

CONSTRUCTION PLANS
FOR
JIMMY CAMP CREEK REALIGNMENT

GENERAL NOTES

1. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY, OR EASEMENT SHALL CONFORM TO THE EL PASO COUNTY CONSTRUCTION SPECIFICATIONS AND DESIGN STANDARDS, LATEST EDITION THEREOF. A COPY OF THESE STANDARDS SHALL BE KEPT ON SITE.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER AND THE COUNTY OF ANY PROBLEMS IN CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS AT, AND ADJACENT TO, THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS.
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE THE PROPOSED WORK AND SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
6. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG PERSONS, OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND EL PASO COUNTY REQUIREMENTS.
7. CONTRACTOR WILL COORDINATE AND HAVE A PRE-CONSTRUCTION MEETING WITH THE COUNTY PRIOR TO STARTING CONSTRUCTION.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND PROVIDE FOR ADEQUATE DRAINAGE THROUGHOUT THE SITE DURING THE PROCESS OF EXCAVATION, GRADING AND EMBANKMENT. THE GRADE SHALL BE MAINTAINED IN SUCH CONDITION THAT IT IS WELL DRAINED AT ALL TIMES.
9. CONTRACTOR SHALL PROTECT ALL ADJACENT IMPROVEMENTS (BUILDINGS, STREETS, LANDSCAPE AREAS, ETC...) FROM DAMAGE AND EROSION AT THE CONTRACTOR'S EXPENSE. ALL DISTURBED AREAS OFF-SITE SHALL BE RESTORED TO A MINIMUM OF THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
10. CONSTRUCTION EROSION CONTROL SHALL BE THE RESPONSIBILITY OF THE OWNER AND THE CONTRACTOR.
11. REFER TO SHEET 10 FOR ADDITIONAL NOTES ON EROSION CONTROL.
12. A WATER TRUCK OR OTHER MEANS SHALL BE PROVIDED BY THE CONTRACTOR TO KEEP DUST IN CHECK.
13. ANY CONSTRUCTION DEBRIS OR MUD TRACKING ONTO THE PUBLIC RIGHT-OF-WAY RESULTING FROM THE PROJECT SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATION OR EXCESSIVE PAVEMENT FAILURE CAUSED BY THE PROJECT, AND SHALL PROPERLY BARRICADE THE SITE UNTIL CONSTRUCTION IS COMPLETE.
14. THE MAXIMUM ALLOWABLE EARTH DISTURBANCE AREA AT ANY ONE TIME IS 40 ACRES, PER COUNTY REQUIREMENTS.
15. THE CONTRACTOR SHALL ACCEPT THE EXISTING TOPOGRAPHY SHOWN ON THE PLANS AS ACCURATE, WITHIN THE NATIONAL MAPPING STANDARDS OR VERIFY THE ACCURACY AT THEIR OWN EXPENSE. NO EXTRAS SHALL BE GRANTED TO CONTRACTOR ON CLAIMS OF INACCURATE TOPOGRAPHY.
16. ANY SETTLEMENT OR SOIL ACCUMULATION BEYOND THE PROPERTY LIMITS AND CONSTRUCTION EASEMENTS DUE TO GRADING OR EROSION SHALL BE REPAIRED BY THE CONTRACTOR IMMEDIATELY.
17. ALL EXISTING UTILITY LINE LOCATIONS MUST BE VERIFIED BY THE CONTRACTOR AND THE ENGINEER NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. IT IS THE PLAN'S INTENT TO SHOW ALL EXISTING UTILITIES. HOWEVER, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE SATISFIED THAT ALL EXISTING UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT, HAVE BEEN PROPERLY LOCATED.
18. ALL FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR PER ASTM D-698. REFER TO GEOTECHNICAL REPORT BY KUMAR & ASSOC. FOR SPECIFICS & DETAILS. ANY AREAS WHERE DEPTH OF FILL EXCEEDS 8 FEET SHALL BE COMPACTED TO 98% STANDARD PROCTOR.
19. ALL PROPOSED CONTOURS ARE TO TOP OF FINISHED GRADE UNLESS NOTED OTHERWISE.
20. ALL FILL PLACED ON SLOPES STEEPER THAN 4:1 SHALL BE KEYED INTO THE EXISTING SLOPE AS DIRECTED BY THE GEOTECHNICAL ENGINEER. ALL SUBGRADE SHALL BE VERIFIED FOR COMPACTION PRIOR TO PLACEMENT OF FILL. ALL SURFACE VEGETATION, DEBRIS OR OTHER DELETERIOUS MATERIAL SHALL BE REMOVED PRIOR TO PLACEMENT OF FILL. SUBGRADE SHALL BE SCARIFIED & RECOMPACTED AS DIRECTED BY THE GEOTECHNICAL REPORT OR ENGINEER BUT IN NO CASE TO LESS THAN 95% OF STD. PROCTOR DENSITY PER ASTM D-698.

ENGINEER'S FLOODPLAIN STATEMENT

THESE CONSTRUCTION DRAWINGS FOR THE REALIGNMENT OF JIMMY CAMP CREEK WERE PREPARED UNDER MY DIRECTION AND SUPERVISION AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID JIMMY CAMP CREEK REALIGNMENT CONSTRUCTION PLANS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THESE JIMMY CAMP CREEK REALIGNMENT CONSTRUCTION PLANS.

FOR AND ON BEHALF OF DREXEL, BARRELL & CO.:

JOHN A. MCCARTY, P.E.
NAME

ENGINEER'S DRAINAGE STATEMENT

THESE MASS GRADING CONSTRUCTION AND DRAINAGE PLANS AND ACCOMPANYING DRAINAGE REPORT WERE PREPARED UNDER MY DIRECTION AND SUPERVISION AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID DRAINAGE PLAN AND REPORT HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE CITY/COUNTY FOR DRAINAGE REPORTS AND SAID REPORT IS IN CONFORMITY WITH THE MASTER PLAN OF THE DRAINAGE BASIN. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THESE PLANS AND REPORT.

FOR AND ON BEHALF OF DREXEL, BARRELL & CO.:

KARI J. McDOWELL, P.E.
NAME

DEVELOPER'S STATEMENT

I, THE DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE CONSTRUCTION AND DRAINAGE PLANS AND THE ACCOMPANYING DRAINAGE REPORT.

BUSINESS NAME: THE LANDHUIS COMPANY

BY: *[Signature]* DATE: 9/4/05

TITLE: *Director of Operations*

ADDRESS: 212 N. WAHSATCH, SUITE 301
COLORADO SPRINGS, COLORADO 80903

COUNTY'S STATEMENT

FILED IN ACCORDANCE WITH SECTION 51.1 OF THE EL PASO LAND DEVELOPMENT CODE, AS AMENDED.

JOHN A. MCCARTY, COUNTY ENGINEER/DIRECTOR DATE 9-6-05

A PART OF THE S 1/2 OF SEC. 14, S 1/2 SEC. 13 A PART OF THE NE 1/4 OF SEC. 22, N 1/2 OF SEC. 23, AND N1/2 OF SEC. 24, T. 15S., R.65W. OF THE 6TH P.M., IN THE COUNTY OF EL PASO STATE OF COLORADO.

DISTURBED AREA=148.75 ACRES MORE OR LESS

AUGUST 18, 2005



PREPARED FOR:
THE LANDHUIS COMPANY

212 N. WAHSATCH, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200

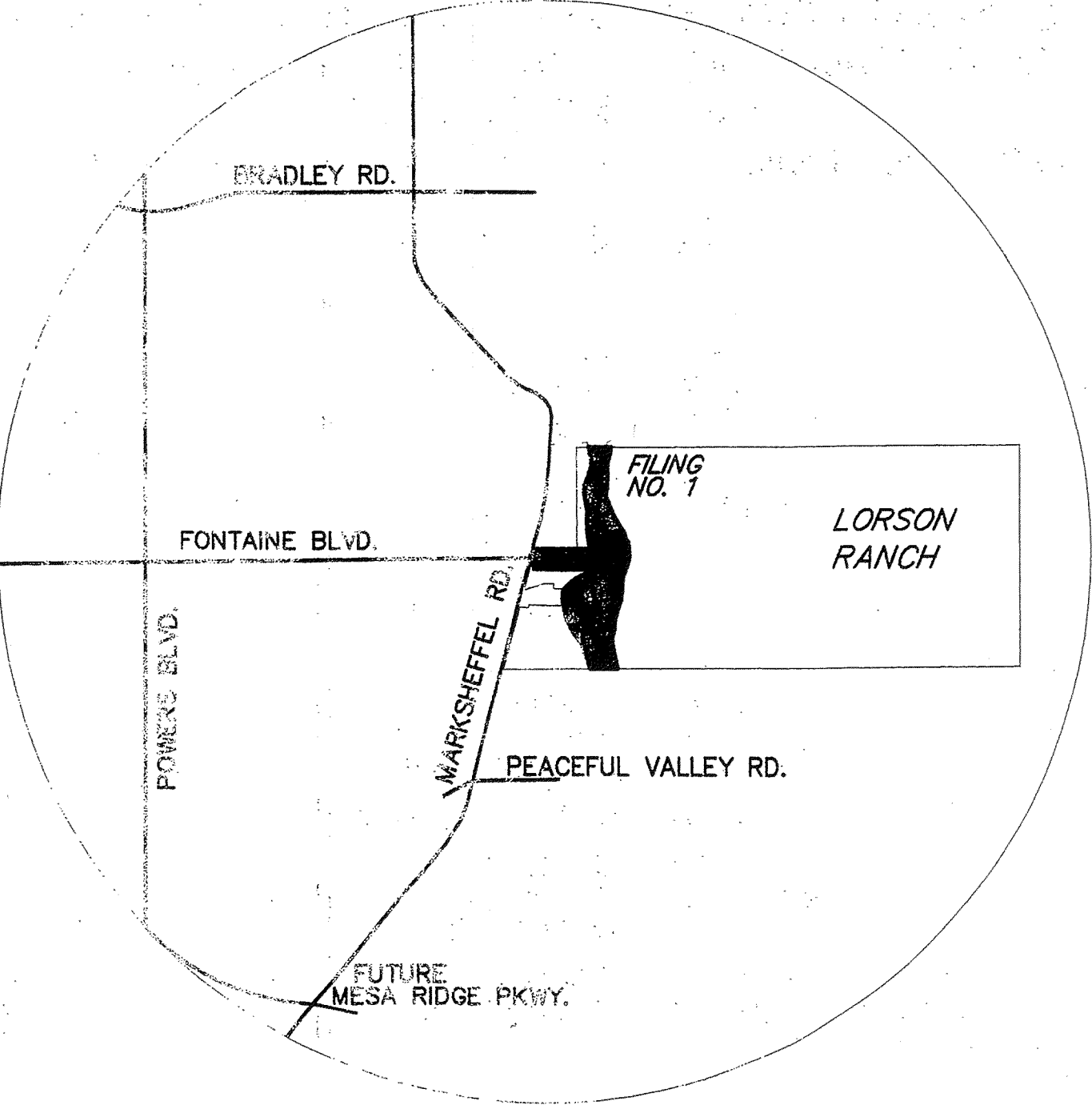
CONTACT:
DAVE COCOLIN



PREPARED BY:
Drexel, Barrell & Co.
Engineers • Surveyors

6365 CORPORATE DRIVE
COLORADO SPRINGS, COLORADO 80919
(719) 260-0887

CONTACT:
KARI J. McDOWELL, P.E., P.T.O.E.



VICINITY MAP
NO SCALE



CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.

SHEET INDEX

SHEET NO.	SHEET DESCRIPTION
1	COVER SHEET
2-5	MASS GRADING PLAN
6-7	FONTAINE BLVD. PLAN AND PROFILES
8-11	DRAINAGE AND EROSION CONTROL PLAN
12-19	JIMMY CAMP CREEK PLAN AND PROFILE
20-24	JIMMY CAMP CREEK CROSS SECTIONS
25-26	PEDESTRIAN TRAIL PLAN AND PROFILES AT FONTAINE BRIDGE
27-29	JIMMY CAMP CREEK DETAILS
30-31	EROSION CONTROL DETAILS

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE SOUTH LINE OF THE NORTH HALF OF SECTION 23, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN AS BEING SOUTH 89°41'52" WEST. THE EAST QUARTER CORNER OF SAID SECTION 23 IS A FOUND 3-1/2" ALUMINUM CAP MONUMENT AND THE WEST QUARTER CORNER OF SAID SECTION 23 IS A FOUND 2-1/2" ALUMINUM CAP MONUMENT.

BENCHMARK

FMS MONUMENT F204 LOCATED AT THE NORTHWEST CORNER OF FONTAINE BLVD. AND COTTONWOOD GROVE DRIVE. ELEVATION 5724.072 (N.G.V.D. 29).

UTILITY CONTACTS

COLORADO CENTRE
AL TESTA
(719) 380-8865
WIDEFIELD WATER & SANITATION DISTRICT
JOHN P. MCGINN
(719) 227-0072 EXT 104

REVISION DESCRIPTIONS	DATE
RESPONSE TO COUNTY COMMENTS	02 SEP 2005

WORKING
COPY

GENERAL NOTES

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4. ALL STATIONS REFER TO CENTERLINE OF STREET STATIONS SHOWN ON PLAN, UNLESS OTHERWISE NOTED.

UTILITY CONTACTS

COLORADO CENTRE
AL TESTA
(719) 380-8865

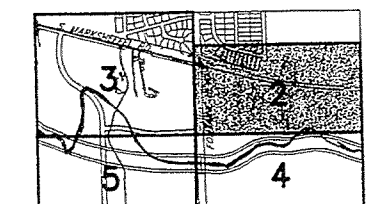
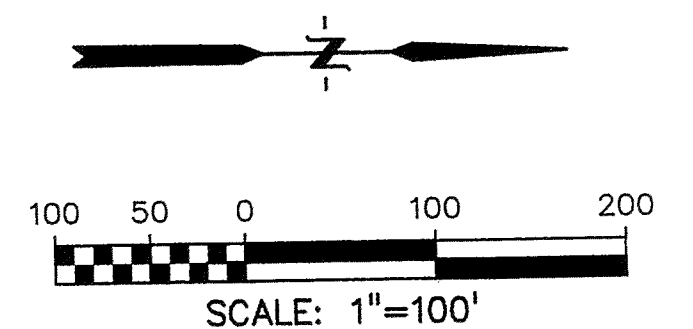
WIDEFIELD WATER & SANITATION DISTRICT
JOHN P. MCGINN
(719) 227-0072 EXT 104

LEGEND

PROPERTY LINE
LOT LINES
EASEMENT
RIGHT-OF-WAY
EXISTING RIGHT-OF-WAY
PROPOSED INTERMEDIATE CONTOUR 5724
PROPOSED INDEX CONTOUR 5745
EX. INTERMEDIATE CONTOUR 5364
EX. INDEX CONTOUR 5365

LEGEND CONT'D

PROPOSED STORM SEWER
EXISTING 100-YR FLOODPLAIN
EXISTING 100-YR CONVEYANCE
LIMIT OF MASS GRADING
LIMIT OF JIMMY CAMP CREEK GRADING
EXISTING JIMMY CAMP CREEK FLOWLINE
RELOCATED JIMMY CAMP CREEK
REFER TO SHEETS 12-29 FOR
CHANNEL GRADING AND DETAILS



KEY MAP
NO SCALE

REFER TO JIMMY CAMP CREEK
PLAN SHEET 19 FOR OFFSITE
EARLY GRADING INFORMATION.



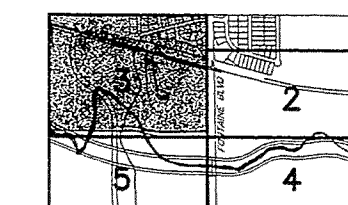
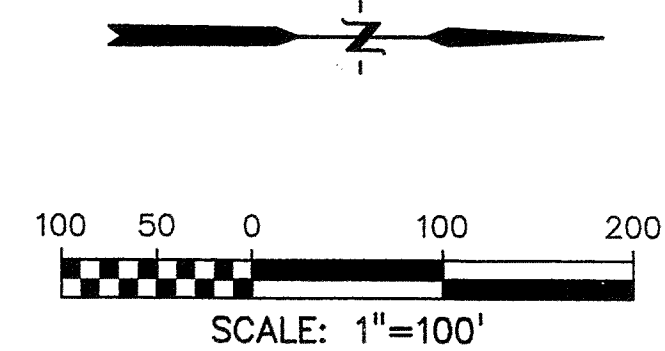
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SIGNATURE AND DATE

PREPARED BY: Drexel Barrell & Co. Engineers + Surveyors 6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887 1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4338 5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645 CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.		THE LANDHUIS COMPANY 212 N. WAHSATCH, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: DAVE COCCOLIN		PROJECT INFO: LORSON RANCH JIMMY CAMP CREEK REALIGNMENT EL PASO COUNTY, COLORADO		DESIGNED BY: SM/KJM DRAWN BY: WC CHECKED BY:		REVISION DESCRIPTIONS RESPONSE TO COUNTY COMMENTS COUNTY COMMENTS		DATE 02 SEP 05 01 DEC 2005		DRAWING INFO. MASS GRADING PLAN		DATE: 18 AUG 2005 SCALE: H: 1" = 100' V:		JOB NO.: C7668-2 DRAWING NO.: 6D 154		SHEET 2 SHEETS 31	
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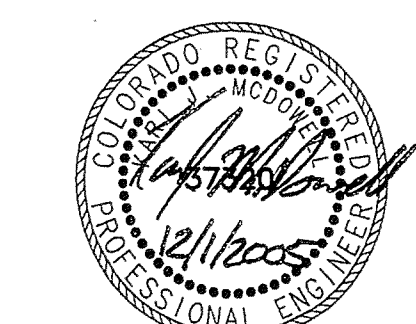
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MATCH LINE
SEE SHEET 2



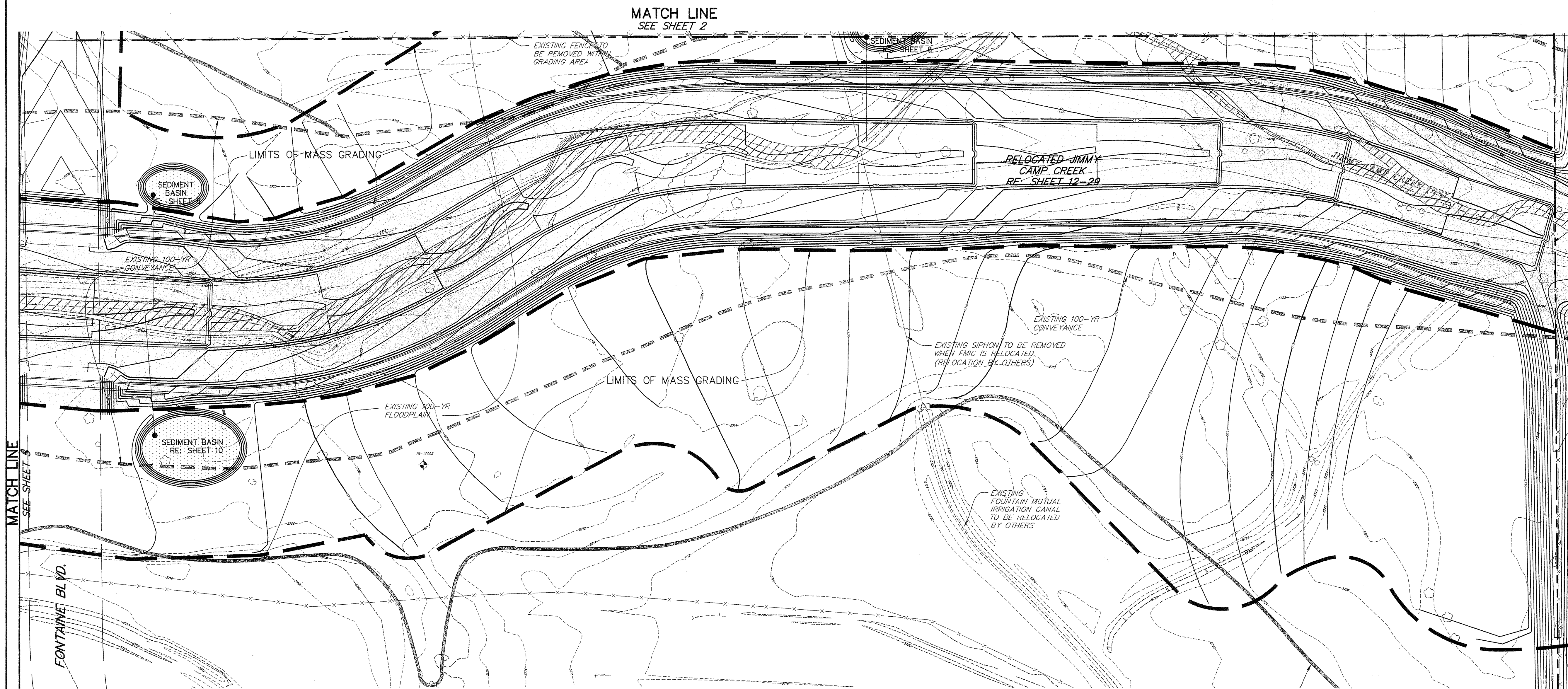
- NOTES:
1. REFER TO NOTES ON SHEET 2.
 2. REFER TO LEGEND ON SHEET 2.
 3. WHERE AN ACTIVELY-FLOWING WATERCOURSE MUST BE CROSSED REGULARLY BY CONSTRUCTION VEHICLES, A TEMPORARY CROSSING SHOULD BE PROVIDED. A FORD SHOULD BE LINED WITH A MINIMUM 6-INCH THICK LAYER OF 1-1/2 INCH DIAMETER ROCK. THE APPROACH LENGTH WILL BE A MINIMUM OF 75 FEET AND HAVE A MINIMUM WIDTH OF 15 FEET. REFER TO TABLE MT-3 ON SHEET 31 FOR THE FILTER CLOTH MATERIAL REQUIREMENTS. A TYPICAL STREAM FORD IS SHOWN ON FIGURE C-18 ON SHEET 31. A PERMIT IS REQUIRED FOR PLACEMENT OF FILL IN A WATERWAY UNDER SECTION 404 OF THE CLEAN WATER ACT. THE U.S. ARMY CORPS OF ENGINEERS HAS ISSUED NATIONWIDE GENERAL PERMIT NUMBER 14 FOR MINOR ROAD CROSSING FILLS. THIS IS DEFINED AS PLACEMENT OF LESS THAN 200 CUBIC YARDS OF FILL.



NOT VALID WITHOUT ORIGINAL
SIGNATURE AND DATE

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												SCALE: H: 1" = 100' V:		DRAWING NO.: 6D 154				SHEETS 31	

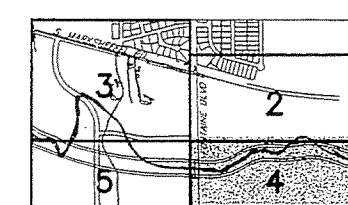
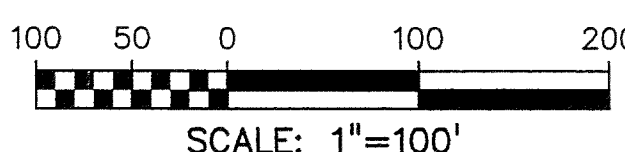
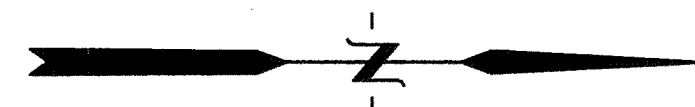
MASS GRADING PLAN



EXISTING FENCE TO BE REMOVED WITHIN GRADING AREA

REFER TO JIMMY CAMP CREEK PLAN SHEET 19 FOR OFFSITE GRADING INFORMATION.

PROPOSED CHANNEL TO REDIRECT OFFSITE RUNOFF INTO JCC. REFER TO CHANNEL TYPICAL SECTION DESIGNED BY OTHERS.



KEY MAP
NO SCALE

- NOTES:**
1. REFER TO NOTES ON SHEET 2.
2. REFER TO LEGEND ON SHEET 2.



NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE

PREPARED BY: **Drexel Barrell & Co.** Engineers Surveyors
6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80918 (719) 260-0887
1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4338
5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645
CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.

PREPARED FOR: **THE LANDHUIS COMPANY**
212 N. WAHATCH, SUITE 301
COLORADO SPRINGS, COLORADO 80903 (719) 635-3200
CONTACT: DAVE COCOLIN

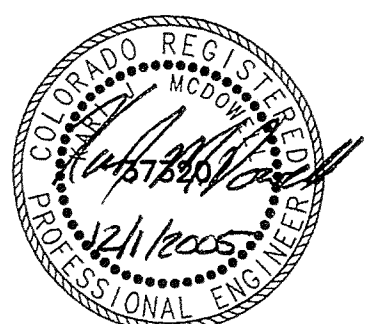
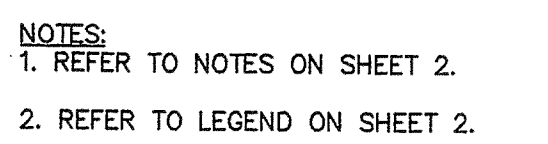
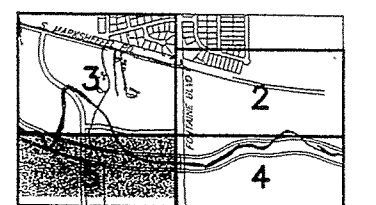
PROJECT INFO: **LORSON RANCH**
JIMMY CAMP CREEK
REALIGNMENT
EL PASO COUNTY, COLORADO

DESIGNED BY: SM/KJM
DRAWN BY: WC
CHECKED BY:

REVISION DESCRIPTIONS
RESPONSE TO COUNTY COMMENTS 02 SEP 05
COUNTY COMMENTS 01 DEC 2005
CLIENT COMMENTS 01 MAR 2006

DRAWING INFO: **MASS GRADING PLAN**

DATE: 18 AUG 2005
JOB NO: C7668-2
SHEET: 4
SCALE: H: 1" = 100' V: 1" = 100'
DRAWING NO: 6D 154
SHEETS: 31



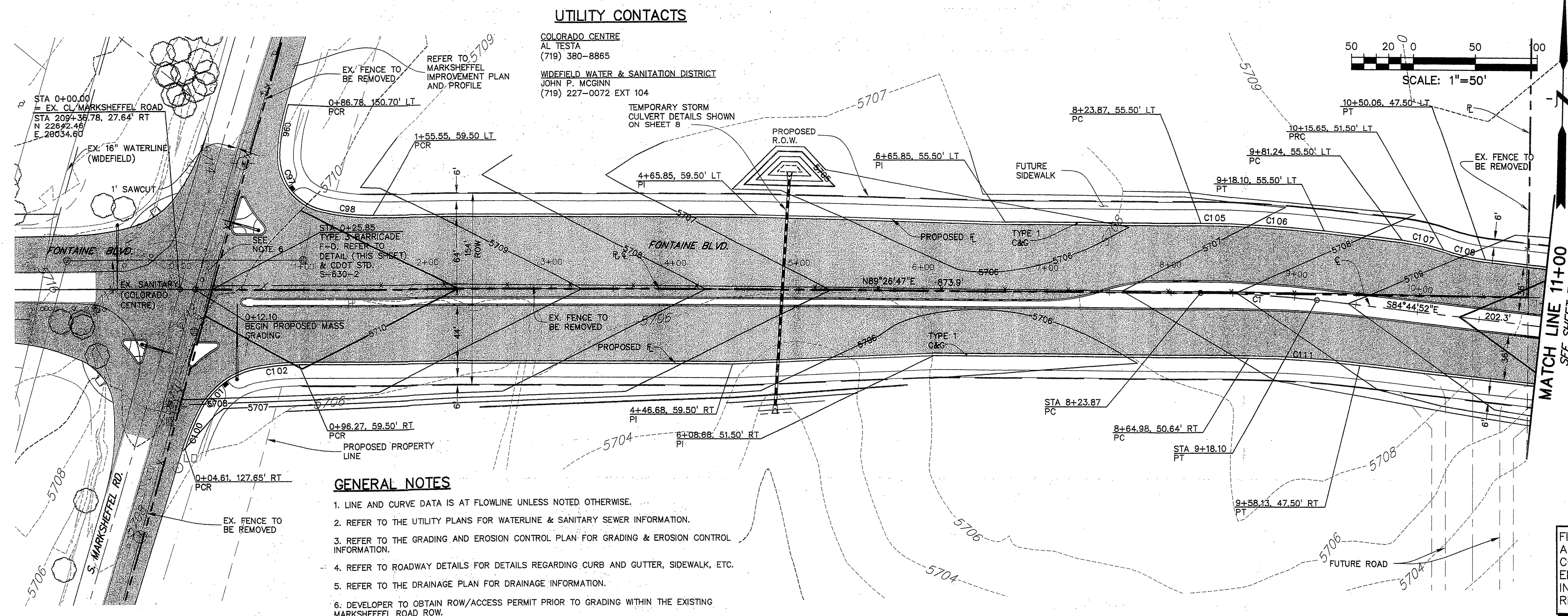
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SIGNATURE AND DATE

DATE: 18 AUG 2005	JOB NO: C7668-2	SHEET 5
SCALE: H: 1" = 100' V:	DRAWING NO.: 6D 154	SHEETS 31



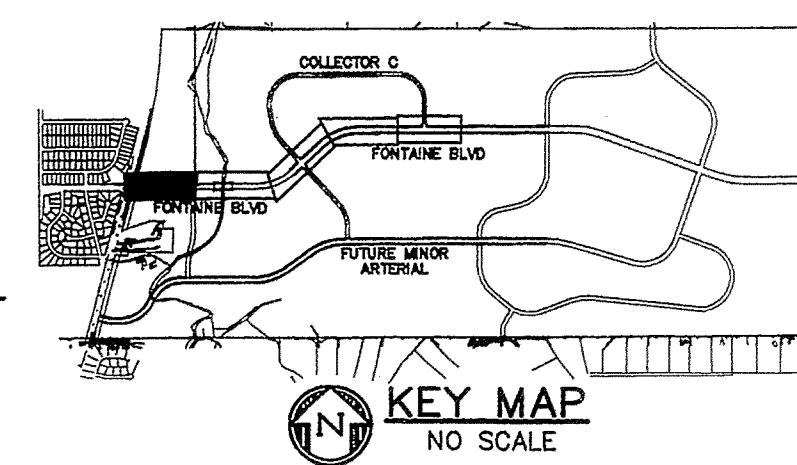
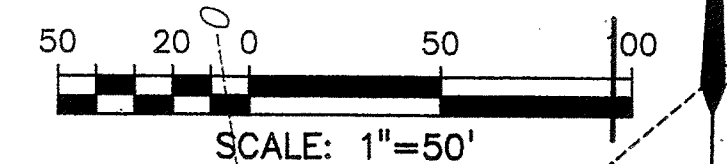
PROJECT INFO:

DESIGNED BY:	REVISION DESCRIPTIONS	DATE
SM/KJM	RESPONSE TO COUNTY COMMENTS	02 SEP 05
DRAWN BY:	COUNTY COMMENTS	01 DEC 2005
WC		
CHECKED BY:		

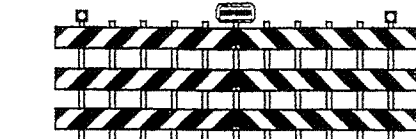


UTILITY CONTACTS

COLORADO CENTRE
AL TESTA
(719) 380-8865
WIDEFIELD WATER & SANITATION DISTRICT
JOHN P. MCGINN
(719) 227-0072 EXT 104



FUTURE ASPHALT PAVEMENT



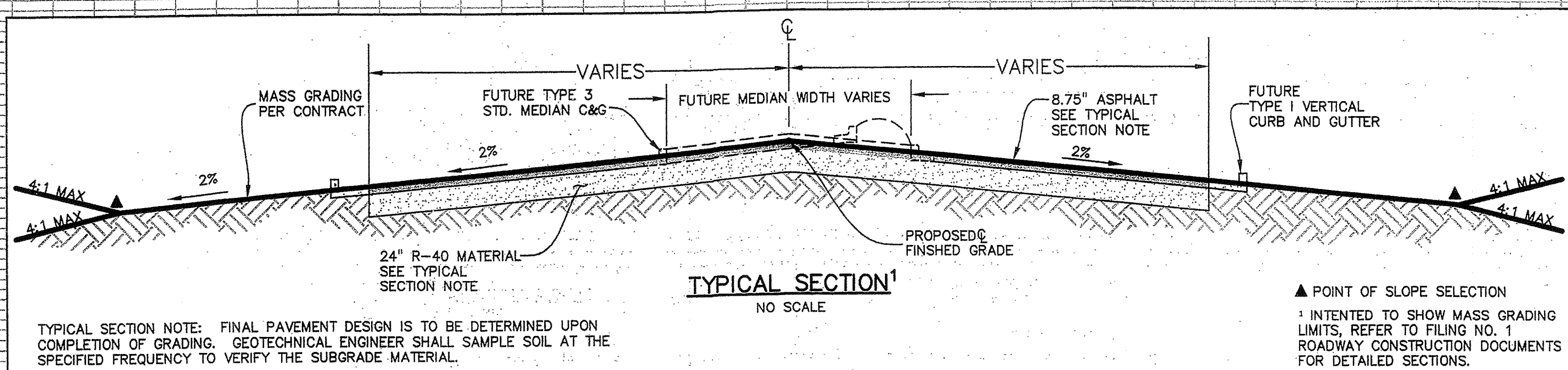
TYPE 3 BARRICADE
STA 0+25.85

CURVE	LENGTH	RADIUS	DELTA	BEARING
C1	94.23'	930.00'	5°48'20"	N87°38'02"W
C8	41.08'	180.00'	13°04'31"	S08°52'06"W
C9	62.88'	45.00'	79°48'33"	S37°34'28"E
C9B	41.08'	180.00'	13°04'31"	S84°00'57"E
C100	33.62'	180.00'	10°42'05"	S21°32'23"W
C101	58.83'	65.00'	51°51'18"	S52°49'04"W
C102	33.62'	180.00'	10°42'05"	S84°05'45"W
C105	23.59'	985.50'	1°22'18"	N89°52'04"W
C106	76.26'	985.50'	4°26'02"	N86°57'53"W
C107	34.72'	150.00'	13°15'41"	N78°07'02"W
C108	34.72'	150.00'	13°15'41"	S78°07'02"E
C111	90.38'	892.00'	5°48'20"	N87°38'02"W

FINISHED C&G GRADE & CONTOURS SHOWN ARE TOP OF ASPHALT. EARTHWORK CONTRACT INCLUDES EXCAVATION OR EMBANKMENT TO SUBGRADE AND INSTALLATION OF R-40 MATERIAL. REFER TO TYPICAL SECTION, THIS SHEET.

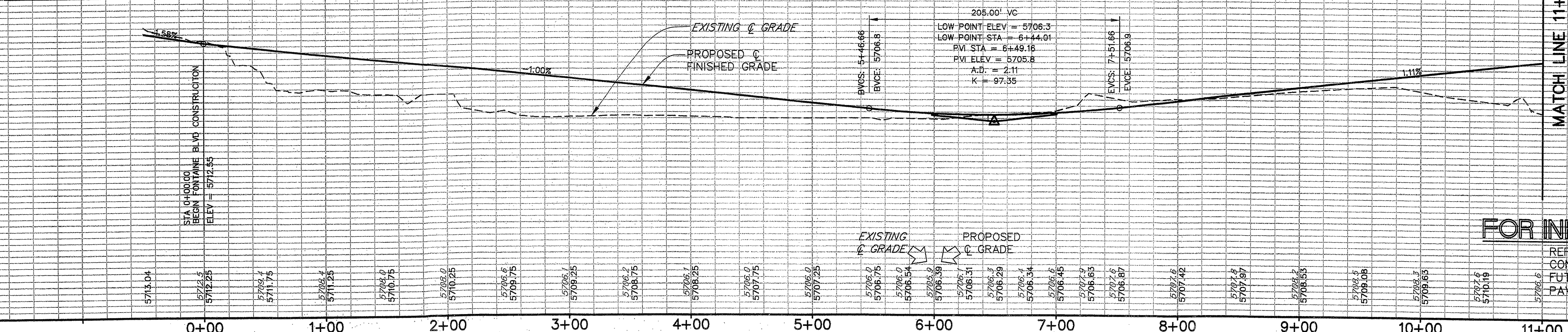
GENERAL NOTES

1. LINE AND CURVE DATA IS AT FLOWLINE UNLESS NOTED OTHERWISE.
2. REFER TO THE UTILITY PLANS FOR WATERLINE & SANITARY SEWER INFORMATION.
3. REFER TO THE GRADING AND EROSION CONTROL PLAN FOR GRADING & EROSION CONTROL INFORMATION.
4. REFER TO ROADWAY DETAILS FOR DETAILS REGARDING CURB AND GUTTER, SIDEWALK, ETC.
5. REFER TO THE DRAINAGE PLAN FOR DRAINAGE INFORMATION.
6. DEVELOPER TO OBTAIN ROW/ACCESS PERMIT PRIOR TO GRADING WITHIN THE EXISTING MARKSHEFFEL ROAD ROW.



TYPICAL SECTION NOTE: FINAL PAVEMENT DESIGN IS TO BE DETERMINED UPON COMPLETION OF GRADING. GEOTECHNICAL ENGINEER SHALL SAMPLE SOIL AT THE SPECIFIED FREQUENCY TO VERIFY THE SUBGRADE MATERIAL.

POINT OF SLOPE SELECTION
INTENDED TO SHOW MASS GRADING LIMITS, REFER TO FILING NO. 1 ROADWAY CONSTRUCTION DOCUMENTS FOR DETAILED SECTIONS.

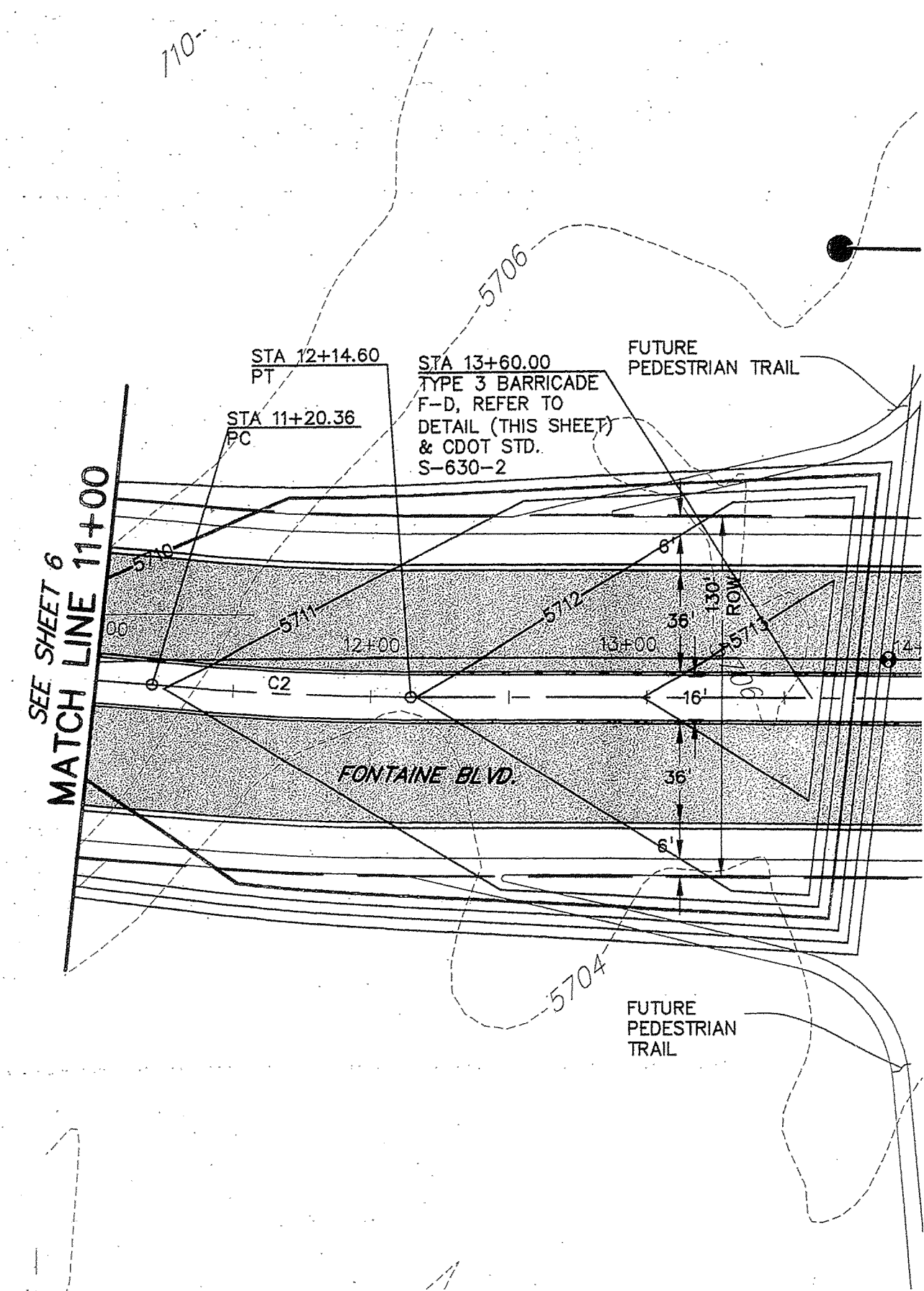


FOR INFORMATION ONLY

REFER TO FILING NO. 1 ROADWAY CONSTRUCTION DOCUMENTS FOR FUTURE CURB AND GUTTER, AND PAVING DETAILS.

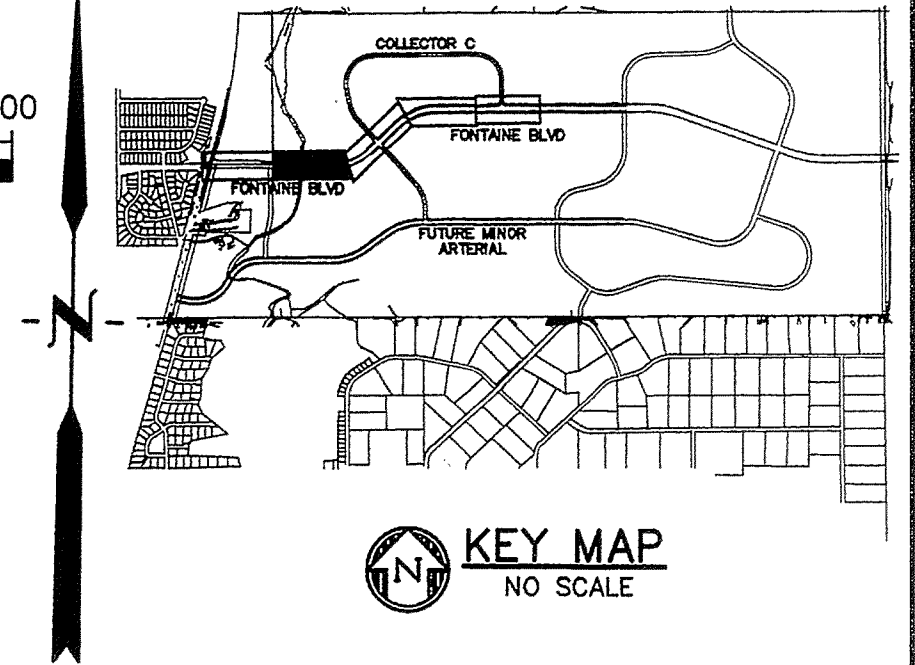
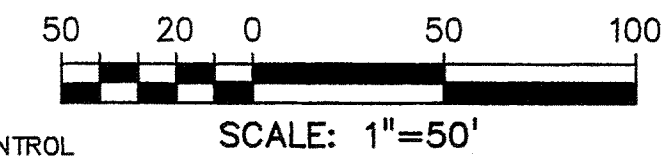
PREPARED BY: Drexel Barrell & Co. 6365 CORPORATE DRIVE 1800 38TH STREET 5401 W. 10TH STREET, SUITE 100A CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.	PREPARED FOR: THE LANDHUIS COMPANY 212 N. WASHITON, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: DAVE COCCOLIN	PROJECT INFO: LORSON RANCH JIMMY CAMP CREEK REALIGNMENT EL PASO COUNTY, COLORADO	DESIGNED BY: JE RESPONSE TO COUNTY COMMENTS DATE: 02 SEP 05	DRAWING INFO: FONTAINE BLVD. PLAN AND PROFILE (STA 0+00 TO 11+00)	DATE: 18 AUG 2005 SCALE: H: 1" = 50' V: 1" = 5'	JOB NO: C7668-2 DRAWING NO.: 6D 154	SHEET: 6 SHEETS: 31
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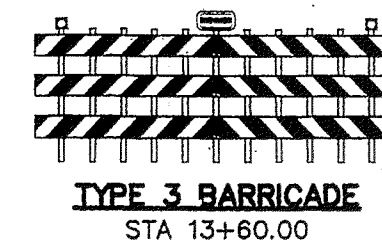


GENERAL NOTES

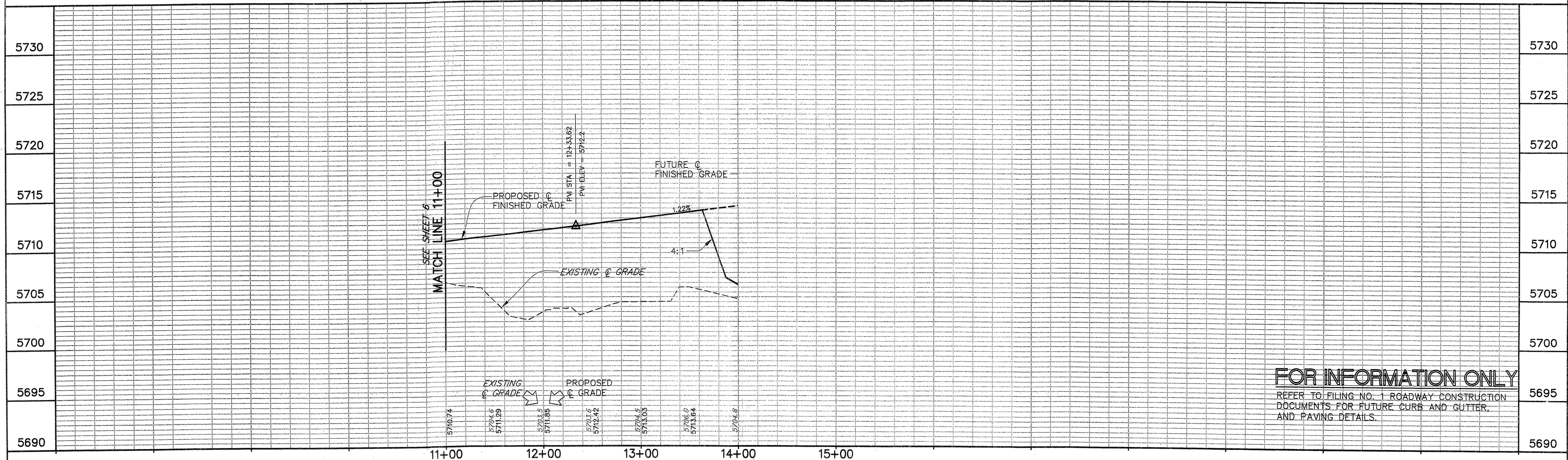
1. LINE AND CURVE DATA IS AT FLOWLINE UNLESS NOTED OTHERWISE.
2. REFER TO THE UTILITY PLANS FOR WATERLINE & SANITARY SEWER INFORMATION.
3. REFER TO THE GRADING AND EROSION CONTROL PLAN FOR GRADING & EROSION CONTROL INFORMATION.
4. REFER TO ROADWAY DETAILS FOR DETAILS REGARDING CURB AND GUTTER, SIDEWALK, ETC.
5. REFER TO THE DRAINAGE PLAN FOR DRAINAGE INFORMATION.



CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	BEARING
C2	84.23'	930.00'	5°48'20"	S87°39'02"E



FINISHED @ GRADE & CONTOURS SHOWN ARE TOP OF ASPHALT. EARTHWORK CONTRACT INCLUDES EXCAVATION OR EMBANKMENT TO SUBGRADE AND INSTALLATION OF R-40 MATERIAL. REFER TO TYPICAL SECTION, SHEET 6.



FOR INFORMATION ONLY
REFER TO FILING NO. 1 ROADWAY CONSTRUCTION DOCUMENTS FOR FUTURE CURB AND GUTTER, AND PAVING DETAILS.

PREPARED BY: **Drexel Barrell & Co.** Engineers - Surveyors
6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887
1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4336
5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645
CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.

PREPARED FOR: **THE LANDHUIS COMPANY**
212 N. WAHSATCH, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200
CONTACT: DAVE COCCOLIN

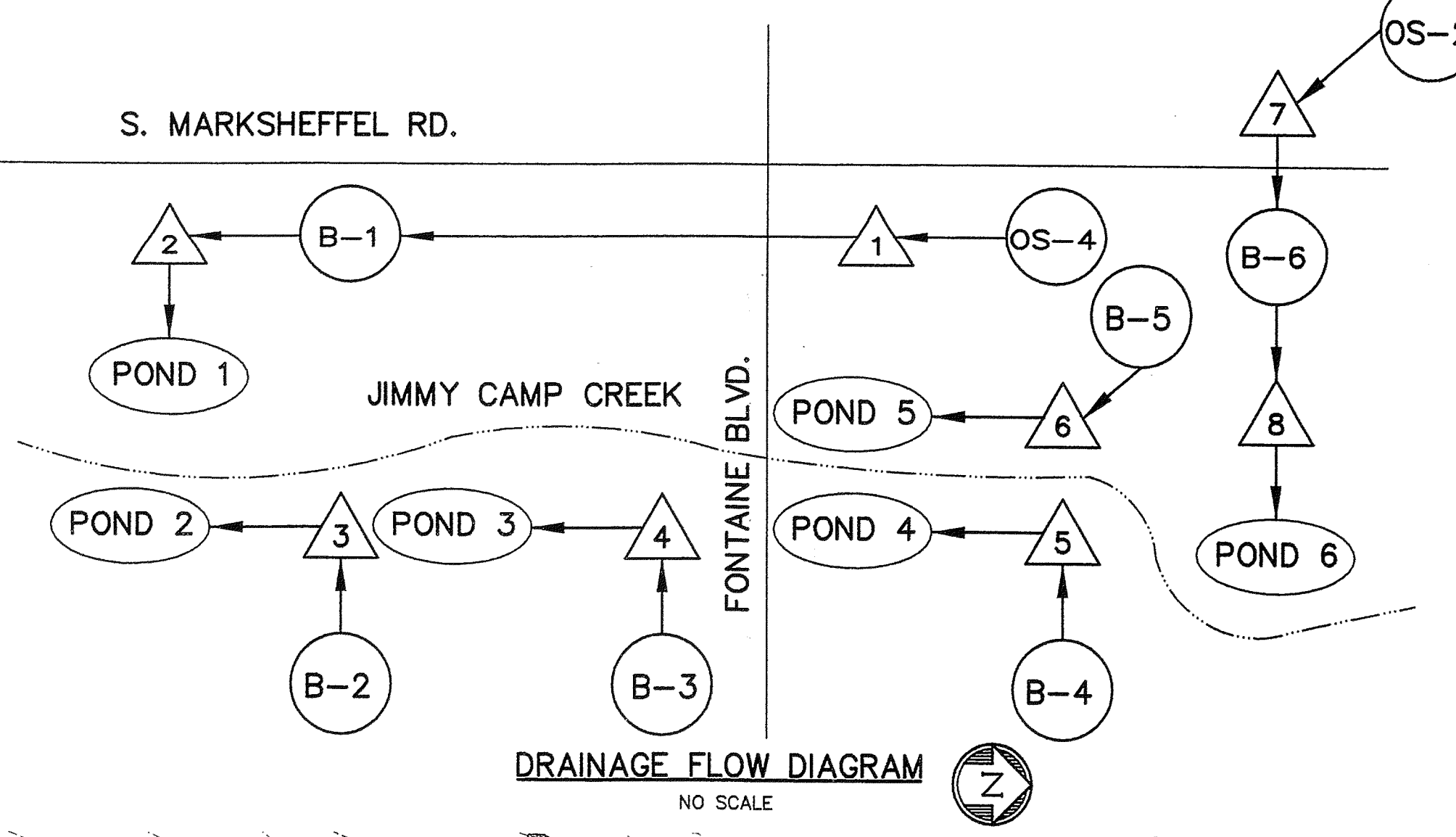
PROJECT INFO: **LORSON RANCH**
JIMMY CAMP CREEK REALIGNMENT
EL PASO COUNTY, COLORADO

DESIGNED BY: JE
DRAWN BY: JE
CHECKED BY: JE
REVISION DESCRIPTIONS: RESPONSE TO COUNTY COMMENTS
DATE: 02 SEP 05

DRAWING INFO: **FONTAINE BLVD.**
PLAN AND PROFILE
(STA 11+00 TO 24+00)

DATE: 18 AUG 2005	JOB NO: C7668-2	SHEET 7
SCALE: H: 1" = 50' V: 1" = 5'	DRAWING NO.: 6D 154	SHEETS 31

- LEGEND**
- PROPERTY LINE
 LOT LINES
 EASEMENT
 RIGHT-OF-WAY
 EXISTING RIGHT-OF-WAY
 PROPOSED INTERMEDIATE CONTOUR 5724
 PROPOSED INDEX CONTOUR 5745
 EX. INTERMEDIATE CONTOUR 5364
 EX. INDEX CONTOUR 5365
 EXISTING 100-YR FLOODPLAIN
 EXISTING 100-YR CONVEYANCE
 LIMIT OF MASS GRADING
 EXISTING JIMMY CAMP CREEK FLOWLINE
- LIMIT OF JIMMY CAMP CREEK GRADING
 EXISTING JIMMY CAMP CREEK
 DRAINAGE BASIN BOUNDARY
 DRAINAGE BASIN DESIGN POINT
 BASIN I.D.
 BASIN AREA (Acres)
 100 YEAR RUNOFF COEFFICIENT
 100 YEAR FLOW (cfs)
 DIRECTION OF FLOW
 100 YEAR DETENTION POND OVERFLOW
 PROPOSED STORM SEWER 18" RCP
 EX. STORM CULVERT OR LARGE DIAMETER STORM SEWER EX. 54" CMP
- ROCK CHECK DAM (SEE DETAIL SHEET 30)
 DIVERSION SWALE (SEE DETAIL SHEET 30)
 LOW TAILWATER BASIN (SEE DETAIL SHEET 31)
 MULCHING (SEE NOTES SHEET 11)
 OUTLET PROTECTION (SEE DETAIL SHEET 31)
 SEDIMENTATION BASIN (SEE DETAIL SHEET 30)
 SILT FENCE (SEE DETAIL SHEET 31)
 SURFACE ROUGHENING (SEE NOTES SHEET 11)
 TEMPORARY SEEDING (SEE NOTES SHEET 11)
 VEHICLE TRACKING CONTROL (SEE DETAIL SHEET 31)

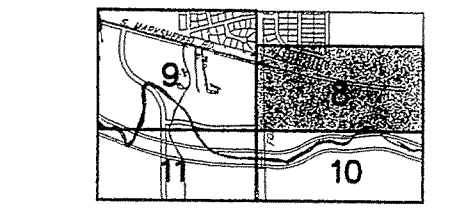
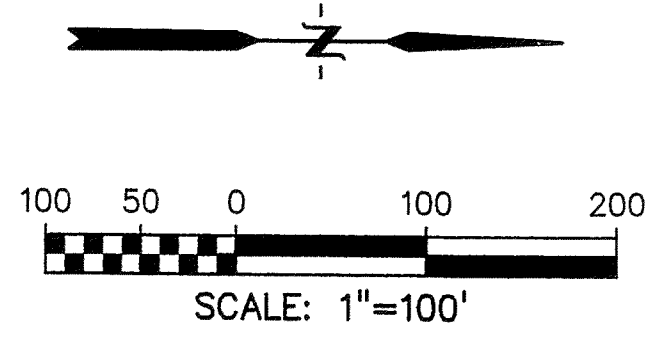


RUNOFF SUMMARY TABLE

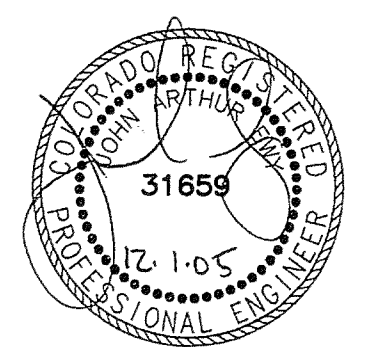
DESIGN POINT	TRIBUTARY BASINS	RUNOFF 100-YR* (cfs)
1	OS-4	16.3
2	OS-4, B-1	22.5
3	B-2	4.2
4	B-3	4.0
5	B-4	16.1
6	B-5	3.1
7	OS-2	112.9
8	OS-2, B-6	112.9

*ALL FLOWS ARE EITHER UNDEVELOPED OR HISTORIC.

SEDIMENT BASIN POND 6
 DISTURBED AREA=14.25-ACRE
 MIN. VOLUME=0.59 ACRE-FT
 CLEAN-OUT VOLUME=0.29 ACRE-FT
 BOTTOM ELEV=5715.00
 CLEAN-OUT ELEV=5716.70
 MAX. SEDIMENT WS ELEV=5717.80
 EMERGENCY SPILLWAY LENGTH=70.0-FT
 TOP OF POND=5719.00
 TOP OF RISER=5717.80
 RISER SIZE=8-IN
 PERFORATION SIZE=1-1/16-IN
 #ROWS=4
 #COLUMNS=1
 RISER OUTFALL SLOPE=2.0% MIN.
 (SEE DETAIL SHEET 31)

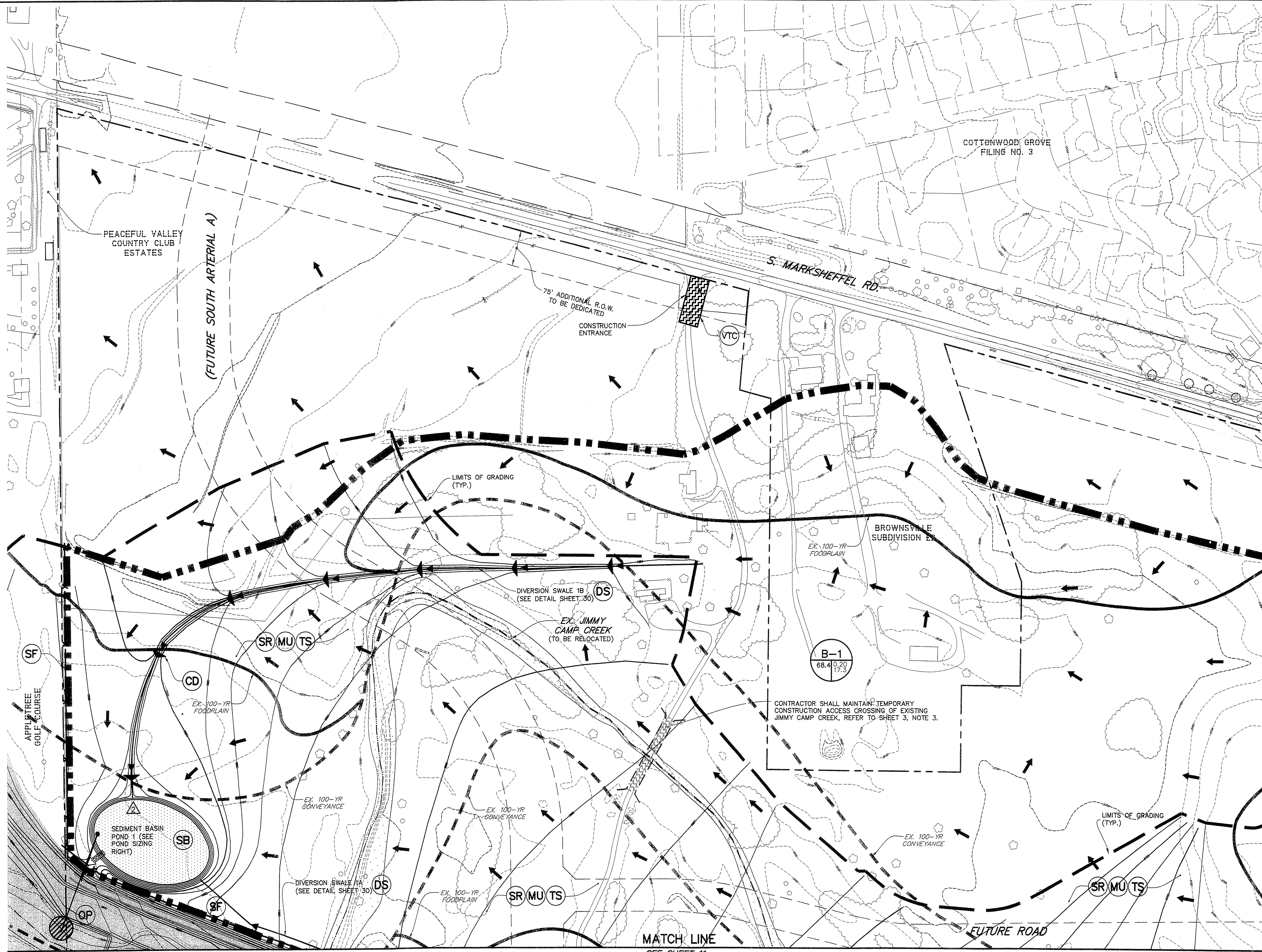


KEY MAP
 NO SCALE



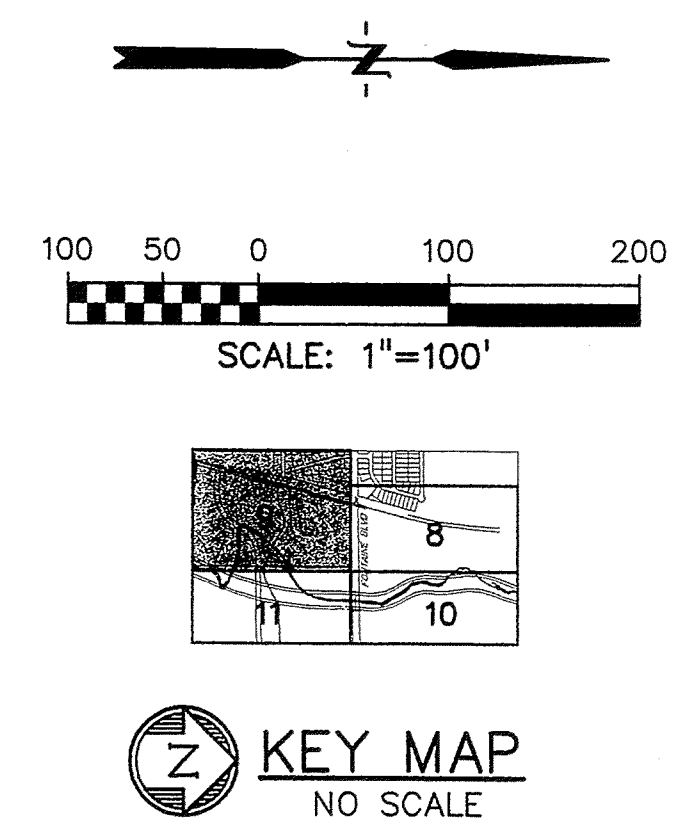
NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE



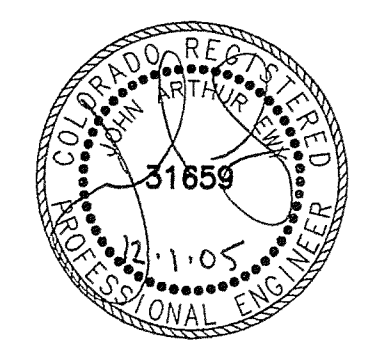


SEDIMENT BASIN POND 1
DISTURBED AREA=45.48 ACRE
MIN. VOLUME=1.88 ACRE-FT
CLEAN-OUT VOLUME=0.94 ACRE-FT
BOTTOM ELEV=5685.00
CLEAN-OUT ELEV=5686.80
MAX. SEDIMENT WS ELEV=5688.00
EMERGENCY SPILLWAY ELEV=5688.50
EMERGENCY SPILLWAY LENGTH=25.0-FT
TOP OF POND=5689.00

TOP OF RISER=5688.00
RISER SIZE=8-IN
PERFORATION SIZE=1-3/8-IN
#ROWS=4
#COLUMNS=2
RISER OUTFALL SLOPE=2.0% MIN.
(SEE DETAIL SHEET 31)



- NOTES:
1. REFER TO NOTES ON SHEET 10.
2. REFER TO LEGEND ON SHEET 8.

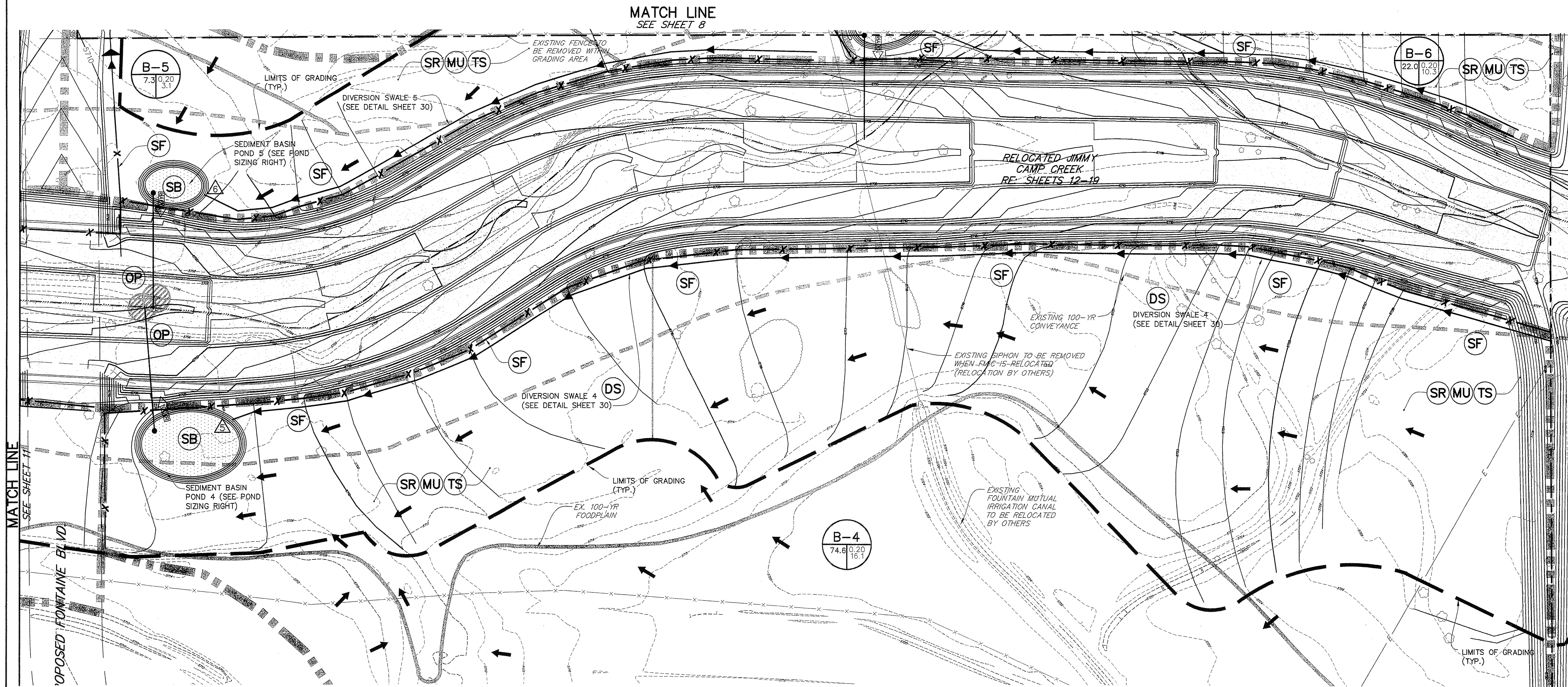


NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE

<p>PREPARED BY: Drexel Barrell & Co. Engineers - Surveyors 6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887 1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4336 5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645 CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.</p>	<p>PREPARED FOR: THE LANDHUIS COMPANY 212 N. WAHSATCH, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: DAVE COCOLIN</p>	<p>PROJECT INFO: LORSON RANCH JIMMY CAMP CREEK REALIGNMENT EL PASO COUNTY, COLORADO</p>	<p>DESIGNED BY: SM/LRE DRAWN BY: WC CHECKED BY:</p> <p>REVISION DESCRIPTIONS RESPOND TO COUNTY COMMENTS COUNTY COMMENTS</p> <p>DATE 02 SEP 2005 01 DEC 2005</p>	<p>DRAWING INFO: DRAINAGE AND EROSION CONTROL PLAN</p>	<p>DATE: 18 AUG 2005 SCALE: H: 1" = 100' V:</p> <p>JOB NO: C7668-2 DRAWING NO: 6D 154</p> <p>SHEET 9 SHEETS 31</p>
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EROSION NOTES:

1. TEMPORARY SEEDING SHALL BE APPLIED WITHIN 14 DAYS OF ACHIEVING FINAL GRADE OR SUSPENDING FURTHER CONSTRUCTION. TEMPORARY SEEDING SHALL BE APPLIED ON DISTURBED AREAS THAT ARE TO REMAIN IN AN INTERIM STATE FOR MORE THAN 30 DAYS, BUT LESS THAN 1 YEAR. REFER TO TEMPORARY SEEDING SCHEDULE, SHEET 11. EROSION CONTROL IS DEPENDENT UPON ESTABLISHING VEGETATIVE COVER.
2. ALL REQUIRED PERIMETER SILT FENCING AND VEHICLE TRACKING CONTROL SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITY (STOCKPILING, STRIPPING, GRADING, ETC.). SILT FENCES AND DIVERSION SWALES SHALL BE ADJUSTED AS GRADING PROGRESSES TO PREVENT SEDIMENT TRANSPORT OFF-SITE OR INTO JIMMY CAMP CREEK.
3. PRE-DISTURBANCE VEGETATION SHALL BE PROTECTED AND RETAINED WHEREVER POSSIBLE. REMOVAL OR DISTURBANCE OF EXISTING VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS, AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.
4. ALL SOILS EXPOSED DURING LAND DISTURBING ACTIVITY (STRIPPING, GRADING, UTILITY INSTALLATIONS, STOCKPILING, FILLING, ETC.) SHALL BE KEPT IN A ROUGHENED CONDITION BY RIPPING OR DISCING ALONG LAND CONTOURS UNTIL MULCH AND TEMPORARY SEEDING IS INSTALLED. NO SOILS WITHIN PROJECT LIMITS SHALL REMAIN EXPOSED BY LAND DISTURBING ACTIVITY FOR MORE THAN THIRTY (30) DAYS BEFORE REQUIRED TEMPORARY EROSION CONTROL (E.G. SEED/MULCH, ETC.) IS INSTALLED.
5. ALL TEMPORARY (STRUCTURAL) EROSION CONTROL MEASURES SHALL BE INSPECTED AND REPAIRED OR RECONSTRUCTED BY THE CONTRACTOR AS NECESSARY AFTER EACH RUNOFF EVENT IN ORDER TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL RETAINED SEDIMENTS, PARTICULARLY THOSE ON PAVED ROADWAY SURFACES, SHALL BE REMOVED AND DISPOSED OF IN A MANNER AND LOCATION SO AS NOT TO CAUSE THEIR RELEASE INTO ANY DRAINAGEWAY.
6. NO SOIL STOCKPILE SHALL EXCEED TWENTY-FIVE (25) FEET IN HEIGHT. ALL SOIL STOCKPILES SHALL BE PROTECTED FROM SEDIMENT TRANSPORT BY SURFACE ROUGHENING, WATERING, AND PERIMETER SILT FENCING. ANY SOIL STOCKPILE REMAINING AFTER 60 DAYS SHALL BE SEEDED AND MULCHED.
7. LOCAL ORDINANCE PROHIBITS THE TRACKING, DROPPING, OR DEPOSITING OF SOILS OR ANY OTHER MATERIAL ONTO STREETS BY OR FROM ANY VEHICLE. CONTRACTOR SHALL INSTALL VEHICLE TRACKING CONTROL AT DESIGNATED CONSTRUCTION ENTRANCE. ANY INADVERTENTLY DEPOSITED MATERIAL SHALL BE CLEANED IMMEDIATELY BY THE CONTRACTOR. TRAILER LOCATIONS, STORAGE AND STAGING AREAS SHALL HAVE A VEHICLE TRACKING CONTROL TEMPORARY BMP.
8. CRIMPED STRAW MULCH SHALL BE PLACED OVER ALL DISTURBED AREAS REQUIRING TEMPORARY SEEDING.
9. ALL TOPSOIL SHALL BE SALVAGED. TOPSOIL AND OVERBURDEN SHALL BE REDISTRIBUTED WITHIN THE GRADED AREA AFTER ROUGH GRADING TO PROVIDE A SUITABLE BASE FOR AREAS WHICH WILL BE SEEDED AND PLANTED. RUNOFF FROM STOCKPILED AREAS SHALL BE CONTROLLED TO PREVENT EROSION.

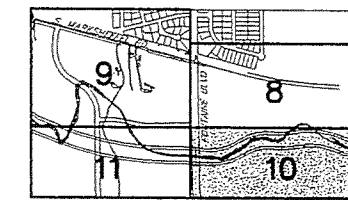
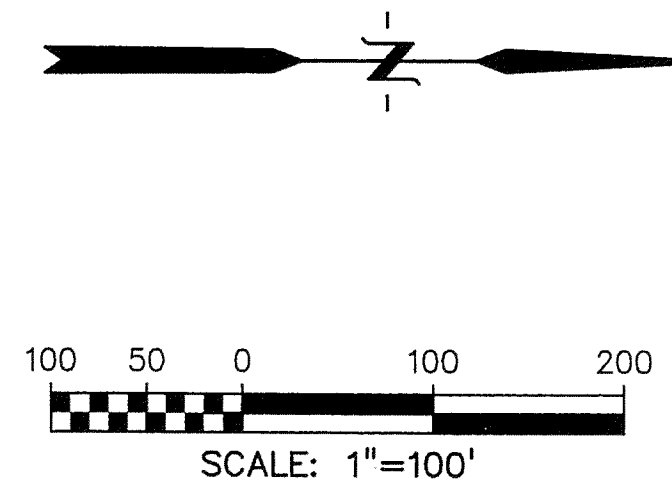
10. SOIL STABILIZATION MEASURES SHALL BE APPLIED WITHIN 30 DAYS TO DISTURBED AREAS WHICH MAY NOT BE AT FINAL GRADE, BUT WILL BE LEFT DORMANT FOR LONGER THAN 30 DAYS.
11. FUGITIVE DUST EMISSIONS RESULTING FROM GRADING ACTIVITIES AND/OR WIND SHALL BE CONTROLLED USING THE BEST AVAILABLE CONTROL TECHNOLOGY, AS DEFINED BY THE COLORADO DEPARTMENT OF HEALTH, AT THE TIME OF GRADING.
12. DISTURBED AREAS THAT ARE TO FINAL GRADE BUT WILL REMAIN UNDEVELOPED FOR MORE THAN 1 YEAR SHALL BE REVEGETATED WITH A PERMANENT SEED MIX. CONTRACTOR SHALL COORDINATE AREAS WITH OWNER/DEVELOPER. IF CONSTRUCTION IS SUSPENDED FOR MORE THAN 1 YEAR, ALL DISTURBED AREAS SHALL BE REVEGETATED WITH A PERMANENT SEED MIX. REFER TO PERMANENT SEEDING SCHEDULE, SHEET 30.
13. AT LEAST 10 DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF THE CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORM WATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORM WATER 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
WQCD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT
14. OUTLET PIPES FROM SEDIMENT PONDS WILL BE SHORTENED TO THE EDGE OF THE RELOCATED JIMMY CAMP CREEK FROM THE HISTORIC CREEK LOCATION WHEN THE REDIRECTED CREEK REACHES EACH OUTLET PIPE.
15. TEMPORARY SWALES SHALL BE MAINTAINED TO DRAIN TO THE SEDIMENT BASINS AS SHOWN ON THE PLANS. TEMPORARY SWALES WILL BE ADJUSTED TO DRAIN TO THE SEDIMENT BASINS DURING GRADING UP TO AND INCLUDING FINAL GRADE.
16. THE TEMPORARY CREEK CROSSING IS PHASED SO THAT PHASE ONE ENDS ONCE A NEW TEMPORARY CREEK IS ESTABLISHED AND THE CREEK HAS BEEN REDIRECTED TO THE PROPOSED LOCATION. ONCE PHASE ONE ENDS PHASE TWO BEGINS IN THE NEW LOCATION.
17. THE EROSION CONTROL MEASURES PRESENTED ON THIS PLAN ARE FOR GRADING ACTIVITIES BEYOND THE BANKS OF JIMMY CAMP CREEK. REFER TO THE JIMMY CAMP CREEK PLAN AND PROFILE DRAWINGS FOR CONSTRUCTION MEANS AND METHODS INCLUDING EROSION CONTROL.
18. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND PROVIDE FOR ADEQUATE DRAINAGE THROUGH THE SITE DURING THE PROCESS OF EXCAVATION, GRADING AND EMBANKMENT. THE GRADE SHALL BE MAINTAINED IN SUCH CONDITION THAT IT IS WELL DRAINED AT ALL TIMES.

SB SEDIMENT BASIN POND 4
DISTURBED AREA=23.35 ACRE
MIN. VOLUME=0.96 ACRE-FT
CLEAN-OUT VOLUME=0.48 ACRE-FT
BOTTOM ELEV=5704.00
CLEAN-OUT ELEV=5705.80
MAX. SEDIMENT WS ELEV=5607.00
EMERGENCY SPILLWAY ELEV=5607.50
EMERGENCY SPILLWAY LENGTH=20.0-FT
TOP OF POND=5708.00

TOP OF RISER=5707.00
RISER SIZE=8-IN
PERFORATION SIZE=1-IN
#ROWS=4
#COLUMNS=2
RISER OUTFALL SLOPE=2.0% MIN.
(SEE DETAIL SHEET 31)

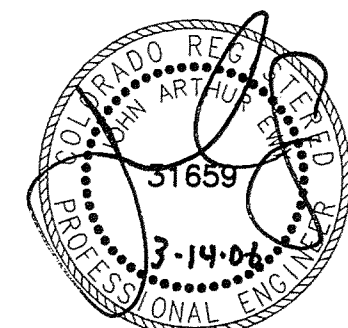
SB SEDIMENT BASIN POND 5
DISTURBED AREA=7.91 ACRE
MIN. VOLUME=0.33 ACRE-FT
CLEAN-OUT VOLUME=0.165 ACRE-FT
BOTTOM ELEV=5704.00
CLEAN-OUT ELEV=5705.90
MAX. SEDIMENT WS ELEV=5707.00
EMERGENCY SPILLWAY ELEV=5607.50
EMERGENCY SPILLWAY LENGTH=5.0-FT
TOP OF POND=5708.00

TOP OF RISER=5707.00
RISER SIZE=8-IN
PERFORATION SIZE=1-3/8-IN
#ROWS=4
#COLUMNS=3
RISER OUTFALL SLOPE=2.0% MIN.
(SEE DETAIL SHEET 31)



KEY MAP
NO SCALE

- NOTES:
1. REFER TO NOTES ON SHEET 10.
 2. REFER TO LEGEND ON SHEET 8.



NOT VALID WITHOUT ORIGINAL
SIGNATURE AND DATE

PREPARED BY: **Drexel Barrell & Co.** Engineers Surveyors
6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0987
1800 39TH STREET BOULDER, COLORADO 80301 (303) 442-4338
5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645
CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.

PREPARED FOR:



THE LANDHUIS COMPANY
212 N. WAHSATCH, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: DAVE COCCOLIN

PROJECT INFO:

LORSON RANCH
JIMMY CAMP CREEK
REALIGNMENT
EL PASO COUNTY, COLORADO

DESIGNED BY: SM/LRE
DRAWN BY: WC
CHECKED BY:

REVISION DESCRIPTIONS
RESPOND TO COUNTY COMMENTS
COUNTY COMMENTS
CLIENT COMMENTS
CLIENT COMMENTS

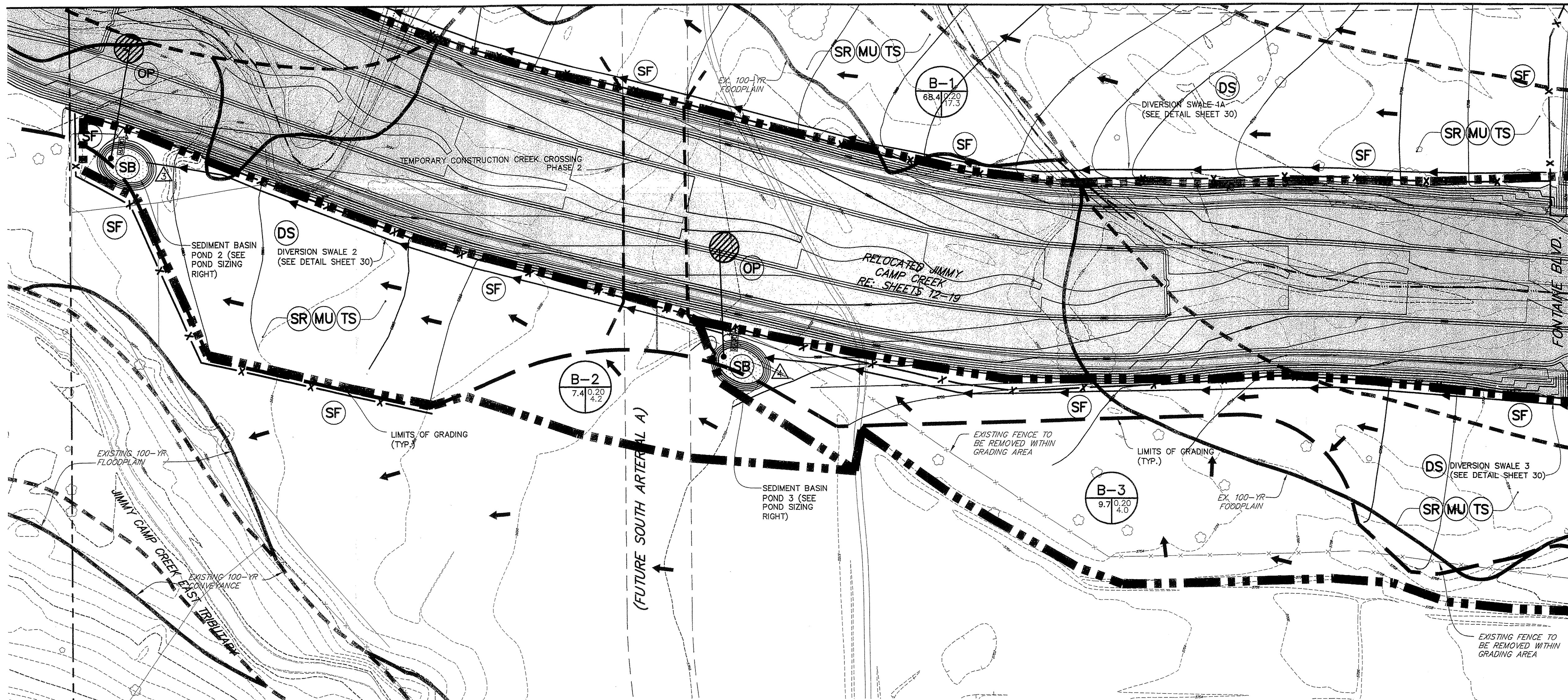
DATE
02 SEP 2005
01 DEC 2005
01 MAR 2006
14 MAR 2006

DRAWING INFO:

**DRAINAGE AND
EROSION CONTROL PLAN**

DATE: 18 AUG 2005
SCALE: H: 1" = 100'
V: 1" = 100'
JOB NO: C7668-2
DRAWING NO.: 6D 154
SHEET: 10
SHEETS: 31

MATCH LINE
SEE SHEET 9

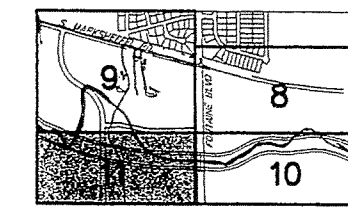
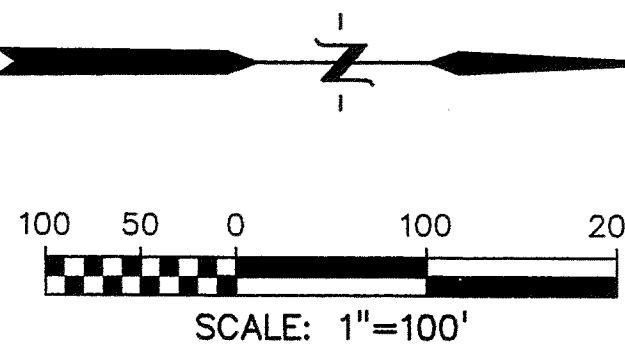


SEDIMENT BASIN POND 2
DISTURBED AREA=4.81 ACRE
MIN. VOLUME=0.20 ACRE-FT
CLEAN-OUT VOLUME=0.10 ACRE-FT
BOTTOM ELEV=5688.00
CLEAN-OUT ELEV=5689.80
MAX. SEDIMENT WS ELEV=5691.00
EMERGENCY SPILLWAY ELEV=5691.50
EMERGENCY SPILLWAY LENGTH=5.0-FT
TOP OF POND=5692.00

TOP OF RISER=5691.00
RISER SIZE=8-IN
PERFORATION SIZE=3/8-IN
#ROWS=3
#COLUMNS=1
RISER OUTFALL SLOPE=2.0% MIN.
(SEE DETAIL SHEET 31)

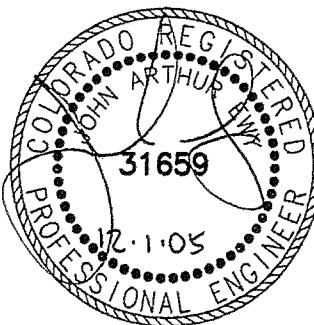
SEDIMENT BASIN POND 3
DISTURBED AREA=5.42 ACRE
MIN. VOLUME=0.22 ACRE-FT
CLEAN-OUT VOLUME=0.11 ACRE-FT
BOTTOM ELEV=5695.00
CLEAN-OUT ELEV=5696.80
MAX. SEDIMENT WS ELEV=5697.90
EMERGENCY SPILLWAY ELEV=5698.50
EMERGENCY SPILLWAY LENGTH=5.0-FT
TOP OF POND=5699.00

TOP OF RISER=5697.90
RISER SIZE=8-IN
PERFORATION SIZE=3/8-IN
#ROWS=3
#COLUMNS=1
RISER OUTFALL SLOPE=2.0% MIN.
(SEE DETAIL SHEET 31)



KEY MAP
NO SCALE

NOTES:
1. REFER TO NOTES ON SHEET 10.
2. REFER TO LEGEND ON SHEET 8.



NOT VALID WITHOUT ORIGINAL
SIGNATURE AND DATE

SR SURFACE ROUGHENING NOTES:

APPLICATION TECHNIQUES
1. STAIR STEP GRADING - USED ON SLOPES WITH GRADIENTS BETWEEN 3:1 AND 2:1 AND FOR SOIL CONTAINING A LARGE AMOUNT OF SMALL ROCKS. STAIRS ARE TO BE WIDE ENOUGH TO WORK WITH STANDARD EARTH MOVING EQUIPMENT.
2. GROOVE CUTTING - USED ON SLOPES WITH GRADIENTS BETWEEN 3:1 AND 2:1. GROOVES ARE TO BE AT LEAST 3 INCHES DEEP AND NO MORE THAN 15 INCHES APART.
3. TRACKING - USED ON SOILS WITH HIGHER SAND CONTENT DUE TO COMPACTION BY HEAVY MACHINERY.

MAINTENANCE REQUIREMENTS
1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL SURFACE ROUGHENED AREAS.
2. SURFACE ROUGHENING IS TO BE REPEATED AS OFTEN AS NECESSARY.
3. VEHICLES OR EQUIPMENT IS NOT TO BE DRIVEN OVER AREAS THAT HAVE BEEN ROUGHENED.
4. AS SURFACE ROUGHENING IS ONLY A TEMPORARY CONTROL, ADDITIONAL TREATMENTS MAY BE NECESSARY TO MAINTAIN THE SOIL SURFACE IN A ROUGHENED CONDITION.

MU MULCHING NOTES:

INSTALLATION REQUIREMENTS
1. ALL DISTURBED AREAS MUST BE MULCHED WITHIN 21 DAYS AFTER FINAL GRADE AND SEEDED AREAS ARE TO BE MULCHED WITHIN 24 HOURS AFTER SEEDING.
2. MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED- AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED FREE FORAGE CERTIFICATION PROGRAM.
3. HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL. GRAVEL CAN ALSO BE USED.
4. MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.
5. MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING MULCH FIBERS 4 INCHES INTO THE SOIL), USING NETTING (USED ON SMALL AREAS WITH STEEP SLOPES), OR WITH A TACKIFIER.
6. HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

MAINTENANCE REQUIREMENTS
1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.
2. MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEED.

TS TEMPORARY SEEDING NOTES

1. DISTURBED AREAS ARE TO BE SEEDED WITHIN 21 DAYS AFTER CONSTRUCTION ACTIVITY OR GRADING ENDS IF SEASON ALLOWS.
2. SOIL IS TO BE CONDITIONED FOR PLANT GROWTH BY APPLYING TOPSOIL, FERTILIZER OR LIME.
3. SOIL IS TO BE TILLED IMMEDIATELY PRIOR TO APPLYING SEEDS. COMPACT SOILS ESPECIALLY NEED TO BE LOOSENEED.
4. SEEDBED DEPTH IS TO BE 4 INCHES FOR SLOPES FLATTER THAN 3:1 AND 1 INCH FOR SLOPES STEEPER THAN 3:1.
5. ANNUAL GRASSES LISTED IN TABLE TS-1 ARE TO BE USED FOR TEMPORARY SEEDING. SEED MIXES ARE NOT TO CONTAIN ANY NOXIOUS WEED SEEDS INCLUDING RUSSIAN OR CANADIAN THISTLE, KNAWEED, PURPLE LOOSESTRIPE, EUROPEAN BINDWEED, JOHNSON GRASS, AND LEAFY SPURGE.
6. TABLE TS-1 ALSO PROVIDES REQUIREMENTS FOR SEEDING RATES, SEEDING DATES, AND PLANTING DEPTHS FOR THE APPROVED TYPES OF ANNUAL GRASSES.
7. SEEDING IS TO BE APPLIED USING MECHANICAL TYPE DRILLS EXCEPT WHERE SLOPES ARE STEEP OR ACCESS IS LIMITED THEN HYDRAULIC SEEDING MAY BE USED.
8. ALL SEEDED AREAS ARE TO BE MULCHED.
9. IF HYDRAULIC SEEDING IS USED THEN HYDRAULIC MULCHING SHALL BE DONE SEPARATELY TO AVOID SEEDS BECOMING ENCAPSULATED IN THE MULCH.

RECOMMENDED ANNUAL GRASSES

SPECIES (COMMON NAME)	GROWTH SEASON	SEEDING DATE	POUNDS OF PURE LIVE SEED (PLS) (PLS/ACRE)	PLANTING DEPTH (INCHES)
1. OATS	COOL	MARCH 16 - APRIL 30	35-50	1-2
2. SPRING WHEAT	COOL	MARCH 16 - APRIL 30	25-35	1-2
3. SPRING BARLEY	COOL	MARCH 16 - APRIL 30	25-35	1-2
4. ANNUAL RYEGRASS	COOL	MARCH 16 - JUNE 30	10-15	1-2
5. MILLET	WARM	MAY 16 - JULY 15	3-15	1/2-3/4
6. SUDANGRASS	WARM	MAY 16 - JULY 15	5-10	1/2-3/4
7. SORGHUM	WARM	MAY 16 - JULY 15	5-10	1/2-3/4
8. WINTER WHEAT	COOL	SEPTEMBER 1 - 30	20-35	1-2
9. WINTER BARLEY	COOL	SEPTEMBER 1 - 30	20-35	1-2
10. WINTER RYE	COOL	SEPTEMBER 1 - 30	20-35	1-2
11. TRITICALE	COOL	SEPTEMBER 1 - 30	25-40	1-2

**TS TEMPORARY SEED MIX
TABLE TS-1**

PREPARED BY: **Drexel Barrell & Co.** Engineers - Surveyors
6385 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887
1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4336
5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645
CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.



THE LANDHUIS COMPANY
212 N. WAHSATCH, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: DAVE COCCOLIN

PROJECT INFO: **LORSON RANCH**
JIMMY CAMP CREEK
REALIGNMENT
EL PASO COUNTY, COLORADO

DESIGNED BY: SM/LRB
DRAWN BY: WC
CHECKED BY:
REVISION DESCRIPTIONS: RESPOND TO COUNTY COMMENTS
DATE: 02 SEP 2005
COUNTY COMMENTS: 01 DEC 2005

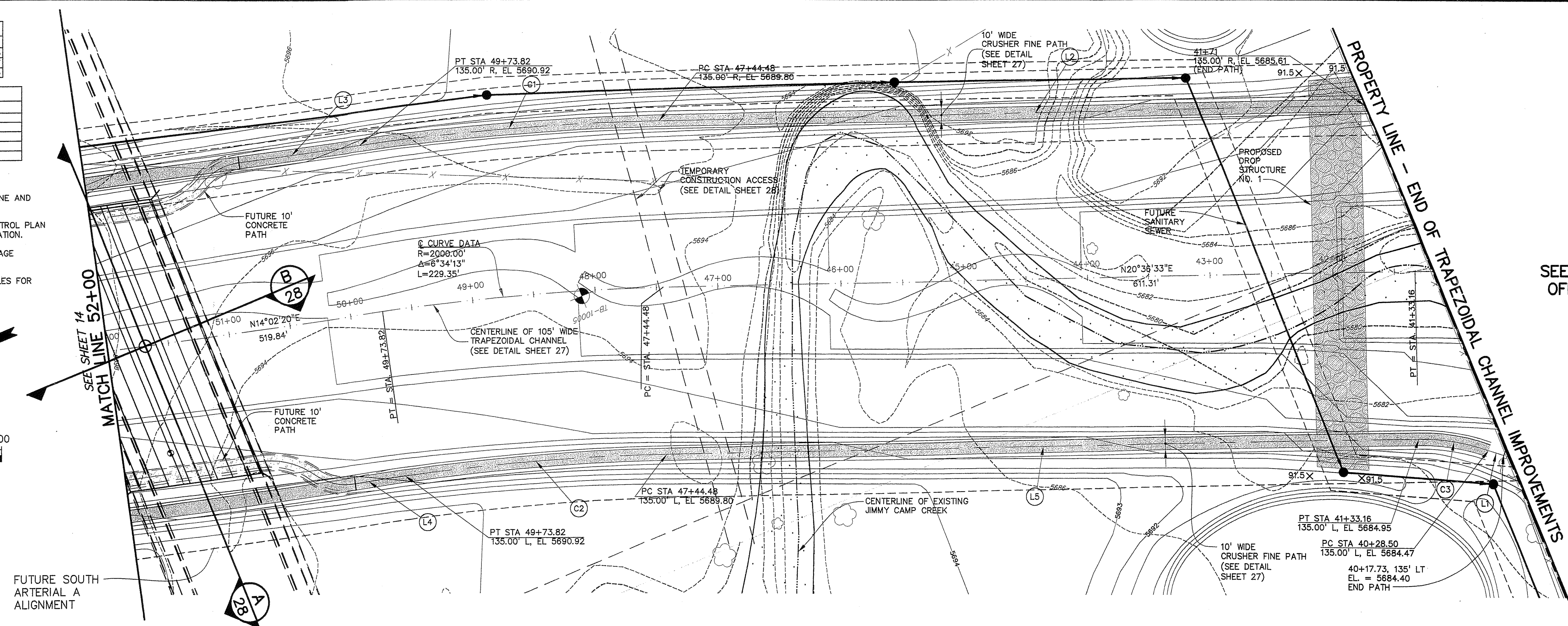
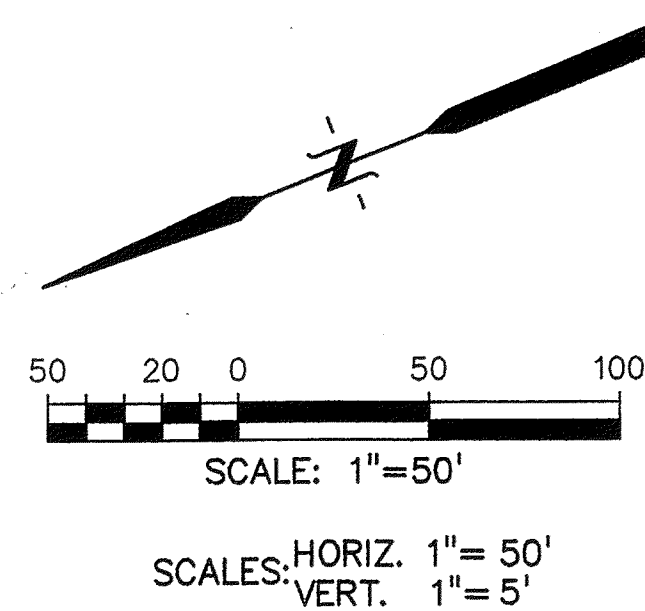
DRAWING INFO: **DRAINAGE AND
EROSION CONTROL PLAN**

DATE: 18 AUG 2005
SCALE: 1" = 100'
JOB NO: C7668-2
DRAWING NO.: 6D 154
SHEET: 11
SHEETS: 31

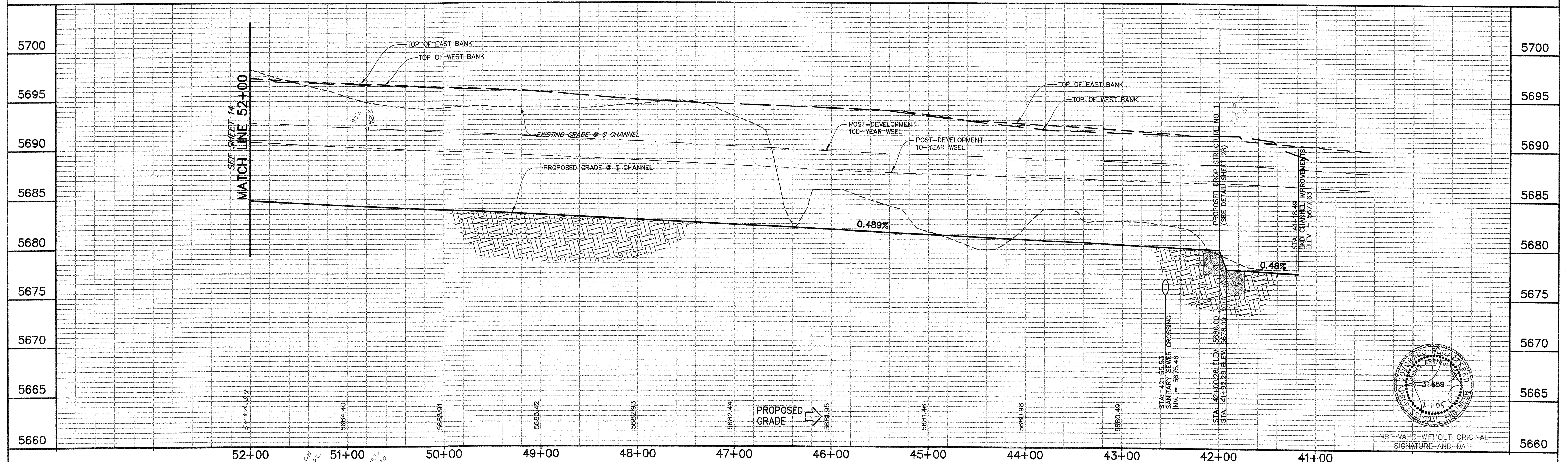
LINE TABLE		
LINE	LENGTH	BEARING
L1	13.15	N40°05'35"E
L2	611.31	N20°36'33"E
L3	519.84	N14°02'20"E
L4	519.84	N14°02'20"E
L5	611.31	N20°36'33"E

NOTES:

1. REFER TO THE UTILITY PLANS FOR WATERLINE AND SANITARY SEWER INFORMATION.
2. REFER TO THE GRADING AND EROSION CONTROL PLAN FOR GRADING AND EROSION CONTROL INFORMATION.
3. REFER TO THE DRAINAGE PLAN FOR DRAINAGE INFORMATION.
4. REFER TO THE ROADWAY PLAN AND PROFILES FOR ROADWAY INFORMATION.



SEE SHEET 13 FOR
OFFSITE GRADING



A circular professional engineer seal for the State of Colorado. The outer ring contains the text "COLORADO REGISTERED" at the top and "ENGINEER" at the bottom. Inside the ring, the name "JOHN ARTHUR" is written in an arc. In the center, the number "31659" is displayed, with the expiration date "12-1-05" written below it. The word "PROFESS" is partially visible on the left side of the seal.

NOT VALID WITHOUT ORIGINAL
SIGNATURE AND DATE

PREPARED BY: **Drexel Barrell & Co.** Engineers - Surveyors

6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887

1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4338

5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645

CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.



THE LANDHAUS
COMPANY

THE LANDHUIS COMPANY
212 N. WAHSATCH, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT:
DAVE COCOLIN

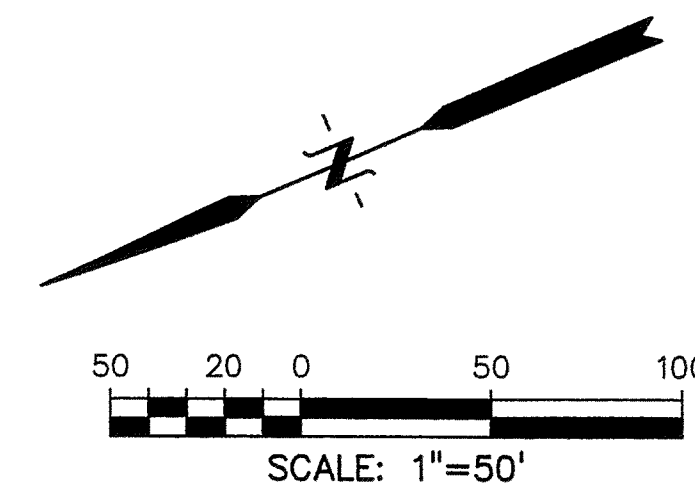
PROJECT INFO: **LORSON RANCH**
JIMMY CAMP CREEK
REALIGNMENT
EL PASO COUNTY, COLORADO

DESIGNED BY:	JE	REVISION DESCRIPTIONS
DRAWN BY:	BKI	COUNTY COMMENTS
CHECKED BY:		COUNTY COMMENTS

DATE
15 NOV 2005
01 DEC 2005

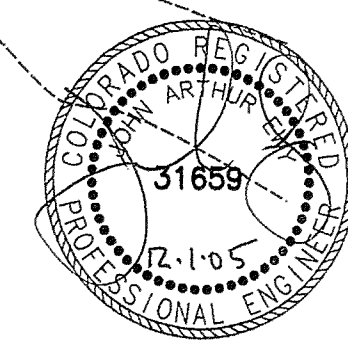
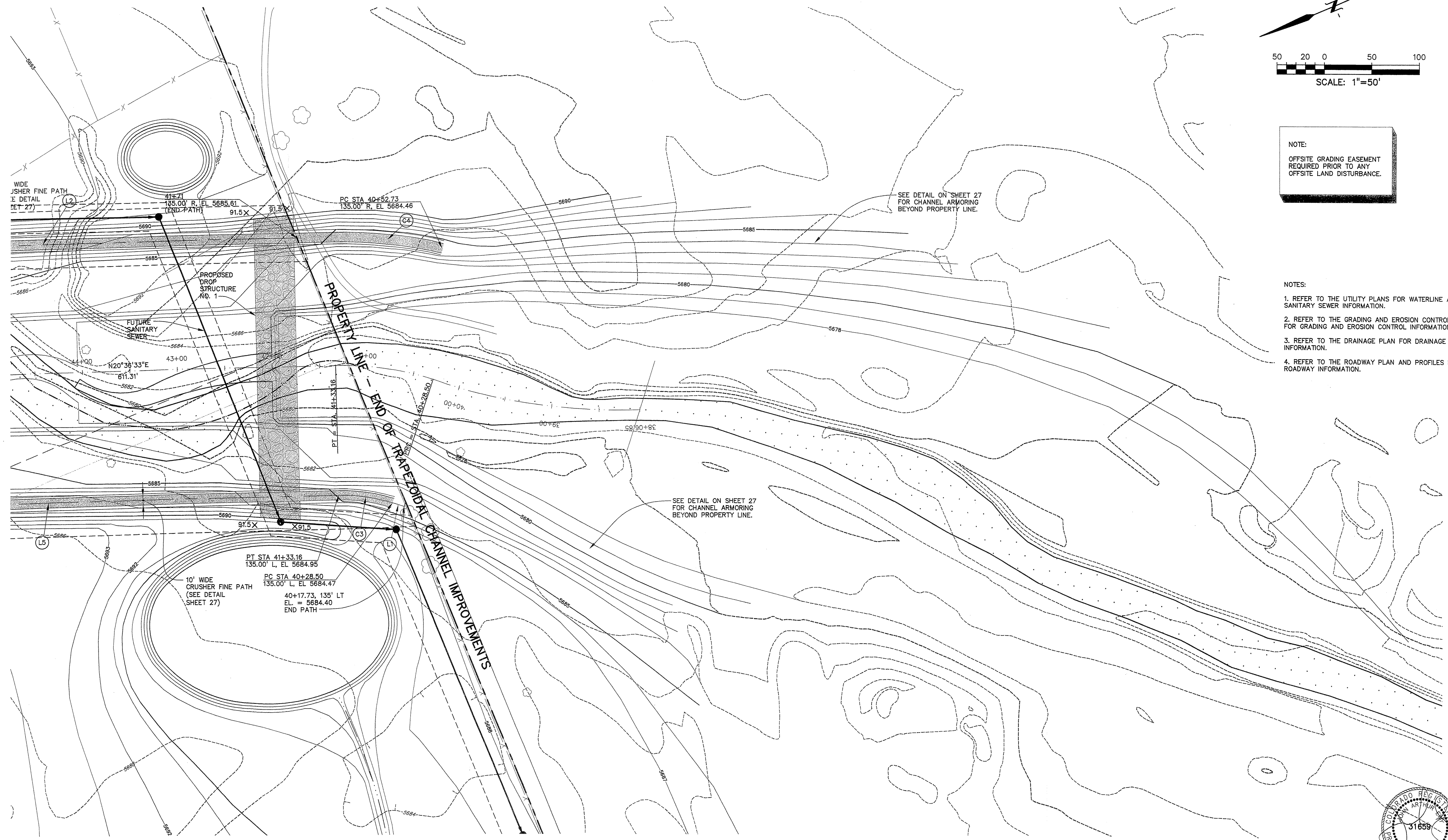
DRAWING INFO.
JIMMY CAMP CREEK CHANNEL ALIGNMENT
AND BIKE PATH PLAN AND PROFILE
(STA 40+45 TO 52+00)

DATE: 18 AUG 2005	JOB NO: C7668-2	SHEET 12
SCALE: H: 1" = 50' V: 1" = 5'	DRAWING NO.: 6D 154	SHEETS 31



NOTE:
OFFSITE GRADING EASEMENT
REQUIRED PRIOR TO ANY
OFFSITE LAND DISTURBANCE.

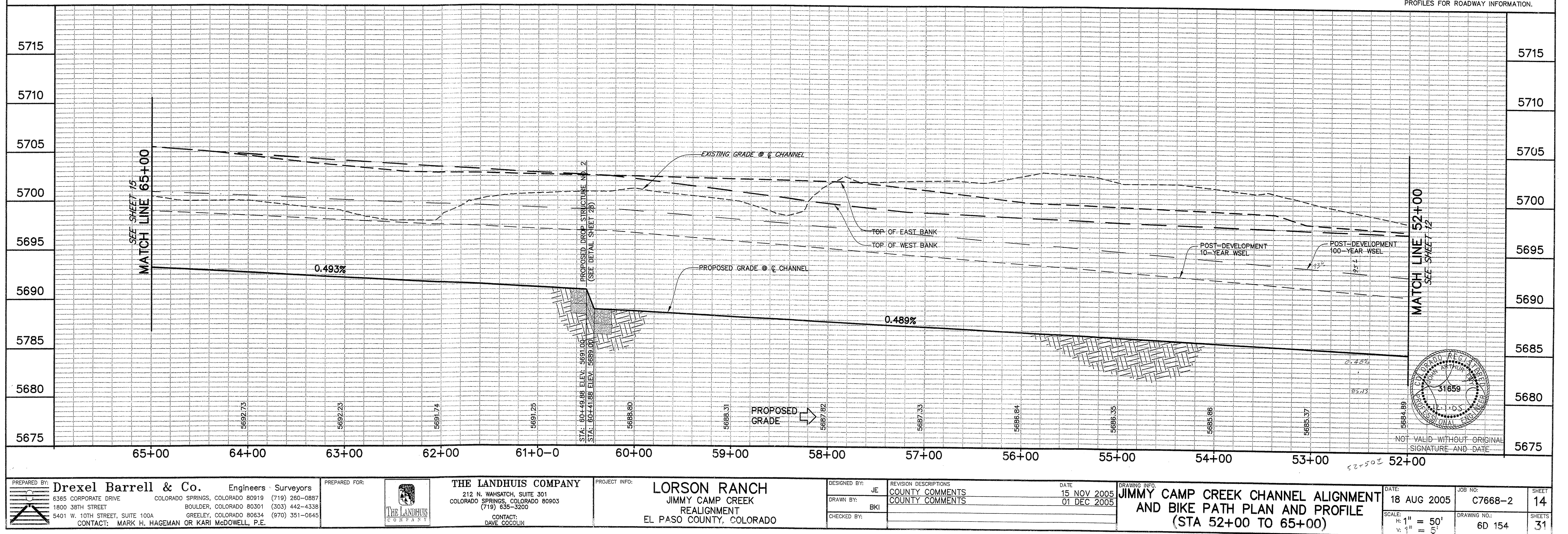
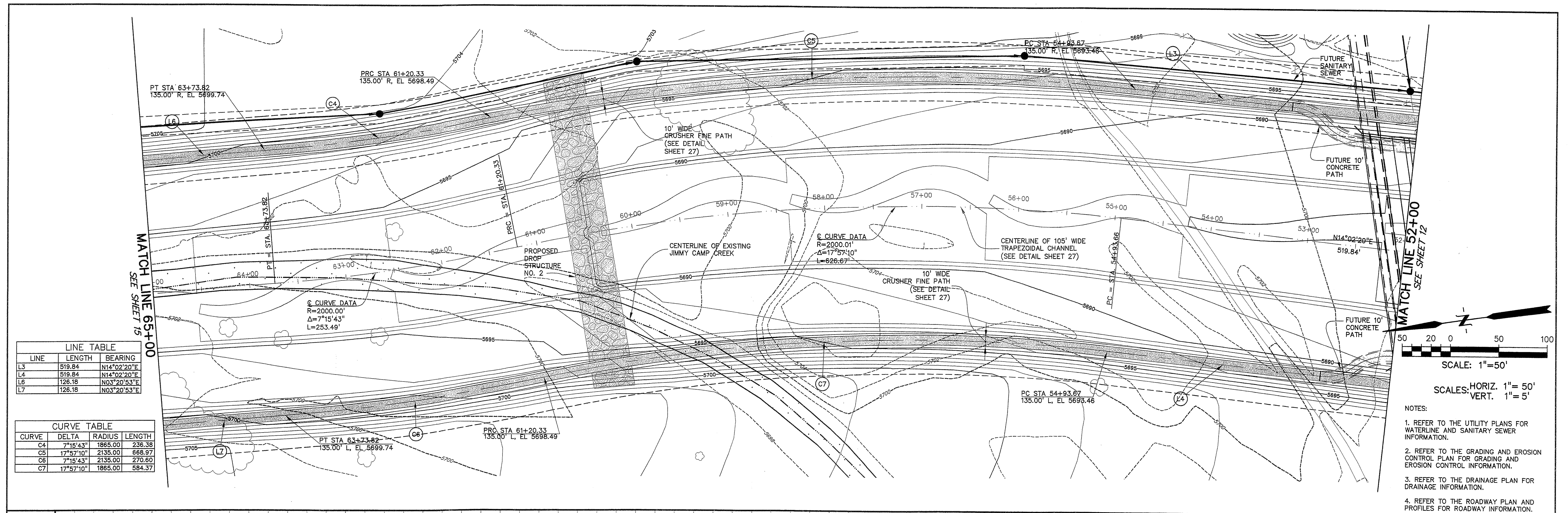
- NOTES:
1. REFER TO THE UTILITY PLANS FOR WATERLINE AND SANITARY SEWER INFORMATION.
 2. REFER TO THE GRADING AND EROSION CONTROL PLAN FOR GRADING AND EROSION CONTROL INFORMATION.
 3. REFER TO THE DRAINAGE PLAN FOR DRAINAGE INFORMATION.
 4. REFER TO THE ROADWAY PLAN AND PROFILES FOR ROADWAY INFORMATION.



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SIGNATURE AND DATE

PREPARED BY: Drexel Barrell & Co. Engineers - Surveyors 6365 CORPORATE DRIVE 1800 38TH STREET 5401 W. 10TH STREET, SUITE 100A CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E. COLORADO SPRINGS, COLORADO 80919 BOULDER, COLORADO 80301 GREELEY, COLORADO 80634 (719) 260-0887 (303) 442-4338 (970) 351-0645	PREPARED FOR: THE LANDHUIS COMPANY 212 N. WASHATCH, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: DAVE COCOLIN	PROJECT INFO: LORSON RANCH JIMMY CAMP CREEK REALIGNMENT EL PASO COUNTY, COLORADO	DESIGNED BY: JE DRAWN BY: BKJ CHECKED BY: REVISION DESCRIPTIONS: COUNTY COMMENTS COUNTY COMMENTS DATE: 15 NOV 2005 01 DEC 2005	DRAWING INFO: JIMMY CAMP CREEK CHANNEL ALIGNMENT AND BIKE PATH PLAN (OFFSITE SOUTH PROPERTY LINE) DATE: 18 AUG 2005 SCALE: H: 1" = 50' V: JOB NO: C7668-2 DRAWING NO.: 6D 154	SHEET 13 SHEETS 31
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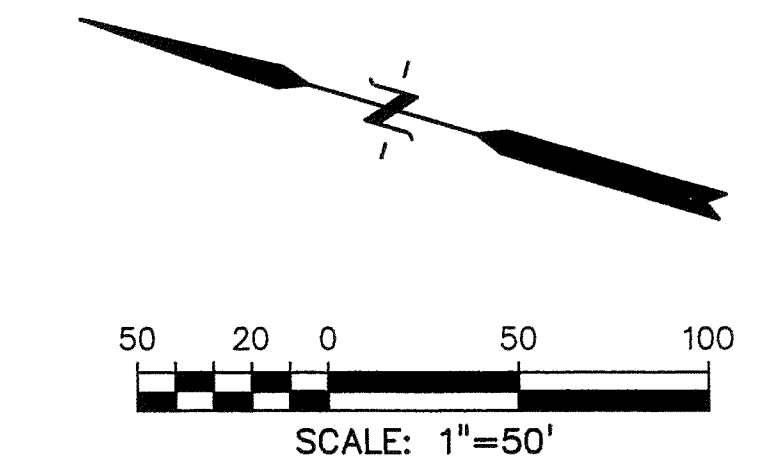
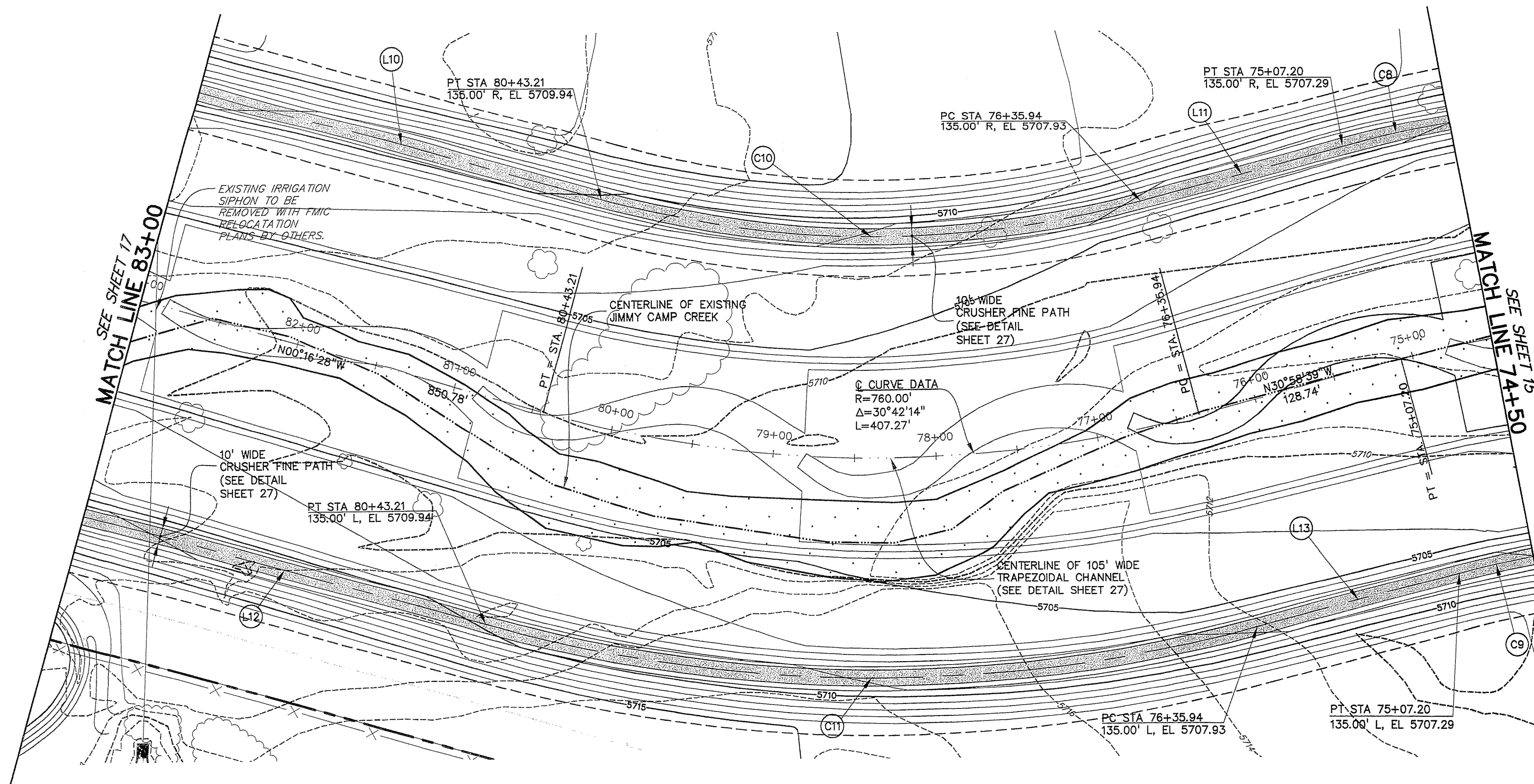
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NOTE:
THE JIMMY CAMP CREEK CHANNEL
MAY ONLY BE CONSTRUCTED
DOWNSTREAM OF THE EXISTING FMIC
SIPHON, UNLESS THE SIPHON IS
EITHER RELOCATED OR MODIFIED
SUCH THAT THE TOP OF THE PIPE
IS 3 FEET BELOW THE CHANNEL
BOTTOM.

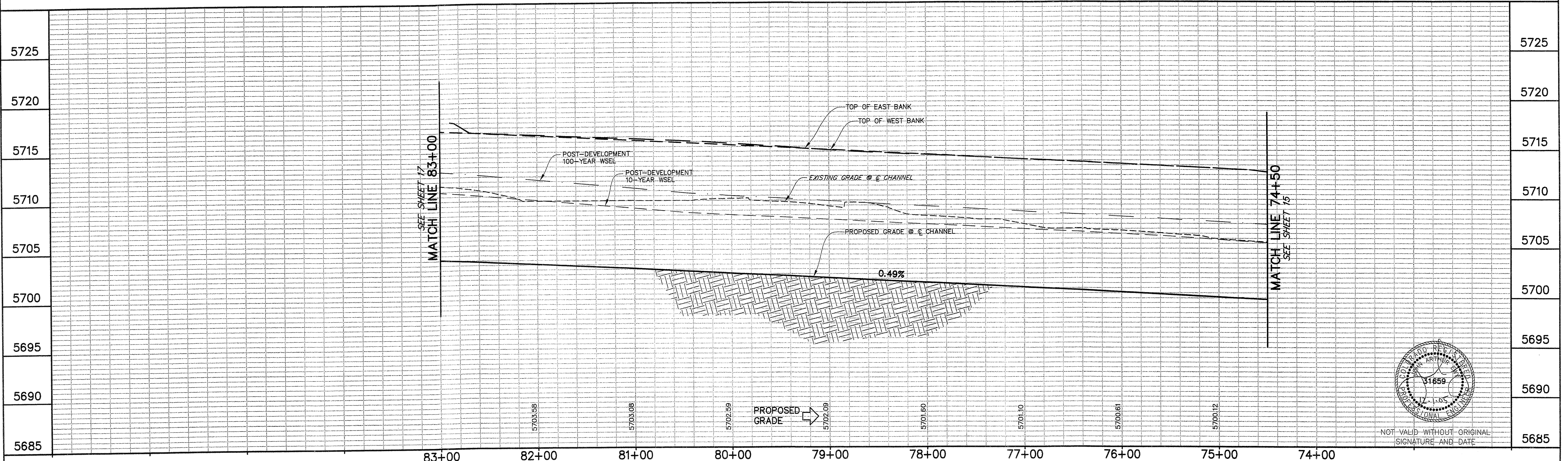
LINE TABLE			
LINE	LENGTH	BEARING	
L10	850.78	N00°16'28"W	
L11	128.74	N30°58'40"W	
L12	850.78	N00°16'28"W	
L13	128.74	N30°58'40"W	

CURVE TABLE				
CURVE	DELTA	RADIUS	LENGTH	
C8	34°19'33"	885.00	530.20	
C9	34°19'33"	615.00	368.45	
C10	30°42'13"	625.00	334.92	
C11	30°42'13"	895.00	479.61	



SCALES: HORIZ. 1"= 50'
VERT. 1"= 5'

- NOTES:
1. REFER TO THE UTILITY PLANS FOR WATERLINE AND SANITARY SEWER INFORMATION.
 2. REFER TO THE GRADING AND EROSION CONTROL PLAN FOR GRADING AND EROSION CONTROL INFORMATION.
 3. REFER TO THE DRAINAGE PLAN FOR DRAINAGE INFORMATION.
 4. REFER TO THE ROADWAY PLAN AND PROFILES FOR ROADWAY INFORMATION.



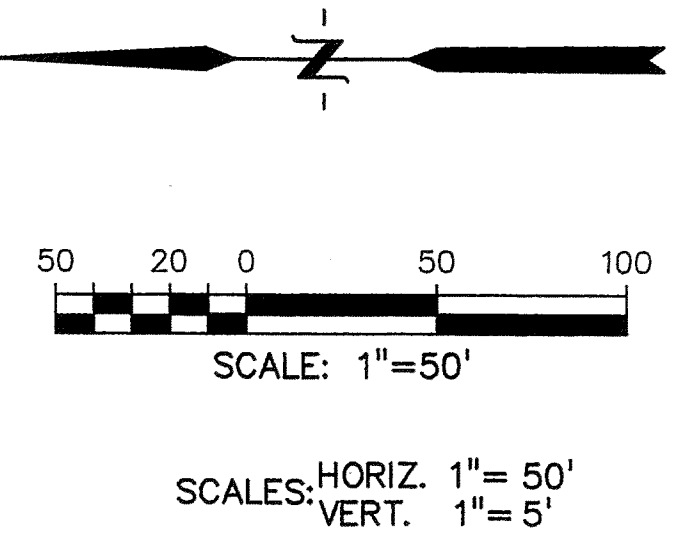
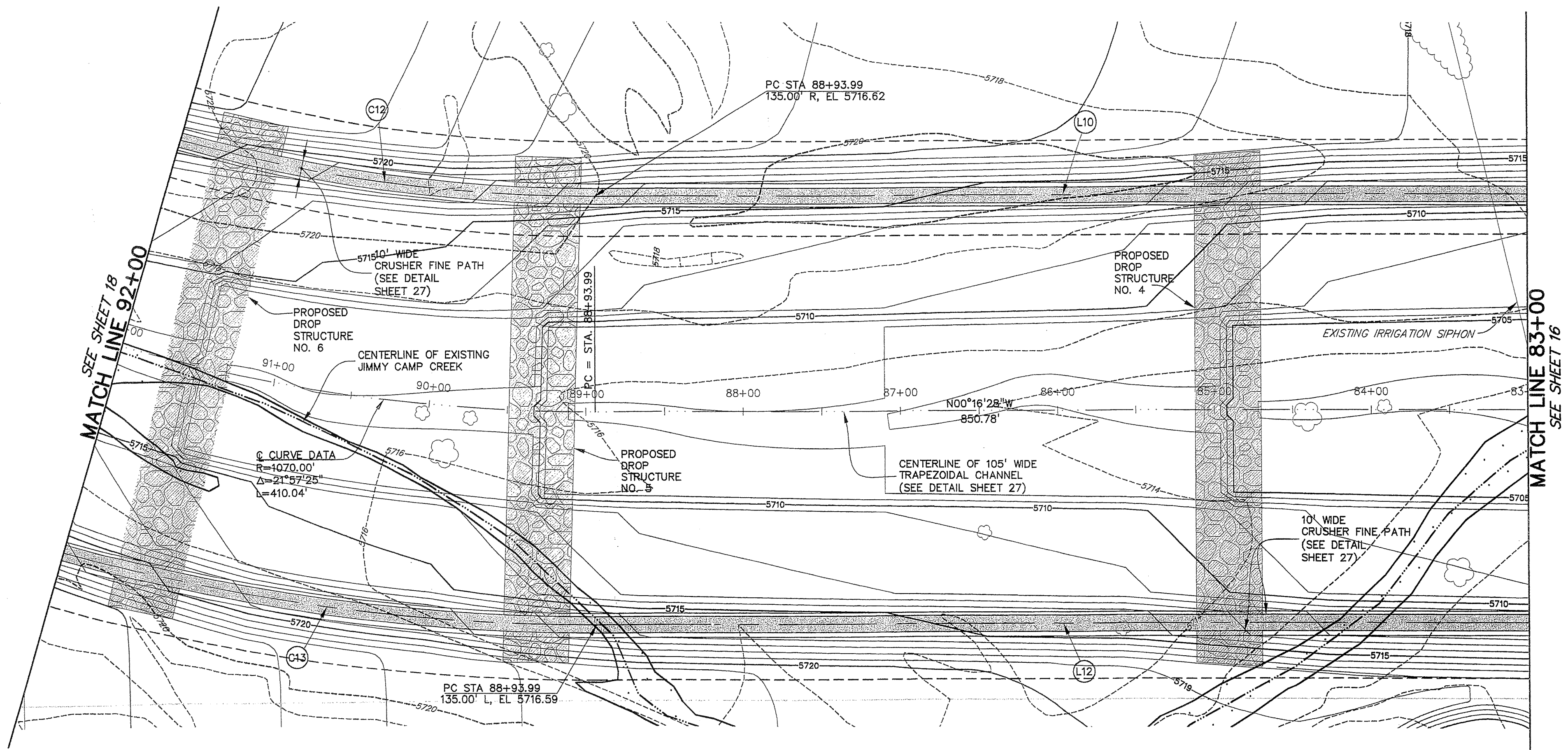
NOT VALID WITHOUT ORIGINAL
SIGNATURE AND DATE

PREPARED BY: Drexel Barrell & Co. 6365 CORPORATE DRIVE 1800 38TH STREET 5401 W. 10TH STREET, SUITE 100A CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.	Engineers & Surveyors COLORADO SPRINGS, COLORADO 80919 (719) 260-0887 BOULDER, COLORADO 80301 (303) 442-4338 GREELEY, COLORADO 80634 (970) 351-0645	PREPARED FOR: THE LANDHUIS COMPANY 212 N. WAHSATCH, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: DAVE COCOLIN	PROJECT INFO: LORSON RANCH JIMMY CAMP CREEK REALIGNMENT EL PASO COUNTY, COLORADO	DESIGNED BY: JE DRAWN BY: BKJ CHECKED BY:	REVISION DESCRIPTIONS COUNTY COMMENTS COUNTY COMMENTS	DATE 15 NOV 2005 01 DEC 2005	DRAWING INFO: JIMMY CAMP CREEK CHANNEL ALIGNMENT AND BIKE PATH PLAN AND PROFILE (STA 74+50 TO 83+00)	DATE: 18 AUG 2005	JOB NO.: C7668-2	SHEET: 16
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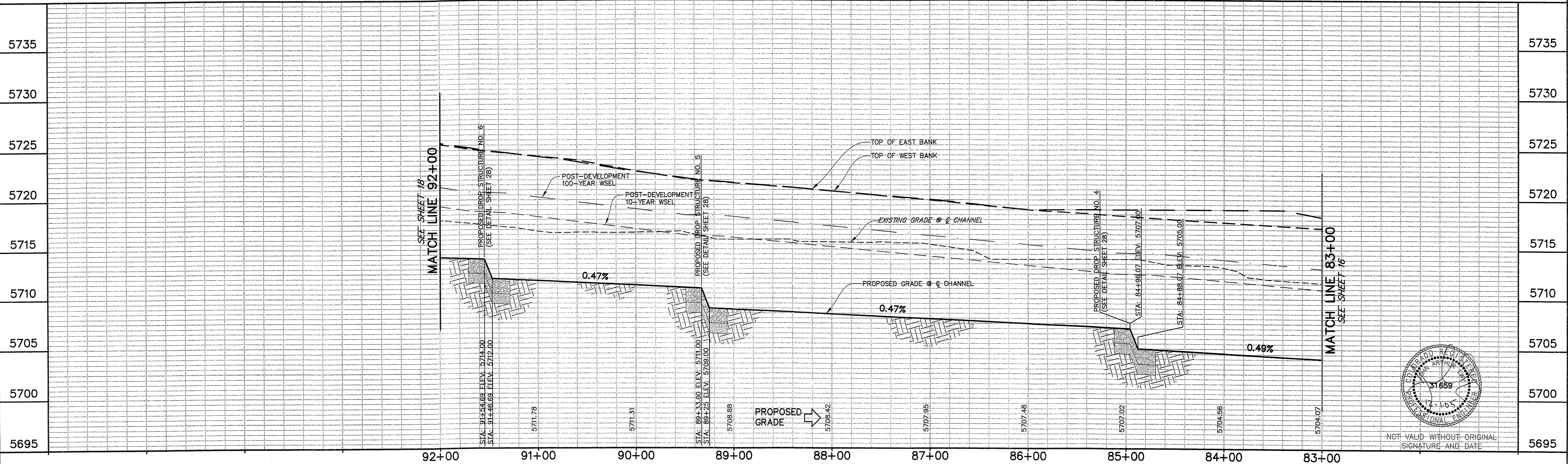
NOTE:
THE JIMMY CAMP CREEK CHANNEL
MAY ONLY BE CONSTRUCTED
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SIPHON, UNLESS THE SIPHON IS
EITHER RELOCATED OR MODIFIED
SUCH THAT THE TOP OF THE PIPE
IS 3 FEET BELOW THE CHANNEL
BOTTOM.

LINE TABLE			
LINE	LENGTH	BEARING	
L10	850.78	N00°16'28"W	
L12	850.78	N00°16'28"W	

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C12	21°57'25"	935.00	358.31
C13	21°57'25"	1205.00	461.78



- NOTES:
1. REFER TO THE UTILITY PLANS FOR WATERLINE AND SANITARY SEWER INFORMATION.
 2. REFER TO THE GRADING AND EROSION CONTROL PLAN FOR GRADING AND EROSION CONTROL INFORMATION.
 3. REFER TO THE DRAINAGE PLAN FOR DRAINAGE INFORMATION.
 4. REFER TO THE ROADWAY PLAN AND PROFILES FOR ROADWAY INFORMATION.



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PREPARED BY: **Drexel Barrell & Co.** Engineers - Surveyors
6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887
1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4338
5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645
CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.

PREPARED FOR: **THE LANDHUIS COMPANY**
212 N. WAHATCH, SUITE 301
COLORADO SPRINGS, COLORADO 80903 (719) 635-3200
CONTACT: DAVE COCULIN

PROJECT INFO: **LORSON RANCH**
JIMMY CAMP CREEK
REALIGNMENT
EL PASO COUNTY, COLORADO

DESIGNED BY: JE
DRAWN BY: BKJ
CHECKED BY:
REVISION DESCRIPTIONS
COUNTY COMMENTS
COUNTY COMMENTS
DATE
15 NOV 2005
01 DEC 2005

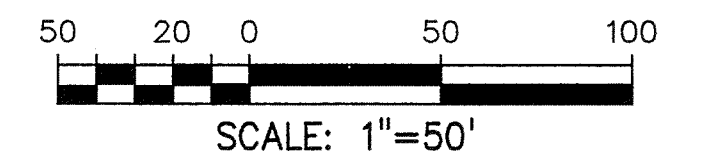
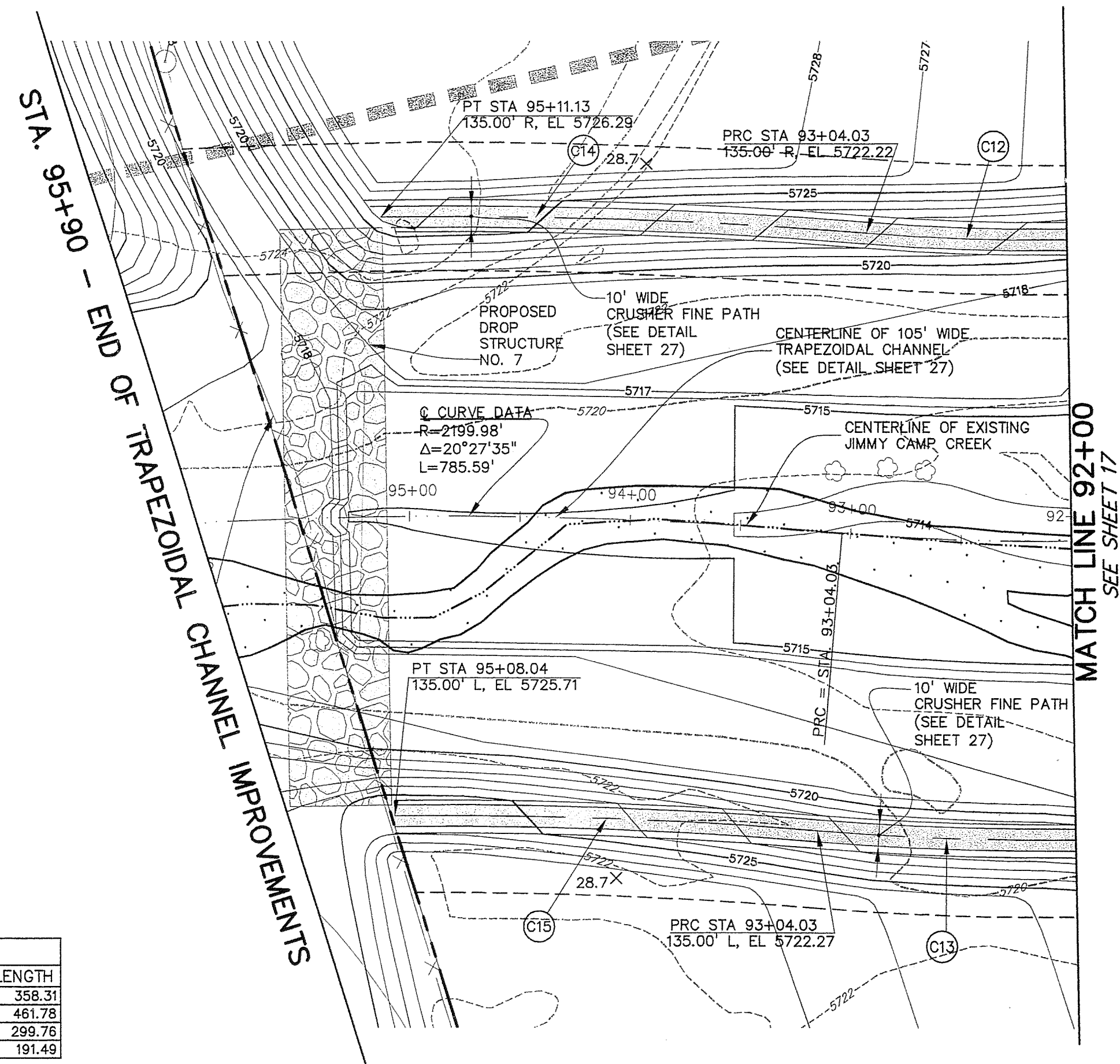
DRAWING INFO: **JIMMY CAMP CREEK CHANNEL ALIGNMENT
AND BIKE PATH PLAN AND PROFILE
(STA 83+00 TO 92+00)**

DATE: 18 AUG 2005
JOB NO.: C7668-2
SHEET: 17
SCALE: 1" = 50'
H: 1" = 50'
V: 1" = 5'
DRAWING NO.: 6D 154
SHEETS: 31

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SEE SHEET 19 FOR
OFFSITE GRADING

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C12	21°57'25"	935.00	358.31
C13	21°57'25"	1205.00	461.78
C14	7°21'19"	2335.00	299.76
C15	5°18'47"	2065.00	191.49



SCALES: HORIZ. 1"= 50'
VERT. 1"= 5'

NOTES:

1. REFER TO THE UTILITY PLANS FOR WATERLINE AND SANITARY SEWER INFORMATION.
2. REFER TO THE GRADING AND EROSION CONTROL PLAN FOR GRADING AND EROSION CONTROL INFORMATION.
3. REFER TO THE DRAINAGE PLAN FOR DRAINAGE INFORMATION.
4. REFER TO THE ROADWAY PLAN AND PROFILES FOR ROADWAY INFORMATION.

5740

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5705

5700

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5725

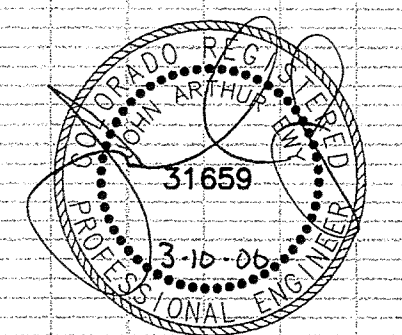
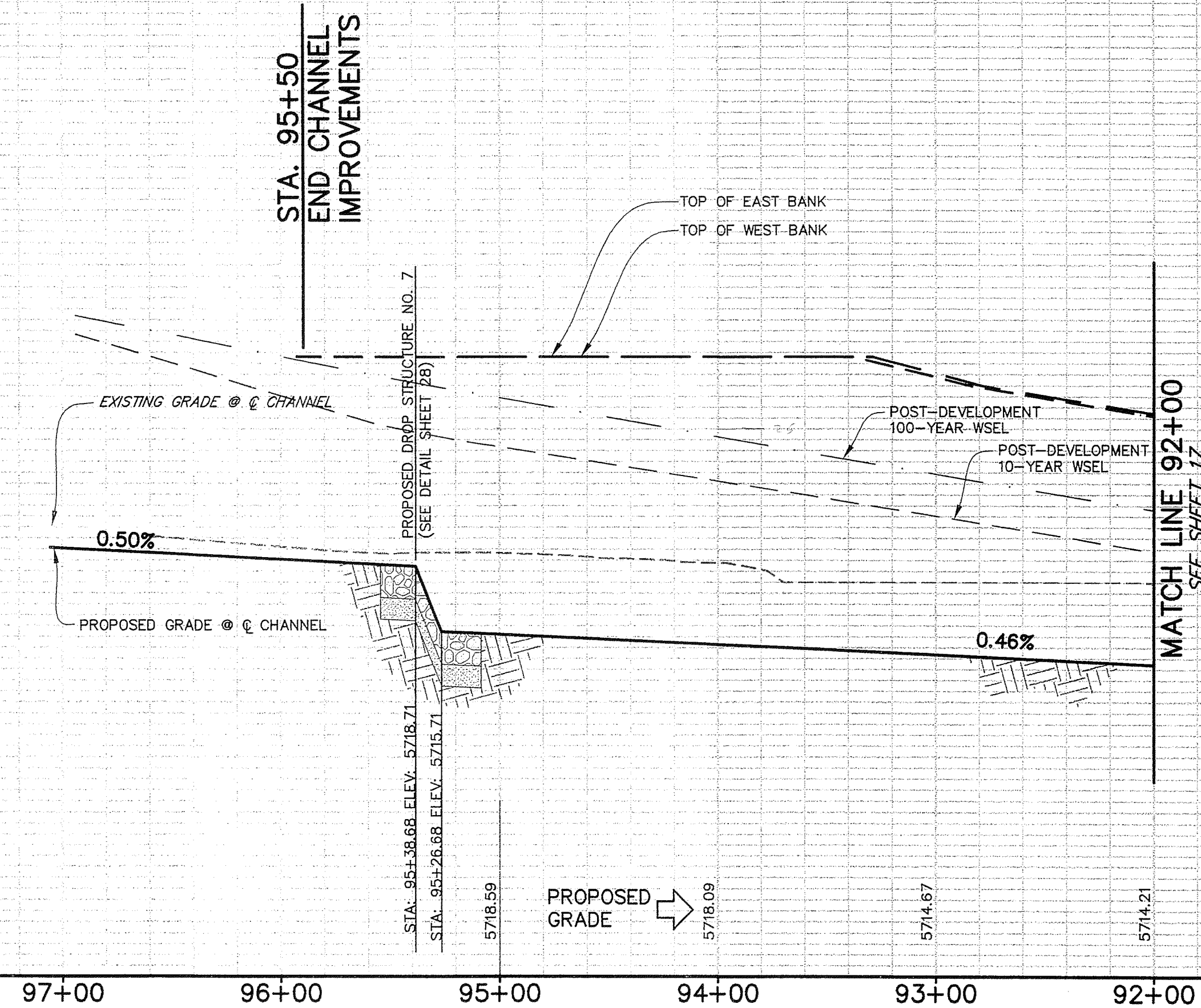
5720

5715

5710

5705

5700



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PREPARED BY: **Drexel Barrell & Co.** Engineers Surveyors
6385 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887
1800 38TH STREET BOULDER, COLORADO 80501 (303) 442-4336
5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645
CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.

PREPARED FOR: **THE LANDHUIS COMPANY**
212 N. WAHSATCH, SUITE 301
COLORADO SPRINGS, COLORADO 80903 (719) 635-3200
CONTACT: DAVE COOLIN

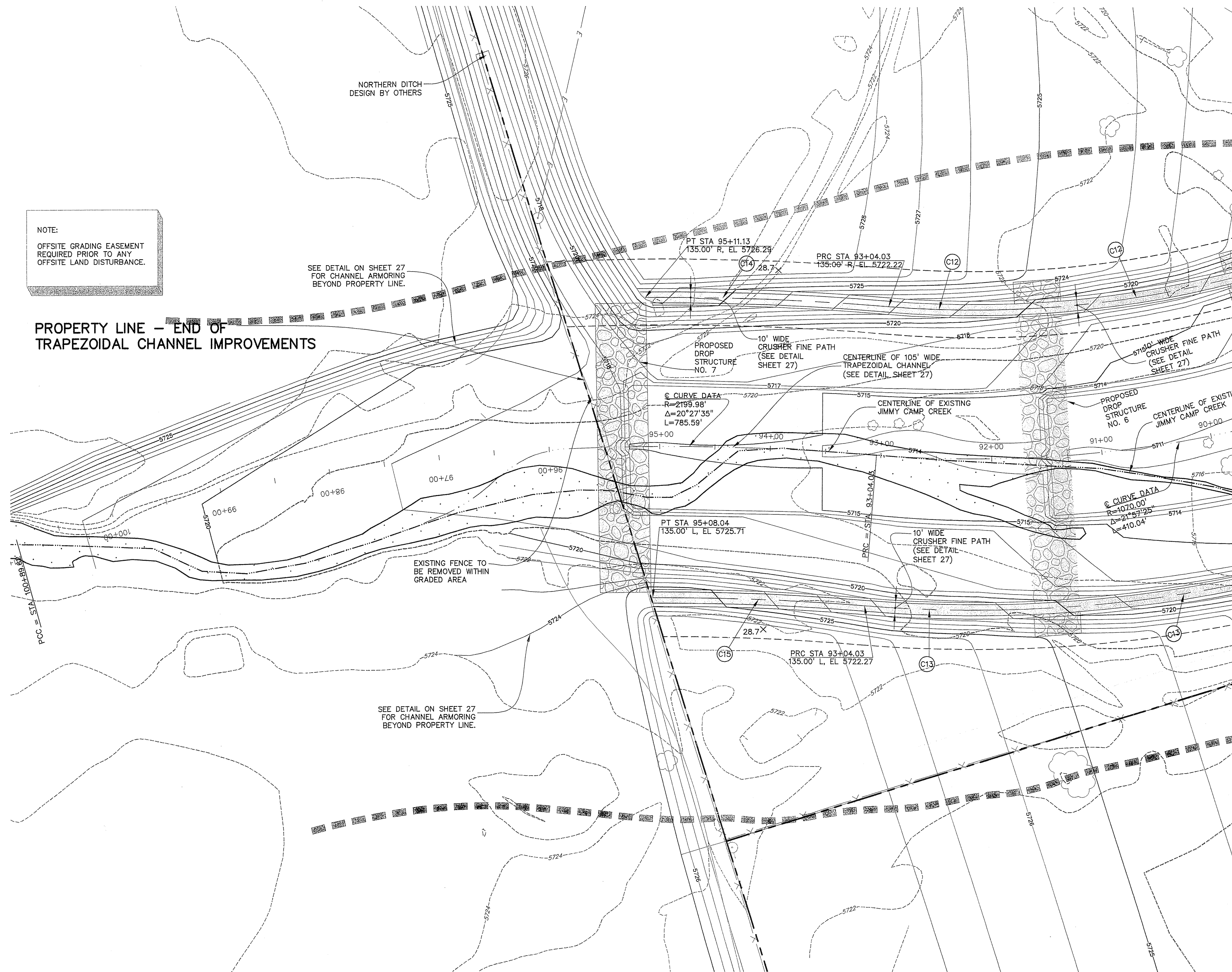
PROJECT INFO: **LORSON RANCH**
JIMMY CAMP CREEK
REALIGNMENT
EL PASO COUNTY, COLORADO

DESIGNED BY: JE
DRAWN BY: BKJ
CHECKED BY: BKJ
REVISION DESCRIPTIONS
COUNTY COMMENTS
COUNTY COMMENTS
PRVS PER PERMIT FOR RE-DESIGN
OF N.DITCH AND TAPER
DATE
15 NOV 2005
01 DEC 2005
14 FEB 2006

DRAWING INFO: **JIMMY CAMP CREEK CHANNEL ALIGNMENT
AND BIKE PATH PLAN AND PROFILE
(STA 92+00 TO END)**
DATE: 18 AUG 2005
JOB NO: C7668-2
DRAWING NO: 6D 154
SHEET: 31

SCALE: H: 1" = 50'
V: 1" = 5'

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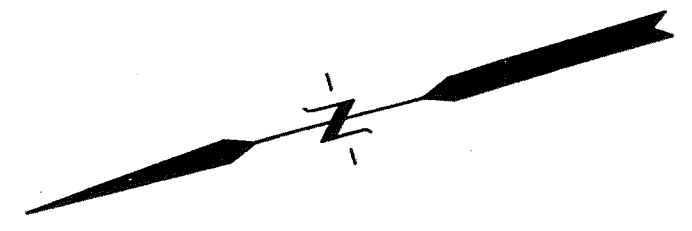
NOTE:
OFFSITE GRADING EASEMENT
REQUIRED PRIOR TO ANY
OFFSITE LAND DISTURBANCE.

PROPERTY LINE - END OF
TRAPEZOIDAL CHANNEL IMPROVEMENTS

SEE DETAIL ON SHEET 27
FOR CHANNEL ARMORING
BEYOND PROPERTY LINE.

EXISTING FENCE TO
BE REMOVED WITHIN
GRADED AREA

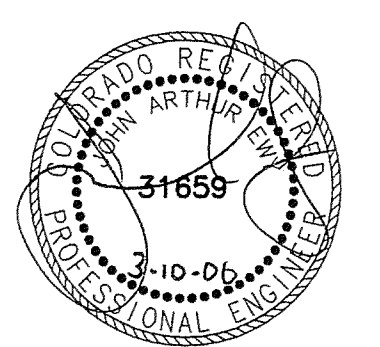
SEE DETAIL ON SHEET 27
FOR CHANNEL ARMORING
BEYOND PROPERTY LINE.



50 20 0 50 100
SCALE: 1"=50'

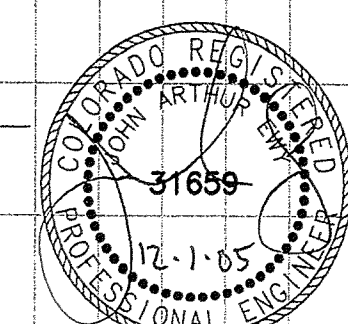
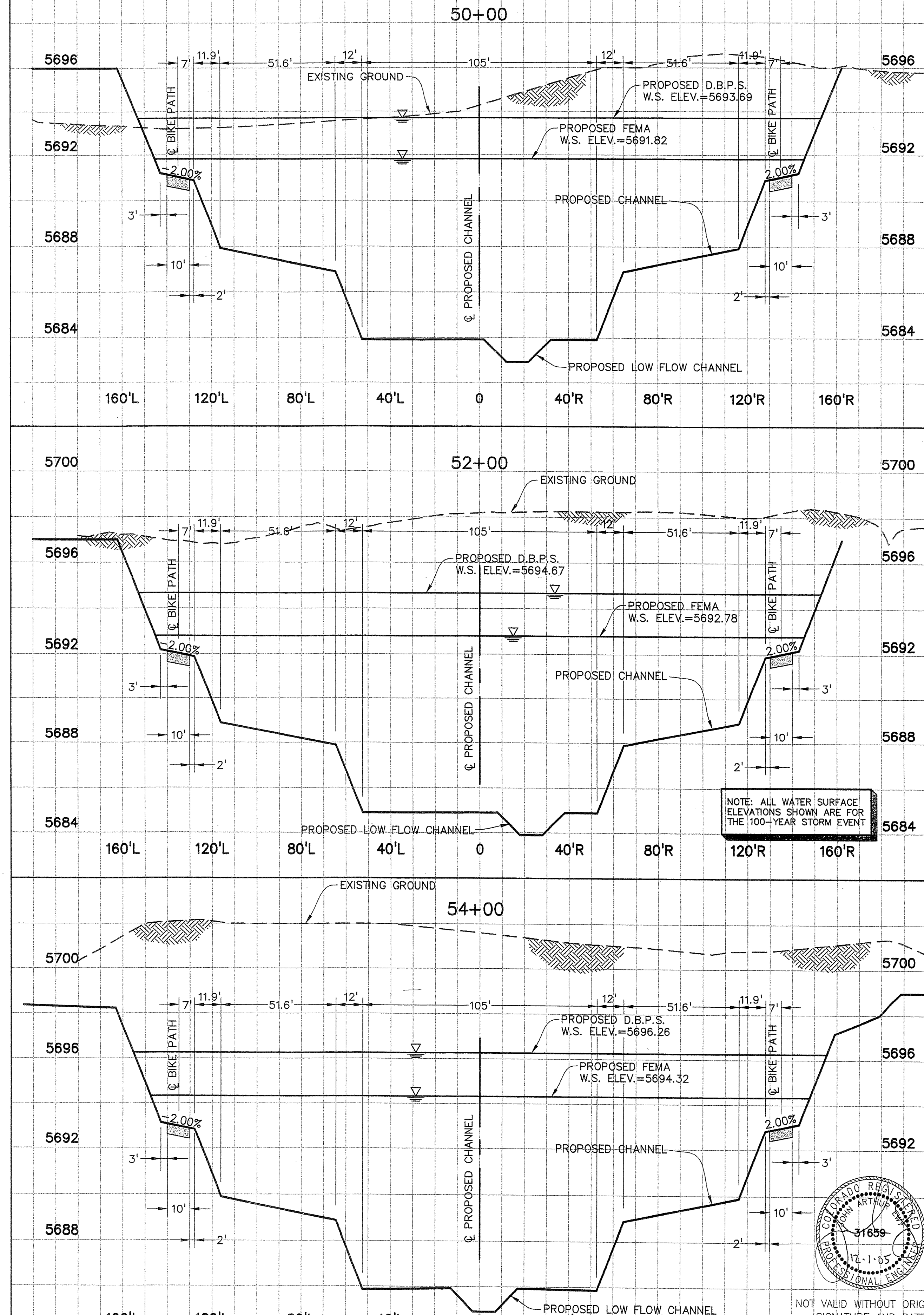
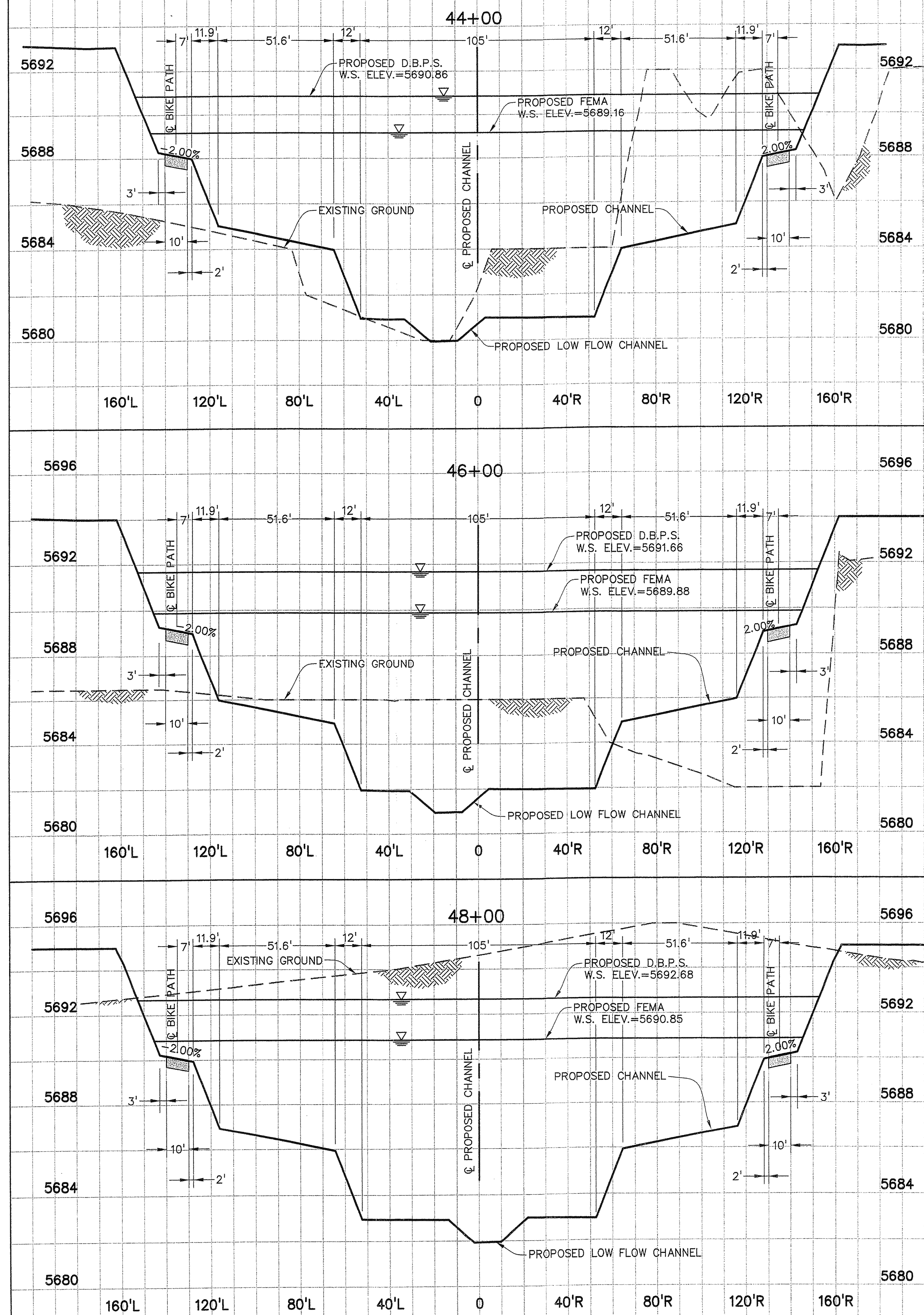
SCALES: HORIZ. 1"= 50'
VERT. 1"= 5'

- NOTES:
1. REFER TO THE UTILITY PLANS FOR WATERLINE AND SANITARY SEWER INFORMATION.
 2. REFER TO THE GRADING AND EROSION CONTROL PLAN FOR GRADING AND EROSION CONTROL INFORMATION.
 3. REFER TO THE DRAINAGE PLAN FOR DRAINAGE INFORMATION.
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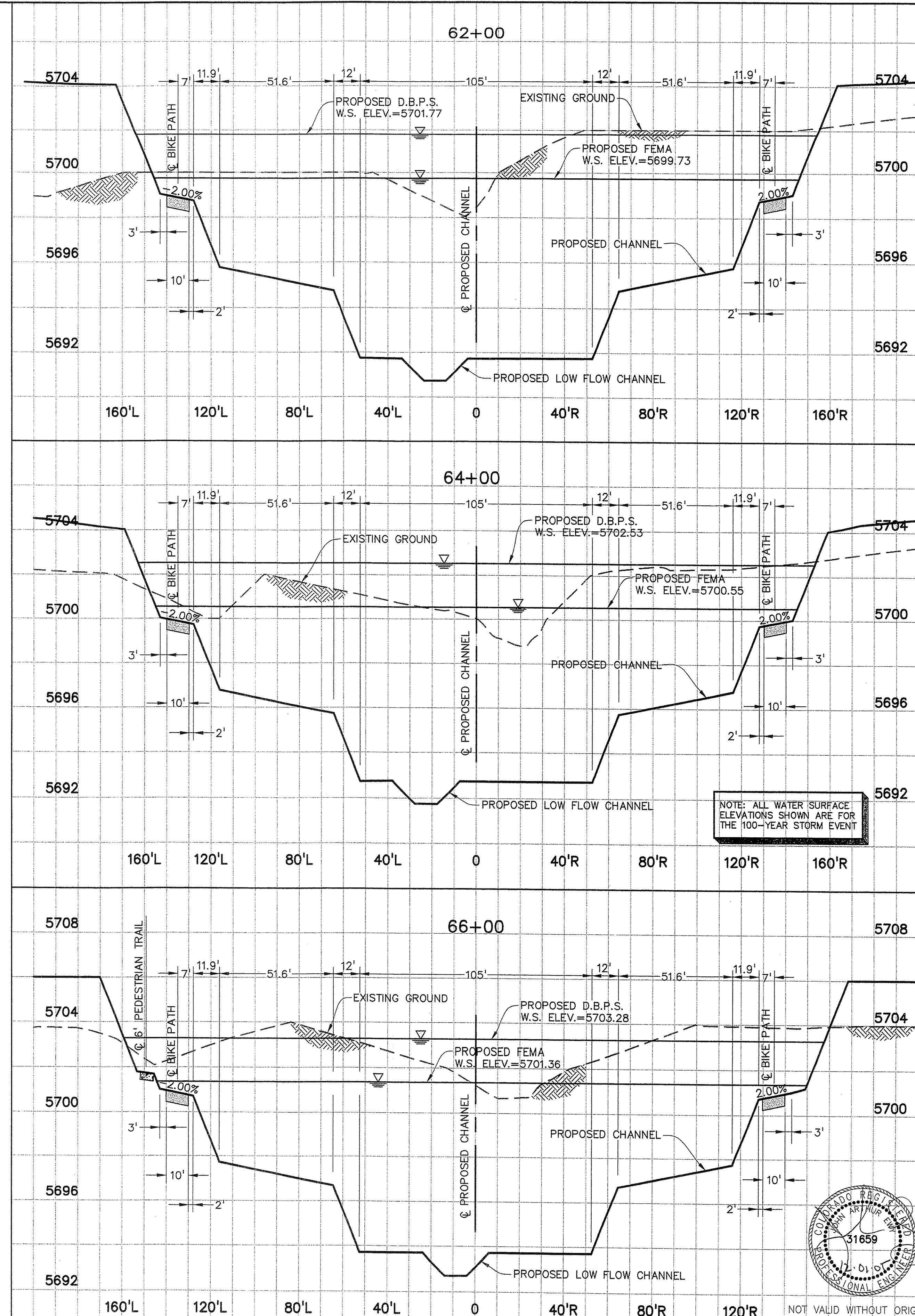
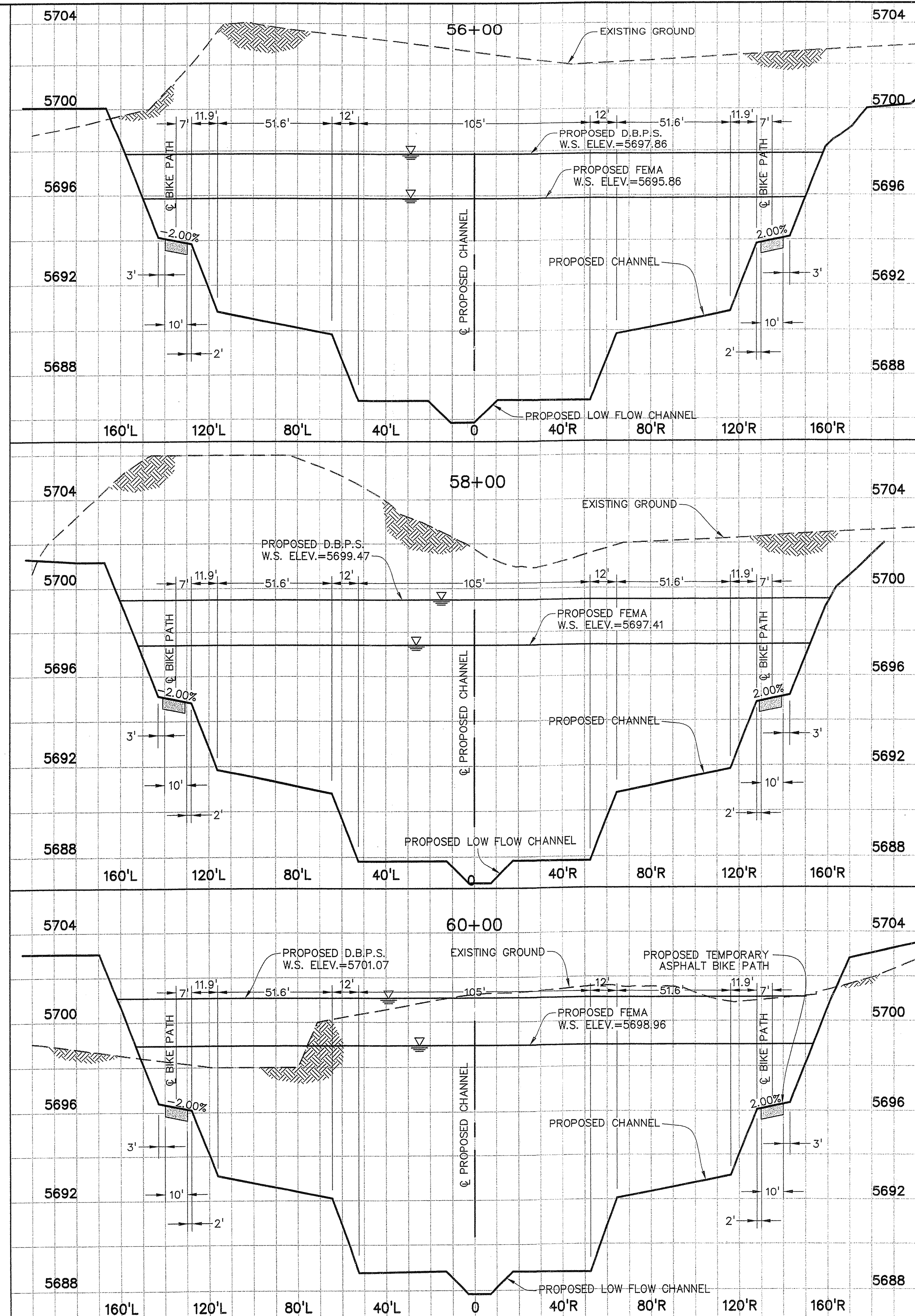


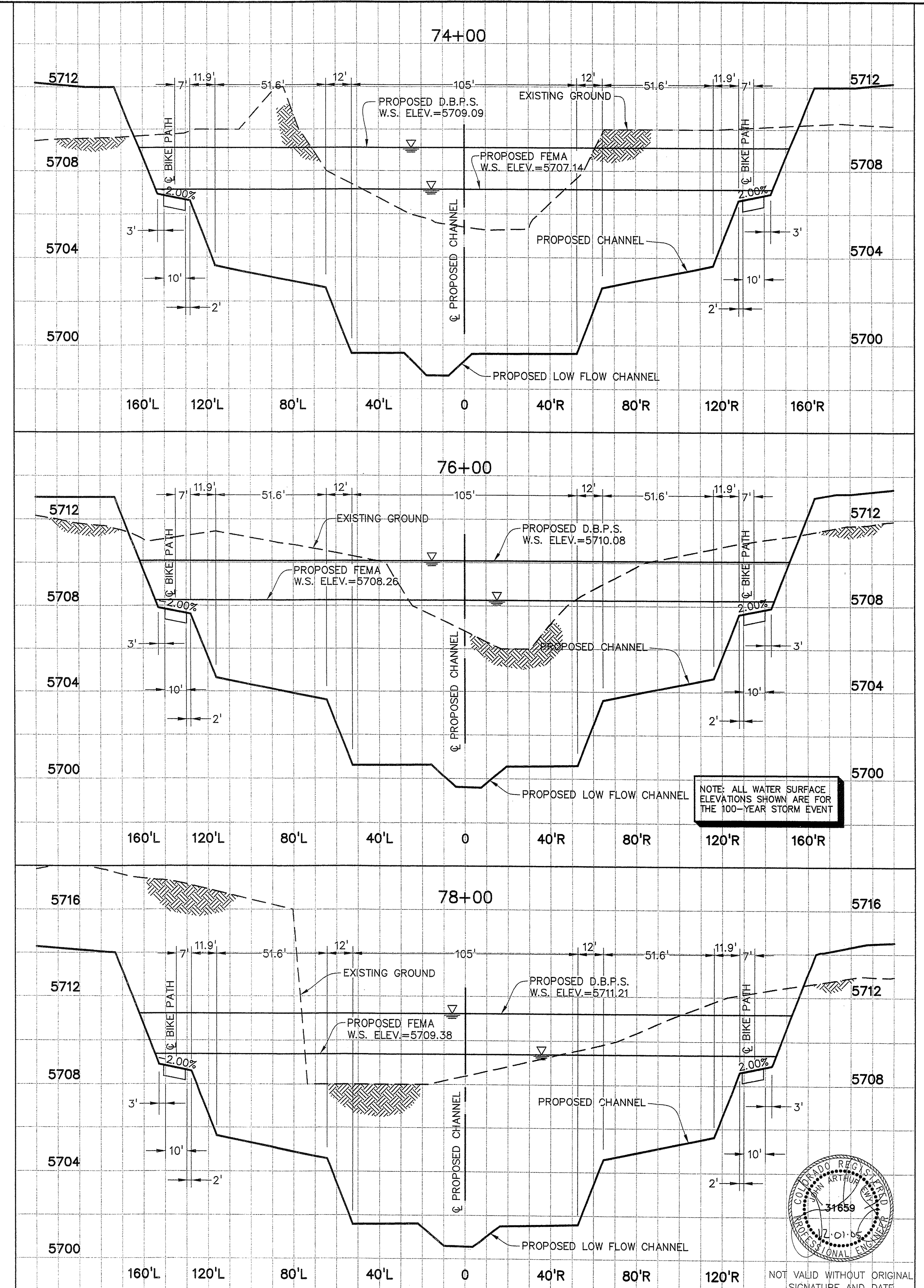
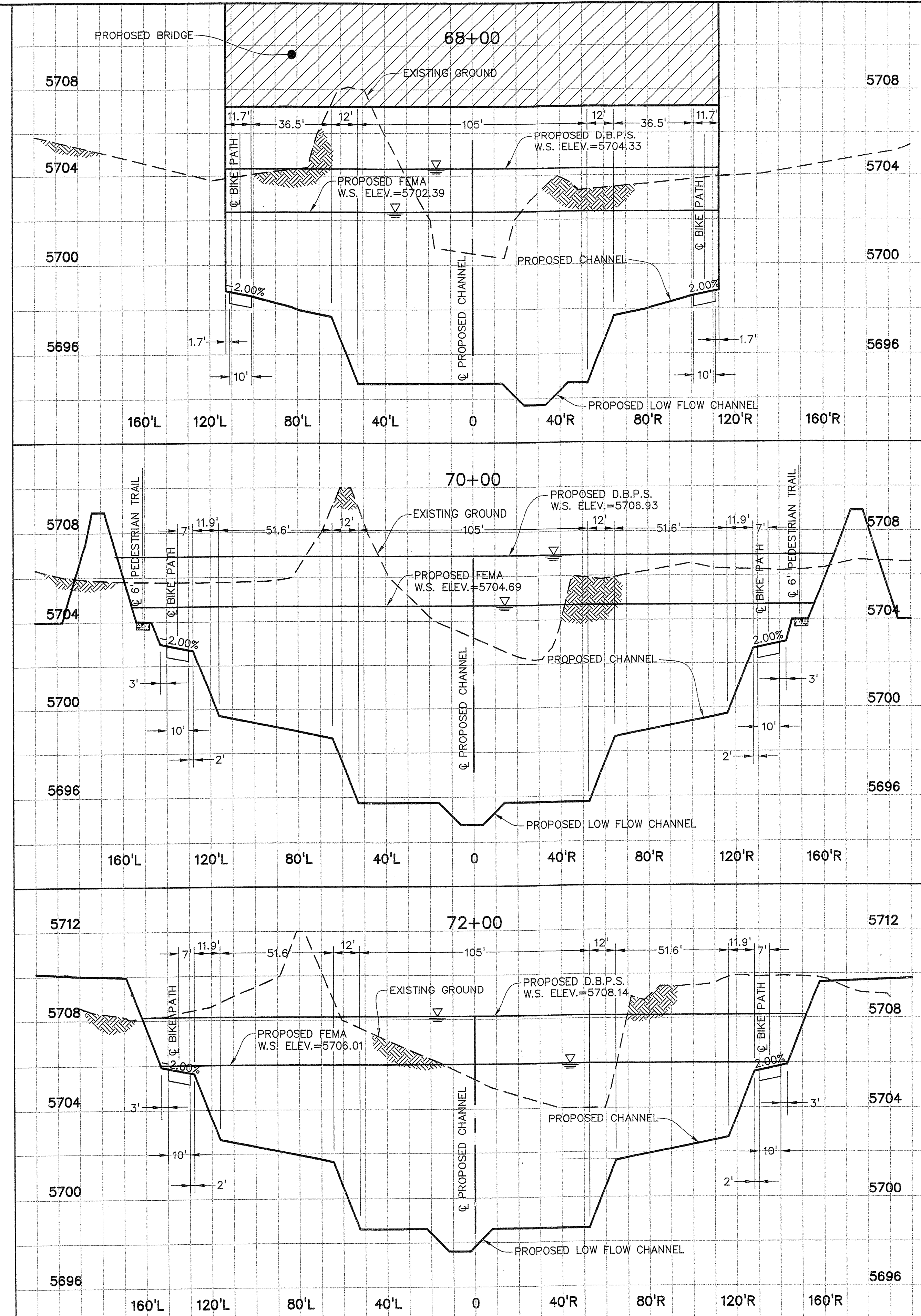
NOT VALID WITHOUT ORIGINAL
SIGNATURE AND DATE

PREPARED BY: Drexel Barrell & Co. Engineers 6365 CORPORATE DRIVE 1800 38TH STREET 5401 W. 10TH STREET, SUITE 100A CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E. COLORADO SPRINGS, COLORADO 80919 BOULDER, COLORADO 80301 GREELEY, COLORADO 80634 (719) 260-0887 (303) 442-4338 (970) 351-0645	PREPARED FOR: THE LANDHUIS COMPANY 212 N. WAHSATCH, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: DAVE COCOLIN	PROJECT INFO: LORSON RANCH JIMMY CAMP CREEK REALIGNMENT EL PASO COUNTY, COLORADO	DESIGNED BY: JE DRAWN BY: BKJ CHECKED BY: REVISION DESCRIPTIONS: COUNTY COMMENTS COUNTY COMMENTS REV'S PER PENTACOR RE-DESIGN OF N.DITCH AND TAPER DATE: 15 NOV 2005 01 DEC 2005 14 FEB 2006	DRAWING INFO: JIMMY CAMP CREEK CHANNEL ALIGNMENT AND BIKE PATH PLAN. (OFFSITE NORTH PROPERTY LINE) DATE: 18 AUG 2005 JOB NO.: C7668-2 DRAWING NO.: 6D 154 SHEET: 31
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PREPARED BY: **Drexel Barrell & Co.** Engineers - Surveyors
 6385 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 280-0887
 1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4338
 5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645
 CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.

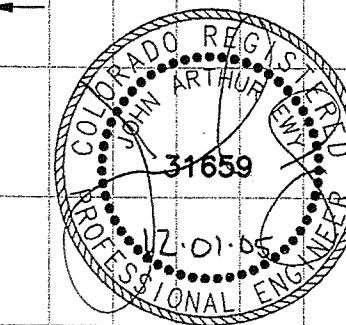
PREPARED FOR: **THE LANDHUIS COMPANY**
 212 N. WAHSATCH, SUITE 301
 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200
 CONTACT: DAVE COGOLIN

PROJECT INFO: **LORSON RANCH**
JIMMY CAMP CREEK
REALIGNMENT
EL PASO COUNTY, COLORADO

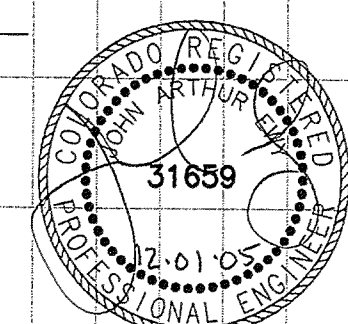
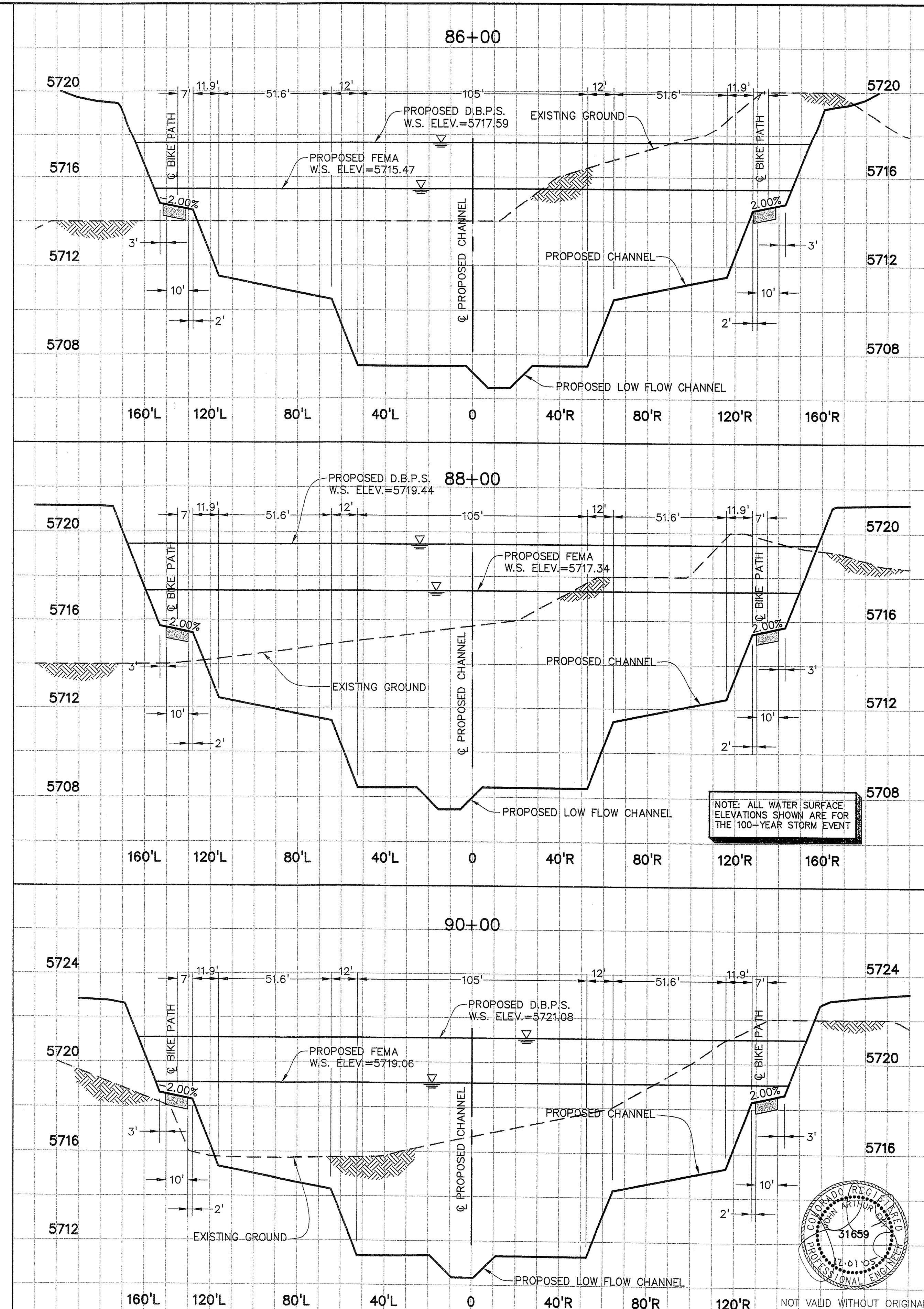
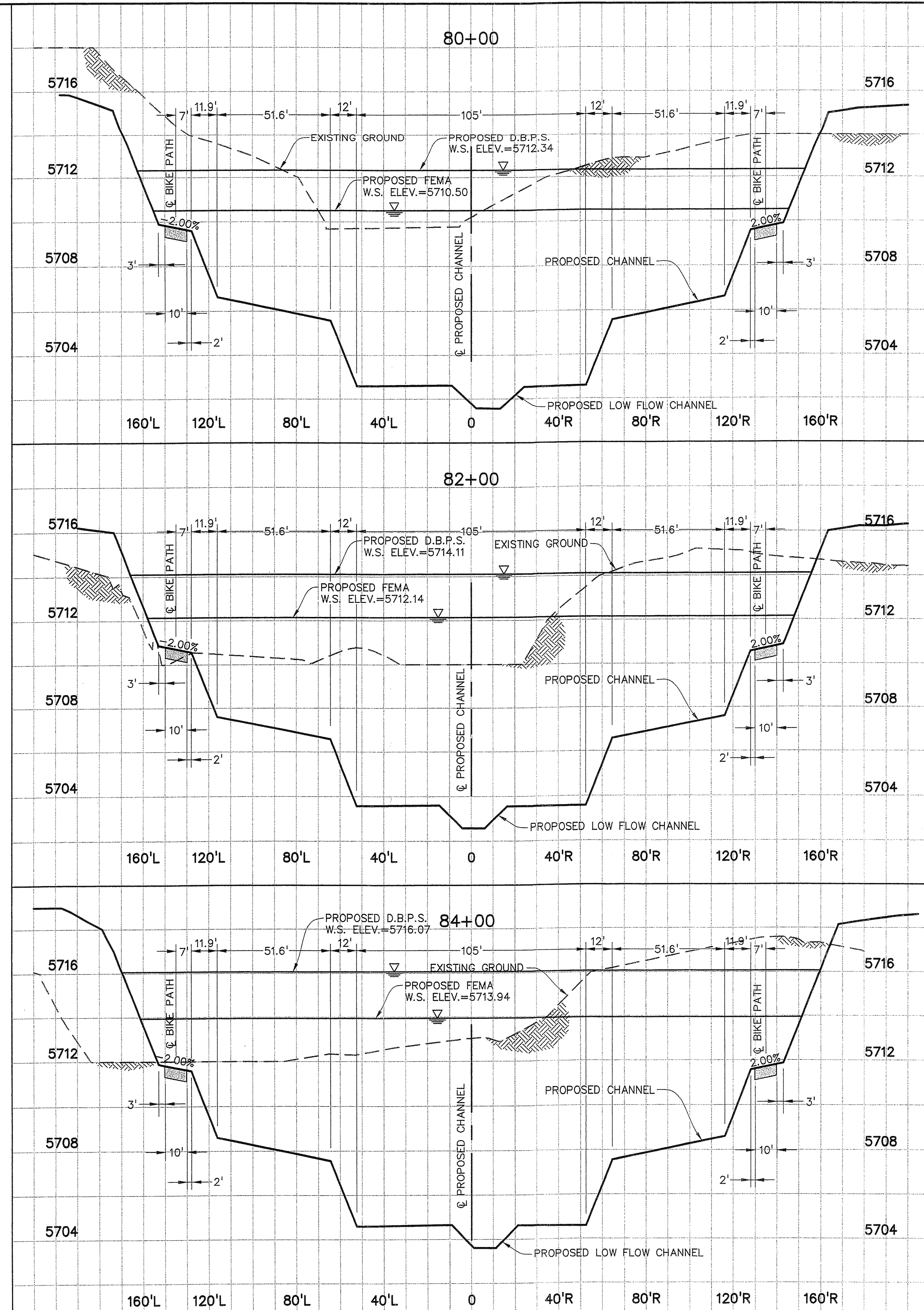
DESIGNED BY: JE
 REVISION DESCRIPTIONS: COUNTY COMMENTS
 DRAWN BY: BLF
 CHECKED BY: DATE: 15 NOV 2005
 COUNTY COMMENTS: 01 DEC 2005

DRAWING INFO: **JIMMY CAMP CREEK**
PROPOSED CHANNEL CENTERLINE
CROSS SECTIONS

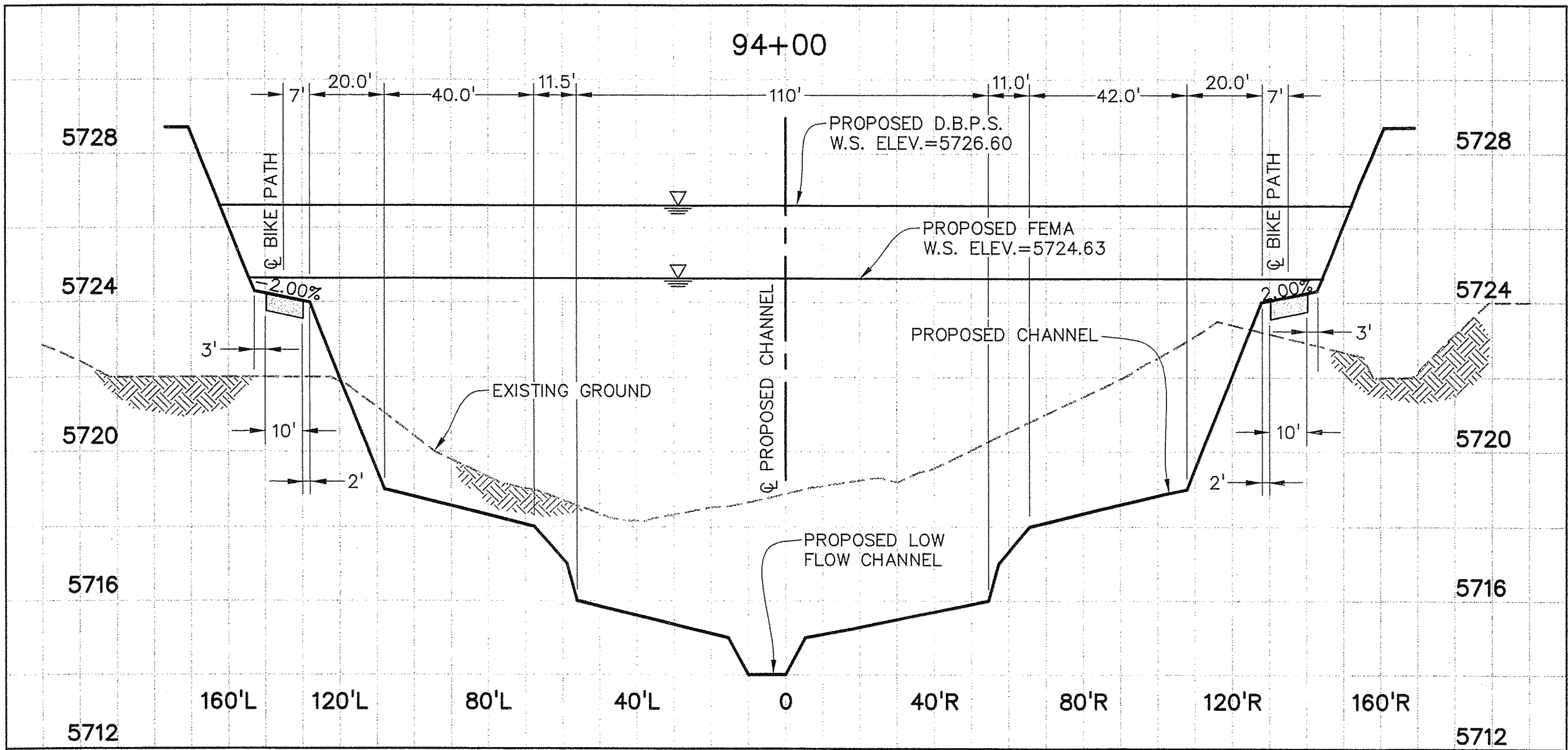
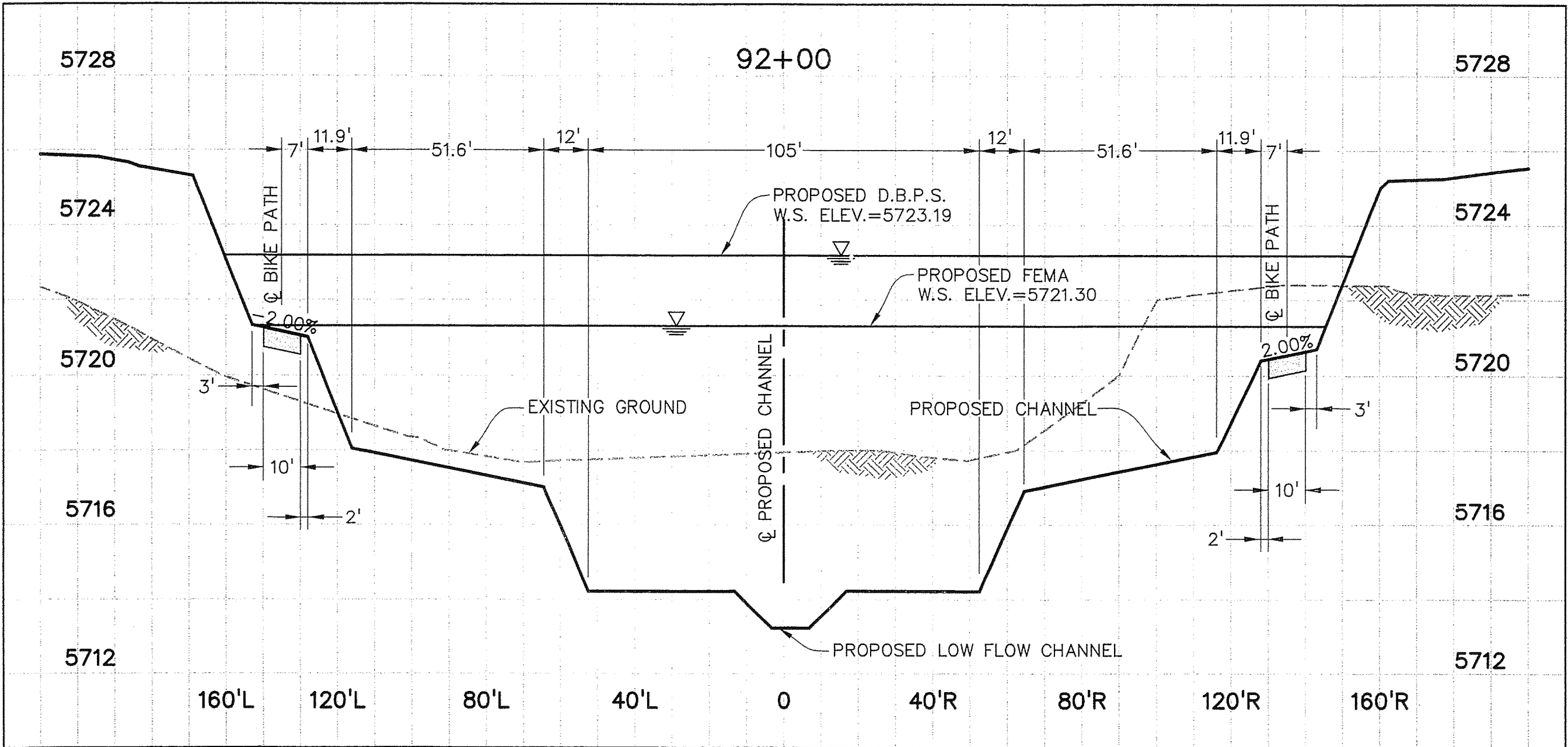
DATE: 18 AUG 2005
 SCALE: H: 1" = 30'
 V: 1" = 3'
 JOB NO: C7668-2
 DRAWING NO: 6D 154
 SHEET: 22
 SHEETS: 31



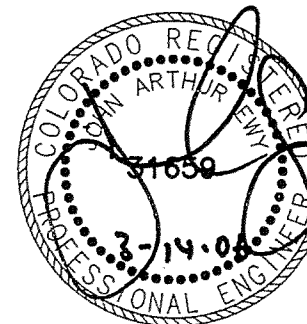
NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE



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NOTE: ALL WATER SURFACE ELEVATIONS SHOWN ARE FOR THE 100-YEAR STORM EVENT



NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE

PREPARED BY: Drexel Barrell & Co. Engineers Surveyors 6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887 1600 38TH STREET BOULDER, COLORADO 80301 (303) 442-4338 5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645 CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.	PREPARED FOR: 	THE LANDHUIS COMPANY 212 N. WAHSATCH, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 638-3200 CONTACT: DAVE COCOLIN	PROJECT INFO: LORSON RANCH JIMMY CAMP CREEK REALIGNMENT EL PASO COUNTY, COLORADO	DESIGNED BY: JE DRAWN BY: BLF CHECKED BY: REVISION DESCRIPTIONS COUNTY COMMENTS 15 NOV 2005 COUNTY COMMENTS 01 DEC 2005 REV'S PER PENTACOR RE-DESIGN 14 FEB 2006 OF N. DITCH AND TAPER CLIENT COMMENTS 14 MAR 2006	DRAWING INFO: JIMMY CAMP CREEK PROPOSED CHANNEL CENTERLINE CROSS SECTIONS	DATE: 18 AUG 2005 SCALE: H: 1" = 30' V: 1" = 3' JOB NO: C7668-2 DRAWING NO.: 6D 154 SHEET: 24 SHEETS: 31
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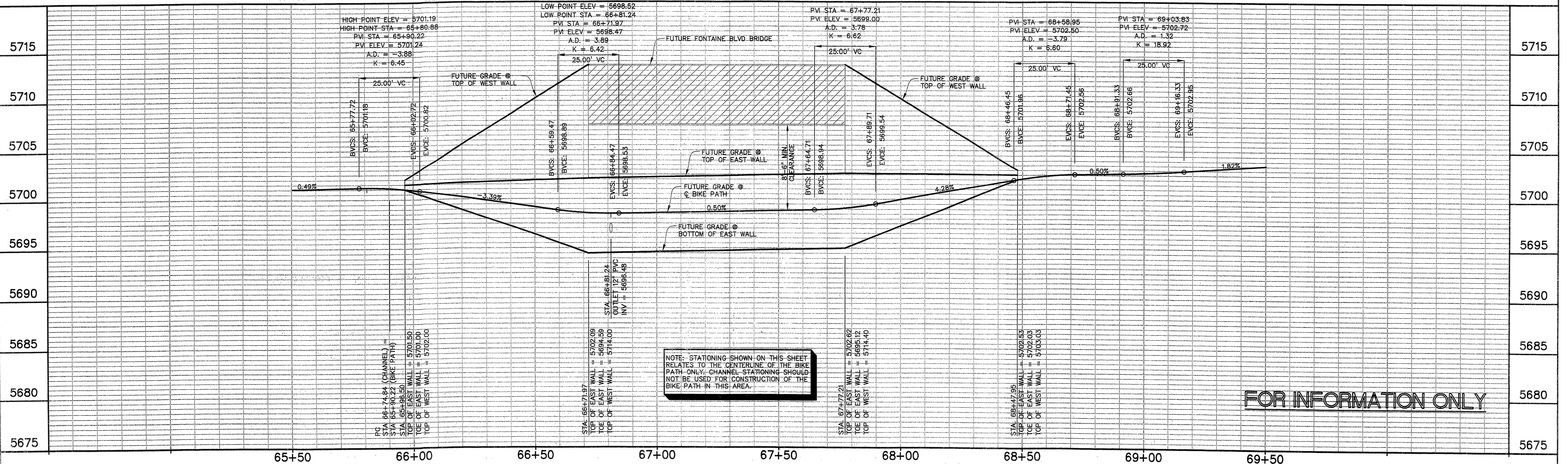
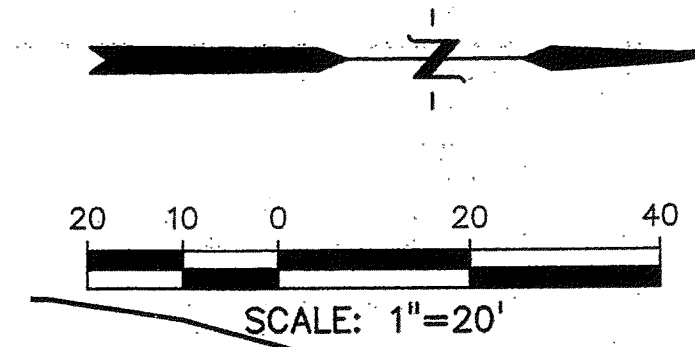
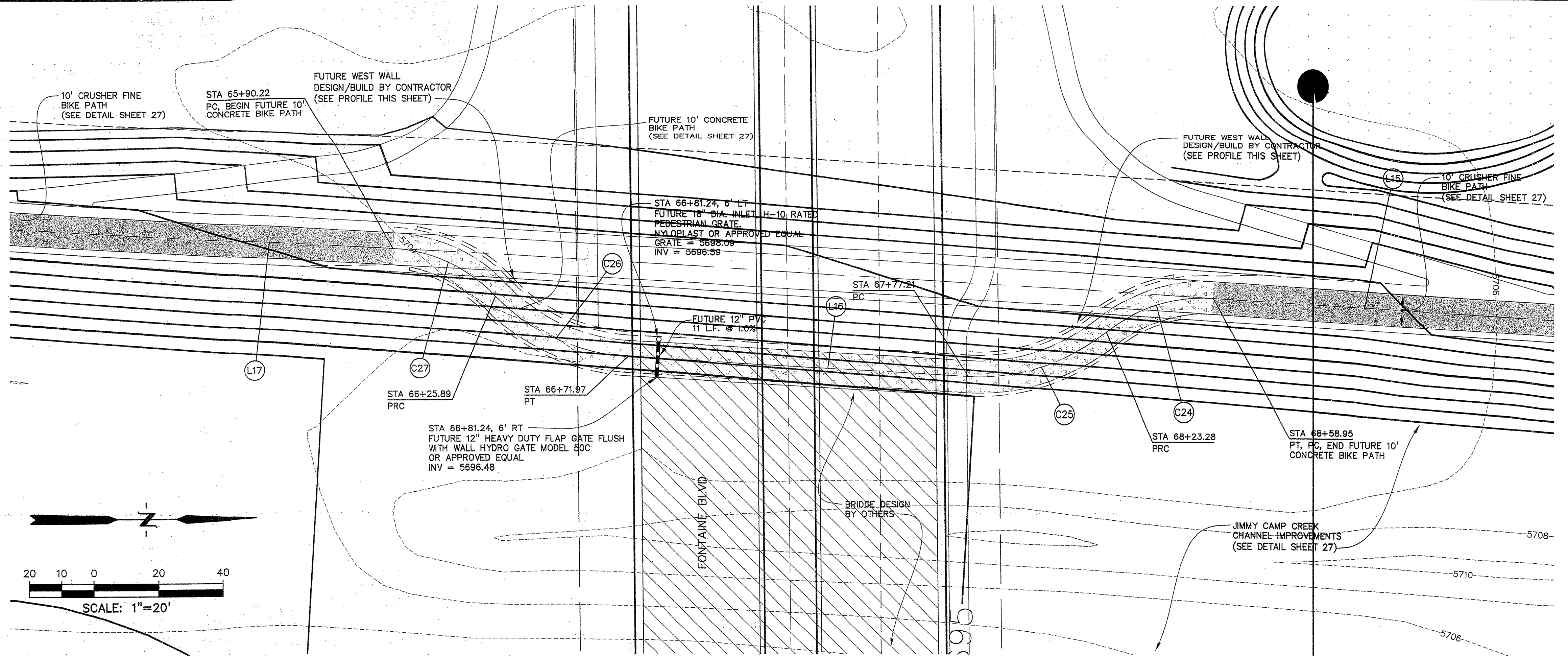
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GENERAL NOTES

1. CONSTRUCTION PLANS FOR ITEMS NOTED TO BE SUBMITTED AT A LATER DATE.
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3. REFER TO THE GRADING AND EROSION CONTROL PLAN FOR GRADING & EROSION CONTROL INFORMATION.
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5. REFER TO THE DRAINAGE PLAN FOR DRAINAGE INFORMATION.
6. REFER TO THE JIMMY CAMP CREEK PLAN AND PROFILES FOR JIMMY CAMP CREEK INFORMATION.

LINE TABLE		
LINE	LENGTH	BEARING
L15	128.94	N03°20'53"E
L16	105.24	N03°20'53"E
L17	301.03	N03°20'53"E

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C24	42°34'39"	48.00	35.67
C25	42°34'39"	62.00	46.07
C26	42°34'39"	62.00	46.07
C27	42°34'39"	48.00	35.67



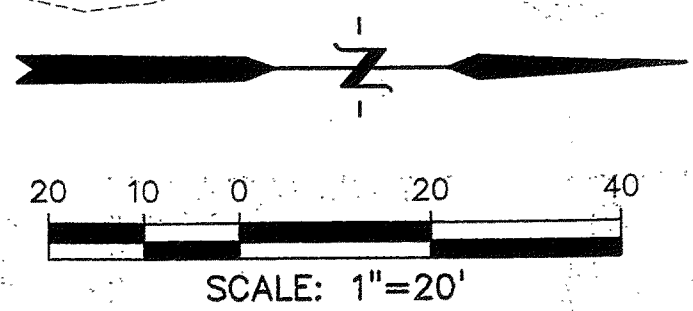
NOTE: STATIONING SHOWN ON THIS SHEET RELATES TO THE CENTERLINE OF THE BIKE PATH. ONLY CHANNEL STATIONING SHOULD NOT BE USED FOR CONSTRUCTION OF THE BIKE PATH IN THIS AREA.

FOR INFORMATION ONLY

PREPARED BY: Drexel Barrell & Co. Engineers & Surveyors 6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887 1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4338 5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645 CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.	PREPARED FOR: THE LANDHUIS COMPANY 212 N. WAHSATCH, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200 CONTACT: DAVID COGOLIN	PROJECT INFO: LORSON RANCH JIMMY CAMP CREEK REALIGNMENT EL PASO COUNTY, COLORADO	DESIGNED BY: MM DRAWN BY: MM CHECKED BY: JE	REVISION DESCRIPTIONS DATE	DRAWING INFO: JIMMY CAMP CREEK BIKE PATH (WEST) PLAN AND PROFILE (STA 65+77.72 TO 69+16.33)	DATE: 18 AUG 2005 SCALE: H: 1" = 20' V: 1" = 5'	JOB NO: C7668-2 DRAWING NO: 6D 154	SHEET: 25 SHEETS: 31
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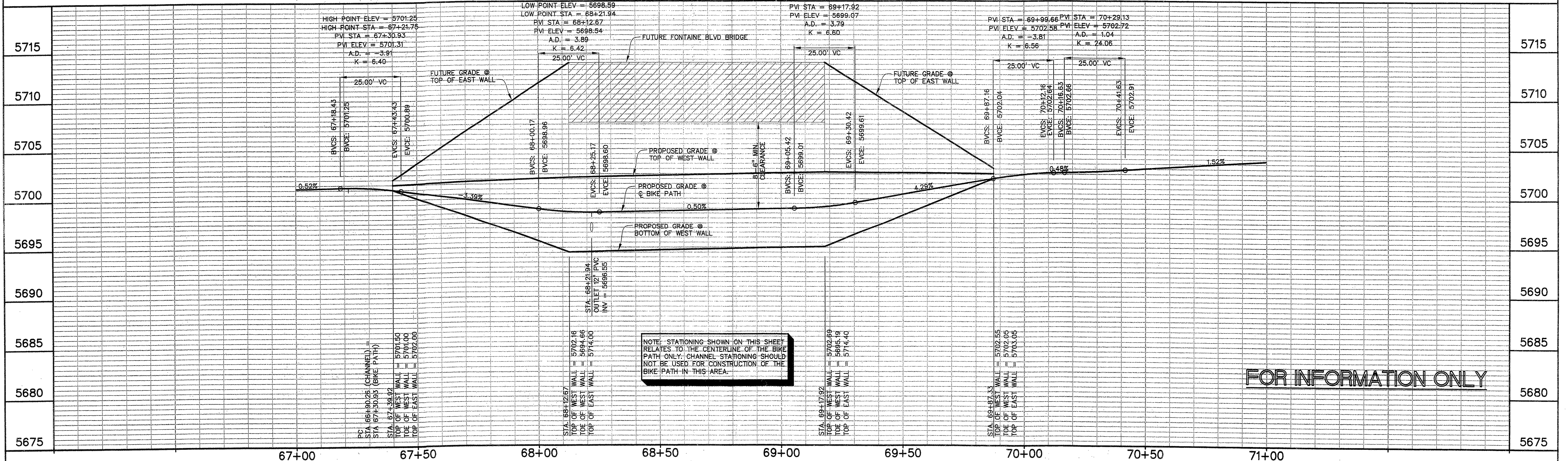
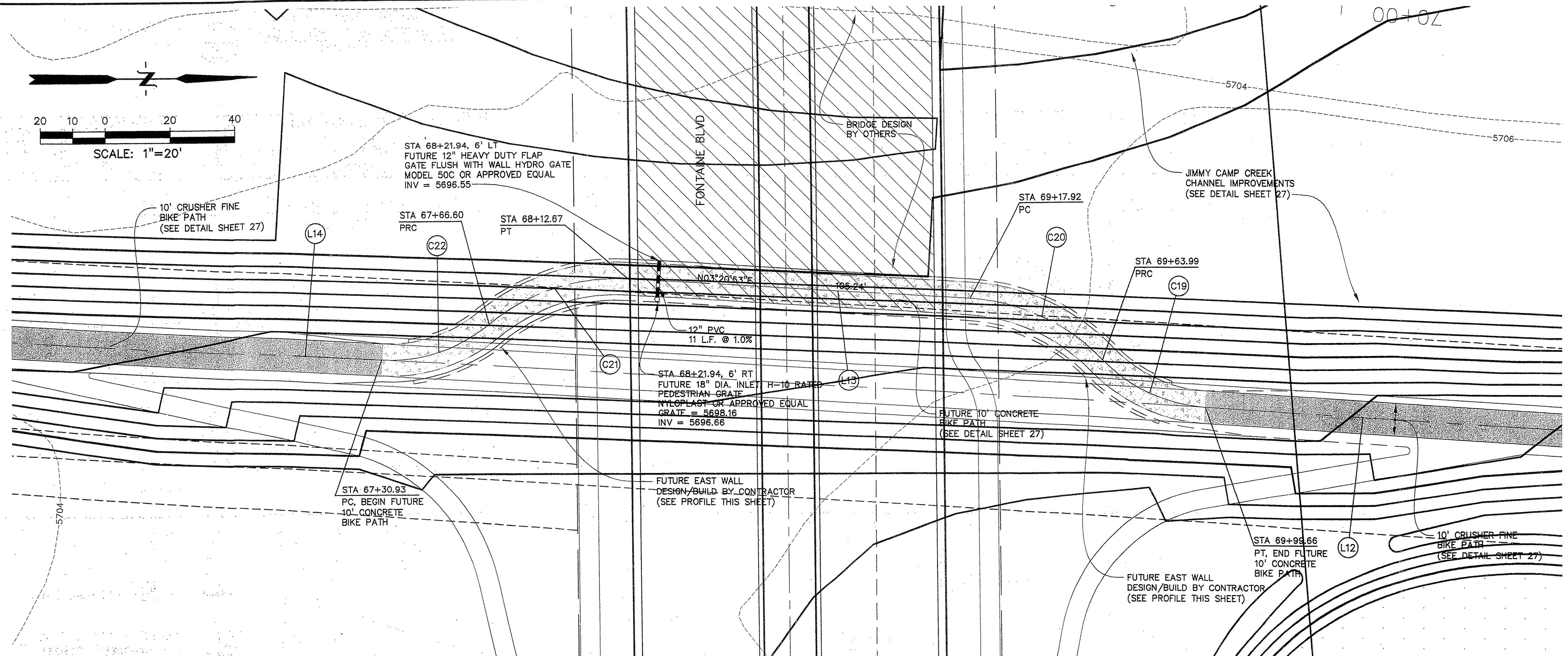
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5. REFER TO THE DRAINAGE PLAN FOR DRAINAGE INFORMATION.
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LINE TABLE		
LINE	LENGTH	BEARING
L12	113.53	N03°20'53"E
L13	105.24	N03°20'53"E
L14	316.44	N03°20'53"E

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C19	42°34'39"	48.00	35.67
C20	42°34'39"	62.00	46.07
C21	42°34'39"	62.00	46.07
C22	42°34'39"	48.00	35.67



FOR INFORMATION ONLY

PREPARED BY: **Drexel Barrell & Co.** Engineers & Surveyors
 6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887
 1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4338
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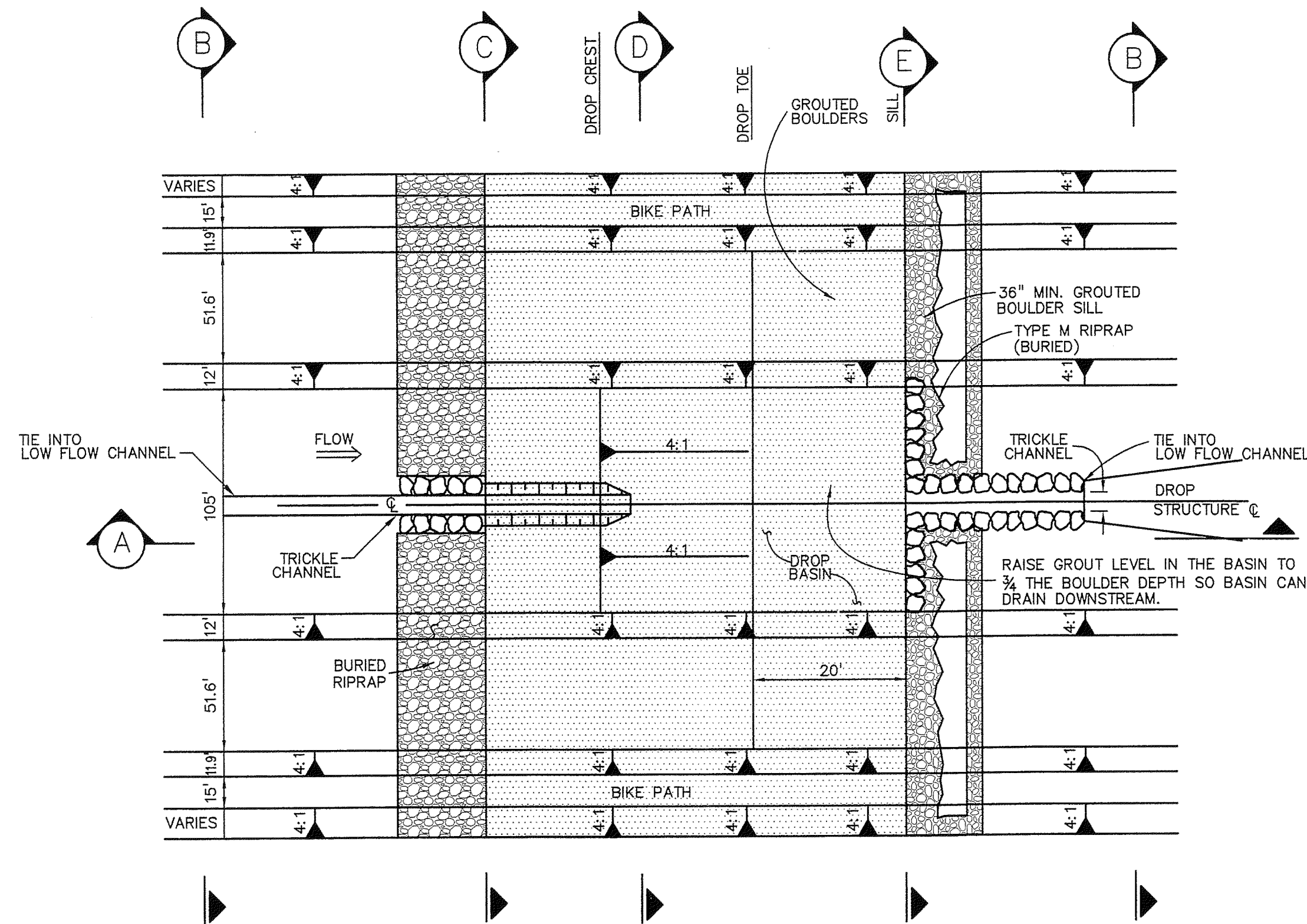
THE LANDHUIS COMPANY
 212 N. WAHSATCH, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200
 CONTACT: DAVE COGOLIN

PROJECT INFO: **LORSON RANCH**
 JIMMY CAMP CREEK REALIGNMENT
 EL PASO COUNTY, COLORADO

DESIGNED BY: MM
 DRAWN BY: MM
 CHECKED BY: JE

DRAWING INFO: **JIMMY CAMP CREEK BIKE PATH (EAST)**
 PLAN AND PROFILE
 (STA 67+18.43 TO 70+41.63)

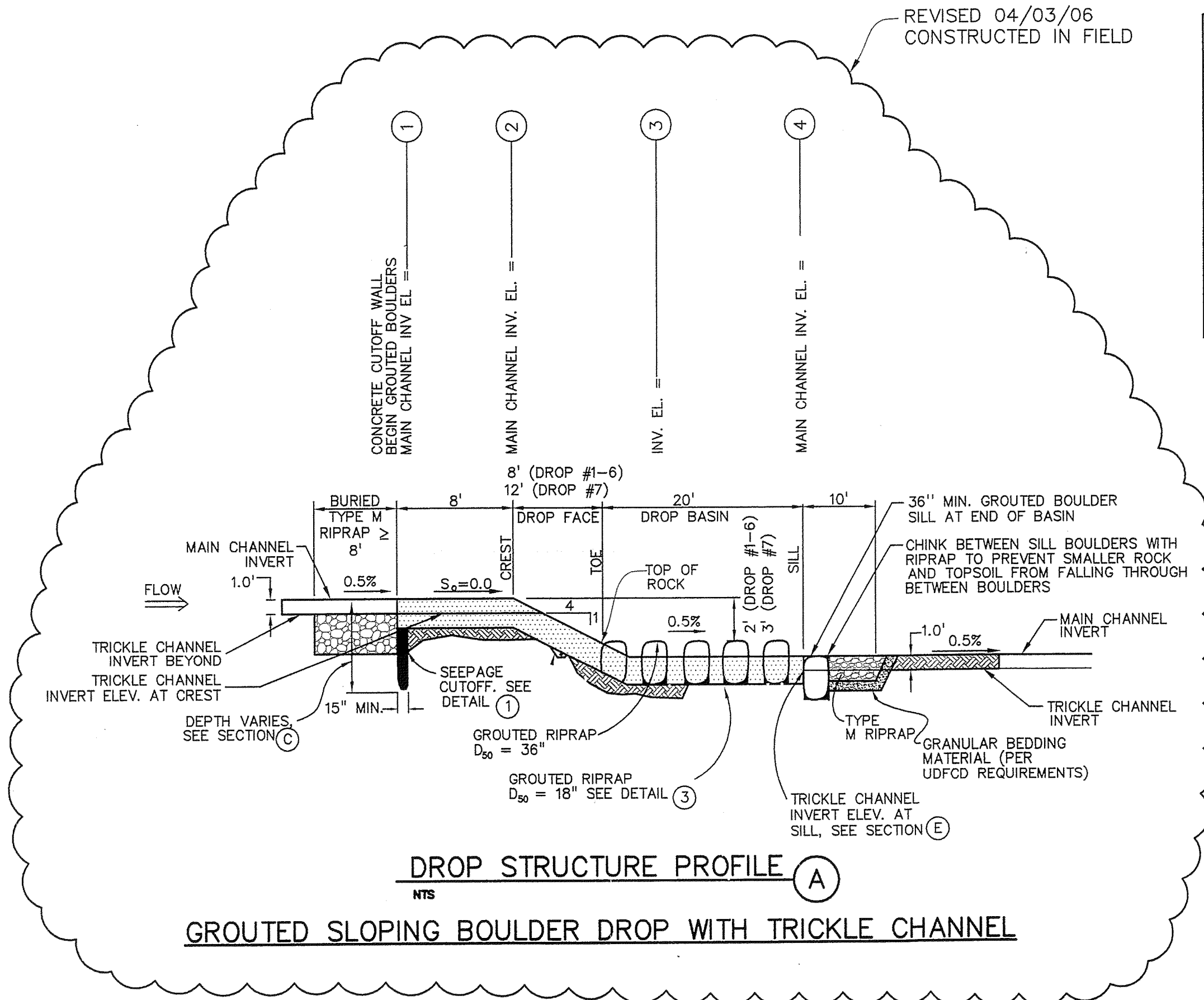
DATE: 18 AUG 2005
 SCALE: H: 1" = 20'
 V: 1" = 5'
 JOB NO: C7668-2
 DRAWING NO: 6D 154
 SHEET: 26
 SHEETS: 31



DROP STRUCTURE PLAN

NTS

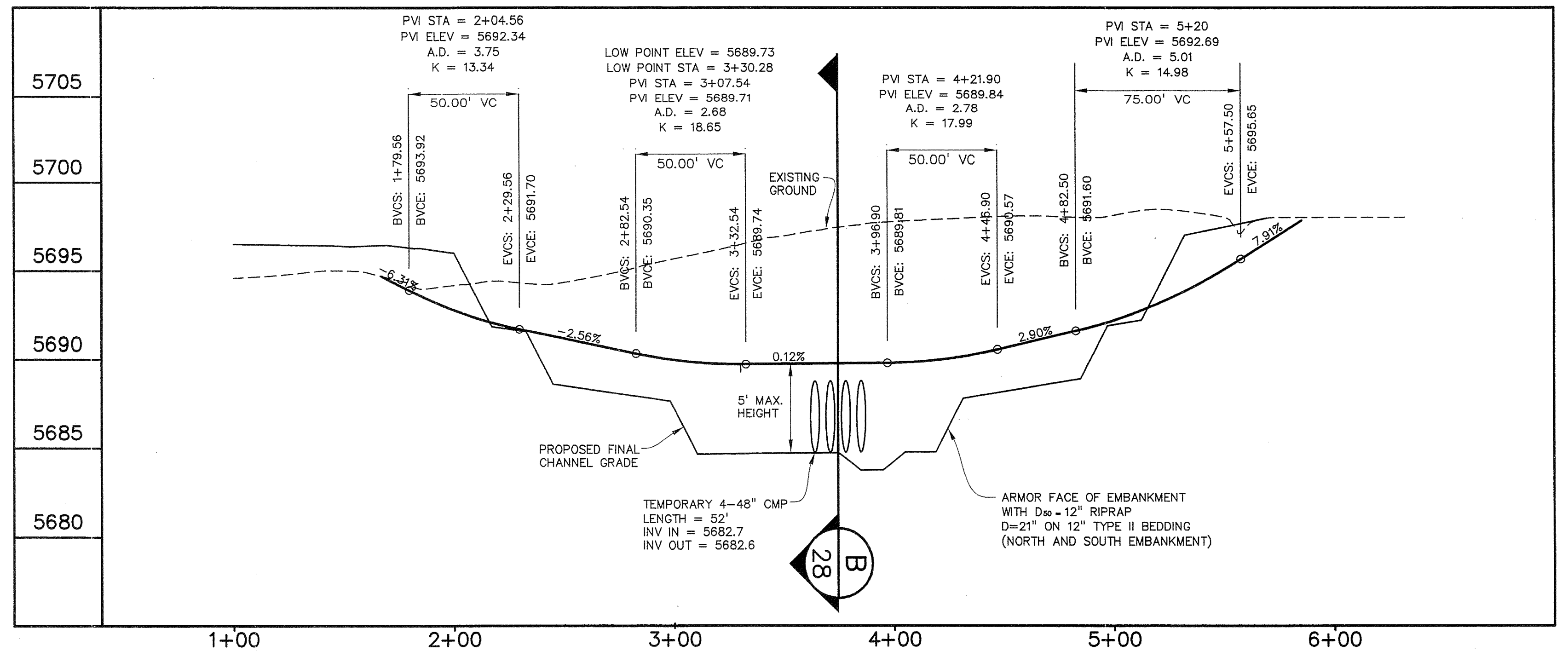
REVISED 04/03/06
CONSTRUCTED IN FIELD



DROP STRUCTURE PROFILE

NTS

GROUTED SLOPING BOULDER DROP WITH TRICKLE CHANNEL

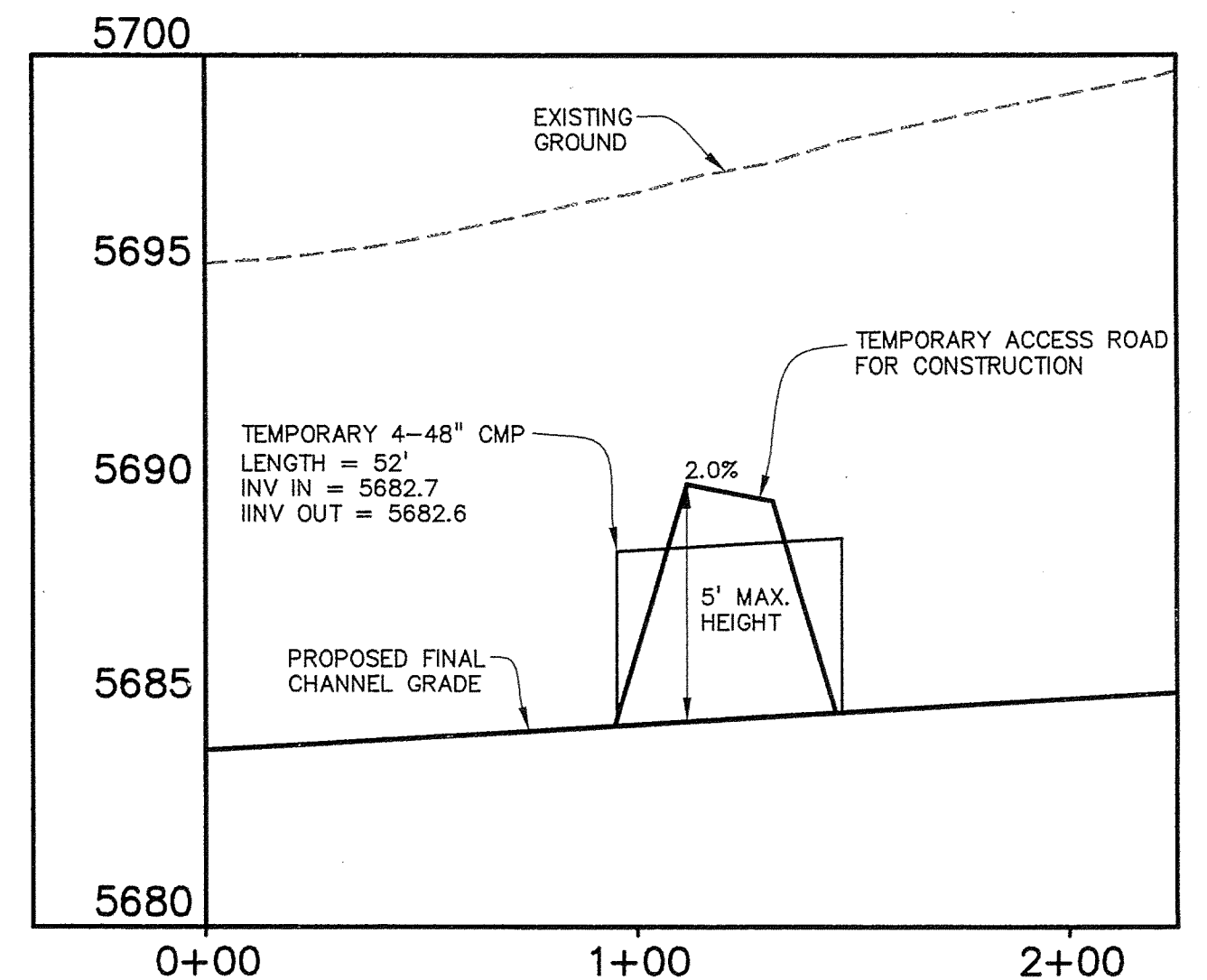


TEMPORARY CONSTRUCTION
ACCESS SECTION

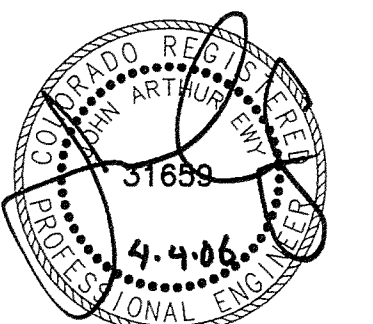
POINT NUMBER	ELEVATION						
	DROP #1	DROP #2	DROP #3	DROP #4	DROP #5	DROP #6	DROP #7
1	5680.0	5691.0	5698.0	5707.0	5711.0	5714.0	5718.0
2	5680.0	5691.0	5698.0	5707.0	5711.0	5714.0	5718.0
3	5678.0	5689.0	5696.0	5705.0	5709.0	5712.0	5715.0
4	5677.9	5688.9	5695.9	5704.9	5708.9	5711.9	5714.9

GENERAL NOTES

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TEMPORARY CONSTRUCTION
ACCESS SECTION



NOT VALID WITHOUT ORIGINAL
SIGNATURE AND DATE

PREPARED BY: **Drexel Barrell & Co.** Engineers Surveyors
6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887
1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4338
5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645
CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.

PREPARED FOR: **THE LANDHUIS COMPANY**
212 N. WAHSATCH, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200
CONTACT: DAVE COGOLIN

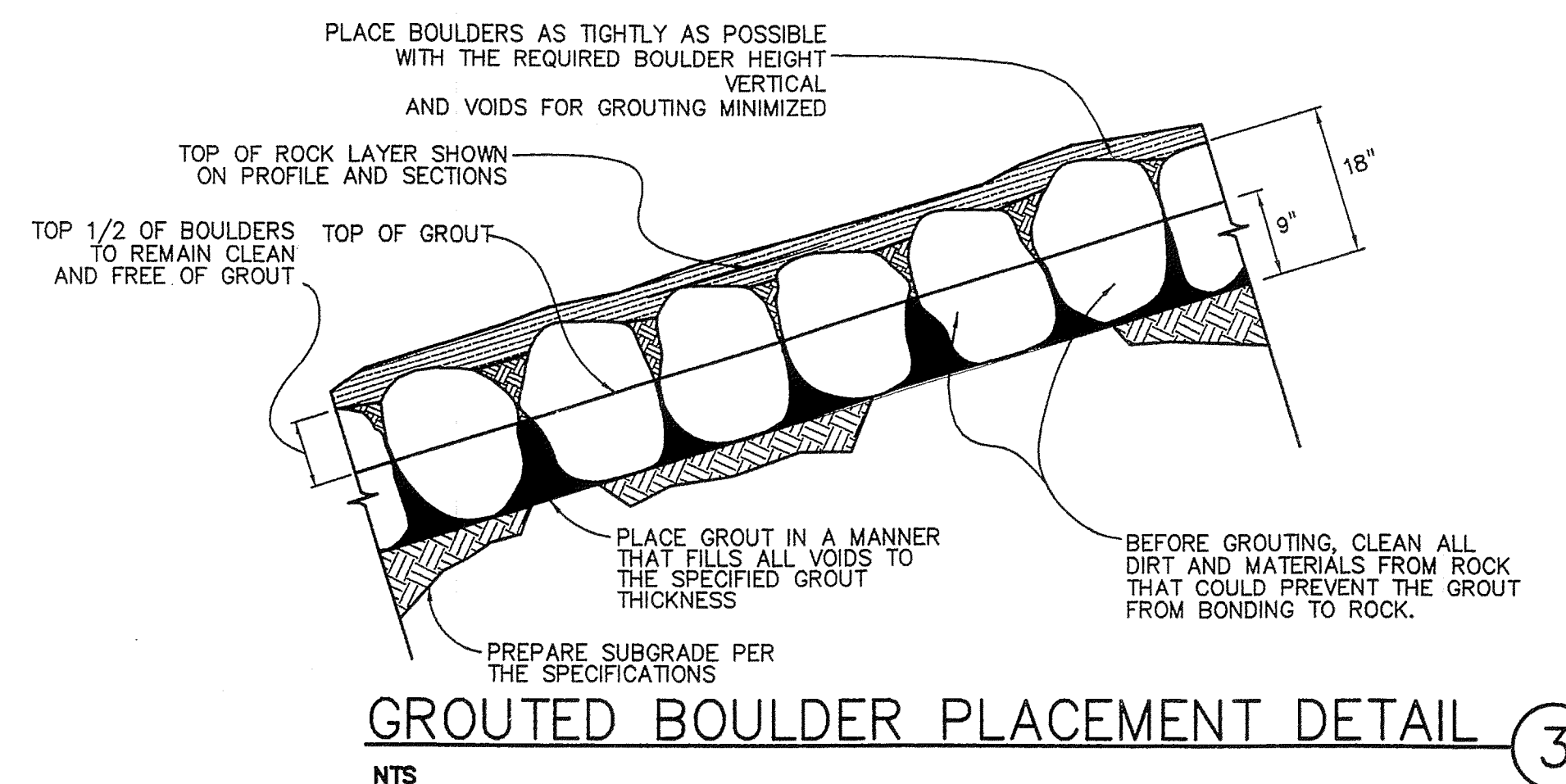
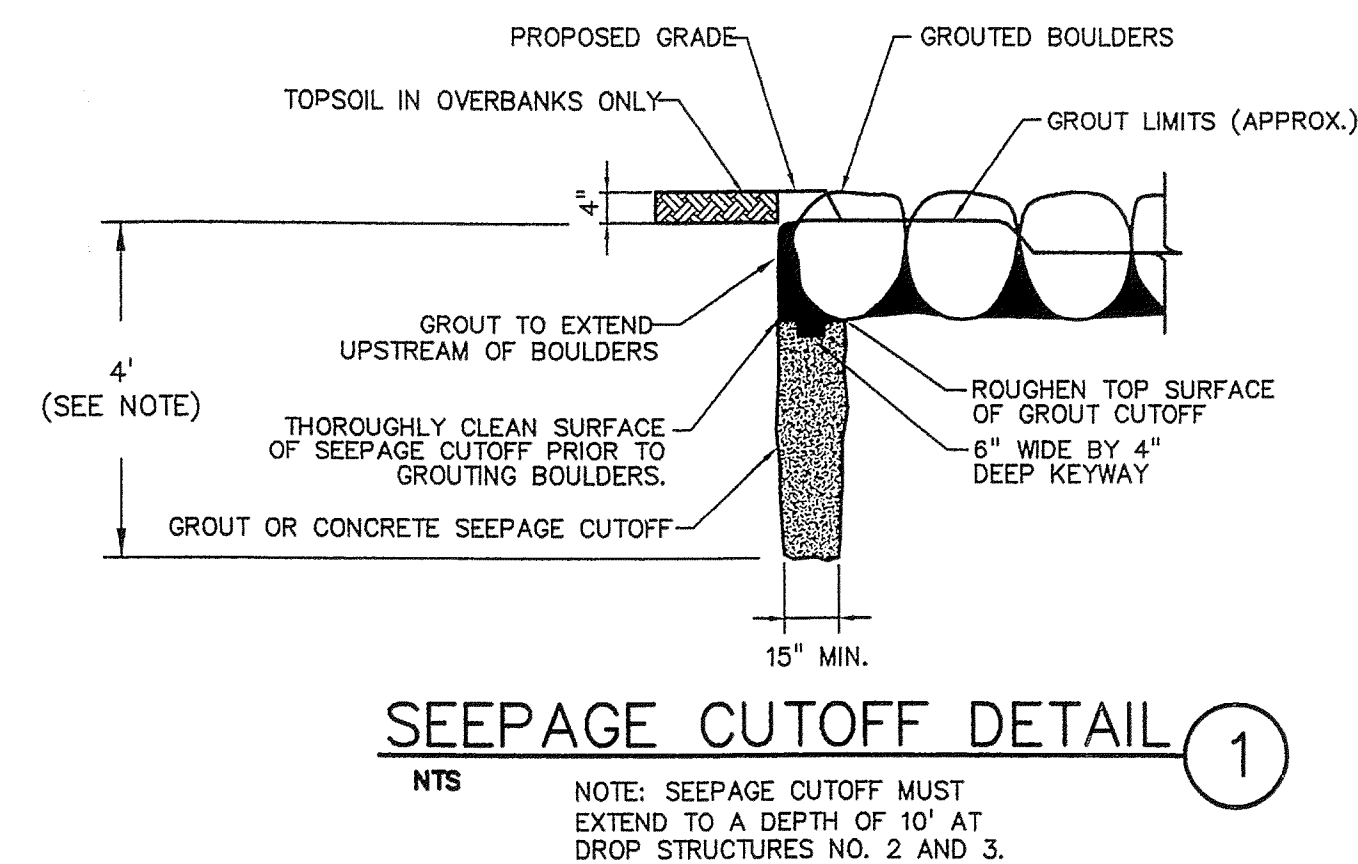
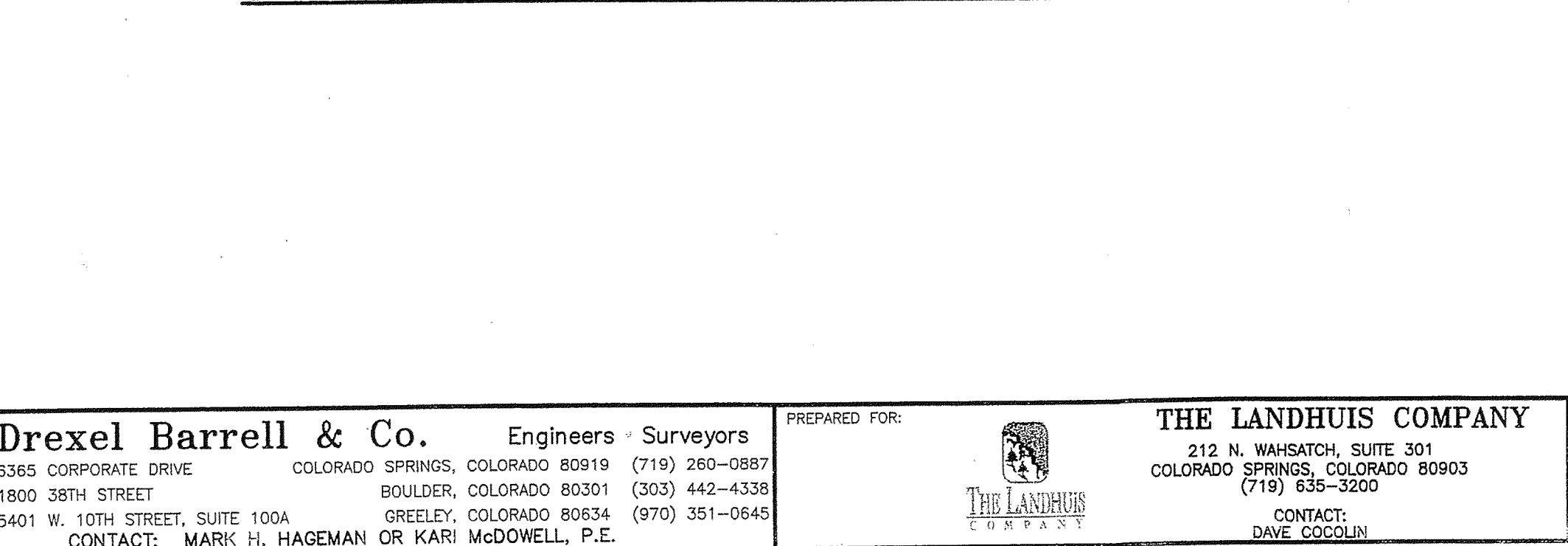
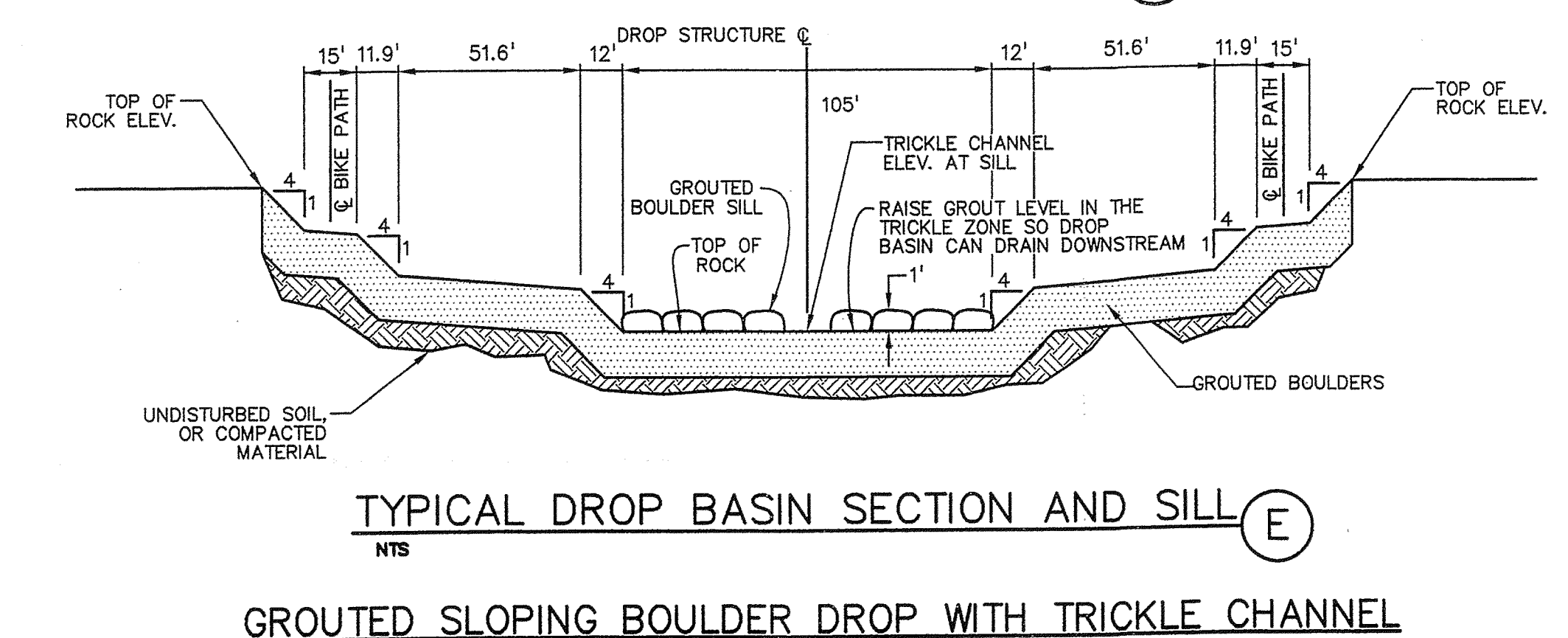
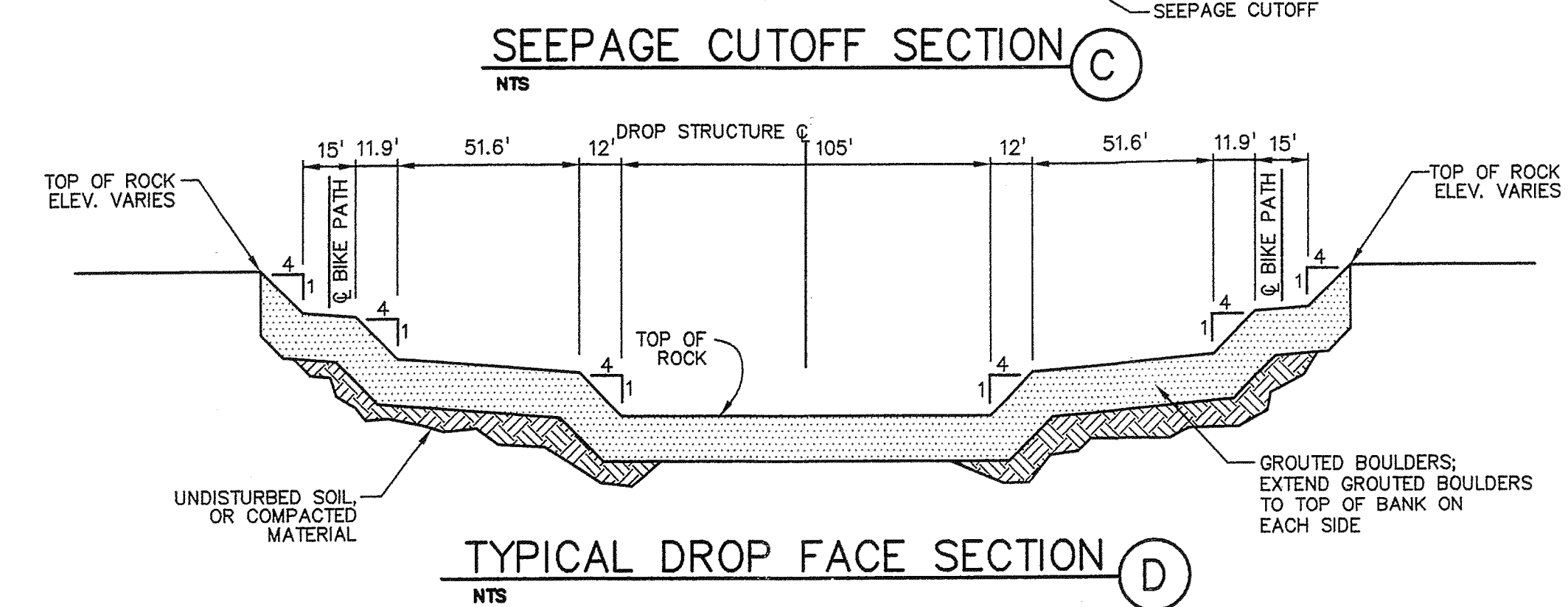
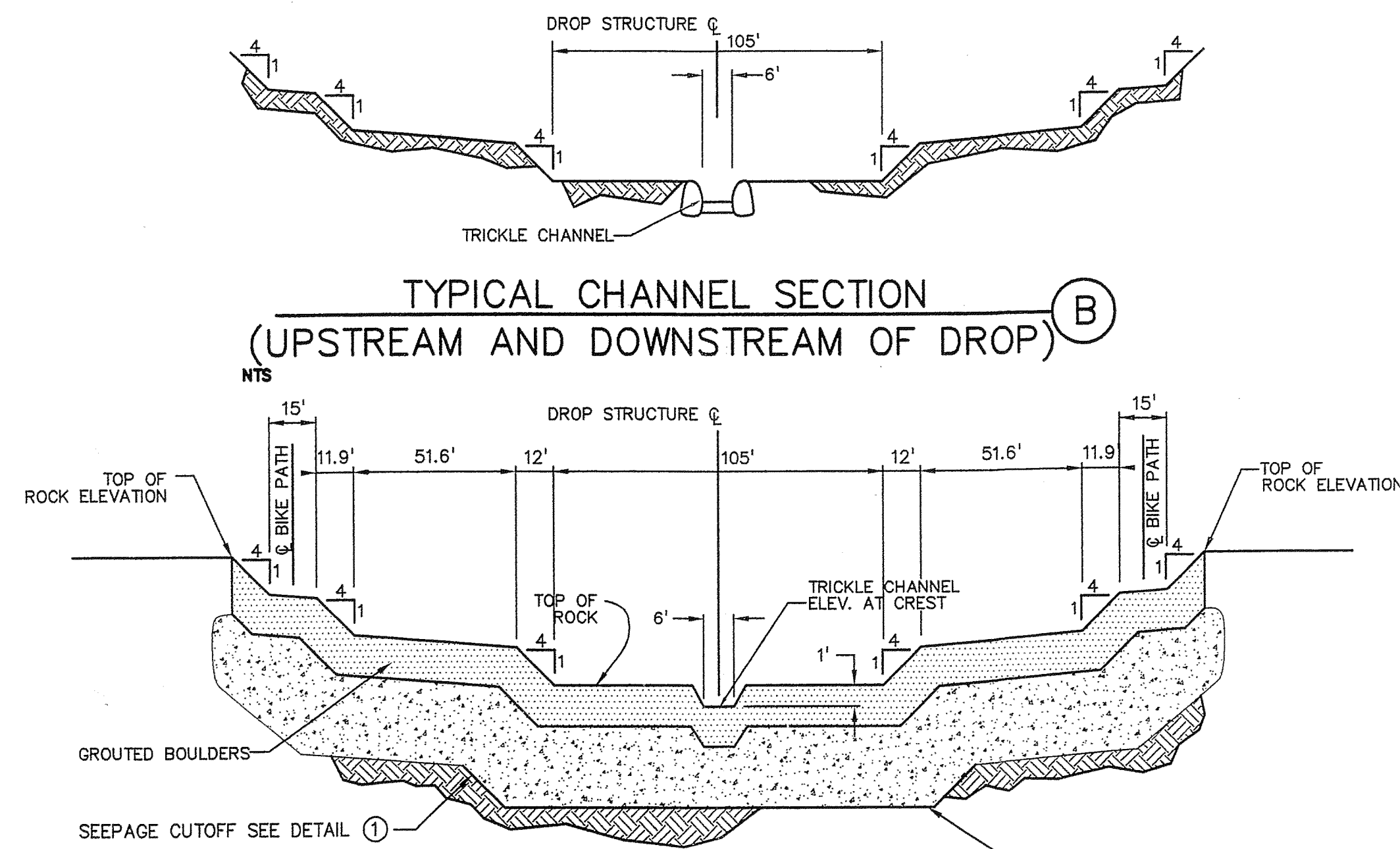
PROJECT INFO: **LORSON RANCH**
JIMMY CAMP CREEK
REALIGNMENT
EL PASO COUNTY, COLORADO

DESIGNED BY: JE
DRAWN BY: MM
CHECKED BY: MM

REVISION DESCRIPTIONS
COUNTY COMMENTS
DROP STRUCTURE AS
CONSTRUCTED IN FIELD
DATE: 15 NOV 2005
03 APR 2006

DRAWING INFO: **DROP STRUCTURE DETAILS**

DATE: 18 AUG 2005
SCALE: NTS
JOB NO: C7668-2
DRAWING NO: 6D 154
SHEET: 31



GROUTED SLOPING BOULDER DROP WITH TRICKLE CHANNEL

GROUT NOTES

MATERIAL SPECIFICATIONS

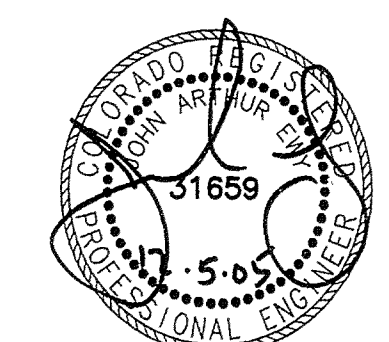
1. ALL GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH EQUAL TO 3200 PSI.
2. ONE CUBIC YARD OF GROUT SHALL HAVE A MINIMUM OF SIX (6) SACKS OF TYPE II PORTLAND CEMENT.
3. A MAXIMUM OF 25% TYPE F FLY ASH MAY BE SUBSTITUTED FOR THE PORTLAND CEMENT.
4. FOR TYPE A GROUT, THE AGGREGATE SHALL BE COMPRISED OF 70% NATURAL SAND (FINES) AND 30% 3/4-INCH ROCK (COARSE).
5. FOR TYPE B GROUT, THE AGGREGATE SHALL BE COMPRISED OF 3/4-INCH MAXIMUM GRAVEL, STRUCTURAL CONCRETE AGGREGATE.
6. TYPE B GROUT SHALL BE USED IN STREAMS WITH SIGNIFICANT PERENNIAL FLOWS.
7. THE GROUT SLUMP SHALL BE 4-INCHES TO 6-INCHES.
8. AIR ENTRAINMENT SHALL BE 5.5%-7.5%.
9. TO CONTROL SHRINKAGE AND CRACKING, 1.5 POUNDS OF FIBERMESH, OR EQUIVALENT, SHALL BE USED PER CUBIC YARD OF GROUT.
10. COLOR ADDITIVE IN REQUIRED AMOUNTS SHALL BE USED WHEN SO SPECIFIED BY CONTRACT.

PLACEMENT SPECIFICATIONS

1. ALL TYPE A GROUT SHALL BE DELIVERED BY MEANS OF A LOW PRESSURE (LESS THAN 10 PSI) GROUT PUMP USING A 2-INCH DIAMETER NOZZLE.
2. ALL TYPE B GROUT SHALL BE DELIVERED BY MEANS OF A LOW PRESSURE (LESS THAN 10 PSI) CONCRETE PUMP USING A 3-INCH DIAMETER NOZZLE.
3. FULL DEPTH PENETRATION OF THE GROUT INTO THE BOULDER VOIDS SHALL BE ACHIEVED BY INJECTING GROUT STARTING WITH THE NOZZLE NEAR THE BOTTOM AND RAISING IT AS GROUT FILLS, WHILE VIBRATING GROUT INTO PLACE USING A PENCIL VIBRATOR.
4. AFTER GROUT PLACEMENT, EXPOSED BOULDER FACES SHALL BE CLEANED WITH A WET BROOM.
5. ALL GROUT BETWEEN BOULDERS SHALL BE TREATED WITH A BROOM FINISH.
6. ALL FINISHED GROUT SURFACES SHALL BE SPRAYED WITH A CLEAR LIQUID MEMBRANE CURING COMPOUND AS SPECIFIED IN ASTM C-309.
7. SPECIAL PROCEDURES SHALL BE REQUIRED FOR GROUT PLACEMENT WHEN THE AIR TEMPERATURES ARE LESS THAN 40°F OR GREATER THAN 90°F. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM THE DESIGN ENGINEER OF THE PROCEDURES TO BE USED FOR PROTECTING THE GROUT.
8. CLEAN BOULDERS BY BRUSHING AND WASHING BEFORE GROUTING.

GENERAL NOTES

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6. REFER TO THE JIMMY CAMP CREEK PLAN AND PROFILES FOR JIMMY CAMP CREEK INFORMATION.



NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE

DROP STRUCTURE DETAILS

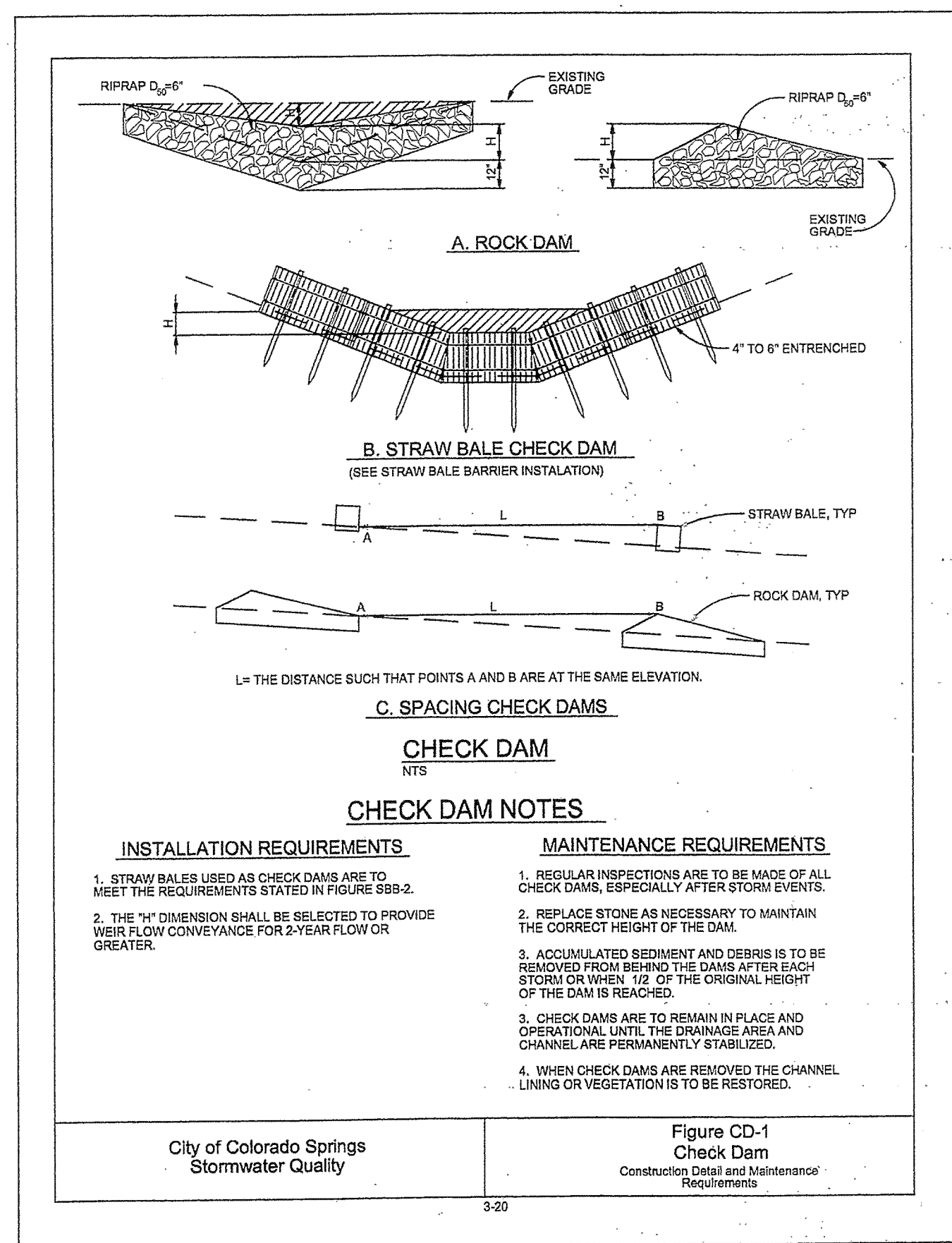
PREPARED BY: **Drexel Barrell & Co.** Engineers - Surveyors
6365 CORPORATE DRIVE COLORADO SPRINGS, COLORADO 80919 (719) 260-0887
1800 38TH STREET BOULDER, COLORADO 80301 (303) 442-4338
5401 W. 10TH STREET, SUITE 100A GREELEY, COLORADO 80634 (970) 351-0645
CONTACT: MARK H. HAGEMAN OR KARI McDOWELL, P.E.

PREPARED FOR: **THE LANDHUIS COMPANY**
212 N. WAHSATCH, SUITE 301 COLORADO SPRINGS, COLORADO 80903 (719) 635-3200
CONTACT: DAVE COGOLIN

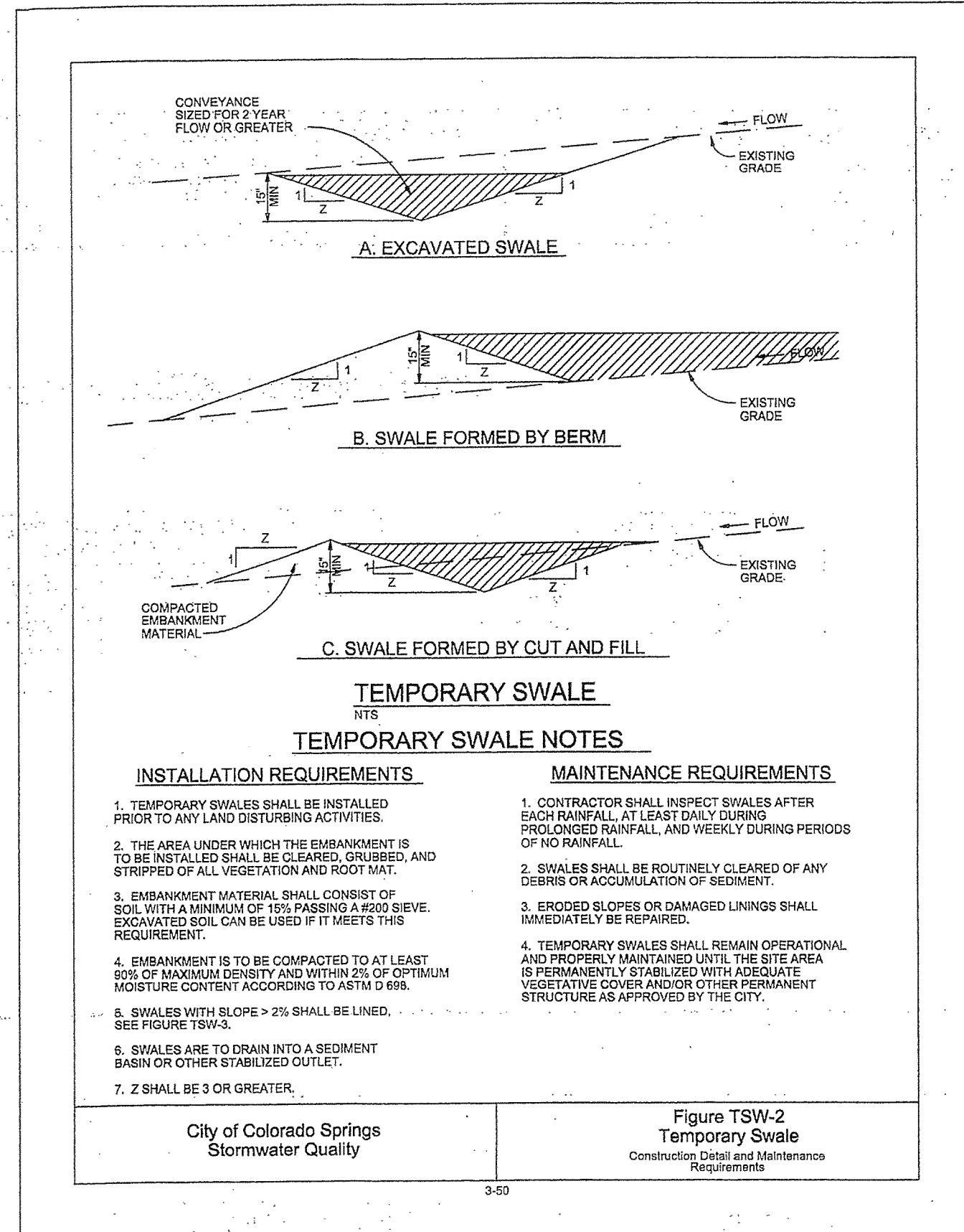
PROJECT INFO: **LORSON RANCH**
JIMMY CAMP CREEK
REALIGNMENT
EL PASO COUNTY, COLORADO

DESIGNED BY: JE
DRAWN BY: MM
CHECKED BY: MM
REVISION DESCRIPTIONS
COUNTY COMMENTS
DATE: 15 NOV 2005

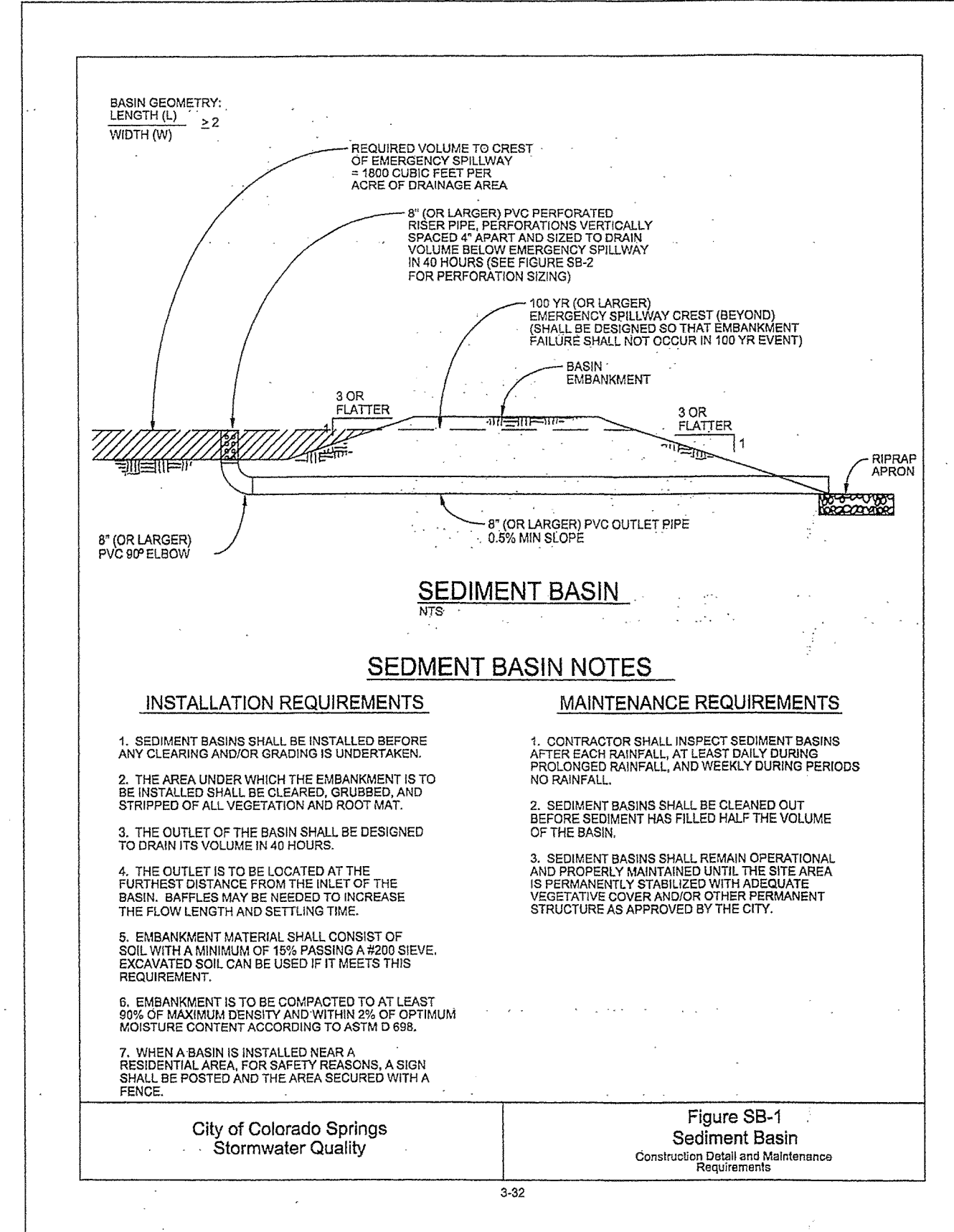
DRAWING INFO: **DROP STRUCTURE DETAILS**
DATE: 18 AUG 2005
JOB NO: C7668-2
SCALE: H: NTS
V: NTS
DRAWING NO.: 6D 154
SHEET: 31



CD CHECK DAM DETAIL
NO SCALE



DS DIVERSION SWALE
NO SCALE



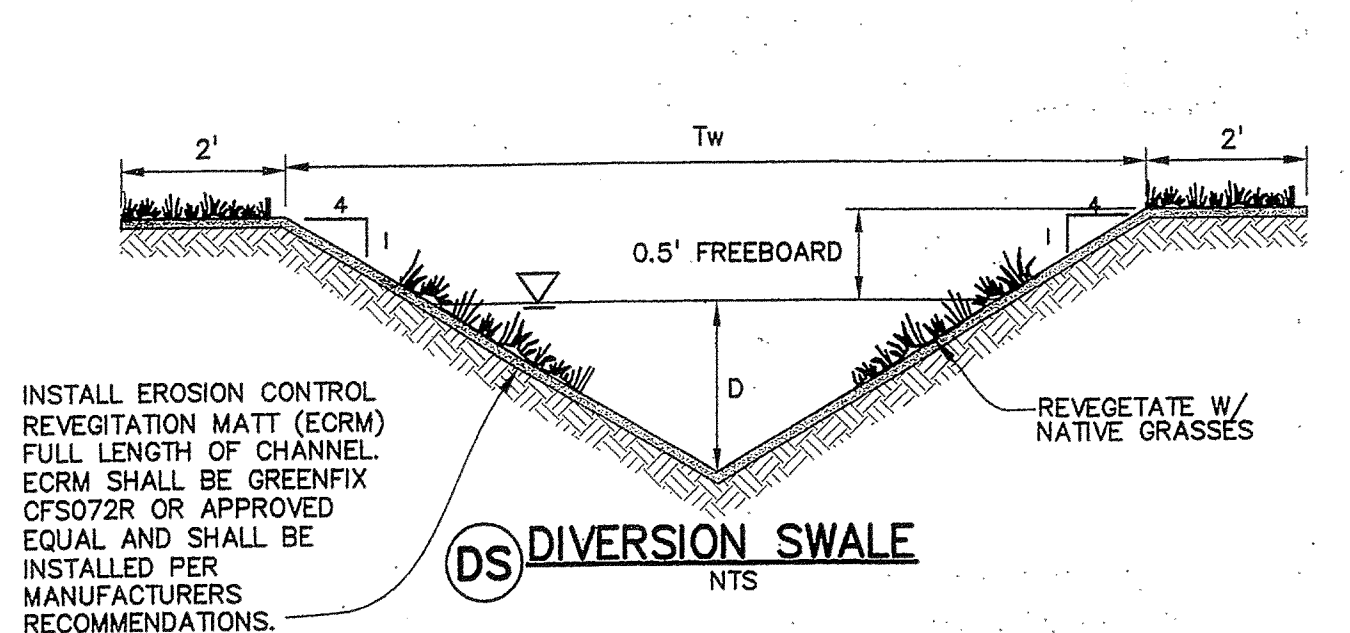
SB SEDIMENT BASIN DETAIL
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RECOMENDED SEED MIX FOR SANY SOILS

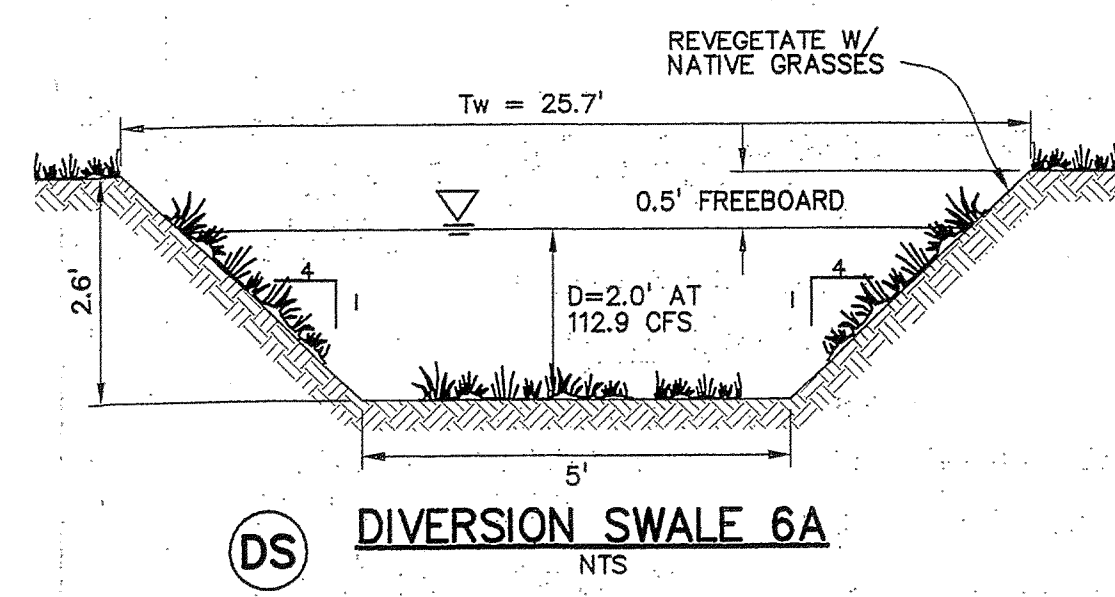
COMMON NAME (VARIETY)	SCIENTIFIC NAME	GROWTH SEASON	GROWTH FORM	SEEDS/Lb	Lbs PLS/ACRE
BLUE GRAMA (HACHITA)	CHONDROSUM GRACILE	WARM	SOD/BUNCH	825,000	2.1
LITTLE BLUESTEM (CAMPER)	SCHIZACHYRIUM SCOPARIUM	WARM	BUNCH	260,000	3.0
PRAIRIE SANDREED	CALAMOVIFA LONGIFOLIA	WARM	SOD	274,000	3.0
SAND DROPSEED	SPOROBOLUS CRYPTANDRUS	WARM	BUNCH	5,298,000	0.3
SIDEOATS GRAMA (VAUGHN)	BOUTELOUA CURTIPENDULA	WARM	SOD/BUNCH	191,000	5.6
WESTERN WHEATGRASS (ARRIBA)	PASCOPYRUM SMITHII	COLD	SOD	110,000	8.0
					22.0
WILDFLOWERS					
BLANKET FLOWER	GAILLARDIA ARISTATA	-	-	132,000	0.25
PRAIRIE CONEFLOWER	RATIBIDA COLUMNIFERA	-	-	1,230,000	0.20
PURPLE PRAIRIE CLOVER	PETALOSTEMUM PURPUREA	-	-	210,000	0.20
GAYFEATHER	LIATRIS PUNCTATA	-	-	138,000	0.06
FLAX	LINUM LEWISII	-	-	293,000	0.20
PENSTEMON	PENSTEMON STRICTUS	-	-	592,000	0.20
YARROW	ACHILLEA MILLEFOLIUM	-	-	2,770,000	0.03
					1.14

SUITABLE FOR COLORADO FRONT RANGE SITE FROM 4,500' TO 7,000' IN ELEVATION

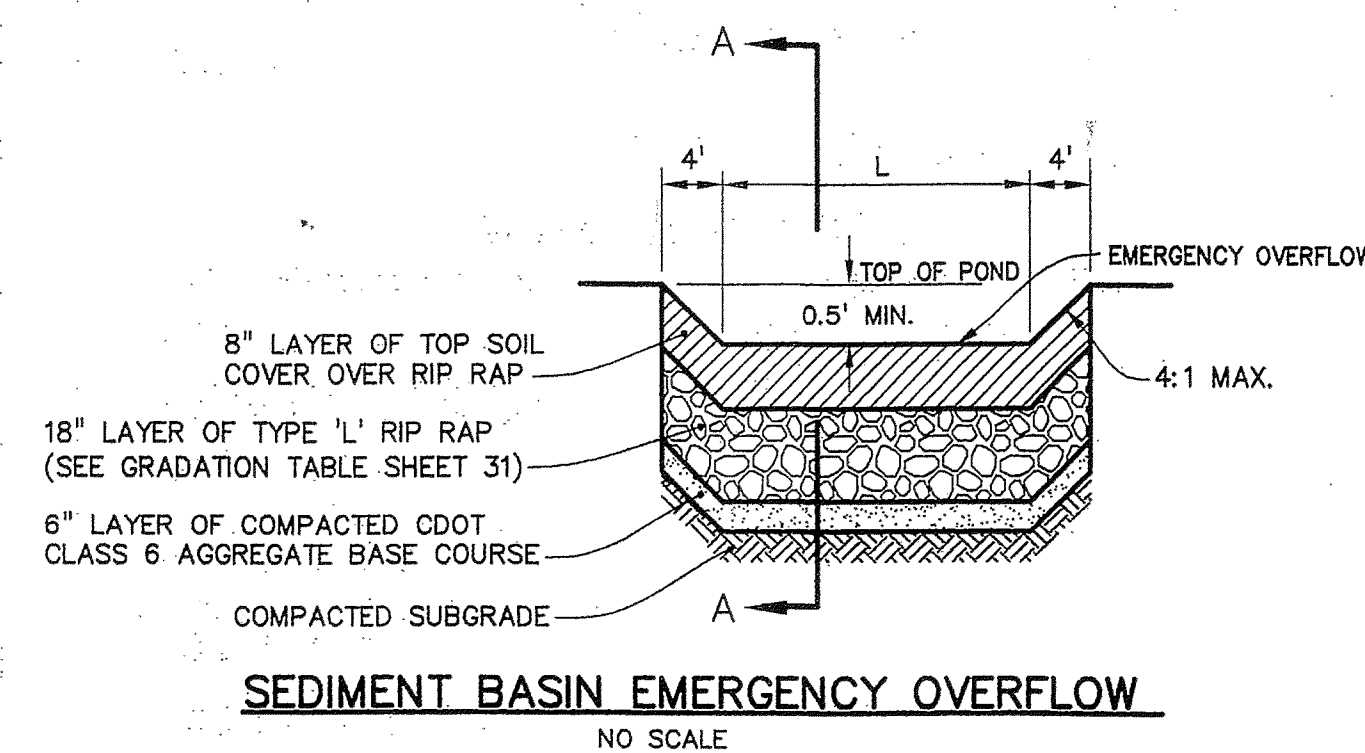
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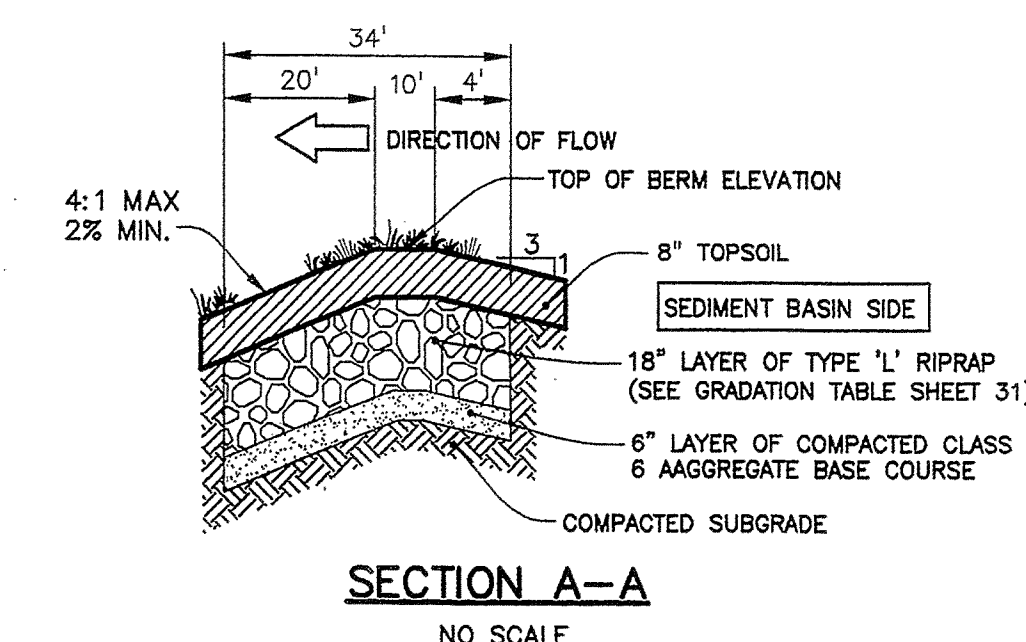
DS DIVERSION SWALE
NTS



DS DIVERSION SWALE 6A
NTS



SEDIMENT BASIN EMERGENCY OVERFLOW
NO SCALE



SECTION A-A
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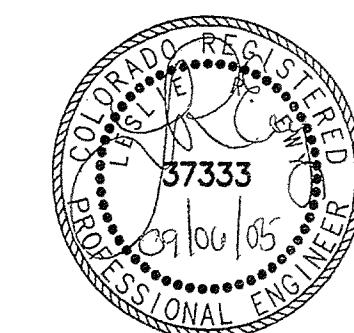
DIVERSION SWALE REQUIREMENT SUMMARY

DIVERSION SWALE ID	TOP WIDTH (TW) (FEET)	DEPTH (D) (FEET)	100-YEAR FLOW (CFS)
1A	14.4	1.3	17.28
1B	15.5	1.4	22.50
2	10.1	0.7	4.18
3	10.1	0.8	3.95
4	14.1	1.3	18.07
5	9.4	0.7	3.09
6B	12.5	1.1	10.28

DIVERSION SWALES MUST BE INSTALLED AND MAINTAINED PER CITY OF COLORADO SPRINGS DETAIL ABOVE

EMERGENCY OVERFLOW REQUIREMENT SUMMARY

POND ID	WEIR LENGTH (L) (FEET)	WEIR ELEVATION	TOP OF POND ELEVATION
POND 1	25.0	5688.50	5689.00
POND 2	5.0	5691.50	5692.00
POND 3	5.0	5698.50	5699.00
POND 4	20.0	5707.50	5708.00
POND 5	5.0	5707.50	5708.00
POND 6	70.0	5718.30	5719.00



NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE

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5401 W. 10TH STREET, SUITE 100A GREENEY, COLORADO 80634 (970) 351-0845
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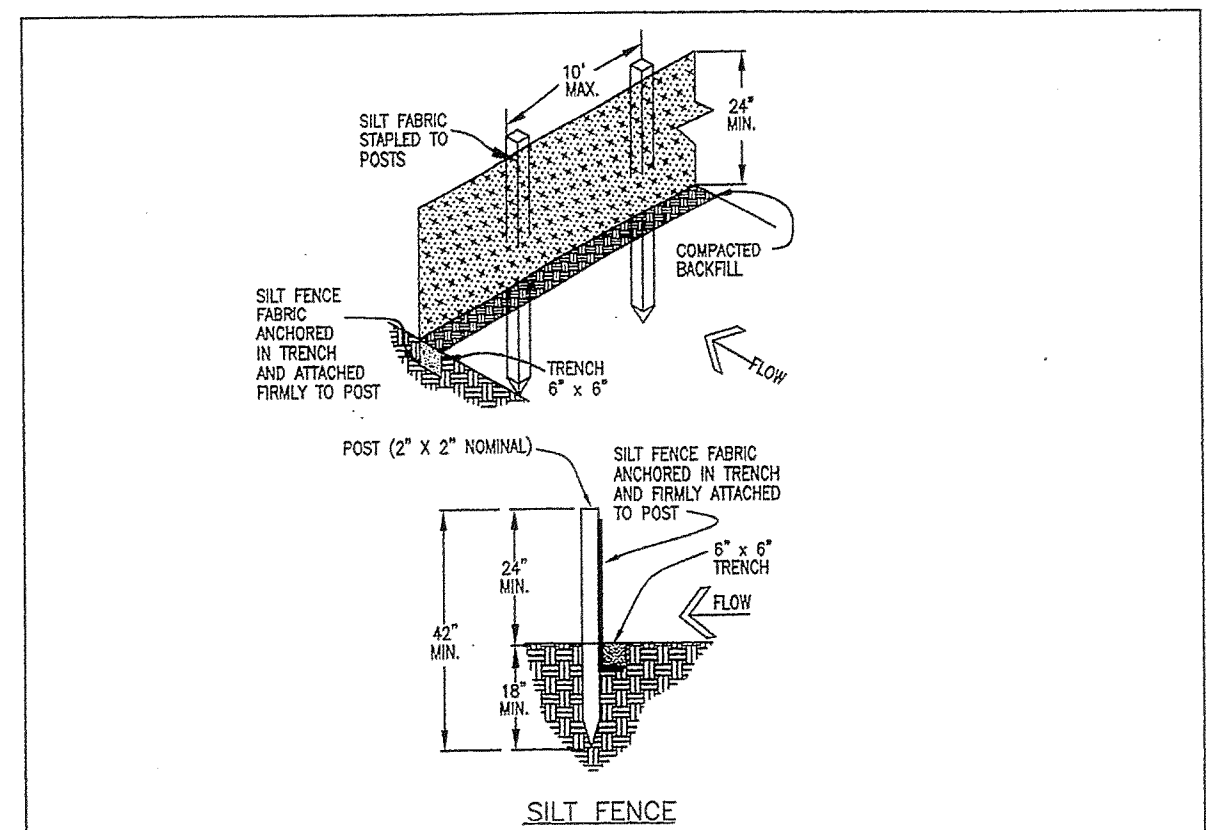
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212 N. WAHSATCH, SUITE 301
COLORADO SPRINGS, COLORADO 80903 (719) 635-3200
CONTACT: DAVE COCCOLIN

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JIMMY CAMP CREEK
REALIGNMENT
EL PASO COUNTY, COLORADO

DESIGNED BY: LRE
DRAWN BY: LRE
CHECKED BY: LRE
REVISION DESCRIPTIONS: RESPOND TO COUNTY COMMENTS
DATE: 02 SEP 2005

EROSION CONTROL DETAILS

DATE: 18 AUG 2005
SCALE: H: V:
JOB NO: C7668-2
DRAWING NO: 6D 154
SHEET: 30
31



SILT FENCE NOTES

INSTALLATION REQUIREMENTS

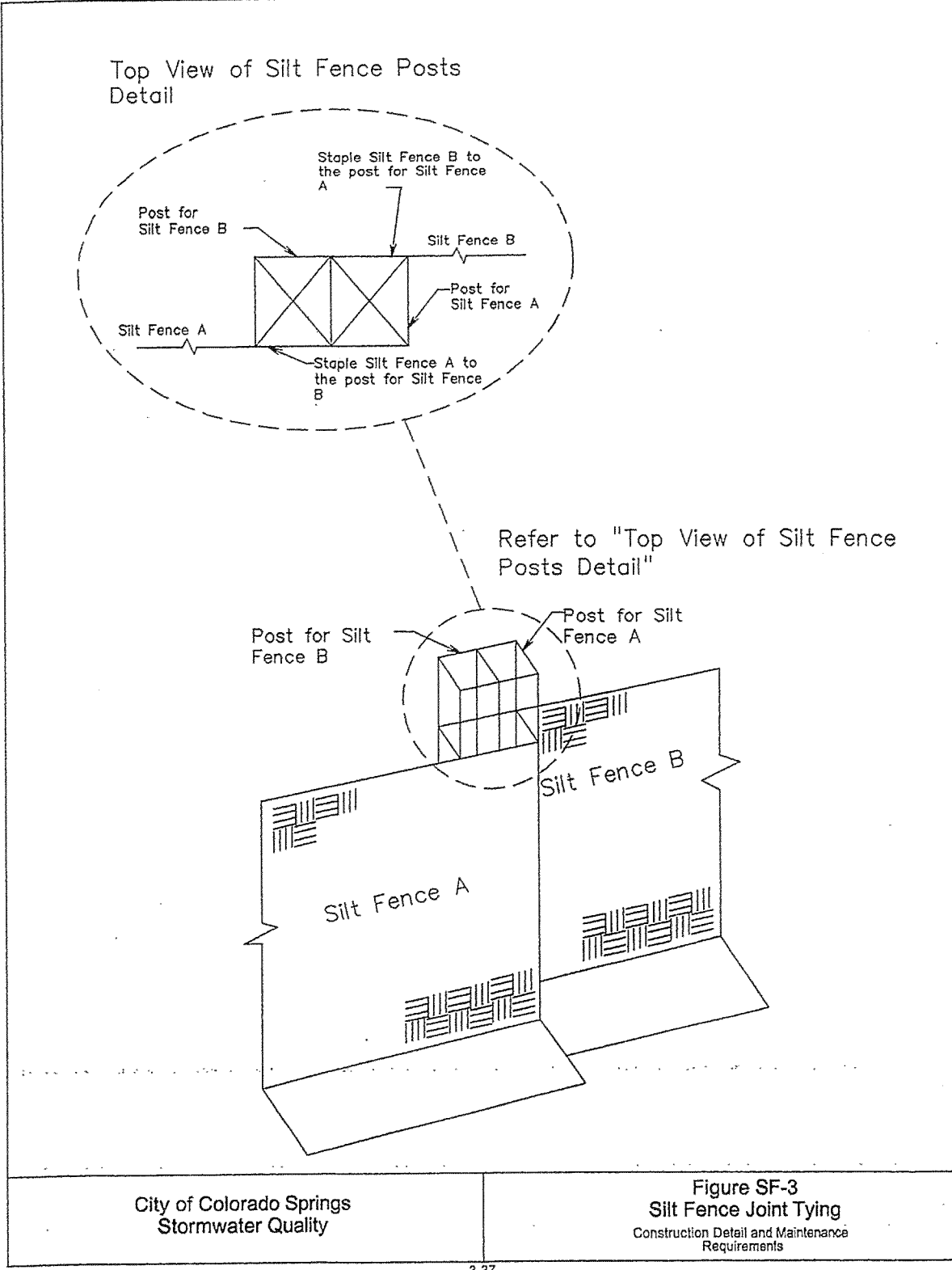
1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPUN TOGETHER ONLY AT SUPPORT POSTS AND SECURELY SEALED.
3. METAL POSTS SHALL BE "STUDDIED TIE" OR "U" TYPE WITH MINIMUM WEIGHT OF 133 POUNDS PER LINEAR FOOT. WOOD POSTS 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 TIE, 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' LONG. TIE WIRES OR HOD 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 INCUR 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, UNINTENDED 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.

City of Colorado Springs
Stormwater Quality

Figure SF-2
Silt Fence
Construction Detail and Maintenance Requirements

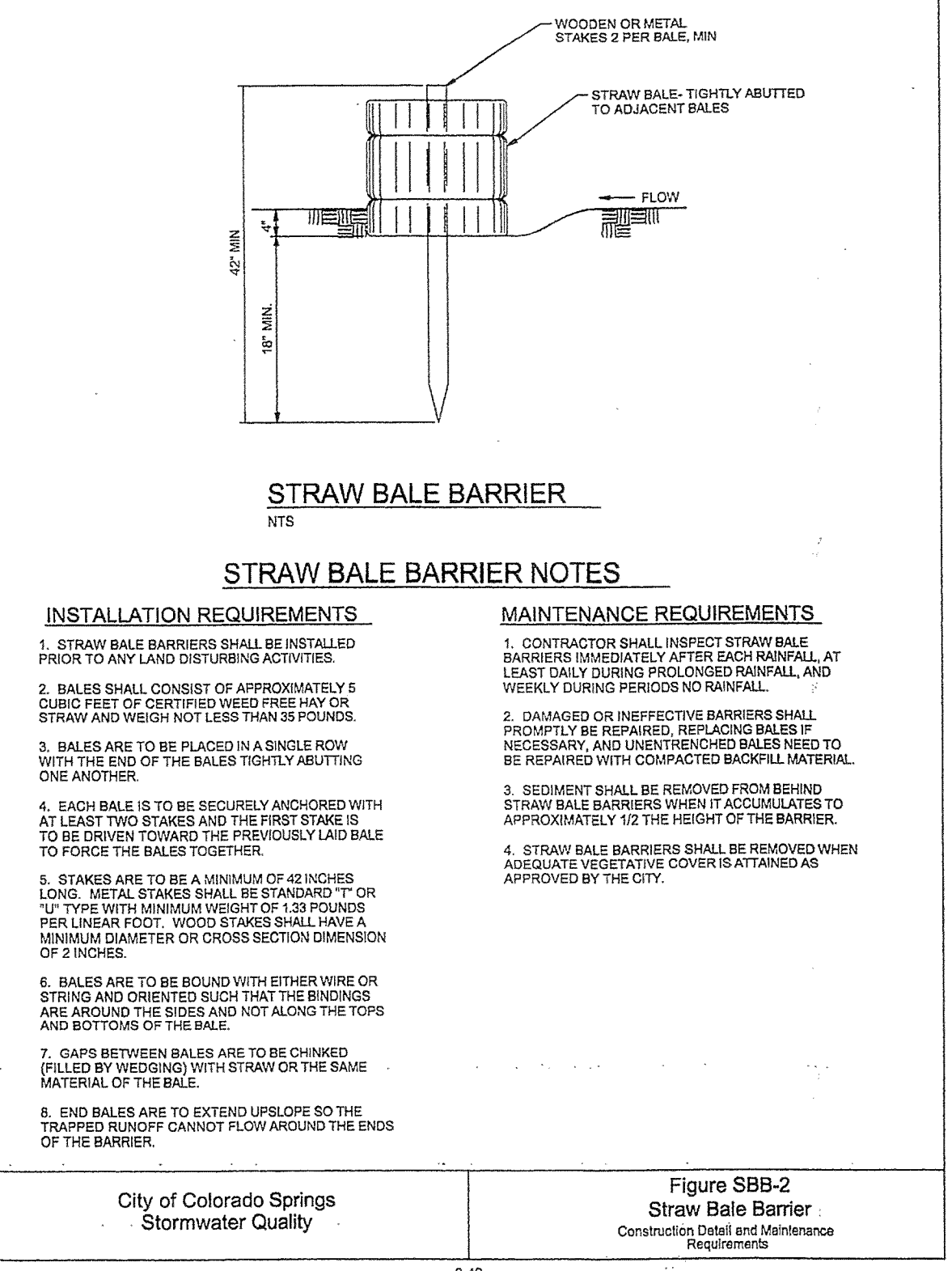


Top View of Silt Fence Posts Detail

Refer to "Top View of Silt Fence Posts Detail"

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Stormwater Quality

Figure SF-3
Silt Fence Joint Tying
Construction Detail and Maintenance Requirements



STRAW BALE BARRIER

INSTALLATION REQUIREMENTS

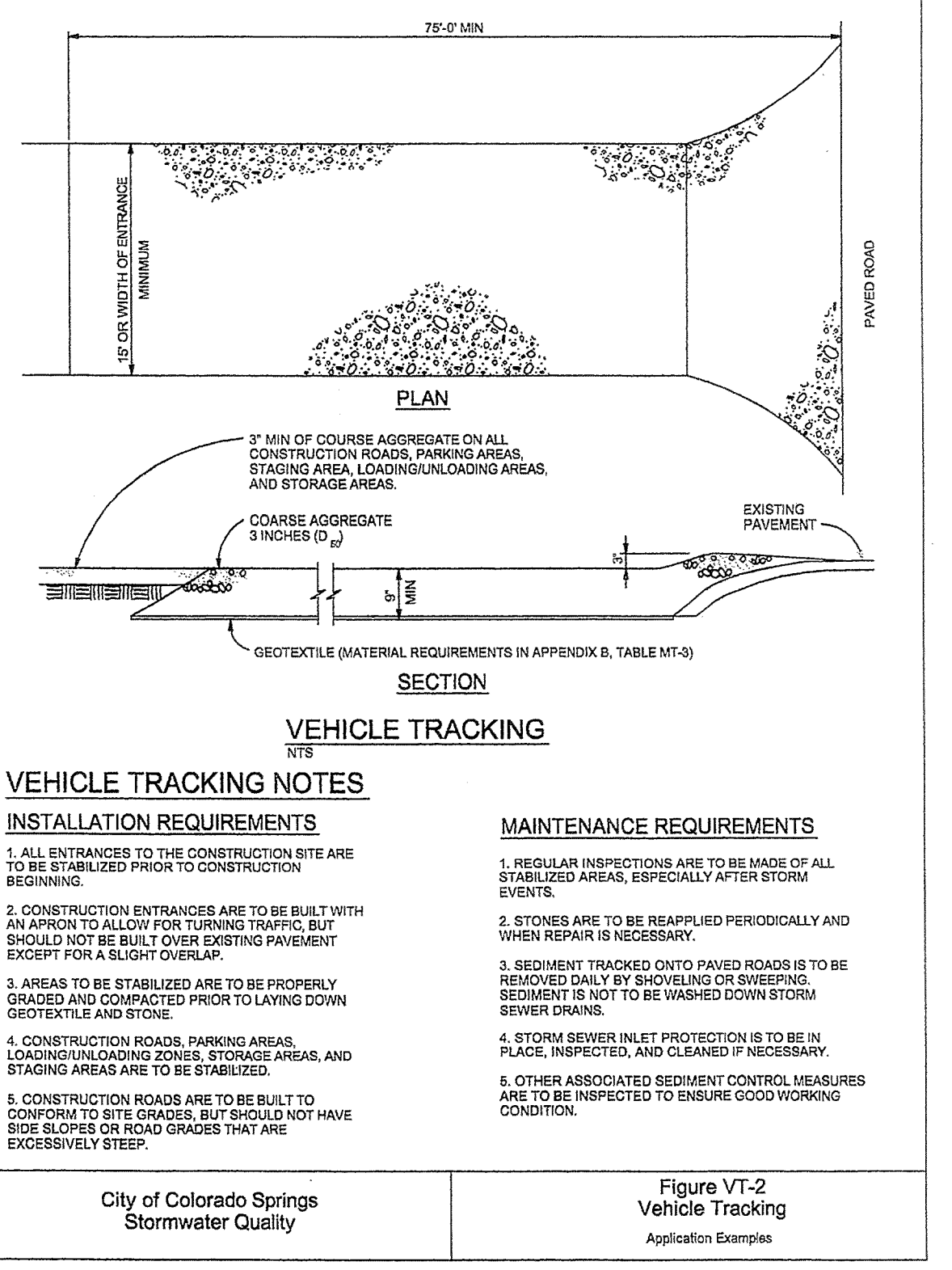
1. STRAW BALE BARRIERS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF CERTIFIED WHEAT FREE HAY OR STRAW AND WEIGH NOT LESS THAN 35 POUNDS.
3. BALES ARE TO BE PLACED IN A SINGLE ROW WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
4. EACH BALE IS TO BE SECURELY AND 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 "I" OR "U" TYPE WITH MINIMUM WEIGHT OF 133 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 END 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 OF NO RAINFALL.
2. DAMAGED OR INEFFECTIVE BARRIERS SHALL PROMPTLY BE REPAIRED. REPLACING BALES IF NECESSARY, AND UNINTENDED 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 BARRIERS.
4. STRAW BALE BARRIERS SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs
Stormwater Quality

Figure SBB-2
Straw Bale Barrier
Construction Detail and Maintenance Requirements



VEHICLE TRACKING

INSTALLATION REQUIREMENTS

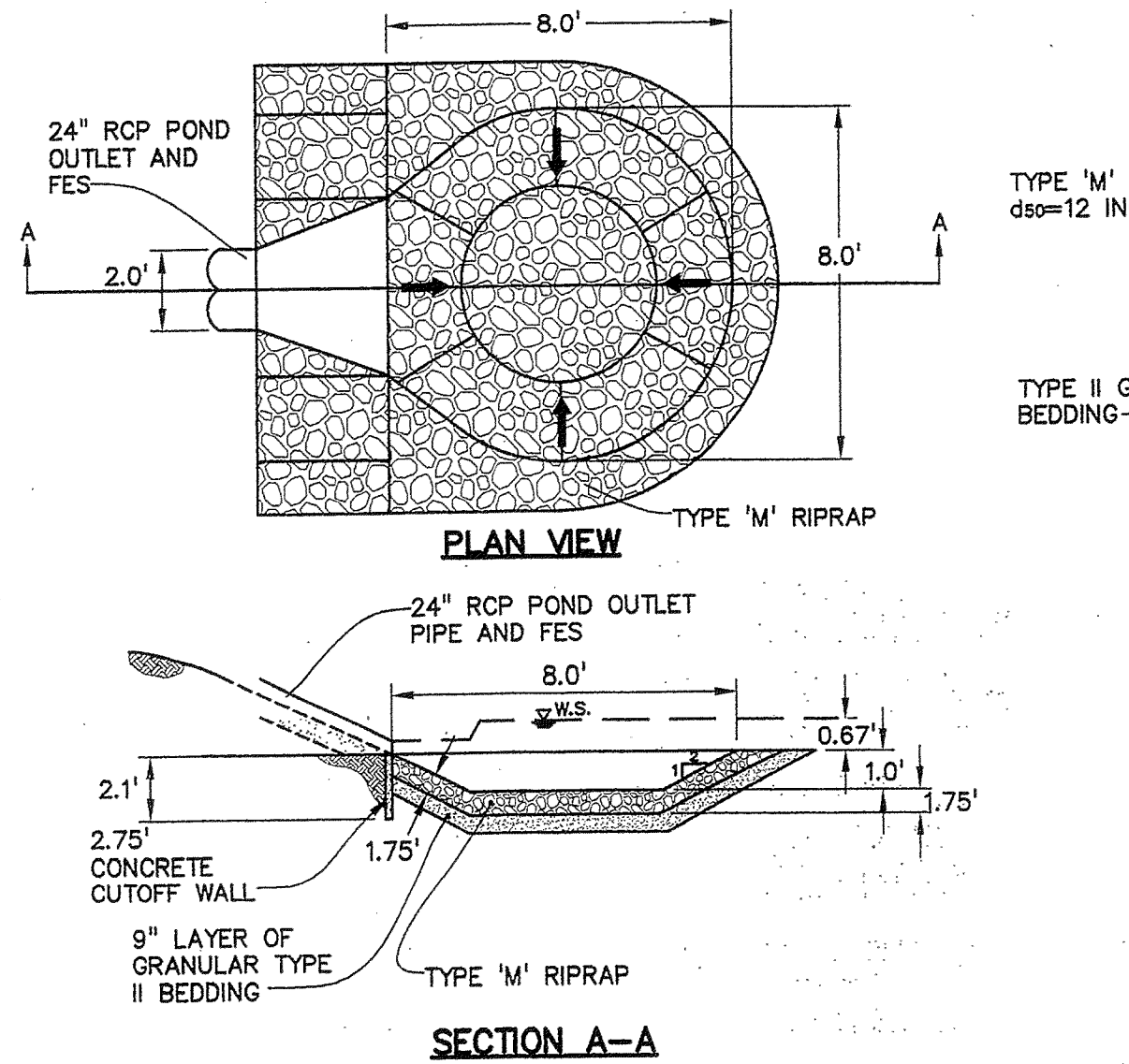
1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
3. AREAS TO BE STABILIZED ARE TO BE PROPERLY 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.
6. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs
Stormwater Quality

Figure VT-2
Vehicle Tracking
Application Examples

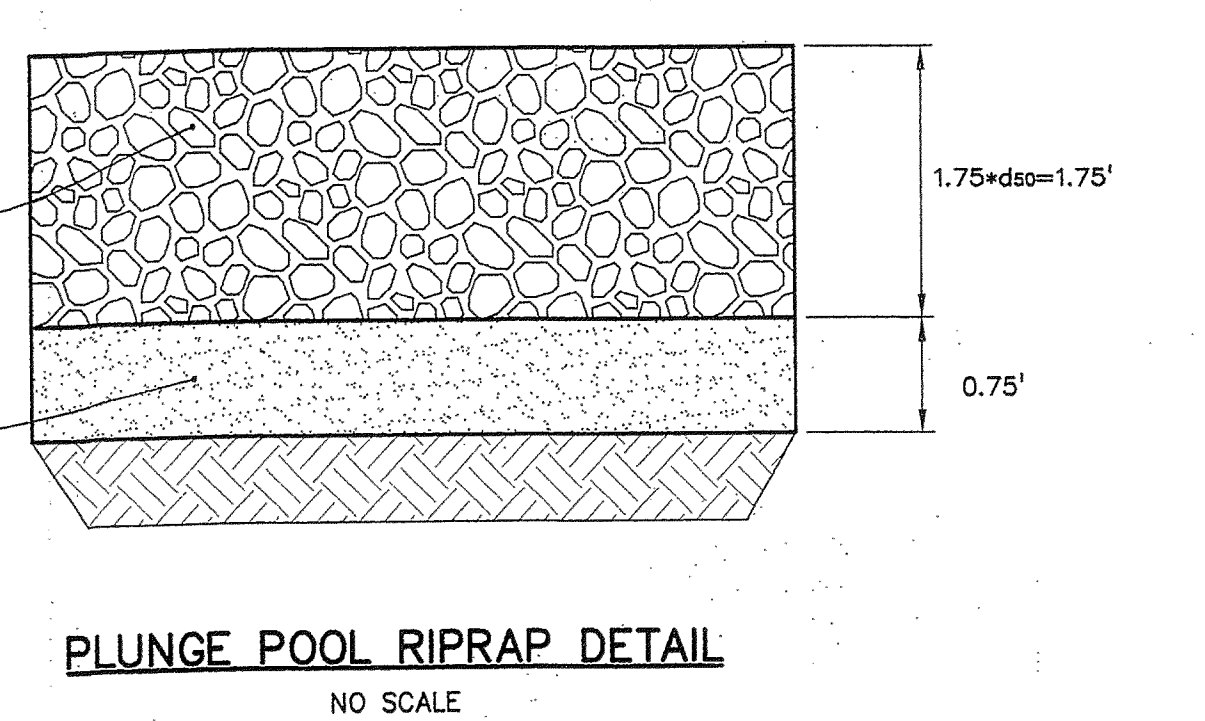


PLAN VIEW

SECTION A-A

City of Colorado Springs
Stormwater Quality

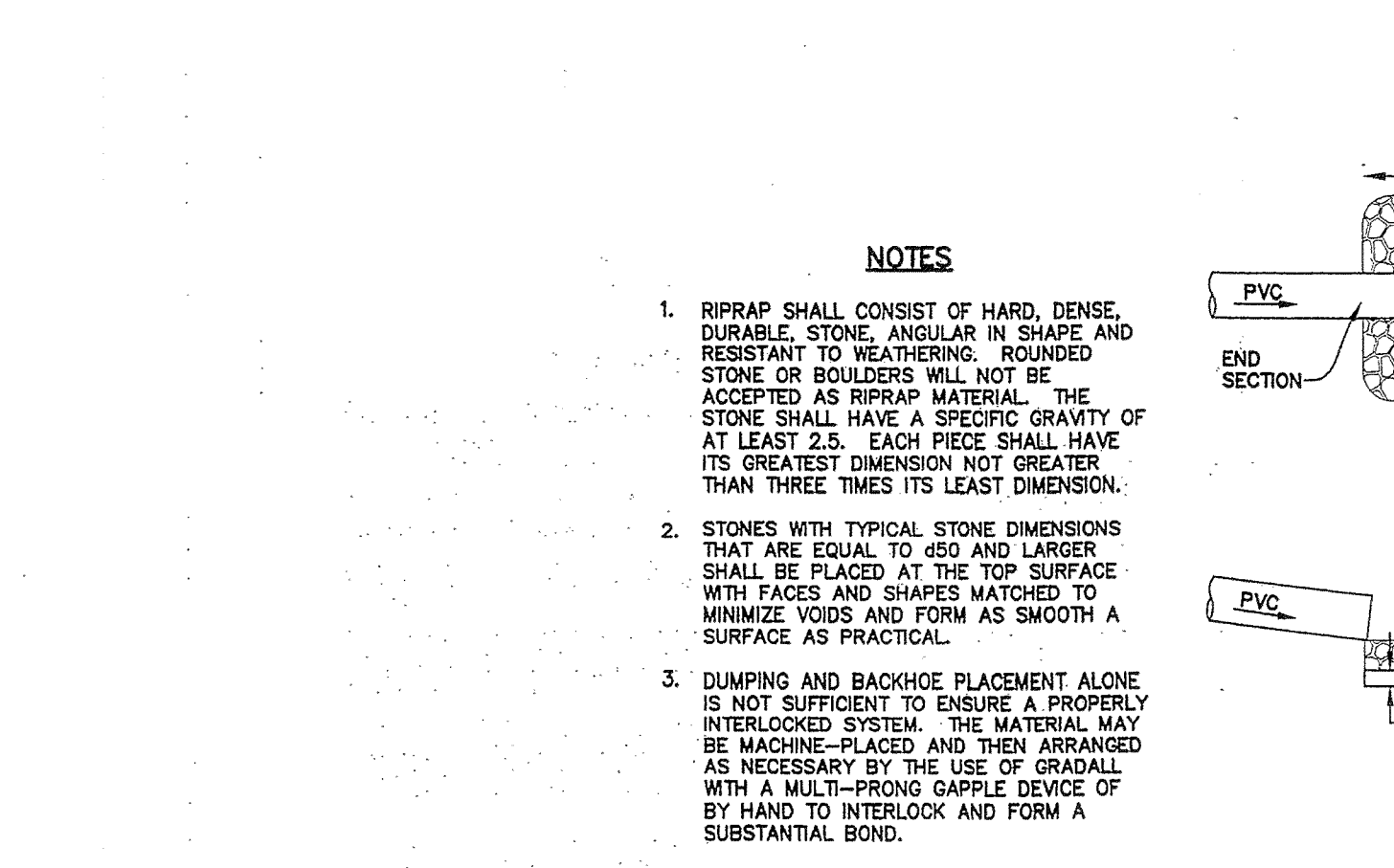
Figure LTB-1
Low Tailwater Basin
Construction Detail and Maintenance Requirements



CLASSIFICATION AND GRADATION OF ORDINARY RIPRAP

RIPPAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSION (INCHES)	d ₅₀ * (INCHES)
TYPE VL	70-100	12	6
	50-70	9	
	35-50	6	
	2-10	2	
TYPE L	70-100	15	9
	50-70	12	
	35-50	9	
	2-10	3	
TYPE M	70-100	21	12
	50-70	18	
	35-50	12	
	2-10	3	
TYPE H	70-100	30	18
	50-70	24	
	35-50	18	
	2-10	6	

*d₅₀ = MEAN PARTICLE SIZE

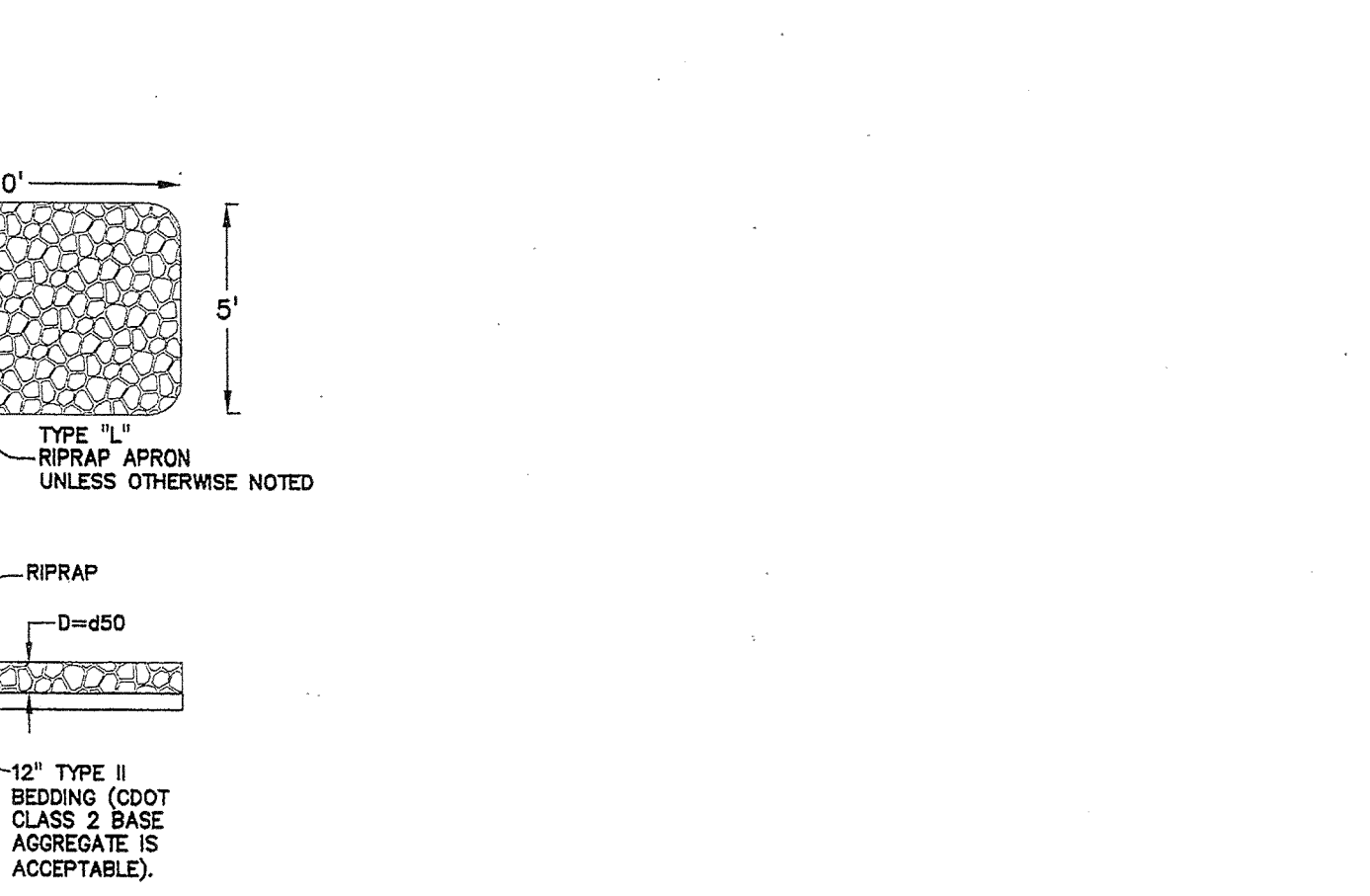


NOTES

1. RIPRAP SHALL CONSIST OF HARD, DENSE, DURABLE, STONE, ANGULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR BOULDERS WILL NOT BE ACCEPTED AS RIPRAP MATERIAL. THE STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.5. EACH PIECE SHALL HAVE ITS GREATEST DIMENSION NOT GREATER THAN THREE TIMES ITS LEAST DIMENSION.
2. STONES WITH TYPICAL STONE DIMENSIONS THAT ARE EQUAL TO d₅₀ AND LARGER SHALL BE PLACED AT THE TOP SURFACE WITH FACES AND SHAPES MATCHED TO MINIMIZE Voids AND FORM AS SMOOTH A SURFACE AS PRACTICAL.
3. DUMPING AND BACKFILL PLACEMENT ALONE IS NOT SUFFICIENT TO ENSURE A PROPERLY INTERLOCKED SYSTEM. THE MATERIAL MAY BE MACHINE-PLACED AND THEN ARRANGED AS NECESSARY BY THE USE OF GRADALL WITH A MULTI-PRONG GAPPLE DEVICE OF BY HAND TO INTERLOCK AND FORM A SUBSTANTIAL BOND.

City of Colorado Springs
Stormwater Quality

Figure OP-1
Outlet Structure Riprap Bedding
Construction Detail and Maintenance Requirements



VEHICLE TRACKING

INSTALLATION REQUIREMENTS

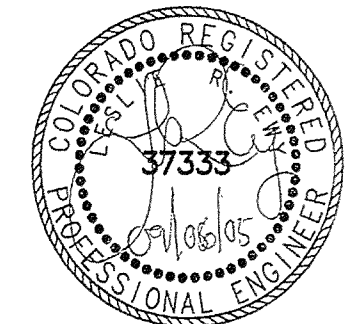
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5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

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City of Colorado Springs
Stormwater Quality

Figure VT-2
Vehicle Tracking
Application Examples



NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE