TABLE 1704.5.1
LEVEL 1 REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION

VERIFICATION AND INSPECTION	FREQUENCY OF INSPECTION		REFERENCE FOR CRITERIA		
	CONTINUOUS	PERIODIC	IBC SECTION	ACI 530/ ASCE 5/ TMS 402 a	ACI 530.1/ ASCE 6/ TMS 602 a
1. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED.	-	X	-	-	ART. 1.5
2. VERIFICATION OF f'm and f'AAC PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE.	-	X	-	-	ART 1.4B
3. VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT.	X	-	-	-	ART 1.5B.1.b.3
4. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE.					
a. PROPORTIONS OF SITE-PREPARED MORTAR.	-	X	-	-	ART. 2.6A
b. CONSTRUCTION OF MORTAR JOINTS.	-	X	-	-	ART. 3.3B
c. LOCATION OF REINFORCEMENT, CONNECTORS, PRESTRESSING TENDONS, AND ANCHORAGE.	-	X	-	-	ART. 3.4, 3.6A
d. PRESTRESSING TECHNIQUE.	-	X	-	-	ART. 3.6B
e. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGE.	-	X	-	-	ART. 2.4B, 2.4H
5. DURING CONSTRUCTION THE INSPECTION PROGRAM SHALL VERIFY.					
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	-	X	-	-	ART. 3.3F
b. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.	-	X	-	SEC. 1.2.2(e), 1.16.1	-
c. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGE.	-	X	-	SEC. 1.15	ART. 2.4, 3.4
d. WELDING OF REINFORCING BARS.	X	-	-	SEC. 2.1.9.7.2, 3.3.3.4(b)	-
e. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	-	X	SEC. 2104.3, 2104.4	-	ART.1.8C, 1.8D
f. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE.	X	-	-	-	ART. 3.6B
6. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE.					
a. GROUT SPACE IS CLEAN.	-	X	-	-	ART. 3.2D
b. PLACEMENT OF REINFORCEMENT AND CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGE.	-	X	-	SEC. 1.13	ART. 3.4
c. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	-	X	-	-	ART. 2.6B
d. CONSTRUCTION OF MORTAR JOINTS.	-	X	-	-	ART. 3.3B
7. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE.	X	-	-	-	ART. 3.5
a. GROUTING OF PRESTRESSING BONDED TENDONS.	X	-	-	-	ART. 3.6C
8. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	-	X	SEC. 2105.2.2, 2105.3	-	ART 1.4

a. THE SPECIFIC STANDARDS REFERENCED ARE THOSE LISTED IN CHAPTER 35.

TABLE 1704.5.3
LEVEL 2 REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION

VERIFICATION AND INSPECTION	FREQUENCY OF INSPECTION		REFERENCE FOR CRITERIA		
	CONTINUOUS	PERIODIC	IBC SECTION	ACI 530/ ASCE 5/ TMS 402 a	ACI 530.1/ ASCE 6/ TMS 602 a
1. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS.	-	X	-	-	ART. 1.5
2. VERIFICATION OF f'm AND f'AAC PRIOR TO CONSTRUCTION AND FOR EVERY 5,000 SQUARE FEET DURING CONSTRUCTION.	-	X	-	-	ART. 1.4B
3. VERIFICATIONS OF PROPORTIONS OF MATERIALS IN PREMIXED OR PREBLENDED MORTAR AND GROUT AS DELIVERED TO THE SITE.	-	X	-	-	ART. 1.5B
4. VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO SITE FOR SELF-CONSOLIDATING GROUT.	X	-	-	-	ART. 1.5B.1.b.3
5. THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE.					
a. PROPORTIONS OF SITE-PREPARED MORTAR, GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	-	X	-	-	ART. 2.6A
b. PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS.	-	X	-	-	ART. 3.3B
c. PLACEMENT OF REINFORCEMENT, CONNECTORS AND PRESTRESSING TENDONS AND ANCHORAGES.	-	X	-	SEC. 1.15	ART. 3.4, 3.6A
d. GROUT SPACE PRIOR TO GROUT.	X	-	-	-	ART. 3.2D
e. PLACEMENT OF GROUT.	X	-	-	-	ART. 3.5
f. PLACEMENT OF PRESTRESSING GROUT.	X	-	-	-	ART. 3.6C
g. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	-	X	-	-	ART. 3.3F
h. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.	X	-	-	SEC. 1.2.2(e), 1.16.1	-
i. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES.	-	X	-	SEC. 1.15	ART. 2.4. 3.4
j. WELDING OF REINFORCING BARS.	X	-	-	SEC 2.1.9.7.2, 3.3.3.4(b)	-
k. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	-	X	SEC. 2104.3, 2104.4	-	ART. 1.8C, 1.8D
l. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE.	X	-	-	-	ART. 3.6B
6. PREPARATION OF ANY REQUIRED GROUT SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	X	-	SEC. 2105.2.2, 2105.3	-	ART. 1.4

a. THE SPECIFIC STANDARDS REFERENCED ARE THOSE LISTED IN CHAPTER 35.

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION - FROM AISC STEEL CONSTRUCTION MANUAL - CHAPTER N - QUALITY CONTROL AND QUALITY ASSURANCE (AISC 360-10)

TABLE N5.4-1 - INSPECTION TASKS PRIOR TO WELDING

INSPECTION TASK PRIOR TO WELDING	QUALITY CONTROL	QUALITY ASSURANCE
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P	P
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O
WELDER IDENTIFICATION SYSTEM (SEE NOTE 1)	O	O
FIT - UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) JOINT PREPARATION DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) CLEANLINESS (CONDITION OF STEEL SURFACE) TACKING (TACK WELD QUALITY AND LOCATION) BACKING TYPE AND FIT (IF APPLICABLE)	O	O
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O
FIT - UP OF FILLET WELDS DIMENSIONS (ALIGNMENT, GAPS OF ROOT CLEANLINESS (CONDITION OF STEEL SURFACE) TACKING (TACK WELD QUALITY AND LOCATION)	O	O
CHECK WELDING EQUIPMENT	O	---

NOTE 1 - THE FABRICATOR OF ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW - STRESS TYPE.

TABLE N5.4-2 - INSPECTION TASKS DURING WELDING

INSPECTION TASK DURING WELDING	QUALITY CONTROL	QUALITY ASSURANCE
USE OF QUALIFIED WELDERS	O	O
CONTROL AND HANDLING OF WELDING CONSUMABLES PACKAGING EXPOSURE CONTROL	O	O
NO WELDING OVER CRACKED TACK WELDS	O	O
ENVIRONMENTAL CONDITIONS WIND SPEED WITHIN LIMITS PRECIPITATION AND TEMPERATURE	O	O
WPS FOLLOWED SETTINGS ON WELDING EQUIPMENT TRAVEL SPEED SELECTED WELDING MATERIALS SHIELDING GAS TYPE/FLOW RATE PREHEAT APPLIED INTERPASS TEMPERATURE MAINTAINED (MIN./MAX) PROPER POSITION (F, V, H, OH)	O	O
WELDING TECHNIQUES INTERPASS AND FINAL CLEANING EACH PASS WITHIN PROFILE LIMITATIONS EACH PASS MEETS QUALITY REQUIREMENTS	O	O

TABLE N5.4-3 - INSPECTION TASKS AFTER WELDING

INSPECTION TASK DURING WELDING	QUALITY CONTROL	QUALITY ASSURANCE
WELDS CLEANED	O	O
SIZE, LENGTH, AND LOCATION OF WELDS	P	P
WELDS MEET VISUAL ACCEPTANCE CRITERIA CRACK PROHIBITION WELD/BASE-METAL FUSION CRATER CROSS SECTION WELD PROFILES WELD SIZE UNDERCUT POROSITY	P	P
ARC STRIKES	P	P
k-AREA (SEE NOTE 1)	P	P
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P
REPAIR ACTIVITIES	P	P
DOCUMENT ACCEPTANCE OF REJECTION OF WELDED JOINT OR MEMBER	P	P

NOTE 1 - WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PREFORMED IN THE k-AREA, VISUALLY INSPECT THE WEB k-AREA FOR CRACKS WITHIN 3 in. (75mm) OF THE WELD.

TABLE N5.6-1 - INSPECTION TASKS PRIOR TO BOLTING

INSPECTION TASKS PRIOR TO BOLTING	QUALITY CONTROL	QUALITY ASSURANCE
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	O
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)	O	O
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS	O	O

TABLE N5.6-2 - INSPECTION TASKS DURING BOLTING

INSPECTION TASKS DURING BOLTING	QUALITY CONTROL	QUALITY ASSURANCE
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O	O
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARDS THE FREE EDGES	O	O

TABLE N5.6-2 - INSPECTION TASKS AFTER BOLTING

INSPECTION TASKS AFTER BOLTING	QUALITY CONTROL	QUALITY ASSURANCE
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P

TABLE N6.1 - INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT

INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT	QUALITY CONTROL	QUALITY ASSURANCE
PLACEMENT AND INSTALLATION OF STEEL DECK	P	P
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	P	P

NOTES:

1. THESES TABLES WERE TAKEN FROM THE 14TH EDITION AISC STEEL CONSTRUCTION MANUAL - CHAPTER N - QUALITY CONTROL AND QUALITY ASSURANCE
2. P USED IN THE ABOVE TABLE STANDS FOR "PERFORM THESE TASKS FOR EACH WELDED CONNECTION, BOLTED CONNECTION, OR STEEL ELEMENT"
3. O USED IN THE ABOVE TABLE STANDS FOR "OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS"

TABLE 1705.3
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD a	IBC REFERENCE
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	-	X	ACI 318: 3.5, 7.1-7.7	1910.4
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.2.2, ITEM 2b.	-	-	AWS D1.4 ACI 318: 3.5.2	-
3. INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	-	X	ACI 318: 8.1.3, 21.2.8	1908.5 1909.1
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE.	-	X	ACI 318: 3.8.6, 8.1.3, 21.2.8	1909.1
5. VERIFYING USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: CH. 4,5.2-5.4	1904.2, 1910.2, 1910.3
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C 172 ASTM C 31 ASTM 318: 5.6, 5.8	1910.10
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 5.9 , 5.10	1910.6, 1910.7, 1910.8
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 5.11-5.13	1910.9
9. INSPECTION OF PRESTRESSED CONCRETE: a. APPLICATION OF PRESTRESSING FORCES. b. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	X X	- -	ACI 318: 18.20 ACI 318: 18.18.4	-
10. ERECTION OF PRECAST CONCRETE MEMBERS.	-	X	ACI 318: CH.16	-
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POSTTENSIONED CONCRETE AND PRIOR REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X	ACI 318: 6.2	-
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: 6.1.1	-

a. WHERE APPLICABLE, SEE ALSO SECTION 1707.1, SPECIAL INSPECTION FOR SEISMIC RESISTANCE.

TABLE 1705.6
REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X

WZG STRUCTURAL
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Date

No. Description

NATALIE E. BIRD
PROFESSIONAL ENGINEER
PA REG# PE076743

AEM ARCHITECTS INC
3700 PERKIOMEN AVENUE, READING, PA 19606-2795
Phone: 610.779.3220
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GENERAL NOTES

RENOVATIONS TO THE
REAMSTOWN ELEMENTARY SCHOOL
COCALICO SCHOOL DISTRICT
SOUTH REAMSTOWN ROAD, EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PA

All DIMENSIONS and EXISTING CONDITIONS shall be CHECKED and VERIFIED by the CONTRACTOR at the SITE.

JOB NO.: 22011.00
DRAWN BY: NB/RB
DATE: 04-14-2023

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