Project Narrative/Notes/Revisions

General Notes

. CONSTRUCTION STAKING TO BE PROVIDED BY REEVE & ASSOCIATES, INC.

3. THE CONTRACTOR SHALL LOCATE, RETAIN AND PROTECT ALL EXISTING UTILITIES UNLESS OTHERWISE DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.

SEPARATION, CULINARY WATER LINES, SANITARY SEWER, AND STORM DRAIN LINES. 5. THE CONTRACTOR SHALL INSTALL ALL SANITARY SEWER MAINS, SERVICE LINES

ADJUST WATER MAINS FROM 4'-6" TO 6'-6" OF COVER AS REQUIRED TO AVOID

10. CONTRACTOR SHALL BE RESPONSIBLE OF PROPER BACKFILLING, COMPACTING.

11. CONTRACTOR TO OBTAIN ALL NECESSARY PERMIT(S) AND COMPLY WITH ALL

13. ALL EXPOSED NUTS AND BOLTS WILL BE COATED WITH A NON-OXIDE WASH

14. CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ACCORDING TO GOVERNING AGENTS STANDARDS. WET DOWN DRY MATERIALS AND RUBBISH TO

16. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF

17. ALL EXISTING ASPHALT SHALL BE SAW CUT IN NEAT STRAIGHT LINES BY THE

18. CONTRACTOR TO INSTALL MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL

19. THE CONTRACTOR IS RESPONSIBLE TO FURNISH ALL MATERIALS TO COMPLETE

21. A UPDES GENERAL CONSTRUCTION STORM WATER PERMIT MUST BE OBTAINED

20. TRAFFIC CONTROL IS TO CONFORM TO THE CURRENT CITY AND/OR STATE

ALL VALVES, FITTINGS, AND APPURTENANCES TO BE BLOCKED.

7. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL UTILITY CONFLICTS UPON

8. CONTRACTOR SHALL COORDINATE CONSTRUCTION AND INSTALLATION OF

ELECTRICAL, TELEPHONE, NATURAL GAS AND CABLE TV SERVICES WITH THE

IMPROVEMENT DRAWINGS SHALL BE RESUBMITTED AND APPROVED BY THE

SANITARY SEWER SERVICE LINES.

OF CONNECTING SEWER PIPING.

AND PAVEMENT RESTORATION.

AND WRAPPED IN 8-MIL POLYETHYLENE.

IMPROVEMENTS DURING CONSTRUCTION.

OR DAMAGE TO EXISTING UTILITIES.

CONTRACTOR PRIOR TO EXCAVATION.

TRANSPORTATION ENGINEERS' MANUAL

SPECIFICATIONS AND DRAWINGS.

PRIOR TO COMMENCING CONSTRUCTION.

PERMITTING REQUIREMENTS.

PREVENT BLOWING.

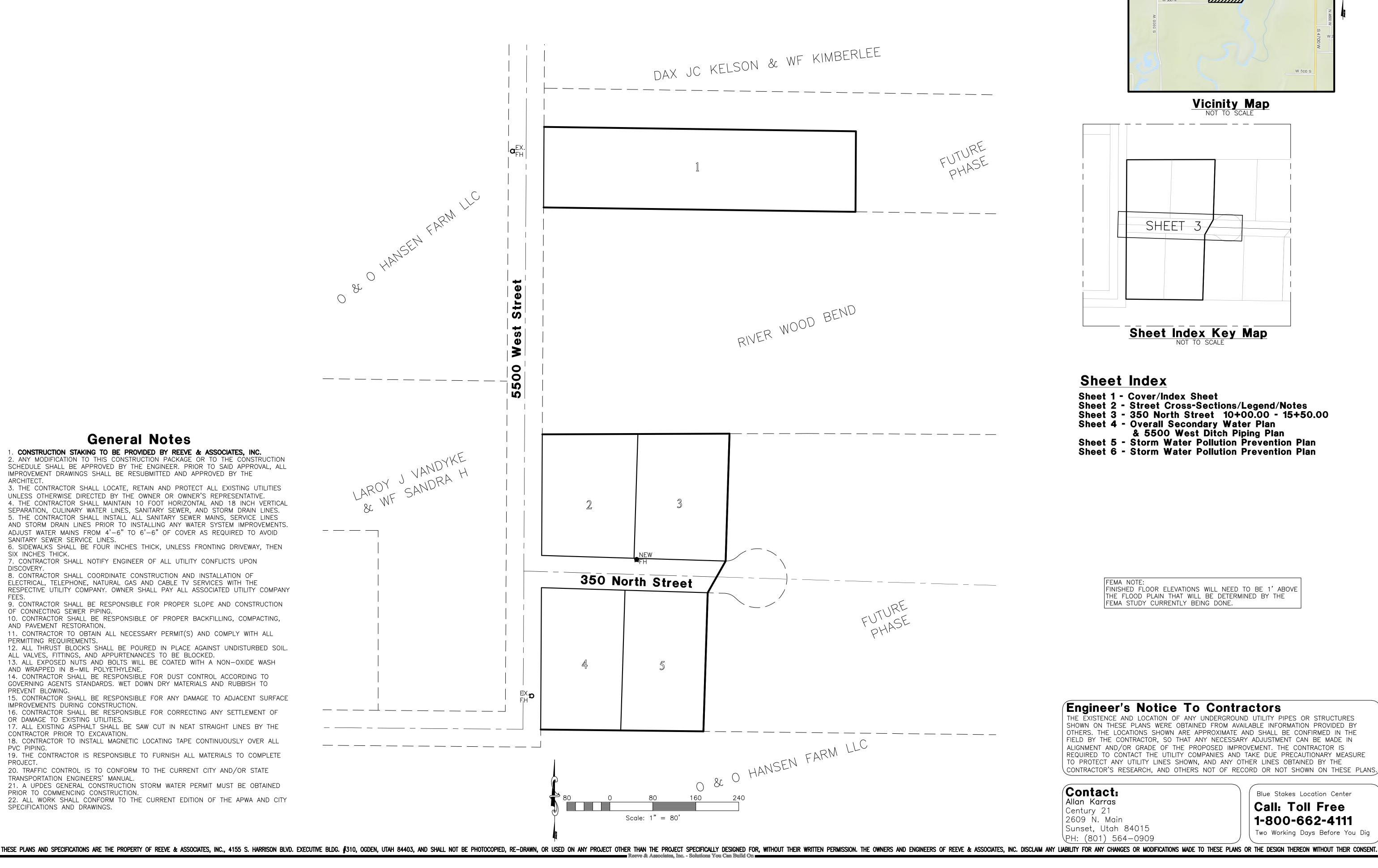
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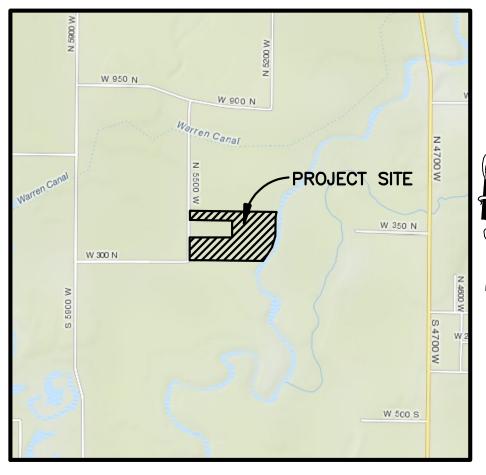
1) 4/1/11 RH - PREPARED PLANS FOR CLIENT. 2) 4/14/11 RH - REVISED PLANS PER COUNTY COMMENTS 3) 6/15/11 RH - REVISED PLANS PER COUNTY COMMENTS. 4) 9/29/11 RH - REVISED PLANS PER COUNTY COMMENTS

LISA ESTATES SUBDIVISION

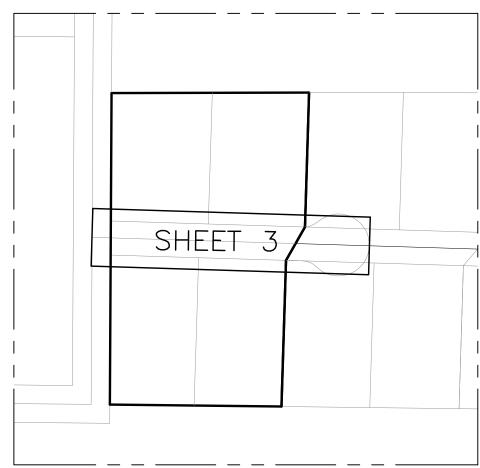
Phase-1 & Phase-2 Improvement Plans

WARREN, WEBER COUNTY, UTAH MARCH, 2011





Vicinity Map



Sheet Index Key Map

Sheet Index

Sheet 1 - Cover/Index Sheet

Sheet 2 - Street Cross-Sections/Legend/Notes

Sheet 3 - 350 North Street 10+00.00 - 15+50.00 Sheet 4 - Overall Secondary Water Plan

& 5500 West Ditch Piping Plan

Sheet 5 - Storm Water Pollution Prevention Plan **Sheet 6 - Storm Water Pollution Prevention Plan**

> FEMA NOTE: FINISHED FLOOR ELEVATIONS WILL NEED TO BE 1' ABOVE THE FLOOD PLAIN THAT WILL BE DETERMINED BY THE

375328 J. NATE REEVE

Project Info.

Drafter: R. HANSEN Begin Date: MARCH 18, 2011 LISA ESTATES SUBDIVISION

PHASE 1 & 2 Number: <u>1714–27</u>

Sheet 6 Sheets

Engineer's Notice To Contractors

FEMA STUDY CURRENTLY BEING DONE.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM AVAILABLE INFORMATION PROVIDED BY OTHERS. THE LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR, SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO CONTACT THE UTILITY COMPANIES AND TAKE DUE PRECAUTIONARY MEASURE TO PROTECT ANY UTILITY LINES SHOWN, AND ANY OTHER LINES OBTAINED BY THE CONTRACTOR'S RESEARCH. AND OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

Contact:

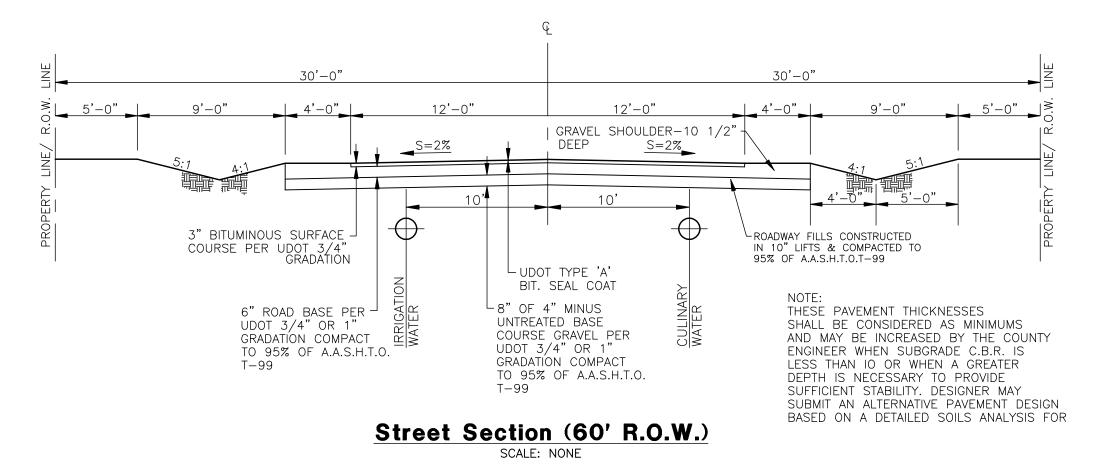
Allan Karras Century 21 2609 N. Main |Sunset, Utah 84015 \PH: (801) 564—0909

Blue Stakes Location Center Call: Toll Free

1-800-662-4111 Two Working Days Before You Dig

でので S C

. NATE REEVE, P.E.



= EXISTING CATCH BASIN ---EX.W --- = EXISTING CULINARY WATER LINE SS — = PROPOSED SANITARY SEWER LINE — —EX.SS — — = EXISTING SANITARY SEWER LINE -----SD ----- = PROPOSED STORM DRAIN LINE

— —EX.SD — — = EXISTING STORM DRAIN LINE -----LD ----- = PROPOSED LAND DRAIN LINE — —EX.LD — = EXISTING LAND DRAIN LINE

Reeve & Associates, Inc. - Solutions You Can Build On

-----SW ----- = PROPOSED SECONDARY WATER LIP — —EX.SW — — = EXISTING SECONDARY WATER LIN -----IRR----- = PROPOSED IRRIGATION LINE

— —EX.IRR— — = EXISTING IRRIGATION LINE ----OHP--- = EXISTING OVERHEAD POWER LINE

----TEL--- = EXISTING TELEPHONE LINE = EXISTING EDGE OF PAVEMENT

 \times \times \times = FENCE LINE

= DITCH/SWALE FLOWLINE = PROPOSED FIRE HYDRANT

= EXISTING FIRE HYDRANT = PROPOSED MANHOLE

= EXISTING MANHOLE = PROPOSED SEWER CLEAN-OUT

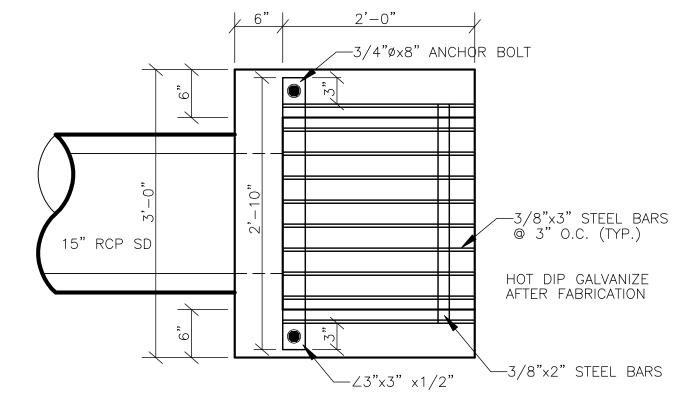
= PROPOSED GATE VALVE = EXISTING GATE VALVE

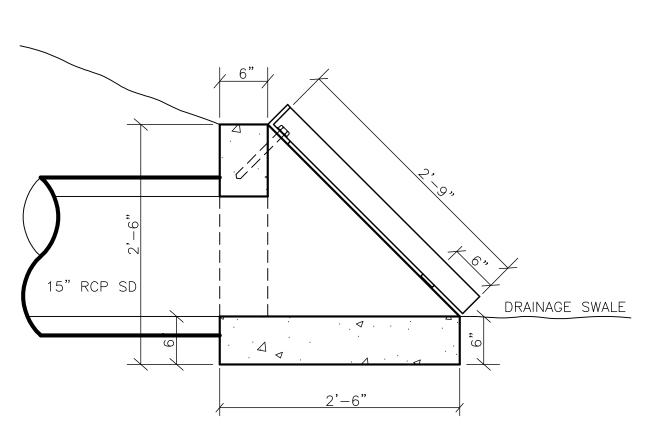
= PROPOSED WATER METER = EXISTING WATER METER

= PROPOSED CATCH BASIN

Legend

NE		= EXISTING CATCH BASIN	L.F.	= LINEAR FEET
E	•	= EXISTING SPRINKLER	NG	= NATURAL GRADE
E	•	= PLUG W/ 2" BLOW-OFF	O.C.	= ON CENTER
3		= AIR-VAC ASSEMBLY	PC	= POINT OF CURVE
	•	= PROPOSED REDUCER	PRC	= POINT OF REVERSE CURVE
	L	= PLUG & BLOCK	PRVC	= POINT OF REVERSE VERTICAL CURVE
		= STREET LIGHT	PT	= POINT OF TANGENT
	-	= SIGN	PP	= POWER/UTILITY POLE
INE	BLDG	= BUILDING	P.U.E.	= PUBLIC UTILITY EASEMENT
NE	BVC	= BEGIN VERTICAL CURVE	R/C	= REBAR & CAP
	C&G	= CURB & GUTTER	RCB	= REINFORCED CONCRETE BOX
	СВ	= CATCH BASIN	RCP	= REINFORCED CONCRETE PIPE
1E	C.F.	= CUBIC FEET	RIM	= RIM OF MANHOLE
	C.F.S.	= CUBIC FEET PER SECOND	R.O.W.	= RIGHT-OF-WAY
	CL	= CENTERLINE	SD	= STORM DRAIN
	DI	= DUCTILE IRON	SS	= SANITARY SEWER
	EP	= EDGE OF PAVEMENT	SW	= SECONDARY WATER
ALL	EVC	= END VERTICAL CURVE	TBC	= TOP BACK OF CURB
	FC	= FENCE CORNER	TOE	= TOE OF SLOPE
	FF	= FINISH FLOOR	TOP	= TOP OF SLOPE
	FFE	= FINISH FLOOR ELEVATION	TOW	= TOP OF WALL
	FG	= FINISHED GRADE	TSW	= TOP OF SIDEWALK
	FH	= FIRE HYDRANT	VPI	= VERTICAL POINT OF INTERSECT.
	FL	= FLOW LINE	W	= CULINARY WATER
	GB	= GRADE BREAK	WM	= WATER METER
	HDPE	= HIGH DENSITY POLYETHYLENE PIPE		= NEW PAVEMENT
	18187	יחר מו כווא איז איז ו		





15" Inlet w/Grate

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF REEVE & ASSOCIATES, INC., 4155 S. HARRISON BLVD. EXECUTIVE BLDG. #310, OGDEN, UTAH 84403, AND SHALL NOT BE PHOTOCOPIED, RE-DRAWN, OR USED ON ANY PROJECT OTHER THAN THE PROJECT SPECIFICALLY DESIGNED FOR, WITHOUT THEIR CONSENT.

General Notes

= INVERT

LD

=IRRIGATION

= LAND DRAIN

ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE DEVELOPMENT STANDARDS OF WEBER COUNTY AND THE STANDARD DRAWINGS CONTAINED THEREIN. WEBER COUNTY PUBLIC WORKS REQUIREMENTS SHALL BE MET.

= NEW CONCRETE

- 2. THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS.
- 3. THE STREET STRUCTURAL CROSS SECTION IS PER WEBER COUNTY DETAILS CONTAINED WITHIN THESE PLANS.
- 4. WATER LINE PIPE SHALL BE PVC C-900 CLASS 200. WASHOUT ASSEMBLIES SHALL CONSIST OF A KUPFERLE FOUNDRY CO. 2" BLOW-OFF HYDRANT (OR COUNTY-APPROVED EQUIV.).
- 5. SECONDARY WATER LINE SHALL BE PVC C-900 CLASS 200. ALL SECONDARY WATER VALVE LIDS SHALL BE STAMPED "IRRIGATION".

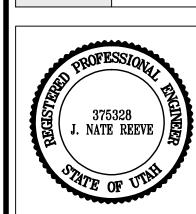


PEVISIONS DATE DESCRIPTION 4-14-11 RH County Comments 6-15-11 RH County Comments 9-29-11 RH County Comments
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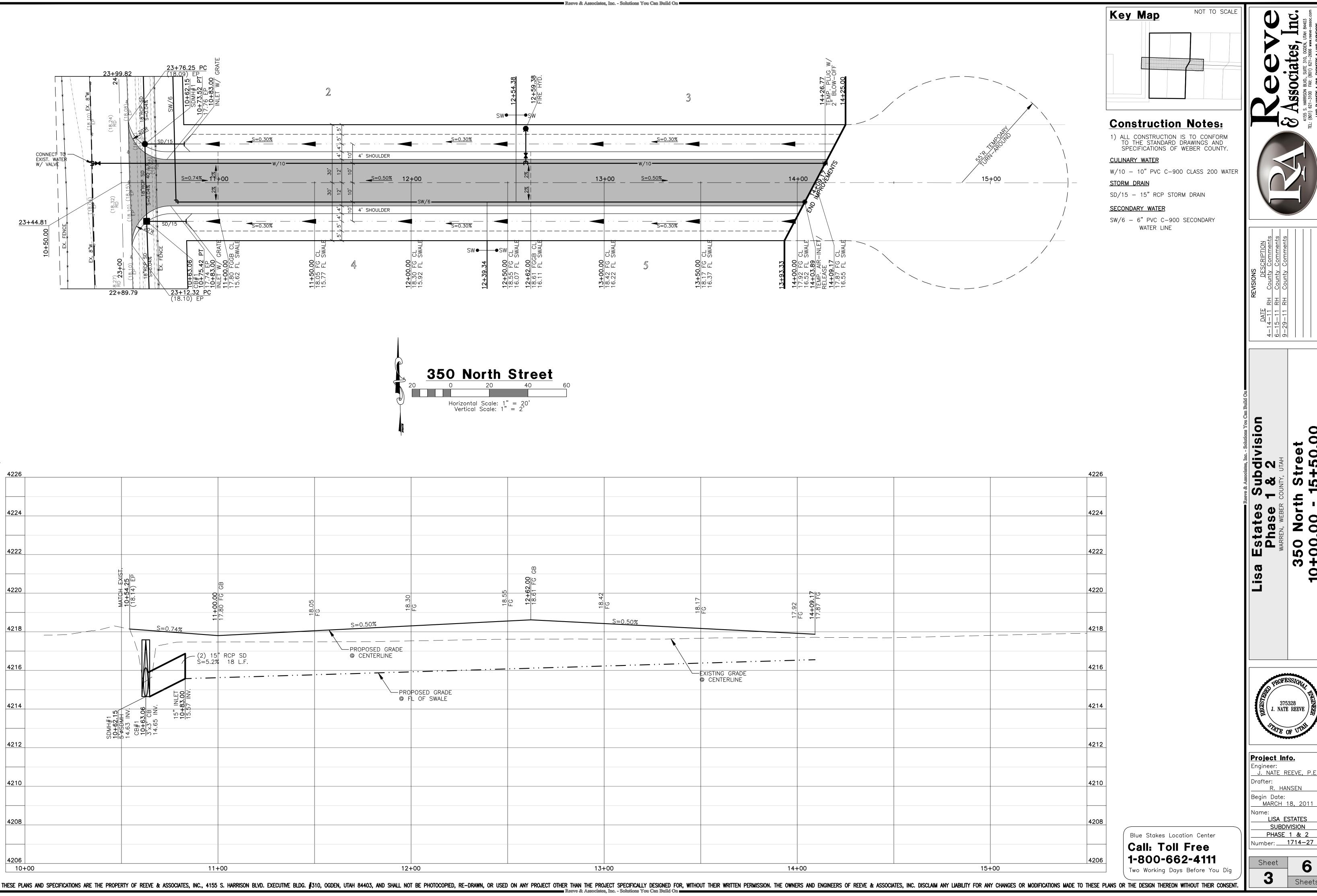
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Project Info.					
Engineer:					
Drafter: R. HANSEN					
Begin Date: MARCH 18, 2011					
Name: LISA ESTATES					
SUBDIVISION					
PHASE 1 & 2					
Number: <u>1714–27</u>					

Sheet 6 Sheets





DATE DESCRIPT

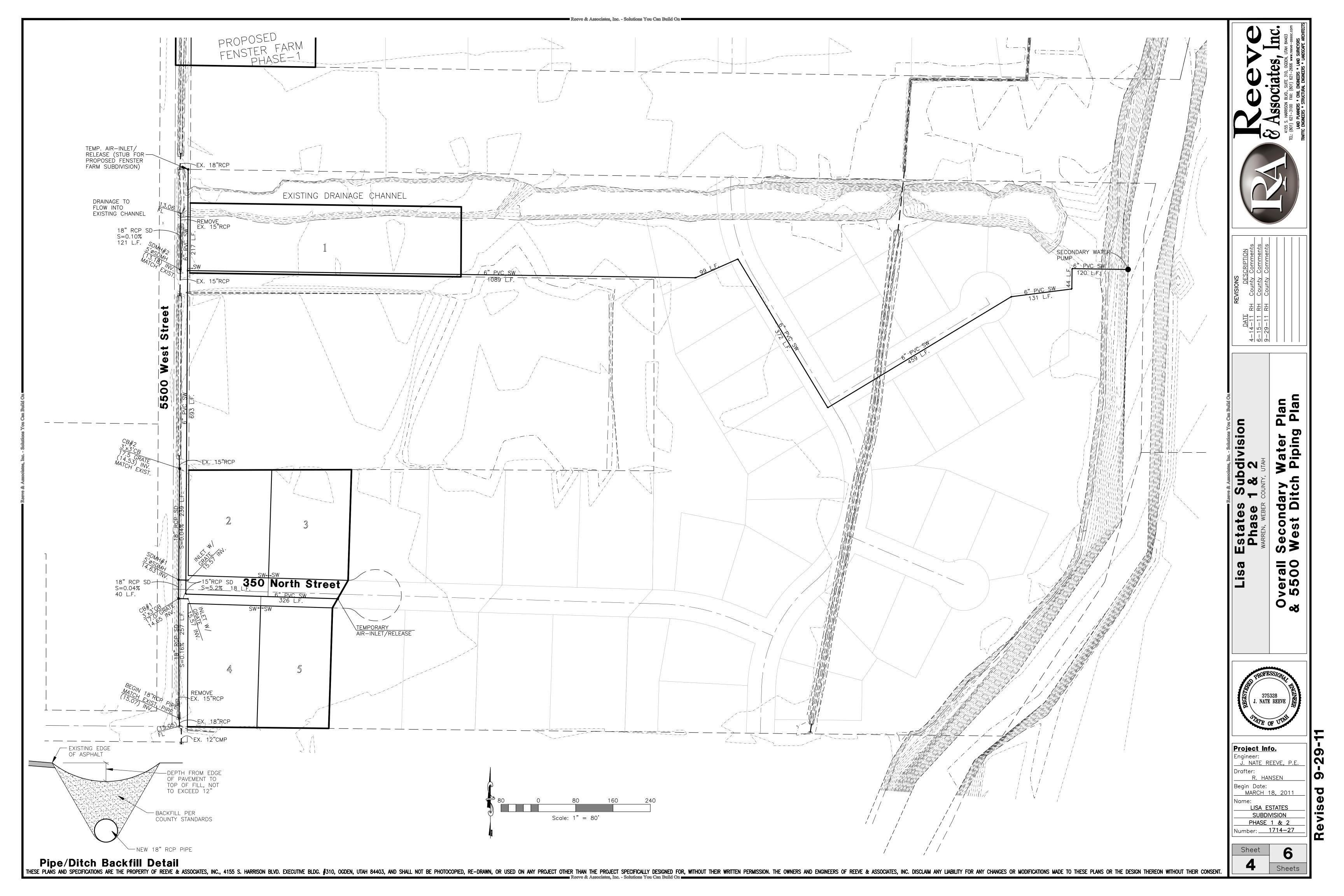
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375328 J. NATE REEVE

Begin Date:
MARCH 18, 2011 LISA ESTATES

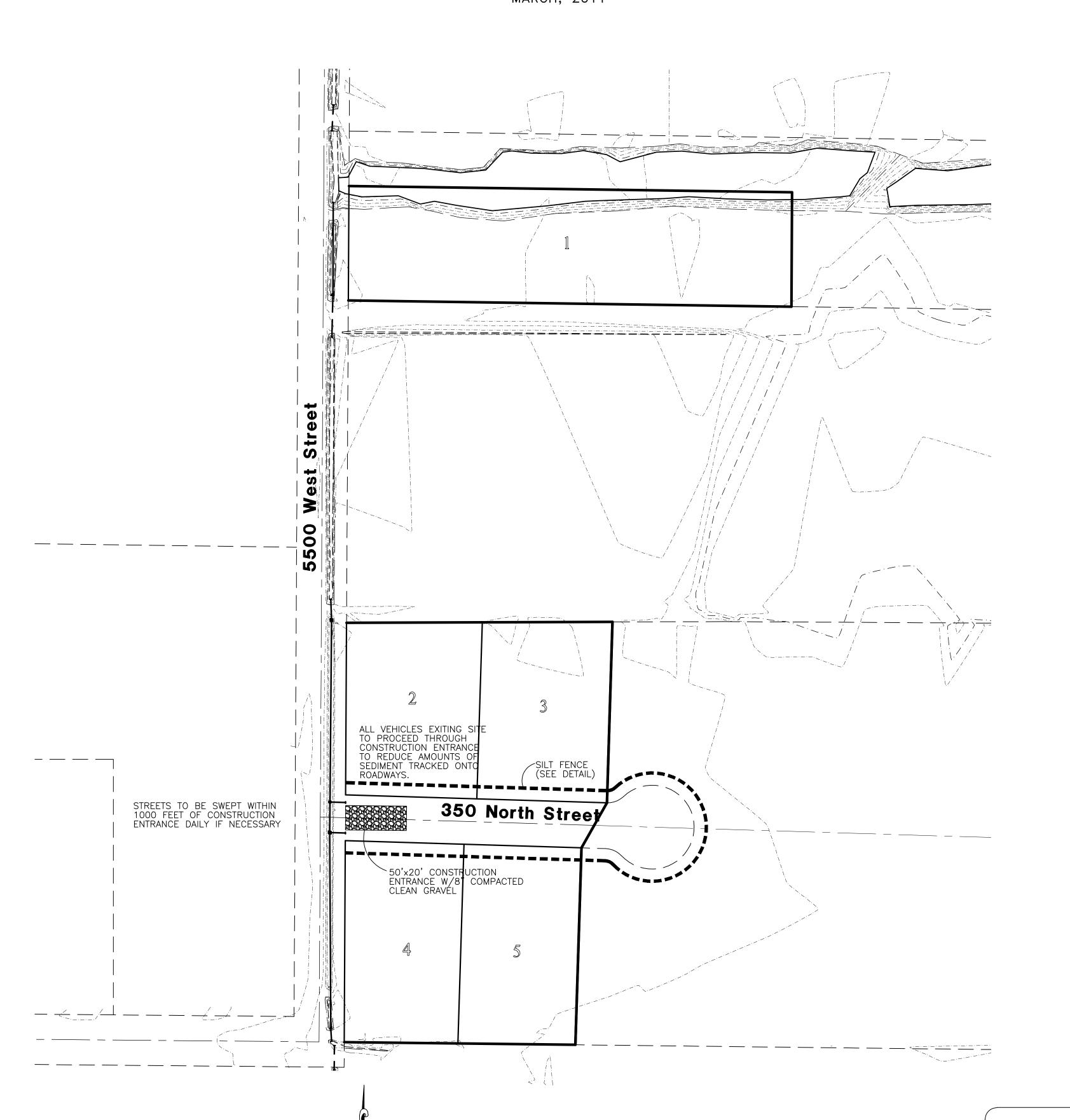
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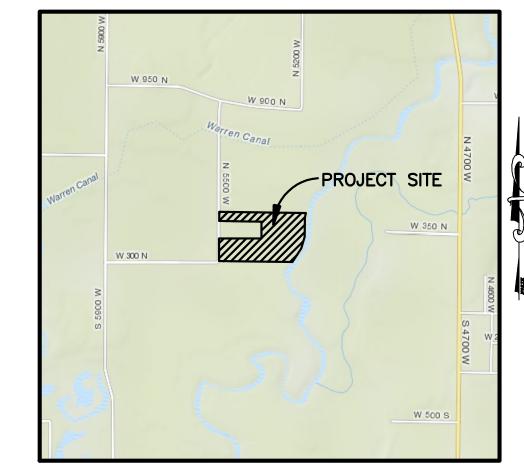


LISA ESTATES SUBDIVISION

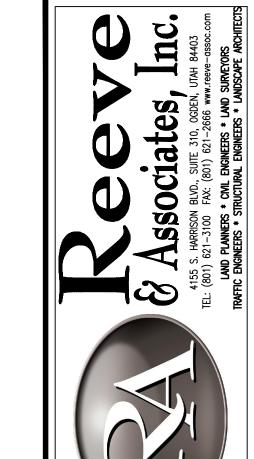
Phase-1 & Phase-2
Storm Water Pollution Prevention Plan Exhibit

WARREN, WEBER COUNTY, UTAH MARCH, 2011



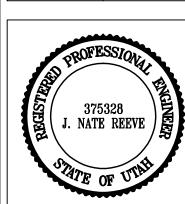


Vicinity Map



 1 1

Sto Pre



Project Info.				
Engineer:				
Drafter: R. HANSEN				
Begin Date: MARCH 18, 2011				
Name:				
LISA ESTATES				
SUBDIVISION				
PHASE 1 & 2				

Number: <u>1714–27</u> Sheet Sheets

Construction Activity Schedule

 PROJECT LOCATION... .WARREN, WEBER COUNTY, UTAH - PROJECT BEGINNING DATE. .MARCH 2011 BMP'S DEPLOYMENT DATE. .MARCH 2011 - STORM WATER MANAGEMENT CONTACT / INSPECTOR.. ..ALLAN KARRAS (801) 564-0909

- SPECIFIC CONSTRUCTION SCHEDULE INCLUDING BMP CONSTRUCTION SCHEDULE TO BE INCLUDED WITH SWPP BY OWNER/DEVELOPER

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF REEVE & ASSOCIATES, INC., 4155 S. HARRISON BLVD. EXECUTIVE BLDG. #310, OGDEN, UTAH 84403, AND SHALL NOT BE PHOTOCOPIED, RE-DRAWN, OR USED ON ANY PROJECT OTHER THAN THE PROJECT SPECIFICALLY DESIGNED FOR, WITHOUT THEIR CONSENT

Scale: 1" = 80'

Fueling area:

Vehicle parking areas:

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 contaminates are found or generated, contact environmental engineer and contacts listed. Areas of contaminated soil:

If any contaminates are found or generated, contact environmental engineer and contacts listed.

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.

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.

BMP's for wind erosion:

Stockpiles and site as needed to be watered regularly to eliminate / control wind erosion

To be performed in designated areas only and surrounded with silt fence.

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.

- 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 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.

- 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, creaks, 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 property

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.

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

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.

major spills can result in significant fines and penalties.

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

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

Erosion Control Plan Notes

a. 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

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

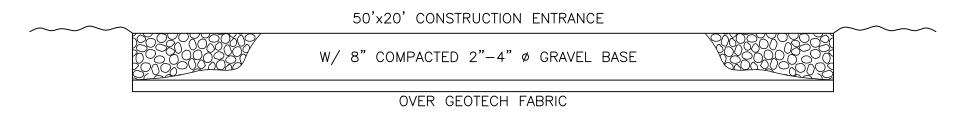
directed by the Engineer of record of the governing agency. The placement of additional devices to reduce erosion damage within the site is left to the discretion of the Engineer of

Desilting basins may not be removed or made inoperable without the approval of the engineer of record and the

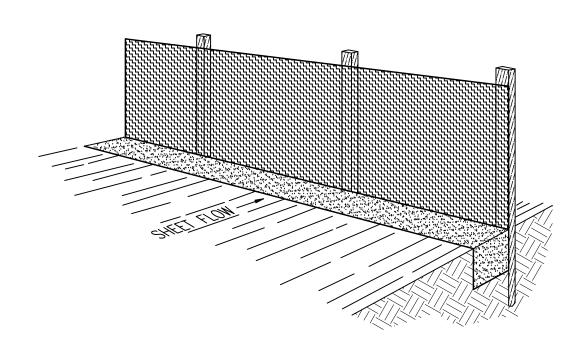
Erosion control devices will be modified as need as the project progresses, and plans of these changes submitted for approval by the engineer of record and the governing agency.

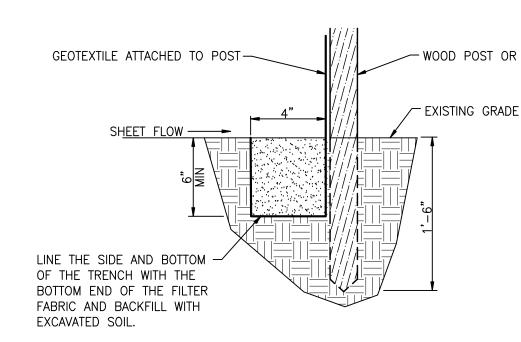
Conduct a minimum of one inspection of the erosion and sediment controls every two weeks. Maintain documentation on site. Part III.D.4 of general permit UTR300000 identifies the minimum inspection requirements.

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



Cross Section 50' x 20' Construction Entrance





Section

_2 TO 1 SLOPE

Perspective View

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.

IABLE I:					
Recommended Maximum Slope Lengths					
for Silt Fence					
(Richardson & Middlebrooks, 1991)					
Slope Steepness Max. Slo	pe Length				
(%) m	(ft)				
<2% 30.5m	(100ft)				
2-5% 22.9n	n (75ft)				
5-10% 15.2m	n (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 be 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 abut 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

*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.

*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

should generally be less than three (3) times *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

*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 Detail

10 MIL PLASTIC LINER -

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

geotextile shall extend into the trench.

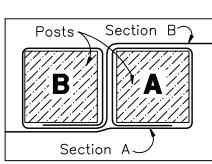
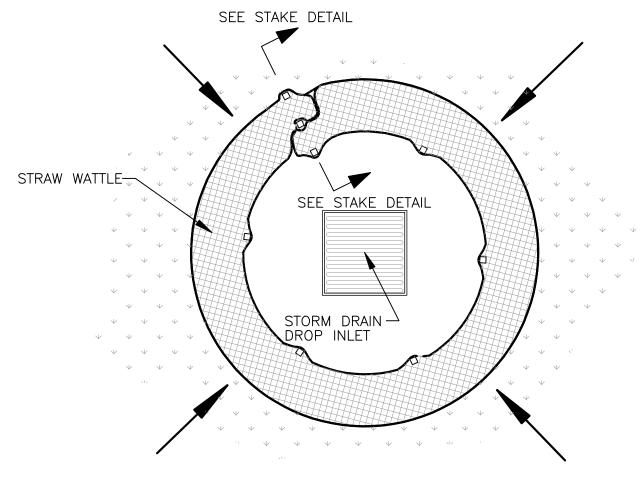


Figure 1: Top View of Roll-to-Roll Connection



Plan View

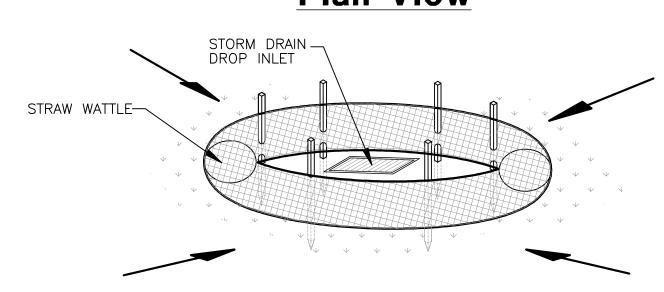
ANCHOR THROUGH-

Inlet Box Protection

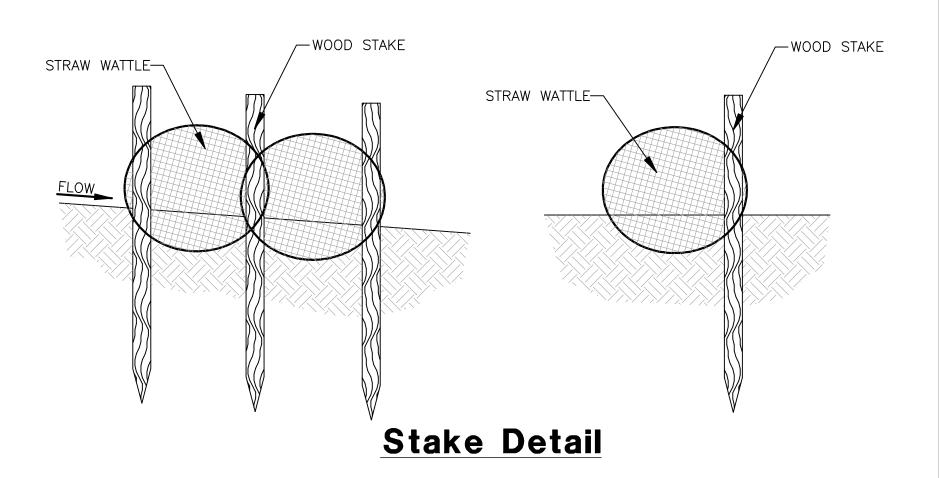
STORM DRAIN INLET-

ANCHOR THROUGH-

NETTING

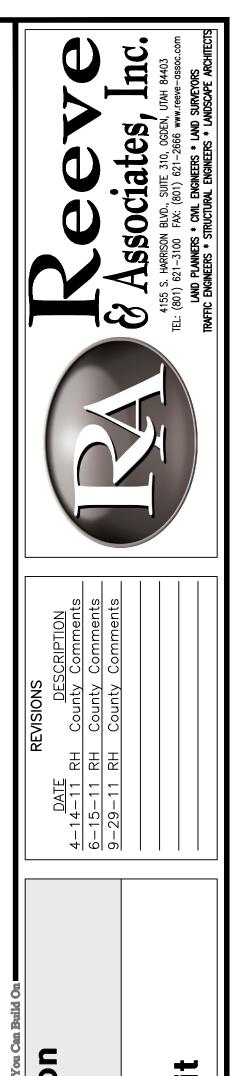


Drop Inlet Protection



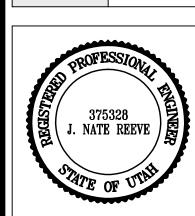
Concrete Washout Area w/ 10 mil Plastic Liner

3' HIGH BERM─\



-GRAVEL BAGS

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Project Info. J. NATE REEVE, P.E. Drafter: R. HANSEN Begin Date: MARCH 18, 2011 Name: LISA ESTATES SUBDIVISION PHASE 1 & 2 Number: <u>1714–27</u>

Sheets

Sheet