



Storm Water Pollution Prevention Plan

**Sunshine Valley Estate
Huntsville, Utah**

Matt Lowe
801-648-8829

April 18, 2019

Storm Water Pollution Prevention Plan

for:

SUNSHINE VALLEY ESTATES
940 S. 9270 E.
HUNTSVILLE, UT. 84317

Operator(s):

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SWPPP Preparation Date:

April 8, 2019

Estimated Project Dates:

Project Start Date: 04/08/2019
Project Completion Date: 04/08/2020

Contents

SECTION 1: CONTACT INFORMATION/ RESPONSIBLE PARTIES	33
1.1 Owner(s) & Contractors.....	1
1.2 Storm Water Team.....	34
SECTION 2: SITE EVALUATION, ASSESSMENT, & PLANNING	34
2.1 Project/Site Information	34
2.2 Nature of Construction Activity	35
2.3 Construction Site Estimates	35
2.4 Soils, Slopes, Vegetation, and Current Drainage Patterns.....	35
2.5 Emergency Related Projects.....	6
2.6 Phase/Sequence of Construction Activity.....	7
2.7 Site Features and Sensitive Areas to be Protected	Error! Bookmark not defined.
2.8 Maps	36
SECTION 3: WATER QUALITY	36
3.1 UIC Class 5 Injection Wells.....	9
3.2 Discharge Information	400
3.3 Receiving Waters	410
3.4 Impaired Waters.....	11
3.5 High Quality Waters	11
3.6 Dewatering Practices	11
3.7 Control Storm Water Flowing onto and Through the Project.....	12
3.8 Project Storm Deain Inlets.....	13
SECTION 4: POLLUTION PREVENTION STANDARDS	14
4.1 Potential Sources of Pollution.....	14
4.2 Non-Storm Water Discharges.....	15
4.3 Natural Buffers or Equivalent Sediment Controls	16
SECTION 5: EROSION AND SEDIMENT CONTROLS	20
5.1 Minimize Disturbed Area and Protect Natural Features and Soil.....	20
5.2 Establish Perimeter Controls and Sediment Barriers	21
5.3 Retain Sediment On-Site.....	22
5.4 Establish Stabilized Construction Exits	22
5.5 Protect Slopes.....	23
5.6 Stockpiled Soil or Other Erodible Material.....	24
5.7 Minimize Dust.....	25
5.8 Topsoil.....	25
5.9 Soil Compaction	26
5.10 High Altitude/Heavy Snow.....	26
5.11 Chemical Treatment.....	27
5.12 Stabilized Soils.....	28
5.13 Final Stabilization	29
SECTION 6: POLLUTION PREVENTION	31
6.1 Spill Prevention & Response.....	31
6.2 Construction & Domestic Waste.....	32
6.3 Washing of Applicators and Containers used for Concrete, Paint or Other Materials.....	33

6.4	Establish Proper Building Material Staging Areas	34
6.5	Establish Proper Equipment/Vehicle Fueling and Maintenance Practices.....	35
6.6	Control Equipment/Vehicle Washing	36
6.7	Pesticides, Herbicides, Insecticides, Fertilizers, and Landscape Materials	36
6.8	Other Pollution Prevention Practices	37
SECTION 7: INSPECTIONS & CORRECTIVE ACTIONS		38
7.1	Inspections	38
7.2	Corrective Action	39
7.3	Delegations of Authority	39
SECTION 8: Training & Record Keeping		40
8.1	Training	40
8.2	Record Keeping.....	40
8.3	Log of Changes to the SWPPP	40
SECTION 9: CERTIFICATION		Error! Bookmark not defined. 42
SWPPP APPENDICES.....		56
Appendix A – General Location Map		
Appendix B – Site Maps		
Appendix C – Construction General Permit		
Appendix D – NOI, and Acknowledgment Letter from EPA/State/MS4		
Appendix E – Inspection Reports		
Appendix F – Corrective Action Log (or in Part 5.4)		
Appendix G – SWPPP Amendment Log (or in Part CGP 7.4.3)		
Appendix H – Subcontractor Certifications/Agreements		
Appendix I – Grading and Stabilization Activities Log (see CGP 7.2.4.b)		
Appendix J – Training Log		
Appendix K – Delegation of Authority (see CGP Appendix G16.1.2)		
Appendix L – Additional Information (i.e., Other permits such as dewatering, stream alteration, wetland; and out of date swppp documents)		
Appendix M – BMP Specifications		

SECTION 1: CONTACT INFORMATION/ RESPONSIBLE PARTIES

1.1 Owner(s) & Contractors

Owner(s):

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Project Manager(s):

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801-648-8829

SECTION 2: SITE EVALUATION, ASSESSMENT, & PLANNING

2.1 Project/Site Information

Project/Site Name: Sunshine Valley Estates

Project Street/Location: 940 S 9270 E

City: Huntsville

State: UT

ZIP Code: 84317

County or Similar Subdivision: Weber County

Latitude:

Longitude:

40.185431 ° N (decimal)

-111.610322 ° W (decimal)

Method for determining latitude/longitude:

USGS topographic map (specify scale: _____)

EPA Web site GPS

Other (please specify): Google Earth

Is the project located in Indian country? Yes No

If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable." _____

Is this project considered a federal facility?

Yes

No

UPDES project or permit tracking number*: _____

**(This is the unique identifying number assigned to your project by your permitting authority after you have applied for coverage under the appropriate National Pollutant Discharge Elimination System (UPDES) construction general permit.)*

2.2 Nature of Construction Activity

Describe the general scope of the work for the project, major phases of construction, etc:

Construction of a 9 lot subdivision

What is the function of the construction activity?

Residential Commercial Industrial Road Construction Linear Utility

Other (please specify):

Estimated Project Start Date: 3/26/2019

Estimated Project Completion Date: 3/26/2020

2.3 Construction Site Estimates

The following are estimates of the construction site.

Total project area:	13.92 acres
Construction site area to be disturbed:	13.92 acres
Percentage impervious area before construction:	1%
Runoff coefficient before construction:	0.20
Percentage impervious area after construction:	7%
Runoff coefficient after construction	0.26

2.4 Soils, Slopes, Vegetation, and Current Drainage Patterns

Soil type(s):

Soil types consist mainly of sandy gravel

Slopes (describe current slopes and note any changes due to grading or fill activities):

A gentle slope of about 0.5% from east to west

Drainage Patterns (describe current drainage patterns and note any changes dues to grading or fill activities) Onsite drainage currently runs to the existing south fork of the Ogden River. The final result of the project will result in the same outfall.

Vegetation: Dry weeds and grass

2.5 Emergency Related Projects

Emergency-Related Project? Yes No

Response to a public emergency (see CGP Part 1.2.1); natural disaster, extreme flooding conditions, etc.

PROVIDE INFORMATION SUBSTANTIATING ITS OCCURRENCE

INSERT DESCRIPTION OF CONSTRUCTION THAT WAS NECESSARY TO REESTABLISH AFFECTED PUBLIC SERVICES

2.6 Phase/Sequence of Construction Activity

Phase I

- Describe phase
- Duration of phase (start date, end date)
- List BMPs associated with this phase
- Describe stabilization methods for this phase (describe any temporary stabilization methods that will be used before final stabilization)

Phase II

- Describe phase
- Duration of phase (start date, end date)
- List BMPs associated with this phase
- Describe stabilization methods for this phase (describe any temporary stabilization methods that will be used before final stabilization)

2.8 Maps

The location map is filed in Appendix A

The SWPPP site map(s) are filed in Appendix B

SECTION 3: WATER QUALITY

3.1 UIC Class 5 Injection Wells

- French Drain
- Commercially Manufactured pre-cast or pre-built subsurface infiltration system
- Drywell(s), seepage pit(s), improved sinkhole(s)

Description of your Class V Injection Well:

[INSTERT DESCRIPTION AND/OR INCLUDE SPECIFICATIONS IN APPENDIX G](#)

DWQ contact information:

Name:

Date:

Additional information:

Local Requirements:

3.2 Discharge Information

Does your project/site discharge storm water into a Municipal Separate Storm Sewer System (MS4)? Yes No

List the MS4 that receives the discharge from the construction project:

Are there any surface waters that are located within 50 feet of your construction disturbances?

Yes No

List the water body:

3.3 Receiving Waters

Table 1 – Names of Receiving Waters (see <http://wq.deq.utah.gov>)

Name(s) of the first surface water that receives storm water directly from your site and/or from the MS4. (note: multiple rows provided where your site has more than one point of discharge that flows to different surface waters)
1. Pineview Reservoir
2. Weber River
3.
4.
5.
6.

3.4 Impaired Waters

Table 2. - Impaired Waters (Answer the following for each surface water listed in Table 1 above) (see <http://wq.deq.utah.gov> look in the bottom half of the left hand column)

	Is this surface water listed as "impaired"?	If you answered yes, then answer the following:		
		What pollutant(s) are causing the impairment?	Has a TMDL been completed?	Pollutant(s) for which there is a TMDL
1.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Phosphorus dissolved oxygen	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Phosphorus & dissolved oxygen
2.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
5.	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
6.	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	

3.5 High Water Quality

Table 3 – High Water Quality (Answer the following for each surface water listed in Table 1 above) (see <http://wq.deq.utah.gov> look in the bottom half of the left hand column)

	Is this surface water designated as High Water Quality? (see Appendix C)	If you answered yes, specify which category the surface water is designated as?
1.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2
2.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2
3.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2
4.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2
5.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2
6.	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2

3.6 Dewatering Practices

3.6: (Place name of BMP here – reference to detailed instructions, Appendix M – construction dewatering, intercepted groundwater, spring water, etc.)

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

3.6: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

3.7 Control Storm Water Flowing onto and through the Project

3.7: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

3.7: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

3.8 Protect Storm Drain Inlets

3.8: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

3.8: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
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Authorized Non-Storm Water Discharges	Comments

4.2: (Place name of BMP here – reference to detailed instructions in Appendix M – water line, sanitation, flushing, etc.)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

4.2: (Place name of BMP here -- reference to detailed instructions in Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

4.3 Natural Buffers or Equivalent Sediment Controls

Buffer Compliance Alternatives

Are there any surface waters within 50 feet of your project’s earth disturbances? YES NO

(Note: If “no”, no further documentation is required for the Section 4.3. Delete the rest of Section 4.3 below this point.)

SECTION 5: EROSION AND SEDIMENT CONTROLS

5.1 Minimize Disturbed Area and Protect Natural Features and Soil

5.1: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.1: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.2 Establish Perimeter Controls and Sediment Barriers

5.2: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.2: (Place name of BMP here – reference to detailed instruction, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.3 Retain Sediment On-Site

5.3: (Place name of BMP here – reference to detailed instruction, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.3: (Place name of BMP here – reference to detailed instruction, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.4 Establish Stabilized Construction Exits

5.4: (Place name of BMP here – reference to detailed instructions, Appendix M -- Tire and mud removal BMP)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.4: (Place name of BMP here – reference to detailed instructions, Appendix M -- Street clean up method)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.5 Protect Slopes

5.5: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.5: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.6 Stockpiled Soil or Other Erodible Material

5.6: (Place name of BMP here – reference to detailed instruction, Appendix M -- Backfill)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.6: (Place name of BMP here – reference to detailed instructions, Appendix M -- Landscaping)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.6: (Place name of BMP here – reference to detailed instructions, Appendix M – On site materials processing)

BMP Description: [Include rationale why this BMP will work best for this project]

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.7 Minimize Dust

5.7: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

5.7: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

5.8 Topsoil

5.8: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

5.8: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

5.9 Soil Compaction

5.9: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

5.9: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

5.10 High Altitude/Heavy Snows

Date Snow is Expected	Date of High Altitude/Heavy Snow Conditions BMPs to be Installed	Date of First Heavy Snow
	Scheduled:	
	Actual:	

5.10: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

5.10: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

5.11 Chemical Treatment

Soil Types

List all the soil types (including soil types expected to be found in fill material) that are expected to be exposed during construction and that will be discharged to locations where chemicals will be applied: Sandy Loam

Treatment Chemicals

List all treatment chemicals that will be used at the site and explain why these chemicals are suited to the soil characteristics: N/A

Describe the dosage of all treatment chemicals you will use at the site or the methodology you will use to determine dosage: N/A

Provide information from any applicable Material Safety Data Sheets (MSDS): N/A

Describe how each of the chemicals will be stored: N/A

Include references to applicable state or local requirements affecting the use of treatment chemicals, and copies of applicable manufacturer's specifications regarding the use of your specific treatment chemicals and/or chemical treatment systems: N/A

Special Controls for Cationic Treatment Chemicals (if applicable)

If you have been authorized by your applicable Regional Office to use cationic treatment chemicals, include the official EPA authorization letter or other communication, and identify the specific controls and implementation procedures you are required to implement to ensure that your use of cationic treatment chemicals will not lead to a violation of water quality standards:

Schematic Drawings of Storm Water Controls/Chemical Treatment Systems

Provide schematic drawings of any chemically-enhanced storm water controls or chemical treatment systems to be used for application of treatment chemicals: N/A

Training

Describe the training that personnel who handle and apply chemicals have received prior to permit coverage, or will receive prior to the use of treatment chemicals: N/A

5.11: (Place name of BMP here – reference to detailed instructions, Appendix M)	
BMP Description:	
<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.11: (Place name of BMP here – reference to detailed instructions, Appendix M)	
BMP Description:	
<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.12 Stabilize Soils

5.12: (Place name of BMP here – reference to detailed instructions, Appendix M)	
BMP Description:	
<input type="checkbox"/> <i>Permanent</i> <input type="checkbox"/> <i>Temporary</i>	
<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.12: (Place name of BMP here – reference to detailed instructions, Appendix M)	
BMP Description:	
<input type="checkbox"/> <i>Permanent</i> <input type="checkbox"/> <i>Temporary</i>	
<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

5.13 Final Stabilization

5.13: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

5.13: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

SECTION 6: POLLUTION PREVENTION

6.1 Spill Prevention and Response

Any discharges in 24 hours equal to or in excess of the reportable quantities listed in 40 CFR 117, 40 CFR 110, and 40 CFR 302 will be reported to the National Response Center and the Division of Water Quality (DWQ) as soon as practical after knowledge of the spill is known to the permittees. The permittee shall submit within 14 calendar days of knowledge of the release a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and measures taken and/or planned to be taken to the Division of Water Quality (DWQ), 288 North 1460 West, P.O. Box 144870, Salt Lake City, Utah 84114-4870. The Storm Water Pollution Prevention Plan must be modified within 14 calendar days of knowledge of the release to provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

Agency	Phone Number
National Response Center	(800) 424-8802
Division of Water Quality (DWQ) 24-Hr Reporting	(801)-231-1769 (801) 536-4123

Utah Department of Health Emergency Response	(801) 580-6681
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Material	Media Released To	Reportable Quantity
Engine oil, fuel, hydraulic & brake fluid	Land	25 gallons
Paints, solvents, thinners	Land	100 lbs (13 gallons)
Engine oil, fuel, hydraulic & brake fluid	Water	Visible Sheen
Antifreeze, battery acid, gasoline, engine degreasers	Air, Land, Water	100 lbs (13 gallons)
Refrigerant	Air	1 lb

6.2 Construction and Domestic Waste

6.2: (Place name of BMP here – reference to detailed instructions, Appendix M)(Trash Control)	
BMP Description:	
Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

6.2: (Place name of BMP here – reference to detailed instructions, Appendix M)(Spoil Control)	
BMP Description:	
Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

6.2: (Place name of BMP here – reference to detailed instructions, Appendix M)(Sanitary Waste Control)	
--	--

<i>BMP Description:</i>	
<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.2: (Place name of BMP here – reference to detailed instructions, Appendix M)(Concrete Cutting Control)

<i>BMP Description:</i>	
<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.2: (Place name of BMP here – reference to detailed instructions, Appendix M)(Concrete Washout Control)

<i>BMP Description:</i>	
<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.3 Washing of Applicators and Containers used for Concrete, Paint or Other Materials

6.3: (Place name of BMP here – reference to detailed instructions, Appendix M)

<i>BMP Description:</i>	
<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.3: (Place name of BMP here – reference to detailed instructions, Appendix M)

<i>BMP Description:</i>	
--------------------------------	--

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.4 Establish Proper Building Material Staging Areas

6.4: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.5 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

6.5: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.5: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.6 Control Equipment/Vehicle Washing

6.6: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.6: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.7 Pesticides, Herbicides, Insecticides, Fertilizers, and Landscape Materials

6.7: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.7: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	
<i>Responsible Staff:</i>	

6.8 Other Pollution Prevention Practices

6.8: (Place name of BMP here – reference to detailed instructions, Appendix M)

BMP Description:

<i>Installation Schedule:</i>	
<i>Maintenance and Inspection:</i>	

Responsible Staff:	
6.8: (Place name of BMP here – reference to detailed instructions, Appendix M)	
BMP Description:	
Installation Schedule:	
Maintenance and Inspection:	
Responsible Staff:	

SECTION 7: INSPECTIONS & CORRECTIVE ACTIONS

7.1 Inspections

1. **Inspection Personnel:** Identify the person(s) who will be responsible for conducting inspections and describe their qualifications:

[File inspection certifications in Appendix J](#)

2. **Inspection Schedule:**

Minimum Inspection Requirements:

- At least once every 7 calendar days; or
- At least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

Inspection Reports are filed in Appendix E

7.2 Corrective Actions

Correction Action Log is filed in Appendix F

7.3 Delegation of Authority

See the signed delegation of authority forms in Appendix K.

SECTION 8: TRAINING AND RECORDKEEPING

8.1 Training

Training documentation and log are filed in Appendix J.

8.2 Recordkeeping

Maintain all records in Appendices A-M

8.3 Log of Changes to the SWPPP

Amendments to the SWPPP are filed in Appendix G

SECTION 9: CERTIFICATION

Owner

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name:

Title:

Signature:

Date:

General Contractor

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

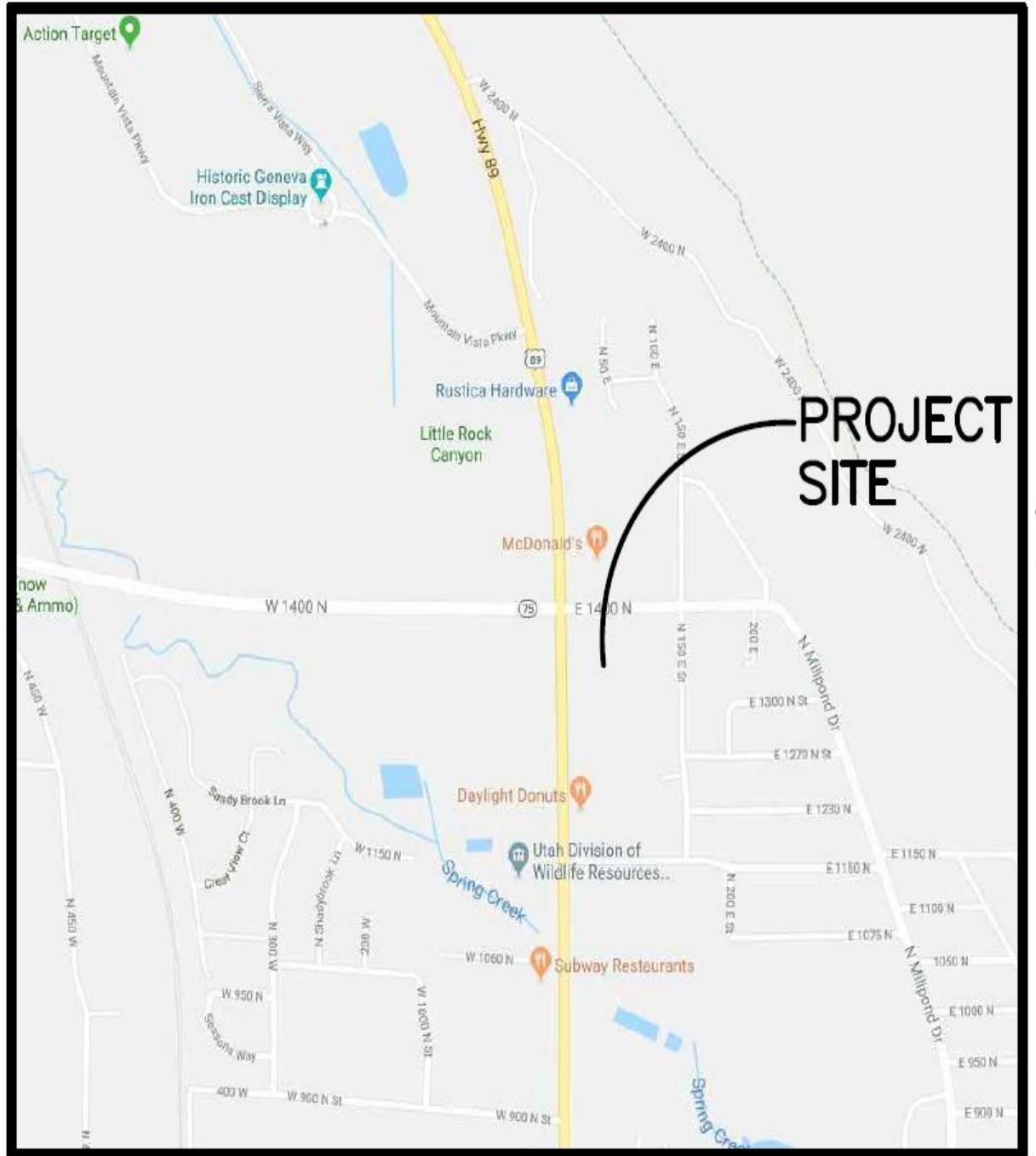
Name:

Title:

Signature:

Date:

Appendix A – General Location Map



Appendix B – Site Maps

General Notes:

- ALL CONSTRUCTION MUST STRICTLY FOLLOW THE STANDARDS AND SPECIFICATIONS SET FORTH BY: GOVERNING UTILITY MUNICIPALITY, GOVERNING CITY OR COUNTY (IF UN-INCORPORATED), INDIVIDUAL PRODUCT MANUFACTURERS, AMERICAN PUBLIC WORKS ASSOCIATION (APWA), AND THE DESIGN ENGINEER. THE ORDER LISTED ABOVE IS ARRANGED BY SENIORITY. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED CONTRACTORS, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.
- CONTRACTOR TO STRICTLY FOLLOW GEOTECHNICAL RECOMMENDATIONS FOR THIS PROJECT. ALL GRADING INCLUDING BUT NOT LIMITED TO CUT, FILL, COMPACTION, ASPHALT SECTION, SUBBASE, TRENCH EXCAVATION/BACKFILL, SITE GRUBBING, RETAINING WALLS AND FOOTINGS MUST BE COORDINATED DIRECTLY WITH THE PROJECT GEOTECHNICAL ENGINEER.
- TRAFFIC CONTROL, STRIPING & SIGNAGE TO CONFORM TO CURRENT GOVERNING AGENCIES TRANSPORTATION ENGINEER'S MANUAL AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
- CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
- AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF ADA ACCESSIBILITY GUIDELINES.
- PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED THOROUGHLY REVIEWED PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
- CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND NOTIFYING ENGINEER OR INSPECTING AUTHORITY 48 HOURS IN ADVANCE OF COVERING UP ANY PHASE OF CONSTRUCTION REQUIRING OBSERVATION.
- ANY WORK IN THE PUBLIC RIGHT-OF-WAY WILL REQUIRE PERMITS FROM THE APPROPRIATE CITY, COUNTY OR STATE AGENCY CONTROLLING THE ROAD, INCLUDING OBTAINING REQUIRED INSPECTIONS.
- ALL DIMENSIONS, GRADES & UTILITY DESIGNS SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES.
- CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING AND BRING UP ANY QUESTIONS BEFOREHAND.
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH BY THE GEOTECHNICAL ENGINEER.
- CATCH SLOPES SHALL BE GRADED AS SHOWN ON GRADING PLANS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FLAGGING, CAUTION SIGNS, LIGHTS, BARRICADES, FLAGMEN, AND ALL OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.
- CONTRACTOR SHALL, AT THE TIME OF BIDDING AND THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE BONDBLE FOR AN AMOUNT EQUAL TO OR GREATER THAN THE AMOUNT BID AND TO DO THE TYPE OF WORK CONTEMPLATED IN THE PLANS AND SPECIFICATIONS. CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PLANS AND SPECIFICATIONS.
- CONTRACTOR SHALL INSPECT THE SITE OF THE WORK PRIOR TO BIDDING TO SATISFY HIMSELF BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS HE MAY PREFER OF THE LOCATIONS OF THE PROPOSED WORK AND OF THE ACTUAL CONDITIONS OF AND AT THE SITE OF WORK. IF, DURING THE COURSE OF HIS EXAMINATION, A BIDDER FINDS FACTS OR CONDITIONS WHICH APPEAR TO HIM TO BE IN CONFLICT WITH THE LETTER OR SPIRIT OF THE PROJECT PLANS AND SPECIFICATIONS, HE SHALL CONTACT THE ENGINEER FOR ADDITIONAL INFORMATION AND EXPLANATION BEFORE SUBMITTING HIS BID. SUBMISSION OF A BID BY THE CONTRACTOR SHALL CONSTITUTE ACKNOWLEDGMENT THAT, IF AWARDED THE CONTRACT, HE HAS RELIED AND IS RELYING ON HIS OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE FULFILLMENT OF THE WORK AND ON HIS OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT. THE INFORMATION PROVIDED BY THE ENGINEER IS NOT INTENDED TO BE A SUBSTITUTE FOR, OR A SUPPLEMENT TO, THE INDEPENDENT VERIFICATION BY THE CONTRACTOR TO THE EXTENT SUCH INDEPENDENT INVESTIGATION OF SITE CONDITIONS IS DEEMED NECESSARY OR DESIRABLE BY THE CONTRACTOR. CONTRACTOR SHALL ACKNOWLEDGE THAT HE HAS NOT RELIED SOLELY UPON OWNER- OR ENGINEER-FURNISHED INFORMATION REGARDING SITE CONDITIONS IN PREPARING AND SUBMITTING HIS BID.
- CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.
- CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER, ENGINEER, AND/OR GOVERNING AGENCIES.
- CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, CONTROL POINTS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.
- CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER; ALL RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.
- IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.
- WHenever existing facilities are removed, damaged, broken, or cut in the installation of the work covered by these plans or specifications, said facilities shall be replaced at the contractor's expense with materials equal to or better than the materials used in the original existing facilities. The finished product shall be subject to the approval of the owner, the engineer, and the respective regulatory agency.
- CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL STRUCTURES AND OTHER FACILITIES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
- WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE HIGHEST QUALITY ARE TO BE USED.
- CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS. THEREFORE, THE OWNER IS RELYING UPON THE EXPERIENCE AND EXPERTISE OF THE CONTRACTOR. PRICES PROVIDED WITHIN THE CONTRACT DOCUMENTS SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THE TRUE INTENT AND PURPOSE OF THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE AND HAVE SPECIAL SKILLS IN THE NATURE, EXTENT AND INHERENT CONDITIONS OF THE WORK TO BE PERFORMED. CONTRACTOR SHALL ALSO ACKNOWLEDGE THAT THERE ARE CERTAIN PECULIAR AND INHERENT CONDITIONS EXISTENT IN THE CONSTRUCTION OF THE PARTICULAR FACILITIES WHICH MAY CREATE, DURING THE CONSTRUCTION PROGRAM, UNUSUAL OR UNSAFE CONDITIONS HAZARDOUS TO PERSONS, PROPERTY AND THE ENVIRONMENT. CONTRACTOR SHALL BE AWARE OF SUCH PECULIAR RISKS AND HAVE THE SKILL AND EXPERIENCE TO FORESEE AND TO ADOPT PROTECTIVE MEASURES TO ADEQUATELY AND SAFELY PERFORM THE CONSTRUCTION WORK WITH RESPECT TO SUCH HAZARDS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL STRIPING AND/OR PAVEMENT MARKINGS NECESSARY TO THE EXISTING STRIPING INTO FUTURE STRIPING. METHOD OF REMOVAL SHALL BE BY GRINDING OR SANDBLASTING.
- CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 4 FEET OR MORE. FOR EXCAVATIONS 4 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL COMPLY WITH LOCAL, STATE AND NATIONAL SAFETY CODES, ORDINANCES, OR REQUIREMENTS FOR EXCAVATION AND TRENCHES.
- ALL EXISTING GATES AND FENCES TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL GATES AND FENCES FROM DAMAGE.

Utility Notes:

- CONTRACTOR SHALL COORDINATE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE SERVICE, GAS SERVICE, CABLE, POWER, INTERNET.
- EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS USING A COMBINATION OF ON-SITE SURVEYS (BY OTHERS), PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE IN THE FIELD, THEIR MAIN AND SERVICE LINES 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK. THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.
- CONTRACTOR SHALL POT HOLE ALL UTILITIES TO DETERMINE IF CONFLICTS EXIST PRIOR TO BEGINNING ANY EXCAVATION. NOTIFY ENGINEER OF ANY CONFLICTS. CONTRACTOR SHALL VERIFY LOCATION AND INVERTS OF EXISTING UTILITIES TO WHICH NEW UTILITIES WILL BE CONNECTED. PRIOR TO COMMENCING ANY EXCAVATION WORK THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE REQUIRED PROCEDURES.
- CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT HIS EXPENSE.
- ALL VALVES AND MANHOLE COVERS SHALL BE RAISED OR LOWERED TO MEET FINISHED GRADE.
- CONTRACTOR SHALL CUT PIPES OFF FLUSH WITH THE INSIDE WALL OF THE BOX OR MANHOLE.
- CONTRACTOR SHALL GROUT AT CONNECTION OF PIPE TO BOX WITH NON-SHRINKING GROUT, INCLUDING PIPE VOIDS LEFT BY CUTTING PROCESS, TO A SMOOTH FINISH.
- CONTRACTOR SHALL GROUT WITH NON-SHRINK GROUT BETWEEN GRADE RINGS AND BETWEEN BOTTOM OF INLET LID FRAME AND TOP OF CONCRETE BOX
- SILT AND DEBRIS IS TO BE CLEANED OUT OF ALL STORM DRAIN BOXES, CATCH BASINS ARE TO BE MAINTAINED IN A CLEANED CONDITION AS NEEDED UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.
- CONTRACTOR SHALL CLEAN ASPHALT, TAR OR OTHER ADHESIVES OFF OF ALL MANHOLE LIDS AND INLET GRATES TO ALLOW ACCESS.
- EACH TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND GRADE AS REQUIRED. THE TRENCH WALL SHALL BE SO BRACED THAT THE WORKMEN MAY WORK SAFELY AND EFFICIENTLY. ALL TRENCHES SHALL BE DRAINED SO THE PIPE LAYING MAY TAKE PLACE IN DE-WATERED CONDITIONS.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES WITH WHICH TO REMOVE PROMPTLY AND TO PROPERLY DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION.
- MAINTAIN A MINIMUM 18" VERTICAL SEPARATION DISTANCE BETWEEN ALL UTILITY CROSSINGS.
- CONTRACTOR SHALL START INSTALLATION AT LOW POINT OF ALL NEW GRAVITY UTILITY LINES.
- ALL BOLTED FITTINGS MUST BE GREASED AND WRAPPED.
- UNLESS SPECIFICALLY NOTED OTHERWISE, MAINTAIN AT LEAST 2 FEET OF COVER OVER ALL STORM DRAIN LINES AT ALL TIMES (INCLUDING DURING CONSTRUCTION).
- ALL WATER LINES SHALL BE INSTALLED A MINIMUM OF 60" BELOW FINISHED GRADE.
- ALL SEWER LINES AND SEWER SERVICES SHALL HAVE A MINIMUM SEPARATION OF 10 FEET, PIPE EDGE TO PIPE EDGE, FROM THE WATER LINES. IF A 10 FOOT SEPARATION CAN NOT BE MAINTAINED, THE SEWER LINE AND WATER LINE SHALL BE LAID IN SEPARATE TRENCHES AND THE BOTTOM OF THE WATER LINE SHALL BE AT LEAST 18" ABOVE THE TOP OF THE SEWER LINE.
- CONTRACTOR SHALL INSTALL THRUST BLOCKING AT ALL WATERLINE ANGLE POINTS AND TEES.
- ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK AND STREET PAVING.
- CONTRACTOR SHALL INSTALL MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL NONMETALLIC PIPE.

Erosion Control General Notes:

THE CONTRACTOR TO USE BEST MANAGEMENT PRACTICES FOR PROVIDING EROSION CONTROL FOR CONSTRUCTION OF THIS PROJECT. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO GOVERNING AGENCIES ORDINANCES AND ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE COUNTIES. ALSO, INSPECTORS WILL HAVE THE RIGHT TO CHANGE THE FACILITIES AS NEEDED.

CONTRACTOR SHALL KEEP THE SITE WATERED TO CONTROL DUST. CONTRACTOR TO LOCATE A NEARBY HYDRANT FOR USE AND TO INSTALL TEMPORARY METER. CONSTRUCTION WATER COST TO BE INCLUDED IN BID.

WHEN GRADING OPERATIONS ARE COMPLETED AND THE DISTURBED GROUND IS LEFT OPEN FOR 14 DAYS OR MORE, THE AREA SHALL BE FURROWED PARALLEL TO THE CONTOURS.

THE CONTRACTOR SHALL MODIFY EROSION CONTROL MEASURES TO ACCOMMODATE PROJECT PLANNING.

ALL ACCESS TO PROPERTY WILL BE FROM PUBLIC RIGHT-OF-WAYS. THE CONTRACTOR IS REQUIRED BY STATE AND FEDERAL REGULATIONS TO PREPARE A STORM WATER POLLUTION PREVENTION PLAN AND FILE A "NOTICE OF INTENT" WITH THE GOVERNING AGENCIES.

Maintenance:

ALL BEST MANAGEMENT PRACTICES (BMP'S) SHOWN ON THIS PLAN MUST BE MAINTAINED AT ALL TIMES UNTIL PROJECT CLOSE-OUT.

THE CONTRACTOR'S RESPONSIBILITY SHALL INCLUDE MAKING BI-WEEKLY CHECKS ON ALL EROSION CONTROL MEASURES TO DETERMINE IF REPAIR OR SEDIMENT REMOVAL IS NECESSARY. CHECKS SHALL BE DOCUMENTED AND COPIES OF THE INSPECTIONS KEPT ON SITE.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF BARRIER.

SEDIMENT TRACKED ONTO PAVED ROADS MUST BE CLEANED UP AS SOON AS PRACTICAL, BUT IN NO CASE LATER THAN THE END OF THE NORMAL WORK DAY. THE CLEAN UP WILL INCLUDE SWEEPING OF THE TRACKED MATERIAL, PICKING IT UP, AND DEPOSITING IT TO A CONTAINED AREA.

EXPOSED SLOPES:

- ANY EXPOSED SLOPE THAT WILL REMAIN UNTOUCHED FOR LONGER THAN 14 DAYS MUST BE STABILIZED BY ONE OR MORE OF THE FOLLOWING METHODS:
- SPRAYING DISTURBED AREAS WITH A TACKIFIER VIA HYDROSEED
 - TRACKING STRAW PERPENDICULAR TO SLOPES
 - INSTALLING A LIGHT-WEIGHT, TEMPORARY EROSION CONTROL BLANKET

Notice to Contractor:


THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON RECORDS OF THE VARIOUS UTILITY COMPANIES AND/OR MUNICIPALITIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

THE CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEERS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

Survey Control Note:

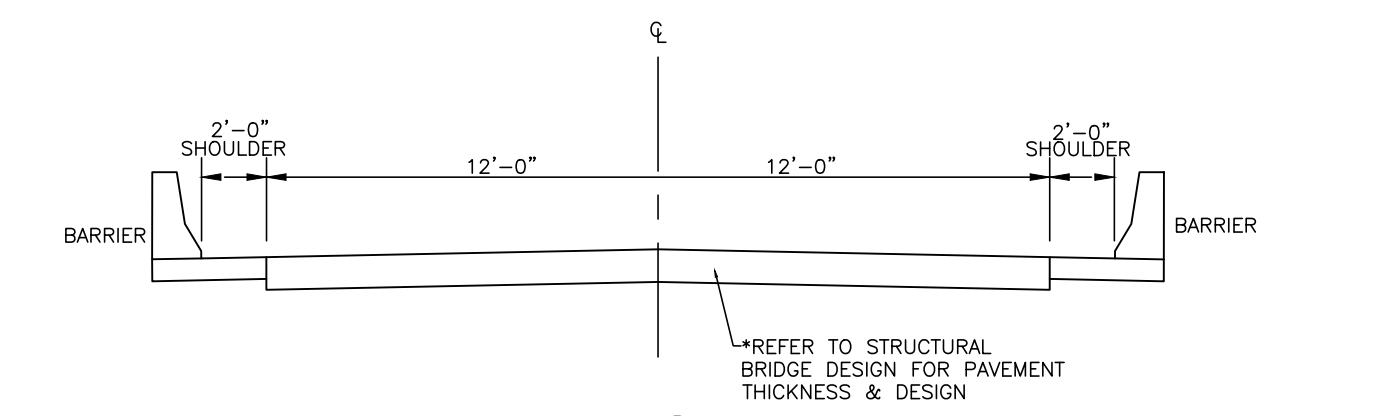
THE CONTRACTOR OR SURVEYOR SHALL BE RESPONSIBLE FOR FOLLOWING THE NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS (NSPS) MODEL STANDARDS FOR ANY SURVEYING OR CONSTRUCTION LAYOUT TO BE COMPLETED USING REEVE & ASSOCIATES, INC. SURVEY DATA OR CONSTRUCTION IMPROVEMENT PLANS. PRIOR TO PROCEEDING WITH CONSTRUCTION STAKING, THE SURVEYOR SHALL BE RESPONSIBLE FOR VERIFYING HORIZONTAL CONTROL FROM THE SURVEY MONUMENTS AND FOR VERIFYING ANY ADDITIONAL CONTROL POINTS SHOWN ON AN ALTA SURVEY, IMPROVEMENT PLAN, OR ANY ELECTRONIC DATA PROVIDED. THE SURVEYOR SHALL ALSO USE THE BENCHMARKS AS SHOWN ON THE PLAN, AND VERIFY THEM AGAINST NO LESS THAN FIVE (5) EXISTING HARD IMPROVEMENT ELEVATIONS INCLUDED ON THESE PLANS OR ON ELECTRONIC DATA PROVIDED. IF ANY DISCREPANCIES ARE ENCOUNTERED, THE SURVEYOR SHALL IMMEDIATELY NOTIFY REEVE & ASSOCIATES, INC. AND RESOLVE THE DISCREPANCIES BEFORE PROCEEDING WITH ANY CONSTRUCTION STAKING.

Reeve & Associates, Inc.
 5160 SOUTH 1500 WEST, RIVERDALE, UTAH 84405
 TEL: (801) 621-1100 FAX: (801) 621-2666 www.reeve-assoc.com
 LAND OWNERS • CIVIL ENGINEERS • LAND SURVEYORS
 TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

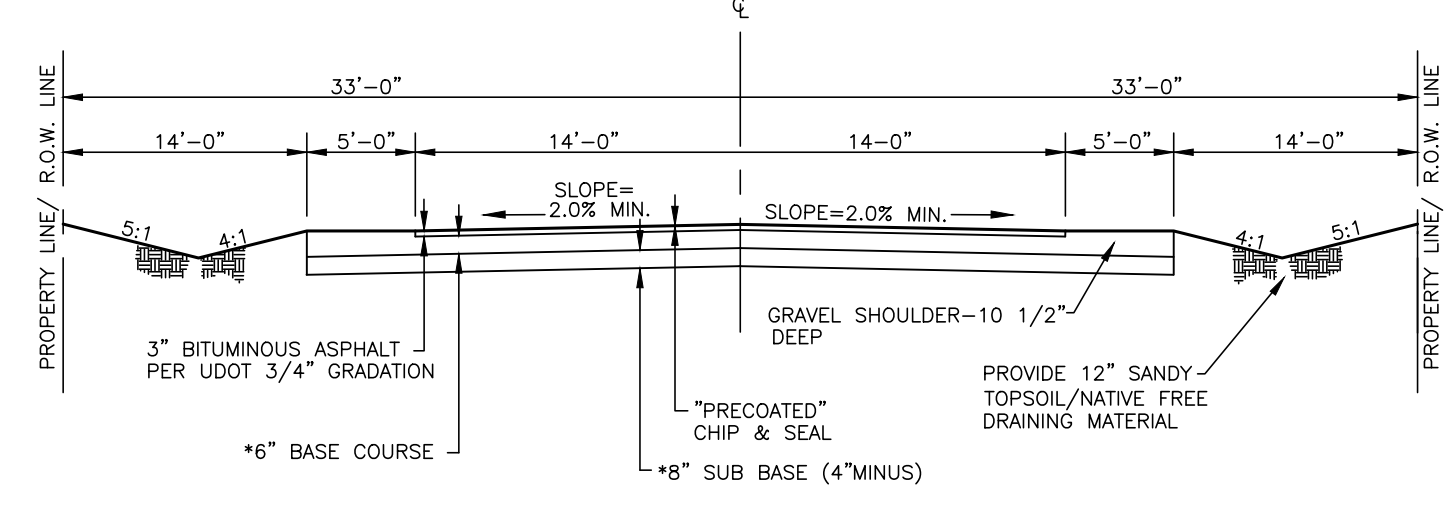


REVISIONS	DESCRIPTION
DATE	

Sunshine Valley Estates
 HUNTSVILLE, WEBER COUNTY, UTAH
**Notes/Legend/
 Street Cross-Section**



Bridge Section
SCALE: NONE

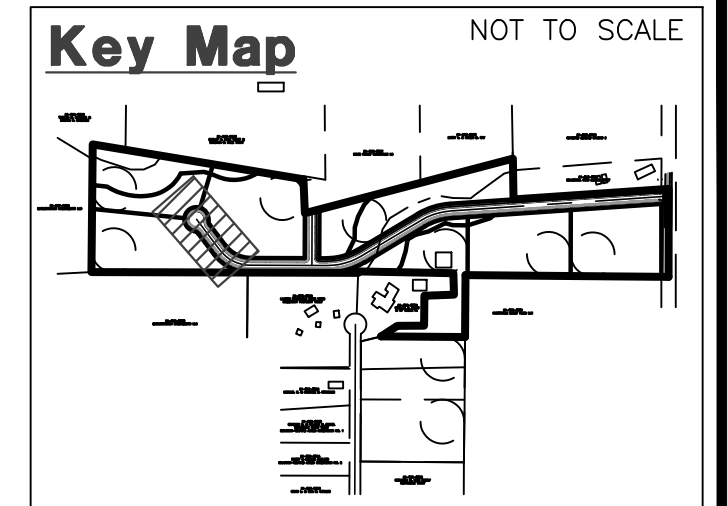


Street Section (66' R.O.W.)
SCALE: NONE

Project Info.

Engineer:	T. HUNT
Drafter:	K. EAVES
Begin Date:	12/1/18
Name:	SUNSHINE VALLEY ESTATES
Number:	4825-21

Sheet	11
2	Sheets



Construction Notes:

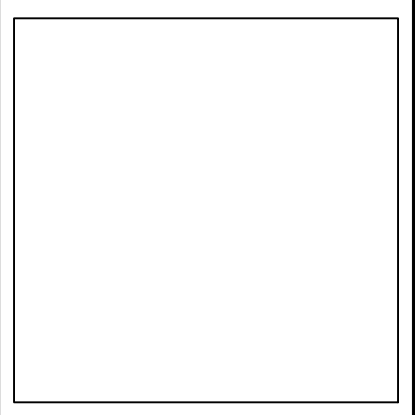
- 1) ALL CONSTRUCTION IS TO CONFORM TO THE STANDARD DRAWINGS AND SPECIFICATIONS OF WEBER COUNTY.
- 2) THE LOWEST FLOOR TO BE ONE FOOT ABOVE THE BFE.

Reeve & Associates, Inc.
 5160 SOUTH 1500 WEST, RIVERDALE, UTAH 84405
 TEL: (801) 621-1000 FAX: (801) 621-2666 www.reeve-assoc.com
 LAND PLANNERS • CIVIL ENGINEERS • LAND SURVEYORS
 TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS	DESCRIPTION

Sunshine Valley Estates
 HUNTSVILLE, WEBER COUNTY, UTAH

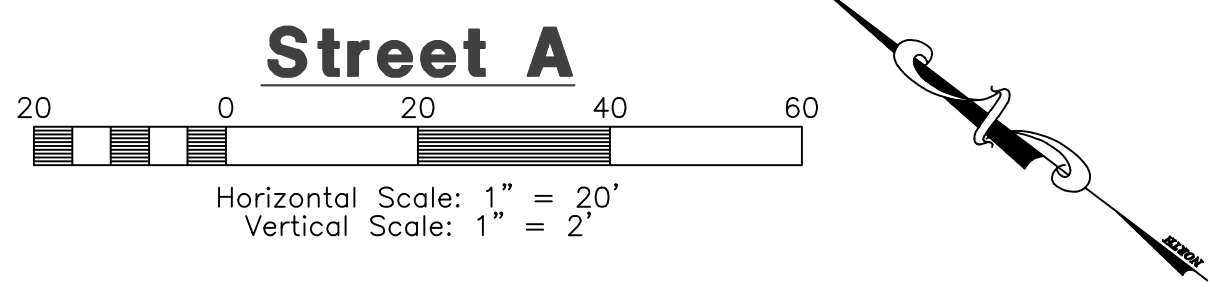
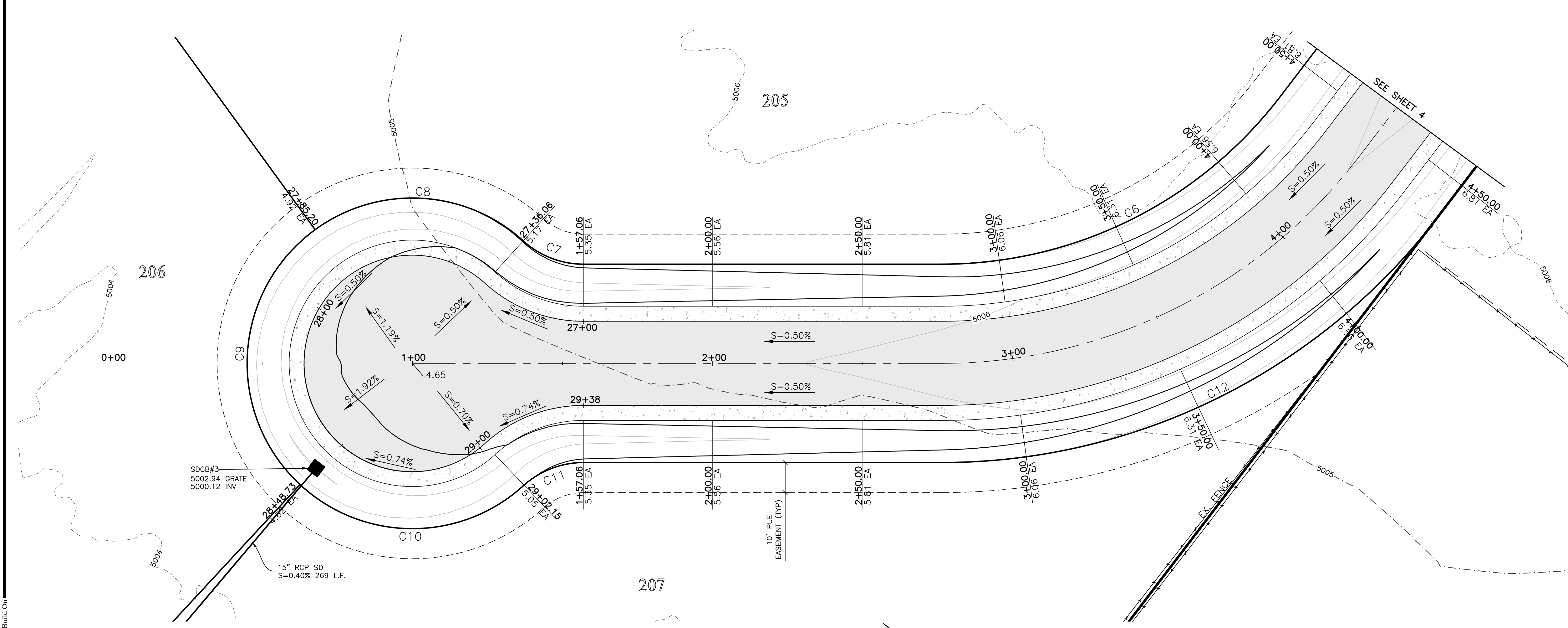
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Project Info.

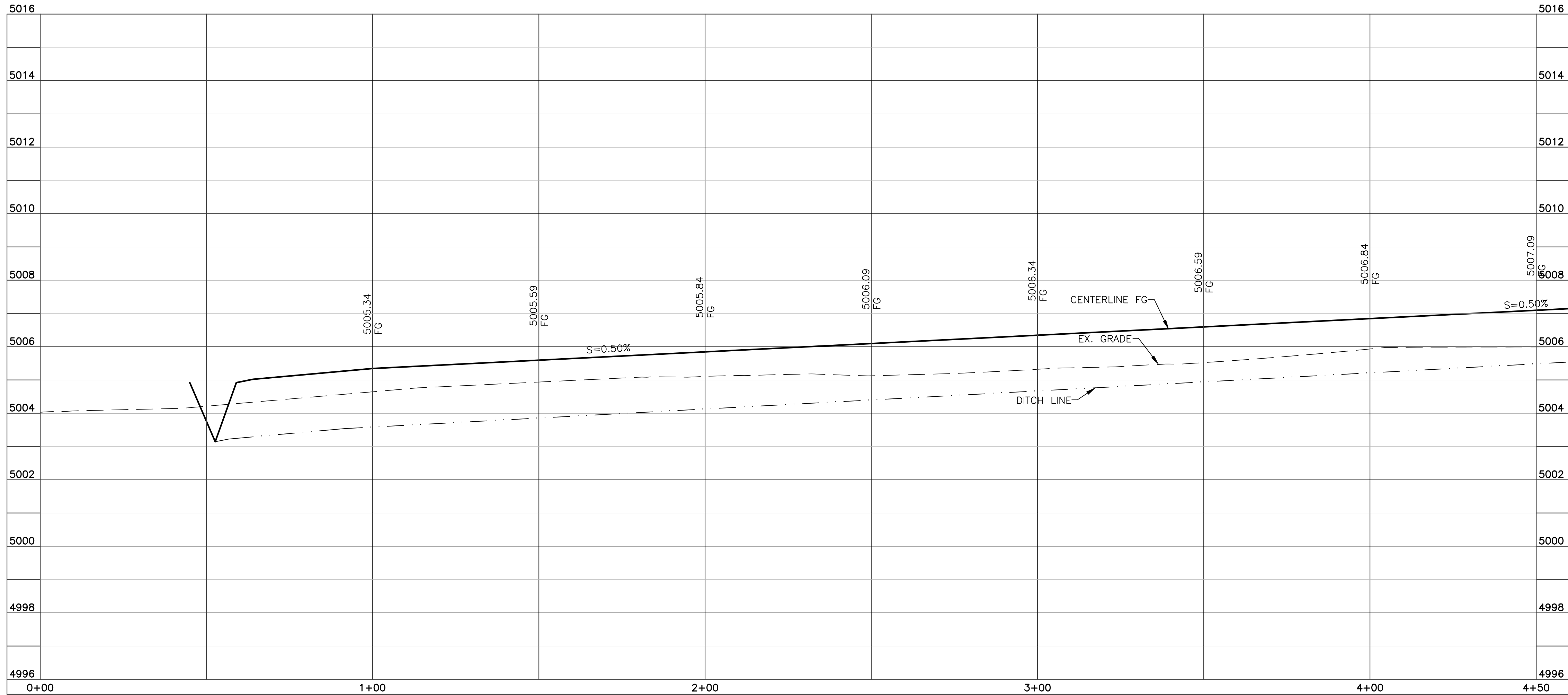
Engineer: T. HUNT
 Drafter: K. EAVES
 Begin Date: 12/1/18
 Name: SUNSHINE VALLEY ESTATES
 Number: 4825-21

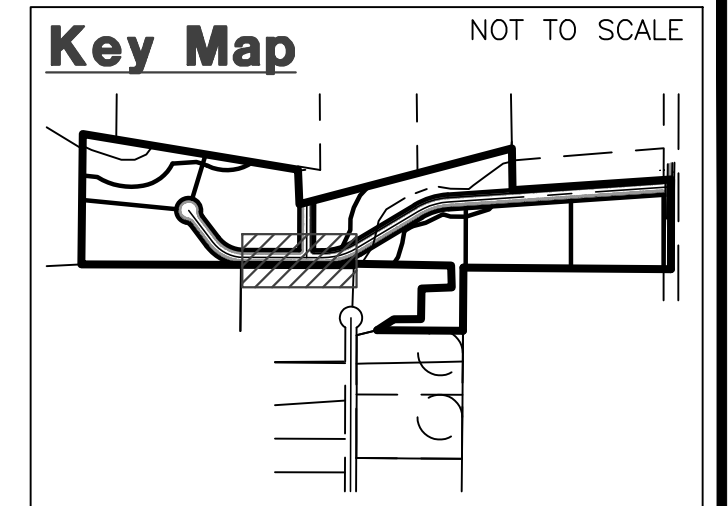
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3	Sheets



CURVE TABLE

#	RADIUS	ARC LENGTH	CHD LENGTH	TANGENT	CHD BEARING	DELTA
C1	267.00	125.85	124.50	64.01	S72°37'20"W	26°57'51"
C2	333.00	180.40	178.20	92.47	S74°39'34"W	31°02'20"
C3	333.00	166.72	155.27	79.84	S72°37'20"W	26°57'51"
C4	267.00	53.42	53.33	26.80	S64°52'18"W	11°27'47"
C5	267.00	91.22	90.78	46.06	S80°23'28"W	19°34'33"
C6	142.00	130.41	125.88	70.21	N63°30'38"W	52°37'16"
C7	30.00	22.08	21.58	11.57	N16°06'56"W	42°10'06"
C8	55.00	75.07	69.38	44.70	N34°08'02"W	78°12'17"
C9	55.00	97.06	84.95	66.85	S56°12'26"W	101°06'46"
C10	55.00	81.61	74.33	50.41	S36°51'31"E	85°01'08"
C11	30.00	22.08	21.58	11.57	S58°17'02"E	42°10'06"
C12	208.00	191.03	184.39	102.85	S63°30'38"E	52°37'16"
C13	175.00	160.72	155.13	86.53	S63°30'38"E	52°37'16"
C14	300.00	162.52	160.54	83.31	N74°39'34"E	31°02'20"
C15	300.00	141.18	139.89	71.52	N72°37'20"E	26°57'51"
C16	200.91	210.43	200.94	116.02	S85°10'59"W	60°00'37"
C17	183.72	169.37	163.44	91.24	S53°02'16"W	52°49'13"
C18	286.02	213.45	208.53	111.97	N79°22'39"W	42°45'32"

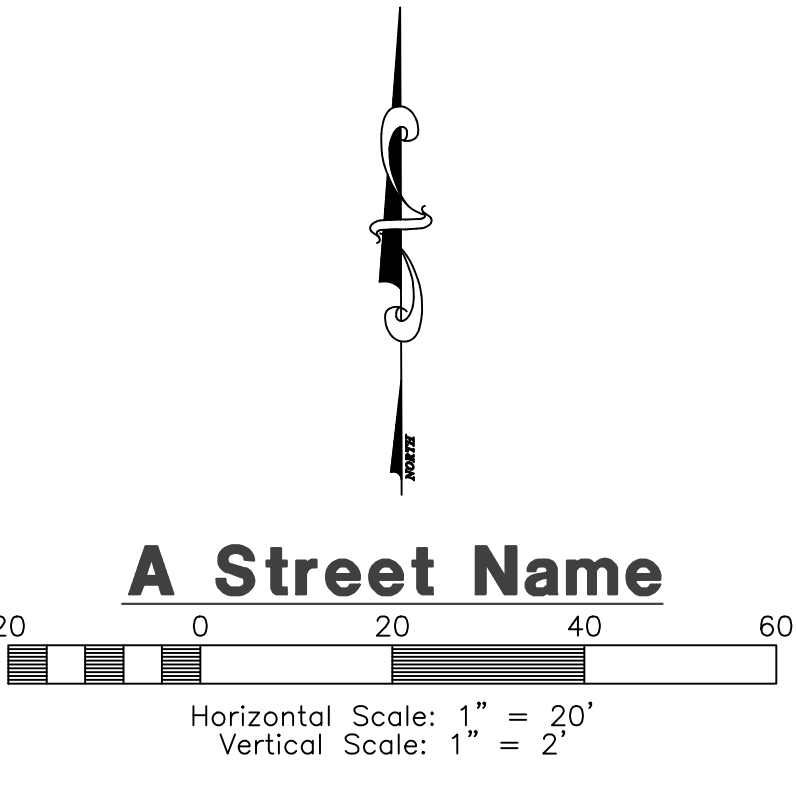
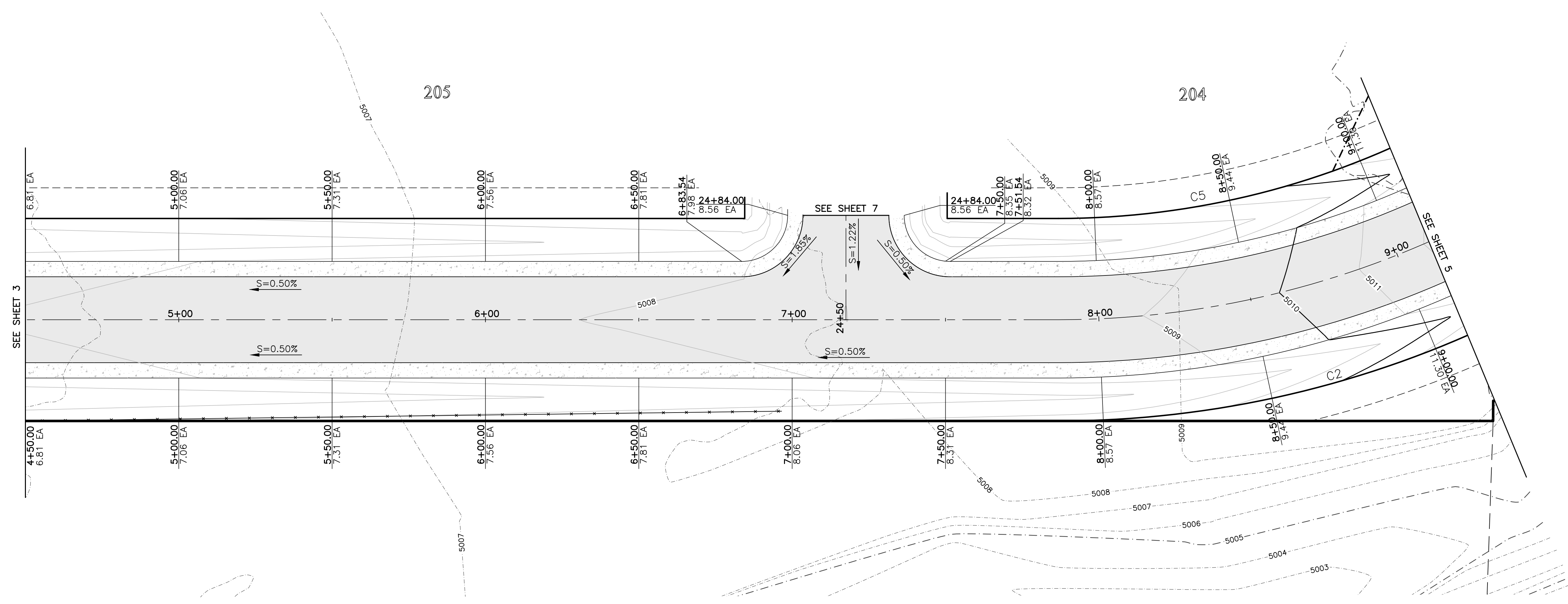




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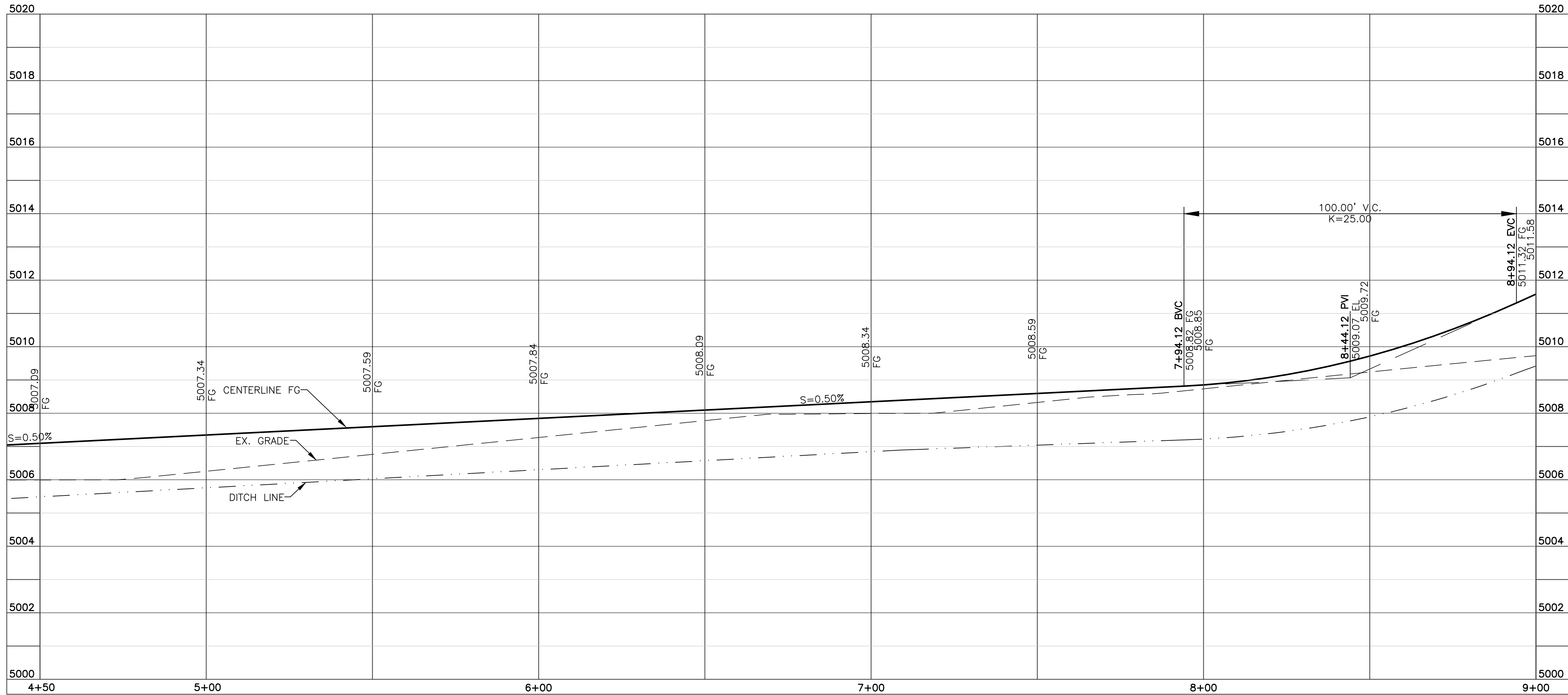


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CURVE TABLE

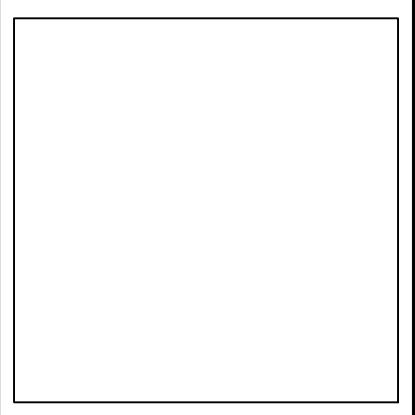
#	RADIUS	ARC LENGTH	CHD. LENGTH	TANGENT	CHD. BEARING	DELTA
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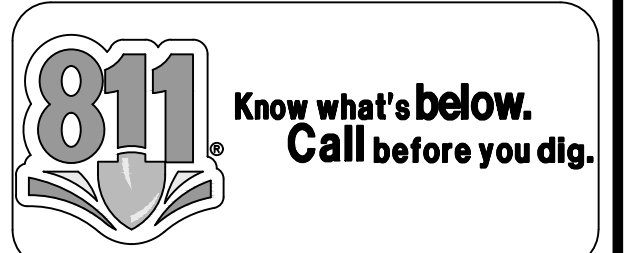
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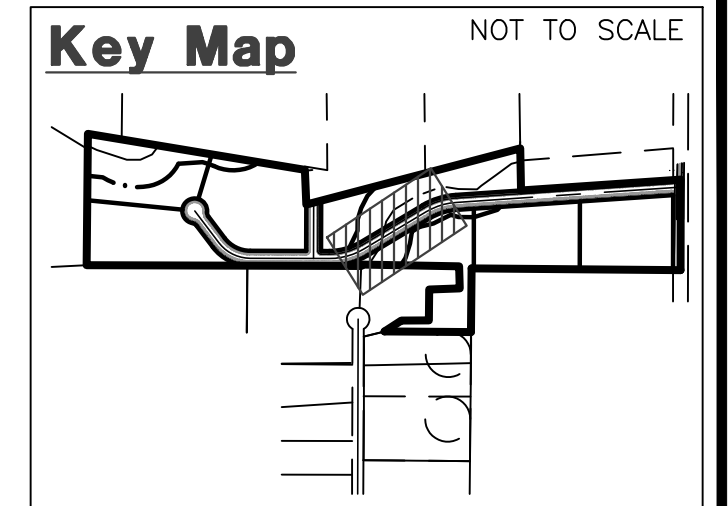
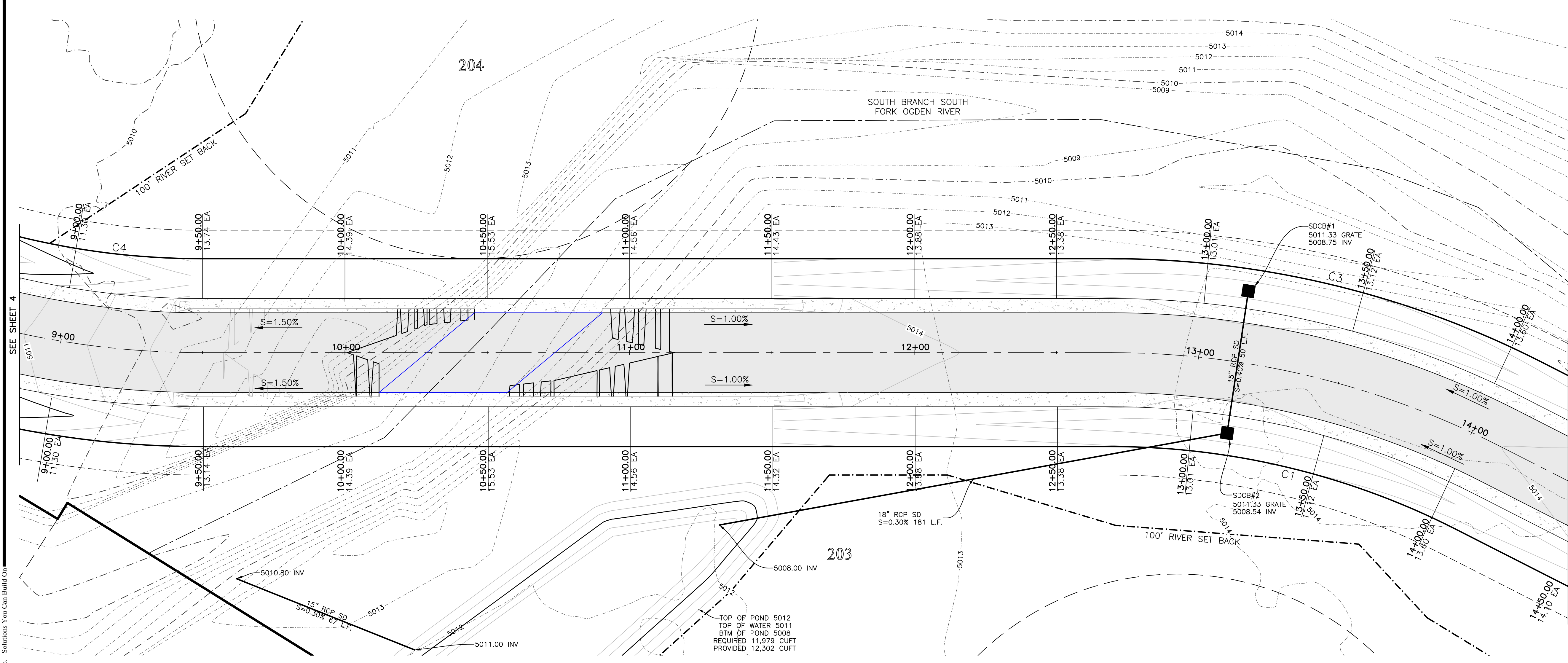
DATE	DESCRIPTION

Sunshine Valley Estates
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Sunshine Valley Drive
4+50.00 - 9+00.00

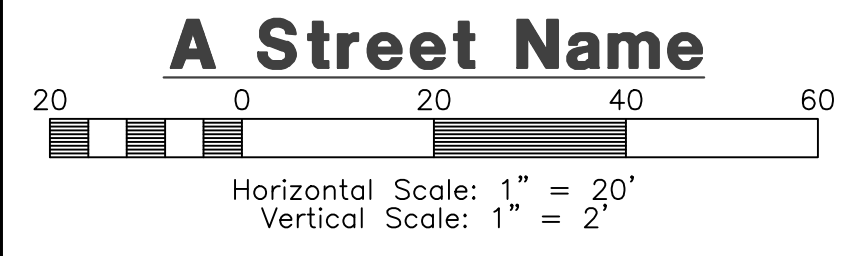
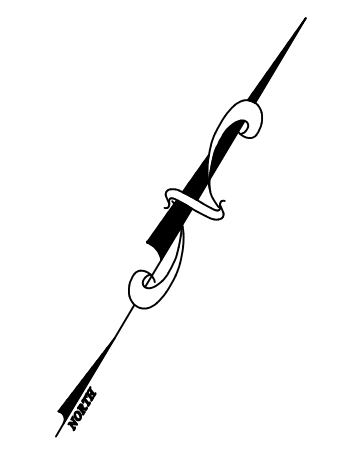


Project Info.
 Engineer: T. HUNT
 Drafter: K. EAVES
 Begin Date: 12/1/18
 Name: SUNSHINE VALLEY ESTATES
 Number: 4825-21



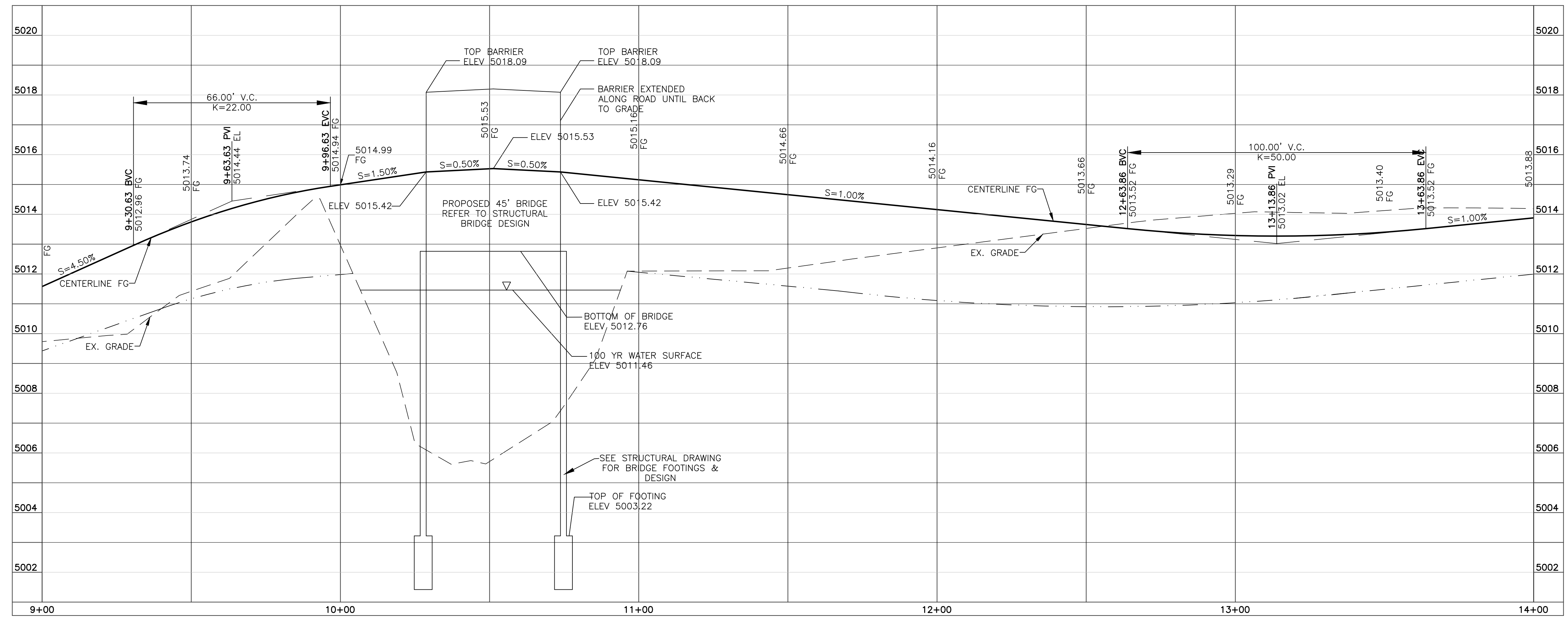


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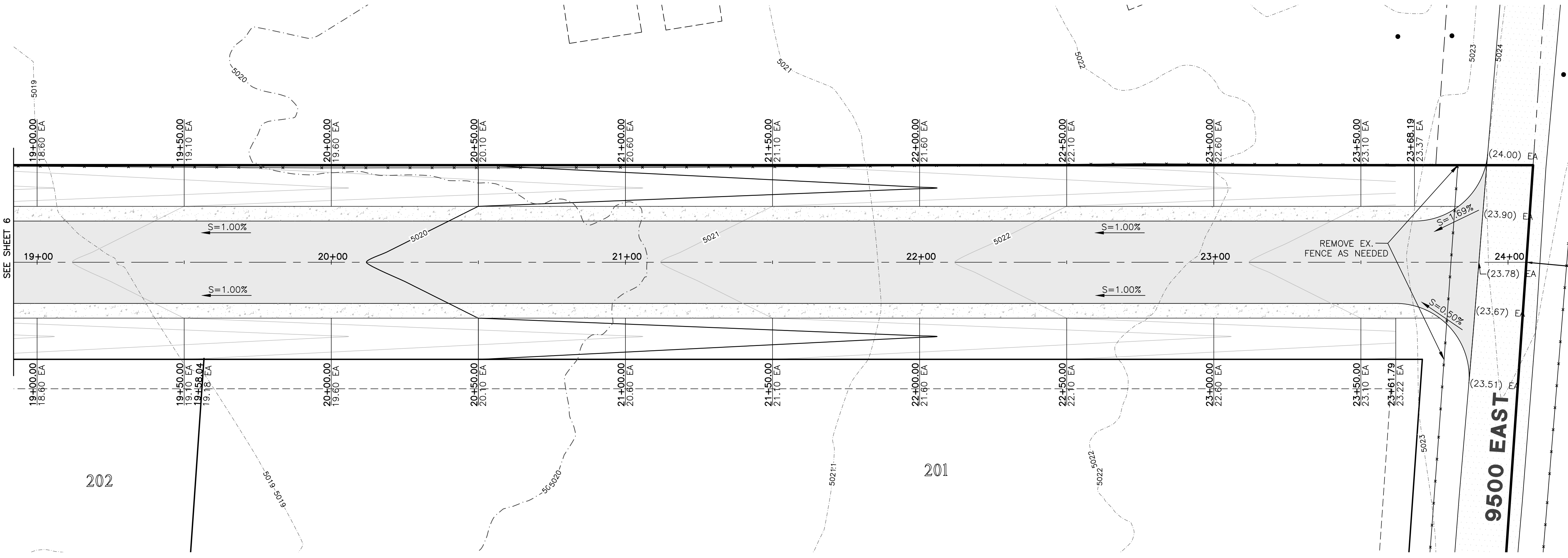
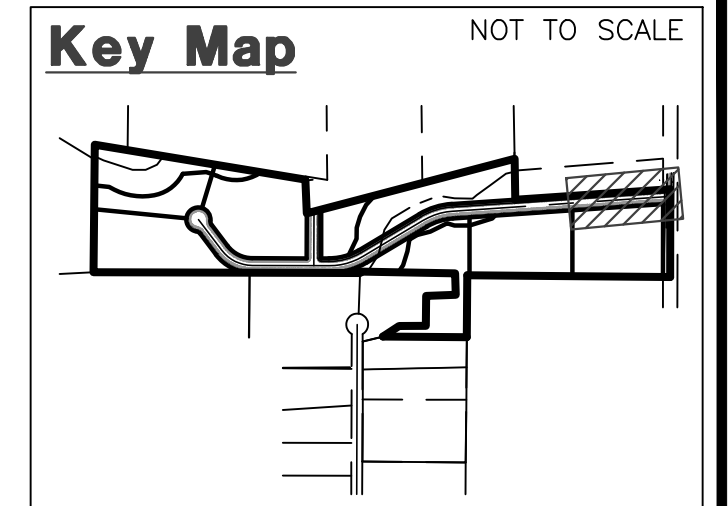
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Sheet **5** of **11** Sheets

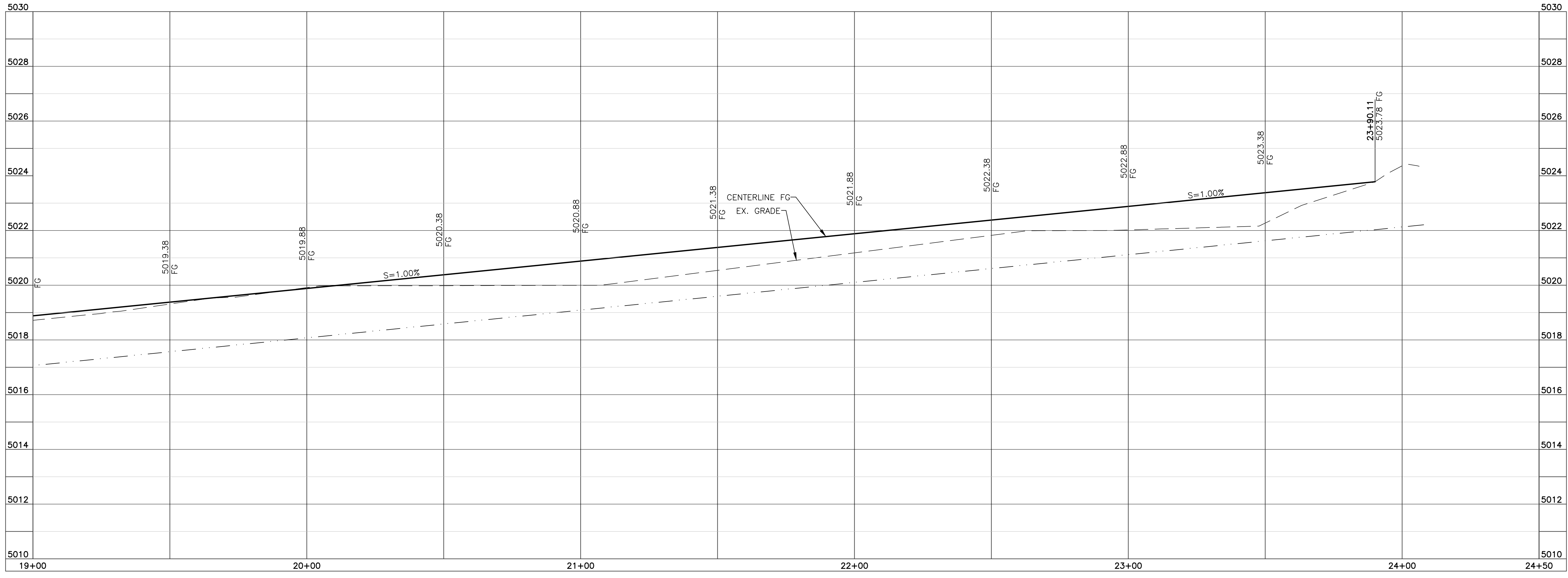
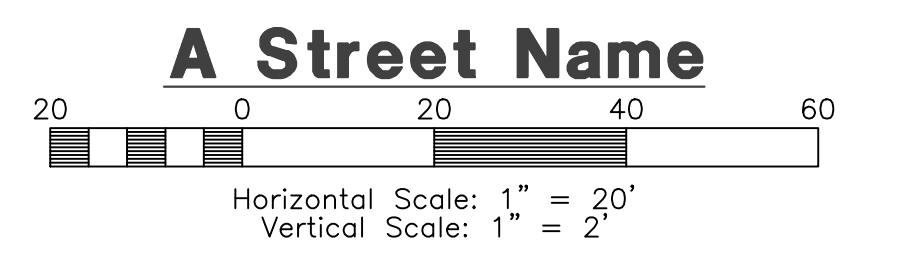




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REVISIONS	DESCRIPTION

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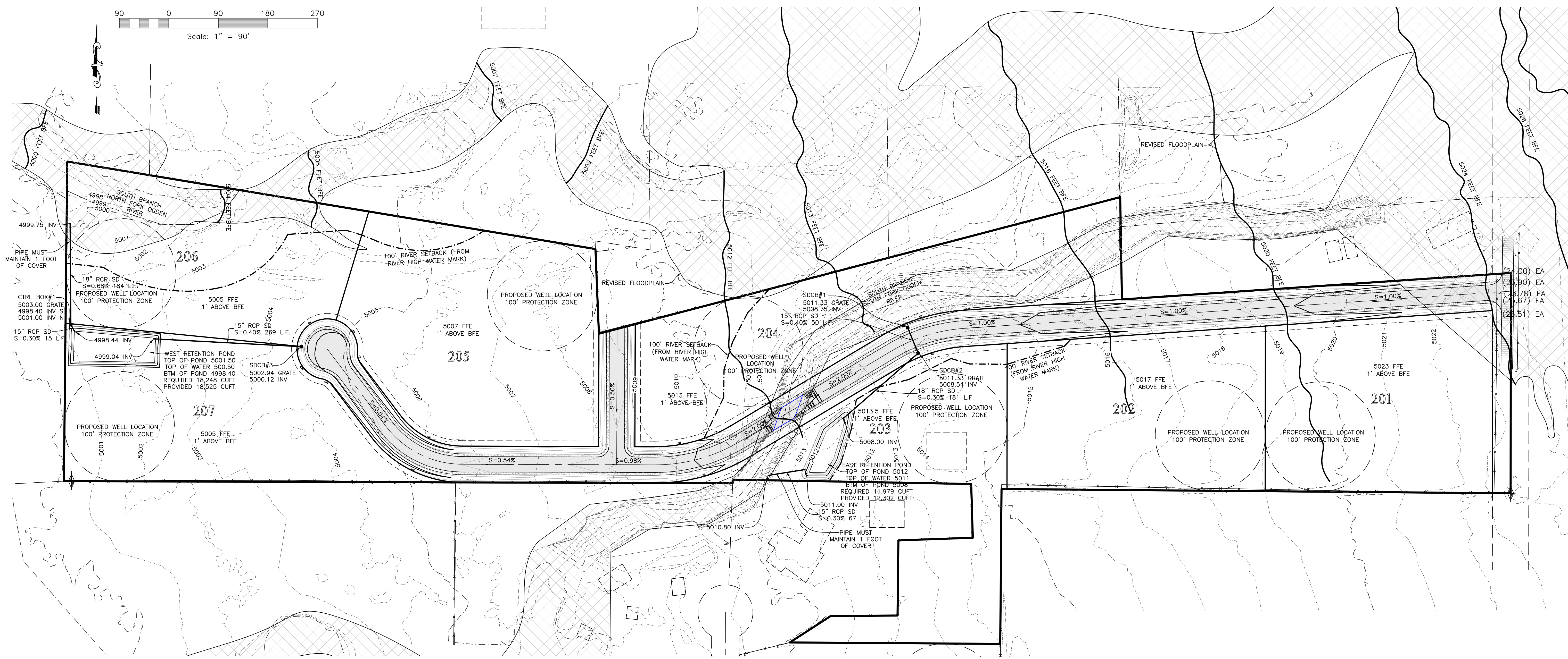
Project Info.
 Engineer: T. HUNT
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 Name: SUNSHINE VALLEY ESTATES
 Number: 4825-21

Sheet **11**
 7 Sheets

REVISIONS	DESCRIPTION

Sunshine Valley Estates
 HUNTSVILLE, WEBER COUNTY, UTAH

Grading & Drainage Plan



Storm Runoff Calculations
 West Sunshine Valley - Weber County

The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for the Huntsville, Utah area taken from the NOAA Atlas 14 database, using a 100 year storm for retention. Storm water runoff has been calculated for a fully developed site and limited to a release rate based on the percolation rate out of each basin. These calculations are for the portion of Sunshine Valley west of the bridge.

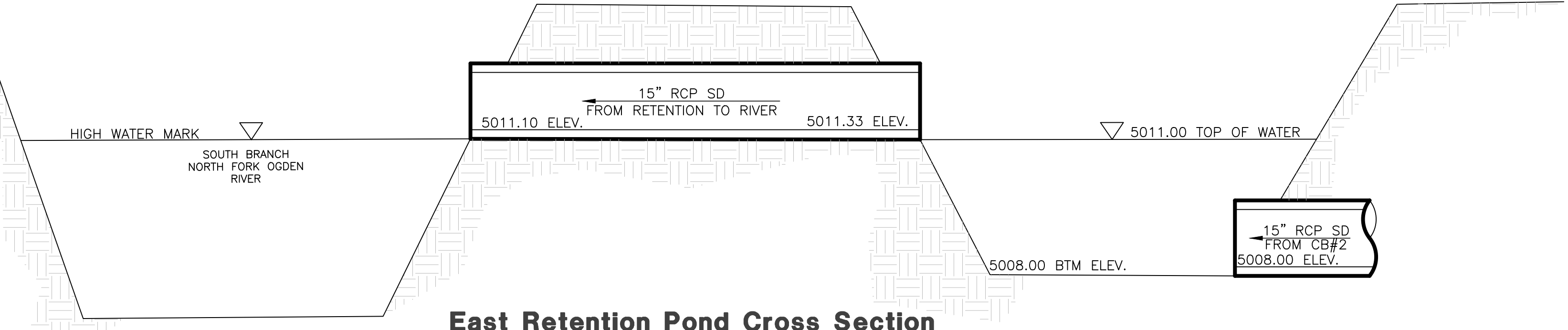
The calculations are as follows:

Drainage Area:	Total Area = 13.92 acre or 606,444 ft ²
Runoff Coefficients:	Paved Area 31,770 C = 0.9
	Landscaped Area 564,674 C = 0.2
	Road 10,000 C = 0.9
Weighted Runoff Coefficient:	C = 0.25

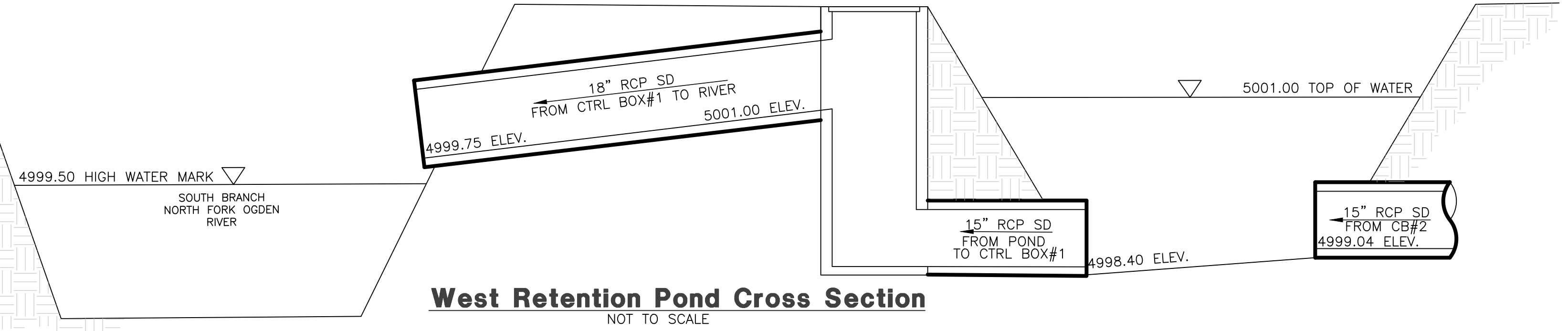
Percolation Rate:	Drainage Area 5,460 s.f.
	Perc Rate 5 mps
	Percolation out (1 in/100 sec) (1 in/100 sec) Bot Area cfs
	1.52

Volume of Run-off for 100-year Storm Event:									
C =	0.25								
I =	See Below in/hr								
A =	606,444.21 ft ²								
Q(out) =	2.26 ft ³ /s	(due to percolation out)							
time (min)	time (sec)	Q (cfs)	I (in./hr.)	Vol. in (cf)	Vol. out (cf)	Difference (cf)			
0	0	0.00	0.00	0	0	0			
5	300	7.22	25.16	7947	455	7092			
10	600	5.5	19.16	11499	910	10589			
15	900	4.54	15.82	14237	1365	12872			
30	1800	3.05	10.66	19192	2730	16462			
60	3600	1.89	6.59	23708	5460	18248			
120	7200	1.11	3.87	27948	10920	16928			
180	10800	0.764	2.66	29751	16380	13371			
360	21600	0.432	1.51	32514	32760	-246			
720	43200	0.27	0.94	40643	65520	-24877			
1440	86400	0.158	0.55	47997	131040	-83043			

SUMMARY:
 The required storage volume is **18,248** cubic feet



East Retention Pond Cross Section
 NOT TO SCALE



West Retention Pond Cross Section
 NOT TO SCALE

Storm Runoff Calculations
 East Sunshine Valley - Weber County

The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for the Huntsville, Utah area taken from the NOAA Atlas 14 database, using a 100 year storm for retention. Storm water runoff has been calculated for a fully developed site and limited to a release rate based on the percolation rate out of each basin. These calculations are for the portion of Sunshine Valley east of the bridge.

The calculations are as follows:

Drainage Area:	Total Area = 10.22 acre or 445,067 ft ²
Runoff Coefficients:	Paved Area 45,214 C = 0.9
	Landscaped Area 392,354 C = 0.2
	Road 7,500 C = 0.9
Weighted Runoff Coefficient:	C = 0.28

Percolation Rate:	Drainage Area 8,150 s.f.
	Perc Rate 5 mps
	Percolation out (1 in/100 sec) (1 in/100 sec) Bot Area of Drain cfs
	2.26

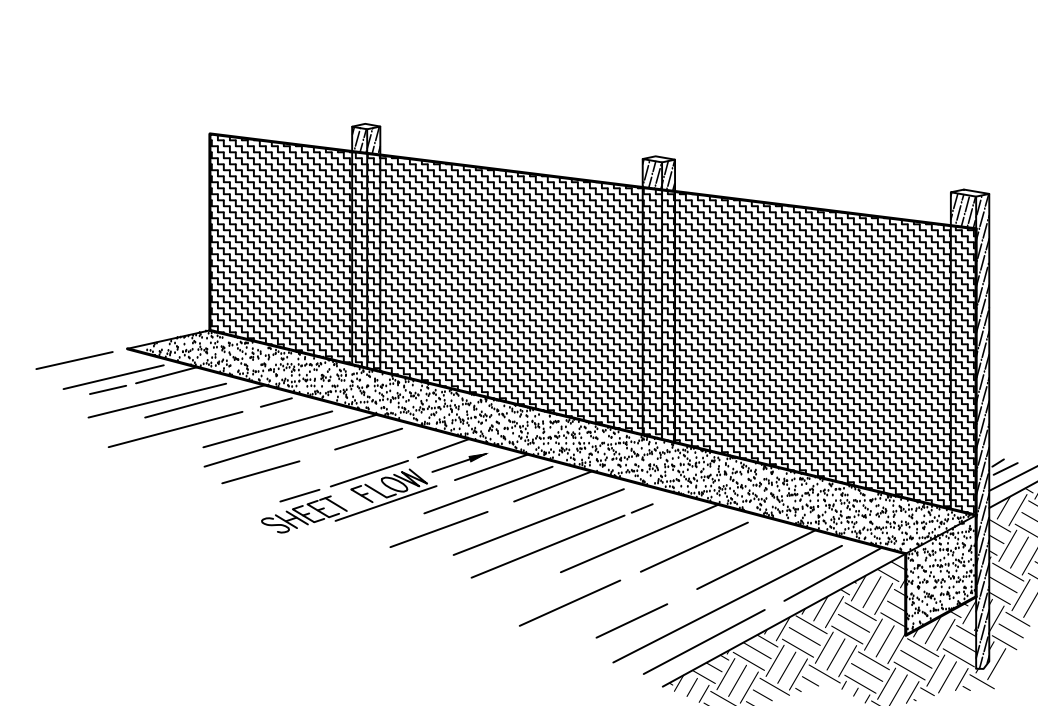
Volume of Run-off for 100-year Storm Event:									
C =	0.28								
I =	See Below in/hr								
A =	445,067.40 ft ²								
Q(out) =	2.26 ft ³ /s	(due to percolation out)							
time (min)	time (sec)	Q (cfs)	I (in./hr.)	Vol. in (cf)	Vol. out (cf)	Difference (cf)			
0	0	0.00	0.00	0	0	0			
5	300	7.22	21.04	6313	679	5634			
10	600	5.5	16.03	9818	1358	8460			
15	900	4.54	13.23	11909	2038	9871			
30	1800	3.05	8.92	16054	4075	11979			
60	3600	1.89	5.51	19831	8150	11681			
120	7200	1.11	3.24	23294	16300	6994			
180	10800	0.764	2.23	24949	24450	-401			
360	21600	0.432	1.26	27197	48900	-21703			
720	43200	0.27	0.79	33997	97800	-63803			
1440	86400	0.158	0.46	39789	195600	-155811			

SUMMARY:
 The required storage volume is **11,979** cubic feet

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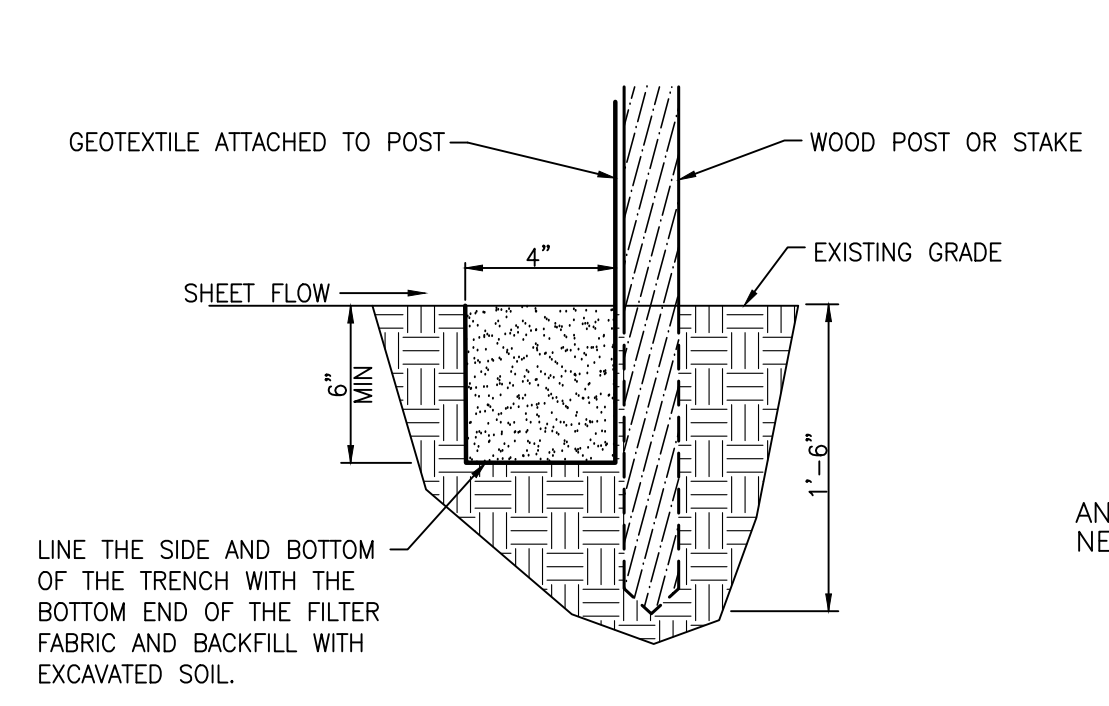
Notes:

- Describe all BMP's to protect storm water inlets:
All storm water inlets to be protected by straw wattle barriers, or gravel bags (see detail).
- Describe BMP's to eliminate/reduce contamination of storm water from:
 - Equipment / building / concrete wash areas:
To be performed in designated areas only and surrounded with silt fence barriers.
 - Soil contaminated by soil amendments:
If any contaminants are found or generated, contact environmental engineer and contacts listed.
 - Areas of contaminated soil:
If any contaminants are found or generated, contact environmental engineer and contacts listed.
 - Fueling area:
To be performed in designated areas only and surrounded with silt fence.
 - Vehicle maintenance areas:
To be performed in designated areas only and surrounded with silt fence.
 - Vehicle parking areas:
To be performed in designated areas only and surrounded with silt fence.
 - Equipment storage areas:
To be performed in designated areas only and surrounded with silt fence.
 - Materials storage areas:
To be performed in designated areas only and surrounded with silt fence.
 - Waste containment areas:
To be performed in designated areas only and surrounded with silt fence.
 - Service areas:
To be performed in designated areas only and surrounded with silt fence.
- BMP's for wind erosion:
Stockpiles and site as needed to be watered regularly to eliminate / control wind erosion
- Construction Vehicles and Equipment:
 - Maintenance
 - Maintain all construction equipment to prevent oil or other fluid leaks.
 - Keep vehicles and equipment clean, prevent excessive build-up of oil and grease.
 - Regularly inspect on-site vehicles and equipment for leaks, and repair immediately.
 - Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment on-site.
 - Segregate and recycle wastes, such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, hydraulic, and transmission fluids.
 - Fueling
 - If fueling must occur on-site, use designated areas away from drainage.
 - Locate on-site fuel storage tanks within a bermed area designed to hold the tank volume.
 - Cover retention area with an impervious material and install in a manner to ensure that any spills will be contained in the retention area. To catch spills or leaks when removing or changing fluids.
 - Use drip pans for any oil or fluid changes.
 - Washing
 - Use as little water as possible to avoid installing erosion and sediment controls for the wash area.
 - If washing must occur on-site, use designated, bermed wash areas to prevent waste water discharge into storm water, creeks, rivers, and other water bodies.
 - Use phosphate-free, biodegradable soaps.
 - Do not permit steam cleaning on-site.
- Spill Prevention and Control
 - Minor Spills:
Minor spills are those which are likely to be controlled by on-site personnel. After contacting local emergency response agencies, the following actions should occur upon discovery of a minor spill:
 - Contain the spread of the spill.
 - If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (i.e. absorbent materials, cat litter, and / or rags).
 - If the spill occurs in dirt areas, immediately contain the spill by constructing an earth dike. Dig up and properly dispose of contaminated soil.
 - If the spill occurs during rain, cover the impacted area to avoid runoff.
 - Record all steps taken to report and contain spill.
 - Major Spills:
On-site personnel should not attempt to control major spills until the appropriate and qualified emergency response staff have arrived at the site. For spills of federal reportable quantities, also notify the National Response Center at (800) 424-8802. A written report should be sent to all notified authorities. Failure to report major spills can result in significant fines and penalties.
- Post Roadway / Utility Construction
 - Maintain good housekeeping practices.
 - Enclose or cover building material storage areas.
 - Properly store materials such as paints and solvents.
 - 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 offsite or in designated areas only.
 - Do not wash out concrete trucks into storm drains, open ditches, streets or streams.
 - Do not place material or debris into streams, gutters or catch basins that stop or reduce the flow of runoff water.
 - All public streets and storm drain facilities shall be maintained free of building materials, mud and debris caused by grading or construction operations. Roads will be swept within 1000' of construction entrance daily, if necessary.
 - Install straw wattle around all inlets contained within the development and all others that receive runoff from the development.
- Erosion Control Plan Notes
 - The contractor will designate an emergency contact that can be reached 24 hours a day 7 days a week.
 - A stand-by crew for emergency work shall be available at all times during potential rain or snow runoff events. Necessary materials shall be available on site and stockpiled at convenient locations to facilitate rapid construction of emergency devices when rain or runoff is eminent.
 - Erosion control devices shown on the plans and approved for the project may not be removed without approval of the engineer of record. If devices are removed, no work may continue that have the potential of erosion without consulting the engineer of record. If deemed necessary erosion control should be reestablished before this work begins.
 - Graded areas adjacent to fill slopes located at the site perimeter must drain away from the top of the slope at the conclusion of each working day. This should be confirmed by survey or other means acceptable to the engineer of record.
 - All silt and debris shall be removed from all devices within 24 hours after each rain or runoff event.
 - Except as otherwise approved by the inspector, all removable protective devices shown shall be in place at the end of each working day and through weekends until removal of the system is approved.
 - All loose soil and debris, which may create a potential hazard to offsite property, shall be removed from the site as directed by the engineer of record of the governing agency.
 - The placement of additional devices to reduce erosion damage within the site is left to the discretion of the engineer of record.
 - Desilting basins may not be removed or made inoperable without the approval of the engineer of record and the governing agency.
 - Erosion control devices will be modified as need as the project progresses and plans of these changes submitted for approval by the engineer of record and the governing agency.
- Conduct a minimum of one inspection of the erosion and sediment controls every two weeks. Maintain documentation on site.
 - Part III.D.4 of general permit UTR300000 identifies the minimum inspection requirements.
 - Part II.D.4.C identifies the minimum inspection report requirements.
 - Failure to complete and/or document storm water inspections is a violation of part III.D.4 of Utah General Permit UTR 300000.



Perspective View

Figure 2



Section

INSTALLATION

The silt fence should be installed prior to major soil disturbances in the drainage area. The fence should be placed across the slope along a line of uniform elevation wherever flow of sediment is anticipated. Table 1 shows generally-recommended maximum slope lengths (slope spacing between fences) at various site grades for most silt fence applications.

Slope Steepness (%)	Max. Slope Length (m)	Max. Slope Length (ft)
<2%	30.5m	100ft
2-5%	22.9m	75ft
5-10%	15.2m	50ft
10-20%	7.6m	25ft
>20%	4.5m	15ft

PREFABRICATED SILT FENCE ROLLS
 *Excavate a minimum 15.2cm x 15.2cm (6"x6") trench at the desired location.
 *Unroll the silt fence, positioning the post against the downstream wall of the trench.
 *Adjacent rolls of silt fence should be joined by nesting the end post of one fence into the other. Before nesting the end posts, rotate each post until the geotextile is wrapped completely around the post, then about the end posts to create a tight seal as shown in Figure 1.
 *Drive posts into the ground until the required fence height and/or anchorage depth is obtained.
 *Bury the loose geotextile at the bottom of the fence in the upstream trench and backfill with natural soil, tamping the backfill to provide good compaction and anchorage. Figure 2 illustrates a typical silt fence installation and anchor trench placement.

should generally be less than three (3) times the height of the fence.
 *If a steel or plastic mesh is required to reinforce the geotextile, it shall have a minimum mesh opening of 15.2cm (6").
 *Fasten the mesh to the upslope side of the posts using heavy duty wire staples, tie wires or hog strings. Extend the mesh into the bottom of the trench.
 *The geotextile shall then be stapled or wired to the posts. An extra 20-50cm (8-20") of geotextile shall extend into the trench.

INSPECTION
 *Inspect the silt fence daily during periods of rainfall, immediately after significant rainfall event and weekly during periods of no rainfall. Make any repairs immediately.
 *When sediment deposits behind the silt fence are one-third of the fence height, remove and properly dispose of the silt accumulations. Avoid damage to the fabric during cleanout.

REMOVAL
 *Silt fence should not be removed until construction ceases and the upslope area has been properly stabilized and/or revegetated.

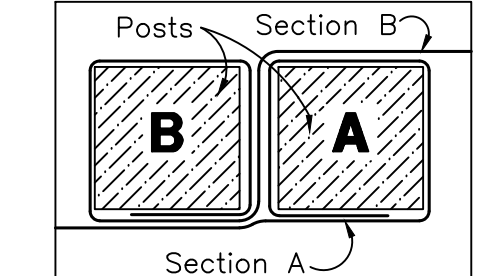
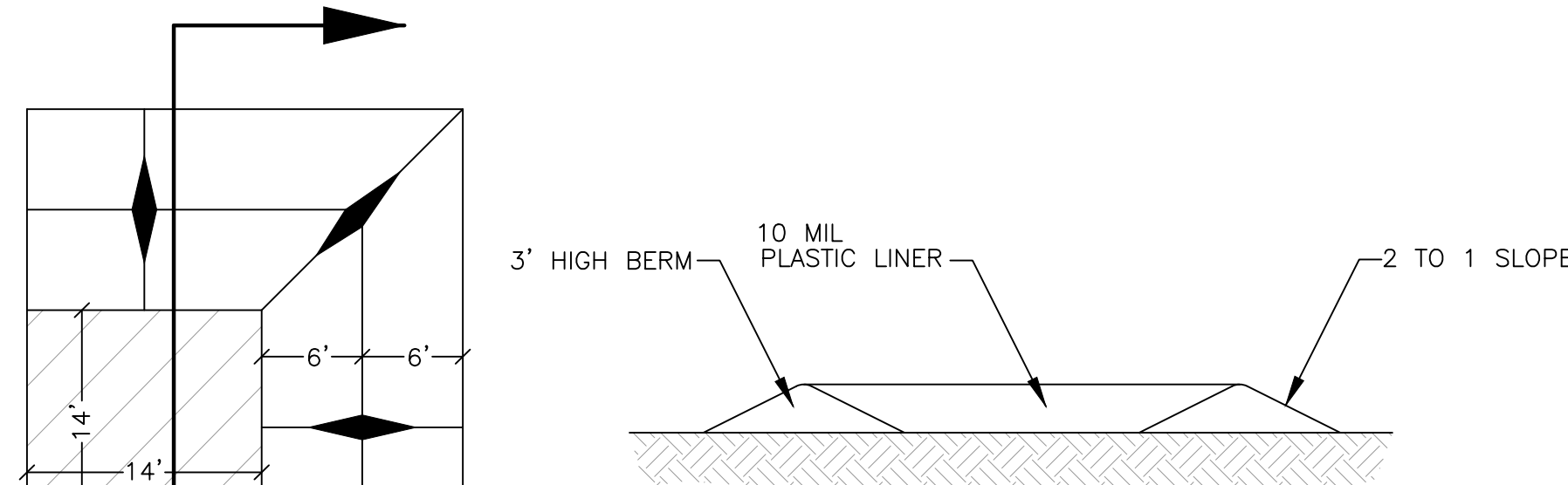


Figure 1: Top View of Roll-to-Roll Connection

FIELD ASSEMBLY:
 *Excavate a minimum 15.2cm x 15.2cm (6"x6") trench at the desired location.
 *Drive wooden posts, or steel posts with fastening projections, against the downstream wall of the trench. Maximum post spacing should be 2.4-3.0m (8-10ft). Post spacing

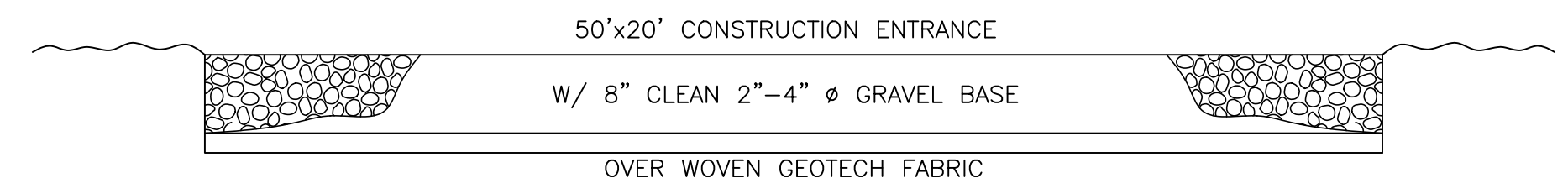
Silt Fence Detail

SCALE: NONE

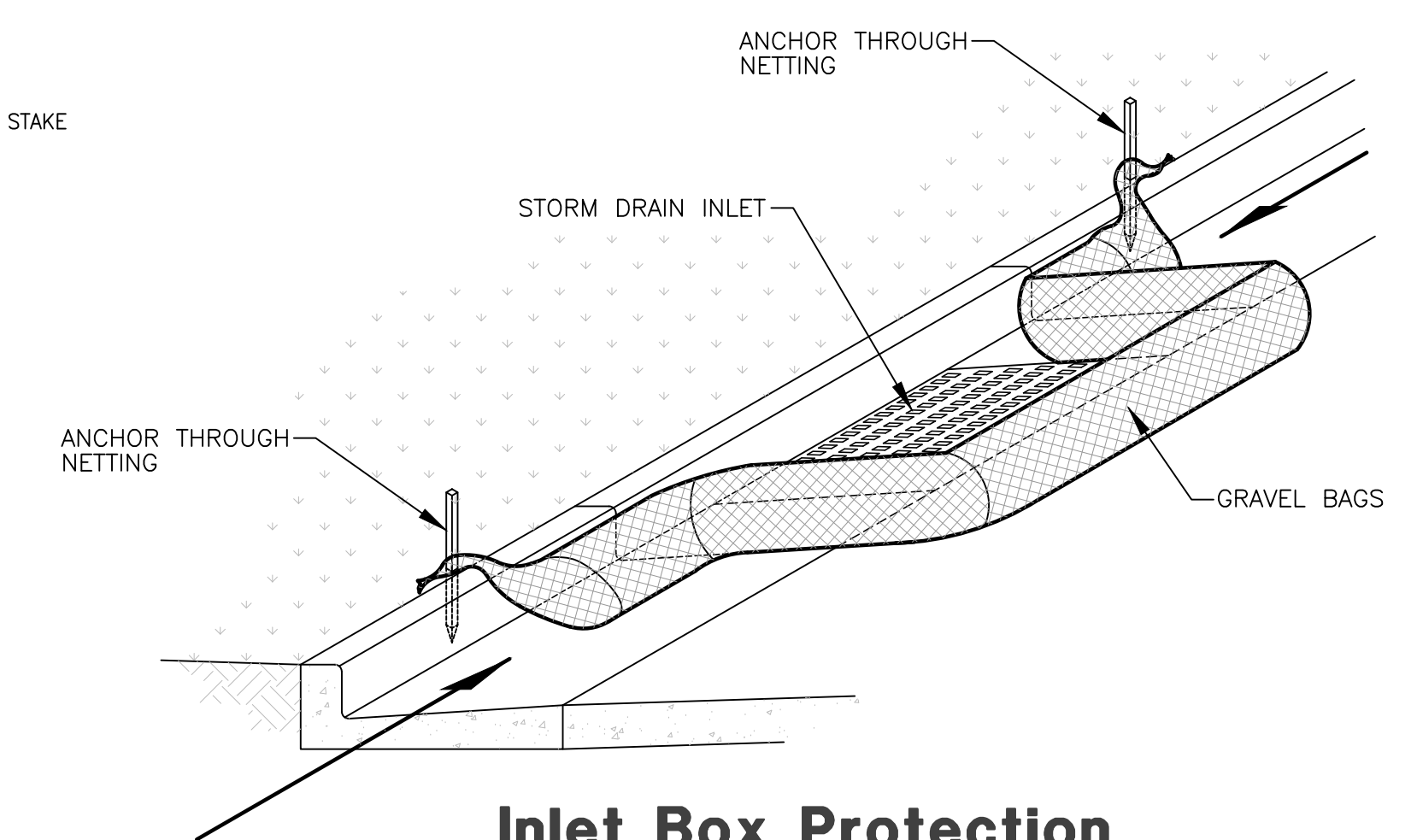


Concrete Washout Area w/ 10 mil Plastic Liner

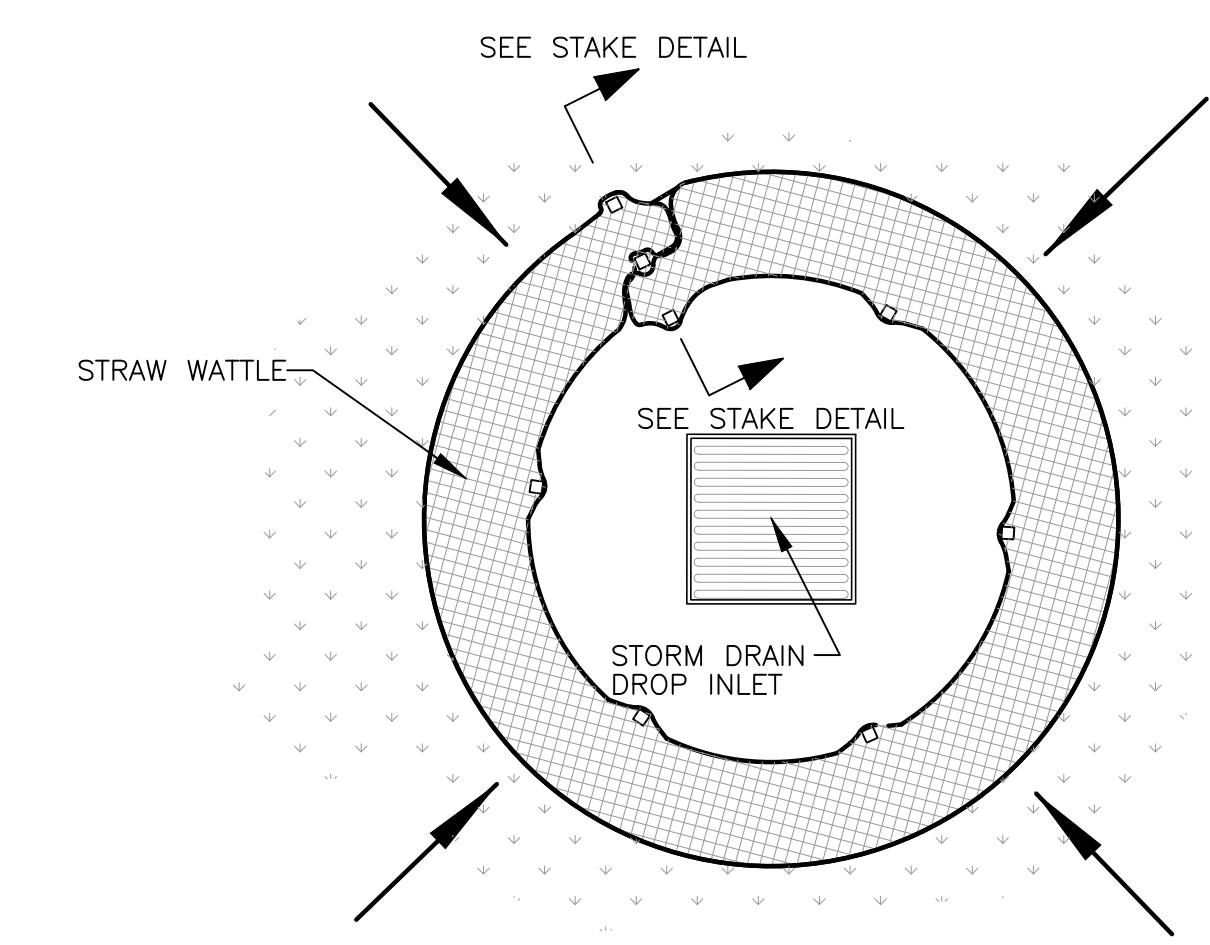
SCALE: NONE



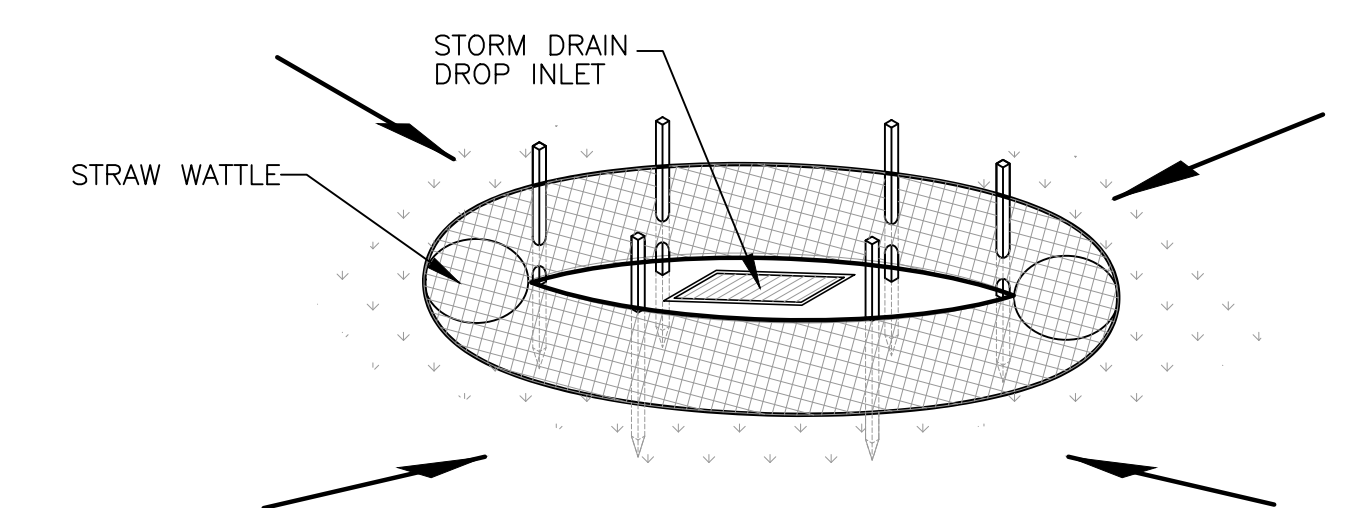
Cross Section 50' x 20' Construction Entrance



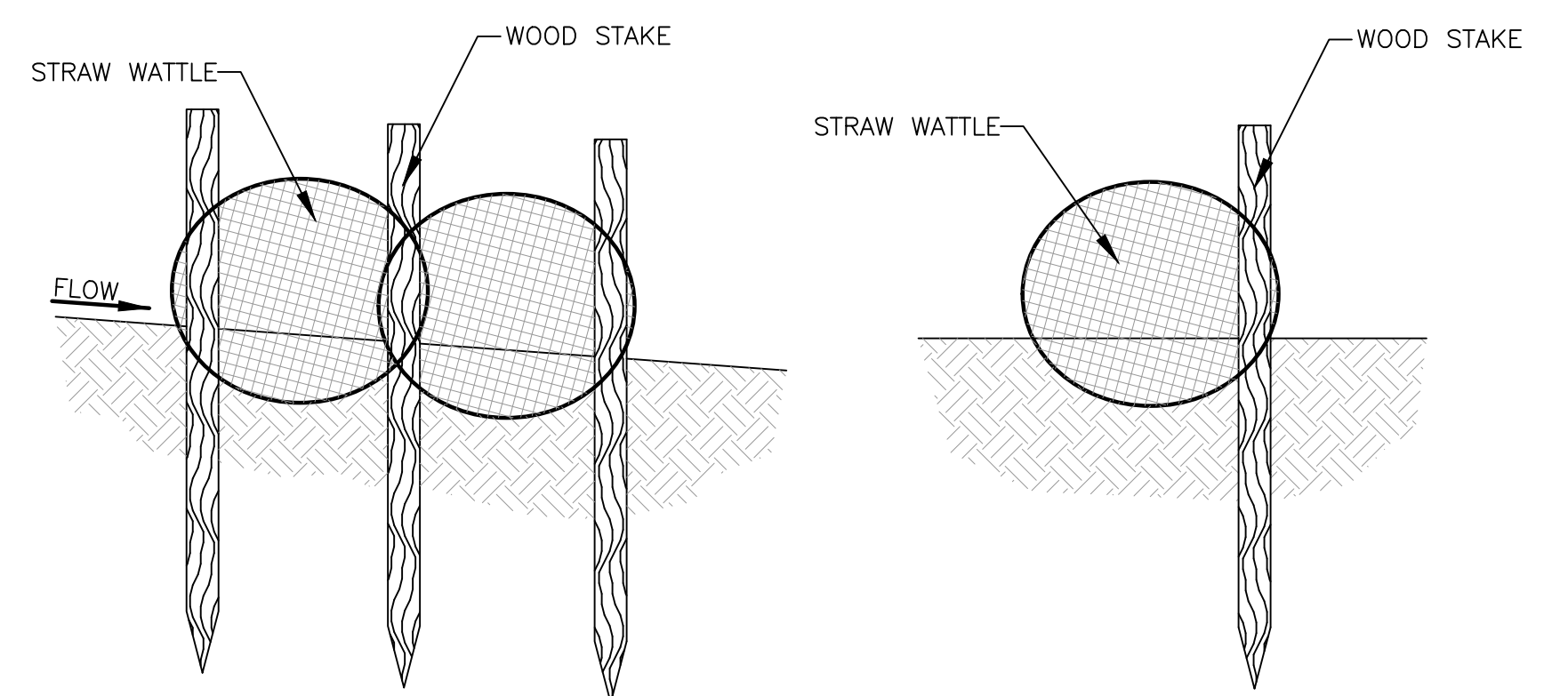
Inlet Box Protection



Plan View



Drop Inlet Protection



Stake Detail

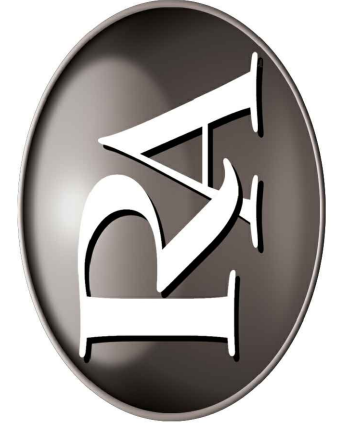
Reeve & Associates, Inc.
 5160 SOUTH 1500 WEST, RIVERDALE, UTAH 84405
 TEL: (801) 621-1000 FAX: (801) 621-8866 www.reeve-assoc.com
 LAND SURVEYORS • CIVIL ENGINEERS • LAND SURVEYORS
 TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS	DESCRIPTION
DATE	

Sunshine Valley Estates
 HUNTSVILLE, WEBER COUNTY, UTAH
Storm Water Pollution Prevention Plan Details

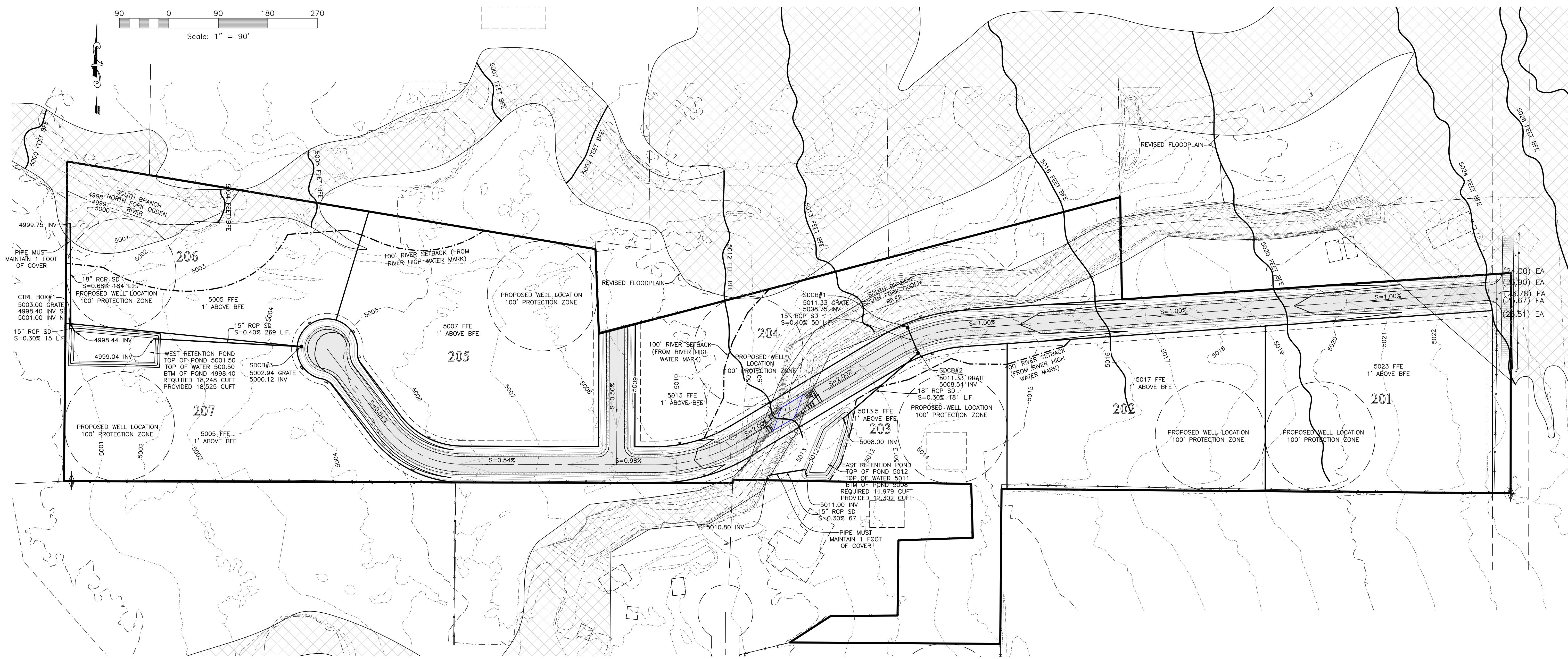
Project Info:
Engineer: T. HUNT
Drafter: K. EAVES
Begin Date: 12/1/18
Name: SUNSHINE VALLEY ESTATES
Number: 4825-21

Sheet	11
11	Sheets



REVISIONS	DESCRIPTION
DATE	

Sunshine Valley Estates
 HUNTSVILLE, WEBER COUNTY, UTAH
Stream Alteration Exhibit



Storm Runoff Calculations
 West Sunshine Valley - Weber County

The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for the Huntsville, Utah area taken from the NOAA Atlas 14 database, using a 100 year storm for retention. Storm water runoff has been calculated for a fully developed site and limited to a release rate based on the percolation rate out of each basin. These calculations are for the portion of Sunshine Valley west of the bridge.

The calculations are as follows:

Drainage Area:

Total Area =	13.92 acre or	606,444 ft ²
Runoff Coefficients		
Paved Area	31,770	C = 0.9
Landscaped Area	564,674	C = 0.2
Roof	10,000	C = 0.9
Weighted Runoff Coefficient		C = 0.25

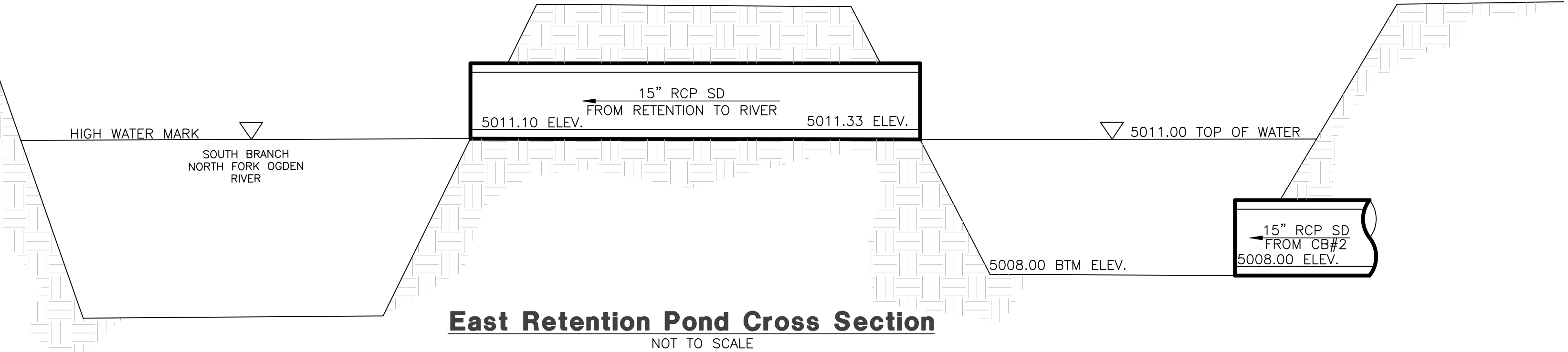
Percolation Rate:

Drainage Area	5,460 s.f.
Perc Rate	5 mpy
Percolation out	(1 in/100 sec) * (1 min/60 sec) * Bot Area cfs
	1.52

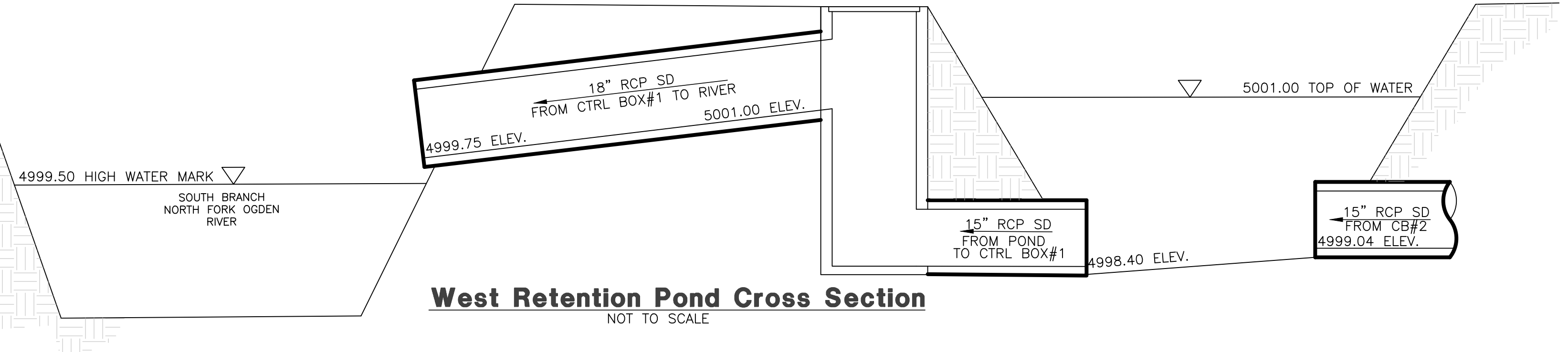
Volume of Run-off for 100-year Storm Event:

time (min)	time (sec)	Q (cfs)	Vol in (cf)	Vol out (cf)	Difference (cf)
0	0	0.00	0.00	0	0
5	300	7.22	25.16	7947	455
10	600	5.5	19.16	11499	910
15	900	4.54	15.82	14237	1365
30	1800	3.08	10.66	19192	2730
60	3600	1.89	6.59	23708	5460
120	7200	1.11	3.87	27948	10920
180	10800	0.764	2.66	29751	16380
360	21600	0.432	1.51	32514	32760
720	43200	0.27	0.94	40643	64520
1440	86400	0.158	0.55	47997	131040

SUMMARY:
 The required storage volume is **18,248** cubic feet



East Retention Pond Cross Section
 NOT TO SCALE



West Retention Pond Cross Section
 NOT TO SCALE

Storm Runoff Calculations
 East Sunshine Valley - Weber County

The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for the Huntsville, Utah area taken from the NOAA Atlas 14 database, using a 100 year storm for retention. Storm water runoff has been calculated for a fully developed site and limited to a release rate based on the percolation rate out of each basin. These calculations are for the portion of Sunshine Valley east of the bridge.

The calculations are as follows:

Drainage Area:

Total Area =	10.22 acre or	445,067 ft ²
Runoff Coefficients		
Paved Area	45,214	C = 0.9
Landscaped Area	392,354	C = 0.2
Roof	7,500	C = 0.9
Weighted Runoff Coefficient		C = 0.28

Percolation Rate:

Drainage Area	8,150 s.f.
Perc Rate	5 mpy
Percolation out	(1 in/100 sec) * (1 min/60 sec) * Bot Area of Drain cfs
	2.26

Volume of Run-off for 100-year Storm Event:

time (min)	time (sec)	Q (cfs)	Vol in (cf)	Vol out (cf)	Difference (cf)
0	0	0.00	0.00	0	0
5	300	7.22	21.04	6313	5534
10	600	5.5	16.03	9816	1358
15	900	4.54	13.23	11909	2038
30	1800	3.08	8.92	16054	4075
60	3600	1.89	5.51	19831	8150
120	7200	1.11	3.24	23294	16394
180	10800	0.764	2.23	24949	24450
360	21600	0.432	1.26	27197	48900
720	43200	0.27	0.79	33997	97800
1440	86400	0.158	0.46	39789	195600

SUMMARY:
 The required storage volume is **11,979** cubic feet

Project Info.
 Engineer: T. HUNT
 Drafter: K. EAVES
 Begin Date: 12/1/18
 Name: SUNSHINE VALLEY ESTATES
 Number: 4825-21

Appendix C – Construction General Permit

FILE COPY

STATE OF UTAH
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY
Utah Pollutant Discharge Elimination System (UPDES)
General Permit for Discharges from Construction Activities
UPDES Permit No. UTRC00000

This Permit is issued in compliance with the provisions of the Utah Water Quality Act, Title 19, Chapter 5, Utah Code Annotated 2004, as amended (the "Act") and the federal Water Pollution Control Act (33 U.S.C. §§ 1251 et. seq., as amended by the Water Quality Act of 1987, P.L. 100-4), and the rules and Regulations made pursuant to those statutes. This permit authorizes "owners/operators" of construction activities (defined in Part 1.1.1 and Appendix A) that meet the requirements of Part 1.1 of this Utah Pollutant Discharge Elimination System (UPDES) general permit, to discharge pollutants in accordance with the effluent limitations and conditions set forth herein. Permit coverage is required from the "commencement of earth-disturbing activities" (see Appendix A) until "final stabilization" (see Part 2.2.4).

This permit becomes effective on July 1, 2014.

This permit and the authorization to discharge expire at midnight on June 30, 2019.

Signed this 10 day of June, 2014



Walter L. Baker, P.E.
Director

***Appendix D – NOI, Local, County and other State Permits. and
Acknowledgement Letter from EPA/State/MS4***

Appendix E – Inspection Reports

Appendix H – Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION STORM WATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Storm water Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact storm water must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

Signature: _____

Title: _____

Date: _____

Delegation of Authority

I, _____, hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the UPDES "General Permit for Storm Water Discharges Associated with Construction Activity" (CGP), at the construction site:

_____, Permit No. UTR_____

The designee is authorized to sign all reports required by the Permit and other information requested by the Director of the Utah Division of Water Quality, or by an authorized representative of the Executive Secretary.

Name of Person or Position: _____

Owner/Operator: _____

Mailing Address: _____

City, State, Zip Code: _____

Phone Number: _____

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Part G.16.1.2. of the CGP, and that the designee above meets the definition of a "duly authorized representative" as set forth in Part G.16.1.2 of the CGP.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Title: _____

Signature: _____

Date: _____

Appendix J – SWPPP Training Log

Storm Water Pollution Prevention Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Storm Water Training Topic: *(check as appropriate)*

- Erosion Control BMPs Emergency Procedures
 Sediment Control BMPs Good Housekeeping BMPs
 Non-Storm Water BMPs

Specific Training Objective: _____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Appendix K – Construction plans

The permittee may elect to use this section to place a small copy of construction plans as a reference for the convenience of those using the SWPPP. It is not a permit requirement to place a copy of the construction plans here in the SWPPP.



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