

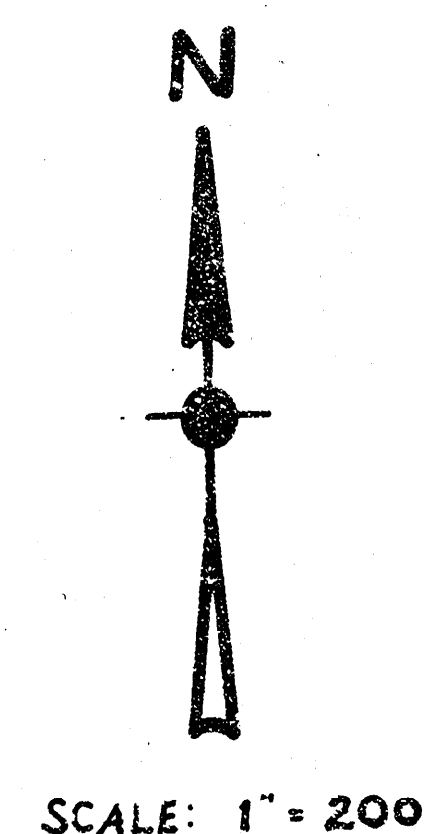
STORM WATER SEWER NO. 199.

OAK CLIFF ESTATES, PHASE I.

CITY OF WICHITA, DEPT. OF ENGINEERING.

PROJ. NO.: 468 - 76 - 245 - 80989-000-000-001.

R. W. BRUGGEMAN.
DIRECTOR OF ENGINEERING/CITY ENGINEER.

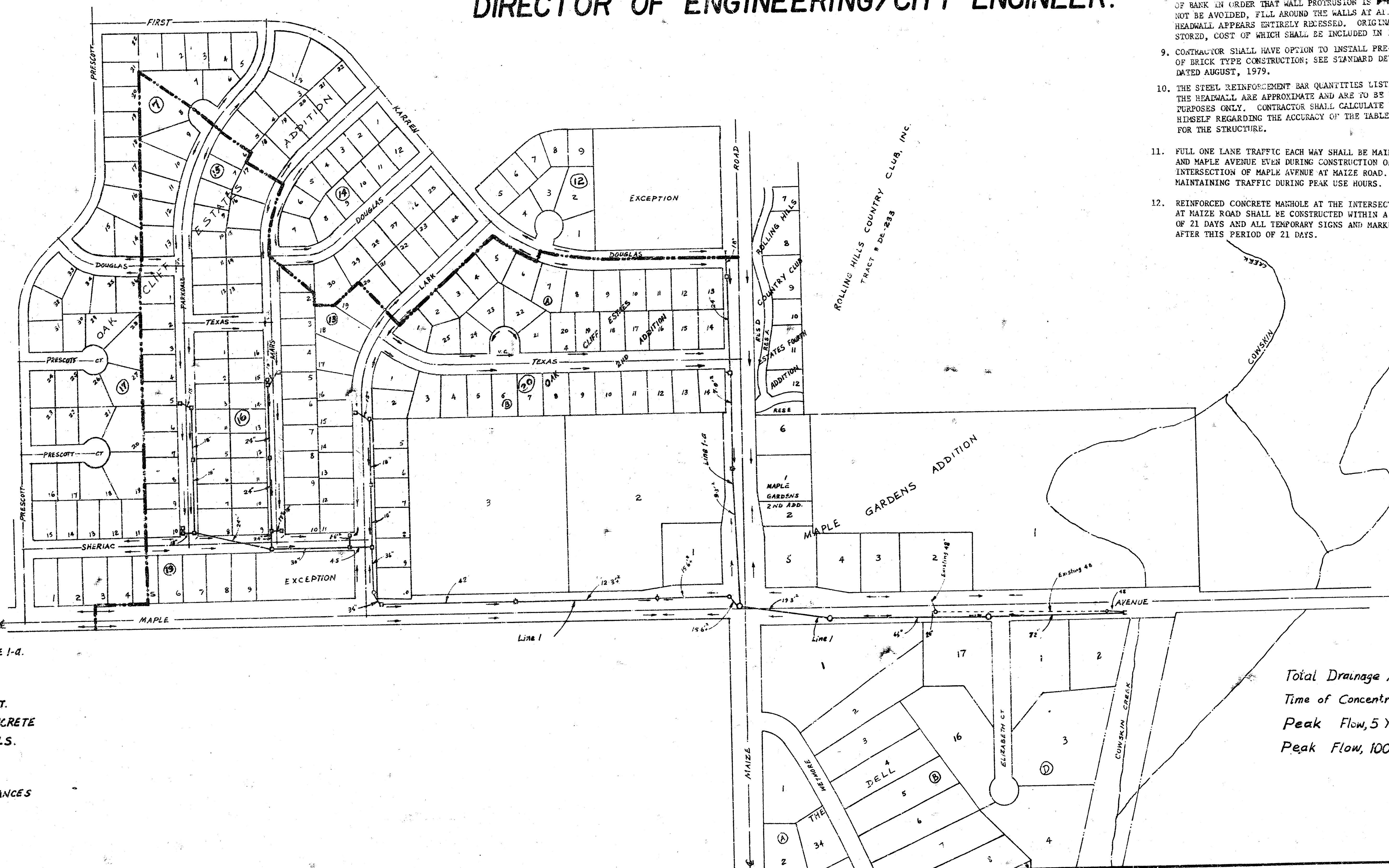


LEGEND

- Benefit District Boundary.
- Lot and Street Right of Way Lines.
- Storm Sewer System with Inlets and Manholes.
- Flow in Street Gutters.

INDEX

- SHEET NO. 1. TITLE SHEET
- 2-10. PLAN AND PROFILE, MAIN LINE (LINE 1)
- 11-12. PLAN AND PROFILE, LINE IN MAIZE RD., LINE 1-A.
- 13. STRUCTURAL DETAIL: HEADWALL
- 14. TRAFFIC PLAN: MAPLE AT MAIZE INT.
- 15. CITY OF WICHITA STD. REINFORCED CONCRETE MANHOLE DETAILS.
- 16. CITY OF WICHITA STD. TYPE I-A CURB INLET DETAILS.
- 17. CITY OF WICHITA STD. SEWER APPURTENANCES TYPE B MANHOLE.



HYDROLOGY

Total Drainage Area, A	81.4 Acres.
Time of Concentration, T _c	27.0 Min.
Peak Flow, 5 Year Freq., Q ₅	220.0 c.f.s.
Peak Flow, 100 Year Freq., Q ₁₀₀	380.0 c.f.s.

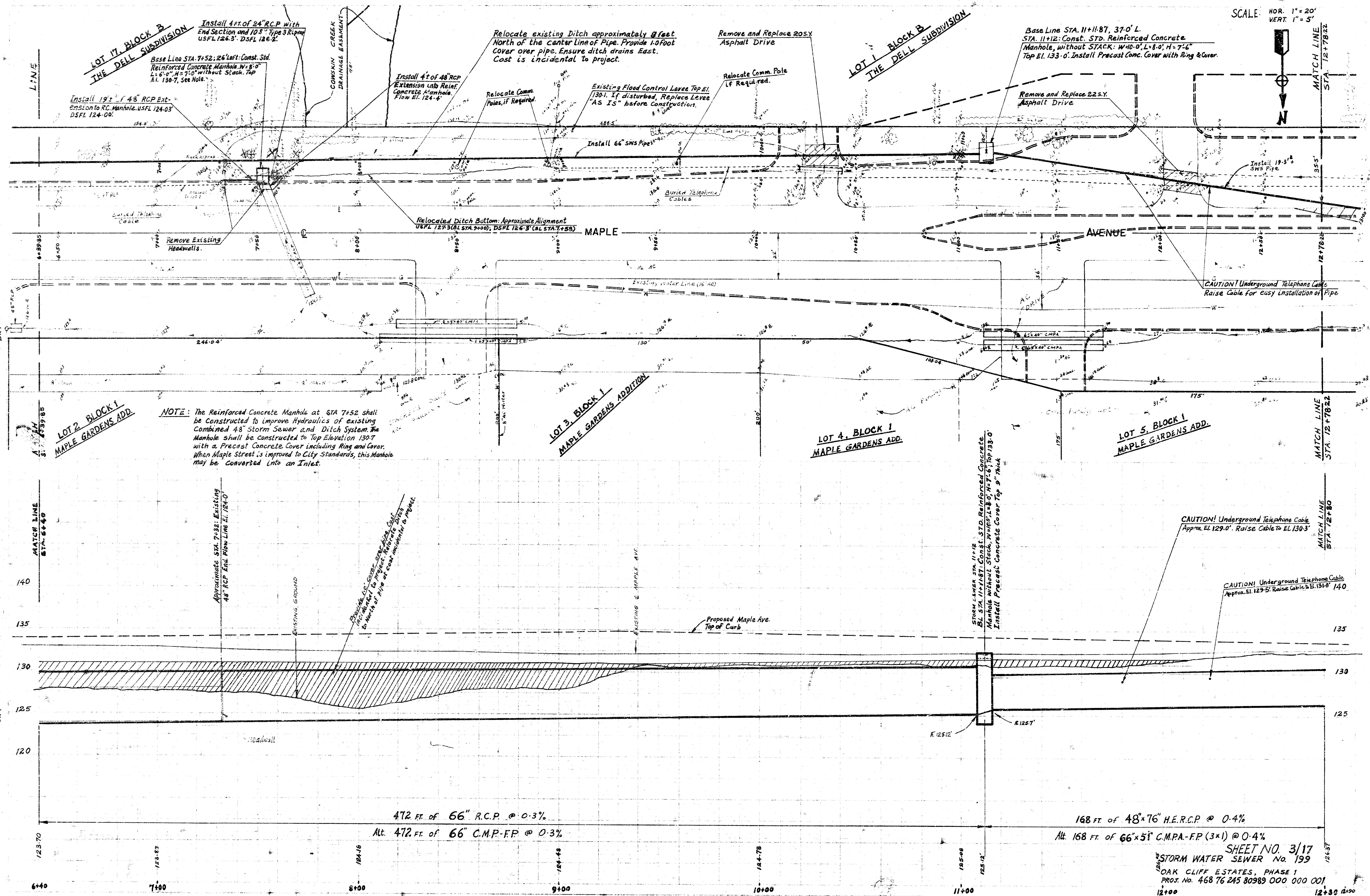
SHEET NO. 1/17

- (GENERAL NOTES)
- CONTRACTOR SHALL COORDINATE WORK WITH PAVING AND SANITARY SEWER CONTRACTORS AND WHEN NECESSARY CONTACT ALL PERTINENT UTILITY COMPANIES, PARTICULARLY SOUTHWESTERN BELL TELEPHONE AND KANSAS GAS & ELECTRIC COMPANY, AND OTHER AGENCIES INVOLVED WITH THIS PROJECT SITE DEVELOPMENT.
 - FIELD ENGINEER SHALL TAKE TIES ON ALL IRONS AND TRIMBLES IN THE PROJECT AREA PRIOR TO CONSTRUCTION. FIELD ENGINEER SHALL REPLACE ALL SUCH IRONS AND TRIMBLES DISTURBED DURING CONSTRUCTION.
 - THE LATERAL DISTANCES OF THE CURB INLETS AND MANHOLES NOTED ON THE PLANS ARE APPROXIMATE SINCE THE CURB LOCATIONS SHOWN IN THESE PLANS ARE NOT ACCURATE. THE FIELD ENGINEER SHALL REFER TO PAVING PLANS UNDER CONTRACT FOR LATERAL LOCATIONS OF CURB INLETS AND MANHOLES.
 - THE LOCATION OF THE FLOOD CONTROL LEVEE ALONG THE WEST BANK OF CONSUMM CREEK AND ALONG SOUTH LINE OF MAPLE AVENUE IS AS SHOWN ON SHEETS 2 AND 3 OF THE PLANS. IF THESE LEVEES ARE DISTURBED CONTRACTOR SHALL REPLACE THEM "AS IS" BEFORE CONSTRUCTION. LEVEE REPLACEMENT SHALL BE PERFORMED IN 6" LIPS OF IDENTICAL MATERIAL COMPACTED TO A MINIMUM DRY DENSITY OF 95 PERCENT WHEN TESTED IN ACCORDANCE WITH METHOD ASTM D-698. THE ORIGINAL GROUND SURFACE, INCLUDING IDENTICAL GRASS COVER, SHALL BE RESTORED TO PROTECT THE LEVEE FROM EROSION FORCES OF NATURE. COST OF SUCH ITEM SHALL BE INCLUDED IN COST OF LINEAL FOOT OF PIPE INSTALLED.
 - ALL CONCRETE SHALL BE "6-SACK CONCRETE" UNLESS OTHERWISE NOTED.
 - EARTHWORK FOR AND DOWNSTREAM FROM HEADWALL AND FOR RIPRAP SHALL BE PAID FOR IN ITEMS BID FOR HEADWALL, PIPES AND/OR RIPRAP.
 - TREES TO BE REMOVED ARE MARKED WITH "X", EXCEPT THAT ANY TREE MARKED FOR REMOVAL WHICH, IN THE OPINION OF THE ENGINEER, CAN BE SAVED, SHALL BE SAVED. CONTRACTOR SHALL CONTACT EACH PROPERTY OWNER ALONG THE SOUTH LINE OF MAPLE AVENUE (SHEETS 2 AND 3) WHOSE LAWN COULD BE DISTURBED BY THE PROJECT. EVERY ATTEMPT SHALL BE MADE TO RESTORE THE GROUND COVER AS EXISTING BEFORE CONSTRUCTION AT THE DIRECTION OF FIELD ENGINEER. THE ALIGNMENT OF THE STORM SEWER ON SHEETS 2 AND 3 MAY BE SLIGHTLY VARIED AS DIRECTED BY THE FIELD ENGINEER TO AVOID DESTROYING A TREE, TO THE SATISFACTION OF THE ADJACENT PROPERTY OWNER.
 - THE HEADWALL AT PIPES OUTFALL SHALL BE CONSTRUCTED TO ALIGN WITH THE SLOPE OF BANK IN ORDER THAT WALL PROTRUSION IS MINIMUM. WHERE SUCH PROTRUSION CANNOT BE AVOIDED, FILL AROUND THE WALLS AT AN APPROXIMATE 5:1 SIDE SLOPES SO HEADWALL APPEARS ENTIRELY RECESSED. ORIGINAL VEGETATION COVER SHALL BE RESTORED, COST OF WHICH SHALL BE INCLUDED IN ITEM BID FOR HEADWALL.
 - CONTRACTOR SHALL HAVE OPTION TO INSTALL PRE-CAST TYPE I-A CURB INLET IN LIEU OF BRICK TYPE CONSTRUCTION; SEE STANDARD DETAIL, PRE-CAST TYPE I-A INLET DATED AUGUST, 1979.
 - THE STEEL REINFORCEMENT BAR QUANTITIES LISTED AND DRAWN ON SHEET NO. 13 FOR THE HEADWALL ARE APPROXIMATE AND ARE TO BE USED STRICTLY FOR INFORMATION PURPOSES ONLY. CONTRACTOR SHALL CALCULATE HIS OWN QUANTITIES TO SATISFY HIMSELF REGARDING THE ACCURACY OF THE TABLE AND THE REINFORCEMENT REQUIRED FOR THE STRUCTURE.
 - FULL ONE LANE TRAFFIC EACH WAY SHALL BE MAINTAINED ON MAIZE ROAD AND MAPLE AVENUE EVEN DURING CONSTRUCTION OF THE MANHOLE AT THE INTERSECTION OF MAPLE AVENUE AT MAIZE ROAD. THIS SHALL INCLUDE MAINTAINING TRAFFIC DURING PEAK USE HOURS.
 - REINFORCED CONCRETE MANHOLE AT THE INTERSECTION OF MAPLE AVENUE AT MAIZE ROAD SHALL BE CONSTRUCTED WITHIN A MAXIMUM TIME LIMIT OF 21 DAYS AND ALL TEMPORARY SIGNS AND MARKERS SHALL BE REMOVED AFTER THIS PERIOD OF 21 DAYS.

D. KESTER, KRUG SEP 20
Y. D. DESAI

D. KESTER, KRUG SEP 20
Y. D. DESAI

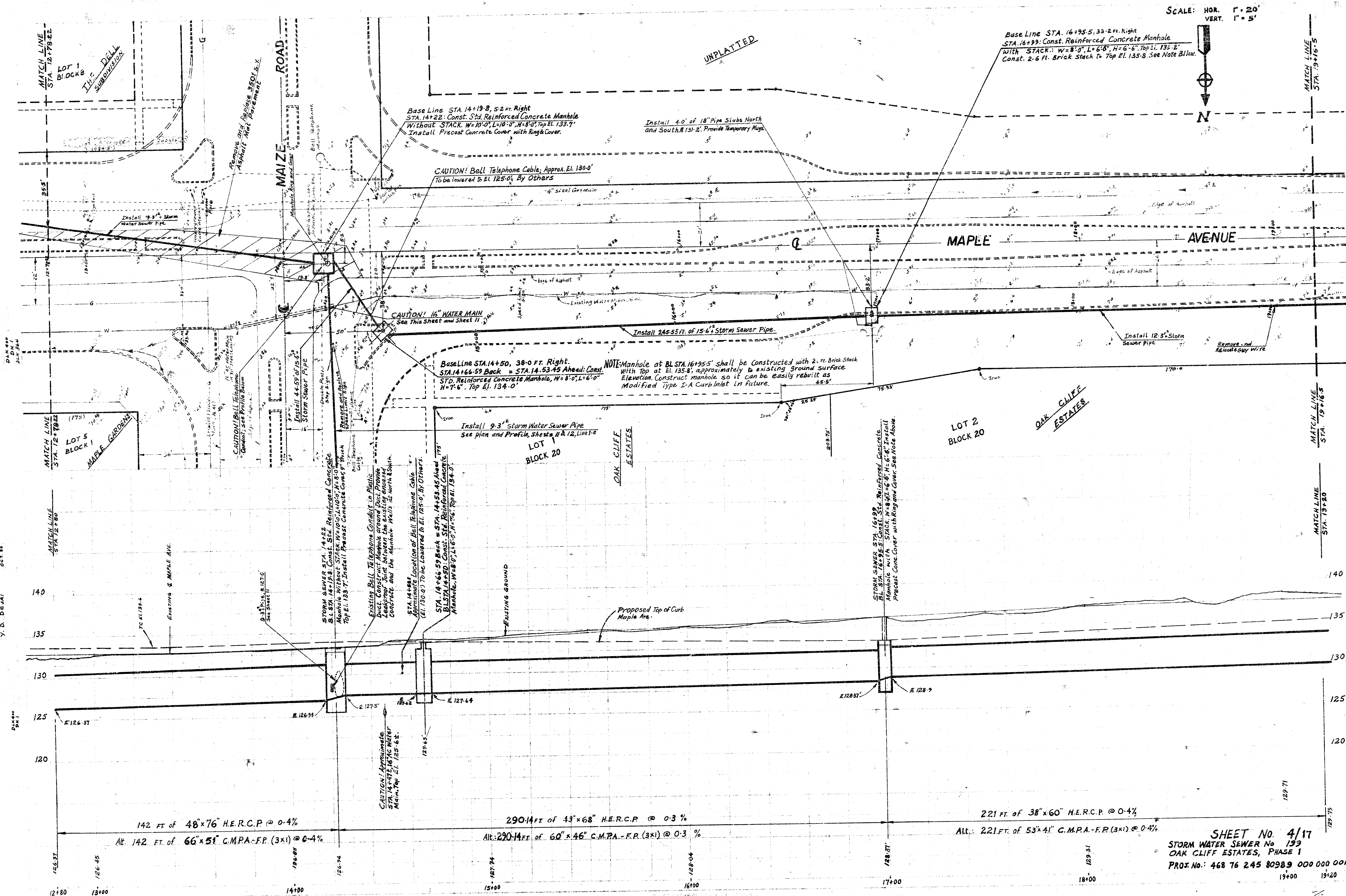
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SHEET NO. 3/17
STORM WATER SEWER No. 199
OAK CLIFF ESTATES, PHASE 1
PROJ. NO. 468 76 245 80989 000 000 001
12+00 12+30 12+90

D. KESSLER, KRAUS SEP 80
Y. D. DESAI

D. KESSLER, KRAUS SEP 80
Y. D. DESAI



SCALE: HOR. 1" = 20'
VERT. 1" = 5'



TRACT NO. DE-365-5

Base Line Sta. 21+75.5, 29.5 Ft. Right
Sta. 21+79 Const. Std. Type I-A Curb Inlet, W=8'-0"
Top El. 138'-8", Install Precast Concrete Cover. Fill around
to existing Ground Surface El. 138'-8", See NOTE Below

MATCH LINE
STA. 19+16.5

MATCH LINE
STA. 25+46.5

LOT 2, BLOCK 20
OAK CLIFF ESTATES

LOT 3, BLOCK 20
OAK CLIFF ESTATES

NOTE: The Inlet at Base Line Sta. 21+75.5 is to be constructed as Brick
Manhole to Elevation approx. 138'-0". It shall be covered
to El. 138'-7" with precast concrete cover with 24" Dia. Manhole
Ring and Cover. In future when Maple Avenue is constructed
with Curb and Gutter, this inlet shall be modified to work
as Type I-A Curb Inlet, W=8'-0".

Install 4.0 Ft. of 24" Pipe
Stub North R.E. 133.5.

Install 123' of Storm
Water Sewer Pipe

Install 371 Ft. of 42" Storm
Water Sewer Pipe.

Remove and Replace
20 sq. Gravel Drive

LOT 10, BLOCK 20
OAK CLIFF ESTATES

MATCH LINE
STA. 25+50

SHEET No. 5/17
STORM WATER SEWER NO. 139
OAK CLIFF ESTATES, PHASE I
PROJ. No. 468 76 245 80989 000 000.001
25+00 25+50 25+60

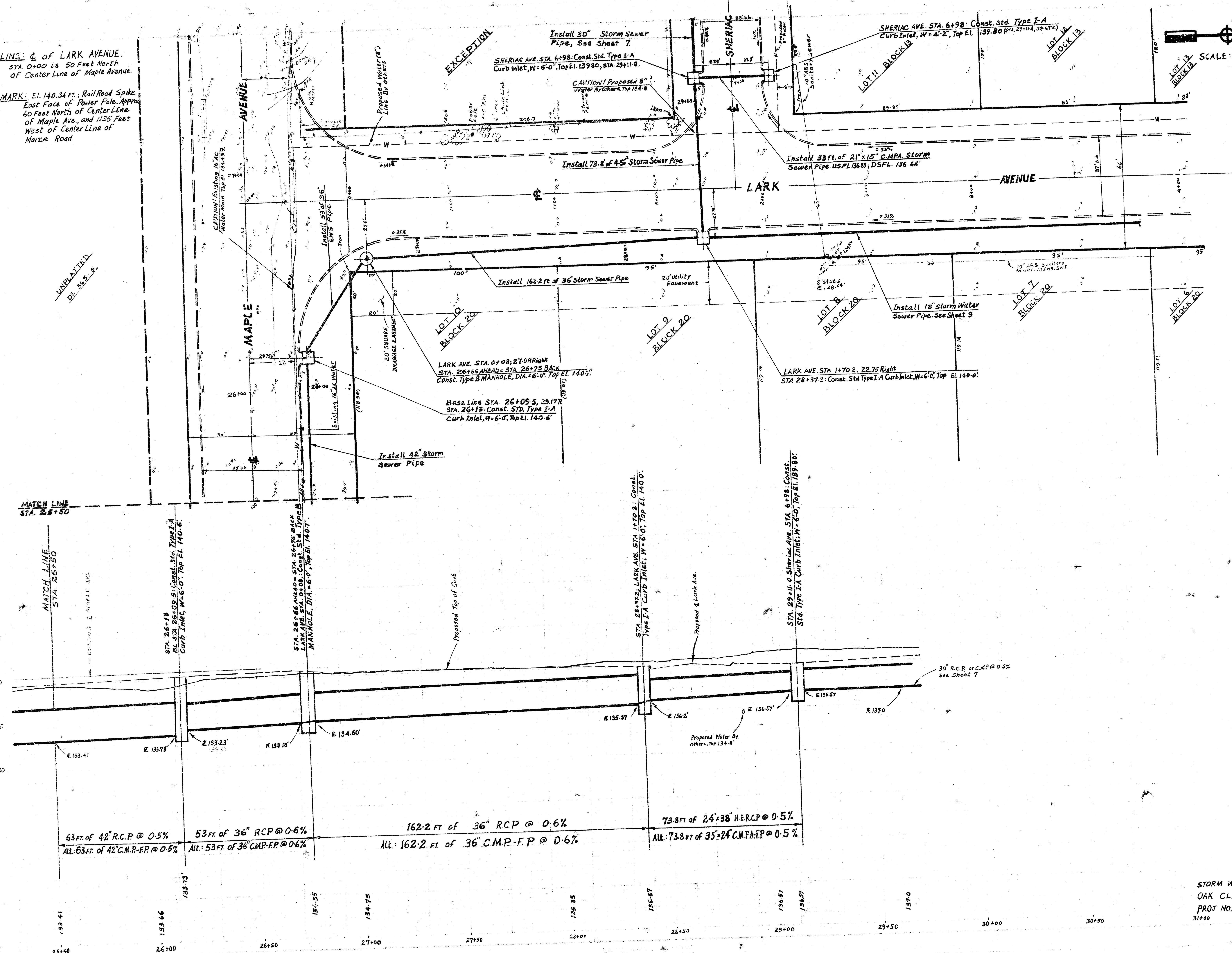
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BASE LINE: ϕ OF LARK AVENUE.
STA. 0+00 is 50 Feet North
OF Center Line of Maple Avenue.

BENCH MARK: EL. 140.34 FT.; Railroad Spike
East Face of Power Pole. Approx.
60 Feet North of Center Line
OF Maple Ave., and 1135 Feet
West of Center Line of
Maize Road.

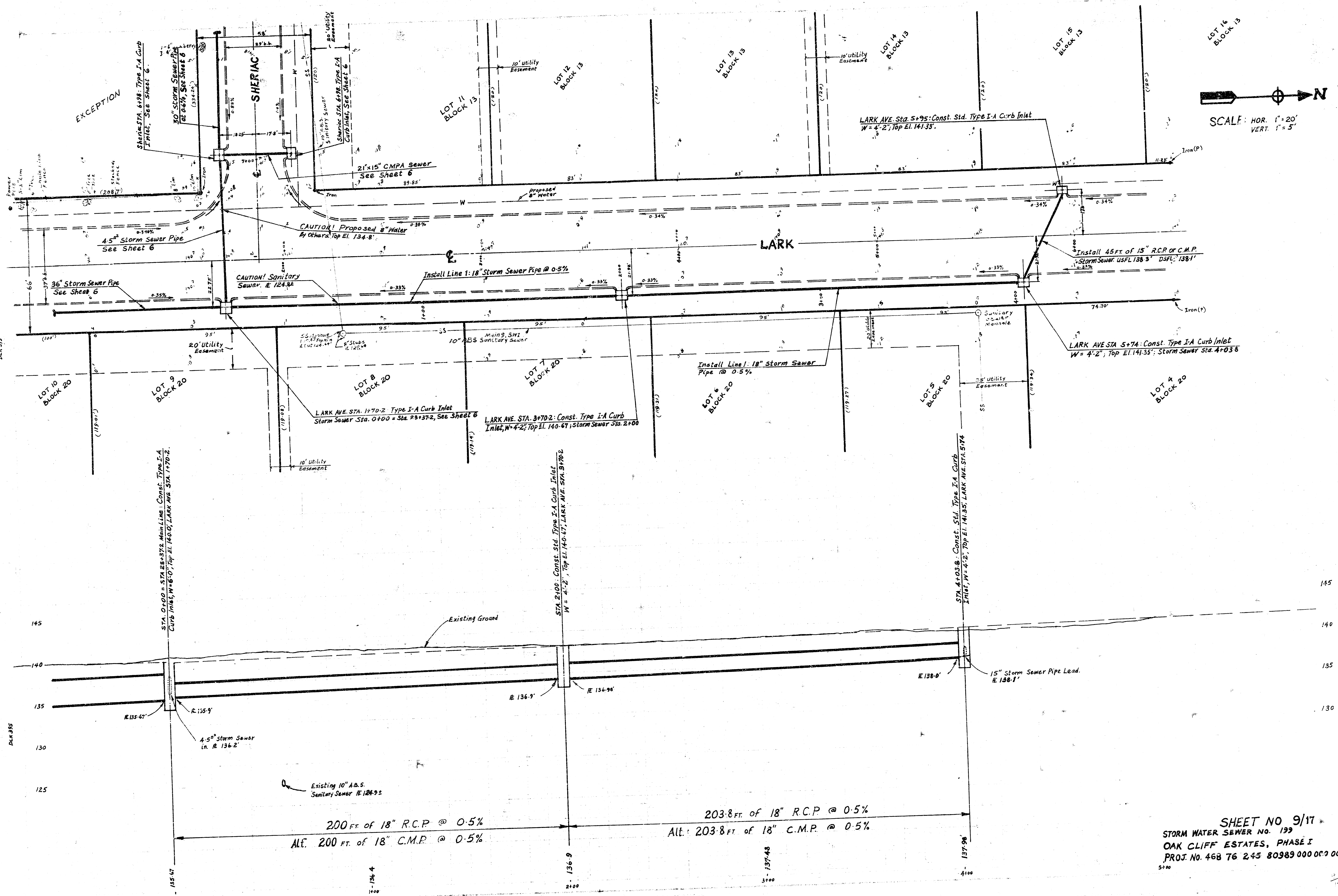
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DE 36-2

SCALE: HOR. 1" = 20'
VERT. 1" = 5'



SEP 80
D. L. KRUG
10/10/80

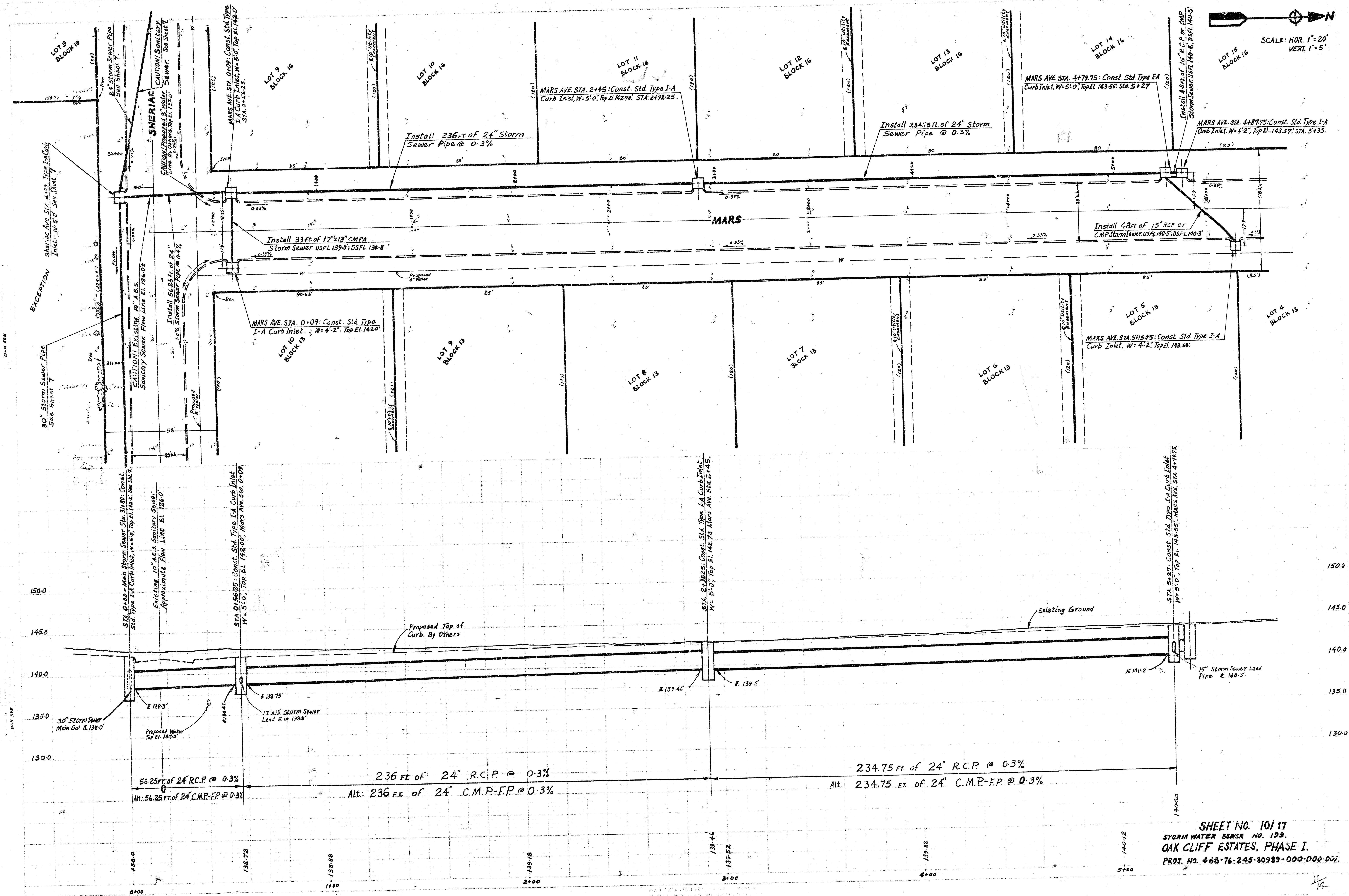
SEP 80
D. L. KRUG
10/10/80



SCALE: HOR. 1"=20'
VERT. 1"=5'

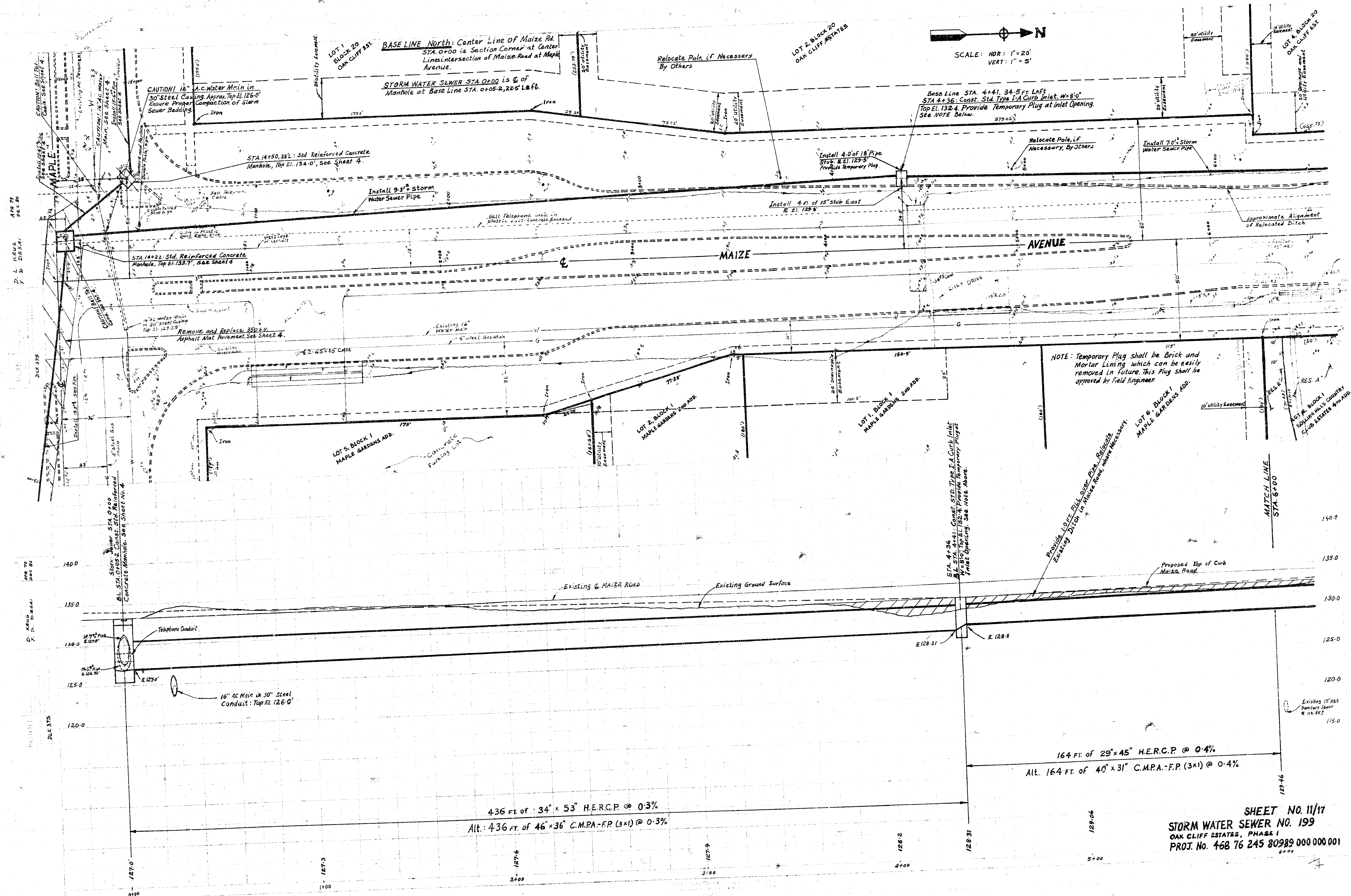
SHEET NO. 9/17
STORM WATER SEWER NO. 199
OAK CLIFF ESTATES, PHASE I
PROJ. NO. 468 76 2-45 80989 000 000 001

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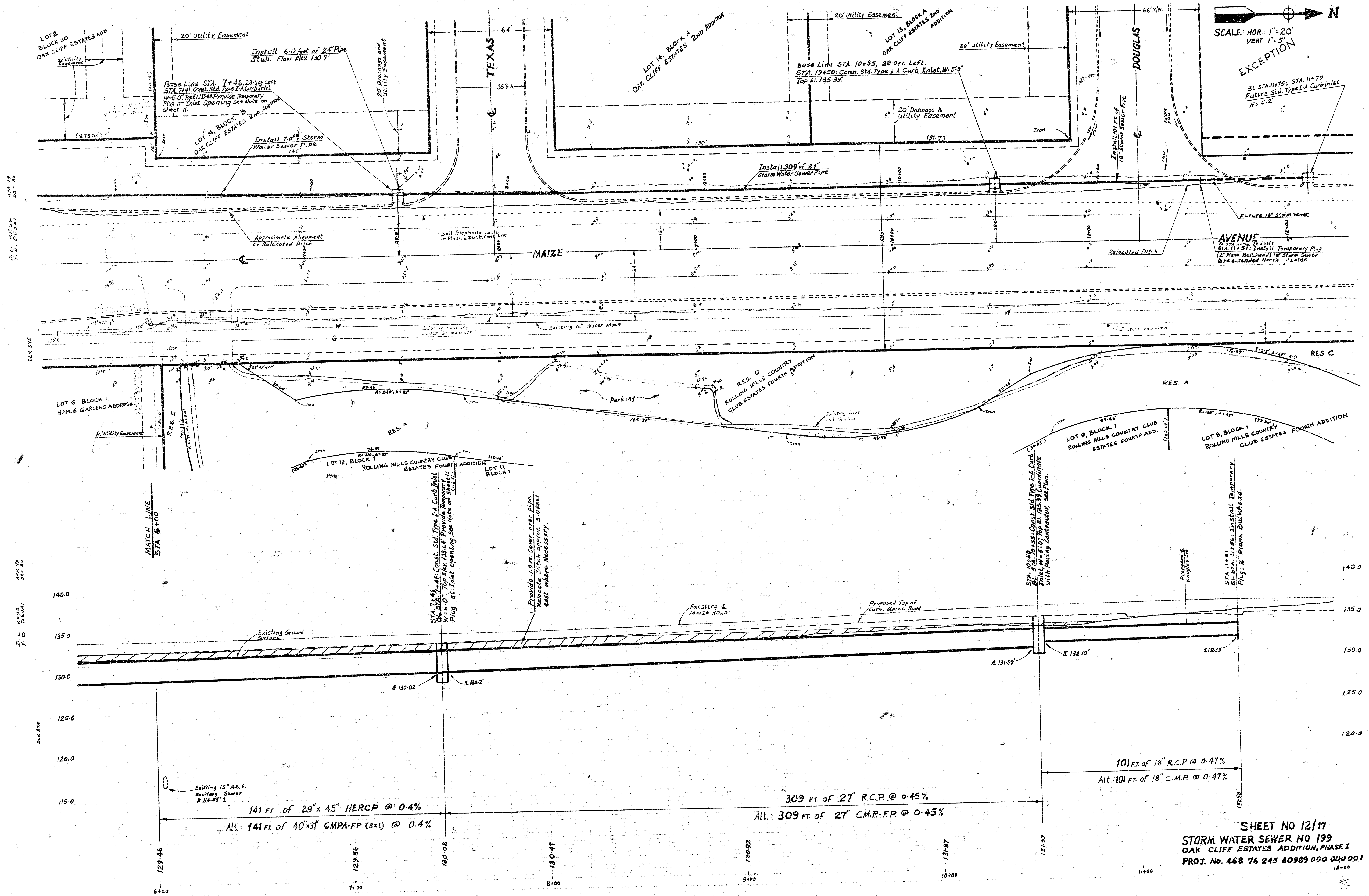


SHEET NO. 10/17
 STORM WATER SEWER NO. 199.
 OAK CLIFF ESTATES, PHASE I.
 PROJ. NO. 468-76-245-80989-000-000-007.

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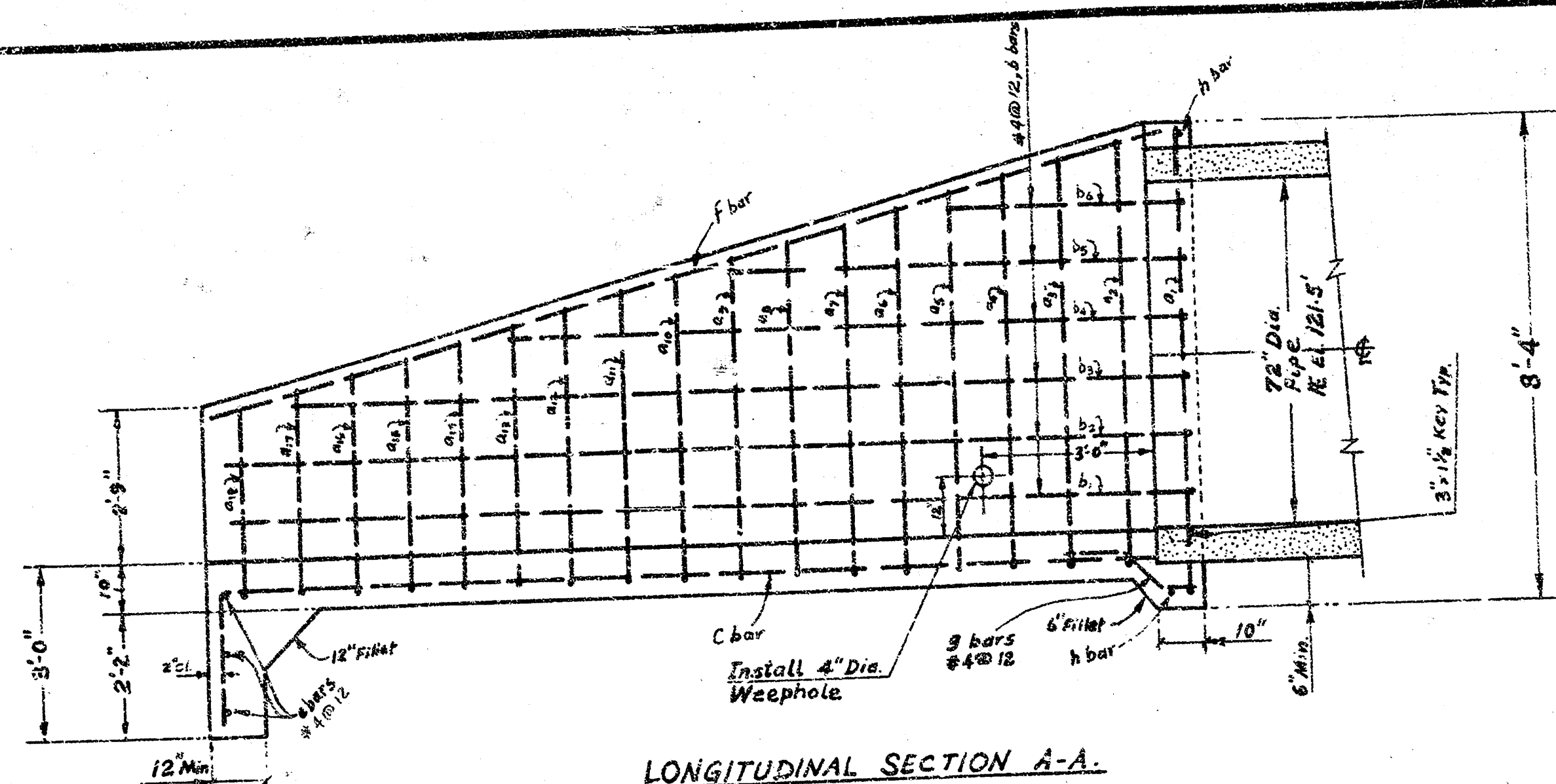
SHEET NO. 11/17
 STORM WATER SEWER NO. 199
 OAK CLIFF ESTATES, PHASE I
 PROJ. No. 468 76 245 80989 000 000 001



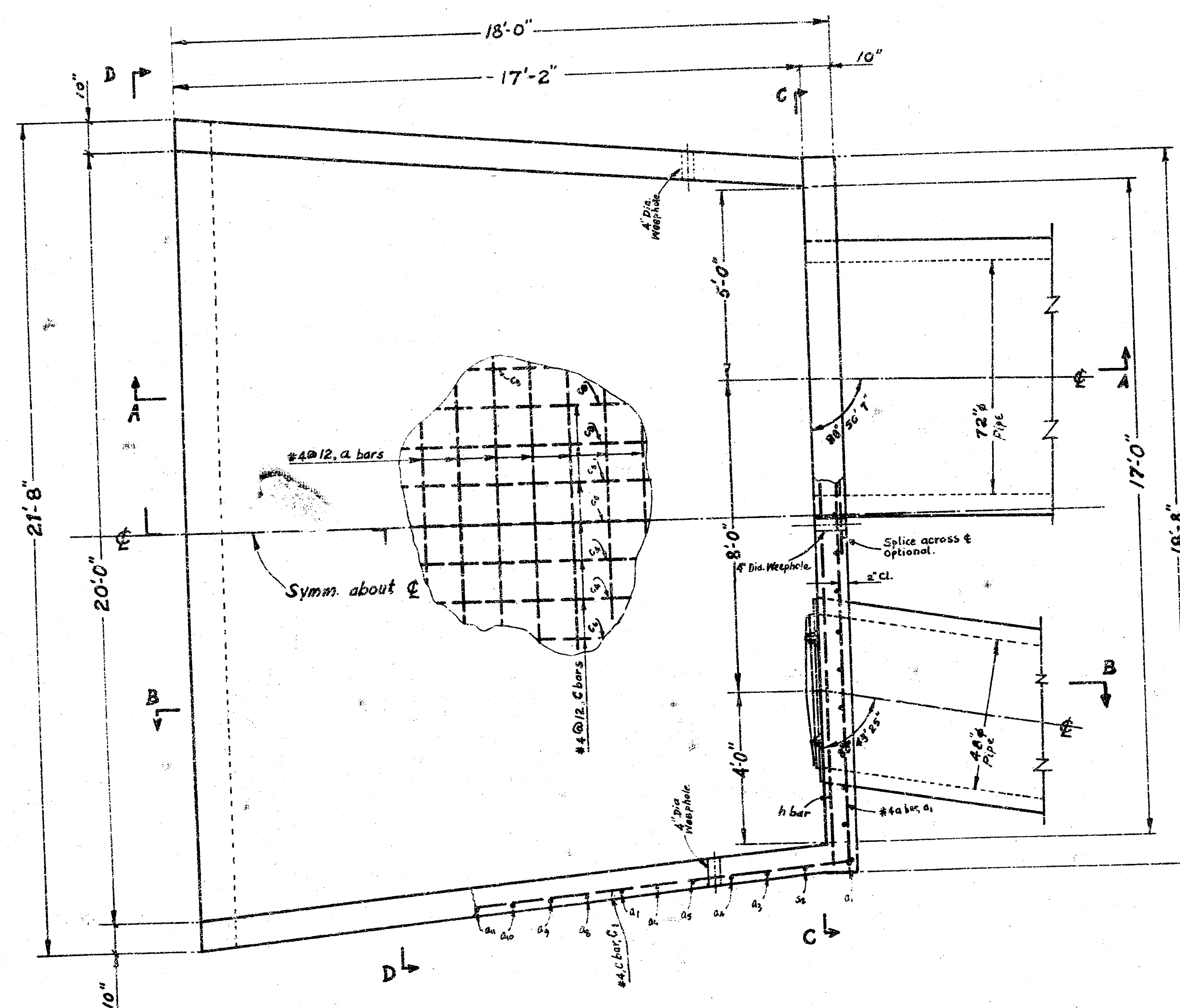
SCALE: HOR: 1"=20'
VERT: 1"=5'
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EXCEPTION

SHEET NO 12/17
STORM WATER SEWER NO 199
OAK CLIFF ESTATES ADDITION, PHASE I
PROJ. No. 468 76 243 80989 000 000 001
12+00

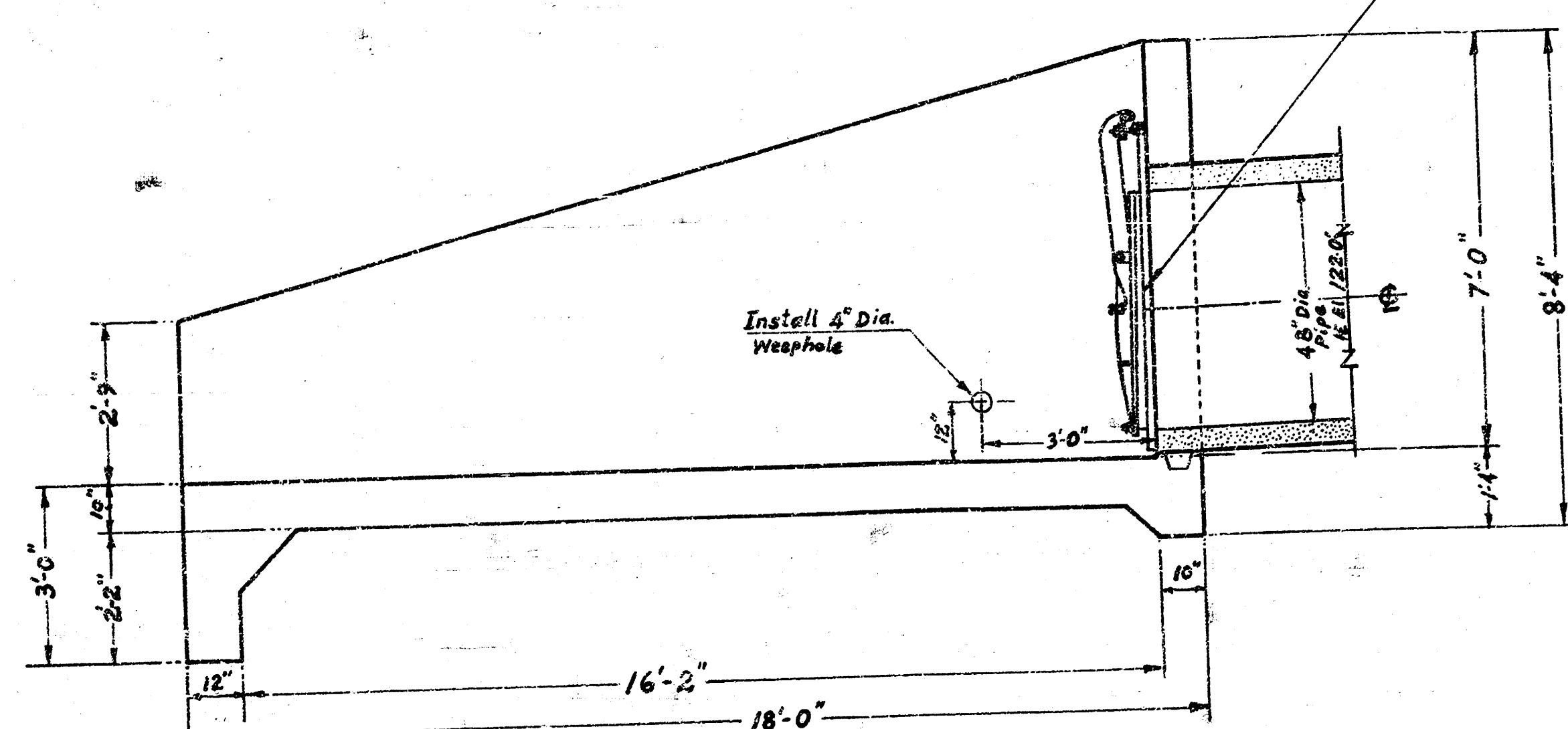
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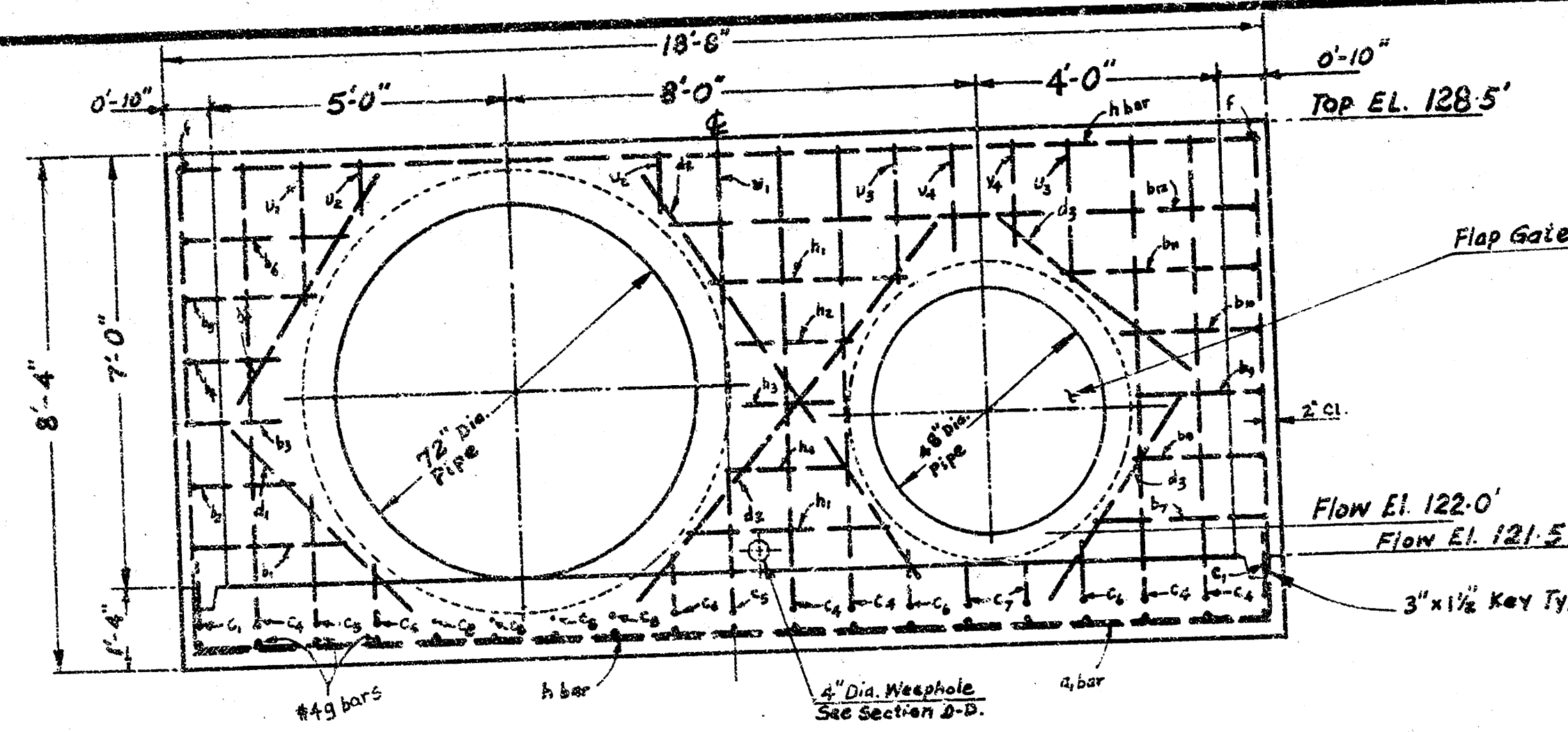
LONGITUDINAL SECTION A-A



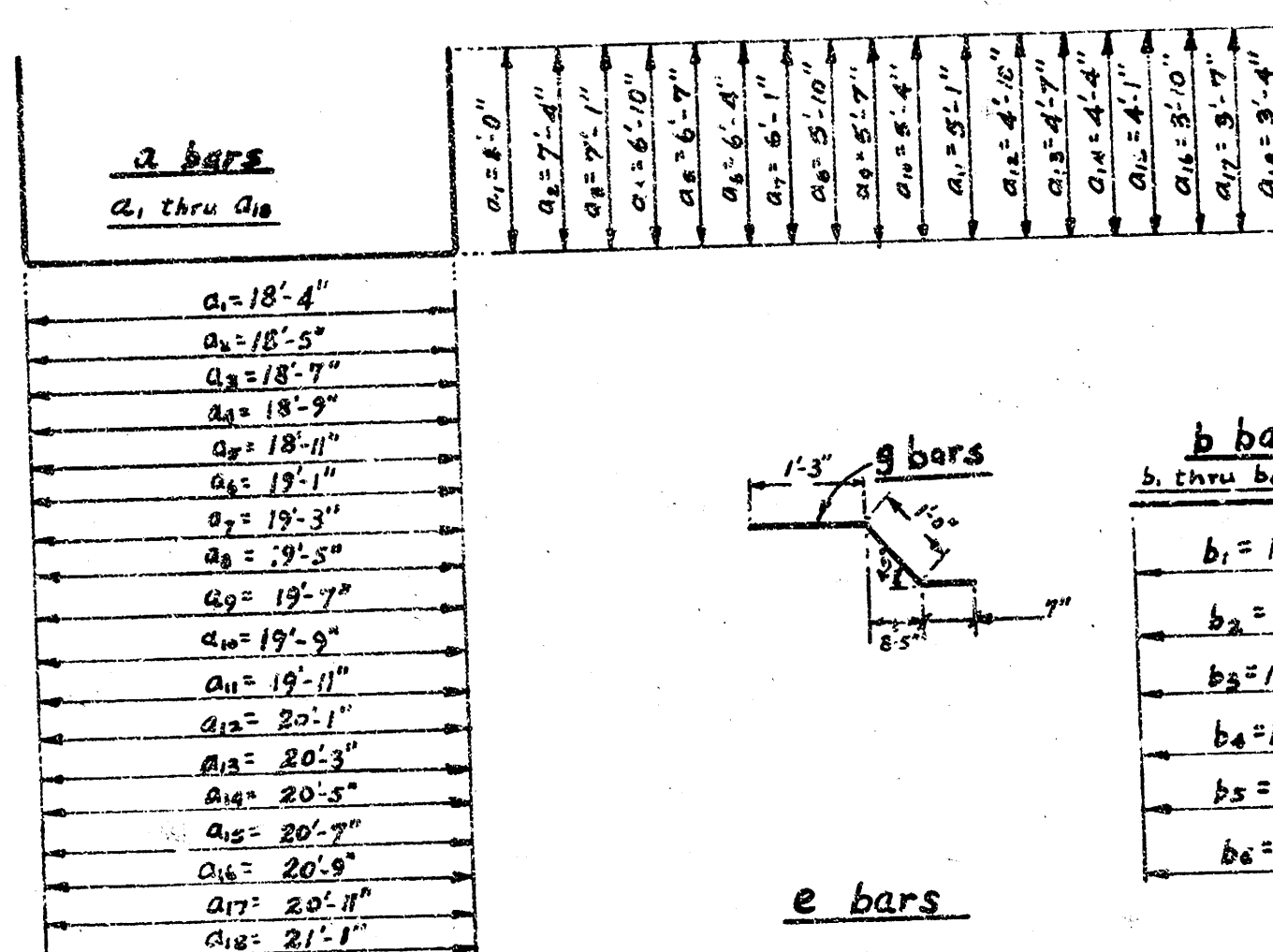
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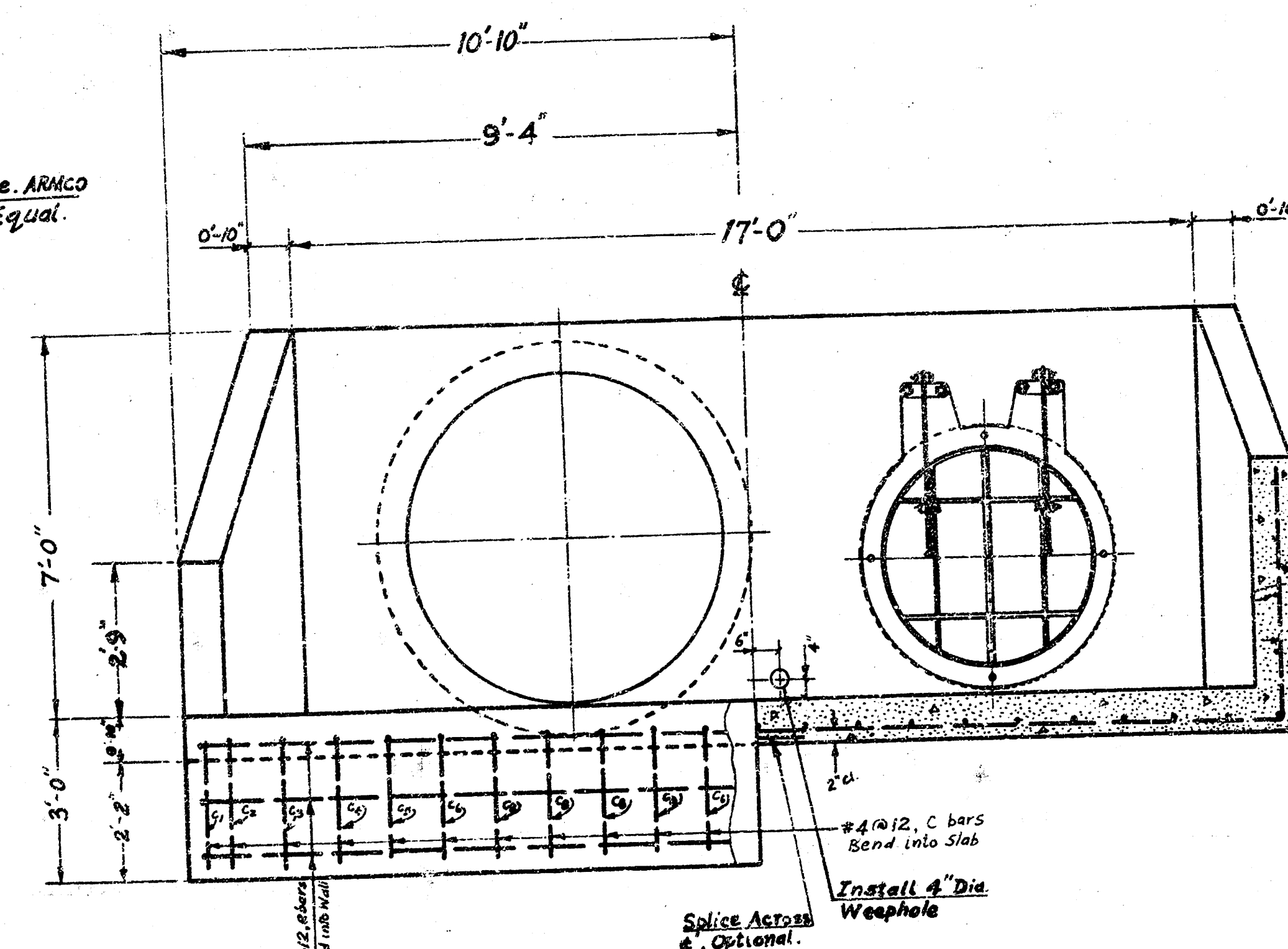
LONGITUDINAL SECTION BB



SECTION C-C



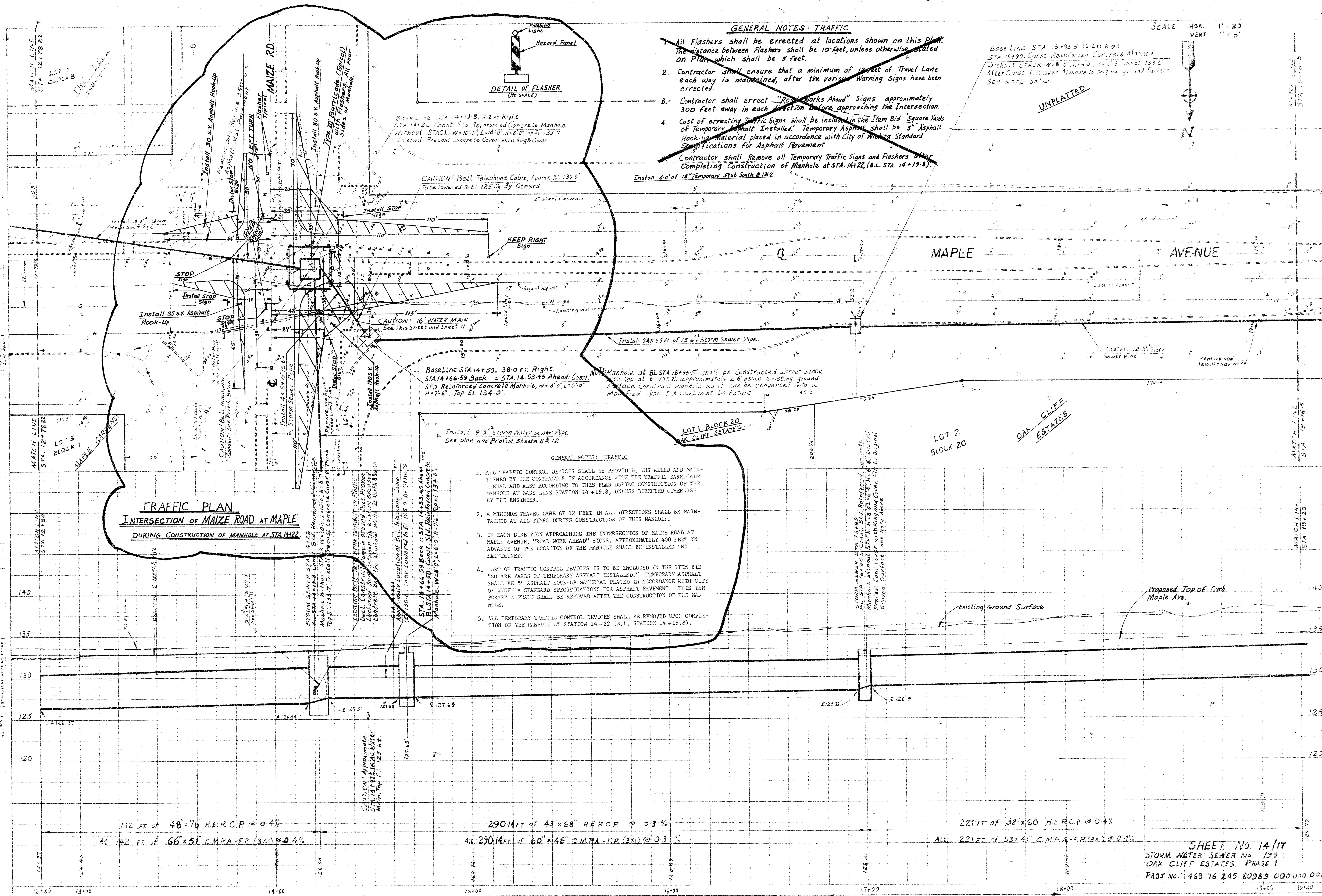
BAR BENDING DIAGRAMS NO SCALE



SECTION D-D

BAR SCHEDULE				
BAR	LENGTH	NO.	SHAPE	WEIGHT
a1	34'-4"	1		22.94
a2	33'-1"	1		22.10
a3	32'-9"	1		21.88
a4	32'-5"	1		21.66
a5	32'-1"	1		21.44
a6	31'-9"	1		21.21
a7	31'-5"	1		20.99
a8	31'-1"	1		20.76
a9	30'-9"	1		20.55
a10	30'-5"	1		20.32
a11	30'-1"	1		20.10
a12	29'-9"	1		19.88
a13	29'-5"	1		19.65
a14	29'-1"	1		19.43
a15	28'-9"	1		19.21
a16	28'-5"	1		18.99
a17	28'-1"	1		18.76
a18	27'-9"	1		18.54
b1	20'-2"	1		13.47
b2	19'-5"	1		12.97
b3	17'-9"	1		11.86
b4	13'-10"	1		7.24
b5	10'-6"	1		4.69
b6	7'-0"	1		13.70
b7	20'-6"	1		13.25
b8	19'-10"	1		12.19
b9	18'-3"	1		9.69
b10	14'-6"	1		7.63
b11	11'-5"	1		9.47
b12	14'-2"	1		27.95
c1	20'-11"	2		4.79
c2	3'-7"	2		16.81
c3	12'-7"	2		91.03
c4	27'-3"	2		29.18
c5	21'-10"	2		55.46
c6	20'-9"	2		27.17
c7	20'-4"	2		52.78
c8	19'-9"	2		11.36
d1	4'-3"	4		21.38
d2	8'-0"	4		10.69
d3	4'-0"	4		14.76
e	22'-4"	3		23.72
f	17'-9"	2		35.91
g	2'-10"	19		4.45
h1	3'-4"	2		1.34
h2	2'-0"	1		1.00
h3	1'-6"	1		1.39
h4	2'-1"	1		24.50
h	18'-4"	2		3.12
v1	2'-4"	2		1.11
v2	0'-10"	2		3.01
v3	2'-3"	2		2.34
v4	1'-9"	2		
TOTAL REBARS				988.90 lb.
VOLUME OF CONCRETE				21.87 c.y.

SHEET NO. 13/17
STORM WATER SEWER No. 199
OAK CLIFF ESTATES, PHASE I
PROJ. No. 468-76-245-80989-000-000-000



- GENERAL NOTES: TRAFFIC**
1. All Flashers shall be erected at locations shown on this Plan. The distance between Flashers shall be 10 feet, unless otherwise stated on Plan which shall be 5 feet.
 2. Contractor shall ensure that a minimum of 12 feet of Travel Lane each way is maintained, after the various Warning Signs have been erected.
 3. Contractor shall erect "Road Works Ahead" Signs approximately 300 feet away in each direction before approaching the Intersection.
 4. Cost of erecting Traffic Signs shall be included in the Item Bid "Square Yards of Temporary Asphalt Installed." Temporary Asphalt shall be 5" Asphalt Hook-up Material placed in accordance with City of Wichita Standard Specifications for Asphalt Pavement.
 5. Contractor shall Remove all Temporary Traffic Signs and Flashers after Completing Construction of Manhole at STA. 14+22 (B.L. STA. 14+19.8).
- Install 4'-0" of 18" Temporary Stud South of 14+22

Base Line STA 15+95.5, 33.2 ft. R. Mt.
STA 15+99 Const. Reinforced Concrete Manhole
Without Stack W-8'x8' L-10'x3' H-8'3" Top El. 133.7'
After Const. Fill Over Manhole to Original Ground Surface
See Note Below.

UNPLATTED

SCALE: HOR. 1" = 20'
VERT. 1" = 5'



TRAFFIC PLAN
INTERSECTION OF MAIZE ROAD AT MAPLE
DURING CONSTRUCTION OF MANHOLE AT STA. 14+22

- GENERAL NOTES: TRAFFIC**
1. ALL TRAFFIC CONTROL DEVICES SHALL BE PROVIDED, MAINTAINED AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH THE TRAFFIC BARRICADE MANUAL AND ALSO ACCORDING TO THIS PLAN DURING CONSTRUCTION OF THE MANHOLE AT BASE LINE STATION 14+19.8, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
 2. A MINIMUM TRAVEL LANE OF 12 FEET IN ALL DIRECTIONS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION OF THIS MANHOLE.
 3. IN EACH DIRECTION APPROACHING THE INTERSECTION OF MAIZE ROAD AT MAPLE AVENUE, "ROAD WORK AHEAD" SIGNS, APPROXIMATELY 400 FEET IN ADVANCE OF THE LOCATION OF THE MANHOLE SHALL BE INSTALLED AND MAINTAINED.
 4. COST OF TRAFFIC CONTROL DEVICES IS TO BE INCLUDED IN THE ITEM BID "SQUARE YARDS OF TEMPORARY ASPHALT INSTALLED." TEMPORARY ASPHALT SHALL BE 5" ASPHALT HOOK-UP MATERIAL PLACED IN ACCORDANCE WITH CITY OF WICHITA STANDARD SPECIFICATIONS FOR ASPHALT PAVEMENT. THIS TEMPORARY ASPHALT SHALL BE REMOVED AFTER THE CONSTRUCTION OF THE MANHOLE.
 5. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE REMOVED UPON COMPLETION OF THE MANHOLE AT STATION 14+22 (S.I. STATION 14+19.8).

SHEET NO. 14/17
STORM WATER SEWER No. 139
OAK CLIFF ESTATES, PHASE 1
PROJ. NO. 469 76 245 80989 000 000 001