



KENAI PENINSULA BOROUGH

144 North Binkley Street • Soldotna, Alaska 99669-7520

Toll-free within the Borough: 1-800-478-4441

PHONE: (907) 262-4441 • **FAX:** (907) 262-1892

www.borough.kenai.ak.us

**MIKE NAVARRE
BOROUGH MAYOR**

Summary Evaluation

Project: Anchor Point Fire Service Area Training Site.

Location: Unocal J Pad - Parcel # 16910154

In review of the construction documents attached and a review of the site there are some concerns that need to be addressed prior to use as a training facility for equipment driving and fire suppression training.

The 300' x 400' pad was constructed in 2002 as a possible location of a gas well including containment berms. The pad was constructed at 24" in the cut area and 30" on the fill area.



Currently no water leaves the pad, so prior to use as a training facility a drainage system to manage the fire water and site drainage must be constructed.



During the site visit on June 15, 2015 the 8'x 60' drainage basin remained full even during hot dry weather.



Tires easily rut surface even on light passenger vehicles

The water appears to be trapped behind the containment berm. Due to the water remaining on the pad during multiple freeze thaw cycles since construction. The pad fill has lost its compaction. To re-compact and add an additional 24" of material, and address the fire water drainage is estimated at around \$200,000 this would stabilize the site to all fire tanker access.



There are potential areas beyond the pad to address water drainage, It should be noted that the fire training structure may be visible to local residential in the area.

See attached construction documents for additional information

Kevin Lyon, Capital Projects Director
Direct Line (907) 262-2035

J PAD

PROPOSED ROAD and PAD PROJECT

- * PAD CONSTRUCTION:
112,230 SQUARE FEET (TOTAL)
- * GRINER ROAD UPGRADE:
3,426 L.F.
- * NEW ROAD CONSTRUCTION:
724 L.F.

UNOCAL



ESTIMATED QUANTITIES

ITEM	ESTIMATED QUANTITY		
	PAD	ACCESS ROAD	TOTAL
CLEARING	4.88 AC.	1.30 AC.	6.18 AC.
UNCLASSIFIED EXCAVATION	14,200 CY	1,155 CY	15,355 CY
SELECTED MATERIAL TYPE A	11,700 CY	3,590 CY	15,290 CY
SELECTED MATERIAL TYPE B	-	2,735 CY	2,735 CY
GEOTEXTILE (ADOT REINFORCEMENT)	14,500 SF	-	14,500 SF
GEOTEXTILE (ADOT REIN., NONWOVEN)	-	13,833 SF	13,833 S.F.
18" CSP CULVERT	-	128 LF	128 LF
24" CSP CULVERT	-	70 LF	70 LF

MATERIAL GRADING REQUIREMENTS

SIEVE	GRADING B	SELECT A	SELECT B
4 IN.	100%	--	--
2 IN.	70 - 100	60 - 90	--
3/4 IN.	50 - 90	--	--
NO. 4	30 - 70	20 - 55	--
NO. 200	6% MAX	6% MAX	12% MAX

** SELECT MATERIAL, TYPE B MEETS ADOT SPECIFICATIONS, SECTION 703-2.07, NO. 3, EXCEPT THAT 12% OF MATERIAL MAY PASS THE #200 SIEVE AS DETERMINED BY ATM T-7.

GENERAL NOTES

1. ALL GEOTEXTILE SHALL BE REINFORCEMENT GRADE & SHALL COMPLY WITH ADOT SPECIFICATIONS, TABLE 729-1. MINIMUM OVERLAP AT LONGITUDINAL JOINTS IS 2 FEET. MINIMUM END OVERLAP IS 3 FEET.
2. SELECTED MATERIAL TYPES A & B SHALL MEET THE GRADATION REQUIREMENTS SHOWN IN GRADING TABLE HEREON AND SHALL BE PLACED IN LIFTS NOT EXCEEDING 6 INCHES IN DEPTH. THE CONTRACTOR SHALL DELIVER AGGREGATE SAMPLES TO ENGINEER FOR SIEVE ANALYSIS PRIOR TO COMMENCING WITH ANY FILL OPERATION.
3. ESTIMATED QUANTITIES SHOWN HEREON ARE FOR DESIGN PURPOSES ONLY. IT IS NOT INTENDED THAT THE CONTRACTOR RELY SOLELY ON THE SCHEDULE. QUANTITIES ARE PROVIDED FOR CONTRACTOR'S INFORMATION BUT ARE NOT A WARRANTY OF ACTUAL QUANTITIES NECESSARY FOR FINAL COMPLETION OF THE PROJECT. PRIOR TO BIDDING, CONTRACTOR SHALL MAKE HIS OWN TAKE OFF AND CALCULATIONS TO SATISFY HIMSELF WITH THE NECESSARY QUANTITIES TO COMPLETE THE PROJECT.

SHEET INDEX

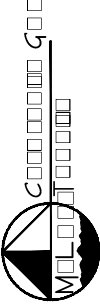
1	TITLE SHEET / ESTIMATED QUANTITIES
2	PROJECT OVERVIEW
3	EXISTING SITE CONDITIONS
4	FINISH GRADE PAD DESIGN
5-6	TYPICAL SECTIONS
7-11	PLAN AND PROFILE SHEETS
12-15	CROSS SECTIONS

SET NO. _____



REV	DATE	DESCRIPTION	BY	PCO
2	2/16/02	CLIENT REVIEW ISSUE		PCO
1	2/07/02	PRELIMINARY ISSUE		PCO

UNOCAL
J-PAD
TITLE SHEET / ESTIMATED QUANTITIES
 JOB NO. 013179
 FIELD BOOK NO. 01-04
 DATE OF FIELD WORK 12/01 & 1/02


 ENGINEERING/MAPPING/SURVEYING/TESTING
 P.O. BOX 466 SLODINA, AK, 99669
 VOICE (907) 283-4218 FAX (907) 283-3265
 EMAIL: mslane@mcclanecg.com

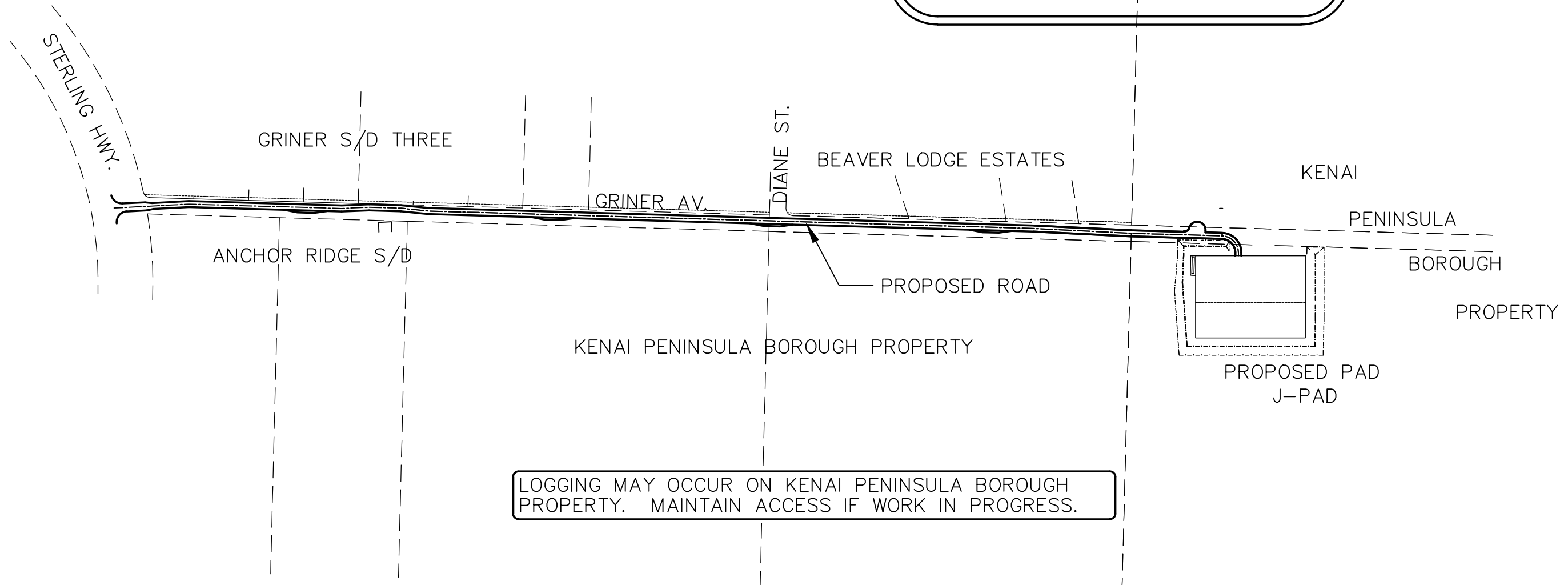
DRAWN BY PCO
 CHECKED BY SAM
 HORZ. SCALE N/A
 VERT. SCALE N/A
 SHEET 1 of 15

NOTES

1. BASIS OF BEARING IS ALASKA STATE PLANE ZONE 4 NAD27 ACCORDING TO GPS OBSERVATION UTILIZING ADOT CONTROL POINT N86. BASIS OF ELEVATION IS NAVD88.
2. AREA ENCOMPASSING THE PROPOSED PAD IS TREE COVERED TO VARYING DEGREES. CLEARING AND SURFACE GRUBBING WILL BE REQUIRED.
3. SOILS EXPLORATION WAS PERFORMED BY MCG IN JANUARY, 2002. TEST HOLE LOCATIONS ARE SHOWN HEREON. CONSULT THE REFERENCE SOILS INFORMATION DOCUMENTS FOR TEST HOLE LOGS.
4. DOZER TRACK BERMS TO OBTAIN ADEQUATE COMPACTION AS DETERMINED BY OWNER'S REPRESENTATIVE.
5. CONSTRUCT THE PAD CONTAINMENT DIKES, AS INDICATED, FIRST WITH AVAILABLE WASTE EXCAVATION. STOCKPILE REMAINING MATERIAL IN THE DESIGNATED BERM AREA.
6. SUBMIT TRAFFIC CONTROL PLAN TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. MAINTAIN ACCESS FOR AREA RESIDENTS.



SCALE: 1" = 400'



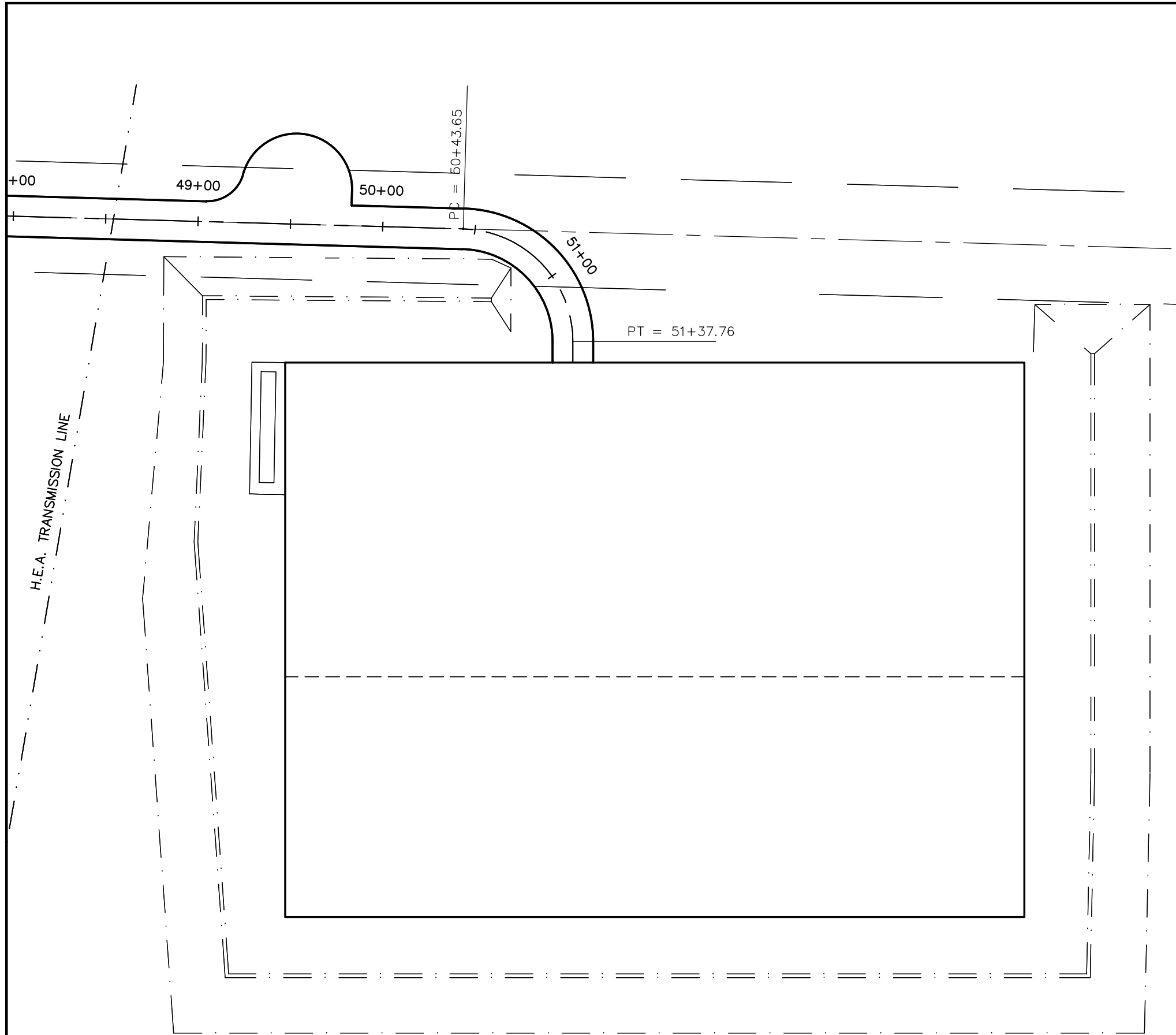
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2	2/18/02	CLIENT REVIEW ISSUE		PCO
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UNOCAL
73
J-PAD
PROJECT OVERVIEW

DATE OF FIELD WORK: 12/01 & 1/02 | FIELD BOOK NO. 01-04 | JOB NO. 013179

ENGINEERING/MAPPING/SURVEYING/TESTING
P.O. BOX 488 SOLDOTNA, AK, 99689
VOICE (907) 283-4218 FAX (907) 283-3265
EMAIL: msmlane@mcclanecg.com

DRAWN BY: PCO
CHECKED BY: SAM
HORZ. SCALE: 1"=400'
VERT. SCALE: N/A
SHEET 2 of 15



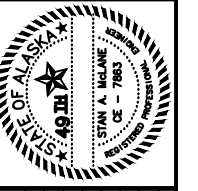
SCALE: 1" = 60'

LEGEND

- 550 CONTOUR LINE (EXISTING GROUND)
- SLOPE DIRECTION
- 250.0 PAD / ROAD / BERM FG
- GRADE BREAK
- WELL LOCATION
- TEST HOLE LOCATION

NOTES

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2. AREA ENCOMPASSING THE PROPOSED PAD IS TREE COVERED TO VARYING DEGREES.
3. UNOCAL MAY HAVE THE PAD AREA LOGGED BEFORE CONSTRUCTION OF PAD. CLEARING REQUIREMENTS WILL BE SPECIFIED PRIOR TO BID DATE. GRUBBING IS REQUIRED.
4. SOILS EXPLORATION WAS PERFORMED BY MCG IN JANUARY, 2002. TEST HOLE LOCATIONS ARE SHOWN HEREON. CONSULT THE REFERENCE SOILS INFORMATION DOCUMENTS FOR TEST HOLE LOGS.
5. CONTOURS REFLECTED HEREON REPRESENT EXISTING GROUND AND ARE AT 1 FOOT INTERVALS.
6. DOZER TRACK BERMS TO OBTAIN ADEQUATE COMPACTION AS DETERMINED BY OWNER'S REPRESENTATIVE.
7. CONSTRUCT THE PAD CONTAINMENT DIKES, AS INDICATED, FIRST WITH AVAILABLE WASTE EXCAVATION. STOCKPILE REMAINING MATERIAL IN THE DESIGNATED BERM AREA.



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UNOCAL
J-PAD
EXISTING SITE CONDITIONS

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 EMAIL: msmclanecg@mclanecg.com

DATE OF FIELD WORK 12/01 & 1/02 FIELD BOOK NO. 01-04 JOB NO. 013179

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 SHEET 3 of 15



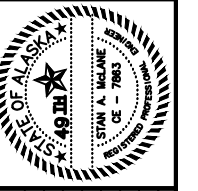
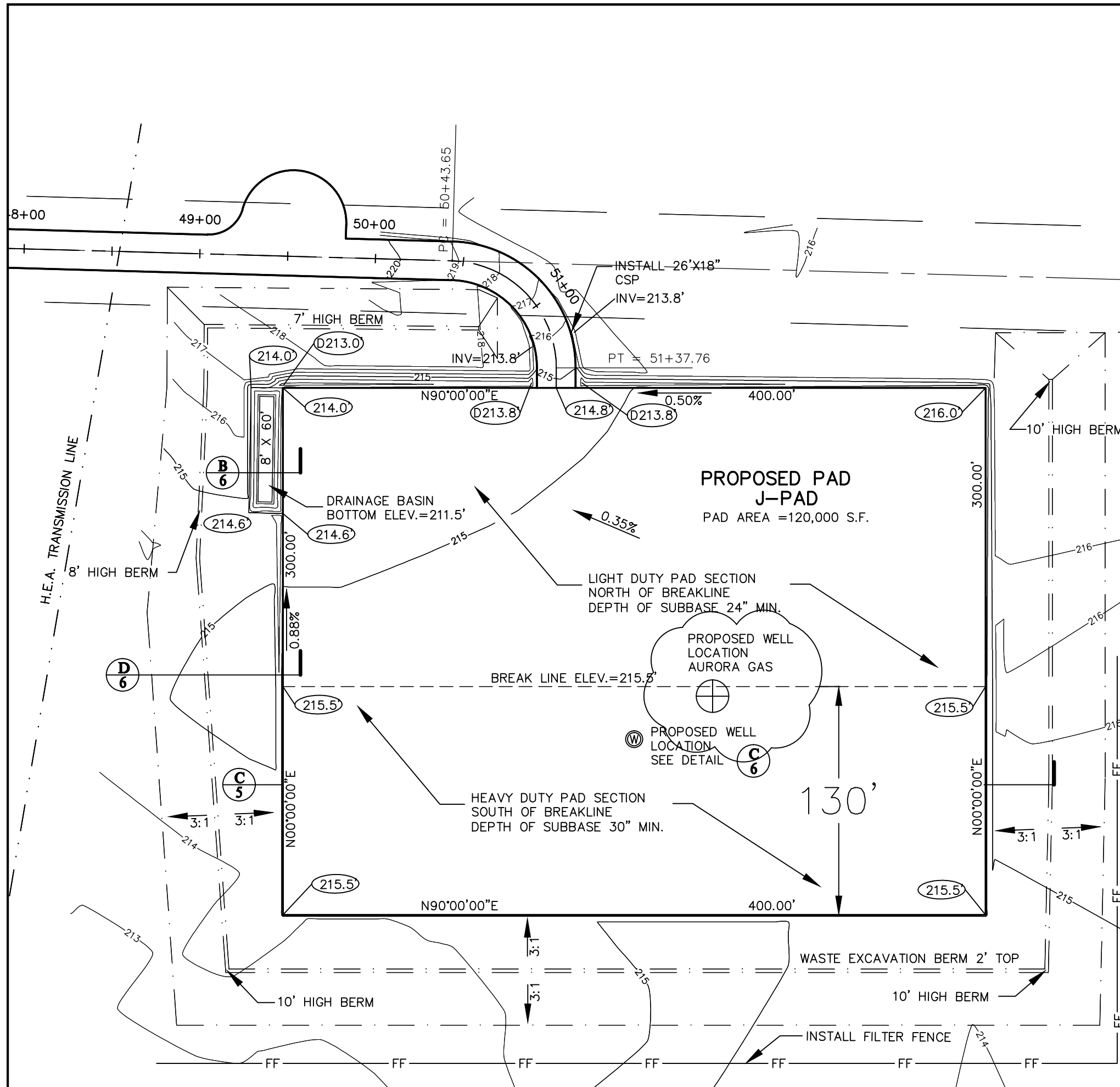
SCALE: 1" = 60'

LEGEND

- 550 CONTOUR LINE (FINISHED GRADE)
- SLOPE DIRECTION
- 250.0 PAD FG
- D250.0 DITCH FG
- R250.0 ROAD FG
- GRADE BREAK
- WELL LOCATION

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5. DOZER TRACK BERMS TO OBTAIN ADEQUATE COMPACTION AS DETERMINED BY OWNER'S REPRESENTATIVE.
6. CONSTRUCT THE PAD CONTAINMENT DIKES, AS INDICATED, FIRST WITH AVAILABLE WASTE EXCAVATION. STOCKPILE REMAINING MATERIAL IN THE DESIGNATED BERM AREA.
7. PILE SNOW TO OUTSIDE OF WASTE EXCAVATION BERM. SEGREGATE FORM WASTE EXCAVATION.



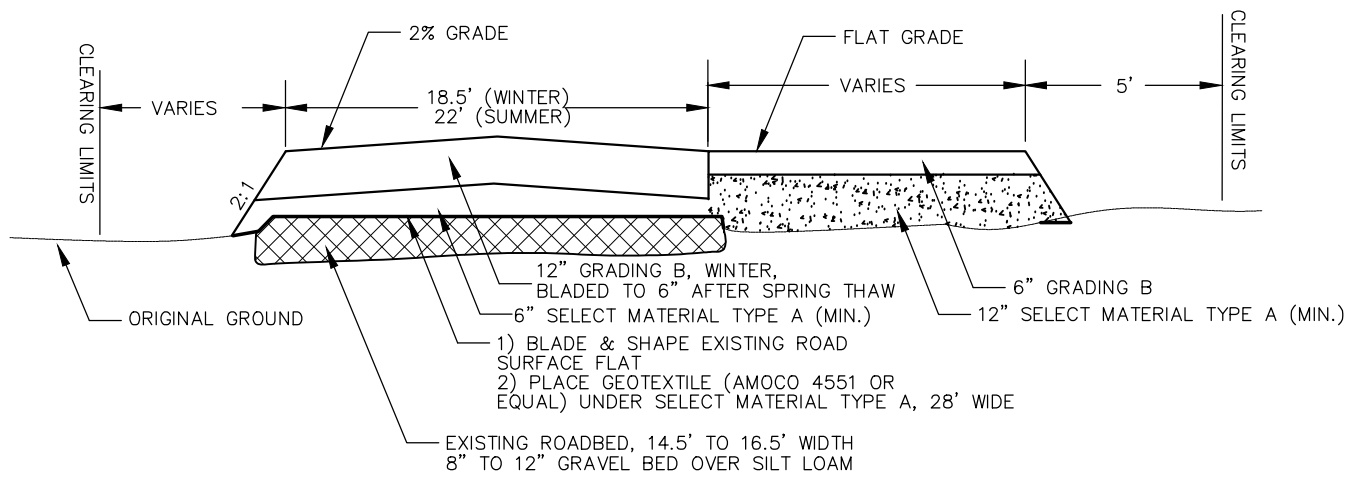
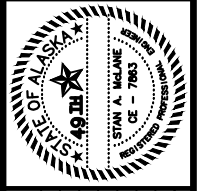
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UNOCAL
J-PAD

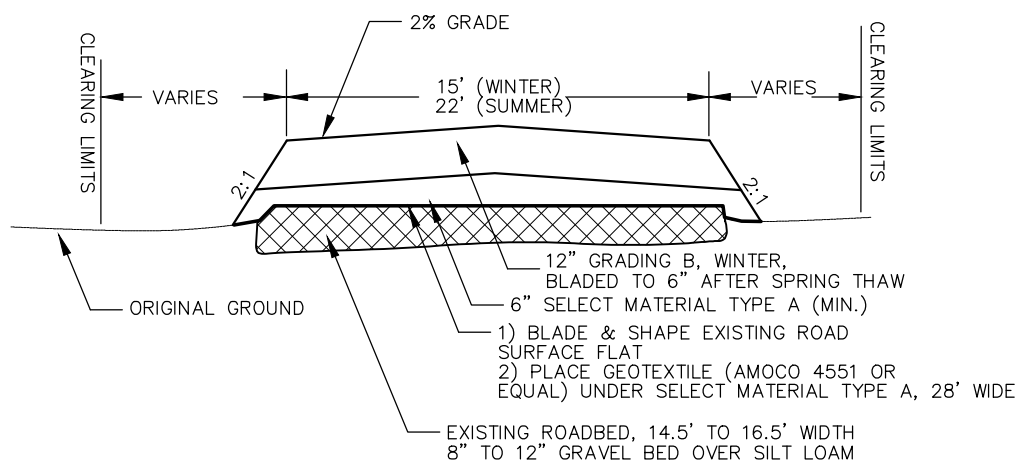
FINISHED GRADE PAD DESIGN

ENGINEERING/MAPPING/SURVEYING/TESTING
P.O. BOX 488 SULLOITNA, AK. 99669
VOICE (907) 283-4218 FAX (907) 283-3265
EMAIL: mstm@unocal.com

DATE OF FIELD WORK 12/01 & 1/02 FIELD BOOK NO. 01-04 JOB NO. 013179
DRAWN BY PCO
CHECKED BY SAM
HORZ. SCALE 1"=60'
VERT. SCALE 1"=30'
SHEET 4 of 15

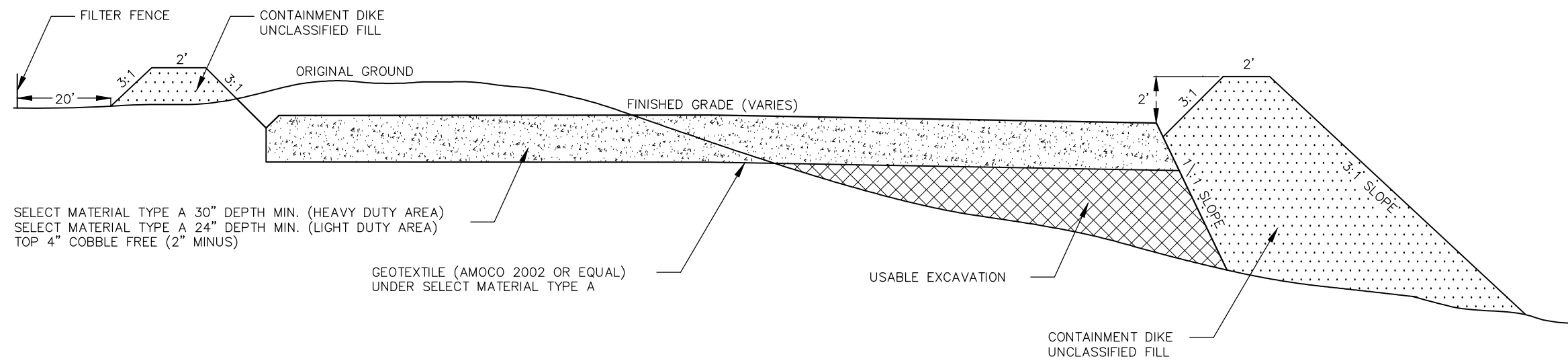


1. ALL SUMMER WIDENING OF ROAD SHALL OCCUR ON THE NON-PULLOUT SIDE.



A TYPICAL UPGRADED EXISTING ROAD & PULLOUT/TURNAROUND SECTION
5 NOT TO SCALE

B TYPICAL UPGRADED EXISTING ROAD SECTION
5 NOT TO SCALE



C TYPICAL PAD SECTION
5 NOT TO SCALE

REV	DATE	DESCRIPTION	BY
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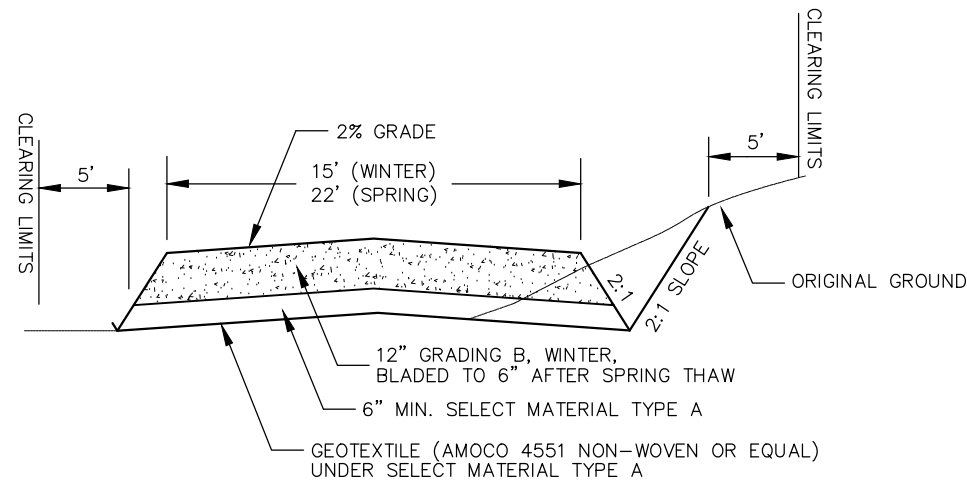
UNOCAL
J-PAD
TYPICAL SECTIONS

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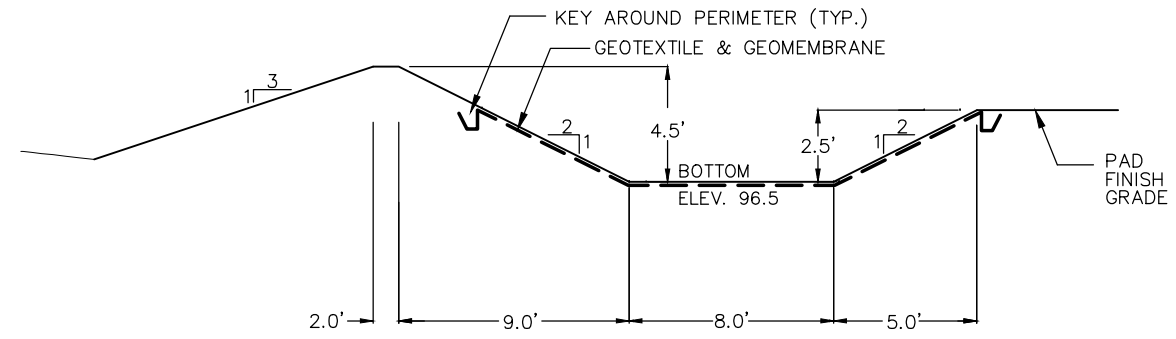
MOLDOVE

ENGINEERING/MAPPING/SURVEYING/TESTING
P.O. BOX 488 SOLDOTNA, AK, 99689
VOICE (907) 283-4218 FAX (907) 283-3265
EMAIL: mstmoldove@mdmcorp.com

DRAWN BY	PCO
CHECKED BY	SAM
HORIZ. SCALE	N.T.S.
VERT. SCALE	N.T.S.
SHEET	5 of 15

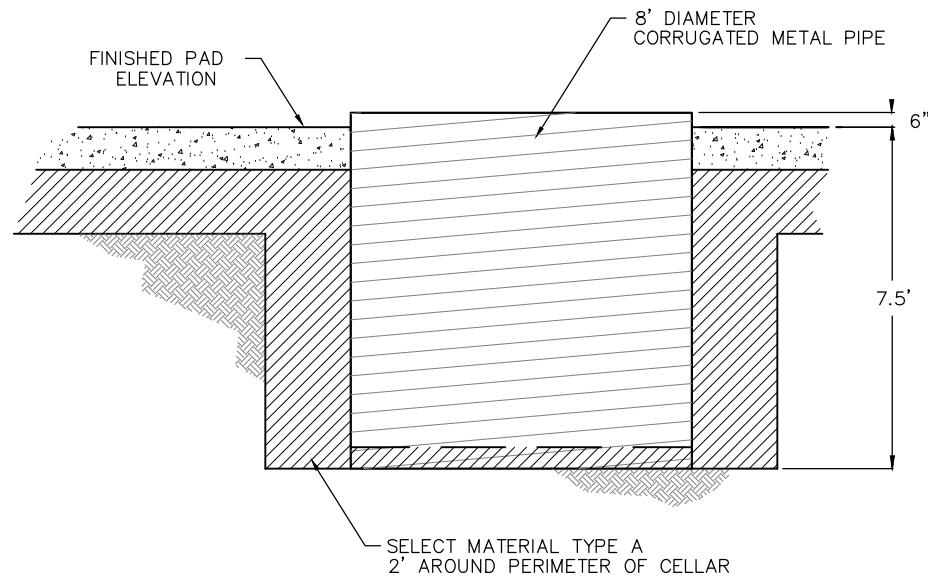


A
6 **TYPICAL NEW ROAD SECTION**
NOT TO SCALE



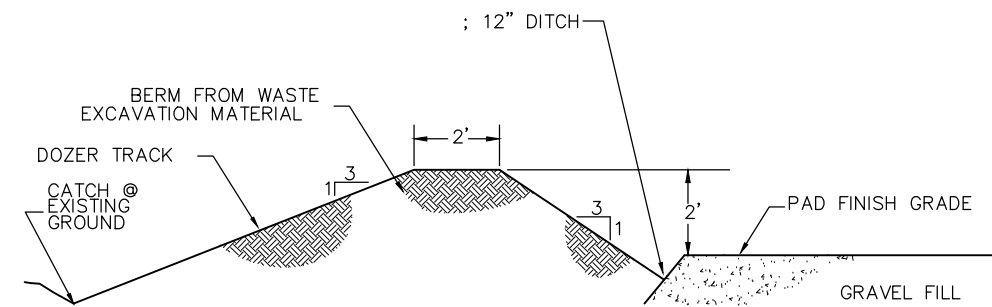
- NOTES:
1. EXCAVATE BASIN AFTER PAD FILL IS PLACED AND COMPACTED.
 2. CONSTRUCT BERM USING SAND GENERATED FROM EXCAVATION MEETING SELECTED B REQUIREMENTS.
 3. SHAPE AND COMPACT BASIN TO SMOOTH FINISH AT PLAN DIMENSIONS.
 4. LINE BASIN WITH NON-WOVEN GEOTEXTILE, AMOCO 4553 OR EQUAL, AND WITH GEOMEMBRANE, FNW PPL-24 (PROVIDED BY UNOCAL) OR EQUAL.
 5. KEY GEOTEXTILE AROUND PERIMETER AT FINISHED PAD GRADE ELEVATION.

B
6 **DRAINAGE BASIN SECTION**
NOT TO SCALE



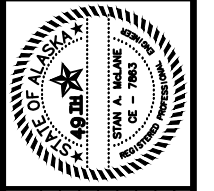
1. OVEREXCAVATE TO ALLOW FOR SELECT BACKFILL 2' AROUND CELLAR PERIMETER.
2. FILL BOTTOM OF WELL CELLAR WITH 6" OF SELECT MATERIAL TYPE A. COMPACT TO 95% OF MAXIMUM DENSITY.
3. CMP PROVIDED BY UNOCAL.

C
6 **TYPICAL WELL CELLAR SECTION**
NOT TO SCALE



- NOTES:
1. CONSTRUCT DIKE USING UNCLASSIFIED MATERIAL GENERATED FROM EXCAVATION.
 2. DITCH DEPTH VARIES FROM 6 TO 18 INCHES. CONSTRUCT TO PROVIDE DRAINAGE TO LINED BASIN.
 3. ADDITIONAL WASTE EXCAVATION SHALL BE USED FOR SLOPE FLATTENING AND STOCKPILED IN BERMS ADJACENT TO THE PAD.

D
6 **DIKE/BERM SECTION**
NOT TO SCALE



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UNOCAL
J-PAD
TYPICAL SECTIONS

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FIELD BOOK NO. 01-04
ENGINEERING/MAPPING/SURVEYING/TESTING
P.O. BOX 488 SOLDOTNA, AK, 99689
VOICE (907) 283-4218 FAX (907) 283-3265
EMAIL: mstm@unocal.com

DRAWN BY PCO
CHECKED BY SAM
HORZ. SCALE N.T.S.
VERT. SCALE N.T.S.
SHEET 6 of 15

BEGIN ROAD
STATION 10+00

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5. DOZER TRACK BERMS TO OBTAIN ADEQUATE COMPACTION AS DETERMINED BY OWNER'S REPRESENTATIVE.
6. CONSTRUCT THE PAD CONTAINMENT DIKES, AS INDICATED, FIRST WITH AVAILABLE WASTE EXCAVATION. STOCKPILE REMAINING MATERIAL IN THE DESIGNATED BERM AREA.

LEGEND

- 550 CONTOUR LINE (EXISTING GROUND)
- SLOPE DIRECTION
- 250.0 PAD / ROAD / BERM FG
- GRADE BREAK
- ⊙ WELL LOCATION



SCALE: 1" = 60'



REV	DATE	DESCRIPTION	BY
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11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00

CALL FOR UTILITY LOCATES
BEFORE BEGINNING WORK
CALL LOCATE CENTER:
1-800-478-3121

CONSTRUCT PULLOUT
60'X8' W/ 48' TRANSITION
CENTER AT STA. 17+00

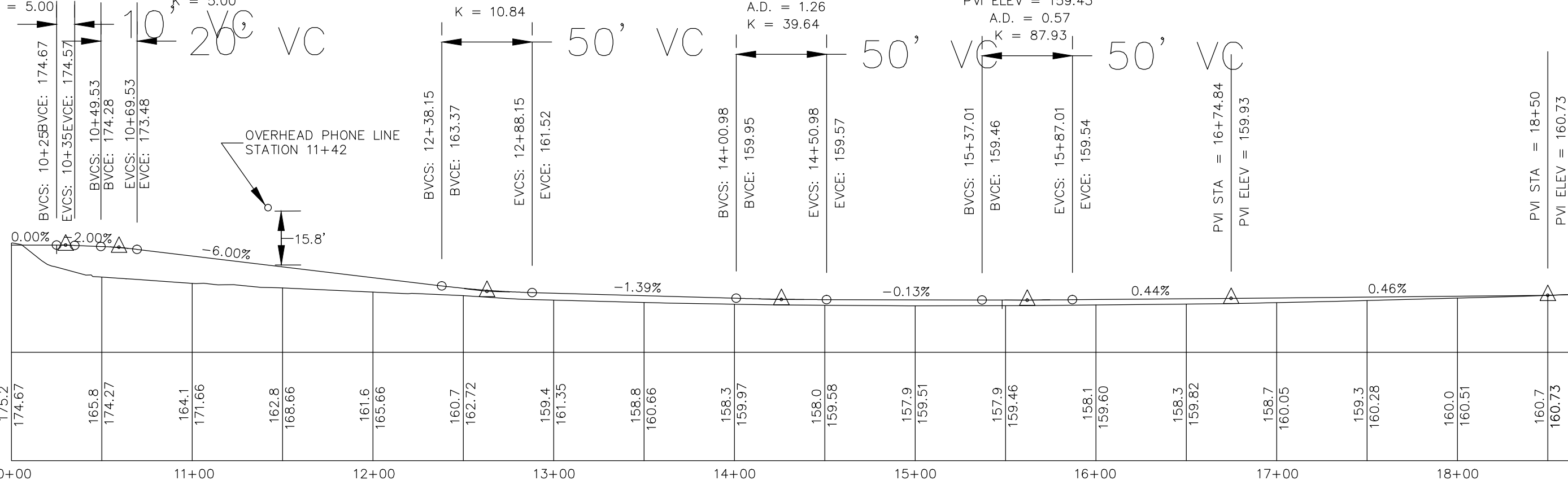
PVI STA = 10+30
PVI ELEV = 174.67
A.D. = -2.00
K = 5.00

PVI STA = 10+59.53
PVI ELEV = 174.08
A.D. = -4.00
K = 5.00

PVI STA = 12+63.15
PVI ELEV = 161.87
A.D. = 4.61
K = 10.84

PVI STA = 14+25.98
PVI ELEV = 159.61
A.D. = 1.26
K = 39.64

LOW POINT ELEV = 159.46
LOW POINT STA = 15+48.16
PVI STA = 15+62.01
PVI ELEV = 159.43
A.D. = 0.57
K = 87.93



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J-PAD
ROAD PLAN AND PROFILE

ENGINEERING/MAPPING/SURVEYING/TESTING
P.O. BOX 468 SOLDOTNA, AK, 99689
VOICE (907) 283-4218 FAX (907) 283-3265
EMAIL: mstm@unocal.com

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VERT. SCALE 1"=30'
SHEET 7 of 15

DATE OF FIELD WORK 12/01 & 1/02 FIELD BOOK NO. 01-04 JOB NO. 013179

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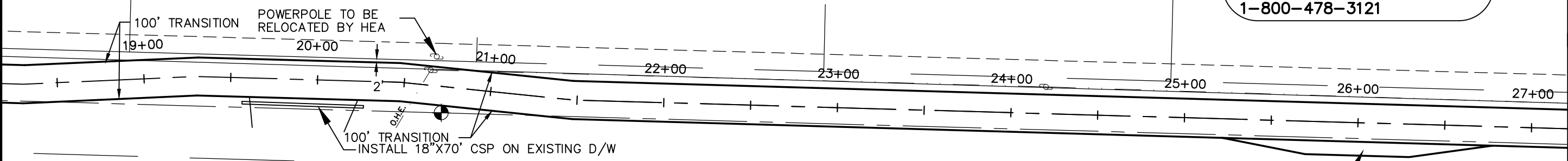
LEGEND

- 550 CONTOUR LINE (EXISTING GROUND)
- SLOPE DIRECTION
- 250.0 PAD / ROAD / BERM FG
- GRADE BREAK
- WELL LOCATION



SCALE: 1" = 60'

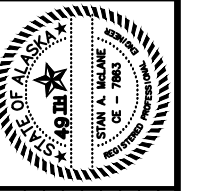
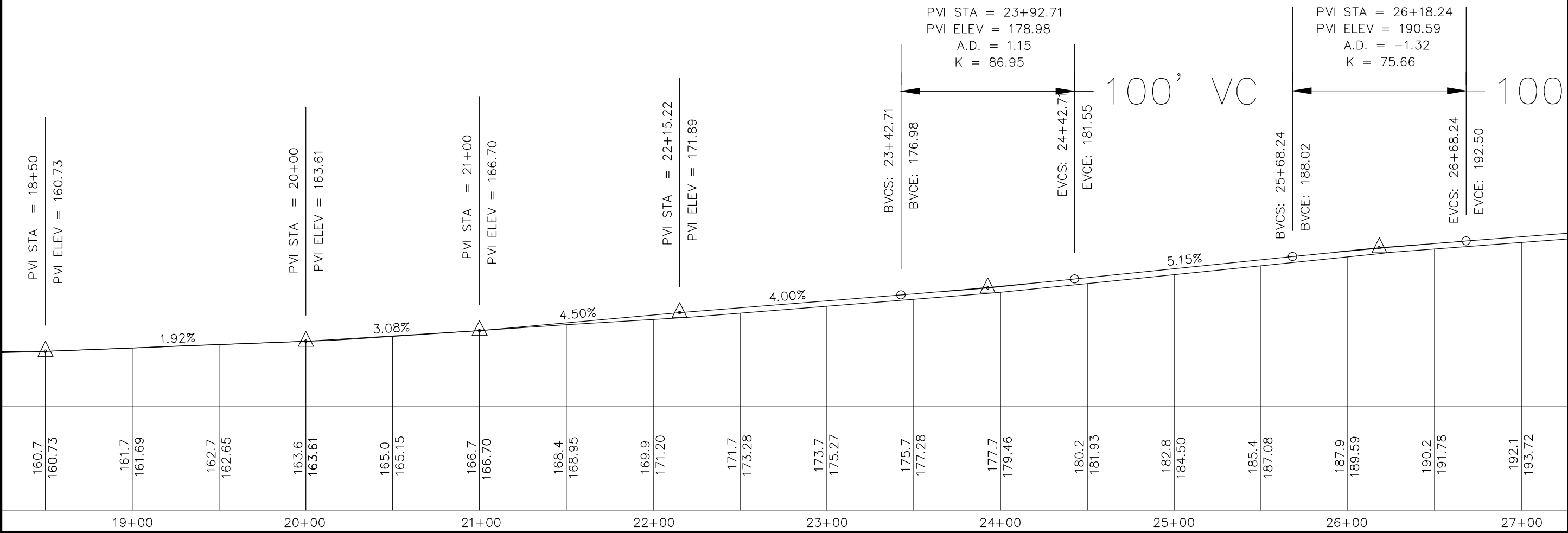
CALL FOR UTILITY LOCATES BEFORE BEGINNING WORK
CALL LOCATE CENTER:
1-800-478-3121



ROAD ALIGNMENT TO BE SHIFTED NORTH AS SHOWN. PROPOSED SOUTH EDGE OF ROAD MATCHES EXISTING SOUTH EDGE OF ROAD. STATION 19+30 TO 20+47.

APPROX. LOCATION OF EXISTING HOUSE

CONSTRUCT PULLOUT 60'X8' W/ 48' TRANSITION CENTER AT STA. 26+00



REV	DATE	DESCRIPTION	BY
2	2/18/02	CLIENT REVIEW ISSUE	PCO
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UNOCAL
J-PAD

ROAD PLAN AND PROFILE

ENGINEERING/MAPPING/SURVEYING/TESTING
P.O. BOX 468 SOLDOTNA, AK 99689
VOICE (907) 283-4218 FAX (907) 283-3265
EMAIL: msmdane@mcclanecg.com

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VERT. SCALE: 1"=30'
SHEET 8 of 15

NOTES

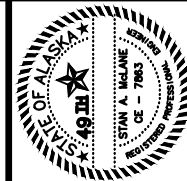
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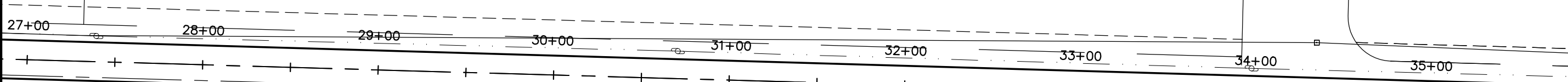
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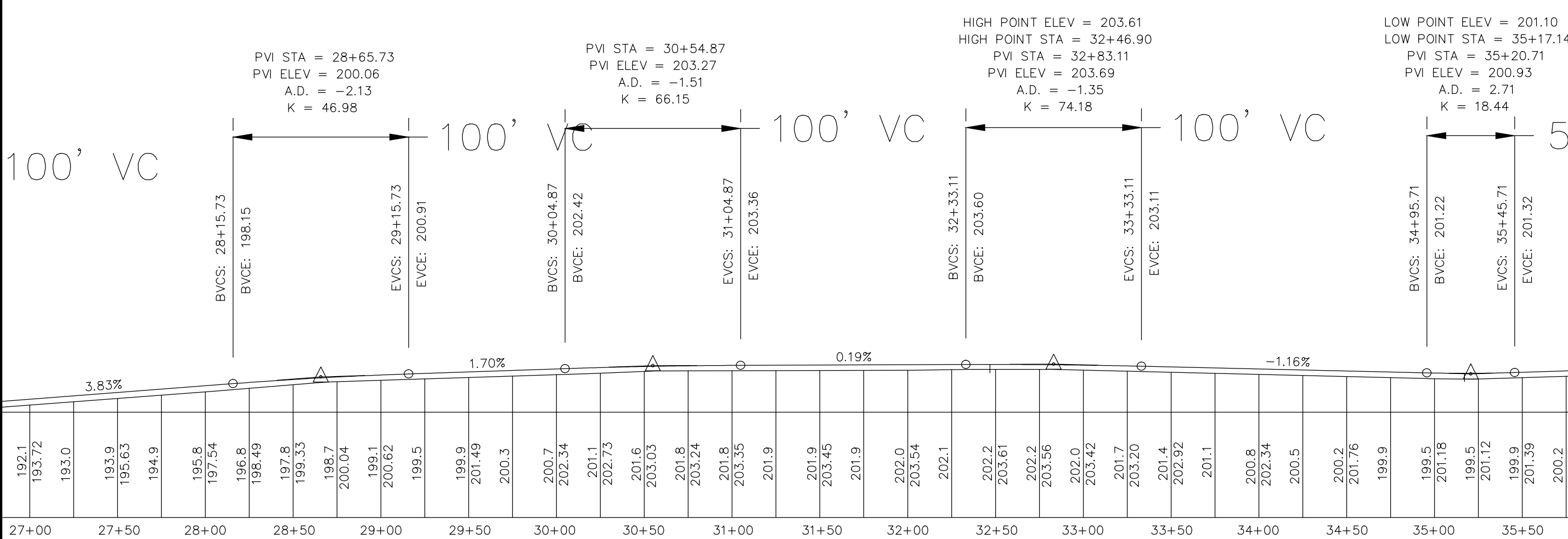


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CALL FOR UTILITY LOCATES BEFORE BEGINNING WORK
CALL LOCATE CENTER:
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EMAIL: msmdanecg@mdanecg.com

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HORZ. SCALE 1"=60'
VERT. SCALE 1"=30'
SHEET 9 of 15

DATE OF FIELD WORK 12/01 & 1/02 FIELD BOOK NO. 01-04 JOB NO. 013179

NOTES

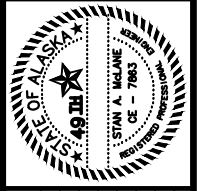
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2. AREA ENCOMPASSING THE PROPOSED PAD IS TREE COVERED TO VARYING DEGREES. CLEARING AND SURFACE GRUBBING WILL BE REQUIRED.
3. SOILS EXPLORATION WAS PERFORMED BY MCG IN JANUARY, 2002. TEST HOLE LOCATIONS ARE SHOWN HEREON. CONSULT THE REFERENCE SOILS INFORMATION DOCUMENTS FOR TEST HOLE LOGS.
4. CONTOURS REFLECTED HEREON REPRESENT EXISTING GROUND AND ARE AT 1 FOOT INTERVALS.
5. DOZER TRACK BERMS TO OBTAIN ADEQUATE COMPACTION AS DETERMINED BY OWNER'S REPRESENTATIVE.
6. CONSTRUCT THE PAD CONTAINMENT DIKES, AS INDICATED, FIRST WITH AVAILABLE WASTE EXCAVATION. STOCKPILE REMAINING MATERIAL IN THE DESIGNATED BERM AREA.

LEGEND

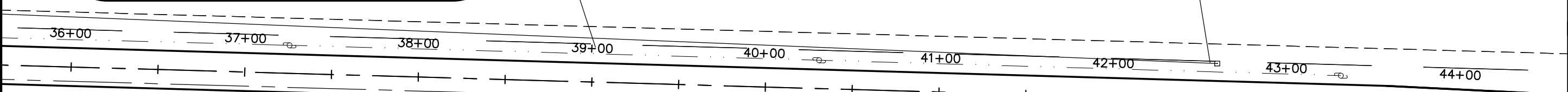
- 550 CONTOUR LINE (EXISTING GROUND)
- SLOPE DIRECTION
- 250.0 PAD / ROAD / BERM FG
- GRADE BREAK
- WELL LOCATION



SCALE: 1" = 60'

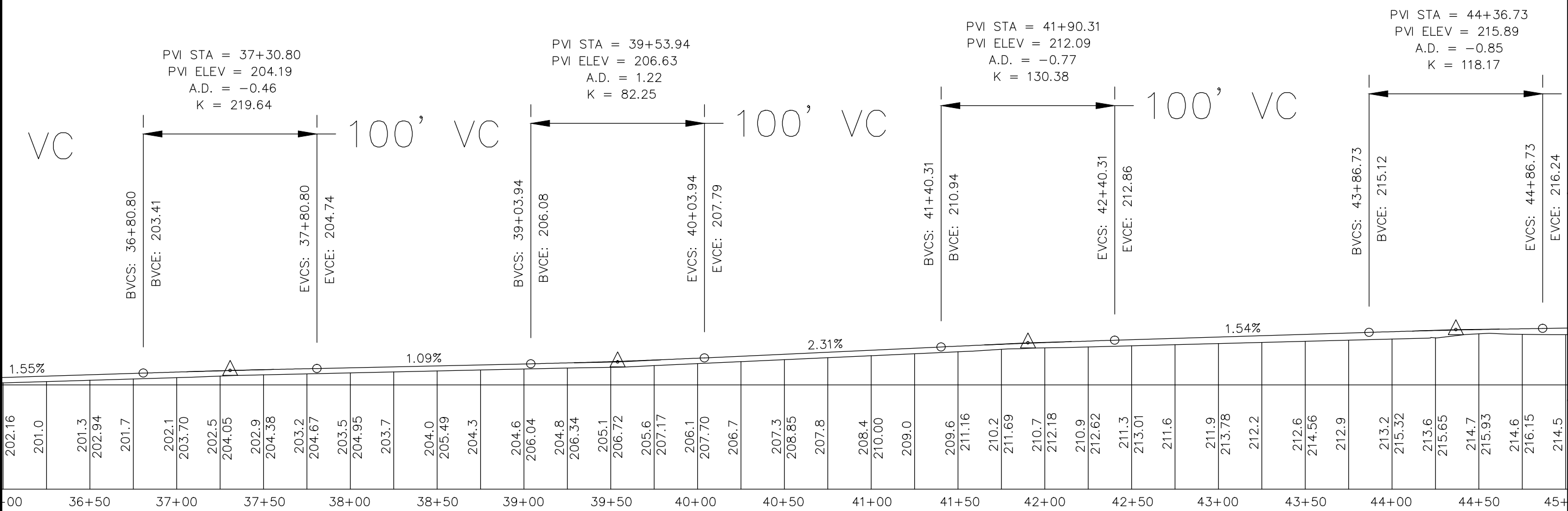


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2	2/18/02	CLIENT REVIEW ISSUE	PCO
1	2/07/02	PRELIMINARY ISSUE	PCO



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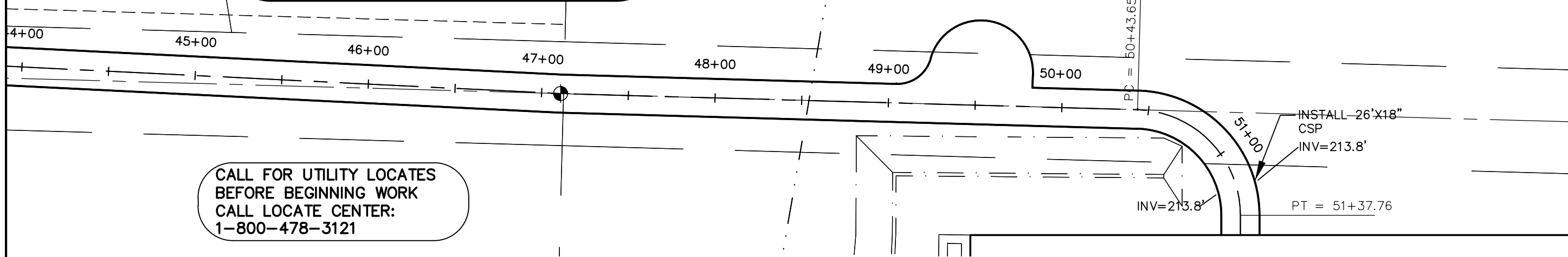
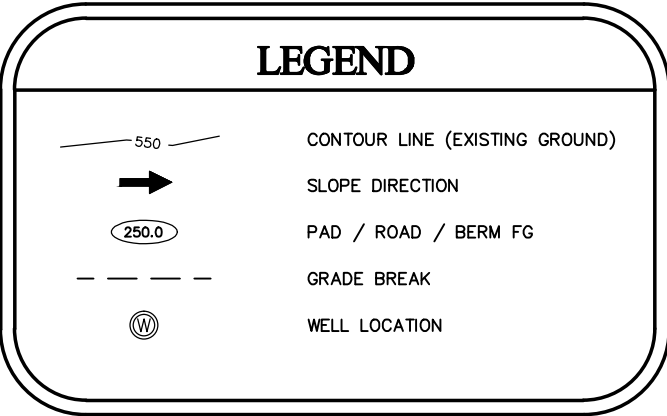
DATE OF FIELD WORK 12/01 & 1/02 FIELD BOOK NO. 01-04 JOB NO. 013179

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EMAIL: mstm@molotoveng.com

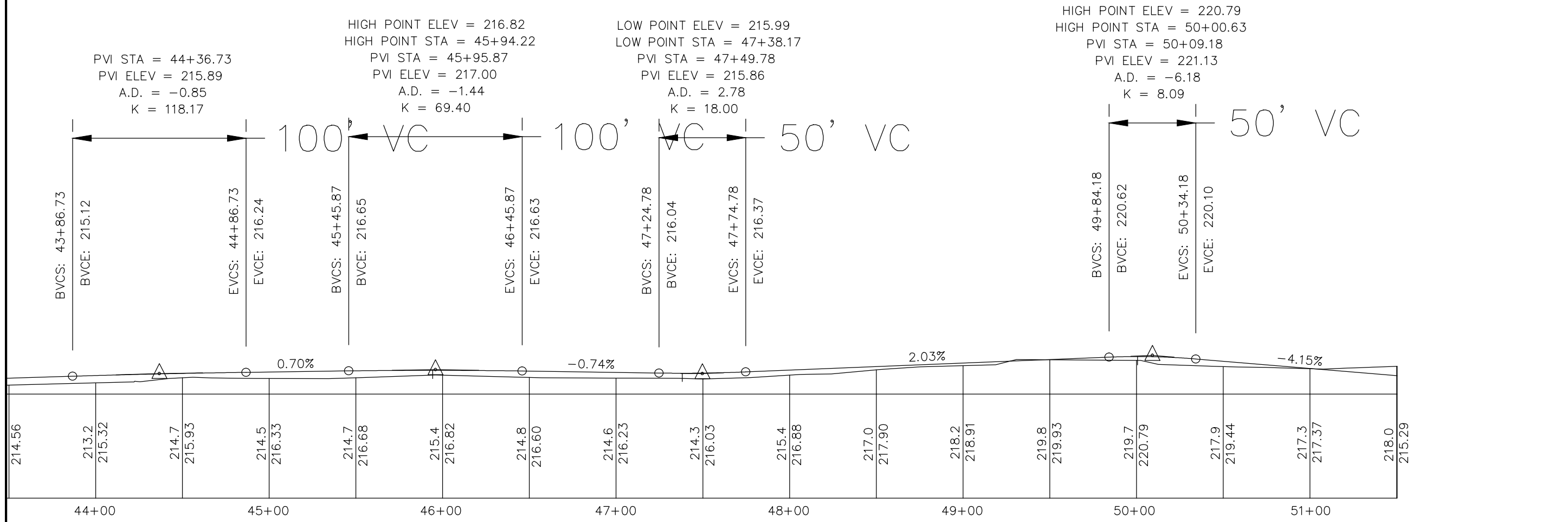
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HORZ. SCALE 1"=60'
VERT. SCALE 1"=30'
SHEET 10 of 15

NOTES

1. BASIS OF BEARING IS ALASKA STATE PLANE ZONE 4 NAD27 ACCORDING TO GPS OBSERVATION UTILIZING ADOT CONTROL POINT N86. BASIS OF ELEVATION IS NAVD88.
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DATE OF FIELD WORK 12/01 & 1/02

FIELD BOOK NO. 01-04

JOB NO. 013179

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2	2/18/02	CLIENT REVIEW ISSUE	PCO
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VERT. SCALE 1"=30'

SHEET 11 of 15



REV	DATE	DESCRIPTION	BY
1	2/18/02	CLIENT REVIEW ISSUE	PCO

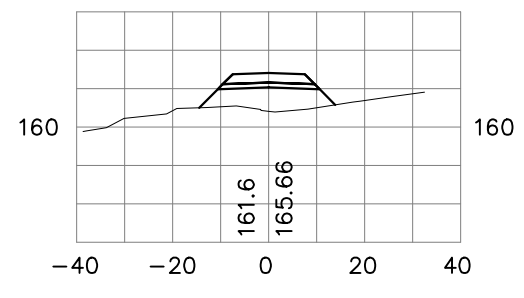
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DATE OF FIELD WORK 12/01 & 1/02 FIELD BOOK NO. 01-04 JOB NO. 013179

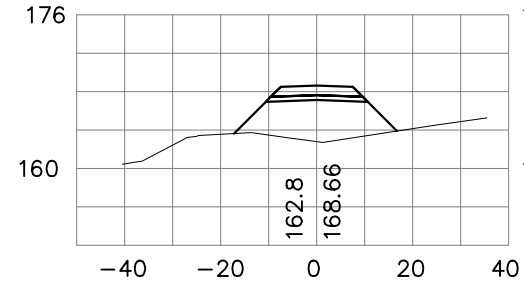
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 SHEET 12 of 15

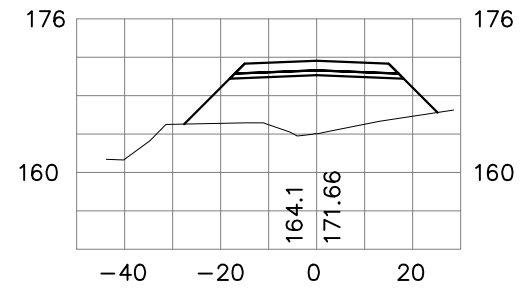
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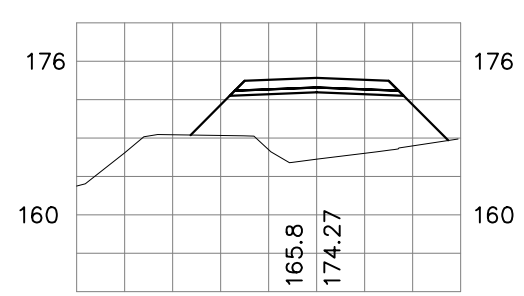
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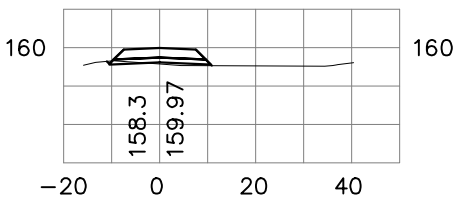
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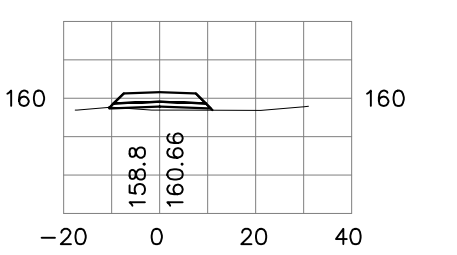
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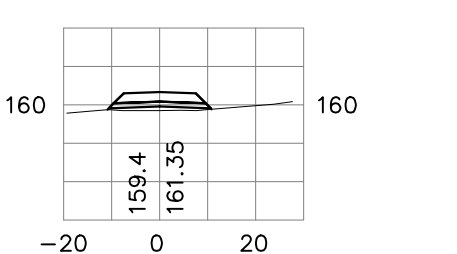
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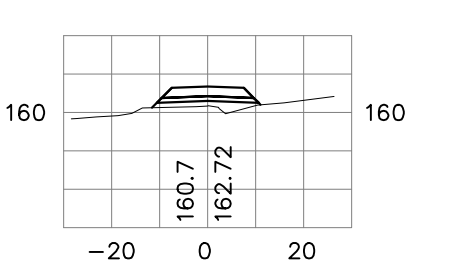
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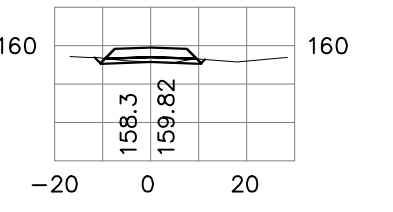
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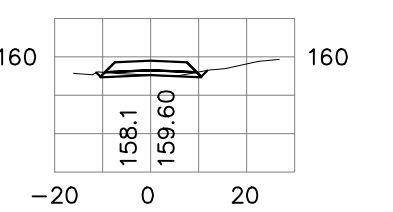
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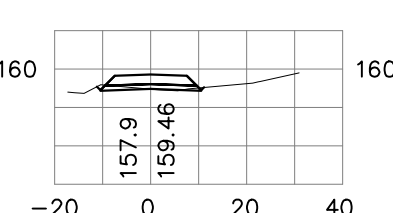
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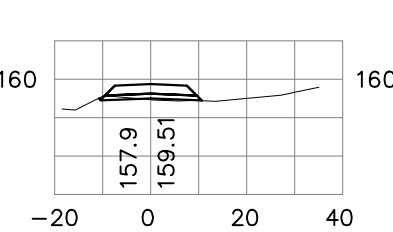
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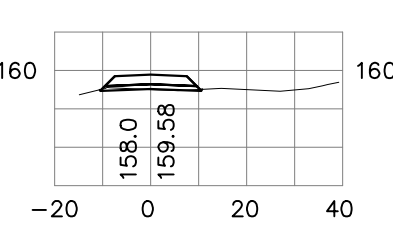
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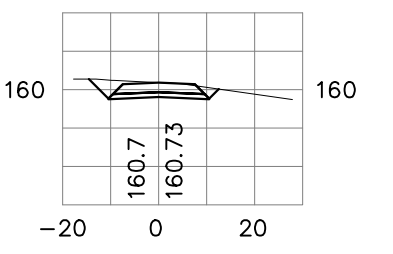
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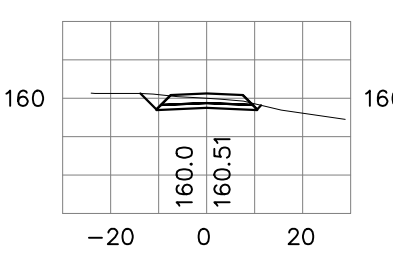
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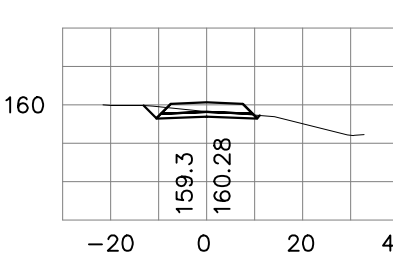
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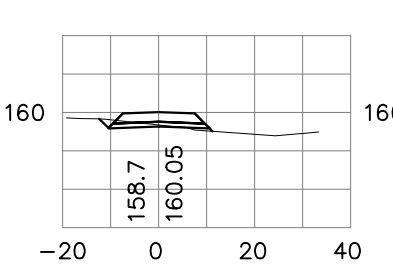
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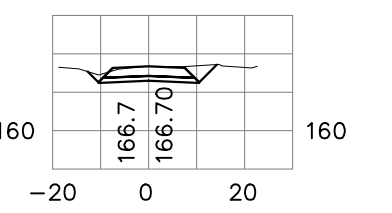
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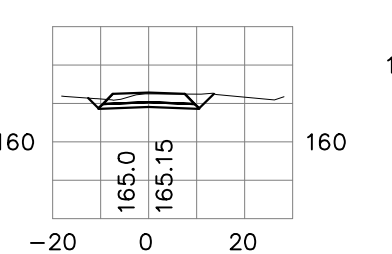
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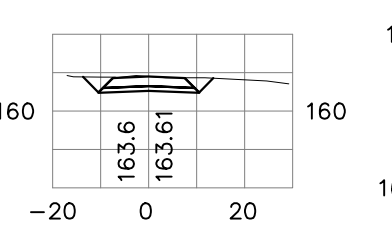
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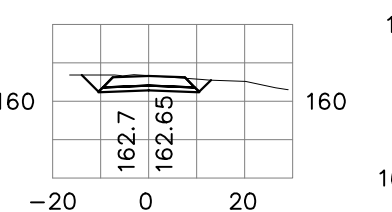
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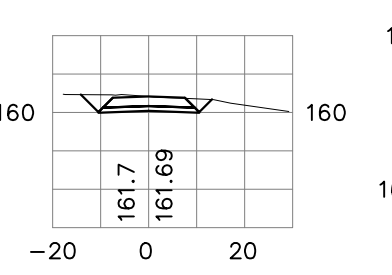
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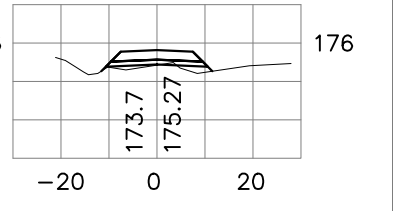
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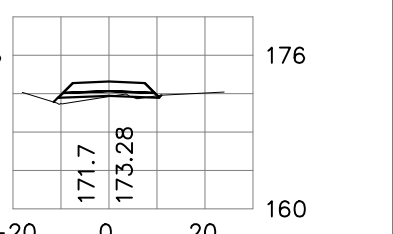
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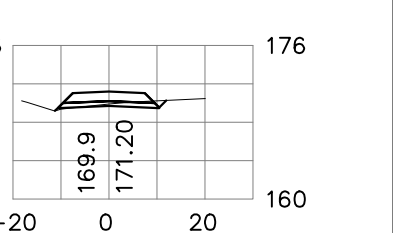
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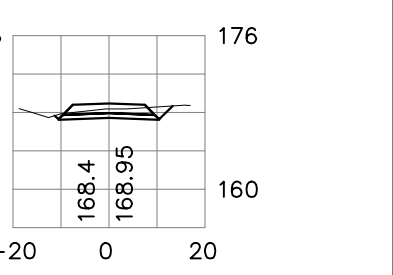
22+50



22+00



21+50





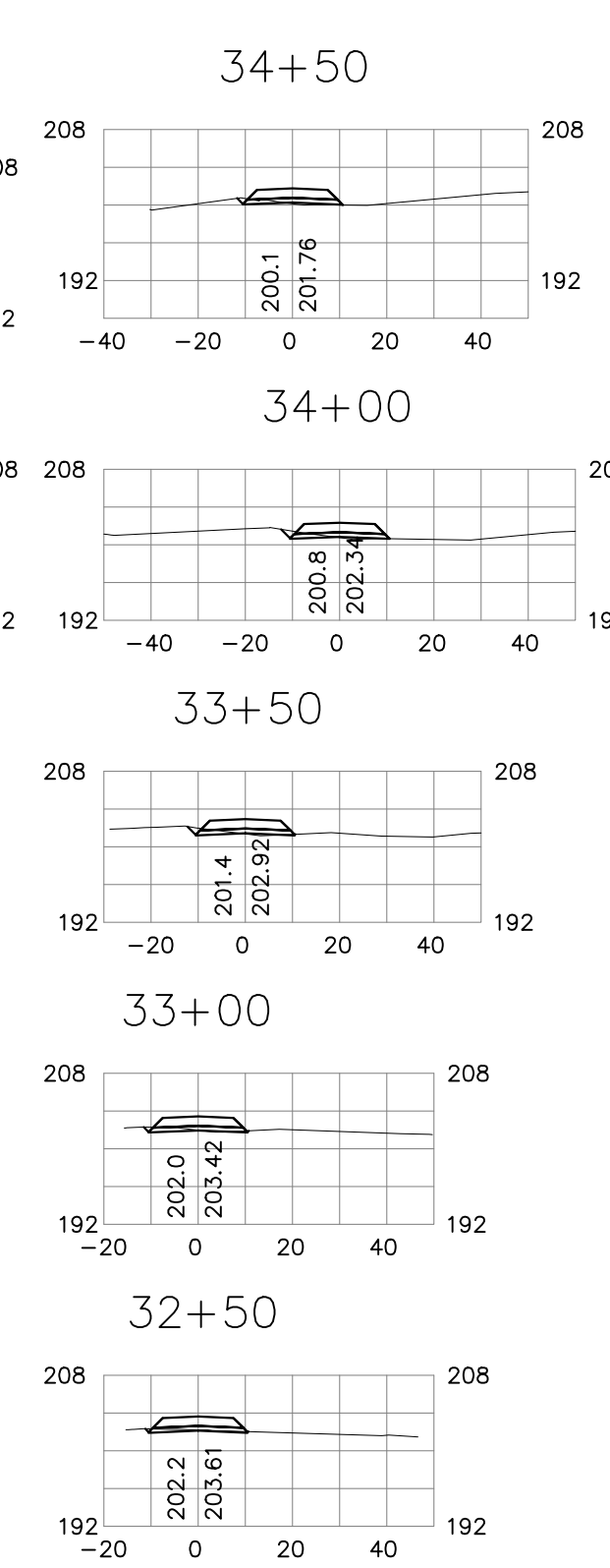
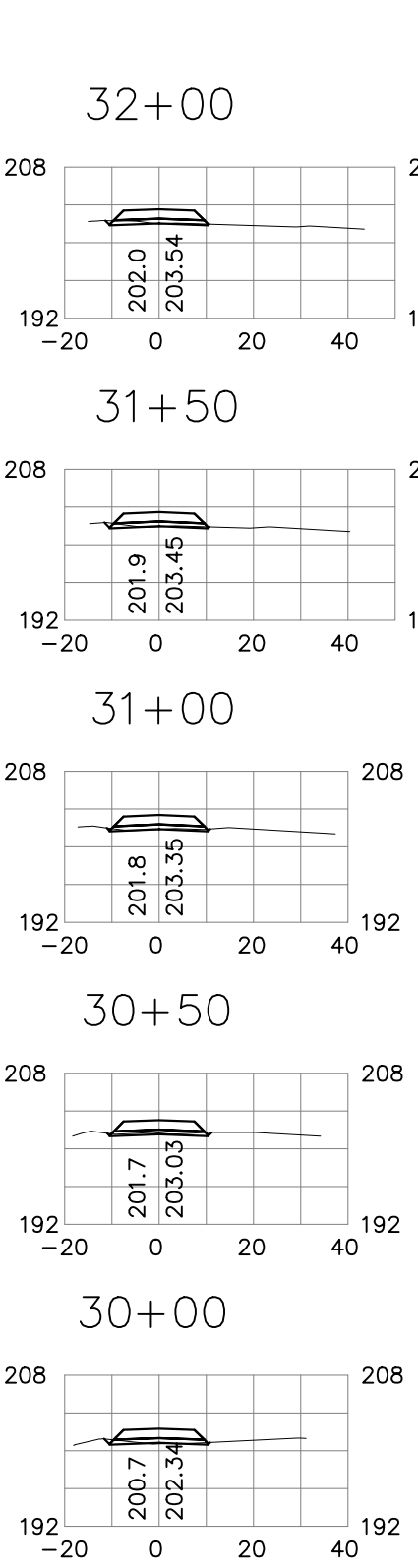
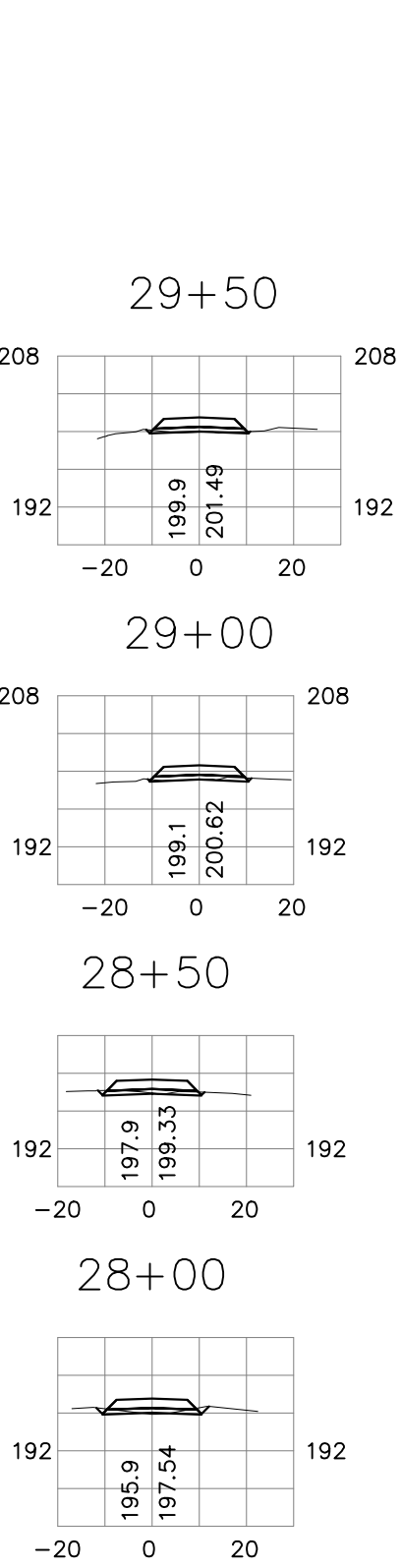
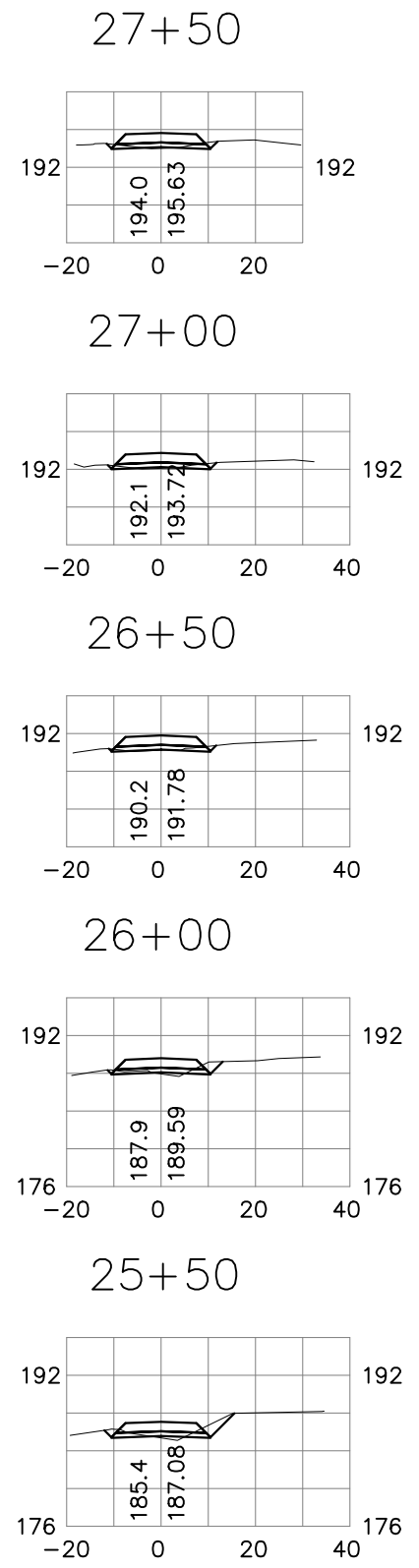
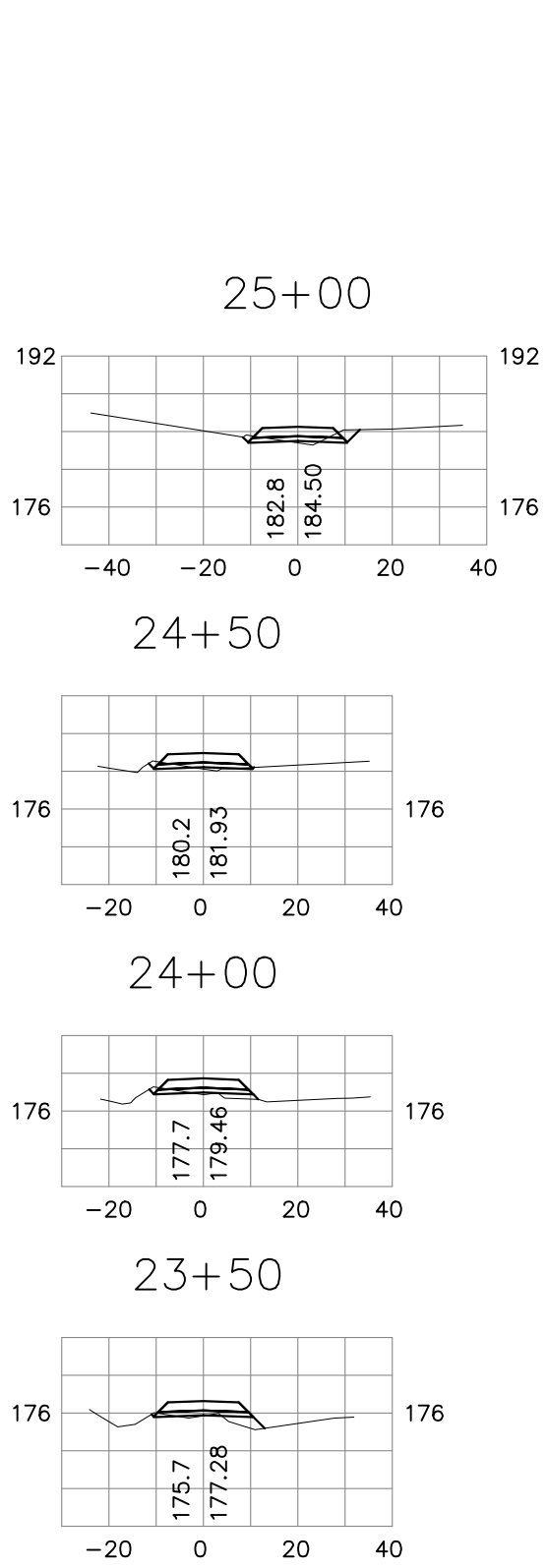
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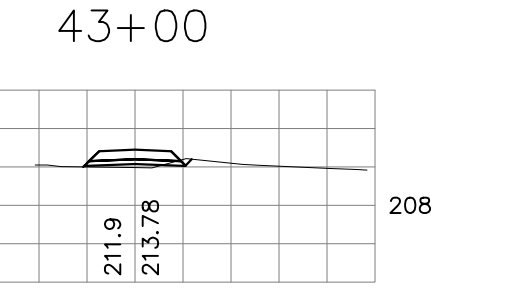
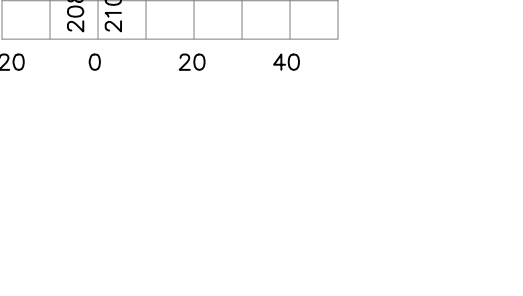
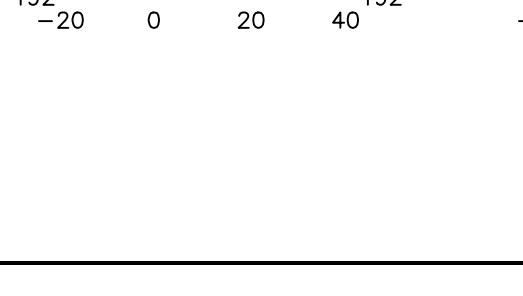
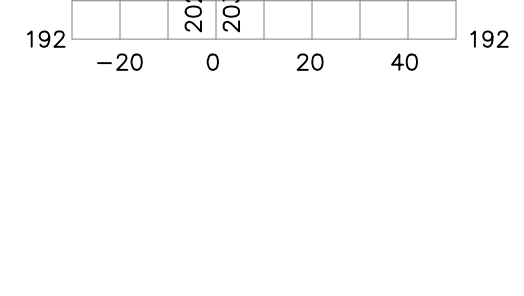
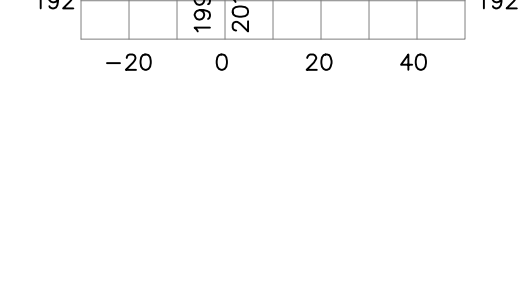
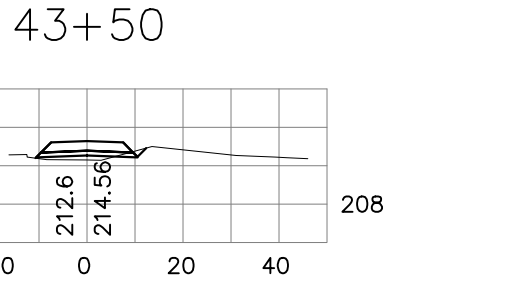
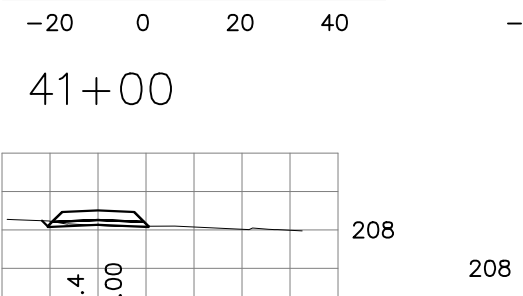
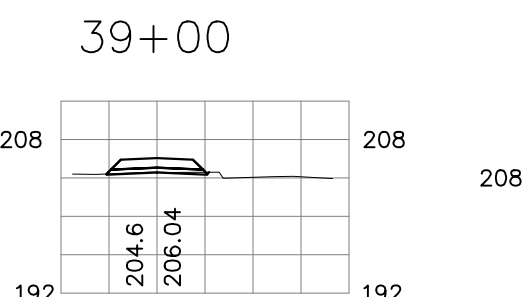
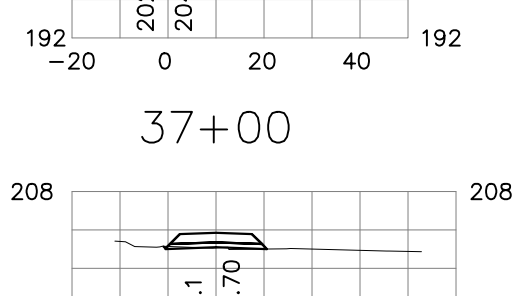
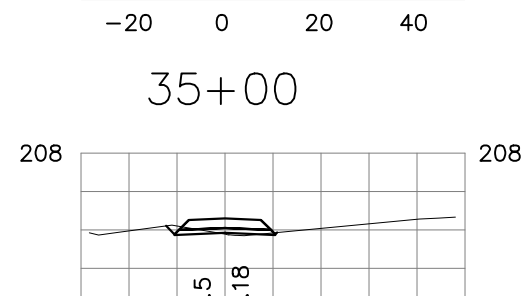
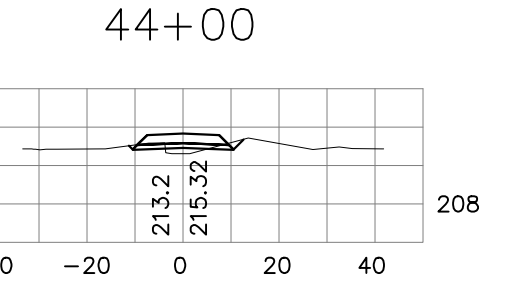
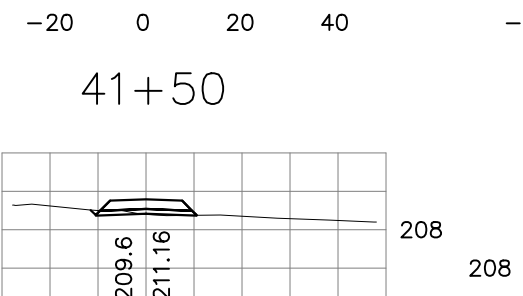
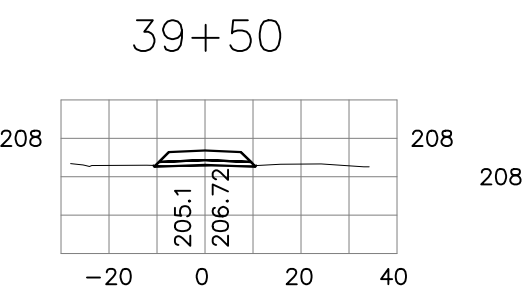
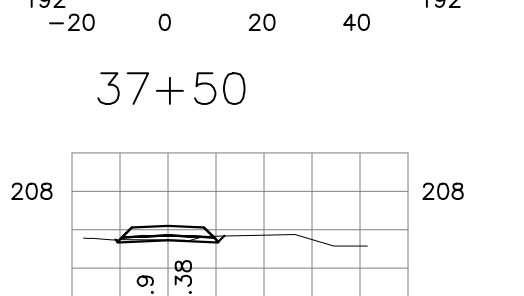
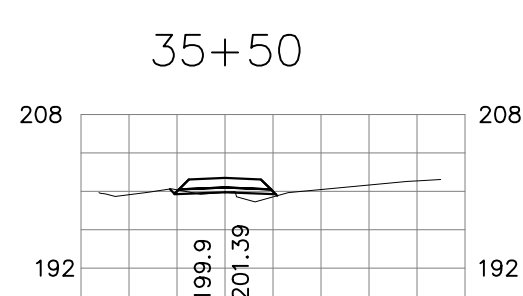
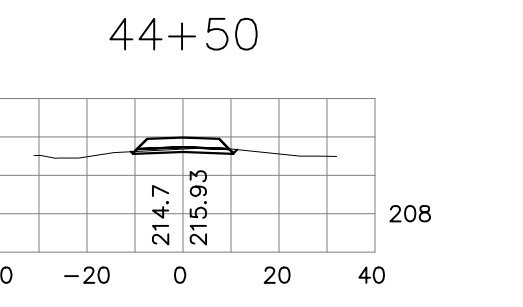
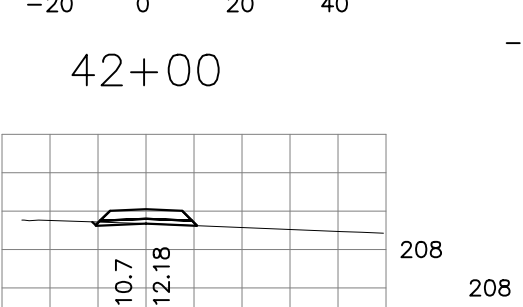
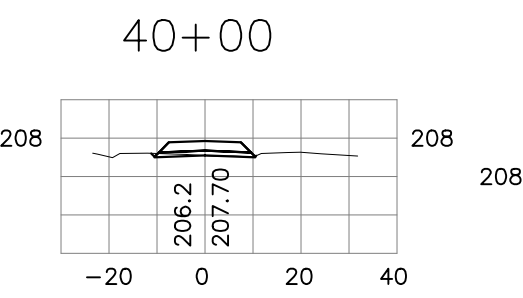
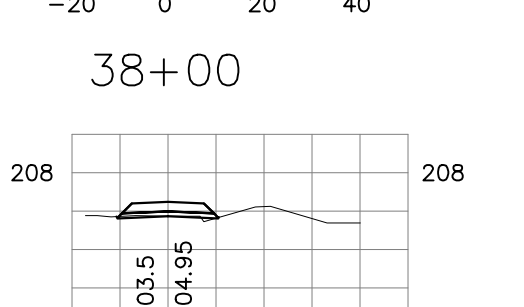
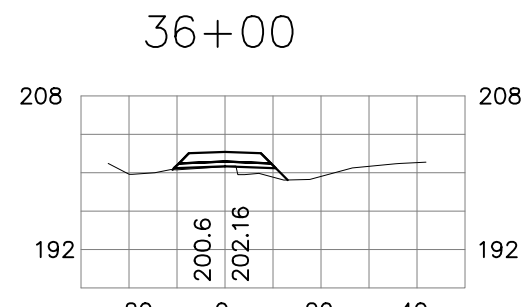
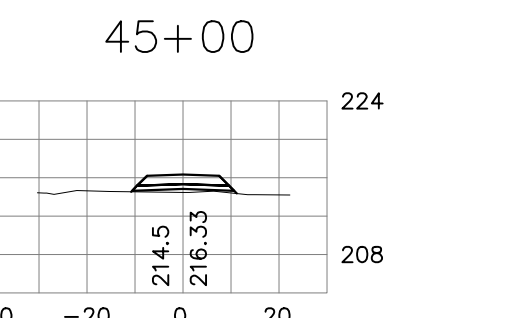
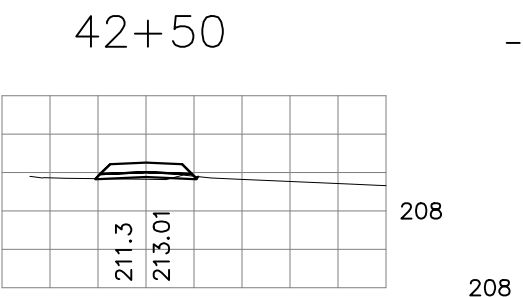
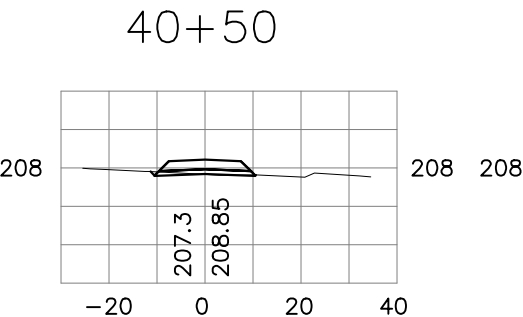
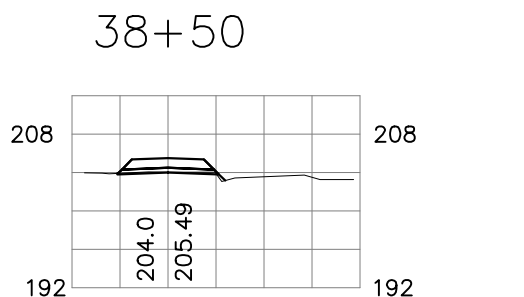
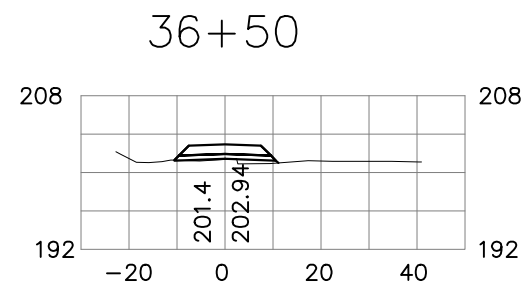
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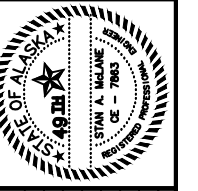
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DATE OF FIELD WORK 12/01 & 1/02 FIELD BOOK NO. 01-04 JOB NO. 013179

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 SHEET 14 of 15





REV	DATE	DESCRIPTION	BY
1	2/18/02	CLIENT REVIEW ISSUE	PCO

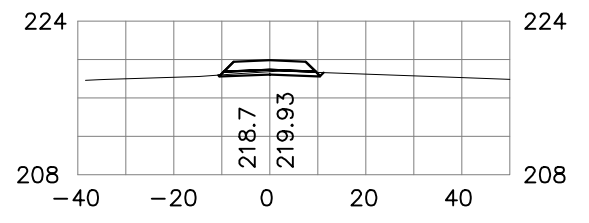
UNOCAL
J-PAD
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DATE OF FIELD WORK 12/01 & 1/02 FIELD BOOK NO. 01-04 JOB NO. 013179

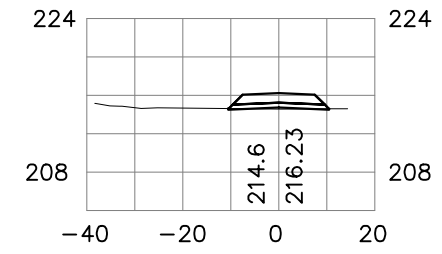
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EMAIL: msm@molinc.com

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HORZ. SCALE 1"=40'
VERT. SCALE 1"=20'
SHEET 15 of 15

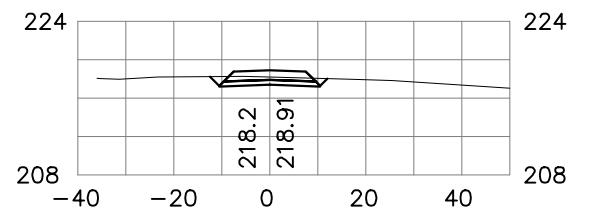
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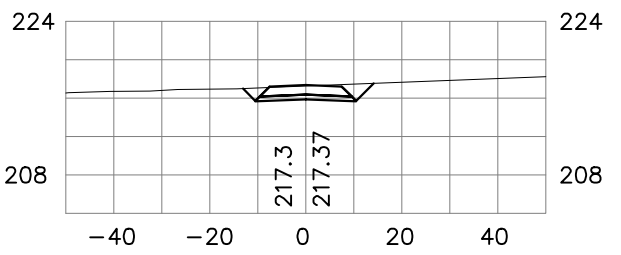
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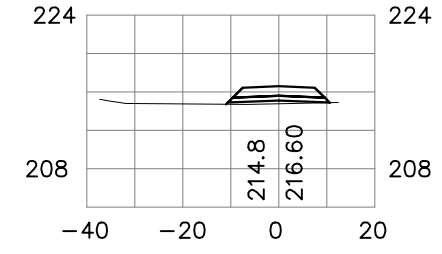
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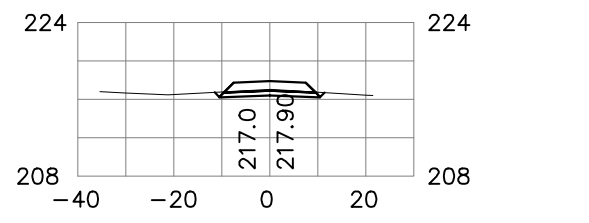
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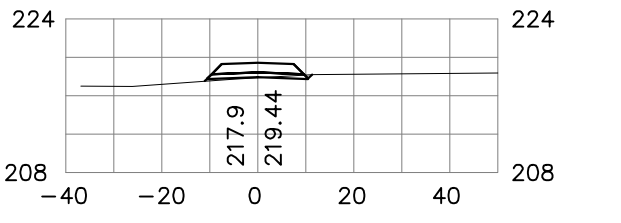
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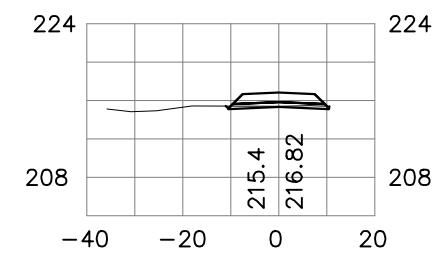
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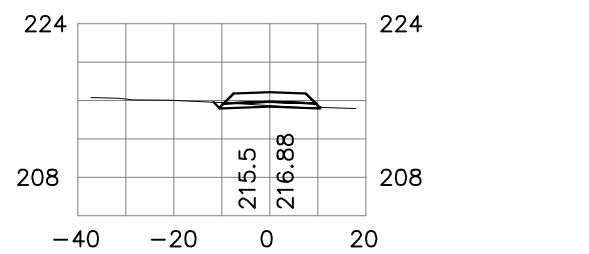
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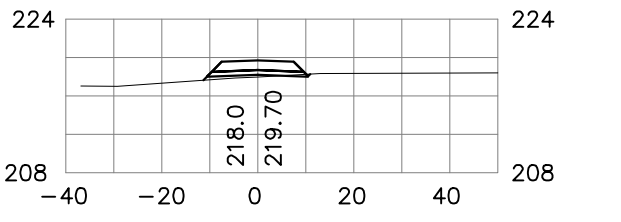
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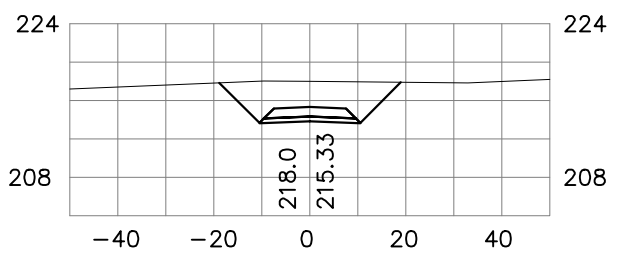
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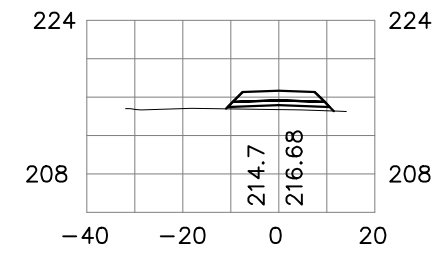
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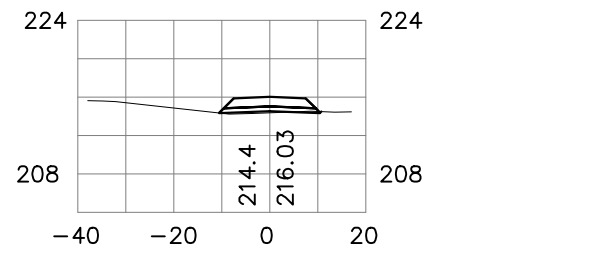
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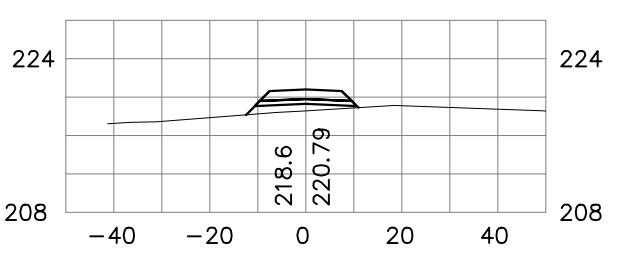
45+50



47+50



50+00



51+37.76

