

STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS CONSTRUCTION PLAN FOR GRADING, BASE & BITUMINOUS SURFACING

TRUNK HIGHWAY NO. 49=126

BETWEEN ST. MARIE ST. AND SOO LINE RAILROAD A POINT 3.10' SOUTH OF THE S.E. COR. A POINT 48572' NORTH & 0.18' EAST OF THE FROM SEC. 25, T30N, R23W TO E. 1/4 COR. SEC. 25, T30N, R23W

MINNESOTA PROJECT			STATE PROJECT NO. 6214-20		
GROSS LENGTH	FEET	MILES	GROSS LENGTH	3119.00 FEET	0.59 MILES
BRIDGES-LENGTH	FEET	MILES	BRIDGES-LENGTH	0.00 FEET	0.00 MILES
EXCEPTIONS-LENGTH	FEET	MILES	EXCEPTIONS-LENGTH	0.00 FEET	0.00 MILES
NET LENGTH	FEET	MILES	NET LENGTH	3119.00 FEET	0.59 MILES

NOTE: LENGTH & DESCRIPTIONS BASED ON E.T.H. 49

SCALES

PLAN	1" = 100'
PROFILE	1" = 100'
INDEX MAP	1" = 2 1/2'

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES
3	PLAN SHEET
4-8	CROSS SECTIONS

PLANS SYMBOLS

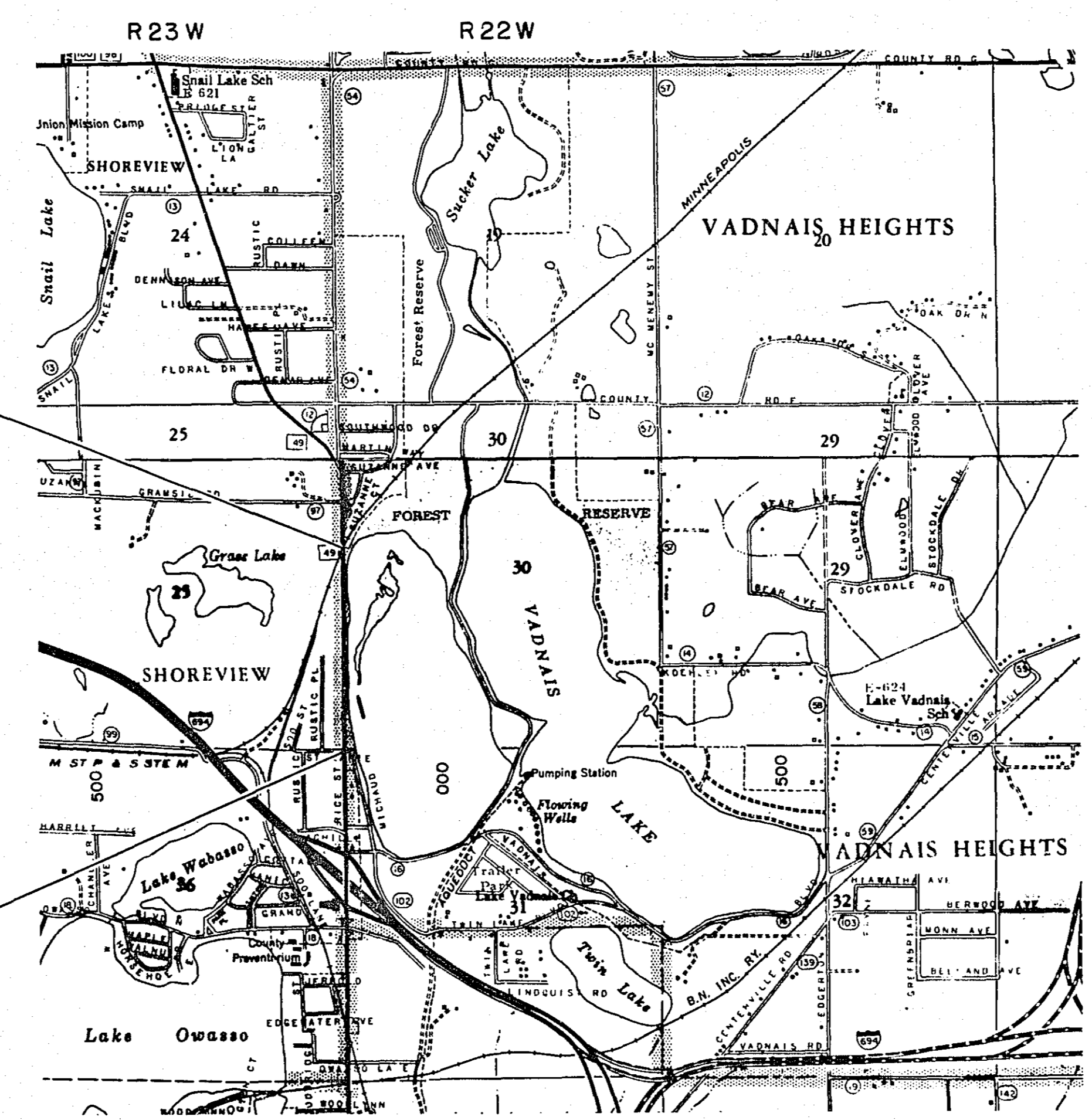
- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT-OF-WAY LINE
- PRESENT RIGHT-OF-WAY LINE
- CONTROL OF ACCESS LINE
- PROPERTY LINE (Except Land Lines)
- VACATED PLATTED PROPERTY
- CORPORATE OR CITY LIMITS
- TRUNK HIGHWAY CENTER LINE
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT-OF-WAY LINE
- RIVER OR CREEK
- DRY RUN
- DRAINAGE DITCH
- DRAIN TILE
- CULVERT
- DROP INLET
- GUARD RAIL
- BARBED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SNOW FENCE
- STONE WALL OR FENCE
- HEDGE
- RAILROAD CROSSING SIGN
- RAILROAD CROSSING BELL
- ELECTRIC WARNING SIGN
- CROSSING GATE
- MEANDER CORNER

UTILITIES SYMBOLS

- POWER POLE LINE
- TELEPHONE OR TELEGRAPH POLE LINE
- JOINT TELEPHONE AND POWER ON POWER POLES
- ON TELEPHONE POLES
- ANCHOR
- STEEL TOWER
- STREET LIGHT
- PEDESTAL TELEPHONE CABLE TERMINAL
- GAS MAIN
- WATER MAIN
- CONDUIT
- TELEPHONE CABLE IN CONDUIT
- ELECTRIC CABLE IN CONDUIT
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- BURIED TELEPHONE CABLE
- BURIED ELECTRIC CABLE
- AERIAL TELEPHONE CABLE
- SEWER (SANITARY OR STORM)
- SEWER MANHOLE

PIT DATA

PIT NO.	Located in	Dead Haul
PIT NO.	Located in	Dead Haul
PIT NO.	Located in	Dead Haul
PIT NO.	Located in	Dead Haul



REVISIONS

DATE	SHEET NO.	REVISED BY

DESIGN DESIGNATION

ADT (CURRENT YEAR) 1968 = 9780
 ADT (FUTURE YEAR) 1985 = 20,000
 DHV (DESIGN HOUR VOLUME) =
 D (DIRECTIONAL DISTRIBUTION) = %
 T (HEAVY COMMERCIAL) = 13 %

Design Speed 50 MPH
 Based on Stopping Sight Distance
 Height of eye 3.75' Height of object 0.50'
 Design Speed not achieved at:
 STA. TO STA. MPH
 STA. TO STA. MPH

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 DATE 5-5-70 REG. NO. 5962
 DESIGN SQUAD H.W. RIES

DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS

APPROVED: _____ DATE _____
 DIVISION ENGINEER

- Right of Way Approval: _____ 1970
- Recommended for Approval: _____ 1970
- Recommended for Approval: _____ 5-29 1970
- Recommended for Approval: _____ 5-5 1970
- Recommended for Approval: _____ 1970
- Recommended for Approval: _____ 5-29 1970
- Approved: _____ 6-1 1970

55A-4

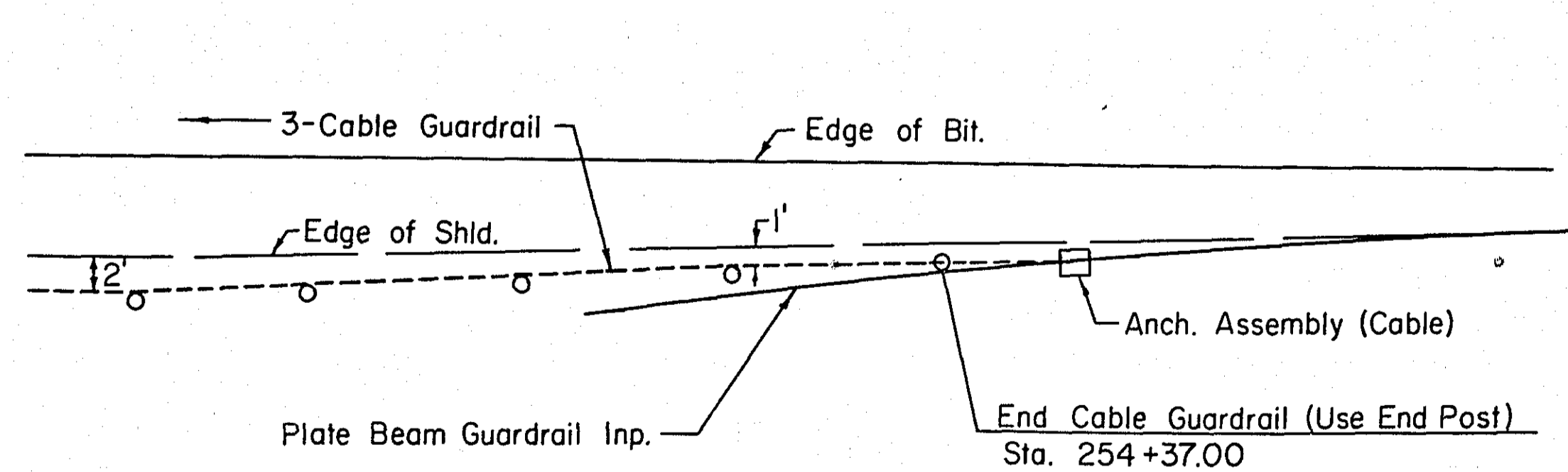
44P 6-3-70

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2021.501	Mobilization	Lump Sum	1	1
2031.501	Field Office, Type D	Each	1	1
2031.503	Field Laboratory, Type C	Each	1	1
2051.501	Maintenance and Restoration of Haul Roads	Lump Sum	1	1
2101.501	Clearing	Acre	0.20	0.50
2101.502	Clearing	Tree	15	25
2101.506	Grubbing	Acre	0.20	0.50
2101.507	Grubbing	Tree	16	25
2104.502	Remove Pavement	Sq. Yd.	1,363	1424
2104.509	Remove Guard Rail	Lin. Ft.	2,540	2540
2104.501	Remove Portable Culverts	Lin. Ft.	26	26
2105.501	Common Excavation	Cu. Yd.	344	344
2105.507	Subgrade Excavation	Cu. Yd.	459	459
2105.525	Topsoil Borrow	Cu. Yd.	1,007	1113
2105.527	Common Borrow Excavation	Cu. Yd.	40,202	33,156
2221.503	Aggregate Shouldering Placed, Class 5	Cu. Yd.	965	965
2331.504	Bituminous Material for Mixture	Ton	138	153.4
2331.514	Base Course Mixture	Ton	3,298	3408
2331.516	Shoulder Mixture	Ton	414	0
2351.504	Asphalt Cement	Ton	48	56
2351.509	Asphaltic Concrete Wearing Course + Filler	Ton	429	522
2351.510	Asphaltic Concrete Binder Course	Ton	546	634
2357.502	Bituminous Material for Tack Coat	Gal.	848	248
2358.501	Bituminous Material for Prime Coat	Gal.	827	0
2501.503	Structure Excavation, Class F	Cu. Yd.	16	16
2501.523	24" Concrete Culvert, Class II	Lin. Ft.	68	64
2501.536	24" Concrete Aprons	Apron	2	2
2506.506	Construct Manholes, Design A or F	Lin. Ft.	9.2	8.8
2506.516	Casting Assemblies (1)	Assembly	1	1
2554.501	Traffic Barrier, Design 8330	Lin. Ft.	3,119	3113
2554.521	Anchorage Assemblies	Assembly	14	14
2554.531	Expansion Assemblies	Assembly	21	21
2575.501	Roadside Seeding (3)	Acre	2.4	2.2
2575.502	Seed Mixture 5	Pound	120	110
2575.505	Sodding	Sq. Yd.	2,510	2892
2575.511	Mulch Material, Type 1-3	Ton	5	5
2575.512	Mulch Material, Type 2-3	Gallon	480	469
2575.531	Commercial Fertilizer, Analysis 12-12-16 (2)	Ton	1	1

- (1) Casting Assembly A-7 (Ring Casting No. 700-7, Cover Casting No. 712)
- (2) To be applied at the rate of 700 Lbs./Acre, No Lime.
- (3) Seeding Acreage Increased by 30%.

CABLE GUARDRAIL INSTALLATION DETAIL



PUBLIC UTILITIES

LINE	SHEET NO.	LOCATION	ITEM INPLACE	REMARKS	OWNERSHIP
1		Sta. 227+54 to 246+00 29' Lt.	12 Power Poles	Relocate	N.S.P.
2		227+37 to 246+00 16' Lt.	Underground Tel. Cable + 2 Man holes	Relocate	N.W.B.T.
3					
4					
5		N.S.P. = Northern States Power			
6		N.W.B.T. = Northwestern Bell Tel.			
6		228+50 16' Lt. (F)	TELE. MH.	RELOCATED	
7		231+46 " (F)	" "	"	
8		239+33 " (F)	" "	"	

CONSTRUCTION NOTES

Topsoil and other unsuitable materials shall be eliminated from the upper 3.0' of the grading grade. Topsoil and other unsuitable materials shall not be placed adjacent to structures. Grading grade on this project is defined as the top of the soil embankment or bottom of the bituminous base.

Unsuitable materials for grading are topsoils, other organic soil, debris and silt soils. Selected grading materials include all other mineral soils encountered.

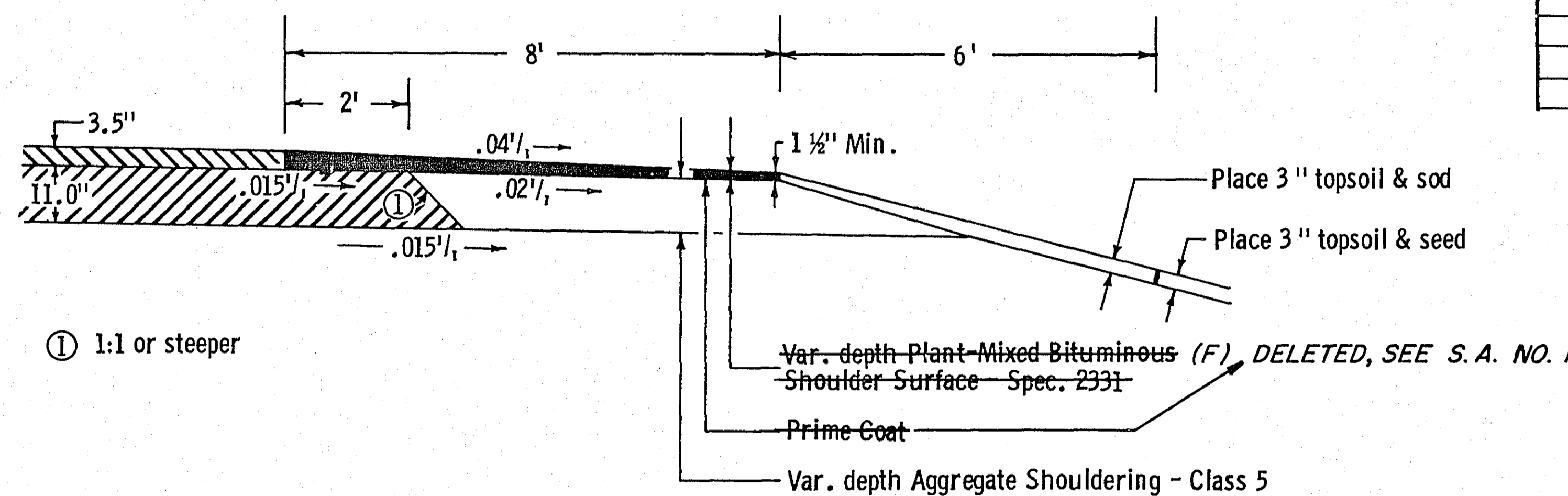
Place 3" topsoil on all seeded and sodded areas. Class 5 seed and Type 3 mulch shall be used on all seeded areas.

The following Standard Plates, approved by the Bureau of Public Roads, shall apply on this project.

STANDARD PLATES

PLATE NO.	DESCRIPTION
0001 A	Specification Reference to Standard Plates
3000 F	Reinforced Concrete Pipe
3005 A	Reinforced Concrete Pipe - Wall C
3100 F	Concrete Apron for Reinforced Concrete Pipe
4000 G	Manhole or Catch Basin (Design A)
4005 H	Manhole or Catch Basin (Design F)
4010 D	Adjusting Ring
4011 C	Precast Conc. Base
4101 B	Ring Casting for Manhole or Catch Basin
4110 D	Cover Casting for Manhole
4180 F	Manhole Step Casting
8000 C	Standard Barricades
8008 D	Contractors' Sign
8307 J	Structural Plate Beam Guardrail
8330 A	3 - Cable Guardrail Assembly
8330 A	3 - Cable Guardrail Details
9102 C	Sodding at Pipe Culvert Ends

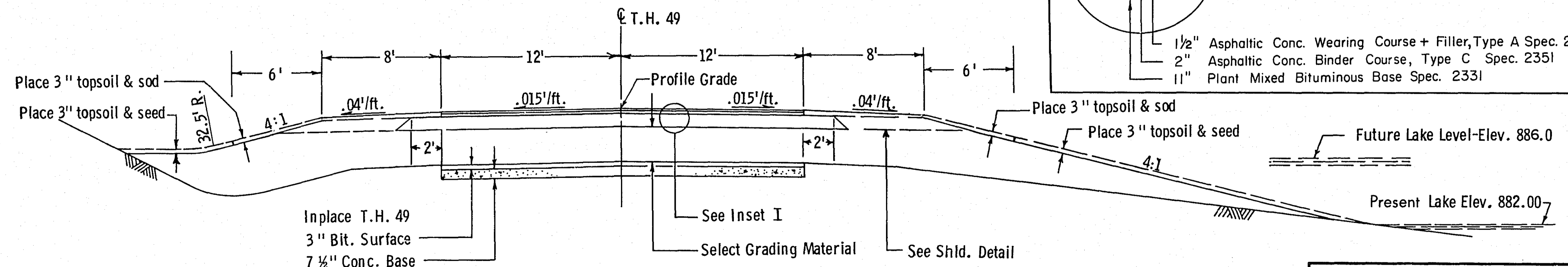
BITUMINOUS SURFACED SHOULDERS



CLEARING AND GRUBBING

STATION (TO STATION)	LOC.	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
T.H. 49 228+00 - 229+00	25'-60' Rt.	4		4	
229+00 - 229+40	27'-60' Rt.	6		6	
232+25 - 233+00	45'-65' Lt.	3		4	
233+44	50' Lt.	1		1	
233+47	46' Lt.	1		1	
233+71 - 238+00	55'-72' Lt.		0.2		0.2
FINAL					
T.H. 49 227+69-240+85	L.T. & RT.	25	0.5	25	0.5

T H 49 STATION 227+38.66 TO 246+00



INSET I

FINAL CONSTRUCTION CHECKLIST COMPLETED

T. A. Glasser

PROJECT ENGINEER

10/8/71

DATE

1 1/2" Asphaltic Conc. Wearing Course + Filler, Type A Spec. 2351
 2" Asphaltic Conc. Binder Course, Type C Spec. 2351
 11" Plant Mixed Bituminous Base Spec. 2331

ESTIMATED QUANTITIES

State Proj. No. 6214-20 (T.H. 49-126)

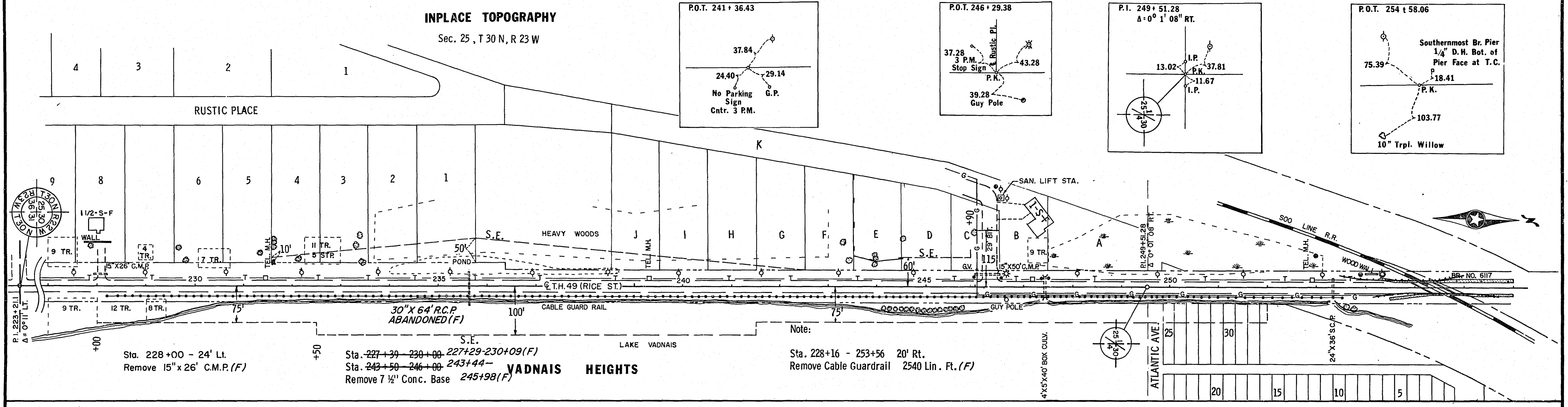
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SHOREVIEW

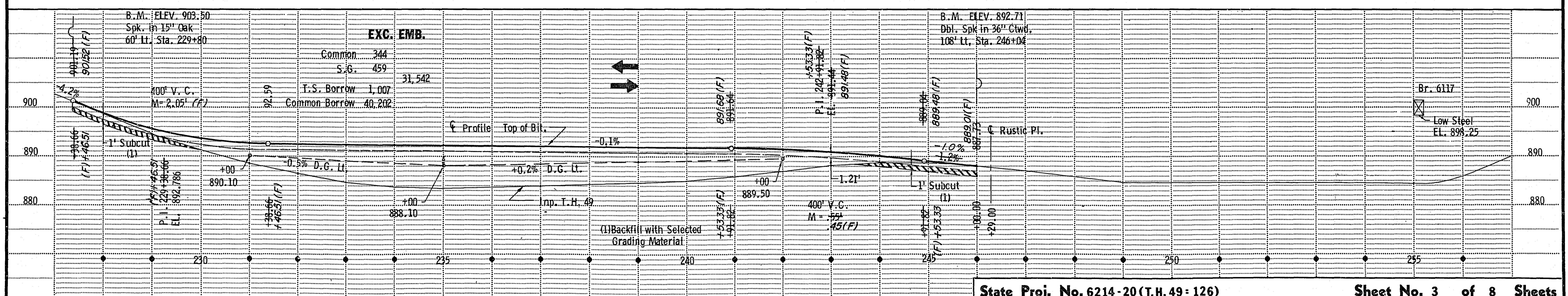
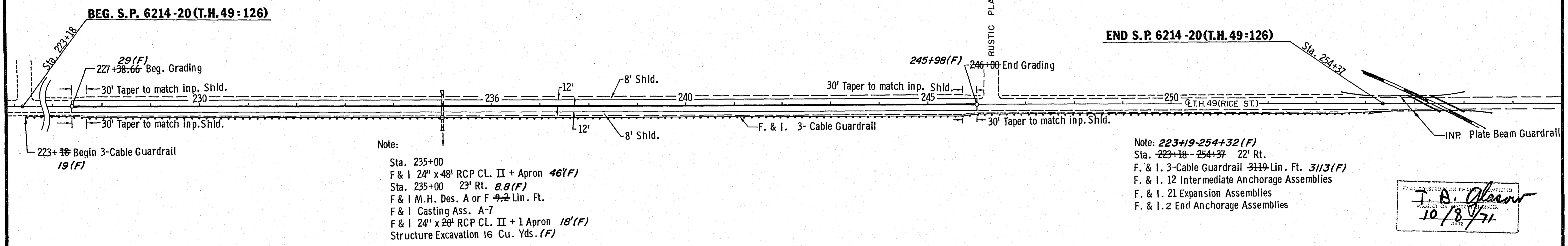
INPLACE TOPOGRAPHY

Sec. 25, T 30 N, R 23 W

Fed. Proj. No.



PROPOSED CONSTRUCTION



State Proj. No. 6214-20 (T.H. 49-126)

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