

BEING A PART OF SECTION 11, TOWNSHIP 5 NORTH,
RANGE 68 WEST OF THE 6TH PRINCIPAL MERIDIAN
CITY OF LOVELAND, COUNTY OF LARIMER, STATE OF COLORADO

PRIOR TO THE ISSUANCE OF A SITE WORK PERMIT OR ANY CONSTRUCTION ACTIVITY WITHIN COUNTY ROAD 3 RIGHT-OF-WAY, A RIGHT-OF-WAY WORK PERMIT AND APPROVED CONSTRUCTION TRAFFIC CONTROL PLAN SHALL BE OBTAINED FROM THE CITY PUBLIC WORKS DEPARTMENT.

	PROPOSED WATER LINE
	EXISTING WATER LINE
	PROPOSED FIRE HYDRANT
	PROPOSED VALVE
	EXISTING WATER WELL
	PROPOSED WATER METER
	EXISTING WATER METER
	EXISTING CLEANOUT
	PROPOSED SANITARY MANHOLE
	PROPOSED STORM SEWER W/ RIPRAP
	EXISTING STORM SEWER W/ RIPRAP
	PROPOSED TYPE R INLET
	PROPOSED SANITARY SEWER
	EXISTING SANITARY SEWER
	PROPOSED UNDERDRAIN
	EXISTING ELECTRIC LINE
	EXISTING TELEPHONE LINE
	EXISTING CABLE TV LINE
	EXISTING FIBER OPTICS LINE
	EXISTING GAS LINE
	PROPOSED GUARD RAIL
	PROPOSED DRAINAGE SWALE
	EXISTING UNDERGROUND COMMUNICATION LINE
	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING SANITARY SEWER LINE
	EXISTING WATER LINE



VICINITY MAP
1" = 1000'



<div> <div> </div> <div> </div> </div>			
<u>OWNER/DEVELOPER</u> CENTERRA EAST DEVELOPMENT, LLC 2725 ROCKY MOUNTAIN AVE, STE 200 LOVELAND, CO 80538 (970) 776-0406 TROY MCWHINNEY	<u>LANDSCAPE ARCHITECT</u> TB GROUP 444 MOUNTAIN AVENUE BERTHOUD, CO 80513 (970) 532-5891 CHRISTINE MYERS	<u>MUNICIPALITY</u> CITY OF LOVELAND DEVELOPMENT SERVICES DEPARTMENT 500 EAST THIRD STREET LOVELAND, CO 80537 (970) 962-2579 TROY BLISS	<u>STORM DRAINAGE</u> CITY OF LOVELAND PUBLIC WORKS DEPARTMENT 2525 W. 1ST STREET LOVELAND, CO 80537 (970) 962-2531 SUZETTE SCHAFF, P. E.
<u>CIVIL ENGINEER</u> MERRICK & COMPANY 5970 GREENWOOD PLAZA BLVD GREENWOOD VILLAGE, CO. 80111 (303) 353-3617 TYLER SCARLETT, P. E.	<u>SURVEYOR</u> LAT40, INC. 6250 W. 10TH STREET, UNIT #2 GREELEY, CO 80634 (970) 515-5294 BRIAN ROTTINGHAUS, PLS	<u>FIRE PROTECTION</u> LOVELAND FIRE AND RESCUE 410 EAST 5TH STREET LOVELAND, CO 80537 (970) 962-2518 CARIE DANN, DEPUTY FIRE MARSHAL	
<u>GOETECHNICAL ENGINEER</u> SOLOIGIC, INC 3522 DRAFT HORSE COURT LOVELAND, CO 80538 (970) 535-6144 CONTACT: DARREL DI CARLO, P. E.	<u>OIL & GAS REGULATORY SPECIALIST</u> ARDOR ENVIRONMENTAL (303) 503-7539 CONTACT: TRISHA FANNING	<u>KEY CONTACT PERSON</u> PETERSON ENERGY OPERATING, INC P.O. BOX 2169 LOVELAND, CO 80537 (970) 203-4263 CONTACT: ANDY PETERSON, P. E. EMAIL: ANDY@PETERSONENERGYOPERATING.COM	

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3	C-002	GENERAL NOTES
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A PORTION OF OUTLOT P MILLENNIUM EAST 10TH SUBDIVISION
BEING A PORTION OF THE NORTHEAST QUARTER AND SOUTHEAST
QUARTER OF SECTION 11, TOWNSHIP 5 NORTH, RANGE 68 WEST OF
THE 6TH PRINCIPAL MERIDIAN, CITY OF LOVELAND, COUNTY OF
LARIMER, STATE OF COLORADO

BEARINGS ARE ASSUMED AND ARE BASED ON THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 11, AS BEARING S89°10'22"W A DISTANCE OF 2642.94 FEET BETWEEN THE EAST QUARTER CORNER OF SAID SECTION 11 BEING MONUMENTED BY A FOUND 2" ALUMINUM CAP STAMPED "CITY OF LOVELAND BENCHMARK 95-06" SET IN A HEADWALL 500 N OF HWY 34 INTERSECTION AT AN ELEVATION OF 4967.15' (NGVD 29).

THESE PLANS HAVE BEEN APPROVED BY:

PUBLIC WORKS - TRANSPORTATION DEVELOPMENT DIVISION (FOR PUBLIC IMPROVEMENTS ONLY)

BY: _____ DATE: _____

LOVELAND FIRE RESCUE AUTHORITY

BY: _____ DATE: _____

WATER AND POWER DEPARTMENT - WATER/WASTEWATER

BY: _____ DATE: _____

WATER AND POWER DEPARTMENT - POWER

BY: _____ DATE: _____

PUBLIC WORKS DEPARTMENT - STORMWATER DIVISION

BY: _____ DATE: _____

PARKS AND RECREATION DEPARTMENT

BY: _____ DATE: _____
DEVELOPMENT SERVICES DEPARTMENT - CURRENT PLANNING DIVISION

BY: _____ DATE: _____

THE CITY OF LOVELAND REVIEW CONSTITUTES COMPLIANCE WITH THE CITY'S DEVELOPMENT STANDARDS, SUBJECT TO THESE PLANS BEING STAMPED, SIGNED, AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD. REVIEW BY THE CITY DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE ENGINEER OF RECORD.

THESE PLANS ARE INTENDED TO BE FOR CITY REVIEW OR PUBLIC AND PRIVATE INFRASTRUCTURE IMPROVEMENTS ASSOCIATED WITH THE DEVELOPMENT PROJECT. CONSTRUCTION OF IMPROVEMENTS CANNOT COMMENCE UNTIL REQUIRED SITE DEVELOPMENT PLANS AND SUBDIVISION PLATS ARE COMPLETE, APPROVED, AND ON FILE WITH THE CITY.

THESE PLANS SHALL BE VALID FOR A PERIOD OF THREE YEARS FROM THE DATE OF APPROVAL BY THE TRANSPORTATION DEVELOPMENT DIVISION. IF THE NEXT APPROVAL OR PERMIT REQUIRED TO COMMENCE CONSTRUCTION THAT IS AUTHORIZED BY THE CITY'S APPROVAL OF THESE PLANS HAS NOT BEEN APPLIED FOR WITHIN THREE YEARS OF THE DATE OF APPROVAL, THE PLANS SHALL EXPIRE AND SHALL BE DEEMED NULL AND VOID.

0	ISSUED FOR CONSTRUCTION	5/5/2023	TVG	SWC	TS
REV	REVISION DESCRIPTION	DATE	CHND	CHKD	APPR



Know what's **below**.
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ACCEPTED BY:

CITY ENGINEER (or Designer)



Engineering / Architecture / Design-Build / Surveying / Planning / Geospatial Solutions

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303-751-0741
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FOR AND ON BEHALF OF MERRICK & COMPANY

TITLE

MRG, LP OIL AND GAS CE PAD
CITY OF LOVELAND, COLORADO
CIVIL CONSTRUCTION PLANS
COVER SHEET

JOB NUMBER

65120236-10

DATE _____

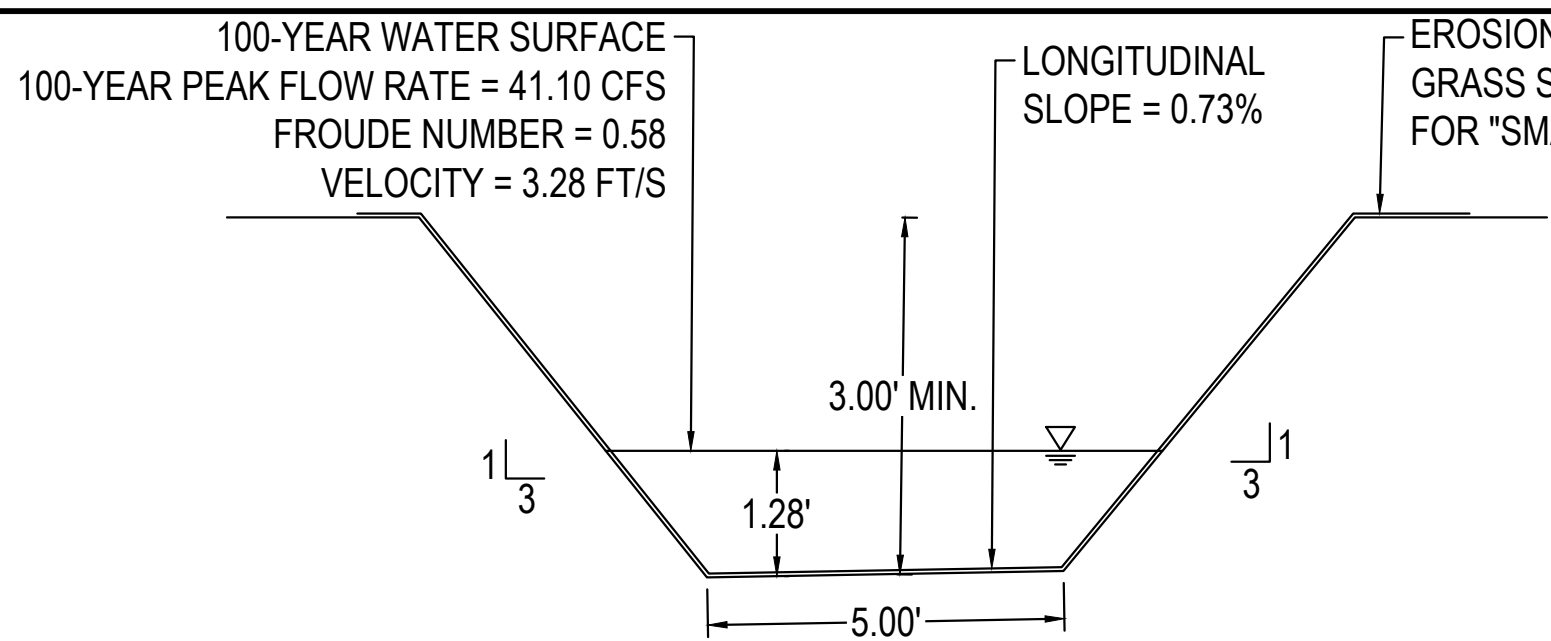
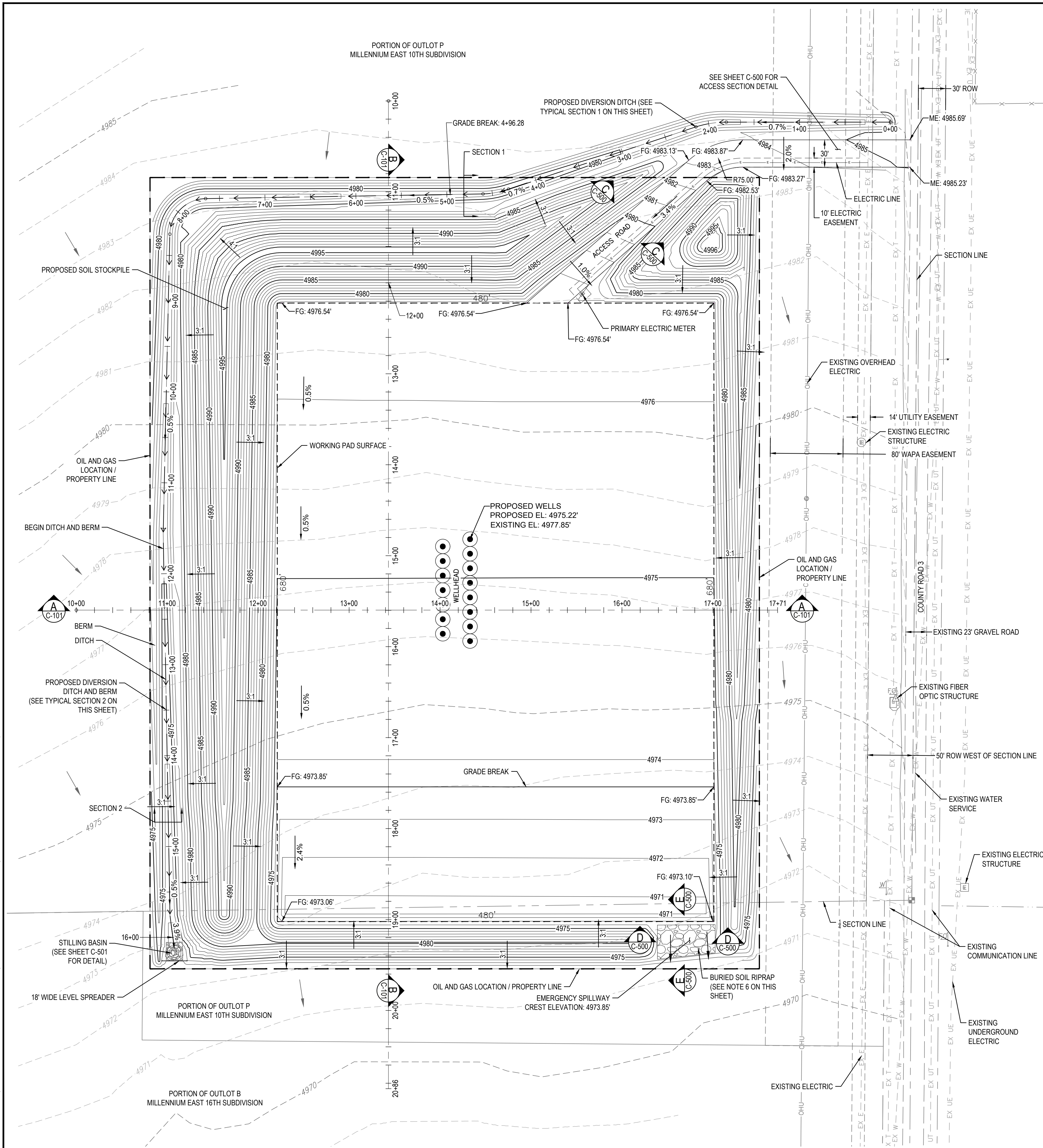
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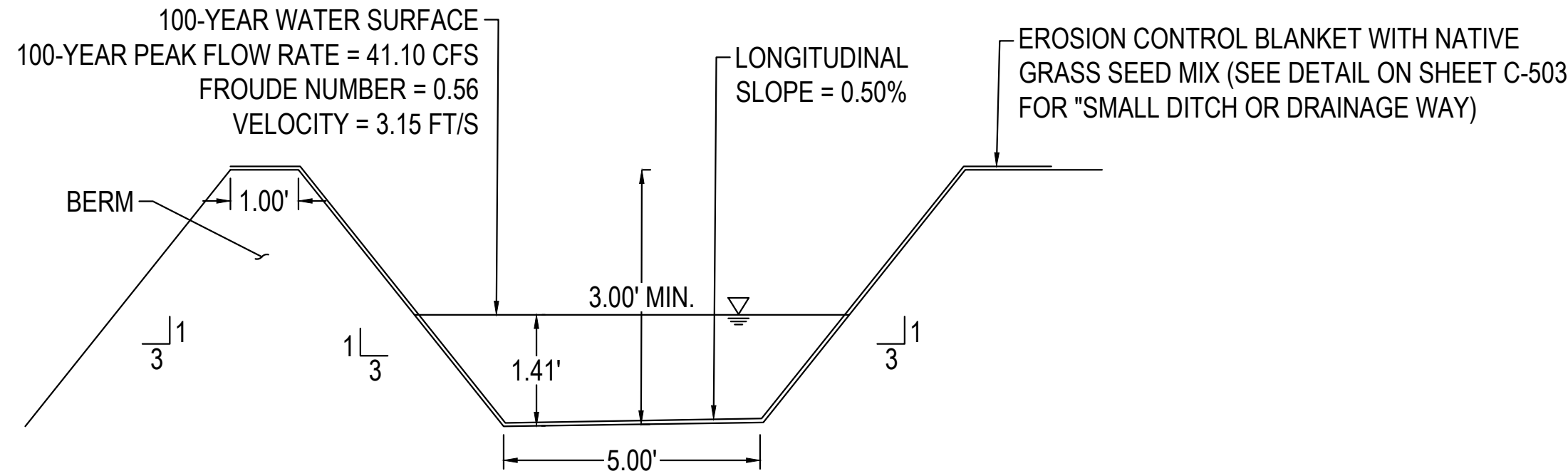
1 of 1

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DIVERSION DITCH - TYPICAL SECTION 1

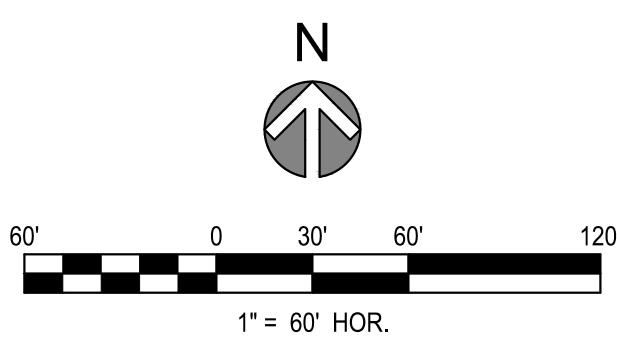
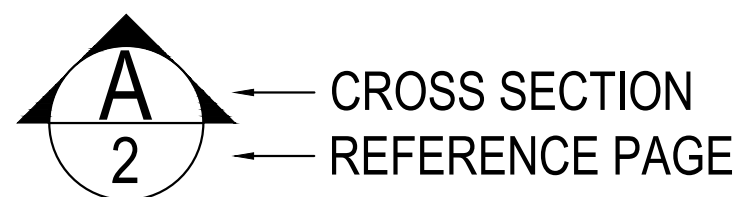


DIVERSION DITCH & BERM - TYPICAL SECTION 2

NOTES:

- ALL ELEVATIONS AND CONTOURS SHOWN ARE TO TOP OF FINISHED GRADE.
- WORKING PAD SURFACE AND ACCESS ROAD SHALL BE STABILIZED WITH 4-INCH DEPTH CDOT CLASS 6 AGGREGATE BASE COURSE (ABC).
- ALL DISTURBED AREAS OUTSIDE THE LIMITS OF THE CDOT CLASS 6 ABC SHALL RECEIVE EROSION CONTROL SEEDING.
- GROUND ELEVATIONS BASED ON NGVD 1929 DATUM.
- CONTRACTOR TO REMOVE 4" OF TOPSOIL. SHOULD THE ACTUAL FIELD DEPTH OF THE TOPSOIL DIFFER, CONTACT ENGINEER.
- REFERENCE MILE HIGH FLOOD DISTRICT "DIVISION 31 EARTHWORK - RIPRAP, BOULDERS, AND BEDDING" CONSTRUCTION SPECIFICATIONS (SECTION 31 37 00) FOR SOIL RIPRAP EXECUTION AND PLACEMENT. RIPRAP LAYER TO HAVE 18" THICKNESS. TOP OF RIPRAP TO HAVE 4" OF TOPSOIL COVER.

LEGEND:



EARTHWORK VOLUMES

ALL REPORTED VOLUMES ARE BANK VOLUMES
TOTAL CUT: 34,693 CY
TOTAL FILL: 42,350 CY
CDOT CLASS 6 FILL IMPORT: 4,201 CY
TOTAL ESTIMATED TOPSOIL: 7,361 CY
RIPRAP (MHFD TYPE L: D₅₀ = 9") : 363CY

DISTURBED AREA

OIL AND GAS LOCATION: ±13.4 AC
WORKING PAD SURFACE: ±7.49 AC
ACCESS ROAD: ±0.32 AC

REV	REVISION DESCRIPTION	DATE	CHND	CHKD	APPR
0	ISSUED FOR CONSTRUCTION	5/5/2023	TVG	SWC	TS



CITY APPROVAL

ACCEPTED BY: _____ DATE: _____

CITY ENGINEER (or Designee)



PE STAMP

FOR AND ON BEHALF OF MERRICK & COMPANY

TITLE

MRG, LP OIL AND GAS CE PAD
CITY OF LOVELAND, COLORADO
CIVIL CONSTRUCTION PLANS
DRILLING PHASE GRADING PLAN

JOB NUMBER: 65120236-10

DATE: 5/5/2023

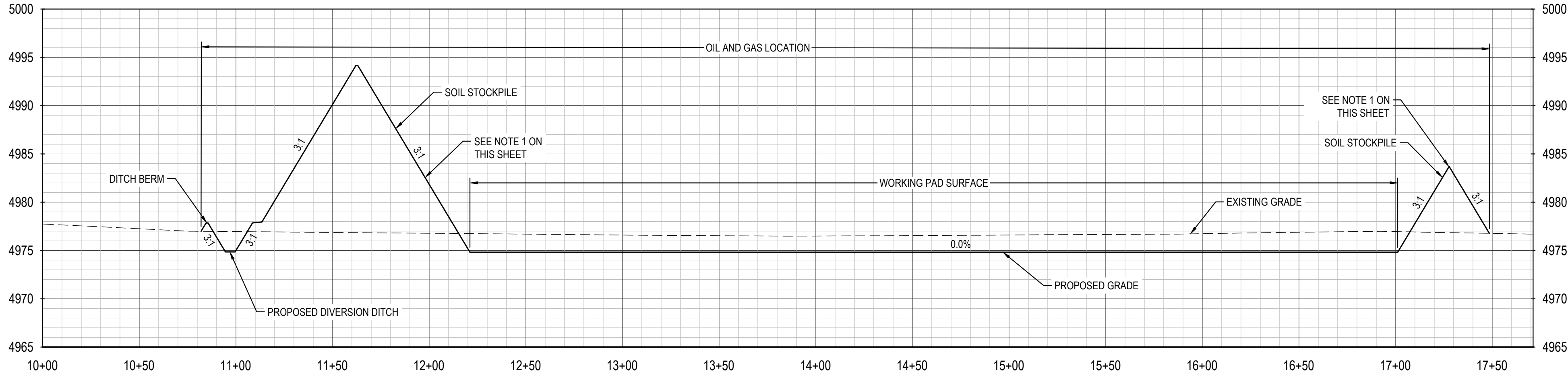
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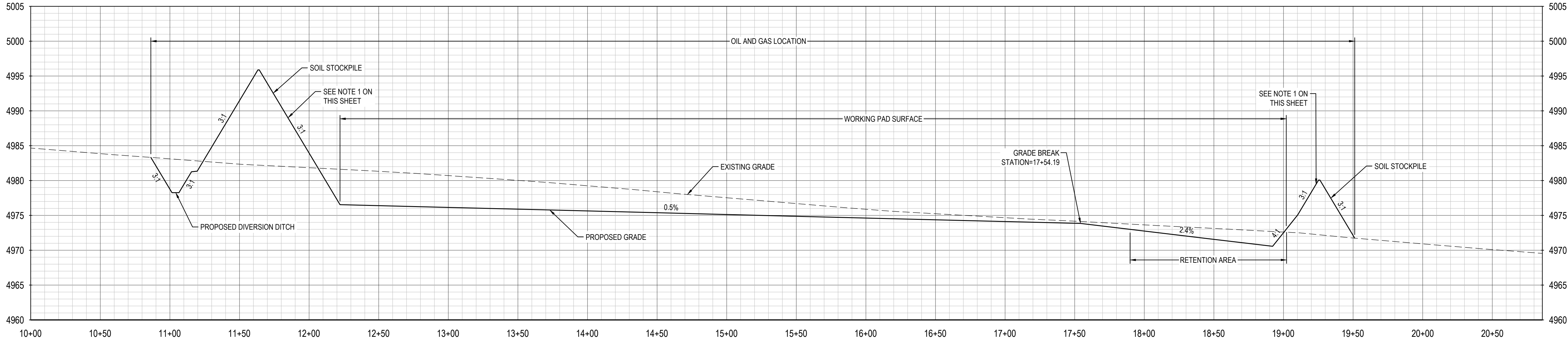
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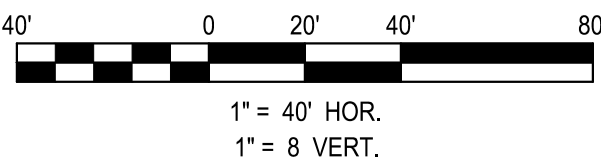
SECTION A (W-E)



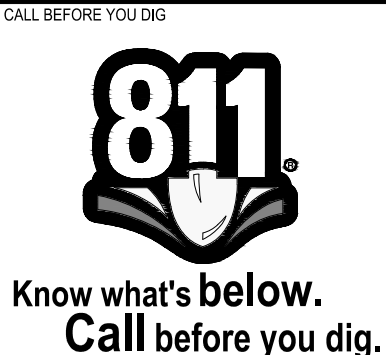
SECTION B (N-S)



NOTES:
1. UPON COMPLETION OF THE STOCKPILES, THE STOCKPILE SURFACE IS TO BE COATED WITH A BIODEGRADABLE, SOIL TACKIFIER SUITABLE FOR USE IN ENVIRONMENTS WITH AVERAGE HUMIDITY LEVELS IN THE 40%-50% RANGE TO RESIST WIND EROSION.



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CITY ENGINEER (or Designee)



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FOR AND ON BEHALF OF MERRICK & COMPANY

TITLE

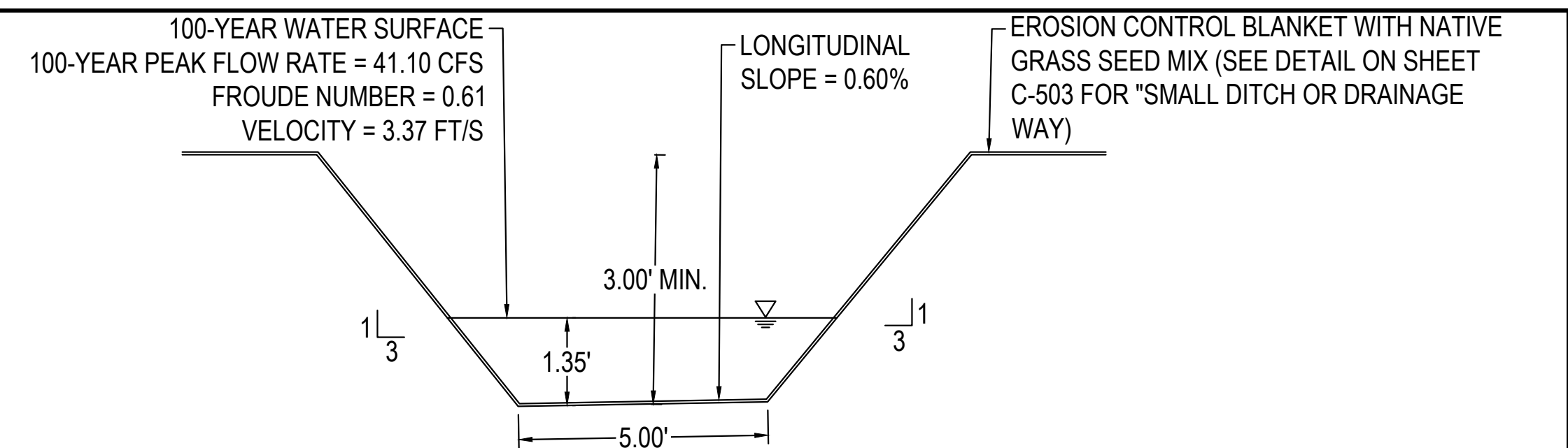
MRG, LP OIL AND GAS CE PAD
CITY OF LOVELAND, COLORADO
CIVIL CONSTRUCTION PLANS
DRILLING PHASE SECTION VIEWS

JOB NUMBER
65120236-10

DATE
5/5/2023

SHEET
C-101

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100-YEAR WATER SURFACE
100-YEAR PEAK FLOW RATE = 41.10 CFS
FROUDE NUMBER = 0.56
VELOCITY = 3.15 FT/S

BERM

1.00'

1/3

1.41'

3.00' MIN.


LONGITUDINAL SLOPE = 0.50%

EROSION CONTROL BLANKET WITH NATIVE GRASS SEED MIX (SEE DETAIL ON SHEET C-503 FOR "SMALL DITCH OR DRAINAGE WAY")

5.00'

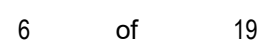
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1. ALL ELEVATIONS AND CONTOURS SHOWN ARE TO TOP OF FINISHED GRADE.
2. ALL DISTURBED AREAS OUTSIDE THE LIMITS OF THE CDOT CLASS 6 ABC SHALL RECEIVE EROSION CONTROL SEEDING.
3. GROUND ELEVATIONS BASED ON NGVD 1929 DATUM.
4. REFERENCE MILE HIGH FLOOD DISTRICT "DIVISION 31 EARTHWORK - RIPRAP, BOULDERS, AND BEDDING" CONSTRUCTION SPECIFICATIONS (SECTION 31 37 00) FOR SOIL RIPRAP EXECUTION AND PLACEMENT. RIPRAP LAYER TO HAVE 18" THICKNESS. TOP OF RIPRAP TO HAVE 4" OF TOPSOIL COVER.

 ← CROSS SECTION
← REFERENCE PAGE NUMBER

RIPRAP (MHFD TYPE L: $D_{50} = 9"$) : 1,341 CY

OIL AND GAS LOCATION: ±13.4 ACRES
INTERIM WORKING PAD SURFACE: ±2.0 ACRES
RECLAIMED AREA: ±6.2 ACRES
UNRECLAIMED AREA: ±5.2 ACRES

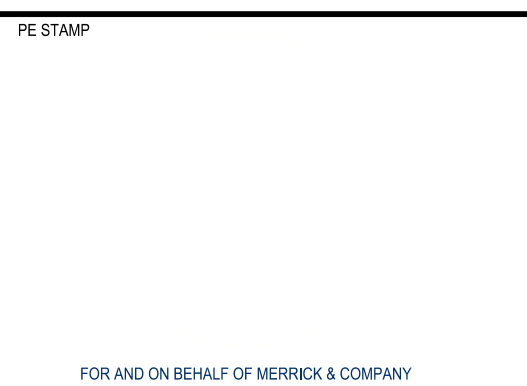
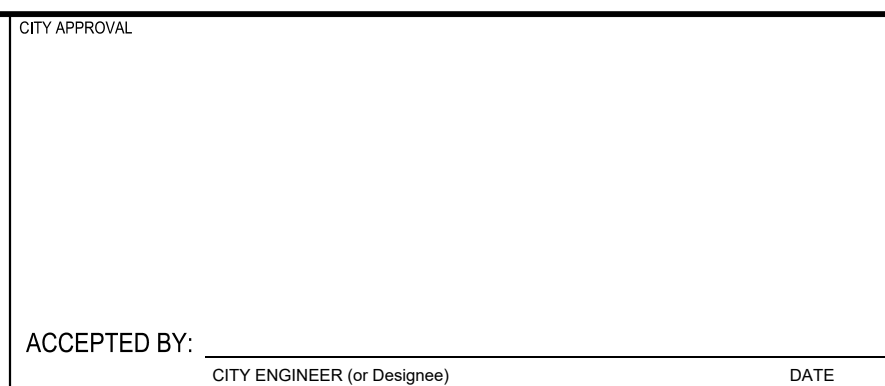
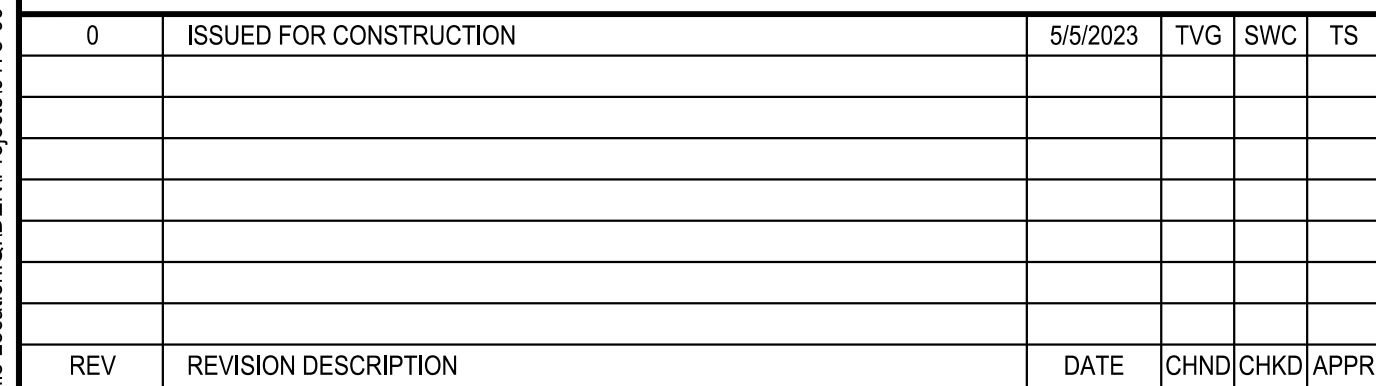


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The profile view shows the proposed road alignment from station 0+50 to 5+00. The vertical axis represents elevation from 4965 to 4995 feet. The horizontal axis represents stationing. The profile includes existing grade, proposed grade, and various features like ditches, berms, and service roads. Key labels include: DITCH BERM, VISUAL MITIGATION BERMS, PROPOSED DIVERSION DITCH, SERVICE ROAD, EXISTING GRADE, PROPOSED GRADE, and PROPOSED INTERNAL DITCH. Slopes are indicated as 3:1, 2:1, and 4:1.

The profile view shows the vertical alignment of the proposed road. The existing grade is shown as a dashed line, and the proposed grade is shown as a solid line. Key features include:

- Visual Mitigation Berms:** Located at station 1+50 and 5+50.
- Service Road:** Located at station 2+00.
- Proposed Internal Ditch:** Located at station 1+75.
- Proposed Grade:** Shown as a solid line with a 0.5% slope.
- Existing Grade:** Shown as a dashed line.
- Access Road:** Located at station 6+50.
- Proposed Diversion Ditch:** Located at station 6+75.



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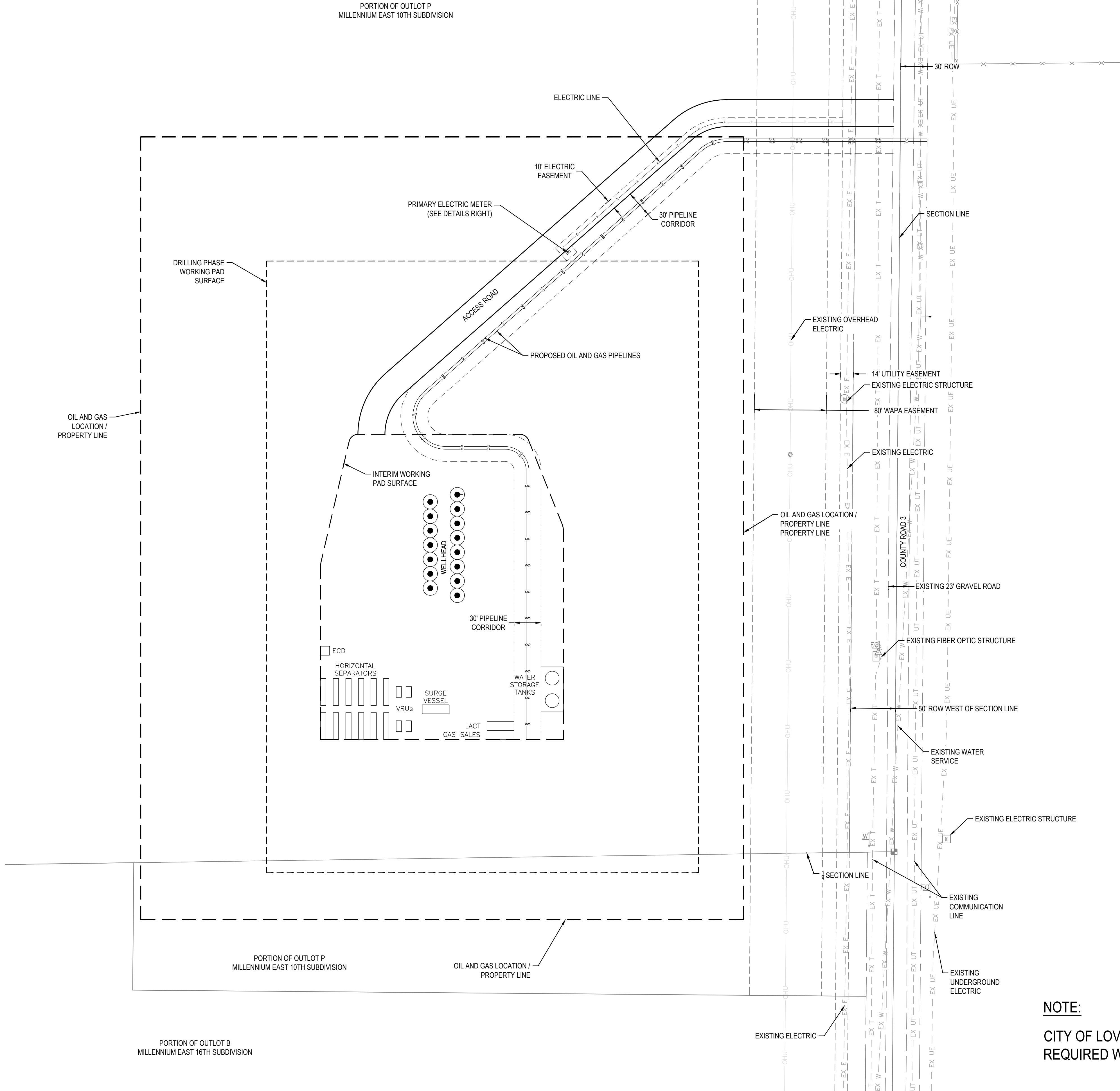
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C-201

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NOTE:
CITY OF LOVELAND WATER OR SEWER SERVICE IS NOT
REQUIRED WITH THIS PROJECT

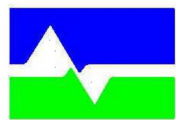
PRIMARY METER INSTALLATION

TABLE OF RESPONSIBILITY

ITEM, MATERIAL OR WORK DESCRIPTION	PARTY TO FURNISH AND OWN	PARTY TO INSTALL AND MAINTAIN
PERMITS AND INSPECTIONS	CUSTOMER	N/A
PRIMARY METERING CABINET	CUSTOMER	CITY
CONCRETE PRECAST VAULT	CITY	CITY
LINE SIDE CONDUIT AND CONDUCTOR	CITY	CITY
LINE SIDE TERMINATIONS	CITY	CITY
INSTRUMENT TRANSFORMERS CTs & PTs	CITY	CITY
METER SOCKET	CITY	CITY
METERING CIRCUIT CONDUCTORS	CITY	CITY
BILLING METER	CITY	CITY
LOAD SIDE CONDUIT AND CONDUCTORS	CUSTOMER	CUSTOMER
LOAD SIDE TERMINATIONS	CITY	CITY
GROUND RODS (5) CONDUCTOR OR GRID	CITY	CITY

NOTES:

1. DEMARCATION POINT - LOAD SIDE TERMINATIONS



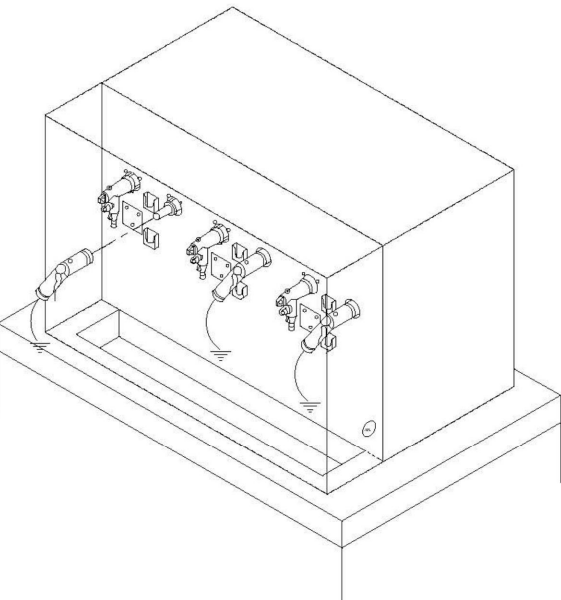
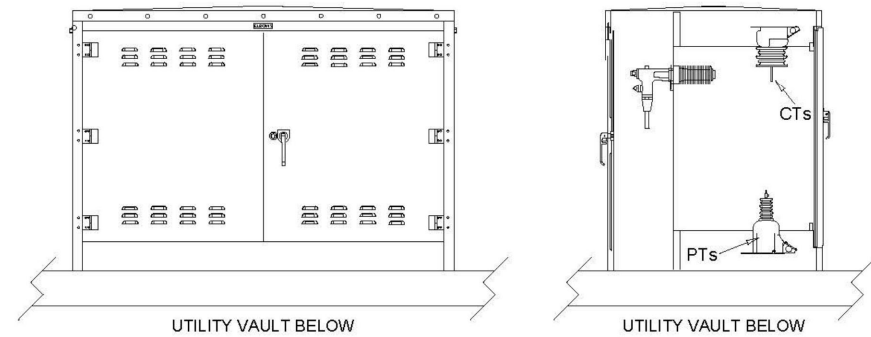
CITY OF LOVELAND WATER & POWER

Date:	Drawing No.	Requirements for Electric Service
AUGUST 2020	6.8	PRIMARY METER RESPONSIBILITY

Requirements for Electric Service - Section 6 - Meters & Meter Connections

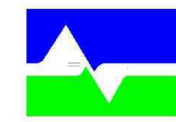
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PRIMARY METER INSTALLATION



NOTES:

1. CUSTOMER OWNED CONDUCTORS MUST FIT CITY SUPPLIED LOAD SIDE TERMINATIONS. CONTACT POWER ENGINEERING AT 970-962-3000

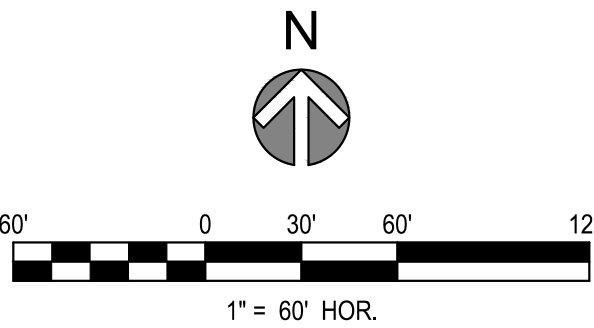


CITY OF LOVELAND WATER & POWER

Date:	Drawing No.	Requirements for Electric Service
AUGUST 2020	6.9	PRIMARY METER INSTALLATION

Requirements for Electric Service - Section 6 - Meters & Meter Connections

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FOR AND ON BEHALF OF MERRICK & COMPANY

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MRG, LP OIL AND GAS CE PAD
CITY OF LOVELAND, COLORADO
CIVIL CONSTRUCTION PLANS
UTILITY PLAN

JOB NUMBER

65120236-10

DATE

5/5/2023

SHEET

C-300

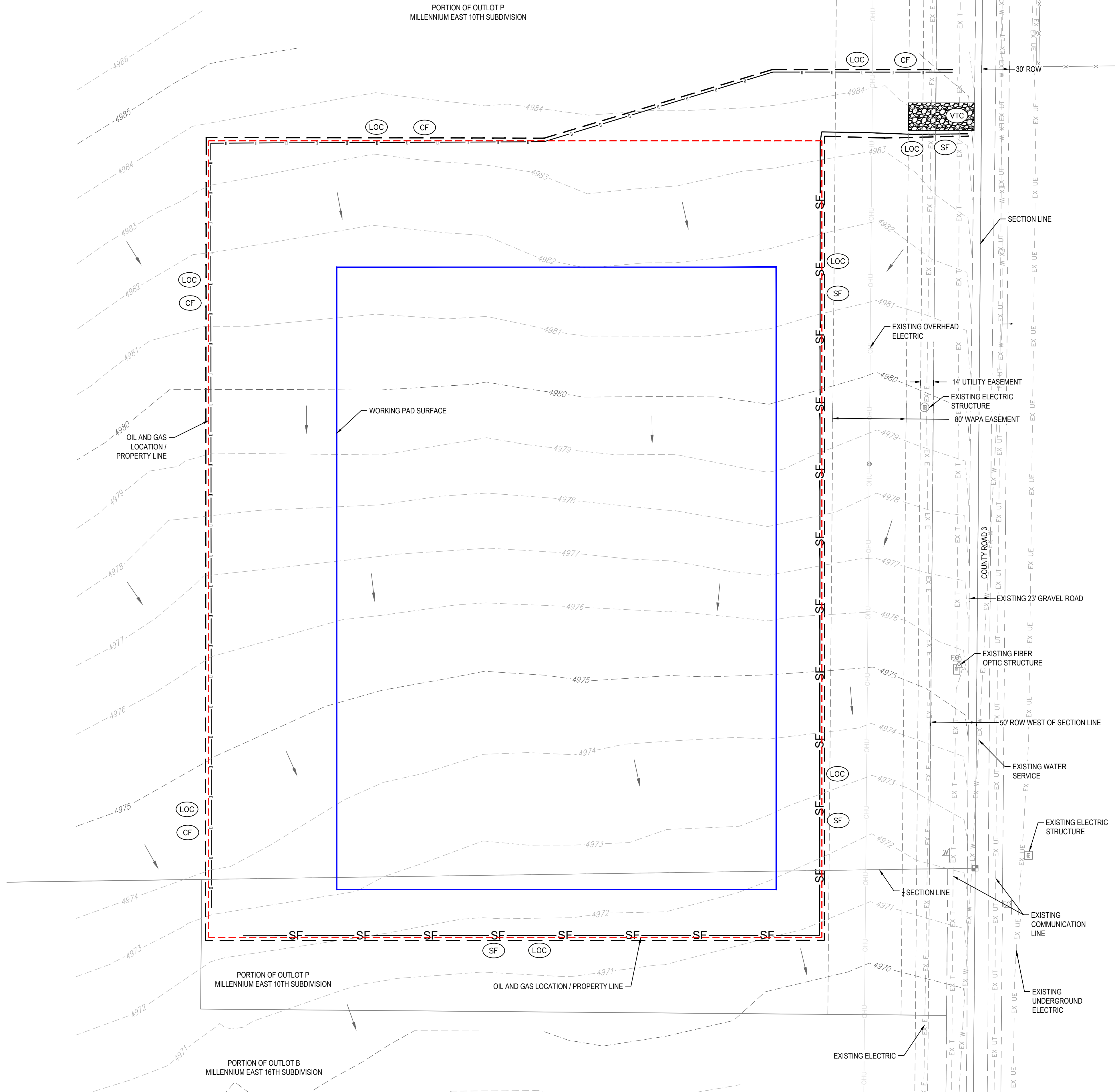
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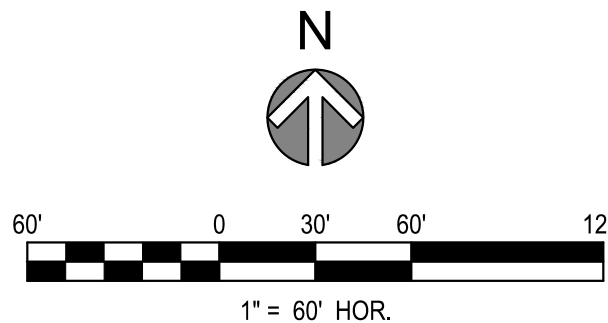


LEGEND

WORKING PAD SURFACE

OIL AND GAS LOCATION

- VTC VEHICLE TRACKING CONTROL
- CF CONSTRUCTION FENCE
- SF SILT FENCE
- LOC LIMIT OF CONSTRUCTION
- SMC SEEDING, MULCHING AND CRIMPING
- TSB TEMPORARY SEDIMENT BASIN
- SB STILLING BASIN
- LS LEVEL SPREADER
- BRR BURIED SOIL RIPRAP
- SR SURFACE ROUGHENING



0	ISSUED FOR CONSTRUCTION	5/5/2023	TVG	SWC	TS
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CALL BEFORE YOU DIG

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MRG, LP OIL AND GAS CE PAD

CITY OF LOVELAND, COLORADO

CIVIL CONSTRUCTION PLANS

PHASE 1 SEDIMENT AND EROSION CONTROL PLAN

JOB NUMBER

65120236-10

DATE

5/5/2023

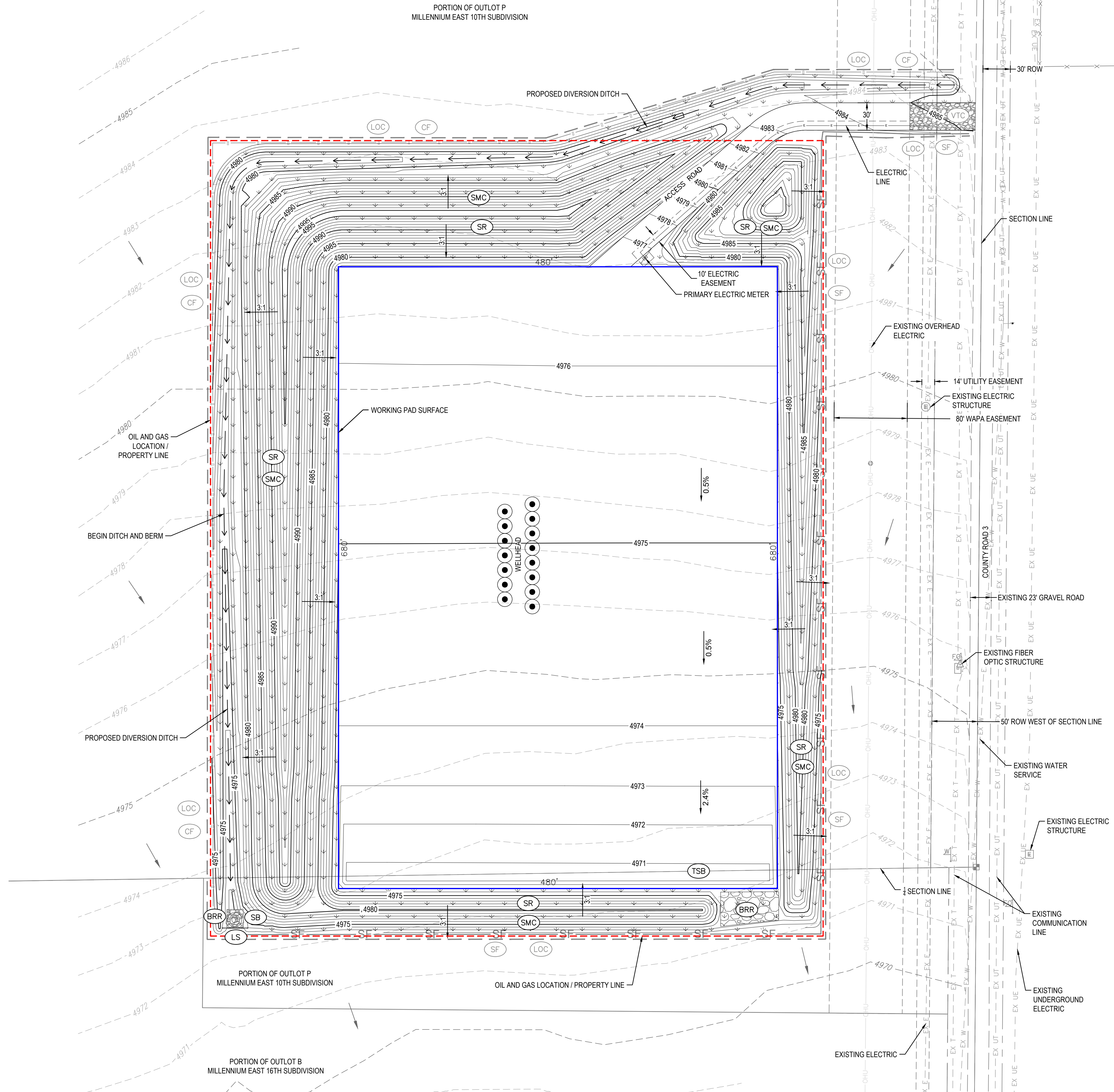
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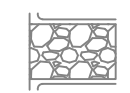
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LEGEND

WORKING PAD SURFACE

OIL AND GAS LOCATION



VTC

VEHICLE TRACKING CONTROL



CF

CONSTRUCTION FENCE



SF

SILT FENCE



LOC

LIMIT OF CONSTRUCTION



SMC

SEEDING, MULCHING AND CRIMPING

TSB

TEMPORARY SEDIMENT BASIN

SB

STILLING BASIN

LS

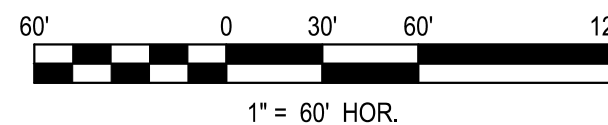
LEVEL SPREADER

BRR

BURIED SOIL RIPRAP

SR

SURFACE ROUGHENING



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0	ISSUED FOR CONSTRUCTION	5/5/2023	TVG	SWC	TS

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FOR AND ON BEHALF OF MERRICK & COMPANY

TITLE

MRG, LP OIL AND GAS CE PAD
CITY OF LOVELAND, COLORADO
CIVIL CONSTRUCTION PLANS
DRILLING PHASE SEDIMENT AND EROSION CONTROL PLAN

JOB NUMBER

65120236-10

DATE

5/5/2023

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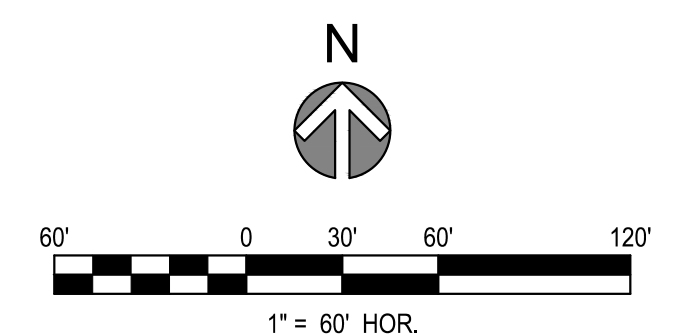
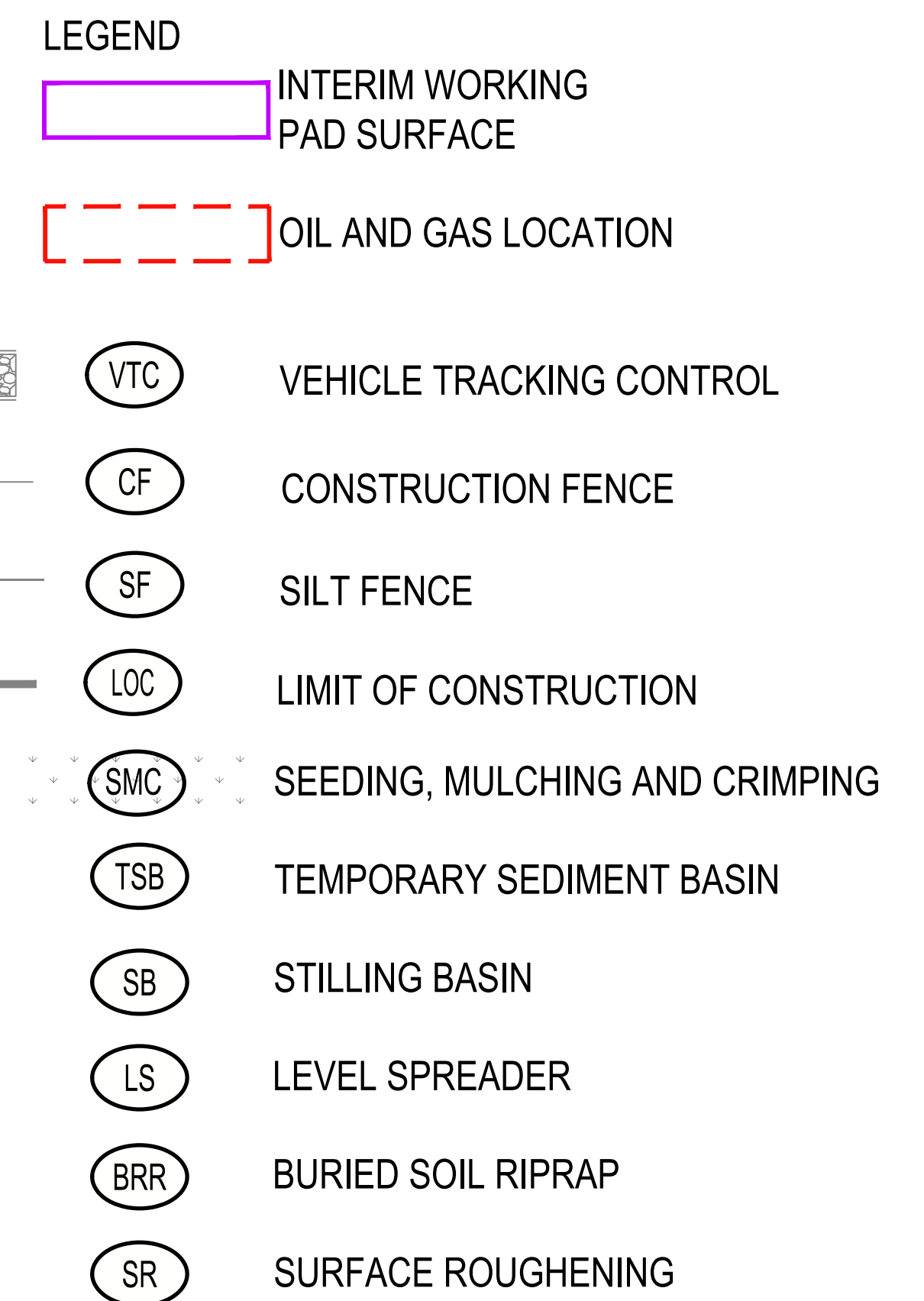
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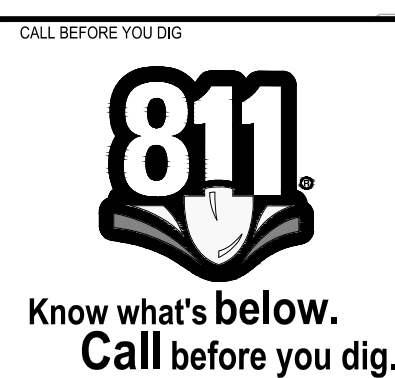
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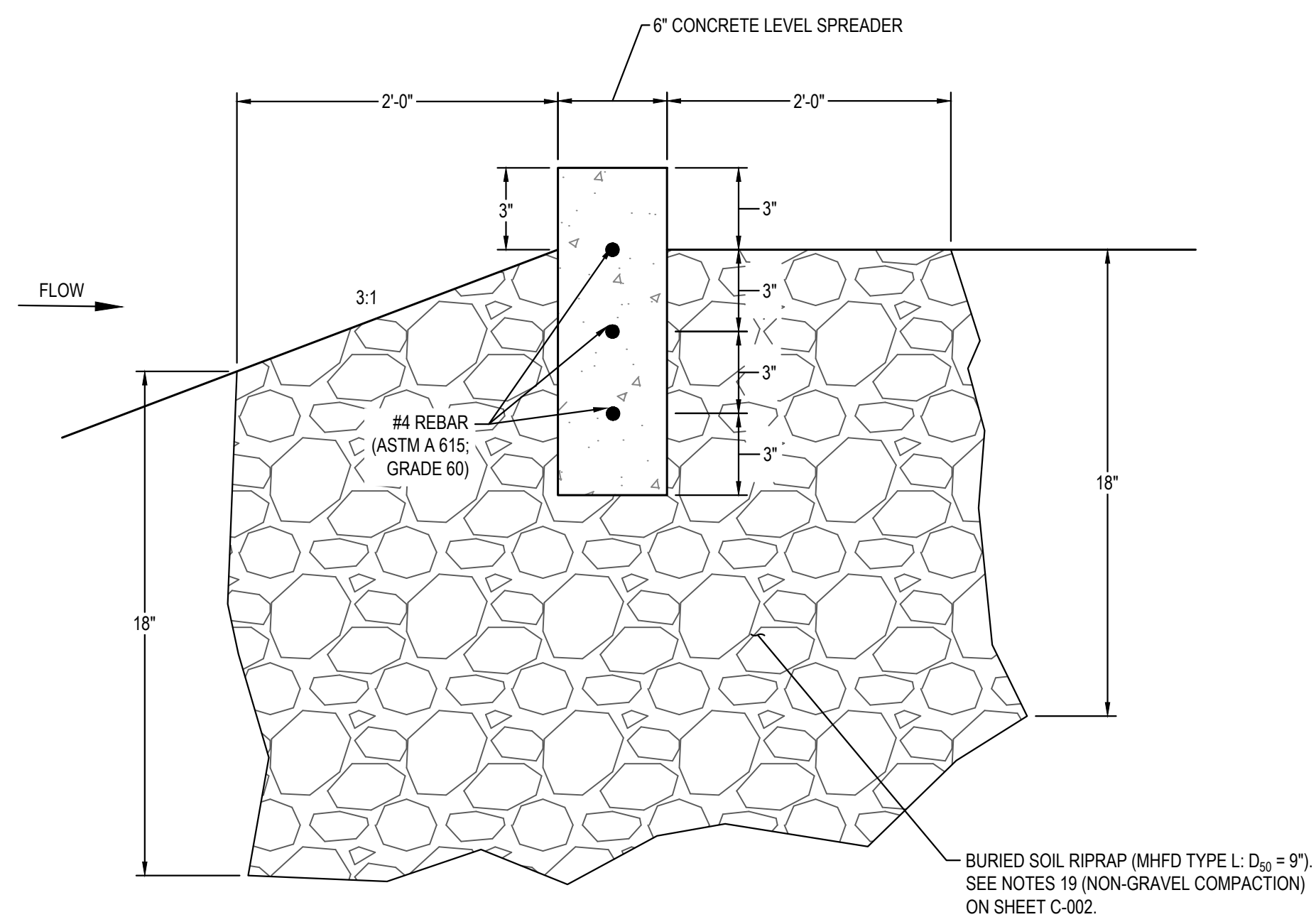
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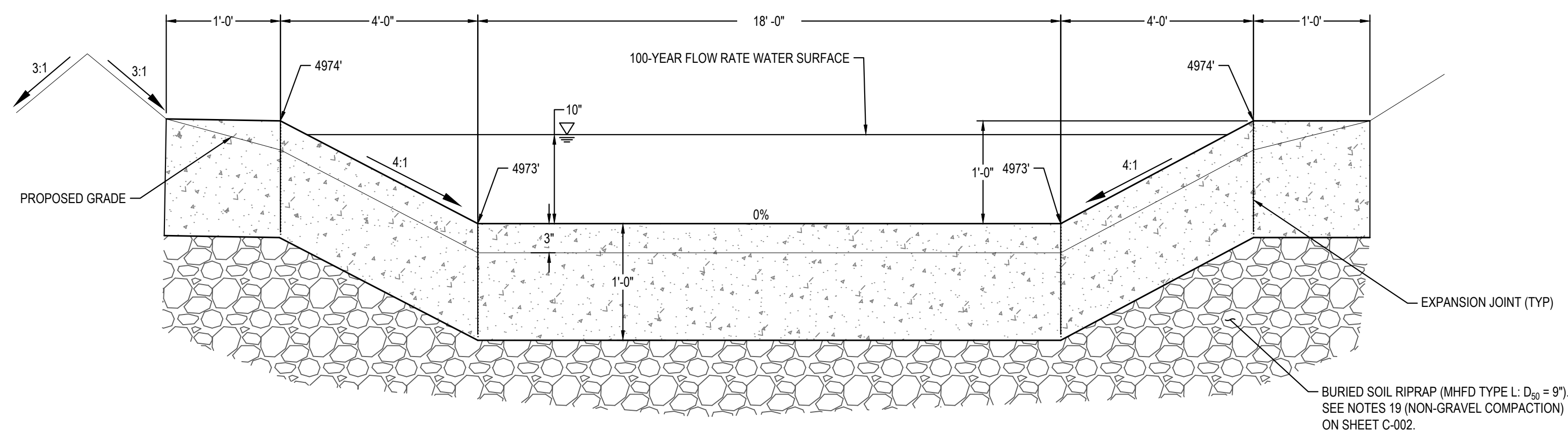
MRG, LP OIL AND GAS CE PAD
CITY OF LOVELAND, COLORADO
CIVIL CONSTRUCTION PLANS
PRODUCTION PHASE SEDIMENT AND EROSION CONTROL PLAN

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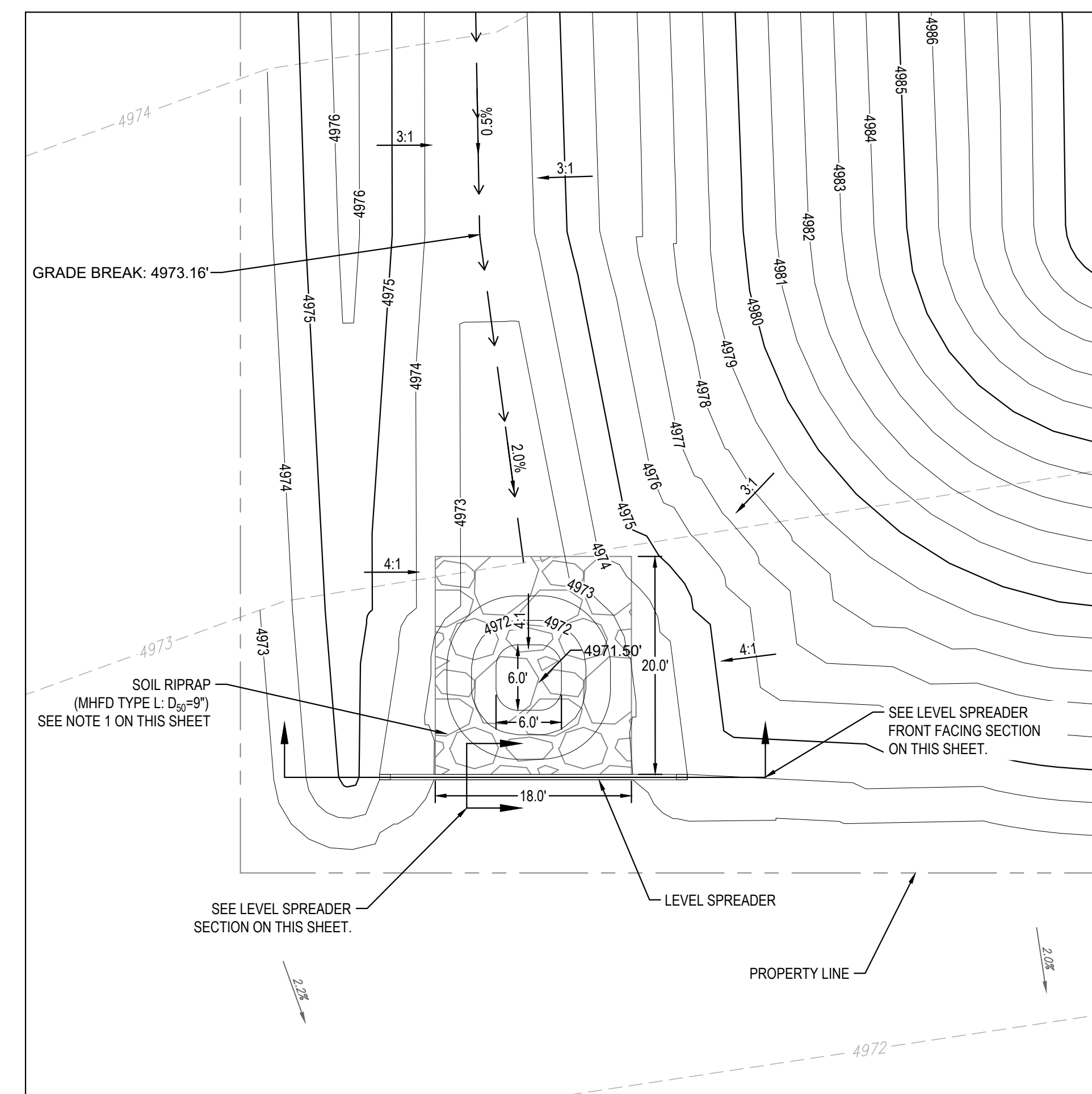
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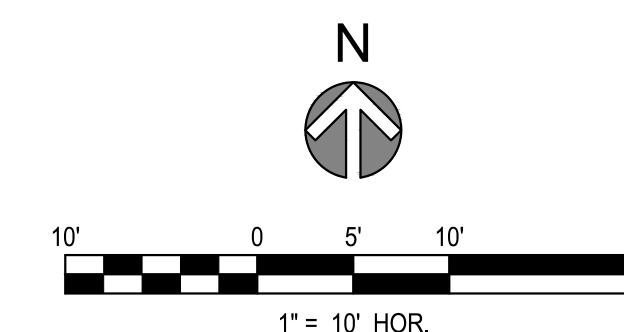
CONCRETE LEVEL SPREADER SECTION
N.T.S.



DRILL PHASE CONCRETE LEVEL SPREADER FRONT FACING SECTION



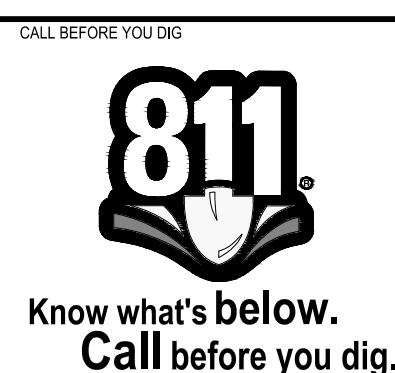
DRILL PHASE STILLING BASIN AND LEVEL SPREADER DETAIL - PLAN VIEW



NOTES

1. REFERENCE MILE HIGH FLOOD DISTRICT "DIVISION 31 EARTHWORK - RIPRAP, BOULDERS, AND BEDDING" CONSTRUCTION SPECIFICATION (SECTION 31 37 00) FOR SOIL RIPRAP EXECUTION AND PLACEMENT. RIPRAP LAYER TO HAVE 18" THICKNESS. TOP OF RIPRAP TO HAVE 4" OF TOPSOIL COVER.

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DETAIL SHEET

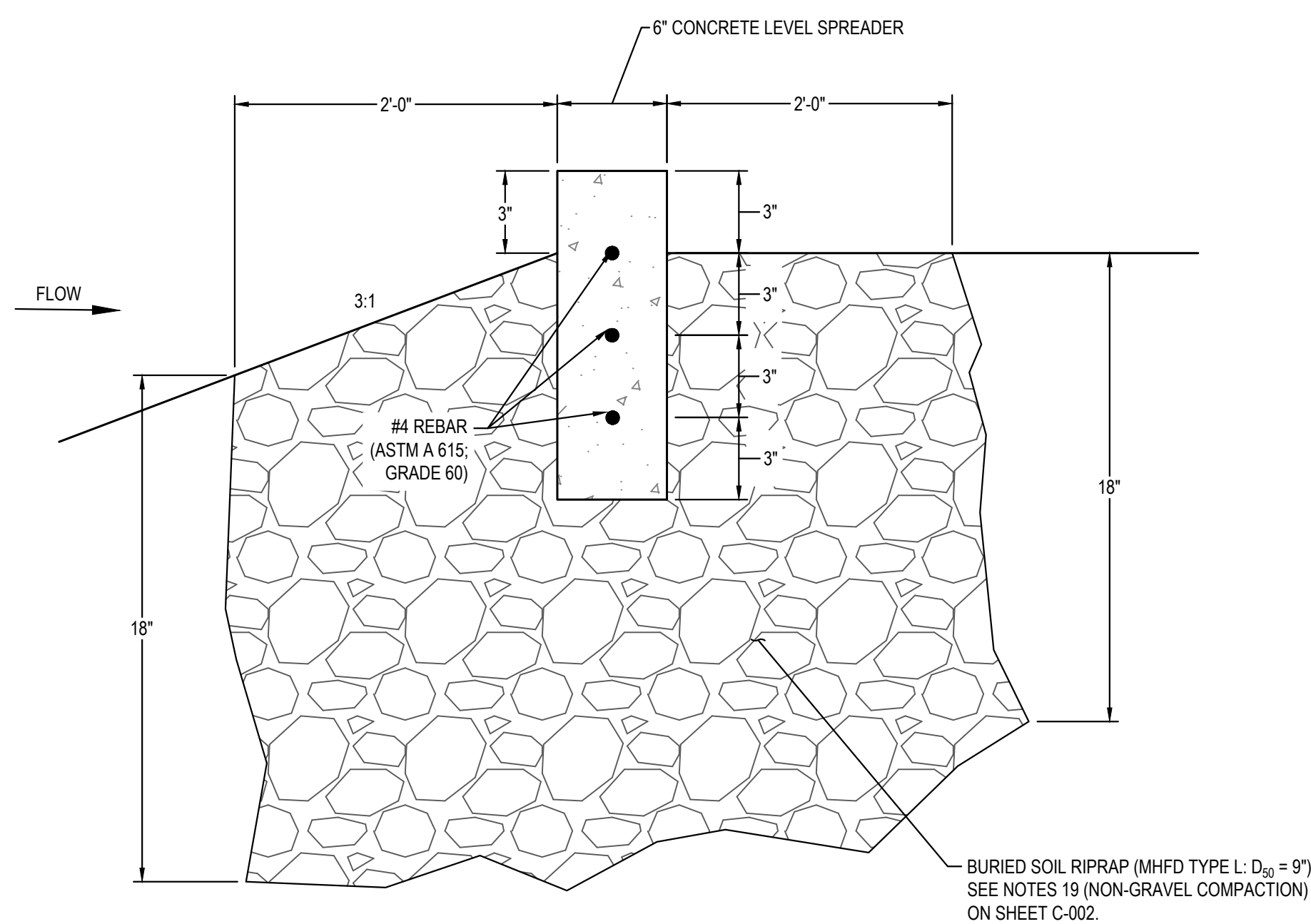
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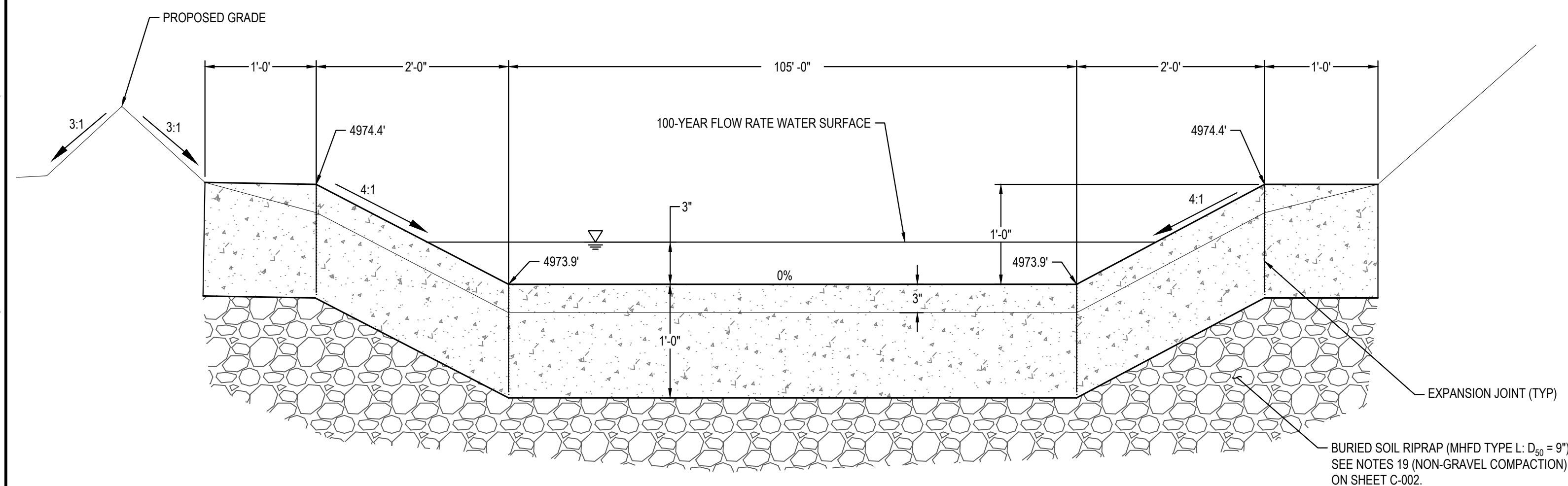
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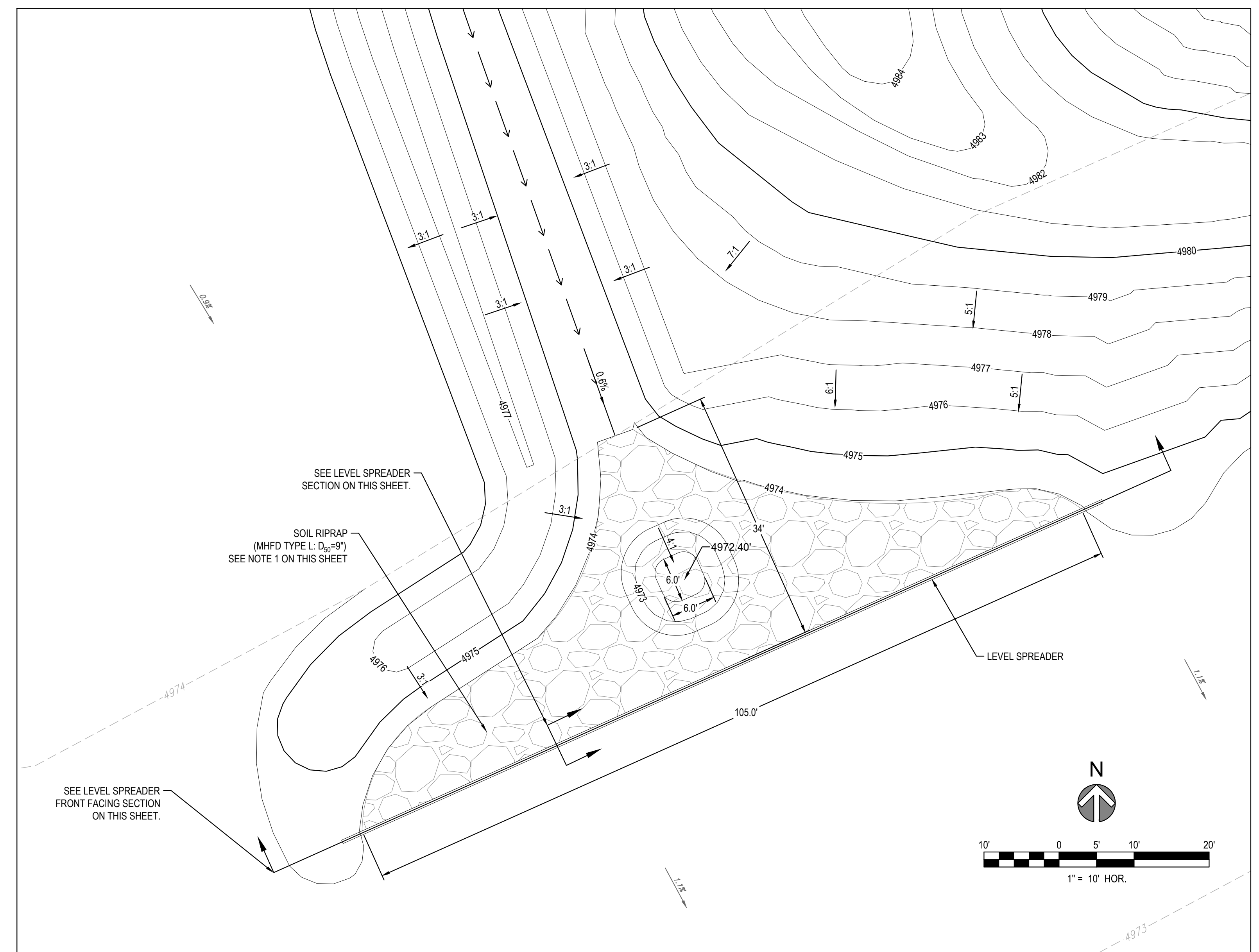


CONCRETE LEVEL SPREADER SECTION



PRODUCTION PHASE CONCRETE LEVEL SPREADER FRONT FACING SECTION

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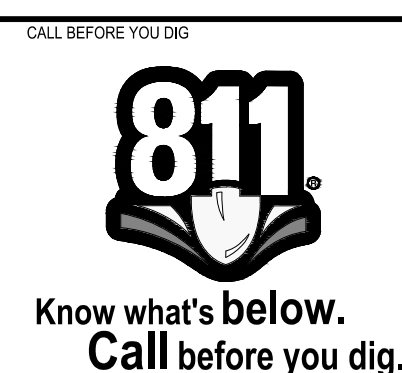


PRODUCTION PHASE STILLING BASIN AND LEVEL SPREADER DETAIL - PLAN VIEW

NOTES

1. REFERENCE MILE HIGH FLOOD DISTRICT "DIVISION 31 EARTHWORK - RIPRAP, BOULDERS, AND BEDDING" CONSTRUCTION SPECIFICATION (SECTION 31 37 00) FOR SOIL RIPRAP EXECUTION AND PLACEMENT. RIPRAP LAYER TO HAVE 18" THICKNESS. TOP OF RIPRAP TO HAVE 4" OF TOPSOIL COVER.

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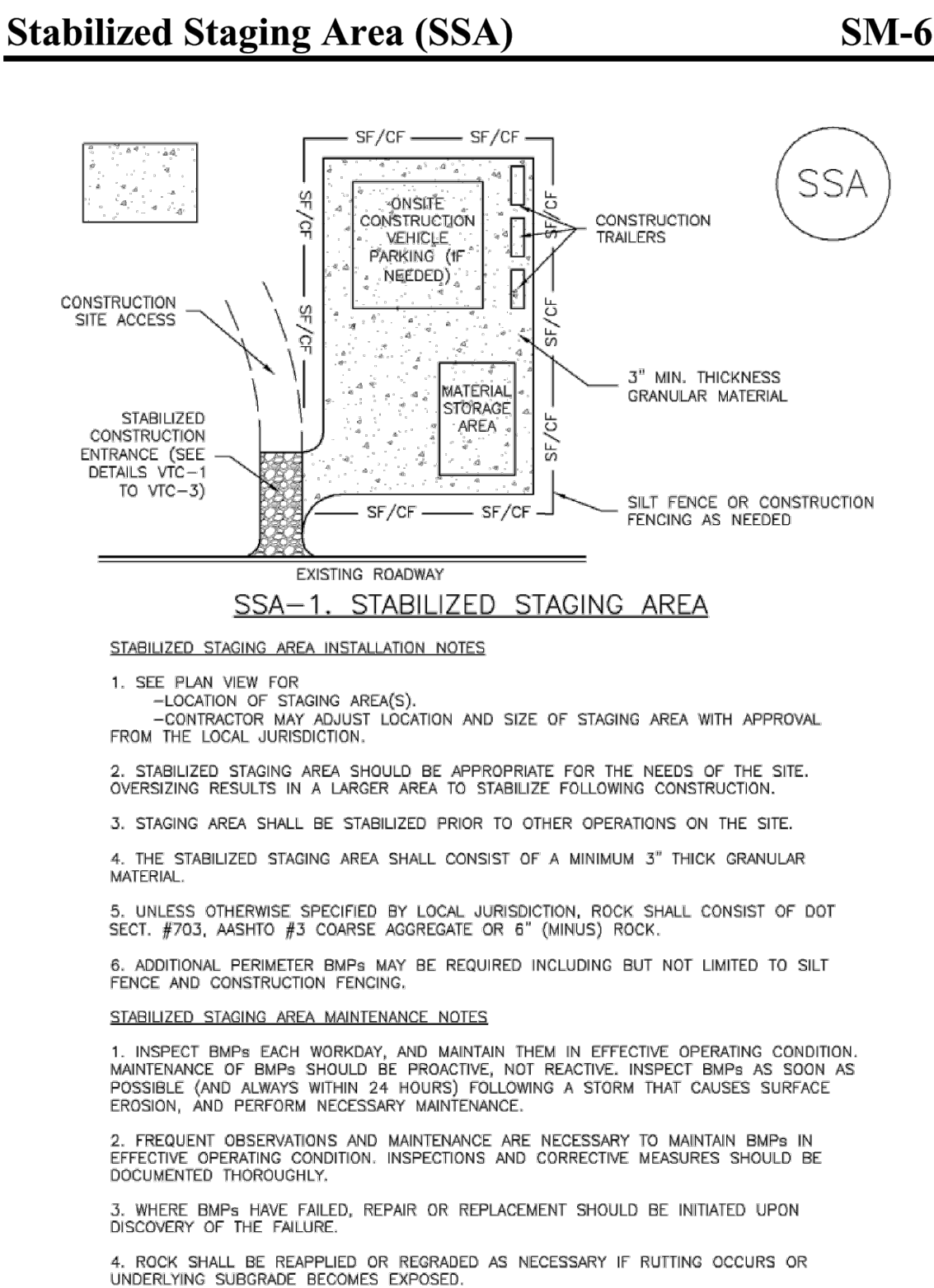
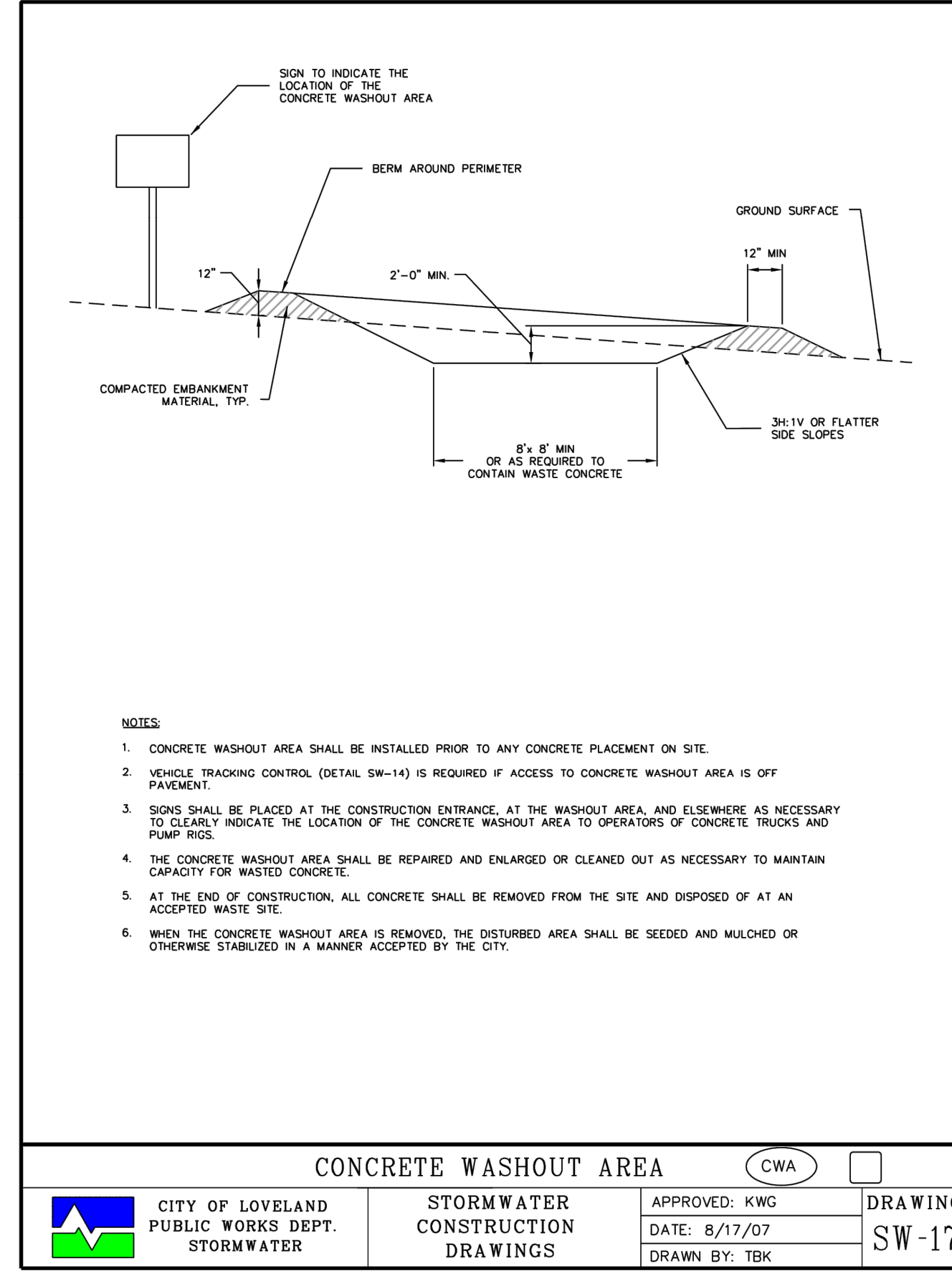
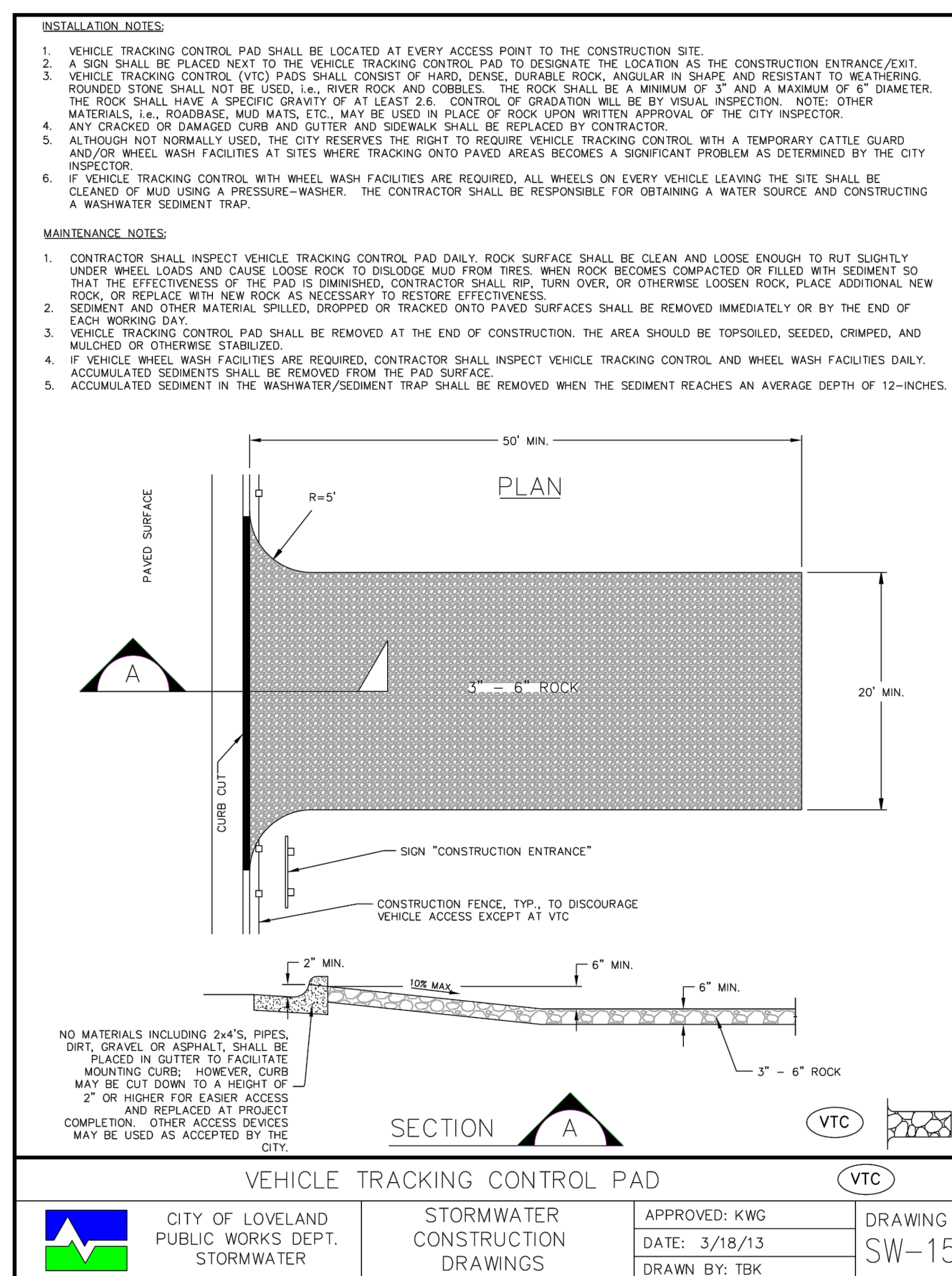
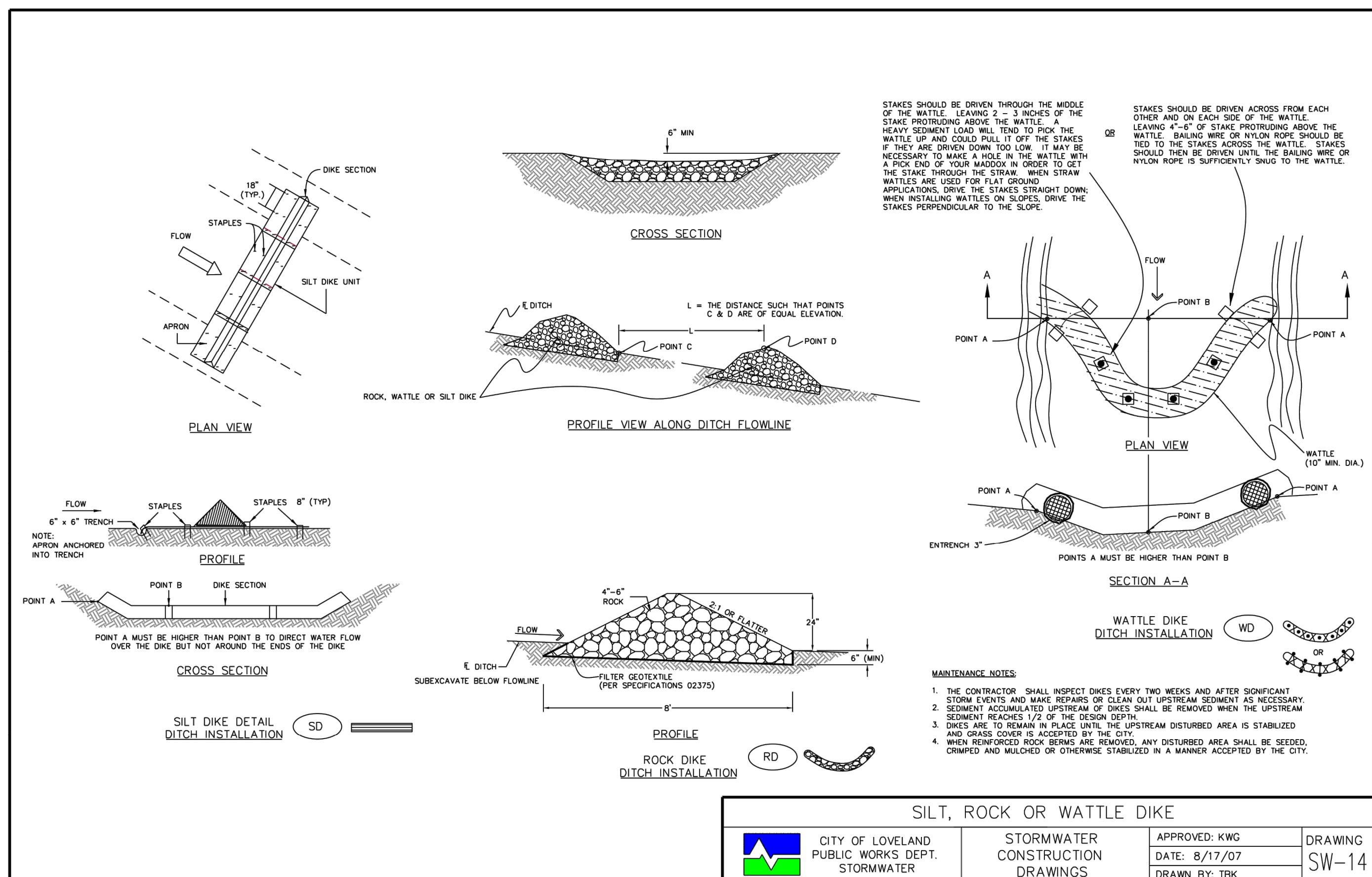
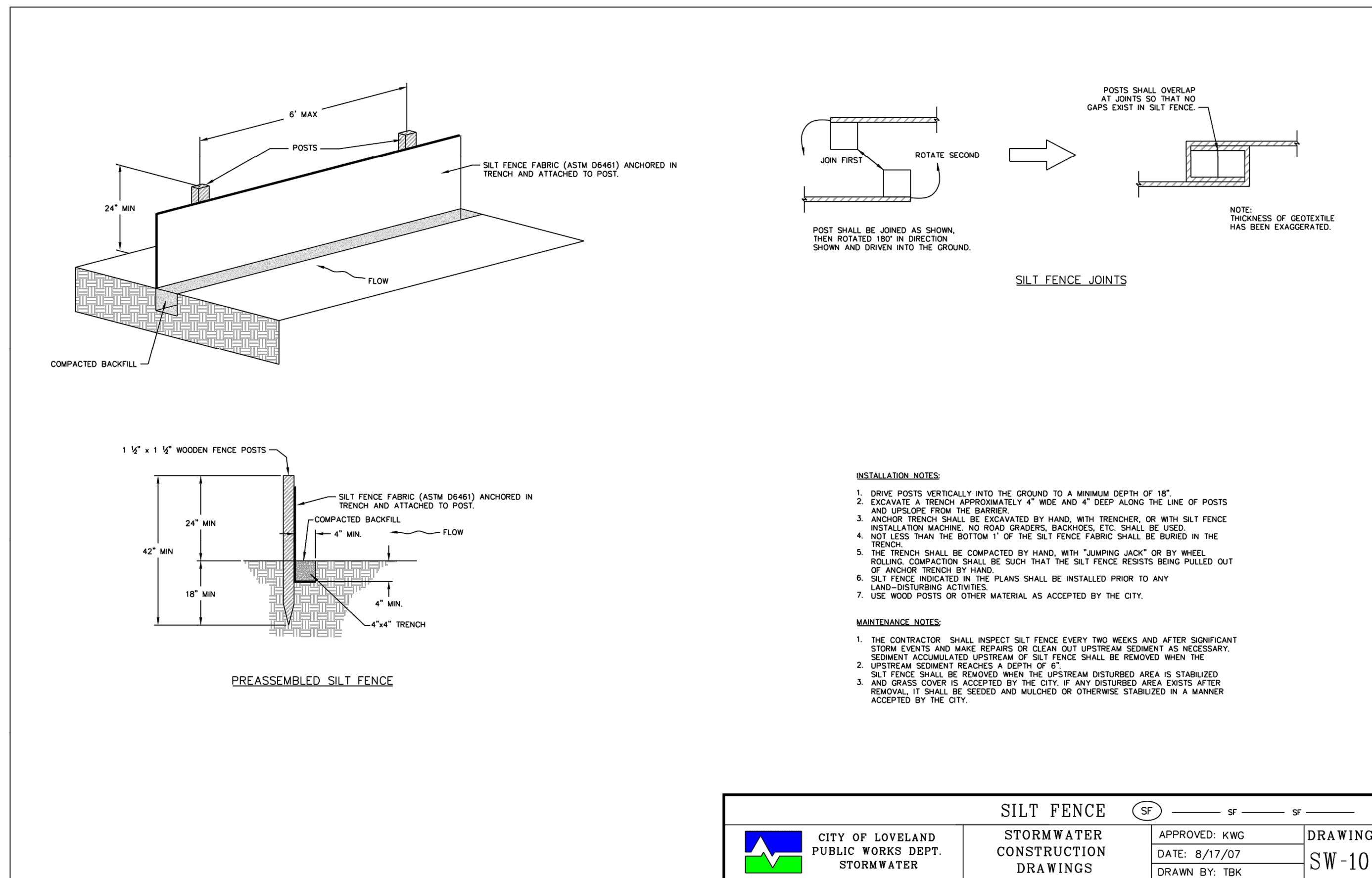
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CIVIL CONSTRUCTION PLANS
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**SM-6** **Stabilized Staging Area (SSA)**

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

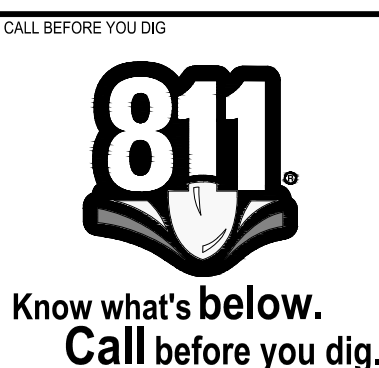
6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDS AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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DETAIL SHEET

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DATE
5/5/2023

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Landscape Architectural Plans for:
CE
Oil and Gas Pad Site
Loveland, Colorado

Plans Prepared For:

MRG, LP
2725 Rocky Mountain Avenue
Suite 200
Loveland, CO 80538

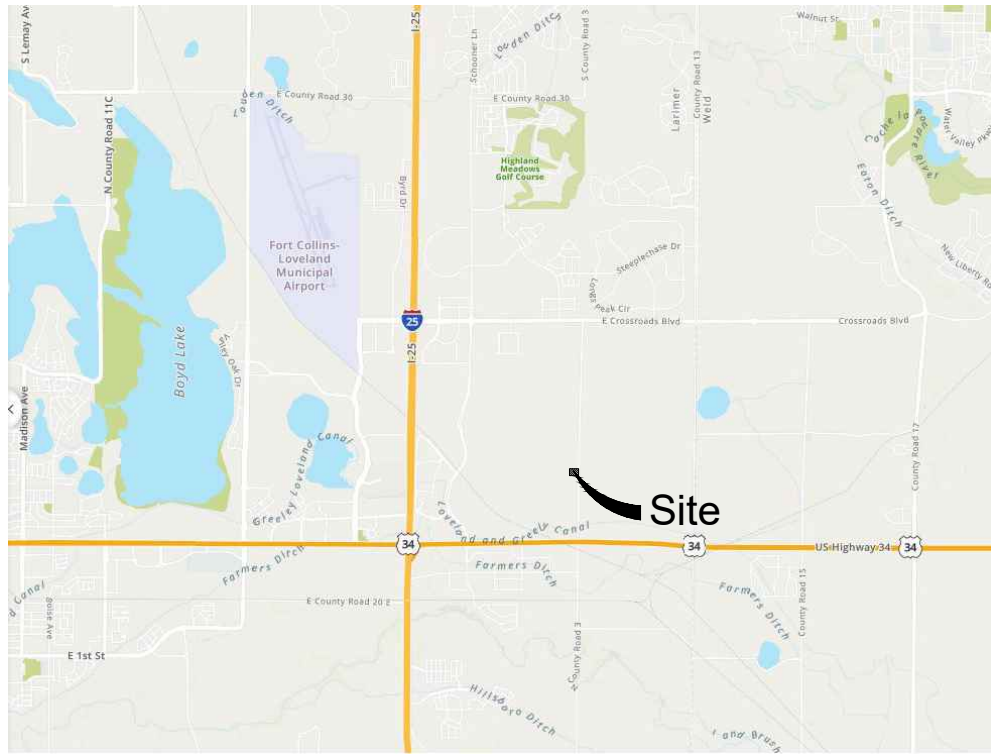
Project Manager: William Irwin

Plans Prepared By:



444 Mountain Ave. TEL 970.532.5891
Berthoud, CO 80513 WEB TBGroup.us

Vicinity Map:



Landscape Sheet Index:

SHEET LS 01 COVER SHEET
SHEET LS 02 LANDSCAPE AND BUFFER YARD PLAN
SHEET LS 03 FENCING DETAILS

General Notes:

- 1. GRADES DISTURBED SHALL MATCH OR IMPROVE EXISTING GRADES TO PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES OR TO DRAINAGE AREAS AND SWALES WHILE PROVIDING A SMOOTH TRANSITION BETWEEN ALL ADJACENT UNDISTURBED GRADES AND PROPOSED GRADES.
- 2. JOB SITE TO BE KEPT CLEAN AT ALL TIMES AND CONSTRUCTION AREAS ARE TO BE MAINTAINED FOR SAFETY.
- 3. ALL SOILS DISTURBED WITHIN AND ADJACENT TO WORK AREA, INCLUDING AREAS OUTSIDE OF CONSTRUCTION LIMITS, DUE TO NEW CONSTRUCTION ARE TO BE REGRADED AND SURFACE CONDITIONS REPAIRED BY RESEEDING THESE AREAS PER THE NATIVE GRASS SEED MIX NOTES THIS SHEET.
- 4. PROTECT EXISTING SURFACES AND SOILS, BOTH INSIDE AND OUTSIDE OF CONSTRUCTION LIMITS, DURING CONSTRUCTION. IF GRADES, CONCRETE OR ASPHALT ARE DAMAGED DUE TO CONSTRUCTION OPERATIONS OR WEATHER THE CONTRACTOR IS RESPONSIBLE FOR REPAIR TO THAT EQUIVALENT TO EXISTING CONDITIONS AT NO EXPENSE TO THE OWNER / CITY.
- 5. CONTRACTOR IS RESPONSIBLE FOR SETUP OF BARRICADES, WARNING SIGNAGE, OR OTHER PROTECTIVE DEVICES IF ANY EXCAVATIONS ARE LEFT EXPOSED AFTER ON-SITE WORK HOURS.
- 6. THE CONTRACTOR SHALL NOT PURPOSEFULLY PROCEED WITH ANY CONSTRUCTION PER PLANS PROVIDED WHEN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT WERE NOT CONSIDERED OR CHANGED AFTER PLANS WERE SUBMITTED. CONTRACTOR SHALL NOTIFY OWNER OR OWNER'S REPRESENTATIVE AND THE CITY OF LOVELAND IF SITUATION ARISES AND REVISIONS ARE NECESSARY.
- 7. THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND OTHER POLLUTANTS FROM ENTERING ANY STORM WATER SEWER SYSTEM OR, ADJACENT WATER WAYS, ETC., DURING THE DEMOLITION OR CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT. THE CONTRACTOR SHALL BE HELD RESPONSIBLE AND EXPENSE FOR THE CORRECTION OF ANY ADVERSE IMPACTS TO THE STORM WATER SEWER SYSTEM OR, ADJACENT WATER WAYS, WETLANDS ETC., RESULTING FROM THE WORK DONE AS PART OF THIS PROJECT/CONTRACT.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE PRIOR TO BIDDING AND CONSTRUCTION, OF BECOMING AWARE OF ALL EXISTING AND PROPOSED UTILITIES, PIPES, STRUCTURES, ETC. CALL UNCC THREE DAYS BEFORE SCHEDULED WORK AT 811 OR 1-800-922-1987.
- 9. CONTRACTOR IS RESPONSIBLE FOR BECOMING AWARE OF AND OBTAINING ANY AND ALL PERMITS AS REQUIRED FOR THIS PROJECT.

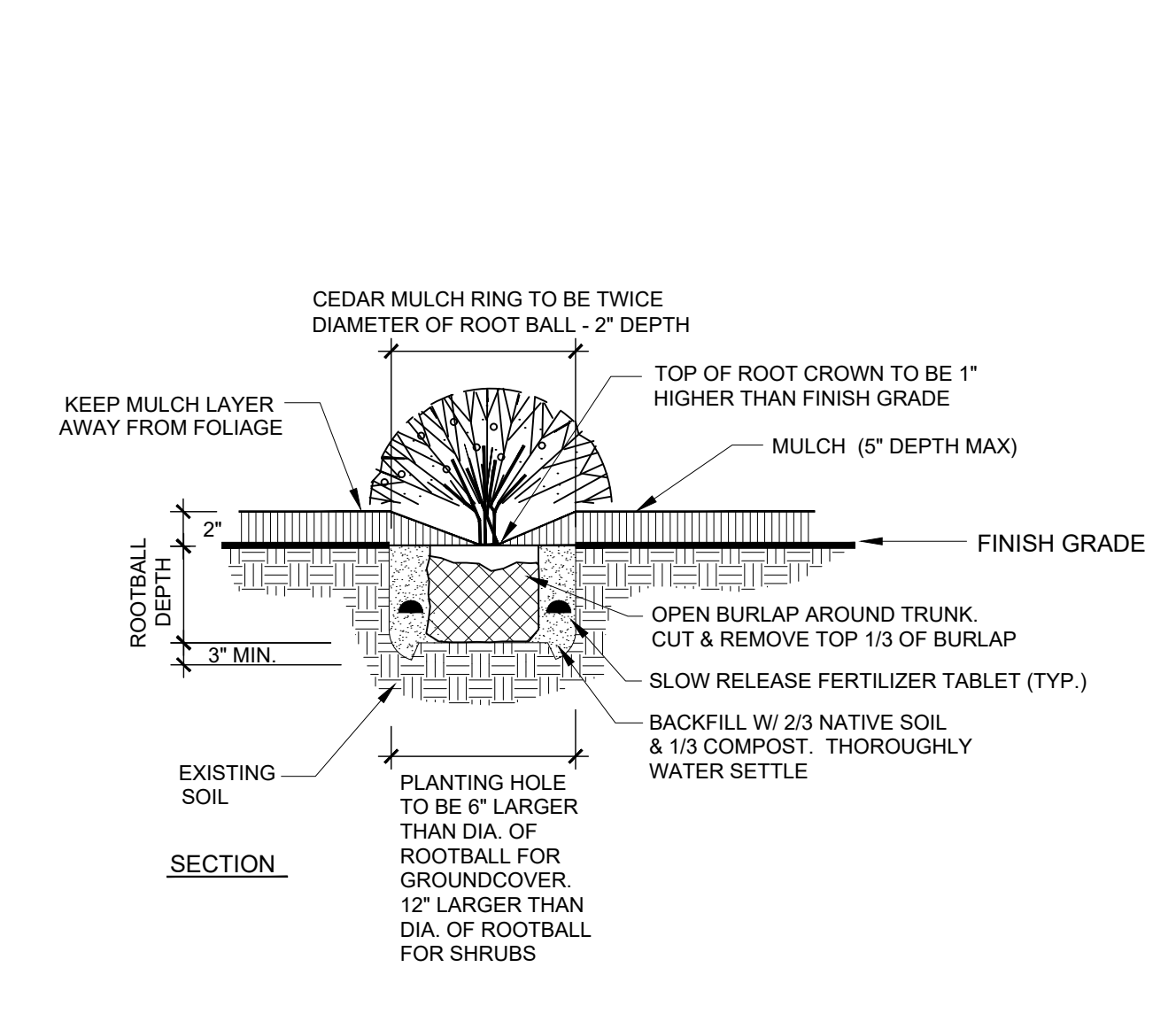
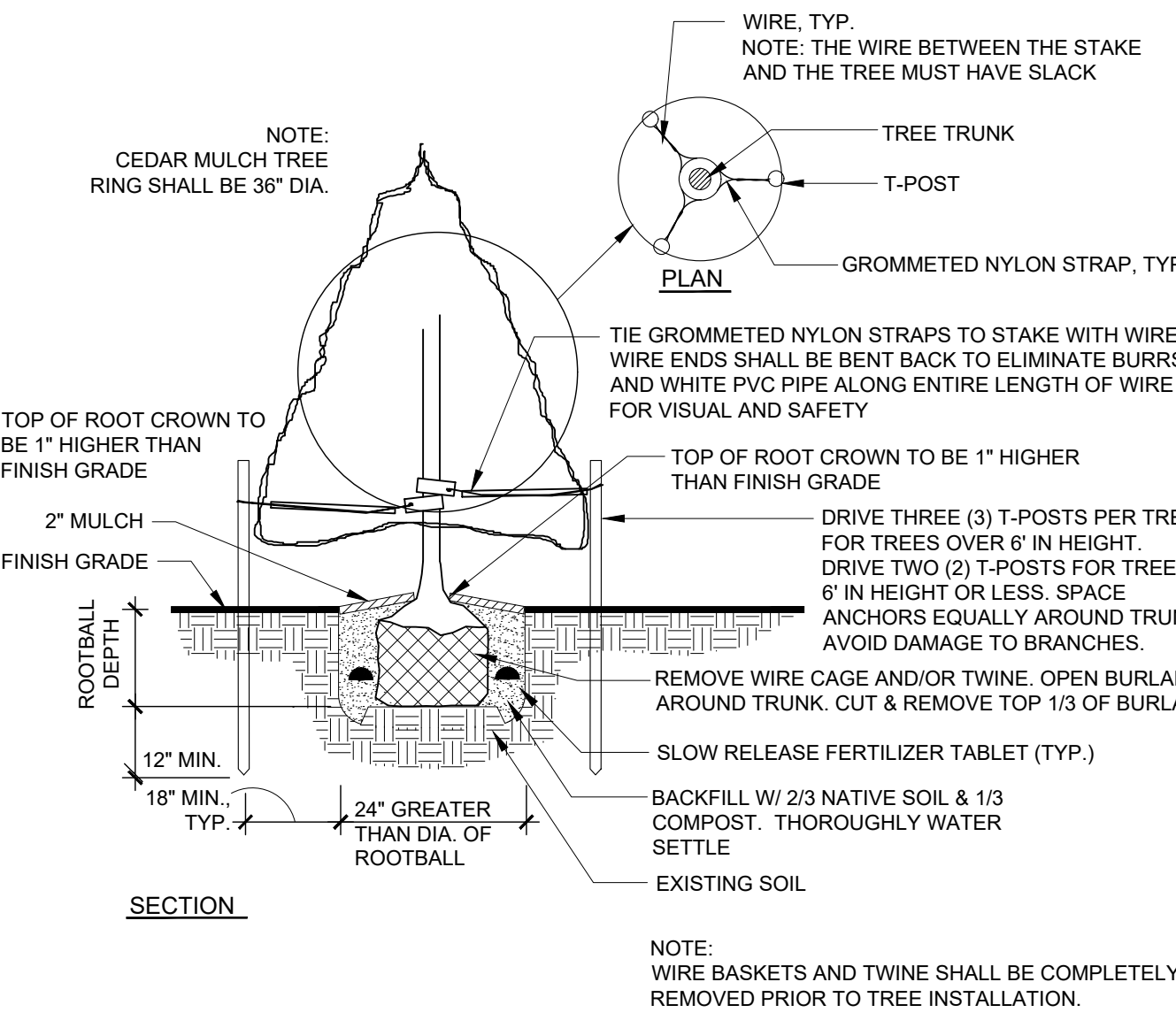
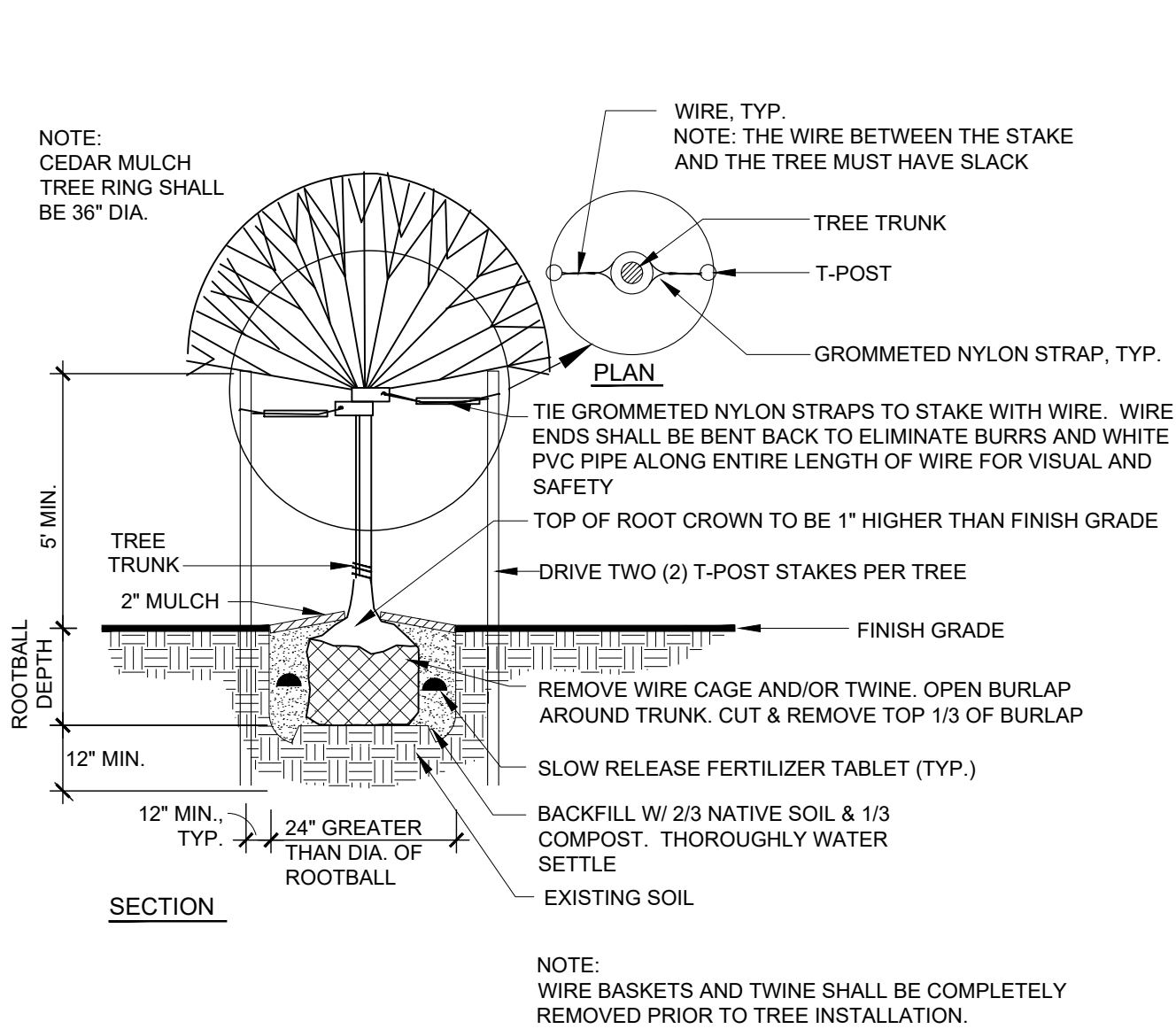
Irrigation Notes

- 1. CONTRACTOR TO SELECT AND UTILIZE AN IRRIGATION WATER TANK FOR THE AUTOMATIC IRRIGATION SYSTEM DESIGN. THIS DESIGN TO INCLUDE ELECTRONIC CONTROLLER AND BOOSTER PUMP AS A PART OF THEIR DESIGN AND SCOPE FOR THE PROPOSED LANDSCAPE DEPICTED ON PLANS.
- 2. THE DESIGN FOR THE AUTOMATIC IRRIGATION SYSTEM SHALL BE EQUIPPED WITH AN AUTOMATIC RAIN DETECTION DEVICE.
- 3. CONTRACTOR SHALL VERIFY THE MAXIMUM AVAILABLE P.S.I. AND GPM AND DESIGN THE IRRIGATION SYSTEM TO MEET THE REQUIRED P.S.I. AND GPM FOR THE PROPOSED LANDSCAPE.
- 4. ALL TREES AND SHRUBS ARE TO BE IRRIGATED WITH A PERMANENT DRIP IRRIGATION SYSTEM.
- 5. IRRIGATION SYSTEM WILL BE ADJUSTED TO THE MINIMUM WATER REQUIREMENT, BASED ON THE NEEDS OF EACH SELECTED PLANT MATERIAL.
- 6. QUICK COUPLERS SHALL BE PROVIDED AT EACH POINT OF CONNECTION AND AT REGULAR SPACING ALONG THE IRRIGATION MAINLINE. SPACING OF QUICK COUPLES SHALL NOT EXCEED 200 FEET. LOCATE QUICK COUPLING VALVE AT A POINT OF EASY ACCESS.
- 7. ALL IRRIGATION TRENCHES SHALL BE PROPERLY WATERED AND COMPACTED TO AVOID FUTURE SETTLING. ANY SETTLING DURING WARRANTY PERIOD WILL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
- 8. CONTRACTOR TO DETERMINE AND COORDINATE APPROPRIATE POWER SOURCE AND ASSOCIATED ELECTRICAL DESIGN FOR THE ELECTRONIC CONTROLLER AND BOOSTER PUMP.
- 9. ALL IRRIGATION SLEEVING SHALL BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR. IRRIGATION CONTRACTOR SHALL COORDINATE SLEEVING LOCATIONS WITH GENERAL CONTRACTOR. ALL IRRIGATION SLEEVING TO BE STAKED IN THE FIELD OR LOCATED ON DIMENSIONED "AS-BUILT" DRAWING BY THE GENERAL CONTRACTOR TO ALLOW FUTURE USE AND LOCATION.

Landscape Notes

- 1. MAINTENANCE PERIOD: LANDSCAPE SHALL BE MAINTAINED, INCLUDING WATERING, MOWING, PRUNING, REPLACEMENT OF DEAD OR DYING PLANT MATERIALS, AND FERTILIZING BY CONTRACTOR FOR ONE (1) FULL YEAR AFTER FINAL ACCEPTANCE. AFTER MAINTENANCE PERIOD OWNER WILL MAINTAIN AS DESCRIBED ABOVE.
- 2. WARRANTY PERIOD: LANDSCAPE WILL BE WARRANTED FOR ONE (1) FULL YEAR AFTER MAINTENANCE PERIOD.
- 3. ANY DISCREPANCIES WITH THE DRAWINGS AND SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE PRIOR TO PROCEEDING WITH CONSTRUCTION.
- 4. CONTRACTOR TO VERIFY ALL FIELD CONDITIONS, EASEMENTS, PROPERTY LINES, FENCE LINES, ETC. PRIOR TO STARTING WORK. SHOULD ANY DISCREPANCIES, OMISSIONS, OR ERRORS OCCUR, NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY.
- 5. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES 48 HRS. PRIOR TO ANY EXCAVATION OR PLANTING.
- 6. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.
- 7. NO PLANT MATERIAL WITH MATURE GROWTH GREATER THAN THREE (3) FEET IN HEIGHT SHALL BE PLANTED WITHIN POTABLE WATER, SANITARY SEWER, OR NON-POTABLE IRRIGATION EASEMENTS. (VOLUME III, SECTION 2.05.A)
- 8. NO SHRUBS SHALL BE PLANTED WITHIN FIVE (5) FEET OR TREES WITHIN TEN (10) FEET OF POTABLE AND NON-POTABLE WATER METERS, FIRE HYDRANTS, SANITARY SEWER MANHOLES, OR POTABLE WATER, SANITARY SEWER, AND NON-POTABLE IRRIGATION MAINS AND SERVICES. (VOLUME III, SECTION 2.05.B)
- 9. MINIMUM CLEARANCE OF THREE (3) FEET ON EACH SIDE OF FIRE DEPARTMENT CONNECTION (FDC). NO VEGETATION OTHER THAN TURF OR GROUND COVERS PLANTED IN FRONT OF FDC.
- 10. IF TREES OR SHRUBS ARE LOCATED ON TOP OF FIELD VERIFIED UTILITIES, CONTRACTOR SHALL NOTIFY OWNER BEFORE ANY DIGGING HAS COMMENCED. VERIFY WITH OWNER IF AND WHICH SHRUBS/TREES SHALL BE TAKEN OUT OF PROJECT/CONTRACT.
- 11. TO THE MAXIMUM EXTENT FEASIBLE, TOPSOIL THAT IS REMOVED DURING CONSTRUCTION ACTIVITY SHALL BE CONSERVED FOR LATER USE ON AREAS REQUIRING REVEGETATION AND LANDSCAPING.
- 12. EXCAVATED MATERIAL TO BE USED AS FILL WILL HAVE ALL ROCKS, DEBRIS, WASTE MATERIAL, FROZEN MATERIAL, VEGETATION LARGER THAN 3" IN ANY DIMENSION REMOVED BEFORE PLACEMENT AND COMPACTION OF SOIL.
- 13. PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES OR FOUNDATIONS CREATING A SMOOTH TRANSITION BETWEEN ALL ADJACENT EXISTING GRADES AND PROPOSED GRADES BEING SURE NOT TO DISTURB EXISTING DRAINAGE PATTERNS.
- 14. PRIOR TO NATIVE SEEDING OPERATIONS; FOOTHILLS NATIVE GRASS SEEDED AREAS AND THE PLANTING BEDS, SHALL BE THOROUGHLY LOOSENEED AND FINE GRADED. REMOVE ALL UNSUITABLE SOIL, INCLUDING ALL ROCKS LARGER THAN 3 INCHES IN ANY DIRECTION, ALL CONCRETE, TRASH, DEBRIS, WEEDS, ROOTS AND OTHER WASTE MATERIALS.
- 15. ORGANIC AMENDMENTS SHALL BE INCORPORATED WITHIN THE FOOTHILLS NATIVE GRASS SEEDED AREAS AND PLANTING BEDS TO A MINIMUM 6" DEPTH AT THE MINIMUM OF RATE OF 2 CU. YDS. / 1,000 SQ. FT.
- 16. ALL PLANT MATERIALS ARE SIZED AND OUTLINED IN PLANT LIST. ALL PLANTS TO BE PLANTED IN AMENDED SOIL AND STAKED AS SHOWN IN DETAILS. ALL PLANT MATERIAL SHALL MEET OR EXCEED THE CODE OF STANDARDS CURRENTLY RECOMMENDED BY THE COLORADO NURSERY ACT FOR NUMBER ONE GRADE.
- 17. IF PLANTS ARE IN NEED OF REPLACEMENT DUE TO DECLINING HEALTH, DISEASE, OR DEATH, THE PLANTS MUST BE REPLACED WITH THE ORIGINAL SPECIES UNLESS APPROVED BY THE CITY.
- 18. CHANGES IN PLANT SPECIES OF PLANT LOCATIONS FROM WHAT IS LISTED ON THE LANDSCAPE PLAN WILL REQUIRE THE APPROVAL OF THE CITY PRIOR TO INSTALLATION OF REPLACEMENT. OVERALL QUANTITY AND QUALITY TO BE CONSISTENT WITH THE APPROVED PLANS. IN THE EVENT OF CONFLICT WITH THE QUANTITIES INCLUDED IN THE PLANT LIST, SPECIES AND QUANTITIES SHALL BE PROVIDED.
- 19. ALL TREES AND SHRUBS TO BE BALLED AND BURLAPPED, OR CONTAINERIZED.
- 20. ALL PLANT MATERIAL SHALL HAVE ALL WIRE, TWINE, BASKETS, BURLAP, AND ALL OTHER NON-BIODEGRADABLE CONTAINMENT MATERIAL REMOVED FROM THE TRUNK AND/OR ROOT BALL OF THE PLANT, PRIOR TO PLANTING.

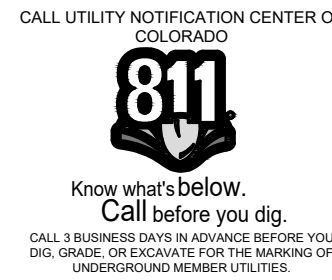
Planting Details

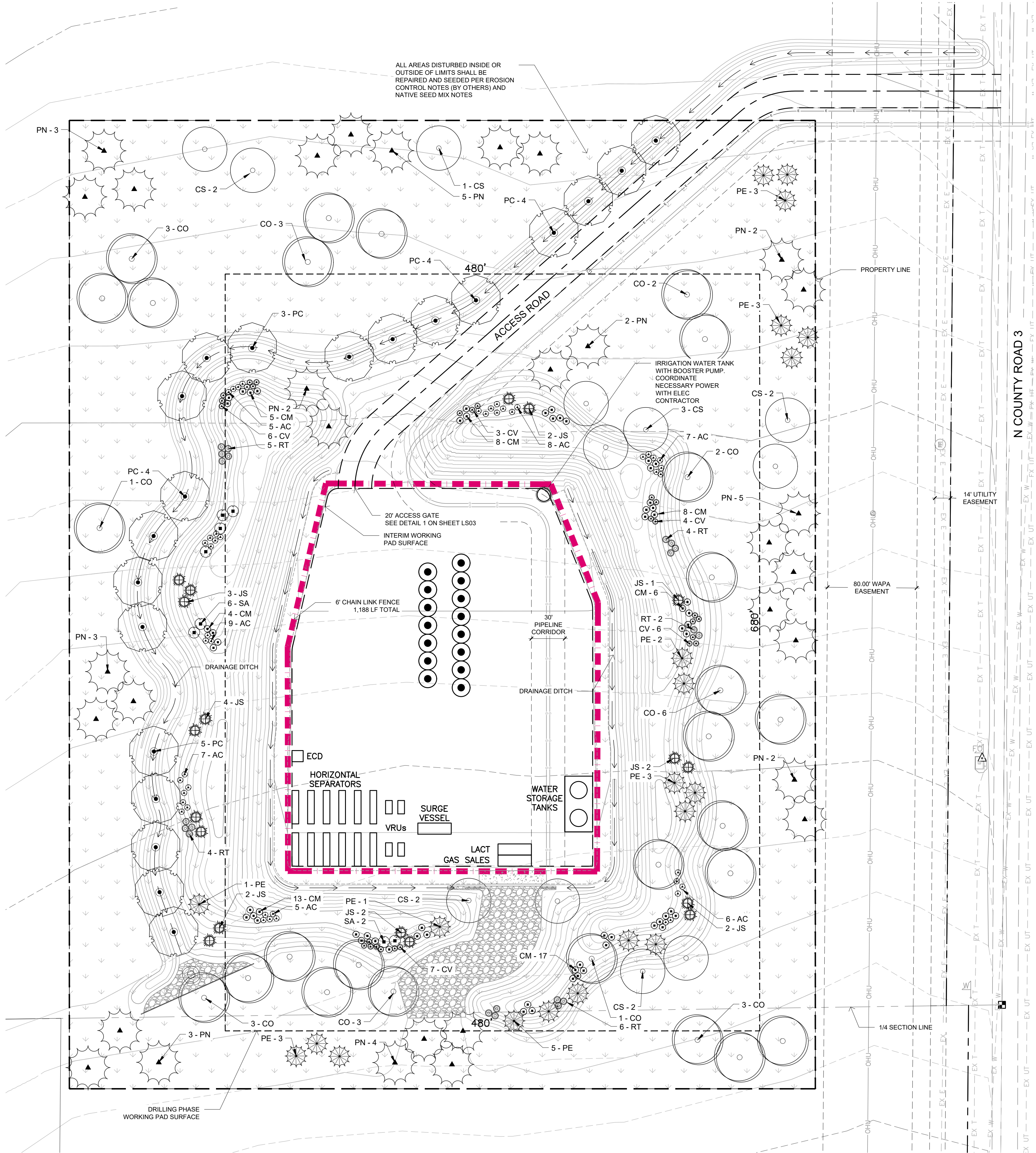


1 DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE
329343.15-01

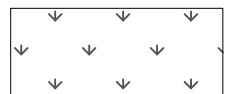
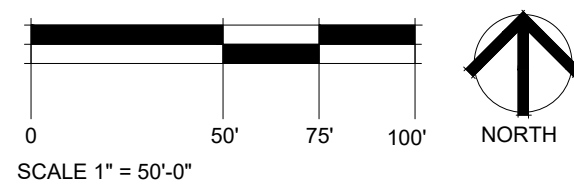
2 CONIFER TREE PLANTING DETAIL
NOT TO SCALE
329343.25-01

3 GROUND COVER AND SHRUB PLANTING DETAIL
NOT TO SCALE
TBG-L-01





Landscape and Buffer Yard Plan



NATIVE GRASS GROUNDCOVER
SEE NATIVE SEED MIX NOTES



6' CHAIN LINK FENCE WITH FENCE SCREEN
SEE FENCE DETAILS ON SHEET LS03

Pad Equipment Dimensions

- ECD: 8'(D) X 30'(H)
- SEPARATORS: 12'(D) X 16'(H)
- VRUs: 8'x16'x 8'(H)
- LACT(s): 10'x30'x 8'(H)
- TANKS: 15.5'(D) x 16'(H)

Native Grass Seed Mix

NON IRRIGATED NATIVE GRASS :

UPLAND NATIVE MIX (PER CENTERRA DESIGN GUIDELINES):
ALL AREAS DISTURBED SHALL BE A MIXTURE THAT MATCHES THE FOLLOWING:

COMMON NAME	Lbs. PLS/acre
SLENDER WHEATGRASS	3
WESTERN WHEATGRASS, ROSANA	3
GREEN NEEDLE GRASS, LODORM	1
CANADA WILDRYE, MANDAN	1
BEARDLESS WILDRYE, SHOSHONE	0.5
ANNUAL RYE	2
BLUE GRAMA, BAD RIVER	0.5
SIDEOTS GRAMA, VAUGHN	1.5
LITTLE BLUESTEM, CAMPER	1.5
YELLOW INDIANGRASS	1
TOMAHAWK OR NEB 54	1
BIG BLUESTEM, PAWNEE	1
SWITCHGRASS, BLACKWELL	0.5
ALKALI SACATON	0.25
TOTAL	16.75 pounds per live seed per acre

1. SEED SHALL BE AS MANUFACTURED BY ARKANSAS VALLEY SEED SOLUTIONS, 4625 COLORADO BOULEVARD, DENVER, CO 80216, (877) 957-3337.
2. DRILLED IN TWO PERPENDICULAR DIRECTIONS WITH A TOTAL APPLICATION RATE: 16.75 LBS (PLS) PER ACRE
3. ADEQUATE TEMPORARY IRRIGATION OR BY WATER TRUCK WILL BE PROVIDED BY CONTRACTOR FOR THE ESTABLISHMENT AND MAINTENANCE OF THESE SEEDED AREAS, AND THAT NATIVE GRASSES SHALL BE MAINTAINED IN A CONDITION OF ACCEPTABLE HEIGHT, FREE OF WEEDS, TRASH AND DEBRIS, AND SHALL NOT REPRESENT A FIRE HAZARD NOR BECOME A NUISANCE SITE FOR WATER OR WIND EROSION.

MULCH IN ALL NATIVE SEED AREAS:

1. IMMEDIATELY FOLLOWING THE RAKING / SEEDING OPERATION, ADD STRAW MULCH TO THE SEEDED AREAS.
2. APPLY STRAW MULCH AT A MINIMUM OF 1.5 TONS PER ACRE OF AIR DRY MATERIAL. SPREAD STRAW MULCH UNIFORMLY OVER THE AREA WITH MECHANICAL MULCH SPREADER / CRIMPER. DO NOT MULCH WHEN WIND VELOCITY EXCEEDS 10 MPH.
3. WHEREVER THE USE OF CRIMPING EQUIPMENT IS PRACTICAL, PLACE MULCH IN THE MANNER NOTED ABOVE AND ANCHOR IT INTO THE SOIL. USE A DISC SUCH AS A MULCH TILLER, WITH A FLAT SERRATED DISC AT LEAST 1/4 INCH IN THICKNESS, HAVING DULL EDGES, AND SPACE NO MORE THAN 9 INCHES APART, WITH DISCS OF SUFFICIENT DIAMETER TO PREVENT THE FRAME OF THE EQUIPMENT FROM DRAGGING THE MULCH. ANCHOR MULCH A MINIMUM DEPTH OF 2 INCHES AND ACROSS THE SLOPE WHERE PRACTICAL WITH NO MORE THAN TWO PASSES OF THE ANCHORING EQUIPMENT.
4. IMMEDIATELY UPON COMPLETION OF THE MULCHING AND BINDING OPERATION, THE SEEDED AREAS SHALL BE IRRIGATED, KEEPING THE TOP 2 INCHES OF SOIL EVENLY MOIST UNTIL SEED HAS UNIFORMLY GERMINATED AND GROWN TO A HEIGHT OF 2-INCHES.
5. WATERING APPLICATION SHALL BE DONE IN A MANNER WHICH WILL PROVIDE UNIFORM COVERAGE BUT WHICH WILL NOT CAUSE EROSION, MOVEMENT, OR DAMAGE TO THE FINISHED SURFACE.

Bufferyard Standards and Calculations

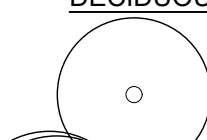
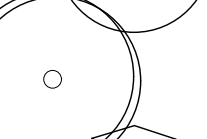









BUFFER YARD REQUIREMENT - WIDTH: 150 FT., 1151 LF PERIMETER TOTAL

- 5 CANOPY TREES PER 100 LF
- 6 EVERGREEN TREES PER 100 LF
- 4 LARGE SHRUBS PER 100 LF

BUFFERYARD LANDSCAPING REQ'D:
58 CANOPY TREES
69 EVERGREEN TREES
46 SHRUBS

BUFFERYARD LANDSCAPING PROVIDED:
58 CANOPY TREES
70 EVERGREEN TREES
163 SHRUBS

Plant List

DECIDUOUS TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	WIDTH
	CS	12	Catalpa speciosa Western Catalpa	2.0" cal. BB	50'	40'
	CO	27	Celtis occidentalis Western Hackberry	2.0" cal. BB	60'	50'
	PC	20	Populus sargentii Plains Cottonwood	0.5" cal	80'	50'
EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	WIDTH
	JS	18	Juniperus scopulorum Rocky Mountain Juniper	6" B&B	30'	12'
	PE	21	Pinus edulis Pinyon Pine	6" B&B	30'	20'
	PN	31	Pinus nigra Austrian Pine	6" B&B	60'	40'
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	WIDTH
	AC	47	Atriplex canescens Fourwing Saltbush	5 gal.	4'	5'
	CM	61	Cercocarpus montanus montanus Mountain Mahogany	5 gal.	6'	6'
	CV	26	Chrysothamnus viscidiflorus Yellow Rabbitbrush	5 gal.	5'	5'
	RT	21	Rhus trilobata Three-leaf Sumac	5 gal.	6'	6'
	SA	8	Shepherdia argentea Silver Buffaloberry	5 gal.	10'	10'

SEAL

PROJECT TITLE

CE
Oil and Gas Pad Site

Landscape and Fencing
Plan

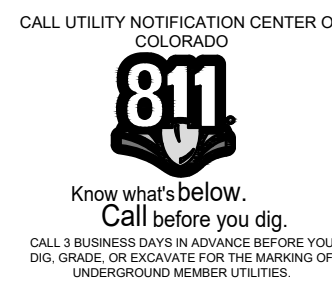
Loveland, Colorado

PREPARED FOR

MRG, LP

2725 Rocky Mountain Avenue
Suite 200
Loveland, CO 80538

Contact: William Irwin



REVISIONS	DATE
1st Submittal	06/13/22
2nd Submittal	02/03/23
3rd Submittal	04/13/23

DATE

February 3, 2023

SHEET TITLE

Landscape and
Buffer Yard Plan

SHEET INFORMATION

LS 02

FENCING INSTALLATION NOTES

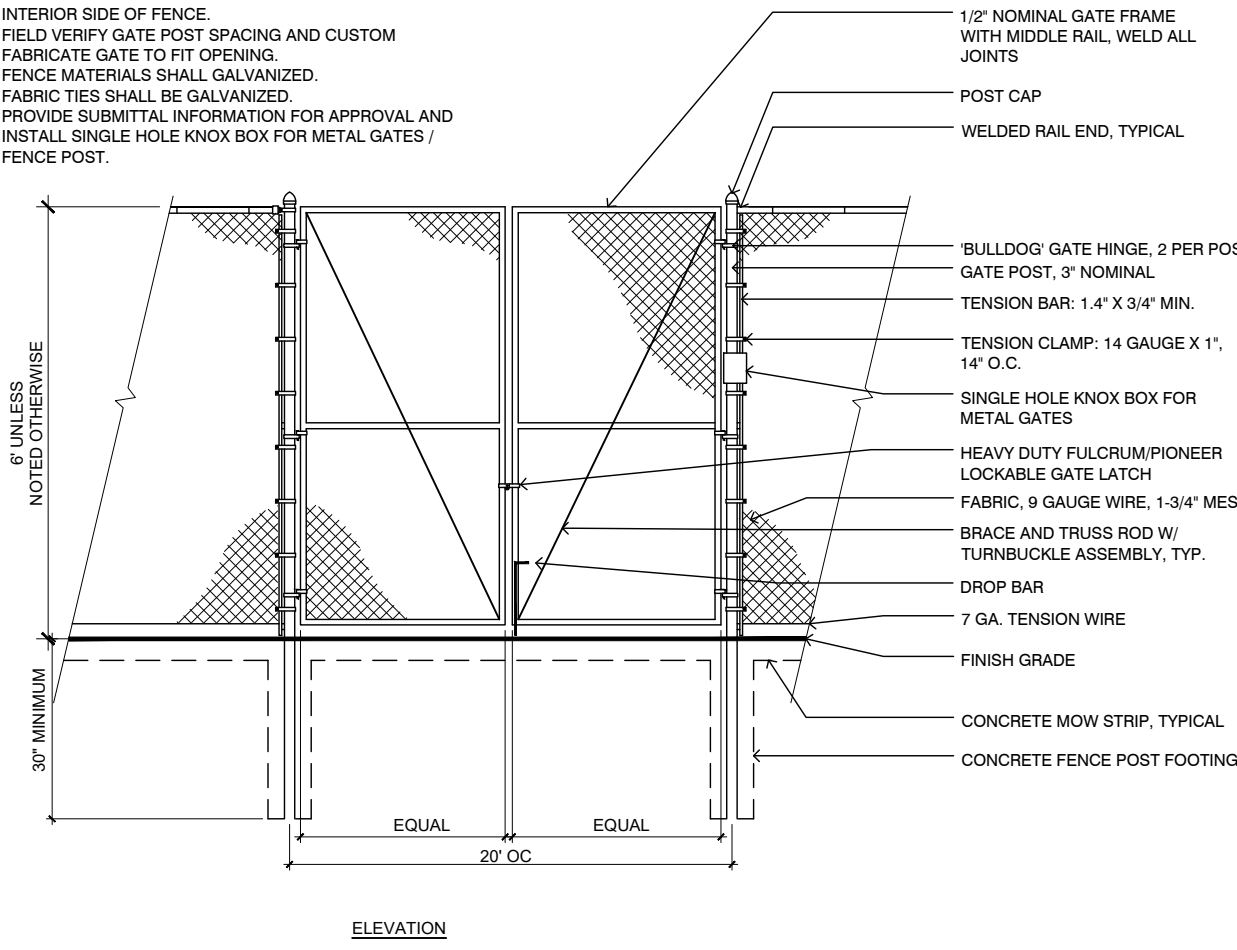
- CONTRACTOR TO OBTAIN ALL INSTALLATION AND STRUCTURAL INFORMATION OR DRAWINGS FROM MANUFACTURER PRIOR TO INSTALLATION.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT ALL NECESSARY PERMIT DOCUMENTS AS REQUIRED BY THE LOCAL JURISDICTIONS FOR THESE PRODUCTS.
- CONTRACTOR TO SUBMIT PRODUCT INFORMATION FOR OWNER'S REVIEW AND APPROVAL PRIOR TO ORDERING
- COORDINATE FINAL LOCATION OF ALL FENCING AND EQUIPMENT WITH OWNER PRIOR TO FINAL INSTALLATION / MOUNTING.
- SUBSTITUTIONS ARE ALLOWED, FOR SPECIFIED PRODUCTS THAT ARE NO LONGER AVAILABLE, OR IF A SUBSTANTIAL COST SAVINGS CAN BE REALIZED FOR THE OWNER BY USE OF AN ALTERNATE AND EQUAL PRODUCT. IF SUCH SUBSTITUTION OCCURS IT MUST BE SUBMITTED IN WRITING AND APPROVED BY THE OWNER OR ANY GOVERNING AGENCIES.

GATE NOTES

- GATES SHALL BE PROVIDED WITH A COMBINATION CATCH AND LOCKING ATTACHMENT DEVICE FOR A PAD LOCK, AND SHALL BE KEPT LOCKED EXCEPT WHEN BEING USED FOR ACCESS TO THE SITE.
- THE OPERATOR MUST PROVIDE THE CHIEF OF THE APPROPRIATE FIRE PROTECTION DISTRICT WITH A "KNOX PADLOCK" OR "KNOX BOX WITH KEY" TO ACCESS THE WELL SITE TO BE USED IN CASE OF AN EMERGENCY.

NOTES:

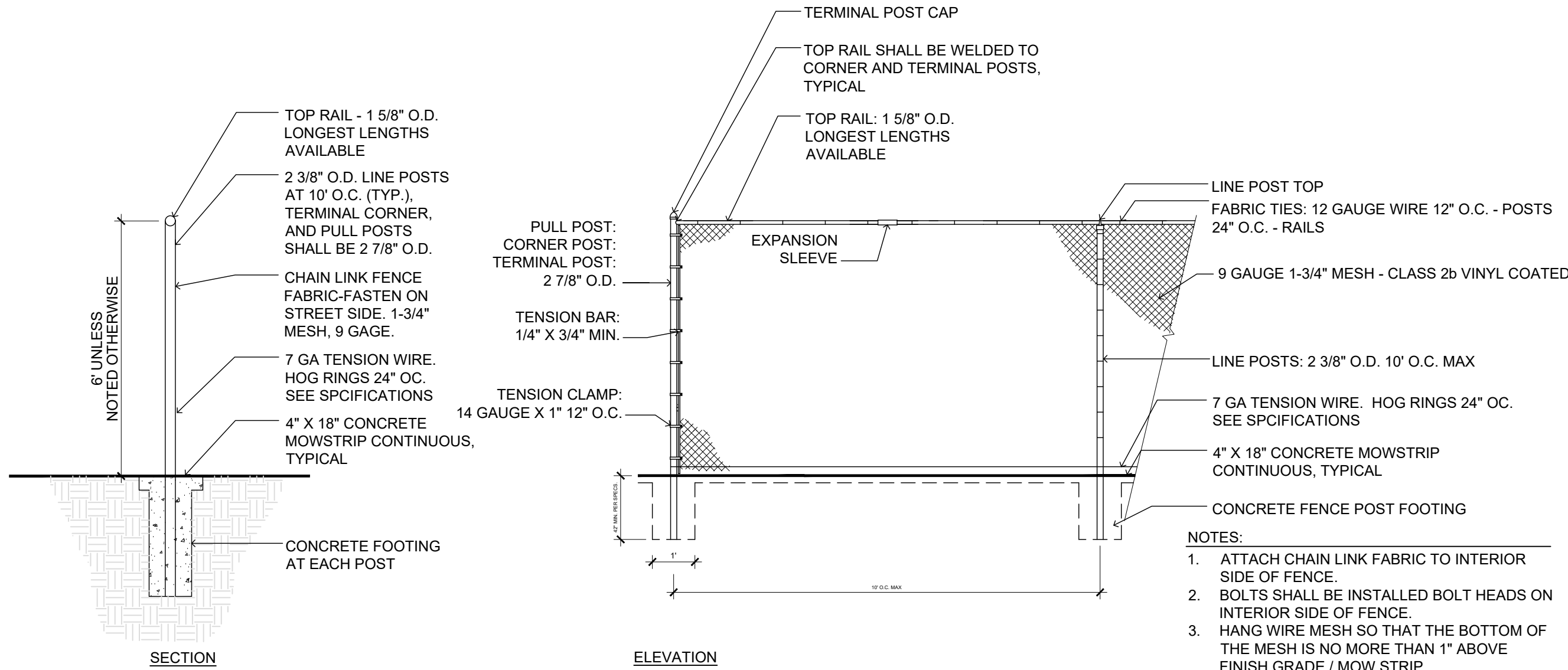
- CONTRACTOR SHALL PREPARE SHOP DRAWINGS OF GATES FOR APPROVAL
- BOLTS SHALL BE INSTALLED WITH BOLT HEADS ON INTERIOR SIDE OF FENCE.
- FIELD VERIFY GATE POST SPACING AND CUSTOM FABRICATE GATE TO FIT OPENING.
- FENCE MATERIALS SHALL GALVANIZED.
- FABRIC TIES SHALL BE GALVANIZED.
- PROVIDE SUBMITTAL INFORMATION FOR APPROVAL AND INSTALL SINGLE HOLE KNOX BOX FOR METAL GATES / FENCE POST.



1 20' WIDE CHAIN LINK GATE

NOT TO SCALE

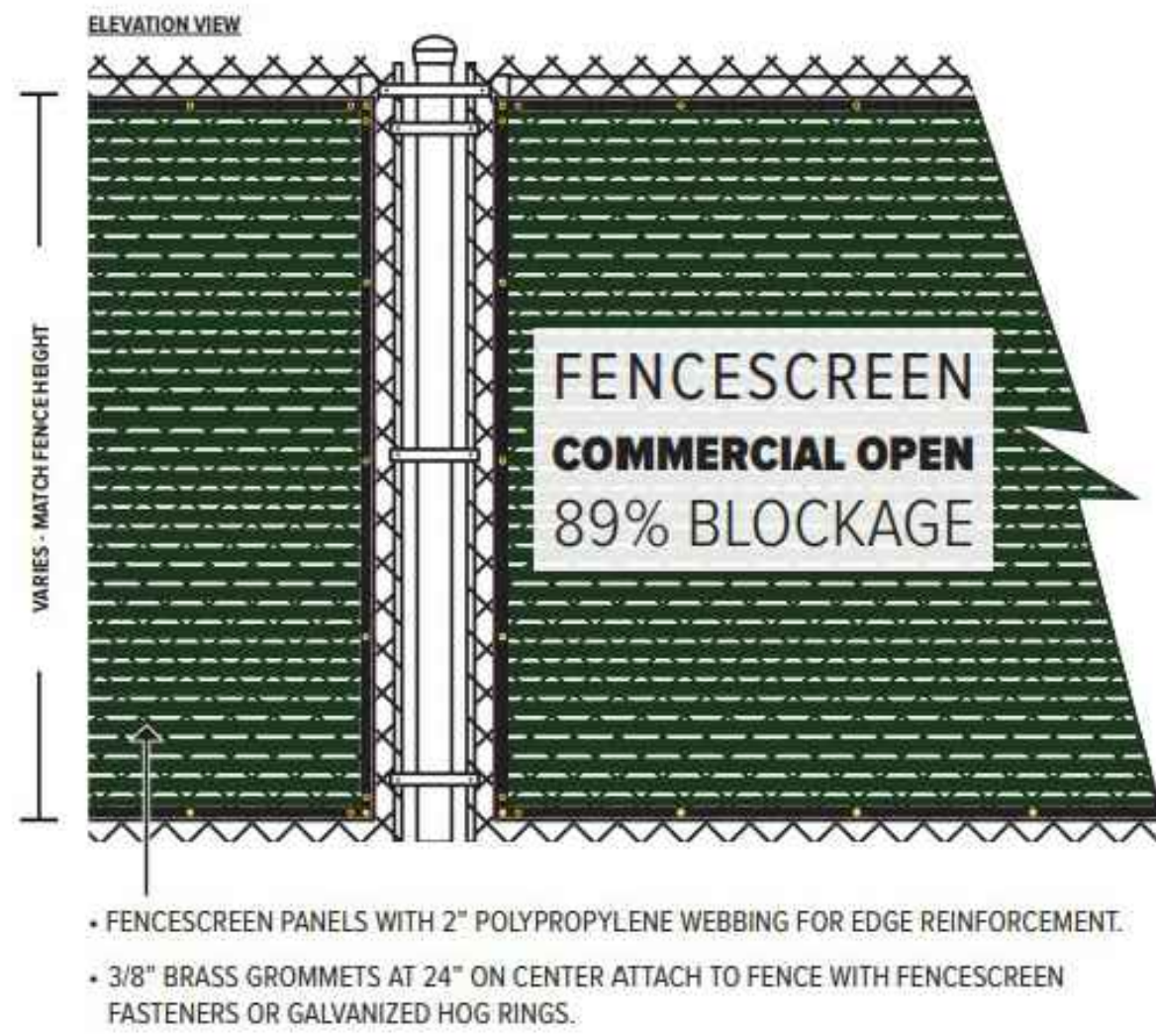
TBG-FE-07



2 6' CHAIN LINK FENCE

NOT TO SCALE

TBG-FE-08



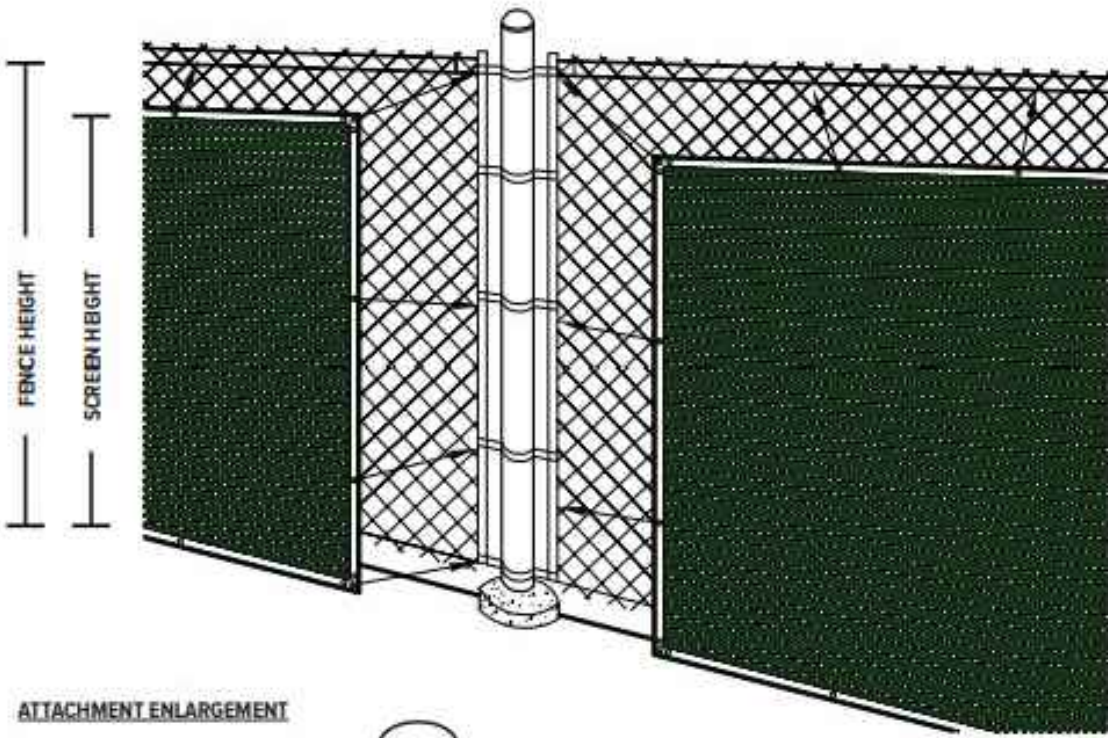
FENCESCREEN MATERIAL SPECIFICATIONS

MATERIAL COMPOSITION: OPEN LENO WEAVE POLYPROPYLENE

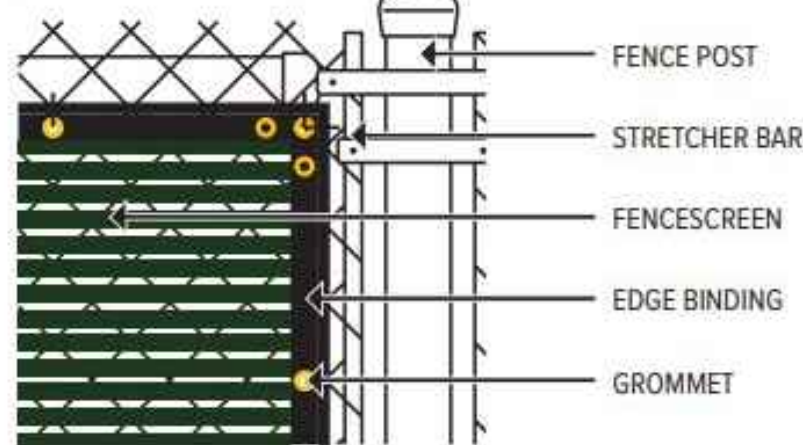
PROPERTIES	RESULTS
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Weight	300 g/m ²
Construction	30 x 16 weave lath-leno Closed Mesh
Grab Tensile Strength	400/234 lbs.
Burst Strength	469 psi
Tear	120 x 95
Shade Percentage	89%

ATTACHMENT DETAIL 3D



ATTACHMENT ENLARGEMENT



NOTE:

- INSTALL PER FENCESCREEN MANUFACTURER RECOMMENDATION
- REFER TO STRUCTURAL PLANS FOR ALL FOOTING SIZE

AVAILABLE COLORS:



3 FENCE SCREEN DETAILS

MANUFACTURER: FENCE SCREEN
MODEL: 600 SERIES
COLOR: BLACK
MATERIAL: KNITTED POLYPROPYLENE OPEN MESH

Scale: NTS