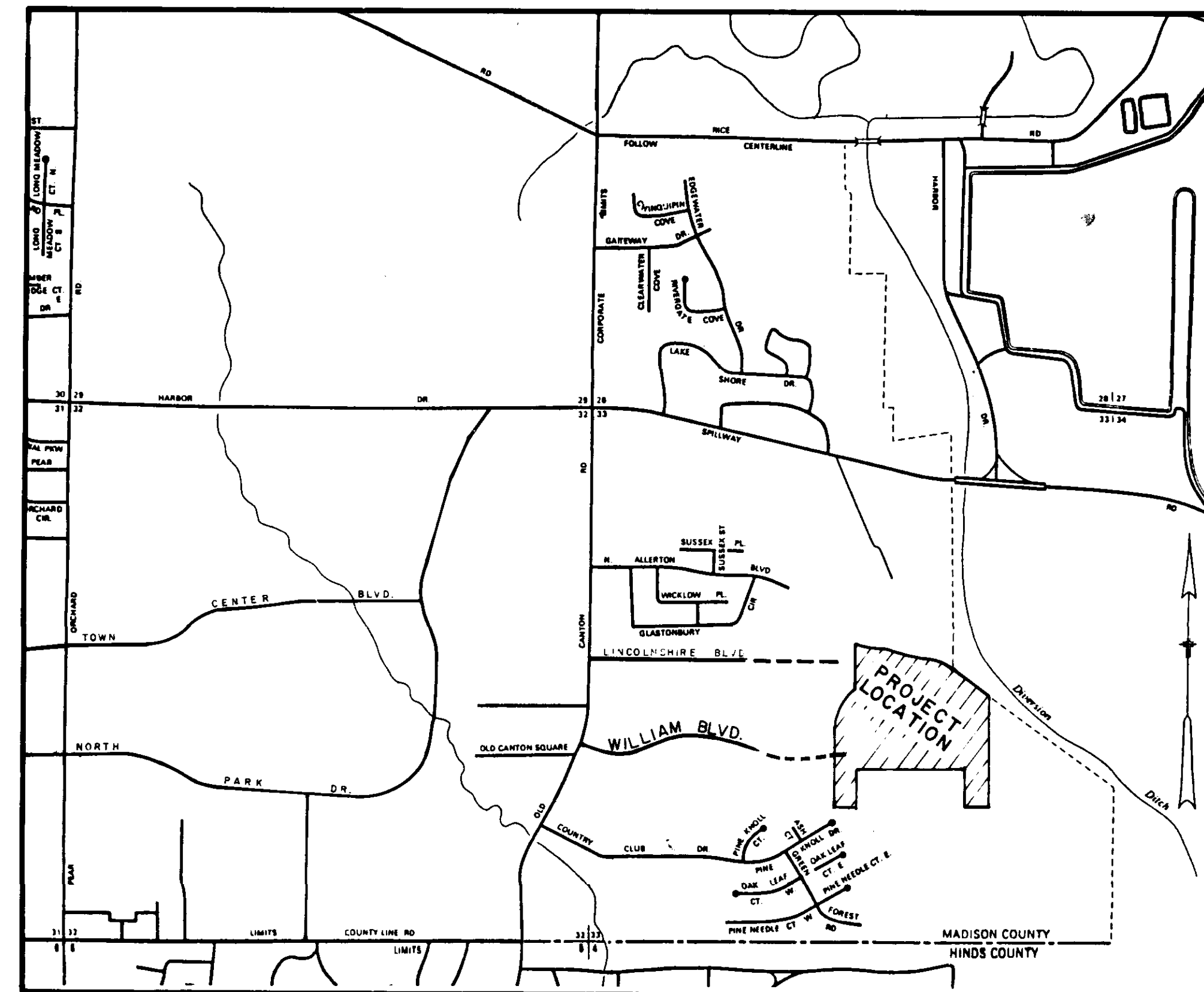


CONSTRUCTION PLANS FOR UTILITY AND STREET CONSTRUCTION FOR WILLIAM BLVD. EXTENSION AND HAWTHORN GREEN SUBDIVISION PART 1 CITY OF RIDGELAND MADISON COUNTY, MISSISSIPPI



LOCATION MAP

A DEVELOPMENT OF GREEN & HARKINS
5438 I-55 NORTH JACKSON, MISSISSIPPI 39211
OWNERS:

**HUBERT F. GREEN, JR., JAMES HARKINS
& MIKE HARKINS**

PREPARED BY:

GUEST ENGINEERING, INC.
CONSULTING ENGINEERS - SURVEYORS
5250 Galaxie Dr. • P.O. Box 16545 • Jackson, MS 39236
Telephone (601) 981-2759

INDEX TO DRAWINGS

Title	Sheet
Cover	1
Streets and Drainage Layouts	2
Water and Sanitary Sewer System Layouts	3
Street Plan and Profile Sheets	4-19
Standard Water Details	ST.W. 1
Standard Sanitary Sewer Details	ST.SS. 2
Standard Storm Sewer and Street Details	ST.SS. 3

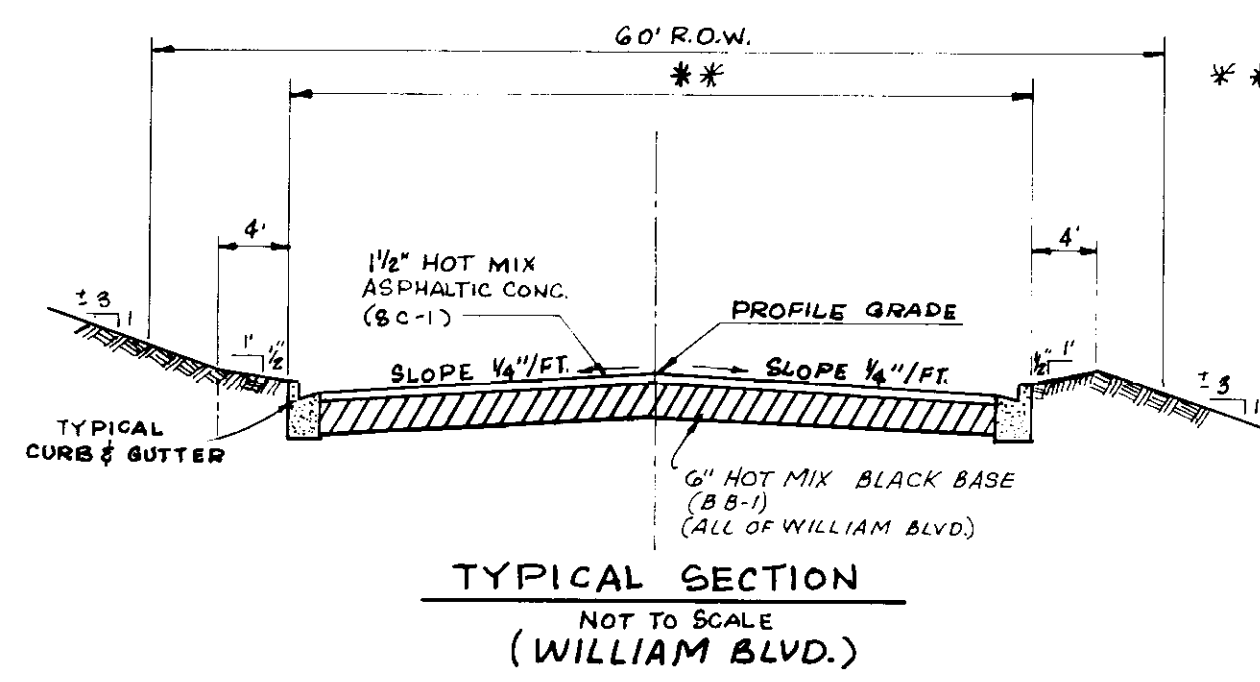
**FINAL PLANS OF COMPETED WORK
CONTRACTOR : ADAMS CONST.
CONTRACT TIME BEGAN
ACCEPTED
ENGINEER**

Technical specifications for street and storm sewer construction for this project shall be the Mississippi Standard Specifications for State Aid Road and Bridge Construction, 1982 edition.

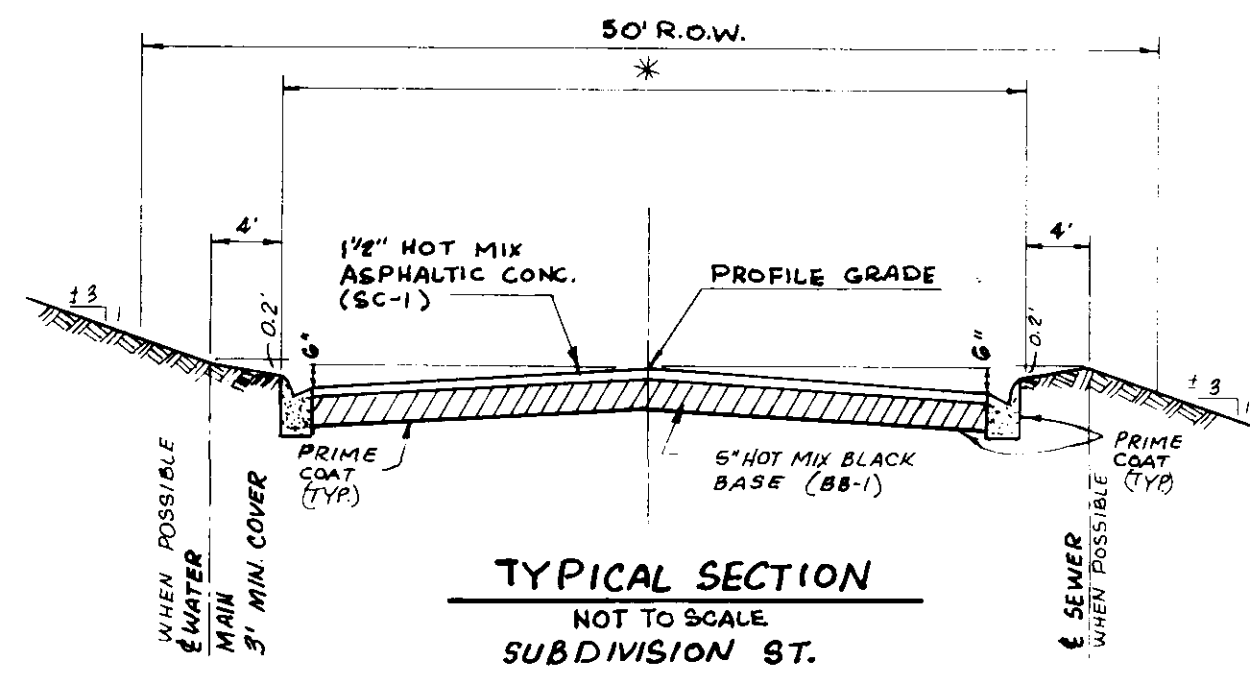
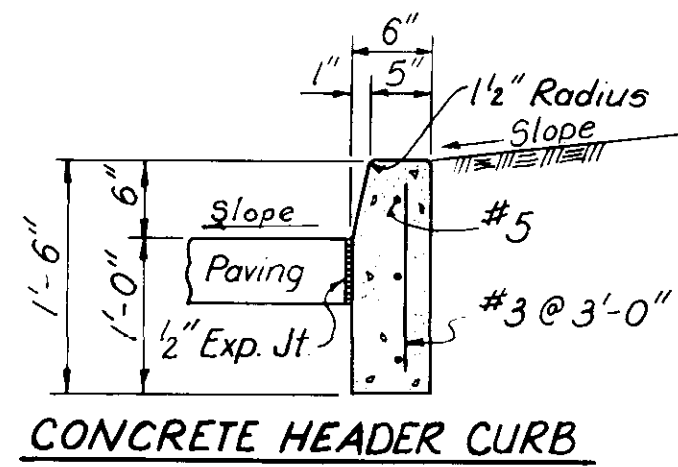
Equipment, Materials and Construction of Water Distribution System and Sanitary Sewer System shall conform to "Utility and Street Construction for William Blvd. Extension and Hawthorn Green Subdivision Part 1". A separate bound set of specifications by GUEST ENGINEERING, INC. for the construction of utility and street construction for William Blvd. Extension and Hawthorn Green Subdivision Part 1.

The quantities of all pay items listed in the Recapitulations of quantities which are designated, (Plan Measure) or (P.M.) are calculated based on the lines, dimensions, thicknesses, grades, slopes, sections or quantities as shown on the original plans. The quantities computed, and shown on the original plans will be the measurement for final payment.

If during construction, however, the Engineer finds it necessary to change the lines, dimensions, grades, slopes, sections or quantities or if such changes are ordered on the plan changes, :



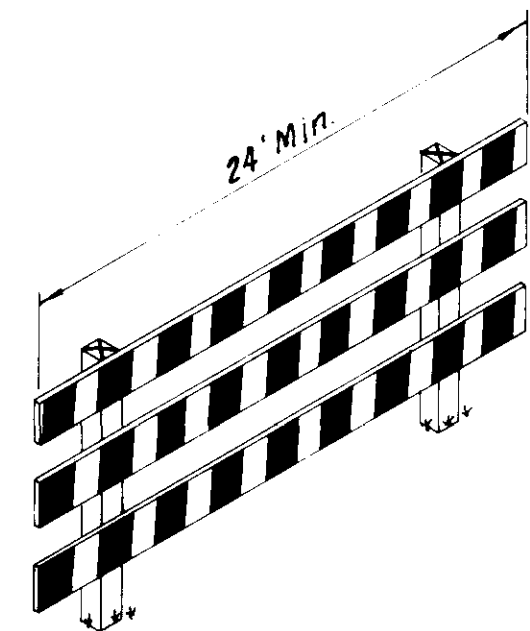
* 44' B-B Curb To Subd. Development
(See Plan Profile Sheet No. 5)



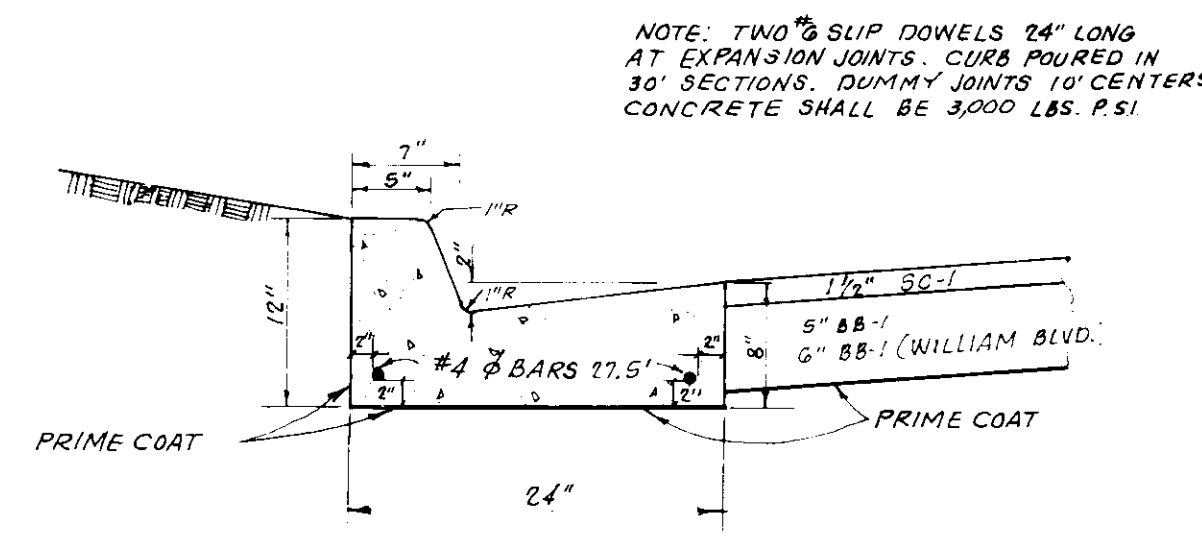
* 37' B-B Curb
William Blvd. (Hawthorn Green - Sta. 33+00)

* 31' B-B Curb
Hawthorn Green
Lincolnshire Blvd.

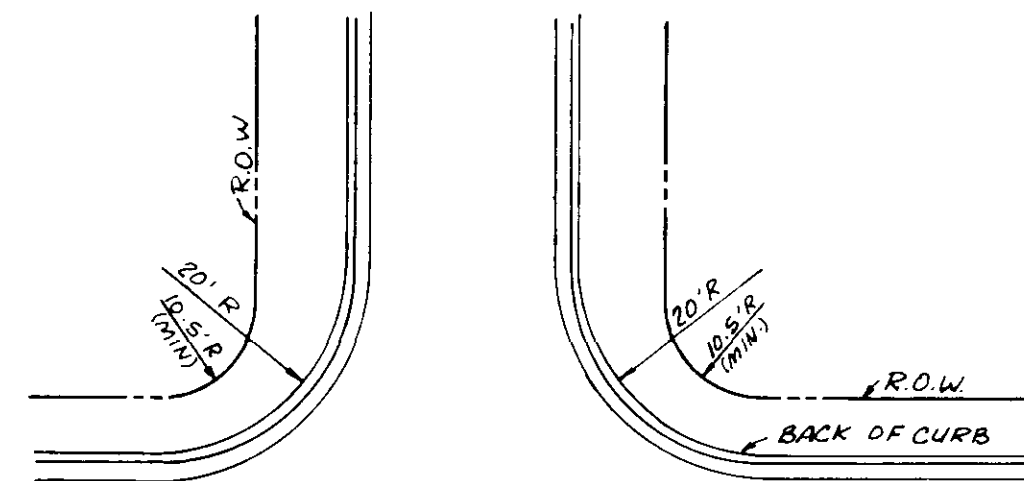
* 27' B-B Curb
Glen Burn
Dunleith



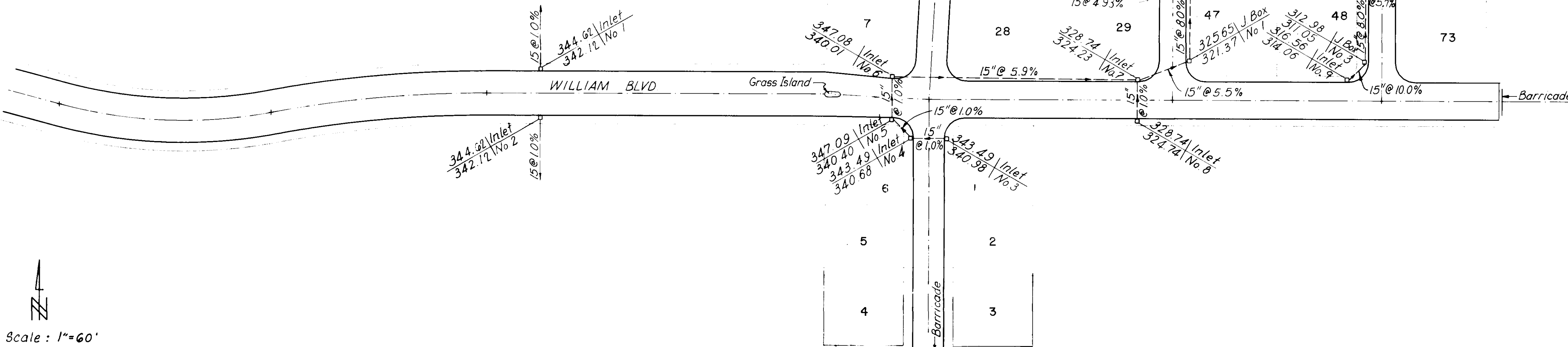
Type III Barricade Per Miss. State Hwy Dept.
Standard Dwg. "HIGHWAY SIGN AND BARRICADE
DETAILS FOR CONSTRUCTION PROJECTS" Sheet No. 189



TYPICAL CURB & PRIME COAT



TYPICAL ST. CORNER
(Not to Scale)



Scale: 1"=60'

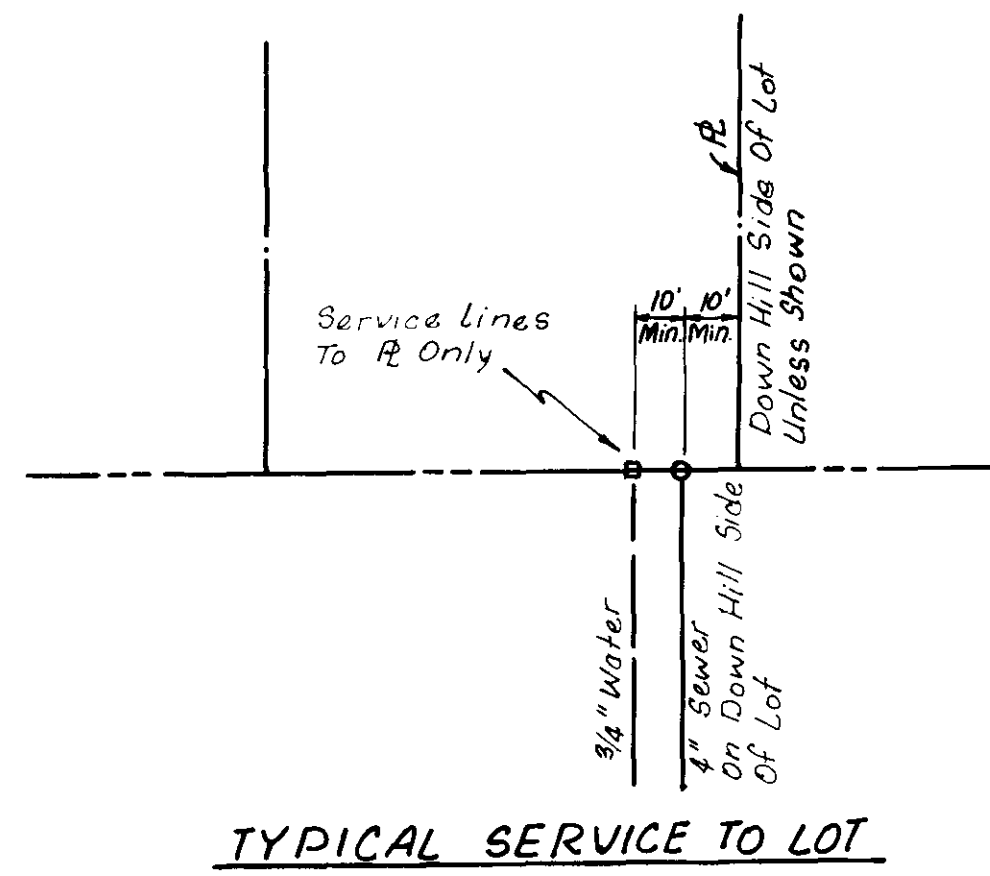
NOTES:

- All excess excavation shall be placed evenly on adjoining lots or other designated low spots or stock piled as directed by the Engineer on the job site. All spread material shall be properly processed and spread in maximum of 6" to 8" lifts.
 - Prior to placement of SC-1, density tests shall be performed by a licensed soil laboratory at the contractor's expense.
 - If during construction operations expansive clay soils are encountered, the street subgrade shall be excavated to minimum of two (2) additional feet below subgrade and backfilled with a suitable non-expansive sand clay material approved by the engineer.
 - Underground improvements shown in these plans are determined from surface evidence and maps obtained from various entities. No excavation was performed. Users of these plans should satisfy themselves as to whether the information shown hereon is correct and complete.
- CONTACT ALL APPROPRIATE AGENCIES BEFORE EXCAVATING.
- Street extensions to match existing grades.
 - Elevations are based on M.S.L. datum.
 - Junction box per Mississippi State Highway Department Standard Drawing "JUNCTION BOX FOR PIPE CULVERTS" Sheet No. 227; or standard storm sewer brick manhole.
 - Tops to be adjusted on job site as necessary to match finish grade.

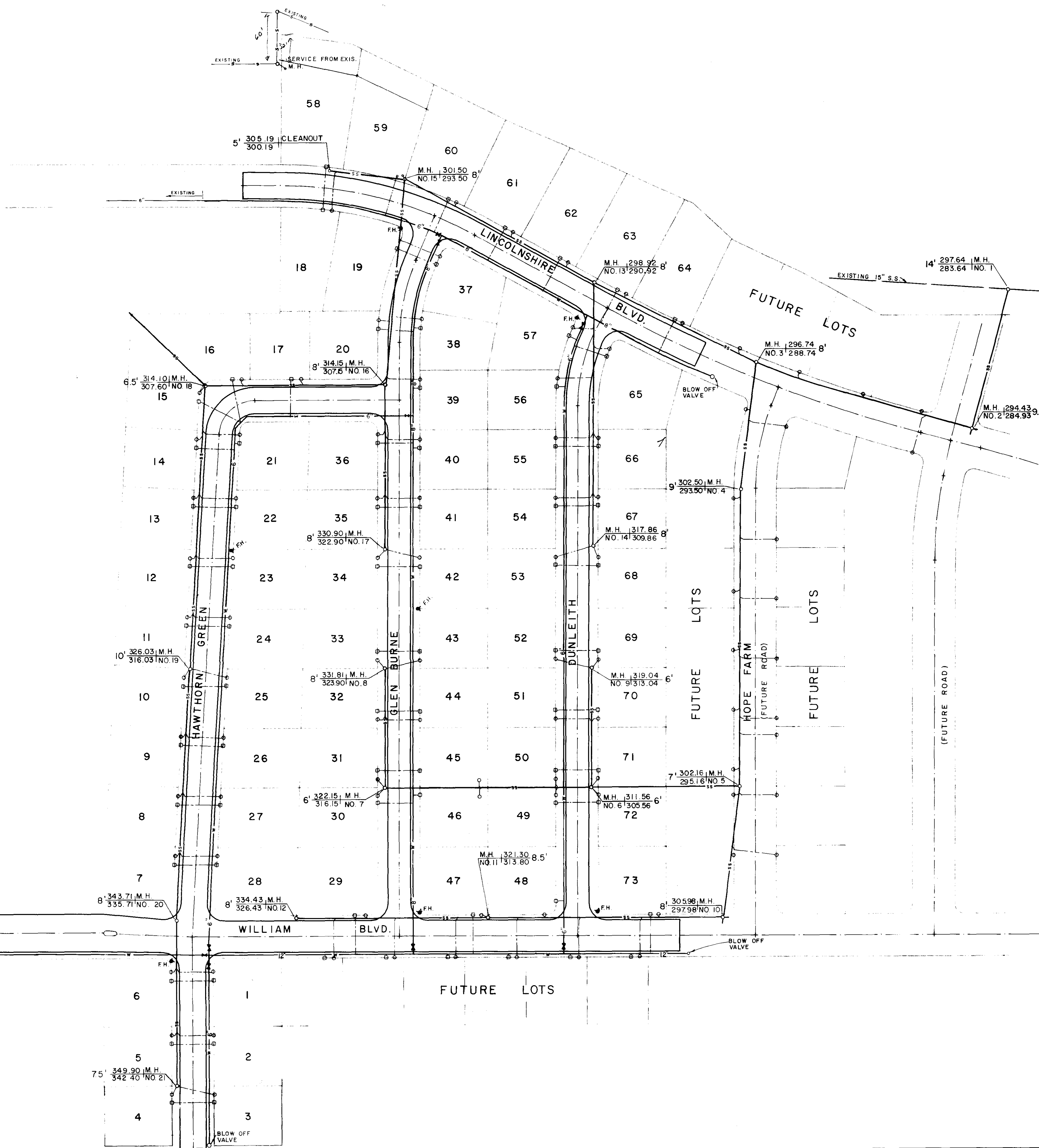
GUEST ENGINEERING, INC.
CONSULTING ENGINEERS - SURVEYORS
5250 Galaxie Dr. • P.O. Box 16545 • Jackson, MS 39236
Telephone (601) 981-2759

STREETS AND STORM DRAINAGE
WILLIAM BLVD. EXTENSION
AND HAWTHORN GREEN SUBDIVISION
CITY OF RIDGELAND
MADISON COUNTY, MISSISSIPPI

DESIGNED
P. GUEST
DRAWN
B. BOONE
CHECKED
P. GUEST
DATE
2-13-89
SHEET 2
OF 22



Note: All Water Mains Or Water Service Lines Are Req'd To Be A Min. Of 18" Over Any Sewer Main Or Service, When Crossing.



Scale: 1" = 60'

GUEST ENGINEERING, INC.
 CONSULTING ENGINEERS - SURVEYORS
 5250 Galaxie Dr. • P.O. Box 16545 • Jackson, MS 39236
 Telephone (601) 981-2759

WATER AND SANITARY SEWER SYSTEMS
 WILLIAM BLVD. EXTENSION
 AND HAWTHORN GREEN SUBDIVISION
 MADISON COUNTY, MISSISSIPPI

DESIGNED
D. Guest
 DRAWN
W. Cheney
 CHECKED
B. Boone
 DATE
 2-13-89
 SHEET 3
 OF 22

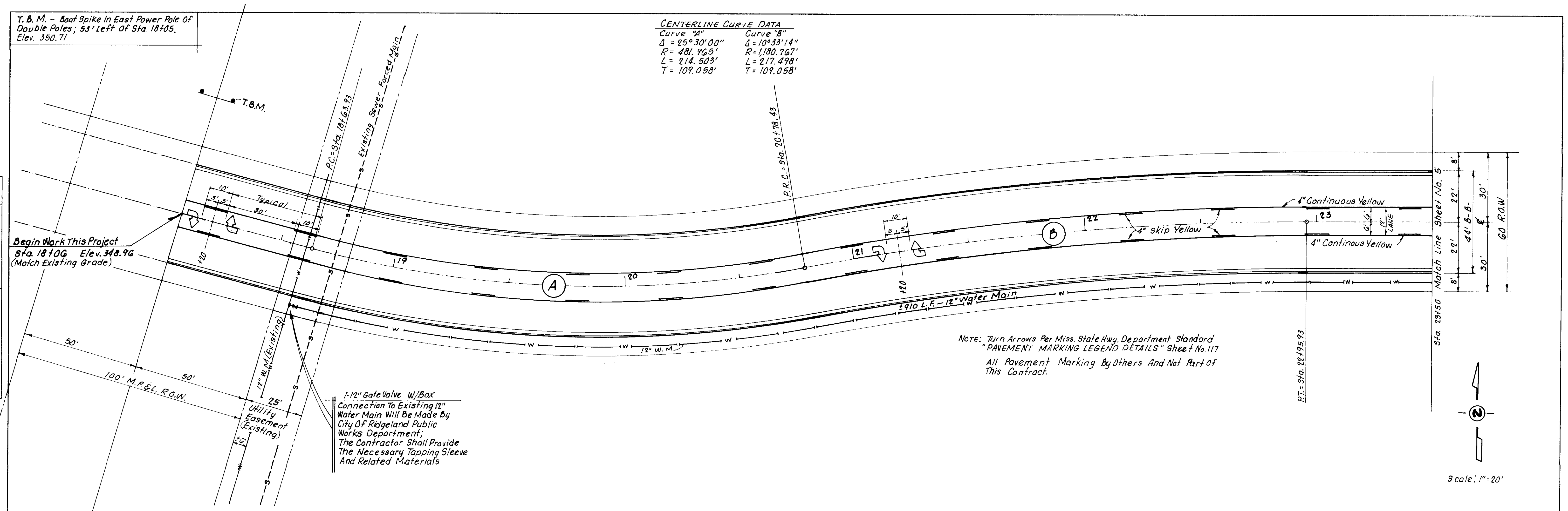
T. B. M. - *Boat Spike In East Power Pole Of Double Poles; 53' Left Of Sta. 18+05, Elev. 350.71*

CENTERLINE CURVE DATA

Curve "A"	Curve "B"
$\Delta = 25^\circ 30' 00''$	$\Delta = 10^\circ 33' 14''$
$R = 481.965'$	$R = 1,180.767'$
$L = 214.503'$	$L = 217.478'$
$T = 109.058'$	$T = 109.058'$

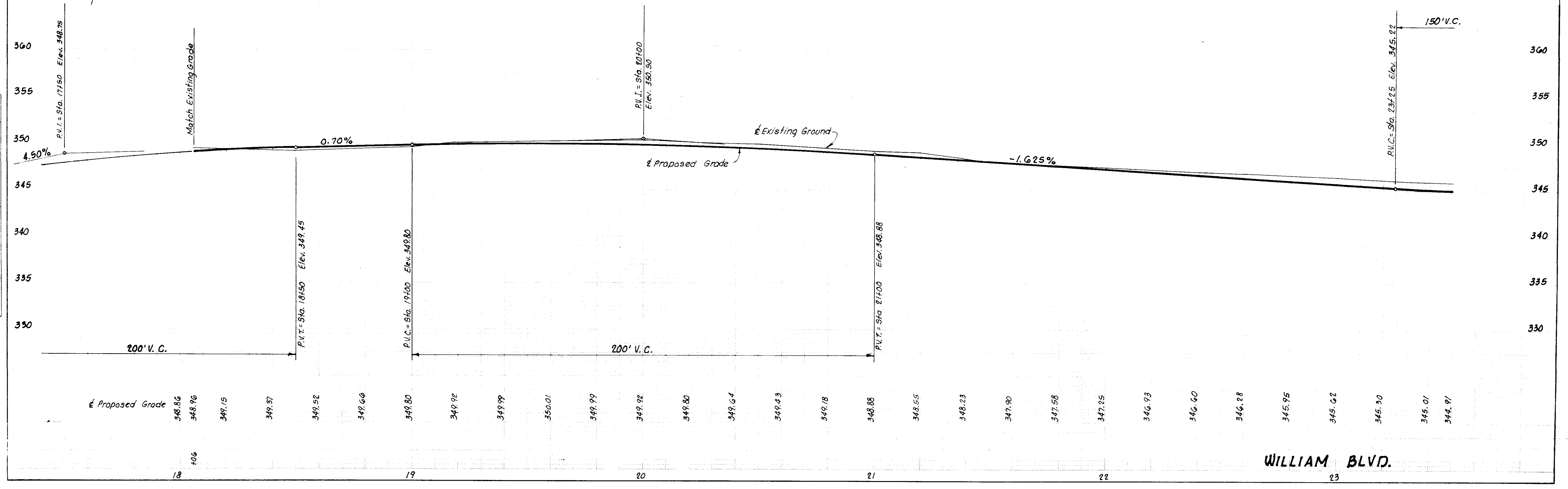
BY	DATE
FINAL SURVEY	
FIELD	
NOTE BOOK	
AREAS CHECKED	
NO.	

BY	DATE
ORIGINAL SURVEY	
FIELD	
NOTE BOOK	
AREAS CHECKED	
NO.	



NOTE: Turn Arrows Per Miss. State Hwy. Department Standard "PAVEMENT MARKING LEGEND DETAILS" Sheet No. 117
All Pavement Marking By Others And Not Part of This Contract.

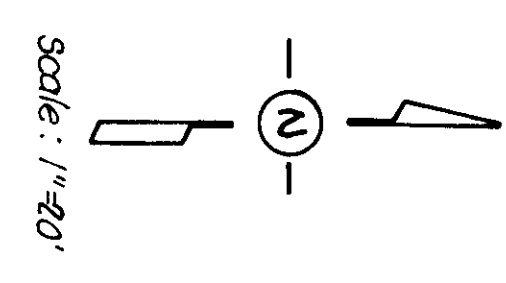
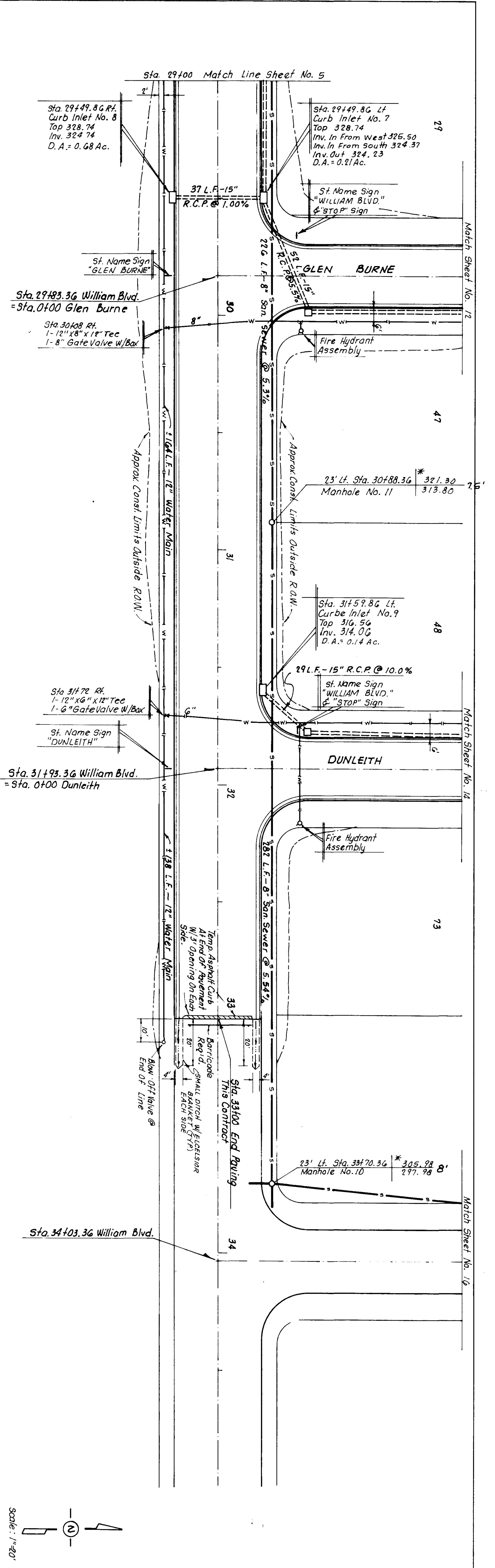
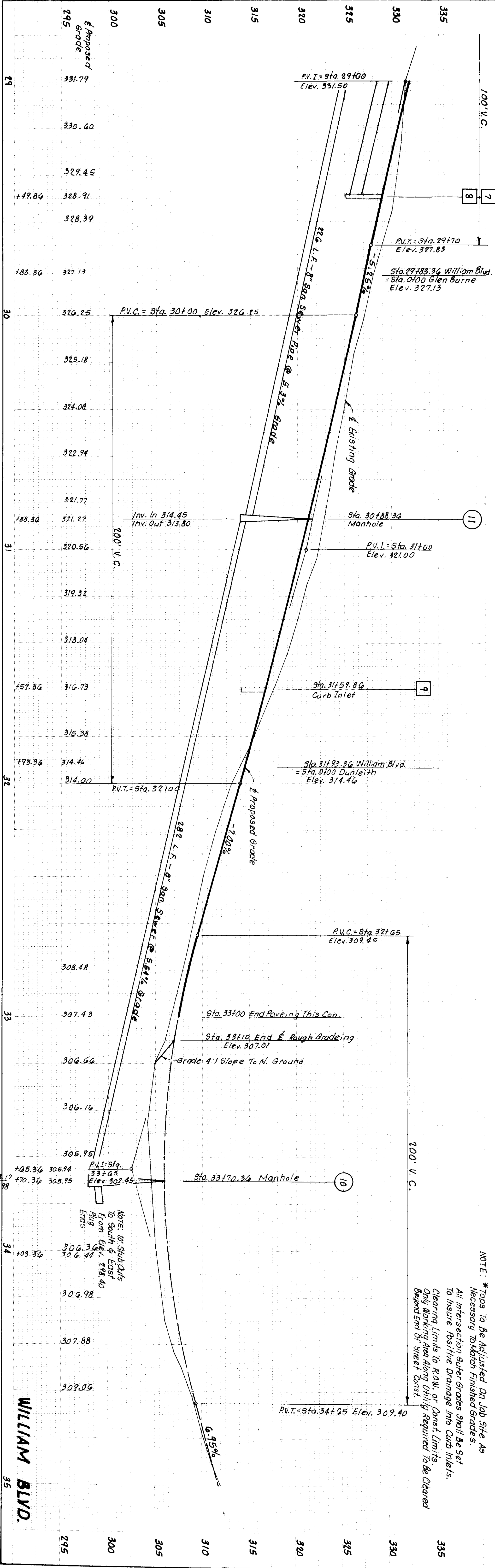
Scale: 1" = 20'



WILLIAM BLVD.

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
CHECKED		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
CHECKED		



Match Sheet No. 5

Match Sheet No. 12

Match Sheet No. 14

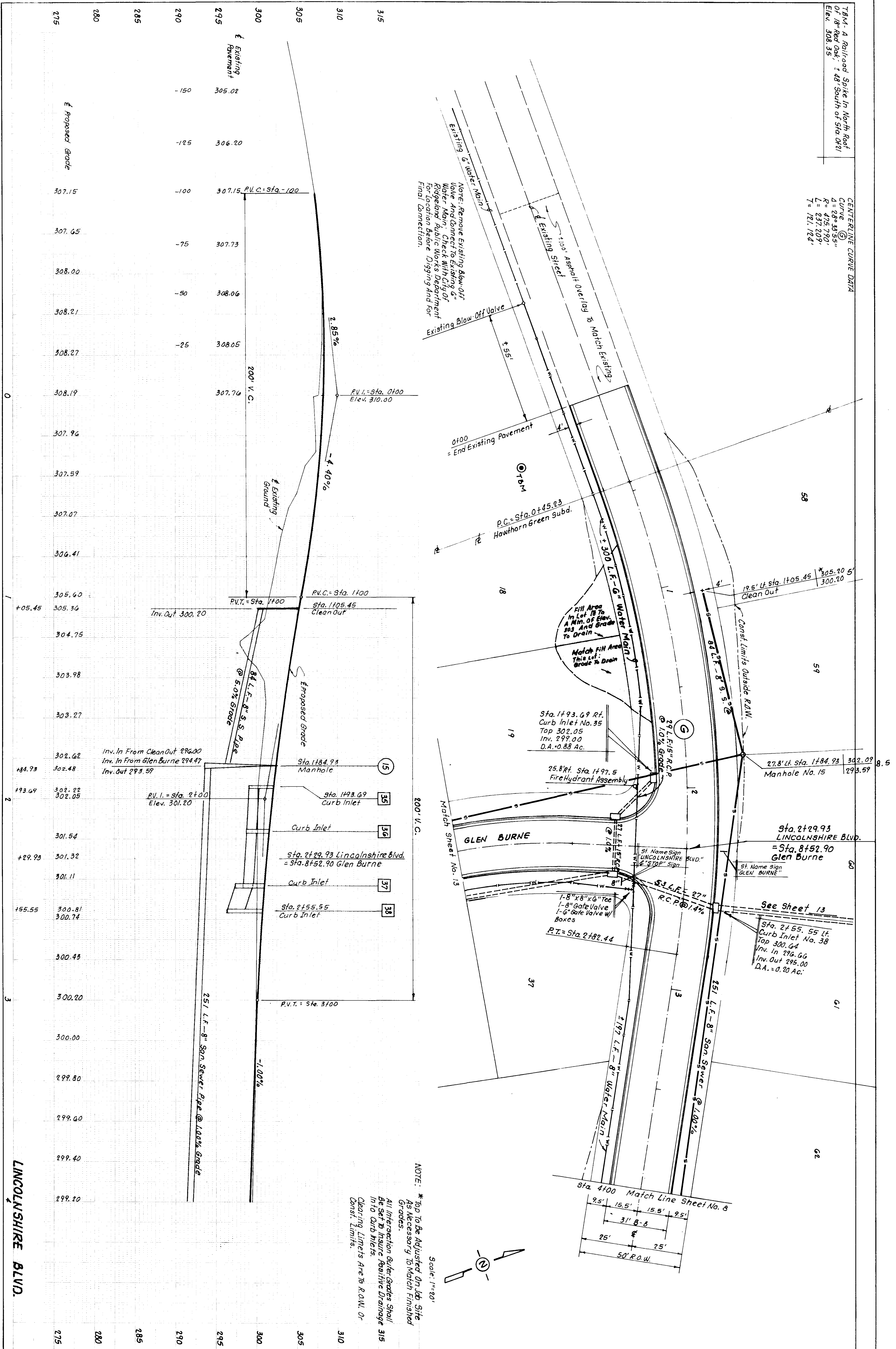
Match Sheet No. 16

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
AREAS CHECKED		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
AREAS CHECKED		

TBM - A Railroad Spike In North Road
Of 18" Red Oak - 1' 48" South of Sta 421
Elev. 308.35

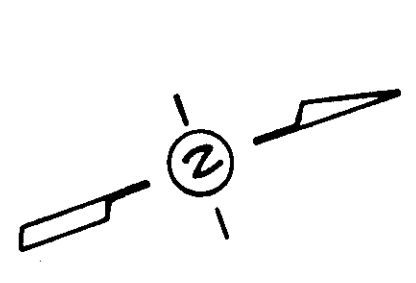
CENTERLINE CURVE DATA
 $CURVE = 33.5'$
 $D = 289.335'$
 $R = 472.72'$
 $L = 237.20'$
 $T = 121.124'$



NOTE: Remove Existing Blow-Off Valve And Connect To Existing 6" Water Main. Check With City Of Ridgeland Public Works Department For Location Before Digging And For Final Connection.

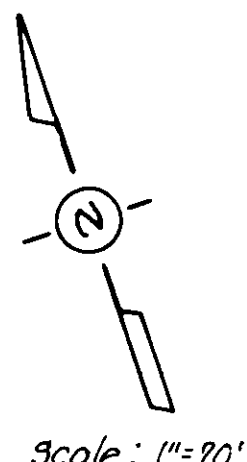
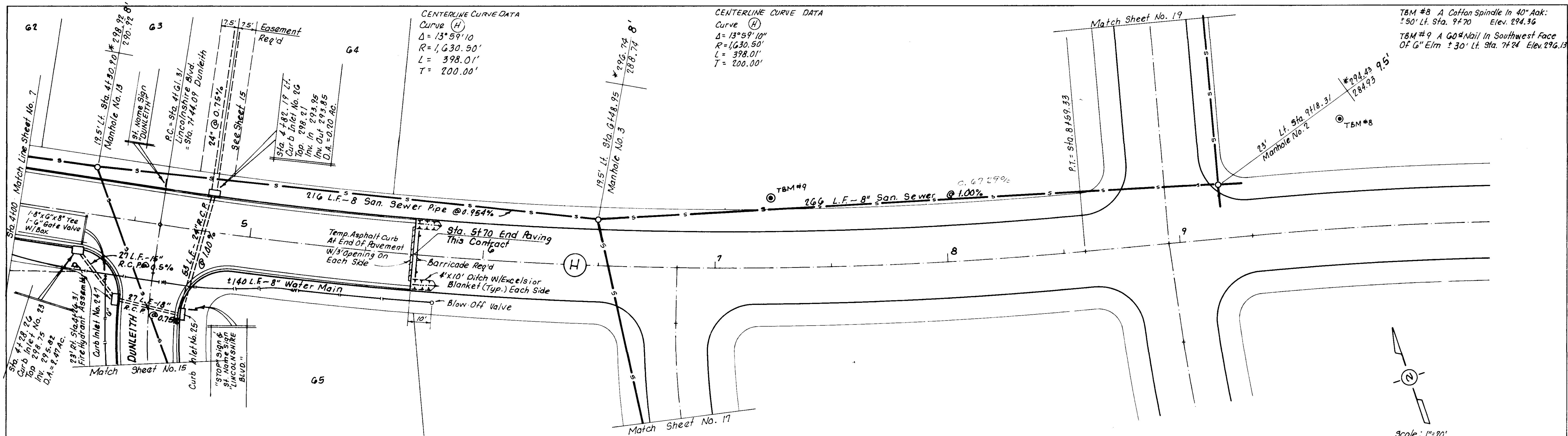
NOTE: * Top To Be Adjusted On Job Site As Necessary To Match Finished Grades.
 All Intersection Sides Grades Shall Be Set To Insure Positive Drainage Into Catch Basins.
 Clearing Limits Are To R.O.W. Or Const. Limits.

Scale: 1"=80'

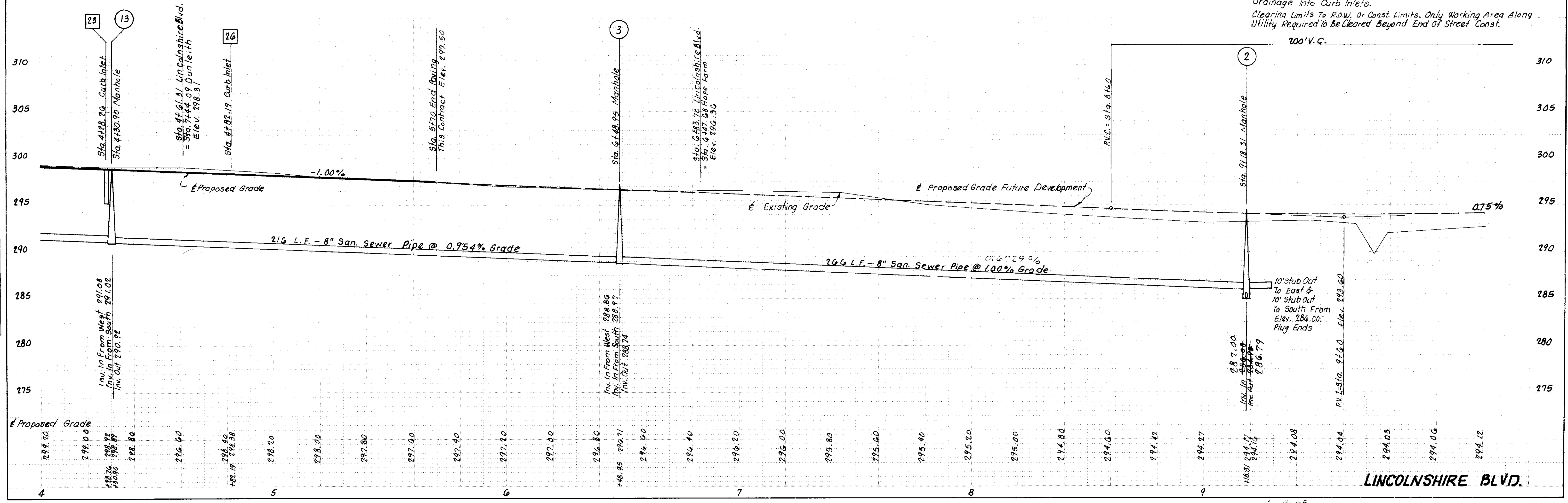


DATE	
BY	
FINAL SURVEY	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

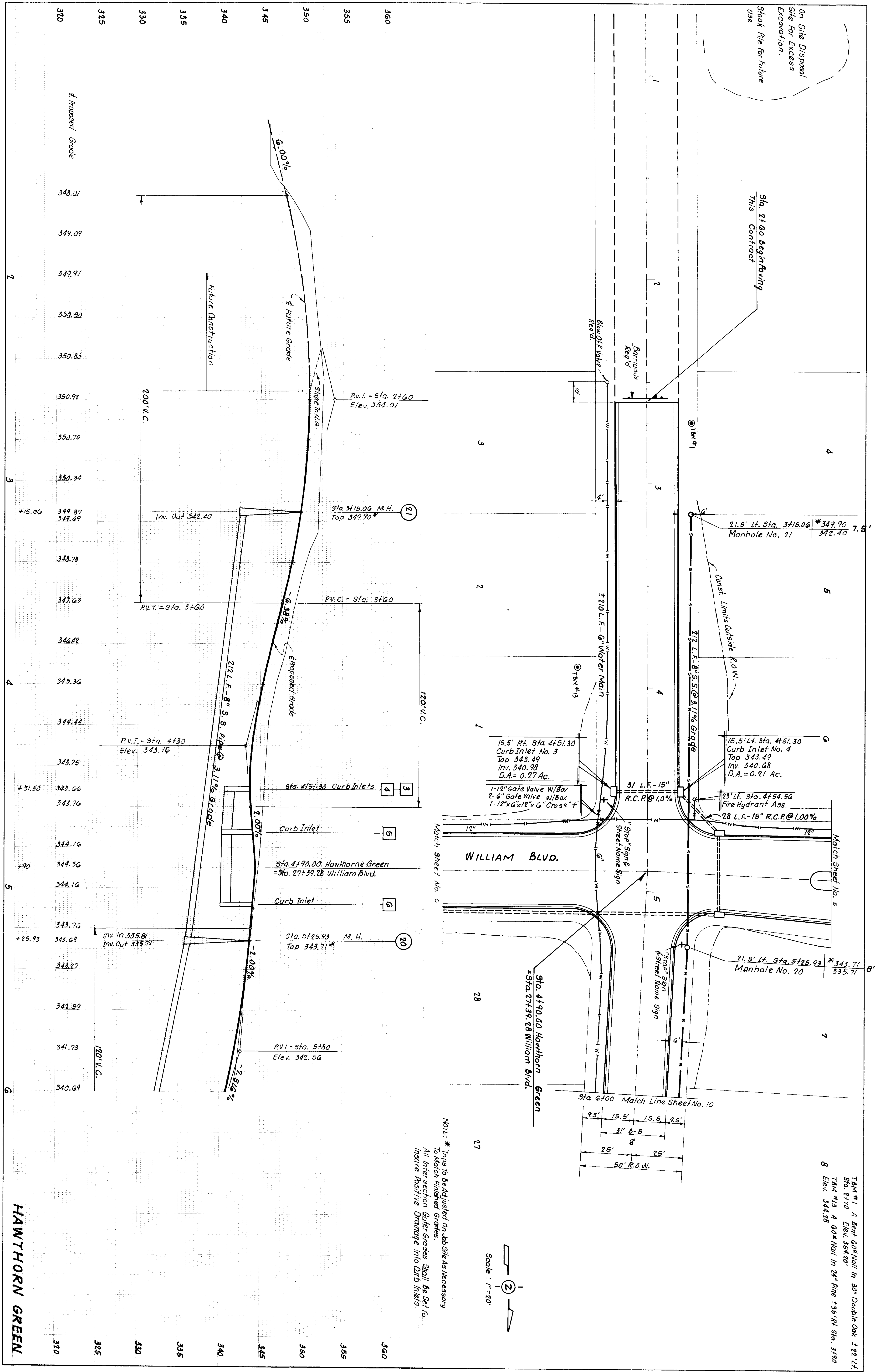


NOTE:
 * Top To Be Adjusted On Job Site As Necessary To Match Finished Grades.
 All Intersection Curb Grades Shall Be Set To Insure Positive Drainage Into Curb Inlets.
 Clearing Limits To ROW, Or Const. Limits. Only Working Area Along Utility Required To Be Cleared Beyond End Of Street Const.

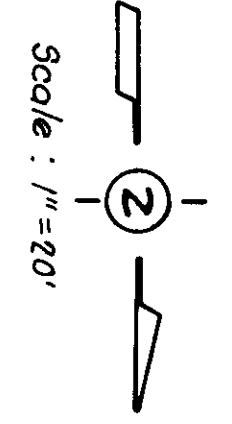


ORIGINAL SURVEY	BY	DATE
SURVEY		
PLOTTED		
TEMPLATE		
AREAS CHECKED		

FINAL SURVEY	BY	DATE
NOTE BOOK		
AREAS CHECKED		



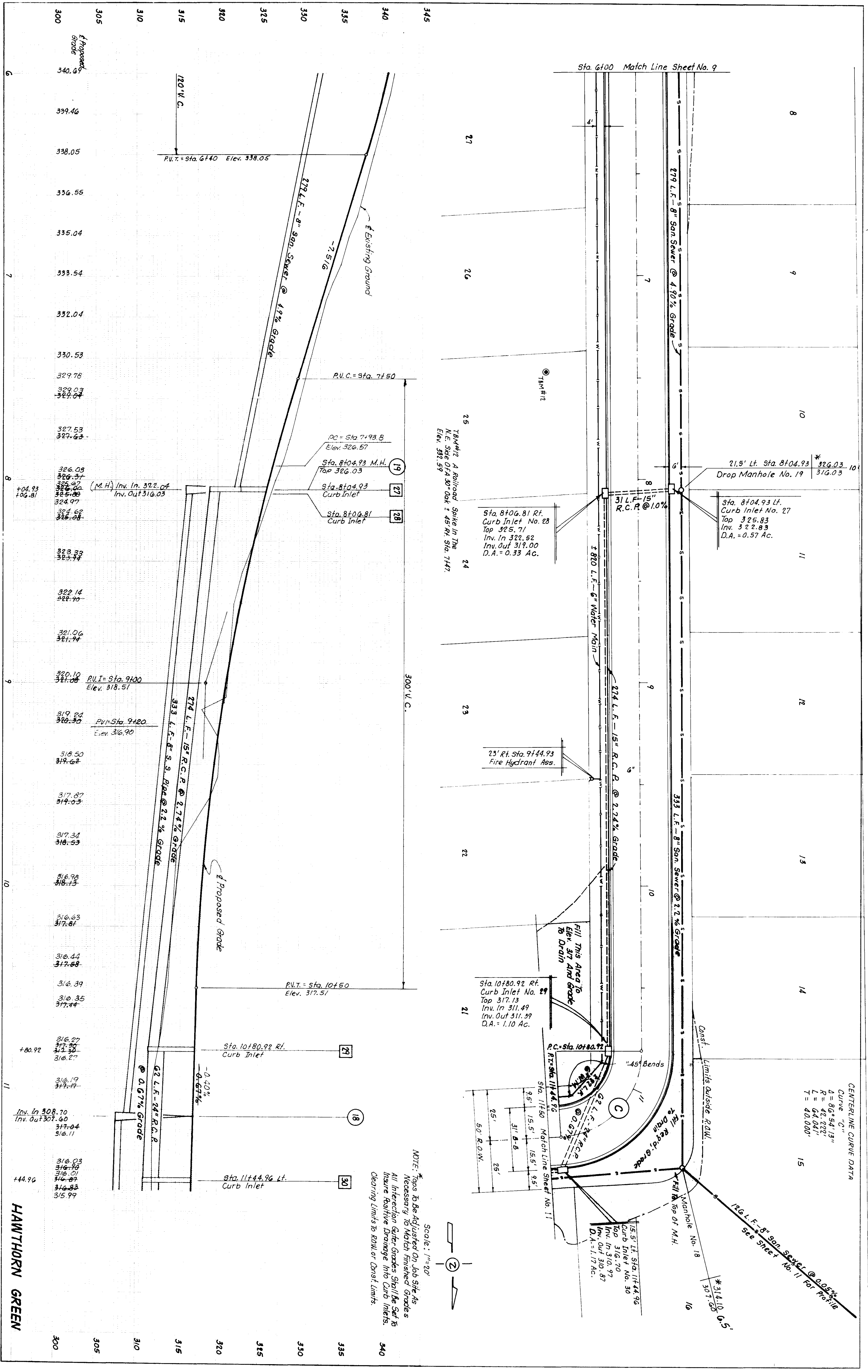
NOTE: * Tops To Be Adjusted On Job Site As Necessary To Match Finished Grades.
 All Intersection Gutter Grades Shall Be Set To Insure Positive Drainage Into Curb Inlets.



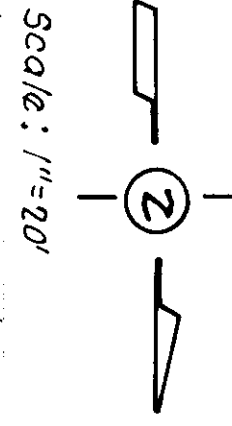
TBM #1 A Bent 60° Nail In 30" Double Oak ± 22' L.F.
 Sta. 270 Elev. 354.80'
 TBM #3 A 60° Nail In 24" Pine ± 35' R.F. Sta. 340 Elev. 344.28'

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



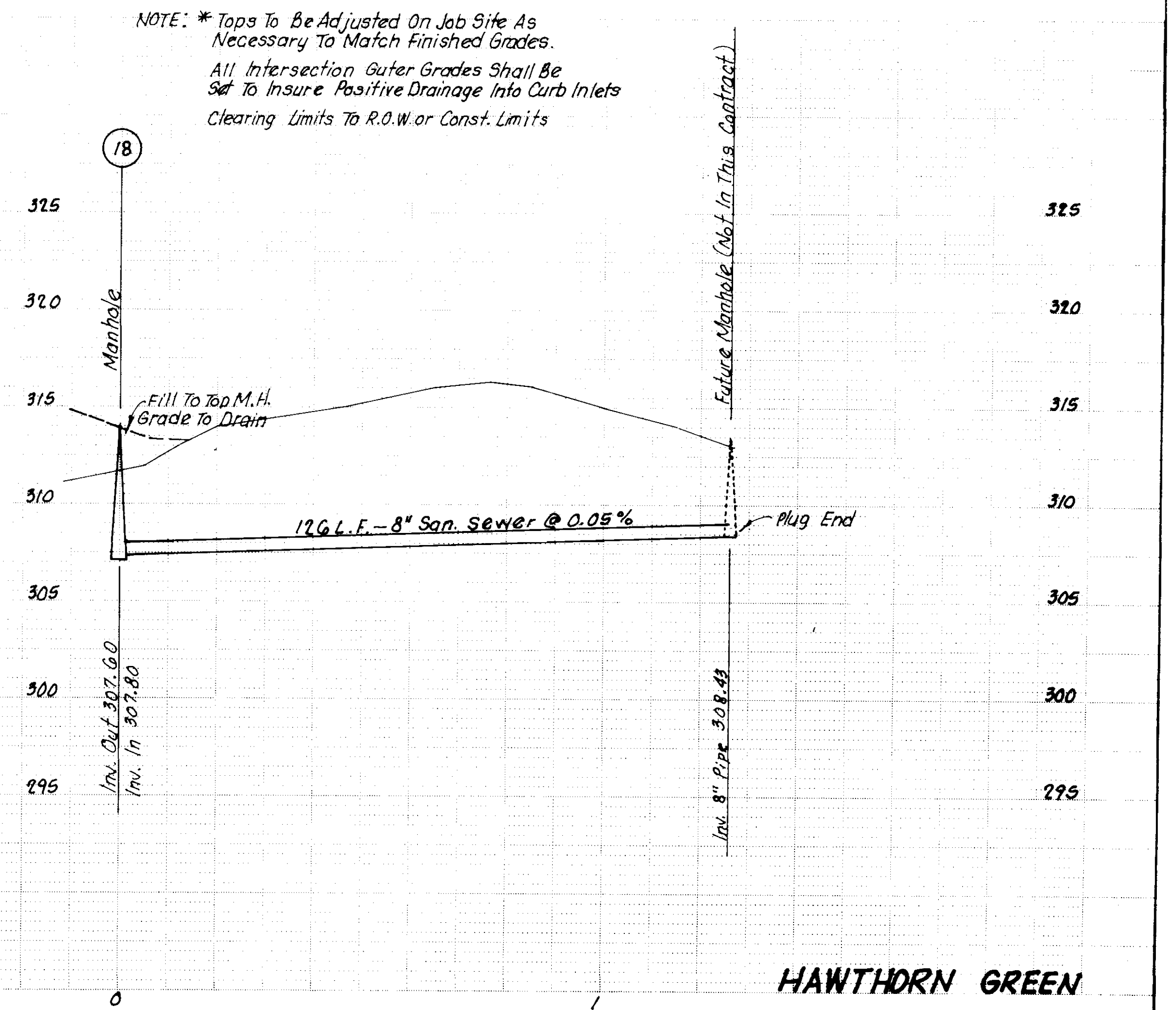
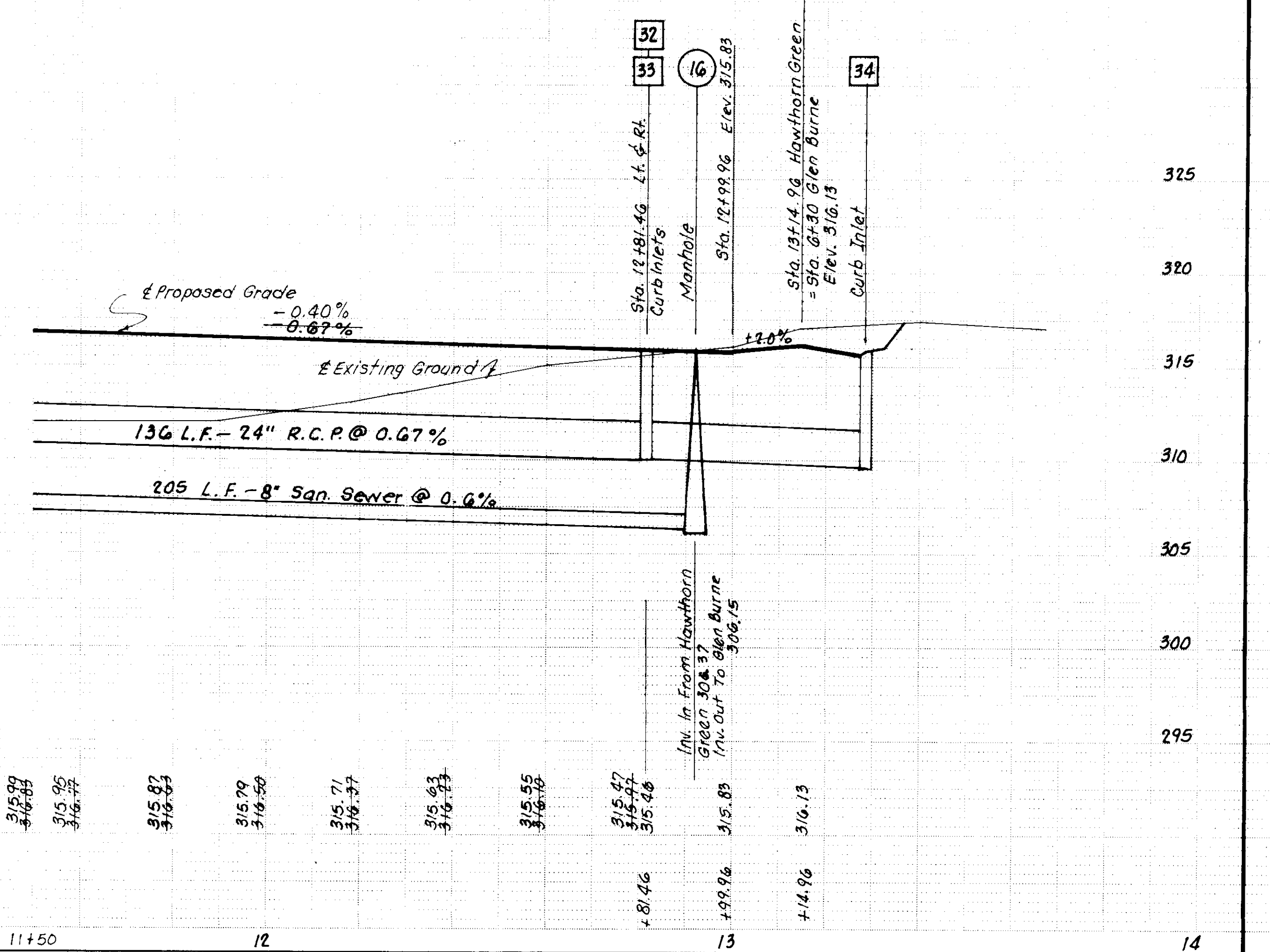
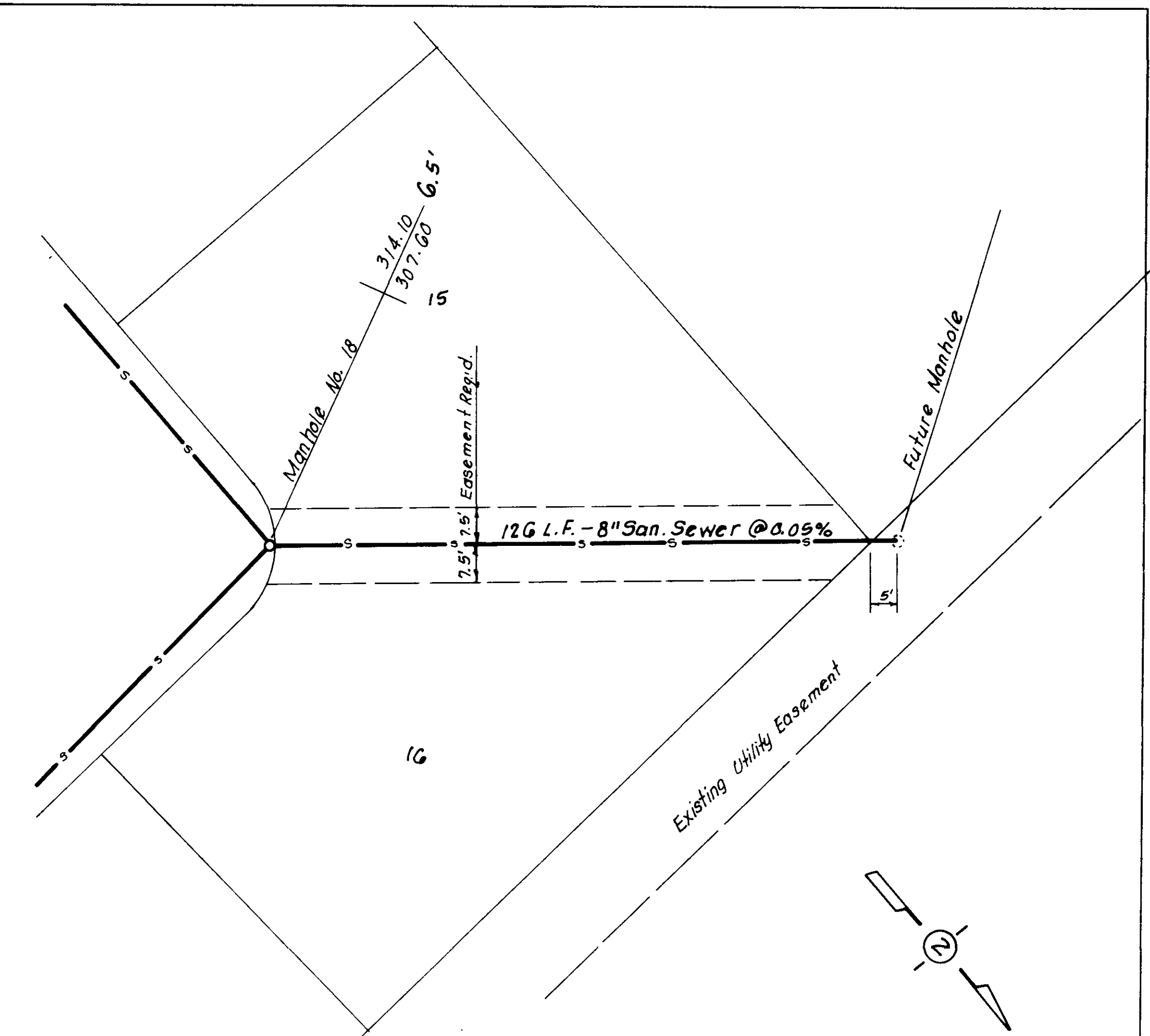
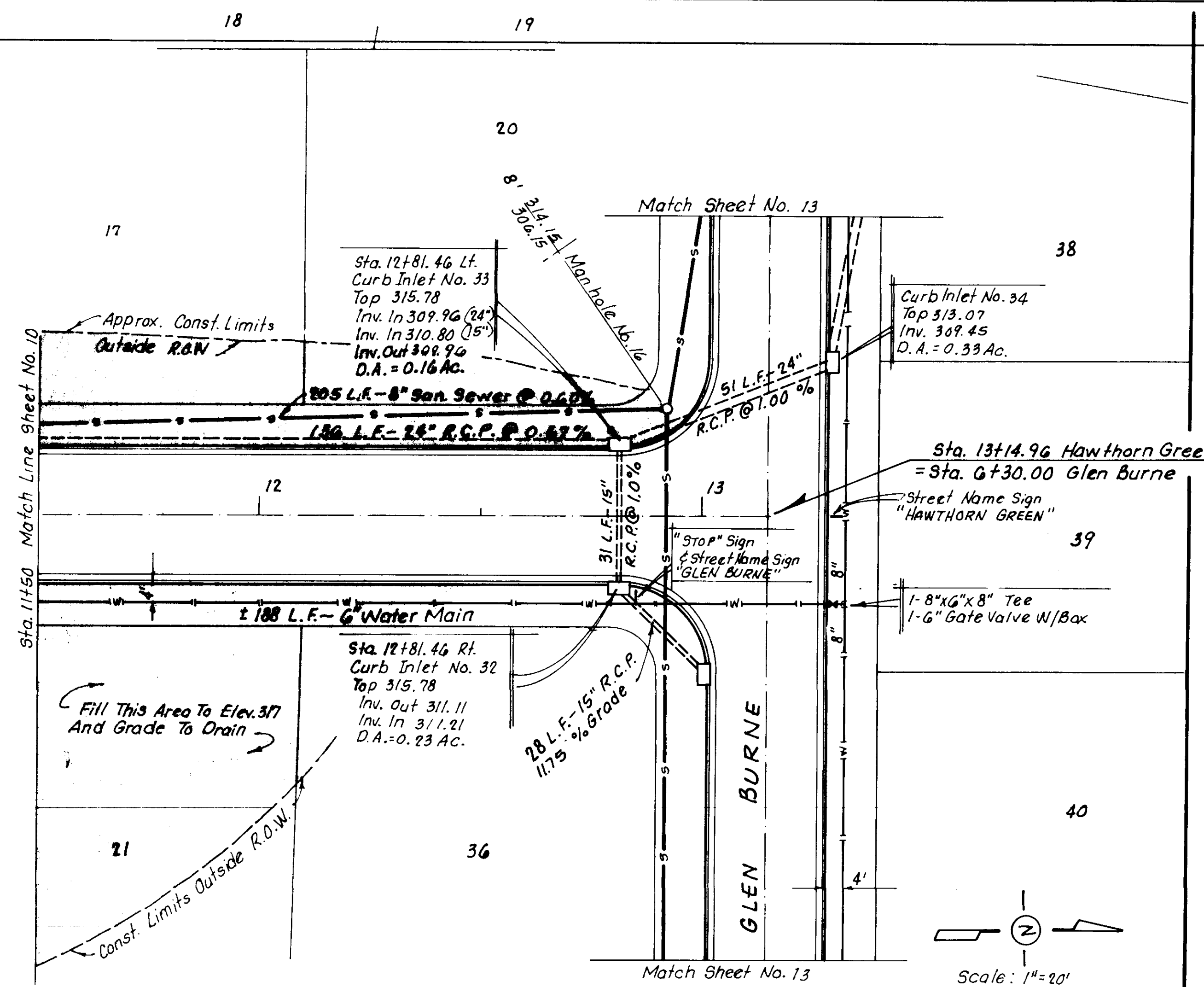
NOTE: *Tops to be adjusted on Job Site As Necessary to Match Finished Grades. All Intersection Outer Grades Shall Be Set to Insure Positive Drainage into Curb Inlets. Clearing Limits to ROW or Const. Limits.



CENTERLINE CURVE DATA
 Curve "C"
 D = 86.54' (13")
 R = 42.272'
 L = 64.041'
 T = 40.000'

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	

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

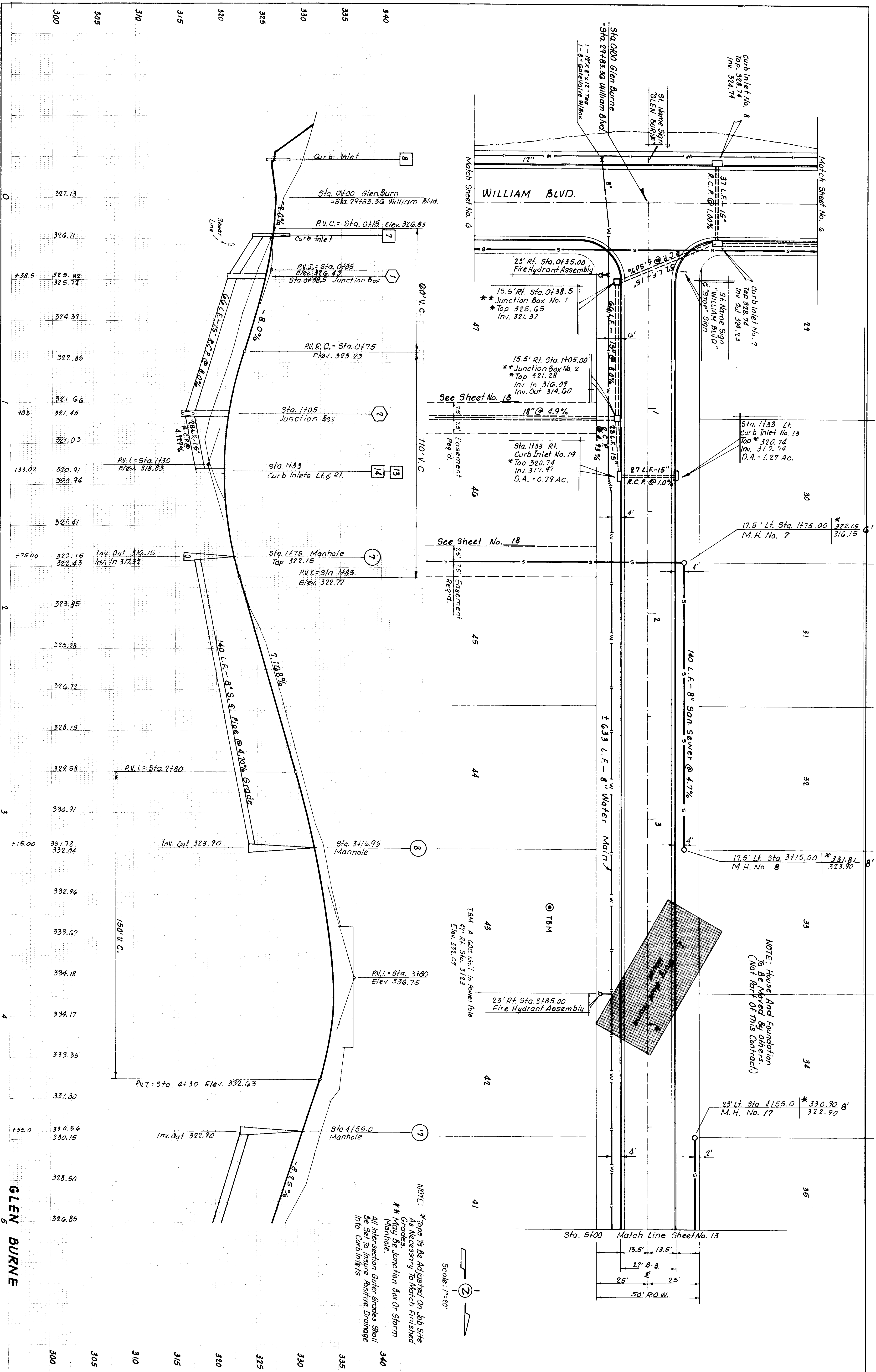


NOTE: *Tops To Be Adjusted On Job Site As Necessary To Match Finished Grades.
 All Intersection Outer Grades Shall Be Set To Insure Positive Drainage Into Curb Inlets
 Clearing Limits To R.O.W. or Const. Limits

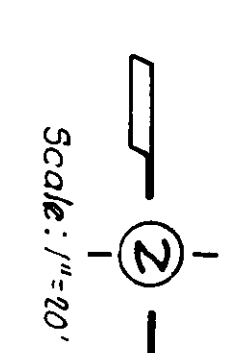
HAWTHORN GREEN

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
AREAS CHECKED		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
AREAS CHECKED		



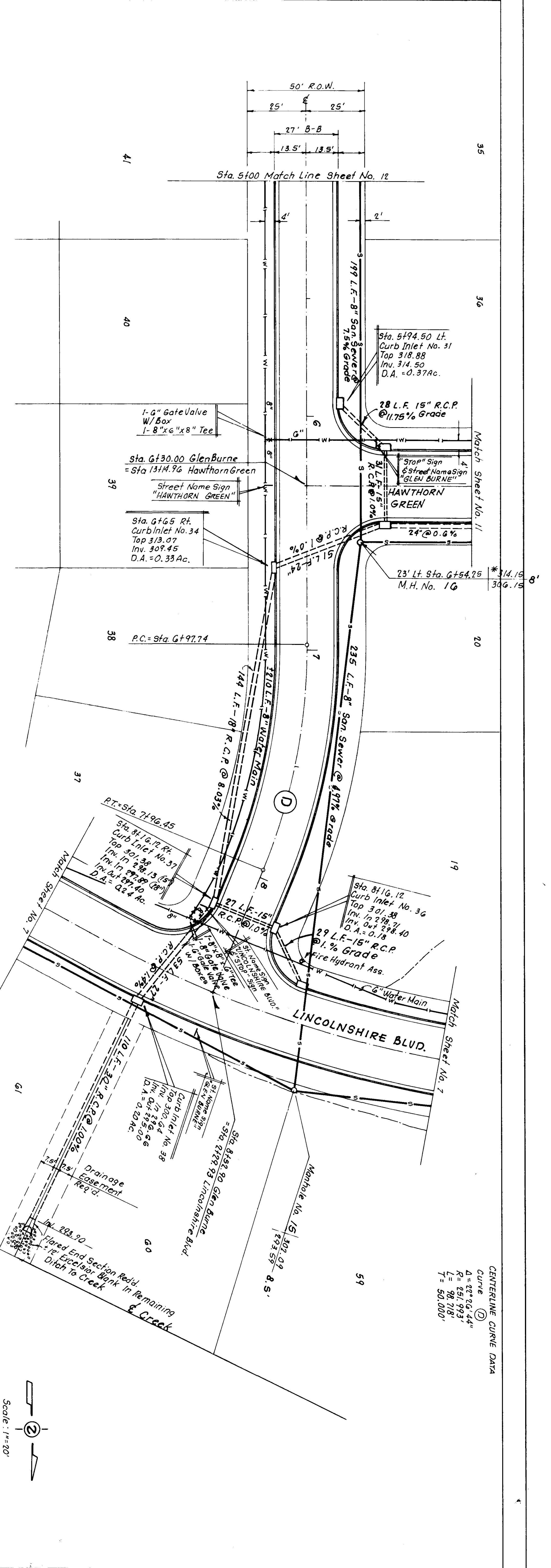
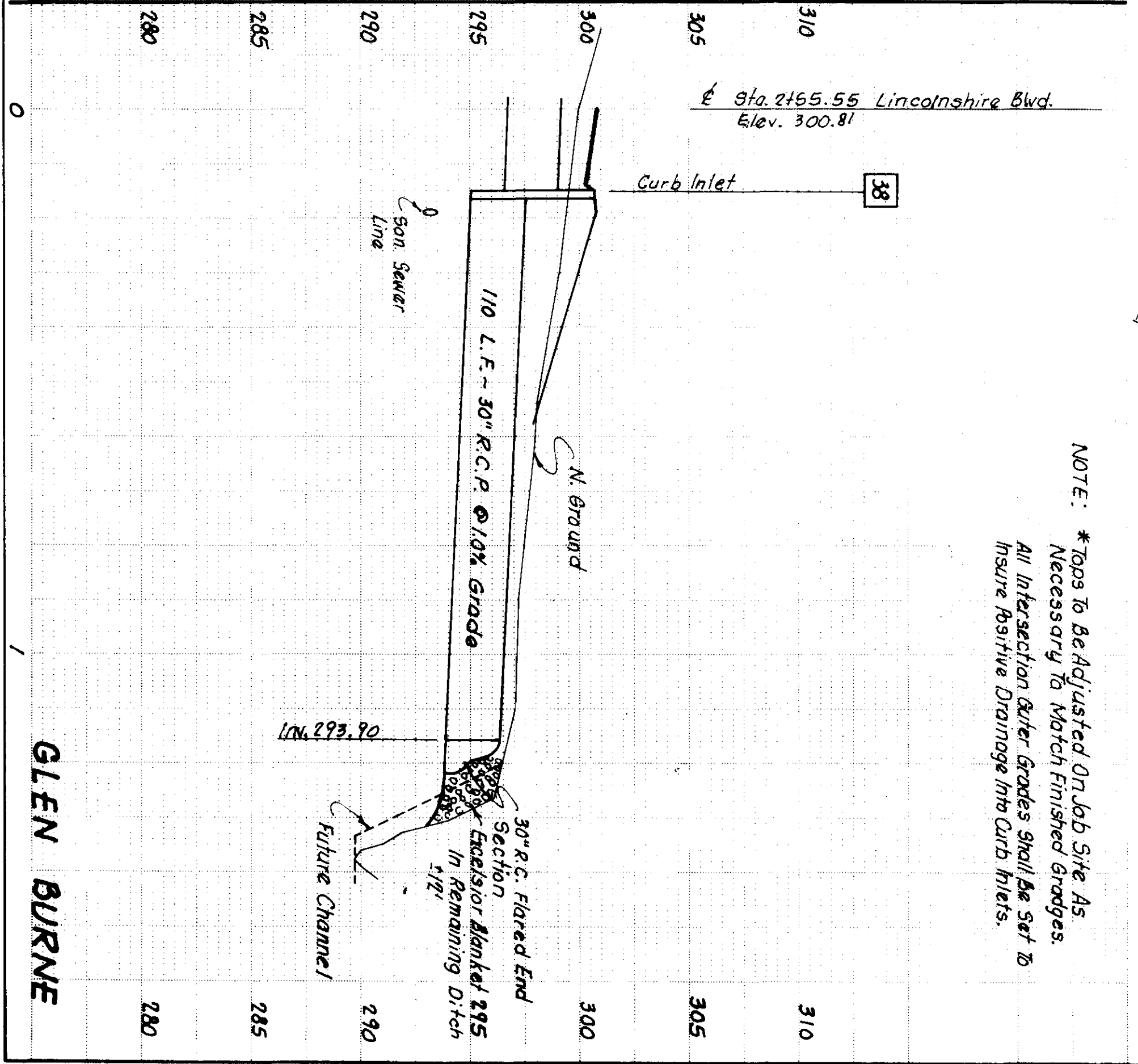
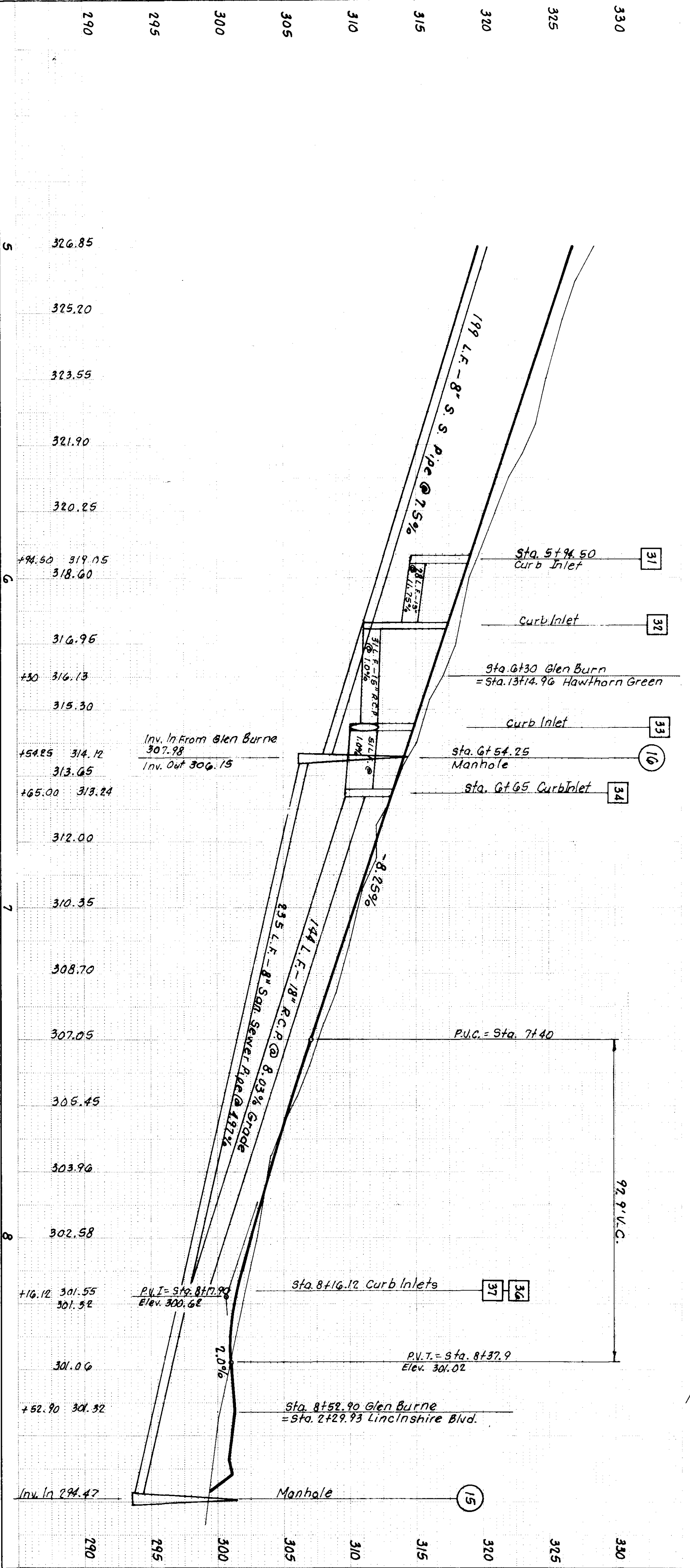
NOTE: *Tops to be Adjusted on Job site As Necessary to Match Finished Grades.
 ** May be Junction Box Or Storm Manhole.
 All Inter-section gutter Grades Shall be Set to Insure Positive Drainage into Curb Inlets



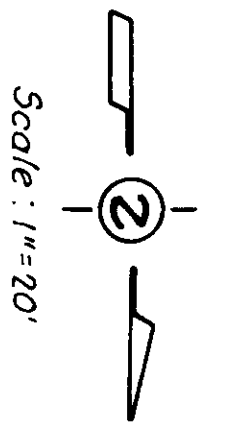
GLEN BURNE

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTES		
AREAS CHECKED		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTES		
AREAS CHECKED		



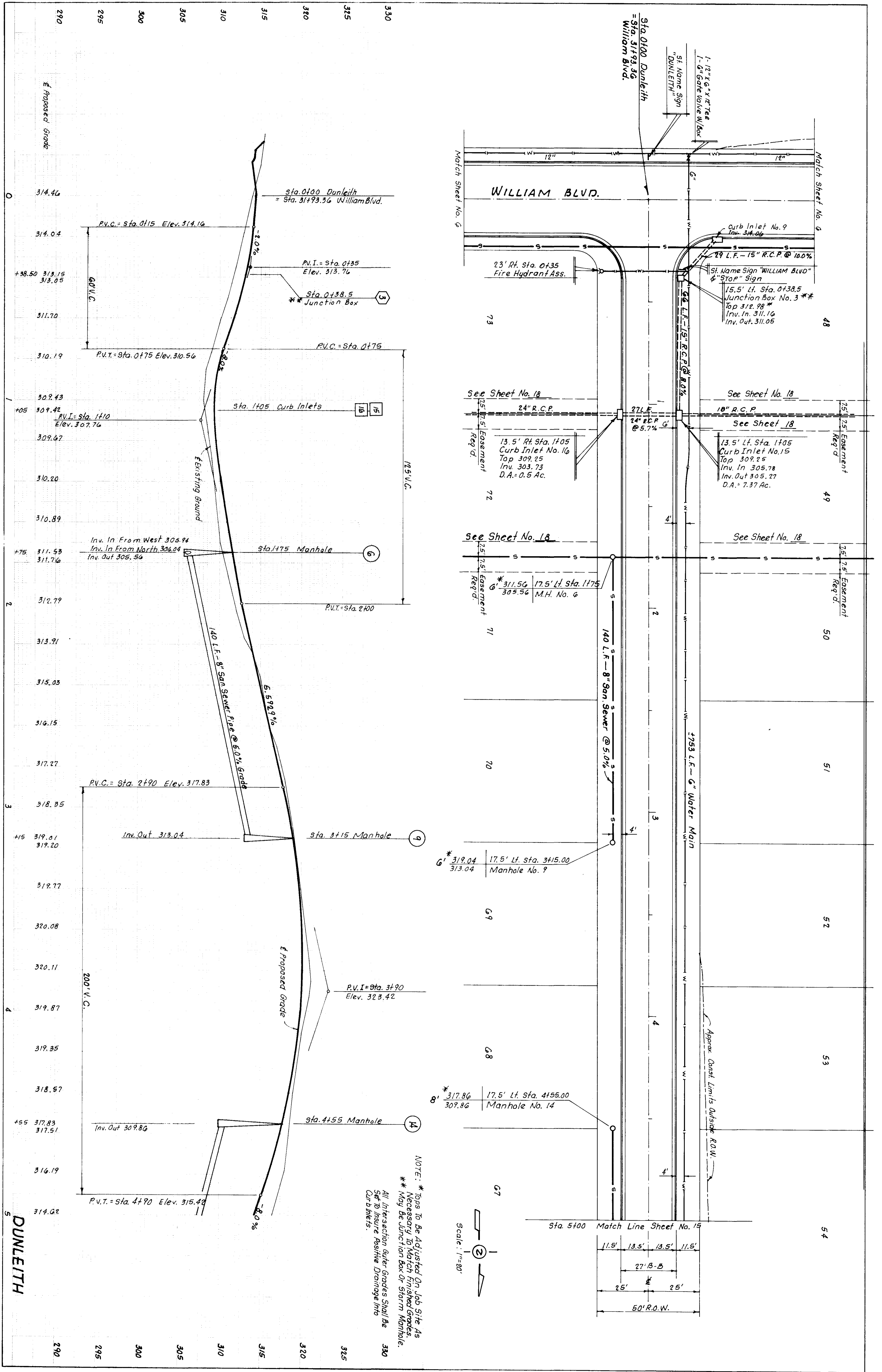
NOTE: *Tops to be Adjusted On Job Site As Necessary to Match Finished Grades. All Intersections After Grades Shall Be Set to Insure Positive Drainage into Curb Inlets.



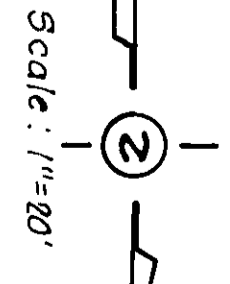
CENTERLINE CURVE DATA
 CURVE (D)
 Δ = 22° 26' 44"
 R = 251.993'
 L = 98.7181'
 T = 50.000'

ORIGINAL SURVEY	SURVEYED	BY	DATE
NO.	AREAS CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NO.	AREAS CHECKED		

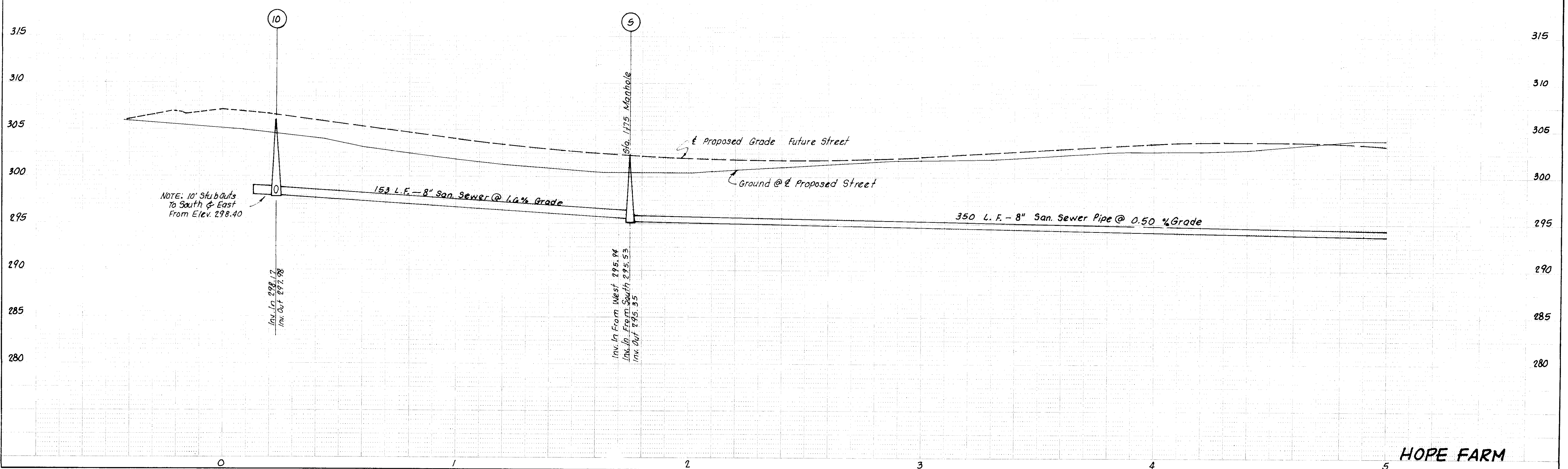
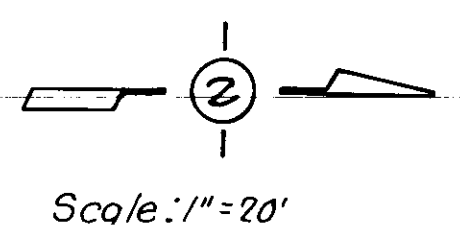
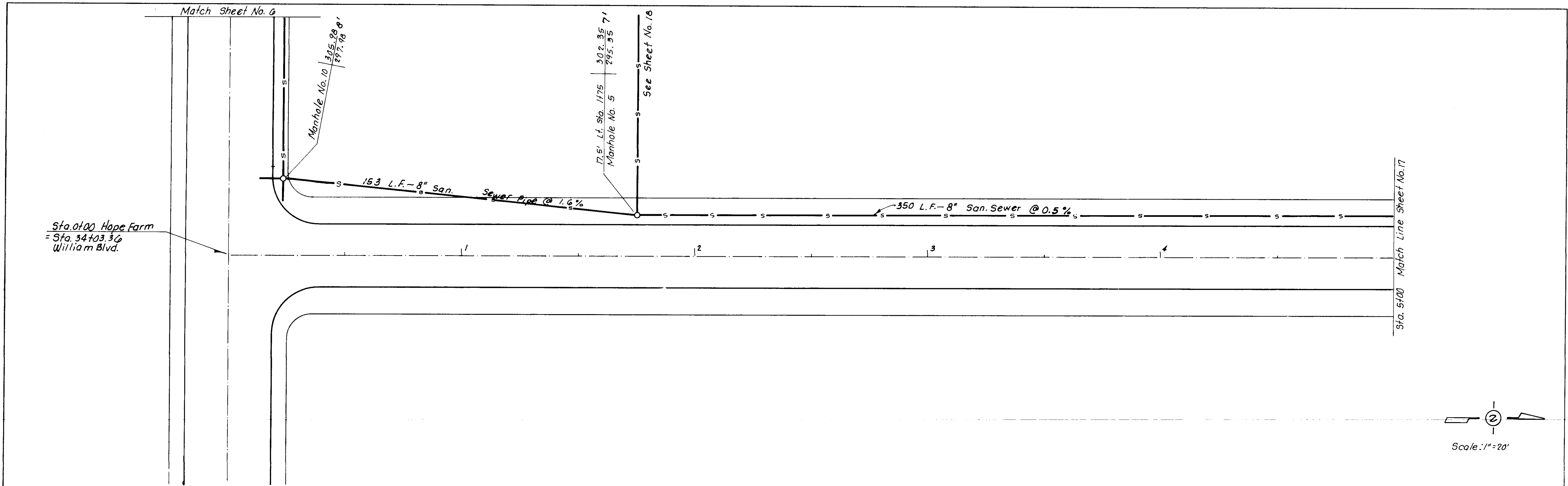


NOTE: * Tops to be Adjusted On Job Site As Necessary to Match Finished Grades.
 ** May be Junction Box or Storm Manhole.
 All Intersections with Grades Shall be Set to Insure Positive Drainage into Curbside.



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

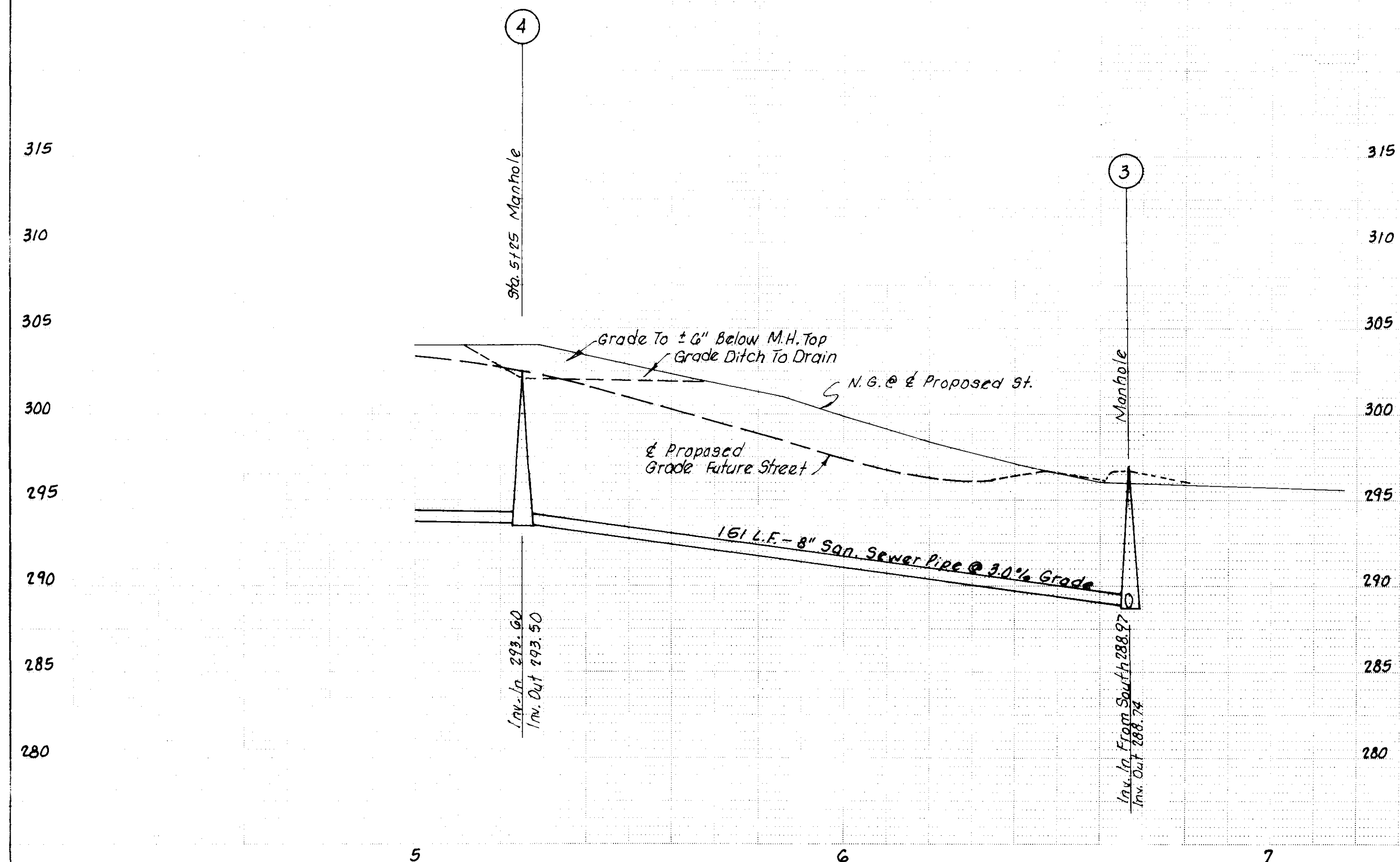
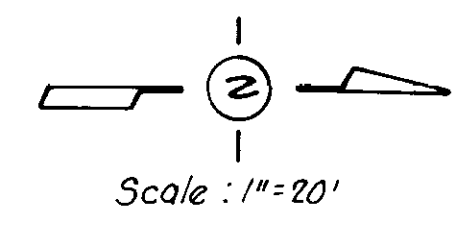
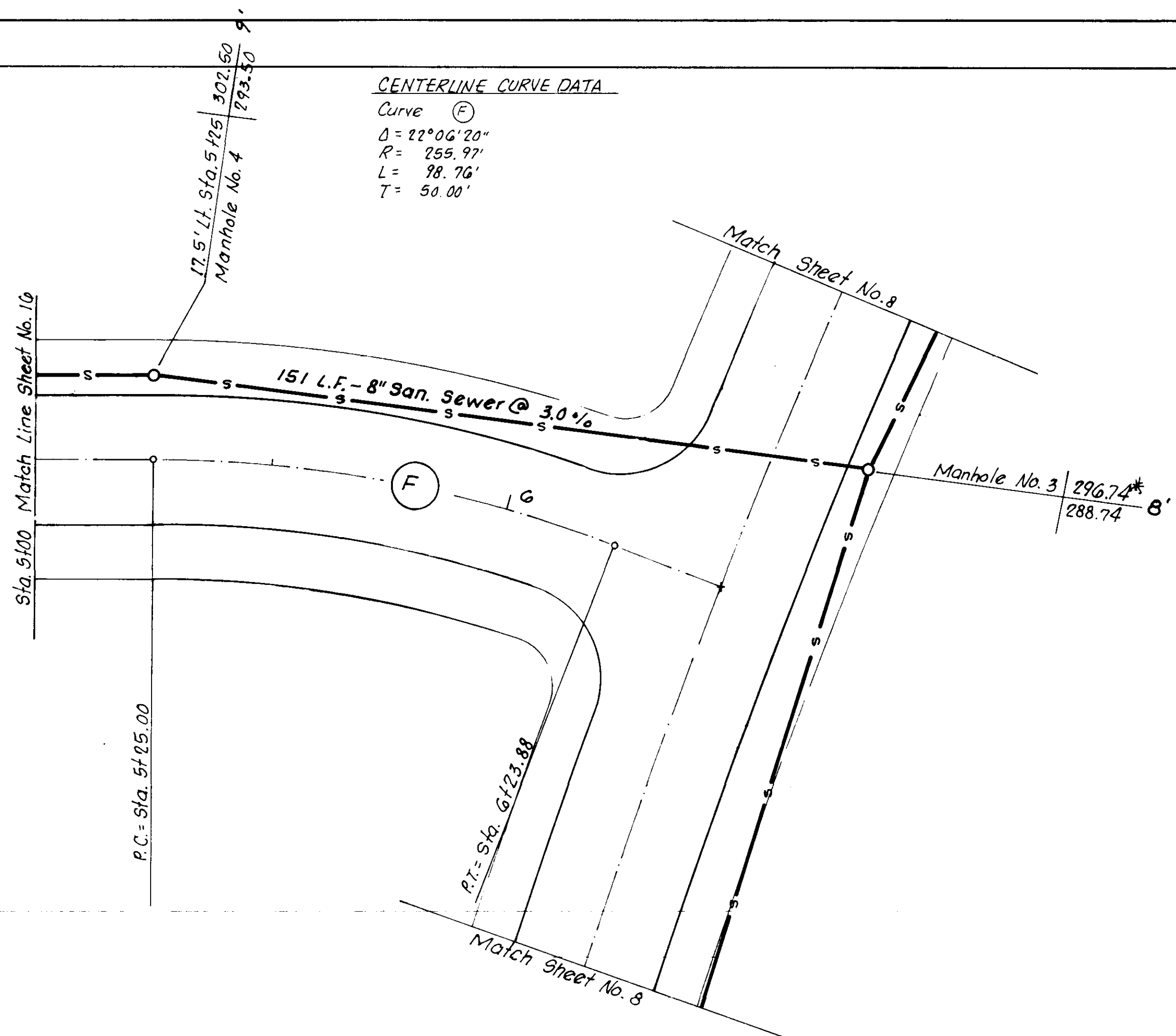
ORIGINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



FINAL SURVEY	BY	DATE
SURVEYED		
TEMPLATE		
NOTE BOOK		
AREAS CHECKED		
NO		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
TEMPLATE		
NOTE BOOK		
AREAS CHECKED		
NO		

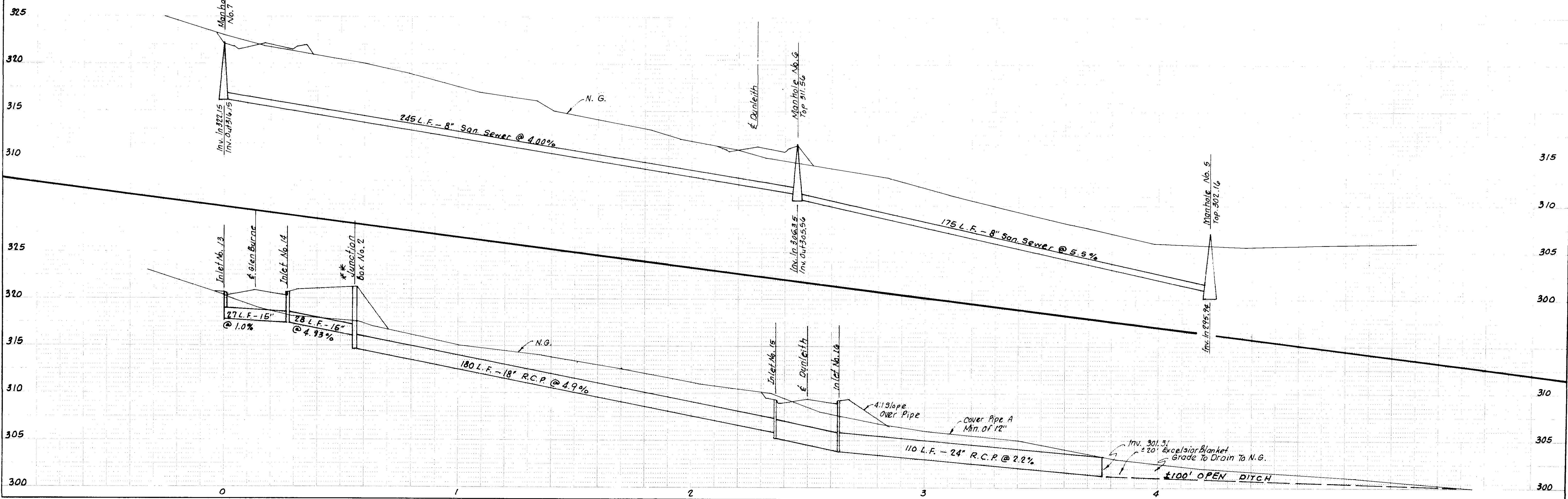
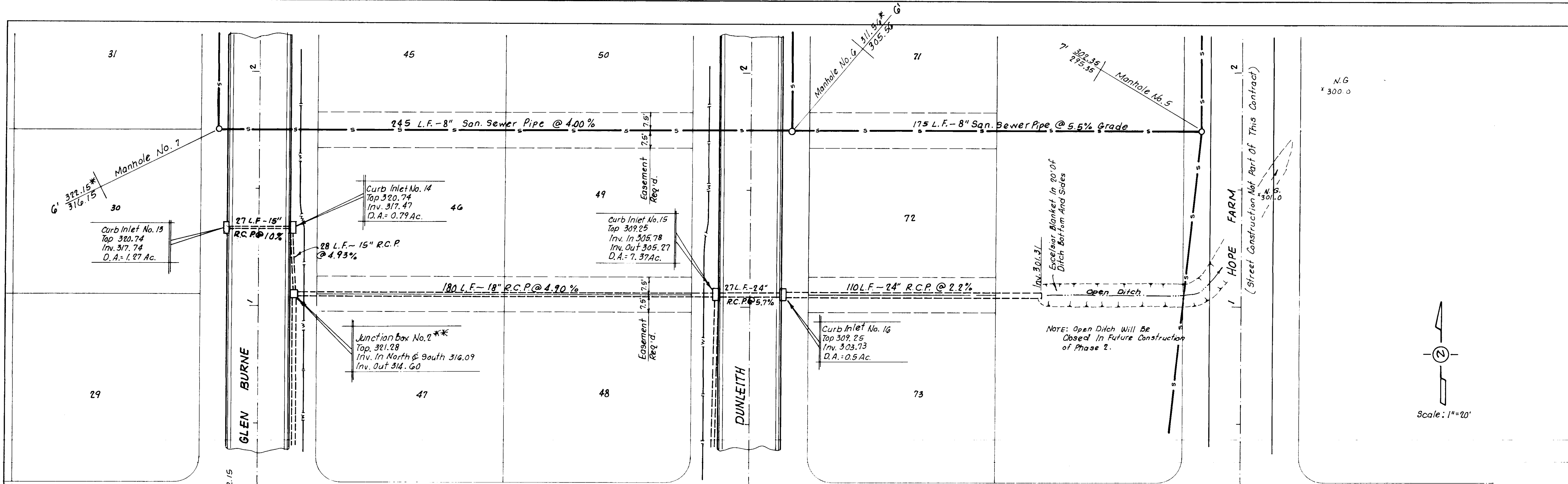
CENTERLINE CURVE DATA
 Curve \odot
 $\Delta = 22^{\circ}06'20''$
 $R = 255.97'$
 $L = 98.76'$
 $T = 50.00'$



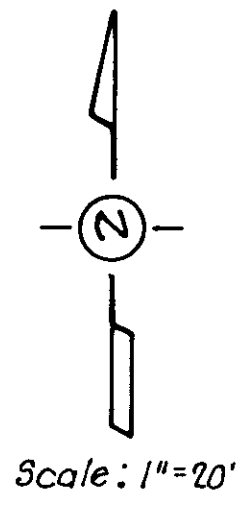
HOPE FARM

BY	DATE
FINAL SURVEYED	
PLOTTED	
DATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

ORIGINAL SURVEYED	DATE
PLOTTED	
DATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

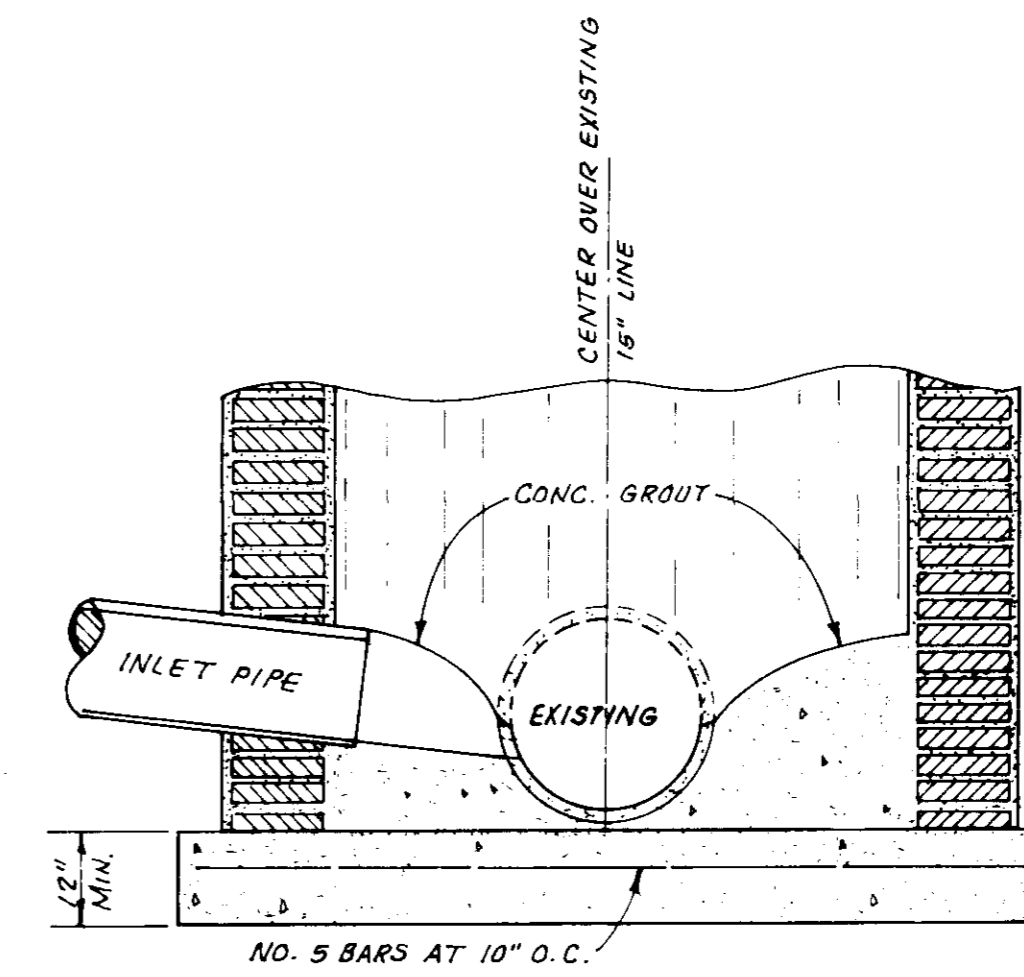
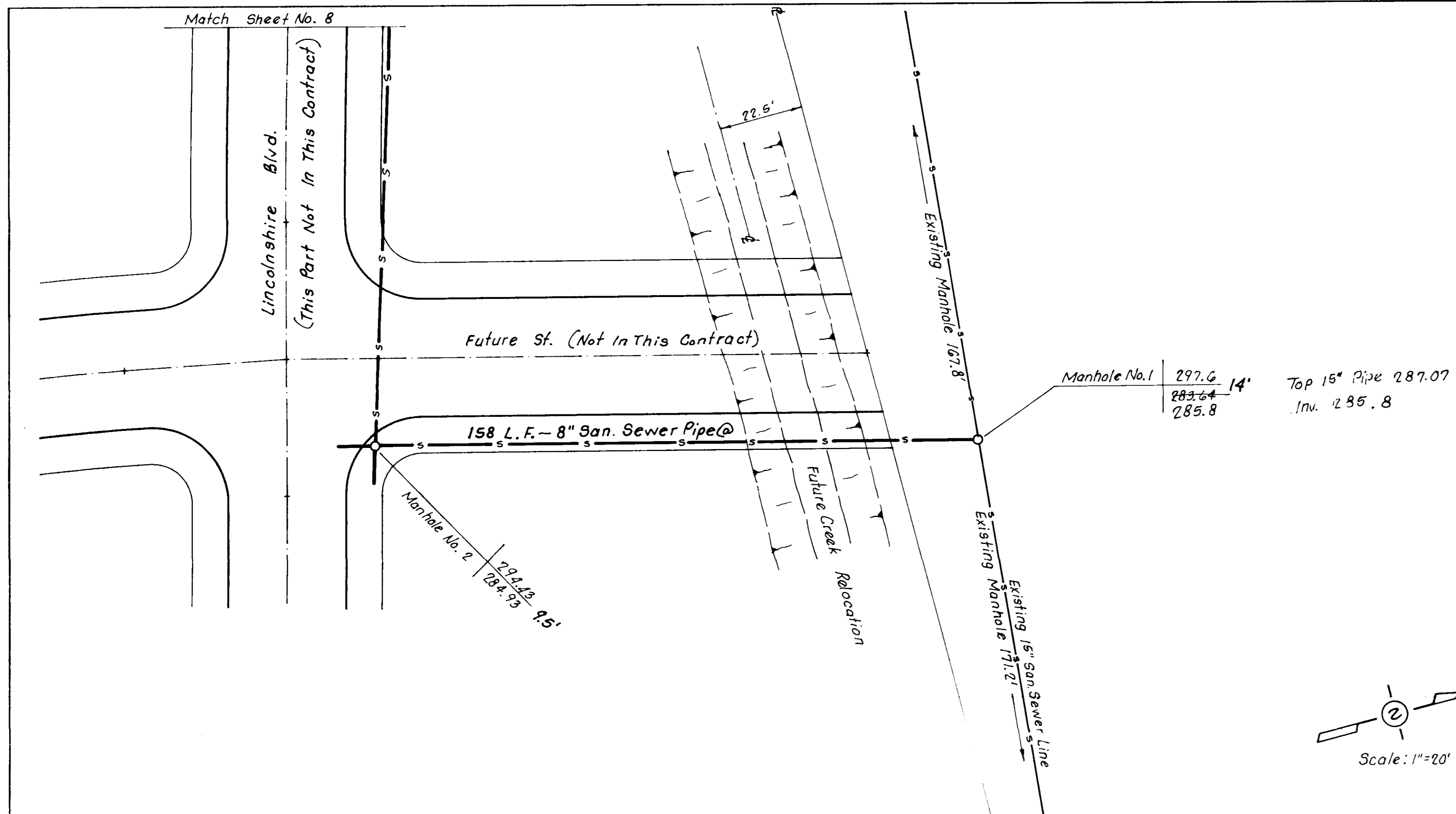


N.G.
x 300.0



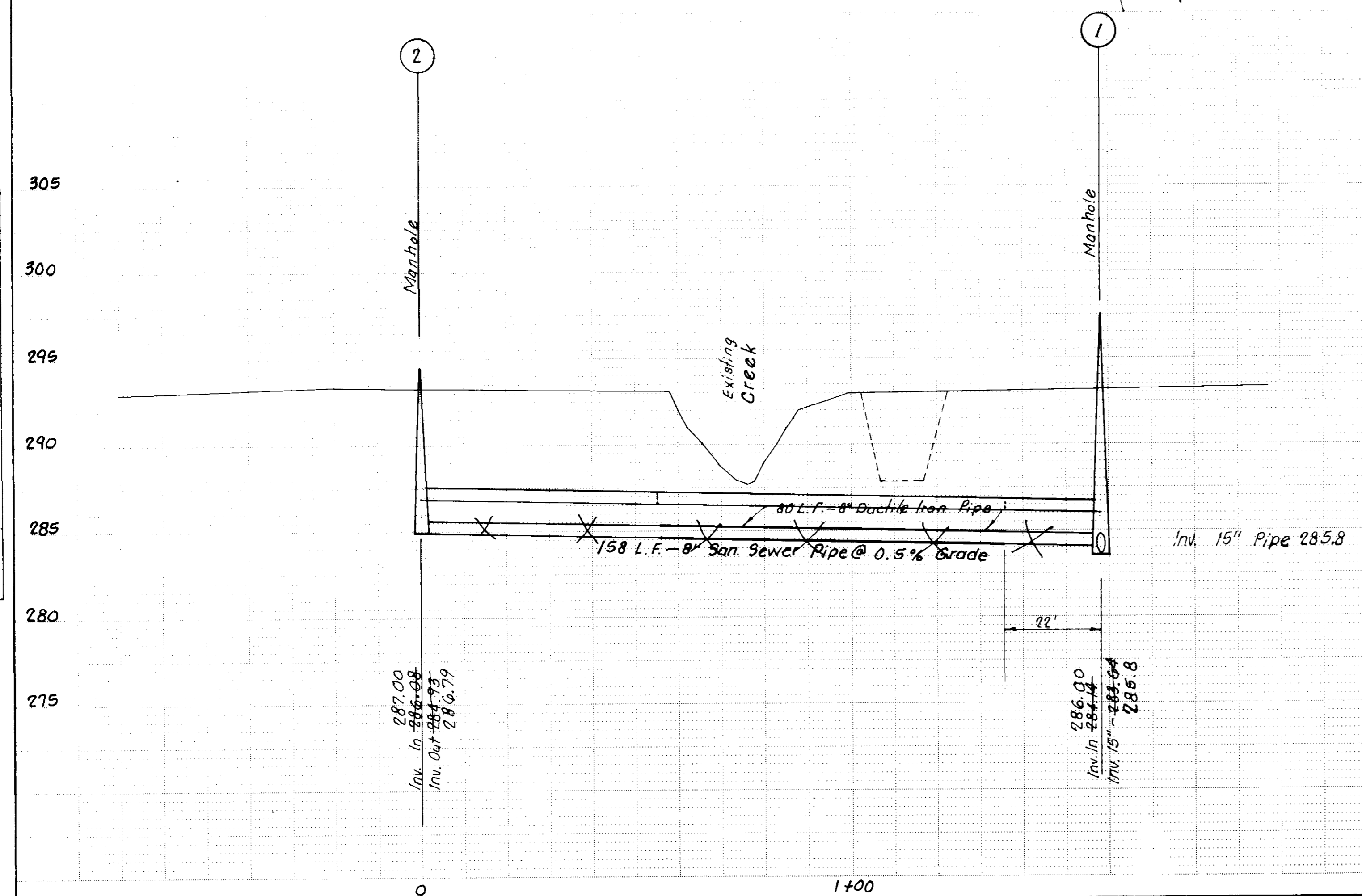
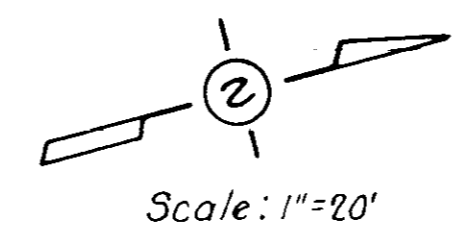
FINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	DATE
NOTE BOOK	NO.
AREAS CHECKED	

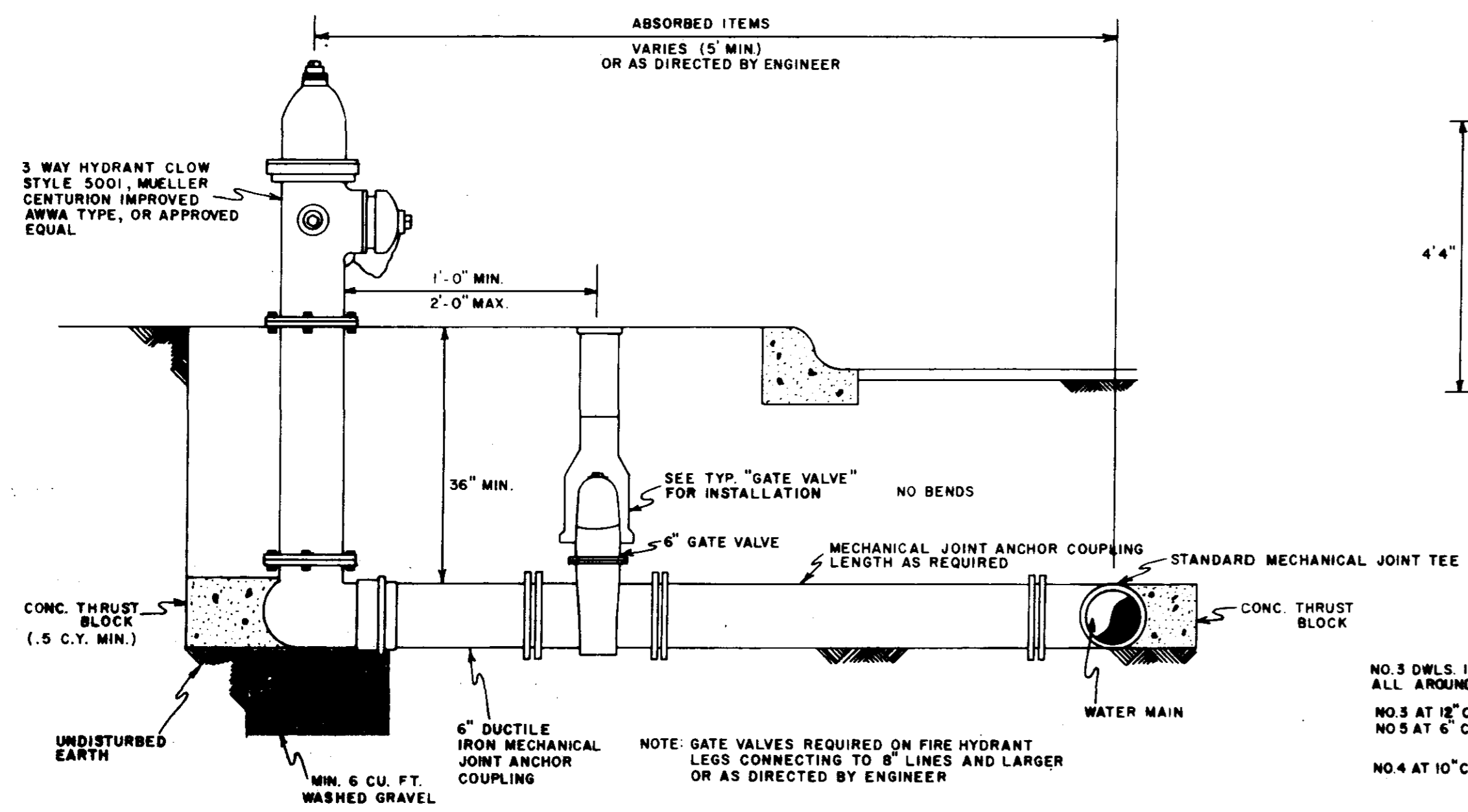
ORIGINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	DATE
NOTE BOOK	NO.
AREAS CHECKED	



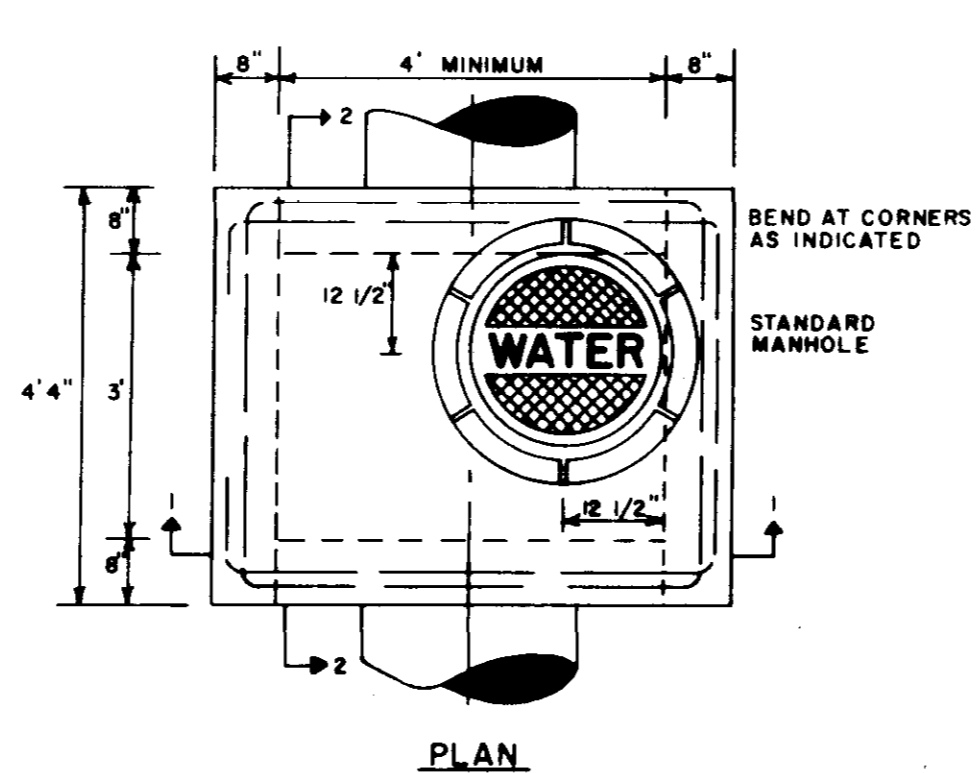
NOTE:
Contractor To Keep Existing 15" In Service While Installing Manhole.
Grout All Around Bottom Half Of Existing 15" Inside Manhole. After Completion Of Construction Of Manhole And Inlet Pipe Is Installed, Break Away Only Top Part Of Existing Pipe.

SECTION
MANHOLE OVER EXISTING LINE

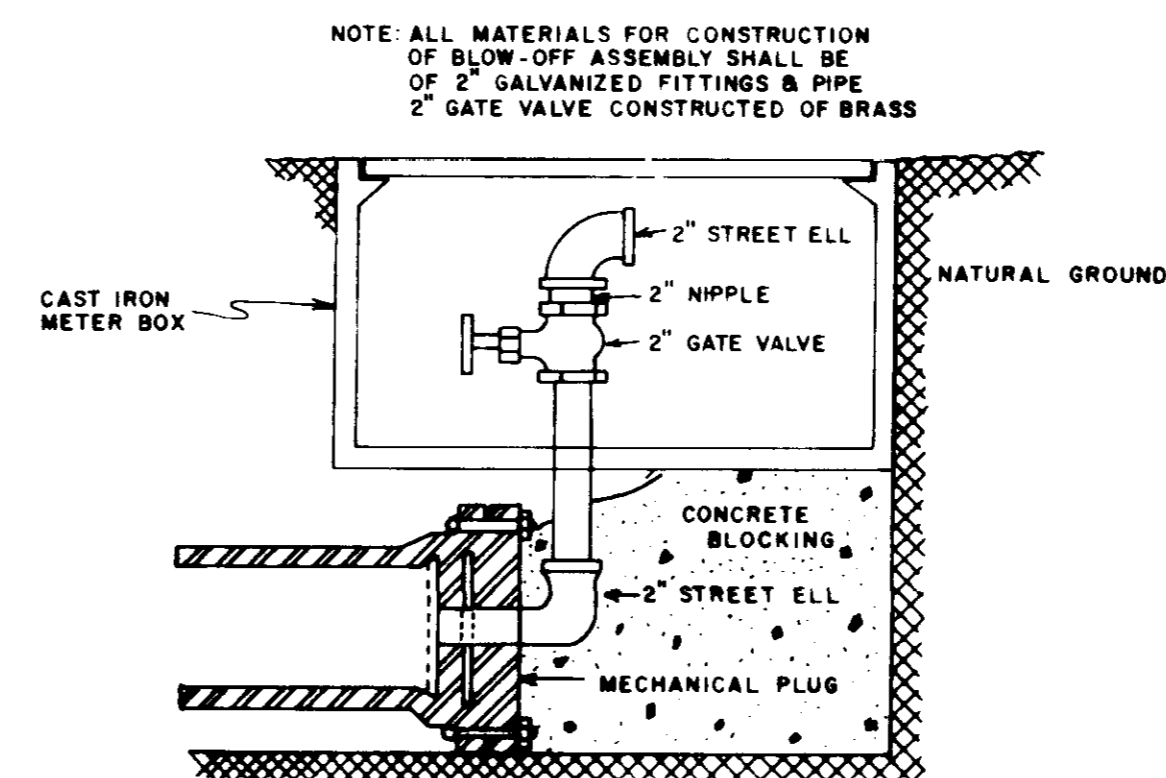




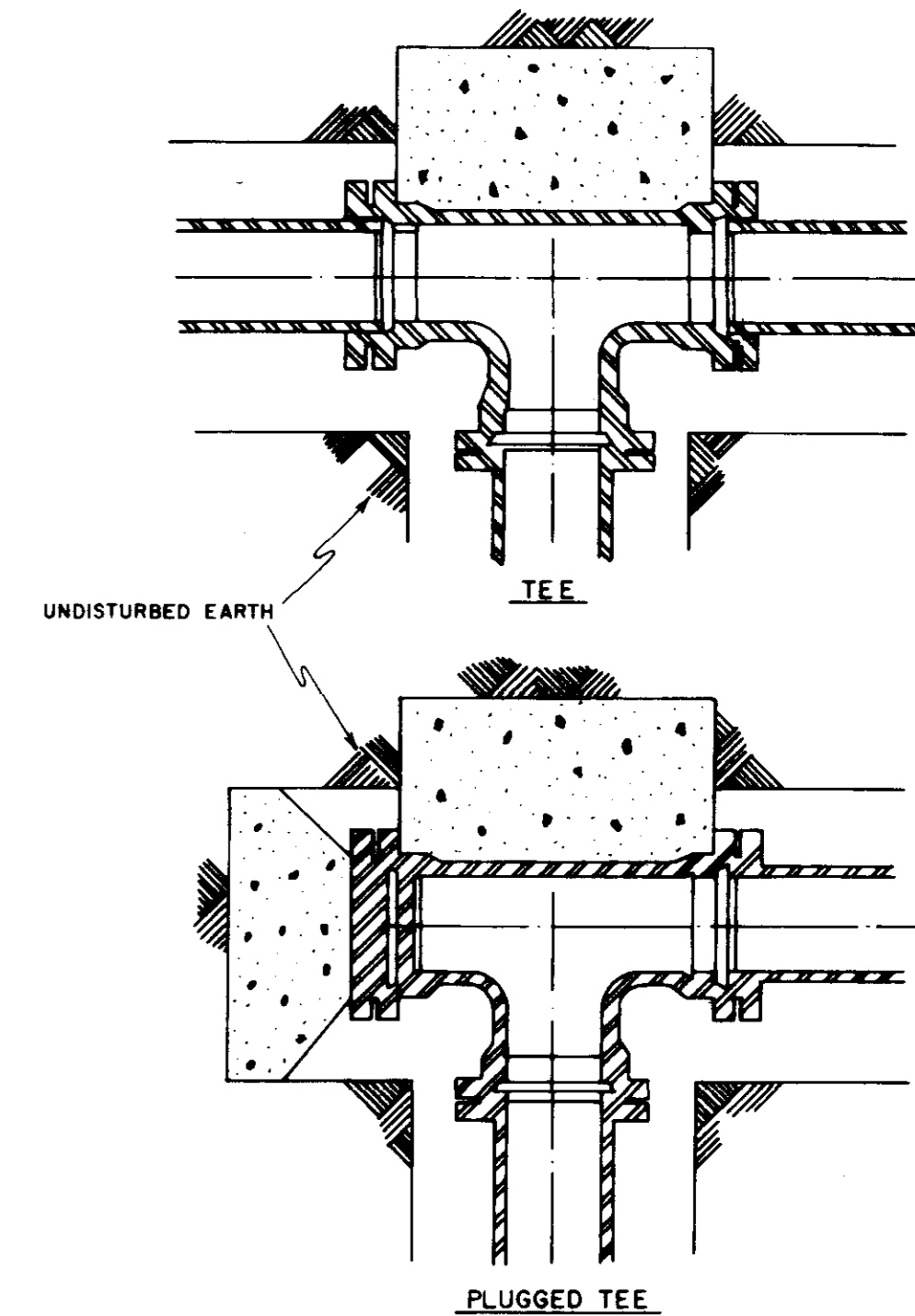
FIRE HYDRANT ASSEMBLY



PLAN

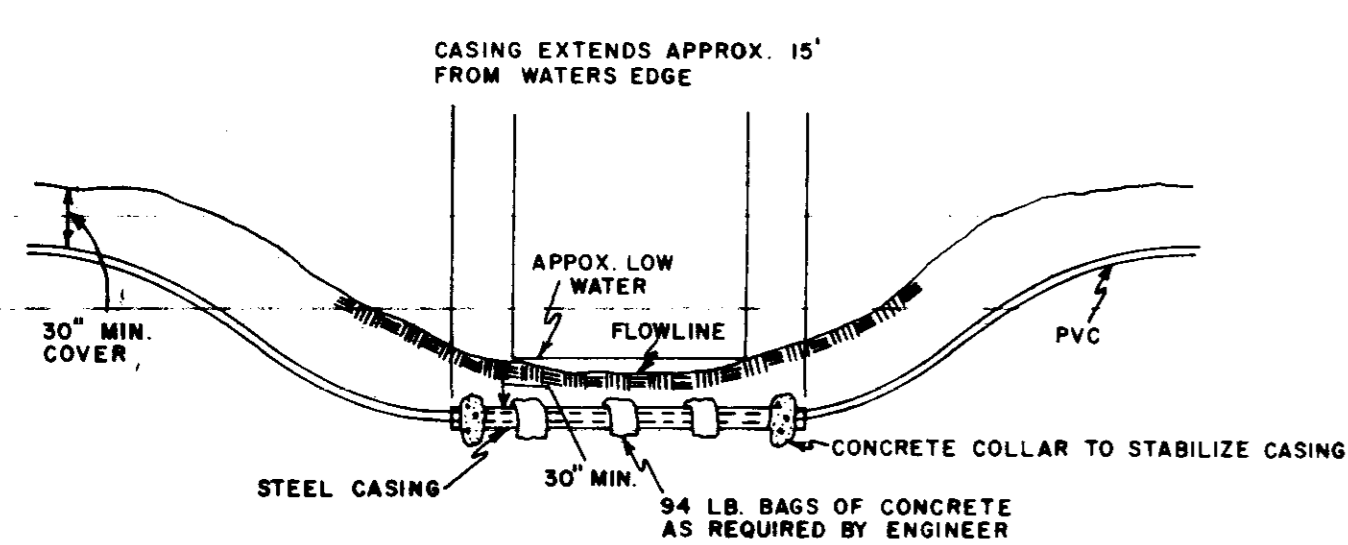


TYPICAL BLOW-OFF ASSEMBLY

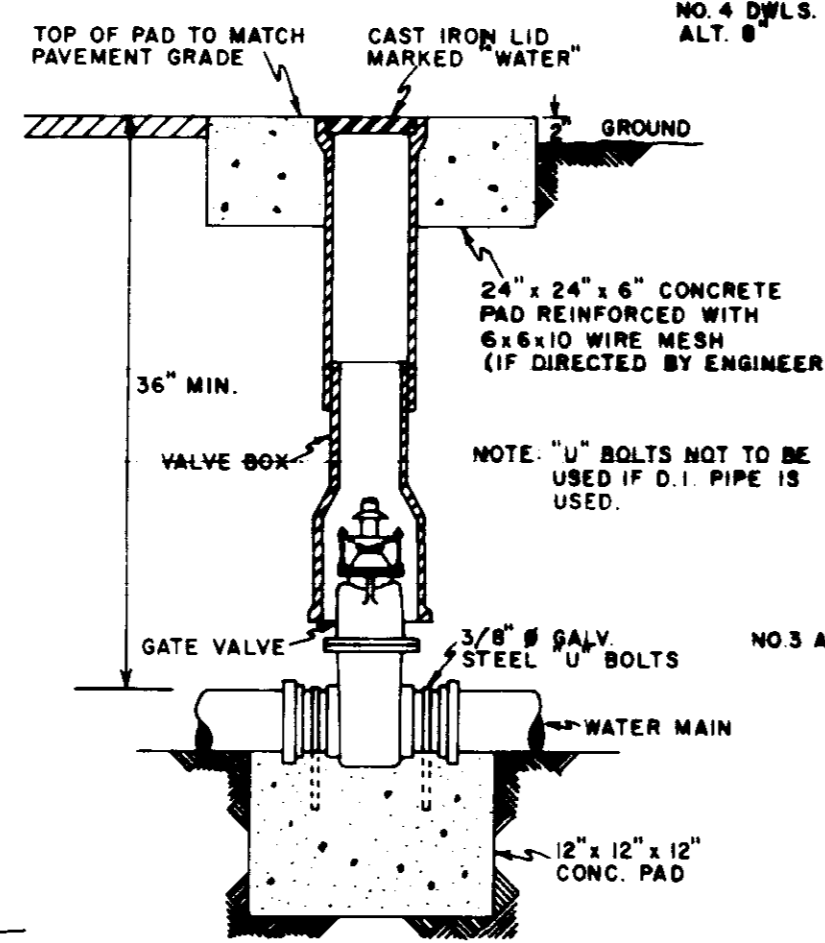


TEE

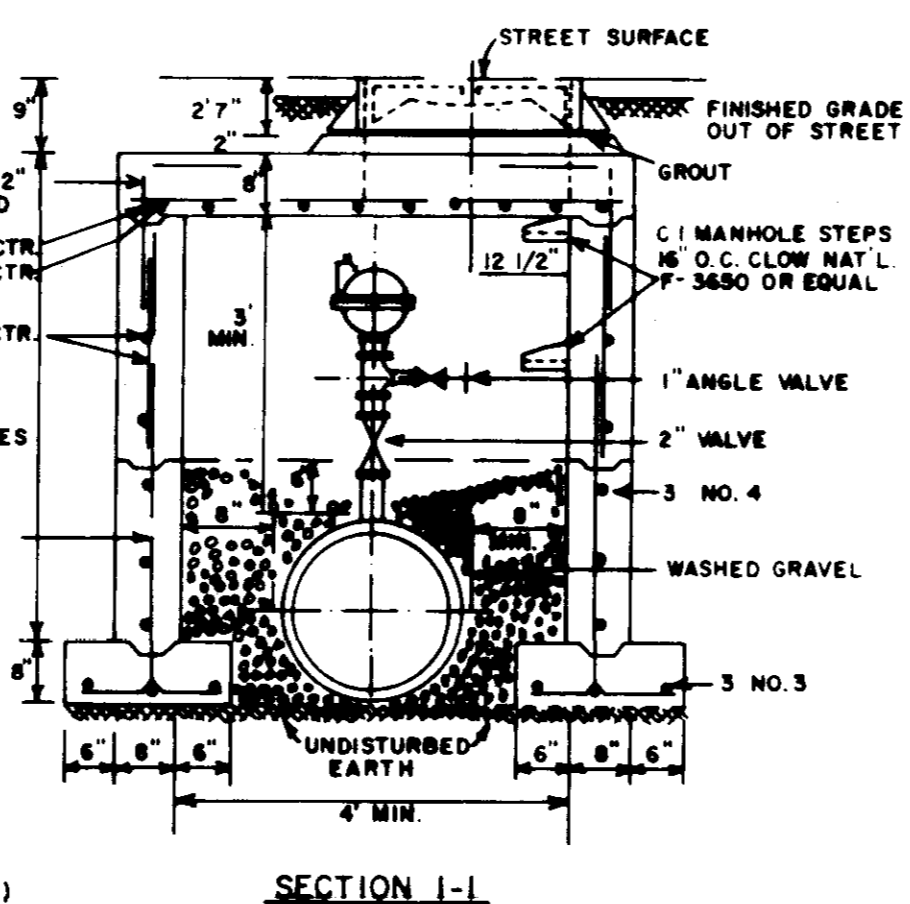
PLUGGED TEE



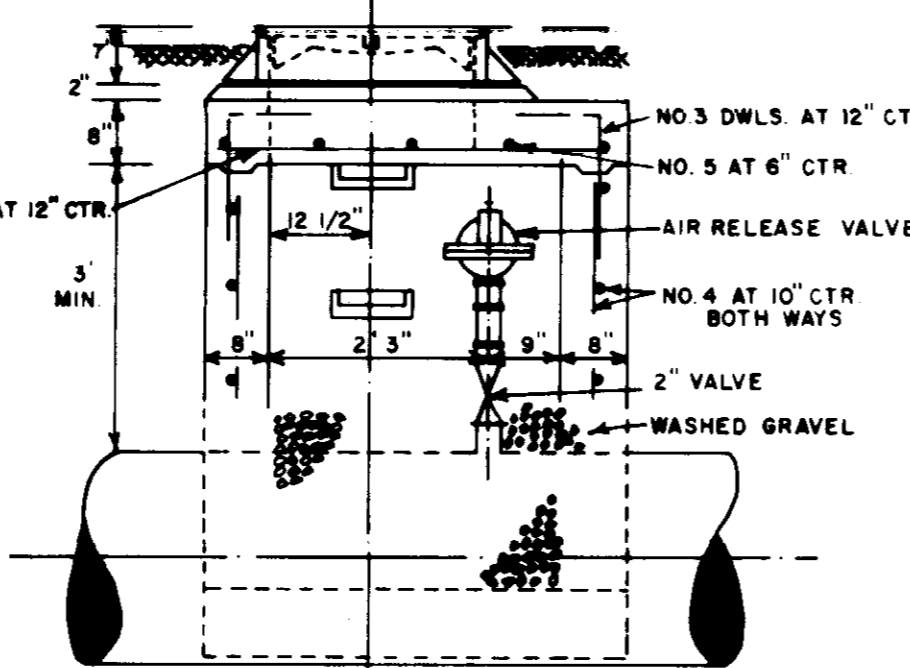
TYPICAL CREEK CROSSING FOR PVC PIPE



GATE VALVE

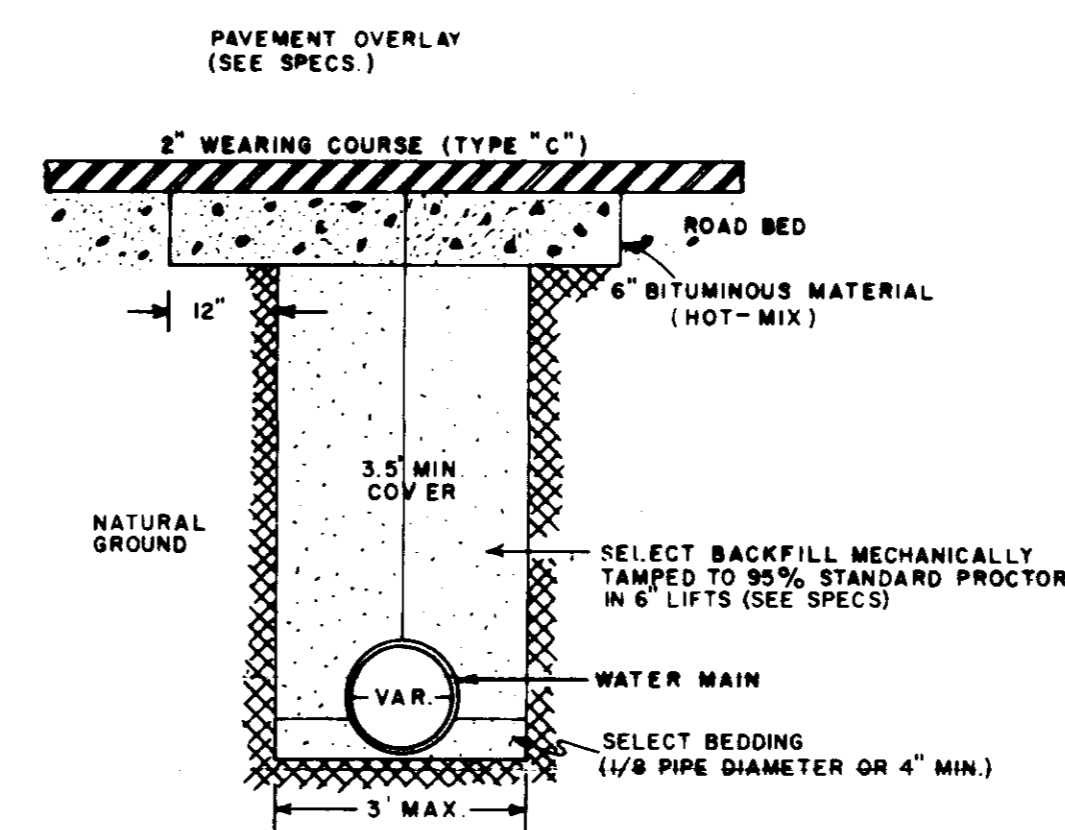


SECTION 1-1

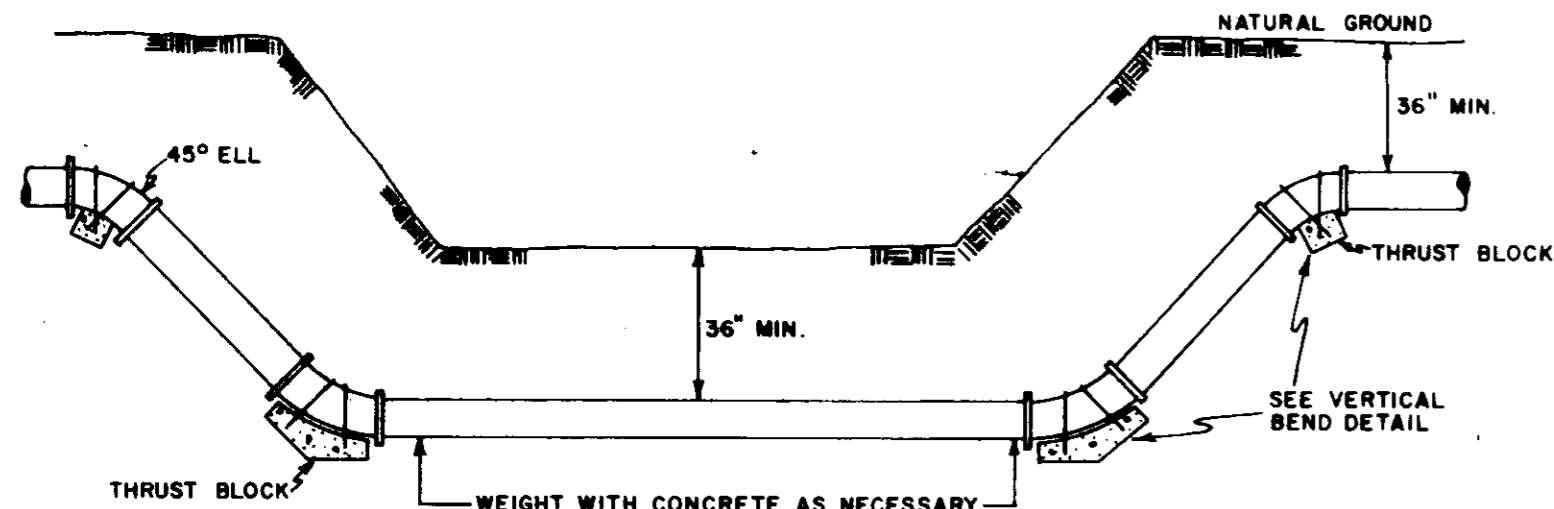


SECTION 2-2

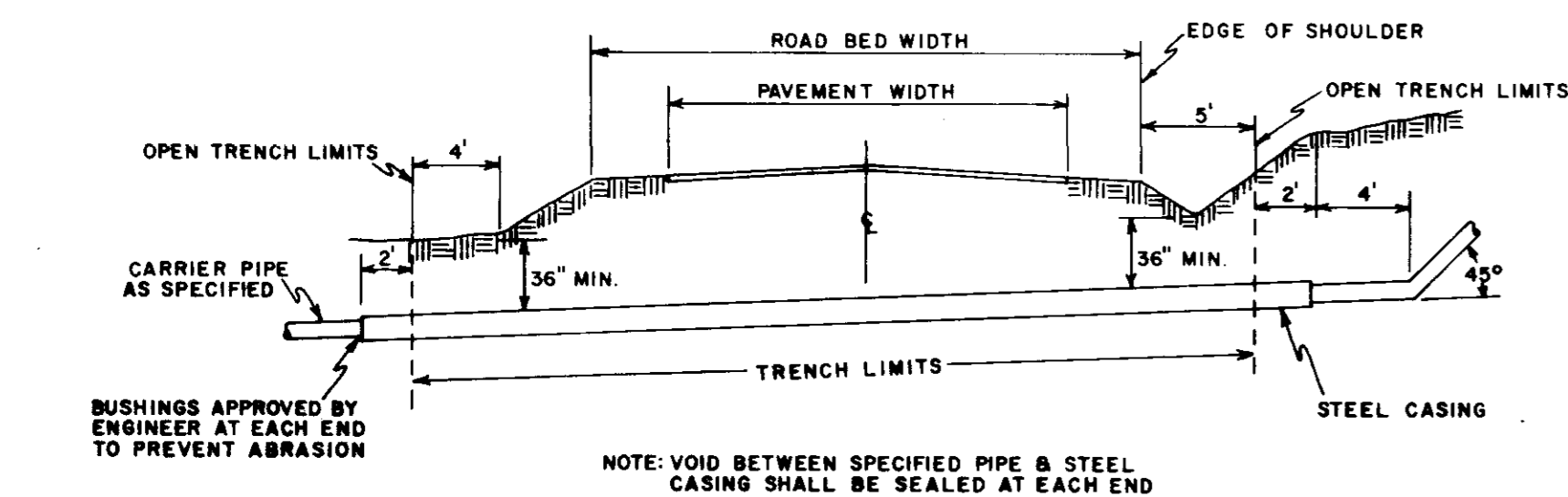
TYPICAL AIR RELEASE VALVE AND MANHOLE



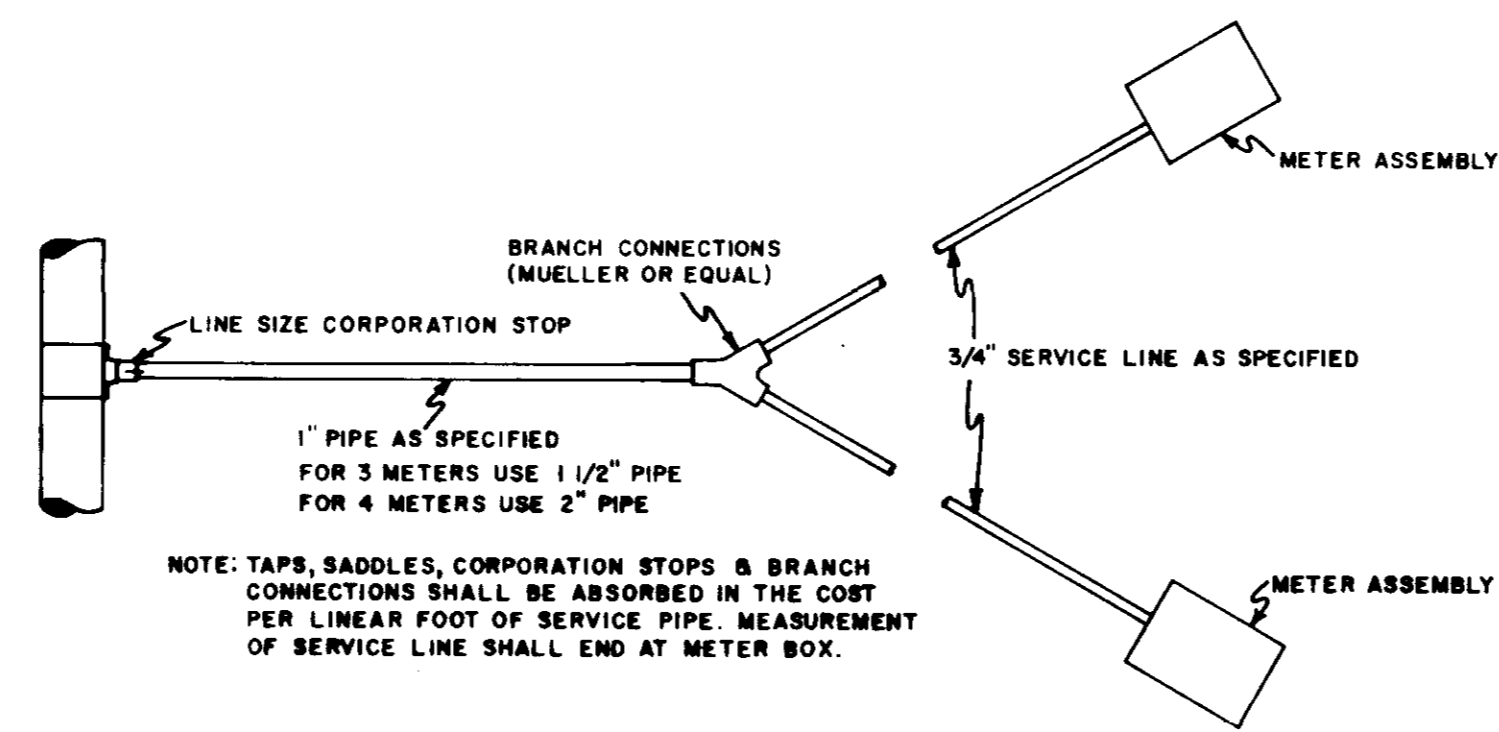
TYPICAL STREET REPAIR



TYPICAL CREEK CROSSING FOR DUCTILE IRON PIPE

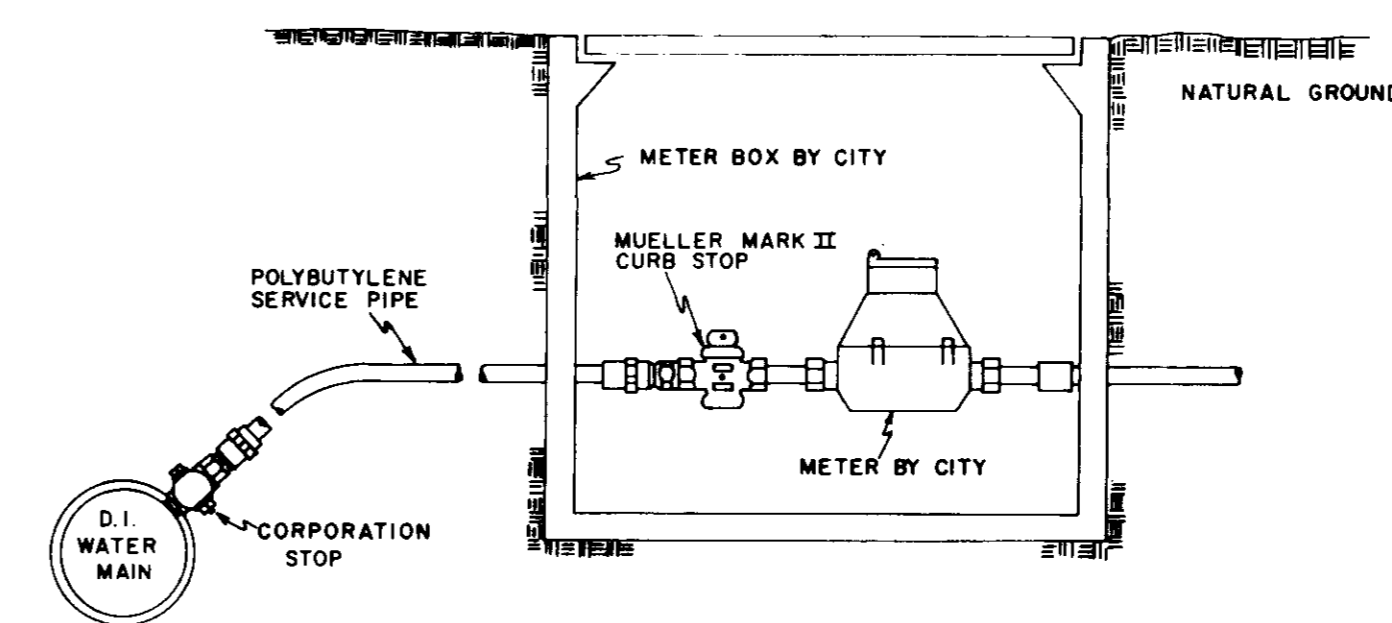


TYPICAL ROAD BORE

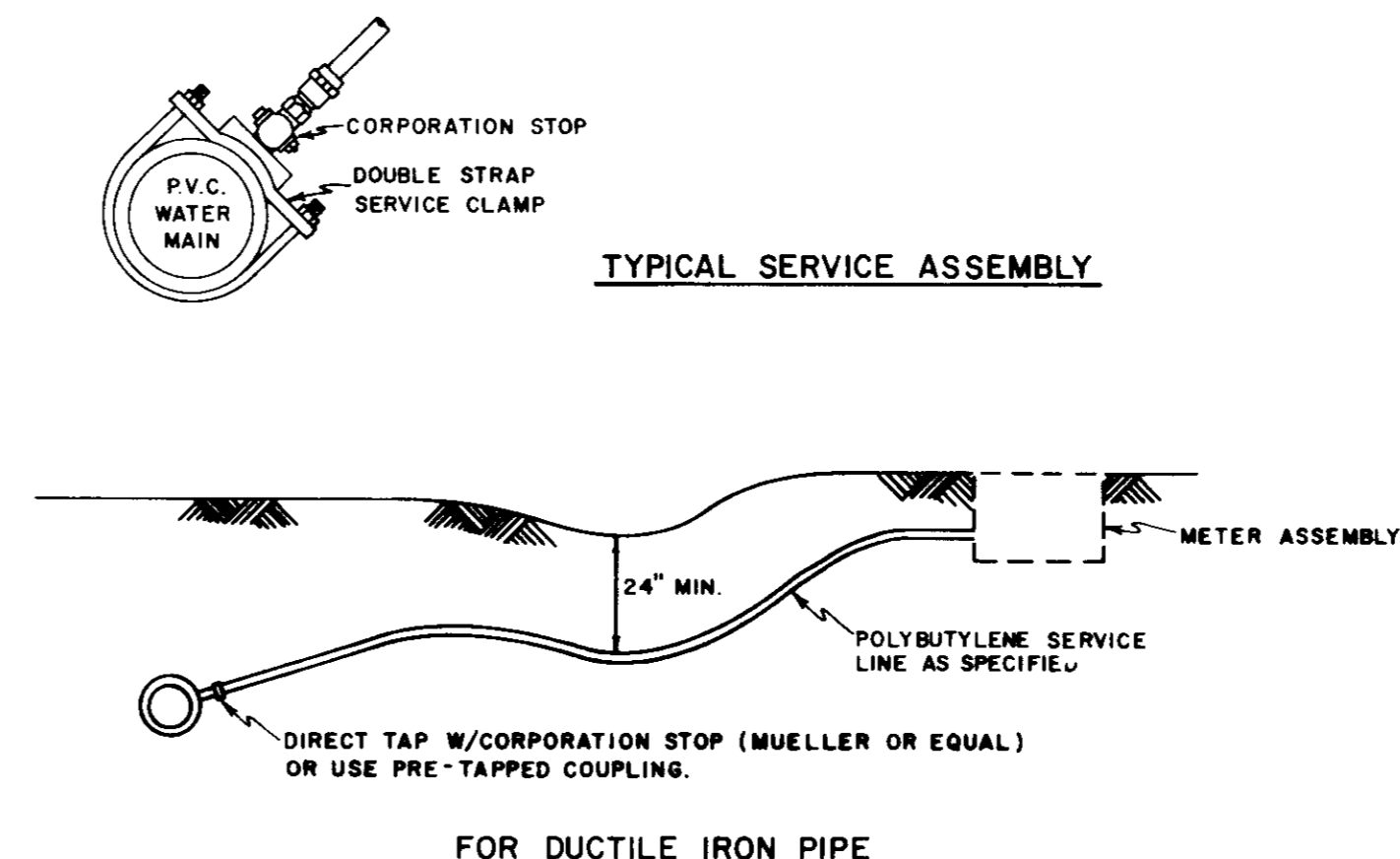


MULTIPLE CONNECTIONS

SERVICE CONNECTIONS

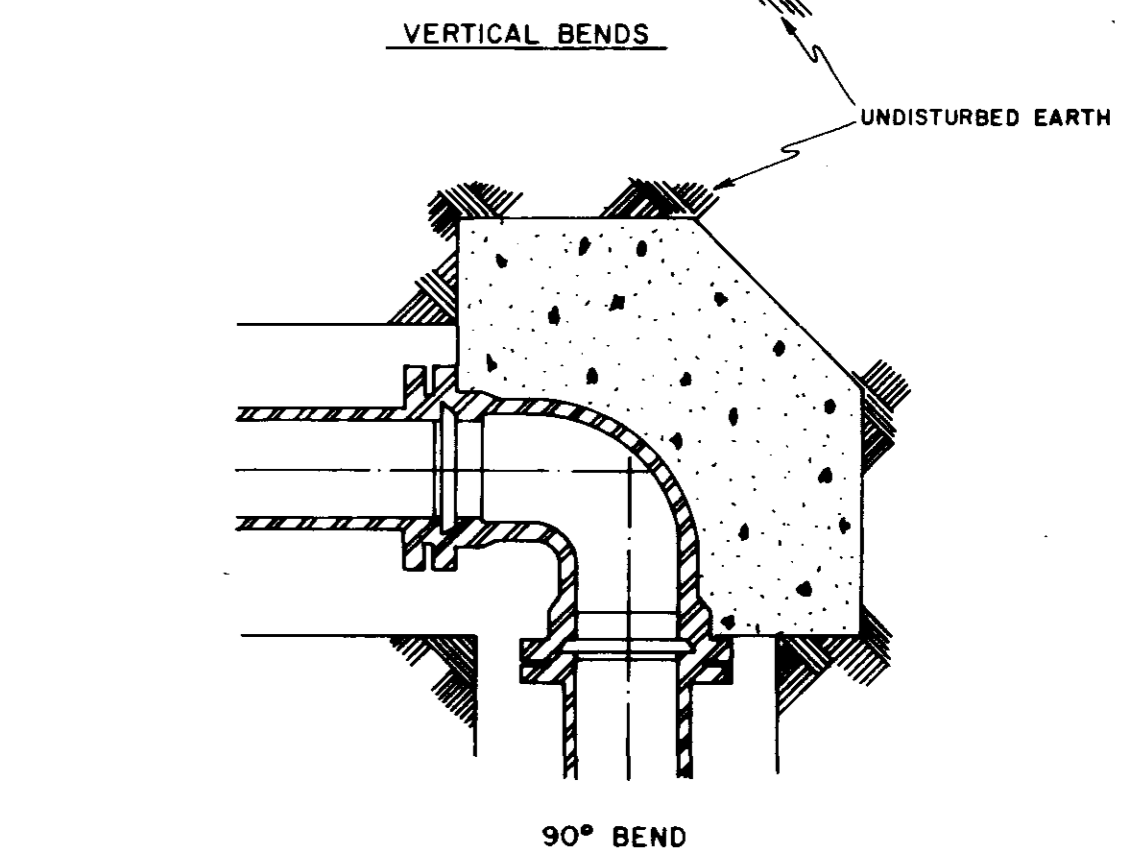


TYPICAL SERVICE ASSEMBLY



FOR DUCTILE IRON PIPE

NOTE: COMPENSATION FOR CONCRETE THRUST BLOCKING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR VALVES, FIRE HYDRANTS AND FITTINGS.



TYPICAL BLOCKING ON WATER MAIN
(3000 PSI CONCRETE REQUIRED)

BEARING AREA IN SQ. FT.					
NOMINAL PIPE DIAMETER (IN.)	DEAD END OR TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4	2.0	2.0	2.0	2.0	2.0
6	2.0	2.0	2.0	2.0	2.0
8	3.0	3.0	2.0	2.0	2.0
12	5.0	6.0	4.0	3.0	3.0
16	8.0	12.0	6.0	4.0	4.0
VERTICAL BENDS					
4	—	—	6.0 (.22)	4.0 (.15)	4.0 (.18)
6	—	—	14.0 (.52)	6.0 (.22)	4.0 (.15)
8	—	—	27.0 (1.0)	9.0 (.33)	6.0 (.22)
12	—	—	68.0 (2.5)	22.0 (.80)	9.0 (.33)
16	—	—	90.0 (3.33)	52.0 (1.9)	18.0 (.67)
VOLUME OF BLOCKS INCLUDING SOIL LOAD CU. FT. (CU. YDS.)					

DESIGNED
S.F.A.

DATE
11/1/85

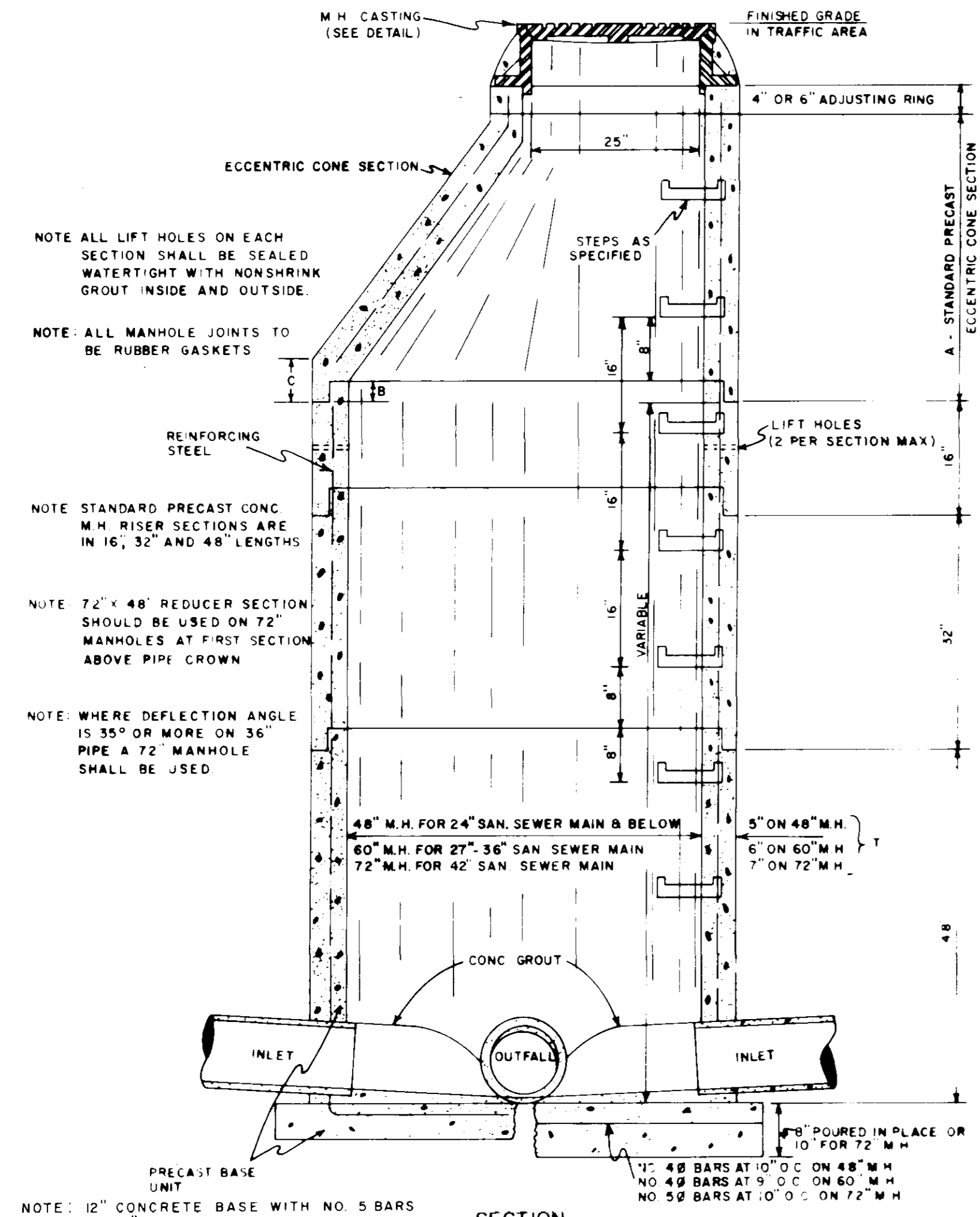
DRAWN
T.A.H.

SCALE
NONE

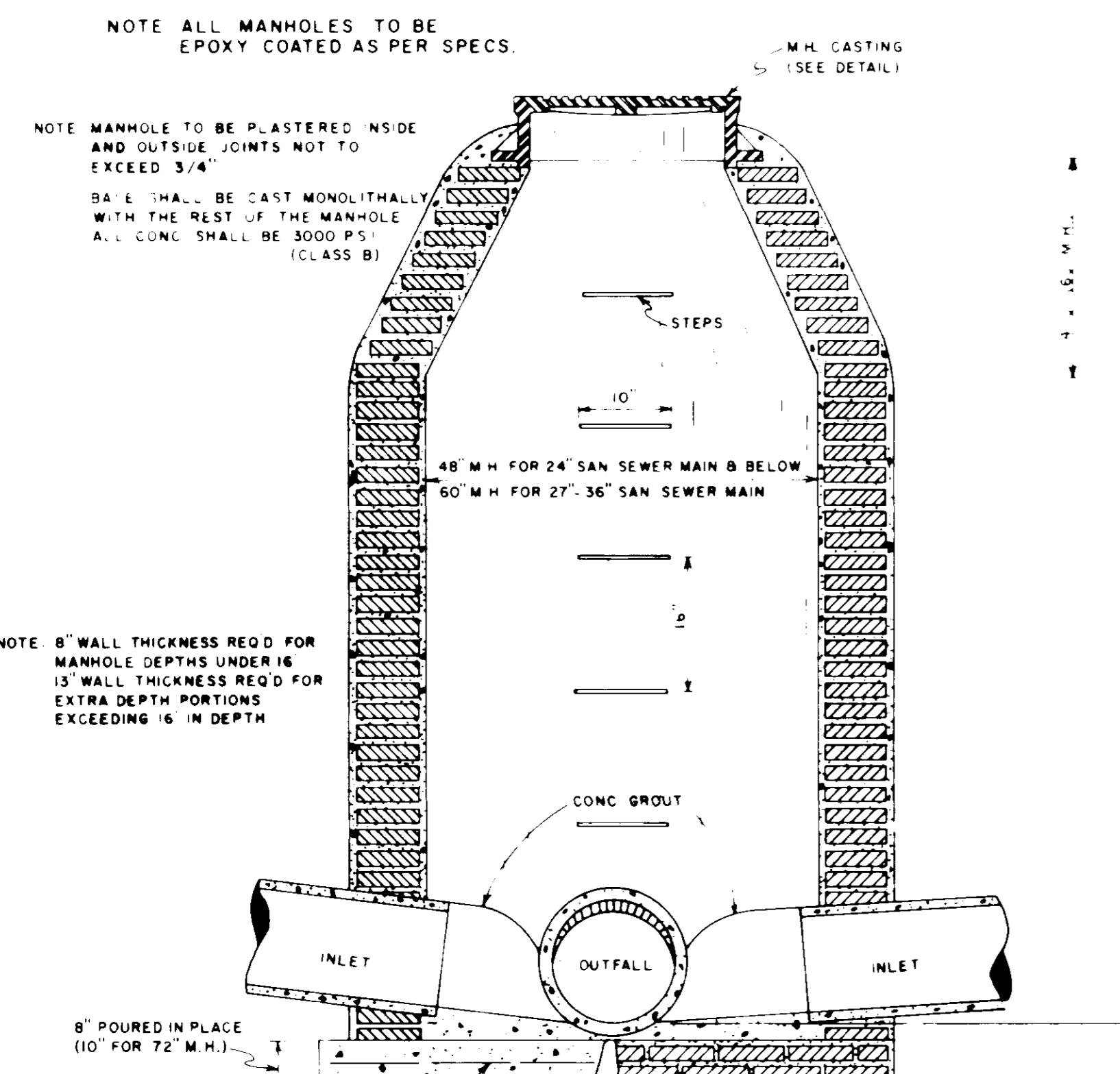
STANDARD WATER DETAILS

PROJECT NO.

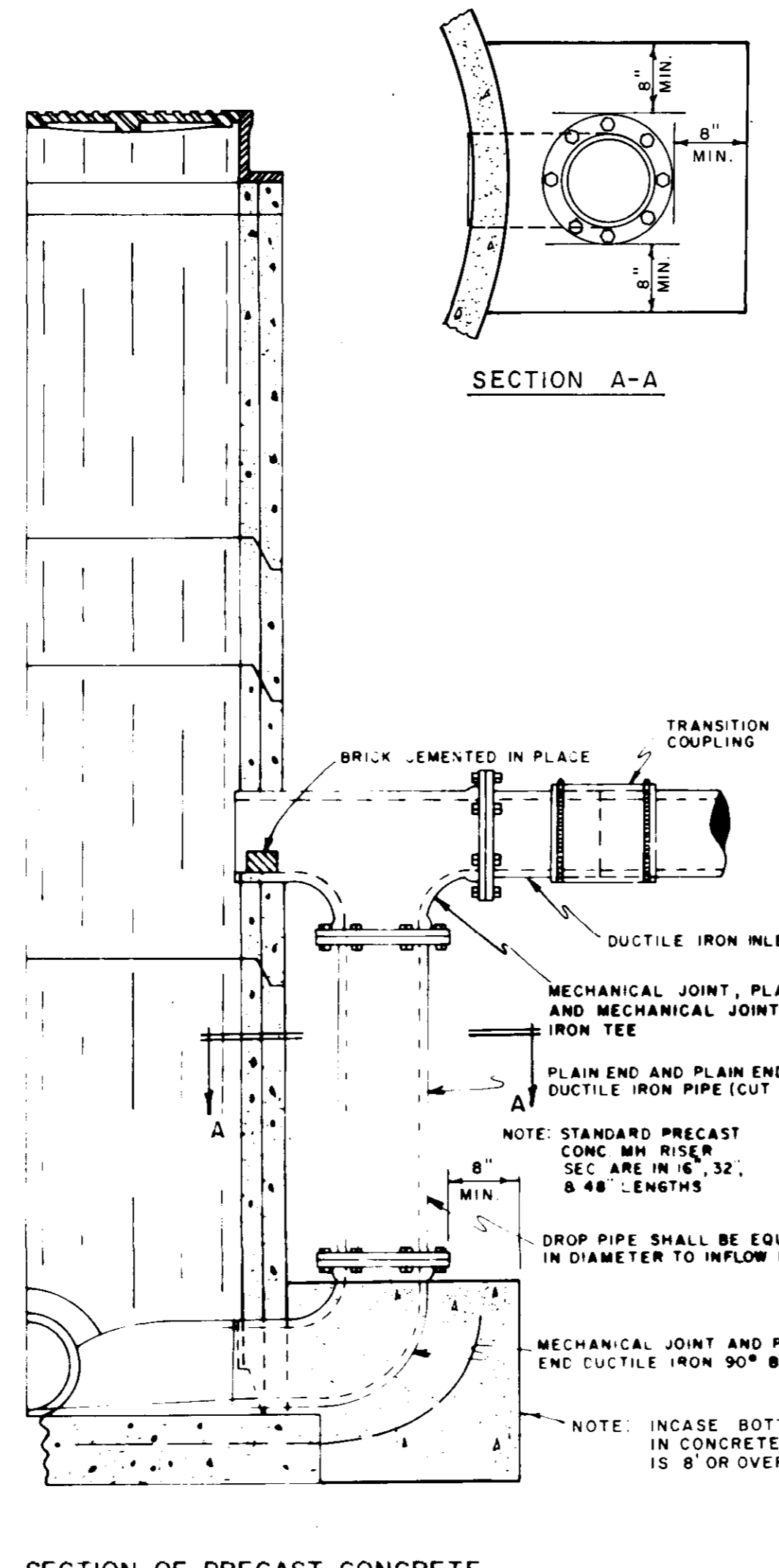
FILE NO. SHEET NO.
ETW
1



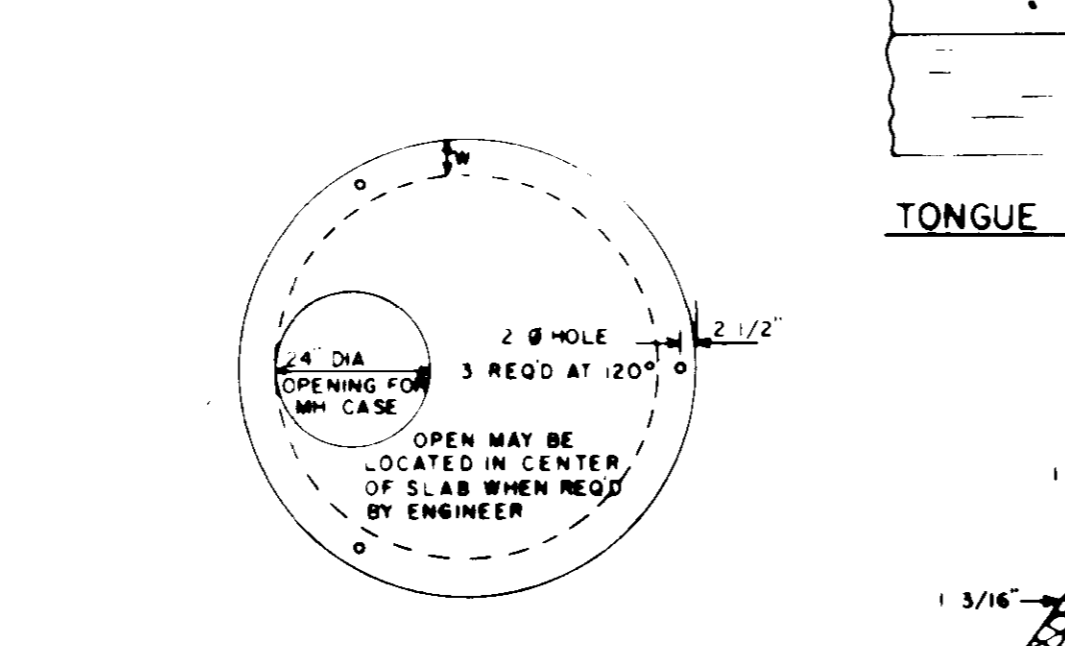
SECTION PRECAST CONCRETE MANHOLE



SECTION STANDARD BRICK MANHOLE



SECTION OF PRECAST CONCRETE MANHOLE WITH DROP CONN



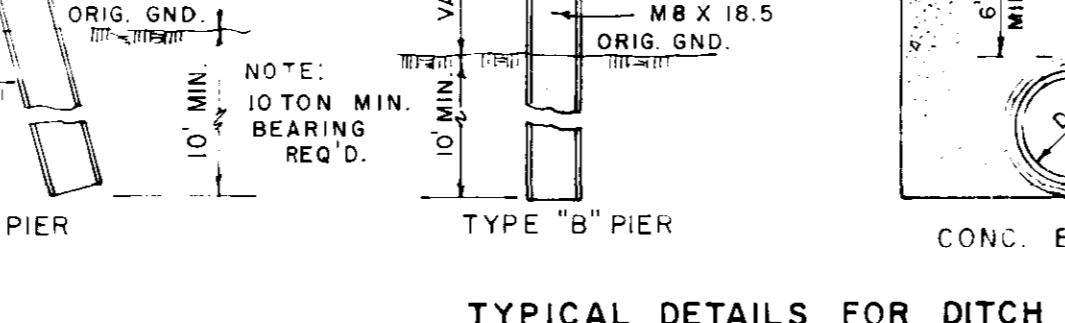
SECTION OF PRECAST CONCRETE MANHOLE

SECTION OF PRECAST CONCRETE MANHOLE

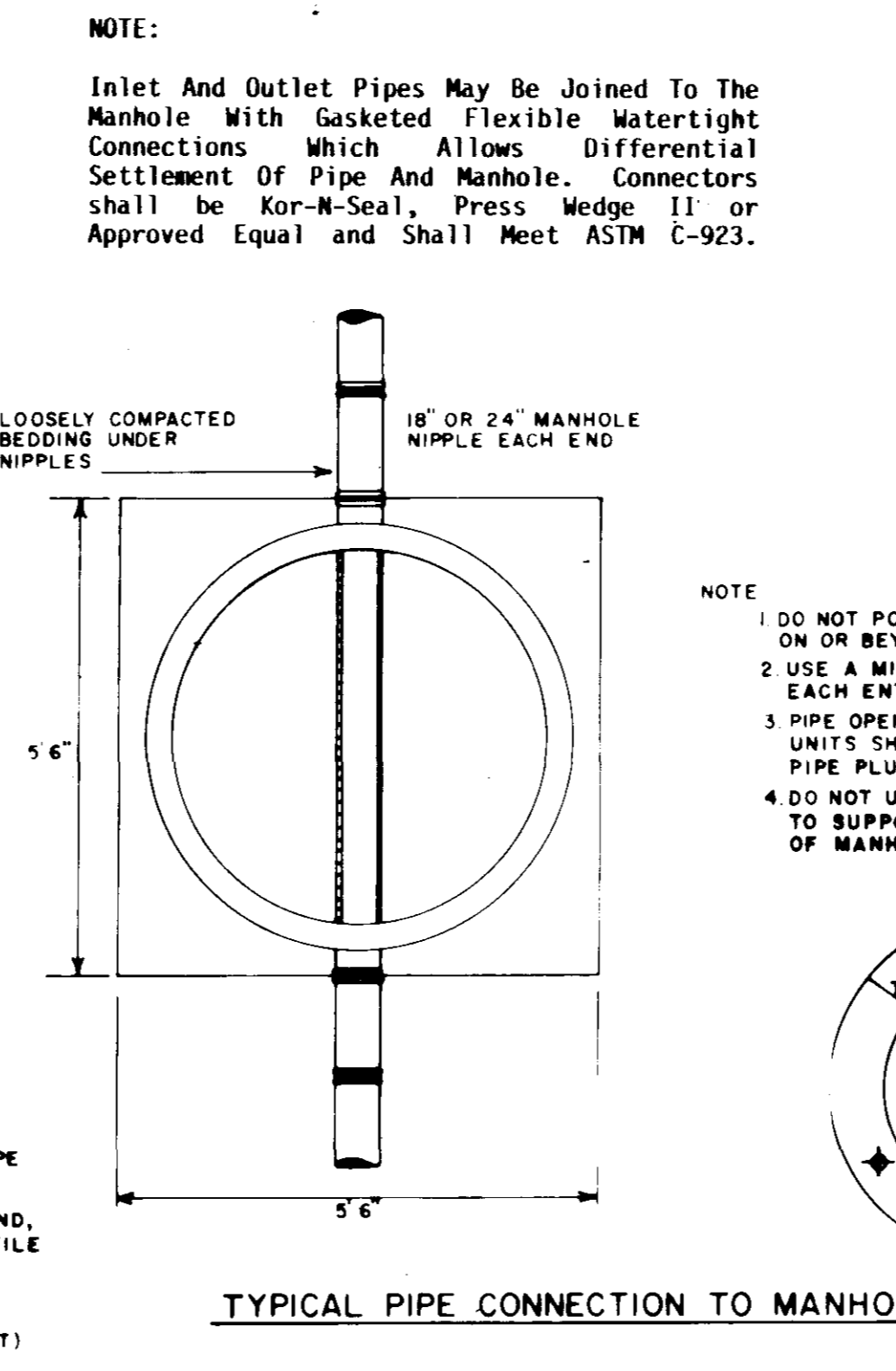
DIA	A	B	C	T	APPROX CONE WT	APPROX RING WT
48"	36"	3 1/2"	5"	5"	2075 LBS	870 LBS
60"	36"	5"	9"	6"	3465 LBS	1250 LBS

DIMENSION AND WEIGHT TABLE

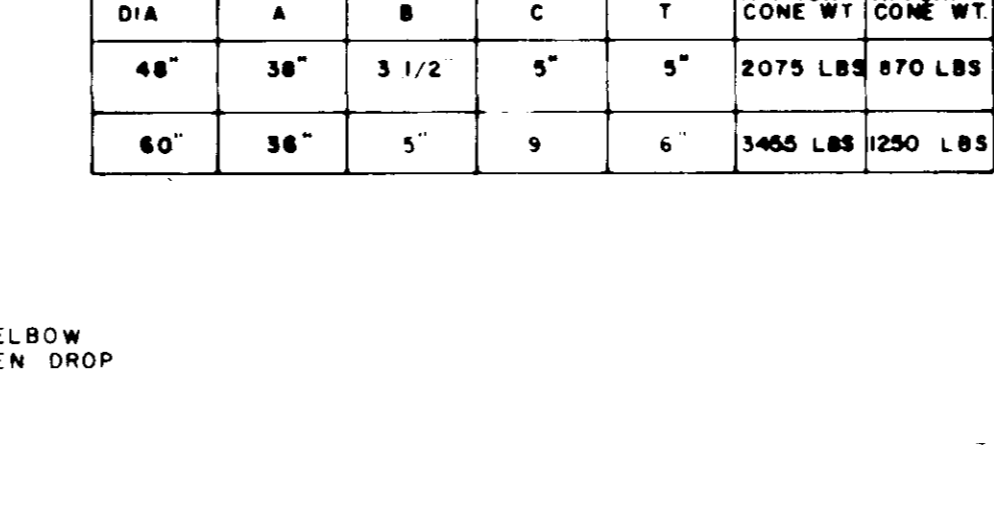
PIPE DIA	W	D	T	EST WT
48"	5'	58"	6"	1,145 LBS
54"	5 1/2'	65"	8"	1,990 LBS
60"	6'	72"	8"	2,515 LBS
65"	6 1/2'	79"	8"	3,090 LBS
72"	7'	86"	8"	3,720 LBS
84"	8'	100"	8"	5,140 LBS
96"	9'	114"	8"	6,775 LBS
108"	9'	126"	8"	8,345 LBS



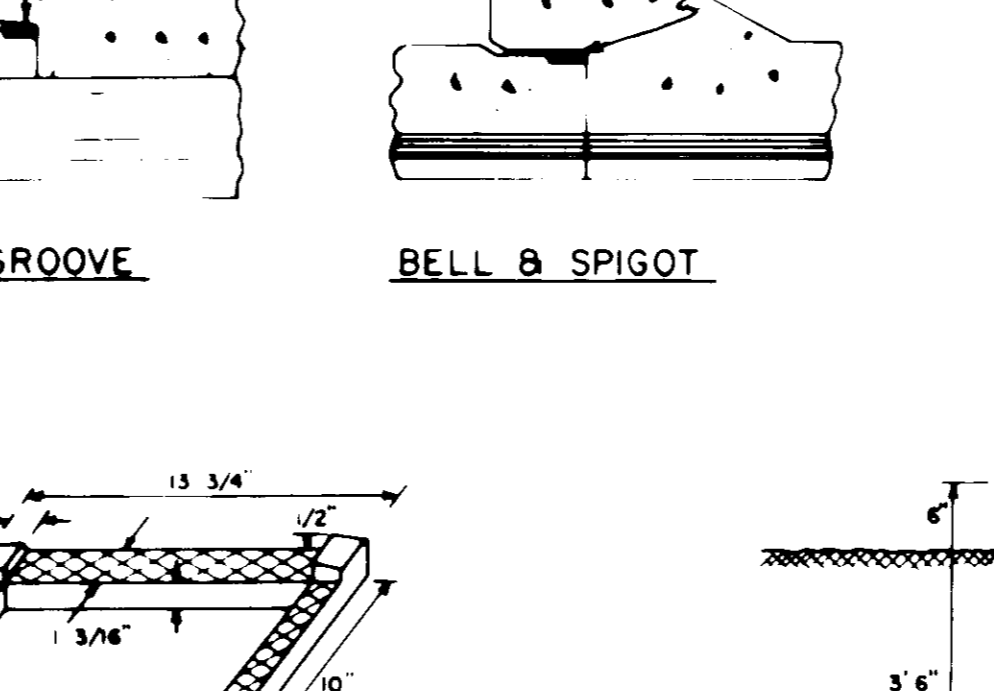
FLAT SLAB MANHOLE TOP



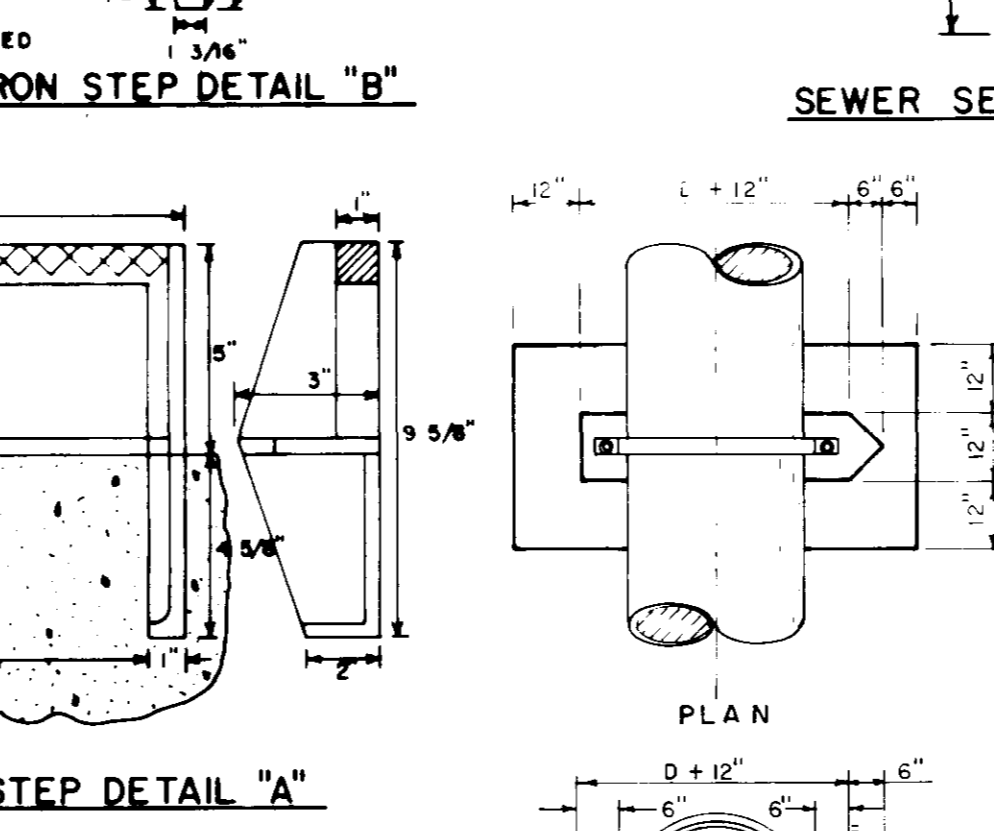
TYPICAL PIPE CONNECTION TO MANHOLE



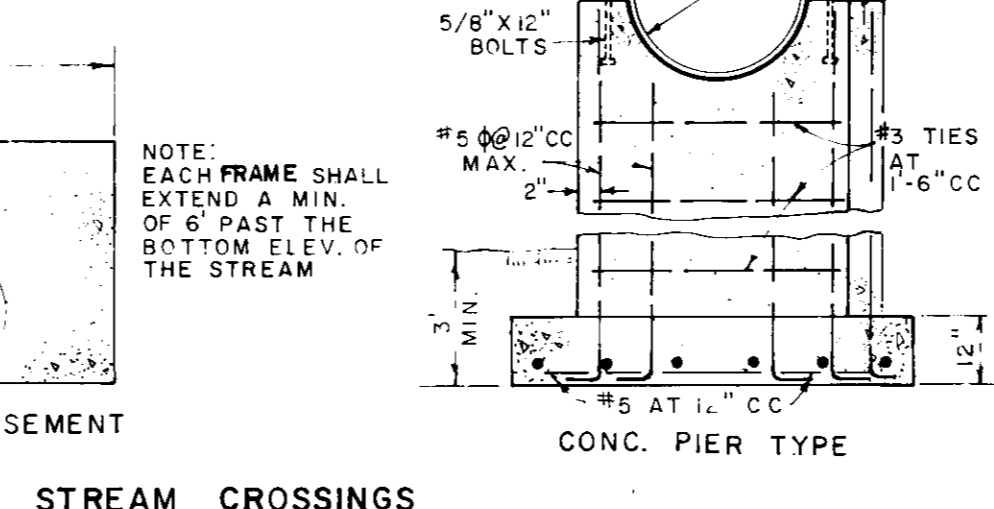
SECTION OF PRECAST CONCRETE MANHOLE



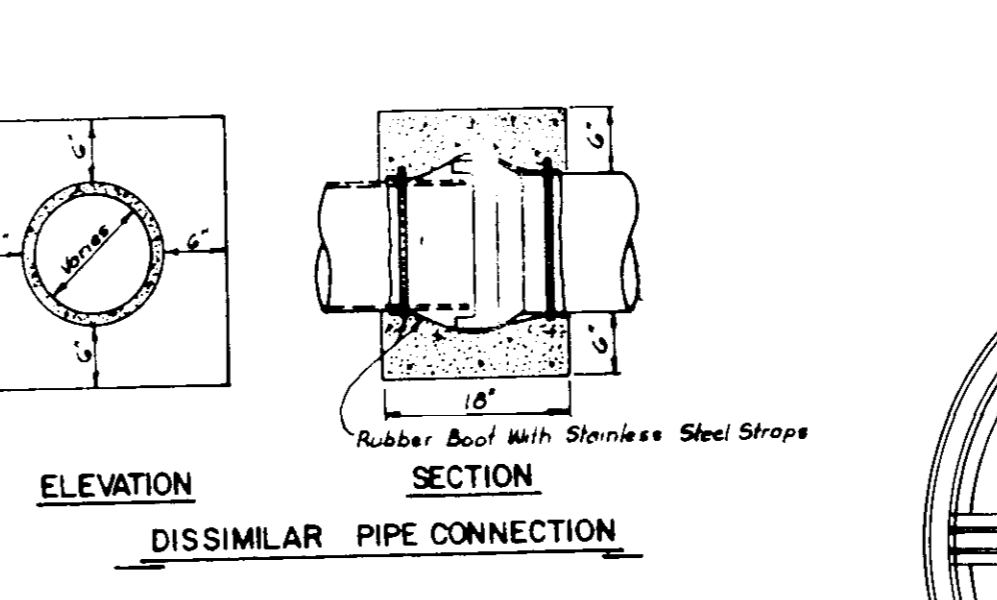
TONGUE & GROOVE BELL & SPIGOT



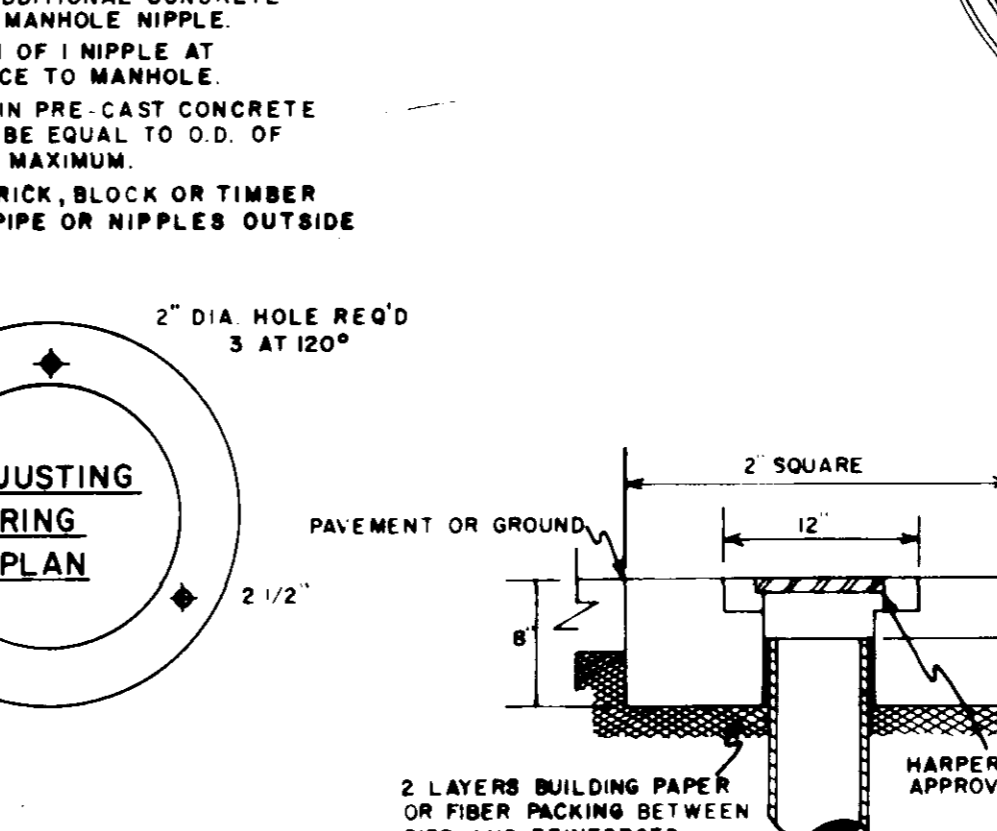
CAST IRON STEP DETAIL 'B'



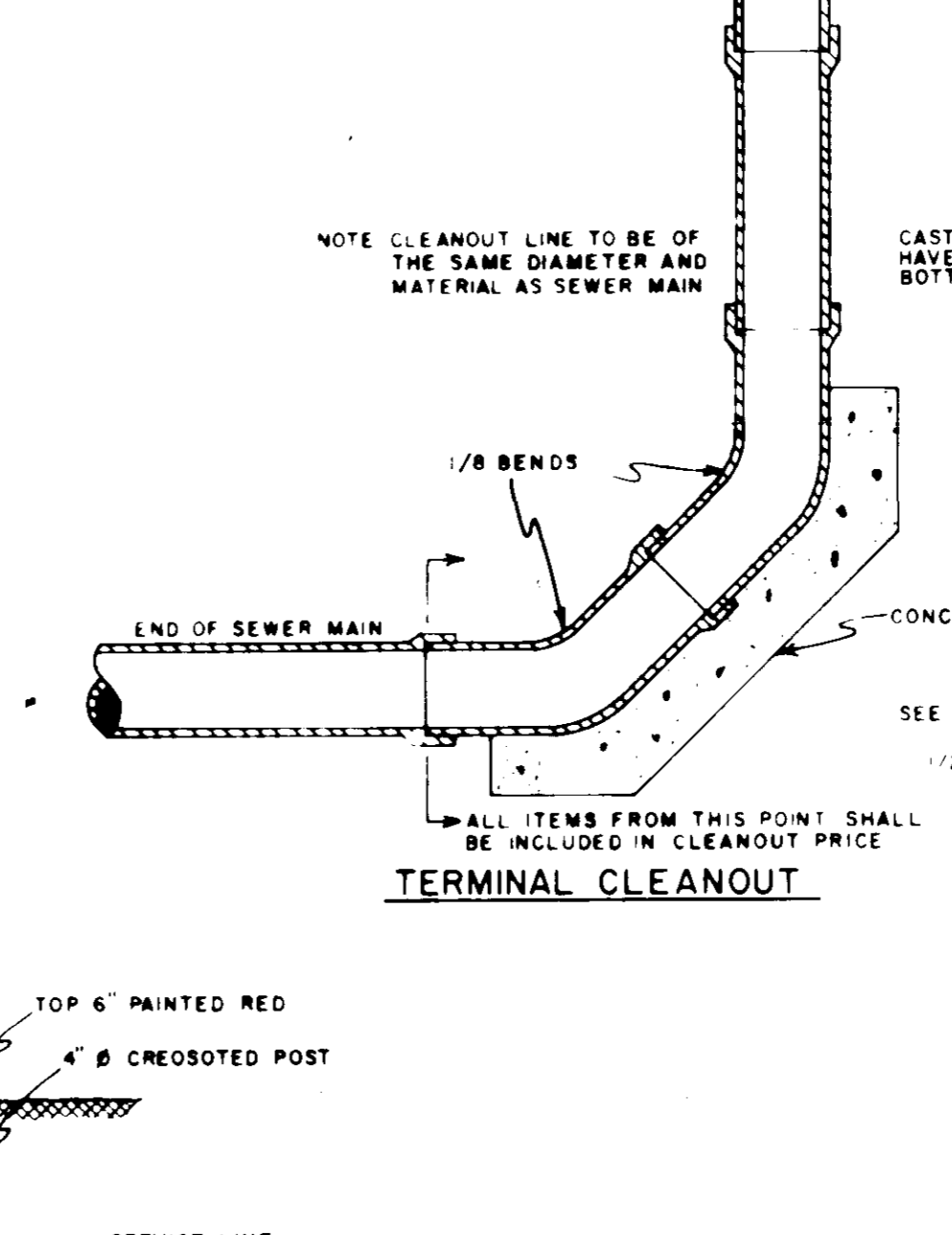
STEP DETAIL 'A'



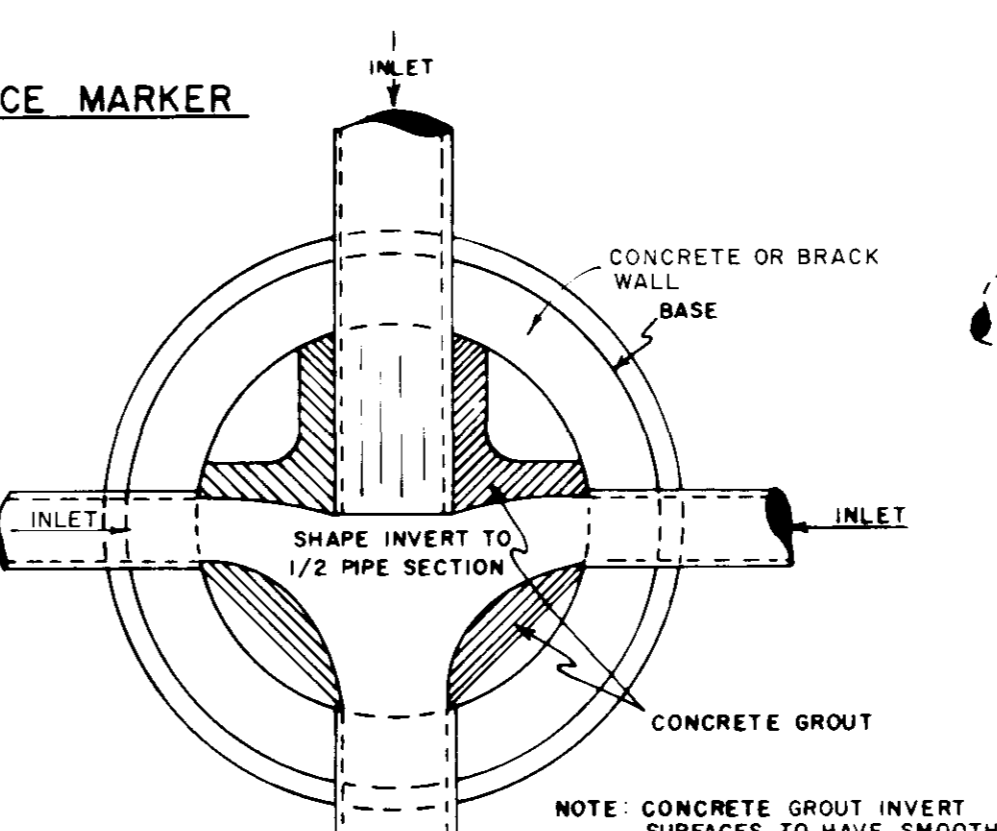
DISSIMILAR PIPE CONNECTION



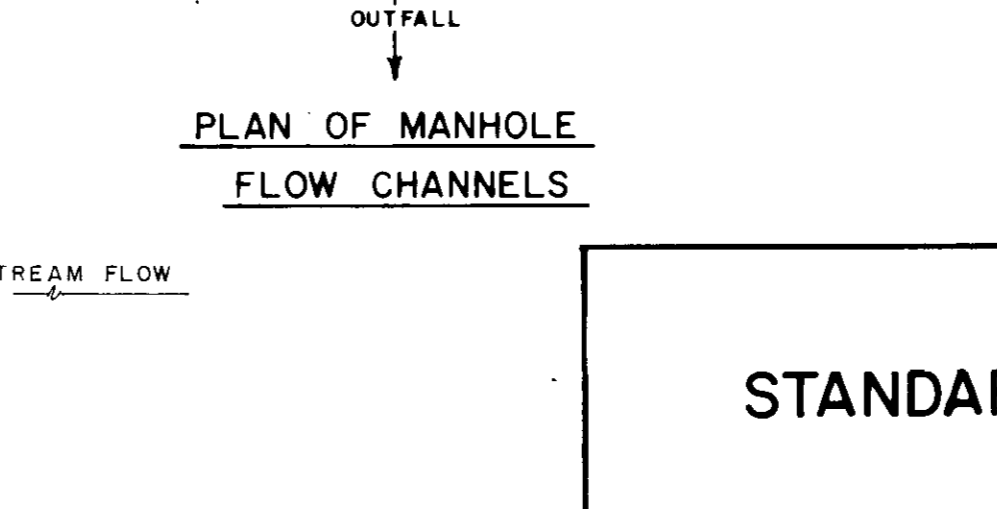
ADJUSTING RING PLAN



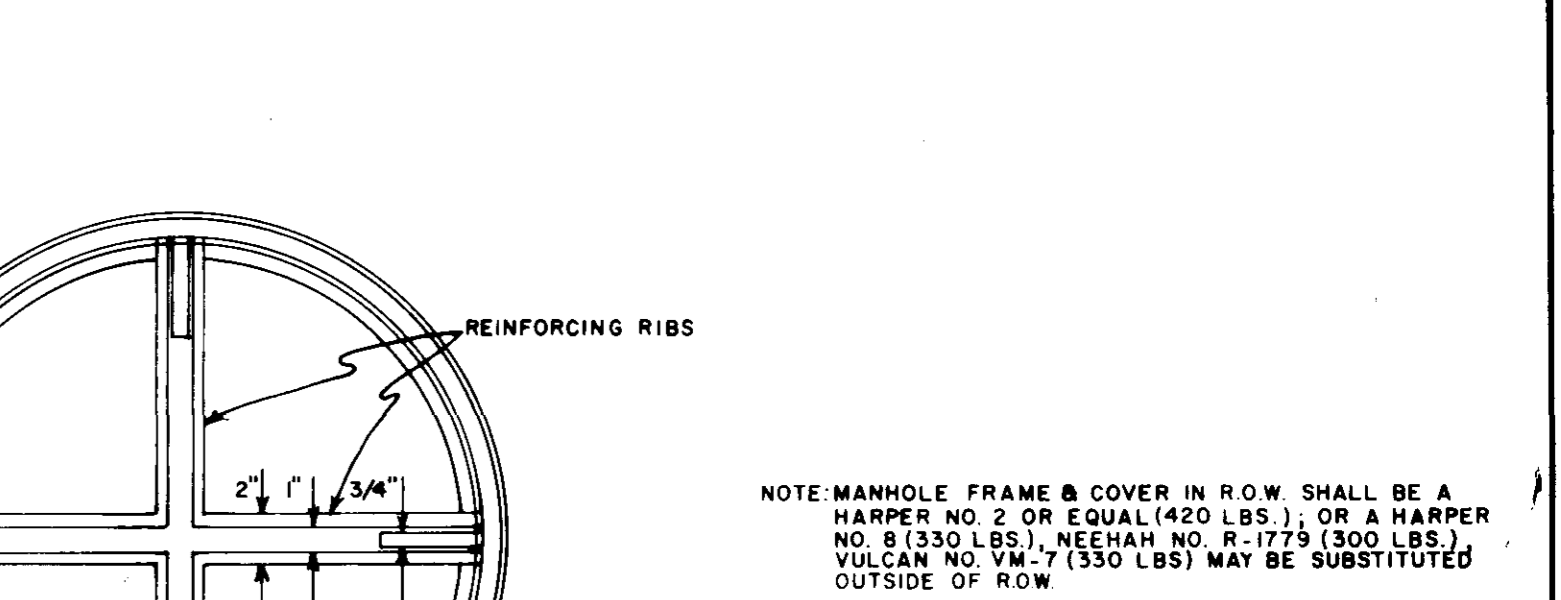
TERMINAL CLEANOUT



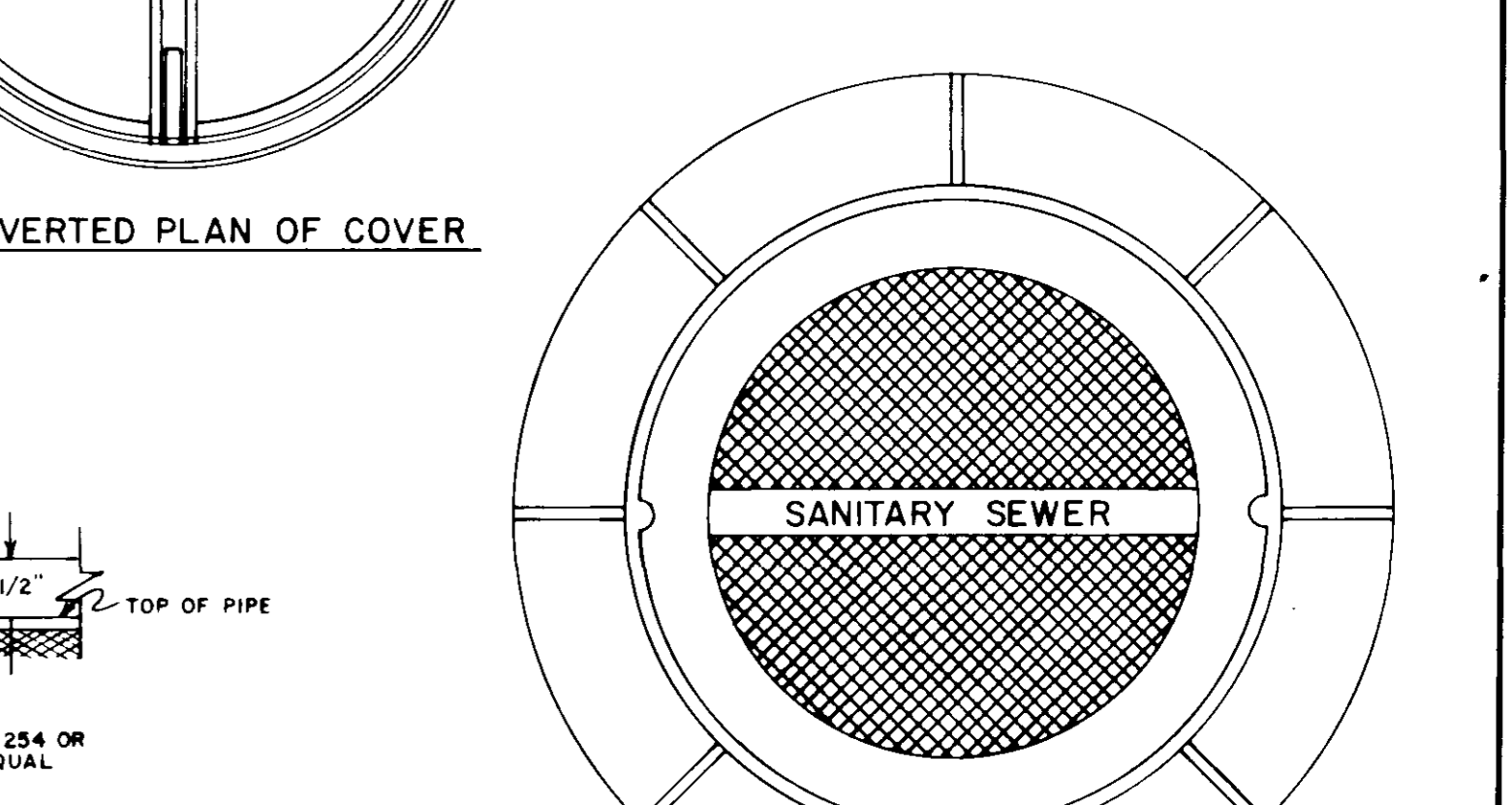
SEWER SERVICE MARKER



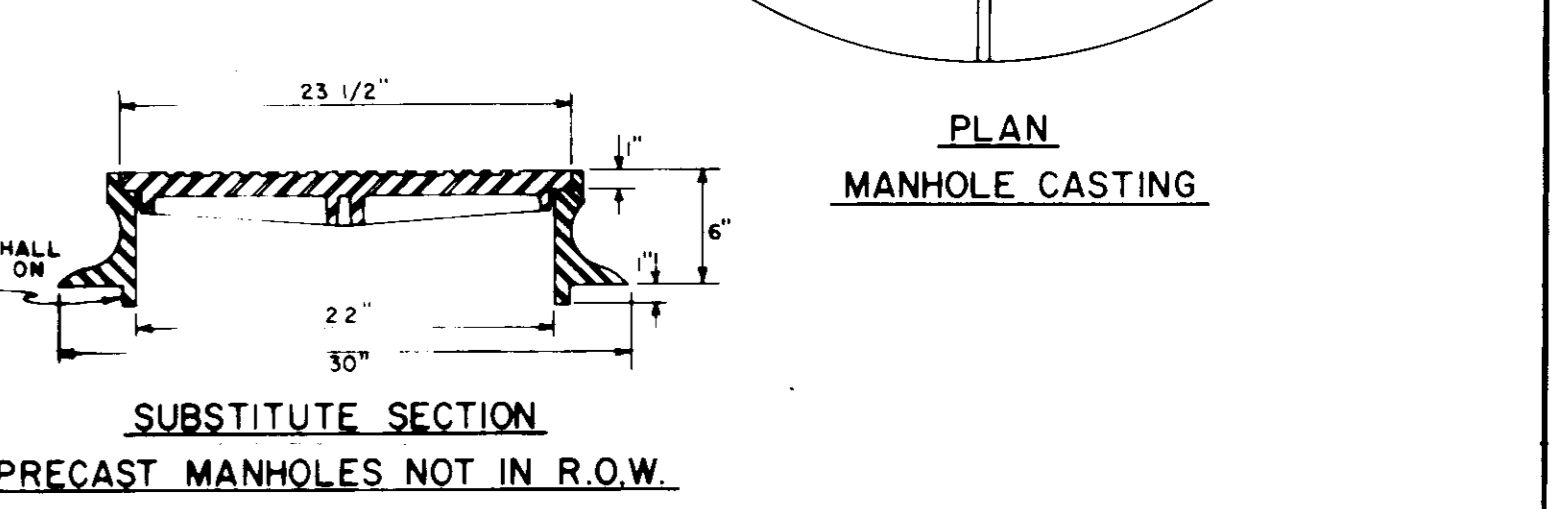
PLAN OF MANHOLE FLOW CHANNELS



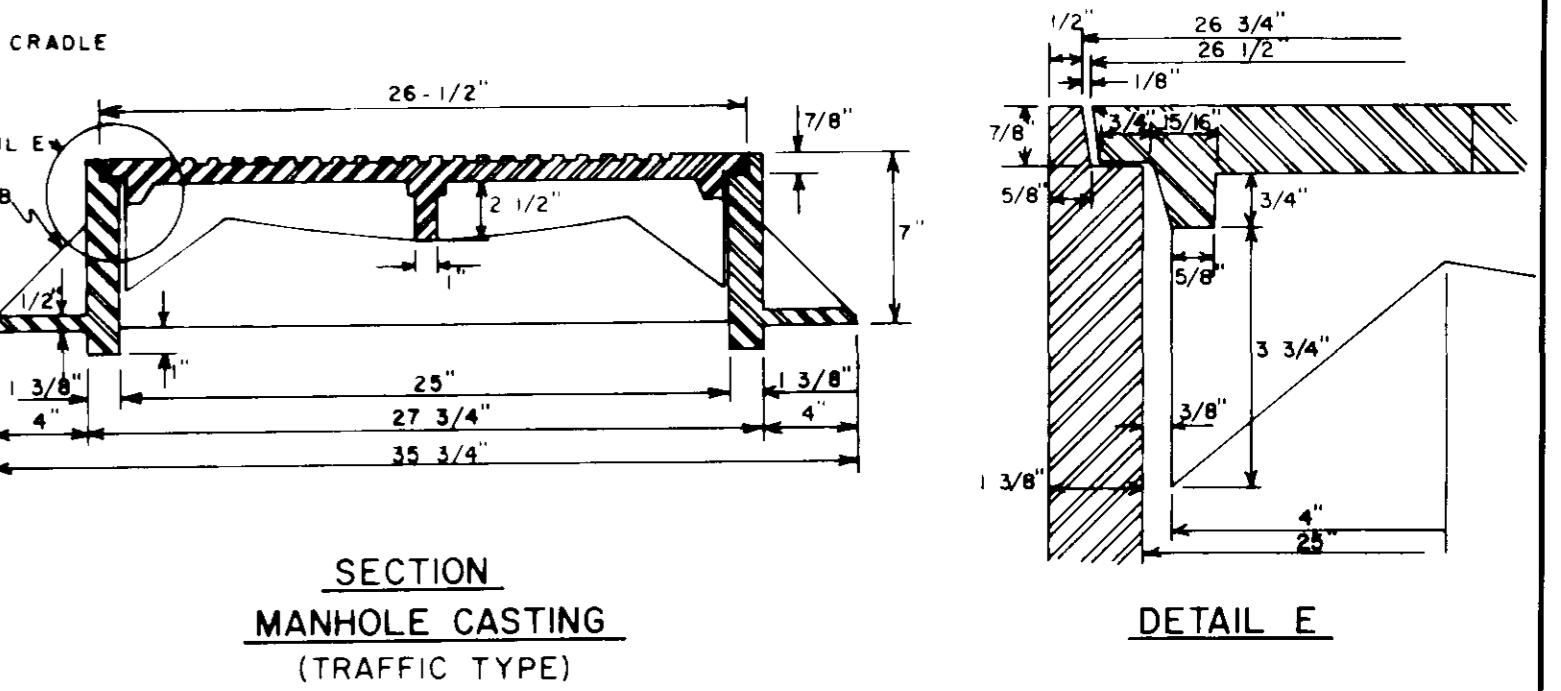
INVERTED PLAN OF COVER



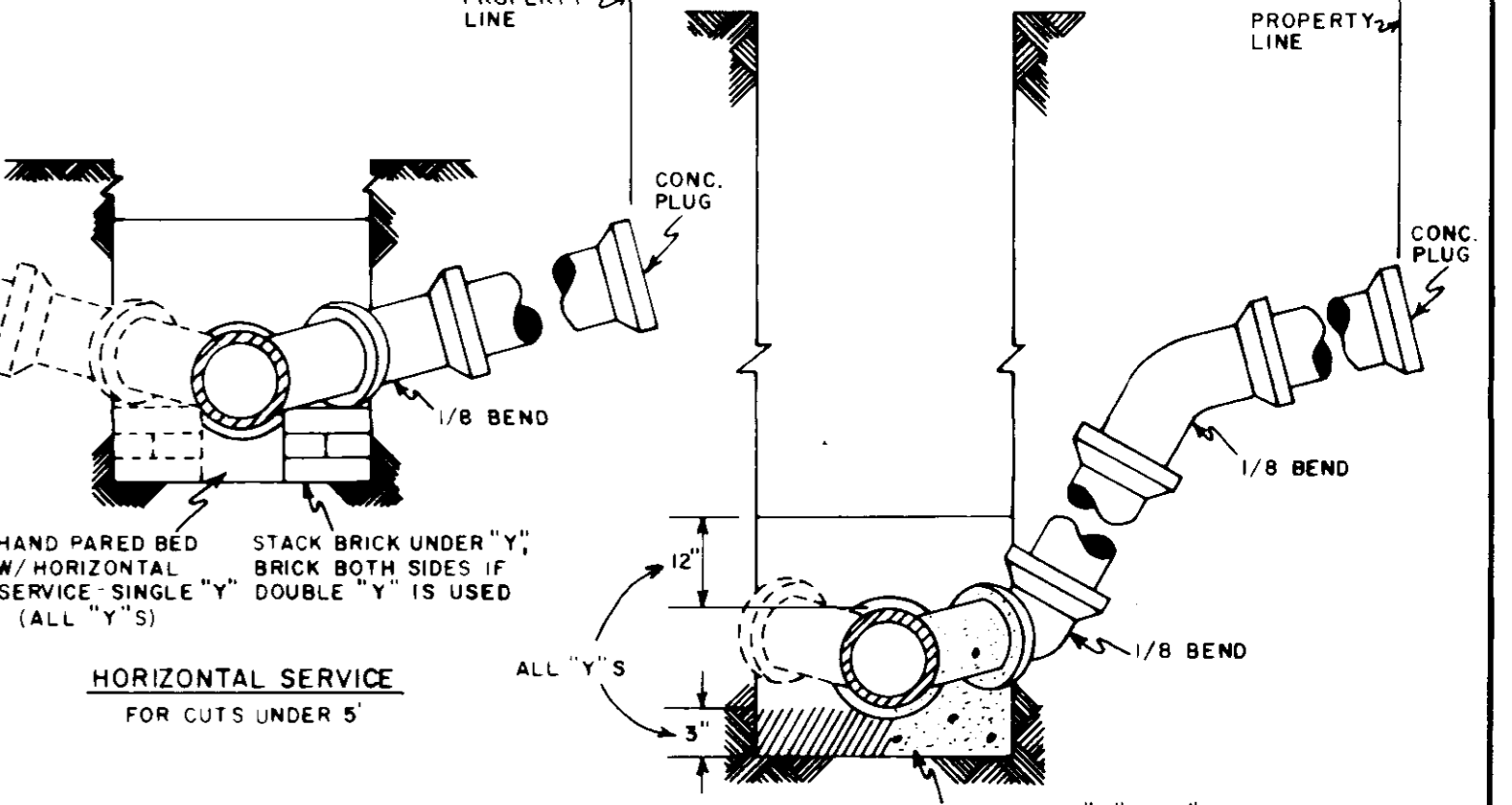
PLAN MANHOLE CASTING



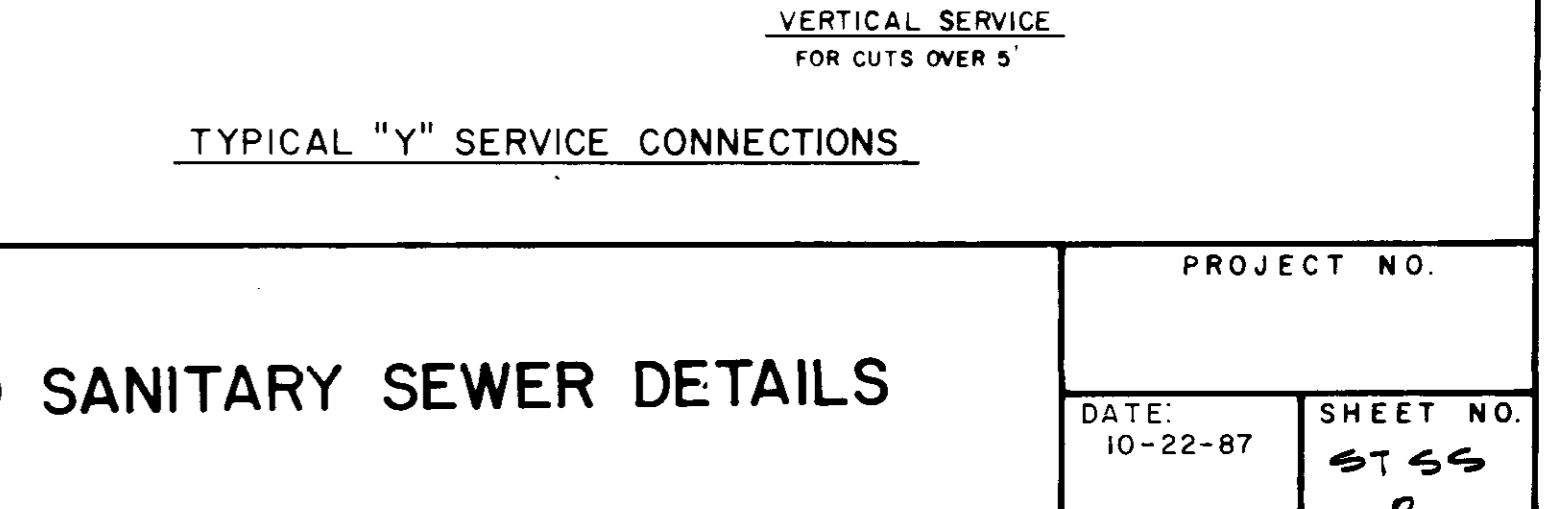
SUBSTITUTE SECTION PRECAST MANHOLES NOT IN R.O.W.



SECTION MANHOLE CASTING (TRAFFIC TYPE)



HORIZONTAL SERVICE



VERTICAL SERVICE

NOTE: Inlet And Outlet Pipes May Be Joined To The Manhole With Gasketed Flexible Watertight Connections Which Allows Differential Settlement Of Pipe And Manhole. Connectors shall be Kor-N-Seal, Press Wedge II or Approved Equal and Shall Meet ASTM C-923.

- NOTE:
- DO NOT POUR ADDITIONAL CONCRETE ON OR BEYOND MANHOLE NIPPLE.
 - USE A MINIMUM OF 1 NIPPLE AT EACH ENTRANCE TO MANHOLE.
 - PIPE OPENING IN PRE-CAST CONCRETE UNITS SHALL BE EQUAL TO O.D. OF PIPE PLUS 6" MAXIMUM.
 - DO NOT USE BRICK, BLOCK OR TIMBER TO SUPPORT PIPE OR NIPPLES OUTSIDE OF MANHOLE.

NOTE: MANHOLE FRAME & COVER IN R.O.W. SHALL BE A HARPER NO. 2 OR EQUAL (420 LBS.), OR A HARPER NO. 8 (330 LBS.), NEEHAW NO. R-1779 (300 LBS.), VULCAN NO. VM-7 (330 LBS.) MAY BE SUBSTITUTED OUTSIDE OF R.O.W.

STANDARD SANITARY SEWER DETAILS

PROJECT NO.	SHEET NO.
DATE: 10-22-87	ST 55
	2