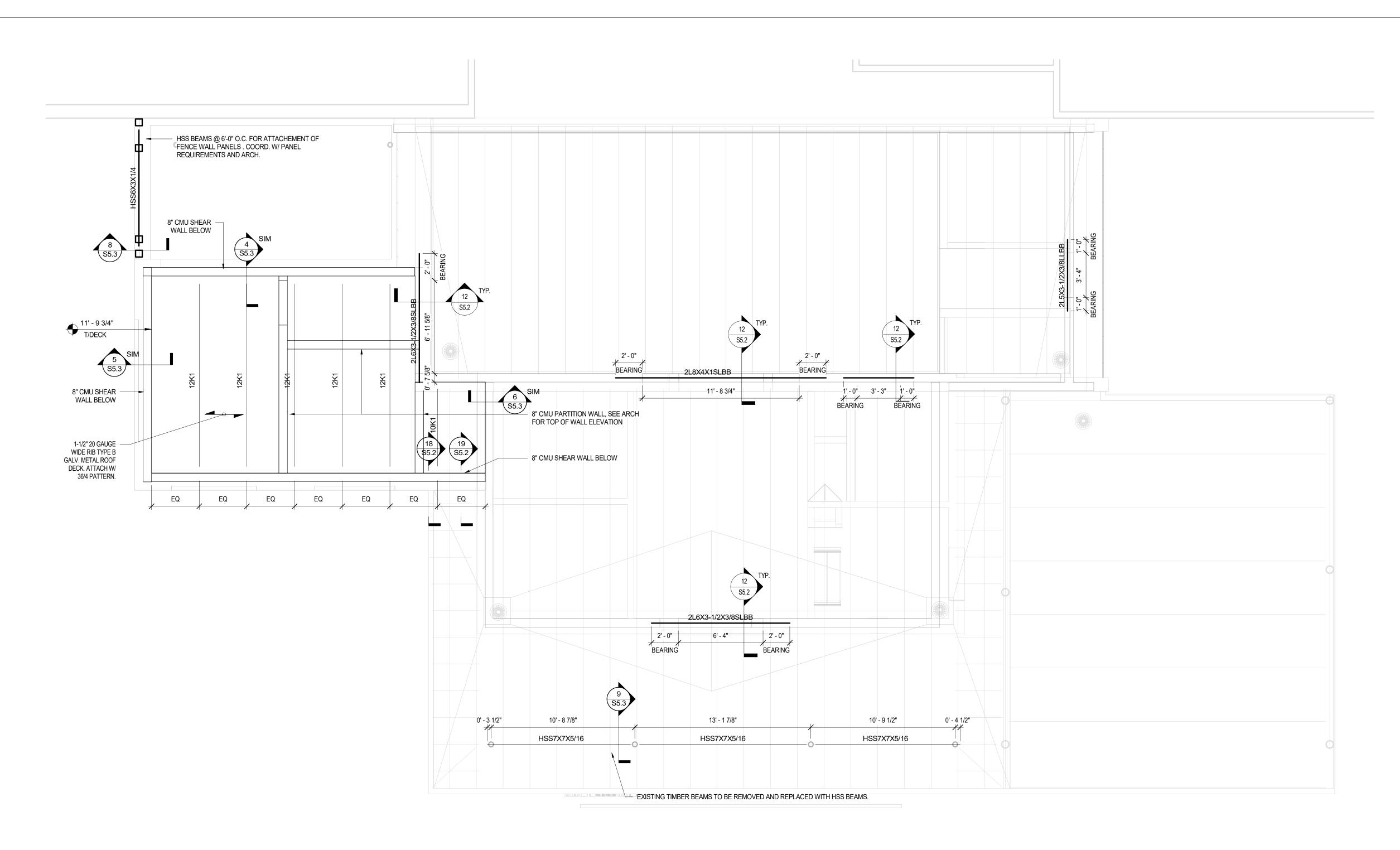
STRUCTURAL FOUNDATION PLAN

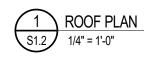
DRAWING NO.

18-00355-001 **DATE:** 07.24.2020 **S1.1** SCALE: AS NOTED

DRAWN BY:

CHECKED BY: CR FILE: NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.





# **ROOF FRAMING PLAN NOTES**

indicates the direction the deck is spanning.

(T.O.P.): INDICATES TOP OF PARAPET. COORD. W/ ARCH

(T.O.D): INDICATES TOP OF DECK.

(MSW): INDICATES A MASONRY SHEAR WALL.

NOTE: SEE ARCHITECT AND PLUMBING DRAWINGS FOR

LOCATIONS OF ROOF DRAINS.

NOTE: FOR FRAMING AROUND THE PERIMETER OF A MECHANICAL UNIT, SEE TYPICAL DETAIL:

NOTE: CONTRACTOR COORDINATE LOCATION OF OPENINGS AND WEIGHTS OF MECHANICAL UNITS, WITH THE MECHANICAL DRAWINGS. IF WEIGHTS EXCEED WHAT IS SHOWN ON THE STRUCTURAL PLAN, THEN NOTIFY THE STRUCTURAL ENGINEER OF THE CHANGE PRIOR TO ANY DETAILING OR FABRICATION OF JOIST, DECK OR STEEL.

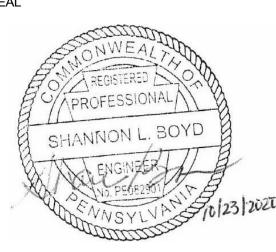
PHILADELF	PHIA	## MANETO

3.25.2021 ADDENDUM #1

### PROJECT COORDINATOR

REVISIONS

Philadelphia Parks & Recreation and Department of Public Property 1515 Arch Street, 11th Floor Philadelphia, PA 19102 Contact: Tara Rasheed, 215-683-0252



### PROJECT TEAM

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CITY OF PHILADELPHIA

DEPARTMENT OF PUBLIC PROPERTY

1515 ARCH STREET 11TH FLOOR, ONE PARKWAY BUILDING PHILADELPHIA, PENNSYLVANIA

PROJECT TITLE NELSON PLAYGROUND

RAWING TITLE STRUCTURAL ROOF PLAN DRAWING NO.

ROJECT NO. 18 (00355-001

**DATE:** 07.24.2020 **SCALE**: AS NOTED

S1.2

NOTE: ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE SITE BEFORE PROCEEDING WITH THE WORK.

