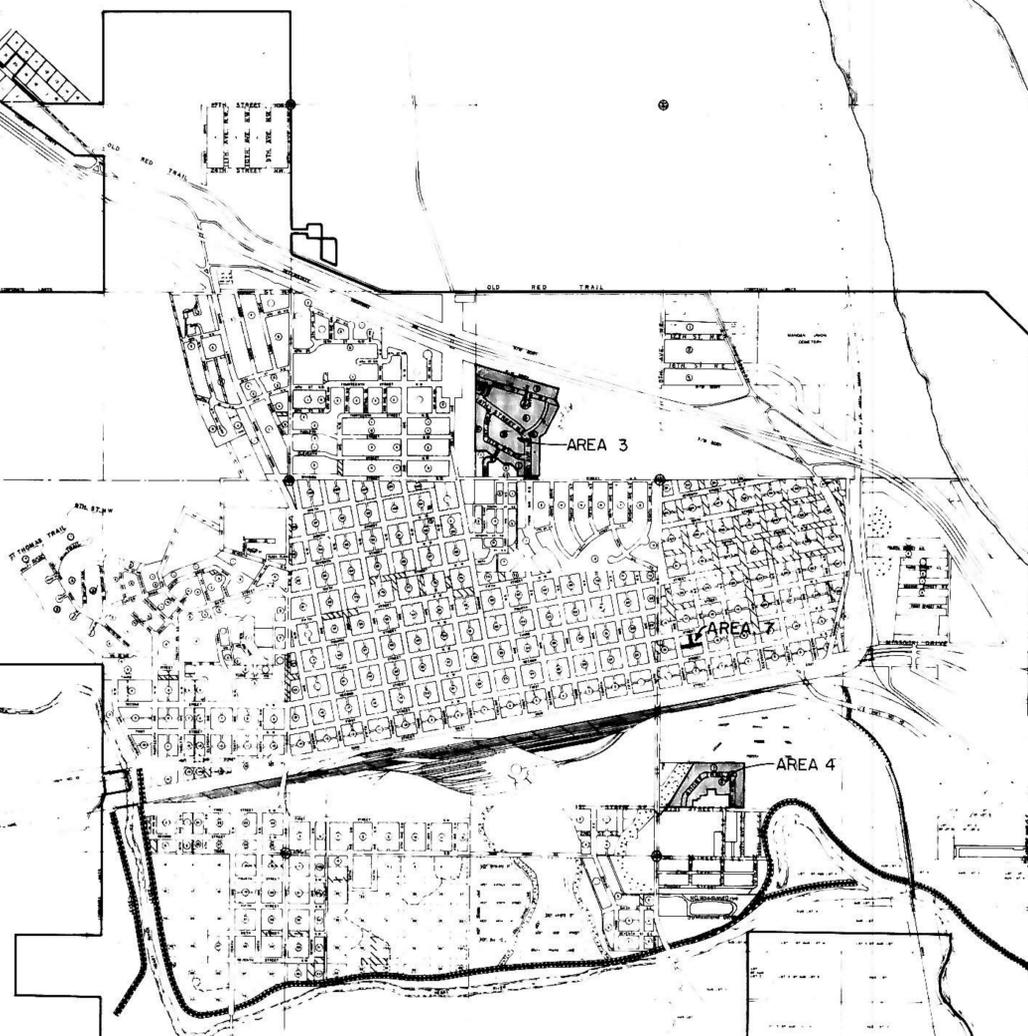
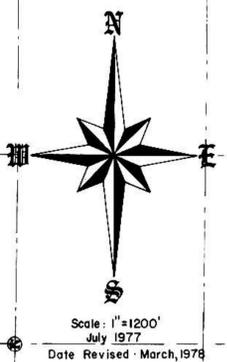
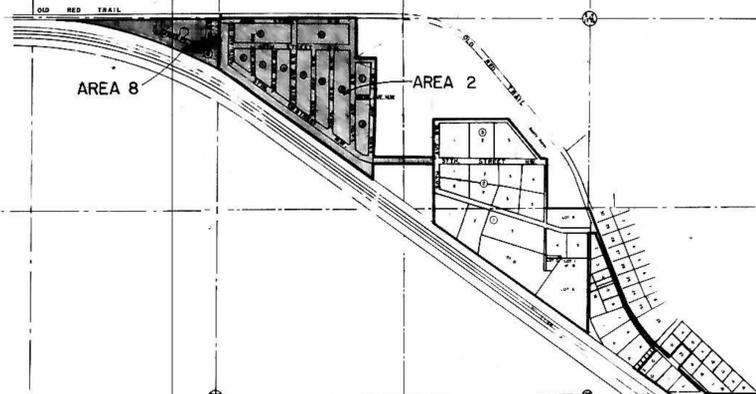


STREET IMPROVEMENT DISTRICT NO. 55 CITY OF MANDAN, NORTH DAKOTA

INDEX

1. PROJECT LAYOUT -- AREA NO. 1, 5 & 6
2. PROJECT LAYOUT -- AREA NO. 2
3. PROJECT LAYOUT -- AREA NO. 3 & 4
4. PROJECT LAYOUT -- AREA NO. 8
- 1-1 8TH AVENUE SE
- 1-2 16TH STREET SE
- 1-3 10TH AVENUE SE & WHITMAN ROAD
- 1-4 9TH AVENUE SE STA. 0+00 to STA. 7+25
- 1-5 9TH AVENUE SE STA. 7+25 to STA. 16+71.11
- 1-6 12TH AVENUE SE & EMBERLAND DRIVE
- 2-1 43RD STREET NW STA. 1+98.62 to STA. 12+50
- 2-2 43RD STREET NW STA. 12+50 to STA. 18+34.72
- 2-3 42ND STREET NW STA. 0+39 to STA. 12+05
- 2-4 42ND STREET NW STA. 12+05 to STA. 16+82.75
- 2-5 42ND STREET NW STA. 0+34.63 to STA. 3+11.94 & 40TH STREET NW STA. 0+34.63 to STA. 2+42.06
- 2-6 37TH STREET NW STA. 0+20.40 to STA. 11+50
- 2-7 37TH STREET NW STA. 11+50 to STA. 23+52.25
- 2-8 37TH STREET NW STA. 23+52.25 to STA. 33+10.72
- 2-9 40TH AVENUE NW
- 2-10 39TH AVENUE NW
- 2-11 38TH AVENUE NW
- 2-12 37TH AVENUE NW
- 2-13 36TH AVENUE NW
- 2-14 35TH AVENUE NW STA. 0+35 to STA. 12+14.27
- 2-15 34TH AVENUE NW STA. -0+47.42 to STA. 12+00
- 2-16 34TH AVENUE NW STA. 12+00 to STA. 17+99.17
- 2-17 33RD AVENUE NW STA. 0+19.17 to STA. 7+00
- 2-18 33RD AVENUE NW STA. 7+00 to STA. 13+60.07
- 3-1 15TH STREET NE
- 3-2 14TH STREET NE
- 3-3 3RD AVENUE NE
- 3-4 1ST AVENUE NE & 11TH STREET NE
- 3-5 ANNE'S PLACE NE & SHANNON'S DRIVE NE
- 3-6 TOWER PLACE NE
- 4-1 ADOBE TRAIL SE
- 4-2 9TH AVENUE SE
- 5-1 12TH AVENUE SE
- 5-2 17TH STREET SE & 18TH STREET SE
- 5-3 19TH STREET SE & 16TH STREET SE
- 5-4 15TH STREET SE & APPROACH ROAD TO HIGHWAY 1806
- 5-5 14TH AVENUE SE
- 6-1 19TH STREET SE STA. 0+00 to STA. 9+00
- 6-2 19TH STREET SE STA. 9+00 to STA. 16+51.15
- 6-3 11TH AVENUE SE
- 6-4 20TH STREET SE
- 6-5 12TH AVENUE SE
- 6-6 23RD STREET SE
- 7-1 ALLEY BETWEEN 8TH AVENUE NE & 9TH AVENUE NE
- 8-1 41st AVENUE NW STA 0+00 to STA. 5+22
- 8-2 CROWN POINT ROAD NW STA. 0+00 to STA. 8+56.73
- 8-3 CROWN POINT ROAD NW STA. 0+35 to STA. 1+68



CIVIL ENGINEERING LAND PLANNING LAND SURVEYING

SWENSON, HAGEN & CO. P.C.
Consulting Engineers

PO BOX 1135, 909 BASIN AVENUE
BISMARCK, NORTH DAKOTA 58501
701-223-2600

Prepared For:
City of Mandan, North Dakota
Terrence Potthoff, City Engineer
411 Sixth Avenue Southwest
Mandan, North Dakota

ENGINEER'S CERTIFICATE

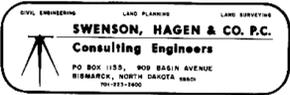
I, EDWARD W. HAGEN, A REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR, HEREBY CERTIFY THAT THE PLANS FOR STREET IMPROVEMENT DISTRICT NO. 55 FOR THE CITY OF MANDAN, NORTH DAKOTA WERE PREPARED UNDER MY SUPERVISION AND ARE COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Edward W. Hagen
EDWARD W. HAGEN
REGISTERED PROFESSIONAL ENGINEER AND
LAND SURVEYOR #850

STREET IMPROVEMENT DISTRICT NO. 55 PROJECT LAYOUT

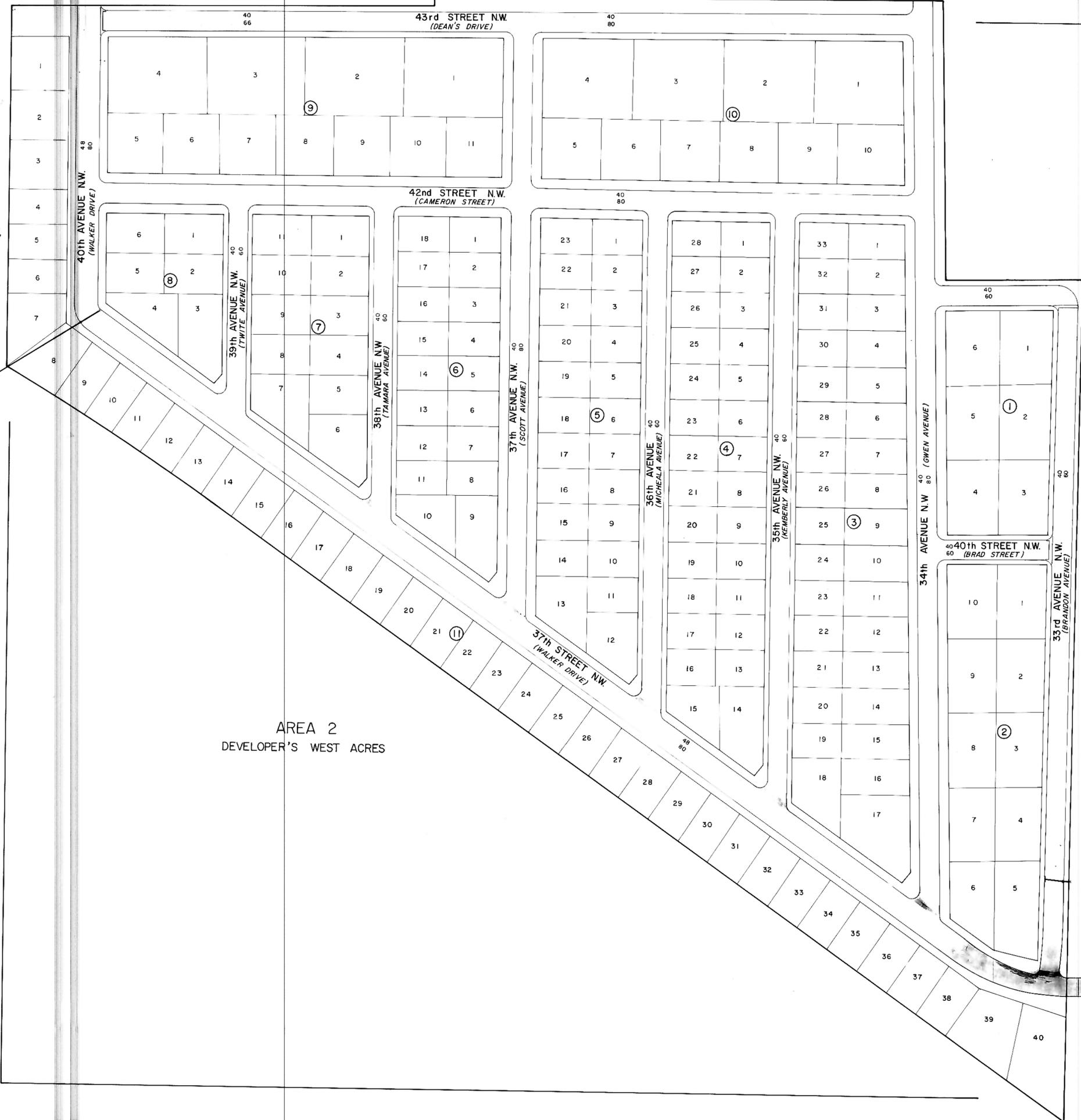


SCALE · 1" = 100'



AREA 2
DEVELOPER'S WEST ACRES

INTERSTATE DRIVE
MANDAN INDUSTRIAL PARK



STREET IMPROVEMENT DISTRICT NO. 55

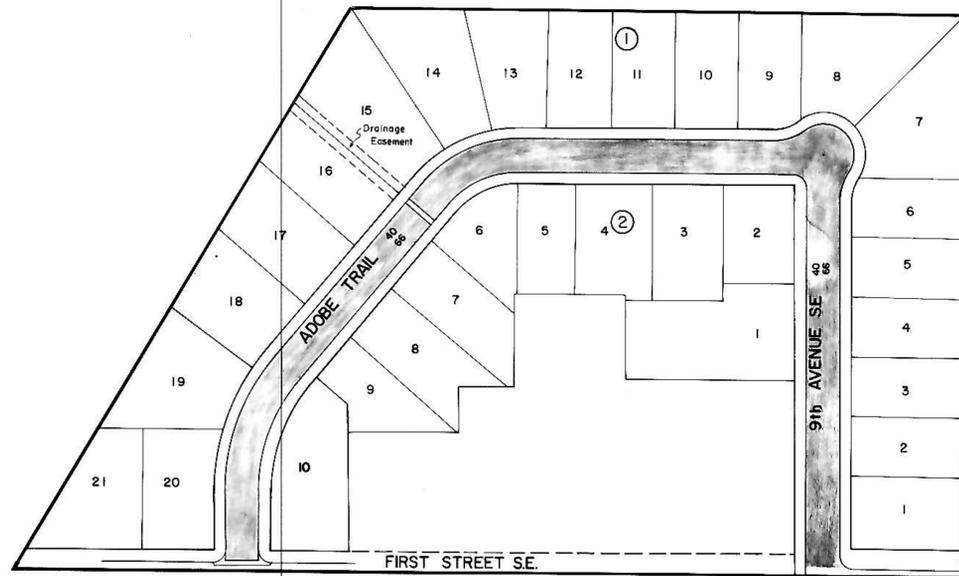
PROJECT LAYOUT



CIVIL ENGINEERING LAND PLANNING LAND SURVEYING
SWENSON, HAGEN & CO. P.C.
 Consulting Engineers
 PO BOX 1135, 909 BABIN AVENUE
 BISMARCK, NORTH DAKOTA 58503
 701-253-1400

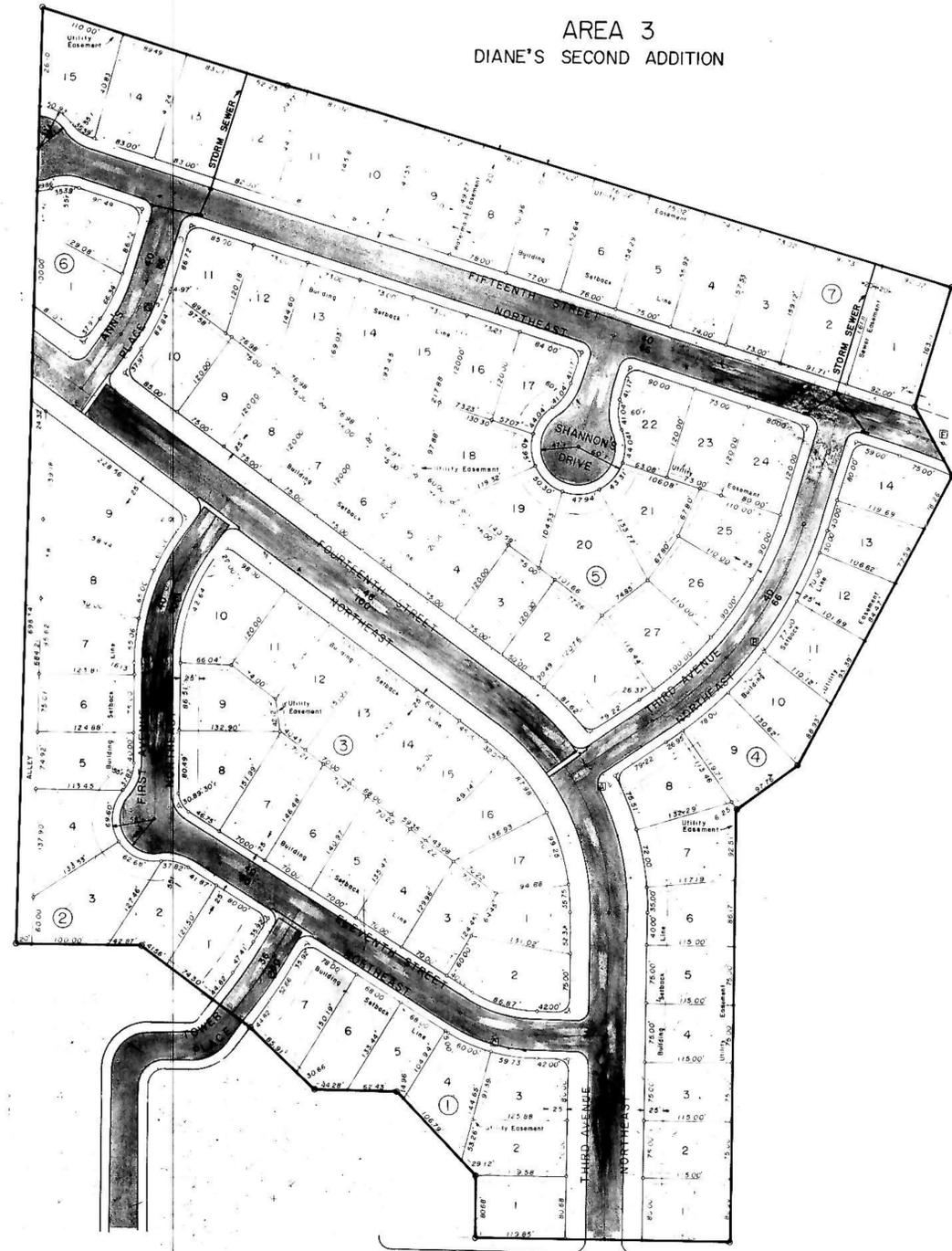
SCALE · 1" = 100'

AREA 4
 HOOVESTOL SUBDIVISION



40 - Paving Width
 66 - Right of Way Width

AREA 3
 DIANE'S SECOND ADDITION

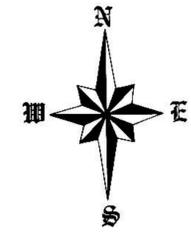


STREET IMPROVEMENT DISTRICT NO. 55

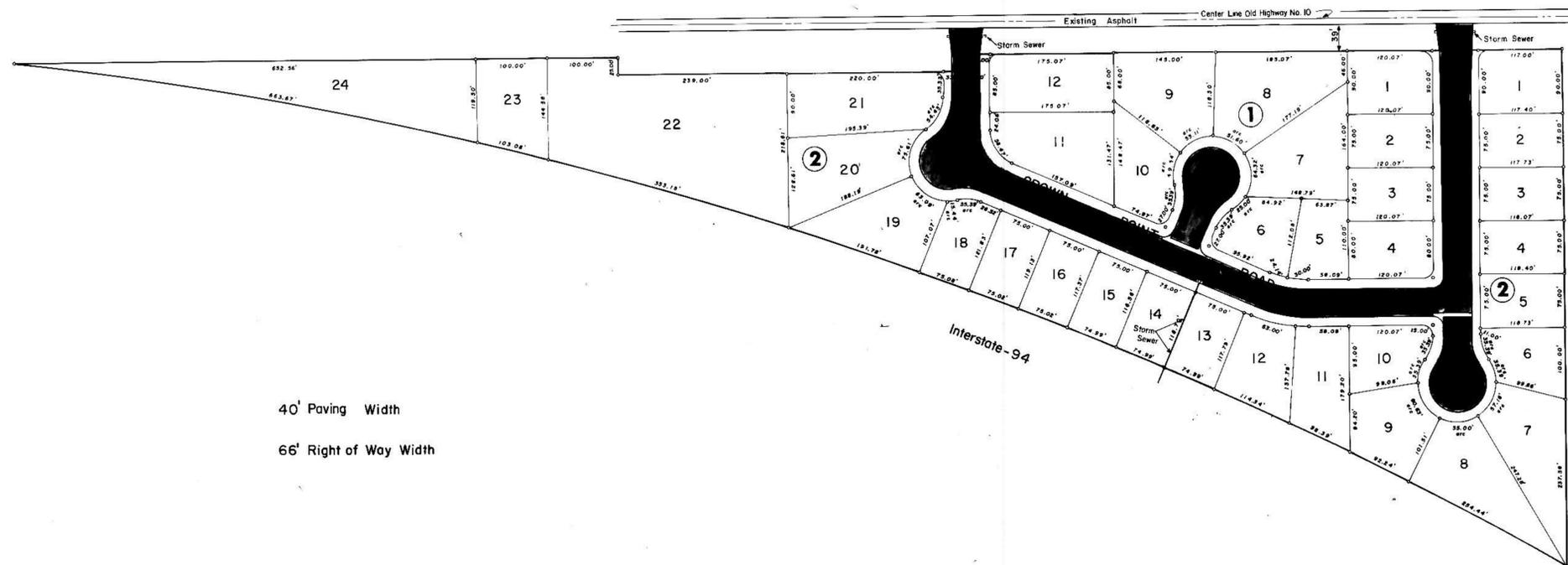
PROJECT LAYOUT

AREA NO. 8

REPLAT OF CROWN POINT SUBDIVISION



Scale: 1"=100'
December, 1977



40' Paving Width

66' Right of Way Width

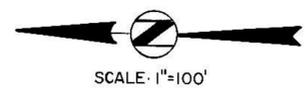
CIVIL ENGINEERING LAND PLANNING LAND SURVEYING

SWENSON, HAGEN & CO. P.C.

Consulting Engineers

PO BOX 1135, 909 BASIN AVENUE
BISMARCK, NORTH DAKOTA 58501
701-223-2600

STREET IMPROVEMENT DISTRICT NO. 55 PROJECT LAYOUT



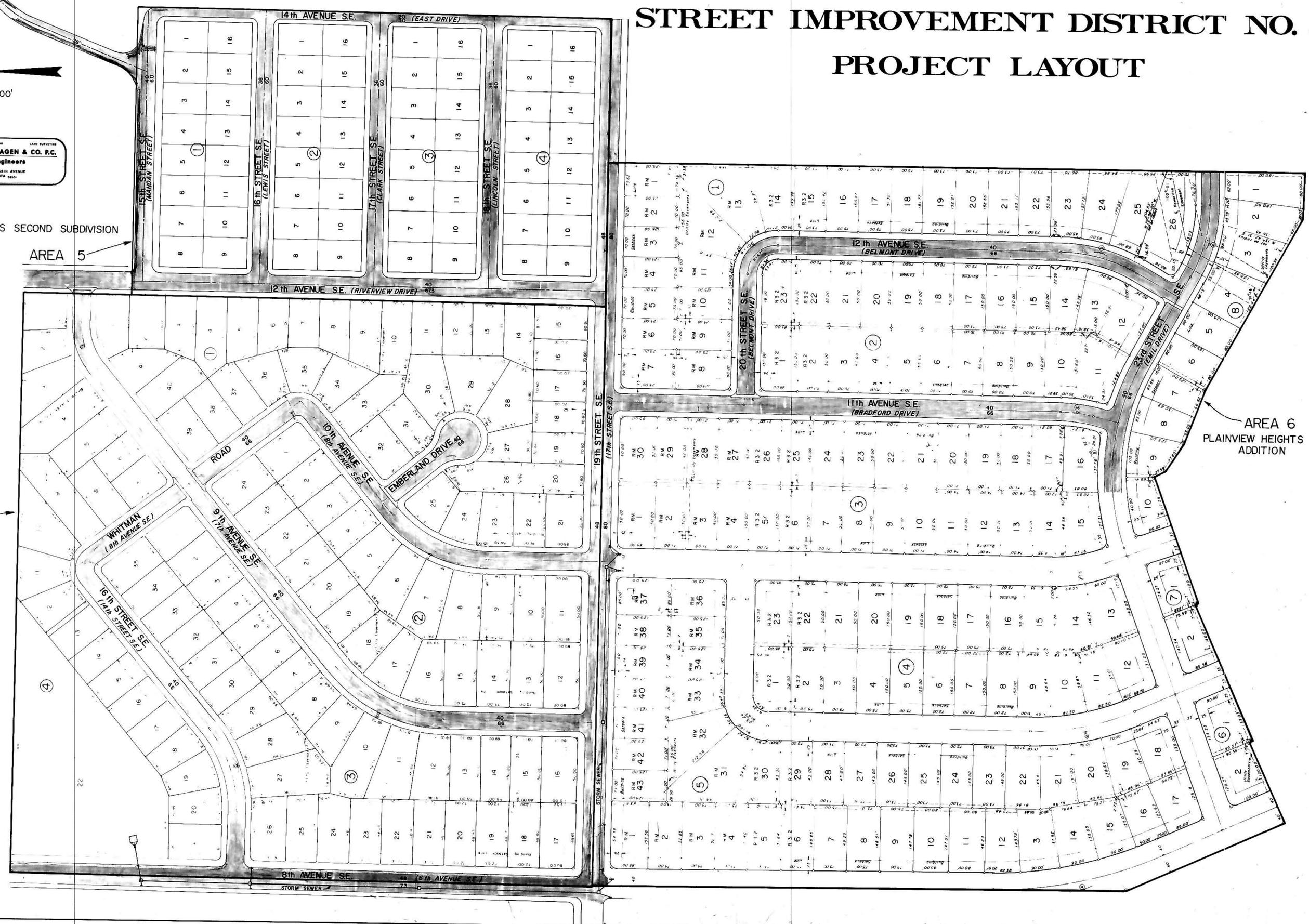
CIVIL ENGINEER LAND PLANNER LAND SURVEYOR
SWENSON, HAGEN & CO. P.C.
 Consulting Engineers
 PO BOX 1125, 808 BASIN AVENUE
 BISMARCK, NORTH DAKOTA 58501
 701-223-8800

RIPEL'S SECOND SUBDIVISION

AREA 5

AREA 1
 EMBERLAND WEST

40 - Paving Width
 66 - Right of Way Width



AREA 6
 PLAINVIEW HEIGHTS FIRST ADDITION

LEGEND	
EXISTING	
	50' LT
	50' RT
EXISTING	
	WATERMAIN
	HYDRANTS
	GATE VALVES
	TEE
	PLUG
	SANITARY SEWER
	SAN. SEWER MH
PROPOSED	
	TYPE A INLET
	TYPE B INLET
	TYPE C INLET
	STORM SEWER
	STORM SEW. MH

Note: Install a 1 1/2" - 30" barrel for adjusting the casting elevation for manhole no. 1

STORM SEWER MANHOLES			
MH. NO.	TYPE	CAST IN PLACE	CAST IN PLACE
1	1	2	3
CASTING ELEV.	1739.97	1726.21	1716.30
TOP OF ROOF	1737.86	1725.41	1715.26
TOP OF WALL	1737.19	1724.74	1714.59
INVERT (a)	1732.66	1720.20	1708.00
INVERT (b)	1732.66	1720.42	1698.78
INVERT (c)		1720.10	1696.38
INVERT (d)		1720.26	

MH. NO.	(Arrow indicate main line flow)	Inside Dimensions	Dimensions
		A	B
1		4'-6"	4'-6"
2		4'-6"	4'-6"
3		6'-0"	6'-0"

STORM SEWER INLETS				
INLET NO.	1	2	3	4
TYPE	A	A	A	A
CURB ELEV.	1725.55	1725.55	1716.50	1716.50
GUTTER ELEV.	1724.90	1724.90	1715.85	1715.85
TOP OF ROOF	1724.36	1724.36	1715.31	1715.31
INVERT (a)	1720.53	1720.53	1698.85	1698.20
LENGTH P.C. SEC.	4'-0"	4'-0"	12'-5"	13'-8"

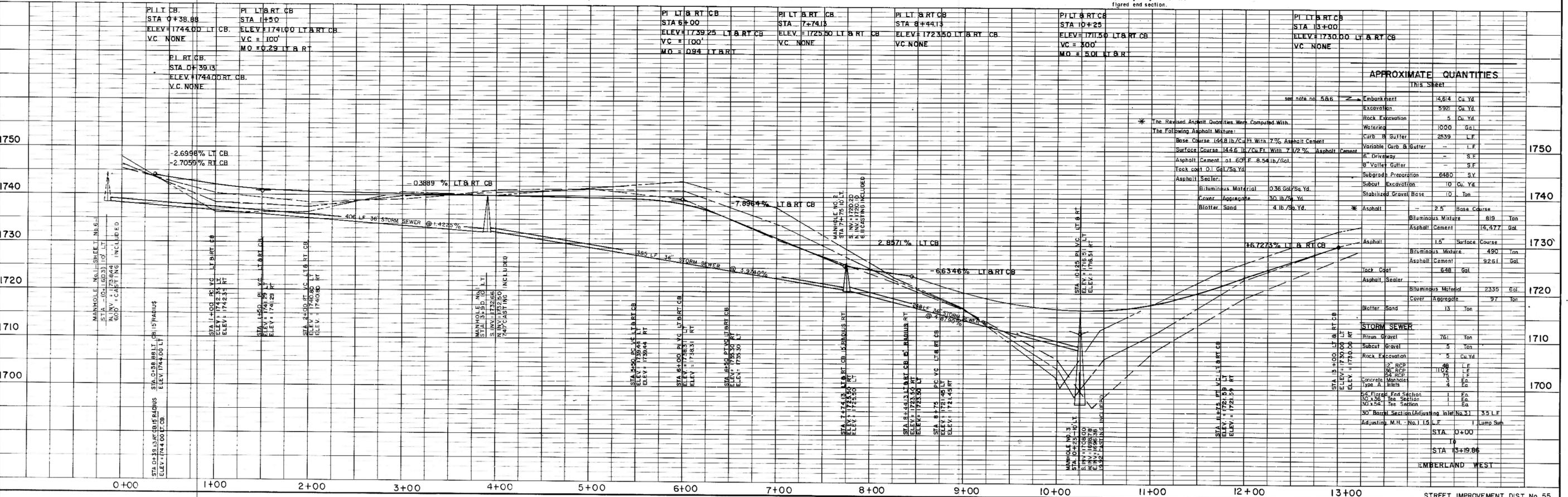
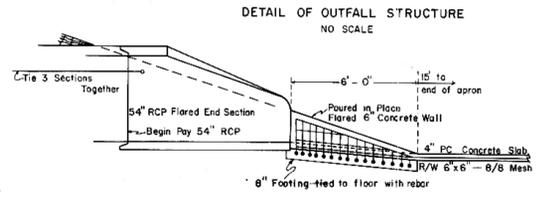
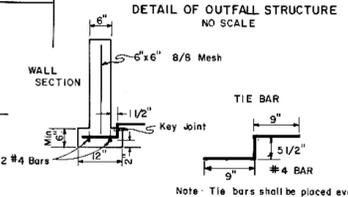
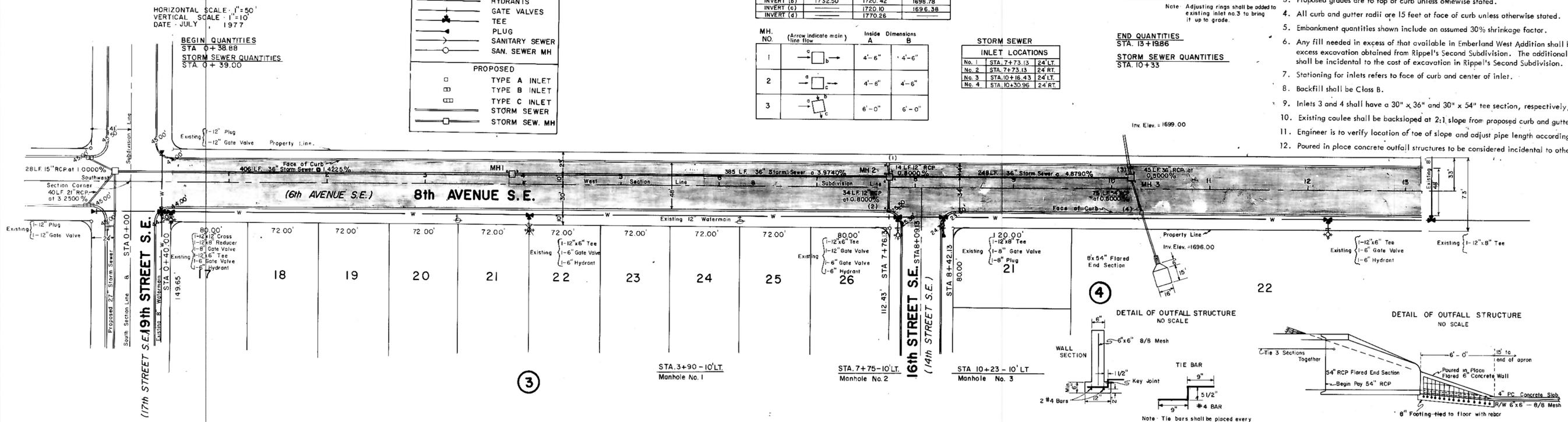
Note: Adjusting rings shall be added to existing inlet no. 3 to bring it up to grade.

INLET LOCATIONS	
No. 1	STA. 7+73.13 24' LT.
No. 2	STA. 7+73.13 24' RT.
No. 3	STA. 10+18.43 24' LT.
No. 4	STA. 10+30.96 24' RT.

END QUANTITIES
STA. 13+19.86

STORM SEWER QUANTITIES
STA. 10+33

- NOTES:
- Proposed Sewer and Water Improvements on 8th Avenue SE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25." Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during Construction.
 - Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 23."
 - Proposed grades are to top of curb unless otherwise stated.
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Embankment quantities shown include an assumed 30% shrinkage factor.
 - Any fill needed in excess of that available in Emberland West Addition shall be obtained from excess excavation obtained from Rippe's Second Subdivision. The additional haul distance shall be incidental to the cost of excavation in Rippe's Second Subdivision.
 - Stationing for inlets refers to face of curb and center of inlet.
 - Backfill shall be Class B.
 - Inlets 3 and 4 shall have a 30" x 36" and 30" x 54" tee section, respectively, for inlet bases.
 - Existing coulee shall be backslotted at 2:1 slope from proposed curb and gutter.
 - Engineer is to verify location of toe of slope and adjust pipe length accordingly.
 - Poured in place concrete outfall structures to be considered incidental to other items.

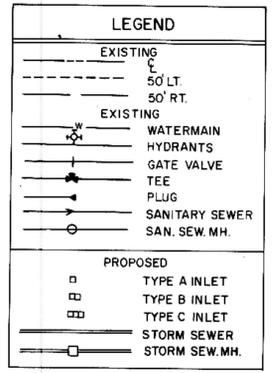
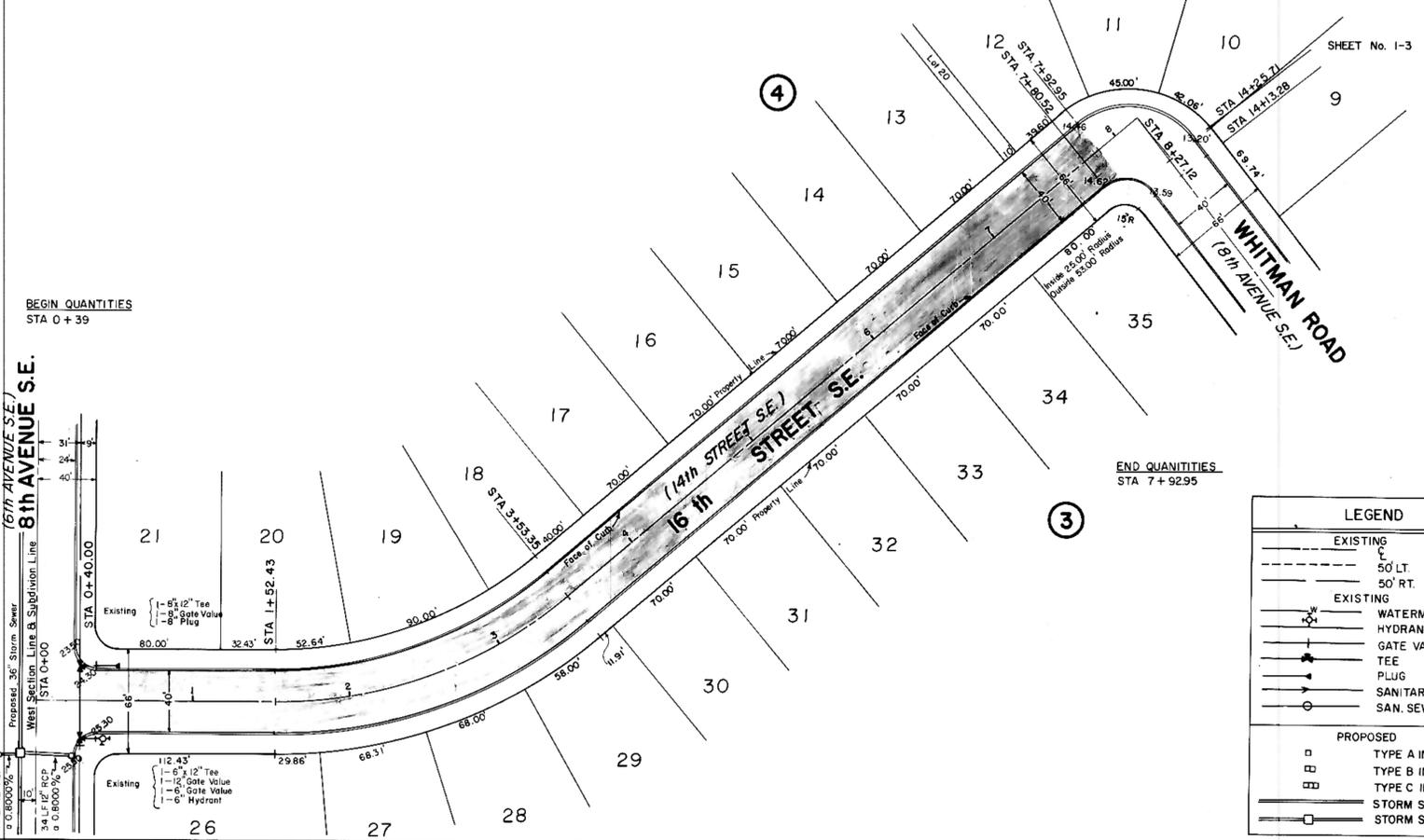


APPROXIMATE QUANTITIES		This Sheet	
Embankment	14.614	Cu. Yd.	
Excavation	5.921	Cu. Yd.	
Rock Excavation	5	Cu. Yd.	
Watering	10.000	Gal.	
Curb & Gutter	2839	L.F.	
Variable Curb & Gutter	-	L.F.	
8" Driveway	-	S.F.	
8" Valley Gutter	-	S.F.	
Subgrade Preparation	6480	S.Y.	
Subcut Excavation	10	Cu. Yd.	
Stabilized Gravel Base	10	Ton	
Asphalt	-	2 1/2" Base Course	
Biluminous Mixture	819	Ton	
Asphalt Cement	14,477	Gal.	
Asphalt	-	1.5" Surface Course	
Biluminous Mixture	490	Ton	
Asphalt Cement	9261	Gal.	
Lock Coat	638	Gal.	
Asphalt Sealer	-		
Biluminous Material	2335	Gal.	
Cover Aggregate	97	Ton	
Ballast Sand	13	Ton	
STORM SEWER			
Birim. Gravel	761	Ton	
Subcut Gravel	5	Ton	
Rock Excavation	5	Cu. Yd.	
12" RCP	1102	L.F.	
6" RCP	75	L.F.	
Concrete Manholes	3	EA	
Type A Inlets	4	EA	
6" Flared End Section	1	EA	
30" x 36" Tee Section	1	EA	
30" x 54" Tee Section	1	EA	
30" Barrel Section (Adjusting Inlet No. 3)	3.5	L.F.	
Adjusting M.H. No. 1	1	Lump Sum	
STA. 0+00			
STA. 13+19.86			

PLAN
DATE
BY
CHECKED
DATE
BY

PROFILE
DATE
BY
CHECKED
DATE
BY

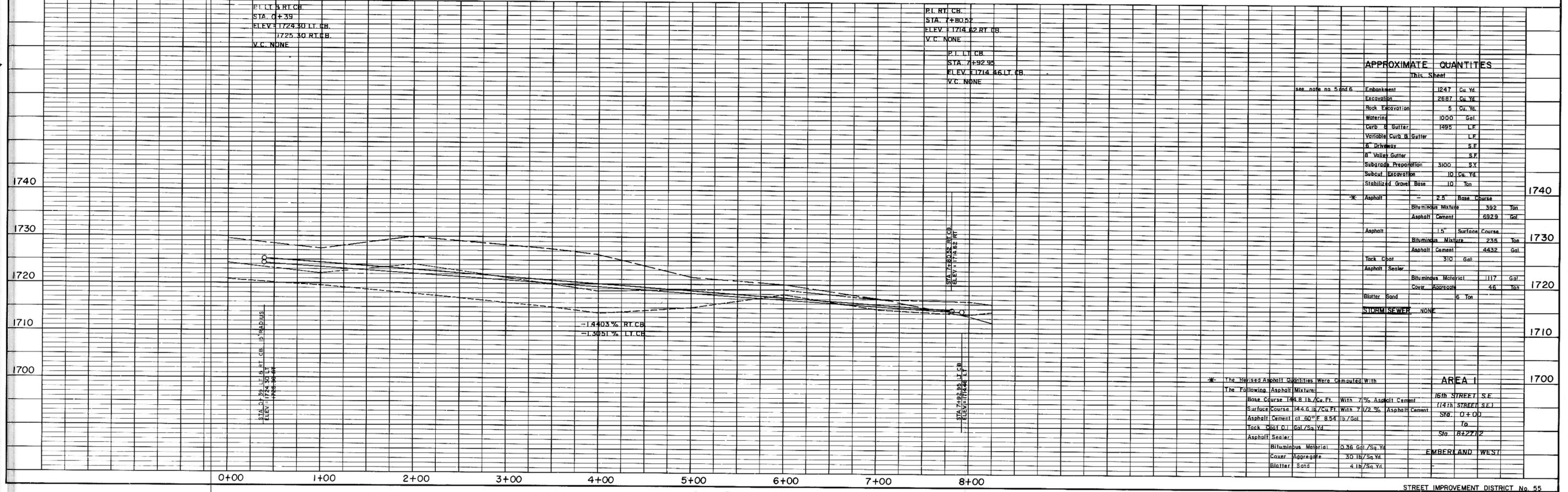
HORIZONTAL SCALE - 1" = 50'
 VERTICAL SCALE - 1" = 10'
 DATE JULY 1977



- NOTES:
- Proposed Sewer and Water Improvements on 16th Street SE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25." Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
 - Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 23."
 - Proposed grades are to top of curb unless otherwise stated.
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Embankment quantities shown include an assumed 30% shrinkage factor.
 - Any fill needed in excess of that available in Emberland West Addition shall be obtained from excess excavation obtained from Rippel's Second Subdivision. The additional haul distance shall be incidental to the cost of excavation in Rippel's Second Subdivision.

PLAN
 SURVEYED BY
 PLOTTED BY
 ALIGNED CHECKED BY
 DATE OF WAY CHECKED

PROFILE
 SURVEYED BY
 PLOTTED BY
 ALIGNED CHECKED BY
 DATE OF WAY CHECKED



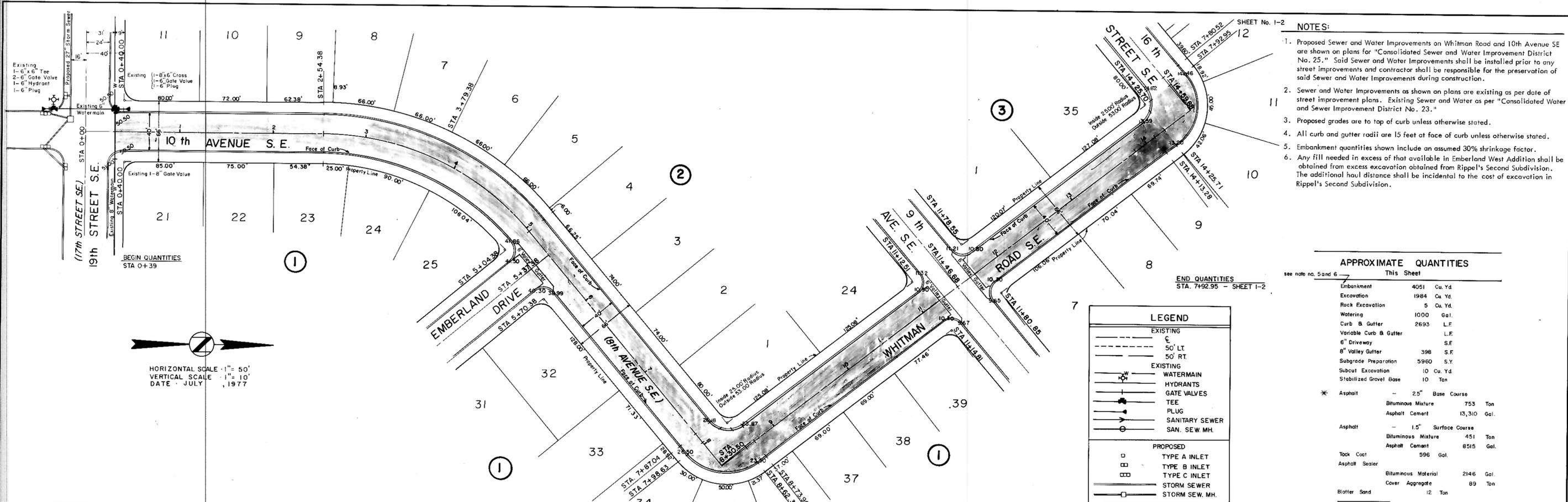
APPROXIMATE QUANTITIES		This Sheet	
Embankment	1247	Cu. Yd.	
Excavation	2687	Cu. Yd.	
Rock Excavation	5	Cu. Yd.	
Watering	1000	Gal.	
Curb & Gutter	1495	L.F.	
Variable Curb & Gutter		L.F.	
8" Driveway		S.F.	
8" Valley Gutter		S.F.	
Subgrade Preparation	3100	S.Y.	
Subcut Excavation	10	Cu. Yd.	
Stabilized Gravel Base	10	Ton	
Asphalt	2.5	Base Course	1740
Bituminous Mixture	352	Yon	
Asphalt Cement	692.9	Gal.	
Asphalt	1.5	Surface Course	1730
Bituminous Mixture	235	Yon	
Asphalt Cement	443.2	Gal.	
Tack Coat	310	Gal.	
Asphalt Sealer			
Bituminous Material	1117	Gal.	1720
Cover Aggregate	46	Ton	
Blotter Sand	6	Ton	
STORM SEWER	NONE		
* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixtures:		AREA 1	
Base Course 144.8 lb./Cu. Ft. With 7% Asphalt Cement		16th STREET S.E.	
Surface Course 144.6 lb./Cu. Ft. With 7.2% Asphalt Cement		114th STREET S.E.	
Asphalt Cement at 60°F 8.54 lb./Gal.		Sta. 0+00	
Tack Coat 0.1 Gal./Sq. Yd.		Sta. 8+27.2	
Asphalt Sealer		EMBERLAND WEST	
Bituminous Material	0.36 Gal./Sq. Yd.		
Cover Aggregate	30 lb./Sq. Yd.		
Blotter Sand	4 lb./Sq. Yd.		

KE PLATE 1, PLAN-PROFILE
 KEUFFEL & ESSER CO.
 487024 MADE IN U.S.A.

STREET IMPROVEMENT DISTRICT No. 55
 MANDAN, NORTH DAKOTA
 SHEET No. 1-2
 DATE REVISED: February, 1978

PLAN
 SUPERVISOR: _____
 CHECKED: _____
 DATE: _____

PROFILE
 SUPERVISOR: _____
 CHECKED: _____
 DATE: _____



HORIZONTAL SCALE - 1" = 50'
 VERTICAL SCALE - 1" = 10'
 DATE - JULY 1977

LEGEND

EXISTING
 C
 50' LT
 50' RT

EXISTING
 WATERMAIN
 HYDRANTS
 GATE VALVES
 TEE
 PLUG
 SANITARY SEWER
 SAN. SEW. MH.

PROPOSED
 TYPE A INLET
 TYPE B INLET
 TYPE C INLET
 STORM SEWER
 STORM SEW. MH.

- NOTES:**
- Proposed Sewer and Water Improvements on Whitman Road and 10th Avenue SE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25." Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
 - Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Sewer and Water Improvement District No. 23."
 - Proposed grades are to top of curb unless otherwise stated.
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Embankment quantities shown include an assumed 30% shrinkage factor.
 - Any fill needed in excess of that available in Emberland West Addition shall be obtained from excess excavation obtained from Rippe's Second Subdivision. The additional haul distance shall be incidental to the cost of excavation in Rippe's Second Subdivision.

APPROXIMATE QUANTITIES
 This Sheet

Embankment	4051	Cu. Yd.
Excavation	1984	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Watering	1000	Gal.
Curb & Gutter	2693	L.F.
Variable Curb & Gutter		L.F.
6" Driveway		S.F.
8" Valley Gutter	396	S.F.
Subgrade Preparation	5960	S.Y.
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton

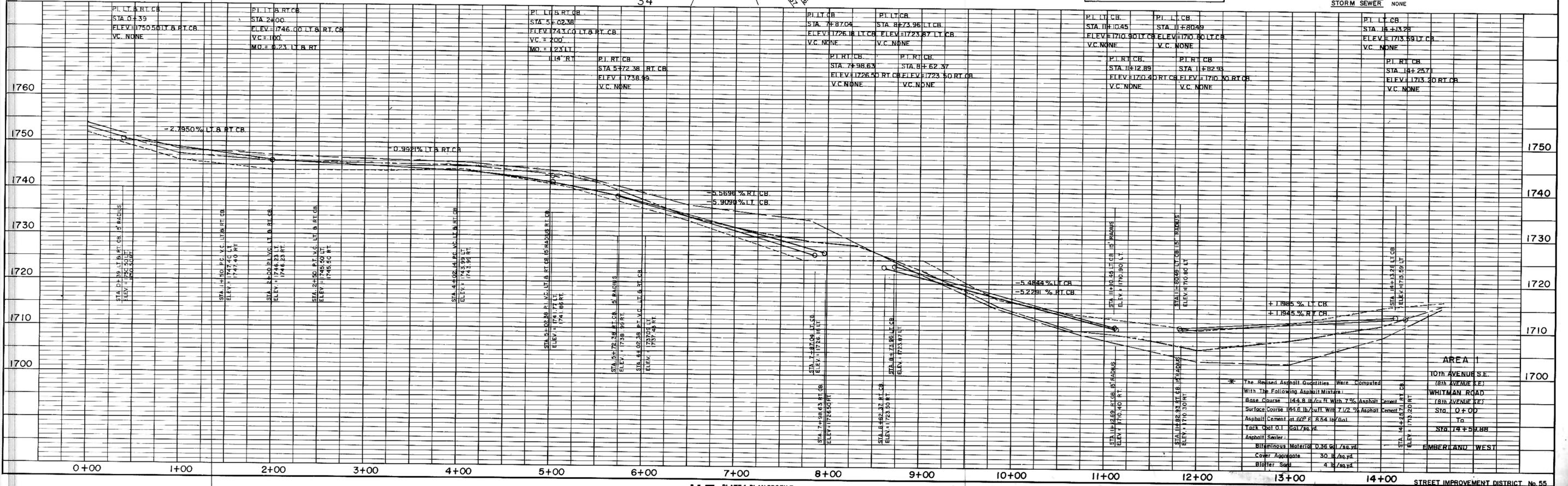
* Asphalt - 2.5" Base Course
 Bituminous Mixture 753 Ton
 Asphalt Cement 13,310 Gal.

Asphalt - 1.5" Surface Course
 Bituminous Mixture 451 Ton
 Asphalt Cement 8515 Gal.

Tack Coat 596 Gal.
 Asphalt Sealer
 Bituminous Material 2146 Gal.
 Cover Aggregate 89 Ton

Blotter Sand 12 Ton

STORM SEWER NONE



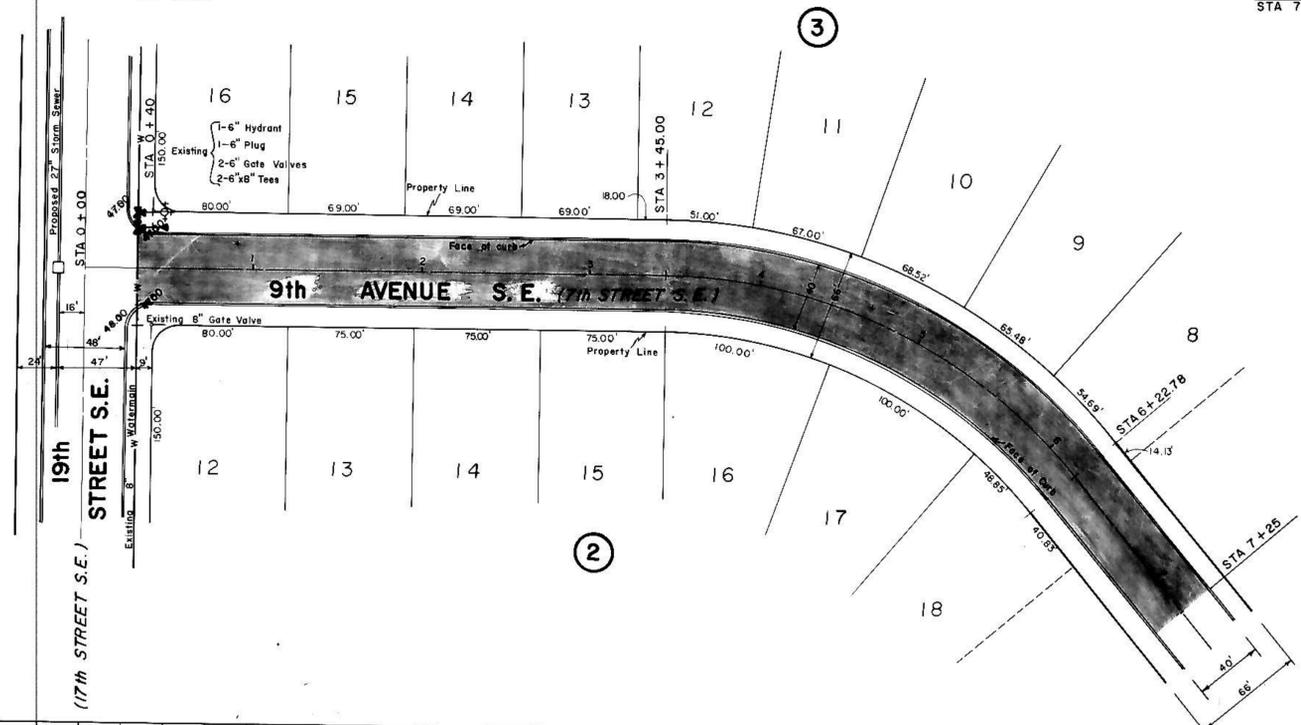
AREA 1
 10th AVENUE S.E.
 (8th AVENUE S.E.)
 WHITMAN ROAD
 (8th AVENUE S.E.)
 STA. 0+00
 STA. 14+58.88
 EMBERLAND WEST

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 144.8 lb/Cu. Ft. With 7% Asphalt Cement
 Surface Course 134.8 lb/Cu. Ft. With 7 1/2% Asphalt Cement
 Asphalt Cement at 60° F. 8.54 lb/Gal.
 Tack Coat 0.1 Gal/36 sq. ft.
 Asphalt Sealer
 Bituminous Material 0.35 cu. ft./sq. yd.
 Cover Aggregate 30 lb./sq. yd.
 Blotter Sand 4 lb./sq. yd.

HORIZONTAL SCALE: 1"=50'
 VERTICAL SCALE: 1"=10'
 DATE: JULY, 1977

BEGIN QUANTITIES
 STA 0+39

END QUANTITIES
 STA 7+25



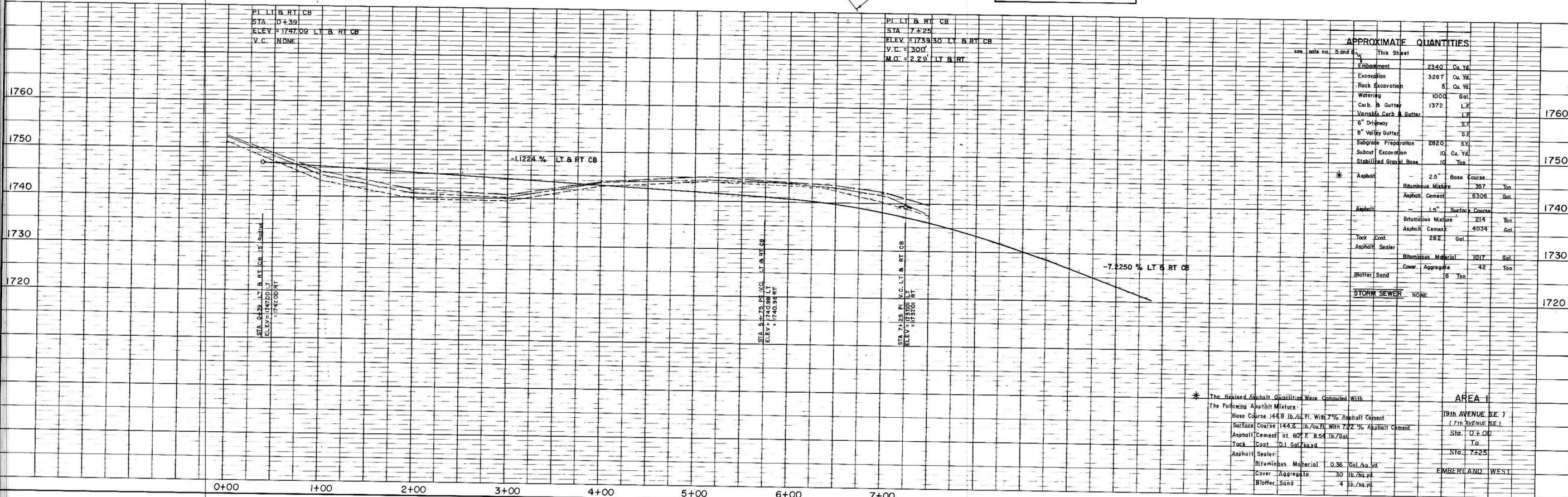
LEGEND	
EXISTING	
---	50' LT
---	50' RT
EXISTING	
W	WATERMAIN
H	HYDRANTS
G	GATE VALVE
T	TEE
P	PLUG
S	SANITARY SEWER
M	SAN. SEWER MH
PROPOSED	
□	TYPE A INLET
▣	TYPE B INLET
▤	TYPE C INLET
---	STORM SEWER
---	STORM SEW. MH

NOTES:

- Proposed Sewer and Water Improvements on 9th Avenue SE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25." Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 23."
- Proposed grades are to top of curb unless otherwise stated.
- All curb and gutter radii are 15 feet or face of curb unless otherwise stated.
- Embankment quantities shown include an assumed 30% shrinkage factor.
- Any fill needed in excess of that available in Emberland West Addition shall be obtained from excess excavation obtained from Rippe's Second Subdivision. The additional haul distance shall be incidental to the cost of excavation in Rippe's Second Subdivision.

PLAN
 DATE: _____
 BY: _____
 CHECKED: _____
 APPROVED: _____

PROFILE
 DATE: _____
 BY: _____
 CHECKED: _____
 APPROVED: _____



APPROXIMATE QUANTITIES	
Embankment	2240 Cu. Yd.
Excavation	3267 Cu. Yd.
Rock Excavation	5 Cu. Yd.
Watering	1000 Gal.
Curb & Gutter	1372 LF
Variable Curb & Gutter	LF
8" Driveway	S.F.
8" Valley Gutter	S.F.
Subgrade Preparation	2820 S.F.
Subsoil Excavation	10 Cu. Yd.
Stabilized Gravel Base	10 Ton
Asphalt	2.5" Base Course 357 Ton
Asphalt	1.5" Surface Course 214 Ton
Asphalt	Asphalt Cement 4034 Gal.
Tack Coat	282 Gal.
Asphalt	Asphalt Sealer Bituminous Material 1017 Gal.
Blotter Sand	Cover Aggregate 42 Ton
Blotter Sand	5 Ton
STORM SEWER	NONE

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 144.8 lb./cu. ft. With 7% Asphalt Cement
 Surface Course 144.8 lb./cu. ft. With 7.2% Asphalt Cement
 Asphalt Cement at 60°F. 8.54 lb./gal.
 Tack Coat .01 gal./sq. yd.
 Asphalt Sealer
 Bituminous Material 0.36 gal./sq. yd.
 Cover Aggregate 30 lb./sq. yd.
 Blotter Sand 4 lb./sq. yd.

AREA I
 (9th AVENUE SE.)
 (7th AVENUE SE.)
 Sta. 0+00
 To
 Sta. 7+25
 EMBERLAND WEST

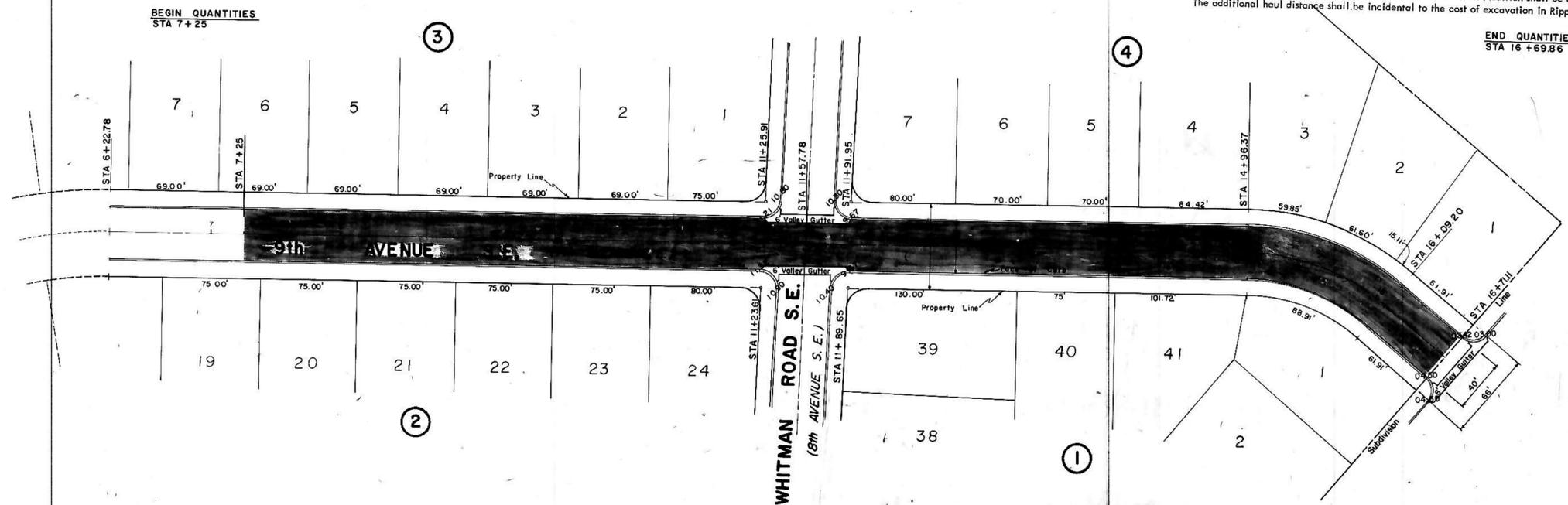
PLAN
 NOTE BOOK
 No. _____
 DATE _____

SWENSON HAGEN & CO. P.C.
 CONSULTING ENGINEERS
 309 BASTIA LN. F.O. 101 1115
 Bismarck, N.D. 58101
 Phone: 224-2601

PROFILE
 NOTE BOOK
 No. _____
 DATE _____

SWENSON HAGEN & CO. P.C.
 CONSULTING ENGINEERS
 309 BASTIA LN. F.O. 101 1115
 Bismarck, N.D. 58101
 Phone: 224-2601

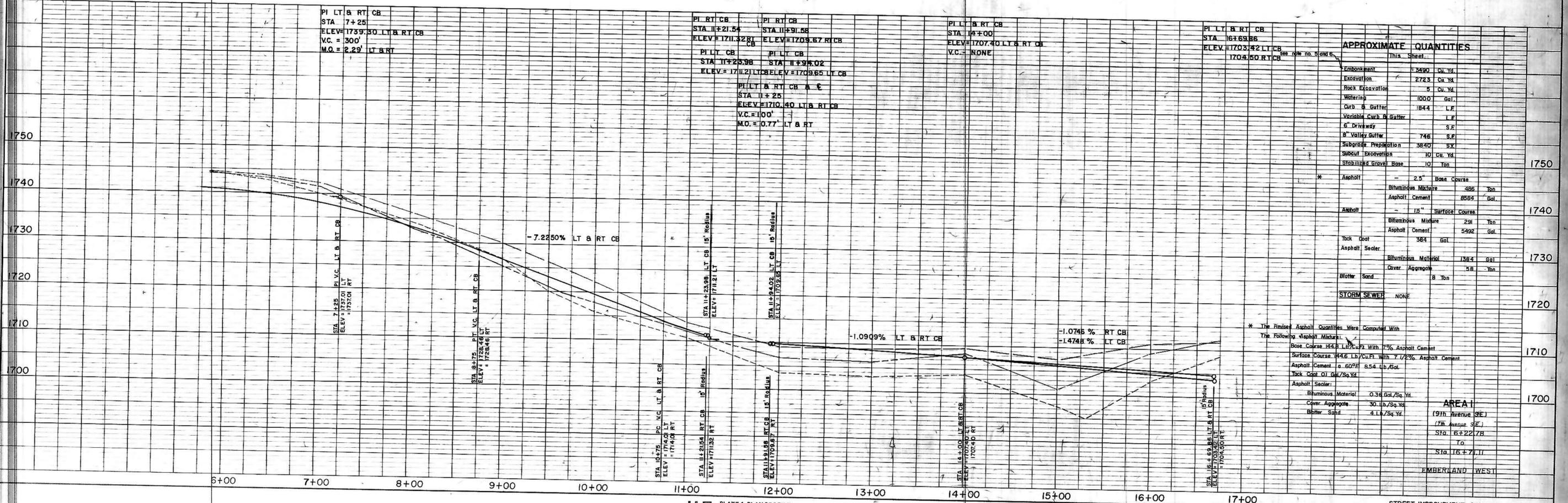
HORIZONTAL SCALE: 1"=50'
 VERTICAL SCALE: 1"=10'
 DATE: JULY, 1977



- NOTES:**
- Proposed Sewer and Water Improvements on 9th Avenue SE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25." Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
 - Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 23".
 - Proposed grades are to top of curb unless otherwise stated.
 - All curb and gutter radii are 15 feet or face of curb unless otherwise stated.
 - Embankment quantities shown include an assumed 30% shrinkage factor.
 - Any fill needed in excess of that available in Emberland West Addition shall be obtained from excess excavation obtained from Rippel's Second Subdivision. The additional haul distance shall be incidental to the cost of excavation in Rippel's Second Subdivision.

LEGEND

---	EXISTING
---	50' LT
---	50' RT
---	EXISTING WATERMAIN
---	EXISTING HYDRANTS
---	GATE VALVES
---	TEE
---	PLUG
---	SANITARY SEWER
---	SAN. SEWER MH

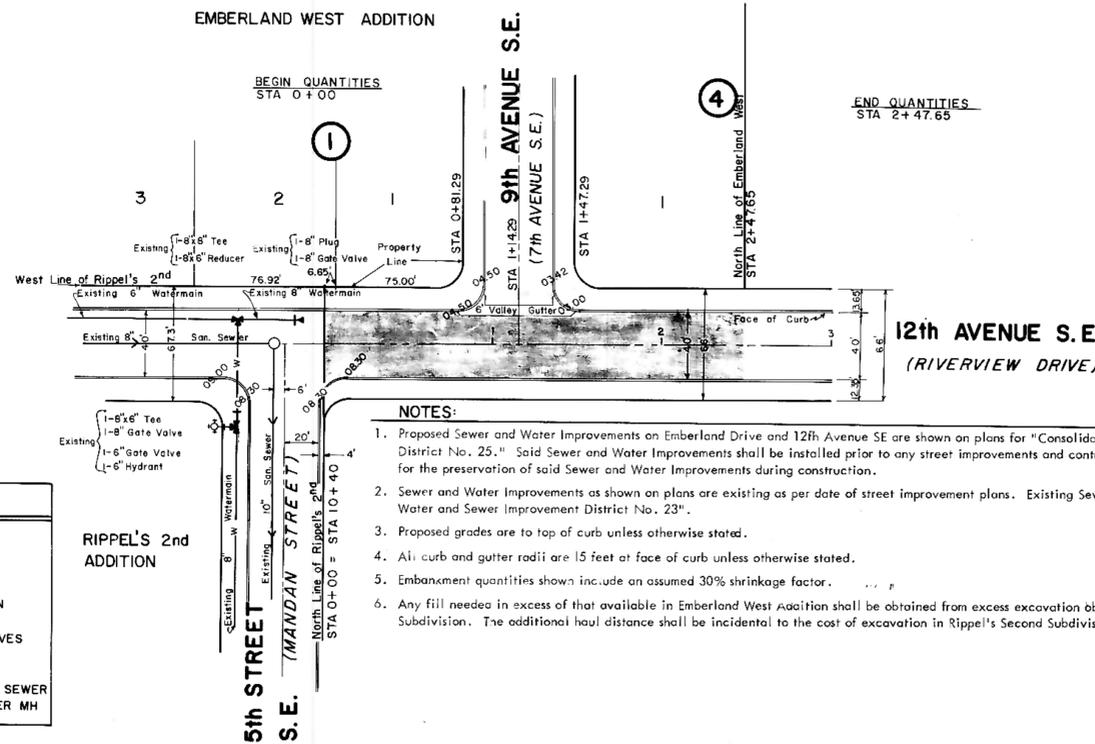
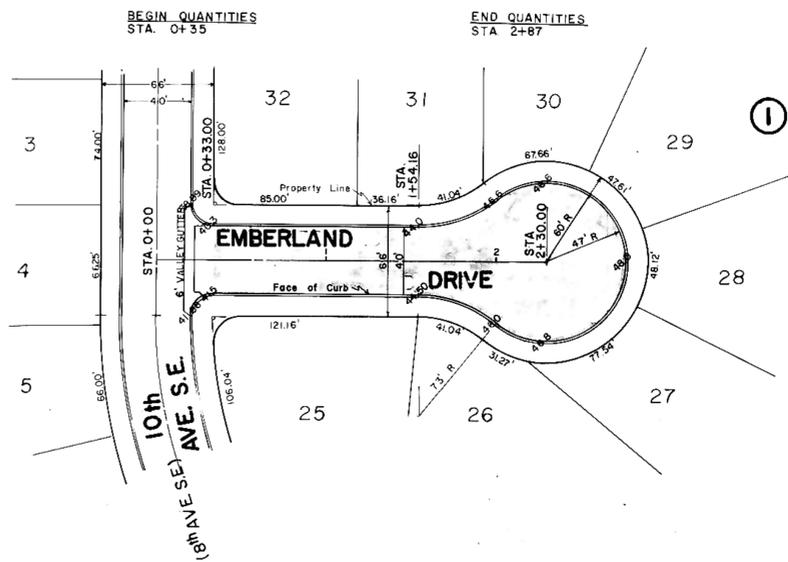


APPROXIMATE QUANTITIES

Item	Quantity	Unit
Embankment	3490	Cu. Yd.
Excavation	2723	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Watering	1000	Gal.
Curb & Gutter	1844	L.F.
Variable Curb & Gutter		L.F.
6" Driveway		S.F.
8" Valley Gutter	746	S.F.
Subgrade Preparation	3840	S.Y.
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton
Asphalt	2.5	Base Course
Bimimous Mixture	486	Ton
Asphalt Cement	8584	Gal.
Asphalt	15	Surface Course
Bimimous Mixture	291	Ton
Asphalt Cement	5992	Gal.
Tack Coat	384	Gal.
Asphalt Sealer		
Bimimous Material	7384	Gal.
Cover Aggregate	58	Ton
Blotter Sand	8	Ton
STORM SEWER	NONE	

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course: 14.8 Lb./Cu.Ft. With 7% Asphalt Cement
 Surface Course: 14.6 Lb./Cu.Ft. With 7.7% Asphalt Cement
 Asphalt Cement @ 60°F: 8.54 Lb./Gal.
 Tack Coat: 0.1 Gal./Sq.Yd.
 Asphalt Sealer:
 Bimimous Material: 0.36 Gal./Sq.Yd.
 Cover Aggregate: 30 Lb./Sq.Yd.
 Blotter Sand: 4 Lb./Sq.Yd.

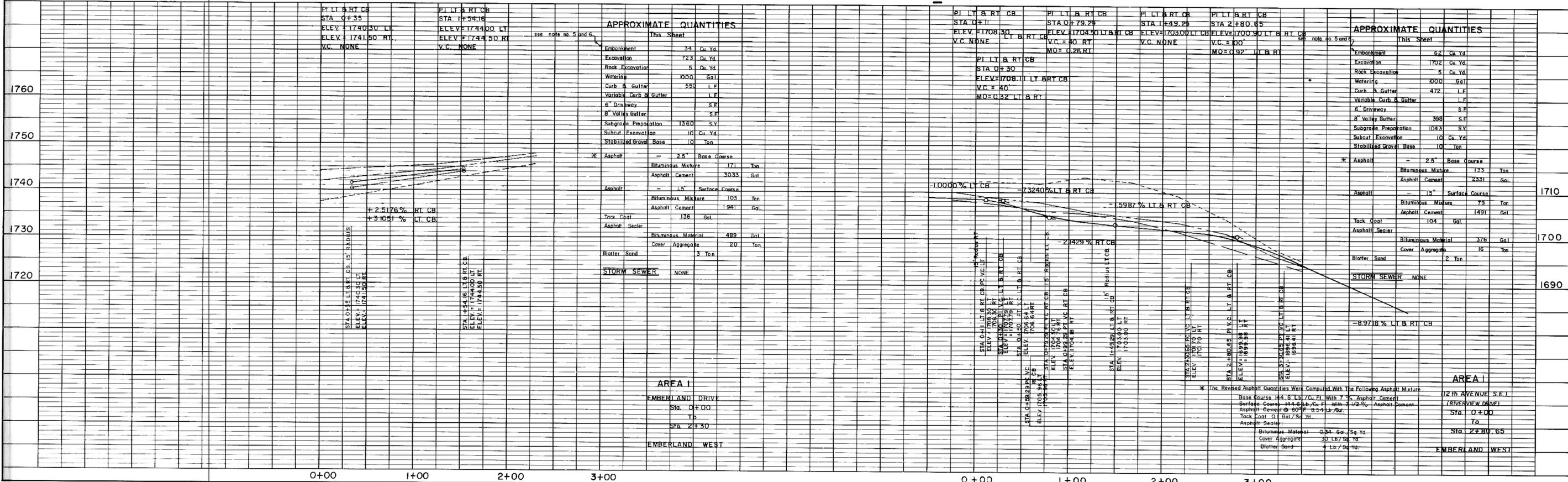
HORIZONTAL SCALE: 1"=50'
 VERTICAL SCALE: 1"=10'
 DATE: JULY, 1977



LEGEND	
---	EXISTING
---	5'0" LT
---	5'0" RT
---	EXISTING
---	WATERMAIN
---	HYDRANTS
---	GATE VALVES
---	TEE
---	PLUG
---	SANITARY SEWER
---	SAN. SEWER MH

NOTES:

- Proposed Sewer and Water Improvements on Emberland Drive and 12th Avenue SE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25." Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 23".
- Proposed grades are to top of curb unless otherwise stated.
- All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
- Embankment quantities shown include an assumed 30% shrinkage factor.
- Any fill needed in excess of that available in Emberland West Addition shall be obtained from excess excavation obtained from Rippel's Second Subdivision. The additional haul distance shall be incidental to the cost of excavation in Rippel's Second Subdivision.



AREA I
 EMBERLAND DRIVE
 STA. 0+00 TO 2+87
 EMBERLAND WEST

AREA I
 12th AVENUE S.E.
 (RIVERVIEW DRIVE)
 STA. 0+00 TO 2+87.65
 EMBERLAND WEST

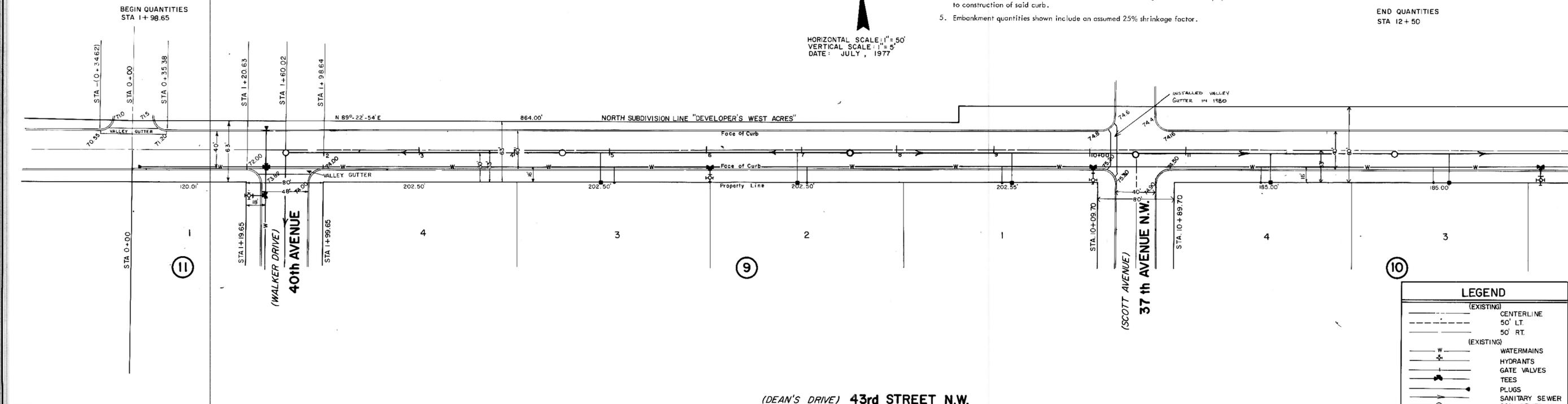
PLATE 1, PLAN-PROFILE
 KEUFEL & ESSER CO.
 487024 MADE IN U.S.A.

PLAN
 SURVIVED: _____
 PHOTO: _____
 NOTE BOOK: _____
 NO. _____

PROFILE
 SURVIVED: _____
 PHOTO: _____
 NOTE BOOK: _____
 NO. _____

- NOTES:
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24."
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb unless otherwise stated.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Embankment quantities shown include an assumed 25% shrinkage factor.

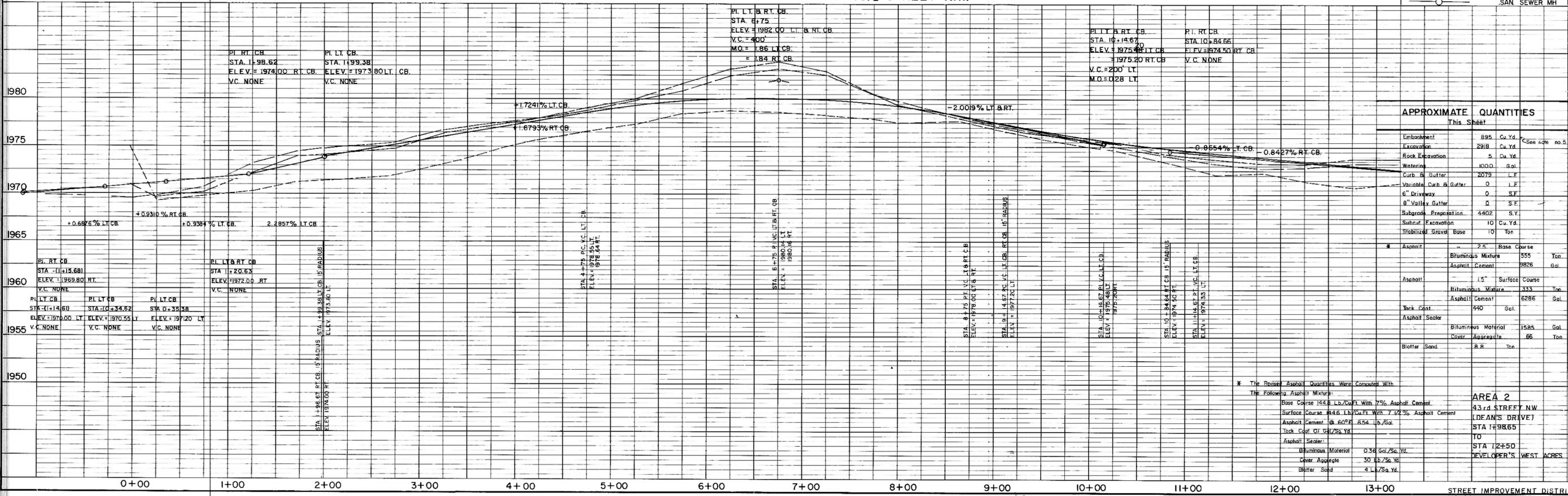
HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'
 DATE: JULY, 1977



END QUANTITIES
 STA 12+50

LEGEND

(---)	(EXISTING) CENTERLINE
(---)	50' LT.
(---)	50' RT.
(W)	(EXISTING) WATERMANS
(H)	HYDRANTS
(+)	GATE VALVES
(T)	TEES
(P)	PLUGS
(S)	SANITARY SEWER
(O)	SAN SEWER MH



APPROXIMATE QUANTITIES
 This Sheet

Embankment	895	Cu. Yd.	
Excavation	2918	Cu. Yd.	See note no. 5
Rock Excavation	5	Cu. Yd.	
Watering	1000	Gal.	
Curb & Gutter	2079	L.F.	
Variable Curb & Gutter	0	L.F.	
6" Driveway	0	S.F.	
8" Valley Gutter	0	S.F.	
Subgrade Excavation	4402	S.Y.	
Subcut Excavation	10	Cu. Yd.	
Stabilized Gravel Base	10	Ton	
Asphalt	25	Base Course	
Bituminous Mixture	555	Ton	
Asphalt Cement	9826	Gal.	
Asphalt	1.5	Surface Course	
Bituminous Mixture	333	Ton	
Asphalt Cement	6286	Gal.	
Thick Coat	490	Gal.	
Asphalt Sealer			
Bituminous Material	1585	Gal.	
Cover Aggregate	86	Ton	
Blotter Sand	R.R.	Ton	

* The Revised Asphalt Quantities Were Compared With The Following Asphalt Mixtures:
 Base Course 145.8 Lb./Cu Ft. With 7% Asphalt Cement
 Surface Course #4.6 Lb./Cu Ft. With 7.12% Asphalt Cement
 Asphalt Cement @ 60# 8.54 Lb./Gal.
 Thick Coat @ 54/25# Yd.
 Asphalt Sealer:
 Bituminous Material 0.36 Gal./Sq. Yd.
 Cover Aggregate 30 Lb./Sq. Yd.
 Blotter Sand 4 L./Sq. Yd.

AREA 2
 43rd STREET N.W.
 (DEAN'S DRIVE)
 STA 1+98.65
 TO
 STA 12+50
 DEVELOPER'S WEST ACRES

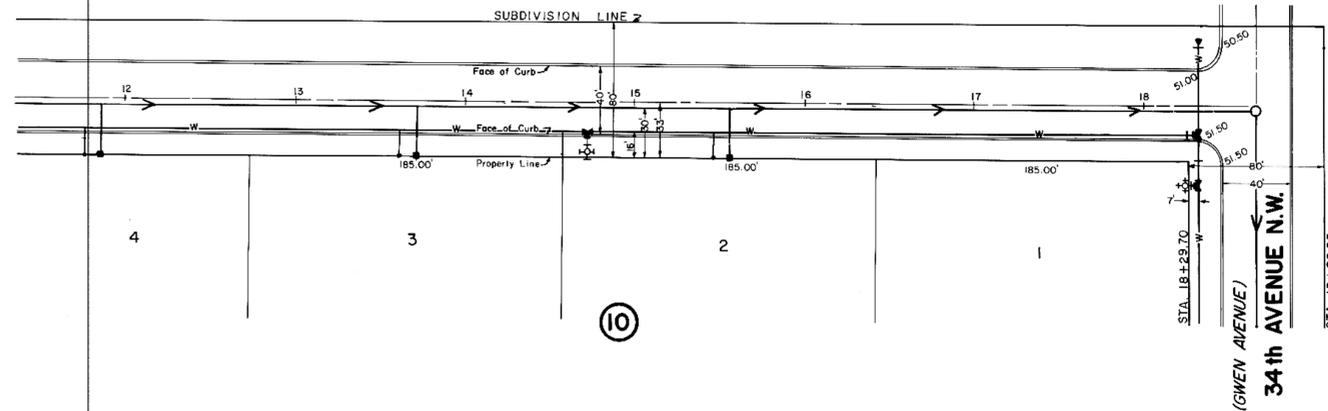
DATE
BY
SURVEYED
NOTED
ALIGNED CHECKED
RECORD CHECKED
PLAN
NOTE BOOK
No.

DATE
BY
SURVEYED
NOTED
ALIGNED CHECKED
RECORD CHECKED
PROFILE
NOTE BOOK
No.

BEGIN QUANTITIES
STA 12+50

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'
DATE: JULY, 1977

END QUANTITIES
STA 18+34.72

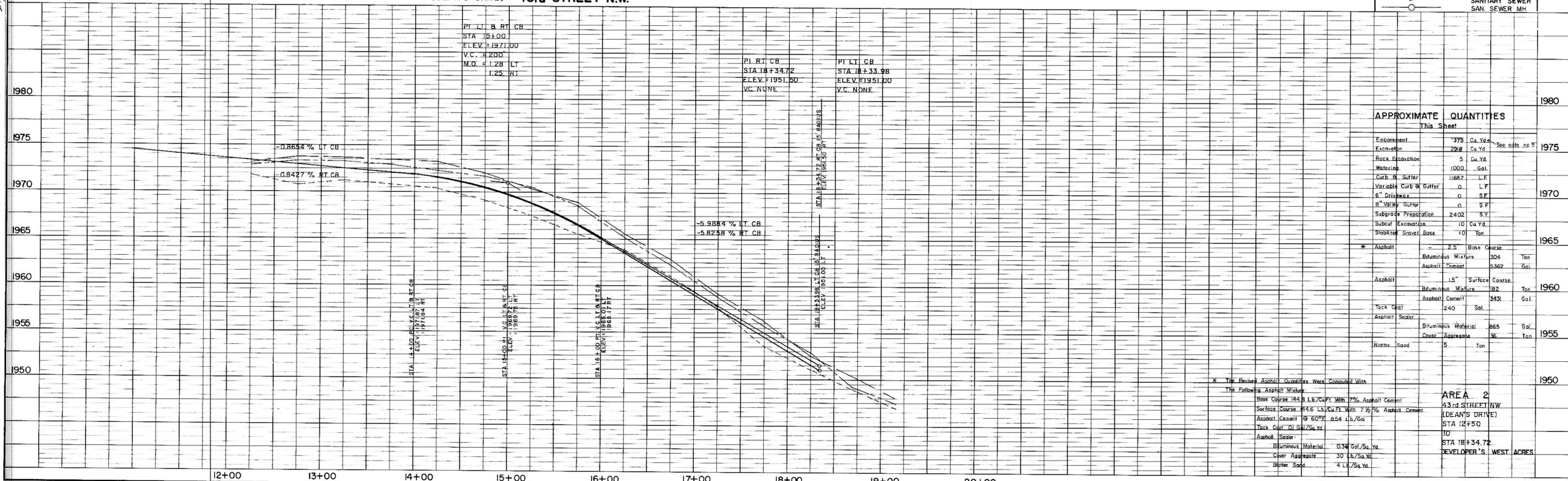


NOTES:

- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
- All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
- Proposed grades are to top of curb unless otherwise stated.
- City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
- Embankment quantities shown include an assumed 25% shrinkage factor.

LEGEND	
(EXISTING)	CENTERLINE
---	50' LT.
---	50' RT.
(EXISTING)	WATERMANS
W	HYDRANTS
+	GATE VALVES
+	TEES
+	PLUGS
○	SANITARY SEWER
○	SAN. SEWER MH

(DEAN'S DRIVE) 43rd STREET N.W.



APPROXIMATE QUANTITIES

This Sheet	
Embankment	378 Cu. Yd.
Excavation	224 Cu. Yd.
Rock Excavation	5 Cu. Yd.
Watering	1000 Gal.
Curb & Gutter	11687 L.F.
Variable Curb & Gutter	0 L.F.
6" Driveway	0 S.F.
8" Valley Gutter	0 S.F.
Subgrade Preparation	2402 S.Y.
Subcut Excavation	10 Cu. Yd.
Stabilize Gravel Base	10 Ton
* Asphalt	25 Base Course
Bituminous Mixture	304 Ton
Asphalt Cement	5362 Gal.
Asphalt	1.5" Surface Course
Bituminous Mixture	182 Ton
Asphalt Cement	3421 Gal.
Tack Coat	240 Gal.
Asphalt Sealer	
Bituminous Material	865 Gal.
Cover Aggregate	36 Ton
Blotter Sand	5 Ton

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
Base Course 144 B.L.B./Cu.Ft. With 7% Asphalt Cement
Surface Course 44.6 Lb./Cu.Ft. With 7 1/2% Asphalt Cement
Asphalt Cement 10 60°F. 8.54 Lb./Gal.
Tack Coat 0.1 Gal./Sq. Yd.
Asphalt Sealer
Bituminous Material 0.34 Gal./Sq. Yd.
Cover Aggregate 30 Lb./Sq. Yd.
Blotter Sand 4 Lb./Sq. Yd.

AREA 2
43rd STREET NW
(DEAN'S DRIVE)
STA 12+50
TO
STA 18+34.72
DEVELOPER'S WEST ACRES

BEGIN QUANTITIES
STA 0+39

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'
DATE: JULY, 1977

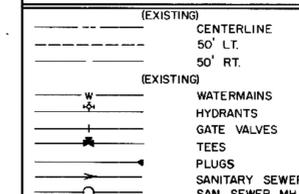
END QUANTITIES
STA 12+05

* The Revised Asphalt Quantities Were Computed With
The Following Asphalt Mixture:
Base Course 1448 Lb./Cu.Ft. With 7% Asphalt Cement
Surface Course 1446 Lb./Cu.Ft. With 7 1/2% Asphalt Cement
Asphalt Cement @ 60°F 8.54 Lb./Gal.
Tack Coat 0.1 Gal./Sq.Yd.
Asphalt Sealer:
Bituminous Material 0.36 Gal./Sq. Yd.
Cover Aggregate 30 Lb./Sq.Yd.
Blotter Sand 4 Lb./Sq.Yd.

NOTES:

- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
- All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
- Proposed grades are to top of curb unless otherwise stated.
- City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
- Embankment quantities shown include an assumed 25% shrinkage factor.

LEGEND



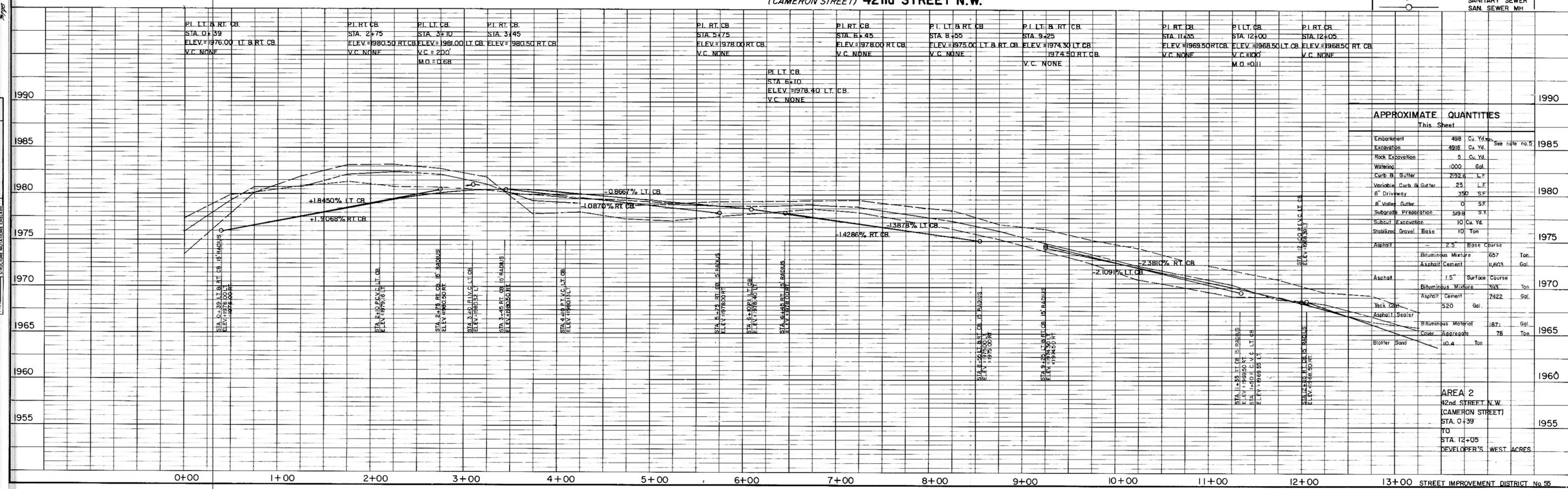
(CAMERON STREET) 42nd STREET N.W.

PI. LT. & RT. CB. STA. 0+39 ELEV. = 976.00 LT. & RT. CB. V.C. NONE	PI. RT. CB. STA. 2+75 ELEV. = 980.50 RT. CB. V.C. NONE	PI. LT. CB. STA. 3+10 ELEV. = 981.00 LT. CB. V.C. = 200' M.O. = C.C.B.	PI. RT. CB. STA. 3+45 ELEV. = 980.50 RT. CB.	PI. RT. CB. STA. 5+75 ELEV. = 978.00 RT. CB. V.C. NONE	PI. RT. CB. STA. 8+45 ELEV. = 978.00 RT. CB. V.C. NONE	PI. LT. & RT. CB. STA. 8+25 ELEV. = 975.00 LT. & RT. CB. V.C. NONE	PI. LT. & RT. CB. STA. 9+25 ELEV. = 974.30 LT. CB. 1974.50 RT. CB. V.C. NONE	PI. RT. CB. STA. 11+35 ELEV. = 969.50 RT. CB. V.C. NONE	PI. LT. CB. STA. 12+00 ELEV. = 968.50 LT. CB. V.C. = 0' M.O. = 0:11	PI. RT. CB. STA. 12+05 ELEV. = 968.50 RT. CB. V.C. NONE
---	---	--	--	---	---	---	--	--	---	--

APPROXIMATE QUANTITIES
This Sheet

Embankment	488	Cu. Yd.	See note no. 5
Excavation	4216	Cu. Yd.	
Rock Excavation	5	Cu. Yd.	
Watering	1000	Gal.	
Curb & Gutter	2192.6	L.F.	
Variable Curb & Gutter	23	L.F.	
6" Driveway	350	S.F.	
8" Water Gutter	0	S.F.	
Subgrade Preparation	519.8	S.Y.	
Subcut Excavation	10	Cu. Yd.	
Stabilize Gravel Base	10	Ton	
Asphalt	2.5'	Base Course	
Bituminous Mixture	657	Ton	
Asphalt Cement	11,603	Gal.	
Asphalt	1.5"	Surface Course	
Bituminous Mixture	393	Ton	
Asphalt Cement	7422	Gal.	
Tack Coat	520	Gal.	
Asphalt Sealer			
Bituminous Material	187	Gal.	
Cover Aggregate	78	Ton	
Blotter Sand	10.4	Ton	

AREA 2
42nd STREET N.W.
(CAMERON STREET)
STA. 0+39
TO
STA. 12+05
DEVELOPER'S WEST ACRES

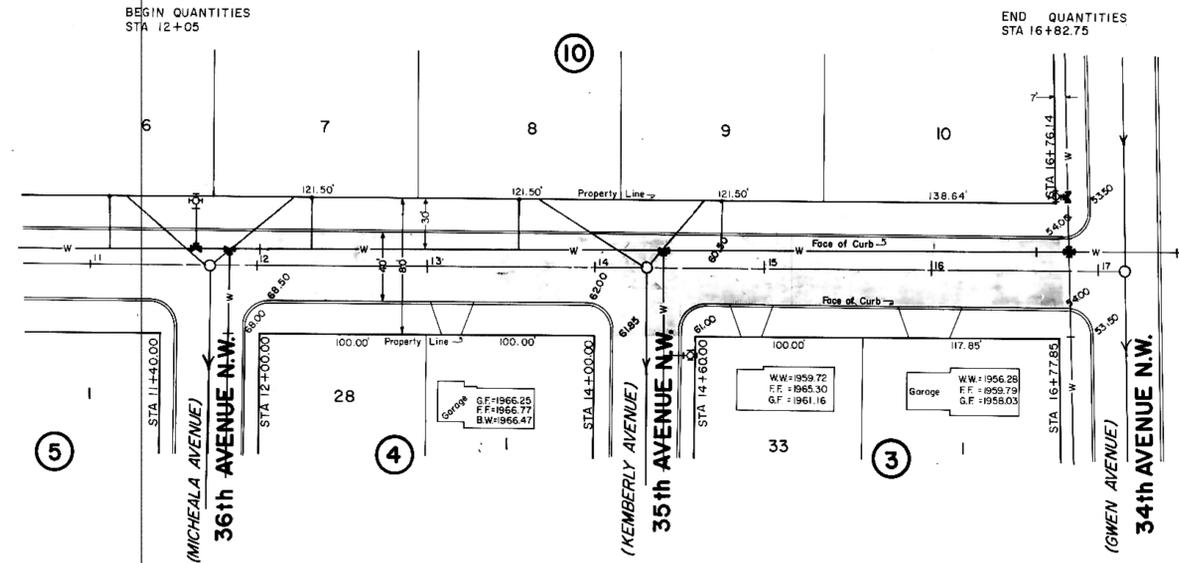


PLAN
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CHECKED BY: []
DATE: []

PROFILE
DRAWN BY: []
CHECKED BY: []
DATE: []

PLAN
NOTE BOOK
No.

PROFILE
NOTE BOOK
No.



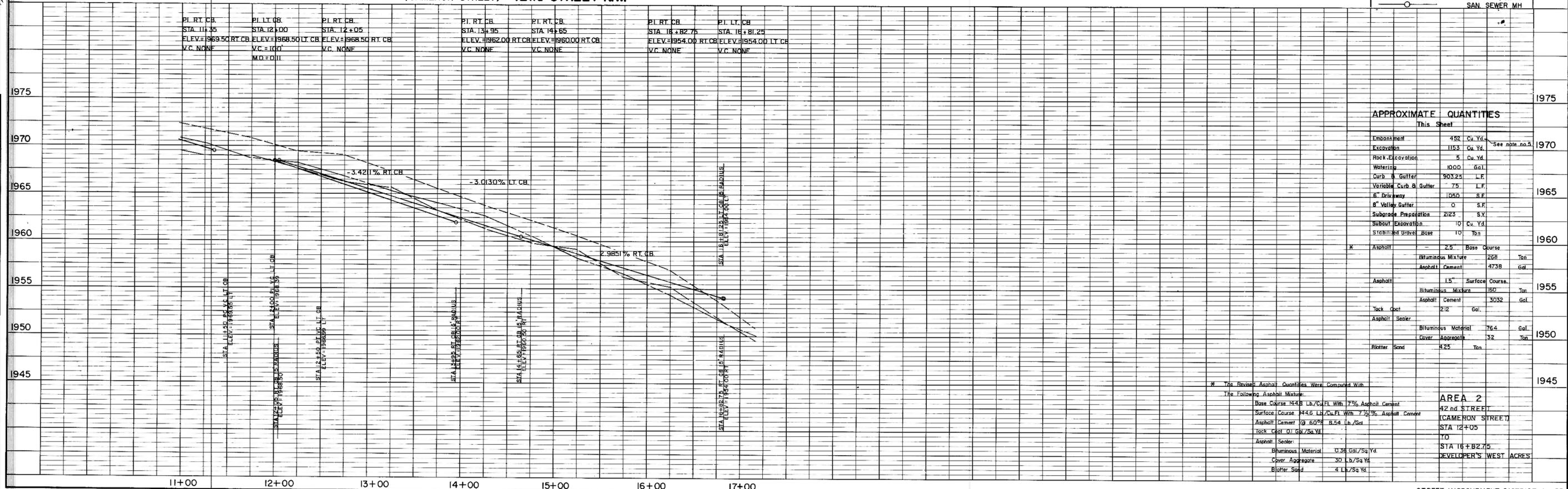
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'
DATE: JULY, 1977

NOTES:

- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
- All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
- Proposed grades are to top of curb unless otherwise stated.
- City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
- Embankment quantities shown include an assumed 25% shrinkage factor.

LEGEND	
(EXISTING)	CENTERLINE
(EXISTING)	50' LT.
(EXISTING)	50' RT.
(EXISTING)	WATERMAINS
(EXISTING)	HYDRANTS
(EXISTING)	GATE VALVES
(EXISTING)	TEES
(EXISTING)	PLUGS
(EXISTING)	SANITARY SEWER
(EXISTING)	SAN. SEWER MH

(CAMERON STREET) 42nd STREET N.W.



APPROXIMATE QUANTITIES

This Sheet

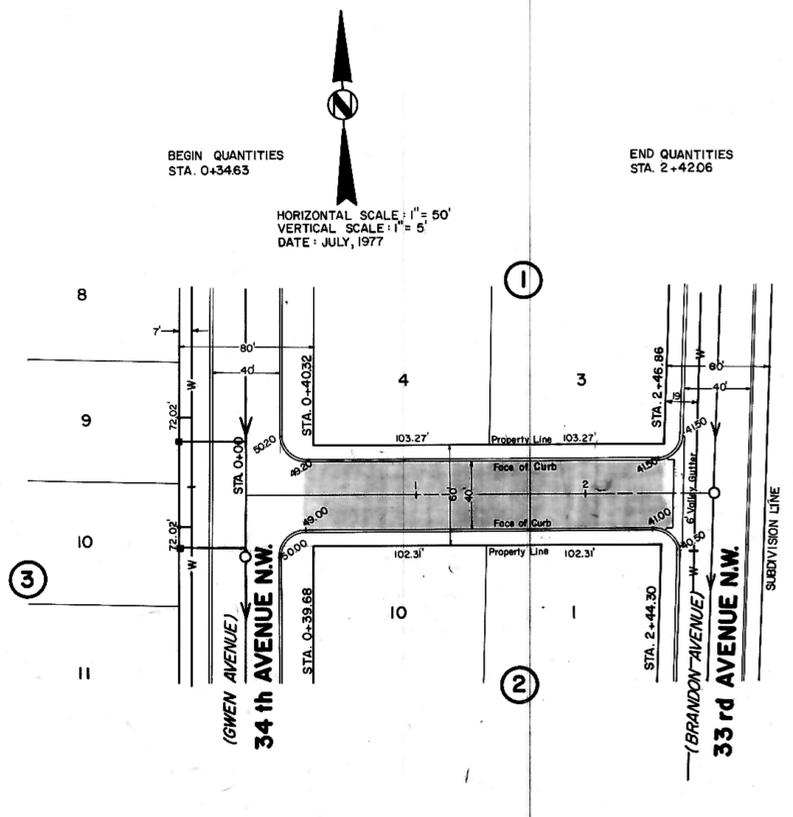
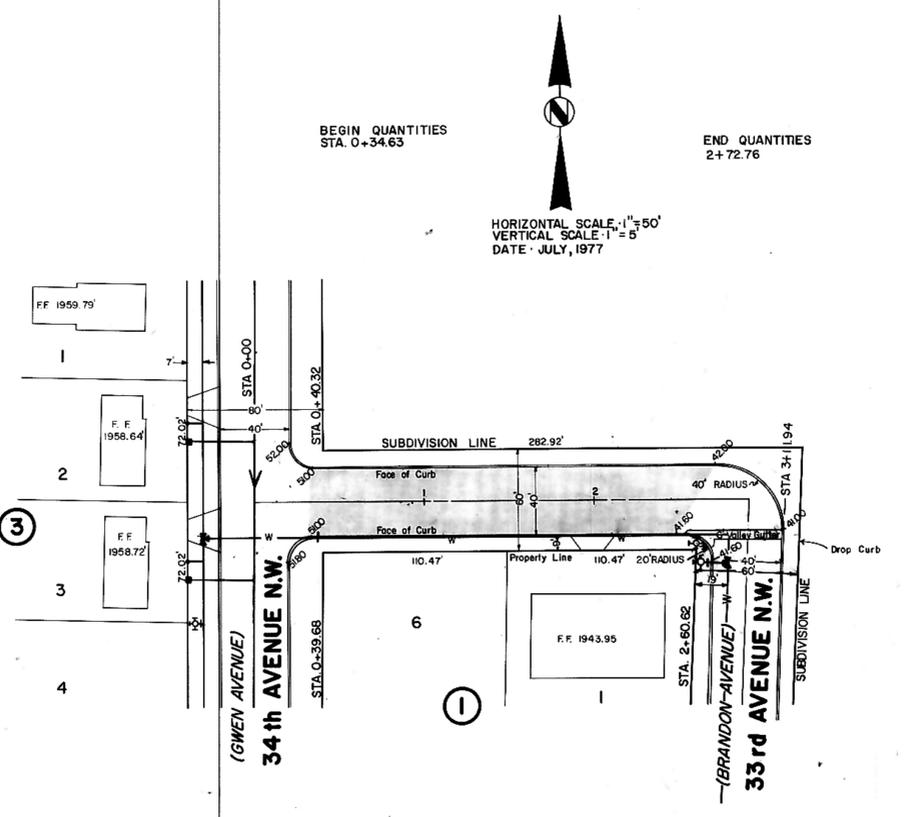
Embankment	452	Cu. Yd.
Excavation	1153	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Watering	1000	Gal.
Curb & Gutter	303.25	L.F.
Variable Curb & Gutter	75	L.F.
8" Driveway	1050	S.F.
8" Valley Gutter	0	S.F.
Subgrade Preparation	2123	S.Y.
Subcut Excavation	10	Cu. Yd.
Stitching Stone Base	10	Ton
Asphalt	2.5	Base Course
Bituminous Mixture	268	Ton
Asphalt Cement	4738	Gal.
Asphalt	1.5	Surface Course
Bituminous Mixture	150	Ton
Asphalt Cement	3032	Gal.
Tack Coat	212	Gal.
Asphalt Sealer		
Bituminous Material	76.4	Gal.
Cover Aggregate	32	Ton
Blotter Sand	425	Ton

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 154.9 Lb./Cu. Ft. With 7% Asphalt Cement
 Surface Course 44.6 Lb./Cu. Ft. With 7.7% Asphalt Cement
 Asphalt Cement @ 60% 8.54 Lb./Gal.
 Tack Coat @ 1 Gal./Sq. Yd.
 Asphalt Sealer:
 Bituminous Material 138 Gal./Sq. Yd.
 Cover Aggregate 20 Lb./Sq. Yd.
 Blotter Sand 4 Lb./Sq. Yd.

AREA 2
42nd STREET
(CAMERON STREET)
STA 12+05
TO
STA 16+82.75
DEVELOPER'S WEST ACRES

PLAN
 SUBMITTED BY: _____
 DATE: _____
 NOTE BOOK NO. _____
 ALIGNED CHECKED BY: _____
 REVISION CHECKED BY: _____

PROFILE
 SUBMITTED BY: _____
 DATE: _____
 NOTE BOOK NO. _____
 ALIGNED CHECKED BY: _____
 REVISION CHECKED BY: _____



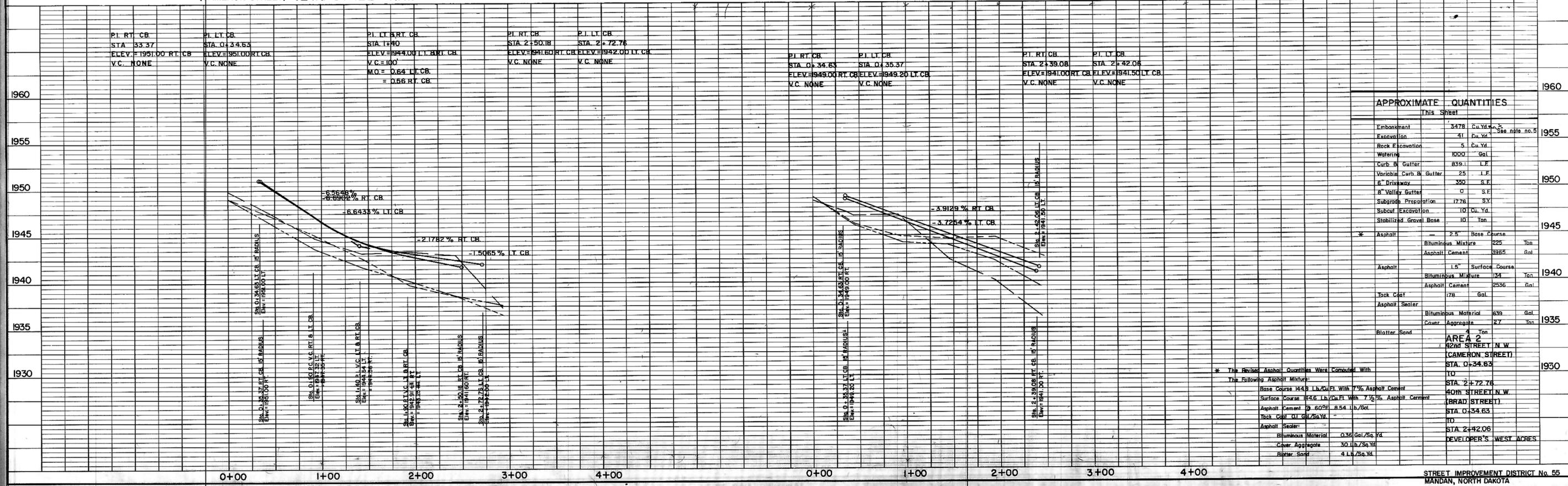
- NOTES:
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb unless otherwise stated.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Embankment quantities shown include an assumed 25% shrinkage factor.

LEGEND

(EXISTING)	CENTERLINE
(EXISTING)	50' LT.
(EXISTING)	50' RT.
(EXISTING)	WATERMAINS
(EXISTING)	HYDRANTS
(EXISTING)	GATE VALVES
(EXISTING)	TEES
(EXISTING)	PLUGS
(EXISTING)	SANITARY SEWER
(EXISTING)	SAN. SEWER MH

(CAMERON STREET) 42nd STREET N.W.

(BRAD STREET) 40th STREET N.W.



APPROXIMATE QUANTITIES

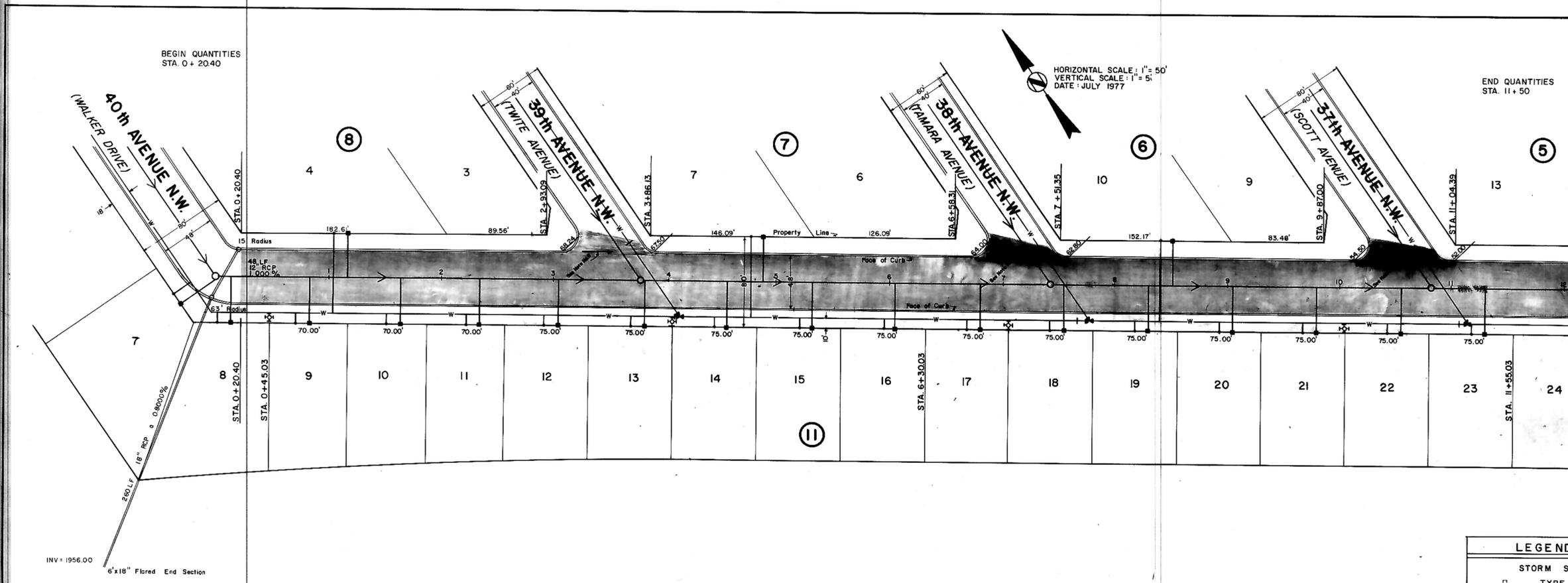
Item	Quantity	Unit
Embankment	3478	Cu. Yd.
Excavation	41	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Watering	1000	Gal.
Curb & Gutter	859.1	L.F.
Variable Curb & Gutter	25	L.F.
8" Driveway	350	S.F.
8" Valley Gutter	0	S.F.
Subgrade Preparation	1776	S.Y.
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton.
Asphalt	225	Base Course
Asphalt Cement	3365	Gal.
Asphalt	15	Surface Course
Asphalt Cement	2536	Gal.
Tack Coat	178	Gal.
Asphalt Sealer	639	Gal.
Blotter Sand	27	Ton.

AREA 2
 42nd STREET N.W.
 (CAMERON STREET)
 STA. 0+34.63
 TO
 STA. 2+72.76
 40th STREET N.W.
 (BRAD STREET)
 STA. 0+34.63
 TO
 STA. 2+42.06
 DEVELOPER'S WEST ACRES.

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 14.8 lb./Cu. Ft. With 7% Asphalt Cement
 Surface Course 14.6 lb./Cu. Ft. With 7 1/2% Asphalt Cement
 Asphalt Cement @ 60% 8.54 lb./60l
 Tack Coat 0.1 Gal./Sq. Yd.
 Asphalt Sealer
 Bituminous Material 0.36 Gal./Sq. Yd.
 Cover Aggregate 30 lb./Sq. Yd.
 Blotter Sand 4 lb./Sq. Yd.

DATE	
BY	
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NO.	
DATE	
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DATE	
BY	
REVISION	
NO.	



- NOTES:**
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb unless otherwise stated.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Embankment quantities shown include an assumed 25% shrinkage factor.
 - Depress crown and tip gutter section to allow drainage to flow across intersection as indicated.

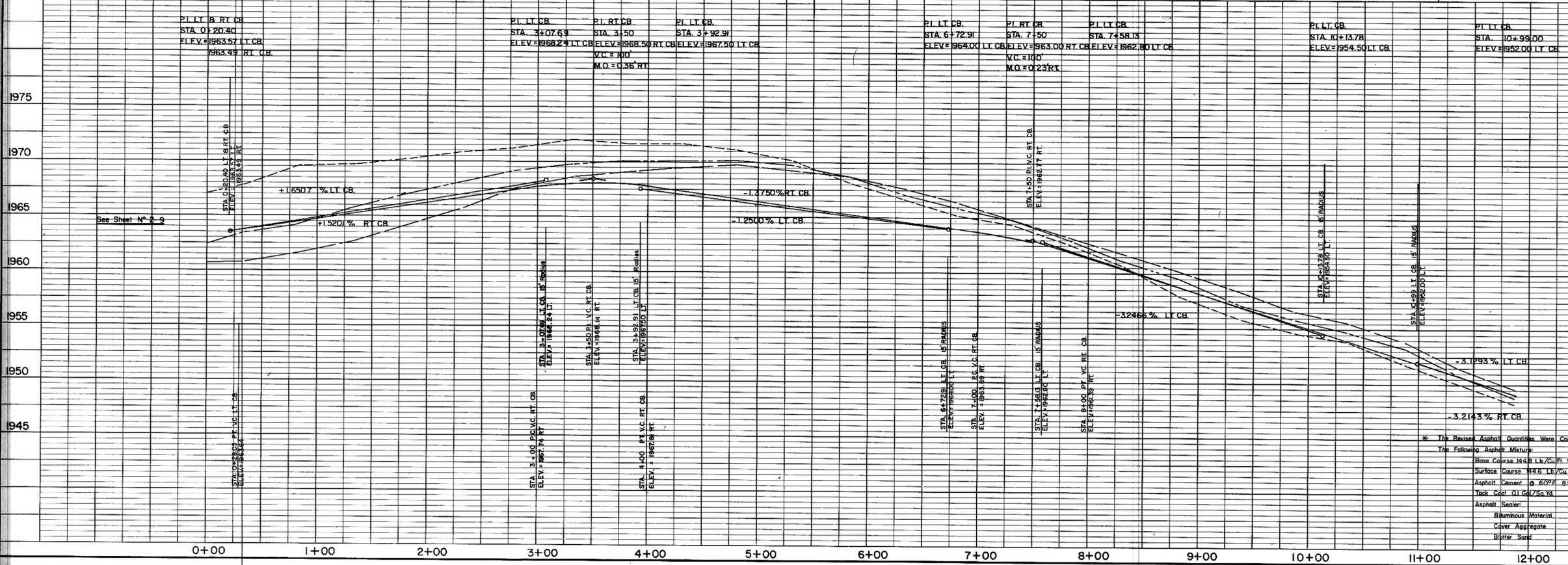
LEGEND

—	(EXISTING) CENTERLINE
- - -	50' LT.
- - -	50' RT.
W	(EXISTING) WATERMANS
H	HYDRANTS
G	GATE VALVES
T	TEES
P	PLUGS
S	SANITARY SEWER
NS	SAN. SEWER NH

LEGEND

□	STORM SEWER TYPE A
□	TYPE B
□	TYPE C

(WALKER DRIVE) 37th STREET N.W.



APPROXIMATE QUANTITIES

This Sheet	
Embankment	436 Cu. Yd.
Excavation	6480 Cu. Yd.
Rock Excavation	5 Cu. Yd.
Watering	1000 Gal.
Curb & Gutter	2193 L.F.
Variable Curb & Gutter	0 L.F.
8" Driveway	0 S.F.
8" Valley Gutter	0 S.F.
Subgrade Preparation	5959 S.Y.
Subcut Excavation	10 Cu. Yd.
Stabilized Gravel Base	10 Ton.
Asphalt	2.5" Base Course
Bituminous Mixture	752 Ton.
Asphalt Cement	13,262 Gal.
Asphalt	1.5" Surface Course
Bituminous Mixture	451 Ton.
Asphalt Cement	8514 Gal.
Rock Coat	596 Gal.
Asphalt Sealer	596 Gal.
Bituminous Material	2145 Gal.
Cover Aggregate	89 Ton.
Blotter Sand	12 Ton.
Storm Sewer	NONE

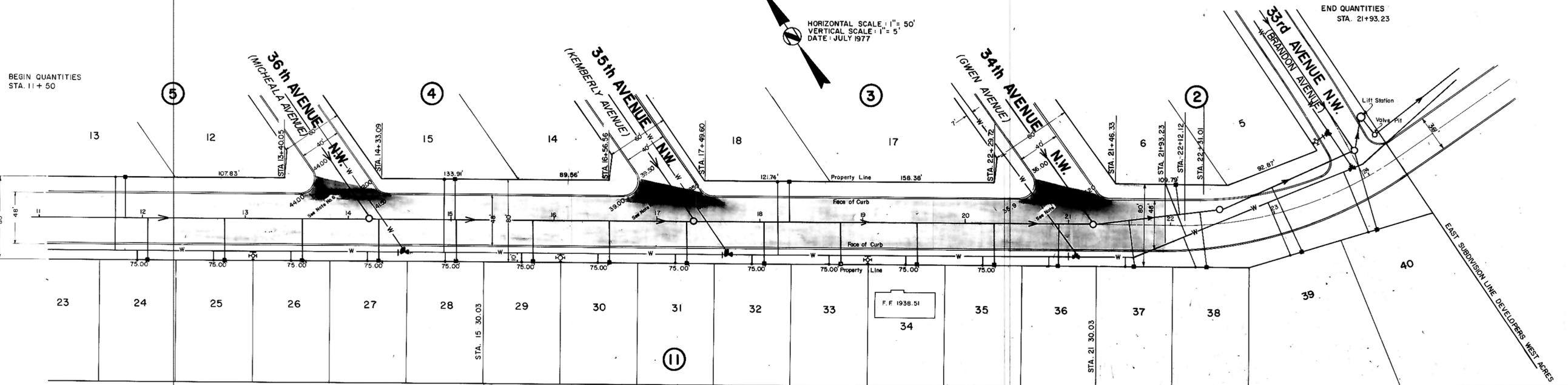
* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 14.4 Lb./Cu.Ft. With 7% Asphalt Cement
 Surface Course 14.6 Lb./Cu.Ft. With 7.2% Asphalt Cement
 Asphalt Cement @ 60°F 8.54 lb./Gal.
 Rock Coat 0.10 lb./Sq. Yd.
 Asphalt Sealer
 Bituminous Material 0.36 Gal./Sq. Yd.
 Cover Aggregate 30 lb./Sq. Yd.
 Blotter Sand 4 Lb./Sq. Yd.

AREA 2
 37th STREET N.W.
 (WALKER DRIVE)
 STA. 0+20.40
 TO
 STA. 11+50
 DEVELOPER'S WEST ACRES

STREET IMPROVEMENT DISTRICT No. 55
 MANDAN, NORTH DAKOTA

PLAN
 REVISIONS
 PHOTO
 ALIGNMENT CHECKER
 RECORD CHECKER
 No.

PROFILE
 REVISIONS
 PHOTO
 GRADES CHECKER
 STRUCTURE NOTATIONS CHECKER
 No.



HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'
 DATE: JULY 1977

END QUANTITIES
 STA. 21+93.23

BEGIN QUANTITIES
 STA. 11+50

SOUTH SUBDIVISION LINE DEVELOPERS
 WEST ACRES

VALLEY GUTTERS WERE
 DELETED IN 1977 AS
 REQUESTED BY T. POTHOFF

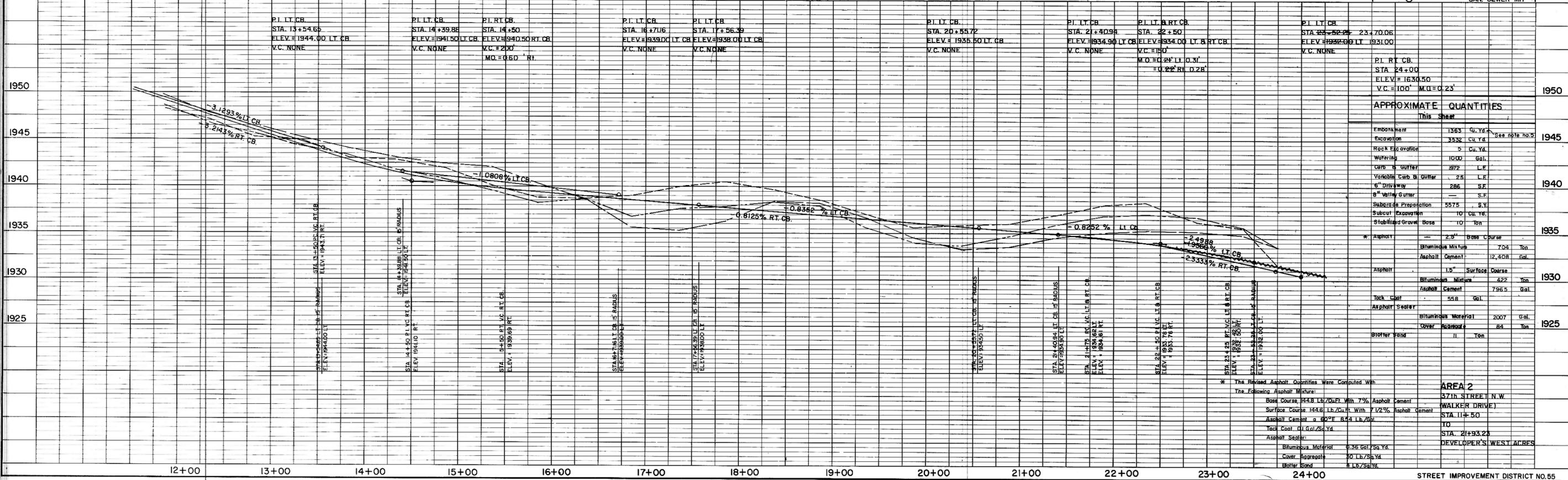
NOTES:

- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
- All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
- Proposed grades are to top of curb unless otherwise stated.
- City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
- Embankment quantities shown include an assumed 25% shrinkage factor.
- Depress crown and tip gutter section to allow drainage to flow across intersection as indicated.

LEGEND

(---)	(EXISTING) CENTERLINE
(---)	50' LT.
(---)	50' RT.
(---)	(EXISTING) WATERMAINS
(---)	HYDRANTS
(---)	GATE VALVES
(---)	TEES
(---)	PLUGS
(---)	SANITARY SEWER
(---)	SAN. SEWER MH

(WALKER DRIVE) 37th STREET N.W.



APPROXIMATE QUANTITIES

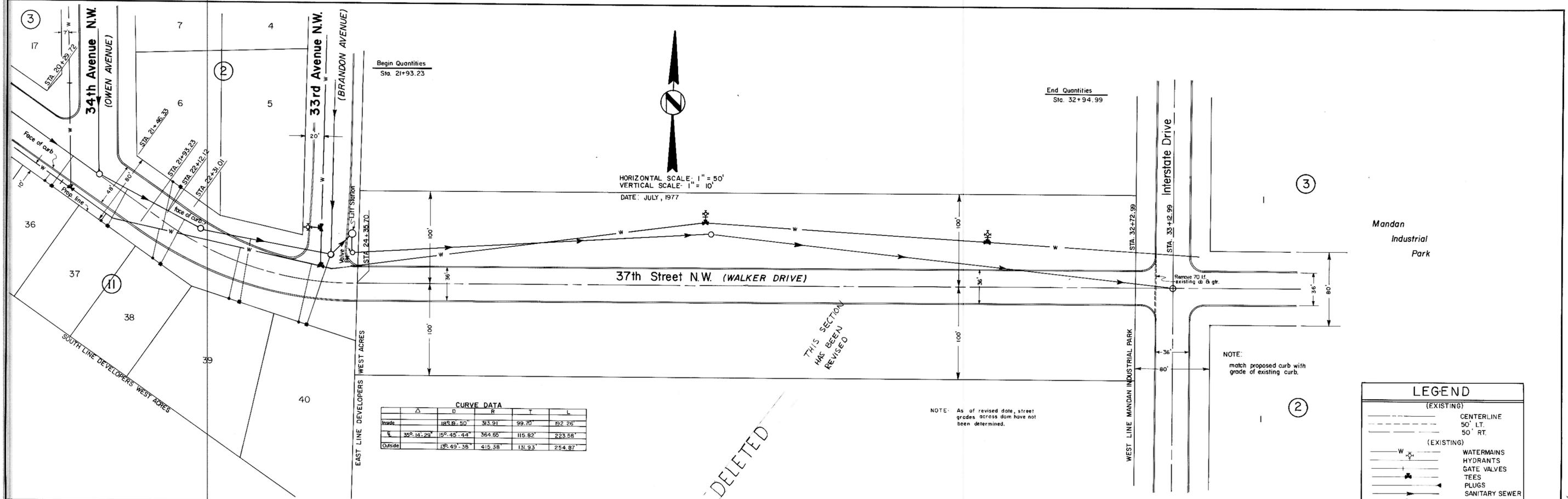
Item	Quantity	Unit
Embankment	1363	Cu. Yd.
Excavation	3332	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Waterline	1000	Gal.
Curb & gutter	872	L.F.
Variable Curb & gutter	25	L.F.
5" Driveway	286	S.F.
6" Water Gutter		S.F.
Subgrade Preparation	5575	S.Y.
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton
Asphalt	2.31	Base Course
Bituminous Mixture	704	Ton
Asphalt Cement	12,408	Gal.
Asphalt	1.5	Surface Course
Bituminous Mixture	422	Ton
Asphalt Cement	7965	Gal.
Rock Coat	568	Gal.
Asphalt Sealers		
Bituminous Material	2007	Gal.
Cover	84	Ton
Grout Sand	11	Ton

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course: 144.8 Lb./Cu.Yd. With 7% Asphalt Cement
 Surface Course: 144.6 Lb./Cu.Yd. With 7 1/2% Asphalt Cement
 Asphalt Cement: a 60°F R44 Lb./Gal.
 Rock Coat: 1.1 Gal./Sq.Yd.
 Asphalt Sealers:
 Bituminous Material: 0.35 Gal./Sq.Yd.
 Cover: Aggregate: 40 Lb./Sq.Yd.
 Grout Sand: 1 Lb./Sq.Yd.

AREA 2
 37th STREET N.W.
 WALKER DRIVE
 STA. 11+50
 TO
 STA. 21+93.23
 DEVELOPER'S WEST ACRES

DATE
BY
SURVEYED
NOTED
ALIGNED
CHECKED
NO. 1

DATE
BY
SURVEYED
NOTED
ALIGNED
CHECKED
NO. 1



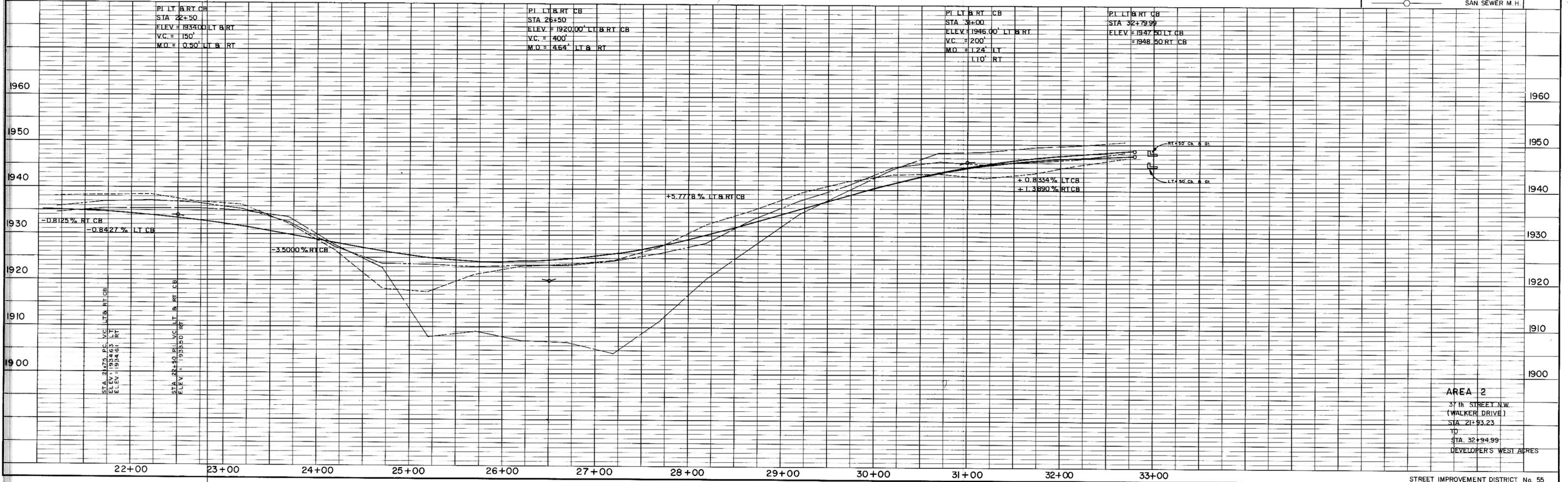
CURVE DATA

	D	R	T	L
Inside	185.850'	313.91'	99.70'	132.26'
Outside	365.4423'	155.4544'	364.65'	115.82'
Outside	185.4938'	415.38'	131.93'	254.87'

LEGEND

(EXISTING)
--- CENTERLINE
--- 50' LT.
--- 50' RT.

(EXISTING)
W --- WATERMAINS
H --- HYDRANTS
+ --- GATE VALVES
T --- TEES
P --- PLUGS
S --- SANITARY SEWER
O --- SAN SEWER M.H.



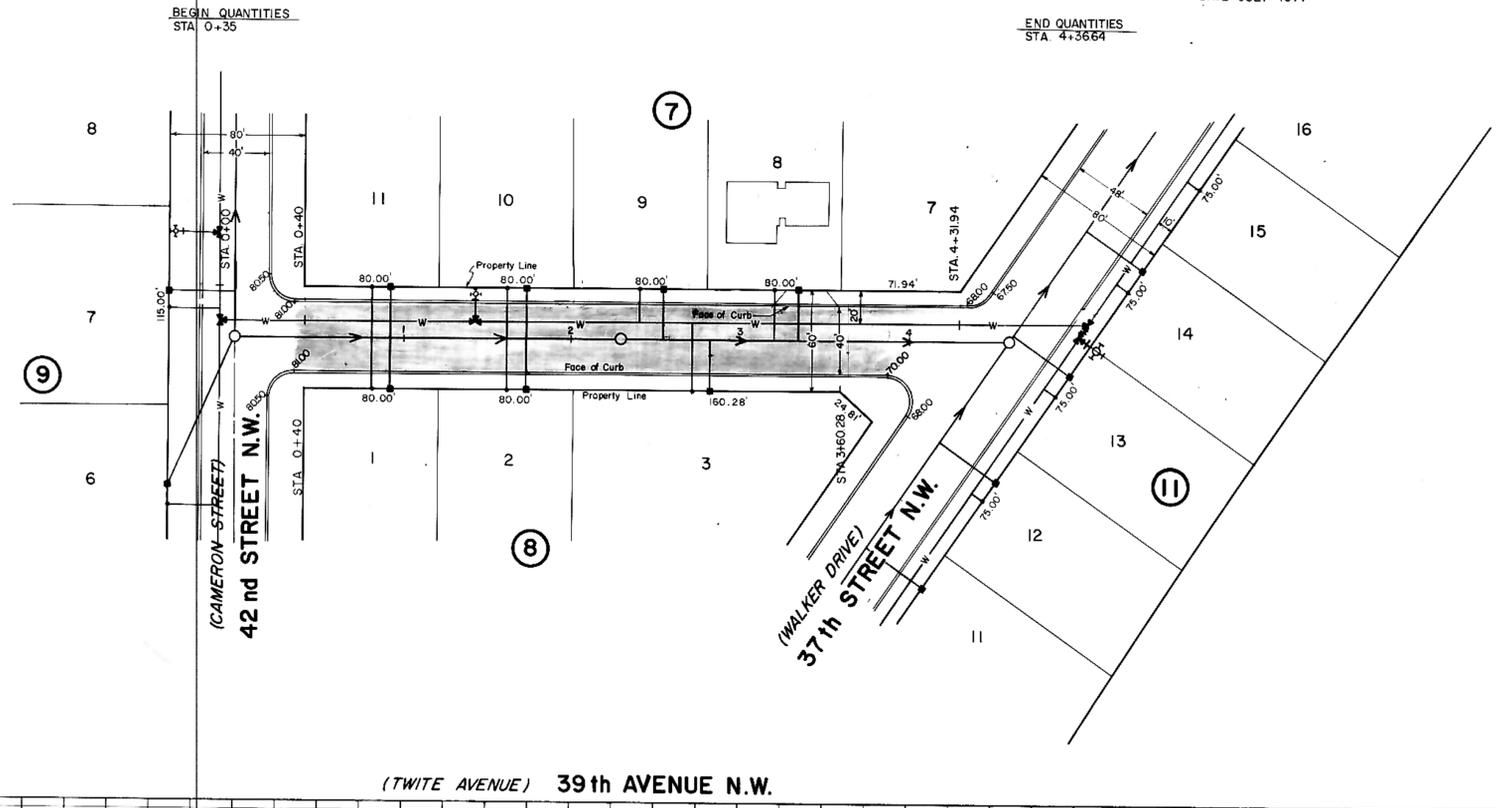
AREA 2
37th STREET N.W.
(WALKER DRIVE)
STA 21+93.23
TO
STA 32+94.99
DEVELOPERS' WEST ACRES

PLAN
 SURVEYED BY
 PLOTTED BY
 NOTE BOOK NO.
 DATE

PROFILE
 SURVEYED BY
 NOTE BOOK NO.
 DATE

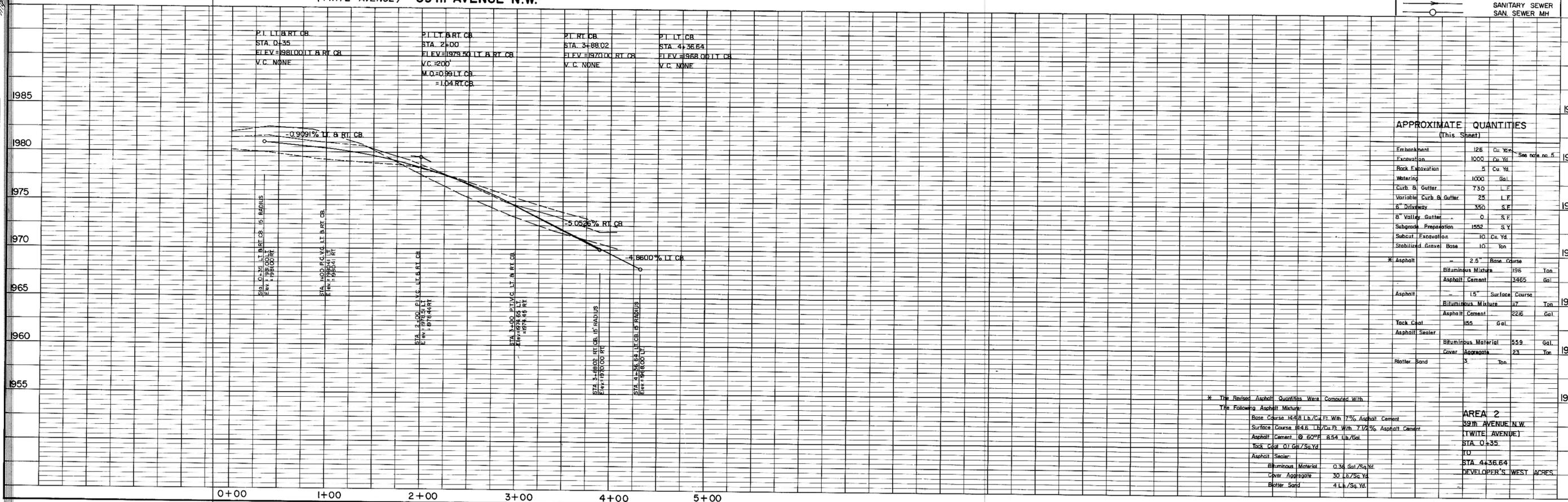
HORIZONTAL SCALE: 1"=50'
 VERTICAL SCALE: 1"=5'
 DATE: JULY 1977

- NOTES:**
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb unless otherwise stated.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Embankment quantities shown include an assumed 25% shrinkage factor.



LEGEND

(---)	(EXISTING) CENTERLINE
(---)	50' LT.
(---)	50' RT.
(---)	(EXISTING) WATERMAINS
(---)	HYDRANTS
(---)	GATE VALVES
(---)	TEES
(---)	PLUGS
(---)	SANITARY SEWER
(---)	SAN. SEWER MH



APPROXIMATE QUANTITIES
 (This Sheet)

Embankment	128	Cu. Yd.	See note no. 5
Excavation	1000	Cu. Yd.	
Rock Excavation	5	Cu. Yd.	
Watering	1000	Gal.	
Curb & Gutter	730	L.F.	
Variable Curb & Gutter	25	L.F.	
6" Driveway	350	S.F.	
8" Valley Gutter	0	S.F.	
Subgrade Preparation	1552	S.Y.	
Subcut Excavation	10	Cu. Yd.	
Stabilized Gravel Base	10	Ton	
Asphalt	2.5"	Base Course	
Bituminous Mixture	196	Ton	
Asphalt Cement	3465	Gal.	
Asphalt	1.5"	Surface Course	
Bituminous Mixture	17	Ton	
Asphalt Cement	226	Gal.	
Tack Coat	155	Gal.	
Asphalt Sealer			
Bituminous Material	559	Gal.	
Cover Aggregate	23	Ton	
Filter Sand	5	Ton	

The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 14.48 Lb./Cu. Ft. With 7% Asphalt Cement
 Surface Course 14.6 Lb./Cu. Ft. With 7.12% Asphalt Cement
 Asphalt Cement @ 60°F 8.54 Lb./Gal.
 Tack Coat 0.1 Gal./Sq. Yd.
 Asphalt Sealer:
 Bituminous Material 0.36 Gal./Sq. Yd.
 Cover Aggregate 30 Lb./Sq. Yd.
 Filter Sand 4 Lb./Sq. Yd.

AREA 2
 39th AVENUE N.W.
 TWITE AVENUE
 STA. 0+35
 STA. 4+36.64
 DEVELOPER'S WEST ACRES

PLATE 1, PLAN/PROFILE
 KRUEFFEL & ESSER CO.
 48 7024 MADE IN U.S.A.

STREET IMPROVEMENT DISTRICT No. 55
 MANDAN, NORTH DAKOTA
 SHEET No. 2-10
 DATE REVISED—February, 1978

PLAN
 SURVEYED BY
 NOTED BY
 NOTE BOOK NO.
 ALUMINUM CHECKED BY
 PLANNING CHECKED BY

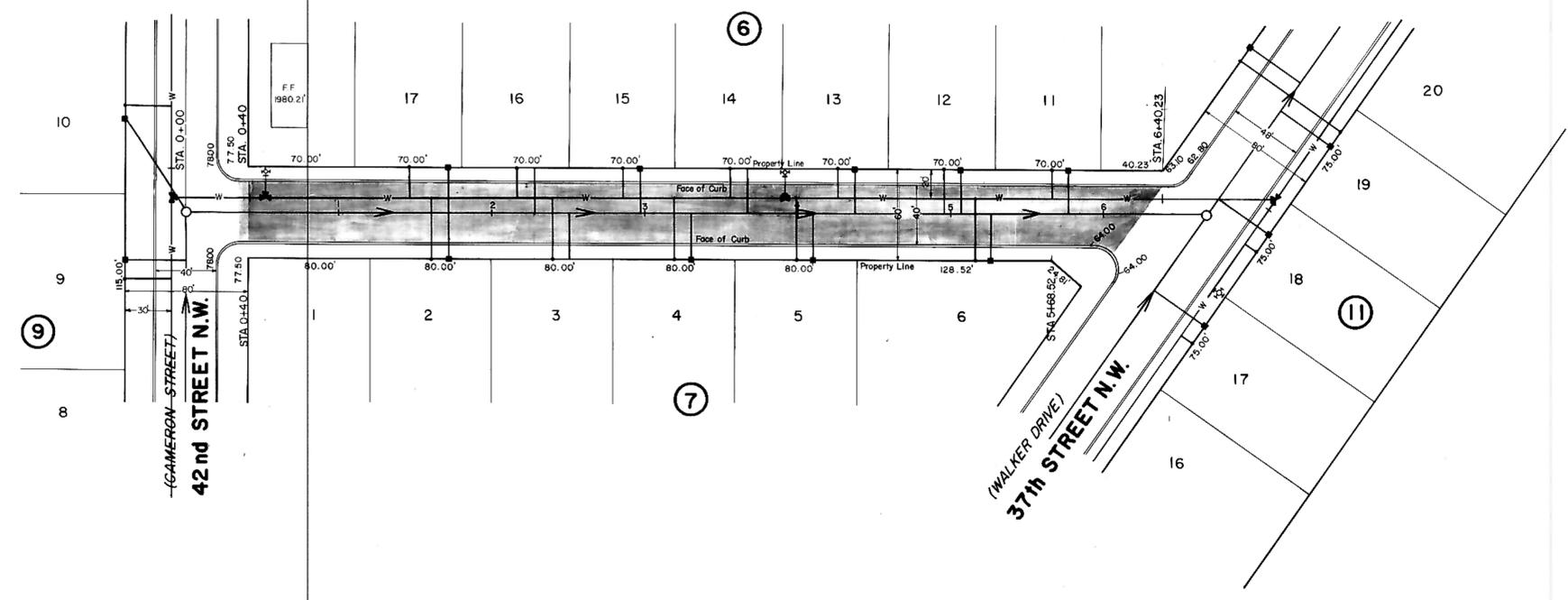
PROFILE
 SURVEYED BY
 NOTED BY
 NOTE BOOK NO.
 ALUMINUM CHECKED BY
 PLANNING CHECKED BY



HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'
 DATE: JULY, 1977

BEGIN QUANTITIES
 STA 0+35

END QUANTITIES
 STA 6+44.93

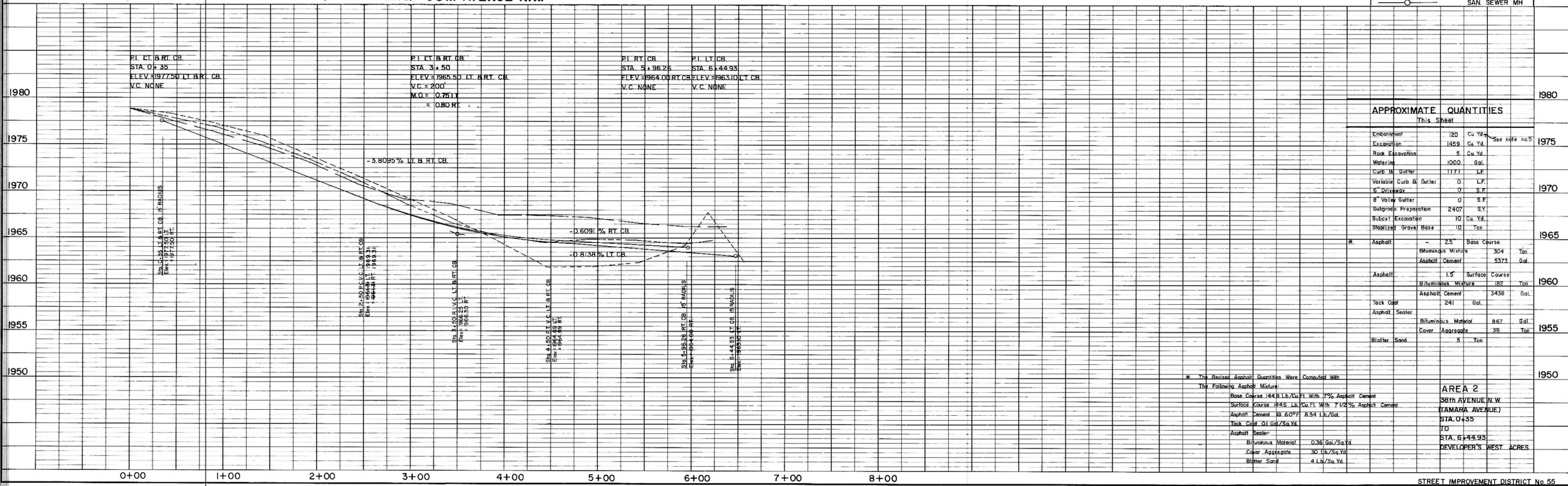


(TAMARA AVENUE) 38th AVENUE N.W.

- NOTES:
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
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 - Proposed grades are to top of curb unless otherwise stated.
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 - Embankment quantities shown include an assumed 25% shrinkage factor.

LEGEND

(EXISTING)	---	CENTERLINE
(EXISTING)	---	50' L.T.
(EXISTING)	---	50' RT.
(EXISTING)	W	WATERMAINS
(EXISTING)	H	HYDRANTS
(EXISTING)	G	GATE VALVES
(EXISTING)	T	TEES
(EXISTING)	P	PLUGS
(EXISTING)	S	SANITARY SEWER
(EXISTING)	M	SAN. SEWER MH



APPROXIMATE QUANTITIES
 This Sheet

Embankment	120	Cu Yd.	See note no. 5
Excavation	1359	Cu Yd.	
Rock Excavation	5	Cu Yd.	
Waterline	1000	Gal.	
Curb & Gutter	1171	LF	
Variable Curb & Gutter	0	S.F.	1970
8" Driveway	0	S.F.	
8" Valley Gutter	0	S.F.	1965
Subgrade Preparation	2407	S.Y.	
Subcut Excavation	10	Cu Yd.	
Stabilized Gravel Base	10	Ton	
Asphalt	2.5"	Base Course	1960
Bituminous Mixture	304	Ton	
Asphalt Cement	5373	Gal.	1960
Asphalt	1.5"	Surface Course	
Bituminous Mixture	182	Ton	1960
Asphalt Cement	3438	Gal.	
Tack Coat	241	Gal.	1955
Asphalt Sealer			
Bituminous Material	867	Gal.	
Cover Aggregate	35	Ton	1955
Blotter Sand	5	Ton	

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixtures:
 Base Course 144 Lb./Cu. Ft. With 7% Asphalt Cement
 Surface Course 246 Lb./Cu. Ft. With 7 1/2% Asphalt Cement
 Asphalt Cement @ 60°F 8.54 Lb./Gal.
 Tack Coat .01 Gal./Sq. Yd.
 Asphalt Sealer:
 Bituminous Material 0.36 Gal./Sq. Yd.
 Cover Aggregate 30 Lb./Sq. Yd.
 Blotter Sand 4 Lb./Sq. Yd.

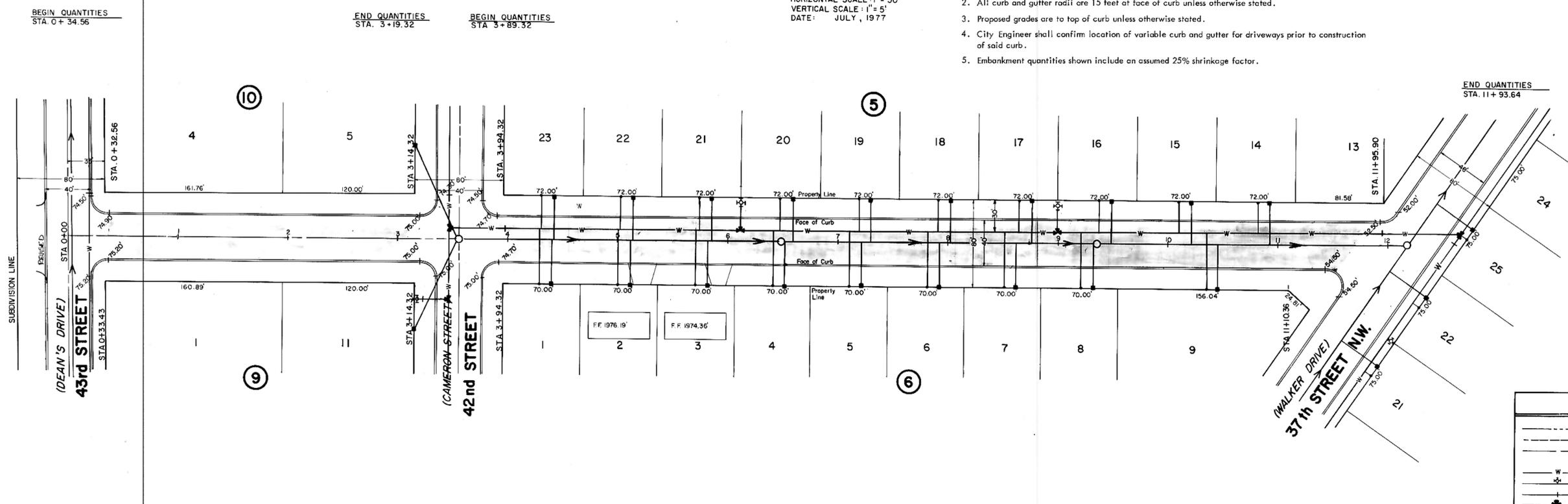
AREA 2
 38th AVENUE N.W.
 (TAMARA AVENUE)
 STA. 0+35
 STA. 6+44.93
 DEVELOPER'S WEST ACRES

PLAN
 DRAWN BY: KOTTID
 CHECKED BY: EC. OF WAY ENGINEER
 DATE: _____

PROFILE
 DRAWN BY: _____
 CHECKED BY: _____
 DATE: _____

HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'
 DATE: JULY, 1977

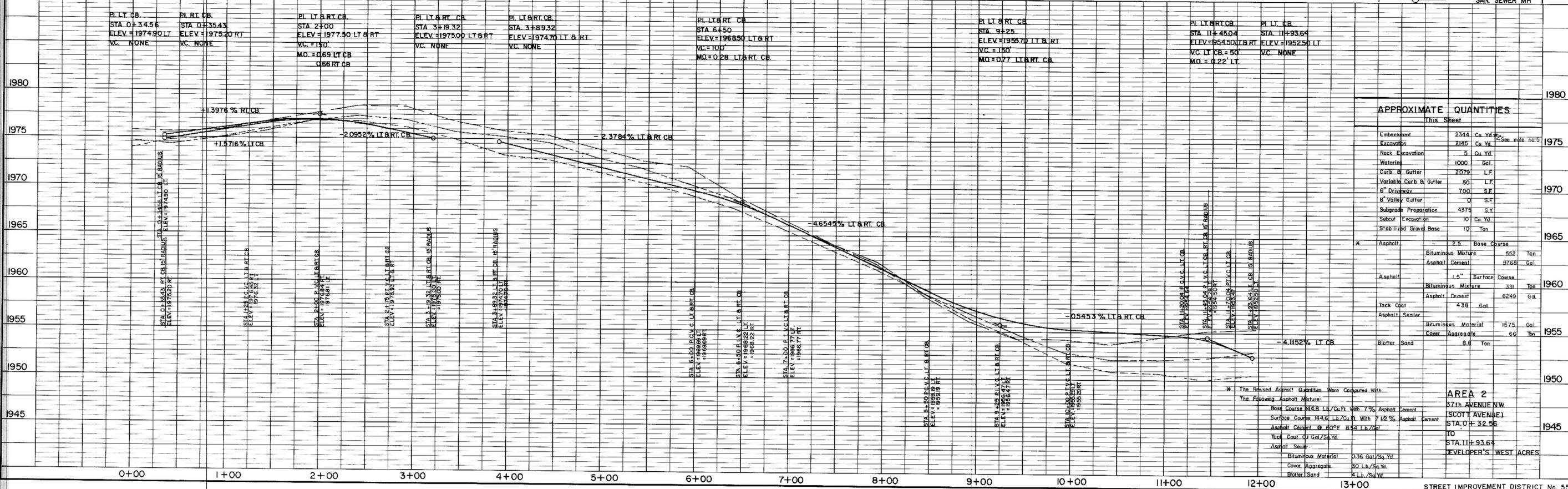
- NOTES:
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
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 - Proposed grades are to top of curb unless otherwise stated.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Embankment quantities shown include an assumed 25% shrinkage factor.



LEGEND

(---)	(EXISTING) CENTERLINE
(---)	50' LT.
(---)	50' RT.
(---)	(EXISTING) WATERMANS
(---)	HYDRANTS
(---)	GATE VALVES
(---)	TEES
(---)	PLUGS
(---)	SANITARY SEWER
(---)	SAN. SEWER MH

(SCOTT AVENUE) 37th AVENUE N.W.



APPROXIMATE QUANTITIES

Item	Quantity	Unit
Embankment	2544	Cu. Yd.
Excavation	2145	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Waterline	1000	Gal.
Curb & Gutter	2079	L.F.
Variable Curb & Gutter	50	L.F.
6" Driveway	700	S.F.
8" Valley Gutter	0	S.F.
Subgrade Preparation	4374	S.Y.
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton
Asphalt	2.5	Base Course
Bituminous Mixture	552	Ton
Asphalt Cement	9768	Gal.
Asphalt	1.5	Surface Course
Bituminous Mixture	331	Ton
Asphalt Cement	6249	Gal.
Jack Coat	438	Gal.
Asphalt Sealer		
Bituminous Material	1575	Gal.
Cover Aggregate	66	Ton
Blotter Sand	8.8	Ton

PLATE 1, PLAN-PROFILE
 KEUFEL & ESSER CO.
 48 7024 MADE IN U.S.A.

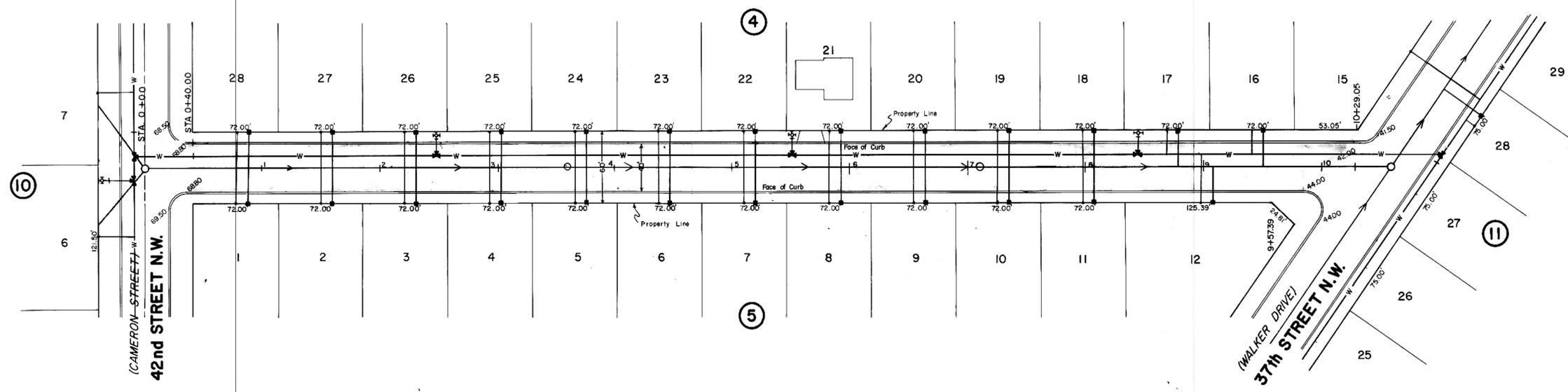
STREET IMPROVEMENT DISTRICT No. 55
 MANDAN, NORTH DAKOTA

DATE REVISED - February, 1978
 SHEET No. 2-12

HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'
 DATE: JULY, 1977

BEGIN QUANTITIES
 STA 0+35

END QUANTITIES
 STA 10+33.75

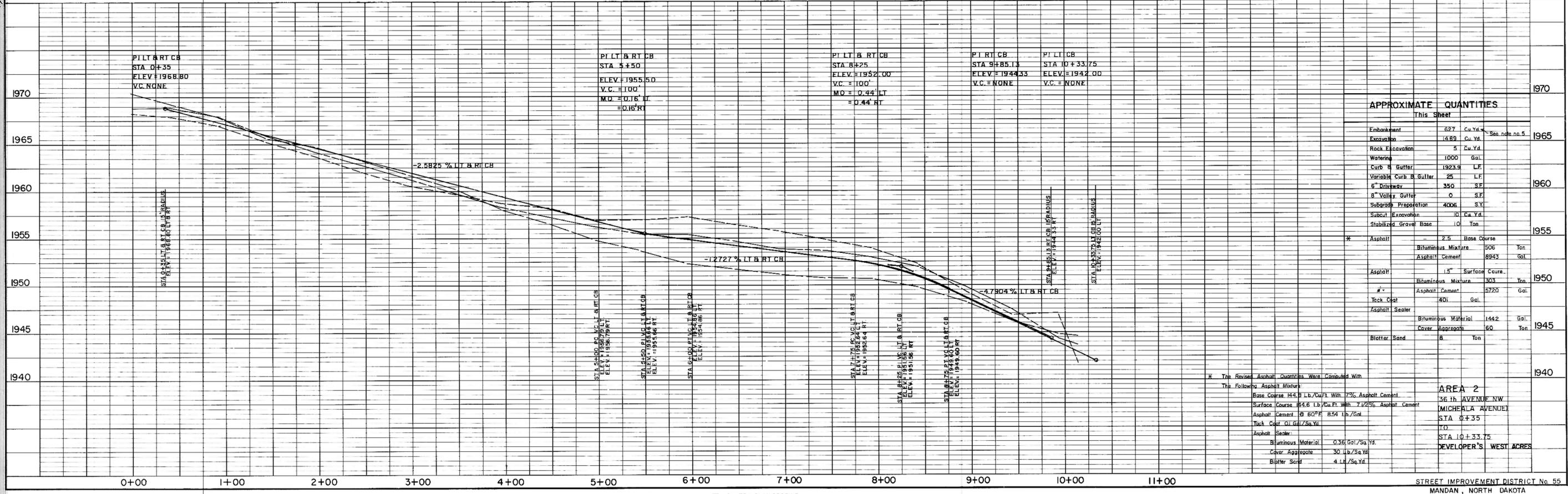


- NOTES:**
1. Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
 2. All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 3. Proposed grades are to top of curb unless otherwise stated.
 4. City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 5. Embankment quantities shown include an assumed 25% shrinkage factor.

LEGEND

---	EXISTING CENTERLINE
---	50' LT.
---	50' RT.
---	(EXISTING)
W	WATERMAINS
H	HYDRANTS
G	GATE VALVES
T	TEES
P	PLUGS
S	SANITARY SEWER
SM	SAN. SEWER MH

(MICHEALA AVENUE) 36th AVENUE N.W.



APPROXIMATE QUANTITIES

This Sheet		See note no. 5	
Embankment	627 Cu. Yd.		
Excavation	1489 Cu. Yd.		
Rock Excavation	5 Cu. Yd.		
Watering	1000 Gal.		
Curb & Gutter	1923.9 LF		
Variable Curb & Gutter	25 LF		
6" Driveway	350 SF		
8" Valley Gutter	0 SF		
Subgrade Preparation	4006 SF		
Subcut Excavation	0 Cu. Yd.		
Stabilized Gravel Base	10 Ton		
Asphalt	2.5 Base Course		
Bituminous Mixture	505 Ton		
Asphalt Cement	8943 Gal.		
Asphalt	1.5" Surface Course		
Bituminous Mixture	303 Ton		
Asphalt Cement	5720 Gal.		
Tack Coat	401 Gal.		
Asphalt Sealer			
Bituminous Material	1442 Gal.		
Cover Aggregate	60 Ton		
Blotter Sand	8 Ton		

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course M4.8 Lb./Cu.Ft. With 7% Asphalt Cement
 Surface Course M4.6 Lb./Cu.Ft. With 7.12% Asphalt Cement
 Asphalt Cement @ 60°F 8.54 Lb./Gal.
 Tack Coat @ 60°F 7.50 Lb./Sq.Yd.
 Asphalt Sealer:
 Bituminous Material 0.36 Gal./Sq.Yd.
 Cover Aggregate 30 Lb./Sq.Yd.
 Blotter Sand 4 Lb./Sq.Yd.

AREA 2
 36th AVENUE NW
 (MICHEALA AVENUE)
 STA 0+35
 STA 10+33.75
 DEVELOPER'S WEST ACRES

PLAN
 SHEET NO. 2-13
 DATE: FEBRUARY, 1978

PROFILE
 SHEET NO. 2-13
 DATE: FEBRUARY, 1978

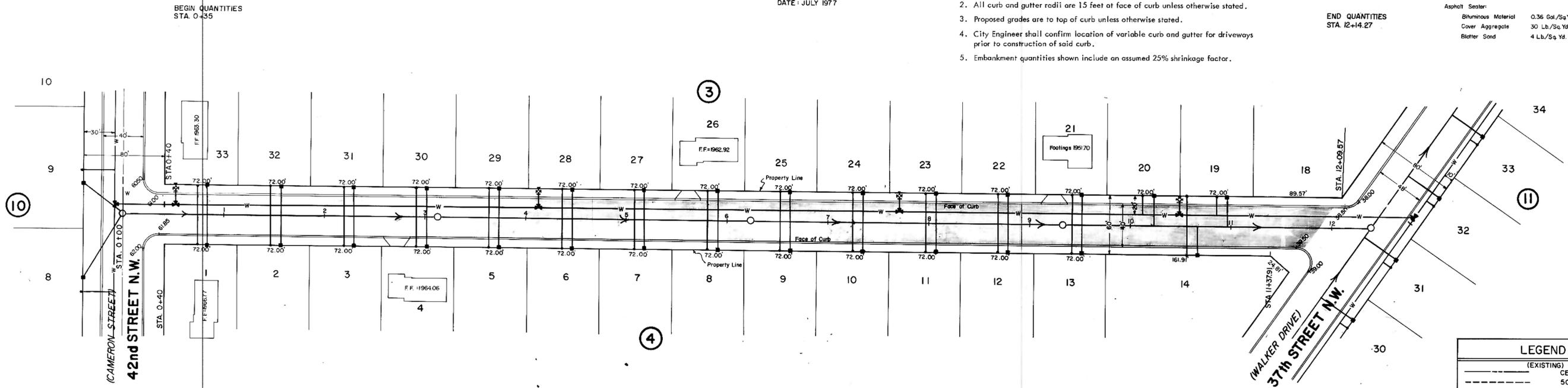
PLAN
 SURVEYED, PLOTTED, ALIGNED, CHECKED, REVISIONS
 NOTE BOOK No. _____
 DATE _____

PROFILE
 SURVEYED, PLOTTED, ALIGNED, CHECKED, REVISIONS
 NOTE BOOK No. _____
 DATE _____

HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'
 DATE: JULY 1977

- NOTES:
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 - Embankment quantities shown include an assumed 25% shrinkage factor.

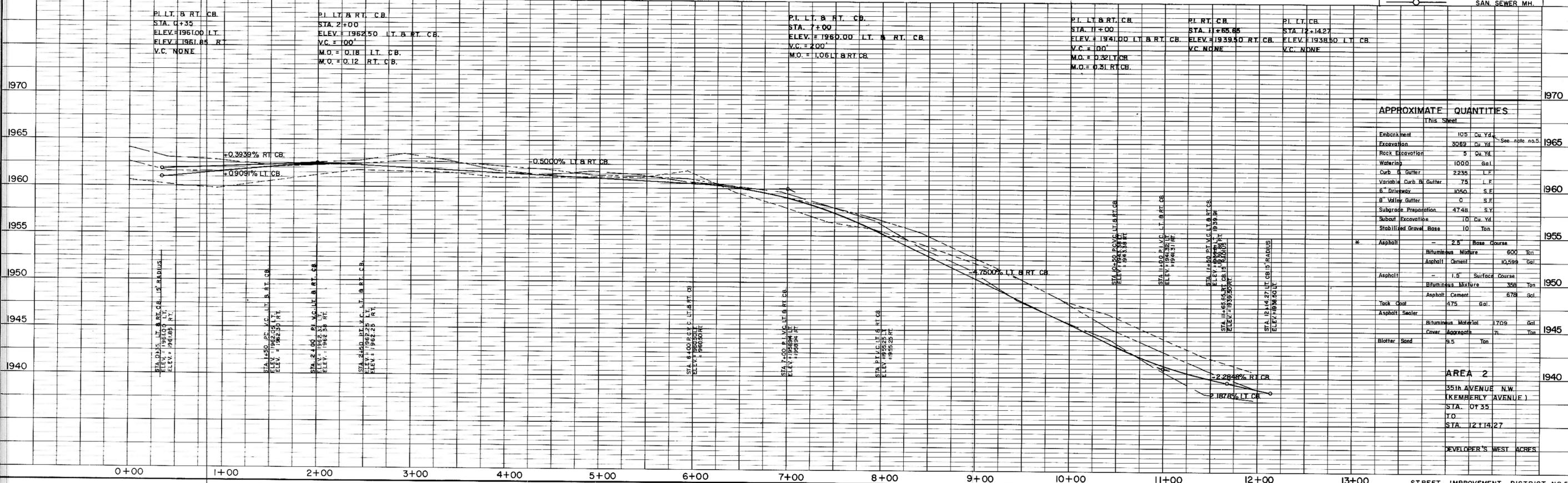
* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 144.8 Lb./Cu.Ft. With 7% Asphalt Cement
 Surface Course 144.6 Lb./Cu.Ft. With 7 1/2% Asphalt Cement
 Asphalt Cement @ 60°F 8.54 Lb./Gal.
 Tack Coat 0.1 Gal./Sq.Yd.
 Asphalt Sealer:
 Bituminous Material 0.36 Gal./Sq.Yd.
 Cover Aggregate 30 Lb./Sq.Yd.
 Blotter Sand 4 Lb./Sq.Yd.



(KEMBERLY AVENUE) 35th AVENUE N.W.

LEGEND

(---)	(EXISTING) CENTERLINE
(---)	50' LT.
(---)	50' RT.
(---)	(EXISTING) WATERMAINS
(---)	HYDRANTS
(---)	GATE VALVES
(---)	TEES
(---)	PLUGS
(---)	SANITARY SEWER
(---)	SAN. SEWER MH.



APPROXIMATE QUANTITIES

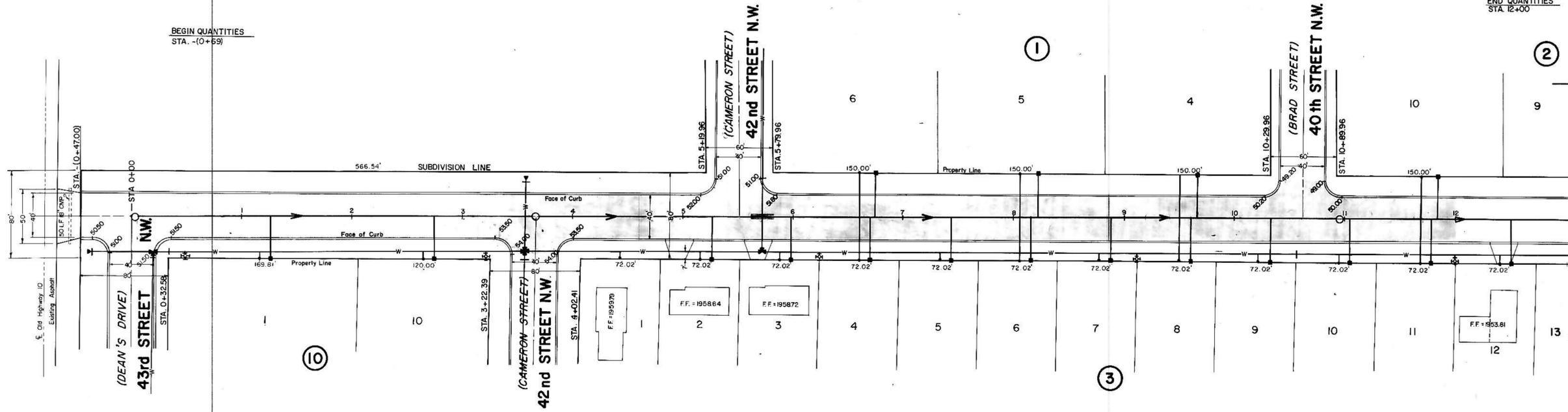
Item	Quantity
Embankment	105 Cu. Yd.
Excavation	3069 Cu. Yd.
Rock Excavation	5 Cu. Yd.
Watering	1000 Gal.
Curb & Gutter	2235 L.F.
Variable Curb & Gutter	75 L.F.
8" Driveway	1050 S.F.
8" Valley Gutter	0 S.F.
Subgrade Preparation	4748 S.Y.
Subsoil Excavation	10 Cu. Yd.
Stabilized Gravel Base	10 Ton.
Asphalt	2.5" Base Course
Bituminous Mixture	600 Ton.
Asphalt Cement	10,599 Gal.
Asphalt	1.5" Surface Course
Bituminous Mixture	308 Ton.
Asphalt Cement	678 Gal.
Tack Coat	475 Gal.
Asphalt Sealer	
Bituminous Material	1709 Gal.
Cover Aggregate	71 Ton.
Blotter Sand	5.5 Ton.

AREA 2
 35th AVENUE N.W.
 (KEMBERLY AVENUE)
 STA. 0+35
 TO
 STA. 12+14.27
 DEVELOPER'S WEST ACRES

HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'
 DATE: JULY, 1977

BEGIN QUANTITIES
 STA. -(0+69)

END QUANTITIES
 STA. 12+00



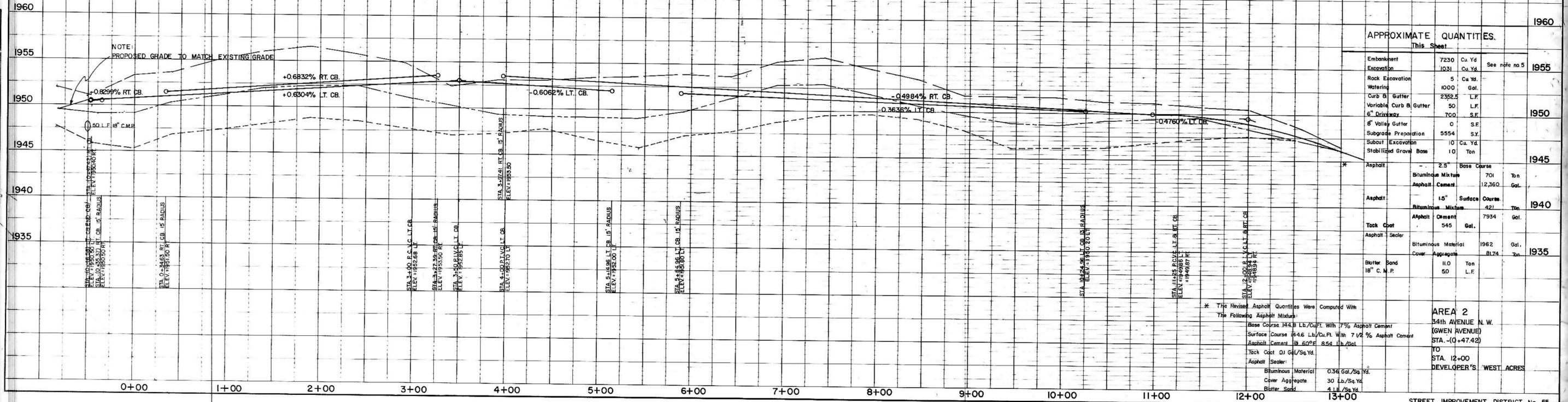
- NOTES:
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 - Embankment quantities shown include an assumed 25% shrinkage factor.

LEGEND

(EXISTING)	CENTERLINE
(EXISTING)	50' LT.
(EXISTING)	50' RT.
(EXISTING)	WATERMAINS
(EXISTING)	HYDRANTS
(EXISTING)	GATE VALVES
(EXISTING)	TEES
(EXISTING)	PLUGS
(EXISTING)	SANITARY SEWER
(EXISTING)	SAN. SEWER MH

(GWEN AVENUE) 34th AVENUE N.W.

P.I. RT. CB. STA. -(0+47.42) ELEV. = 1950.40 RT. CB. ELEV. = 1950.50 LT. CB. ELEV. = 1951.50 RT. CB. V.C. NONE	P.I. LT. CB. STA. -(0+46.58) ELEV. = 1950.50 LT. CB. ELEV. = 1951.50 RT. CB. V.C. NONE	P.I. RT. CB. STA. -(0+35.37) ELEV. = 1951.50 RT. CB. ELEV. = 1951.50 RT. CB. V.C. NONE	P.I. RT. CB. STA. 0+34.63 ELEV. = 1951.50 RT. CB. ELEV. = 1951.50 RT. CB. V.C. NONE	P.I. RT. CB. STA. 3+27.39 ELEV. = 1953.50 RT. CB. ELEV. = 1953.00 LT. CB. ELEV. = 1953.50 RT. CB. ELEV. = 1952.00 LT. CB. ELEV. = 1951.80 LT. CB. V.C. = 100' M.O. = 0.15 LT. CB.	P.I. LT. CB. STA. 3+50 ELEV. = 1953.00 LT. CB. ELEV. = 1953.00 LT. CB. ELEV. = 1952.00 LT. CB. ELEV. = 1951.80 LT. CB. V.C. NONE	P.I. RT. CB. STA. 3+97.41 ELEV. = 1953.50 RT. CB. ELEV. = 1952.00 LT. CB. ELEV. = 1951.80 LT. CB. V.C. NONE	P.I. LT. CB. STA. 5+14.96 ELEV. = 1952.00 LT. CB. ELEV. = 1951.80 LT. CB. V.C. NONE	P.I. LT. CB. STA. 5+84.96 ELEV. = 1952.00 LT. CB. ELEV. = 1951.80 LT. CB. V.C. NONE	P.I. LT. CB. STA. 10+24.96 ELEV. = 1950.20 LT. CB. ELEV. = 1950.00 LT. CB. V.C. NONE	P.I. LT. CB. STA. 10+94.96 ELEV. = 1950.00 LT. CB. ELEV. = 1949.50 LT. & RT. CB. V.C. = 150' M.O. = 0.56 LT. & RT. CB.	P.I. LT. & RT. CB. STA. 12+00 ELEV. = 1949.50 LT. & RT. CB. V.C. = 150' M.O. = 0.56 LT. & RT. CB.
---	---	---	--	---	---	--	--	--	---	--	---



APPROXIMATE QUANTITIES.

Item	Quantity	Unit	Year
Embankment	7250	Cu. Yd.	1955
Excavation	1031	Cu. Yd.	1955
Rock Excavation	5	Cu. Yd.	1955
Watering	1000	Gal.	1955
Curb & Gutter	2352.5	L.F.	1955
Variable Curb & Gutter	50	L.F.	1955
6" Driveway	700	S.F.	1955
8" Valley Gutter	0	S.F.	1955
Subgrade Preparation	5554	S.Y.	1955
Subcut Excavation	10	Cu. Yd.	1955
Stabilized Gravel Base	10	Ton	1955
Asphalt	2.5	Base Course	1945
Bituminous Mixture	701	Ton	1945
Asphalt Cement	12,360	Gal.	1945
Asphalt	15"	Surface Course	1940
Bituminous Mixture	421	Ton	1940
Asphalt Cement	7934	Gal.	1940
Tack Coat	545	Gal.	1940
Asphalt Sealer	1962	Gal.	1940
Bituminous Material	1962	Gal.	1935
Cover Aggregate	8174	Ton	1935
Blotter Sand	11.0	Ton	1935
18" C.M.P.	50	L.F.	1935

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixtures:

Base Course 144.8 Lb./Cu.Ft. With 7% Asphalt Cement
 Surface Course 144.6 Lb./Cu.Ft. With 7 1/2 % Asphalt Cement
 Asphalt Cement 10.60% 8.54 Lb./Gal.
 Tack Coat 0.1 Gal./Sq.Yd.
 Asphalt Sealer
 Bituminous Material 0.36 Gal./Sq.Yd.
 Cover Aggregate 30 Lb./Sq.Yd.
 Blotter Sand 4 Lb./Sq.Yd.

AREA 2
 34th AVENUE N.W.
 (GWEN AVENUE)
 STA. -(0+47.42)
 TO
 STA. 12+00
 DEVELOPER'S WEST ACRES

PLAN
 SURVEYED BY
 PLOTTED BY
 CHECKED BY
 DATE

PROFILE
 SURVEYED BY
 PLOTTED BY
 CHECKED BY
 DATE

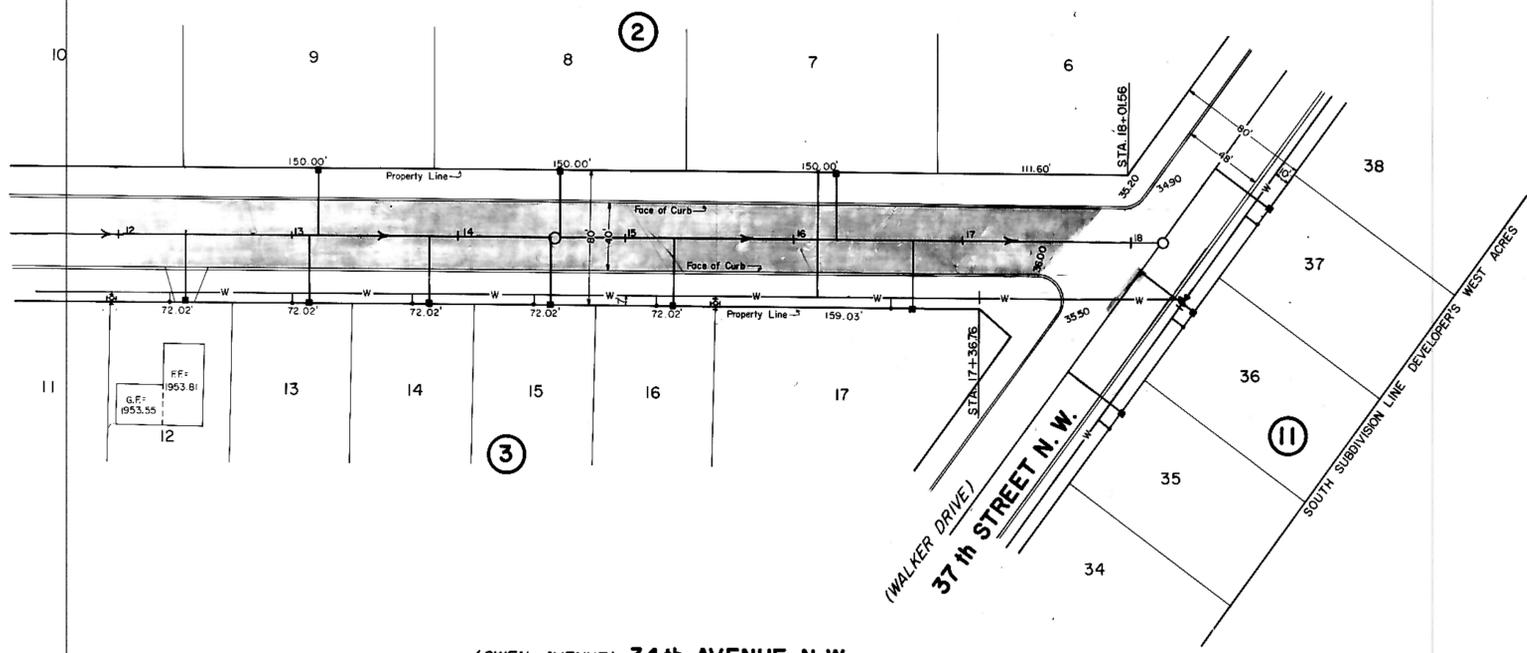
DATE
BY
SURVYD.
P. COTTER
NOTE BOOK
ALGUMIN CHECKED
NO.

DATE
BY
SURVYD.
P. COTTER
NOTE BOOK
ALGUMIN CHECKED
NO.

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'
DATE: JULY 1977

BEGIN QUANTITIES
STA. 12+00

END QUANTITIES
STA. 17+99.17

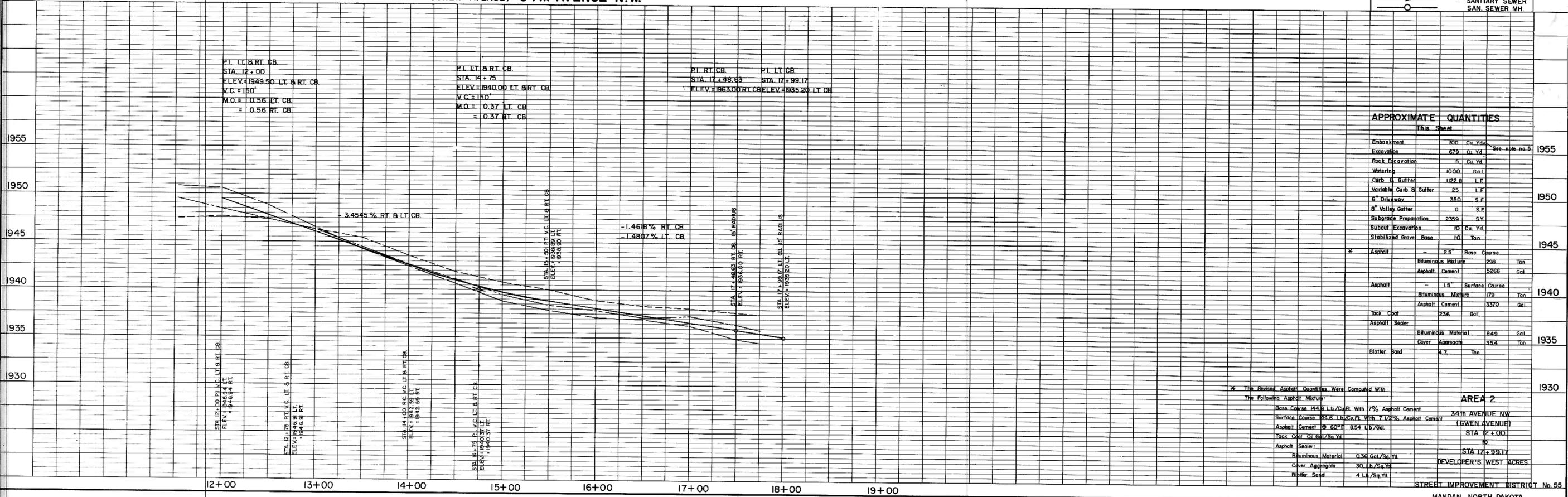


(GWEN AVENUE) 34th AVENUE N.W.

NOTES:

1. Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
2. All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
3. Proposed grades are to top of curb unless otherwise stated.
4. City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
5. Embankment quantities shown include an assumed 25% shrinkage factor.

LEGEND	
(EXISTING)	CENTERLINE
---	50' LT.
---	50' RT.
(EXISTING)	WATERMAINS
W	HYDRANTS
+	GATE VALVES
T	TEES
P	PLUGS
S	SANITARY SEWER
SM	SAN. SEWER MH.



APPROXIMATE QUANTITIES

This Sheet		
Embankment	200 Cu. Yd.	See note no. 5
Excavation	679 Cu. Yd.	
Rock Excavation	5 Cu. Yd.	
Watering	1000 Gal.	
Curb & Gutter	1122 L.F.	
Variable Curb & Gutter	25 L.F.	
6" Driveway	35.0 S.F.	
8" Valley Gutter	0 S.F.	
Subgrade Preparation	2368 S.Y.	
Subcut Excavation	10 Cu. Yd.	
Stabilized Gravel Base	10 Ton	
* Asphalt	2.5" Base Course	
	Bluminous Mixture	296 Ton
	Asphalt Cement	5286 Gal.
Asphalt	1.5" Surface Course	
	Bluminous Mixture	79 Ton
	Asphalt Cement	3370 Gal.
Tack Coat	236 Gal.	
Asphalt Sealer		
	Bluminous Material	849 Gal.
	Cover Aggregate	354 Ton
	Blotter Sand	4.7 Ton

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:

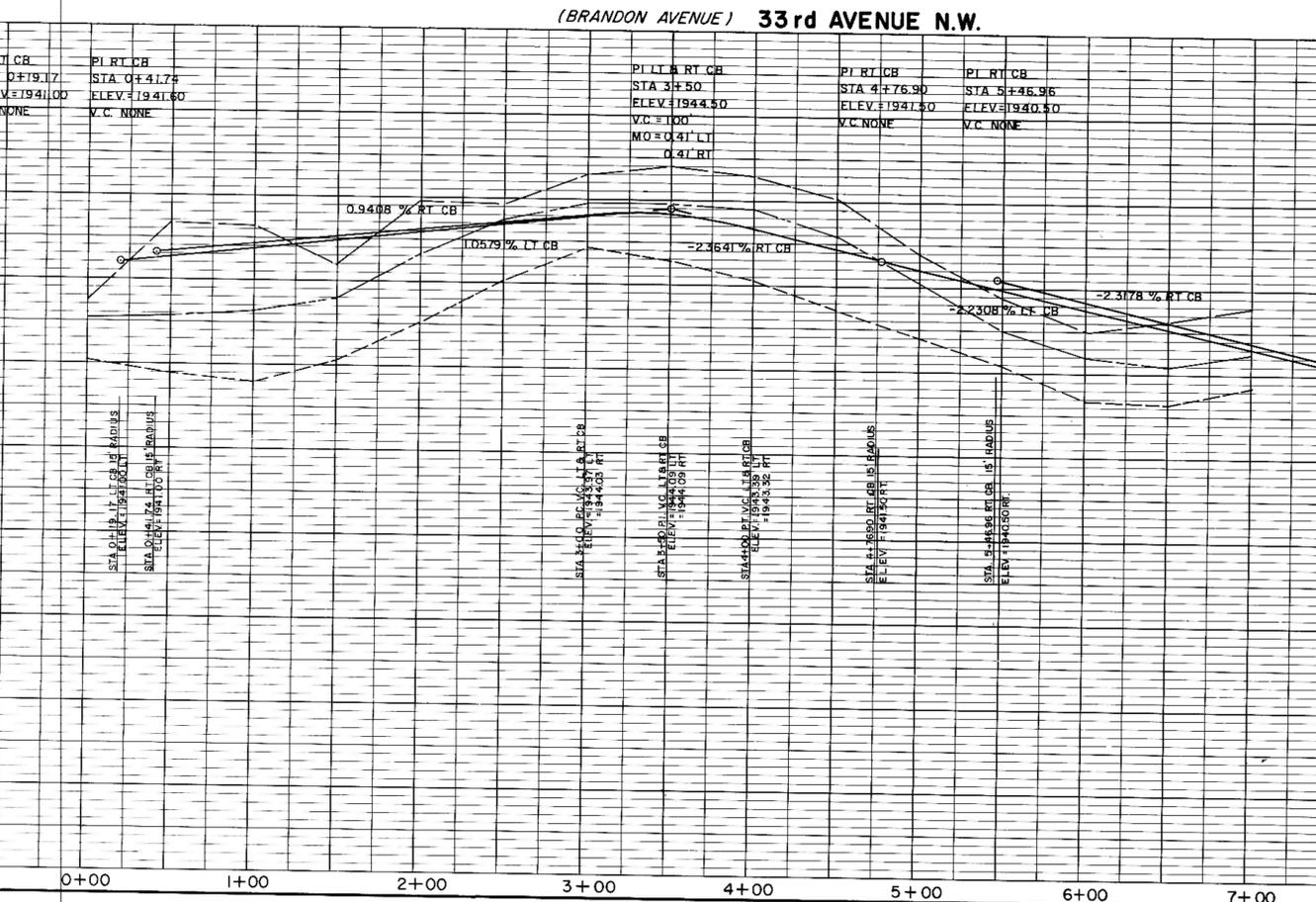
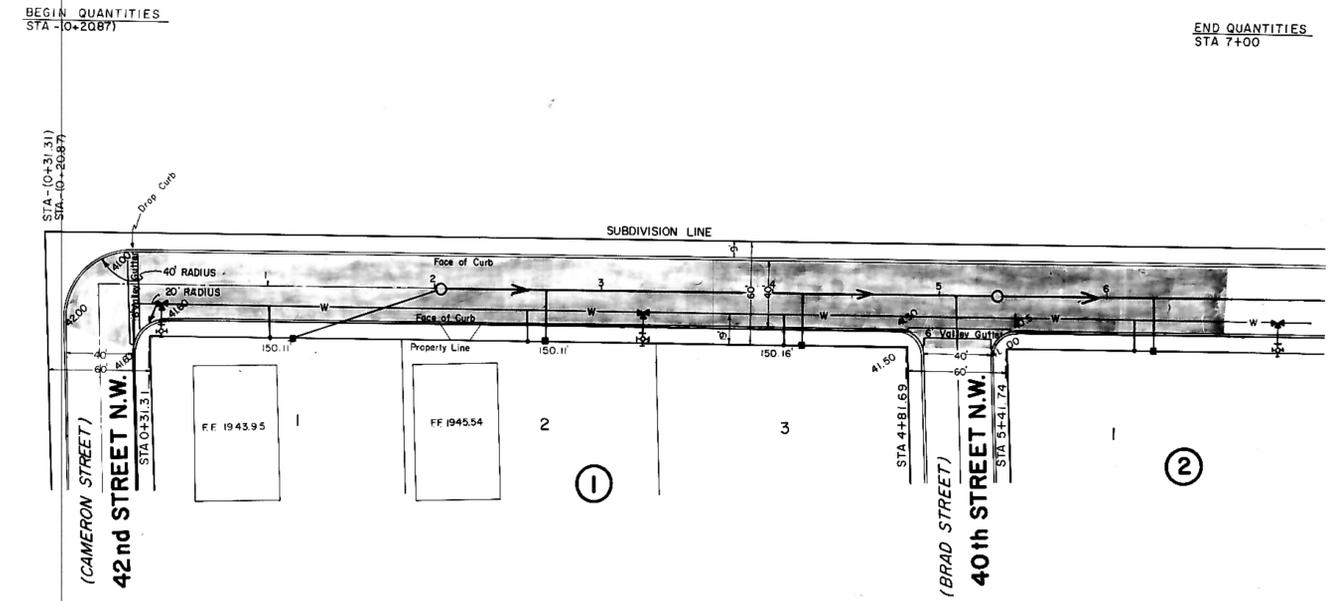
Base Course 144.8 Lb./Cu. Ft. With 7% Asphalt Cement
 Surface Course 143.6 Lb./Cu. Ft. With 7.2% Asphalt Cement
 Asphalt Cement @ 60°F 8.54 Lb./Gal.
 Tack Coat @ Gal./Sq. Yd.
 Asphalt Sealer:
 Bluminous Material 0.36 Gal./Sq. Yd.
 Cover Aggregate 30 Lb./Sq. Yd.
 Blotter Sand 4 Lb./Sq. Yd.

AREA 2
 34th AVENUE NW
 (GWEN AVENUE)
 STA. 12+00
 STA. 17+99.17
 DEVELOPER'S WEST ACRES

STREET IMPROVEMENT DISTRICT No. 55
 MANDAN, NORTH DAKOTA

- NOTES:**
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 24".
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb unless otherwise stated.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Embankment quantities shown include an assumed 25% shrinkage factor.

HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'
 DATE: JULY, 1977



LEGEND

(EXISTING)	CENTERLINE
(EXISTING)	50' LT.
(EXISTING)	50' RT.
(EXISTING)	WATERMAINS
(EXISTING)	HYDRANTS
(EXISTING)	GATE VALVES
(EXISTING)	TEES
(EXISTING)	PLUGS
(EXISTING)	SANITARY SEWER
(EXISTING)	SAN SEWER MH.

APPROXIMATE QUANTITIES
 This Sheet

Item	Quantity	Unit
Embankment	3988	Cu. Yd.
Excavation	687	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Watering	1000	Gal.
Curb & Gutter	1375.2	L.F.
Variable Curb & Gutter	25	L.F.
6" Driveway	350	S.F.
8" Valley Gutter	615	S.F.
Subgrade Preparation	2968	S.Y.
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton
* Asphalt	2.5	Base Course
Bituminous Mixture	374	Ton
Asphalt Cement	6826	Gal.
Asphalt	1.5	Surface Course
Bituminous Mixture	225	Ton
Asphalt Cement	4239	Gal.
Tack Coat	297	Gal.
Asphalt Spreader		
Bituminous Material	1088	Gal.
Coar. Aggregate	44.5	ton
Blotter Sand	6	ton

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 14.4 B.L./Cu.Ft. With 7% Asphalt Cement
 Surface Course 14.6 L.B./Cu.Ft. With 7.2% Asphalt Cement
 Asphalt Cement @ 60°F 854 Lb./Gal.
 Tack Coat Oil 6.17/Sq.Yd.
 Asphalt Spreader:
 Bituminous Material 0.36 Gal./Sq.Yd.
 Coar. Aggregate 30 Lb./Sq.Yd.
 Blotter Sand 4 Lb./Sq.Yd.

AREA 2
 33rd AVENUE N.W.
 (BRANDON AVENUE)
 STA. - (D+2Q87)
 (D)
 STA 7+00
 DEVELOPER'S WEST ACRES

PLATE 1, PLAN-PROFILE
 KEUFFEL & ESSER CO.
 48 7024 MADE IN U.S.A.

STREET IMPROVEMENT DISTRICT No. 55
 MANDAN, NORTH DAKOTA

DATE REVISED—February, 1978
 SHEET No. 2-17

PLAN
 SURVEYED BY
 DATE
 NOTE BOOK NO.
 CHECKED BY
 DATE

PROFILE
 SURVEYED BY
 DATE
 NOTE BOOK NO.
 CHECKED BY
 DATE

PLAN	DATE
NO.	
BY	
REVISION	
NO.	
DATE	

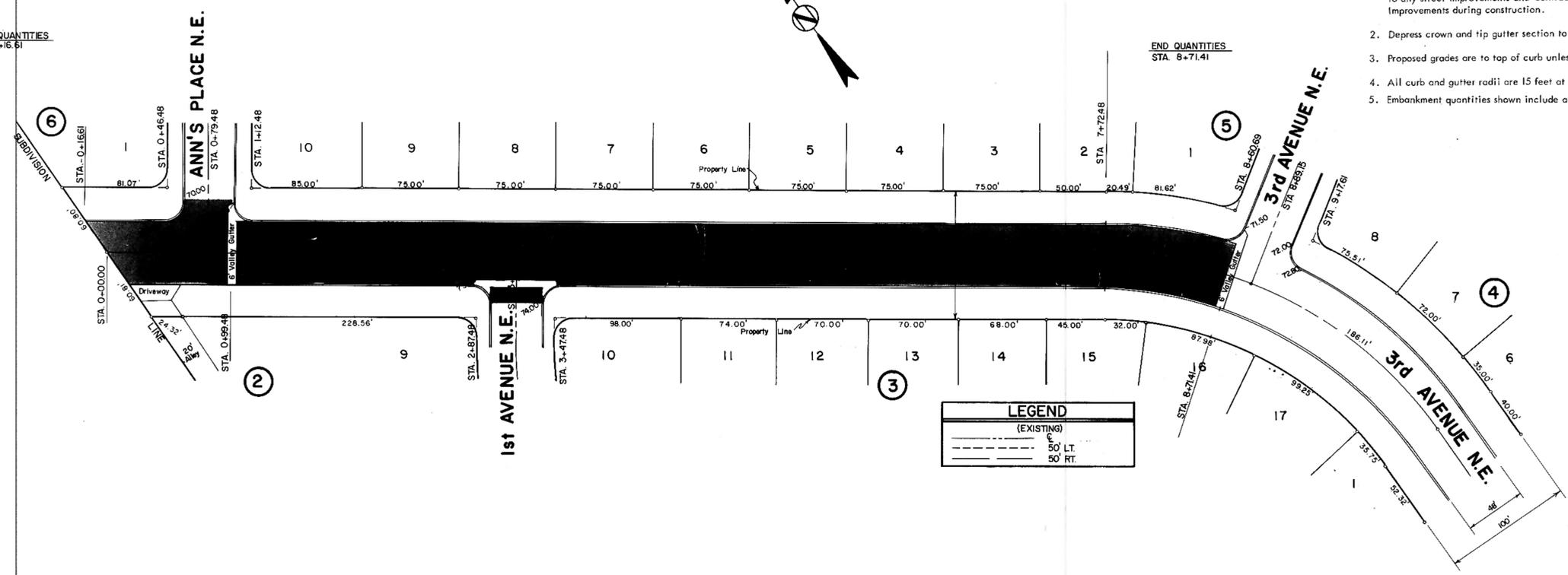
PROFILE	DATE
NO.	
BY	
REVISION	
NO.	
DATE	

HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'
 DATE: JULY, 1977

- NOTES:**
- Proposed Sewer and Water Improvements on 14th Street NE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25." Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
 - Depress crown and rip gutter section to allow drainage to flow across intersection as indicated.
 - Proposed grades are to top of curb unless otherwise stated.
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Embankment quantities shown include an assumed 30% shrinkage factor.

BEGIN QUANTITIES
 STA. -0+16.61

END QUANTITIES
 STA. 8+71.41



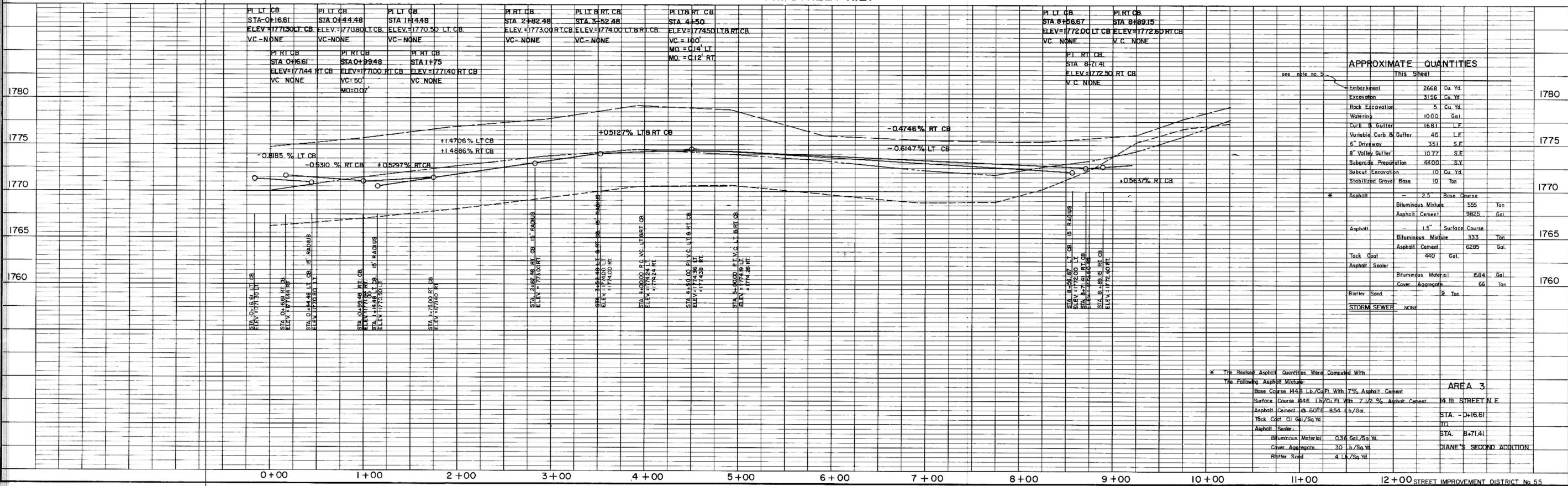
LEGEND

(EXISTING)

--- 5' LT.

--- 5' RT.

14th STREET N.E.



APPROXIMATE QUANTITIES

This Sheet

Embankment	2668	Cu. Yd.
Excavation	3156	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Watering	1000	Gal.
Curb & Gutter	1681	L.F.
Variable Curb & Gutter	40	L.F.
6" Driveway	351	S.F.
8" Valley Gutter	1077	S.F.
Subgrade Preparation	4400	S.Y.
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton
Asphalt	2.5	Base Course
Bituminous Mixture	555	Ton
Asphalt Cement	3825	Gal.
Asphalt	1.5	Surface Course
Bituminous Mixture	333	Ton
Asphalt Cement	6285	Gal.
Tack Coat	440	Gal.
Asphalt Sealer		
Bituminous Material	1584	Gal.
Cover Aggregate	66	Ton
Blotter Sand	9	Ton
STORM SEWER	NONE	

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:

Base Course	1448	Lb./Cu. Ft. With 7% Asphalt Cement
Surface Course	1446	Lb./Cu. Ft. With 7 1/2% Asphalt Cement
Asphalt Cement @ 60%	854	Lb./Gal.
Thick Coat @ 1 Gal./Sq. Yd.		
Asphalt Sealer		
Bituminous Material	0.36	Gal./Sq. Yd.
Cover Aggregate	30	Lb./Sq. Yd.
Blotter Sand	4.14	Sq. Yd.

AREA 3
 14th STREET N.E.
 STA. -0+16.61
 TO
 STA. 8+71.41
 DIANE'S SECOND ADDITION

NOTES:

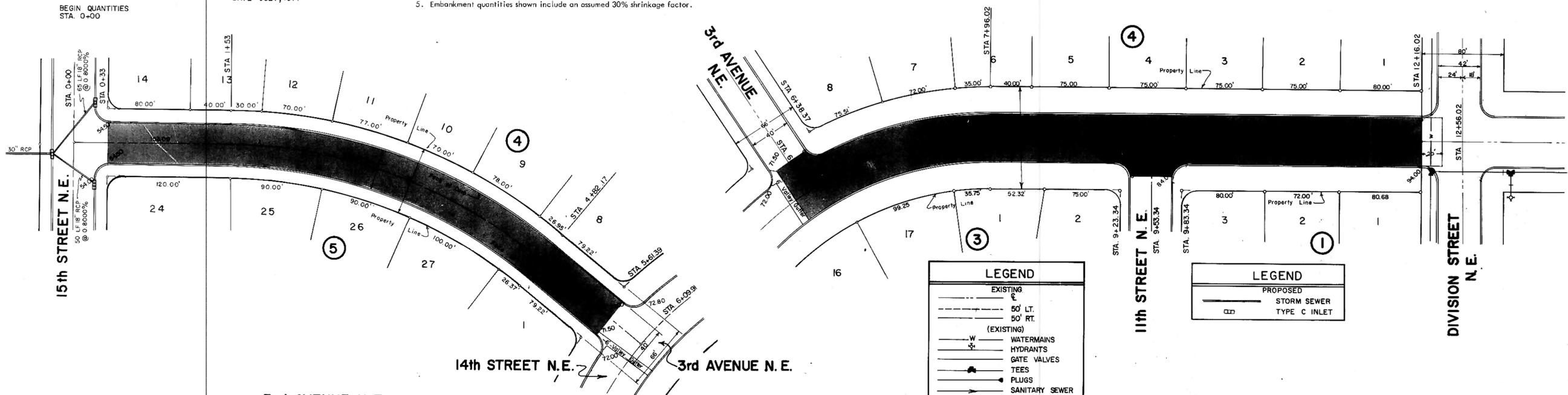
- Proposed Sewer and Water Improvements on 3rd Avenue NE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25". Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
- Depress crown and tip gutter section to allow drainage to flow across intersection as indicated.
- Proposed grades are to top of curb unless otherwise stated.
- All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
- Embankment quantities shown include an assumed 30% shrinkage factor.

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'
DATE: JULY, 1977

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'
DATE: JULY, 1977

END QUANTITIES
STA 12+17.02

BEGIN QUANTITIES
STA 0+00



LEGEND

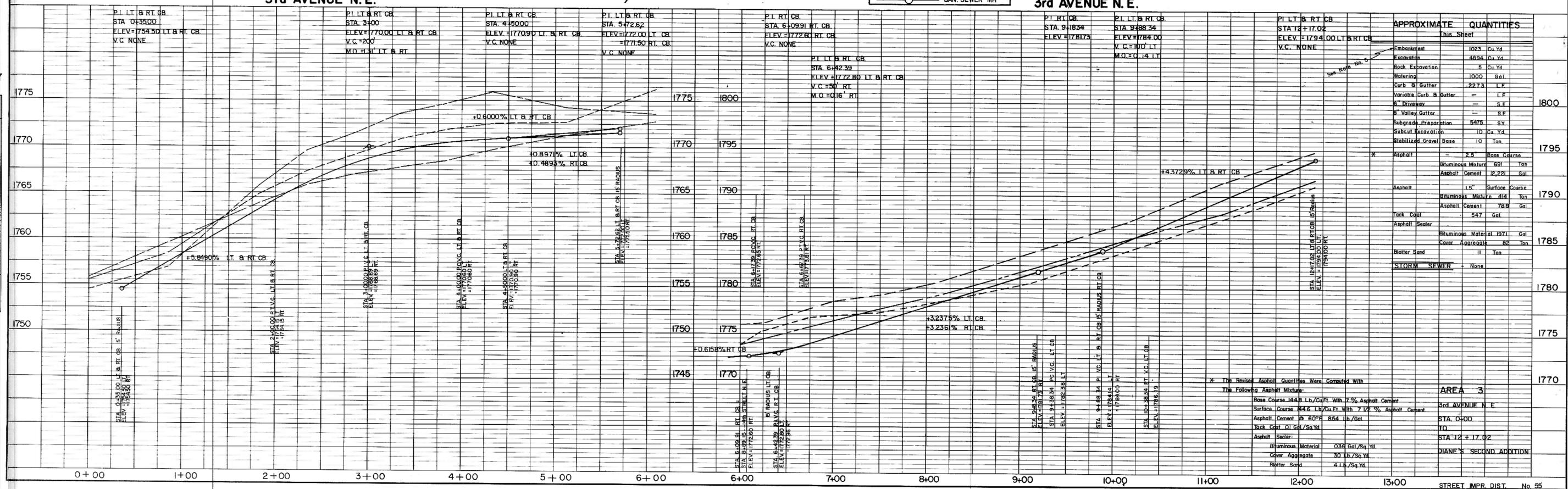
EXISTING
 - 50' LT.
 - 50' RT.
 (EXISTING)
 - W WATERMAINS
 - H HYDRANTS
 - G GATE VALVES
 - T TEES
 - P PLUGS
 - S SANITARY SEWER
 - M SAN. SEWER MH

LEGEND

PROPOSED
 - STORM SEWER
 - TYPE C INLET

PLAN
 SURVEYED BY: _____
 CHECKED BY: _____
 DATE: _____

PROFILE
 SURVEYED BY: _____
 CHECKED BY: _____
 DATE: _____

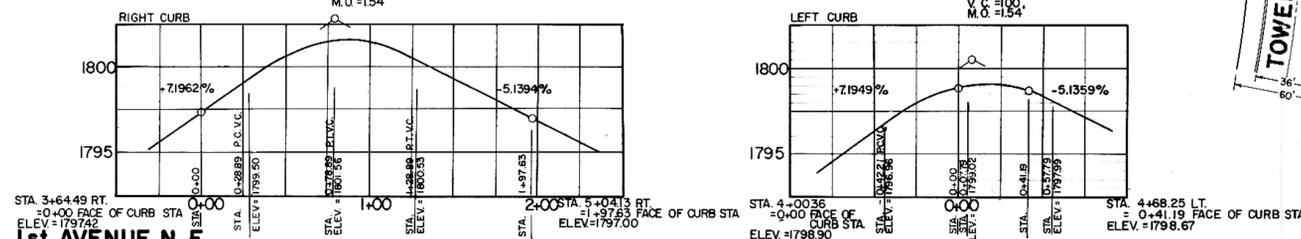
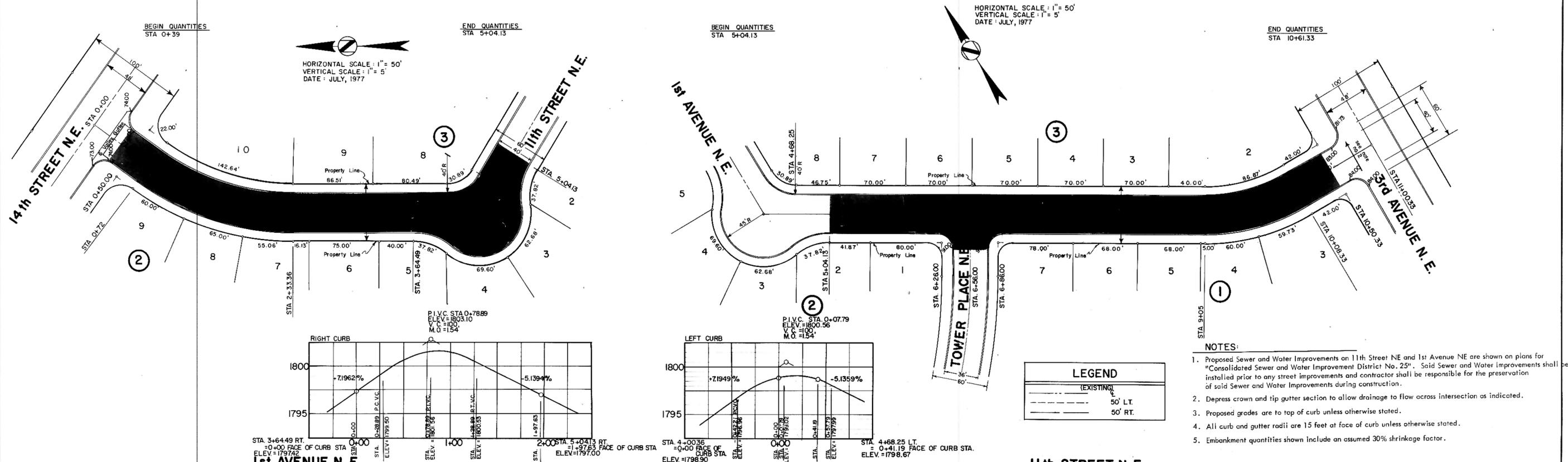


APPROXIMATE QUANTITIES	QUANTITIES
Embankment	1023 Cu. Yd.
Excavation	4884 Cu. Yd.
Rock Excavation	5 Cu. Yd.
Watering	1000 Gal.
Curb & Gutter	2273 L.F.
Variable Curb & Gutter	- L.F.
6" Driveway	- S.F.
8" Valley Gutter	- S.F.
Subgrade Preparation	5475 S.Y.
Subsoil Excavation	10 Cu. Yd.
Stabilized Gravel Base	10 Ton.
Asphalt	2.5 Base Course
Bituminous Mixture	691 Ton
Asphalt Cement	12,221 Gal.
Asphalt	1.5" Surface Course
Bituminous Mixture	414 Ton
Asphalt Cement	7818 Gal.
Tack Coat	547 Gal.
Asphalt Sealer	-
Bituminous Material	1971 Gal.
Cover Aggregate	82 Ton
Blotter Sand	11 Ton
STORM SEWER	None

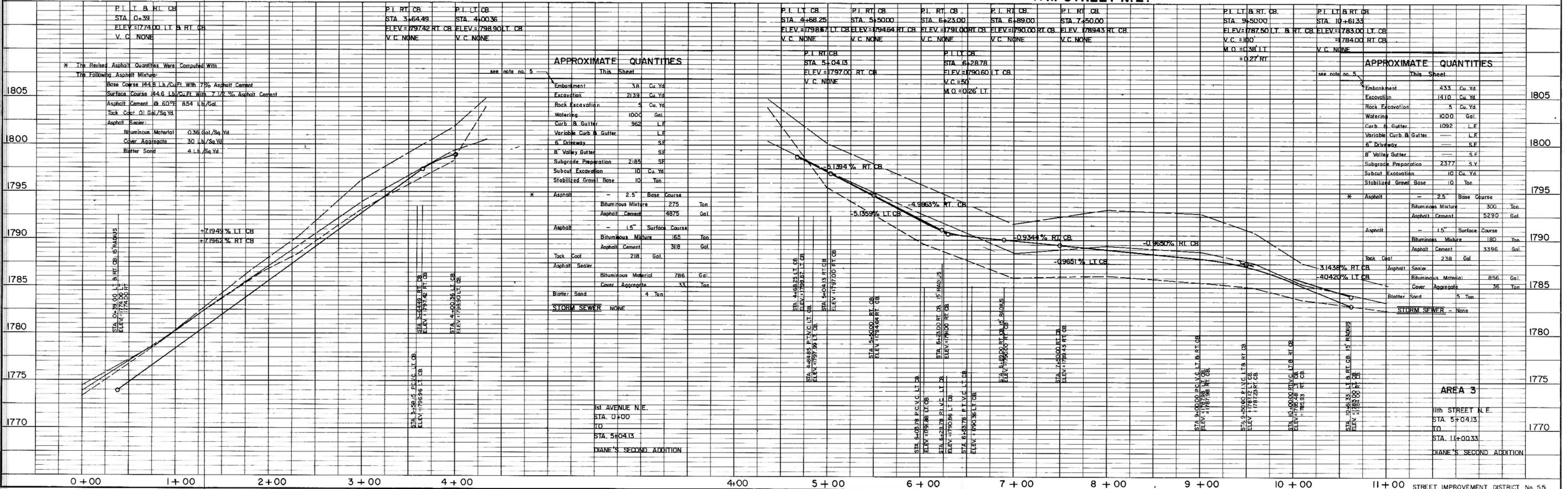
* The Revised Approx. Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 144.8 Lb./Cu.Ft. With 7% Asphalt Cement
 Surface Course 144.6 Lb./Cu.Ft. With 7.12% Asphalt Cement
 Asphalt Cement @ 60°F 854 lb./Gal.
 Tack Coat 0.1 Gal./Sq.Yd.
 Asphalt Sealer:
 Bituminous Material 0.36 Gal./Sq. Yd.
 Cover Aggregate 30 Lb./Sq. Yd.
 Blotter Sand 4 Lb./Sq. Yd.

PLAN
 NO. 1
 DATE: _____
 BY: _____
 CHECKED: _____
 APPROVED: _____

PROFILE
 NO. 1
 DATE: _____
 BY: _____
 CHECKED: _____
 APPROVED: _____



- NOTES:
- Proposed Sewer and Water Improvements on 11th Street NE and 1st Avenue NE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25". Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
 - Depress crown and tip gutter section to allow drainage to flow across intersection as indicated.
 - Proposed grades are to top of curb unless otherwise stated.
 - All curb and gutter radii are 15 feet at face curb unless otherwise stated.
 - Embankment quantities shown include an assumed 30% shrinkage factor.



PLAN
NOTE BOOK
NO.

PROFILE
NOTE BOOK
NO.

DATE

DATE

DATE

DATE

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DATE

DATE

DATE

DATE

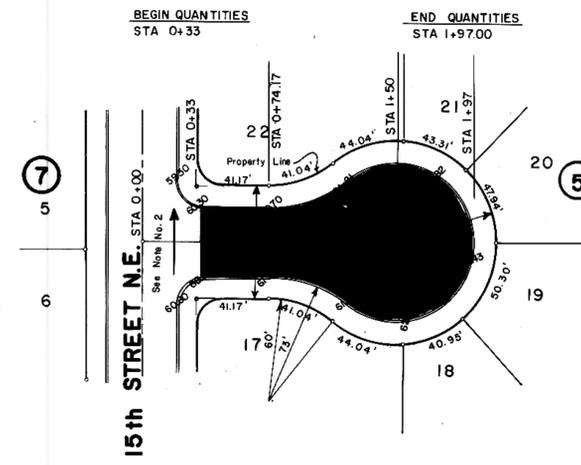
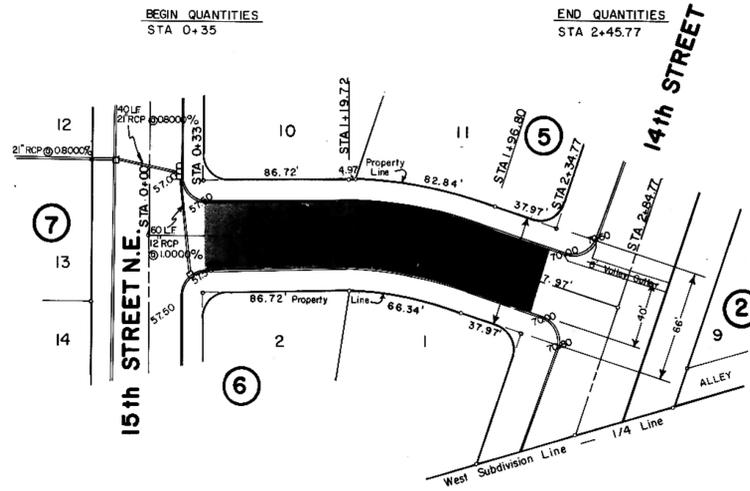
DATE

DATE

DATE

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'
DATE: JULY, 1977

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'
DATE:



- NOTES:
- Proposed Sewer and Water Improvements on Shannon Drive NE and Ann's Place NE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25". Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
 - Depress crown and tip gutter section to allow drainage to flow across intersection as indicated.
 - Proposed grades are to top of curb unless otherwise stated.
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Embankment quantities shown include an assumed 30% shrinkage factor.

LEGEND

---	EXISTING
---	50' L.T.
---	50' R.T.
□	PROPOSED TYPE A INLET
□	TYPE B INLET
□	TYPE C INLET
---	STORM SEWER
---	STORM SEWER MH

ANN'S PLACE N.E.

SHANNON'S DRIVE N.E.

APPROXIMATE QUANTITIES
ANN'S PLACE N.E.

APPROXIMATE QUANTITIES
SHANNON'S DRIVE N.E.

Embankment	220	Cu. Yd.
Excavation	198	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Waterline	1000	Gal.
Curb & Gutter	422	L.F.
Variable Curb & Gutter		L.F.
6" Driveway		S.F.
8" Valley Gutter		S.F.
Subgrade Preparation	870	S.Y.
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton
Asphalt	2.5	Base Course
Bituminous Mixture	110	Ton
Asphalt Cement	1839	Gal.
Asphalt	1.5	Surface Course
Bituminous Mixture	66	Ton
Asphalt Cement	1240	Gal.
Tack Coat	87	Gal.
Asphalt Sealer		
Bituminous Material	313	Gal.
Cover Aggregate	13	Ton
Blotter Sand	2	Ton
STORM SEWER	NONE	

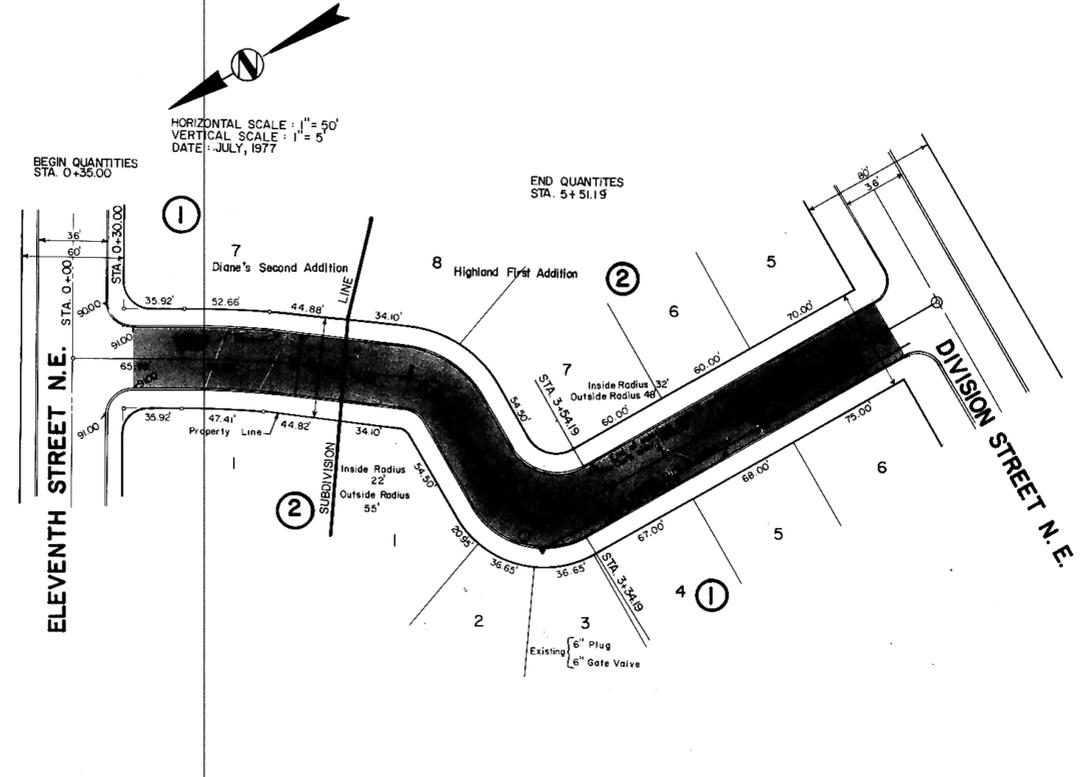
Embankment	347	Cu. Yd.
Excavation	145	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Waterline	1000	Gal.
Curb & Gutter	330	L.F.
Variable Curb & Gutter		L.F.
6" Driveway		S.F.
8" Valley Gutter		S.F.
Subgrade Preparation	920	S.Y.
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton
Asphalt	2.5	Base Course
Bituminous Mixture	116	Ton
Asphalt Cement	2052	Gal.
Asphalt	1.5	Surface Course
Bituminous Mixture	70	Ton
Asphalt Cement	1313	Gal.
Tack Coat	92	Gal.
Asphalt Sealer		
Bituminous Material	331	Gal.
Cover Aggregate	14	Ton
Blotter Sand	2	Ton
STORM SEWER	NONE	

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 14.8 Lb./Cu.Ft. With 7% Asphalt Cement
 Surface Course 14.6 Lb./Cu.Ft. With 7 1/2% Asphalt Cement
 Asphalt Cement @ 60°F 8.54 Lb./Gal.
 Tack Coat 0.1 Gal./Sq. Yd.
 Asphalt Sealer:
 Bituminous Material 0.38 Gal./Sq. Yd.
 Cover Aggregate 30 Lb./Sq. Yd.
 Blotter Sand .4 Lb./Sq. Yd.

0+00 1+00 2+00 3+00 0+00 1+00 1+50

DATE: _____ BY: _____
 SURVAYOR: _____
 PLANNING: _____
 ENGINEER: _____
 NOTE BOOK No. _____
 ALIGNED CHECKED: _____
 RECORD CHECKED: _____

DATE: _____ BY: _____
 SURVAYOR: _____
 PLANNING: _____
 ENGINEER: _____
 NOTE BOOK No. _____
 ALIGNED CHECKED: _____
 RECORD CHECKED: _____

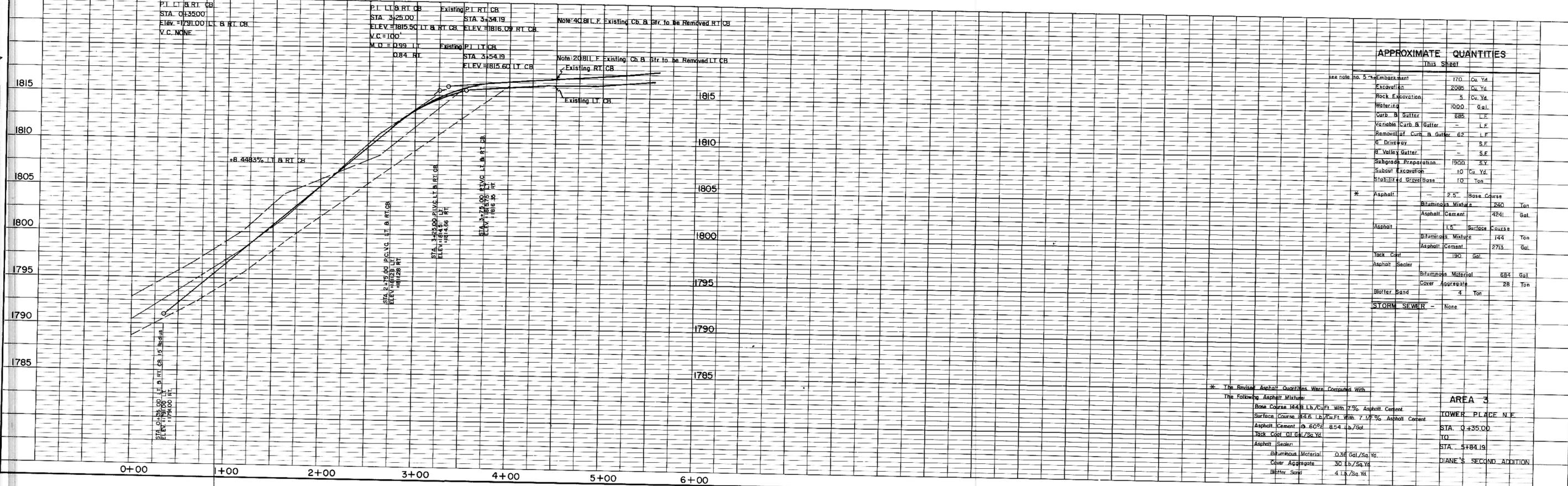


- NOTES:**
- Proposed Sewer and Water Improvements on Tower Place NE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25". Said Sewer and Water Improvements shall be installed prior to any street improvements and contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
 - Depress crown and tip gutter section to allow drainage to flow across intersection as indicated.
 - Proposed grades are to top of curb unless otherwise stated.
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Embankment quantities shown include an assumed 30% shrinkage factor.

LEGEND

---	(EXISTING)
---	50' LT.
---	50' RT.
---	(EXISTING)
W	WATER MAINS
H	HYDRANTS
G	GATE VALVES
T	TEES
P	PLUGS
S	SANITARY SEWER
MH	SAN SEWER MH

TOWER PLACE N.E.



APPROXIMATE QUANTITIES

Item	Quantity	Unit
Excavation	170	Cu. Yd.
Rock Excavation	2085	Cu. Yd.
Watering	1000	Gal.
Curb & Gutter	685	L.F.
Removal of Curb & Gutter	62	L.F.
8" Driveway	—	S.F.
8" Valley Gutter	—	S.F.
Subgrade Preparation	1900	S.Y.
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton
Asphalt	2.5	Base Course
Bituminous Mixture	240	Ton
Asphalt Cement	424	Gal.
Asphalt	1.5	Surface Course
Bituminous Mixture	144	Ton
Asphalt Cement	2713	Gal.
Jack Coat	190	Gal.
Asphalt Sealer	—	—
Bituminous Material	684	Gal.
Cover Aggregate	28	Ton
Blotter Sand	4	Ton
STORM SEWER	—	None

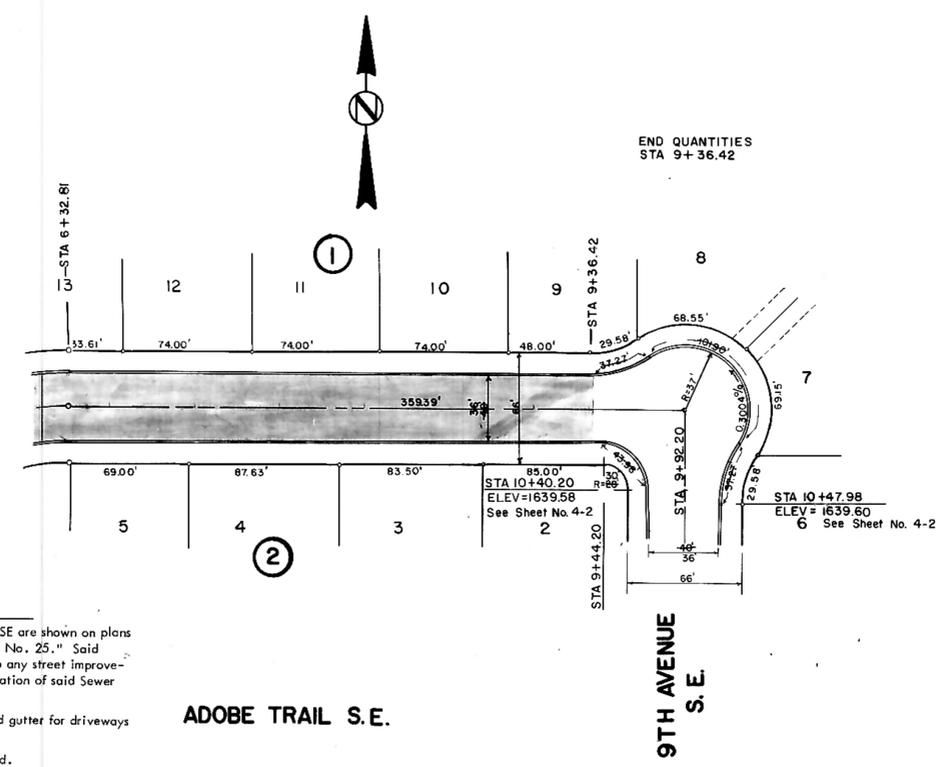
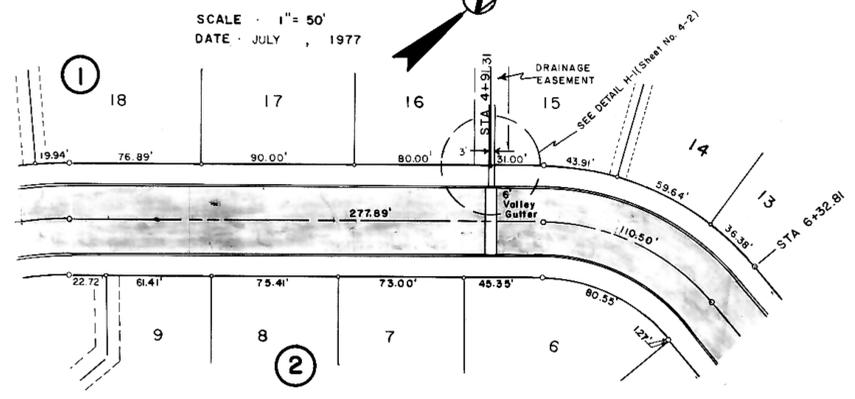
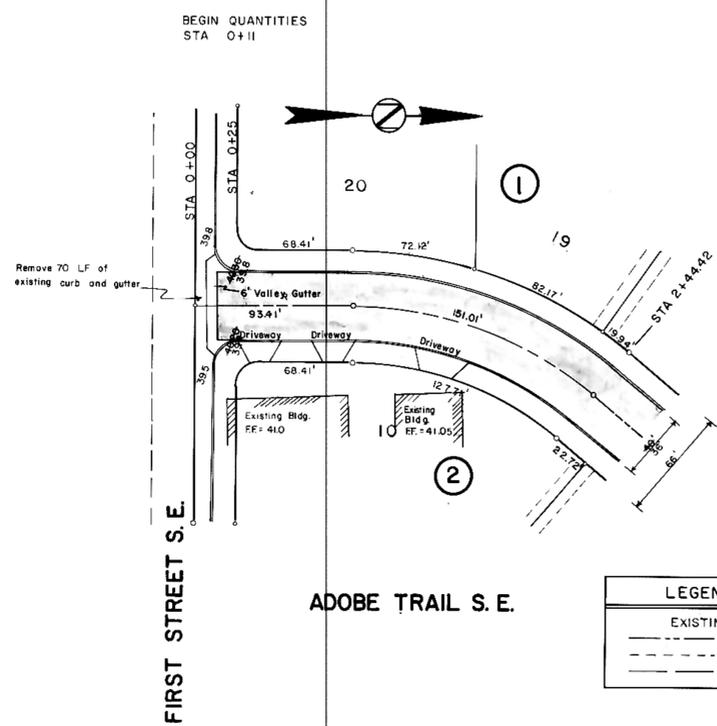
* The Bituminous Asphalt Quantities Were Compared With The Following Asphalt Mixtures:

Base Course	1448 Lb./Cu.Ft. With 7% Asphalt Content
Surface Course	1446 Lb./Cu.Ft. With 7 1/2% Asphalt Content
Asphalt Cement	@ 60°F - 8.54 Lb./Gal.
Jack Coat	Oil Gal./Sq. Yd.
Asphalt Sealer	—
Bituminous Material	0.38 Gal./Sq. Yd.
Cover Aggregate	30 Lb./Sq. Yd.
Blotter Sand	4 Lb./Sq. Yd.

AREA 3
TOWER PLACE N.E.
 STA. 0+35.00 TO
 STA. 5+51.19
 DIANE'S SECOND ADDITION

DATE: _____
 BY: _____
 CHECKED: _____
 PLAN
 SURVEYED: _____
 NOTES: _____
 NOTE BOOK: _____
 No. _____

DATE: _____
 BY: _____
 CHECKED: _____
 PROFILE
 SURVEYED: _____
 NOTES: _____
 NOTE BOOK: _____
 No. _____

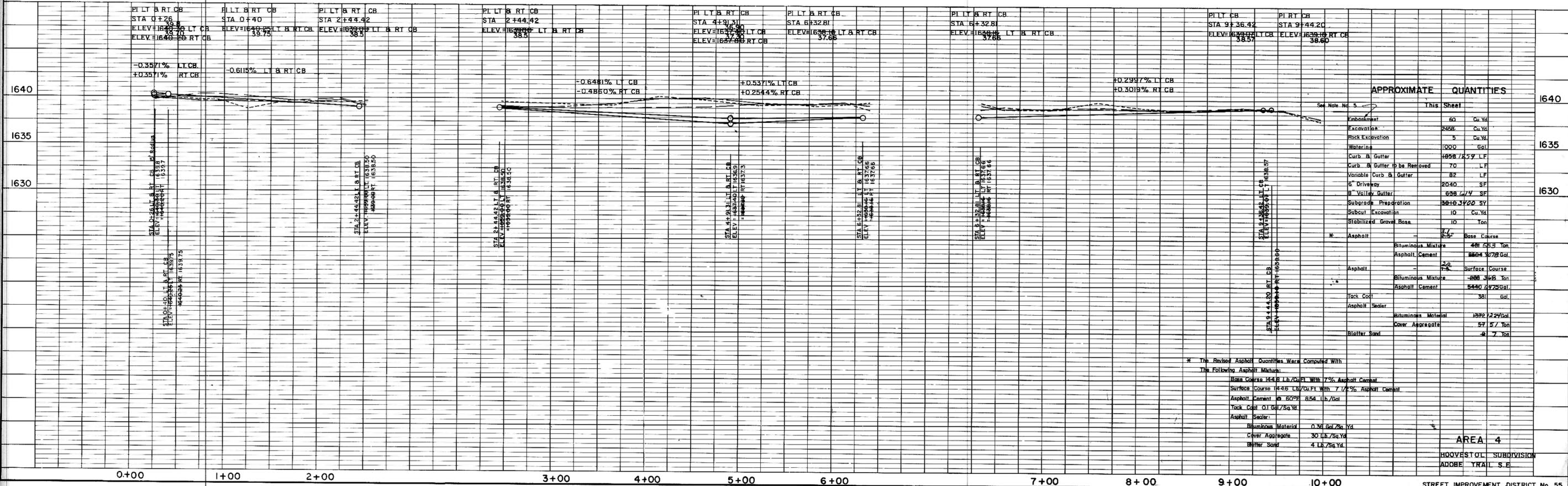


LEGEND

EXISTING	—
50' LT	- - -
50' RT	- - -

- NOTES:**
- Proposed Sewer and Water Improvements on Adobe Trail SE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25." Said Sewer and Water Improvements shall be installed prior to any street improvements and Contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Proposed grades are to top of curb unless otherwise stated.
 - All curb and gutter radii are 15 feet to face of curb unless otherwise stated.
 - Embankment quantities shown include an assumed 25% shrinkage factor.

HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



APPROXIMATE QUANTITIES

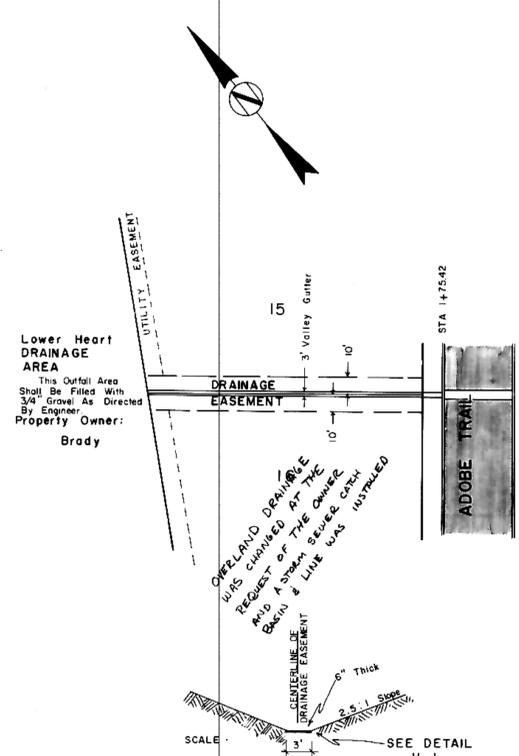
	This Sheet	
Embankment	60	Cu. Yd.
Excavation	2458	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Watering	1000	Gal.
Curb & Gutter	1898	L.F.
Curb & Gutter to be Removed	70	L.F.
Variable Curb & Gutter	82	L.F.
6" Driveway	2040	SF
6" Valley Gutter	638	L.F.
Subgrade Preparation	3816	SF
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton
Asphalt	37	Base Course
Bituminous Mixture	481	Sq. Yd.
Asphalt Cement	8864	Gal.
Asphalt	20	Surface Course
Bituminous Mixture	888	Sq. Yd.
Asphalt Cement	5440	Gal.
Tack Coat	38	Gal.
Asphalt Sealer	1392	Gal.
Bituminous Material	30	Sq. Yd.
Cover Aggregate	57	Ton
Blotter Sand	4	Ton

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 144 Lb./Cu. Ft. With 7% Asphalt Cement
 Surface Course 1435 Lb./Cu. Ft. With 7 1/2% Asphalt Cement
 Asphalt Cement @ 60°F 854 Lb./Gal.
 Tack Coat 0.1 Gal./Sq. Yd.
 Asphalt Sealer:
 Bituminous Material 0.36 Gal./Sq. Yd.
 Cover Aggregate 30 Lb./Sq. Yd.
 Blotter Sand 4 Lb./Sq. Yd.

AREA 4
 HQQUEST OL SUBDIVISION
 ADOBE TRAIL S.E.

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BY	
REVISION	
NO.	
PLAN	
NOTE BOOK	
NO.	

DATE	
BY	
REVISION	
NO.	
PROFILE	
NOTE BOOK	
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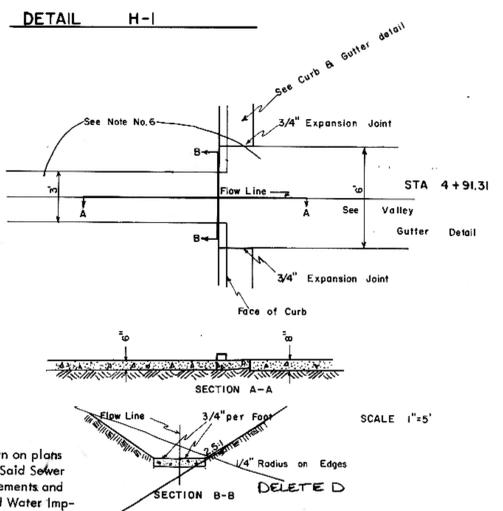
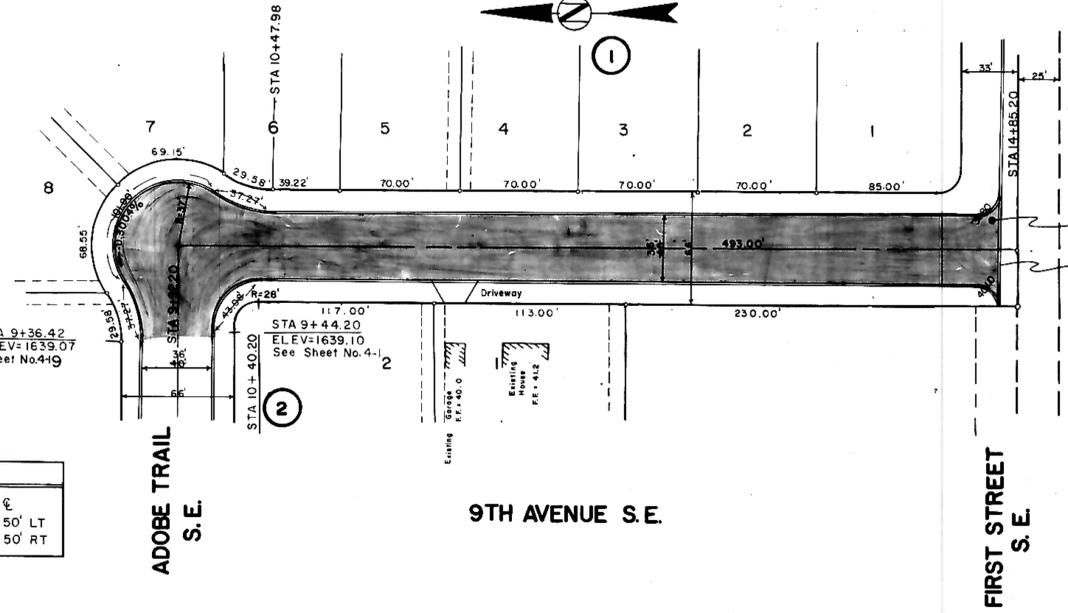


LEGEND	
---	EXISTING
- - -	50' LT
- - -	50' RT

BEGIN QUANTITIES
STA 9+36.42

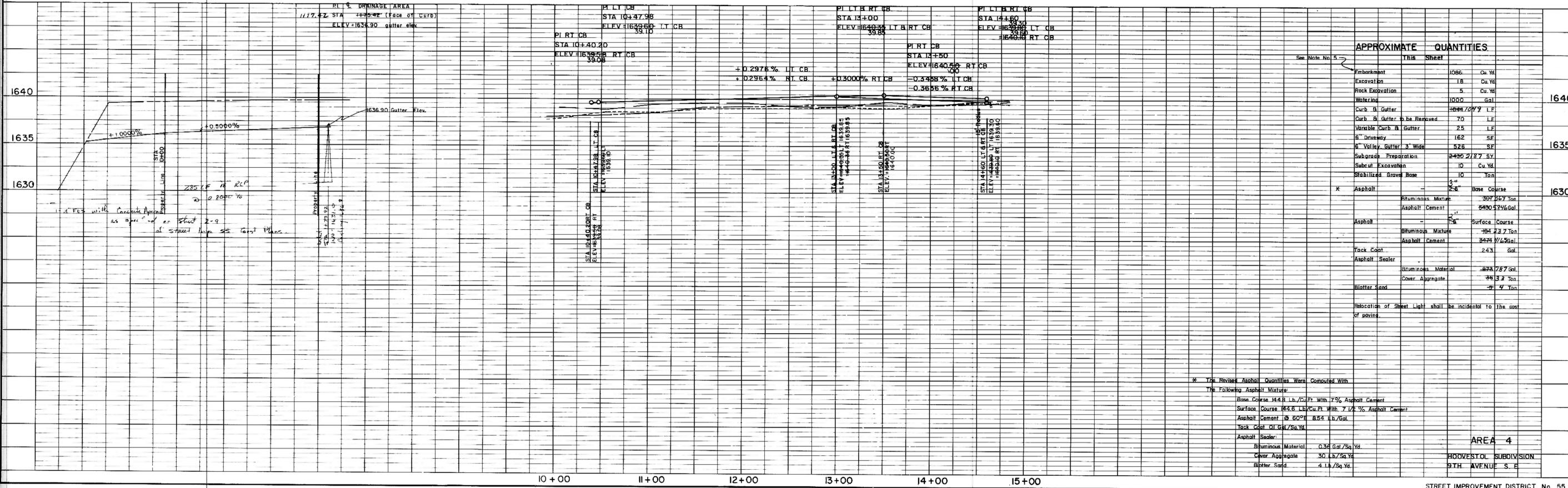
END QUANTITIES
STA 14+75

DATE JULY, 1977



- NOTES:
- Proposed Sewer and Water Improvements on Ninth Ave. SE are shown on plans for "Consolidated Sewer and Water Improvement District No. 25." Said Sewer and Water Improvements shall be installed prior to any street improvements and Contractor shall be responsible for the preservation of said Sewer and Water Improvements during construction.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Proposed grades are to top of curb unless otherwise stated.
 - All curb and gutter radii are 15 feet to face of curb unless otherwise stated.
 - Embankment quantities shown include an assumed 25% shrinkage factor.
 - The standard 6" and 3" valley gutter sections shall be poured as one continuous section as shown. Joints shall be located and constructed as directed in the standard typical details for the 6" section. Contraction joints shall be placed at equal intervals, 7' maximum, and shall be scored to 1/3 the depth of the concrete.

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



APPROXIMATE QUANTITIES

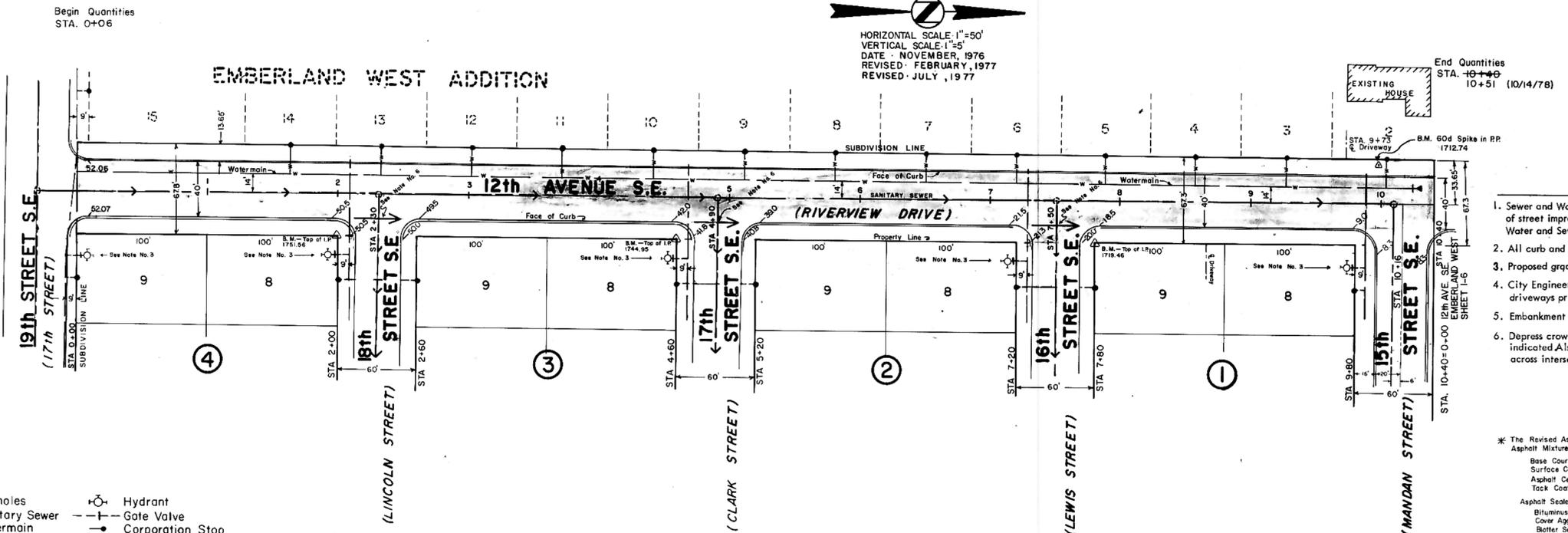
This Sheet	Quantity	Unit
Embankment	1086	Cu Yd
Excavation	18	Cu Yd
Rock Excavation	5	Cu Yd
Watering	1000	Gal
Curb & Gutter	1086	LF
Curb & Gutter to be Removed	70	LF
Variable Curb & Gutter	25	LF
6" Driveway	162	SF
6" Valley Gutter 3' Wide	526	SF
Subgrade Preparation	2436	Sq Yd
Subcut Excavation	10	Cu Yd
Stabilized Gravel Base	10	Ton
Asphalt	243	Base Course
Asphalt	307	2 1/2" Ton
Asphalt Cement	5430	2 1/4 Gal
Asphalt	184	Surface Course
Asphalt Cement	3474	1 1/4 Gal
Track Coat	243	Gal
Asphalt Sealer	243	Gal
Bituminous Material	823	7 1/2 Gal
Cover Aggregate	46	3 1/2 Ton
Blotter Sand	4	1/2 Ton

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 14.6 Lb./Cu Ft. With 7% Asphalt Cement
 Surface Course 14.6 Lb./Cu Ft. With 7 1/2 % Asphalt Cement
 Asphalt Cement @ 60°F 8.54 Lb./Gal.
 Track Coat 0.1 Gal./Sq Yd
 Asphalt Sealer:
 Bituminous Material 0.36 Gal./Sq Yd
 Cover Aggregate 30 Lb./Sq Yd
 Blotter Sand 4 Lb./Sq Yd

AREA 4
HOVESTOL SUBDIVISION
9TH AVENUE S.E.

PLAN
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 BY: _____
 CHECKED: _____
 SUPERVISOR: _____
 ENGINEER: _____
 NOTE BOOK: _____
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PROFILE
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 ENGINEER: _____
 NOTE BOOK: _____
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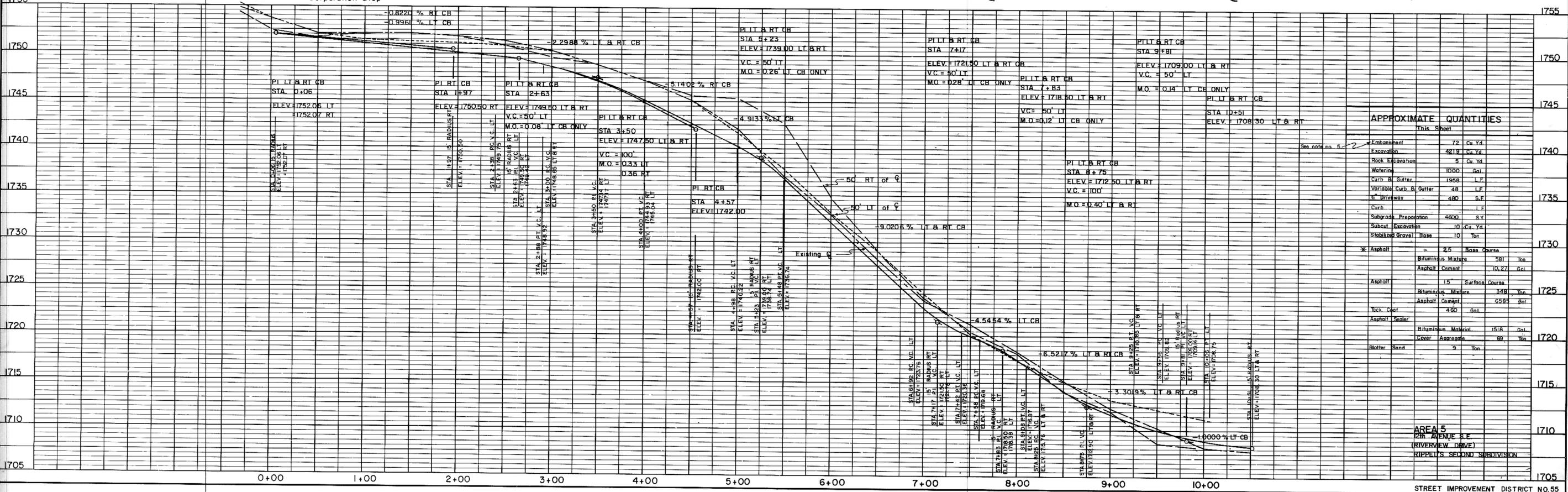
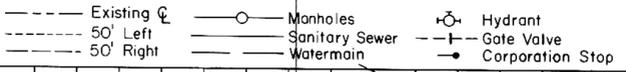


- NOTES
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per Consolidated Water and Sewer Improvement District No. 23.
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Embankment quantities include an assumed 25% shrinkage factor.
 - Depress crown to allow drainage to flow across intersection as indicated. Also tip gutter section to allow storm water to flow across intersection.

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture

Base Course 144.8 Lb/Cu Ft With 7% AC
 Surface Course 144.6 Lb/Cu Ft With 7 1/2 % AC
 Asphalt Cement @ 60° F. 8.54 Lb/Gal.
 Tack Coat 0.1 Gal/Sq Yd

Asphalt Sealer
 Bituminous Material 0.36 Gal/Sq Yd
 Cover Aggregate 30 Lb/Sq Yd
 Botter Sand 4 Lb/Sq Yd



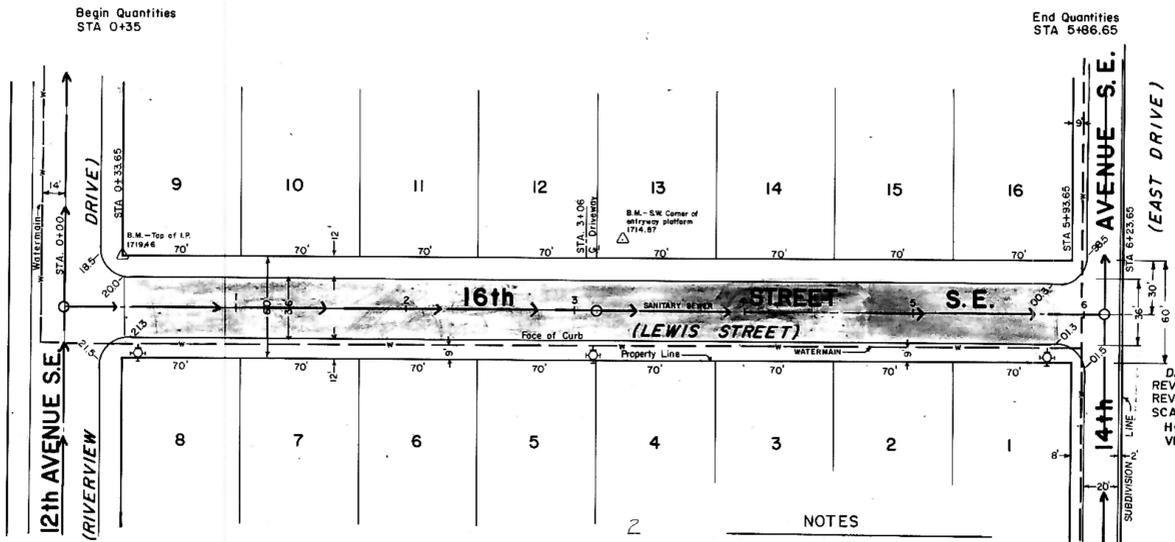
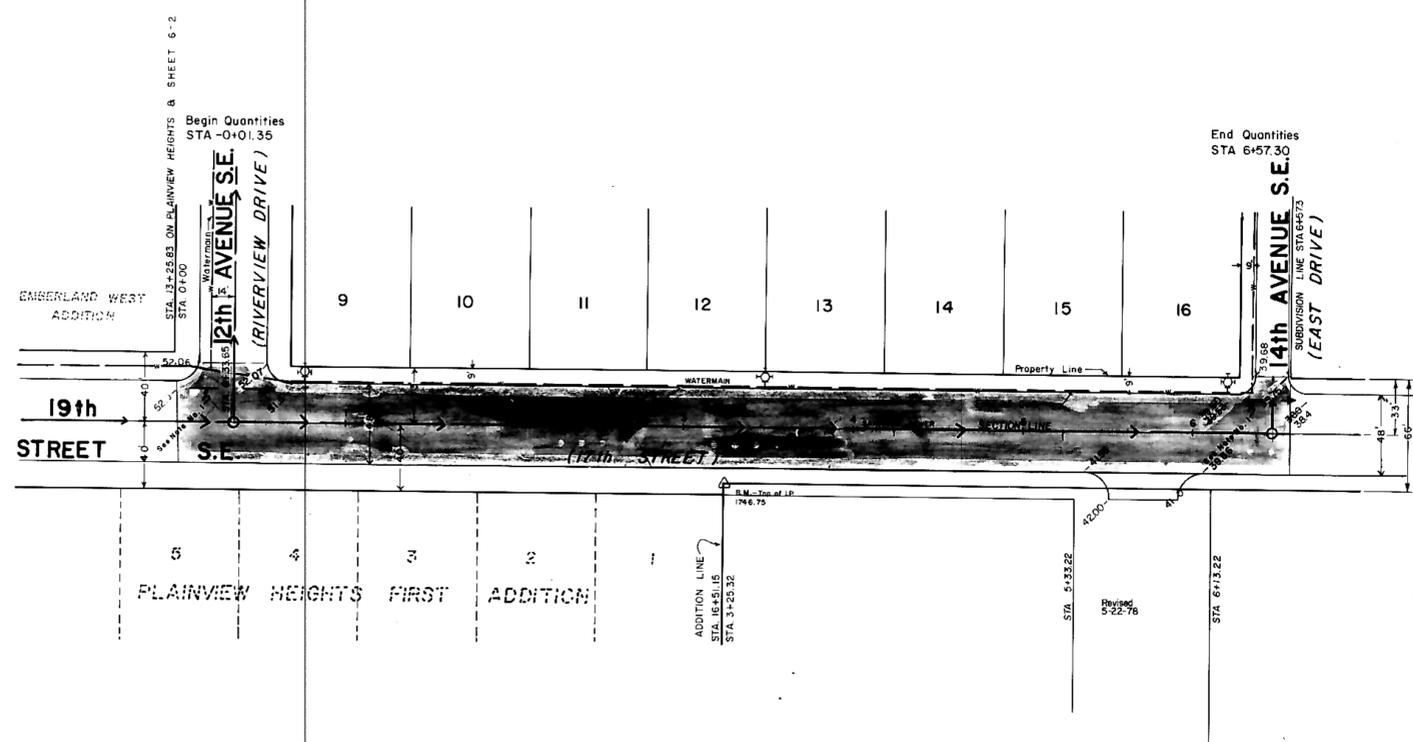
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PLAN
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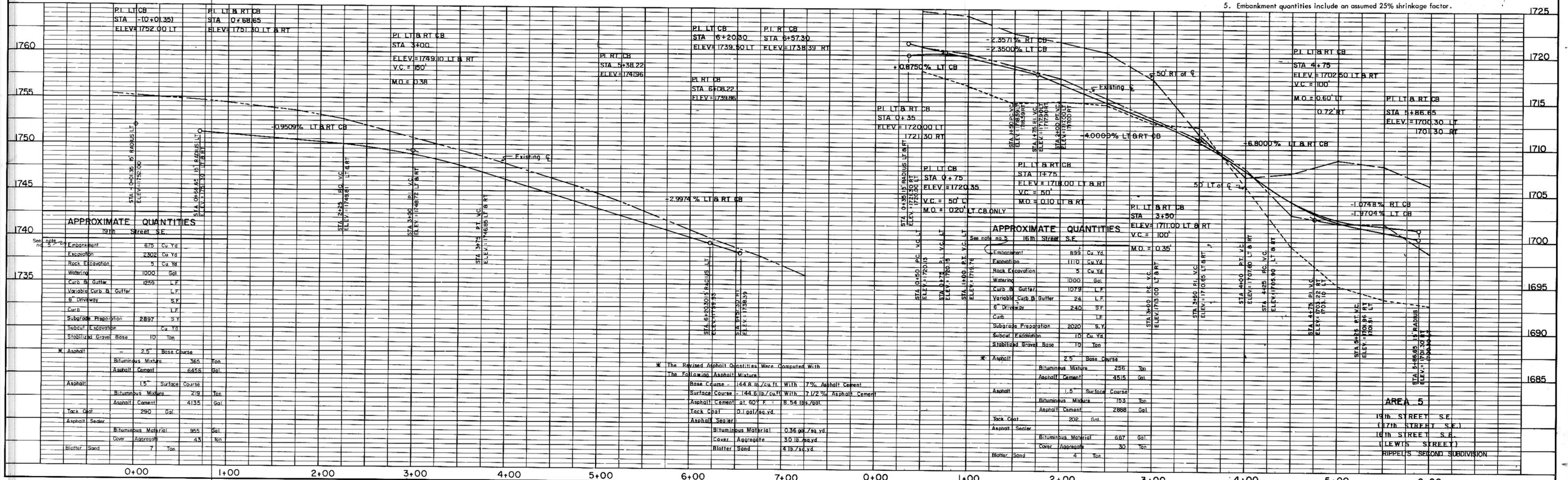
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 BY



Existing Curb
 50' Left
 50' Right
 Manhole
 Sanitary Sewer
 Watermain
 Hydrant
 Gate Valve

- NOTES
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per Consolidated Water and Sewer Improvement District No. 23.
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Embankment quantities include an assumed 25% shrinkage factor.



APPROXIMATE QUANTITIES

Item	Quantity	Unit
Embankment	875	Cu Yd
Excavation	2302	Cu Yd
Rock Excavation	5	Cu Yd
Watering	1000	Gal
Curb & Gutter	1259	L.F.
Variable Curb & Gutter		L.F.
Driveway		S.F.
Curb		L.F.
Subgrade Preparation	2897	S.Y.
Subcut Excavation		Cu Yd
Stabilized Gravel Base	10	Ton
Asphalt	2.5	Base Course
Bituminous Mixture	365	Ton
Asphalt Cement	6455	Gal
Asphalt	1.5	Surface Course
Bituminous Mixture	219	Ton
Asphalt Cement	4135	Gal
Tack Coat	290	Gal
Asphalt Sealer		
Bituminous Material	955	Gal
Cover Aggregate	43	Ton
Blotter Sand	7	Ton

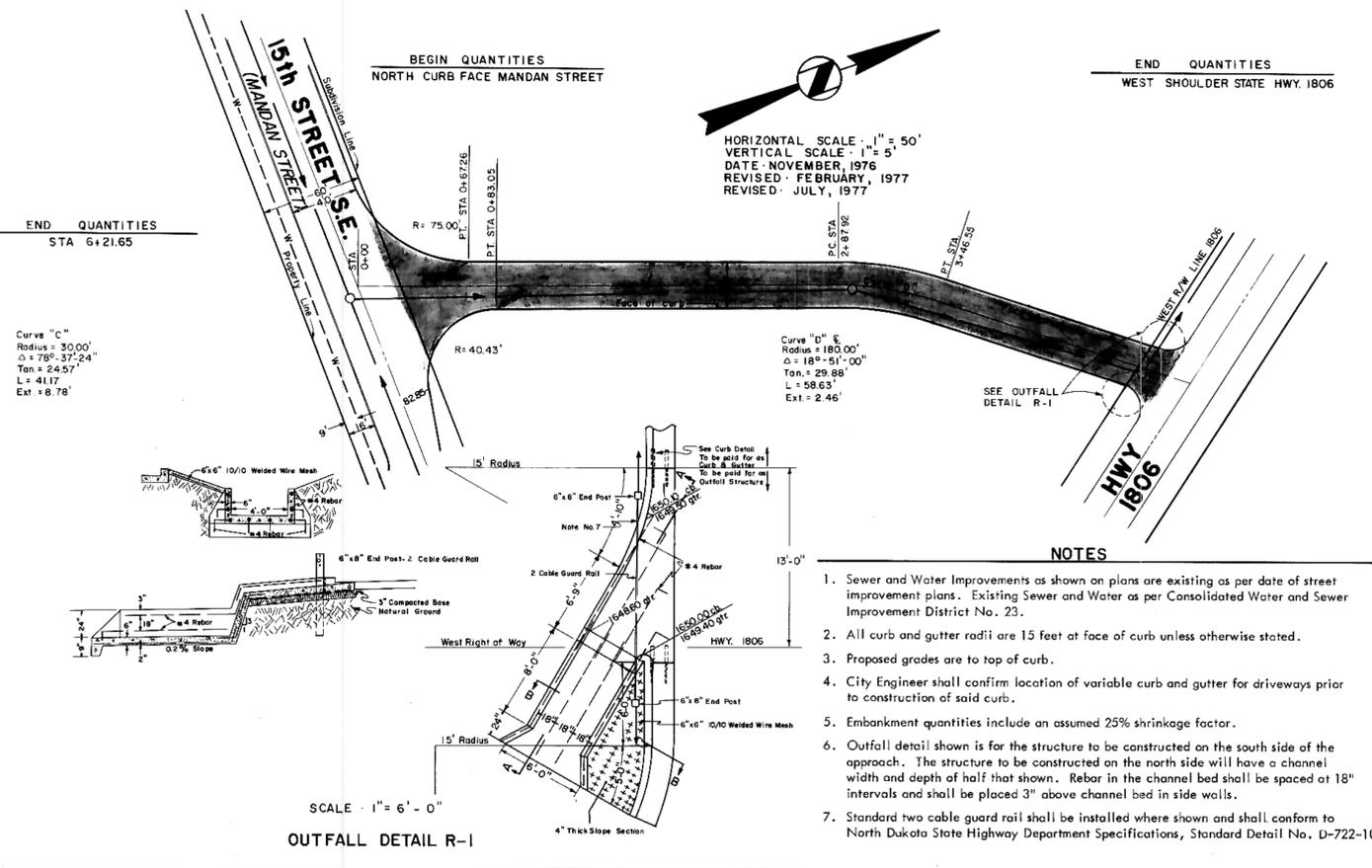
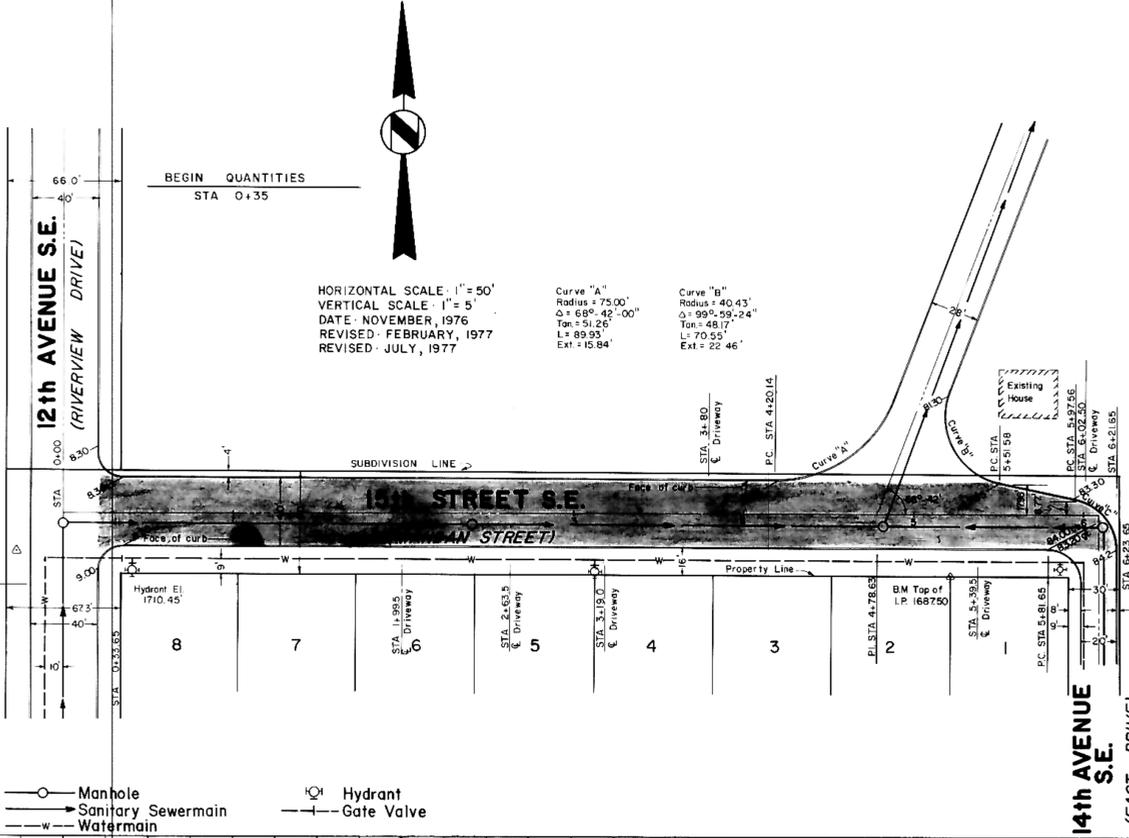
APPROXIMATE QUANTITIES

Item	Quantity	Unit
Embankment	895	Cu Yd
Excavation	1110	Cu Yd
Rock Excavation	5	Cu Yd
Watering	1000	Gal
Curb & Gutter	1079	L.F.
Variable Curb & Gutter	24	L.F.
Driveway	240	S.F.
Curb		L.F.
Subgrade Preparation	2020	S.Y.
Subcut Excavation	10	Cu Yd
Stabilized Gravel Base	10	Ton
Asphalt	2.5	Base Course
Bituminous Mixture	258	Ton
Asphalt Cement	4515	Gal
Asphalt	1.5	Surface Course
Bituminous Mixture	153	Ton
Asphalt Cement	2888	Gal
Tack Coat	202	Gal
Asphalt Sealer		
Bituminous Material	667	Gal
Cover Aggregate	30	Ton
Blotter Sand	4	Ton

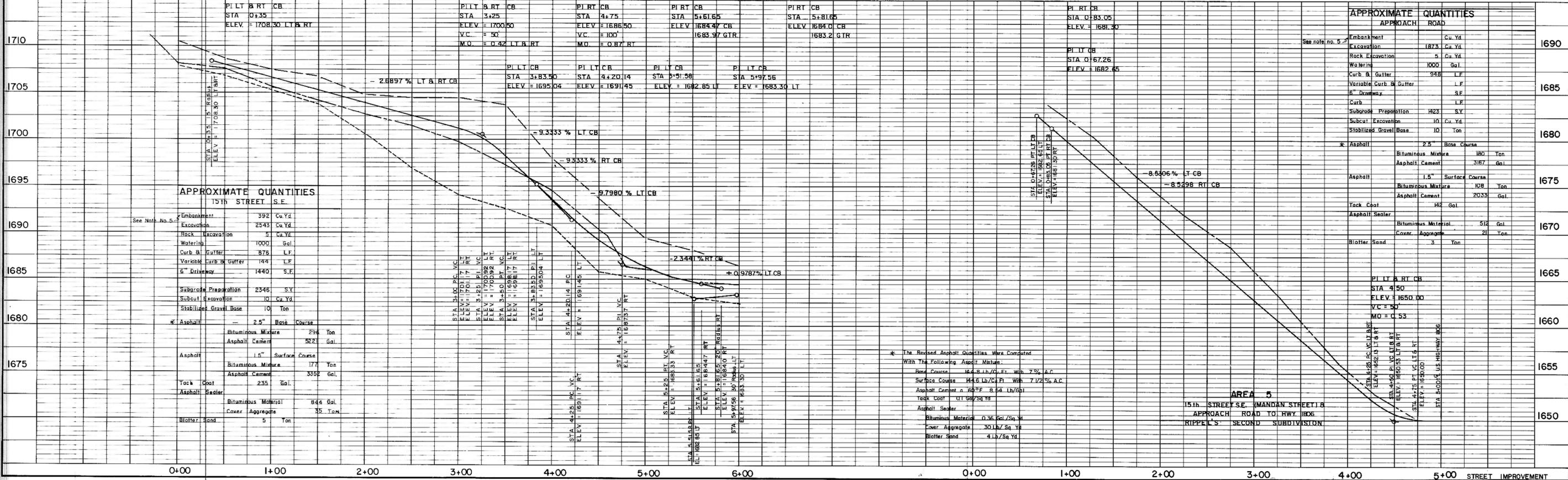
* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixtures
 Base Course - 144.8 lb/cu ft. With 7% Asphalt Cement
 Surface Course - 144.6 lb/cu ft. With 7 1/2% Asphalt Cement
 Asphalt Cement at 60° F. = 8.54 lbs/gal.
 Tack Coat = 0.1 gal/sq. yd.
 Asphalt Sealer
 Bituminous Material = 0.36 gal/sq. yd.
 Cover Aggregate = 30 lb/sq. yd.
 Blotter Sand = 4 lb/sq. yd.

DATE: _____
 BY: _____
 SUPERVISOR: _____
 PHOTO: _____
 NOTE BOOK: _____
 ALIGNMENT CHECKED: _____
 NO. OF WAY CHECKED: _____
 No. _____

DATE: _____
 BY: _____
 SUPERVISOR: _____
 PHOTO: _____
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 No. _____



- NOTES**
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per Consolidated Water and Sewer Improvement District No. 23.
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Embankment quantities include an assumed 25% shrinkage factor.
 - Outfall detail shown is for the structure to be constructed on the south side of the approach. The structure to be constructed on the north side will have a channel width and depth of half that shown. Rebar in the channel bed shall be spaced at 18" intervals and shall be placed 3" above channel bed in side walls.
 - Standard two cable guard rail shall be installed where shown and shall conform to North Dakota State Highway Department Specifications, Standard Detail No. D-722-10



* The Required Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course: 164.8 Lb/Cu Ft. With 7% A.C.
 Surface Course: 144.6 Lb/Cu Ft. With 7 1/2% A.C.
 Asphalt Cement: 64.5% R 54 Lb/Gal
 Tack Coat: 0.150 Lb/Sq Yd
 Asphalt Sealer
 Bituminous Material: 0.36 Gal/Sq Yd
 Cover Aggregate: 30 Lb/Sq Yd
 Blotter Sand: 4 Lb/Sq Yd

APPROACH	QUANTITIES	ROAD
Embankment	392 Cu Yd	
Excavation	2543 Cu Yd	
Rock Excavation	5 Cu Yd	
Watering	1000 Gal	
Curb & Gutter	876 L.F.	
Variable Curb & Gutter	144 L.F.	
6" Driveway	1440 S.F.	
Subgrade Preparation	2346 S.Y.	
Subcut Excavation	10 Cu Yd	
Stabilized Gravel Base	10 Ton	
Asphalt	2.5 Base Course	
Bituminous Mixture	180 Ton	
Asphalt Cement	3187 Gal	
Asphalt	1.5 Surface Course	
Bituminous Mixture	109 Ton	
Asphalt Cement	2032 Gal	
Tack Coat	142 Gal	
Asphalt Sealer		
Bituminous Material	512 Gal	
Cover Aggregate	21 Ton	
Blotter Sand	3 Ton	

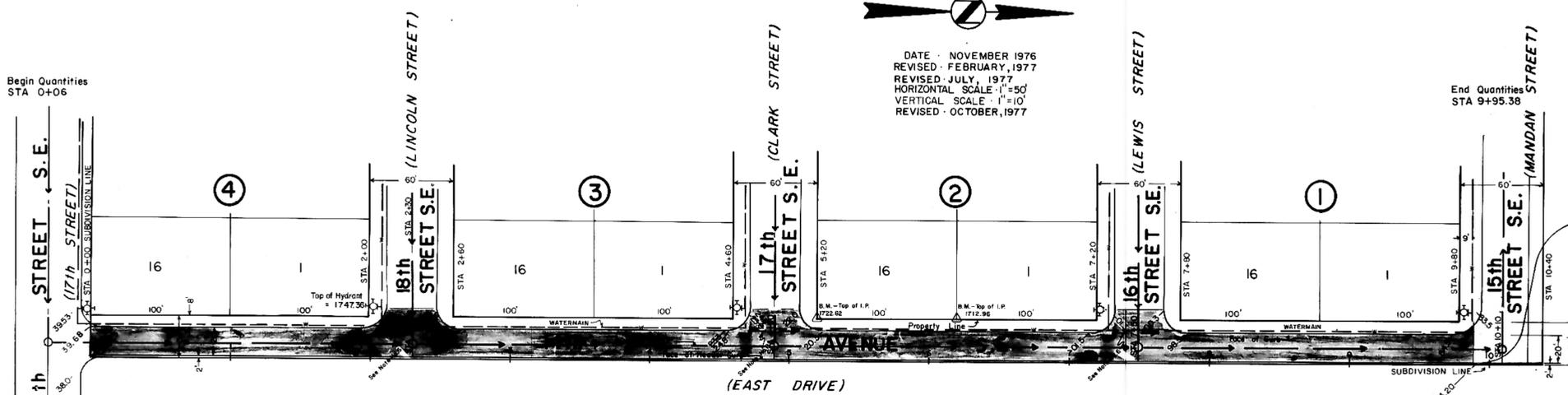
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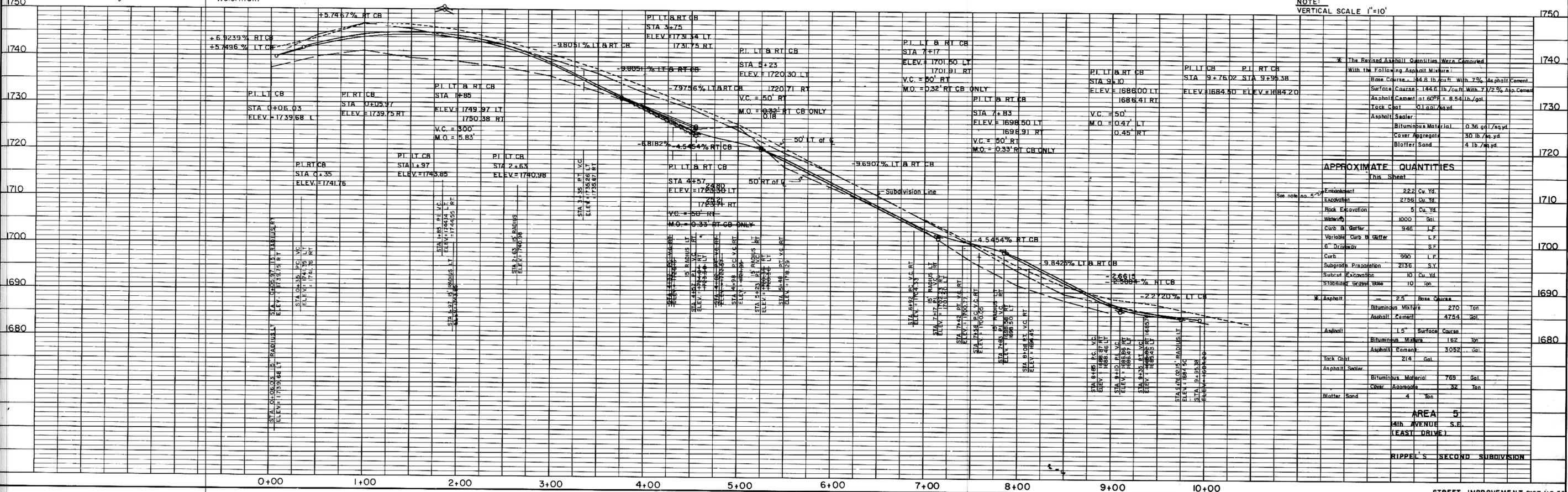
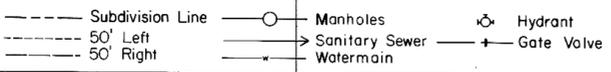
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DATE - NOVEMBER 1976
 REVISED - FEBRUARY, 1977
 REVISED - JULY, 1977
 HORIZONTAL SCALE - 1"=50'
 VERTICAL SCALE - 1"=10'
 REVISED - OCTOBER, 1977

- NOTES**
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per Consolidated Water and Sewer Improvement District No. 23.
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Embankment quantities include an assumed 25% shrinkage factor.
 - Depress crown to allow drainage to flow across intersection as indicated. Also tip gutter section to allow storm water to flow across intersection.



NOTE: VERTICAL SCALE 1"=10'

* The Revised Asphalt Quantities Were Computed With the Following Asphalt Mixture:

Base Course	144.8 lb./cu.ft. With 7% Asphalt Cement
Surface Course	144.8 lb./cu.ft. With 7 1/2% Asphalt Cement
Asphalt Cement	at 60°F = 8.54 lb./gal.
Tack Coat	0.1 gal./sq.yd.
Asphalt Sealer	
Bituminous Material	0.36 gal./sq.yd.
Cover Aggregate	30 lb./sq.yd.
Blotter Sand	4 lb./sq.yd.

APPROXIMATE QUANTITIES

Excavation	222 Cu. Yd.
Rock Excavation	2795 Cu. Yd.
Widening	5 Cu. Yd.
Curb & Gutter	1000 Gal.
Variable Curb & Gutter	946 L.F.
6" Driveway	S.F.
Curb	990 L.F.
Subgrade Excavation	2136 S.Y.
Subcut Excavation	10 Cu. Yd.
Stabilizer Gravel Base	10 Ton
Asphalt	
2" Base Course	270 Ton
Asphalt Cement	4754 Gal.
Asphalt	
1.5" Surface Course	162 Ton
Asphalt Cement	3052 Gal.
Tack Coat	214 Gal.
Asphalt Sealer	
Bituminous Material	789 Gal.
Cover Aggregate	32 Ton
Blotter Sand	4 Ton

AREA 5
 4th AVENUE S.E.
 (EAST DRIVE)
 RIPPET'S SECOND SUBDIVISION

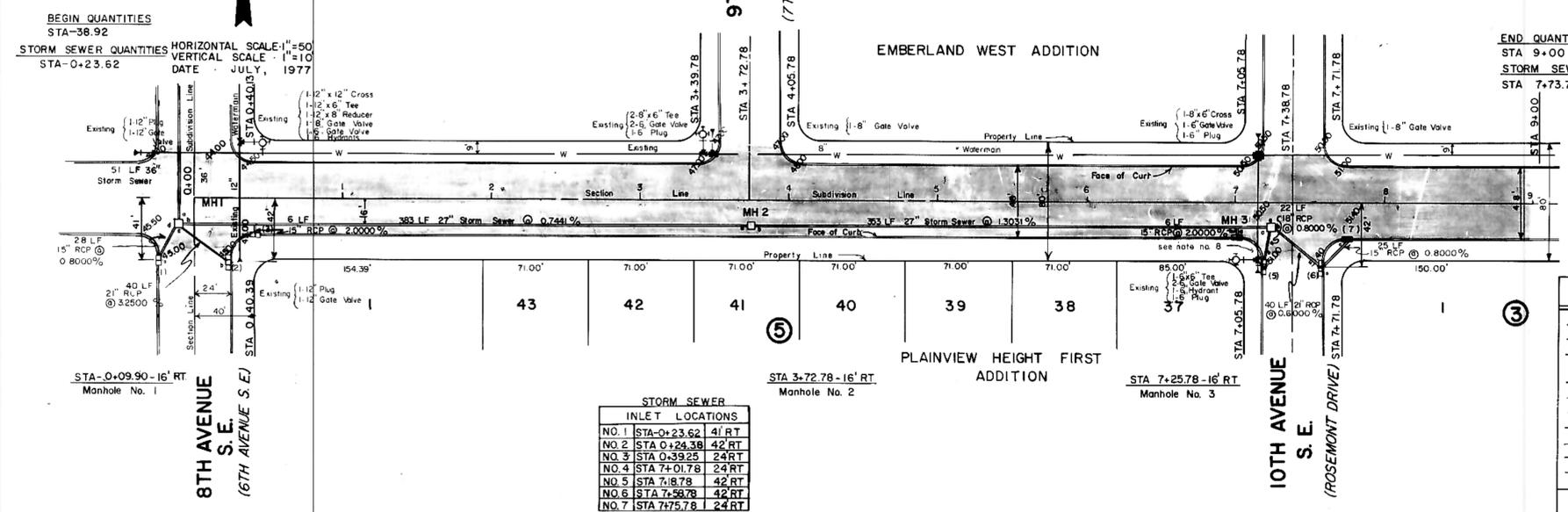
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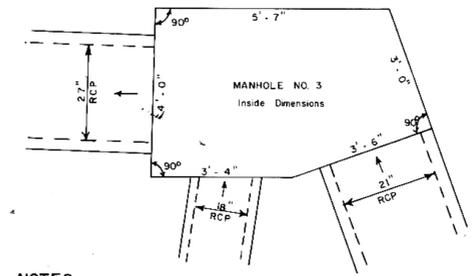
STORM SEWER MANHOLES			
MH. NO.	1	2	3
TYPE	CAST IN PLACE	CAST IN PLACE	CAST IN PLACE
SIZE	90" x 54"	54" x 50"	SEE DETAIL
CASTING ELEV.	1744.50	1747.55	1750.50
TOP OF ROOF	1743.70	1746.75	1749.70
TOP OF WALL	1743.03	1746.08	1749.03
INVERT (a)	1738.35	1741.35	1745.00
INVERT (b)	1738.50	1741.40	1745.12
INVERT (c)	1738.50	1741.40	1745.12
INVERT (d)	1738.50	1741.40	1745.12

STORM SEWER INLETS							
INLETS NO.	1	2	3	4	5	6	7
TYPE	B	C	B	C	C	C	B
CURB ELEV.	1745.00	1745.00	1745.00	1750.50	1751.00	1751.40	1751.40
GUTTER ELEV.	1744.35	1744.35	1744.35	1749.85	1750.35	1750.75	1750.75
TOP OF ROOF	1743.81	1743.81	1743.81	1749.31	1749.81	1750.21	1750.21
INVERT (a)	1738.78	1739.80	1739.00	1746.00	1746.30	1746.50	1746.70
INVERT (b)							
LENGTH PC SEC							

MH NO.	SCHEMATIC (Arrows indicate main flow)	Inside Dimensions A	Dimensions B
1.		7'-6"	4'-6"
2.		4'-6"	4'-6"
3.	SEE DETAIL		

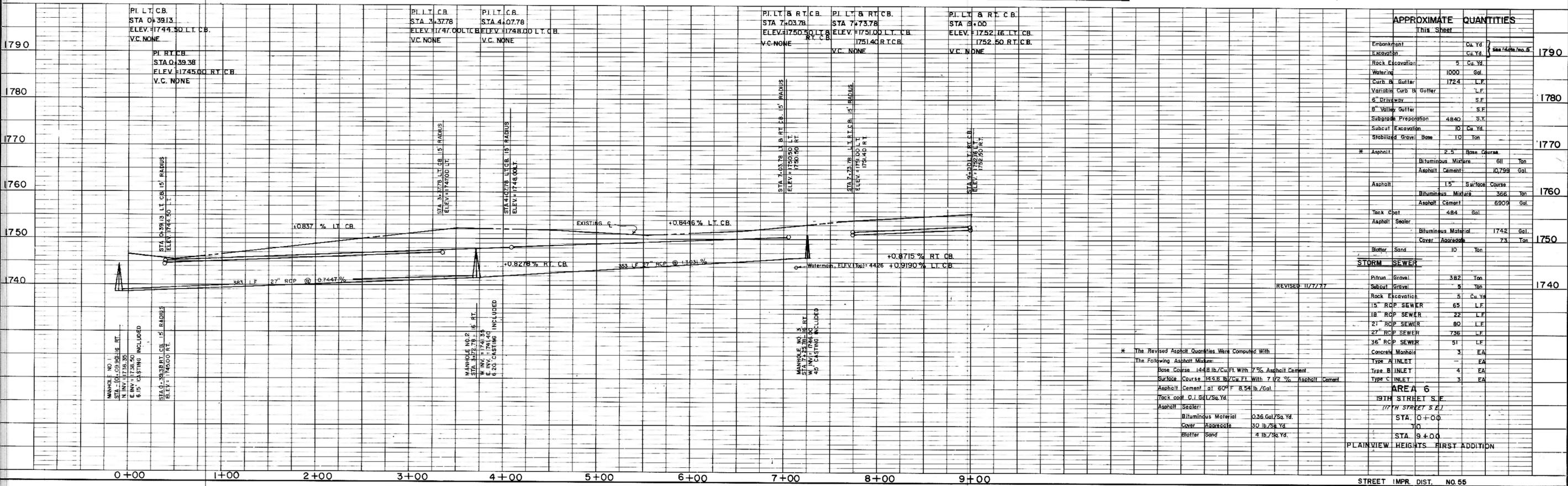


LEGEND	
	EXISTING TYPE A INLET
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	EXISTING STORM SEWER
	EXISTING STORM SEWER MH
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	PROPOSED TYPE B INLET
	PROPOSED STORM SEWER
	PROPOSED STORM SEWER MH



- NOTES:
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 23."
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb unless otherwise stated.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Streets have been graded to within five tenths of a foot of the proposed grades and final grading shall be considered as a one lump sum item for Area No. 6.
 - Stationing for inlets refers to face of curb and center of inlet.
 - Backfill shall be Class B.
 - Contractor to uncover existing watermain and verify elevation.

STORM SEWER INLET LOCATIONS	
NO. 1	STA 0+23.62 4' RT
NO. 2	STA 0+28.38 42' RT
NO. 3	STA 0+39.25 24' RT
NO. 4	STA 7+01.78 24' RT
NO. 5	STA 7+8.78 42' RT
NO. 6	STA 7+58.78 42' RT
NO. 7	STA 7+75.78 24' RT



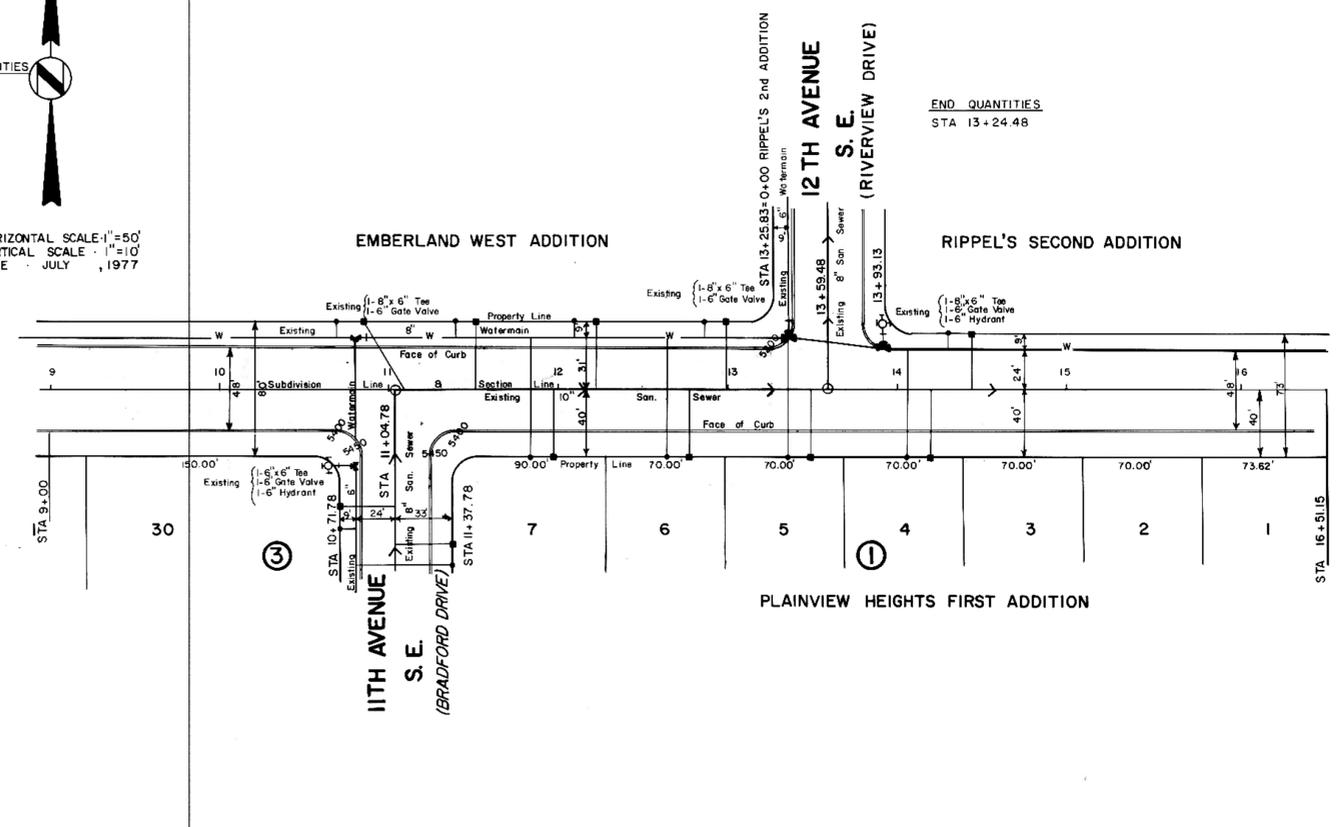
APPROXIMATE QUANTITIES		This Sheet	1790
Embankment	Cu. Yd.		
Excavation	Cu. Yd.		
Rock Excavation	5 Cu. Yd.		
Watering	1000 Gal.		
Curb & Gutter	1724 L.F.		
Variable Curb & Gutter	L.F.		
6" Driveway	S.F.		
8" Valley Gutter	S.F.		
Subgrade Preparation	4840 S.Y.		
Subcut Excavation	10 Cu. Yd.		
Stabilized Gravel Base	10 Ton		
Asphalt	2.5" Base Course		
Bituminous Mixture	611 Ton		
Asphalt Cement	10,799 Gal.		
Asphalt	1.5" Surface Course		
Bituminous Mixture	368 Ton		
Asphalt Cement	6909 Gal.		
Tack Coat	484 Gal.		
Asphalt Sealer	1742 Gal.		
Bituminous Material	1742 Gal.		
Cover Aggregate	73 Ton		
Blotter Sand	10 Ton		
STORM SEWER			
Pitrun Gravel	382 Ton		
Subcut Gravel	5 Ton		
Rock Excavation	5 Cu. Yd.		
15" RCP SEWER	65 L.F.		
18" RCP SEWER	22 L.F.		
21" RCP SEWER	80 L.F.		
27" RCP SEWER	736 L.F.		
36" RCP SEWER	51 L.F.		
Concrete Manholes	3 EA		
Type A INLET	4 EA		
Type B INLET	4 EA		
Type C INLET	3 EA		
* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixtures:			
Base Course	144 lb./Cu. Ft. With 7% Asphalt Cement		
Surface Course	145 lb./Cu. Ft. With 7 1/2% Asphalt Cement		
Tack Coat	0.1 Gal./Sq. Yd.		
Asphalt Sealer			
Bituminous Material	0.36 Gal./Sq. Yd.		
Cover Aggregate	30 lb./Sq. Yd.		
Blotter Sand	4 lb./Sq. Yd.		
AREA 6			
19TH STREET S.E.			
17TH STREET S.E.			
STA. 0+00			
STA. 9+00			
PLAINVIEW HEIGHTS FIRST ADDITION			



BEGIN QUANTITIES
STA 9+00

HORIZONTAL SCALE - 1"=50'
VERTICAL SCALE - 1"=10'
DATE - JULY 1977

END QUANTITIES
STA 13+24.48



19TH STREET
S. E.
(17TH STREET S. E.)

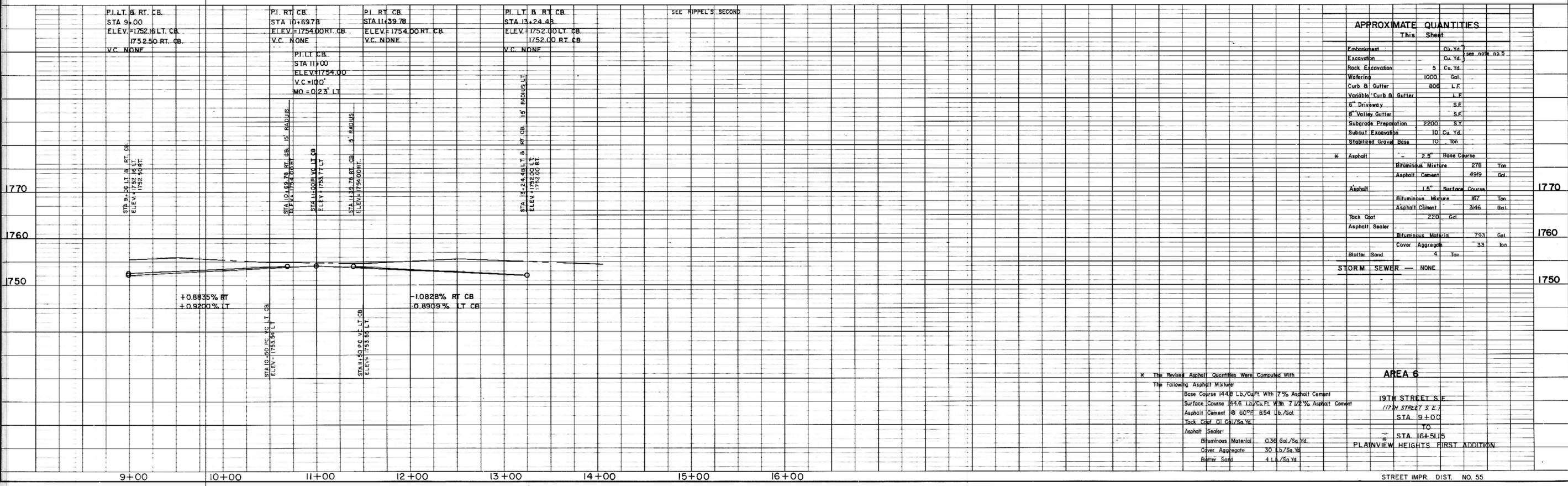
LEGEND	
---	EXISTING
---	50' LT
---	50' RT
---	EXISTING
W	WATERMAIN
H	HYDRANTS
G	GATE VALVES
T	TEE
P	PLUG
S	SANITARY SEWER
SM	SAN SEWER MH

NOTES:

- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 23."
- All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
- Proposed grades are to top of curb unless otherwise stated.
- City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
- Streets have been graded to within five tenths of a foot of the proposed grades and final grading shall be considered as a one lump sum item for Area No. 6.

PI, LT & RT, CB	PI, RT, CB	PI, RT, CB	PI, LT & RT, CB
STA 9+00	STA 10+69.78	STA 11+439.78	STA 13+24.48
ELEV: 1752.16 LT, CB	ELEV: 1754.00 RT, CB	ELEV: 1754.00 RT, CB	ELEV: 1752.00 LT, CB
VC: NONE	VC: NONE	VC: NONE	VC: NONE

SEE RIPPEL'S SECOND



APPROXIMATE QUANTITIES

	This Sheet	See note no. 5
Embankment	0 Cu. Yd.	
Excavation	0 Cu. Yd.	
Rock Excavation	5 Cu. Yd.	
Watering	1000 Gal.	
Curb & Gutter	806 L.F.	
Variable Curb & Gutter	L.F.	
6" Driveway	S.F.	
8" Valley Gutter	S.F.	
Subgrade Preparation	2200 S.Y.	
Subcut Excavation	10 Cu. Yd.	
Stabilized Gravel Base	10 Ton	
* Asphalt	2.5" Base Course	
	Bituminous Mixture	278 Ton
	Asphalt Cement	4919 Gal.
Asphalt	1.5" Surface Course	1770
	Bituminous Mixture	167 Ton
	Asphalt Cement	3466 Gal.
Tack Coat	220 Gal.	
Asphalt Sealer	Bituminous Material	793 Gal.
	Cover Aggregate	33 Ton
	Blotter Sand	4 Ton
STORM SEWER	NONE	1750

* The Revised Asphalt Quantities Were Computed With

The Following Asphalt Mixture	
Base Course	14.5 Lb./Cu. Ft. With 7% Asphalt Cement
Surface Course	14.5 Lb./Cu. Ft. With 7 1/2% Asphalt Cement
Asphalt Cement	80°F 854 Lb./Gal.
Tack Coat	0.1 Gal./Sq. Yd.
Asphalt Sealer	
Bituminous Material	0.36 Gal./Sq. Yd.
Cover Aggregate	30 Lb./Sq. Yd.
Blotter Sand	4 Lb./Sq. Yd.

AREA 6

19TH STREET S.E.
(17TH STREET S.E.)
STA 9+00
TO
STA 16+51.5
PLAINVIEW HEIGHTS FIRST ADDITION

DATE	BY

PLAN
NOTE BOOK
No.

DATE	BY

PROFILE
NOTE BOOK
No.

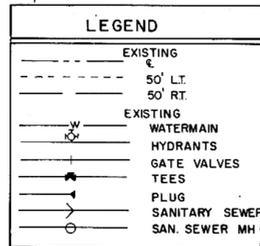
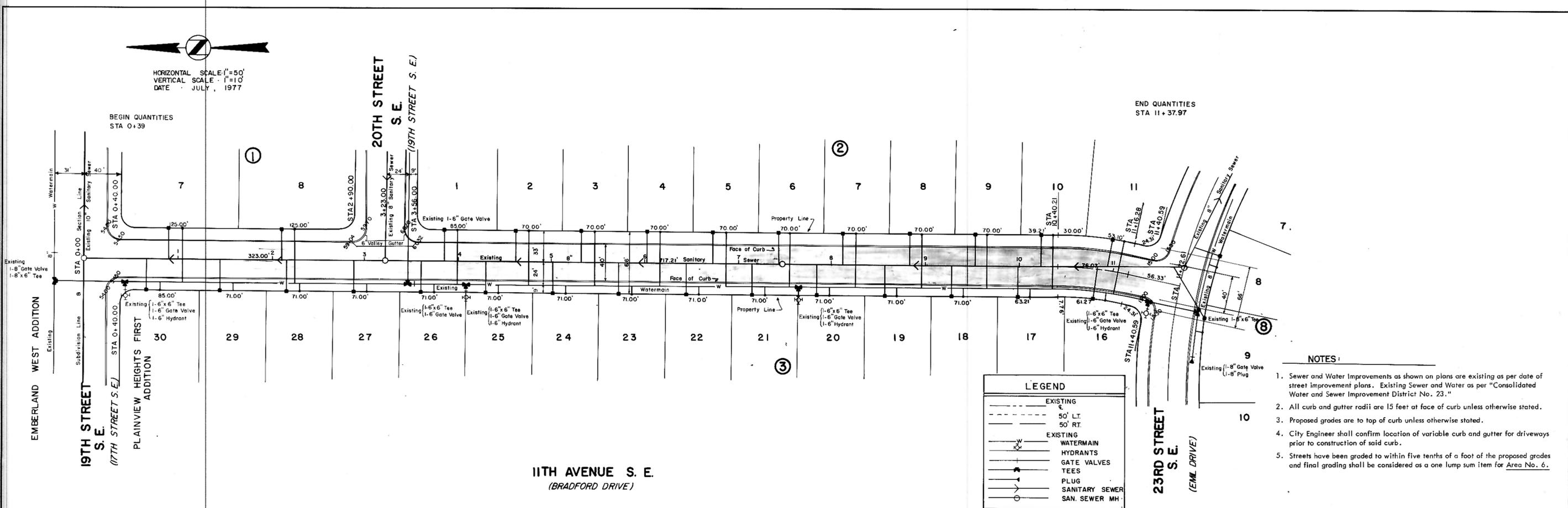
HORIZONTAL SCALE 1"=50'
 VERTICAL SCALE 1"=10'
 DATE JULY, 1977

BEGIN QUANTITIES
 STA 0+39

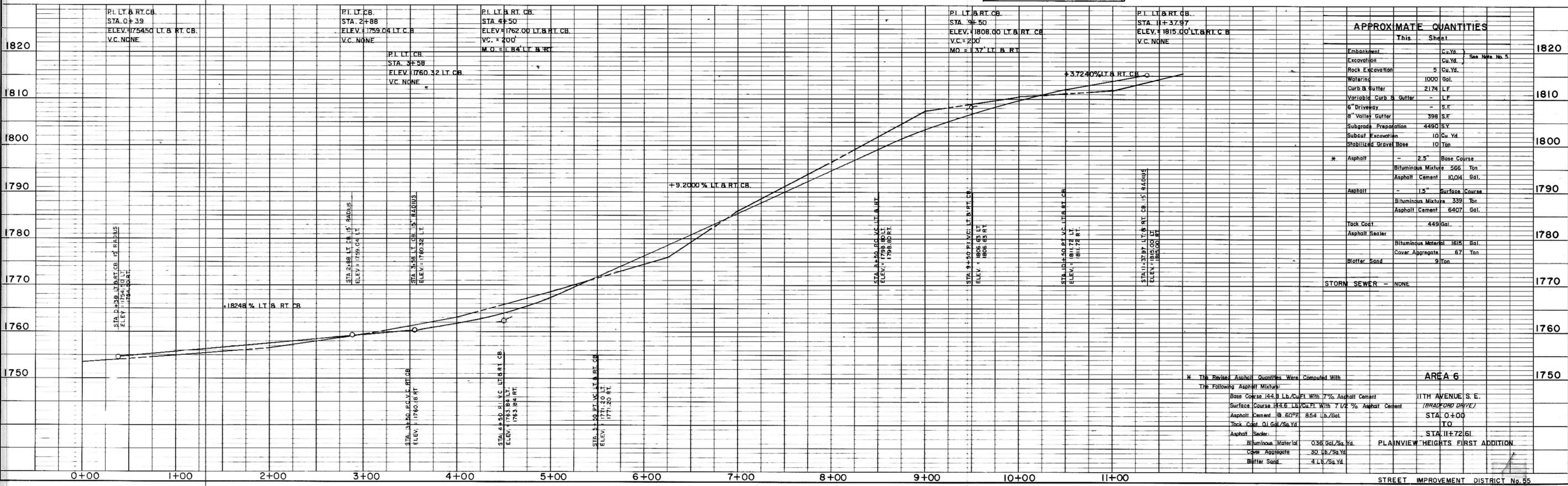
END QUANTITIES
 STA 11+37.97

PLAN
 SURVEIL
 NOTE BOOK
 NO. OF WAY CHECKED

PROFILE
 SURVEIL
 NOTE BOOK
 NO. OF WAY CHECKED



- NOTES:**
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 23."
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb unless otherwise stated.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Streets have been graded to within five tenths of a foot of the proposed grades and final grading shall be considered as a one lump sum item for Area No. 6.



K&M PLATE 1, PLAN-PROFILE
 KEUFFEL & ESSER CO.
 46 7024 MADE IN U.S.A.

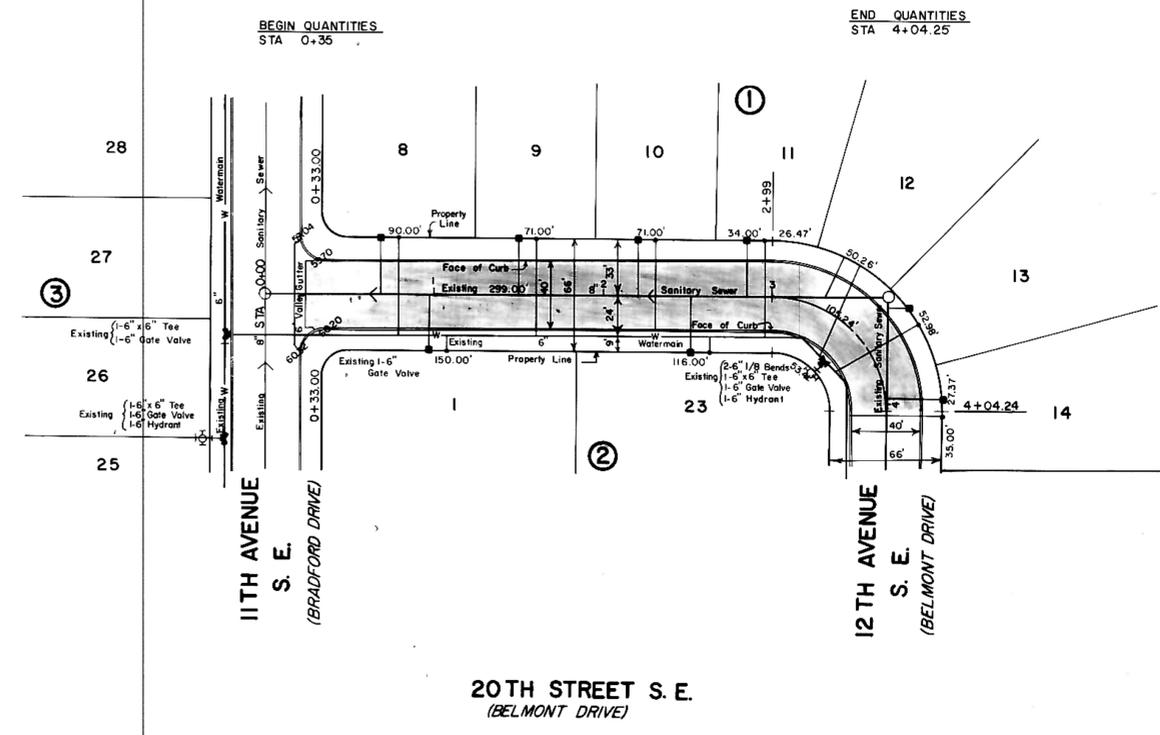
STREET IMPROVEMENT DISTRICT No. 55
 MANDAN, NORTH DAKOTA
 SHEET NO. 6-3
 DATE REVISED-MARCH, 1978



HORIZONTAL SCALE: 1"=50'
 VERTICAL SCALE: 1"=10'
 DATE: JULY, 1977

PLAN
 NOTE BOOK
 No. _____

PROFILE
 NOTE BOOK
 No. _____

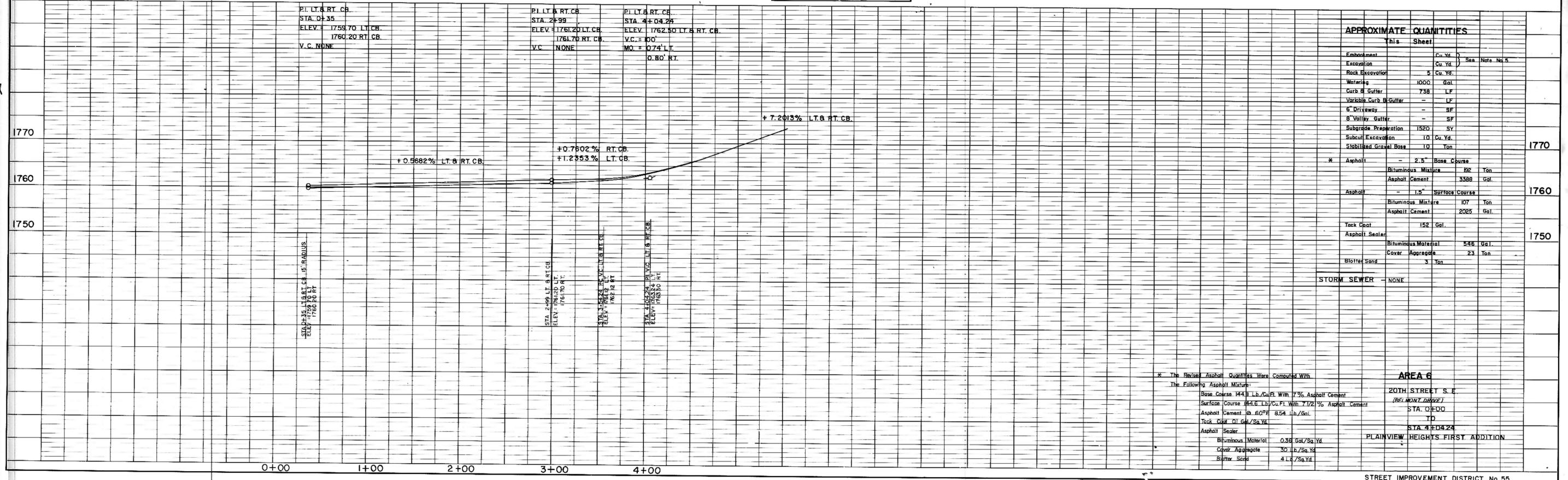


LEGEND	
---	EXISTING
---	50' LT
---	50' RT
---	EXISTING WATERMAIN
---	HYDRANTS
---	GATE VALVE
---	TEE
---	PLUG
---	SANITARY SEWER
---	SAN. SEWER MH

NOTES:

1. Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 23."
2. All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
3. Proposed grades are to top of curb unless otherwise stated.
4. City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
5. Streets have been graded to within five tenths of a foot of the proposed grades and final grading shall be considered as a one lump sum item for Area No. 6.

20TH STREET S. E.
 (BELMONT DRIVE)



APPROXIMATE QUANTITIES			
	This Sheet		
Embankment	Cu. Yd.		
Excavation	Cu. Yd.		
Back Excavation	5 Cu. Yd.		
Watering	1000 Gal.		
Curbs & Gutters	738 LF		
Variable Curbs & Gutters	- LF		
6" Driveway	- SF		
8" Valley Gutter	- SF		
Subgrade Preparation	1520 SY		
Subcut Excavation	10 Cu. Yd.		
Stabilized Gravel Base	10 Ton		
* Asphalt	- 2.5" Base Course		
	Bituminous Mixture	192 Ton	
	Asphalt Cement	3388 Gal.	
Asphalt	- 1.5" Surface Course		
	Bituminous Mixture	107 Ton	
	Asphalt Cement	2025 Gal.	
Tack Coat	152 Gal.		
Asphalt Sealer			
	Bituminous Material	536 Gal.	
	Cover Aggregate	23 Ton	
	Blotter Sand	3 Ton	
STORM SEWER	- NONE		

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 1448 Lb./Cu.Ft. With 7% Asphalt Cement
 Surface Course 1416 Lb./Cu.Ft. With 7 1/2% Asphalt Cement
 Asphalt Cement @ 60°F 8.54 Lb./Gal.
 Tack Coat 0.1 Gal./Sq.Yd.
 Asphalt Sealer
 Bituminous Material 0.36 Gal./Sq.Yd.
 Cover Aggregate 30 Lb./Sq.Yd.
 Blotter Sand 4 Lb./Sq.Yd.

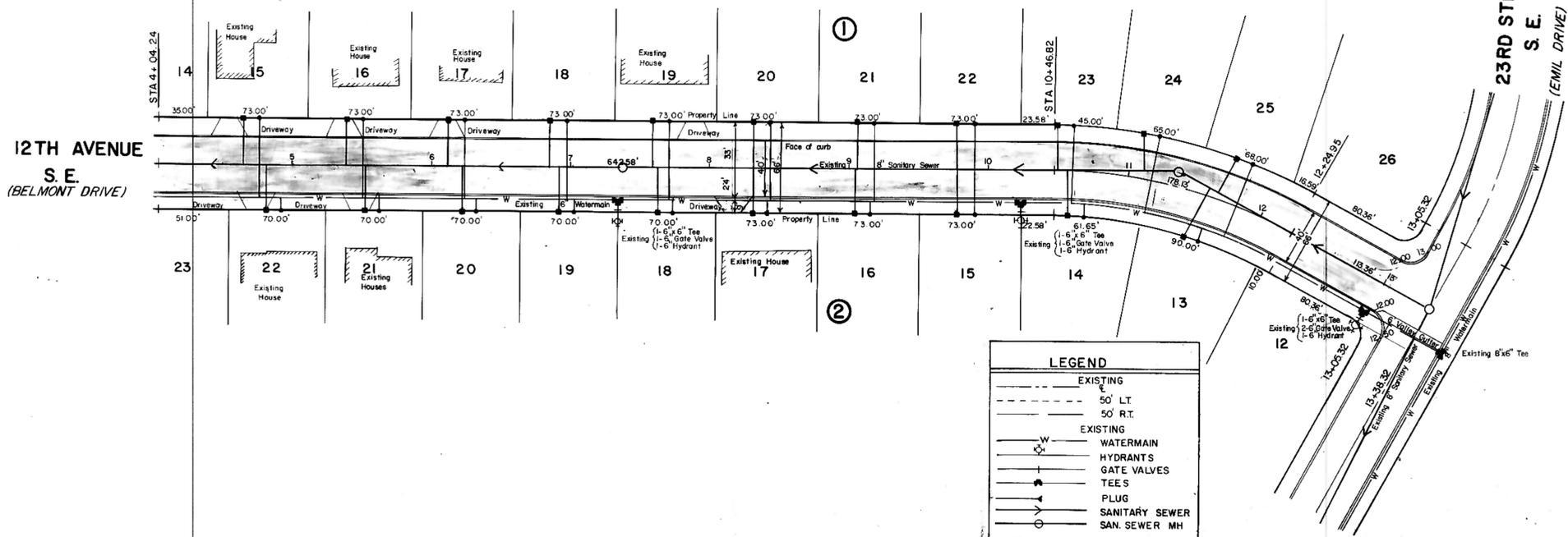
AREA 6
 20TH STREET S. E.
 (BELMONT DRIVE)
 STA. 0+00 TO
 STA. 4+04.24
 PLAINVIEW HEIGHTS FIRST ADDITION



BEGIN QUANTITIES
STA 4+04.24

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=10'
DATE: JULY, 1977

END QUANTITIES
STA 13+03.31



LEGEND

EXISTING

50' LT

50' RT

EXISTING

WATERMAIN

HYDRANTS

GATE VALVES

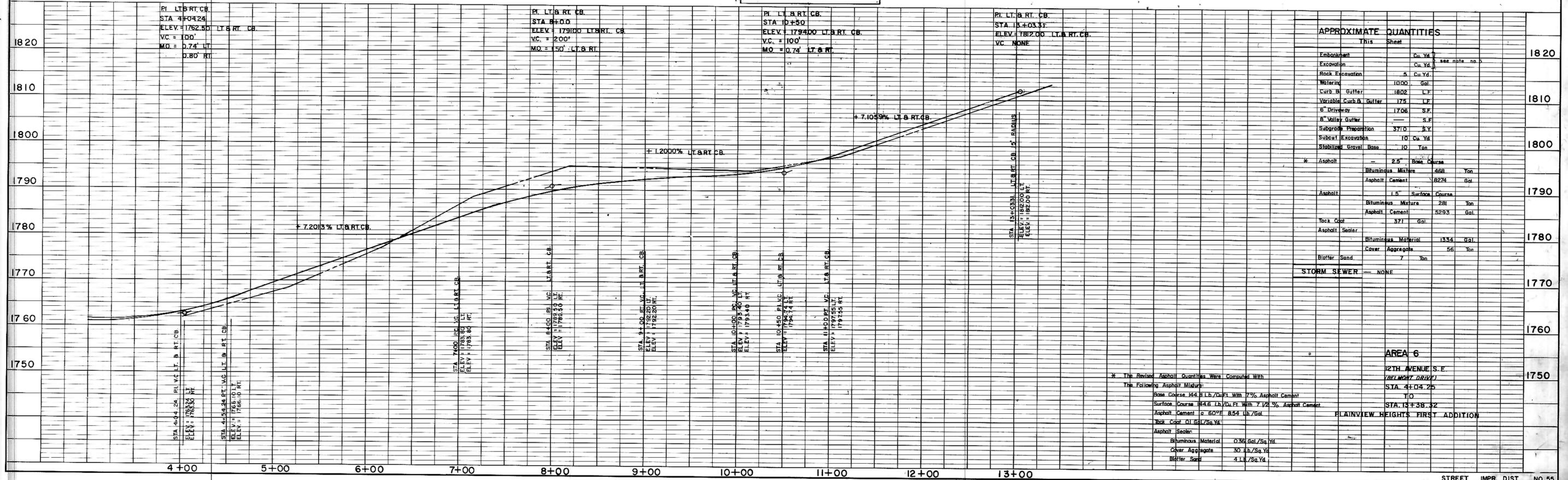
TEES

PLUG

SANITARY SEWER

SAN. SEWER MH

- NOTES:**
- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 23."
 - All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
 - Proposed grades are to top of curb unless otherwise stated.
 - City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
 - Streets have been graded to within five tenths of a foot of the proposed grades and final grading shall be considered as a one lump sum item for Area No. 6.



APPROXIMATE QUANTITIES

Item	This Sheet	Unit	Quantity
Embankment		Cu. Yd.	1820
Excavation		Cu. Yd.	see note no. 1
Rock Excavation	5	Cu. Yd.	
Watering	1000	Gal.	
Curb & Gutter	1802	LT.	
Variable Curb & Gutter	175	LT.	
8" Driveway	1708	S.F.	
8" Valley Gutter		S.F.	
Subgrade Preparation	3710	S.Y.	
Subcut Excavation	10	Cu. Yd.	
Stabilized Gravel Base	10	Ton	
* Asphalt	2.5'	Base Course	
		Bituminous Mixture	468 Ton
		Asphalt Cement	824 Gal.
Asphalt	1.5'	Surface Course	
		Bituminous Mixture	281 Ton
		Asphalt Cement	529 Gal.
Tack Coat	371	Gal.	
Asphalt Sealer		Bituminous Material	1334 Gal.
		Cover Aggregate	56 Ton
Blotter Sand	7	Ton	
STORM SEWER			NONE

AREA 6
12TH AVENUE S.E.
(BELMONT DRIVE)
STA 4+04.25
T.O.
STA 13+38.32
PLAINVIEW HEIGHTS FIRST ADDITION

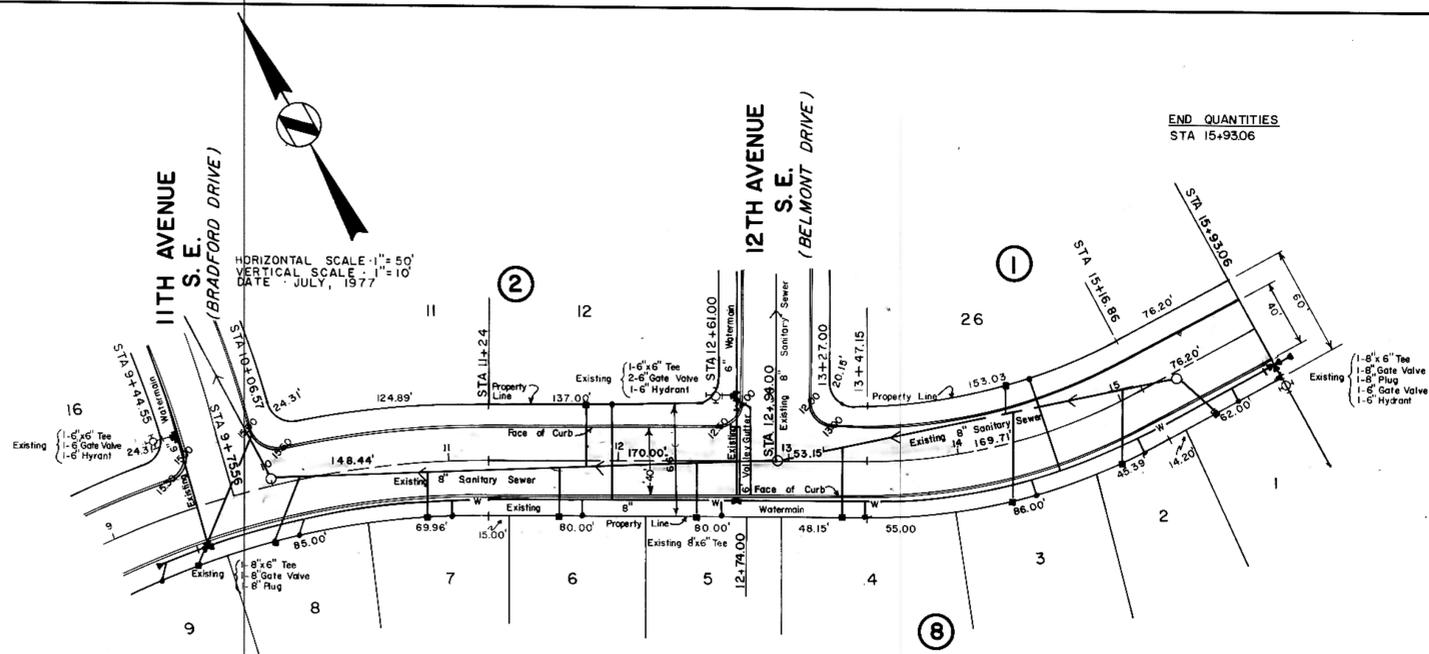
* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
Base Course 144.8 Lb./Sq. Ft. With 7% Asphalt Cement
Surface Course 84.6 Lb./Sq. Ft. With 7 1/2% Asphalt Cement
Asphalt Cement @ 80°F 8.54 Lb./Gal.
Tack Coat 0.1 Gal./Sq. Ft.
Asphalt Sealer
Bituminous Material 0.36 Gal./Sq. Ft.
Cover Aggregate 30 Lb./Sq. Ft.
Blotter Sand 4 Lb./Sq. Ft.

PLAN
SURVEYED BY: _____
DATE: _____
NOTE BOOK NO.: _____
DRAWING CHECKED BY: _____
DATE: _____

PROFILE
SURVEYED BY: _____
DATE: _____
NOTE BOOK NO.: _____
DRAWING CHECKED BY: _____
DATE: _____

DATE: _____ BY: _____
 SURVEYED: _____
 ADJUSTED: _____
 PLAN NOTE BOOK No. _____

DATE: _____ BY: _____
 SURVEYED: _____
 ADJUSTED: _____
 PROFILE NOTE BOOK No. _____



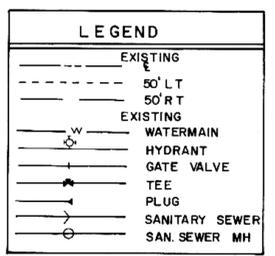
BEGIN QUANTITIES
STA 9+00

END QUANTITIES
STA 15+93.06

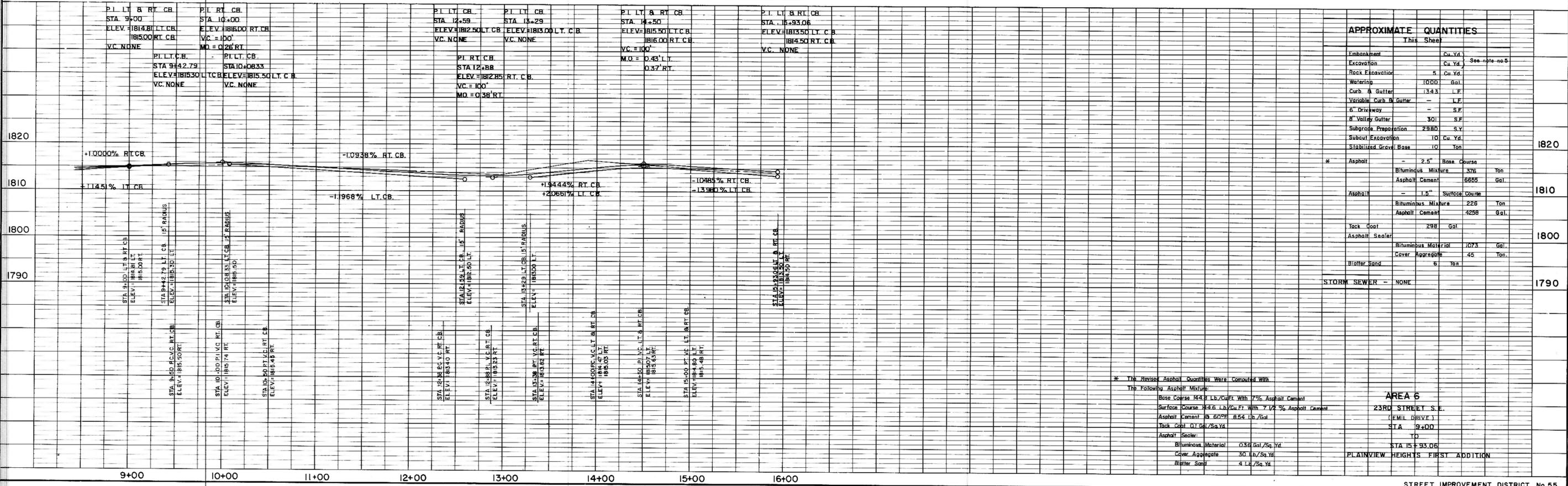
HORIZONTAL SCALE 1" = 50'
 VERTICAL SCALE 1" = 10'
 DATE: JULY, 1977

NOTES:

- Sewer and Water Improvements as shown on plans are existing as per date of street improvement plans. Existing Sewer and Water as per "Consolidated Water and Sewer Improvement District No. 23."
- All curb and gutter radii are 15 feet at face of curb unless otherwise stated.
- Proposed grades are to top of curb unless otherwise stated.
- City Engineer shall confirm location of variable curb and gutter for driveways prior to construction of said curb.
- Streets have been graded to within five tenths of a foot of the proposed grades and final grading shall be considered as a one lump sum item for Area No. 6.



23RD STREET S.E.
(EMIL DRIVE)



APPROXIMATE QUANTITIES

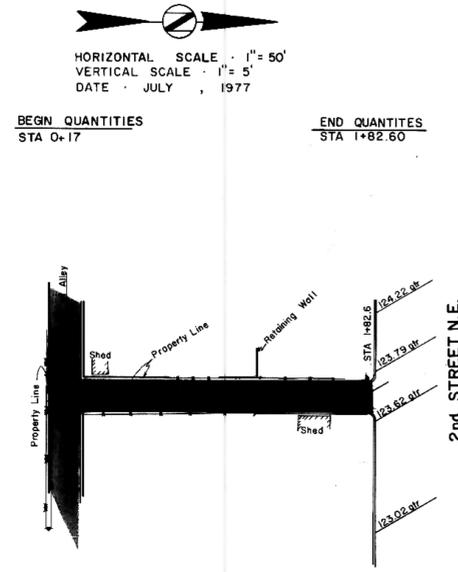
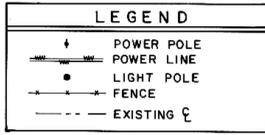
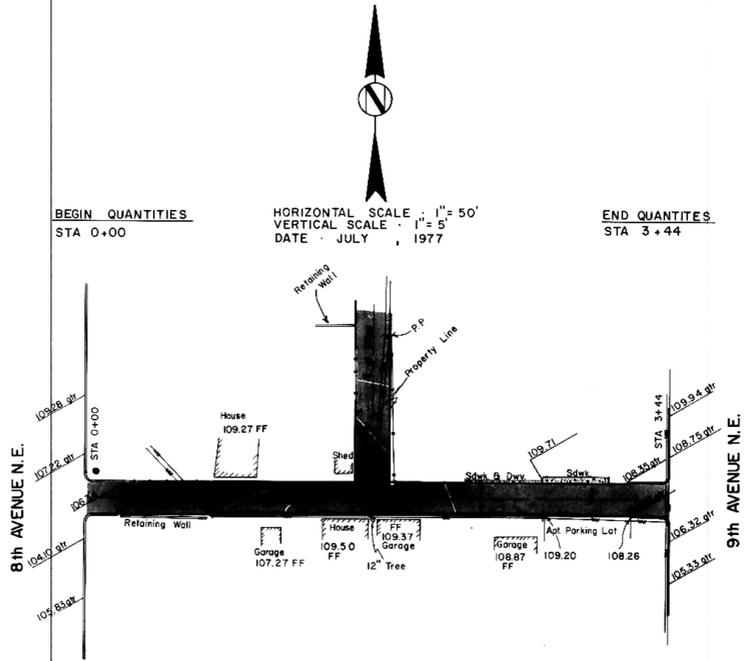
Item	Quantity	Unit
Embankment	0	Cu. Yd.
Excavation	5	Cu. Yd.
Rock Excavation	5	Cu. Yd.
Watering	1000	Gal.
Curb & Gutter	1343	L.F.
Variable Curb & Gutter	0	L.F.
8" Driveway	0	S.F.
8" Valley Gutter	301	S.F.
Subgrade Preparation	2880	S.Y.
Subcut Excavation	10	Cu. Yd.
Stabilized Gravel Base	10	Ton
Asphalt	2.5"	Base Course
Bituminous Mixture	376	Ton
Asphalt Cement	6855	Gal.
Asphalt	1.5"	Surface Course
Bituminous Mixture	228	Ton
Asphalt Cement	4258	Gal.
Tack Coat	298	Gal.
Asphalt Sealer	0	Gal.
Bituminous Material	1073	Gal.
Cover Aggregate	45	Ton
Blotter Sand	6	Ton
STORM SEWER	NONE	

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:
 Base Course 14.8 Lb./Cu.Ft. With 7% Asphalt Cement
 Surface Course 14.6 Lb./Cu.Ft. With 7 1/2% Asphalt Cement
 Asphalt Cement @ 60°F 8.54 Lb./Gal.
 Tack Coat 0.1 Gal./Sq.Yd.
 Asphalt Sealer
 Bituminous Material 0.32 Gal./Sq.Yd.
 Cover Aggregate 30 Lb./Sq.Yd.
 Blotter Sand 4 Lb./Sq.Yd.

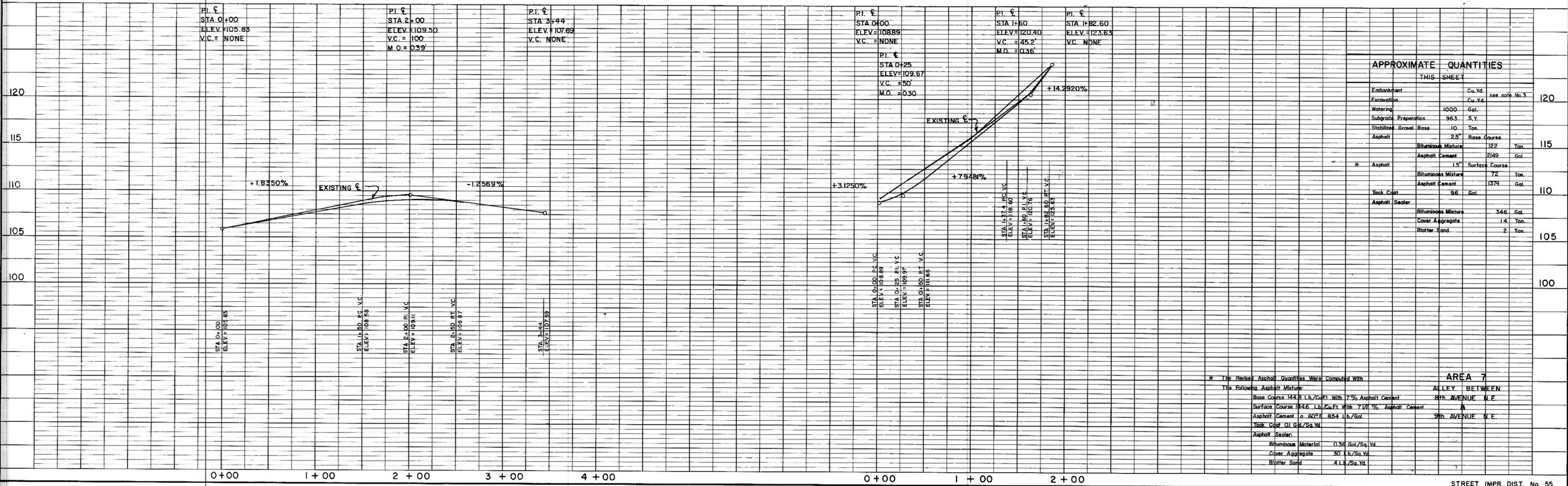
AREA 6
 23RD STREET S.E.
 (EMIL DRIVE)
 STA 9+00
 TO
 STA 15+93.06
 PLAINVIEW HEIGHTS FIRST ADDITION

DATE: _____
 BY: _____
 SURVEYED: _____
 PLOTTED: _____
 NOTE BOOK: _____
 NO. _____

DATE: _____
 BY: _____
 SURVEYED: _____
 PLOTTED: _____
 NOTE BOOK: _____
 NO. _____



- NOTES:
1. An inverted crown shall be constructed with a cross slope of 3/8" per foot.
 2. Proposed grades are to the centerline of the paving.
 3. Grading of alley shall be considered as a one lump sum item.
 4. Elevations are referenced to top of hydrant on the corner of 1st Street NE and 8th Avenue NE. Elevation = 100



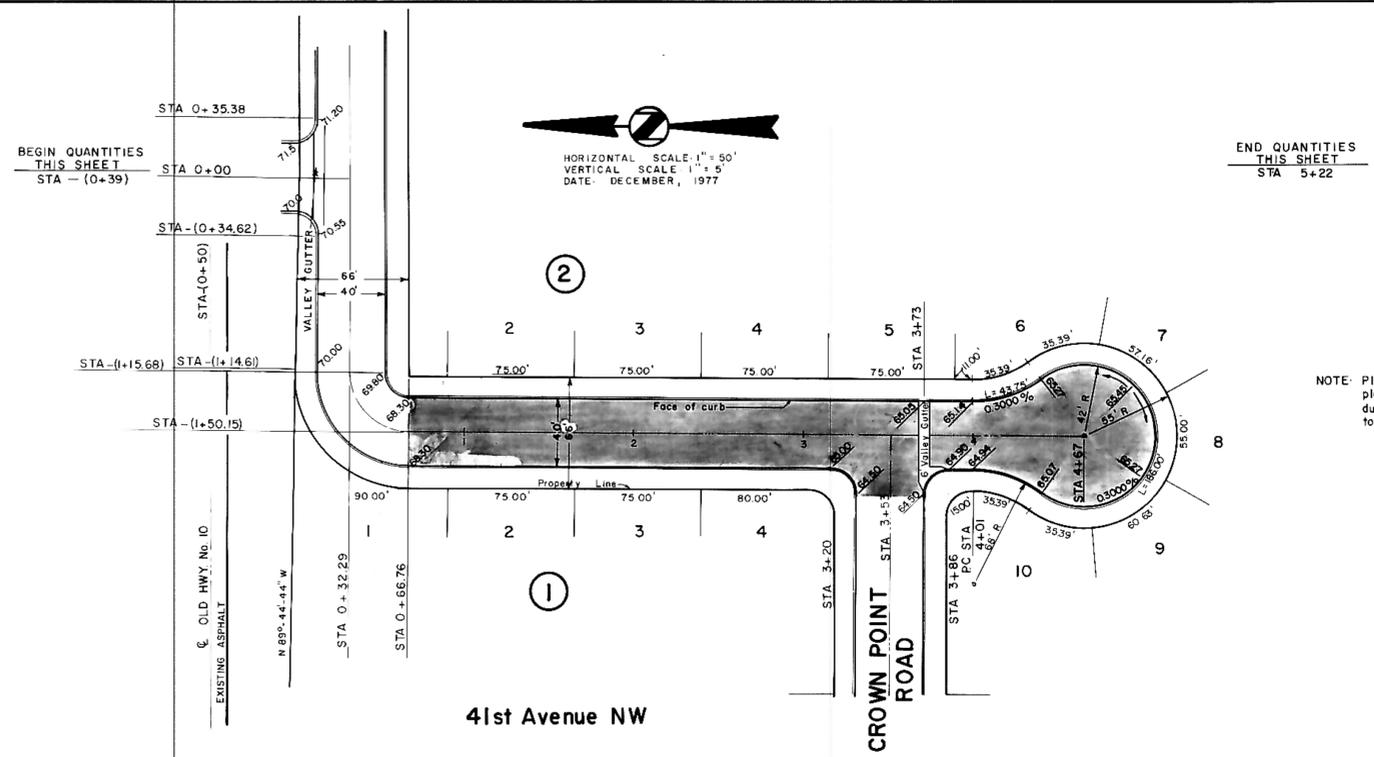
APPROXIMATE QUANTITIES			
THIS SHEET			
Embankment	Cu.Yd.		120
Excavation	Cu.Yd.	see note No. 3	
Watering	1000 Gal.		
Subgrade Preparation	963 S.Y.		
Stabilized Gravel Base	10 Ton		
Asphalt	2.5" Base Course		
Bituminous Mixture	182 Ton		115
Asphalt Cement	249 Gal		
Asphalt	1.5" Surface Course		
Bituminous Mixture	72 Ton		110
Asphalt Cement	1374 Gal		
Tank Coat	96 Gal		
Asphalt Sealer			
Bituminous Mixture	346 Gal		105
Cover Aggregate	14 Ton		
Blotter Sand	2 Ton		100

* The Revised Asphalt Quantities Were Computed With The Following Asphalt Mixture:

AREA 7		ALLEY BETWEEN 8th AVENUE N.E. AND 9th AVENUE N.E.	
Base Course	144 Lb./Cu.Ft. With 7% Asphalt Cement		
Surface Course	144.6 Lb./Cu.Ft. With 7.12% Asphalt Cement		
Asphalt Cement	60°F 854 lb./Gal		
Tank Coat	0.1 Gal/Sq.Yd.		
Asphalt Sealer			
Bituminous Material	0.36 Gal/Sq.Yd.		
Cover Aggregate	30 lb./Sq.Yd.		
Blotter Sand	4 Lb./Sq.Yd.		

DATE	
BY	
PLAN	
NO. BOOK	
NOTE	
NO.	

DATE	
BY	
PROFILE	
NO. BOOK	
NOTE	
NO.	

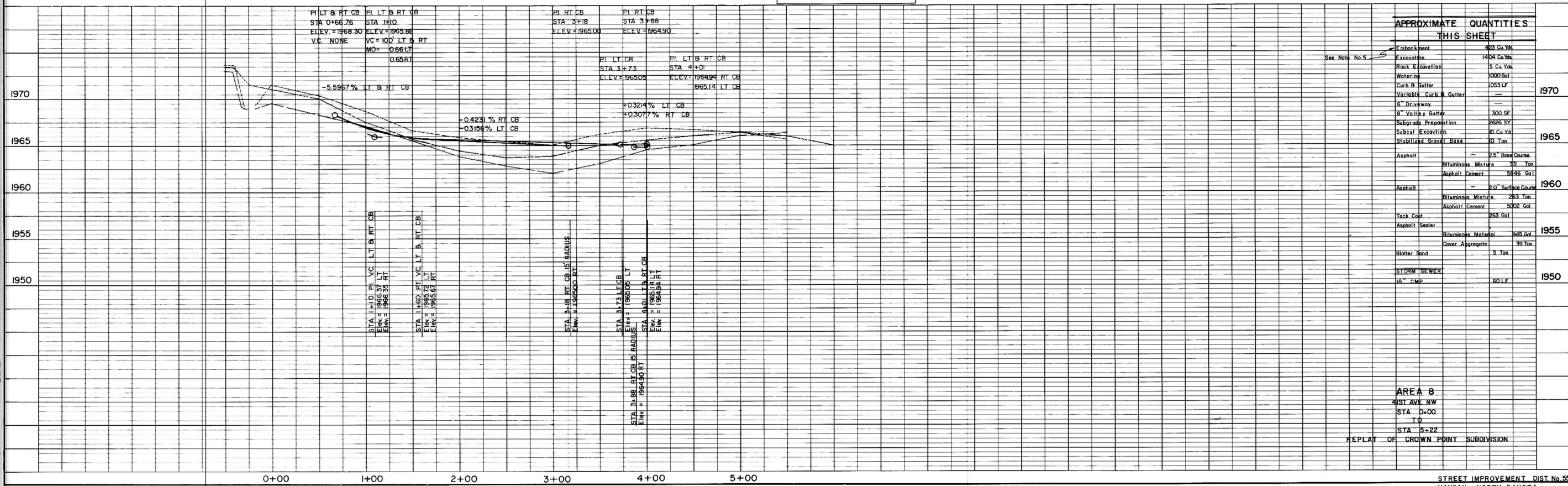


NOTE: Please refer to sewer & water plans before issuing building permits due to depths of the sewer in relation to the street grades.

LEGEND	
Existing	—
50' LT	- - - -
50' RT	— · — · —

NOTES

- Proposed Sewer and Water improvements for Crown Point Road are shown on plans for "Consolidated Sewer and Water Improvement District No. 25". Said sewer and water improvements shall be installed prior to any street improvements except earthwork and contractor shall be responsible for the preservation of said sewer and water improvements during construction.
- Proposed grades are to the top of the curb unless otherwise stated.
- All curb and gutter radii are 15 feet at the face of curb unless otherwise stated.
- All backfill on this sheet shall be Class "B".
- Earthwork quantities include the removal of topsoil. Topsoil may be used as fill in the embankment area outside the right-of-way. Embankment quantities shown include an assumed 20% shrinkage factor.
- The following is the asphalt mixture that was used to compute the quantities. This is not necessarily the design mix that will be used.
 - Base Course 144.8 lb./cu. ft. with 7% asphalt cement.
 - Surface Course 144.6 lb./cu. ft. with 7½% asphalt cement.
 - Asphalt Cement at 60°F. = 8.54 lbs./gal.
 - Tack Coat 0.1 gal./sq. yd.
 - Asphalt Sealer Bituminous Material 0.36 gal./sq. yd.
 - Cover Aggregate 30 lbs./sq. yd.



APPROXIMATE QUANTITIES THIS SHEET

Item	Quantity	Year
Embankment	423 Cu Yds	1970
Excavation	1404 Cu Yds	1970
Rock Excavation	5 Cu Yds	1970
Watering	1000 Gal	1970
Curb & Gutter	1053 LF	1970
Variable Curb & Gutter	—	1970
6" Driveway	—	1970
8" Valley Gutter	300 SF	1970
Subgrade Preparation	2626 SY	1965
Subcut Excavation	10 Cu Yds	1965
Stabilized Gravel Base	10 Ton	1965
Asphalt	25" Base Course	1960
Bituminous Mixture	283 Ton	1960
Asphalt Cement	5002 Gal	1960
Asphalt	2" Surface Course	1960
Bituminous Mixture	283 Ton	1960
Asphalt Cement	5002 Gal	1960
Tack Coat	283 Gal	1960
Asphalt Sealer	825 Gal	1960
Bituminous Material	39 Ton	1960
Cover Aggregate	39 Ton	1960
Blotter Sand	5 Ton	1960
STORM SEWER	—	1950
IR" C&G	60 LF	1950

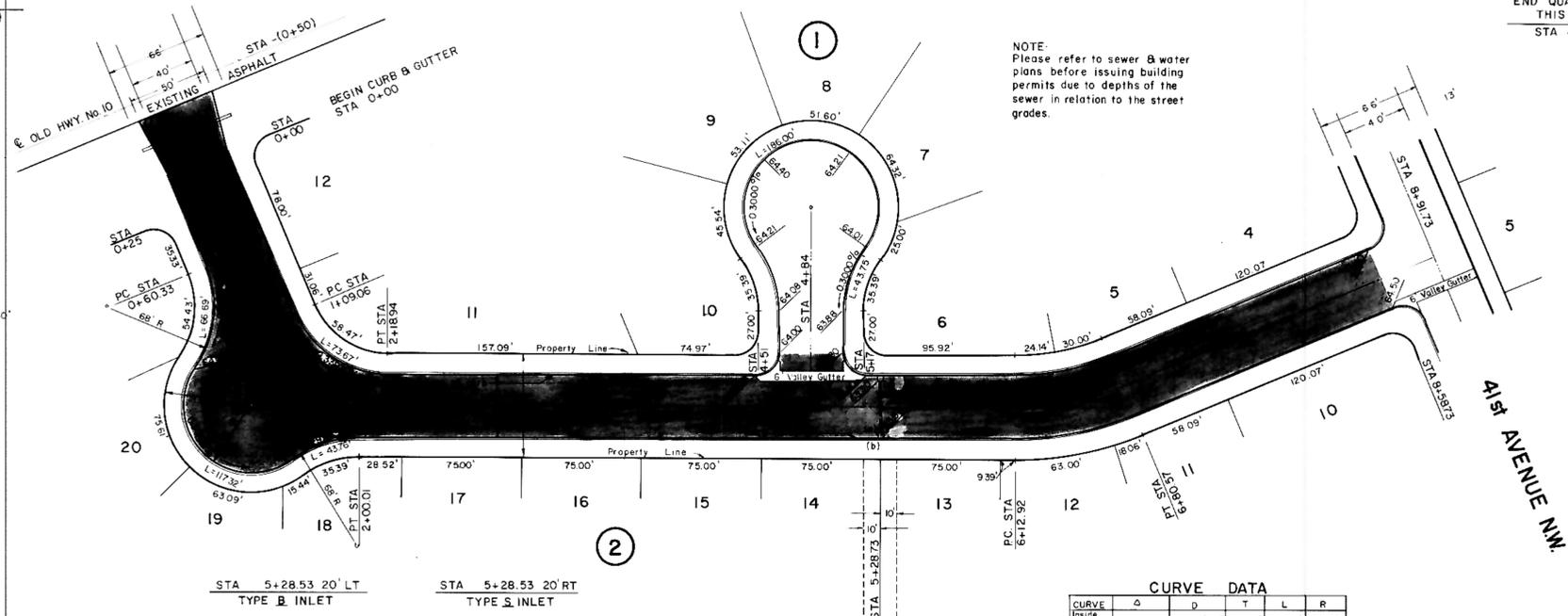
AREA 8
41st Ave NW
STA 0+00
T.O.
STA 5+22
REPLAT OF CROWN POINT SUBDIVISION

BEGIN QUANTITIES
THIS SHEET
STA - (0+39)

END QUANTITIES
THIS SHEET
STA 8+56.73



HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'
DATE: DECEMBER, 1977



NOTE:
Please refer to sewer & water plans before issuing building permits due to depths of the sewer in relation to the street grades.

CURVE	Δ	D	T	L	R
Inside Curve		38° 40' 13"	3072'	59.48'	151.02'
A	23° 00' 00"	344' 00' 00"	34.79'	67.65'	171.02'
Outside Curve		30° 20' 56"	3886'	75.78'	191.02'

- NOTES**
- Proposed Sewer and Water improvements for Crown Point Road are shown on plans for "Consolidated Sewer and Water Improvement District No. 25". Said Sewer and Water improvements shall be installed prior to any street improvements except earthwork and contractor shall be responsible for the preservation of sewer and water improvements during construction.
 - Proposed grades are to the top of the curb unless otherwise stated.
 - All curb and gutter radii are 15 feet at the face of curb unless otherwise stated.
 - All backfill on this sheet shall be Class "B".
 - Earthwork quantities include the removal of topsoil. Topsoil may be used as fill in the embankment area outside the right-of-way. Embankment quantities shown include an assumed 20% shrinkage factor.
 - The following is the asphalt mixture that was used to compute the quantities. This is not necessarily the design mix that will be used:
 Base Course 144.8 lb/cu. ft. with 7% asphalt cement.
 Surface Course 144.6 lb/cu. ft. with 7½% asphalt cement.
 Asphalt Cement at 60° F. = 8.54 lbs./gal.
 Tack Coat 0.1 gal./sq. yd.
 Asphalt Sealer Bituminous Material 0.36 gal./sq. yd.
 Cover Aggregate 30 lbs./sq. yd.

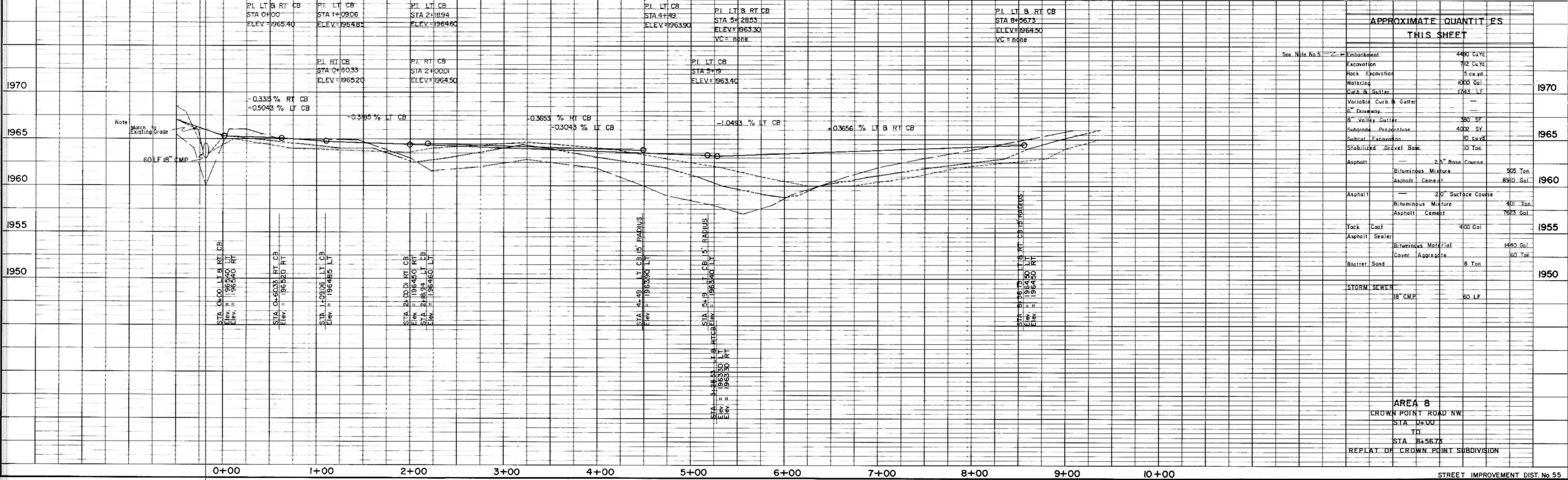
DATE	
BY	
NO.	

DATE	
BY	
NO.	

LEGEND

Existing	—
58' LT	- - - - -
58' RT	- - - - -

CROWN POINT ROAD NW.



**APPROXIMATE QUANTITIES
THIS SHEET**

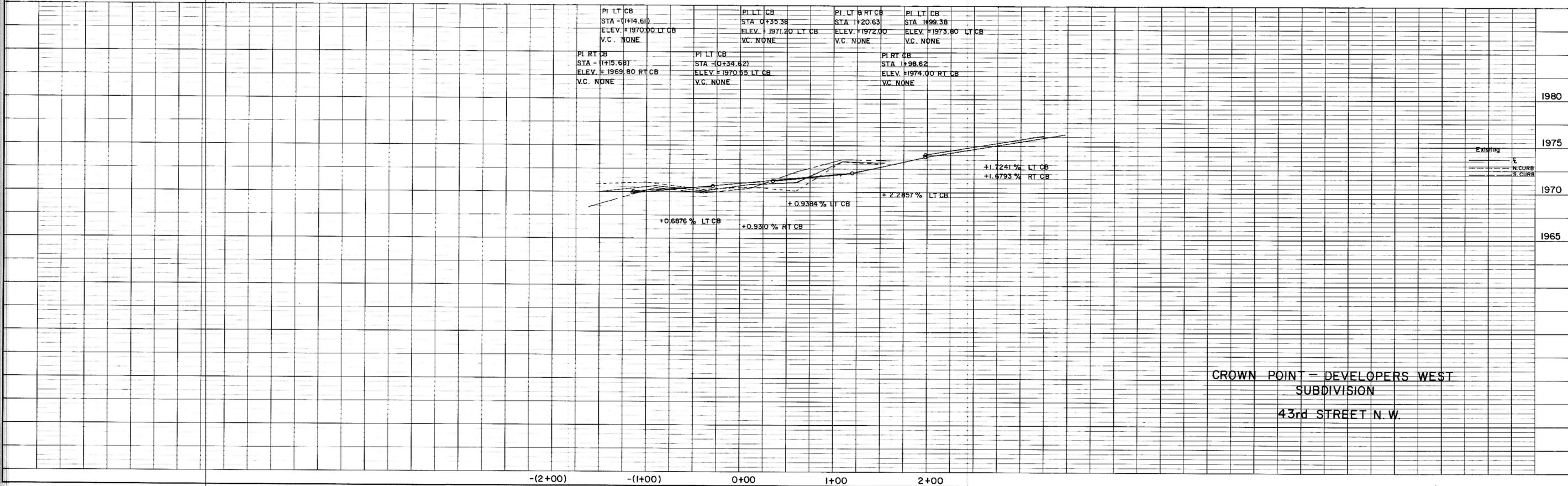
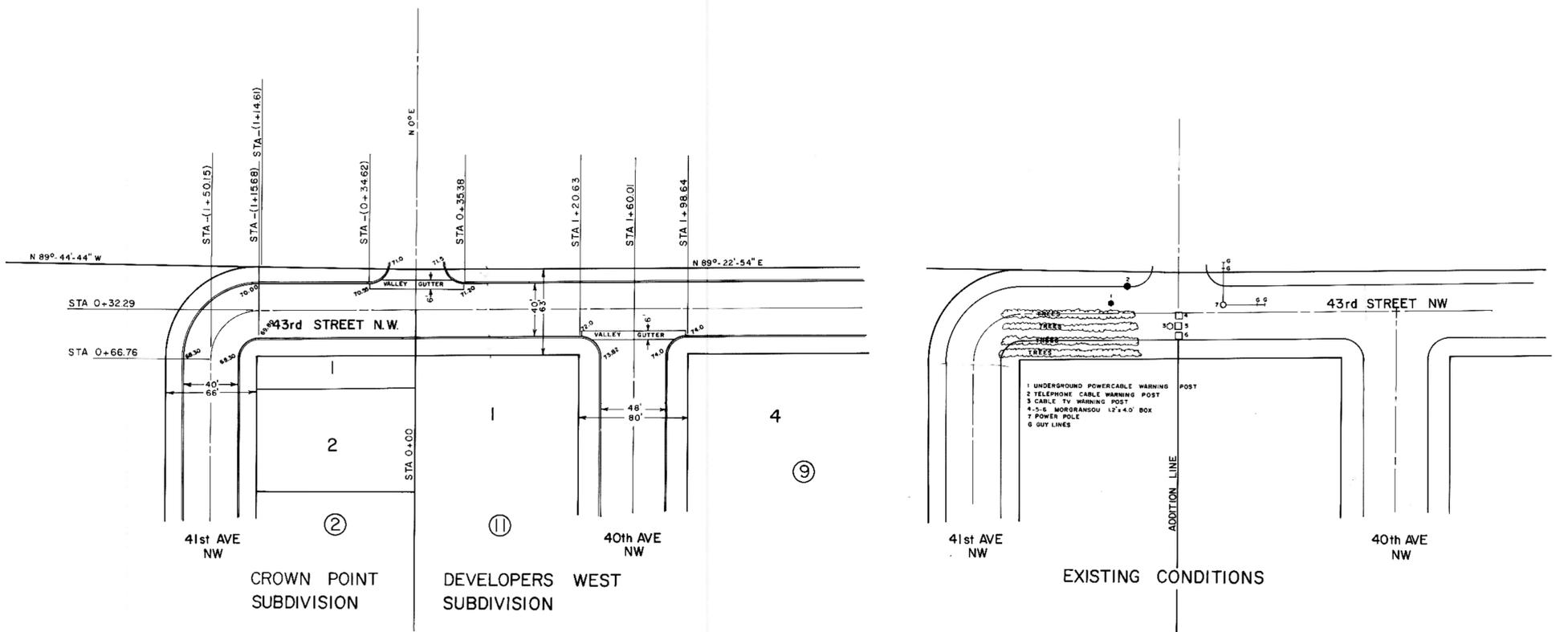
Item	Quantity	Unit
Embankment	480	CuYd
Excavation	712	CuYd
Rock Excavation	5	CuYd
Watering	1000	Gal
Curb & Gutter	1753	LF
Variable Curb & Gutter		
6" Driveway		
B Valley Gutter	380	SF
Subgrade Preparation	4002	SF
Subsoil Excavation	10	CuYd
Stabilized Gravel Base	10	Ton
Asphalt	2.5"	Base Course
Bituminous Mixture	505	Ton
Asphalt Cement	8910	Gal
Asphalt	2.0"	Surface Course
Bituminous Mixture	401	Ton
Asphalt Cement	7823	Gal
Tack Coat	400	Gal
Asphalt Sealer	1440	Gal
Bituminous Material	50	Ton
Cover Aggregate	8	Ton
Storm Sewer	50	LF
8" C.M.P.		

AREA 8
CROWN POINT ROAD NW
STA 0+00
TO
STA 8+56.73
REPLAT OF CROWN POINT SUBDIVISION

PLAN
 DATE: _____ BY: _____
 CHECKED: _____
 DATE: _____
 NO. _____

PROFILE
 DATE: _____ BY: _____
 CHECKED: _____
 DATE: _____
 NO. _____

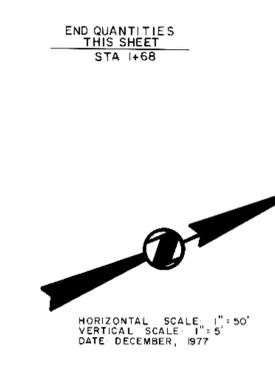
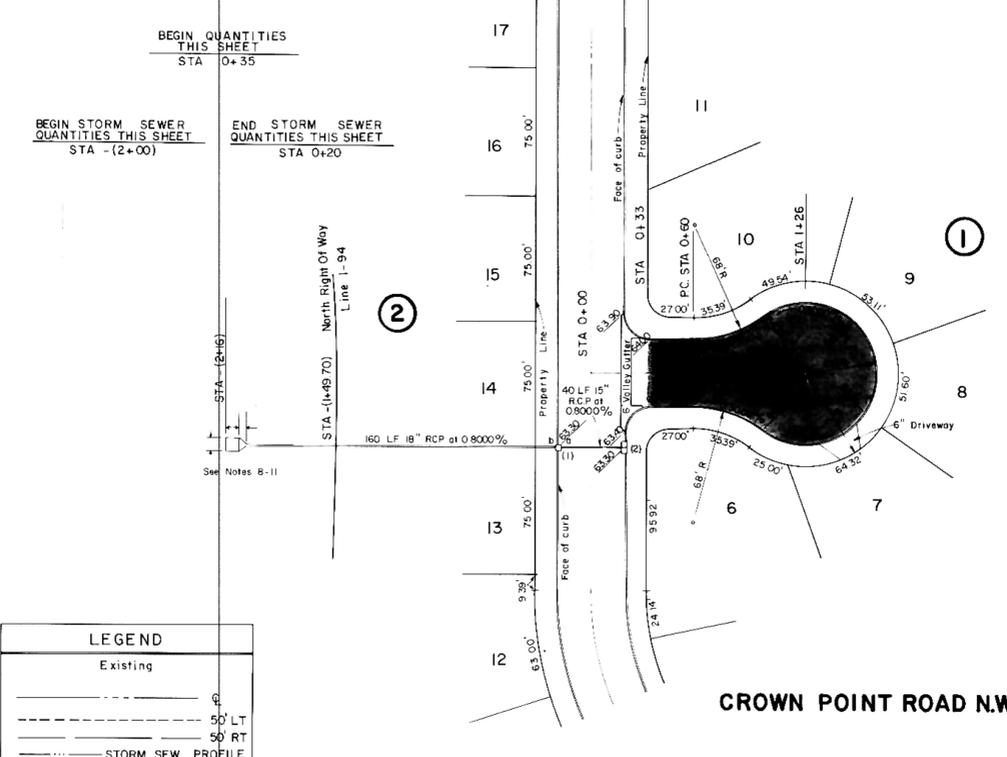
HORIZONTAL SCALE 1" = 50'
 VERTICAL SCALE 1" = 5'
 DATE - MAY, 1979



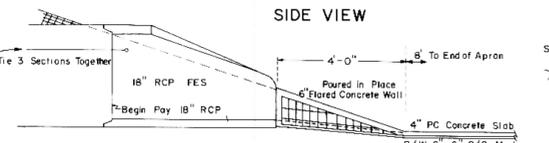
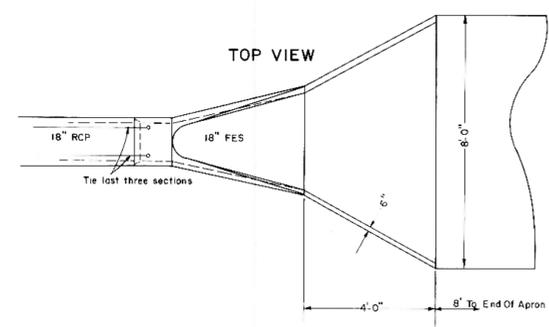
CROWN POINT - DEVELOPERS WEST
 SUBDIVISION
 43rd STREET N.W.

DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	

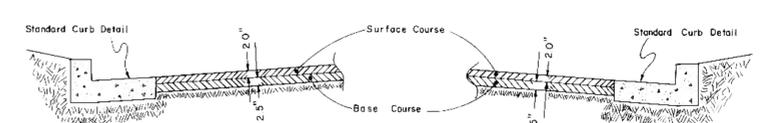
DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	



INLET No.	1	2
TYPE	S	B
CURB ELEV.	1963.30	1963.30
GUTTER ELEV.	1962.65	1962.65
TOP OF ROOF	1962.11	1962.11
INVERT (a)	1952.28	1952.60
INVERT (b)	1952.20	
PRECAST SECT.	9-4	



DETAIL OF OUTFALL STRUCTURE
No Scale

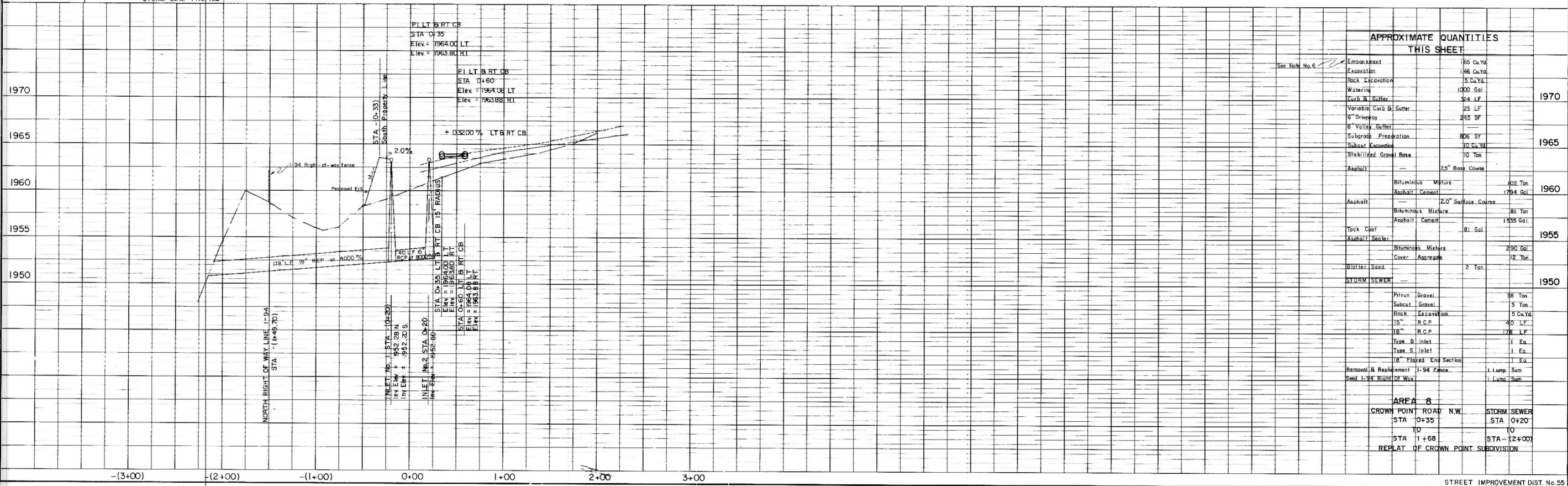


STANDARD STREET CROSS SECTION
Replat of Crown Point Subdivision Only

- ### NOTES
- Proposed sewer and water improvements for Crown Point Road are shown on plans for "Consolidated Sewer and Water Improvement District No. 25". Said sewer and water improvements shall be installed prior to any street improvements except earthwork and contractor shall be responsible for the preservation of said sewer and water improvements during construction.
 - Proposed grades are to the top of the curb unless otherwise stated.
 - All curb and gutter radii are 15 feet at the face of curb unless otherwise stated.
 - Stationing for inlets refers to face of curb and center of inlet.
 - All backfill on this sheet shall be Class "B".
 - Earthwork quantities include the removal of topsoil. Topsoil may be used as fill in the embankment area outside the right-of-way. Embankment quantities shown include an assumed 20% shrinkage factor.
 - The following is the asphalt mixture that was used to compute the quantities. This is not necessarily the design mix that will be used:
 Base Course 144.8 lb/cu. ft. with 7% asphalt cement.
 Surface Course 144.6 lb/cu. ft. with 7 1/2% asphalt cement.
 Asphalt Cement at 60° F. = 8.54 lbs./gal.
 Tack Coat 0.1 gal./sq. yd.
 Asphalt Sealer Bituminous Material 0.36 gal./sq. yd.
 Cover Aggregate 30 lbs./sq. yd.
 - Engineer is to verify location of toe of slope and adjust pipe length accordingly.
 - Poured in place concrete outfall structure to be considered incidental to flared end section.
 - Contractor shall provide approximately 50 yards embankment to provide a minimum of 1 foot cover over storm sewer. This shall be paid for by the cubic yard in place.
 - Removal and replacement of topsoil in the 1-94 right-of-way shall be considered incidental to the other bid items. Contractor shall restore 1-94 right-of-way to its original condition or better as specified by N.D. State Highway Department Standard Specifications.
 - Seeding in State Highway Right-of-Way shall be as specified in Section 890-Seed-N.D. State Highway Standard Specifications.

Existing	—
50' LT	- - - -
50' RT	- - - -
STORM SEW. PROFILE	—

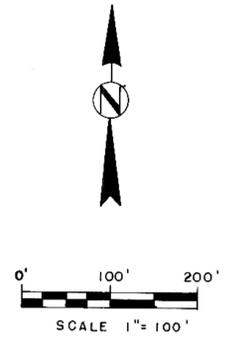
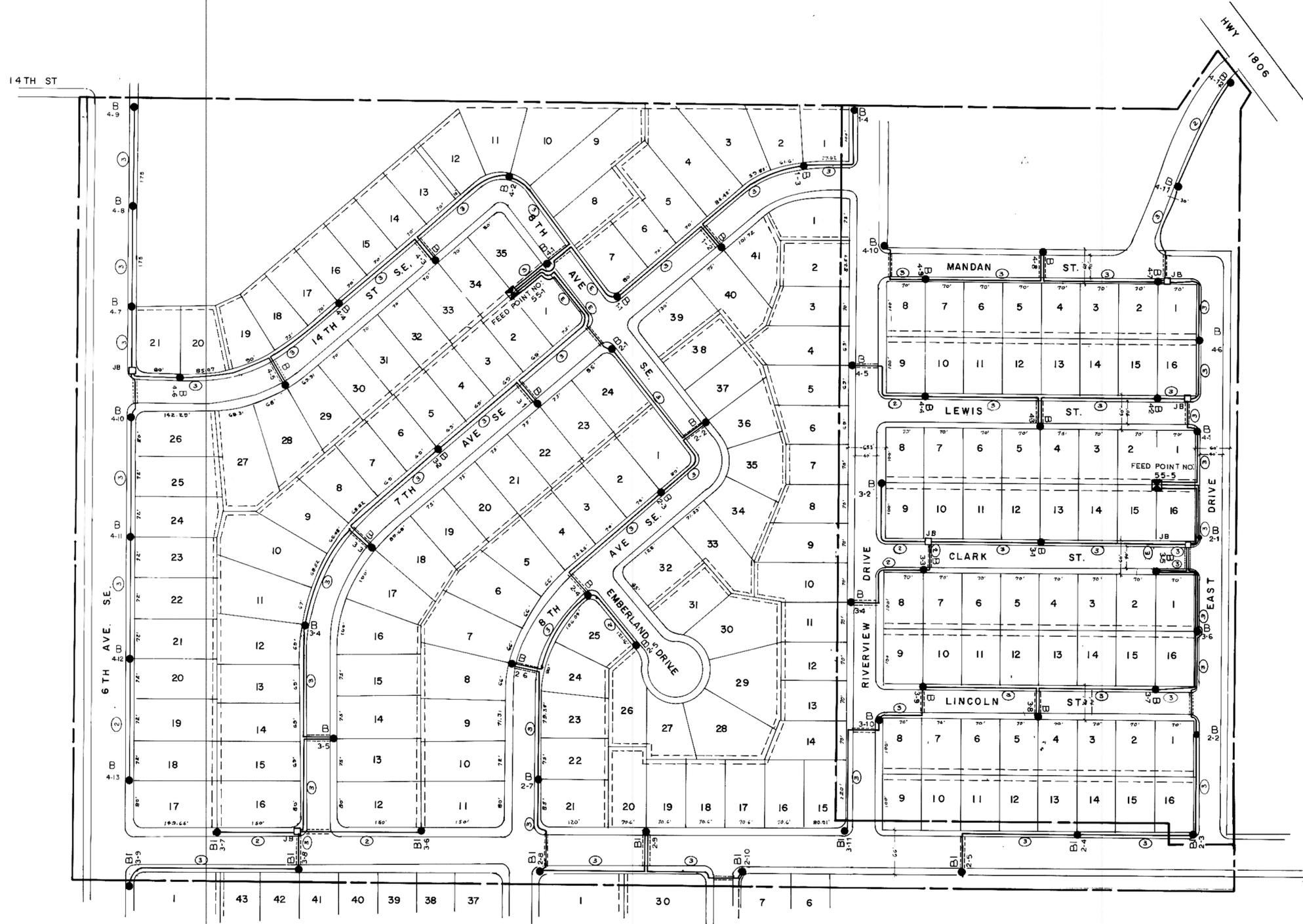
CROWN POINT ROAD N.W.



Item	Quantity	Unit
Embankment	165	Cu Yd
Excavation	146	Cu Yd
Rock Excavation	5	Cu Yd
Watering	1000	Gal
Curb & Gutter	324	LF
Variable Curb & Gutter	25	LF
6" Driveway	245	SF
8" Valley Gutter		
Subgrade Preparation	806	SY
Subcut Excavation	10	Cu Yd
Stabilized Gravel Base	10	Ton
Asphalt		2.5" Base Course
Bituminous Mixture	102	Ton
Asphalt Cement	1794	Gal
Asphalt		2.0" Surface Course
Bituminous Mixture	81	Ton
Asphalt Cement	1435	Gal
Tack Coat	81	Gal
Asphalt Sealer		
Bituminous Mixture	290	Gal
Cover Aggregate	12	Ton
Blotter Sand	2	Ton
STORM SEWER		
Pitrun Gravel	58	Ton
Subcut Gravel	5	Ton
Rock Excavation	5	Cu Yd
15" R.C.P.	40	LF
18" R.C.P.	178	LF
Type B Inlet	1	Ea
Type S Inlet	1	Ea
18" Flared End Section	1	Ea
Removal & Replacement 1-94 Fence	1	Lump Sum
Seed 1-94 Right Of Way	1	Lump Sum

Item	Quantity	Unit
CROWN POINT ROAD N.W.		
STA 0+35		STA 0+20
10		10
STA 1+68		STA 1+2+00
REPLAT OF CROWN POINT SUBDIVISION		

UNIT 1 UNIT 5



LEGEND - SYMBOLS

- STREET LIGHT UNIT
- LIGHT UNIT EXISTING OR SHOWN ON ANOTHER SHEET
- JUNCTION BOX
- ⊠ FEEDPOINT
- CIRCUIT CONDUCTOR - UNDERGROUND
- CIRCUIT CONDUCTOR - IN CONDUIT
- ③ DESIGNATES NUMBER OF CONDUCTORS
- B ← STREET LIGHT TYPE
- | - | CIRCUIT NUMBER
- B → BRACKET ARM EXTENDS THIS DIRECTION

NOTE:
LOT WIDTHS MUST BE VERIFIED. USE FOR STAKING INFO ONLY.

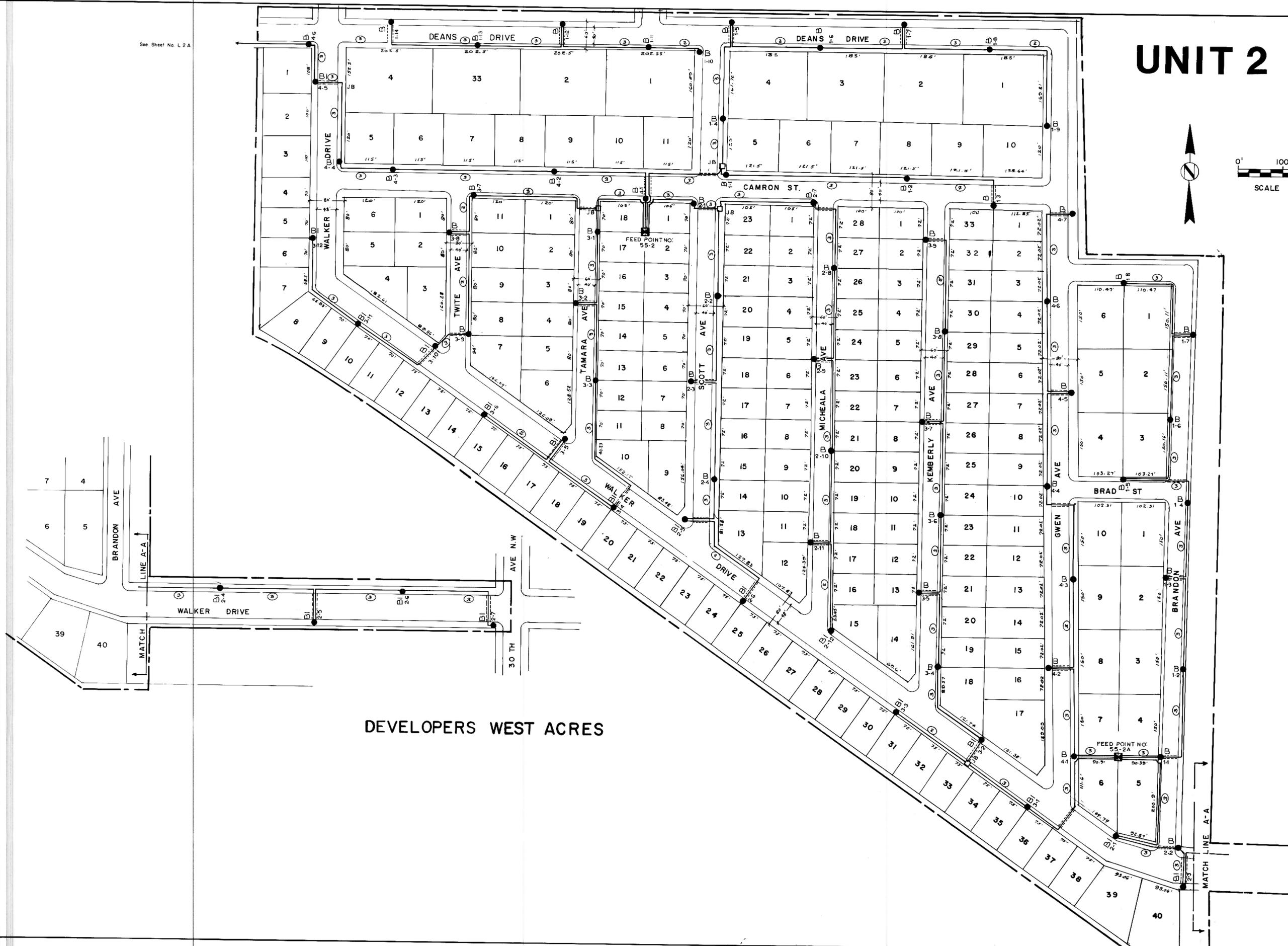
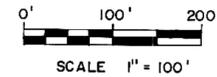
EMBERLAND WEST ADDITION

RIPPEL'S SECOND SUBDIVISION

SCHMIT, SMITH & RUSH
CONSULTING ENGINEERS
MINOT NORTH DAKOTA

See Sheet No. L-2 A

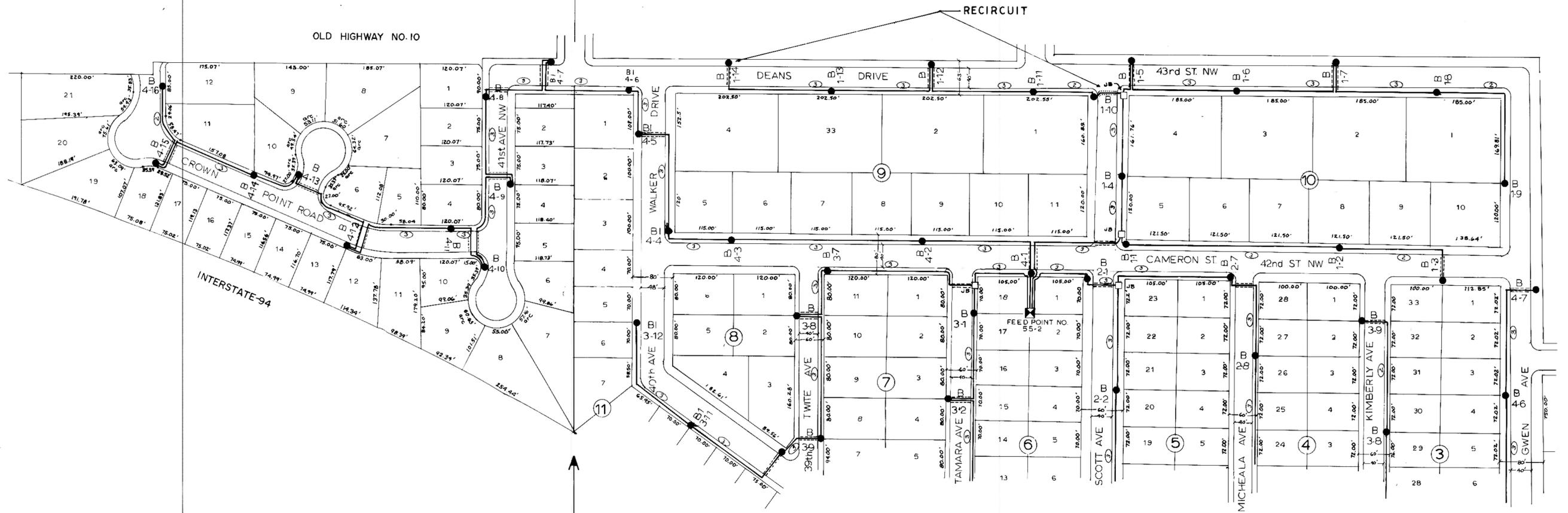
UNIT 2



DEVELOPERS WEST ACRES

SCHMIT, SMITH & RUSH
CONSULTING ENGINEERS
MINOT NORTH DAKOTA

UNIT 2

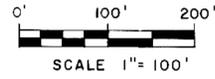


REPLA of CROWN POINT SUBDIVISION

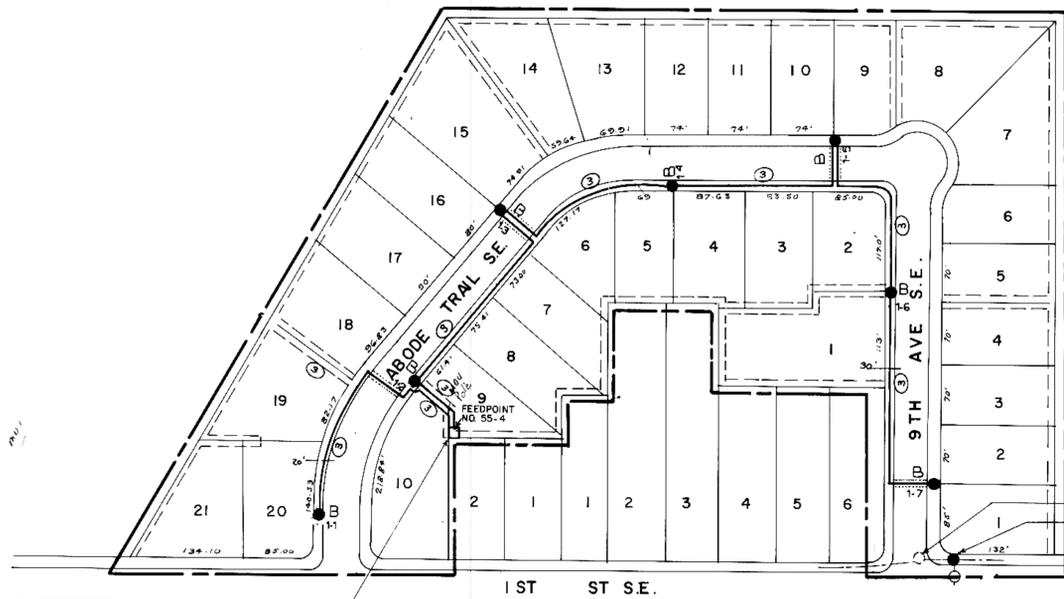
DEVELOPERS WEST ACRES - PARTIAL

UNIT 3

UNIT 4



DIANE'S SECOND ADDITION

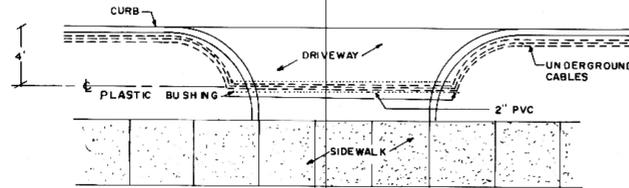


EXISTING ST LIGHT
RELOCATE TO THIS POINT
CONNECT TO EXISTING CIRCUIT
MAKE UNDERGROUND SPLICES
WITH HOMAC "FLOODSEAL"

RELOCATE FEEDPOINT
NO. 55-4

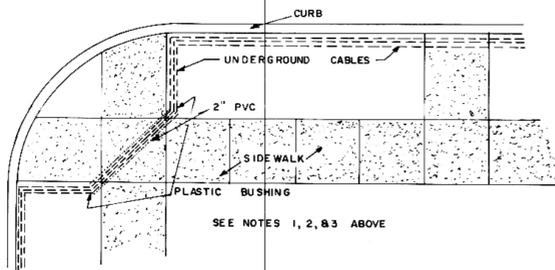
HOOVESTOL SUBDIVISION

SCHMIT, SMITH & RUSH
CONSULTING ENGINEERS
MINOT NORTH DAKOTA



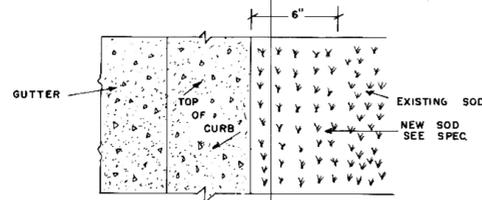
1. CONDUIT SHALL BE 18" BELOW GRADE AND SLOPED 3" FOR DRAINAGE.
2. CONDUIT SHALL EXTEND 6" BEYOND DRIVEWAY AT BOTH ENDS.
3. PROVIDE 9" LOOP IN CABLES AT EACH CONDUIT END.

DRIVEWAY CROSSUNDER DETAIL
NO SCALE

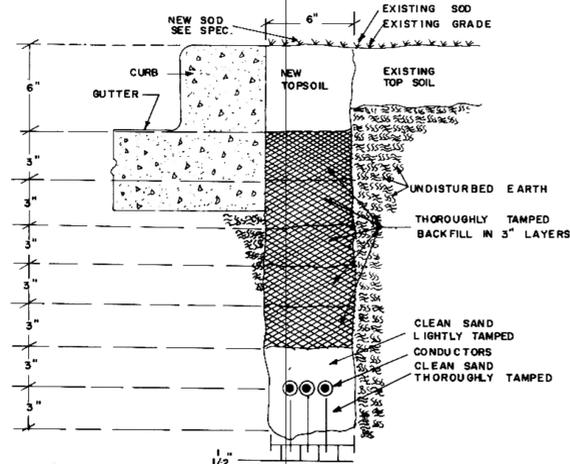


SEE NOTES 1, 2, & 3 ABOVE

SIDEWALK CROSSUNDER DETAIL
NO SCALE

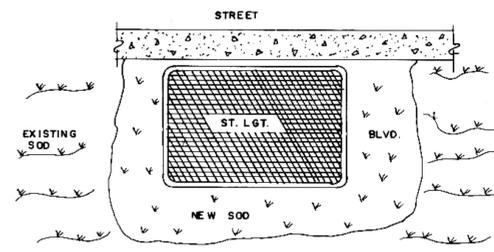


PLAN

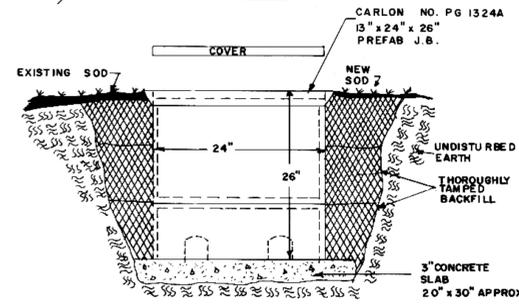


SECTION

UNDERGROUND CABLE DETAILS
NO SCALE

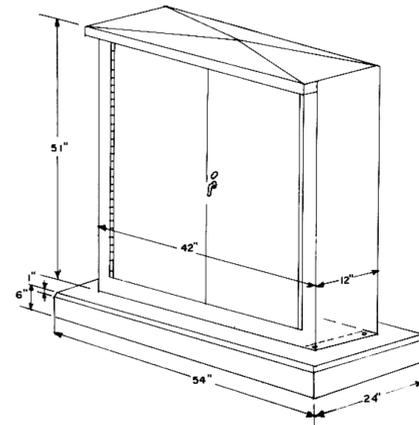


PLAN



ELEVATION

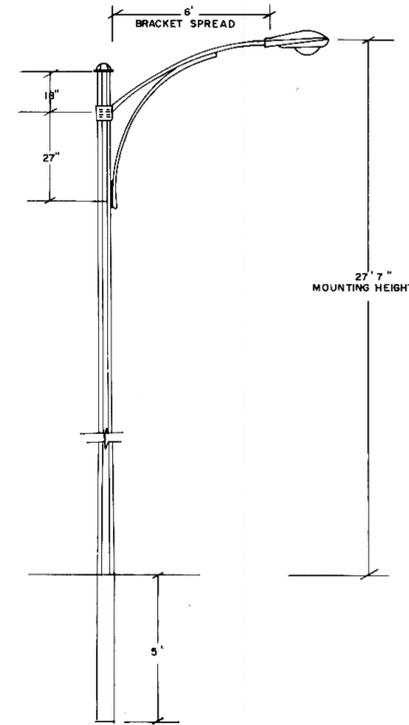
J. B. DETAILS
TYPICAL



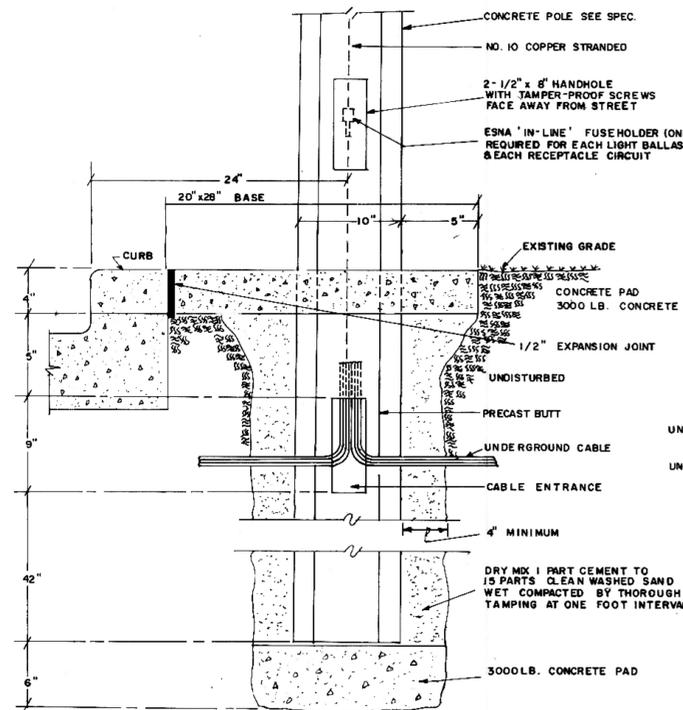
PAD MOUNTED

FEEDPOINT DETAILS

TYPICAL CONDITION - SEE SPEC

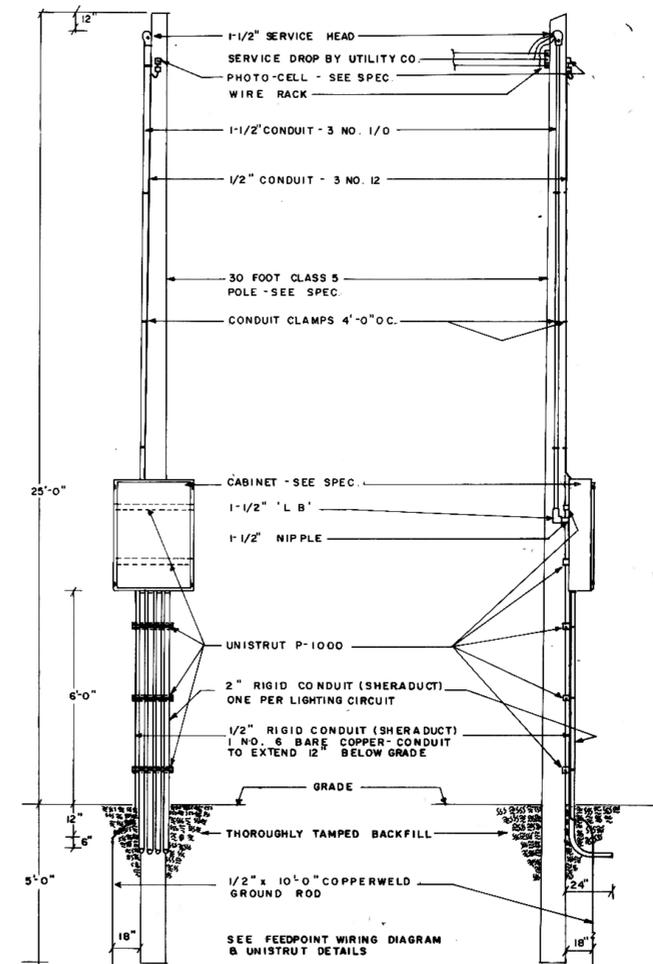


TYPE B & BI
NO SCALE



TYPE B&BI BASE DETAIL

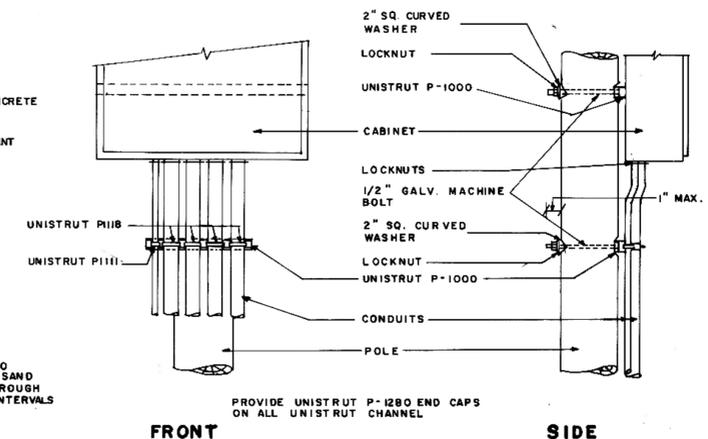
NO SCALE



FRONT

POLE MOUNTED
FEEDPOINT ELEVATIONS
NO SCALE

SIDE



FRONT

UNISTRUT DETAILS
NO SCALE

SIDE