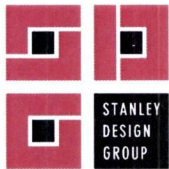


Case No. 20UR001

**Legal Description:**

Tract A of South Creek Industrial Park #2, located in Section 8, T1N, R8E, BHM, Rapid City, Pennington County, South Dakota



**STANLEY DESIGN GROUP**  
LANDSCAPE ARCHITECTURE | PLANNING | DESIGN

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JAN 10 2020  
RAPID CITY DEPARTMENT OF  
COMMUNITY DEVELOPMENT

TO: Growth Management and Planning, City of Rapid City  
FROM: Michael Stanley  
SUBMITTAL DATE: January 10, 2020  
REGARDING: **LETTER OF INTENT FOR THE  
SOUTH DAKOTA FIRE SERVICE INSTITUTE WEST TRAINING FACILITY**  
SDG PROJECT NO. 19509

Training, education, and practice have become an integral part of a modern day first-responder. To better support and prepare the City's (and regions) fire fighters, the City of Rapid City Fire Department is proposing to construct a modern fire and rescue training facility. The facility is to be located on a City owned 18-acre parcel. The parcel is located approximately 2,000 feet south of the intersection of Creek Drive and East St. Patrick Street. The Meade/Hawthorn Drainage channel runs along the north side of the property, Rapid Creek is on the east side. The property is currently zoned Light Industrial. Pepsi Bottling is the neighbor to the south, Perdue furniture is located west (across Creek Drive). Several smaller industrial uses are located to the north and a sod farm is east of the property.

This new facility has two main components. The first is a new fire department administrative building and maintenance facility. The second component is a fire and rescue training facility composed of different training props and scenarios with the necessary infrastructure to support those training exercises .

**ADMINISTRATIVE BUILDING AND MAINTENANCE FACILITY**

The new administration building will be a single-story, 16,500 square foot building. This building will be the new administration headquarter for the Rapid City Fire Department. This building will have three main components, First, it will contain the operations, offices, storage, ambulance billing, meeting rooms and personnel that operate out of the existing administration facility at Station No. 1. Second, this building will have a training classroom(s) and a sleeping room (as part of the training exercises). Finally, this building will have a Rapid City Fire history display, it will highlight equipment, photos and past records of the City's fire department.

The new maintenance building is proposed to be an 11,000 square foot structure to accommodate service bays capable of housing and servicing not only Rapid City owned trucks but surrounding area fire department trucks. The Rapid City Fire Department is a warranty service provider for certain fire truck manufacturers. In addition to service bays, this facility will have an office area for the service technicians. The master plan is proposing 4 parking stalls for the service technicians.

**FIRE AND RESCUE TRAINING FACILITY**

The fire and rescue training grounds will be a modern training facility composed of 14 different scenarios designed to test and push the first responder's limits and talents. The different training props include:

- Vehicle Extrication Training Prop
  - Surfacing: Grass and Gravel
  - Prop: Used Automobiles & Trucks
- Propane and Natural Gas Training Prop
  - Surfacing: Grass and Gravel
  - Prop: Propane Truck, Propane tanks
- Cold Storage Building/Indoor Training Prop
  - Prop: One Building, 85'x85', two story with a concrete apron

- Non-Burning Streetscape Training Prop
  - Prop: Two buildings, approximately 85'x25' and 55'x40'
- Live House Burn
  - Surfacing: Gravel and Grass
  - Single, typical residential house built and then burned – 1 house per year.
- Off-road Driving Course Training Area
  - Placed obstacles (not permanent or structural) to make up a driving course
- Hazardous Materials Training Prop
  - Surfacing: Grass and Gravel
  - Prop: Rail car tanker or Tanker Truck
- Airplane Rescue Training Prop
  - Surfacing: Grass and Gravel
  - Prop: Airplane Fuselage
- Swift Water Rescue Training
  - To take place in Rapid Creek, no structures installed.
- Burn Building with Tower Training
  - Surfacing: Concrete Apron
  - Prop: Pre-manufactured structure designed using intermodal containers in multiple configurations to provide training for high-angle rope rescue, confined space rescue and other multi-story training scenarios. This four story prop allows rescuers to maneuver through vertical and horizontal hatches to rescue simulated victims, as well as perform more elaborate movement of victims between two high-point anchors using an English Reeves system. Maximum height of 45'.

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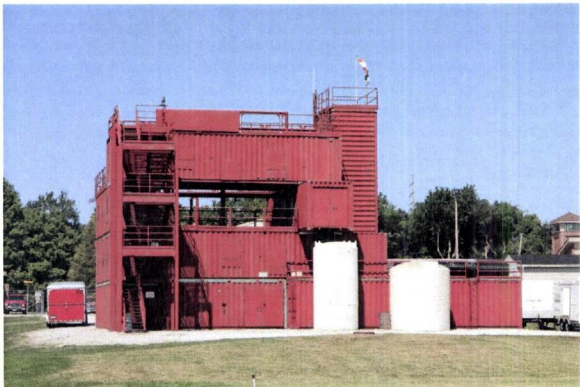


Photo 1: Example of Burn Building

- Observational Training Tower
  - Reconstruction of the fire department's tower (formerly constructed at WDT).
  - Tower Height: 45-foot tall, maximum'
- Agricultural/Farm and Electric Training Prop with Cell Tower
  - Surfacing: Grass and Gravel
  - Prop: Typical farm implements, silo, electric/power pole with a training cell tower (tower will be less than 45-feet).





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RAPID CITY DEPARTMENT OF  
COMMUNITY DEVELOPMENT

- Trench Rescue Training Prop
  - Surfacing: Grass and Gravel
  - Prop: Typical Shipping containers placed in a manner to create a "trench"
- Rescue City Training Prop
  - Grass and Gravel
  - Prop: This prop's interior provides a simulated, collapsed, heavily constructed concrete and steel building. Once inside the rescuer will encounter columns that have been compromised in shear "punch thru" collapse. Rescuers conduct horizontal and vertical breaches, construct shoring and cribbing. First responders are challenged to work around office equipment and other obstacles in a search and rescue scenario. Multiple props including concrete piles, pre-cast concrete piping, girders, and slabs. In addition, this prop will train K9 units.
- Road System in Training Grounds
  - The roadway in the training grounds with be hard surfaced, either paved with asphalt or concrete.

SITE PARKING

- The parking stalls will support the administration staff and visitors during normal business hours, Monday through Friday. Training events are planned to be on weekends or in the evenings. The master plan is proposing 80 parking stalls. The administration office space, conference rooms, ambulance billing, etc. will occupy approximately 12,500 square feet. The classroom, storage, and workstations associated with the training aspect will occupy 2,600 square feet and have a maximum trainee count of 50. A history display will be part of the entry space for the building, this is not intended as a visitor attraction or destination.

Use	Measurement	Parking Requirement	Parking Required	Parking Provided
Fire Department Offices	12,500 sq.ft.	5 stalls per 1000 sq.ft.	62.5	62.5
Training Classrooms	50 Trainees	.25/seat	12.5	12.5
Fire Department Display	0	0	0	0
Maintenance Building				4

SITE FENCING

The training grounds north and south boundaries will be fenced with a 6-foot tall chain link fence; the fence will extend to approximately the floodway boundary of Rapid Creek. The training ground will be separated from the administration and maintenance buildings by a 6-foot tall chain link fence. Two gates will be placed on this fence line for access into the training grounds.

SITE LANDSCAPING

The development will provide landscaping per the City's landscape ordinance. A landscaping plan will be submitted with building permit or as required by the City of Rapid City. The attached landscape concept indicates the type and style of plant material. A majority of the site will not be disturbed or it will continue to have grass as the prop surface, The landscape plan recommends emphasizing the planting at the street and around the maintenance and administrative buildings. Street trees should be placed along the parking lot and building to soften the impact of the building. Larger shrub materials should be placed along the fence to screen the training grounds from public view. There is significate separation between the majority of the training facilities and the neighborhood to the east because of the Rapid Creek Floodplain, therefore no screening will be provided in the on the east end of property.

The property measures 18 acres or 784,080 square feet; the proposed buildings measure a total of approximately 27,125 square feet. Subtracting the building footprint from the parcel square footage results in requiring 756,955 landscape points. As mentioned above, this property is along Rapid Creek and has many mature trees and shrubs. The master plan proposes to only calculate the landscape points from the "developed" area of the new administration building, parking lot and maintenance facility. This area, is indicated on the landscape plan; it measures 129,102 sq.ft or 2.96 acres. Subtracting the building from this square footage would result in a point requirement of 101,977. The required points, conceptually, may be fulfilled by the follow breakdown (indicated on the landscape plan).



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Vegetation Type	Quantity	Point value	Proposed Points
Medium Deciduous Trees	14	1,000 per tree	14,000
Conifer Trees	8	2,000 per tree	16,000
Shrubs	200	250 per shrub	50,000
Turfgrass	2,510	10 per square yard	25,100
Existing points in the ROW (Turfgrass)	10,338	.25 of total	2,584
<b>Total Points</b>			<b>107,684</b>

**FLOODPLAIN**

The Floodplain Administrator has been notified of the project and the site design will meet the requirements of a floodplain development permit.

**SITE UTILITIES**

The site utility improvements will include water, sanitary sewer, and storm sewer. A new water main loop will be constructed approximately alongside of the interior road to provide necessary flow at multiple training fire hydrant locations. These training fire hydrants locations will be determined during final design. The sanitary sewer service(s) will be connected to the City's sanitary sewer system. Storm sewer will be included at final design. A run-off treatment swale will be used for treatment of stormwater and potable water from the fire hydrant usage. Stormwater treatment and detention ponds will be included as determined necessary at final design.

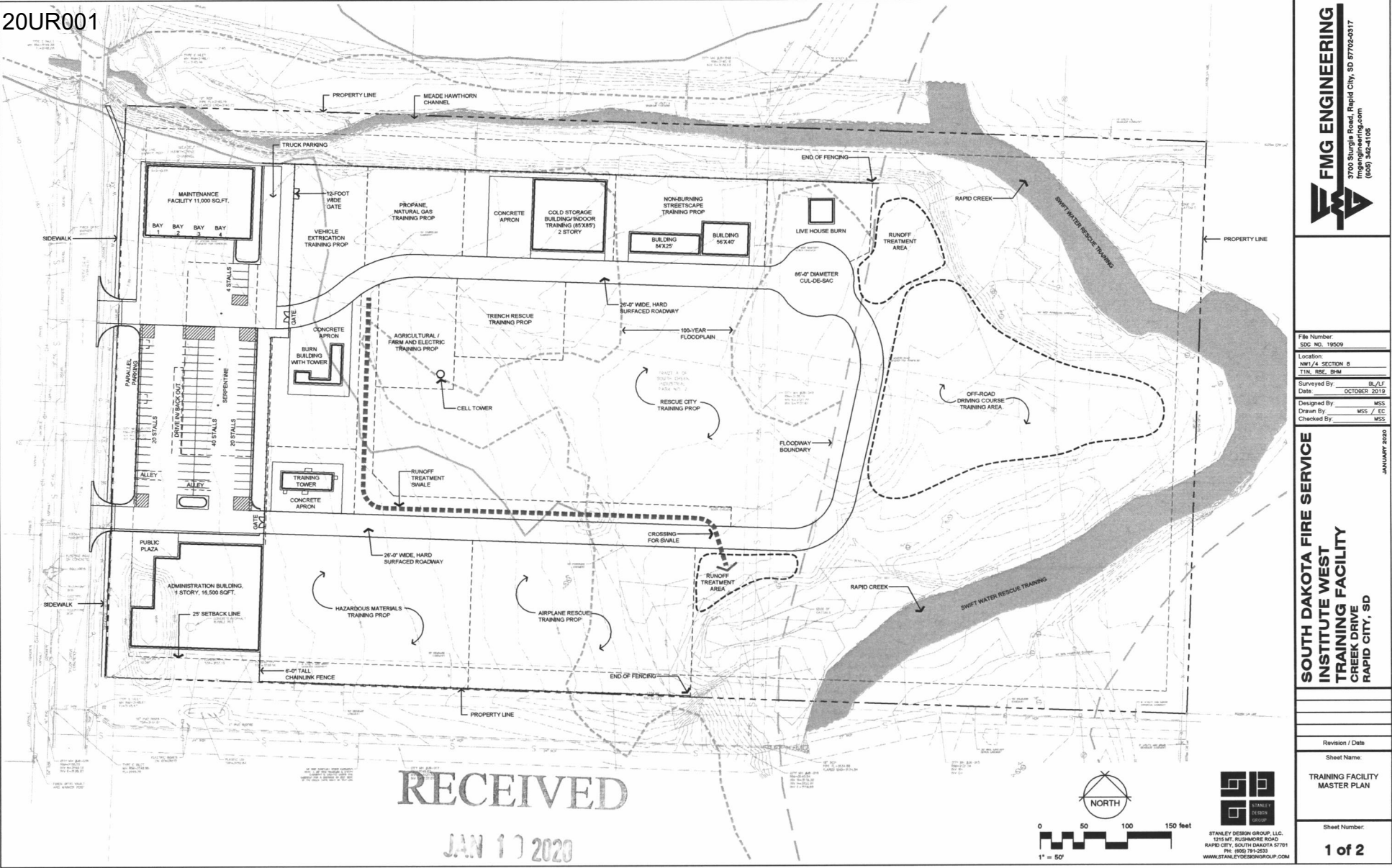
**SIGNAGE AND LIGHTING PLANS**

The site signage and site lighting are not shown on the conceptual layout. Signage will be per code and site lighting plans will be determined at final design.

**PROJECT PHASING**

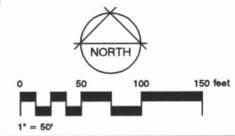
The project phasing will be determined based on funding and grant availability.





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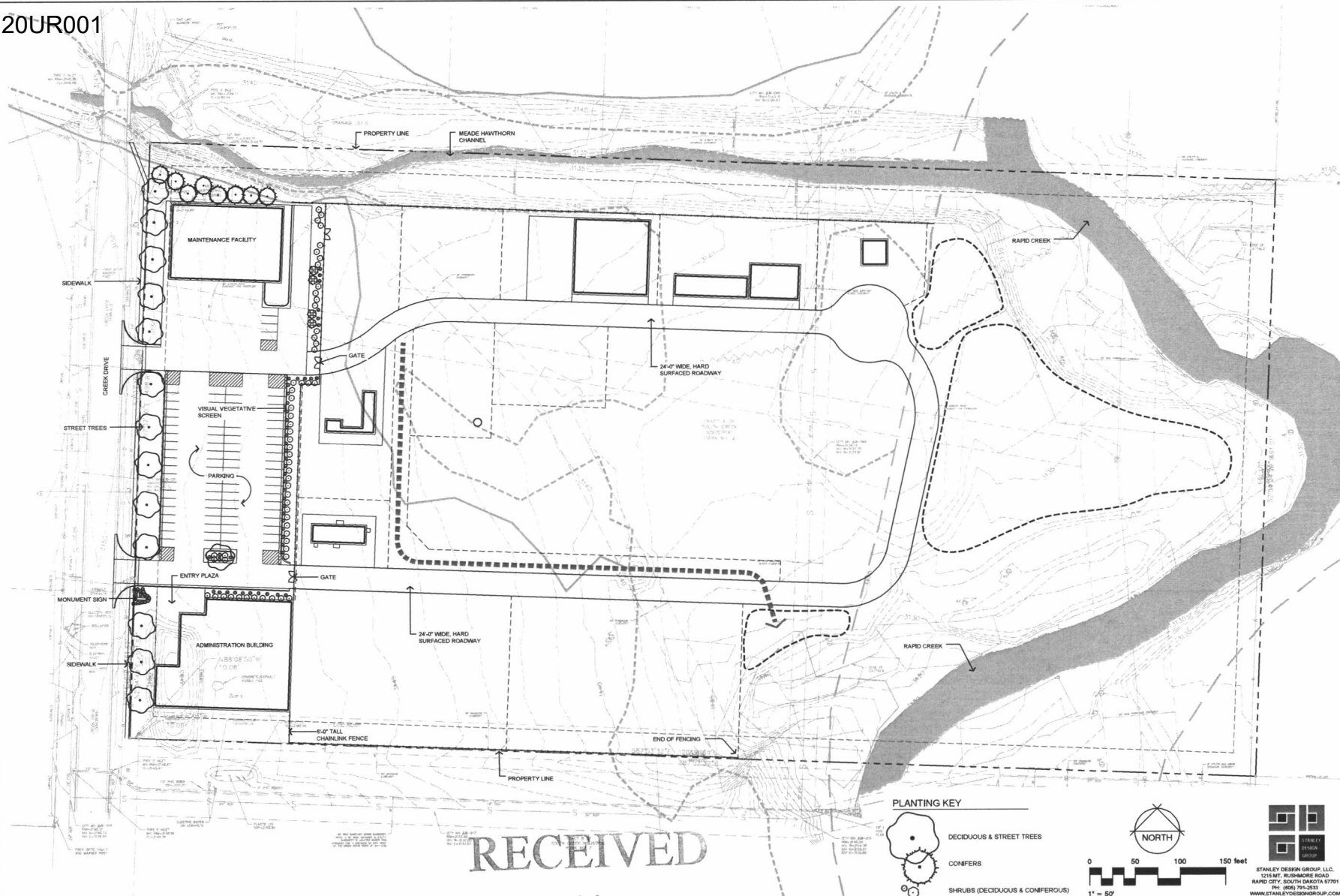
File Number:	SOC NO. 19509
Location:	WEST 1/4 SECTION 8 T1N, R8E, B4M
Surveyed By:	BL/LF
Date:	OCTOBER 2019
Designed By:	MSS
Drawn By:	MSS / EC
Checked By:	MSS

**SOUTH DAKOTA FIRE SERVICE  
INSTITUTE WEST  
TRAINING FACILITY  
CREEK DRIVE  
RAPID CITY, SD**

Revision / Date
Sheet Name
Training Facility Master Plan
Sheet Number

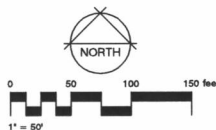
**1 of 2**





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- PLANTING KEY
- DECIDUOUS & STREET TREES
  - CONIFERS
  - SHRUBS (DECIDUOUS & CONIFEROUS)



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**PRELIMINARY  
FOR REVIEW ONLY**

File Number:  
SDG NO. 19509

Location:  
M81/4 SECTION 8  
T13N, R6E, B1W

Surveyed By:  
Date:  
OCTOBER 2019

Designed By: MDS  
Drawn By: MSS / EC  
Checked By: MSS

**SOUTH DAKOTA FIRE SERVICE  
INSTITUTE WEST  
TRAINING FACILITY  
CREEK DRIVE  
RAPID CITY, SD**

Revision / Date

Sheet Name:  
TRAINING FACILITY  
PLANTING CONCEPT

Sheet Number:  
**2 of 2**