

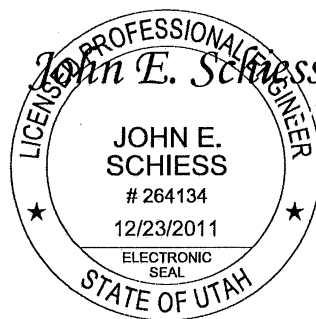
SANDY CITY

NEW SEVERSON WELLHOUSE PROJECT

DECEMBER 2011

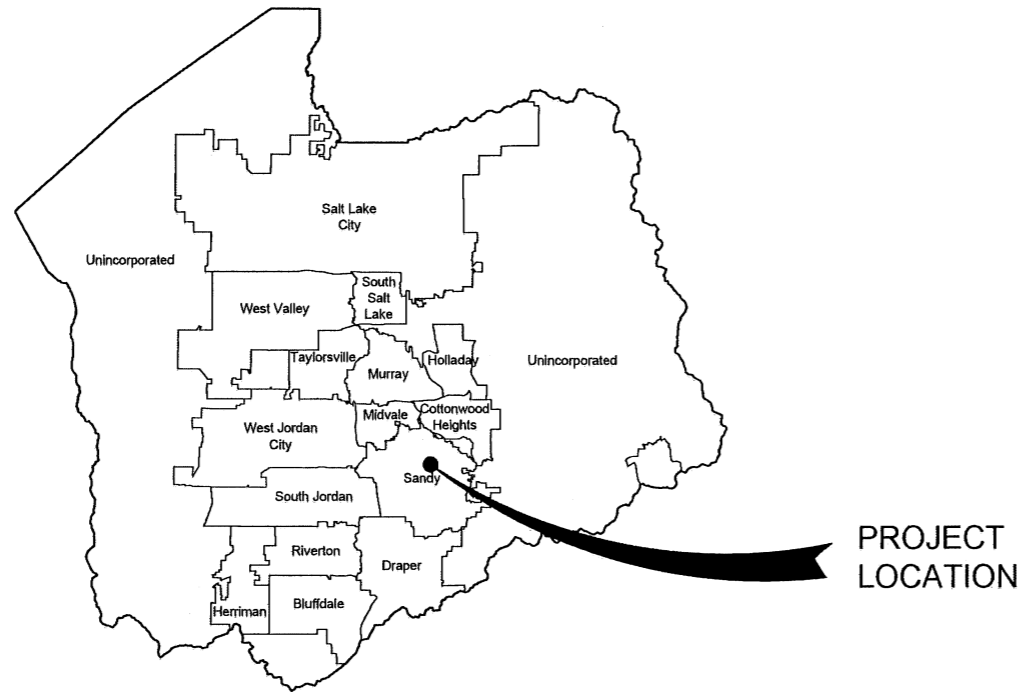


HORROCKS
ENGINEERS



Digitally signed by John E Schiess
DN: c=US, o=TrustID personal certificate, ou=Utah,
cn=John E Schiess, email=jschiess@horrocks.com,
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Date: 2011.12.23 10:00:36 -07'00'

COUNTY MAP



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 ABBREVIATIONS, LEGEND AND UTILITY CONTACTS
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 GENERAL STRUCTURE NOTES
 GENERAL STRUCTURE NOTES
 GENERAL STRUCTURE NOTES

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 ELECTRICAL DETAILS
 ELECTRICAL INSTALLATION DETAILS

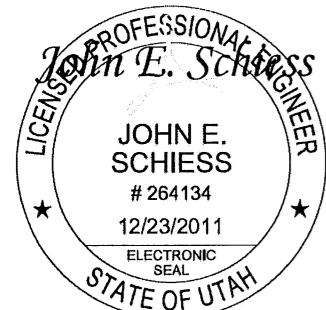
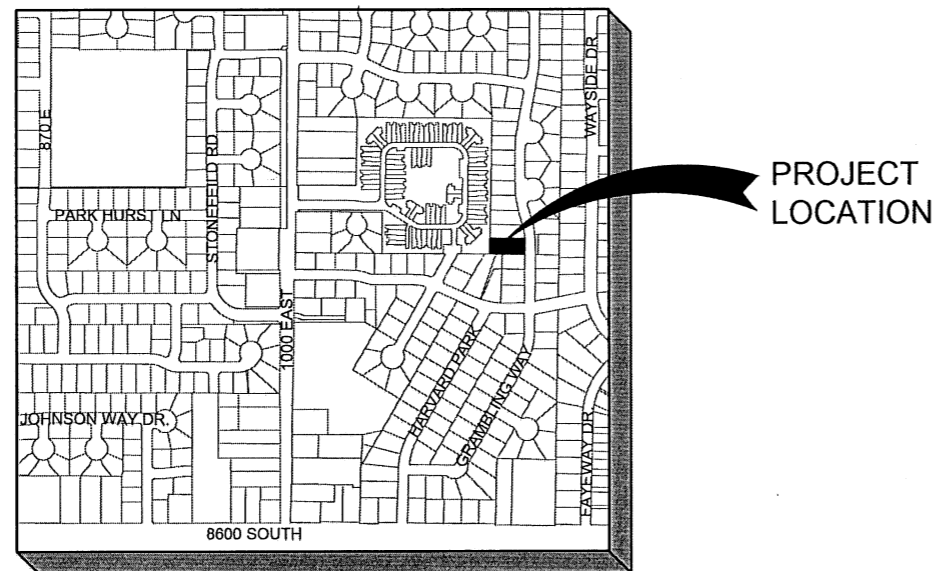
E1.0	24
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VICINITY MAP



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REV	DATE	BY	DESCRIPTION
REVISIONS			

SCALE	
HORIZONTAL	N/A
VERTICAL	N/A

WARNING

0 1/2 1

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HORROCKS ENGINEERS

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 (801) 763-5100

SANDY CITY - NEW SEVERSON WELLHOUSE

COUNTY MAP, VICINITY MAP, SHEET INDEX

DESIGNED	DATE	PROJECT NO.
DPB	10/2011	PG-031-1107
DRAWN	DATE	SHEET NO.
SAS	10/2011	2 of 45
CHECKED	DATE	DRAWING NO.
JES	12/2011	G2

LEGEND

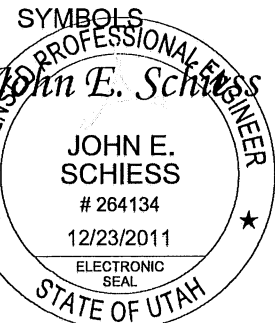
EXISTING

(SEE SHEET XX-XX)
MATCH LINE STA. XX+XX

MATCH LINE	-----	-----
EXISTING BURIED ELECTRICAL LINE	----- bel -----	----- bel -----
EXISTING OVERHEAD ELECTRICAL LINE	----- el -----	----- el -----
EXISTING BURIED CABLE TV	----- bctv -----	----- bctv -----
EXISTING OVERHEAD CABLE TV	----- ctv -----	----- ctv -----
EXISTING BURIED FIBER OPTIC	----- bfo -----	----- bfo -----
EXISTING OVERHEAD FIBER OPTIC	----- fo -----	----- fo -----
EXISTING BURIED TELEPHONE	----- btel -----	----- btel -----
EXISTING OVERHEAD TELEPHONE	----- tel -----	----- tel -----
EXISTING GAS LINE	----- g -----	----- g -----
EXISTING SEWER	----- ss -----	----- ss -----
EXISTING STORM DRAIN	----- sd -----	----- sd -----
EXISTING WATERLINE	----- w -----	----- w -----
EXISTING IRRIGATION LINE	----- irr -----	----- irr -----
EXISTING INTERMEDIATE CONTOUR	-----	-----
EXISTING INDEX CONTOUR	----- XXXX -----	----- XXXX -----
EXISTING CHAINLINK FENCE	-----	-----
EXISTING STOCK FENCE	----- X-----	----- X-----

PROPOSED

PROPOSED BURIED ELECTRICAL LINE	----- BEL -----
PROPOSED OVERHEAD ELECTRICAL LINE	----- EL -----
PROPOSED BURIED CABLE TV	----- BCTV -----
PROPOSED OVERHEAD CABLE TV	----- CTV -----
PROPOSED BURIED FIBER OPTIC	----- BFO -----
PROPOSED OVERHEAD FIBER OPTIC	----- FO -----
PROPOSED BURIED TELEPHONE	----- BTEL -----
PROPOSED OVERHEAD TELEPHONE	----- TEL -----
PROPOSED GAS LINE	----- G -----
PROPOSED SEWER	----- SS -----
PROPOSED STORM DRAIN	----- SD -----
PROPOSED WATERLINE	----- W -----
PROPOSED IRRIGATION LINE	----- IRR -----
PROPOSED CHAIN LINK FENCE	-----
PROPOSED ORNAMENTAL FENCE	-----



UTILITY CONTACTS

UTILITY COMPANY	CONTACT NUMBER	CONTACT NAME	CONTACT EMAIL	DESCRIPTION
COMCAST CABLE - DVS, SL, TL, UT CO	801-401-3041	GARY GOLDSTEIN	gary_goldstein@cable.comcast.com	CATV & FIBER MRKD BY STK CNTR
JORDAN VALLEY WATER C.D.	801-565-4300	GORDON BATT	GORDONB@JVWCD.ORG	CULINARY WATER
MIDVALLEY IMPROVEMENT DISTRICT	801-255-7321	BOB BAIN	BLUESTAKE@MVDST.COM	SEWER
QUESTAR GAS ZONE III	801-324-3970	SL MAPPING DEPARTMENT		GAS MRKD BY ELM LOCATING
CENTURY LINK LOCAL NETWORK ZONE IV	801-974-8130	ARLENE COMSTOCK		FBR & PHN MRKD BY STAKE CENTER
ROCKY MOUNTAIN POWER - JORDAN VALLEY	503-813-6993	JOEL SIMMONS	JOEL.SIMMONS@PACIFICORP.COM	ELECTRIC MRKD BY STAKE CENTER
SANDY CITY	801-568-3075	MATT ESKESEN	MESKESEN@SANDY.UTAH.GOV	CULIN & IRR WATER, STORM DRN

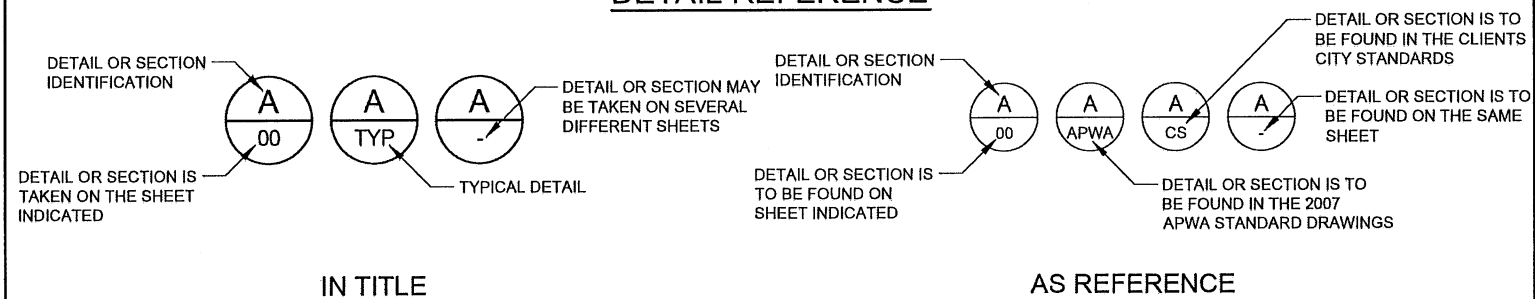
ABBREVIATIONS

AC	ASPHALT CONCRETE PAVEMENT
BV	BUTTERFLY VALVE
BLDG.	BUILDING
CI	CAST IRON
CL	CENTER LINE
CLR	CLEAR
CO	CLEANOUT
COM	COMPRESSION FITTING
CONC	CONCRETE
CONST	CONSTRUCT
CTS	COPPER TUBE STEEL
C.Y.	CUBIC YARD
d	DEPTH OF FLOW
D	DIAMETER OF PIPE
DWG	DRAWING
DIA	DIAMETER
DIM.	DIMENSION
DIP	DUCTILE IRON PIPE
E	EAST
EA	EACH
EL, ELEV	ELEVATION
ESMT	EASEMENT
EW	EACH WAY
EXIST OR EX	EXISTING
FIP	FEMALE IRON PIPE FITTING
FM	FORCE MAIN
FRP	FIBERGLASS REINFORCED PLASTIC
F, FL	FLOW LINE
FL, FLG	FLANGE FITTING
FE	FLANGE END
FT	FOOT
FPS	FEET PER SECOND
GV	GATE VALVE
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
", IN	INCH(ES)
INV	INVERT
LT	LEFT
MAX	MAXIMUM
MGD	MILLION GALLONS PER DAY
MIP	MALE IRON PIPE FITTING
MH	MANHOLE
MFRS	MANUFACTURERS
MJ	MECHANICAL JOINT FITTING
N	NORTH, FRICTION FACTOR
N/A	NOT APPLICABLE
#, NO	NUMBER
NT'D	NOTED
NTS	NOT TO SCALE
PERM	PERMANENT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
R	PROPERTY LINE
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PWD	PUBLIC WORKS DEPARTMENT
Q	RATE OF FLOW
REINF	REINFORCEMENT, REINFORCING
REQD	REQUIRED
RES	RESERVOIR
REV	REVISION
RT	RIGHT
R/W	RIGHT OF WAY
S	SOUTH, SLOPE
ST STL	STAINLESS STEEL
STD	STANDARD
STA	STATION
T.B.	THRUST BLOCK
TEMP	TEMPORARY
TBM	TEMPORARY BENCH MARK
TYP	TYPICAL
UBC	UNTREATED BASE COURSE
UNO	UNLESS NOTED OTHERWISE
UG	UNDERGROUND
V	VELOCITY
VERT	VERTICAL
W	WEST
TOF	TOP OF FOOTING
TOW	TOP OF WALL

PIPE ABBREVIATIONS

PVC	POLYVINYL CHLORIDE PLASTIC PIPE
RCP	REINFORCED CONCRETE PIPE
VCP	VITRIFIED CLAY PIPE
CIP	CAST IRON PIPE
HDPE	HIGH DENSITY POLYETHYLENE
DIP	DUCTILE IRON PIPE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYLENE PIPE
POLY	POLYETHYLENE PIPE

DETAIL REFERENCE



IN TITLE

AS REFERENCE

SCALE	WARNING
HORIZONTAL: N/A	0 1/2 1
VERTICAL: N/A	IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE



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SANDY CITY - NEW SEVERSON WELLHOUSE
ABBREVIATIONS, LEGEND, UTILITY CONTACTS

DESIGNED: DPB	DATE: 10/2011	PROJECT NO.: PG-031-1107
DRAWN: SAS	DATE: 10/2011	SHEET NO.: 3 of 45
CHECKED: JES	DATE: 12/2011	DRAWING NO.: G3

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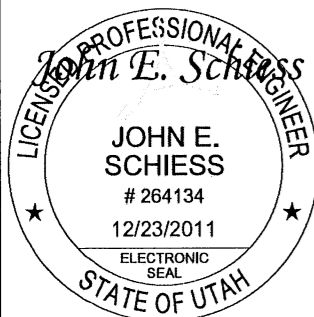
GENERAL NOTES

1. ELEVATIONS ON THESE PLANS ARE LOCAL TO THE PROJECT SITE.
2. INSTALL RIMS IN ACCORDANCE WITH SANDY CITY SPECIFICATIONS.
3. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES (WATER AND DRAINAGE SERVICES AND ACCESS ROADS, ECT.) DURING CONSTRUCTION AND ENSURE THEY REMAIN IN PLACE AND OPERATIONAL.
4. RESTORE OR PRESERVE ALL EXISTING FENCES, ROAD AND DITCHES.
5. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS, PRIOR TO FINAL PAYMENT.
6. PIPE LENGTHS SHOWN ON PLAN SHEETS ARE HORIZONTAL.
7. CONTRACTOR SHALL REMOVE/SUPPORT/REPLACE ALL CULVERTS OR EXISTING UTILITIES.
8. SAFE CONSTRUCTION PROCEDURES AND WORKING CLEARANCES ARE TO BE MAINTAINED AT ALL TIMES WHILE WORKING NEAR POWER LINES.
9. ALL POINTS ARE GIVEN IN STATE PLANE GROUND COORDINATES.
10. CONTRACTOR SHALL RESTORE ALL EXISTING DRIVE APPROCHES, MAIL BOXES AND LANDSCAPE TO PRECONSTRUCTION CONDITION.
11. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS AND THE MOST CURRENT EDITION OF SANDY CITY STANDARD SPECIFICATIONS AND DRAWINGS.

OTHER NOTES

1. ANY MODIFICATION TO THIS CONSTRUCTION PACKAGE OR TO THE CONSTRUCTION SCHEDULE SHALL BE MODIFIED BY THE ENGINEER. PRIOR TO SAID APPROVAL, ALL IMPROVEMENT DRAWINGS SHALL BE RESUBMITTED AND APPROVED BY SANDY CITY PUBLIC UTILITIES.
2. THE CONTRACTOR SHALL LOCATE, RETAIN AND PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE DIRECTED ON THE PLANS OR BY THE ENGINEER.
3. ALL SURPLUS EXCAVATION SHALL BE REMOVED FROM THE SITE. TOPSOIL OR OTHER NATIVE MATERIAL MAY BE USED IN LANDSCAPE GRADING. STOCKPILE TOPSOIL SEPARATELY FROM OTHER EXCAVATED MATERIALS IN THE LOCATION DESIGNATED BY THE OWNERS REPRESENTATIVE. TOPSOIL PLACED IN LANDSCAPED AREAS SHALL BE 6 INCHES THICK MINIMUM AND GRADED TO DRAIN. REFER TO LANDSCAPE PLANS AND SANDY CITY SPECIFICATIONS.
4. THE CONTRACTOR SHALL MAINTAIN 10 FOOT HORIZONTAL AND 18 INCH VERTICAL SEPARATION BETWEEN SANITARY SEWER AND CULINARY WATER LINES.
5. THE CONTRACTOR SHALL INSTALL ALL SANITARY SEWER MAINS, SERVICE LINES, AND STORM DRAIN LINES PRIOR TO INSTALLING ANY WATER SYSTEM IMPROVEMENTS. WATER MAINS MAY BE PLACED LOWER THAN THE MINIMUM (48 INCHES OF COVER) AS REQUIRED TO AVOID GRAVITY SEWER OR STORM DRAIN MAINS OR SERVICE LINES WITH APPROVAL FROM THE ENGINEER. PROVIDE 18 INCHES MINIMUM CLEARANCE BETWEEN WATER AND DRAIN LINES.
6. SIDEWALKS SHALL BE THE WIDTH INDICATED ON THE PLANS. REFER TO THE ARCHITECTURAL PLANS FOR DETAILS OF SIDEWALKS.
7. TRACER WIRE SHOULD BE PLACED ABOVE ALL SEWER AND WATER LINES AS REQUIRED BY SANDY CITY OR SEWER DISTRICT.
8. ALL EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY AND ARE BASED ON UTILITY MAPS AND FIELD SURVEY. CONTRACTOR SHALL NOTIFY BLUE STAKES AT 532-5000 48 HOURS IN ADVANCE OF ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
9. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL UTILITY CONFLICTS UPON DISCOVERY.
10. CONTRACTOR SHALL COORDINATE CONSTRUCTION AND INSTALLATION OF ELECTRICAL, TELEPHONE, AND NATURAL GAS SERVICES WITH THE UTILITY COMPANY.
11. CONTRACTOR SHALL PROVIDE THRUST BLOCKING FOR ALL WATER LINE FITTINGS PER SANDY CITY STANDARD DETAILS.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER BACK FILLING, COMPACTING, AND PAVEMENT RESTORATION WITHIN STREET RIGHT-OF-WAY. REFER TO APPROPRIATE SANDY CITY STANDARD DETAILS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS FROM SANDY CITY TO WORK WITHIN THE RIGHT-OF-WAY.
13. CONTRACTOR SHALL PROVIDE CITY INSPECTOR WITH CONSTRUCTION SCHEDULE AFTER SAID SCHEDULE HAS BEEN APPROVED BY ENGINEER AND OWNER.
14. CONTRACTOR TO PROVIDE ELECTRICAL LINE TRENCHING AND BACKFILL. COORDINATE LOCATIONS WITH ROCKY MOUNTAIN POWER.
15. WATER VALVES, SEWER MANHOLES, STORM DRAIN INLETS OR CLEANOUT BOXES, AND OTHER SURFACE UTILITY ACCESSORIES SHALL BE RAISED AND SLOPED TO ACCURATE FINISH SURFACE BY A CONCRETE GRADE COLLAR AS PER SANDY CITY STANDARD AND SPECIFICATIONS.
16. ALL PAVEMENT SECTIONS, EXCAVATION, BACKFILLING, AND OTHER EARTHWORK OPERATIONS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. STRUCTURAL FILL, BEDDING, IMPORTED BACKFILL, GRANULAR SUBBASE, BASE COURSE AND ASPHALTIC CONCRETE MATERIALS SHALL MEET THE REQUIREMENTS OUTLINED IN THE PROJECT SPECIFICATIONS.
17. ALL WORK WITHIN THE SANDY CITY RIGHT-OF-WAY ON PUBLIC STREETS SHALL REQUIRE A TRAFFIC CONTROL PLAN BE SUBMITTED TO THE SANDY CITY TRAFFIC ENGINEER FOR APPROVAL. SAID APPROVAL MUST BE OBTAINED PRIOR TO COMMENCING WORK.
18. UTILITY PIPING SHALL BE IN ACCORDANCE WITH SANDY CITY SPECIFICATIONS. ALL UTILITY PIPING, SERVICE CONNECTIONS, METERS, ETC. SHALL CONFORM TO THE CURRENT EDITION OF THE SANDY CITY STANDARD SPECIFICATIONS AND DETAILS. WATER SYSTEM CONNECTIONS TO BE HOT TAPPED UNLESS OTHERWISE APPROVED BY SANDY CITY.

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REVISIONS			

SCALE	
HORIZONTAL	N/A
VERTICAL	N/A

WARNING

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SANDY CITY - NEW SEVERSON WELLHOUSE

GENERAL NOTES

DESIGNED	DATE	PROJECT NO.
DPB	10/2011	PG-031-1107
DRAWN	DATE	SHEET NO.
SAS	10/2011	4 of 45
CHECKED	DATE	DRAWING NO.
JES	12/2011	G4

A. GENERAL:

1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
2. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK THAT CONFORMS WITH THE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY.
3. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.
4. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.
5. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, STEEL DECKS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF STRUCTURAL ENGINEER.
6. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. HE SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE CHOOSES AN OPTION AND HE SHALL COORDINATE ALL DETAILS.
7. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.
8. TYPICAL DETAILS ARE NOT CUT ON DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE.
9. WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.
10. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

B. SHOP DRAWINGS:

1. THE GENERAL CONTRACTOR WILL REVIEW AND STAMP ALL SHOP DRAWINGS AND PRODUCT DATA FOR CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS PRIOR TO SUBMISSION. ANY SHOP DRAWINGS OR PRODUCT DATA NOT REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW.
2. ANY SHOP DRAWING NOT CHECKED AND INITIALED BY THE SUPPLIER/DETAILER PRIOR TO SUBMITTING FOR ARCHITECTURAL AND ENGINEERING REVIEW, WILL BE RETURNED WITHOUT REVIEW.
3. THE CONSTRUCTION DOCUMENTS MAY NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.
4. ELECTRONIC FILES OF CONSTRUCTION DOCUMENTS WILL NOT BE MADE AVAILABLE FOR USE AS SHOP DRAWINGS.

C. CODE:

1. 2009 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC)

D. DESIGN LOADS:

1. ROOF:
 - LIVE LOAD _____ 20 PSF (REDUCIBLE)
 - DEAD LOAD _____ 20 PSF
 - SNOW LOAD _____
 - P_g _____ 43.1 PSF
2. WIND LOADS:
 - BASIC WIND SPEED (3-SECOND GUST) _____ 90 MILES PER HOUR
 - WIND IMPORTANCE FACTOR _____ 1.00
 - EXPOSURE _____ B
 - OCCUPANCY CATEGORY _____ II
 - INTERNAL PRESSURE COEFFICIENT _____ ±0.18
 - BUILDING CLASSIFICATION _____ ENCLOSED
3. SEISMIC LOADS:
 - SEISMIC IMPORTANCE FACTOR _____ 1.0
 - OCCUPANCY CATEGORY _____ II
 - SITE CLASS _____ D
 - SEISMIC DESIGN CATEGORY _____ D
 - SPECTRAL RESPONSE ACCELERATIONS
 - SS _____ 1.446
 - S1 _____ 0.583
 - SDS _____ 0.964
 - SD1 _____ 0.583
 - RESISTING SYSTEM _____ BEARING WALL SYSTEM: SPECIAL REINFORCED MASONRY SHEAR WALLS
 - RESPONSE MODIFICATION FACTOR, R _____ 5
 - DESIGN BASE SHEAR _____ 0.193W
 - SEISMIC RESPONSE COEFFICIENT, CS _____ 0.193
 - ANALYSIS PROCEDURE _____ EQUIVALENT LATERAL FORCE PROCEDURE

E. DEFERRED SUBMITTALS:

1. DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN WHICH ARE NOT SUBMITTED AT THE TIME OF PERMIT APPLICATION AND WHICH ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIED PERIOD.
2. ITEMS THAT ARE SUBMITTED FOR CONSIDERATION AS DEFERRED SUBMITTALS ARE AS FOLLOWS:
 - a. PREFABRICATED WOOD I-JOISTS
 - b. PREFABRICATED WOOD TRUSSES

F. FOUNDATIONS:

1. SPREAD FOOTINGS SHALL BEAR ON CONTROLLED, COMPACTED FILL. FOR FILL REQUIREMENTS, SEE PLANS. DESIGN SOIL BEARING VALUE 1,500 PSF. FOR TOP OF FOOTING ELEVATIONS, SEE FOUNDATION PLANS.

G. STRUCTURAL STEEL:

1. ALL STRUCTURAL STEEL SHALL BE FABRICATED BY A FABRICATOR WITH ANY ONE OF THE FOLLOWING MINIMUM QUALIFICATIONS. QUALIFICATIONS SHALL BE IN EFFECT AT TIME OF BID.
 - 1.1 AISC CERTIFIED FABRICATOR (STD).

FABRICATOR SHALL SUBMIT DOCUMENTATION OF THEIR CERTIFICATION WITH THE FIRST SHOP DRAWING SUBMITTAL.
2. LATEST AISC AND AWS CODES APPLY. THE SHOP DRAWING REVIEW TIME OF SECTION 4.4 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES IS REVISED TO MATCH THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS. THE WORD APPROVED IN SECTION 4.4 IS REDEFINED AS REVIEWED.
3. STEEL PROPERTIES
 - CHANNELS, PLATES AND ANGLES _____ ASTM A36 (Fy = 36 KSI)
 - ANCHOR RODS _____ ASTM F1554, GRADE 36
 - ANCHORS _____ ASTM F1554, GRADE 36
4. WHEN STRUCTURAL STEEL IS FURNISHED TO A SPECIFIED MINIMUM YIELD POINT GREATER THAN 36 KSI, THE ASTM OR OTHER SPECIFICATION DESIGNATION SHALL BE INCLUDED NEAR THE ERECTION MARK ON EACH SHIPPING ASSEMBLY OR IMPORTANT CONSTRUCTION COMPONENT OVER ANY SHOP COAT OF PAINT PRIOR TO SHIPMENT FROM THE FABRICATORS PLANT.
5. ALL BOLTS SHALL BE INSTALLED WITH STEEL WASHERS.
6. ALL WELDING BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES, CERTIFICATES SHALL BE THOSE ISSUED BY AN INDEPENDENT TESTING AGENCY.
7. ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS. USE E80 SERIES FOR ASTM A706 REINFORCING BARS. USE E308 SERIES FOR STAINLESS TO STAINLESS WELDS AND E309 SERIES FOR STAINLESS TO CARBON STEELS.
8. ALL WELDING PER AMERICAN WELDING SOCIETY STANDARDS. ALL WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT HIS DISCRETION. SHOP WELDS OR FIELD WELDS SHALL BE SHOWN ON SHOP DRAWINGS.
9. SLAG SHALL BE REMOVED FROM ALL COMPLETED WELDS, AND THE WELD AND ADJACENT BASE METAL SHALL BE CLEANED BY BRUSHING OR OTHER SUITABLE MEANS. WELDED JOINTS SHALL NOT BE PAINTED UNTIL AFTER WELDING HAS BEEN COMPLETED AND THE WELD ACCEPTED. ALL COMPLETE PENETRATION WELDS SHALL BE TESTED.

H. CONCRETE:

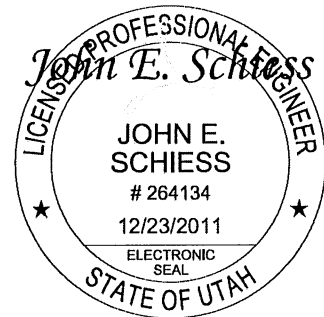
1. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
2. ADDITION OF WATER TO THE BATCH FOR MATERIAL WITH INSUFFICIENT SLUMP WILL NOT BE PERMITTED, UNLESS THE SUPPLIER HAS SPECIFICALLY WITHHELD WATER FROM THE BATCH AT THE PLANT. IN SUCH CASE THE MIX DESIGN AND TRUCK TICKET MUST CLEARLY STATE THE MAXIMUM AMOUNT OF WATER THAT CAN BE ADDED TO THE BATCH ON SITE. IN NO CASE SHALL THE DESIGN WATER TO CEMENTITIOUS MATERIAL RATIO BE EXCEEDED.
3. CONCRETE PROPERTIES:

CONCRETE USE	MINIMUM 28 DAY COMPRESSIVE STRENGTH	SLUMP AT PLACEMENT
UNLESS NOTED OTHERWISE, ALL CONCRETE SHALL BE	4,000 PSI	4" +/- 1"
PEDESTALS	4,000 PSI	4" +/- 1"
WALLS	4,000 PSI	4" +/- 1"
SLABS ON GRADE	4,000 PSI	4" +/- 1"
FOOTINGS AND STEM WALLS	4,000 PSI	4" +/- 1"

4. CONCRETE CONTAINING SUPERPLASTICIZING ADMIXTURE SHALL HAVE A SLUMP OF 4" +/- 1", TO BE FIELD VERIFIED, PRIOR TO ADDING ADMIXTURE, AND NOT EXCEEDING 8" AT PLACEMENT.
5. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDER-FLOOR DUCTS, SLAB EDGES, REINFORCING, KEYS, ETC.
6. UNLESS APPROVED OTHERWISE IN WRITING BY THE ENGINEER, ALL CONCRETE SLABS ON GRADE SHALL BE BOUND BY CONSTRUCTION JOINTS, KEYS OR SAW CUT, SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 250 SQUARE FEET. KEYS OR CONSTRUCTION JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING. ALL OTHER JOINTS MAY BE SAW CUT. CAST CLOSURE POUR AROUND COLUMNS AFTER DEAD LOAD IS APPLIED.

I. STEEL REINFORCING:

1. TYPICAL REINFORCING BAR STRENGTHS
 - REINFORCING (NON-WELDABLE) _____ ASTM A615, DEFORMED, Fy = 60 KSI (420 MPa)
 - REINFORCING (WELDABLE) _____ ASTM A706, DEFORMED, Fy = 60 KSI (420 MPa)
 - WELDED WIRE FABRIC _____ ASTM A185, WIRE PER ASTM A82
2. TYPICAL CLEAR CONCRETE COVERAGES
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH _____ 3"
 - FORMED CONCRETE EXPOSED TO EARTH OR WEATHER
 - #6 AND LARGER _____ 2"
 - #5 AND SMALLER _____ 1 1/2"
 - FORMED CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
 - SLABS, WALLS, OR JOISTS
 - #14 AND LARGER _____ 1 1/2"
 - #11 AND SMALLER _____ 3/4"
 - BEAMS, COLUMNS (TO PRIMARY REINFORCEMENT, TIES, OR STIRRUPS) _____ 1 1/2"
 - ALL OTHERS PER LATEST EDITION OF ACI 318.
3. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. LATEST ACI CODE AND DETAILING MANUAL APPLY. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE. REINFORCING BAR SPACINGS GIVEN ARE MAXIMUM ON CENTERS.
4. ALL REINFORCING TO BE WELDED SHALL BE WELDED IN ACCORDANCE WITH AWS D1.4. NO TACK WELDING OF REINFORCING BARS IS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE BY STRUCTURAL ENGINEER.
5. REINFORCING LAP SPLICES IN CONCRETE SHALL BE PER TYPICAL DETAIL UNLESS NOTED OTHERWISE. ALL SPLICE LOCATIONS ARE SUBJECT TO APPROVAL. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS.
6. LAP IN WELDED WIRE FABRIC SHALL BE MADE SO THAT THE OVERLAP MEASURED BETWEEN THE OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES.



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REV	DATE	BY	DESCRIPTION

SCALE

HORIZONTAL _____

VERTICAL _____

N/A

N/A

WARNING

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HORROCKS

ENGINEERS

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(801) 763-5100

SANDY CITY - NEW SEVERSON WELLHOUSE

GENERAL STRUCTURAL NOTES

DESIGNED	DATE	PROJECT NO.
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SAS	10/2011	5 of 45
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JES	12/2011	G5

J. MASONRY:

- MASONRY WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 530, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".
- MASONRY UNIT PROPERTIES
 - HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 WITH A COMPRESSIVE STRENGTH OF 1900 PSI AND A DENSITY BETWEEN 125 PCF (MEDIUM WEIGHT) AND 135 PCF (NORMAL WEIGHT). F_m FOR DESIGN IS 1500 PSI (SOLID GROUTED CONSTRUCTION) AND 1350 PSI (PARTIAL GROUTED CONSTRUCTION).
- ALL UNITS SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE. VERTICAL ALIGNMENT OF CELLS SHALL MAINTAIN A CONTINUOUS CLEAR, UNOBSTRUCTED CELL NOT LESS THAN 3 INCHES SQUARE. MINIMUM DEPTH OF HORIZONTAL BOND BEAM CHANNEL BELOW TOP OF UNIT SHALL BE 1 1/2" INCHES, AND CHANNEL SHALL BE 3" WIDE MINIMUM. ALL UNITS SHALL BE FREE OF DUST AND DIRT AT THE TIME OF LAYING.
- MORTAR SHALL CONFORM TO ASTM C270 AND SHALL BE TYPE S WITH PROPORTIONS PER TABLE 2103.7(1) (IBC). MASONRY CEMENT SHALL NOT BE USED.
- GROUT FOR WALLS CONSTRUCTED WITH HOLLOW CONCRETE MASONRY UNITS SHALL HAVE AN F_{'g} = 2000PSI.
- VERTICAL REINFORCING (UNLESS NOTED OTHERWISE):

PLACE #4 (6" WALLS), #5 (8" WALLS), #5 (12" WALL) BAR IN CENTER OF GROUT AT CENTER OF WALL, CONTINUOUS FULL HEIGHT OF WALL, WITH ONE BAR AT ALL CORNERS, INTERSECTIONS, WALL ENDS, BEAM BEARING, JAMBS AND EACH SIDE OF CONTROL JOINTS AND AT INTERVALS NOT TO EXCEED 48" O.C. TIE AT 8'-0" VERTICALLY, WITH SINGLE WIRE LOOP TIE BY A.A. PRODUCTS COMPANY. UNLESS NOTED OTHERWISE, LAP SPLICES SHALL BE PER TYPICAL REINFORCING BAR SPLICE DETAIL. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90 DEGREE HOOKED DOWELS TO MATCH VERTICAL REINFORCING.

- HORIZONTAL REINFORCING (UNLESS NOTED OTHERWISE):

PLACE 2#4 (6" WALL), 2#5 (8" WALL), 2#5 (12" WALL) BARS IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT ROOF AND ELEVATED FLOOR LINES. PLACE #4 (6" WALL), #5 (8" WALL), #5 (12" WALL) BAR IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT TOP OF PARAPET OR TOP OF A FREE-STANDING WALL. PLACE THESE BARS CONTINUOUS THROUGH CONTROL JOINT. WRAP MASTIC TAPE FOR 1'-8" EACH SIDE OF CONTROL JOINT. PROVIDE BENT BARS, TO MATCH HORIZONTAL BOND BEAM REINFORCING, AT CORNERS AND WALL INTERSECTIONS TO MAINTAIN BOND BEAM CONTINUITY. UNLESS NOTED OTHERWISE, LAP SPLICES SHALL BE PER TYPICAL REINFORCING BAR SPLICE DETAIL. STAGGER ALTERNATE SPLICES A MINIMUM OF 4'-0". PROVIDE STANDARD WEIGHT (NO. 9 GAGE WIRE) DUR-O-WALL OR DUR-O-WIRE LADDER TYPE JOINT REINFORCING AT 16" O.C. IN MASONRY WALLS. LAP JOINT REINFORCING 6" MINIMUM.

- GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACING AND RECONSOLIDATED AFTER EXCESS MOISTURE HAS BEEN ABSORBED, BUT BEFORE WORKABILITY IS LOST.
- PROVIDE CLEANOUTS IF GROUT POUR EXCEEDS 5'-0" IN HEIGHT. IF CLEANOUTS ARE PROVIDED, GROUT POUR MAXIMUM HEIGHT = 12'-0", IN LIFTS NOT TO EXCEED 6'-0".
- UNLESS NOTED OTHERWISE ON THE PLANS, PLACE CONTROL JOINTS IN MASONRY WALLS SUCH THAT NO STRAIGHT RUN OF WALL EXCEEDS 24'-0".

K. WOOD:

- PLYWOOD SHALL BE APA RATED SHEATHING, WITH AN EXTERIOR OR EXPOSURE 1 DURABILITY CLASSIFICATION AND SHALL BEAR THE STAMP OF AN APPROVED TESTING AGENCY. LAY UP FLOOR AND ROOF WITH THE FACE GRAIN PERPENDICULAR TO SUPPORTS. STAGGER JOINTS. PROVIDE PLY CLIPS AT MIDSPAN OF ALL UNSUPPORTED PLYWOOD EDGES. ALL NAILING SHALL BE COMMON NAILS. IF GUN NAILS ARE USED IN LIEU OF COMMON NAILS, REDUCE NAIL SPACING TO 4" AT EDGE NAILING AND 8" AT INTERMEDIATE NAILING (UNLESS NOTED OTHERWISE).
- PLYWOOD PROPERTIES AND ATTACHMENT (UNLESS NOTED OTHERWISE)

ROOF	
THICKNESS	19/32"
SPAN/INDEX RATIO	40/20
EDGE NAILING (COMMON NAILS)	10d (.148 DIA) AT 6" O.C.
INTERMEDIATE NAILING (COMMON NAILS)	10d (.148 DIA) AT 12" O.C.
MINIMUM NAIL PENETRATION (IN FRAMING)	1 5/8"

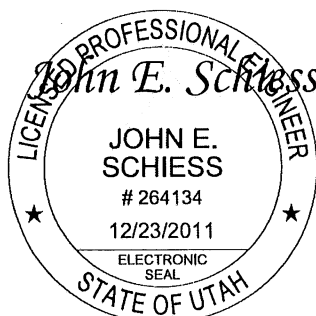
- THE FIRST SHEET OF PLYWOOD SHEATHING ADJACENT AND PARALLEL TO WALLS, PERIMETER MEMBERS OR MEMBERS IDENTIFIED AS CHORD, COLLECTOR OR DRAG MEMBERS (ON ONE OR BOTH SIDES AS APPLICABLE) SHALL BE FULL WIDTH SHEETS. ELSEWHERE MINIMUM SHEET WIDTH 2'-0".
- SAWN FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION OR THE WEST COAST LUMBER INSPECTIONS BUREAU. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED GRADING AGENCY.
- SAWN LUMBER PROPERTIES

MEMBER USE	F _b (PSI)	F _v (PSI)	E (PSI)	F _c (PSI)	SPECIES AND GRADE
TOP PLATES WITH THICKNESS LESS THAN OR EQUAL TO 4"	900	180	1,600,000	1350	DOUGLAS FIR-LARCH #2
STUDS	700	180	1,400,000	850	DOUGLAS FIR-LARCH STUD

- AT WOOD STUD WALLS, WOOD PLATE ANCHOR RODS SHALL BE 1/2" DIAMETER PLACED NOT TO EXCEED 4'-0" O.C. UNLESS NOTED OTHERWISE. ANCHOR RODS SHALL BE PLACED AT ALL JAMBS, CORNERS, INTERSECTIONS, AND WALL ENDS. ALL BOTTOM PLATES SHALL HAVE A MINIMUM OF 2 ANCHOR RODS. ALL FOUNDATION PLATES OR SILLS AND SLEEPERS ON A CONCRETE SLAB, WHICH IS IN DIRECT CONTACT WITH EARTH, AND SILLS WHICH REST ON CONCRETE OR MASONRY FOUNDATIONS, SHALL BE TREATED WOOD AND MARKED OR BRANDED BY AN APPROVED AGENCY.
- JOIST HANGERS AND OTHER MISCELLANEOUS FRAMING ANCHORS SHALL BE AS MANUFACTURED BY SIMPSON COMPANY OR OTHER MANUFACTURER WITH I.C.C. APPROVAL. ALL NAIL HOLES IN JOIST HANGERS AND MISCELLANEOUS FRAMING ANCHORS SHALL BE FILLED WITH NAILS PER MANUFACTURERS PUBLISHED NAIL SIZES.
- DO NOT NOTCH OR DRILL JOISTS, BEAMS OR LOAD BEARING STUDS WITHOUT PRIOR APPROVAL OF STRUCTURAL ENGINEER. DOUBLE UP FLOOR JOISTS UNDER PARTITIONS. PROVIDE 2" SOLID BLOCKING AT SUPPORT OF ALL JOISTS. DOUBLE UP STUDS AT JAMBS AND UNDER BEAMS IN BEARING WALLS. PROVIDE 2 X SOLID BLOCKING AT MID-HEIGHT OF BEARING STUD WALLS. ALL NAILING NOT NOTED SHALL BE ACCORDING TO TABLE 2304.9.1 (IBC).
- ALL PREFABRICATED WOOD JOISTS AND TRUSSES SHALL HAVE TOP FLANGES OR CHORDS FABRICATED FROM MATERIAL WITH A SPECIFIC GRAVITY OF 0.50 OR GREATER.
- PREFABRICATED WOOD I JOISTS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH A CURRENT I.C.C. REPORT.
- WOOD I JOIST SIZES ARE AS INDICATED ON PLANS.

- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SEALED CALCULATIONS FOR ALL WOOD I JOISTS FOR REVIEW PRIOR TO MANUFACTURE.
- ALL WOOD I JOISTS SHALL BE DESIGNED FOR AN ADDITIONAL 200 LB. POINT LOAD ANYWHERE ALONG THE SPAN.
- ADDITIONAL WOOD I JOISTS WILL BE SUPPLIED AS REQUIRED TO SUPPORT MECHANICAL EQUIPMENT.
- LIVE LOAD DEFLECTIONS OF WOOD I JOISTS SHALL BE LIMITED TO SPAN/240 AT SIMPLE SPAN ROOF MEMBERS AND 2X SPAN/240 AT CANTILEVER ROOF MEMBERS.
- WOOD I JOISTS ARE DEFERRED SUBMITTAL ITEM.
- PREFABRICATED WOOD TRUSSES SHALL BE DESIGNED TO SUPPORT THEIR OWN WEIGHT PLUS SUPERIMPOSED DEAD AND LIVE LOADS STATED IN THE GENERAL NOTES. BRIDGING AND PERMANENT BRACING REQUIRED FOR TRUSSES ARE NOT SHOWN ON STRUCTURAL DRAWINGS. SUPPLY AND INSTALL ALL BRACING PER TRUSS MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SEALED CALCULATIONS FOR REVIEW PRIOR TO MANUFACTURE. CALCULATIONS AND SHOP DRAWINGS SHALL SHOW ANY SPECIAL DETAILS REQUIRED AT BEARING POINTS. ALL CONNECTORS SHALL HAVE CURRENT I.C.C. APPROVAL AND SHALL BE DESIGNED AND SIZED FOR TWICE THE CALCULATED LOAD. NO OFF-SETS FOR CONNECTIONS WILL BE PERMITTED. ALL TOP AND BOTTOM CHORD MATERIAL SHALL BE FINGER JOINTED AT SPLICES AND TENSION TESTED TO A MINIMUM OF 1.2 TIMES THE ALLOWABLE TENSION PARALLEL TO THE GRAIN (PER NATIONAL DESIGN SPECIFICATIONS).
- ALL PREFABRICATED WOOD TRUSSES SHALL BE CAMBERED FOR THE DESIGN DEAD LOAD.
- ALL PREFABRICATED WOOD TRUSSES SHALL BE DESIGNED FOR AN ADDITIONAL 200 LB. POINT LOAD ANYWHERE ALONG THE SPAN.
- ADDITIONAL PREFABRICATED WOOD TRUSSES SHALL BE SUPPLIED AS REQUIRED TO SUPPORT MECHANICAL EQUIPMENT.
- LIVE LOAD DEFLECTIONS OF PREFABRICATED WOOD TRUSSES SHALL BE LIMITED TO SPAN/240 AT SIMPLE SPAN ROOF MEMBERS AND 2X SPAN/240 AT CANTILEVER ROOF MEMBERS.
- PREFABRICATED WOOD TRUSSES ARE A DEFERRED SUBMITTAL ITEM.

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SCALE

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SANDY CITY - NEW SEVERSON WELLHOUSE

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L. POST-INSTALLED ANCHORS:

1. POST INSTALLED ANCHOR SYSTEMS SHALL COMPLY WITH THE LATEST REVISION OF ICC-ES ACCEPTANCE CRITERIA AND HAVE A VALID ICC-ES REPORT IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE.
2. EXPANSION BOLTS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:
 - a. HILTI HSL-3 CARBON STEEL HEAVY DUTY EXPANSION ANCHOR (ICC-ES REPORT ESR-1545).
 - b. HILTI HDA CARBON AND STAINLESS STEEL UNDERCUT ANCHOR (ICC-ES REPORT ESR-1546).
 - c. HILTI KWIK BOLT TZ CARBON AND STAINLESS STEEL ANCHORS (ICC-ES REPORT ESR-1917).
 - d. POWERS POWER-STUD+SD2 ANCHOR (ICC-ES REPORT ESR-2502).
 - e. POWERS POWER-STUD+SD1 (ICC-ES REPORT ESR-2818).
 - f. SIMPSON STRONG-TIE STRONG-BOLT ANCHOR (ICC-ES REPORT ESR-1771).
3. ADHESIVE ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:
 - a. HILTI HIT-RE 500-SD ADHESIVE ANCHOR (ICC-ES REPORT ESR-2322).
 - b. SIMPSON STRONG-TIE SET-XP EPOXY ADHESIVE ANCHOR (ICC-ES REPORT ESR-2508).
 - c. POWERS PE 1000+ EPOXY ADHESIVE ANCHOR (ICC-ES REPORT ESR-2583).
4. SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING:
 - a. POWERS WEDGE-BOLT+ SCREW ANCHOR (ICC-ES REPORT ESR-2526).
 - b. SIMPSON STRONG-TIE TITEN HD SCREW ANCHOR (ICC-ES REPORT ESR-2713).
5. ANCHORS IN CONCRETE OVER STEEL DECK SHALL BE ONE OF THE FOLLOWING:
 - a. HILTI KWIK BOLT TZ CARBON AND STAINLESS STEEL ANCHORS (ICC-ES REPORT ESR-1917).
 - b. HILTI HIT-RE 500-SD ADHESIVE ANCHORS (ICC-ES REPORT ESR-2322).
 - c. SIMPSON STRONG-TIE STRONG-BOLT WEDGE ANCHOR (ICC-ES REPORT ESR-1771).
 - d. SIMPSON STRONG-TIE TITEN HD SCREW ANCHOR (ICC-ES REPORT ESR-2713).
6. EXPANSION BOLTS IN MASONRY SHALL BE ONE OF THE FOLLOWING:
 - a. HILTI KWIK BOLT 3 (ICC-ES REPORT ESR-1385).
 - b. SIMPSON STRONG-TIE WEDGE-ALL ANCHOR (ICC-ES REPORT ESR-1396).
7. ADHESIVE ANCHORS IN MASONRY SHALL BE ONE OF THE FOLLOWING:
 - a. HILTI HIT HY 150 MAX ADHESIVE ANCHOR (ICC-ES REPORT ESR-1967).
 - b. HILTI HIT HY 150 ADHESIVE ANCHOR (ICC-ES REPORT ESR-2678).
 - c. SIMPSON STRONG-TIE SET ADHESIVE ANCHOR (ICC-ES REPORT ESR-1772).
8. SCREW ANCHORS IN MASONRY SHALL BE ONE OF THE FOLLOWING:
 - a. HILTI HUS-H CONCRETE MASONRY SCREW ANCHOR (ICC-ES REPORT ESR-2369).
 - b. POWERS WEDGE-BOLT+ SCREW ANCHOR (ICC-ES REPORT ESR-1678).
 - c. SIMPSON STRONG-TIE TITEN HD SCREW ANCHOR (ICC-ES REPORT ESR-1058).
9. ANCHORS INSTALLED IN THE BOTTOM OF CONCRETE OVER STEEL DECK SHALL BE INSTALLED IN THE BOTTOM FLUTE ONLY.
10. ANCHORS ARE NOT TO BE INSTALLED UNTIL CONCRETE OR GROUT HAS REACHED ITS DESIGN STRENGTH.
11. FOR ANCHOR EMBEDMENT, SEE DRAWINGS OR TYPICAL DETAIL. USE EMBEDMENT RECOMMENDED BY MANUFACTURER WHERE NO EMBEDMENT IS SHOWN.
12. MANUFACTURER'S INSTALLATION TRAINING AND CERTIFICATION IS REQUIRED ON ALL POST-INSTALLED ANCHORS FOR ANCHOR INSTALLER.

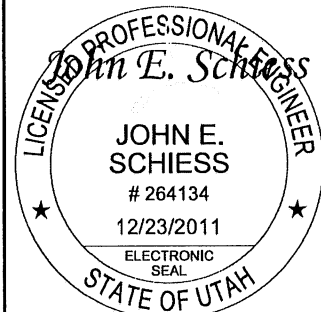
M. SPECIAL STRUCTURAL INSPECTIONS:

THE TYPES OF WORK LISTED BELOW SHALL BE INSPECTED BY A SPECIAL INSPECTOR.

1. ALL SPECIAL INSPECTORS SHALL BE UNDER THE SUPERVISION OF A REGISTERED CIVIL OR STRUCTURAL ENGINEER.
2. THE QUALIFICATIONS OF ALL SPECIAL INSPECTORS SHALL BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
3. THE MINIMUM QUALIFICATIONS FOR THE SPECIAL INSPECTORS ARE AS FOLLOWS:
 - 3.1 CONCRETE AND PRESTRESSED CONCRETE INSPECTION - I.C.C. CERTIFICATION IN REINFORCED CONCRETE AND PRESTRESSED CONCRETE OR E.I.T. CERTIFICATION.
 - 3.2 STRUCTURAL WELDING INSPECTION
 - a. VISUAL TESTING - I.C.C. CERTIFICATION IN STRUCTURAL STEEL AND WELDING OR A.W.S. CERTIFIED WELD INSPECTOR (C.W.I.).
 - b. NON-DESTRUCTIVE TESTING - A.W.S. C.W.I.
 - 3.3 EXPANSION/ADHESIVE ANCHOR INSPECTION - I.C.C. CERTIFICATION IN REINFORCED CONCRETE AND MASONRY OR E.I.T. CERTIFICATION.
 - 3.4 STRUCTURAL MASONRY INSPECTION - I.C.C. CERTIFICATION IN MASONRY OR E.I.T. CERTIFICATION.
4. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
 - 4.1 THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK REQUIRING SPECIAL INSPECTION FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
 - 4.2 THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO BE KEPT AT THE SITE FOR USE BY THE BUILDING OFFICIAL, THE CONTRACTOR AND THE STRUCTURAL ENGINEER OF RECORD. IF SPECIAL INSPECTION IS PROVIDED BY ANYONE OTHER THAN THE STRUCTURAL ENGINEER OF RECORD, INSPECTION REPORTS SHALL BE SUBMITTED TO THE OFFICE OF THE STRUCTURAL ENGINEER ON A WEEKLY BASIS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
 - 4.3 UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
5. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR:
 - 5.1 NOTIFY THE RESPONSIBLE INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORKING DAY (24 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED.
 - 5.2 ALL WORK REQUIRING SPECIAL STRUCTURAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT IS OBSERVED BY THE SPECIAL STRUCTURAL INSPECTOR.
6. SPECIAL INSPECTION (INSP) AND MATERIAL TESTING (TEST) MATRIX

7. CONTRACTOR TO CONTRACT WITH AND PAY FOR SPECIAL INSPECTIONS THROUGH AN INDEPENDENT SPECIAL STRUCTURAL INSPECTION FIRM OR TESTING LAB.

MATERIAL	TASK	FREQUENCY		RESPONSIBLE FIRM
		CONTINUOUS	PERIODIC	
CAST-IN-PLACE CONCRETE	REINFORCING STEEL, AND PLACEMENT	-	INSP	SSI FIRM
	USE OF REQUIRED CONCRETE DESIGN MIX	-	INSP	SSI FIRM
	SHAPE, LOCATION AND DIMENSIONS OF CONCRETE MEMBER	-	INSP	SSI FIRM
	BOLTS INSTALLED IN CONCRETE	INSP	-	SSI FIRM
	REINFORCED CONCRETE PLACEMENT	INSP	-	SSI FIRM
	ADHESIVE AND EXPANSION ANCHORS	INSP	-	SSI FIRM
	SPECIFIED CURING TECHNIQUES	-	INSP	SSI FIRM
	CONCRETE MATERIALS	-	TEST	TESTING LAB
UNIT MASONRY ASSEMBLIES	MORTAR MATERIALS	-	TEST	TESTING LAB
	GROUT MATERIALS	-	TEST	TESTING LAB
	UNIT MASONRY MATERIALS	-	TEST	TESTING LAB
	SITE-MIXED MORTAR	-	INSP	SSI FIRM
	PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS	-	INSP	SSI FIRM
	GROUT SPACE PRIOR TO GROUTING	-	INSP	SSI FIRM
	REINFORCEMENT AND CONNECTORS	-	INSP	SSI FIRM
	GROUT PLACEMENT	INSP	-	SSI FIRM
	ADHESIVE AND EXPANSION ANCHORS	INSP	-	SSI FIRM
	WOOD	WOOD FRAMING FOR CONFORMANCE WITH CONSTRUCTION DOCUMENTS	-	INSP



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