

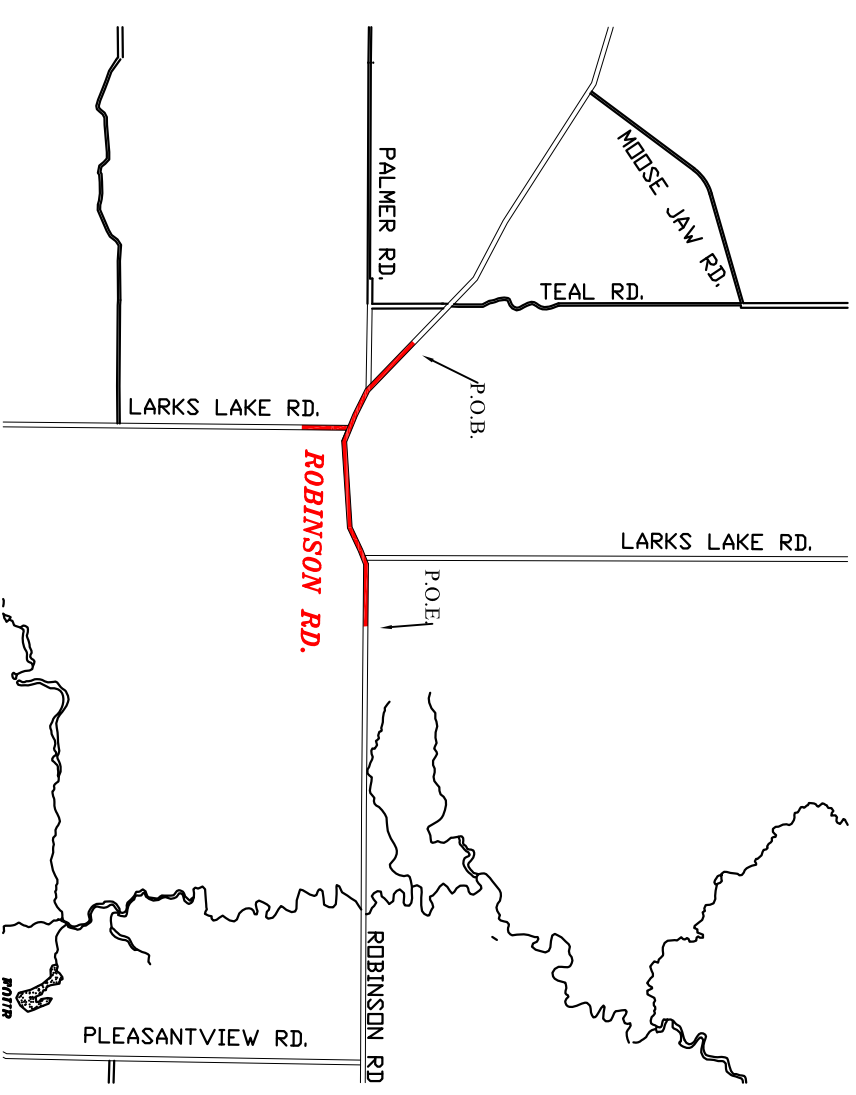
EMMET COUNTY ROAD COMMISSION
 IN COOPERATION WITH
LITTLE TRAVERSE BAY BANDS OF ODAWA INDIANS
 THROUGH THE

FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF INDIAN AFFAIRS

PLANS OF PROPOSED ROAD IMPROVEMENTS
 E.C.R.C. PROJECT NUMBER: A459.4131

ROBINSON ROAD

SECTIONS 32 & 33, T37N, R5W, CENTER TOWNSHIP
 SECTIONS 4 & 5, T36N, R5W, PLEASANTVIEW TOWNSHIP
 EMMET COUNTY, MICHIGAN



INDEX OF SHEETS

- 1 TITLE SHEET
- 2 EXISTING TYPICAL SECTION
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- 9 ROAD RELOCATION PLANVIEW
- 10 ROBINSON ROAD PROFILE
- 11-15 ROBINSON ROAD EARTHWORK CROSS SECTIONS
- 16 LARKS LAKE ROAD PROFILE
- 17-18 LARKS LAKE ROAD EARTHWORK CROSS SECTIONS

STANDARD PLANS

The following items shall be constructed in accordance with the referenced standard plan.

- ROAD STANDARD PLANS**
- R-11-E MONUMENT BOXES
 - R-60-J* GUARDRAIL TYPES A, B, BD, T, TD, MGS-8, & MGS-8D
 - R-62-H* GUARDRAIL APPROACH TERMINAL 2M
 - R-66-E* GUARDRAIL DEPARTING TERMINALS TYPES B, T & MGS
 - R-74-D BUMPER & PARKING RAILS AND MISC. WOOD POSTS
 - R-82-D BEDDING AND FILLING AROUND PIPE CULVERTS
 - R-96-E SOIL EROSION & SEDIMENTATION CONTROL MEASURES
 - R-100-1* SEEDING AND TREE PLANTING
 - R-105-D GRADING CROSS-SECTIONS
 - R-107-H SUPERELEVATION AND PAVEMENT CROWNS
 - 21 GUARDRAIL AT INTERSECTIONS
- * SPECIAL DETAILS

- TRAFFIC AND SAFETY STANDARD PLANS**
- WZD-100-A GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS
 - WZD-125-E TEMPORARY TRAFFIC CONTROL DEVICES

SPECIFICATIONS

The improvements covered by these plans shall be done in accordance with the Michigan Department of Transportation 2020 Standard Specifications for Construction as amended by Supplemental Specifications and Special Provisions. The proposed improvements covered by these plans have been prepared in accordance with the Michigan Department of Transportation Local Agency Programs Guidelines for Geometrics (3R), dated August 28, 2008. Exceptions are noted in the project file.

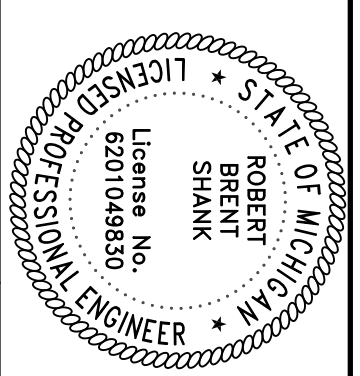
Traffic will be maintained by the Contractor during construction, in accordance with contract Special Provisions and the 2011 Michigan Manual of Uniform Traffic Control Devices, as revised.

TRAFFIC DATA

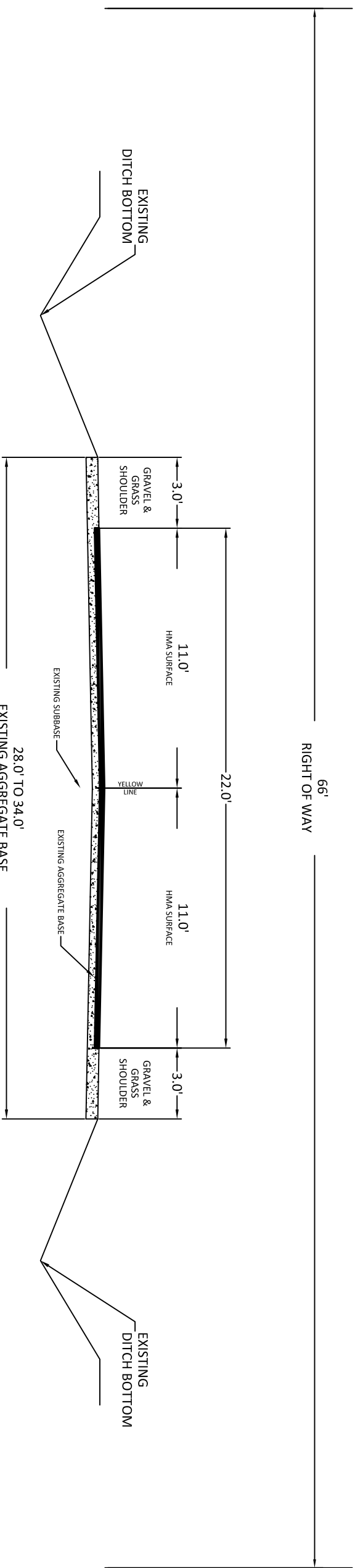
	2024	2044
ADT:	514	929
COMMERCIAL %:	7%	7%
DESIGN SPEED:	60 m.p.h.	
STATUTORY SPEED:	55 m.p.h.	

CONTRACT FOR: 1.52 miles of Trenching, HMA Base Crushing and Shaping, Road Obliteration, Curve Relocation, Excavation, Embankment, Culverts and other drainage improvements, Aggregate Base, HMA Paving, Guardrail Upgrades, Shoulder Gravel, Pavement Markings, Traffic Control and Restoration efforts.

BRENT SHANK, P.E. · ENGINEER MANAGER
 REGISTRATION NUMBER: 6201049830



EMMET COUNTY ROAD COMMISSION
 2255 E HATHAWAY ROAD · HARBOR SPRINGS, MI 49740 · (231) 347-8142



EXISTING SECTION

STATION 0+00 TO 34+00

NO SCALE

EXISTING TYPICAL SECTION

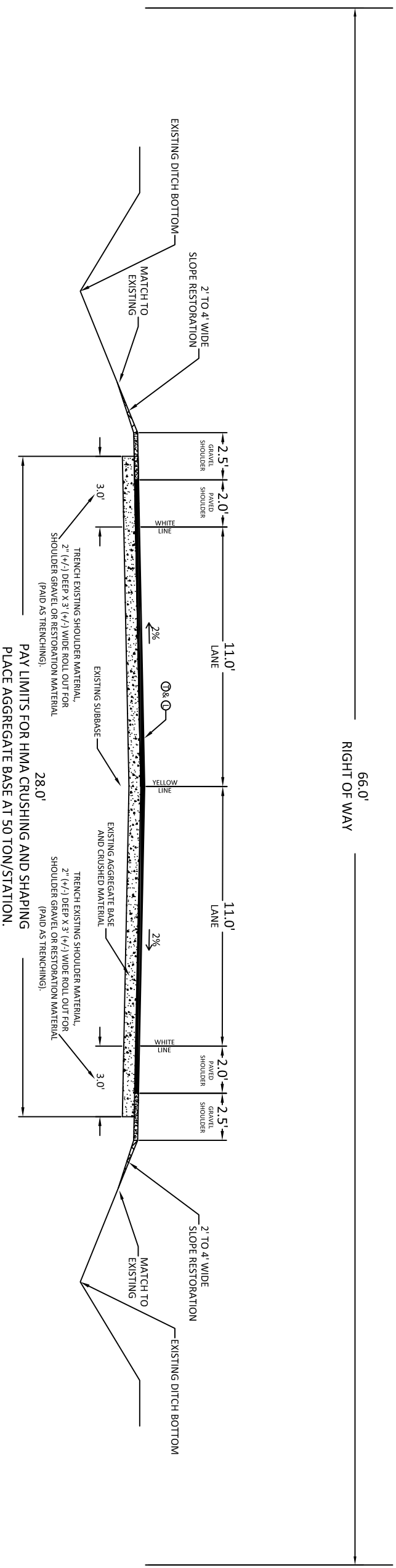
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ROBINSON ROAD

DATE:
 03/11/24

SHEET
2
 OF 18

66.0'
RIGHT OF WAY



NOTE: IT IS ANTICIPATED THAT IN ORDER TO CONSTRUCT THE PROPOSED CROSS SLOPE THE CONTRACTOR WILL NEED TO LATERALLY MOVE CRUSHED MATERIAL AND IMPORTED AGGREGATE BASE. THE MOVEMENT OF SUCH MATERIAL EITHER Laterally OR LONGITUDINALLY TO CONSTRUCT THE PROPOSED CROSS SECTION SHALL BE INCLUDED IN THE HMA BASE CRUSHING AND SHAPING PAY ITEM AND NO ADDITIONAL PAYMENT FOR THIS WORK WILL BE MADE. THE HMA BASE CRUSHING AND SHAPING IS BASED ON THE PROPOSED TYPICAL CROSS SECTION AND BE PAID FOR ON A SQUARE YARD BASIS. THE FINAL AGGREGATE BASE DEPTH SHALL BE A MINIMUM OF 6 INCHES THICK. CRUSH AND SHAPING IN EXCESS OF THE MINIMUM REQUIRED, SHALL BE INCLUDED IN THE HMA BASE CRUSHING AND SHAPING PAY ITEM WITHOUT ADDITIONAL COMPENSATION. NO EXISTING PAVEMENT SHALL REMAIN BELOW AND CRUSHED AND SHAPED AREAS.

NOTE: MATCH EXISTING SUPER ELEVATION RATE IN CURVE AREAS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER

TYPICAL SECTION

STATIONS: 0+00 to 19+86

31+64 to 36+04

76+00 to 80+00

NO SCALE

TYPICAL SECTION

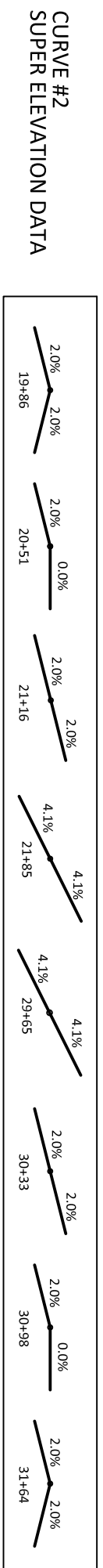
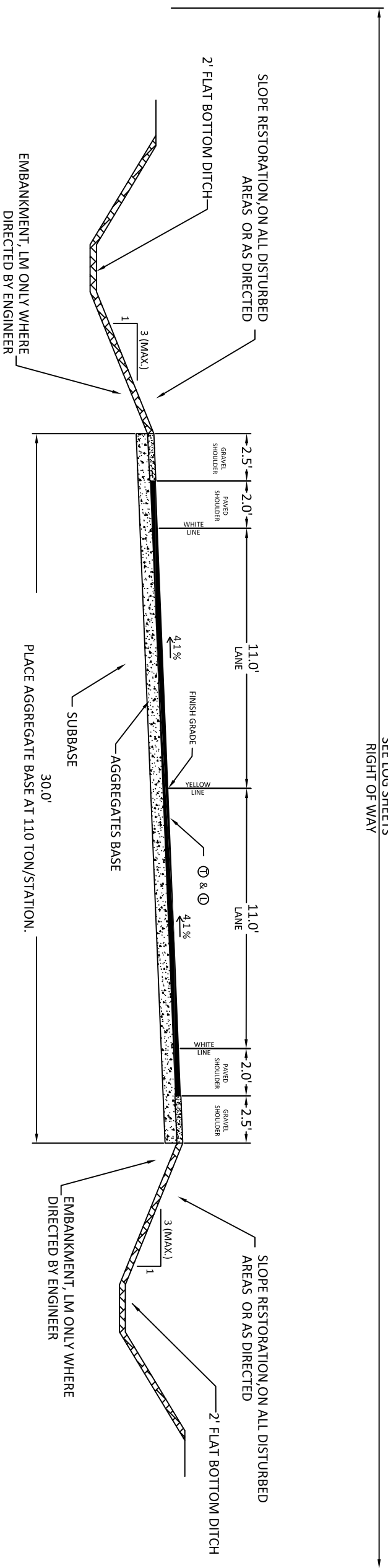
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ROBINSON ROAD

DATE:
03/11/24

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OF 18

SEE LOG SHEETS
RIGHT OF WAY



TYPICAL SECTION

STATION 19+86 to 31+64

NO SCALE

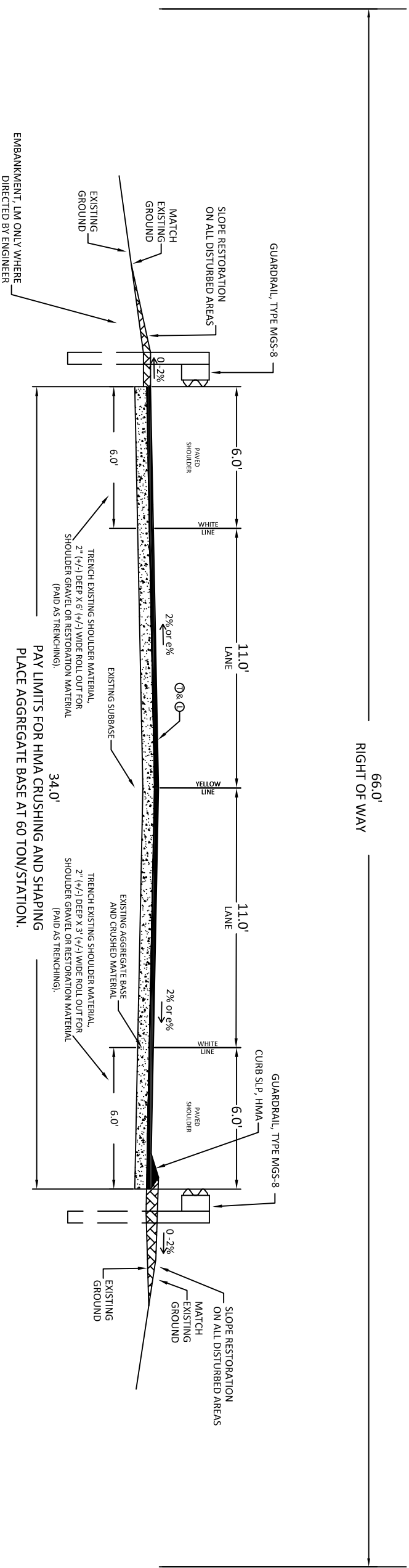
TYPICAL SECTION

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03/11/24

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NOTE: IT IS ANTICIPATED THAT IN ORDER TO CONSTRUCT THE PROPOSED CROSS SLOPE THE CONTRACTOR WILL NEED TO LATEROALLY MOVE CRUSHED MATERIAL AND IMPORTED AGGREGATE BASE. THE MOVEMENT OF SUCH MATERIAL EITHER LATERALLY OR LONGITUDINALLY TO CONSTRUCT THE PROPOSED CROSS SECTION SHALL BE INCLUDED IN THE HMA BASE CRUSHING AND SHAPING PAY ITEM AND NO ADDITIONAL PAYMENT FOR THIS WORK WILL BE MADE. THE HMA BASE CRUSHING AND SHAPING IS BASED ON THE PROPOSED TYPICAL CROSS SECTION AND BE PAID FOR ON A SQUARE YARD BASIS. THE FINAL AGGREGATE BASE DEPTH SHALL BE A MINIMUM OF 6 INCHES THICK. CRUSH AND SHAPING IN EXCESS OF THE MINIMUM REQUIRED, SHALL BE INCLUDED IN THE HMA BASE CRUSHING AND SHAPING PAY ITEM WITHOUT ADDITIONAL COMPENSATION. NO EXISTING PAVEMENT SHALL REMAIN BELOW AND CRUSHED AND SHAPED AREAS.

NOTE: MATCH EXISTING SUPER ELEVATION RATE IN CURVE AREAS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER

TYPICAL SECTION

STATION 36+04 TO 53+00

NO SCALE

TYPICAL SECTION

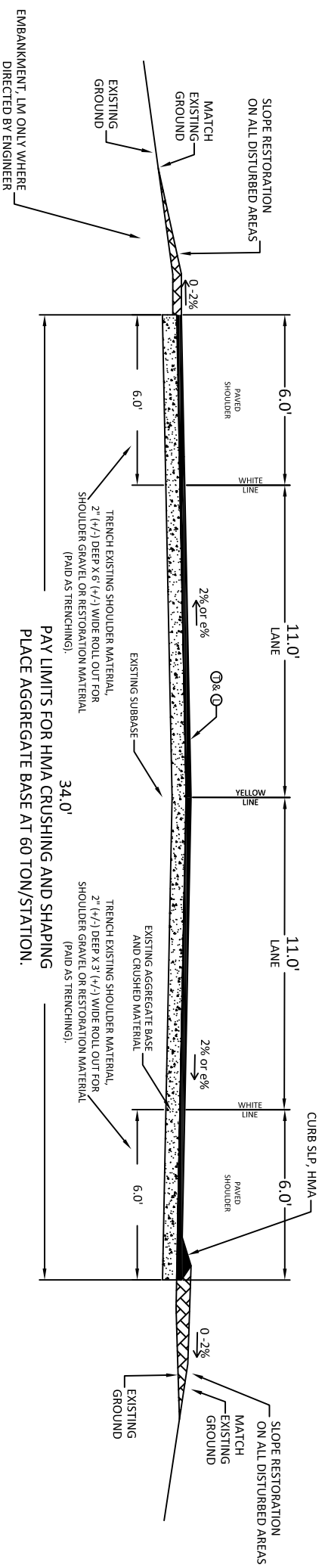
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5
OF 18

66.0'
RIGHT OF WAY



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NOTE: MATCH EXISTING SUPER ELEVATION RATE IN CURVE AREAS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER

TYPICAL SECTION

STATION 53+00 TO 76+00

NO SCALE

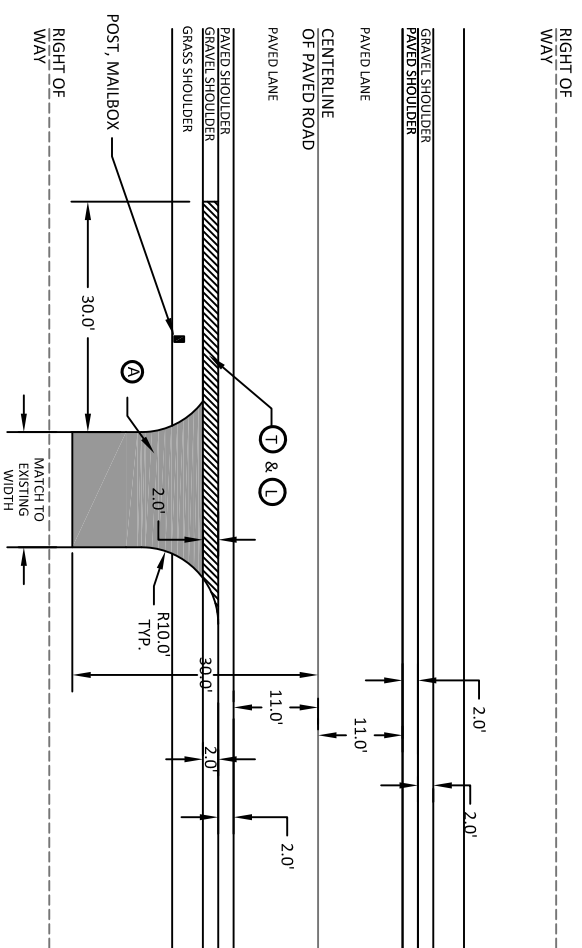
TYPICAL SECTION

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ROBINSON ROAD

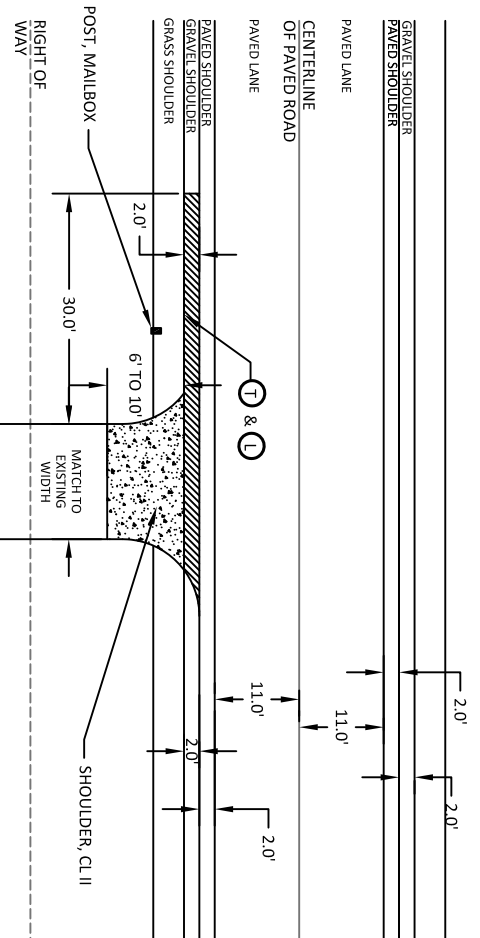
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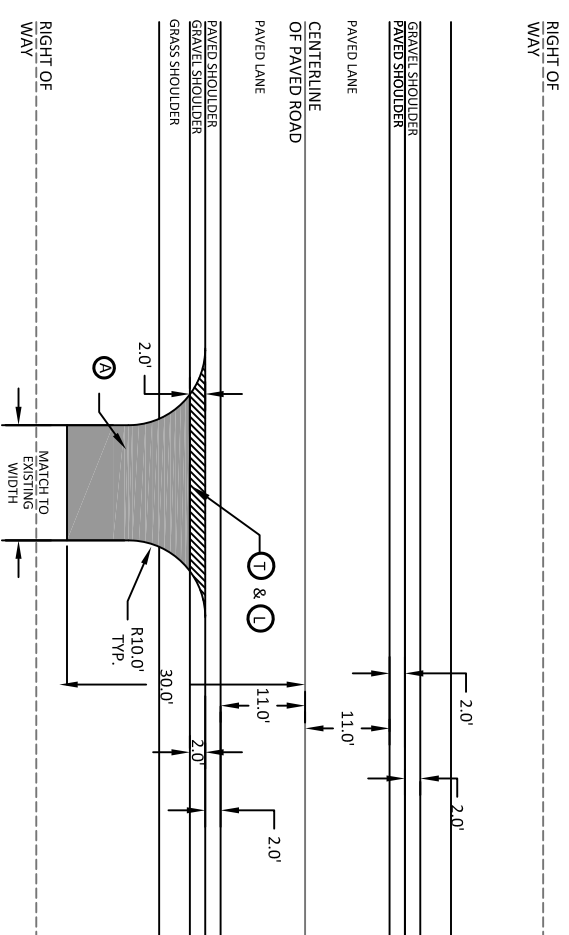
PAVED DRIVEWAY w/ MAILBOX

NOT TO SCALE



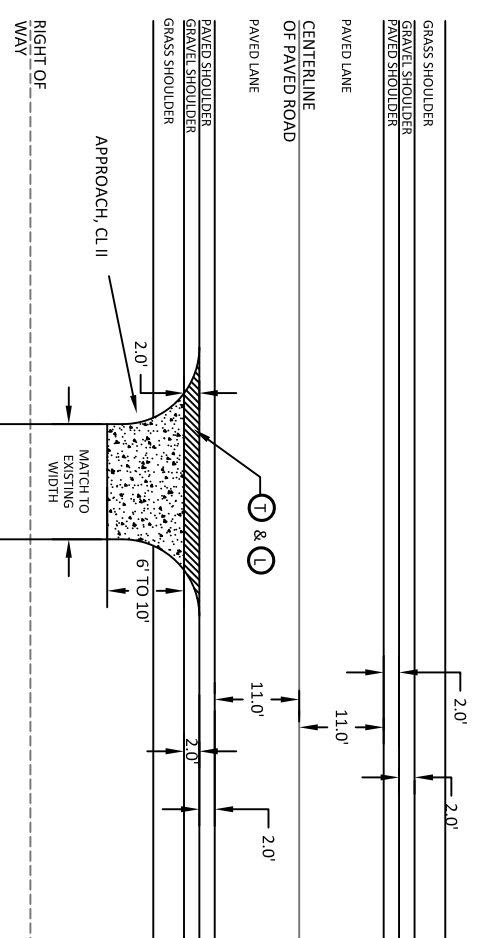
GRAVEL DRIVEWAY w/ MAILBOX

NOT TO SCALE



PAVED DRIVEWAY

NOT TO SCALE



GRAVEL DRIVEWAY

NOT TO SCALE

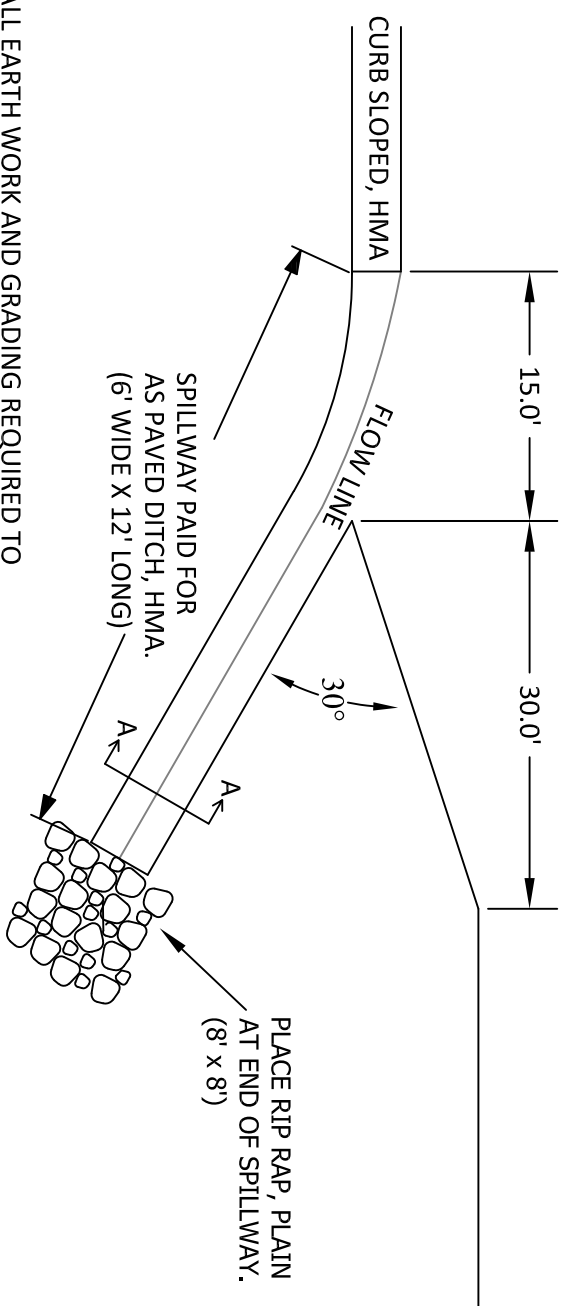
DRIVEWAY DETAILS

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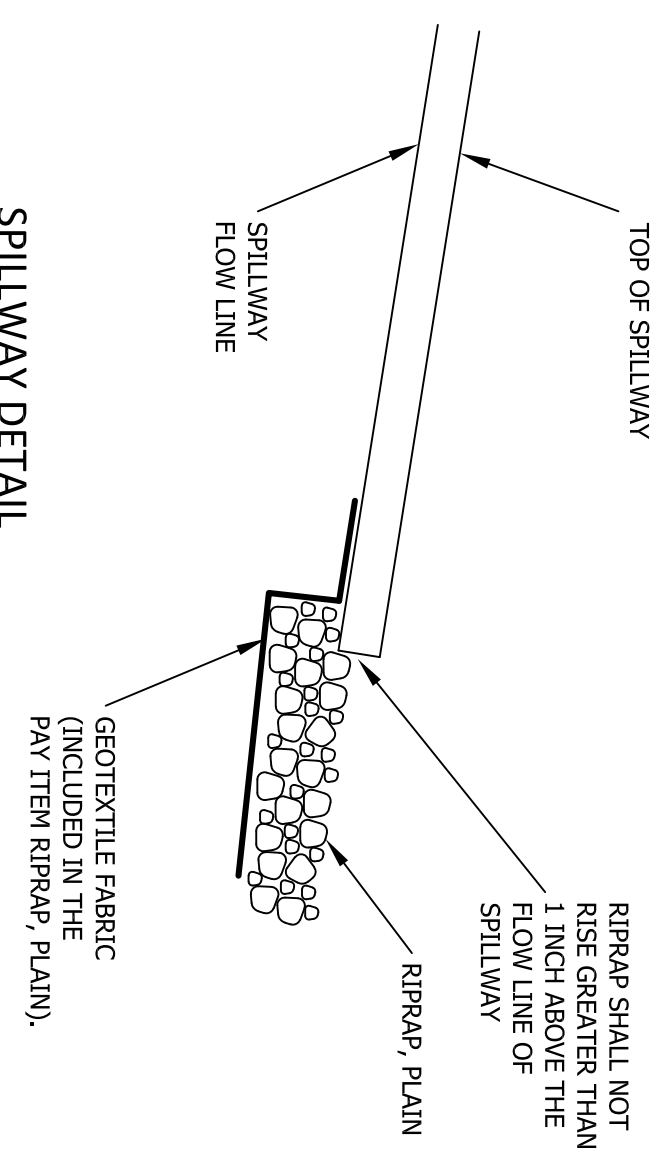
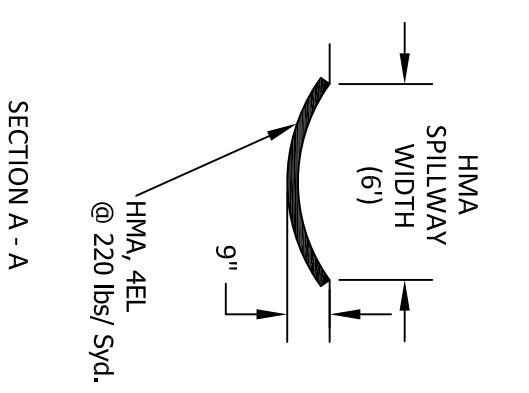
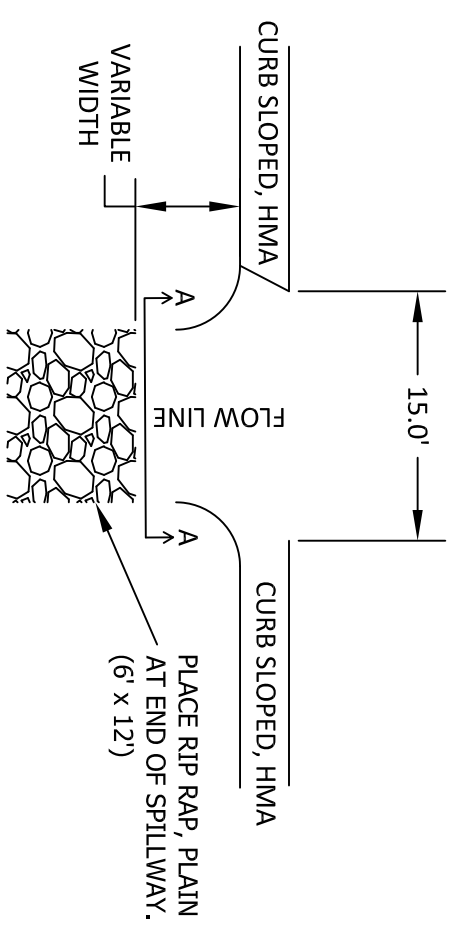
DATE:
03/11/24

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* ALL EARTH WORK AND GRADING REQUIRED TO CONSTRUCT THE SPILLWAY SHALL BE INCLUDED IN THE PAYMENT FOR PAVED DITCH, HMA.

** TOP OF SPILLWAY SHALL NOT BE HIGHER THAN EXISTING GROUND.



SPILLWAY DETAIL

NO SCALE

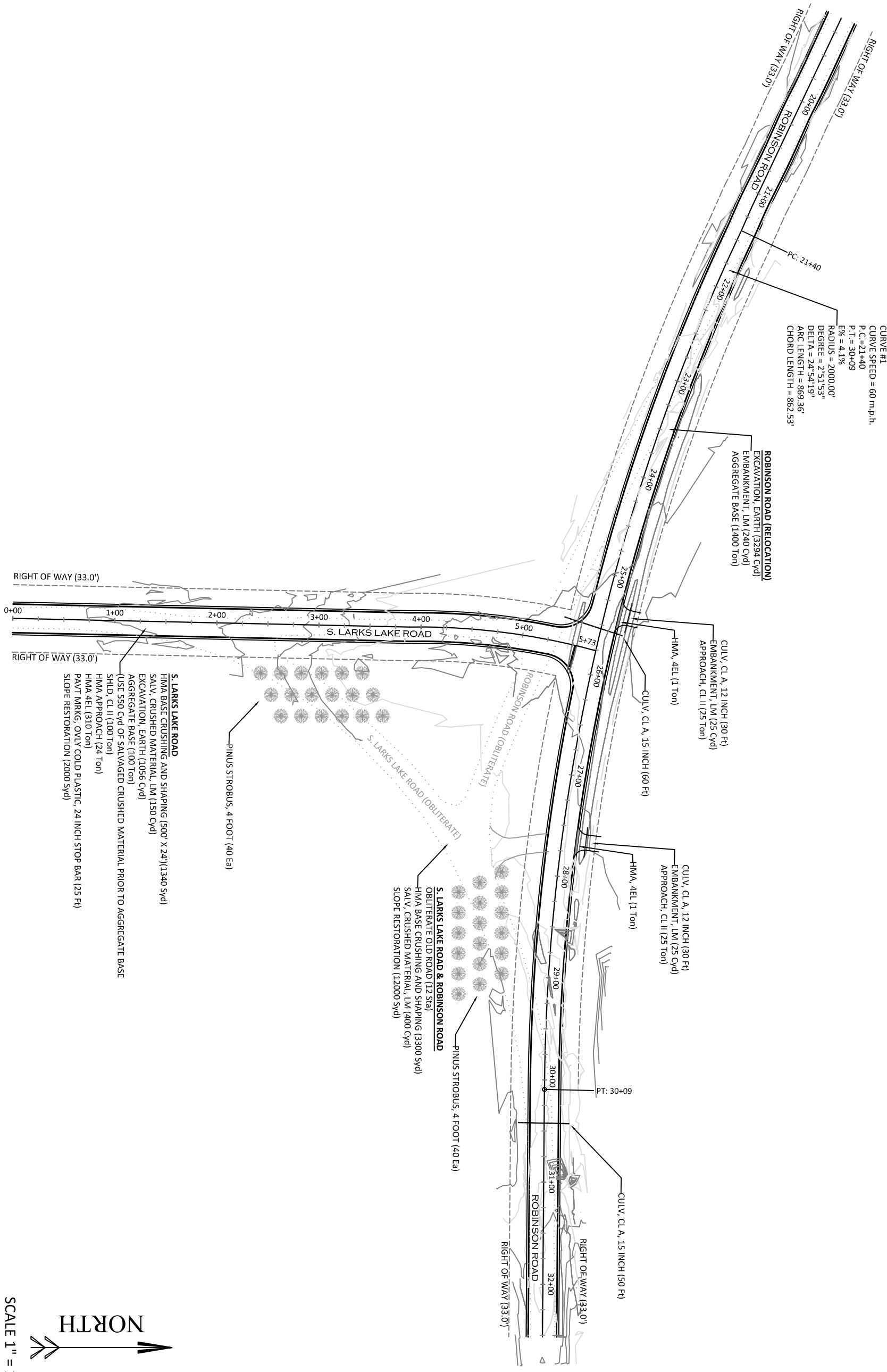
ROBINSON ROAD

SPILLWAY DETAIL

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CURVE #1
 CURVE SPEED = 60 m.p.h.
 P.C. = 21+40
 P.T. = 30+09
 E% = 4.1%
 RADIUS = 2000.00'
 DEGREE = 2°51'53"
 DELTA = 24°54'19"
 ARC LENGTH = 869.36'
 CHORD LENGTH = 862.53'

ROBINSON ROAD (RELOCATION)
 EXCAVATION, EARTH (3294 Cyd)
 EMBANKMENT, LM (240 Cyd)
 AGGREGATE BASE (1400 Ton)

CULV. CL. A, 12 INCH (30 Ft)
 EMBANKMENT, LM (25 Cyd)
 APPROACH, CL II (25 Ton)

CULV. CL. A, 12 INCH (30 Ft)
 EMBANKMENT, LM (25 Cyd)
 APPROACH, CL II (25 Ton)

S. LARKS LAKE ROAD
 HMA BASE CRUSHING AND SHAPING (500' X 24") (1340 Syd)
 SALV. CRUSHED MATERIAL, LM (150 Cyd)
 EXCAVATION, EARTH (1056 Cyd)
 AGGREGATE BASE (100 Ton)
 (USE 550 CYD OF SALVAGED CRUSHED MATERIAL PRIOR TO AGGREGATE BASE
 SHLD., CL II (100 Ton)
 HMA APPROACH (24 Ton)
 HMA 4EL (310 Ton)
 PAVT MKKG. OVLY COLD PLASTIC, 24 INCH STOP BAR (25 Ft)
 SLOPE RESTORATION (2000 Syd)

S. LARKS LAKE ROAD & ROBINSON ROAD
 OBLITERATE OLD ROAD (12 Sta)
 HMA BASE CRUSHING AND SHAPING (3300 Syd)
 SALV. CRUSHED MATERIAL, LM (400 Cyd)
 SLOPE RESTORATION (12000 Syd)



SCALE 1" = 100'

ROBINSON ROAD

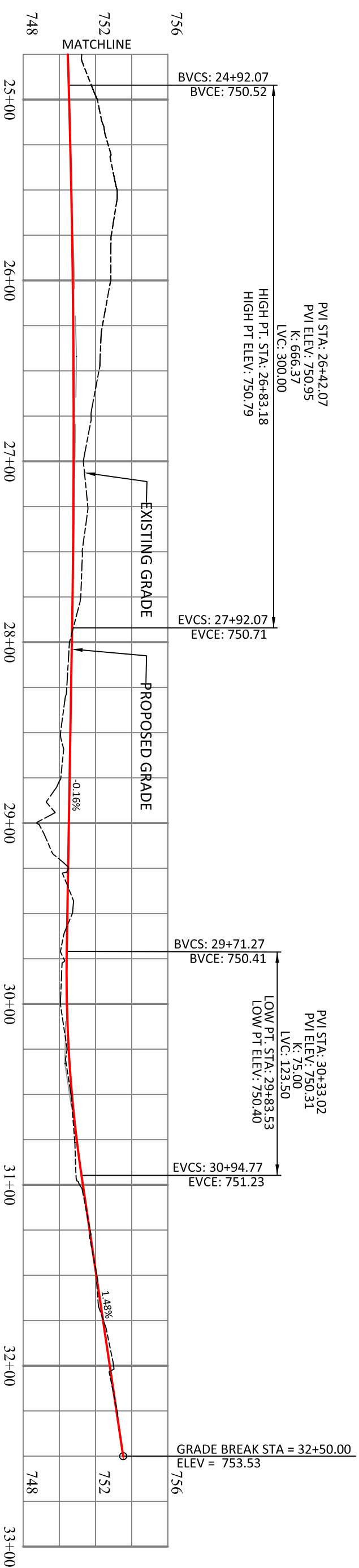
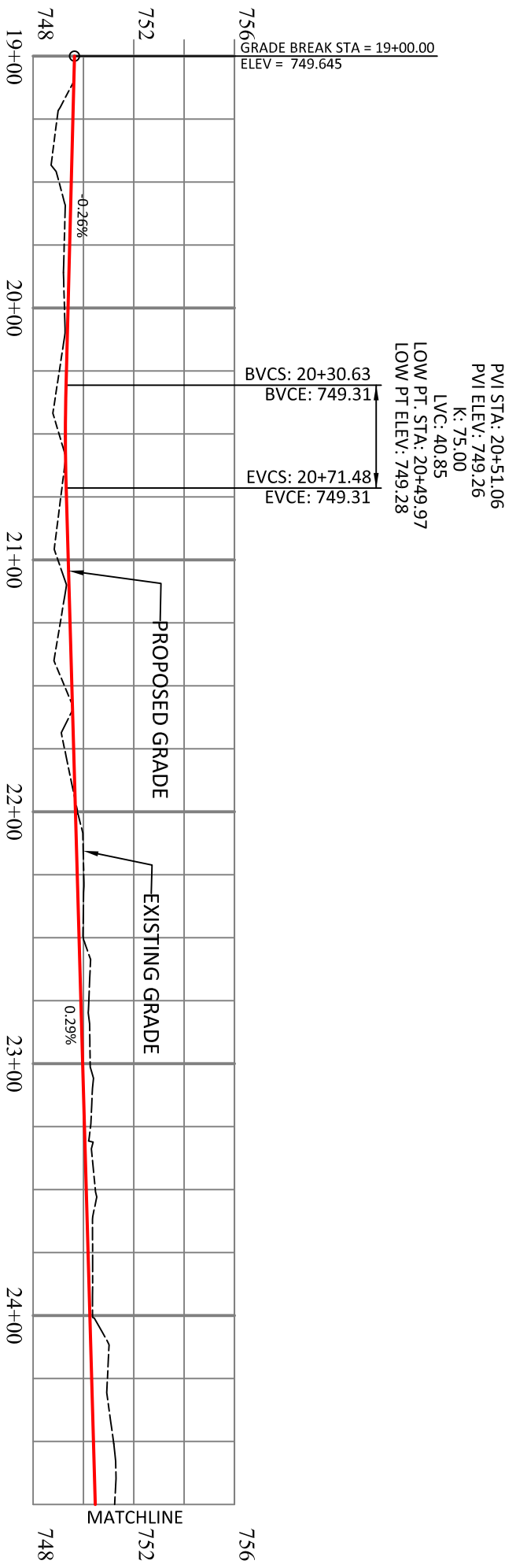
PLAN SHEET

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ROBINSON ROAD ROAD PROFILE

STATION 19+00 to 32+50 FOR INFORMATIONAL PURPOSES ONLY NO SCALE

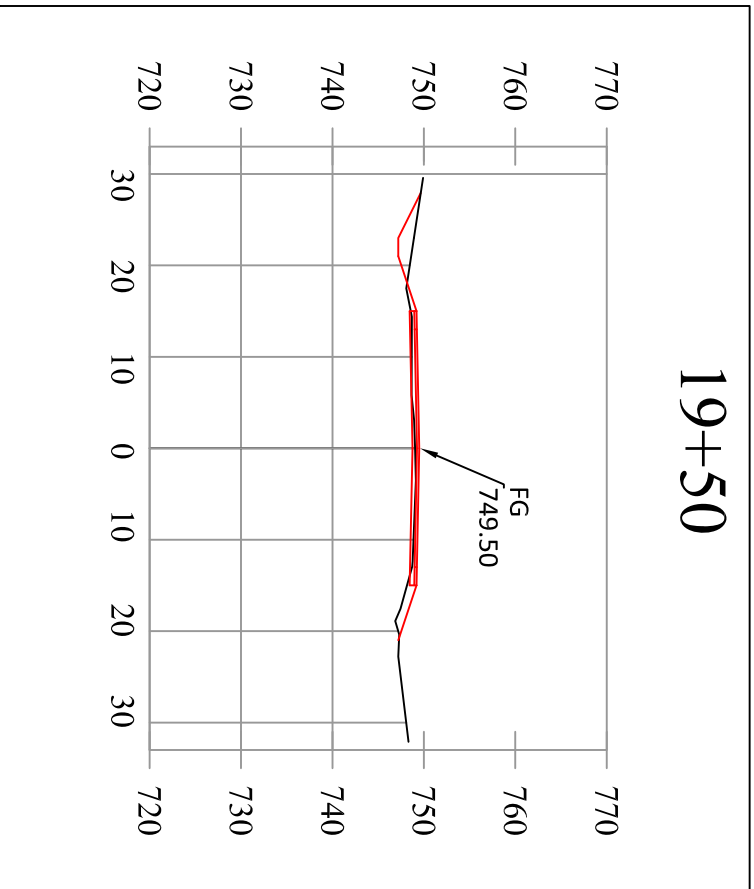
ROBINSON ROAD PROFILE

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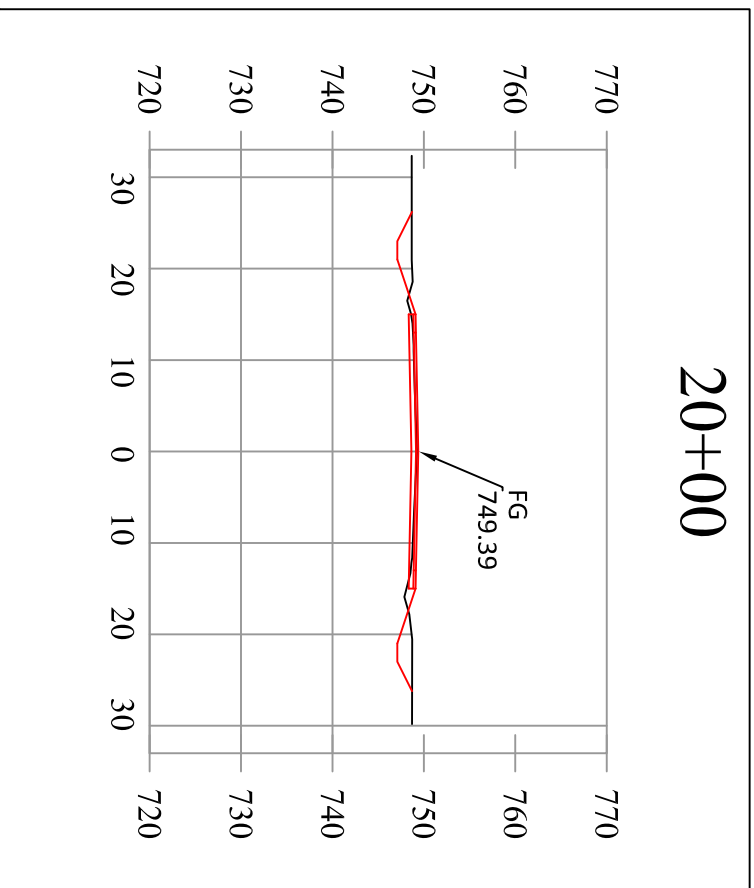
ROBINSON ROAD

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03/11/24

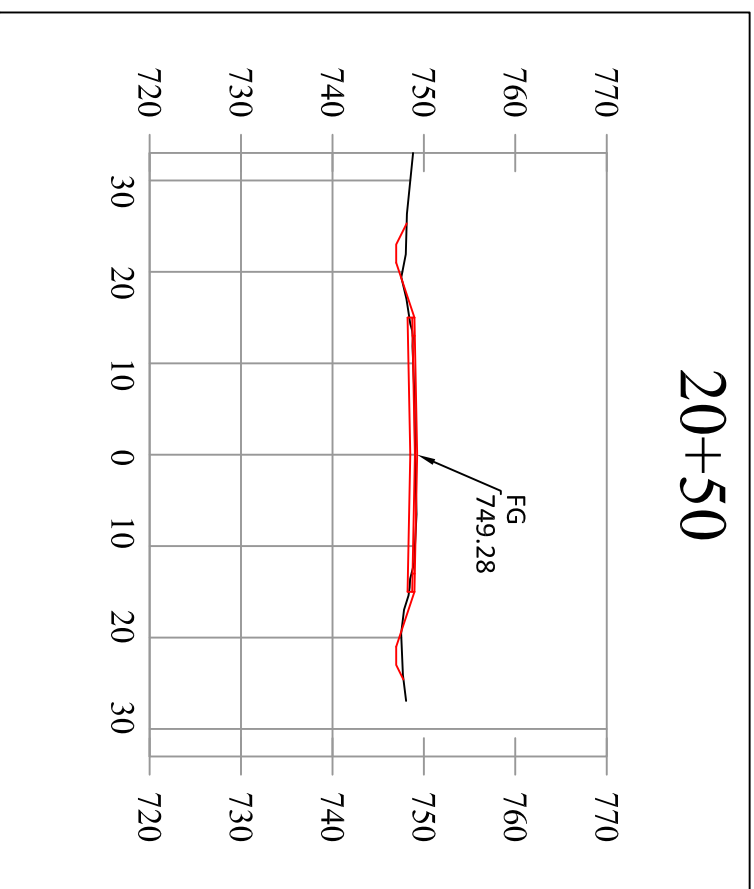
SHEET
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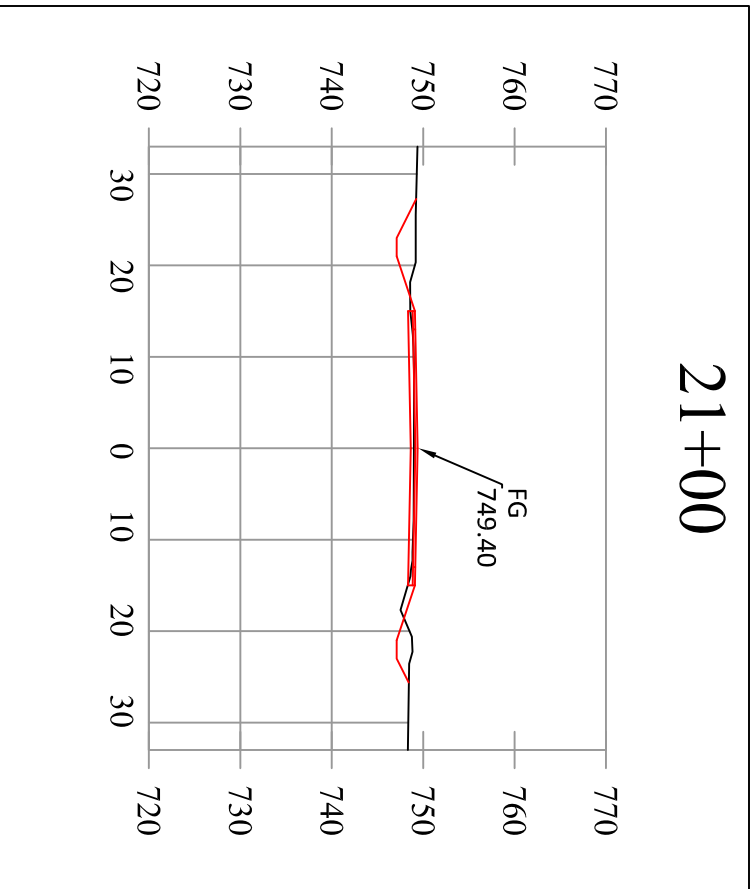
19+50



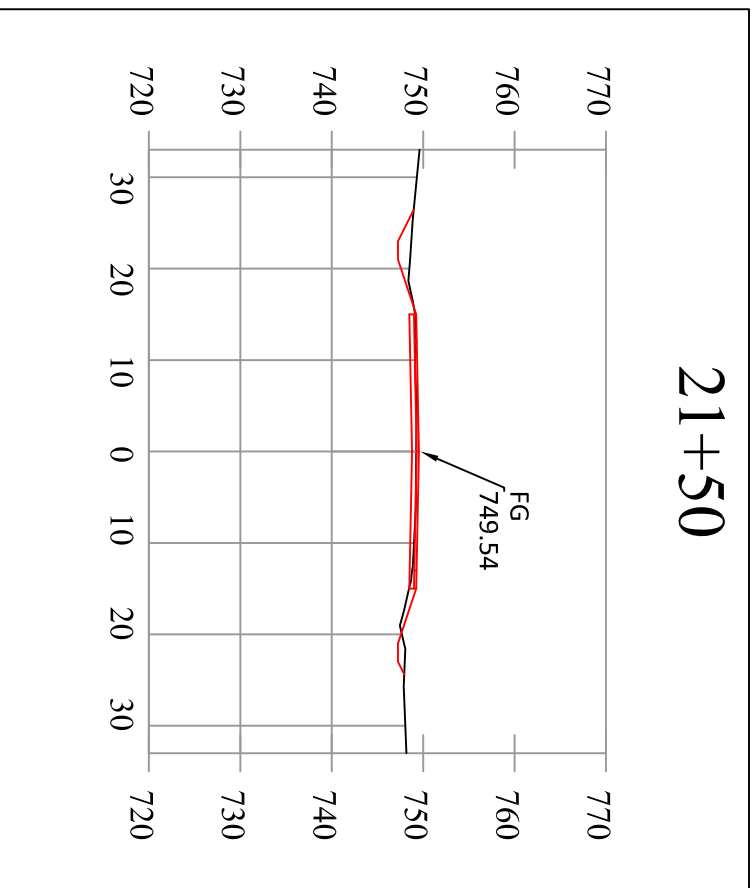
20+00



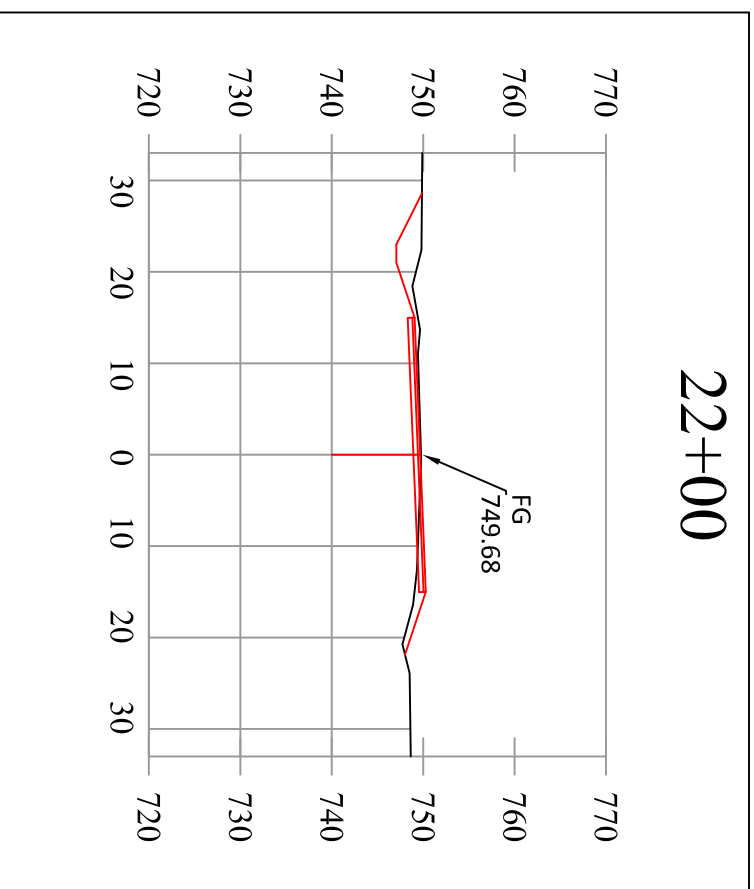
20+50



21+00



21+50



22+00

ROBINSON ROAD ROAD CROSS SECTIONS

STATION 19+50 to 32+50

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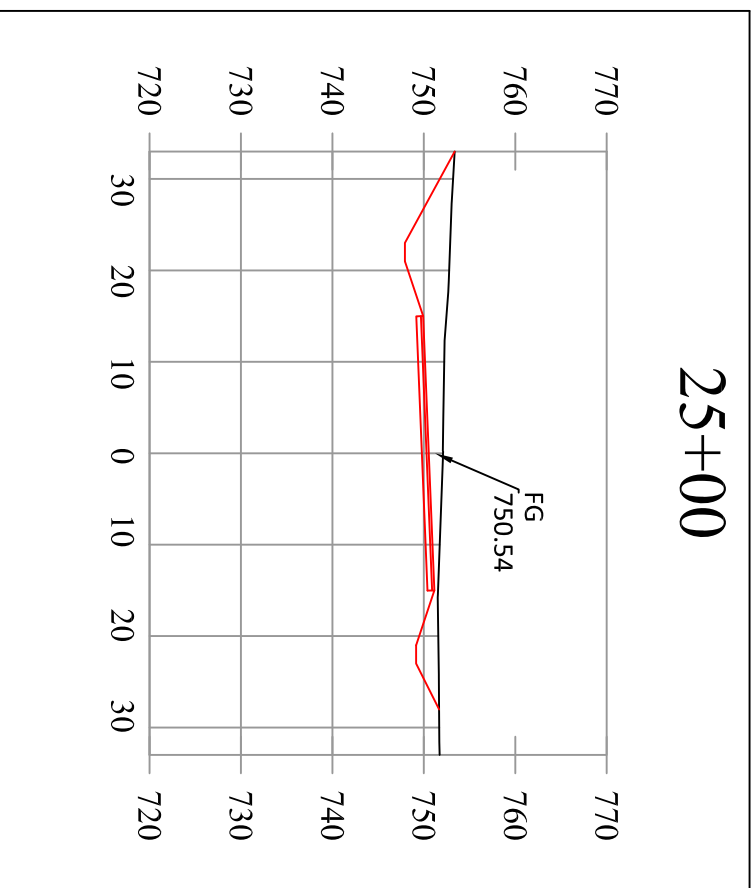
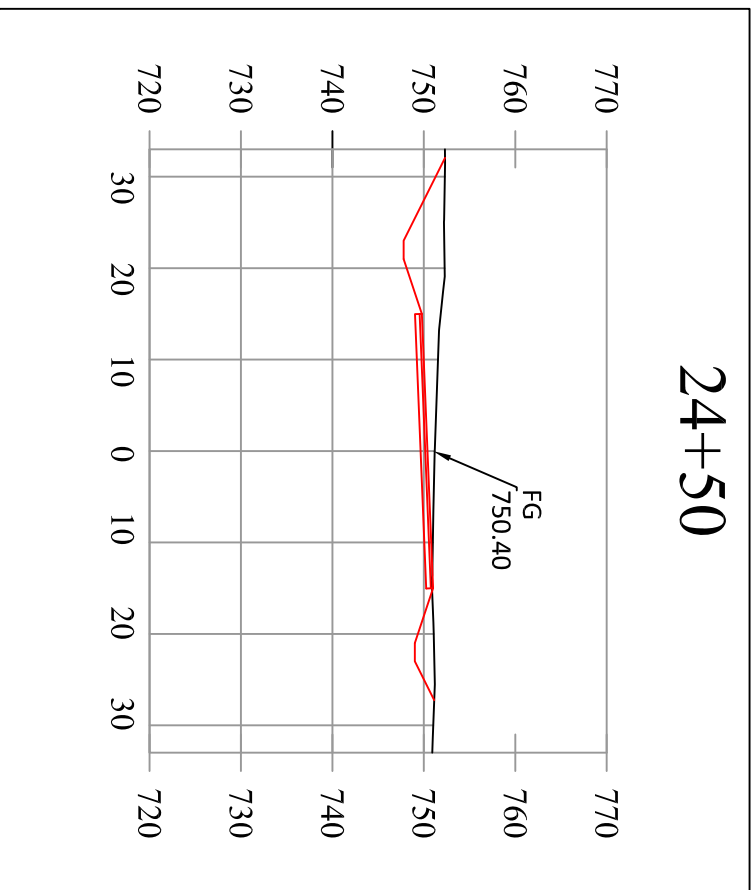
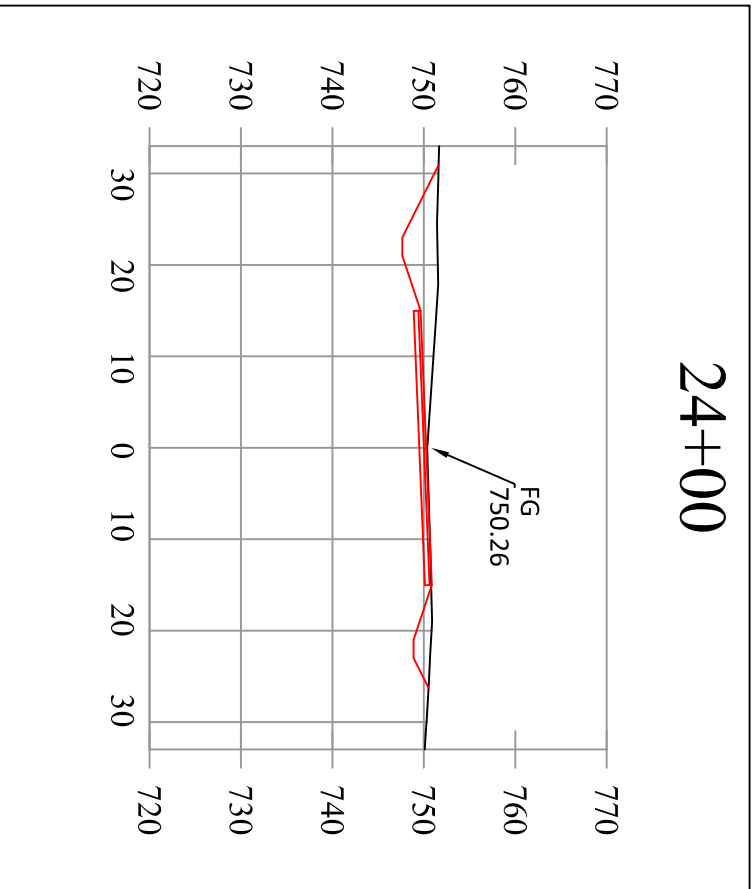
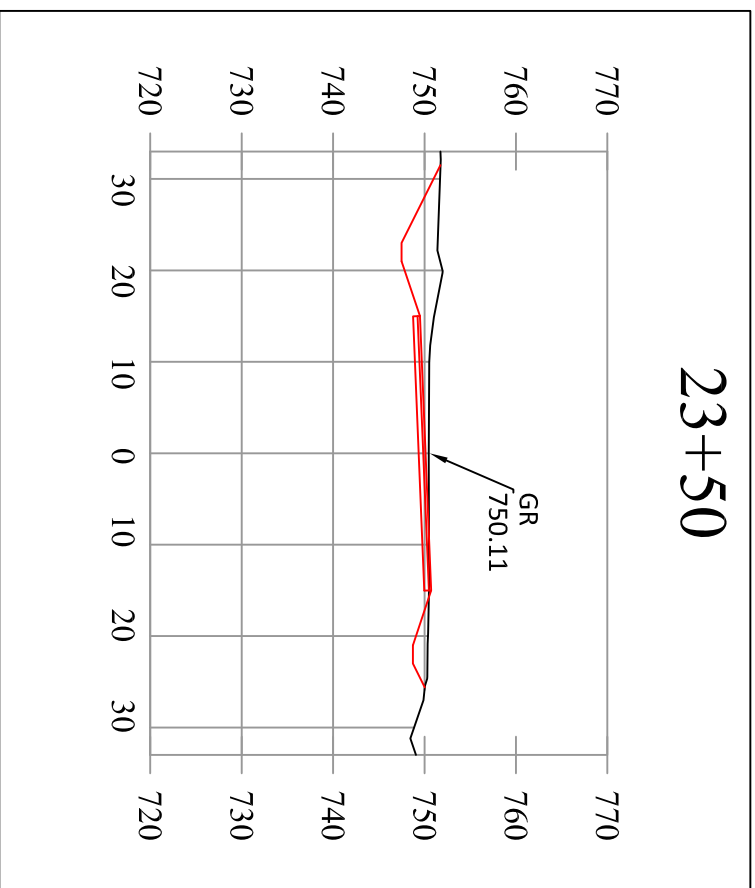
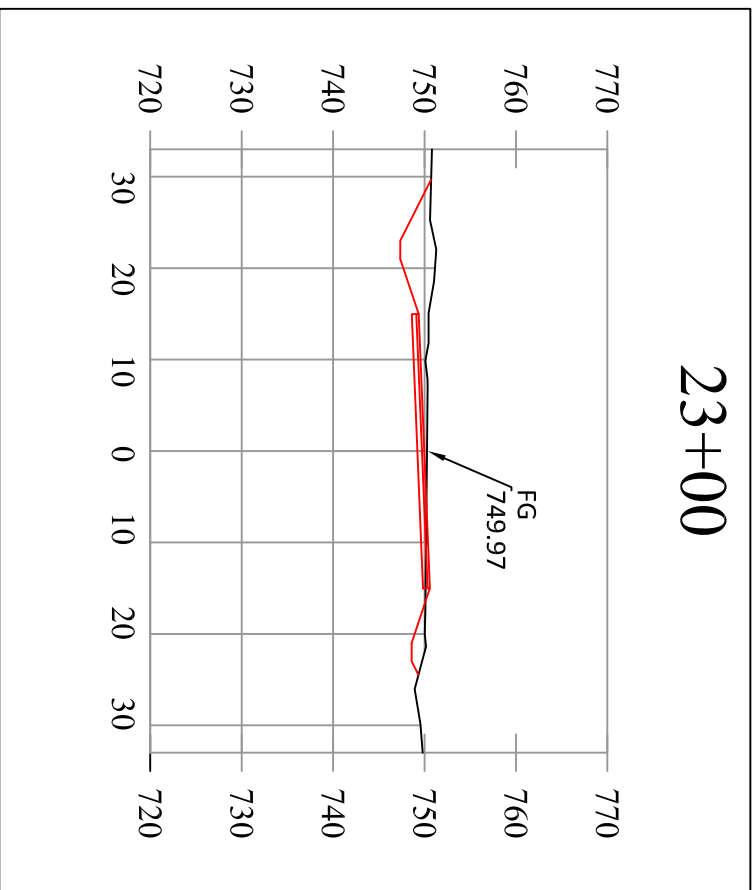
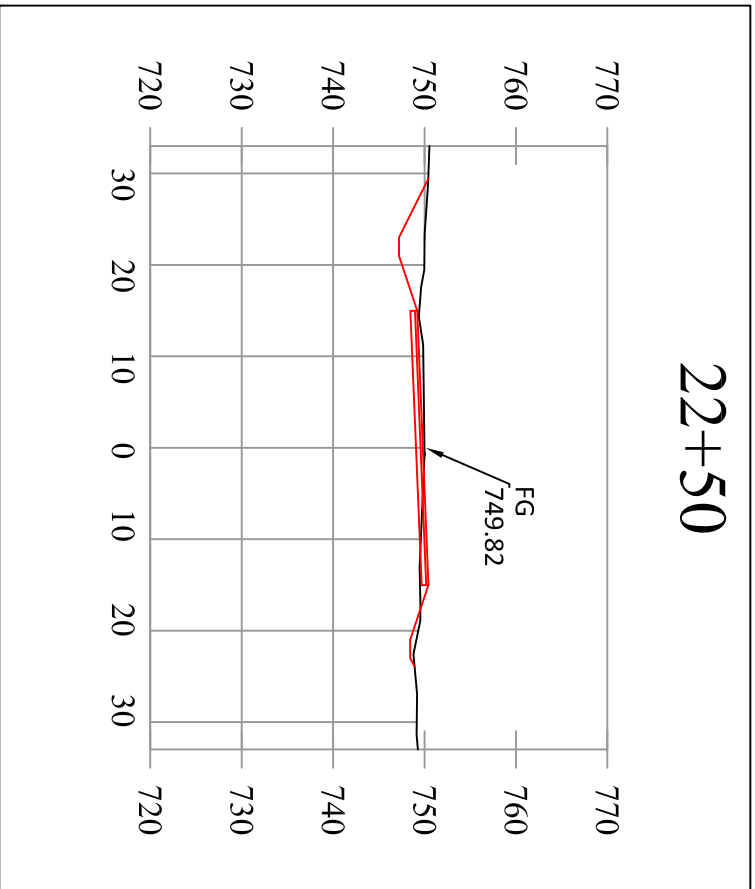
ROBINSON ROAD

ROBINSON ROAD EARTHWORK

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ROBINSON ROAD ROAD CROSS SECTIONS

STATION 19+50 to 32+50

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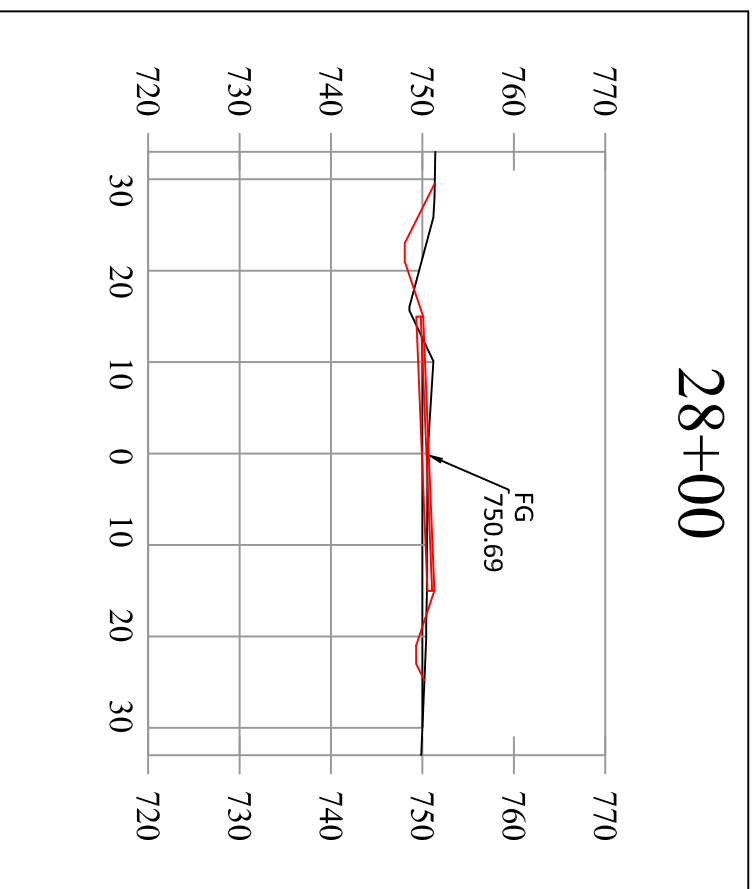
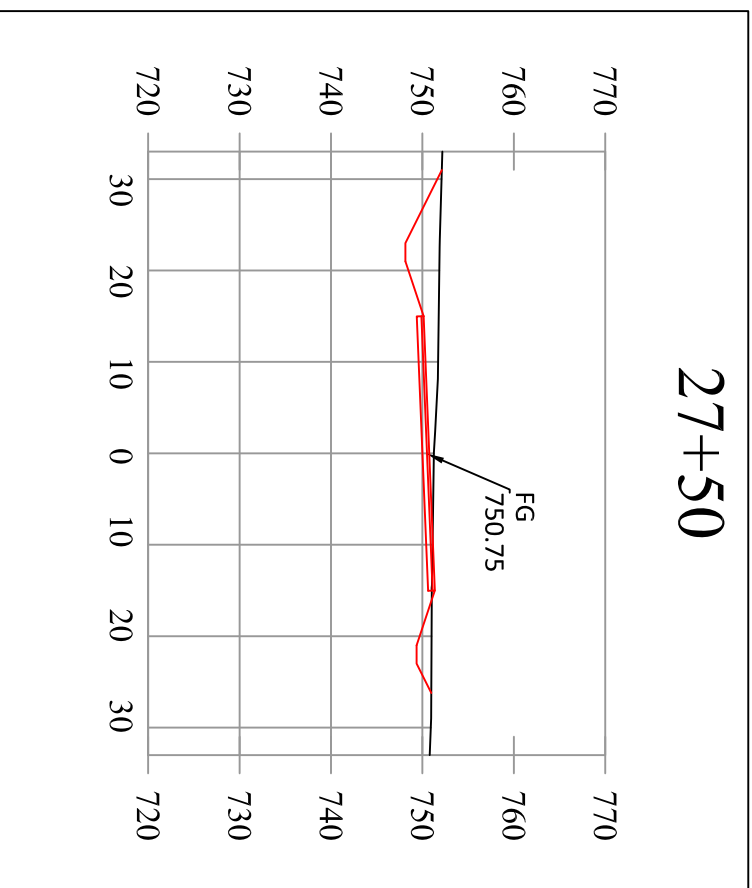
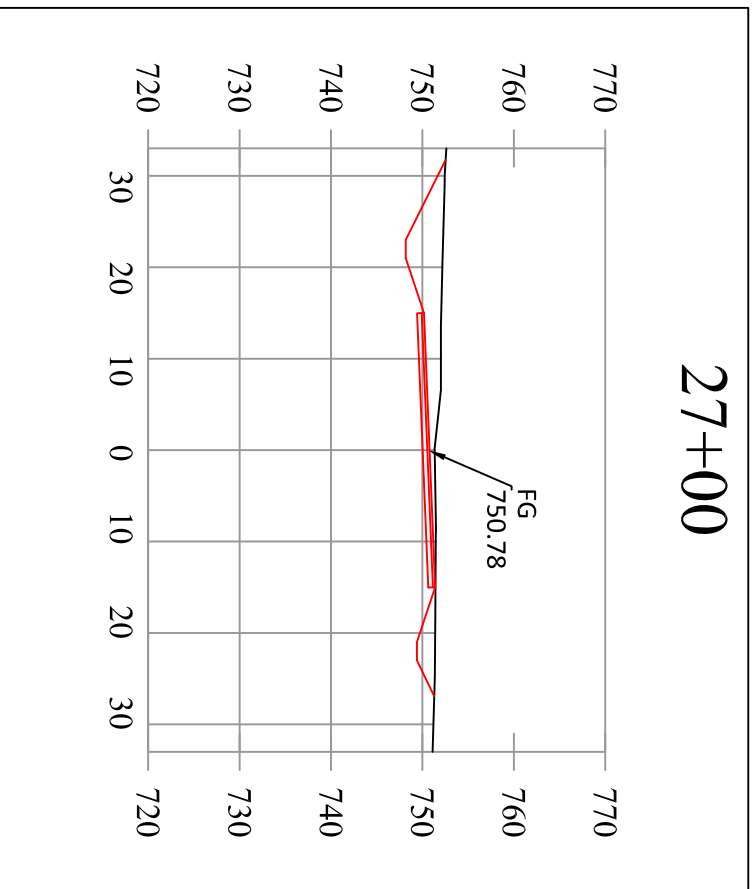
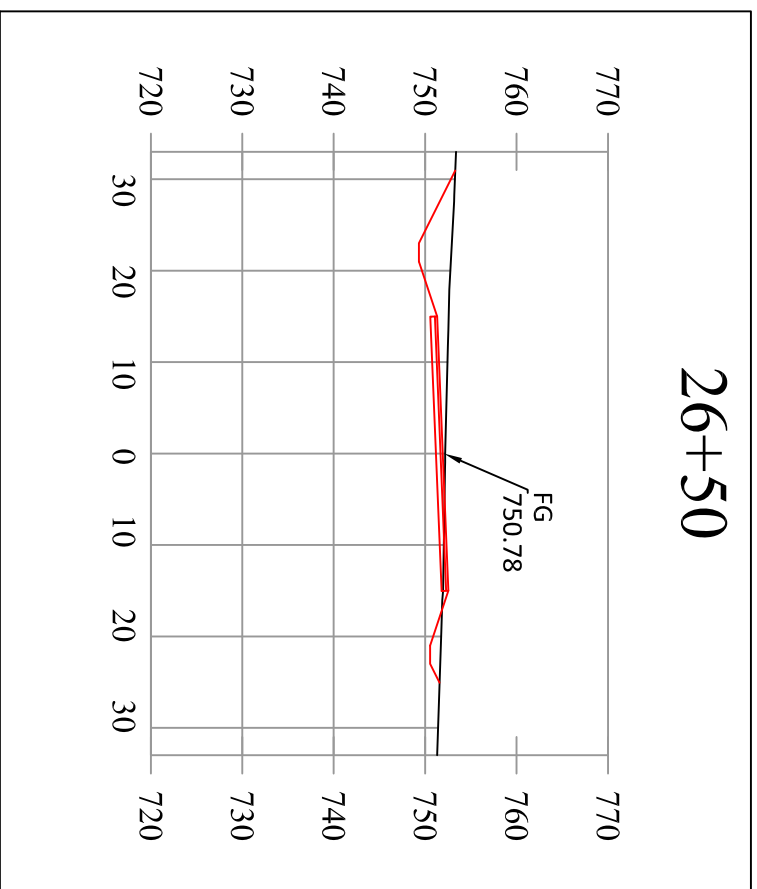
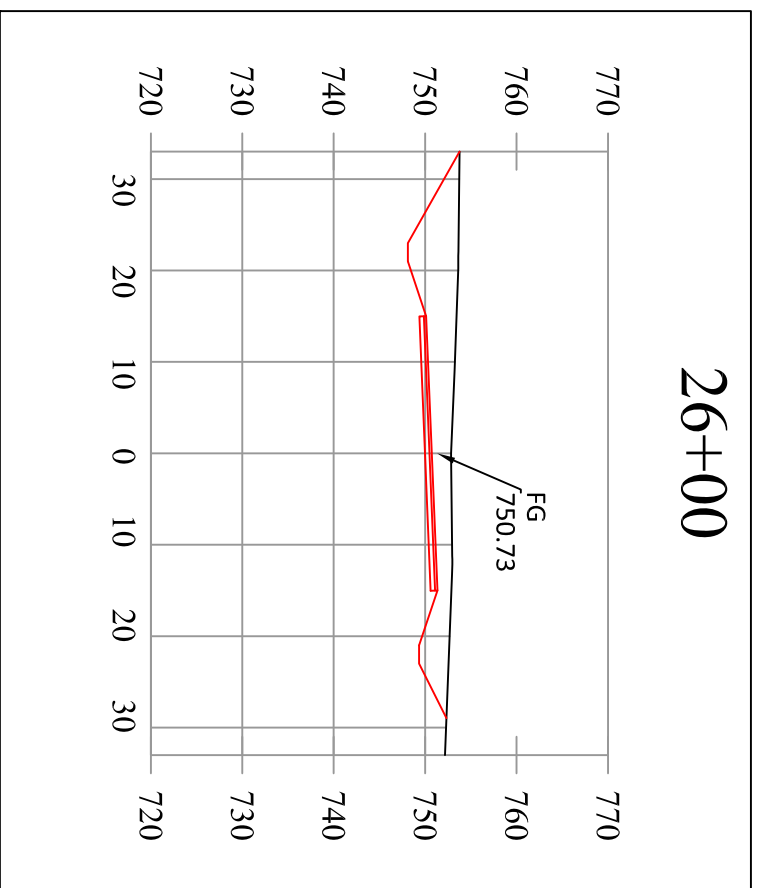
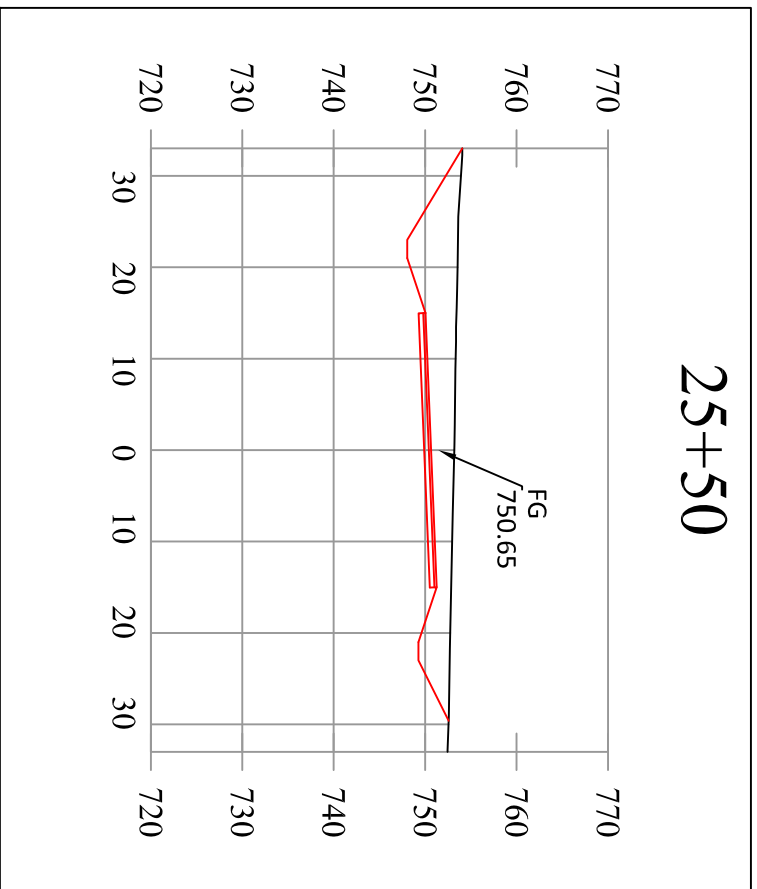
ROBINSON ROAD

ROBINSON ROAD EARTHWORK

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ROBINSON ROAD ROAD CROSS SECTIONS

STATION 19+50 to 32+50

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NO SCALE

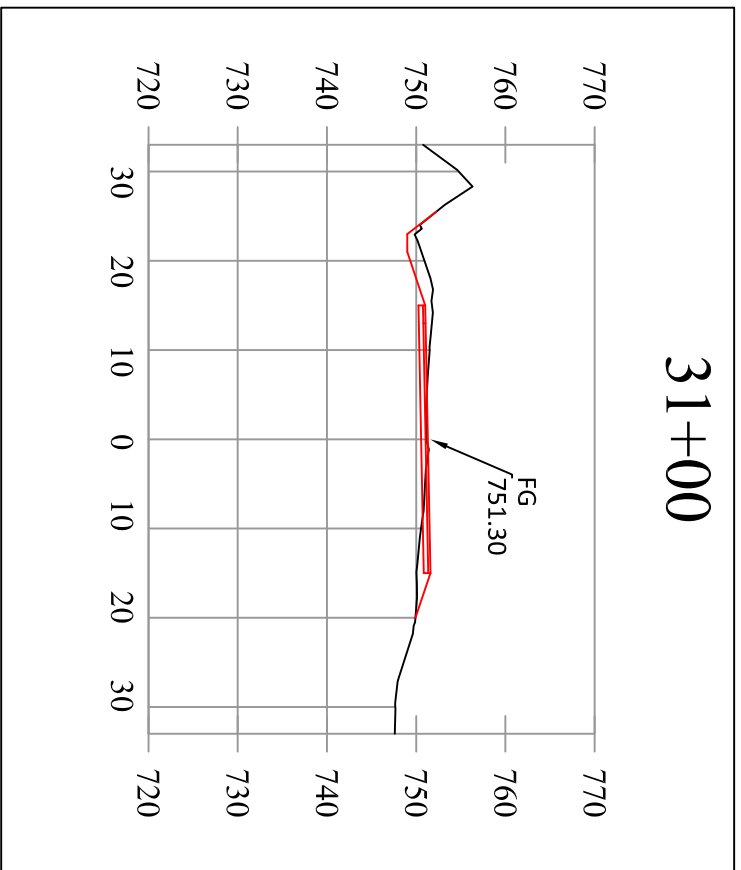
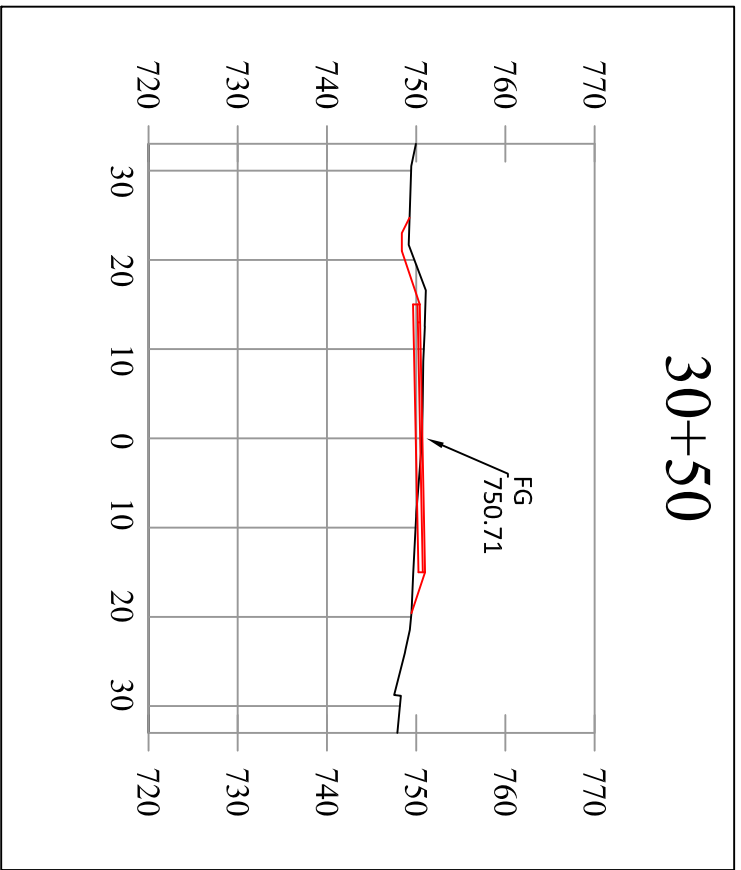
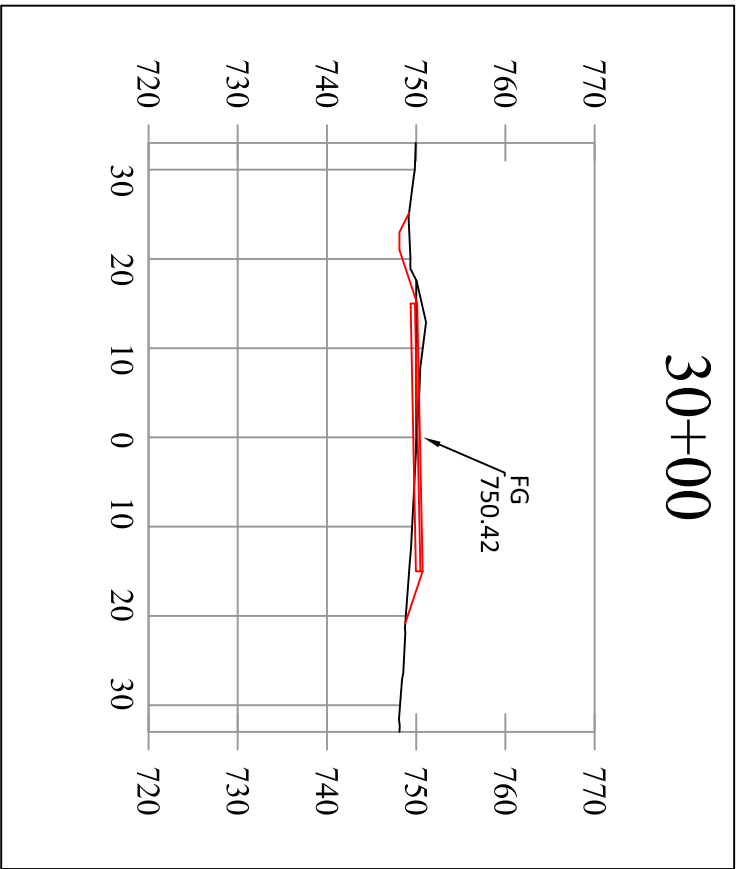
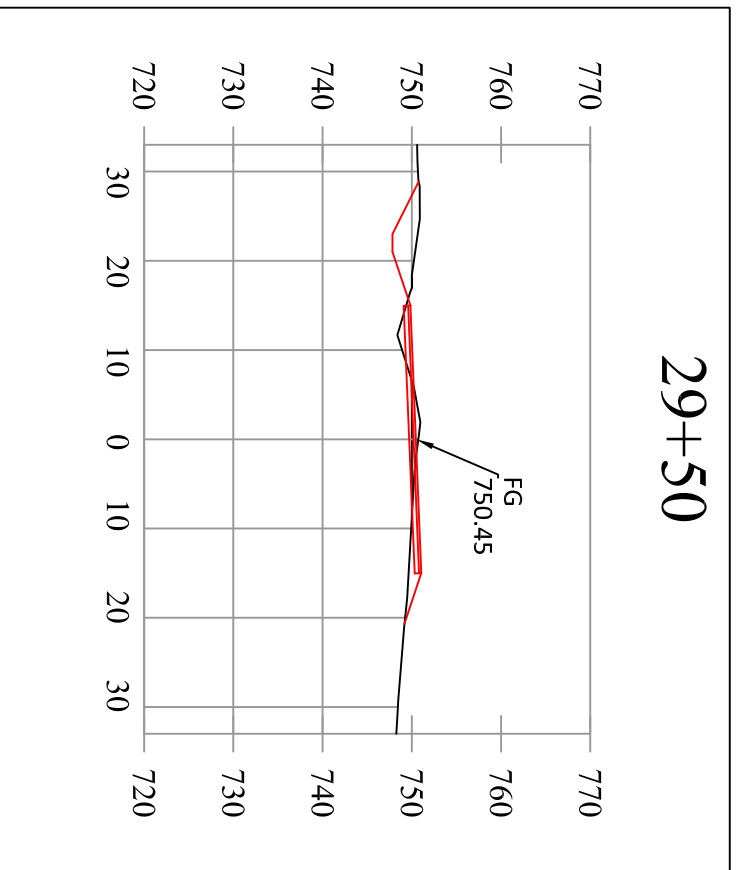
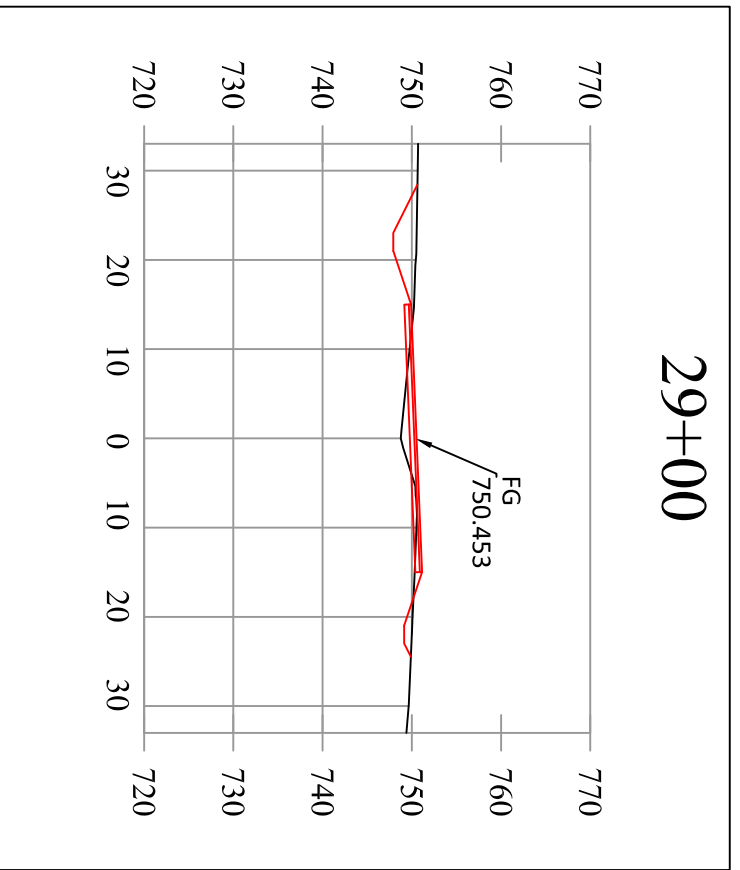
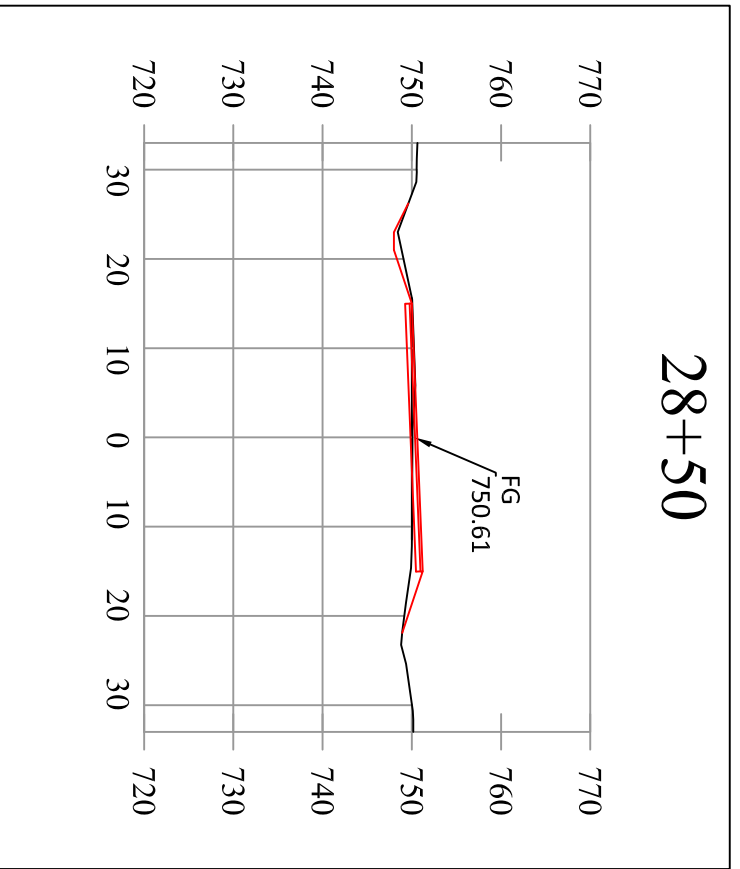
ROBINSON ROAD

ROBINSON ROAD EARTHWORK

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ROBINSON ROAD ROAD CROSS SECTIONS

STATION 19+50 to 32+50

FOR INFORMATIONAL PURPOSES ONLY

NO SCALE

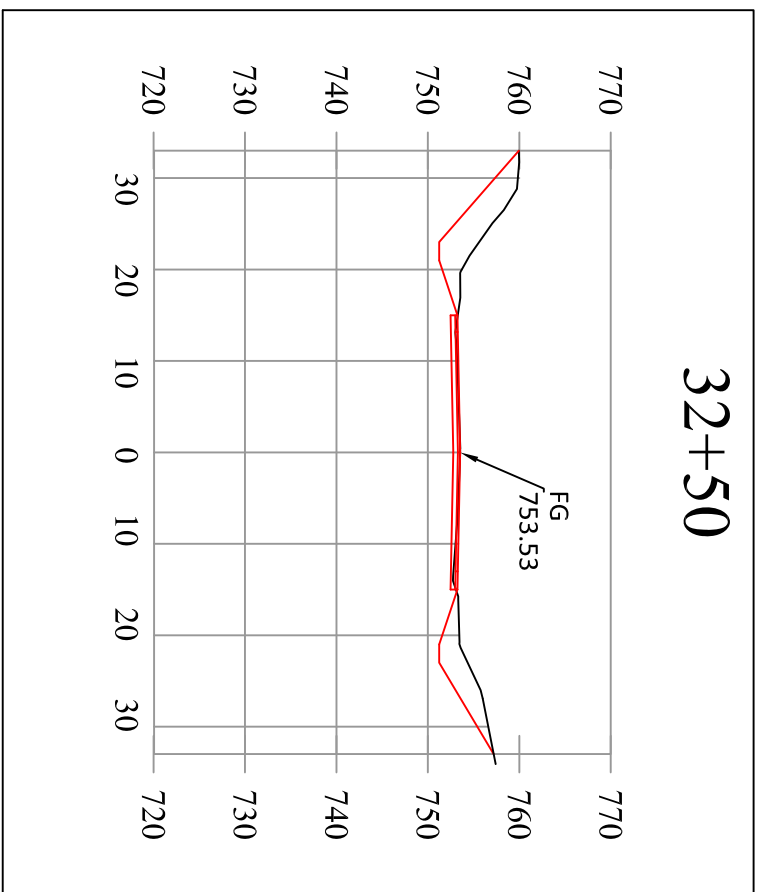
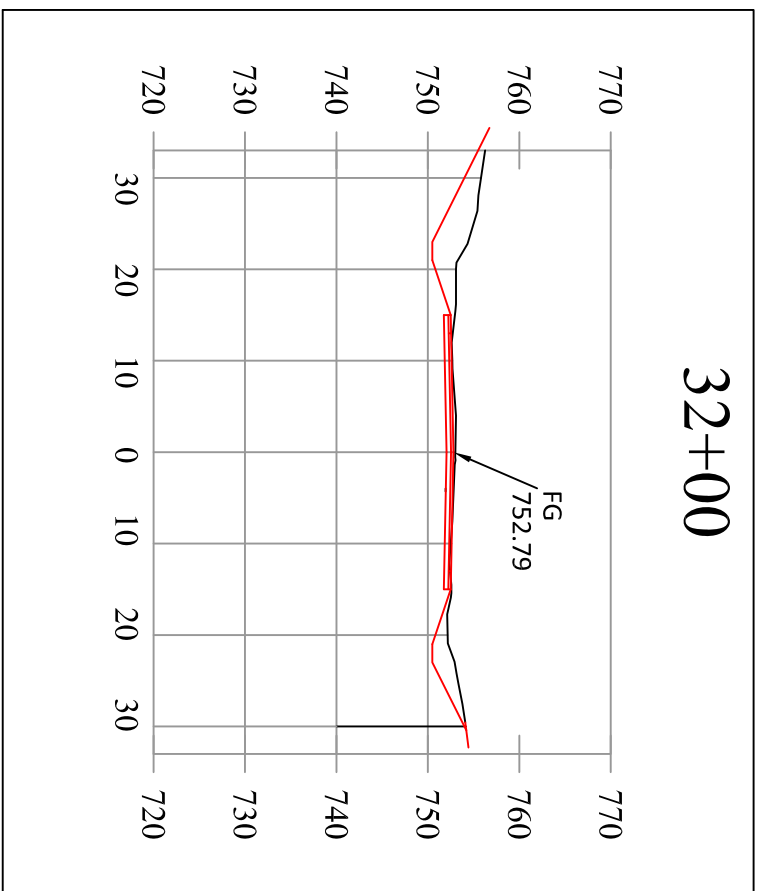
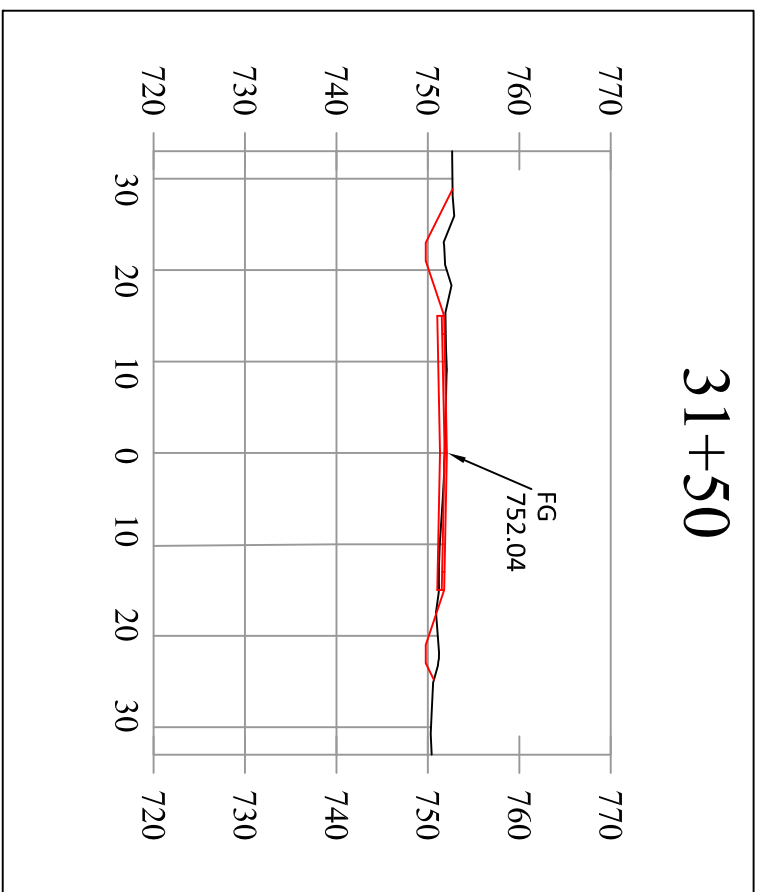
ROBINSON ROAD

ROBINSON ROAD EARTHWORK

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ROBINSON ROAD ROAD CROSS SECTIONS

STATION 19+50 to 32+50

FOR INFORMATIONAL PURPOSES ONLY

NO SCALE

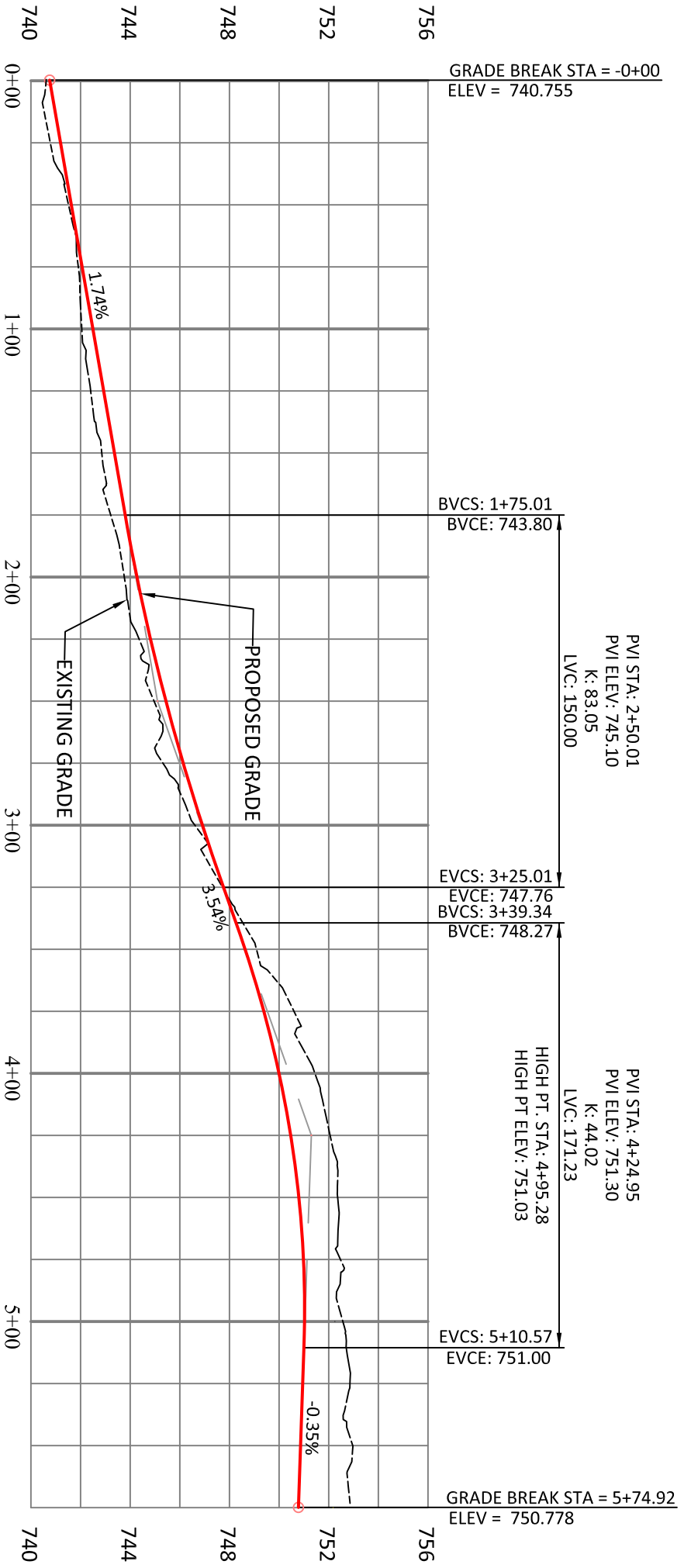
ROBINSON ROAD

ROBINSON ROAD EARTHWORK

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LARKS LAKE ROAD PROFILE

STATION 0+00 to 5+74 FOR INFORMATIONAL PURPOSES ONLY NO SCALE

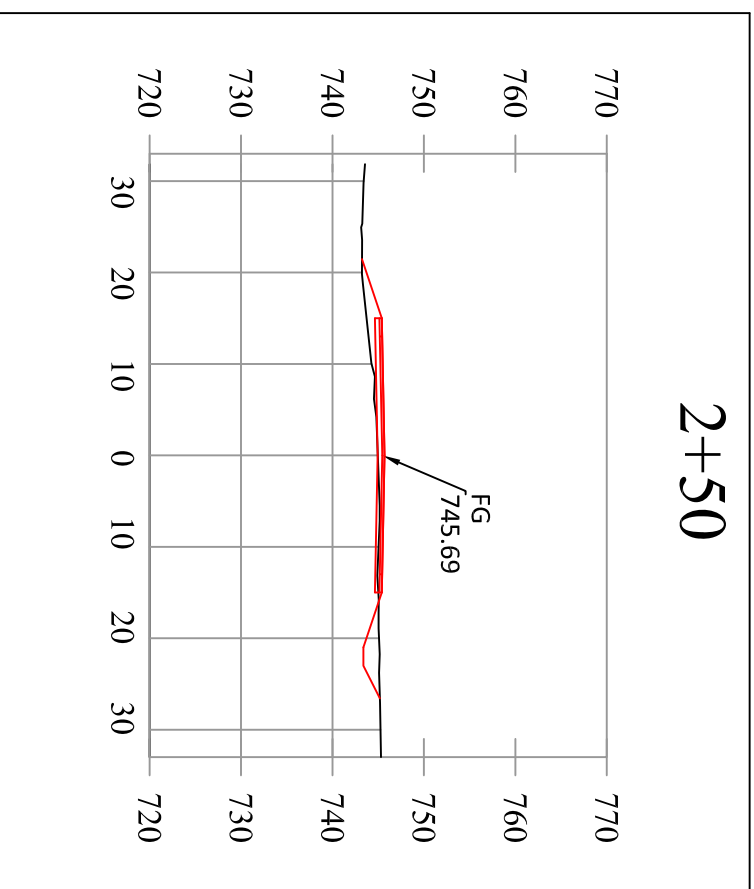
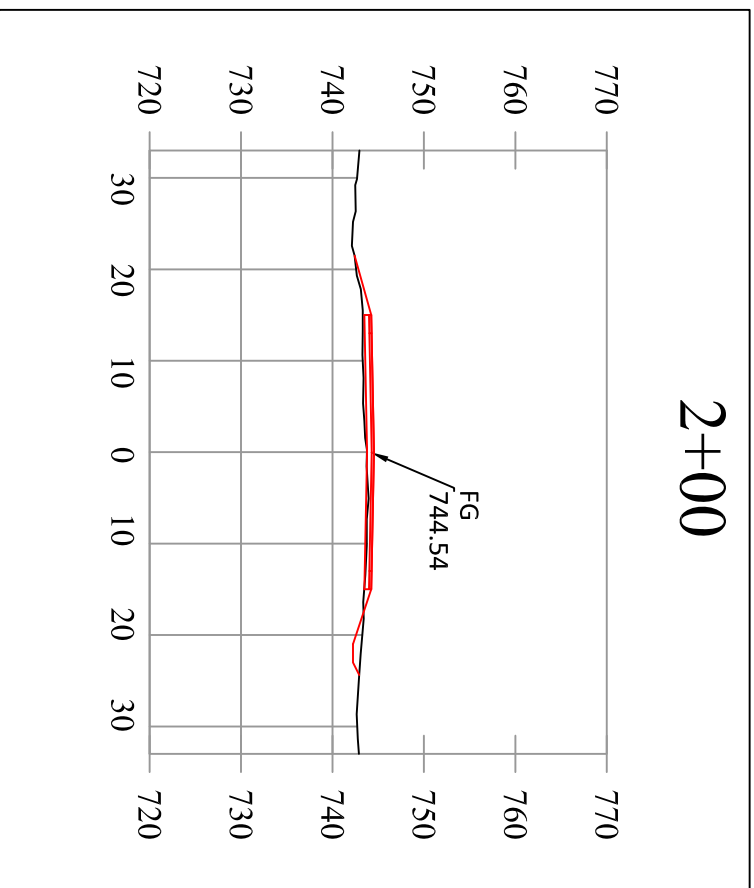
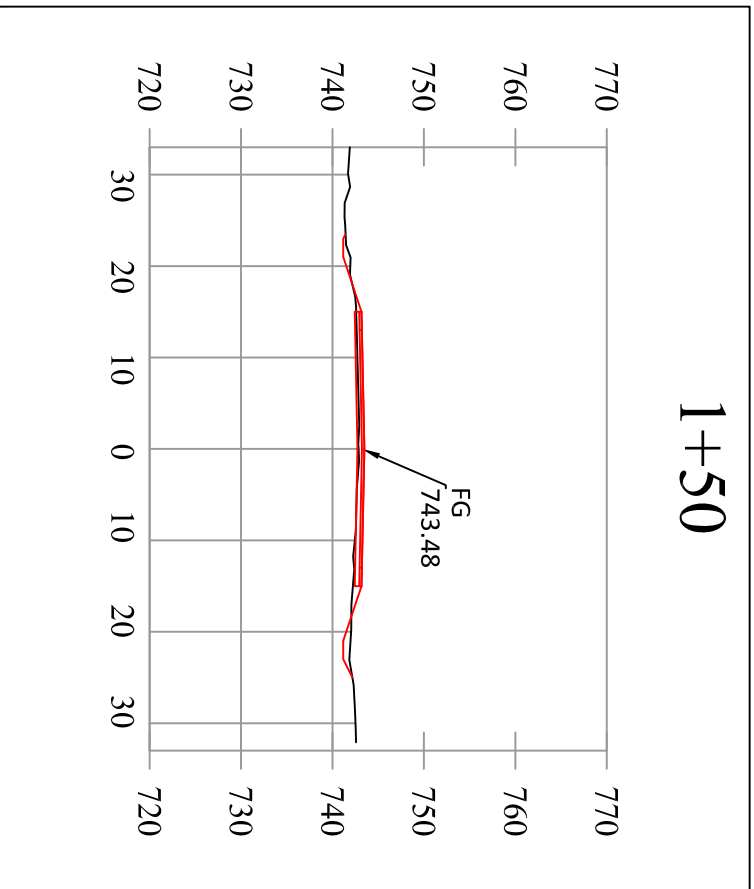
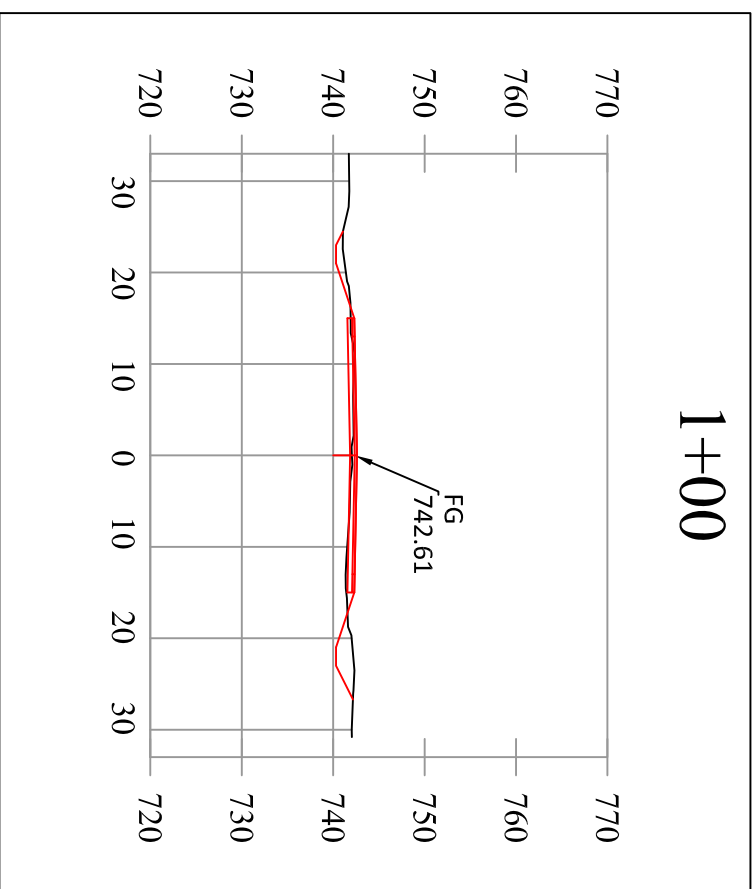
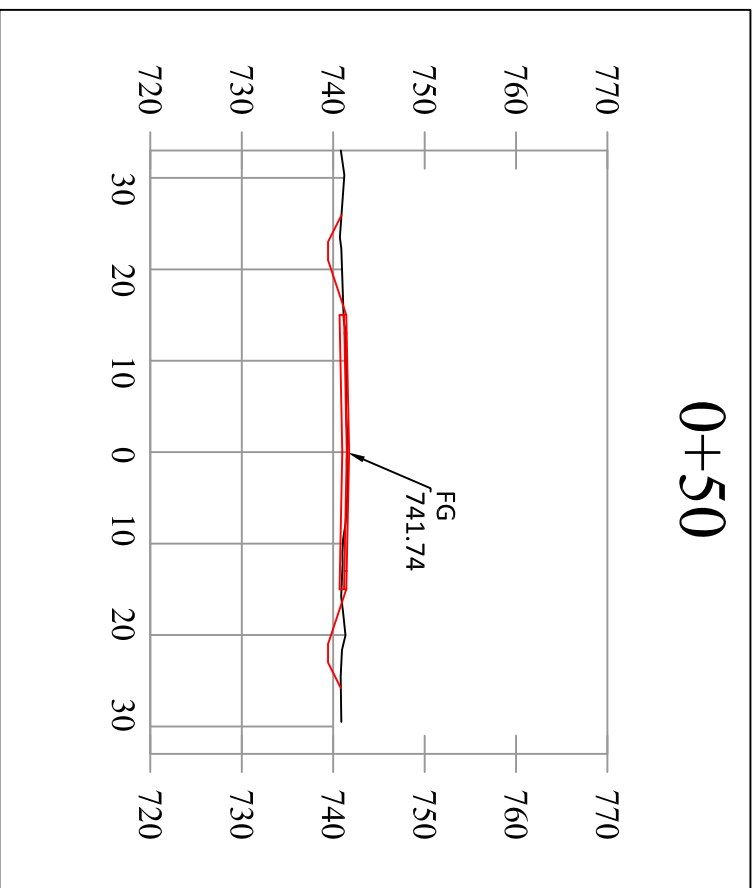
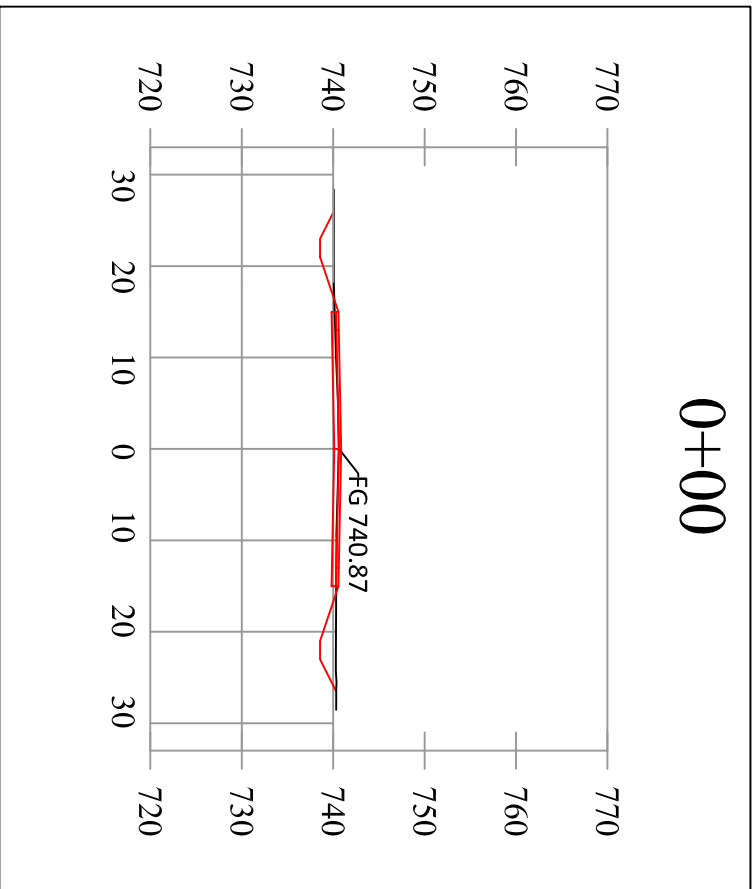
LARKS LAKE ROAD PROFILE

EMMET COUNTY ROAD COMMISSION
 2265 E HATHAWAY ROAD · HARBOR SPRINGS, MI 49740 · (231) 347-8142

ROBINSON ROAD

DATE:
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16
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LARKS LAKE ROAD ROAD CROSS SECTIONS

STATION 0+00 to 5+74

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NO SCALE

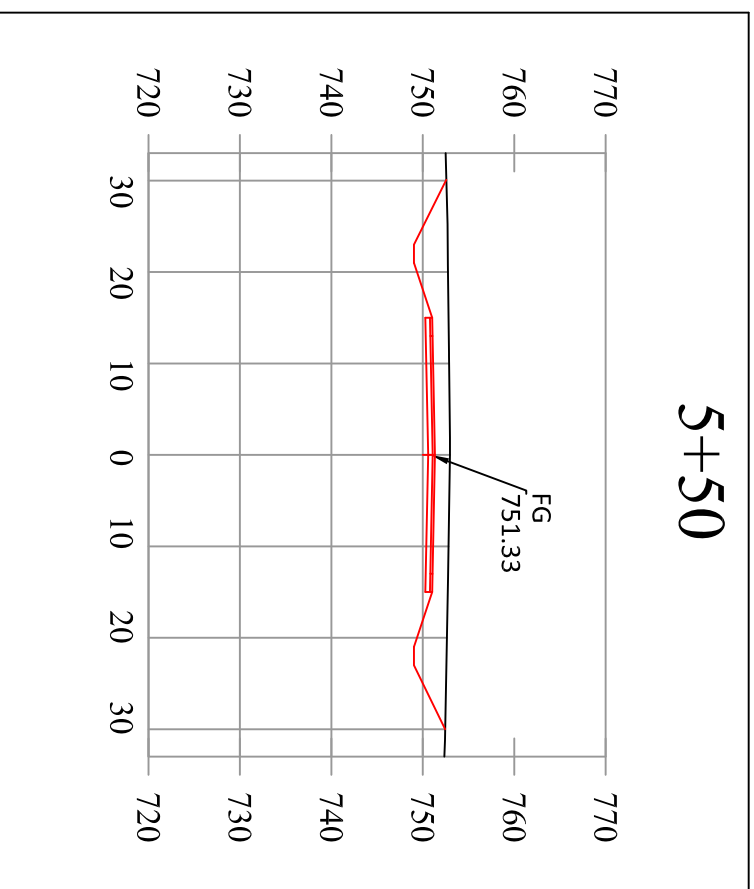
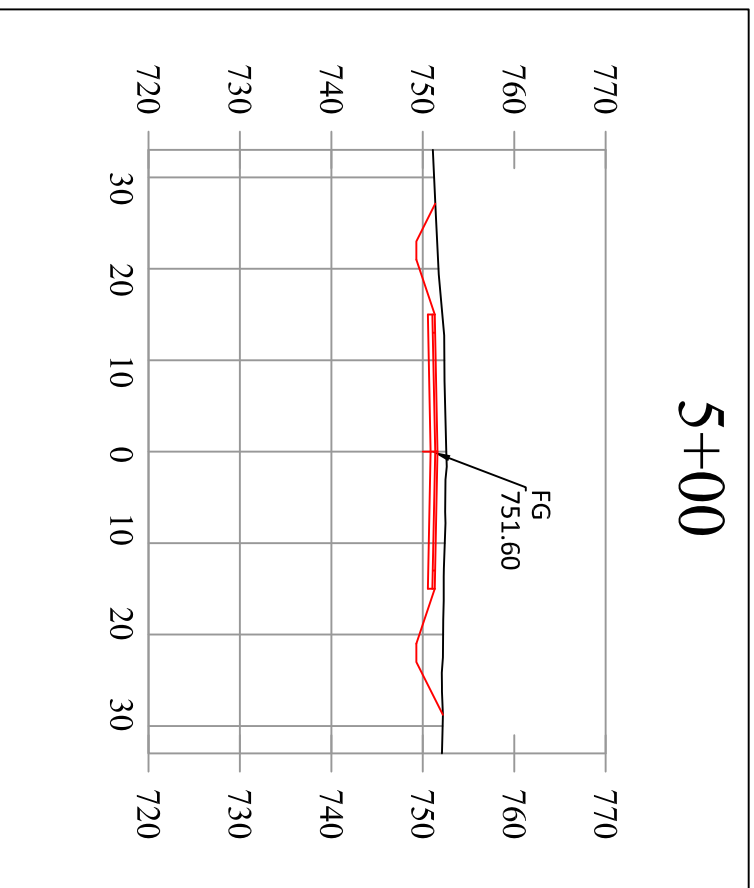
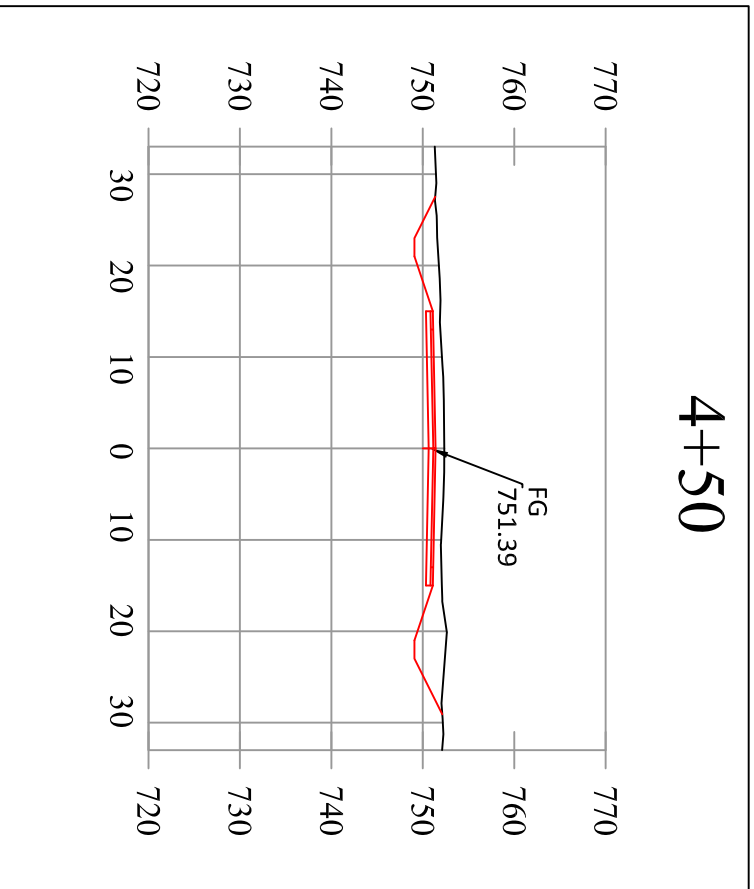
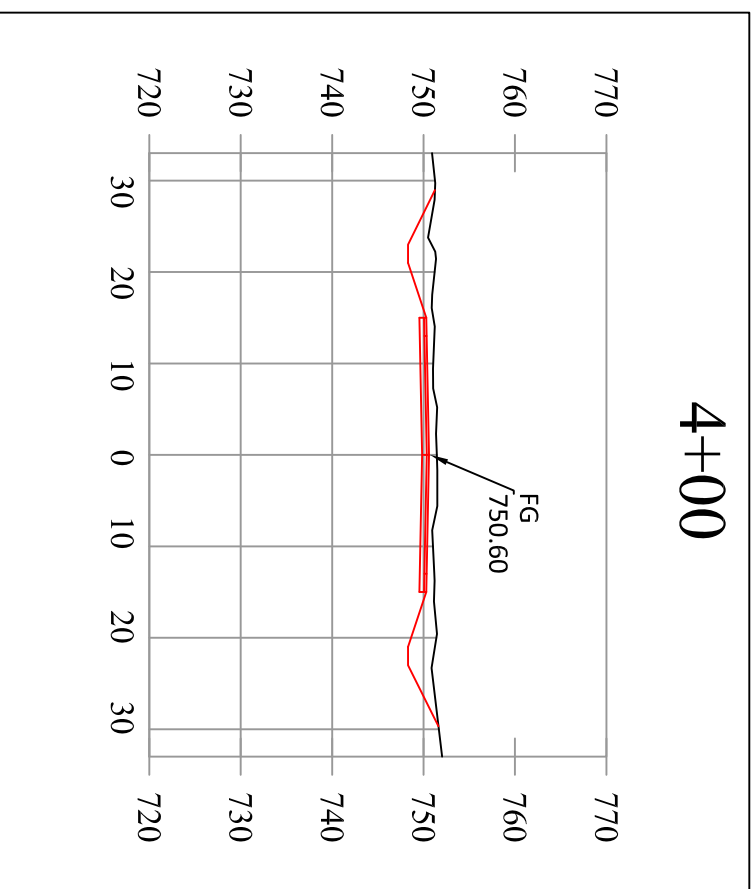
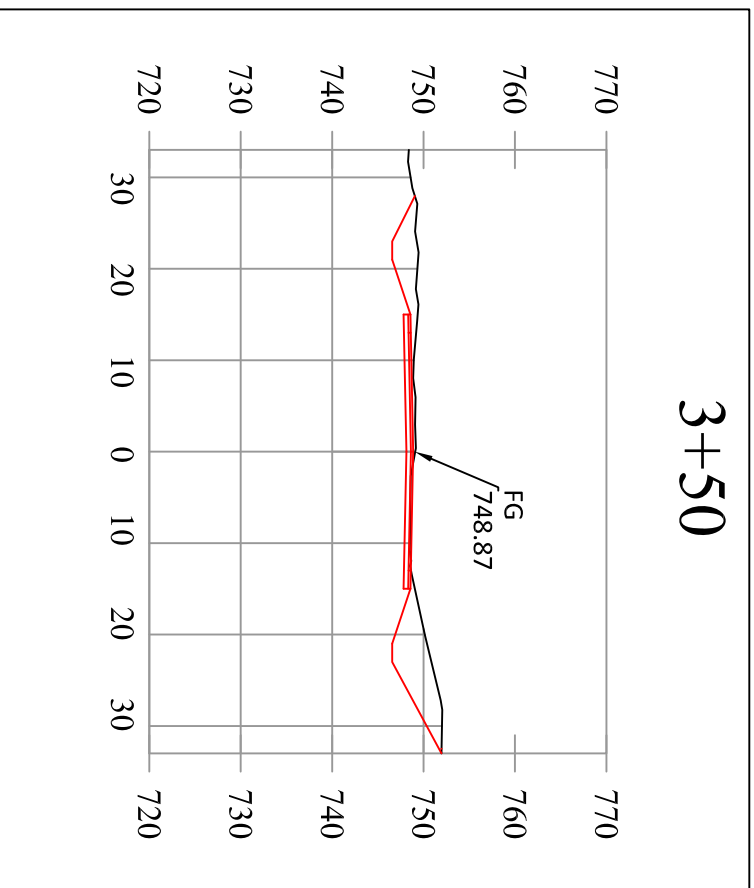
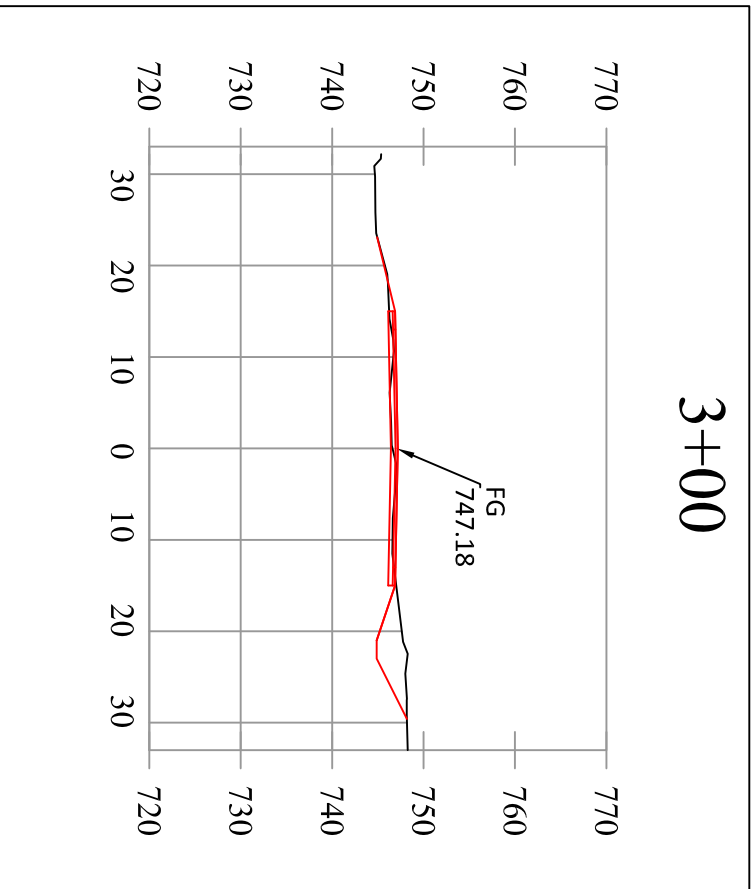
ROBINSON ROAD

LARKS LAKE ROAD EARTHWORK

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LARKS LAKE ROAD ROAD CROSS SECTIONS

STATION 0+00 to 5+74

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LARKS LAKE ROAD EARTHWORK

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