

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Community Development staff at 775.328.6100.

Project Information		Staff Assigned Case No.: _____	
Project Name (commercial/industrial projects only): West McCarran Restoration Project			
Project Description: River restoration; see attached report for more details			
Project Address: I-80 East between Mustang and Patrick			
Project Area (acres or square feet): 26 acres			
Project Location (with point of reference to major cross streets AND area locator): Site is along the Truckee River approximately 7 miles east of Sparks, between Mustang and Patrick			
Assessor's Parcel No(s):	Parcel Acreage:	Assessor's Parcel No(s):	Parcel Acreage:
084-450-02	61.4		
Section(s)/Township/Range: T19N, R21E, Section 11			
Indicate any previous Washoe County approvals associated with this application:			
Case Nos. NA			
Applicant Information (attach additional sheets if necessary)			
Property Owner:		Professional Consultant:	
Name: The Nature Conservancy		Name: Graham Matthews & Associates	
Address: 1 E. First Street, Suite 1007		Address: P.O. Box 1516	
Reno, NV	Zip: 89501	Weaverville, CA	Zip: 96093
Phone: 775-322-4990	Fax: 322-5132	Phone:	Fax:
Email: mhazelwood@tnc.org		Email: graham@gmahydrology.com	
Cell:	Other:	Cell:	Other:
Contact Person: Mickey Hazelwood		Contact Person: Graham Matthews	
Applicant/Developer:		Other Persons to be Contacted:	
Name:		Name:	
Address:		Address:	
	Zip:		Zip:
Phone:	Fax:	Phone:	Fax:
Email:		Email:	
Cell:	Other:	Cell:	Other:
Contact Person:		Contact Person:	
For Office Use Only			
Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

Special Use Permit Application for Grading Supplemental Information

(All required information may be separately attached)

Chapter 110 of the Washoe County Code is commonly known as the Development Code. Specific references to special use permits may be found in Article 810, Special Use Permits. Article 438, Grading, and Article 418, Significant Hydrologic Resources, are the ordinances specifically involved in this request.

1. What is the purpose of the grading?

This project is a continuation of restoration efforts along the lower Truckee River that began in 2003 and has involved five sites prior to this project. Floodplain adjacent to the river will be excavated in order to provide topographic and hydrologic complexity and to increase flood water storage potential.

2. How many cubic yards of material are you proposing to excavate on site?

100,500 CY

3. How many square feet of surface of the property are you disturbing?

1132560 sq.ft.

4. How many cubic yards of material are you exporting or importing? If none, how are you managing to balance the work on-site?

No material will be imported or exported. Material excavated from the floodplain will be distributed in other areas of the site and incorporated into the finish grading and revegetation efforts.

5. Is it possible to develop your property without surpassing the grading thresholds requiring a Special Use Permit? (Explain fully your answer.)

No, the applicant is implementing a river restoration project which requires excavation of floodplain sufficient to achieve hydrologic goals.

6. Has any portion of the grading shown on the plan been done previously? (If yes, explain the circumstances and the year the work was done.)

No

7. Have you shown all areas on your site plan that are proposed to be disturbed by grading? (If no, explain fully your answer.)

Yes

8. Can the disturbed area be seen from off-site? If yes, from which directions, and which properties or roadways?

Yes, from Mustang Road to the west and from the BLM and gravel pit properties across the river to the south.

9. Could neighboring properties also be served by the proposed access/grading requested (i.e. if you are creating a driveway, would it be used for access to additional neighboring properties)?

No

10. What is the slope (Horizontal:Vertical) of the cut and fill areas proposed to be? What methods will be used to prevent erosion until the revegetation is established?

The slopes vary across the project site; see project plans for details. BMPs described in the Construction Sequence and BMP report, including silt fencing and fiber rolls, will remain in place for at least two years until vegetation becomes established.

11. Are you planning any berms?

Yes No If yes, how tall is the berm at its highest?

12. If your property slopes and you are leveling a pad for a building, are retaining walls going to be required? If so, how high will the walls be and what is their construction (i.e. rockery, concrete, timber, manufactured block)?

NA

13. What are you proposing for visual mitigation of the work?

The end-product of the project is a restored river system/riparian woodland, which has a higher scenic value than the current conditions.

14. Will the grading proposed require removal of any trees? If so, what species, how many and of what size?

A handful of cottonwoods/willows of small to medium size may be removed, but will be replaced by thousands more cottonwoods/willows.

15. What type of revegetation seed mix are you planning to use and how many pounds per acre do you intend to broadcast? Will you use mulch and, if so, what type?

Seeding will be done in combination with other planting methods (poles and cuttings, containerized plants, bare root), in various zones throughout the project site: riparian woodland, riparian shrub, upland. Seed mixes and rates will vary with those zones and be based on previous experience on similar project sites and in consultation with seed supplier (Comstock Seed). Mulch products will be used as needed.

16. How are you providing temporary irrigation to the disturbed area?

A temporary overhead and drip irrigation system will be installed on the site and maintained until vegetation is established. Water will be pumped from the river via water rights leased by the City of Reno; diversion points will be identified and permits filed with the Nevada Division of Water Resources for those points.

17. Have you reviewed the revegetation plan with the Washoe Storey Conservation District? If yes, have you incorporated their suggestions?

No

18. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that may prohibit the requested grading?

Yes No If yes, please attach a copy.

Washoe County Special Use Permit Application Truckee River Restoration Program West McCarran Project

Nature of Activity

The project proposes to lower the existing (abandoned) floodplain on the project site in order to reconnect it with the Truckee River. The Truckee River water surface elevation will be altered locally through the use of constructed riffles and by lowering an existing (abandoned) diversion dam. Swales and scour channels will be excavated into the designed floodplain surface to provide topographic and hydrologic complexity and to increase flood water storage potential. Grade control structures will step-down the existing upstream riffle, while another rock structure/riffle will partially backwater the existing upstream riffle.

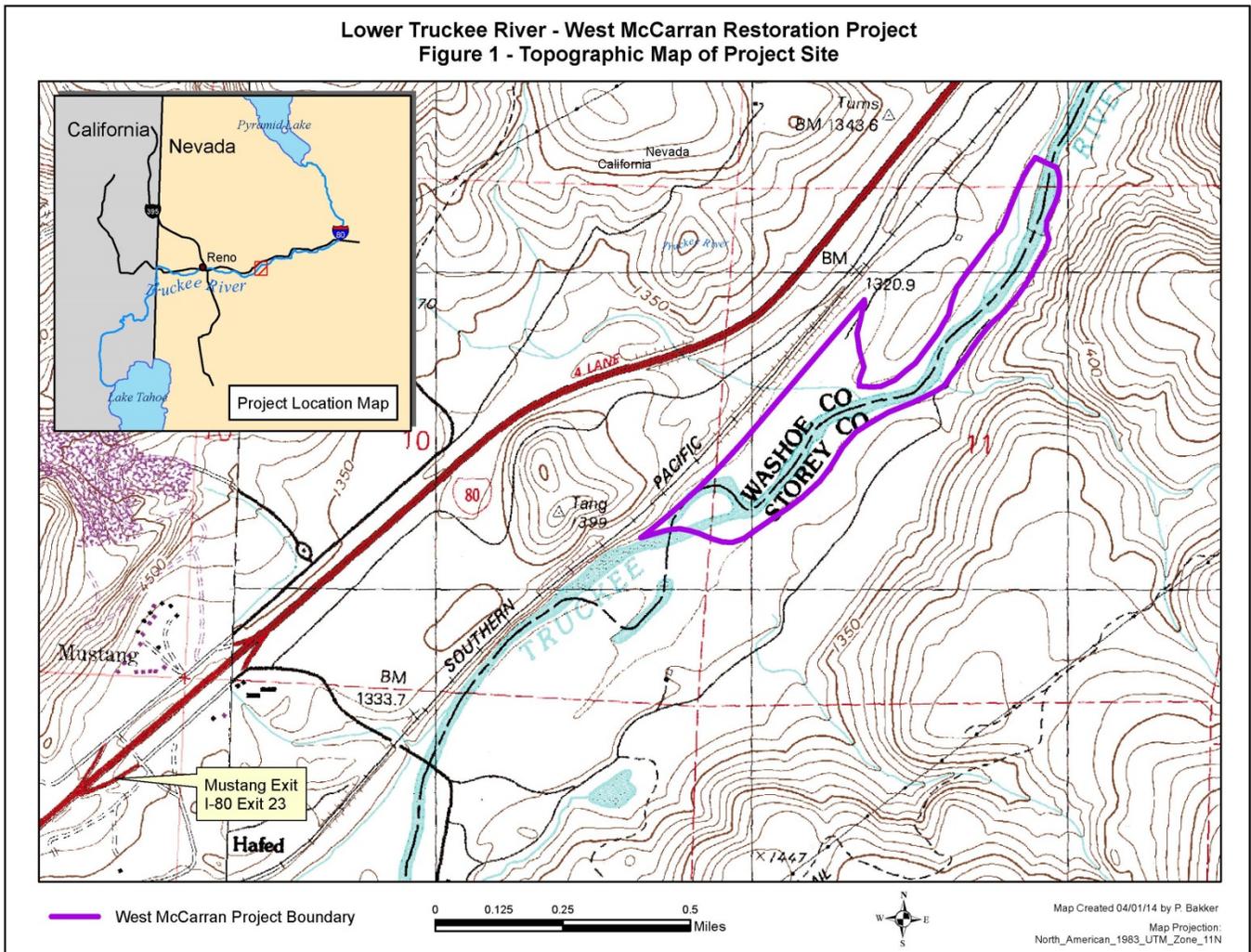


Figure 1. Topographic Map of Project Site

Primary elements of this project include:

- Lowering the floodplain
- Construction of riffles and grade control structures in and adjacent to the active channel
- Lowering an abandoned diversion structure
- Sequestering spoils along floodplain margins

A. Pre-construction Activities and Best Management Practices (BMPs)

Phased construction will combine various activities and BMPs to minimize surface water contact with exposed cuts and fills, and reduce or prevent associated impacts. The following Pre-construction, construction and Post-construction BMPs will be implemented.

1. Construction Access

Primary access to the site is along the established road through the previously-constructed Mustang Ranch project site, along the north side of the river. It is a 10 foot wide compacted and graveled roadbed suitable for heavy equipment. Two potential staging areas exist along this road. The south side of the river may be accessed by Mustang Ranch Road as it exits the paved portion approximately ½ mile south of the bridge over the Truckee River. Additional secondary access roads will be graded as needed on floodplains and will have a native surface which can be watered and re-graded as necessary during construction.

2. Location of Rock and Gravel Stockpiles

Gravel and cobble can be end-dumped and loaded in areas with good turnaround access along the north and south sides of the river. Riprap materials will be stored near the placement sites. All materials to be placed in the river will be washed by spraying the stockpiles with the water trucks. Washing will be repeated as piles are depleted.

3. All Construction Volumes and Areas

Table 1. Estimated construction materials volumes for Truckee River near West McCarran

Structure (1-2 ton boulders)	TW, ft	H, ft	BW, ft	L, ft	VOL, CY	Fraction in Washoe Co	Vol, CY Washoe	Fraction in Storey Co	VOL, CY Storey
GC1	30	6	30	63	420	0%	-	100%	420
GC2	30	6	30	190	1,267	0%	-	100%	1,267
GC3	30	6	30	293	1,953	0%	-	100%	1,953
GC4	30	6	30	154	1,027	0%	-	100%	1,027
RS1	30	6	30	204	1,360	67%	911	33%	449
RS2	30	6	30	247	1,647	50%	823	50%	823
Total					7,674		1,735		5,939

Riffle Gravel					1,500	78%		1,170	330
Riffle Cobble					1,000	78%		780	220
Total					2,500		1,950		550

Table 2. Computed cut volumns

Area	Cubic Yards
Entire Project	121,290
North Side (Washoe County)	100,500
South Side (Storey County)	20,790

4. Staging Areas and Equipment Wash Sites

The staging areas will double as equipment wash sites. Parking surfaces will be graded to contain runoff and will be covered with gravel. Straw wattles (fiber rolls) will be staked along perimeters to further facilitate containment.

5. Establishment of Turbidity Curtains

To minimize turbidity impacts during floodplain grading, Type II heavy duty turbidity curtains (Figure2) will be installed parallel to the Truckee River stream bank. If both floodplains are graded simultaneously, the Type II turbidity curtains will be staked along both banks. A floating Type III heavy duty turbidity curtain will be installed across the channel downstream of the project site.

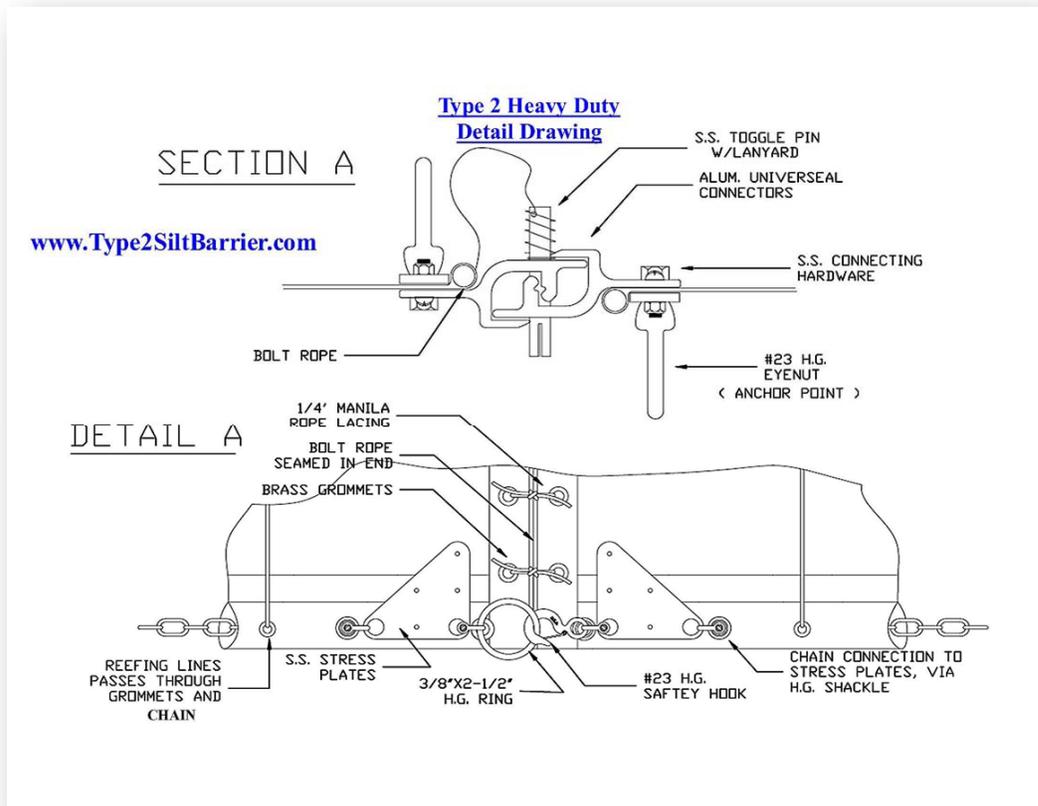


Figure 2. Detail of Type II heavy duty turbidity curtain, courtesy Granite Environmental

6. Sensitive Areas

No disturbance will take place outside the project boundaries. Riparian save areas within the project footprint will be fenced, flagged and avoided as delineated in final plans.

B. Construction and BMPs

1. Water and Air Quality Monitoring

Background turbidity samples will be collected twice per day upstream of all planned activities, above the upstream grade control structure. Downstream samples will be collected at a location determined by NDEP below the downstream grading boundary of the project. Samples will be collected at the downstream site before, during and after construction activities each day at a sampling frequency of approximately once per hour.

Air quality will be qualitatively monitored by the contractor during all ground disturbance activities. Water trucks will be deployed as necessary to keep the production of air borne particulates to a minimum.

2. Floodplain Grading

The starting location and progression of floodplain grading will be chosen by the contractor. Excavators or scrapers will likely be used to lower the floodplains to the design grade. When gravel or cobble lenses are encountered, these materials should be screened and separated for potential use in cobble blankets.

3. Excavation of Swales and Scour Channels

After the floodplain is lowered to the designed grade, new features will be cut into the landscape as detailed in the (final) plan and under supervision from TNC staff. The primary elements of such features are to provide seasonal hydrologic connectivity to water in the main river channel: swales will be wet during spring runoff and scour channels will flow during flood events, serving to slowly return water from floodplains back to the main channel.

4. Excavation in-Channel for the Placement of Grade Control Structures

Grade control materials will be stockpiled near the existing channel location and excavation will likely proceed from upstream to downstream to minimize potential difficulties due to backwatering effects during construction. K-rails or other diversion structures may be deployed as velocity barriers at the contractor's discretion. It is understood that water depth may preclude cross-channel notching in some cases and that grade control materials (1-2 ton boulders) may be worked into the bed as required.

5. Placement of Spoils

Some spoiled material may be screened and used to construct riffles and some will be sequestered at the toes of slopes along the project boundary near the stockpiling sites and as detailed in the Final 100% plans. Spoiled material volumes are estimated not to exceed 121,290 CY.

Stockpiling of spoils will occur near the interfaces of floodplain/native slopes and will be blended to the existing bank slopes.

6. Construction of Riffles and Grade Control

All materials will be washed prior to placement in the channel. Riffles shall consist of the streambed over-excavated to accommodate boulders or cobble blankets on the downstream slope such that the finished surface of cobble is at design grade, typically 2-3 feet above existing grade (Design Sheet C7). Cobbles and gravel can be delivered to the riffle locations by driving trucks along the newly excavated floodplain (soil conditions permitting). Spreading and grading can be accomplished from either bank with an excavator. Depth of cobbles in riffles shall be at least 2 feet and boulder depths will be up to 5 feet and may protrude above existing grade. Large boulders will be placed as directed to provide complexity in constructed riffles. The length of cobble blankets over the downstream face of riffles will vary but will average approximately 100 feet. A gravel blanket (3/8-3" size range) will be placed along the upstream slope of the riffle to a depth of at least one foot overlapping the cobble blanket and extending upstream approximately 50 feet. Toes of gravel riffles must be backwatered by the next riffle crest downstream. Placement volumes will vary with the size of the feature; gravel and cobble will be incorporated into the grade control matrices (Table 1).

The grade control structures (Design Sheet 7) are intended to (1) protect the channel from headcutting and (2) to elevate the water surface to activate topographic features along the floodplain. Voids must be backfilled with gravel and cobble prior to placement of the next layer of 1-2 ton boulders if more than one course is required. The finished structures will protrude above the grade of the riverbed and will blend into the upstream and downstream regions with sloping gravel/cobble riffles.

7. Post Grading Treatment

TNC assumes responsibility for post grading soil treatments to reduce short term erosion. Such treatments may include; pole plantings, containerized seedlings, water jetted cuttings, and seeding. Mulch can be added to facilitate water retention, reduce erosion and inhibit colonization by undesired species. Given the extremely windy conditions which often occur in the region, a tackifier will be added as needed.

8. Erosion Prevention Treatments during Construction

All large disturbance areas will be fenced with wire backed silt fencing which provides extra strength in windy areas. Spacing of steel posts will not exceed 8 feet. Wire fencing will be installed on the downhill side of the filter fabric, between the fabric and the posts and the fabric will be anchored in a 12 inch deep ditch (Nevada BMP Guide, June 2008). Some areas (e.g. long slopes along floodplain boundaries and spoils sequestration areas) may be protected with rows of straw wattles (fiber rolls), staked in place along level contours. Rolls should be keyed in to the ground surface 2-4 inches and staked at least every 4 feet with the space between rows not to exceed 20 feet (Nevada BMP Guide, June 2008).

C. Post-construction

1. Road Surfaces Treatments

Primary haul roads along both north and south sides of the river will be graded and watered regularly, and track-out areas will be graveled with ¾ inch road base rock as needed. Temporary construction roads of native surface will be ripped or disked to reduce compaction in preparation for TNC revegetation efforts.

2. Revegetation/Air Quality/Erosion Treatments

Silt fencing and fiber rolls located in non-flood prone areas will remain on site until vegetation becomes established. BMP's located along the river's edge and on the lowest floodplain surfaces will be removed following construction. Under TNC direction a spray mulch/tackifier mixture may be applied to exposed soils to reduce wind-blown soils. Weed free straw mulch may also be applied.

3. Riparian, Wetland, Upland Vegetation Restoration

In riparian and wetland areas revegetation will occur as a combination of natural recruitment and TNC planting efforts. Floodplain and upland plantings will need to be watered for the first few years following construction as in other TNC restoration projects, such as Mustang and 102. Removal of invasive species will be a component of TNC's Vegetation Restoration Plan.

D. Type of equipment to be used and how it will be operated

The excavation of the floodplain, the placement of riffle rock, and other activities at the site will require the hiring of an excavation crew. The equipment listed below, or its equivalent, is expected to be used throughout the site.

Cat 330 Excavator
Cat 973 Loader
Cat D400
Cat D7 Dozer
Cat 14G Grader
4000 gal water truck

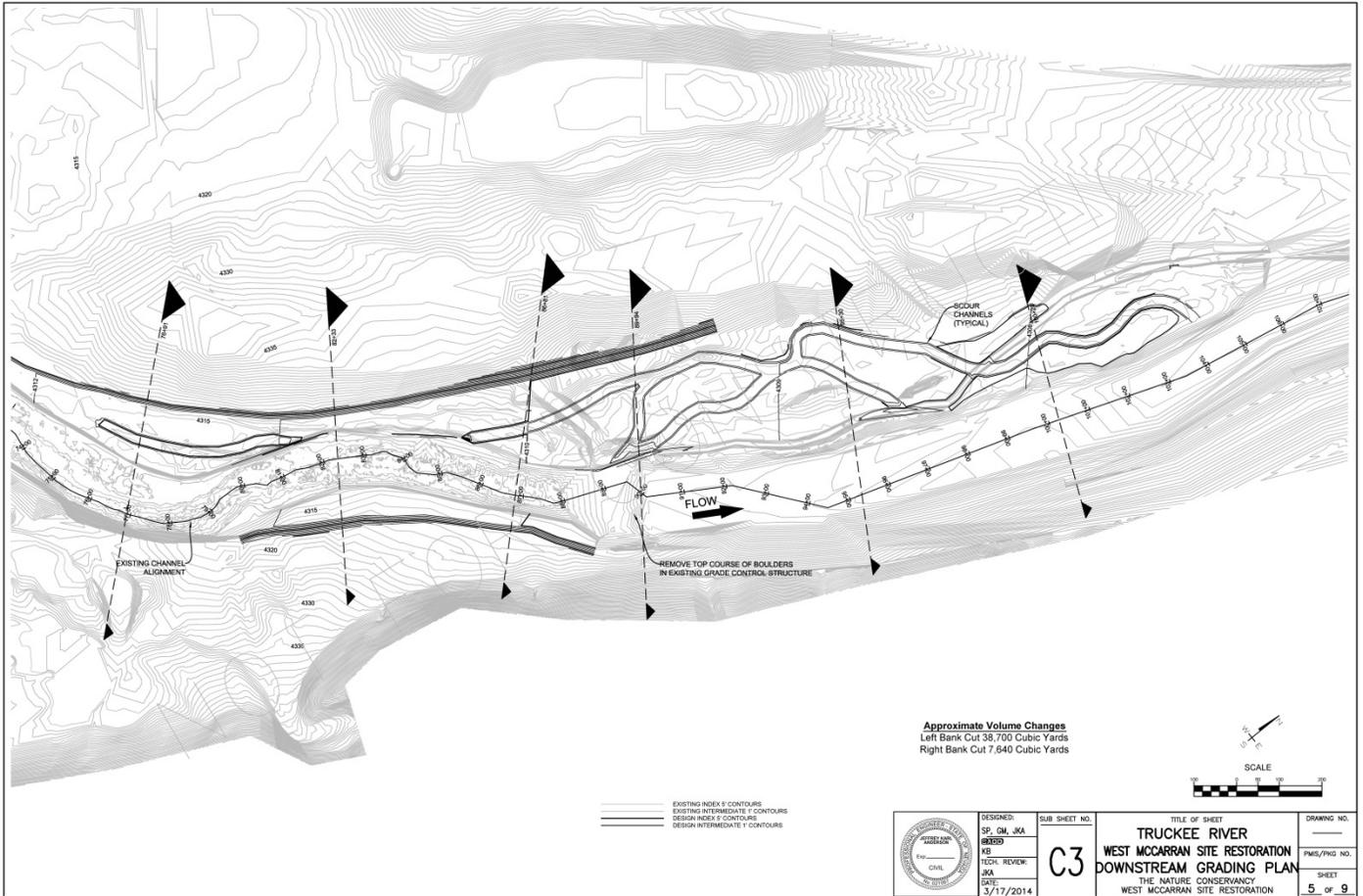


Figure 4. Downstream Site Plan

Proposed Project Purpose

Background

Over the past century, the lower Truckee River downstream from Vista has suffered from many human-caused changes, which have greatly altered the ecological integrity and functioning of the river. Truckee River flows are regulated by a number of agreements, decrees, and river operating requirements.

Well intended but failed efforts at flood control in the early 1960s led to exacerbated channel down cutting along the lower Truckee River and as a result, depression of the groundwater table. The lowered groundwater depth and deeply incised channel has disconnected the river from the riparian habitat and surrounding floodplains. Without access to groundwater, regeneration of native riparian vegetation has been impaired for decades, and invasive species have begun to dominate the riparian communities along the river's edge.

Land use practices along the Truckee River have altered the flow regimes, also causing the condition of riparian vegetation to decline and resulting in a significant reduction of important habitat for birds, mammals, reptiles, and amphibians. Urban growth and development in the cities of Reno and Sparks have increased the amount of impervious surfaces, affecting water quality and the extent and timing of flooding.

Since 2003, TNC and its partner agencies have demonstrated river restoration techniques on the lower Truckee River through two projects at TNC's 305-acre McCarran Ranch, the Lockwood site, the lower Mustang Ranch site, and the 102 Ranch site. The site proposed for restoration is within the same reach of the lower Truckee River as the completed restoration sites. The restoration activities at McCarran Ranch included the creation of a new river meander; approximately one mile of new channel and riffle construction; revegetation of approximately 120 acres; creation of wetlands and ponds, including oxbow wetlands; and a variety of wildlife nesting, cover, and shelter improvements. The constructed riffles raised the water surface level and promoted more frequent overbank flooding within the project areas. The localized overbank flooding of these uninhabited floodplain areas improved soil fertility and ecological productivity, while attenuating downstream flooding.

These river and riparian restoration measures are correcting the undesirable effects of channelization and river entrenchment, while retaining the benefits of flood flow attenuation. Restoration at the McCarran Ranch sites is resulting in the recovery of the groundwater table in the project area, increased populations and survivorship of native plants, and increased fish and native bird populations. The decreased channel width promotes improved hydraulic connection between the river channel and its floodplain to better support wetland habitat.

Purpose of and Need for the Proposed Action

The primary purpose of the project is to contribute to the ecological restoration of the lower Truckee River. Overall, the project is intended to help restore basic physical and biological functions to a more natural condition so that the ecological systems and native organisms can depend on those functions. Generally, the restoration project will involve the creation of new areas of aquatic and terrestrial habitat, including river channel modifications, scour channels and swales, and areas of native vegetation, for the purposes of restoring the degraded ecosystem to a more natural condition.

Monitoring results support the effectiveness of TNC's restoration projects since 2003 and the need for continued, well-designed restoration projects at high priority sites on the lower Truckee River.

The West McCarran site was selected by TNC and cooperating agencies in order to restore the river channel, floodplain, and riparian forest and to undo the damage of the human-caused changes. The proposed channel-and-floodplain restoration work to be implemented at the site would create a variety of benefits in terms of long-term floodwater flow attenuation, water quality, habitats for native plants and animals including special-status species, biological productivity and diversity, noxious weed reduction and control, and restoration of native species. The proposed project would continue TNC's program of restoration on key reaches of the lower Truckee River and provide linkage and continuity with the previously restored sites.

The decision to propose this site, as well as previous projects for restoration, was based in part on their relatively high scores in a report prepared by Otis Bay Ecological Consultants (Otis Bay Ecological Consultants 2007) for the U.S. Army Corps of Engineers. The report includes a ranking of the ecological restoration potential of 20 sites along the lower Truckee River based on field and aerial observations. The criteria included flow regime, average floodplain width and potential for floodplain expansion, riparian forest and potential for recovery, existing aquatic habitat diversity and potential to increase hydraulic habitat diversity, encroachments into the channel and floodplain, existing entrenchment, floodplain reconnection potential, and connection to natural features.

West McCarran

TNC acquired the McCarran Ranch riverfront with the purpose of restoring the health of the river and associated riparian and wetland habitats. The Truckee River at West McCarran has a deeply incised straight channel, a disconnected floodplain, and backwater effects of a downstream weir. The site also contains existing elements such as functional historic swales, remnant late seral cottonwoods, and relict wetlands, which would accelerate the restoration process.

The West McCarran site is immediately downstream of the Lower Mustang project, where extensive restoration work was done in 2009 to lower the floodplain, realign the channel, and restore native riparian vegetation. The 1-mile West McCarran reach is the upstream segment of TNC's McCarran Ranch Preserve, which totals nearly five river miles. Most of the downstream portion of the river frontage was restored from 2003 to 2006. The purpose and need for restoration proposed at West McCarran Ranch is to provide river and ecological restoration, and to provide physical and biological continuity with previously restored sites upstream and downstream of the West McCarran reach.

Timeframe of the proposed project

January-August 2014 Finalize design and secure permits.

September-December 2014 Site preparation; rock stockpiling; plant salvage; excavation of floodplains; construction of grade control structures and riffles.

Other Permits and Approvals Required

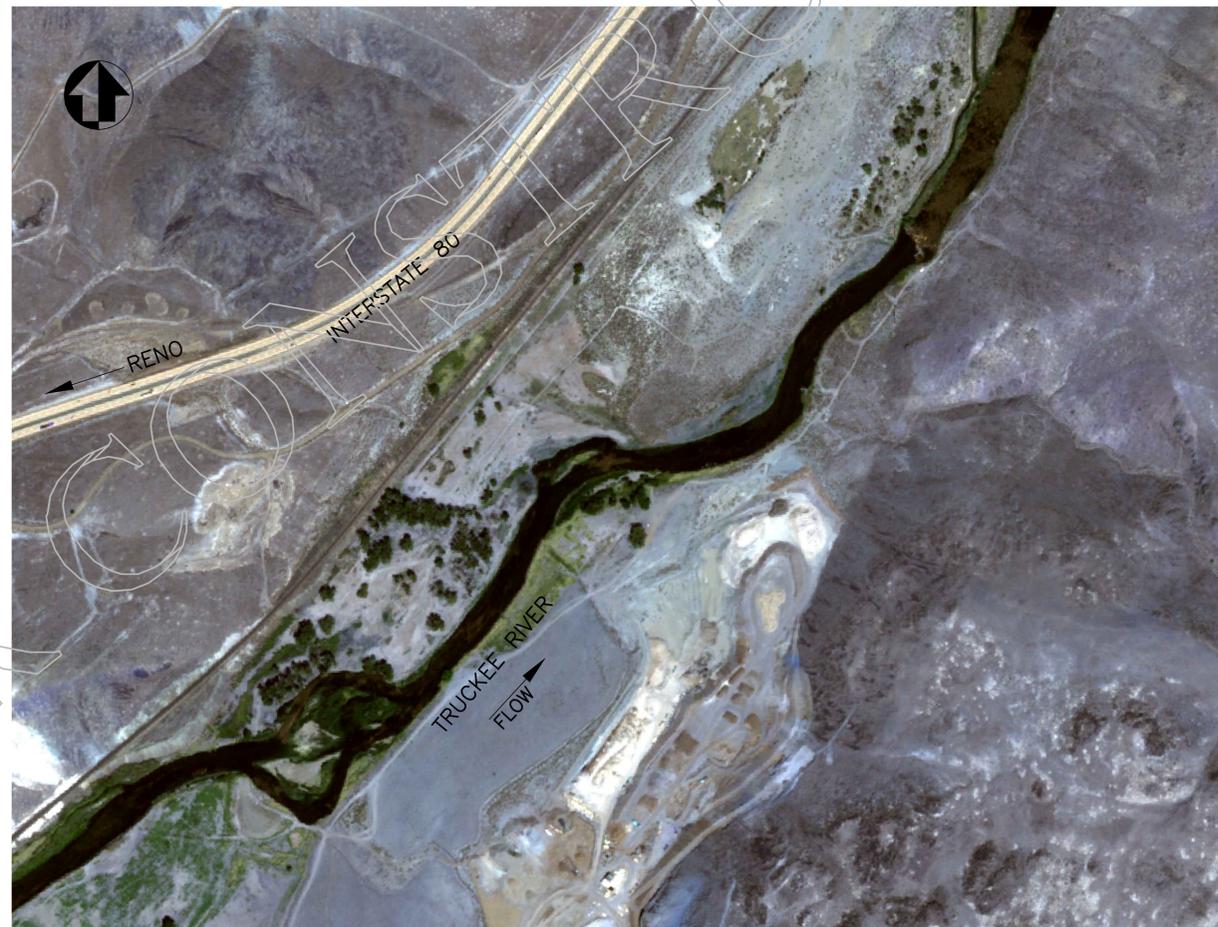
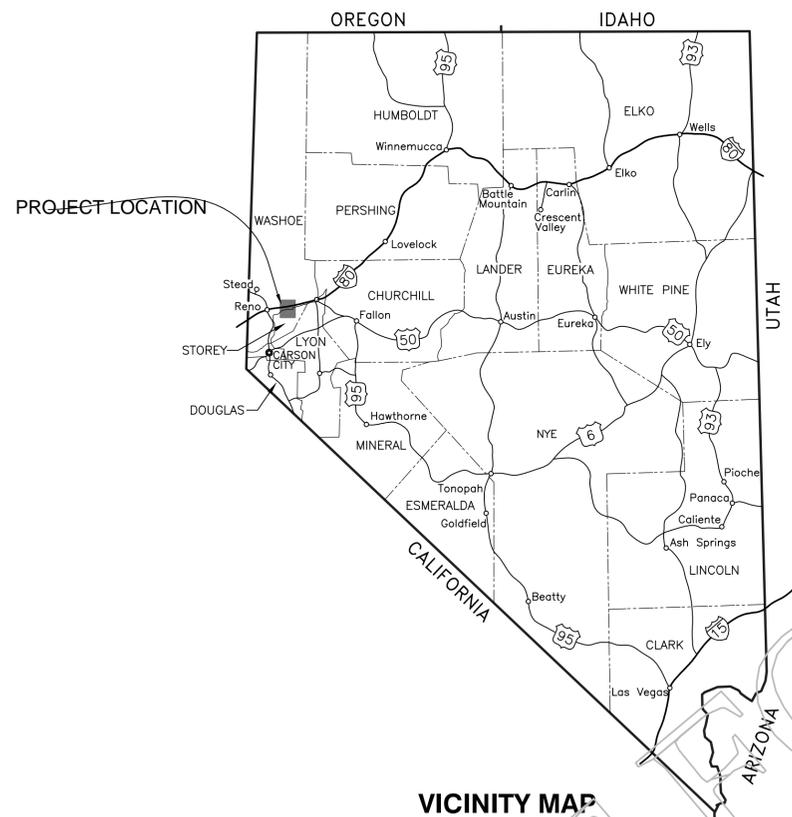
The construction work associated with restoring this site requires a series of federal, state, and local permits, as well as letters of permission and easements. As of March 2014, the permit application process is in the initial stages, and all permits are expected to be in-hand by late August 2014. The 2003 and 2006 McCarran Ranch projects served to demonstrate exactly which permits and easements were needed, and they are as follows:

1. Temporary Working in Waterways (Rolling Stock) Permit – issued by NDEP.
2. 401 Water Quality Certification – issued by NDEP.
3. Stormwater General Permit – issued by NDEP.
4. Letters of Authorization from State of Nevada – both the State Engineer (Division of Water Resources) and Department of Wildlife must approve the project. State Engineer Contact: Robert Martinez (775) 684-2735; NDOW Contact: Laura Richards (775) 688-1996.
5. Grading Permits – issued by Washoe and Storey Counties. Washoe County Contact: Don Jeppson, AIA (775) 328-2020; Storey County contact: Dean Haymore (775) 847-0966.
6. Special Use Permits – issued by Storey and Washoe Counties. Washoe County Contact: Roger Pellham, (775) 328-3622; Storey County Contact: Dean Haymore (775) 847-0966.
7. Dust Control and Vector Control Permits – Washoe County District Health Department. Contact: Air Quality Management Division (775) 784-7200.
8. Right of Entry and Construction Authorization – Division of State Lands. Division of State Lands Contact: David Marlow (775) 684-2720.

TNC will be responsible for preparing and submitting all necessary materials to secure these permits and easements. TNC will be named on each permit for the project (as will contractors as appropriate).

TRUCKEE RIVER RESTORATION THE NATURE CONSERVANCY

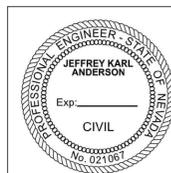
WEST MCCARRAN SITE
STOREY AND WASHOE
COUNTIES, NEVADA



SHEET INDEX

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C3	DOWNSTREAM GRADING PLAN
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100% PERMIT PLAN SET



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TRUCKEE RIVER RESTORATION
WEST MCCARRAN SITE
THE NATURE CONSERVANCY
COUNTY: STOREY/WASHOE STATE: NEVADA

SHEET
1
OF
11

GENERAL NOTES:

1. ALL IMPROVEMENTS SHALL BE ACCOMPLISHED UNDER THE APPROVAL, INSPECTION, AND TO THE SATISFACTION OF THE OWNER. IMPROVEMENT CONSTRUCTION SHALL COMPLY WITH THESE PLANS, SPECIFICATIONS, AND THE 2001 NEVADA DOT STANDARD PLANS FOR CONSTRUCTION OF LOCAL STREETS AND ROADS, UNLESS NOTED OTHERWISE. ALL REFERENCES TO THE "STANDARD SPECIFICATIONS" SHALL MEAN THE STATE OF NEVADA, DEPARTMENT OF TRANSPORTATION (NDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION OF LOCAL STREETS AND ROADS, 2001. CONSTRUCTION NOT SPECIFIED ON THESE PLANS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR IS OBLIGATED TO BE FAMILIAR WITH APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS NOT DISCUSSED IN THE GENERAL NOTES. THE CONTRACT SPECIAL PROVISIONS SHALL SUPERSEDE THOSE OF THE STANDARD SPECIFICATIONS WHERE DISCREPANCIES OCCUR.

2. CONSTRUCTION HOURS SHALL BE WEEKDAYS BETWEEN 7:00 A.M. AND 6:00 P.M. UNLESS PRIOR APPROVAL IS RECEIVED FROM THE OWNER.

3. THE LOCATIONS AND EXTENT OF EXISTING UTILITIES AND UNDERGROUND UTILITIES IN THE WORK AREA AS SHOWN ARE APPROXIMATE AND ARE NOT NECESSARILY COMPLETE. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE EXISTING UTILITIES BASED UPON AVAILABLE RECORDS. THE CONTRACTOR SHALL DETERMINE THE TYPE, LOCATION, SIZE, AND/OR DEPTH OF THE EXISTING UTILITIES WITHIN THE WORK AREA BEFORE COMMENCING WORK. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT (800) 227-2600 AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION. SEE SPECIAL PROVISIONS FOR CONTRACTOR NOTIFICATION REQUIREMENTS. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR DAMAGED UTILITIES. THE OWNER AND THEIR CONSULTANTS ASSUME NO RESPONSIBILITY FOR ANY UNDERGROUND UTILITIES OR OTHER BURIED OBJECTS WHICH MAY BE ENCOUNTERED AND ARE NOT SHOWN ON THESE PLANS.

4. UNLESS NOTED OTHERWISE ON THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION.

5. THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTRACT AND STANDARD SPECIFICATIONS.

7. THERE SHALL BE NO GRADING OR LAND DISTURBANCE PERFORMED WITH RESPECT TO THE PROJECT BETWEEN DECEMBER 15 AND JULY 1 UNLESS PROPER APPROVALS ARE OBTAINED FROM THE APPROPRIATE AGENCIES.

8. THE CONTRACTOR SHALL MAINTAIN A SET OF PLANS ON THE JOB SHOWING "AS-CONSTRUCTED" CHANGES MADE TO DATE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUPPLY TO THE OWNER A SET OF PLANS, MARKED UP TO THE SATISFACTION OF THE OWNER, REFLECTING THE AS-CONSTRUCTED MODIFICATIONS.

9. AT NO TIME SHALL THE CONTRACTOR UNDERTAKE TO CLOSE OFF ANY EXISTING UTILITY LINES OR OPEN VALVES OR TAKE ANY OTHER ACTION WHICH WOULD AFFECT THE OPERATION OF EXISTING WATER OR SEWER SYSTEMS WITHOUT PRIOR APPROVAL FROM THE OWNER.

10. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM PREVENTIVE DUST CONTROL MEASURES TO ENSURE THAT DUST RESULTING FROM THE CONTRACTOR'S PERFORMANCE OF THE WORK IS CONTROLLED IN CONFORMANCE WITH THE PROVISIONS OF SECTION 107, "LEGAL RELATIONS AND RESPONSIBILITY," OF THE STANDARD SPECIFICATIONS, COUNTY, AND LOCAL ORDINANCES.

11. EROSION CONTROL STRUCTURES SHALL CONTAIN AND CONTROL EROSION CAUSED SILT DEPOSITS AND PROVIDE FOR THE SAFE DISCHARGE OF SILT-FREE RUNOFF FROM THE PROJECT SITE INTO RECEIVING WATER BODIES. SUITABLE SUPPLIES FOR MITIGATING SEDIMENT IMPACTS TO ONSITE WATERWAYS SHALL BE MAINTAINED AT THE PROJECT SITE BY THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES. THE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION "HANDBOOK OF BEST MANAGEMENT PRACTICES." AN INSPECTION SHALL OCCUR PRIOR TO THE COMMENCEMENT OF WORK FOR A PRE-GRADING INSPECTION OF THE INSTALLED TEMPORARY EROSION CONTROL FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PERFORMANCE OF THE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT.

12. CONSTRUCTION LIMITS SHOWN ON THE PLANS DELINEATE BOUNDARIES FOR THE CONTRACTOR'S OPERATIONS OUTSIDE THE COUNTY STREET RIGHT-OF-WAY. CONSTRUCTION LIMIT FENCING SHALL BE ERECTED ALONG THESE BOUNDARIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

13. THE CONTRACTOR SHALL USE ONLY DESIGNATED SPECIFIC SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.

14. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND HIS SUBCONTRACTOR(S) TO EXAMINE THE PROJECT SITE PRIOR TO THE OPENING OF BID PROPOSALS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, SUCH AS THE NATURE AND LOCATION OF THE WORK AND THE GENERAL AND LOCAL CONDITIONS, PARTICULARLY THOSE AFFECTING THE AVAILABILITY OF TRANSPORTATION, THE DISPOSAL, HANDLING, AND STORAGE OF MATERIALS, AVAILABILITY OF LABOR, WATER, ELECTRICITY, ROADS, THE UNCERTAINTIES OF WEATHER, THE CONDITIONS OF THE GROUND, SURFACE AND SUBSURFACE MATERIALS, THE EQUIPMENT AND FACILITIES NEEDED PRIMARILY FOR AND DURING THE PERFORMANCE OF THE WORK, AND THE COSTS THEREOF. ANY FAILURE BY THE CONTRACTOR AND SUBCONTRACTOR(S) TO ACQUAINT HIMSELF WITH ALL THE AVAILABLE INFORMATION WILL NOT RELIEVE HIM FROM RESPONSIBILITY FOR PROPERLY ESTIMATING THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK.

15. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL REQUIRED ENVIRONMENTAL REGULATORY PERMITS HAVE BEEN OBTAINED AND ARE PART OF THE CONSTRUCTION DOCUMENTS AVAILABLE FOR THE CONTRACTOR. POTENTIAL PERMITS INCLUDE, BUT ARE NOT LIMITED TO, THE UNITED STATES ARMY CORPS OF ENGINEERS, NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION, UNITED STATES FISH AND WILDLIFE SERVICE, STOREY AND WASHOE COUNTIES, ETC. THE CONTRACTOR SHALL CONDUCT ALL CONSTRUCTION OPERATIONS TO BE IN CONFORMANCE WITH THE PROVISIONS CONTAINED WITHIN THESE PERMITS. THE CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE ALL PERMITS, LICENSES, INSURANCE POLICIES, ETC., NOT ALREADY OBTAINED BY OWNER, AS MAY BE NECESSARY TO COMPLY WITH STATE AND LOCAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK. SEE SPECIAL PROVISIONS.

16. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE CONTRACT DOCUMENTS FOR ALL SUBMITTALS REQUIRED FOR OWNER REVIEW AND ACCEPTANCE.

17. THE CONSULTANT TEAM AND OVERSEEING ENGINEER RESPONSIBLE FOR PREPARATION OF THESE PLANS AND SPECIFICATIONS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE CONSULTANT TEAM AND OVERSEEING ENGINEER RESPONSIBLE FOR PREPARATION OF THESE PLANS. CONTACT PERSON: GRAHAM MATTHEWS, P.O. BOX 1516, WEAVERVILLE, CALIFORNIA, 96093-1516; TELEPHONE (530) 623-0520.

18. CONTRACTOR'S LICENSE CLASSIFICATION: BIDDERS SHALL BE PROPERLY LICENSED TO PERFORM THE WORK PURSUANT TO THE STATE CONTRACTOR'S LICENSE ACT (NAC 624 ET SEQ.) AND SHALL POSSESS A CLASS A LICENSE OR EQUIVALENT COMBINATION OF CLASSES REQUIRED BY THE CATEGORIES AND TYPE OF WORK INCLUDED IN THE CONTRACT DOCUMENTS AND PLANS. FAILURE OF THE SUCCESSFUL BIDDER TO OBTAIN PROPER AND ADEQUATE LICENSING FOR AN AWARD OF THE CONTRACT SHALL CONSTITUTE A FAILURE TO EXECUTE THE CONTRACT, AND FORFEITURE AS PROVIDED UNDER THAT SECTION.

19. THE VERTICAL DATUM FOR THIS PROJECT IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988. HORIZONTAL DATUM IS BASED ON US STATE PLANE 1983 NEVADA WEST 2703 (NAD83).

20. TOPOGRAPHIC MAPPING WAS PREPARED USING LIDAR METHODS BY TOWILL, INC., SAN FRANCISCO, CA IN 2010 AND SUPPLEMENTARY GROUND SURVEYS BY GRAHAM MATTHEWS & ASSOCIATES, WEAVERVILLE, CA IN 2010- 2012.

21. LINE AND GRADE: THE LAYOUT CONTROL, DIMENSIONS AND CONTOURS SHOWN ARE INTENDED TO PROVIDE THE CONTRACTOR SUFFICIENT INFORMATION TO LAYOUT AND PERFORM INITIAL STAKING OF THE PROJECT. THE STAKES SHALL BE REVIEWED AND ADJUSTED WITH THE CONTRACTING OFFICER PRIOR TO ANY GRADING. ADJUSTMENTS TO THE GRADING WILL BE REQUIRED AS DIRECTED BY THE CONTRACTING OFFICER TO ACHIEVE A FUNCTIONAL, RESTORED CREEK. CAD FILES WILL BE MADE AVAILABLE FOR THE CONTRACTOR'S CONVENIENCE. IN THE EVENT OF A CONFLICT, THE HARD COPY DRAWINGS SHALL GOVERN.

22. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS AND ATTACHED SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE CONSULTANT TEAM RESPONSIBLE FOR THE PLAN PREPARATION. CONTACT PERSON: GRAHAM MATTHEWS, P.O. BOX 1516, WEAVERVILLE, CALIFORNIA, 96093-1516; TELEPHONE (530) 623-0520.

23. NO TREES OR WETLAND VEGETATION SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE PLANS, OR AS DIRECTLY SPECIFIED ON-SITE BY THE PROJECT MANAGEMENT STAFF. ALL TREES CONFLICTING WITH GRADING SHALL BE TRIMMED. NO GRADING SHALL TAKE PLACE WITHIN THE DRIP LINE OF TREES NOT TO BE REMOVED.

24. IF, DURING CONSTRUCTION, ARCHAEOLOGICAL REMAINS ARE ENCOUNTERED, CONSTRUCTION IN THE VICINITY SHALL BE HALTED, AND THE STATE OFFICE OF HISTORIC PRESERVATION AND A QUALIFIED ARCHEOLOGIST SHALL BE NOTIFIED IMMEDIATELY.

25. PERMIT CONDITIONS MAY CONTAIN SPECIFIC REQUIREMENTS FOR THE CONTROL OF OFF-SITE TURBIDITY FROM PROJECT OPERATIONS. TURBIDITY WILL BE MONITORED ON A FREQUENT BASIS BY THE PROJECT MANAGEMENT AND INSPECTION STAFF ON-SITE. TURBIDITY AMOUNTS IN EXCESS OF THE PERMITTED AMOUNT AND/OR DURATIONS WILL CAUSE WORK TO BE STOPPED UNTIL IMPROVED PRACTICES ARE IN EFFECT AND THE PROBLEMS CONTROLLED. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR ANY PROJECT DELAYS THAT OCCUR BY NATURE OF THIS FAILURE TO ADEQUATELY CONTROL SEDIMENT ON-SITE.

26. THE CONTRACTOR SHALL CONFORM TO THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDERS PERTAINING TO EXCAVATIONS AND TRENCHES

GENERAL GRADING NOTES:

1. GENERAL SITE GRADING: ALL GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND ALL APPLICABLE LOCAL, COUNTY, AND STATE GRADING ORDINANCES.

2. EARTHWORK QUANTITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND ARE FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY. THE ACTUAL AMOUNT OF EARTH MOVED WILL VARY DEPENDING ON CONDITIONS IN THE FIELD INCLUDING BUT NOT LIMITED TO COMPACTION, CONSOLIDATION, STRIPPING, AND THE CONTRACTOR'S METHOD OF OPERATION.

3. THE SITE SHALL BE MAINTAINED IN AN ORDERLY FASHION. FOLLOWING THE CESSATION OF CONSTRUCTION ACTIVITY, ALL CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE OR PLACED ON-SITE AS DIRECTED BY THE OWNER.

PROJECT TOTAL CUT/FILL QUANTITIES

COUNTY	CUT VOLUME (CY)	FILL VOLUME (CY)	NET VOLUME (CY)
WASHOE	92,000	200	91,800
STOREY	13,200	0	13,200
TOTAL	105,200	200	105,000

NOTE: CUT/FILL VOLUMES ASSUME SOLID VOLUME

BOULDER/COBBLE/GRAVEL QUANTITIES

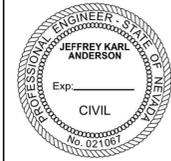
PROJECT ELEMENT	MATERIAL TYPE	TOTAL VOLUME (CY)	TOTAL WEIGHT (TON)
BOULDER	1 TO 2 TON ROCK	2310	3601
GRAVEL/COBBLE MIX	2 TO 12 INCH GRAVEL/COBBLE	1900	3386

NOTE: BOULDER, COBBLE, GRAVEL VOLUMES ASSUME SOLID VOLUME; QUANTITIES ASSUME 30% VOIDS FOR BOULDERS AND 20% VOIDS FOR GRAVEL/COBBLE, AND 165 LBS/CY.

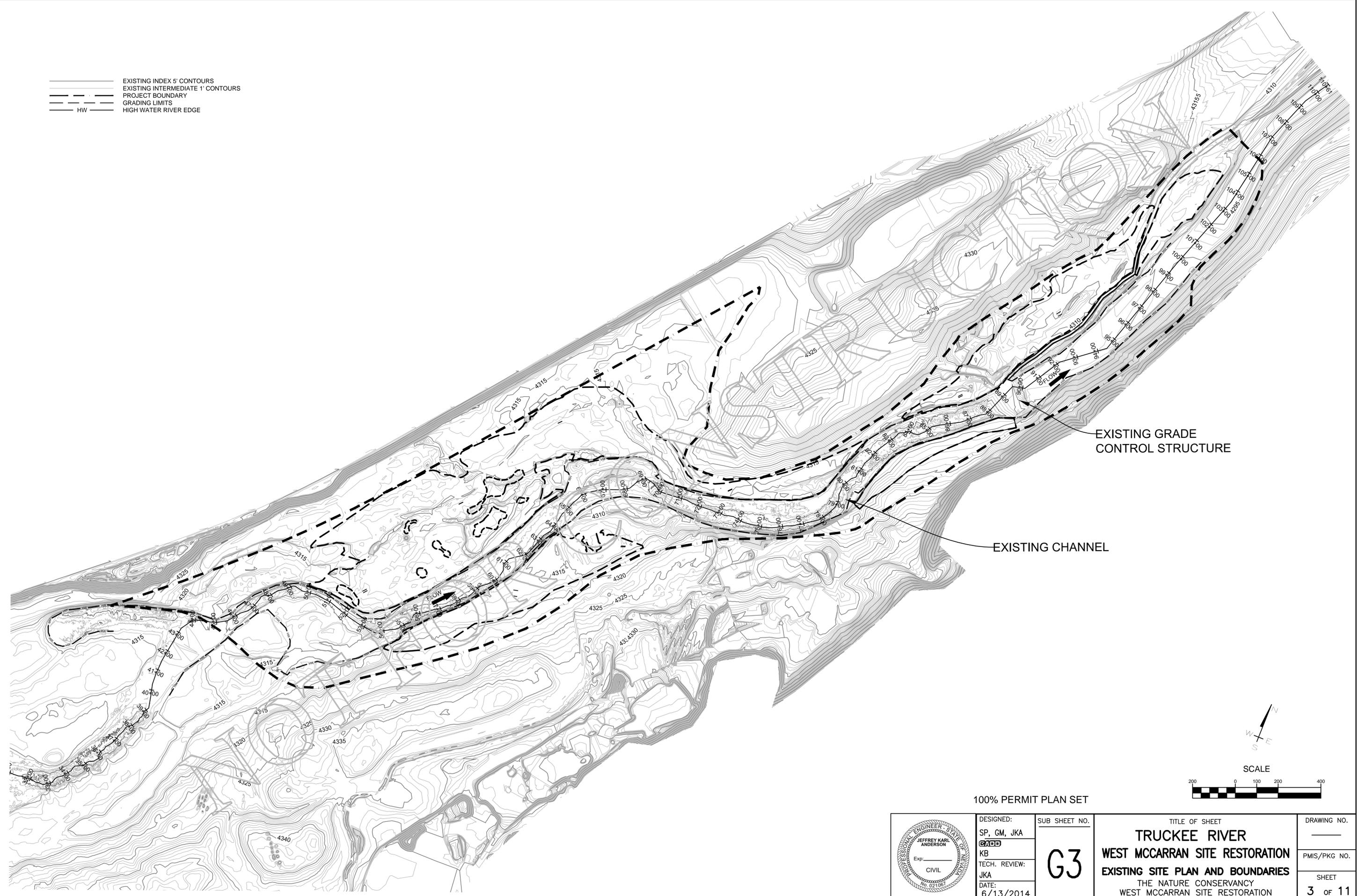
PROJECT CONTROL POINTS

CP #	NORTHING (NAD83, FT)	EASTING (NAD83, FT)	ELEVATION (NAVD88, FT)	TYPE
215	14877034.805	2356540.942	4264.665	REBAR
216	14876798.940	2355860.311	4281.947	REBAR
217	14876972.487	2355984.875	4282.668	REBAR
218	14876984.429	2354730.203	4271.237	REBAR

100% PERMIT PLAN SET

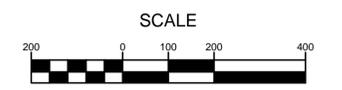
	DESIGNED: SP, GM, JKA	SUB SHEET NO. G2	TITLE OF SHEET TRUCKEE RIVER WEST MCCARRAN SITE RESTORATION NOTES THE NATURE CONSERVANCY WEST MCCARRAN SITE RESTORATION	DRAWING NO. _____
	TECH. REVIEW: JKA		PMIS/PKG NO. _____	
	DATE: 6/13/2014		SHEET 2 OF 11	

_____ EXISTING INDEX 5' CONTOURS
 _____ EXISTING INTERMEDIATE 1' CONTOURS
 _____ PROJECT BOUNDARY
 _____ GRADING LIMITS
 _____ HW _____ HIGH WATER RIVER EDGE



EXISTING GRADE CONTROL STRUCTURE

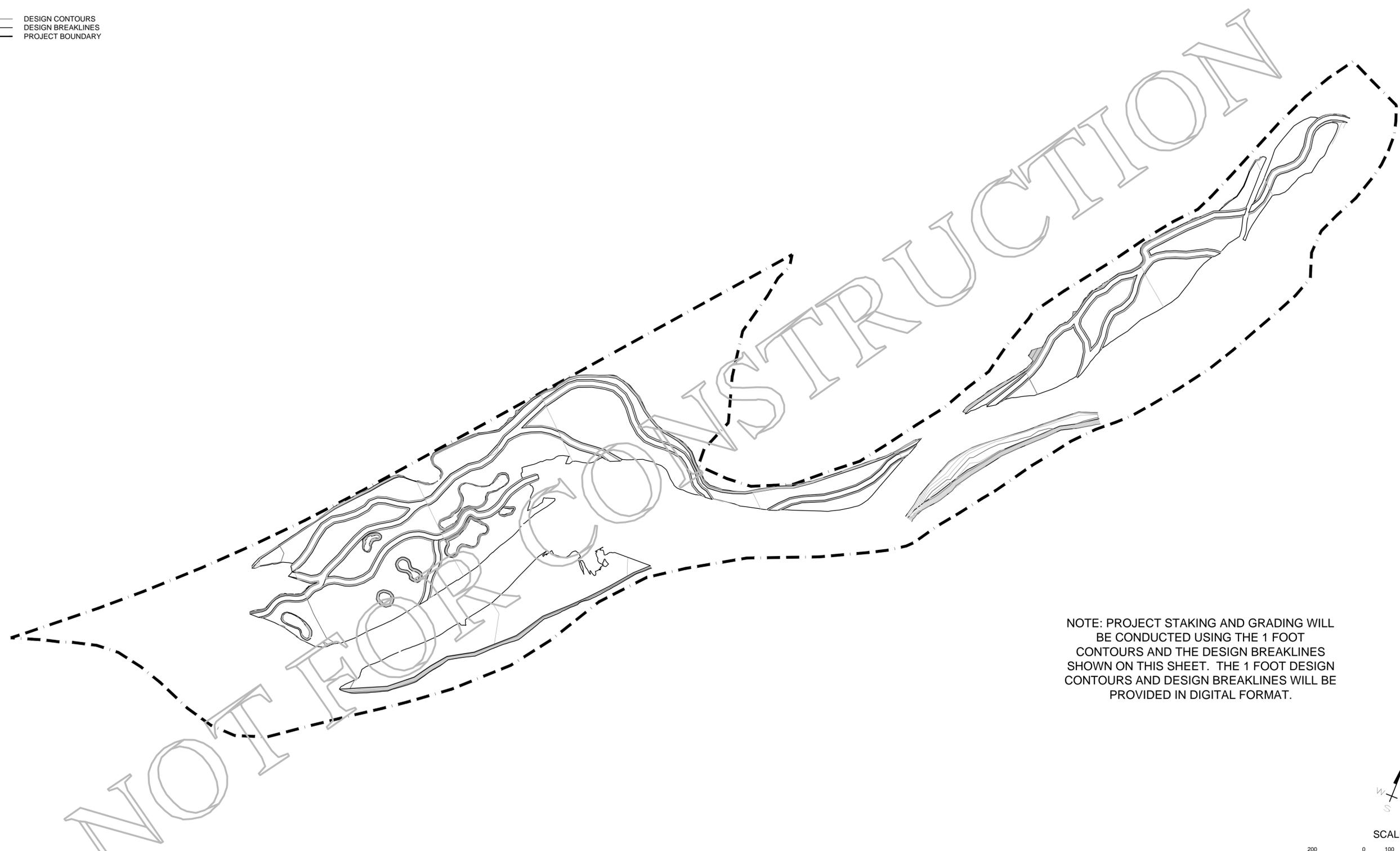
EXISTING CHANNEL



100% PERMIT PLAN SET

	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
	SP, GM, JKA	<h1>G3</h1>	TRUCKEE RIVER WEST MCCARRAN SITE RESTORATION EXISTING SITE PLAN AND BOUNDARIES THE NATURE CONSERVANCY WEST MCCARRAN SITE RESTORATION	_____
	KB			PMS/PKG NO.
	TECH. REVIEW:			JKA
DATE:	6/13/2014			3 OF 11

_____ DESIGN CONTOURS
 _____ DESIGN BREAKLINES
 - - - - - PROJECT BOUNDARY



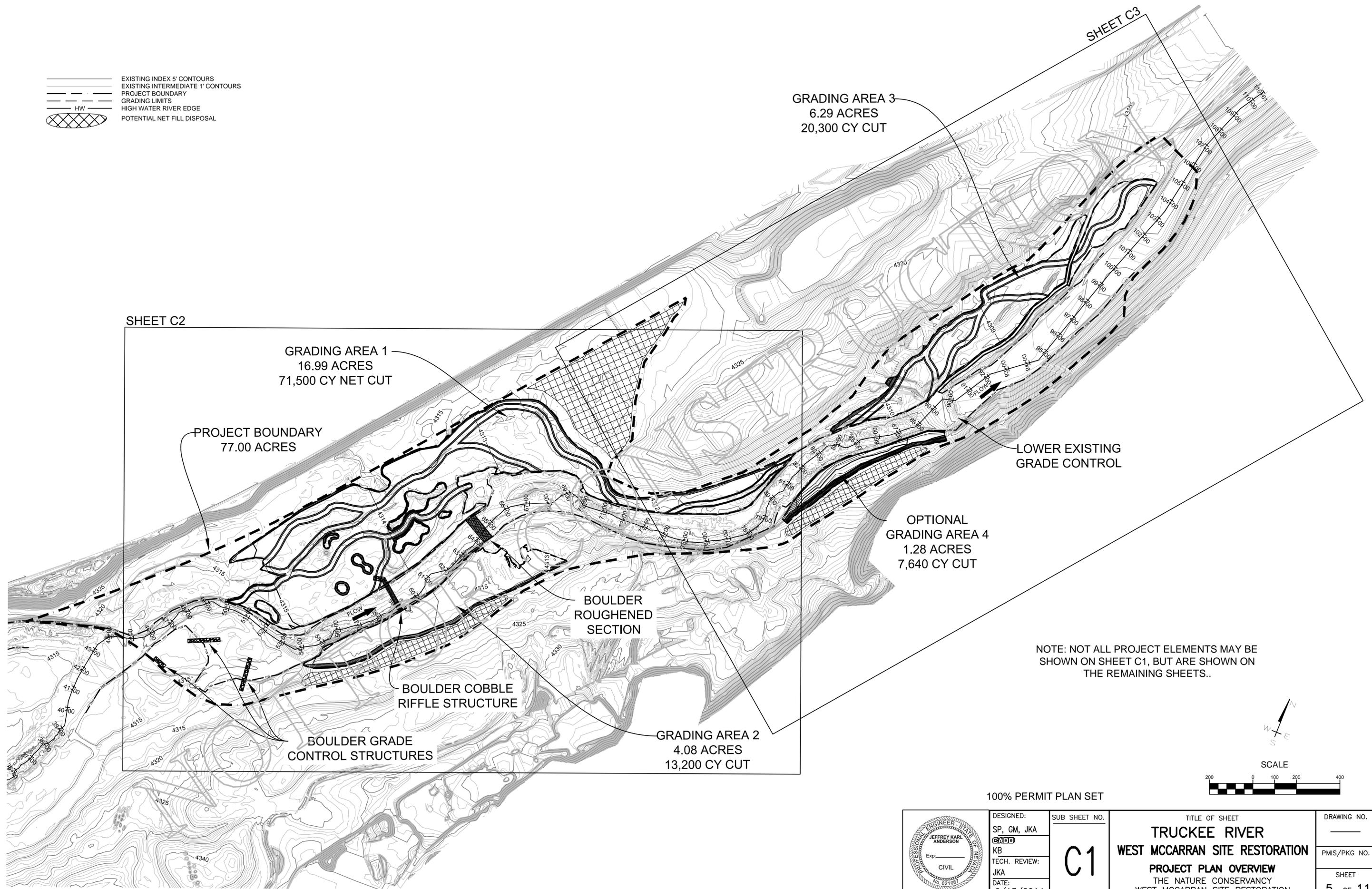
NOTE: PROJECT STAKING AND GRADING WILL
 BE CONDUCTED USING THE 1 FOOT
 CONTOURS AND THE DESIGN BREAKLINES
 SHOWN ON THIS SHEET. THE 1 FOOT DESIGN
 CONTOURS AND DESIGN BREAKLINES WILL BE
 PROVIDED IN DIGITAL FORMAT.



100% PERMIT PLAN SET

	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
	SP, GM, JKA	G4	TRUCKEE RIVER WEST MCCARRAN SITE RESTORATION DESIGN BREAKLINES AND CONTOURS THE NATURE CONSERVANCY WEST MCCARRAN SITE RESTORATION	_____
	KB			PMIS/PKG NO.
	TECH. REVIEW:			JKA
DATE:	6/13/2014	4 OF 11		

-  EXISTING INDEX 5' CONTOURS
-  EXISTING INTERMEDIATE 1' CONTOURS
-  PROJECT BOUNDARY
-  GRADING LIMITS
-  HIGH WATER RIVER EDGE
-  POTENTIAL NET FILL DISPOSAL



GRADING AREA 3
6.29 ACRES
20,300 CY CUT

GRADING AREA 1
16.99 ACRES
71,500 CY NET CUT

PROJECT BOUNDARY
77.00 ACRES

LOWER EXISTING
GRADE CONTROL

OPTIONAL
GRADING AREA 4
1.28 ACRES
7,640 CY CUT

BOULDER
ROUGHENED
SECTION

NOTE: NOT ALL PROJECT ELEMENTS MAY BE
SHOWN ON SHEET C1, BUT ARE SHOWN ON
THE REMAINING SHEETS..

BOULDER COBBLE
RIFFLE STRUCTURE

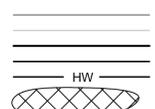
GRADING AREA 2
4.08 ACRES
13,200 CY CUT

BOULDER GRADE
CONTROL STRUCTURES



100% PERMIT PLAN SET

	DESIGNED: SP, GM, JKA	SUB SHEET NO. <h1 style="font-size: 2em;">C1</h1>	TITLE OF SHEET	DRAWING NO.
	TECH. REVIEW: JKA		<h2 style="font-size: 1.2em;">TRUCKEE RIVER WEST MCCARRAN SITE RESTORATION PROJECT PLAN OVERVIEW</h2> <p style="font-size: 0.8em;">THE NATURE CONSERVANCY WEST MCCARRAN SITE RESTORATION</p>	PMS/PKG NO.
	DATE: 6/13/2014			SHEET
				5 of 11


 EXISTING INDEX 5' CONTOURS
 EXISTING INTERMEDIATE 1' CONTOURS
 DESIGN INDEX 5' CONTOURS
 DESIGN INTERMEDIATE 1' CONTOURS
 HW HIGH WATER RIVER EDGE

 POTENTIAL NET FILL DISPOSAL

NOTE: SCOUR CHANNELS ARE SHALLOW CHANNELS CONSTRUCTED ON THE RESTORED FLOODPLAINS. THE SCOUR CHANNELS WILL ONLY CONTAIN WATER DURING FLOOD FLOWS, AND ARE NOT INTENDED TO BE BACKWATERED OR CONTAIN WATER AT LOW-FLOW CONDITIONS.

Approximate Volume
 Left Bank Cut 71,500 Cubic Yards
 Right Bank Cut 13,200 Cubic Yards

BOULDER GRADE CONTROL STRUCTURE 4, TO BE LOCATED AND PLACED AS DIRECTED IN FIELD (SEE DETAIL 1, SHEET 11)

SCOUR CHANNELS (TYPICAL)

BOULDER ROUGHENED SECTION, TO BE LOCATED AND PLACED AS DIRECTED IN FIELD.

SCOUR CHANNELS (TYPICAL)

EXISTING CHANNEL ALIGNMENT

FLOW

BOULDER/COBBLE/GRAVEL RIFFLE STRUCTURE TO BE LOCATED AND PLACED AS DIRECTED IN THE FIELD (SEE DETAIL 2, SHEET 11)

TIE RIFFLE BOULDERS INTO EXISTING RIGHT BANK ROCK SLOPE PROTECTION

BOULDER GRADE CONTROL STRUCTURE 1, TO BE LOCATED AND PLACED AS DIRECTED IN FIELD (SEE DETAIL 1, SHEET 11)

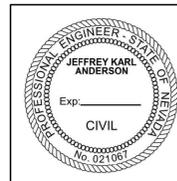
BOULDER GRADE CONTROL STRUCTURE 2, TO BE LOCATED AND PLACED AS DIRECTED IN FIELD (SEE DETAIL 1, SHEET 11)

BOULDER GRADE CONTROL STRUCTURE 3 TO BE LOCATED AND PLACED AS DIRECTED IN FIELD (SEE DETAIL 1, SHEET 11)

SCALE



100% PERMIT PLAN SET



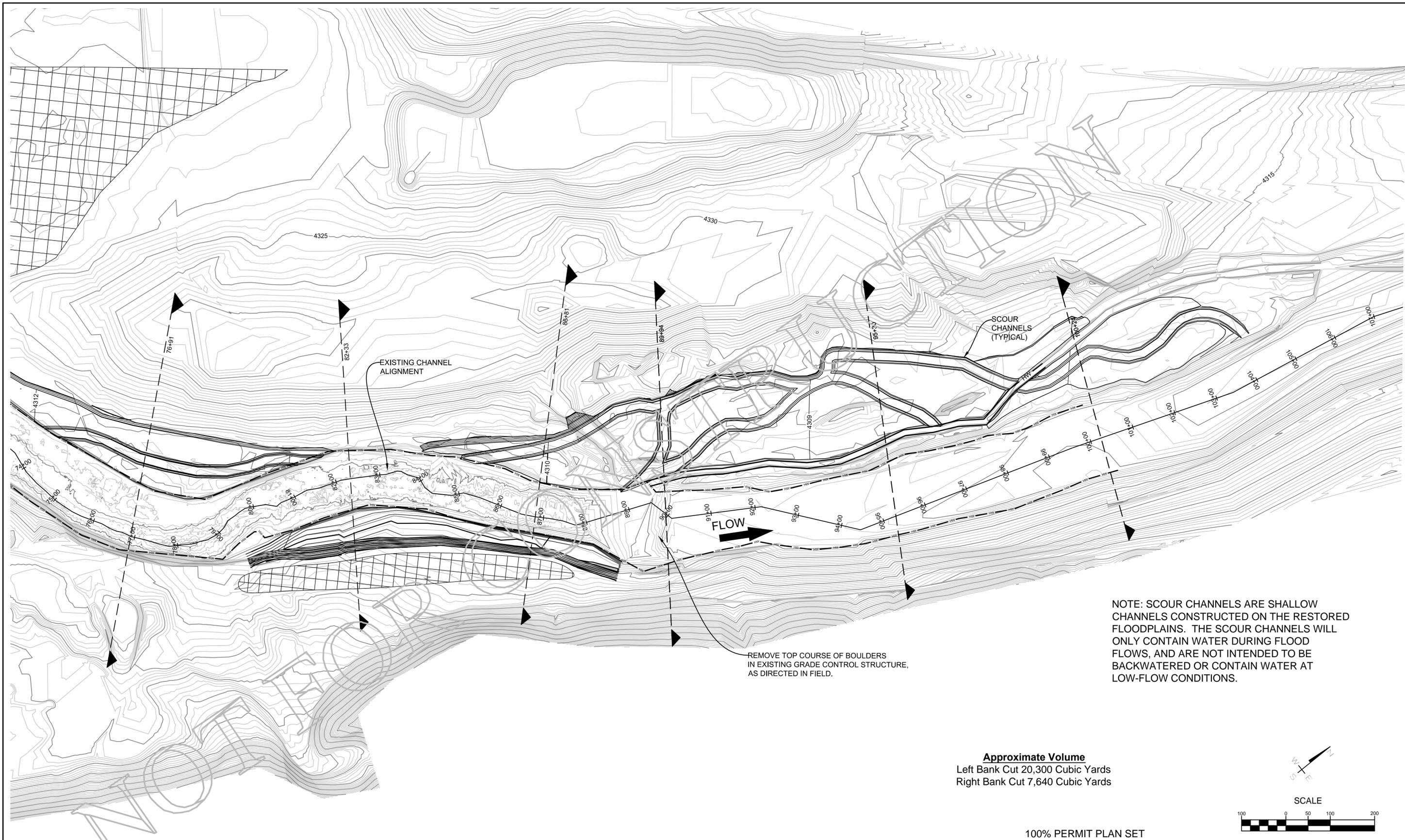
DESIGNED:
 SP, GM, JKA
 KB
 TECH. REVIEW:
 JKA
 DATE:
 6/13/2014

SUB SHEET NO.

C2

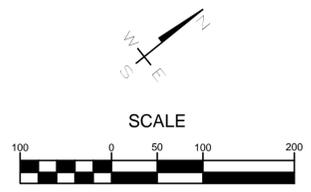
TITLE OF SHEET
TRUCKEE RIVER
WEST MCCARRAN SITE RESTORATION
UPSTREAM GRADING PLAN
 THE NATURE CONSERVANCY
 WEST MCCARRAN SITE RESTORATION

DRAWING NO.
 PMS/PKG NO.
 SHEET
6 of 11



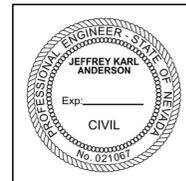
NOTE: SCOUR CHANNELS ARE SHALLOW CHANNELS CONSTRUCTED ON THE RESTORED FLOODPLAINS. THE SCOUR CHANNELS WILL ONLY CONTAIN WATER DURING FLOOD FLOWS, AND ARE NOT INTENDED TO BE BACKWATERED OR CONTAIN WATER AT LOW-FLOW CONDITIONS.

Approximate Volume
 Left Bank Cut 20,300 Cubic Yards
 Right Bank Cut 7,640 Cubic Yards



100% PERMIT PLAN SET

- EXISTING INDEX 5' CONTOURS
- EXISTING INTERMEDIATE 1' CONTOURS
- DESIGN INDEX 5' CONTOURS
- DESIGN INTERMEDIATE 1' CONTOURS
- HW HIGH WATER RIVER EDGE
- ▨ POTENTIAL NET FILL DISPOSAL



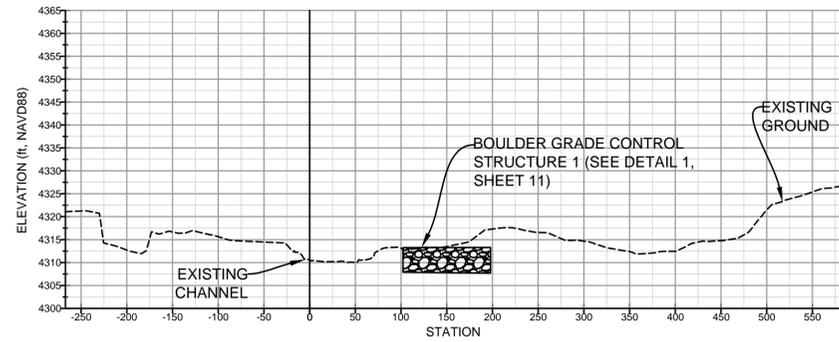
DESIGNED:
 SP, GM, JKA
 KB
 TECH. REVIEW:
 JKA
 DATE:
 6/13/2014

SUB SHEET NO.
C3

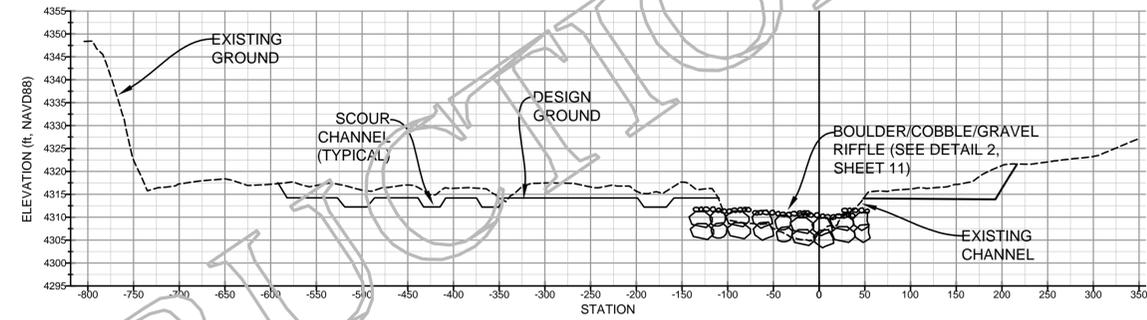
TITLE OF SHEET
**TRUCKEE RIVER
 WEST MCCARRAN SITE RESTORATION
 DOWNSTREAM GRADING PLAN**
 THE NATURE CONSERVANCY
 WEST MCCARRAN SITE RESTORATION

DRAWING NO.
 PMIS/PKG NO.
 SHEET
7 of 11

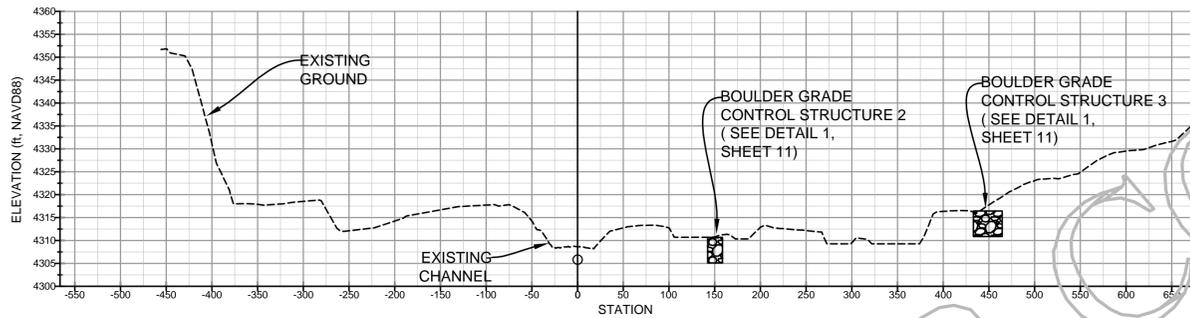
CROSS SECTION 45+53



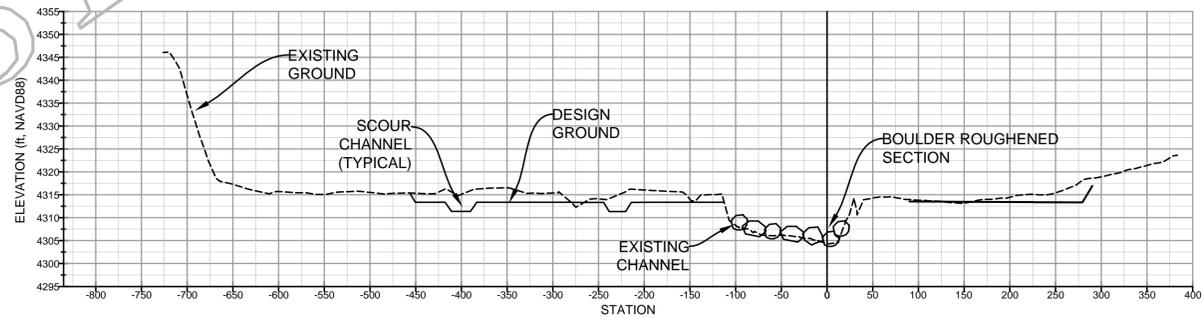
CROSS SECTION 59+01



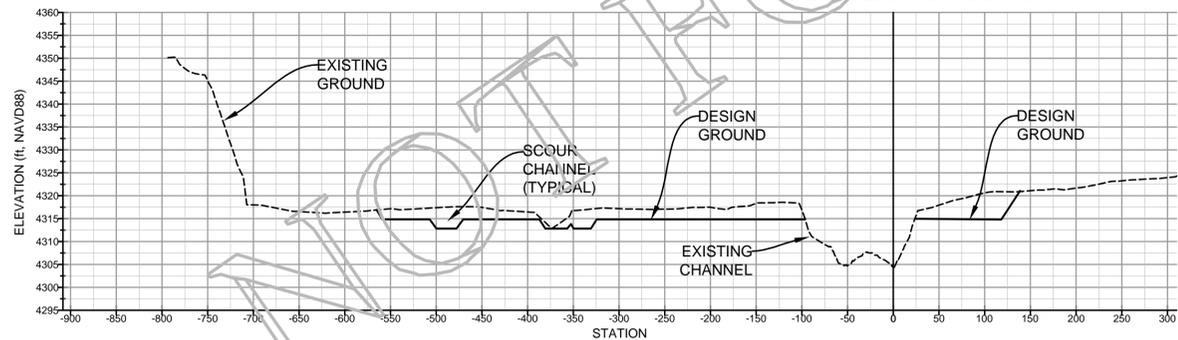
CROSS SECTION 48+57



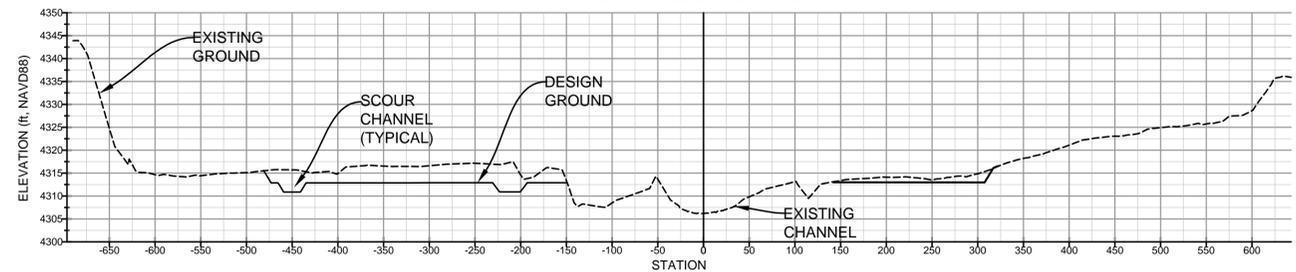
CROSS SECTION 64+20



CROSS SECTION 55+15



CROSS SECTION 66+93



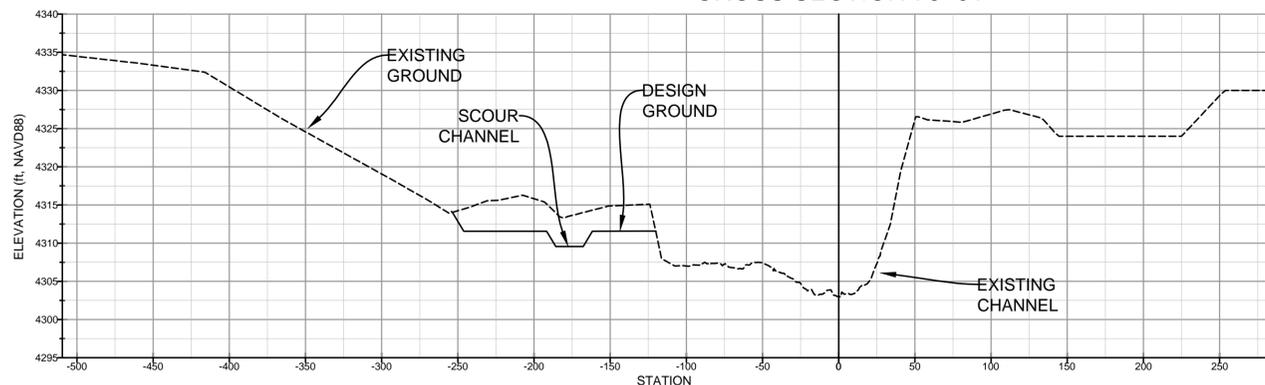
HORIZONTAL SCALE: 1"=100'
VERTICAL SCALE: 1"=500'



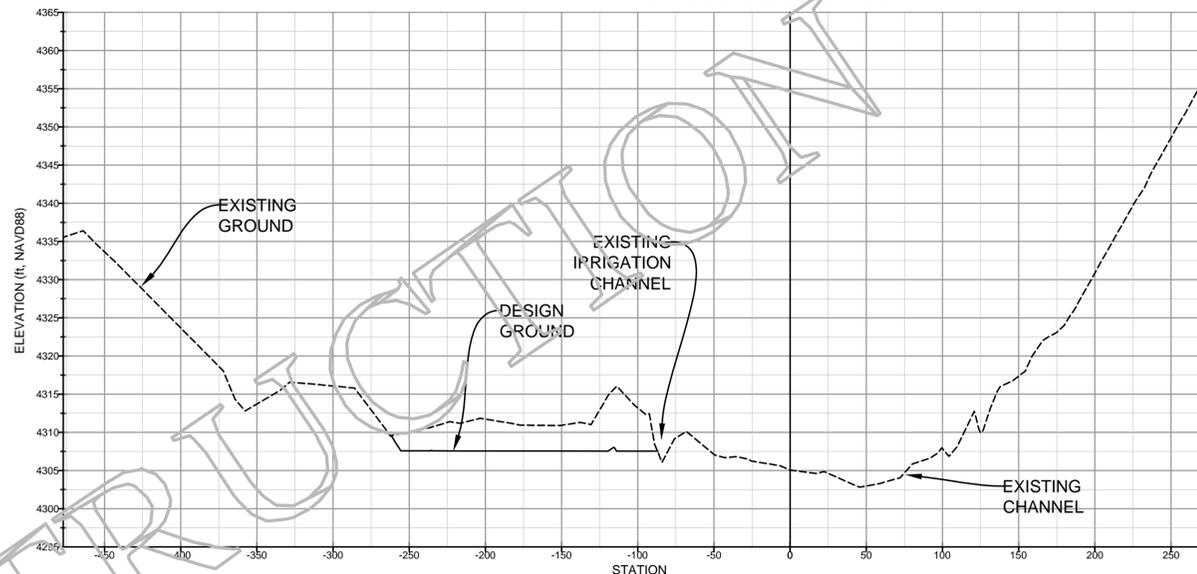
100% PERMIT PLAN SET

	DESIGNED: SP, GM, JKA	SUB SHEET NO. C4	TITLE OF SHEET TRUCKEE RIVER WEST MCCARRAN SITE RESTORATION UPSTREAM CROSS SECTIONS	DRAWING NO.
	TECH. REVIEW: JKA			PMIS/PKG NO.
	DATE: 6/13/2014		THE NATURE CONSERVANCY WEST MCCARRAN SITE RESTORATION	SHEET 8 OF 11

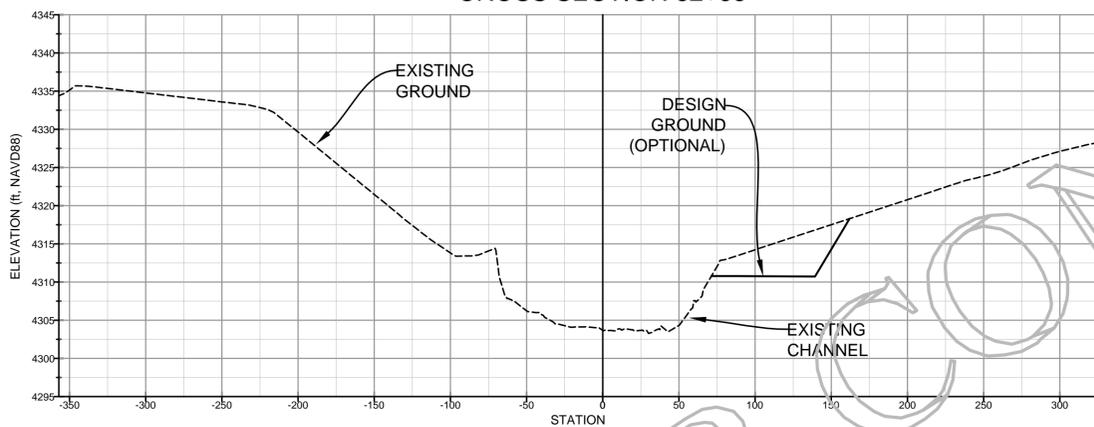
CROSS SECTION 76+91



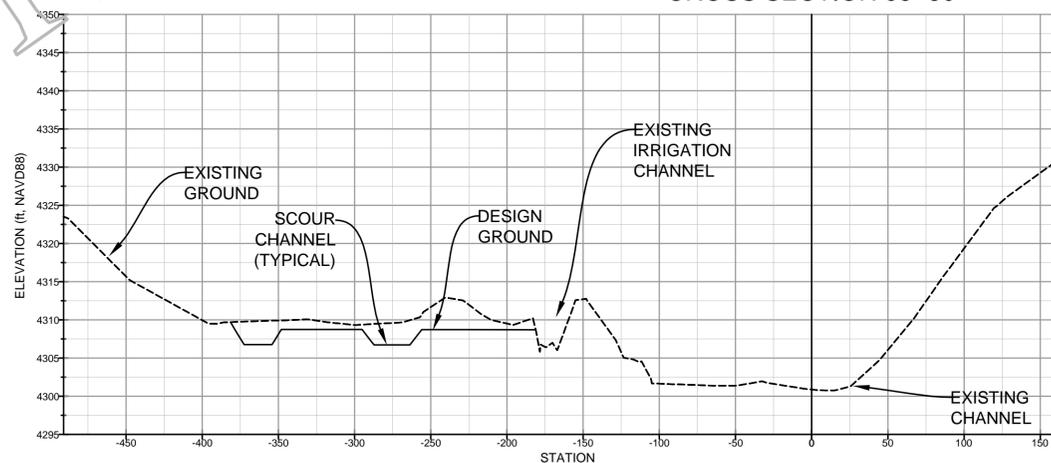
CROSS SECTION 89+94



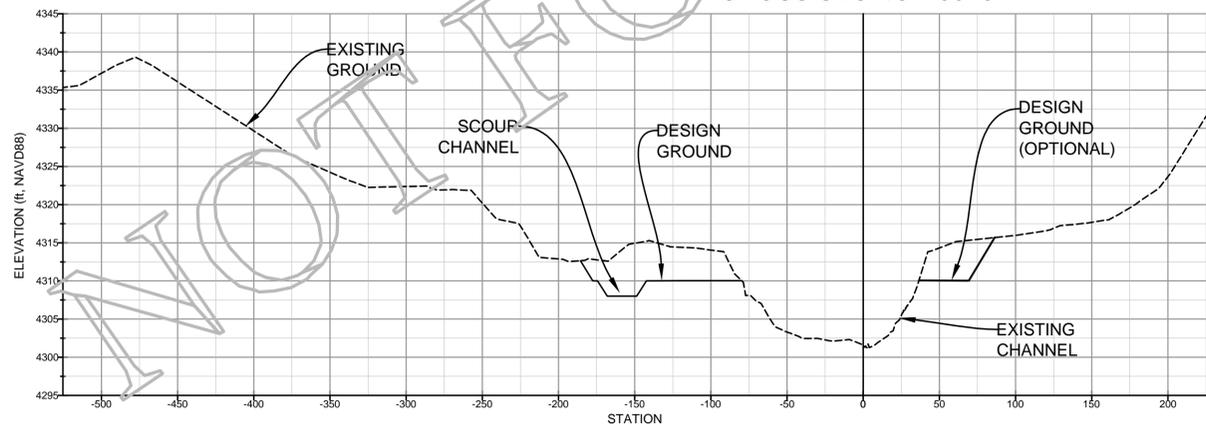
CROSS SECTION 82+33



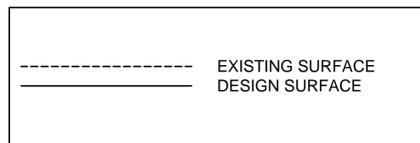
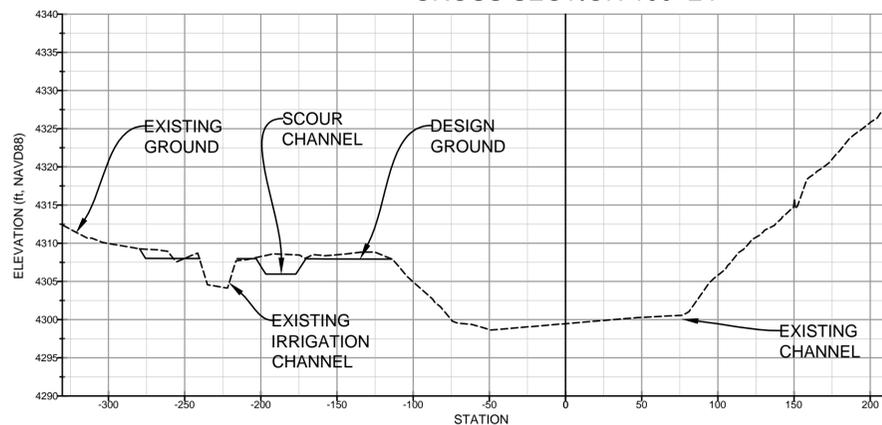
CROSS SECTION 95+30



CROSS SECTION 86+81

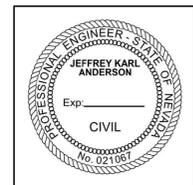


CROSS SECTION 100+24



HORIZONTAL SCALE: 1"=60'
 VERTICAL SCALE: 1"=300'

100% PERMIT PLAN SET



DESIGNED:
 SP, GM, JKA
 KB
 TECH. REVIEW:
 JKA
 DATE:
 6/13/2014

SUB SHEET NO.
C5

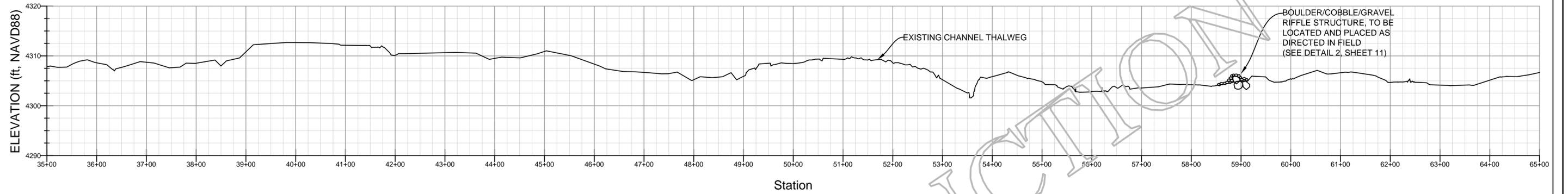
TITLE OF SHEET
**TRUCKEE RIVER
 WEST MCCARRAN SITE RESTORATION
 DOWNSTREAM CROSS SECTIONS**
 THE NATURE CONSERVANCY
 WEST MCCARRAN SITE RESTORATION

DRAWING NO.

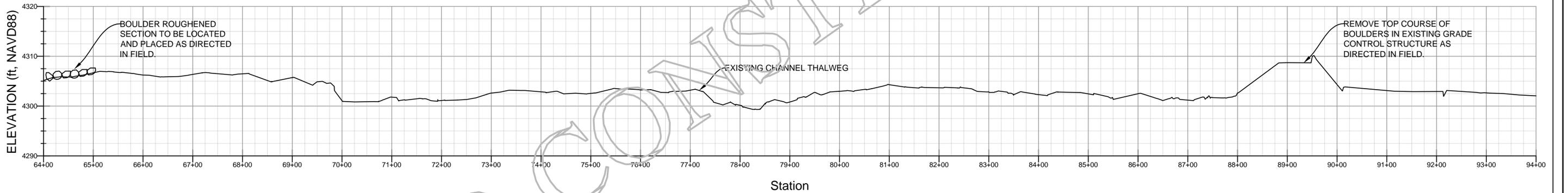
 PMS/PKG NO.

 SHEET
9 of 11

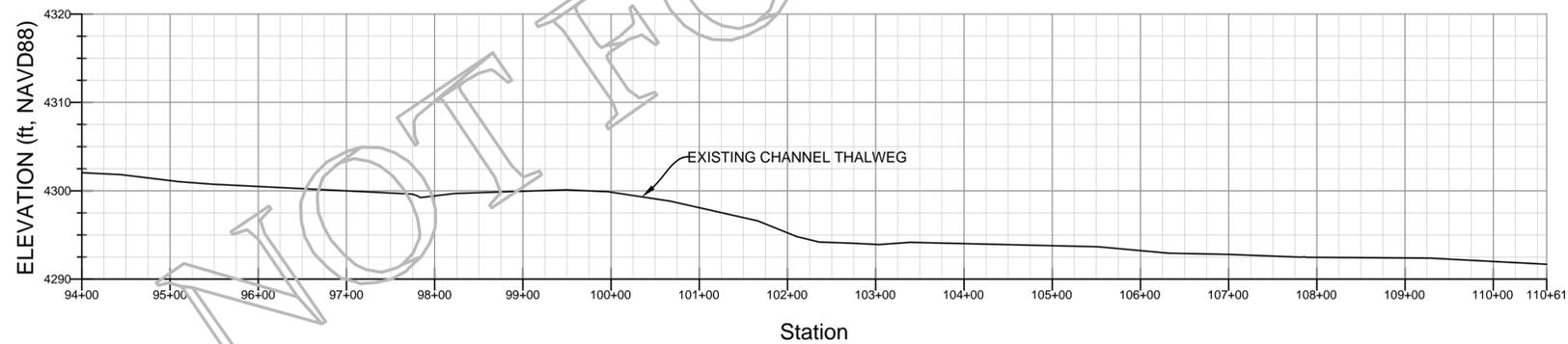
TRUCKEE MCCARRAN THALWEG



TRUCKEE MCCARRAN THALWEG

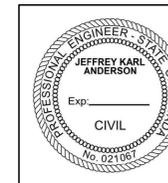


TRUCKEE MCCARRAN THALWEG



HORIZONTAL SCALE: 1"=100'
VERTICAL SCALE: 1"=1000'

100% PERMIT PLAN SET

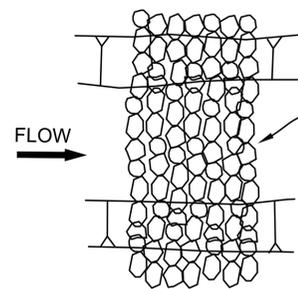


DESIGNED:
SP, GM, JKA
KB
TECH. REVIEW:
JKA
DATE:
6/13/2014

SUB SHEET NO.
C6

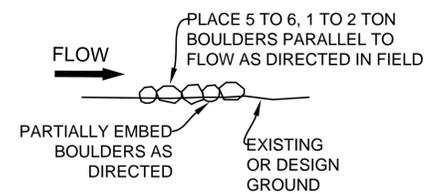
TITLE OF SHEET
**TRUCKEE RIVER
WEST MCCARRAN SITE RESTORATION
THALWEG PROFILE**
THE NATURE CONSERVANCY
WEST MCCARRAN SITE RESTORATION

DRAWING NO.
PMIS/PKG NO.
SHEET
10 of 11

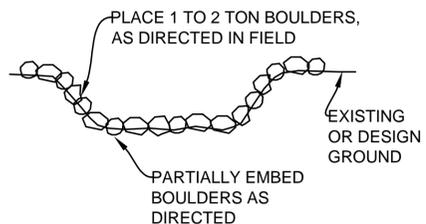


PLAN VIEW

NOTE: GRADE CONTROL STRUCTURE TO BE LOCATED AND CONSTRUCTED AS DIRECTED IN FIELD



SIDE VIEW

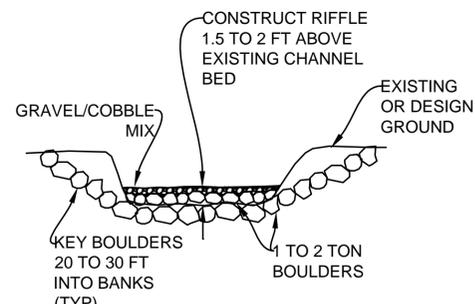


FRONT VIEW

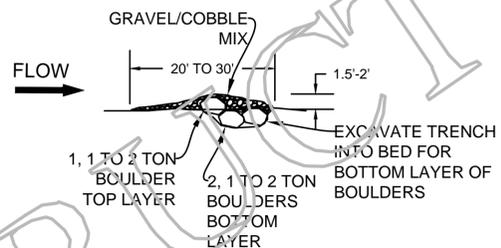
DETAIL 1

BOULDER GRADE CONTROL STRUCTURE

SCALE= NTS



FRONT VIEW



SIDE VIEW

NOTE: RIFFLE TO BE LOCATED AND CONSTRUCTED AS DIRECTED IN FIELD

DETAIL 2

BOULDER/COBBLE/GRAVEL RIFFLE

SCALE= NTS

NOT FOR CONSTRUCTION

100% PERMIT PLAN SET

	DESIGNED:	SP, GM, JKA	C7	TITLE OF SHEET	DRAWING NO.	
	TECH. REVIEW:	JKA		TRUCKEE RIVER WEST MCCARRAN SITE RESTORATION DETAILS	_____	
	DATE:	6/13/2014			PMIS/PKG NO.	_____
					SHEET	11 OF 11