

**Environmental Stewardship Plan for the Yellow Creek Shooting Range
Exemption SRMA (Special Recreation Management Area)
Lawrence County, South Dakota**



**U.S. Department of the Interior
Bureau of Land Management
South Dakota Field Office
309 Bonanza Street
Belle Fourche, South Dakota 57717**

August 2024

TABLE OF CONTENTS

Site Assessment

Description of the Range and Support Facilities

Existing or Potential Environmental Conditions

Plan of Action

Potential Management Alternatives

Selection of Management Alternatives

Alternatives Selected

Management Actions

Plan Implementation

Schedule for Implementation

Responsibilities

Measuring Success

Guide for Periodic Assessments and Adjustments to the Plan

Next Steps

References

Appendix A – Range Inspection Forms

Form A-1: Rifle Range Monitoring Form

Form A-2: Soil pH Monitoring Form

Form A-3: Photo Point Monitoring Form

Appendix B – Shooting Range Site Plan

ENVIRONMENTAL STEWARDSHIP PLAN – YELLOW CREEK SHOOTING RANGE

In an ongoing effort to properly manage the environmental resources at the Yellow Creek Shooting Range, the Bureau of Land Management (BLM), South Dakota Field Office has developed this Environmental Stewardship Plan (ESP). The goals of the ESP, along with the actions necessary to meet the goals, are detailed in this document. A copy of this ESP shall be kept on file at the BLM, South Dakota Field Office and will be incorporated into the Recreation and Public Purpose Lease with the City of Deadwood, SD.

The ESP is a dynamic plan intended to be supplemented throughout the life of the Yellow Creek Shooting Range, as required by annual monitoring described in the Operation Plan to be completed at the time of site operation.

The purpose of this document is to:

- Identify issues of potential environmental concern that may exist or develop at the Yellow Creek Shooting Range.
- Identify, evaluate, and prioritize appropriate actions to manage these issues.
- Generate a list of short- and long-term action items and the steps necessary to implement each item.
- Develop a schedule for implementation of these actions.
- Identify ways the success of any site modifications or changes in site management techniques will be measured; and
- Annually evaluate the progress towards environmental stewardship goals, and identify goals, actions, and any appropriate revision to the ESP for subsequent years.

Environmental Goals

- Maintain metals levels in soils below BLM’s 2021 Risk-Based Screening Levels for Recreational Shooting Sites on Bureau of Land Management Properties (BLM 2021) as shown in Table 1.
- Prevent migration of lead and other metals off-site through ground water and surface water runoff.
- Maintain and improve existing vegetation in undeveloped areas.
- Contain and remove trash and debris; and
- To prevent rainwater and snowmelt from dissolving and transporting lead and other metals from firearms use, maintain soil pH of 6.5 to 8.5 within the firing line and impact areas. Minimize erosion of earthen backstop berms.
- Reduce noise levels with shooting range design and materials.

Table 1. BLM Proposed Conditional RBSLs (BLM 2021).

Constituent to analyze	BLM Law Enforcement and Oversight Staff (250 days/year)	BLM Staff and Volunteers Performing Trash and Debris Removal (2 days/year)	BLM Recreational Shooter (25 days/year)	BLM Shooter Visitor (Child 0–7 Years Old) (25 days/year)
	Proposed Conditional RBSL mg/kg			
Antimony	2,820	176,250	56,400	12,936
Arsenic	600	37,500	12,000	2,752
Copper	282,000	>1,000,000	>1,000,000	>1,000,000
Lead	882	4,727	2,521	1,606
Zinc	>1,000,000	>1,000,000	>1,000,000	>1,000,000

SITE ASSESSMENT

Description of the Range and Support Facilities

The ESP includes the evaluation of existing site conditions and identification of potential environmental issues that may conflict with the use of the property as a shooting range.

The Yellow Creek Shooting Range would be a developed site located approximately 5 miles south of Deadwood, SD on 14 acres of land managed by the U.S. Department of the Interior, Bureau of Land Management, South Dakota Field Office. The range is leased under the Recreation and Public Purposes Act by the City of Deadwood to be managed as a public shooting range. It includes approximately 7 acres of range surrounded by another 7 acres of Hazardous Exclusion Area identified by a perimeter fence for public safety and livestock exclusion.

The site would consist of a parking area, public information kiosk, vault toilet, concrete shooting benches, replaceable target stands, (2) 50-yard pistol ranges, 100-yard and 200-yard rifle ranges, and firing line structures to help with noise reduction. The primary backstops are earthen berms lined with fine material for efficient metals removal.

Additional site assessment details are discussed in the National Environmental Policy Act (NEPA) environmental assessment and Yellow Creek shooting area review and update of Initial Investigation Report Real Property Disposal (Phase 1 ESA) for the Yellow Creek Shooting Range.

Existing or Potential Environmental Conditions

Existing or potential environmental issues or areas of concern have been identified for this site and are discussed below. Implementation of possible management alternatives to these issues is discussed later in this ESP.

- The current backstops and backstop materials do not meet NRA or EPA BMP guidance (NRA 2012, EPA 2005).
- The earthen backstop berms are unvegetated, susceptible to increased erosion, and may periodically need repair.
- Lead and other metals may currently exist or accumulate at levels exceeding 2021 BLM RBSL's (BLM 2022).
- Trash and debris may impact public safety and health.
- Shooting at non-designated targets or outside designated shooting areas may result in vegetation destruction, public safety hazards and non-containment of lead.
- Vandalism or destruction of facilities.

PLAN OF ACTION

Potential Management Alternatives

Alternative 1 Work on all environmental action items simultaneously.

Alternative 2 Work on one action item this year and address all others later.

Alternative 3 Choose a few goals that can be implemented immediately and begin planning the longer-term alternatives.

ACTION ITEMS

1. Reconstruct shooting backstops to NRA standards according to site plan (Attached). Onsite materials that were processed during lead removal will be utilized on the berm faces.
2. Vegetate the earthen backstop berms to minimize erosion.

3. Install surface runoff and erosion control features, such as gravelling the parking area and vehicle routes, revegetation, etc.
4. Apply lime and/or phosphate to impact areas if soil test analysis determines it is necessary. Apply clay layer or gravel to base of earthen berms to minimize or prevent lead and moisture mixing.
5. Begin planning to monitor lead and other metals accumulation at the range. Recover and recycle lead and other metals from range on a regular basis when monitoring indicates RBSL's are exceeded.
6. Construct perimeter fencing identified in the Environmental Assessment. A three-panel wooden fence along the road, a 4-wire wildlife friendly barbed wire fence (bottom wire smooth) along the southern perimeter, and a buck-and-rail fence around the perimeter.
7. Install trash cans to minimize trash and debris across the landscape. Install education and awareness signs to pick up all trash.
8. Establish designated targets, shooting direction, and educational displays or kiosks. Ensure onsite signs include messaging regarding potential for elevated lead levels, including recommendations for hygiene (i.e., Hand washing) and not eating or smoking on site.
9. Construct shooting range fire line structure to reduce noise levels.

Selection of Management Alternative to be Implemented and Action Items

Alternative Selected

Based on the environmental stewardship goals of this ESP, the environmental benefits provided and the current availability of funds, the following priorities were chosen for the first calendar year once the R&PP lease is in place. The choices were made to first address the most pressing environmental concerns and those most easily resolved, and then initiate management practices that would create longer-term environmental benefits.

Alternative 3 Choose a few goals (Action Items) that can be implemented immediately and begin planning the longer-term alternatives.

1. Reconstruct shooting backstops to NRA standards according to the attached site plan.
2. Vegetate the earthen backstop berms to minimize erosion.
3. Install surface runoff and erosion control features, such as gravelling the parking area and vehicle routes, revegetation, etc.
6. Construct perimeter fencing identified in the Environmental Assessment.
7. Install trash cans to minimize trash and debris across the landscape. Install education and awareness signs to pick up all trash.
8. Establish designated targets, shooting direction, and educational displays or kiosks. Ensure onsite signs include messaging regarding potential for elevated lead levels, including recommendations for hygiene (i.e., hand washing) and not eating or smoking on site.
9. Construct shooting range fire line structure to reduce noise levels.

Additional Action Items can be developed through coordination with the BLM.

Management Actions

Best management practices outlined in the Environmental Protection Agency document "Best Management Practices for Lead at Outdoor Shooting Ranges" will be incorporated (EPA 2005).

Continue to restrict the Yellow Creek shooting area as a day-use only site. Prohibiting camping and overnight use reduces potential exposure duration to contaminants of concern associated with shooting sites.

Construction Actions

The Yellow Creek Shooting Range site was primitively developed in 1977 but the range does not meet current NRA design standards. Listed below will be the priority construction actions needed to make the range safe.

- Relocate the berms for the 100yd and 20yd rifle ranges and build new berms around the two 50yd pistol ranges. All berms will be covered with fine material located on site to improve bullet retention and recovery. Use of previous berm material should be used to be installed on the new berms.
- Relocate the entrance road to a safer location along Yellow Creek Road.
- Install cattle guard at entrance to the shooting range.
- Construct boundary fence according to the completed environmental assessment. Fence will include warning signs to notify public of the shooting range location.
- Collect soil samples from impact areas, e.g., earthen berms, target areas, shooting platform, etc., to test for available phosphorous, pH, clay and organic content, and other nutrients once the new berms have been constructed.
- Contact Natural Resource Conservation Service (NRCS), Local Soil Conservation District, Local Cooperative Extension Agent, and/or qualified party and request recommendations for plant species best suited for erosion control on the berms.
- If needed, add lime, phosphate, other plant fertilizer and grass seed, at application rates recommended by NRCS, Extension Agent or other based on soil test results, to maintain optimum pH and other soil conditions to minimize metals mobility and maximize plant growth for erosion control.
- Construct shooting range firing line structure to reduce noise levels and improve safety of the range by providing safe platforms and locations to shoot from.

PLAN IMPLEMENTATION

Schedule for Implementation

Upon completion of construction activities:

- Identify responsible party to collect samples and make and carry out recommendations, if necessary. Once the R&PP lease is in place, the City of Deadwood will be responsible for collecting samples.
 - Have soil samples collected from impact areas and analyzed for pH, clay, organic material, available phosphorus, and other nutrient levels.
 - If indicated by soil test analysis, apply nutrients, lime, and seed per recommendations to increase plant density and prevent or minimize erosion and lead particle runoff.

Responsibilities

The City of Deadwood would sign an R&PP lease with the BLM which will be the guiding document for managing the shooting range. This ESP will be reviewed annually to ensure BMPs are being followed or if any adjustments to shooting range management need to be made.

It will be the responsibility of the City of Deadwood or current lease holder to periodically have the lead bullet fragments removed from the berms. Frequency will be determined by annual monitoring, visual inspection, and following the most current BMP's.

MONITORING AND MEASURING SUCCESS

The following parameters will be monitored as described:

- Vegetation density (annual) and type- Measured during growing season (early spring) as visual estimate of percentage of ground surface covered by vegetation. Document type (if any) of noxious weeds on site.
- Test soil (annual) – Sampled near shooting platform(s), earthen backstop berms/target areas, and other areas as determined by the BLM. For efficiency, recommend sampling at same time as other parameters, i.e., growing season or early spring. Soil testing may include, but is not limited to the following: lead, pH, arsenic, phosphorous, etc.
- Erosion and soil loss (biannual) - Document existing conditions and note any significant change in the size and/or depth of ruts or ditches. Erosion control measures may also be informally monitored by BLM staff during normal operating activities and brought to the attention of the lessee. Recommended monitoring in the spring and fall.
- Earthen berm integrity and erosion (annual) – Document existing conditions and note any significant change in the size or integrity of the earthen berms. Note any sediment deposition below the earthen berms. Runoff and ponding are effectively diverted away from impact areas (i.e., berms and target areas). Recommend sampling at same time as other parameters, i.e., growing season or early spring.
- Trash and debris (as needed) – Note the amount of trash and debris removed from trash receptacles. Visually note the amount of trash or debris on the landscape. Permanent photo points will be established and monitored on an annual basis to document changes over time, e.g., erosion, vegetation, trash and debris, usage levels, etc. Soil testing will be necessary to determine trends in soil pH, lead, and available phosphorus levels. An annual report documenting results of soil sampling and analysis, and current condition of other measures such as vegetation growth and erosion control will be prepared and kept on file with the ESP at the BLM, South Dakota Field Office.
- **Annual documentation will be provided to the BLM by the City of Deadwood** during the annual meeting to identify work previously completed, monitoring results, and prioritize goals for the upcoming season.

PERIODIC ASSESSMENTS AND ADJUSTMENTS TO THE PLAN

This ESP will be reviewed annually to assess the achievement of the prioritized goals listed in this ESP and to set goals for next year(s).

The annual inspections may necessitate a revision to the ESP in order to continue to meet or exceed the objectives outlined in this ESP. Recommendations from the public and BLM staff will all be considered during any revisions to the ESP. The annual inspections may determine metals recovery and removal if the metal in the soil is above the selected RBSL.

Questions to be answered include:

- Were the Environmental Stewardship Goals achieved that were identified for this ESP?
- In what areas (if any) did the ESP fall short?
- What is necessary to fully implement the ESP in these areas?

Next Steps

- Continue to monitor the environment and review the ESP on an annual basis.
- Update the ESP and set goals for subsequent years.

Also determine:

- Which potential management alternatives and actions listed in this ESP did not address this year should be considered for implementation.
- If it is still feasible to attempt to complete them.
- Identify additional goals previously put on hold. Estimate when these goals will be addressed.

Recommended future actions based upon original goals:

- Recover lead and other metals on a periodic basis to remain in compliance with regulatory guidelines, BLM RBSL's and BLM policy.

REFERENCES

BLM 2021. Risk-Based Screening Levels for Recreational Shooting Sites on Bureau of Land Management Properties. FINAL GUIDANCE. Submitted by: HSG, LLC, dba Herndon Solutions Group.

BLM 2022. Yellow Creek shooting area review and update of Initial Investigation Report Real Property Disposal (Phase 1 ESA). December 19, 2022 memo with attachments.

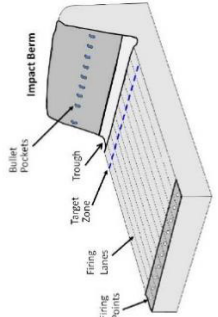
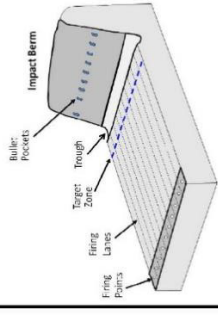
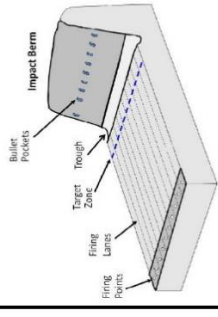
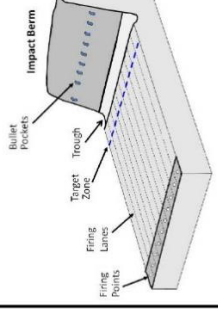
National Rifle Association. 2012. The NRA Range Source Book: A Guide to Planning and Construction, March 2012

National Shooting Sports Foundation, Facility Development Division. 1997. Environmental aspects of construction and management of outdoor shooting ranges. Facility Development Series Number 2. 125p.

United States Environmental Protection Agency. 2005. Best management practices for lead at outdoor shooting ranges. EPA-902-B-01-001. 103 p. <https://www.epa.gov/lead/best-management-practices-lead-outdoor-shooting-ranges-0>

APPENDIX A: RANGE INSPECTION FORMS

Form A-1: Rifle Range Monitoring Form

Form A-1: Yellow Creek Range Monitoring Form			
INSPECTED BY:		DATE:	
Directions: Mark Areas of erosion on drawing and describe in each space below. Examples of erosion include: ruts, gullies, soil deposition, litter/debris piles, etc.			
<p>100 - Yard Rifle Berm/Target Area</p> 	<p>DESCRIBE AREA OF EROSION</p>	<p>DESCRIBE CORRECTIVE ACTION</p>	
<p>200 - Yard Rifle Berm/Target Area</p> 	<p>DESCRIBE AREA OF EROSION</p>	<p>DESCRIBE CORRECTIVE ACTION</p>	
<p>50 - Yard West Pistol Berm/Target Area</p> 	<p>DESCRIBE AREA OF EROSION</p>	<p>DESCRIBE CORRECTIVE ACTION</p>	
<p>50 - Yard East Pistol Berm/Target Area</p> 	<p>DESCRIBE AREA OF EROSION</p>	<p>DESCRIBE CORRECTIVE ACTION</p>	

Form A-2: Soil pH Monitoring Form

Date	Soil pH				Comments	Initials
	50yd Pistol Range	50yd Piston Range	100yd Rifle Range	200yd Rifle Range		
7/1/24	7.2	7.1	6.9	7.3	**Example Only** - Range samples collected from impact berm.	RL

NOTES: Soil pH monitoring should be conducted annually

Procedure for measuring pH in soil:

- 1. In a clean container, mix 1 part soil with 1 part tap water or distilled water.
- 2. Mix thoroughly.
- 3. Allow mixture to settle for 10 minutes.
- 4. Calibrate pH meter following manufacturer’s instructions.
- 5. Measure pH with pH meter, allowing reading to stabilize. Record reading.
- 6. Clean pH meter and contain with tap water or distilled water.

Form A-3: Photo Point Monitoring Form

Camera Location and Photo Points

Date: _____

Area: Yellowcreek Shooting Range

Observer: _____

Comments: _____

Photo Point Location 1: _____

<p>Photo Point Observation Notes:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p><i>Insert Photo Here</i></p>
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Photo Point Location 2: _____

<p>Photo Point Observation Notes:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p><i>Insert Photo Here</i></p>
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Photo Point Location 3: _____

<p>Photo Point Observation Notes:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p><i>Insert Photo Here</i></p>
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Photo Point Location 4: _____

<p>Photo Point Observation Notes:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p><i>Insert Photo Here</i></p>
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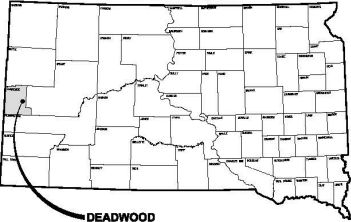
Photo Point Location 5: _____

<p>Photo Point Observation Notes:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p><i>Insert Photo Here</i></p>
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APPENDIX B: YELLOW CREEK SHOOTING RANGE SITE PLAN

ONE CALL
BEFORE DIGGING
1-800-781-7474

SOUTH DAKOTA




DEADWOOD

DEADWOOD GUN RANGE SITE PLAN


DEADWOOD, SOUTH DAKOTA

TDG PROJECT NO. 22-004

PLANS FOR:




PLANS BY:



TOWEY DESIGN GROUP, INC.
1705 13th Street, Suite 100, Deadwood, SD 57501
605.600.3788 tdg@tdgdesigngroup.com

DEADWOOD, SOUTH DAKOTA



PROJECT LOCATION MAP
NOT TO SCALE

**PRELIMINARY
FOR REVIEW ONLY**

NOT FOR CONSTRUCTION

I, _____, CERTIFY THAT THESE PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF SOUTH DAKOTA.

ENGINEER: _____ DATE: _____

INDEX OF SHEETS

- 1 TITLE
- 2-3 GENERAL NOTES / LEGEND
- 4 EROSION CONTROL NOTES
- 5 EROSION CONTROL
- 6 EXISTING CONDITIONS AND REMOVALS
- 7 NEW ACCESS ROAD PLAN AND PROFILE
- 8 DITCH RECLAMATION PLAN AND PROFILE
- 9 LOCATION OVERVIEW
- 10 SITE PLAN
- 11 GRADING PLAN
- 12 TYPICAL SECTIONS

Project Name:
DEADWOOD GUN RANGE

Current Address:
YELLOW CREEK ROAD

Legal Description:
PUBLIC LAND IN SECTION 15, T4N
R3E

Description:
.

Lot Line Setbacks:
Front yard = 20'
Side yard = 8' (minimum)
Rear yard = 25'

Right-of-Way:
Other Streets = 66'

SHEET NAME:
TITLE

SHEET NO:
1

<p>SPECIFICATIONS TO BE USED</p> <p>ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH 2007'S STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2015 EDITION (STANDARD SPECIFICATIONS WITH ALL CURRENT UPDATES, EXCEPT AS MODIFIED IN THE 8-D DOCUMENT). THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN THE STANDARD SPECIFICATIONS, THE DETAILED SPECIFICATIONS AND THE DRAWINGS.</p> <p>PROJECT NOTE</p> <p>THIS PROJECT INCLUDES THE REMOVAL AND REPLACEMENT OF AN ENTRANCE APPROACH AND REGRADING THE PROJECT SITE AS SHOWN ON 8-D.</p> <p>CONSTRUCTION LIMITS</p> <p>IN GENERAL, THE CONSTRUCTION LIMITS FOR THIS PROJECT SHALL BE DEFINED AS PROPERTY LINES, RIGHT-OF-WAY, EXISTING UTILITY EXEMPTION LINES AND TEMPORARY CONSTRUCTION LIMITS UNLESS INDICATED OTHERWISE ON THE DRAWINGS OR FURTHER DEFINED HEREIN. THE CONTRACTOR SHALL COMPLETE CONSTRUCTION WORK TO WITHIN THE CONSTRUCTION LIMITS.</p> <p>CONSTRUCTION ACTIVITIES SHALL BE RESTRICTED TO THE CONSTRUCTION LIMITS UNLESS PRIOR APPROVAL IS RECEIVED FROM THE ENGINEER. USE OF CITY LANDS FOR STAGING AREAS, MATERIAL STORAGE, SEDIMENTATION PONDS, DOWNSTREAM AREAS, TOPSOIL STOCKPILING SHALL ONLY BE WITH PRIOR APPROVAL FROM THE ENGINEER. ANY DAMAGES AND RESTORATION OUTSIDE THE CONSTRUCTION LIMITS SHALL BE AT THE CONTRACTOR'S EXPENSE.</p> <p>THE CONTRACTOR SHALL NOT OPERATE ON PLACE EQUIPMENT, MATERIALS, OR STOCKPILES ON PRIVATE PROPERTY WITHOUT THE PROPERTY OWNER'S WRITTEN CONSENT. THE CONTRACTOR SHALL FURNISH A COPY OF THE OWNER'S WRITTEN CONSENT TO THE ENGINEER AND THE CITY.</p> <p>PROJECT ACCEPTANCE AND WARRANTY PERIOD</p> <p>THE WARRANTY PERIOD FOR THIS PROJECT SHALL BE 1 YEAR AND WILL NOT BEGIN UNTIL THE PROJECT IS 100% COMPLETE AND SHALL BE BASED ON COMPLETION OF DIFFERENT PHASES.</p> <p>UTILITIES</p> <p>THE CONTRACTOR SHALL BE AWARE THAT THE EXISTING UTILITIES SHOWN IN THE PLANS WERE SURVEYED PRIOR TO THE DESIGN OF THIS PROJECT AND MIGHT HAVE BEEN RELOCATED OR REPLACED BY A NEW UTILITY FACILITY PRIOR TO CONSTRUCTION OF THIS PROJECT. MIGHT BE RELOCATED OR REPLACED BY A NEW UTILITY FACILITY DURING THE CONSTRUCTION OF THIS PROJECT. OR MIGHT NOT REQUIRE ADJUSTMENT AND MAY REMAIN IN ITS CURRENT LOCATION. THE CONTRACTOR SHALL CONTACT EACH UTILITY OWNER AND CONFIRM THE STATUS OF ALL EXISTING AND NEW UTILITY FACILITIES. THE UTILITY CONTACT INFORMATION IS PROVIDED ELSEWHERE IN THE PLANS ON BIDDING DOCUMENTS.</p> <p>CONTRACTOR FURNISHED STAGING</p> <p>ALL CONSTRUCTION STAGING ON THIS PROJECT WILL BE BY THE CONTRACTOR IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.</p> <p>DEWATERING PERMITS</p> <p>DEWATERING ACTIVITIES SHALL BE CONDUCTED IN COMPLIANCE WITH THE GENERAL PERMIT TO EXCAVATE UNDER THE SURFACE WATER DISCHARGE SYSTEM FOR TEMPORARY DEWATERING ACTIVITIES IN SOUTH DAKOTA; SOUTH PERMIT NO. 3203 (501). A COPY OF THIS PERMIT IS AVAILABLE THROUGH IDEEM. THE CONTRACTOR IS REQUIRED TO FURNISH THE NEAREST FOR INFORMATION TO IDEEM REQUIRED UNDER THE PERMIT AND FOR EACH SCHEDULED CUT/AIN SCHEDULE AUTHORIZATION, AND FURNISH A SEPARATE COPY OF AUTHORIZATION TO THE RESPECTIVE OWNER AT THE PRE-CONSTRUCTION CONFERENCE.</p> <p>THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING SELF-MONITORING ACTIVITIES INCLUDING MARKING, TESTING AND REPORTING AS MAY BE DETERMINED TO BE REQUIRED UNDER THE AUTHORIZATION TO DISCHARGE. PAYMENT FOR OBTAINING THE NECESSARY AUTHORIZATION TO DISCHARGE, AND FOR ALL COMPLIANCE ACTIVITIES AND OBLIGATIONS BY THE CONTRACTOR SHALL BE RESPONSIBLE TO THE ITEM WHICH IT RELATES. NO ADDITIONAL PAYMENT WILL BE MADE.</p> <p>CONTRACTOR PROVIDED WATER</p> <p>THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING WATER FOR CONNECTION OF EXTERIOR AND GRANULAR MATERIALS USED FOR, BUT NOT LIMITED TO, GRADING, SURFACE PRESERVATION AND TRENCH BRAGGAL WATER NEEDED FOR SOO AND BRED IRRIGATION, STREET CLEANING, AND OTHER MISCELLANEOUS ITEMS SHALL ALSO BE PROVIDED BY THE CONTRACTOR.</p>																															
<p>SUBMITTALS</p> <p>THE TERM "SUBMITTALS" INCLUDES DRAWINGS, DIAGRAMS, DESCRIPTIVE LITERATURE, ILLUSTRATIONS, INSTRUCTIONS, SCHEDULES, PERFORMANCE AND TEST DATA, PRODUCT DATA SHEETS, MATERIAL SAFETY DATA SHEETS, AND SIMILAR MATERIALS BY A SUPPLIER OR CONTRACTOR, TO ILLUSTRATE MATERIAL, OR EQUIPMENT FOR SOME PORTION OF THE WORK.</p> <p>THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A MINIMUM OF FIVE (5) COPIES OF SUBMITTALS FOR ALL CONTRACTOR FURNISHED PRODUCTS. SUBMITTALS SHALL CLEARLY INDICATE ANY DEVIATION FROM THE STANDARD SPECIFICATIONS AND SHALL BE CERTIFIED AND DATED BY THE PRIME CONTRACTOR. THE ENGINEER WILL REVIEW THE SUBMITTALS. IF THE PRIME CONTRACTOR'S SUBMITTALS ARE ONLY BE ACCEPTED FROM THE PRIME CONTRACTOR, THE ENGINEER WILL INDICATE HIS APPROVAL OR DISAPPROVAL OF EACH SUBMITTAL AND IF HE DOES NOT APPROVE THE SUBMITTAL, HE WILL INDICATE HIS REASONS FOR DOING SO. ANY WORK DONE PRIOR TO APPROVAL SHALL BE AT THE CONTRACTOR'S OWN RISK. REVISIONS TO SUBMITTALS SHALL BE MADE THE SAME AS FOR ORIGINAL. WITH CHANGES FROM THE PREVIOUS SUBMITTAL CLEARLY MARKED.</p> <p>THE LOG OF CONSTRUCTION SUBMITTALS SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING LIST BELOW:</p> <table border="0"> <tr> <td>CONSTRUCTION SCHEDULE</td> <td>CITY TRENCH AND UTILITY LICENSES</td> </tr> <tr> <td>ALL PERSONNEL</td> <td>SUBCONTRACTOR & SUPPLIER LIST</td> </tr> <tr> <td>TRAFFIC CONTROL PLAN</td> <td>WATER DIVERSION PLAN</td> </tr> <tr> <td>SOILS QUALITY PERMIT</td> <td>CRACK BYPASS NETWORK</td> </tr> <tr> <td>PERMITS AS NOTED</td> <td>EXCAVATION AND SHOULDER PLAN</td> </tr> <tr> <td>AGGREGATE BASE COURSE</td> <td>ASPHALT CONCRETE MIX DESIGN</td> </tr> <tr> <td>PPC CONCRETE MIX DESIGN</td> <td>REINFORCING STEEL M.I. CERTS</td> </tr> <tr> <td>SO CONCRETE MIX</td> <td>TACK COAT COMPOSITION</td> </tr> <tr> <td>HOT TAR SEAL</td> <td>GRAVEL SURFACING</td> </tr> <tr> <td>TEMPORARY CONCRETE PPS</td> <td>AGGREGATE BEDDING MATERIAL</td> </tr> <tr> <td>SOO CERTIFICATION</td> <td>FERTILIZER & MULCH CERTIFICATION</td> </tr> <tr> <td>SEED MIX CERTIFICATION</td> <td>FISC MATERIALS</td> </tr> <tr> <td>RIEPAF</td> <td>WATERS</td> </tr> <tr> <td>SURFACE</td> <td>SOOBN CONTROL BLANKET</td> </tr> <tr> <td>OTHER SUBMITTALS (AS REQUIRED)</td> <td></td> </tr> </table> <p>UTILITY COMPANY NOTIFICATION</p> <p>THE ONE-CALL NUMBER WAS CALLED FOR UTILITY LOCATES DURING THE DESIGN SURVEY ACTIVITIES OF THIS PROJECT. THE UTILITIES SHOWN ON THE DRAWINGS ARE FROM THE ONE-CALL MARKING. THE INFORMATION ON THESE DRAWINGS CONCERNING THE TYPE, SIZE, AND LOCATION OF UTILITIES HAS BEEN SHOWN BASED UPON BEST INFORMATION AVAILABLE AT THE TIME OF THE DESIGN SURVEY. ADULT INFORMATION OR PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES IN PLACE UNLESS THEY ARE SCHEDULED FOR RELOCATION. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE UTILITY COMPANIES. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK.</p> <p>THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND PRIVATE UTILITIES LOCATED WITHIN THE PROJECT LIMITS. NO EXTRA PAYMENT ON CONTRACT THIS EXTENSION WILL BE MADE AS A RESULT OF DELAYS THAT MAY BE CAUSED BY WORKING AROUND PRIVATE UTILITIES.</p> <p>THE CONTRACTOR SHALL UTILIZE THE SOUTH DAKOTA ONE CALL NOTIFICATION PROCESS TO PROVIDE ADVANCE NOTICE OF AT LEAST 48 HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, TO NOTIFY ALL SOUTH DAKOTA UNDERGROUND FACILITY OPERATORS OF WHENEVER EXCAVATION. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES BEFORE WORK IS COMMENCED.</p> <p>WASTE DISPOSAL SITE</p> <p>THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL WASTE DISPOSAL ON THE PROJECT. THE CONTRACTOR SHALL FURNISH THE DISPOSAL SITE FOR THIS WORK AND THE LOCATION MUST BE APPROVED BY THE ENGINEER. NO WASTE MATERIALS SHALL BE SPREAD OR PLACED ANYWHERE ON THE SITE. NO PAYMENT WILL BE MADE FOR WASTE DISPOSAL. TOPSOIL IS NOT CONSIDERED A WASTE MATERIAL AND SHALL NOT BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL SPREAD ALL TOPSOIL TO AT LEAST THE MINIMUM THICKNESS REQUIRED. ALL ADDITIONAL TOPSOIL SHALL BE SPREAD TO MEET ALL APPLICABLE DISTURBED AREAS.</p> <p>ALL MATERIALS GENERATED BY THIS PROJECT MUST BE DISPOSABLE OF AT A PERMITTED SITE. DEPENDING ON WHAT MATERIAL IS GENERATED AND WHETHER IT IS CONTAMINATED OR UNCONTAMINATED WILL DETERMINE WHICH PERMITTED FACILITY CAN ACCEPT IT. PERMITTED FACILITIES INCLUDE CONSTRUCTION AND DEMOLITION DEBRIS, RESTRICTED USE SITES, AND REGIONAL LANDFILLS. CONTACT SOUTH WASTE MANAGEMENT PROGRAM AT 605.773.3703 TO IDENTIFY LOCALY PERMITTED DISPOSAL SITES FOR VARIOUS CATEGORIES OF CONTAMINATED AND UNCONTAMINATED MATERIALS.</p>	CONSTRUCTION SCHEDULE	CITY TRENCH AND UTILITY LICENSES	ALL PERSONNEL	SUBCONTRACTOR & SUPPLIER LIST	TRAFFIC CONTROL PLAN	WATER DIVERSION PLAN	SOILS QUALITY PERMIT	CRACK BYPASS NETWORK	PERMITS AS NOTED	EXCAVATION AND SHOULDER PLAN	AGGREGATE BASE COURSE	ASPHALT CONCRETE MIX DESIGN	PPC CONCRETE MIX DESIGN	REINFORCING STEEL M.I. CERTS	SO CONCRETE MIX	TACK COAT COMPOSITION	HOT TAR SEAL	GRAVEL SURFACING	TEMPORARY CONCRETE PPS	AGGREGATE BEDDING MATERIAL	SOO CERTIFICATION	FERTILIZER & MULCH CERTIFICATION	SEED MIX CERTIFICATION	FISC MATERIALS	RIEPAF	WATERS	SURFACE	SOOBN CONTROL BLANKET	OTHER SUBMITTALS (AS REQUIRED)		<p>CLEARING AND GRUBBING</p> <p>CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH SECTION 100 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL USE EXTREME CARE SO THAT TREES AND VEGETATION OUTSIDE OF THE CONSTRUCTION LIMITS ARE NOT DISTURBED. ANY MATERIALS SUCH AS TREES, STUMPS, LIMBS, ETC., ENCOUNTERED DURING THE CLEARING OPERATIONS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. WITH ENGINEER'S PRE-APPROVAL, SOME LIMBS MAY BE PERMITTED. IF LIMBS ARE PERMITTED, IT SHALL BE ACCOMPANIED BY SAWING, EXCEPT AS NOTED BELOW, NO SIGNIFICANT MAINTENANCE OR HAZARD WILL BE MADE FOR THEM AND STUMP REMOVAL WITH SAID WORK BEING INCIDENTAL TO THE CONTRACT ITEM FOR CLEARING AND GRUBBING.</p> <p>THE CONTRACTOR SHALL REPLACE ANY TREES NOT IDENTIFIED FOR REMOVAL THAT ARE DAMAGED OR DYING AS A RESULT OF HIS OPERATIONS. THE TREES SHALL BE REPLACED WITH A TREE OF EQUIVALENT SPECIES AND MIN TWO (2) INCH CALIPER SIZE AT THE EXPENSE OF THE CONTRACTOR.</p> <p>REMOVAL OF TREES OVER SIX (6) INCHES IN DIAMETER, AS NOTED ON THE PLANS, SHALL BE FOR AT THE CONTRACT ITEM AND BE IN ACCORDANCE WITH "CLEARING AND GRUBBING, TREES" FOR VARIOUS TREE SIZES.</p> <p>TOPSOIL - SALVAGE AND REPLACE</p> <p>THE CONTRACTOR SHALL SALVAGE, STORED, AND REPLACE ALL TOPSOIL IN THE STAGING AREA, DOWNSTREAM AREA AND OTHER LOCATIONS AS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL PLACE TOPSOIL ON ALL AREAS TO RECEIVE SEED, TO MINIMUM DEPTH OF SIX (6) INCHES. THE ENGINEER WILL DETERMINE THE SUITABILITY OF ALL TOPSOIL.</p> <p>UNCLASSIFIED EXCAVATION</p> <p>ALL MATERIALS, EXCEPT ROCK, ENCOUNTERED DURING CONSTRUCTION FOR THE ROADS AND AS SHOWN ON THE CROSS SECTIONS AND GRADING PLANS REGARDLESS OF THEIR NATURE OR MANNER IN WHICH THEY ARE REMOVED WILL BE CONSIDERED UNCLASSIFIED EXCAVATION. PAYMENT WILL BE FULL COMPENSATION FOR EXCAVATION, CONSTRUCTION AND COMPACTION OF SETTLEMENTS SURVIVAL OF SLOPES, FINISHING OF SURFACES, STOCKPILE OR SURPLUS MATERIALS, COMPLETION OF SURFACE, ROWLEADS, AND ROADWAY AND MAINTENANCE REGARDLESS OF THE TYPE OF MATERIAL.</p> <p>THE QUANTITIES GIVEN ARE THE ENGINEER'S ESTIMATE ONLY AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ACTUAL EXCAVATION QUANTITIES REQUIRED BY THE ENGINEER. THESE QUANTITIES WILL BE MEASURED AND PAID FOR IN ACCORDANCE WITH THE CONTRACT UNIT PRICE SCHEDULE YARD FOR UNCLASSIFIED EXCAVATION.</p> <p>SCARPING AND RECOMPACTION OF EARTH EMBANKMENT SHALL BE GOVERNED BY THE SPICES DESIGN METHOD. EMBANKMENT QUANTITIES WERE COMPUTED ASSUMING A SHRINKAGE FACTOR OF 20%. NO SEPARATE MEASUREMENT OR SURVEY OF EMBANKMENT QUANTITIES WILL BE MADE.</p> <p>AGGREGATE BASE COURSE</p> <p>AGGREGATE FOR BASE COURSE SHALL BE CRUSHED LIMESTONE, 1/4" TO 1/2" ROCK AND SHALL CONFORM TO THE REQUIREMENTS FOR ONE (1) INCH AGGREGATE BASE COURSE MATERIALS AS SPECIFIED IN SECTION 815 OF THE STANDARD SPECIFICATIONS.</p> <p>BEFORE PLACEMENT OF THE AGGREGATE BASE COURSE, THE SUBGRADE SHALL BE PROOF ROLLED IN THE PRESENCE OF THE ENGINEER WITH A LOADED DUMP TRUCK TO MEET COMPACTION REQUIREMENTS. ANY SOFT AREAS SHALL BE REMOVED BY THE CONTRACTOR.</p> <p>PERMANENT GRAVEL SURFACING</p> <p>PERMANENT GRAVEL SURFACING SHALL BE SIX (6) INCHES THICK. AGGREGATE FOR GRAVEL SURFACING SHALL BE THREE QUARTER INCH (3/4) LIMESTONE LEDE ROCK AND SHALL CONFORM TO THE REQUIREMENTS IN SECTION 892 OF THE STANDARD SPECIFICATIONS.</p>
CONSTRUCTION SCHEDULE	CITY TRENCH AND UTILITY LICENSES																														
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<p>TDQ TOWEY DESIGN GROUP, INC. 1476 14TH ST SW, BOX 10793 SIOUX FALLS, SD 57107 605.800.8355 info@tdg.com www.tdggroup.com</p> <p>LOGO: CITY OF DEADWOOD SOUTH DAKOTA</p> <p>PRELIMINARY FOR REVIEW ONLY</p> <p>DEADWOOD GUN RANGE DEADWOOD SOUTH DAKOTA</p> <p>REVISIONS:</p> <p>INTERNAL JOB NUMBER: 22-004 11" X 17" PLAN SET DESIGNED BY: MT DRAWN BY: CR SURVEYED BY: SURVEY DATE:</p> <p>SHEET NAME: GENERAL NOTES</p> <p>SHEET NO: 2</p>																															

<p>EXISTING</p> <p>MAJOR CONTOUR</p> <p>MINOR CONTOUR</p> <p>PROPERTY LINE</p> <p>SECTION LINE</p>	<p>PROPOSED</p> <p>BEND</p> <p>BORE HOLE</p> <p>CAP</p> <p>CROSS</p> <p>DEFLECTION COUPLING</p> <p>FIRE HYDRANT</p> <p>GATE VALVE</p> <p>LEFT TURN LANE</p> <p>POST INDICATOR VALVE</p> <p>REDUCER</p> <p>RIGHT TURN LANE</p> <p>SANITARY SEWER CLEANOUT</p> <p>SANITARY SEWER MANHOLE</p> <p>SIGN</p> <p>STREET LIGHT</p> <p>TEE</p> <p>TYPE B</p> <p>TYPE E</p>	<p>ASPHALT</p> <p>COMMUNICATION LINE</p> <p>CONCRETE</p> <p>CURB & GUTTER</p> <p>DEMOLITION</p> <p>DIRECTION OF FLOW</p> <p>DRAINAGE LINE</p> <p>EXCAVATION LIMITS</p> <p>FOUNDATION DRAIN</p> <p>GAS LINE</p> <p>GRAVEL FILTER SOCKS</p> <p>MAJOR CONTOUR</p> <p>MINOR CONTOUR</p> <p>PAVEMENT MARKING</p> <p>PERIMETER PROTECTION</p> <p>POWER CONDUIT</p> <p>PROPERTY LINE</p> <p>ROOF DRAIN</p> <p>SANITARY SEWER MAIN</p> <p>SANITARY SEWER SERVICE</p> <p>SECTION LINE</p> <p>SETBACK LINE</p> <p>SIDEWALK</p> <p>SILT FENCE</p> <p>STORM SEWER</p> <p>STRAW WATTLE</p> <p>TOP SOIL BERM</p> <p>WATER MAIN</p> <p>WATER SERVICE</p>	<p>TDQ TOWEY DESIGN GROUP, INC. 1476 14TH ST SW, BOX 10793 SIOUX FALLS, SD 57107 605.800.8355 info@tdg.com www.tdggroup.com</p> <p>LOGO: CITY OF DEADWOOD SOUTH DAKOTA</p> <p>PRELIMINARY FOR REVIEW ONLY</p> <p>DEADWOOD GUN RANGE DEADWOOD SOUTH DAKOTA</p> <p>REVISIONS:</p> <p>INTERNAL JOB NUMBER: 22-004 11" X 17" PLAN SET DESIGNED BY: MT DRAWN BY: CR SURVEYED BY: SURVEY DATE:</p> <p>SHEET NAME: LEGEND</p> <p>SHEET NO: 3</p>
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OWNER REPRESENTATIVE:
 COMPANY: CITY OF DEADWOOD, SD
 CONTACT: TBD
 ADDRESS: 108 SHERRIN STREET
 ADDRESS: DEADWOOD, SD 57724
 PHONE: 605.444.1773

CONTRACTOR:
 COMPANY: TBD
 CONTACT: TBD
 ADDRESS: TBD
 PHONE: TBD

DESIGN ENGINEER:
 COMPANY: TOWEY DESIGN GROUP, INC.
 CONTACT: MICHAEL TOWEY, PE #254
 ADDRESS: 475 HILLA DRIVE
 ADDRESS BOX ELDER, SOUTH DAKOTA, USA 57719
 EMAIL: MTOWEY@TOWEYDESIGNGROUP.COM
 PHONE: 605.695.3758

PROJECT DESCRIPTION:
 THE FOLLOWING PROJECT IS THE REMOVAL, REMEDIATION AND RELOCATION OF AN INTRUSIVE APPROXIMATE AND SITE REGRADING TO MATCH NRA SPECIFICATIONS AT DEADWOOD'S GUN RANGE.

EXISTING SITE CONDITIONS:
 AN EXISTING SHOOTING RANGE IS LOCATED ON THE PROPERTY. A MAJORITY OF THE PROPERTY IS ALREADY OCCUPIED.
 ARE WETLANDS AN ISSUE? NO
 IF WETLANDS ARE AN ISSUE, HAS A DETERMINATION BEEN MADE BY THE US ARMY CORPS OF ENGINEERS?
 DOES THE STATE HISTORIC PRESERVATION OFFICE (SHPO) NEED TO REVIEW THIS PLAN? YES
 DOES THE STATE FISH AND WILDLIFE SERVICE NEED TO REVIEW THESE PLANS? NO
 DOES THE US FISH AND WILDLIFE SERVICE NEED TO REVIEW THESE PLANS? NO

ADJACENT AREAS:
 SITES ADJACENT TO THE PROPOSED WORK AREA ARE BOTH DEVELOPED AND UNDEVELOPED. THERE ARE NEIGHBORING PRIVATE LOTS AS WELL AS NEAR AND OTHER GOVERNMENT OWNED PROPERTIES. THE PRIVATE LOTS ARE SHOWN ON THE LOCATION OVERVIEW.

SOILS:
 IN GENERAL, UNDERLYING A THIN LAYER OF TOPSOIL, THE SUBSURFACE SOILS ENCOUNTERED WITHIN THE BOUNDRIES CONSIST OF ABOUT 6 TO 7 FEET OF ALL MATERIAL COVERING VERY FINE SANDY SILTY SANDS. UNDER AN ADDITIONAL 21 CALENDAR DAYS, WITHIN 14 DAYS AFTER FINAL GRADE IS REACHED ON A PORTION OF THE SITE, PERIMETER OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS AND SOIL STOCKPILES.

SOIL STOCKPILE AND STORAGE:
 ANY HAZARDOUS MATERIALS TO BE REMOVED MUST BE STOCKPILED WITHIN THE PROJECT LIMITS AT A LOCATION CHOSEN BY THE CONTRACTOR AND APPROVED BY THE OWNER AND ENGINEER. EXCESS EXCAVATED MATERIALS ARE TO BE HAILED OFF SITE. STOCKPILES OF EXCAVATED MATERIALS SHALL BE PROTECTED BY A SILT FENCE WHERE THE SILT FENCE SHALL BE PLACED AT A MINIMUM OF 6 FEET FROM THE TOE OF THE PILE AND SEEGED WITH A TEMPORARY COVER CAP.

RESOURCES:
 THE FOLLOWING PROJECT SCHEDULE IS TO BE DETERMINED. A PROPOSED ORDER OF PRODUCT SCHEDULING WILL BE MADE AVAILABLE. IF THE CONTRACTOR PROPOSES TO UTILIZE A DIFFERENT SCHEDULING, THEY SHALL SUBMIT THAT TO THE ENGINEER AND CITY FOR APPROVAL.

EROSION CONTROL MEASURES INSTALLED WITH THE PROJECT WILL REMAIN IN PLACE AND REMOVED ONCE THE SITE HAS BECOME STABILIZED.

AREA DISTURBED:
 THE TOTAL SURFACE AREA TO BE DISTURBED IS APPROXIMATELY 9.20 ACRES.

SEEDING CONTROL MEASURES:
 SILT FENCE, INLET SEDIMENTATION PROTECTION, TEMPORARY SEDIMENT TRAP.

EROSION AND SEDIMENT CONTROL REQUIREMENTS:
 THE FOLLOWING EROSION AND SEDIMENT CONTROL SCHEDULING SHALL BE FOLLOWED BY THE OWNER CONTRACTOR INVOLVED IN THIS CONSTRUCTION SITE ACTIVITY. CHANGES IN THE PROJECT'S CONSTRUCTION PLANS AND TIMELINES MAY REQUIRE THIS SCHEDULING TO BE CHANGED. ANY CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN (ESCP) MUST BE APPROVED BY THE ENGINEER PRIOR TO MAKING MODIFICATIONS IN THE FIELD.

PERIMETER PROTECTION:
 PERIMETER PROTECTION SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER. TO RETAIN SEDIMENT FROM BEING TRANSPORTED OFF THE PROJECT SITE, PERIMETER PROTECTION MAY BE CONSTRUCTED WITH SILT FENCE OR SEDIMENT CONTROL WATTLERS. PERIMETER PROTECTION SHALL BE INSPECTED IN ACCORDANCE WITH THE SWPPP.

SILT FENCE:
 SILT FENCE (FLOW FLOW: 20 TO GAL/INCH) OR HIGH FLOW (1.145 GAIN/INCH) SHALL BE PLACED AT THE LOCATIONS NOTED IN THE DRAWINGS AND AT LOCATIONS THAT WILL MINIMIZE SEDIMENTATION OF ADJACENT STREAMS, LAKES, DAMS, OR DRAINAGE AREAS AS DETERMINED BY THE ENGINEER DURING CONSTRUCTION.

EROSION AND SEDIMENT CONTROL MEASURES:
 THE SURFACE ROUGHENING EROSION CONTROL MAY BE EXTENDED TO A MAXIMUM OF THREE (3) MONTHS ON A CASE-BASED BASIS. THE CITY INSPECTOR HAS DETERMINED THAT THE SITE DEMONSTRATES THE FOLLOWING:
 • APPROPRIATE SOIL CONDITIONS EXIST FOR THE METHODS OF CONTROL.
 • DISTURBED AREAS WILL BE SEEDED AND MULCHED WITHIN THREE (3) MONTHS.
 • SEDIMENTATION LIMITATIONS EXIST.
 • SOIL STABILIZATION METHOD HAS DEMONSTRATED ITS EFFECTIVENESS.

NOTICE OF INTENT:
 THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING A NOTICE OF INTENT (NOI) AND OTHER REQUIRED PAPERWORK TO ACQUIRE, FOLLOWING COMPLETION OF THE PROJECT, THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING A NOTICE OF TERMINATION (NOT).

DEWATERING:
 DEWATERING OPERATIONS ARE EXPECTED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY PERMITS FROM SD DENR.

EROSION AND SEDIMENT CONTROL PLAN CERTIFICATION:
 THIS EROSION AND SEDIMENT CONTROL PLAN, NARRATIVE, AND ATTACHED EROSION AND SEDIMENT CONTROL PLAN APPEARS TO FULFILL THE TECHNICAL REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL AND THE REQUIREMENTS OF THE CITY OF DEADWOOD. I UNDERSTAND THAT ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE NEEDED IF UNFORESEEN EROSION PROBLEMS OCCUR OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL BE IN WITH THE LAND AND BE THE OBLIGATION OF THE PRIMARY RESPONSIBLE PARTY UNLESS SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED, OR VOIDED.

OWNER REPRESENTATIVE: DATE
 ENGINEER CERTIFICATION: I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF SOUTH DAKOTA.
 MICHAEL TOWEY, PE (605)695 DATE

TDG
 TOWEY DESIGN GROUP, INC.
 475 HILLA DRIVE, BOX 1049, ELDER, SD 57719
 605.695.3758 mtowey@tdgdesigngroup.com

LOGO:

PRELIMINARY FOR REVIEW ONLY

DEADWOOD GUN RANGE
 DEADWOOD
 SOUTH DAKOTA

REVISIONS:

INTERNAL JOB NUMBER: 22-004
 11" X 17" PLAN SET
 DESIGNED BY: MT
 DRAWN BY: CR
 SURVEYED BY:
 SURVEY DATE:

SHEET NAME:
EROSION CONTROL NOTES

SHEET NO:
 4

Legend:
 PP PERIMETER PROTECTION
 STRAW WATTLE
 TOP SOIL BERM
 GRAVEL FILTER SOCK
 SILT FENCE
 VTS VEHICLE TRAFFIC CONTROL
 CWA CONCRETE WASH OUT AREA
 INLET PROTECTION
 RIP RAP

Scale: 1" = 40'

North Arrow:

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 TOWEY DESIGN GROUP, INC.
 475 HILLA DRIVE, BOX 1049, ELDER, SD 57719
 605.695.3758 mtowey@tdgdesigngroup.com

LOGO:

PRELIMINARY FOR REVIEW ONLY

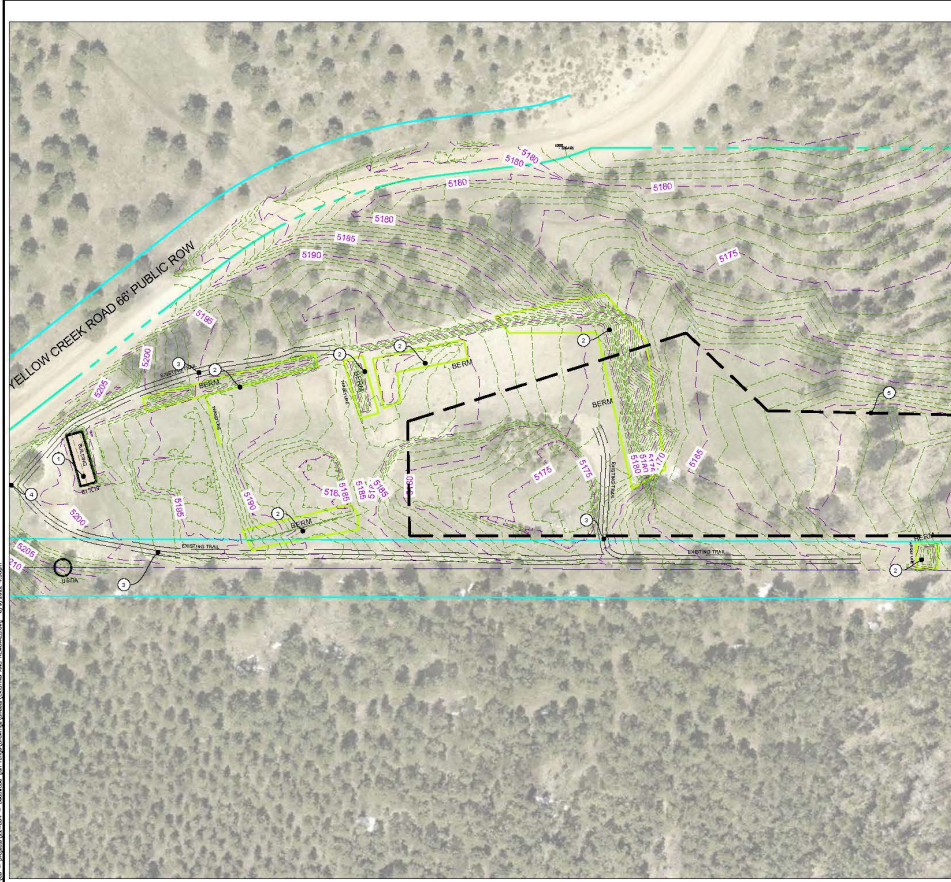
DEADWOOD GUN RANGE
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 SURVEY DATE:

SHEET NAME:
EROSION CONTROL

SHEET NO:
 5



- ① REMOVE EXISTING SHOOTING ENCLOSURE
- ② REMOVE / STOCKPILE BERM MATERIAL
- ③ RECLAIM EXISTING TRAILS
- ④ REMOVE AND RECLAIM EXISTING ENTRANCE
- ⑤ REMOVE TREES WITHIN NEW LONG RANGE RIFLE SHOOTING AREA



LOGO:



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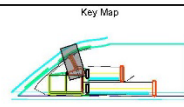
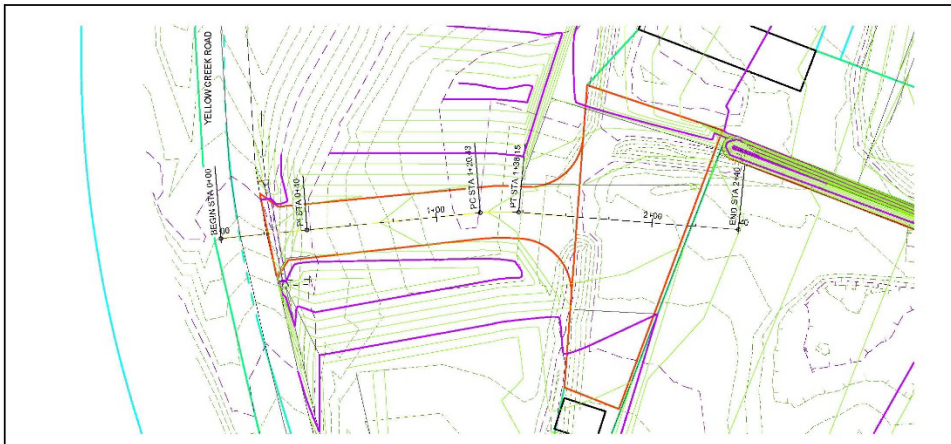
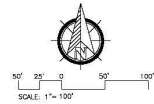
DEADWOOD GUN RANGE
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SOUTH DAKOTA

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SURVEYED BY:
SURVEY DATE:

SHEET NAME:
EXISTING AND REMOVALS

SHEET NO:
6





LOGO:



PRELIMINARY
FOR REVIEW ONLY

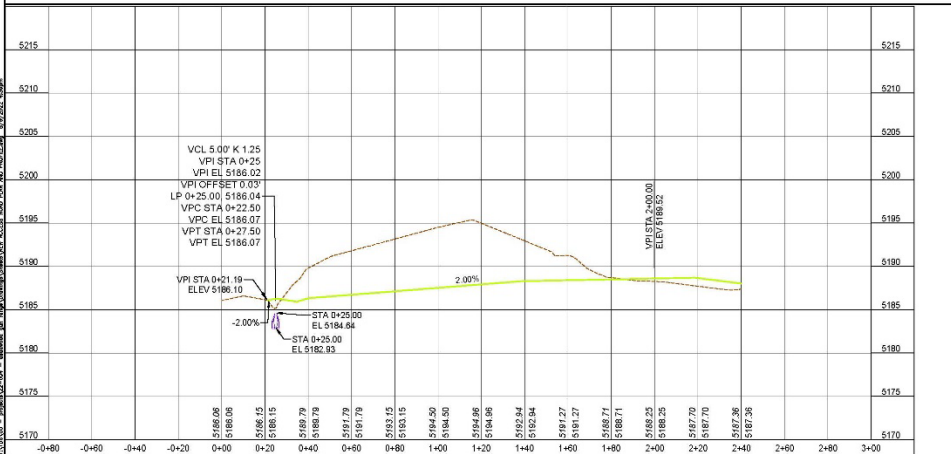
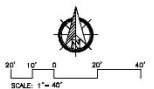
DEADWOOD GUN RANGE
DEADWOOD
SOUTH DAKOTA

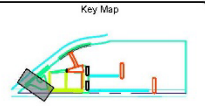
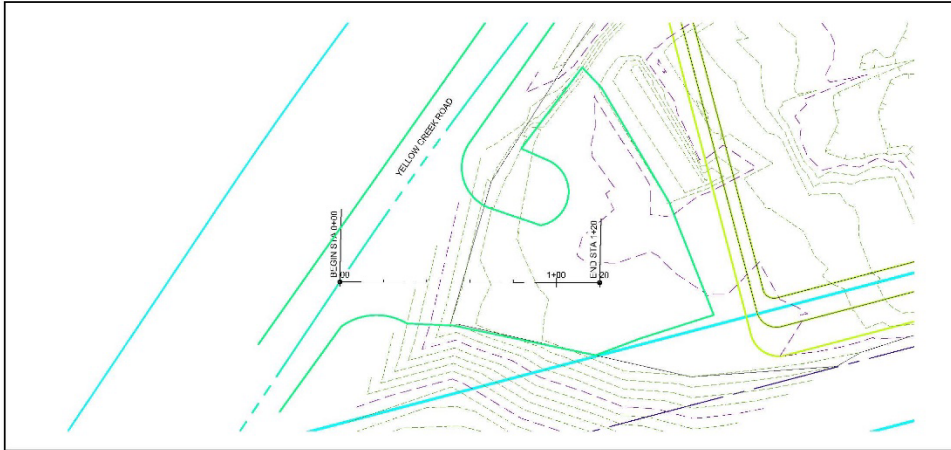
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SURVEYED BY:
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SHEET NAME:
**NEW ACCESS ROAD PLAN
AND PROFILE - 0+00 TO 2+20**

SHEET NO:
7





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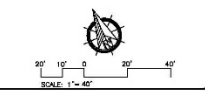
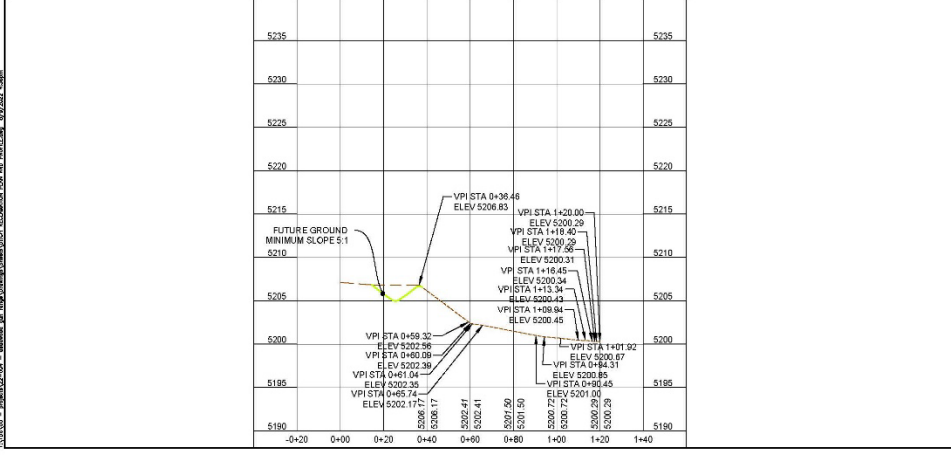
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DEADWOOD GUN RANGE
DEADWOOD
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SURVEY DATE:

SHEET NAME:
DITCH RECLAMATION PLAN AND PROFILE - 0+00 TO 3+00
SHEET NO:
8



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1101 W. 10th Street, Suite 1000, Rapid City, SD 57701
605.378.3783 tdg@tdgdesigngroup.com



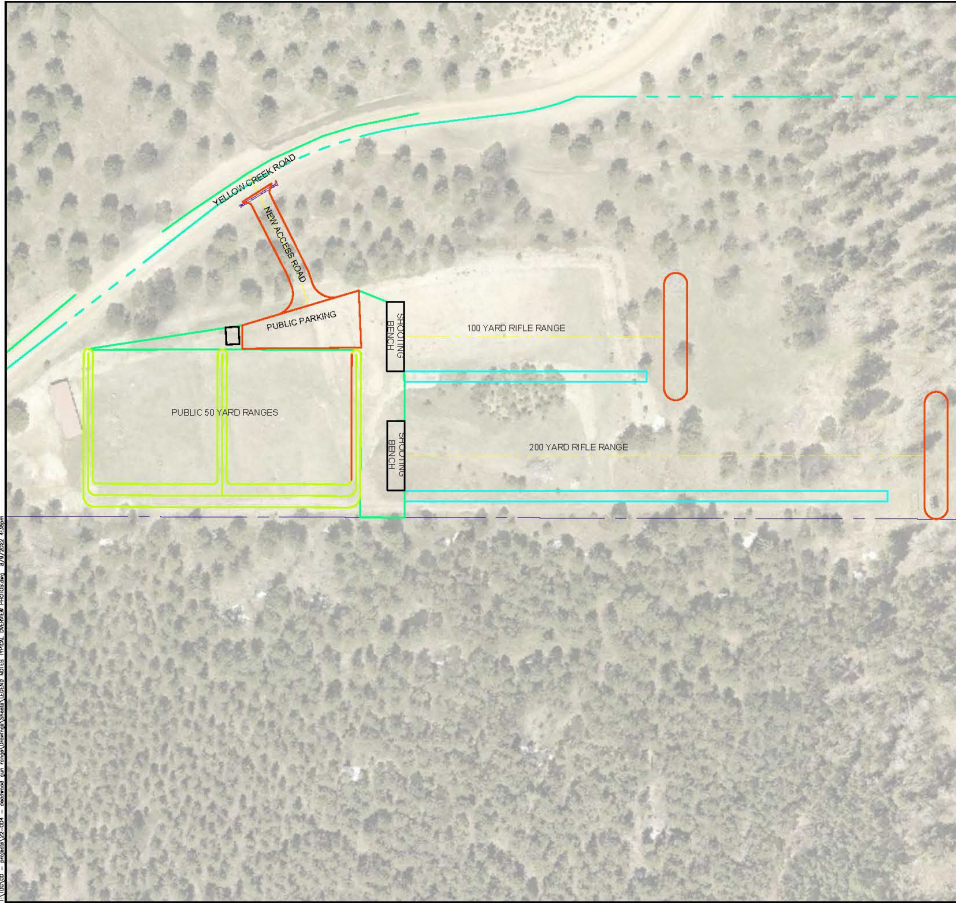
PRELIMINARY FOR REVIEW ONLY

DEADWOOD GUN RANGE
DEADWOOD
SOUTH DAKOTA

REVISIONS:

INTERNAL JOB NUMBER: 22-004
11" X 17" PLAN SET
DESIGNED BY: MT
DRAWN BY: CR
SURVEYED BY:
SURVEY DATE:

SHEET NAME:
LOCATION OVERVIEW
SHEET NO:
8



SCALE: 1" = 100'

TDG
TOWEY DESIGN GROUP, INC.
4250 W. 102ND ST., SUITE 100, WEST DES MOINES, IA 50325
800.378.3788

CITY OF DEADWOOD
SOUTH DAKOTA

PRELIMINARY FOR REVIEW ONLY

DEADWOOD GUN RANGE
DEADWOOD
SOUTH DAKOTA

REVISIONS:

INTERNAL JOB NUMBER: 22-004
11" X 17" PLAN SET
DESIGNED BY: MT
DRAWN BY: CR
SURVEYED BY:
SURVEY DATE:

SHEET NAME:
SITE PLAN

SHEET NO:
10



SCALE: 1" = 100'

TDG
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CITY OF DEADWOOD
SOUTH DAKOTA

PRELIMINARY FOR REVIEW ONLY

DEADWOOD GUN RANGE
DEADWOOD
SOUTH DAKOTA

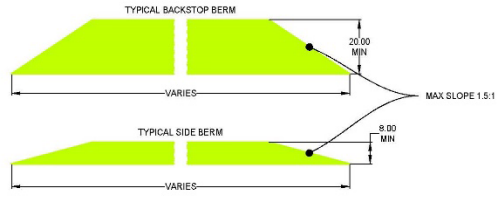
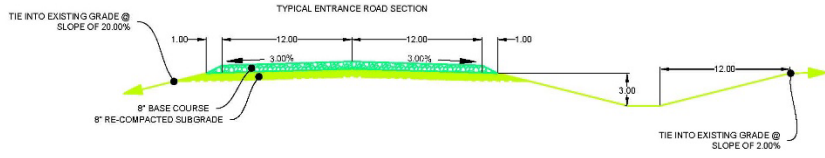
REVISIONS:

INTERNAL JOB NUMBER: 22-004
11" X 17" PLAN SET
DESIGNED BY: MT
DRAWN BY: CR
SURVEYED BY:
SURVEY DATE:

SHEET NAME:
GRADING PLAN

SHEET NO:
11

\\s01001 - 11/06/2013 10:48:00 AM - 11/06/2013 10:48:00 AM - 11/06/2013 10:48:00 AM - 11/06/2013 10:48:00 AM - 11/06/2013 10:48:00 AM



NOT TO SCALE

LOGO:

PRELIMINARY FOR REVIEW ONLY

DEADWOOD GUN RANGE
DEADWOOD
SOUTH DAKOTA

REVISIONS:

INTERNAL JOB NUMBER: 22-004
11" X 17" PLAN SET
DESIGNED BY: MT
DRAWN BY: CR
SURVEYED BY:
SURVEY DATE:

SHEET NAME:
TYPICAL SECTIONS

SHEET NO:
12