

CONSTRUCTION DRAWINGS FOR ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH

GAS - BLACK HILLS ENERGY
(719)-393-6625

ELECTRIC – MOUNTAIN VIEW ELECTRIC ASSOC.
(719)-495-2283

GEOTECHNICAL ENGINEER – ENTECH ENGINEERING, INC.
(719)–531–5599

FALCON FIRE PROTECTION DISTRICT
(719) 495-4050

IMPROVEMENT PLANS
PREPARED FOR GTL, INC. DBA GTL DEVELOPMENT, INC.

A PARCEL OF LAND LOCATED IN A PORTION OF SECTION 20, IN TOWNSHIP
12 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN,
EL PASO COUNTY, STATE OF COLORADO.

SHEET NO	SHEET INDEX
1	COVER SHEET
2	INDEX SHEET
3	NOTES SHEET
4-5	DETAIL SHEETS
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8-9	CROOKED HILL DR.
10	PARKLAND DR. & EVENING CREEK DR.
11	MONUMENT VISTA DR.
12	CUATRO CAMINOS DR. & BLUFFPOINT DR.
13	CROOKED BLUFF DR.
14	COASTAL HILLS LN.
15	COASTAL HILLS LN. & STORM #1
16	OVERALL SANITARY SEWER
17	OVERALL SANITARY SEWER SERVICES
18	OVERALL UNDERDRAIN
19	UNDERDRAIN DETAILS
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22	OVERALL STORM DRAIN
23	GRADING INDEX SHEET
24-29	GRADING LAYOUTS
30	GRADING CUT-FILL LAYOUT
31-32	GRADING DETAIL SHEETS

THE FOLLOWING TWO (2) COURSES ARE ON SAID BOUNDARY LINE:

36. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 630.00 FEET A DELTA ANGLE OF 19°34'09" AN ARC LENGTH OF 215.17 FEET, WHOSE LONG CHORD BEARS N07°58'43"E A DISTANCE OF 214.13 FEET;

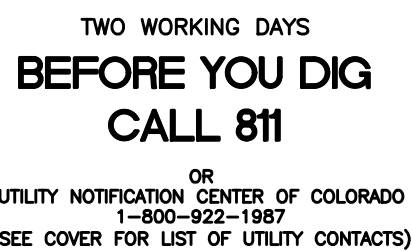
37. THENCE N42°56'08"E A DISTANCE OF 31.12 FEET TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF REX ROAD AND SOUTHERLY BOUNDARY LINE OF THE ESTATES AT ROLLING HILLS RANCH FILING NO. 2, RECORDED WITH RECEPTION NO. _____ IN THE RECORDS OF EL PASO COUNTY;

THE FOLLOWING NINE (9) CORSES ARE ON SAID BOUNDARY LINE

38. THENCE N87°55'36"E A DISTANCE OF 348.00 FEET TO A CURVE TO THE RIGHT;
39. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 900.00 FEET A DELTA ANGLE OF 06°09'59", AN ARC LENGTH OF 96.77 FEET, WHOSE LONG CHORD BEARS S88°39'34"E A DISTANCE OF 96.73 FEET;
40. THENCE S85°54'45"E A DISTANCE OF 400.64 FEET TO A CURVE TO THE RIGHT;
41. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 7440.00 FEET, A DELTA ANGLE OF 02°14'02", AN ARC LENGTH OF 290.08 FEET, WHOSE LONG CHORD BEARS S84°47'44"E A DISTANCE OF 290.06 FEET;
42. THENCE S38°26'09"E A DISTANCE OF 31.03 FEET;
43. THENCE S83°16'41"E A DISTANCE OF 60.00 FEET;
44. THENCE N51°52'47"E A DISTANCE OF 31.03 FEET TO A NON-TANGENT CURVE TO THE RIGHT;
45. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 7440.00 FEET, A DELTA ANGLE OF 00°18'41", AN ARC LENGTH OF 40.44 FEET, WHOSE LONG CHORD BEARS S82°43'51"E A DISTANCE OF 40.44 FEET;
46. THENCE S82°33'58"E A DISTANCE OF 158.76 FEET;
47. THENCE S82°33'58"E A DISTANCE OF 782.00 FEET;
48. THENCE S07°26'02"W A DISTANCE OF 500.00 FEET;
49. THENCE S04°57'36"E A DISTANCE OF 290.00 FEET;
50. THENCE N11°42'15"W A DISTANCE OF 500.00 FEET;
51. THENCE S16°41'21"W A DISTANCE OF 150.00 FEET;
52. THENCE S24°44'20"W A DISTANCE OF 200.00 FEET;
53. THENCE S17°50'28"W A DISTANCE OF 60.00 FEET;
54. THENCE S17°50'28"W A DISTANCE OF 180.00 FEET;
55. THENCE S50°35'03"W A DISTANCE OF 368.67 FEET TO THE POINT OF BEGINNING.

THE ABOVE PARCEL OF LAND CONTAINS 64.773 ACRES, MORE OR LESS.

BASIS OF BEARINGS FOR THIS DESCRIPTION IS THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 29, T12S, R64W OF THE 6TH P.M., WHICH IS ASSUMED TO BEAR S89°25'42"E FROM THE SOUTHWEST CORNER OF SECTION 29 (A STONE W/SCRIBED "X") TO THE SOUTH QUARTER CORNER OF SECTION 29 (3.25" ALUM. CAP LS 30087).




1) MRRCI - 3 1/4" ALUMINUM CAP ON NO.6 REBAR LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF LONDONDERRY DRIVE AND ANGELES ROAD. LOCATED AT THE SE CORNER OF THE MERIDIAN RANCH RECREATIONAL CENTER SIGN. ELEVATION = 7098.40'

2) MRMSI - 3 1/4" ALUMINUM CAP ON NO.6 REBAR LOCATED ON THE WEST SIDE OF RAINBOW BRIDGE DRIVE 1,150 FEET NORTH OF LONDONDERRY DRIVE. LOCATED NEAR THE BACK OF SIDE WALK AT THE NW CORNER OF RAINBOW BRIDGE DRIVE AND THE NORTHERLY ENTRANCE TO MERIDIAN RANCH ELEMENTARY SCHOOL (10480 RAINBOW BRIDGE DRIVE). ELEVATION = 7099.73'

DEVELOPERS STATEMENT:

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


RAUL GLEZMAN, VICE PRESIDENT
GTL DEVELOPMENT, INC.

OWNERS STATEMENT:

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


RAUL GUZMAN, VICE PRESIDENT
GTL DEVELOPMENT, INC.

DESIGN ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID DETAILED PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THEY PARTITION ROADWAY AND DRAINAGE FIELDS ARE DESIGNED AND ARE CONSIDERED TO BE THE BEST OF KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

THOMAS A. KERBY, P.E. #31429



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 VOL. 1 & 2, 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 BEEN 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 DIRECTORS DISCRETION.

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

DATE _____

Scale	Drawn by	ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS
	by L&S	
AS SHOWN	Checked by	COVER SHEET
	TAK	
1 of 32	Date	MAY 2021



MERIDIAN RANCH

TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
TELEPHONE: 719.495.7444
FAX: 719.495.2457

No.	Revisions	Date	Init.	Appr.	Date
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2					
3					
4					

MERIDIAN RANCH
FILING 9

THE ESTATES AT
ROLLING HILLS
RANCH FILING 2

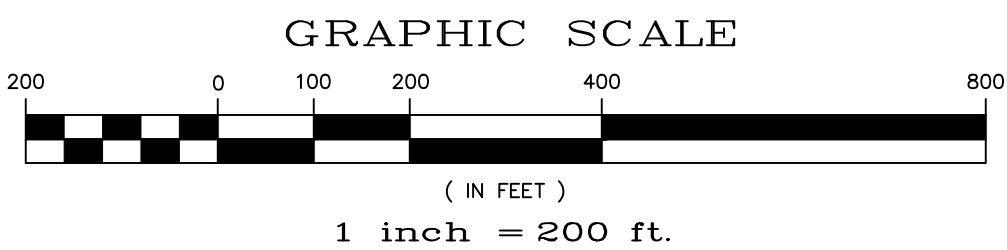
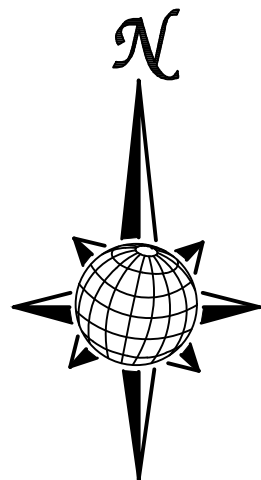



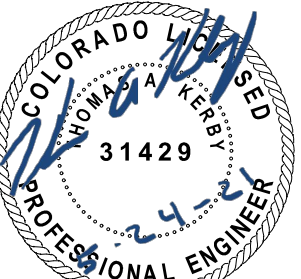
TWO WORKING DAYS
**BEFORE YOU DIG
CALL 811**
OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)

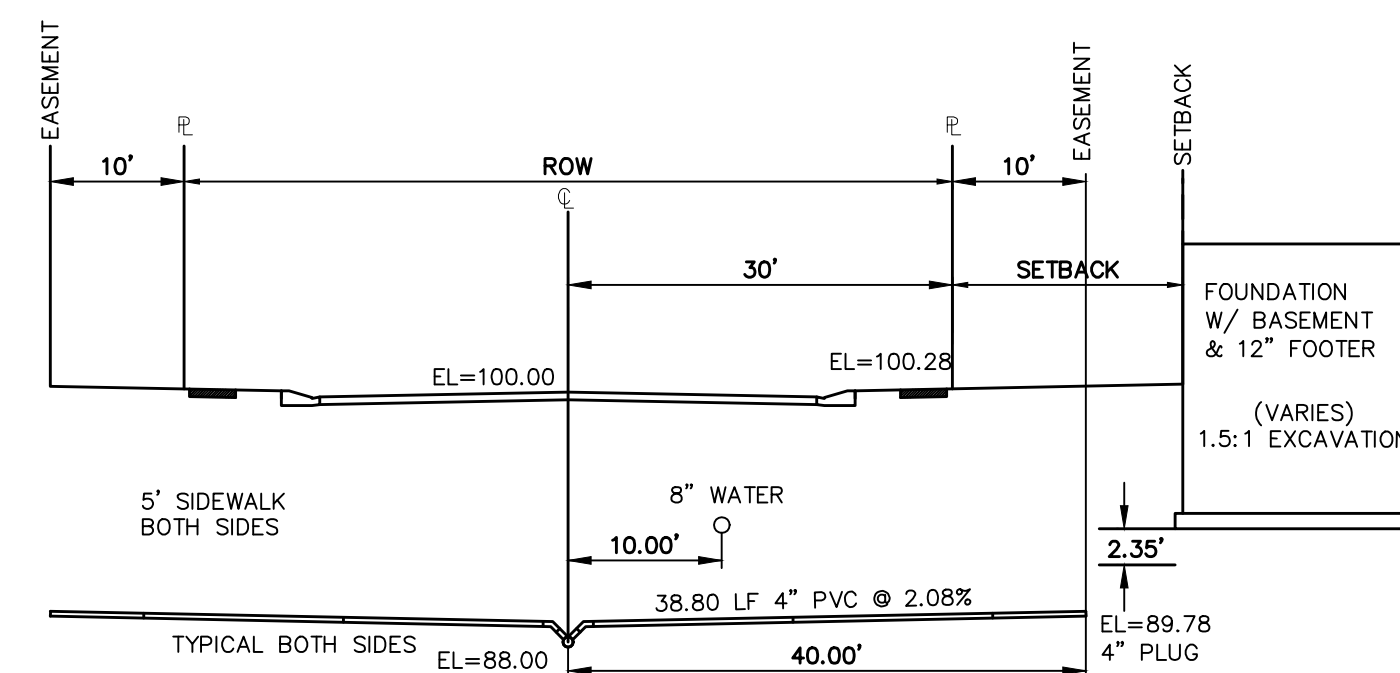
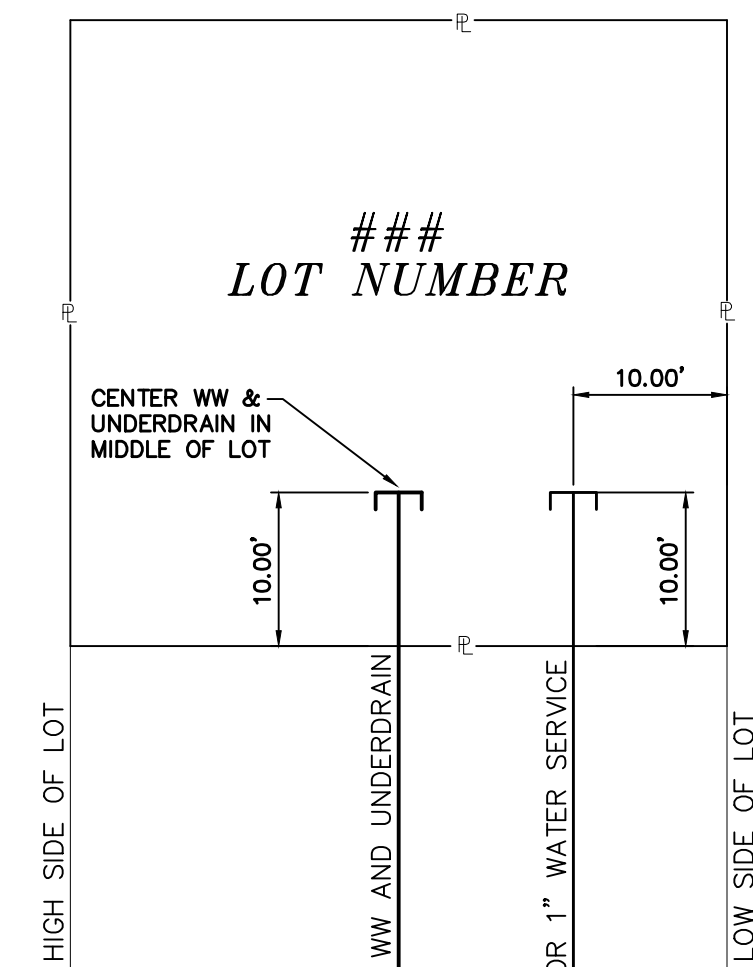
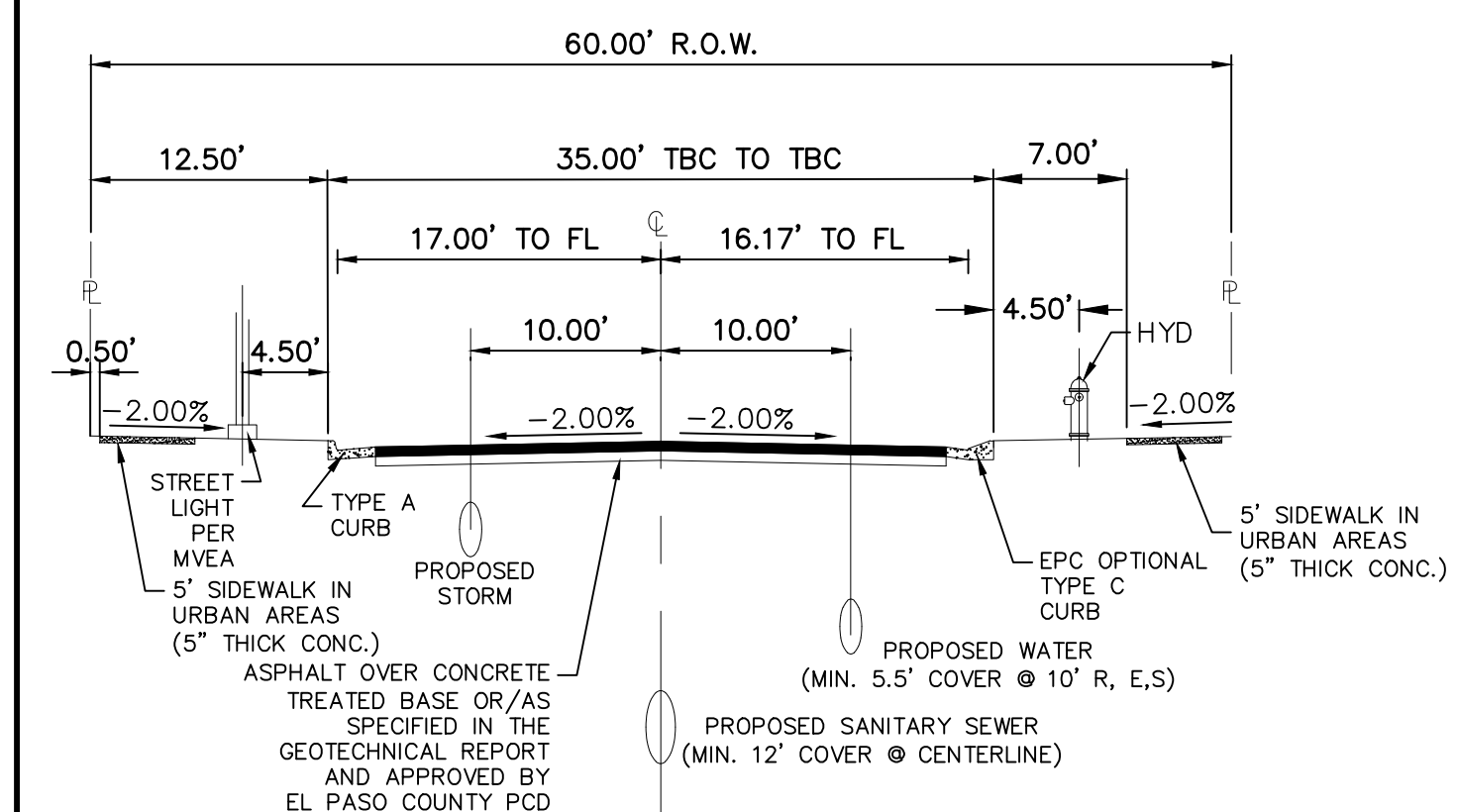
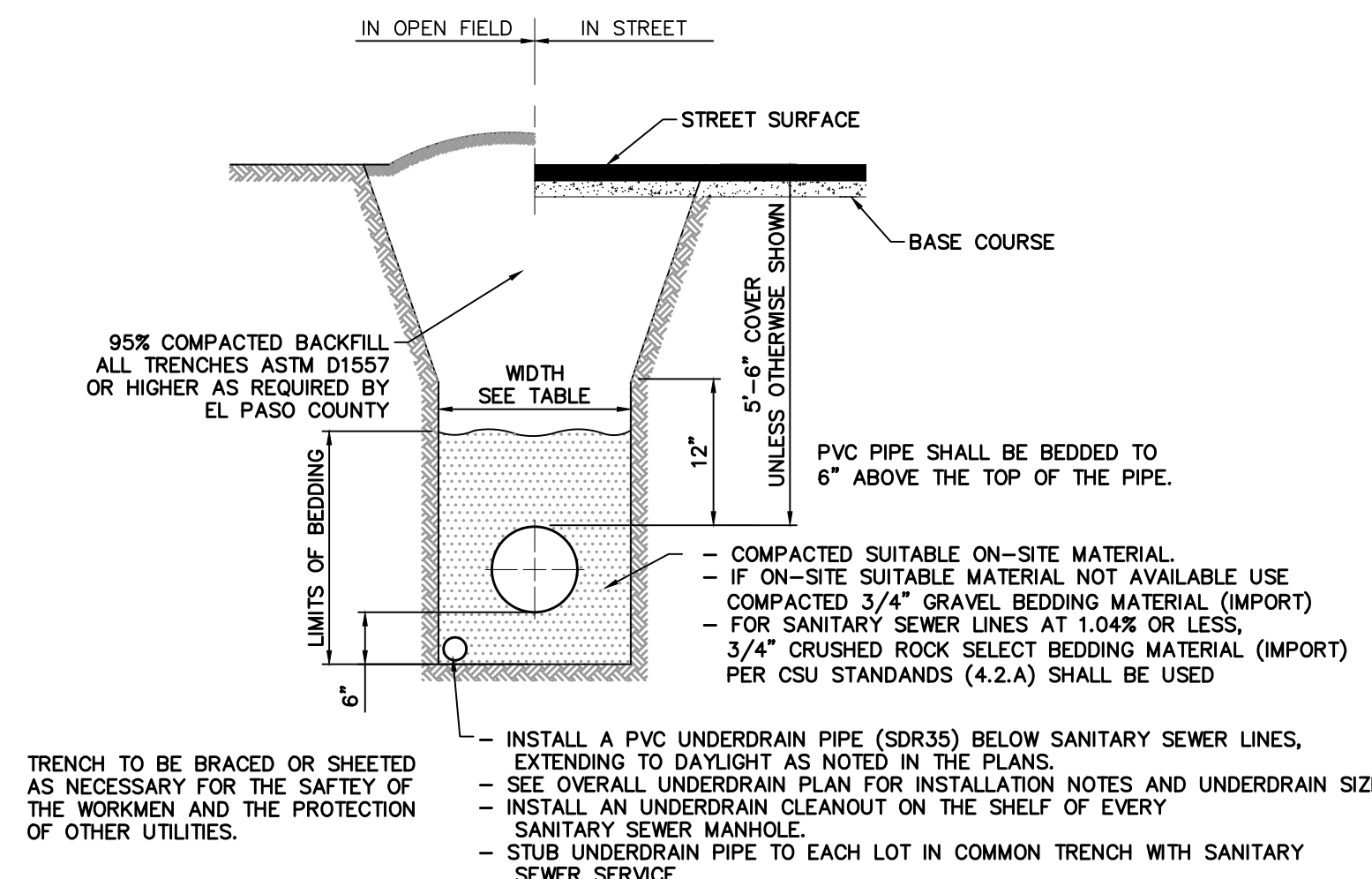
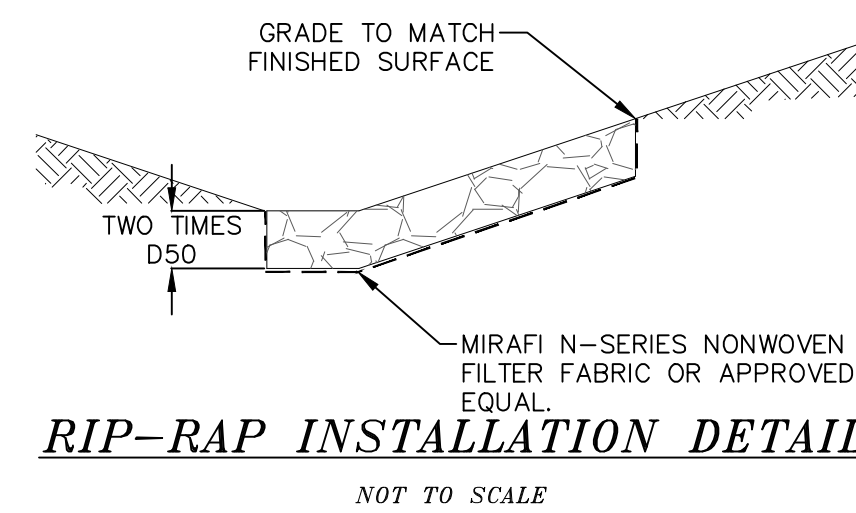
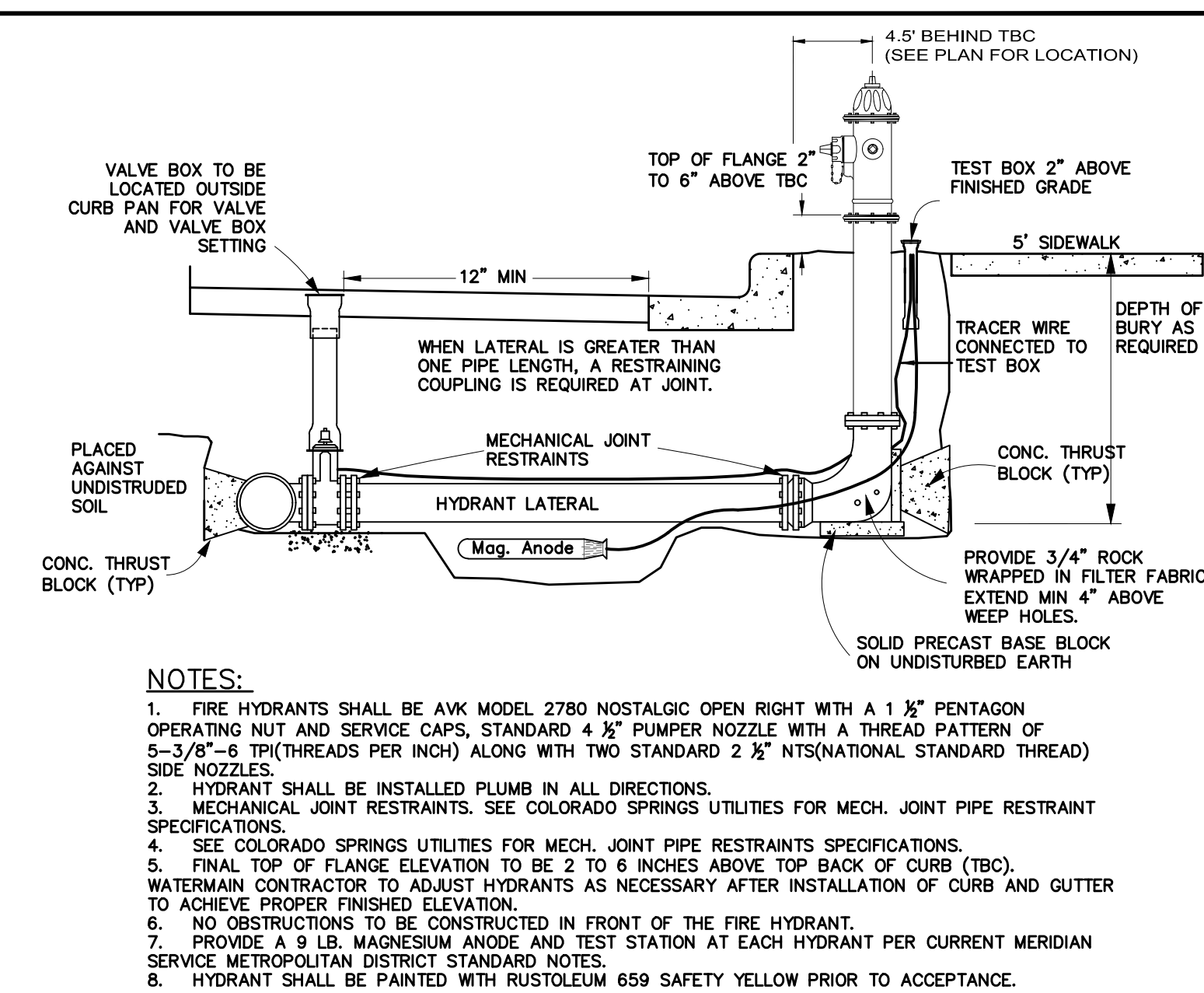
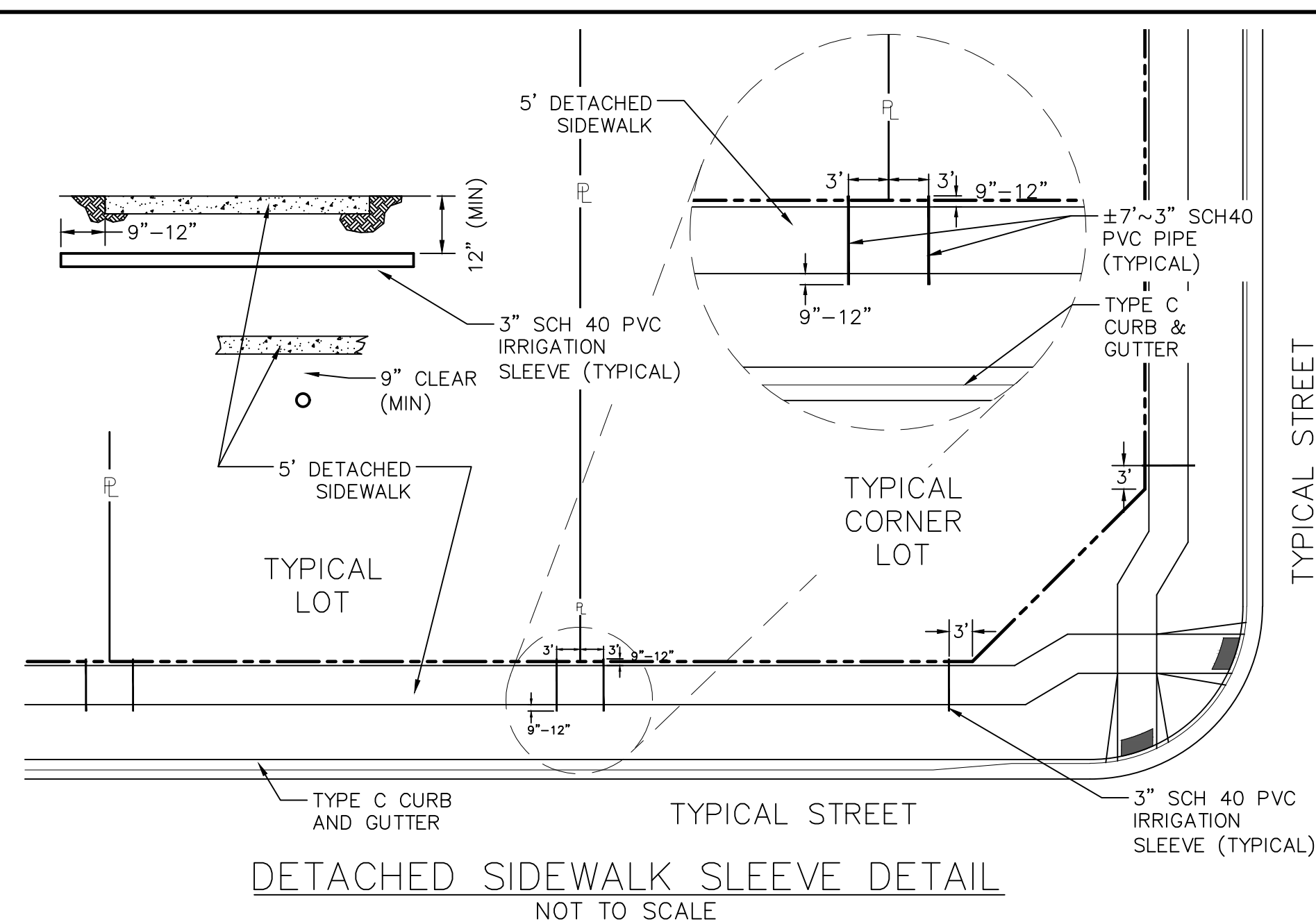
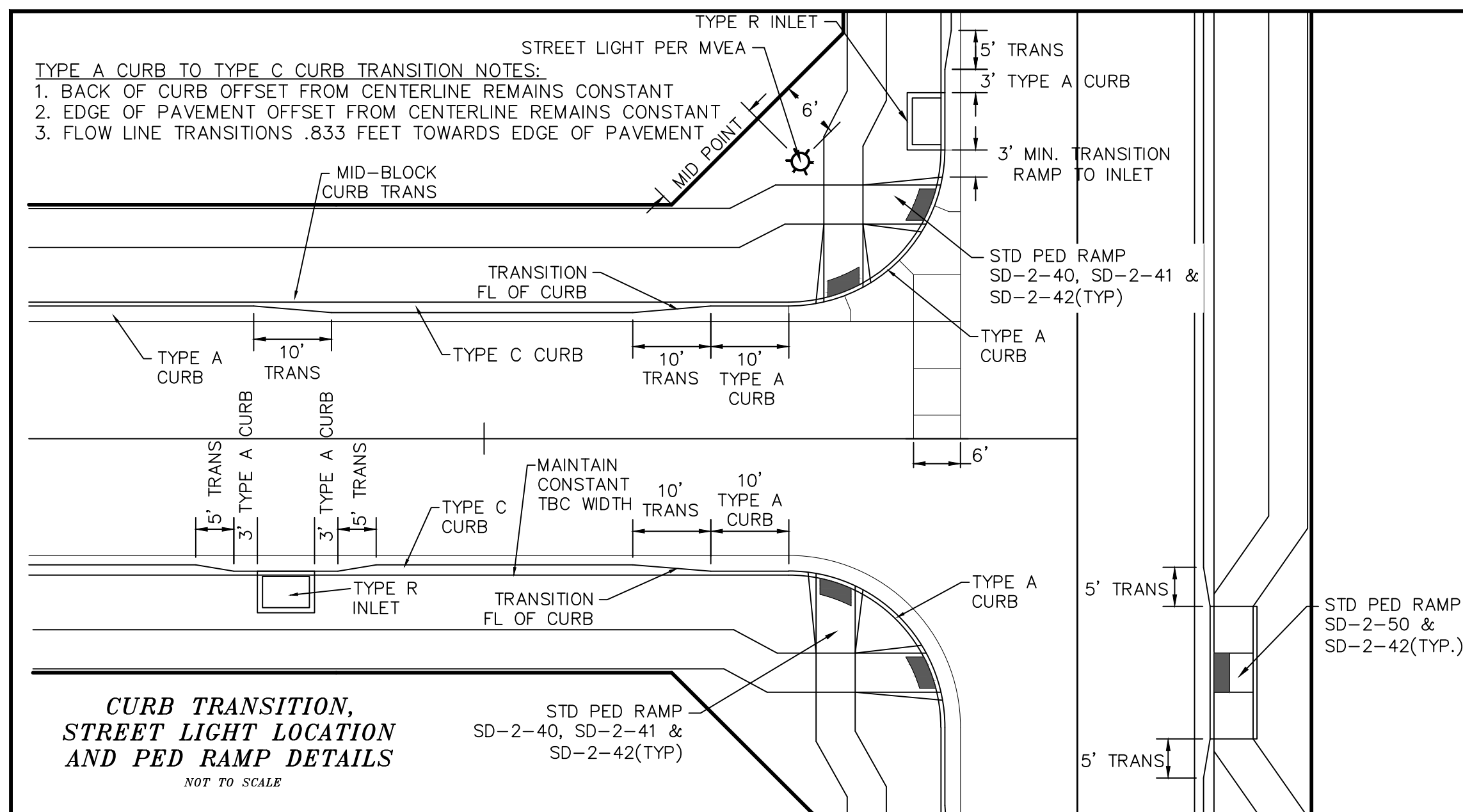
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FALCON
REGIONAL
PARK

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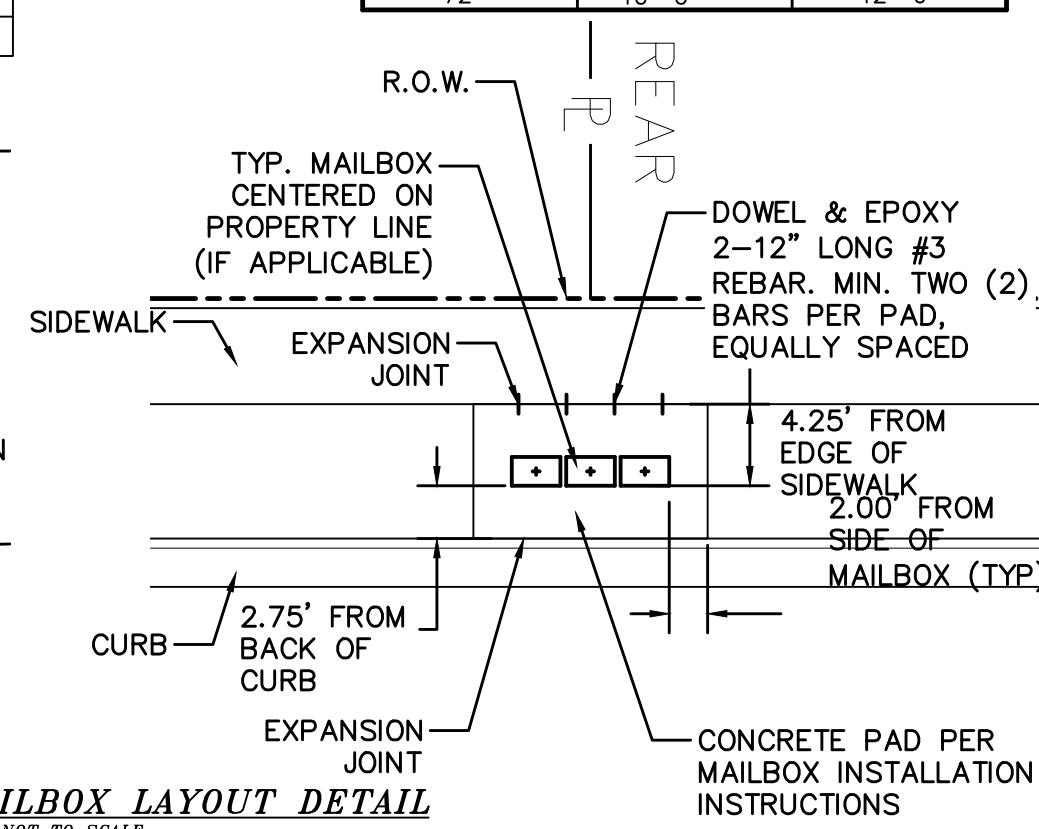
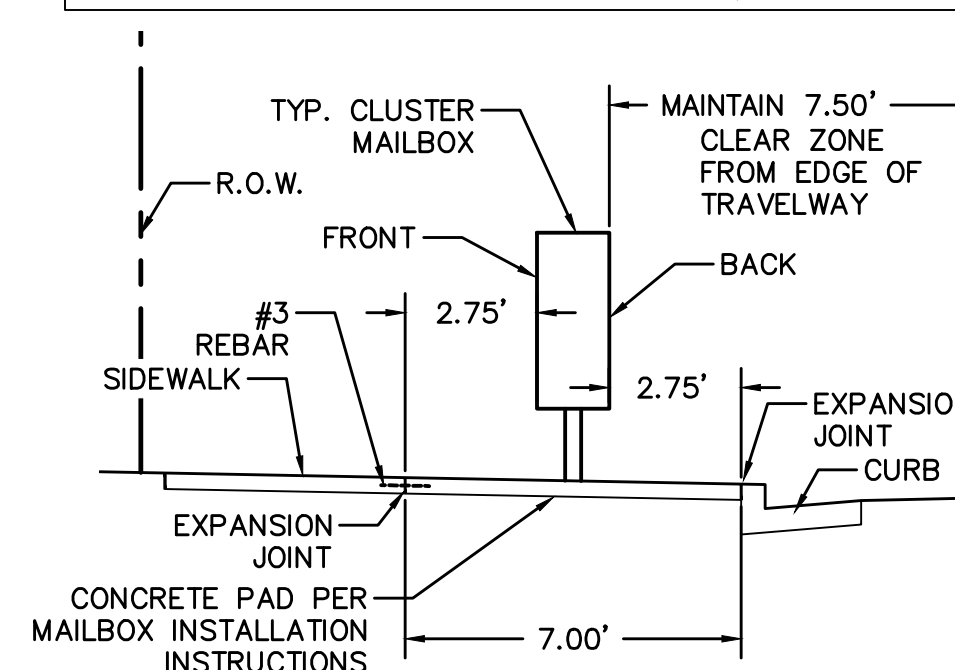


1		2		3		4		No.		Revisions		Date		Appr.		Date	
1		2		3		4		No.		Revisions		Date		Appr.		Date	
<p>TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457</p>																	
<p> MERIDIAN RANCH</p>																	
<p>ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS INDEX SHEET</p>																	
Scale		AS SHOWN		2 of 32		Date		MAY 2021									
Drawn by		Log		Checked by		TAK		Date									
AS SHOWN		2		32		Date		MAY 2021									
<p> PROFESSIONAL ENGINEER 31429</p>																	



PIPE CHART

PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'-4"	4'-0"
5"	1'-6"	4'-0"
8"	1'-8"	4'-0"
12"	2'-0"	4'-0"
18"	3'-0"	4'-0"
24"	3'-6"	4'-0"
30"	4'-0"	6'-0"
36"	5'-0"	6'-0"
42"	6'-0"	8'-0"
48"	6'-0"	8'-0"
54"	8'-0"	8'-0"
60"	8'-0"	8'-0"
66"	8'-0"	10'-0"
72"	10'-0"	12'-0"



		LEGEND
<u>SYMBOL</u>	<u>ACRONYM</u>	<u>DESCRIPTION</u>
	RCP W/FES	REINFORCED CONCRETE PIPE W/FLARED END SECTIONS
	INLET	STORM SEWER INLET BOX
	SDMH	STORM SEWER MANHOLE
	ST	STORM SEWER LINE (PUBLIC UNLESS OTHERWISE NOTED)
	SS	SANITARY SEWER MAIN
	SSMH	SANITARY SEWER MANHOLE
	WM	WATER MAIN (ALL PIPES PVC, UNLESS OTHERWISE NOTED)
	GV	WATER GATE VALVE
	BV	WATER BUTTERFLY VALVE
	BOV	WATER BLOW-OFF VALVE
	HYD ASSY	FIRE HYDRANT ASSEMBLY
	TEE W/GV	WATER TEE W/ GATE VALVES
	ATT SW	ATTACHED SIDEWALK
		STANDARD PEDESTRIAN RAMP PER SD-2-40 & M-608-1 (SH 6 OF 6)
		ANODE (CATHODIC PROTECTION)
	TS	TEST STATION
	HB	HAY BALE DAM
	SF	SILT FENCE
	EXIST	EXISTING FEATURES
		LOT NUMBERS
		CROSS PAN PER SD-2-26
	SL	STREET LIGHT PER MOUNTAIN VIEW ELECTRIC ASSOCIATION (MVEA)
	R1-1	STOP SIGN - R1-1, 30x30 UNLESS OTHERWISE NOTED
		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')

[illegible]

TECH CONTRACTORS
11886 STAPLETON DRIVE
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MERIDIAN RANCH

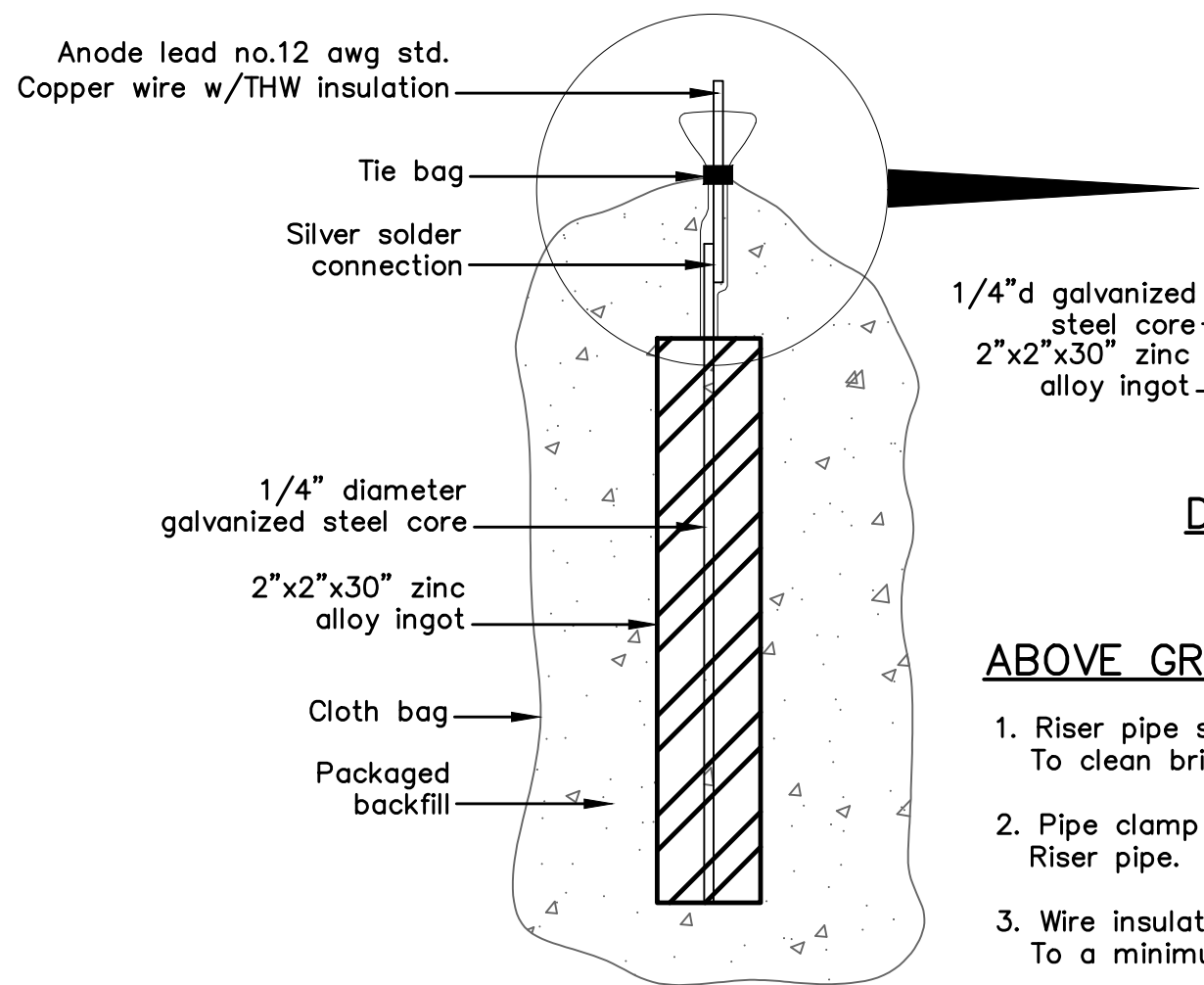
ROLLING HILLS RANCH FILING 3
AT MERIDIAN RANCH
STREET AND UTILITY PLANS

DETAIL SHEET

Drawn by	LOG
Checked by	TAK
Date	MAY 2021

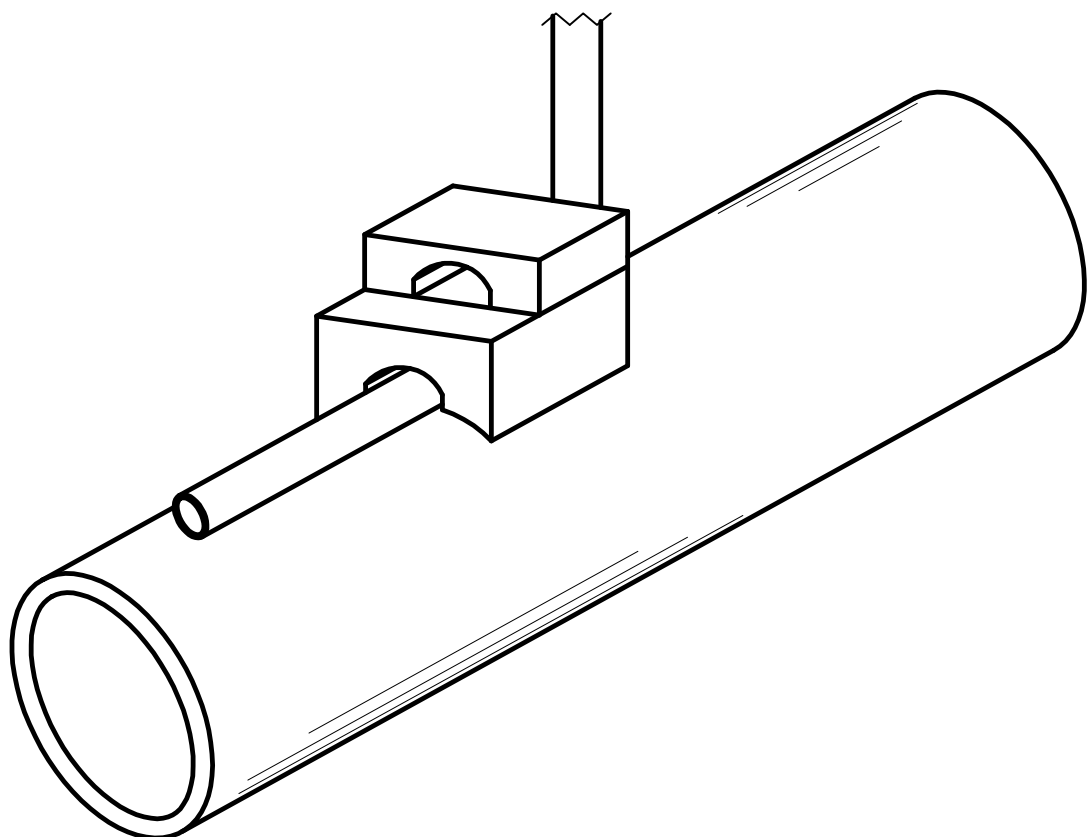
Scale
AS SHOWN
4 of 32





ZINC ANODE

ZINC ANODE AND CONNECTORS FOR 1" AND 2" WATER SERVICE



DETAIL A

ABOVE GRADE CONNECTION NOTES:

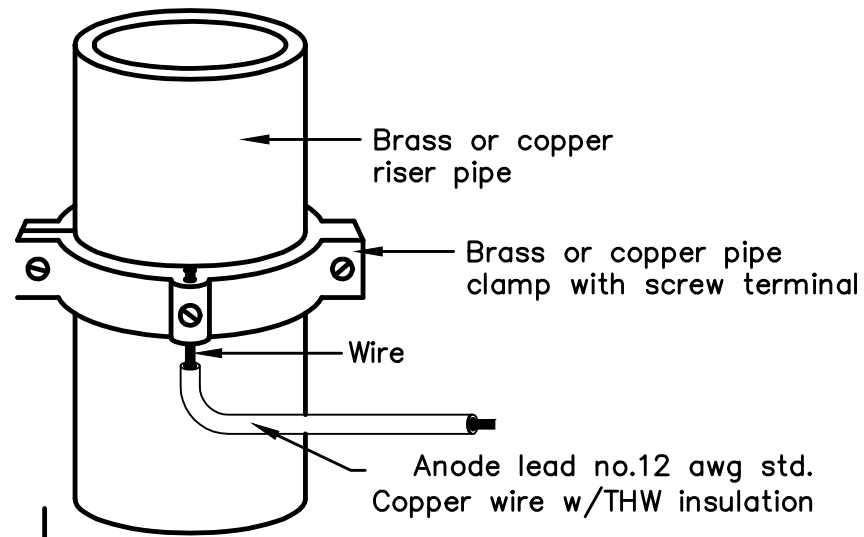
1. Riser pipe shall be wire brushed To clean bright metal.
2. Pipe clamp shall be located on Riser pipe.
3. Wire insulation shall be stripped To a minimum length to connect

Wire to pipe clamp.

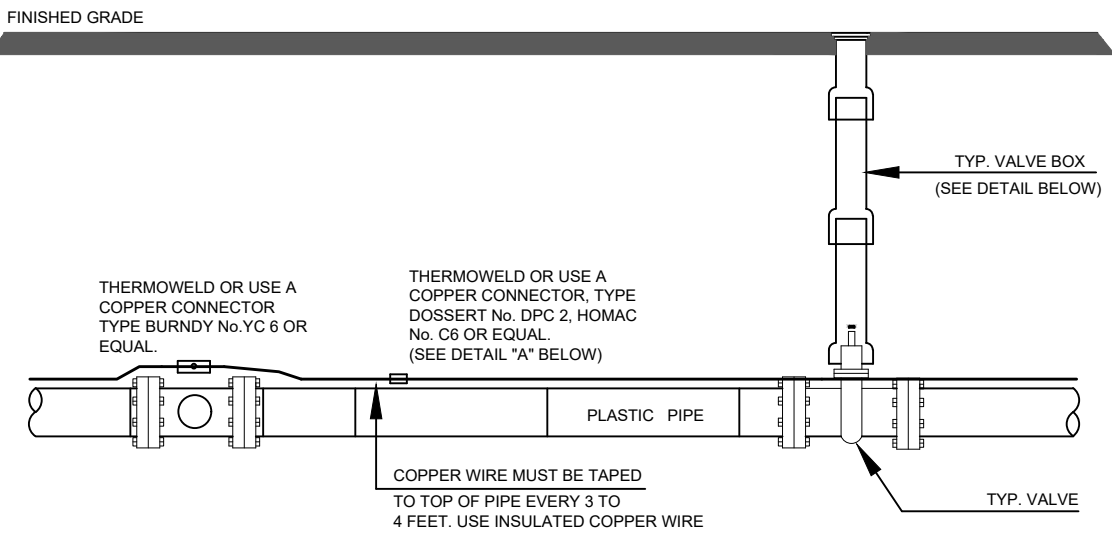
PACKAGED BACKFILL COMPOSTION:

75% gypsum
20% bentonite
5% sodium sulfate

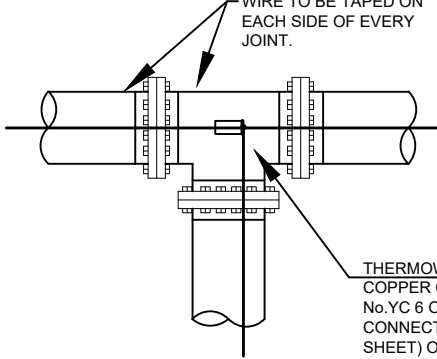
Ingot weight: 30 lbs.
Pkgd. Weight: 70 lbs. Approx.



ANODE LEAD ABOVE
GRADE CONNECTION



DETAIL "A"



DETAIL "B"

NOTE

1. Contractor is responsible for continuity of all tracer wire.
2. Tracer wire is required on all pipes per MSMD specifications (PVC and HDPE).

FIELD INSTALLATION OF POLYETHYLENE WRAP FOR DIP PIPE AND FITTINGS.

STEP 1:

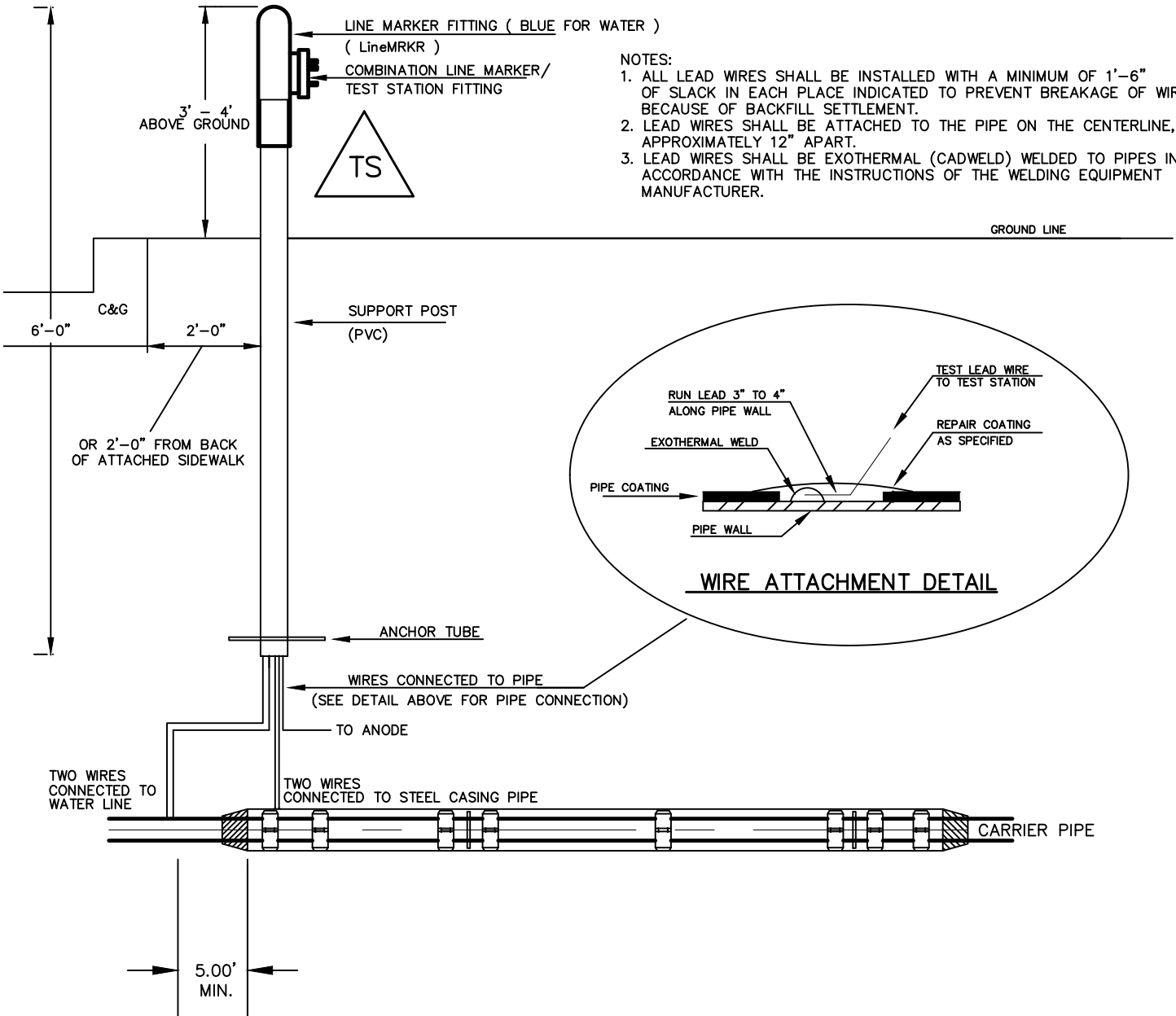
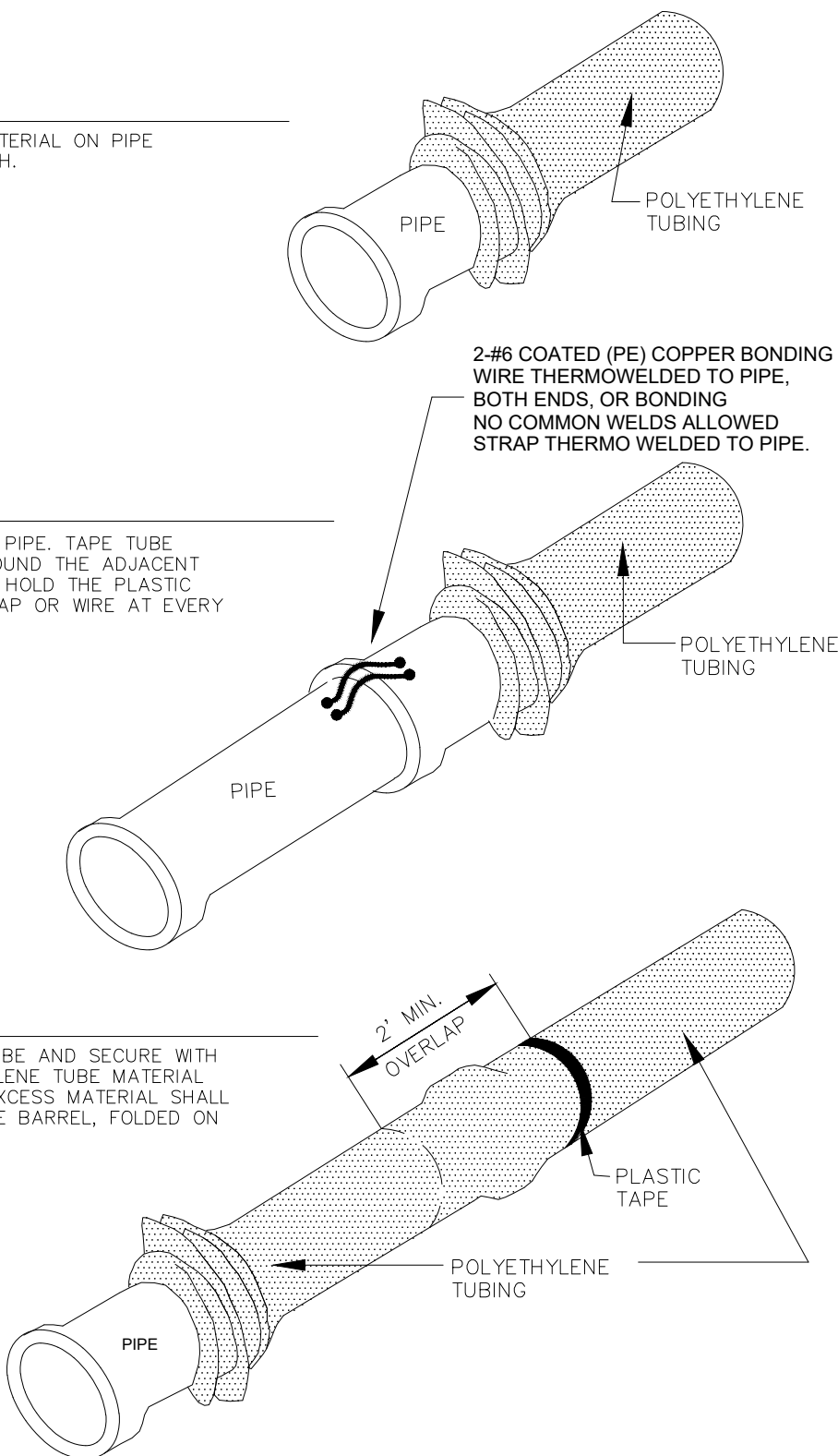
PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO TRENCH.

STEP 2:

PULL TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO END AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE. INSTALL BONDING STRAP OR WIRE AT EVERY JOINT OF PIPE PRIOR TO WRAPPING.

STEP 3:

OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.



TYPICAL DETAIL FOR TEST STATION
WITH STEEL SLEEVE INSTALLATION

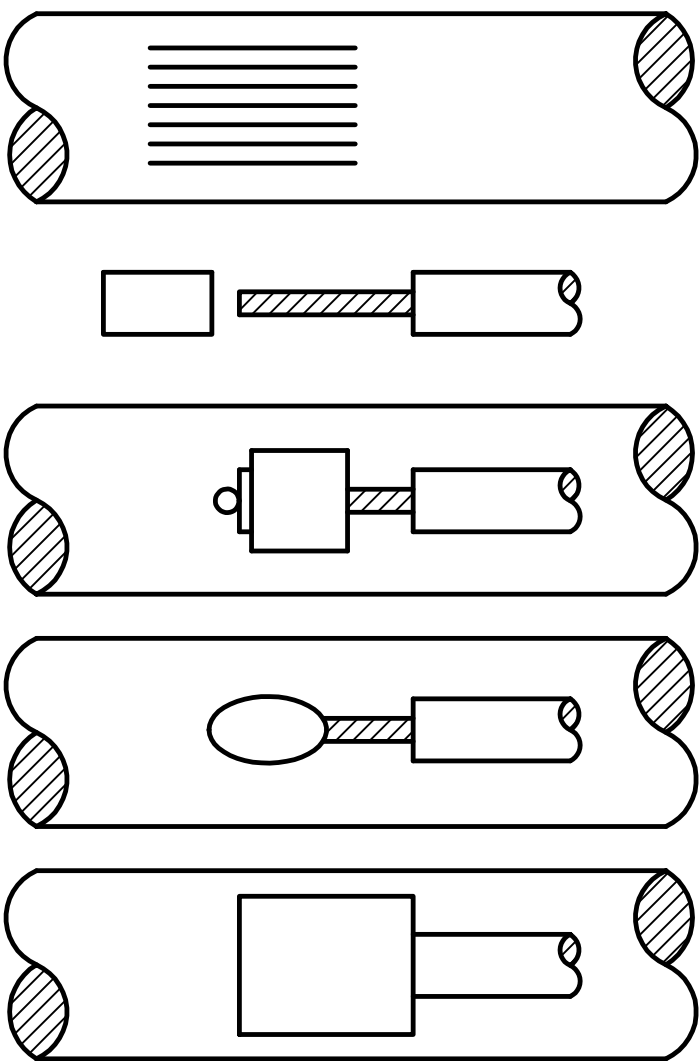
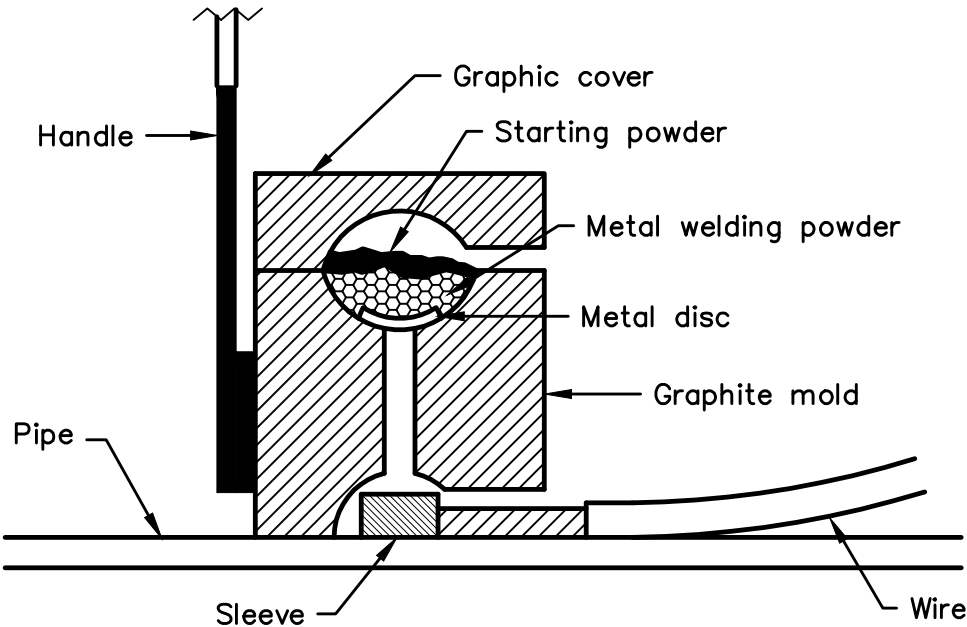
NOTES:

- 1.) Lowerings to be cathodically protected under the direction of the MSMD Inspector, per standards.
(For anode size see detail above.)
- 2.) Example can vary due to site conditions and MSMD Inspector's direction's.
- 3.) Reference Colorado Springs Utilities Standard Detail Drawing No. A 8-6 - Steel Sleeve Installation.

NOTES:

1. All wire welds shall be minimum 3 inches apart.
2. Standard weld cartridges shall be used for steel surfaces.

EXOTHERMIC WELD PROCESS



STEP 1. File structure connection area (3 in x 3 in) to bare shiny metal and clean.

STEP 2. Strip insulation from wire. Attach sleeve where required by manufacturer.

STEP 3. Hold mold firmly with opening away from operator and ignite with flint gun.

STEP 4. Remove slag from connection and peen weld for soundness.

STEP 5. Cover connection and exposed structure surface with a bituminous coating compound. Place plastic shield cap firmly over connection.

No.	Revisions	Date	Appr.	Date
1				
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3				
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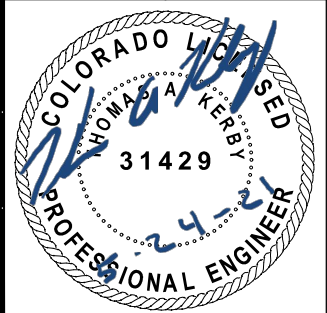
TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
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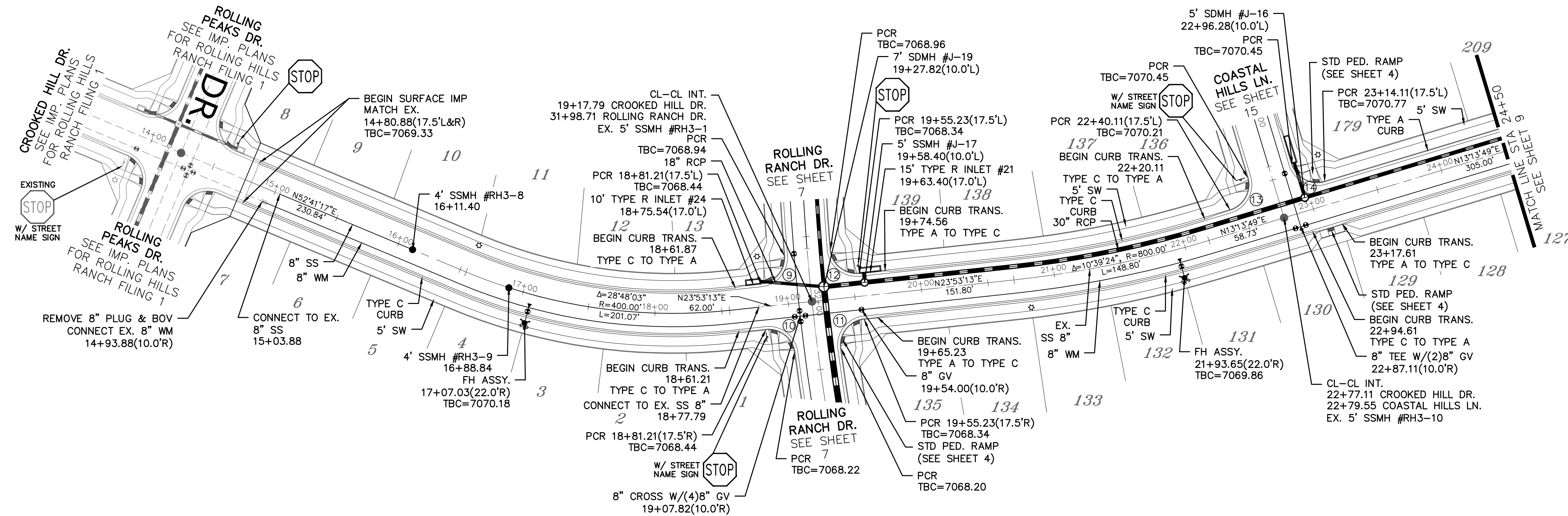


ROLLING HILLS RANCH FILING 3
AT MERIDIAN RANCH
STREET AND UTILITY PLANS
DETAIL SHEET

Drawn by LCG
Checked by TAK
Date MAY 2021

Scale AS SHOWN
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CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
9	30.19'	19.50'	88°42'18"
10	30.19'	19.50'	88°42'18"
11	31.09'	19.50'	91°21'23"
12	31.09'	19.50'	91°21'23"
13	30.63'	19.50'	90°00'00"
14	30.63'	19.50'	90°00'00"

ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)

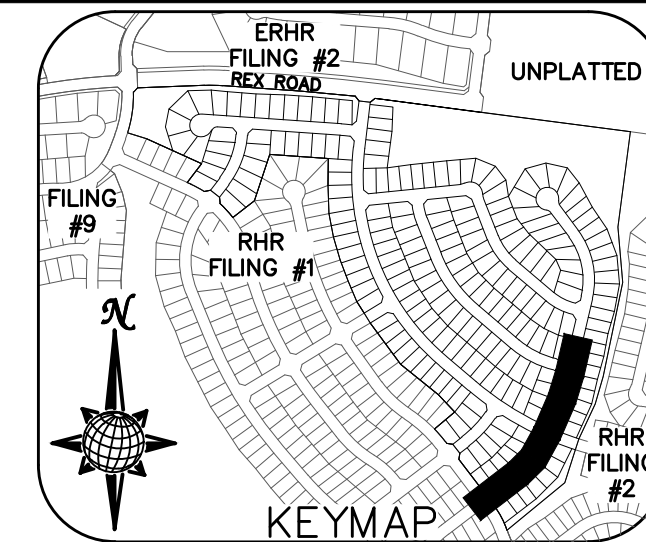
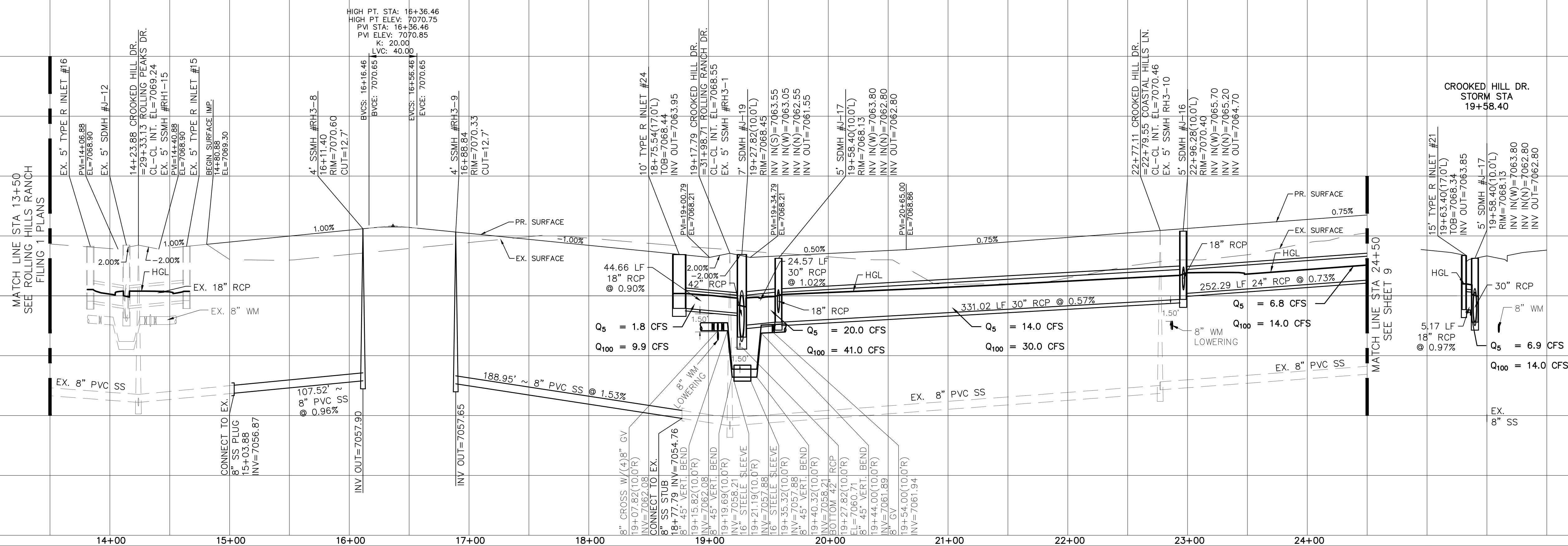
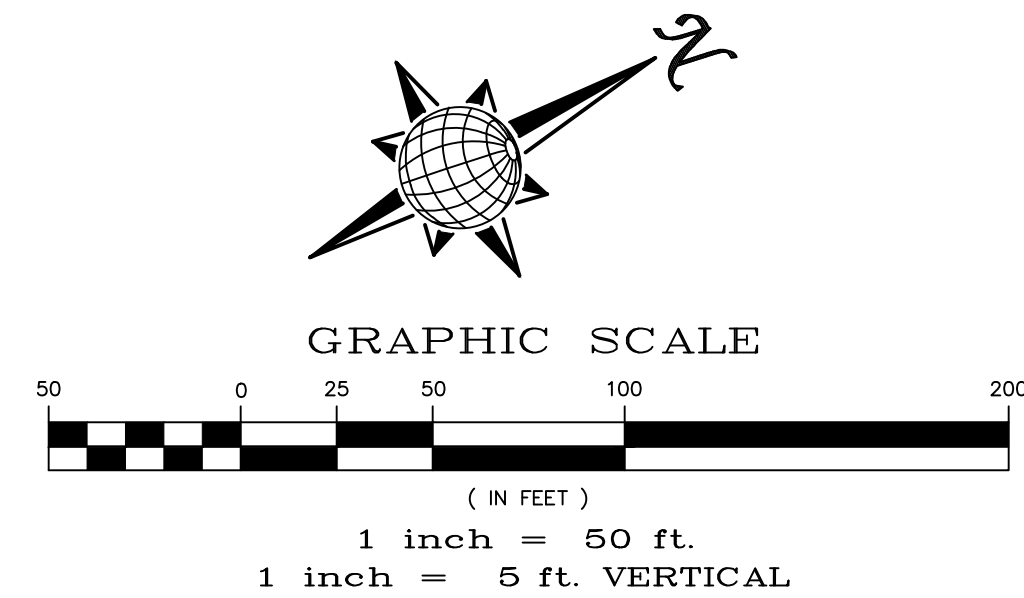


**TWO WORKING DAYS
BEFORE YOU DIG
CALL 811**

OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)

CROOKED HILL DR.

URBAN LOCAL
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)



No.	Revisions	Date	Inst.	Appr.	Date
1					
2					
3					
4					

TECH CONTRACTORS
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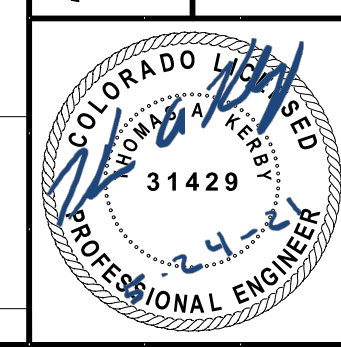


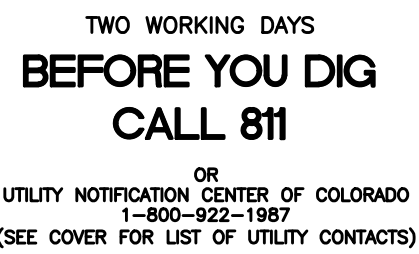
 MERIDIAN RANCH

ROLLING HILLS RANCH FILING 3
AT MERIDIAN RANCH
STREET AND UTILITY PLANS
CROOKED HILL DR.

<i>Drawn by</i>	<i>LOG</i>	<i>Checked by</i>	<i>TAK</i>	<i>Date</i>
				MAY 2021

Scale	AS SHOWN
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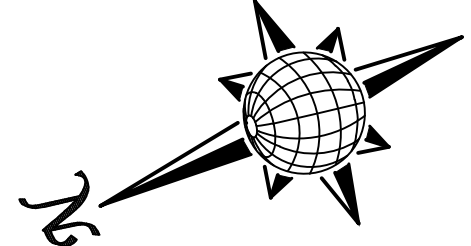


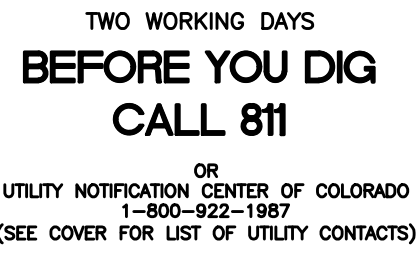


ALL CURB RADII ARE TO TOP BACK OF
CURB (TYP.)





EVENING CREEK DR.

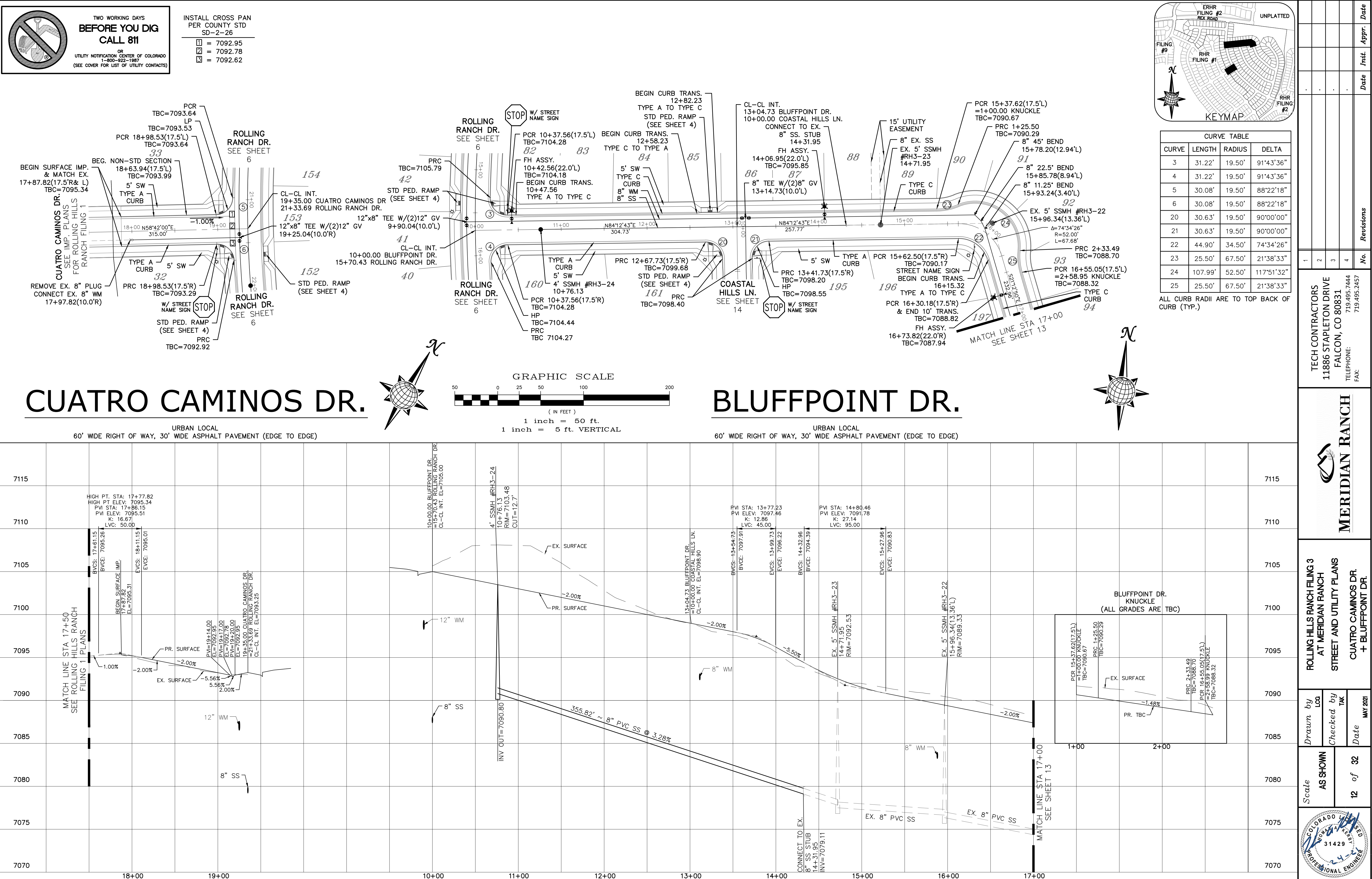





ERHR FILING #2
REX ROAD
UNPLATTED
FILING #9
RHR FILING #1
RHR FILING #2
KEYMAP



	Scale	AS SHOWN	<i>Drawn by</i> <i>LOG</i> <i>Checked by</i> <i>TAK</i> <i>Date</i> MAY 2021	ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS MONUMENT VISTA DR.	 MERIDIAN RANCH
		11 of 32			





TWO WORKING DAYS

BEFORE YOU DIG

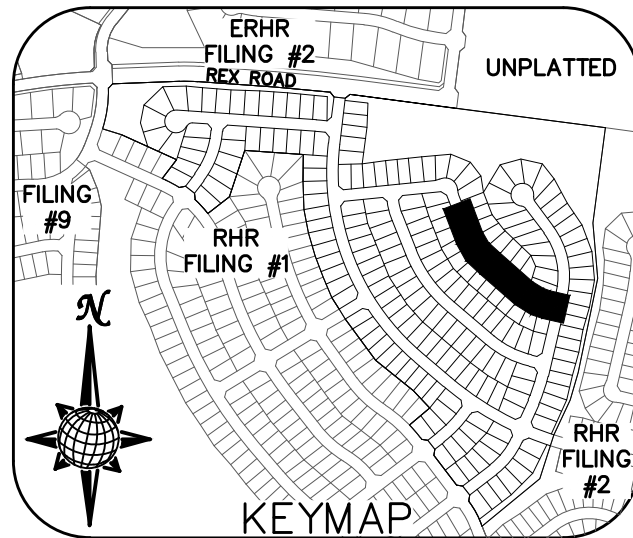
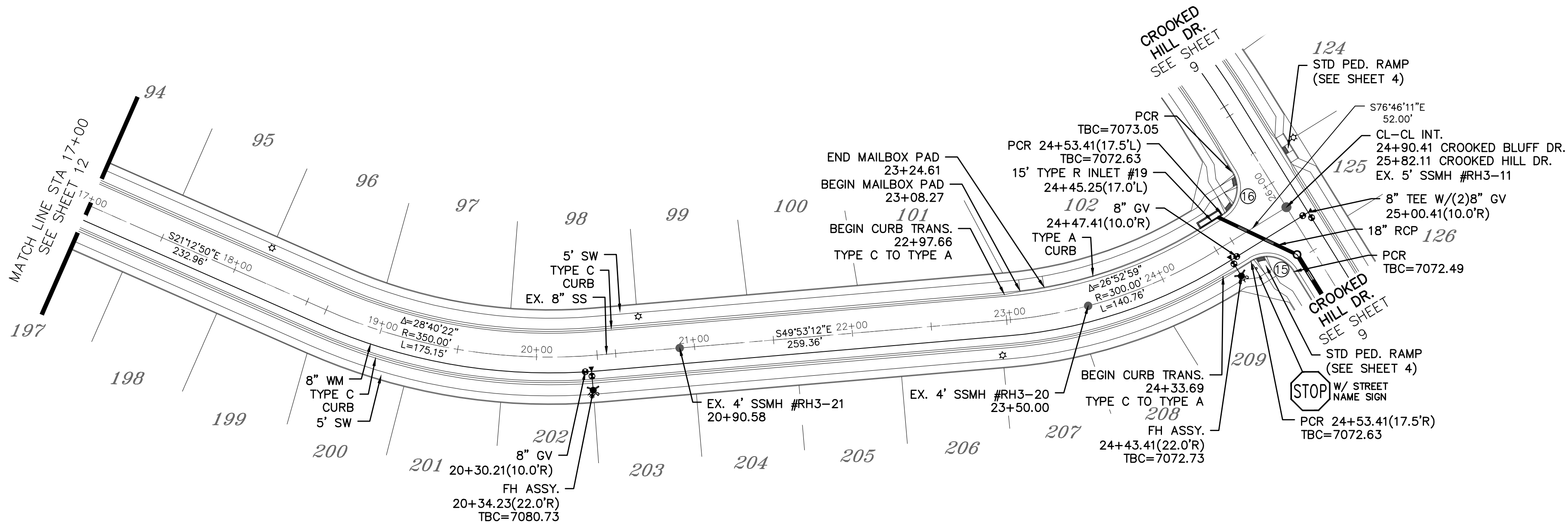
CALL 811

OR

UTILITY NOTIFICATION CENTER OF COLORADO

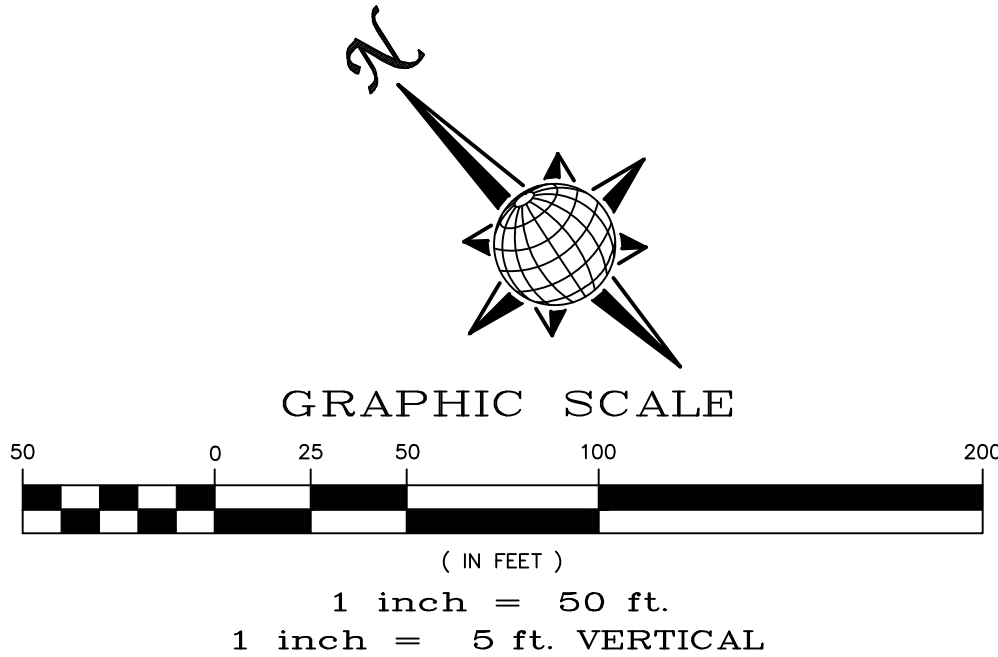
1-800-922-1987

(SEE COVER FOR LIST OF UTILITY CONTACTS)



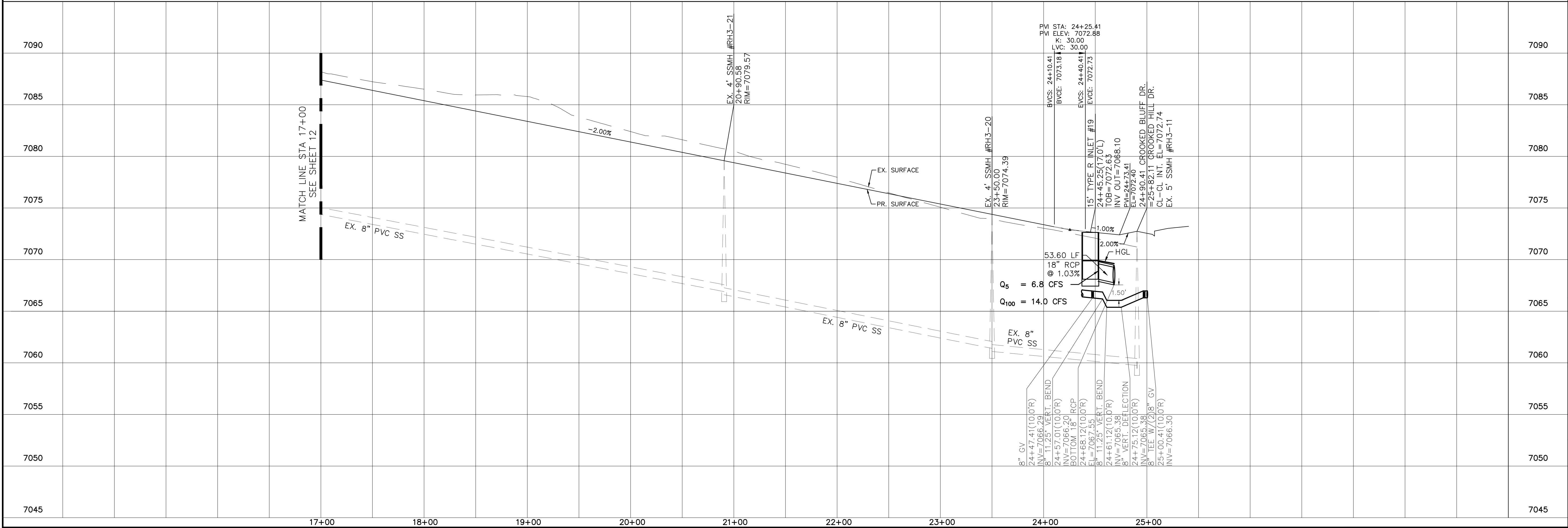
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CURVE	LENGTH	RADIUS	DELTA
15	30.63'	19.50'	90°00'00"
16	30.63'	19.50'	90°00'00"

ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)



CROOKED BLUFF DR.

URBAN LOCAL
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)



Date

Appr.

Init.

Date

1

2

3

4

No.

Revisions


TECH CONTRACTORS

11886 STAPLETON DRIVE

FALCON, CO 80831

TELEPHONE 719.495.7444

FAX 719.495.2457



MERIDIAN RANCH

ROLLING HILLS RANCH FILING 3

AT MERIDIAN RANCH

STREET AND UTILITY PLANS

CROOKED BLUFF DR.

Drawn by

Log

Checked by

TAK


Date

MAY 2021

Scale

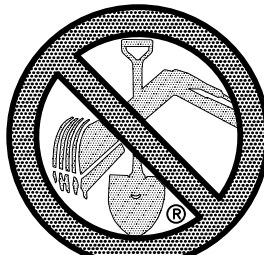
AS SHOWN

13 of 32



PROFESSIONAL ENGINEER

31429



TWO WORKING DAYS

BEFORE YOU DIG

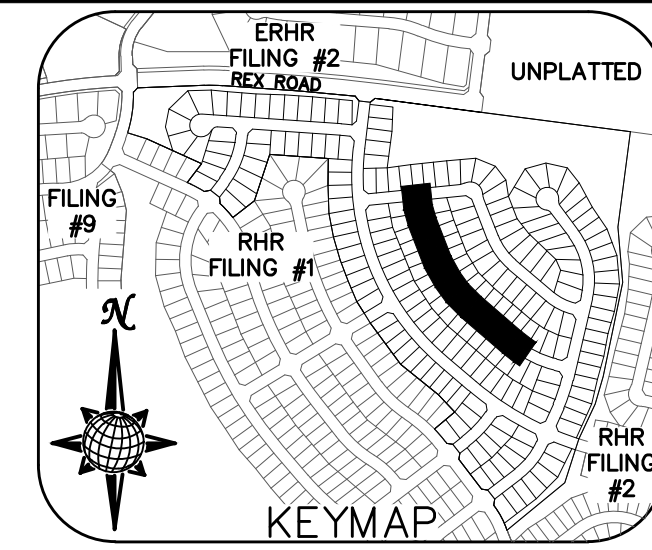
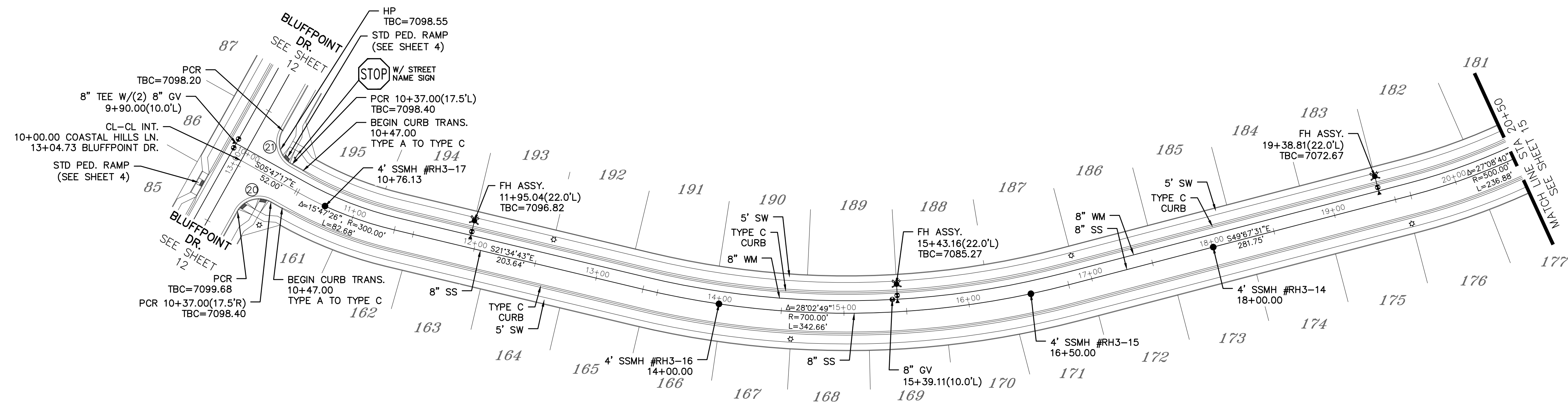
CALL 811

OR

UTILITY NOTIFICATION CENTER OF COLORADO

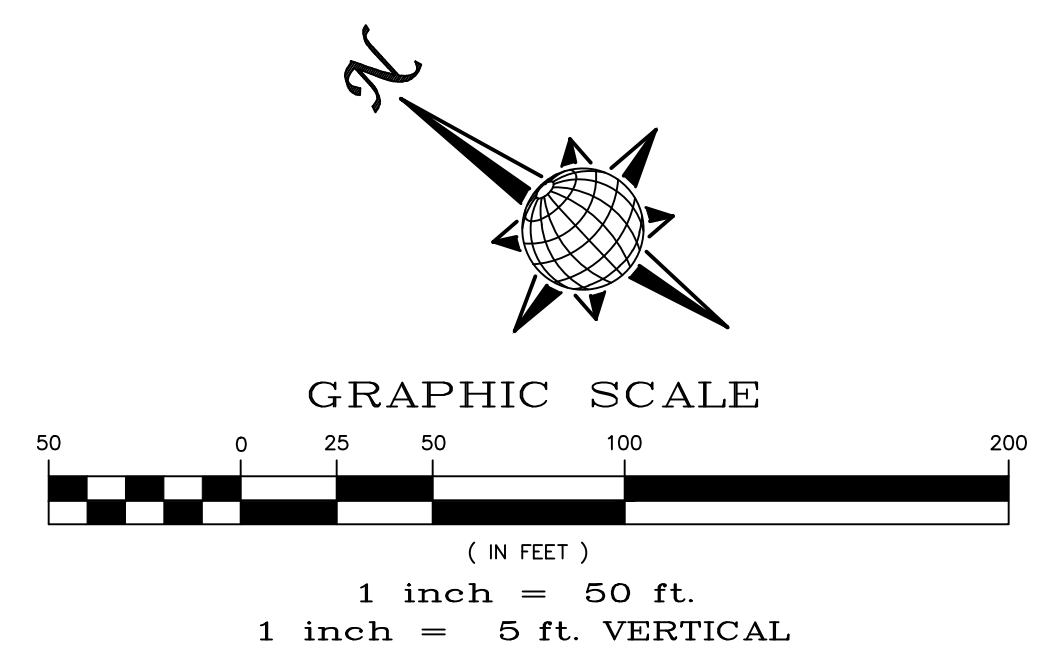
1-800-922-1987

(SEE COVER FOR LIST OF UTILITY CONTACTS)



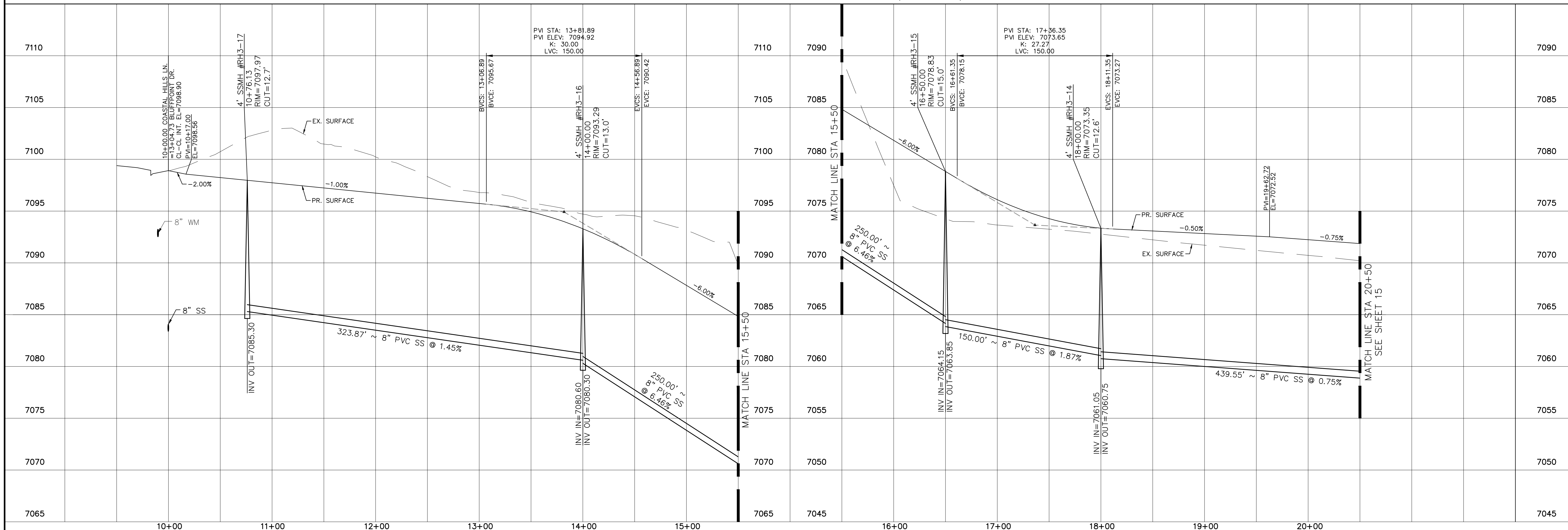
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21	30.63'	19.50'	90°00'00"

ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)



COASTAL HILLS LN.

URBAN LOCAL
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)



Date

Appr.

Init.

Date

No.

Revisions

1

2

3

4


TECH CONTRACTORS

11886 STAPLETON DRIVE

FALCON, CO 80831

TELEPHONE 719.495.7444

FAX 719.495.2457



MERIDIAN RANCH

ROLLING HILLS RANCH FILING 3

AT MERIDIAN RANCH

STREET AND UTILITY PLANS

COASTAL HILLS LN

Drawn by

Log

Checked by

TAK


Date

MAY 2021

Scale

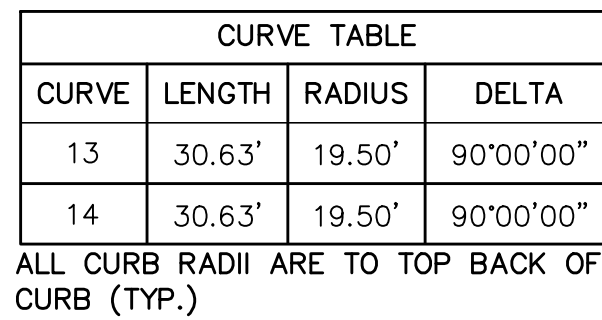
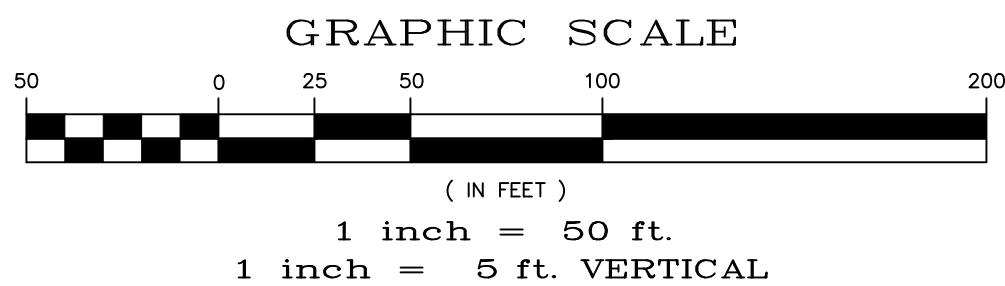
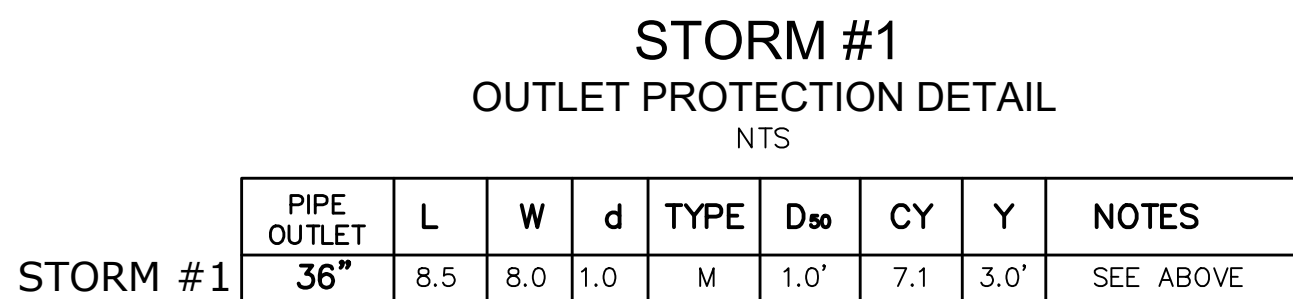
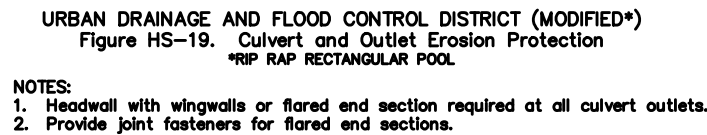
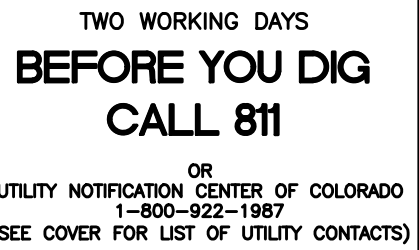
AS SHOWN

14 of 32



31429

PROFESSIONAL ENGINEER



1					
2					
3					
4					
No.	Revisions	Date	Init.	Appr.	Date

TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
TELEPHONE: 719.495.7444
FAX: 719.495.2457

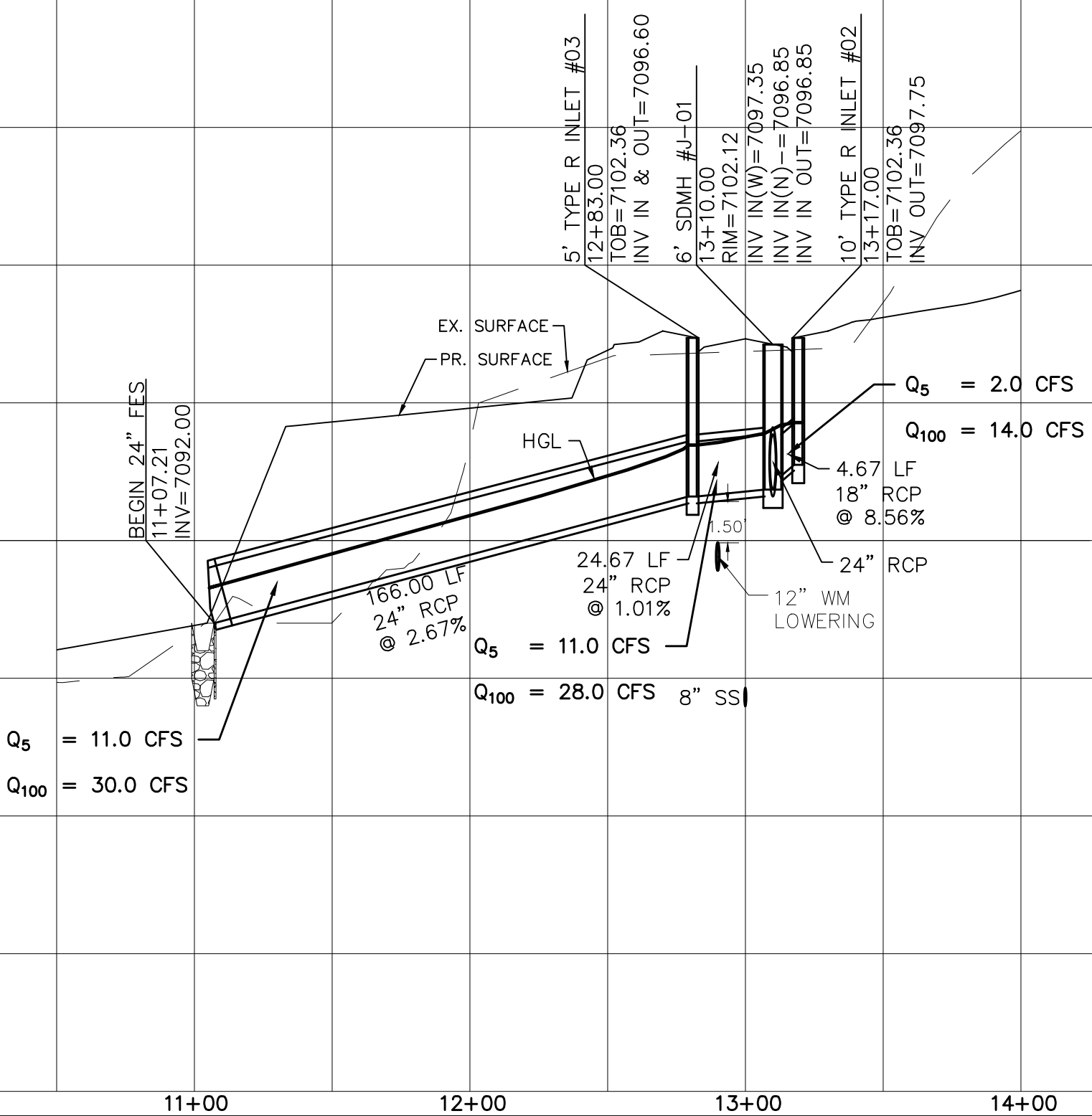
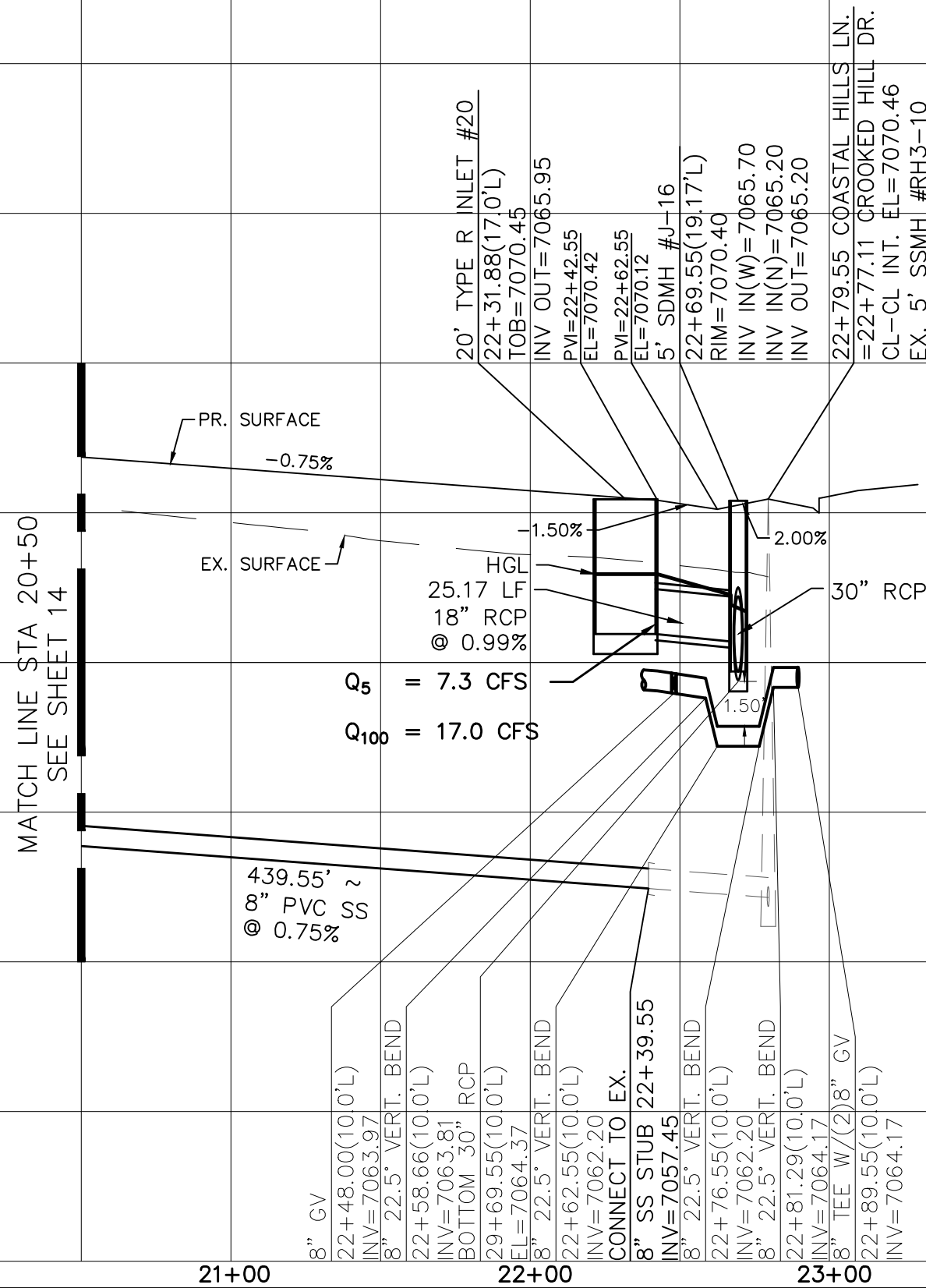


MERIDIAN RANCH

ROLLING HILLS RANCH FILING 3
AT MERIDIAN RANCH
STREET AND UTILITY PLANS
COASTAL HILLS LN. + STORM #1

Drawn by LOG	Checked by TAK	Date MAY 2021
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Scale
AS SHOWN
15 of 32





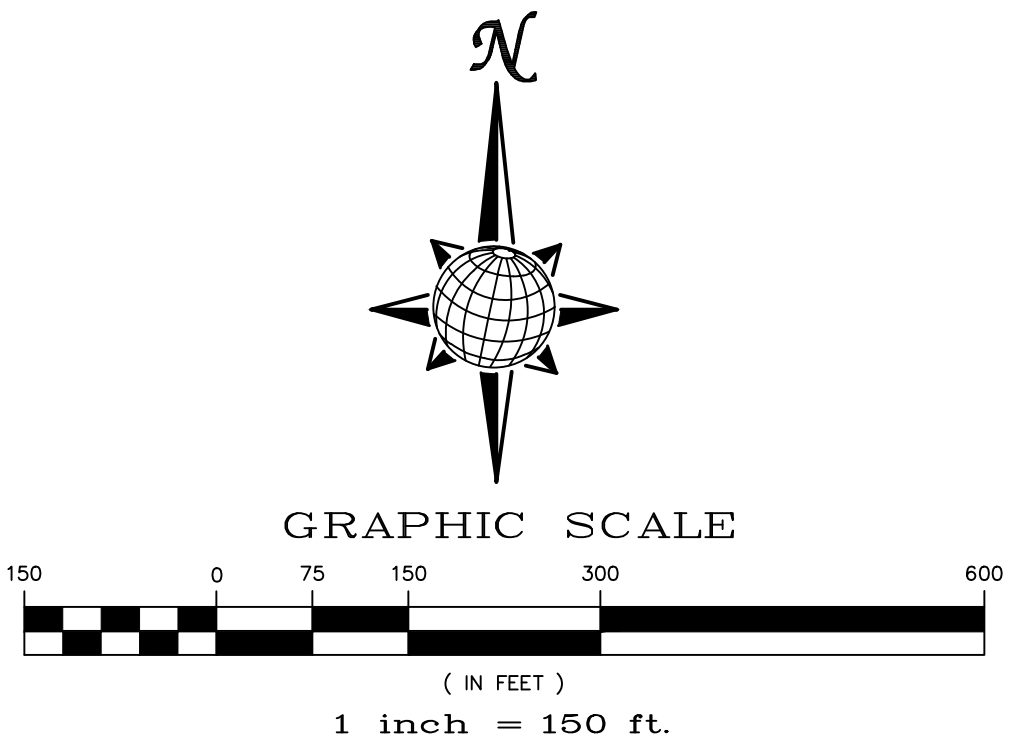
NOTE:
CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:
1) ROUGH GRADING FOR ROLLING HILLS RANCH AT MERIDIAN RANCH
2) ROLLING HILLS RANCH FILING 1 AT MERIDIAN RANCH
3) ESTATES AT ROLLING HILLS RANCH FILING 2
4) ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH

NOTE:
8" SS UNLESS OTHERWISE LABELED.

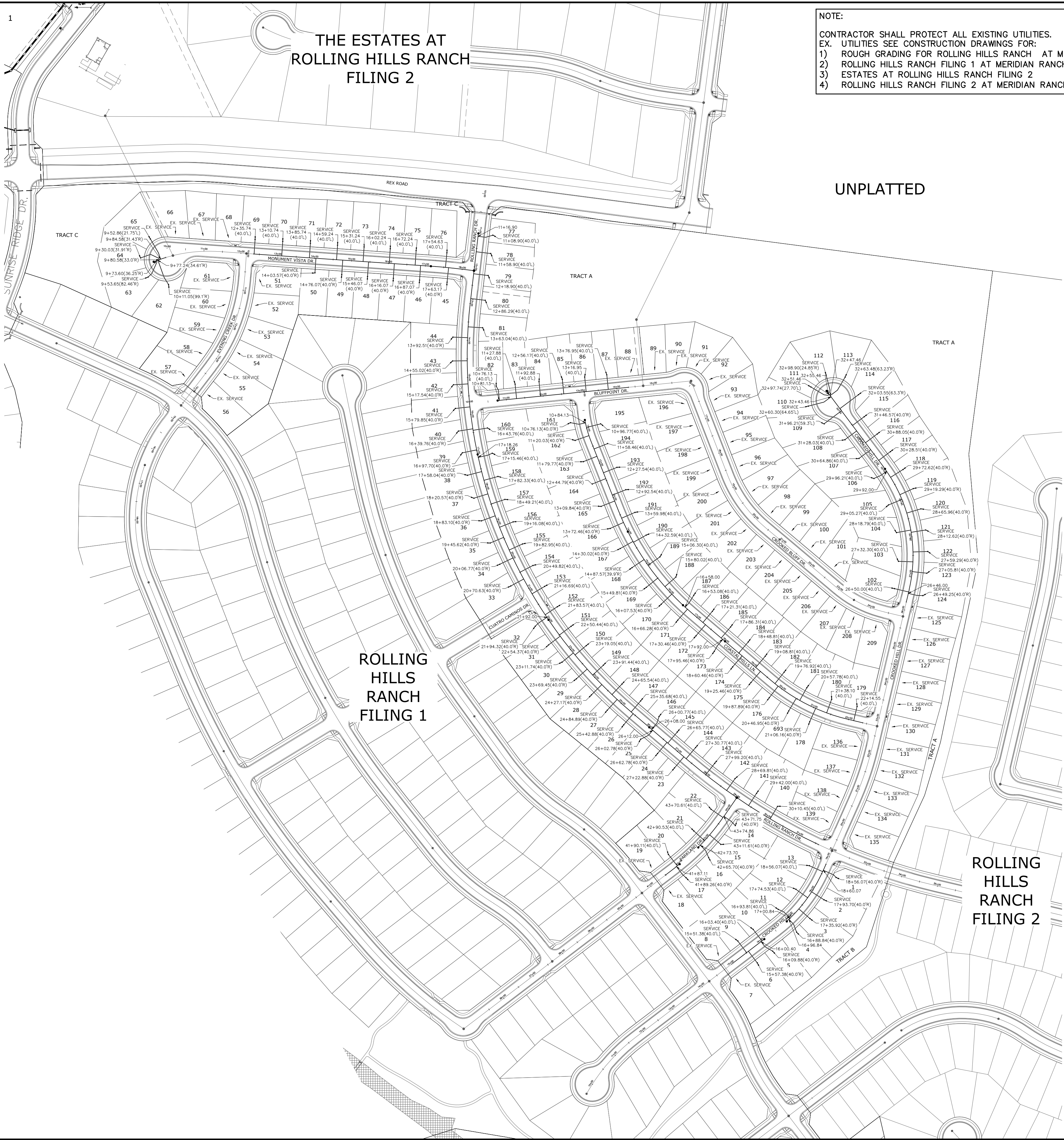


TWO WORKING DAYS
**BEFORE YOU DIG
CALL 811**


OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)



Scale AS SHOWN	Drawn by LGA	Checked by TAK	Date MAY 2021	ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS OVERALL SANITARY SEWER								
				TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457								
				 MERIDIAN RANCH								
				Revisions								
				No.	1	2	3	4	Date	Init.	Appr.	Date

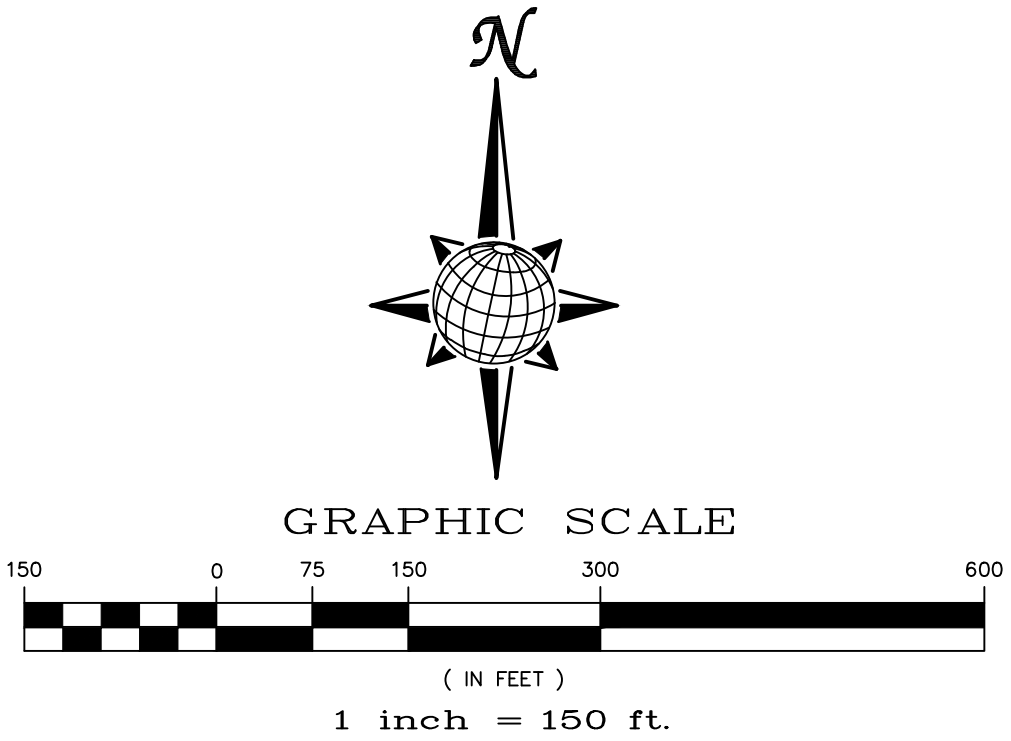


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3) ESTATES AT ROLLING HILLS RANCH FILING 2
4) ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH




TWO WORKING DAYS
BEFORE YOU DIG
CALL 811

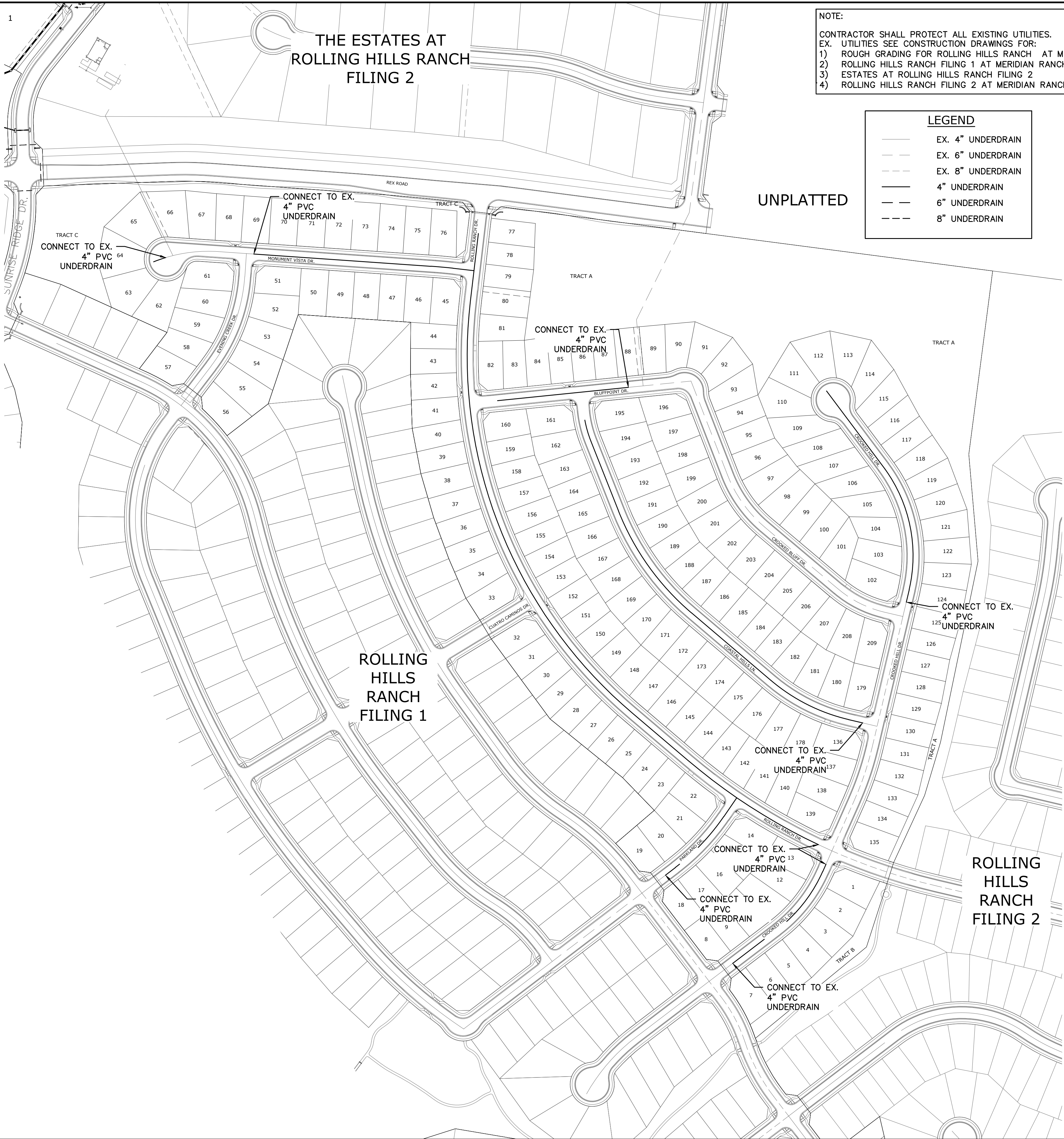
OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)



Scale AS SHOWN	Drawn by LSC	Checked by TAK	Date MAY 2021	ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS OVERALL SANITARY SEWER SERVICES				TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE 719.495.7444 FAX 719.495.2457				MERIDIAN RANCH															
				1				2				3				4											
				No.				Revisions				Date				Init.				Appr.				Date			
				17				of				32															

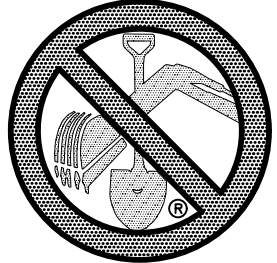


31429



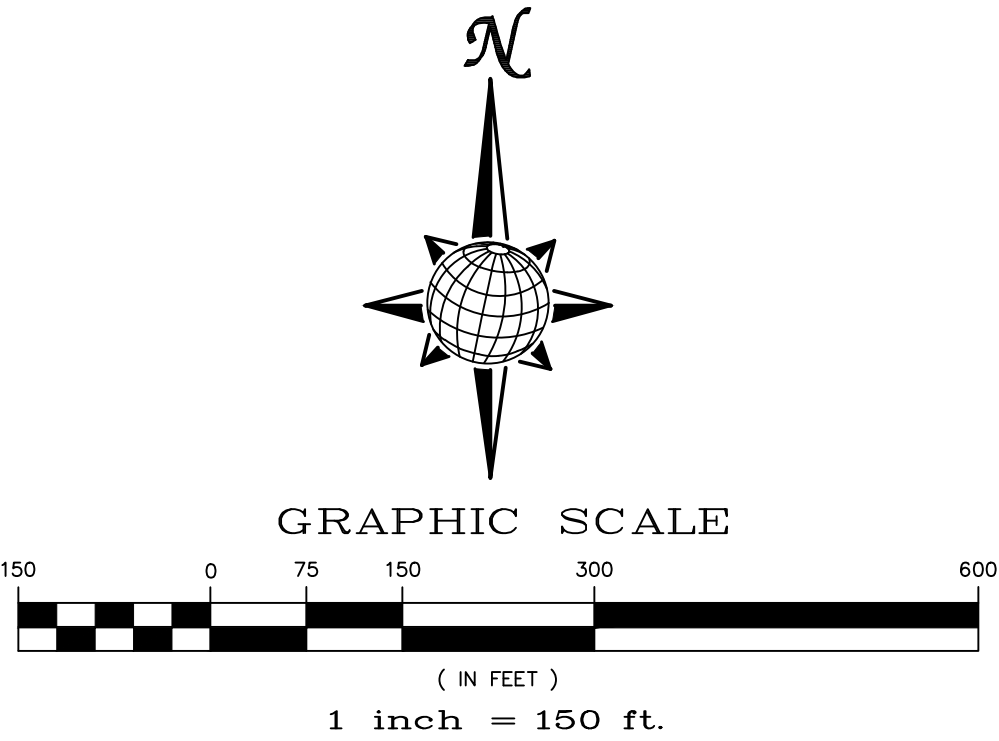
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LEGEND	
	EX. 4" UNDERDRAIN
	EX. 6" UNDERDRAIN
	EX. 8" UNDERDRAIN
	4" UNDERDRAIN
	6" UNDERDRAIN
	8" UNDERDRAIN

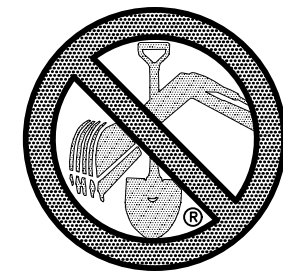


TWO WORKING DAYS
**BEFORE YOU DIG
CALL 811**

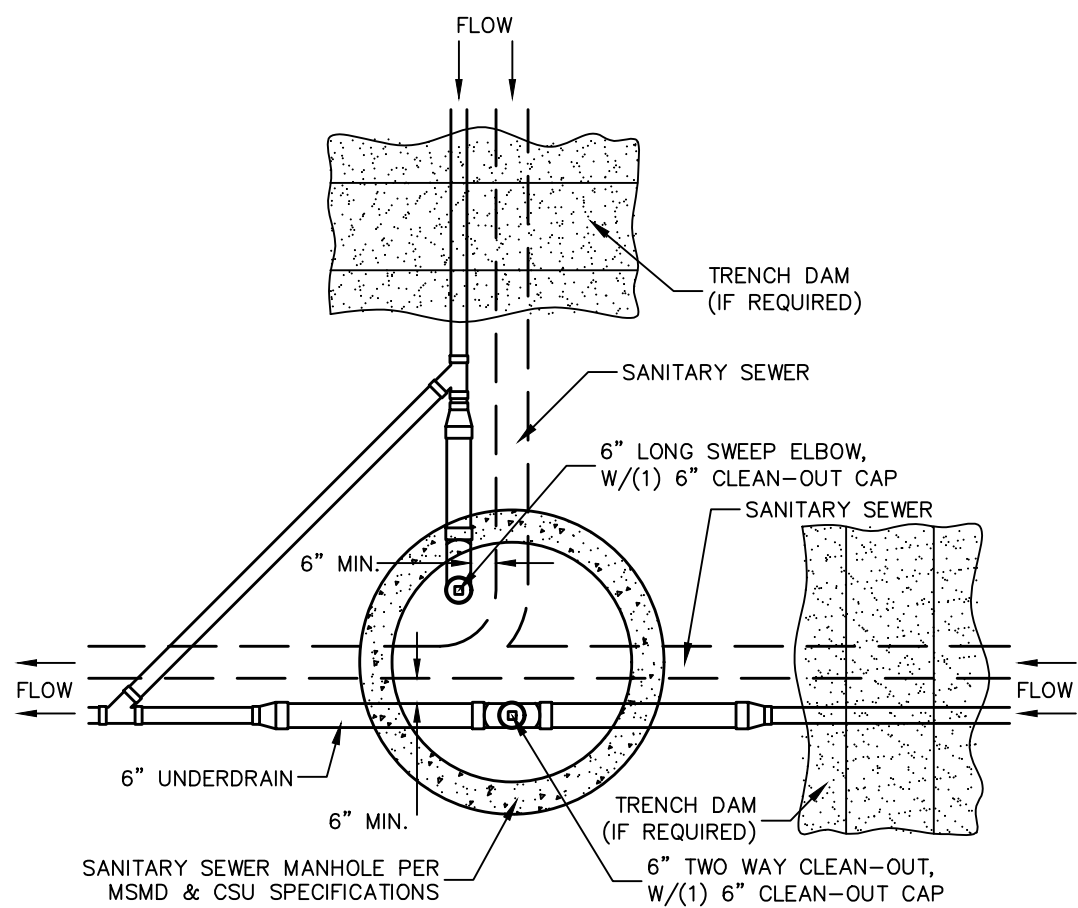
OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)



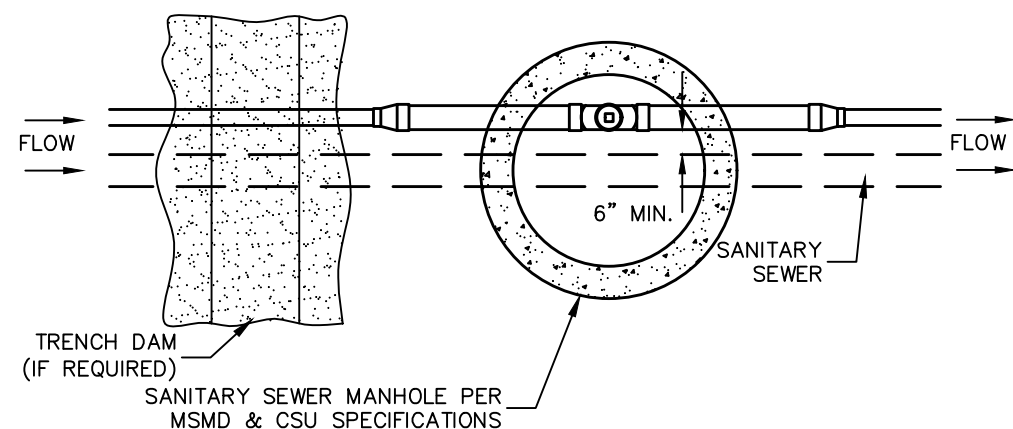
Scale AS SHOWN	18 of 32		Drawn by LGA		Date MAY 2021				
			Checked by TAK						
			Rolling Hills Ranch Filing 3 at Meridian Ranch Street and Utility Plans Overall Underdrain						
			 MERIDIAN RANCH						
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457			No.		Revisions				
1		2							
3		4							
			Date		Appr.				



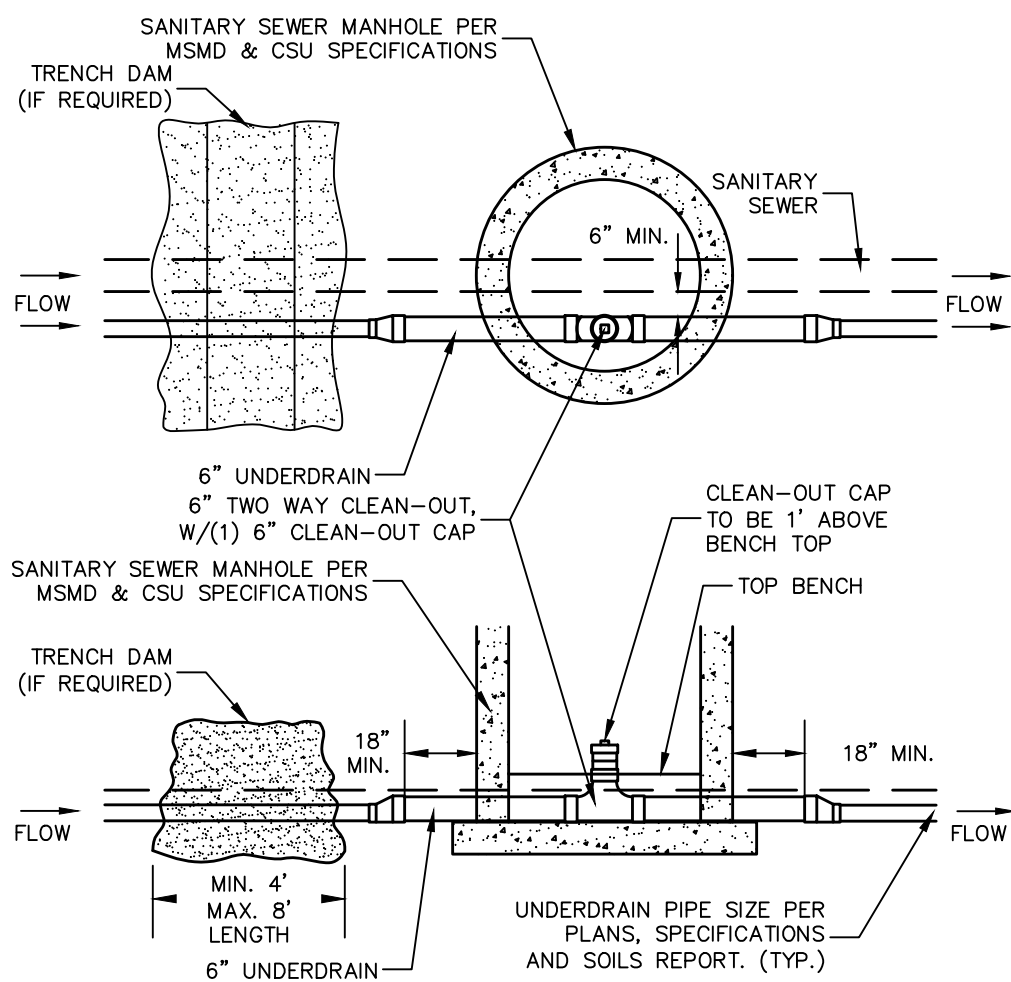
TWO WORKING DAYS
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OR
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1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)



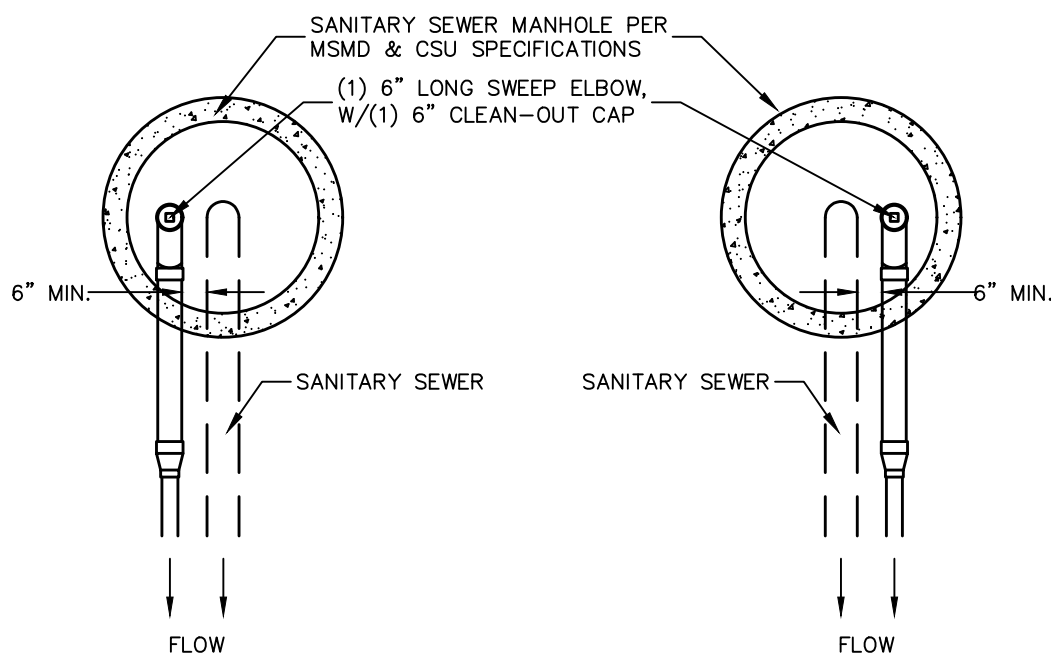
SSMH #RH3-2
& #RH3-6



SSMH #RH3-3,
#RH3-4, #RH3-5
& #RH3-12



SSMH #RH3-14, #RH3-15,
#RH3-16 & #RH3-26



SSMH #RH3-9, SSMH #RH3-7,
#RH3-17, #RH3-8,
#RH3-19, #RH3-13
& #RH3-27

NOTES:

1. THE UNDERDRAIN SYSTEM SHALL BE PASSIVE, WATER TIGHT, NON- PERFORATED PIPE, WITH THE MAIN LINE SIZE DESIGNED BY THE ENGINEER. ALL UNDERDRAIN PIPES AND FITTINGS SHALL BE SDR 35 PVC, OR MSMD APPROVED EQUAL, INSTALLED PER THE SAME INSTALLATION STANDARDS AS OUTLINED BY CSUS FOR SANITARY SEWER SYSTEMS. THE UNDERDRAIN SYSTEM AT EACH SANITARY SEWER MANHOLE SHALL CONTAIN 6" CLEAN-OUTS IN EACH UNDERDRAIN MAIN DIRECTION PER THE CLEAN-OUT DETAIL. ALL LOTS SHALL RECEIVE A WHITE 3" UNDERDRAIN SERVICE LATERAL ADJACENT TO THE SANITARY SEWER SERVICE LATERAL.
2. TESTING OF THE UNDERDRAIN SYSTEM WILL CONSIST OF VISUAL INSPECTIONS FOR WATER IN THE SYSTEM, ALONG WITH A VIDEO INSPECTION PERFORMED BY MSMD PERSONNEL. ALL UNDERDRAIN MAINS AND DOWNSTREAM INFILTRATION STRUCTURES SHALL BE CLEAN AND DEBRIS FREE UPON COMPLETION OF THE SYSTEM AND PRIOR TO CCTV. ALL UNDERDRAIN MAINS SHALL BE CCTV INSPECTED BY MSMD AND REVIEWED FOR APPROVAL. THE SPECIFICATION FOR ALLOWABLE STANDING WATER AND WATER INFILTRATION IN THE UNDERDRAIN SYSTEM SHALL BE THE SAME AS PER CSUS FOR SANITARY SEWER SYSTEMS. IF EXCESS WATER IS OBSERVED IN THE UNDERDRAIN SYSTEM, THE CONTRACTOR SHALL LOCATE THE SOURCE OF WATER INFILTRATION AND REPAIR AS NECESSARY TO MEET CSUS.
3. IF THE UNDERDRAIN MAIN HAS LOW SPOTS THAT EXCEED CSUS STANDARDS, THE CONTRACTOR SHALL REPAIR THE LINE AS NECESSARY TO MEET CSUS. UNDERDRAIN MAINS THAT DO NOT MEET MSMD STANDARDS SHALL BE REPLACED AND OR REPAIRED AS NECESSARY. THE CONTRACTOR SHALL RE-CCTV INSPECT THE UNDERDRAIN MAIN LINES AFTER THE REPAIRS HAVE BEEN MADE WITH ONE VIDEO SUBMITTED TO MSMD FOR REVIEW AND APPROVAL.
4. UNDER DRAIN MAIN LINES SHALL HAVE CONTINUOUS POSITIVE DRAINAGE TO THE POINT OF DISCHARGE INTO A BELOW GRADE AN APPROVED UNDERDRAIN INFILTRATION STRUCTURE WHEREVER POSSIBLE. UNDERDRAIN INFILTRATION STRUCTURES SHALL BE DESIGNED WITH OVERFLOW LINES FOR FUTURE EXPANSION AS NEEDED. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION OF THE INFILTRATION STRUCTURE, STOP INSTALLATION AND CONTACT THE DISTRICT ENGINEER FOR POSSIBLE ALTERNATE DESIGN.
5. UNDERDRAINS WILL DAYLIGHT AT LOCATIONS SHOWN ON THE DRAWINGS.
6. UNDERDRAIN CLEANOUTS SHALL BE 6 INCH AND SHALL BE LOCATED AT EVERY MANHOLE. UNDERDRAIN CLEANOUTS AND CLEANOUT CONSTRUCTION WILL LEAVE NO INFILTRATION WITHIN SEWER MANHOLES. MANHOLE PENETRATIONS TO BE FILLED WITH NON-SHRINKING GROUT. UNDERDRAIN SIZE WILL NOT BE REDUCED THROUGH THE MANHOLE.
7. TRENCH DAMS WILL BE PROVIDED AT INTERVALS NO GREATER THAN 350 FEET IN SANITARY SEWER SECTIONS WHERE GROUNDWATER EXISTS OR WHERE DIRECTED BY THE ENGINEER. A TRENCH DAM WILL BE CONSTRUCTED WITHIN THE FIRST 100 FEET OF EITHER ENTERING OR EXITING GROUNDWATER. THE CONTRACTOR SHALL NOTIFY THE DISTRICT WHEN GROUNDWATER IS ENCOUNTERED TO REVIEW TRENCH DAM NEEDS, LOCATIONS, AND MATERIALS.
8. TRENCH DAMS MAY BE CONSTRUCTED OF ON SITE MATERIALS IF APPROVED BY THE SOILS ENGINEER.
9. TRENCH DAMS SHALL COMPLETELY INTERRUPT GRAVEL BEDDING AND STABILIZATION THE FULL WIDTH OF THE TRENCH FOR A LENGTH OF NO LESS THAN 4 FEET BUT NO GREATER THAN 8 FEET.
10. TRENCH DAMS SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR AROUND THE SEWER AND UNDERDRAIN PIPELINES.
11. IF ALTERNATE MATERIALS (CONCRETE) OR SOIL AMENDED TRENCH DAMS ARE NECESSARY OR REQUIRED BY THE ENGINEER, THE DAMS SHALL BE EXTENDED A MINIMUM OF 6 FEET ABOVE THE PIPELINE BUT IN NO CASE CLOSER THAN 6" FROM THE SURFACE.

CLEAN-OUT DETAILS

SCALE : N.T.S.

No.	Revisions	Date	Init.	Appr.	Date
1					
2					
3					
4					

TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
TELEPHONE 719.495.7444
FAX 719.495.2457



ROLLING HILLS RANCH FILING 3
AT MERIDIAN RANCH
STREET AND UTILITY PLANS
UNDERDRAIN DETAILS


Scale	AS SHOWN	Drawn by	Log	Checked by	TAK	Date	MAY 2021
	19 of 32						





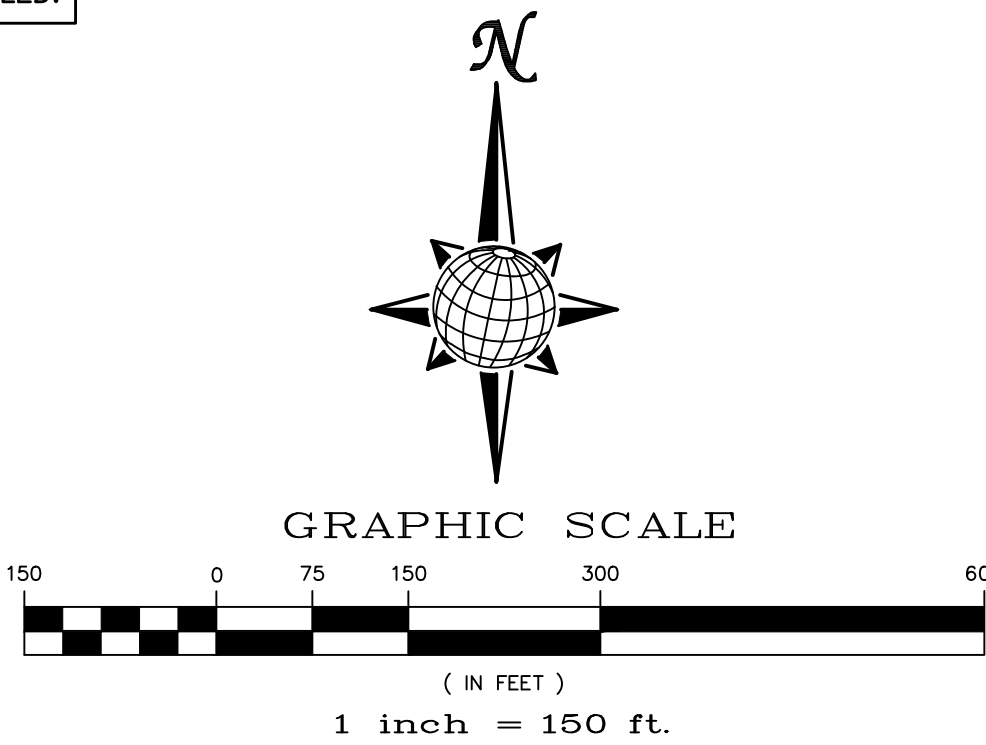
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4) ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH

NOTE:
3/4" WATER SERVICE UNLESS OTHERWISE LABELED.




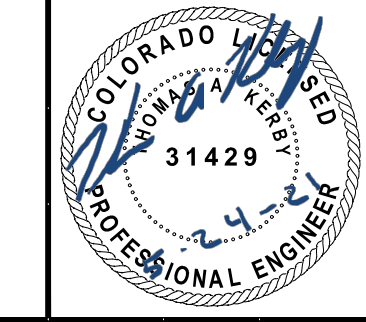
TWO WORKING DAYS
**BEFORE YOU DIG
CALL 811**

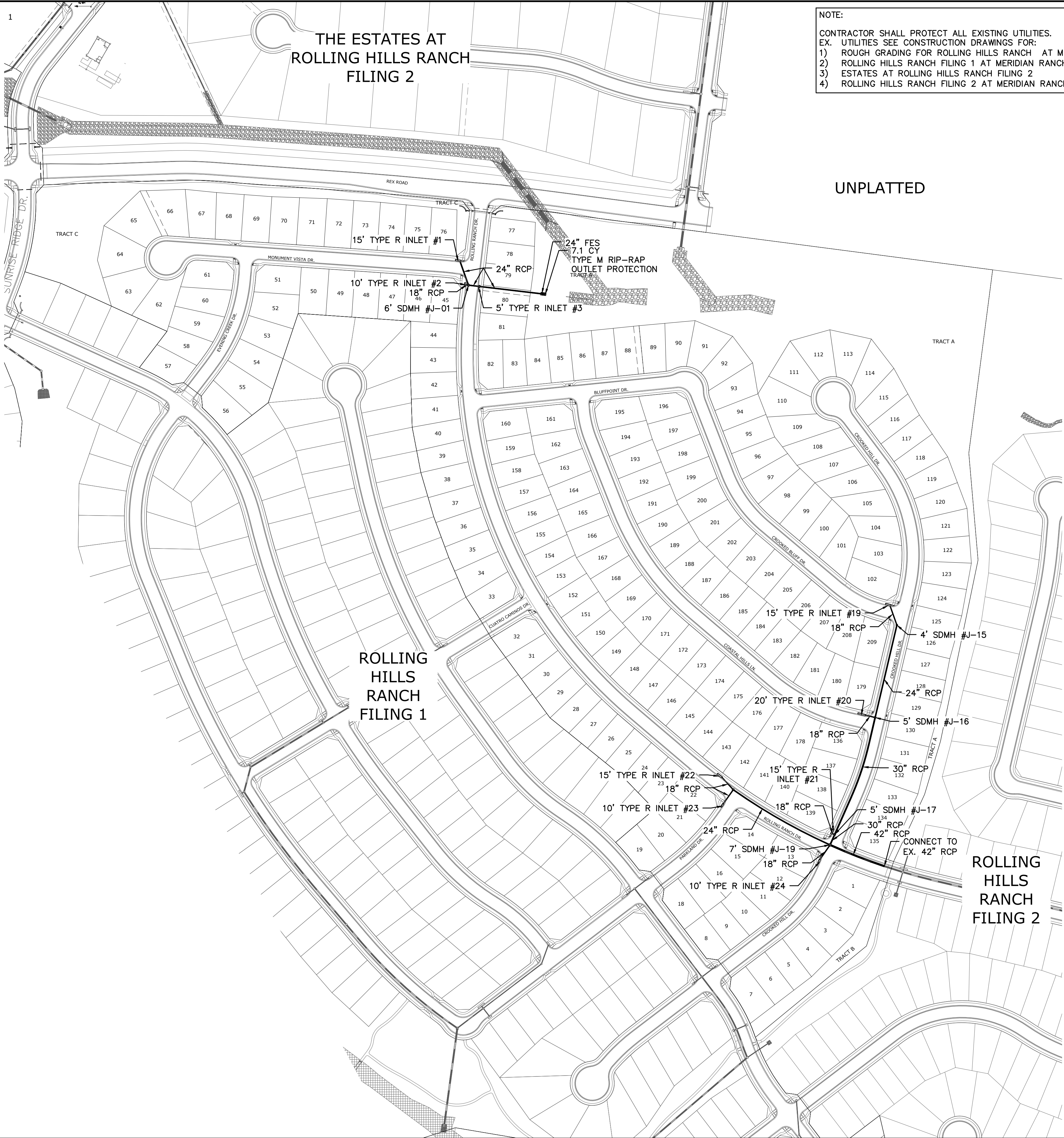
OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)




RESIDENTIAL HOME	
4,800 SQ. FT. (MAX)	
VB CONSTRUCTION	
REQ'D FIRE FLOW:	1750 GPM
HYDRANT SPACING:	500' (MAX)
HOSE LAY DIST.:	250' (MAX)
NON-SPRINKLER	

Scale AS SHOWN	Drawn by LGA	Checked by TAK	Date MAY 2021	No.		Revisions	Date	Init.	Appr.	Date								
				1	2													
				3	4													
				5	6													
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE 719.495.7444 FAX 719.495.2457																		
 MERIDIAN RANCH																		
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS OVERALL WATER SERVICES																		
ROLLING HILLS RANCH FILING 2																		



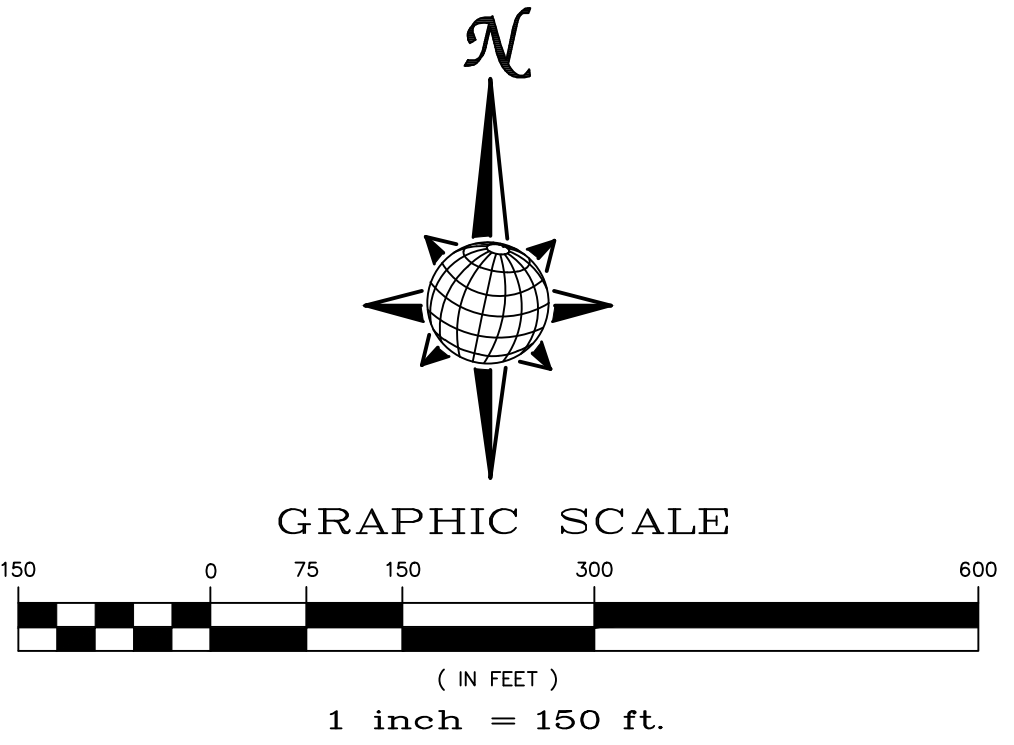




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TWO WORKING DAYS
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Scale AS SHOWN	Drawn by LCS	Checked by TAK	Date MAY 2021	22 of 32									
				ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS OVERALL STORM DRAIN									
				TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457									
				MERIDIAN RANCH 									
				Revisions		Date		Init.		Appr.		Date	
				1		2		3		4		No.	

EL PASO COUNTY STANDARD NOTES:

1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS, ESTABLISHED OR EQUIVALENT PERMANENT STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF-SITE.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WOOD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

Stage	Description	Control Measures	Begin Date	End Date
Stage 1	Overlot Grading	Perimeter Control Temporary Sed. Basins Swale Checks as needed Surface Roughening	May 2020	November 2020
Stage 2	Underground utilities Surface Improvements	Perimeter Control Inlet Protection	August 2020	March 2022
Stage 3	Home Construction	Inlet Protection Individual Lot Perimeter Control	June 2020	
Final Stabilization	Permit Close	Final Stabilization Permanent Measures	June 2023	

EARTHWORK QUANTITIES

NET YARDS BALANCE

TOTAL STRIPPINGS 0.00 AC. 000 CY

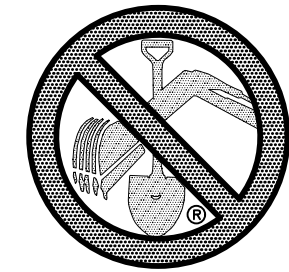
NET YARDS CUT FILL
 0 CY 0 CY

20% COMPACTION FACTOR

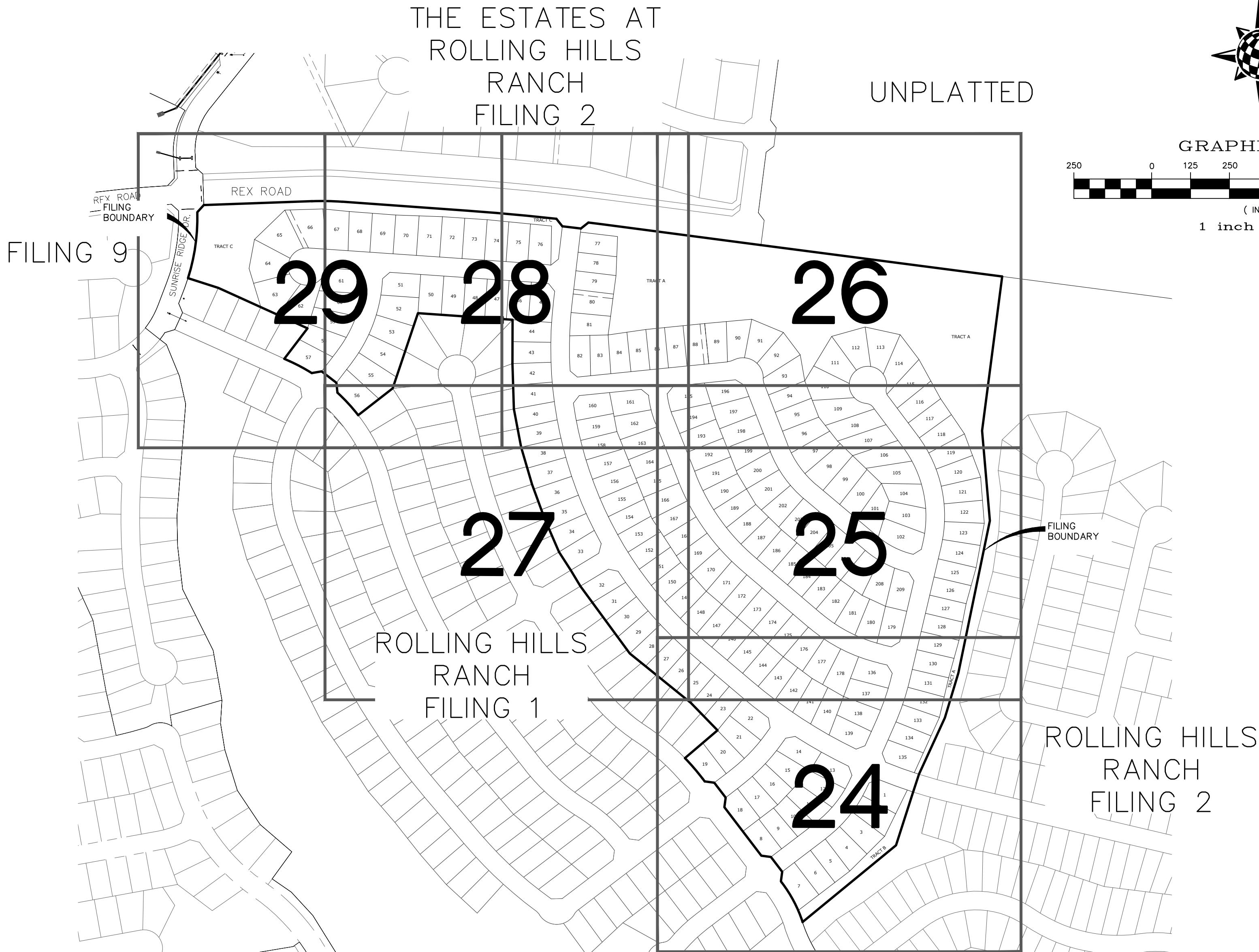
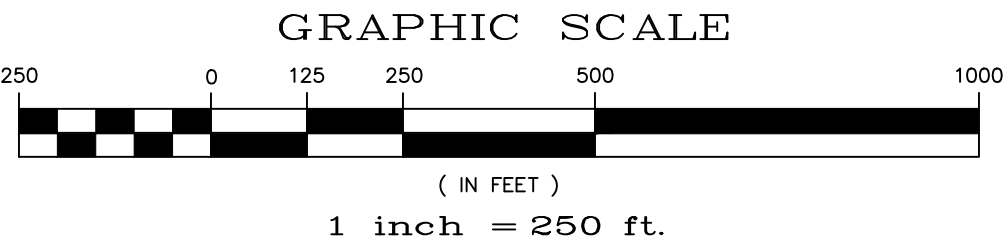
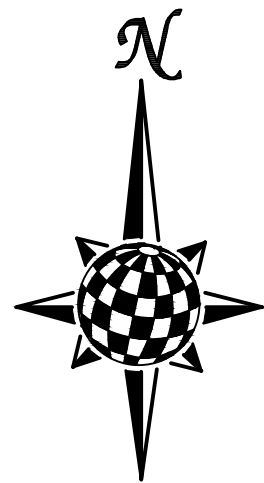
NOTE: FILL WILL BE GENERATED FROM UTILITY INSTALL.

NOTE:

- 1) EXISTING VEGETATION ON THE PROJECT SITE AND THE IN SURROUNDING AREAS CONSISTS OF A MIXTURE OF NATIVE GRASSES AND WEEDS WITH COVERAGE APPROXIMATING 70% DENSITY UNLESS OTHERWISE NOTED. SOME AREAS HAVE NEGLIGIBLE VEGETATIVE GROWTH AT THIS TIME AS THE SITE WAS PREVIOUSLY GRADED AND RE-SEEDED OR USED AS A BUILDERS' STOCKPILE LOCATION. AREAS PREVIOUSLY GRADED HAS BEEN RE-SEEDED WITH THE APPROVED COUNTY SEED MIX.
- 2) MATERIAL STORAGE, TOPSOIL STOCKPILES(UDFCD: MM-2), STAGING(UDFCD: SM-6), CONCRETE WASHOUT AND WASTE AREAS SHALL BE IDENTIFIED BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION AND ADJUSTED AS NECESSARY. IDENTIFICATION SHALL BE LOCATED IN THE SWMP AS WELL AS ANY DETAILS NECESSARY.
- 3) THERE IS NO CONCRETE BATCH PLANT ASSOCIATED WITH THIS PROJECT.
- 4) NO SLOPES GREATER THAN 3:1 ARE EXPECTED ON THIS SITE. SLOPES GREATER THAN 3:1 REQUIRE EROSION CONTROL BLANKET.



TWO WORKING DAYS
**BEFORE YOU DIG
CALL 811**
OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)



Date	Appr.	Date	Init.	Date	Revisions

No.	Revisions
1	
2	
3	
4	

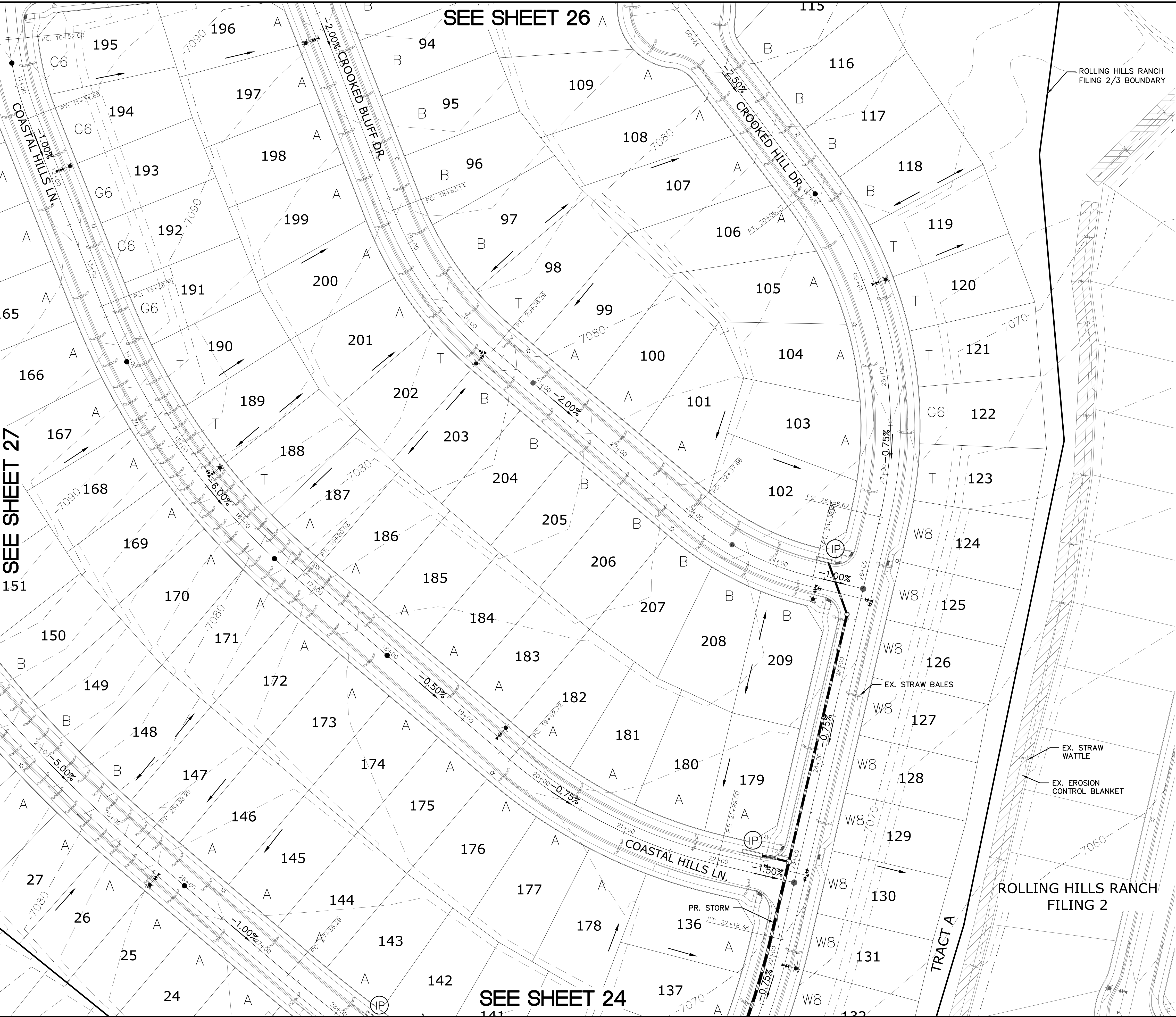
TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
TELEPHONE 719.495.7444
FAX 719.495.2457

 **MERIDIAN RANCH**

**ROLLING HILLS RANCH FILING 3
AT MERIDIAN RANCH
GRADING/EROSION CONTROL PLAN
GRADING INDEX SHEET**

Scale	Drawn by	Loc	Checked by	TAK	Date
AS SHOWN					
23 of 32					MAY 2021

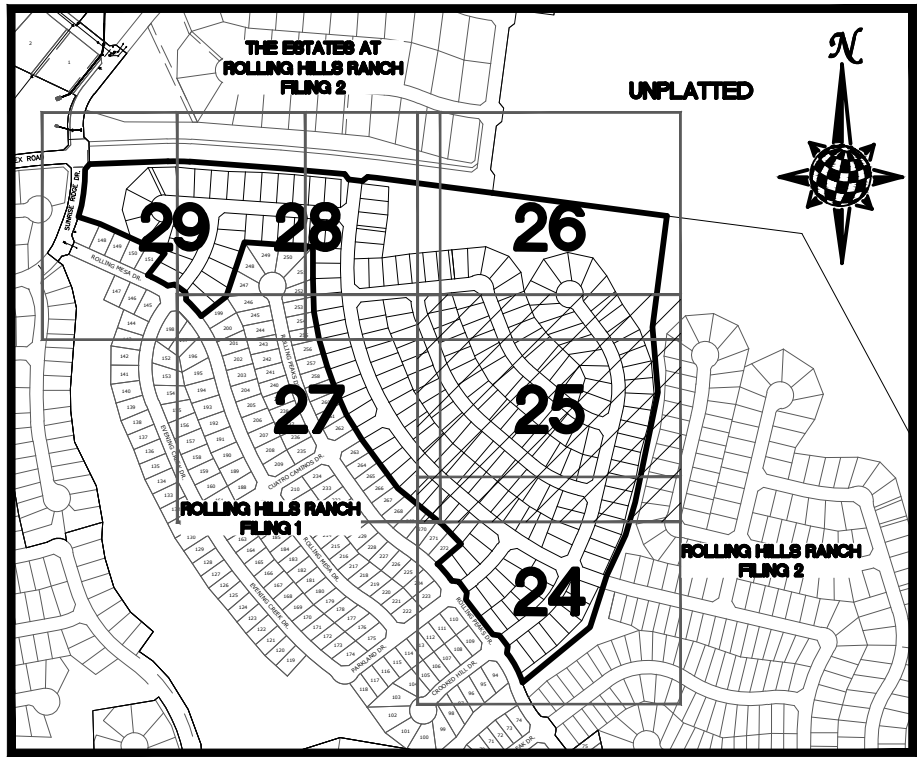




SEE SHEET 27

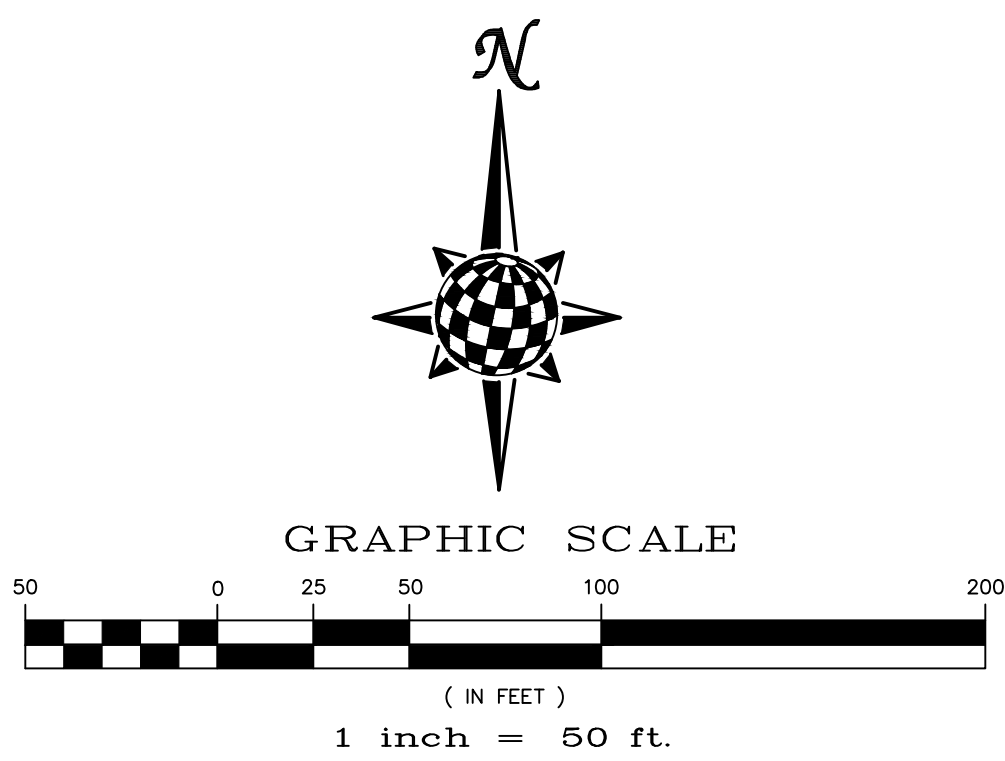
SEE SHEET 26

SEE SHEET 24



INDEX MAP
N.T.S.

SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES
		EROSION WATTLES PER DETAIL SHEET 32
		EROSION CONTROL BLANKET PER DETAIL ECB-1 & ECB-2 DCM VOL. 2
	RCP	REINFORCED CONCRETE PIPE
	SF	SILT FENCE PER DETAIL SF-1, SF-2 & SF-3 DCM VOL. 2
	VTC	VEHICLE TRACKING CONTROL PER DETAIL VT-2 DCM VOL. 2
	IP	INLET PROTECTION PER DETAIL SHEET 32
		PROPERTY BOUNDARY/CONSTRUCTION BOUNDARY
		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')
		PROPOSED CONTOUR (10')
		PROPOSED CONTOUR (2')
		LIMITS OF GRADING/CONSTRUCTION BOUNDARY
		FLOW DIRECTION
		GRADE
		LOT NUMBER
		LOT GRADE TYPE



NOTE:
ALL CONTOURS SHOWN WITHIN THE PLAN SET
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SECTIONS ARE TO BE GRADED TO ROUGH
SUB-GRADE AS SHOWN IN THEIR RESPECTIVE
TYPICAL STREET SECTION SHOWN ON SHEET 31.

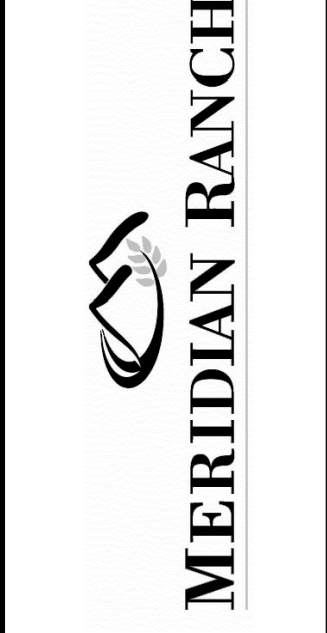
CONTRACTOR SHALL PROTECT ALL EXISTING
UTILITIES.
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:
1) ROLLING HILLS RANCH ROUGH GRADING
2) ROLLING HILLS RANCH FILING 1
3) ESTATES AT ROLLING HILLS RANCH FILING 2
4) ROLLING HILLS RANCH FILING 2

TWO WORKING DAYS
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CALL 811**

OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)

Date	Appr.	Init.	Date	Revisions

TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
TELEPHONE: 719.495.7444
FAX: 719.495.2457

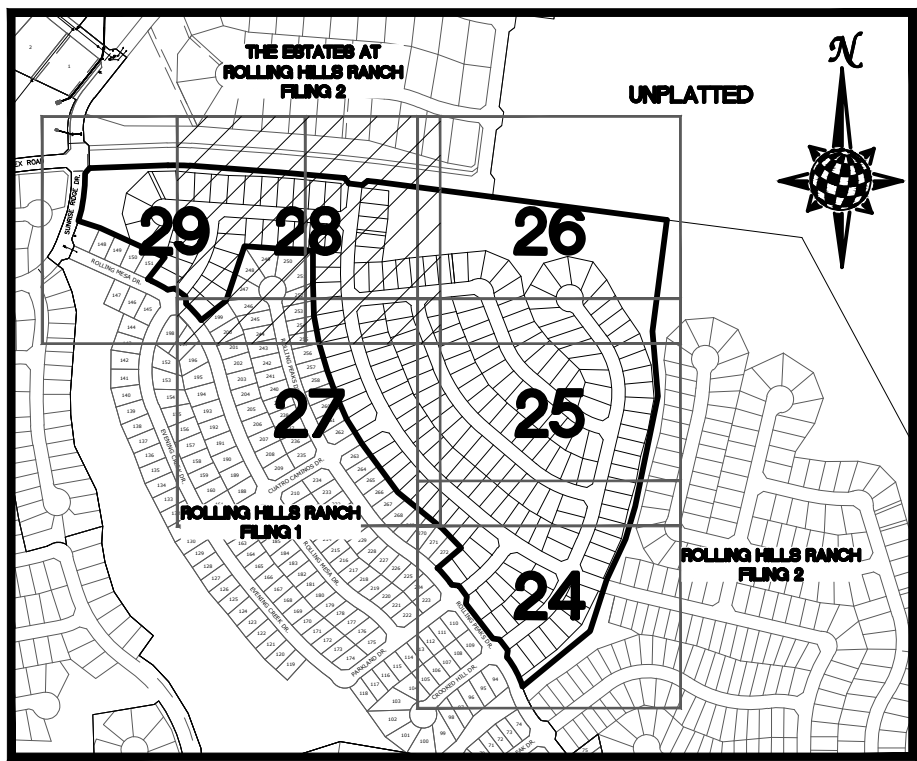
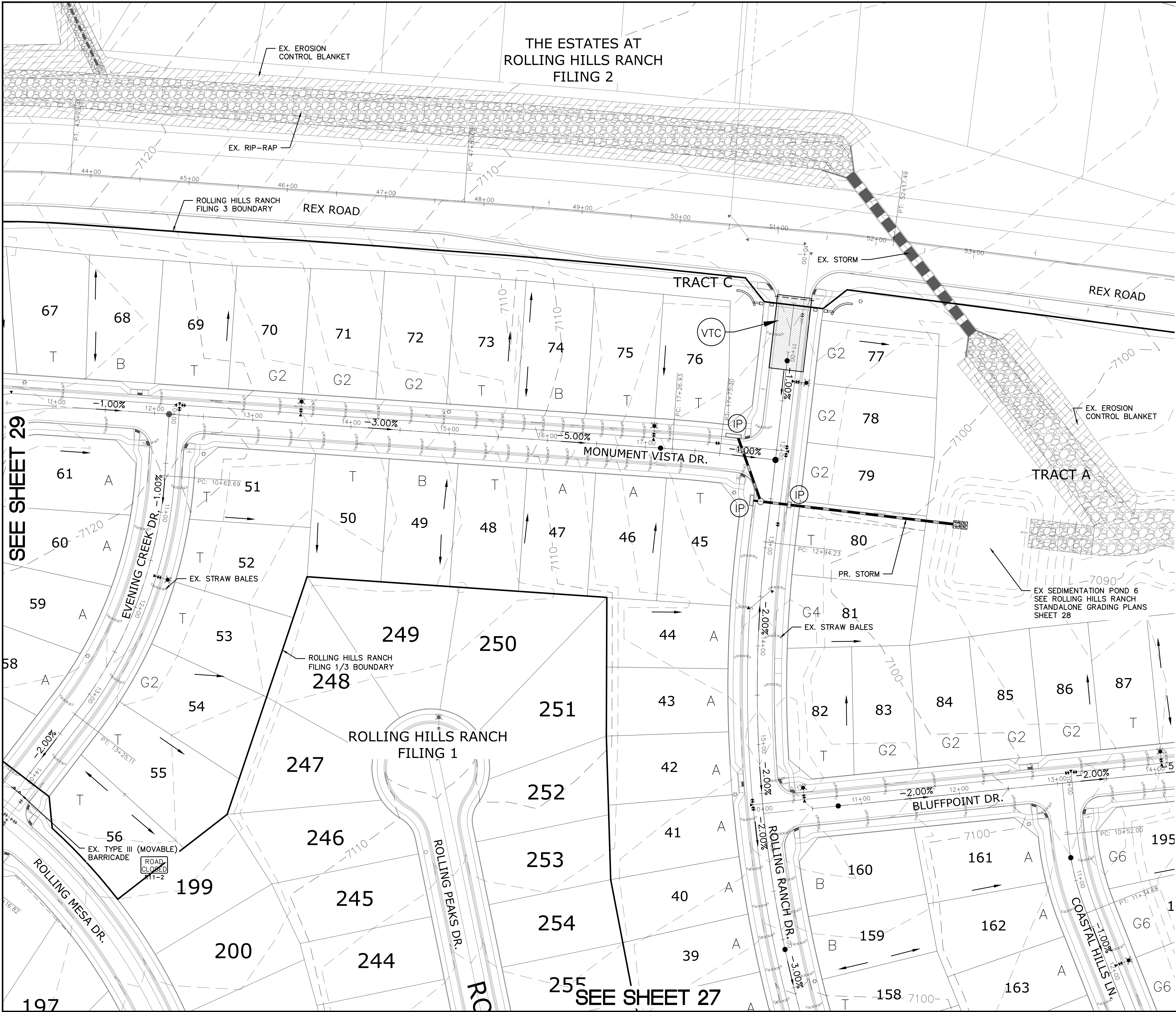


ROLLING HILLS RANCH FILING 3
AT MERIDIAN RANCH
GRADING/EROSION CONTROL PLAN
GRADING LAYOUT

Drawn by
Log
Checked by
TAK
Date
MAY 2021

Scale
AS SHOWN
25 of 32

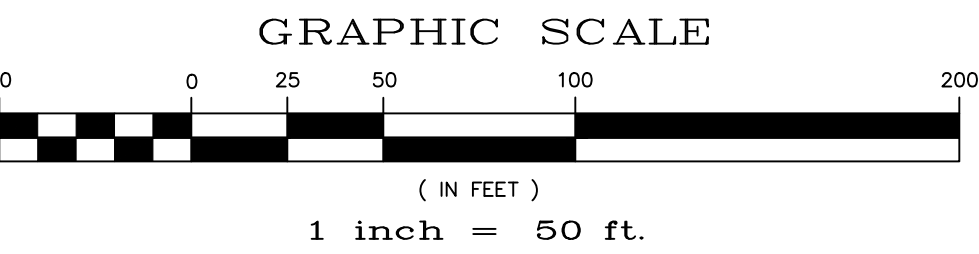
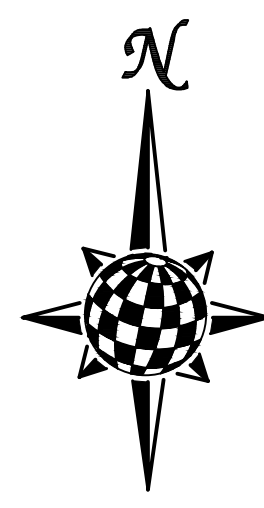




INDEX MAP
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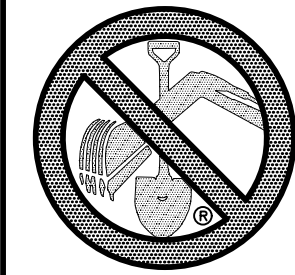
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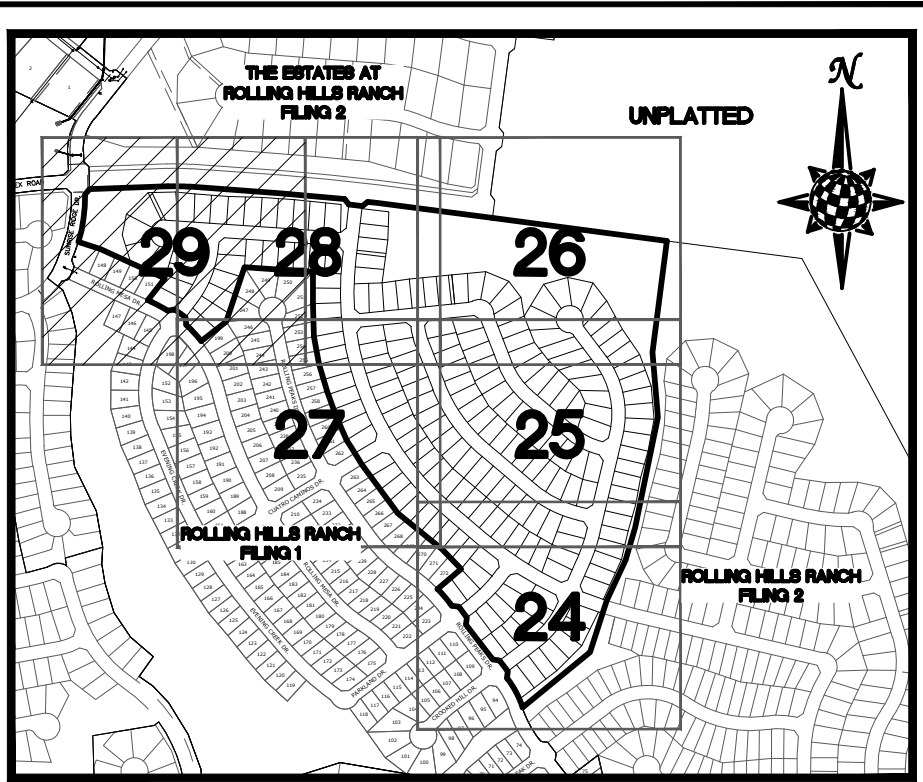
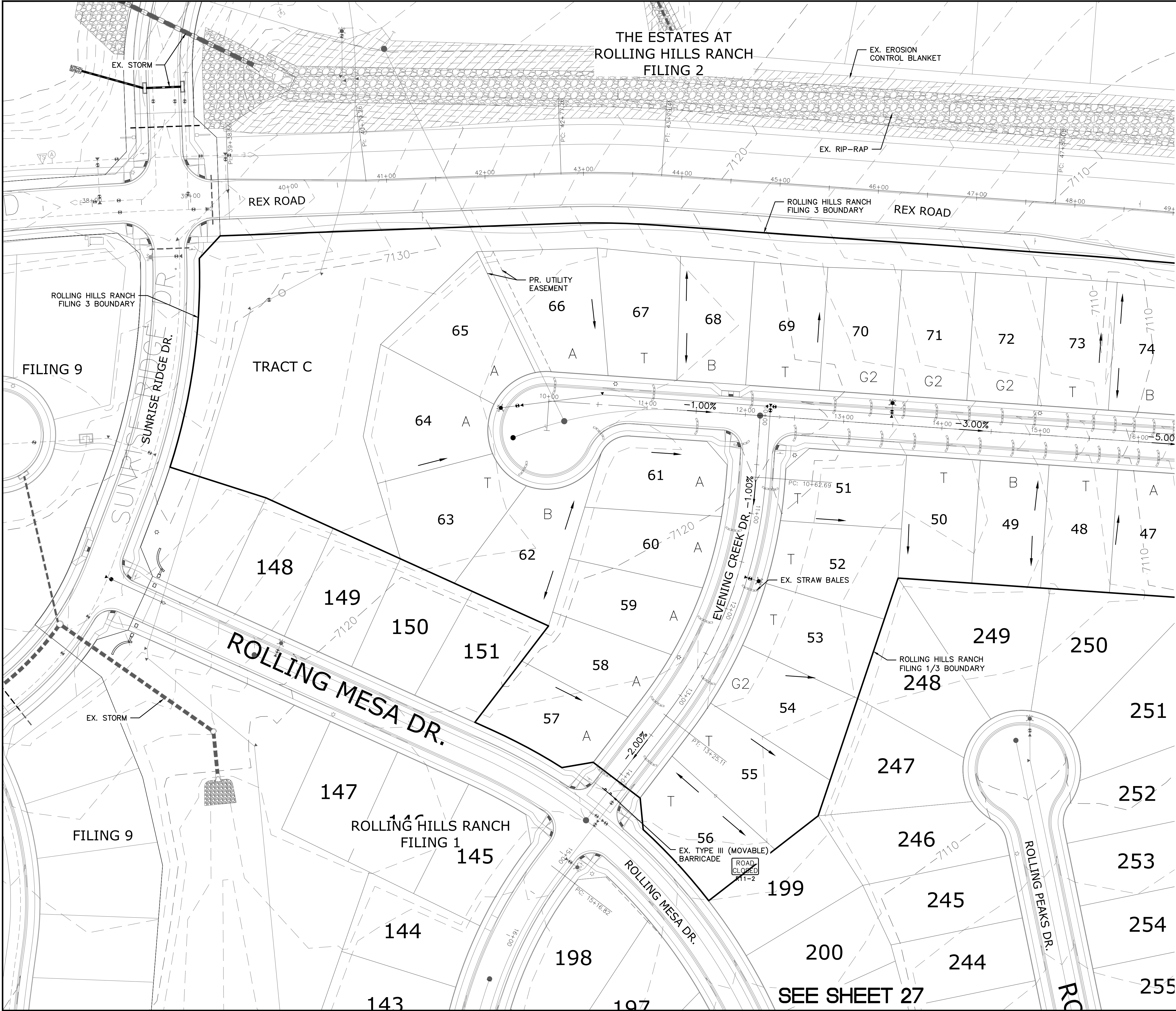
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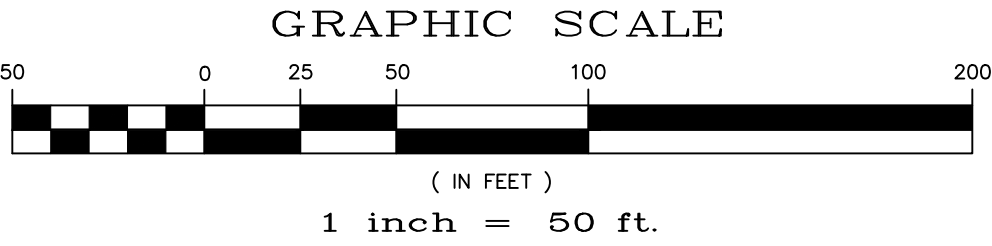
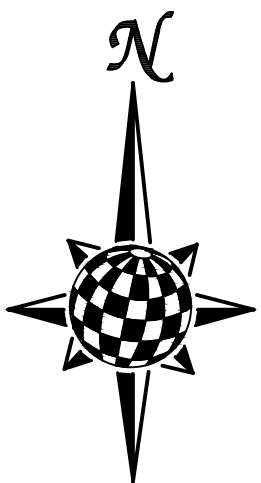
					Date
					Appr.
					Date
					Init.
					Date
					Revisions
1	2	3	4	No.	
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE 719.495.7444 FAX 719.495.2457					
 MERIDIAN RANCH					
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH GRADING/EROSION CONTROL PLAN GRADING LAYOUT					
Drawn by	Log	Checked by	TAK	Date	MAY 2021
Scale	AS SHOWN	28	of	32	
					



INDEX MAP
N.T.S.

LEGEND

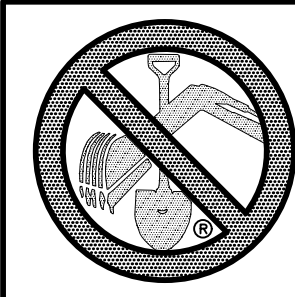
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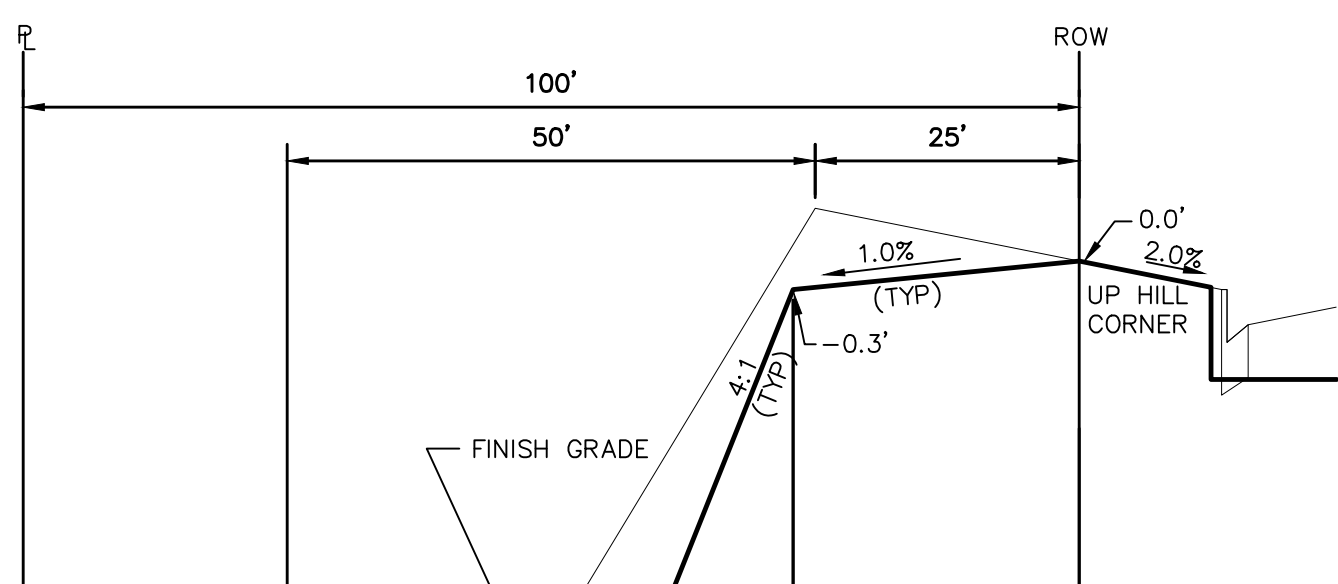
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4) ROLLING HILLS RANCH FILING 2



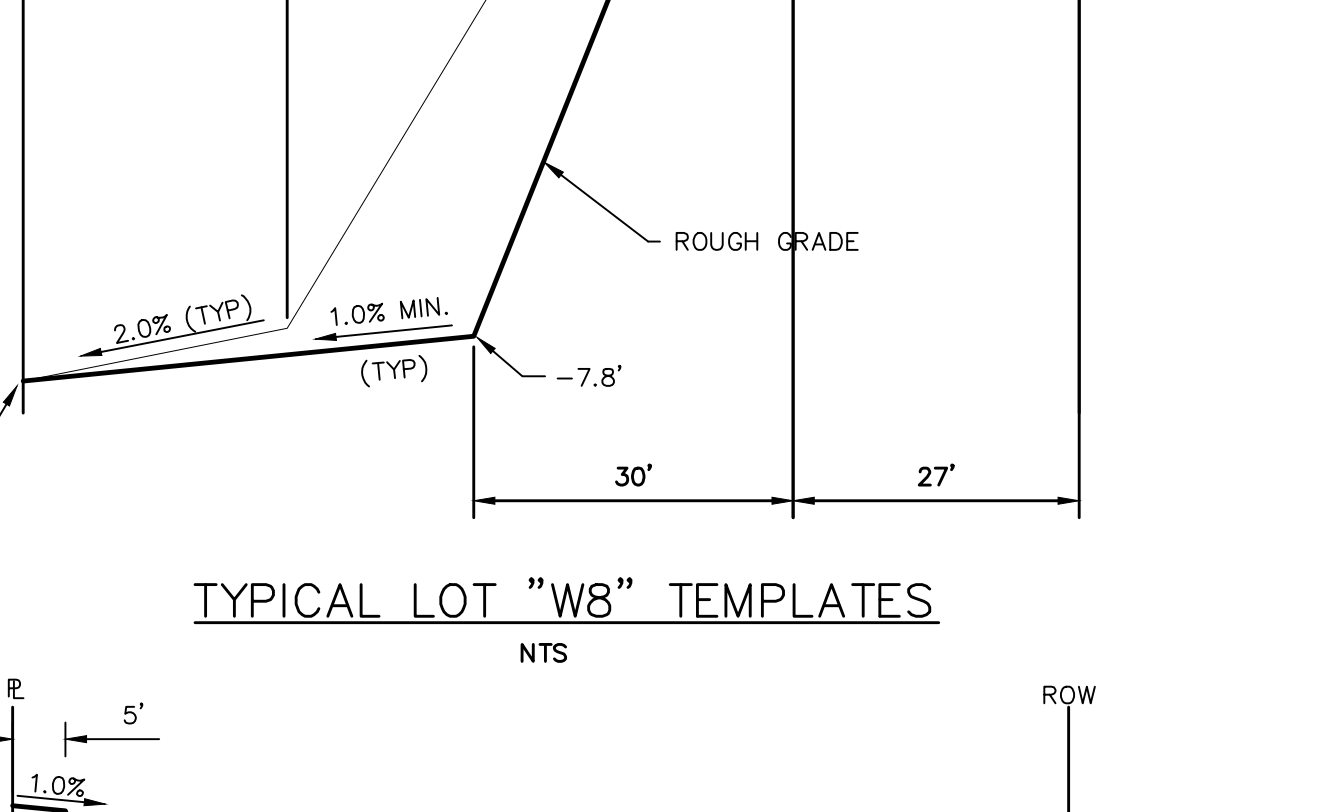
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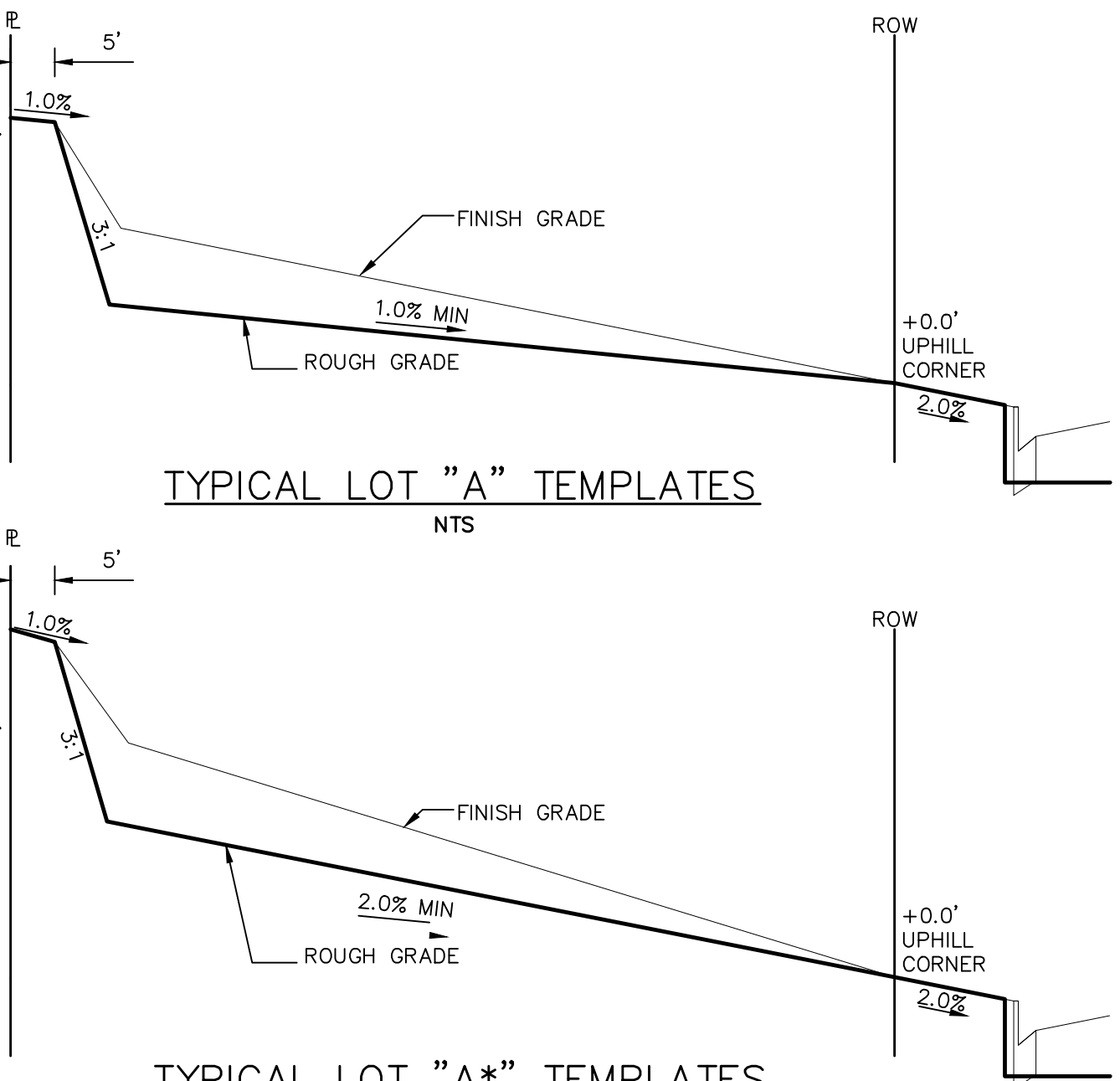
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Drawn by	Log	Checked by	TAK	Date	MAY 2021
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COLORADO PROFESSIONAL ENGINEER 31429					



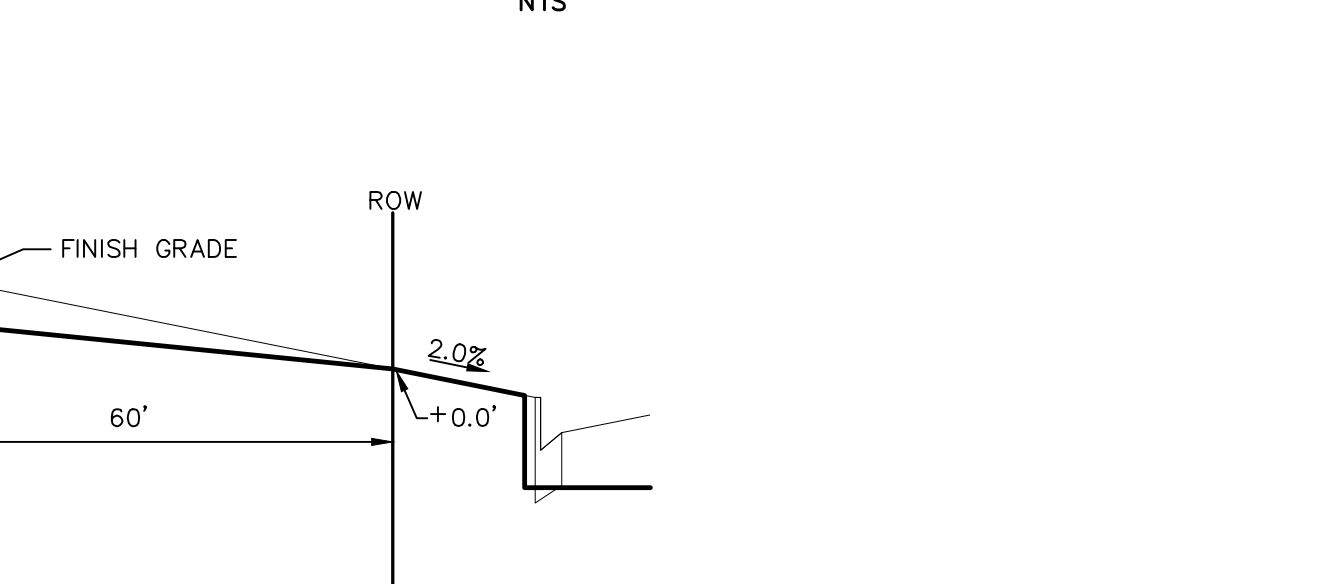
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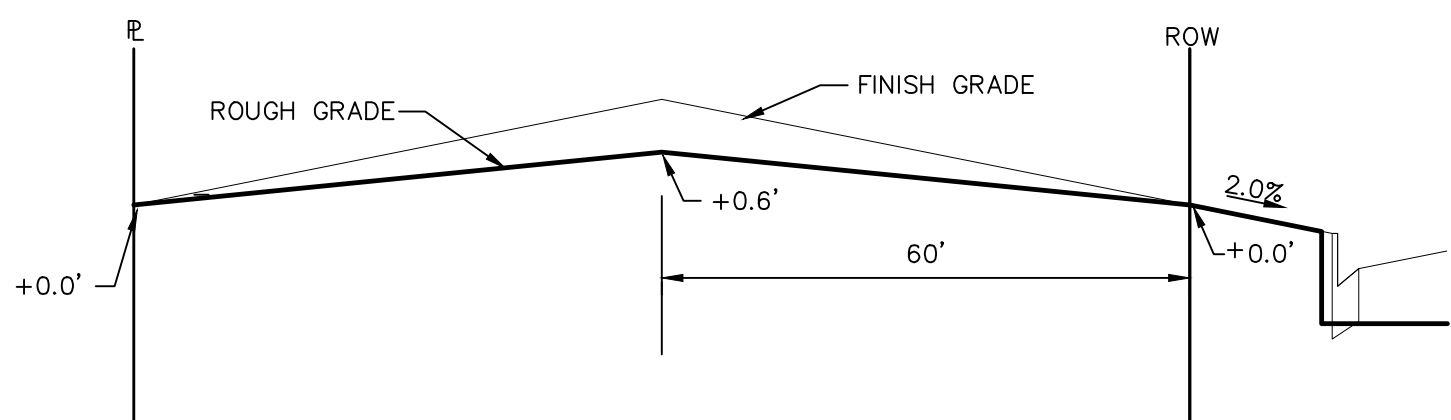
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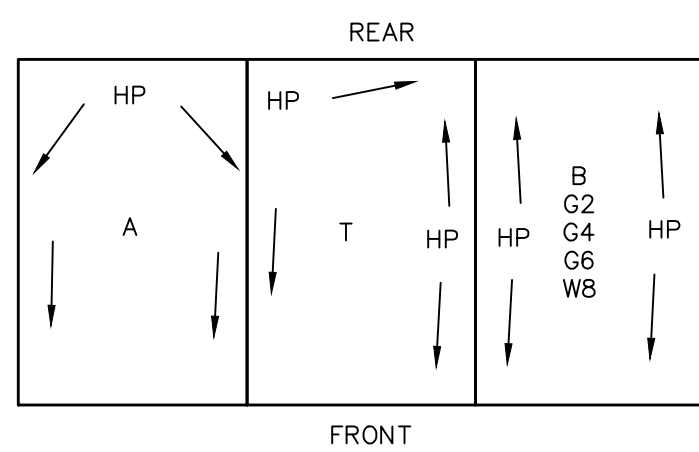
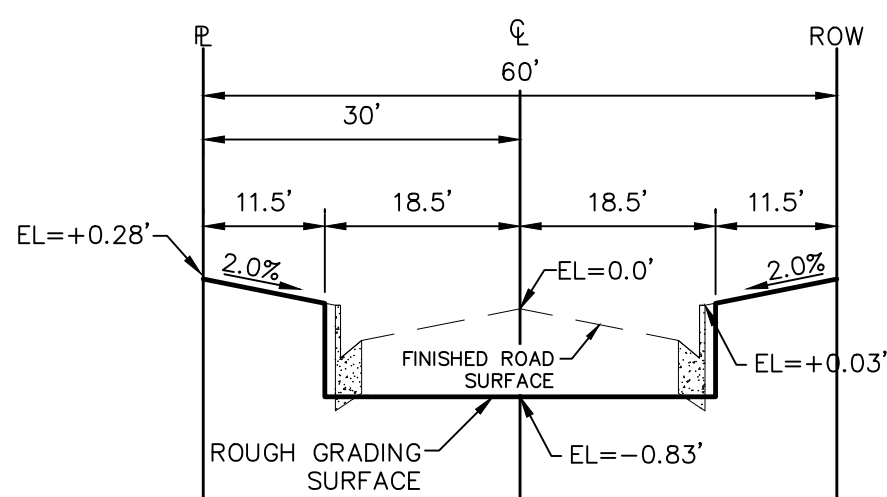
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NTS



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NTS

THE ANTICIPATED START FOR THIS PROJECT IS JULY 2021 WITH AN ANTICIPATED COMPLETION DATE OF JUNE 2022. BELOW IS A BRIEF OUTLINE OF THE CONSTRUCTION SEQUENCE FOR THIS PROJECT.

- * INSTALL INITIAL BMP'S
- * SANITARY SEWER
- * WATER
- * STORM SEWER AND CULVERTS
- * ELECTRIC
- * GAS
- * PHONE & CABLE TV
- * FINISHED ROAD GRADING AND PAVING

SILT FENCES AND STRAW BALE CHECK DAMS (OR APPROVED EQUAL) WILL BE INSTALLED PRIOR TO ANY EXCAVATION FOR THE MAJOR ROADS. STRAW BALE CHECK DAMS, FILTREX OR APPROVED EQUAL WILL BE PLACED AT ALL ENTRANCES AND EXITS OF DRAINAGE WAYS. STRAW BALES, FILTREX OR APPROVED EQUAL WILL BE INSTALLED AROUND THE OUTLET AND OVERFLOW STRUCTURE. THE OUTLET STRUCTURE WILL ALSO BE PROTECTED WITH RIPRAP ON THE DOWNSTREAM SIDE.

NON-STRUCTURE PRACTICES TO CONTROL EROSION AND SEDIMENTATION WILL INCLUDE RESEEDING OF GROUND COVER IN DISTURBED AREAS ACCORDING TO THE EROSION CONTROL PLAN. TEMPORARY SEEDING OF THE DETENTION POND AND MULCHING ALONG STEEP EMBANKMENTS WILL BE PERFORMED AS REQUIRED.

SILT FENCE IS REQUIRED TO BE IN PLACE PRIOR TO ANY MOVEMENT OF DIRT.

SEE ROUGH GRADING FOR ROLLING HILLS RANCH AT MERIDIAN RANCH PLANS AND SWMP FOR STAGES OF EROSION AND SEDIMENT CONTROL

THE MOST PROBABLE SOURCE OF NON-STORMWATER POLLUTION IS REFUELING AND DAILY MAINTENANCE OPERATIONS. IF MOBILE FUEL TRUCKS ARE USED TO SERVICE EQUIPMENT, ABSORBENT MATERIALS AND CONTAINERS FOR THE STORAGE OF USED ABSORBENT MATERIAL WILL BE CLOSE BY. IF A FUEL TANK IS LEFT ON SITE, BERMS WILL BE BUILT AROUND THE TANK TO CAPTURE ANY SPILLED FUEL. AGAIN, ABSORBENT MATERIALS AND THEIR CONTAINERS WILL BE ON HAND.

THERE ARE NO DEDICATED ASPHALT OR CONCRETE BATCH PLANTS PLANNED FOR THIS SITE.

ONCE THE MAJOR ROADS ARE PAVED AND THE SURROUNDING DISTURBED AREAS ARE 70% ESTABLISHED WITH VEGETATION AND ACCEPTANCE BY THE MERIDIAN RANCH SERVICE DISTRICT, THE CHECK DAMS AND THE SILT FENCES AROUND THE STREETS CAN BE REMOVED. AFTER COMPLETION OF THE STORM SEWER SYSTEM, THE STRAW BALES AND/OR FILTER CAN BE REMOVED. AFTER ALL GROUND DISTURBING CONSTRUCTION HAS BEEN COMPLETED AND ALL SLOPES ARE 70% ESTABLISHED WITH VEGETATION AND ACCEPTANCE BY THE MERIDIAN RANCH SERVICE DISTRICT, REMAINING CHECK DAMS AND SILT FENCES CAN BE REMOVED. THE RIPRAP ON ANY OF THE OUTLETS WILL REMAIN AFTER CONSTRUCTION TO REDUCE EROSION OF THE CHANNELS. ALL PERMANENT SWALES WILL BE LINED WITH LANDSCAPING TO SLOW RUNOFF AND FILTER SEDIMENTS.

THERE ARE SEVERAL BEST MANAGEMENT PRACTICES THAT CAN BE EMPLOYED TO PREVENT OR MITIGATE THE SOURCE OF POLLUTANTS AND CONTAMINATION OF STORMWATER RUNOFF. SOME OF THESE ARE:

- * ALL REFUSE DUMPSTERS AND RECEPTACLES SHALL BE EQUIPPED WITH FUNCTIONAL LIDS TO PREVENT RAIN AND SNOW FROM ENTERING.
- * STORAGE CONTAINERS, DRUMS AND BAGS SHALL BE STORED AWAY FROM DIRECT TRAFFIC ROUTES TO PREVENT ACCIDENTAL SPILLS.
- * EMPTY DRUMS SHALL BE COVERED TO PREVENT COLLECTION OF PRECIPITATION.
- * CONTAINERS SHALL BE STORED ON PALLETS OR OTHER DUNNAGE TO PREVENT CORROSION OF CONTAINERS, WHICH CAN RESULT WHEN CONTAINERS COME IN CONTACT WITH MOISTURE ON THE GROUND.
- * REGULARLY SCHEDULED REMOVAL OF CONSTRUCTION TRASH AND DEBRIS.
- THE CONTRACTOR IS CERTAINLY NOT LIMITED TO THESE GOOD HOUSEKEEPING MEASURES, AND MAY IMPLEMENT FURTHER CONTROLS AS PRUDENCE AND GOOD JUDGEMENT DEEM NECESSARY.

A THOROUGH INSPECTION OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE PERFORMED EVERY 14 DAYS AS WELL AS AFTER ANY RAIN OR SNOWMELT EVENT THAT CAUSES SURFACE EROSION:

- * EROSION OF V-NOTCH SWALES, CHANNELS AND SIDE SLOPES SHALL BE REPAIRED.
- * WHEN THE CHECK DAMS HAVE SILTED UP TO HALF THEIR HEIGHT, THE SILT SHALL BE REMOVED, CHANNEL GRADE REESTABLISHED, AND SIDE SLOPES RE-SEEDING IF NECESSARY. ANY CHECK DAMS THAT HAVE SHRIDED OR DECAYED SHALL BE REPAIRED OR REPLACED.
- * SILT TRAPS SHALL BE CLEANED WHENEVER THE WATER LEVEL HAS REACHED A DEPTH OF 6" AT THE FENCE, AND BROKEN WOODEN PARTS OR OTHER DEBRIS SHALL BE REPAIRED OR REPLACED.
- * ANY ACCUMULATED TRASH OR DEBRIS SHALL BE REMOVED FROM OUTLETS.
- * IF THE DEPTH OF THE SILT IN THE TEMPORARY SEDIMENTATION TRAP EXCEEDS 1/2 OF THE ORIGINAL DEPTH, THE TRAP SHALL BE CLEANED OUT AND RESTORED TO ITS ORIGINAL DEPTH. THE OVERFLOW SPILLWAY SHALL BE CLEANED OR REPAIRED AS NECESSARY.
- * AN INSPECTION AND MAINTENANCE LOG FOLLOWS THIS STORMWATER MANAGEMENT PLAN.

ALL DISTURBED AREAS SHALL BE REQUIRE SEEDING WITHIN TWO (2) WEEKS FOLLOWING THE ESTABLISHMENT OF FINAL GRADE. AREAS TO RECEIVE PAVEMENT DURING THE CONSTRUCTION OF THE ROAD SYSTEM SHALL NOT RECEIVE ANY SEEDING. SEEDING SHOULD BE ACCOMPLISHED USING AN APPROPRIATE GRASS SEED MIXTURE, BROADCASTING OR BY HYDROMULCHING. IF SEEDING BY THE HYDROMULCHING METHOD IS SELECTED, SEEDING RATE SHOULD BE DOUBLED. IF HYDROMULCHING IS SELECTED TWO OPERATIONS SHOULD BE CONSIDERED, APPLYING THE SEED FIRST AND THE MULCH IN A SECOND OPERATION. UPON COMPLETION OF THE SEEDING OPERATION THE SITE SHOULD BE COVERED WITH WEEF FREE MULCH AT A RATE OF 4,000 LBS. PER ACRE. MULCH SHALL BE INSTALLED PER DCM VOLUME 2, FIGURE MU-1, FOUND ON PAGE 3-30.

BELOW IS THE ACCEPTED GRASS MIX FOR SANDY SOILS:

GRASS	VARIETY	AMOUNT IN PLS LBS. PER ACRE
SIDEOATS GRAMA	EL RENO	3.0
WESTERN WHEATGRASS	BARTON	2.5
SLENDER WHEATGRASS	NATIVE	2.0
LITTLE BLUESTERN	PASTURA	2.0
SAND DROPSEED	NATIVE	0.5
SWITCH GRASS	NEBRASKA	3.0
WEEPING LOVE GRASS	MORPHA	1.0

NOTE:

"FINISH GRADE" IN THE TEMPLATES ARE ONLY APPROXIMATE GRADES. ACTUAL FINISHED GRADES WILL VARY DEPENDING ON INDIVIDUAL HOME PLOT PLANS. PLOT PLANS SHALL CLOSELY FOLLOW THE FINISH GRADE PATTERNS SHOWN IN THE TEMPLATES WITHOUT ADVERSELY AFFECTING THE GRADES AND DRAINAGE PATTERNS OF NEIGHBORING LOTS OR TRACTS. CONTOURS SHOWN ON THESE PLANS ARE ROUGH GRADES AND WILL CHANGE WITH EVERY HOME CONSTRUCTION. FIELD VERIFY ALL GRADES PRIOR DESIGN OF INDIVIDUAL HOME PLOT PLANS.

1	-		
2	-		
3	-		
4	-		
No.	Revisions	Date	Appr. Date

TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
TELEPHONE: 719.495.7444
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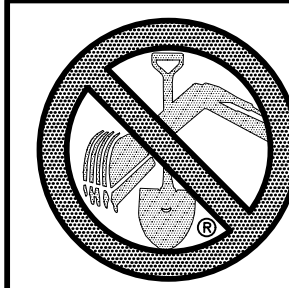


MERIDIAN RANCH

**ROLLING HILLS RANCH FILING 3
AT MERIDIAN RANCH**

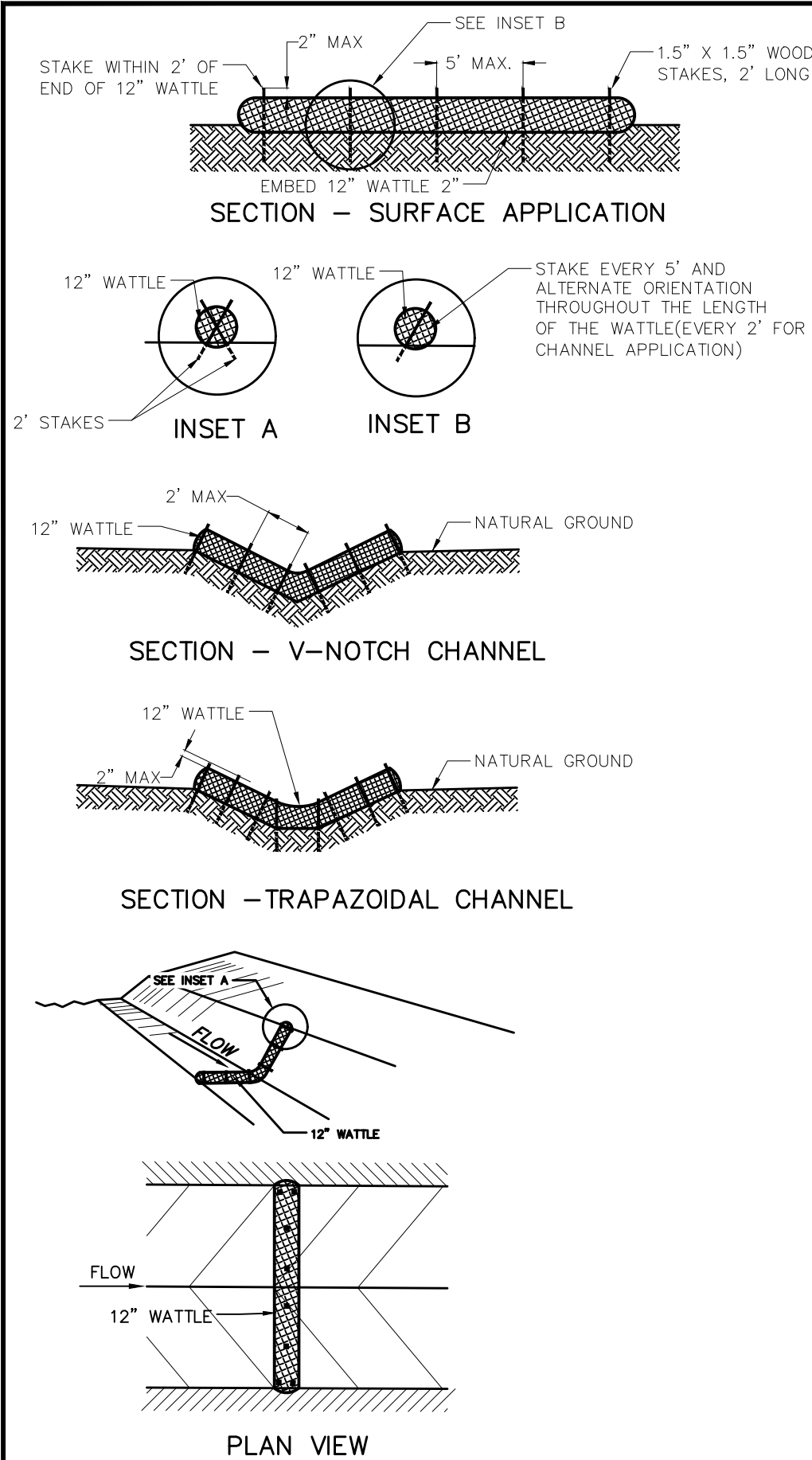
GRADING DETAIL SHEET

<p>Scale</p> <p>AS SHOWN</p>	<p>Drawn by</p> <p>LOG</p>
	<p>Checked by</p> <p>TAK</p>
	<p>Date</p> <p>MAY 2021</p>



**TWO WORKING DAYS
BEFORE YOU DIG
CALL 811**

OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)



NOTES:

USE 2 FT WOODEN STATES WITH A 1.5 IN BY 1.5 IN NOMINAL CROSS SECTION.

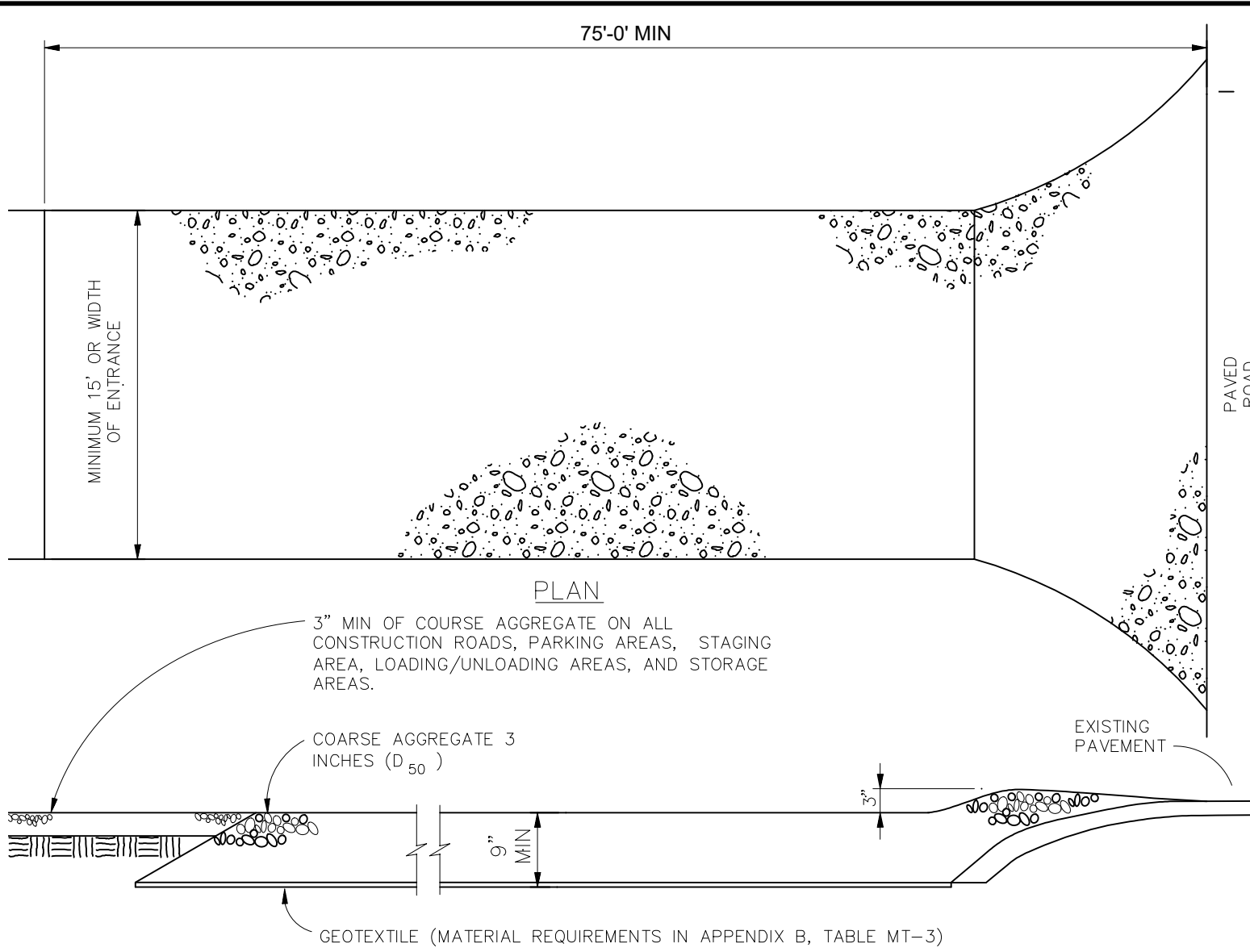
ONLY INSTALL 12" WATTLES TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES OR AS DIRECTED.

REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE HALF OF THE EXPOSED LOG HEIGHT. INSPECTIONS SHALL BE PERFORMED FREQUENTLY FOR PROPER FUNCTION.

WHEN MORE THAN ONE EROSION LOG IS NEEDED, ENDS MUST BE TIGHTLY ABUTTED.

WATTLES MAY ALSO BE USED ALONG LONG SLOPES TO REDUCE EROSION AND SEDIMENT VOLUME.

STRAW WATTLES MAY BE USED IN LIEU OF STRAW BALES AND/OR SILT FENCE WITH APPROVAL THE COUNTY, OWNER, ENGINEER, AND SWMP ADMINISTRATOR.



VEHICLE TRACKING

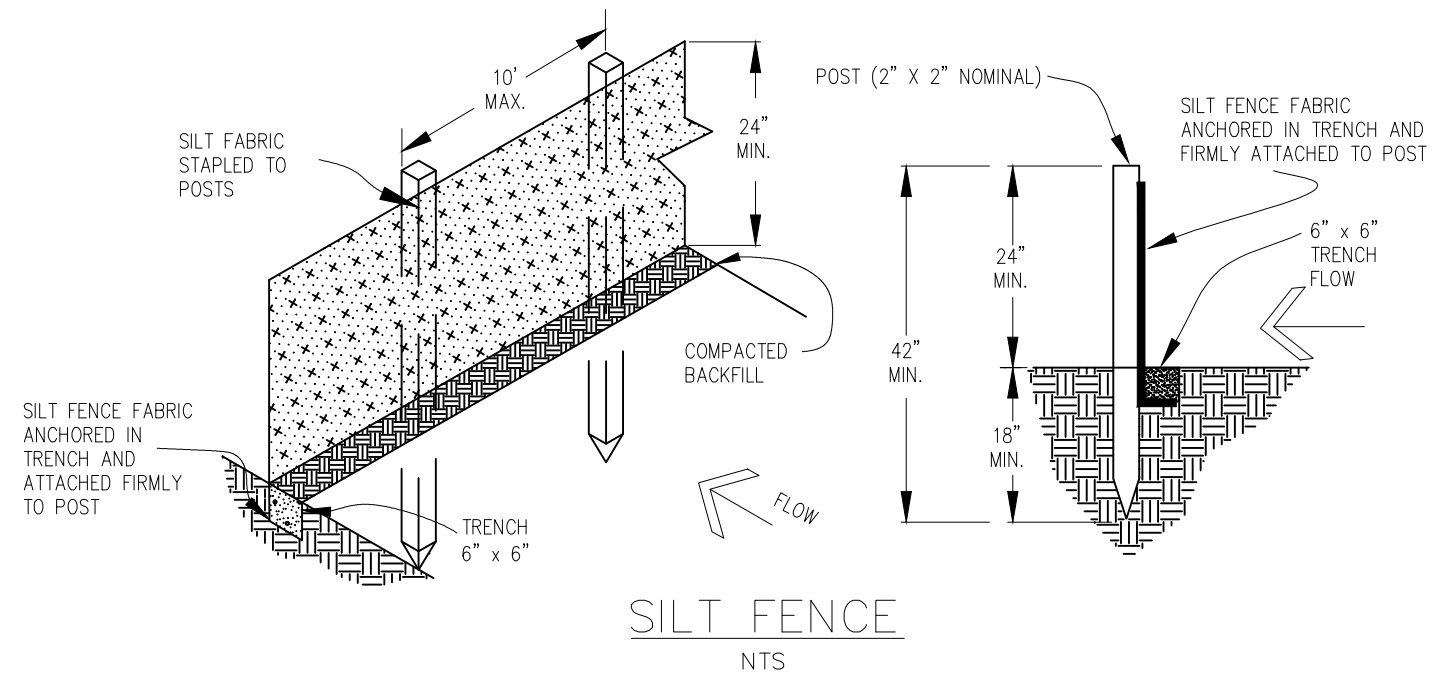
VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.



SILT FENCE

SILT FENCE NOTES

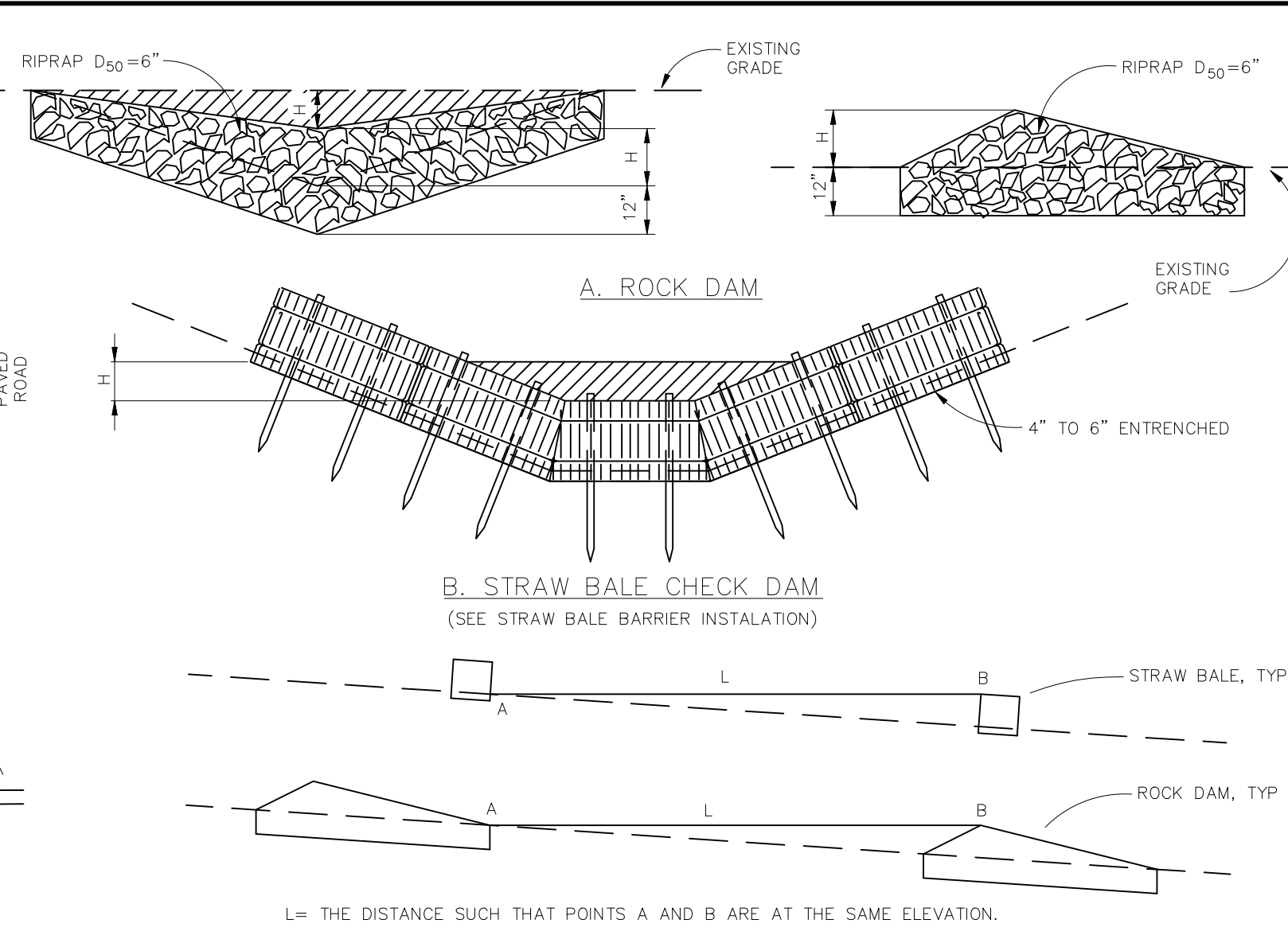
INSTALLATION REQUIREMENTS

1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.
3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG #9 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.
5. WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG. TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 3' ABOVE THE ORIGINAL GROUND SURFACE.

6. ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.
7. THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES; HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
2. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
3. SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.



CHECK DAM

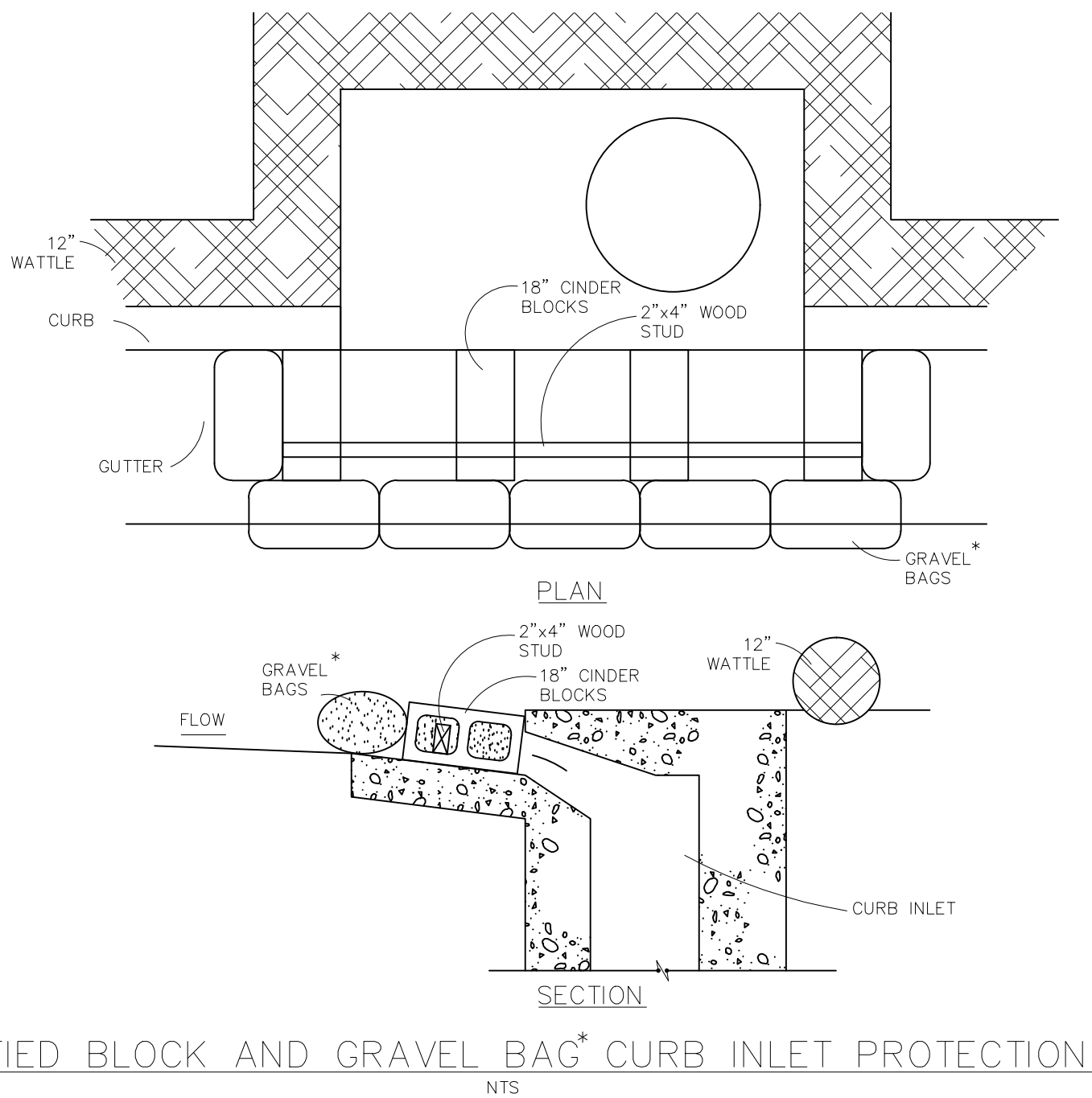
CHECK DAM NOTES

INSTALLATION REQUIREMENTS

1. STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE SBB-2.
2. THE "H" DIMENSION SHALL BE SELECTED TO PROVIDE WEIR FLOW CONVEYANCE FOR 2-YEAR FLOW OR GREATER.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL CHECK DAMS, ESPECIALLY AFTER STORM EVENTS.
2. REPLACE STONE AS NECESSARY TO MAINTAIN THE CORRECT HEIGHT OF THE DAM.
3. ACCUMULATED SEDIMENT AND DEBRIS IS TO BE REMOVED FROM BEHIND THE DAMS AFTER EACH STORM OR WHEN 1/2 OF THE ORIGINAL HEIGHT OF THE DAM IS REACHED.
4. CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.
5. WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.



MODIFIED BLOCK AND GRAVEL BAG* CURB INLET PROTECTION

BLOCK AND GRAVEL BAG* CURB INLET PROTECTION NOTES

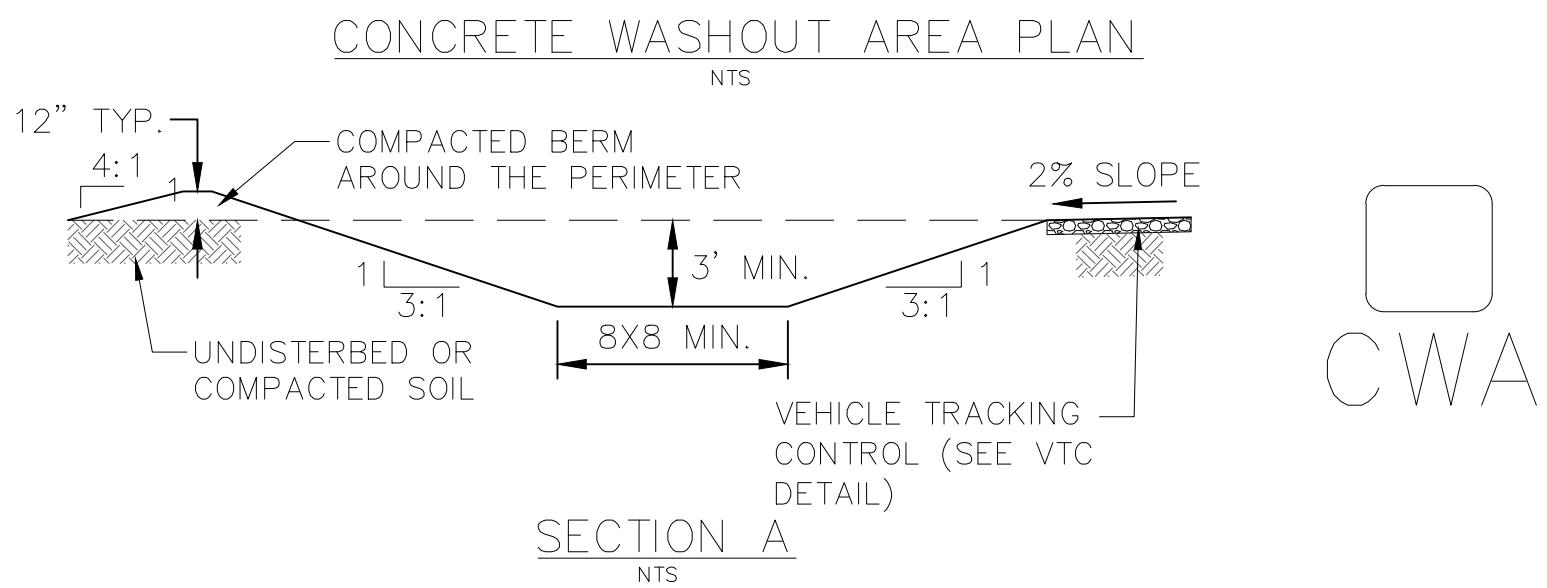
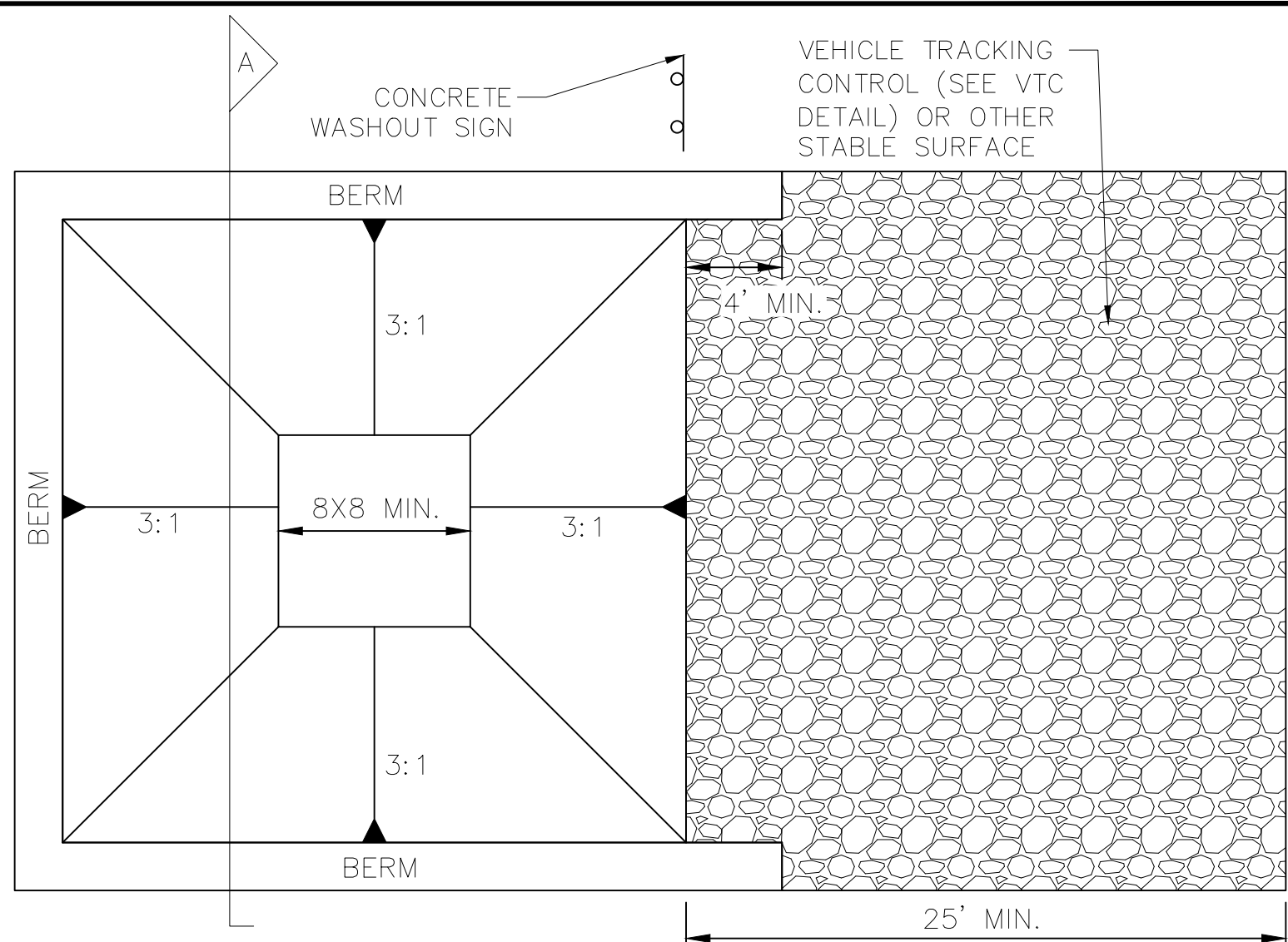
INSTALLATION REQUIREMENTS

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
2. CONCRETE BLOCKS ARE TO BE LAID AT 2' SPACING ON THEIR SIDES WITH THE OPEN ENDS OF THE BLOCK FACING EACH OTHER.
3. IF MORE THAN ONE 2X4 IS REQUIRED, THEY NEED TO OVERLAP BY A MINIMUM OF 2'.
4. GRAVEL BAGS ARE TO BE PLACED AROUND THE CONCRETE BLOCKS AND 2X4 TO CLOSELY ABUTTING ONE ANOTHER SO THERE ARE NO GAPS.
5. GRAVEL BAGS ARE TO CONTAIN WASHED SAND OR GRAVEL APPROXIMATELY 3/4 INCH IN DIAMETER.
6. BAGS ARE TO BE MADE OF 1/4" INCH WIRE MESH (USED WITH GRAVEL ONLY) OR GEOTEXTILE.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED OR REPLACED.
3. SEDIMENT SHALL BE REMOVED WHEN SEDIMENT HAS ACCUMULATED TO APPROXIMATELY 1/2 THE DESIGN DEPTH OF THE TRAP.
4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

* AN ALTERNATE 3/4" TO 1" GRAVEL FILTER OVER A WIRE SCREEN MAY BE USED IN PLACE OF GRAVEL BAGS. THE WIRE MESH SHALL EXTEND ABOVE THE TOP OF THE CONCRETE BLOCKS AND THE GRAVEL PLACED OVER THE WIRE SCREEN TO THE TOP OF THE CONCRETE BLOCKS.



CWA INSTALLATION NOTES:

1. SEE PLAN VIEW FOR CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' X 8'. SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE A MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

CWA MAINTENANCE NOTES:

1. INSPECT BMPs EACH WORKDAY AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOPSOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

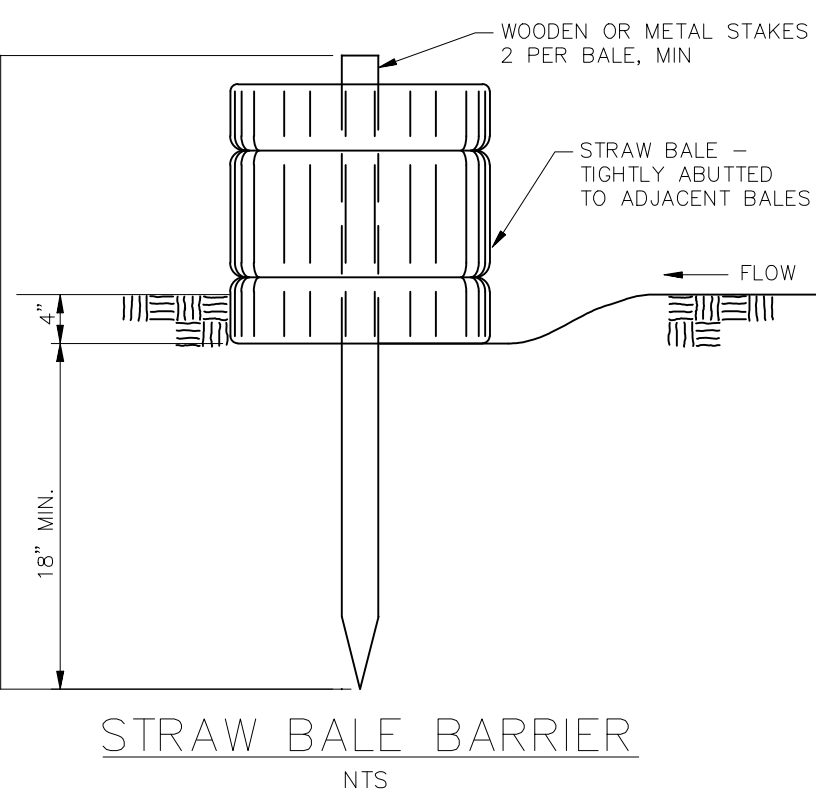
STRAW BALE BARRIER NOTES

INSTALLATION REQUIREMENTS

1. STRAW BALE BARRIERS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF CERTIFIED WEED FREE HAY OR STRAW AND WEIGH NOT LESS THAN 35 POUNDS.
3. BALES ARE TO BE PLACED IN A SINGLE ROW WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
4. EACH BALE IS TO BE SECURELY ANCHORED WITH AT LEAST TWO STAKES AND THE FIRST STAKE IS TO BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.
5. STAKES ARE TO BE A MINIMUM OF 42 INCHES LONG. METAL STAKES SHALL BE STANDARD "T" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD STAKES SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
6. BALES ARE TO BE BOUND WITH EITHER WIRE OR STRING AND ORIENTED SUCH THAT THE BINDINGS ARE AROUND THE SIDES AND NOT ALONG THE TOPS AND BOTTOMS OF THE BALE.
7. GAPS BETWEEN BALES ARE TO BE CHINKED (FILLED BY WEDGING) WITH STRAW OR THE SAME MATERIAL OF THE BALE.
8. END BALES ARE TO EXTEND UPSLOPE SO THE TRAPPED RUNOFF CANNOT FLOW AROUND THE ENDS OF THE BARRIER.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT STRAW BALE BARRIERS IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED OR INEFFECTIVE BARRIERS SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALE BARRIERS WHEN IT ACCUMULATES TO APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.
4. STRAW BALE BARRIERS SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.



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