Revised 10/12/21 BP#_____

Application for Residential Site Plan (Form #1)

20 North Main Alpine, UT 84004 ● 801-756-6347 extension 5 (Building Department) ● www.alpinecity.org

Building Address _____ Parcel # _____

Subdivision _____ Lot # _____ Plat _____

Name of Applicant _____

Mailing Address _____

Cell Phone _____ Email _____

Contractor _____ License # _____

Contractor Address_____ City_____ State _____ Zip Code _____

Contractor Cell Phone _____Email_____

Intended Use (check one) ☐ Single Family ☐ Single Family with accessory apartment ☐ Commercial

_____

Applicant or Contractor Signature Date

Before the Building Permit Application (Form #2) will be accepted, approval of the following departments shall be obtained.

DEPARTMENT APPROVALS

_____

City Planner Date

_____

City Fire Marshall Date

_____

Public Works Director Date

_____

City Engineer (SWPPP) Date

Revised 10/12/21 BP#_____

Site Plan Instructions

New Home Form #1

20 North Main Alpine, UT 84004 ● 801-756-6347 (Phone) ● 801-756-1189 (Fax) ● www.alpinecity.org

Applicant must submit two (2) copies of a detailed site plan, drawn to scale (1" = 20' min.) shall be filed with the Building Department. If site plans are incomplete or inaccurate, the building permit application may be delayed until such information is forthcoming. The site plan shall clearly show the following:

I have included all items listed below on the site plan. If an item does not apply to this site plan, I have read and understand all of these requirements (must write "YES" before an application is accepted by the Alpine City Building Department).	**YES**
1. General Site Plan Requirements (verify submittal is showing the following and check each box before writing "YES") ☐ a. North arrow ☐ b. Scale ☐ c. Lot lines & their dimensions (conform to legal description) ☐ d. Curb, gutter, and public sidewalks ☐ e. Label property address ☐ f. Adjacent streets (label street names) ☐ g. Existing easements, rights-of-way and flood plains ☐ h. Motor vehicle access and parking (cannot be located on water services) ☐ i. Accessible route of travel ☐ j. *Sewer lateral ☐ k. *Water lateral ☐ l. *Water meter ☐ m. *Gas line and gas meter ☐ n. *Electrical meter box ☐ o. *Pressurized irrigation meter Driveway requirements (*items p – v*): ☐ p. Slope of driveway may not exceed 12% ☐ q. Three (3) foot minimum distance required from water meter to edge of driveway ☐ r. Three (3) foot minimum distance required from pressurized irrigation meter to edge of driveway ☐ s. Three (3) foot minimum distance required from property line to edge of driveway ☐ t. Corner lots: Forty (40) foot minimum distance required from adjoining street top back of curb to edge of driveway ☐ u. Three (3) foot minimum distance required from water meter to edge of driveway ☐ v. Driveway must be constructed with an all-weather driving surface. **These items ***cannot be in a driveway, drive approach, sidewalk, or any other concrete**. These items must be located in a landscaping area. Water and pressurized irrigation meter cans must be a minimum of three (3) feet from a driveway.*	
2. Drainage plan and calculations (see instructions on page 5)	
3. Location of existing structures. Existing structures should be clearly labeled "*EXISTING*"	

4.	Location of proposed structures being applied for with this permit. Any structures that are not part of this permit should be left off the site plan or clearly labeled as "*FUTURE*"	
5.	The following items require a separate building permit and shall be labeled as "*FUTURE*" on the site plan. ☐ a. Fences (see page 4 for more information) ☐ b. Retaining walls (see page 4 for more information) ☐ c. Accessory Structures (pools, pool houses, detached buildings, sheds, etc)	
6.	Dimensions of all setbacks are required to be shown on the plan. **Setbacks are outlined on page 6**. Building location must comply with all Alpine City zoning regulations and cannot be located on any easement or right-of-way. It is the applicant's responsibility to ensure that footings and foundation are built in accordance with setback requirements.	
7.	Existing elevations: (verify submittal is showing the following and check each box before writing "YES") ☐a. All corners of lot ☐b. Elevation of curb at extension of lot line ☐c. Contours on a minimum of 2-foot intervals	
8.	Finish grade elevations: (verify submittal is showing the following and check each box before writing "YES") ☐a. All corners of proposed structure ☐b. Elevation of basement floor ☐c. Elevation of main floor ☐d. Elevation of garage floor	
9.	Height of home plan requirements: **Total height of home** definition: Vertical distance from the "average elevation of the finished grade" of the structure to the "roof line of the structure". See Alpine City Development Code 3.21.08 for "roof lines" defined. The maximum height allowed is thirty-four (34) feet. Willow Canyon and Three Falls have different criteria, talk to Staff. **Plans must include a Height Table as outlined below**: (verify submittal is showing the following and check each box before writing "YES") ☐a. Total Height of Home = Roof Line Elevation – Average Finish Grade Elevation. ☐b. Average Finish Grade Elevation = Sum of Finish Grade Elevations for each major corner of the home divided by the total number of corners. **Plans must include architectural elevations**: ☐c. Front elevation ☐d. Rear elevation ☐e. Side elevations ☐f. The elevations must show the total height of the home as a line drawn from the average finish grade elevation to the midpoint elevation of the roof or top of flat roof	
10.	No construction, buildings or landscaping is allowed in a designated floodplain. If any portion of a designated flood plain is located on the property, a flood plain permit is required. The Flood Plain Permit is found here: http://www.alpinecity.org/building-department	

11.	Total square footage of home must be shown; including garage, basement, and storage areas. Fire Sprinklers shall be required if over 10,000 square feet.	
12.	Plans comply with the 2015 IRC and 2014 NEC if it is a residential use. Plans comply with the 2015 IBC, IMC, IPC and 2014 NEC if it is a commercial use.	
13.	The sight triangle on corner lots will not be obstructed. The sight triangle is defined as the area formed by connecting the corner of the property to points 35 feet back along each property line abutting the street. (DC 3.21.06)	
14.	A geotechnical report from a soils engineer is required. This requires onsite soil samples and testing PRIOR to issuance of the building permit. An excavation observation report is also required prior to footing installation. (Report requirements found in DC 4.06.02.3.e)	
15.	Is the lot located in Three Falls? If no, mark "N/A" and move to item 18. If yes, the following must also be submitted: (verify submittal is showing the following and check each box before writing "YES") ☐a. Three Falls HOA site plan approval letter ☐b. Site specific geotechnical/geological hazard report. Beyond the standard geotechnical investigation requirements (DC 4.06.02.3.e), the report shall also include faults and earthquakes, subsurface rocks and soils, slope and elevations, flood hazards, flood plains and erosion hazards (DC 4.06.020.3: e, f.i.(1,2,3,5,6,7)) ☐c. Detailed landscaping plan with square footage of irrigable area listed Three Falls is restricted to 1-acre of irrigable area per lot	
16.	All lots require a Land Disturbance Permit. Building permits will not be issued until the Land Disturbance Permit is completed. The Land Disturbance Permit is included with this permit. Mark "YES" if you have received and started that process.	

GENERAL INFORMATION ON FENCES

Fences require a separate building permit. The permit for fences is found here: http://www.alpinecity.org/planning-and-zoning

Under no condition shall a privacy fence and retaining wall exceed nine (9) feet on the same plane. If a privacy fence that is on top of a retaining wall would exceed nine (9) feet, the fence shall be set back at least four (4) feet from the back side of the retaining wall. Open style fences including but not limited to rail fences, field fences, or chain link fences are permitted to be on the same plane as a retaining wall. (Section 3.21.6 of the Alpine City Development Code)

GENERAL INFORMATION ON RETAINING WALLS

Retaining walls require a separate building permit. The permit for retaining walls is found here: http://www.alpinecity.org/building-department

Retaining walls or accessory structures proposed within a public utility easement will require written approval of all affected entities. Any retaining walls over 4 feet in height from the finished grade elevation to the top of the wall shall be designed by a professional engineer licensed in the State of Utah and be designed in accordance with Article 3.32 of the Alpine City Development Code. A separate building permit will be required. Walls greater than 2 feet in height from footing to top of wall are required to be engineered per International Building Code.

DRAINAGE REQUIREMENTS FOR SITE PLANS

I have included all items listed below on the site plan. If an item does not apply to this site plan, I have read and understand all of these requirements (must check "YES" before an application is accepted by the Alpine City Building Department).		**YES**
1.	Show location and type of retention, drainage must be away from structure in all cases	
2.	Drainage from the property may not exceed that which existed prior to development. Paved areas and roof drains may need to be supplied with appropriate sumps or other means of mitigation.	
3.	**Drainage plans** are required for **<u>all site plans, regardless of topography</u>**, including at minimum the following requirements. (verify submittal is showing the following and check each box before writing "YES") ☐ a. Contours on **2-foot** intervals ☐ b. Lot configurations with dimensions, footprint of home and structures, etc. ☐ c. **Proposed drainage patterns**. Where possible, drainage will be directed to city streets after the first 0.53 inches (2-year, 1-hr event) of rainfall is retained onsite. ☐ d. Acceptable methods of retaining water are sumps, berms, retention, rainwater harvesting, low impact development bmp's, and other methods approved by the City Engineer. Retention areas will need to be sized according to the storm drain calculations. ☐ e. **Natural drainages** shall not be filled in where the potential for runoff from upstream exists, without providing a plan for the potential runoff. ☐ f. Supporting storm drain **calculations** are required.	
4.	**Design Criteria**: The design storm is **2-year, 1-hour** (80^{th} percentile storm, 0.53"). - For lots less than 1-acre, drainage calculations must include the entire lot. - For lots greater than 1-acre, drainage calculations shall be for finished limits of disturbance only (do not include construction limits of disturbance)	
5.	Drainage plans shall be required to **be stamped by a licensed professional engineer, registered in the State of Utah, no exceptions.**	
6.	**A certified survey** shall be required, certifying that the house is placed on the lot in conformance with Alpine City zoning ordinances.	

Jed Muhlestein P.E.
Alpine City Engineer

SETBACK REGULATIONS FOR DWELLINGS

TR-10,000 Zone

Front:	30 feet from the front property line or 40 feet from the curb
Rear:	20 feet from the rear property line
Sides:	Aggregate of 22 feet with no less than 10 feet on a side
Corner lots:	30 feet from the property line on both street frontages. Interior side yard 10 feet.
Minimum lot size:	10,000 square feet*
Minimum frontage:	90 feet on a public street*

CR-20,000 and CR-40,000 Zones

Front:	30 feet from front property line or 40 feet from the curb.
Rear:	30 feet from the rear property line
Side:	Aggregate of 30 feet with no less than 12 feet on a side
Corner lots:	30 feet from the property line on both street frontages. Interior side yard 12 feet.
Minimum lot size:	Varies, determined by average slope of lot, see DC 3.03.040 & 3.04.040*
Minimum frontage:	Varies, determined by average slope of lot, see DC 3.03.040 & 3.04.040*

Lots with an average slope greater than 25% are considered non-buildable.

*** Lot sizes and frontages may be less in a Planned Residential Development (PRD).**

Taken from Alpine City Development Code:
Sections 3.02.050, 3.03.040, 3.03.050, 3.04.040, 3.04.050, 3.05.050

Design for Alpine City shall comply with the requirements for:

a.	**Frost line depth**	**30 inches**
b.	**Assumed soil bearing pressure**	**1,500 psf**
c.	**Seismic zone**	**3**
d.	**Basic Wind Speed**	**115 – C mph**
e.	**Roof snow load**	**45 psf** (no allowance for duration)

INFRASTRUCTURE PROTECTION BOND INFORMATION

- During site plan review, an inspection will be made of the job site. The inspection includes the street, sidewalk, curb and gutter, valves, hydrants, manholes, the pressurized irrigation box, and where applicable, adjacent open space and trails.

- The purpose of the inspection is to note any existing damage to the infrastructure. The developer will be held responsible for existing damage.

- Any damage incurred during construction and landscaping will be the responsibility of the builder/homeowner.

- If the initial inspection cannot be made because snow, dirt or some other material is covering the sidewalk, curb, PI box, etc., the building permit will not be issued.

- The street, gutter and sidewalks must be kept clear at all times. Dumpsters and portable bathroom facilities are required at the job site. They may not be located on the sidewalk or street. Curb ramps are required and shall be constructed of wood, metal, or asphalt. Dirt or gravel ramps are prohibited.

- Public open space areas near project site must be fenced per City Standard Detail 29. (DC 3.16.110.3)

- Public or private open space and vacant lots shall not be used for the storage of equipment, building and/or landscaping materials, dumpsters, sanitary facilities or any other material related to the project. Access to the building site across open space or adjacent vacant lots is prohibited.

Inspections will be withheld if there is a violation of the Clean Street Ordinance or other Ordinance. Continuing violations will be red-tagged.

Clean Street Ordinance Section 14.08
Infrastructure Protection Bond - Ordinance No. 2008-14
Open Space Ordinance No. 2007-12
Trail Ordinance No. 2009-06

LAND DISTURBANCE PERMITS WILL NOT BE ISSUED ON RESIDENTIAL LOTS WITHOUT AN APPROVED SITE PLAN

ALPINE CITY
801-756-6347

20 North Main St.
Alpine, UT 84004

Building Permit Number
Permit Number: _____
(office use) ☐ Priority Site

LAND DISTURBANCE PERMIT

****Excavation of lot prior to issuance of permit is prohibited****
Application Fee: $300 *(included in building permit)*

Project Name: Project Address:

Owner's Name: Cell Phone: Email:

Contractor's Name: Cell Phone: Email:

SWPPP Contact: Cell Phone: Email:

Area of Disturbance: Purpose of Disturbance:

UPDES/NOI Permit Number [1]: Effective Date: Expiration Date:

Select Project Type:

☐ Type A – Project greater than 1 acre of disturbance – Construction General Permit (CGP)
☐ Type B – Project less than 1 acre of disturbance – Common Plan Permit (CPP)

REQUIREMENTS FOR TYPE A PROJECTS - CGP Check off each item as it is completed	**REQUIREMENTS FOR TYPE B PROJECTS - CPP** Check off each item as it is completed
☐ Read & initial all pages of this permit	☐ Read & initial all pages of this permit
☐ SWPPP Document [3]	☐ SWPPP drawing (11"x17") [2]
☐ SWPPP drawing (11"x17") [2]	☐ Common Plan SWPPP Template [3]
☐ Engineered Drainage Calcs and Plan [2]	☐ Engineered Drainage Calcs and Plan [2]
☐ Copy of State Permit (UTRC00000) [3]	☐ Copy of State Permit (UTRH00000) [3]
☐ Copy of UPDES Permit (NOI) [1]	☐ Copy of UPDES Permit (NOI) [1]
☐ Payment of application fee	☐ Payment of application fee
☐ Provide proof of Qualified Inspector	☐ Scan all docs to jason@alpinecity.org
☐ Scan all docs to jason@alpinecity.org	☐ Hold pre-construction meeting w/ Jason
☐ Hold pre-construction meeting w/ Jason	☐ If required, turn in Fire Safety Permit [4]
☐ If required, turn in Fire Safety Permit [4]	
(all items must be complete for approval)	*(all items must be complete for approval)*

1 Notice of Intent (NOI) Permits for CGP projects (>1 acre) or CPP projects (<1 acre) can be obtained here: https://deq.utah.gov/water-quality/updes-ereporting#construction

2 **SWPPP DRAWING MUST SHOW ENGINEERED DRAINAGE AND CALCS FOR NEW HOMES**

3 SWPPP templates and other required State documents can be found here: https://deq.utah.gov/water-quality/general-construction-storm-water-updes-permits

4 All construction site must completely fence the area of disturbance with orange construction fencing

5 **Property corners AND disturbance limits must be clearly marked before construction begins**. Property corners to be clearly marked with 5-foot metal tee post at all corners and angle points. These are to remain in place until an occupancy permit has been issued. Inspections may be withheld if all posts are not in place at inspections.

Initials _____

Permit Revised Date 10/12/21

LAND DISTURBANCE PERMITS WILL NOT BE ISSUED ON RESIDENTIAL LOTS WITHOUT AN APPROVED SITE PLAN

SIGNAGE REQUIREMENTS BY PROJECT TYPE

☐ **PROJECT TYPE A SIGNAGE:** The permittee must post a sign (4' x 4') near the main entrance to the project containing the SWPPP drawing, SWPPP Document, current NOI, State General Construction Permit UTR300000, Alpine City Land Disturbance Permit, and verbiage per attached detail. See attached detail – "Project Type A Signage"

☐ **PROJECT TYPE B SIGNAGE:** The permittee must post a sign (18"x24") near the main entrance to the project containing the SWPPP drawing, SWPPP Document, current NOI, State General Construction Permit UTR300000, Alpine City Land Disturbance Permit, and verbiage per attached detail. See detail – "Project Type B Signage"

SIGN VERBIAGE: Letters must be printed red in color, 2" tall, on a white background
(Hand written lettering is not acceptable)

SWPPP Storm Water Pollution Prevention Plan
A Utah Pollutant Discharge elimination System (UPDES) permit covers this construction site.
If any non-storm water discharge or severe vehicle tracking occurs please call _____
(insert site SWPPP contact's phone number).

- A building permit will not be issued until the SWPPP is installed and approved.
- **Per Development Code 3.16.110.3, properties located next to City Open Space MUST fence the Open Space with construction fencing per City Standard Detail 29 (attached)**.
- Applicant shall maintain all storm water management control measures according to the UPDES, SWPPP and Alpine City codes.
- Notice of Violation: Pursuant to Section 14-400 of Alpine City Code, failure to comply with the SWPPP requirements, the UPDES Permit, Alpine's City Land Disturbance Permit or any City Code may result in a notice of violation. The City will order compliance by a written notice of violation to the responsible person. Such notice may be in the form of a citation or a stop work order.
- Building Inspections: Pursuant to Section 14-400 of Alpine City Code, the Building Official is not permitted to perform any type of building inspection for the site if it is not in compliance with section 14-400 of Alpine City Code.
- In consideration for the granting of a Land Disturbance Permit by Alpine City, the applicant hereby promises:
  1. to perform the work applied for in a professional manner and in conformity with ordinances of Alpine City and
  2. to defend indemnify and hold harmless the City of Alpine, its officers, agents and employees from any and all costs, damages and liabilities which may accrue or be claimed to accrue by reason of any work performed under a permit issued pursuant to this application.

_____ Applicant (Signature)

_____ Alpine City Engineer or assigned (Signature)

(Office use)

This land disturbance permit grants you permission to conduct the following activities:

☐	Clearing and grubbing	☐	Right of way improvements
☐	Placing of fill material	☐	Stock pile materials
☐	Excavation and back fill of utilities	☐	other: _____

Initials _____

Permit Revised Date 10/12/21

BEST MANAGEMENT PRACTICES (BMP)

BMP Requirements vary from site to site depending on existing conditions and the disturbance activity

BMPs are defined as "structural and nonstructural practices proven effective in sediment and erosion control and management of surface runoff into waters of the State." Eroding soils and surface water runoff transports pollutants, sediment, and nutrients into local rivers, streams, lakes and aquifers.
Certain construction activities may cause more pollution if not properly managed. Not all BMPs will apply to every construction site; however, all of the suggested BMPs should be considered.
The City may change any BMP regulation or requirement, if at any time, the City determines a BMP regulation or requirement to be ineffective and/or an additional BMP measure is deemed applicable. The City will notify project proponents of any changes to BMP regulations or requirements.

Required BMPs

Construction Fencing

Construction fencing is required around the entire project on all projects per Alpine City Standard Detail 29 (plastic orange construction fencing).

Washout/collection area:

If it is necessary, the Permittee will provide a concrete washout area on-site, designate specific washout areas and design facilities to handle anticipated washout water. Location of washout must be shown on the site map. Washout areas should also be provided for stucco, dry wall and paint operations. Because washout areas can be a source of pollutants from leaks or spills. All washout waste must be removed from the lot and properly disposed of upon completion of construction. Washout areas must be designated as "Concrete Washout" by sign with 2" lettering and red in color.

Perimeter control:

Installing perimeter controls such as sediment barriers, silt fences, construction barriers, dikes, disturbance limit markers or any combination of such measures shall be used. Perimeter controls shall be installed prior to land grading.

Silt fence:

Should be used where: sheet and rill erosion would occur; protection of adjacent property or areas beyond the limits of grading; a barrier between any soil disturbance area and hard surfaces draining to a storm drain or water body, neighboring properties, sensitive areas, etc.

Off-site sediment tracking:

Prevent sediment from being tracked off-site by stabilizing a construction entrance/exit. A rock tracking pad can reduce the amount of mud transported onto paved roads by vehicles. Rock pads shall not contain any rocks smaller than 2" in diameter and no rocks larger than 5" in diameter.

Clean up of building sites:

Building sites should be cleaned on a regular basis. Materials should be secured on the site to prevent the blowing of debris and garbage. The permittee shall leave the site in a clean condition upon completion of construction.

BMPs to consider while designing your project

Erosion Controls

- Chemical Stabilization
- Dust Control
- Geo Textiles/Rolled Erosion Control Products (RECP)
- Gradient Terraces
- Mulching/Bonder Fiber Matrix (BFM)
- Rip Rap
- Seeding/Re-vegetation
- Sodding
- Soil Retention
- Soil Roughening/Tracking
- Temporary Slope Drain
- Temporary Stream Crossings
- Wind Fences and Sand Fences

Sediment Controls

- Brush Barrier
- Compost Filter Berms
- Compost filter Socks
- Sediment Basin and Rock Dams
- Fiber Rolls
- Filter Berms
- Construction Entrances
- Sediment Traps
- Silt Fence
- Check Dams
- Grass-lined Channels
- Permanent Slop Diversions
- Temporary Diversion Dikes

Inlet Protection

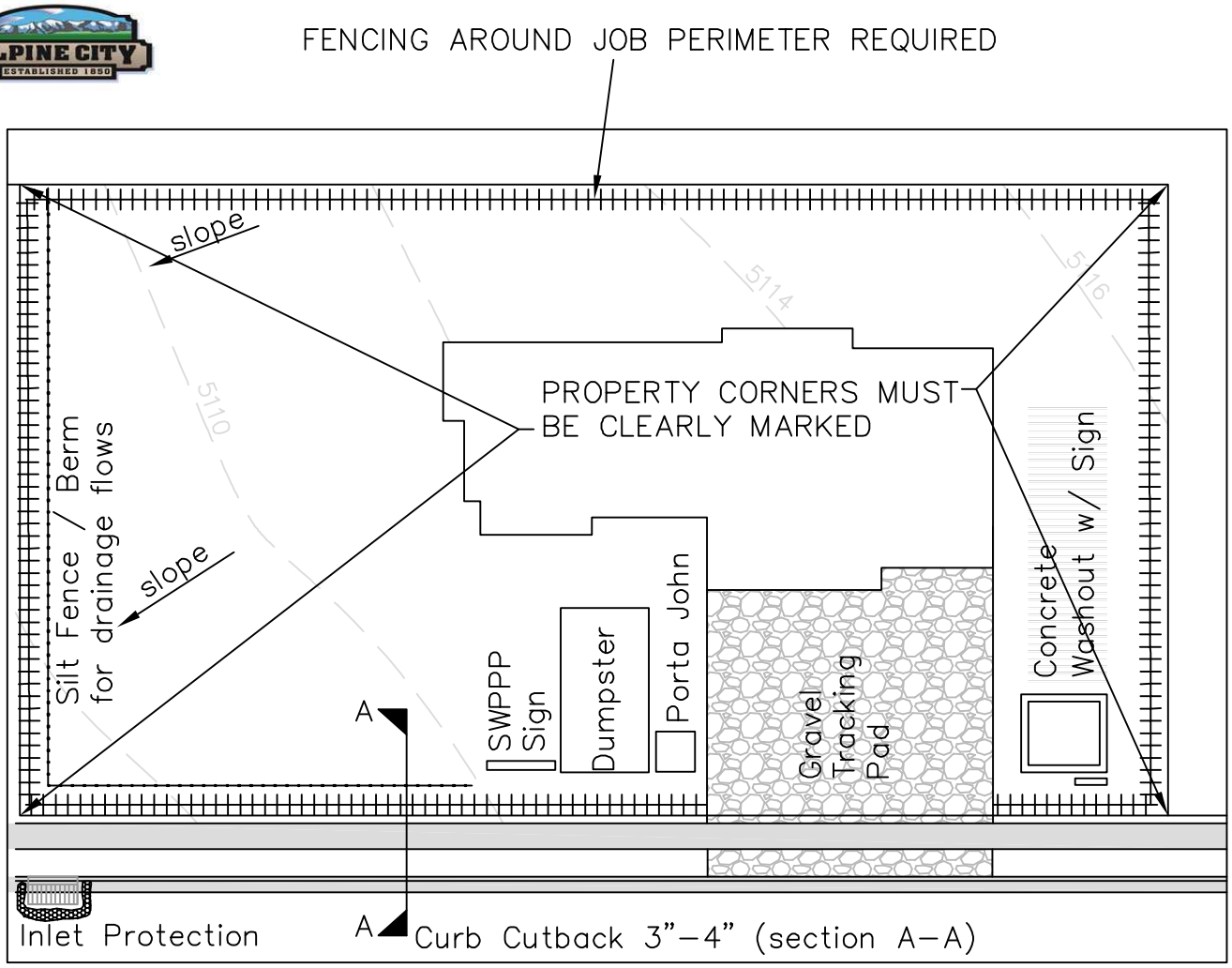
- Sediment filters and Sediment Chambers
- Straw or Hay Bales
- Vegetated Buffers
- Curb cut back
- Dewatering

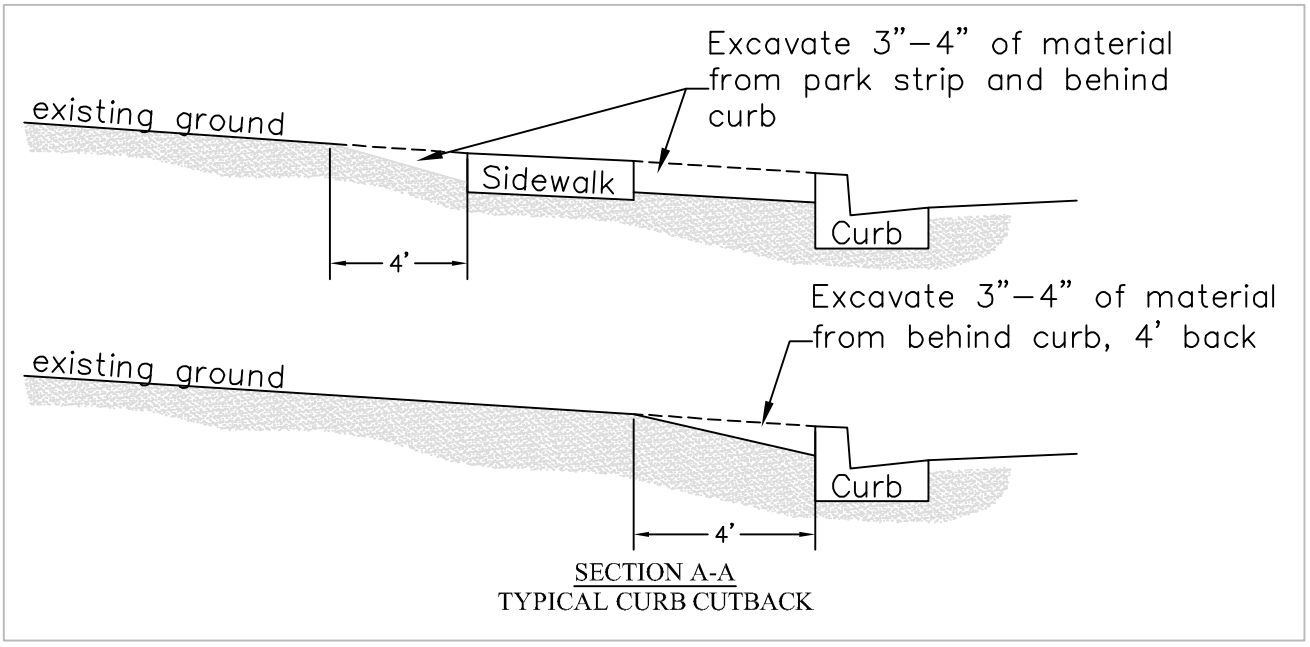
Good House Keeping

- Porta John
- Dumpster
- Street Cleaning/Sweeping

Initials _____

Permit Revised Date 10/12/21





This drawing was created to show what a typical residential SWPPP Site Plan looks like. Please note that all sites are different but generally require the same BMP's to be compliant with State and Local Codes.

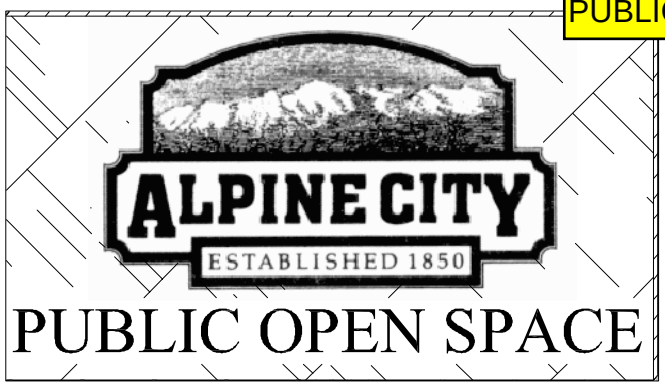
SWPPP Drawing - Typical

Common Required SWPPP Items

Initials _____

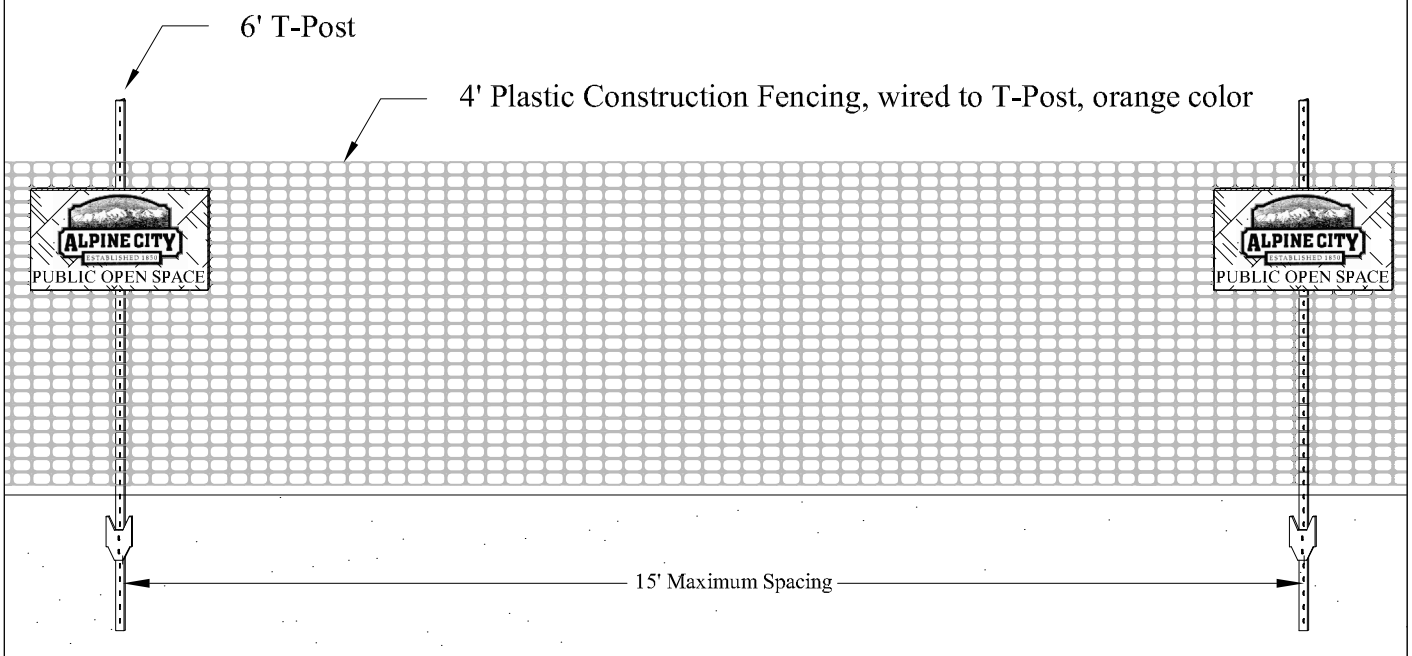
FENCING REQUIRED ON ALL JOBS!

SIGNAGE NOT REQUIRED IF JOB DOESN'T BORDER PUBLIC OPEN SAPCE



SIGN SPECIFICATIONS

- SIGN TO BE 18"x24"
- PRINTED WITH BLACK LETTERS, WHITE BACKGROUND
- LAMINATED AND STAPLED TO PLYWOOD
- WIRED TO T-POSTS
- SPACED ONE PER JOB SITE IN A VISIBLE LOCATION IF MORE THAN 300' OF FENCING REQ'D, ONE SIGN TO BE PLACED EVERY 300'



STATEMENT OF USE

THIS DOCUMENT AND ANY ILLUSTRATIONS HEREON ARE PROVIDED AS STANDARD CONSTRUCTION DETAILS WITHIN ALPINE CITY. DEVEATION FROM THIS DOCUMENT REQUIRES APPROVAL OF ALPINE CITY, ALPINE CITY CORPRTATION CAN NOT BE HELD LIABLE FOR MISSUSE OR CHANGES REGARDING THIS DOCUMENT.

REVISION

NO.		BY	APRL.	DATE

ALPINE CITY
ESTABLISHED 1850

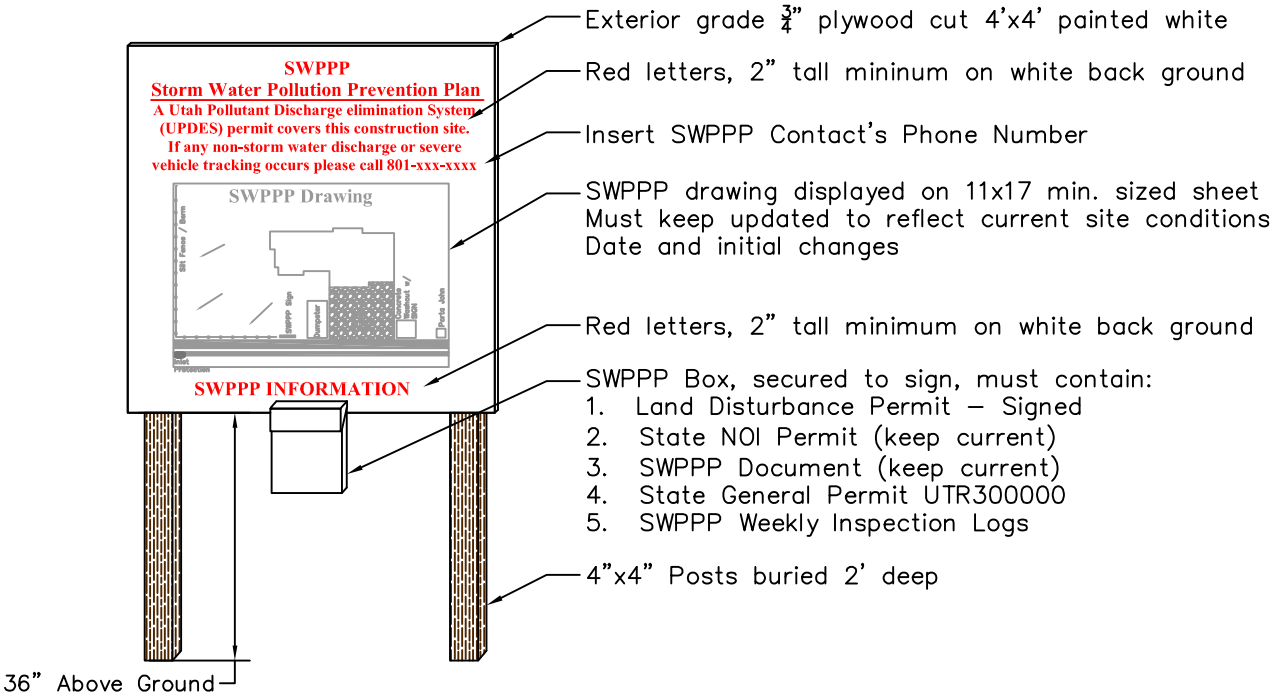
CAD FILE: E:\ENGINEERING\STANDARD DRAWINGS\2015 UPDATED (CURRENT)\29 PUBLIC OPEN SPACE FENCING

PUBLIC OPEN SPACE FENCING

ALPINE CITY
20 NORTH MAIN
ALPINE, UT 84004

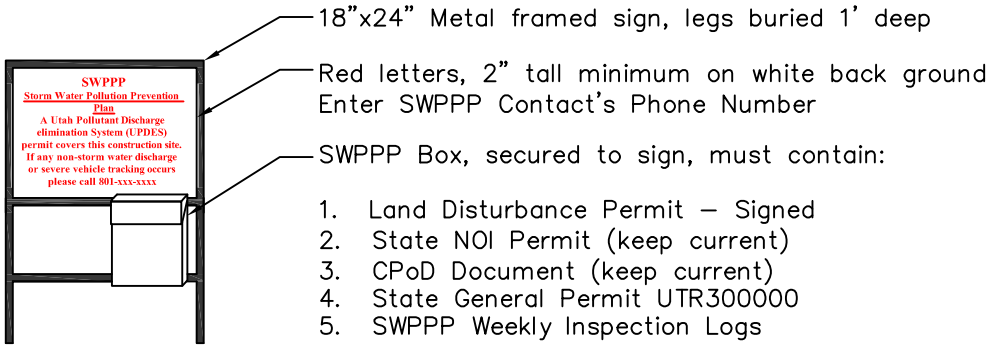
STANDARD DRAWING NUMBER:	29
PLOT SCALE:	N.T.S.
DRAWN BY:	WJM
DESIGN BY:	
CHECKED BY:	
ADOPTED DATE:	4/14/04

SWPPP DETAILS



SWPPP SIGN - Over 1 Acre Projects

Project Type A Signage

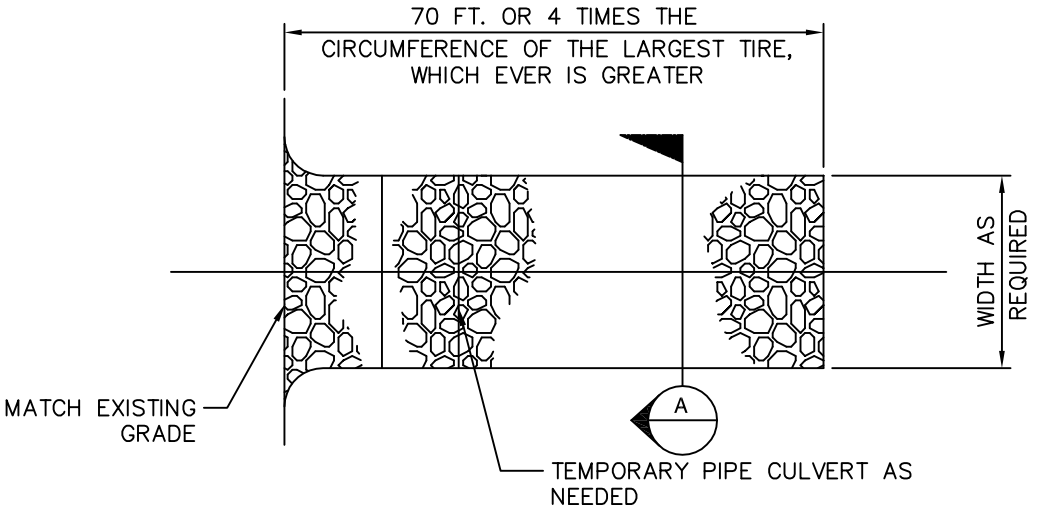


SWPPP SIGN - Under 1 Acre Projects

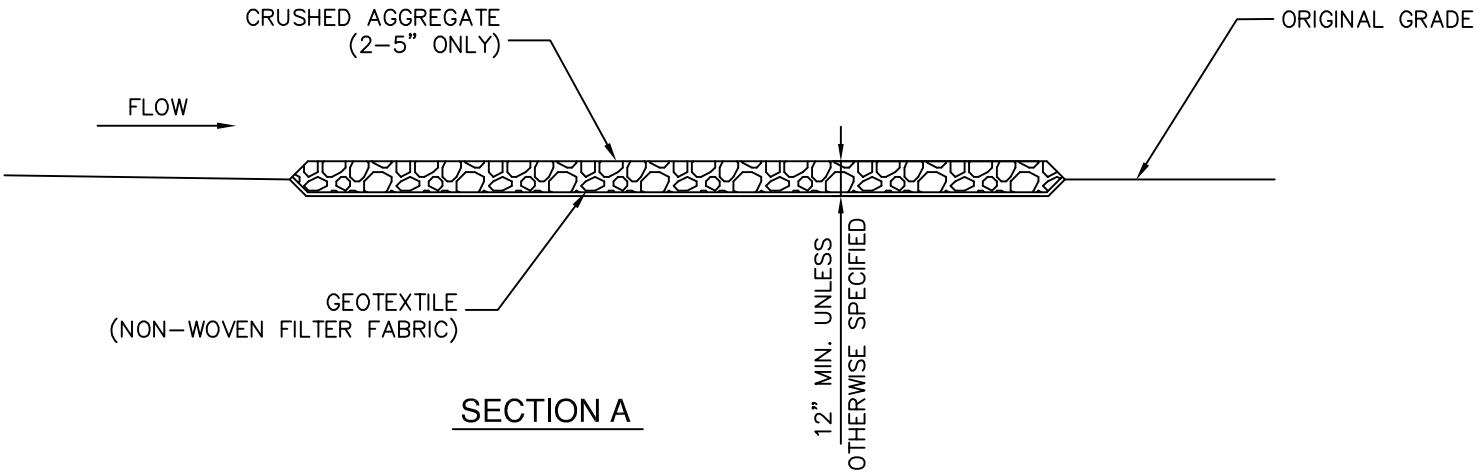
Project Type B Signage

Initials _____

** NO ROCKS SMALLER THAN 2" IN THE TRACKING PAD **



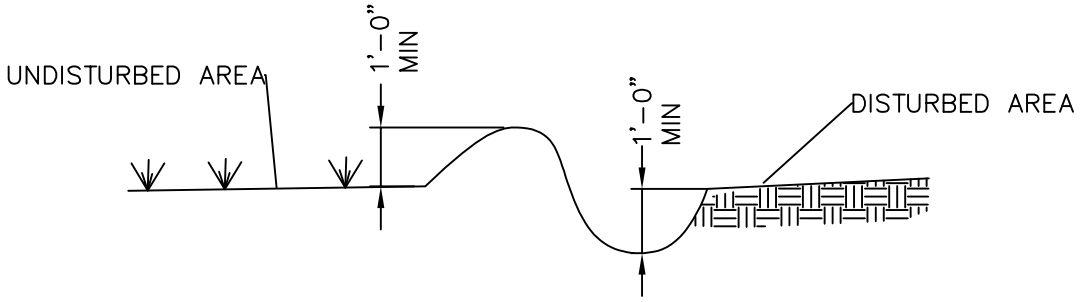
PLAN VIEW



SECTION A

STABILIZED CONSTRUCTION ENTRANCE DETAIL

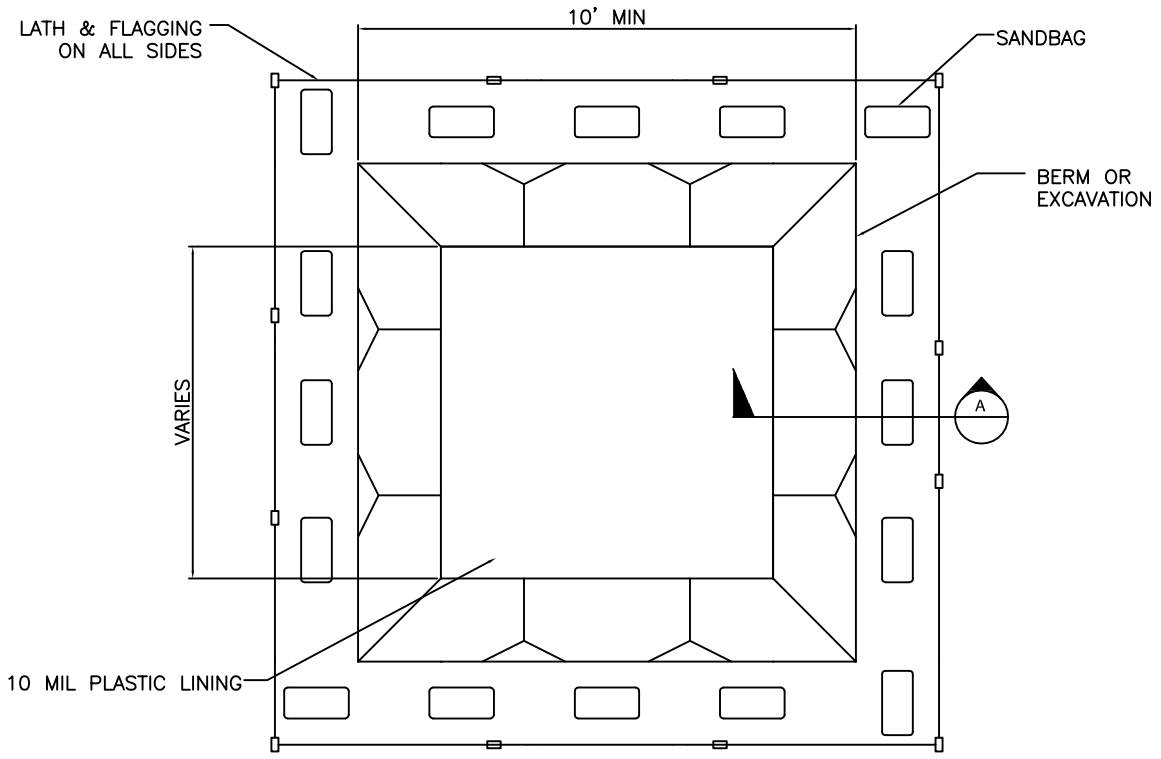
SCALE: N. T. S.



SWALE / BERM DETAIL

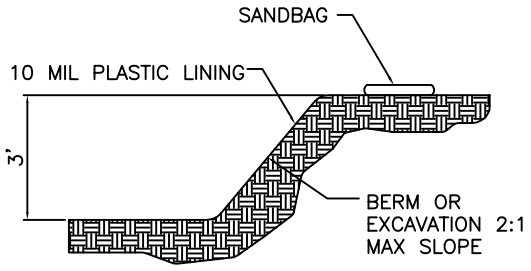
SCALE: N. T. S.

Initials_____

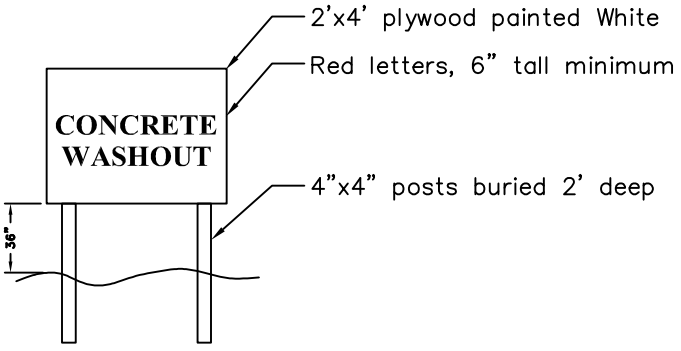


PLAN

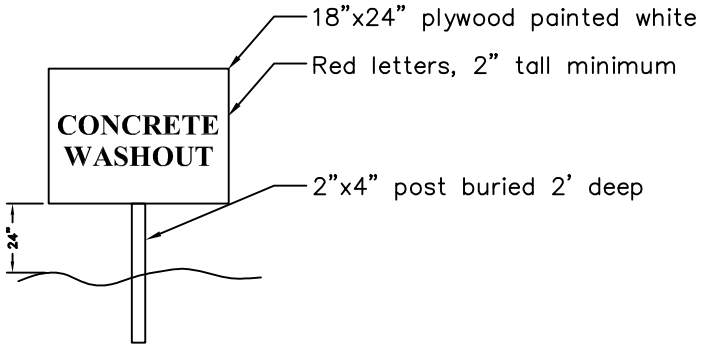
NOTES:
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. CONCRETE WASHOUT SIGN REQUIRED. SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. WASHOUT NEEDS TO BE EMPTIED AND REPAIRED WHEN 75% OF STORAGE CAPACITY IS FILLED.
4. DEVELOPER/CONTRACTOR RESPONSIBLE FOR REMOVAL & PROPER DISPOSAL OF CONCRETE PRIOR TO FILING N.O.T



SECTION A



Concrete Washout
> 1 Acre Sign Detail

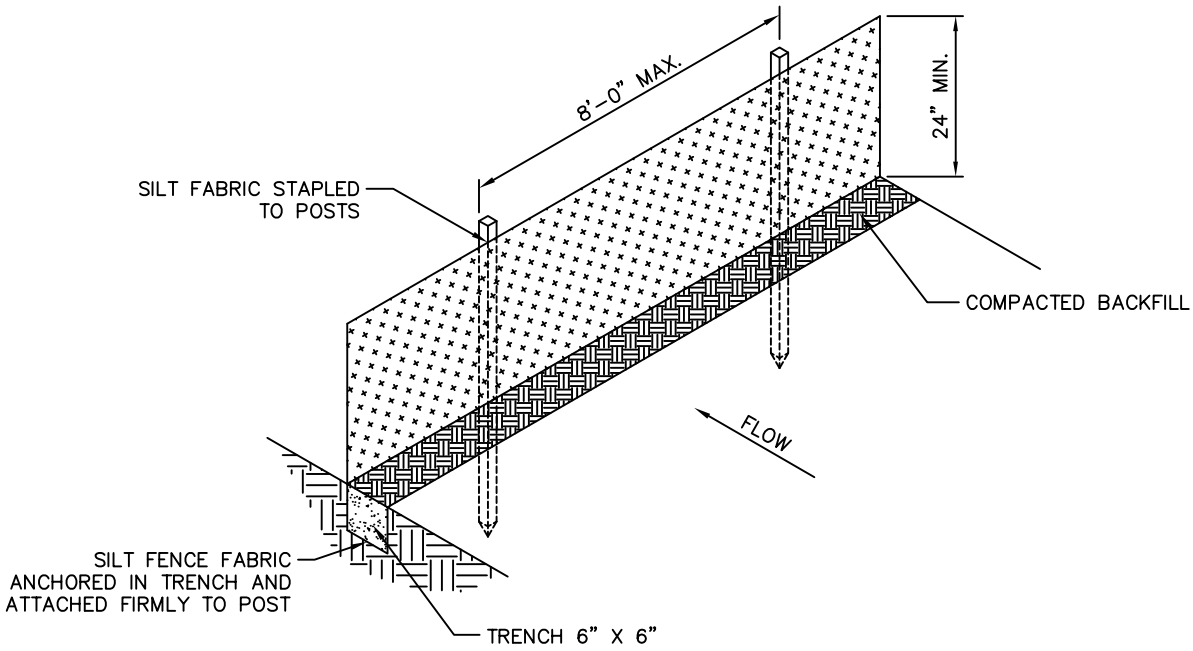


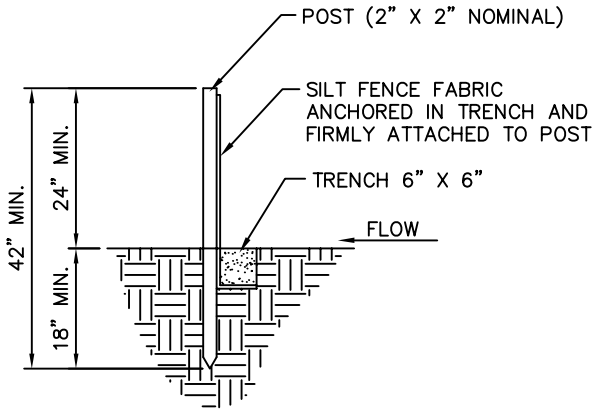
Concrete Washout
< 1 Acre Sign Detail

CONCRETE WASHOUT DETAIL
SCALE: N. T. S.

NOTE:
RENTABLE CONCRETE BINS ARE ACCEPTABLE – SIGN REQUIRED

Initials _____



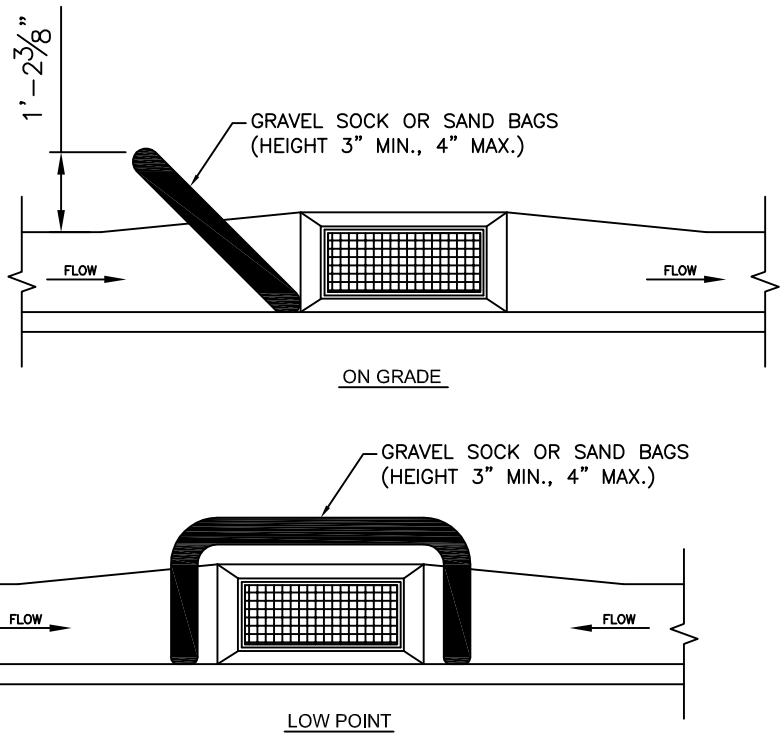


NOTES:
1. MINIMUM FILTER FABRIC HEIGHT SHALL BE 24".
2. POSTS FOR SILT FENCES SHALL BE METAL OR HARD WOOD WITH A MINIMUM LENGTH OF 36". WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION OF 2". METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 LBS/FOOT.
3. DRIVE POSTS VERTICALLY INTO THE GROUND TO A MINIMUM DEPTH OF 18", AND EXCAVATE A TRENCH APPROXIMATELY 6" WIDE AND 6" DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER. NO LESS THAN THE BOTTOM 1 FOOT OF THE FABRIC SHALL BE BURIED INTO THIS TRENCH.
4. THE FILTER FABRIC MATERIALS SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO THE WOOD POSTS WITH ¾" LONG #9 HEAVY DUTY STAPLES.
5. POSTS SHALL BE SPACED A MAXIMUM OF 8 FEET APART.

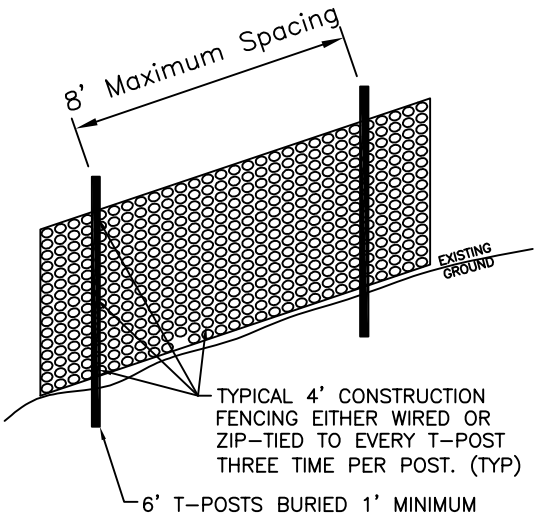
SILT FENCE DETAIL

SCALE: N. T. S.

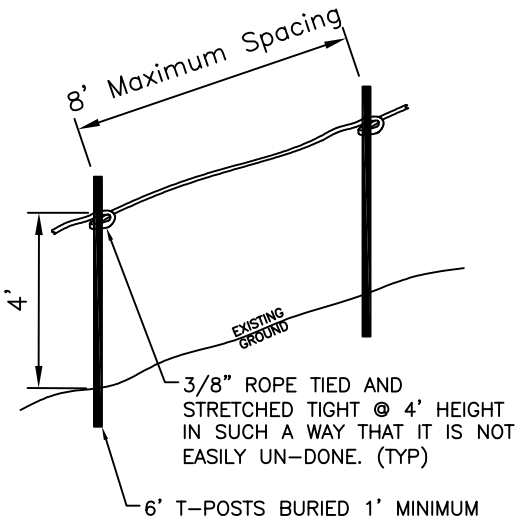
Initials_____



INLET PROTECTION DETAIL SCALE: N. T. S.



CONSTRUCTION FENCE OPTION 1 DETAIL SCALE: N. T. S.

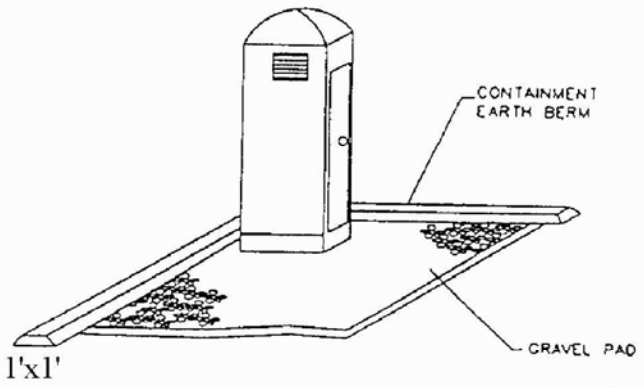


CONSTRUCTION FENCE OPTION 2 DETAIL SCALE: N. T. S.

Initials_____

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.

ALPINE CITY
ESTABLISHED 1850

Adapted from Salt Lake County BMP Fact Sheet

Targeted Pollutants

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

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

Implementation Requirements

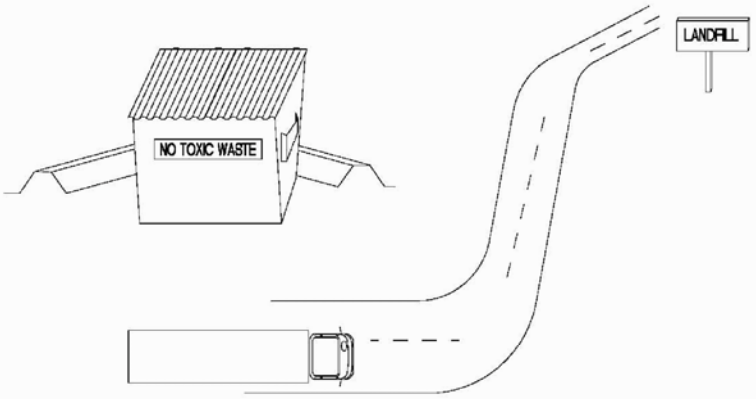
- ☒ Capital Costs
- ☒ O&M Costs
- ☒ Maintenance
- ☐ Training

■ High ☒ Medium ☐ Low

Initials _____

BMP: Waste Disposal

WD



Objectives

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

Description:

Controlled storage and disposal of solid waste generated by construction activities.

Application:

All construction sites.

Installation:

- Designate one or several waste collection areas with easy access for construction vehicles and personnel. Ensure no waterways or storm drainage inlets are located near the waste collection areas.
- Construct compacted earthen berm (See Earth Berm Barrier BMP Fact Sheet), or similar perimeter containment around collection area for impoundment in the case of spills and to trap any windblown trash.
- Use water tight containers with covers to remain closed when not in use. Provide separate containers for different waste types where appropriate and label clearly.
- Ensure all on site personnel are aware of and utilize designated waste collection area properly and for intended use only (e.g. all toxic, hazardous, or recyclable materials shall be properly disposed of separately from general construction waste).
- Arrange for periodic pickup, transfer and disposal of collected waste at an authorized disposal location. Include regular Porto-potty service in waste management activities.

Limitations:

- On-site personnel are responsible for correct disposal of waste.

Maintenance:

- Discuss waste management procedures at progress meetings.
- Collect site trash daily and deposit in covered containers at designated collection areas.
- Check containers for leakage or inadequate covers and replace as needed.
- Randomly check disposed materials for any unauthorized waste (e.g. toxic materials).
- During daily site inspections check that waste is not being incorrectly disposed of on-site (e.g. burial, burning, surface discharge, discharge to storm drain).

ALPINE CITY
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Targeted Pollutants

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- ☐ Floatable Materials
- ■ Other Waste

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

Implementation Requirements

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

■ High ☒ Medium ☐ Low

Initials _____

EPA United States Environmental Protection Agency

Stormwater Best Management Practice

Concrete Washout

Permits for Clean Water NPDES

Minimum Measure

Construction Site Stormwater Runoff Control

Subcategory

Good Housekeeping/Materials Management

Description of Concrete Washout at Construction Sites

Concrete and its ingredients

Concrete is a mixture of cement, water, and aggregate material. Portland cement is made by heating a mixture of limestone and clay containing oxides of calcium, aluminum, silicon and other metals in a kiln and then pulverizing the resulting clinker. The fine aggregate particles are usually sand. Coarse aggregate is generally gravel or crushed stone. When cement is mixed with water, a chemical reaction called hydration occurs, which produces glue that binds the aggregates together to make concrete.

Concrete washout

After concrete is poured at a construction site, the chutes of ready mixed concrete trucks and hoppers of concrete pump trucks must be washed out to remove the remaining concrete before it hardens. Equipment such as wheelbarrows and hand tools also need to be washed down. At the end of each work day, the drums of concrete trucks must be washed out. This is customarily done at the ready mixed batch plants, which are usually off-site facilities, however large or rural construction projects may have on-site batch plants. Cementitious (having the properties of cement) washwater and solids also come from using such construction materials as mortar, plaster, stucco, and grout.

Environmental and Human Health Impacts

Concrete washout water (or washwater) is a slurry containing toxic metals. It's also caustic and corrosive, having a pH near 12. In comparison, Drano liquid drain cleaner has a pH of 13.5. Caustic washwater can harm fish gills and eyes and interfere with reproduction. The safe pH ranges for aquatic life habitats are 6.5 – 9 for freshwater and 6.5 – 8.5 for saltwater.

Construction workers should handle wet concrete and washout water with care because it may cause skin irritation and eye damage. If the washwater is dumped on the ground (Fig. 1), it can run off the construction site to adjoining roads and enter roadside storm drains, which discharge to surface waters such as rivers, lakes, or estuaries. The red arrow in Figure 2 points to a ready mixed truck chute that's being washed out into a roll-off bin, which isn't watertight. Leaking washwater, shown in the foreground, will likely follow similar

Figure 1. *Chute washwater being dumped on the ground*

Figure 2. *Chute washwater leaking from a roll-off bin being used as a washout container*

paths to nearby surface waters. Rainfall may cause concrete washout containers that are uncovered to overflow and also transport the washwater to surface waters. Rainwater polluted with concrete washwater can percolate down through the soil and alter the soil chemistry, inhibit plant growth, and contaminate the groundwater. Its high pH can increase the toxicity of other substances in the surface waters and soils. Figures 1 and 2 illustrate the need for better washout management practices.

Best Management Practice Objectives

The best management practice objectives for concrete washout are to (a) collect and retain all the concrete washout water and solids in leak proof containers, so that this caustic material does not reach the soil surface and then migrate to surface waters or into the ground water, and (b) recycle 100 percent of the collected concrete washout water and solids. Another

Office of Water, 4203M
www.epa.gov/npdes/pubs/concretewashout.pdf
www.epa.gov/npdes/stormwater/menuofbmps

EPA 833-F-11-006
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