APPENDIX H: Training Log

Training Log				
Training Date	Name and Title of Trainer	Name of person(s) and Company(s) Trained	BMP(s) Pertaining	Description of training material e.g. instruction, direction, etc. Attach all support documents in Appendix J. Including but not limited to: certifications, contracts, videos, literature, meeting minutes, memos, letters, emails, phone logs...

APPENDIX I: Construction Plans

Appendix I

PLAN NOTES

FIRE

1. Garage - 5/8" Type "X" gypsum board on walls and ceiling, or to roof - nail @ 6" O.C. All beams and structural members covered with 5/8" gypsum board.

2. Door between Garage and Dwelling - Solid core wood or "B" label door not less than 1 3/4".

3. Smoke Detectors - Shall receive their primary power from the building wiring and shall be equipped with battery back-up. All detectors shall be wired in series so the alarm is audible in all sleeping areas.

4. Smoke Detectors - Install in each sleeping room. Mount at a central point in the corridor or area giving access to each separate sleeping room.

5. Smoke Detectors - In dwellings with basements and more than one story, a detector shall be installed on each story and in the basement. When sleeping rooms are in an upper level, the detector shall be placed on the ceiling in close proximity to the stairway.

6. Smoke Detectors - Where ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24" or more, detectors shall be installed in the hallway and the adjacent room.

7. Space under Stairs - Enclose any usable space under stairs with 5/8" gypsum board.

8. Stair Stringers - Fire block walls at all stair stringers.

9. Fire Blocking - All stud cavities greater than 10'.

10. Carbon monoxide alarms shall be installed on each habitable level of a dwelling unit equipped with fuel burning appliances. All carbon monoxide detectors shall be listed and comply with UL 2034 and shall be installed in accordance with provisions of this code and NFPA 720. R315.3

EXCAVATION

1. Footings - Bear on natural undisturbed soil, free of plant material or debris.

2. Final Grade - Provide positive drainage away from all project foundations - Minimum slope of 5% for first 10', with 1.

ATTIC VENTILATION

1. Net free ventilation area shall not be less than 1/300th provided that at least 50% of the area is provided by ventilators located in upper portion of space to be ventilated.

2. Any other space to be vented by soffit system.

3. Provide 22" x 30" Attic Access to all attica areas. (not located above closet shelf), with 30" minimum clear headroom above door.

WINDOWS

1. Basement & Sleeping Rooms - Below the fourth story, shall have at least one operable window or exterior door approved for emergency escape or rescue. Same shall have a minimum net clear of 5.7 square feet. Shall have a minimum net clear opening height dimension of 24". Shall have a minimum net clear opening width dimension of 20". Shall have finished sill height of not more than 44" above the finished floor.

2. Escape & Rescue Windows - Shall have a window well if finished sill height below the adjacent ground elevation. The clear horizontal dimensions of the window well shall allow the window to be fully opened and provide a minimum accessible net clear opening of 9 square feet, with a minimum dimension of 36". Window wells with vertical depth of more than 44" shall be equiped with an approved permanently affixed ladder or stairs that are accessible with the window in the fully open position. The ladder or stairs shall not encroach into the required dimensions of the window well by more than 6".

3. Glass Size - 10% of square feet.

4. Ventilation - 5% of square feet.

5. Glazing - All doors, enclosures for bathtubs, showers, hot tubs, saunas, whirlpools, and steam rooms shall be impact resistant. Glazing in any portion of a building wall enclosing the compartments where the bottom exposed edge of the glazing is less than 60" above a standing surface and drain inlet shall be impact resistant.

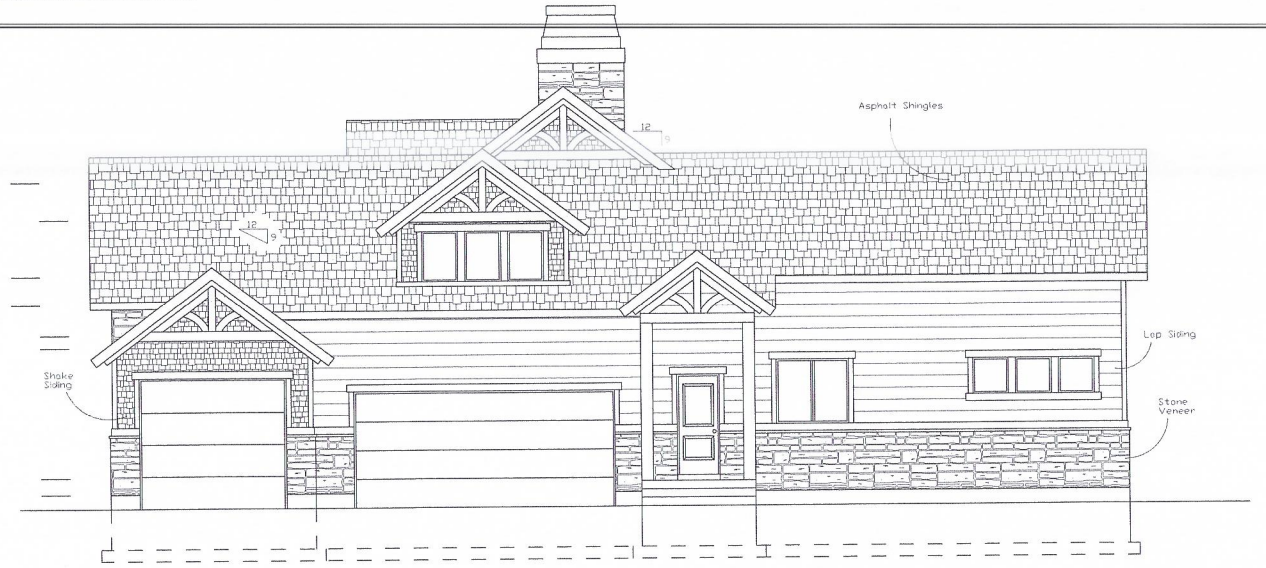
6. Glazing - In all fixed or operable panels adjacent to a door where the nearest exposed edge of the glazing is within a 24" arc of either vertical edge of the door in a closed position, and where the bottom exposed edge of the glazing is less than 60" above the walking surface shall be impact resistant.

7. Glazing - In all individual fixed or operable panels, other than stated above, shall be impact resistant when it meets all of the following conditions: Exposed area of an individual pane is greater than 9 square feet; Exposed bottom edge is less than 18" above floor; Exposed top edge is greater than 36" above the floor; One or more walking surfaces are within 36" horizontally of the plane of the glazing.

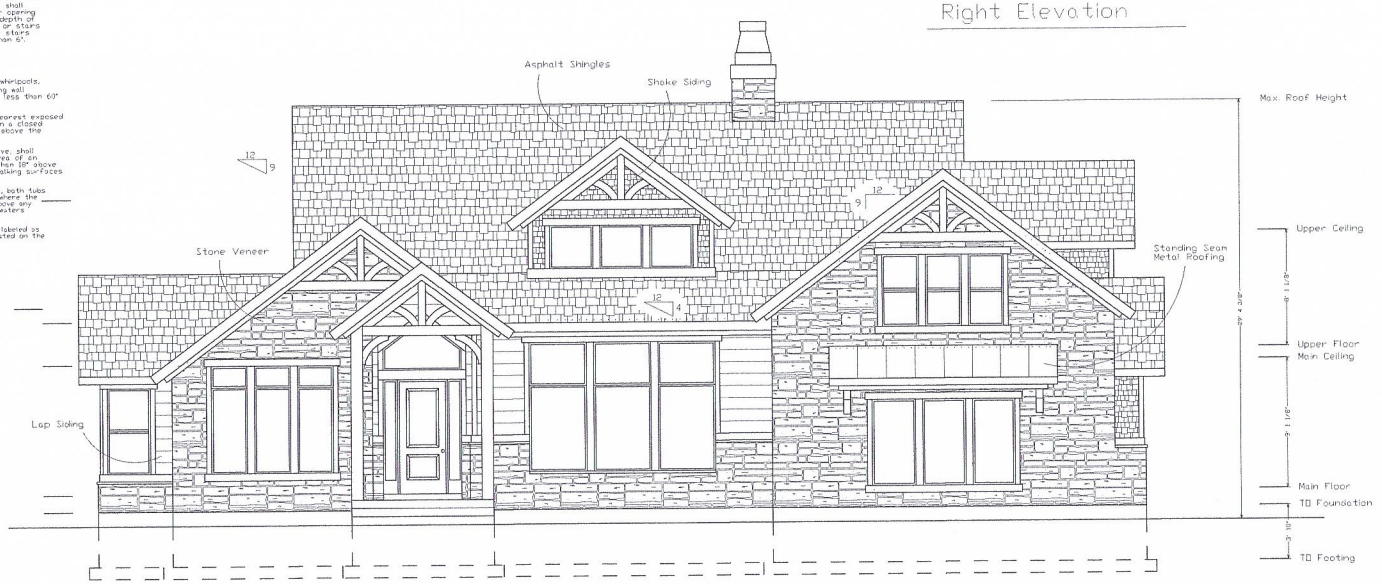
8. Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bath tubs and showers. Glazing in any part of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60 inches measured vertically above any standing or walking surface. Glazing that is more than 60" horizontally from the waters edge of a hot tub, whirlpool tub, or bath tub need not comply with this section.

9. All U-factors shall be determined by testing in accordance with NFRC 100 and labeled as such by the manufacturer, per section 1121.3 of the 2006 IECC. U-Factors are listed on the RES sheet.

10. Window labels: F=Fixed C=Casement DH=Single Hung SV=Slider



Right Elevation



Front Elevation

Homeowner:
Paul & Jessica Hennig
907 232-1056
901 232 1063

General Contractor:
Jed Slama
801 430-6622

HENNIG RESIDENCE
1080 South 9150 East
Huntsville, Utah

DESCRIPTION:
EXTERIOR ELEVATIONS

Scale: 1/4" = 1 Foot

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MASONRY

1. Ties - Brick or stone veneer shall have corrosion resistant ties of not less than 22 ga. x 3/4" or #9 ga. wire spaced not more than 16" O.C. horizontal and 18" O.C. vertical. Anchor ties shall have a tip or hook on the extended leg, that will engage or encircle the #9 ga. horizontal joint reinforcement wire.

2. Moisture barrier required, or full 1" airspace.

3. Wall Reinforcement - Minimum of .0007 each way, or a total of .002.

4. R703.7.6 Weepholes. Weepholes shall be provided in the outside wythe of masonry walls at a maximum spacing of 33 inches on center. Weepholes shall not be less than 3/16 inch in diameter. Weepholes shall be located immediately above the flashing.

PLUMBING

1. All plumbing shall be installed in accordance with current plumbing code requirements, ordinances, and industry standards.

2. Contractor is responsible for design of new plumbing equipment.

3. Provide all equipment, accessories and components required to constitute installation of new equipment.

4. Provide all low water usage water closets, 1.6 GAL flush.

5. Provide anti-scald device at all lavatory faucets.

6. Water Heaters - Located in a garage and which generates a glow, spark, or flame capable of igniting flammable vapors shall be installed with the pilots, burners, or heating elements and switches at least 18" above the floor level.

7. Water Heaters - anchor or strap water heater to resist seismic motion. Locate anchor or strip within the upper or lower third of the appliance.

8. Provide expansion tank on supply line to water heater.

9. Backflow Prevention - Install on all hose bibs and lawn sprinklers.

10. Fixtures that have flood level rims located below the elevation of the next upstream manhole cover of the public sewer serving such fixtures shall be protected form back flow of sewage by installing an approved backwater valve. Fixtures having flood level rims above the elevation of the next upstream manhole shall not discharge through the backwater valve. Backwater valves shall be provided with an access. IRC P3009.1

ELECTRICAL

1. All electrical shall be installed in accordance with current electrical code requirements Contractor shall obtain required permit and comply with all required codes.

2. Provide all new fixtures, switches, outlets, and wiring.

3. Electrical Panel - Fire rated and located in mechanical room unless otherwise noted. Provide minimum clearance of 30" width and 6' - 0" in height Cannot be located facing the garage side of firewall.

4. Provide secondary grounding system when using the water services as the primary ground.

5. In all locations where required, designated or none designated, restrooms, garages, or outside of building provide outlets with an approved GFCI.

6. Central heating equipment shall be supplied by an individual branch circuit.

7. Temporary wiring shall conform to NEC. article 305.

8. At least one weatherproof GFCI protected outlet shall be provided at 8' above grade both front and back of building.

9. Lighting and electrical plans are preliminary and for permit purposes. Contractor shall review locations, types, and quantities of all fixtures with the owner prior to installation.

10. Attic, Crawl Space, Utility Room, & Basement Storage - At least one lighting outlet with a switch at point of entry. Some is required for any space containing equipment requiring service.

11. Provide j-boxes and/or whips as required For all appliance connections, coordinate with owner for final locations, types, quantities, and power requirements.

12. Pre-wire for voice/data and cable TV in rooms requested by owner - coordinate with owner for final locations.

13. All outlets in restrooms shall be GFCI and on a dedicated 20 amp circuit.

14. Smoke detectors shall be hardwired with battery back up and wired in series.

15. Carbon monoxide detectors shall be hardwired with battery back up and wired in series.

16. All GFU outlets at 18" AFF minimum unless otherwise noted.

17. All exterior GFU outlets to have weather proof covers.

18. All 125-volt, 15 and 20 amp receptacles installed inside or outside of a dwelling shall be listed tamper-resistant receptacles unless located more than 5'6" above the floor. R4.08.14.

19. Kitchen and Dining Area - Counters shall have receptacle outlets at each counter space wider than 12". Counters shall have receptacle outlet located so that no point, along the wall line, is more than 24" measured horizontally, from a receptacle outlet in that space. Island and peninsula counter tops 12" or wider shall have at least one receptacle for each 4' of counter top.

20. Install an outlet within 20' of the A/C equipment on exterior of house.

21. Where there are 2 or more non-metallic sheathed cables (romex) are installed together in the same space without maintaining space between them and where the opening they are installed in is filled with caulking, foam insulation, or other types of insulation the conductors must be derated as required by IRC E3705.4.4

22. All electrical circuits providing power to bedrooms shall be provided by an arc-fault circuit interrupter as required by IRC E3902.11.

23. All branch circuits that supply 125-volt, single-phase, 15- and 20-ampere receptacle outlets installed in dwelling unit locations shall be protected by an arc-fault circuit interrupter(s). IRC E3902.16 (and State Amendments)

FLASHING

1. Flashing shall be installed in such a manner so as to prevent moisture from entering a wall, roof, or floor and redirect it to the exterior. Flashing shall be installed at the perimeters of exterior door and window assemblies, penetrations and terminations of exterior wall assemblies, exterior wall intersections with roofs, chimneys, porches, decks, balconies and similar projections and at built-in gutters and similar locations where moisture could enter the wall. Flashing and projected flanges shall be installed on both sides and the ends of copings, under sills and continuously above projected trim. A flashing shall be installed at the intersection of the foundation to stucco, masonry, siding or brick veneer. The flashing shall be approved corrosion-resistant flashing. R703.7.4, R703.8, R903.2, R905

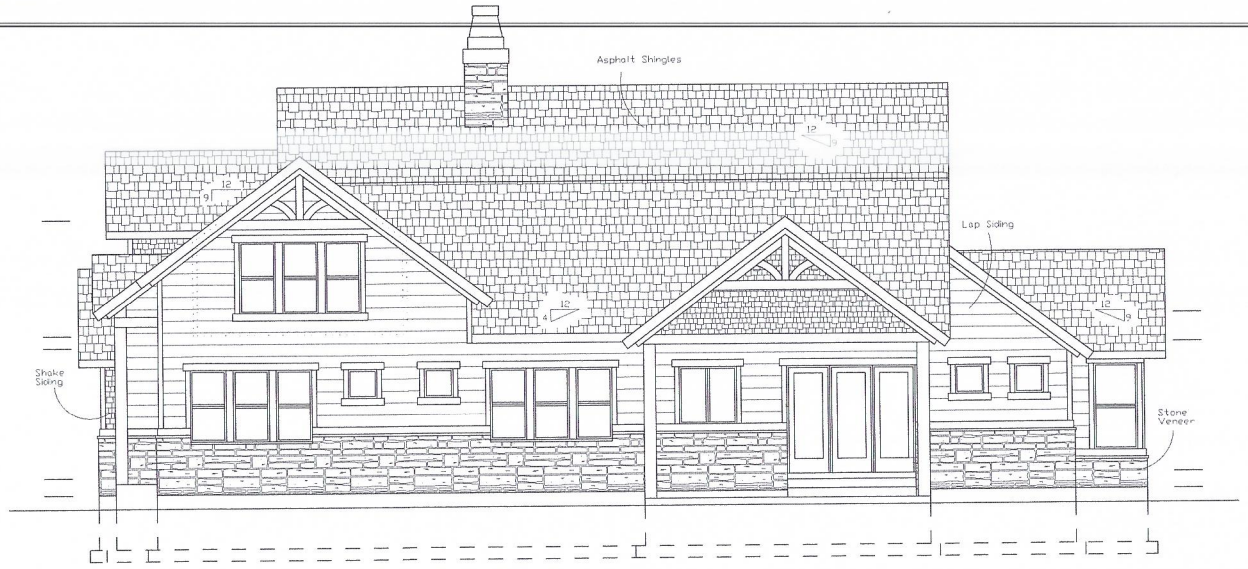
2. R905.2.7.1 Ice Barrier. In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet, shall be used in lieu of normal underlayment and extend from the lowest edges of all roof structures to a point at least 24 inches inside the exterior wall line of the building.

ENERGY EFFICIENCY

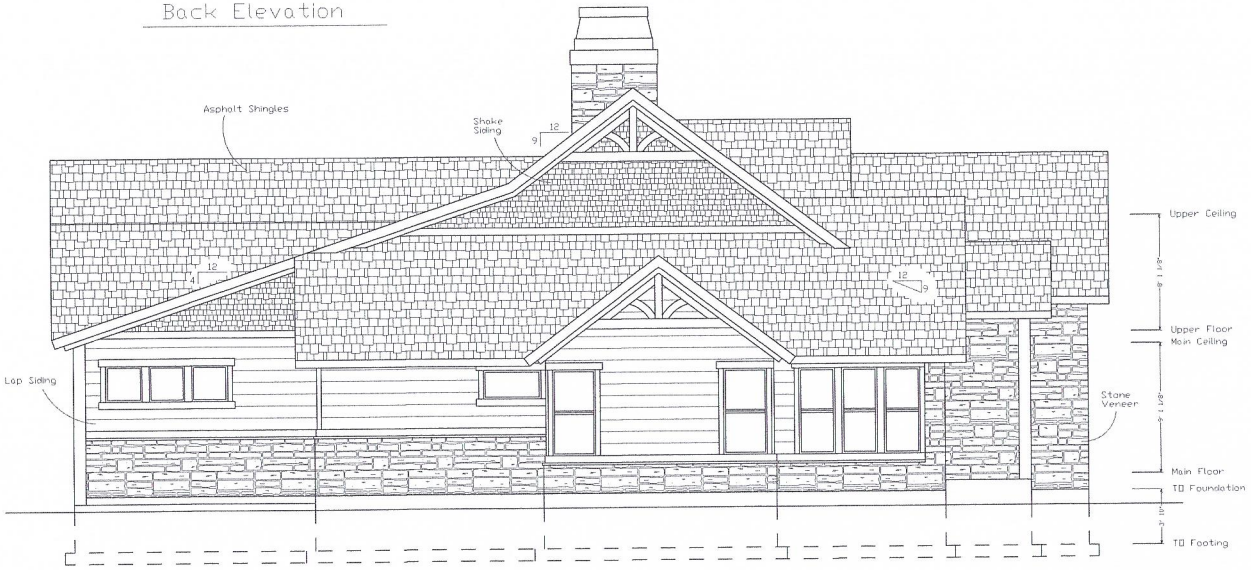
1. The thickness of blown or sprayed roof/ceiling insulation (fiberglass or cellulose) shall be written in inches (mm) on markers that are installed at least one every 300 ft2 (28 m2) throughout the attic space. The markers shall be affixed to the trusses or joists and marked with the minimum initial installed thickness with numbers a minimum of 1 inch (25 mm) high. Each marker shall face the attic access opening.

2. All materials, systems and equipment shall be installed in accordance with the manufacturer's installation instructions and the provisions of this code.

3. A permanent certificate shall be posted on or in the electrical distribution panel. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant R-values of insulation installed in or on ceiling /roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces. The certificate shall also list the type and efficiency of heating, cooling and service water heating equipment.



Back Elevation



Left Elevation

Homeowner:
Paul & Jessica Hennig
907 232-1056
901 232 1063

General Contractor:
Jed Slama
801 430-6622

HENNIG RESIDENCE
1080 South 9150 East
Huntsville, Utah

DESCRIPTION:
EXTERIOR ELEVATIONS

Scale: 1/4" = 1 Foot

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801 628-7041

PROFESSIONAL ENGINEER
8/2017
MICHAEL C. DENT
STATE OF UTAH

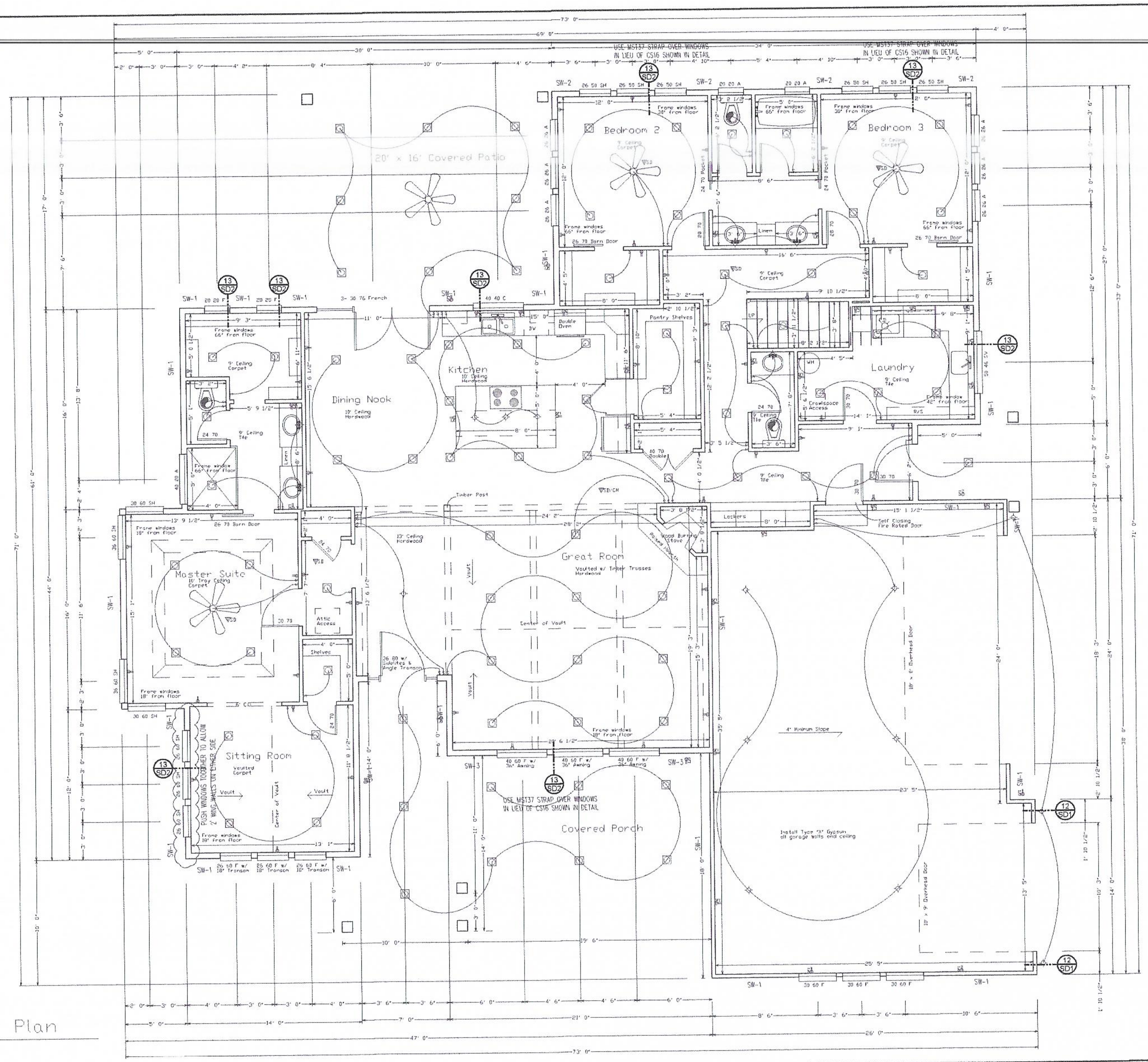
SHEAR WALL NOTES

ALL EXTERIOR WALLS AND VERTICAL SURFACES AT STEPS IN ROOF SHALL BE SHEATHED WITH 7/16" APA RATED 24/0 OR BETTER STRUCTURAL WOOD PANELS. BLOCK ALL HORZ EDGES WITH 2" NOM. OR WIDER 2" OR WIDER FRAMING AT ADJOINING PANEL EDGES AND NAILS SHALL BE STAGGERED WHERE 8d NAILS ARE SPACED 3" O.C. OR LESS. SHEATHING SHALL EXTEND CONTINUOUS FROM FLOOR TO TOP PLATE FRAMING ON UPPER EXT. WALLS. NAILS SHALL BE PLACED NOT LESS THAN 1/2" FROM EDGE OF PANEL AND DRIVEN FLUSH BUT SHALL NOT FRACTURE THE SURFACE OF THE SHEATHING. EXTEND SHEATHING OVER RIM AND NAIL TO RIM AND WALL PLATES 4" O.C.

SHEAR WALL SCHEDULE

TYPE	SHEATHING	NAIL	EDGE	FIELD	STAPLE EQ
TYPICAL	7/16" ONE SIDE	8d	6" O.C.	12" O.C.	16G @ 3" O.C.
SW-1	7/16" ONE SIDE	8d	4" O.C.	12" O.C.	16G @ 2" O.C.
SW-2	7/16" ONE SIDE	8d	3" O.C.	12" O.C.	NOT ALLOWED
SW-3	7/16" ONE SIDE	8d	2" O.C.	12" O.C.	NOT ALLOWED

NOTE: 16 GAUGE STAPLES MAY BE SUBSTITUTED FOR 8d NAILS AT 1/2 SPACING ON TYPICAL AND SW-1.
SW-2 AND SW-3 REQUIRE 3X OR (2) 2X ON JOINING PANEL EDGES.



Main Floor Plan

Homeowner:
Paul & Jessica Hennig
907 232-1056
901 232 1068

General Contractor:
Jed Slama
801 430-6622

HENNIG RESIDENCE
1080 South 9150 East
Huntsville, Utah

DESCRIPTION:
MAIN FLOOR PLAN

Main Level:
2548 Sq. Ft.

Garage:
934 Sq. Ft.

Scale: 1/4" = 1 Foot

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Upper Floor Plan

Creative Line L.L.C. Custom Home Solutions CreativeLinePlans.com ©Ashlie Hull 801 628-7041	HENNIG RESIDENCE 1080 South 9150 East Huntsville, Utah	General Contractor: Jed Slama 801 430-6622	Homeowner: Paul & Jessica Hennig 907 232-1056 901 232 1068

Scale: 1/4" = 1 Foot

DESCRIPTION: UPPER FLOOR PLAN

Upper Level: 1088 Sq. Ft.

Foundation Dimensions

FOOTING SCHEDULE

TYPE	WIDTH	LENGTH	THICK	REINFORCEMENT
F-16	16"	CONT.	10"	2: # 4 BARS CONT.
F-18	18"	CONT.	10"	2: # 4 BARS CONT.
F-20	20"	CONT.	10"	2: # 4 BARS CONT.
F-24	24"	CONT.	10"	3: # 4 BARS CONT.
F-30	30"	CONT.	10"	3: # 4 BARS CONT.
F-36	36"	CONT.	10"	4: # 4 BARS CONT.
S-24	24"	24"	10"	3: # 4 BARS EACH WAY
S-30	30"	30"	10"	3: # 4 BARS EACH WAY
S-36	36"	36"	10"	4: # 4 BARS EACH WAY
S-42	42"	42"	12"	5: # 4 BARS EACH WAY
S-48	48"	48"	12"	6: # 4 BARS EACH WAY
S-60	60"	60"	12"	7: # 4 BARS EACH WAY

FOOTING, FOUNDATION AND CONCRETE

ALL FOOTINGS ARE BASED ON ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED GRANULAR FILL COMPACTED TO 95% OF MAXIMUM DENSITY. NO FOOTINGS SHALL BE PLACED IN WATER OR FROZEN GROUND. ALL FOOTINGS TO BE PLACE AT MIN. BELOW LOCAL FROST DEPTH. CONTINUOUS AND MONOLITHIC POUR. CHANGES IN ELEV. SHALL BE STEPPED WITH STEP HEIGHT NOT HIGHER THAN ½ THE STEP LENGTH AND NOT GREATER THAN 5 FT. MIN. 6" THICKNESS ON VERT. STEP. FOOTINGS TO HAVE 2 #4 BAR CONTINUOUS. NOTIFY ENGINEER IF GRADE DROPS OVER 8 FEET IN 24 FEET (G.T. 1 TO 3 SLOPE) SO THAT APPROPRIATE DESIGN CHANGES MAY BE MADE TO FOUNDATION AND FOOTINGS.

ALL FOOTINGS, FOUNDATIONS, AND INTERIOR SLABS SHALL BE NORMAL WT. CONCRETE WITH A COMPRESSIVE STRENGTH EQUAL TO AT LEAST 3,000 PSI WITHIN 28 DAYS AFTER POURING. ALL CONC WORK SHALL BE PLACED, CURED, STRIPPED, AND PROTECTED AS DIRECTED BY THE SPECIFICATIONS AND ACI STANDARDS AND PRACTICES.

ALL REINFORCING SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318. REINFORCEMENT SHALL BE FREE FROM MUD AND OIL AND OTHER NON-METALLIC COATINGS THAT HAMPER BONDING CAPACITY. ALL SPLICES IN CONTINUOUS REINFORCING SHALL LAP 45 BAR DIAMETERS (24" LAP FOR #4 BARS).

VERT & HORZ. #4 BAR (GRADE 60) AS PER FND SCHEDULE. OPENINGS TO HAVE 1 VERT. #4 BAR EA. SIDE OF OPENING TIED TO HORZ. BAR. 2 #4 BAR ABOVE AND 1 #4 BELOW. WINDOW OPENING EXTENDING 24" BEYOND OPENING. USE ANCHOR BOLTS AS PER FND SCHEDULE USE SIMPSON STHDX(RJ) STRAPS AS NOTED ON DRAWING. OWNER\CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS LISTED ON THE DRAWING. VERIFICATION OF ALL SITE CONDITIONS INCLUDING SITE STABILITY IS THE RESPONSIBILITY OF OTHERS

ALLOW 14 DAYS FOR CONCRETE TO CURE PRIOR TO BACKFILL.

NOTE: THIS ENGINEERING ASSUMES THAT THE CLEARANCE & SETBACK REQUIREMENTS LISTED IN IRC SECTION R403.1.7 ARE MET. IF THESE PROVISIONS ARE NOT MET, CONTACT THE ENGINEER FOR FURTHER DESIGN.

NOTE: THIS ENGINEERING ASSUMES THAT THE SITE IS STABLE HAVING NO GLOBAL STABILITY CONCERNS OR HAZARDS. IF THIS IS NOT TRUE THEN CONTACT ENGINEER FOR FURTHER ANALYSIS AND DESIGN.

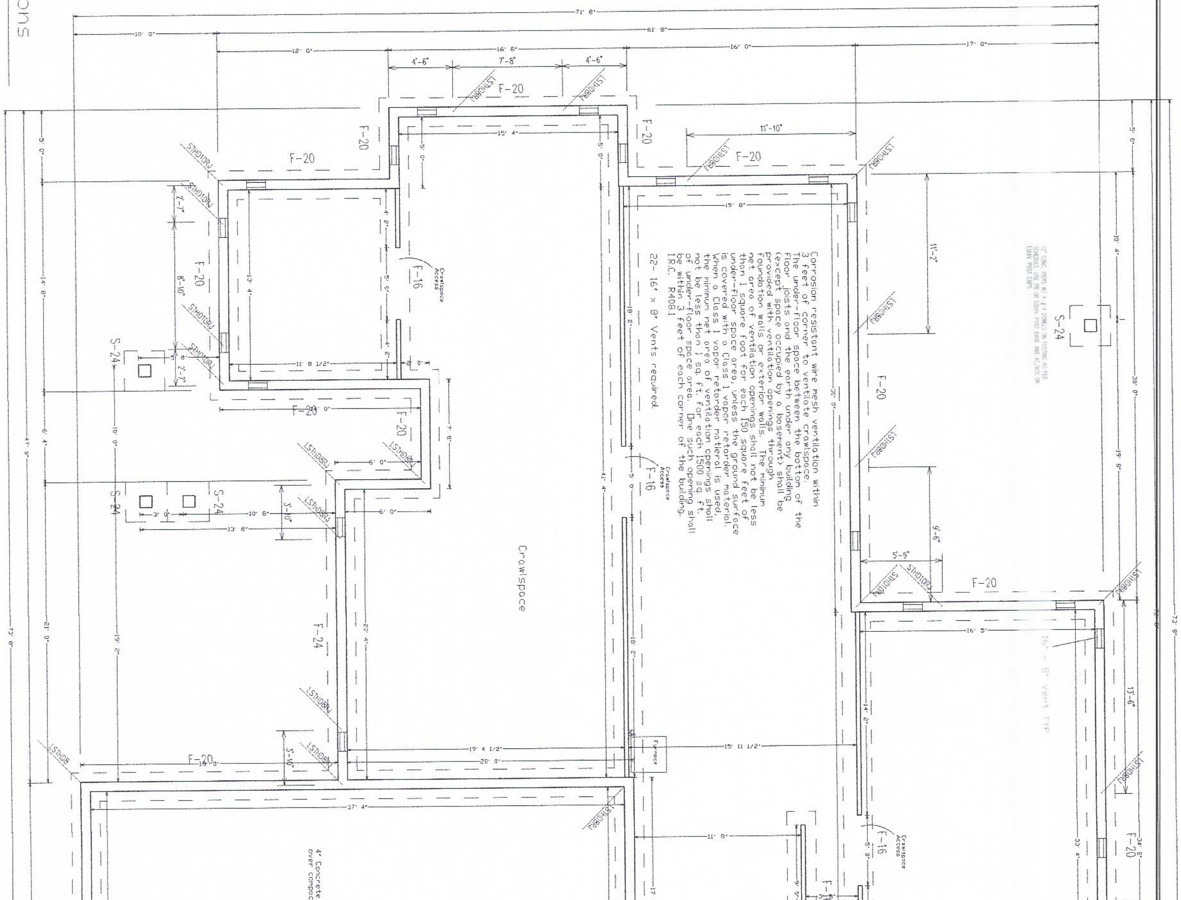
PROFESSIONAL ENGINEER 8/2017 No. 5543066 MICHAEL C. DENT STATE OF UTAH

FOUNDATION SCHEDULE

3,000 PSI CONCRETE — 60,000 PSI STEEL

MAXIMUM WALL HEIGHT FROM T.O. FOOTING	TOP EDGE SUPPORT	MIN. WALL WIDTH	VERTICAL WALL REINF. SIZE	VERTICAL WALL REINF. SPACING	HORIZONTAL WALL REINF. SIZE	HORIZONTAL WALL REINF. SPACING	ADDITIONAL REINF. FOR OPENINGS ABOVE NO.	ABOVE SIZE	SIDES NO.	SIDES SIZE	BELOW NO	BELOW SIZE	MAX. LINTEL LENGTH	MIN. LINTEL DEPTH	ADDITIONAL FTG. SIZE AND REINF. WIDTH	ADDITIONAL FTG. LENGTH	NOTES	FOUNDATION BOLTS (MIN. 7" EMBEDMENT)
2'-0" TO 5'-0"	NONE	8"	#4	24" O.C.	#4	18" O.C.	2	#4	1	#4	1	#4	2'	6"	SEE FTG. SCHED.			½" X 10" @ 32" O.C.
5'-1" TO 6'-0"	NONE	8"	#4	18" O.C.	#4	18" O.C.	2	#4	1	#4	1	#4	3'	6"	36"	4 #4 X CONT	SEE NOTE 8 BELOW	½" X 10" @ 32" O.C.
6'-1" TO 7'-0"	NONE	8"	#4	12" O.C.	#4	18" O.C.	2	#4	1	#4	1	#4	4'	8"	42"	5 #4 X CONT	SEE NOTE 8 BELOW	½" X 10" @ 32" O.C.
7'-10" TO 8'-0"	FLOOR	8"	#4	24" O.C.	#4	18" O.C.	2	#4	1	#4	1	#4	5'	10"	SEE FTG. SCHED.			½" X 10" @ 32" O.C.
8'-1" TO 9'-0"	FLOOR	8"	#4	16" O.C.	#4	18" O.C.	2	#4	1	#4	1	#4	6'	12"	SEE FTG. SCHED.			½" X 10" @ 32" O.C.
9'-1" TO 10'-0"	FLOOR	8"	#4	12" O.C.	#4	12" O.C.	2	#4	1	#4	1	#4	6'	12"	24"	2 #4 X CONT	USE MIN F-24 FOOTING	⅝" X 10" @ 24" O.C.
10'-1" TO 11'-0"	FLOOR	8"	#4	8" O.C.	#4	12" O.C.	2	#4	1	#4	1	#4	6'	12"	24"	2 #4 X CONT	USE MIN F-24 FOOTING	⅝" X 10" @ 24" O.C.
> 11'-0"+	REQ. ENG.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		REQ. ENG.

NOTES:
1. REBAR TO BE PLACED IN THE CENTER OF THE WALL AND EXTEND FROM THE FOOTING TO WITHIN 3" OF THE TOP OF THE WALL.
2. #4 FOOTING DOWELS SHALL EXTEND 24" INTO THE FOUNDATION AND MATCH VERTICAL STEEL.
3. ONE BAR SHALL BE LOCATED IN THE TOP 3" AND ONE BAR IN THE BOTTOM 3" OF THE FOUNDATION WALL. (THE REMAINING EQUALLY SPACED BETWEEN)
4. BARS SHALL BE PLACED WITHIN 2" OF THE OPENING AND EXTEND 24" BEYOND THE EDGE OF THE OPENING.
5. THIS TABLE ASSUMES A MINIMUM OF 1500 PSF BEARING CAPACITY, 30 PSF EQUIVALENT FLUID PRESSURE AND A GLOBALLY STABLE SITE
6. ALL FOUNDATION STEPS SHALL BE 2'-0" MINIMUM
7. USE 3" X 3" X ¼" WASHERS, IF SLOTTED WASHER IS USED, ADD CUT WASHER.
8. LARGER FOOTINGS AND INCREASED FOUNDATION RE-ENFORCEMENT SPECIFIED ON 5'-1" TO 7'-0" WALLS MAY BE REDUCED TO FOOTING SIZE SPECIFIED ON PLANS (MIN F-20) AND WALL RE-ENFORCEMENT PLACED AT 24" O.C. VERTICAL AND 18" O.C. HORIZONTAL PROVIDED ONE OF THE FOLLOWING CONDITIONS EXIST
   A. 5'-1" TO 7'-0" WALL LENGTH NOT TO EXCEED 15'-0" BEFORE A JOG IN THE FOUNDATION
   B. 5'-1" TO 7'-0" WALL LENGTH NOT TO EXCEED 15'-0" BEFORE IT STEPS BELOW 5'1" IN HEIGHT
   C. UNBALANCED BACKFILL DOES NOT EXCEED 4'
9. MINIMUM STRENGTH REQUIRES 2,500 PSI CONCRETE; HOWEVER, AS PER IRC 402.2 3,000 PSI CONCRETE SHALL BE USED



Scale: 1/4" = 1 Foot

DESCRIPTION: FOUNDATION DIMENSIONS

HENNIG RESIDENCE
1080 South 9150 East
Huntsville, Utah

General Contractor:
Jed Slama
801 430-6622

Homeowner:
Paul & Jessica Hennig
907 232-1056
901 232 1068

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Custom Home Solutions
CreativeLinePlans.com
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APPENDIX J: Additional Information

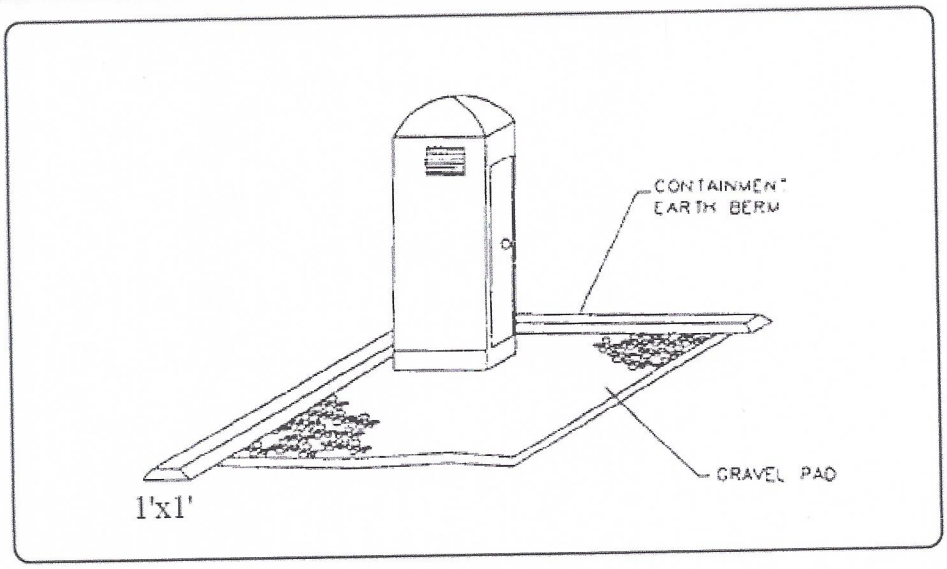
None.

APPENDIX K: BMP Specifications and Details (label BMPs to match the sections identified in this document.)

Appendix K.

BMP: Portable Toilets

PT



OBJECTIVES

- ☒ Housekeeping Practices
- ☒ Contain Waste
- ☐ Minimize Disturbed Areas
- ☐ Stabilize Disturbed Areas
- ☐ Protect Slopes/Channels
- ☐ Control Site Perimeter
- ☐ Control Internal Erosion

DESCRIPTION:

Temporary on-site sanitary facilities for construction personnel.

APPLICATION:

- ► All sites with no permanent sanitary facilities or where permanent facility is too far from activities.

INSTALLATION/APPLICATION CRITERIA:

- ► Locate portable toilets in convenient locations throughout the site.
- ► Prepare level, gravel surface and provide clear access to the toilets for servicing and for on-site personnel.
- ► Construct earth berm perimeter (See Earth Berm Barrier Information Sheet), control for spill/protection leak.

LIMITATIONS:

No limitations.

MAINTENANCE:

- ► Portable toilets should be maintained in good working order by licensed service with daily observation for leak detection.
- ► Regular waste collection should be arranged with licensed service.
- ► All waste should be deposited in sanitary sewer system for treatment with appropriate agency approval.

WEBER COUNTY

ENGINEERING DEPARTMENT

2380 Washington Blvd., Suite 240
Ogden, UT 84401
(801) 399-8374

TARGETED POLLUTANTS

- ☐ Sediment
- ☐ Nutrients
- ☐ Toxic Materials
- ☐ Oil & Grease
- ☐ Floatable Materials
- ■ Other Construction Waste

- ■ High Impact
- ☒ Medium Impact
- ☐ Low or Unknown Impact

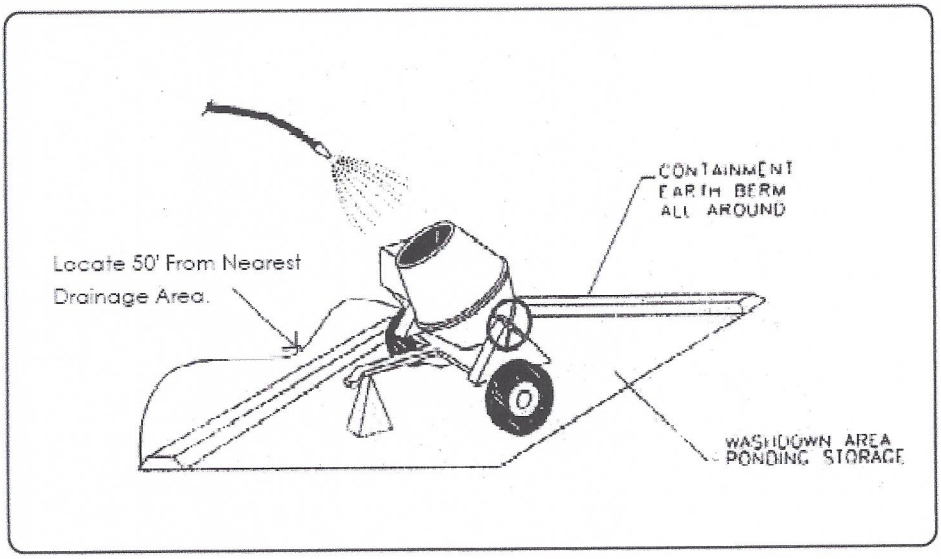
IMPLEMENTATION REQUIREMENTS

- ☒ Capital Costs
- ☒ O&M Costs
- ☒ Maintenance
- ☐ Training

- ■ High
- ☒ Medium
- ☐ Low

BMP: Concrete Waste Management

CWM



OBJECTIVES

- ☐ Housekeeping Practices
- ☒ Contain Waste
- ☐ Minimize Disturbed Areas
- ☐ Stabilize Disturbed Areas
- ☐ Protect Slopes/Channels
- ☐ Control Site Perimeter
- ☐ Control Internal Erosion

DESCRIPTION:

Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors.

APPLICATIONS:

- ► This technique is applicable to all types of sites.

INSTALLATION/APPLICATION CRITERIA:

- ► Store dry and wet materials under cover, away from drainage areas.
- ► Avoid mixing excess amounts of fresh concrete or cement on-site.
- ► Perform washout of concrete trucks off-site or in designated areas only.
- ► Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- ► Do not allow excess concrete to be dumped on-site, except in designated areas.
- ► When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water within a bermed or level area. (See Earth Berm Barrier information sheet.)
- ► Train employees and subcontractors in proper concrete waste management.

LIMITATIONS:

- ► Off-site washout of concrete wastes may not always be possible.

MAINTENANCE:

- ► Inspect subcontractors to ensure that concrete wastes are being properly managed.
- ► If using a temporary pit, dispose hardened concrete on a regular basis.

WEBER COUNTY

ENGINEERING DEPARTMENT

2380 Washington Blvd., Suite 240
Ogden, UT 84401
(801) 399-8374

TARGETED POLLUTANTS

- ☐ Sediment
- ☐ Nutrients
- ☐ Toxic Materials
- ☐ Oil & Grease
- ☐ Floatable Materials
- ☒ Other Construction Waste

- ■ High Impact
- ☒ Medium Impact
- ☐ Low or Unknown Impact

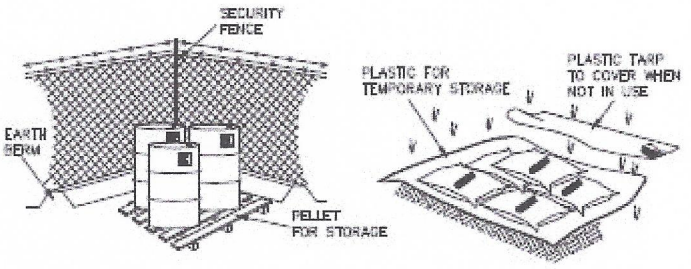
IMPLEMENTATION REQUIREMENTS

- ☐ Capital Costs
- ☐ O&M Costs
- ☒ Maintenance
- ☒ Training

- ■ High
- ☒ Medium
- ☐ Low

BMP: Materials Storage

MS



- CONTROLLED STORAGE LOCATION
- BERMED PERIMETER IMPOUNDMENT
- STORAGE OFF GROUND
- COVER WHEN NOT IN USE

OBJECTIVES

- ☒ Housekeeping Practices
- ☒ Contain Waste
- ☐ Minimize Disturbed Areas
- ☐ Stabilize Disturbed Areas
- ☐ Protect Slopes/Channels
- ☐ Control Site Perimeter
- ☐ Control Internal Erosion

DESCRIPTION:

Controlled storage of on-site materials.

APPLICATION:

- ► Storage of hazardous, toxic, and all chemical substances.
- ► Any construction site with outside storage of materials.

INSTALLATION/APPLICATION CRITERIA:

- ► Designate a secured area with limited access as the storage location. Ensure no waterways or drainage paths are nearby.
- ► Construct compacted earthen berm (See Earth Berm Barrier Information Sheet), or similar perimeter containment around storage location for impoundment in the case of spills.
- ► Ensure all on-site personnel utilize designated storage area. Do not store excessive amounts of material that will not be utilized on site.
- ► For active use of materials away from the storage area ensure materials are not set directly on the ground and are covered when not in use. Protect storm drainage during use.

LIMITATIONS:

- ► Does not prevent contamination due to mishandling of products.
- ► Spill Prevention and Response Plan still required.
- ► Only effective if materials are actively stored in controlled location.

MAINTENANCE:

- ► Inspect daily and repair any damage to perimeter impoundment or security fencing.
- ► Check materials are being correctly stored (i.e. standing upright, in labeled containers, tightly capped) and that no materials are being stored away from the designated location.

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TARGETED POLLUTANTS

- ☐ Sediment
- ☐ Nutrients
- ■ Toxic Materials
- ☐ Oil & Grease
- ☐ Floatable Materials
- ☒ Other Construction Waste

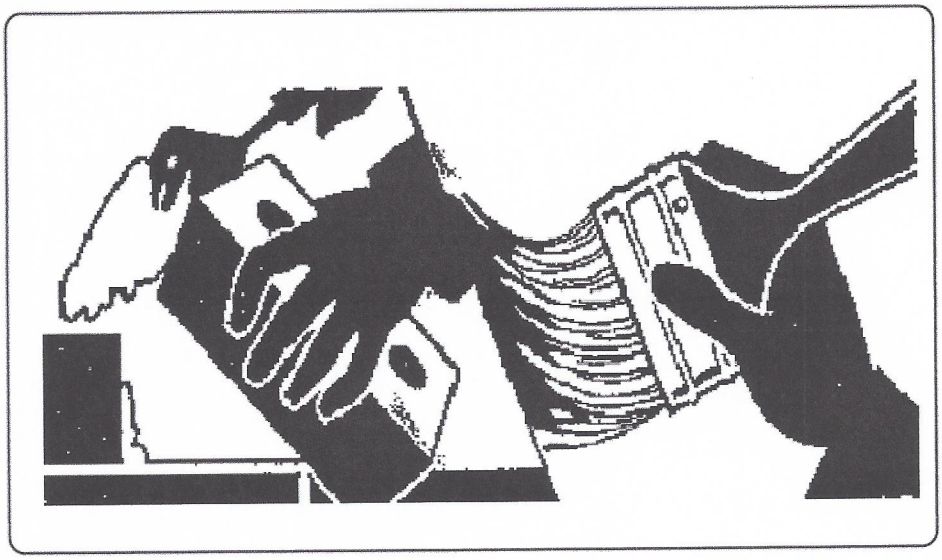
- ■ High Impact
- ☒ Medium Impact
- ☐ Low or Unknown Impact

IMPLEMENTATION REQUIREMENTS

- ☒ Capital Costs
- ☒ O&M Costs
- ☒ Maintenance
- ■ Training

- ■ High
- ☒ Medium
- ☐ Low

BMP: Building Repair, Remodeling, and Construction BRRC



DESCRIPTION:

Prevent or reduce the discharge of pollutants to stormwater from building repair, remodeling and construction by using soil erosion controls, enclosing or covering building material storage areas, using good housekeeping practices, using safer alternative products, and training employees.

APPROACH:

- ► Use soil erosion control techniques if bare ground is temporarily exposed.
- ► Use permanent soil erosion control techniques if the remodeling clears buildings that are not to be replaced.
- ► Enclose painting operations consistent with local air quality regulations and OSHA.
- ► Properly store materials that are normally used in repair and remodeling such as paints and solvents.
- ► Properly store and dispose waste materials generated from the activity.
- ► Maintain good housekeeping practices while work is underway.

LIMITATIONS:

- ► This BMP is for minor construction only.
- ► Hazardous waste that cannot be re-used or recycled must be disposed of by a licensed hazardous waste hauler.
- ► Safer alternative products may not be available, suitable, or effective in every case.
- ► Be certain that actions to help stormwater quality are consistent with OSHA and air quality regulations.

OBJECTIVES

- ☐ New Development
- ☐ Residential
- ☒ Commercial Activities
- ☒ Industrial Activities
- ☒ Municipal Facilities
- ☐ Illegal Discharges

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TARGETED POLLUTANTS

- ■ Sediment
- ☐ Nutrients
- ☒ Heavy Metals
- ☒ Toxic Materials
- ☐ Oxygen Demanding Substance
- ☒ Oil & Grease
- ■ Floatable Materials
- ☐ Bacteria & Viruses

- ■ High Impact
- ☒ Medium Impact
- ☐ Low or Unknown Impact

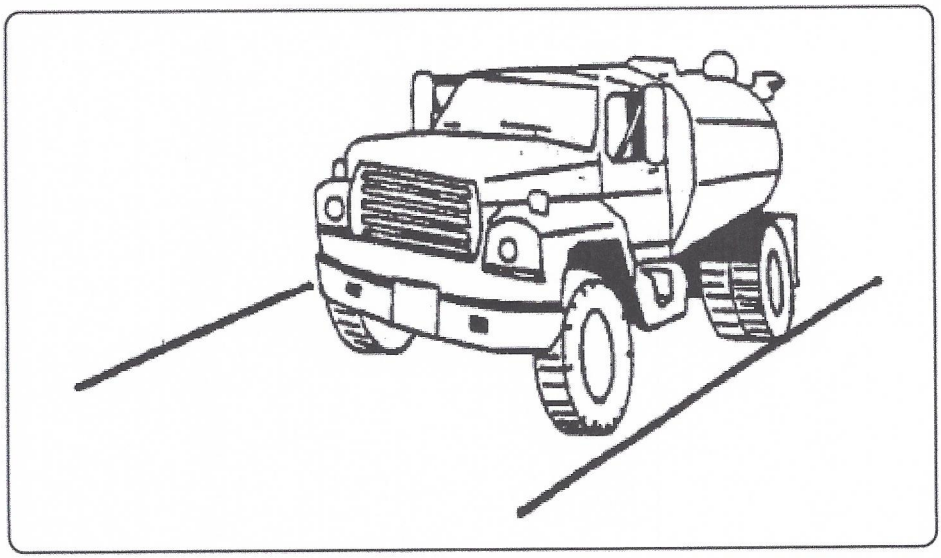
IMPLEMENTATION REQUIREMENTS

- ☒ Capital Costs
- ☒ O&M Costs
- ☐ Regulatory
- ☒ Training
- ☒ Staffing
- ☒ Administrative

- ■ High
- ☒ Medium
- ☐ Low

BMP: Dust Control

DC



OBJECTIVES

- ☒ Housekeeping Practices
- ☐ Contain Waste
- ☒ Minimize Disturbed Areas
- ☒ Stabilize Disturbed Areas
- ☐ Protect Slopes/Channels
- ☐ Control Site Perimeter
- ☐ Control Internal Erosion

DESCRIPTION:

Dust control measures are used to stabilize soil from wind erosion, and reduce dust by construction activities.

APPLICATION:

- ► Dust control is useful in any process area, loading and unloading area, material handling areas, and transfer areas where dust is generated. Street sweeping is limited to areas that are paved.

INSTALLATION/APPLICATION CRITERIA:

- ► Mechanical dust collection systems are designed according to the size of dust particles and the amount of air to be processed. Manufacturers' recommendations should be followed for installation (as well as the design of the equipment).
- ► Two kinds of street weepers are common: brush and vacuum. Vacuum sweepers are more efficient and work best when the area is dry.
- ► Mechanical equipment should be operated according to the manufacturers' recommendations and should be inspected regularly.

LIMITATIONS:

- ► Is generally more expensive than manual systems.
- ► May be impossible to maintain by plant personnel (the more elaborate equipment).
- ► Is labor and equipment intensive and may not be effective for all pollutants (street sweepers).

MAINTENANCE:

- ► If water sprayers are used, dust-contaminated waters should be collected and taken
- ► for treatment. Areas will probably need to be resprayed to keep dust from
- ► spreading.

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TARGETED POLLUTANTS

- ■ Sediment
- ☐ Nutrients
- ☐ Toxic Materials
- ☐ Oil & Grease
- ☐ Floatable Materials
- ☐ Other Waste

- ■ High Impact
- ☒ Medium Impact
- ☐ Low or Unknown Impact

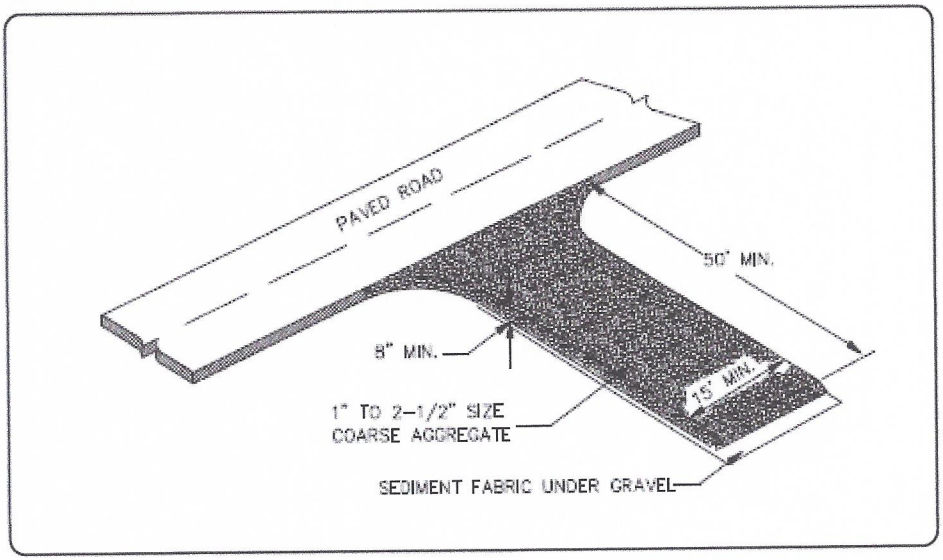
IMPLEMENTATION REQUIREMENTS

- ☒ Capital Costs
- ☐ O&M Costs
- ☒ Maintenance
- ☒ Training

- ■ High
- ☒ Medium
- ☐ Low

BMP: Stabilized Construction Entrance

SCE



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DESCRIPTION:

A stabilized pad of crushed stone located where construction traffic enters or leaves the site from or to paved surface.

APPLICATIONS:

- ► At any point of ingress or egress at a construction site where adjacent traveled way is paved. Generally applies to sites over 2 acres unless special conditions exist.

INSTALLATION/APPLICATION CRITERIA:

- ► Clear and grub area and grade to provide maximum slope of 2%.
- ► Compact subgrade and place filter fabric if desired (recommended for entrances to remain for more than 3 months.
- ► Place coarse aggregate, 1 to 2-1/2 inches in size, to a minimum depth of 8 inches.

LIMITATIONS:

- ► Requires periodic top dressing with additional stones.
- ► Should be used in conjunction with street sweeping on adjacent public right-of-way.

MAINTENANCE:

- ► Inspect daily for loss of gravel or sediment buildup.
- ► Inspect adjacent roadway for sediment deposit and clean by sweeping or shoveling.
- ► Repair entrance and replace gravel as required to maintain control in good working condition.
- ► Expand stabilized area as required to accommodate traffic and prevent erosion at driveways.

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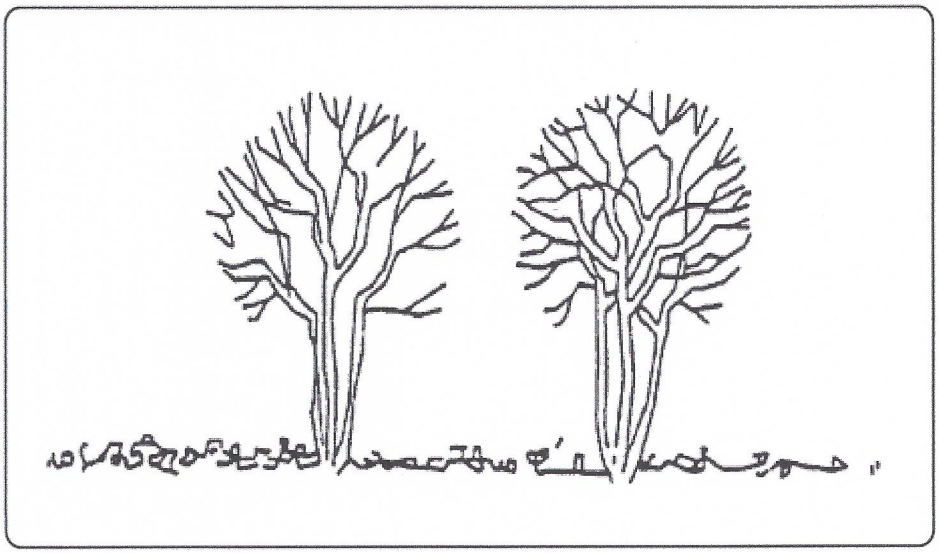
IMPLEMENTATION REQUIREMENTS

- ■ Capital Costs
- ☒ O&M Costs
- ☒ Maintenance
- ☐ Training

- ■ High
- ☒ Medium
- ☐ Low

BMP: Preservation of Existing Vegetation

PEV



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- ☐ Control Internal Erosion

DESCRIPTION:

Carefully planned preservation of existing vegetation minimizes the potential of removing or injuring existing trees, vines, shrubs and/or grasses that serve as erosion controls.

APPLICATIONS:

- ► This technique is applicable to all types of sites. Areas where preserving vegetation can be particularly beneficial are floodplains, wetlands, stream banks, steep slopes, and other areas where erosion controls would be difficult to establish, install, or maintain.

INSTALLATION/APPLICATION CRITERIA:

- ► Clearly mark, flag or fence vegetation or areas where vegetation should be preserved.
- ► Prepare landscaping plans which include as much existing vegetation as possible and state proper care during and after construction.
- ► Define and protect with berms, fencing, signs, etc. a setback area from vegetation to be preserved.
- ► Propose landscaping plans which do not include plant species that compete with the existing vegetation.
- ► Do not locate construction traffic routes, spoil piles, etc. where significant adverse impact on existing vegetation may occur.

LIMITATIONS:

- ► Requires forward planning by the owner/developer, contractor and design staff.
- ► For sites with diverse topography, it is often difficult and expensive to save existing trees while grading the site satisfactorily for the planned development.
- ► May not be cost effective with high land costs.

MAINTENANCE:

- ► Inspection and maintenance requirements for protection of vegetation are low.
- ► Maintenance of native trees or vegetation should conform to landscape plan specifications.

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IMPLEMENTATION REQUIREMENTS

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