

LINCOLN WAY EAST STORM SEWER

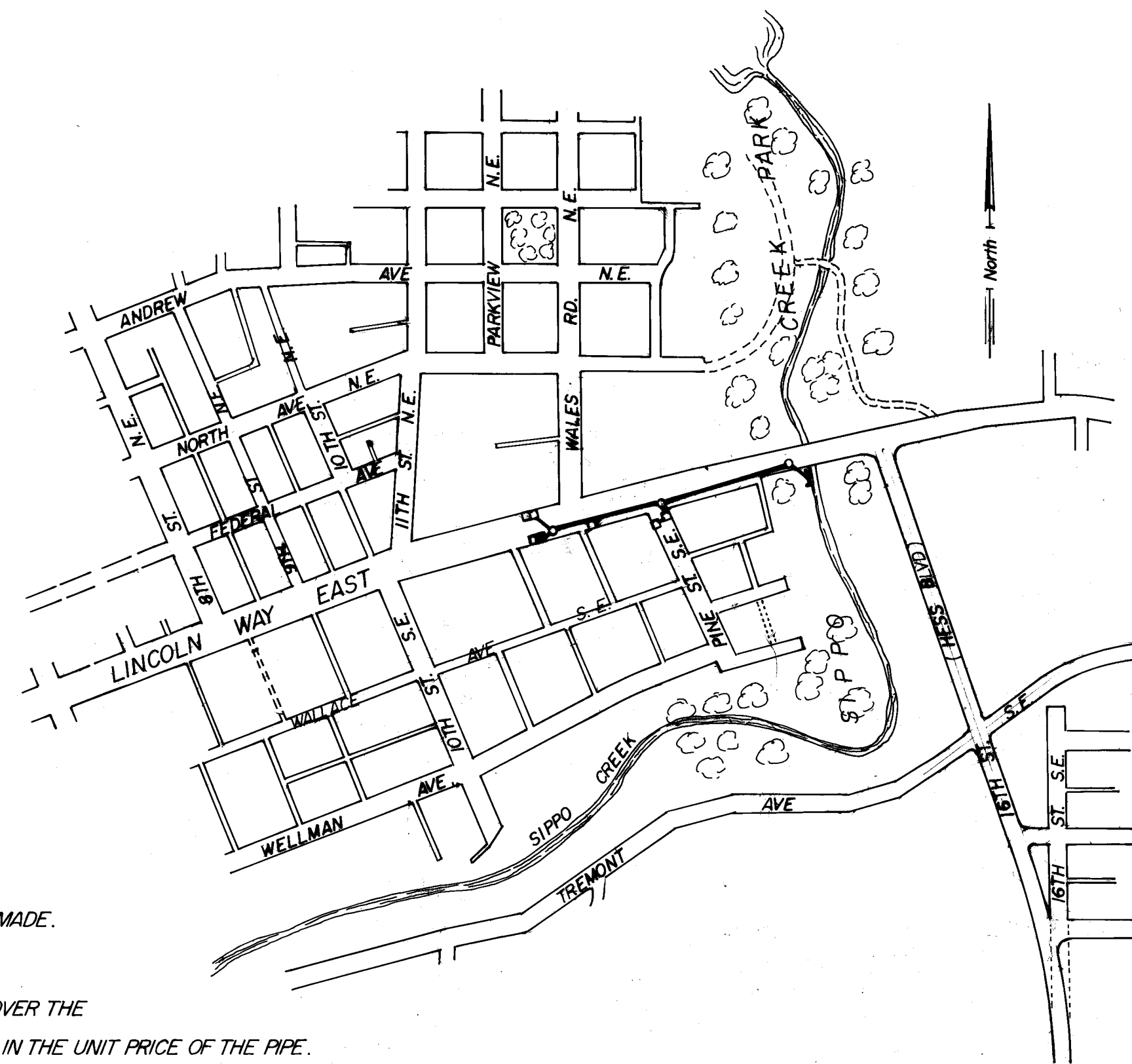
FROM CURB LINE OF LINCOLN & MERCURY GAR. TO SIPPO CREEK

CONVENTIONAL SIGNS

MANHOLES	O NEW O EXIST.
CURB LINE	—P—
PROPERTY LINE	—P—
WATER LINE	—W—
GAS LINE	—G—
SANITARY SEWER	—S—
STORM SEWER	—S—
PROPOSED SEWER	—S—
UNDERGROUND TELEPHONE CABLE	—T—
POWER POLES	⊙
TREES	⊙
LIGHT POLES	⊙

GENERAL NOTES:

1. ALL CONSTRUCTION TO BE PER CITY OF MASSILLON & OHIO DEPT. OF TRANSPORTATION SPECIFICATIONS & STANDARDS.
2. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES BEFORE WORK STARTED.
3. CONSTRUCTION SIGNS; CONTRACTOR SHALL ERECT & MAINTAIN ALL NECESSARY SIGN, BARRICADES, FLAGMAN & LIGHTS. ONE LANE TRAFFIC, EAST & WEST BOUND IS TO BE MAINTAINED AT ALL TIMES. TRAFFIC FLOW IS NOT TO BE INTERRUPTED. THIS IS AN ABSOLUTE NECESSITY. ACCESS TO ADJOINING PROPERTIES MUST BE MAINTAINED AT ALL TIMES.
4. ALL MANHOLES TO BE PRECAST CONCRETE WITH A MINIMUM OF 1'-0" OF ADJUSTING RINGS ON TOP OF CONE.
5. BACKFILL TO BE COMPACTED PER SPECIFICATIONS, IF UNSUITABLE, GRANULAR BACKFILL MAY BE ORDERED BY THE ENGINEER. SEE TYPICAL DITCH RESTORATION.
6. COST OF COMPACTION PER LIN. FT. SHALL BE INCLUDED IN PRICE OF CONCRETE PIPE.
7. ALL CATCH BASINS & MANHOLES TO BE MASSILLON CITY STANDARD. SEE ATTACHED SHEETS.
8. BACKFILL MUST BE AT OPTIMUM MOISTURE.
9. ONLY A QUALIFIED BRICK LAYER EXPERIENCED IN CATCH BASINS MAY BE USED.
10. BRICK LAYER & METHOD OF CONSTRUCTION SHALL BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.
11. BEDDING IS TO BE INCLUDED IN THE PRICE OF PIPE. SEE TYPICAL DITCH RESTORATION SHEET 4.
12. PRECAST CATCH BASINS ARE PERMISSIBLE PROVIDED A SIX (6) INCH ADJUSTING RING IS USED.
13. CONTRACTOR MUST PROVIDE GRAVEL AND DUST CONTROL TO KEEP STREET IN CONDITION FOR TRAFFIC UNTIL PERMANENT REPAIRS ARE MADE.
14. ALL STREET REPAIRS TO BE AS PER DETAIL.
15. MASTIC JOINTS ARE PERMISSIBLE IN THE CONCRETE PIPE.
16. FLAT SLAB TOP MUST BE USED WITH THE PRECAST MANHOLE RISERS ON SHALLOW MANHOLES.
17. PERMANENT REPAIRS TO BE APPLIED IN SUITABLE WEATHER OR PER ENGINEER'S DIRECTION.
18. WHEN CONFLICT ARISES OVER THE INTERPRETATION OF NOTES & DETAILS, THE NOTES & DETAILS IN THE DRAWINGS TAKE PREFERENCE OVER THE GENERAL PROVISIONS & SPECIFICATIONS THAT APPEAR IN THE CONTRACT.
19. THE REMOVAL OF PAVEMENT, CONCRETE, ASPHALT, BRICK & STREET CAR TRACKS IS NOT A SEPARATE PAY ITEM, BUT IS TO BE INCLUDED IN THE UNIT PRICE OF THE PIPE.
20. MAXIMUM PAY ITEM FOR SEEDING, FERTILIZER AND STRAW IS THE BASE BID.
21. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE TEMPORARY REPAIR UNTIL PERMANENT REPAIRS ARE MADE.
22. IF SANITARY SEWER LATERALS ARE BROKEN, THE CONTRACTOR WILL REPAIR THE LATERAL AT HIS OWN EXPENSE.
23. PRIME COAT & SEAL COAT TO BE INCLUDED IN THE UNIT PRICE OF THE ASPHALT.
24. ALL CATCH BASINS TO BE TYPE "A" & "B" (SEE PLAN).
25. HEADWALL TO BE MASSILLON STANDARD EXCEPT AS NOTED.
26. CONNECTING THE NEW STORM SEWER TO THE EXISTING MANHOLE, EXISTING FIELD DRAINS ETC. WILL BE INCLUDED IN THE UNIT PRICE OF THE PIPE.
27. REMOVAL OF EXISTING CURB & DRIVE WALK WILL BE INCLUDED IN THE UNIT PRICE OF THE PIPE. GRANULAR MATERIAL MAY BE BANK RUN MATERIAL, FILL SAND ETC.
28. ALL CUTS IN THE STREET MUST HAVE A CLEAN SHARP EDGE EITHER WITH AN AIR HAMMER OR SAW. NO RAGGED EDGES WILL BE PERMITTED.
29. CONNECTION OF EXISTING STORM SEWERS PIPE TO NEW STORM SHALL BE INCLUDED IN THE UNIT PRICE OF NEW STORM SEWERS.
30. SALVAGE CASTINGS REMAIN PROPERTY OF THE CITY.
31. CITY WILL NOT PAY FOR EXCESS MATERIAL IF CONTRACTOR EXCAVATES DITCH WIDER OR DEEPER THAN PLANS SPECIFY.



SITE MAP

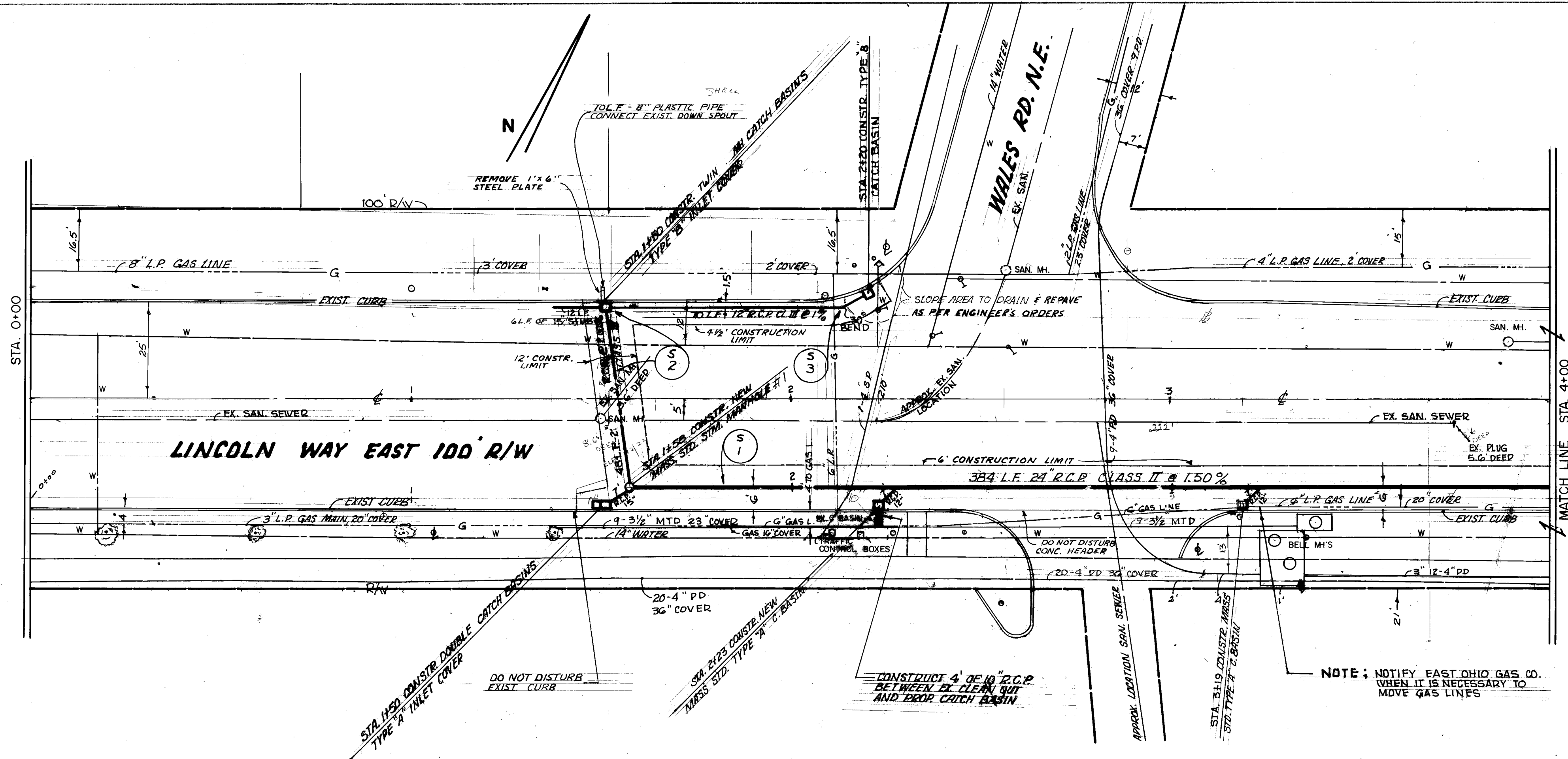
SCALE 1" = 400'

MAYOR.....DELBERT A. DEMMER
SAFETY SERVICE DIR.....TED WILLOUGHBY
CITY ENGINEER.....ROBERT WAGONER

PREPARED BY RON MCPHERSON & TERRY RIDGLEY
MASSILLON CITY ENGINEERING DEPARTMENT

DATE	
BY	
SURVEYED	
NOTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
SURVEYED	
NOTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	



STATION	604 STORM MH. EACH	603 8\"/>
S-1 4+00-1+58	1	242
S-2 1+58-1+50	10	48
S-3		
TOTAL	1	10

609 CURBING 6"x 18" CITY STANDARD

NORTH SIDE
1+89 - 2+24 36
1+50 10
2+23 10
3+19 10
TOTAL 66 L.F.

REPAVE 2'x20' NORTH SIDE
 $\frac{16 \times 8}{9} = 14.2$ SQ. YDS. 404 VAR. THICKNESS FROM 2" to 5"

659 SEEDING & MULCHING

NORTH SIDE
1+89 to 2+24 $\frac{36 \times 6}{9} = 24$ SQ. YDS.

304' BASE = 1'-0" CRUSHER RUN
1+52 to 4+00
 $\frac{248(12-150) \times 1.0}{27} \times 2.0 = 192.89$ TONS

653 TOP SOIL 6"

$\frac{24}{6} = 4.0$ CU. YDS.

1+50
 $\frac{12 \times (8-150) \times 1.0}{27} \times 2.0 = 5.79$ TONS

452-10" PAVEMENT

1+52 to 4+00 $\frac{248 \times 12}{9} = 330.7$ SQ. YDS.

1+50 to 1+58
 $\frac{42 \times (8-150) \times 1.0}{27} \times 2.0 = 20.22$ TONS

1+50 $\frac{12 \times 8}{9} = 10.7$ SQ. YDS.

1+58 to 1+50 $\frac{42 \times 12}{9} = 56.0$ SQ. YDS.

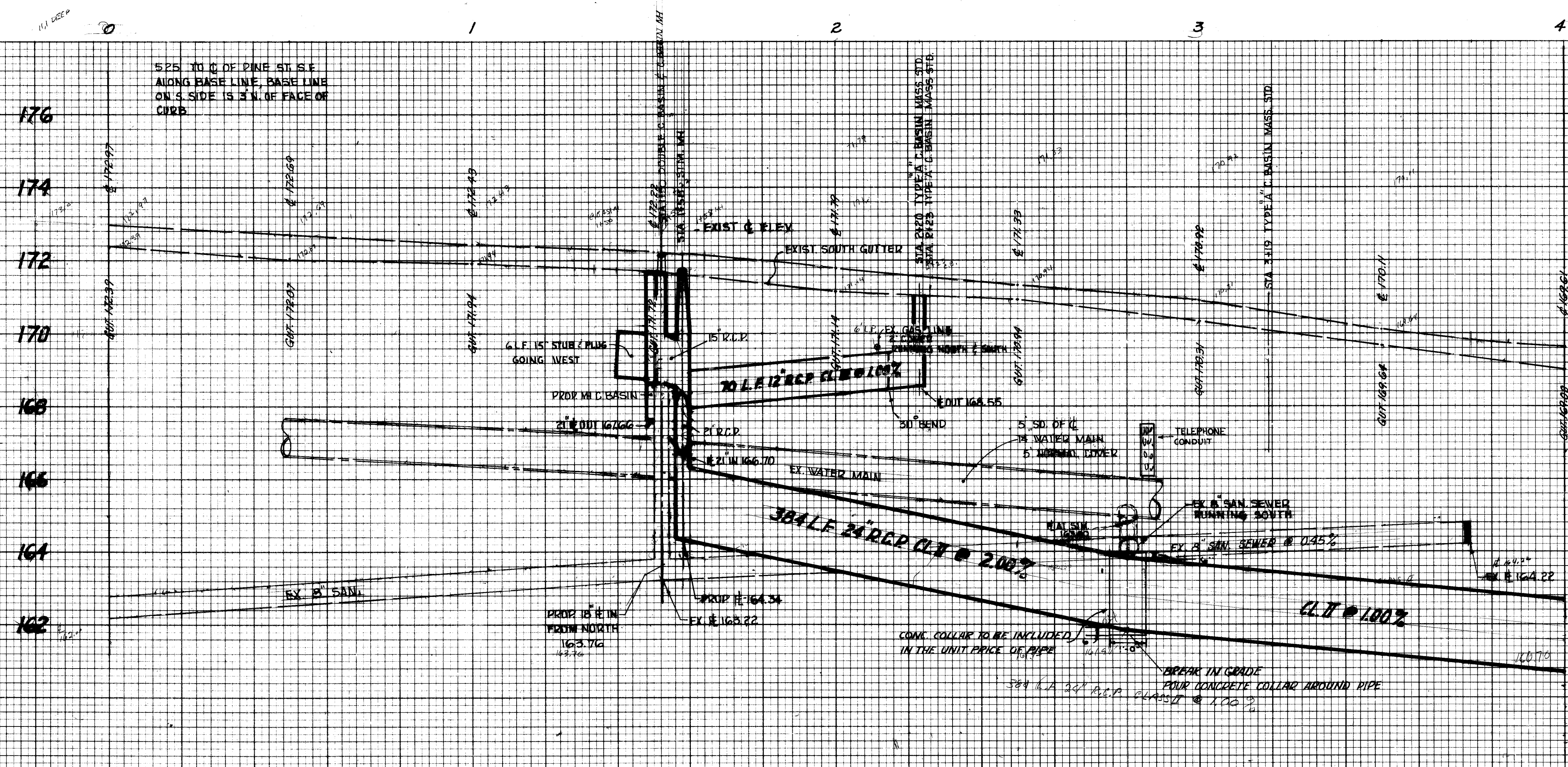
1+44 to 2+24
 $\frac{80 \times (6-150) \times 1.0}{27} \times 2.0 = 26.67$ TONS

1+44 to 2+24 NORTH SIDE $\frac{80 \times 6}{9} = 53.3$ SQ. YDS.

452 DRIVEWAY 6" CONC.

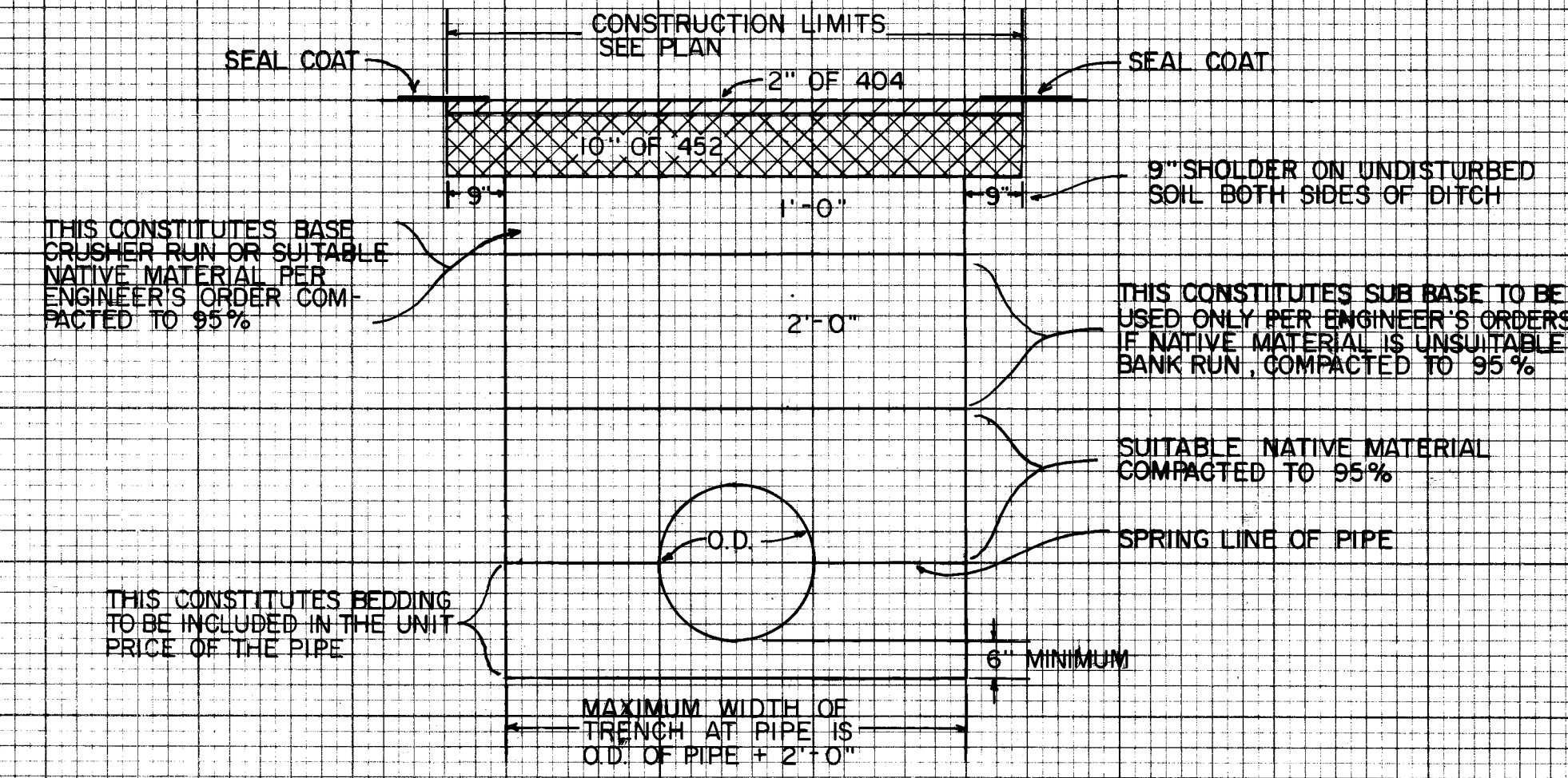
1+48 to 1+89 $\frac{41 \times 6}{9} = 27.3$ SQ. YDS.

245.57 TONS TOTAL



TYPICAL DITCH RESTORATION

SCALE 1/2" = 1'

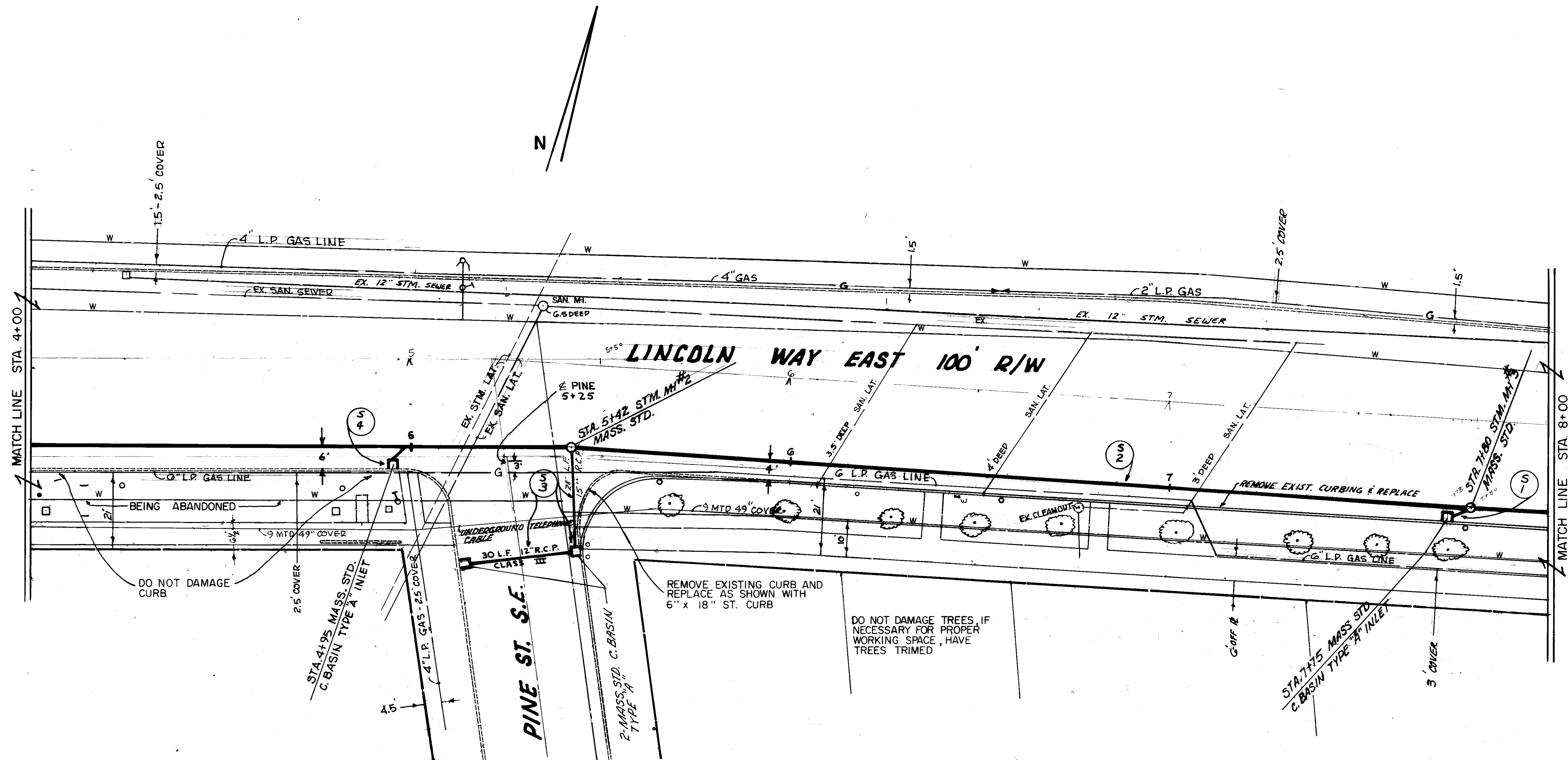


BENCH MARK:
174.07 - TOP OF HYD. N.W. CORNER
LINCOLN WAY EAST & WALES RD

CITY OF MASSILLON, OHIO	
LINCOLN WAY EAST STORM SEWER	
FROM CURB LINE OF LINCOLN & REPORT GARAGE TO SIPPY CREEK	
DR. BY EUN M. HAN	CITY OF MASSILLON, ENGINEERING DEPARTMENT
CITY ENGINEER ROBERT WAGNER	FIELD BOOK 239
SCALE 1" = 20' HORIZ. 1" = 2' VERT.	DATE 1/8 - 80
2	

DATE	BY
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

DATE	BY
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



	STATION FROM - TO	STORM MANHOLE EACH	27" R.C.P. CLASS II L.F.	24" R.C.P. CLASS II L.F.	15" R.C.P. CLASS III L.F.	12" R.C.P. CLASS III L.F.	TYPE "A" C. BASIN
S-1	7+80 TO 8+00	1	20'			7'	1
S-2	5+42 TO 7+80	1	238'				
S-3	SO. OF 5+42 PINE ST.				28'	30'	2
S-4	4+00 TO 5+42			142'		6'	1
TOTAL		2	258'	142'	28'	43'	4

609 - CURBING

6" x 18" MASSILLON STD. L.F.
 RADIUS, S.E. CORNER L.W.E. &
 PINE 5+64 TO 8+00 24'
 W. SIDE PINE ST. C. BASIN 236
 C.B. STA. 4+95 10
 280

608 - SIDEWALK

S.E. CORNER PINE & L.W.E.

6' x 6' = 36'
 6' x 40' 5' x 3' = 15'
 6' x 83' 5' x 3' = 15'
 TOTAL 66'

SEEDING

5+42 TO 8+00
 $\frac{258 \times 12.5}{9} = 358$ SQ. YDS.

TOP SOIL 6"

$\frac{358}{6} = 60$ CU. YDS.

304 - BASE 1'-0" (CRUSHER RUN)

4+00 TO 5+42 $\frac{142 \times (12-1.50) \times 1}{27} \times 2 = 110.44$ TONS
 5+42 TO 8+00 $\frac{258 \times (11-1.50) \times 1}{27} \times 2 = 181.55$ TONS
 291.99 TONS

310 - SUB BASE (USE BANK RUN IF UNSUITABLE MATERIAL IS ENCOUNTERED)

5+25 TO 8+00 $\frac{275 \times 5 \times 2}{27} \times 2 = 203.70$ TONS

PAVEMENT 4+00 TO 8+00

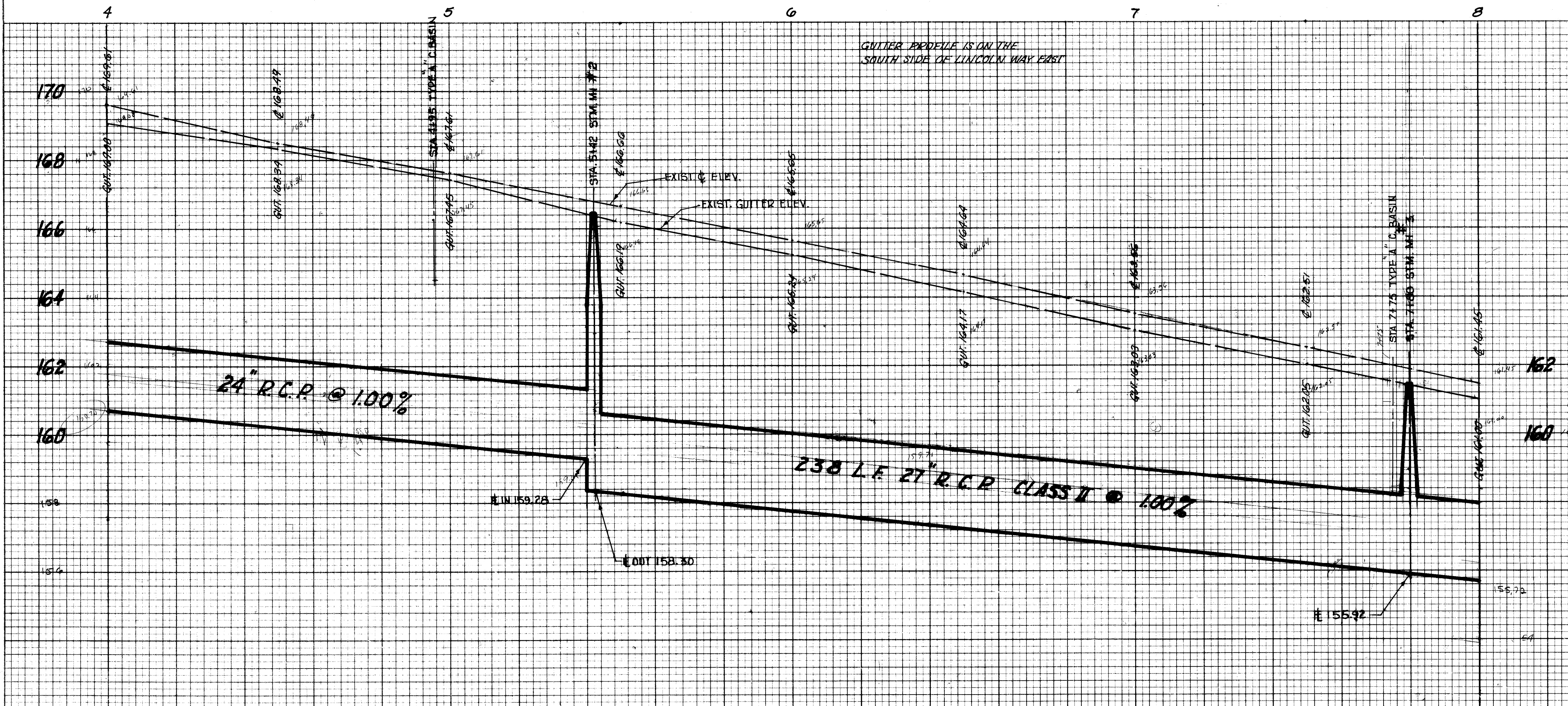
5+42 TO 8+00 $\frac{258 \times 11}{9} = 315.3$ SQ. YDS.

4+00 TO 5+42 $\frac{142 \times 12}{9} = 189.3$ SQ. YDS.

@ PINE $\frac{60 \times 8}{9} = 53.3$ SQ. YDS.

$\frac{27 \times 3}{9} = 9.0$ SQ. YDS.

TOTAL 567.0 SQ. YDS.



BENCH MARK:

TOP OF HYD. LINCOLN WAY
 EAST & PINE ST. S.E.
 168.70

CITY OF MASSILLON, OHIO	
LINCOLN WAY EAST STORM SEWER	
FROM CURB LINE OF LINCOLN & MERCURY GARAGE TO SUPPO CREEK	
DR. BY DON ANDERSON	CITY OF MASSILLON, ENGINEERING DEPARTMENT
CITY ENGINEER ROBERT WATONER	FIELD BOOK 237
SCALE 1" = 20' HORIZ. 1" = 2' VERT.	DATE 8-20-80
FILE NO. SE-575	ACC. NO. 2947

ORIGINAL	BY _____	DATE _____
SURVEY		
PLOTTED		
TEMPLATE		
NOTE BOOK	AREAS	
NO.	AREAS CHECKED	

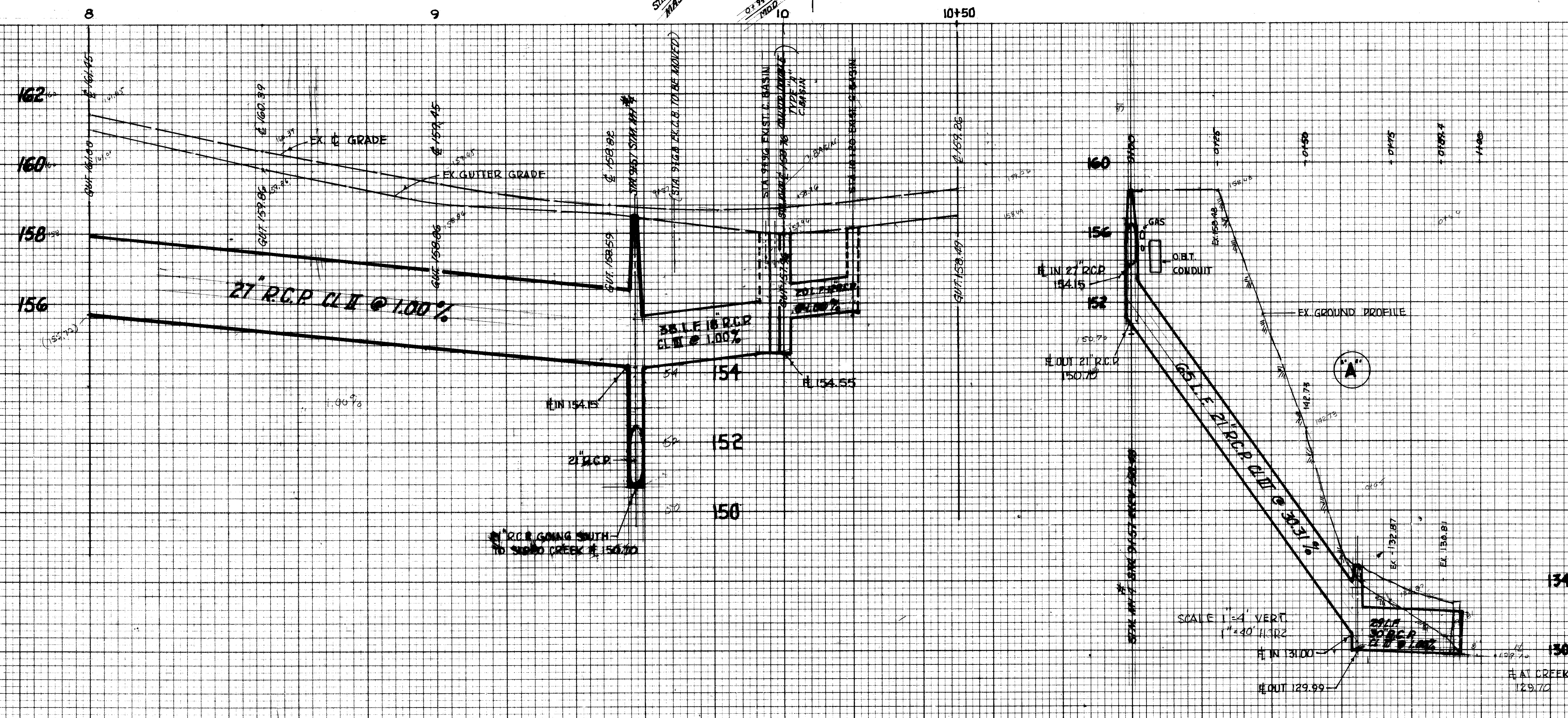


Diagram illustrating the proposed stone rubble wall and headwall structure. The wall is shown with a 30° R.C.P. (Right Circular Pipe) section. The wall dimensions are specified as:

- HW-1 MODIFIED SKEW LENGTH - 13'-8"
- HEIGHT - 6'-5"

Additional instructions for the wall construction:

- REMOVE EXISTING STONE RUBBLE WALL
- REPLACE TO FIT ENDS TO BE INCLUDED IN THE PRICE OF THE HEADWALL

CITY OF MASSILLON, OHIO			
LINCOLN WAY EAST STORM SEWER			
FROM CURB LINE OF LINCOLN & MERCURY GARAGE TO SUPP. CREEK			
DRAWN BY: BOB MCNEILSON		CITY OF MASSILLON, ENGINEERING DEPARTMENT	
CITY ENGINEER: ROBERT WAGNER		FIELD BOOK 239	
SCALE: 1" = 20' HORIZ. 1" = 2' VERT.		SHEET 4	

LINCOLN WAY EAST STORM SEWER

FROM CURB LINE OF LINCOLN & MERCURY GAR. TO SIPPO CREEK

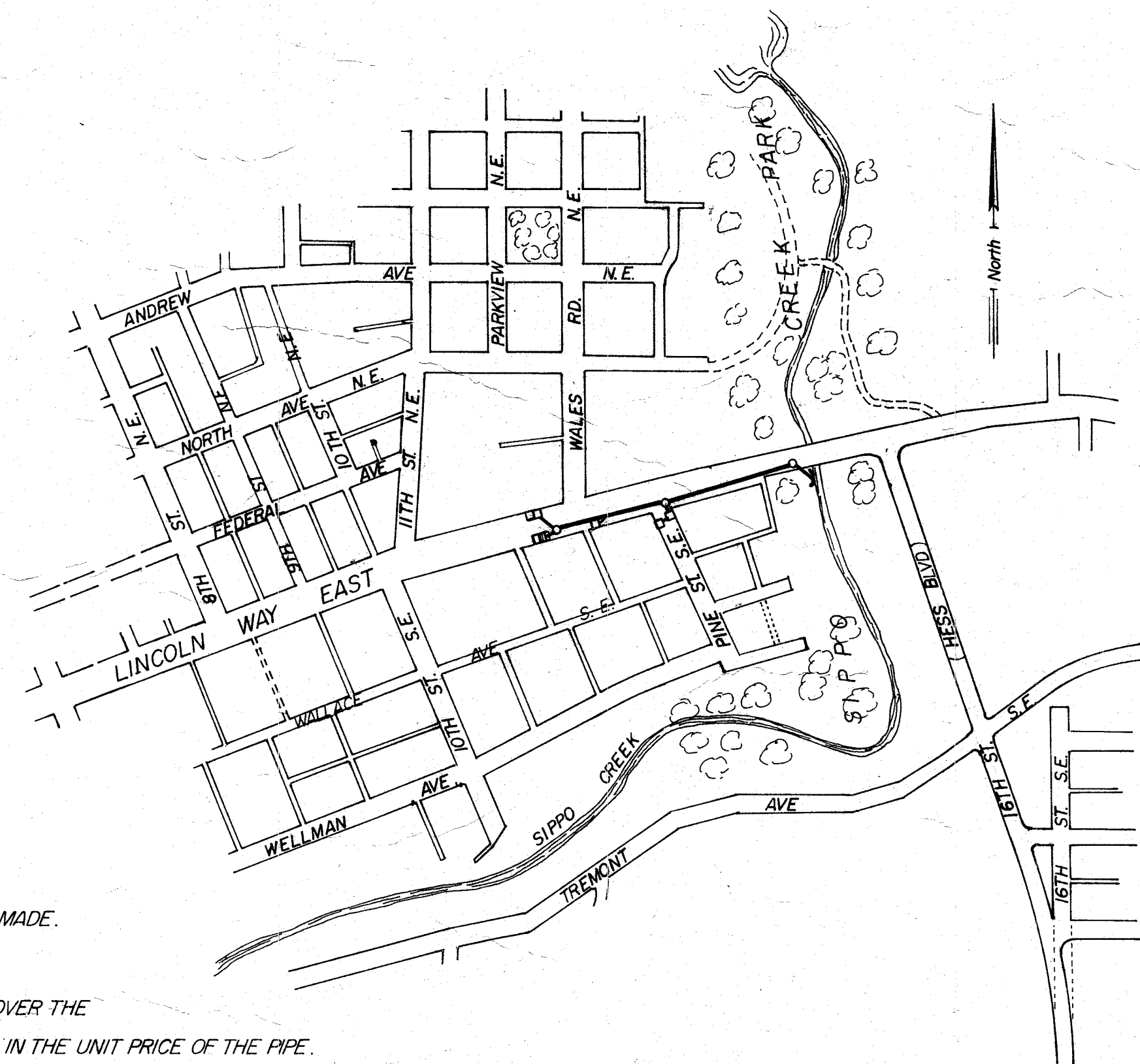
3% FALL
T.C. .26
EXIST
HIGHER THAN
ROADWAY

CONVENTIONAL SIGNS

MANHOLES	O NEW O EXIST.
CURB LINE	—
PROPERTY LINE	— P —
WATER LINE	— W —
GAS LINE	— G —
SANITARY SEWER	—
STORM SEWER	—
PROPOSED SEWER	—
UNDERGROUND TELEPHONE CABLE	— B.T. —
POWER POLES	—
TREES	—
LIGHT POLES	—

GENERAL NOTES:

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4. ALL MANHOLES TO BE PRECAST CONCRETE WITH A MINIMUM OF 1'-0" OF ADJUSTING RINGS ON TOP OF CONE.
5. BACKFILL TO BE COMPACTED PER SPECIFICATIONS, IF UNSUITABLE, GRANULAR BACKFILL MAY BE ORDERED BY THE ENGINEER.
6. SEE TYPICAL DITCH RESTRICTIONS.
7. COST OF CONSTRUCTION PER LIN. FT. SHALL BE INCLUDED IN PRICE OF CONCRETE PIPE.
8. ALL CATCH BASINS & MANHOLES TO BE MASSILLON CITY STANDARD. SEE ATTACHED SHEETS.
9. BACKFILL MUST BE AT OPTIMUM MOISTURE.
10. ONLY A QUALIFIED BRICK LAYER EXPERIENCED IN CATCH BASINS MAY BE USED.
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24. PRIME COAT & SEAL COAT TO BE INCLUDED IN THE UNIT PRICE OF THE ASPHALT.
25. ALL CATCH BASINS TO BE TYPE "A" & "B" (SEE PLAN).
26. HEADWALLS TO BE MASSILLON STANDARD EXCEPT AS NOTED.
27. CONNECTING THE NEW STORM SEWER TO THE EXISTING MANHOLE, EXISTING FIELD DRAINS ETC. WILL BE INCLUDED IN THE UNIT PRICE OF THE PIPE.
28. REMOVAL OF EXISTING CURB, WALK & DRIVE WILL BE INCLUDED IN THE UNIT PRICE OF THE PIPE. GRANULAR MATERIAL MAY BE BANK RUN MATERIAL, FILL SAND ETC.
29. ALL CUTS IN THE STREET MUST HAVE A CLEAN SHARP EDGE EITHER WITH AN AIR HAMMER OR SAW. NO RAGGED EDGES WILL BE PERMITTED.
30. CONNECTION OF EXISTING STORM SEWERS PIPE TO NEW STORM SHALL BE INCLUDED IN THE UNIT PRICE OF NEW STORM SEWERS.
31. SALVAGE CASTINGS REMAIN PROPERTY OF THE CITY.
32. CITY WILL NOT PAY FOR EXCESS MATERIAL IF CONTRACTOR EXCAVATES DITCH WIDER OR DEEPER THAN PLANS SPECIFY.



SITE MAP

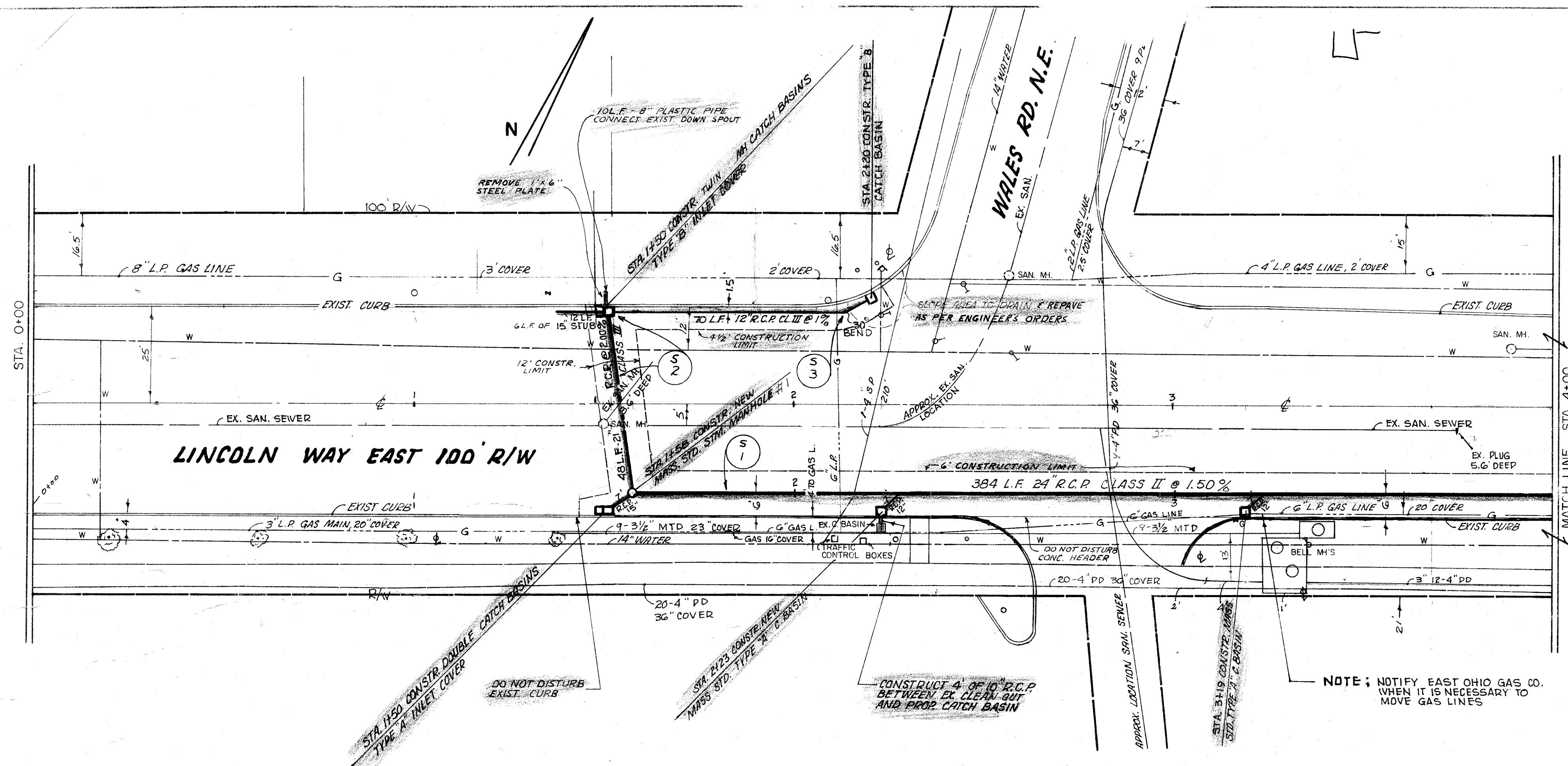
SCALE 1" = 400'

MAYOR.....DELBERT A. DEMMER
SAFETY SERVICE DIR.....TED WILLOUGHBY
CITY ENGINEER.....ROBERT WAGONER

PREPARED BY RON MCPHERSON & TERRY RIDGLEY
MASSILLON CITY ENGINEERING DEPARTMENT

DATE: _____ BY: _____
 SURVEYED: _____
 TEMPLATE: _____
 NO. _____
 AREAS CHECKED: _____

DATE: _____ BY: _____
 SURVEYED: _____
 TEMPLATE: _____
 NO. _____
 AREAS CHECKED: _____



STATION	604 STORM MH. EACH	603 8" PLASTIC L.F.	603 24" R.C.P. CLASS II L.F.	603 21" R.C.P. CLASS III L.F.	603 15" R.C.P. CLASS III L.F.	603 12" R.C.P. CLASS III L.F.	603 10" R.C.P. L.F.	604 TYPE "A" C BASIN EACH	604 TYPE "A" C BASIN TWIN EACH	603
S-1 4+00-1+58	1		242		7	14	4	2	1	
S-2 1+58-1+50		10		48	6	70				
S-3										
TOTAL	1	10	242	48	13	84	4	2	1	

609 CURBING 6"x18" CITY STANDARD

NORTH SIDE

1+89 - 2+24

36

1+50

10

2+23

10

3+19

10

TOTAL

66 L.F.

REPAVE 2'x20' NORTH SIDE

16x8

9

= 14.2 SQ. YDS.

404 VAR. THICKNESS

FROM 1" TO 8"

659 SEEDING & MULCHING

NORTH SIDE

1+89 to 2+24

36

6

= 24 SQ. YDS.

304 - BASE = 1'-0" CRUSHER

1+52 to 4+00

248 (1'-150) x 10' x 2.0' = 5.75

27

1+50

12 x (8'-150) x 10' x 2.0' = 5.75

27

653 TOP SOIL 6"

24

6

= 4.0 CU. YDS.

452-10" PAVEMENT

404-2" PAVEMENT

1+52 to 4+00

248

12

= 330.7 SQ. YDS.

1+50

12 x 8

9

= 10.7 SQ. YDS.

1+58 to 1+50

42 x 12

9

= 56.0 SQ. YDS.

1+44 to 2+24

80 x 6

9

= 53.3 SQ. YDS.

452 DRIVEWAY 6" CONC.

1+48 to 1+89

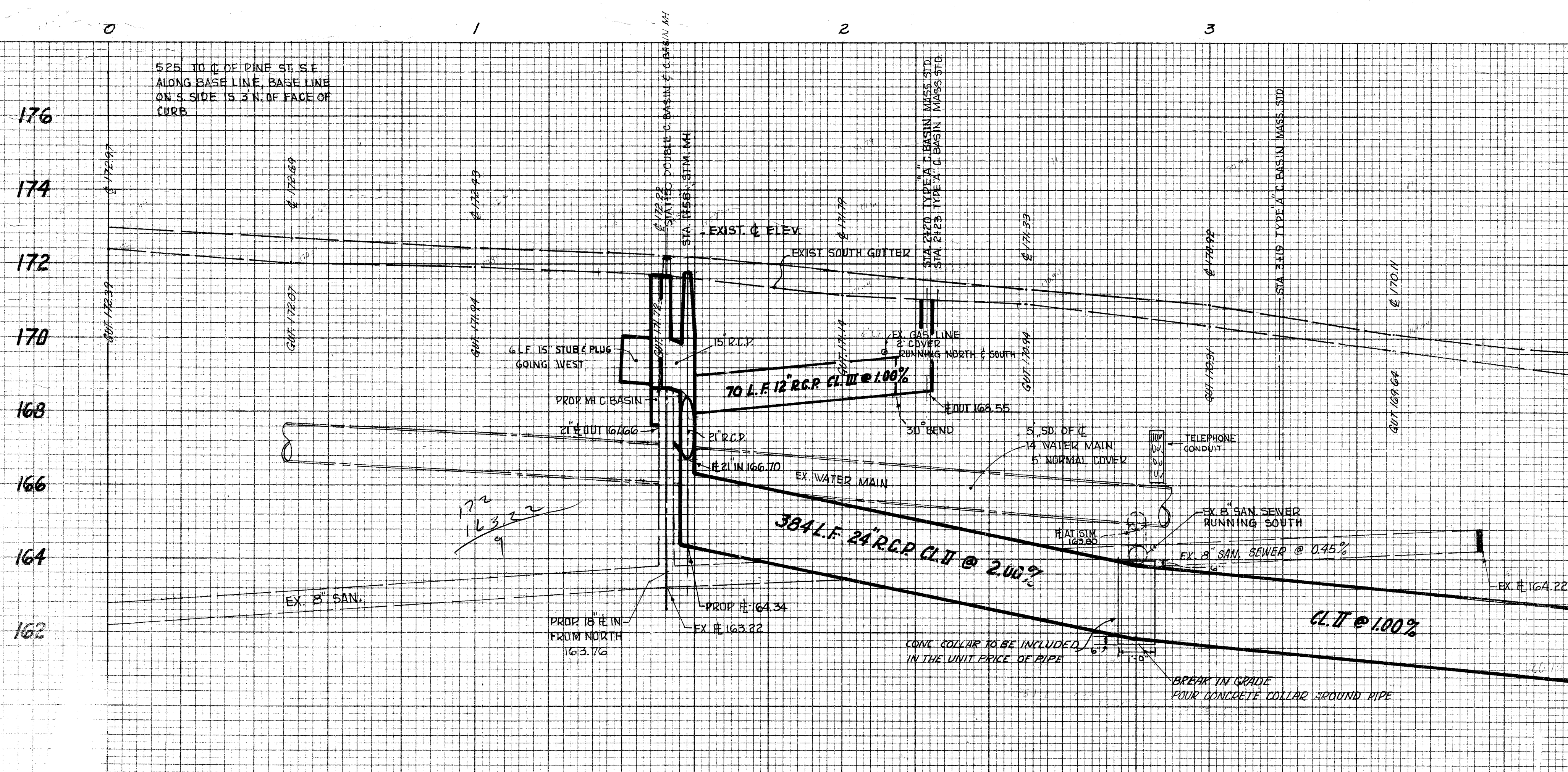
41 x 6

9

= 27.3 SQ. YDS.

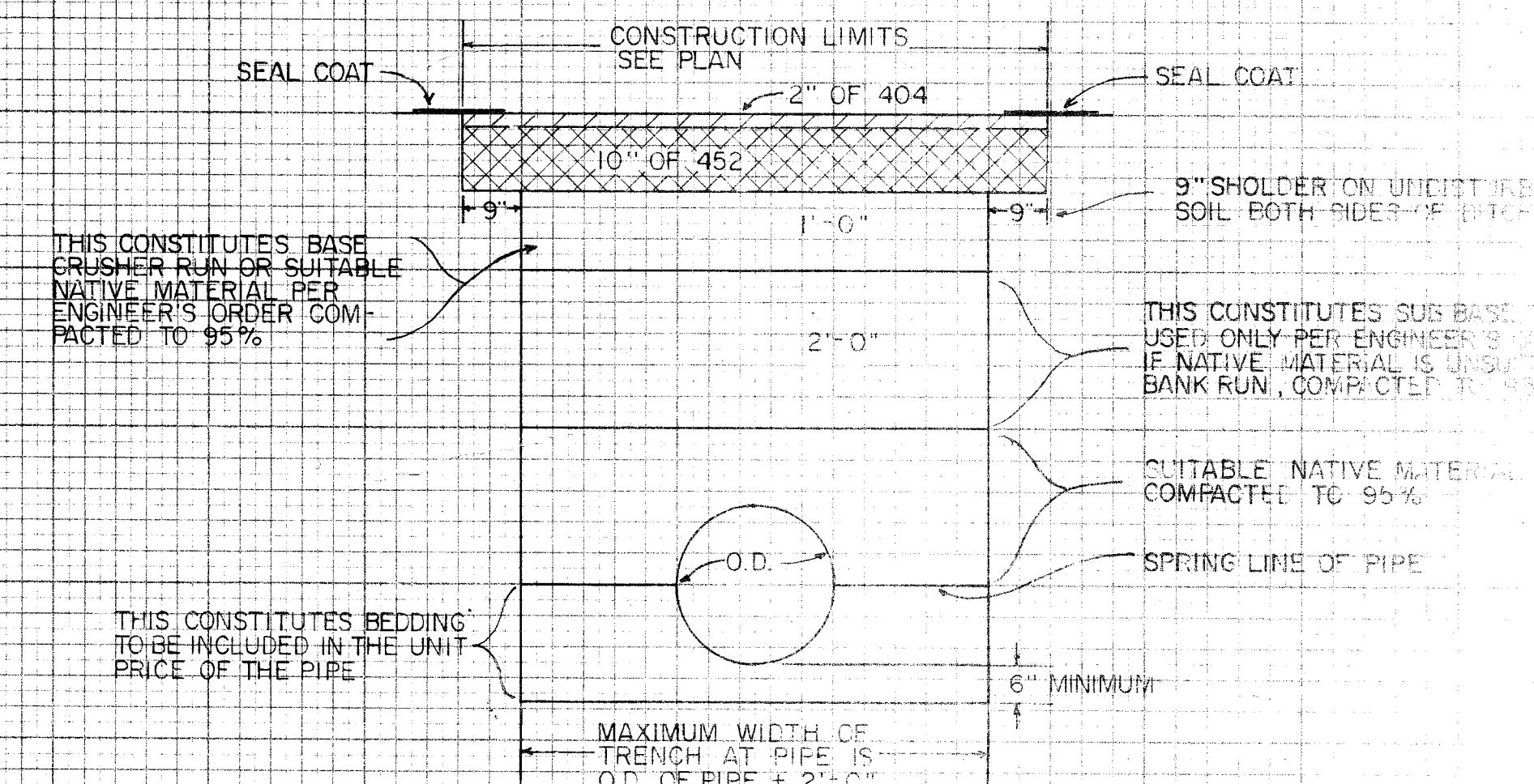
TOTAL = 450.7 SQ. YDS.

245.57 TONS TOTAL



TYPICAL DITCH RESTORATION

SCALE 1/2" = 1'



BENCH MARK:

174.07 - TOP OF HYD. N.W. CORNER
 LINCOLN WAY EAST & WALES RD.

CITY OF MASSILLON, OHIO

LINCOLN WAY EAST STORM SEWER

FROM CURB LINE OF LINCOLN & MERCURY GARAGE TO SIPPON

DR. BY: RON MCPHERSON

CITY OF MASSILLON, ENGINEER

CITY ENGINEER ROBERT WAGONER

FIELD BOOK 239

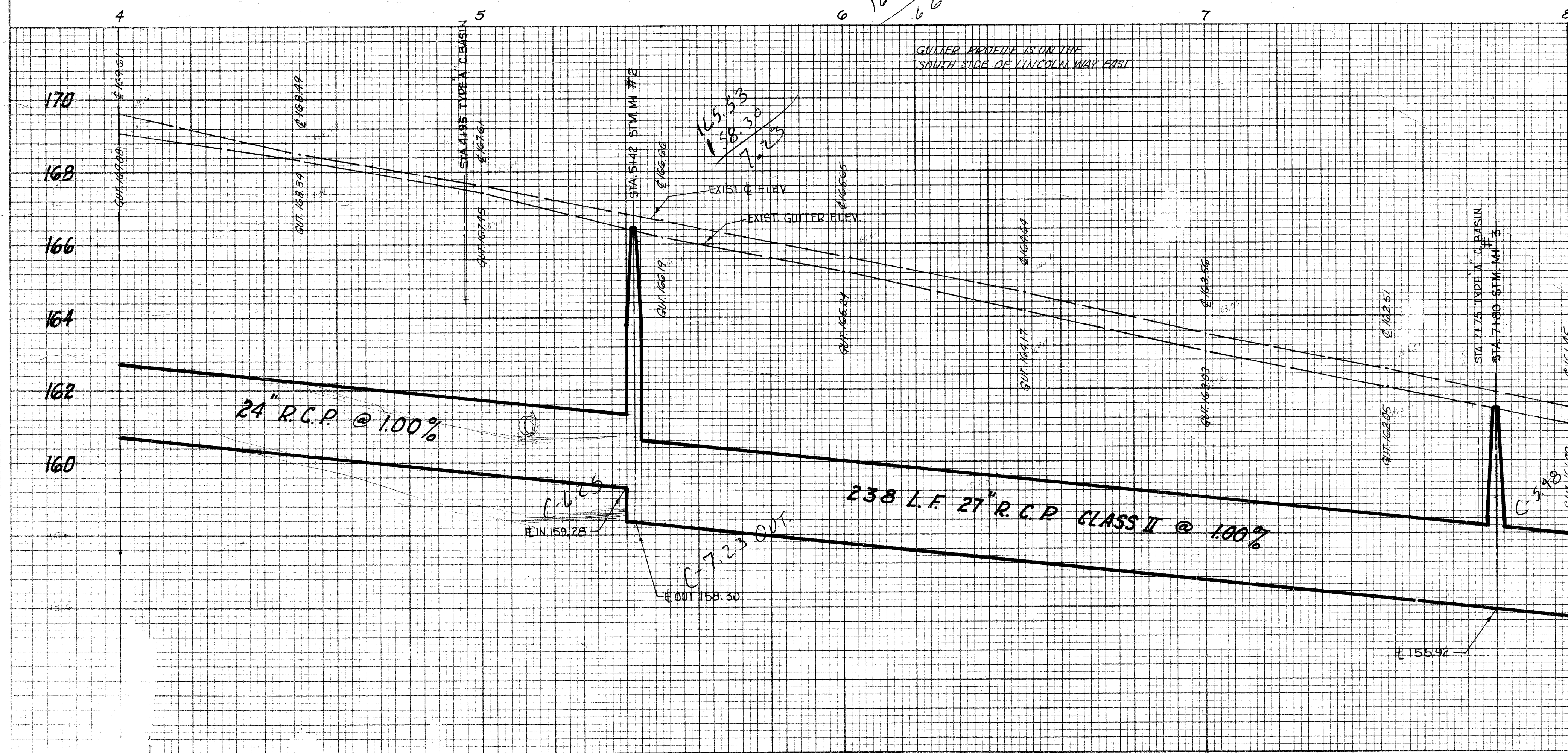
SCALE 1" = 20' HORIZ. 1" = 2' VERT.

DATE 1/5 - 1980

FILE NO. SE-575

ACC. NO. 29

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
	TEMPLATE		
NOTE BOOK	AREAS		
NO.	AREAS CHECKED		



609 - CURBING

6" x 18" MASSILLON STD. L.F.
RADIUS, S.E. CORNER L.W.E. &
PINE 5+64 to 8+00 24'
W. SIDE PINE ST. C. BASIN 10
C.B. STA. 4+95 10
280

608 - SIDEWALK
S.E. CORNER PINE & L.W.E.
6' x 6' = 36 @
6+40 5' x 3' = 15 @
6+83 5' x 3' = 15 @
TOTAL 66 @

SEEDING
5+42 to 8+00
 $\frac{258 \times 12.5}{9} = 358 \text{ SQ. YDS.}$

TOP SOIL 6"
 $\frac{358}{6} = 60 \text{ CU. YDS.}$

310 - SUB BASE (USE BANK RUN IF UNDESIRABLE MATERIAL ENCOUNTERED)
5+15 to 3+00 275 x 5 x 4 x 2 = 203.10 TONS
27

PAVEMENT 4+00 to 6+00
5+42 to 8+00 150 x 11 = 315.0 SQ. YDS.
9
4+00 to 5+42 142 x 11 = 156.2 SQ. YDS.
9
@ PINE 60 x 8 = 63.3 SQ. YDS.
9
27 x 3 = 9.0 SQ. YDS.
9
TOTAL 567.0 SQ. YDS.

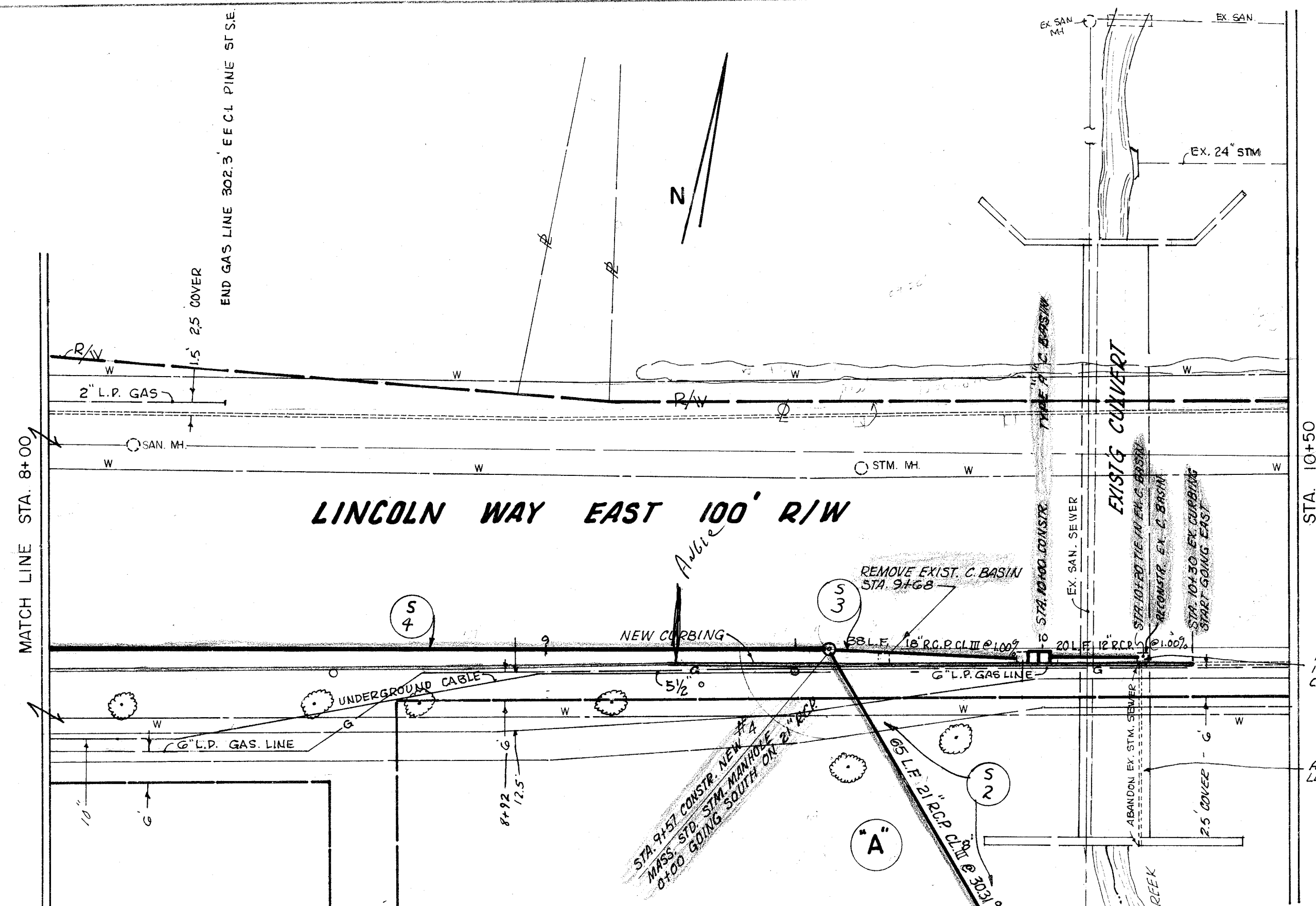
304 - BASE 1'-0" (CRUSHER RUN)
4+00 to 5+42 142 x (11-1.50) x 1
27 x 2 = 110.44 TONS
5+42 to 8+00 258 x (11-1.50) x 2 = 191.52 TONS
27
201.99 TONS

CITY OF MASSILLON, OHIO	
LINCOLN WAY 1ST STORM SEWER	
FROM CURB LINE OF LINCOLN & MERCURY GARAGE TO SIPPO CREEK	
DR. BY RON MCPHERSON	CITY OF MASSILLON, ENGINEERING DEPT.
CITY ENGINEER ROBERT W. POMER	FIELD BOOK 139
SCALE 1" = 20' HORIZ. 1" = 2' VERT.	DATE 8-20
FILE NO. SE-575	ACC NO. 294

HIGHWAY FEDERAL AID SHEET
PLATE 4-SINGLE PLAN AND CROSS SECTION-FULL LINE
 TELEDYNE
 PRINTED IN U.S.A.

$$\begin{array}{r} 159.28 \\ 158.30 \\ \hline .98 \end{array}$$
$$\begin{array}{r} 7.23 \\ 98 \\ \hline 125 \end{array}$$

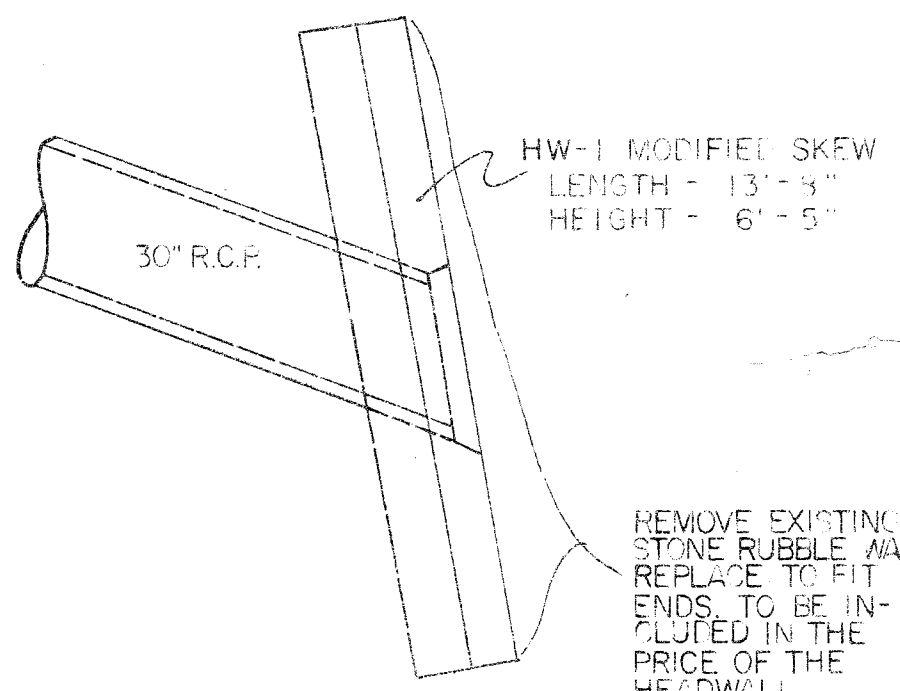
DATE	BY
REVIEWED	NOTED
PLANNED	NOTED
DESIGNED	NOTED
CONSTRUCTED	NOTED
NO.	NO.



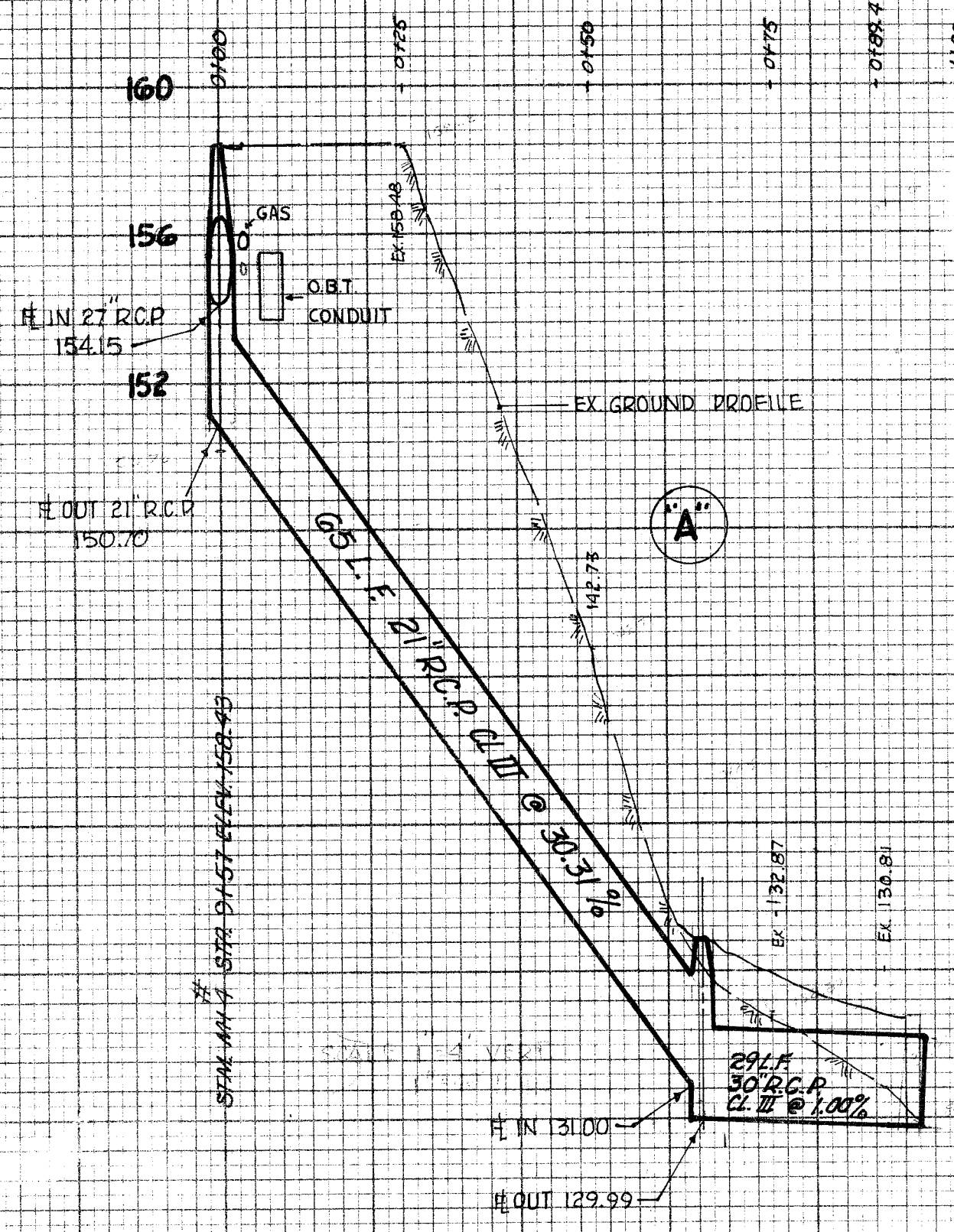
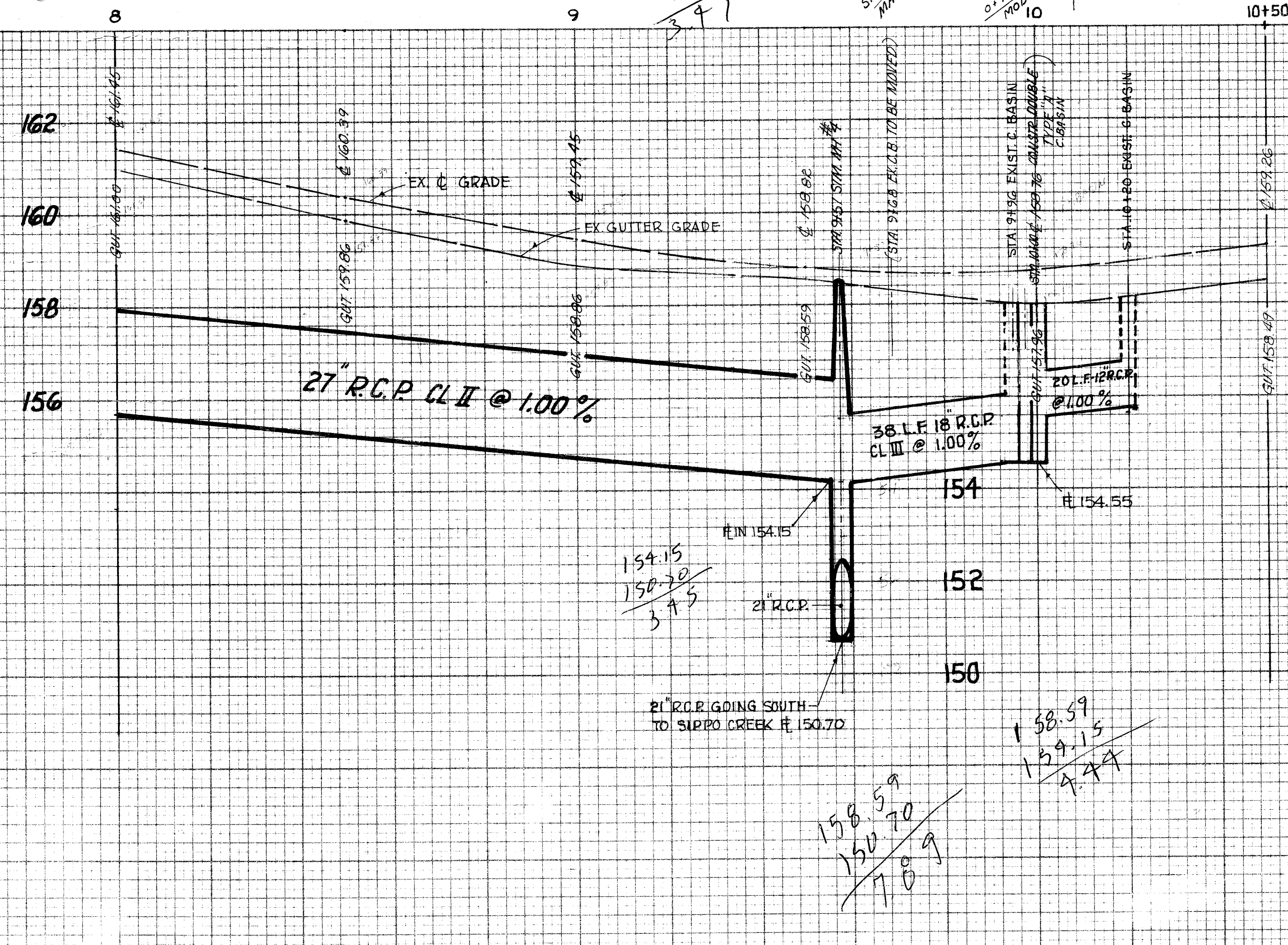
STATION	30" R.C.P.	STORM MANHOLE	HW-1 HEADWALL MODIFIED	27" R.C.P. CLASS II	24" R.C.P. CLASS II	21" R.C.P. CLASS III	18" R.C.P. CLASS II	15" R.C.P. CLASS III	12" R.C.P. CLASS III	TYPE "A" CATCH BASIN	TYPE "B" C. BASIN TWIN	TYPE "B" C. BASIN RE-CONSTRUCT	RECONSTRUCT C. BASIN
FROM - TO	L.F.	EACH	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.				
S-1	0+94 to 0+65	29	1	1									
S-2	0+65 to 0+00		1			65							
S-3	9+57 to 10+20						38		20				
S-4	9+57 to 8+00				157								
TOTAL		29	2	1	157	65	38		20				

304 BASE 1'-0" (CRUSHER RUN)
 8+00 to 9+63 $\frac{163(6-150)10}{27} \times 2 = 54.33$ TONS
 9+63 to 10+22 $\frac{59(5-150)10}{27} \times 2 = 15.29$ TONS
 310 SUB BASE (USE IF UNSUITABLE MATERIAL IS ENCOUNTERED)
 8+00 to 10+22 $\frac{222 \times 5 \times 2}{27} \times 2 = 164.44$ TONS
 609 CURBING
 6" x 18" MASSILLON STD. 10+30 to 8+00 - 230'
 404/452 PAVEMENT REPLACEMENT
 8+00 to 9+63 $\frac{6 \times 163}{9} = 108.66$ SQ. YDS.
 9+63 to 10+22 $\frac{5 \times 59}{9} = 32.78$ SQ. YDS.
 10+22 to 10+31 $\frac{1 \times 9}{9} = 1.00$ SQ. YDS.
 142.44 SQ. YDS.

659 - SEEDING
 0+03 to 0+94 $\frac{91 \times 30}{9} = 303.33$ SQ. YDS.
 8+00 to 8+92 $\frac{92 \times 12.5}{9} = 127.8$ SQ. YDS.
 8+92 to 9+49 $\frac{57(12.5+10)}{9} = 71.25$ SQ. YDS.
 9+49 to 9+98 $\frac{49(10+3)}{9} = 35.38$ SQ. YDS.
 9+98 to 10+30 $\frac{32(3)}{9} = 7.67$ SQ. YDS.
 TOTAL SEEDING 545.43 SQ. YDS.
 608 - SIDEWALK
 9+67 15' x 5' = 75 SQ. FT.



DATE	BY
REVIEWED	NOTED
PLANNED	NOTED
DESIGNED	NOTED
CONSTRUCTED	NOTED
NO.	NO.



ITEM	DESCRIPTION	SHT. 2	SHT. 3	SHT. 4	TOTAL	EA.
602	HEADWALL HW-1 MOD.			1	1	EA.
603	30" R.C.P. CLASS III			29	29	L.F.
603	27" R.C.P. CLASS II		258	157	415	L.F.
603	24" R.C.P. CLASS II	242	142		384	L.F.
603	21" R.C.P. CLASS III	48		65	113	L.F.
603	18" R.C.P. CLASS II			38	38	L.F.
603	15" R.C.P. CLASS III	13	28		41	L.F.
603	12" R.C.P. CLASS III	84	43	20	147	L.F.
603	10" CONCRETE	4			4	L.F.
603	8" PLASTIC (HEAVY WALL)	10			10	L.F.
604	WH C. BASIN TYPE "B" TWIN	1			1	EA.
604	C. BASIN TYPE "B"	1			1	EA.
604	C. BASIN TYPE "B" RECONSTR.			1	1	EA.
604	C. BASIN TYPE "A"	2	4		6	EA.
604	C. BASIN TYPE "A" TWIN	1			2	EA.
404/452	PAVEMENT 2" 404/10" 452	540.7	507.0	142.44	1190.14	SQ. YDS.
404	REPAIRING 1/4" 404	14.2			14.2	SQ. YDS.
452	6" CONC. DRIVE	27.3			27.3	SQ. YDS.
608	4" CONC. SIDEWALK		66	15	81	SQ. FT.
609	6" x 18" CONC. CURB	66	280	250	596	L.F.
653	6" TOP SOIL	4	60	90.00	154	C.Y.
659	SEEDING & MULCHING	24	358	545.43	927	SQ. YDS.
202	REMOVE EXIST. C. BASINS			2	2	EA.
304	BASE (CRUSHER RUN)	245.7	291.99	69.00	606.7	TONS
310	SUBBASE		203.70	104.44	308	TONS
614	TRAFFIC CONTROL					SUM.
604	STM. MH. CITY STD.	1	2		3	EA.

CITY OF MASSILLON, OHIO

LINCOLN WAY EAST STORM SEWER

FROM CURB LINE OF LINCOLN & MERCURY TO SIPPY CREEK

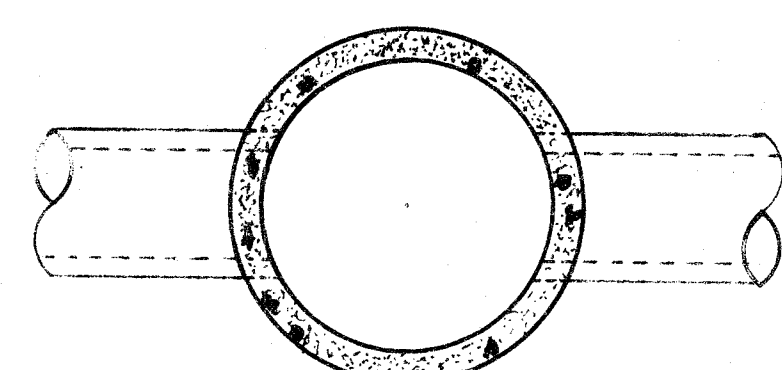
DE. BY: RONI MCPHERSON

CITY ENGINEER: ROBERT W. ...

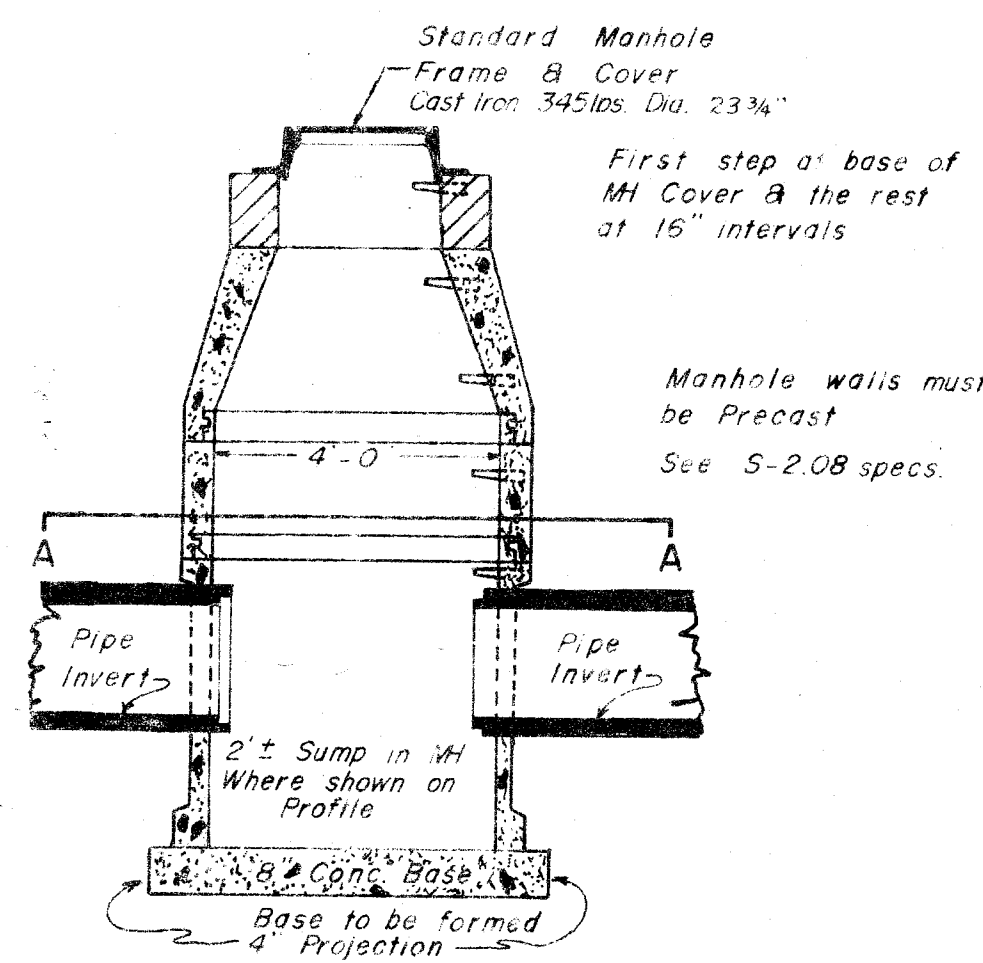
SCALE: 1" = 20' HORIZ. 1" = 2' VERT.

FILE NO. ...

ACC. NO. 2549



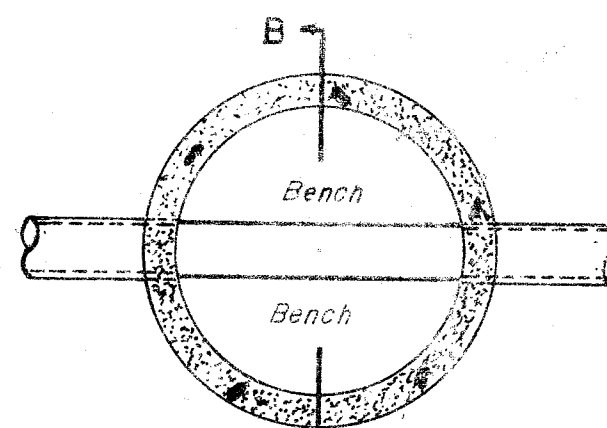
SECTION A-A



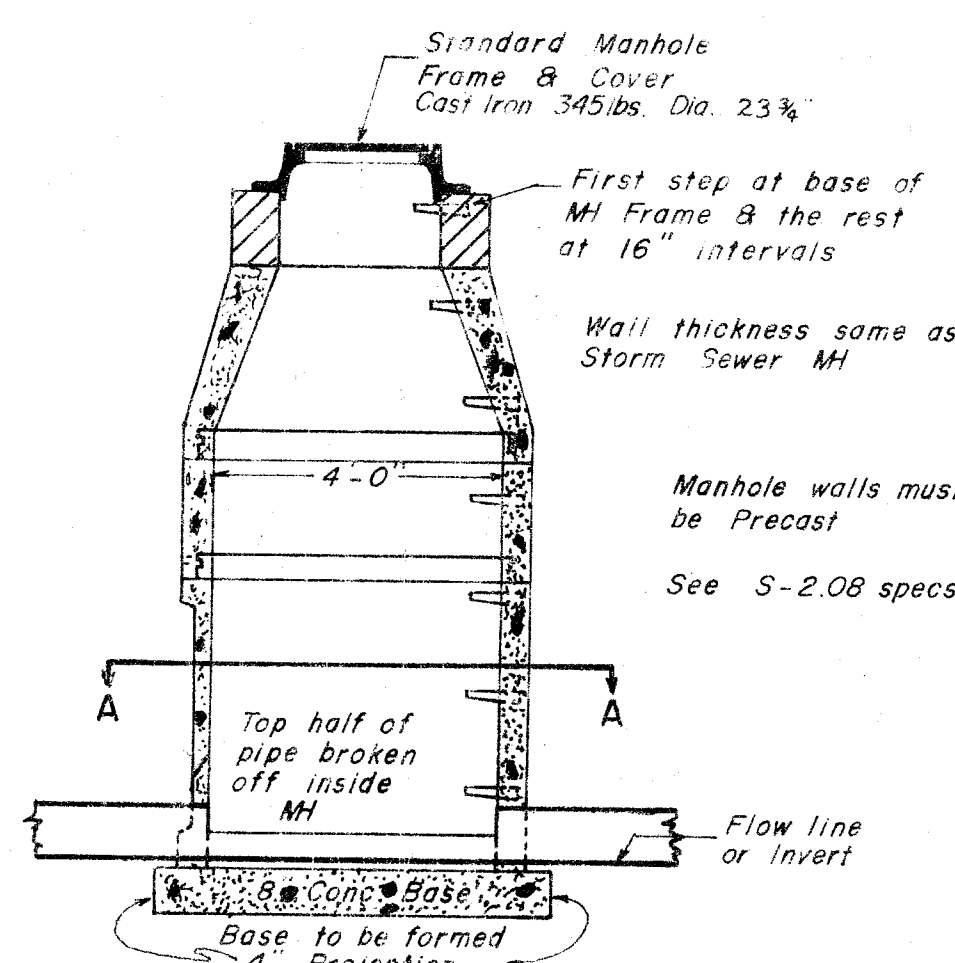
STORM SEWER MANHOLE

Bid price per foot for manholes shall include all material & labor complete in place.

O-Ring is required on all sanitary & shallow manholes



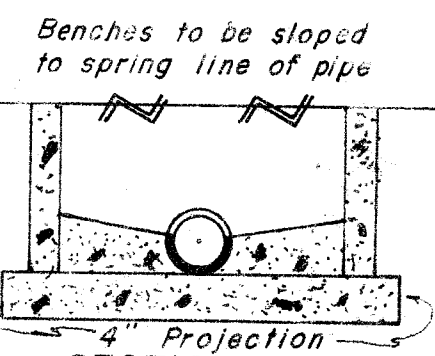
SECTION A-A



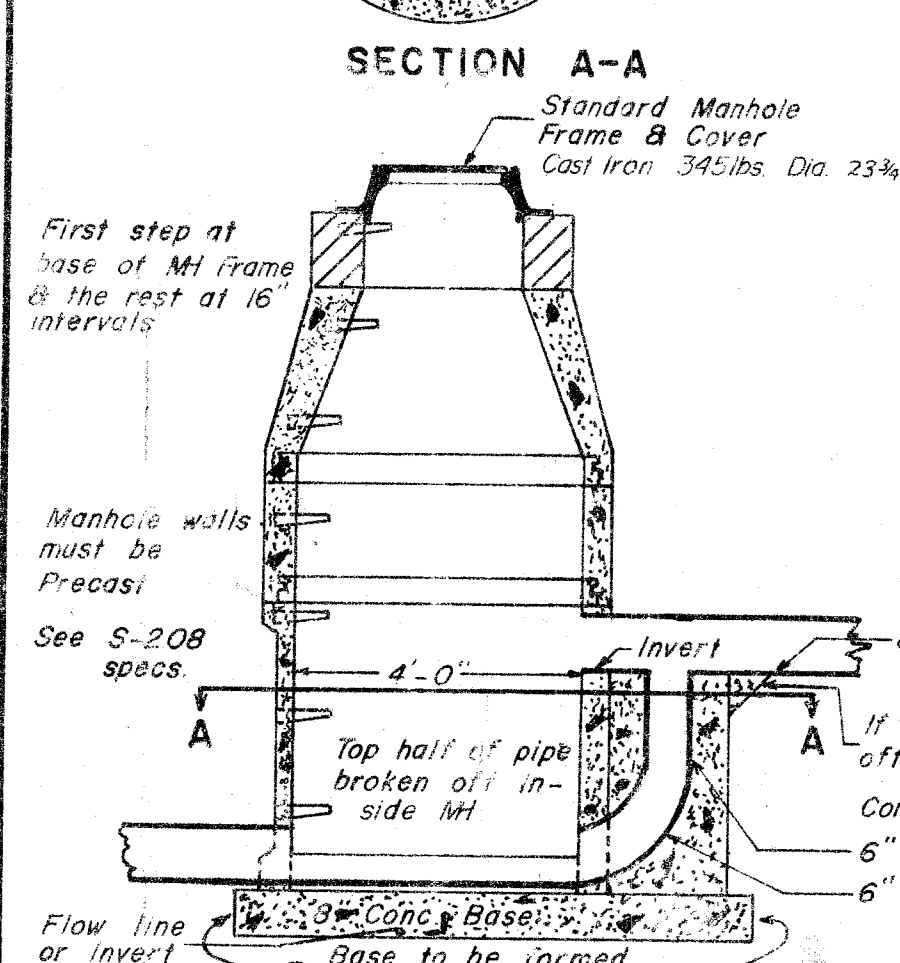
SANITARY SEWER MANHOLE

Manhole walls must be Precast See S-2.08 specs.

Bid price per foot for manholes shall include all material & labor complete in place



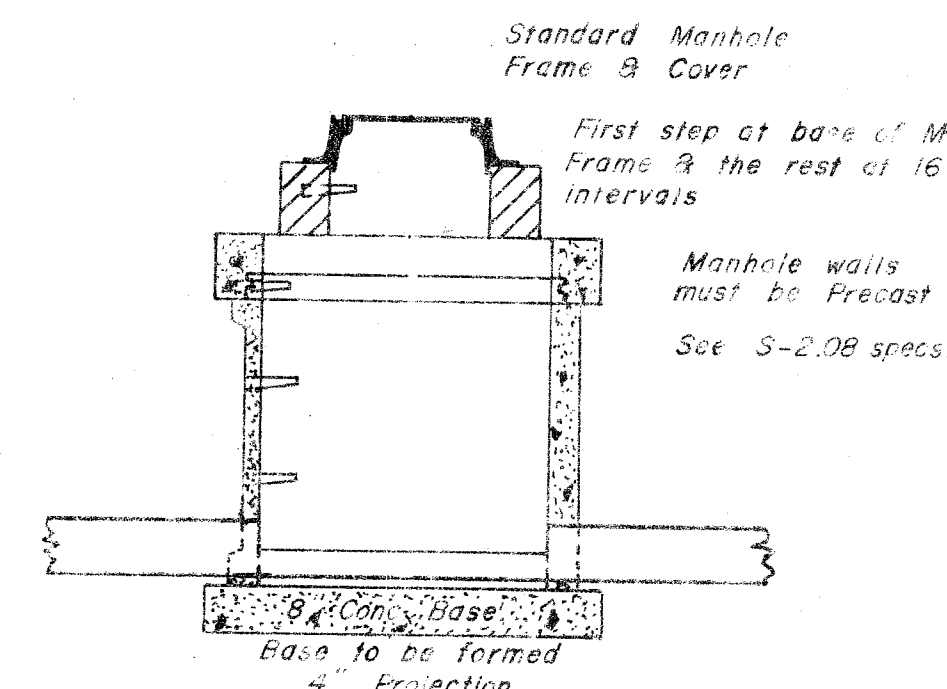
SECTION B-B



SANITARY DROP MANHOLE

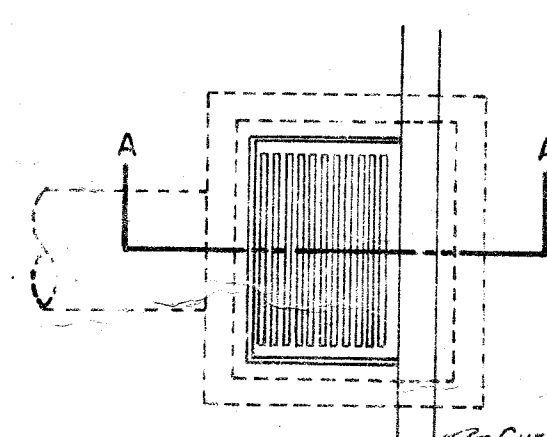
Bid price per foot for manholes shall include all material & labor complete in place

O-Ring is required on all sanitary & shallow manholes



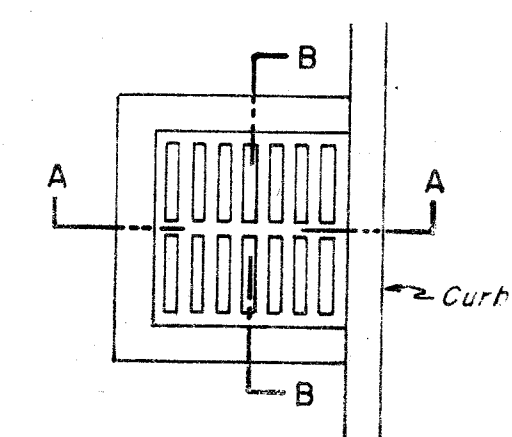
STD. SHALLOW MANHOLE

Manhole walls must be Precast See S-2.08 specs.

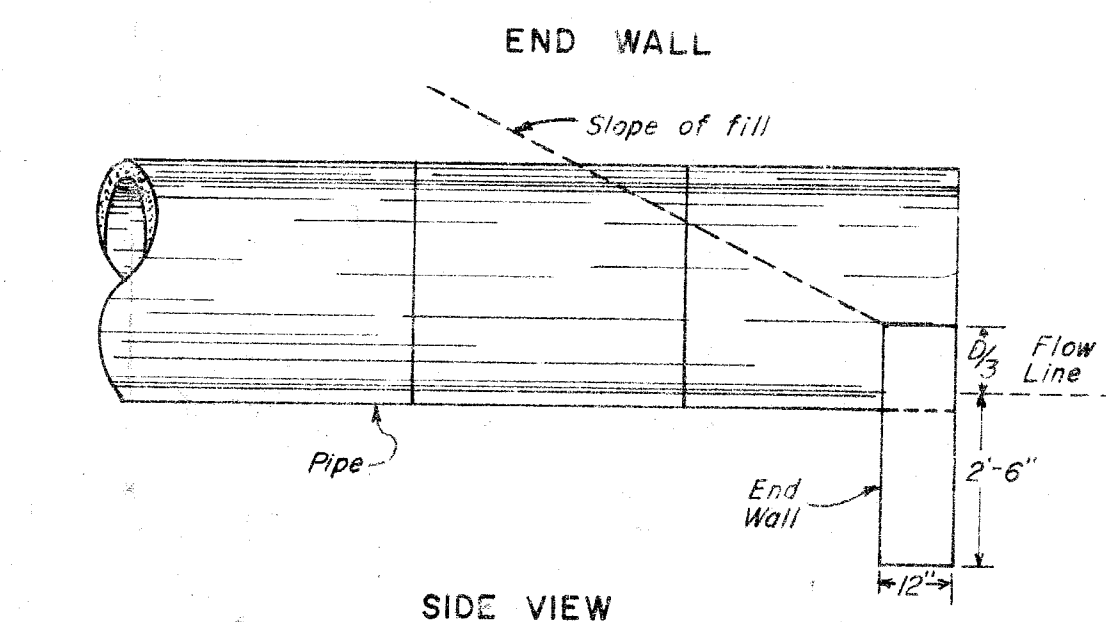
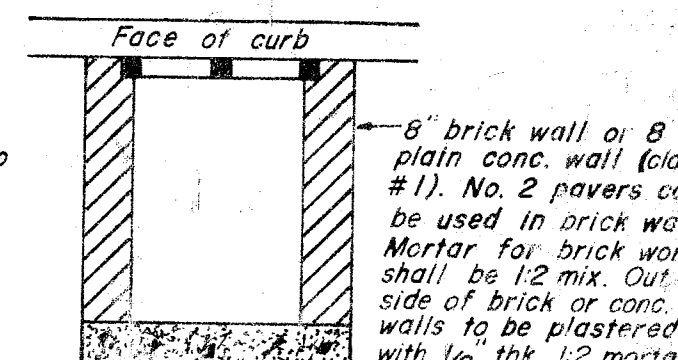
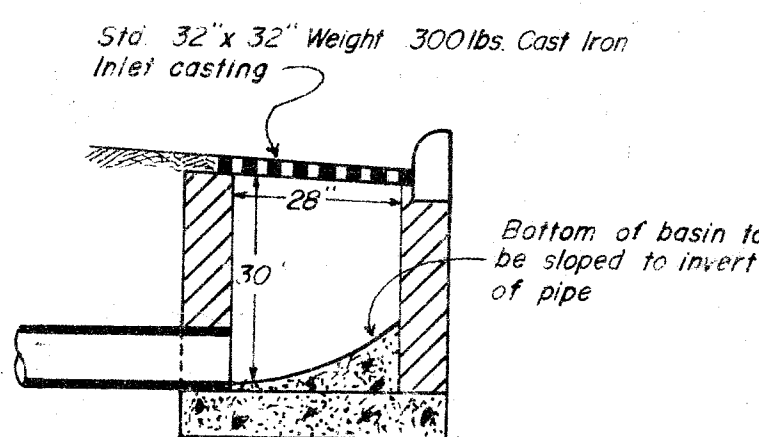


CATCH BASIN TYPE "A"

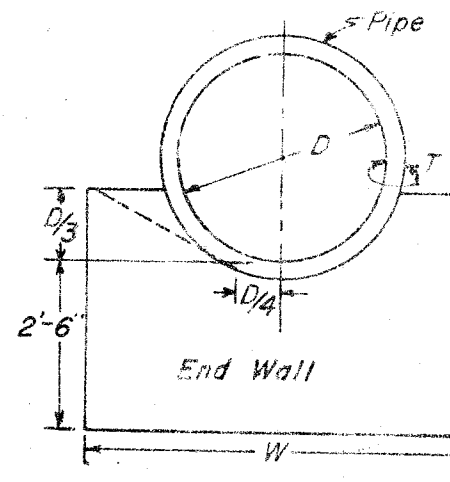
8" brick wall or 8" plain conc. wall (class #1) No. 2 pavers can be used in brick walls. Mortar for brick work shall be 1:2 mix. Outside of brick or conc. walls to be plastered with 1/2 thk. 1:2 mortar.



CATCH BASIN TYPE "B"



HEADWALL - HALF

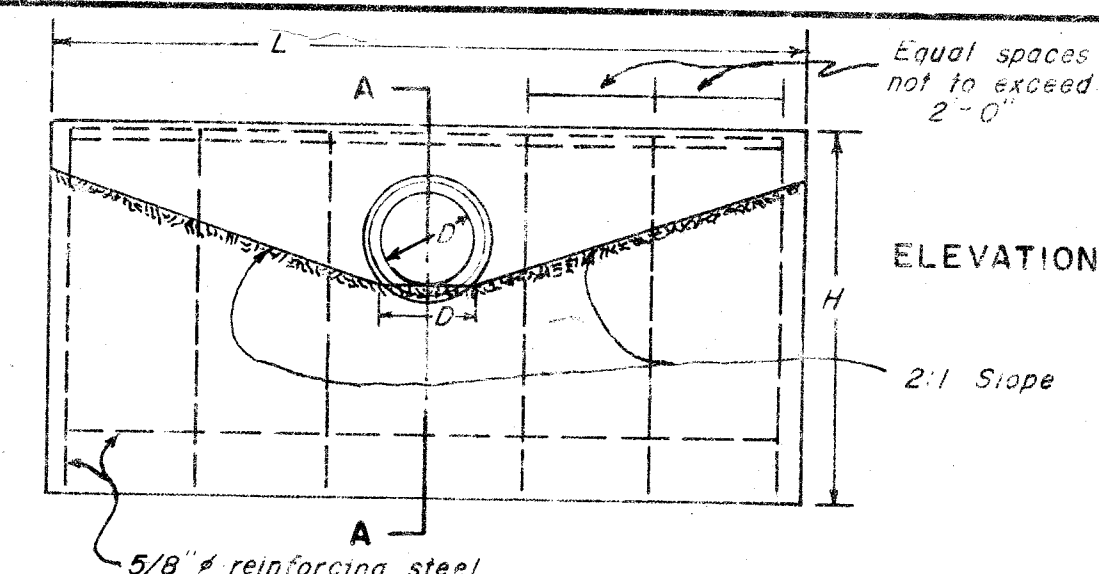


PIPE DIAMETER	WIDTH W	CONC. CU YD ONE END WALL
12"	2' 4"	.23
15"	2' 3"	.26
18"	3' 0"	.30
21"	3' 6"	.36
24"	4' 0"	.41
27"	4' 6"	.47
30"	4' 10"	.51
33"	5' 2"	.55
36"	5' 6"	.59
39"	6' 2"	.67
42"	6' 10"	.76
48"	7' 7"	.86
54"	8' 4"	.96

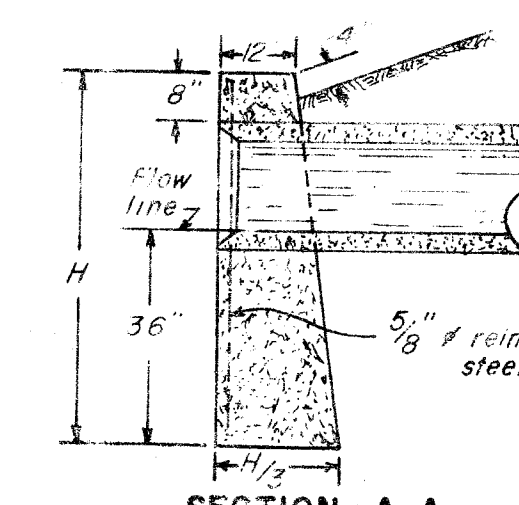
REINFORCING STEEL BARS shall be 5/8 inch round.

FOUNDATION Where the soil borings indicate a bearing capacity of less than 2600 lbs. per square foot it will be necessary to increase the width of the base.

PIPE DIAMETER	WIDTH W	CONC. CU YD ONE END WALL
12"	2' 4"	.23
15"	2' 3"	.26
18"	3' 0"	.30
21"	3' 6"	.36
24"	4' 0"	.41
27"	4' 6"	.47
30"	4' 10"	.51
33"	5' 2"	.55
36"	5' 6"	.59
39"	6' 2"	.67
42"	6' 10"	.76
48"	7' 7"	.86
54"	8' 4"	.96



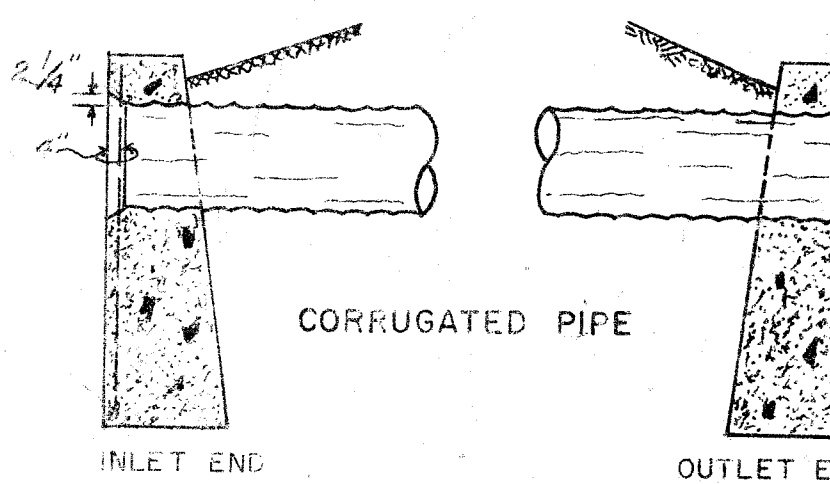
HEADWALL - HW 1



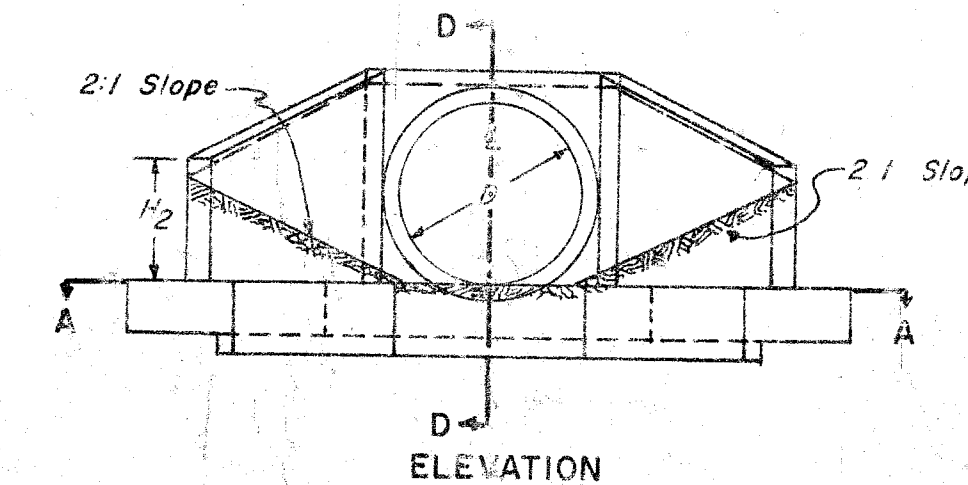
NOTES
REINFORCING STEEL BARS shall be 5/8 inch round.
FOUNDATION Where the soil borings indicate a bearing capacity of less than 2600 pounds per square foot, it will be necessary to increase the width of the base.

DIMENSIONS		QUANTITIES	
DIAMETER	H	CONCRETE CU. YDS.	REINFORCING STEEL LBS.
15"	5' 2"	1.7	41
18"	5' 5"	2.2	57
21"	5' 8"	2.9	62
24"	6' 1"	3.3	69
30"	6' 5"	4.7	92
36"	7' 2"	6.3	105

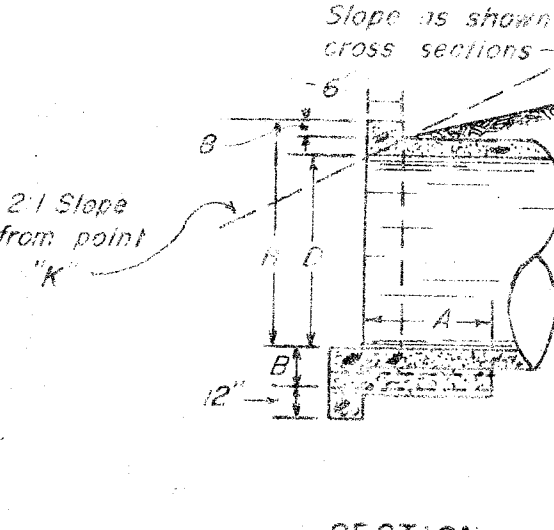
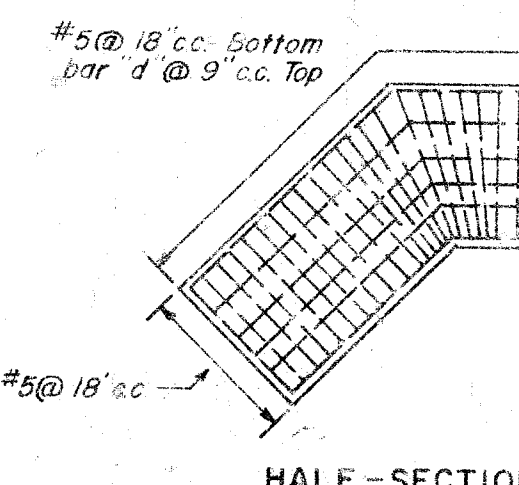
D = DIAMETER OF PIPE
H = HEIGHT OF PIPE
L = LENGTH OF PIPE
W = WIDTH OF PIPE
T = THICKNESS OF PIPE



HEADWALL - HW 2



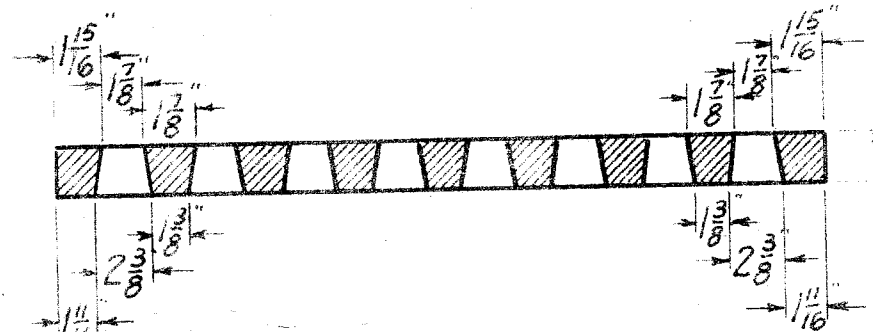
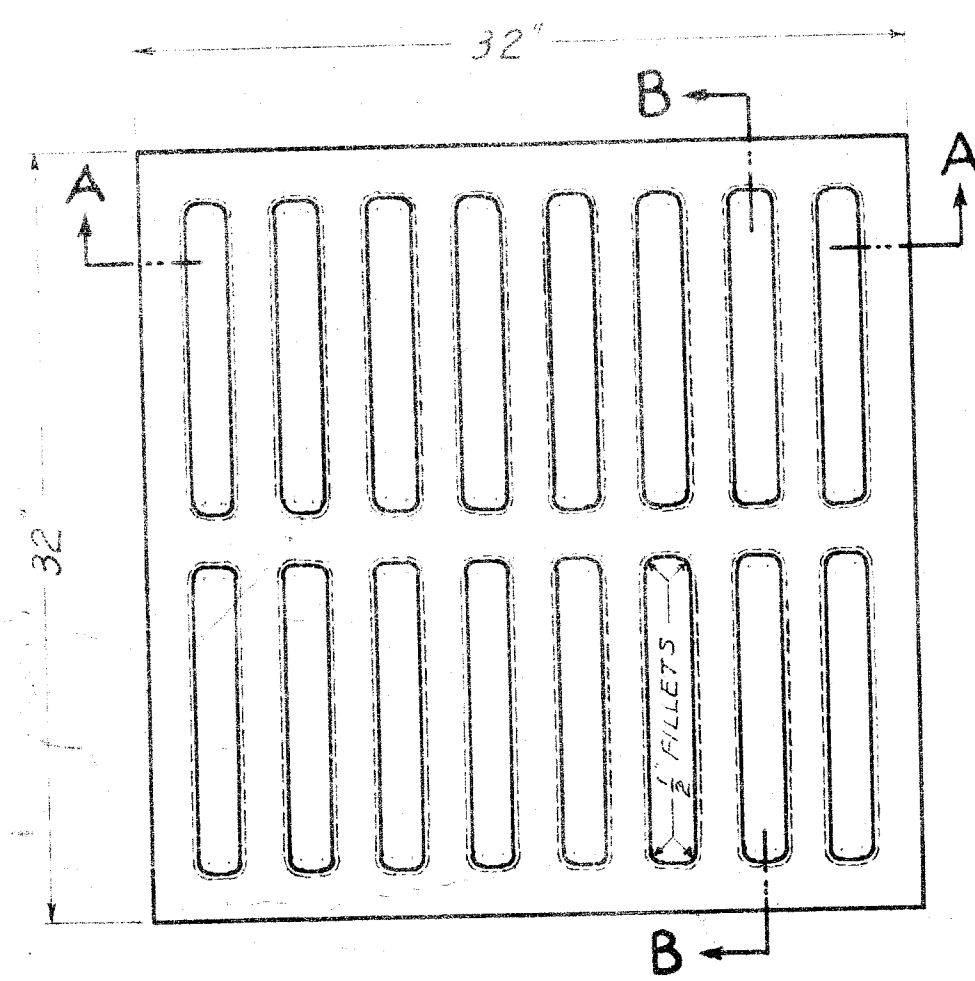
HEADWALL - HW 3



SECTION D-D

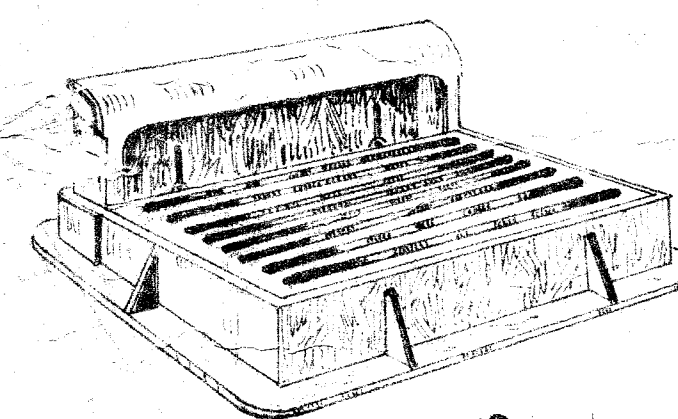
CORRUATED PIPE END TRENCH HEADWALL

CITY OF MAUI
STANDARD

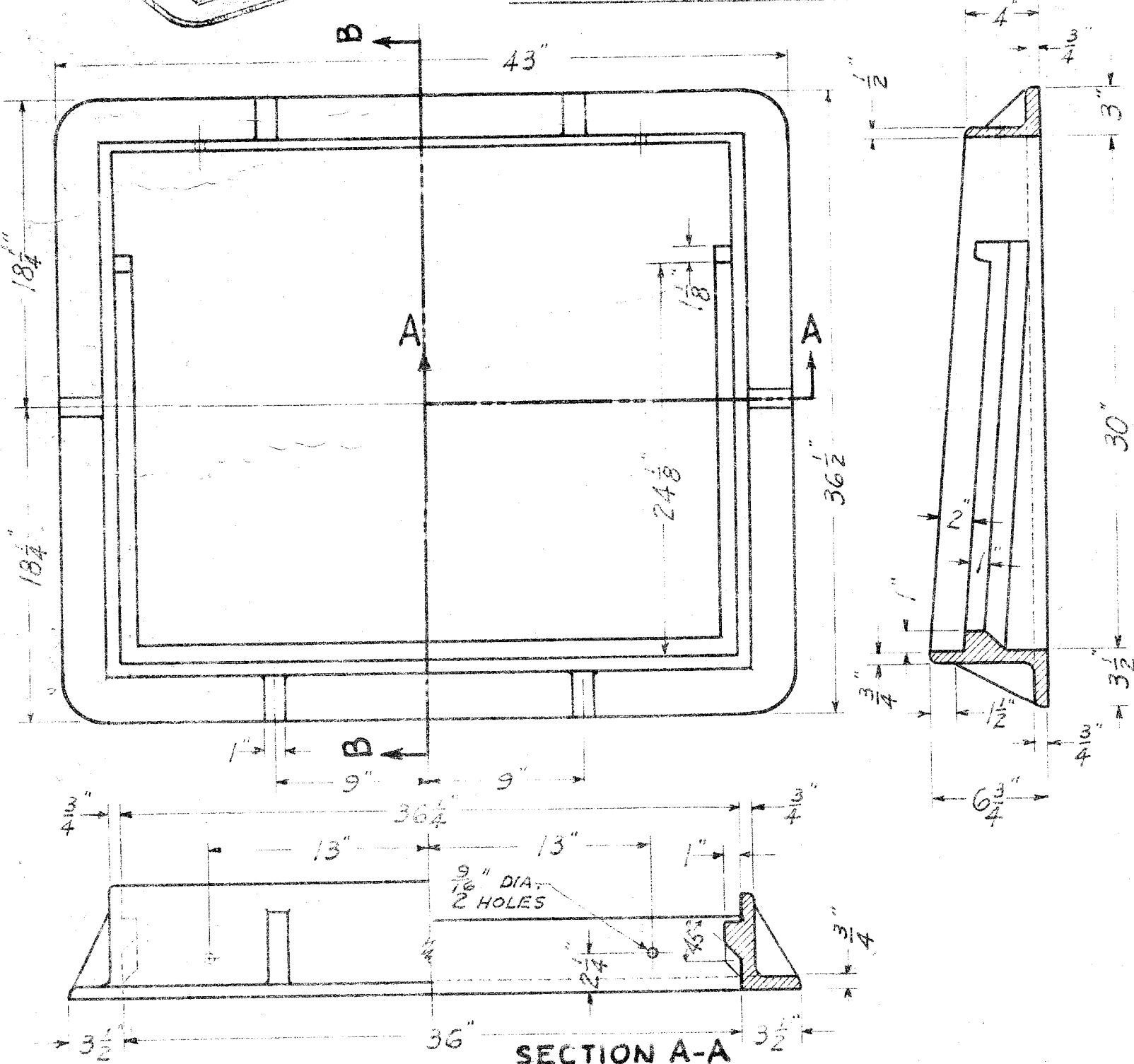


SECTION A-A

TYPE "B" INLET
MATERIAL - CAST IRON
WEIGHT - 300 LBS.
SCALE: 1 1/2" = 1'-0"

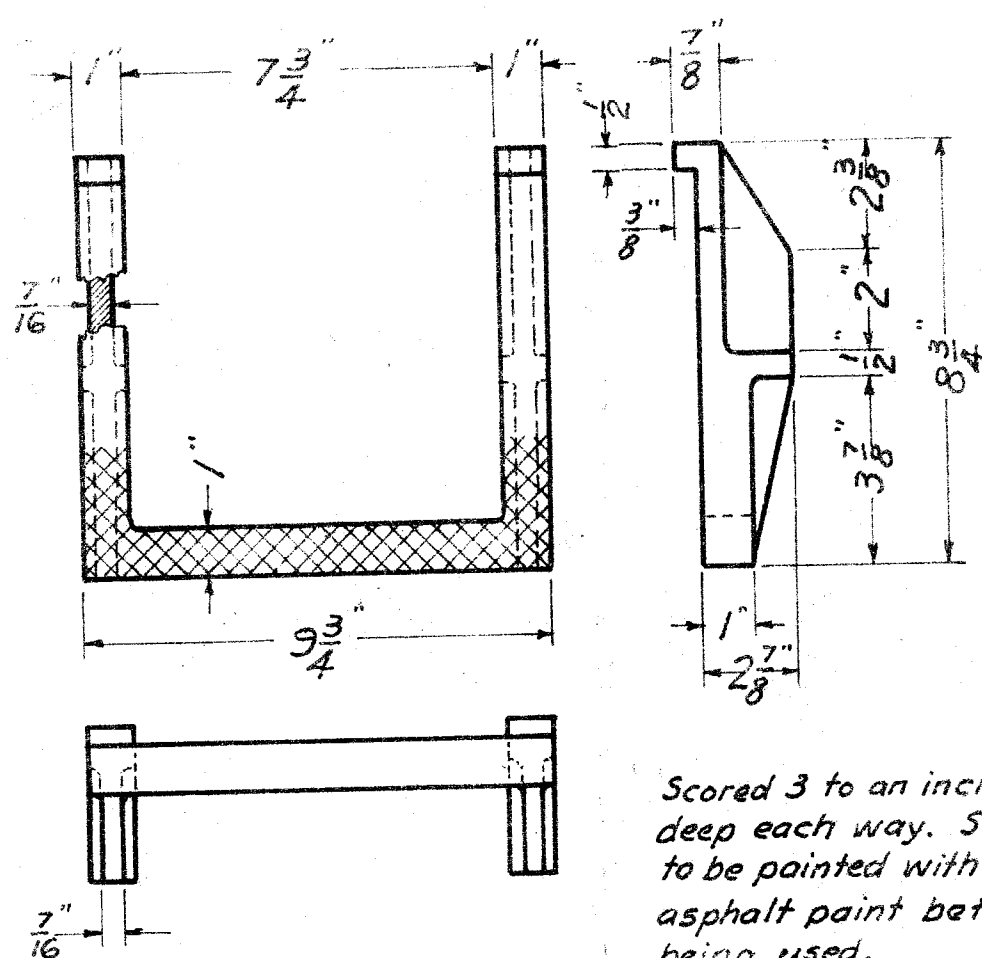


CURB INLET ASSEMBLY
TOTAL WEIGHT - 650 LBS.
Neenah R-3293 or equal.



CURB INLET FRAME
MATERIAL - CAST IRON
WEIGHT -
SCALE: 1 1/2" = 1'-0"

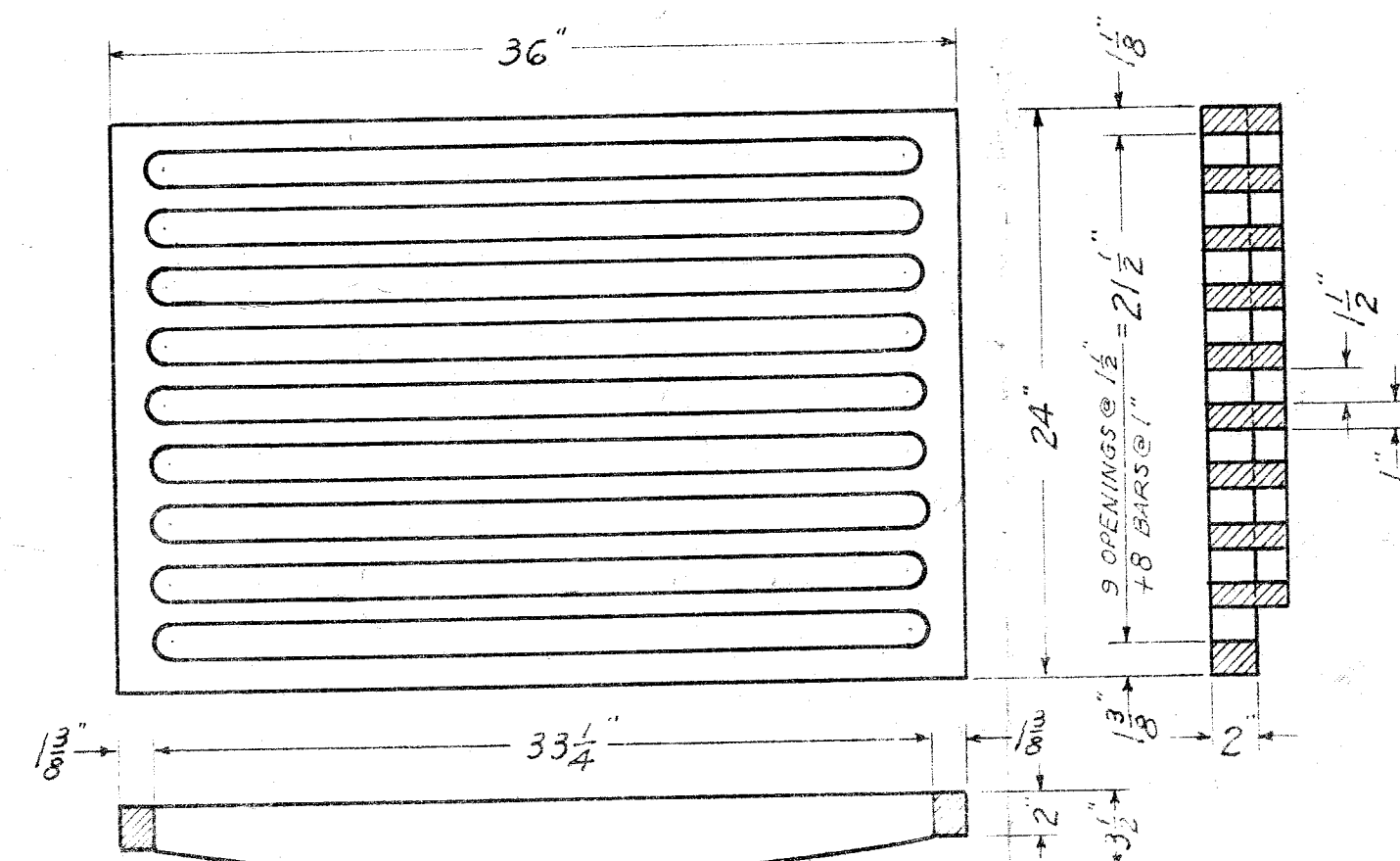
SECTION B-B



MANHOLE STEP
MATERIAL: CAST IRON
SCALE - 3" = 1'-0"

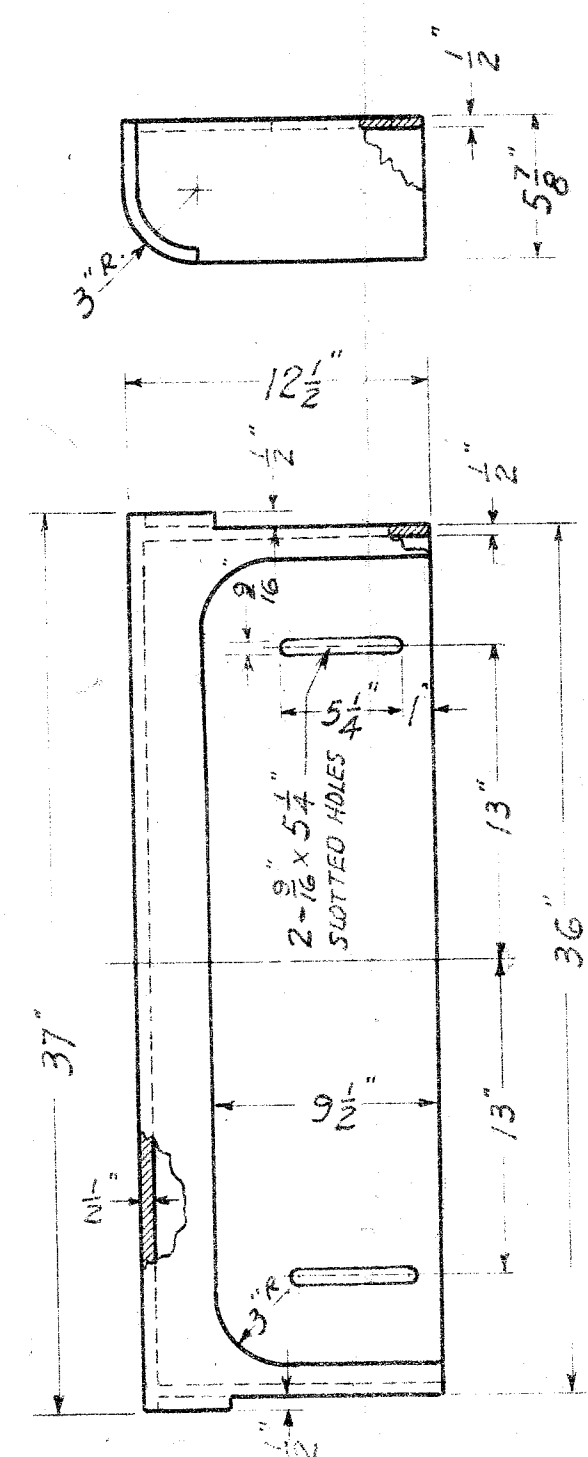
Scored 3 to an inch 1/8 deep each way. Steps to be painted with asphalt paint before being used.

Manhole steps to be included in bid price per vert. foot of manholes.



CURB INLET GRATE
MATERIAL - CAST IRON
WEIGHT -
SCALE: 1 1/2" = 1'-0"

SECTION B-B



CURB INLET BOX
MATERIAL - CAST IRON
WEIGHT -
SCALE: 1 1/2" = 1'-0"

NOTE:

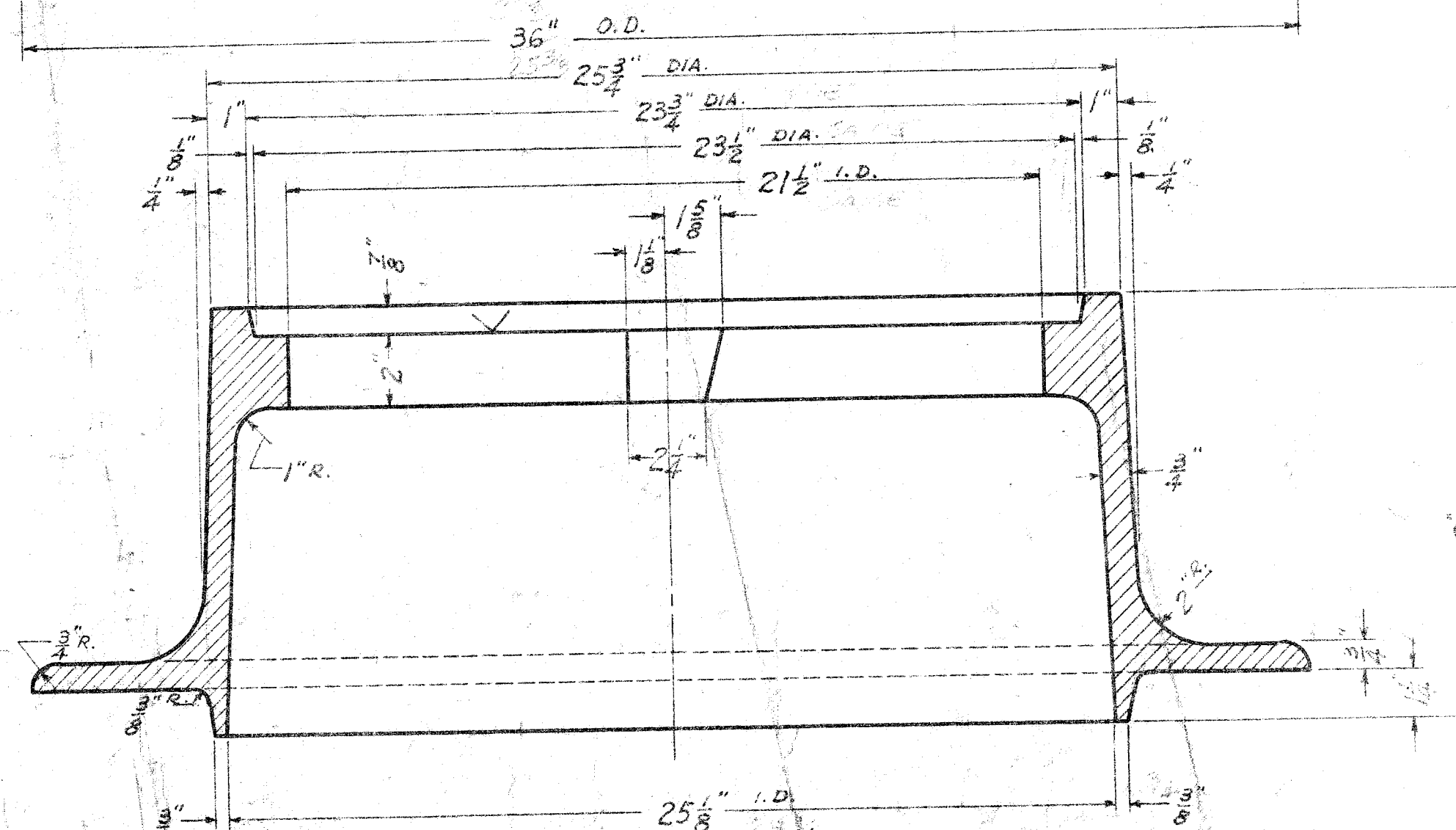
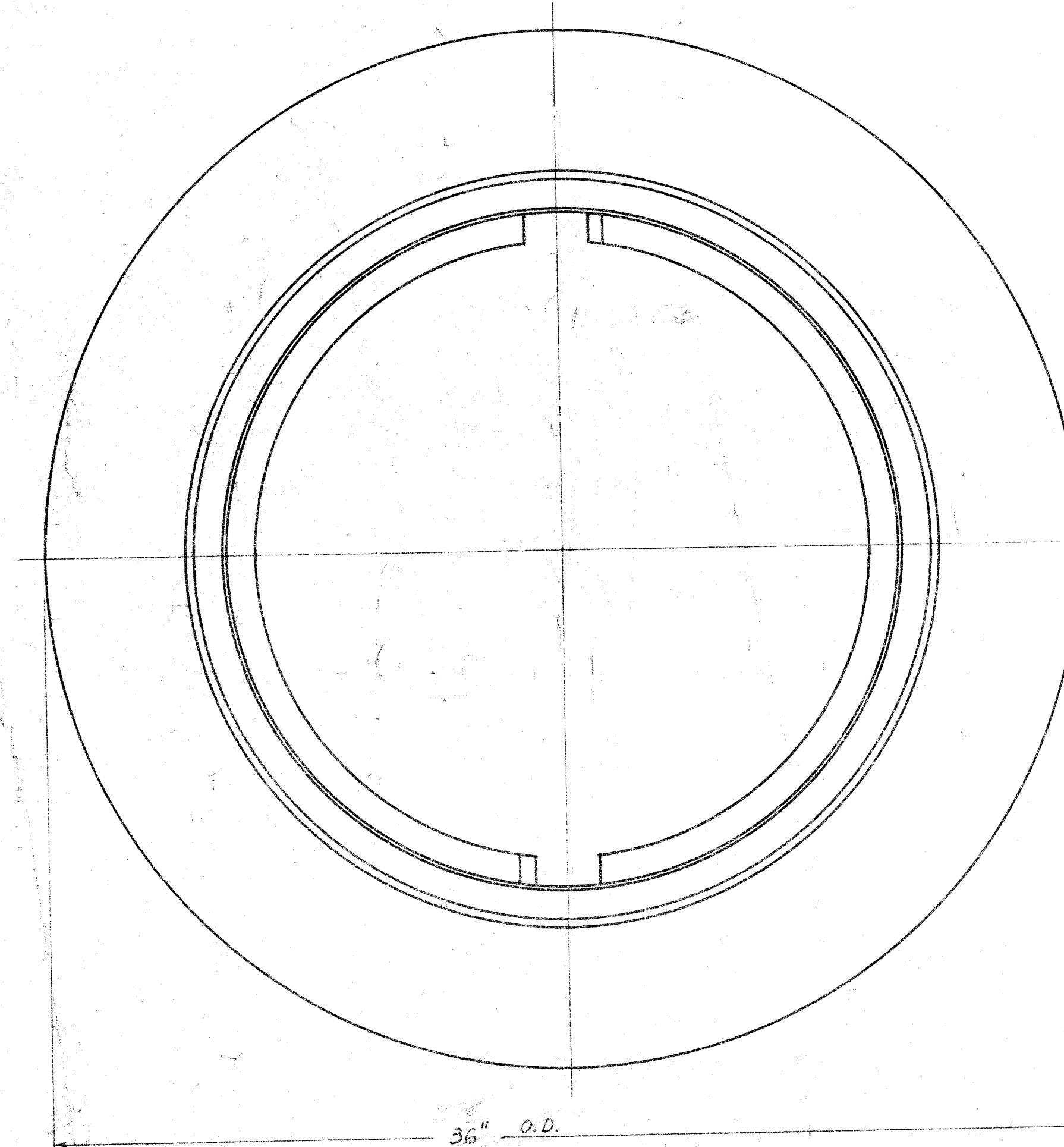
1. Bearing parts of frame & cover shall be machined to provide a firm & even seat for any position of the cover.
2. Material for frame & cover to be of cast iron of good quality - A.S.T.M. class 30 or better.
3. Castings to be free from blowholes or other defects.
4. They shall be cleaned of all scale & grease and receive (2) two coats of bituminous paint.

STM. SEWER

SAN. SEWER

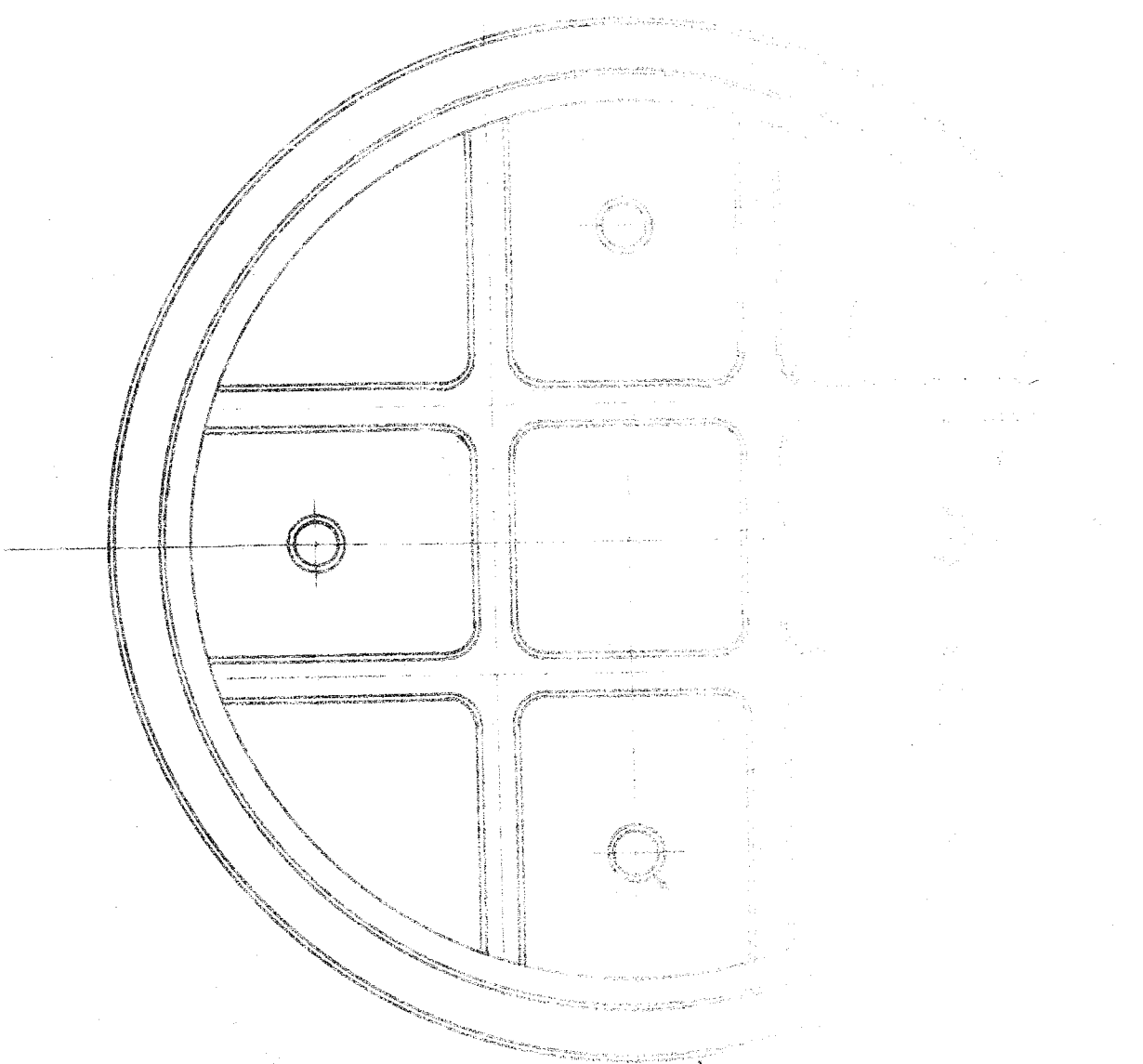
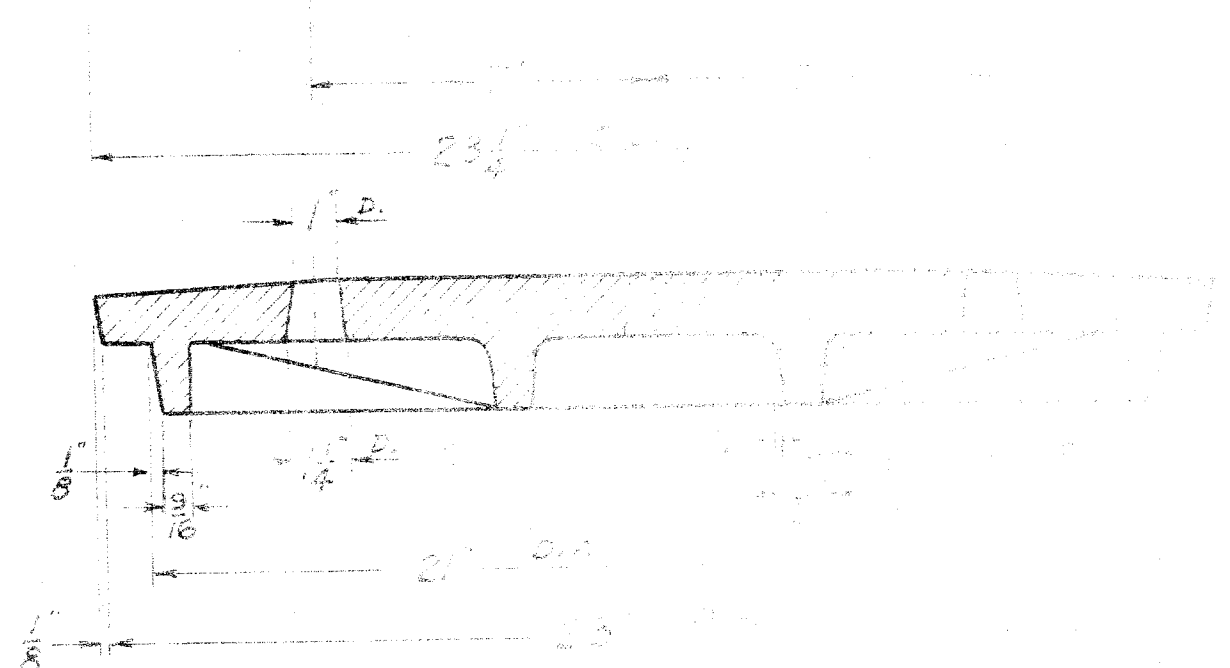
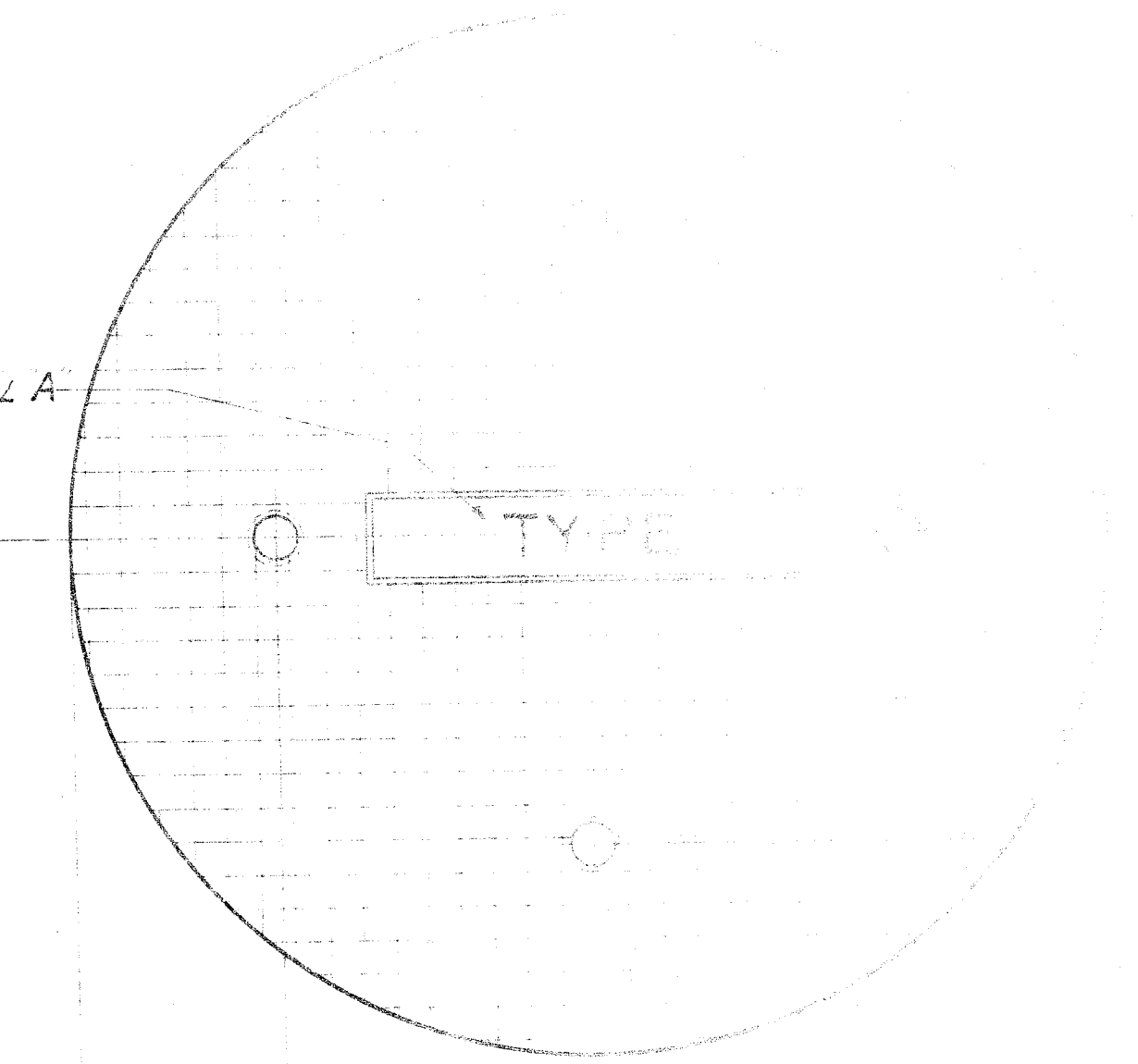
Sanitary & storm covers & frames identical except for above lettering on plate.

DETAIL "A"



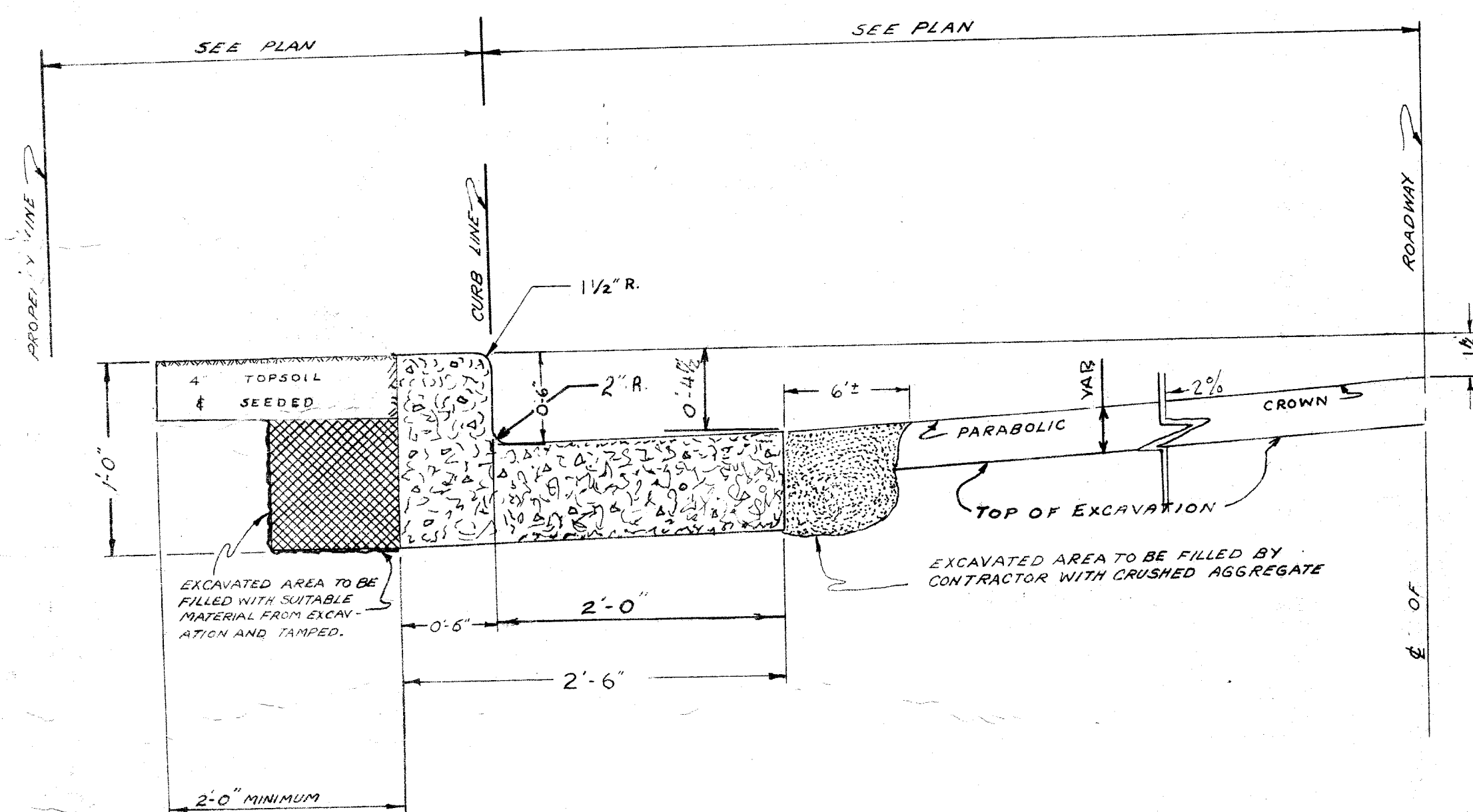
MANHOLE FRAME
MATERIAL - CAST IRON
WEIGHT - 345 LBS.
SCALE - 3" = 1'-0"

SEE DETAIL A



MANHOLE COVER
MATERIAL - CAST IRON
WEIGHT - 345 LBS.
SCALE - 3" = 1'-0"

CITY OF



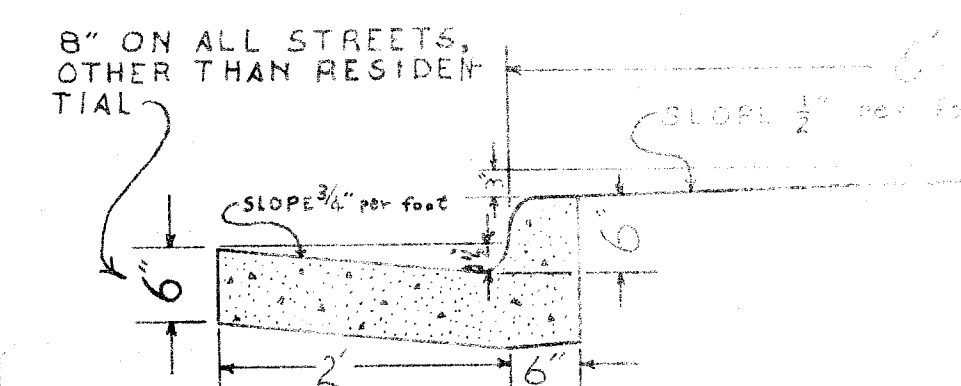
MASSILLON STANDARD CURB & GUTTER DETAIL

DR. BY: O. DEBOS - 2-5-65

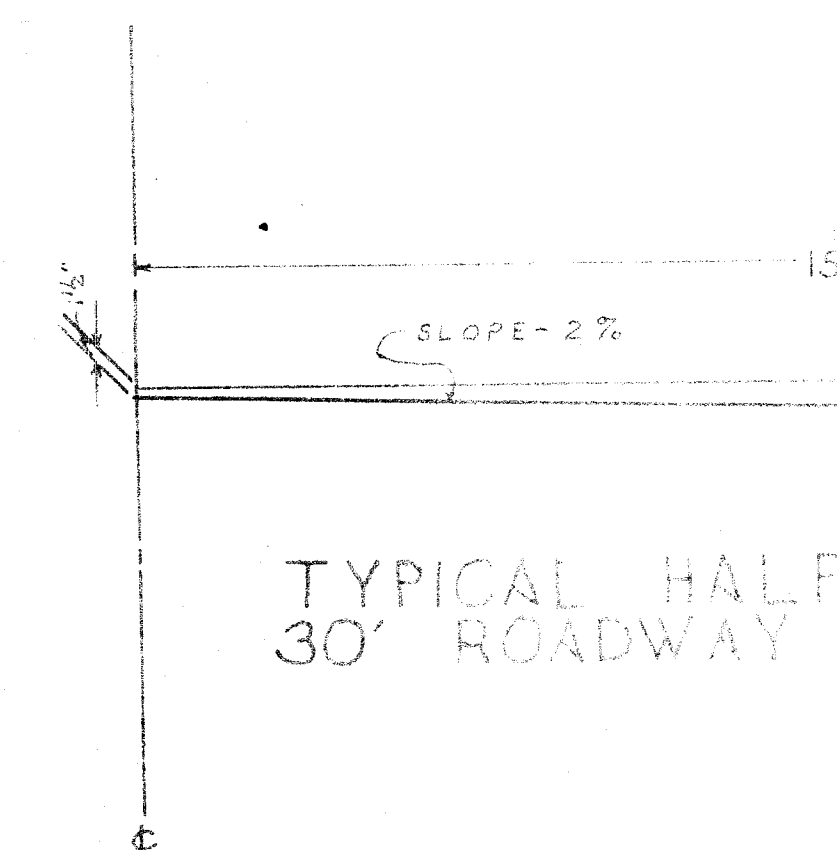
1. CONTRACTOR SHALL CHECK DETAIL DRAWINGS FOR MINIMUM GRADE & BACKFILL REQUIREMENTS.
2. ALL COMBINATION CONCRETE CURB & GUTTER TO BE MASSILLON STANDARD EXCEPT WHERE VARIATIONS ARE TO BE EXTENDED OR MET. - SEE SPECIFICATION BOOK, & PLANS.
3. EXCAVATION FOR COMBINATION CONCRETE CURB & GUTTER SHALL BE INCLUDED IN THE COST PER LINEAL FOOT OF SAID CURB & GUTTER.
4. ALL COMBINATION CONCRETE CURB & GUTTER TO BE CONSTRUCTED BEFORE EXCAVATION IS STARTED, WHEN EXCAVATION DOES NOT EXCEED 1'-0" IN DEPTH.
5. ROADWAY EXCAVATION TO BE 2" TO 4" BELOW FINISH GRADE OF STREET AT THE DISCRETION OF THE CITY ENGINEER.
6. ALL CATCH BASINS & MANHOLES TO BE ADJUSTED TO GRADE WHERE NECESSARY.
7. ALL CONCRETE TO BE 1:2:4-6 BAG MIX 28 DAY - 3000 P.S.I. COMPRESIVE STRENGTH MAX. SLUMP TO BE 4".
8. CONTRACTOR SHALL PAY INSPECTOR(S) AT THE RATE OF TIME AND ONE HALF OF REGULAR RATE AFTER 4:30 P.M. MONDAY THUR. FRIDAY. SATURDAYS ALL DAY AT TIME AND ONE HALF.
9. ALL MATERIALS USED WILL BE NEW - NO SALVAGED MATERIAL WILL BE ACCEPTED EXCEPT CASTINGS.
10. IF CONTRACTOR EXCAVATES DEEPER THAN NECESSARY FOR CURB & GUTTER, CONTRACTOR WILL FURNISH CRUSHER RUN GRAVEL & TAMP BEFORE CURB & GUTTER IS CONSTRUCTED.
11. IF SUB GRADE IS UNSUITABLE, CONTRACTOR WILL EXCAVATE & REPLACE SUCH MATERIAL TAMPED CRUSHER RUN GRAVEL, AT THE DISCRETION OF THE INSPECTOR OR CITY ENGINEER. THIS FILL TO BE PLACED IN 6" LAYERS OR LESS; SAID FILL TO BE COMPACTED TO 95% MAXIMUM LABORATORY DRY WEIGHT BEFORE ANY ADDITIONAL LAYERS ARE ADDED. CONTRACTOR WILL BE PAID FOR EXTRA GRAVEL & EXCAVATION. THIS COMPACTION TO BE DONE BEFORE FORMS ARE PLACED.
12. ALL EXTRA PAY ITEMS WILL HAVE THE APPROVAL OF THE BOARD OF CONTROL BEFORE EXTRA ITEMS ARE INSTALLED.
13. CONTRACTOR TO REMOVE PIPE UNDER DRIVES AND RETURN TO PROPERTY OWNER OR DISPOSE OF. THIS PIPE REMOVAL AND DISPOSAL TO BE INCLUDED IN CURB PRICE.
14. CONTRACTOR TO BACK FILL CURB IMMEDIATELY AFTER CURB HAS BEEN IN PLACE FOR 48 HOURS.
15. CONTRACTOR SHALL NOTIFY ENGINEER WHEN HE IS IN NEED OF CONSTRUCTION STAKES AND THIS OFFICE WILL COMPLY WITH-IN A PERIOD OF 48 HOURS.
16. CIRCLE CURB WHEN RADIUS IS 17.5 FT. OR LESS
17. HOLES FOR DOWNSPOUTS TO BE INCLUDED IN COST PER LIN. FT. OF CURB & GUTTER.
18. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES BEFORE ANY WORK IS BEGUN. THE CITY OF MASSILLON IS NOT RESPONSIBLE FOR ANY LOST TIME DO TO UTILITY RELOCATION.

GENERAL NOTES

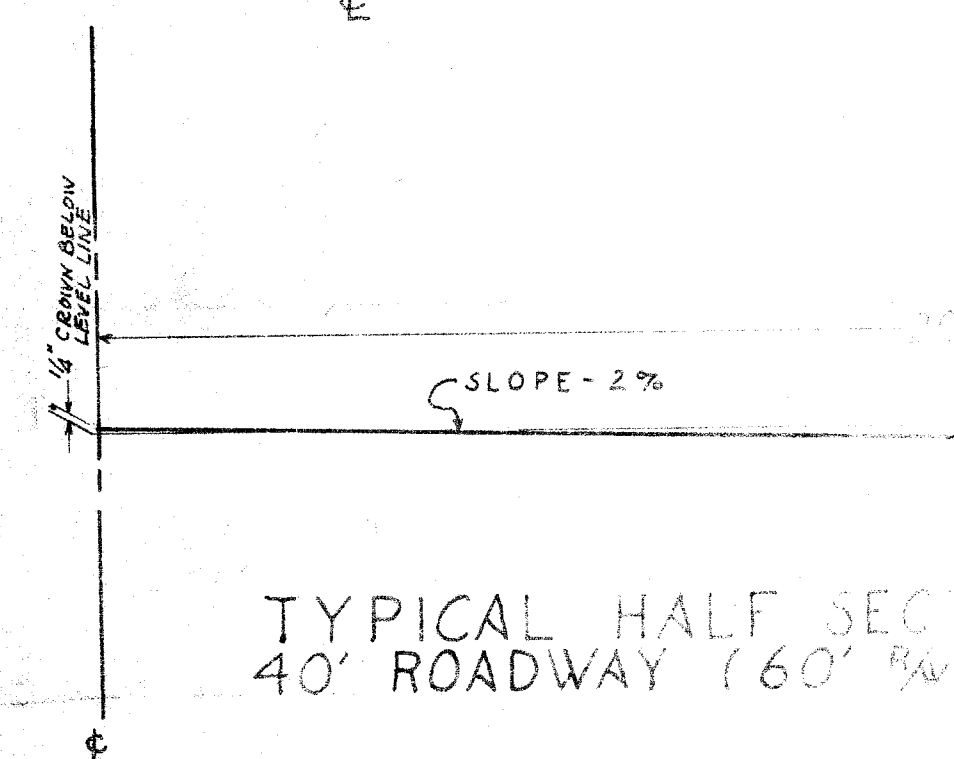
O. DEBOS - 2-23-65



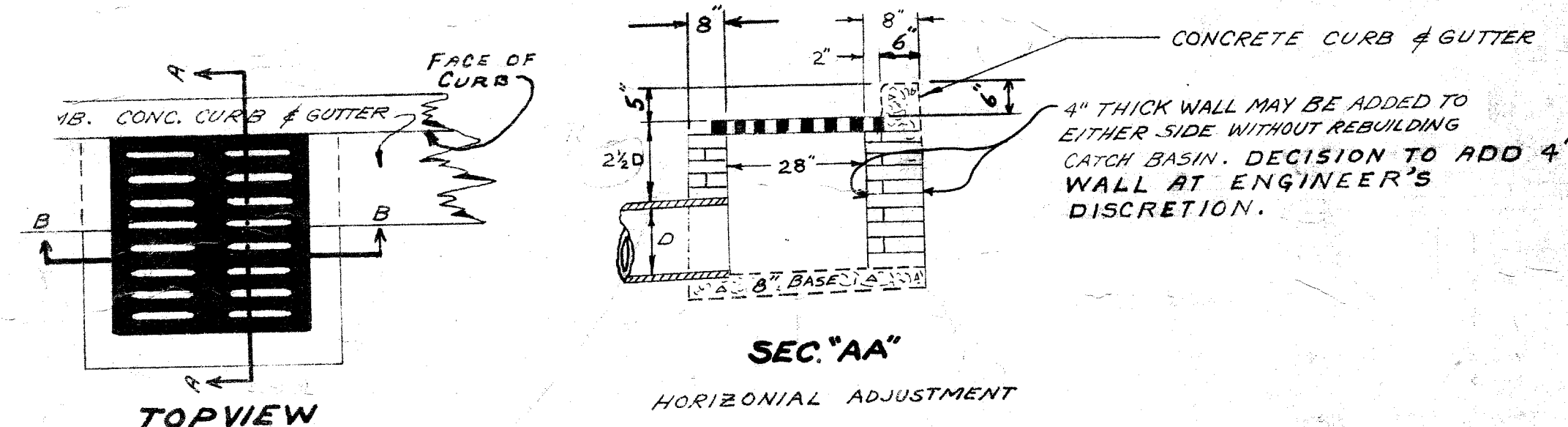
TYPICAL SECTION-WALK AND ROADWAY



TYPICAL HALF SECTION
30' ROADWAY (50' R/W)

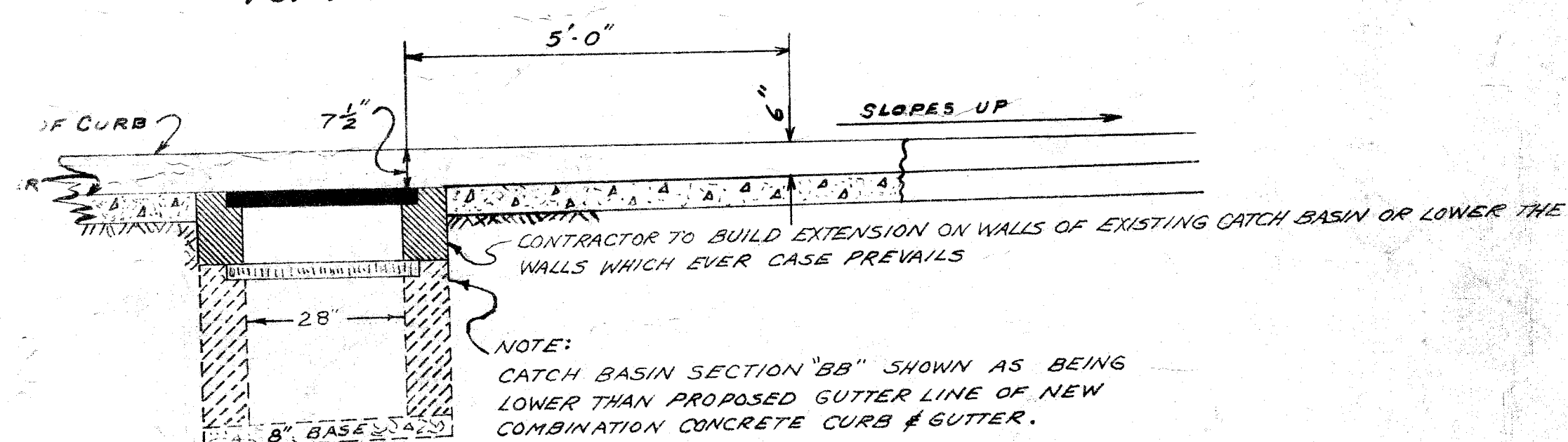


TYPICAL HALF SECTION
40' ROADWAY (60' R/W)



SEC. "AA"

HORIZONTAL ADJUSTMENT



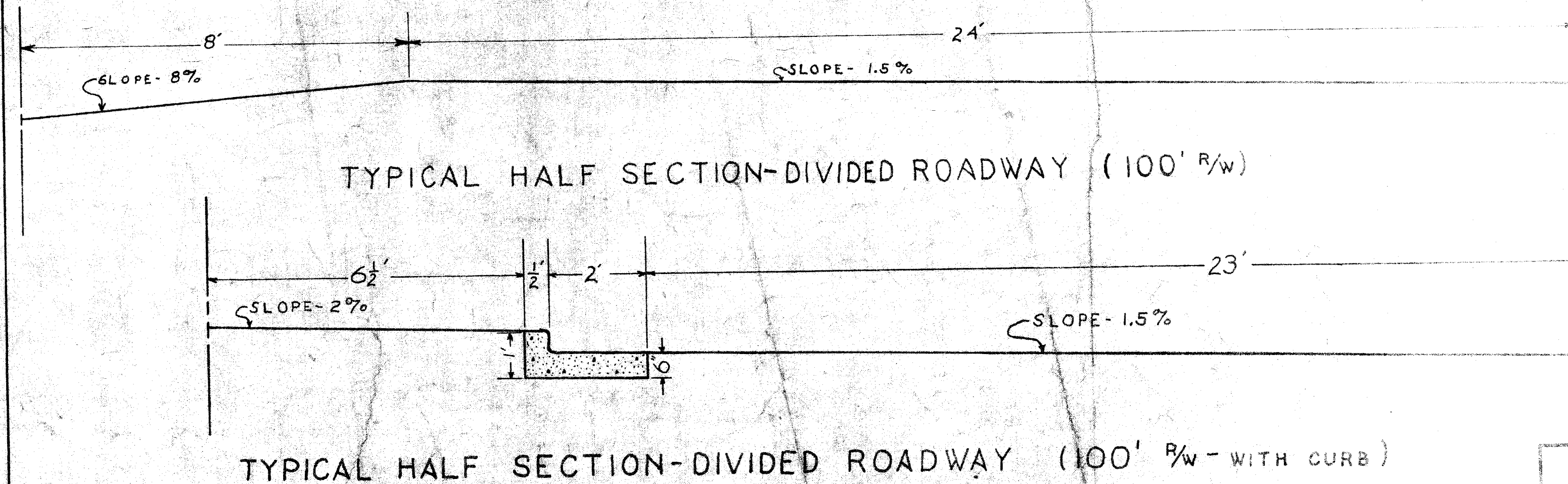
SEC. "BB"

VERTICAL ADJUSTMENT

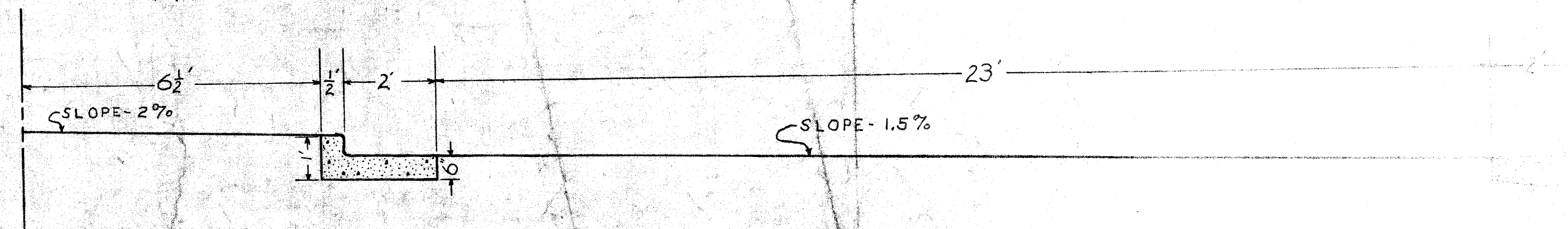
CONTRACTOR TO GET FINAL APPROVAL OF THE INSPECTOR BEFORE CASTING IS SET ON TOP OF BASIN.

ADJUSTMENT OF CATCH BASIN

DR. BY: O. DEBOS - 2-23-65



TYPICAL HALF SECTION-DIVIDED ROADWAY (100' R/W)



TYPICAL HALF SECTION-DIVIDED ROADWAY (100' R/W - WITH CURB)

CONSTRUCTION	
CONCERNING	CONSTRUCTION
APPROVED	
DRAWN BY	
CHECKED BY	
DATE	