

**FINAL DRAINAGE LETTER**

**FOR**

**TIMBERLINE STORAGE YARD**  
**EL PASO COUNTY, COLORADO**

JUNE 2018

Prepared for:  
**Timberline Landscaping, Inc.**  
20625 Andalusian View  
Pueblo, CO 81008  
(719)-638-1000

Prepared by:



20 Boulder Crescent, Suite 110  
Colorado Springs, CO 80903  
(719) 955-5485

Project #43-095  
PCD Project No. COM-18-012

**DRAINAGE LETTER  
FOR  
TIMBERLINE STORAGE YARD  
DRAINAGE PLAN STATEMENTS**

**ENGINEERS STATEMENT**

The attached drainage plan and report was prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the County for drainage reports and said report is in conformity with the applicable master plan of the drainage basin. I accept responsibility for any liability caused by any negligent acts, errors of omission on my part in preparing this report.

\_\_\_\_\_  
Virgil A. Sanchez, P.E. #37160  
For and on Behalf of M&S Civil Consultants, Inc



**DEVELOPER'S STATEMENT**

I, the developer have read and will comply with all the requirements specified in this drainage report and plan.

BY: Matt Steed 

TITLE: COO Timberline

DATE: 6/20/18

ADDRESS: Timberline Landscaping, Inc.  
20625 Andalusian View  
Pueblo, CO 81008

**EL PASO COUNTY'S STATEMENT**

Filed in accordance with the requirements of El Paso County Land Development Code, Drainage Criteria Manual Volumes 1 and 2, and the El Paso County Engineering Criteria Manual, as amended.



BY: \_\_\_\_\_  
Jennifer Irvine, P.E.  
County Engineer / ECM Administrator

DATE: \_\_\_\_\_

**CONDITIONS:**



20 Boulder Crescent, Suite 110  
Colorado Springs, CO 80903  
Mail to: P.O. Box 1360  
Colorado Springs, CO 80901  
719.955.5485

June 13, 2018

Attn: Jennifer Irvine, P.E.  
El Paso County Engineer  
2880 International Circle  
Colorado Springs, Colorado 80910

RE: Final Drainage Letter for Timberline Storage Yard, in El Paso County, Colorado.

Dear Jennifer,

The purpose of this letter is to show that there shall be no negative drainage effects associated with the existing development of Timberline Storage Yard under PPR-17-018 with the proposed addition of a 40'x50' wash bay with concrete aprons. Access to the proposed wash bay shall be through the existing entryways as provided by the previously developed Timberline Storage Yard access entryways with a gravel surface. This final drainage letter is being submitted concurrently for the approval of a Site Improvement Plan, Grading and Drainage Plan.

**Property Description:**

Timberline Storage Yard is located in the southeast quarter of the southwest quarter of Section 28, Township 13 South, Range 65 West of the 6th P.M. in El Paso County, Colorado. The site is currently zoned "M" which is associated with the industrial development. The parcel is bound to the north, south, and east by other vacant parcels of land. Adjacent to the southwest corner of the site, is an existing development that consists of a light industrial/storage and a maintenance yard. As shown on the associated FIRM panel, a channel known as the East Fork of Sand Creek Sub-tributary flows from east to west along the northern boundary of the site. Due to the presence of an existing railroad embankment, the sub-tributary does not influence the subject site. The site is located with the greater Sand Creek Drainage Basin and is tributary to the Sand Creek Channel via the East Fork Sand Creek Sub-Tributary.

**Existing Drainage Characteristics:**

The parent parcel housing the existing development is approximately 37.95 acres in size and is currently zoned "M" for industrial. The total 37.95 acres parcel, approximately 11.48 acres was developed with the Timberline Storage Yard, which consist of a large gravel storage yard, an office/warehouse building, with asphalt and gravel parking areas, lighting, landscaping, and access entryways.

Runoff produced north of the development area mimics the historic drainage patterns by sheet flowing to the north development boundary where it combines with runoff generated onsite within the gravel storage yard and from the north half of the warehouse building. Earthen swales with rip rap lined rundown convey the collected runoff to a proposed 0.9 acre Full Spectrum Detention pond located along the southern boundary of the site.

## **Floodplain Statement:**

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel No. 08041C0543 F, effective date March 17, 1997 no portion of this site is located within the 100- year floodplain.

## **Proposed drainage characteristics:**

The proposed project includes the addition of a 40'x50' wash bay with (2) 20'x40' concrete pads to the existing Timberline Storage Yard site. The proposed wash bay is design to be constructed within the existing gravel storage yard area north of the existing warehouse. Access to the proposed wash bay shall be through the existing entryways as provided by the previously developed Timberline Storage Yard access entryways with a gravel surface.

## **FOUR STEP PROCESS**

**Step1 Employ Runoff Reduction Practices** – The project does not provide any runoff reduction practices.

**Step 2 Stabilize Drainageways** – The Timberline Storage Yard site has an existing Full Spectrum Detention (FSD) pond to control developed runoff that is discharging to the historic drainage way that crosses the vacant parcel located to the south of the subject site. The FSD outlet structure was designed to drain the water quality event storm in 40 hours, while reducing the 100 year peak discharge to approximately 90% of the predevelopment conditions.

**Step 3 Provide Water Quality Capture Volume** – An existing Full Spectrum Detention Basin reduces the peak discharge rates and provides water quality treatment. The WQCV is designed to release over a 40 hour period while larger event storms releases in periods of times between 64-80 hours.

**Step4 Consider Need for Industrial and Commercial BMP's** – This submittal provides a Site Plan, Drainage and Grading plan. The original BMPS are still place from the construction of the warehouse and (FSD) pond to mitigate the potential for erosion across the site.

## **Water Quality Provisions:**

The existing full spectrum detention (FSD) pond functions to provide detention and water quality for the existing storage yard development as well as all runoff tributary to it. This includes runoff produced onsite, north of the development and parcel, as well as offsite flows adjacent to the west boundary of the parcel. This full spectrum detention pond is designed to function to treat approximately 20.0 acres by providing 0.216 acre-feet of storage for the water quality event 0.516 acre feet of storage at the EURV event storm and 1.88 acre-feet of storage in the 100-year event. The existing full spectrum detention basin is private and is maintained by the property owner. Access has been granted to the owner and El Paso County for access and maintenance of the private WQCV facility.

The wash bay's additional flows shall insignificantly increase the Basin A (as determined in the Final Drainage Report for Timberline Storage Yard" prepared by M&S Civil Consultants approved February 13, 2018.

**Revised Basin A, 8.3 acres, (Q5=9.4cfs, Q100=25.1cfs, Original) (Q5=9.5cfs, Q100=25.2cfs Including wash bay addition. The c-value change was negligible, and therefore the FSD watershed imperviousness was also negligible.),** consists primarily of a proposed gravel storage yard as well as the north half of the proposed office/warehouse building, concrete aprons, and asphalt parking areas....

**Private Water Quality Facility - Cost Estimate:**

No additional costs are required to the existing Private Water Quality Facility: **\$0.00**

**Drainage fees:**

No drainage fees are due as the site is not being platted at this time.

**Conclusion:**

No negative drainage effects associated with addition of a 40'x50' wash bay with (2) 20'x40' concrete pads to the existing Timberline Storage Yard site. The additional flows generated from the additional wash bay are negligible are within the margin of error of the Final Drainage Report for Timberline Storage Yard.

This proposal does not conflict or change the specifications as previously detailed within the "Final Drainage Report for Timberline Storage Yard" prepared by M&S Civil Consultants approved February 13, 2018

This letter has been prepared according to the County drainage criteria and is being submitted for approval. If you have any question about this submittal, please feel free to call me at 719-491-0818 or email me at [Virgils@mscivil.com](mailto:Virgils@mscivil.com)

Sincerely,



Virgil A. Sanchez

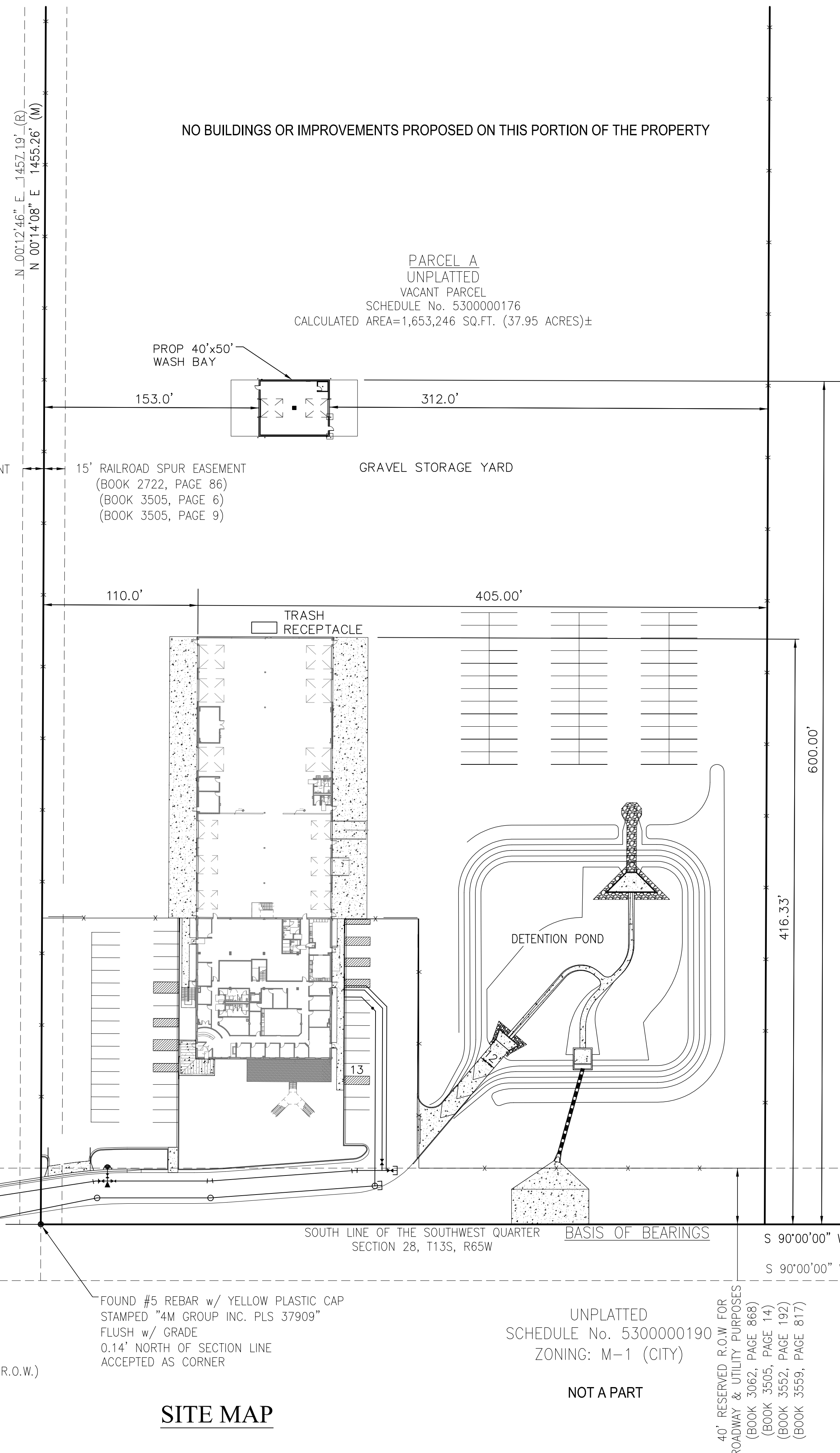
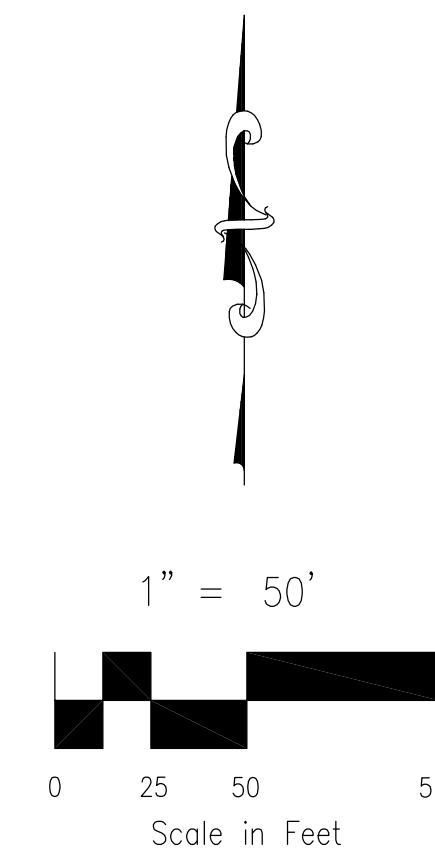
**SITE PLAN, GRADING AND DRAINAGE PLAN**



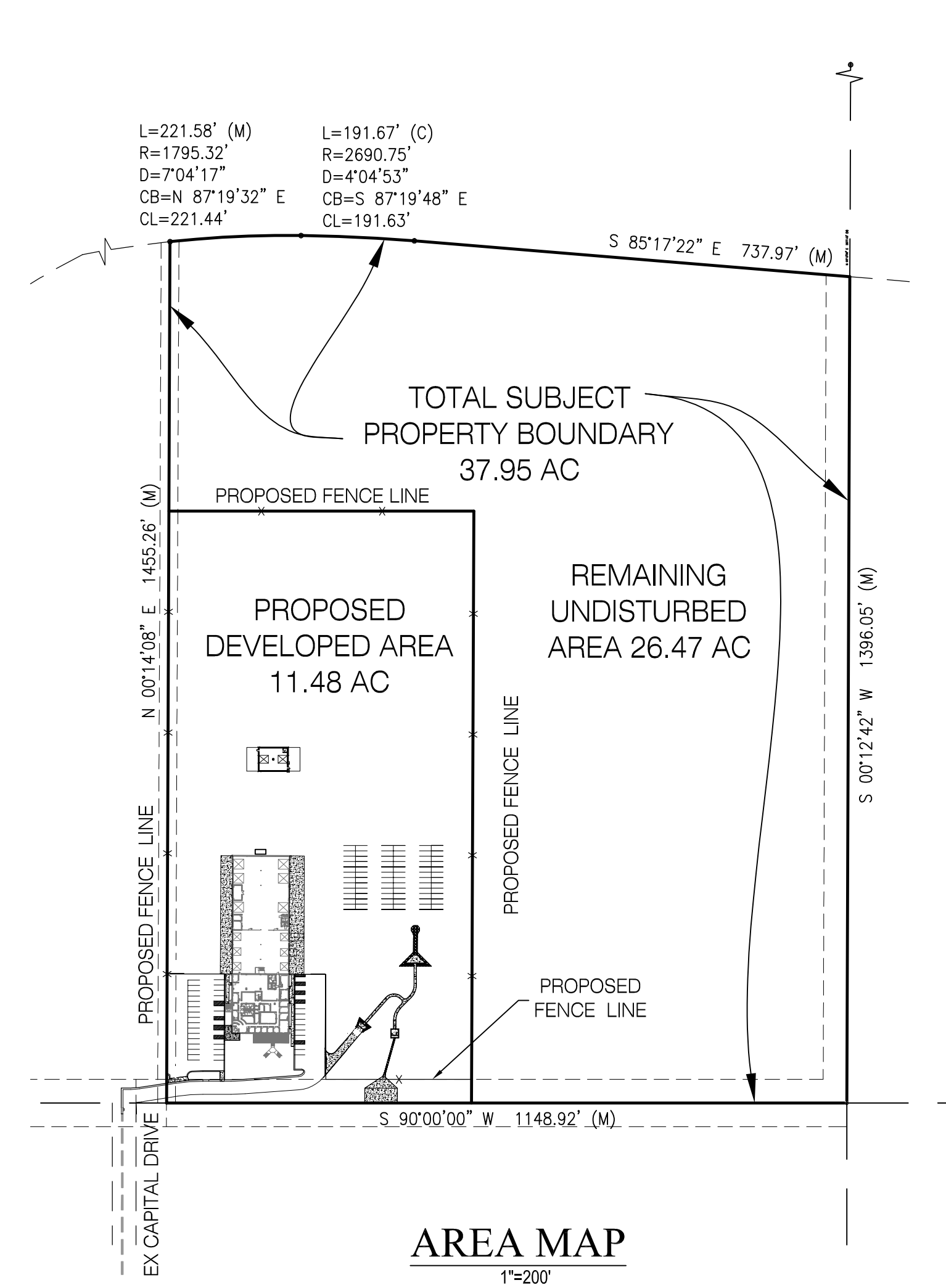
# TIMBERLINE STORAGE YARD - SITE PLAN, GRADING AND DRAINAGE PLAN

EL PASO COUNTY, STATE OF COLORADO

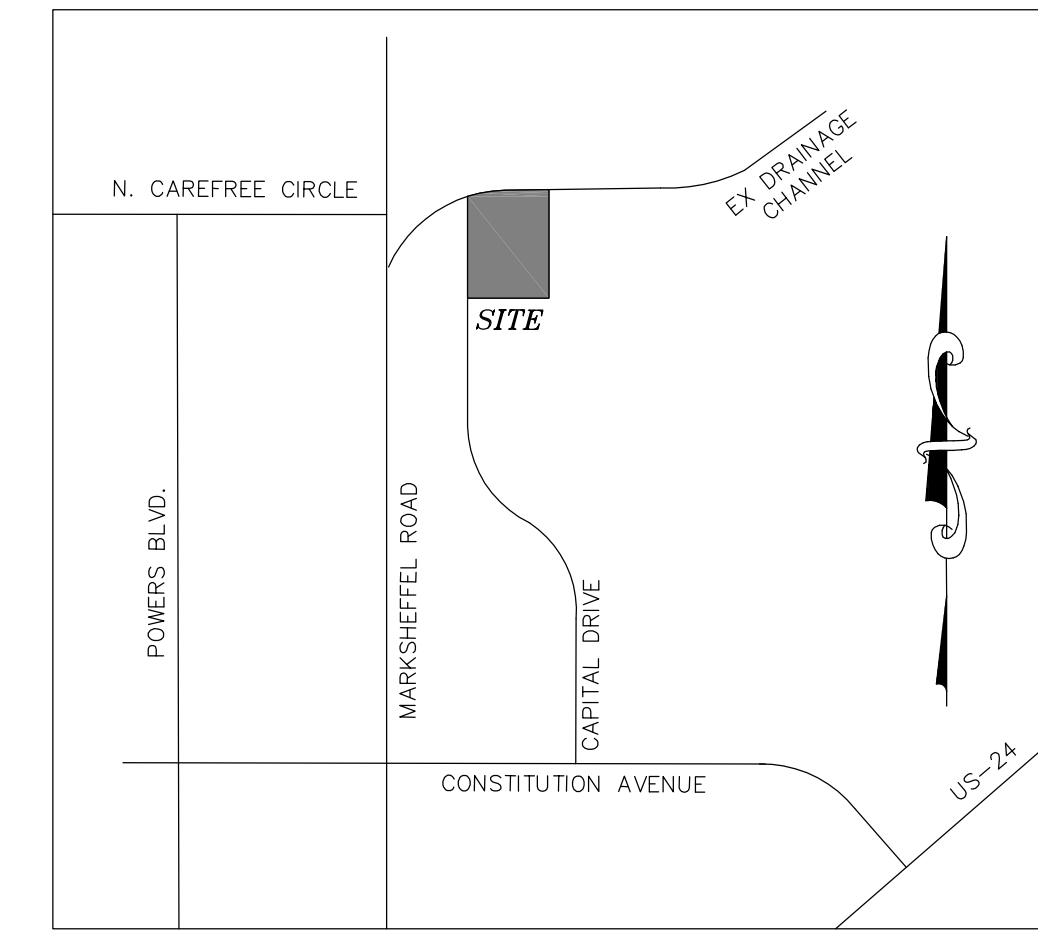
A PORTION OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN,



**SITE MAP**



**AREA MAP**  
1"=200'



**VICINITY MAP**  
N.T.S.

**DESIGN ENGINEER'S STATEMENT**

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

VIRGIL A. SANCHEZ, COLORADO P.E. #37160  
FOR AND ON BEHALF OF M & S CIVIL CONSULTANTS, INC.

**OWNER/DEVELOPER'S STATEMENT:**

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

**EL PASO COUNTY:**

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

JENNIFER IRVINE, P.E.  
COUNTY ENGINEER / ECM ADMINISTRATOR

PAGE INDEX	
1 OF 3	COVER SHEET
2 & 3 OF 3	GRADING & EROSION CONTROL

**LEGAL DESCRIPTION:**

THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER; THENCE ON THE WEST LINE OF SAID SOUTHWEST QUARTER, NORTH 00 DEGREES 02 MINUTES 12 SECONDS WEST A DISTANCE OF 298.20 FEET TO INTERSECT THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF THE CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD; THENCE NORTHEASTERLY AND EASTERLY ON SAID RIGHT-OF-WAY LINE ON A CURVE TO THE RIGHT WHOSE RADIUS IS 1,795.32 FEET, THROUGH A CENTRAL ANGLE OF 63 DEGREES 33 MINUTES 20 SECONDS AN ARC DISTANCE OF 1,991.47 FEET FOR THE POINT OF BEGINNING OF THE TRACT TO BE DESCRIBED HEREBY; THENCE CONTINUE ON THE LAST MENTIONED CURVE, WHOSE RADIUS IS 1,795.32 FEET, THROUGH A CENTRAL ANGLE OF 06 DEGREES 56 MINUTES 39 SECONDS AN ARC DISTANCE OF 217.59 FEET; THENCE ON A SPIRAL CURVE, WHOSE LONG CHORD BEARS SOUTH 85 DEGREES 25 MINUTES 49 SECONDS EAST A DISTANCE OF 195.23 FEET TO A POINT OF TANGENCY; THENCE SOUTH 85 DEGREES 25 MINUTES 17 SECONDS EAST A DISTANCE OF 738.04 FEET MORE OR LESS TO INTERSECT THE EAST LINE OF SAID SOUTHWEST QUARTER; THENCE ON SAID EAST LINE SOUTH 00 DEGREES 12 MINUTES 46 SECONDS WEST A DISTANCE OF 1,395.80 FEET TO THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER; THENCE ON THE SOUTH LINE OF SAID SOUTHWEST QUARTER, SOUTH 90 DEGREES 00 MINUTES 00 SECONDS WEST A DISTANCE OF 1,148.00 FEET; THENCE NORTH 00 DEGREES 12 MINUTES 46 SECONDS EAST A DISTANCE OF 1,457.19 FEET MORE OR LESS TO THE POINT OF BEGINNING.

CALCULATED AREA=1,653,246 SQ.FT. (37.95 ACRES)±

**CONTACTS**

- OWNER**  
TIMBERLINE LANDSCAPING, INC.  
3498 CAPITAL DRIVE  
COLORADO SPRINGS, CO 80939
- CIVIL ENGINEER**  
MS CIVIL CONSULTANTS, INC.  
102 E. PIKES PEAK AVE. STE 306  
COLORADO SPRINGS, CO 80903  
VIRGIL A. SANCHEZ, P.E.  
719-491-0818
- WATER AND WASTEWATER**  
CHEROKEE METROPOLITAN DISTRICT  
6250 PALMER PARK BOULEVARD  
COLORADO SPRINGS, CO 80915-1721  
JONATHAN SMITH  
719-597-5080
- COUNTY ENGINEER**  
EL PASO COUNTY  
PLANNING AND COMMUNITY DEVELOPMENT  
2880 INTERNATIONAL CIRCLE, SUITE 110  
COLORADO SPRINGS, COLORADO 80910  
GILBERT LAFORECE, P.E.  
719-520-7945
- FIRE DEPARTMENT**  
OMARRON HILLS FIRE DEPARTMENT  
1835 TUSKEGEE PLACE  
COLORADO SPRINGS, CO 80915  
719-591-0960
- TELEPHONE COMPANY**  
U.S. WEST COMMUNICATIONS (LOCATORS)  
800-922-1987  
AT&T (LOCATORS)  
719-635-3674

NO BUILDINGS OR IMPROVEMENTS PROPOSED ON THIS PORTION OF THE PROPERTY

NO BUILDINGS OR IMPROVEMENTS PROPOSED ON THIS PORTION OF THE PROPERTY

UNPLATTED  
SCHEDULE No. 5300000552  
ZONING: I-3 (COUNTY)  
NOT A PART

UNPLATTED  
SCHEDULE No. 5300000190  
ZONING: M-1 (CITY)  
NOT A PART

40' RESERVED R.O.W FOR  
ROADWAY & UTILITY PURPOSES  
(BOOK 3062, PAGE 868)  
(BOOK 3505, PAGE 14)  
(BOOK 3552, PAGE 192)  
(BOOK 3559, PAGE 817)

FOUND #5 REBAR w/ YELLOW PLASTIC CAP  
STAMPED "4M GROUP INC. PLS 37909"  
FLUSH w/ GRADE  
0.14' NORTH OF SECTION LINE  
ACCEPTED AS CORNER

TIMBERLINE STORAGE YARD

SITE PLAN, GRADING AND DRAINAGE PLAN

PROJECT NO. 43-095    SCALE:    DATE: 6/01/2018

DESIGNED BY:    HORIZONTAL:    SHEET 1 OF 3

DRAWN BY:    VERTICAL:    GRO1

CHECKED BY:    N/A

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485

**CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF  
M&S CIVIL CONSULTANTS,  
INC.

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:	APPROV. BY:	DATE:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

**CAUTION**

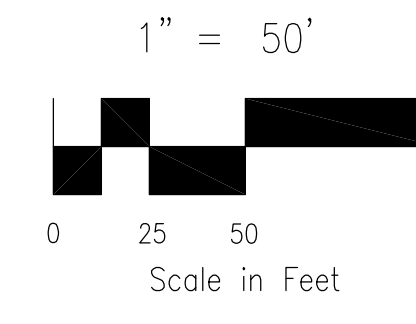
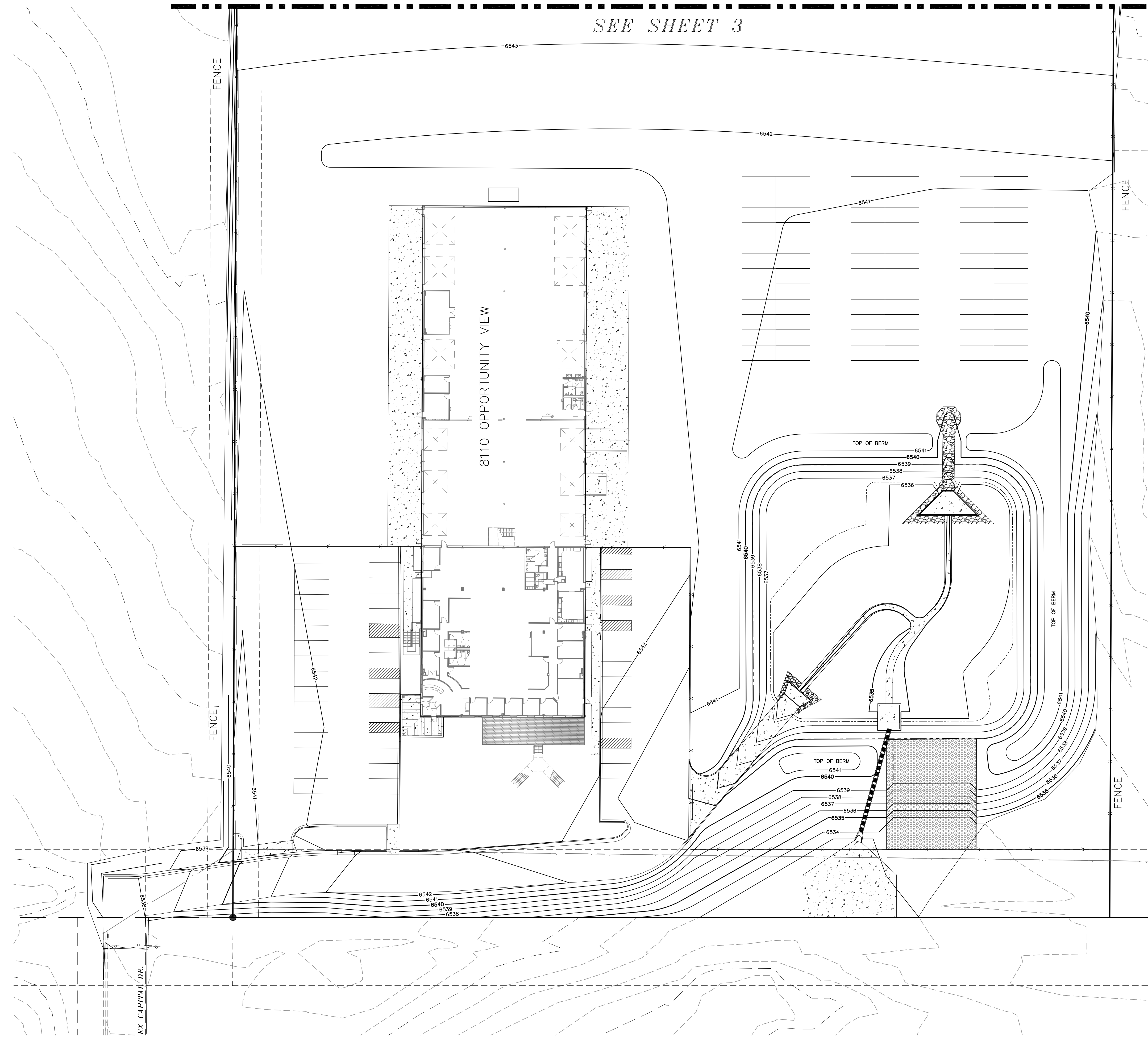
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# TIMBERLINE STORAGE YARD

SITE PLAN, GRADING AND DRAINAGE PLAN

SEE SHEET 3

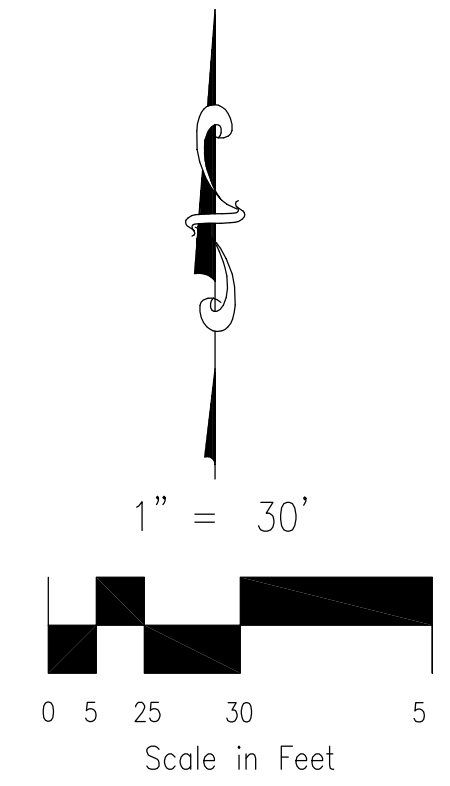
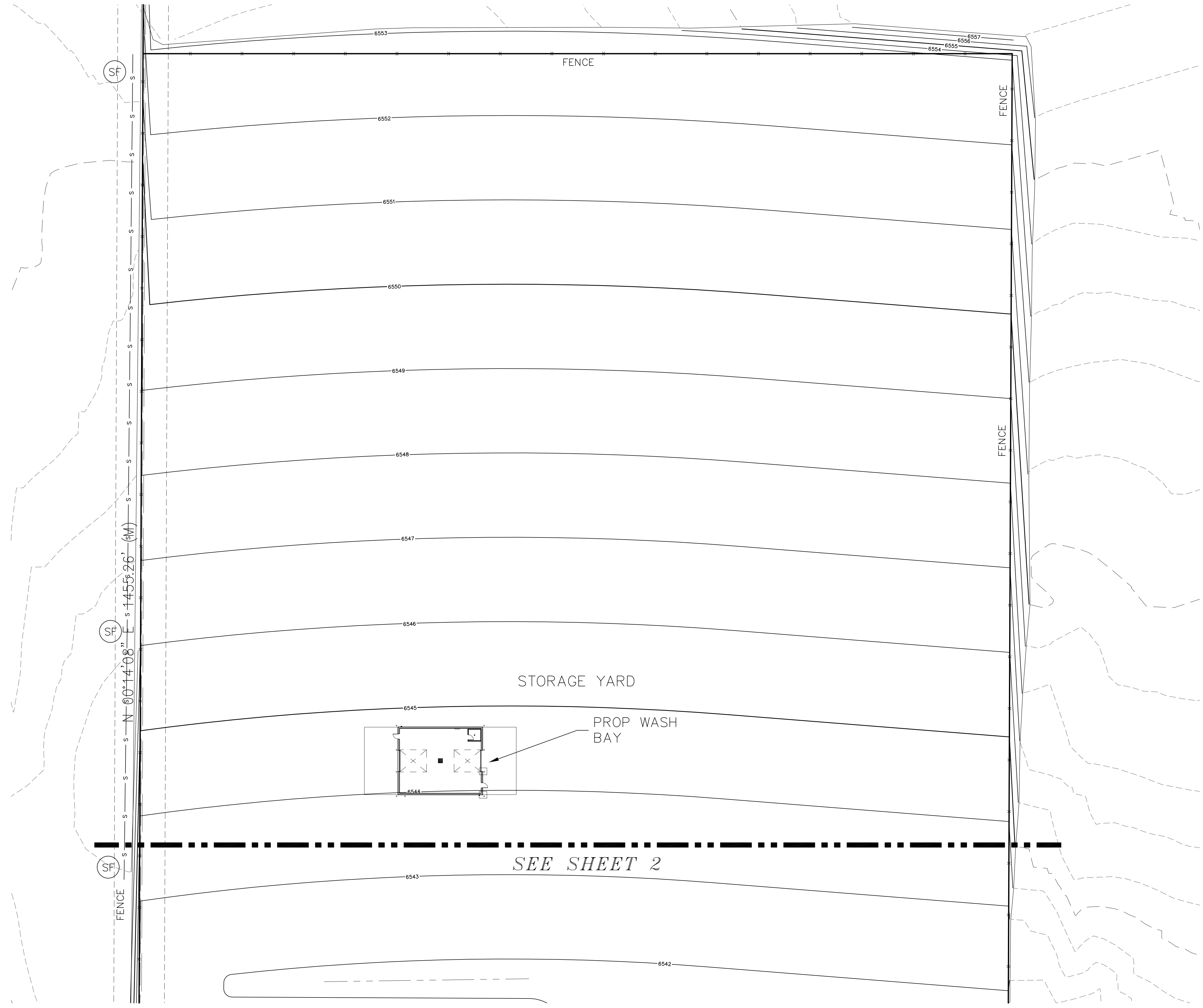


REVISIONS: NO. DATE BY DESCRIPTION APPROVED BY DATE		M&S CIVIL CONSULTANTS, INC. 20 BOULDER CRESCENT, SUITE 110 COLORADO SPRINGS, CO 80903 PHONE: 719.555.5485	TIMBERLINE STORAGE YARD	
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.			SITE PLAN, GRADING AND DRAINAGE PLAN	
CAUTION		PROJECT NO. 43-095		DATE: 6/01/2018
DESIGNED BY: GW		SCALE: HORIZONTAL: 1"=50'		SHEET 2 OF 3
DRAWN BY: GW		VERTICAL: N/A		
CHECKED BY:		PROJECT NO. 43-095		GR02



# TIMBERLINE STORAGE YARD

SITE PLAN, GRADING AND DRAINAGE PLAN



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REVISIONS: NO. DATE BY: DESCRIPTION APPROVED BY: DATE:		MIRCIL A. SANCHEZ, COLORADO P.E. NO. 37160		20 BOULDER CRESCENT, SUITE 110 COLORADO SPRINGS, CO 80903 PHONE: 719.555.4485		CIVIL CONSULTANTS, INC.	
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE 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 PREPARER OF THESE PLANS.				CAUTION			
PROJECT NO. 43-095				SCALE:			
DESIGNED BY: GW				HORIZONTAL: 1"=50'			
DRAWN BY: GW				VERTICAL: N/A			
CHECKED BY:				DATE: 6/01/2018			
TIMBERLINE STORAGE YARD				SITE PLAN, GRADING AND DRAINAGE PLAN			
SHEET 3 OF 3				GR03			