

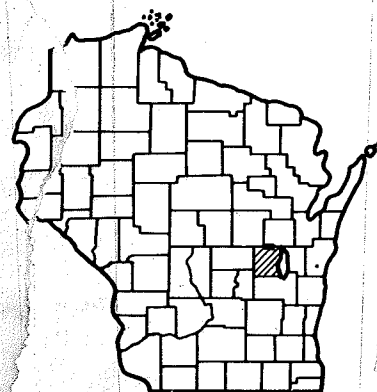
PLAN #715

PLAN #715

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Sheet No. 3	Estimate of Quantities
Sheet No. 3A - 3B	Miscellaneous Quantities
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Sheet No. 8 - 8.43	Cross Sections

TOTAL SHEETS = 101



R-1

SHEETS:

1	4.5	5.3	7.3
2	4.6	5.4	7.4
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2.2	5		7.6
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3A	SDD 8E8-1		
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4			
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4.2	SDD 9A1-3		
4.3			

WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED  
~~U.S.H. 45 - U.S.H. 41~~  
U.S.H. 76 C.T.H. "BB"  
WINNEBAGO CO.

STATE PROJECT NUMBER  
4667-1-71

Plan 1 in. = 100 ft. & 20 ft.  
Profile Hor. 1 in. = 100 ft., 20 ft. Vert. 1 in. = 10 ft. & 2 ft.  
Cross Sections Hor. 1 in. = 5 ft. Vert. 1 in. = 5 ft.

AS BUILT PLAN  
NO. 715

SUPERVISOR R. AMEL  
RESIDENT K. JURKOWSKI  
CONTRACTOR COURTNEY & PLUMMER  
COMPLETED 10-30-79

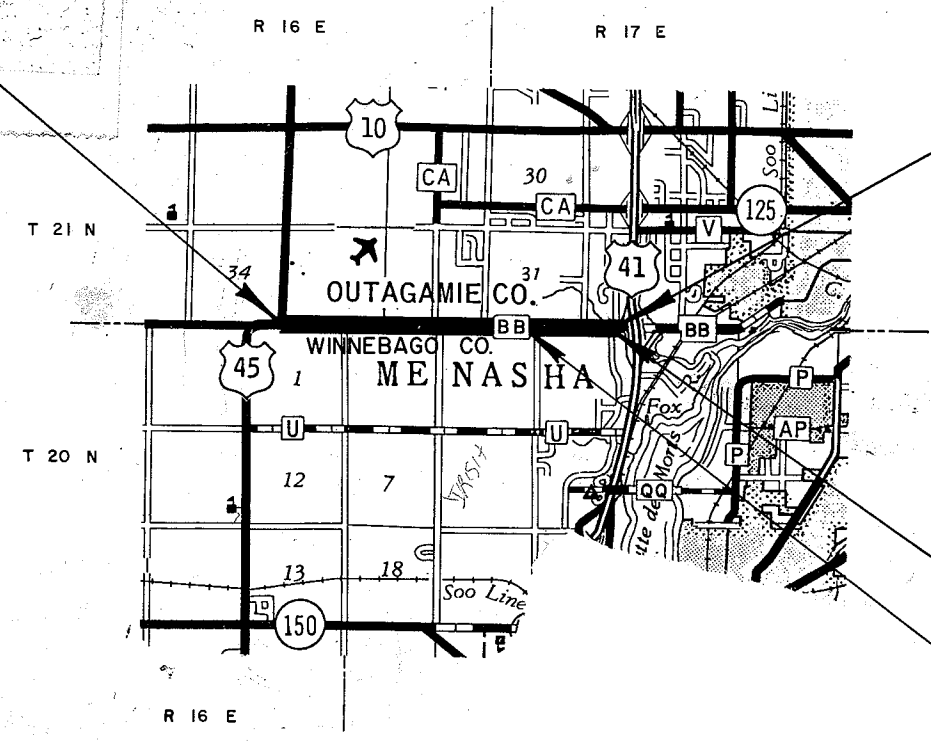
STATE PROJECT		FEDERAL PROJECT	
4667-1-71		PROJECT	CONTRACT
		RS 1016(2)	1

R1-10/24/78

62  
84  
146

BEGIN PROJECT 4667-1-71  
STA. 16+00.00  
N = 821,200 ± 200 FT. \*  
E = 2,382,980 ± 200 FT. \*  
LOCATED 7.68 FT. SOUTH AND 399.93 FT. WEST OF  
THE SOUTHEAST CORNER OF SEC. 34, T21N, R16E.  
\* SCALED FROM THE U.S.G.S. 7.5 MINUTE SERIES,  
OSHKOSH NORTHEAST QUADRANGLE (SOUTH ZONE)

END PROJECT 4667-1-71  
STA. 203+38.00  
N = 821,660 ± 200 FT. \*  
E = 2,401,660 ± 200 FT. \*  
LOCATED 54.50 FT. SOUTH AND 550 FT. WEST OF THE  
NORTHEAST CORNER OF SEC. 4, T20N, R17E.  
\* SCALED FROM THE U.S.G.S. 7.5 MINUTE SERIES,  
NEENAH QUADRANGLE (SOUTH ZONE)



Design Designation

A.D.T. 1978	= 1970
A.D.T. 1998	= 6700
D.I.V.	= 938
D.	= 60/40
T.	= 8%
V.	= 55

586  
515  
71  
22  
93

Conventional Signs

County Line	-----	Culverts in Place	-----
Township or Range Line	-----	Culverts Required	-----
Section Line	-----	Drop Inlet	-----
New Right of Way Line	-----	Power Pole	-----
Present Right of Way Line	-----	Telephone or Telegraph Pole	-----
Wire Fence	x (type) x	Right of Way Markers	-----
Corporate or City Limits	-----	Reference Stake for Hubs Only	+61.7 -25.9
Property Line	P.L.	Marsh	-----
Traveled Way or P.E.	-----	Hedge	-----
Railroads	-----	Trees	-----
Base or Survey Line	-----	Ground Elevation	Datum Line
Caution Symbol (combustible fluids under pressure)	-----	Grade Elevation	Datum Line

STRUCTURE NO. B-44/70-92

STRUCTURE NO. B-44/70-93

APPROVED FOR OUTAGAMIE COUNTY BY  
DATE 10-6-79 SIGNATURE OF OFFICIAL

APPROVED FOR WINNEBAGO COUNTY BY  
DATE SIGNATURE OF OFFICIAL

497-1-11  
PLANS PREPARED BY  
OWEN AYRES & ASSOCIATES  
1789 SHAWANO AVE.  
GREEN BAY, WISCONSIN 54303

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

Approved: 1/23/78 [Signature] District Engineer  
Approved: 9-29-78 [Signature] Chief Design Engineer  
Approved: 9/29/78 [Signature] Director of Development

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
REGION 5

GENERAL NOTES

FILL AS SHOWN ON THE PLAN SHEETS PERTAINS TO EMBANKMENT CONSTRUCTED FROM BORROW EXCAVATION AND UNCLASSIFIED EXCAVATION. THE SHRINKAGE ALLOWANCE USED TO COMPUTE THE VOLUME OF MATERIAL NECESSARY TO COMPLETE THE FILL IS 33% FOR UNCLASSIFIED EXCAVATION AND 25% FOR BORROW EXCAVATION BASED ON THE VOLUME OF THE FILL.

WHEN THE QUANTITY OF THE ITEM OF BASE COURSE OR SURFACE COURSES IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE EXACT LOCATION AND LIMITS OF PRIVATE ENTRANCES AND FIELD ENTRANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. PRIVATE UTILITY COMPANIES SHALL ADJUST OR MOVE ALL FACILITIES WHICH INTERFERE WITH NEW CONSTRUCTION.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT SHOWN ON THE CROSS SECTIONS OF PLAN AND PROFILE SHEETS, BUT IF REQUIRED, SHALL BE MEASURED AND PAID FOR AS UNCLASSIFIED EXCAVATION. THE LOCATION FOR EBS, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.

CERTAIN UNDERGROUND UTILITY STRUCTURES HAVE BEEN LOCATED ON THESE PLANS. THESE LOCATIONS SHALL NOT BE TAKEN AS CONCLUSIVE, VERIFICATION AS TO THE LOCATION TO THE SATISFACTION OF THE CONTRACTOR OF ALL UNDERGROUND UTILITY STRUCTURES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE ASSUMED AS A CONDITION OF THE CONTRACT. SALVAGED TOPSOIL SHALL BE PLACED AS SHOWN ON THE PLANS TO A DEPTH OF APPROXIMATELY 4 INCHES AT TIME OF PLACEMENT. ALL AREAS COVERED WITH SALVAGED TOPSOIL SHALL BE MULCHED.

THE TOWNS OF GRAND CHUTE AND MENASHA SHALL ADJUST OR MOVE ALL APPLICABLE UTILITIES WHICH INTERFERE WITH THE NEW CONSTRUCTION. CURB AND GUTTER RADII ARE SHOWN TO THE FRONT FACE OF CURB. CURB HEIGHTS AT ENDS OF CURB AND GUTTER SHALL BE TAPERED FROM 0 TO 6 INCHES IN 5 FEET.

INLET AND DISCHARGE ELEVATIONS SHOWN ON THE PLAN SHEETS ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. EXACT LOCATION OF CULVERT PIPES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ORIGIN OF BENCHMARKS IS U.S.G.S., B.M.T.T.I.B., 1954 STA. 7 + 87 IRISH ROAD 35 FEET RIGHT, ELEVATION 809.16.

BEARINGS SHOWN ON THIS PLAN ARE TRUE BEARINGS TO THE NEAREST SECOND.

WISCONSIN TELEPHONE COMPANY BUTTE DES MORTS UTILITY DISTRICT  
 MR. JIM BROPHY MR. DOUGLAS HUNDOON  
 225 NORTH RICHMOND P.O. BOX 1192  
 APPLETON, WISCONSIN 54911 APPLETON, WISCONSIN 54911  
 TELEPHONE: 414-734-8020 TELEPHONE: 414-731-6319  
 733-2590

RIPRAP AT CULVERT ENDS SHALL BE PLACED IN ACCORDANCE WITH THE ENGINEER IN THE FIELD.

ALL EXISTING ENTRANCE AND CROSS DRAIN PIPES SHOWN ON THE PLAN SHEETS SHALL BE REMOVED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

REMOVAL OF EXISTING CULVERT PIPES IS TO BE CONSIDERED INCIDENTAL UNLESS INDICATED OTHERWISE ON THE PLANS.

EARTHWORK QUANTITIES AS SHOWN IN THE BALANCES INCLUDE THE QUANTITIES FROM SIDE ROAD CONNECTIONS.

THE C.T.H. "BB" PROFILE AS SHOWN ON THE PLAN SHEETS FROM STA. 16 + 00 TO STA. 185 + 00 REFERS TO THE ULTIMATE FINISHED GRADE. A DEDUCTION OF 2 INCHES IS REQUIRED TO ARRIVE AT THE INITIAL FINISHED GRADE OF THIS PROJECT.

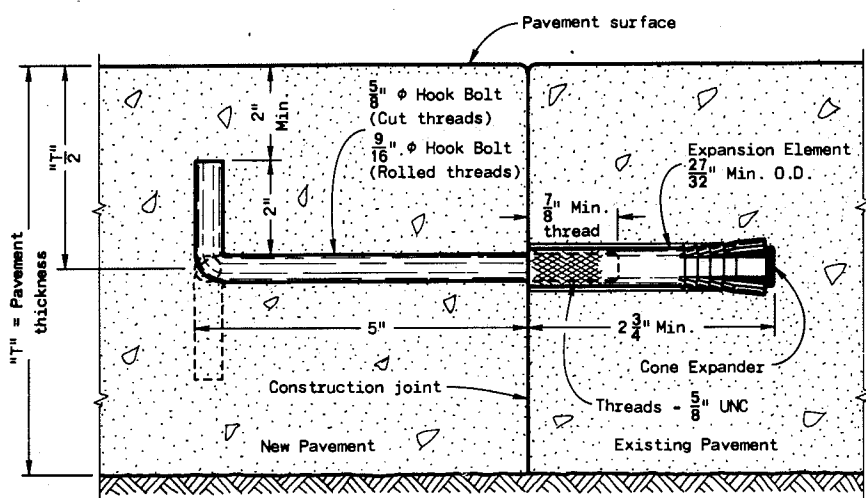
INTERSECTION SOD FLUMES TO BE AS DIRECTED BY THE ENGINEER.

HANDICAP RAMP CURB OPENINGS AT STREET RADII SHALL BE LOCATED TO ACCOMMODATE THE TYPE I RAMPS AS SHOWN ON STANDARD DETAIL DRAWING

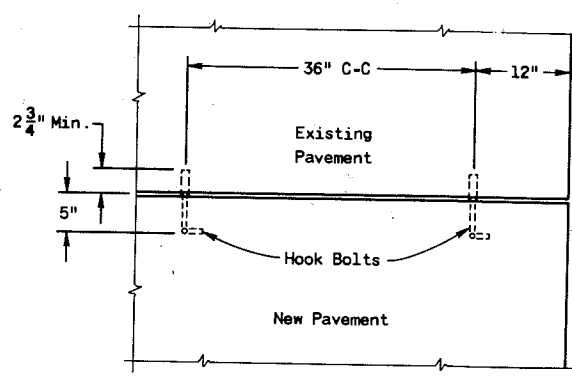
SEED ALL AREAS TO RIGHT-OF-WAY LINE.

STANDARD DETAIL DRAWINGS

CATCH BASIN, MANHOLE AND INLET COVERS	8A5-3
MANHOLES TYPE 2 AND 3	8B7-2
INLETS, TYPE 1 AND 2	8C1-3
INLETS, TYPE 8, 9, 10, AND 11	8C5-1
CONCRETE CURB, GUTTER, COMBINATION CURB & GUTTER OR INTEGRAL CURB	8D1-4
CONCRETE SURFACE DRAINS	8D4-1
MANHOLES, TYPE 1	8B6-2
INLETS, TYPE 3	8C2-3
SOD OR MASONRY AND SOD DITCH CHECKS	8E4-2
EROSION MAT	8E7-1
TYPICAL INSTALLATIONS OF EROSION BALES	8E8-1
APRON ENDWALLS FOR CULVERT PIPE & PIPE ARCH	8F1-8
NAME PLATE (STRUCTURES)	12A3-3
LAYOUT DETAILS FOR AT-GRADE SIDE ROAD INTERSECTIONS	9A1-3
CONCRETE PAVEMENT REINFORCEMENT	13A1-3
CLASS "A" STEEL PLATE BEAM GUARD & STEEL PLATE BEAM MEDIAN GUARD	14B2-4
CONSTRUCTION BARRICADES AND STANDARD SIGNS	15C1-1
CURB RAMPS FOR HANDICAPPED PERSONS	8D5-1



SECTION  
 CONSTRUCTION JOINT  
 HOOK BOLT



PLAN VIEW  
 Showing location details for Hook Bolts.

**HOOK BOLTS**  
 Longitudinal construction joints created as a result of widening an existing pavement shall be tied with hook bolts.

Hook bolts shall conform to ASTM Designation A 307, except that the requirements of paragraph 1.3 shall not apply.

The expansion anchor shall be an internally threaded anchor which consists of an externally slit expansion element and a single cone expander. The expansion element shall contain a minimum of three grips. The expansion element shall be threaded in such a manner as to prevent the machine bolt from coming into contact with the cone expander at any time.

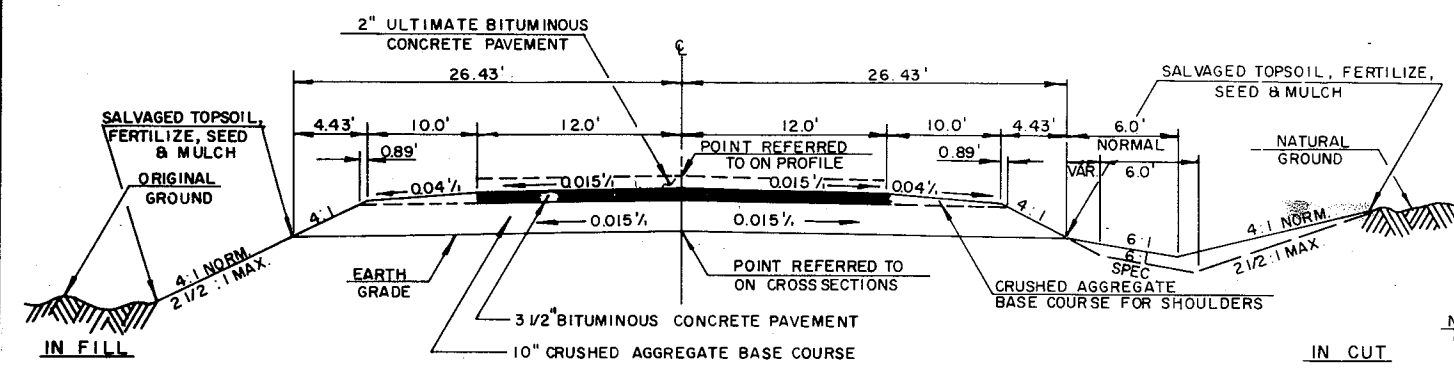
The expansion anchor shall be set in existing pavement according to manufacturer's instructions. The holes shall be of the recommended diameter and depth and shall be drilled by methods recommended by the manufacturer of the particular anchor. The drilled holes shall be rough, not reamed, and free from any drill dust.

WISCONSIN ELECT  
 MR. O. R. BOI  
 807 SOUTH  
 APPLE

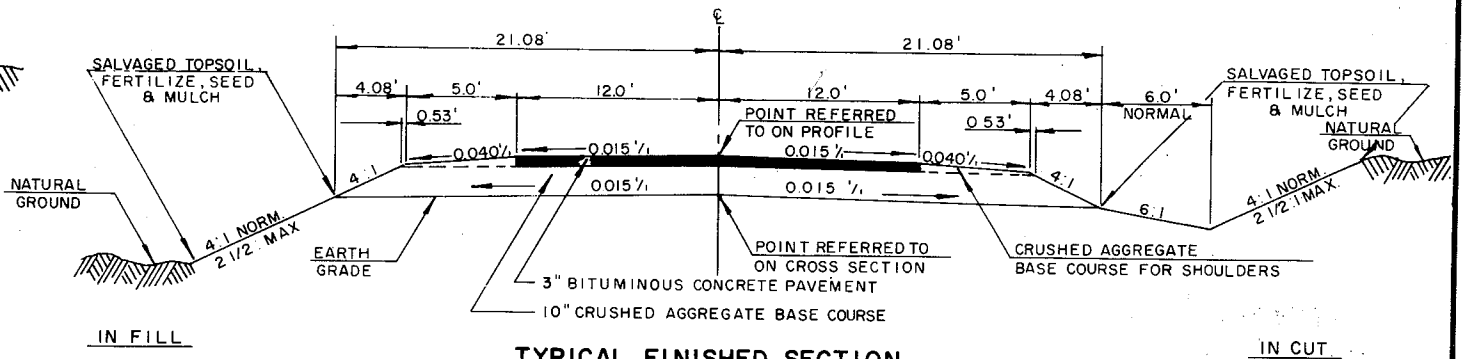
24  
25  
27.5  
32.5  
27.5  
60

3  
24

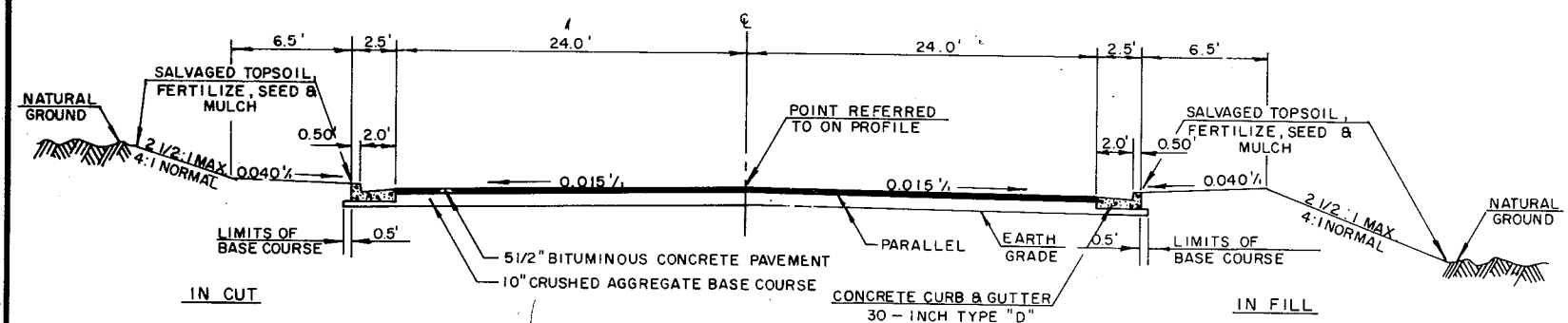
STATE PROJECT NUMBER	SHEET NO.
4667 - 1 - 71	2.1
TYPICAL CROSS SECTIONS FOR	
C.T.H. "BB" WINNEBAGO CO.	



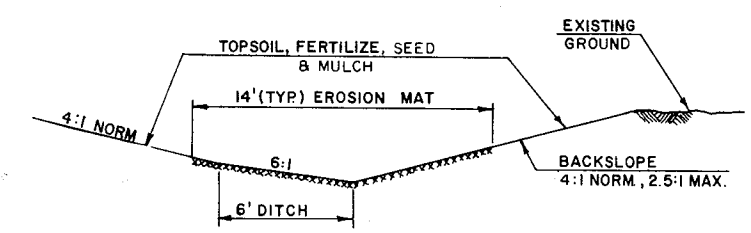
**TYPICAL FINISHED SECTION  
C.T.H. "BB"**  
STA. 16+00 - STA. 185+00



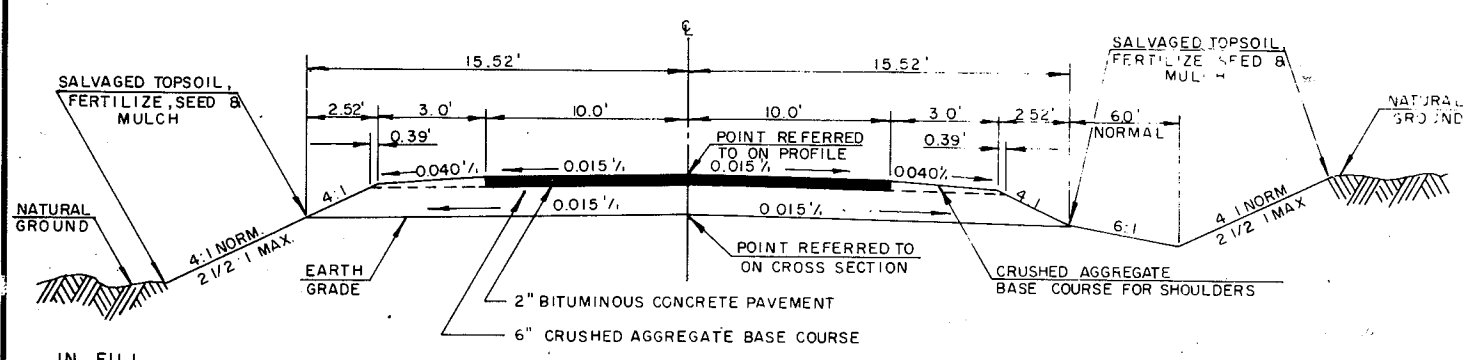
**TYPICAL FINISHED SECTION  
FOR  
VAN DYKE & FRONTAGE ROAD**



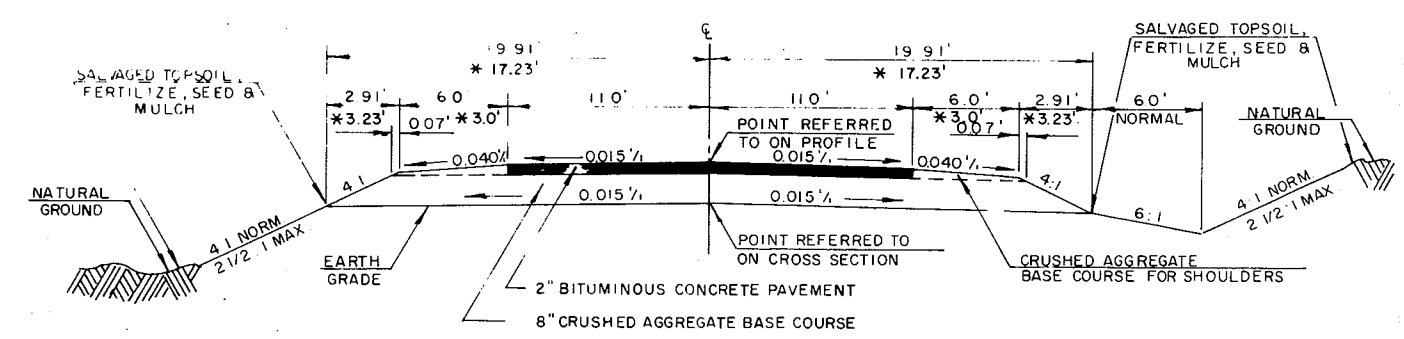
**TYPICAL URBAN SECTION  
FOR C.T.H. "BB"**  
STA. 185+00 - STA 201+63



**EROSION MAT**



**TYPICAL FINISHED SECTION  
FOR  
BEHM COURT**

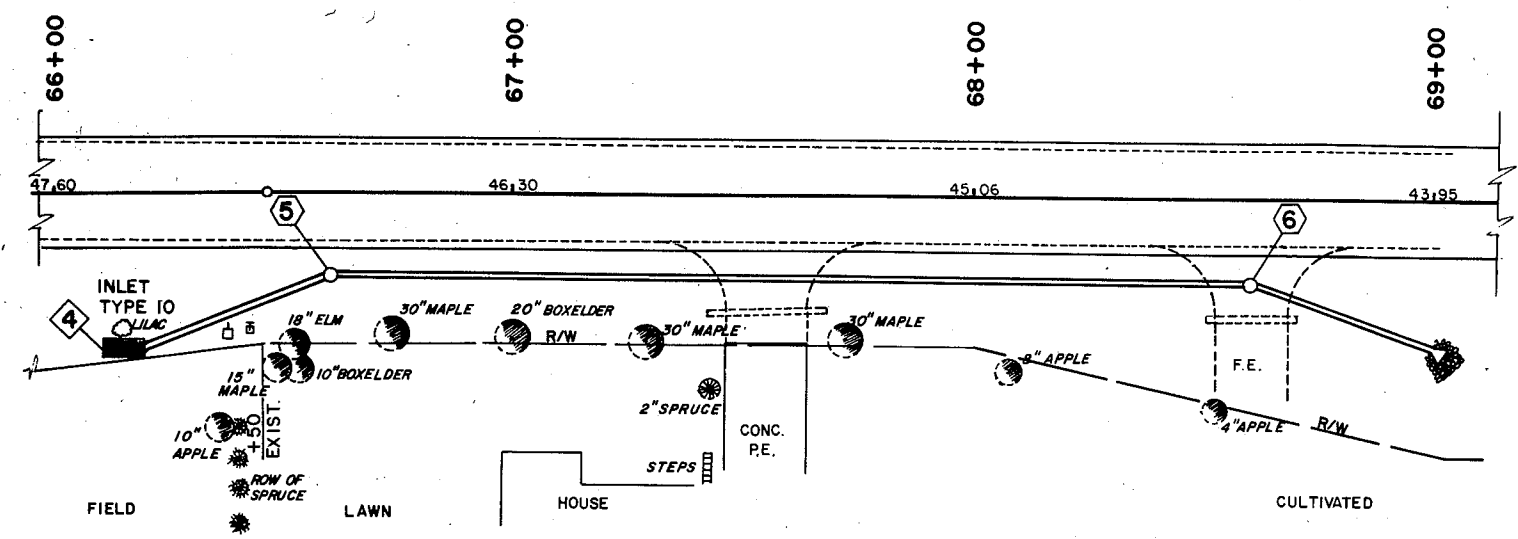


**TYPICAL FINISHED SECTION  
BITUMINOUS SURFACE SIDE ROADS**

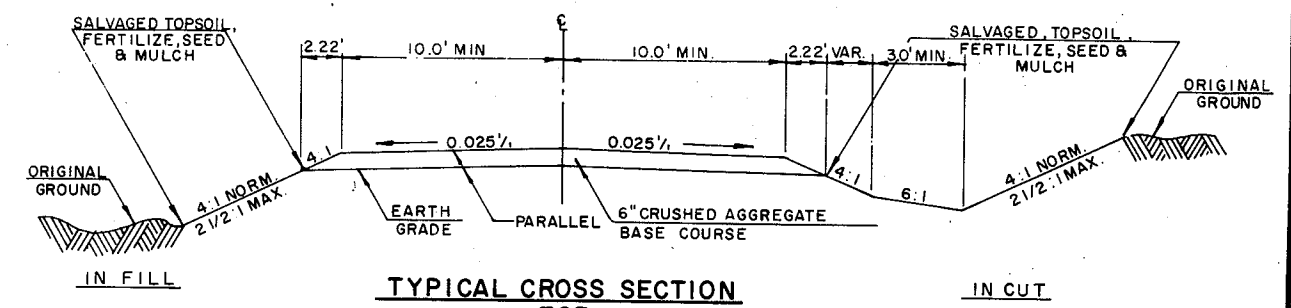
- CLAYTON AVE
- TWO MILE RD.
- IRISH RD
- MAYFLOWER DR
- BELAIRE DR
- COLD SPRINGS RD
- CASALOMA DR.

\* NORTH BND CONN. TO U.S.H. "45"

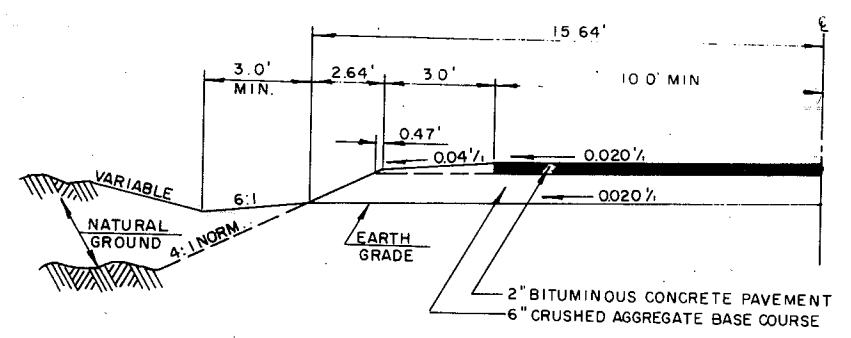
STATE PROJECT NUMBER	SHEET NO.
4667-1-71	2.2
TYPICAL CROSS SECTIONS FOR	
C.T.H. "BB" WINNEBAGO CO.	



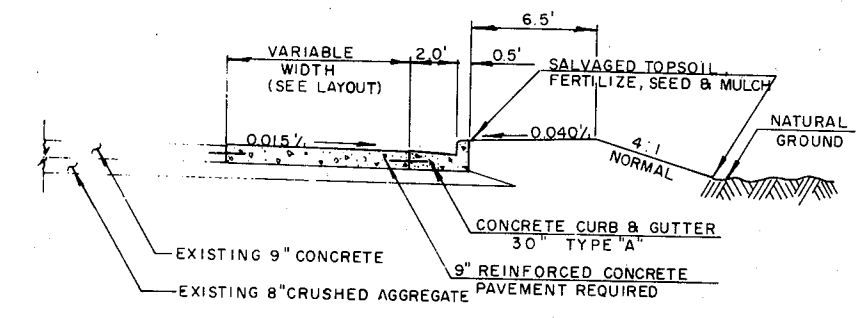
**PLAN FOR**  
**STORM SEWER - MANHOLES AND INLET**  
 STA. 66 + 00 TO STA. 69 + 00



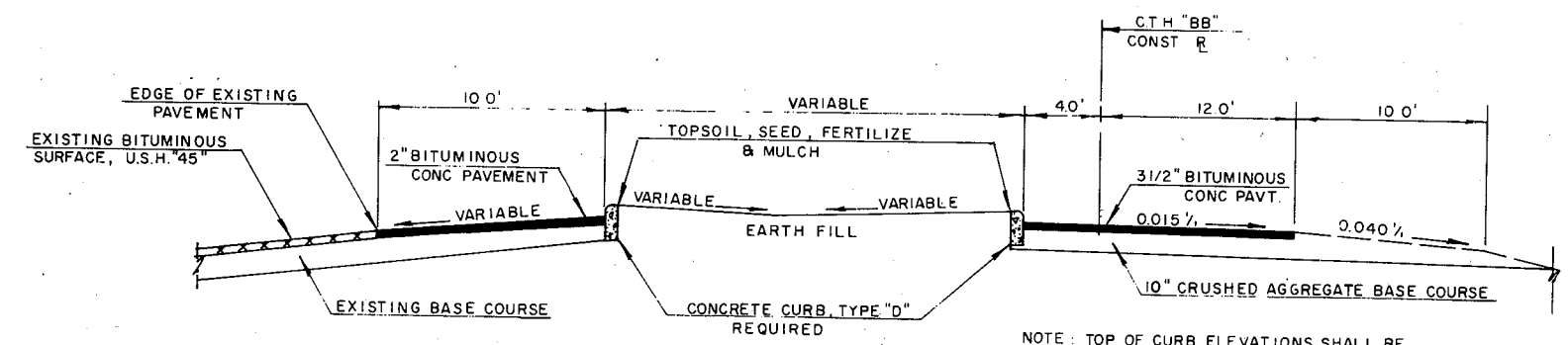
**TYPICAL CROSS SECTION FOR CR. AGG. SURFACED PRIVATE ENTRANCES**



**TYPICAL 1/2 SECTION FOR BITUMINOUS SURFACE PRIVATE ENTRANCES**



**1/2 TYPICAL SECTION STATION 201 + 63 - STATION 203 + 38**



NOTE: TOP OF CURB ELEVATIONS SHALL BE DETERMINED EXACTLY BY ENGINEER IN THE FIELD

**SECTION THRU ISLAND AT U.S.H. "45" LOOKING NORTHEAST**



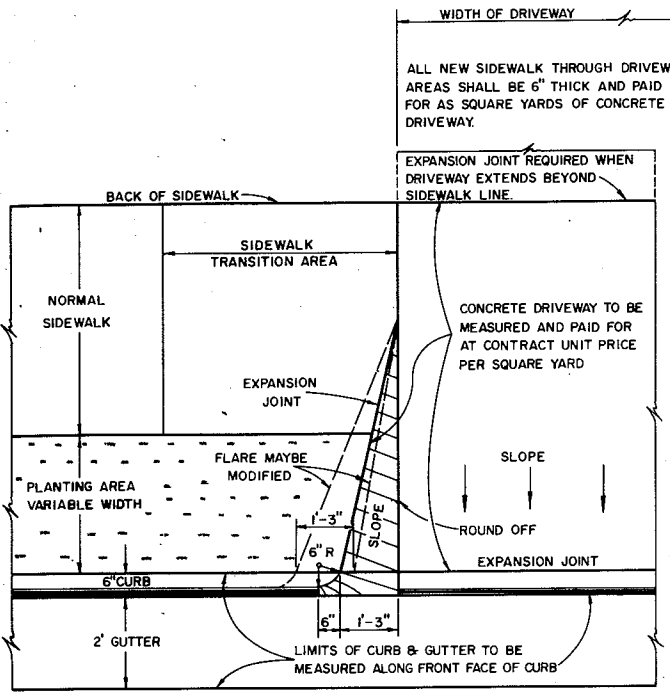
**CONSTRUCTION DETAILS  
FOR  
DRIVEWAYS**

**WIDTH OF DRIVEWAYS**

SINGLE OR COMBINATION MEASURED AT RIGHT ANGLES TO CENTERLINE OF DRIVEWAY.

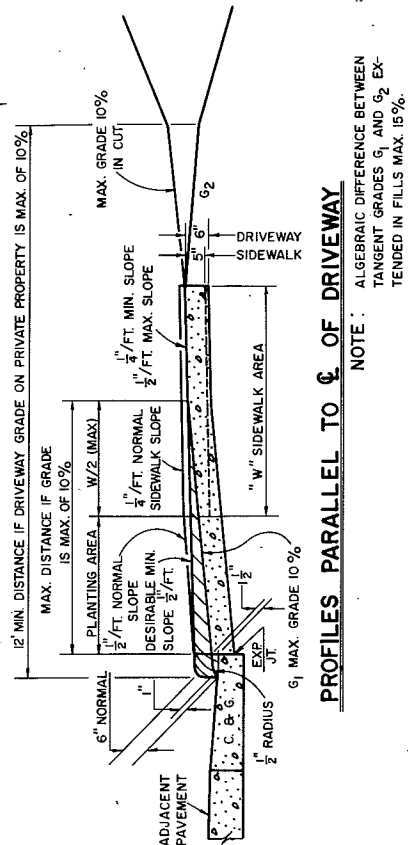
- RURAL - NON - COMMERCIAL 24 FT MAX.
- URBAN - NON - COMMERCIAL 24 FT MAX.
- URBAN - COMMERCIAL 35 FT MAX.

**NOTE:** FOR NON - RIGID SURFACED DRIVEWAYS USE 6" DEPTH GRAVEL OR CRUSHED AGGREGATE BASE COURSE.



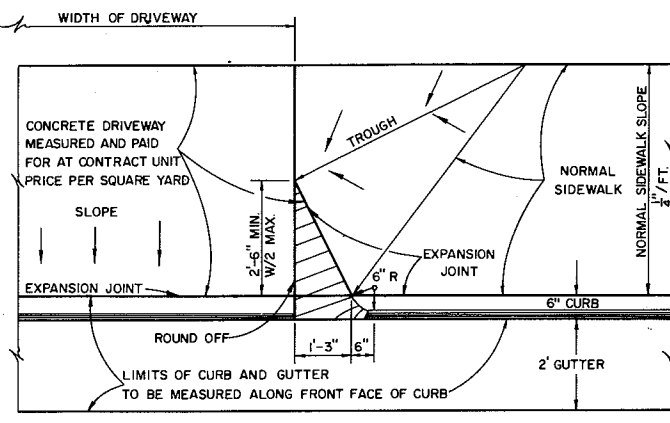
**PLAN**

**WHEN SIDEWALK IS SEPARATED FROM CURB BY PLANTING AREA**



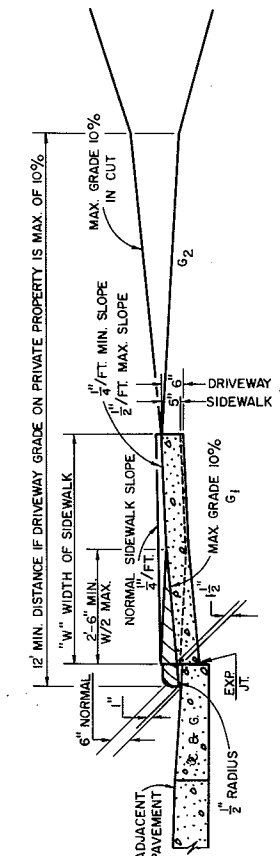
**PROFILES PARALLEL TO C OF DRIVEWAY**

**NOTE:** ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G<sub>1</sub> AND G<sub>2</sub> EXTENDED IN FILLS MAX. 15%.



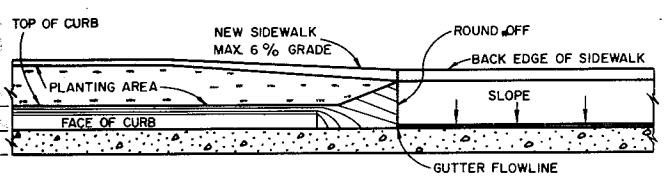
**PLAN**

**WHEN SIDEWALK IS IMMEDIATELY ADJACENT TO CURB**

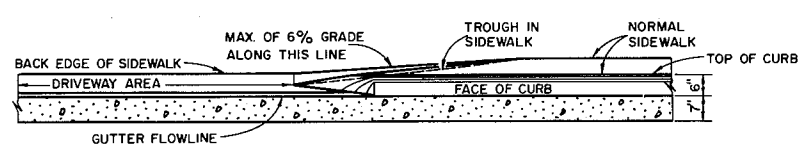


**PROFILES PARALLEL TO C OF DRIVEWAY**

**NOTE:** ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G<sub>1</sub> AND G<sub>2</sub> EXTENDED IN FILLS MAX. 15%.



**PROFILES PARALLEL TO CENTERLINE OF ROADWAY**



**PROFILES PARALLEL TO CENTERLINE OF ROADWAY**

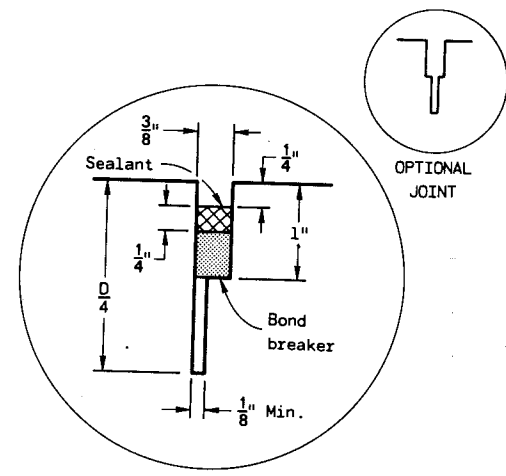
**DRIVEWAY DETAILS**

**GENERAL NOTES**

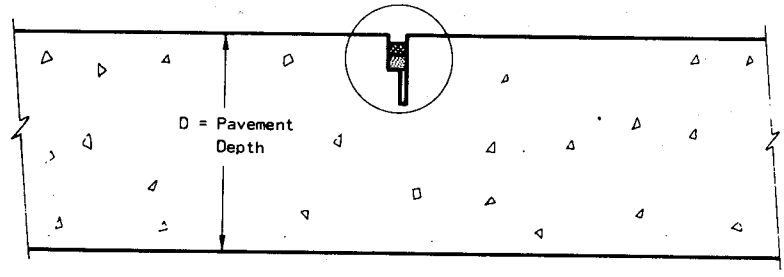
FOR ALL OTHER CONSTRUCTION DETAILS AND REQUIREMENTS FOR THE WORK DETAILED ON THIS DRAWING SEE SECTIONS 409, 601 AND 602 OF THE STANDARD SPECIFICATIONS. CONCRETE USED IN THE WORK OF "CONCRETE DRIVEWAYS" SHALL BE GRADE "A" CONCRETE USED IN THE WORK OF "CONCRETE CURB AND GUTTER" AND "CONCRETE SIDEWALKS" SHALL BE GRADE "A" IN CONFORMITY WITH THE STANDARD SPECIFICATIONS.

STATE PROJECT NUMBER	SHEET NO.
4667-1-71	2.4
NON-REINFORCED CONCRETE PAVEMENT (20' Normal transverse joints with poured type sealer)	

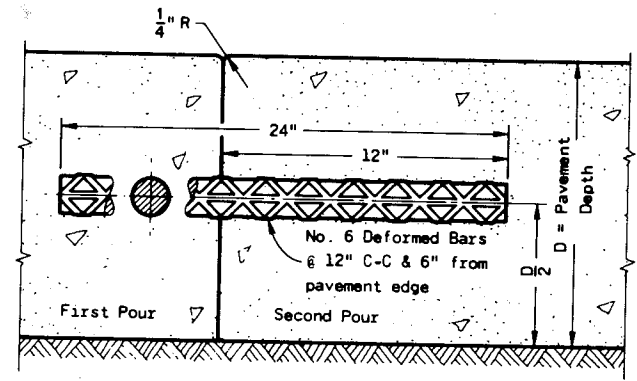
R 1 - 10/24/78



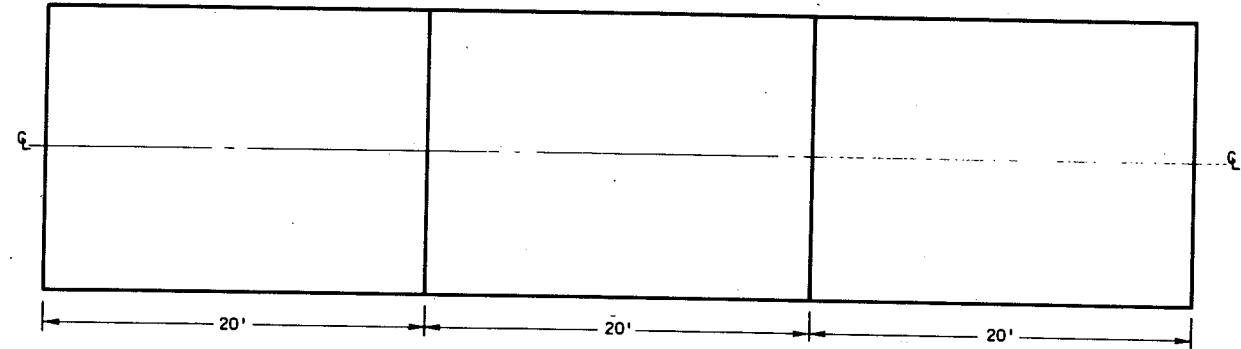
ONE COMPONENT SILICONE JOINT SEAL



CONTRACTION JOINT



CONSTRUCTION JOINT



CONTRACTION JOINT LOCATIONS

**GENERAL NOTES**

Details of construction not shown on this drawing shall conform to Standard Specifications and Special Provisions

**CONTRACTION JOINTS**

Contraction joints shall be located at a uniform spacing of 20' (±1'). Exceptions shall be as directed by the engineer.

Contraction joints shall be sealed with a silicone joint sealer.

A backup material or bond breaker, compatible with the joint sealer shall be placed in the bottom of joints prior to sealing.

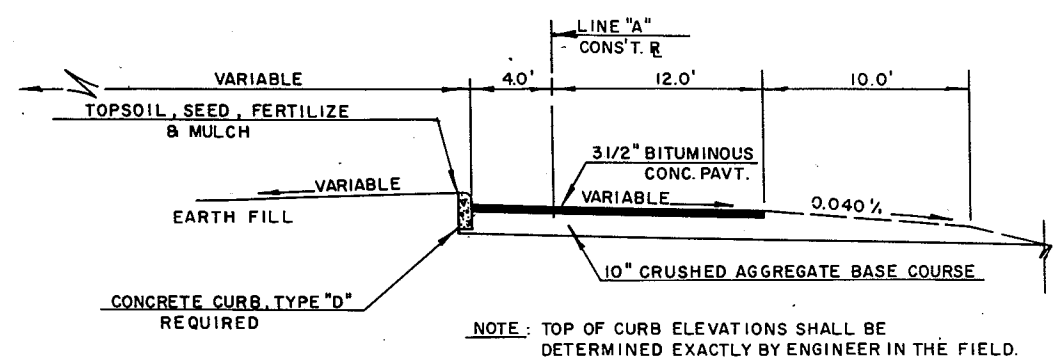
**CONSTRUCTION JOINTS**

Construction joints shall be located a minimum of 4 feet from the nearest contraction joint.

Deformed bars may be inserted through the header board after concrete has been poured.

# INTERSECTION U.S.H. "45" & C.T.H. "BB"

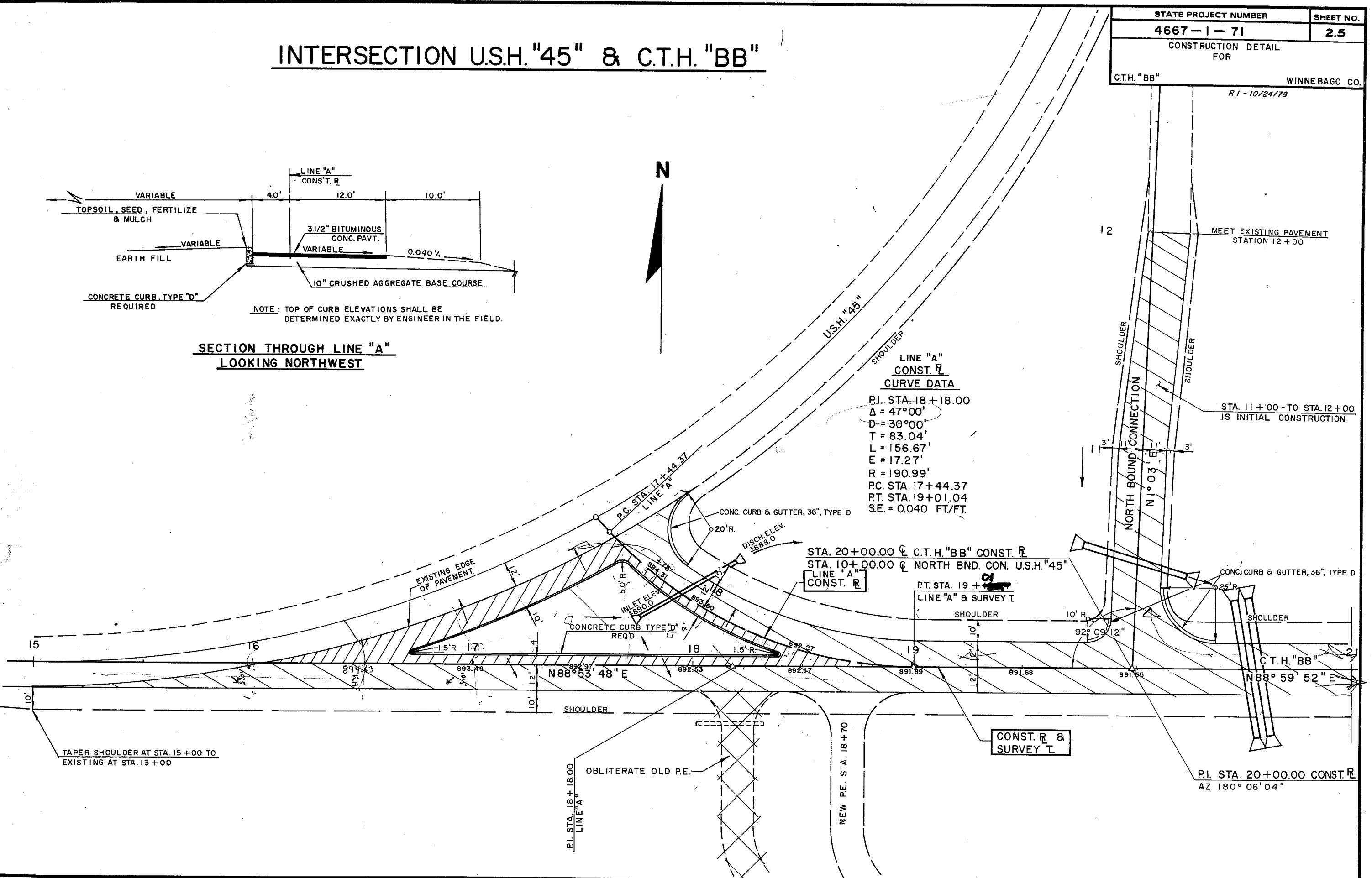
STATE PROJECT NUMBER	SHEET NO.
4667-1-71	2.5
CONSTRUCTION DETAIL FOR	
C.T.H. "BB"	WINNEBAGO CO.
R1-10/24/78	



**SECTION THROUGH LINE "A"  
LOOKING NORTHWEST**



**LINE "A"  
CONST. R  
CURVE DATA**  
 P.I. STA. 18+18.00  
 $\Delta = 47^\circ 00'$   
 $D = 30^\circ 00'$   
 $T = 83.04'$   
 $L = 156.67'$   
 $E = 17.27'$   
 $R = 190.99'$   
 P.C. STA. 17+44.37  
 P.T. STA. 19+01.04  
 S.E. = 0.040 FT/FT.



TAPER SHOULDER AT STA. 15+00 TO EXISTING AT STA. 13+00

P.I. STA. 18+18.00  
LINE "A"

OBLITERATE OLD P.E.

NEW P.E. STA. 18+70

CONST. R & SURVEY T

P.I. STA. 20+00.00 CONST. R  
AZ. 180° 06' 04"

3500

5800

$\frac{1150}{2} \text{ 57.}$   
2/2300





# DETAIL SUMMARY OF MISCELLANEOUS QUANTITIES

STATE PROJECT NUMBER	SHEET NO.
4667-1-71	3A
C.T.H. "BB" WINNEBAGO CO.	
R 1 - 10/24/78	

### RIPRAP

LOCATION	QUANTITY (CY.)
UNDISTRIBUTED AT SEWER DISCHARGES	10

### SEEDING

LOCATION	SEED MIXTURE NO. 1 (LBS.)	APPROXIMATE SQ. YDS.
MAINLINE & SIDE ROADS	1,565	116,000
BORROW PIT	535	40,000

### CROSS DRAINS

STATION	LOCATION	DIA (IN.)	LENGTH (L.F.)	TYPE	CLASS	THICKNESS (IN.)		END TREATMENT RIPRAP (C.Y.)	SOD (S.Y.)	APRON ENDWALLS	ELEVATIONS	
						STEEL	ALUMINUM				INLET	DISCH.
20 + 55	CL	TWIN 35 X 24	2 @ 64	C.M.P.A.	---	---	---	30	4		886.5	886.0
36 + 70	CL	24	64	C.P.	III	0.064	0.075	12	2		871.8	871.2
52 + 25	CL	24	64	C.P.	III	0.064	0.075	12	2		860.8	858.8
71 + 65	CL	36	80	C.P.	-III	0.079	0.105	16	2		836.0	833.8
92 + 90	CL	24	66	C.P.	III	0.064	0.075	12	2		818.4	817.0
142 + 00	CL	36	66	C.P.	III	0.079	0.105	16	2		772.2	771.3

### REMOVING GUARDRAIL

STATION TO STATION	LOCATION	L.F.
(C.T.H. "BB") 194 + 18	LT. & RT.	50
(FRONTAGE RD.) 8 + 50	LT.	130

### EROSION MAT

LOCATION	SQ. YDS.
UNDISTRIBUTED	1,400

### EROSION BALES

LOCATION	EACH
UNDISTRIBUTED	100

### ADJUSTING MANHOLE COVERS

STATION	LOCATION	TYPE	REMARKS
197+20	4' LT.	SAN.	ADJUST
200+71	14' RT.	TELE.	ADJUSTED BY OTHERS
201+18	1' RT.	SAN.	ADJUST

### SODDING (DITCH CHECKS) ~~NOT PLACED~~

STATION TO STATION	LOCATION	QUANTITY	SQ. YDS.
<del>25 + 00 - 29 + 00</del>	<del>LT. &amp; RT.</del>	<del>14</del>	<del>140</del>
<del>29 + 00 - 35 + 00</del>	<del>LT.</del>	<del>10</del>	<del>100</del>
<del>46 + 00 - 47 + 00</del>	<del>LT. &amp; RT.</del>	<del>7</del>	<del>70</del>
<del>47 + 00 - 49 + 00</del>	<del>RT.</del>	<del>4</del>	<del>40</del>
<del>55 + 00 - 57 + 00</del>	<del>LT. &amp; RT.</del>	<del>3</del>	<del>90</del>
<del>57 + 00 - 60 + 00</del>	<del>LT.</del>	<del>3</del>	<del>30</del>
<del>60 + 00 - 65 + 00</del>	<del>LT. &amp; RT.</del>	<del>13</del>	<del>130</del>
<del>68 + 00 - 69 + 00</del>	<del>LT.</del>	<del>4</del>	<del>40</del>
<del>69 + 00 - 71 + 00</del>	<del>RT.</del>	<del>5</del>	<del>50</del>
<del>76 + 00 - 80 + 00</del>	<del>LT.</del>	<del>5</del>	<del>50</del>
<del>84 + 00 - 92 + 00</del>	<del>LT. &amp; RT.</del>	<del>22</del>	<del>220</del>
<del>97 + 00 - 106 + 00</del>	<del>LT.</del>	<del>4</del>	<del>40</del>
<del>100 + 00 - 105 + 00</del>	<del>RT.</del>	<del>7</del>	<del>70</del>
<del>105 + 00 - 114 + 00</del>	<del>LT. &amp; RT.</del>	<del>21</del>	<del>210</del>
<del>116 + 00 - 133 + 00</del>	<del>LT. &amp; RT.</del>	<del>56</del>	<del>560</del>
<del>167 + 00 - 180 + 00</del>	<del>RT.</del>	<del>16</del>	<del>160</del>
<del>170 + 00 - 180 + 00</del>	<del>LT.</del>	<del>13</del>	<del>130</del>
UNDISTRIBUTED SODDING		332	

### CLEARING & GRUBBING

LOCATION STATION TO STATION	CLEARING (STATION) (IN. DIA.)	GRUBBING (STATION) (IN. DIA.)
16 + 00 - 23 + 00	• 4	• 4
23 + 00 - 33 + 00	65 81	65 00
33 + 00 - 51 + 00	•	•
51 + 00 - 59 + 00	50 31	50 31
59 + 00 - 60 + 00	1	1
60 + 00 - 66 + 00	•	•
66 + 00 - 74 + 00	160 11	160 85
74 + 00 - 85 + 00	• 29	• 29
85 + 00 - 89 + 00	25 20	25 12
89 + 00 - 96 + 00	7	7
2-MILE ROAD	60 20	60
IRISH ROAD	1	1
96 + 00 - 106 + 00	•	•
106 + 00 - 112 + 00	15 20	15 20
112 + 00 - 113 + 00	1	1
113 + 00 - 122 + 00	85 162	85 162
122 + 00 - 124 + 00	2	2
124 + 00 - 125 + 00	15 19	15 19
125 + 00 - 137 + 00	• 50	• 28
137 + 00 - 140 + 00	3	3
140 + 00 - 157 + 00	• 9	• 9
157 + 00 - 174 + 00	190 193	190 193
174 + 00 - 181 + 00	•	• 12
181 + 00 - 182 + 00	20	20 30
182 + 00 - 193 + 00	• 8	• 8
193 + 00 - 196 + 00	200 66	200 96
196 + 00 - 203 + 38	• 54	• 54

### EXCAVATION

LOCATION	UNCLASSIFIED CU. YD.	BORROW CU. YD.
C.T.H. "BB"	40,258	16,440
NO. BOUND CONN. TO "45"	179	
CLAYTON AVENUE	68	
2-MILE ROAD	224	
IRISH ROAD	72	
MAYFLOWER DRIVE	33	
BEL AIRE DRIVE	78	
COLD SPRINGS ROAD	50	
LA SALOMA DRIVE	116	
BEHM COURT	928	
FRONTAGE ROAD	328	
VAN DYKE ROAD	68	

### HOOK BOLTS

STATION - STATION	LOCATION
STA. 201+63 - STA. 203+74	RT.
STA. 201+63 - STA. 203+40	LT.

\* DENOTES BASIS OF PAYMENT

# DETAIL SUMMARY OF MISCELLANEOUS QUANTITIES

STATE PROJECT NUMBER	SHEET NO.
4667-1-71	38
C.T.H. "BB" WINNEBAGO CO.	
R 1-10/24/78	

### MINOR SIDE ROAD AND PRIVATE ENTRANCE PIPES

STATION	LOCATION	DIA. (IN.)	LENGTH (L.F.)	TYPE	CLASS	THICKNESS (IN.)		APRON ENDWALLS	SCHEDULE
						STEEL	ALUMINUM		
17 + 88	REF. LINE "A"	18	50	C.P.	III	0.064	0.060	2	8
10 + 50	NO. CONN.	36	48	C.P.	III	0.079	0.105	2	14
63 + 35	P.E. LT.	24	28	C.P.	III	0.064	0.075	2	13
67 + 30	P.E. LT.	24	28	C.P.	III	0.064	0.075	2	13
70 + 85	F.E. LT.	24	28	C.P.	III	0.064	0.075	2	13
10 + 34	2 MILE ROAD	35 X 24	48	C.M.P.A.	---	0.079	---	2	12
104 + 40	P.E. LT.	30	40	C.P.	III	0.079	0.075	2	12
105 + 60	P.E. LT.	30	40	C.P.	III	0.079	0.075	2	12
118 + 55	P.E. LT.	30	42	C.P.	III	0.079	0.075	2	12
125 + 14	P.E. RT.	24	28	C.P.	III	0.064	0.075	2	13
10 + 42	MAYFLOWER DR.	36	48	C.P.	III	0.079	0.105	2	14
129 + 40	F.E. RT.	24	28	C.P.	III	0.064	0.075	2	10
135 + 12	P.E. RT.	24	36	C.P.	III	0.064	0.075	2	10
9 + 52	BELAIRE RD.	24	48	C.P.	III	0.064	0.075	2	10
140 + 00	F.E. LT.	36	28	C.P.	III	0.079	0.105	2	14
148 + 10	F.E. RT.	24	28	C.P.	III	0.064	0.075	2	10
150 + 00	P.E. RT.	24	28	C.P.	III	0.064	0.075	2	10
9 + 56	COLD SPRING RD.	28 X 20	50	C.M.P.A.	---	0.064	---	2	10
173 + 40	P.E. RT.	24	40	C.P.	III	0.064	0.075	2	10
173 + 75	F.E. LT.	24	28	C.P.	III	0.064	0.075	2	10
174 + 40	P.E. RT.	24	28	C.P.	III	0.064	0.075	2	10
176 + 40	P.E. RT.	24	40	C.P.	III	0.064	0.075	2	10
181 + 50	P.E. LT.	24	28	C.P.	III	0.064	0.075	2	10
10 + 32	CASALOMA	35 X 24	48	C.M.P.A.	---	0.079	---	2	12
180 + 15	P.E. RT.	24	40	C.P.	III	0.064	0.075	2	10
182 + 33	F.E. RT.	24	28	C.P.	III	0.064	0.075	2	10
20 P.E.'s @ 28' EA.	LT. & RT.	18	560	C.P.	III	0.064	0.060	40	160

### INLETS, MANHOLES, COVERS AND STORM SEWERS

STRUCTURE NO.	TYPE	LOCATION STATION LT./RT.	COVER	GRATE	STRUCTURE ELEVATIONS TOP OF COVER	FLOW LINE	DEPTH FT.	FROM NO.	TO NO.	R.C.P. CLASS	SIZE IN.	LENGTH FT.	III, S.S.	INLET ELEVATION	DISCHARGE ELEVATION	REMARKS
5	MANHOLE	66 + 42 18' RT.	J	---	+ 846.73	---	3.7	5	6	18"	200'	218	841.7	839.7		
6	MANHOLE	68 + 60 18' RT.	J	---	+ 844.29	---	3.3	6	DITCH	18"	48'		839.7	839.0	1-18" R.C. APRON ENDWALL REQ'D.	
7	INLET	184 + 74 32' LT.	MS	---	---	758.5	2.25	7	9	24"	60'		756.25	755.3		
8	INLET	184 + 74 32' RT.	MS	---	---	758.5	2.25	8	9	18"	38'		756.25	755.3		
9	MANHOLE	185 + 10 18' RT.	J	---	860.82	---	4.2	9	12	36"	334'		755.3	753.6		
10	INLET	188 + 22 25.5' LT.	A	RT.	---	759.46	1.8	10	12	12"	48'		756.7	756.2		
11	INLET	188 + 45 25.5' RT.	A	LT.	---	759.29	1.8	11	12	12"	4'		756.5	756.2		
12	MANHOLE	188 + 50 18' RT.	J	---	759.53	---	4.6	12	15	36"	294'		753.6	752.1		
13	INLET	191 + 50 25.5' LT.	A	RT.	---	756.77	1.8	13	15	12"	40'		754.0	753.2		
14	INLET	191 + 50 25.5' RT.	A	LT.	---	756.55	1.8	14	15	12"	4'		753.7	753.6		
15	MANHOLE	191 + 50 18' RT.	J	---	756.81	---	3.4	15	18	36"	244'		752.1	747.6		
16	INLET	194 + 00 25.5' LT.	A	RT.	---	753.59	2.8	16	18	12"	40'		749.8	748.0		
17	INLET	193 + 95 25.5' RT.	A	LT.	---	752.60	1.8	17	18	12"	4'		749.8	749.7		
18	MANHOLE	194 + 00 18' RT.	J	---	752.83	---	6.5	18	CREEK	36"	34'		745.0	740.0	1-36" R.C. APRON ENDWALL REQ'D.	
19	MANHOLE	195 + 50 18' RT.	J	---	751.40	---	7.6	19	CREEK	24"	58'		742.50	742.0	1-24" R.C. APRON ENDWALL REQ'D.	
20A	INLET	195 + 50 25.5' RT.	A	LT.	---	751.11	1.8	20A	19	12"	4'		744.30	748.0		
20	INLET	197 + 50 25.5' LT.	A	RT.	---	751.38	2.8	20	22	12"	40'		747.6	746.6		
21	INLET	197 + 50 25.5' RT.	A	LT.	---	750.33	1.8	21	22	12"	4'		747.5	747.2		
22	MANHOLE	197 + 50 18' RT.	J	---	750.62	---	5.8	22	19	24"	194'		743.50	742.50		
23	INLET	200 + 50 25.5' LT.	A	RT.	---	750.36	2.8	23	25	12"	40'		747.5	747.0		
24	INLET	200 + 50 25.5' RT.	H	LT.	---	749.50	2.8	24	25	12"	4'		745.7	745.4		
25	MANHOLE	200 + 50 18' RT.	J	---	749.78	---	3.5	25	22	24"	294'		745.0	743.50		
26	INLET	10 + 60 25' LT.	MS	---	---	748.0	1.7	26	28	18"	18'		746.3	746.0		
27	INLET	10 + 60 25' RT.	MS	---	---	748.0	1.7	27	28	18"	30'		746.3	746.0		
28	MANHOLE	10 + 60 6' LT.	J	---	751.62	---	3.9	28	25	24"	90'		746.0	745.0		

+ NOTE: TOP OF MANHOLE COVER ELEVATION APPROXIMATE, SET + 3" BELOW FINISHED SHOULDER GRADE.

### CONCRETE CURB, CURB & GUTTER

LOCATION	CONCRETE CURB TYPE D (L.F.)	CONCRETE CURB & GUTTER 30" TYPE A (L.F.)	CONCRETE CURB & GUTTER 30" TYPE D (L.F.)	CONC. CURB & GUTTER 36" TYPE D (L.F.)
C.T.H. "BB" & U.S.H. 45	360			100
185 + 00 - 201 + 63 LT. & RT.			3,330	
201 + 63 - 203 + 35 LT. & RT.		340		

### BITUMINOUS QUANTITIES

LOCATION	STATION TO STATION	BITUMINOUS CONCRETE PAVEMENT TONS	BITUMINOUS MATERIAL FOR SURFACE TONS
C.T.H. "BB"	15 + 00 - 185 + 00	9,350	515
C.T.H. "BB"	135 + 00 - 201 + 63	2,800	155
SIDE RDS. P.E.'S		550	30

### STEEL PLATE BEAM GUARD, CLASS "A"

LOCATION	STATION TO STATION	L.F.	ANCHORAGES REQUIRED
C.T.H. "BB"	137 + 46 - 138 + 78 LT.	132	2
C.T.H. "BB"	137 + 22 - 138 + 54 RT.	132	2
C.T.H. "BB"	192 + 50 - <del>195 + 30</del>	400	280
C.T.H. "BB"	192 + 50 - 195 + 50 RT.	300	2
FRONTAGE ROAD	** 8 + 50 - <del>8 + 50</del>	40	1

\*\* CONNECT TO EXISTING BEAM GUARD STA. 8 + 50 ±

### CONCRETE PAVEMENT 9-INCH

LOCATION	SQ. YDS.
201 + 63 - 203 + 74 RT.	245
201 + 63 - 203 + 38 LT.	210

### CONCRETE DRIVEWAY

LOCATION	STATION	SQ. YDS.
C.T.H. "BB"	190 + 04 RT.	25

### CONCRETE SURFACE DRAIN

LOCATION	STATION	CU. YDS.
C.T.H. "BB"	203 + 30 LT.	2
C.T.H. "BB"	203 + 35 RT.	2

### REMOVING PAVEMENT

LOCATION	SQ. YDS.
201 + 63 - 203 + 74 RT.	140
202 + 23 - 203 + 38 LT.	65
290 + 04 P.E. RT.	25

### CRUSHED AGGREGATE BASE COURSE

LOCATION	ROADWAY TONS	SHOULDERS TONS
MAINLINE	57,000	5,440
SIDE ROADS	2,800	160
P.E.'S & F.E.'S	600	
UNDISTRIBUTED	500	

STANDARD ABBREVIATIONS

ABANDON	ABND	MAXIMUM	MAX.
ABSTRACT	ABS.	MEASURED	(M)
ACCESS POINT	A.P.	MILE	MI
ACRES	AC.	MINIMUM	MIN
ADDITION	ADD	MONUMENTS	MON
AHEAD	AH.	MUNICIPAL	MCPL
AND OTHERS	ET AL.	NORTHEAST	NE
AND WIFE	ET UX.	NORTHWEST	NW
APARTMENT	APT.	NUMBER	NO.
ASSUMED	(A)	OUTLOT	OL
AVENUE	AVE	PAGE	P
BACK	BK.	PARALLEL	PLL
BARN	B	PAVEMENT	PAV'T
BASE LINE	B.L.	PERMANENT	PERM
BEARING LONG CHORD	B.L.C.	POINT OF CURVATURE	P.C.
BITUMINOUS	BIT.	POINT OF INTERSECTION	P.I.
BLOCK	BLK.	POINT OF TANGENCY	P.T.
BOULEVARD	BLVD.	POINT OF COMPOUND CURVE	P.C.C.
BRICK	BRK.	POINT OF REVERSE CURVE	P.R.C.
BUILDINGS	BLDGS	POINT ON CURVE	P.O.C.
CATCH BASIN	C.B.	POINT ON LINE	P.O.L.
CEMETERY	CEM.	POINT ON SEMI-TANGENT	P.O.S.T.
CENTERLINE	C	PROJECT	PROJ
CENTRAL ANGLE	Δ	PROPERTY LINE	PL
CHANNEL	CH.	QUIT CLAIM DEED	Q.C.D.
CHANNEL CHANGE	CH.CH.	RADIUS	R
COMMERCIAL	COMM.	RAILROAD	R.R.
COMPANY	COM	REFERENCE LINE	R.L.
COMPUTED	(C)	REQUIRED	REQ'D
CONCRETE	CONC.	RESIDENTIAL	RES
CONSTRUCTION	CONST.	RESTAURANT	REST
CORNER	COR.	RIGHT	RT
CORPORATION	CORP	RIGHT OF WAY	R/W
COUNTY	CO.	ROAD	RD
COUNTY TRUNK HIGHWAY	C.T.H.	ROADWAY	RDWY
CREEK	CR.	SANITARY	SAN
CULVERT	CULV.	SCALED	SCA
DEED	(D)	SCHOOL	SCH
DEGREE OF CURVE	D.	SECTION	SEC
DISPOSAL	DISP.	SERVICE STATION	S.S.
DISTRICT	DIST.	SEPTIC TANK	SEP
DRIVE	DR.	SIDEWALK	SWK
DRIVEWAY	DWY.	SHED	S
ESTATE	EST.	SOUTHEAST	SE
EXISTING	EX.	SOUTHWEST	SW
EXTERNAL DISTANCE	E	SQUARE	SQ.
FACTORY	FACT.	STANDARD	STD
FEDERAL AID PROJECT	F.A.P.	STATE TRUNK HIGHWAY	S.T.H.
FIELD ENTRANCE	F.E.	STATION	STA
FIRE HYDRANT	F.H.	STREET	ST
FOOT (FEET)	FT	SUBDIVISION	SUBD
FOUNDATION	FDN.	SURVEY	SUR
GARAGE	G	TANGENT	TAN
GOVERNMENT	GOV'T.	TANGENT LENGTH OF CURVE	T.L.C.
HIGHWAY	HWY.	TAPER	TAP
HOUSE	H	TAVERN	TAV
INCHES	"	TEMPORARY	TEMP
INCORPORATED	INC.	TRANSIT LINE	T.L.
INTERSECTION ANGLE	∩	TRANSMISSION TOWER	T.T.
INTERSTATE HIGHWAY	I.H.	UNITED STATES COAST & GEODETIC SURVEY	USC&GS
IRON PIN	I.P.	UNITED STATES GEOLOGICAL SURVEY	USGS
ISLAND	IS.	UNITED STATES HIGHWAY	U.S.H.
LEFT	LT.	VENDEE	VDE
LENGTH OF CURVE	L	VENDOR	VDR
LESSEE	LSE	VITRIFIED	VIT.
LESSOR	LSR	VOLUME	V
LIMITED HIGHWAY EASEMENT	L.H.E.	WAREHOUSE	WH
MAGNETIC	MAG.	WATER TOWER	WT
MAILING ADDRESS	# 0000	WATER	W
MANHOLE	M.H.	WINDMILL	WM
MANUFACTURING	MFG.	WOOD	WC

STATE OF WISCONSIN

WINNEBAGO COUNTY HIGHWAY DEPARTMENT

PLAT OF RIGHT OF WAY REQUIRED FOR

C.T.H. "BB"

U.S.H. 45 TO U.S.H. 41

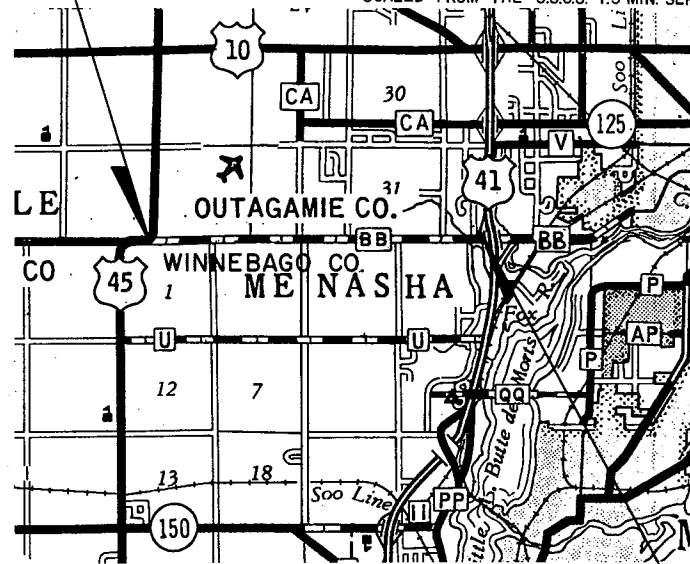
BEGIN RELOCATION ORDER PROJECT 4667-1-00

STATION 15+00.00

N = 821,200 ± 200 FT.  
E = 2,382,880 ± 200 FT.

LOCATED 11.55 FT. SOUTH AND 1,111.91 FT. WEST OF THE NORTH 1/4 CORNER OF SECTION 1, T20N, R16E

\* SCALED FROM THE U.S.G.S. 7.5 MIN. SERIES OSHKOSH, NE. QUADRANGLE



END RELOCATION ORDER PROJECT 4667-1-00

STATION 20+63.33

N = 821,680 ± 200 FT.  
E = 2,401,560 ± 200 FT.

LOCATED 38.31 FT. SOUTH AND 1919.19 FT. EAST OF THE NORTH 1/4 CORNER OF SECTION 4, T20N, R17E.

\* SCALED FROM THE U.S.G.S. 7.5 MIN. SERIES NEENAH QUADRANGLE

LAYOUT

SCALE: 1" = 1/2 MILES

TOTAL NET LENGTH OF CENTERLINE = 3.535

REVISION DATE	R/W PROJECT NUMBER <b>4667-1-00</b>	SHEET NUMBER <b>4.0</b>
	FEDERAL PROJECT NUMBER	
PLAT OF RIGHT OF WAY REQUIRED FOR <b>C.T.H. "BB" WINNEBAGO COUNTY</b>		
	SCALE 0 50 100 200 FT.	DATE 9-15-77
	CONSTRUCTION PROJECT NUMBER <b>4667-1-71</b>	<b>4</b>

CONVENTIONAL SIGNS

STATE LINE	TRAVELED WAY	
COUNTY LINE	SHOWN ONLY IN AREA OF FRONTAGE ROADS, INTERCHANGES & R.A.A. LANES	
TOWNSHIP AND RANGE LINE		
SECTION LINE		
QUARTER LINE		
SIXTEENTH LINE		
NEW CENTER LINE		
NEW R/W LINE		
OLD R/W LINE		
PROPERTY LINE		
CORPORATE LIMITS		
SLOPE INTERCEPTS		
LOT, LINE AND OTHER MINOR DASHED LINES		
UNDERGROUND FACILITY (POWER, TELEPHONE, TELEGRAPH, GAS, ETC.)		
NO ACCESS		
LIMITED HIGHWAY EASEMENT		
HIGHWAY SEPARATION		
HIGHWAY OVERPASS		
RAIL LINE OVERPASS		
ALL OTHER BRIDGES		
STREAM OR RIVER		
LAKE		
	CEMETERY	[Symbol]
	FOUNDATION	[Symbol]
	GAS PUMP ISLAND	[Symbol]
	BUILDING	[Symbol]
	IRON PIN	[Symbol]
	POWER POLE	[Symbol]
	TELEPHONE POLE	[Symbol]
	RAIL LINE	[Symbol]
	TRANSMISSION TOWER AND LINE	[Symbol]
	UNDERGROUND CABLE MARKER	[Symbol]
	WELL	[Symbol]
	STONE MONUMENT	[Symbol]
	SEPTIC TANK	[Symbol]
	WINDMILL	[Symbol]
	CATTLE PASS	[Symbol]
	RELOCATED STREAM OR RIVER	[Symbol]
	TELEPHONE PEDESTAL OR RISER	[Symbol]

APPROVED

WINNEBAGO COUNTY

DATE: 10/4/77

OWEN AYRES & ASSOCIATES

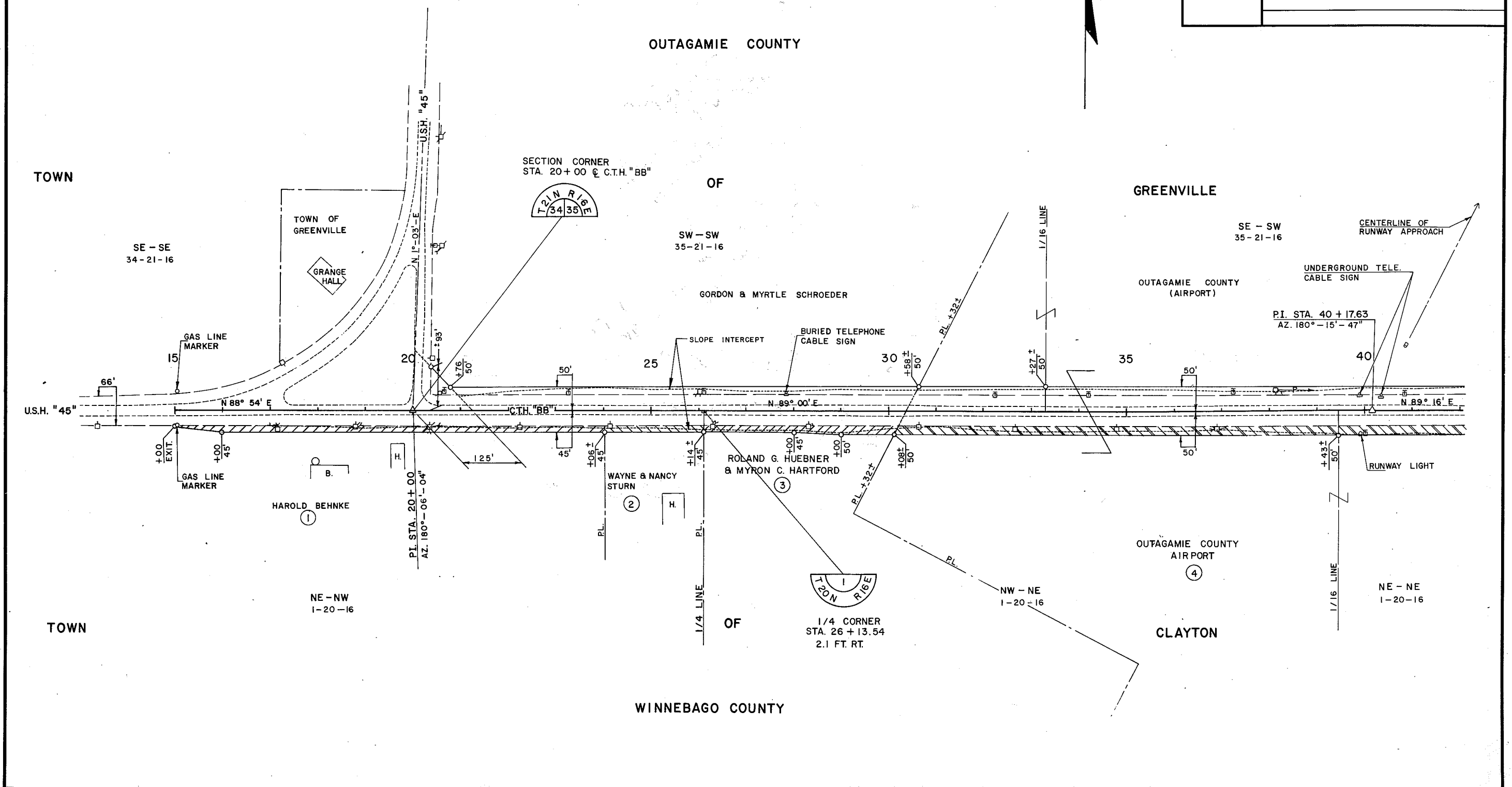
GREEN BAY, WISCONSIN

10/4/77

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	L.H.E. ACRES		ACRES REQUIRED			TOTAL REMAINING ACRES	OPERATIONS PROJECT NUMBER
			TEMP.	PERM.	NEW R/W REQUIRED	EXISTING R/W	TOTAL R/W REQUIRED		
1	HAROLD BEHNKE	FEE TITLE			10,250 SF (235 AC)				
2	WAYNE & NANCY STURN	FEE TITLE			3,500 SF (0.079 AC)				
3	ROLAND G. HUEBNER & MYRON C. HARTFORD	FEE TITLE - RELEASE OF RIGHTS			13,870 SF (0.318 AC)				
4	OUTAGAMIE CO. AIRPORT	FEE TITLE			35,410 SF (0.813 AC)				

REVISION DATE	R/W PROJECT NUMBER <b>4667-1-00</b>	SHEET NUMBER <b>4.1</b>
	FEDERAL PROJECT NUMBER	
PLAT OF RIGHT OF WAY REQUIRED FOR <b>C.T.H. 'BB' WINNEBAGO COUNTY</b>		
	SCALE 0 100 200 Ft.	DATE 9-15-77
	CONSTRUCTION PROJECT NUMBER <b>4667-1-71</b>	<b>4.1</b>



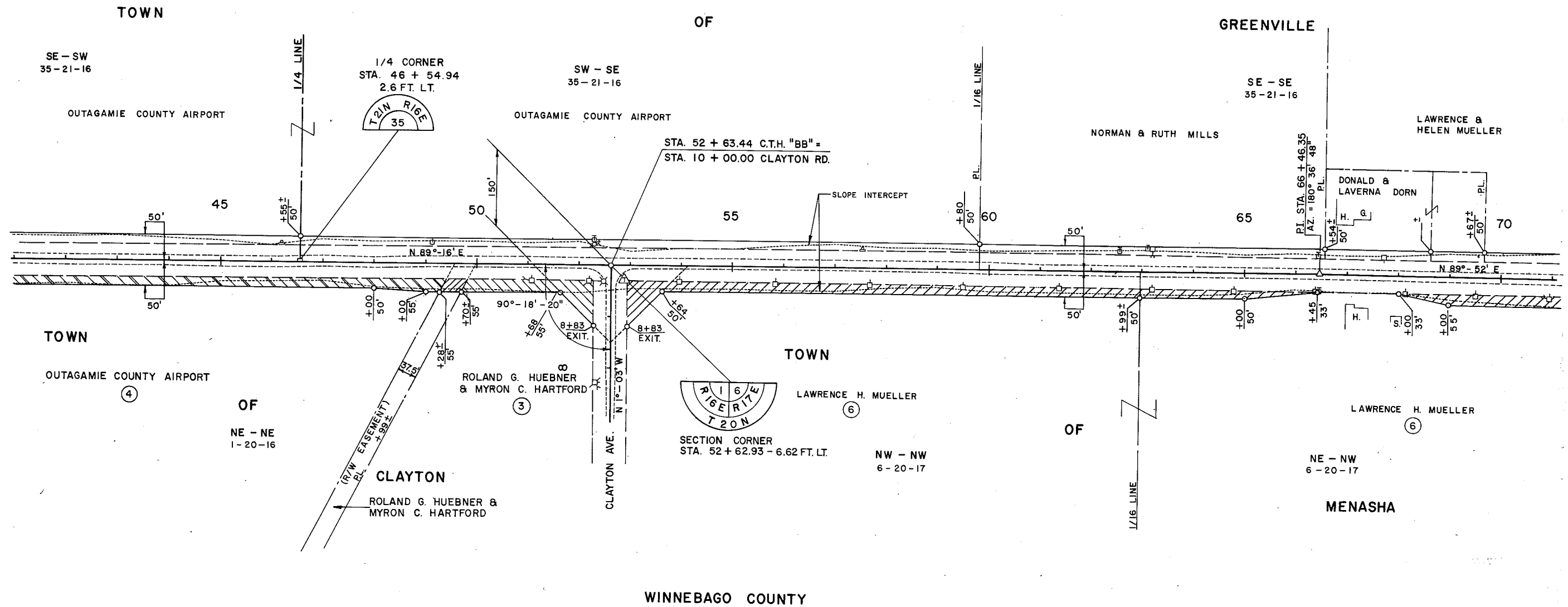
SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	L.H.E. ACRES		ACRES REQUIRED			TOTAL REMAINING ACRES	OPERATIONS PROJECT NUMBER
			TEMP.	PERM.	NEW R/W REQUIRED	EXISTING R/W	TOTAL R/W REQUIRED		
3	ROLAND G. HUEBNER & MYRON C. HARTFORD	FEE TITLE - RELEASE OF RIGHTS			13,870SF (0.318AC)				
4	OUTAGAMIE CO. AIRPORT	FEE TITLE			1,065SF (0.024AC)				
6	LAWRENCE H. MUELLER	FEE TITLE			40,840SF (0.938AC)				

REVISION DATE	R/W PROJECT NUMBER 4667-1-00	SHEET NUMBER 4.2
FEDERAL PROJECT NUMBER		
PLAT OF RIGHT OF WAY REQUIRED FOR <b>C.T.H. 'BB' WINNEBAGO COUNTY</b>		
SCALE 0 100 200 Ft.		DATE 9-15-77
CONSTRUCTION PROJECT NUMBER 4667-1-71		4.2



OUTAGAMIE COUNTY





SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	L.H.E. ACRES		ACRES REQUIRED			TOTAL REMAINING ACRES	OPERATIONS PROJECT NUMBER
			TEMP.	PERM.	NEW R/W REQUIRED	EXISTING R/W	TOTAL R/W REQUIRED		
6	LAWRENCE H. MUELLER	FEE TITLE			40,910SF(0.939 AC)				
7	ANTON DOMBROWSKI	FEE TITLE			13,740SF(0.315 AC)				
8	ANTON S. DOMBROWSKI JR.	FEE TITLE			700SF(0.016 AC)				
9	FRANK & SUSAN REYBROCK	FEE TITLE			1,200SF(0.027AC)				
11	HOWARD DOBBERKE	FEE TITLE			63,420SF(1.456 AC)				

REVISION DATE	R/W PROJECT NUMBER	SHEET NUMBER
10-7-77	4667-1-00	4.3
FEDERAL PROJECT NUMBER		
PLAT OF RIGHT OF WAY REQUIRED FOR		
C.T.H. 'BB' WINNEBAGO COUNTY		
SCALE	DATE	
0 100 200 FT.	9-15-77	
CONSTRUCTION PROJECT NUMBER		
4667-1-71		4.3

N

OUTAGAMIE COUNTY

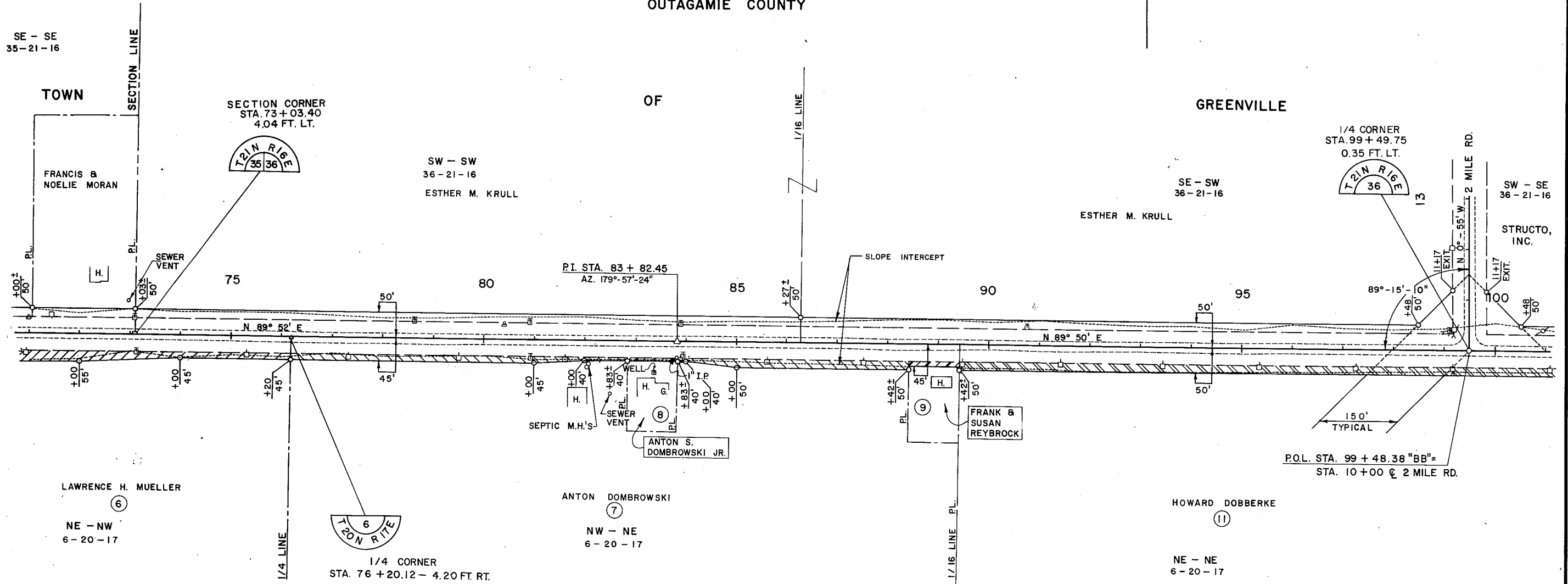
OF

GREENVILLE

OF

MENASHA

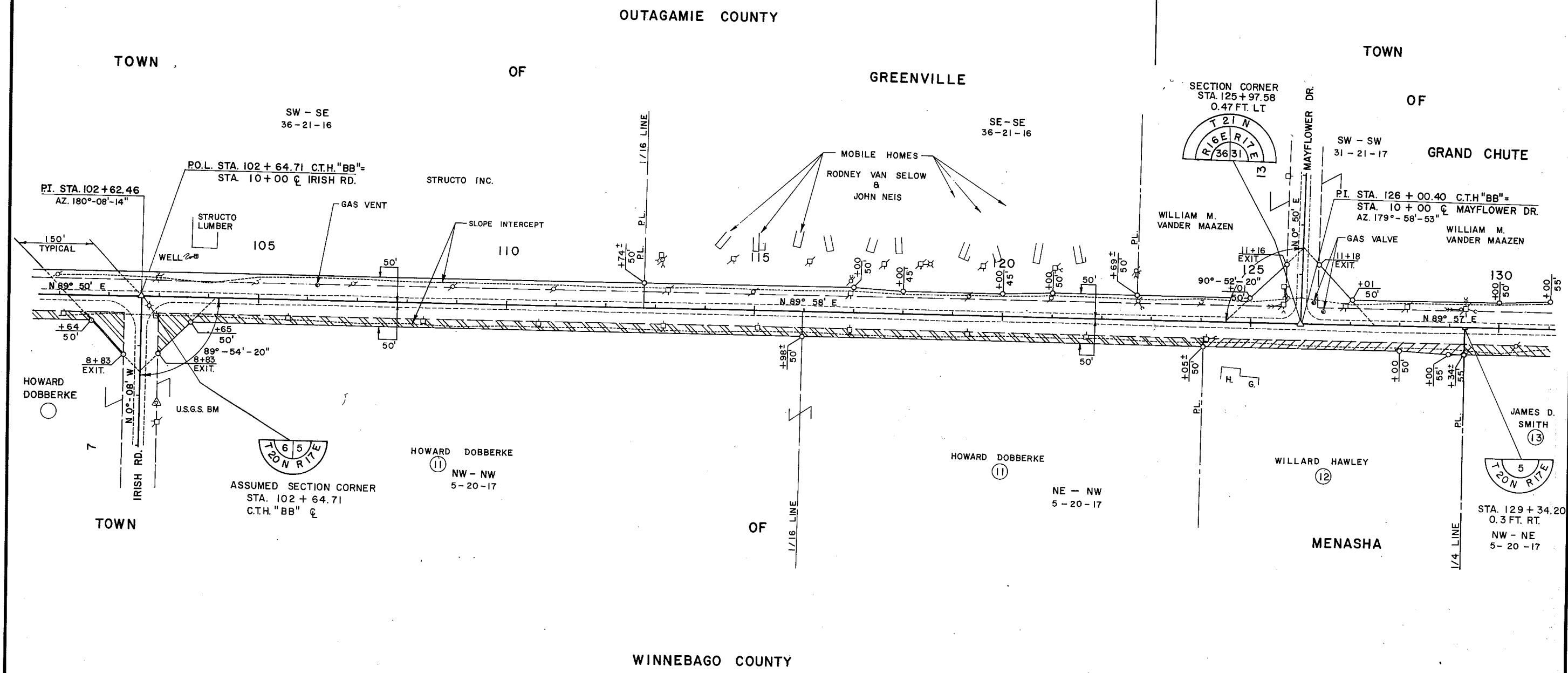
WINNEBAGO COUNTY



SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	L.H.E. ACRES		ACRES REQUIRED			TOTAL REMAINING ACRES	OPERATIONS PROJECT NUMBER
			TEMP.	PERM.	NEW R/W REQUIRED	EXISTING R/W	TOTAL R/W REQUIRED		
11	HOWARD DOBBERKE	FEE TITLE			63,420S.F.(1.456AC)				
12	WILLARD HAWLEY	FEE TITLE			8,820S.F.(0.202AC)				
13	JAMES D. SMITH	FEE TITLE			7,500S.F.(0.172AC)				

REVISION DATE	R/W PROJECT NUMBER <b>4667-1-00</b>	SHEET NUMBER <b>4.4</b>
	FEDERAL PROJECT NUMBER	
PLAT OF RIGHT OF WAY REQUIRED FOR <b>C.T.H. 'BB' WINNEBAGO COUNTY</b>		
SCALE 0 100 200 FT.	DATE 9-15-77	
CONSTRUCTION PROJECT NUMBER <b>4667-1-71</b>		<b>44</b>



SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	L.H.E. ACRES		ACRES REQUIRED			TOTAL REMAINING ACRES	OPERATIONS PROJECT NUMBER
			TEMP.	PERM.	NEW R/W REQUIRED	EXISTING R/W	TOTAL R/W REQUIRED		
13	JAMES D. SMITH	FEE TITLE			7,500S.F.(0.172 AC)				
14	LAWRENCE L. FLANDERS	" "			8,950S.F.(0.206 AC)				
16	ELMER S. DAHL	FEE TITLE			5,640S.F.(0.129 AC)				
17	ROBERT T. POLAR	" "			2,310S.F.(0.053 AC)				
18	R & R STEEL CONSTR. INC.	" "			3,620 S.F.(0.083 AC)				
19	ROBERT & MARTHA LEHRER	" "			9,670 S.F.(0.222 AC)				
21	JAMES R. STRAUSS	FEE TITLE			3,490S.F.(0.080 AC)				
22	CLYDE JORGENSEN	" "			10,860 S.F.(0.249 AC)				
23	JOHN SCHULZ	FEE TITLE			20,430S.F.(0.469 AC)				
24	WISC.-MICH. POWER CO.	RELEASE OF RIGHTS			2,040S.F.(0.047 AC)				

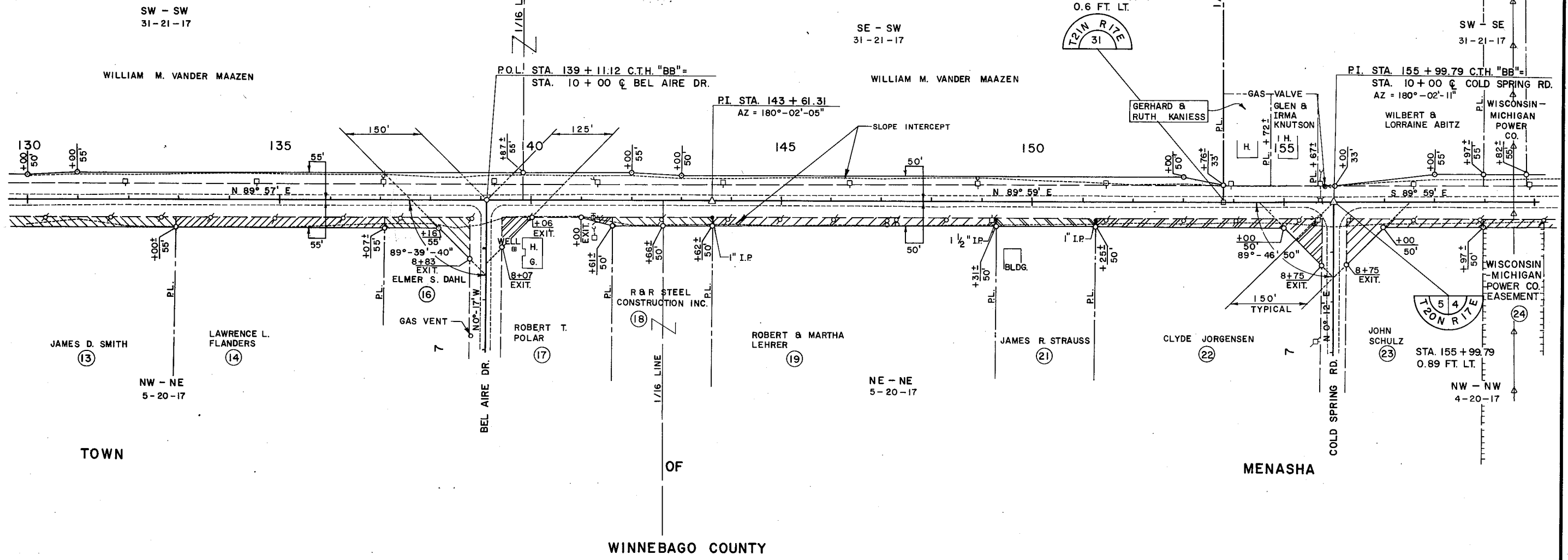
REVISION DATE	R/W PROJECT NUMBER <b>4667-1-00</b>	SHEET NUMBER <b>4.5</b>
	FEDERAL PROJECT NUMBER	
PLAT OF RIGHT OF WAY REQUIRED FOR <b>C.T.H. 'BB' WINNEBAGO COUNTY</b>		
SCALE 0 100 200 Ft.		DATE 9-15-77
CONSTRUCTION PROJECT NUMBER <b>4667-1-71</b>		<b>4.5</b>



TOWN

OF  
OUTAGAMIE COUNTY

GRAND CHUTE



TOWN

OF  
WINNEBAGO COUNTY

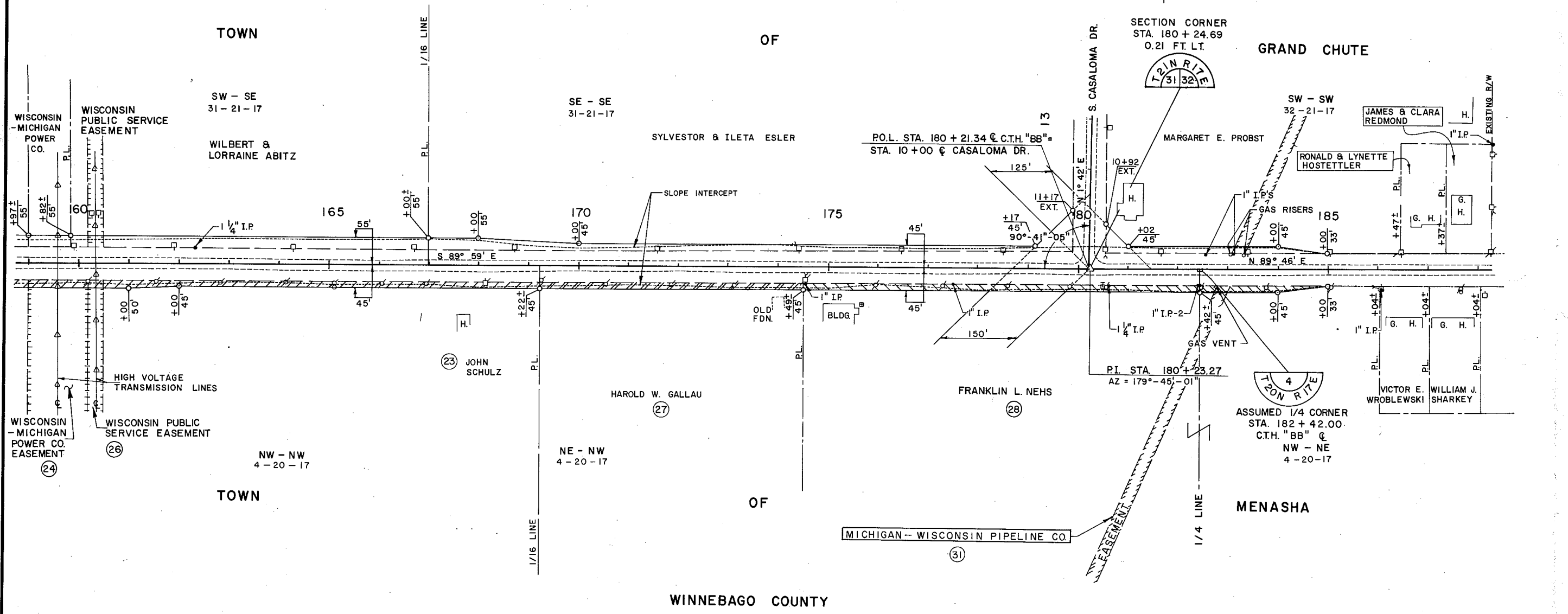
MENASHA

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	L.H.E. ACRES		ACRES REQUIRED			TOTAL REMAINING ACRES	OPERATIONS PROJECT NUMBER
			TEMP	PERM.	NEW R/W REQUIRED	EXISTING R/W	TOTAL R/W REQUIRED		
23	JOHN SCHULZ	FEE TITLE			20,430 SF (0.469 AC)				
24	WISC.-MICH. POWER CO.	RELEASE OF RIGHTS			2,040 SF (0.047 AC)				
26	WISC. PUBLIC SERVICE CO.	RELEASE OF RIGHTS			595 SF (0.014 AC)				
27	HAROLD W. GALLAU	FEE TITLE			6,320 SF (0.145 AC)				
28	FRANKLIN L. NEHS	" "			12,010 SF (0.276 AC)				
31	MICH.-WISC. PIPELINE CO.	RELEASE OF RIGHTS							

REVISION DATE	R/W PROJECT NUMBER <b>4667-1-00</b>	SHEET NUMBER <b>4.6</b>
	FEDERAL PROJECT NUMBER	
PLAT OF RIGHT OF WAY REQUIRED FOR <b>C.T.H. 'BB' WINNEBAGO COUNTY</b>		
SCALE 0 100 200 Ft.		DATE 9-15-77
CONSTRUCTION PROJECT NUMBER <b>4667-1-71</b>		<b>4.6</b>

OUTAGAMIE COUNTY

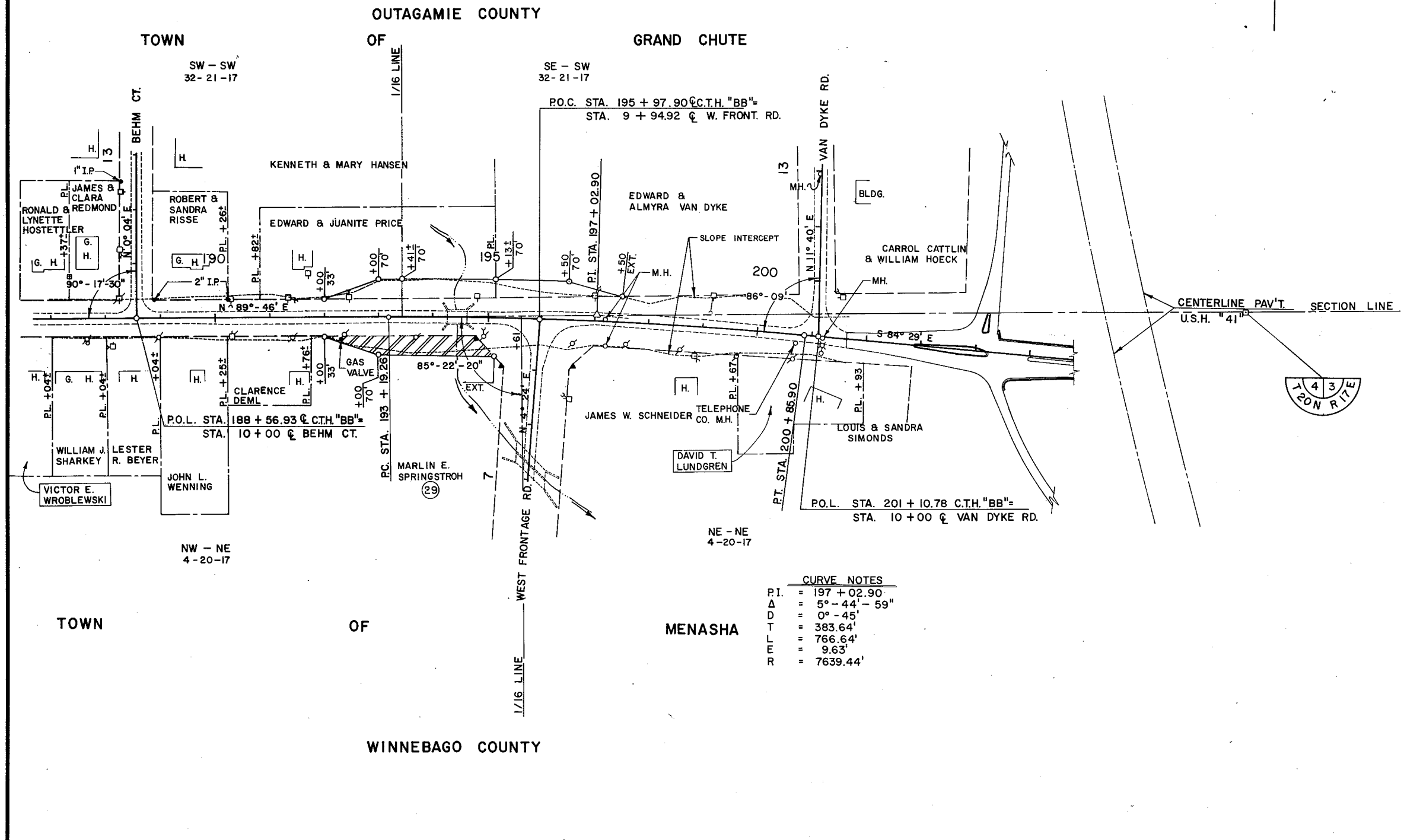


WINNEBAGO COUNTY

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	L.H.E. ACRES		ACRES REQUIRED			TOTAL REMAINING ACRES	OPERATIONS PROJECT NUMBER
			TEMP.	PERM.	NEW R/W REQUIRED	EXISTING R/W	TOTAL R/W REQUIRED		
29	MARLIN E. SPRINGSTROH	FEE TITLE			9.950 S.F. (0.228 AC)				

REVISION DATE	R/W PROJECT NUMBER <b>4667-1-00</b>	SHEET NUMBER <b>4.7</b>
FEDERAL PROJECT NUMBER		
PLAT OF RIGHT OF WAY REQUIRED FOR <b>C.T.H. 'BB' WINNEBAGO COUNTY</b>		
SCALE 0 100 200 Ft.	DATE 9-15-77	
CONSTRUCTION PROJECT NUMBER <b>4667-1-71</b>		



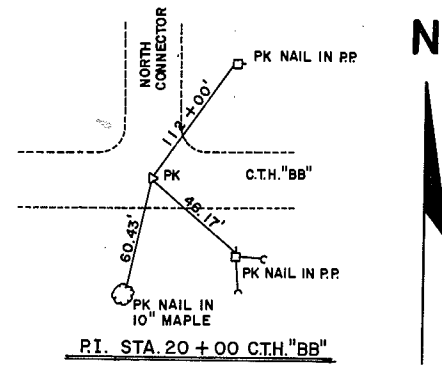
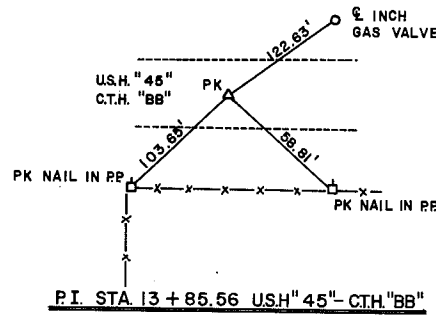
CURVE NOTES

P.I.	= 197 + 02.90'
Δ	= 5° - 44' - 59"
D	= 0° - 45'
T	= 383.64'
E	= 766.64'
R	= 9.63'
	= 7639.44'



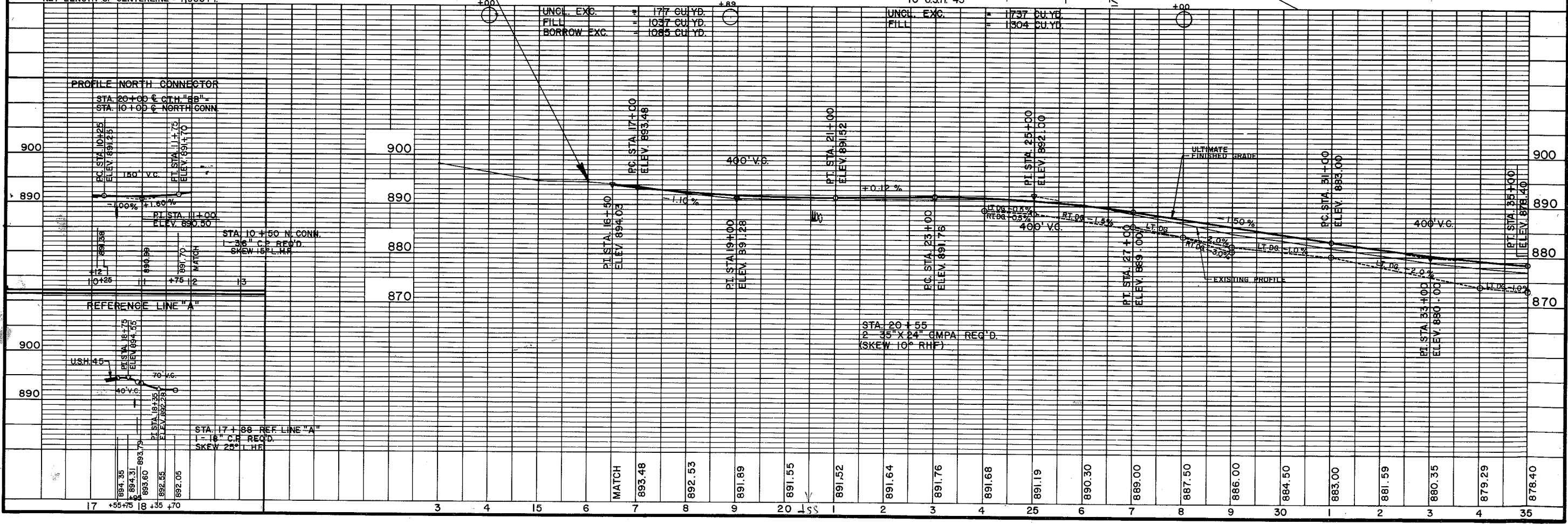
BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
1	18+50	CHS. SQ. SE. CORN. CONC. SLAB 250' LT.	893.27

STATE PROJECT NUMBER	SHEET NO.
4667-1-71	5



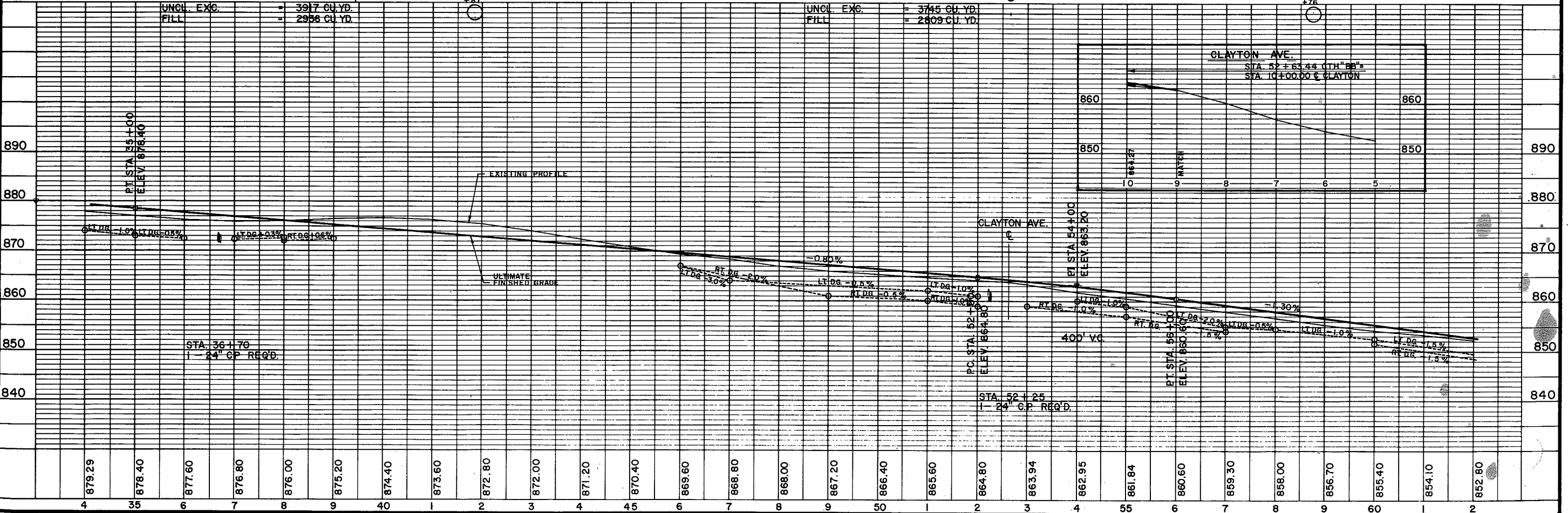
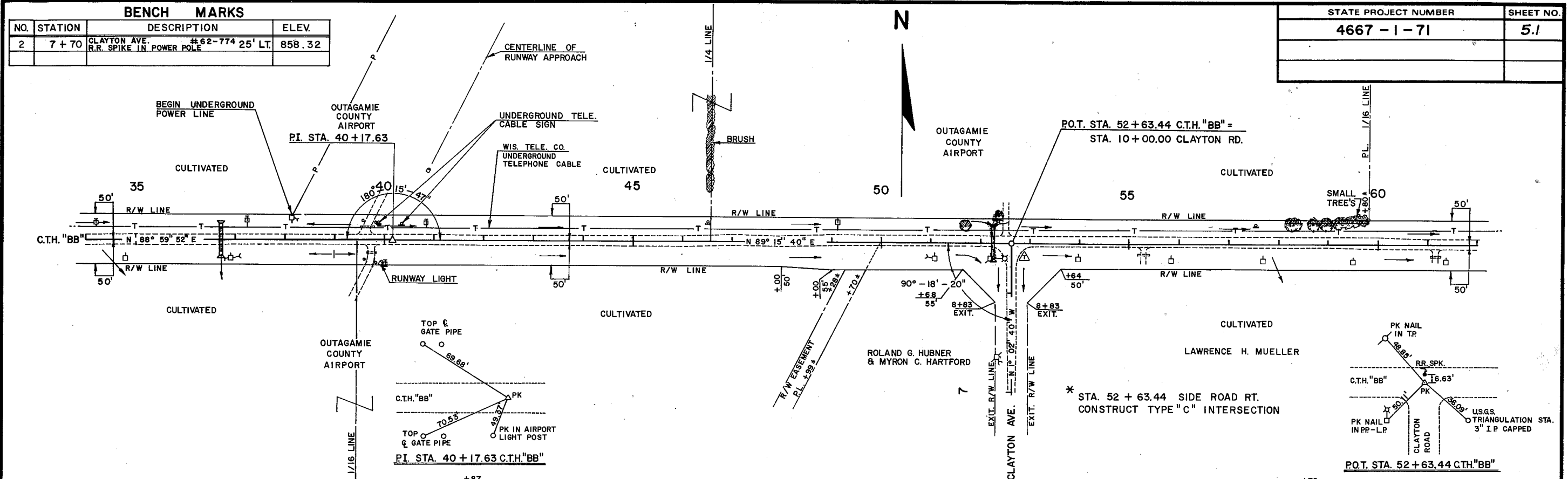
**BEGINNING OF PROJECT 4667-1-71  
STA. 16+00**

NET LENGTH OF CENTERLINE = 1,900 FT.



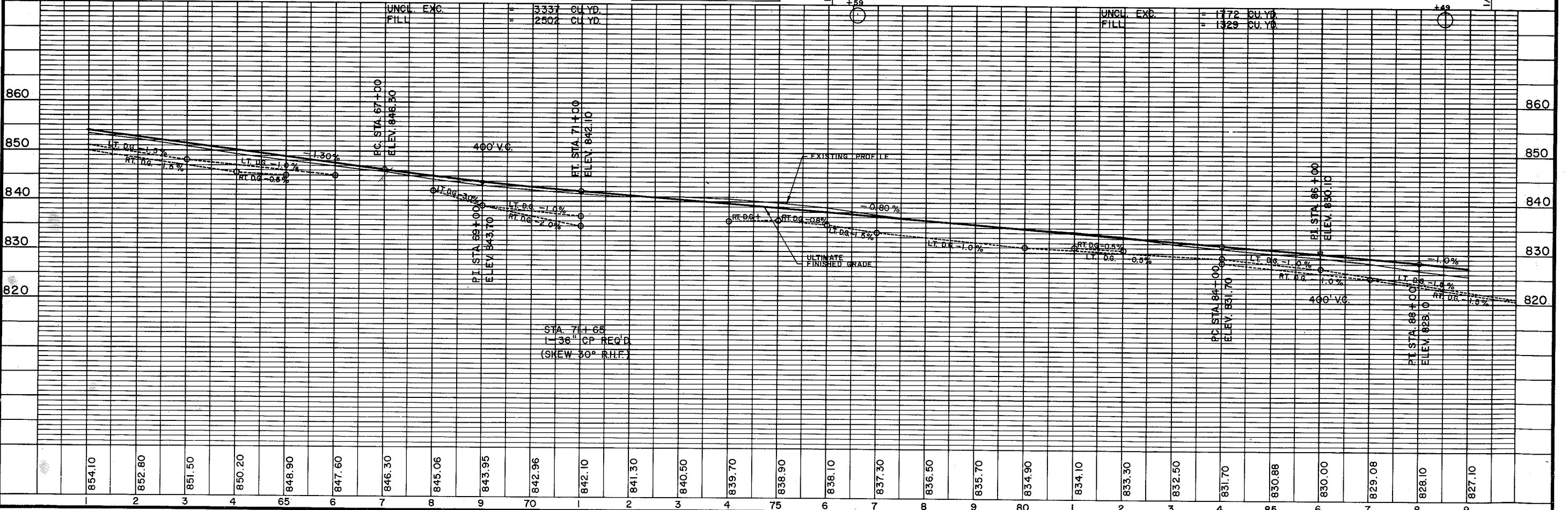
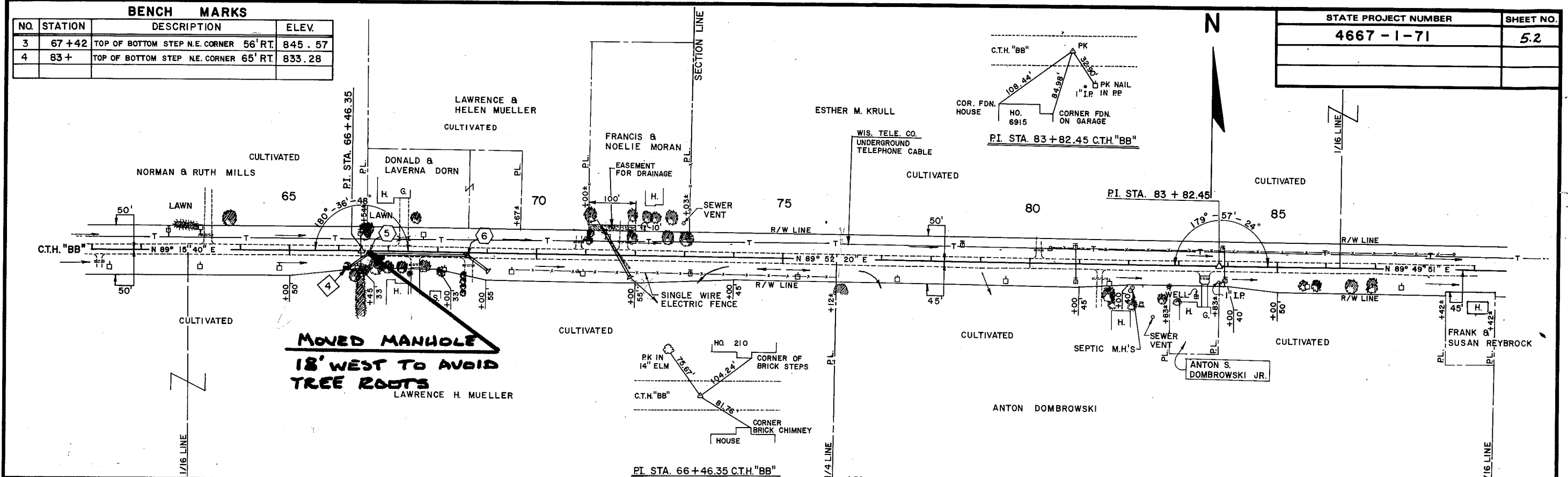
BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
2	7 + 70	CLAYTON AVE. R.R. SPIKE IN POWER POLE #62-774 25' LT.	858.32

STATE PROJECT NUMBER	SHEET NO.
4667-1-71	5.1



BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
3	67+42	TOP OF BOTTOM STEP N.E. CORNER 56' RT.	845.57
4	83+	TOP OF BOTTOM STEP N.E. CORNER 65' RT.	833.28

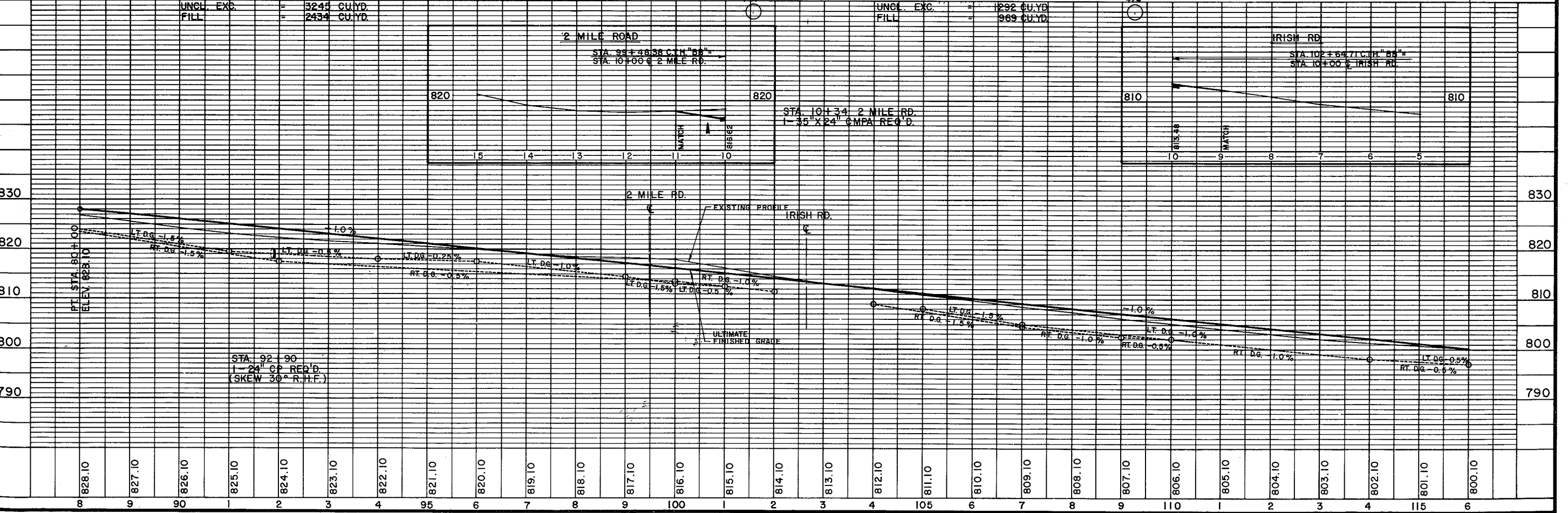
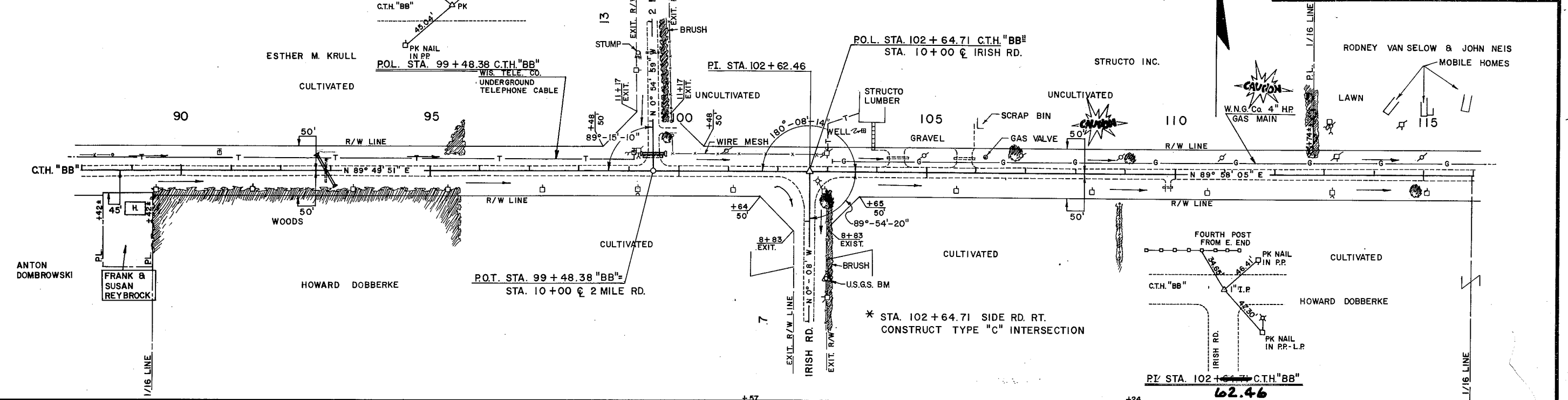
STATE PROJECT NUMBER	SHEET NO.
4667-1-71	52



102  
93  
79  
COS = 30  
20  
10

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
5	7+87	IRISH RD. U.S.G.S. BM.	35' RT. 809.16
6	115+08	YELLOW PAINT S.E. CORNER TRAILER HOUSE SLAB	117' RT. 800.63

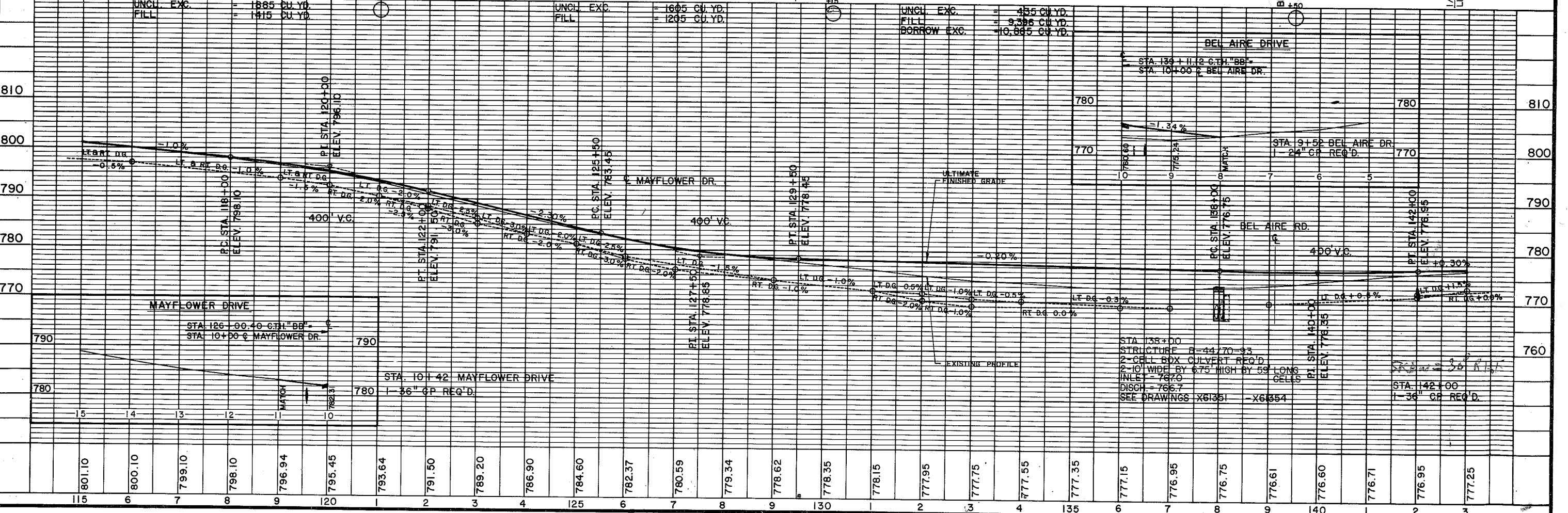
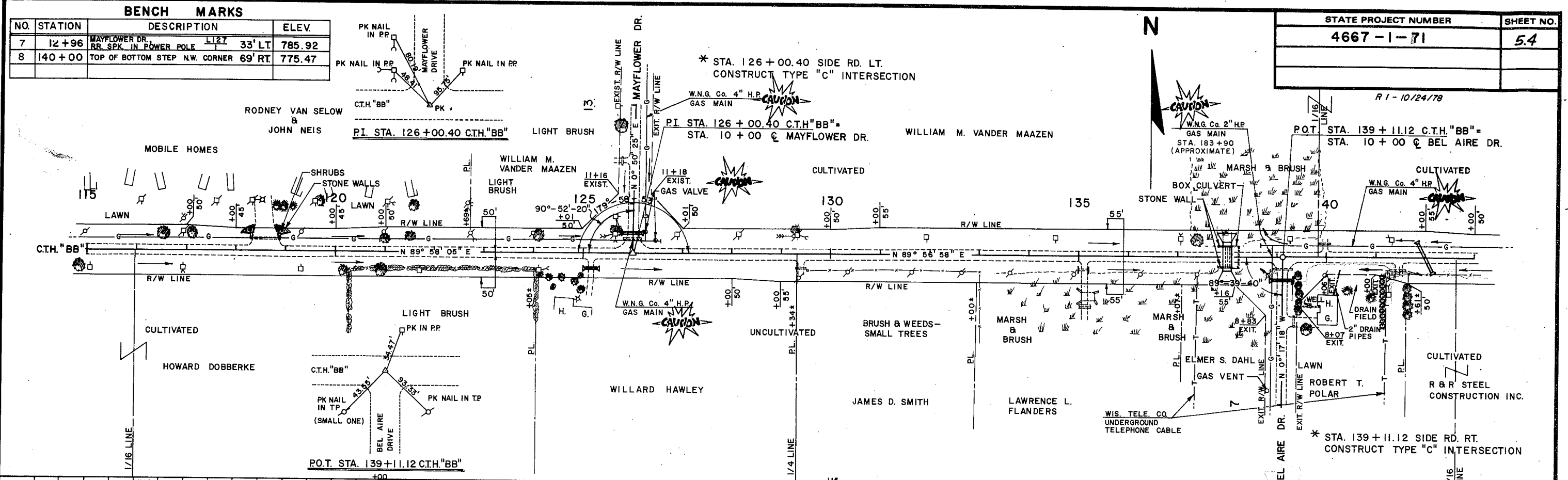
STATE PROJECT NUMBER	SHEET NO.
4667-1-71	5.3



**BENCH MARKS**

NO.	STATION	DESCRIPTION	ELEV.
7	12+96	MAYFLOWER DR. RR. SPK. IN POWER POLE	785.92
8	140+00	TOP OF BOTTOM STEP N.W. CORNER	775.47

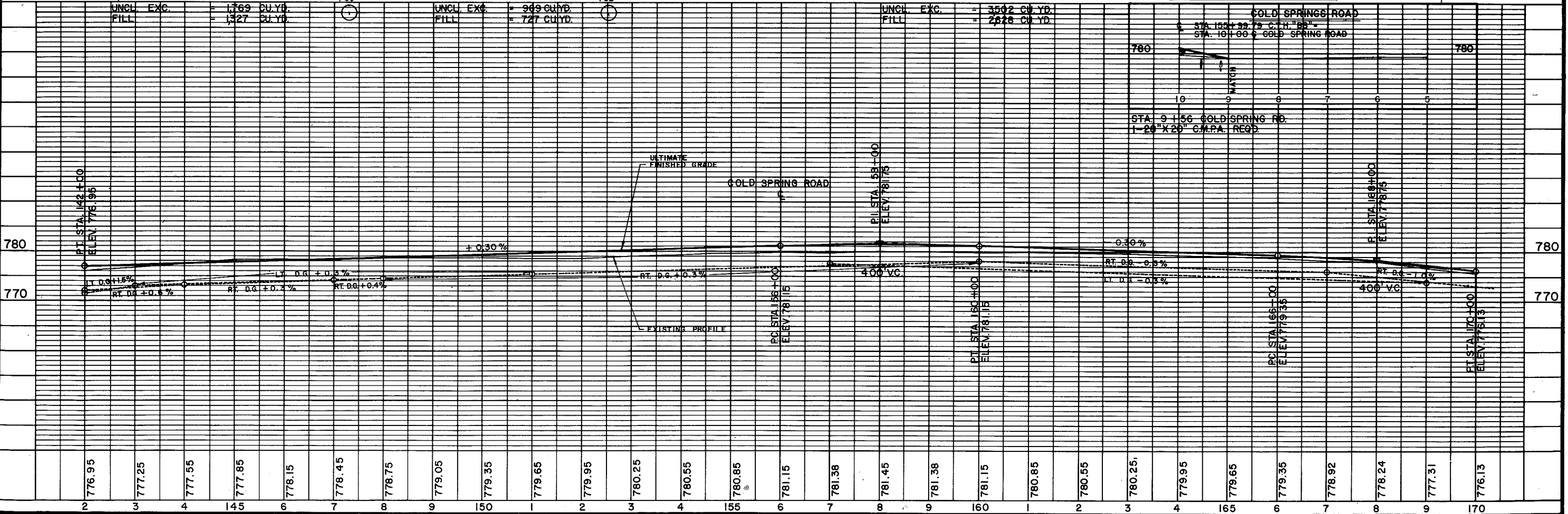
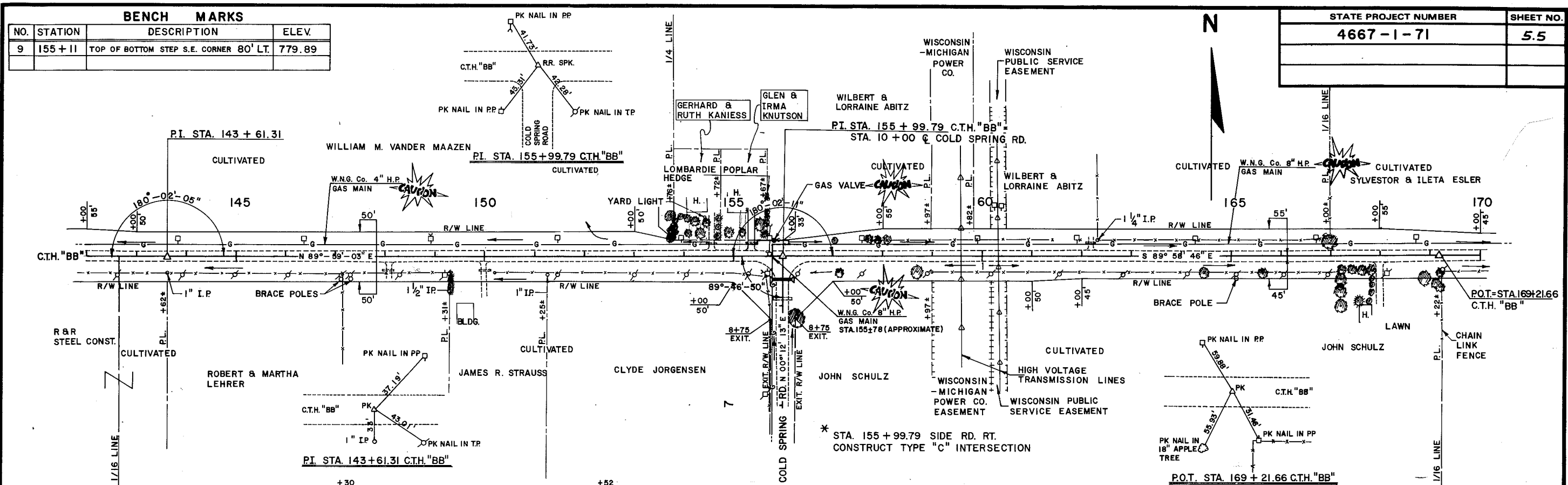
STATE PROJECT NUMBER	SHEET NO.
4667-1-71	5.4





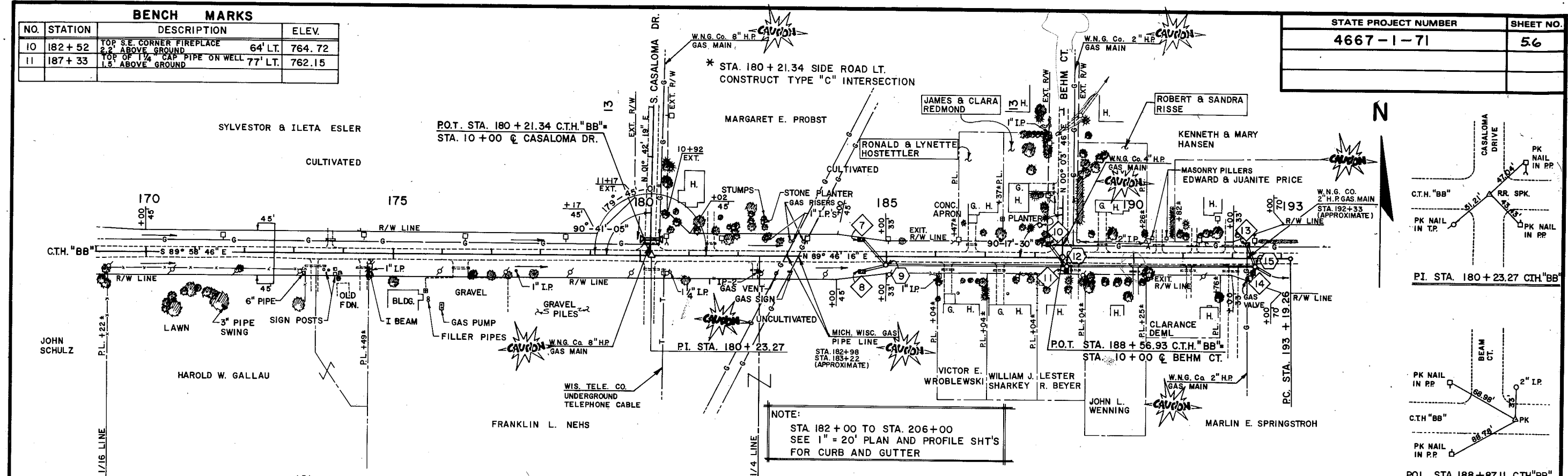
BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
9	155+11	TOP OF BOTTOM STEP S.E. CORNER 80' LT.	779.89

STATE PROJECT NUMBER	SHEET NO.
4667-1-71	5.5

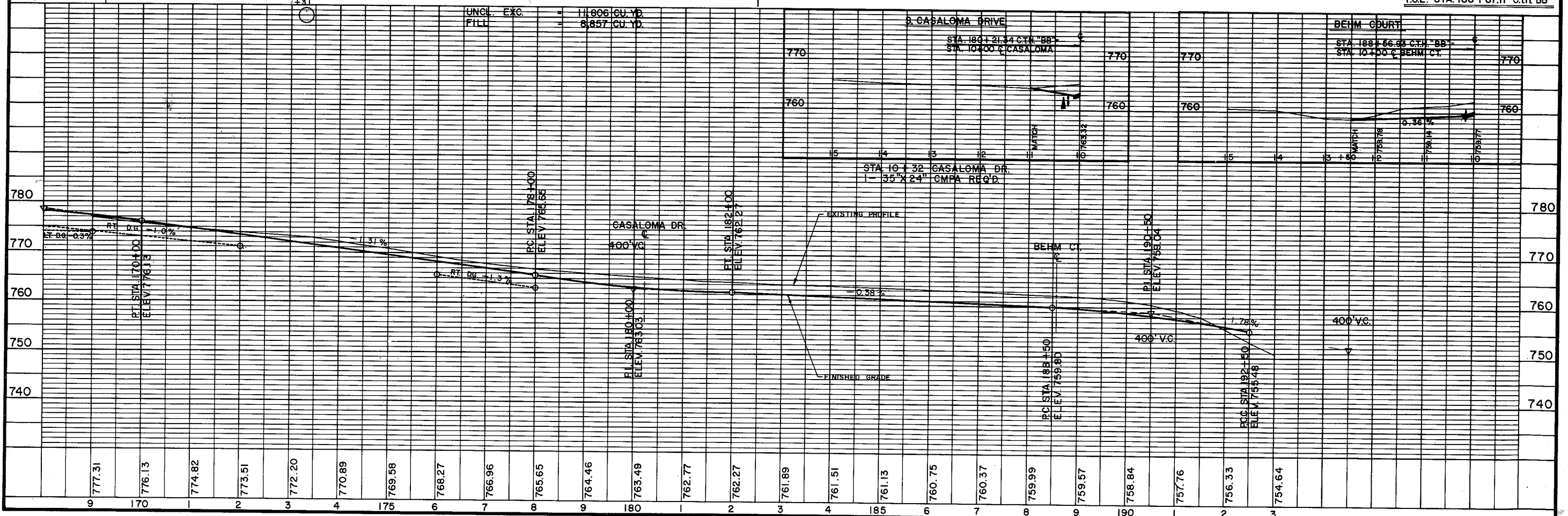


BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
10	182+52	TOP S.E. CORNER FIREPLACE 2.2' ABOVE GROUND	64' LT. 764.72
11	187+33	TOP OF 1/4" CAP PIPE ON WELL 1.5' ABOVE GROUND	77' LT. 762.15

STATE PROJECT NUMBER	SHEET NO.
4667-1-71	56



NOTE:  
 STA 182+00 TO STA. 206+00  
 SEE 1" = 20' PLAN AND PROFILE SHT'S  
 FOR CURB AND GUTTER

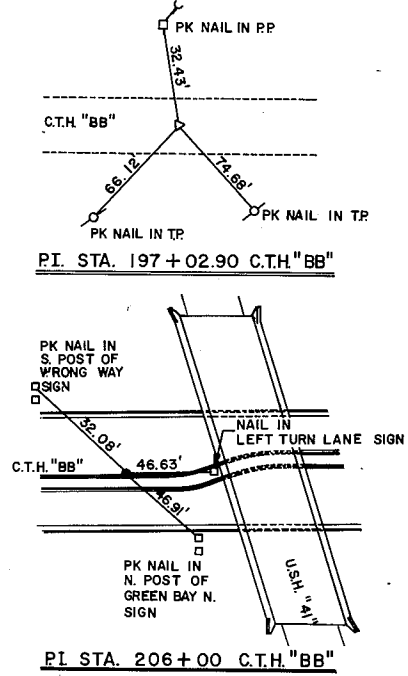
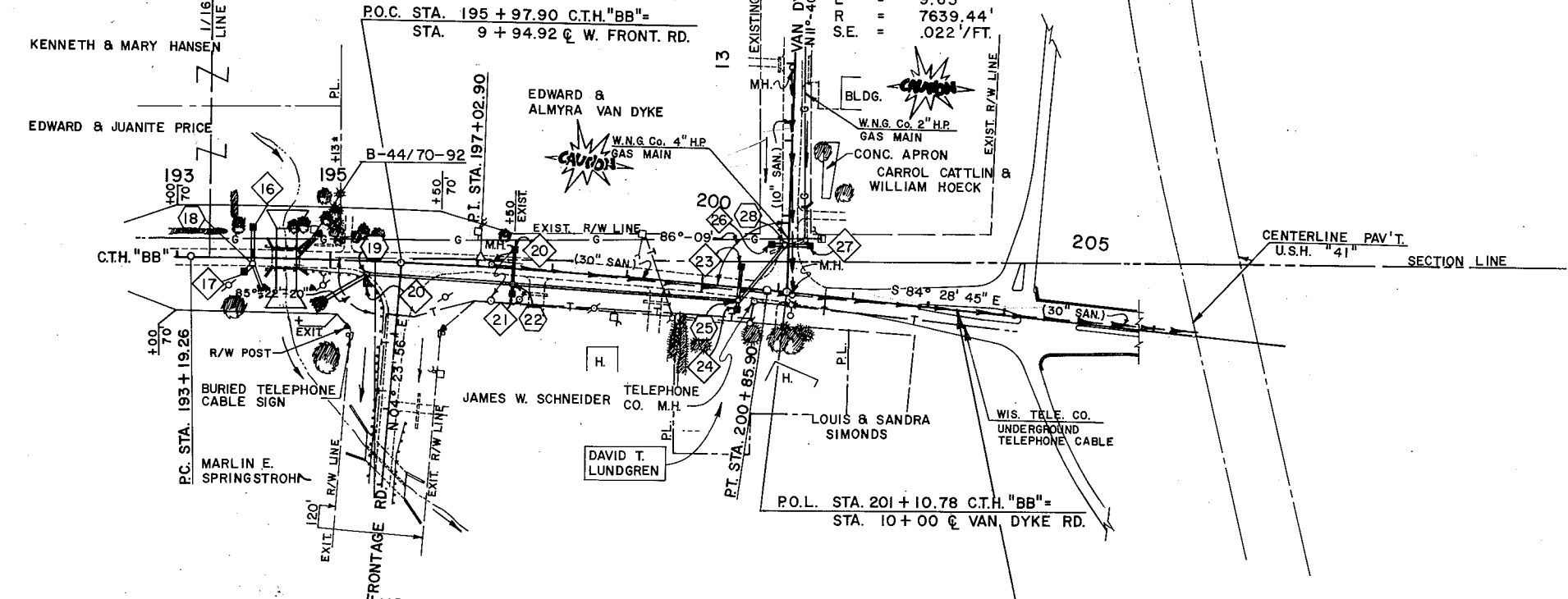


BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
12	194+27	BLUE MARK TOP OF S.W. WING WALL 14' RT	745.44
13	201+38	N.W. CORNER CONC. SLAB GRD. LEVEL 96' RT	751.48

**CURVE NOTES**

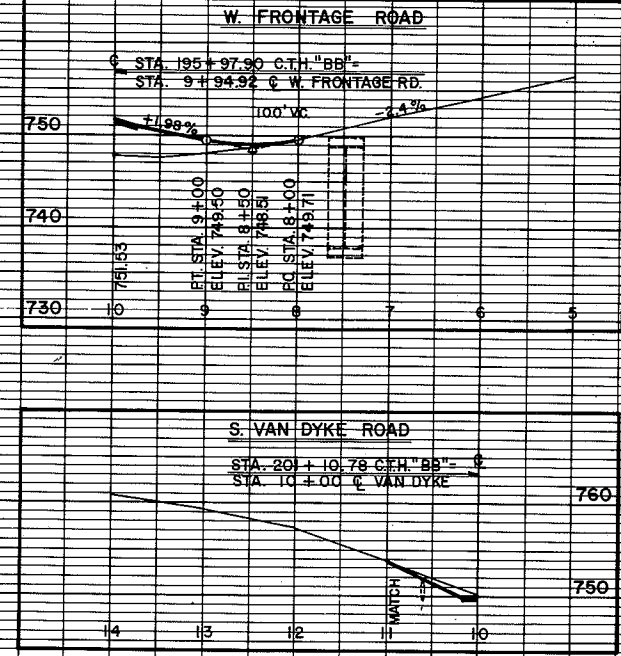
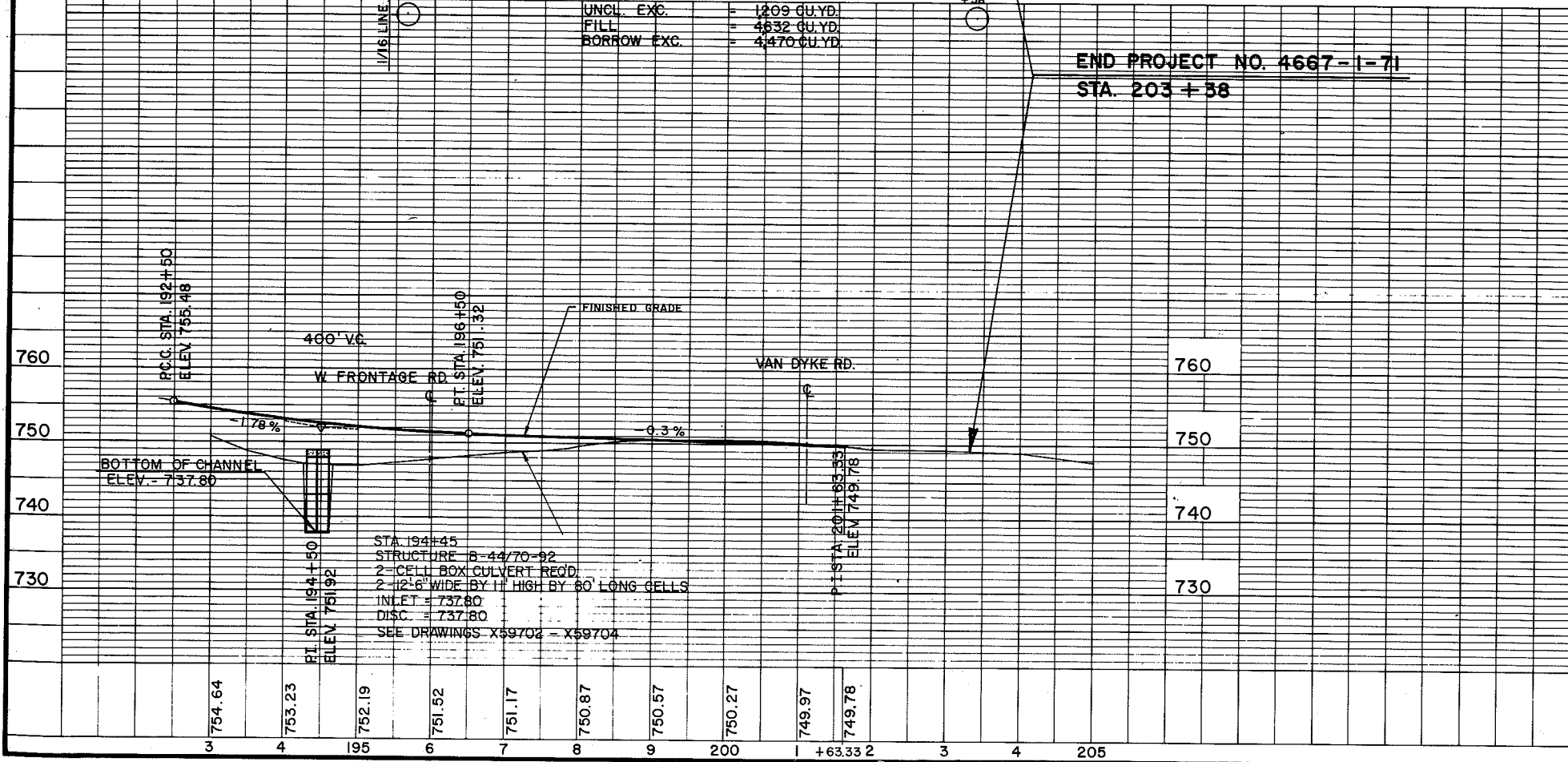
P.I. = 197 + 02.90  
 Δ = 5° - 44' - 59"  
 D = 0° - 45'  
 L = 383.64'  
 T = 766.64'  
 E = 9.63'  
 S.E. = 7639.44'  
 S.E. = .022' / FT.

STATE PROJECT NUMBER	SHEET NO.
4667-1-71	5.7

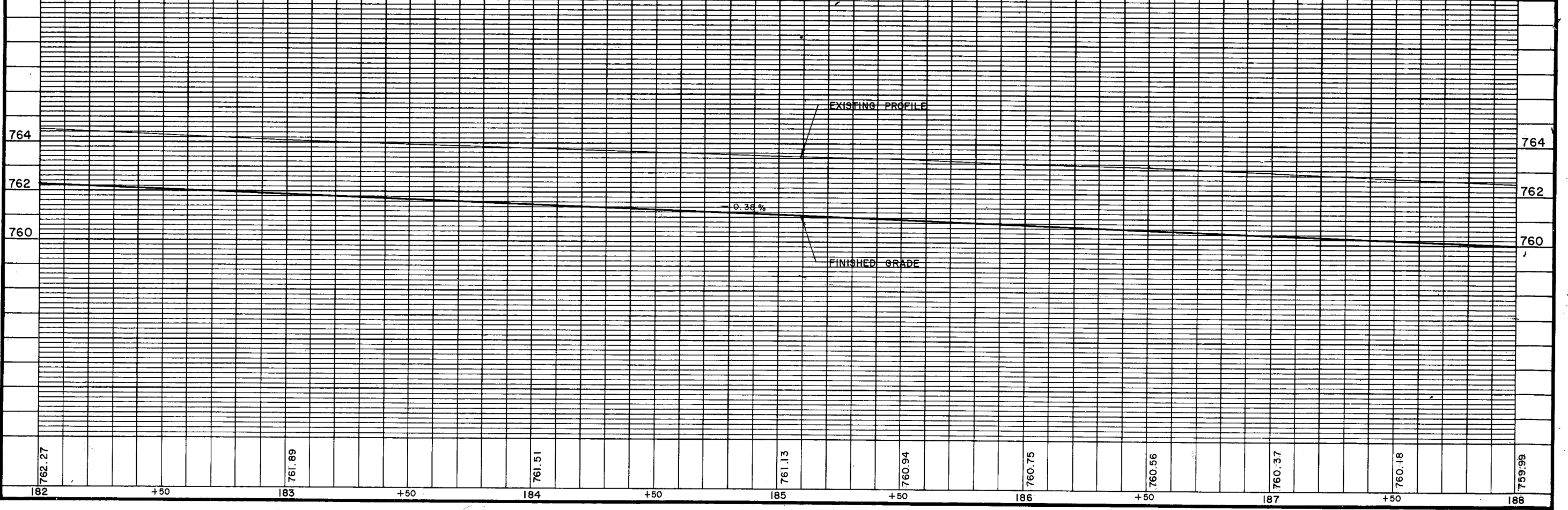
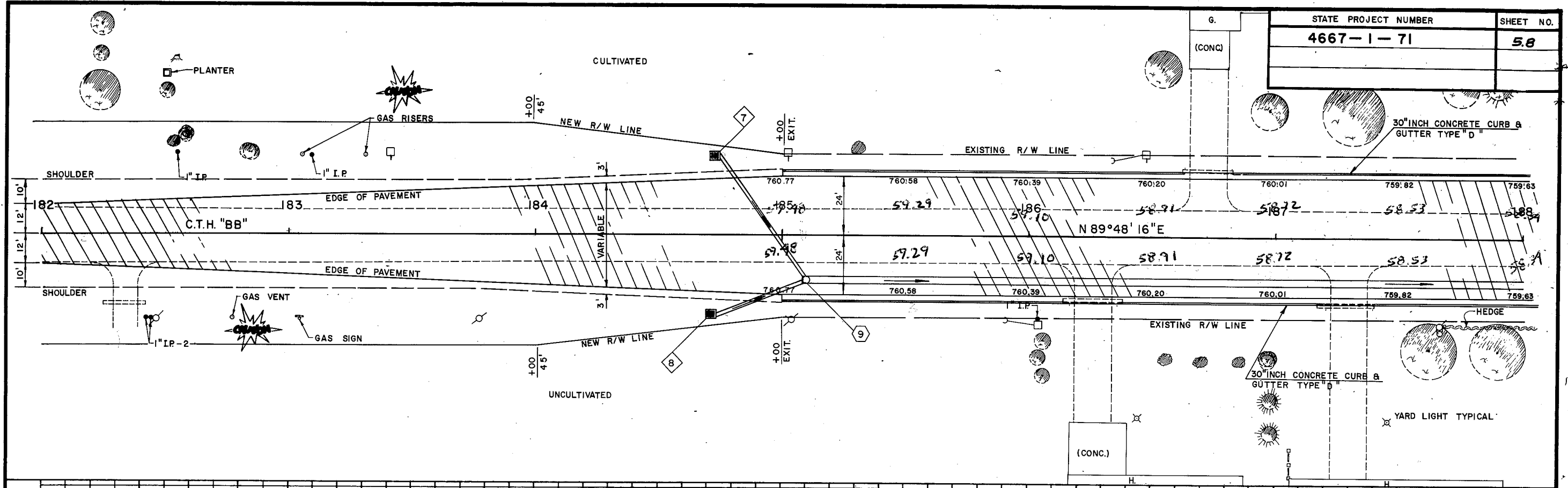


UNCL. EXC. = 1209 CU.YD.  
 FILL = 4632 CU.YD.  
 BORROW EXC. = 4470 CU.YD.

**END PROJECT NO. 4667-1-71**  
**STA. 203 + 38**



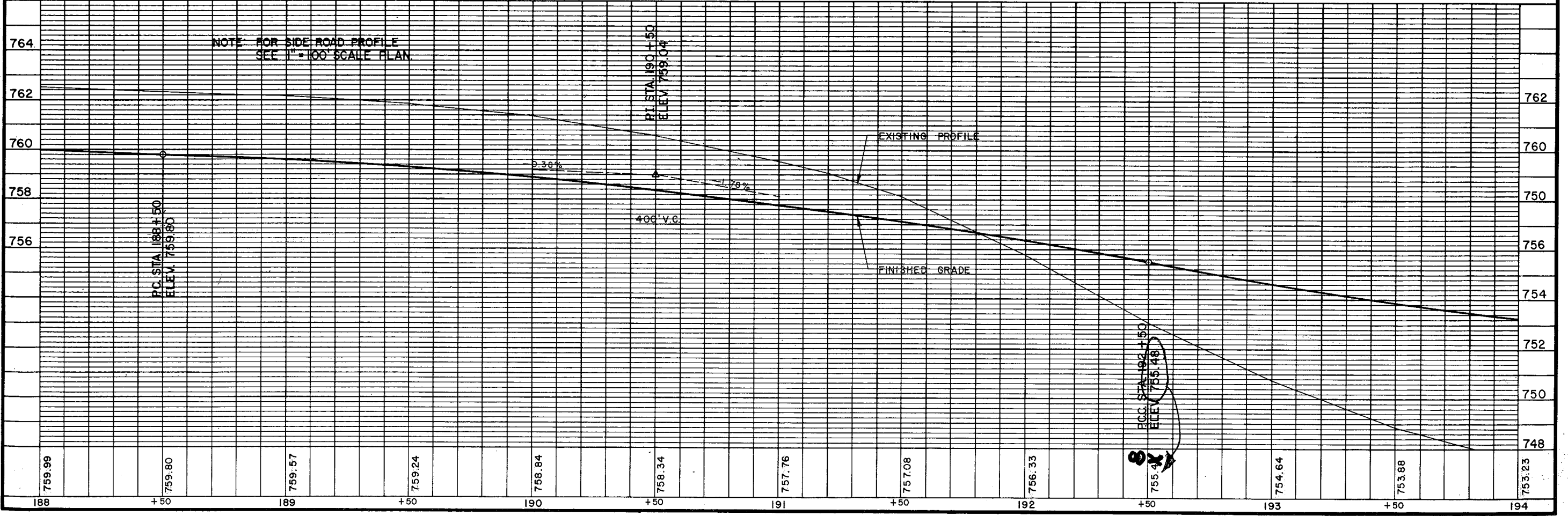
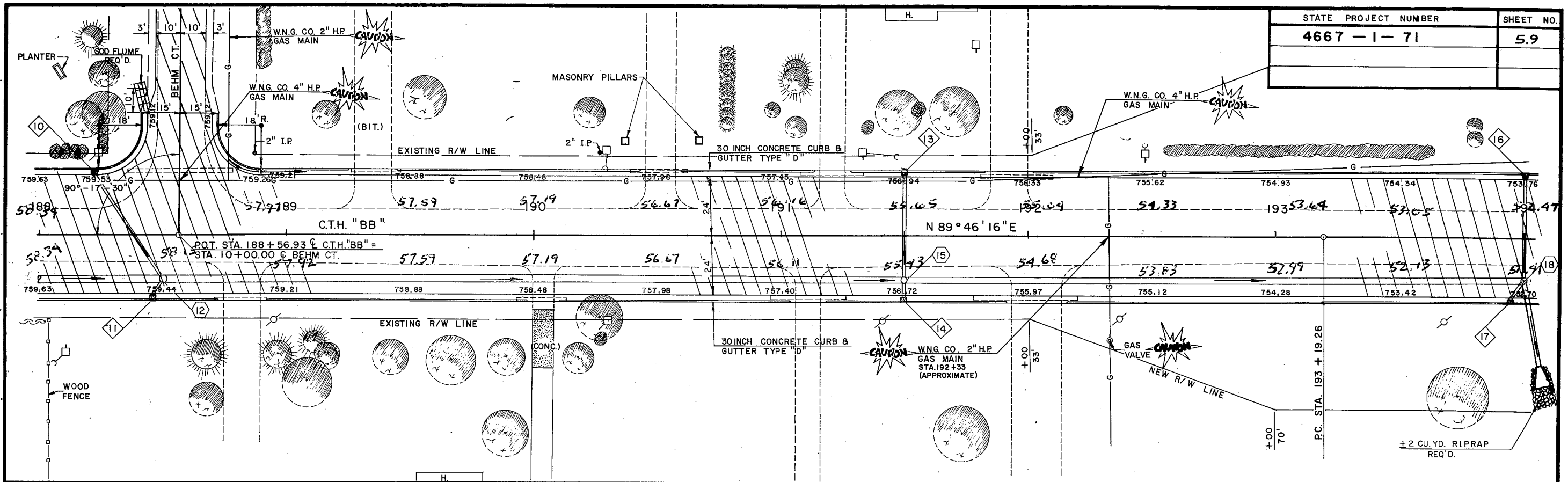
STATE PROJECT NUMBER	SHEET NO.
4667-1-71	5.8



722-1209

27  
13  
x6

STATE PROJECT NUMBER	SHEET NO.
4667 - 1 - 71	5.9

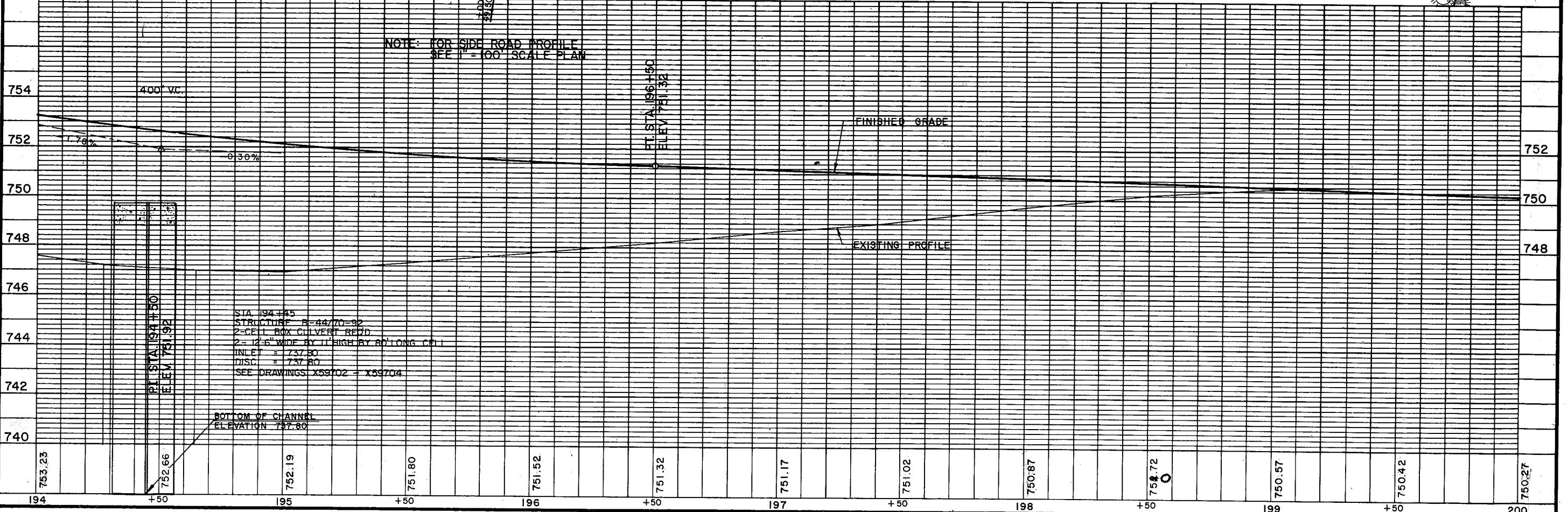
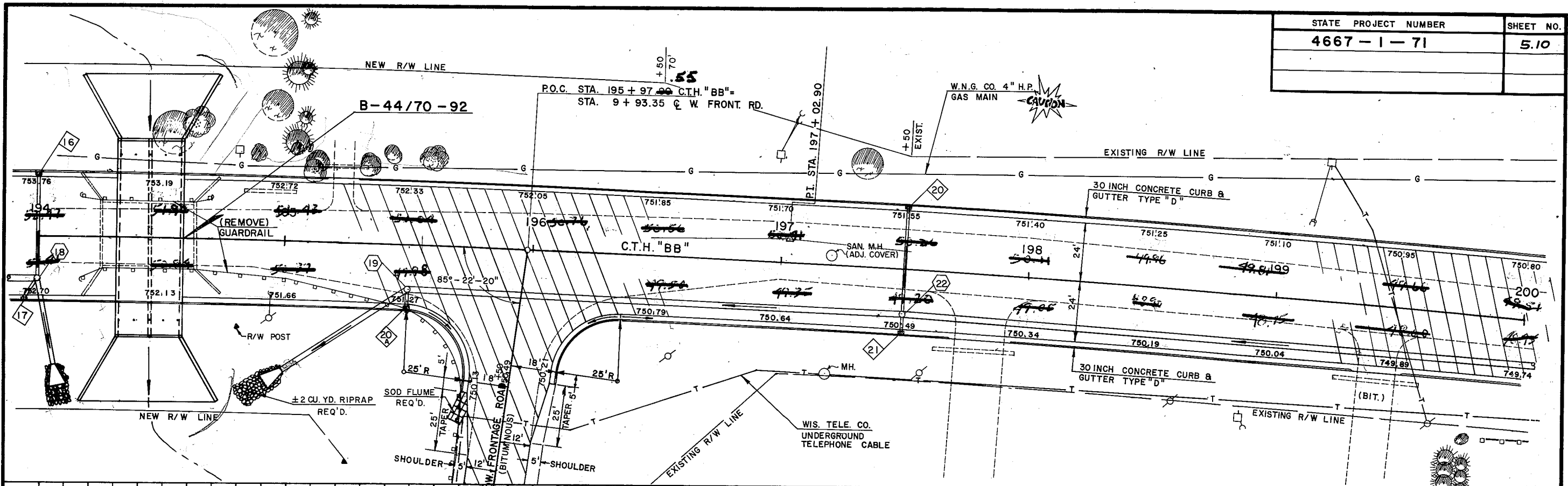


NOTE FOR SIDE ROAD PROFILE  
SEE 1" = 100' SCALE PLAN



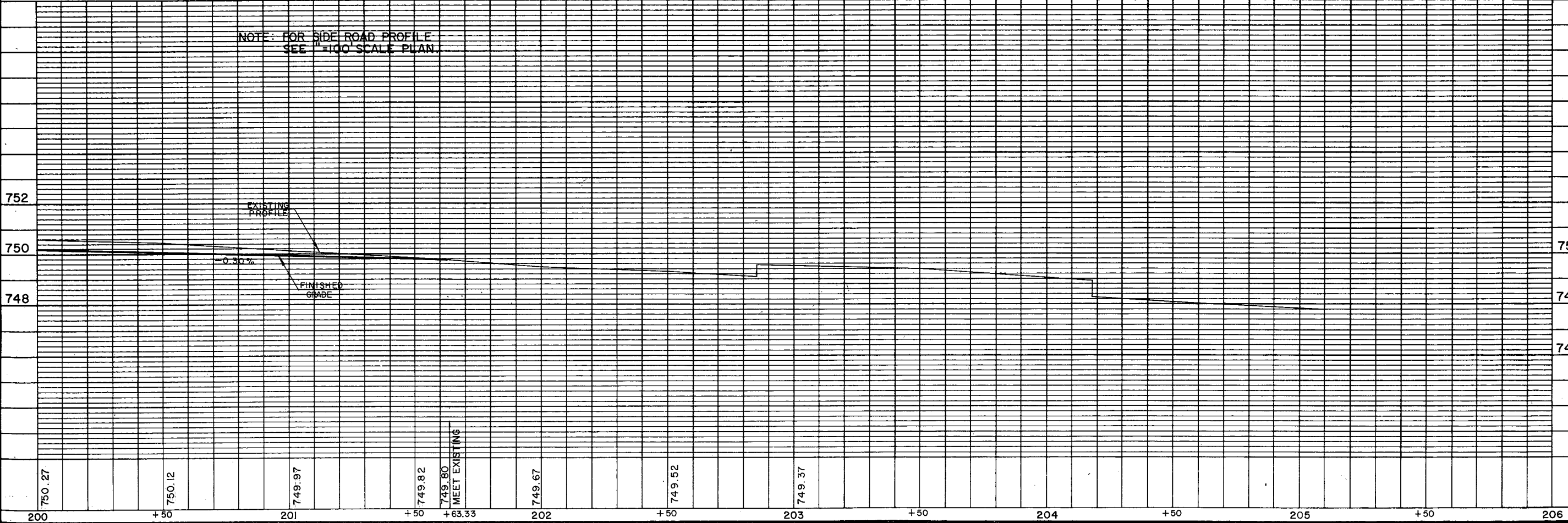
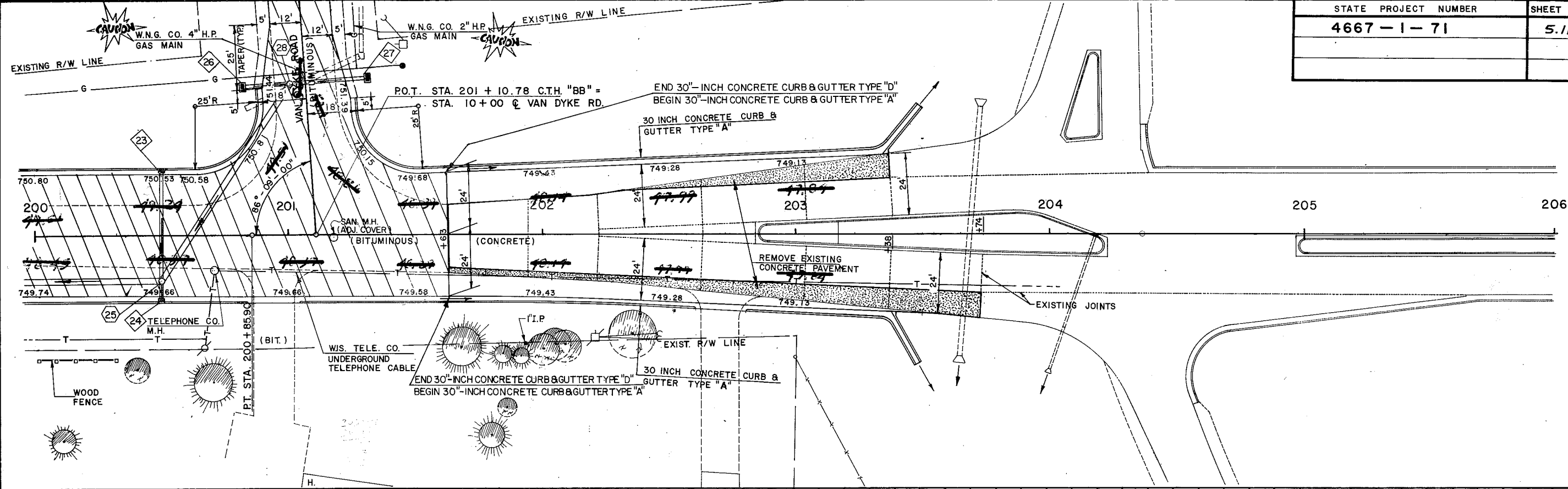
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STATE PROJECT NUMBER	SHEET NO.
4667 - 1 - 71	5.10

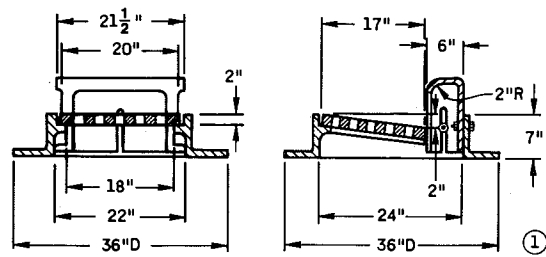


52.66  
1.29  
51.37

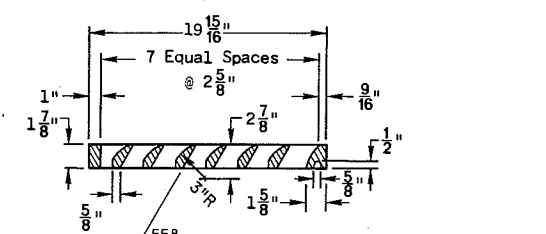
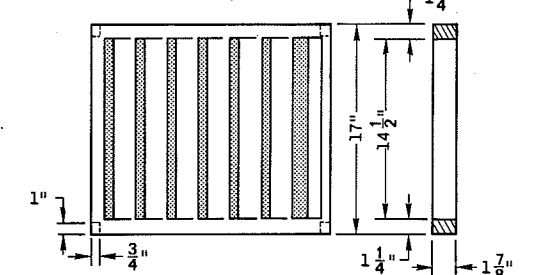
STATE PROJECT NUMBER	SHEET NO.
4667-1-71	5.11



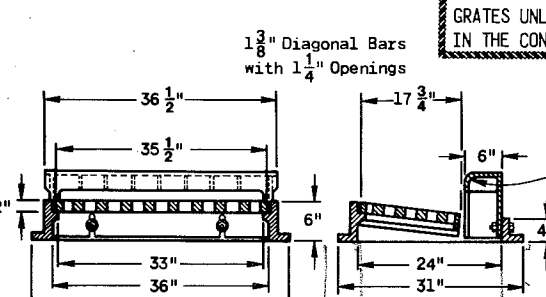




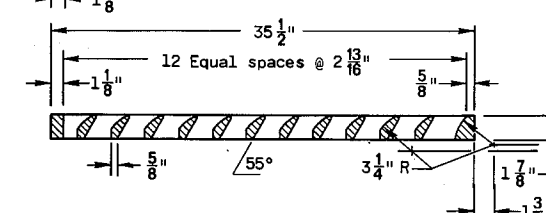
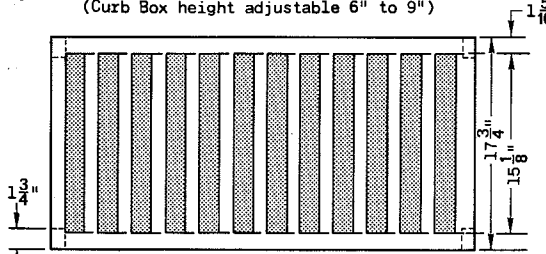
Details of Curb Box, Frame and Diagonally Slotted Grate (Curb Box height adjustable 4" to 9")



**SPECIAL GRATE NO. 1 FOR TYPE "A" COVER**  
(Approximate Weight 70 lbs.)



Details of Curb Box, Frame and Diagonally Slotted Grate (Curb Box height adjustable 6" to 9")

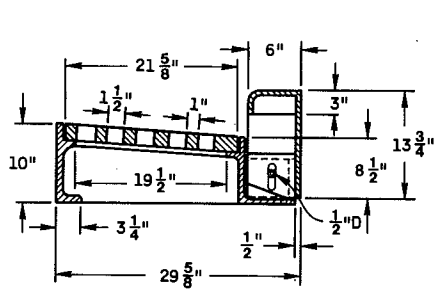
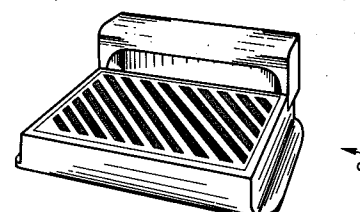
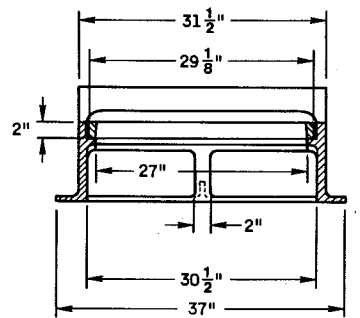
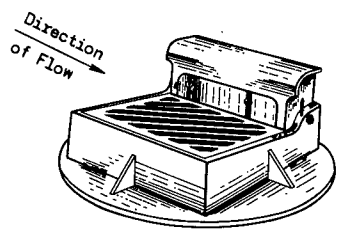


**SPECIAL GRATE NO. 1 FOR TYPE "H" COVER**  
(Approximate Weight 140 lbs.)

1" Diagonal Bars with 1 1/2" Openings

**TYPE "A"**

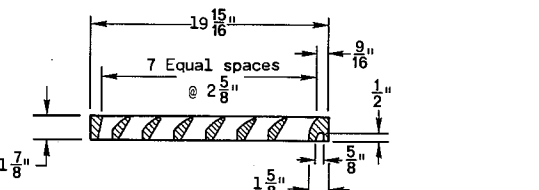
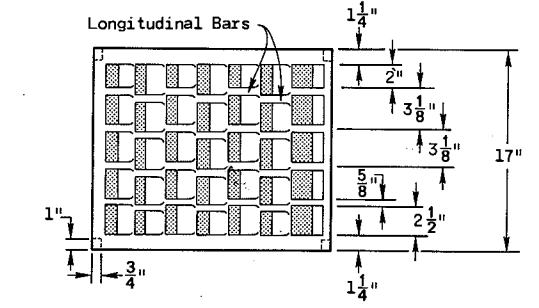
(Approximate Weight 405 lbs.)  
Frame Weight 250 lbs.  
Grate Weight 85 lbs.  
Box Weight 70 lbs.



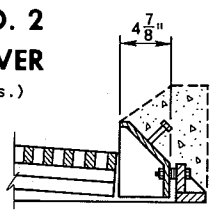
NOTE: Curb Box height adjustable 6" to 9"

**TYPE "WM"**

(Approximate Weight 670 lbs.)  
Frame Weight 350 lbs.  
Grate Weight 185 lbs.  
Box Weight 135 lbs.



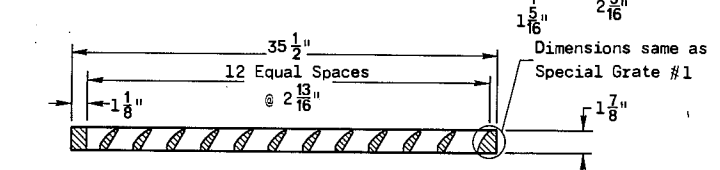
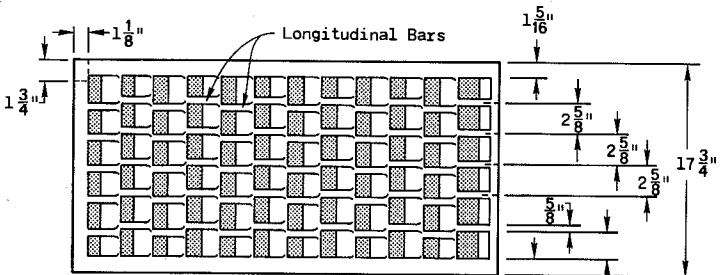
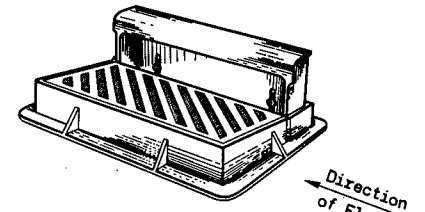
**SPECIAL GRATE NO. 2 FOR TYPE "A" COVER**  
(Approximate Weight 84 lbs.)



**MOUNTABLE CURB BOX FOR TYPES "A" & "H" COVERS**

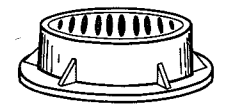
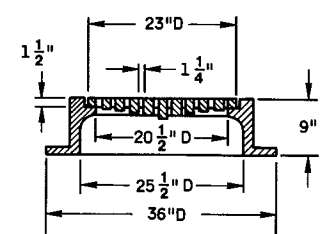
**TYPE "H"**

(Approximate Weight 510 lbs.)  
Frame Weight 220 lbs.  
Grate Weight 175 lbs.  
Box Weight 115 lbs.

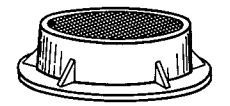


**SPECIAL GRATE NO. 2 FOR TYPE "H" COVER**  
(Approximate Weight 165 lbs.)

CAUTION: DO NOT USE GRATES WITH LONGITUDINAL SLOTS WHERE BICYCLE TRAFFIC IS PERMITTED.



**TYPE "C"**  
Slotted Grate

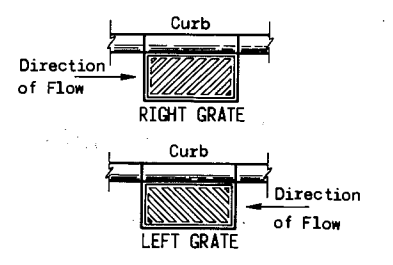


**TYPE "J"**  
Solid Cover

**TYPE "C" - TYPE "J"**

Frame Weight 250 lbs.  
Slotted Grate Weight 125 lbs.  
Solid Cover Weight 150 lbs.

Diagonal Slots shall be oriented to the direction of flow. RIGHT and LEFT grates or grates that are manufactured to be reversible and can be used as either RIGHT or LEFT grates shall be furnished depending on direction of flow (See sketch below)



**GENERAL NOTES**

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detail drawings for proposed alternate designs for Catch Basin, Manhole and Inlet Covers shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All Catch Basin, Manhole and Inlet Covers which are placed in vehicular traffic areas shall be "Non-Rocking" type.

Adjustment of the cover to grade may be accomplished by the use of mortar and brick, or by precast concrete grade rings. Precast concrete grade rings shall conform to the specifications for Precast Reinforced Concrete Manhole Sections, AASHTO Designation M199, except that when such units are wet cast, they shall be made with air-entraining portland cement. Maximum adjustment shall be 8 inches.

The actual weight of covers may vary within 5 percent, plus or minus, of the approximate weight.

**CATCH BASIN MANHOLE AND INLET COVERS**

State of Wisconsin  
Department of Transportation  
Division of Highways

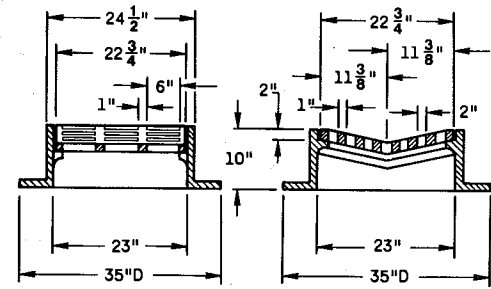
APPROVED  
11-23-77  
DATE

*W. P. Baker*  
SUPERVISING DEVELOPMENT ENGINEER

APPROVED  
11-25-77  
DATE

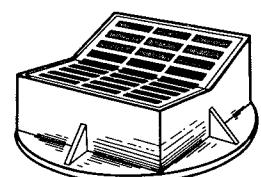
*D. J. Stuebel*  
CHIEF OF FACILITIES DEVELOPMENT

FHWA

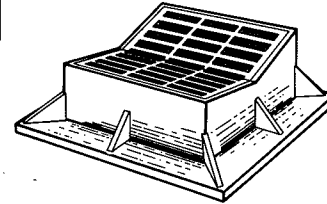


**TYPE "B"**

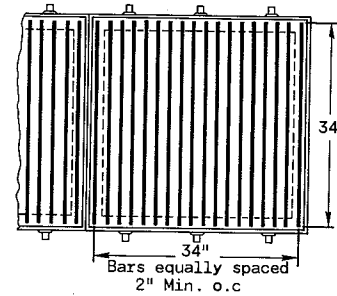
(Approximate Weight 395 lbs.)  
 Frame Weight 285 lbs.  
 Grate Weight 110 lbs.



Round Frame

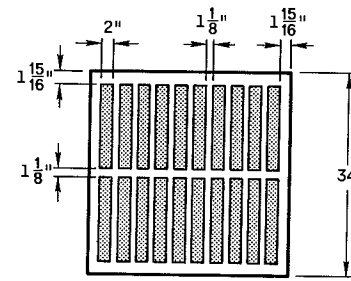


Alternate Frame  
 (Square type)  
 35" Square



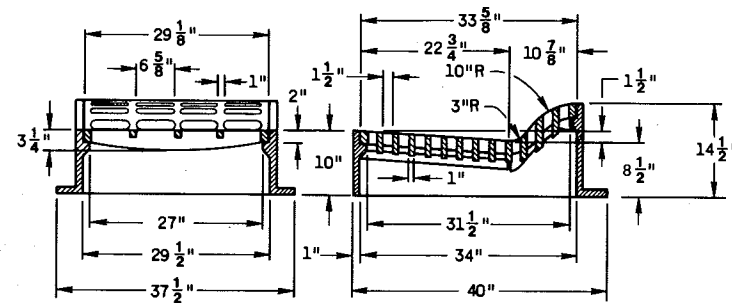
**STEEL GRATE**

(Approximate Weight 209 lbs.)



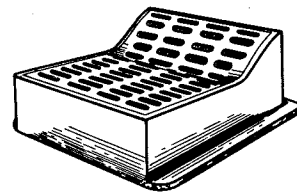
**CAST IRON GRATE**

(Approximate Grate Weight 285 lbs)



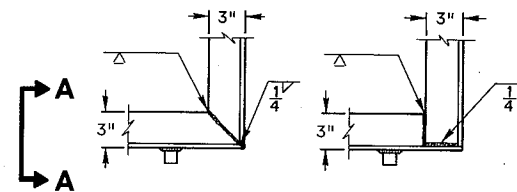
**TYPE "MS"**

CAUTION: DO NOT USE GRATES WITH  
 LONGITUDINAL SLOTS WHERE BICYCLE  
 TRAFFIC IS PERMITTED.

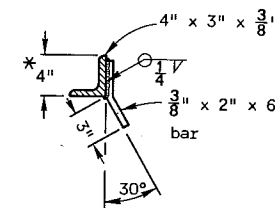


**TYPE "F"**

(Approximate Weight 850 lbs.)  
 Frame 515 lbs.  
 Back grate 160 lbs.  
 Front grate 175 lbs.

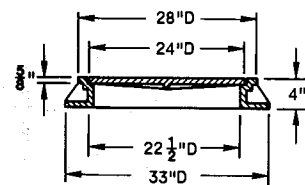


**TYPICAL CORNER OF  
 FRAME FOR STEEL GRATE**



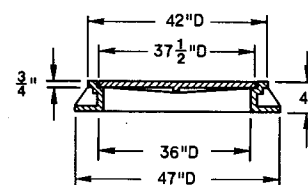
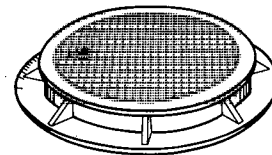
**SECTION A-A**

\*4" dimension may vary according  
 to type of grating used



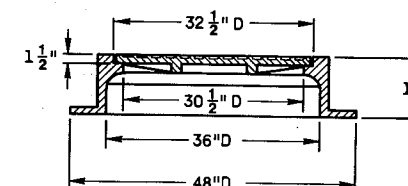
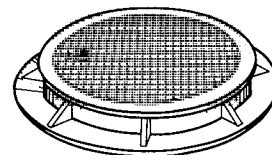
**TYPE "L"**

(Approximate Weight 220 lbs.)



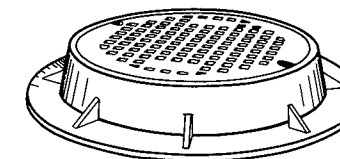
**TYPE "M"**

(Approximate Weight 535 lbs.)



**TYPE "K"**

(Approximate Weight 785 lbs.)



**GENERAL NOTES**

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detail drawings for proposed alternate designs for Catch Basin, Manhole and Inlet Covers shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All Catch Basin, Manhole and Inlet Covers which are placed in vehicular traffic areas shall be "Non-Rocking" type.

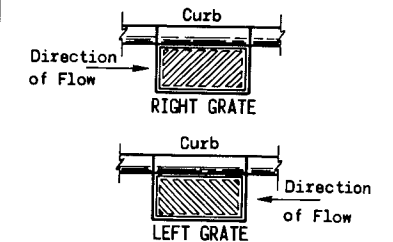
Adjustment of the cover to grade may be accomplished by the use of mortar and brick, or by precast concrete grade rings. Precast concrete grade rings shall conform to the specifications for Precast Reinforced Concrete Manhole Sections, AASHTO Designation M199, except that when such units are wet cast, they shall be made with air-entraining portland cement. Maximum adjustment shall be 8 inches.

The actual weight of covers may vary within 5 percent, plus or minus, of the approximate weight.

The Type "MS" cover may either be a cast iron grate or a steel grate and frame at the contractor's option. A frame is not required with the cast iron cover.

The steel grating shall be capable of carrying an H20 load on a 2'-10" max. clear span and shall have a minimum section modulus thru the main bearing bars of 3.80 inches<sup>3</sup> per ft. of width. The grating shall be cut in such a manner that all riveted or welded connections are left intact. End banding with a 3/8" min. thickness is required. The size of the frame shall be such that when the grate is in place, the clearance between the grate and the frame will not exceed 5/8" on any side. Main bars shall be laterally supported by transverse bars. Grating and frame shall be galvanized as specified in AASHTO Designation M-111 after fabrication. Grating shall be approved by the Engineer.

Diagonal Slots shall be oriented to the direction of flow. RIGHT and LEFT grates or grates that are manufactured to be reversible and can be used as either RIGHT or LEFT grates shall be furnished depending on direction of flow. (See sketch below)



**CATCH BASIN  
 MANHOLE AND  
 INLET COVERS**

State of Wisconsin  
 Department of Transportation  
 Division of Highways

APPROVED  
 11-23-77

DATE

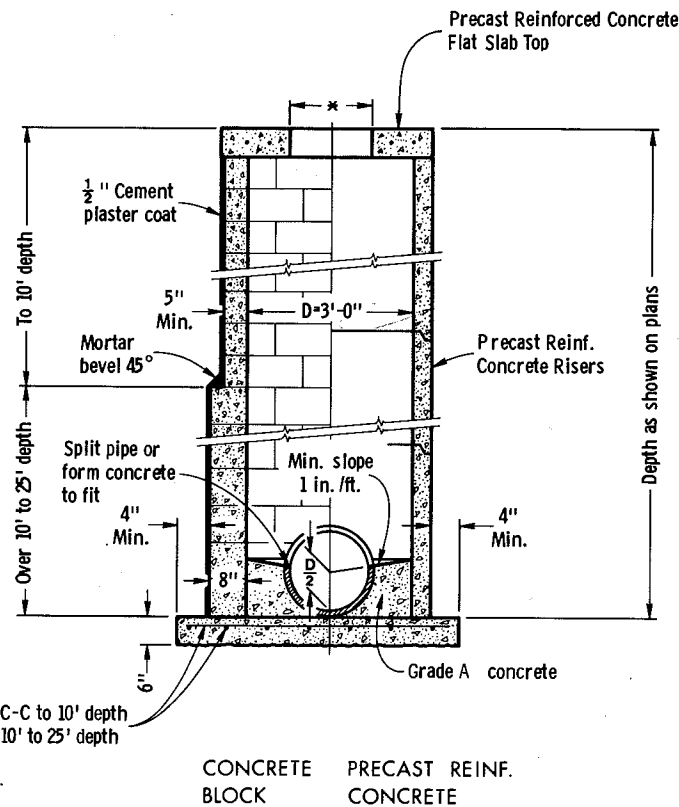
APPROVED  
 11-25-77

DATE

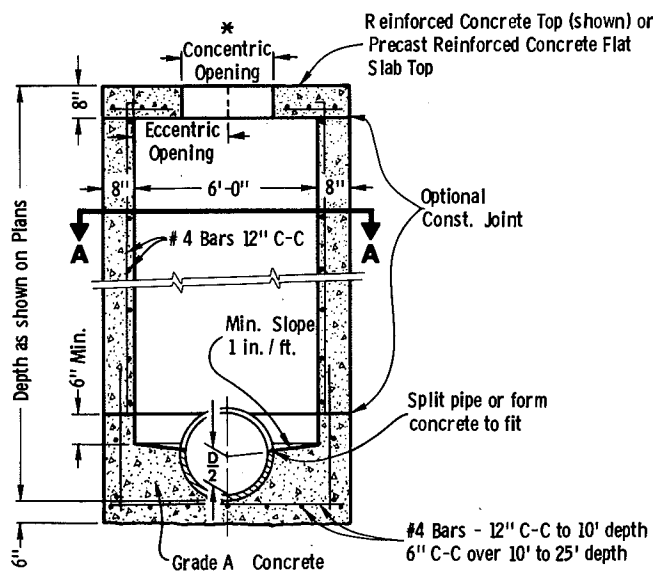
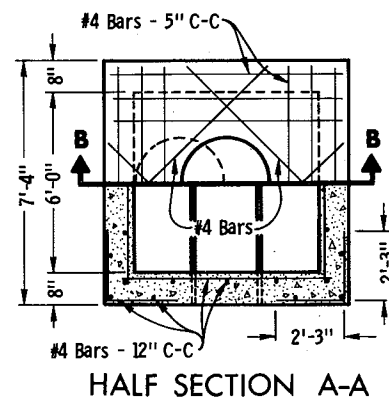
FHWA

*P.W. Buber*  
 SUPERVISING DEVELOPMENT ENGINEER

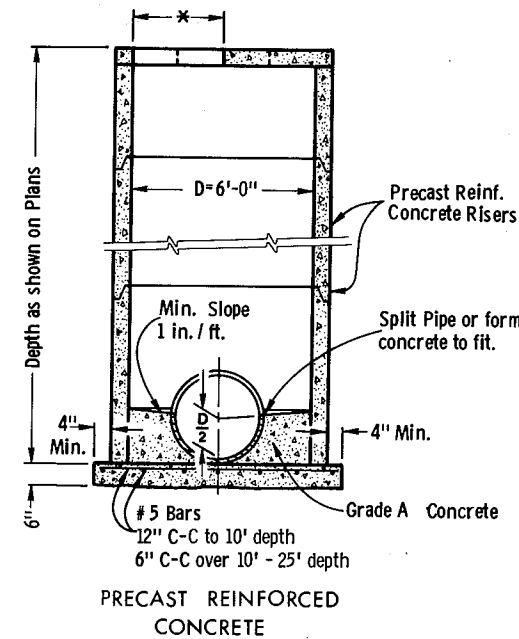
*D.J. Standa*  
 CHIEF OF FACILITIES DEVELOPMENT



**MANHOLES TYPE 2**



**SECTION B-B  
REINFORCED CONCRETE**



**PRECAST REINFORCED  
CONCRETE**

**GENERAL NOTES**

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All drainage structures are designated on the plans as "Manholes 1 - C", "Catch Basins 1 - B", "Inlets 1 - H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

Precast Reinforced Bases shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Steps meeting the following requirements shall be installed in all structures over 5 feet in depth: 16 inch C-C maximum spacing; project a minimum clear distance of 4 inches from the wall at the point of embedment; minimum length of 10 inches; minimum wall embedment of 3 inches; and be capable of supporting a concentrated load of 300 lbs. Ferrous metal steps not painted or treated to resist corrosion shall have a minimum cross sectional dimension of 1 inch.

Solid Aluminum steps shall have a minimum cross sectional dimension of 0.75 inch. Aluminum surfaces to be embedded in concrete shall be given one coat of suitable quality paint, such as zinc chromate primer conforming to federal specification TT-P-645 or equivalent. Steps of approved Polypropylene plastic coated reinforcement bar will be acceptable.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers may be placed with tongue up or down.

\* Use 2'-0" diameter opening with type "C", "L" and "J" covers, or 3'-0" diameter with type "K" and "M" covers.

**MANHOLES TYPE 2 & 3**

State of Wisconsin  
Department of Transportation  
Division of Highways

RECOMMENDED FOR APPROVAL:

12-3-75  
DATE

*J.C. Thomas*  
CHIEF OF FACILITIES DEVELOPMENT

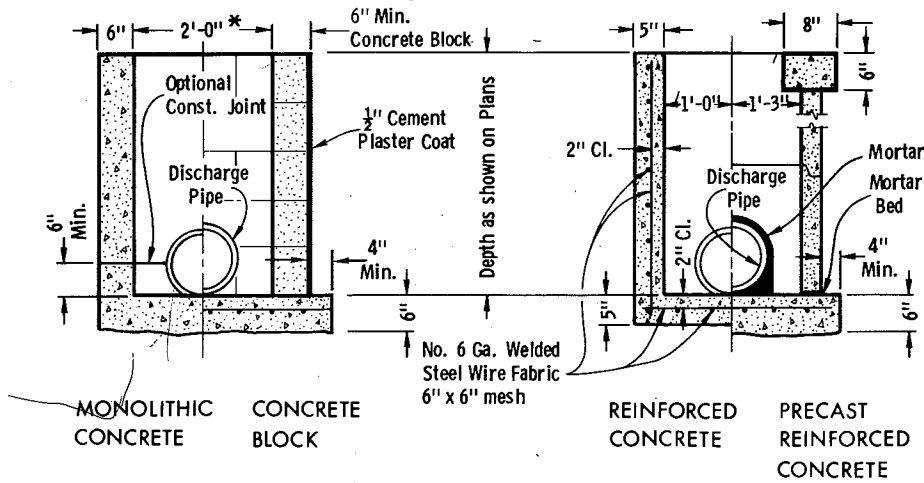
APPROVED

12-9-75  
DATE

*W.J. Sudler*  
STATE HIGHWAY ENGINEER

**MANHOLES TYPE 3**

\* Selection of Square or Circular Design will be based on the pipe sizes and the Inlet Cover being utilized.



**INLETS TYPE 1**

**GENERAL NOTES**

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

Square Precast Inlet units shall conform to the pertinent requirements of AASHTO Designation M 199.

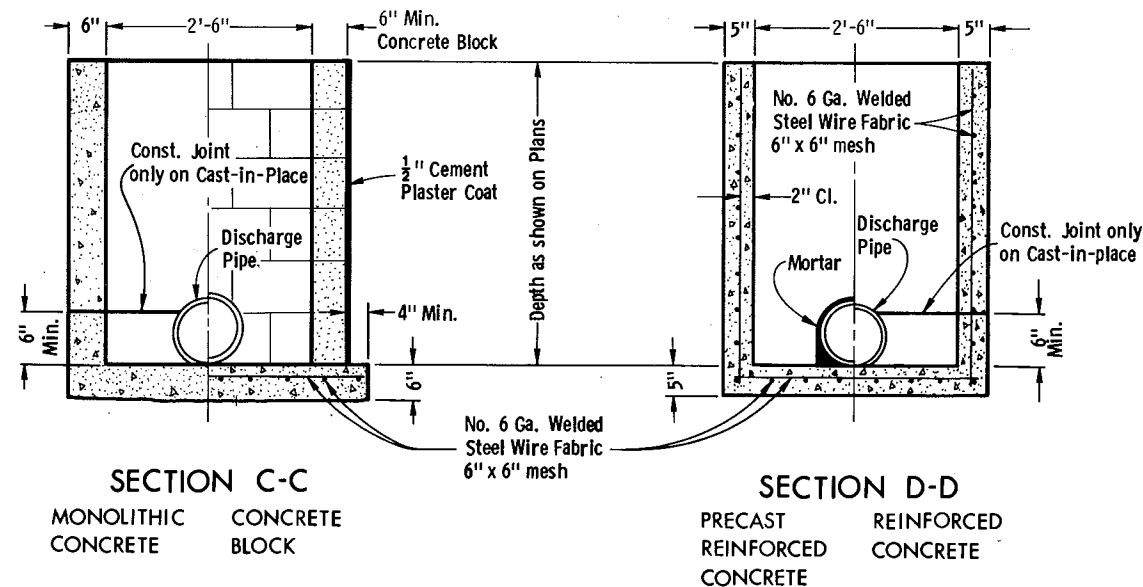
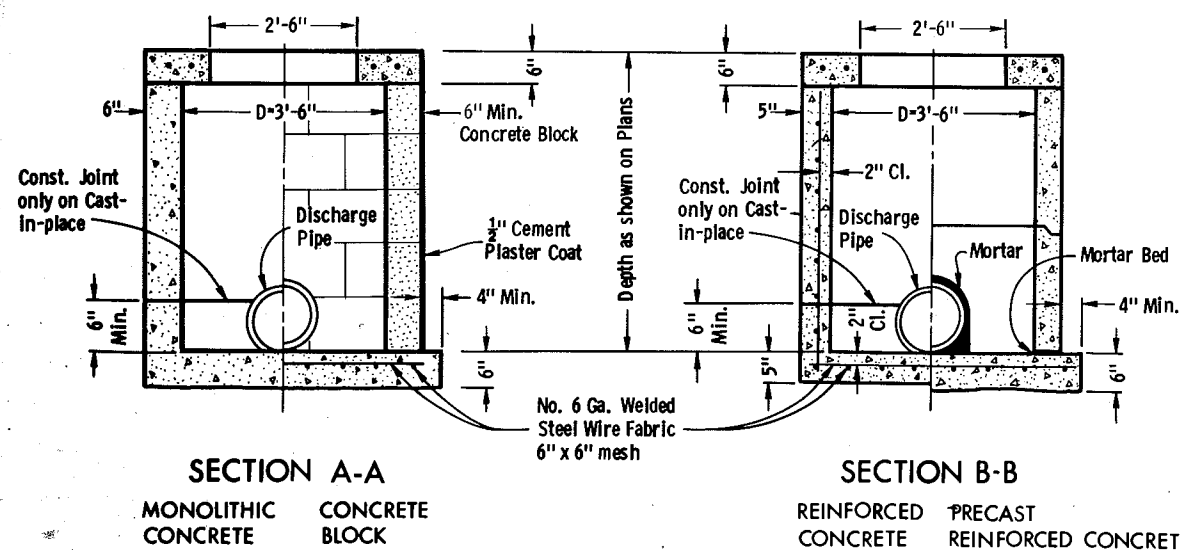
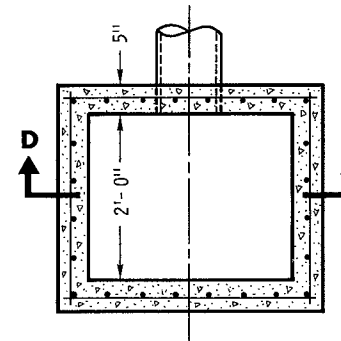
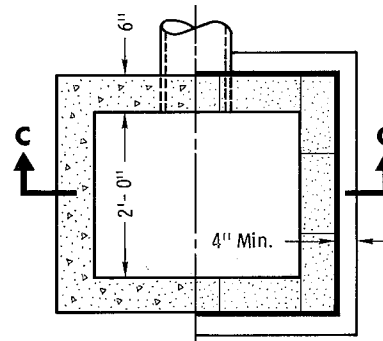
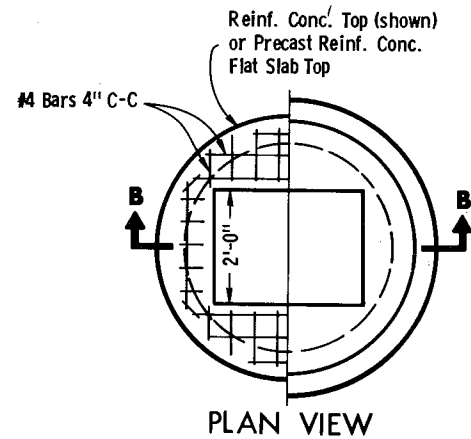
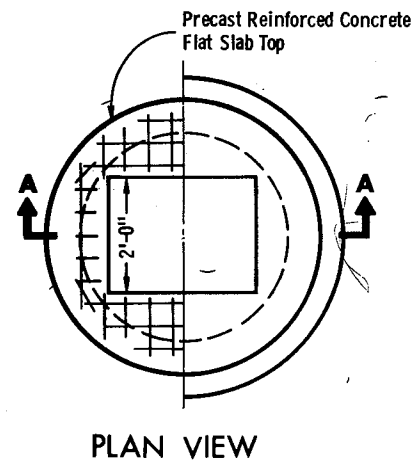
All drainage structures are designated on the plans as "Manholes 1 - C", "Catch Basins 1 - B", "Inlets 1 - H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

Precast Reinforced Bases shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Precast Reinforced Concrete Flat Slab Tops may be used on the structures. The Tops shall be installed on a bed of mortar.

All bar steel reinforced reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers may be placed with tongue up or down.



**INLETS TYPE 2**

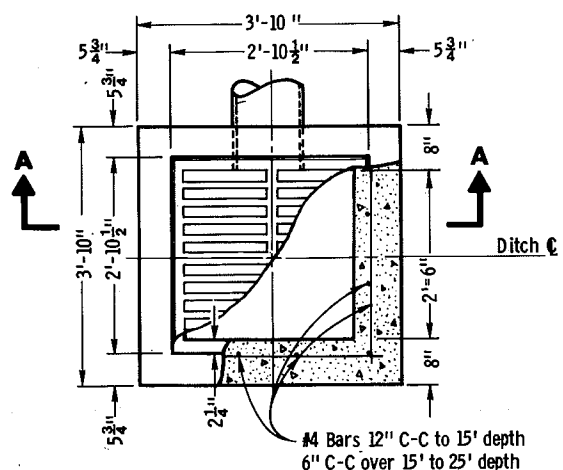
**INLETS TYPE 1 & 2**

State of Wisconsin  
Department of Transportation  
Division of Highways

RECOMMENDED FOR APPROVAL:  
DATE 10-16-75  
APPROVED DATE 10-16-75

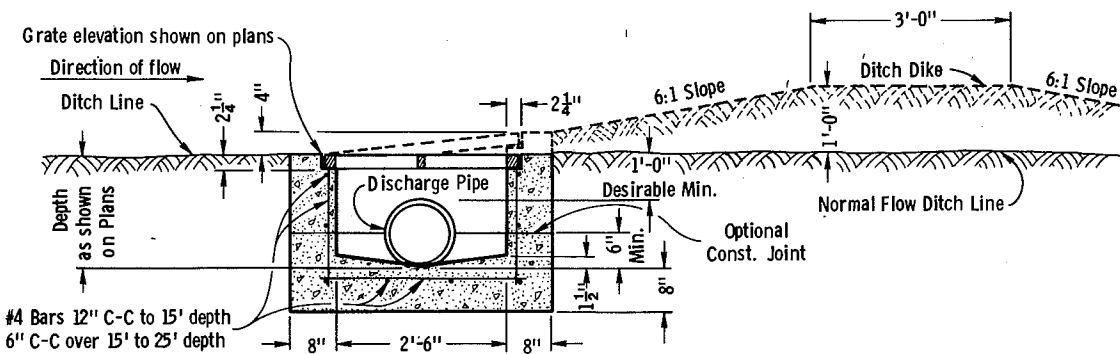
*J.C. Hennel*  
CHIEF OF FACILITIES DEVELOPMENT

*W.J. Fisher*  
STATE HIGHWAY ENGINEER

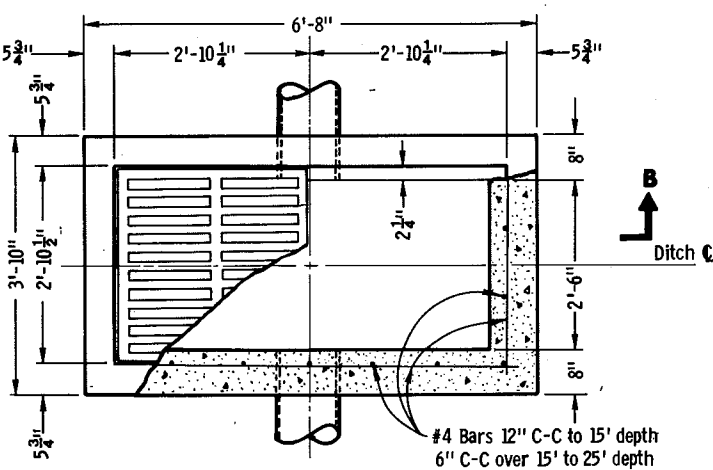


PLAN VIEW

**INLET TYPE 8**  
REINFORCED CONCRETE

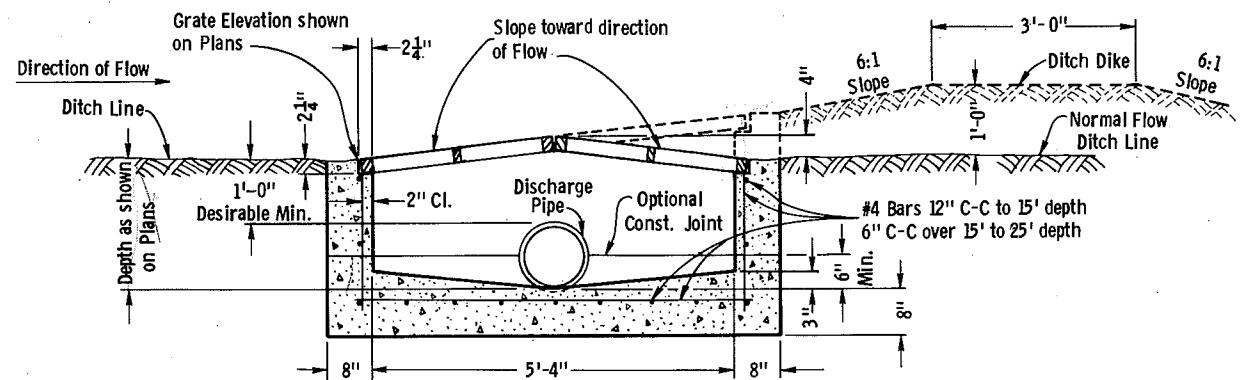


SECTION A-A

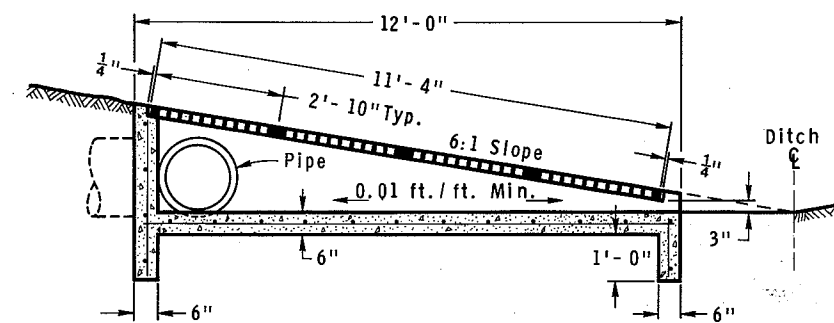


PLAN VIEW

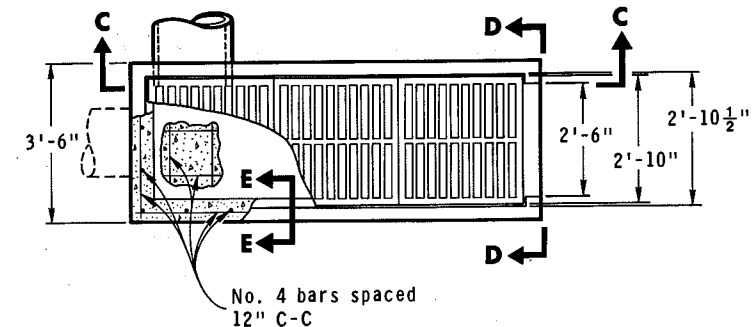
**INLET TYPE 9**  
REINFORCED CONCRETE



SECTION B-B

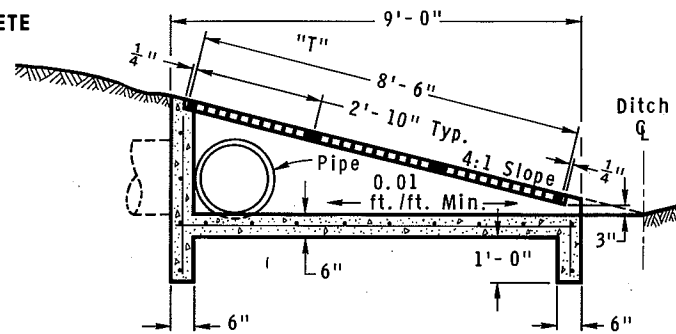


SECTION G-G

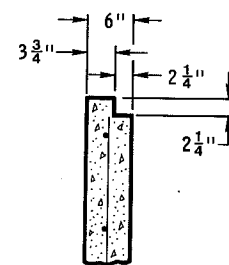


PLAN VIEW

**INLET TYPE 10**  
REINFORCED CONCRETE

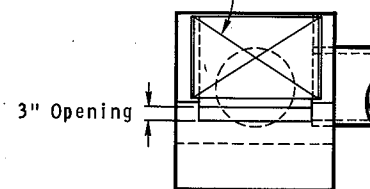


SECTION C-C

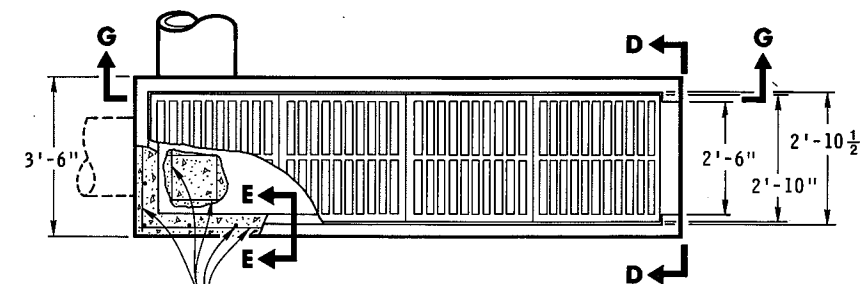


SECTION E-E

3 Grates @ 4:1  
4 Grates @ 6:1



VIEW D-D



PLAN VIEW  
**INLET TYPE 11**  
REINFORCED CONCRETE

**GENERAL NOTES**

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions. Detailed drawings for proposed alternate designs for Inlets which may include precast reinforced concrete inlets, shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

Precast reinforced concrete inlet units, if used, shall conform to the requirements of the Catch Basins, Manholes and Inlets Section of the Standard Specification's.

All Inlets are designated on the Plans as "Inlets, 8-MS", etc. This designation is interpreted to mean that the number, or first digit designates the masonry portion of the structure and the following letter designates the type of cover or iron casting to be used therewith to comprise the complete unit.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

INLETS TYPE 8, 9, 10 and 11

State of Wisconsin  
Department of Transportation  
Division of Highways

RECOMMENDED FOR APPROVAL:

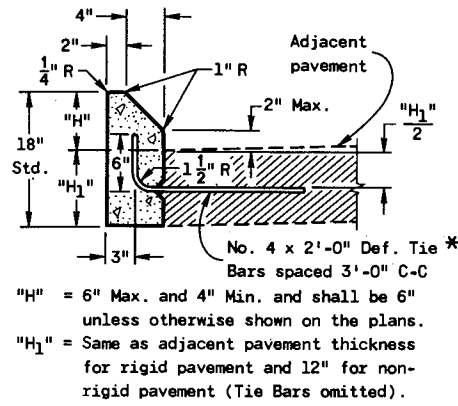
4-30-74  
DATE

APPROVED

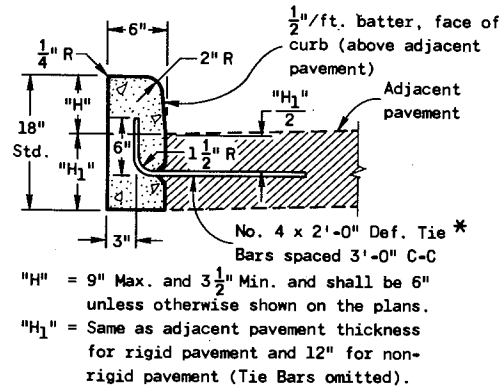
5-02-74  
DATE

*J.C. McManis*  
CHIEF OF FACILITIES DEVELOPMENT

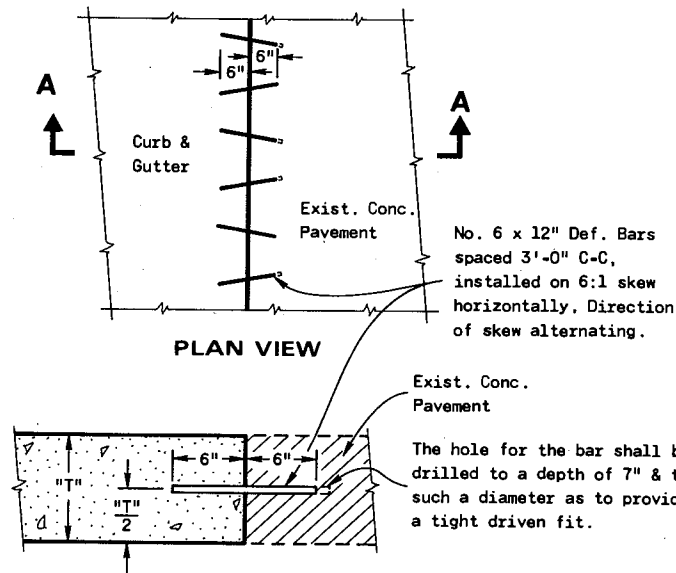
*H.P. Siedler*  
STATE HIGHWAY ENGINEER



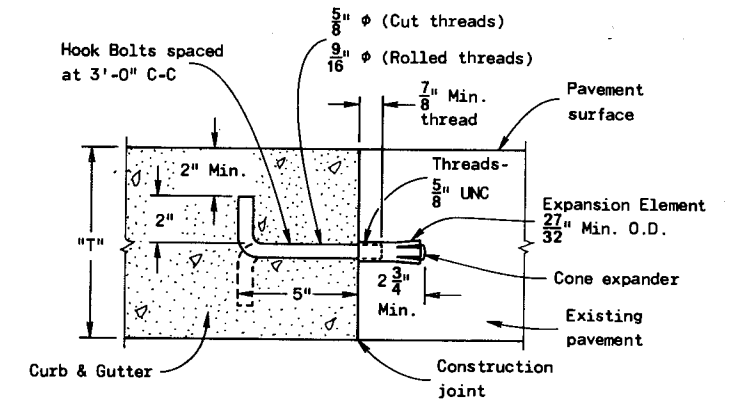
**TYPE "G"**  
(INCLUDING TIE BARS)  
**CONCRETE CURB**



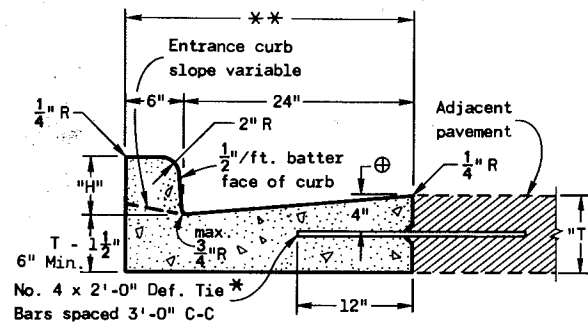
**TYPE "A"**  
(INCLUDING TIE BARS)  
**CONCRETE CURB**



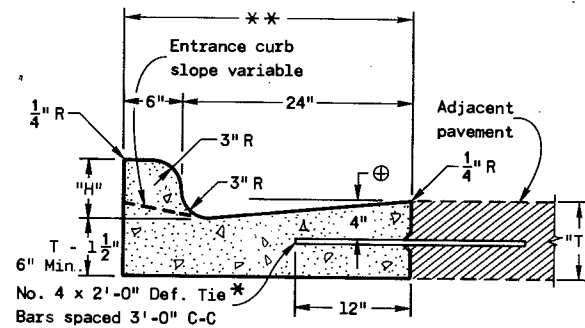
**SECTION A - A**  
**ALTERNATE TIE BAR INSTALLATION**



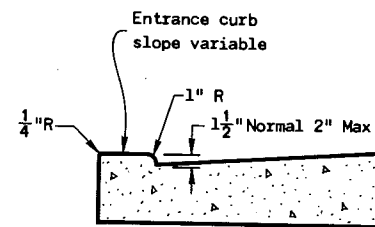
**HOOK BOLT**



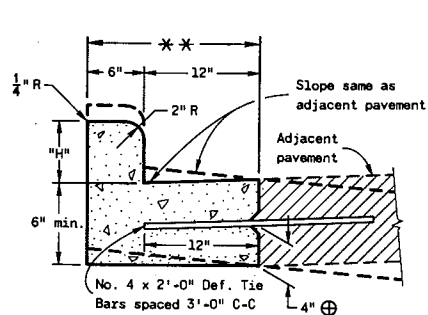
**TYPE "A"**  
(INCLUDING TIE BARS)  
**CONCRETE CURB & GUTTER 30"**



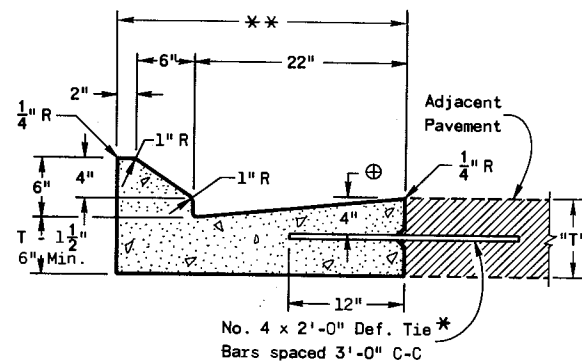
**TYPE "D"**  
(EXCLUDING TIE BARS)  
**CONCRETE CURB & GUTTER 30"**



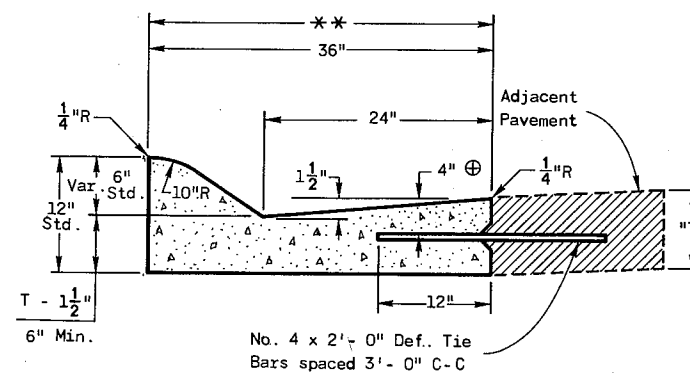
**ALTERNATE ENTRANCE CURB**  
(When directed by the Engineer)



**TYPE "A"**  
(INCLUDING TIE BARS)  
**CONCRETE CURB & GUTTER 18"**



**TYPE "D"**  
(EXCLUDING TIE BARS)  
**CONCRETE CURB & GUTTER 30"**



**TYPE "A"**  
(INCLUDING TIE BARS)  
**CONCRETE CURB & GUTTER 36"**

**GENERAL NOTES**

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Joints shall not be sealed in Concrete Curb, or Concrete Curb & Gutter.

Where Concrete Curb or Concrete Curb & Gutter is poured adjacent to existing P.C. concrete pavement, a "Hook Bolt" or "Alternate Tie Bar Installation" shown on this sheet is required.

Where the adjacent pavement will be bituminous concrete, 3/4 inch expansion joints shall be installed in the Concrete Curb or Concrete Curb & Gutter. These expansion joints shall be located about 3 feet from each end of all catch basins or inlets, at all locations where tangent and radial curb and gutter meet, and on tangent sections at a maximum spacing of 300 feet.

**INTEGRAL CURB AND GUTTER ALTERNATE**  
Unless otherwise specified in the contract, Integral Curb & Gutter may be built as an alternate to Curb & Gutter.

Integral Curb & Gutter shall be measured and paid for as Curb & Gutter.

Pay limits for Concrete Integral Curb & Gutter.

Pavement reinforcing steel and load transfer dowels will not be required within the pay limits of Integral Curb & Gutter.

Contraction, construction or expansion joints shall be continuous through the Integral Curb & Gutter. The joints in Integral Curb & Gutter shall be spaced the same as the joints in the pavement.

"T" = Pavement thickness  
⊕ = Or center of pavement, whichever is less

**CONCRETE CURB,  
CONCRETE CURB & GUTTER,  
OR INTEGRAL CURB**

State of Wisconsin  
Department of Transportation  
Division of Highways

APPROVED  
7-13-78

DATE

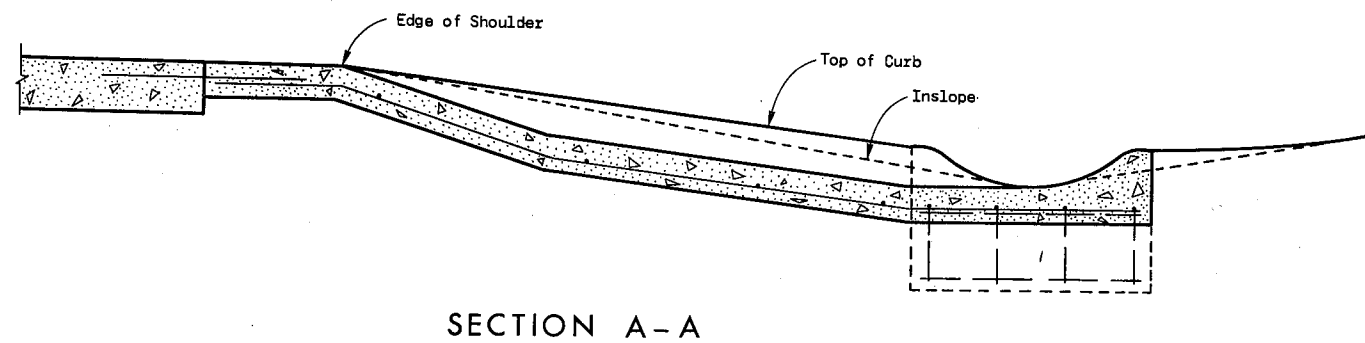
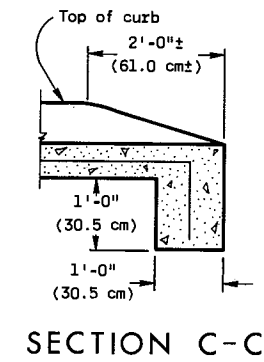
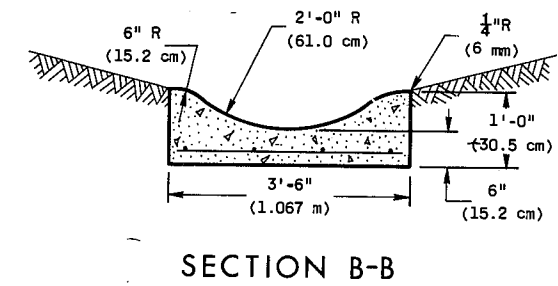
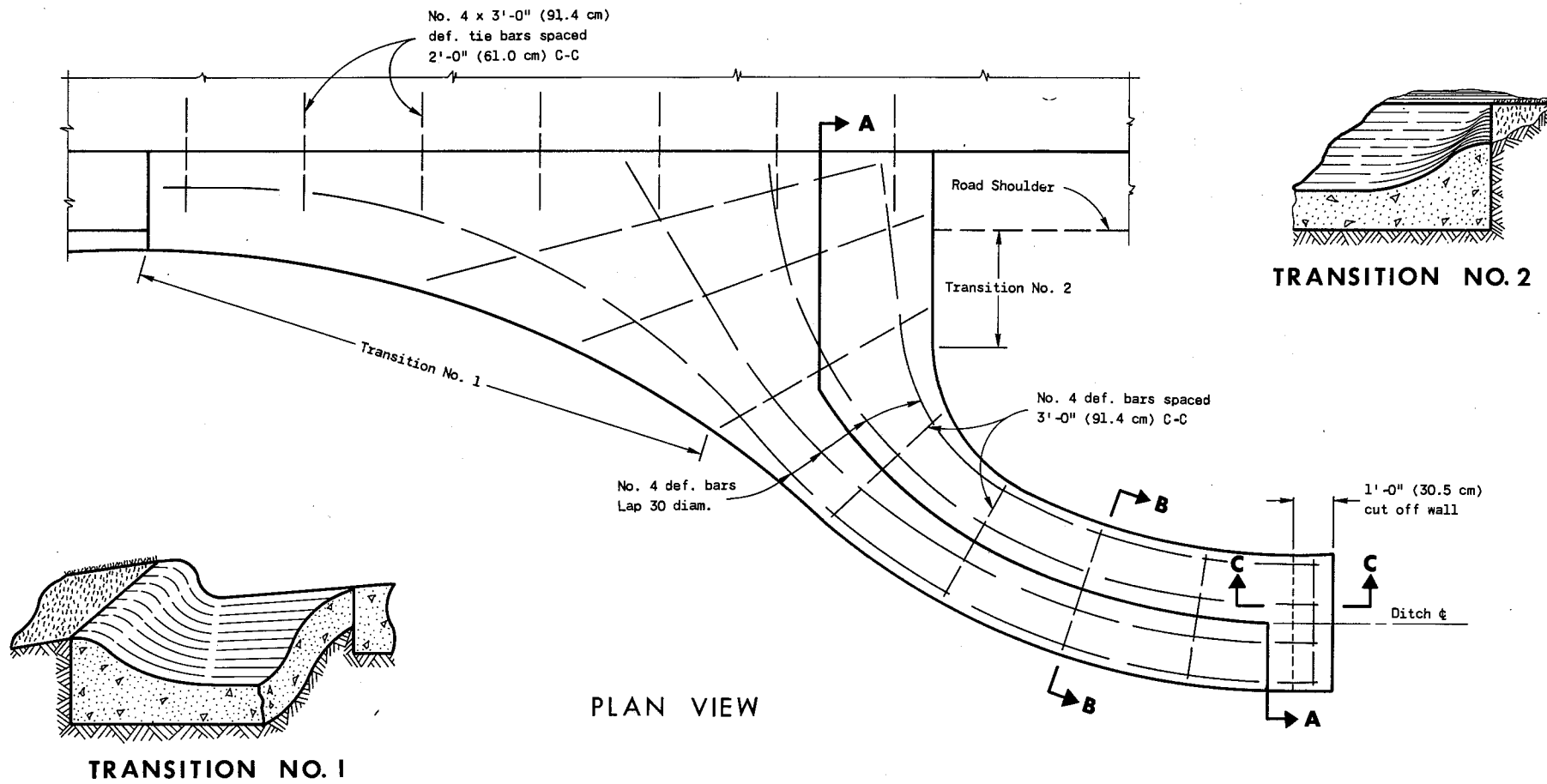
APPROVED  
7-13-78

DATE

FHWA

*R.W. Baker*  
SUPERVISING DEVELOPMENT ENGINEER

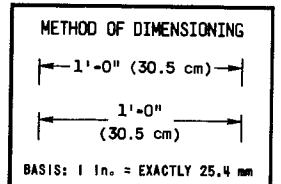
*D.J. Strand*  
CHIEF OF FACILITIES DEVELOPMENT



### GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Typical design only; exact design and flume length may be modified by the Engineer to meet field conditions.



### CONCRETE SURFACE DRAIN

State of Wisconsin  
Department of Transportation  
Division of Highways

RECOMMENDED FOR APPROVAL:

1-7-74

DATE

*J. C. Hennrich*  
CHIEF OF FACILITIES DEVELOPMENT

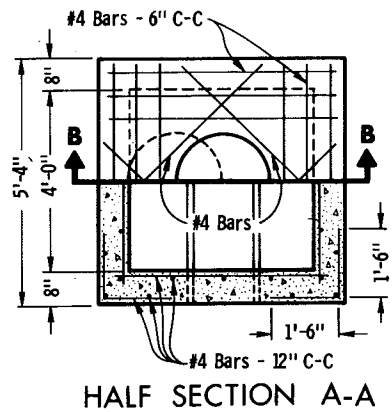
APPROVED

1-15-74

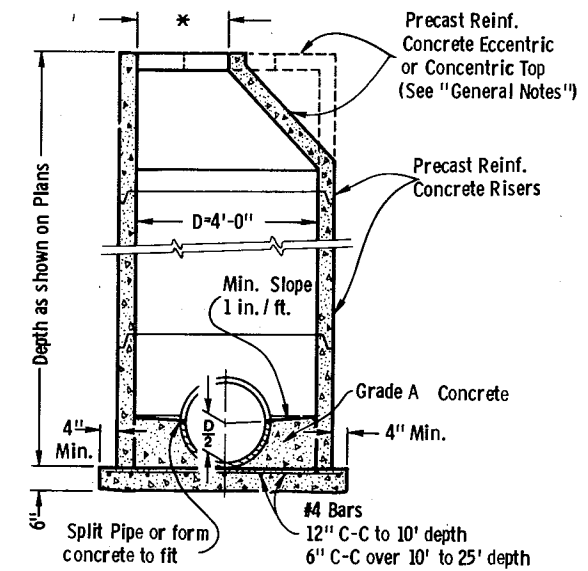
DATE

*H. S. Jidlov*  
STATE HIGHWAY ENGINEER

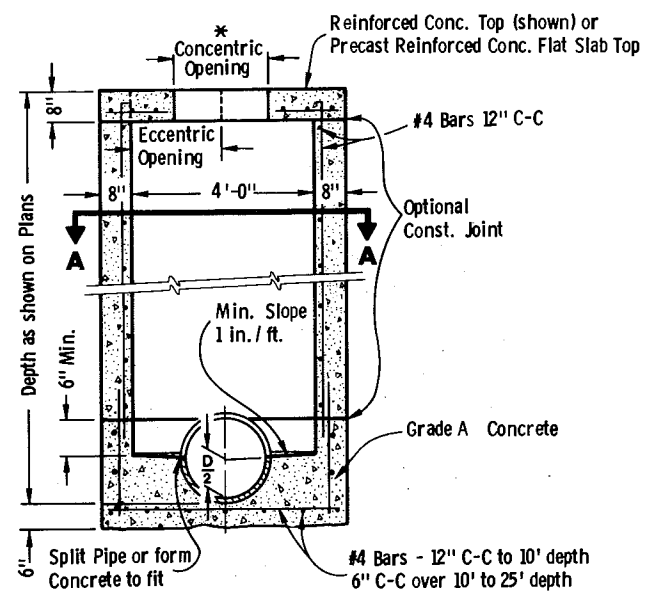




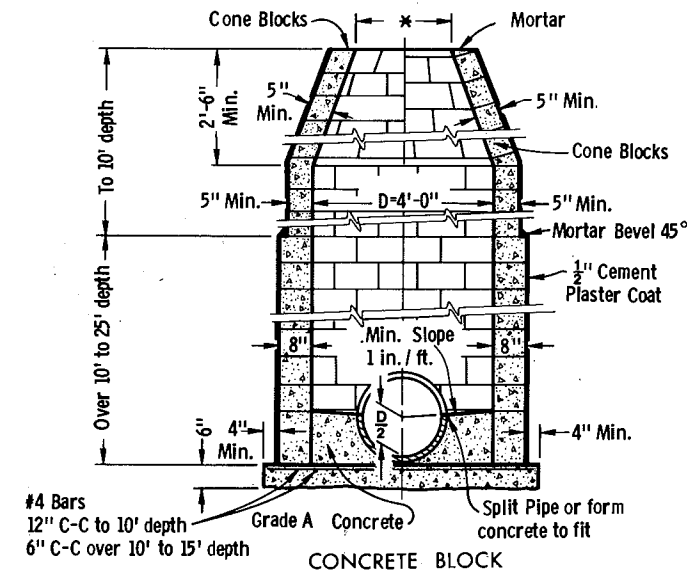
HALF SECTION A-A



PRECAST REINFORCED CONCRETE



SECTION B-B  
REINFORCED CONCRETE



CONCRETE BLOCK

**GENERAL NOTES**

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions. Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All drainage structures are designated on the plans as "Manholes 1 - C", "Catch Basins 1 - B", "Inlets 1 - H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

Precast Reinforced Bases shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Precast Reinforced Concrete Cone Tops (Eccentric or Concentric) may be used on concrete block structures. The Cone Tops shall be installed on a bed of mortar.

Eccentric Cone Tops may be used on all structures, and Concentric Cone Tops shall be used only on structures 5 feet or less in depth, unless otherwise directed by the Engineer.

Steps meeting the following requirements shall be installed in all structures over 5 feet in depth: 16 inch C-C maximum spacing; project a minimum clear distance of 4 inches from the wall at the point of embedment; minimum length of 10 inches; minimum wall embedment of 3 inches; and be capable of supporting a concentrated load of 300 lbs. Ferrous metal steps not painted or treated to resist corrosion shall have a minimum cross sectional dimension of 1 inch.

Solid Aluminum steps shall have a minimum cross sectional dimension of 0.75 inch. Aluminum surfaces to be embedded in concrete shall be given one coat of suitable quality paint, such as zinc chromate primer conforming to federal specification TT-P-645 or equivalent. Steps of approved Polypropylene plastic coated reinforcement bar will be acceptable.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers may be placed with tongue up or down.

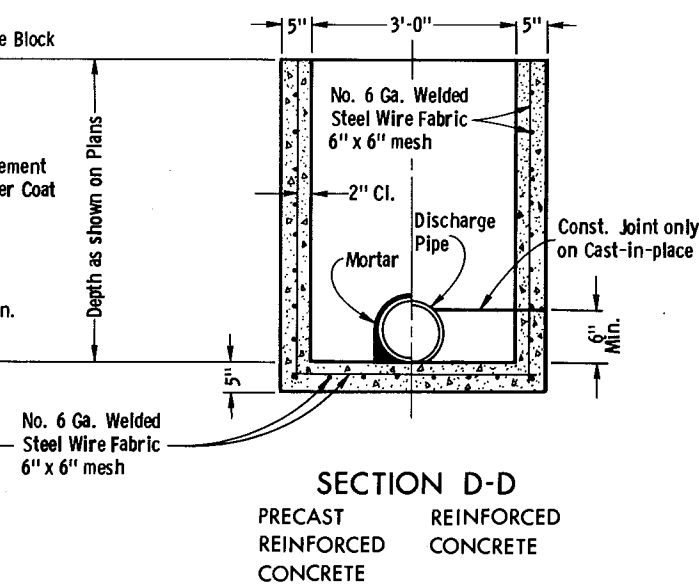
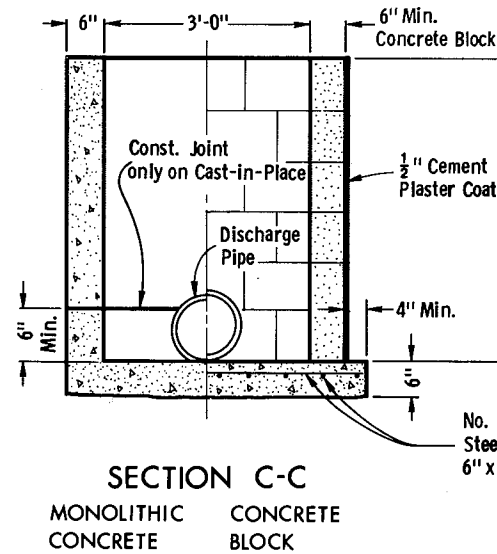
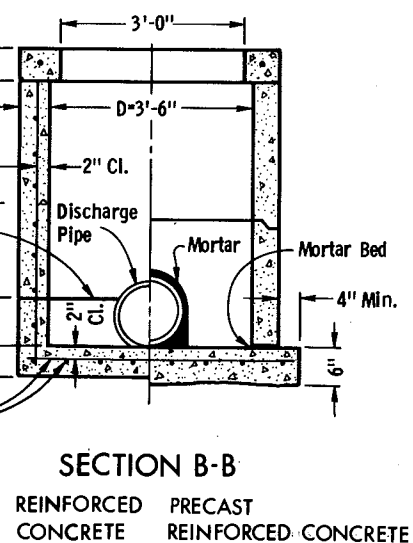
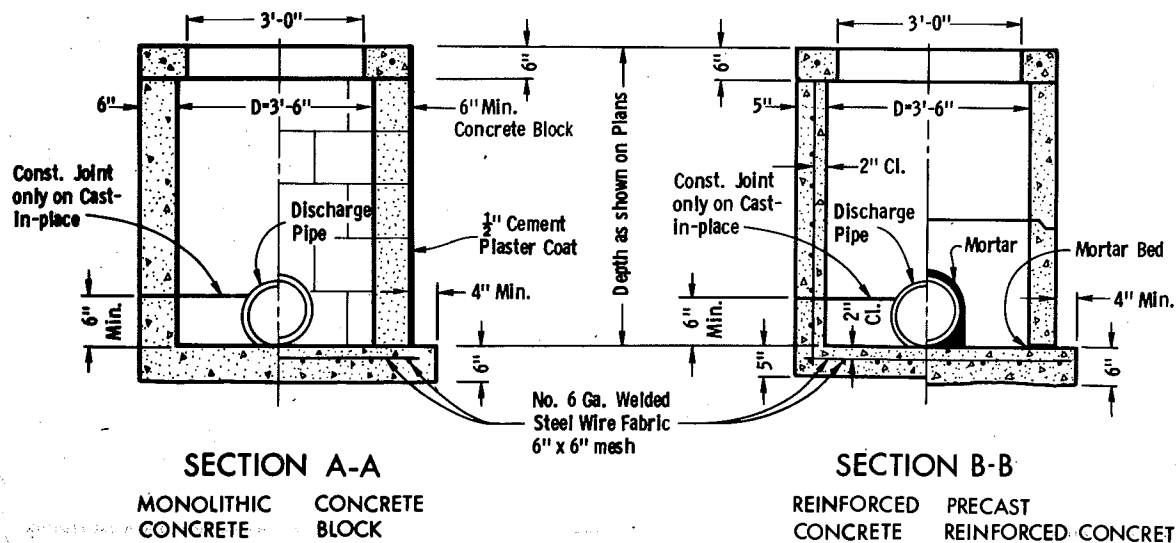
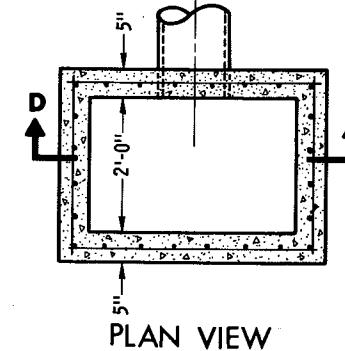
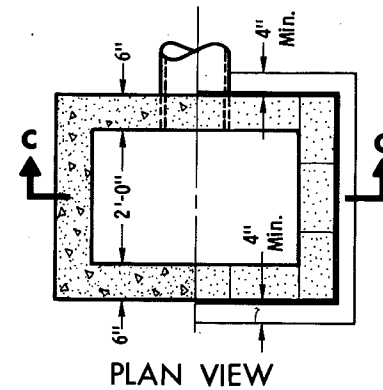
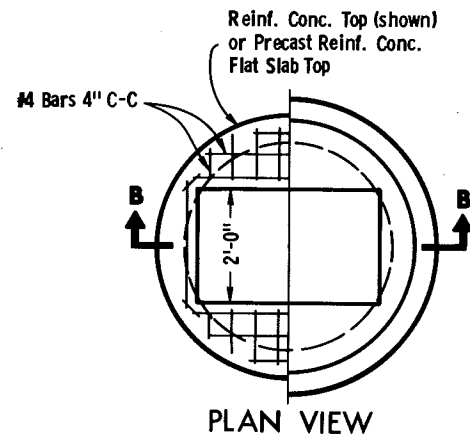
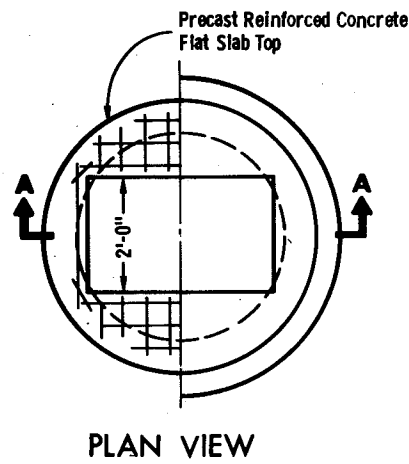
\* Use 2'-0" diameter opening with type "C", "L" and "J" covers, or 3'-0" diameter with type "K" and "M" covers.

S.D.D. 8B6-2

**MANHOLES TYPE 1**

<b>MANHOLES TYPE 1</b>	
State of Wisconsin Department of Transportation Division of Highways	
RECOMMENDED FOR APPROVAL: DATE <b>12-3-75</b>	<i>J.C. Heanish</i> CHIEF OF FACILITIES DEVELOPMENT
APPROVED DATE <b>12-9-75</b>	<i>H.S. Fisher</i> STATE HIGHWAY ENGINEER

S.D.D. 8B6-2



**INLETS TYPE 3**

**GENERAL NOTES**

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions. Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

Square Precast Inlet units shall conform to the pertinent requirements of AA SHTO Designation M 199.

All drainage structures are designated on the plans as "Manholes 1 - C", "Catch Basins 1 - B", "Inlets 1 - H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

Precast Reinforced Bases shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Precast Reinforced Concrete Flat Slab Tops may be used on the structures. The Tops shall be installed on a bed of mortar.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers may be placed with tongue up or down.

**INLETS TYPE 3**

State of Wisconsin  
Department of Transportation  
Division of Highways

RECOMMENDED FOR APPROVAL:

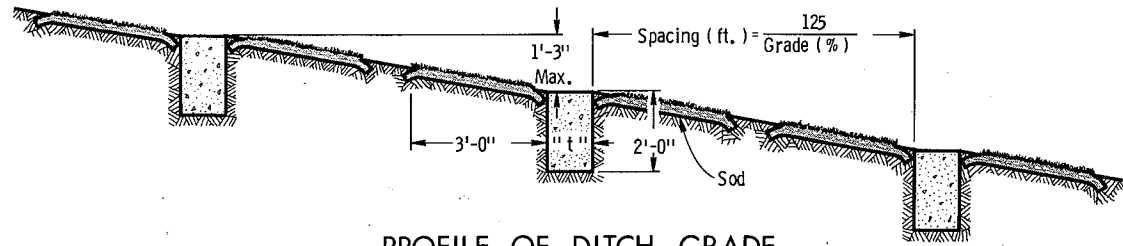
10-16-75  
DATE

*J.C. Hennel*  
CHIEF OF FACILITIES DEVELOPMENT

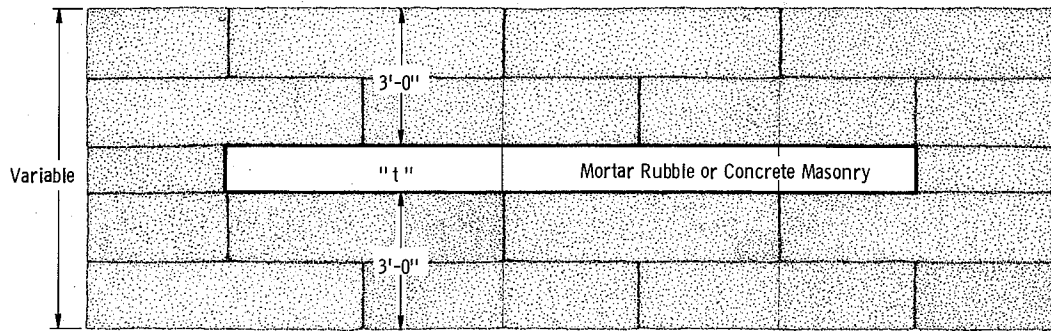
APPROVED

10-16-75  
DATE

*W.J. Siedler*  
STATE HIGHWAY ENGINEER

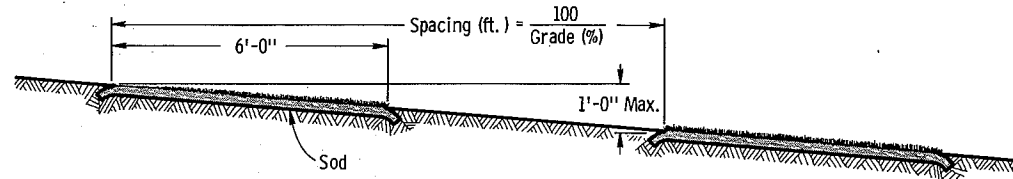


PROFILE OF DITCH GRADE



PLAN VIEW SHOWING MASONRY AND SOD

"t" - Masonry thickness shall be 0'-9" for concrete and 1'-0" for mortar rubble.



PROFILE OF DITCH GRADE



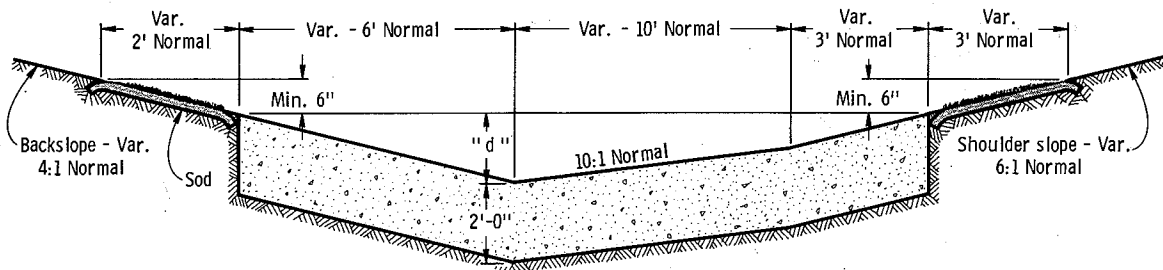
PLAN VIEW SHOWING SOD

**GENERAL NOTES**

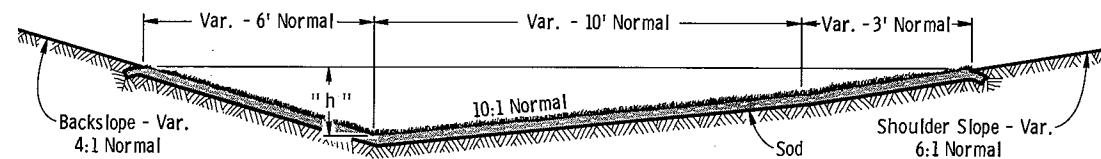
Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Alternate designs for ditch checks, of the material or combination of materials shown hereon, may be used upon written permission of the Engineer.

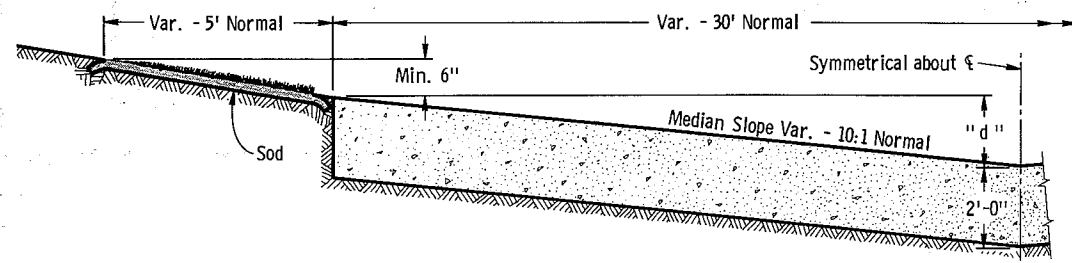
Sod strips for ditch checks may be placed either transversely or longitudinally to the direction of water flow.



SIDE DITCH CROSS SECTION

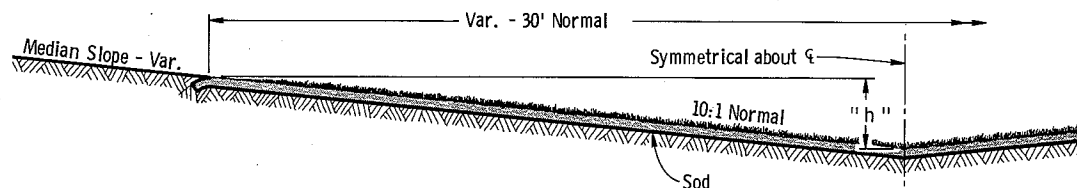


SIDE DITCH CROSS SECTION



MEDIAN DITCH CROSS SECTION

"d" - The minimum depth of the masonry portion of the ditch checks shall be equal to the maximum depth of flow. The normal "d" will be 1'-6".



MEDIAN DITCH CROSS SECTION

"h" - The minimum height of ditch to be sodded shall be equal to the maximum depth of flow plus 6". The normal "h" will be 1'-6".

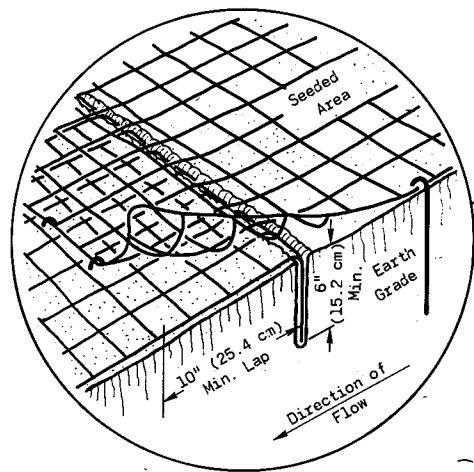
**MASONRY AND SOD DITCH CHECKS**

**SOD DITCH CHECKS**

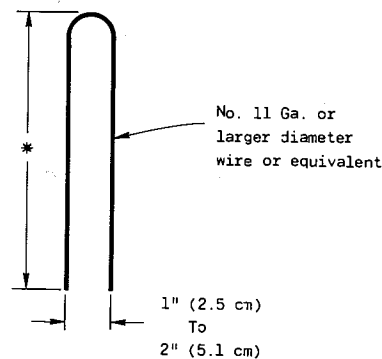
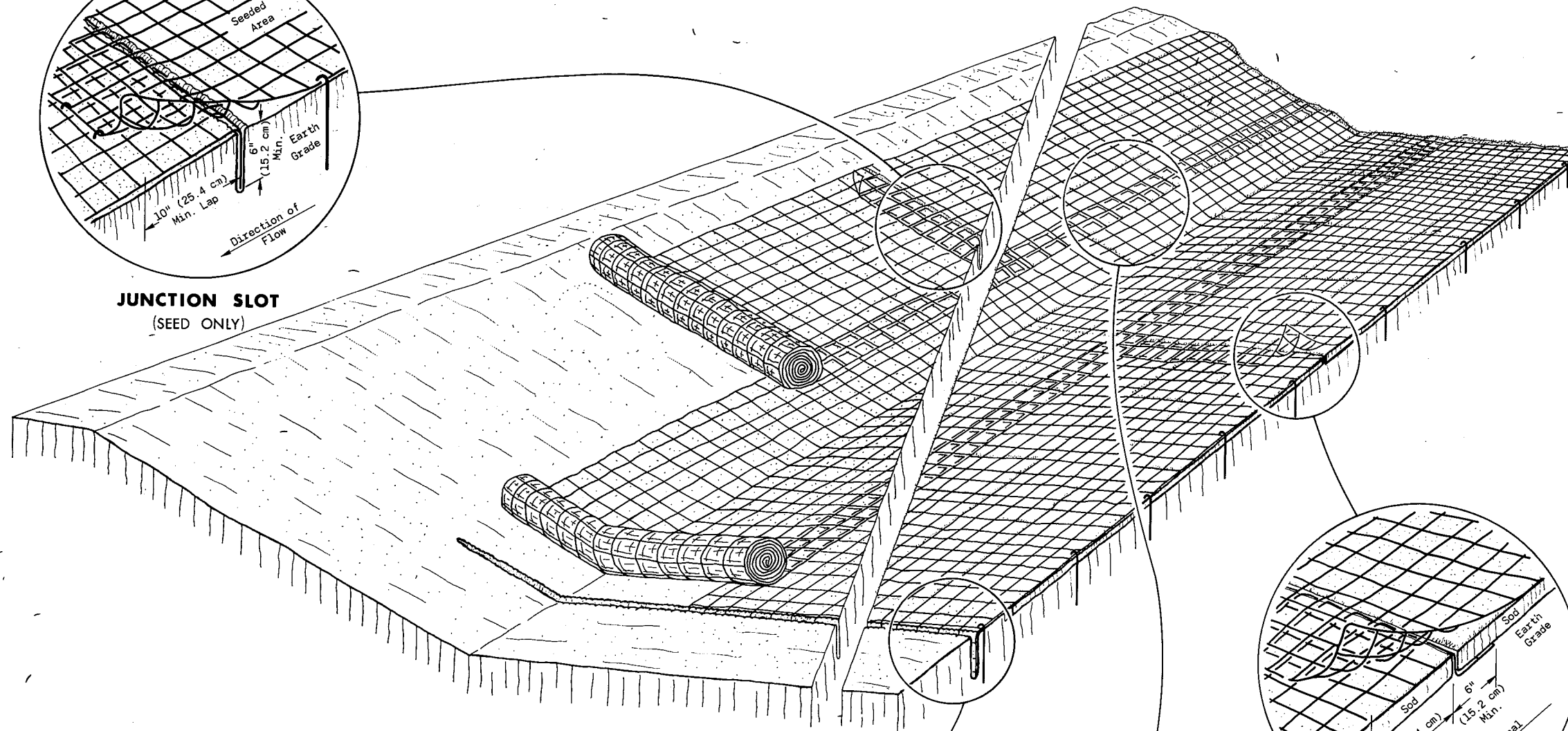
**SOD OR MASONRY AND SOD DITCH CHECKS**

State of Wisconsin  
Department of Transportation  
Division of Highways

RECOMMENDED FOR APPROVAL:  
DATE 9/7/71  
APPROVED: [Signature]  
DATE 9/7/71  
ACTING CHIEF DESIGN ENGINEER  
[Signature]  
STATE HIGHWAY ENGINEER

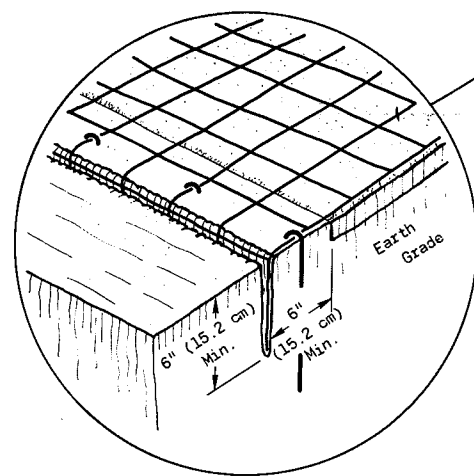


**JUNCTION SLOT**  
(SEED ONLY)

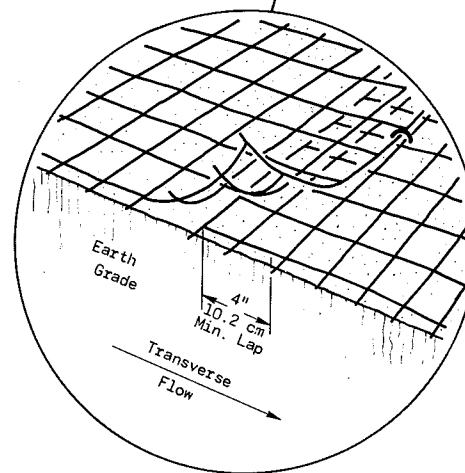


**DETAIL OF TYPICAL STAPLE**

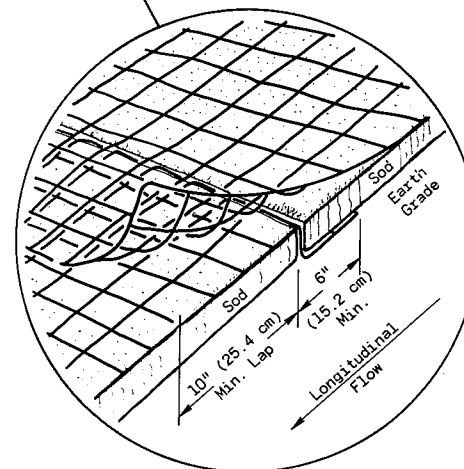
- \* 6" (15.2 cm) Min. for firm soils
- 12" (30.5 cm) Min. for loose soils
- 8" (20.3 cm) Min. where both sod and mats are being used.



**ANCHOR SLOT**  
AT BEGINNING AND END OF EROSION MAT  
(SEED AND SOD)



**LAP JOINT**  
(SEED AND SOD)



**JUNCTION SLOT**  
(SOD ONLY)

**GENERAL NOTES**

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Variations in the dimensions or materials shown hereon shall be permitted if they provide equivalent protection and material strength and if prior approval of the Engineer is obtained.

Lap Joints shall not be placed in the bottom of V-shaped ditches.

Junction Slots on adjacent strips of Matting shall be staggered a minimum of 4 feet (1.219 m) apart.

Edges of the Erosion Mat shall be impressed in the soil.

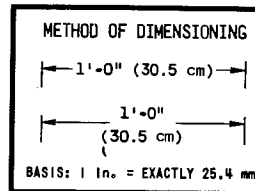
Erosion Mat shall be measured and paid for in accordance with the Standard Specifications.

**EROSION MAT OVER SOD**

- a. Only Jute Fabric will be permitted over sod.
- b. Wood Stakes for Sod may be omitted by the Engineer if the existing slope and soil conditions so warrant.
- c. The width of Erosion Mat shall always equal the Sod width.
- d. Sod strips may be placed either longitudinally or transversely to the flow line of the Ditch.

**EROSION MAT OVER SEEDING**

Junction or Anchor Slots shall be at minimum intervals of 100 feet (30.48 m) on grades up to and including 3 percent, and 50 feet (15.24 m) on grades exceeding 3 percent.



**EROSION MAT**

State of Wisconsin  
Department of Transportation  
Division of Highways

RECOMMENDED FOR APPROVAL:

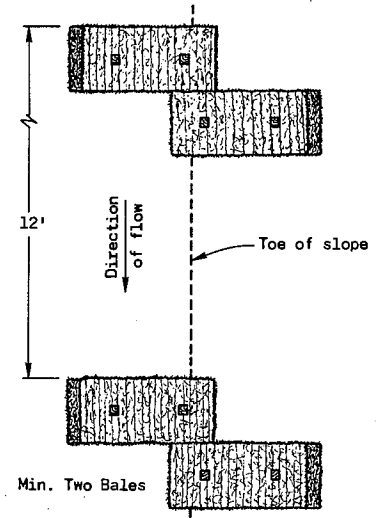
12-3-73  
DATE

*J.C. Henning*  
CHIEF OF FACILITIES DEVELOPMENT

APPROVED

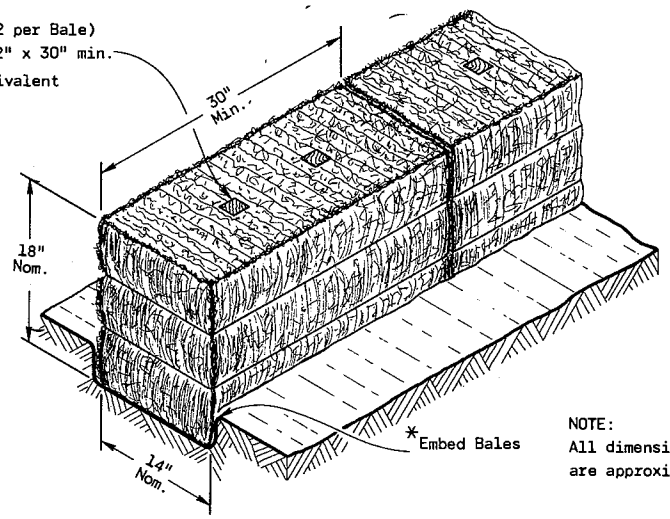
1-15-74  
DATE

*H.S. Siedler*  
STATE HIGHWAY ENGINEER



PLAN VIEW

Wood Stakes (2 per Bale)  
Nominal 2" x 2" x 30" min.  
length or equivalent



NOTE:  
All dimensions  
are approximate

DETAIL OF EROSION BALE INSTALLATION

**GENERAL NOTES**

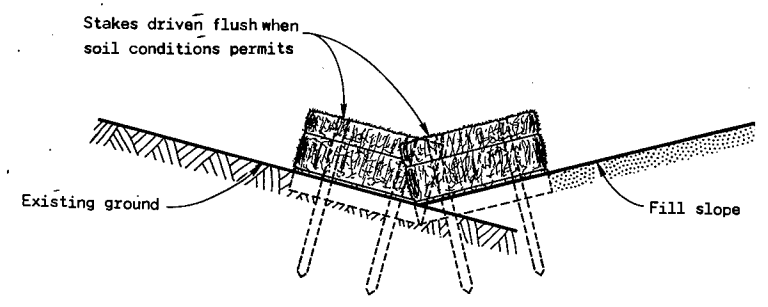
Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Bales shall be placed end to end or overlapping at right angles to the direction of flow and far enough up the sides of the ditch to prevent eroding around ends.

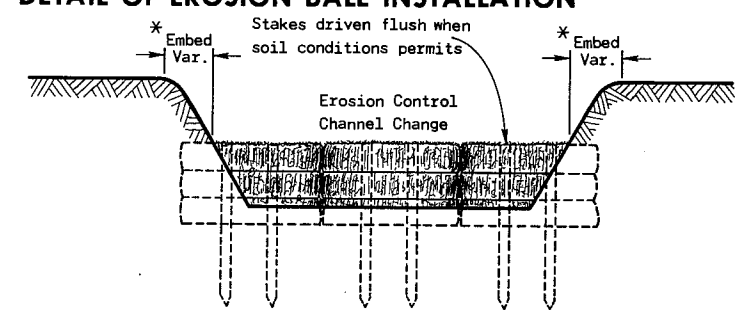
Bales shall be placed with twine or tie wires parallel to the ground.

Stakes to be battered in opposite directions.

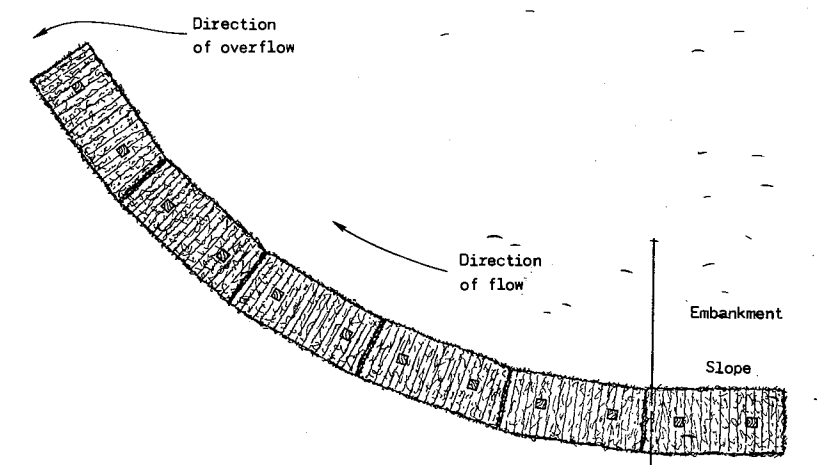
\* As determined by the Engineer.



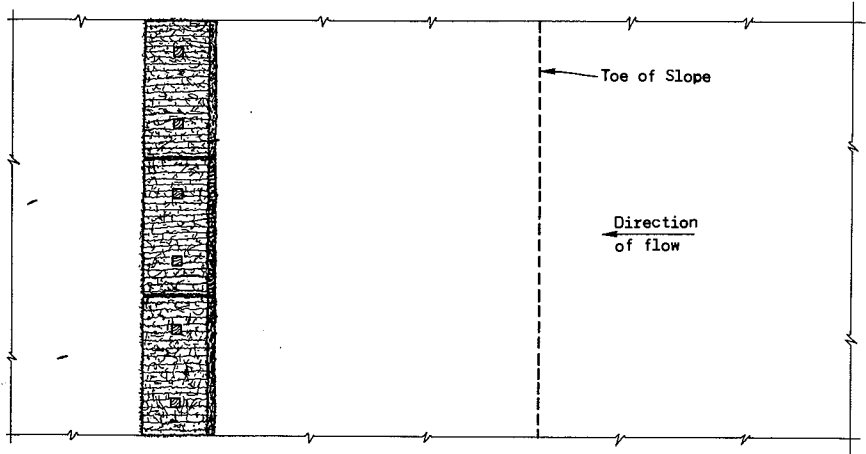
FRONT ELEVATION  
WHEN EXISTING GROUND  
SLOPES TOWARD FILL SLOPE



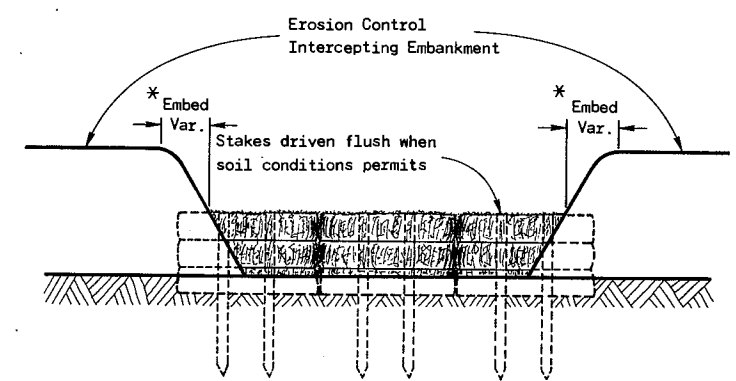
EROSION CONTROL CHANNEL CHANGE



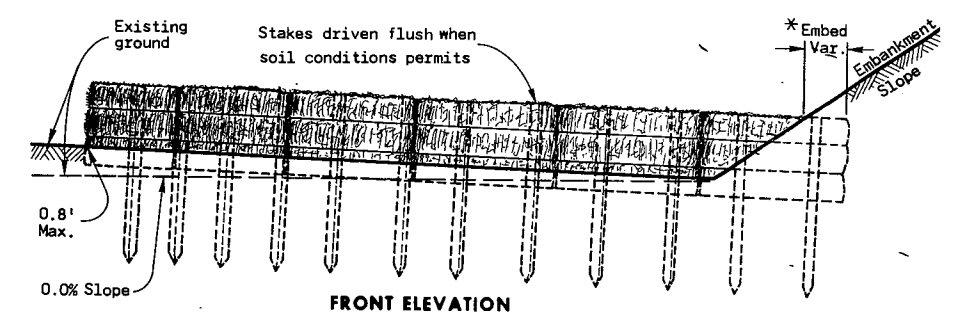
PLAN VIEW



PLAN VIEW



EROSION CONTROL INTERCEPTING EMBANKMENT

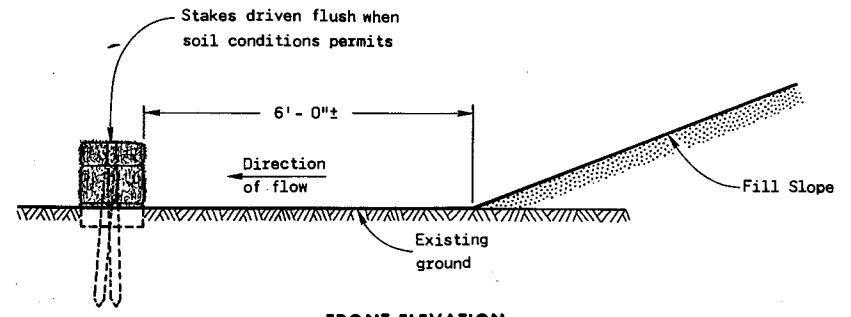


FRONT ELEVATION

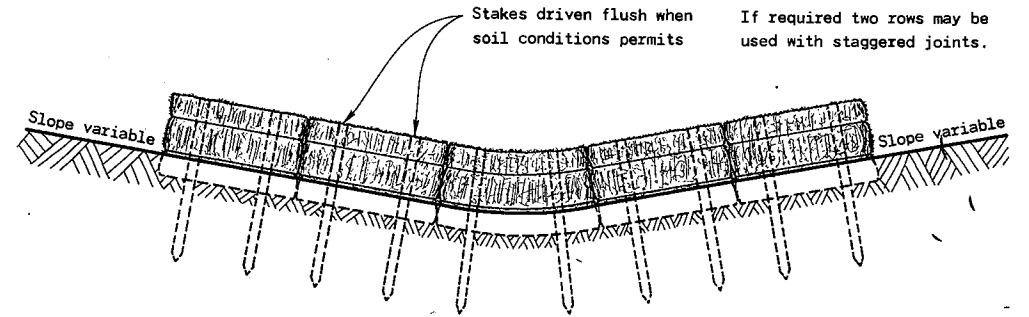
EROSION BALES AT TOE OF SLOPE



PLAN VIEW



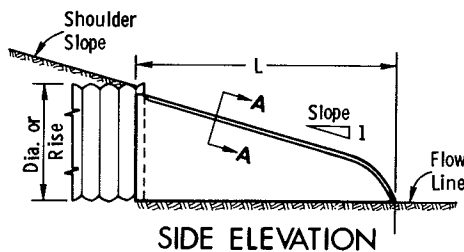
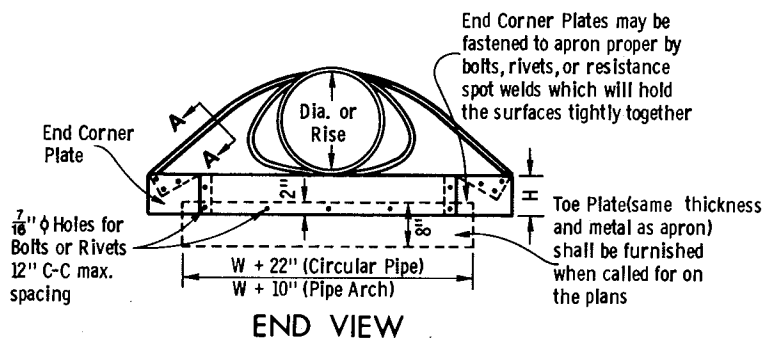
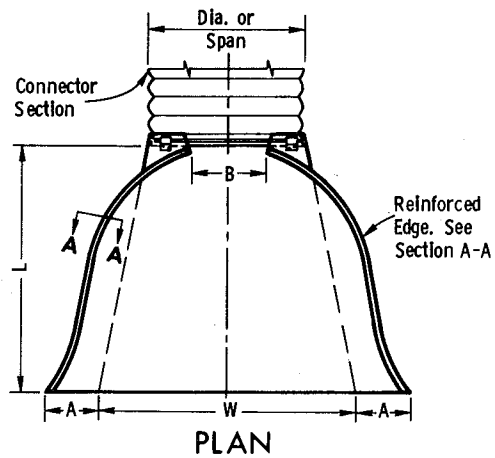
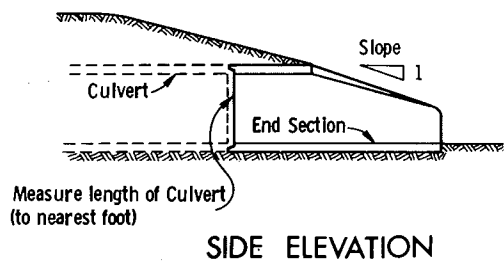
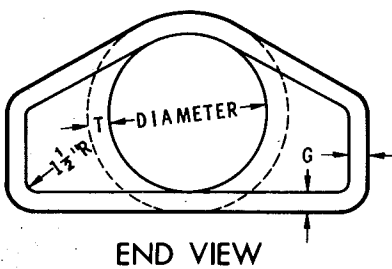
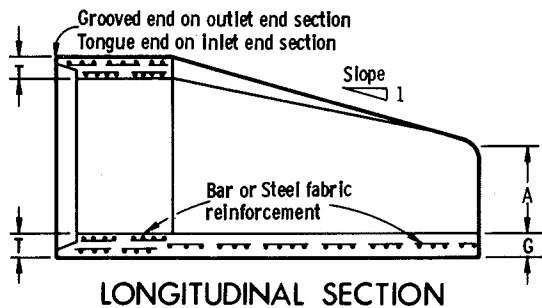
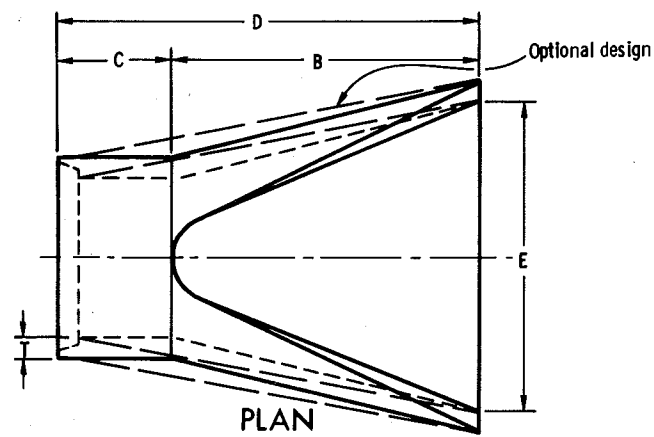
FRONT ELEVATION  
EROSION BALES AT TOE OF SLOPE  
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE



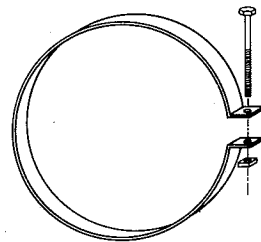
FRONT ELEVATION  
EROSION BALES ACROSS DITCH BOTTOM

<b>TYPICAL INSTALLATIONS OF EROSION BALES</b>	
State of Wisconsin Department of Transportation Division of Highways	
RECOMMENDED FOR APPROVAL: DATE 10/14/75	I.C. Heanish CHIEF OF FACILITIES DEVELOPMENT
APPROVED DATE 10/16/75	H.S. Siddle STATE HIGHWAY ENGINEER

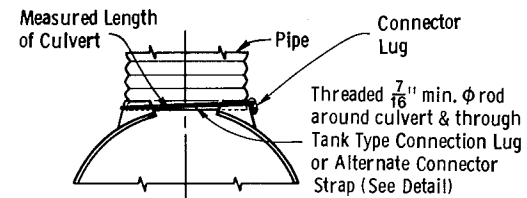
S.D.D. 8E8-1



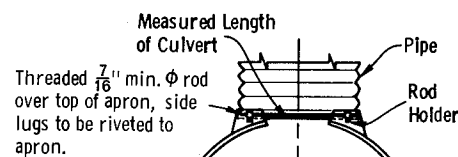
1" Wide, 12 Ga. galvanized (0.109" thick) strap with standard 6" x 1/2" band bolt and nut



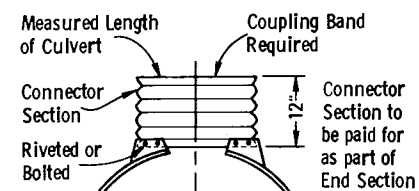
Alternate for Type 1 Connection  
END SECTION CONNECTOR STRAP



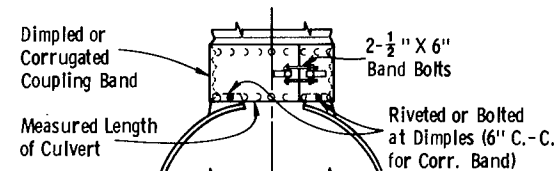
TYPE 1  
For 12" thru 24" only (Circular Pipe)



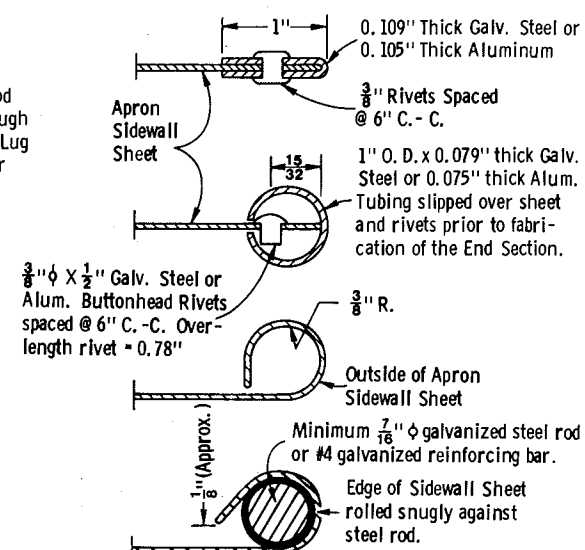
TYPE 2  
For 30" and 36" only (Circular Pipe)  
For 17" X 13" thru 57" X 38" only (Pipe Arch)



TYPE 3  
For 42" thru 84" only (Circular Pipe)  
For 64" X 43" & 71" X 47" (Pipe Arch)



TYPE 5  
Alternate for  
All sizes Corrugated Circular Pipe and Pipe Arch



SECTION A-A

**GENERAL NOTES**

Details of construction, materials, and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Variations of the dimensions and designs shown hereon will be permitted providing equivalent capacity and structural integrity are attained, and prior approval of the Engineer is obtained.

Concrete culvert endwalls may not be used with galvanized steel or aluminum culvert pipe or vice versa.

Galvanized steel or aluminum endwalls shall normally be installed on culvert pipe of the same metal. The use of galvanized steel endwalls on aluminum pipes is permitted, provided the two metals at the joint interface are kept separated by a suitable insulating material approximately 1/8" thick or greater. Such material would be an asphalt impregnated fabric, a sheet plastic, a rubber gasket or other nondegradable material of substantial strength.

When two or more pipe arches with apron endwalls are to be laid adjacent to each other, they shall be separated by the following amount.

Pipes: Total width of apron endwall less the diameter of pipe plus 6 inches.

Pipe Arches: Total width of apron endwall less the span dimension of the pipe arch plus 6 inches.

DIA.	APPROX. WEIGHT/SECTION	T	A	B	C	D	E	G	APPROX. SLOPE
12"	530	2"	4"	24"	48 7/8"	72 7/8"	24"	2"	3 to 1
15"	740	2 1/4"	6"	27"	46"	73"	30"	2 1/4"	↑
18"	990	2 1/2"	9"	27"	46"	73"	36"	2 1/2"	↑
21"	1,280	2 3/4"	9"	36"	37 1/2"	73 1/2"	42"	2 3/4"	↑
24"	1,520	3"	9 1/2"	43 1/2"	30"	73 1/2"	48"	3"	↑
27"	1,930	3 1/2"	10 1/2"	49 1/2"	24"	73 1/2"	54"	3 1/4"	↑
30"	2,190	3 1/2"	12"	54"	19 3/4"	73 3/4"	60"	3 1/2"	↑
36"	4,100	4"	15"	63"	34 3/4"	97 3/4"	72"	4"	↑
42"	5,380	4 1/2"	21"	63"	35"	98"	78"	4 1/2"	↑
48"	6,550	5"	24"	72"	26"	98"	84"	5"	3 to 1
54"	8,040	5 1/2"	27"	65"	33 1/4" - 35"	98 1/4" - 100"	90"	5"	2 1/2 to 1
60"	8,730	6"	30"	60"	39"	99"	96"	5"	2 to 1
66"	10,630	6 1/2"	30"	72"	39"	102"	102"	5 1/2"	↑
72"	12,520	7"	36"	78"	21"	108"	108"	6"	↑
78"	14,430	7 1/2"	36"	78"	21"	114"	114"	6 1/2"	2 to 1
84"	18,160	8"	36"	90 1/2"	21"	111 1/2"	120"	6 1/2"	1 1/2 to 1

\*\* Minimum  
\* Maximum

**REINFORCED CONCRETE APRON ENDWALLS**

D PIPE DIAM.	MIN. METAL THICKNESS	MIN. ALUM. THICKNESS	DIMENSIONS					APPROX. SLOPE
			A ± 1"	B MAX.	H ± 1"	L ± 1/2"	W ± 2"	
12"	0.064	0.060	6"	6"	6"	21"	24"	2 1/2 to 1
15"	↑	↑	7"	8"	6"	26"	30"	↑
18"	↑	↑	8"	10"	6"	31"	36"	↑
21"	↑	0.060	9"	12"	6"	36"	42"	↑
24"	0.064	0.075	10"	13"	6"	41"	48"	↑
30"	0.079	0.075	12"	16"	8"	51"	60"	↑
36"	0.079	0.105	14"	19"	9"	60"	72"	↑
42"	0.109	↑	16"	22"	11"	69"	84"	2 1/2 to 1
48"	↑	↑	18"	27"	12"	78"	90"	2 1/4 to 1
54"	↑	0.105	30"	↑	↑	84"	102"	2 to 1
60"	↑	NA	33"	↑	↑	87"	114"	3 1/4 to 1
66"	↑	↑	36"	↑	↑	87"	120"	1 1/2 to 1
72"	↑	↑	39"	↑	↑	87"	126"	1 1/3 to 1
78"	↑	↑	42"	↑	↑	87"	132"	1 1/4 to 1
84"	0.109	NA	45"	↑	↑	87"	138"	1 1/8 to 1

NOTE: All splices to be lap riveted or bolted

**METAL OR ALUMINUM APRON  
ENDWALLS FOR CIRCULAR PIPES**

PIPE - ARCH DIMENSIONS	MIN. METAL THICK.	DIMENSIONS					APPROX. SLOPE	
		A ± 1"	B MAX.	H ± 1"	L ± 1/2"	W ± 2"		
12"	13"	0.064	7"	9"	6"	19"	30"	2 1/2 to 1
21"	15"	↑	7"	10"	6"	23"	36"	↑
24"	18"	↑	8"	12"	6"	28"	42"	↑
28"	20"	0.064	9"	14"	6"	32"	48"	↑
35"	24"	0.079	10"	16"	6"	39"	60"	↑
42"	29"	0.079	12"	18"	8"	46"	75"	↑
49"	33"	0.109	13"	21"	9"	53"	85"	↑
57"	38"	↑	18"	26"	12"	63"	90"	2 1/2 to 1
64"	43"	↑	18"	30"	12"	70"	102"	2 1/4 to 1
71"	47"	↑	18"	33"	12"	77"	114"	2 1/4 to 1
77"	52"	↑	18"	36"	12"	77"	126"	2 to 1
83"	57"	0.109	18"	39"	12"	77"	138"	2 to 1

NOTE: All splices to be lap riveted or bolted

**METAL APRON ENDWALLS  
FOR PIPE ARCHES**

NOTE: Dimpled Band fits over Outside of Endwall, and Corr. Band fits Inside Endwall. Dimpled Band may be used with Helically Corrugated Pipe

**CONNECTION DETAILS**

**CIRCULAR PIPE**

For Circumferentially Corrugated Pipe use Endwall Connection Details 1, 2, 3, or 5 as applicable.

For Helically Corrugated Pipe use Endwall Connection Details 1, 2 or 5.

For Helically Corrugated Pipes with two Circumferential Corrugations at each end use Endwall Connection Details 1, 2, or 3

**PIPE ARCH**

Use Endwall Connection Details 2, 3, or 5 as applicable.

**APRON ENDWALLS FOR  
CULVERT PIPE AND PIPE ARCH**

State of Wisconsin  
Department of Transportation  
Division of Highways

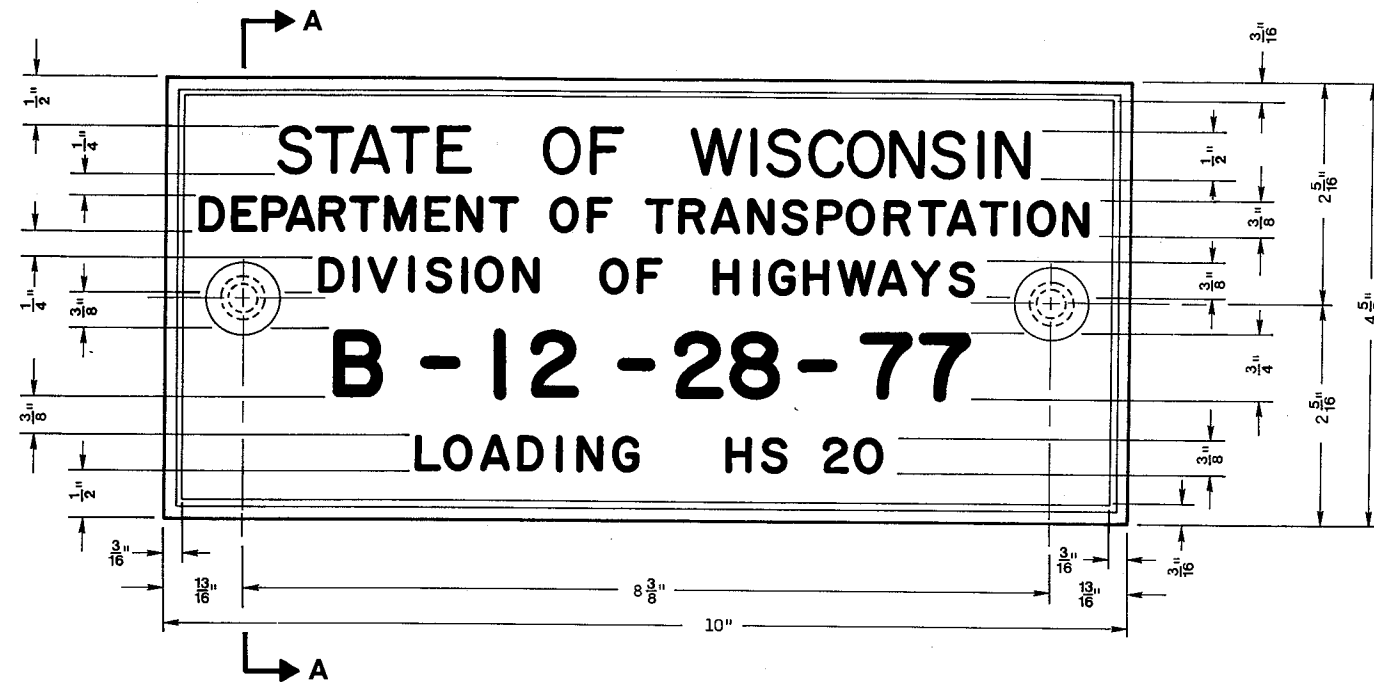
APPROVED  
7-14-78

APPROVED  
7-17-78

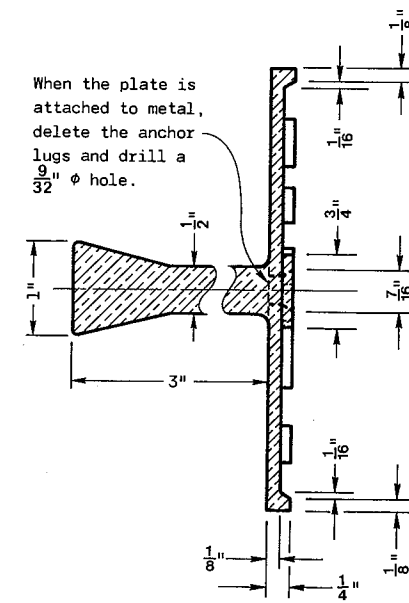
*R.W. Baker*  
SUPERVISING DEVELOPMENT ENGINEER

*D.J. Stank*  
CHIEF OF DIVISION DEVELOPMENT

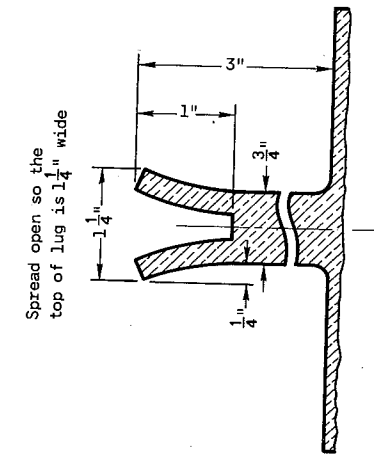
SHWA



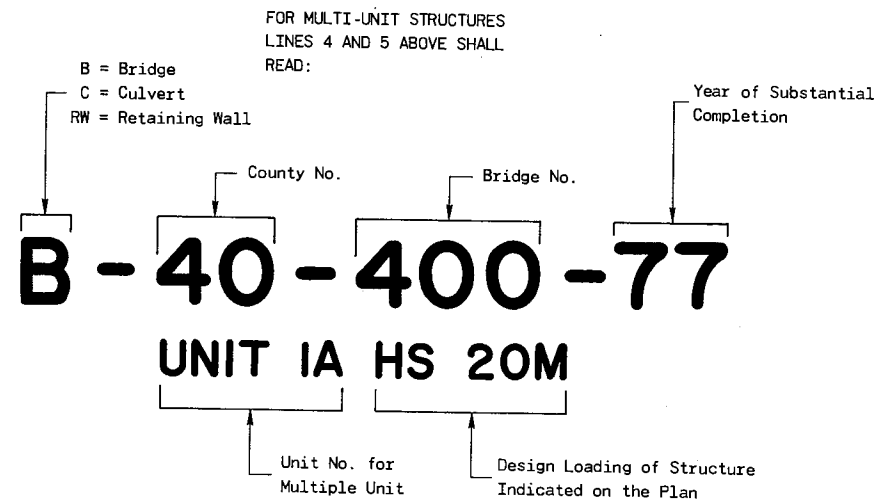
**TYPICAL NAME PLATE**  
(BRIDGES, CULVERTS, AND RETAINING WALLS)



**SECTION A-A**



**ALTERNATE LUG**



**NUMBERING AND LOADING DESIGNATION  
MULTI-UNIT STRUCTURES**

**GENERAL NOTES**

Name Plates to be installed on Bridges, Culverts, and Retaining Walls shall conform to the requirements of Section 506.2.4 of the Standard Specifications.

The Bridge Number and Design Loading shown on this drawing are examples only. See Construction Plans for individual numbering and design loading.

**NAME PLATE  
(STRUCTURES)**

State of Wisconsin  
Department of Transportation  
Division of Highways

APPROVED  
DATE  
**7-5-78**

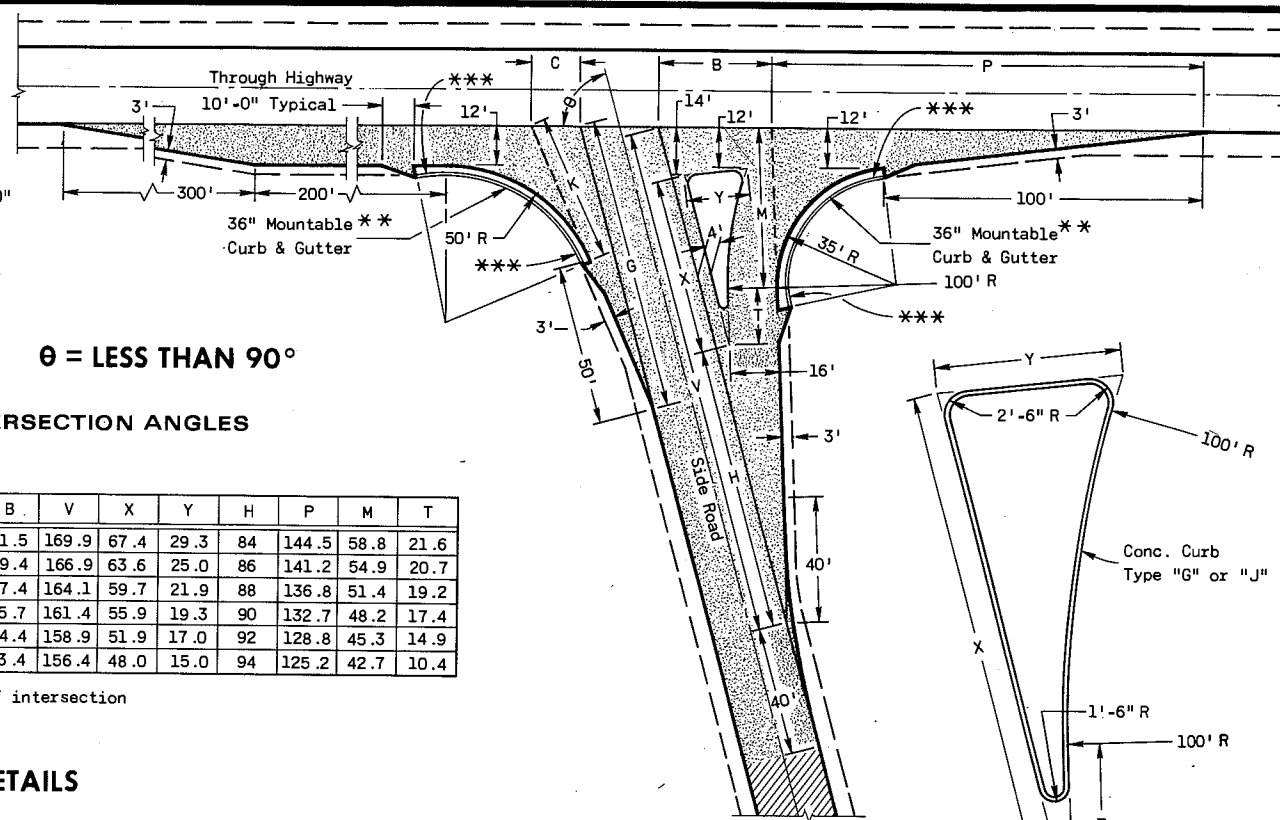
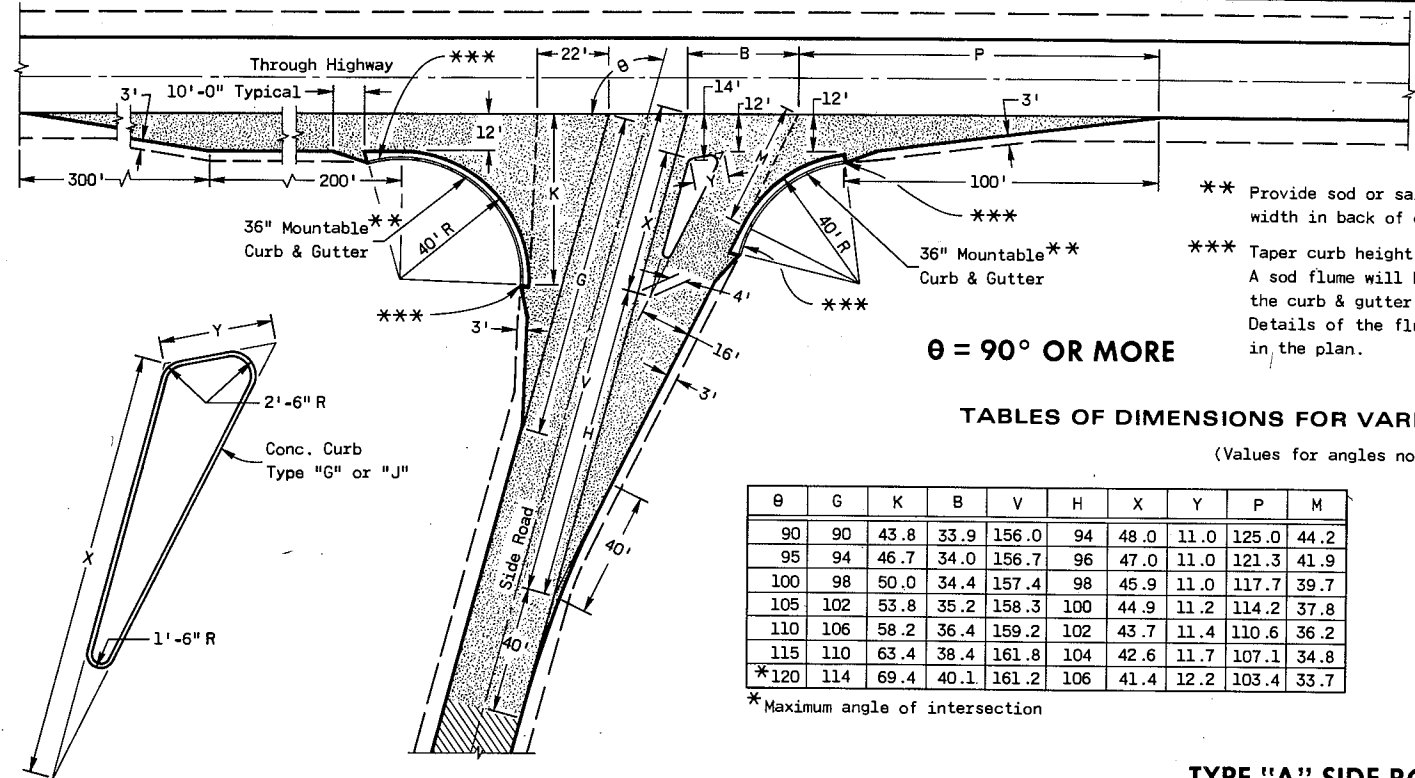
*Richard Baker*  
SUPERVISING DEVELOPMENT ENGINEER

APPROVED  
DATE  
**7-5-78**

*D. J. Shank*  
CHIEF OF FACILITIES DEVELOPMENT

FHWA





\*\* Provide sod or salvaged topsoil & seed to a 3'-0" width in back of curb & gutter sections.  
 \*\*\* Taper curb height 0" to 6" in 10'-0". A sod flume will be required at discharge end of the curb & gutter. Details of the flume(s) will be shown elsewhere in the plan.

$\theta = 90^\circ$  OR MORE

$\theta = \text{LESS THAN } 90^\circ$

**TABLES OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES**

(Values for angles not shown shall be interpolated)

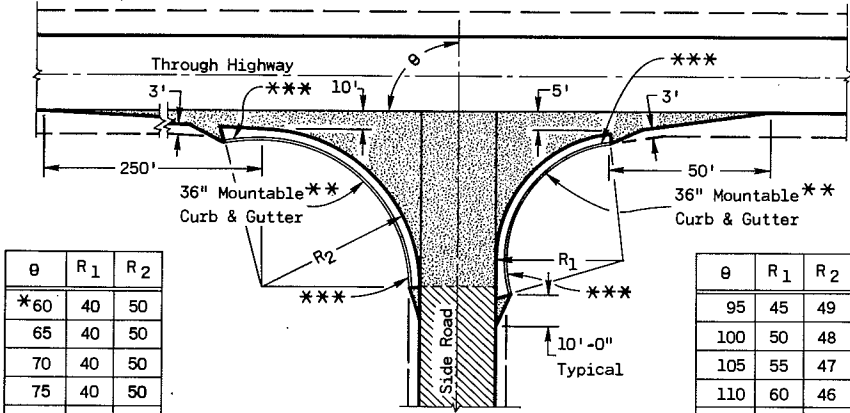
$\theta$	G	K	B	V	H	X	Y	P	M
90	90	43.8	33.9	156.0	94	48.0	11.0	125.0	44.2
95	94	46.7	34.0	156.7	96	47.0	11.0	121.3	41.9
100	98	50.0	34.4	157.4	98	45.9	11.0	117.7	39.7
105	102	53.8	35.2	158.3	100	44.9	11.2	114.2	37.8
110	106	58.2	36.4	159.2	102	43.7	11.4	110.6	36.2
115	110	63.4	38.4	161.8	104	42.6	11.7	107.1	34.8
*120	114	69.4	40.1	161.2	106	41.4	12.2	103.4	33.7

\* Maximum angle of intersection

$\theta$	C	G	K	B	V	X	Y	H	P	M	T
*60	19.7	76.3	38.6	41.5	169.9	67.4	29.3	84	144.5	58.8	21.6
65	17.8	82.6	40.6	39.4	166.9	63.6	25.0	86	141.2	54.9	20.7
70	15.8	87.2	43.1	37.4	164.1	59.7	21.9	88	136.8	51.4	19.2
75	15.7	90.9	45.6	35.7	161.4	55.9	19.3	90	132.7	48.2	17.4
80	15.9	94.9	48.3	34.4	158.9	51.9	17.0	92	128.8	45.3	14.9
85	16.2	99.3	51.4	33.4	156.4	48.0	15.0	94	125.2	42.7	10.4

\* Desirable minimum angle of intersection

**TYPE "A" SIDE ROAD INTERSECTION DETAILS**



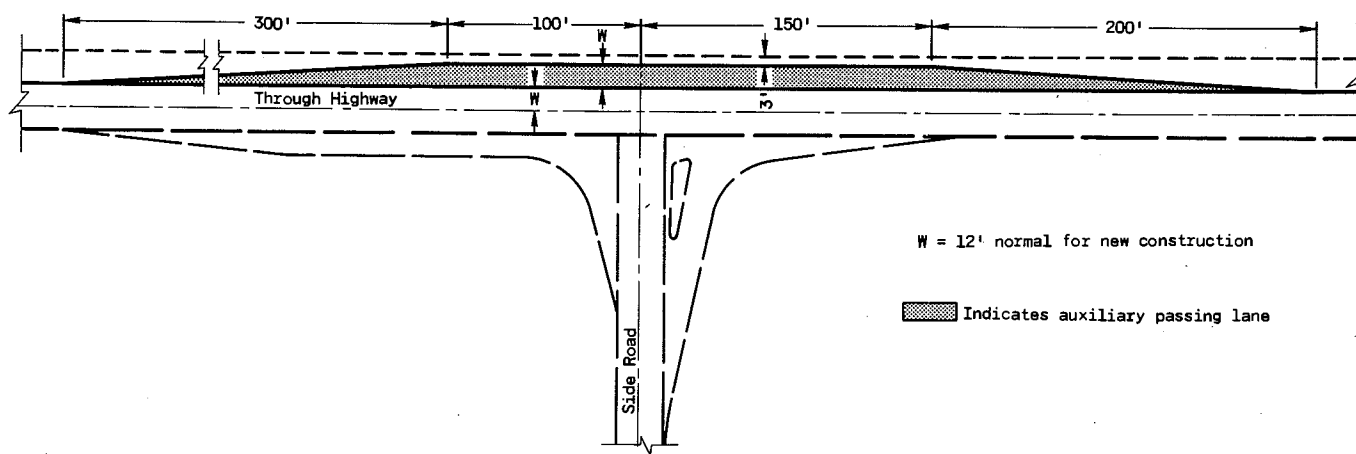
$\theta$	R <sub>1</sub>	R <sub>2</sub>
*60	40	50
65	40	50
70	40	50
75	40	50
80	40	50
85	40	50
90	40	50

\* Min. Angle of Intersection

$\theta$	R <sub>1</sub>	R <sub>2</sub>
95	45	49
100	50	48
105	55	47
110	60	46
115	65	45
*120	70	44

\* Max. Angle of Intersection

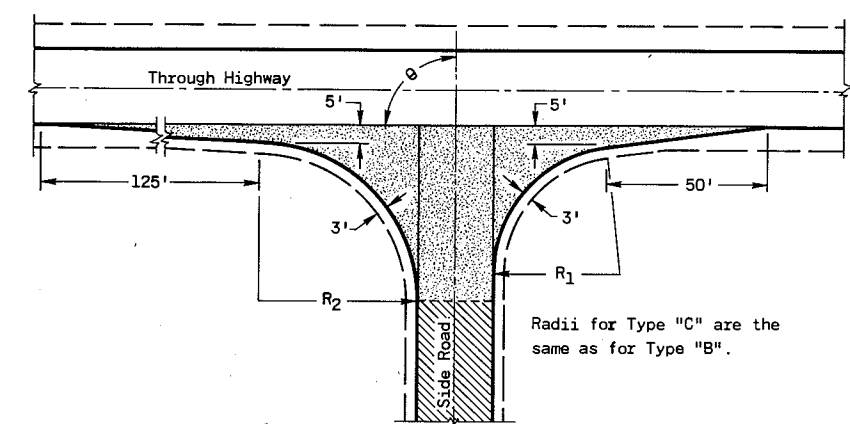
**TYPE "B" SIDE ROAD INTERSECTION DETAILS**



W = 12' normal for new construction

Indicates auxiliary passing lane

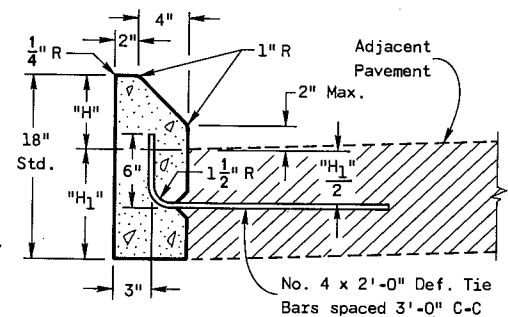
**PASSING LANE DETAIL**



Radii for Type "C" are the same as for Type "B".

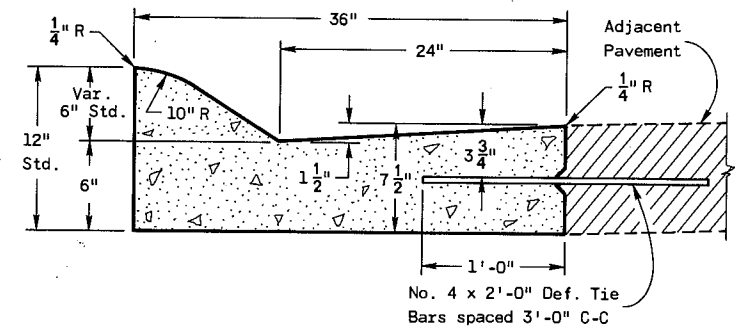
**TYPE "C" SIDE ROAD INTERSECTION DETAILS**

"H" = 6" Max. and 4" Min. and shall be 6" unless otherwise shown on the plans.  
 "H<sub>1</sub>" = Same as adjacent pavement thickness for rigid pavement and 12" for non-rigid pavement (Tie Bars omitted).



**TYPE "G" (INCLUDING TIE BARS) TYPE "J" (EXCLUDING TIE BARS)**

**MOUNTABLE CONCRETE CURB**



**TYPE "A" (INCLUDING TIE BARS) TYPE "D" (EXCLUDING TIE BARS)**

**MOUNTABLE CONCRETE CURB & GUTTER 36"**

**GENERAL NOTES**

Designs may be used interchangeably in combination or separately for any one complete intersection depending upon intersection angle and surfacing of each approach roadway.

Details on this drawing are for minimum design only, and not applicable to special conditions, as shown elsewhere on the plans.

**SIDE ROAD SURFACING NOTE**  
 If the side road is not presently paved, pavement shall be placed to the limits shown. In the case where the construction limits are beyond the paving limits, gravel or crushed stone surfacing shall be placed between the paving limits and construction limits.

If the side road is presently paved, new pavement shall be placed to the limits of design as shown and beyond, if necessary, to meet existing pavement.

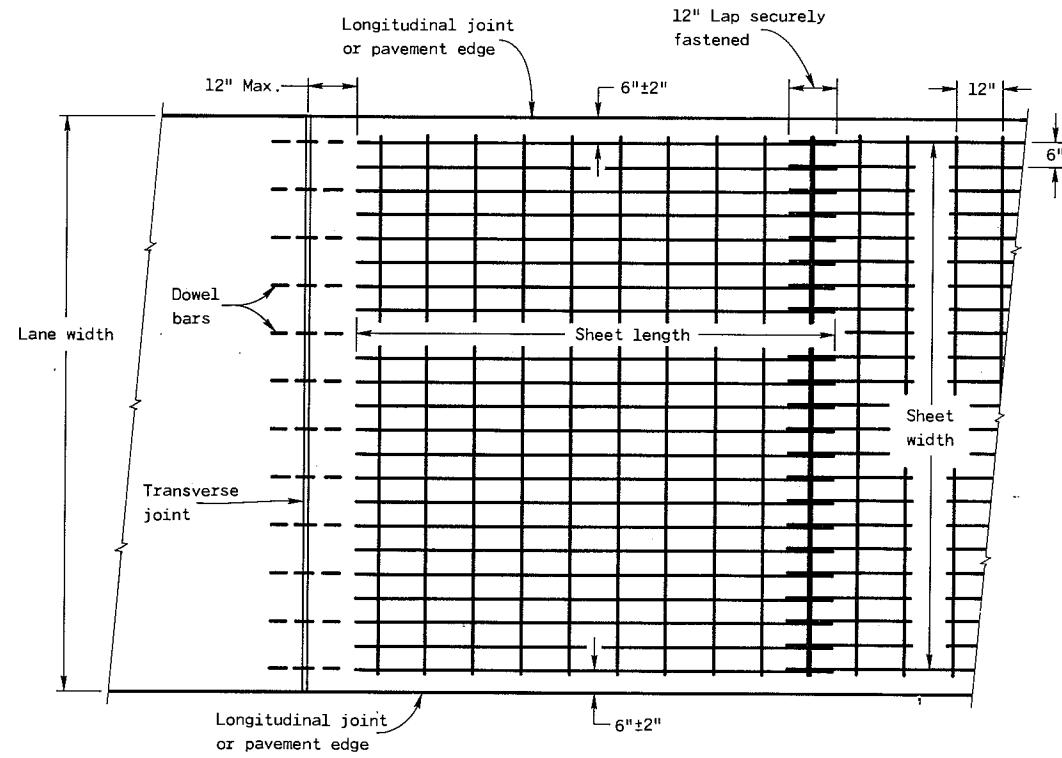
If the side road is the construction project, the intersection surfacing shall be the same as for the project.

Legend:  
 [Hatched] New Pavement  
 [Dotted] Existing Surface

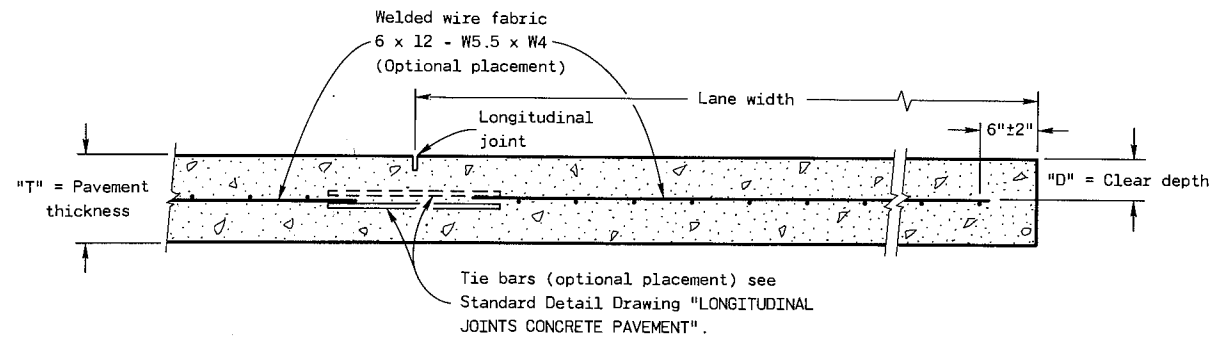
**LAYOUT DETAILS FOR AT-GRADE SIDE ROAD INTERSECTIONS**

State of Wisconsin  
 Department of Transportation  
 Division of Highways

RECOMMENDED FOR APPROVAL:  
 DATE 9-10-76  
 APPROVED DATE 9-10-76  
 [Signatures]



PLAN VIEW



CROSS SECTION  
WELDED STEEL WIRE FABRIC

Pavement Thickness "T"	"D"
8"	2 1/2" - 4"
9"	2 1/2" - 4 1/2"
10"	3" - 5"

**GENERAL NOTES**

Details of construction not shown on this drawing shall conform to Standard Specifications and Special Provisions.

**FABRIC SPECIFICATIONS**

Wire spacing and size = 6" x 12", W5.5 x W4  
Weight per 100 sq. ft. = 55 pounds (approx.)

Fabric shall be shipped to the job site in flat sheets.

**CONCRETE PAVEMENT  
REINFORCEMENT**

State of Wisconsin  
Department of Transportation  
Division of Highways

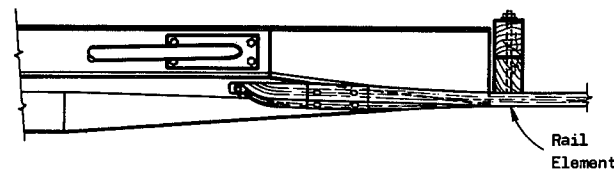
APPROVED  
12-5-77  
DATE

*R.W. Coker*  
SUPERVISING DEVELOPMENT ENGINEER

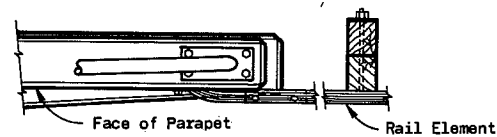
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12-6-77  
DATE

*D.J. Strand*  
CHIEF OF FACILITIES DEVELOPMENT

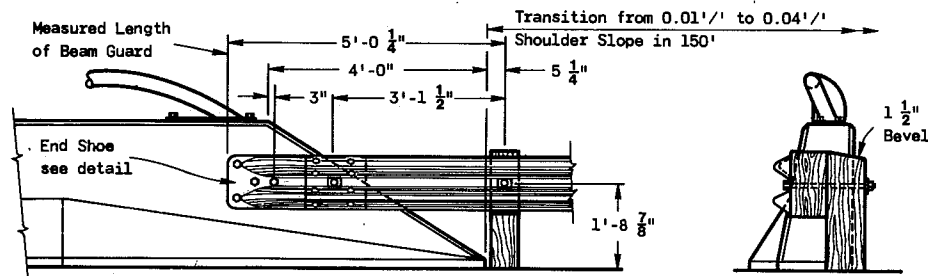
FHWA



PLAN VIEW



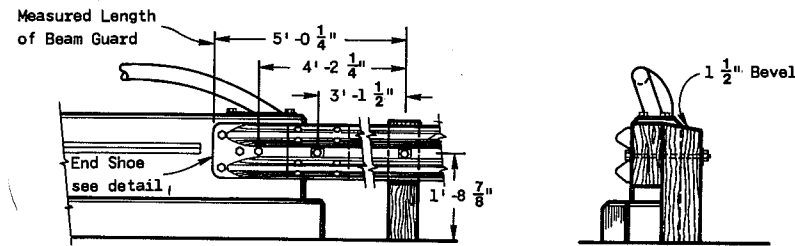
PLAN VIEW



FRONT ELEVATION

END ELEVATION

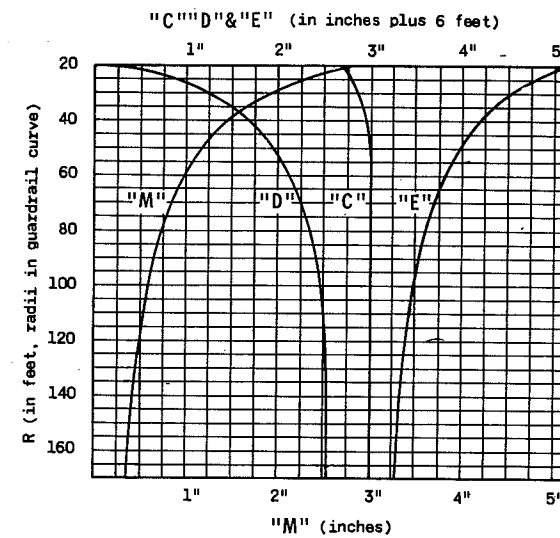
STRUCTURE MOUNTING DETAIL  
SLOPING TYPE PARAPET WALL



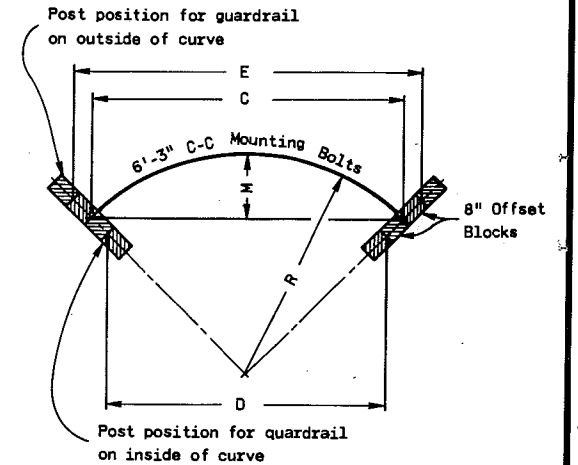
FRONT ELEVATION

END ELEVATION

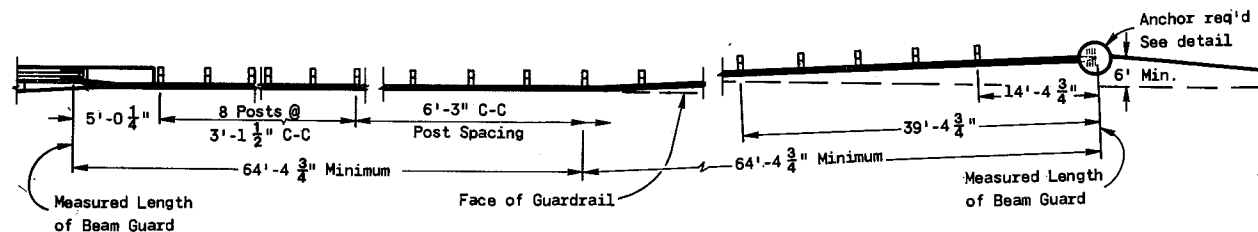
STRUCTURE MOUNTING DETAIL  
VERTICAL TYPE PAPAPET WALL



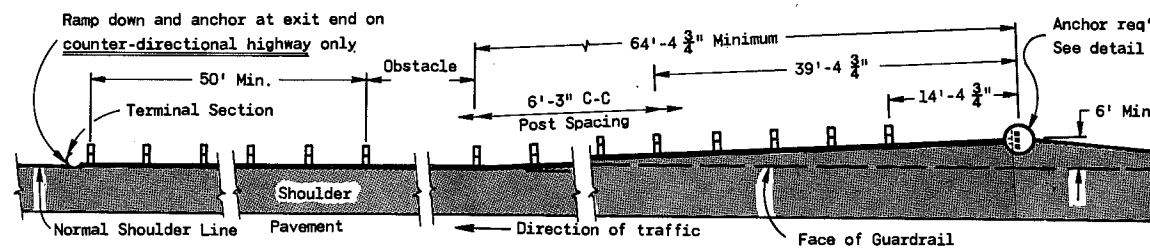
CURVE DATA FOR POST SPACING AND BEAM CURVING



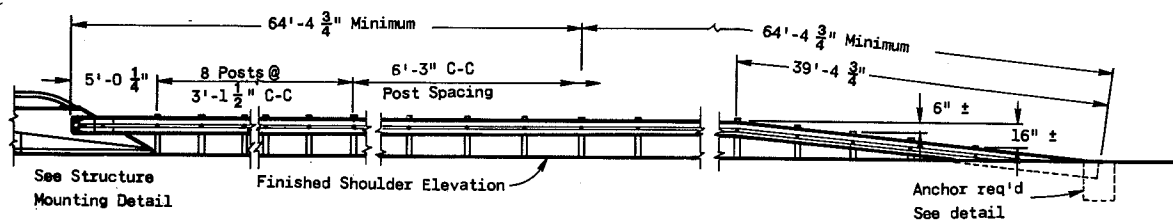
CHORD LENGTHS FOR POST SPACING AND MIDDLE ORDINATES FOR BEAM CURVING



PLAN VIEW

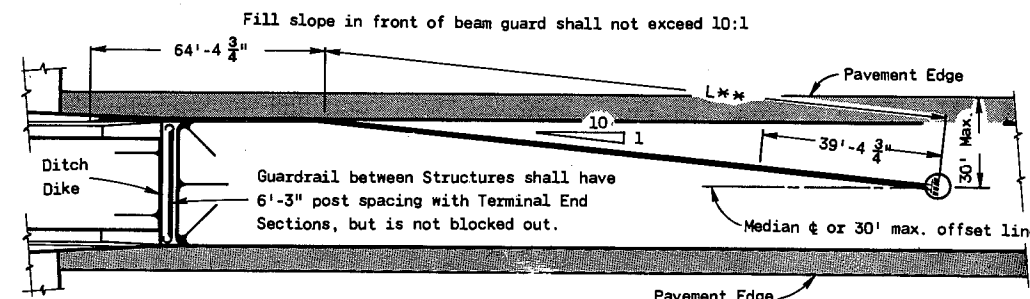


PLAN VIEW  
TYPICAL INSTALLATION AT  
LOCATIONS OTHER THAN STRUCTURES



FRONT ELEVATION

TYPICAL INSTALLATION AT STRUCTURES



PLAN VIEW

MEDIAN PROTECTION

**GENERAL NOTES**

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

The exact location of the beginning and end of each Guardrail installation shall be as shown on the plans or as directed by the Engineer.

Square anchor alternates will be permitted. Square anchors shall be a minimum of 24 inches x 24 inches.

The shoulder widening to accommodate the anchored end of the guardrail shall be accomplished at the rate of widening not to exceed 15 to 1.

Upon approval of the Engineer, the 6 foot anchor offset may be reduced to nothing for replacement installations where existing conditions will not permit the desirable offset. However, when no offset greater than or equal to 3 feet can be provided, the minimum length of guardrail in advance of an obstacle (obstacle to anchor) shall be 150 feet.

The minimum clearance from the front face of guardrail to obstacle shall be 3 feet unless otherwise shown on contract plans. When clearance is less than 3 feet post spacing shall be reduced to 3 feet - 1 1/2 inches C.C.

The "Post Footing Details At Piers" shall be used when guardrail posts are over structure footings and less than 3 feet - 6 inches of earth is provided over the top of the footing.

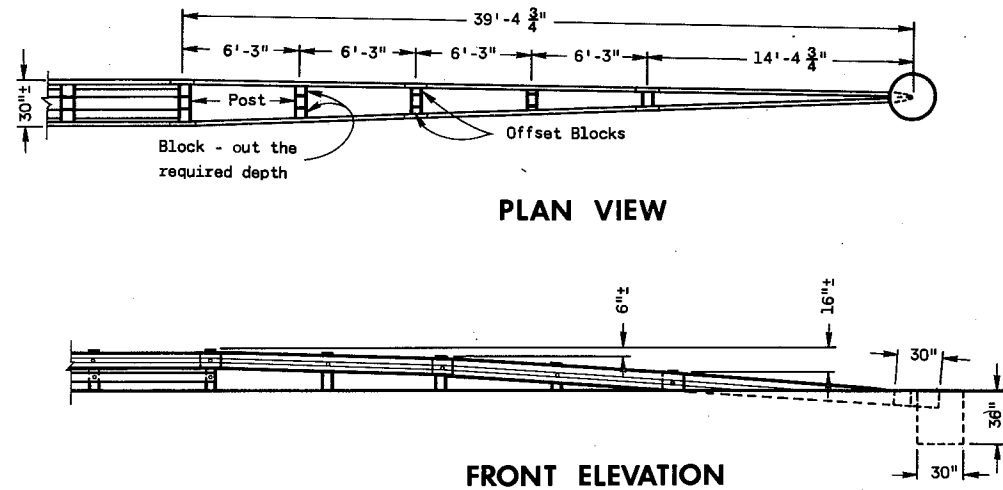
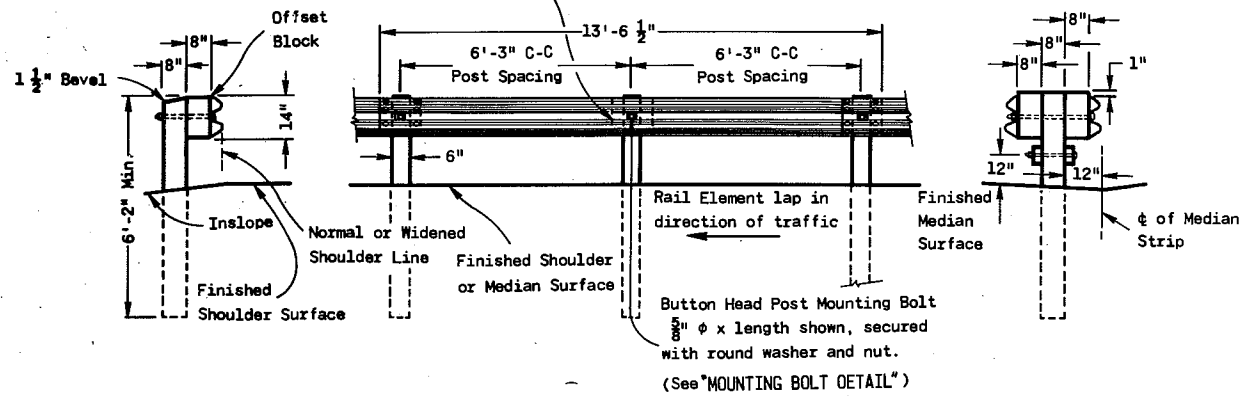
NOTE:  
THIS STANDARD DETAIL DRAWING CONSISTS OF TWO PLATES, AND BOTH PLATES ARE REQUIRED WHEN THIS STANDARD IS CALLED FOR IN THE PLANS.

**CLASS "A"**  
**STEEL PLATE BEAM GUARD &**  
**STEEL PLATE BEAM MEDIAN GUARD**

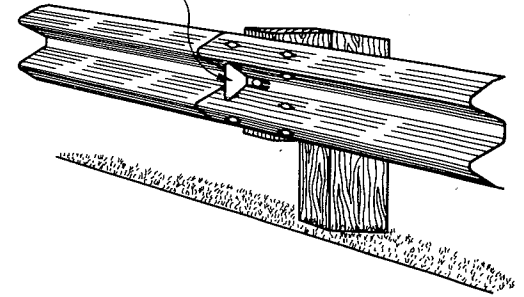
State of Wisconsin  
Department of Transportation  
Division of Highways

One foot long section of rail element, with a  $\frac{3}{4}$ " slotted hole for mounting, shall be placed behind the continuous rail element at the intermediate posts.

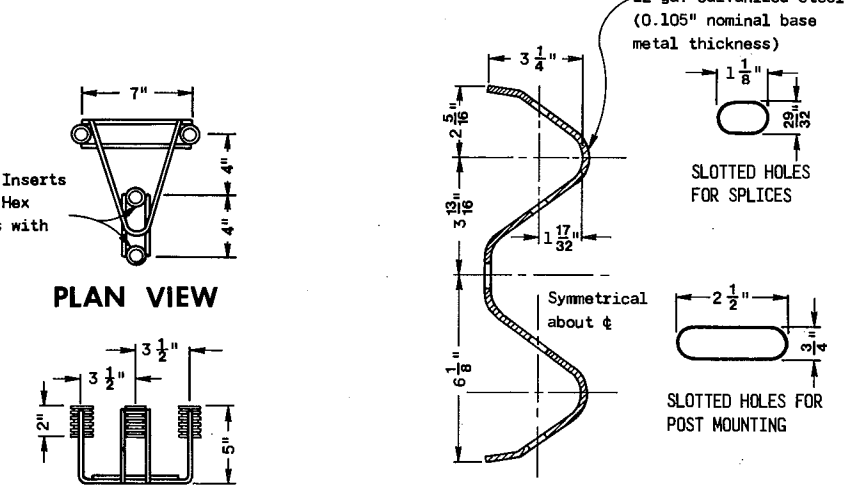
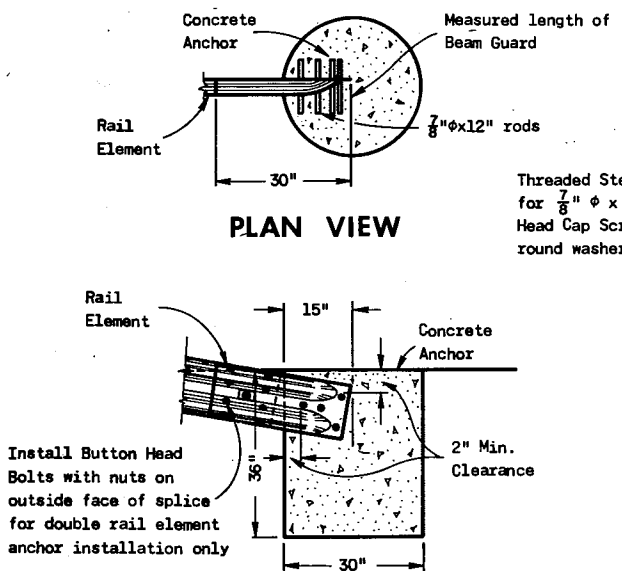
Sawed and treated timber posts and offset blocks shall be furnished and placed in accordance with Standard Specifications. Posts shall be 6" x 8" x 6'-6" and have 6" x 8" x 14" offset blocks.



NOTE: (DIVIDED HIGHWAYS) Reflector spacing shall be 50' C-C on installations less than 200' long, with a minimum of 3 reflectors on any installation. For installations 200' or longer, spacing shall be 100' C-C. (COUNTER-DIRECTIONAL HIGHWAYS) Reflector spacing shall be 25' C-C on installations less than 200' long, with a minimum of 6 reflectors on any installation, and every other reflectorized surface shall be reversed. For installations 200' or longer, spacing shall be 50' C-C.

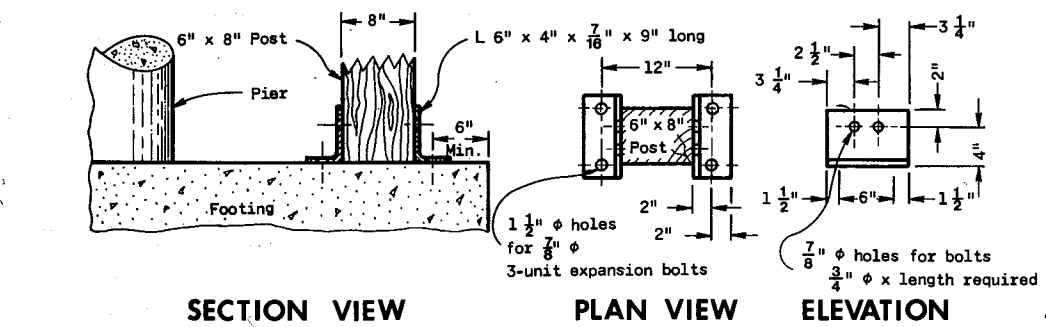


**STEEL PLATE BEAM GUARD**  
**STEEL PLATE BEAM GUARD OR STEEL PLATE BEAM MEDIAN GUARD**



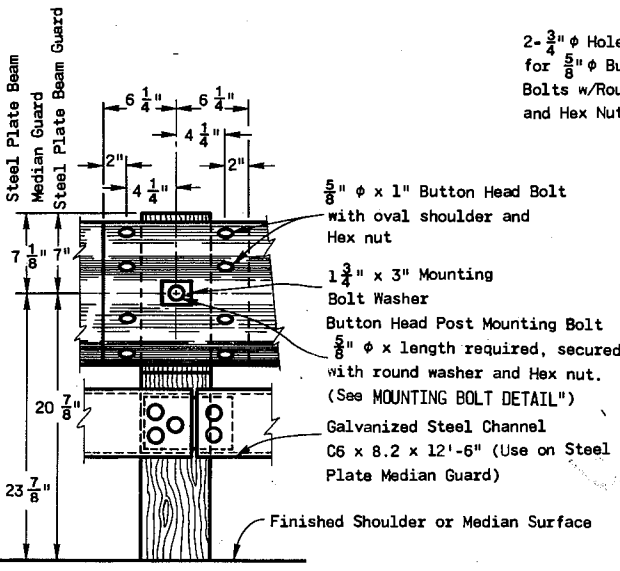
**SECTION VIEW**  
**ANCHOR DETAIL**  
**SINGLE RAIL ELEMENT INSTALLATION**

NOTE: Installation of 4 Bolt Insert Assembly (with Cap Screws inserted) to be part of Bridge Contract.

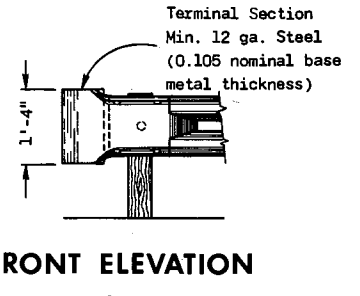
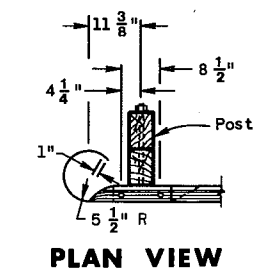
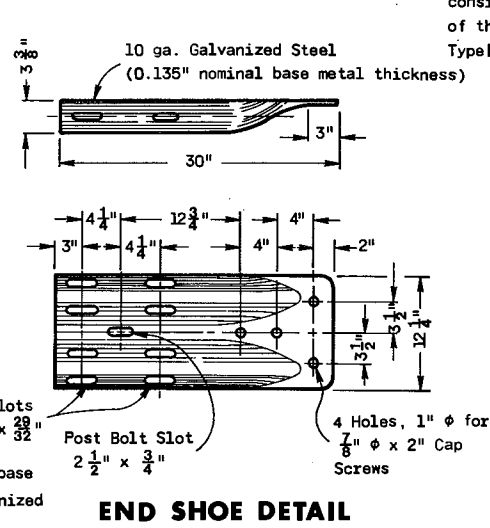
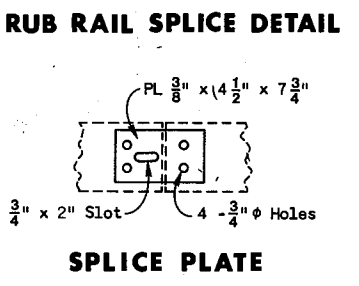
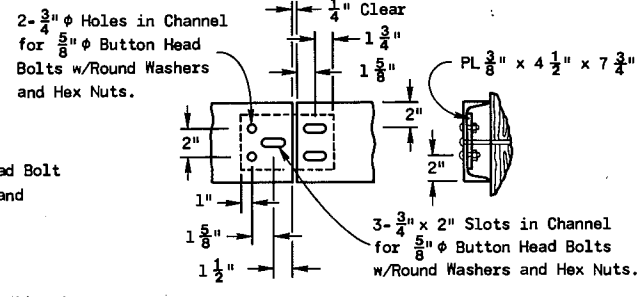
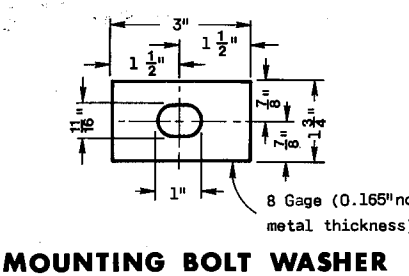
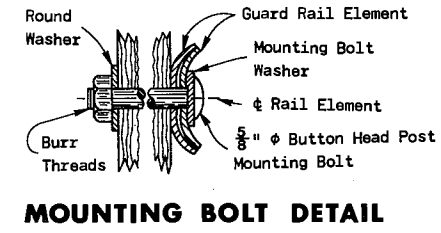


**POST FOOTING DETAIL AT PIERS**

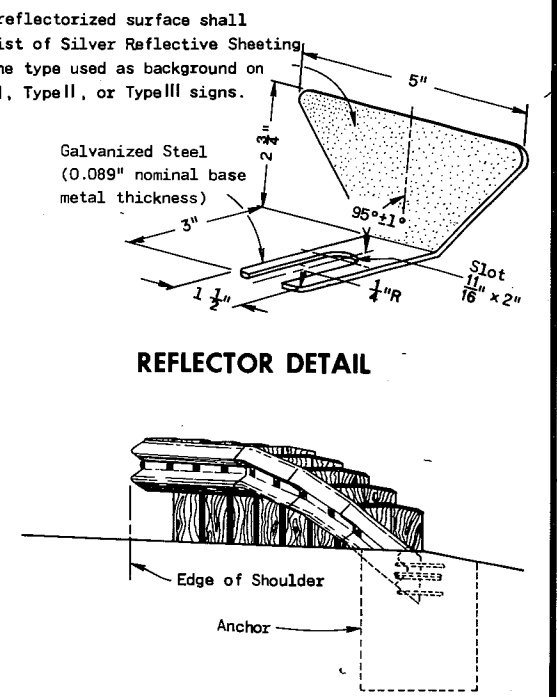
**SECTION THRU RAIL ELEMENT**



**ANCHOR DETAIL FOR DOUBLE RAIL ELEMENT INSTALLATION**



**TYPICAL TERMINAL END ELEVATION**



NOTE: THIS STANDARD DETAIL DRAWING CONSISTS OF TWO PLATES, AND BOTH PLATES ARE REQUIRED WHEN THIS STANDARD IS CALLED FOR IN THE PLANS.

**CLASS "A"**  
**STEEL PLATE BEAM GUARD & STEEL PLATE BEAM MEDIAN GUARD**

State of Wisconsin  
 Department of Transportation  
 Division of Highways

RECOMMENDED FOR APPROVAL  
 5-7-76  
 DATE

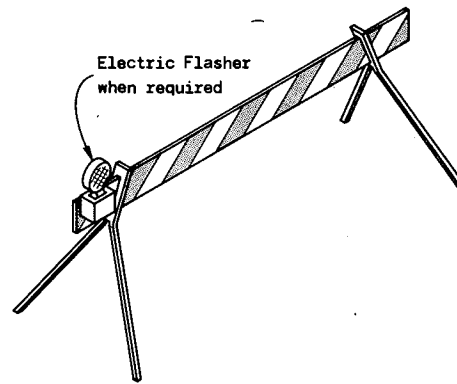
APPROVED  
 5-11-76  
 DATE

S.D.D. 14 B 2-4b

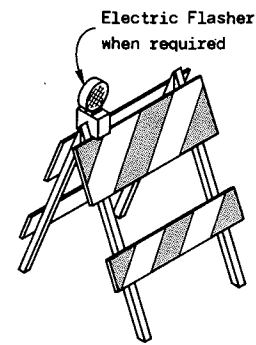
TABLE OF BARRICADE CHARACTERISTICS

BARRICADE TYPE	I	II	III
Height	3' Minimum		5' Minimum
* Rail Width	8" Minimum to 12" Maximum		
Rail Length	2' Minimum to variable Maximum		
** Stripe Width	6" at 45° Angle		
Stripe Colors	Reflectorized Orange & White		

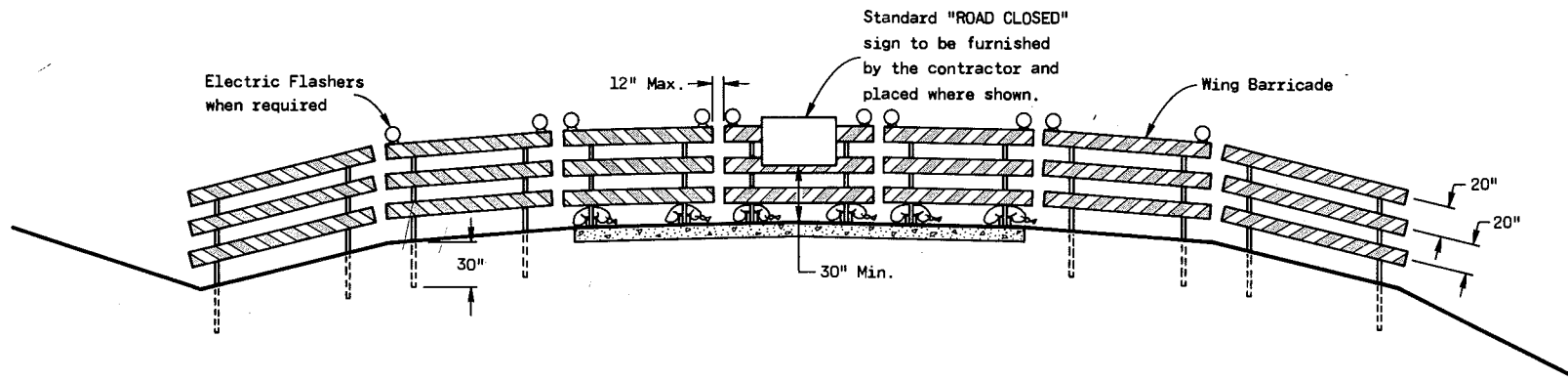
\* Nominal dimensions when barricade is constructed of lumber.  
 \*\* May be 4" for rail lengths less than 3'.



TYPICAL TYPE I BARRICADE

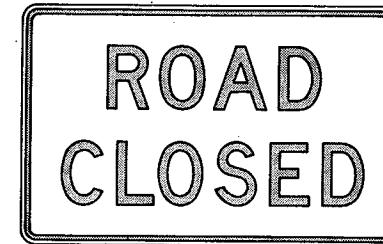


TYPICAL TYPE II BARRICADE



TYPICAL INSTALLATION SHOWING TYPE III BARRICADE

CONSTRUCTION BARRICADES



R11-2  
48" x 30"

Black Lettering on Reflective  
White Background  
Letter Series "D"  
Letter height 8"



W20-3  
48" x 48"

Black Lettering on Reflective  
Orange Background  
Letter Series "D"  
Letter height 7"

STANDARD SIGNS-TYPE II

GENERAL NOTES

The contractor shall furnish, erect and maintain Barricades and Signs. Details regarding location, spacing, dimensions, fabrication, material, sign lettering, lighting devices and color of Barricades and Signs shall conform to this drawing, the Wisconsin Manual on Uniform Traffic Control Devices, the Standard Specifications, Special Provisions and/or plans.

Type III Barricades and Signs shall be erected at the termini of projects and at other road or street locations where it is necessary to control or eliminate public access to the construction area.

Type I and II Barricades shall be used on projects when traffic is to be maintained through the construction area.

The actual field location of barricade installations and advance signs shall be as directed by the Engineer.

Each barricade shall have the name and telephone number of a person responsible for 24 hour emergency service printed in letters at least 3/4 inch in height.

CONSTRUCTION BARRICADES  
& STANDARD SIGNS

State of Wisconsin  
Department of Transportation  
Division of Highways

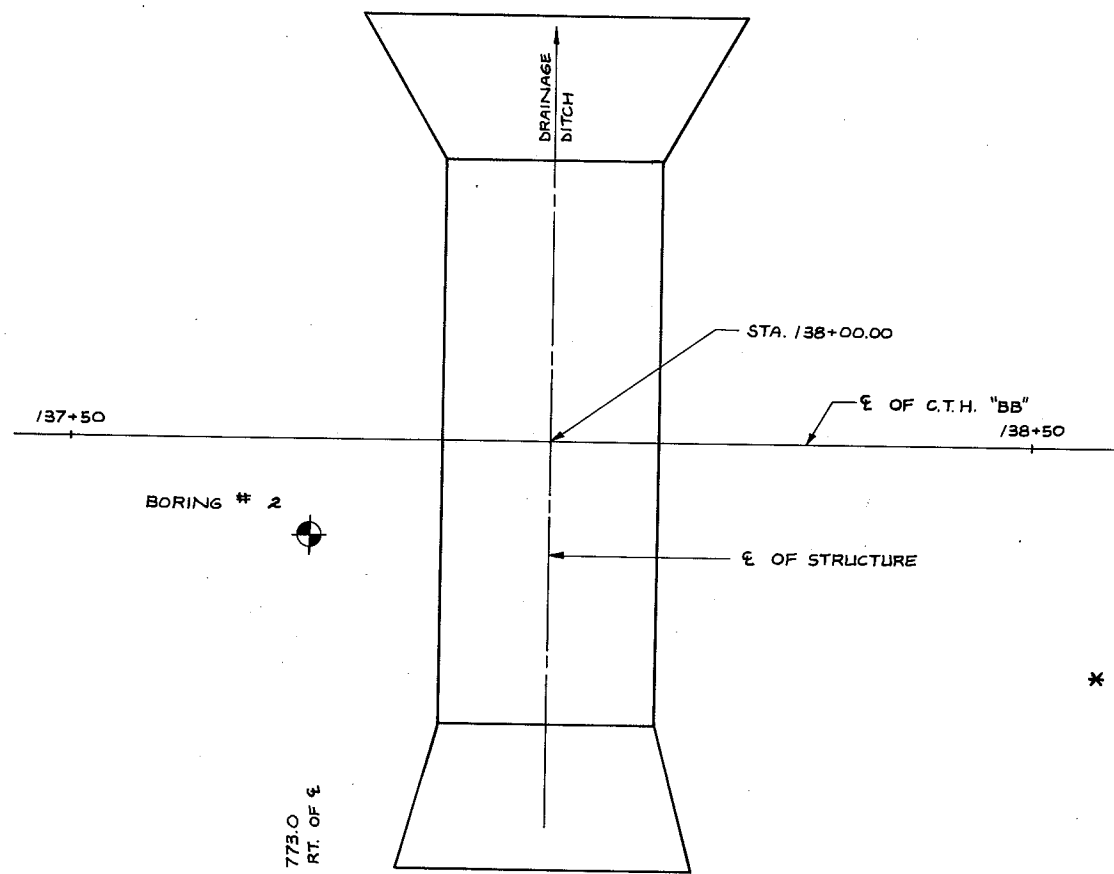
APPROVED  
10-1-76  
DATE

*D. J. Stank*  
CHIEF OF FACILITIES DEVELOPMENT

APPROVED  
10-1-76  
DATE

*W. J. Siedler*  
STATE HIGHWAY ENGINEER

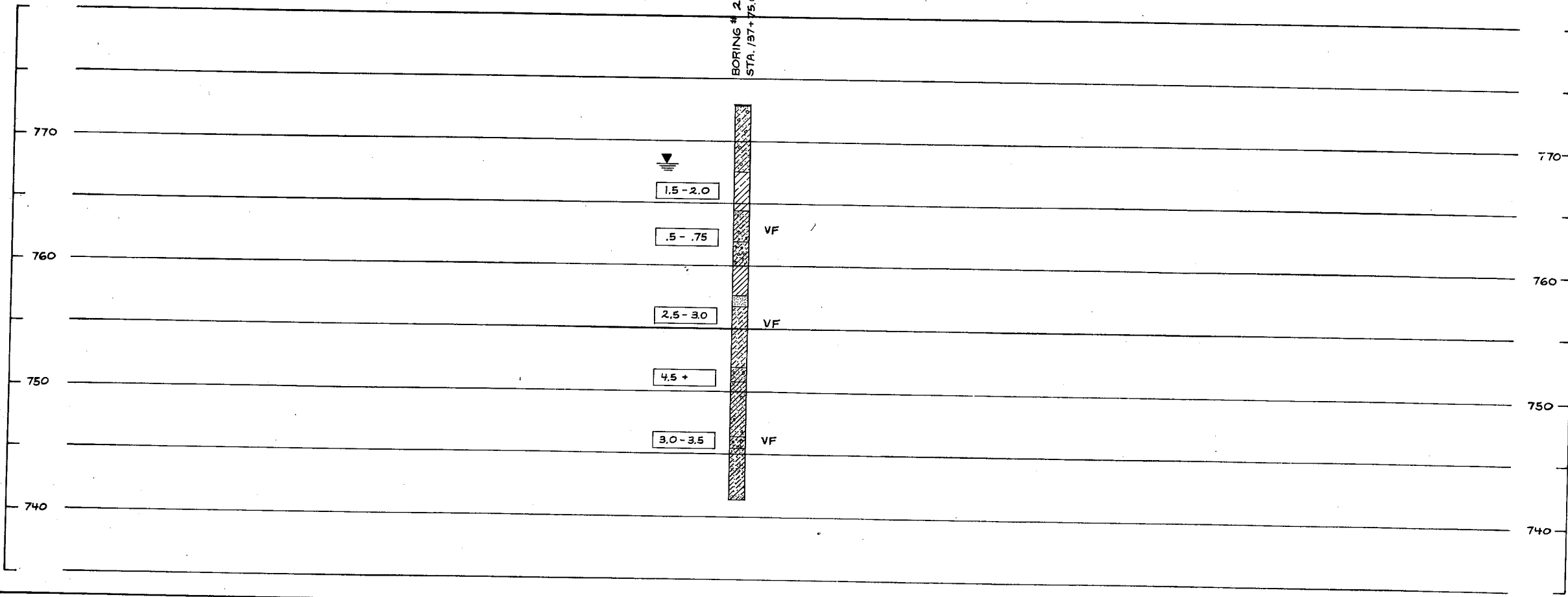




\* UNCONFINED STRENGTH VALUES SHOWN ARE ESTIMATED FROM POCKET PENETROMETER READINGS MADE ON SHELBY TUBE SAMPLES.

BORINGS TAKEN BY:  
OWEN AYRES & ASSOC.  
GEOTECHNICAL DIVISION

BORING # 2 EL. 773.0  
STA. 137+75.00 - 10' RT. OF E

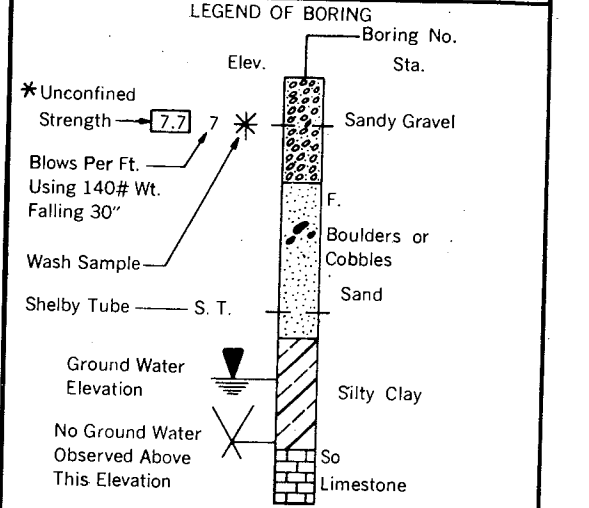
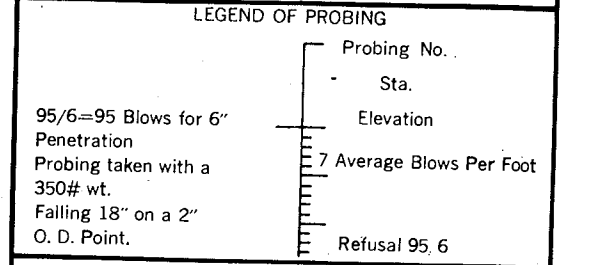


ABBREVIATIONS

F — Fine      M — Medium      C — Coarse  
 Ws — Weathered      So — Sound

MATERIAL SYMBOLS

Topsoil	Silt	Sandstone
Sand	Peat	Limestone
Gravel	Clay	Igneous Rock



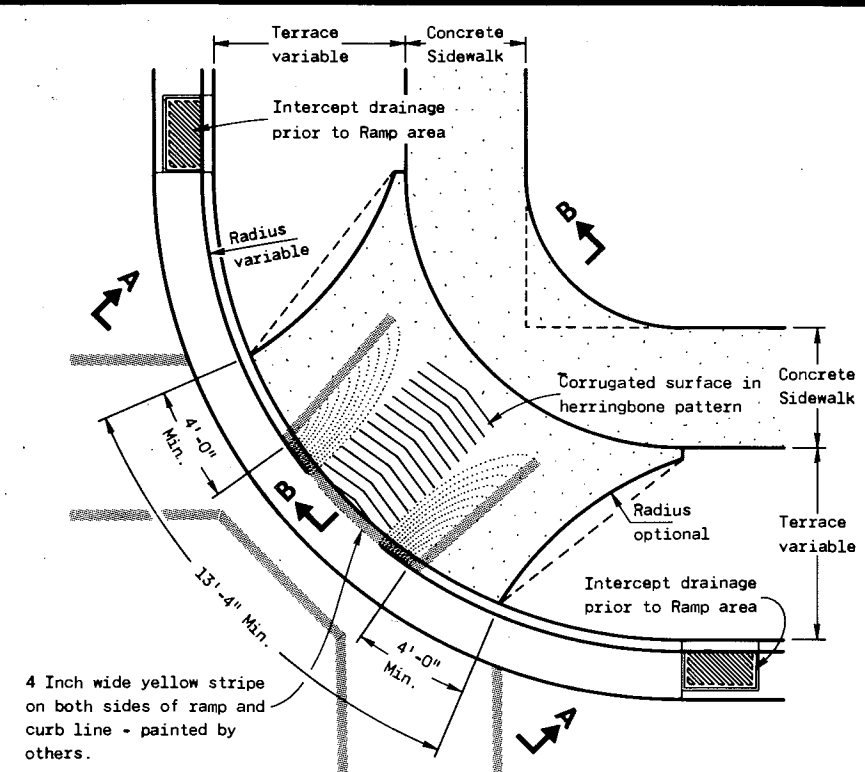
Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O. D. x 1.4" I. D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

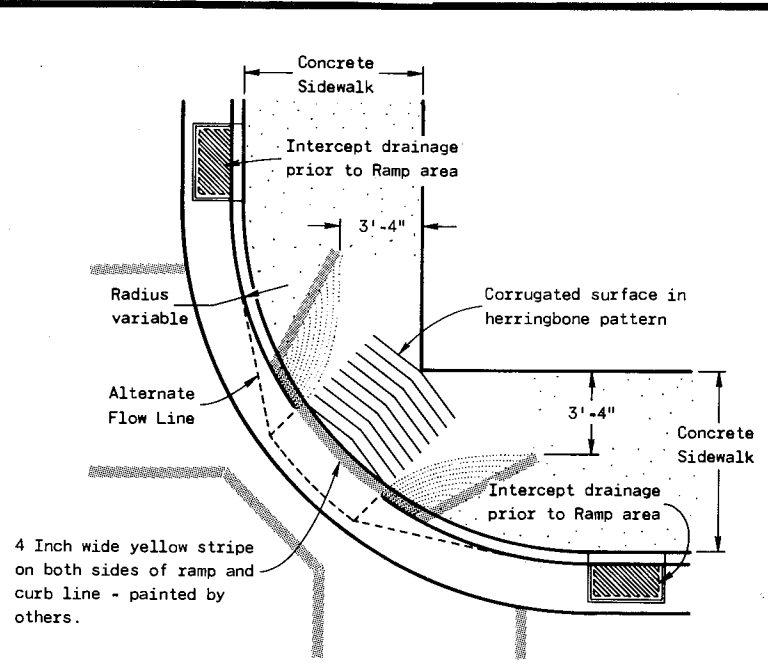
To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

No.	Date.	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
<b>STRUCTURE B-44/70-93</b>			
Const. Spec.	1975	Drawn By	M.T.M. Plans Checked <i>KBH</i>
<b>SUBSURFACE EXPLORATION</b>			SHEET 4 OF 4 <b>X 61354</b>

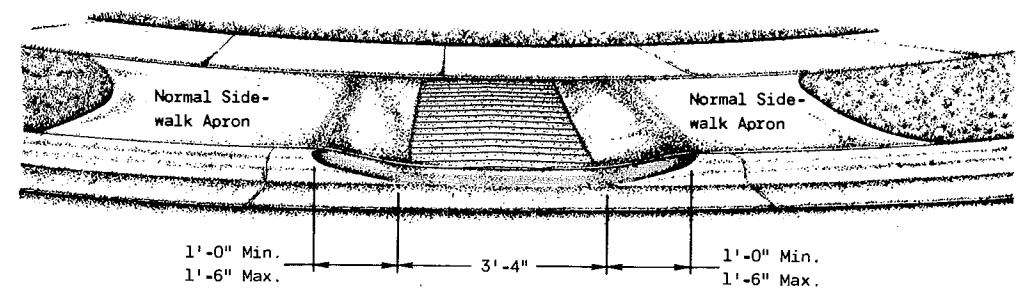




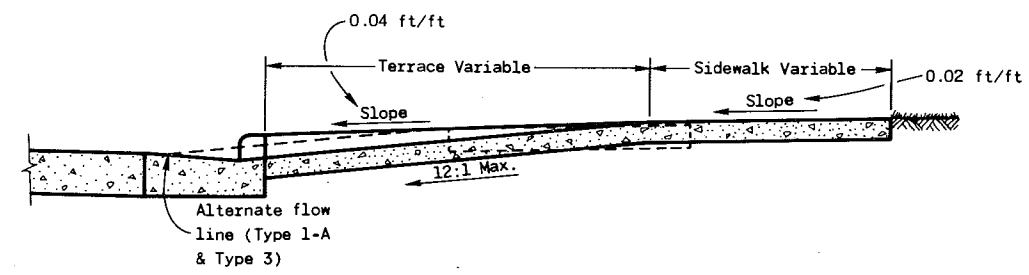
**PLAN VIEW  
TYPE 1 RAMP  
(CENTER OF CORNER RADIUS)**



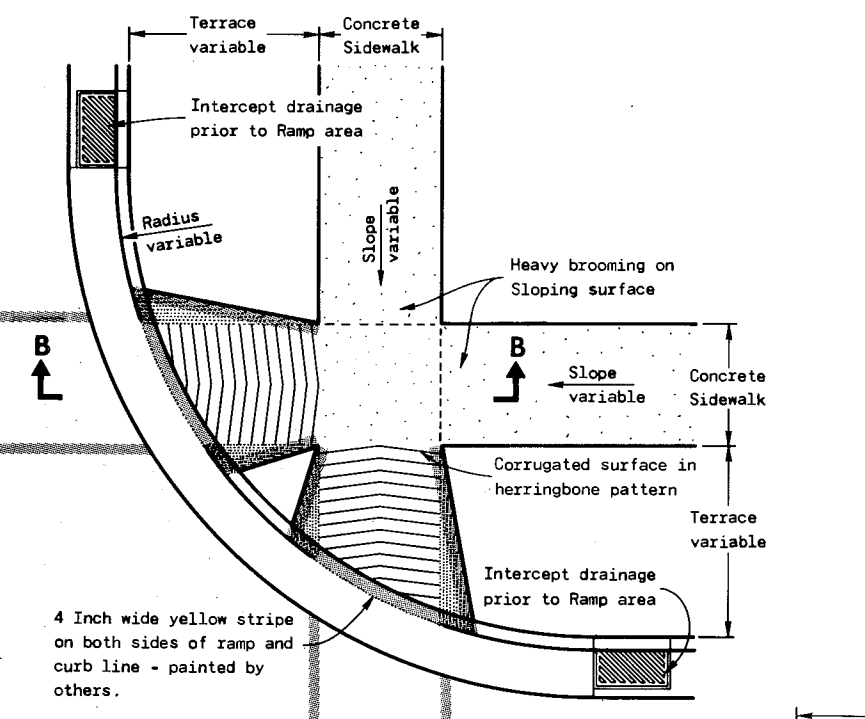
**PLAN VIEW  
TYPE 1-A RAMP  
(NO TERRACE)**



**VIEW A-A**

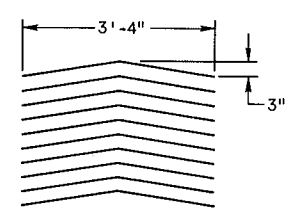


**SECTION B-B**

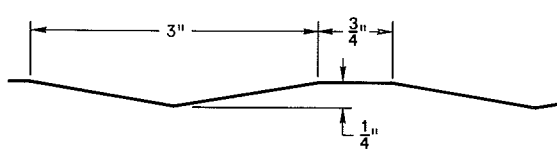


**PLAN VIEW  
TYPE 2 RAMP  
(ON LINE WITH SIDEWALK)**

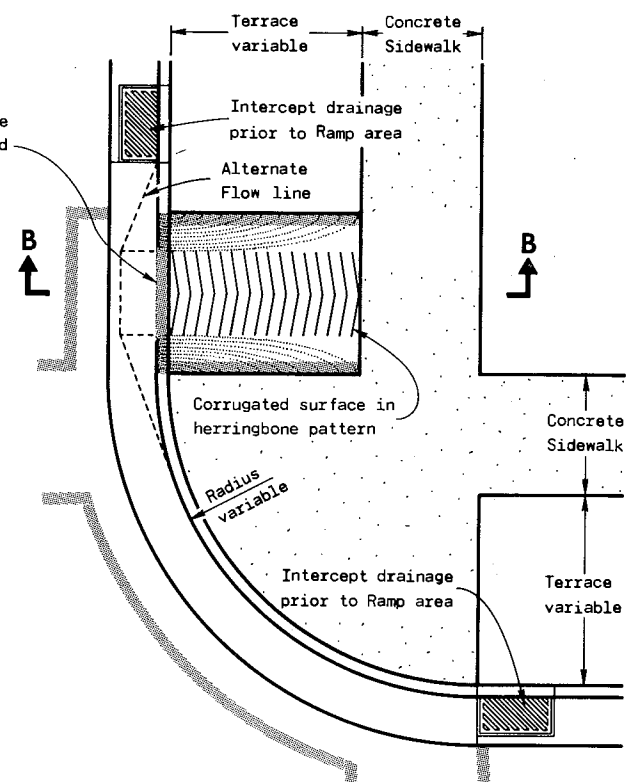
4 Inch wide yellow stripe on both sides of ramp and curb line - painted by others.



**DETAIL OF  
HERRINGBONE PATTERN**



**DETAIL OF  
SURFACE CORRUGATION**



**PLAN VIEW  
TYPE 3 RAMP  
(OUTSIDE OF CROSSWALK AREA)**

**GENERAL NOTES**

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Ramps shall be built at 12:1 or flatter. When necessary, the sidewalk elevation may be lowered to meet the high point on the ramp.

Type 1 or Type 1-A Ramps shall have a normal sidewalk apron and curb on both sides of ramp. Entire curb radius shall not be made into ramp.

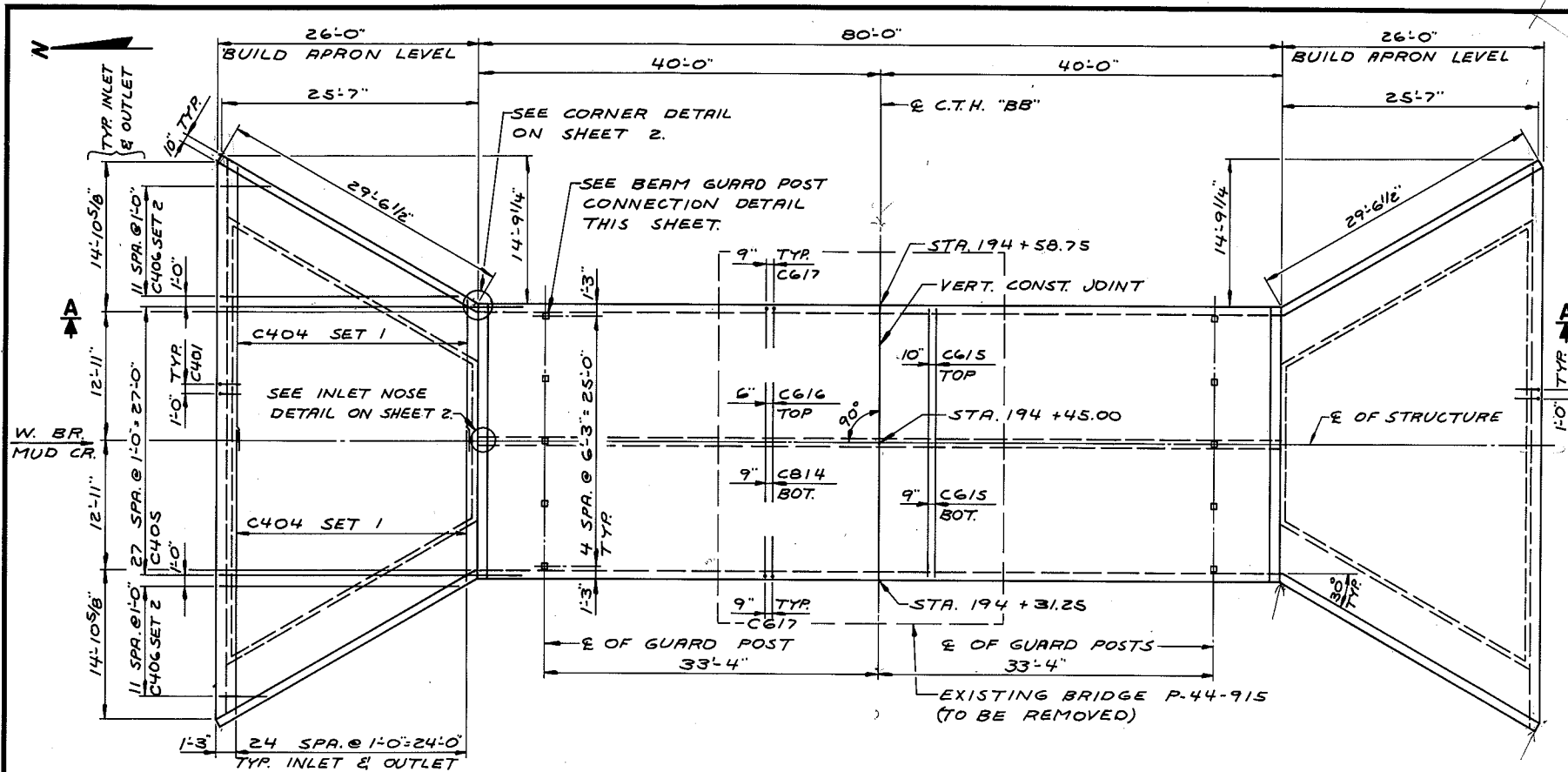
Curb ramps shall be measured and paid for as Concrete Sidewalk and Concrete Curb and Gutter.

Section 66.616, Wisconsin Statutes requires curb ramping for handicapped persons. This law also states that "the ramp shall be either bordered on both sides and the curb line with a four inch wide yellow stripe, or the surface treatment on the ramp shall have integral coloration".

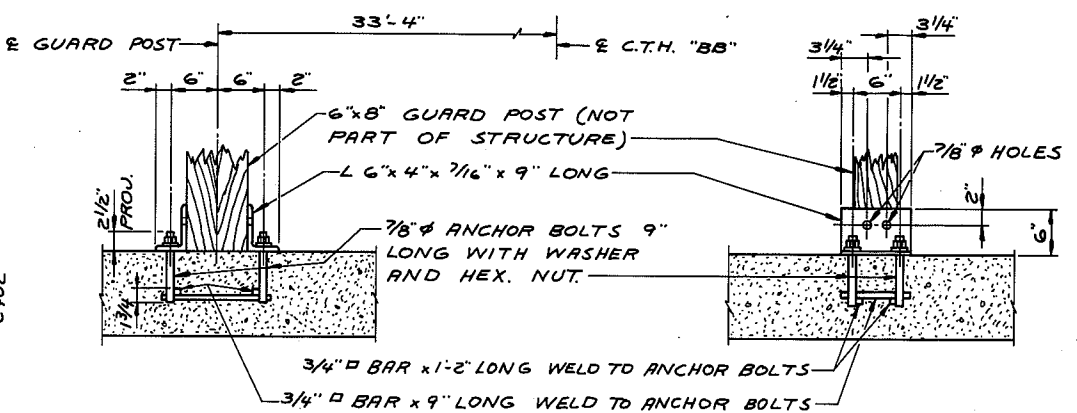
The paint stripe alternate is shown to alert users of this drawing of the requirement for delineation of the ramp. The paint stripes will be applied by State or Municipal signing crews unless otherwise indicated by Special Provision.

<b>CURB RAMPS FOR HANDICAPPED PERSONS</b>	
State of Wisconsin Department of Transportation Division of Highways	
APPROVED 12-27-77 DATE	<i>R.W. Buder</i> SUPERVISING DEVELOPMENT ENGINEER
APPROVED 12-27-77 DATE	<i>D.J. Stank</i> CHIEF OF FACILITIES DEVELOPMENT
FHWA	

S.D.D. 8 D 5-4



**PLAN**

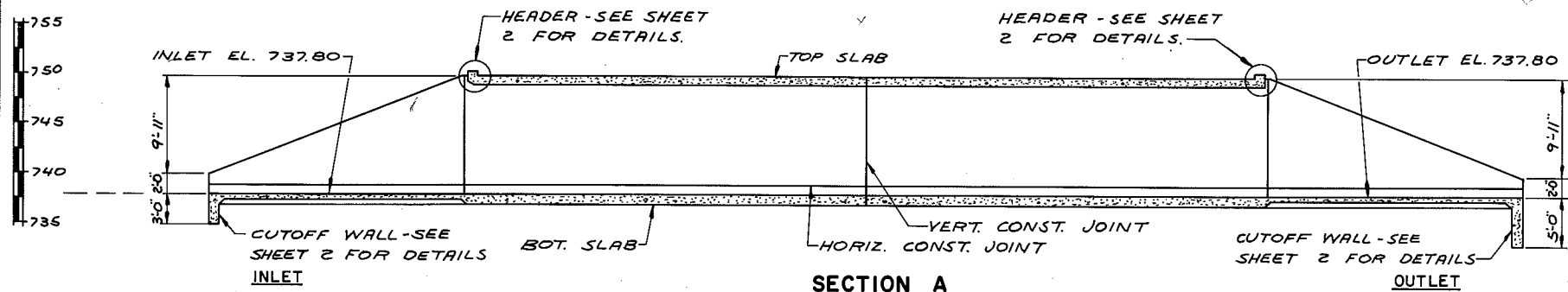


**BEAM GUARD POST CONNECTION DETAIL**

ANGLES, NUTS, WASHERS AND TOP 4" OF ANCHOR BOLTS TO BE GALVANIZED.  
ALL POST CONNECTION MATERIAL TO BE INCLUDED IN BID PRICE FOR "CONCRETE MASONRY".

**TOTAL ESTIMATED QUANTITY**

BID ITEMS		
REMOVING OLD BRIDGE, STA. 194+45.00		1 L.S.
EXCAVATION FOR STRUCTURES, BRIDGES B-44/70-92		1 L.S.
CONCRETE MASONRY, BRIDGES		331 C.Y.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES		35500 L.B.
NON-BID ITEMS		
FILLER		3/4 SIZE
POLYVINYL CHLORIDE WATERSTOP		46 L.F.



**SECTION A**

**GENERAL NOTES**

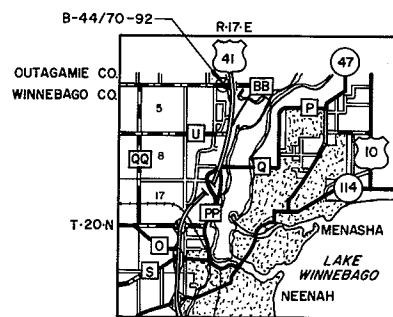
DRAWINGS SHALL NOT BE SCALED.  
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.  
THE FIRST DIGIT OF A THREE DIGIT BAR NO. SIGNIFIES THE BAR SIZE.  
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION: M153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.  
THE EXISTING GROUND LINE WAS USED AS THE UPPER LIMITS OF EXCAVATION.  
ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH GRANULAR BACKFILL TO THE ELEVATION AND SECTION EXISTING PRIOR TO EXCAVATION WITHIN THE LENGTH OF THE BOX.

**DESIGN DATA**

LIVE LOAD: HS-20  
EARTH LOAD: 3'-0"  
ALLOWABLE DESIGN STRESSES:  
CONCRETE MASONRY  $f'_c = 3,500$  p.s.i.  
HIGH-STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)  $f_y = 60,000$  p.s.i.  
HYDRAULIC DATA:  
DRAINAGE AREA: 9.6 SQ. MI.  
WATERWAY AREA: 275 SQ. FT.  
 $Q_{100} = 2,400$  c.f.s.  
 $V = 8.7$  f.p.s.  
HIGH WATER EL. 750.2 ( $Q_{100}$ )

**LIST OF DRAWINGS**

1. GENERAL PLAN \_\_\_\_\_ X 59702
2. BILL OF BARS & DETAILS \_\_\_\_\_ X 59703
3. SUBSURFACE EXPLORATION \_\_\_\_\_ X 59704



**LAYOUT**

No.	Date	Revision	By

PLANS PREPARED BY  
**OWEN AYRES & ASSOCIATES**  
ARCHITECTS / ENGINEERS  
EAU CLAIRE, WISCONSIN

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

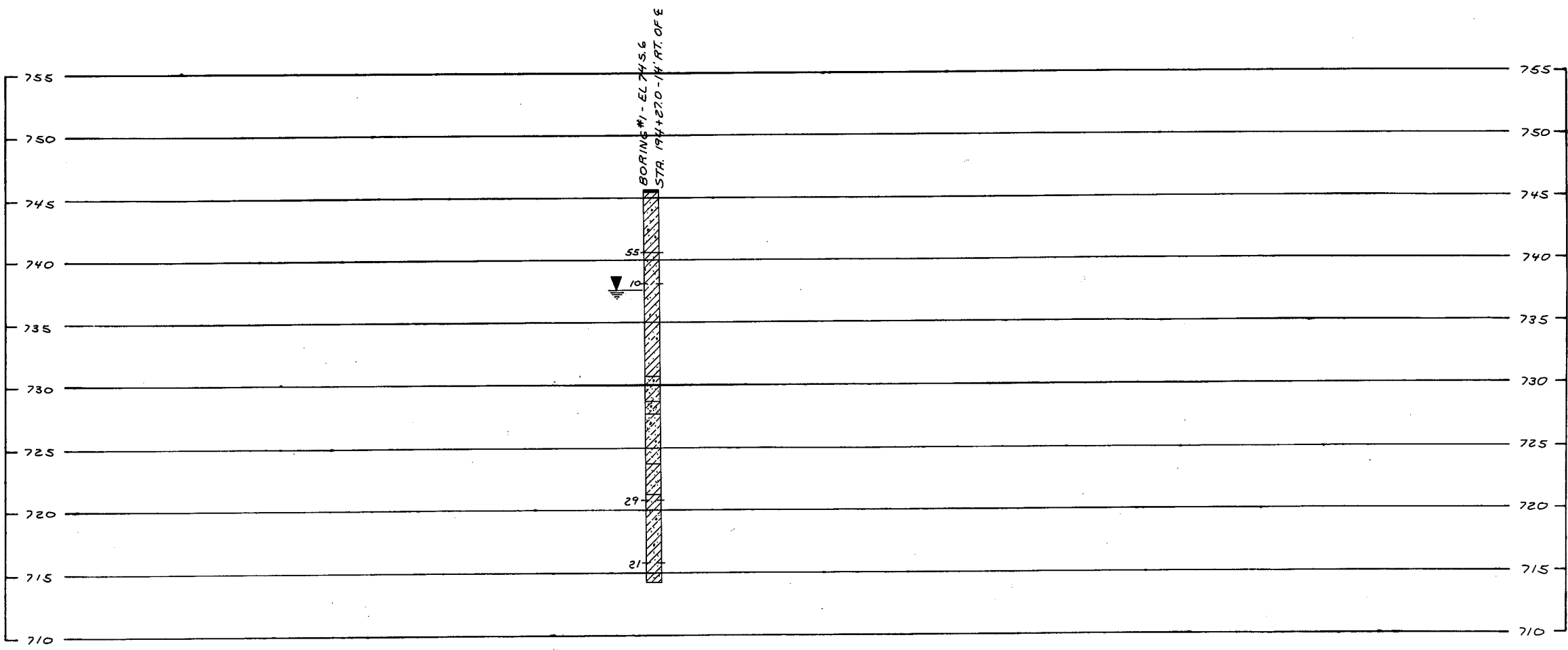
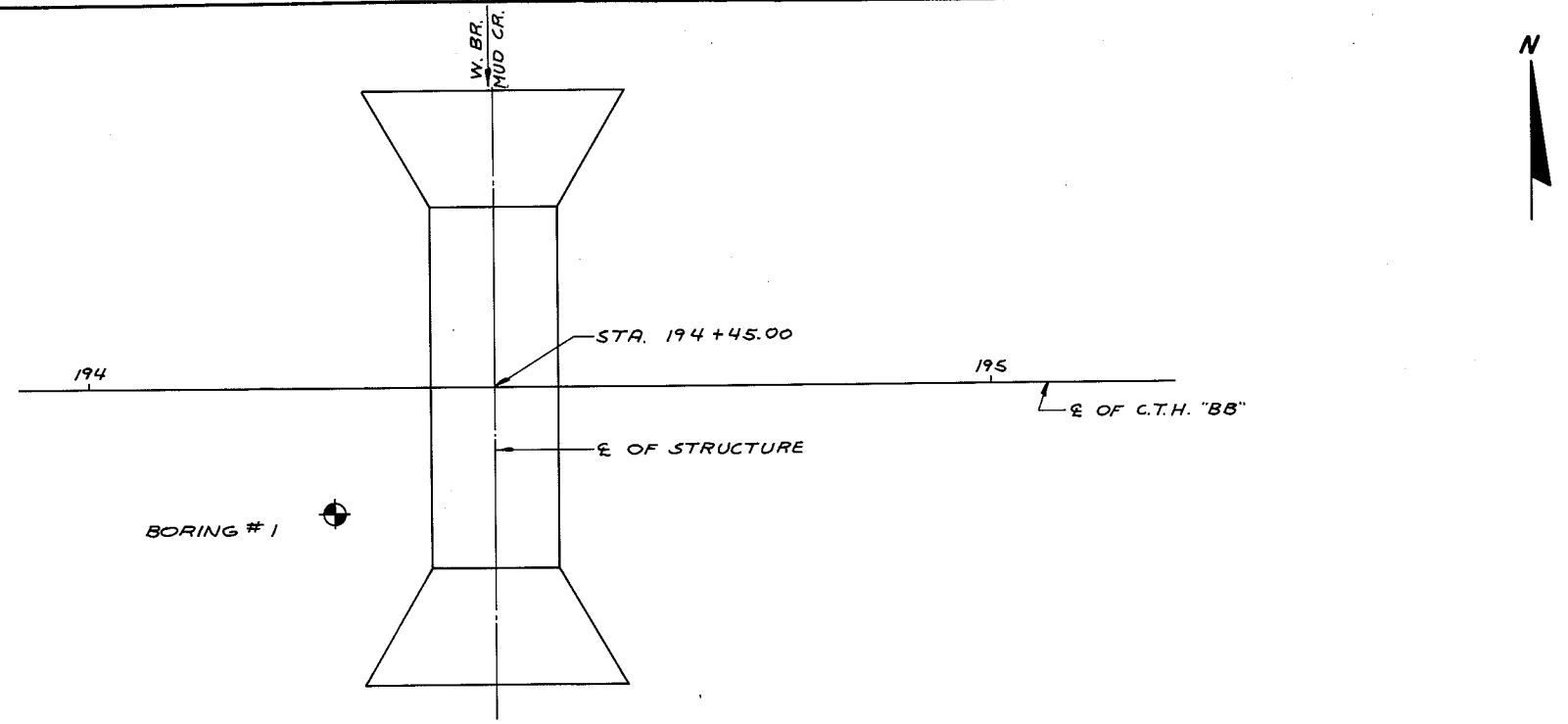
**STRUCTURE B-44/70-92**  
C.T.H. "BB" OVER W. BR. MUD CREEK

County	OUTAGAMIE	Town/City/Village	GRAND CHUTE / MENASHA
Design Spec.	A.A.S.H.T.O. '73 INTERIM '75	Load	HS-20
Design By	K.B.H.	Checked By	N.K.I.J.
Drawn By	G.L.D.	Checked By	K.B.H.

Approved: W.A. Kleina Chief Bridge Engineer  
Date: 2-6-78

**GENERAL PLAN** SHEET 1 OF 3  
X 59702

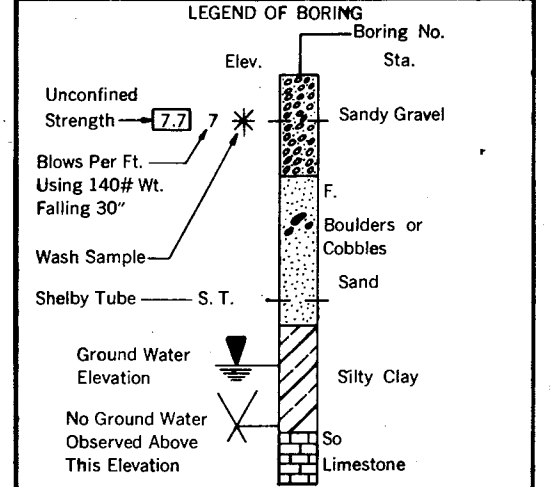
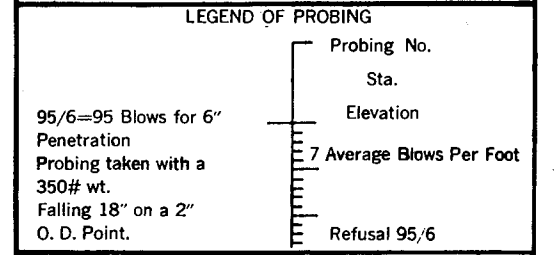




STATE PROJECT NUMBER	SHEET NO.
4667-1-71	7.2

ABBREVIATIONS		
F — Fine	M — Medium	C — Coarse
Ws — Weathered	So — Sound	

MATERIAL SYMBOLS		
Topsoil	Silt	Sandstone
Sand	Peat	Limestone
Gravel	Clay	Igneous Rock



Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O. D. x 1.4" I. D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

**SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION**

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

No.	Date.	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
<b>STRUCTURE B-44/70-92</b>			
Const. Spec.	1975	Drawn By	G.L.D.
		Plans Checked	K.B.H.
<b>SUBSURFACE EXPLORATION</b>			SHEET 3 OF 3 <b>X 59704</b>

**GENERAL NOTES**

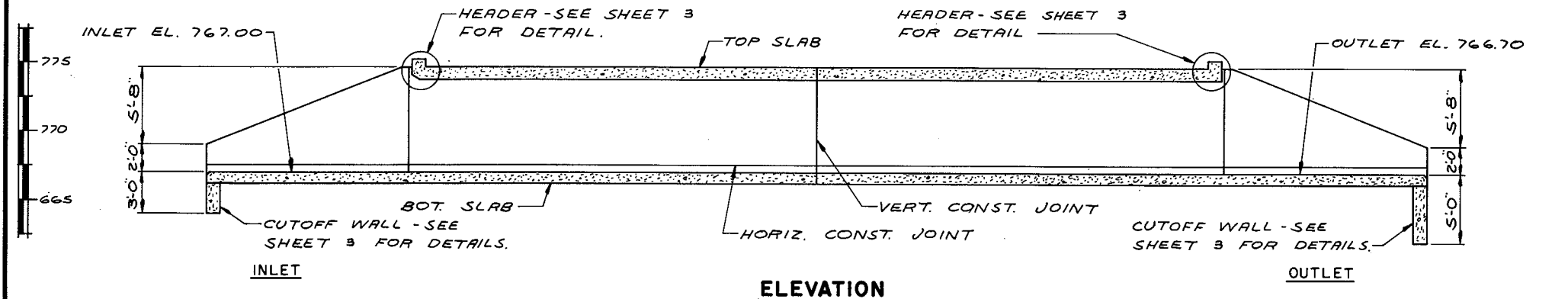
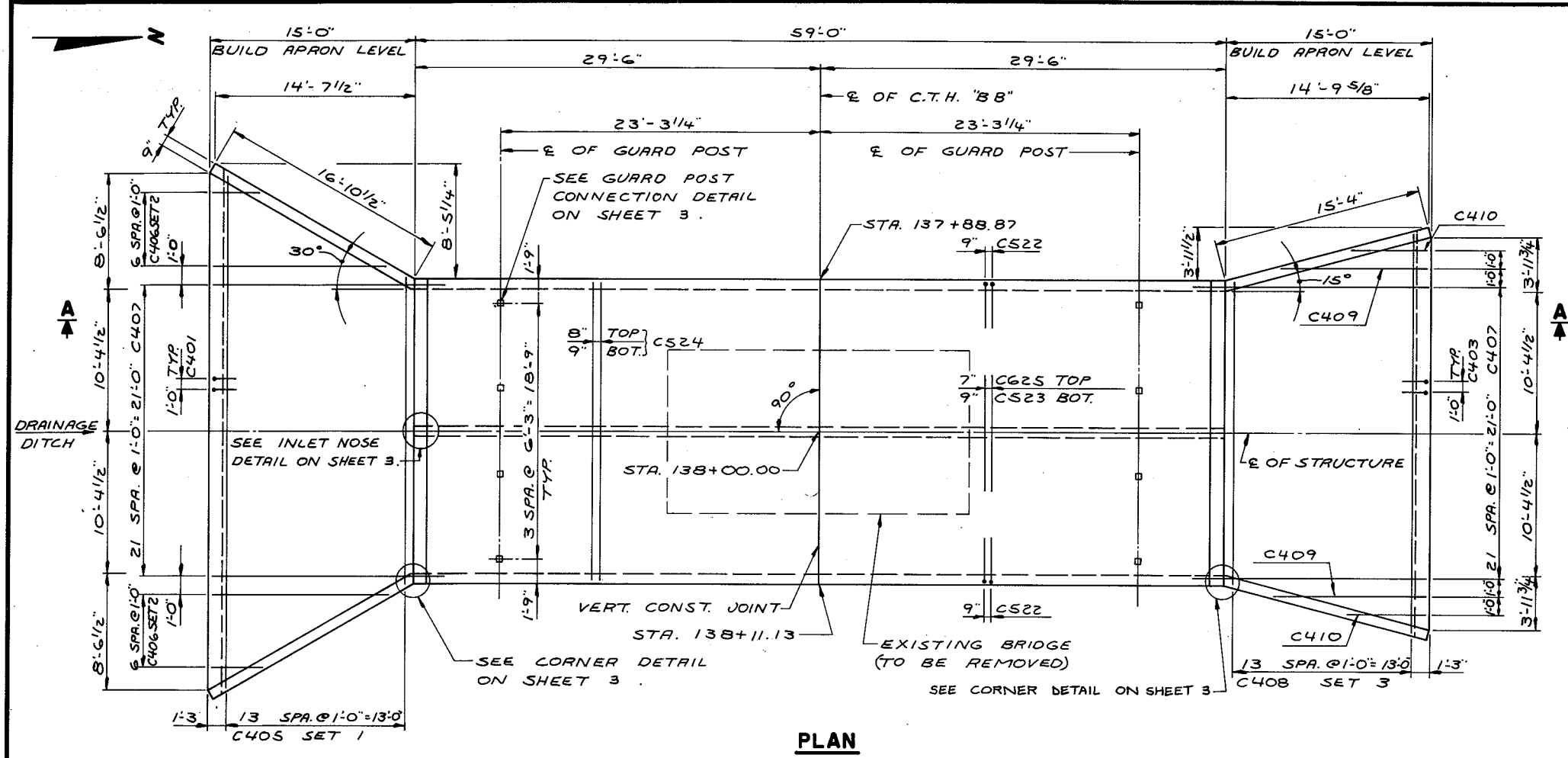
DRAWINGS SHALL NOT BE SCALED.  
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.  
 THE FIRST DIGIT OF A THREE DIGIT BAR NO. SIGNIFIES THE BAR SIZE.  
 JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION: M153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.  
 THE EXISTING GROUND LINE WAS USED AS THE UPPER LIMITS OF EXCAVATION.  
 ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH GRANULAR BACKFILL TO THE ELEVATION AND SECTION EXISTING PRIOR TO EXCAVATION WITHIN THE LENGTH OF THE BOX.

**DESIGN DATA**

LIVE LOAD: HS-20  
 EARTH LOAD: 2'-6"  
 ALLOWABLE DESIGN STRESSES:  
 CONCRETE MASONRY  $f'_c = 3,500$  p.s.i.  
 HIGH-STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)  $f_y = 60,000$  p.s.i.  
 HYDRAULIC DATA:  
 DRAINAGE AREA = 5.06 SQ. MI.  
 WATERWAY AREA = 135 SQ. FT.  
 $Q_{100} = 1400$  c.f.s.  
 $V = 10.4$  f.p.s.  
 HIGH WATER EL.  $_{100} = 775.65$

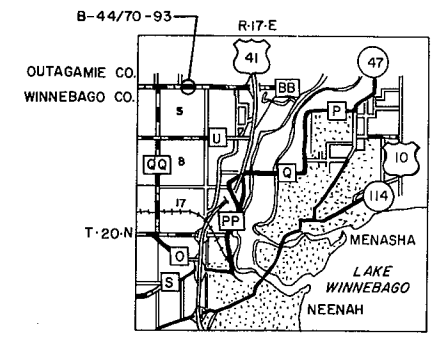
**LIST OF DRAWINGS**

1. GENERAL PLAN \_\_\_\_\_ X 61351
2. DETAILS \_\_\_\_\_ X 61352
3. BILL OF BARS  
 & DETAILS \_\_\_\_\_ X 61353
4. SUBSURFACE EXPLORATION \_\_\_\_\_ X 61354



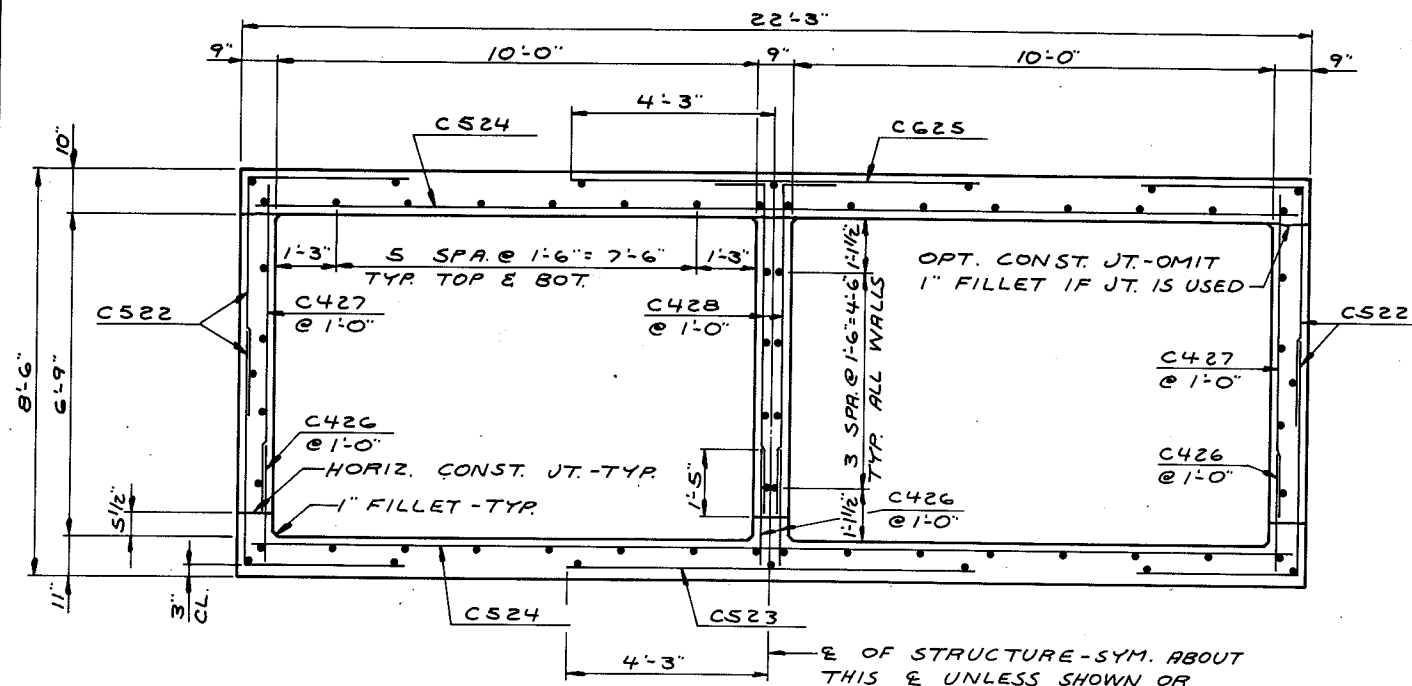
**TOTAL ESTIMATED QUANTITY**

BID ITEMS		
REMOVING OLD CULVERT STA. 138+00.00		1 L.S.
EXCAVATION FOR STRUCTURES, BRIDGES B-44/70-93		1 L.S.
CONCRETE MASONRY, BRIDGES		163 C.Y.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES		15,880 LB.
NON-BID ITEMS		
FILLER	3/4" SIZE	
POLYVINYL CHLORIDE WATERSTOP		29 LF.



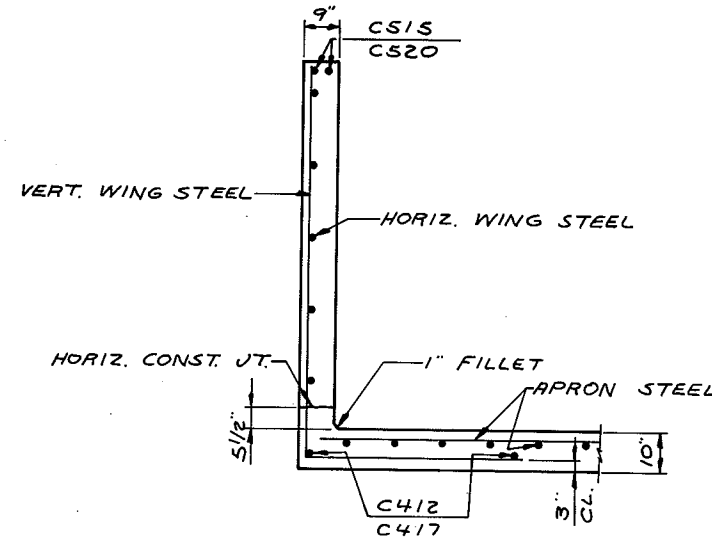
*Handwritten signature: Kevin Johnson*

No.	Date	Revision	By
PLANS PREPARED BY <b>OWEN AYRES &amp; ASSOCIATES</b> ARCHITECTS - ENGINEERS EAU CLAIRE, WISCONSIN			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
<b>STRUCTURE B-44/70-93</b>			
<b>C.T.H. "BB" OVER DRAINAGE DITCH</b>			
County	WINNEBAGO	Town/City/Village	GRAND CHUTE / MENASHA
Design Spec.	A.A.S.H.T.O. '73 INTERIM '75	Load	HS-20 Const. Spec. 1975
Designed By	K.B.H.	Checked	D.H.P.
Drawn	G.L.D.	Checked	MTM
Approved	W.A. Kline		10-3-78
	Chief Bridge Engineer		Date
<b>GENERAL PLAN</b>			SHEET 1 OF 4
			<b>X 61351</b>

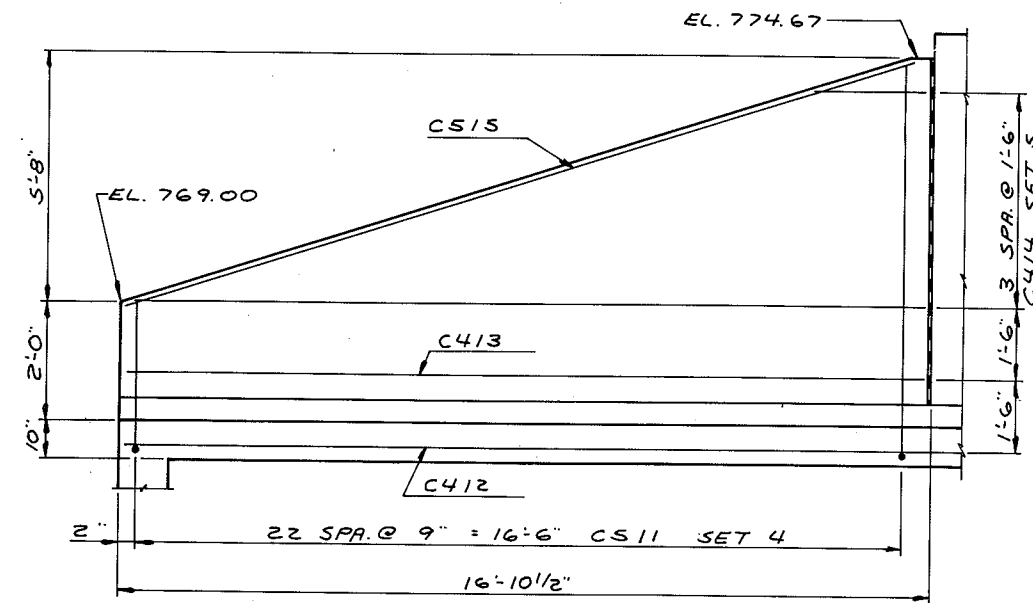


NOTE: ALL LONGITUDINAL BARS IN CULVERT ARE C421 UNLESS SHOWN OR NOTED OTHERWISE.

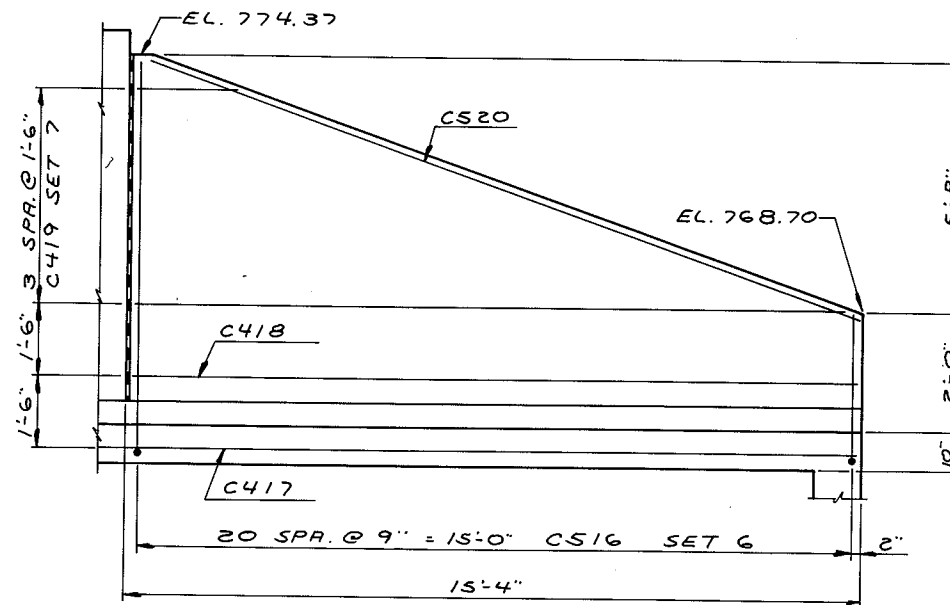
**TYPICAL SECTION THRU BOX**



**TYP. SECTION THRU WALL**



**WING ELEVATION - INLET**



**WING ELEVATION - OUTLET**

WILLIAMS & ASSOCIATES

STRUCTURE B-44/70-93

1975 G.L.D. KBH

2 4

DETAILS X 61352



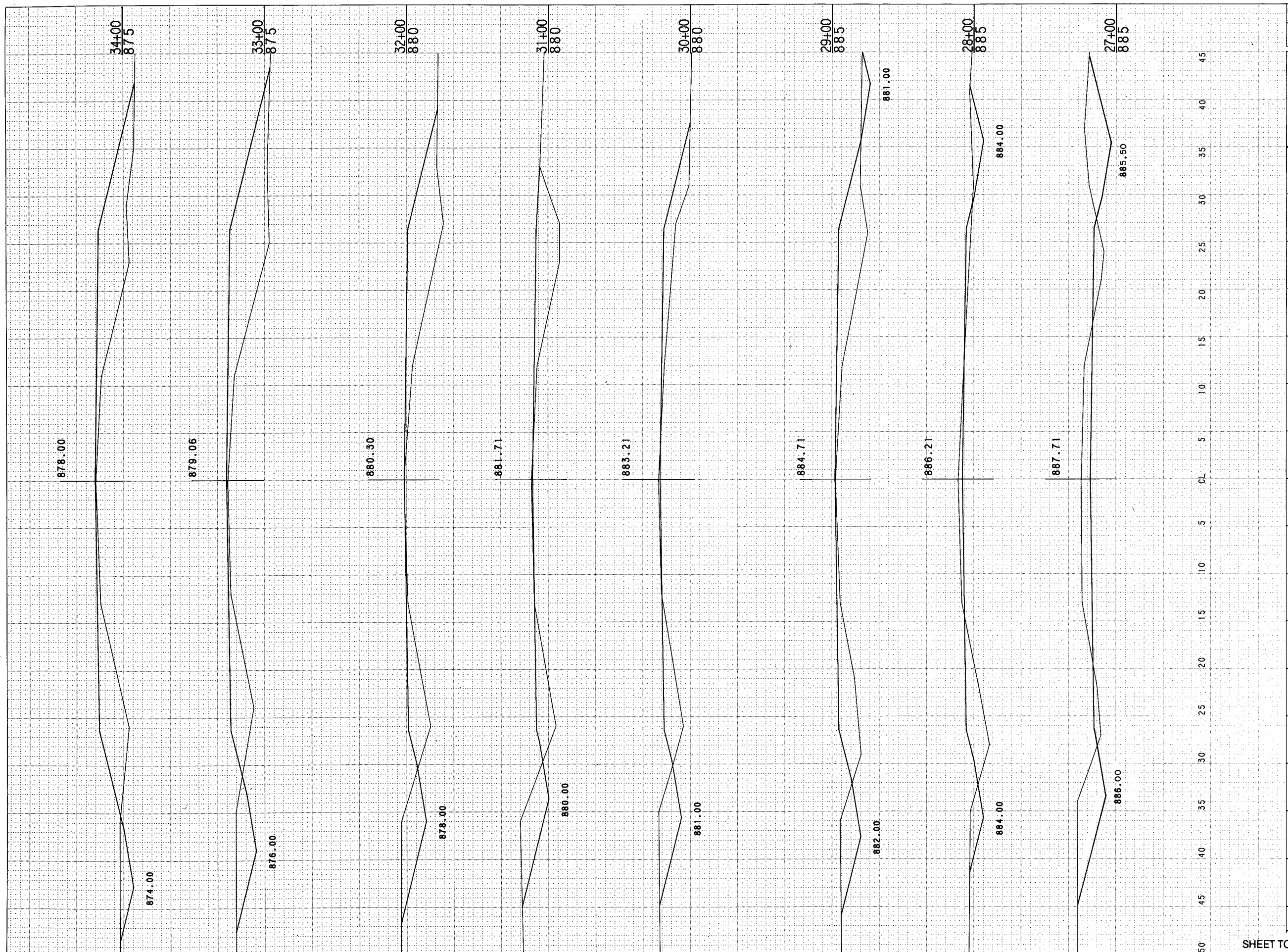




STATE PROJECT NUMBER  
4667-1-71

SHEET NUMBER  
8.1

STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
20				
21	30			207
22	68			186
23	116			143
24	220			81
25	322			29
26	351			13
SHEET TOTAL		1,107		659



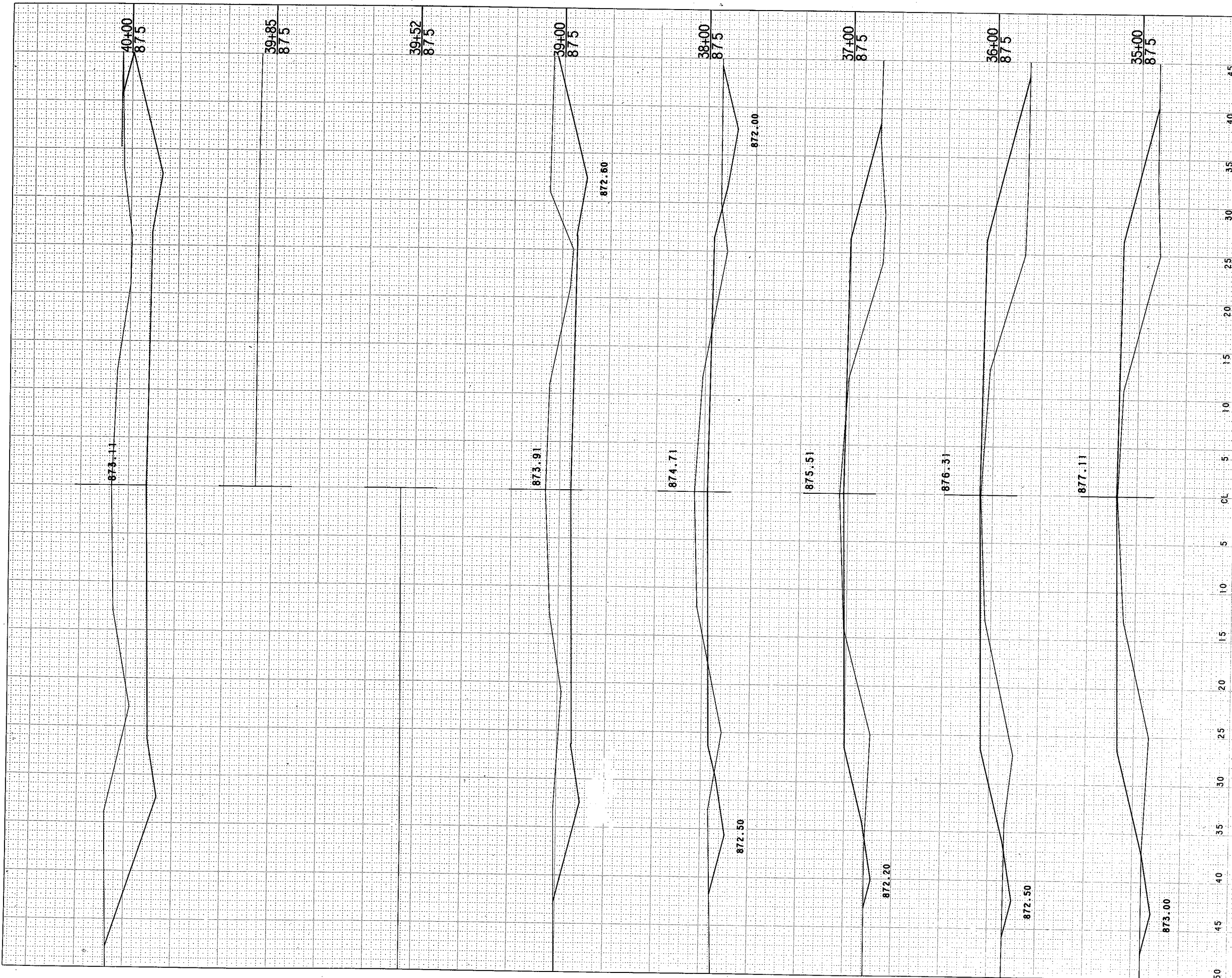
STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
26				
27	288			33
28	158			66
29	79			176
30	74			205
31	77			170
32	80			242
33	76			342
34	55			385
<b>SHEET TOTAL</b>	<b>887</b>			<b>1,619</b>

STATE PROJECT NUMBER

4667-1-71

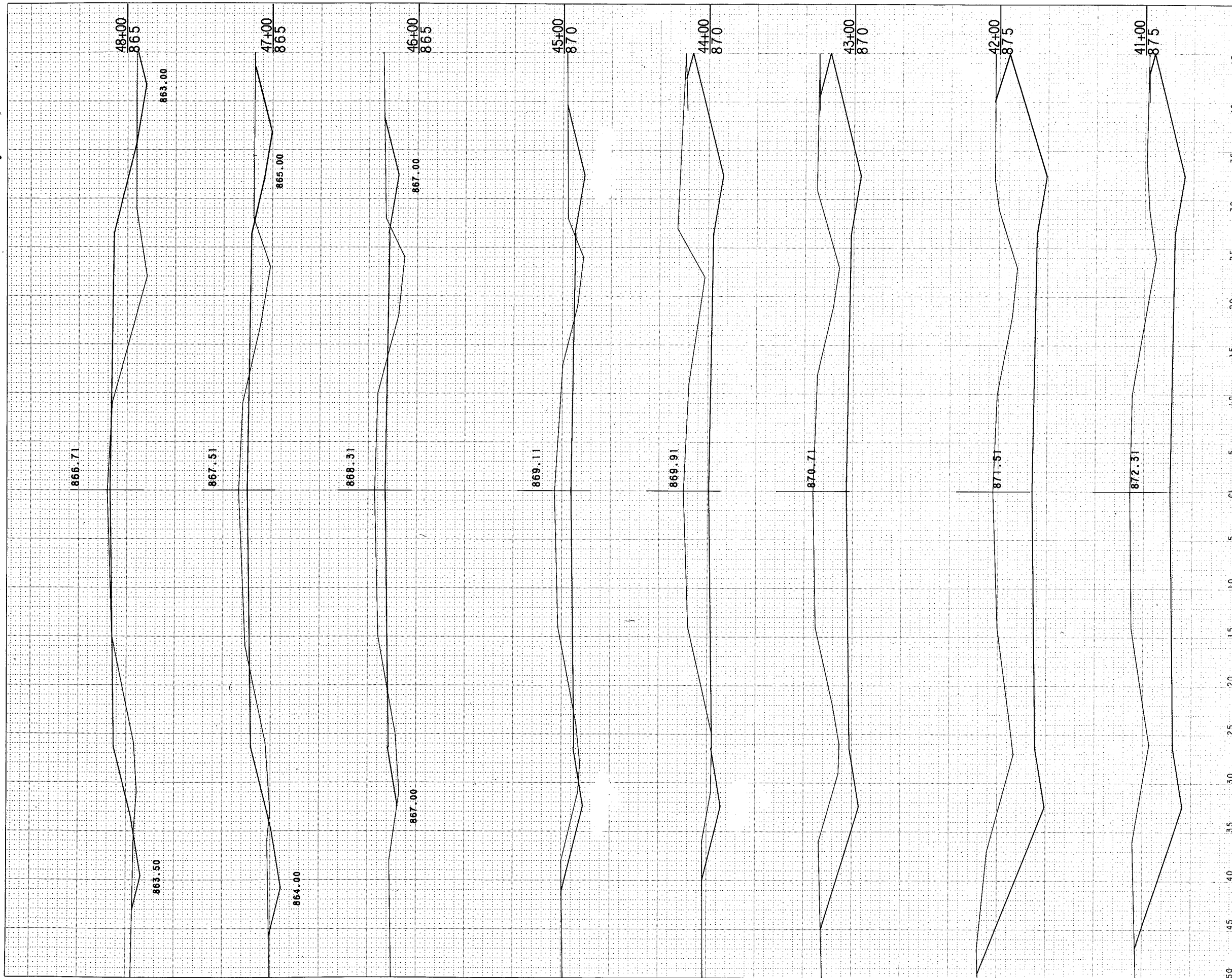
SHEET NUMBER

63



STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
34				
35		29		399
36		17		429
37		22		371
38		121		184
39		417		33
40		826		
41				
42				
43				
44				
45				
SHEET TOTAL		1,432		1,416



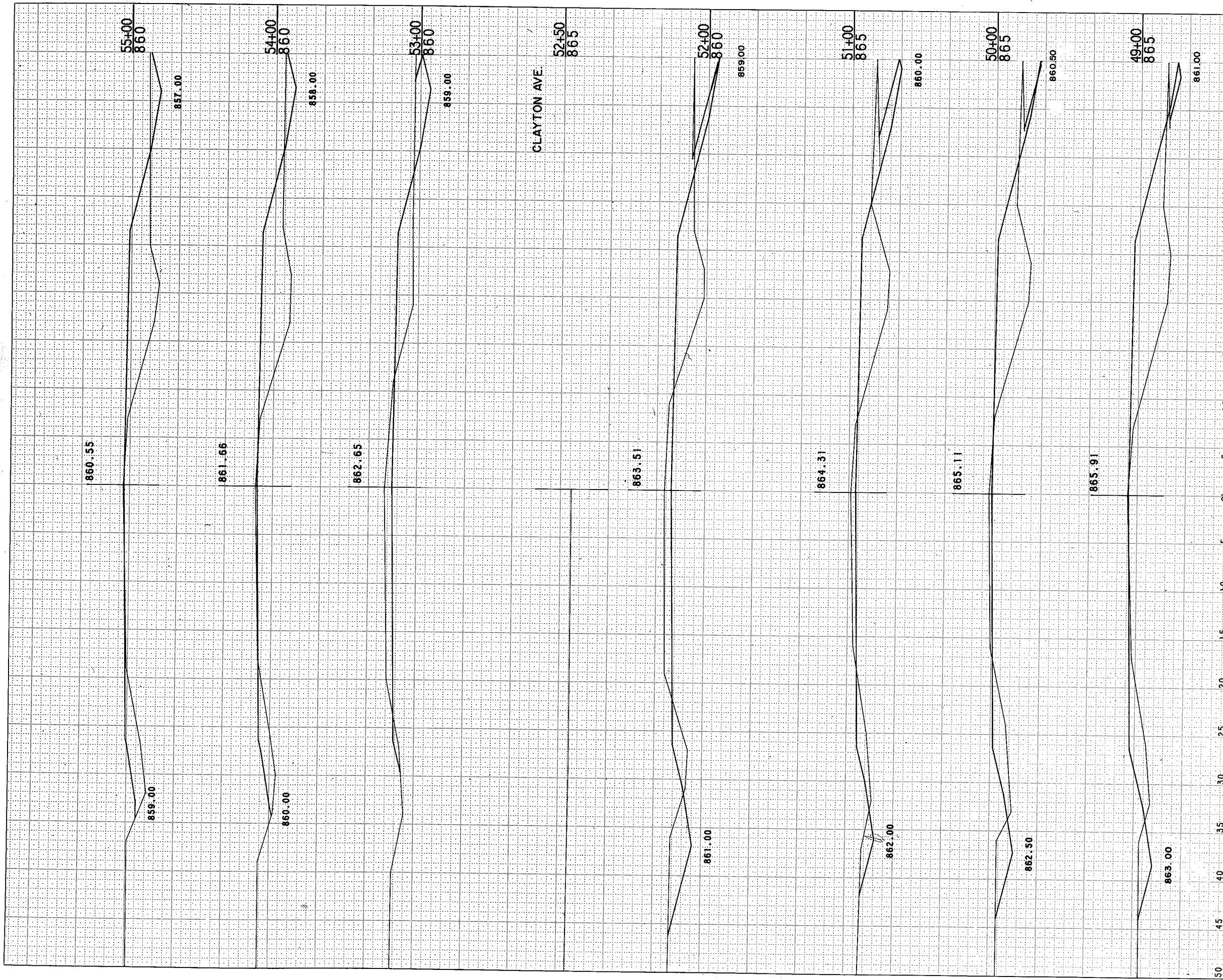


50 45 40 35 30 25 20 15 10 5 CL 5 10 15 20 25 30 35 40 45

STATE PROJECT NUMBER  
4667 - 1 - 71

SHEET NUMBER  
84

STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
40				
41	1,056			
42	1,132			
43	1,032			
44	749			
45	438			11
46	200			46
47	129			89
48	79			186
<b>SHEET TOTAL</b>	<b>4,815</b>			<b>332</b>



CLAYTON AVE

STATE PROJECT NUMBER  
4667-1-71

SHEET NUMBER  
85

STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL		
48				
49	51			291
50	90			281
51	148			209
52	214			169
53	189			127
54	78			163
55	28			239
<b>SHEET TOTAL</b>		798		1,479

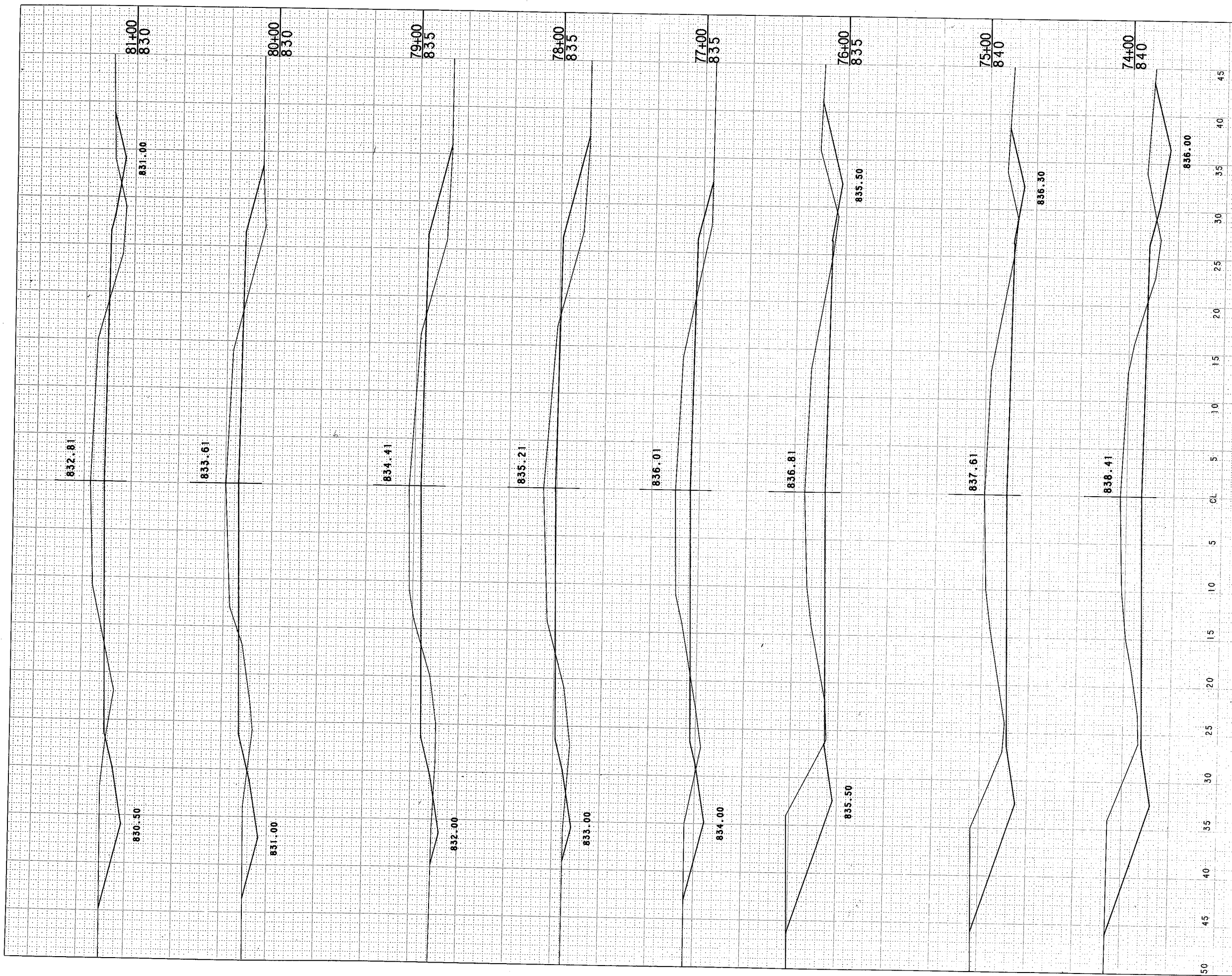








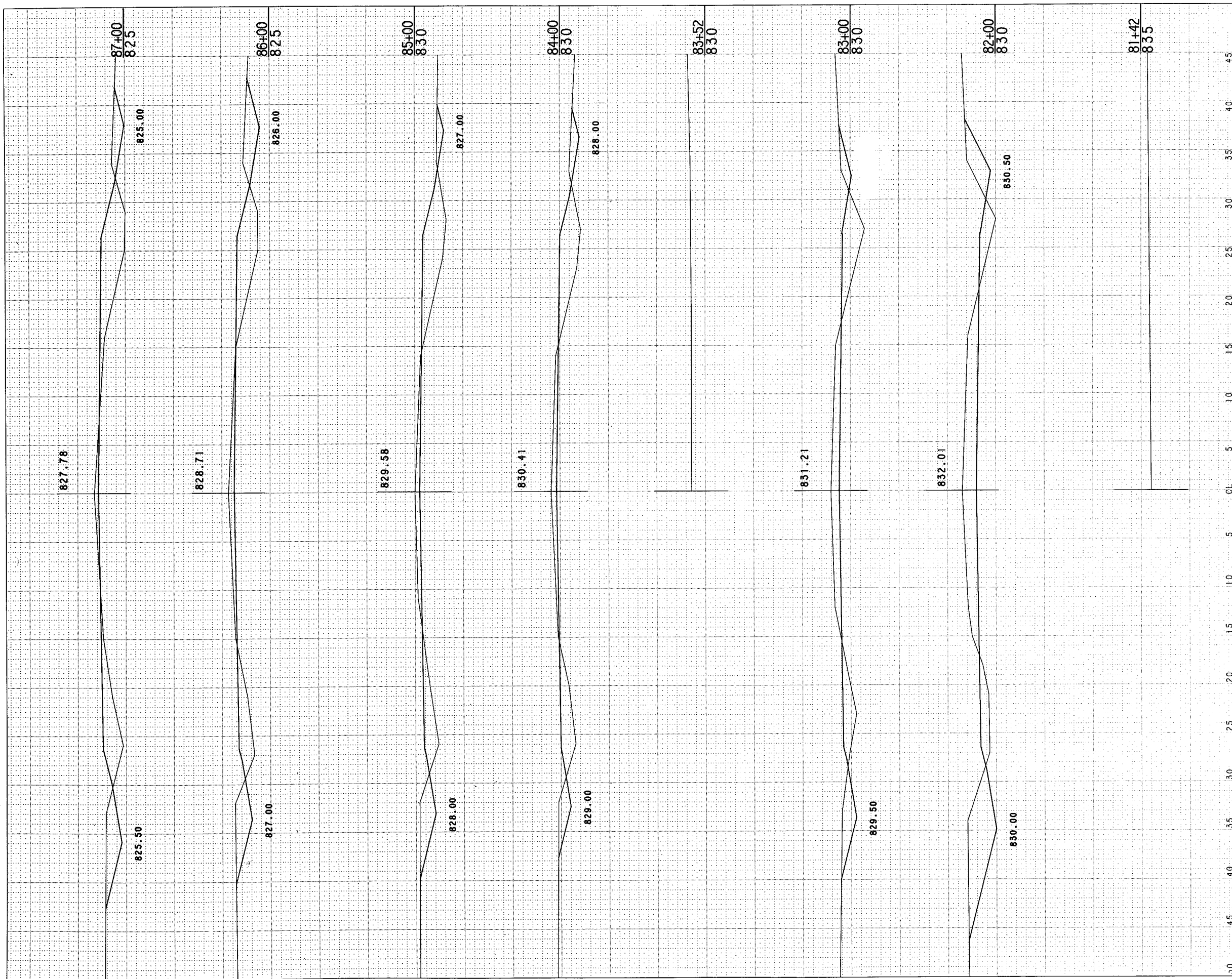




STATE PROJECT NUMBER  
4667-1-71

SHEET NUMBER  
89

STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
73				
74	501			51
75	497			11
76	478			3
77	344			27
78	171			84
79	125			120
80	151			111
81	208			80
SHEET TOTAL		2,475		487

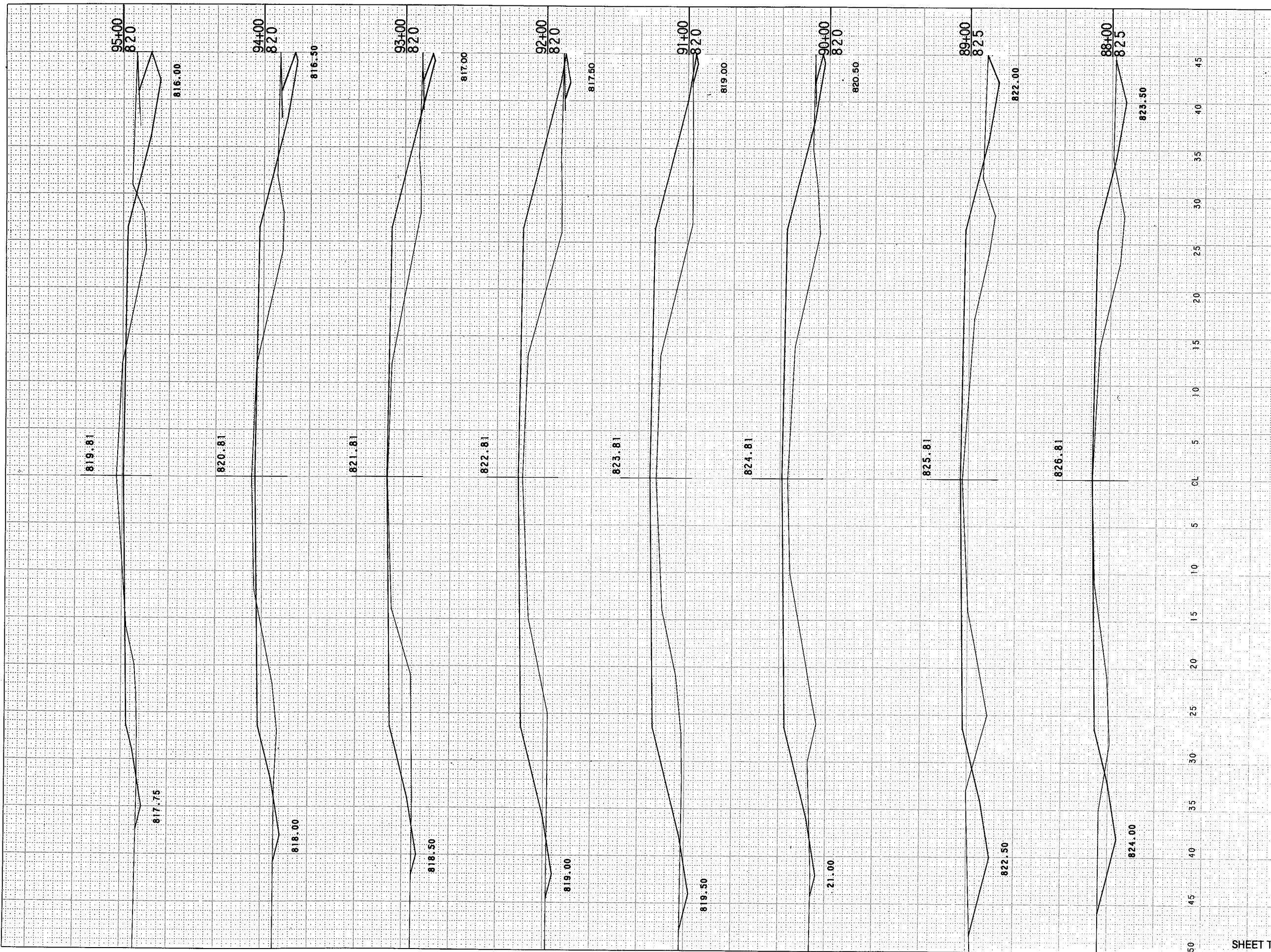


STATE PROJECT NUMBER  
4667-1-71

SHEET NUMBER  
8.10

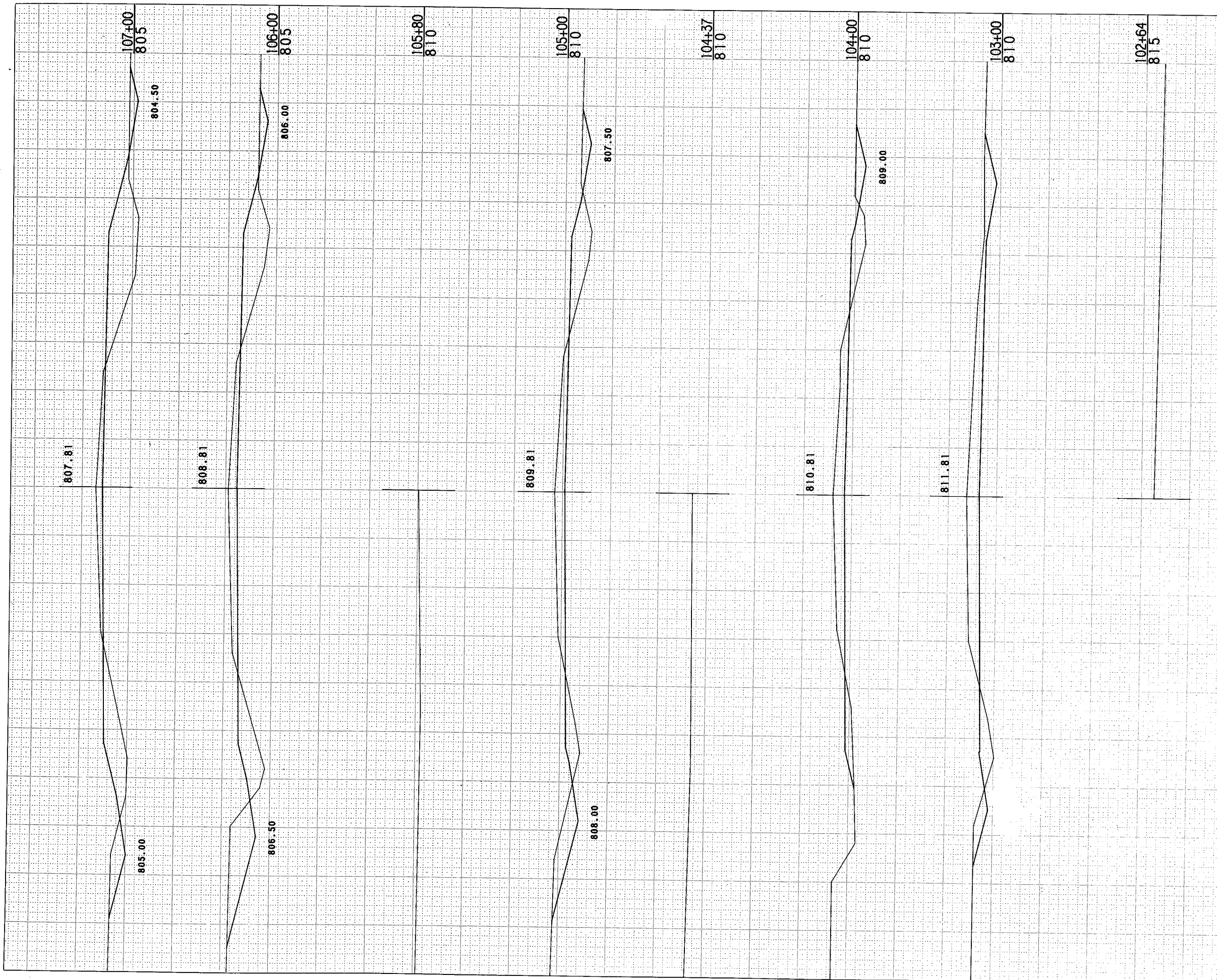
STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
81				
82		267		57
83		207		73
84		101		104
85		78		123
86		96		123
87		95		140
SHEET TOTAL		844		620





STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
87				
88	82			184
89	103			241
90	74			351
91	24			457
92	18			472
93	25			371
94	63			241
95	125			154
<b>SHEET TOTAL</b>	<b>514</b>			<b>2,471</b>





STATE PROJECT NUMBER  
**4667-1-71**

SHEET NUMBER  
**813**

STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
102		233		37
103		175		43
104		152		74
105		171		124
106		133		188
107				
SHEET TOTAL		864		466







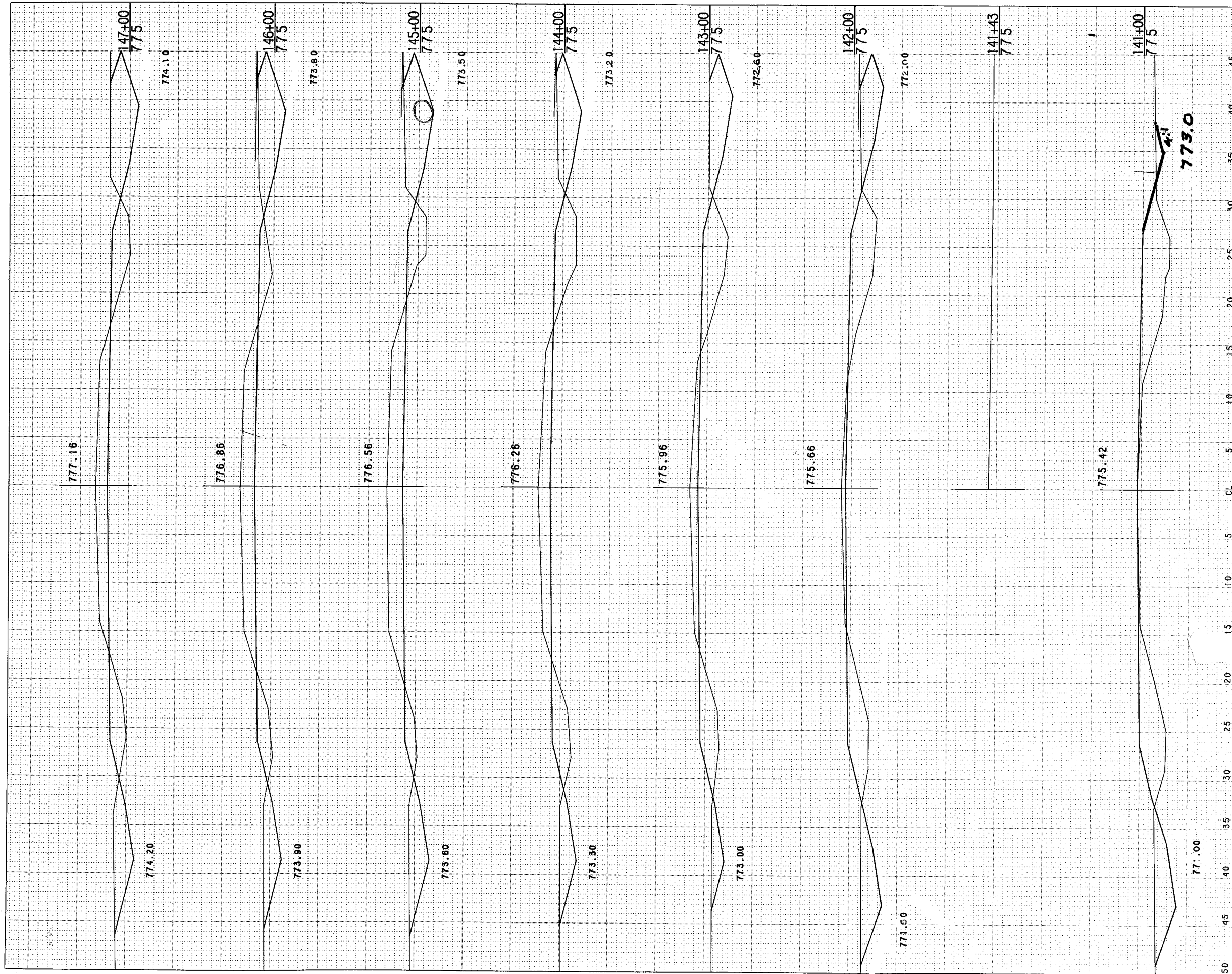












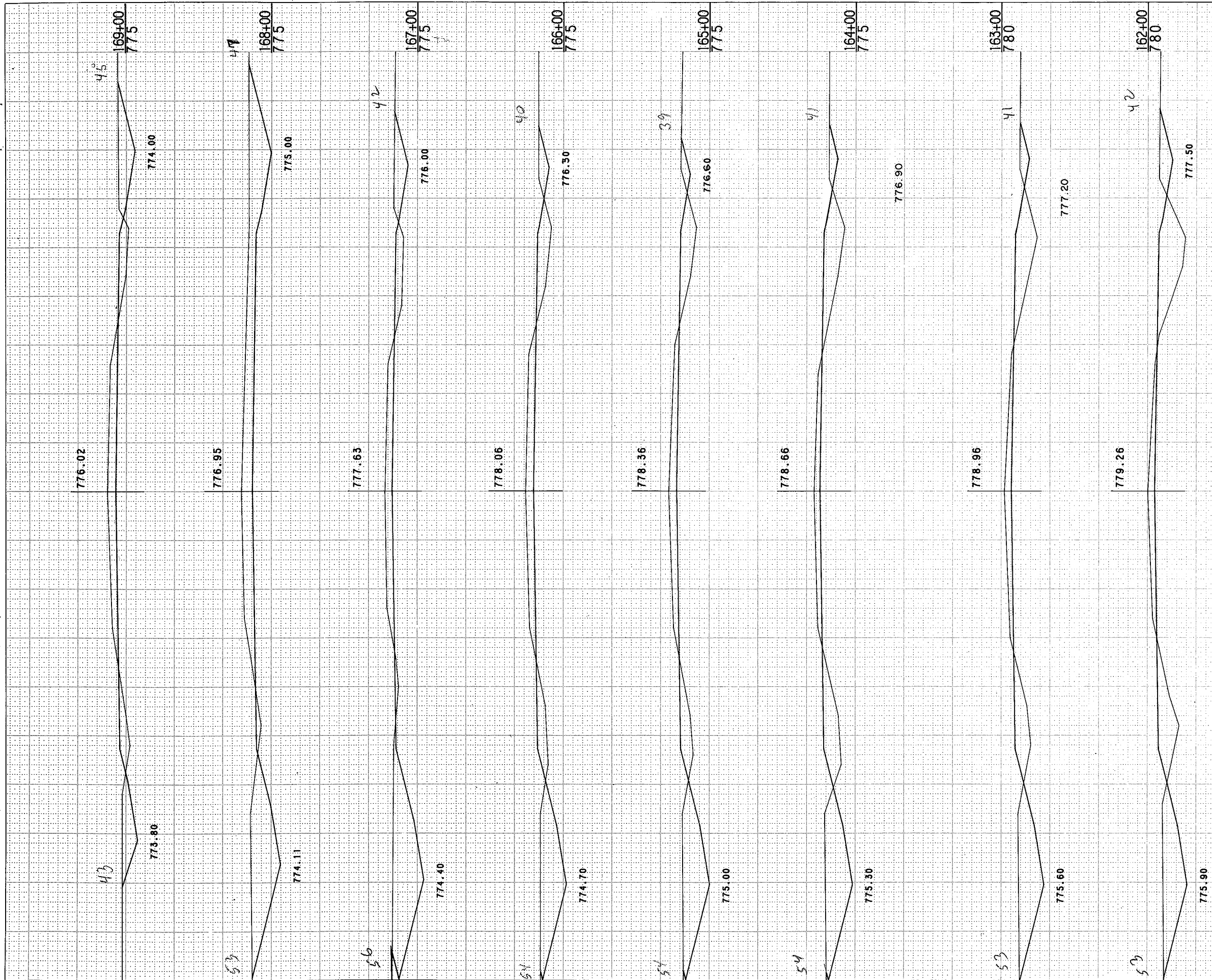
STATE PROJECT NUMBER		SHEET NUMBER	
4667-1-71		8.19	
STATION	DISTANCE	YARDAGE	
		EXCAVATION	FILL
140			
141	76		290
142	136		225
143	189		173
144	222		142
145	330		98
146	369		69
147	322		87
SHEET TOTAL		1,644	1,084







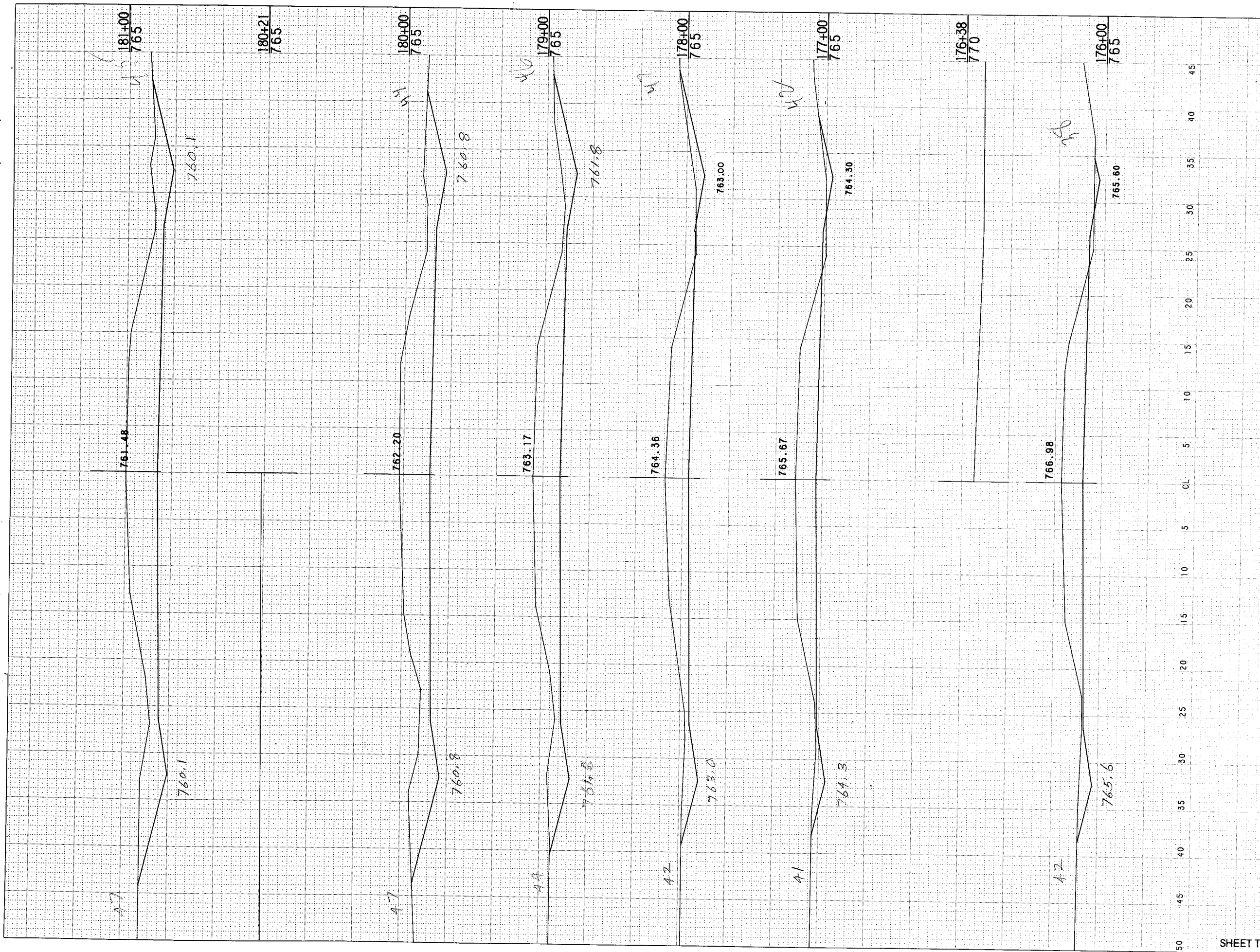




50	45	40	35	30	25	20	15	10	5	CL	5	5	10	15	20	25	30	35	40	45
----	----	----	----	----	----	----	----	----	---	----	---	---	----	----	----	----	----	----	----	----

STATE PROJECT NUMBER		SHEET NUMBER	
4667-1-71		8.22	
STATION	DISTANCE	YARDAGE	
		EXCAVATION	FILL
161			
162	169		152
163	179		127
164	183		117
165	203		100
166	222		72
167	252		48
168	332		18
169	280		26
<b>SHEET TOTAL</b>		1820	660





STATE PROJECT NUMBER  
**4667-1-71**

SHEET NUMBER  
**8.24**

STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
175		385		4
176		344		6
177		377		4
178		485		1
179		627		
180		699		
181				
SHEET TOTAL		2,917		15



















201+63  
750

201+10  
750

201+00  
750

200+50  
750

200+00  
750

199+50  
750

199+00  
750

748.49

748.68

748.83

748.98

749.13

749.28

35

69

67

65

57

37

41

43

47

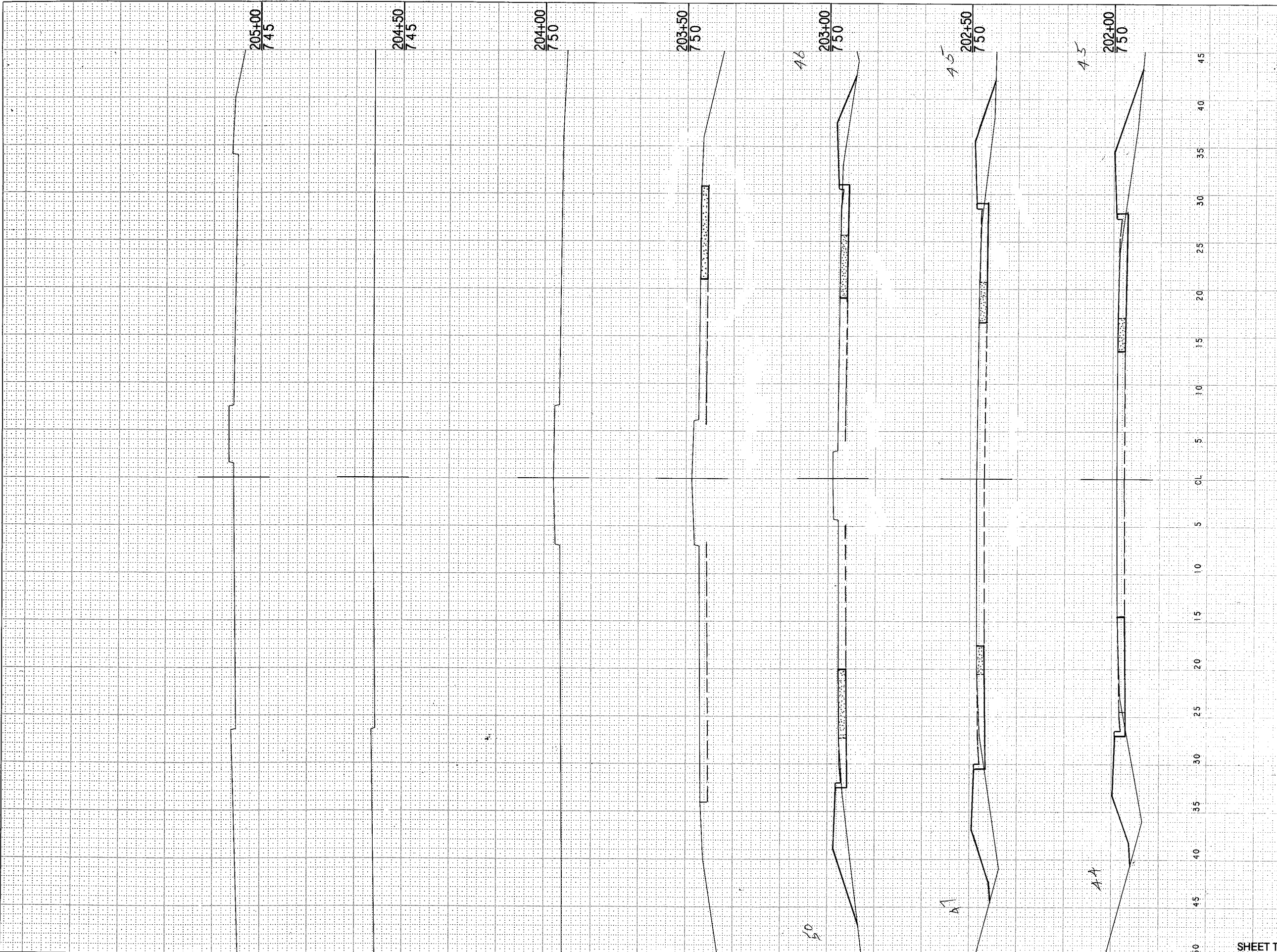
57

50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45

STATE PROJECT NUMBER  
4667-1-71

SHEET NUMBER  
831

STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL		
198+50		50		358
199+50		87		293
200+50		104		252
201+50		118		213
201+00		150		83
199+50		183		46
SHEET TOTAL		692		1,245



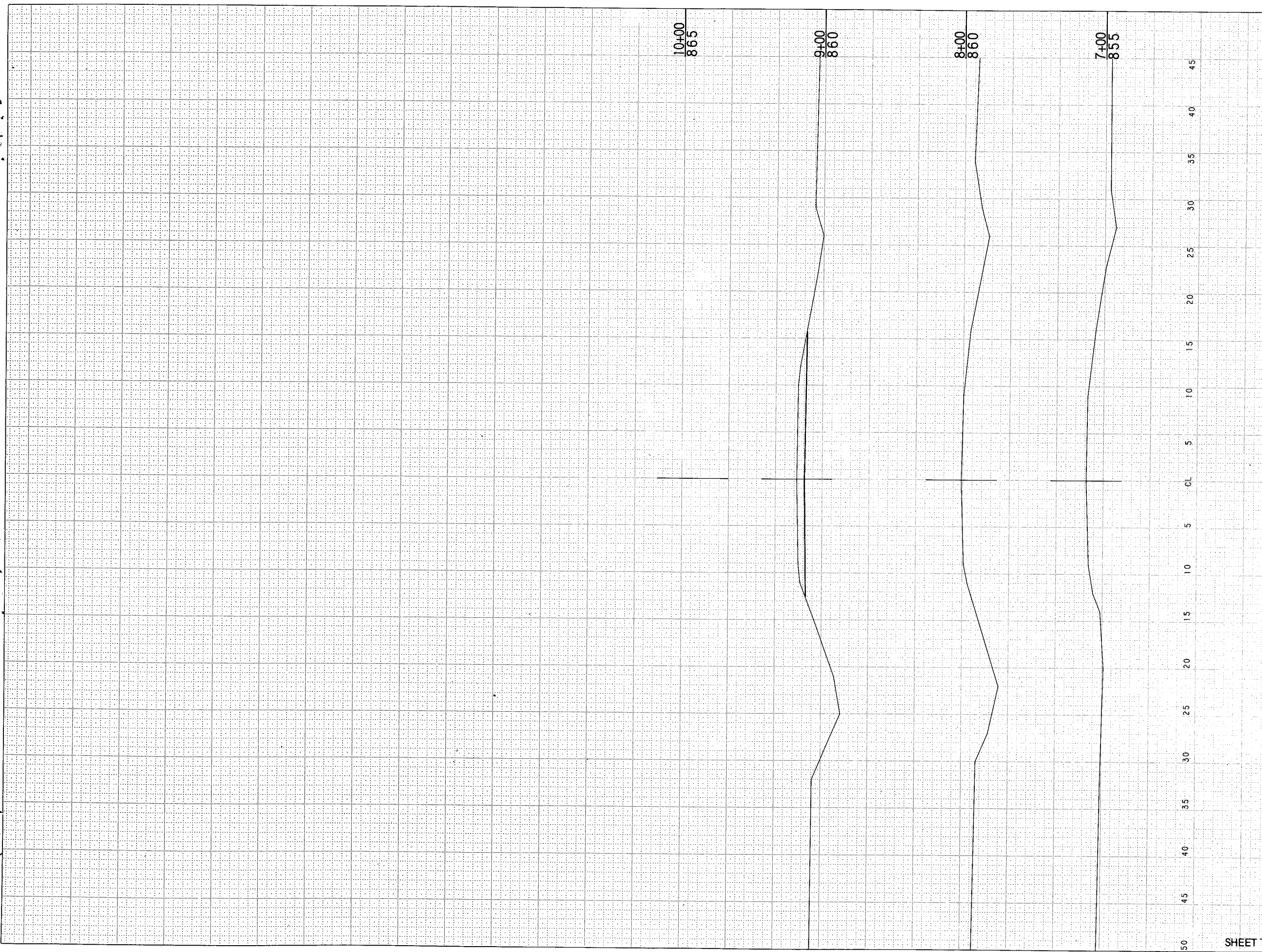
STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
201+63		57		59
202+50		18		78
203+38		19		59
		11		35
SHEET TOTAL		105		231





STATE PROJECT NUMBER  
4667-1-71

SHEET NUMBER  
834

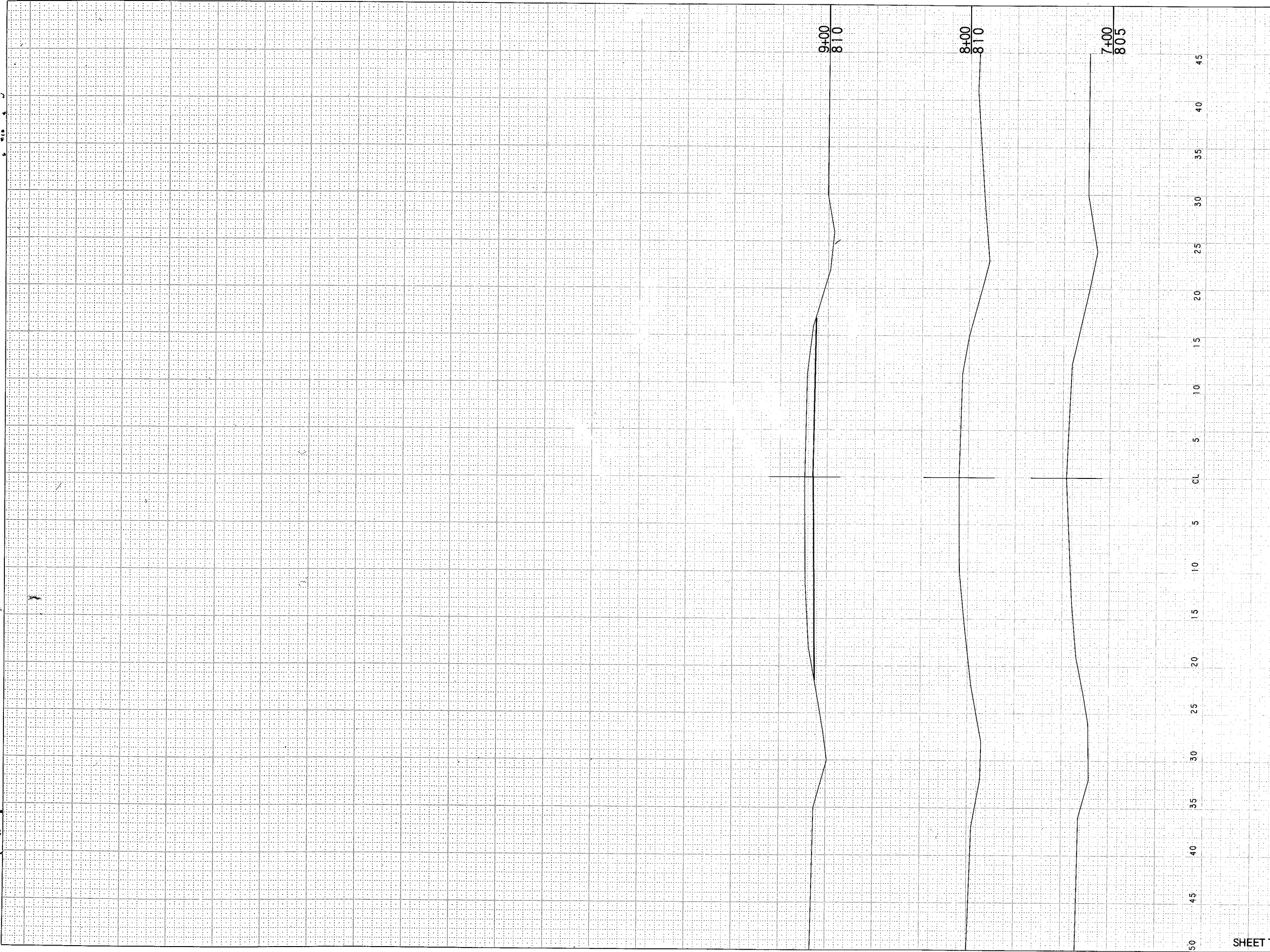


STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
9+00	68		0	
8+00				
7+00				
6+00				
5+00				
4+00				
3+00				
2+00				
1+00				
0+00				
50				
SHEET TOTAL		68	0	



STATE PROJECT NUMBER  
4667-1-71

SHEET NUMBER  
836



STATION	DISTANCE	YARDAGE		
		EXCAVATION		FILL
		UNCL.		
	0			
	5			
	10			
	15			
	20			
	25			
	30			
	35			
	40			
	45			
SHEET TOTAL		72		0



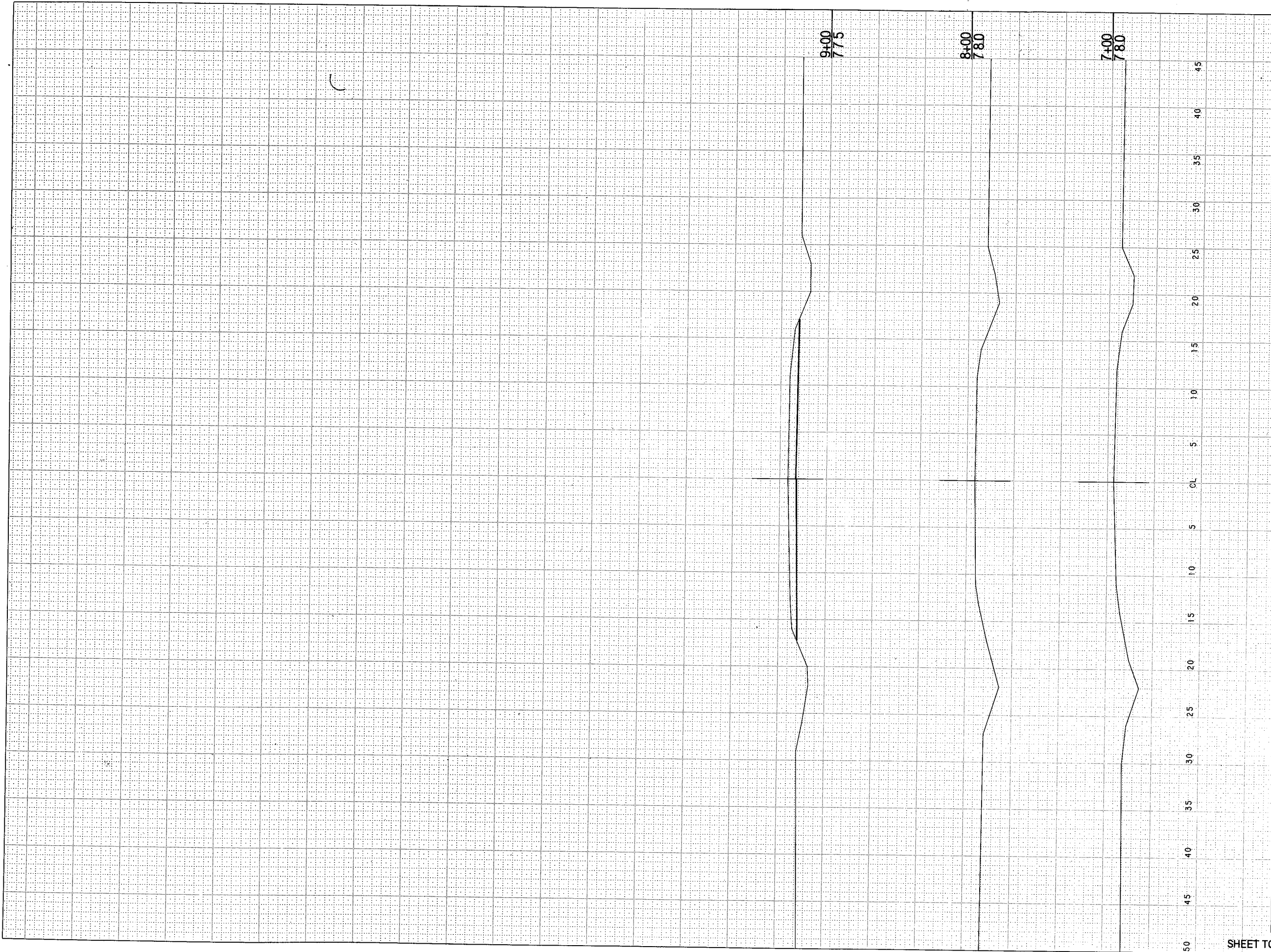






STATE PROJECT NUMBER  
**4667-1-71**

SHEET NUMBER  
**839**



STATION	DISTANCE	YARDAGE	
		EXCAVATION	FILL
50	0	50	0
45	0		
40	0		
35	0		
30	0		
25	0		
20	0		
15	0		
10	0		
5	0		
CL	0		
5	0		
10	0		
15	0		
20	0		
25	0		
30	0		
35	0		
40	0		
45	0		
<b>SHEET TOTAL</b>		<b>50</b>	<b>0</b>









