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Department of Veterans Affairs

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AO

# SPECIAL INSPECTIONS/TESTING/SUBMITTALS

#### STATEMENT OF SPECIAL INSPECTIONS

THE CONTRACTOR SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE "SPECIAL INSPECTIONS" DURING CONSTRUCTION. THE "SPECIAL INSPECTIONS" - REQUIRED IN ACCORDANCE W/ THE IBC, SECTIONS 1704 AND 1705 - ARE SUMMARIZED BELOW.

THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A SCOPE OF SERVICES FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION. IN ADDITION, THE SPECIAL INSPECTION AGENCY SHALL SUBMIT QUALIFICATIONS OF EACH SPECIAL INSPECTOR THAT WILL BE PERFORMING THE WORK.

THE SPECIAL INSPECTOR SHALL FOLLOW THE REPORT REQUIREMENTS OF IBC SECTION 1704.2.4. THE SPECIAL INSPECTOR SHALL USE THE LATEST ISSUE OF THE STRUCTURAL RECORD DRAWINGS FOR THE INSPECTION OF THE STRUCTURE. DO NOT USE THE SHOP DRAWINGS FOR INSPECTION

THE FOLLOWING LIST IDENTIFIES THE SECTIONS OF THE IBC WHICH APPLY TO THIS PROJECT. THE SPECIAL INSPECTOR SHALL ILLUSTRATE THEIR UNDERSTANDING OF THE SPECIAL INSPECTION REQUIREMENTS BY IDENTIFYING APPLICABLE ITEMS WITHIN EACH SECTION OF THEIR SUBMITTAL.

IBC SECTION 1704.2.5 INSPECTION OF FABRICATORS SPECIAL INSPECTIONS OF FABRICATED ITEMS ARE REQUIRED WHEN STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES ARE BEING FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP.

THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. THE SPECIAL INSPECTOR SHALL REVIEW THE PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS FOR THE FABRICATOR'S SCOPE OF WORK.

SPECIAL INSPECTIONS SHALL NOT BE REQUIRED IF THE FABRICATOR IS APPROVED IN ACCORDANCE WITH IBC SECTION 1704.2.5.2.

IBC TABLE 1705.2.2 REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL

VERIFICATION AND INSPECTION	CONTINUO US	PERIODI C	REFERENC ED STANDARD	IBC REFEREN CE	YES	NO	N.A
1. Material verification of cold—form	ned steel dec	k:					
<ul> <li>a. Identification markings to conform to ASTM standards specified in the approved contract documents.</li> </ul>	-	X	Applicable ASTM material standards		X		
b. Manufacturer's certified test reports.	_	×	-		X		
2. Inspection of welding:							
a.Cold—formed steel deck:		T		T		1	
<ol> <li>Floor and roof deck welds.</li> </ol>	_	X	AWS D1.3		X		
b.Reinforcing steel:							
1) Verification of weldability of reinforcing steel other than ASTM A 706.	-	X					X
2) Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special structural walls of concrete and shear reinforcement.	X	_	AWS D1.4 ACI 318: Section 3.5.2				Х
3) Shear reinforcement.	X	_			Х		
4) Other reinforcing steel.	_	X			Х		

AISC 360-10 QUALITY CONTROL AND QUALITY ASSURANCE FOR STEEL CONSTRUCTION

INSPECTION TASKS	QC (Quality Control	QA (Quality Assurance)	YES	NO	N.A.
TABLE N5.4-1 INSPECTION TASKS F					
Welding procedure specifications (WPSs) available	Р	Р	X		
Manufacturer certifications for welding consumables available	Р	Р	X		
Material identifications (type/grade)	0	0	X		
Welder identification system	0	0	Х		
Fit—up of groove welds (including joint geometry)	0	0	Х		
Configuration and finish of access holes	0	0			Χ
Fit-up of fillet welds	0	0	Х		
Check welding equipment	0	_	Х		
TABLE N5.4-2 INSPECTION TASKS	DURING WEL	.DING			
Use of qualified welders	0	0	Х		
Control and handling of welding consumables	0	0	Х		
No welding over cracked tack welds	0	0	X		
Environmental conditions	0	0	X		
WPS followed	0	0	X		
Welding techniques	0	0	X		
TABLE N5.4-3 INSPECTION TASKS		_	1 /	1	I
Welds cleaned	T O	0	X		
Size, length and location of welds	P	P	X		
Welds meet visual acceptance criteria	P	P	X		
Arc strikes	P	P	X		
k-area	P	P	X		
Backing removed and weld tabs removed (if required)	P	P	X		
	Р	P	X		
Repair activities	<u> </u>	P			
Document acceptance or rejection of welding joint or member	Р	Р	X		
TABLE N5.6-1 INSPECTION TASKS F	PRIOR TO BO	)LIING	1	1	Т
Manufacturer's certifications available for fastener materials	0	Р	X		
Fasteners marked in accordance with ASTM requirements	0	0	Χ		
Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	0	0	X		
Proper bolting procedure selected for joint detail	0	0	Х		
Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	0	0	X		
Pre—installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	Р	0	X		
Proper storage provided for bolts, nuts, washers and other fastener components	0	0	×		
TABLE N5.6-2 INSPECTION TASKS	DURING BOL	TING			
Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required	0	0	Х		
Joint brought to the snug—tight condition prior to the pretensioning operation	0	0			Х
Fastener component not turned by the wrench prevented from rotating	0	0	Х		
Fasteners are pretensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges	0	0			Х
TABLE N5.6-3 INSPECTION TASKS			T	1	1
Document acceptance or rejection of bolted connections	Р	Р	X		

O — Observe these items on a random basis. Operations need not be delayed pending these

P - Perform these tasks for each welded joint or member.

THE QUALITY ASSURANCE INSPECTOR SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE, SHALL BE VERIFIED PRIOR TO PLACEMENT OF CONCRETE.

THE QUALITY ASSURANCE INSPECTOR SHALL INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME, AS APPROPRIATE, TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE

CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.

IBC TABLE 1705.3 REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE	YES	NO	N.A
<ol> <li>Inspection of reinforcing steel, including prestressing tendons, and placement.</li> </ol>	_	X	ACI 318: 3.5, 7.1- 7.7	1910.4	X		
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.	_	×	ACI 318: 8.1.3, 21.1.8	1908.5, 1909.1			<b>&gt;</b>
<ol> <li>Inspection of anchors post—installed in hardened concrete members</li> </ol>	_	X	ACI 318: 3.8.6, 8.1.3, 21.1.8	1909.1	X		
5. Verifying use of required design mix.	_	X	ACI 318: Ch. 4, 5.2- 5.4	1904.2, 1910.2, 1910.3	X		
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 ACI 318: 5.6, 5.8	1910.10	X		
7. Inspection of concrete and shotcrete placement for proper application techniques.	X	_	ACI 318: 5.9, 5.10	1910.6, 1910.7, 1910.8	X		
8. Inspection for maintenance of specified curing temperature and techniques.	_	X	ACI 318: 5.11-5.13	1910.9	X		
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 post—tensioned concrete and prior to 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.	_	×	ACI 318: 6.1.1	_	X		

TMS 402 TABLE 1.18.2 LEVEL B QUALITY ASSURANCE FOR MASONRY

Verification of Slump flow and VSI as delivered to the site in accordance with Article 1.5 B.1.b.3 for self—consolidating grout. Verification of f'm and f'AAC prior to construction, except where specifically exempted by this

MINIMUM INSPECTI					
INSPECTION TASK	CONTINUOUS	PERIODIC	YES	NO	N.A.
1. Verify compliance with the approved submittals.		X	Х		
2. As masonry construction begins, verify that the follow	wing are in cor	npliance:			
a. Proportions of site—prepared mortar.	_	Χ	Х		
b. Construction of mortar joints.	_	Χ	Х		
c. Grade and size of prestressing tendons and		Χ			V
anchorages	_	^			X
d. Location of reinforcement, connectors,		Χ	Х		
prestressing tendons and anchorage.	_	^	^		
e. Prestressing technique.	_	Х			Х
3. Prior to grouting, verify that the following are in cor	npliance:				
a. Grout space.	_	Χ	Х		
b. Grade, type, and size of reinforcement and					
anchor bolts, and prestressing tendons, and	_	X	X		
anchorages.					
c. Placement of reinforcement, connectors, and		X	Х		
prestressing tendons and anchorages.	_	^	^		
d. Proportions of site—prepared grout and		X	Х		
prestressing grout for bonded tendons.	_	^	^		
e. Construction of mortar joints.	_	Χ	Χ		
4. Verify during construction:					
a. Size and location of structural elements.	_	Х	Х		
b. Type, size, and location of anchors, including other details of anchorage of masonry to					
structural members, frames, or other	_	X	X		
construction.					
c. Welding of reinforcement.	X				X
d. Preparation, construction, and protection of	Λ				<del>  ^</del>
masonry during cold weather (temperature below					
$40^{\circ}F$ (4.4°C)) or hot weather (temperature above	_	X	X		
90°F (32.2°C)).					
e. Application and measurement of prestressing					
force.	X	_			X
f. Placement of grout and prestressing grout for					<b> </b>
bonded tendons is in compliance.	X	_			X
5. Observe preparation of grout specimens, mortar		.,	, , , , , , , , , , , , , , , , , , ,		
specimens, and/or prisms.	_	X	X		

IBC TABLE 1705.6 REQUIRED VERIFICATION AND INSPECTION OF SOILS

150 17.522 17.00.0 NEQUINED	VERM TOTALION TH	VD 11101 E0 11011	J1	J1L0	
VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED	YES	NO	N.A.
<ol> <li>Verify materials below shallow foundations are adequate to achieve the design bearing capacity.</li> </ol>	-	X	X		
<ol> <li>Verify excavations are extended to proper depth and have reached proper materials.</li> </ol>	_	X	X		
3. Perform classification and testing of compacted fill materials.	_	X	Х		
4. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of compacted fill.	X	_	Х		
5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	-	X	X		

#### STATEMENT OF TESTING

THE CONTRACTOR SHALL EMPLOY ONE OR MORE TESTING AGENCIES TO PROVIDE STRUCTURAL TESTING DURING CONSTRUCTION. THE MINIMUM STRUCTURAL TESTING - REQUIRED IN ACCORDANCE W/ THE IBC, SECTION 1704 - IS SUMMARIZED BELOW.

THE TESTING AGENCY SHALL SUBMIT A SCOPE OF SERVICES FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION. IN ADDITION, THE TESTING AGENCY SHALL SUBMIT QUALIFICATIONS ASSOCIATED WITH EACH TYPE OF TESTS THAT WILL BE PERFORMED. THE TESTING AGENCY SHALL SUBMIT TEST RESULTS TO THE STRUCTURAL ENGINEER OF RECORD DURING CONSTRUCTION FOR VERIFICATION, INCLUDING A FINAL REPORT IN ACCORDANCE WITH SECTION 1704.2.4 OF THE IBC.

TABLE 1 - SUMMARY OF REQUIRED STRUCTURAL TESTS

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODI C	REFERENCED STANDARD	IBC REFERENC E	YES	N O	NA
1. CONCRETE					•		
a. Cylinder Compression Testing	_	X	ASTM C39	_	Х		
b. Beam flexure testing for wall panels	_	X	ASTM C78	_			Х
c. Preconstruction testing of shotcrete	-	X	_	Section 1910			Χ
2. MASONRY							
a. Hollow Unit Block Compression Tests (Unit Strength Method)	_	X	ASTM C90	Section 2105	X		
3. POST-INSTALLED CONCRETE	ANCHORS **						
a. Expansion anchors	_	×	IC C - ES AC 193	Section 1908	X		
b. Adhesive anchors	_	×	IC C -ES AC 308	Section 1908	Х		

\*\* WHEN DIRECTED BY THE STRUCTURAL ENGINEER OF RECORD TO PROVIDE POST-INSTALLED ANCHORAGES THE FOLLOWING GUIDELINES SHALL BE FOLLOWED:

1. A REPRESENTATIVE OF THE ANCHOR MANUFACTURER OR PROJECT SPECIAL INSPECTOR SHALL BE ON SITE TO OVERSEE THE INSTALLATION OF THE FIRST FOUR ANCHORS FOR EACH TYPE OF ANCHOR INSTALLED. THIS MEASURE SHALL BE TAKEN FOR EACH INSTALLER OF THE ANCHORS. THIS SERVICE IS TYPICALLY PROVIDED FOR FREE BY THE LOCAL HILTI

2. THE FIRST FOUR ANCHORS SHALL BE TENSION TESTED ONCE INSTALLATION IS COMPLETE FOR 100% OF THE SERVICE LEVEL LOAD CAPACITY AS SPECIFIED BY THE STRUCTURAL ENGINEER OF RECORD.

### REQUIRED STRUCTURAL SUBMITTALS

1. THE REVIEW OF THE FOLLOWING SUBMITTALS IS INCLUDED IN THE STRUCTURAL ENGINEER OF RECORD'S (SEOR) SCOPE OF SERVICES. THE GENERAL CONTRACTOR SHALL PROVIDE THE ITEMS BELOW TO THE SEOR FOR REVIEW PRIOR TO CONSTRUCTION. 2. SHOP DRAWINGS SHALL BE ORIGINALS AND SHALL NOT BE CREATED FROM THE ELECTRONIC STRUCTURAL CAD FILES OR REPRODUCTIONS OF THE STRUCTURAL DRAWINGS. REPRODUCING THE STRUCTURAL DRAWINGS WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER IS A

- VIOLATION OF COPYRIGHT LAWS. 3. SHOP DRAWING PACKAGES MUST BE COMPLETE WHEN SUBMITTED AND MUST INCLUDE CERTIFIED CALCULATIONS IF REQUIRED. INCOMPLETE SHOP DRAWING PACKAGES WILL BE
- REJECTED WITHOUT REVIEW. 4. PRIOR TO SUBMITTING SHOP DRAWINGS TO SEOR, THE SHOP DRAWINGS MUST BE REVIEWED AND COORDINATED BY THE GENERAL CONTRACTOR.
- 5. ELECTRONIC VERSION IN PDF FORMAT OF ALL REQUIRED SHOP DRAWINGS AND CALCULATIONS MUST BE SUBMITTED BY THE SUPPLIER AND A MINIMUM OF 10 BUSINESS DAYS MUST BE PROVIDED FOR REVIEW BY THE STRUCTURAL ENGINEER OF RECORD.

#### TABLE 1. LIST OF REQUIRED STRUCTURAL SUBMITTALS

CATEGORY	ITEM	COMMENTS
SITE WORK		
SIL WORK	GRADING PLAN	
	OTO ISSUED TO A STATE OF THE ST	
CONCRETE		
	FOUNDATION REINFORCING	
	MIX DESIGNS FOR ALL CLASSES OF	
	CONCRETE	
	MILL CERTS. FOR REINFORCING	
MASONRY		
	STEEL REINFORCING	
	GROUT MIX DESIGN	
	MILL CERTS. FOR REINFORCING	
0.7.5.5.1		
STEEL	CURRENT AISC OR ICC SHOP	
	CERTIFICATION	
	ANCHOR BOLTS	
	METAL ROOF/FLOOR DECK	SEE STRUCTURAL
	OPEN WEB STEEL JOISTS/JOIST	DRAWINGS GENERAL
	GIRDERS	NOTES FOR ADDITIONA INFORMATION ON EACH
	SPECIAL JOIST AND JOIST GIRDER	SUBMITTAL.
	CALCULATIONS	
	STRUCTURAL STEEL	
	STRUCTURAL STEEL EMBEDS MILL CERTS. FOR STRUCTURAL STEEL	
	STAIR AND MISC. METALS SHOP	
	DRAWINGS	
	STAIR CALCULATIONS	
LIGHT GAGE META		
	LIGHT-GAGE SHOP DRAWINGS	
	LIGHT-GAGE CALCULATIONS.	
	ROOF TRUSS SHOP DRAWINGS ROOF TRUSS DESIGN CALCULATIONS	
	ROOF TRUSS PLACEMENT DIAGRAM	
	ROOF TRUSS PERMANENT BRACING	
	DIAGRAM	
OTHER	CDDINIZIED CHOD DDAWINGS	
	SPRINKLER SHOP DRAWINGS	

# 100% CONSTRUCTION DOCUMENTS

**Project Number** 

Dwg. 33 of 53

**CONSULTANTS:** 

WWW.AEI.CC

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(270) 651-7220 TEL. (270) 651-3246 FAX

ADVANCED STRUCTURAL TECHNOLOGIES 7212 METRO BLVD EDINA, MN 55439 (952) 854-9302 TEL. (952) 854-9690 FAX WWW.ASTMN.COM



**ARCHITECT/ENGINEERS:** I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION. OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: John M. Levar LICENSE #:43095 DATE: 5-20-15



Anderson Engineering of Minnesota, LLC 13605 1st Avenue North Plymouth, MN 55441 763-412-4000 (o) 763-412-4090 (f)

**SPECIAL** INSPECTIONS/TESTING/SUBMITTALS Approved: Project Director

Drawing Title

833-CM3-026 WASH BAY / STORAGE BUILDING **Building Number** Location CAMP NELSON NATIONAL CEMETERY **Drawing Number** NICHOLASVILLE, KENTUCKY S-1.1 Checked Drawn

AO

Project Title

**National** Cemetery **Administration** 



CMU WALL SCHEDULE						
	NOMINAL THICKNESS	VERT. REINF.	VERT. BAR LOCATION	HORIZ. JOINT REINF. SPACING	VERIF. BAR SPLICE / LAP LENGTH	NOTES
	12"	#5 @ 48"o.c.	CENTER	9 GA. LADDER @ 16"o.c.	3'-9"	

3'-9"

#### SCHEDULE NOTES:

MARK

WALLS SHALL BE GROUTED AT REINFORCING LOCATIONS ONLY, U.N.O. ON PLAN. PROVIDE 6" MINIMUM LAP SPLICE FOR JOINT REINFORCING.

#5 @ CENTER 9 GA. LADDER 48"o.c. @ 16"o.c.

- IN ADDITION TO THE REINF. SPECIFIED ABOVE, PROVIDE (1) BAR CONT. VERTICAL AT ALL CORNERS, EACH SIDE OF CONTROL JOINTS. MATCH BAR SIZE IN WALL AS REQUIRED. CELLS NEED NOT HAVE MORE THAN (1) BAR PRESENT UNLESS SPECIFICALLY NOTED ON PLAN.
- PROVIDE A CONTINUOUS BOND BEAM AT THE TOP OF ALL CMU WALLS WITH (2) #5 BARS CONT. U.N.O.
- REINFORCING IS CONTINUOUS FROM TOP OF FOOTING TO TOP OF WALL.
- UNITS SHALL UTILIZE FACE SHELL MORTAR BEDDING U.N.O.
- MASONRY WALLS SHALL HAVE CONTROL JOINTS @ A MAXIMUM OF 30'-0" U.N.O. SEE ARCH. DRAWINGS FOR CONTROL JOINT LOCATIONS IN CMU WALLS. SEE 4/S-4.1 FOR CONTROL JOINT DETAIL. CONSOLIDATE GROUT POURS OVER 12" BY MECHANICAL VIBRATION.
- RECONSOLIDATE GROUT IN MASONRY CELLS BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS. IF NEXT GROUT POUR WILL BE MORE THAN (1) HOUR, TERMINATE GROUT POUR 1.5" BELOW TOP OF MASONRY. FOR HIGH LIFT GROUTING (OVER 5'-0") CLEANOUTS ARE REQUIRED @ EVERY
- GROUTED CORE AT THE BASE OF EACH LIFT. IF NEXT GROUT POUR WILL BE MORE THAN (1) HOUR, TERMINATE GROUT POUR 1.5" BELOW TOP OF MASONRY.
- HIGH LIFT GROUT SHALL NOT EXCEED 10'-6" IN HEIGHT FOR #5 VERT. BARS, 12'-6" IN HEIGHT FOR #6 VERT. BARS. THE USE OF SELF-CONSOLIDATING GROUT (SCG) WILL REQUIRE FULL INSPECTION &
- ACCEPTANCE OF THE GROUT MIX DELIVERED TO THE SITE BY THE SUPPLIERS REPRESENTATIVE & THE INSPECTION/ TESTING AGENCY.
- 12. SCG ON-SITE INSPECTION SHALL VERIFY SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DETERMINED BY ASTM C 1611.
- 13. PROVIDE STANDARD 90 DEGREE HOOK DOWELS BETWEEN FOUNDATIONS & WALLS EQUAL TO THE SIZE & SPACING OF THE VERTICAL REINFORCING U.N.O.
- 14. PROVIDE 9 GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT EVERY COURSE IN STACK BOND WALLS & EVERY OTHER COURSE IN RUNNING BOND WALLS.
- 15. ALL SPLICES WITHIN WALL SHALL MEET THE FOLLOWING LAP LENGTH REQUIREMENTS: a. BAR LOCATED AT EDGE: 40" b. BAR LOCATED AT CENTER: 26" SEE SECTIONS AND DETAILS FOR DOWELS AND SPLICES AT FOUNDATIONS.
- REINFORCEMENT SHALL BE PLACED PRIOR TO GROUTING. REINFORCEMENT SHALL BE SECURED AGAINST DISPLACEMENT PRIOR TO GROUTING BY WIRE POSITIONERS OR OTHER SUITABLE DEVICES @ INTERVALS NOT TO EXCEED 200 BAR DIAMETERS.
- 17. TOLERANCES FOR THE PLACEMENT OF REINFORCEMENT IN WALLS AND FLEXURAL ELEMENTS SHALL BE PLUS OR MINUS 1/2" FOR d EQUAL TO 8" OR LESS, PLUS OR MINUS 1" FOR d EQUAL TO 24" OR LESS, BUT GREATER THAN 8", AND PLUS OR MINUS 11/4" INCHES FOR d GREATER THAN 24" NOTE: d = DISTANCE FROM CENTERLINE OF REINFORCING STEEL TO THE OPPOSITE FACE OF MASONRY
- 18. SEE SHEET S-0.1 FOR INFORMATION ON CMU MATERIAL REQUIREMENTS. 19. ALL MORTAR PROTRUSIONS INTO CELLS TO BE GROUTED ARE REQUIRED TO BE REMOVED BY MASON AND ALL DEBRIS MUST BE REMOVED FROM CORE.

Г	1				
7		FOUND	ATIO	N F	LAN
/		1/4"	= 1	,-(	"

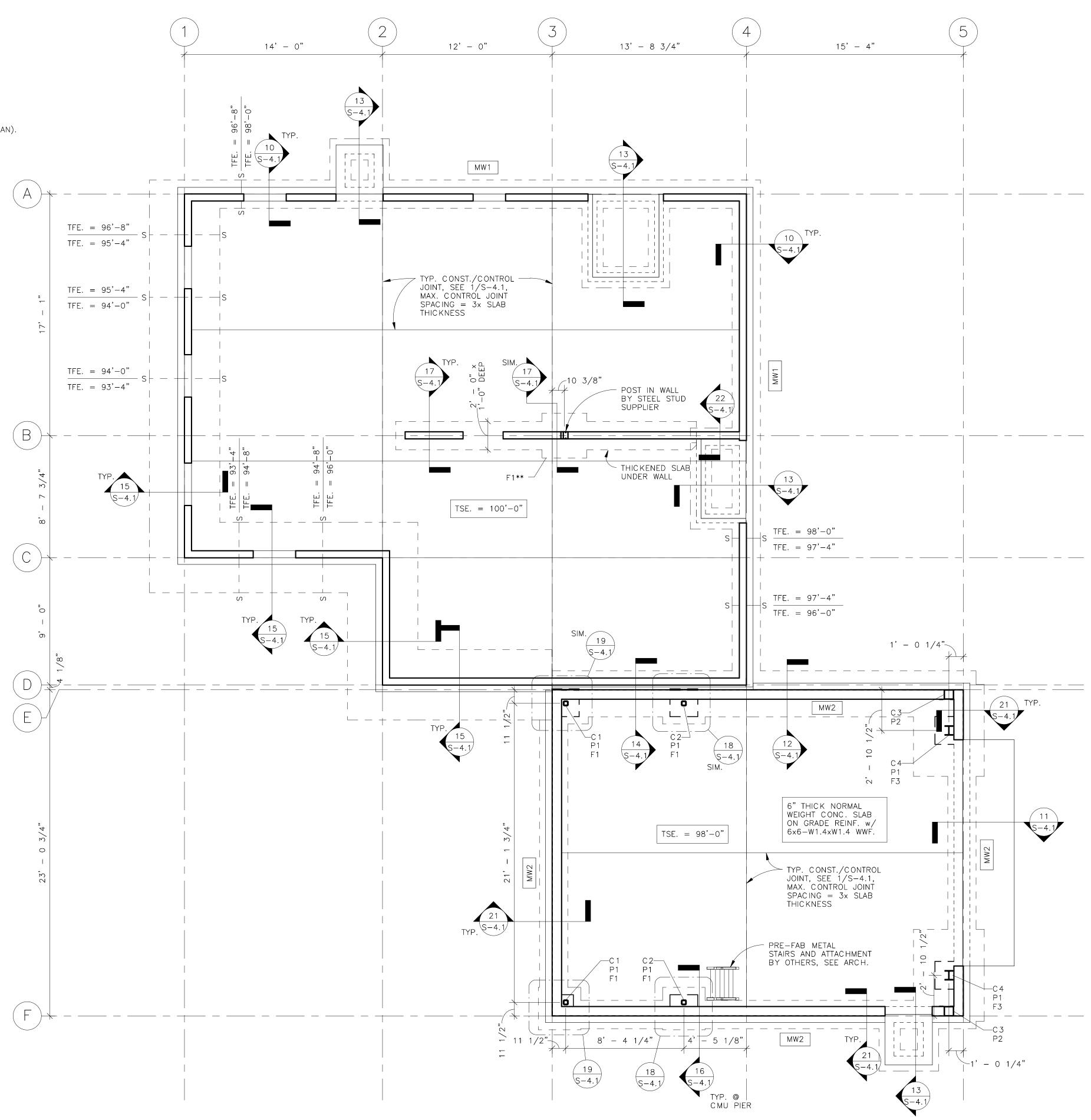
## FOUNDATION PLAN NOTES:

- 1. TOP OF SLAB ELEVATION (TSE.) = 100'-0" U.N.O. ON PLAN REFERENCED FROM DATUM ELEVATION 944.5 FT. VERIFY w/ CIVIL AND ARCH.
- 2. INTERIOR SLAB ON GRADE SHALL BE 4" THICK NORMAL WEIGHT CONCRETE REINFORCED WITH 6x6-W1.4xW1.4 WWF (U.N.O. ON PLAN).
- 3. TOP OF PIER ELEVATION (TPE.) = 97'-4" U.N.O. ON PLAN.
- 4. CONTINUOUS PERIMETER AND INTERIOR LOAD BEARING C.I.P. WALL FOOTING SHALL BE 2'-0" WIDE x 1'-0" DEEP REINF. WITH (2)-#5 CONT. BOTTOM U.N.O.
- 5. FOOTINGS SHALL BE CENTERED ON COLUMNS & WALLS U.N.O. ON PLAN.
- THE GEOTECHNICAL ENGINEER SHALL VERIFY THAT THE FOOTING ELEVATIONS SHOWN LOCATE THE BOTTOM OF THE FOOTING AT AN ELEVATION WHICH PROVIDES BEARING IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF LOCATIONS THAT DO NOT SATISFY THOSE REQUIREMENTS. IN THOSE CASES, THE GRADE MAY BE ELEVATED WITH COMPACTED MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER OR THE FOOTING DEPTH MAY BE INCREASED WITH THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
- 7. "F1" ON PLAN INDICATES FOOTING TYPE SEE SCHEDULE ON THIS SHEET FOR FOOTING SIZE AND REINFORCING.
- 8. "C1" ON PLAN INDICATES STEEL COLUMN TYPE SEE SCHEDULE ON THIS SHEET FOR COLUMN SIZE.
- 9. "P1" ON PLAN INDICATES CONCRETE PIER TYPE SEE SCHEDULE ON THIS SHEET FOR SIZE AND REINF.
- 10. SEE DETAIL 1/S-4.1 FOR TYPICAL SLAB CONTROL / CONSTRUCTION JOINT.
- 11. SEE DETAIL 2/S-4.1 FOR TYPICAL CONCRETE COVER OVER UTILITY PIPE.
- 12. SEE DETAIL 3/S-4.1 FOR TYPICAL COLUMN ISOLATION JOINT.
- 13 SEE DETAIL 4/S-4.1 FOR TYPICAL WALL CONTROL JOINT.
- 14. S----S ON PLAN INDICATES FOOTING STEP. SEE DETAIL 5/S-4.1 FOR ADDITIONAL INFORMATION.

	COLUMN SCHEDULE							
MARK	SIZE	BASE PLATE	REMARKS					
C 1	HSS4×4×1/2	1/2"x8"x8"	SEE 19/S-4.1					
C 2	HSS4×4×1/2	1/2"x8"x10"	SEE 18/S-4.1					
С3	HSS8x8x1/4	1/2"x12"x14"	OFFSET BASEPLATE AS REQ'D					
C 4	W8×24	1"x7 1/2"x16"						

FOOTING SCHEDULE						
MARK	SIZE	REINF. E.W. BOTTOM	REMARKS			
F1	3'-0"x3'-0"x1'-0"		** THICKENED SLAB FOOTING, SEE DETAIL 17/S-4.1			
F3	6'-6"x5'-0"x1'-0"	(4) - #5	PROVIDE TOP & BOT. REINF.			

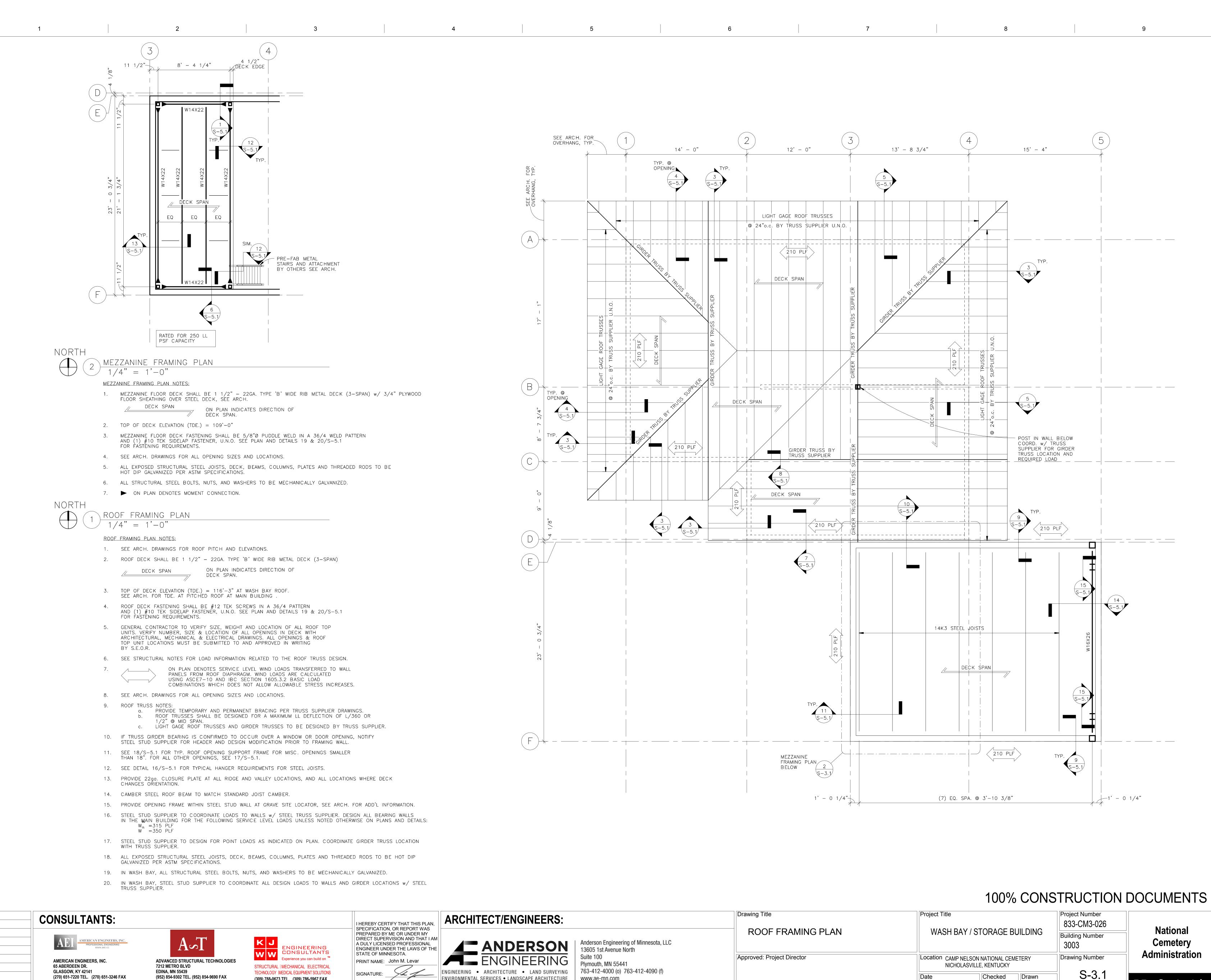
		CMU PIER SCHEDULE	
MARK	SIZE	REINFORCING	REMARKS
P1	24"x24"	(4) - #6 VERT. #3 TIES @ 12"o.c. PLUS 3 TIES AT TOP	
P2	14"×16"	(2) - #5 VERT (1 PER CORE)	



## 100% CONSTRUCTION DOCUMENTS



5



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eginth inch=one root

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