PUB. SEWER STATUS VERIFIED BY _____

ISSUE DATE: 10-16-12

APPROVAL DATE: 11/15/12

PERMIT

P 538101

A REPAIR

Minor Septic Repair
ON-SITE SEWAGE DISPOSAL SYSTEM
HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH

Department of Public Works IS PERMITTED TO INSTALL ☐ ALTER ☒

ADDRESS: _____ PHONE NUMBER: 410-313-6419

SUBDIVISION: DPW Dayton Shop LOT NUMBER: _____

ADDRESS: 4301 Route 32 PROPERTY OWNER: Ho. Co. Government

SEPTIC TANK CAPACITY (GALLONS): N/A

PUMP CHAMBER CAPACITY (GALLONS): _____

NUMBER OF BEDROOMS: _____

SQUARE FEET OF HOUSE: _____

LINEAR FEET OF TRENCH REQUIRED: _____

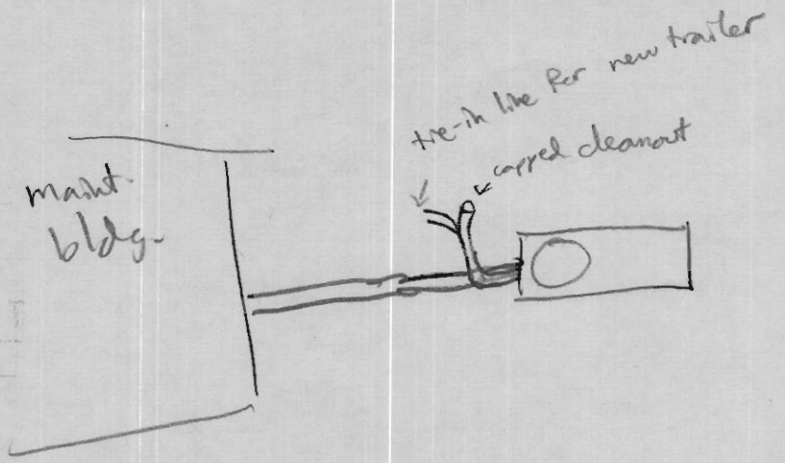
TRENCHES:	
LOCATION:	Maintenance Building
PURPOSE:	Tie in new trailer to existing sewer line for maintenance building. Leave work exposed and call for inspection by Environmental Sanitarian.

PLANS APPROVED: Jeff Williams DATE: 10/16/12

NOTE: PERMIT VOID AFTER 2 YEARS
NOTE: CONTRACTOR RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION INSPECTION FOR ALL INSTALLATIONS
NOTE: WATERTIGHT SEPTIC TANKS REQUIRED
NOTE: ALL PARTS OF SEPTIC SYSTMEM SHALL BE 100 FEET FROM ANY WATER WELL
NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS

NEITHER THE HOWARD COUNTY COUNCIL OR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM
PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT
CALL 410-313-1771 FOR INSPECTION OF SEPTIC SYSTEM

NOT TO SCALE



ROAD NAME

TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM

NUMBER OF TRENCHES _____

TOTAL LENGTH _____

ABSORPTION AREA _____

DISTRIBUTION BOX LEVEL _____

DISTRIBUTION BOX BAFFLE _____

DISTRIBUTION BOX PORT _____

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL _____

MANUFACTURER _____

CAPACITY _____ GAL

SEAM LOC _____

TANK LID DEPTH _____

BAFFLES _____

BAFFLE FILTER _____

MANHOLE LOC _____

6" PORT LOC _____

WATERTIGHT TEST _____

SLOTTED _____

DATE ON LID _____

PUMP/SEPTIC TANK LEVEL _____

MANUFACTURER _____

CAPACITY _____ GAL

SEAM LOC _____

TANK LID DEPTH _____

BAFFLES _____

BAFFLE FILTER _____

MANHOLE LOC _____

6" PORT LOC _____

WATERTIGHT TEST _____

SLOTTED _____

DATE ON LID _____

PRE-CONSTRUCTION:

INSTALLATION:

11/15/12 - I observed a manhole riser installed on septic tank and a new cleanout installed on bldg. sewer line 3' in front of tank where the trailer sewer line will tie-in. OK to backfill. JW

FINAL INSPECTOR J. Williams DATE OF APPROVAL 11/15/12

GENERAL NOTES:

1. ACCESS TO BUILDING FOR PERSONS IN WHEELCHAIRS IS DESIGNED BY AND FIELD BUILT BY OTHERS AND SUBJECT TO LOCAL JURISDICTION APPROVAL. THE PRIMARY ENTRANCE MUST BE ACCESSIBLE.
2. ALL DOORS SHALL BE OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY, TOOL, SPECIAL KNOWLEDGE OR EFFORT. MANUALLY OPERATED FLUSH BOLTS OR SURFACE BOLTS SHALL NOT BE USED.
3. ALL GLAZING WITHIN A 24 INCH ARC OF DOORS, WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR, AND ALL GLAZING IN DOORS SHALL BE SAFETY, TEMPERED OR ACRYLIC PLASTIC SHEET.
4. ALL STEEL STRAPS REFERENCED ON FLOOR PLAN SHALL BE 1.5 INCH x 26 GA. WITH 8 – 15 GA. x 7/16 INCH CROWN x 1 INCH STAPLES EACH END OF STRAP OR EQUIVALENT FROM RIDGE BEAM TO COLUMN, AND COLUMN TO FLOOR.
5. PORTABLE FIRE EXTINGUISHER PER N.F.P.A.–10 (INSTALLED BY OTHERS ON SITE, AND SUBJECT TO LOCAL JURISDICTION.
6. PROVISIONS FOR EXIT DISCHARGE LIGHTING ARE THE RESPONSIBILITY OF THE BUILDING OWNER AND SUBJECT TO LOCAL JURISDICTION APPROVAL WHEN NOT SHOWN ON THE FLOOR PLAN (INCLUDING EMERGENCY LIGHTING, WHEN REQUIRED).
7. WHEN LOW SIDES OF ROOF PROVIDE LESS THAN 6" OF OVERHANG, GUTTERS AND DOWN SPOUTS SHALL BE SITE INSTALLED, DESIGNED BY OTHERS, SUBJECT TO LOCAL JURISDICTION APPROVAL.
8. IN WIND–BORNE DEBRIS REGIONS, EXTERIOR GLAZING SHALL BE IMPACT RESISTANT OR PROTECTED WITH AN IMPACT RESISTANT COVERING MEETING THE REQUIREMENTS OF AN APPROVED IMPACT RESISTANT STANDARD, OR ASTM E1996. WIND–BORNE DEBRIS REGIONS ARE DESIGNATED IN SECTION 1609 OF THE IBC.
9. WINDOWS AND DOORS MUST BE CERTIFIED FOR COMPLIANCE WITH THE WIND DESIGN PRESSURE FOR COMPONENTS AND CLADDING.
10. STRUCTURAL DETAILS NOT INCLUDED IN THIS PLAN SET ARE TO BE CONSTRUCTED ACCORDING TO THE MANUFACTURERS STATE APPROVED BUILDING SYSTEM MANUAL.

ELECTRICAL NOTES:

1. ALL CIRCUITS AND EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE APPROPRIATE ARTICLES OF THE NATIONAL ELECTRICAL CODE (NEC).
2. WHEN LIGHT FIXTURES ARE INSTALLED IN CLOSETS THEY SHALL BE SURFACE MOUNTED OR RECESSED. INCANDESCENT FIXTURES SHALL HAVE COMPLETELY ENCLOSED LAMPS. SURFACE MOUNTED INCANDESCENT FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 12 INCHES AND ALL OTHER FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 6 INCHES FROM "STORAGE AREA" AS DEFINED BY NEC 410–8(g).
3. WHEN WATER HEATERS ARE INSTALLED THEY SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE WATER HEATERS SERVED. THE BRANCH CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PERMITTED TO SERVE AS THE DISCONNECTING MEANS ONLY WHERE THE SWITCH OR CIRCUIT BREAKER IS WITHIN SIGHT FROM THE WATER HEATER OR IS CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
4. HVAC EQUIPMENT SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE EQUIPMENT SERVED. A UNIT SWITCH WITH A MARKED "OFF" POSITION THAT IS A PART OF THE HVAC EQUIPMENT AND DISCONNECTS ALL UNGROUNDED CONDUCTORS SHALL BE PERMITTED AS THE DISCONNECTING MEANS WHERE OTHER DISCONNECTING MEANS ARE ALSO PROVIDED BY A READILY ACCESSIBLE CIRCUIT BREAKER.
5. PRIOR TO ENERGIZING THE ELECTRICAL SYSTEM THE INTERRUPTING RATING OF THE MAIN BREAKER MUST BE DESIGNED AND VERIFIED AS BEING IN COMPLIANCE WITH SECTION 110–9 OF THE NEC BY LOCAL ELECTRICAL CONSULTANT.
6. THE MAIN ELECTRICAL PANEL AND FEEDERS ARE DESIGNED BY OTHERS, SITE INSTALLED AND SUBJECT TO LOCAL JURISDICTION APPROVAL.
7. ALL CIRCUITS CROSSING OVER MODULE MATING LINE(S) SHALL BE SITE CONNECTED WITH APPROVED ACCESSIBLE JUNCTION BOXES, OR CABLE CONNECTORS.
8. ALL RECEPTACLES INSTALLED IN WET LOCATIONS (EXTERIOR) SHALL BE IN WEATHER PROOF (WP) ENCLOSURES. THE INTEGRITY OF WHICH IS NOT AFFECTED WHEN AN ATTACHMENT PLUG CAP IS INSERTED OR REMOVED. THE RECEPT ITSELF SHALL ALSO BE LISTED FOR DAMP AND WET LOCATIONS AS PER 2011 NEC.
9. EXTERIOR LIGHTS NOT INTENDED FOR 24 HOUR USE SHALL BE CONNECTED TO A PHOTOCELL OR TIMER.

PLUMBING NOTES:

1. TOILETS SHALL BE ELONGATED WITH NONABSORBENT OPEN FRONT SEATS.
2. REST ROOM WALLS SHALL BE COVERED WITH NONABSORBENT MATERIAL TO A MINIMUM HEIGHT OF 48 INCHES A.F.F. FLOORS SHALL HAVEA SMOOTH, HARD, NONABSORBENT SURFACE THAT EXTENDS UPWARD ONTO THE WALLS AT LEAST 6 INCHES.
3. THIS UNIT MUST BE CONNECTED TO A PUBLIC WATER SUPPLY AND SEWER SYSTEM IF THESE ARE AVAILABLE.
4. ALL PLUMBING FIXTURES SHALL HAVE SEPARATE SHUTOFF VALVES.
5. WATER HEATER SHALL HAVE SAFETY PAN WITH 1 INCH DRAIN TO EXTERIOR, T & P RELIEF VALVE WITH DRAIN TO EXTERIOR, AND A SHUT OFF VALVE WITHIN 3 FEET ON A COLD WATER SUPPLY LINE.
6. DWV SYSTEM SHALL BE EITHER ABS OR PVC – DWV.
7. WATER SUPPLY LINES SHALL BE CPVC, OR COPPER; AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS LIMITATIONS AND INSTRUCTIONS.
8. WATER CLOSETS ARE TANK TYPE AND URINALS ARE FLUSH TANK TYPE UNLESS OTHERWISE SPECIFIED.
9. BUILDING DRAIN AND CLEANOUTS ARE DESIGNED AND SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL JURISDICTION APPROVAL.
10. SHOWERS SHALL BE CONTROLLED BY AN APPROVED MIXING VALVE WITH A MAXIMUM WATER OUTLET TEMPERATURE OF 120°F (48.8°C).
11. THERMAL EXPANSION DEVICE, IF REQUIRED BY WATER HEATER INSTALLED, AND IF NOT SHOWN ON PLUMBING PLAN, IS DESIGNED AND SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL APPROVAL.
12. WATER PIPES INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL INSULATION. WATER PIPING INSTALLED IN AN UNCONDITIONED ATTIC SHALL BE INSULATED WITH AN INSULATION OF R–6.5 MINIMUM.
13. PIPING IN UNCONDITIONED SPACES MUST BE PROTECTED WITH INSULATION HAVING A MINIMUM R FACTOR OF 6.5 IN ACCORDANCE WITH SECTION 305.6.
14. THE USE OF THIS BUILDING WITHOUT THE REQUIRED DRINKING FOUNTAIN IS SUBJECT TO APPROVAL BY AUTHORITY HAVING JURISDICTION.
15. CUSTOMER ASSUMES ALL RESPONSIBILITY FOR DRINKING WATER FACILITIES AND WHEN NOT SHOWN ON FLOOR PLAN.

MECHANICAL NOTES:

1. ALL SUPPLY AIR REGISTERS SHALL BE 10 INCHES x 10 INCHES ADJUSTABLE WITH 10 INCHES x 20 INCHES (INSIDE) OVERHEAD FIBERGLASS DUCT, UNLESS OTHERWISE SPECIFIED. DUCTS IN UNCONDITIONED SPACES SHALL HAVE R–5 MINIMUM INSULATION EXCEPT DUCTS EXPOSED TO VENTILATED ATTICS AND CRAWL SPACES SHALL HAVE R–6.5 INSULATION.
2. INTERIOR DOORS SHALL BE UNDERCUT 1.5 INCHES ABOVE FINISHED FLOOR FOR AIR RETURN AND/OR AS NOTED ON FLOOR PLAN.
3. HVAC EQUIPMENT SHALL BE EQUIPPED WITH OUTSIDE FRESH AIR INTAKES PROVIDING 20 CFM PER OCCUPANT.
4. EXHAUST FANS SHALL PROVIDE A MINIMUM OF 75 CFM FOR EACH WATER CLOSET AND URINAL.
5. VENT FANS SHALL BE DUCTED TO THE EXTERIOR AND TERMINATE AT AN APPROVED VENT CAP.

ELECTRICAL SCHEDULE 'A'

CIRCUIT	NOMENCLATURE	BREAKER (AMPS)	WIRE (CU.)
1, 3	HVAC	60A(2P)	6–2 #10 GRND.
2, 4	RECEPTACLES	20 A	12–2 NM
5, 7	LIGHTING/FAN	20 A	12–2 NM

ELECTRICAL PANEL SIZING:

DESCRIPTION	PANEL 'A'	KVA
GENERAL LIGHTING		
.0035 KW/SF X 845 SF X 1.25=		3.7
7 RECEPTS AT 180VA/1000=		1.3
WATER HEATER 6.5 KW =		–
1 FAN(S) AT .3 KW X 1.25=		.4
HVAC		10.5

TOTAL 15.9 KW
TOTAL/240 X 1000= 67 AMPS
INSTALL 100 AMP PANEL
120/240 V 1ø

ELECTRICAL SCHEDULE 'B'

CIRCUIT	NOMENCLATURE	BREAKER (AMPS)	WIRE (CU.)
1, 3	HVAC	60A(2P)	6–2 #10 GRND.
6, 8	WATER HEATER	30 A(2P)	10–2 NM
2, 4	RECEPTACLES	20 A	12–2 NM
5, 7	LIGHTING/FAN	20 A	12–2 NM

ELECTRICAL PANEL SIZING:

DESCRIPTION	PANEL 'A'	KVA
GENERAL LIGHTING		
.0035 KW/SF X 555 SF X 1.25=		2.5
8 RECEPTS AT 180VA/1000=		1.5
WATER HEATER 6.5 KW =		6.5
2 FAN(S) AT .3 KW X 1.25=		.8
HVAC		10.5

TOTAL 21.8 KW
TOTAL/240 X 1000= 91 AMPS
INSTALL 100 AMP PANEL
120/240 V 1ø

APPROVED **RADCO** APPROVED
Aug 24, 2012
P.WITHERINGTON

SITE INSTALLED ITEMS

THE FOLLOWING ITEMS HAVE NOT BEEN COMPLETED BY THE MANUFACTURER, HAVE NOT BEEN INSPECTED BY RADCO AND ARE NOT CERTIFIED BY THE STATE MODULAR LABEL. NOTE THAT THIS LIST DOES NOT NECESSARILY LIMIT THE ITEMS OF WORK AND MATERIAL THAT MAY BE REQUIRED FOR A COMPLETE INSTALLATION. ALL SITE RELATED ITEMS ARE SUBJECT TO LOCAL JURISDICTION APPROVAL. CODE COMPLIANCE MUST BE DETERMINED AT THE LOCAL LEVEL.

1. THE COMPLETE FOUNDATION SUPPORT AND TIE DOWN SYSTEM.
2. RAMPS, STAIRS AND GENERAL ACCESS TO THE BUILDING.
3. PORTABLE FIRE EXTINGUISHER(S).
4. BUILDING DRAINS, CLEANOUTS, DRINKING FOUNTAIN, AND HOOK–UP TO PLUMBING SYSTEM.
5. ELECTRICAL SERVICE HOOK–UP (INCLUDING FEEDERS) TO THE BUILDING.
6. THE MAIN ELECTRICAL PANEL AND SUB–FEEDERS
7. CONNECTION OF ELECTRICAL CIRCUITS CROSSING OVER MODULE MATELINE(S) – (MULTI–UNITS ONLY).
8. STRUCTURAL AND AESTHETIC INTERCONNECTIONS BETWEEN MODULES (MULTI–UNITS ONLY).
9. EXIT DISCHARGE LIGHTING (INCLUDING EMERGENCY)
10. WINDOW AND DOOR HIGH WIND STORM COVERINGS (PER CODE) SEE GENERAL NOTE 8.

STRUCTURAL LOAD LIMITATIONS

BUILDING OCCUPANCY CATEGORY: II
BUILDING RISK CATEGORY: II

FLOOR LIVE LOAD:
A. 50 PSF
B. 2000 LB. CONCENTRATED LOAD OVER 30 INCH x 30 INCH AREA LOCATED ANYWHERE ON FLOOR

ROOF LIVE LOAD:
A. 20 PSF

ROOF SNOW LOAD:
A. Pg = 35 PSF GROUND SNOW LOAD
B. Pf = 27.5 PSF FLAT ROOF SNOW LOAD
C. Ce = 1.0 SNOW EXPOSURE FACTOR
D. Is = 1.0 SNOW IMPORTANCE FACTOR
E. Ct = 1.1 SNOW THERMAL FACTOR

WIND LOAD: ASCE 7–10
A1. Vult = 130 MPH WIND SPEED
A2. Vasd = 95 MPH WIND SPEED
B. Iw = 1.0 WIND IMPORTANCE FACTOR
C. C WIND EXPOSURE CATEGORY
D. GCpi= 0.18 INTERNAL PRESSURE COEFFICIENT
E. Pr: ZONE 1: 34.6 PSF Pw: ZONE 4: 38.2 PSF
ZONE 2: 55.2 PSF ZONE 5: 46.0 PSF
ZONE 3: 92.9 PSF

F. THIS BUILDING IS NOT DESIGNED FOR PLACEMENT ON THE UPPER HALF OF A HILL OR ESCARPMENT EXCEEDING 15 FEET IN HEIGHT.

SEISMIC LOAD:
A. Ie = 1.0 SEISMIC IMPORTANCE FACTOR
B. D SITE CLASS
C. A13 SEISMIC FORCE RESISTING SYSTEM.
D. C SEISMIC DESIGN CATEGORY
E. EQUIVALENT LATERAL FORCE ANALYSIS PROCEDURE
F. Ss = ≤ .537 MAPPED SPECTRAL RESPONSE COEF.
G. S1 = ≤ .285 MAPPED SPECTRAL RESPONSE COEF.
H. Sds = ≤ .49 SPECTRAL RESPONSE COEFFICIENT
I. Sd1 = ≤ .19 SPECTRAL RESPONSE COEFFICIENT
J. V = 3256 LB DESIGN BASE SHEAR
K. R = 6.5 RESPONSE MODIFICATION COEFFICIENT
L. Cs = 0.08 SEISMIC RESPONSE COEFFICIENT

FLOOD LOAD:
THIS BUILDING IS NOT DESIGNED TO BE LOCATED IN A FLOOD HAZARD AREA.

BUILDING DESIGN PARAMETERS

1.	USE/OCCUPANCY:	BUSINESS
2.	CONSTRUCTION TYPE:	VB
3.	SPRINKLER SYSTEM:	NO
4.	BUILDING AREA:	1400 S.F.
5.	BUILDING HEIGHT:	≤ 15 FEET
6.	NUMBER OF STORIES:	1
7.	NUMBER OF MODULES:	2
8.	OCCUPANT LOAD 14 BASED ON 100 SF/PERSON	
9.	EXTERIOR WALL FIRE RATING:	NOT RATED

10. THIS BUILDING MUST BE INSTALLED WITH THE FIRE SEPARATION DISTANCES REQUIRED BY IBC TABLE 602 AND SECTION 704.3.
11. ENGERGY CODE COMPLIANCE: SEE ATTACHED ENERGY CALCULATIONS.
12. MANUFACTURERS DATA PLATE, STATE LABELS AND RADCO LABELS ARE TO BE LOCATED ADJACENT TO ELECTRICAL PANEL.

MARYLAND NOTES:

1. REFER TO STATE PACKAGE PAGE NO. D24.0 FOR REQUIRED DUCT PROTECTION AT CONNECTION TO HVAC UNIT.
2. THE FOLLOWING NOTE SHALL BE ON THE BLDG. DATA PLATE: THIS BUILDING HAS NOT BEEN DESIGNED FOR AND IS NOT APPROVED FOR INSTALLATION IN THE FOLLOWING MARYLAND COUNTIES:
BALTIMORE, GARRETT, ALLEGANY
3. HVAC SYSTEM SHALL COMPLY WITH NFPA 90B WHEN BUILDING VOLUME DOES NOT EXCEED 25,000 CUBIC FEET, OTHERWISE HVAC SYSTEM SHALL COMPLY WITH NFPA 90A.
4. THESE PLANS ARE PREPARED TO FACILITATE CONSTRUCTION OF THE PRE–ENGINEERED FACTORY BUILT MODULAR BUILDING, AND THEY INCLUDE MINIMUM ON–SITE SUPPORT AND TIE DOWN REQUIREMENTS FOR THE MODULAR BUILDING. THE PROJECT ARCHITECT OF RECORD IS RESPONSIBLE FOR INCORPORATION AND COORDINATION OF THESE PLANS INTO THE OVERALL PROJECT DESIGN.
5. TO LOCAL BUILDER AND/OR SITE DEVELOPER: ALL SITE WORK INCLUDING THE LOCATION OF THE BUILDING, IS REQUIRED TO BE REVIEWED AND APPROVED BY A MD. REG. ARCH. OR ENG. TO VERIFY CODE COMPLIANCE INCLUDING BUT NOT LIMITED TO FIRE RESISTANCE RATINGS FOR EXTERIOR PROTECTION, MEANS OF EGRESS, HEIGHT AND AREA LIMITATIONS. OTHER PERTINENT SITE RELATED MATTERS. DOCUMENTS RALATED TO SITE WORK, INCLUDING SITE AND DEVELOPMENT DRAWINGS, SHALL BE SUBMITTED TO THE LOCAL GOVERNMENT AGENCY FOR REVIEW AND APPROVAL.

WINDOW & DOOR SPECIFICATIONS

1. DBL. PANE WINDOWS ARE REQUIRED FOR ALL CLIMATE ZONES. SEE THE COMCHECK ENERGY CALCULATIONS FOR THE MAXIMUM ALLOWED U–FACTOR AND SHGC.
2. THE MAXIMUM ALLOWABLE WINDOW AIR LEAKAGE RATE IS 0.3 CFM PER SQUARE FEET OF WINDOW AREA.
3. THE MAXIMUM ALLOWABLE EXTERIOR DOOR AIR LEAKAGE RATE IS 0.5 CFM PER SQUARE FEET OF DOOR AREA.

ACCESSIBILITY NOTES:

1. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SIGN SHALL BE DISPLAYED AT ALL ACCESSIBLE RESTROOM FACILITIES AND AT ACCESSIBLE BUILDING ENTRANCES UNLESS ALL ENTRANCES ARE ACCESSIBLE. INACCESSIBLE ENTRANCES SHALL HAVE DIRECTIONAL SIGNS INDICATING THE ROUTE TO THE NEAREST ACCESSIBLE ENTRANCE.
2. ACCESSIBLE DRINKING FOUNTAINS SHALL HAVE A SPOUT HEIGHT NO HIGHER THAN 36 INCHES ABOVE THE FLOOR AND EDGE OF BASIN NO HIGHER THAN 34 INCHES ABOVE THE FLOOR FOR INDIVIDUALS IN WHEELCHAIRS. ADDITIONALLY, DRINKING WATER PROVISIONS SHALL BE MADE FOR INDIVIDUALS WHO HAVE DIFFICULTY BENDING.
3. WHERE STORAGE FACILITIES SUCH AS CABINETS, SHELVES, CLOSETS AND DRAWERS ARE PROVIDED AT LEAST ONE TYPE PROVIDED SHALL CONTAIN STORAGE SPACE COMPLYING WITH THE FOLLOWING: DOORS ETC. TO SUCH SPACES SHALL BE ACCESSIBLE (I.E. TOUCH LATCHES, U–SHAPED PULLS); SPACES SHALL BE 15 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR FOR FORWARD REACH OR SIDE REACH; CLOTHES RODS OR COAT HOOKS SHALL BE A MAXIMUM OF 48 INCHES ABOVE THE FLOOR (46 INCHES MAXIMUM WHEN DISTANCE FROM WHEEL CHAIR TO ROD EXCEEDS 10 INCHES). SHELVES IN KITCHENS OR TOILET ROOMS SHALL BE 40 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE IN FLOOR.
4. CONTROLS, DISPENSERS, RECEPTACLES AND OTHER OPERABLE EQUIPMENT SHALL BE NO HIGHER THAN 48 INCHES ABOVE THE FLOOR. RECEPTACLES ON WALLS SHALL BE MOUNTED NO LESS THAN 15 INCHES ABOVE THE FLOOR. EXCEPTION; HEIGHT LIMITATIONS DO NOT APPLY WHERE THE USE OF SPECIAL EQUIPMENT DICTATES OTHERWISE OR WHERE ELECTRICAL RECEPTACLES ARE NOT NORMALLY INTENDED FOR USE BY BUILDING OCCUPANTS.
5. WHERE EMERGENCY WARNING SYSTEMS ARE PROVIED, THEY SHALL INCLUDE BOTH AUDIBLE AND VISUAL ALARMS. THE VISUAL ALARMS SHALL BE LOCATED THROUGHOUT, INCLUDING RESTROOM, AND PLACED 80 INCHES ABOVE THE FLOOR OR 6 INCHES BELOW CEILING, WHICH–EVER IS LOWER.
6. ALL DOORS SHALL BE OPENABLE BY A SINGLE EFFORT. DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12 DEGREES SHALL BE 5 SECONDS MINIMUM. THE MAXIMUM FORCE REQUIRED FOR PUSHING OR PULLING OPEN DOORS OTHER THAN FIRE DOORS SHALL NOT EXCEED 5 LBS. FOR ALL SLIDING, FOLDING, AND INTERIOR HINGED DOORS.
7. FLOOR SURFACES SHALL BE STABLE, FIRM, AND SLIP–RESISTANT. CHANGES IN LEVEL BET–WEEN 0.25 INCH AND 0.5 INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2 CHANGES IN LEVEL GREATER THAN 0.5 INCH REQUIRE RAMPS. CARPET PILE THICKNESS SHALL BE 0.5 MAX. GRATINGS IN FLOOR SHALL HAVE SPACES NO GREATER THAN 0.5 INCH WIDE IN ONE DIRECTION. DOORWAY THRESHOLDS SHALL NOT EXCEED 0.5 INCH IN HEIGHT.
8. ACCESSIBLE WATER CLOSETS SHALL BE 17 INCHES TO 19 INCHES, MEASURED FROM THE FLOOR TO THE TOP OF THE SEAT. GRAB BARS SHALL BE 36 INCHES LONG MINIMUM WHEN LOCATED BEHIND WATER CLOSET AND 42 INCHES MINIMUM WHEN LOCATED ALONG SIDE OF WATER CLOSET, AND SHALL BE MOUNTED 33 INCHES TO 36 INCHES ABOVE THE FLOOR. IN ADDITION, A VERTICAL GRAB BAR 18 INCHES MINIMUM IN LENGTH SHALL BE MOUNTED ON THE SIDEWALL WITH THE BOTTOM OF THE BAR LOCATED BETWEEN 39 AND 41 INCHES ABOVE THE FLOOR, AND WITH THE CENTER LINE OF THE BAR LOCATED BETWEEN 39 INCHES AND 41 INCHES FROM THE REAR WALL.
9. ACCESSIBLE URINALS SHALL BE STALL–TYPE OR WALL HUNG WITH ELONGATED RIMS AT A MAXIMUM OF 17 INCHES ABOVE THE FLOOR.
10. ACCESSIBLE LAVATORIES AND SINKS SHALL BE MOUNTED WITH THE RIM NO HIGHER THAN 34 INCHES ABOVE THE FLOOR. KNEE CLEARANCE OF AT LEAST 27 INCHES HIGH MUST BE PROVIDED WITH A MINIMUM DEPTH OF 8 INCHES BENEATH THE FIXTURE, AND 9 INCHES HIGH MINIMUM WITH A MINIMUM DEPTH OF 11 INCHES BENEATH THE FIXTURE. THE KNEE SPACE MUST BE AT LEAST 30 INCHES WIDE.
11. HOT WATER AND DRAIN PIPES UNDER ACCESSIBLE LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. INSULATION OR PROTECTION MATERIALS MAY BE SITE INSTALLED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER ACCESSIBLE LAVATORIES AND SINKS.
12. ACCESSIBLE LAVATORIES AND SINKS SHALL HAVE ACCESIBLE FAUCETS (I.E. LEVER–OPERATED, PUSH TYPE, ELECTRONICALLY CONTROLLED).
13. MIRRORS LOCATED ABOVE LAVATORIES, SINKS OR COUNTERS SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE A MAXIMUM OF 40 INCHES ABOVE THE FLOOR. OTHER MIRRORS IN TOILET ROOMS SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 35 INCHES MAXIMUM ABOVE THE FLOOR.
14. GRAB BARS HAVING A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF 1.25 INCHES MINIMUM AND 2.0 INCHES MAXIMUM. THE SPACE BETWEEN THE GRAB BAR AND THE WALL SHALL BE 1.5 INCHES.
15. WATER CLOSET FLUSH CONTROL SHALL BE INSTALLED A MAXIMUM OF 36 INCHES ABOVE THE FLOOR AND SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET.
16. DOORS TO ALL ACCESSIBLE SPACES SHALL HAVE ACCESSIBLE HARDWARE (I.E. LEVER – OPERRATED, PUSHTYPE, U–SHAPED) MOUNTED WITH OPERABLE PARTS BETWEEN 34 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR.
17. TOILET STALL DOORS SHALL BE THE SELF–CLOSING TYPE.
18. A TOWEL DISPENSER SHALL BE LOCATED ADJACENT TO ALL ACCESSIBLE LAVTORIES.

CODE SUMMARY:

STATE	BUILDING	ELECTRICAL	MECHANICAL	PLUMBING	ACCESSIBILTY	ENERGY CODE
MARYLAND	2012 IBC W/ MD AMENDS. 2009 NFPA 101 W/MD AMENDS	2011 NEC	2012 IMC.	2012 IPC W/ MD. AMEND.	ADAAG	2012 IECC

PROFESSIONAL CERTIFICATION:

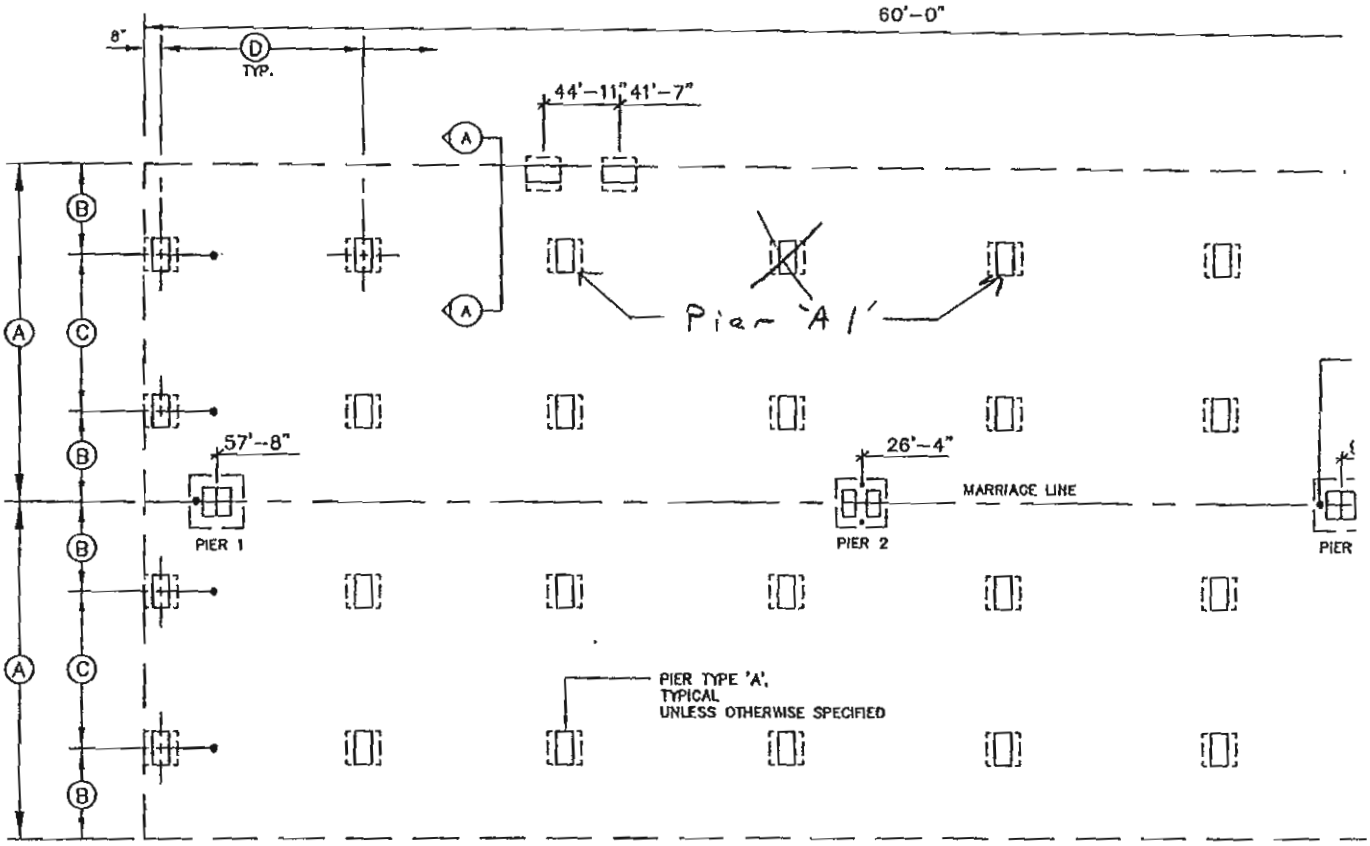
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 8588
EXPIRATION DATE: 6–6–14

STATE OF MARYLAND
JAMES E. BRADLEY
August 24, 2012
No. 8588
PROFESSIONAL ENGINEER

CONSULTING ENGINEER | JAMES BRADLEY, P.E. – 212 FOX TRAIL – PARKESBURG, PA. 19365 – (610) 857–2458

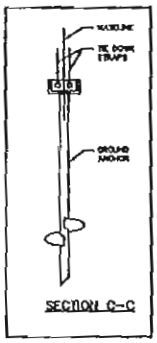
SPECIALIZED STRUCTURES INC.
2400 SPRINGHEAD ROAD WILLACOOCHEE, GA 31650
1–912–384–7565 FAX: 1–912–384–4943

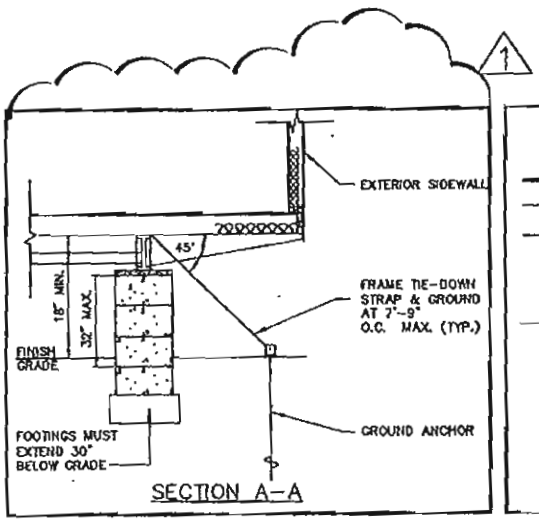
DATE: 6–28–12	THIRD PARTY: RADCO 5456 CRENSHAW ST. TAMPA, FLORIDA 33634 813–243–0370
SCALE : AS NOTED	
CODES: MD.	
LABELS: RADCO	REVISIONS: BY: J.B.
SSI4057 24 x 60 BUSINESS	SHEET
FRAME SIZE: (2) 11'–8" x 60'–0"	
COVER SHEET	DESTINATION: DAYTON — 1 OF 6

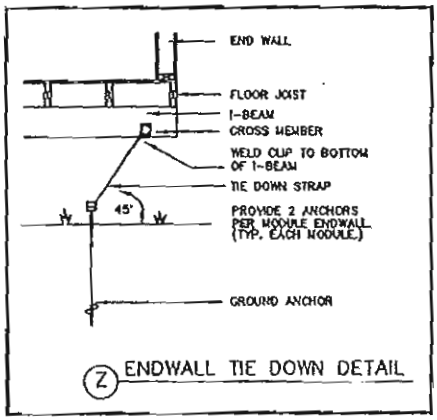


MARRIAGE WALL PIER REQUIREMENTS

PIER NUMBER	MINIMUM SOIL BEARING CAPACITY	PIER TYPE	NUMBER OF VERTICAL TIE DOWN STRAPS REQ'D (EACH MODULE)
1	2000 PSF	D	1
	3000 PSF	C	1
2		D	2
		C	2







APPROVED **RADCO** APPROVED
Oct 14, 2012
R.JOHNSON

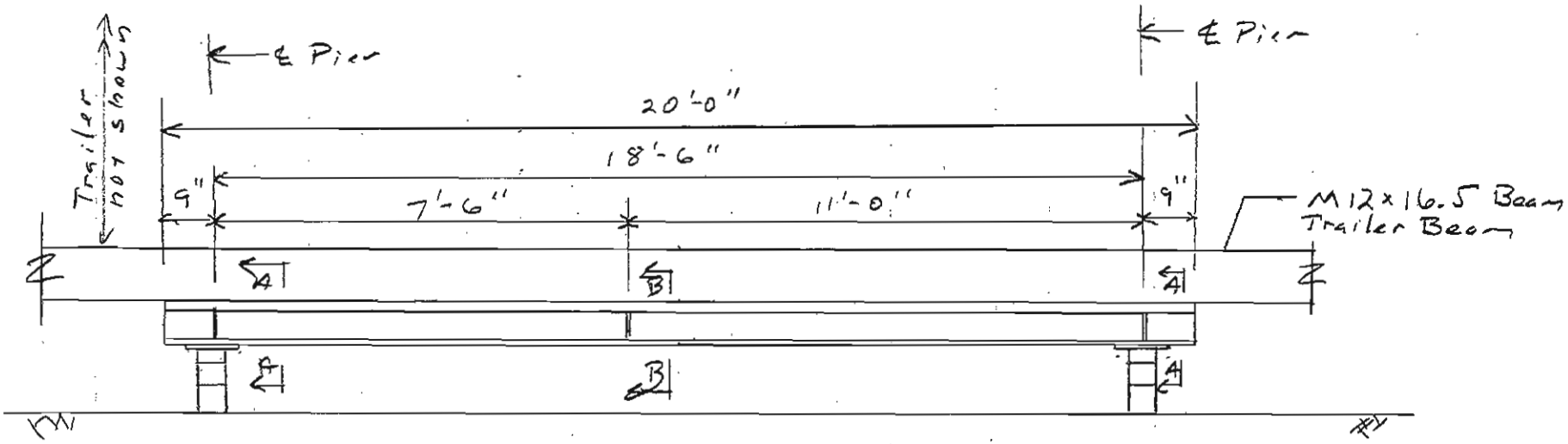
FOUNDATION DIMENSIONS

A MODULE WIDTH	B PIER TO MODULE EDGE	C STEEL BEAM SPACING
11'-8"	22 1/4"	95 1/2"

D MAXIMUM PIER SPACING	MINIMUM SOIL BEARING CAPACITY
6'-8"	2000 PSF
8'-9"	3000 PSF

DESIGN LOADS

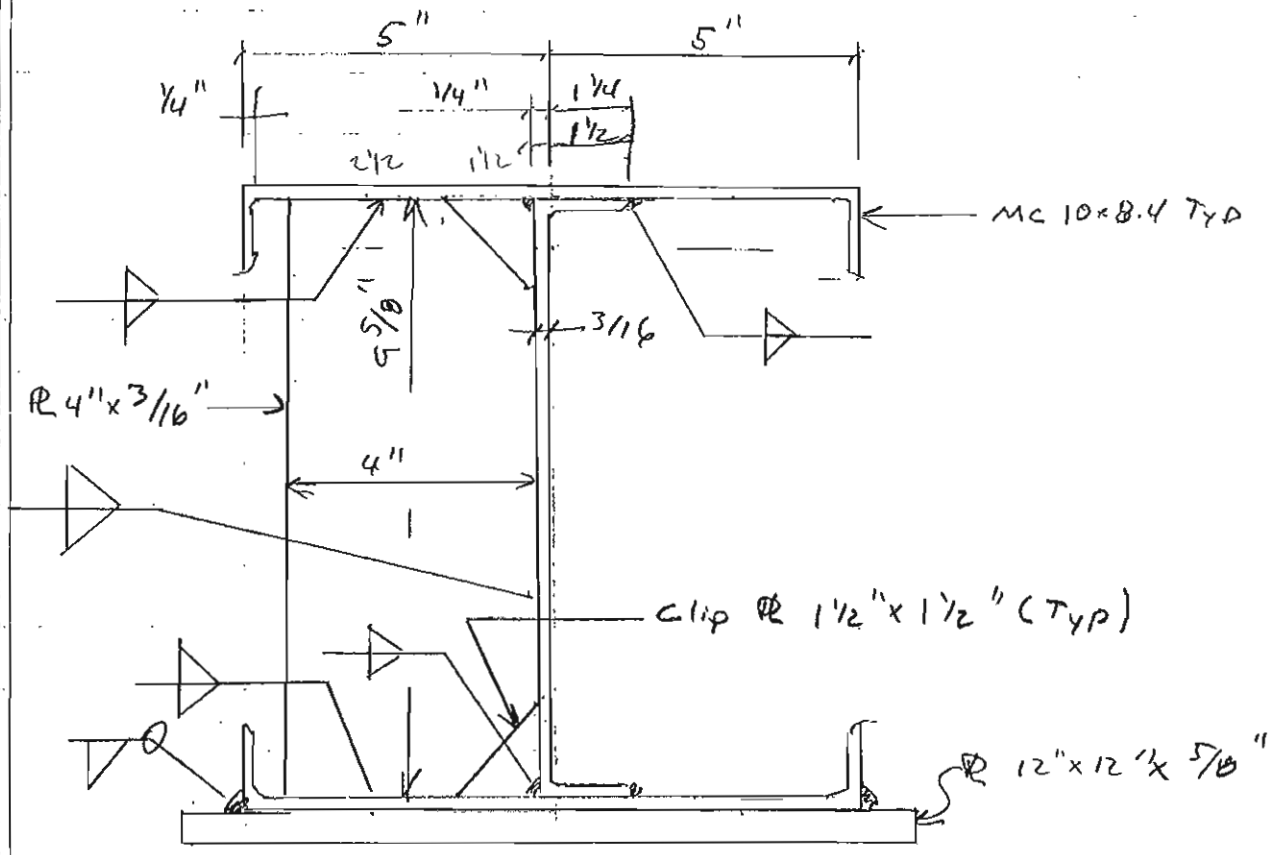
WIND SPEED: 130 MPH	ROOF LIVE LOAD: 20 PSF
BLDG. EXPOSURE: EXP. C	SNOW LOAD: 35 PSF



Auxiliary Support Beam

1" = 3'

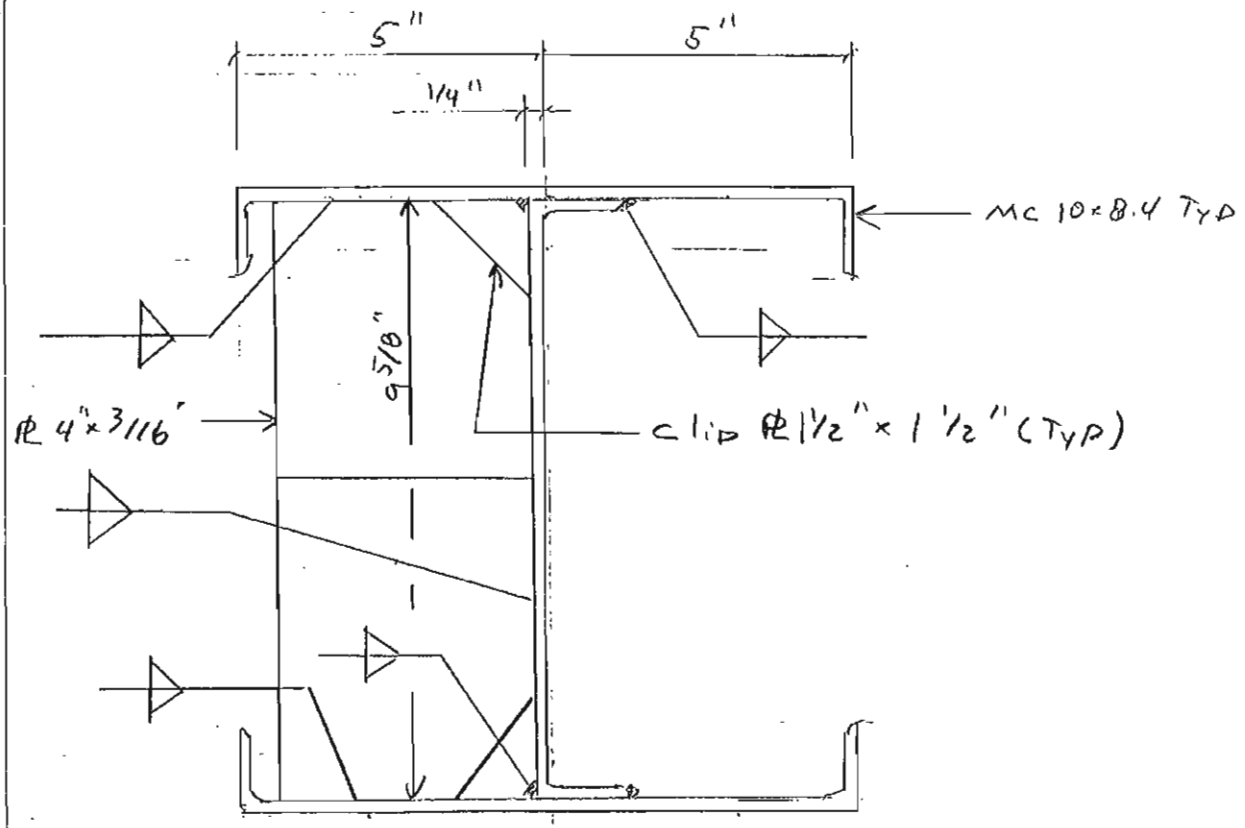
Note: Auxiliary Support Beam to be used where existing pier cannot be re-used as shown



Auxiliary Support Beam

SECTION A-A

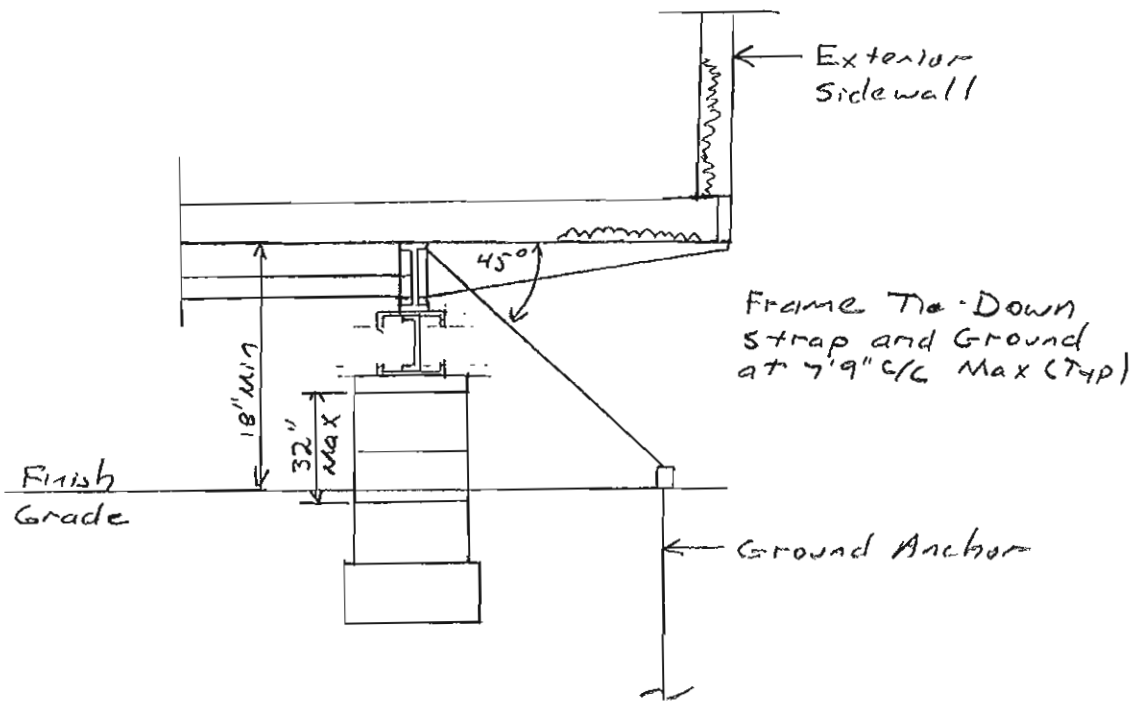
1" = 3"



Auxiliary Support Beam

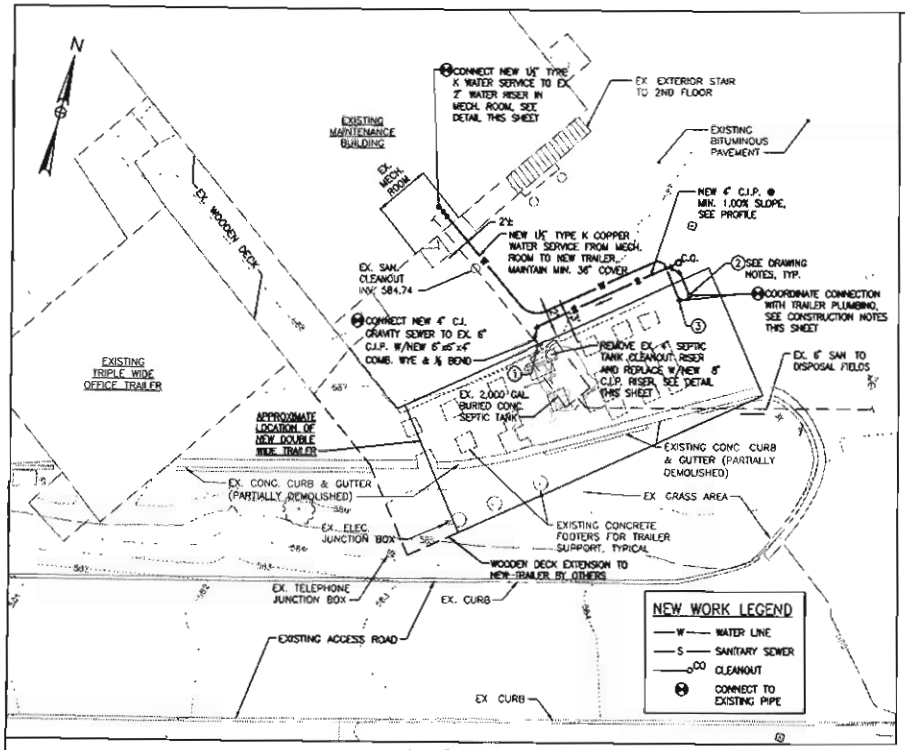
SECTION B-B

1" = 3"



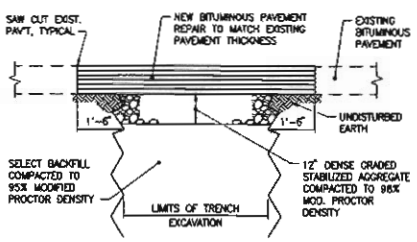
SECTION A-A

PIER 'A1'

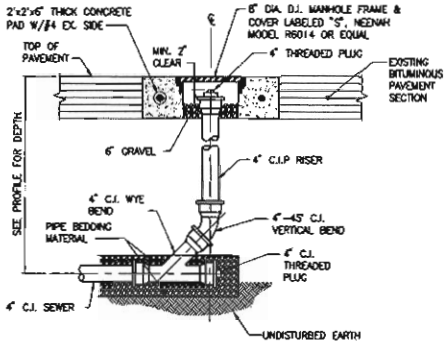


SITE PLAN
SCALE 1" = 10'

HORIZ. SCALE: 1" = 10'
10 5 0 10 20



NEW BITUMINOUS PAVEMENT REPAIR DETAIL
NOT TO SCALE



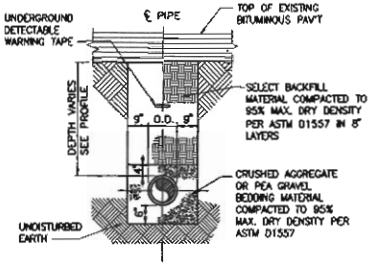
GRAVITY SEWER CLEANOUT DETAIL
NOT TO SCALE

GENERAL CONSTRUCTION NOTES

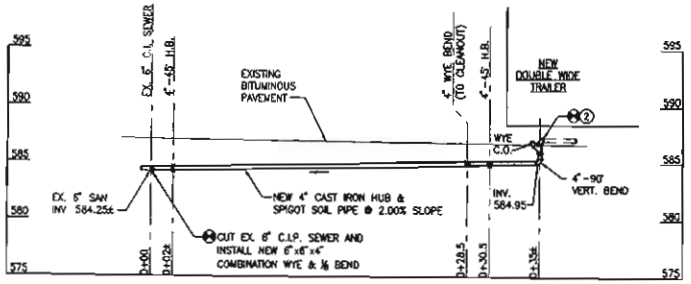
1. THOROUGHLY INSPECT THE SITE PRIOR TO CONSTRUCTION TO VERIFY EXISTING CONDITIONS AND PROVIDE ALL NECESSARY STAKE OUT OF LINE AND GRADE FOR PIPE INSTALLATION.
2. COORDINATE ALL WORK AND PROJECT SCHEDULES WITH THE MAINTENANCE FACILITY SUPERVISOR AND OBTAIN APPROVAL PRIOR TO MAKING CONNECTIONS TO EXISTING WATER AND SEWER PIPING. CONTRACTOR SHALL MAINTAIN UNINTERRUPTED WATER AND SEWER SERVICE TO THE FACILITY EXCEPT WHERE SPECIFICALLY AUTHORIZED BY THE FACILITY SUPERVISOR.
3. ALL EXCAVATION, TRENCHING, SHEETING AND BRACING SHALL BE INSTALLED AS REQUIRED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS INCLUDING O.S.H.A.
4. PROVIDE ADEQUATE BARRICADES AROUND TRENCH HOLE EXCAVATIONS AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL.
5. EXISTING PAVEMENT SHALL BE SAW CUT WITH NEAT, CLEAN, PARALLEL, STRAIGHT LINES. GRADES OF NEW PAVEMENT SHALL BLEND SMOOTHLY WITH EXISTING GRADES.

DRAWING NOTES

1. PROVIDE 30" WIDE REMOVABLE SECTION AT BOTTOM OF NEW TRAILER SKIRT TO ALLOW FOR ACCESS TO SEPTIC TANK CLEANOUT LOCATED UNDER NORTH SIDE OF TRAILER (SEE SITE PLAN THIS SHEET)
2. CONNECT NEW 4" C.I.P. UNDERGROUND SEWER TO NEW TRAILER C.I. RISER PIPE UNDER TRAILER. ALL EXPOSED SANITARY WASTE & VENT PIPING UNDER TRAILER SHALL BE INSULATED WITH 1" FLEXIBLE ELASTOMERIC WITH ALUMINUM JACKET.
3. CONNECT NEW 1½" UNDERGROUND TYPE K COPPER WATER SERVICE TO NEW 1½" WATER LINE UNDER TRAILER. ALL EXPOSED WATER SERVICE PIPING UNDER TRAILER SHALL BE HEAT TRACED (5 WATTS/LF) AND INSULATED WITH 1" FLEXIBLE ELASTOMERIC WITH ALUMINUM JACKET.

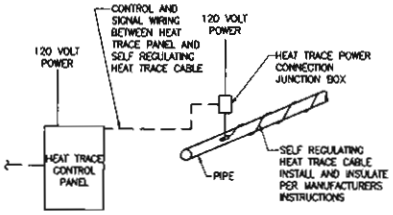


WATER/SEWER TYPICAL PIPE TRENCH DETAIL
NOT TO SCALE

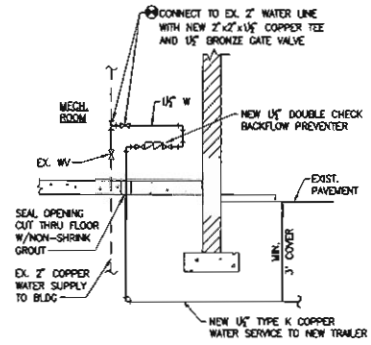


4" C.I. SEWER PROFILE
SCALE 1" = 5' VERT. & HORIZ.

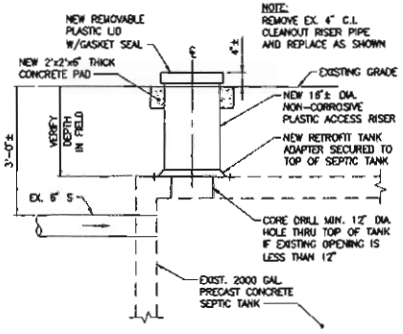
HORIZ. SCALE: 1" = 5'
5 2.5 0 5 10



HEAT TRACING DETAIL
NOT TO SCALE



1-1/2" WATER SERVICE CONNECTION DETAIL
NOT TO SCALE



NEW CLEANOUT ACCESS RISER AT EXISTING SEPTIC TANK
NOT TO SCALE

DTM	1	SDP 82-87 REDLINE NO. 1 (NEW SHEET)	9/2012
DES: RDT			
DRN: CDF/JRG			
CHK: DTM			
DATE: 08/14/13	BY	NO. REVISION	DATE

OWNER:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS
4301 STATE ROUTE 32
DAYTON, MD 21036

DEVELOPER:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
9250 BENDIX ROAD
COLUMBIA, MARYLAND 21045

DAYTON HIGHWAY MAINTENANCE FACILITY
SDP REDLINE

WATER AND SEWER SERVICE TO NEW DOUBLE-WIDE TRAILER

SHEET 2A OF 6

URS

In reply, please refer to: 20834598

September 17, 2012

Mr. Chuck Dammers, Division Chief
Development Engineering
Howard County Department of Planning and Zoning
John Carroll Building
3430 Court House Drive
Ellicott City, Maryland 21043

Attention: Mr. Jeff Pickett

Reference: Dayton Highway Maintenance Facility
Howard County Department of Public Works
Dayton, Maryland
SDP 82-87 Redline Submission

Dear Mr. Dammers:

On behalf of the Howard County Department of Public Works Bureau of Highways, we have enclosed four copies of redlined SDP 82-87 Drawing No. 2 insert (new) sheet and four addenda sheets for the reference project for review and acceptance. Once you issue a notice of intent to approve, we will issue original mylars for signatures.

Please note we are not able to secure a written permission to prepare the red-line from the Maryland Licensed Design Professional (MLDP) of record, since the MLDP of record, Witz & Associates, Inc., has since closed for business.

Since the project is a Howard County Capital Project, we understand that the $200 processing/reviewing fee will be waived. Furthermore, based on our conversation with Mr. James Witmer on September 17, 2012, we understand the Department will accept the redlined SDP submission via postal mail.

Should you have any questions, please contact me at 410-891-9207 or by e-mail at dave.moriconi@urs.com. Thank you for your assistance.

Sincerely,

URS Corporation

David T. Moriconi, P.E.
Project Manager

DTM:JHY:kmc

Attachments

cc: Mr. Bill Malone, Howard County DPW

URS Corporation
4 North Park Drive, Suite 300
Hunt Valley, MD 21030
Tel: 410.785.7220
Fax: 410.785.6818

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5456-A West Crenshaw Street
Tampa, Florida 33634
Tel. 813-243-0370
Fax: 813-243-1314
www.RADCOInc.com
email: Info@RADCOInc.com

August 24, 2012

Mr. Ujjval Dave
Maryland Dept. of Housing and Community Development
Codes Administration
100 Community Place
Crownsville, MD 21032

Submitted on CD
Via U.S. Mail

RE: Specialized Structures
1299 Thompson Drive
Douglas, GA 31535

Dear Mr. Dave:

Please find enclosed for your files the following documents, approved by RADCO under the Maryland Industrialized Buildings Program, and submitted on CD:

RADCO Approval Letter
Plan Number: SSI-4057
Energy Calculations
Truss Drawing No.: SF089038

RADCO's review confirmed that the design complies with the following codes:

2012 International Building Code w/MD amends.
2012 International Mechanical Code
2011 National Electrical Code
2012 International Plumbing Code w/MD amends.
2012 International Energy Conservation Code
2009 NFPA 101 Life Safety Code w/MD amends.
Maryland Accessibility Code

Please feel free to contact me in our Tampa office at (813) 243-0370 if additional information is needed.

Sincerely,

Phillip L. Witherington, P.E.
Staff Engineer

enclosures
cc: Specialized Structures, Inc. – Debbie Park
(file: SSI - Maryland Correspondence)

COM*check* Software Version 3.9.1

Envelope Compliance Certificate

2012 IECC

Section 1: Project Information

Project Type: **New Construction**
Project Title : SSI-4057

Construction Site:

Owner/Agent:
SPECIALIZED STRUCTURES, INC.
2400 SPRINGHEAD RD.
WILLACOOCHEE, GA 31650

Designer/Contractor:
JAMES BRADLEY, P.E.
212 FOX TRAIL
PARKESBURG, PA 19365

Section 2: General Information

Building Location (for weather data): **Ellicott City, Maryland**
Climate Zone: **4a**
Building Type for Envelope Requirements: **Non-Residential**
Vertical Glazing / Wall Area Pct.: **5%**

APPROVED **RADCO** APPROVED
Aug 24, 2012
P.WITHERINGTON

Building Type	Floor Area
Dining: cafeteria/fast food	618
Office	782

Section 3: Requirements Checklist

Envelope PASSES: Design 0.1% better than code.

Climate-Specific Requirements:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof 1: Attic Roof with Wood Joists Comments: FR Deck - R0.28 / Gypsum - R0.56	1400	49.0	1.5	0.020	0.027
Exterior Wall 1: Wood-Framed, 16" o.c. Comments: 3/8" Plywood - R0.47 / Gypsum - R0.45	1333	19.0	0.9	0.062	0.064
Window 1: Metal Frame:Double Pane, Clear, Fixed, SHGC 0.25	61	---	---	0.500	0.380
Door 1: Insulated Metal, Swinging	40	---	---	0.500	0.610
Floor 1: Wood-Framed Comments: 3/4" Deck - R0.94 / Floor Covering R0.06	1400	21.0	1.0	0.043	0.033

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

Air Leakage, Component Certification, and Vapor Retarder Requirements:

- ☐ 1. Continuous air barrier is provided throughout the building thermal envelope.
- ☐ 2. Air barrier joints and seams are sealed. The joints and seals are securely installed in or on the joint for its entire length.
- ☐ 3. Penetrations of the air barrier and paths of air leakage are caulked, gasketed or otherwise sealed in a manner compatible with the construction materials and location. Joints and seals are sealed in the same manner or taped or covered with a moisture vapor-permeable wrapping material. The joints and seals are securely installed in or on the joint for its entire length.
- ☐ 4. The air barrier is continuous for all assemblies that are the thermal envelope and across the joints and assemblies.
- ☐ 5. Recessed lighting fixtures installed in the building envelope are Type IC rated as meeting ASTM E283, tested to <=2.0 cfm, and are sealed with gasket or caulk.
- ☐ 6. Assemblies of materials and components have an average air leakage <= 0.04 cfm/ft2 or are qualifying materials as per Section C402.4.1.2.2. or are concrete masonry walls coated with one application either of block filler and two applications of a paint or sealer coating, or Portland cement/sand parge, stucco or plaster >=1/2 inch thickness.

☐ 7. Air leakage of fenestration. Windows/non-glazed sliding and swinging doors/skylights with no weepage openings <= 0.20 cfm/ft2. Skylights with weepage <= 0.30 cfm/ft2. Curtain walls/storefront glazing <= 0.06 cfm/ft2. Doors: glazed swinging entrance/revolving/rolling <= 1.00 cfm/ft2. Doors: garage <= 0.40 cfm/ft2.

Exceptions:

☐ Field-fabricated assemblies.

☐ 8. Doors and access openings from conditioned space to shafts, chutes stairways and elevator lobbies are gasketed, weatherstripped or sealed.

Exceptions:

☐ Door openings required to comply with International Building Code as per Section C402.4.4.

☐ 9. Stairway and shaft vents are provided with Class I motorized dampers with a leakage rate <= 4 cfm/ft2. Dampers are installed with controls so that they are capable of automatically opening upon activation of any fire alarm or the interruption of power to the damper.

☐ 10. Outdoor air supply and exhaust openings are provided with Class IA motorized dampers having a leakage rate <=4 cfm/ft2.

Exceptions:

☐ Gravity (nonmotorized) dampers having a leakage rate <=20 cfm/ft2 are permitted for exhaust and relief dampers for buildings less than three stories in height above grade, or where the design outdoor air intake or exhaust capacity <=300 cfm.

☐ Dampers smaller than 24 inches in either dimension are permitted to have a leakage <=40 cfm/ft2.

☐ 11. Cargo doors and loading dock doors are weather sealed.

☐ 12. Building entrance doors have a vestibule equipped with self-closing devices.

APPROVED RADCO Aug 24, 2012 P.WITHERINGTON APPROVED

Exceptions:

☐ Building entrances with revolving doors.

☐ Doors not intended to be used as a building entrance by the public, or intended solely for employee use.

☐ Doors that open directly from a space less than 3000 sq. ft. in area.

☐ Doors used primarily to facilitate vehicular movement or materials handling and adjacent personnel doors.

☐ Doors opening directly from a sleeping/dwelling unit

☐ 13. Component R-values & U-factors labeled as certified.

☐ 14. No roof insulation is installed on a suspended ceiling with removable ceiling panels.

☐ 15. 'Other' components have supporting documentation for proposed U-Factors.

☐ 16. Insulation installed according to manufacturer's instructions, in substantial contact with the surface being insulated, and in a manner that achieves the rated R-value without compressing the insulation. Except when instructed otherwise, edge joints between overlapping layers of continuous insulation are staggered.

☐ 17. Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5

Minimum Skylight-Daylighting Requirements:

☐ 18. In enclosed spaces > 10,000 ft2 directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply unless exempted:

☐ The daylight zone under skylights is >= half the floor area;

☐ The skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent.

Exceptions:

☐ Spaces where the proposed general lighting power densities < 0.5 W/ft2.

☐ Areas with obstructions that block direct beam sunlight on >= 1/2 of the roof over the enclosed area for more than 1,500 daytime hours per year between 8 am and 4 pm.

☐ Spaces where the daylight zone under rooftop monitors is > 50 percent of the enclosed space floor area.

☐ 19. Skylights in office, storage, automotive service, manufacturing, non-refrigerated warehouse, retail store, and distribution/sorting area have a measured haze value > 90 percent unless designed to exclude direct sunlight.

Additional Efficiency Package Requirements:

☐ 1. The reduced interior lighting power option has been selected as the additional efficiency package required by this energy code. Requirements for this package are applied to the interior lighting allowance calculations. Full compliance with this efficiency option requires inspection and verification that the interior lighting allowances and fixture schedule found in the interior lighting report are compliant and deemed to pass.

Section 4: Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed envelope system has been designed to meet the 2012 IECC requirements in COM*check* Version 3.9.1 and to comply with the mandatory requirements in the Requirements Checklist.

James E. Bradley, PE
Consulting Engineer
1765 Carnegie Avenue
Clearwater, FL 33756

Name - Title

VALID

Signature

August 24, 2012

Date

STATE OF MARYLAND
JAMES E. BRADLEY
No.8588
PROFESSIONAL ENGINEER

APPROVED RADCO Aug 24, 2012 P.WITHERINGTON APPROVED

COM*check* Software Version 3.9.1

Interior Lighting Compliance Certificate

APPROVED RADCO APPROVED
Aug 24, 2012
P.WITHERINGTON

2012 IECC

Section 1: Project Information

Project Type: **New Construction**
Project Title : SSI-4057

Construction Site:

Owner/Agent:
SPECIALIZED STRUCTURES, INC.
2400 SPRINGHEAD RD.
WILLACOOCHEE, GA 31650

Designer/Contractor:
JAMES BRADLEY, P.E.
212 FOX TRAIL
PARKESBURG, PA 19365

Section 2: Interior Lighting and Power Calculation

A	B Floor Area	C Allowed Watts / ft2	D Allowed Watts
Dining: cafeteria/fast food	618	0.9	556
Office	782	0.85	665
		Total Allowed Watts =	1221

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Dining: cafeteria/fast food (618 sq.ft.)				
Linear Fluorescent 1: 48" T8 32W (Super T8) / Electronic	2	7	54	378
Office (782 sq.ft.)				
Linear Fluorescent 2: 48" T8 32W (Super T8) / Electronic	2	12	54	648
			Total Proposed Watts =	1026

Section 4: Requirements Checklist

Lighting Wattage:

☐ 1. Total proposed watts must be less than or equal to total allowed watts.
Allowed Wattage: 1221 Proposed Wattage: 1026
Complies: YES

Mandatory Requirements:

☐ 2. Dwelling units (complete independent living facilities) within commercial buildings are not required to comply with interior lighting requirements of this code provided that >=75 percent of the permanently installed fixtures other than low voltage lighting contain only high efficacy lamps.

☐ 3. Manual Controls: Each enclosed space has manual lighting control. Remotely located manual controls are labelled for area of service and indicate on/off status.
Exception(s):

- ☐ Security/emergency areas with 24-hour operation.
- ☐ Stairways/corridors that are means of egress.

☐ 4. Light Reduction Controls: Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dual switching of alternate rows of luminaires, alternate luminaires, or alternate lamps, switching the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.
Exception(s):

- ☐ Only one luminaire (lamp < 100 W) in space.

- ☐ An occupant-sensing device controls the area.
- ☐ The area is a corridor, equipment/store rooms, restrooms, public lobby, elec./mech. room, or sleeping unit.
- ☐ Areas that use < 0.6 Watts/sq.ft.
- ☐ Daylight spaces having automatic daylighting controls.

☐ 5. Automatic time switching controls are installed and have an override switching device. The override switching device allows for <= 2 hour operation cycle within spaces <= 5000 sq.ft., manual operation, and is readily accessible and located where the operation of the connected lights are visible or communicated to the switch.

Exception(s):

- ☐ Sleeping units, patient care areas; and spaces where automatic shutoff would endanger safety or security or where lighting is intended for 24-hour operation.
- ☐ Emergency egress lighting.
- ☐ Spaces where lighting is controlled with occupancy sensors.
- ☐ Malls, arcades, auditoriums, single tenant retail spaces, industrial facilities and arenas that are <= 20,000 sq.ft. are permitted exceed the 2-hour operation cycle limit when a captive key device override switch is installed.

☐ 6. Occupant sensors are installed in the following spaces and automatically turn lighting off within 30 minutes of all occupants leaving the space: Classrooms, conference/meeting/training rooms, employee lunch and break rooms, private offices, storage/janitorial rooms, restrooms, and other spaces <= 300 sq.ft. Automatic-on sensors set power on <50 percent power.

Exception(s):

- ☐ Full power automatic-on controls are permitted where manual-on operation would endanger the safety or security of the room or building occupants.

☐ 7. Daylight zones have either individual lighting controls independent from that of the general area lighting that are either manual or automatic and serve zones <= 2,500 sq.ft. Zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration.

Exception(s):

- ☐ Contiguous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
- ☐ Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.

☐ 8. Automatic daylight zone controls are capable of reducing power to < 35 percent using continuous dimming ballasts and daylight-sensing controls OR, are capable of automatic power reduction using step-dimming multi-level switching and daylight-sensing controls having at least two control channels per zone and at least one control step in the 50 - 70 percent range and another <= 35 percent of design power.

☐ 9. Medical task lighting or art/history display lighting claimed to be exempt from compliance has a control device independent of the control of the nonexempt lighting.

☐ 10. Separate control device for display/accent lighting, case lighting, task lighting, nonvisual lighting, under-shelf/cabinent lighting, lighting for sale, and demonstration lighting.

☐ 11. Hotel/motel sleeping units and guest suites have control device(s) at the entry door that control all permanent luminaires and switched receptacles.

☐ 12. Exit signs 5 Watts or less per sign.

☐ 13. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).

Exception(s):

- ☐ Electronic high-frequency ballasts.
- ☐ Luminaires not on same switch.
- ☐ Recessed luminaires 10 ft. apart or surface/pendant not continuous.
- ☐ Luminaires on emergency circuits.

APPROVED **RADCO** APPROVED
Aug 24, 2012
P.WITHERINGTON

Additional Efficiency Package Requirements:

☐ 1. The reduced interior lighting power option has been selected as the additional efficiency package required by this energy code. Requirements for this package are applied to the interior lighting allowance calculations. Full compliance with this efficiency option requires inspection and verification that the interior lighting allowances and fixture schedule are compliant and deemed to pass.

Interior Lighting PASSES: Design 16% better than code.

Section 5: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2012 IECC requirements in COM*check* Version 3.9.1 and to comply with the mandatory requirements in the Requirements Checklist.

VALID

James E. Bradley, PE
Consulting Engineer
1765 Carnegie Avenue
Clearwater, FL 33756

Name - Title

Signature

August 24, 2012

Date

STATE OF MARYLAND · JAMES E. BRADLEY · No.8588 · PROFESSIONAL ENGINEER

COM*check* Software Version 3.9.1

Exterior Lighting Compliance Certificate

2012 IECC

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Aug 24, 2012
P.WITHERINGTON

Section 1: Project Information

Project Type: **New Construction**
Project Title : SSI-4057
Exterior Lighting Zone: **2 (Light industrial area with limited nighttime use)**

Construction Site:	Owner/Agent:	Designer/Contractor:
	SPECIALIZED STRUCTURES, INC. 2400 SPRINGHEAD RD. WILLACOOCHEE, GA 31650	JAMES BRADLEY, P.E. 212 FOX TRAIL PARKESBURG, PA 19365

Section 2: Exterior Lighting Area/Surface Power Calculation

A Exterior Area/Surface	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B x C)	F Proposed Watts
Main entry	3 ft of door width	20	Yes	60	75
Other door (not main entry)	6 ft of door width	20	Yes	120	150
			Total Tradable Watts* =	180	225
			Total Allowed Watts =	180	
			Total Allowed Supplemental Watts** =	600	

* Wattage tradeoffs are only allowed between tradable areas/surfaces.

** A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Section 3: Exterior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Main entry (3 ft of door width): Tradable Wattage				
Incandescent 1: Incandescent 75W	1	1	75	75
Other door (not main entry) (6 ft of door width): Tradable Wattage				
Incandescent 2: Incandescent 75W	1	2	75	150
			Total Tradable Proposed Watts =	225

Section 4: Requirements Checklist

Lighting Wattage:

☐ 1. Within each non-tradable area/surface, total proposed watts must be less than or equal to total allowed watts. Across all tradable areas/surfaces, total proposed watts must be less than or equal to total allowed watts.

Compliance: Passes using supplemental allowance watts.

Controls, Switching, and Wiring:

☐ 2. All exemption claims are associated with fixtures that have a control device independent of the control of the nonexempt lighting.

☐ 3. Lighting not designated for dusk-to-dawn operation is controlled by either a a photosensor (with time switch), or an astronomical time switch.

☐ 4. Lighting designated for dusk-to-dawn operation is controlled by an astronomical time switch or photosensor.

☐ 5. All time switches are capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.

Exterior Lighting Efficacy:

☐ 6. All exterior building grounds luminaires that operate at greater than 100W have minimum efficacy of 60 lumen/watt.

Exceptions:

☐ Lighting that has been claimed as exempt and is identified as such in Section 3 table above.

☐ Lighting that is specifically designated as required by a health or life safety statue, ordinance, or regulation.

☐ Emergency lighting that is automatically off during normal building operation.

☐ Lighting that is controlled by motion sensor.

Exterior Lighting PASSES: Design 71% better than code.

Section 5: Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2012 IECC requirements in COM*check* Version 3.9.1 and to comply with the mandatory requirements in the Requirements Checklist.

James E. Bradley, PE
Consulting Engineer
1765 Carnegie Avenue
Clearwater, FL 33756

Name - Title

VALID

Signature

August 24, 2012

Date

STATE OF MARYLAND
JAMES E. BRADLEY
No.8588
PROFESSIONAL ENGINEER

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Aug 24, 2012
P.WITHERINGTON

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Mechanical Compliance Certificate

2012 IECC

Section 1: Project Information

Project Type: **New Construction**
Project Title : SSI-4057

Construction Site:

Owner/Agent:
SPECIALIZED STRUCTURES, INC.
2400 SPRINGHEAD RD.
WILLACOOCHEE, GA 31650

Designer/Contractor:
JAMES BRADLEY, P.E.
212 FOX TRAIL
PARKESBURG, PA 19365

Section 2: General Information

Building Location (for weather data): **Ellicott City, Maryland**
Climate Zone: **4a**

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Section 3: Mechanical Systems List

Quantity	System Type & Description
2	HVAC System 1 (Single Zone) : Heating: 2 each - Other, Electric, Capacity = 34 kBtu/h Cooling: 2 each - Rooftop Package Unit, Capacity = 36 kBtu/h, Efficiency = 13.00 SEER, Air-Cooled Condenser, Air Economizer
1	Water Heater 1: Electric Instantaneous Water Heater, Capacity: 85 gallons w/ Heat Trace Tape Installed, Efficiency: 0.95

Section 4: Requirements Checklist

Requirements Specific To: HVAC System 1 :

☐ 1. Equipment minimum efficiency: Rooftop Package Unit: 13.00 SEER

☐ 2. Integrated air economizer is required for individual cooling systems and allows modulation of outdoor air and return air dampers to provide up to 100% of the design supply air quantity as outdoor air for cooling. All air economizers shall be capable of automatically reducing outdoor air intake to the design minimum outdoor air quantity when outdoor air intake will no longer reduce cooling energy usage.

☐ 3. Air economizer dampers can be sequenced with the cooling equipment and not controlled exclusively by mixed air temperature.
Exception(s):

- ☐ System controlled from space temperature (such as single-zone systems).

☐ 4. Cooling system provides a means to relieve excess outdoor air during economizer operation.

Requirements Specific To: Water Heater 1 :

☐ 1. Water heating equipment meets minimum efficiency requirements: No efficiency requirements for electric instantaneous water heater.

☐ 2. First 8 ft of outlet piping is insulated

☐ 3. All heat traced or externally heated piping insulated

☐ 4. Hot water storage temperature controls that allow setpoint of 90°F for non-dwelling units and 110°F for dwelling units.

☐ 5. Manual or time control of heat trace and recirculating systems present

☐ 6. Heat traps provided on inlet and outlet of storage tanks

Generic Requirements: Must be met by all systems to which the requirement is applicable:

☐ 1. Plant equipment and system capacity no greater than needed to meet loads
Exception(s):

- ☐ Standby equipment automatically off when primary system is operating

- ☐ Multiple units controlled to sequence operation as a function of load

☐ 2. Minimum one temperature control device per system

☐ 3. Minimum one humidity control device per installed humidification/dehumidification system

☐ 4. Load calculations per ASHRAE/ACCA Standard 183.

☐ 5. Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup
Exception(s):

- ☐ Continuously operating zones
- ☐ 2 kW demand or less, submit calculations

☐ 6. Automatic start controls that can automatically adjust the daily start time of the HVAC system are provided for each system.

☐ 7. Outside-air source for ventilation; system capable of reducing OSA to required minimum

☐ 8. R-6 supply and return air duct insulation in unconditioned spaces
R-8 supply and return air duct insulation outside the building
R-8 insulation between ducts and the building exterior when ducts are part of a building assembly
Exception(s):

- ☐ Ducts located within equipment
- ☐ Ducts with interior and exterior temperature difference not exceeding 15°F.

☐ 9. Ducts sealed - longitudinal seams on rigid ducts; transverse seams on all ducts; UL 181A or 181B tapes and mastics
Exception(s):

- ☐ Continuously welded and locking-type longitudinal joints and seams on ducts operating at static pressures less than 2 inches w.g. pressure classification

☐ 10. Operation and maintenance manual provided to building owner

☐ 11. Thermostatic controls have 5°F deadband
Exception(s):

- ☐ Thermostats requiring manual changeover between heating and cooling

☐ 12. Demand control ventilation (DCV) present for high design occupancy areas (>25 person/1000 ft2 in spaces >500 ft2) and served by systems with any one of 1) an air-side economizer, 2) automatic modulating control of the outdoor air damper, or 3) a design outdoor airflow greater than 3000 cfm.
Exception(s):

- ☐ Systems with heat recovery.
- ☐ Multiple-zone systems without DDC of individual zones communicating with a central control panel.
- ☐ Systems with a design outdoor airflow less than 1200 cfm.
- ☐ Spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1200 cfm.
- ☐ Ventilation for process loads only.

☐ 13. Motorized, automatic shutoff dampers required on exhaust and outdoor air supply openings
Exception(s):

- ☐ Gravity dampers acceptable in buildings <3 stories
- ☐ Gravity dampers acceptable in systems with outside or exhaust air flow rates less than 300 cfm where dampers are interlocked with fan

☐ 14. Automatic controls for freeze protection systems present

☐ 15. Each fan system has an energy recovery system when one of the following conditions are met:
30% >= POA < 40% AND DAF >= 5,500 cfm
40% >= POA < 50% AND DAF >= 4,500 cfm
50% >= POA < 60% AND DAF >= 3,500 cfm
60% >= POA < 70% AND DAF >= 2,000 cfm
70% >= POA < 80% AND DAF >= 1,000 cfm
80% >= POA AND DAF >= 0 cfm
where POA = Percent outdoor air at full design airflow rate and DAF = Design supply fan airflow rate
Exception(s):

- ☐ Laboratory fume hood systems with a total exhaust rate <= 5000 cfm.
- ☐ Systems serving spaces that are not cooled and heated to <60°F.
- ☐ Systems with more than 60% of the outdoor heating energy is provided from site-recovered or site solar energy.
- ☐ Systems exhausting toxic, flammable, paint, or corrosive fumes or dust.
- ☐ Systems requiring dehumidification with cooling coil energy recovery in series with the cooling coil.
- ☐ Systems expected to operate < 20 hrs per week when outdoor air percentage >= 30%.
- ☐ Where the largest exhaust source is less than 75% of the design outdoor airflow.

☐ 16. Mechanical systems shall meet commissioning and completion requirements in Section C408.2.

Section 5: Compliance Statement

APPROVED RADCO APPROVED
Aug 24, 2012
P.WITHERINGTON

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2012 IECC, Chapter 8, requirements in COM*check* Version 3.9.1 and to comply with the mandatory requirements in the Requirements checklist.

James E. Bradley, PE
Consulting Engineer
1765 Carnegie Avenue
Clearwater, FL 33756

Name - Title

Signature

August 24, 2012
Date

STATE OF MARYLAND
JAMES E. BRADLEY
No. 8588
PROFESSIONAL ENGINEER

Section 6: Post Construction Compliance Statement

- ☐ HVAC record drawings of the actual installation, system capacities, calibration information, and performance data for each equipment provided to the owner.
- ☐ HVAC O&M documents for all mechanical equipment and system provided to the owner by the mechanical contractor.
- ☐ Written HVAC balancing and operations report provided to the owner.

The above post construction requirements have been completed.

Principal Mechanical Designer-Name | Signature | Date

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Mechanical Requirements Description

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2012 IECC

The following list provides more detailed descriptions of the requirements in Section 4 of the Mechanical Compliance Certificate.

Requirements Specific To: HVAC System 1 :

1. The specified heating and/or cooling equipment is covered by the ASHRAE 90.1 Code and must meet the following minimum efficiency:
   Rooftop Package Unit: 13.00 SEER
2. Integrated air economizer is required for individual cooling systems over 33 kBtu/h and allows modulation of outdoor air and return air dampers to provide up to 100% of the design supply air quantity as outdoor air for cooling. All air economizers shall be capable of automatically reducing outdoor air intake to the design minimum outdoor air quantity when outdoor air intake will no longer reduce cooling energy usage. Refer to code Section C403.3.1.1.3 for details on high-limit shutoff control types and settings.
3. Air economizer dampers can be sequenced with the cooling equipment and not controlled exclusively by mixed air temperature.
   Exception(s):
   - System controlled from space temperature (such as single-zone systems).
4. Cooling system provides a means to relieve excess outdoor air during economizer operation to prevent overpressurizing the building.

Requirements Specific To: Water Heater 1 :

1. Water heating equipment used solely for heating potable water, pool heaters, and hot water storage tanks must meet the following miniumum efficiency: No efficiency requirements for electric instantaneous water heater.
2. Insulation (0.5 inch) must be provided for the first 8 ft of outlet piping for a constant temperature nonrecirculating storage system and for the inlet pipe between the storage tank and a heat trap in a storage system.
3. Insulation must be provided for pipes that are externally heated (such as heat trace or impedance heating).
4. Service water-heating equipment shall be provided with controls to allow a setpoint of 110°F for equipment serving dwelling units and 90°F for equipment serving non-dwelling units. Lavatory outlet temperatures shall be limited to 110°F.
5. Systems designed to maintain usage temperatures in hot water pipes, such as recirculating hot water systems or heat trace, must be equipped with automatic time switches or other controls that can be set to switch off the temperature maintenance system when there is limited hot water demand.
6. Heat traps must be provided on inlet and outlet vertical pipe risers serving storage water heaters and storage tanks not having integral heat traps and serving a nonrecirculating system.
   Heat traps must be installed as close as practical to the storage tank. Acceptable heat traps are either
   a) a device specifically designed for the purpose or
   b) an arrangement of tubing that forms a loop of 360°F, or
   c) piping that from the point of connection to the water heater (inlet or outlet) includes a length of piping directed downwards before connection to the vertical piping of the supply water or hot water distribution system.

Generic Requirements: Must be met by all systems to which the requirement is applicable:

1. All equipment and systems must be sized to be no greater than needed to meet calculated loads. A single piece of equipment providing both heating and cooling must satisfy this provision for one function with the capacity for the other function as small as possible, within available equipment options.
   Exception(s):
   - The equipment and/or system capacity may be greater than calculated loads for standby purposes. Standby equipment must be automatically controlled to be off when the primary equipment and/or system is operating.
   - Multiple units of the same equipment type whose combined capacities exceed the calculated load are allowed if they are provided with controls to sequence operation of the units as the load increases or decreases.
2. Each heating or cooling system serving a single zone must have its own temperature control device.
3. Each humidification system must have its own humidity control device.
4. Design heating and cooling loads for the building must be determined using procedures in the ASHRAE Handbook of Fundamentals or an approved equivalent calculation procedure.
5. The system or zone control must be a programmable thermostat or other automatic control meeting the following criteria:
   a) capable of setting back temperature to 55°F during heating and setting up to 85°F during cooling,
   b) capable of automatically setting back or shutting down systems during unoccupied hours using 7 different day schedules,
   c) have an accessible 2-hour occupant override,
   d) have a battery back-up capable of maintaining programmed settings for at least 10 hours without power.
   Exception(s):
   - A setback or shutoff control is not required on thermostats that control systems serving areas that operate continuously.

- A setback or shutoff control is not required on systems with total energy demand of 2 kW (6,826 Btu/h) or less.

6. Automatic start controls that can automatically adjust the daily start time of the HVAC system are provided for each system.
7. The system must supply outside ventilation air as required by Chapter 4 of the International Mechanical Code. If the ventilation system is designed to supply outdoor-air quantities exceeding minimum required levels, the system must be capable of reducing outdoor-air flow to the minimum required levels.
8. Air ducts must be insulated to the following levels:
   a) Supply and return air ducts for conditioned air located in unconditioned spaces (spaces neither heated nor cooled) must be insulated with a minimum of R-5. Unconditioned spaces include attics, crawl spaces, unheated basements, and unheated garages.
   b) Supply and return air ducts and plenums must be insulated to a minimum of R-8 when located outside the building.
   c) When ducts are located within exterior components (e.g., floors or roofs), minimum R-8 insulation is required only between the duct and the building exterior.
   Exception(s):
   - Duct insulation is not required on ducts located within equipment.
   - Duct insulation is not required when the design temperature difference between the interior and exterior of the duct or plenum does not exceed 15°F.
9. All joints, longitudinal and transverse seams, and connections in ductwork must be securely sealed using weldments; mechanical fasteners with seals, gaskets, or mastics; mesh and mastic sealing systems; or tapes. Tapes and mastics must be listed and labeled in accordance with UL 181A and shall be marked '181A-P' for pressure sensitive tape, '181A-M' for mastic or '181A-H' for heat-sensitive tape. Tapes and mastics used to seal flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked '181B-FX' for pressure-sensitive tape or '181B-M' for mastic. Unlisted duct tape is not permitted as a sealant on any metal ducts.
   Exception(s):
   - Continuously welded and locking-type longitudinal joints and seams on ducts operating at static pressures less than 2 inches w.g. pressure classification.
10. Operation and maintenance documentation must be provided to the owner that includes at least the following information:
    a) equipment capacity (input and output) and required maintenance actions
    b) equipment operation and maintenance manuals
    c) HVAC system control maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions; desired or field-determined set points must be permanently recorded on control drawings, at control devices, or, for digital control systems, in programming comments
    d) complete narrative of how each system is intended to operate.
11. Thermostats controlling both heating and cooling must be capable of maintaining a 5°F deadband (a range of temperature where no heating or cooling is provided).
    Exception(s):
    - Deadband capability is not required if the thermostat does not have automatic changeover capability between heating and cooling.
12. Demand control ventilation (DCV) required for high design occupancy areas (>25 person/1000 ft2 in spaces >500 ft2) and served by systems with any one of 1) an air-side economizer, 2) automatic modulating control of the outdoor air damper, or 3) a design outdoor airflow greater than 3000 cfm.
    Exception(s):
    - Systems with heat recovery.
    - Multiple-zone systems without DDC of individual zones communicating with a central control panel.
    - Systems with a design outdoor airflow less than 1200 cfm.
    - Spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1200 cfm.
    - Ventilation for process loads only.
13. Outdoor air supply and exhaust systems must have motorized dampers that automatically shut when the systems or spaces served are not in use. Dampers must be capable of automatically shutting off during preoccupancy building warm-up, cool-down, and setback, except when ventilation reduces energy costs (e.g., night purge) or when ventilation must be supplied to meet code requirements. Both outdoor air supply and exhaust air dampers must have a maximum leakage rate of 3 cfm/ft2 at 1.0 in w.g. when tested in accordance with AMCA Standard 500.
    Exception(s):
    - Gravity (non-motorized) dampers are acceptable in buildings less than three stories in height.
    - Systems with a design outside air intake or exhaust capacity of 300 cfm (140 L/s) or less that are equipped with motor operated dampers that open and close when the unit is energized and de-energized, respectively.
14. All freeze protection systems, including self-regulating heat tracing, must include automatic controls capable of shutting off the systems when outside air temperatures are above 40°F or when the conditions of the protected fluid will prevent freezing. Snow- and ice-melting systems must include automatic controls capable of shutting off the systems when the pavement temperature is above 50°F and no precipitation is falling, and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40°F.
15. Each fan system shall have an energy recovery system when one of the following conditions are met:
    30% >= POA < 40% AND DAF >= 5,500 cfm
    40% >= POA < 50% AND DAF >= 4,500 cfm
    50% >= POA < 60% AND DAF >= 3,500 cfm

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60% >= POA < 70% AND DAF >= 2,000 cfm
70% >= POA < 80% AND DAF >= 1,000 cfm
80% >= POA AND DAF >= 0 cfm
where POA = Percent outdoor air at full design airflow rate and DAF = Design supply fan airflow rate.
The energy recovery system shall have at least 50% energy recovery effectiveness.
Exception(s):

- Laboratory fume hood systems with a total exhaust rate <= 5000 cfm.
- Systems serving spaces that are not cooled and heated to <60°F.
- Systems with more than 60% of the outdoor heating energy is provided from site-recovered or site solar energy.
- Systems exhausting toxic, flammable, paint, or corrosive fumes or dust.
- Systems requiring dehumidification that employ energy recovery in series with the cooling coil.
- Systems expected to operate < 20 hrs per week when outdoor air percentage >= 30%.
- Where the largest exhaust source is less than 75% of the design outdoor airflow.

16. Mechancial systems shall meet commissioning and completion requirements in Section C408.2 including development of a commissioning plan (Section 408.2.1), HVAC system adjusting and balancing (Section C408.2.2), functional performance testing of equipment, controls, and economizers (Section C408.2.3), completion of a preliminary commissioning report (Section C408.2.4), a specification in the construction documents that that drawings and manuals will be provided to the building owner within 90 days (Section C408.2.5), a system balancing report (Section C408.2.6), and a final commissioning report (Section C408.2.7).

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Job	Truss	Truss Type	Qty	Ply	First String Space 316 GA
63616	SF089038	SLOPING FLAT	1	1	Ref. #3162959

Universal Forest Products Inc., Grand Rapids, MI 49525, Weston Gorby — 7.330 e Feb 17 2012 MiTek Industries, Inc. Wed May 23 10:16:04 2012 Page 1 of 1

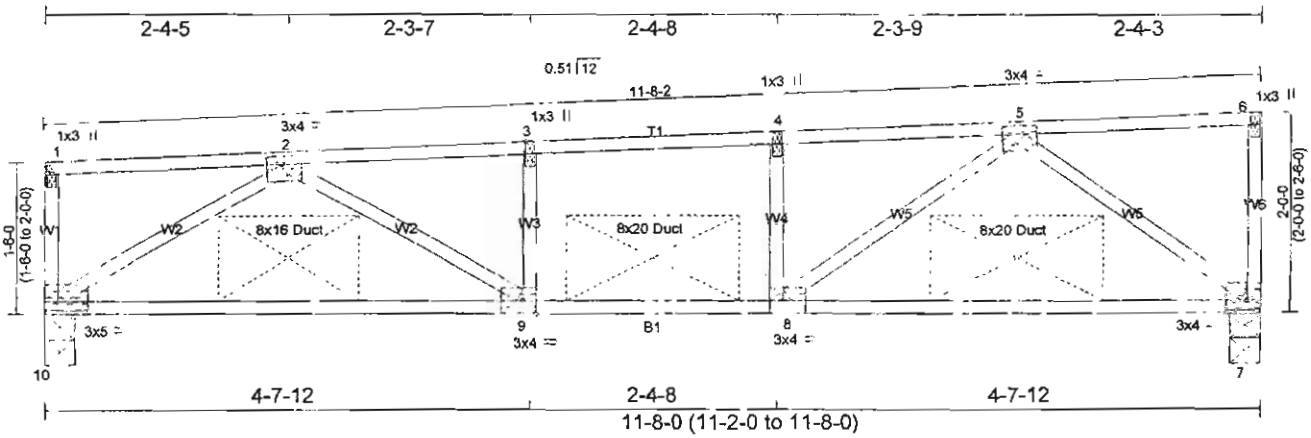

Plate Offsets (X,Y): [2:0-1-12,0-1-0], [3:0-1-8,Edge], [4:0-1-8,Edge], [5:0-0-14,0-1-0], [7:Edge,0-1-0], [8:0-1-8,Edge], [9:0-1-8,Edge], [10:Edge,0-1-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	26.9	Plates Increase	1.15	TC	0.83	Vert(LL)	0.16	9-10	>852	240	MT20	197/144
(Ground Snow=35.0)		Lumber Increase	1.15	BC	0.76	Vert(TL)	-0.34	9-10	>409	180		
TCDL	7.0	Rep Stress Incr	YES	WB	0.42	Horz(TL)	0.03	7	n/a	n/a		
BCLL	0.0 *	Code IBC2012/TPI2007		(Matrix)							Weight: 21 lb	FT = 0%
BCDL	7.0											

LUMBER
TOP CHORD 2x2 SYP No.2
BOT CHORD 2x2 SPF No.2
WEBS 2x2 SPF Stud *Except*
W1: 2x2 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 4-10-15 oc bracing.

REACTIONS (lb/size) 7=395/0-3-8 (min. 0-1-8), 10=395/0-3-8 (min. 0-1-8)
Max Horz 10=111(LC 8)
Max Uplift7=-264(LC 9), 10=-268(LC 7)
Max Grav7=473(LC 2), 10=473(LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-10=-60/62, 1-2=-41/36, 2-3=-833/635, 3-4=-832/644, 4-5=-830/648, 5-6=-31/39, 6-7=-65/63
BOT CHORD 9-10=-423/601, 8-9=-553/830, 7-8=-330/499
WEBS 3-9=-118/126, 4-8=-191/185, 5-7=-621/602, 5-8=-278/415, 2-10=-691/549, 2-9=-153/271

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NOTES
1) Wind: ASCE 7-10; 140mph; TCDL=4.2psf; BCDL=4.2psf; h=30ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-10; Pg=35.0 psf (ground snow); Ps=26.9 psf (roof snow); Category II; Exp C; Partially Exp.; Ct=1.1
3) Roof design snow load has been reduced to account for slope.
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for basic load combinations, which include cases with reductions for multiple concurrent live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 264 lb uplift at joint 7 and 268 lb uplift at joint 10.
9) Fixity of members 10 - 1, 5 - 6 have been changed.
10) This truss is designed in accordance with the 2012 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
11) When adjusting the variable span dimension, adjust the post placement dimensions proportional to the change in span.
12) Based on: SF089028
13) Revision: Updated code from IBC2009

E-signed by Stuart Walter

STATE OF MARYLAND · STUART L. WALTER · No. 32798 · PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 32798, Expiration Date: 04/05/2014

5/23/2012

The professional engineering seal indicates that a licensed professional has reviewed the design under the standards referenced within this document, not necessarily the current state building code. The engineering seal is not an approval to use in a specific state. The final determination on whether a truss design is acceptable under the locally adopted building code rest with the building official or designated appointee.

WARNING - *Verify design parameters and READ NOTES*

Universal Forest Products, Inc. 2801 EAST BELTLINE RD, NE
PHONE (616)-364-6161 FAX (616)-365-0060 GRAND RAPIDS, MI 49525

This building component has only been designed for the loads noted on this drawing. Construction and lifting forces have not been considered. The builder is responsible for lifting methods and system design. Builder responsibilities are defined under TPI1. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult BCSI 1-06 from the Wood Truss Council of America and Truss Plate Institute Recommendation available from WTCA, 6300 Enterprise LN, Madison, WI 53719. J:\support\MitekSupp\templates\ufp.tpe

UNDISTURBED EARTH

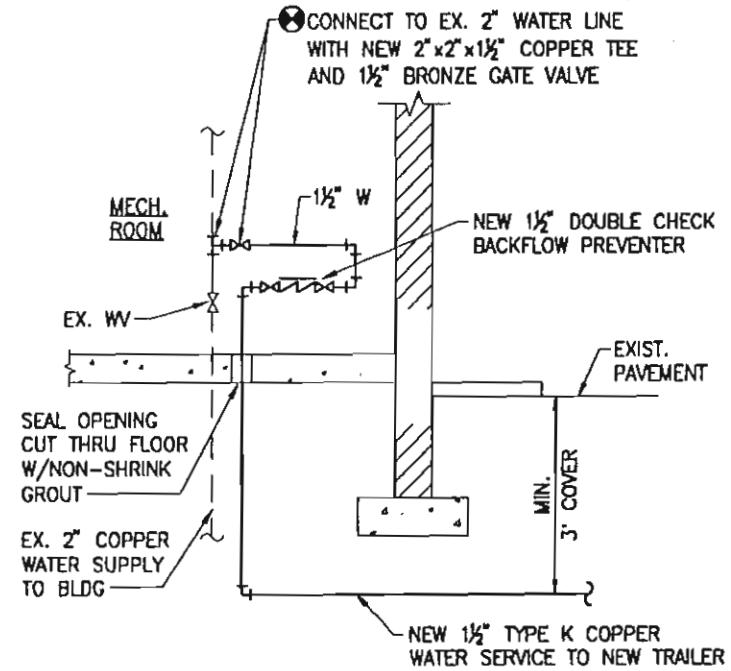
/ER CLEANOUT DETAIL
NOT TO SCALE

UNDISTURBED EARTH

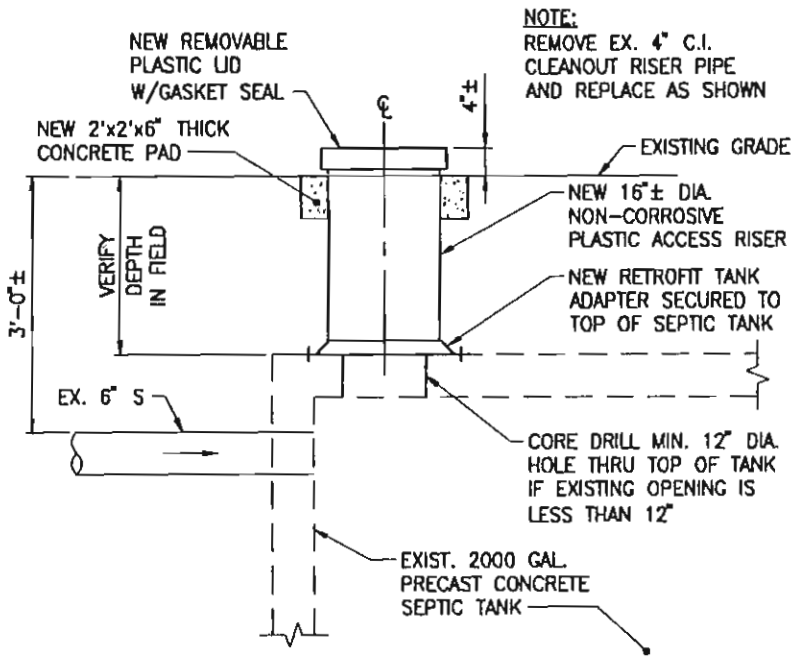
MAX. DRY DENSITY PER ASTM D1557

WATER/SEWER
TYPICAL PIPE TRENCH DETAIL
NOT TO SCALE

POWER
K
ATING
CABLE
INSULATE
CTURERS
S



1-1/2" WATER SERVICE CONNECTION DETAIL
NOT TO SCALE

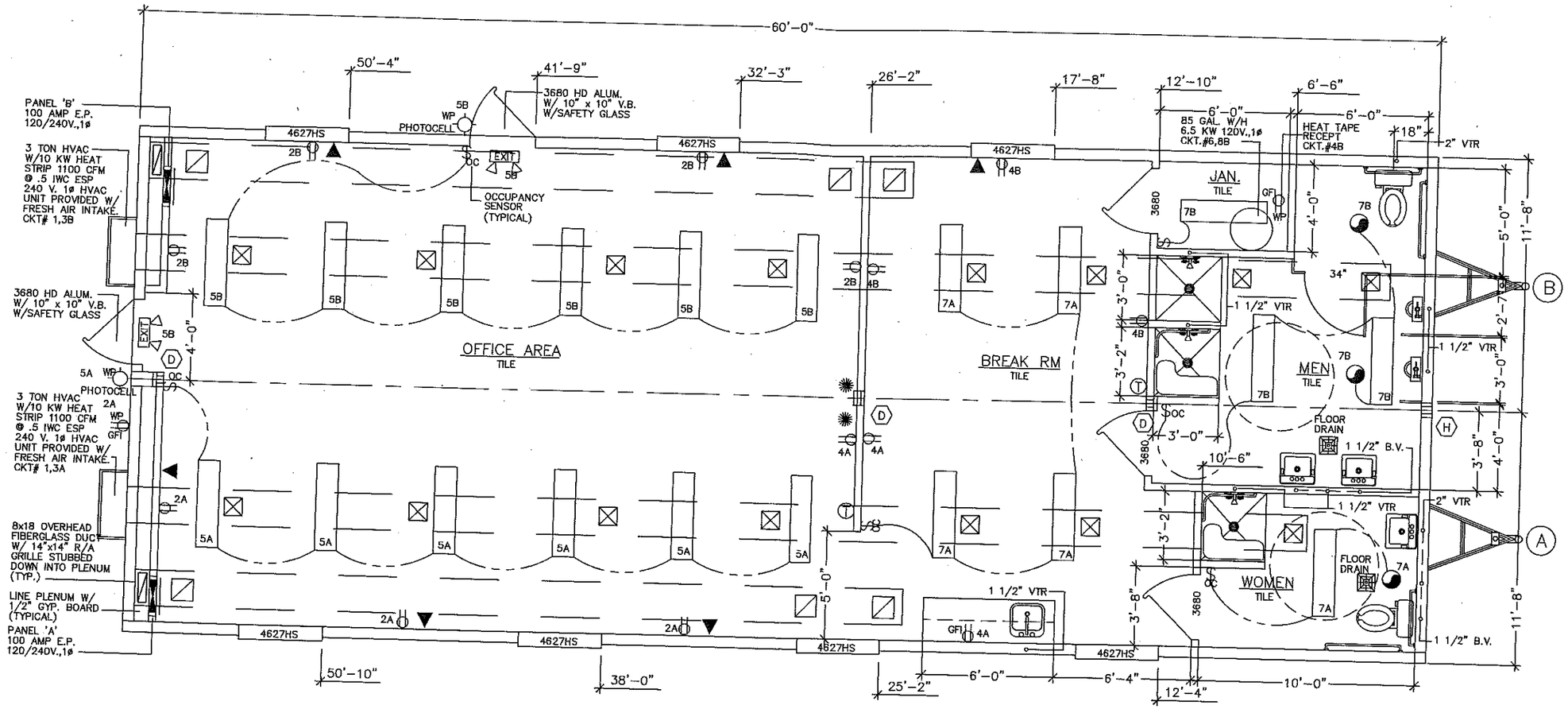


NEW CLEANOUT ACCESS
RISER AT EXISTING SEPTIC TANK
NOT TO SCALE

DEVELOPER:
IOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
9250 BENDIX ROAD
COLUMBIA, MARYLAND 21045

DAYTON HIGHWAY MAINTENANCE FACILITY
SDP REDLINE

WATER AND SEWER SERVICE TO NEW DOUBLE-WIDE TRAILER



COLUMN STRAPPING SCHEDULE:

- (A) (2) 2x4 SPF #2 THIS HALF.
- (B) (2) 2x4 SPF #2 EACH HALF
- (C) (3) 2x4 SPF #2 THIS HALF.
- (D) (3) 2x4 SPF #2 EACH HALF.
- (E) (4) 2x4 SPF #2 THIS HALF.
- (F) (4) 2x4 SPF #2 EACH HALF.
- (G) (5) 2x4 SPF #2 THIS HALF.
- (H) (2) 2x6 SPF #2 EACH HALF.
- ✹ WITH RIDGE BEAM BEARING STIFFENER

NOTES:
1. ALL COLUMN STUDS SHALL BE GLUE/NAILED TOGETHER. PVA GLUE WITH 100% COVERAGE SHALL BE USED.
2. INSTALL TWO STEEL STRAPS AT EACH STUD OF EACH COLUMN.
3. COLUMN STUDS SHALL NOT BE NOTCHED OR BORED.

SYMBOLS

- DUPLEX RECEPTACLE 120 V.
- SINGLE RECEPTACLE 240 V.
- INCANDESCENT LIGHT WITH 1– 60 W. BULB
- VENT FAN
- COMB. VENT FAN & LIGHT
- SUPPLY AIR REGISTER
- RETURN AIR REGISTER
- FLOOD LIGHT 2–150W BULBS
- (S) SMOKE DETECTOR
- (T) THERMOSTAT
- FLUORESCENT FIXTURE WITH 2– 32W TUBES
- EXIT/EMERGENCY LITE COMBO
- (J) JUNCTION BOX (NON POWERED UNLESS CIRCUIT NO. IS SHOWN)
- TELEPHONE JACK
- SWITCH & 3 WAY SWITCH
- EMERGENCY LIGHT WITH BATTERY BACKUP

APPROVED **RADCO** APPROVED
Aug 24, 2012
P.WITHERINGTON

PROFESSIONAL CERTIFICATION:

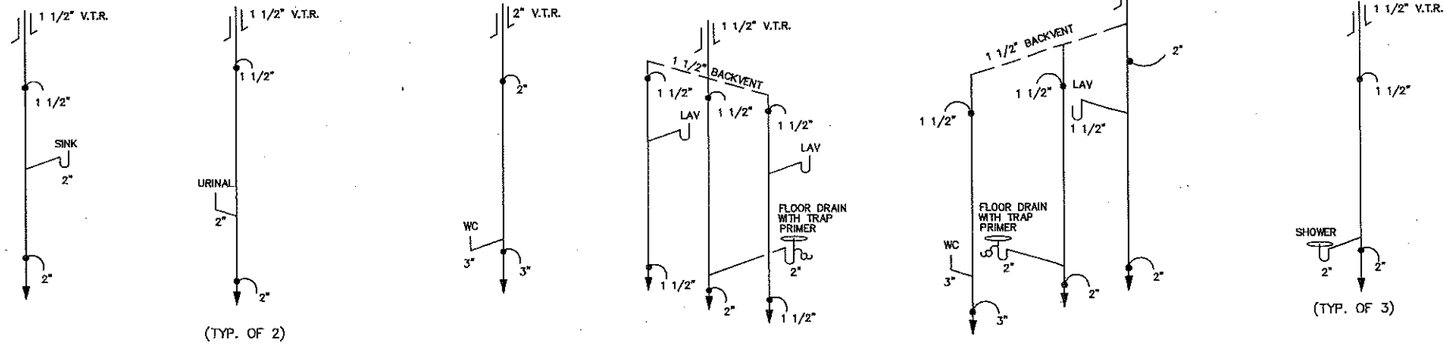
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 8588 EXPIRATION DATE: 6-6-14

CONSULTING ENGINEER | JAMES BRADLEY, P.E. – 212 FOX TRAIL – PARKESBURG, PA. 19365 – (610) 857-2458

VALID STATE OF MARYLAND JAMES E. BRADLEY PROFESSIONAL ENGINEER No.8588 August 24, 2012

SPECIALIZED STRUCTURES INC.
2400 SPRINGHEAD ROAD WILLACOOCHEE, GA 31650
1-912-384-7565 FAX: 1-912-384-4943

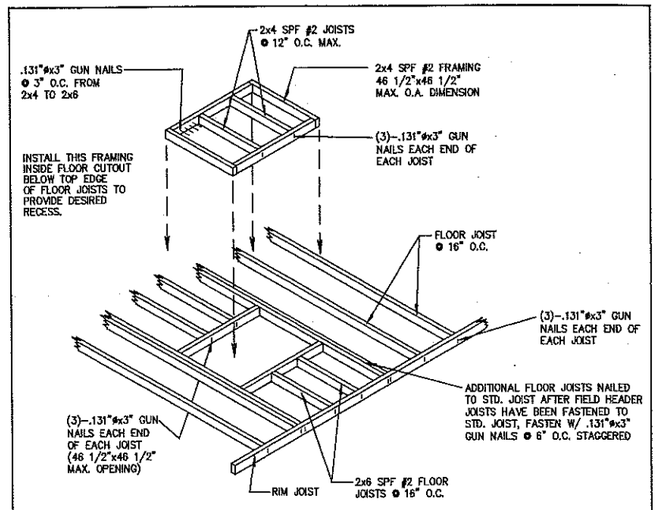
DATE: 6-28-12	THIRD PARTY: RADCO 5458 CRENSHAW ST. TAMPA, FLORIDA 33634 813-243-0370
SCALE : 3/16"=1'-0"	
CODES: MD.	
LABELS: RADCO	REVISIONS: BY: J.B.
SSI4057 24 x 60 BUSINESS	SHEET 2 OF 6
FRAME SIZE: (2) 11'-8" x 60'-0"	
FLOOR PLAN	DESTINATION: DAYTON



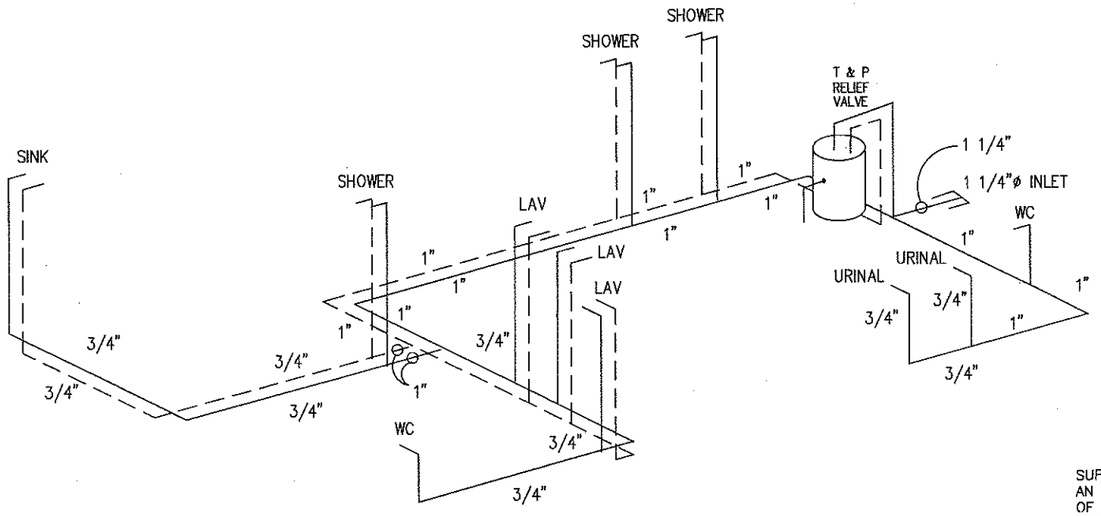
(TYP. OF 2)

(TYP. OF 3)

DWV RISER NTS



ACCESSIBLE SHOWER STALL
RECESSED FLOOR AREA DETAIL
– NTS –



SUPPLY RISER –NTS–

SUPPLY LINE SIZING IS BASED ON AN ASSUMED AVAILABLE PRESSURE OF 46 TO 60 PSI AT MAIN INLET AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION.
——— COLD
— — — — HOT
ALL SUPPLY LINES SHALL BE 3/4", ALL STUB-UPS SHALL BE 1/2" UNLESS OTHERWISE SPECIFIED.

APPROVED **RADCO** APPROVED
Aug 24, 2012
P.WITHERINGTON

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VALID
STATE OF MARYLAND
JAMES STANLEY BRADLEY
No.8588
PROFESSIONAL ENGINEER
August 24, 2012

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1-912-384-7565 FAX: 1-912-384-4943

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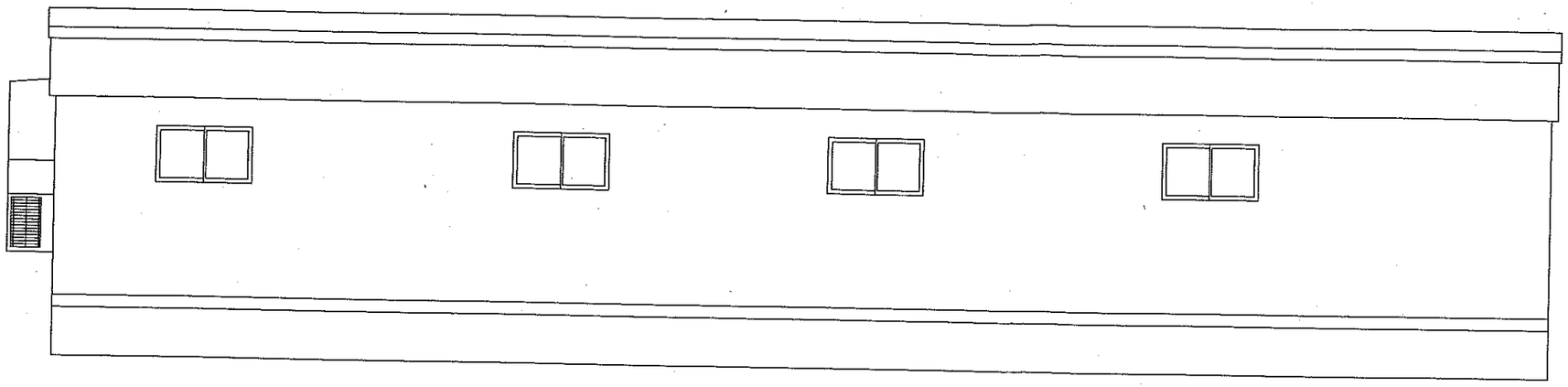
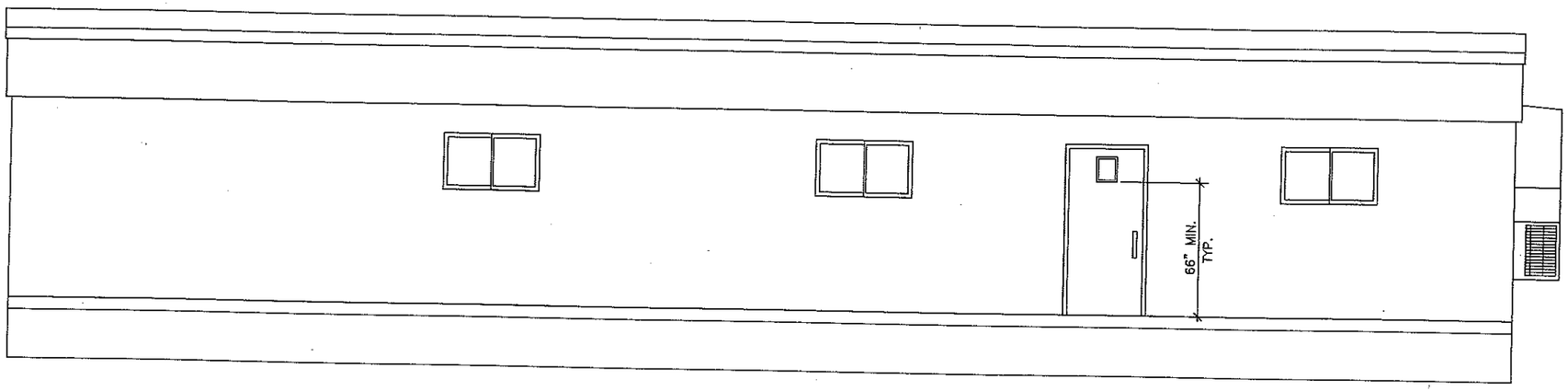
SCALE : NO SCALE		
CODES: MD.		
LABELS: RADCO	REVISIONS:	BY: J.B.
SSI4057 24 x 60 BUSINESS		SHEET 3 OF 6
FRAME SIZE: (2) 11'-8" x 60'-0"		
RISER PLANS	DESTINATION: DAYTON	

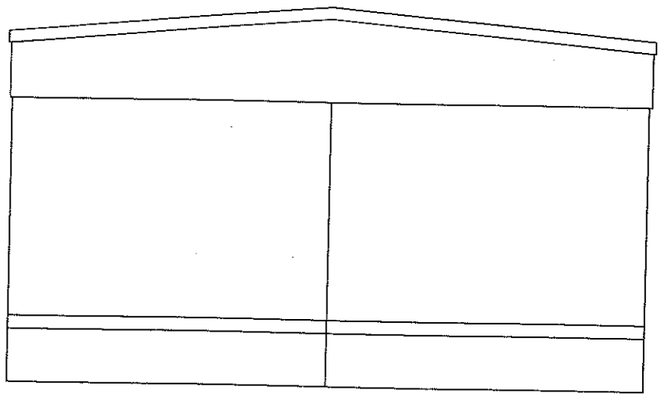


REAR ELEVATION

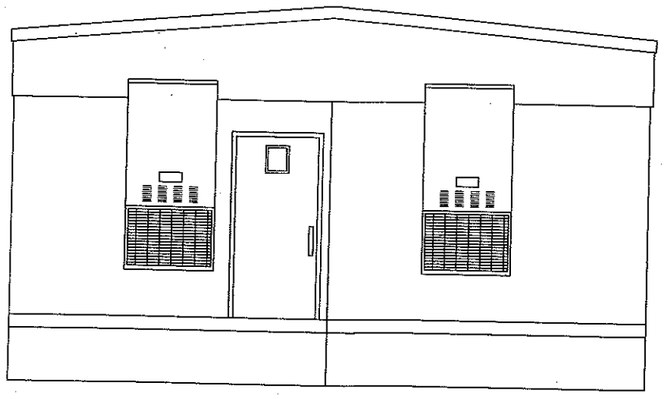


FRONT ELEVATION

SCALE: 3/16"=1'-0"



LEFT ELEVATION



RIGHT ELEVATION

ELEVATION NOTES: TYPICAL

SEE-CROSS SECTION FOR METHOD OF ROOF VENTILATION

ACCESSIBLE RAMP(S), STAIR(S), AND HANDRAILS ARE SITE INSTALLED, DESIGNED BY OTHERS, AND SUBJECT TO LOCAL JURISDICTION.

FOUNDATION ENCLOSURE (WHEN PROVIDED) MUST HAVE 1 SQUARE FOOT NET VENT AREA PER 1/150TH OF THE FLOOR AREA, AND AN 18" X 24" MINIMUM CRAWL SPACE ACCESS, SITE INSTALLED BY OTHERS SUBJECT TO LOCAL JURISDICTION.

APPROVED **RADCO** APPROVED
Aug 24, 2012
P.WITHERINGTON

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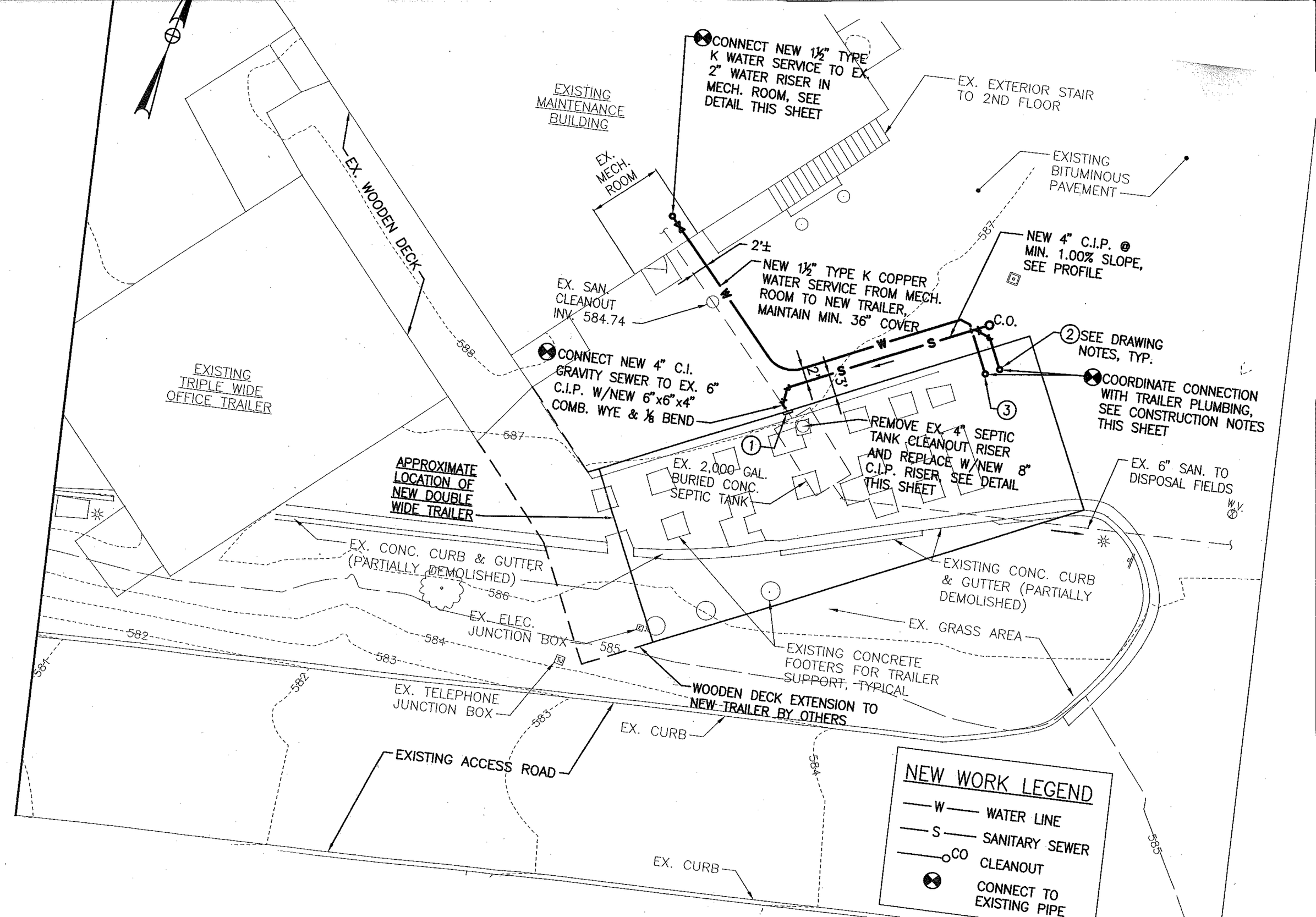
SSI4057 24 x 60 BUSINESS		SHEET 4 OF 6
FRAME SIZE: (2) 11'-8" x 60'-0"		
ELEVATIONS	DESTINATION: DAYTON	


EXISTING MAINTENANCE BUILDING
CONNECT NEW 1½" TYPE K WATER SERVICE TO EX. 2" WATER RISER IN MECH. ROOM, SEE DETAIL THIS SHEET
EX. EXTERIOR STAIR TO 2ND FLOOR
EXISTING BITUMINOUS PAVEMENT
EX. MECH. ROOM
EX. WOODEN DECK
2'±
NEW 1½" TYPE K COPPER WATER SERVICE FROM MECH. ROOM TO NEW TRAILER, MAINTAIN MIN. 36" COVER
NEW 4" C.I.P. @ MIN. 1.00% SLOPE, SEE PROFILE
EX. SAN. CLEANOUT INV. 584.74
C.O.
2
SEE DRAWING NOTES, TYP.
CONNECT NEW 4" C.I. GRAVITY SEWER TO EX. 6" C.I.P. W/NEW 6"x6"x4" COMB. WYE & ⅛ BEND
2'
3'
COORDINATE CONNECTION WITH TRAILER PLUMBING, SEE CONSTRUCTION NOTES THIS SHEET
EXISTING TRIPLE WIDE OFFICE TRAILER
3
REMOVE EX. 4" SEPTIC TANK CLEANOUT RISER AND REPLACE W/NEW 8" C.I.P. RISER, SEE DETAIL THIS SHEET
1
EX. 2,000 GAL. BURIED CONC. SEPTIC TANK
EX. 6" SAN. TO DISPOSAL FIELDS
APPROXIMATE LOCATION OF NEW DOUBLE WIDE TRAILER
EX. CONC. CURB & GUTTER (PARTIALLY DEMOLISHED)
EXISTING CONC. CURB & GUTTER (PARTIALLY DEMOLISHED)
EX. ELEC. JUNCTION BOX
EX. GRASS AREA
EXISTING CONCRETE FOOTERS FOR TRAILER SUPPORT, TYPICAL
WOODEN DECK EXTENSION TO NEW TRAILER BY OTHERS
EX. TELEPHONE JUNCTION BOX
EX. CURB
EXISTING ACCESS ROAD
EX. CURB
588
587
586
585
584
583
582
581
NEW WORK LEGEND
W WATER LINE
S SANITARY SEWER
CO CLEANOUT
CONNECT TO EXISTING PIPE

GENERAL CROSS–SECTION NOTES:

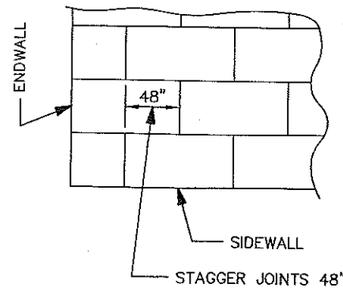
1. UNLESS OTHERWISE SPECIFIED, ALL STEEL MUST COMPLY W/ ASTM A36, YIELD STRENGTH = 36 KSI.
2. ALL LAG SCREWS MUST COMPLY W/ ANSI/ ASME B18.2.1. F_{YB}= 60 KSI MINIMUM.
3. SEE FOUNDATION PLAN FOR PIER AND TIE–DOWN STRAPPING LOCATIONS, ORIENTATIONS, AND SPECIFICATIONS.

EXTERIOR FINISH MATERIAL:

ROOF – 45 MIL BLACK RUBBER ROOF COVERING (EPDM) OVER FR DECK PANEL 'C' INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

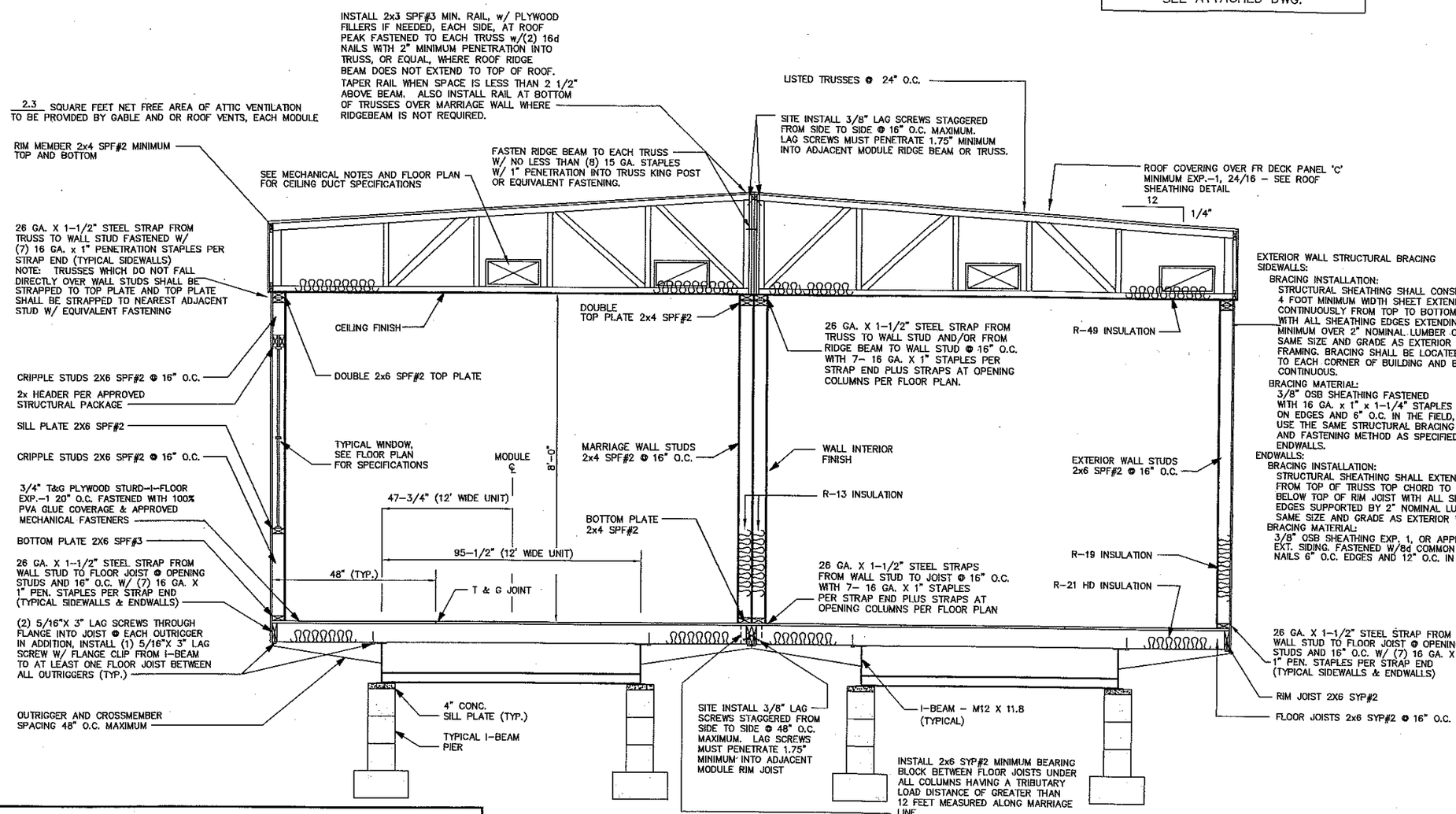
WALL – 24 GA. HI–RIB ALUMINUM OVER APPROVED MOISTURE BARRIER OVER OSB SHEATHING INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

APPROVED TRUSS DESIGN:
TRUSS MANUF.: UNIVERSAL
TRUSS NO. SF089038
SEE ATTACHED DWG.



FR DECK PANEL C TO BE FASTENED TO TRUSSES W/ 8D NAILS @ 6" O.C. ON EDGES AND 12" O.C. IN FIELD

ROOF SHEATHING DETAIL



APPROVED RADCO APPROVED
Aug 24, 2012
P.WITHERINGTON

RIDGE BEAM CONSTRUCTION:

4 LAYERS 3/4"X 24" PLYWOOD, RATED SHEATHING, EXP.–1, STRUCT.–1, 5 PLY/5 LAYER, 48/24 EACH HALF CONTINUOUS ENTIRE LENGTH OF BUILDING.

NOTES:

1. PLYWOOD FACE GRAIN MUST BE PARALLEL TO THE RIDGE BEAM SPAN.
2. ALL PLYWOOD BUTT JOINTS MUST BE STAGGERED 24" MINIMUM.
3. ALL RIDGE BEAM PLYWOOD LAMINATIONS MUST BE THE SAME DEPTH, THICKNESS, AND GRADE OF PLYWOOD. NO LUMBER OR PLYWOOD FLANGES ARE PERMITTED.
4. PLYWOOD MUST BE MANUFACTURED IN ACCORDANCE W/ PS I–95.
5. PLYWOOD LAMINATIONS IN EACH HALF OF THE UNITS MUST BE GLUE NAILED TO ADJACENT LAYERS IN ACCORDANCE W/ PDS SUPPLEMENT #5, W/ AN ADHESIVE COMPLYING W/ ASTM D2559, OR CA25–4.
6. PLYWOOD MUST NOT BE TREATED W/ A FIRE RETARDANT PROCESS.
7. MOISTURE CONTENT MUST BE LESS THAN 16%.
8. BEAMS SUPPORTED BY ENDWALL COLUMNS MUST EXTEND CONTINUOUS OVER COLUMNS TO EXTERIOR FACE OF ENDWALL.
9. INSTALL (2X4) X 20" SPF#3 RIDGE BEAM BEARING STIFFENER OVER SUPPORT COLUMNS, WHEN SPECIFIED ON FLOOR PLAN; FASTEN THE FACE OF THE STIFFENER TO THE RIDGE BEAM W/ 100% GLUE COVERAGE AND (6) 16 GA. X 2–1/2" STAPLES.

INTERIOR FINISH MATERIAL:

CEILING – 1/2 INCH MINIMUM GYPSUM BOARD INSTALLED PER MANUFACTURER'S SPECIFICATIONS. (SEASPRAY FINISH W/ROSETTES)

WALL – 1/2 INCH MINIMUM GYPSUM BOARD (VINYL COVERED)

FLOOR – AS NOTED ON PLAN

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STATE OF MARYLAND
JAMES E. BRADLEY
August 24, 2012
No. 8588
PROFESSIONAL ENGINEER

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DATE: 6–28–12	THIRD PARTY: RADCO 5456 CRENSHAW ST. TAMPA, FLORIDA 33634 813–243–0370	
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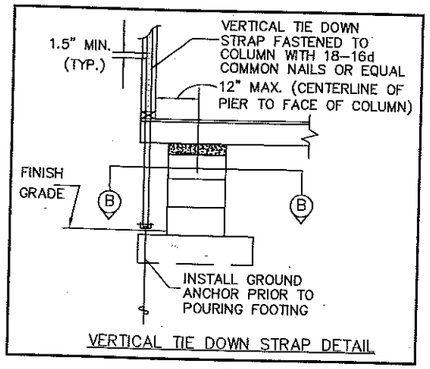
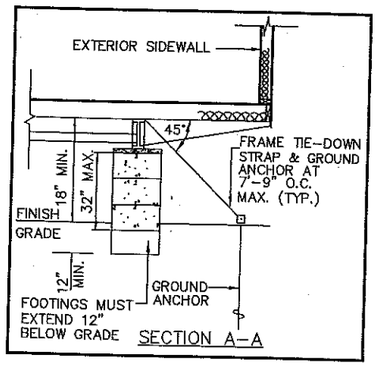
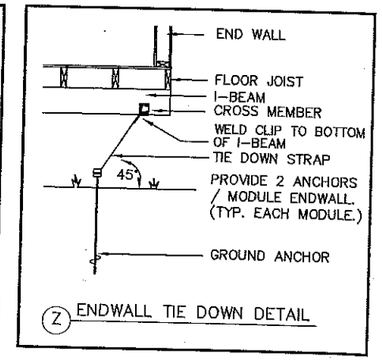
SSI4057 24 x 60 BUSINESS		SHEET
FRAME SIZE: (2) 11'–8" x 60'–0"		6 OF 6
CROSS SECTION	DESTINATION: DAYTON	



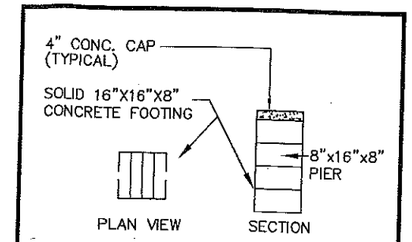
VERTICAL TIE DOWN STRAP DETAIL



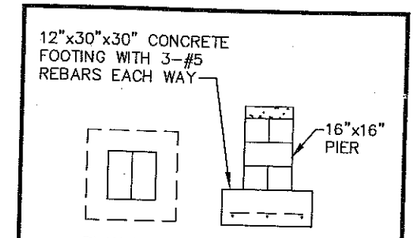
SECTION A–A



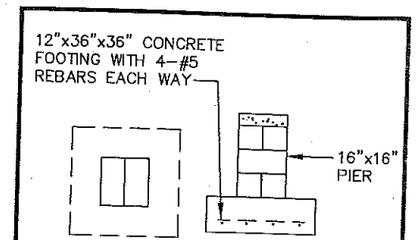
Z ENDWALL TIE DOWN DETAIL



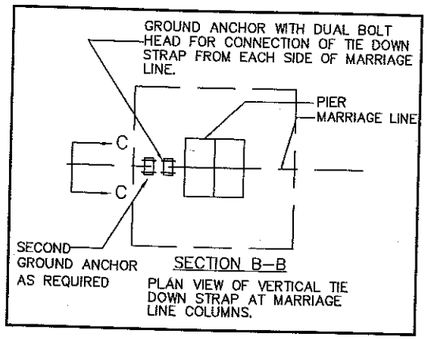
PIER TYPE A



PIER TYPE B

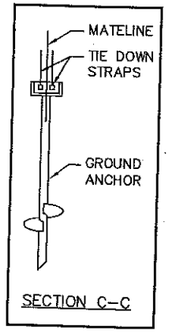


PIER TYPE C

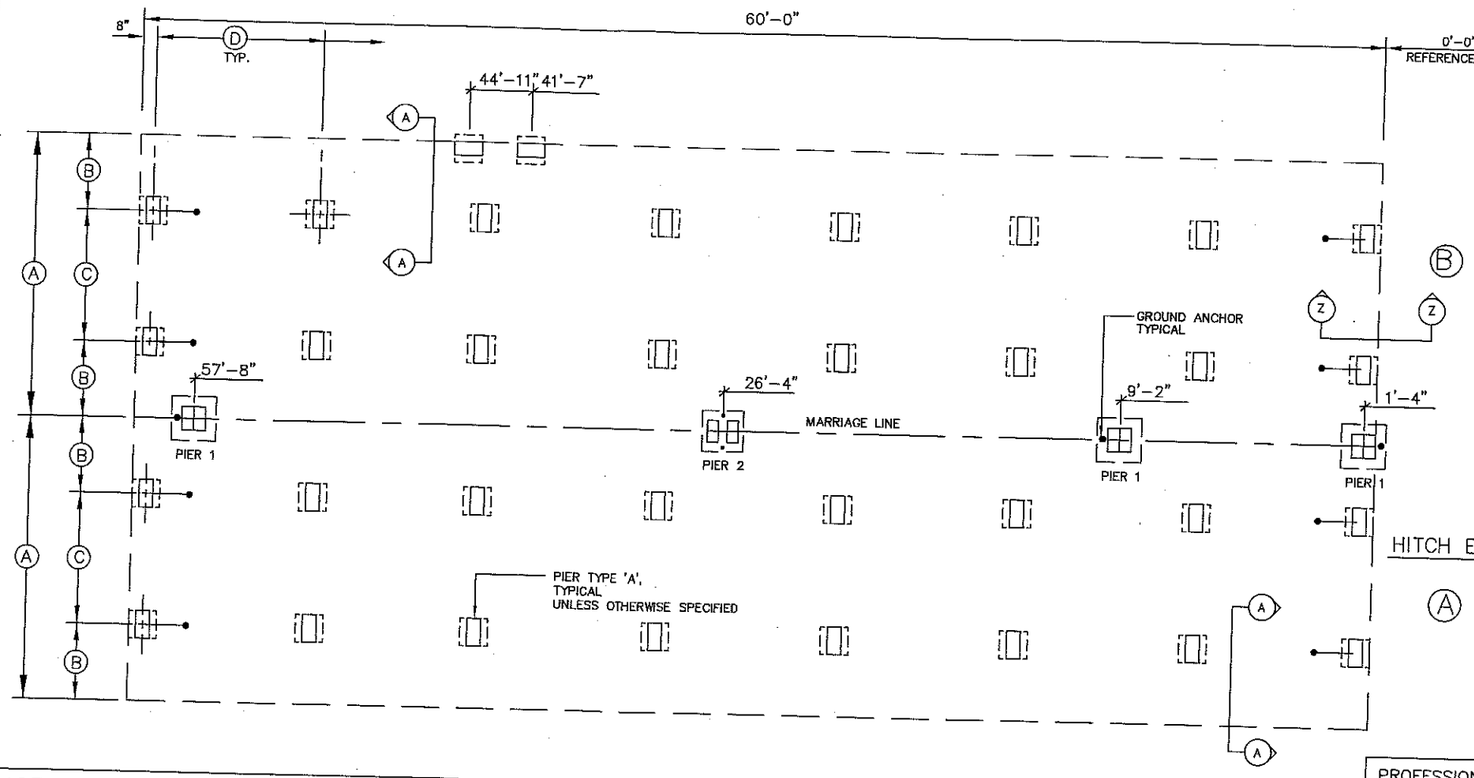


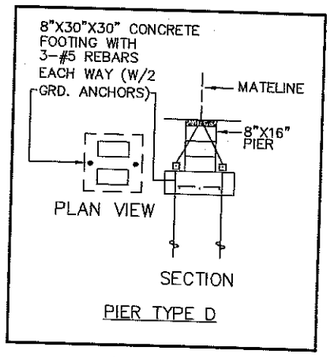
SECTION B–B

PLAN VIEW OF VERTICAL TIE DOWN STRAP AT MARRIAGE LINE COLUMNS.



SECTION C–C





PIER TYPE D

FOUNDATION NOTES:

1. ALL FOUNDATION CONSTRUCTION, MATERIALS, AND INSTALLATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES.
2. TIE–DOWN STRAPS TO BE 1–1/4"x .035" TYPE–1, FINISH B, GRADE 1 ZINC COATED STEEL STRAPPING CERTIFIED BY A REGISTERED ENGINEER OR ARCHITECT AS CONFORMING WITH ASTM D3953–91. TIE DOWN STRAPS AND CONNECTING HARDWARE SHALL HAVE 3150# MINIMUM WORKING CAPACITY.
3. GROUND ANCHORS SHALL HAVE 3150# MINIMUM WORKING CAPACITY, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. DESIGN OF GROUND ANCHOR, INCLUDING SHAFT LENGTH, NUMBER AND DIAMETER OF HELIXES, ETC., TO BE AS SPECIFIED BY THE GROUND ANCHOR MANUFACTURER FOR THE ACTUAL SOIL TYPE ENCOUNTERED. IF THE HOLDING OR PULLOUT CAPACITIES OF GROUND ANCHORS ARE BELOW THE VALUES SPECIFIED ABOVE THE ARCHITECT/ENGINEER MUST BE CONSULTED FOR AN ALTERNATE ANCHORAGE DESIGN.
4. THE FIRST TIE–DOWN STRAP FROM ENDWALLS SHALL NOT EXCEED 1/2 THE MAXIMUM SPACING INDICATED.
5. ALL PIERS SHALL BE CONSTRUCTED OF CONCRETE MASONRY UNITS CONFORMING TO ASTM C90. MASONRY UNITS SHALL BE LAID IN TYPE M OR S MORTAR OR COVERED WITH SURFACE BONDING CEMENT INSTALLED IN ACCORDANCE WITH ITS LISTING. PIER FOOTINGS SHALL BE AS DESCRIBED ABOVE.
6. MINIMUM CONCRETE FOOTING COMPRESSIVE STRENGTH 2,500 PSI AT 28 DAYS.
7. ALL REINFORCEMENT BARS SHALL COMPLY WITH ASTM A615, GRADE 60. REINFORCEMENT BARS SHALL BE EQUALLY SPACED AND PLACED WITH 3" CLEARANCE FROM BOTTOM AND SIDES OF THE FOOTING.
8. SEE SHEET 1 OF 6 FOR BUILDING DESIGN LOADS
9. I–BEAM SUPPORT PIERS MAY BE INSTALLED LATERALLY (90° FROM THE ORIENTATION SHOWN ON THE FOUNDATION PLAN). CENTERLINE OF EACH PIER MUST BE LOCATED DIRECTLY BELOW THE I–BEAM CENTERLINE.
10. SOIL BEARING CAPACITY SHOWN ON THIS PLAN IS ASSUMED. IF THE ACTUAL SOIL BEARING CAPACITY IS LESS THAN 2,000 PSF, THE ARCHITECT/ENGINEER MUST BE CONSULTED FOR REQUIRED ALTERNATE FOUNDATION DESIGN. FOOTINGS SHALL BE PLACED ON NON–EXPANSIVE SOILS ONLY.
11. INSTALL BLOCK PIER ON EACH SIDE OF ALL EXTERIOR DOOR OPENINGS. (MANUFACTURER'S RECOMMENDATION ONLY – OPTIONAL WHEN NOT SHOWN) SLIGHT ADJUSTMENT MAY BE REQUIRED TO INSURE OPENABILITY AFTER INSTALLATION OF BUILDING IS COMPLETE.
12. THE AREA UNDER FOOTINGS AND FOUNDATIONS SHALL HAVE ALL VEGETATION, STUMPS, ROOTS, AND FOREIGN MATERIALS REMOVED PRIOR TO THEIR CONSTRUCTION.
13. THE FOUNDATION DIMENSIONS SHOWN ARE NOMINAL. AN INCREASE IN MODULE WIDTH SHOULD BE EXPECTED DUE TO MODULE EXPANSION, SETTING TOLERANCES, ETC. THE FOUNDATION CONTRACTOR SHOULD CONSULT WITH THE MANUFACTURER OF THE MODULES PRIOR TO CONSTRUCTION OF THE FOUNDATION TO DETERMINE THE AMOUNT OF INCREASED WIDTH TO BE ADDED TO THE NOMINAL DIMENSIONS SHOWN ABOVE.

NOTE:

THIS FOUNDATION PLAN IS PROVIDED FOR REFERENCE AS A TYPICAL STANDARD. ACTUAL FOUNDATION CONDITIONS MUST BE EVALUATED FOR APPLICABILITY IF THIS PLAN IS TO BE USED. ALTERNATE FOUNDATION PLANS MAY BE DESIGNED BY OTHERS IN ACCORDANCE WITH THE REQUIREMENTS OF THE JURISDICTION HAVING AUTHORITY.

MARRIAGE WALL PIER REQUIREMENTS

PIER NUMBER	MINIMUM SOIL BEARING CAPACITY	PIER TYPE	NUMBER OF VERTICAL TIE DOWN STRAPS REQ'D (EACH MODULE)
1	2000 PSF	C	1
	3000 PSF	B	1
2	2000 PSF	D	2
	3000 PSF	D	2

FOUNDATION DIMENSIONS

A MODULE WIDTH	B PIER TO MODULE EDGE	C STEEL BEAM SPACING
11'–8"	22 1/4"	95 1/2"

D MAXIMUM PIER SPACING	MINIMUM SOIL BEARING CAPACITY
5'–8"	2000 PSF
8'–9"	3000 PSF

DESIGN LOADS

WIND SPEED: 130 MPH ROOF LIVE LOAD: 20 PSF
BLDG. EXPOSURE: EXP. C SNOW LOAD: 35 PSF

APPROVED **RADCO** APPROVED
Aug 24, 2012
P.WITHERINGTON

PROFESSIONAL CERTIFICATION:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 8588
EXPIRATION DATE: 6–6–14

VALID STATE OF MARYLAND JAMES E. BRADLEY No.8588 PROFESSIONAL ENGINEER
August 24, 2012

CONSULTING ENGINEER | JAMES BRADLEY, P.E. – 212 FOX TRAIL – PARKESBURG, PA. 19365 – (610) 857–2458

SPECIALIZED STRUCTURES INC.
2400 SPRINGHEAD ROAD WILLACOOCHEE, GA 31650
1–912–384–7565 FAX: 1–912–384–4943

DATE: 6–28–12
SCALE: nts
CODES: MD.
LABELS: RADCO
THIRD PARTY: RADCO 5456 CRENSHAW ST. TAMPA, FLORIDA 33634 813–243–0370
REVISIONS: BY: J.B.
SSI4057 24 x 60 BUSINESS
FRAME SIZE: (2) 11'–8" x 60'–0"
FOUNDATION PLAN
DESTINATION: DAYTON
SHEET 5 OF 6