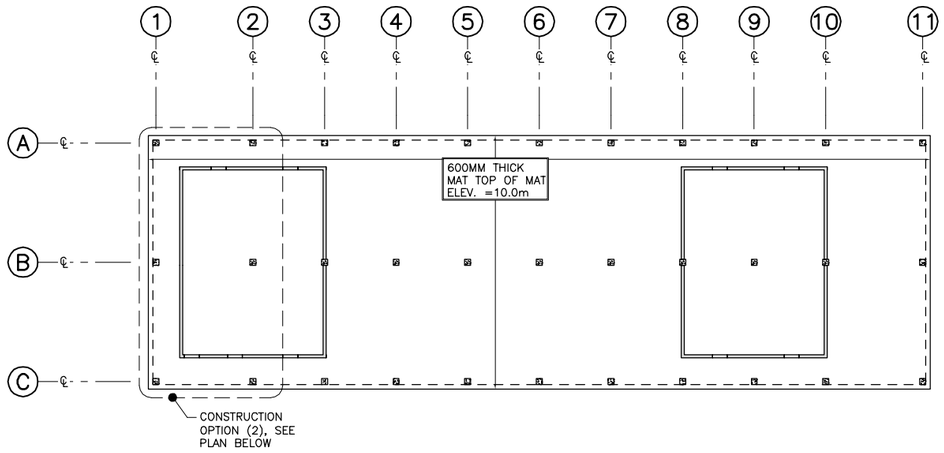
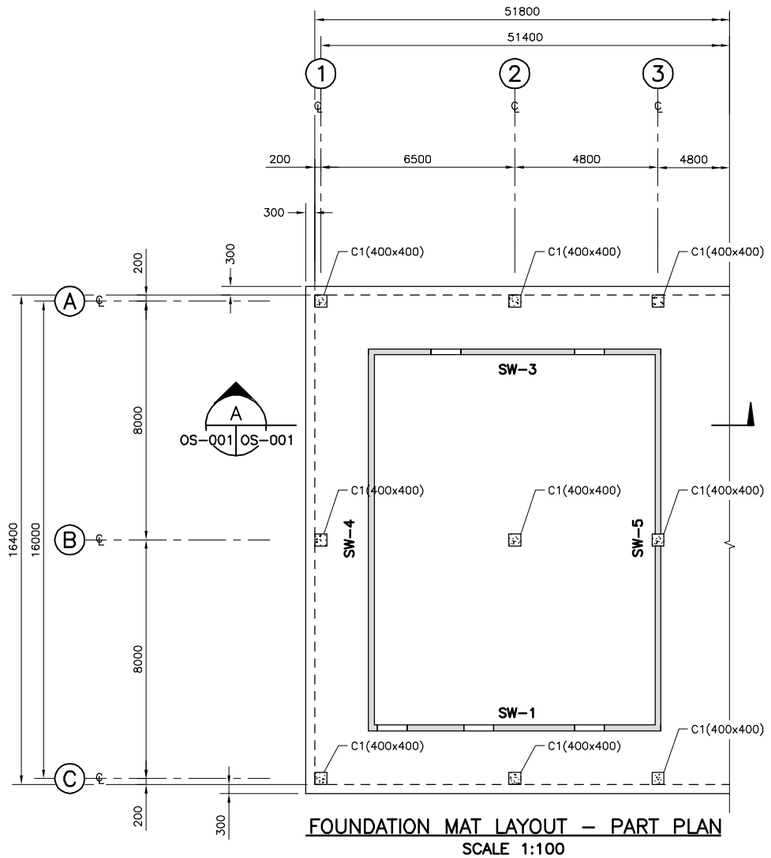
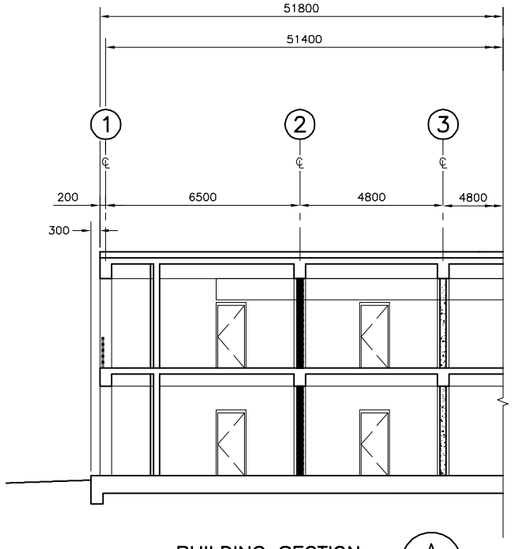


OVERALL FOUNDATION MAT LAYOUT PLAN
WITHOUT LATRINE
SCALE 1:200



FOUNDATION MAT LAYOUT – PART PLAN
SCALE 1:100



BUILDING SECTION A OS-001 OS-001
SCALE 1:100

5 0 5 10 15
1:200
1 0 1 2 3 4 5 6 7 8 9
1:100

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED
PROFESSIONAL ENGINEER
9-15-10

UNLESS OTHERWISE NOTED, ALL
DIMENSIONS SHOWN ARE IN MILLIMETERS.

CORRECTED FINAL DESIGN SUBMITTAL

SYMB	DESCRIPTION	DATE	
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
			APR

DESIGNED BY: JRB
DRAWN BY: GRN
CHECKED BY: SGW
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-OSB001PN

US Army Corps of Engineers
Middle East District

TETRA TECH

AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN

LATRINE DELETION
FOUNDATION LAYOUT PLAN

SHEET REFERENCE NUMBER:
AF1081A
OS–001

W:\23308\127-23308-10010\CAD\SheetFiles\ASD03_KAND\11_LatOption\AF1081A-OSB001PN.dwg 10/14/2010 12:42:26 PM Barrett, Patrick

GENERAL:

1. THE ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY. FINISHED FLOOR IS ELEVATION IS ASSUMED. SEE ARCHITECTURAL DRAWING FOR ELEVATIONS. ALL LINEAR DIMENSIONS ARE MILLIMETERS UNLESS NOTED OTHERWISE (U.N.O.).
2. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR IN THE FIELD AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ON-SITE USACE REPRESENTATIVE BEFORE PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
3. THE CONTRACTOR SHALL INFORM THE ON-SITE USACE REPRESENTATIVE OF ALL DISCREPANCIES BETWEEN DRAWINGS OF DIFFERENT TRADES, PRIOR TO INITIATION OF ANY WORK.
4. OPENINGS IN FLOORS, ROOFS OR WALLS LESS THAN 300mm ARE TYPICALLY NOT SHOWN ON THE DRAWINGS. OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL COORDINATE ALL CHASES, INSERTS, OPENINGS, AND ADDITIONAL WORK SHOWN THE ARCHITECTURAL, PLUMBING, ELECTRICAL AND COMMUNICATION DRAWINGS.
5. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE USASCE ON-SITE REPRESENTATIVE WHEN, IN THE COURSE OF CONSTRUCTION, CONDITIONS ARE UNCOVERED WHICH ARE UNANTICIPATED OR OTHERWISE APPEAR TO PRESENT A DANGEROUS CONDITION.
6. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, PLUMBING, MECHANICAL DESIGN AND SHOP DRAWINGS.
7. SECTIONS AND DETAILS SHOWN ON ANY DRAWING ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
8. WORK NOT INDICATED AS A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING LOCATION, SHALL BE INCLUDED.
9. THE STRUCTURE HAS BEEN DESIGNED FOR THE DESIGN LOADS PRESENTED BELOW FOR SEISMIC AND WIND LOADING FOR THE BAGRAM, AFGHANISTAN AREA. IF THE BUILDING IS TO BE SITE ADAPTED TO A LOCATION WITH MORE STRINGENT SEISMIC AND WIND LOADING CONDITIONS, THE STRUCTURAL DESIGN SHALL BE EVALUATED FOR SUCH CONDITIONS.

DESIGN LOADS:

ALL LOADS ARE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2009 U.N.O.

1. DEAD LOADS: WEIGHT OF BUILDING COMPONENTS
2. LIVE LOADS: ROOF LIVE LOAD .....= 98 kg/m² [20 PSF]
   ROOF SNOW LOAD.....= 74 kg/m² [15 PSF]
   FLOOR LIVE LOAD:
   TYPICAL..... = 368 kg/m² [75 PSF]
   BALCONY..... = 490 kg/m² [100 PSF]
   METAL STAIRS = 490 kg/m² [100 PSF]
3. WIND LOADS: BASIC WIND SPEED, USING 3 SECOND GUST, 126 KPH [78 MPH], EXPOSURE C AND IMPORTANCE FACTOR OF 1.15 AND SHALL BE EMPLOYED AS REQUIRED PER ASCE 7-2005.
4. SEISMIC DESIGN: BAGRAM, AFGHANISTAN IS THE SEISMIC BASIS OF DESIGN. SPECTRAL ACCELERATION BASED ON Ss=1.65g AND S1=0.75g OCCUPANCY CATEGORY III, SITE CLASS D, IMPORTANCE FACTOR, (I)=1.25, DIRECTION OF SEISMIC LOAD IS IN ACCORDANCE WITH ASCE 7-05, 12.5, DIRECTION OF LOADING RESULTING IN A DESIGN BASE SHEAR OF 7010 kN [1576 kips].
5. CONCRETE FRAME WITH SPECIAL REINFORCED SHEAR WALL USED AS LATERAL FORCE RESISTING SYSTEM.

FOUNDATIONS:

1. FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING CAPACITY OF 72 KPA [1500 PSF] AND A MODULUS OF SUBGRADE REACTION 27.15 Mpa/m [100 lb/in²/in]. Ko AND Kp ARE ASSUMED TO BE 0.5 AND 3.0 RESPECTIVELY. CONTRACTOR NEEDS TO VERIFY THE GEOTECHNICAL PROPERTIES AND NOTIFY THE ENGINEER OF ANY DIFFERENCES.
2. ALL MATS AND FOOTINGS SHALL BE PLACED ON NATURAL UNDISTURBED SOIL OR ON COMPACTED SELECT GRANULAR MATERIAL FILL PREPARED AS FOLLOWS:
   (A) REMOVE UNSUITABLE MATERIAL BELOW THE FOOTING ARE REPLACE WITH COMPACTED SELECT GRANULAR MATERIAL FILL. TO A DEPTH DEEMED ADEQUATE BY THE GEOTECHNICAL ENGINEER TO PROVIDE FOUNDATION MATERIAL MEETING OR EXCEEDING THE REQUIREMENT STATED IN FOUNDATION NOTE 1 ABOVE.
   (B) FILL MATERIAL MUST BE PLACED IN LIFTS UP TO A MINIMUM OF 150mm IN THICKNESS. EACH LIFT COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 AT MOISTURE CONTENT WITHIN MINUS 1% TO PLUS 2% OF THE OPTIMUM.
3. ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS SHALL BE VERIFIED IN THE FIELD.
4. BEARING SOIL SHALL BE INSPECTED AND APPROVED BY THE QUALITY CONTROL ENGINEER BEFORE CONSTRUCTING ANY FOOTINGS. NO FOUNDATION CONCRETE SHALL BE PLACED IN WATER OR ON FROZEN SUBGRADE MATERIAL.
5. ALL FOUNDATIONS SHALL BE FOUNDED AT LEAST 800mm BELOW ADJACENT FINISHED GRADE, IF APPLICABLE U.N.O.
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE TEMPORARY SUPPORT AS NECESSARY DURING EXCAVATION AND UNDERPINNING TO MAINTAIN THE INTEGRITY OF ANY ADJACENT EXISTING STRUCTURES AN/OR INFRASTRUCTURE.
7. FOUNDATION DESIGN SHALL BE MODIFIED BY THE CONTRACTOR IF THE EXISTING SOIL CONDITIONS DO NOT MEET THE MINIMUM REQUIREMENTS, AND IF LOADING CRITERIA DIFFERS FROM WHAT IS PRESENTED HEREIN.

ABBREVIATIONS AND SYMBOLS

ADD'L	ADDITIONAL
ALT.	ALTERNATE
ARCH	ARCHITECTURAL
BOT.	BOTTOM
B.O.	BOTTOM OF
CLR	CLEAR
CONT.	CONTINUOUS
COL.	COLUMN
COORD.	COORDINATE
CTR.	CENTER
DIA.	DIAMETER
DN	DOWN
DWG	DRAWING
E.F.	EACH FACE
EL.	ELEVATION
EOD	EDGE OF DECK
EOS	EDGE OF SLAB
EQ.	EQUAL
E.W.	EACH WAY
EXIST	EXISTING
FDN	FOUNDATION
FIN. GR.	FINISHED GRADE
FTG	FOOTING
HP	HIGH POINT
GALV.	GALVANIZED
I.F.	INSIDE FACE
INFO	INFORMATION
JT	JOINT
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
MCJ	MASONRY CONTROL JOINT
MFR.	MANUFACTURER
MAX.	MAXIMUM
MIN.	MINIMUM
NO.	NUMBER
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
O.H.	OPPOSITE HAND
OPN'G	OPENING
PL	PLATE
PROP.	PROPOSED
PSF	POUNDS PER SQUARE FOOT
REINF.	REINFORCING
SIM	SIMILAR
SQ.	SQUARE
STD.	STANDARD
STIFF	STIFFENER
STRUCT	STRUCTURAL
T&B	TOP AND BOTTOM
T.O.	TOP OF
T.O.S.	TOP OF STEEL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
VIF	VERIFY IN FIELD
———	CONSTRUCTION JOINT
	DIRECTION OF SPAN
	DIRECTION OF SLOPE
℄	PLATE
℄	CENTERLINE
DO	DITTO
℄	SIDEWALL LINE

CAST IN PLACE CONCRETE:

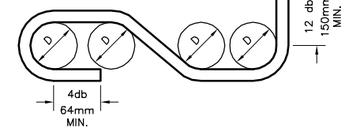
1. CONCRETE WORK SHALL CONFORM TO:
   ACI 301-05 – SPECIFICATIONS FOR STRUCTURAL CONCRETE.
   ACI 318-08 – BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY.
2. CONCRETE SHALL HAVE A MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS, F'C = 28 MPa (4,000 PSI). THE MAXIMUM WATER-CENENT RATIO OF 0.45 (BY WEIGHT). ALL CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED.
3. CONCRETE SHALL BE CONTROLLED NORMAL WEIGHT CONCRETE, PROPORTIONED, MIXED AND PLACED UNDER THE SUPERVISION OF AN APPROVED QUALITY CONTROL ENGINEER.
4. THE FOLLOWING SPECIFIED CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING U.N.O.:

(A) CONCRETE PLACED AGAINST THE EARTH	75mm
(B) BELOW GRADE CONCRETE: SIDES OF FOOTINGS, WALLS & PIERS	
18 ø BAR AND LARGER	50mm
16 ø BAR AND SMALLER	50mm
(C) BEAMS	50mm
(D) COLUMNS	50mm
(E) ELEVATED SLAB	40mm
(F) MAT (FROM TOP)	50mm

5. CHAMFER EXPOSED EDGES 20mm U.N.O..
6. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60. SEE SPLICE TABLE FOR LAP LENGTHS. MINIMUM YIELD STRENGTH FY = 4218 kg/cm².
7. DO NOT WELD OR BEND REINFORCEMENT IN FIELD UNLESS SPECIFICALLY SHOWN OR APPROVED BY ENGINEER.
8. REINFORCING BARS EXTEND 12 BAR DIAMETERS BUT NOT LESS THAN 300mm BEYOND BEND U.N.O..
9. NO BARS SHALL BE CUT OR OMITTED IN THE FIELD BECAUSE OF SLEEVES, DUCT OPENINGS OR RECESSES. BARS MAY BE MOVED ASIDE WITHOUT CHANGE IN LEVEL WITH THE APPROVAL OF THE QUALITY CONTROL ENGINEER.
10. REINFORCEMENT STEEL SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS. ALL CONSTRUCTION JOINTS SHALL BE KEYED U.N.O..
11. WHERE VERTICAL CONSTRUCTION JOINTS ARE NOT SHOWN, OR WHEN ALTERNATE LOCATIONS ARE PROPOSED, DRAWINGS SHOWING LOCATION OF CONSTRUCTION JOINTS AND CONCRETE PLACING SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PREPARATION OF THE REINFORCEMENT SHOP DRAWINGS. CONSTRUCTION JOINTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE BEAM OR SLAB SPAN. CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS U.N.O..
12. ALL KEYS SHOWN SHALL BE 40mm BY 75mm NOMINAL U.N.O..
13. EXPANSION JOINT FILLERS SHALL BE PREFORMED MATERIALS CONFORMING TO ASTM D994.
14. DETAILING, FABRICATION, AND ERECTION OF REINFORCEMENT SHALL CONFORM TO ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 315 DETAILS AND DETAILING OF CONCRETE REINFORCEMENT, AND CRSI MANUAL OF STANDARD PRACTICE.
15. CONTRACTOR SHALL COORDINATE LOCATIONS OF FLOOR DRAINS, PIPING, ELECTRICAL CONDUITS, GROUNDS, SLEEVES, INSERTS, ETC, WITH CONCRETE CONSTRUCTION. NO PIPES SHALL PASS THROUGH CONCRETE WITHOUT THE PERMISSION OF THE CONTRACTING OFFICER. STEEL PIPE SLEEVES SHALL BE PROVIDED AND SPACED A MINIMUM OF THREE PIPE DIAMETERS ON CENTER. CONDUIT AND OTHER EMBEDDED ITEMS SHALL BE CLEAN AND FREE OF OIL AND OTHER FOREIGN MATTER SUCH AS LOOSE COATINGS OR RUST, PAINT AND SCALE.
16. PROVIDE ALL NECESSARY CHAIRS, CHAIR BARS, SPACERS, ETC., WIRED SECURELY TO HOLD REINFORCEMENT IN POSITION.
17. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING SHOWING REINFORCING STEEL PLACEMENT, SCHEDULES, SIZES, GRADES. AND SPLICING AND BENDING DETAILS. DRAWINGS SHALL SHOW SUPPORT DETAILS INCLUDING TYPES, SIZES AND SPACING.
18. REINFORCEMENT SHALL BE STORED OFF THE GROUND ON PLATFORMS, SKIDS OR OTHER SUPPORTS.

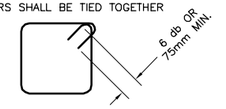
BEND DIAMETER SCHEDULE

db = BAR DIAMETER
D = FINISHED INSIDE BEND DIA.
D = 6 db FOR ø10mm THRU ø25mm



STANDARD HOOKS AND BENDS

WALL BARS SHALL BE TIED TOGETHER



TIES

SPLICES FOR SUCCESSIVE TIES TO BE PLACED AT ALTERNATE CORNERS

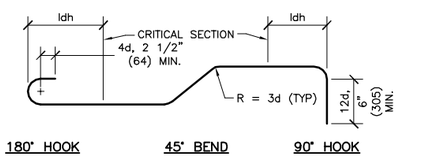
TYPICAL REINFORCING BAR STIRRUPS AND TIES

N.T.S.

LEGEND (FOR REINFORCING SHOWN IN PLAN OR ELEVATION)

	90° HOOK IN THE PLANE OF THE DRAWING
	90° BEND PERPENDICULAR TO THE PLANE OF THE DRAWING
	HOOK PERPENDICULAR TO THE PLANE OF THE DRAWING
	180° HOOK IN THE PLANE OF THE DRAWING
	OFFSET IN THE PLANE OF THE DRAWING

BAR SIZE	ø10	ø12	ø16	ø20	ø22	ø25
ldh	190	230	305	380	420	475



180° HOOK 45° BEND 90° HOOK

NOTE: "d" = BAR DIAMETER.

BENDS IN REINFORCING BARS

N.T.S.

MINIMUM RE-BAR SPLICE LENGTHS mm fy = 4218kg/cm² f'c = 28MPa		
BAR SIZE ø mm	TOP BARS	OTHER BARS
10	650	500
12	815	635
16	1016	788
20	1590	1220
22	1755	1350
25	2032	1550

SPLICE NOTES:

1. BASED ON NORMAL WEIGHT CONCRETE, UNCOATED BARS, CLEAR SPACING NOT LESS THAN FOUR BAR DIAMETERS, AND CLEAR COVER NOT LESS THAN 40mm.
2. WHERE SPACING BETWEEN BARS IS LESS THAN FOUR BAR DIAMETERS, OR CLEAR COVER IS LESS THAN TWO BAR DIAMETERS, INCREASE SPLICE LENGTHS SHOWN BY 50%.
3. BARS ARE CONSIDERED TO BE TOP BARS WHERE MORE THAN 300mm [12"] OF CONCRETE IS CAST BELOW THE BAR. WALL HORIZONTAL BARS UNIFORMLY SPACED IN A VERTICAL PLANE AT 300mm [12"] MAXIMUM SPACING ARE NOT CONSIDERED TOP BARS.
4. BAR SPLICE LOCATION INDICATED MAY BE ADJUSTED TO MEET FIELD CONDITIONS. NO COMPONENT OF SPLICE SHALL BE LOCATED WITHIN 1.0m FROM COLUMN SUPPORT.

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED
PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB		DATE	APR

DESIGNED BY: JRB
DRAWN BY: AC
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-SB001GN

US Army Corps of Engineers
Middle East District

TETRA TECH

AUSTERE STANDARD DESIGNS-PHASE 4
FY11 BARRACKS - PN74127-CLN03
KANDAHAR AIR BASE, AFGHANISTAN

STRUCTURAL GENERAL NOTES
SHEET 1 OF 2

SHEET REFERENCE NUMBER:
AF1081A
S-001

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO:
   AISC – CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES, 13TH EDITION
   AISC – SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
   AWS D1.1–08 – STRUCTURAL WELDING CODE – STEEL
   AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS

2. STRUCTURAL STEEL SHALL CONFORM TO:
   A. W SHAPES, ANGLES, PLATES AND BARS SHALL CONFORM TO ASTM A36, MIN. YIELD STRENGTH = 2531 kg/cm² (36 KSI).
   B. CONNECTION BOLTS SHALL CONFORM TO ASTM A325 OR A490.
   C. ANCHOR BOLTS SHALL CONFORM TO ASTM A 307 USING A 36 STEEL.
   D. WELDED HOOKED OR HEADED STUDS SHALL CONFORM TO AWS D1.1 – TYPE B
   E. STUD SHEAR CONNECTORS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A108
   F. STRUCTURAL STEEL TUBE (HSS) SHALL CONFORM TO ELECTRIC RESISTANCE WELDED OR SEAMLESS PER DIN, BS, AISC, OR EN STANDARDS, WITH MINIMUM YIELD STRENGTH OF 290 MPa.

3. ALL WELDING SHALL BE DONE BY APPROVED WELDERS WITH E70XX ELECTRODES. WELDS SHALL DEVELOP THE FULL STRENGTH OF THE MATERIALS BEING WELDED, U.N.O. MINIMUM FILLET WELD SHALL BE 5mm. ALL WELDING SHALL BE SHOP WELDED. THERE SHALL BE NO STRUCTURAL STEEL FIELD WELDING WITHOUT WRITTEN APPROVAL FROM THE CONTRACTING OFFICER.

4. FIELD CUTTING OF STRUCTURAL STEEL OR ANY FIELD MODIFICATIONS OF STRUCTURAL STEEL SHALL NOT BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER FOR EACH SPECIFIC CASE.

5. NON–SHRINK GROUT SHALL BE USED BELOW THE BEARING PLATES.

6. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING MATERIAL, SIZES, SPACING AND LOCATIONS OF STRUCTURAL MEMBERS AND CONNECTIONS. INDICATE WELDED CONNECTIONS AND NET WELD LENGTHS.

7. SPLICING STRUCTURAL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE USACE ON–SITE REPRESENTATIVE.

8. THE CONTRACTOR SHALL SUPPLY ALL PLATES, CLIPS, SEAT ANGLES, CONNECTIONS ETC., AS REQUIRED FOR COMPLETION OF THE STRUCTURAL WORK. EVEN IF SUCH ITEMS ARE NOT EXPLICITLY CALLED FOR ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.

9. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED PER ASTM A123. ALL BOLTS EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED PER ASTM A153. UNLESS NOTED OTHERWISE IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.

10. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC'S "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," LATEST EDITION.

11. IF AISC STRUCTURAL STEEL MEMBERS ARE NOT AVAILABLE, THE CONTRACTOR SHALL SUBMIT A RECOMMENDED EQUIVALENT TO THE CONTRACTING OFFICER FOR REVIEW AND APPROVAL PRIOR TO PROCUREMENT AND FABRICATION.

MASONRY:

1. CONCRETE MASONRY CONSTRUCTION, SHALL CONFORM TO SPECIFICATION FOR CONCRETE MASONRY CONSTRUCTION (ACI 530.1/ASCE–5/TMS 602) & BUILDING CODE REQUIREMENT FOR MASONRY STRUCTURES (ACI 530/ASCE–5/TMS 402, 2005).

2. ALL CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C 90, TYPE I, NORMAL WEIGHT.

3. CONCRETE MASONRY UNITS SHALL BE A MINIMUM UNIT COMPRESSIVE STRENGTH OF 141 kg/cm² (2000 PSI) MEASURED ON THE NET SECTION AS DETERMINED BY THE UNIT TEST METHOD IN ACCORDANCE WITH ASTM C 140. AS DEFINED BY ACI, THE NET SECTION INCLUDES MORTAR AND GROUT. THE MINIMUM COMPRESSIVE STRENGTH OF MASONRY (f'm) SHALL BE 105 kg/cm² (1500 PSI) AT 28 DAYS, MEASURED ON THE NET SECTION.

4. MORTAR SHALL BE TYPE S CONFORMING TO ASTM C 270, AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 141 kg/cm² (2,000 PSI).

5. GROUT SHALL CONFORM TO ASTM C 476, FINE TYPE, AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 176 kg/cm² (2500 PSI).

6. BONDING METHODS, TIES, AND ACCESSORIES SHALL BE APPROVED BY THE ENGINEER.

7. CMU MASONRY DETAILS, ELEVATIONS AND NOTES APPLY TO ALL CMU EXTERIOR AND INTERIOR WALLS U.N.O. EXTERIOR AND INTERIOR WALLS CONSIST OF A SINGLE CMU WIDTH U.N.O.

8. VERTICAL REINFORCING SHALL EXTEND TO 50mm BELOW THE TOP OF THE CMU WALL.

9. REINFORCING BARS TO EXTEND 12 BAR DIAMETERS BUT NOT LESS THAN 300mm BEYOND BEND U.N.O.

10. AT OPENINGS WIDER THAN 300mm IN CMU WALLS, PROVIDE CONCRETE LINTELS PER TYPICAL CONCRETE LINTEL DETAIL U.N.O. AND ADDITIONAL REINFORCING FULL HEIGHT AT JAMBS DETAIL.

11. REINFORCING BARS SHALL CONFORM TO ASTM A 615, GRADE 60. MINIMUM YIELD STRENGTH FY = 4218 kg/cm²

12. REINFORCEMENT LAP SPLICES IN MASONARY WALLS SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE:

MASONRY LAP AND EMBEDMENT SCHEDULE

BAR SIZE	LAP
10 ø	390mm
12 ø	470mm
16 ø	620mm
20 ø	1120mm
22 ø	1370mm
25 ø	2070mm

13. CONCRETE MASONRY UNITS SHALL BE LAID IN RUNNING (COMMON) BOND, U.N.O.

14. ALL WALLS CONSTRUCTED OF CONCRETE MASONRY BLOCKS SHALL BE FULLY GROUTED AND REINFORCED VERTICALLY AS INDICATED ON THE STRUCTURAL DRAWINGS. REINFORCEMENT SHALL BE LOCATED IN THE CENTER OF WALL U.N.O. BAR POSITIONERS SHALL BE SUPPLIED FOR VERTICAL REINFORCING. SPLICE VERTICAL BARS PER WALL SECTION DETAIL AND TIE WITH ANNEALED WIRE. FILL ALL CELLS WITH GROUT (ASTM C 476). GROUT CELLS IN MAXIMUM LIFT HEIGHT OF 1200mm. ALL REINFORCED CMU SHALL BE TWO–CELL UNITS.

15. FOR MASONRY FINISHING, SEE ARCHITECTURAL DRAWINGS.

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

SYMB	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID–POINT DESIGN SUBMITTAL	08/13/10	SGW

DESIGNED BY: JRB
DRAWN BY: AC
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A–SB002GN

US Army Corps of Engineers
Middle East District

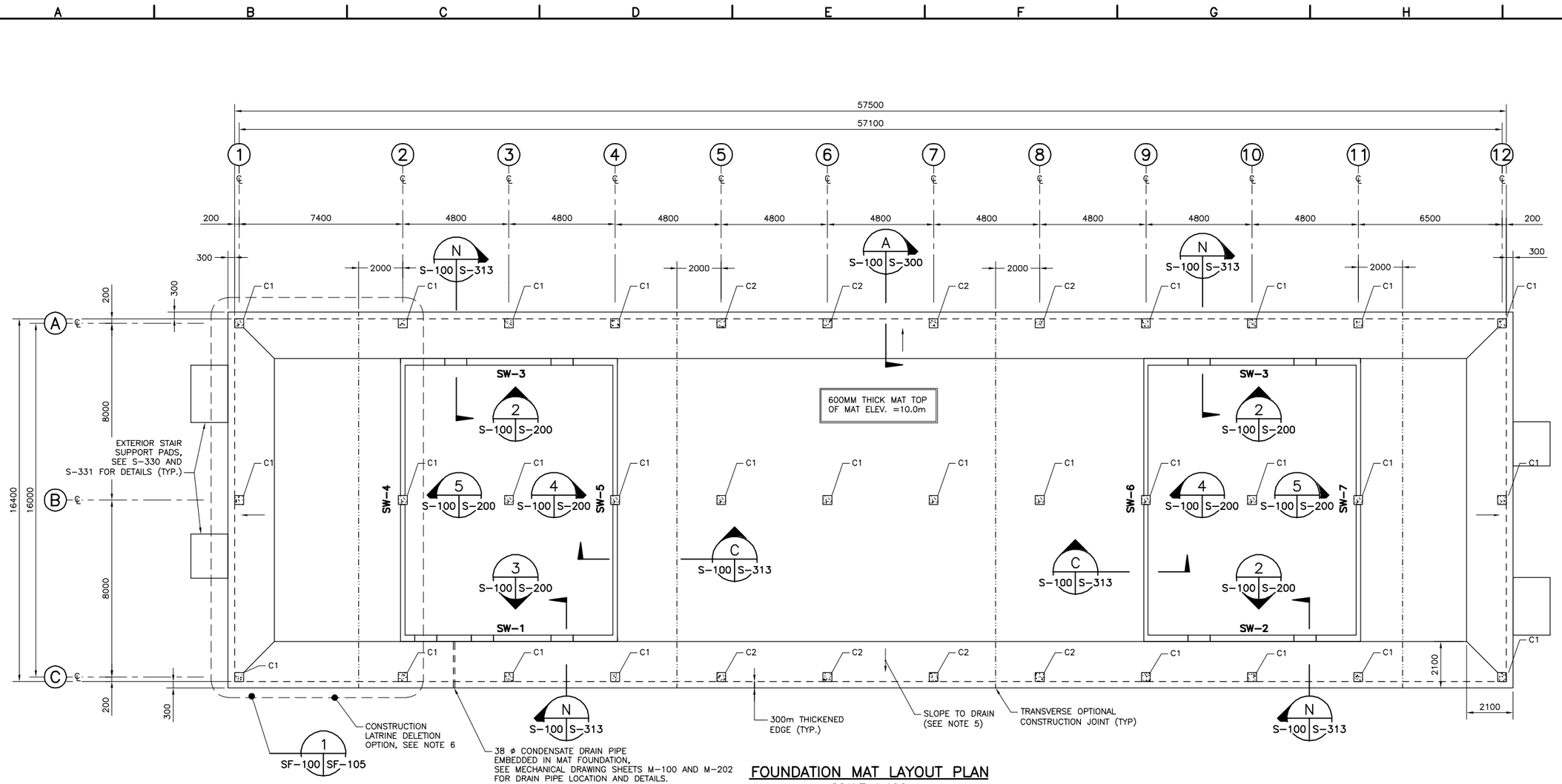
TETRA TECH

AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN

STRUCTURAL GENERAL NOTES
SHEET 2 OF 2

SHEET REFERENCE NUMBER:
AF1081A
S–002

W:\23308\127–23308–10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A–SB002GN.dwg 10/14/2010 11:20:09 AM Barrett, Patrick



FOUNDATION MAT LAYOUT PLAN
SCALE 1:100

LEGEND:

C#	COLUMN TYPE
SW-#	SHEAR WALL TYPE
	TRANSVERSE OPTIONAL CONSTRUCTION JOINT
	SLOPE TO DRAIN

NOTES:

1. FOR TYPICAL MAT REINFORCEMENT, SEE SHEET S-300.
2. COORDINATE LAYOUT AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. SEE S-200 FOR SHEAR WALL ELEVATIONS.
4. FOR GROUND FLOOR WALL LAYOUT PLANS, SEE SHEET S-101.
5. SLOPE MAT SLAB IN BALCONY AREAS TO DRAIN (1.0% MAX.).
6. REMOVAL OF THE LATRINE SHALL BE CONSIDERED A CONSTRUCTION OPTION. IF THE OPTION IS EXERCISED, THE BUILDING CONFIGURATION AND DESIGN BETWEEN COLUMN LINES 2 & 3, SHALL MIRROR THE DESIGN BETWEEN COLUMN LINES 11 & 12. SEE ARCHITECTURAL DRAWINGS AND LATRINE DELETION OPTION ON DRAWING OS-101.

1:100

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB			APR

DESIGNED BY: JRB
DRAWN BY: AC
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-SB100PN

US Army Corps of Engineers
Middle East District

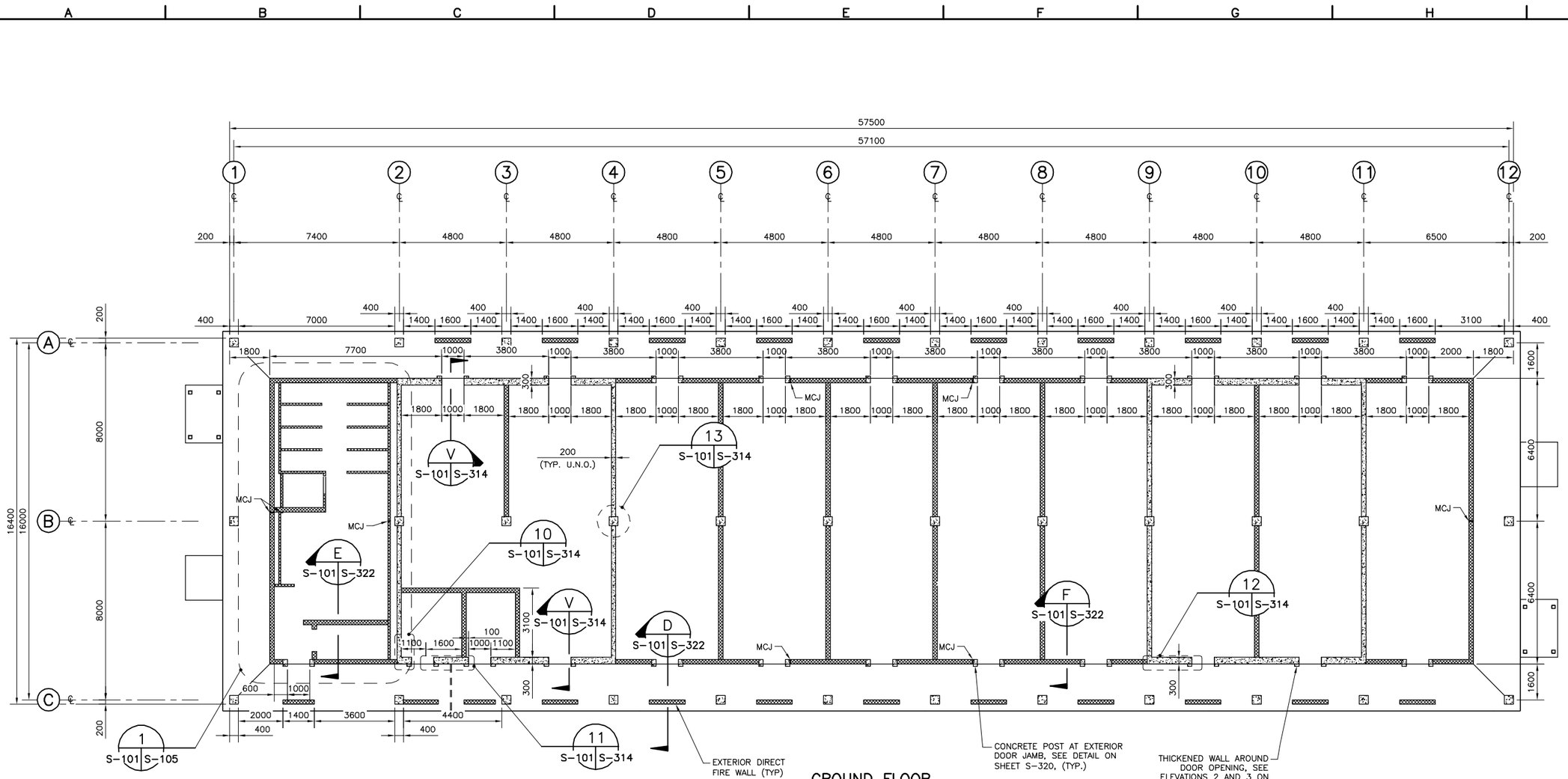
TETRA TECH

AUSTERE STANDARD DESIGNS-PHASE 4
FY11 BARRACKS - PN74127-CLN03
KANDAHAR AIR BASE, AFGHANISTAN

FOUNDATION MAT LAYOUT PLAN

SHEET REFERENCE NUMBER:
AF1081A
S-100

W:\23308\127-23308-10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A-SB100PN.dwg 10/14/2010 11:20:21 AM Barrett, Patrick



GROUND FLOOR WALL LAYOUT PLAN
SCALE 1:100

LEGEND:

- = 100 CMU WALL FULLY GROUTED
- = 200 CMU WALL FULLY GROUTED
- = 200 OR 300 CAST-IN PLACE CONCRETE SHEAR WALL
- MCJ = MASONRY CONTROL JOINT

NOTES:

1. ALL DIMENSIONS PROVIDED ARE TO BE COORDINATED AND VERIFIED WITH ARCHITECTURAL DRAWINGS.
2. SEE PART PLAN ON SHEET S-105 FOR LATRINE LAYOUT AND SLAB SLOPE LINES. COORDINATE ALL DRAIN LOCATIONS WITH PLUMBING DRAWINGS.

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

1 0 1 2 3 4 5 6 7 8 9
1:100

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB		DATE	APR

DESIGNED BY: JRB
DRAWN BY: AC
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-ST101PN

US Army Corps of Engineers
Middle East District

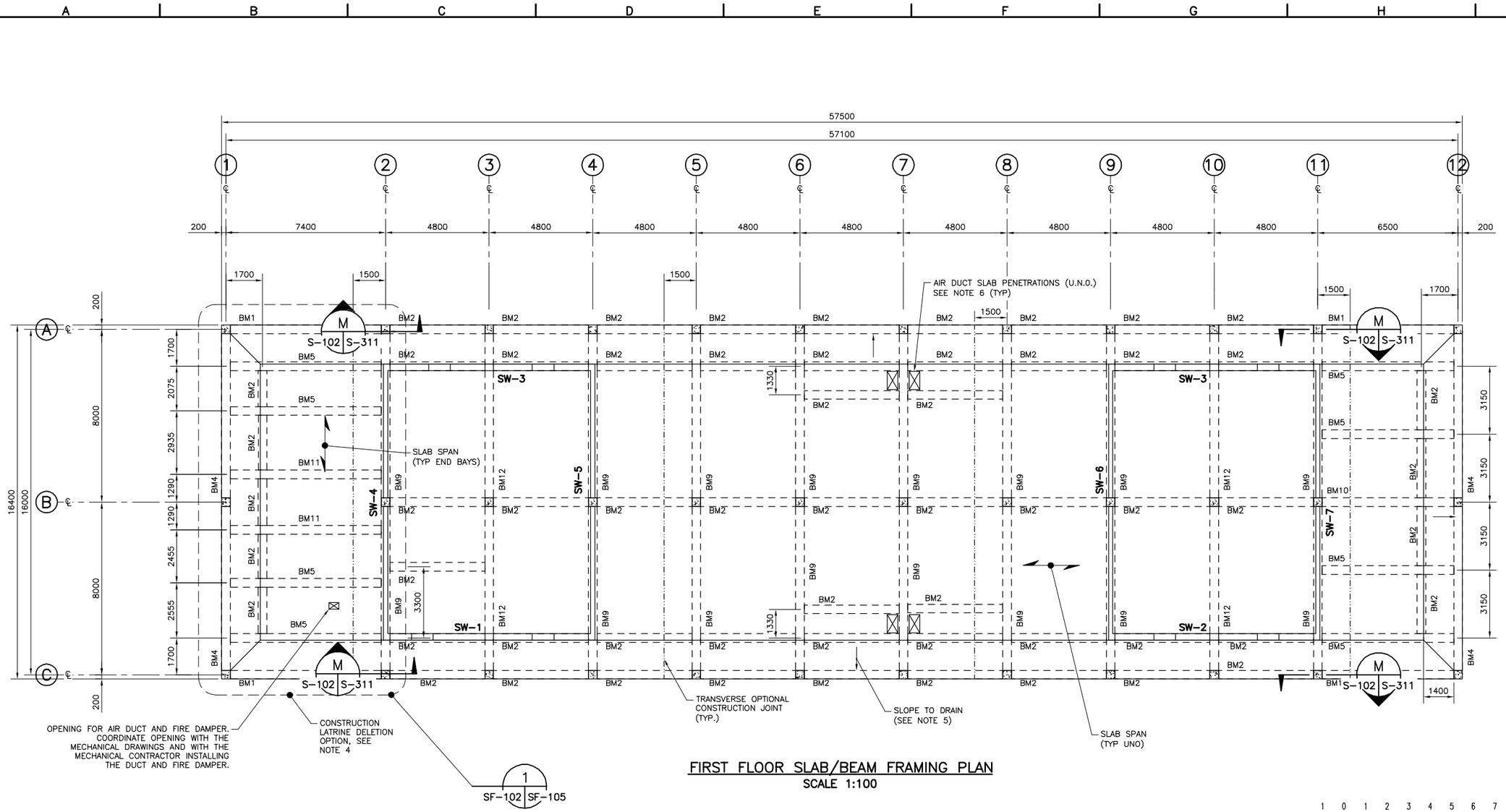
TETRA TECH

AUSTERE STANDARD DESIGNS-PHASE 4
FY11 BARRACKS - PN74127-CLN03
KANDAHAR AIR BASE, AFGHANISTAN

GROUND FLOOR WALL LAYOUT PLAN

SHEET REFERENCE NUMBER:
AF1081A
S-101

W:\23308\127-23308-10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A-ST101PN.dwg 10/14/2010 11:20:31 AM Barrett, Patrick



FIRST FLOOR SLAB/BEAM FRAMING PLAN
SCALE 1:100

1 0 1 2 3 4 5 6 7 8 9
1:100

LEGEND:

BM#	BEAM TYPE
SW-#	SHEAR WALL TYPE
-----------	TRANSVERSE OPTIONAL CONSTRUCTION JOINT

NOTES:

1. TOP OF SLAB ELEVATION: 13.60m
2. SLAB CONSTRUCTION SHALL BE ONE WAY SLAB, DIRECTION OF SPAN AS INDICATED ON PLAN BY S1 .
3. FOR SLAB AND BEAM REINFORCEMENT, SEE SHEETS S-310 TO S-312.
4. REMOVAL OF THE LATRINE SHALL BE CONSIDERED A CONSTRUCTION OPTION. IF THE OPTION IS EXERCISED, THE BUILDING CONFIGURATION AND DESIGN BETWEEN COLUMN LINES 2 & 3, SHALL MIRROR THE DESIGN BETWEEN COLUMN LINES 11 & 12. SEE ARCHITECTURAL DRAWINGS AND LATRINE DELETION OPTION ON DRAWING OS-101.
5. SLOPE FIRST FLOOR SLAB IN BALCONY AREAS TO DRAIN (1% MAX.). LIMITS NOT SHOWN ON THIS SHEET FOR CLARITY (SEE DWG S-100).
6. SEE MECHANICAL DRAWING SHEET M-101 FOR SIZE AND LOCATION OF PENETRATING AIR DUCT. STRUCTURAL OPENING IN SLAB SHALL BE SIZED 75mm LARGER IN LENGTH AND WIDTH THAN THE PENETRATING AIR DUCT, (SIMILAR TO DETAIL 7 SHEET M-202.)

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB			APR

DESIGNED BY: JRB
DRAWN BY: AC
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-SF102PN

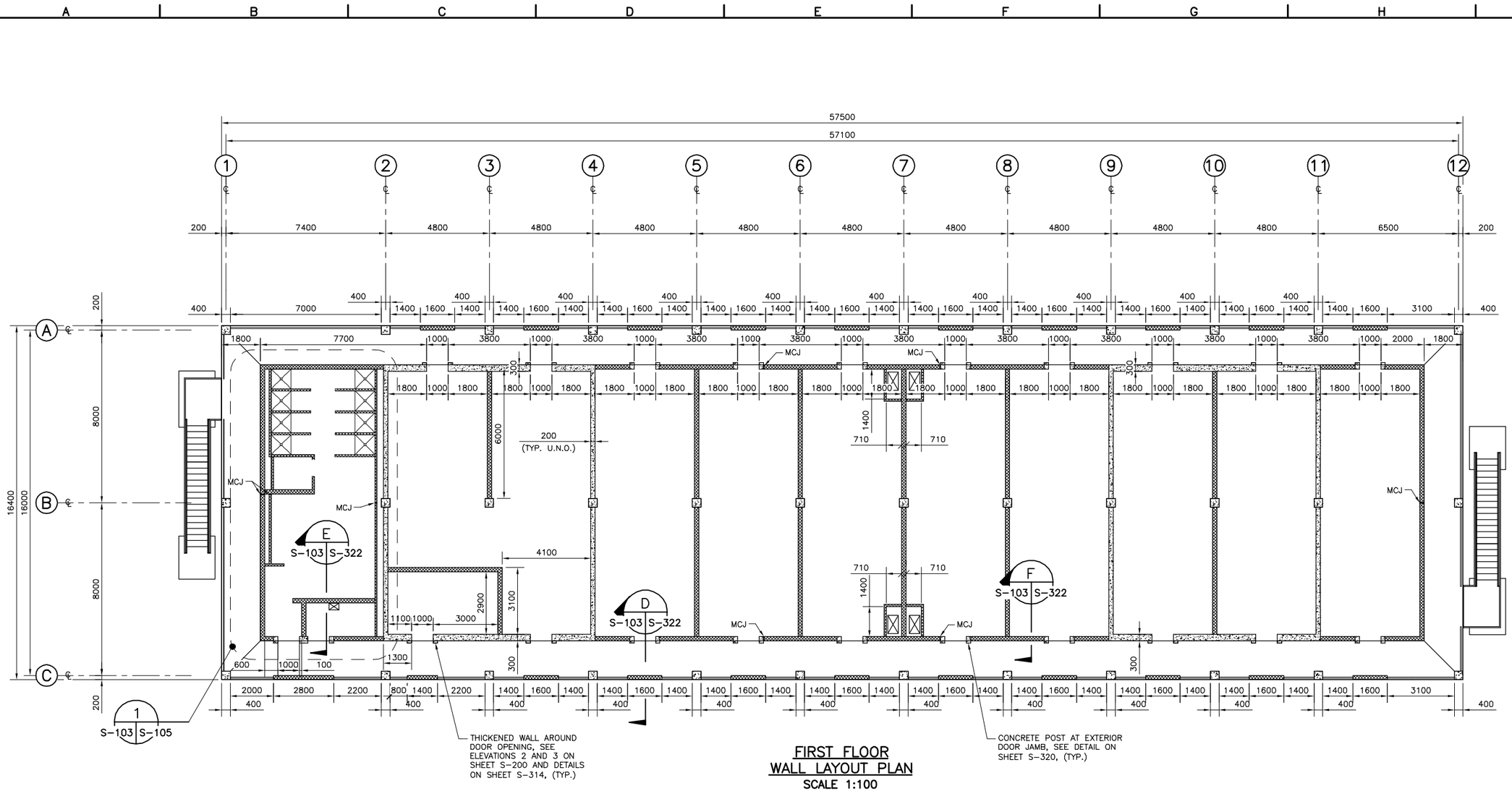
US Army Corps of Engineers
Middle East District

TETRA TECH

AUSTERE STANDARD DESIGNS-PHASE 4
FY11 BARRACKS - PN74127-CLN03
KANDAHAR AIR BASE, AFGHANISTAN

FIRST FLOOR SLAB/BEAM FRAMING PLAN

SHEET REFERENCE NUMBER:
AF1081A
S-102



FIRST FLOOR WALL LAYOUT PLAN

SCALE 1:100

1 0 1 2 3 4 5 6 7 8 9
1:100

LEGEND:

- = 100 CMU WALL FULLY GROUTED
- = 200 CMU WALL FULLY GROUTED
- = 200 OR 300 CAST-IN PLACE CONCRETE SHEAR WALL
- MCJ = MASONRY CONTROL JOINT

NOTES:

1. ALL DIMENSIONS PROVIDED ARE TO BE COORDINATED AND VERIFIED WITH ARCHITECTURAL DRAWINGS.
2. SEE PART PLAN ON SHEET S-105 FOR LATRINE LAYOUT AND SLAB SLOPE LINES. COORDINATE ALL DRAIN LOCATIONS WITH PLUMBING DRAWINGS.

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

SYMB	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW

DESIGNED BY: JRB
DRAWN BY: AC
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-ST103PN

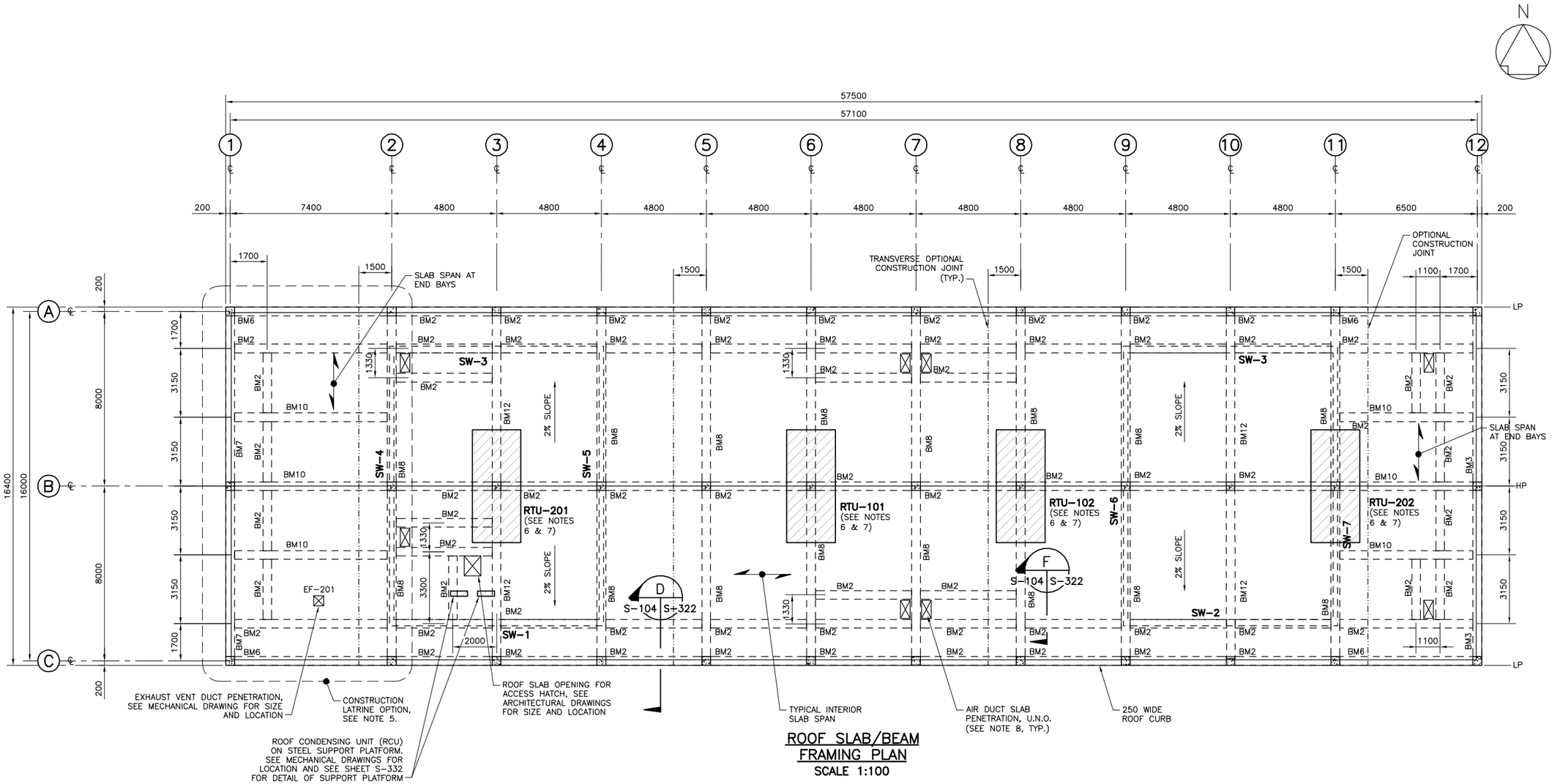
US Army Corps of Engineers
Middle East District

TETRA TECH

AUSTERE STANDARD DESIGNS-PHASE 4
FY11 BARRACKS - PN74127-CLN03
KANDAHAR AIR BASE, AFGHANISTAN

FIRST FLOOR
WALL LAYOUT PLAN

SHEET REFERENCE NUMBER:
AF1081A
S-103



ROOF SLAB/BEAM FRAMING PLAN
SCALE 1:100

LEGEND:

BM#	BEAM TYPE
SW-#	SHEAR WALL TYPE
—·—·—	TRANSVERSE OPTIONAL CONSTRUCTION JOINT

NOTES:

1. TOP OF ROOF SLAB ELEVATION VARIES. SEE SHEET S-200 FOR ROOF GEOMETRY.
2. ROOF SLAB CONSTRUCTION SHALL BE ONE WAY SLAB WITH SLOPED TOP AND FLAT BOTTOM, DIRECTION AND TYPE OF SPAN AS INDICATED ON PLAN BY S1.
3. FOR SLAB & BEAM REINFORCEMENT. SEE SHEETS S-310 TO S-312.
4. ROOF DESIGNED IS BASED ON THE FOLLOWING EQUIPMENT WEIGHTS:
   EF-201 = 4448N [1,000 lbs]
   RTU-101, 102, 201, & 202 = 20017N [4,500 lbs].
5. REMOVAL OF THE LATRINE SHALL BE CONSIDERED A CONSTRUCTION OPTION. IF THE OPTION IS EXCERCISED, THE BUILDING CONFIGURATION AND DESIGN BETWEEN COLUMN LINES 1 & 2, SHALL MIRROR THE DESIGN BETWEEN COLUMN LINES 11 & 12. SEE ARCHITECTURAL DRAWINGS AND LATRINE DELETION OPTION ON DWG OS-101.
6. SEE MECHANICAL DRAWINGS FOR LOCATIONS OF MECHANICAL EQUIPMENT.
7. THE MANUFACTURER PROVIDED STEEL SUPPORT CURB FOR THE ROOF TOP UNITS (RTU) SHALL BE SUPPORTED DIRECTLY ON THE CONCRETE ROOF DECK AND SHALL BE SHIMMED UNDER THE FULL LENGTH OF THE CURBS TO SIT LEVEL ON THE SLOPED ROOF DECK AND TO SPREAD THE RTU WEIGHT EVENLY OVER THE ENTIRE LENGTH OF THE CURBS.
8. SEE MECHANICAL DRAWING SHEET M-102 FOR SIZE AND LOCATION OF PENETRATING AIR DUCT. STRUCTURAL OPENING IN SLAB SHALL BE SIZED 75mm LARGER IN LENGTH AND WIDTH THAN THE PENETRATING AIR DUCT, (SEE DETAIL 7 SHEET M-202).

1 0 1 2 3 4 5 6 7 8 9
1:100

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB			

DESIGNED BY: JRB
DRAWN BY: AC
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-SF104PN

US Army Corps of Engineers Middle East District

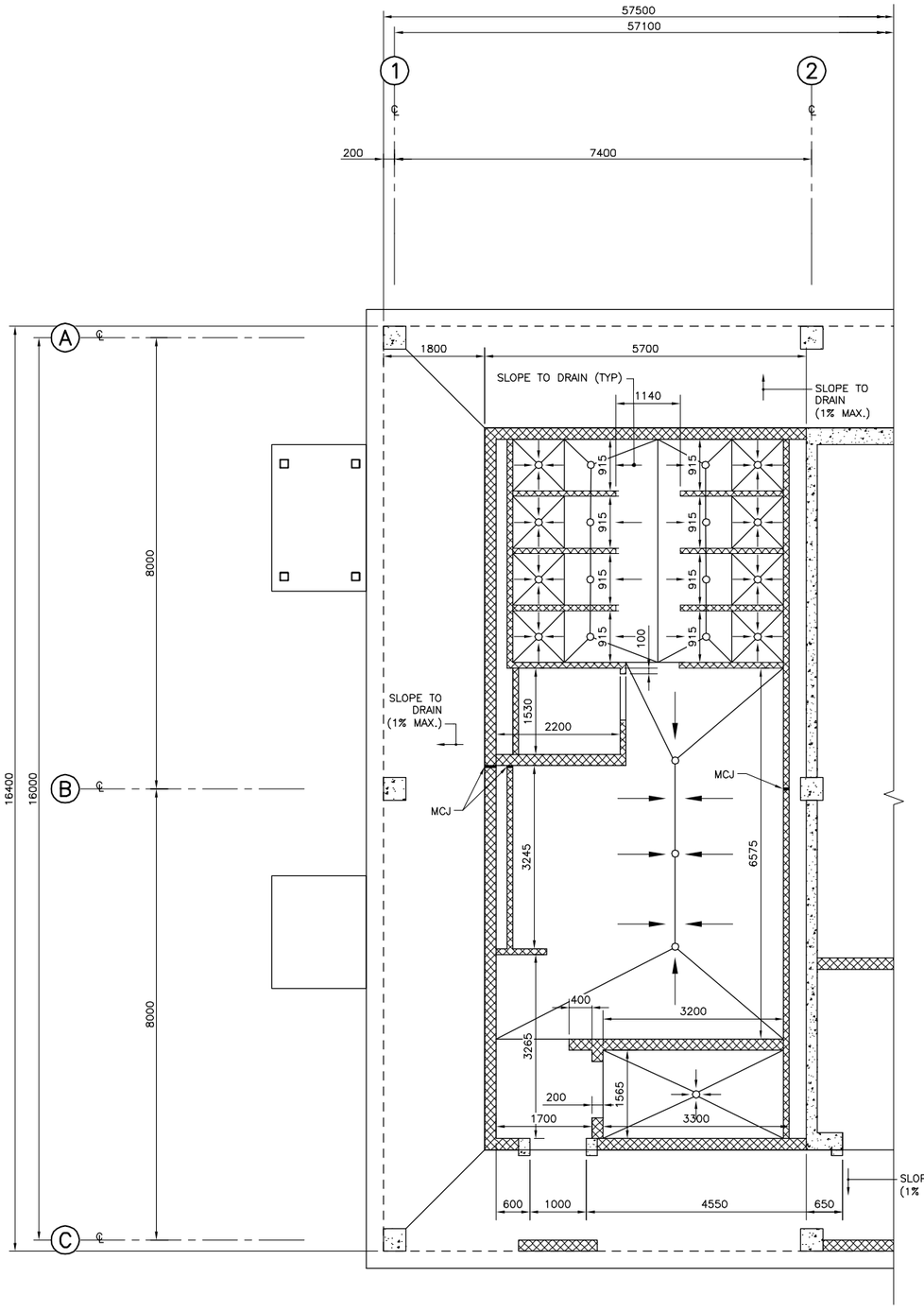
TETRA TECH

AUSTERE STANDARD DESIGNS-PHASE 4
FY11 BARRACKS - PN74127-CLN03
KANDAHAR AIR BASE, AFGHANISTAN

ROOF SLAB/BEAM FRAMING PLAN

SHEET REFERENCE NUMBER:
AF1081A S-104

W:\23308\127-23308-10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A-SF104PN.dwg 10/14/2010 11:21:04 AM Borrett, Patrick



ENLARGED SLAB PLAN – LATRINE AREA
SCALE 1:50

1
S-100, S-101, S-102, S-103 S-105

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

LEGEND:

= 100 CMU WALL FULLY GROUTED

= 200 CMU WALL FULLY GROUTED

= 200 OR 300 CAST-IN PLACE CONCRETE SHEAR WALL

= SLOPE (0.5% MAX) TO FLOOR DRAIN, COORDINATE WITH PLUMBING DWGS

NOTES:

1. GROUND FLOOR LATRINE AREA SHOWN. FIRST FLOOR LATRINE AREA SIMILAR. NOTE THAT FLOOR DRAIN LOCATIONS IN SECOND FLOOR ARE DIFFERENT IN SOME LOCATIONS, BUT FLOOR SLOPE PATTERN IS SIMILAR.
2. SLOPE SLABS ON GROUND AND FIRST FLOOR MAXIMUM 0.5% IN LOCATIONS NOTED ABOVE.
3. ALL WALLS SHALL BE SET ON LEVEL SLAB SURFACES.
4. THE SLAB-ON-GRADE AND FIRST FLOOR SLAB THICKNESS DETAILED IN THE SET ARE MAXIMUM THICKNESS. REDUCTION IN SLAB THICKNESS DUE TO THE DRAINAGE SLOPE OF THE TOP OF THE SLAB SHALL NOT EXCEED 12MM.

1 0 1 2 3 4
1:50

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

SYMB	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW

DESIGNED BY: JRB
DRAWN BY: GRN
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-SB105PN

US Army Corps of Engineers
Middle East District

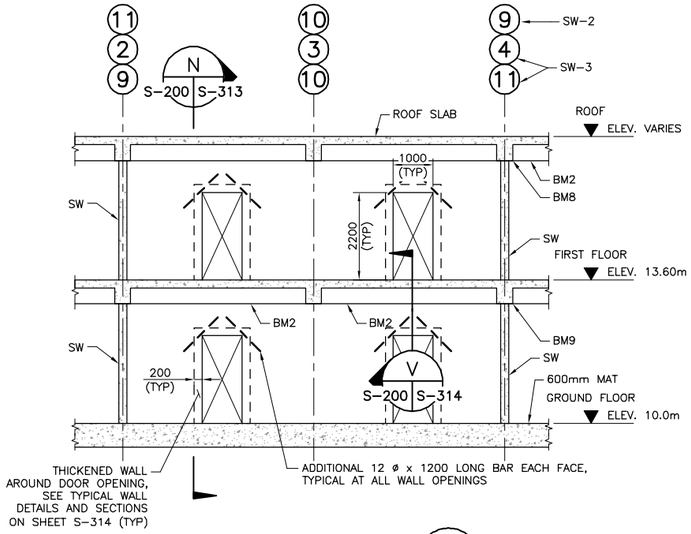
TETRA TECH

AUSTERE STANDARD DESIGNS-PHASE 4
FY11 BARRACKS - PN74127-CLN03
KANDAHAR AIR BASE, AFGHANISTAN

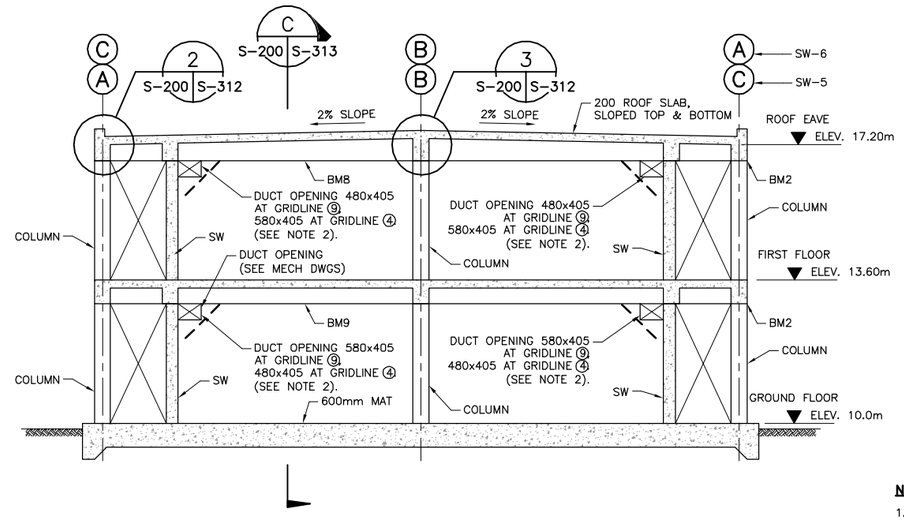
ENLARGED SLAB PLAN
LATRINE AREA

SHEET REFERENCE NUMBER:
AF1081A
S-105

W:\23308\127-23308-10010\CAD\SheetFiles\XS003_KAND\04_Structural\AF1081A-SB105PN.dwg 10/14/2010 11:21:17 AM Barrett, Patrick



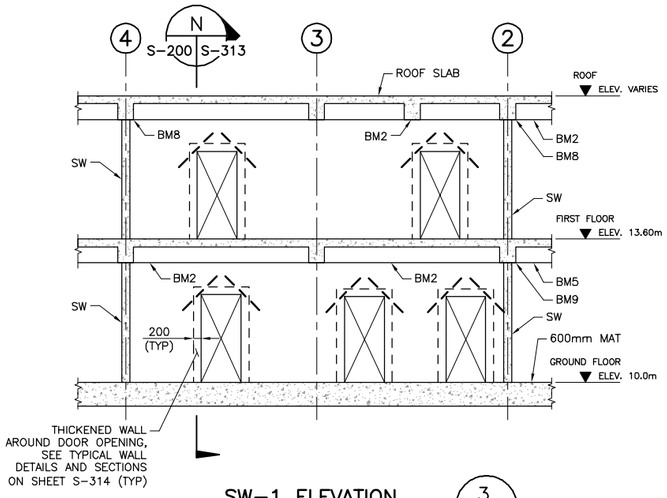
SW-2 & SW-3 ELEVATION
SCALE 1:75
2 S-100 S-200



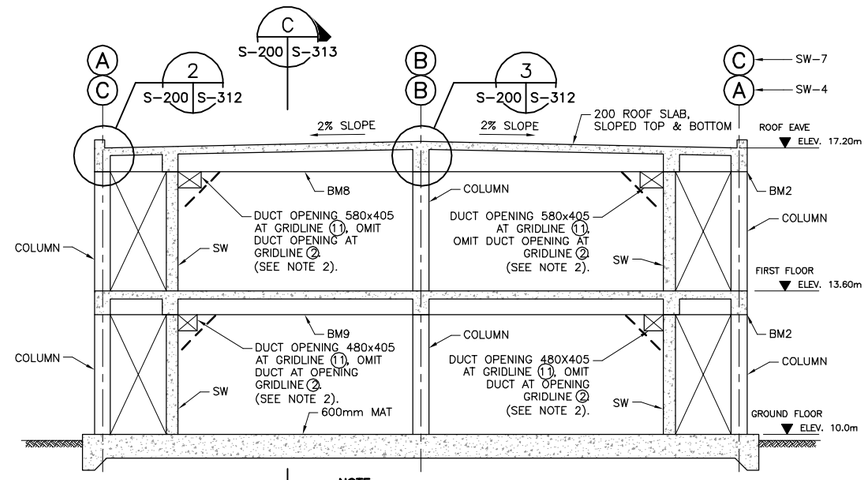
SW-5 & SW-6 ELEVATION
SCALE 1:75
4 S-100 S-200

NOTES:

1. SHEAR WALL ELEVATIONS AS SHOWN ARE LOOKING AT THE INSIDE FACE OF THE SHEAR WALL.
2. DUCT OPENING TO BE COORDINATED WITH THE MECHANICAL CONTRACTOR INSTALLING THE DUCTS.



SW-1 ELEVATION
SCALE 1:75
3 S-100 S-200



NOTE:

LONGITUDINAL BEAMS AT AIR DUCT PENETRATIONS NEAR SW-4 NOT SHOWN FOR CLARITY.

SW-4 & SW-7 ELEVATION
SCALE 1:75
5 S-100 S-200

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB			

DESIGNED BY: JRB
DRAWN BY: GRN
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-ST200EL

US Army Corps of Engineers
Middle East District

TETRA TECH

2 1 0 1 2 3 4 5 5.5
1:75

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

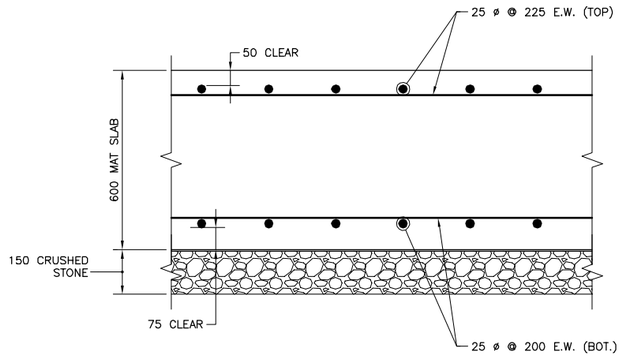
COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED
PROFESSIONAL ENGINEER
9-15-10

AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN

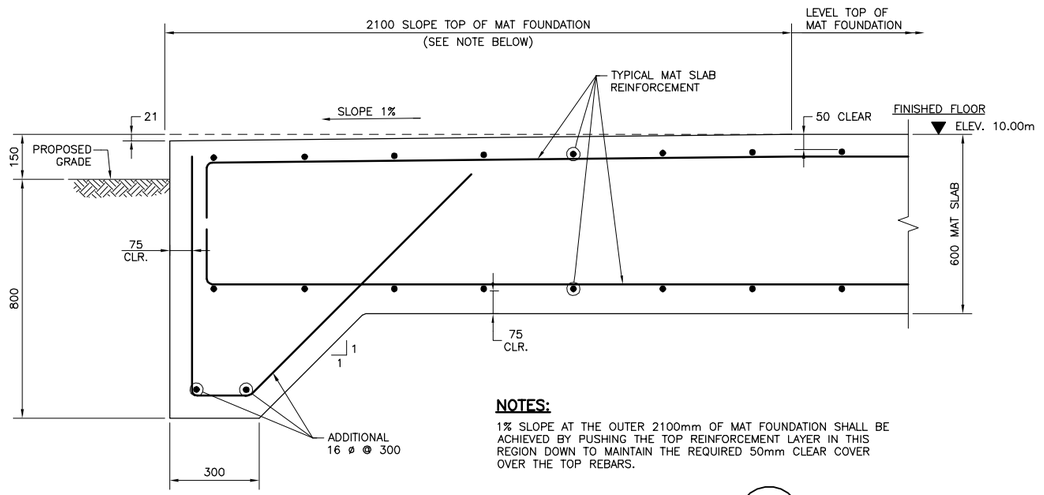
SHEARWALL ELEVATIONS

SHEET REFERENCE NUMBER:
AF1081A
S-200

W:\23308\127-23308-10010\CAD\SheetFiles\XSD03_KAND\04_Structural\AF1081A-ST200EL.dwg 10/14/2010 11:21:28 AM Barrett, Patrick



TYPICAL MAT SLAB REINFORCEMENT AND SUBGRADE
SCALE 1:10



NOTES:

1% SLOPE AT THE OUTER 2100mm OF MAT FOUNDATION SHALL BE ACHIEVED BY PUSHING THE TOP REINFORCEMENT LAYER IN THIS REGION DOWN TO MAINTAIN THE REQUIRED 50mm CLEAR COVER OVER THE TOP REBARS.

MAT TYPICAL EDGE CONDITION
SCALE 1:10

A
S-100 | S-300

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB			

DESIGNED BY: JRB
DRAWN BY: AC
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF10811A-SB300DT

US Army Corps of Engineers
Middle East District

TETRA TECH

0 .50 1.00
1:10

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

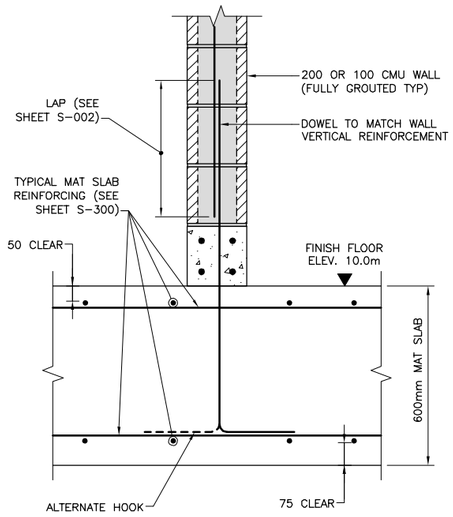
AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN

MAT SLAB DETAILS
SHEET 1 OF 2

SHEET REFERENCE NUMBER:
AF1081A
S–300

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

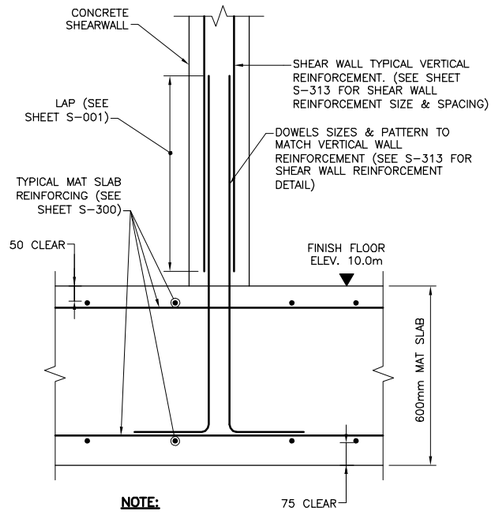
W:\23308\127-23308-10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A-SB300DT.dwg 10/14/2010 11:21:42 AM Barrett, Patrick



NOTE:

1. OMIT DOWELS AT DOOR OPENINGS.

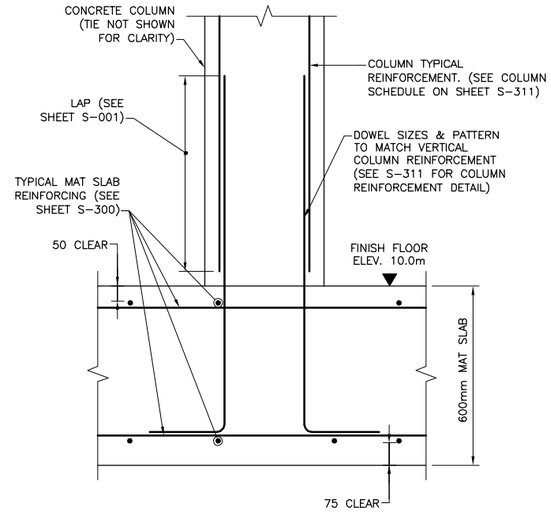
CMU WALL–MAT SLAB CONNECTION DETAIL
SCALE 1:10



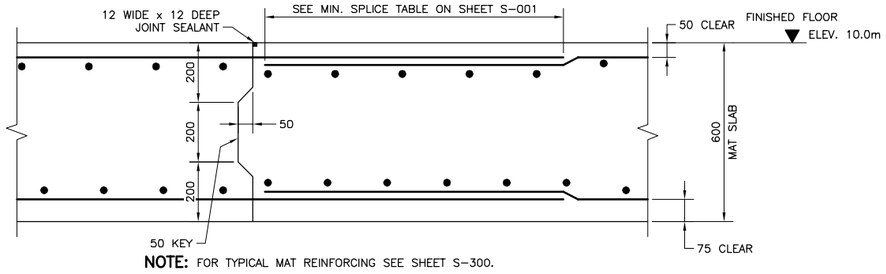
NOTE:

1. SHEAR WALL HORIZONTAL REINFORCEMENT NOT SHOWN FOR CLARITY.
2. OMIT DOWELS AT DOOR OPENINGS.

CONC. SHEAR WALL–MAT SLAB CONNECTION DETAIL
SCALE 1:10



CONC. COLUMN–MAT SLAB CONNECTION DETAIL
SCALE 1:10



NOTE: FOR TYPICAL MAT REINFORCING SEE SHEET S-300.

MAT FOUNDATION TYPICAL CONSTRUCTION JOINT
SCALE 1:10

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

0 .50 1.00
1:10

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB		DATE	APR

DESIGNED BY: JRB
DRAWN BY: GRN
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-SB301DT

US Army Corps of Engineers
Middle East District

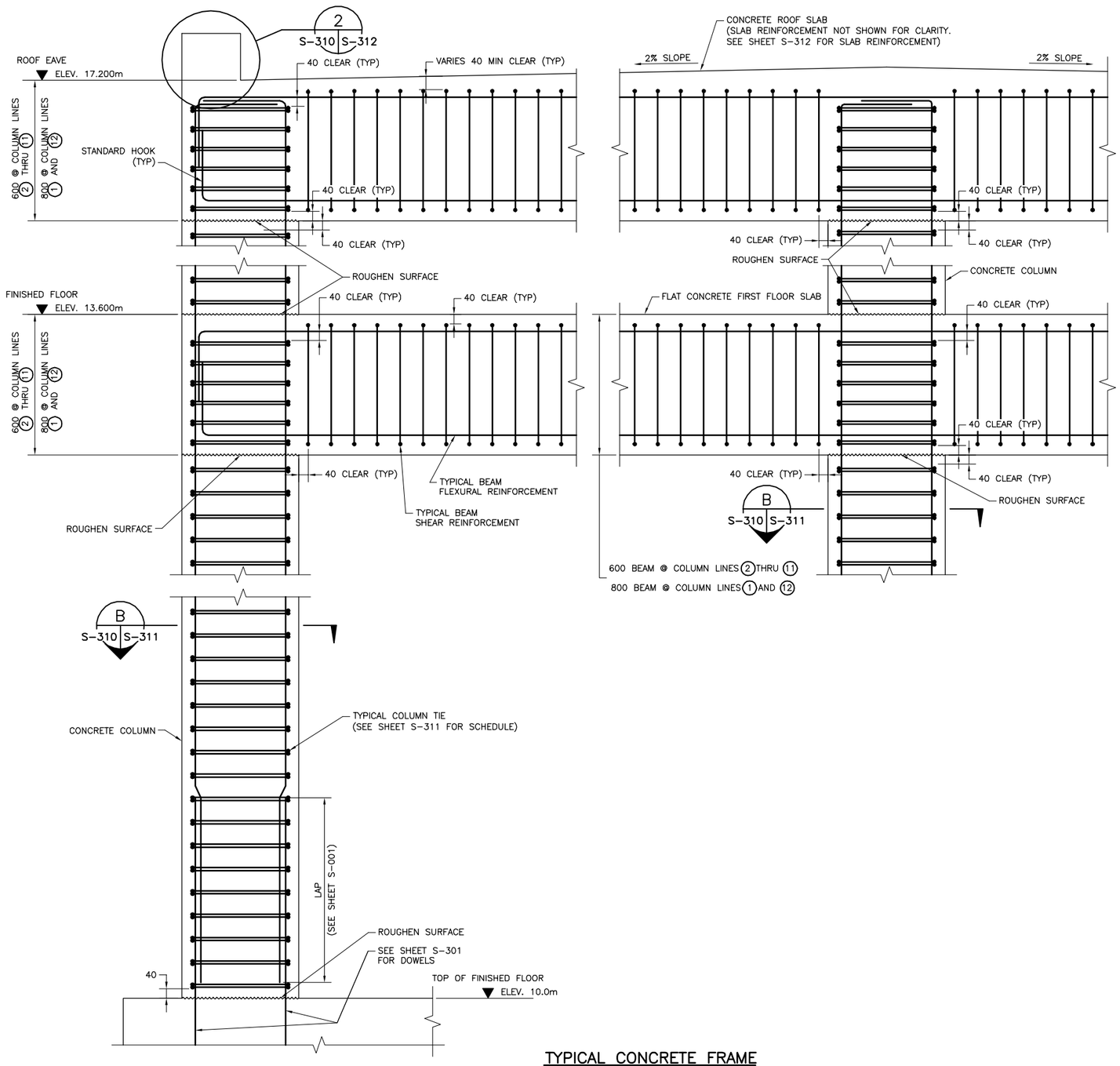
TETRA TECH

AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN

MAT SLAB DETAILS
SHEET 2 OF 2

SHEET REFERENCE NUMBER:
AF1081A
S–301

W:\23308\127-23308-10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A-SB301DT.dwg 10/14/2010 11:21:50 AM Barrett, Patrick



TYPICAL CONCRETE FRAME REINFORCEMENT TRANSVERSE SECTION

SCALE 1:10

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

NOTES:

1. WALLS AND WALL DOWELS NOT SHOWN FOR CLARITY.
2. AT FIRST FLOOR, TOP OF BEAM TO MATCH TOP OF SLAB.
3. AT ROOF LEVEL, TOP OF SLAB VARIES, TOP OF BEAM TO MATCH TOP OF SLAB AT LOW POINT.
4. FOR BEAM AND COLUMN SCHEDULE, SEE SHEET S-311.
5. BOTTOM BAR SPLICES, IF REQUIRED, SHALL BE STAGGERED AND SHALL BE LOCATED WITHIN THE END THIRD OF THE CLEAR SPAN.

CORRECTED FINAL DESIGN SUBMITTAL

DESCRIPTION	DATE	APR
0 CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B FINAL DESIGN SUBMITTAL	09/02/10	SGW
A MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB		

DESIGNED BY: JRB
DRAWN BY: QPV
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-SF310DT

US Army Corps of Engineers
Middle East District

TETRA TECH

0 .50 1.00
1:10

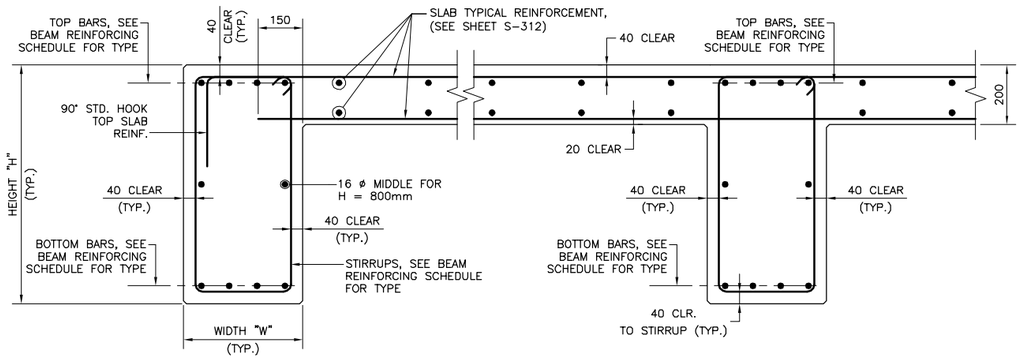
THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

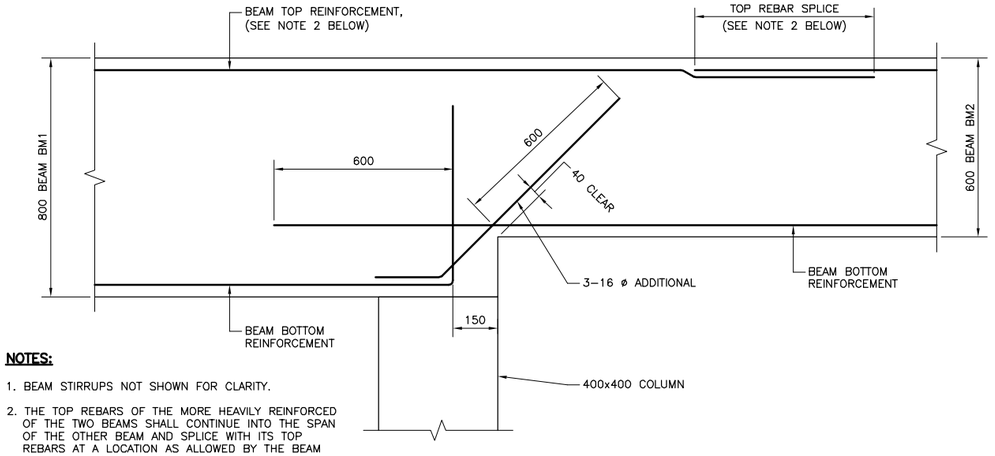
AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN
CONCRETE BEAM AND COLUMN DETAILS
SHEET 1 OF 3

SHEET REFERENCE NUMBER:
AF1081A
S-310

CONCRETE BEAM SCHEDULE							
BEAM TYPE	WIDTH 'W'	HEIGHT 'H'	TOP BARS 'T'	BOTTOM BARS 'B'	STIRRUPS 'S'	STIRRUPS TYPE	REMARKS
BM1	400	800	3–20 ø	3–20 ø	12 ø @ 350	TYPE B	HOOP & TIES SET
BM2	400	600	3–16 ø	4–20 ø	12 ø @ 250	TYPE B	HOOP & TIE SET
BM3	400	800	3–16 ø	6–22 ø	12 ø @ 350	TYPE B	HOOP & TIE SET
BM4	400	800	3–16 ø	6–25 ø	12 ø @ 250	TYPE A	HOOP
BM5	400	600	3–16 ø	5–22 ø	12 ø @ 250	TYPE A	HOOP
BM6	400	800	3–16 ø	3–16 ø	12 ø @ 300	TYPE B	HOOP & TIE SET
BM7	400	800	3–16 ø	6–22 ø	12 ø @ 350	TYPE A	HOOP
BM8	400	600	5–25 ø	5–20 ø	12 ø @ 200	TYPE B	HOOP & TIE SET
BM9	400	600	6–25 ø	6–20 ø	12 ø @ 150	TYPE B	HOOP & TIE SET
BM10	400	600	3–20 ø	6–20 ø	12 ø @ 250	TYPE B	HOOP & TIE SET
BM11	300	600	3–16 ø	4–20 ø	12 ø @ 250	TYPE A	HOOP
BM12	400	600	3–16 ø	5–25 ø	12 ø @ 200	TYPE B	HOOP & TIE SET



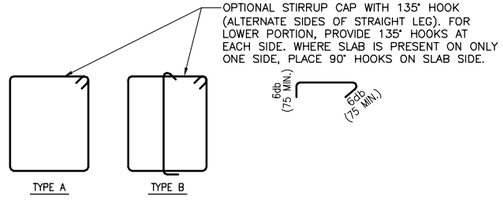
TYPICAL BEAM SECTION
SCALE 1:10



NOTES:

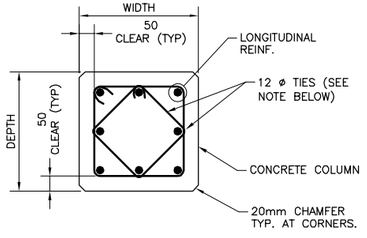
1. BEAM STIRRUPS NOT SHOWN FOR CLARITY.
2. THE TOP REBARS OF THE MORE HEAVILY REINFORCED OF THE TWO BEAMS SHALL CONTINUE INTO THE SPAN OF THE OTHER BEAM AND SPLICE WITH ITS TOP REBARS AT A LOCATION AS ALLOWED BY THE BEAM AND ELEVATED SLAB NO SPLICE ZONE DIAGRAM ON SHEET S–312.

SECTION M
SCALE 1:10 S–102 S–311



TYPICAL BEAM STIRRUP TYPES
SCALE N.T.S.

CONCRETE COLUMN SCHEDULE					
COLUMN TYPE	WIDTH	DEPTH	LONGITUDINAL REBAR	TIES "S"	LOCATION
C1	400	400	8–20 ø	12 ø @ 225 O.C.	TYP U.N.O.
C2	400	400	8–25 ø	12 ø @ 150 O.C.	EXT COLS, GRIDS 5 TO 8



NOTE:

TIES ARE PLACED IN LAYERS EACH CONTAINING 2 – 12 ø TIES AS SHOWN. TIES SPACING SHOWN IN CONCRETE COLUMN SCHEDULE REFER TO THE SPACING OF THESE TIE LAYERS.

CONCRETE COLUMN SECTION
SCALE 1:10 B S–310 S–311

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

0 .50 1.00
1:10

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

CORRECTED FINAL DESIGN SUBMITTAL

SYMB	DESCRIPTION	DATE	
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
			APR

DESIGNED BY: JRB
DRAWN BY: GRN
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A–SF311DT

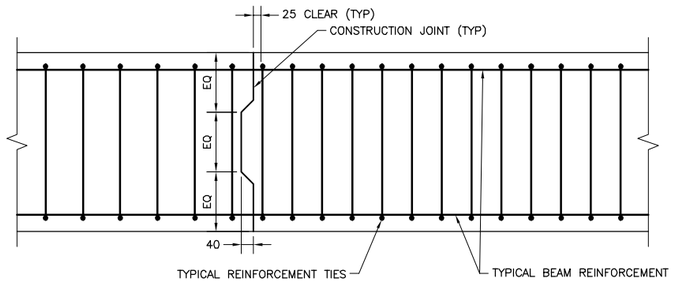
US Army Corps of Engineers
Middle East District

TETRA TECH

AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN
CONCRETE BEAM AND COLUMN DETAILS
SHEET 2 OF 3

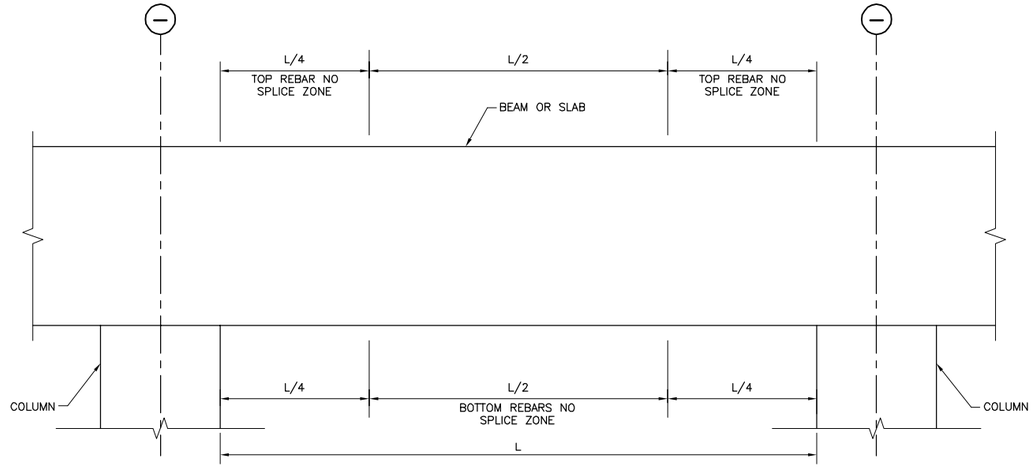
SHEET REFERENCE NUMBER:
AF1081A
S–311

W:\23308\127–23308–10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A–SF311DT.dwg 10/14/2010 11:22:10 AM Barrett, Patrick

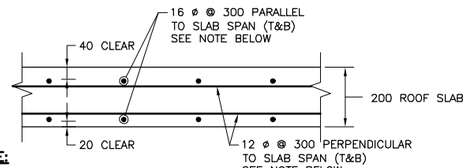


NOTE: FOR LAP LENGTH SEE SPLICE NOTES ON SHEET S-001.

TYPICAL ROOF BEAM CONSTRUCTION JOINT SECTION
1:10

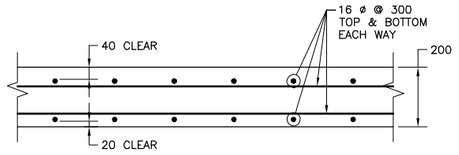


BEAM AND ELEVATED SLABS NO SPLICE ZONES DIAGRAM
N.T.S.

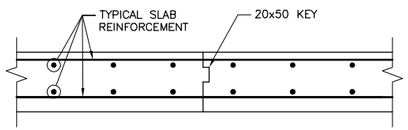


NOTE:
SLAB SPAN CHANGES DIRECTION BASED ON BUILDING BAY. SEE ROOF SLAB BEAM FRAMING PLAN SHEET S-104 FOR SLAB SPAN DIRECTION.

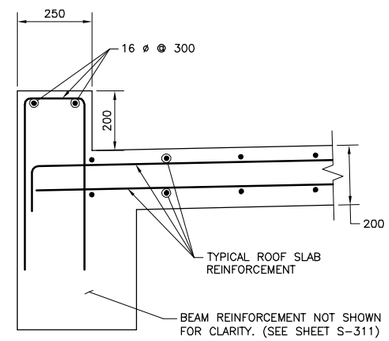
ROOF SLAB TYPICAL REINFORCEMENT DETAIL
SCALE 1:10



FIRST FLOOR SLAB TYPICAL REINFORCEMENT DETAIL
1:10

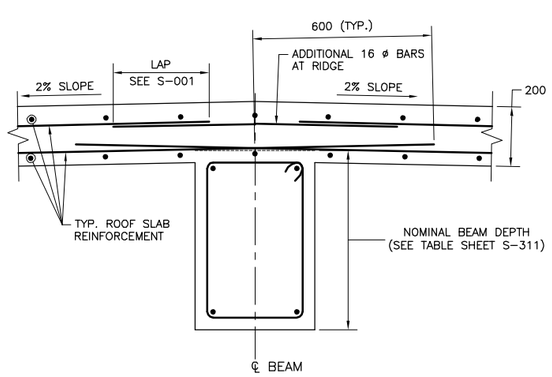


TYPICAL SLAB CONSTRUCTION JOINT DETAIL
1:10



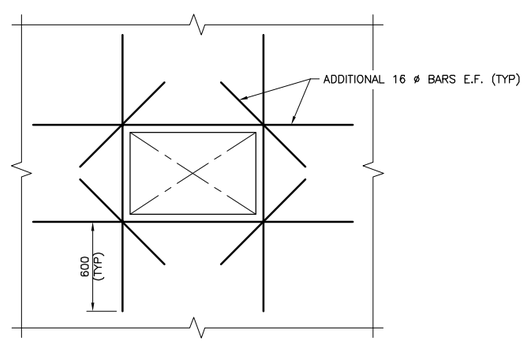
ROOF EDGE CURB DETAIL
SCALE 1:10

2 — S-200, S-310 S-312



ROOF SLAB RIDGE DETAIL
SCALE 1:10

3 — S-200 S-312



ADDITIONAL REINFORCEMENT AROUND SLAB OPENINGS
SCALE 1:20

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB			

DESIGNED BY: JRB
DRAWN BY: GRN
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-SF312DT

US Army Corps of Engineers
Middle East District

TETRA TECH

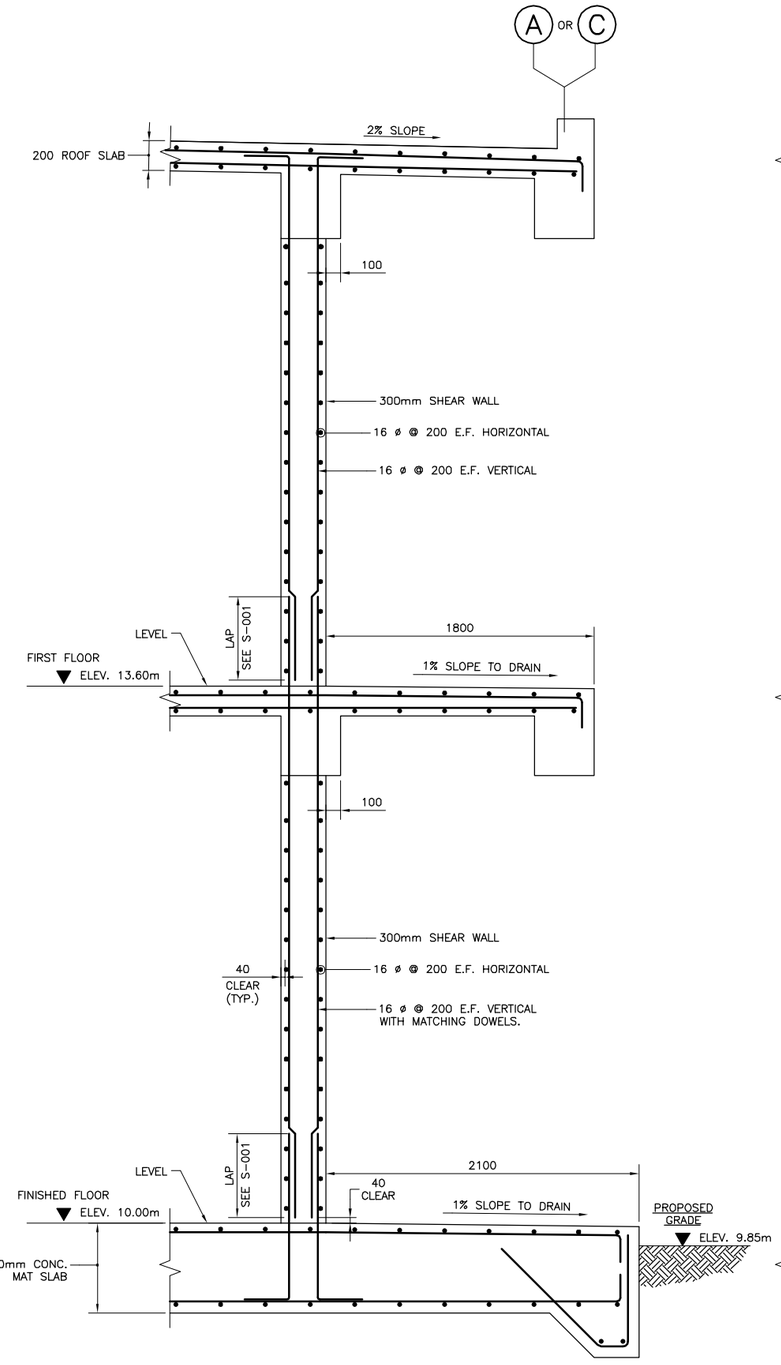
0 .50 1.00
1:10
1 .50 0 1
1:20

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED
PROFESSIONAL ENGINEER
9-15-10

AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN
CONCRETE BEAM AND COLUMN DETAILS
SHEET 3 OF 3

SHEET REFERENCE NUMBER:
AF1081A
S-312

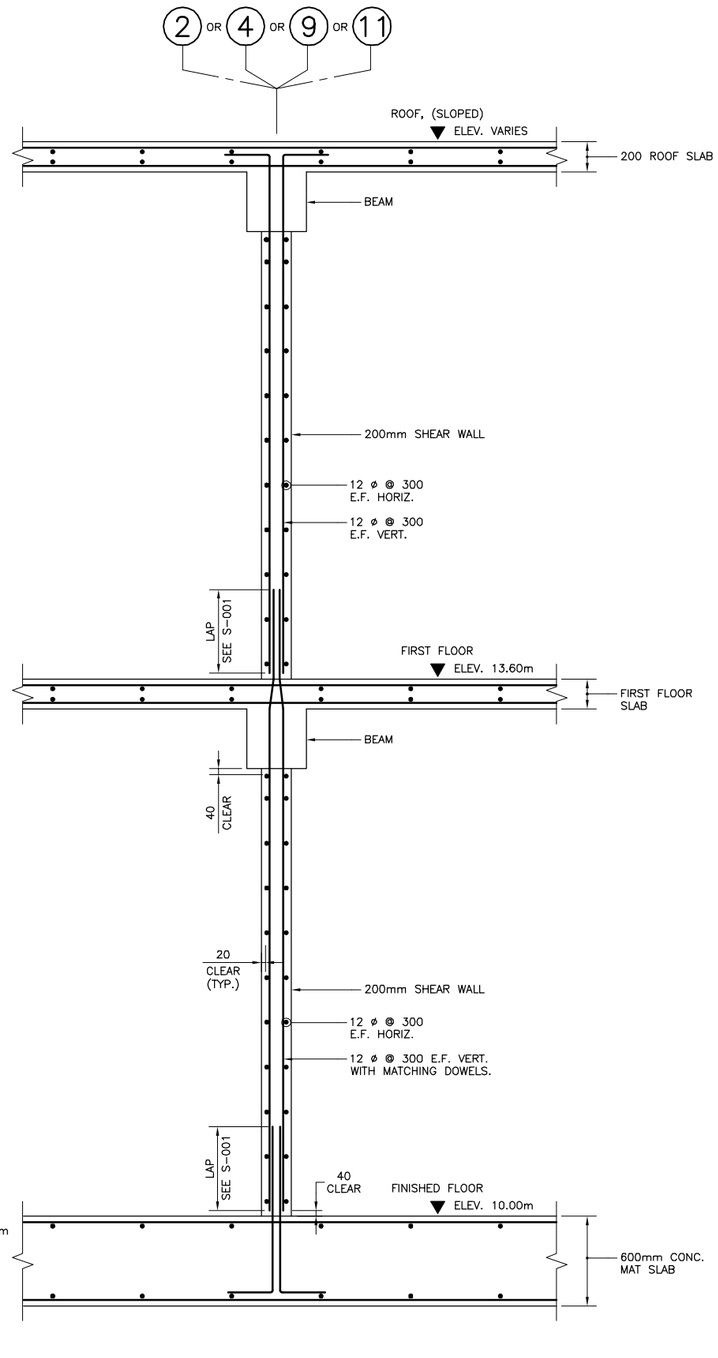


TYPICAL LONGITUDINAL SHEAR WALL SECTION

SCALE 1:20

N

S-100, S-200 | S-313



TYPICAL TRANSVERSE SHEAR WALL SECTION

SCALE 1:20

C

S-100, S-200 | S-313

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

NOTES:

1. BEAM REINFORCEMENT NOT SHOWN FOR CLARITY. SEE BEAM SCHDULE ON SHEET S-311.
2. FOR FIRST FLOOR SLAB AND ROOF SLAB REINFORCEMENT, SEE SHEET S-311 AND S-312, RESPECTIVELY.
3. FOR MAT REINFORCEMENT, SEE SHEET S-300 AND S-301.

CORRECTED FINAL DESIGN SUBMITTAL

SYMB	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW

DESIGNED BY: JRB
DRAWN BY: GRN
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-ST313SE

US Army Corps of Engineers
Middle East District

TETRA TECH

1 .50 0 1
1:20

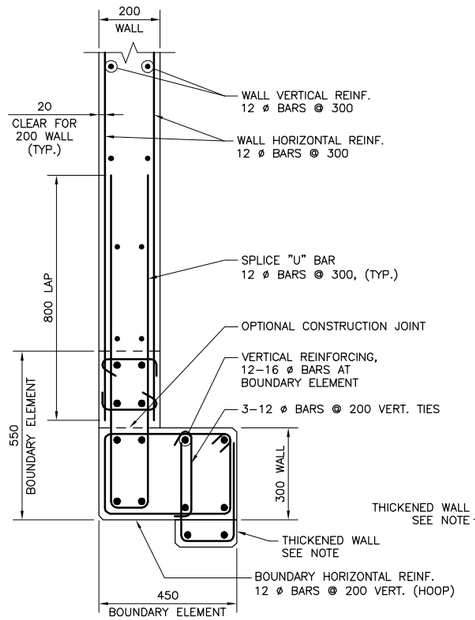
THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

AUSTERE STANDARD DESIGNS-PHASE 4
FY11 BARRACKS - PN74127-CLN03
KANDAHAR AIR BASE, AFGHANISTAN

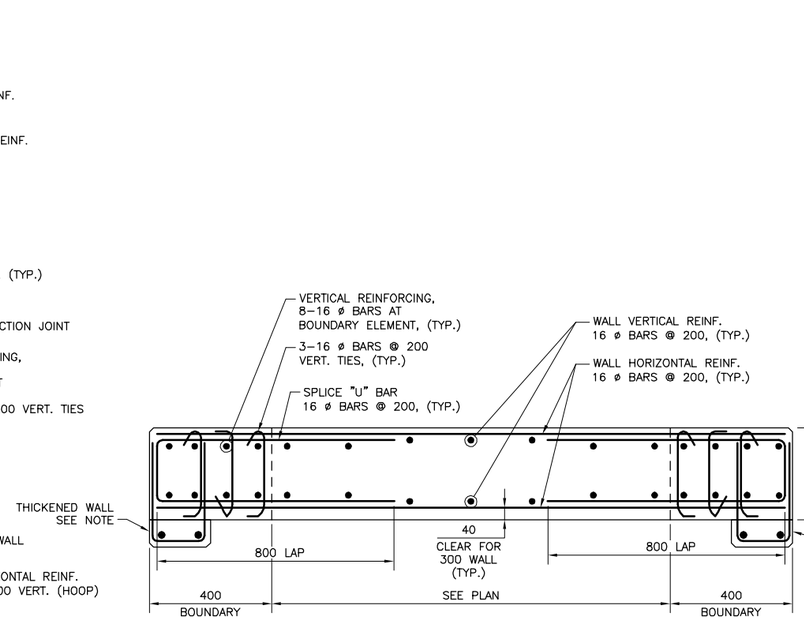
SHEARWALL SECTIONS
SHEET 1 OF 2

SHEET REFERENCE NUMBER:
AF1081A
S-313



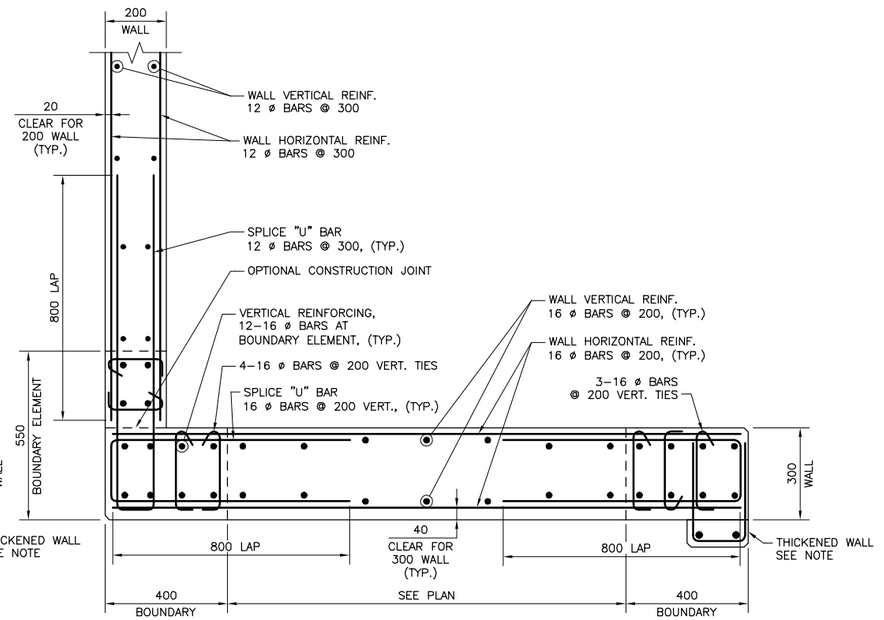
NOTE: SEE TYPICAL THICKENING OF CONCRETE WALL AROUND DOOR OPENING DETAIL THIS SHEET AND ELEVATIONS 2 AND 3 ON SHEET S–200

TYPICAL DETAIL 10 — SCALE 1:10 — S–101 | S–314



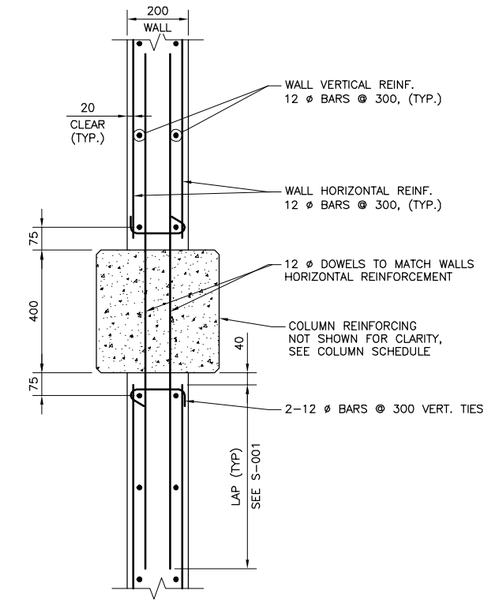
NOTE: SEE TYPICAL THICKENING OF CONCRETE WALL AROUND DOOR OPENING DETAIL THIS SHEET AND ELEVATIONS 2 AND 3 ON SHEET S–200

TYPICAL DETAIL 11 — SCALE 1:10 — S–101 | S–314

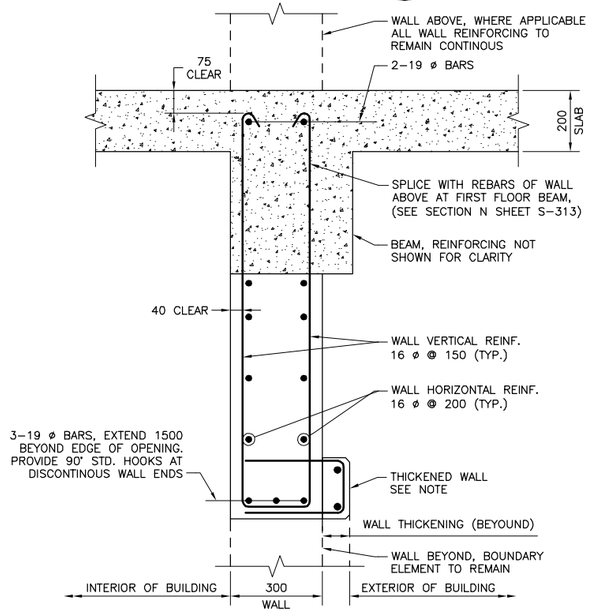


NOTE: SEE TYPICAL THICKENING OF CONCRETE WALL AROUND DOOR OPENING DETAIL THIS SHEET AND ELEVATIONS 2 AND 3 ON SHEET S–200

TYPICAL DETAIL 12 — SCALE 1:10 — S–101 | S–314

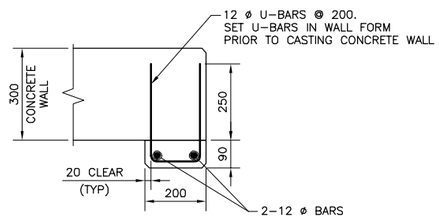


TYPICAL DETAIL 13 — SCALE 1:10 — S–101 | S–314



NOTE: SEE TYPICAL THICKENING OF CONCRETE WALL AROUND DOOR OPENING DETAIL THIS SHEET AND ELEVATIONS 2 AND 3 ON SHEET S–200

TYPICAL SECTION V — SCALE 1:10 — S–101, S–200 | S–314



NOTE: CONCRETE WALL REINFORCEMENT NOT SHOWN FOR CLARITY

TYPICAL THICKENING OF CONCRETE WALL AROUND DOOR OPENINGS DETAIL — SCALE 1:10

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

0 .50 1.00
1:10

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED
PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB		DATE	APR

DESIGNED BY: JRB
DRAWN BY: GRN
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A–ST314SE

US Army Corps of Engineers
Middle East District

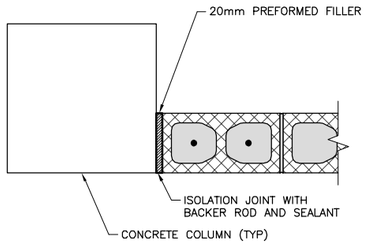
TETRA TECH

AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN

SHEARWALL SECTIONS
SHEET 2 OF 2

SHEET REFERENCE NUMBER:
AF1081A
S–314

W:\23308\127–23308–10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A–ST314SE.dwg 10/14/2010 11:22:39 AM Barrett, Patrick

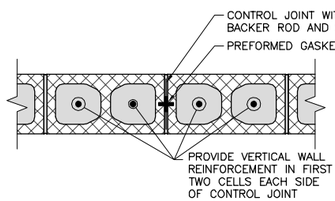


NOTE:

CONDITION AT CONCRETE COLUMN SHOWN. CONDITION AT CONCRETE SHEAR WALL SIMILAR.

TYPICAL END CONDITION AT COLUMN HORIZONTAL SECTION

SCALE 1:10

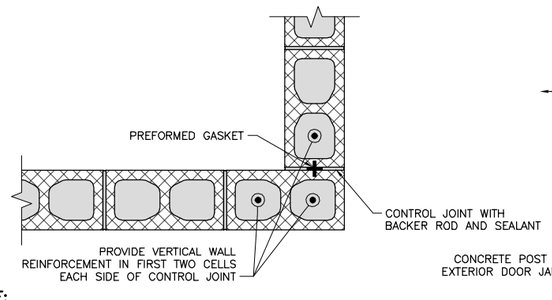


NOTE:

JOINT GROUT SHALL BE DISCONTINUOUS FOR HEIGHT OF WALL AT CONTROL JOINT. SEE WALL LAYOUT PLANS FOR CONTROL JOINT LOCATIONS. CONCRETE BOND BEAMS (CONCRETE AND REBAR) ARE CONTINUOUS ACROSS THE CMU CONTROL JOINT. PROVIDE DUMMY JOINT AT FACE OF BOND BEAM.

CMU CONTROL JOINT DETAIL AT STRAIGHT WALL

SCALE 1:10

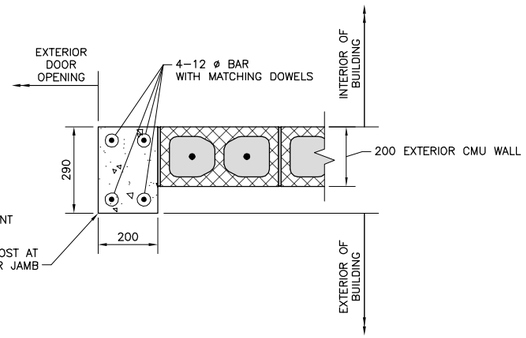


NOTE:

JOINT GROUT SHALL BE DISCONTINUOUS FOR HEIGHT OF WALL AT CONTROL JOINT. SEE WALL LAYOUT PLANS FOR CONTROL JOINT LOCATIONS. CONCRETE BOND BEAMS (CONCRETE AND REBAR) ARE CONTINUOUS ACROSS THE CMU CONTROL JOINT. PROVIDE DUMMY JOINT AT FACE OF BOND BEAM.

CMU CONTROL JOINT DETAIL AT WALL CORNER

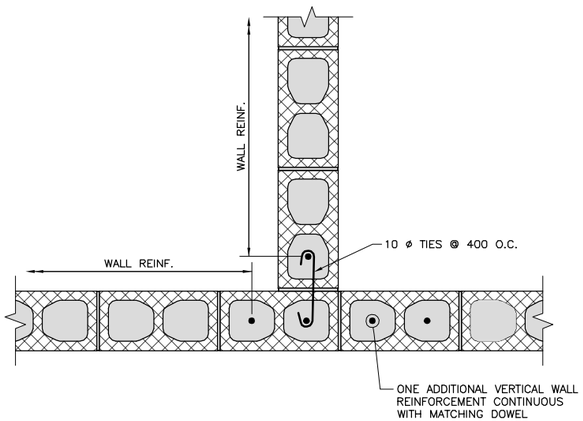
SCALE 1:10



TYPICAL CONCRETE POST AT EXTERIOR DOOR JAMB SECTION

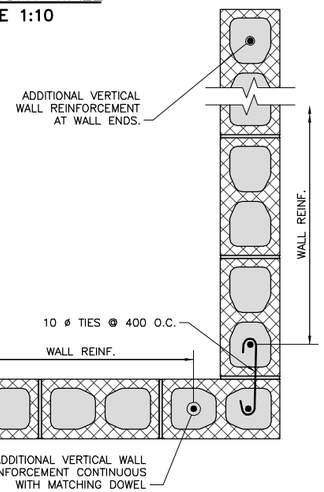
SCALE 1:10

S / S–321 | S–320



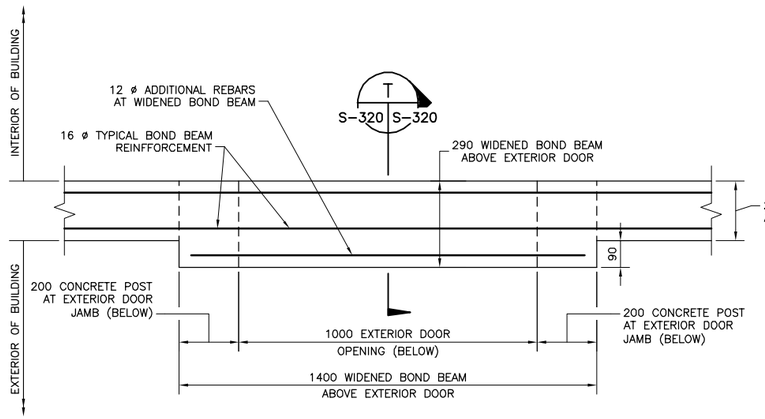
TYPICAL CMU WALL INTERSECTION

SCALE 1:10



TYPICAL CMU WALL CORNER

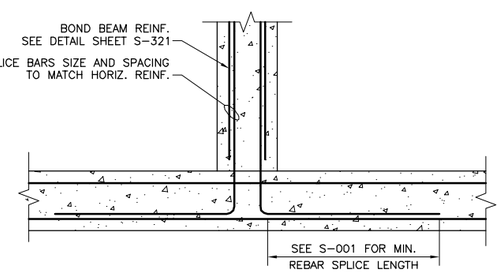
SCALE 1:10



WIDENED BOND BEAM ABOVE EXTERIOR DOOR OPENING SECTION

SCALE 1:10

U / S–321 | S–320

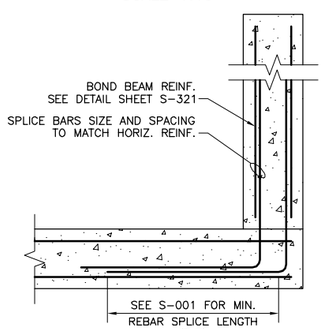


NOTE:

REINFORCEMENT PATTERN AT 200 WIDE BOND BEAM SHOWN. 100 WIDE BOND BEAM SIMILAR.

BOND BEAM INTERSECTION

SCALE 1:10

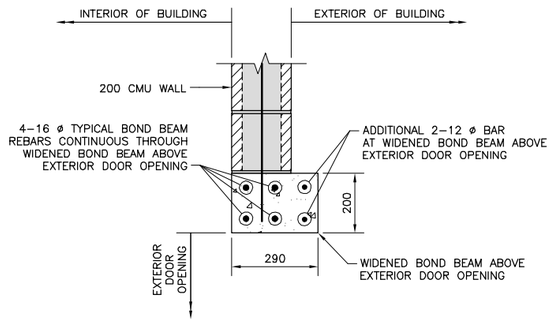


NOTE:

REINFORCEMENT PATTERN AT 200 WIDE BOND BEAM SHOWN. 100 WIDE BOND BEAM SIMILAR.

BOND BEAM CORNER AND END WALL

SCALE 1:10



TYPICAL WIDENED BOND BEAM ABOVE EXTERIOR DOOR OPENING SECTION

SCALE 1:10

T / S–320, S–321 | S–320

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB			

DESIGNED BY: JRB | DRAWN BY: GRN | CHECKED BY: SAM | DATE: 09/15/10

SUBMITTED BY: TETRA TECH

FILE NO.: AF1081A-ST320DT

US Army Corps of Engineers
Middle East District

TETRA TECH

0 .50 1.00
1:10

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

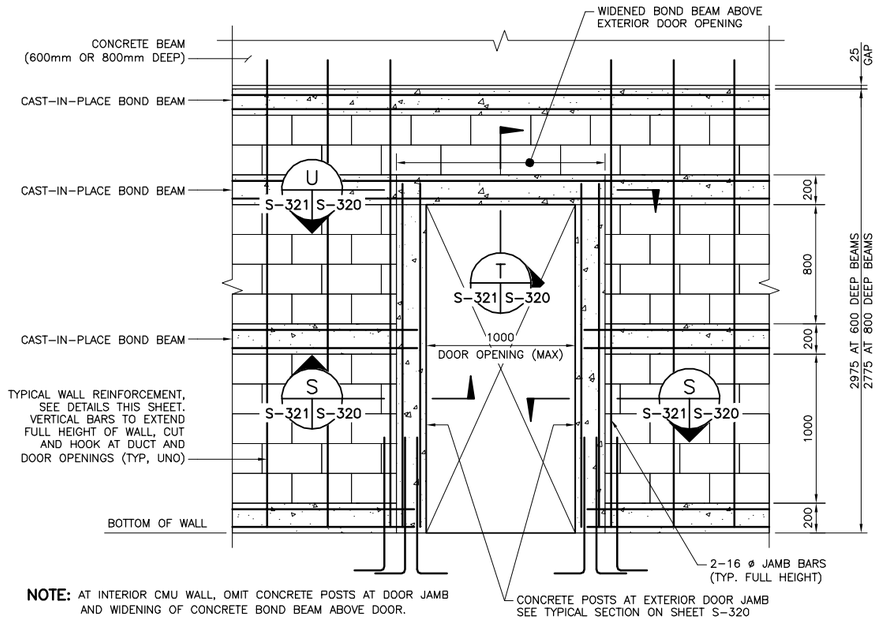
COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN

MASONRY DETAILS
SHEET 1 OF 4

SHEET REFERENCE NUMBER:
AF1081A
S–320

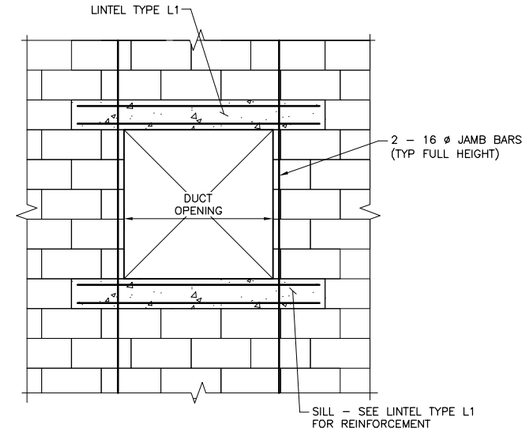
W:\23308\127-23308-10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A-ST320DT.dwg 10/14/2010 11:22:49 AM Borrett, Patrick



NOTE: AT INTERIOR CMU WALL, OMIT CONCRETE POSTS AT DOOR JAMB AND WIDENING OF CONCRETE BOND BEAM ABOVE DOOR.

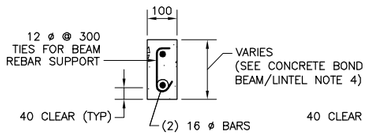
EXTERIOR CMU WALL ELEVATION AND REINFORCEMENT AT DOOR OPENINGS

N.T.S.



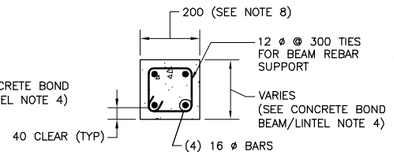
INTERIOR CMU WALL ELEVATION AND REINFORCEMENT AT DUCT OPENINGS

N.T.S.



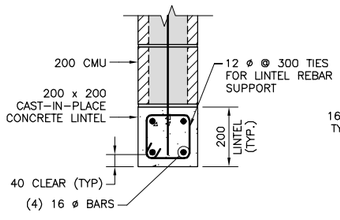
CONCRETE BOND BEAM REINFORCEMENT DETAIL FOR 100 CMU WALL

SCALE 1:10



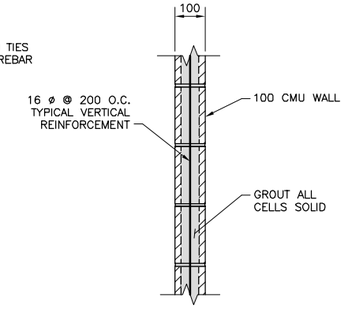
CONCRETE BOND BEAM REINFORCEMENT DETAIL FOR 200 CMU WALL

SCALE 1:10



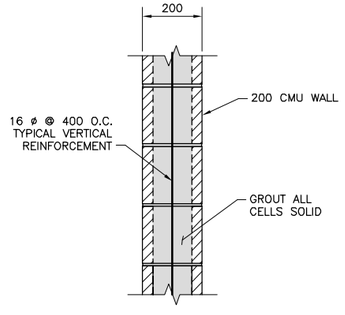
CONCRETE LINTEL TYPE L1 REINFORCEMENT DETAIL

SCALE 1:10



100 CMU WALL TYPICAL REINFORCEMENT

SCALE 1:10



200 CMU WALL TYPICAL REINFORCEMENT

SCALE 1:10

CONCRETE BOND BEAM/LINTEL NOTES:

1. PROVIDE 200mm MINIMUM BEARING AT EACH SIDE OF CLEAR SPAN (TYP).
2. PROVIDE 400mm MINIMUM BEARING AT EACH SIDE FOR OPENING LARGER THAN 1750mm.
3. IF FULL LENGTH IS NOT AVAILABLE, EXTEND AS FAR AS POSSIBLE, HOOK 90°, THEN EXTEND. BEYOND BEND, PROVIDE REMAINDER OF LENGTH REQUIRED (BUT NOT LESS THAN 300mm).
4. CONCRETE BOND BEAM DEPTH SHALL BE AS FOLLOWS:
   - 175mm AT TOP OF CMU WALL'S BOND BEAMS BELOW LEVEL SURFACES.
   - AT TOP OF CMU WALLS BELOW SLOPED SURFACES, BOND BEAM DEPTH SHALL VARY TO MAINTAIN 25mm CLEAR BETWEEN TOP OF BOND BEAM AND SLOPED SURFACE ABOVE IT. BOND BEAM DEPTH SHALL NOT BE LESS THAN 175mm.
   - 200mm FOR BOND BEAMS AT LOCATIONS OTHER THAN TOP OF CMU WALLS.
5. VERTICAL REINFORCEMENT SHALL BE CONTINUOUS THROUGH BOND BEAMS.
6. CONTROL JOINTS SHALL NOT PASS THROUGH LINTELS. AT LINTELS, OFFSET CONTROL JOINT TO THE END OF REQUIRED LINTEL BEARING AREA.
7. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF MASONRY OPENINGS U.N.O.
8. BOND BEAM WIDTH IS INCREASED TO 290mm OVER EXTERIOR DOOR OPENINGS. SEE TYPICAL WIDENED BOND BEAM ABOVE EXTERIOR DOOR SECTIONS ON SHEET S-320.

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

NOTES:

1. FOR GENERAL NOTES SEE SHEETS S-001 AND S-002.

0 .50 1.00
1:10

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

SYMB	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW

DESIGNED BY: JRB
DRAWN BY: GPV
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-ST321DT

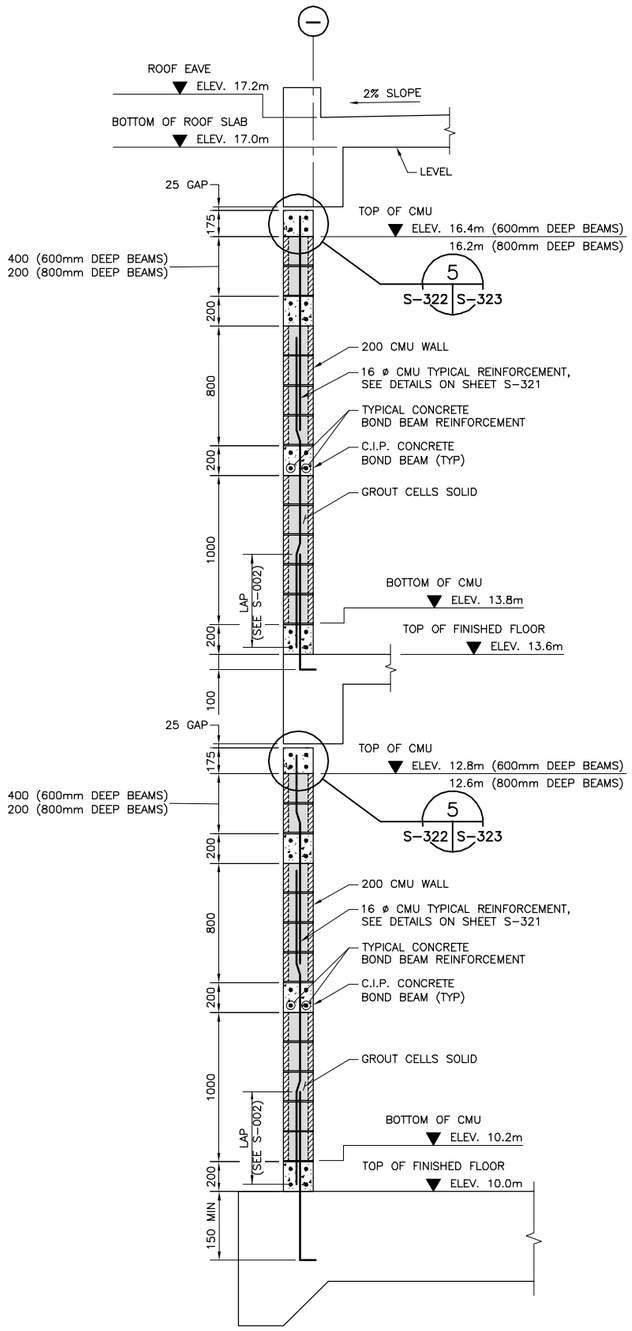
US Army Corps of Engineers Middle East District

TETRA TECH

AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN

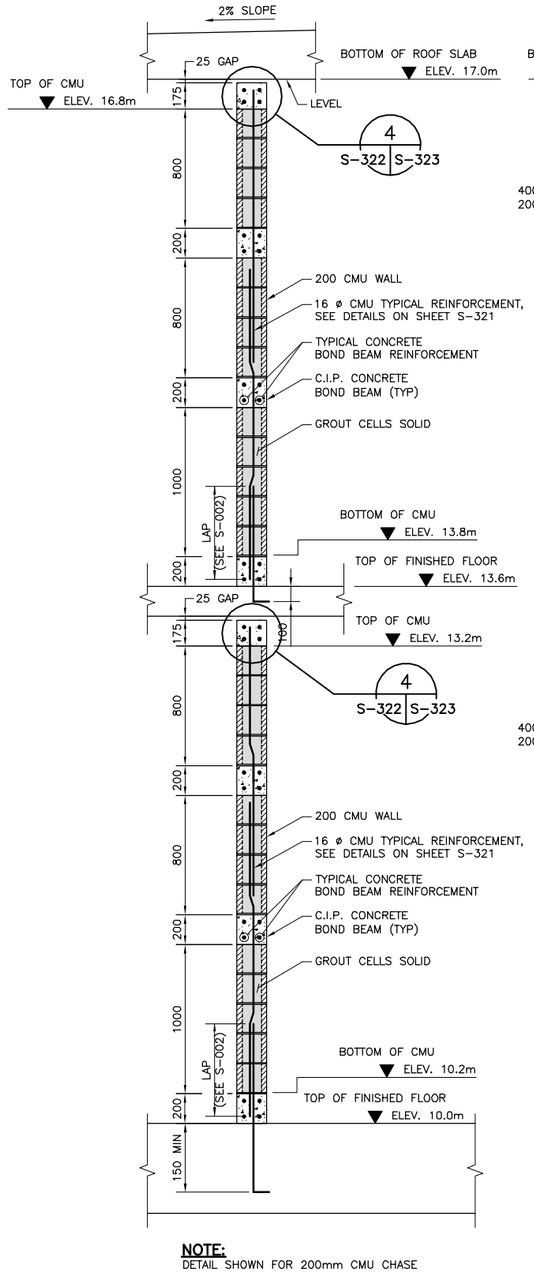
MASONRY DETAILS
SHEET 2 OF 4

SHEET REFERENCE NUMBER:
AF1081A
S-321



TYPICAL EXTERIOR (DIRECT FIRE WALL) CMU WALL SECTION D

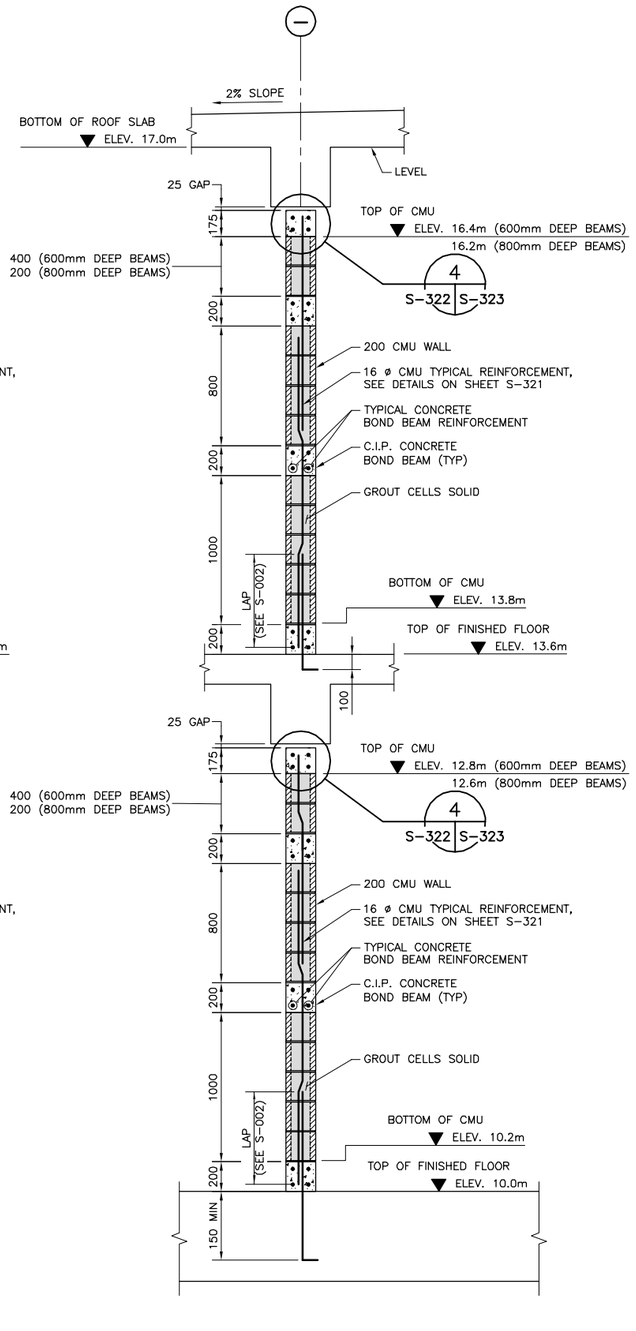
SCALE 1:20 S-101, S-103, S-104 S-322



NOTE:
DETAIL SHOWN FOR 200mm CMU CHASE WALL. 100mm CMU CHASE WALL SIMILAR.

TYPICAL INTERIOR CMU WALL SECTION E

SCALE 1:20 S-101, S-103 S-322



TYPICAL EXTERIOR CMU WALL BELOW EXTERIOR BEAM SECTION F

SCALE 1:20 S-101, S-103, S-104 S-322

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

CORRECTED FINAL DESIGN SUBMITTAL

SYMB	DESCRIPTION	DATE	
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
			APR

DESIGNED BY: JRB
DRAWN BY: GRN
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-ST322DT

US Army Corps of Engineers
Middle East District

TETRA TECH

1 .50 0 1
1:20

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

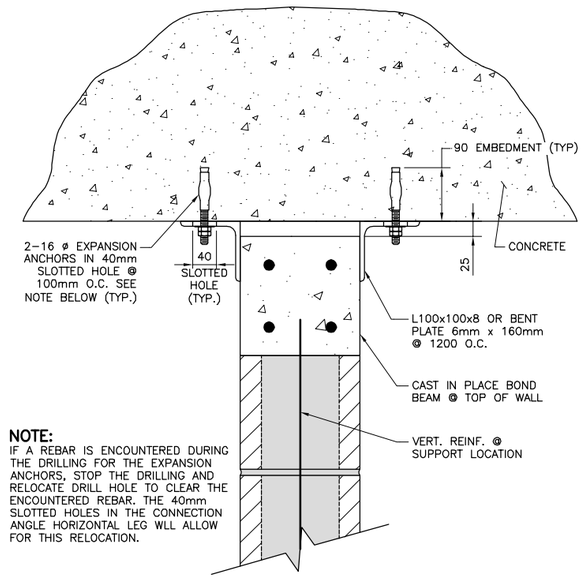
COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN

MASONRY DETAILS
SHEET 3 OF 4

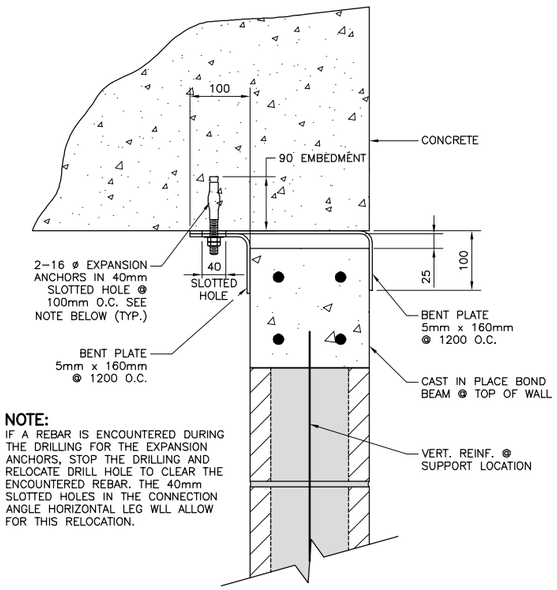
SHEET REFERENCE NUMBER:
AF1081A
S-322

W:\23308\127-23308-10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A-ST322DT.dwg 10/14/2010 11:23:10 AM Barrett, Patrick



NOTE:
IF A REBAR IS ENCOUNTERED DURING THE DRILLING FOR THE EXPANSION ANCHORS, STOP THE DRILLING AND RELOCATE DRILL HOLE TO CLEAR THE ENCOUNTERED REBAR. THE 40mm SLOTTED HOLES IN THE CONNECTION ANGLE HORIZONTAL LEG WLL ALLOW FOR THIS RELOCATION.

DETAIL 4 — SCALE 1:5 — S–322 | S–323



NOTE:
IF A REBAR IS ENCOUNTERED DURING THE DRILLING FOR THE EXPANSION ANCHORS, STOP THE DRILLING AND RELOCATE DRILL HOLE TO CLEAR THE ENCOUNTERED REBAR. THE 40mm SLOTTED HOLES IN THE CONNECTION ANGLE HORIZONTAL LEG WLL ALLOW FOR THIS RELOCATION.

DETAIL 5 — SCALE 1:5 — S–322 | S–323

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

0 .10 .20 .30 .40 .50
1:5

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

SYMB	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW

DESIGNED BY: JRB
DRAWN BY: GRN
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-ST323DT

US Army Corps of Engineers
Middle East District

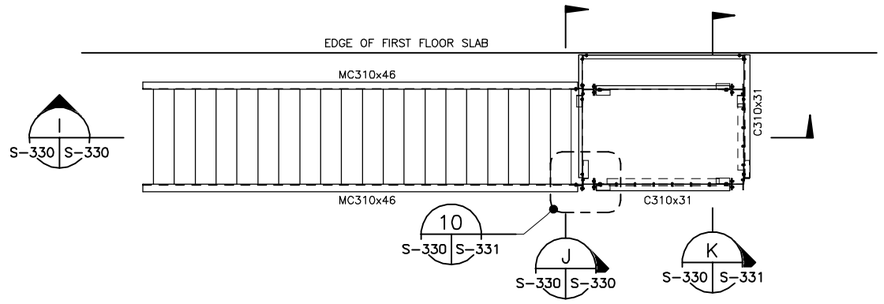
TETRA TECH

AUSTERE STANDARD DESIGNS–PHASE 4
FY11 BARRACKS – PN74127–CLN03
KANDAHAR AIR BASE, AFGHANISTAN

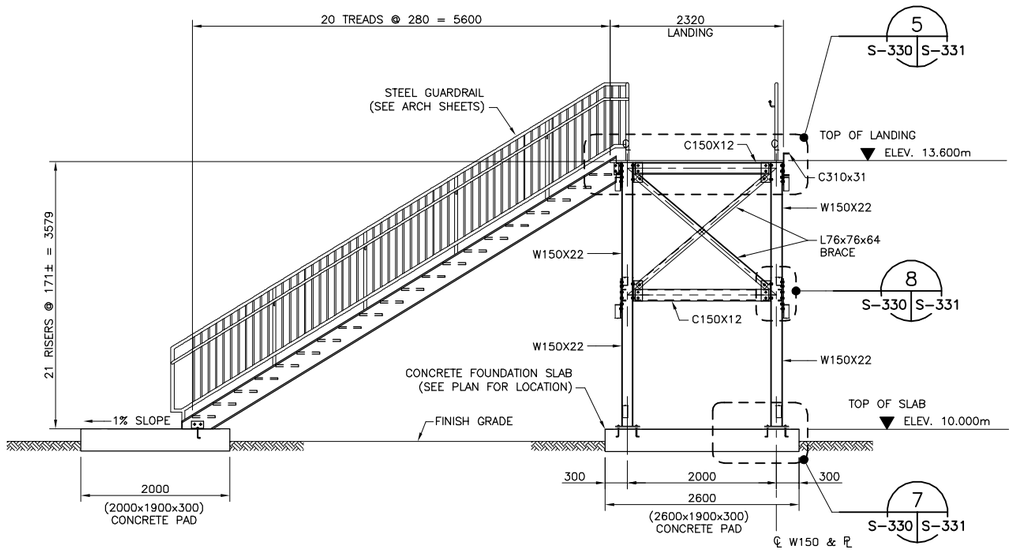
MASONRY DETAILS
SHEET 4 OF 4

SHEET REFERENCE NUMBER:
AF1081A
S–323

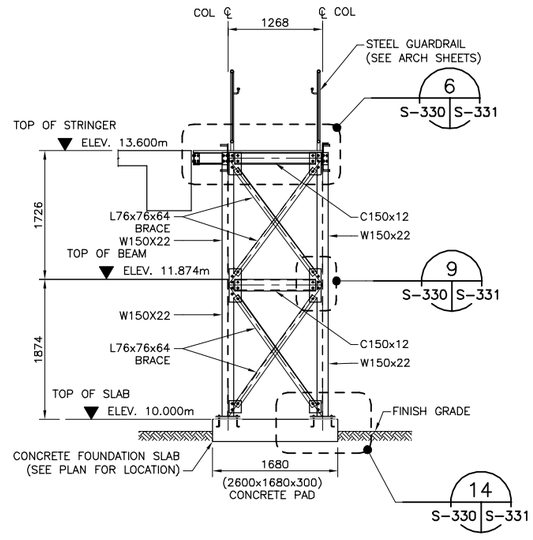
W:\23308\127-23308-10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A-ST323DT.dwg 10/14/2010 11:23:20 AM Borrett, Patrick



FIRST FLOOR EGRESS STAIR
STEEL FRAMING PLAN
SCALE 1:40



SECTION I
SCALE 1:40 S-330 | S-330



SECTION J
SCALE 1:40 S-330 | S-330

NOTES:

1. STAIRS AND GUARDRAILS SHALL BE FOR EXTERIOR USE AND GALVANIZED, AND SHALL BE IN CONFORMANCE WITH OSHA STANDARDS.
2. FOR GUARDRAIL DETAILS, SEE ARCH DWGS.
3. PER OSHA 1910.24(B), THE FIXED STAIRWAYS HAVE BEEN DESIGNED TO CARRY A LOAD OF FIVE TIMES THE NORMAL LIVE LOAD ANTICIPATED BUT NEVER LESS THAN A MOVING CONCENTRATED LOAD OF 4.4 KN (1000 POUNDS).
4. STAIR TREADS SHALL BE REASONABLY SLIP-RESISTANT. WELDED BAR GRATING TREADS SHALL HAVE A LEADING EDGE THAT CAN BE READILY IDENTIFIED BY PERSONNEL DESCENDING THE STAIRWAY. TREADS SHALL BE SERRATED OR OF DEFINITE NON-SLIP DESIGN.
5. THE ANCHORING OF POSTS HAS BEEN DESIGNED FOR A MINIMUM LOAD OF 91 kg APPLIED IN ANY DIRECTION AT ANY POINT ON THE TOP RAIL.

CORRECTED FINAL DESIGN SUBMITTAL

SYMB	DESCRIPTION	DATE	
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
			APR

DESIGNED BY: FRH
DRAWN BY: WAS
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-SC330DT

US Army Corps of Engineers
Middle East District

TETRA TECH

0 .5 1 2 3 4
1:40

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

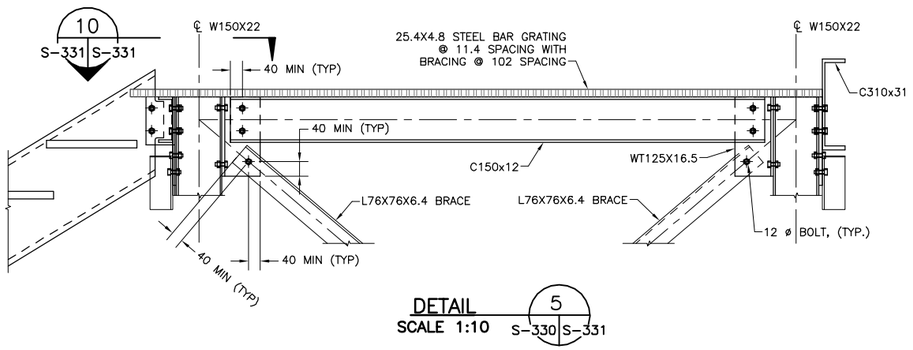
COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED
PROFESSIONAL ENGINEER
9-15-10

AUSTERE STANDARD DESIGNS-PHASE 4
FY11 BARRACKS - PN74127-CLN03
KANDAHAR AIR BASE, AFGHANISTAN

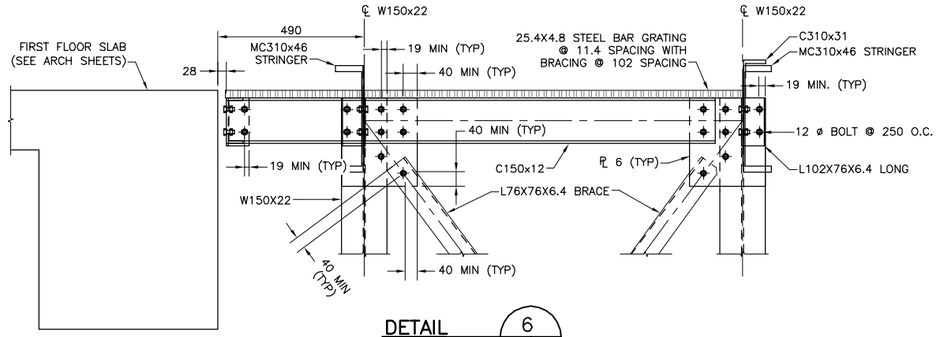
STEEL STAIR DETAILS
SHEET 1 OF 2

SHEET REFERENCE NUMBER:
AF1081A
S-330

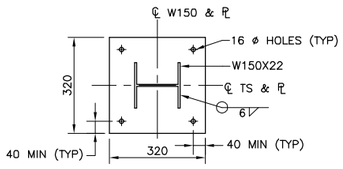
UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

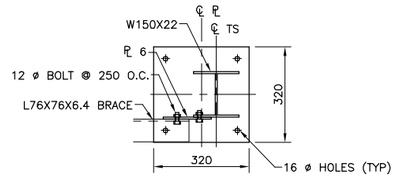


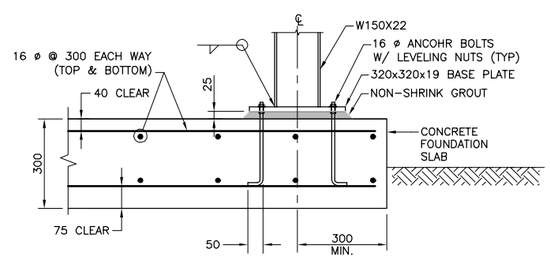
DETAIL 5
SCALE 1:10 S-330 S-331



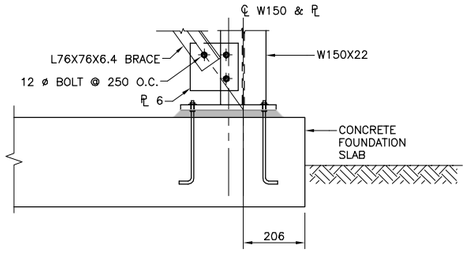
DETAIL 6
SCALE 1:10 S-330 S-331



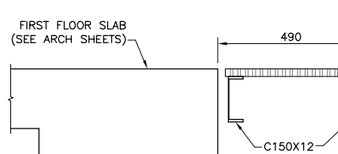




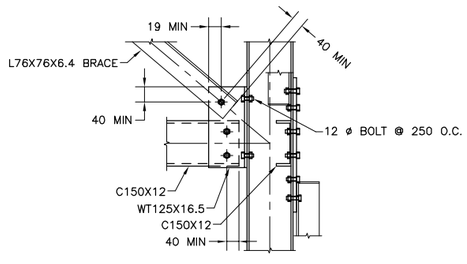
DETAIL 7
SCALE 1:10 S-330 S-331



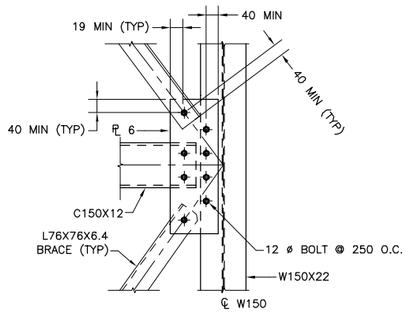
DETAIL 14
SCALE 1:10 S-330 S-331



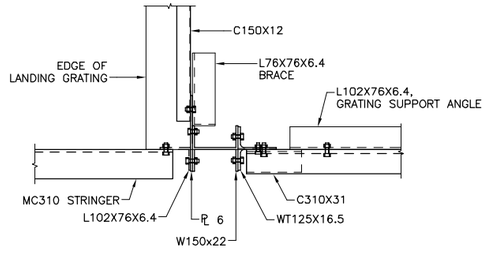
SECTION K
SCALE 1:10 S-330 S-331



TYPICAL BRACE CONNECTION
UPPER BRACES ONLY 8
SCALE 1:10 S-330 S-331



TYPICAL BRACE CONNECTION
UPPER & LOWER BRACES 9
SCALE 1:10 S-330 S-331



DETAIL 10
SCALE 1:10 S-330, S-331 S-331

NOTES:

1. ALL BOLTS SHALL BE 12 ø A325.
2. EDGE DISTANCE FOR BOLTS TO CUT EDGES: 40 MIN.
3. EDGE DISTANCE TO ROLLED EDGES: 19 MIN.
4. BOLT SPACING: 76 O.C.

UNLESS OTHERWISE NOTED, ALL
DIMENSIONS SHOWN ARE IN MILLIMETERS.

0 .50 1.00
1:10

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

SYMB	DESCRIPTION	DATE	APR
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW

DESIGNED BY: FRH
DRAWN BY: WAS
CHECKED BY: SAM
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF1081A-SC331DT

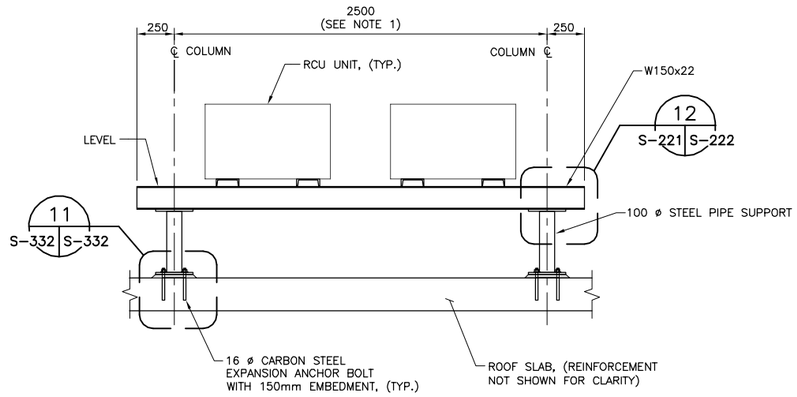
US Army Corps of Engineers
Middle East District

TETRA TECH

AUSTERE STANDARD DESIGNS-PHASE 4
FY11 BARRACKS - PN74127-CLN03
KANDAHAR AIR BASE, AFGHANISTAN

STEEL STAIR DETAILS
SHEET 2 OF 2

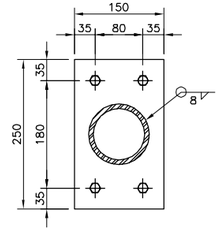
SHEET REFERENCE NUMBER:
AF1081A
S-331



RCU SUPPORT PLATFORM LONGITUDINAL SECTION

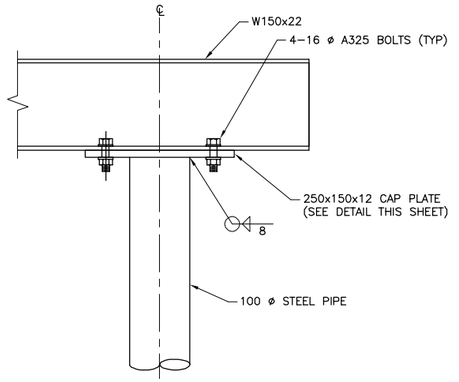
SCALE 1:20

Q
S-332 S-332



CAP PLATE AND BASE PLATE DETAIL AT AHU PLATFORM

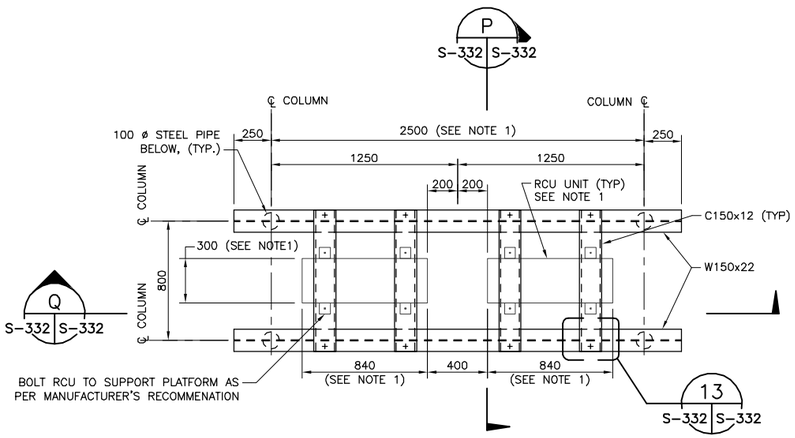
SCALE 1:5



DETAIL

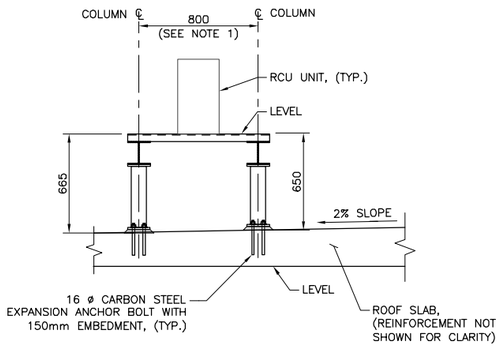
SCALE 1:5

12
S-332 S-332



RCU SUPPORT PLATFORM PLAN

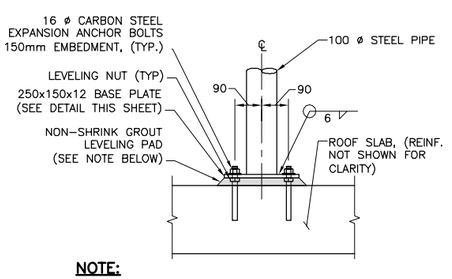
SCALE 1:20



RCU SUPPORT PLATFORM TRANSVERSE SECTION

SCALE 1:20

P
S-332 S-332



NOTE:

NON-SHRINK GROUT LEVELING PAD THICKNESS MAY VARY FROM ONE SIDE OF THE PLATFORM TO THE OTHER TO ALLOW FOR THE LEVELING OF THE RCU SUPPORT PLATFORM. GROUT PAD MAY NOT BE LESS THAN 25mm THICK AND IT MAY NOT BE MORE THAN 50mm THICK.

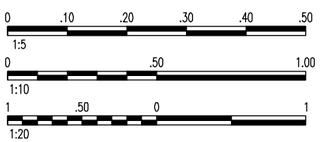
DETAIL

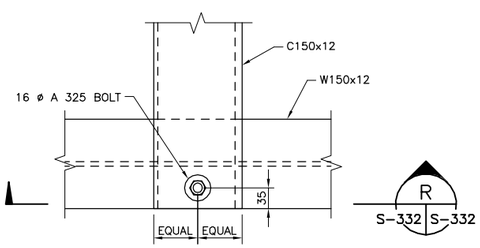
SCALE 1:10

11
S-332 S-332

NOTES:

1. THE RCU SUPPORT PLATFORMS SHOWN IS BASED ON THE DIMENSIONS OF EQUIPMENT ASSUMED DURING THE DESIGN PHASE, AND MAY VARY WITH FINAL EQUIPMENT SELECTED BY THE CONTRACTOR IN WHICH CASE THE ENGINEER MUST BE ADVISED PRIOR TO THE FABRICATION OF THE RCU SUPPORT PLATFORM.
2. FOR THE PURPOSE OF DESIGN, AN RCU EQUIPMENT WEIGHT OF 0.89KN [200#] WAS ASSUMED.
3. FOR CONCRETE PAD REINFORCEMENT AT AHU AND RCU UNITS SEE SHEET S-222.
4. COORDINATE LOCATION OF PADS WITH AHU AND RCU UNITS SHOWN ON SHEETS M-100, M-103, AND M-105.





SECTION

SCALE 1:5

R
S-332 S-332

DETAIL

SCALE 1:5

13
S-332 S-332

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

THESE DRAWINGS ARE "NOT APPROVED FOR CONSTRUCTION" SINCE THESE ARE BASED UPON ASSUMED CONDITIONS. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE ASSUMED CONDITIONS ARE VALIDATED AND APPROVAL IS RECEIVED FROM THE CONTRACTING OFFICER.

COMMONWEALTH OF MASSACHUSETTS
SUSANNE G. WOODS
STRUCTURAL
No. 39514
REGISTERED
PROFESSIONAL ENGINEER
9-15-10

CORRECTED FINAL DESIGN SUBMITTAL

	DESCRIPTION	DATE	
0	CORRECTED FINAL DESIGN SUBMITTAL	09/15/10	SGW
B	FINAL DESIGN SUBMITTAL	09/02/10	SGW
A	MID-POINT DESIGN SUBMITTAL	08/13/10	SGW
SYMB			APR

DESIGNED BY: SAM
DRAWN BY: GPV
CHECKED BY: APL
DATE: 09/15/10
SUBMITTED BY: TETRA TECH
FILE NO.: AF10814-SC332DT

US Army Corps of Engineers
Middle East District

TETRA TECH

AUSTERE STANDARD DESIGNS-PHASE 4
FY11 BARRACKS - PN74127-CLN03
KANDAHAR AIR BASE, AFGHANISTAN

RCU SUPPORT
PLAN, SECTIONS AND DETAILS

SHEET REFERENCE NUMBER:
AF1081A
S-332

W:\23308\127-23308-10010\CAD\SheetFiles\ASD03_KAND\04_Structural\AF1081A-SC332DT.dwg 10/14/2010 11:23:50 AM Barrett, Patrick