STRUCTURAL DESIGN

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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — Sheats Structural Consulting, Inc. No. 3804

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER — No. 26617 — STANLEY R. SHEATS

10/06/2017

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BUCK DESIGNERS — BUILDERS

WASTE MANAGEMENT HAULING FACILITY

HIGHWAY 17, HARDEEVILLE, SOUTH CAROLINA

FOUNDATION PLAN

DRAWN BY: MKH

DRAWING NO.

JOB NO. 17-3550

DATE 10/06/17

REVISIONS

SHEET NO. S1.1

1 S-1.1 SLAB & FOUNDATION PLAN

SCALE: 1/8" = 1'-0"

NORTH

PLAN NOTES:

1. ALL DIMENSIONS, ANGLES, ELEVATIONS, AND COMPONENTS SHOWN HEREIN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED AND COORDINATED WITH THE ARCHITECTURAL DRAWINGS, CIVIL DRAWINGS, MEP DRAWINGS, PEMB DRAWINGS, AND EXISTING CONDITIONS BY THE CONTRACTOR PRIOR TO MATERIAL PURCHASE, FABRICATION, AND CONSTRUCTION. NOTIFY SSCI IF DISCREPANCIES EXIST.
2. PROVIDE CRACK CONTROL JOINTS IN THE SLAB-ON-GRADE AS SHOWN, SEE GENERAL NOTES. DO NOT CUT REINFORCING STEEL OR WWF AT CRACK CONTROL JOINTS.
3. CONTRACTOR MUST SUBMIT FINAL PEMB DRAWINGS AND REACTIONS FOR REVIEW BY SSCI BEFORE FABRICATION AND CONSTRUCTION.

FOOTING SCHEDULE

FOOTING	SIZE (L x W x D)	REINFORCING	REMARKS
F2.0	2'-0" x 2'-0" x 1'-6"	(3) #5's EACH WAY AT BOTTOM	SEE DETAIL 3/S2.1
F3.0	3'-0" x 3'-0" x 1'-6"	(3) #5's EACH WAY AT BOTTOM	SEE DETAIL 6/S2.1
F3.5	3'-6" x 3'-6" x 1'-6"	(4) #5's EACH WAY AT BOTTOM	SEE DETAIL 6/S2.1
F4.0	4'-0" x 4'-0" x 1'-6"	(4) #5's EACH WAY AT BOTTOM	SEE DETAIL 4/S2.1 & 6/S2.1
F4A	4'-0" x 4'-0" x 2'-4"	(4) #5's EACH WAY AT BOTTOM	SEE DETAIL 6/S2.1
F4.5	4'-6" x 4'-6" x 1'-6"	(5) #5's EACH WAY AT BOTTOM	SEE DETAIL 3/S2.1
F5.A	5'-0" x 5'-0" x 1'-6"	(6) #5's EACH WAY AT BOTTOM	SEE DETAIL 3/S2.1
F5.B	5'-0" x 5'-0" x 2'-6"	(6) #5's EACH WAY AT BOTTOM	SEE DETAIL 4/S2.1
F6.A	6'-0" x 6'-0" x 1'-6"	(7) #5's EACH WAY AT BOTTOM	SEE DETAIL 4/S2.1
F6.B	6'-0" x 6'-0" x 2'-0"	(7) #5's EACH WAY AT BOTTOM	SEE DETAIL 4/S2.1
F7	3'-0" x 18'-0" x 1'-0"	#4's AT 12" O.C., MAX., EACH WAY AT BOTTOM	SIMILAR TO DETAIL 4/S2.1

SCHEDULE NOTES:

1. FOOTING CENTERLINES SHALL ALIGN WITH THE CENTERLINE OF THE SUPPORTED MAIN FRAME COLUMN, TYPICAL, - U.N.O. OR SHOWN OTHERWISE. OUTER EDGE(S) OF FOOTINGS AT PERIMETER SHALL ALIGN WITH THE OUTSIDE EDGE(S) OF SLAB, U.N.O.
2. FOOTINGS SHALL BE CAST MONOLITHICALLY WITH THE SLAB-ON-GRADE UNLESS NOTED OTHERWISE.
3. ALL ANCHOR RODS (U.N.O.) SHALL HAVE 18" EMBEDMENT FOR 2'-0" (AND DEEPER) FOOTINGS AND 15" EMBEDMENT FOR 1'-6" DEEP FOOTINGS AND 3" PROJECTION, TYPICAL. SEE GENERAL NOTES AND DETAILS FOR ADDITIONAL ANCHOR ROD INFORMATION. PROVIDE NUMBER, DIAMETER, AND LAYOUT OF ANCHOR RODS AS SHOWN IN PEMB DRAWINGS.
4. LOWER TOP OF INTERIOR FOOTINGS 8" BELOW TOP OF SLAB (TO BE CONFIRMED WITH PEMB DETAILS).

GENERAL NOTES:

SECTION A: GENERAL
1. THE SCOPE OF SERVICES PROVIDED BY SHEATS STRUCTURAL CONSULTING, INC. WAS LIMITED SOLELY TO THE STRUCTURAL DESIGN OF THE NEW FOUNDATIONS PRESENTED HEREIN. STRUCTURAL DESIGN OR EVALUATION OF THE PROPOSED PEMB WAS OUTSIDE OF SSCI'S SCOPE OF SERVICES FOR THIS PROJECT.
2. ALL DIMENSIONS, ANGLES, ELEVATIONS, ETC. GIVEN HEREIN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR (BASED ON EXISTING FIELD CONDITIONS AND OTHER DRAWINGS – ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, PEMB, ETC.) PRIOR TO SUBMITTAL OF BID, MATERIAL PURCHASE, FABRICATION, AND CONSTRUCTION. CONTRACTOR SHALL NOTIFY SSCI OF ANY DISCREPANCIES BEFORE PROCEEDING.
3. CONTRACTOR SHALL COORDINATE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL/SITE, AND PEMB DRAWINGS AND SHALL NOTIFY SSCI OF ANY CONFLICTS OR DISCREPANCIES BEFORE PROCEEDING.
4. WHERE A SECTION, DETAIL, OR NOTE IS GIVEN FOR ONE CONDITION/LOCATION, IT SHALL APPLY TO ALL LIKE OR SIMILAR CONDITIONS/LOCATIONS, UNLESS NOTED OTHERWISE.
5. MEANS, METHODS, SEQUENCES, AND TECHNIQUES OF CONSTRUCTION WERE NOT EVALUATED OR DESIGNED BY SSCI AND ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING ALL INTERMEDIATE STAGES OF CONSTRUCTION, AND THE CONTRACTOR SHALL DESIGN, PROVIDE, AND INSTALL ANY TEMPORARY SHORING, FORMWORK, OR OTHER COMPONENTS THAT MAY BE REQUIRED FOR STABILITY DURING INTERMEDIATE STAGES OF CONSTRUCTION.
6. DRAWINGS ARE NOT TO SCALE. ANY SCALE NOTED IS PROVIDED FOR APPROXIMATE REFERENCE ONLY.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (2015 EDITION WITH SC AMENDMENTS).
8. SSCI ASSUMES NO RESPONSIBILITY FOR JOB SITE SAFETY OR OSHA COMPLIANCE WHICH SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
9. IN THE EVENT OF A CONFLICT BETWEEN PORTIONS OF THE STRUCTURAL DRAWINGS/SPECIFICATIONS, OR A CONFLICT BETWEEN THE STRUCTURAL DRAWINGS/SPECIFICATIONS AND THE REFERENCED CODES/SPECIFICATIONS, OR A CONFLICT BETWEEN THE STRUCTURAL DRAWINGS/SPECIFICATIONS AND THE ARCHITECTURAL, CIVIL, OR PEMB DRAWINGS/SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN. CONTRACTOR SHALL NOTIFY SSCI OF ANY CONFLICTS BEFORE PROCEEDING.
10. STRUCTURAL MEMBERS (BEAMS, COLUMNS, STUDS, ETC.) AND REINFORCING STEEL (IN CONCRETE COLUMN FOOTINGS) SHALL NOT BE SPLICED UNLESS SHOWN HEREIN OR APPROVED, IN WRITING, BY SSCI AND PEMB MANUFACTURER.
11. PROVIDE AS USED HEREIN SHALL MEAN PROVIDE AND INSTALL.
12. OWNER SHALL CONTRACT FOR AND CONTRACTOR SHALL SCHEDULE/COORDINATE ALL SPECIAL INSPECTIONS AS REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
13. STRUCTURAL FOUNDATION DESIGNS/DETAILS SHOWN HEREIN ARE INTENDED SOLELY FOR THE NEW WASTE MANAGEMENT HAULING FACILITY BUILDING AT HARDEEVILLE, SC. THE DESIGNS/DETAILS SHOWN HEREIN SHALL NOT BE RE-USED FOR ANY OTHER BUILDING OR PROJECT WITHOUT REVIEW AND WRITTEN APPROVAL FROM SSCI.

SECTION B: DESIGN CRITERIA
1. FOUNDATION DESIGN IS BASED ON THE VARCO PRUDEN COLUMN REACTIONS DATED 09-12-2017. SSCI IS NOT RESPONSIBLE FOR THE PEMB DESIGN. SSCI IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS CAUSED (IN WHOLE OR IN PART) BY ERRORS OR OMISSIONS IN THE VARCO PRUDEN REACTIONS.
2. BEFORE FABRICATION/CONSTRUCTION, SUBMIT FINAL PEMB ANCHOR BOLT/BASE PLATE DRAWINGS AND REACTIONS TO SSCI FOR REVIEW.
3. SLAB-ON-GRADE IS DESIGNED FOR A UNIFORM LIVE LOAD OF 200 PSF OR A CONCENTRATED WHEEL LOAD OF 10,000 LBS, MAXIMUM (ON AN AREA OF 50 IN^2, MINIMUM)

SECTION C: FOUNDATIONS
1. FOR STRIP FOOTINGS AND SHALLOW SPREAD FOOTINGS, A DESIGN NET ALLOWABLE BEARING PRESSURE OF 2,000 PSF WAS USED. AN INDEPENDENT, QUALIFIED, GEOTECHNICAL ENGINEER SHALL VERIFY THAT THE ABOVE-REFERENCED ALLOWABLE NET BEARING PRESSURE CAPACITY IS OBTAINED IN ALL FOUNDATION EXCAVATIONS BEFORE CONCRETE PLACEMENT. ANY NON-COMPLIANT AREAS SHALL BE CORRECTED PER THE RECOMMENDATION OF THE GEOTECHNICAL ENGINEER TO OBTAIN THE NET ALLOWABLE BEARING CAPACITY SPECIFIED ABOVE.
2. SOIL PROPERTIES LISTED BELOW SHALL BE VERIFIED BY AN INDEPENDENT, QUALIFIED GEOTECHNICAL ENGINEER.
   2.1. PASSIVE EARTH PRESSURE.....332 PSF PER FOOT OF DEPTH
   2.2. SUBGRADE COEFFICIENT OF FRICTION.....0.32
   2.3. MODULUS OF SUB-GRADE REACTION OF 120 PCI, MINIMUM, BELOW SLAB-ON-GRADE.
3. AN INDEPENDENT, QUALIFIED, GEOTECHNICAL ENGINEER SHALL VERIFY THE ADEQUACY OF THE SLAB-ON-GRADE SUBGRADE PRIOR TO SLAB PLACEMENT. CONTRACTOR SHALL PROVIDE APPROPRIATE PROOFROLLING EQUIPMENT AS REQUIRED BY THE GEOTECHNICAL ENGINEER.
4. BACKFILL PLACEMENT AND COMPACTION SHALL BE MONITORED, TESTED, AND APPROVED BY A GEOTECHNICAL ENGINEER. U.N.O., THE TOP 1' OF BACKFILL BENEATH SLABS-ON-GRADE SHALL BE SCARIFIED AND COMPACTED TO A MIN. OF 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. U.N.O., ALL BACKFILL AT FOUNDATIONS SHALL BE COMPACTED AS REQUIRED BY THE GEOTECHNICAL ENGINEER TO ACHIEVE THE ALLOWABLE BEARING PRESSURE LISTED ABOVE. U.N.O., OTHER BACKFILL SHALL BE COMPACTED TO A MIN. OF 96% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. ALL BACKFILL SHALL BE WITHIN 3% OF OPTIMUM MOISTURE WHEN PLACED AND SHALL BE PLACED/COMPACTED IN LIFTS NOT EXCEEDING 6 INCHES (OR LESS IF REQUIRED BY THE GEOTECHNICAL ENGINEER).
5. CLEAN OUT ALL FOOTING EXCAVATIONS (OF LOOSE/SOFT SOIL, STANDING WATER, MUD, DEBRIS, ETC.) IMMEDIATELY BEFORE CONCRETE PLACEMENT.

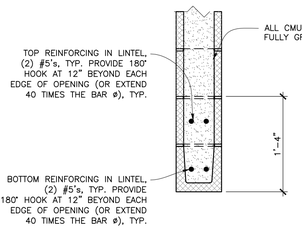
SECTION D: CONCRETE CONSTRUCTION (INCLUDING REBAR AND SLABS-ON-GRADE)
1. ALL CONCRETE CONSTRUCTION SHALL COMPLY WITH ACI 318: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
2. WHERE EPOXY ANCHORAGE OF REINFORCING STEEL BARS IS SPECIFIED, U.N.O. THE HILTI HIT HY 200 EPOXY ANCHORING SYSTEM SHALL BE USED WITH THE FOLLOWING EMBEDMENT LENGTHS: #3 – 6", #4 – 8", #5 – 10", #6 – 12", #7 – 14", #8 – 16" FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS TO ACHIEVE THE MAXIMUM PERFORMANCE OF THE EPOXY ANCHORAGE SYSTEM.
3. PROVIDE CLEAR CONCRETE COVER FOR ALL REINFORCING STEEL BARS PER ACI 318. U.N.O., PROVIDE THE FOLLOWING CLEAR CONCRETE COVER: A) 3" FOR REBAR IN CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO THE EARTH; B) 1-1/2" FOR #5 AND SMALLER REBAR IN CONCRETE EXPOSED TO EARTH OR WEATHER; C) 2" FOR #6 AND LARGER REBAR IN CONCRETE EXPOSED TO EARTH OR WEATHER; D) 1-1/2", U.N.O.
4. ALL REINFORCING STEEL SHALL COMPLY WITH ASTM A615 WITH Fy=60,000 PSI, UNLESS NOTED OTHERWISE. REINFORCING STEEL SHALL BE SUPPORTED ON PLASTIC OR STEEL CHAIRS (WITH EPOXY-COATED LEGS WHERE CHAIRS ARE IN CONTACT WITH EARTH) OR PRECAST CONCRETE BRICKS OR STANDEES FROM LOWER MATS. PROVIDE SIZE AND SPACING OF SUPPORTS AS REQUIRED TO ADEQUATELY SUPPORT REINFORCING STEEL PRIOR TO AND DURING CONCRETE PLACEMENT.
5. ALL WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A185 AND SHALL BE LAPPED 12 INCHES AT ALL ENDS AND EDGES. WELDED WIRE FABRIC SHALL BE CHAIR-SUPPORTED BEFORE CONCRETE PLACEMENT TO ACHIEVE CORRECT DEPTH AND COVER.
6. REINFORCING STEEL LAP SPLICES SHALL MEET OR EXCEED THE FOLLOWING LENGTHS (U.N.O.): #3 – 22", #4 – 29", #5 – 36", #6 – 43", #7 – 63", #8 – 71". STAGGER SPLICES OF ADJACENT BARS.
7. PROVIDE L-SHAPED REINFORCING BARS AT ALL CORNERS AND INTERSECTIONS. CORNER BARS SHALL MATCH THE SIZE AND SPACING OF THE TERMINATING BARS AND SHALL LAP THE TERMINATING BARS BY THE SPLICE LENGTHS GIVEN ABOVE. AT WALL CORNERS, REINFORCING BARS AT THE INNER FACE SHALL BE EXTENDED TO THE OUTER FACE OF THE PERPENDICULAR WALL AND HOOKED (ACI STANDARD) AT ENDS.
8. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI, UNLESS NOTED OTHERWISE. CONTRACTOR SHALL SUBMIT MIX DESIGNS AND ASSOCIATED DATA, PER ACI 318, TO THE SPECIAL INSPECTOR BEFORE CONSTRUCTION AND SHALL AWAIT REVIEW AND APPROVAL BEFORE PROCEEDING.
9. WATER, IN EXCESS OF THAT SHOWN IN THE MIX DESIGN, SHALL NOT BE ADDED TO CONCRETE AT THE PROJECT SITE OR DURING PLACEMENT.
10. ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT AND SHALL BE THOROUGHLY WORKED AROUND REINFORCEMENT AND EMBEDDED FIXTURES AND INTO CORNERS OF FORMS. (REFER TO ACI 309 – GUIDE FOR CONSOLIDATION OF CONCRETE.)
11. WET CURE UNFORMED CONCRETE FOR 7 DAYS, MINIMUM, AFTER PLACEMENT UNLESS AN ALTERNATIVE CURING METHOD IS SUBMITTED BY THE CONTRACTOR AND APPROVED, IN WRITING, BY THE AOR OR SER.
12. U.N.O., ALL SLABS-ON-GRADE SHALL BE PLACED ABOVE 6", MIN., OF G.A.B. COMPACTED TO 100% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. SEE ARCHITECTURAL DRAWINGS AND/OR SPECIFICATIONS FOR VAPOR BARRIER REQUIREMENTS.
13. SAW-CUT CRACK CONTROL JOINTS IN SLABS-ON-GRADE AS SOON AS POSSIBLE AFTER PLACEMENT (BEFORE RANDOM SHRINKAGE CRACKS DEVELOP) AND SEAL AND/OR FILL JOINTS AS REQUIRED. CRACK CONTROL JOINTS SHALL HAVE A DEPTH EQUAL TO 1/3RD OF THE TOTAL DEPTH OF THE SLAB AND SHALL HAVE A WIDTH OF 1/8". CRACK CONTROL JOINTS SHALL BE SPACED AS PER PLAN. IF A DIFFERENT LAYOUT IS PREFERRED, CONTRACTOR SHALL SUBMIT PROPOSED CRACK CONTROL JOINT LAYOUT TO THE SER & AOR FOR REVIEW/APPROVAL BEFORE PLACEMENT OF SLAB-ON-GRADE.
14. ALL CONCRETE CONSTRUCTION, INCLUDING REINFORCING STEEL, SHALL BE OBSERVED AND TESTED BY A QUALIFIED, INDEPENDENT PARTY. CONCRETE TEMPERATURES, SLUMPS, AND AIR CONTENTS SHALL BE TESTED, RECORDED, AND VERIFIED TO BE IN COMPLIANCE WITH THE APPROVED MIX DESIGN. TEST CYLINDERS SHALL BE CAST (IN SETS OF SIX) AND TESTED TO VERIFY COMPRESSIVE STRENGTH. THE ABOVE REFERENCED TESTS AND TEST CYLINDERS SHALL BE PERFORMED AT THE RATE OF ONE SET OF TESTS/CYLINDERS FOR EACH 150 CUBIC YARDS (OR LESS) OF EACH MIX DESIGN OF CONCRETE PLACED IN A DAY. PROVIDE ADDITIONAL COMPRESSIVE STRENGTH TESTING IF REQUIRED BY ACI 318.

SECTION E: CONCRETE MASONRY CONSTRUCTION
1. ALL CONCRETE MASONRY CONSTRUCTION SHALL COMPLY WITH ACI 530-11: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES AND ACI 530.1-11: SPECIFICATION FOR MASONRY STRUCTURES.
2. CONCRETE MASONRY UNITS (CMU) SHALL BE HOLLOW LOADBEARING TYPE AND SHALL COMPLY WITH ASTM C90. MORTAR SHALL BE TYPE S AND SHALL COMPLY WITH ASTM C270. JOINTS SHALL BE FULLY MORTARED (NOT SOLELY FACE SHELLS).
3. ALL CMU SHALL HAVE A MINIMUM F'm = 1,500 PSI.
4. VERTICAL REINFORCING BARS SHALL BE CENTERED WITHIN THE WALL AND CELL, U.N.O.
5. ALL CELLS SHALL BE FILLED WITH GROUT WITH A MIN. 28 DAY COMPRESSIVE STRENGTH OF 2,500 PSI AND A SLUMP OF 8 INCHES TO 11 INCHES. GROUT SHALL COMPLY WITH ASTM C476. GROUT INSTALLATION SHALL UTILIZE THE "LOW LIFT" METHOD AND GROUT POUR HEIGHTS SHALL NOT EXCEED 5'-0".
6. ALL REINFORCING STEEL BARS SHALL COMPLY WITH ASTM A615 WITH Fy=60,000 PSI, UNLESS NOTED OTHERWISE. ALL WIRE JOINT REINFORCING SHALL COMPLY WITH ASTM A153, CLASS B-2, AND SHALL BE GALVANIZED.
7. REINFORCING STEEL LAP SPLICES IN MASONRY CONSTRUCTION SHALL MEET OR EXCEED THE FOLLOWING LENGTHS (U.N.O.): #4 – 25", #5 – 31", #6 – 57. STAGGER SPLICES OF ADJACENT BARS IN BOND BEAMS.
8. WHERE EPOXY ANCHORAGE OF REINFORCING STEEL BARS OR STEEL RODS IN CMU IS SPECIFIED, U.N.O. THE HILTI HIT HY 70 EPOXY ANCHORING SYSTEM SHALL BE USED WITH THE FOLLOWING EMBEDMENT LENGTHS: #3&3/8"ø – 4", #4&1/2"ø – 5", #5&5/8"ø – 6", #6&3/4"ø – 7". FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS TO ACHIEVE THE MAXIMUM PERFORMANCE OF THE EPOXY ANCHORAGE SYSTEM.
9. PROVIDE L-SHAPED REINFORCING BARS AT ALL BOND BEAM CORNERS AND INTERSECTIONS. CORNER BARS SHALL MATCH THE SIZE AND SPACING OF THE TERMINATING BARS AND SHALL LAP THE TERMINATING BARS BY THE SPLICE LENGTHS GIVEN ABOVE.
10. CONTRACTOR SHALL SUBMIT MIX DESIGNS, CERTIFICATES OF COMPLIANCE, AND ASSOCIATED DATA FOR CONCRETE MASONRY UNITS, MORTAR, AND GROUT PER ACI 530 AND 530.1, BEFORE CONSTRUCTION AND SHALL AWAIT SER/AOR REVIEW AND APPROVAL BEFORE PROCEEDING.
11. SECURE REINFORCING STEEL WITH BAR POSITIONERS PRIOR TO GROUT PLACEMENT.
12. MINIMUM VERTICAL REINFORCING STEEL: U.N.O., FULL-HEIGHT #6 VERTICAL REINFORCING BARS SHALL BE PROVIDED AT WALL CORNERS (CORNER CELL AND ONE CELL TO EACH SIDE), IN THE 2 CELLS TO EACH SIDE OF ALL OPENINGS, TO EACH SIDE OF EACH CONTROL JOINT, AT ALL WALL ENDS, AND AT 24" (MAX.) ON CENTER.
13. MINIMUM HORIZONTAL REINFORCING STEEL: U.N.O., BOND BEAMS, REINFORCED WITH 2-#5'S CONTINUOUS, SHALL BE PROVIDED AT THE TOPS OF ALL CMU WALLS, AND AT THE ELEVATION OF ALL FLOORS AND ROOF.
14. MINIMUM WIRE JOINT REINFORCING: U.N.O., 9 GAGE, LADDER TYPE, HORIZONTAL JOINT REINFORCING STEEL SHALL BE PROVIDED IN ALL WALLS AT 8" O.C. BELOW GRADE AND AT 16" O.C. ABOVE GRADE. LAP JOINT REINFORCING 6", MIN., AND BREAK AT ALL CONTROL JOINTS.
15. AT ALL VERTICAL REINFORCING BARS, PROVIDE REINFORCING DOWELS CONNECTED TO THE WALL FOUNDATION WITH AN ACI STANDARD HOOK AND LAP-SPLICED WITH THE VERTICAL BAR.
16. PROVIDE VERTICAL CRACK CONTROL JOINTS IN CMU WALLS AT 30'-0", MAX., O.C. PROVIDE BACKER ROD/SEALANT AS WELL AS WATERPROOFING/WATERSTOPS AT CONTROL JOINTS AS REQUIRED. (WATERPROOFING/WATERSTOP DETAILS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE NOT ADDRESSED HEREIN.) BOND BEAM REINFORCING STEEL SHALL BE CONTINUOUS THROUGH CONTROL JOINTS. WIRE JOINT REINFORCING SHALL TERMINATE 2" TO EACH SIDE OF THE CONTROL JOINT. SUBMIT PROPOSED CONTROL JOINT LAYOUT TO AOR/SER FOR REVIEW BEFORE CONSTRUCTION UNLESS SHOWN HEREIN.
17. ALL CONCRETE MASONRY CONSTRUCTION, INCLUDING REINFORCING STEEL, SHALL BE OBSERVED AND TESTED BY A QUALIFIED, INDEPENDENT PARTY IN ACCORDANCE WITH LEVEL B INSPECTION REQUIREMENTS OF ACI 530 AND ACI 530.1. GROUT SLUMPS SHALL BE TESTED, RECORDED, AND VERIFIED TO BE IN COMPLIANCE WITH THE APPROVED MIX DESIGN. GROUT TEST CUBES SHALL BE CAST (IN SETS OF FOUR) AND TESTED TO VERIFY COMPRESSIVE STRENGTH. THE ABOVE REFERENCED TESTS AND TEST CYLINDERS SHALL BE PERFORMED EACH DAY THAT GROUT IS PLACED FOR EACH 2500 SQUARE FEET (OR LESS) OF MASONRY WALL SURFACE AREA. MORTAR PROPORTIONS SHALL BE PERIODICALLY OBSERVED TO BE IN COMPLIANCE WITH THE APPROVED METHOD AND MIX DESIGN.

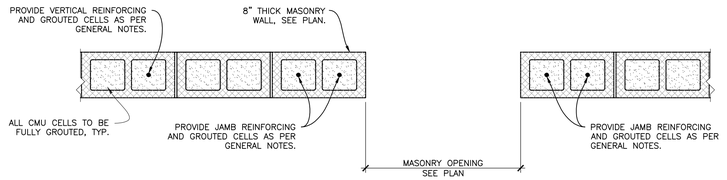
SECTION F: ABBREVIATIONS

ACI	AMERICAN CONCRETE INSTITUTE
AFF	ABOVE FINISHED FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AOR	ARCHITECT OF RECORD
ARCH	ARCHITECT/ARCHITECTURAL
AWS	AMERICAN WELDING SOCIETY
B/BOT	BOTTOM
CONC	CONCRETE
CJ	CONTROL JOINT
CWI	CERTIFIED WELDING INSPECTOR
EF	EACH FACE
EL	ELEVATION
EOS	EDGE OF SLAB
EW	EACH WAY
FFE	FINISHED FLOOR ELEVATION
FND	FOUNDATION
GAB	GRADED AGGREGATE BASE
GL	GRID LINE
IBC	INTERNATIONAL BUILDING CODE
K	KIPS
KSI	KIPS PER SQUARE INCH
LBS	POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MAX	MAXIMUM
MIN	MINIMUM
OC	ON CENTER
PAF	POWDER ACTUATED FASTEN(ERS)
PEMB	PRE-ENGINEERED METAL BUILDING
PERP	PERPENDICULAR
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE-TREATED
REBAR	REINFORCING STEEL BARS
REINF	REINFORCING
REQD	REQUIRED
SCS	SOUTHERN COMPANY SERVICES
SER	STRUCTURAL ENGINEER OF RECORD
SIM	SIMILAR
SL	STEEL LINE
SPEC	SPECIFICATION
SSCI	SHEATS STRUCTURAL CONSULTING, INC.
T	TOP
TO	TOP OF
TOF	TOP OF FOOTING
TYP	TYPICAL
TOS	TOP OF STEEL OR TOP OF SLAB
UNO	UNLESS NOTED OTHERWISE
WWF	WELDED WIRE FABRIC

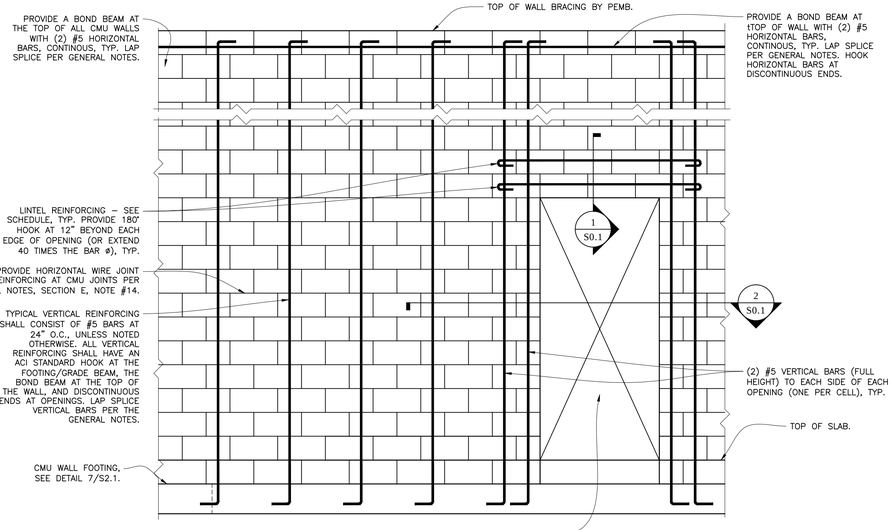
NOTE: ALL ABBREVIATIONS MAY BE WRITTEN WITH OR WITHOUT PERIODS.



1 S0.1 SECTION AT TYPICAL CMU LINTEL
SCALE: 1" = 1'-0"

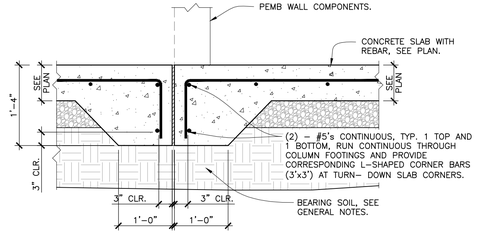


2 S0.1 PLAN VIEW DETAIL AT TYPICAL CMU JAMB
SCALE: 1" = 1'-0"



NOTES:
1. CENTER ALL VERTICAL REINFORCING STEEL IN THE WALL, TYP. U.N.O.
2. FILL ALL CELLS WITH GROUT, SEE GENERAL NOTES.

3 S0.1 PARTIAL ELEVATION AT TYPICAL CMU WALL SHOWING REINFORCING
SCALE: 1/2" = 1'-0"



4 S0.1 SECTION AT JOINT AT GRIDLINE 2
SCALE: 3/4" = 1'-0"

STRUCTURAL DESIGN
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SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER — No. 26617 — CHRISTOPHER L. SHEATS — 10/06/2017

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ABUCK DESIGNERS — BUILDERS

WASTE MANAGEMENT HAULING FACILITY

HIGHWAY 17, HARDEEVILLE, SOUTH CAROLINA

GENERAL NOTES & DETAILS

DRAWN BY: MKH
DRAWING NO.
JOB NO. 17-3550
DATE 10/06/17
REVISIONS

SHEET NO. S0.1

STRUCTURAL DESIGN

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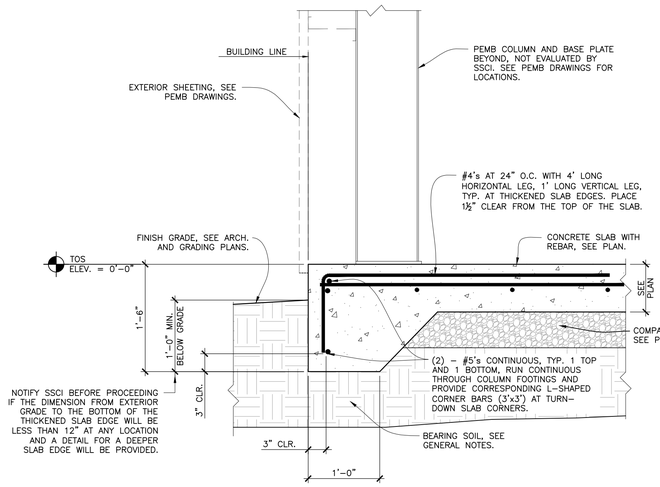
www.sheatsconsulting.com

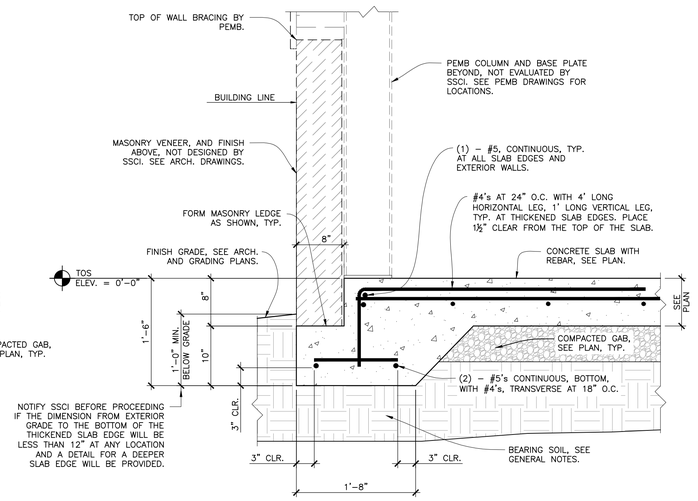
SOUTH CAROLINA — Sheats Structural Consulting, Inc. No. 3804 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — No. 26617 — REGISTERED PROFESSIONAL ENGINEER — STANLEY R. SHEATS

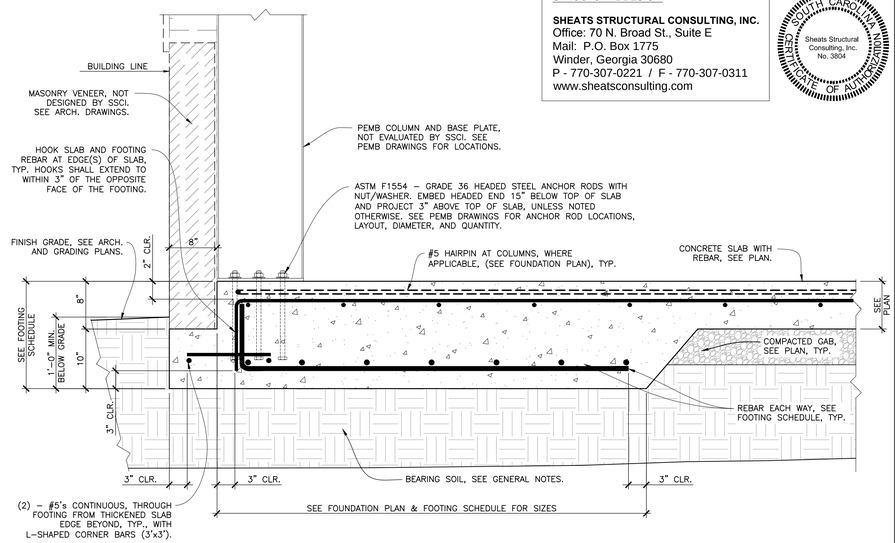
10/06/2017



1 S-2.1 SECTION AT THICKENED SLAB EDGE AT SHEETING
SCALE: 1" = 1'-0"



2 S-2.1 SECTION AT THICKENED SLAB EDGE AT MASONRY
SCALE: 1" = 1'-0"



3 S-2.1 SECTION AT BUILDING PERIMETER COLUMN FOOTING WITH LEDGE FOR MASONRY
SCALE: 1" = 1'-0"

4 S-2.1 SECTION AT BUILDING INTERIOR COLUMN FOOTING
SCALE: 1" = 1'-0"

5 S-2.1 SECTION AT INTERIOR GRADE BEAM
SCALE: 1" = 1'-0"

6 S-2.1 SECTION AT BUILDING PERIMETER COLUMN FOOTING
SCALE: 1" = 1'-0"

7 S-2.1 SECTION AT INTERIOR CMU WALL FOOTING
SCALE: 1" = 1'-0"

8 S-2.1 SECTION AT SUMP PIT AND TRENCH DRAIN
SCALE: 1" = 1'-0"

9 S-2.1 SECTION AT PERIMETER CURB ON SLAB
SCALE: 1" = 1'-0"

10 S-2.1 SECTION AT INTERIOR CURB ON SLAB
SCALE: 1" = 1'-0"

528 DISCOVERY PLACE
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BUCK DESIGNERS — BUILDERS

WASTE MANAGEMENT
HAULING FACILITY

HIGHWAY 17, HARDEEVILLE, SOUTH CAROLINA

DETAILS

DRAWN BY: MKH

DRAWING NO.

JOB NO. 17-3550

DATE 10/06/17

REVISIONS

SHEET NO. S2.1