

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-12-C-0005
CONTRACTOR: ALASKA MARINE EXCAVATION
CITY: ANCHORAGE STATE: ALASKA

Recommended: _____ Approved: _____
PRIME CONTRACTOR: _____ RESIDENT ENGINEER: _____

NOTES

- HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, IN US SURVEY FEET, NAD 27, HOLDING SBC "NINIL 2" AS N 2,215,900.33, E 196,050.77 AND USACE SBC "B-2" AS N 2,215,393.19, E 195,713.32.
- VERTICAL CONTROL IS IN US SURVEY FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0), HOLDING NOAA BENCHMARK "945 5653 E" (LEAD ROD) AT 29.45.
- SOUNDINGS ARE IN US SURVEY FEET AND ARE NEGATIVE UNLESS OTHERWISE INDICATED.
- THIS DRAWING IS INDICATIVE OF CONDITIONS AT THE TIME OF SURVEY.
- THIS BATHYMETRIC POST DREDGE SURVEY WAS CONDUCTED ON APRIL 30, 2016 BY HUGHES & ASSOCIATES, WASILLA, AK. SOUNDINGS WERE COLLECTED USING AN RESON NAVISOUND 210 PRECISION DEPTH SOUNDING WITH A 200KHZ, 3-DEGREE BEAM-WIDTH TRANSDUCER. SOUNDER CALIBRATION WAS PERFORMED USING A DIGIBAR PRO SOUND VELOCITY PROBE. POSITIONING AND TIDES WERE PROVIDED IN REAL TIME USING A TRIMBLE RB RTK GPS RECEIVER OPERATING ON KINEMATIC CORRECTIONS BROADCAST FROM A TRIMBLE RB RTK BASE RECEIVER SET AT CONTROL STATION "NINIL 2". VESSEL NAVIGATION, DATA COLLECTION AND PROCESSING WERE PERFORMED USING HYPACK 2015 INTEGRATED SOFTWARE.
- TOPOGRAPHIC DATA WAS COLLECTED ON APRIL 25 & 30, 2016 USING A TRIMBLE RB RTK GPS RECEIVER OPERATING ON KINEMATIC CORRECTIONS BROADCAST FROM A TRIMBLE RB RTK BASE RECEIVER SET AT "NINIL 2".

PROJECT LIMITS					
CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	2,215,626.07	196,134.54	9A	2,215,873.46	196,197.50
2	2,215,671.45	196,081.67	10	2,216,061.02	195,599.98
3	2,215,369.31	195,822.37	10A	2,216,263.59	195,786.65
4	2,215,304.48	195,897.91	11A	2,216,227.33	195,752.22
5	2,215,292.03	195,925.05	11	2,216,024.80	195,965.51
6	2,215,321.04	195,938.36	12A	2,215,837.20	196,163.07
7	2,215,593.66	196,172.31	12	2,215,802.77	196,199.33
8	2,215,656.00	196,241.00	13	2,215,693.03	196,207.40
9	2,215,839.03	196,233.76			

CONTROL DATA					
STATION	NORTHING	EASTING	ELEV.	DESCRIPTION	
B-1	2,215,770.21	196,041.98	32.23	USACE SBC 1979	
B-2	2,215,393.19	195,713.32	32.33	USACE SBC 1979	
DEEP	2,203,353.41	188,093.31	-	USC & GS SBC 1964	
GB-1	2,216,021.69	195,866.98	8.17	-	
HAYNES	2,209,664.61	191,151.17	199.29	USC & GS SBC 1979	
N. END	2,216,807.77	196,909.70	26.11	1980	
S. END	2,211,878.85	193,593.93	25.83	1980	
NINIL 1	2,215,300.78	195,860.20	26.29	3" SBC IN CONC. DECK OF DOCK	
EL-1	2,214,656.65	195,349.30	29.57	USACE SBC IN HOR. CONC. SHELF	
DL	2,215,165.15	196,319.88	-	REBAR W/ ALCAP "DL 1998"	
LEAD ROD	2,215,838.87	196,114.88	29.45	LEAD/STEEL ROD IN ROCK	
NINIL 2	2,215,900.33	196,050.77	28.28	2" SBC IN ROCK	

HARBOR VOLUME COMPUTATIONS	
VOLUME REMOVED TO PROJECT DEPTH (+2')	4,589 cy
VOLUME REMOVED BETWEEN P.D. (+2') AND MAX-PAY DEPTH (+1')	1,210 cy
VOLUME REMOVED TO SIDE-SLOPES	886 cy
TOTAL REMOVED IN HARBOR	6,685 cy

ENTRANCE CHANNEL VOLUME COMPUTATIONS	
VOLUME REMOVED TO PROJECT DEPTH (+8')	1,747 cy
VOLUME REMOVED BETWEEN P.D. (+8') AND MAX-PAY DEPTH (+7')	897 cy
VOLUME REMOVED TO SIDE-SLOPES	520 cy
TOTAL REMOVED IN ENTRANCE CHANNEL	3,164 cy

OVERDREDGE VOLUME COMPUTATIONS	
OVERDREDGE VOLUME REMOVED BELOW HARBOR MPD (+1.0 MLLW)	250 cy
OVERDREDGE VOLUME REMOVED BELOW CHANNEL MPD (+7.0 MLLW)	599 cy
TOTAL OVERDREDGE VOLUME REMOVED	849 cy

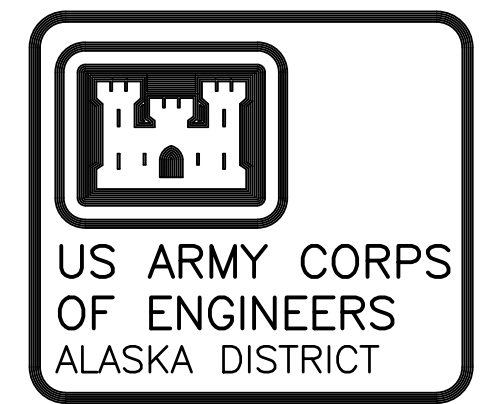
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 Drawn: BTH
 Reviewed: CSJ
 Submitted: [Blank]
 Checked: [Blank]

NINILCHIK, ALASKA
 NINILCHIK HARBOR
 POST DREDGE SURVEY
 APRIL 25 & 30, 2016



Reference number:

SURVEY



CONTRACT NO. W911KB-12-C-0005
 CONTRACTOR ALASKA MARINE EXCAVATION
 CITY ANCHORAGE STATE ALASKA
 Recommended: _____ Approved: _____
 PRIME CONTRACTOR RESIDENT ENGINEER

Symbol	Action	Description	Date	Appr'd

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 Drawn: BTH
 Reviewed: CSJ
 Submitted: _____
 Date: _____
 Desig: _____
 Proj: 2016 Nishik_Pot_Dredge
 Drawing #: _____
 Branch: _____
3363-16

U.S. ARMY ENGINEER DISTRICT
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA
 HUGHES & ASSOCIATES, INC.
 2970 COTTLE LOOP
 WASILLA, ALASKA

NINILCHIK, ALASKA
 NINILCHIK HARBOR
 POST DREDGE SURVEY
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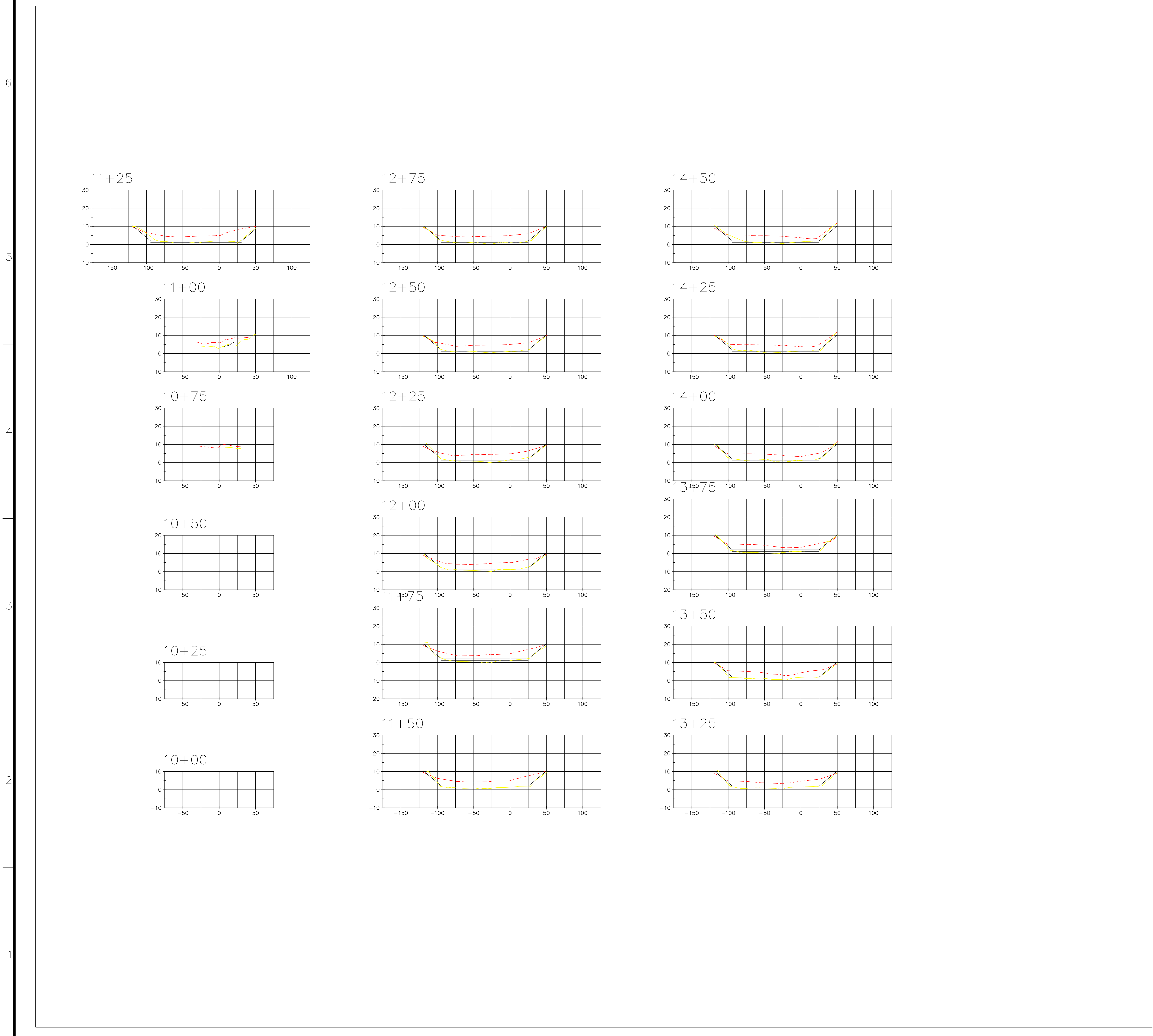
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 Sheet 2 of 4

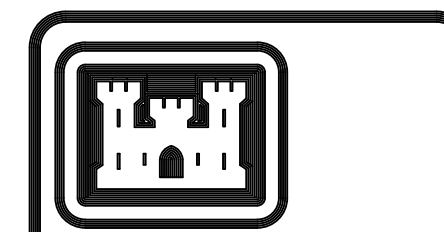
--- PRE-DREDGE SURVEY
 APRIL 24, 2016
 --- POST-DREDGE SURVEY
 APRIL 25 & 30, 2016

SCALE
 HORIZONTAL: 1" = 50'
 VERTICAL: 1" = 20'



SURVEY





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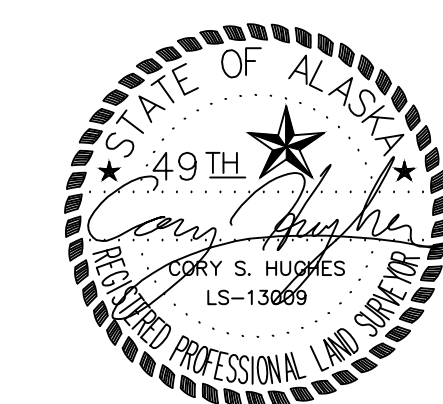
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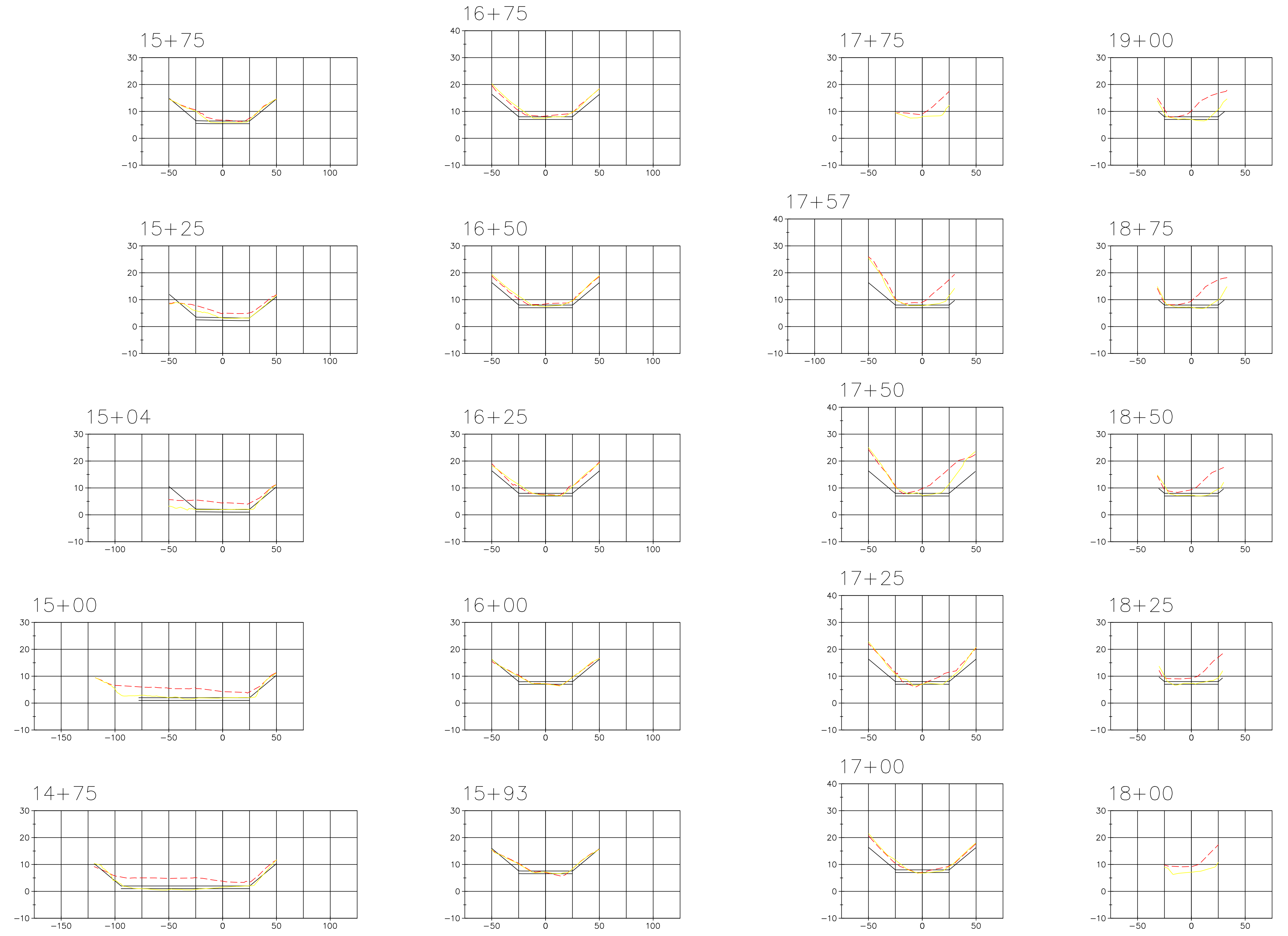
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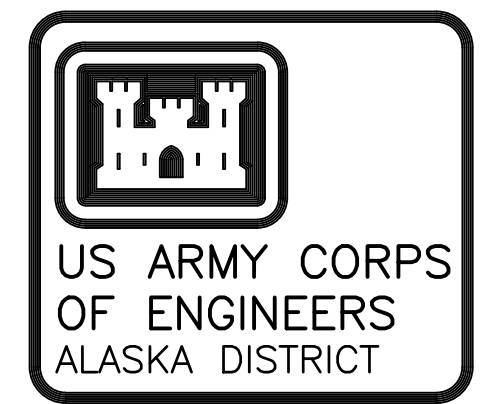
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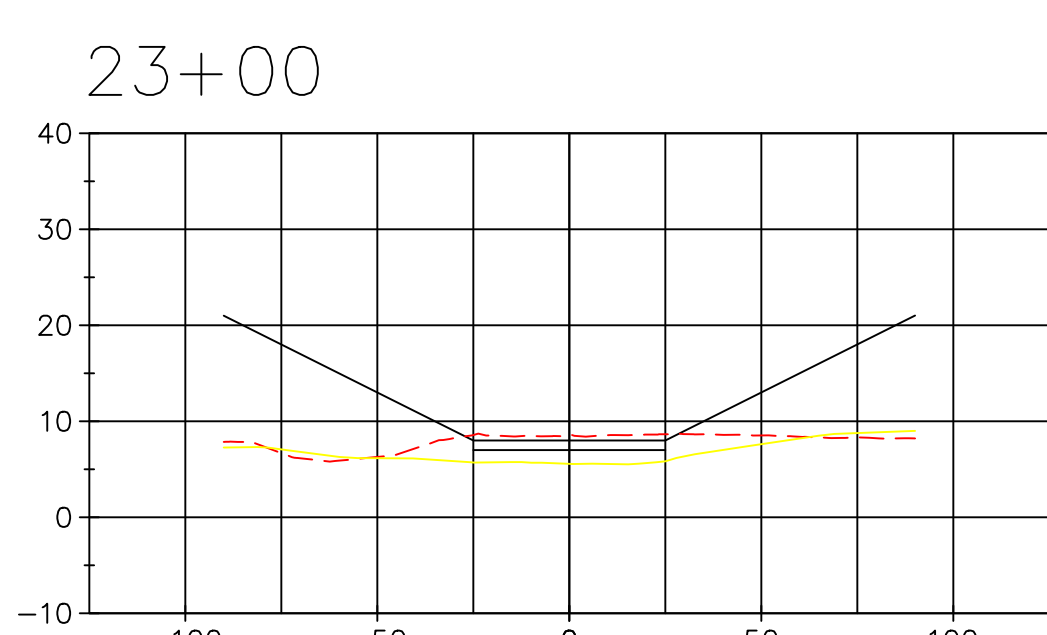
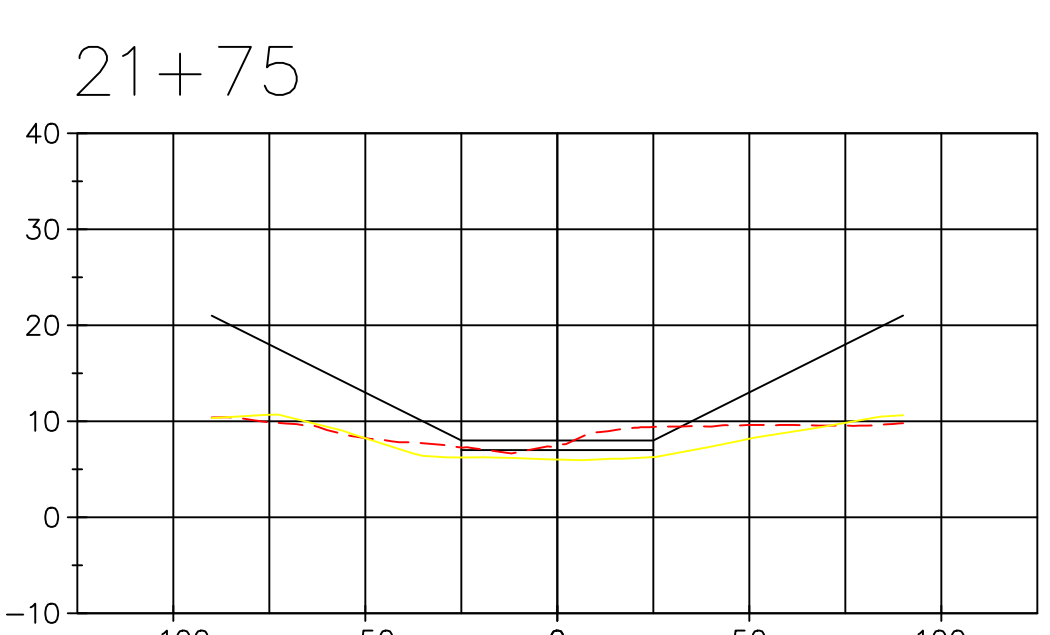
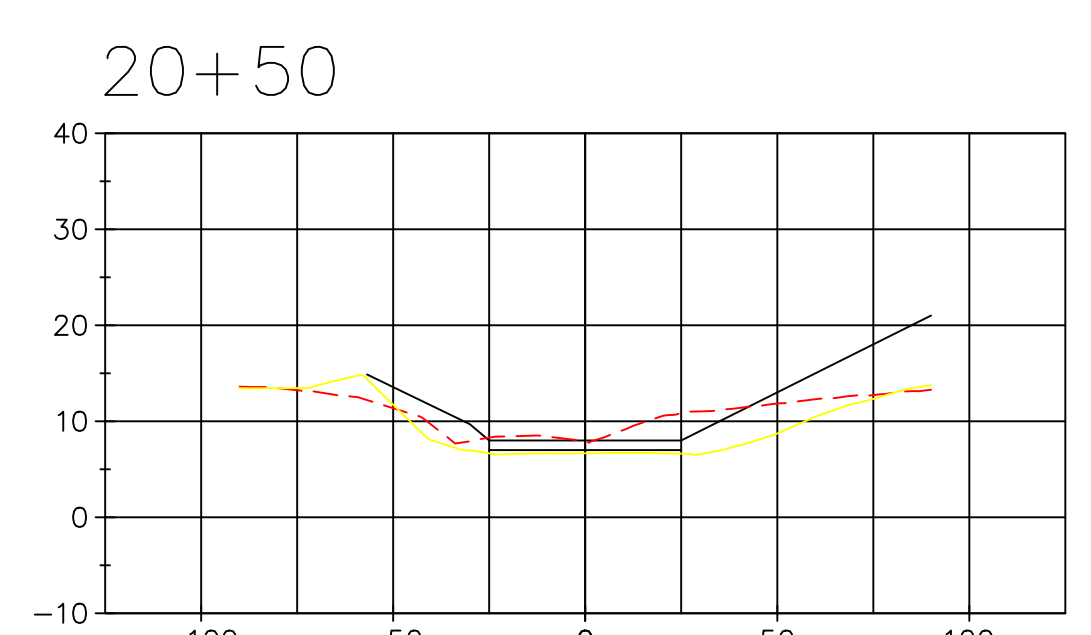
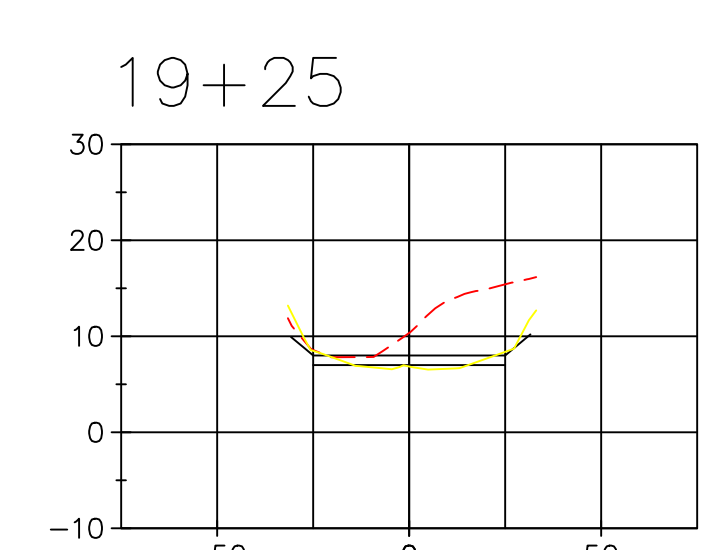
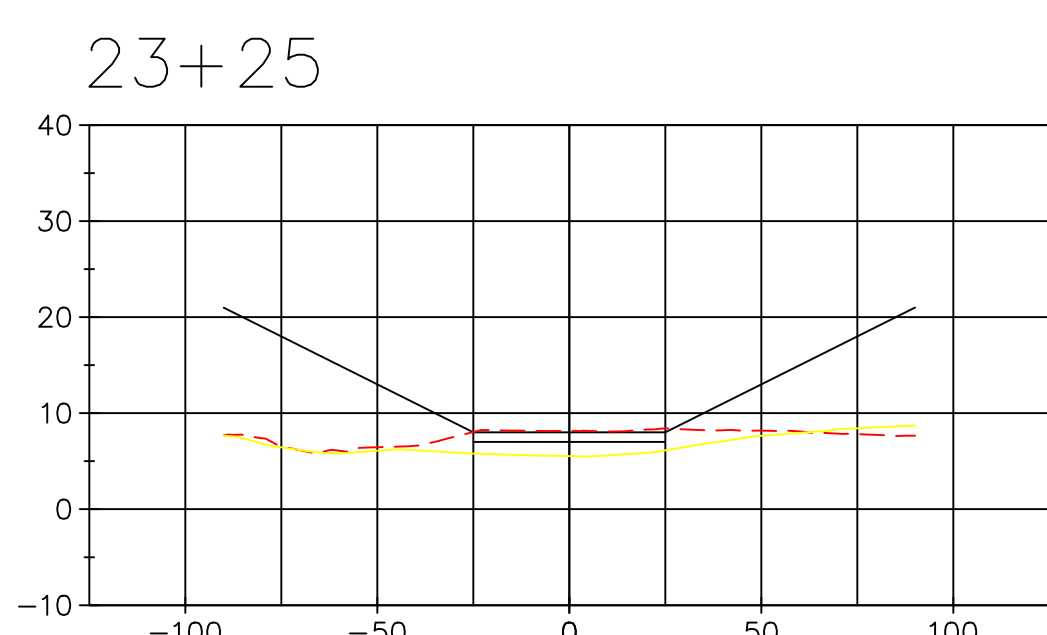
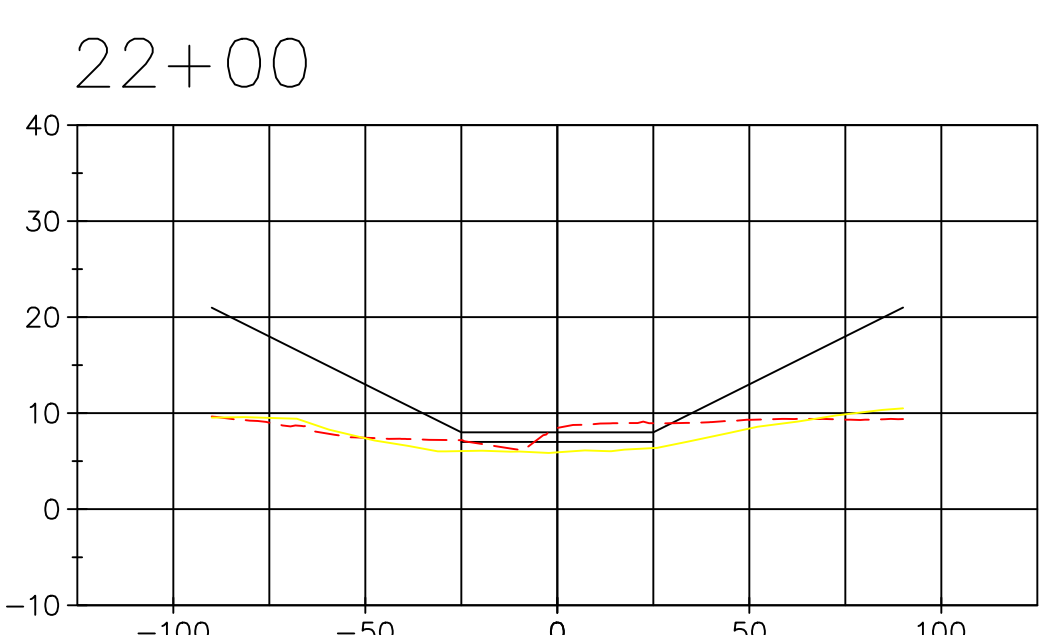
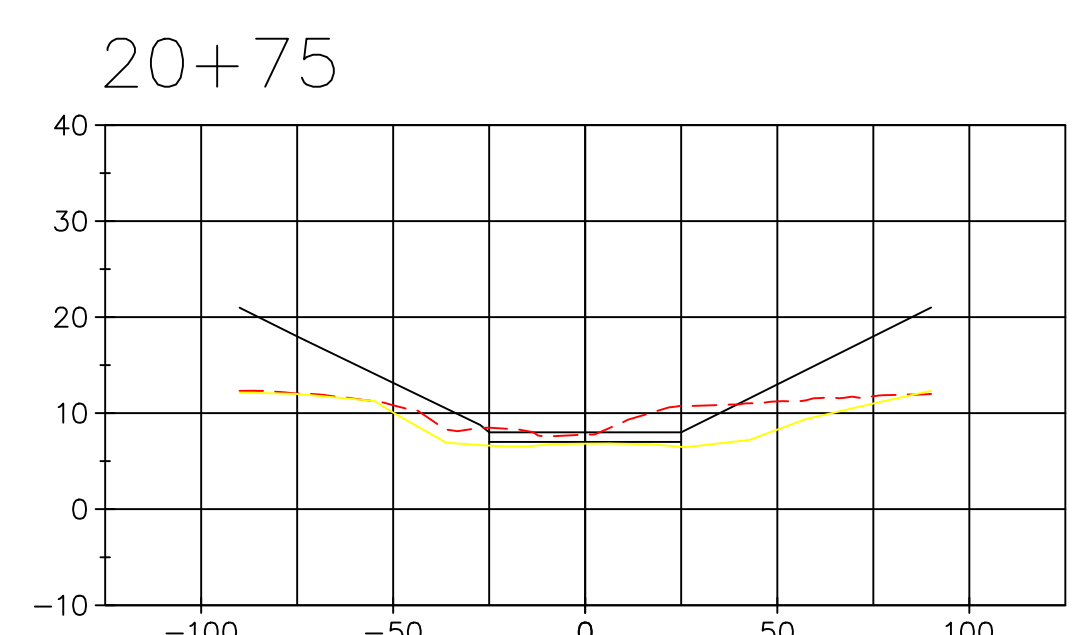
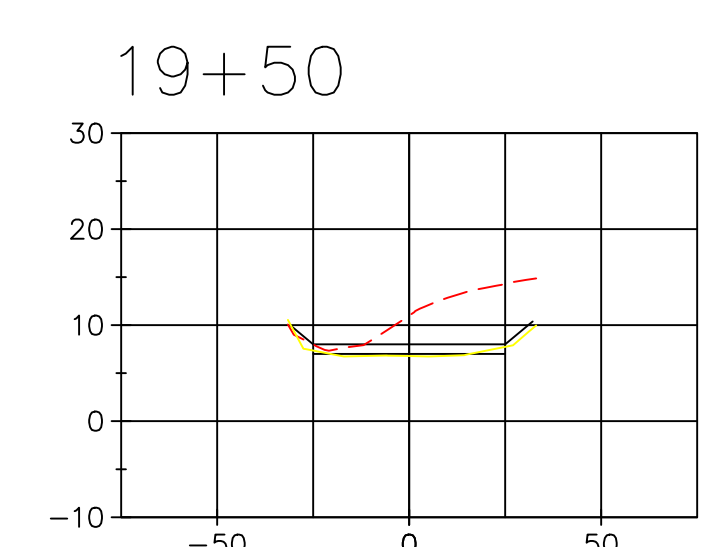
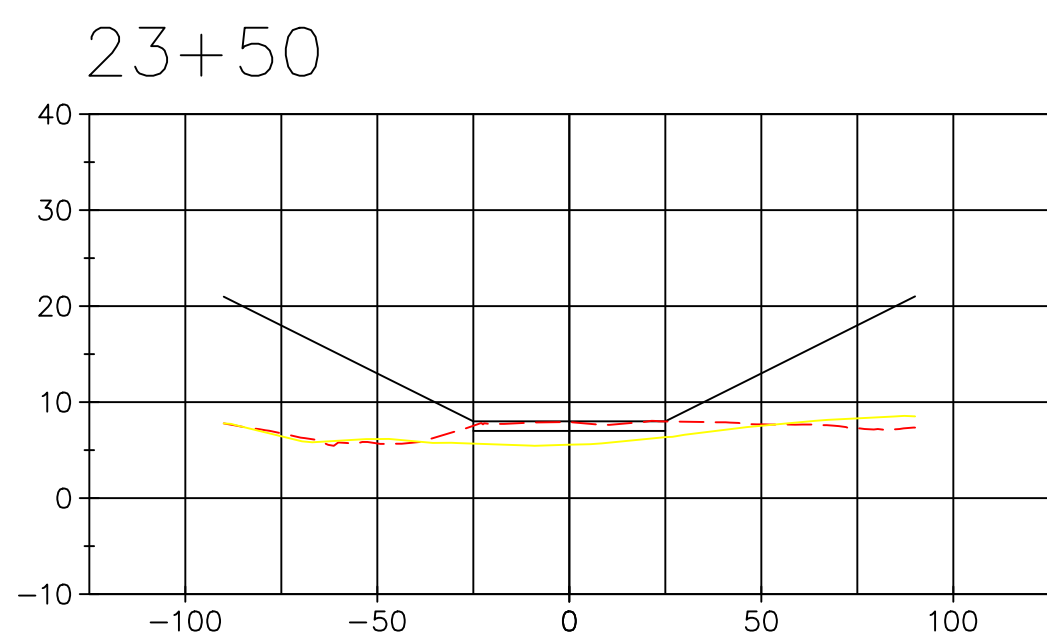
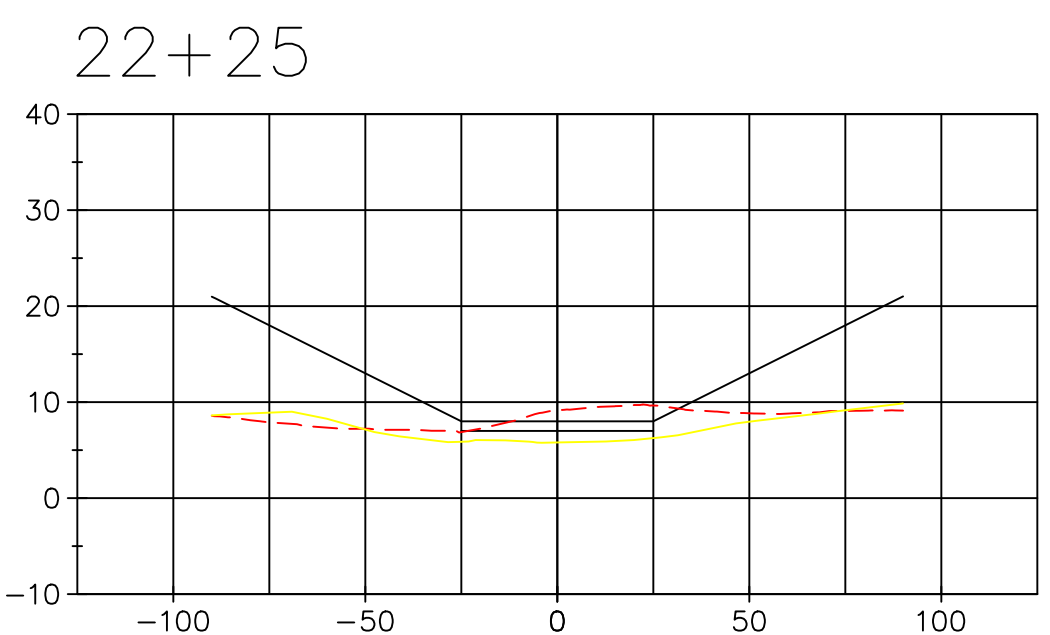
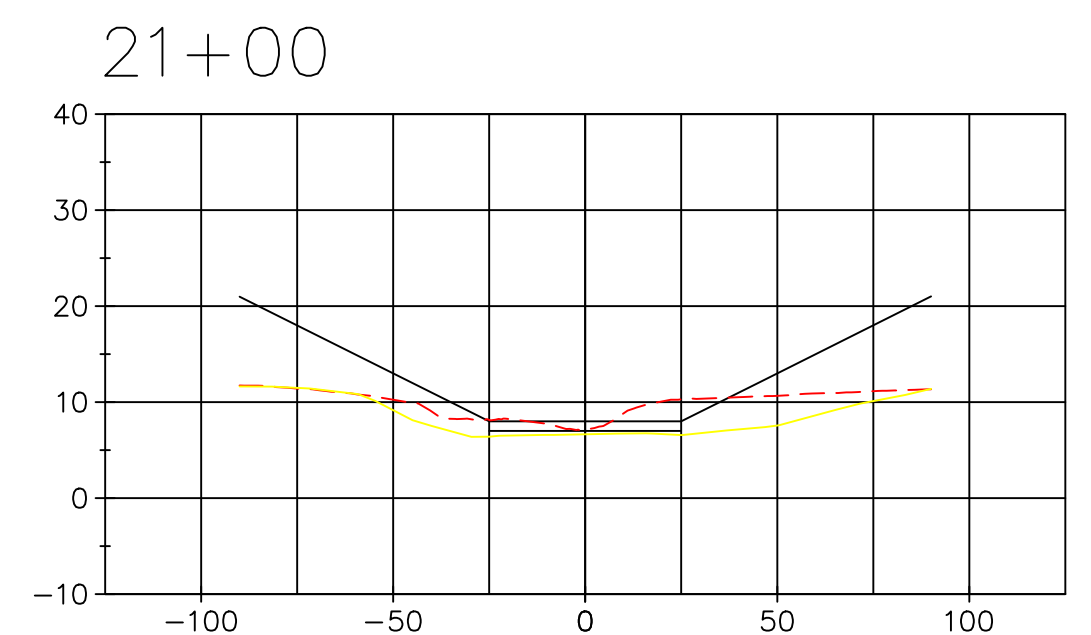
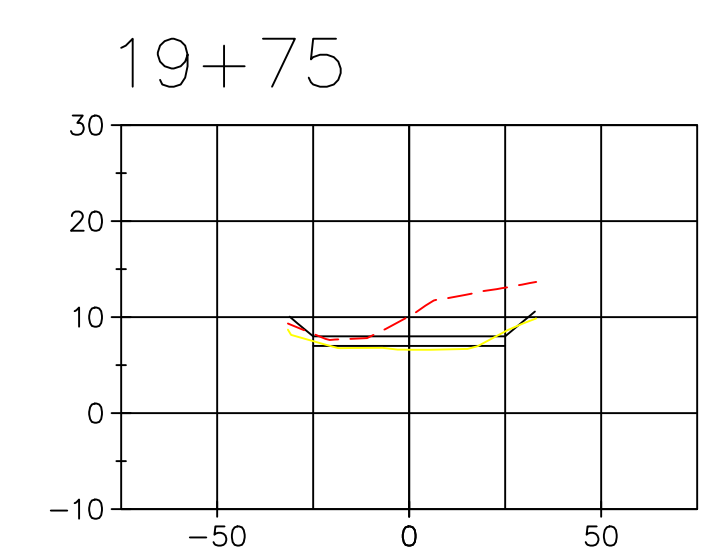
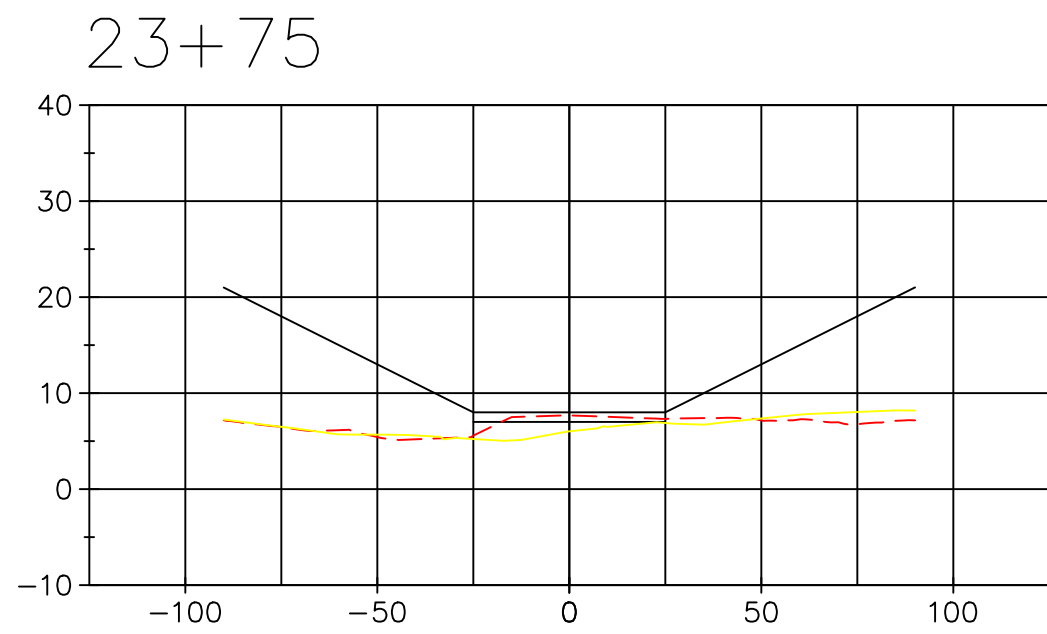
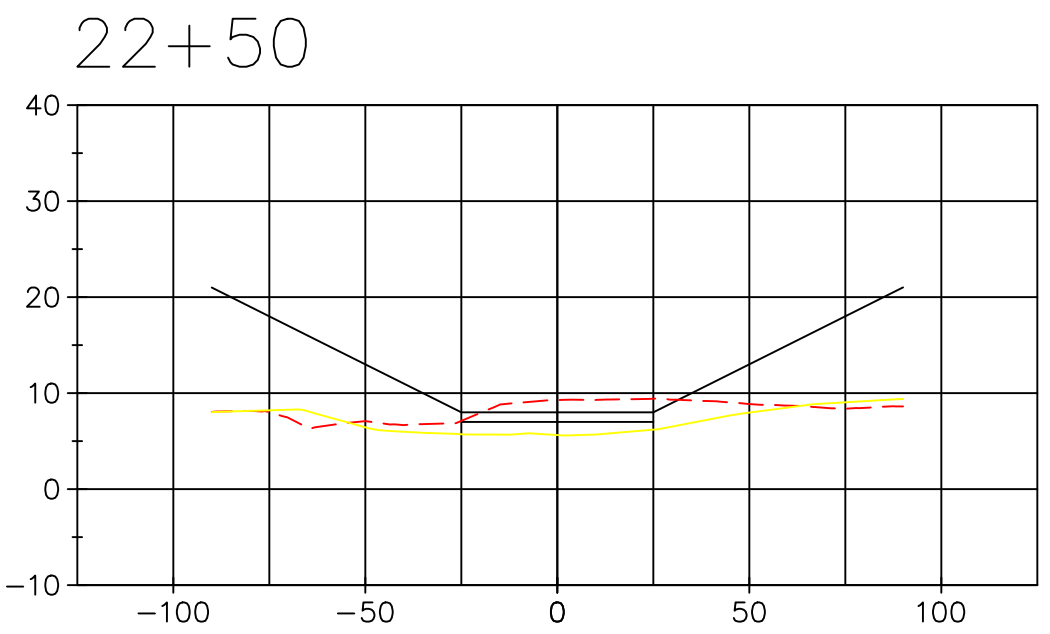
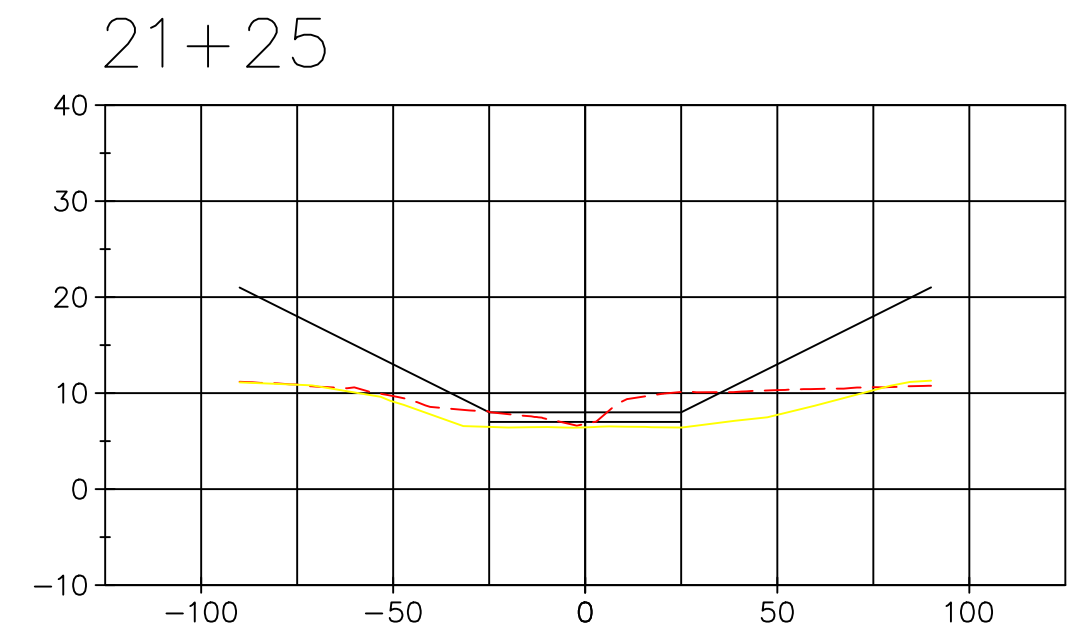
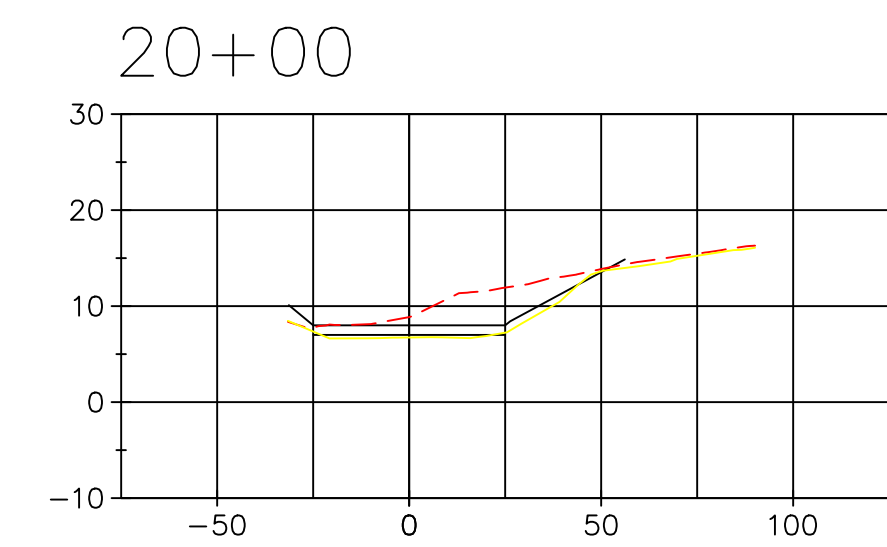
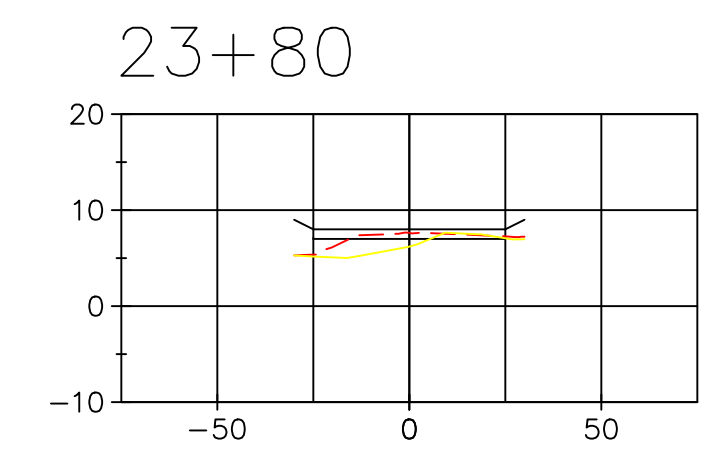
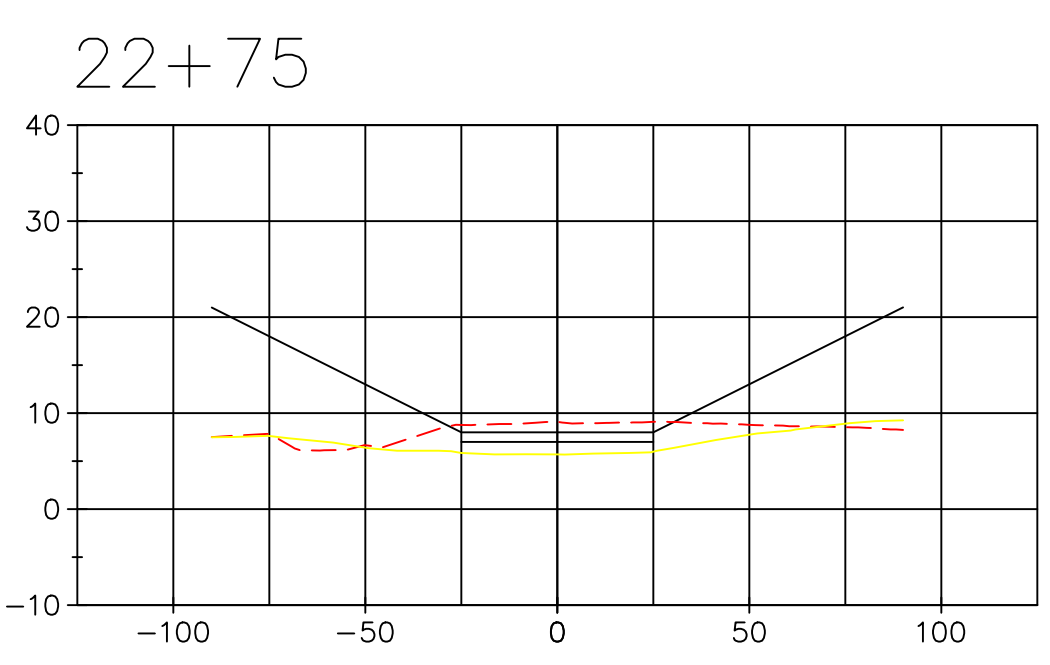
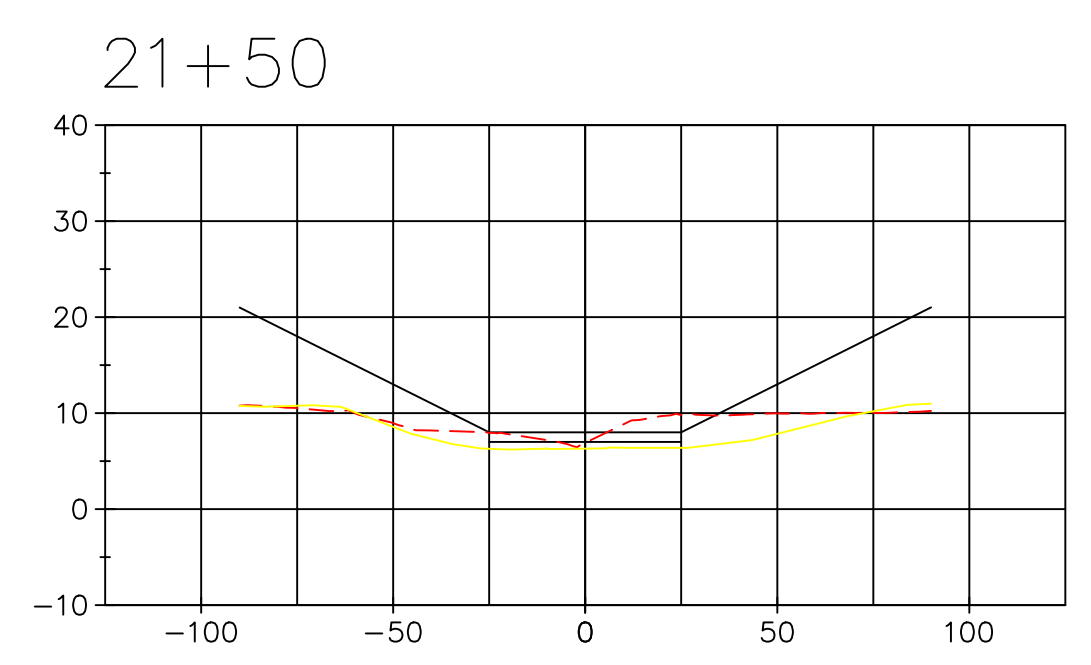
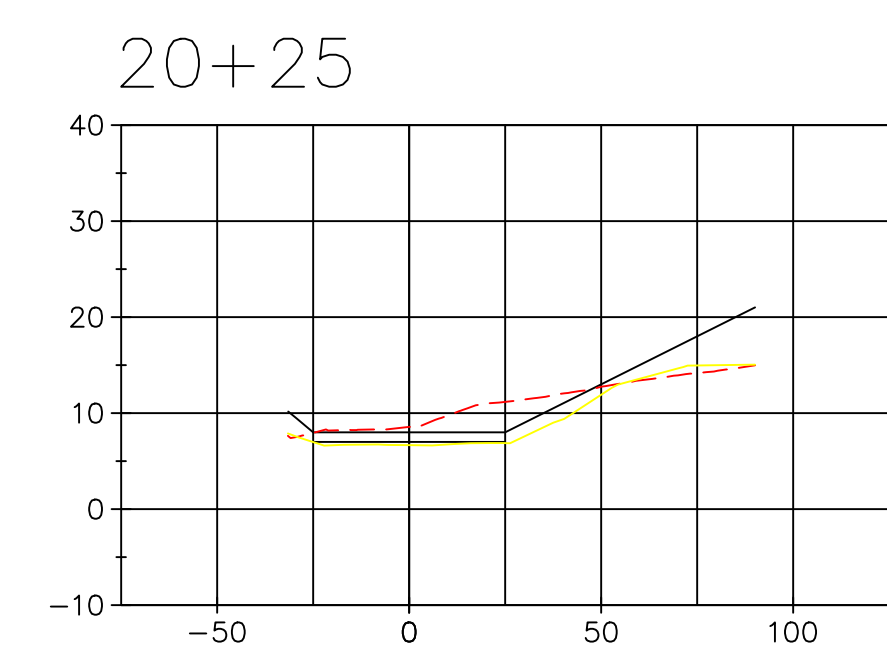
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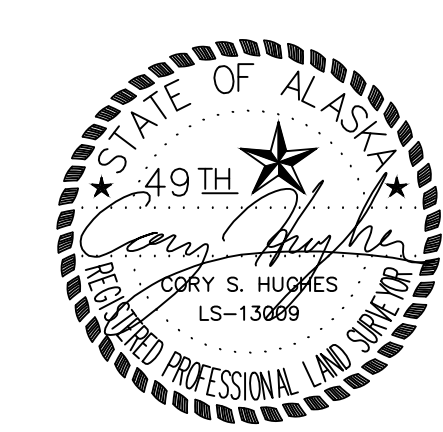
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