

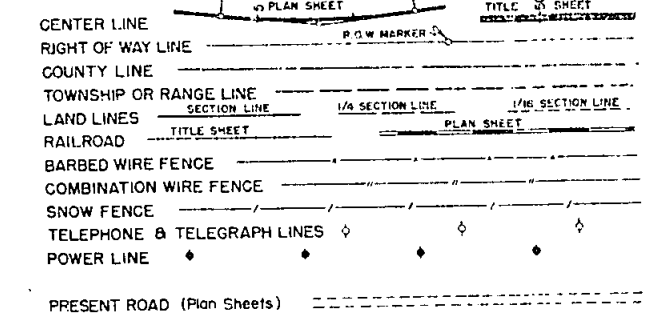
FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	C 12-0072-05	1	

Revised 4-12-54 deleted Sub-Base, added Selected Borrow. D.R.S.
Rev. 6-18-54, Added Sheet 5-A To Index of Sheets, J.C.R.

COLORADO DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED COLORADO PROJECT NO. C 12-0072-05 STATE HIGHWAY NO. 72 ADAMS COUNTY

CONVENTIONAL SIGNS



INDEX OF SHEETS

- SHEET NO. 1 SKETCH MAP, TITLE PAGE AND TABULATION OF LENGTH AND DESIGN
- 2 TYPICAL SECTION AND SUMMARY OF APPROXIMATE QUANTITIES
- 3 FENCING REQUIREMENTS, R.O.W. MARKERS, SURFACING AND SELECTED BORROW PLANS AND LAYOUT OF INTERSECTION AT COLFAX AVE.
- 4 LOCATION OF MATERIAL PIT
- 5 LIST OF STRUCTURES
- 6 STANDARD METHODS FOR SUPERELEVATION AND WIDENING OF CURVES M-1-C
- 7 STANDARD SIDE APPROACH ROADS, FLARING, CUT SLOPE TREATMENT AND WIDENING AT BRIDGES AND AT CREST OF GRADES M-2-EM, M-7-C
- 8 STANDARD MARKER POSTS M-19-D
- 9 STANDARD TIMBER GUARD POSTS M-27-C
- 10 STANDARD WIRE FENCE WITH METAL POSTS M-29-A
- 11 STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS M-107-C
- 12 STANDARD TYPES OF DITCHES AND CONSTRUCTION METHODS
- 13-15 ALIGNMENT PLAN AND PROFILE
- 16-32 CROSS SECTIONS
- 33 SUMMARY OF EARTHWORK QUANTITIES
- 5-A DETAILS OF SIGNING AND STRIPING.

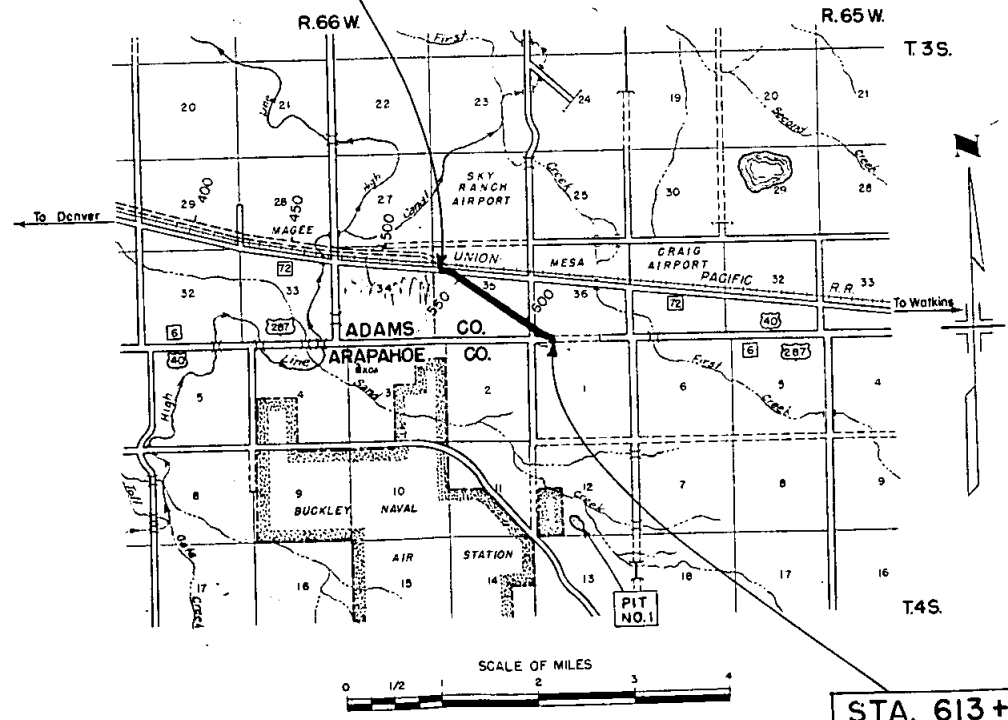
SCALES OF ORIGINAL DRAWINGS

ON PLAN. 1 IN. = 100 FT.
ON PROFILE 1 IN. = 100 FT. HORIZONTAL
1 IN. = 10 FT. VERTICAL
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
GROSS LENGTH OF PROJECT } 7376.2 Ft. = 1.397 Mi.
NET LENGTH OF PROJECT }

TABULATION OF LENGTH AND DESIGN

STATION	ROADWAY	
	LIN. FT.	
539 + 43.8 BEGIN C 12-0072-05	7376.2	
613 + 20.0 END C 12-0072-05 Opposite Sta. 323 + 00.0 on Colfax Avenue		
TOTAL	7376.2	
SUMMARY		
	LIN. FT.	MILES
Roadway	7376.2	1.397
TOTAL (NET AND GROSS LENGTH)	7376.2	1.397
DESIGN DATA		
Maximum Grade	1.30%	
Maximum Degree of Curve	5° 00'	
Minimum N.P.S.D. Horizontal	> 1300'	
Minimum N.P.S.D. Vertical	1210'	
Maximum Design Speed	60 M.P.H.	

STA. 539 + 43.8 BEGIN
C 12-0072-05



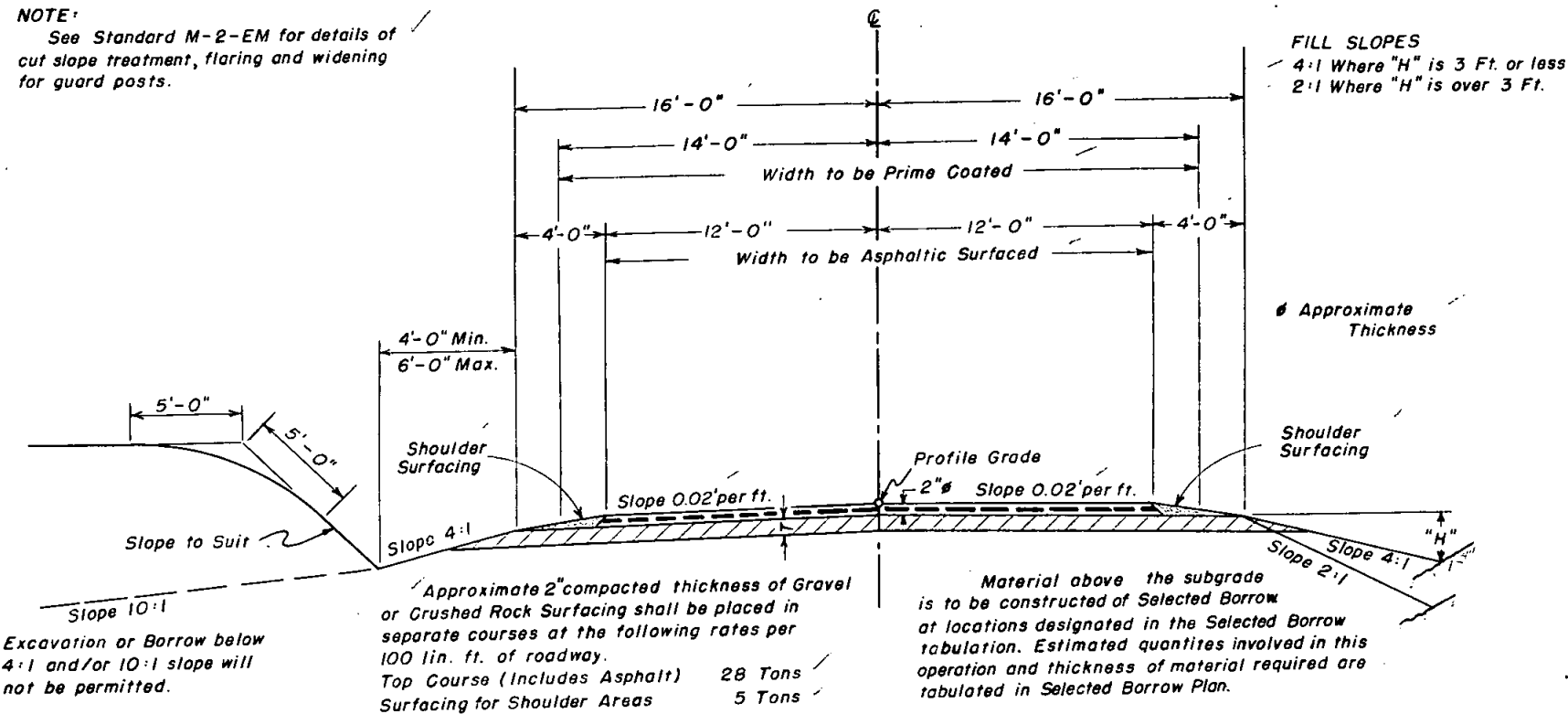
STA. 613 + 20.0 END
C 12-0072-05
OPPOSITE STA. 323 + 00.0
ON COLFAX AVENUE

COLORADO
DEPARTMENT OF HIGHWAYS

APPROVED: _____

CHIEF ENGINEER DATE

TYPICAL SECTION



The depth and width of the side ditch shall be varied where necessary in order to provide proper drainage and/or entrance to drainage structures.

GENERAL NOTES

This project is to be constructed in conformity with the Standard Specifications of the Colorado Department of Highways, adopted June 1, 1952.

All quantities on preliminary plans are to be considered approximate only.

All curves are to be superelevated and widened as provided by the Standard Superelevation sheet included with the plans.

All side approach roads shall be surfaced with a four (4) inch thickness of Selected Borrow extending approximately to the Right of Way Line in lieu of "Gravel or Crushed Rock Surfacing" called for on Standard M-2-EM. Estimated yardage required for this operation is shown in Selected Borrow Plan.

All poles encroaching on construction are to be moved by the owners.

All Corrugated Metal Pipe Culverts shall be laid without Metal Apron on either end.

For preliminary plan quantities of Asphaltic Road Materials the following rates of application were used:
PRIME COAT MC at 0.40 Gals. per Sq. Yd.
PAVING ASPHALT (150-200 Penetration) at 5.0 Lbs. per Sq. Yd. per inch

Rate of application and grade of Asphaltic Material shall be as determined by the Engineer at time of application.

All side approach roads to the project designated by the Engineer shall be primed to approximately 50 feet out from edge of the Asphaltic Surfacing or to the Right of Way line, whichever is less.

SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	ITEM	UNIT			PROJECT TOTALS
10ax	Clearing and Grubbing Entire Project	Lump Sum			•
12a	Removing Fence	Lin. Ft.			2100
13c	Unclassified Excavation	Cu. Yd.			18,000
13d	Unclassified Ditch Excavation	Cu. Yd.			100
13s	Stripping	Cu. Yd.			500
14a	Dry Rock Excavation (Str.)	Cu. Yd.			10
14b	Dry Common Excavation (Str.)	Cu. Yd.			60
14c	Wet Rock Excavation (Str.)	Cu. Yd.			10
14d	Wet Common Excavation (Str.)	Cu. Yd.			10
16a	Structure Backfill (Class 1)	Cu. Yd.			100
16c	Mechanical Tamping	Hour			20
17a	Rolling with Tamping Roller (Two(2) Unit)	Hour			80
17b	Rolling with Tamping Roller (Four(4) Unit)	Hour			20
17c	Rolling with Flat Wheeled Roller (Tandem)	Hour			50
17d	Rolling with Flat Wheeled Roller (Three(3) Wheel)	Hour			60
17e	Rolling with Rubber Tired Roller	Hour			20
17f	Furnishing Tamping Roller (Two(2) Unit)	Each			1
17g	Furnishing Tamping Roller (Four(4) Unit)	Each			1
17h	Furnishing Flat Wheeled Roller (Tandem)	Each			2
17i	Furnishing Flat Wheeled Roller (Three(3) Wheel)	Each			1
17j	Furnishing Rubber Tired Roller	Each			1
17kx	Wetting	M Gal.			930
18a	Station Yard Overhaul	Sta. Yd.			253,000
18b	Yard Mile Overhaul	Yd. Mi.			39,800
24ax	Selected Borrow	Cu. Yd.			15,800
26c	Gravel or Crushed Rock Surfacing (Grading C)	Ton			500
29d	Asphalt (150-200 Penetration)	Ton			130
30x	Asphaltic Road Material MC (Prime)	Gal.			10,500
32a	Plant Mixed Asphaltic Surfacing	Ton			2230
53b	18" Corrugated Metal Culvert Pipe	Lin. Ft.			156
53d	30" Corrugated Metal Culvert Pipe	Lin. Ft.			60
53e	36" Corrugated Metal Culvert Pipe	Lin. Ft.			60
76c	Barbed Wire Fence with Metal Posts	Lin. Ft.			13,800
76g	Barbed Wire Gates	Each			2
81a	Project Markers (Placed by State Forces)	Each			2
81b	Right of Way Markers	Each			5
92	Timber Guard Posts	Each			23
	WORK BY STATE FORCES Signing and Striping Entire Project	Lump Sum			•
	FORCE ACCOUNT Relocate Telephone Line (Work by M.S.T. & T. Co. Forces)	Lump Sum			•
	Relocate Power Line (Work by Public Service Co. Forces)	Lump Sum			•
	Encase Gas Line (Work by Colorado Interstate Gas Co. Forces)	Lump Sum			•

Revised 4-12-54 deleted Sub-Base, added Selected Borrow. D.R.S.

SELECTED BORROW AND SURFACING PLANS

It is estimated that Selected Borrow for the project is available in the vicinity of the pit indicated in the following tabulation. Estimated quantities involved in this operation are shown below.

Alteration of the Selected Borrow Plan as here outlined will be allowed only on written permission from the Department.

R.O.W. MARKERS

STATION	SIDE	NUMBER
550+00	Rt.	1
563+00	Lt.	1
576+50	Rt.	1
590+00	Lt.	1
602+00	Rt.	1
TOTAL		5

FENCING REQUIREMENTS

STATION TO STATION	SIDE	REMOVE FENCE	BUILD B.W. FENCE	B.W. GATES
		LIN. FT.	LIN. FT.	EACH
545+50 to 602+80	Lt.		5730	
603+40 to 620+80	Lt.		1715	
541+75 to 604+50	Rt.		6275	
543+00	X	440		
603+90	X	285		
604+50	X	290		
321+45 to 331+34 (Colfax Ave.)	Lt.	989		
571+00	Rt.&Lt.			2
TOTALS		2004	13,720	2

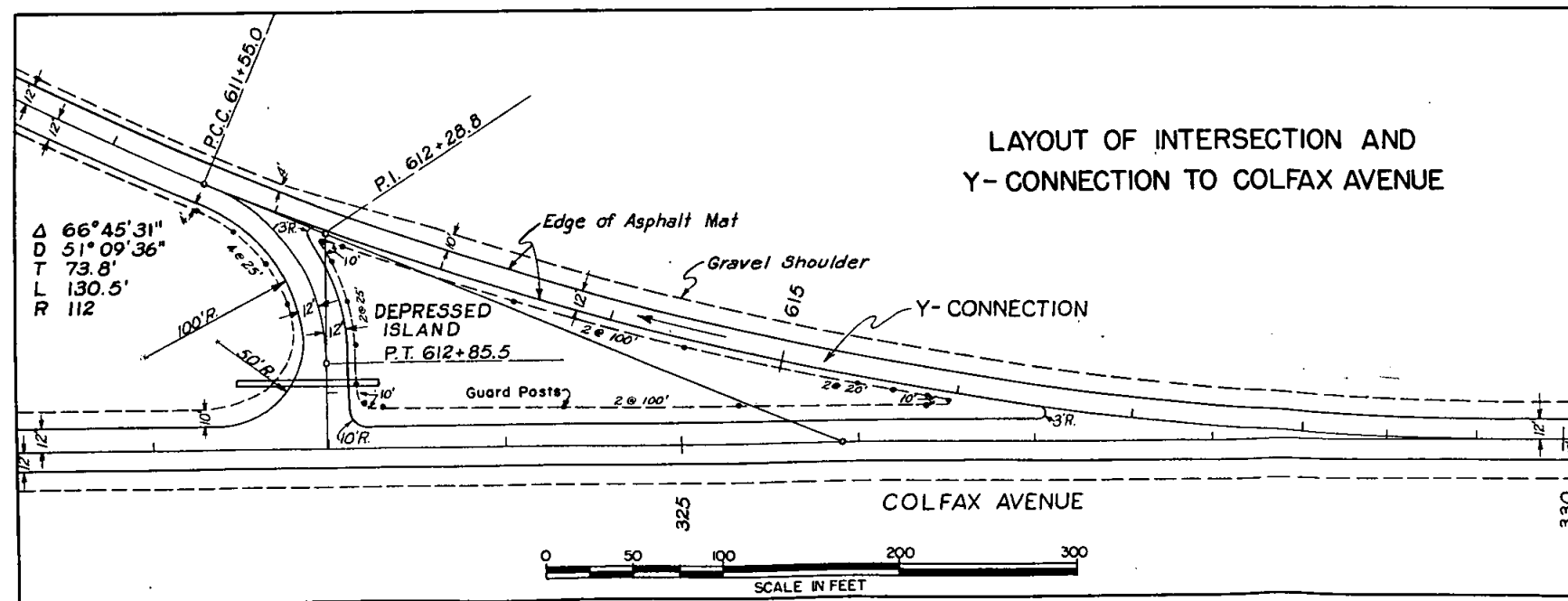
SELECTED BORROW PLAN

MATERIAL TO BE PLACED	SOURCE	AVAILABLE	THICKNESS	OVERHAUL		
				SELECTED BORROW	Sta. Yds.	Yd. Mi.
539+43.8 to 613+20	Pit No. 1	150,000 Cu. Yds.	12"	12,835	141,185	32,414
Estimated For: Approaches to Project	Haul Distance = 2.13 Mi. to Sta. 613+20 Stabilometer "R" Value = 69			175	1925	442
Y-Connection			12"	1092	12,012	2126
Correcting Irregularities				1410	15,512	3498
Road Approaches			4"	218	2398	551
TOTALS				15,730	173,032	39,031

SURFACING PLAN

The source of Surfacing Material for this project is undesignated. Estimated quantities involved in this operation are listed below.

Alteration of the Surfacing Plan as here outlined will be allowed only on written permission from the Department.



MATERIAL TO BE PLACED	SOURCE	AVAILABLE	TONS	
			TOP COURSE PLANT MIX	SHOULDER AREAS
539+43.8 to 613+20	Undesignated		2066	369
Estimated For: Approaches to Project			56	10
Y-Connection			105	45
TOTALS			2227	424

Not to be placed across Road Approaches.

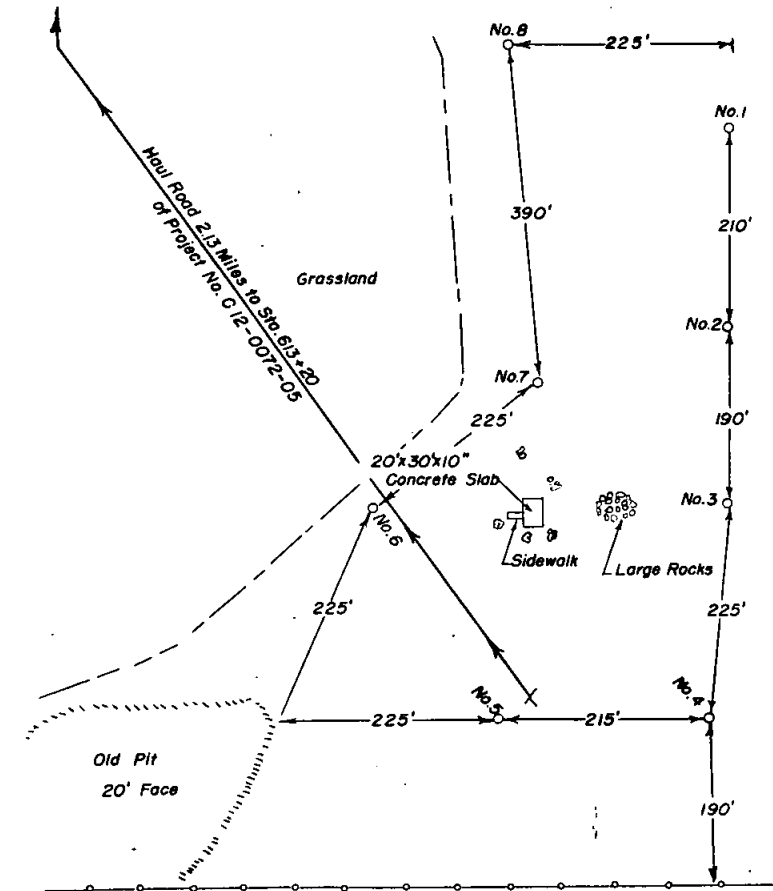
FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	C 12-0072-05	4	

LOCATION OF MATERIAL PIT

PIT NO. 1

- ✓ LOCATION: SW. 1/4 Sec. 12, T. 4 S., R. 66 W.
- ✓ OWNER: F. L. Clinkenbeard
- ✓ QUANTITY AVAILABLE: 150,000 + Cu. Yds.
- ✓ HAUL DISTANCE: 2.13 Miles to Sta. 613+20

✓ Estimated for Stripping Overburden 500 Cu. Yds.



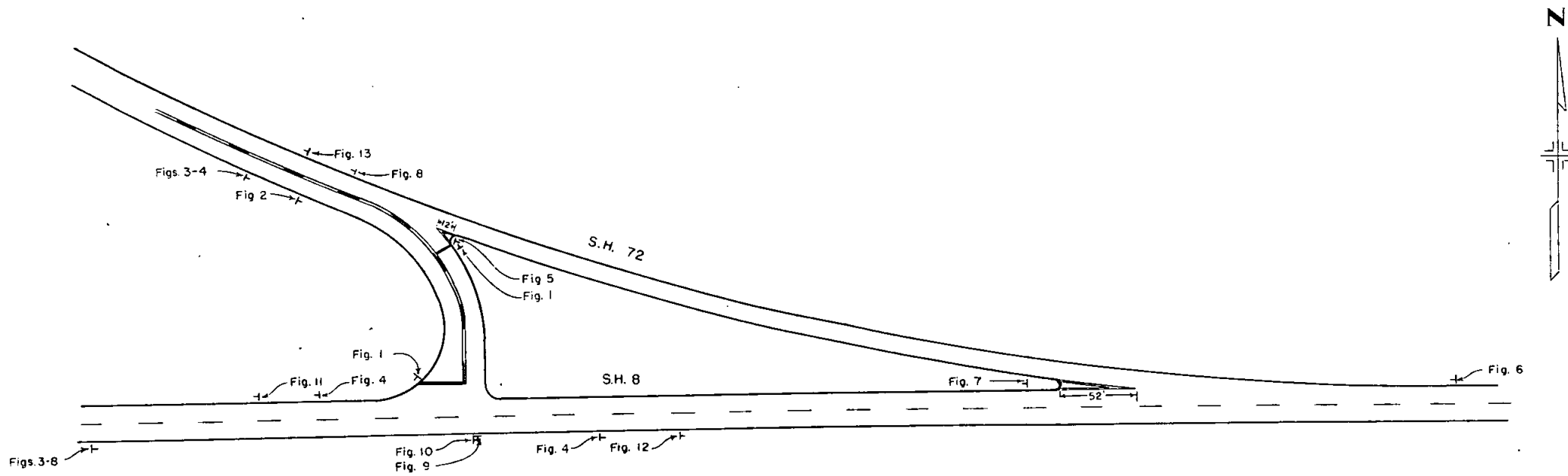
FIELD SAMPLE NO. 1323

TEST NO.	DEPTH IN FEET	DESCRIPTION OF TEST HOLE MATERIAL
1	0.0 - 2.0	SANDY LOAM
1-A	2.0 - 8.0	SAND
1-B	8.0 - 12.0	CLAY
1-C	12.0 - 13.0	SAND
2	0.0 - 0.5	SANDY LOAM
2-A	0.5 - 9.0	SAND Clay at 13.0'
3	0.0 - 13.0	SAND Clay at 13.0'
4	0.0 - 18.0	SAND Clay at 18.0'
5	0.0 - 22.0	SAND Clay at 22.0'
6	0.0 - 18.0	SAND Clay at 18.0'
7	0.0 - 17.0	SAND Clay at 17.0'
8	0.0 - 15.0	SAND

SIGNING AND STRIPING FOR INTERSECTION OF S.H. 8 (U.S. 36-40-287) AND S.H. 72

FEDERAL ROAD DIVISION NO	DISTRICT	PROJ. NO	SHEET NO.	TOTAL SHEETS
9	COLORADO	C-12-0072-05	5-A	

New Sheet, 6-18-54, J.C.R.



LEGEND

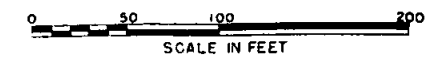
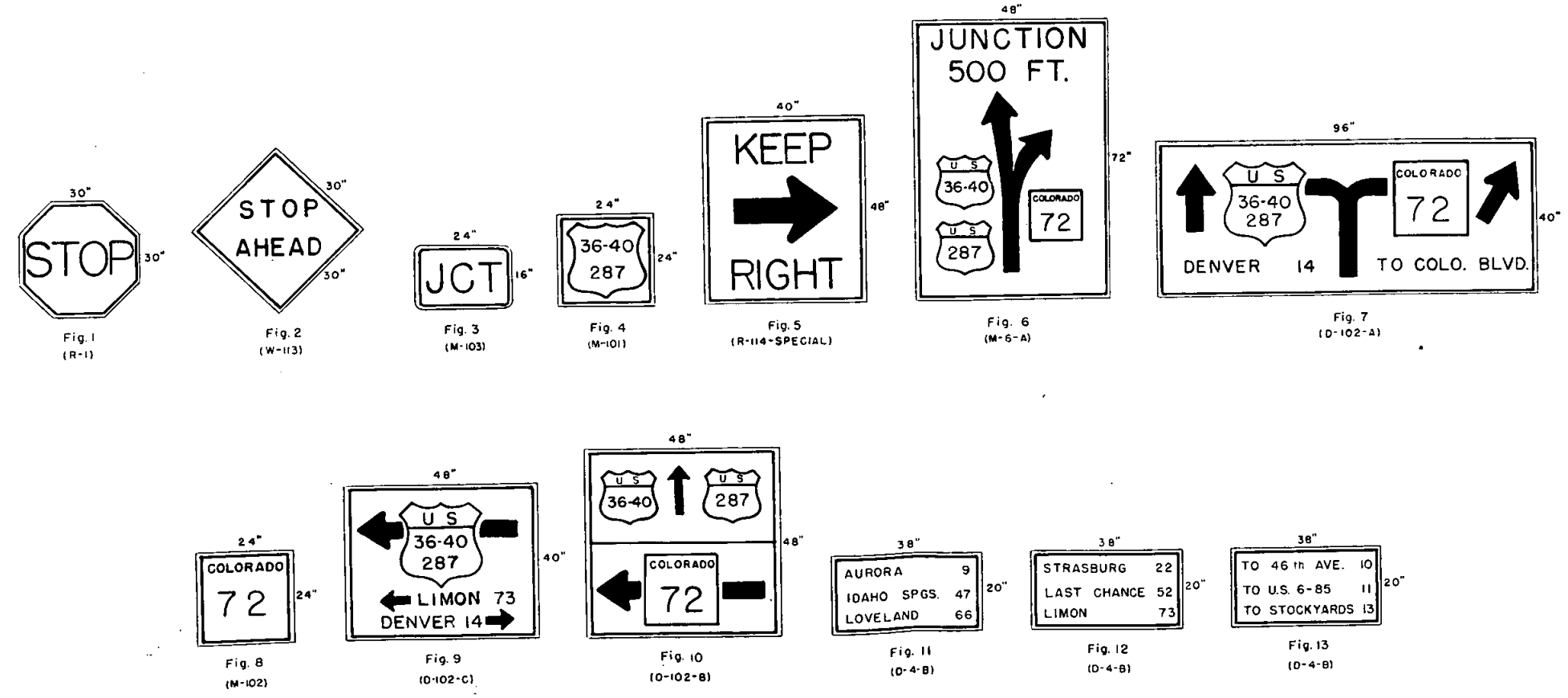
Edge of Pavement	
Center Stripe (White)	
Curb Lines (Yellow)	
No Passing Barrier Lines	
Sign and Post Installation	
Stop Bar (White)	

SIGN SUMMARY

CODE	FIG. NO.	QUANTITY
R-1	1	2
W-113	2	1
M-103	3	2
M-101	4	3
R-114 (SPEC)	5	1
M-6-A	6	1
D-102-A	7	1
M-102	8	2
D-102-C	9	1
D-102-B	10	1
D-4-B	11	1
D-4-B	12	1
D-4-B	13	1

STRIPING SUMMARY

PAINT	FEET	GALS. REQD
YELLOW	450	5
WHITE	1280	10



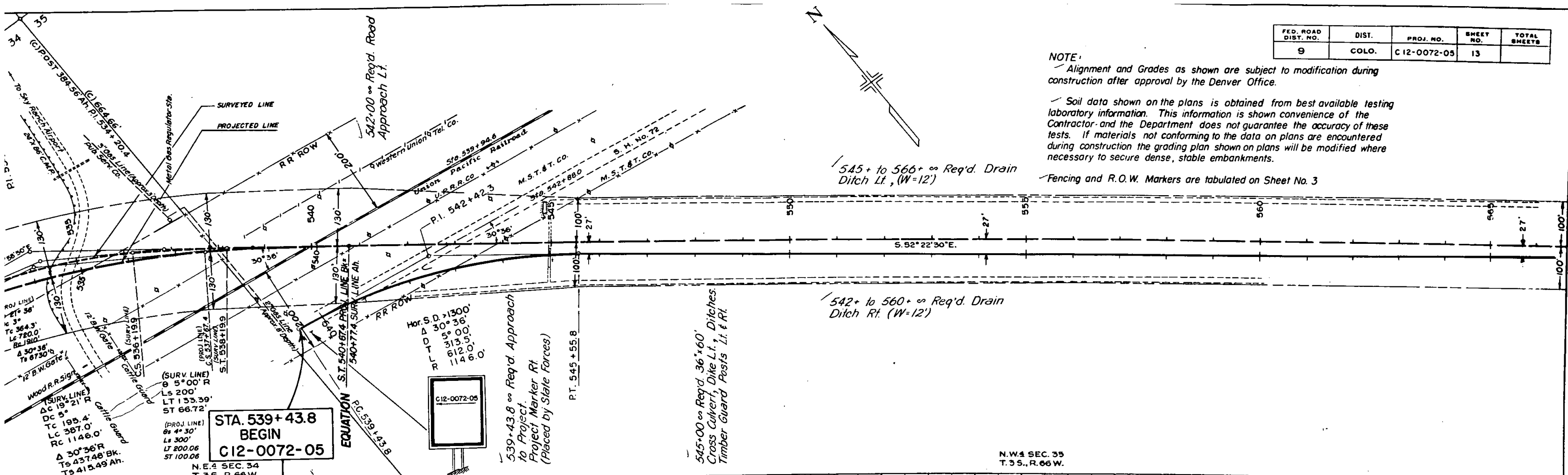
FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	C 12-0072-05	13	

NOTE:

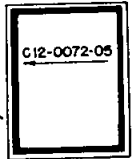
Alignment and Grades as shown are subject to modification during construction after approval by the Denver Office.

Soil data shown on the plans is obtained from best available testing laboratory information. This information is shown convenience of the Contractor and the Department does not guarantee the accuracy of these tests. If materials not conforming to the data on plans are encountered during construction the grading plan shown on plans will be modified where necessary to secure dense, stable embankments.

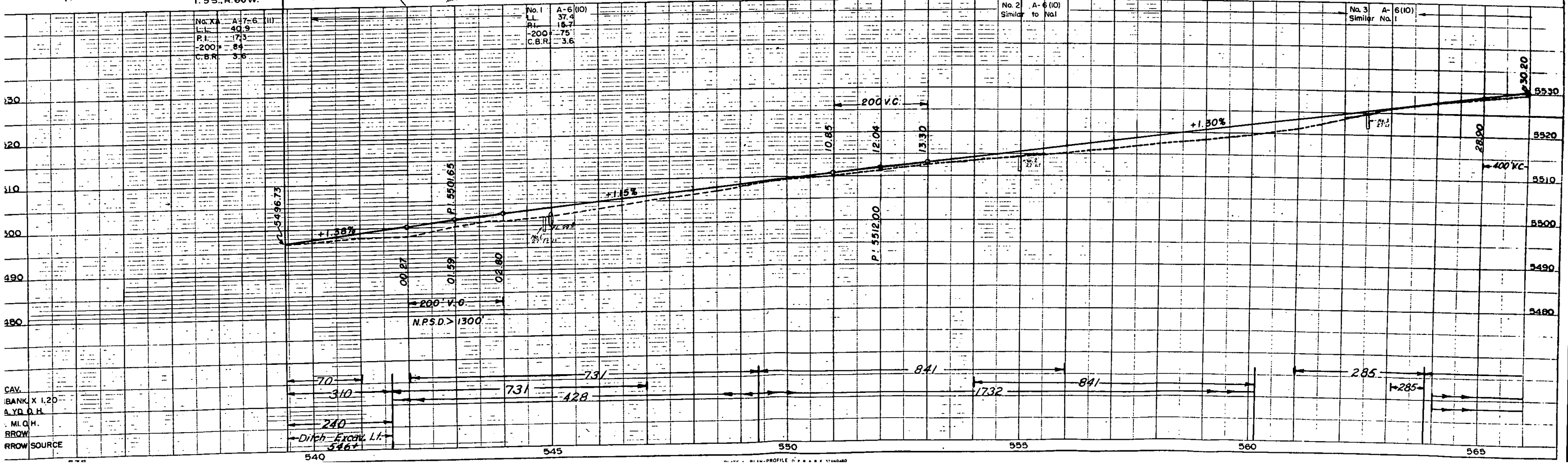
Fencing and R.O.W. Markers are tabulated on Sheet No. 3



**STA. 539+43.8
BEGIN
C12-0072-05**



N. W. 1 SEC. 35
T. 3 S., R. 66 W.

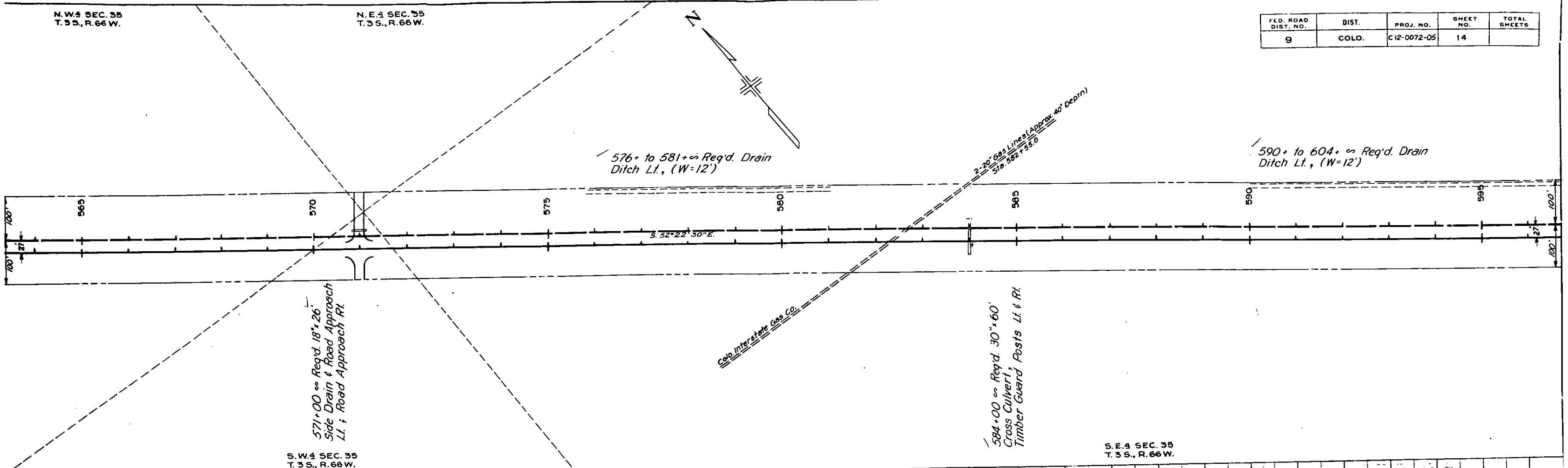
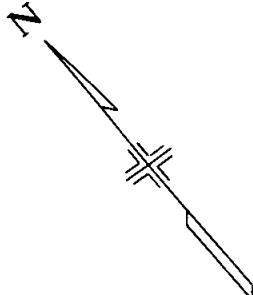


CAV.
BANK X 1.20
A.Y.D. O.H.
M.I. Q.H.
RR.W.
RR.W. SOURCE

N.W. 4 SEC. 35
T. 35 S., R. 66 W.

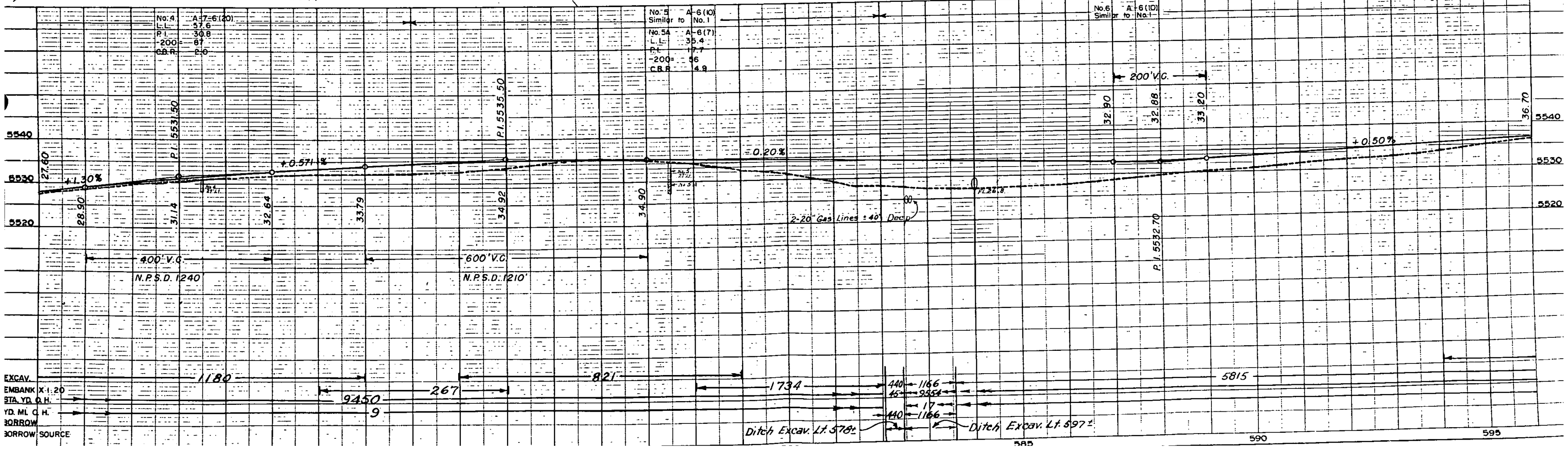
N.E. 4 SEC. 35
T. 35 S., R. 66 W.

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	C12-0072-05	14	



S.W. 4 SEC. 35
T. 35 S., R. 66 W.

S.E. 4 SEC. 35
T. 35 S., R. 66 W.



EXCAV.	STA.	YD.	Q.H.
EMBANK	X-1.20		
YD. MI. C.H.			
BORROW			
BORROW SOURCE			

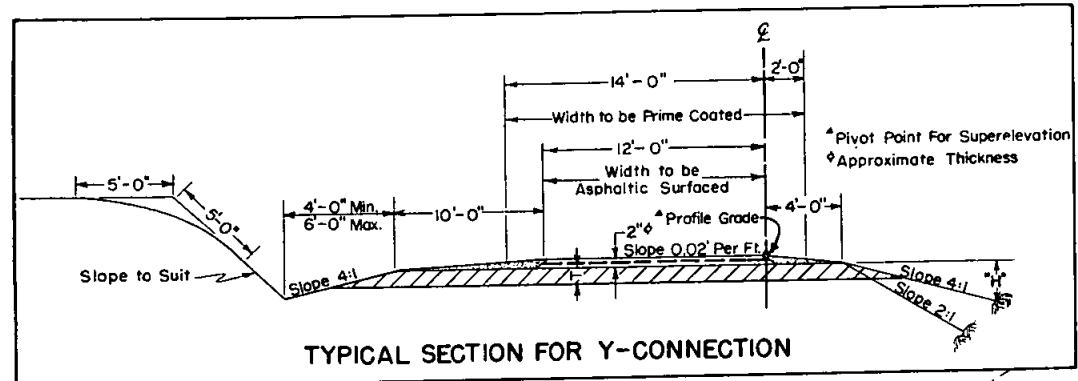
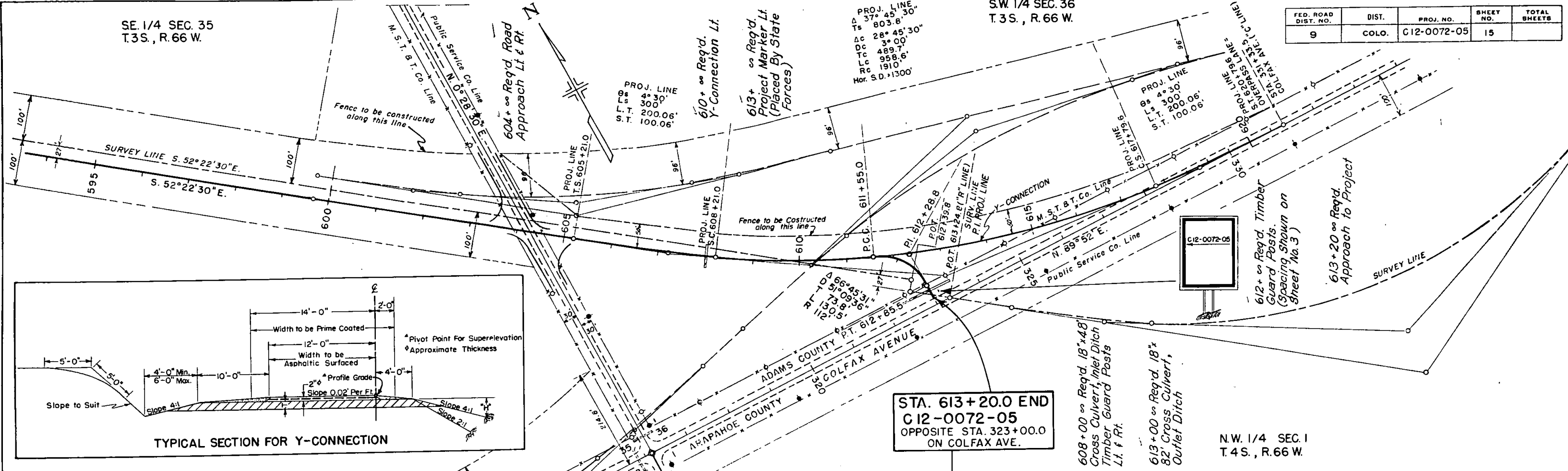
Ditch Excav. Lt. 578±

Ditch Excav. Lt. 597±

SE 1/4 SEC. 35
T.3S., R.66 W.

SW 1/4 SEC. 36
T.3S., R.66 W.

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	C12-0072-05	15	

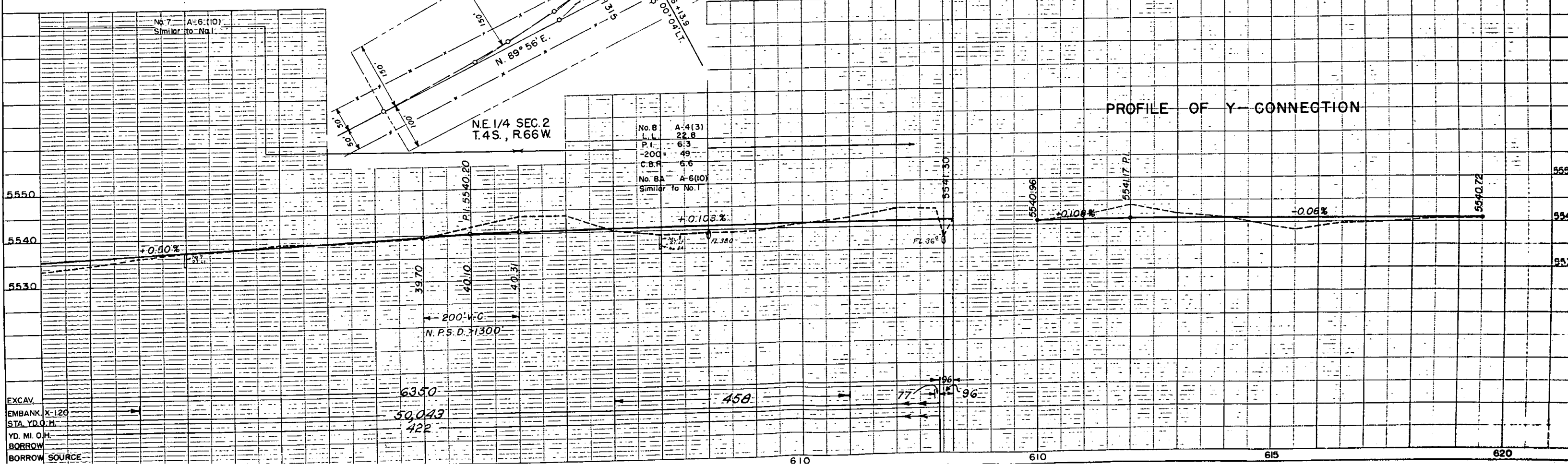


STA. 613+20.0 END
C12-0072-05
OPPOSITE STA. 323+00.0
ON COLFAX AVE.

608+00 Req'd. 18"x48"
Cross Culvert, Inlet Ditch
Timber Guard Posts
Lt. & Rt.

613+00 Req'd. 18"x
82" Cross Culvert,
Outlet Ditch

N.W. 1/4 SEC. 1
T.4S., R.66 W.



EXCAV.	
EMBANK.	X-120
STA. Y.D.O.H.	
Y.D. MI. O.H.	
BORROW	
BORROW SOURCE	

NO. 16252 RT. OF WAY CHECKED

NO. 16257 IS NOTED STRUCTURE NOTATIONS CHECKED

Excavation	Embankment	Excavation	Embankment
Cu. Yds.	Area	Cu. Yds.	Area

Rev. 4-12-54. deleted Sub-Base.; added Select Borrow. D.R.S.

EARTHWORK TOTALS - C 12-0072-05

EXCAVATION

FROM CROSS SECTIONS	10,374	✓
BORROW	1,846	✓
LIST OF STRUCTURES AS EXCAVATION	3,077	✓
" " " " EMBANKMENT	1,250	✓
ESTIMATED FOR CUT SLOPE TREATMENT	100	✓
" " SUBSIDENCE	1,222	✓
" " COVERING ENDS OF CULVERTS	24	✓
TOTAL	17,893	✓

UNCLASSIFIED DITCH EXCAVATION

From List of Structures 30 Cu. Yds. ✓

EMBANKMENT

FROM CROSS SECTIONS	10,183	✓
EMBANKMENT x FACTOR	12,220	✓

STATION YARD OVERHAUL

FROM MASS DIAGRAM	71,252	✓
ESTIMATED FOR SUBSIDENCE	7,125	✓
ESTIMATED FOR STRUCTURE BACKFILL	1,023	✓
ESTIMATED FOR SELECTED BORROW	17,032	✓
TOTAL	252,432	✓

YARD MILE OVERHAUL

FROM MASS DIAGRAM	448	✓
ESTIMATED FOR SUBSIDENCE	45	✓
ESTIMATED FOR STRUCTURE BACKFILL	186	✓
ESTIMATED FOR SELECTED BORROW	39,031	✓
TOTAL	39,710	✓