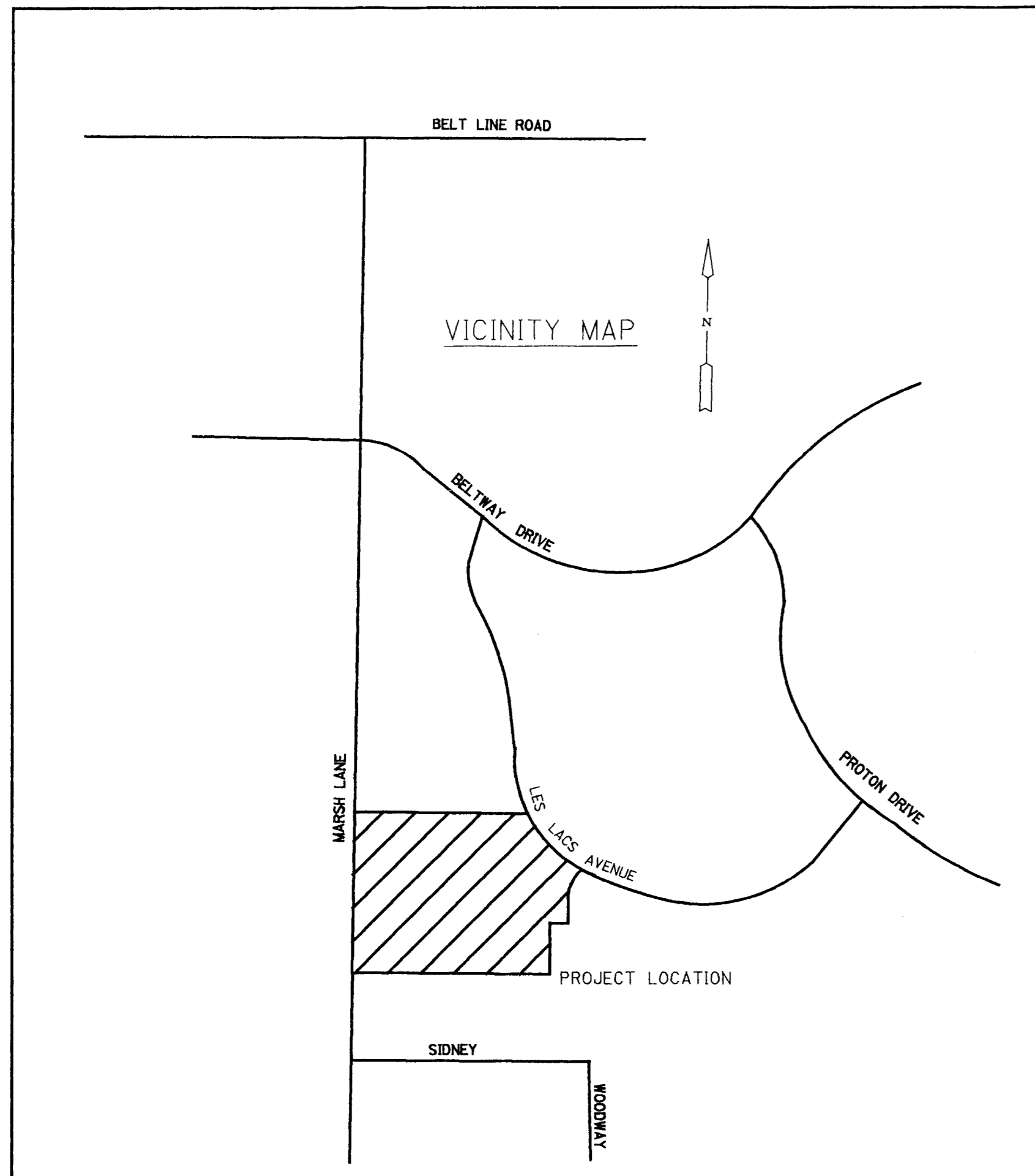


# CONSTRUCTION PLANS

# GRAND ADDISON III

## TOWN OF ADDISON

## DALLAS COUNTY, TEXAS



### INDEX OF SHEETS

SHT No.	DESCRIPTION
1.	COVER SHEET
2.	PLAT
3.	PAVING PLAN AND PROFILE BROOKWOOD LANE
4.	PAVING PLAN AND PROFILE WOODSHADOW LANE
5.	DRAINAGE AREA MAP
6.	STORM SEWER LINES "A" & "C" PLAN AND PROFILE
7.	STORM SEWER LINE "B" PLAN AND PROFILE
8.	STORM SEWER LATERALS
9.	WATER PLAN
10.	SANITARY SEWER PLAN
11.	SANITARY SEWER PROFILES
12.	SANITARY SEWER PROFILES
13.	LOT GRADING PLAN
14.	EROSION CONTROL PLAN
15. THRU 24.	DETAIL SHEETS

### GENERAL NOTES

1. Prior to final acceptance by the Town of Addison
  - a) A Texas Registered Professional Engineer shall certify that the project was constructed in accordance with the plans and specifications approved by the Town of Addison. The Owner shall provide one (1) reproducible set of as-builts (sealed and certified by a Texas Registered Engineer) and two (2) blue line sets.
  - b) A one (1) year maintenance bond is required for the subdivision infrastructure.
  - c) Contractor shall demonstrate that the water and sanitary sewer systems meet the proper pressure, bacteria, and mandrel tests. In addition, the Owner shall provide a VHS format video tape of the sanitary sewer. The final air test shall be completed upon the installation of paving and other utilities.
2. Prior to starting construction, the Contractor shall contact the utility companies to locate existing facilities. These include, but may not be limited to the following:
  - a) Town of Addison
  - b) Lone Star Gas
  - c) Southwestern Bell
  - d) Starline Cable
  - e) Planned Cable Systems
  - f) T.U. Electric
3. Prior to beginning construction, the Owner or his authorized representative shall convene a Pre-Construction Conference between the Town of Addison, Consulting Engineer, Contractor (s), Utility Companies and any other affected parties. Notify Bruce Ellis (450-2847) at least 48 hours prior to the time of the Conference and 48 hours prior to beginning of construction.
4. Any existing pavement, curbs, and/or sidewalks damaged or removed will be repaired by the Contractor at their expense. Contractor shall protect all public utilities in the construction of this project.
5. Lot pins shall be in place during construction and prior to final acceptance. Concrete monuments shall be placed on all boundary corners, block corners, curve points and angle points in public right-of-way. Concrete monuments shall be six (6) inches in diameter embedded at least three (3) inches in the monument at the exact intersection point of the monument. The monuments shall be set at such an elevation that after construction, the top of the monument will be not less than twelve (12) inches below the ground surface.
6. All spoils to be removed from the project and the Town of Addison.
7. At intersections that have valley drains, the crown of the intersecting streets will culminate in a distance of forty (40) feet from the intersecting curb line unless otherwise noted.
8. Temporary or permanent street barricades shall remain at all points of ingress and egress to prevent public use until such street received final acceptance.
9. Contractor shall obtain a right-of-way permit by the Town of Addison for working within the public right-of-way.
10. During construction, the Owner shall provide a qualified geotechnical lab to perform materials testing during the construction, at the request of the Town of Addison.
11. The Contractor shall submit material sheets to the Town of Addison for approval prior to incorporating materials into the job.
12. The location of existing utilities on these plans are approximate. It is the responsibility of the Contractor to locate and verify in the field any utilities that may conflict with his construction.
13. Contractor shall be responsible for maintaining trench safety requirements in accordance with the Town of Addison Standards, Texas State Law, and O.S.H.A. Standards (separate pay item).

THIS CONSTRUCTION IS INTENDED TO MEET THE TOWN OF ADDISON STANDARDS AND FUNCTION AS DESIGNED

### RECORD DRAWING

I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION, AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS.

BY Steven B. Heniford DATE 9-16-94  
TITLE Project Engineer

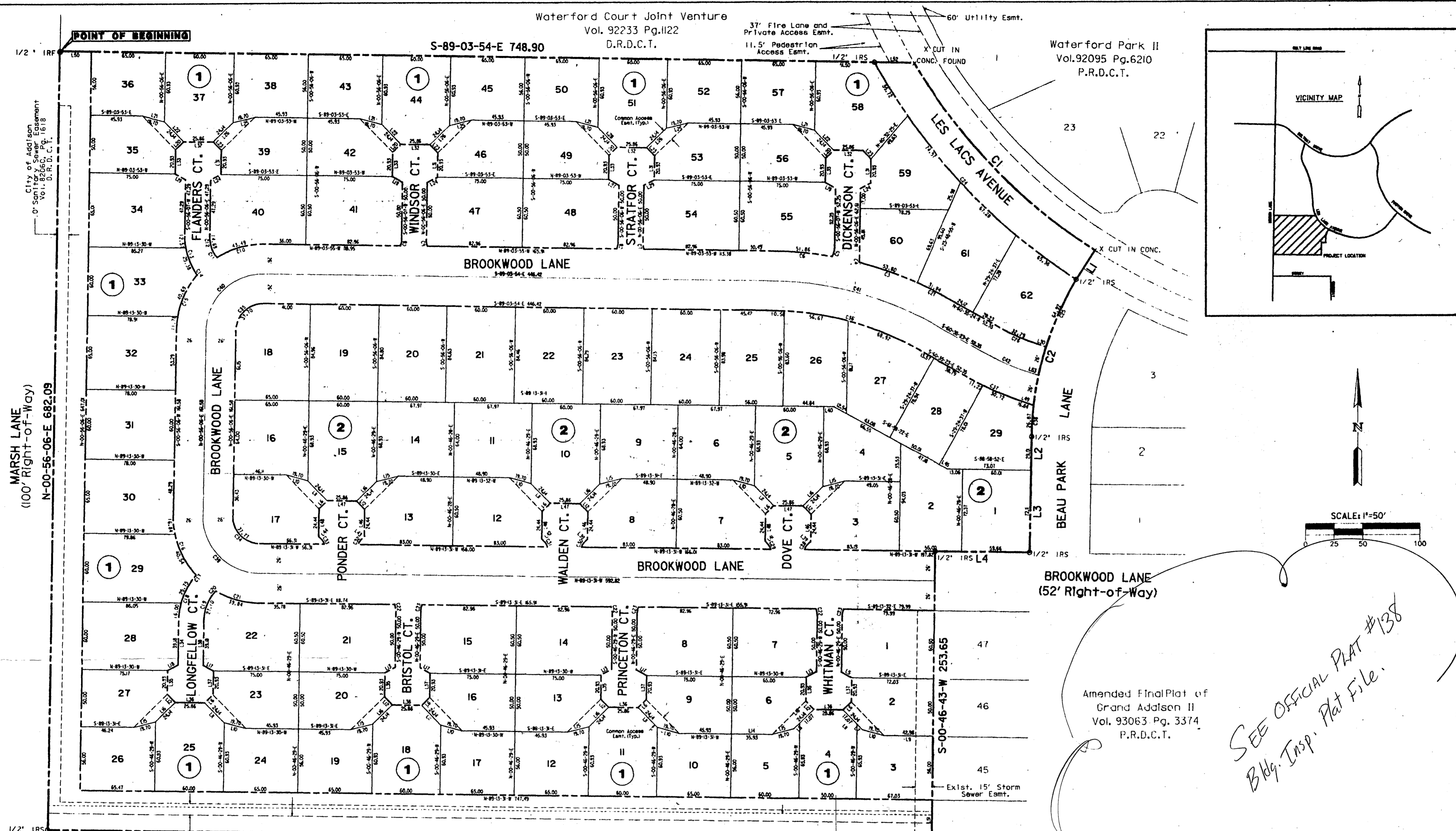


**DEVELOPER**  
**BELTWAY - LES LACS, LTD.**  
4835 LBJ FREEWAY, SUITE 280  
DALLAS, TEXAS 75244

**PREPARED BY:**  
**Lichtler/Jameson & Associates, Inc. LJA**  
CONSULTING ENGINEERS AND PLANNERS  
1420 W. MOCKINGBIRD LANE, SUITE 300, DALLAS, TEXAS 75247, 214/630-8867







**OWNER'S CERTIFICATE**

WHEREAS BELTWAY-LES LACS, LTD and GRAND HOMES, INC. are the owners of a tract of land situated in the Town of Addison, Dallas County, Texas, and being a portion of the Thomas L. Chenoweth Survey, Abstract No. 273 and being a portion of that certain 24.5128 acre tract of land described in a Special Warranty Deed recorded by Strand, Inc. to Beltway-Les Lacs, Ltd., a Texas limited partnership, in Volume 92033, Page 1122, of said Deed Records, said tract of land being a portion of the same, and being more particularly described by metes and bounds as follows:

BEGINNING at a 1/2 inch iron rod found at the southwest corner of said 24.5128 acre tract of land, said iron rod also being the southwest corner of a 10.6878 acre tract of land conveyed by a deed recorded in Volume 92033, Page 1122, of said Deed Records, said iron rod also being on the east right-of-way line of Marsh Lane (a 100 foot right-of-way);

THENCE departing said east right-of-way line along the north property line of said 24.5128 acre tract, bearing S 89° 03' 54" E a distance of 748.90 feet to a 1/2 inch iron rod set on the centerline of Les Lacs Avenue, a private roadway as delineated by plat in Volume 82016, Page 1073 of the Plat Records, Dallas County, Texas, said 'x' being on a curve to the left having a radius of 500.00 feet and a chord bearing and distance of South 44° 01' 32" East, 228.68 feet;

THENCE along said curve through a central angle of 26° 26' 22" on an arc distance of 230.73 feet to an 'x' cut in an old centerline set for the northeast corner heretofore, said 'x' also being the northeast corner of Grand Addison III, being the northeast corner of Grand Addison I, an addition to the Town of Addison according to the Amended Final Plat recorded in Volume 93063, Page 3374, of said Plat Records;

THENCE along said Addition's west property line as follows:

S 32° 43' 53" W a distance of 30.00 feet to a 1/2 inch iron rod set on the southern line of a former private roadway, said iron rod being on the beginning of a non-tangent curve to the left having a radius of 276.00 feet and a chord bearing and distance of S 15° 58' 43" W, 142.51 feet;

THENCE along said curve through a central angle of 29° 55' 25" on an arc distance of 144.14 feet to a 1/2 inch iron rod set on end of curve;

S 01° 01' 02" W a distance of 101.12 feet to a 1/2 inch iron rod set for corner;

N 89° 12' 44" W a distance of 83.12 feet to a 1/2 inch iron rod set for corner;

S 00° 47' 18" W a distance of 253.65 feet to a 1/2 inch iron rod set for corner on the south property line of said 24.5128 acres, being the southeast corner heretofore, also being the north property line of Subdivisions 2 and 3 of Grand Addison I to the Town of Addison as reported in Volume 77118, Page 2198, of said Plat Records, and from which a 1/2 inch iron rod found for the southwest corner of said Amended Grand Addison I Addition bears S 81° 13' 52" E a distance of 6.15 feet;

THENCE along said south property line and said north property line N 00° 56' 08" W a distance of 682.09 feet to the POINT OF BEGINNING and containing 559,194 square feet or 12,837 acres of land.

SAVE AND EXCEPT any street right-of-way dedicated to the Town of Addison by the said Grand Addition III Final Plat.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That Beltway-Les Lacs, Ltd. ("Owner") does hereby adopt this plat designating the heretofore property as Grand Addison III, an addition to the Town of Addison, Texas, and, subject to the conditions, restrictions and reservations stated hereinafter, Owner dedicates to the public use forever the streets and alleys shown thereon.

The easements shown on this plat are hereby reserved for the purpose as indicated, including, but not limited to, the installation and maintenance of water, sanitary sewer, storm sewer, drainage, electric, telephone, gas and cable television. Owner shall have the right to use these easements, provided however, that it does not unreasonably interfere or impede with the provision of the services to others. Said utility easements are hereby reserved by mutual use and accommodation of all public utilities using or desiring to use the same. An express easement of ingress and egress is hereby expressly granted over and across all such easements for the benefit of the provider of services for which easements are granted.

Any drainage and floodway easement shown hereon is hereby dedicated to the public use forever, but including the following covenants with regard to maintenance responsibilities: the existing channels or ditches conveying the drainage and floodway easement will remain in an open channel, unless required to be enclosed by ordinance, of all times and shall be maintained by the individual owners of the lots or lots that are traversed by or adjacent to the drainage and floodway easement. The City will not be responsible for the maintenance and operation of said creek or ditches or any damage or injury to private property or person that results from the flow of water along said creek or for the control of aeration. No obstruction to the normal flow of water shall be permitted by construction of any type building, fence or any other structure within the drainage and floodway easement. Provided, however, it is understood that in the event it becomes necessary for the City to channelize or enclose or erect any type of drainage structure in order to improve the storm drainage, then in such event, the City shall have the right, but not the obligation, to enter upon the drainage and floodway easement or any point, or points, with all rights of ingress and egress to investigate, survey, erect, construct or maintain any drainage facility deemed necessary by the City for the maintenance or efficiency of its respective system or service.

Water main and sanitary sewer easements shall also include additional area of working space for construction and maintenance of the systems. Additional easement area is also conveyed for installation and maintenance of manholes, cleanouts, fire hydrants, water service and sewer services from the main to curb or pavement line, and the descriptions of such additional easements herein granted shall be determined by their locations as installed.

This plat is approved subject to all platting ordinances, rules, regulations and resolutions of the Town of Addison, Texas.

WITNESS my hand at Addison, Texas, this the \_\_\_ day of \_\_\_\_\_, 1993.

BELTWAY-LES LACS LTD.

STATE OF TEXAS  
COUNTY OF DALLAS

BEFORE me, the undersigned, a Notary Public in and for Dallas County, Texas, on this day personally appeared G. Dennis Qualls known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein expressed, and in the capacity herein stated.

Given under my hand and seal of office, this \_\_\_ day of \_\_\_\_\_, 1993.

Notary Public State of Texas

**CURVE TABLE**

CURVE	RADIUS	TANGENT	CHORD	ARC	DELTA	CHORD BEARINGS
1	500.00	117.46	228.89	230.73	28 26' 22"	S 44-01-32 E
2	276.68	73.80	142.62	144.24	29 55' 25"	S 15-58-43 W
3	325.00	26.96	53.74	53.80	09 27' 22"	N 70-54-47 W
4	15.00	0.50	1.80	1.80	06 51' 53"	N 02-29-50 W
5	15.00	3.94	7.61	7.70	29 24' 13"	S 15-38-11 W
6	325.00	26.96	51.81	51.86	09 26' 53"	N 84-30-25 W
7	15.00	2.85	5.60	5.63	21 30' 31"	N 09-49-09 W
8	15.00	2.85	5.60	5.63	21 30' 31"	S 11-41-22 W
9	15.00	2.85	5.60	5.63	21 30' 35"	N 09-49-06 W
10	76.00	22.36	42.90	43.49	32 47' 04"	S 74-32-33 W
11	15.00	3.75	7.28	7.35	28 04' 33"	N 34-08-48 W
12	40.00	7.43	14.61	14.69	21 02' 37"	N 09-35-13 W
13	62.00	19.59	37.36	37.95	35 04' 06"	S 16-35-57 E
14	15.00	0.12	0.25	0.25	00 58' 46"	S 33-29-37 E
15	76.00	27.32	51.12	52.45	39 32' 30"	S 20-42-74 W
16	76.00	30.14	58.03	57.38	43 15' 42"	S 20-41-45 E
17	15.00	1.05	2.10	2.10	08 01' 08"	S 35-20-53 W
18	62.00	21.70	40.97	41.75	38 34' 58"	S 20-03-58 W
19	40.00	14.09	26.99	27.10	38 49' 19"	N 20-11-08 E
20	15.00	0.99	1.98	1.98	07 33' 00"	N 43-22-18 E
21	76.00	20.39	39.99	39.84	30 02' 13"	S 74-12-24 E
22	15.00	2.85	5.60	5.63	21 30' 31"	S 09-58-48 E
23	15.00	2.85	5.60	5.63	21 30' 31"	N 11-31-43 E
24	530.00	134.23	260.25	262.94	28 28' 29"	S 43-01-58 E
25	276.68	32.61	64.77	64.92	13 26' 40"	S 24-08-26 W
26	174.00	16.19	32.25	32.29	10 37' 59"	N 65-54-23 W
27	326.00	15.93	31.82	31.84	09 39' 43"	N 63-23-14 W
28	8.00	2.46	4.70	4.77	34 11' 32"	N 28-40-41 E
29	8.00	2.46	4.70	4.77	34 11' 27"	S 27-07-41 E
30	8.00	2.46	4.70	4.77	34 11' 31"	N 28-40-43 E
31	8.00	2.46	4.70	4.77	34 11' 29"	S 27-07-39 E
32	8.00	2.46	4.70	4.77	34 11' 29"	N 28-40-39 E
33	8.00	2.46	4.70	4.77	34 11' 24"	S 27-07-40 E
34	24.00	24.07	33.99	37.77	90 09' 37"	N 44-08-42 W
35	24.00	24.00	33.94	37.70	90 00' 00"	N 45-58-05 E
36	274.00	69.82	134.78	136.17	28 28' 31"	S 74-49-37 E
37	225.00	21.03	41.88	41.94	10 38' 00"	S 65-54-22 E
38	276.68	13.45	26.86	26.87	05 33' 55"	S 03-46-30 W
39	50.00	50.14	70.81	76.68	90 09' 37"	N 44-08-43 W
40	50.00	50.00	70.71	76.54	90 00' 00"	N 45-58-06 E
41	300.00	76.12	147.87	149.10	28 28' 31"	S 74-49-37 E
42	200.00	18.61	37.06	37.12	10 38' 00"	S 65-54-23 E

**LINE TABLE**

LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
1	S-32-45-17-W	30.00	28	S-44-03-56-E	24.14
2	S-01-11-07-W	29.01	29	S-61-52-49-W	10.30
3	S-01-02-56-W	72.11	30	S-71-13-23-E	10.65
4	N-89-13-31-W	83.12	31	N-00-56-07-E	20.93
5	S-60-10-23-E	10.30	32	N-89-03-93-W	25.96
6	S-45-46-29-W	10.00	33	S-00-56-06-W	20.93
7	N-44-13-31-W	10.30	34	S-00-46-30-W	29.19
8	S-45-46-30-W	7.07	35	S-00-46-29-W	20.93
9	N-89-13-30-W	42.96	36	S-89-13-31-E	25.86
10	N-74-43-55-W	19.70	37	N-00-46-28-E	20.93
11	N-44-13-31-W	24.14	38	N-00-46-29-E	39.18
12	N-44-13-31-W	10.00	39	N-45-46-29-E	4.01
13	N-61-43-21-E	10.30	40	N-89-13-31-W	8.96
14	S-89-13-31-E	75.93	41	S-44-13-32-E	4.01
15	N-76-16-52-E	19.70	42	S-44-13-31-E	4.01
16	N-45-46-30-E	24.14	43	N-45-46-22-E	4.01
17	S-60-10-21-E	10.30	44	S-44-13-25-E	4.01
18	N-44-13-31-W	10.30	45	S-61-58-22-E	8.10
19	N-60-00-35-W	10.30	46	N-00-46-29-E	24.44
20	N-45-56-03-E	10.00	47	N-89-13-31-W	25.06
21	S-74-34-18-E	19.70	48	S-00-46-29-W	24.44
22	S-44-03-54-E	24.14	49	S-71-13-23-E	16.64
23	S-44-03-54-E	10.00	50	N-89-03-94-W	27.50
24	S-61-52-50-W	10.30	51	N-00-46-43-E	35.00
25	S-76-26-29-W	19.70	52	S-89-03-94-E	34.90
26	S-45-56-07-E	24.14	53	S-71-13-23-E	12.49
27	N-60-00-35-W	10.30			

**CERTIFICATE OF APPROVAL**

APPROVED BY the Town of Addison, Dallas County, Texas, this \_\_\_ day of \_\_\_\_\_, 1993.

BY: \_\_\_\_\_ Mayor, Town of Addison

ATTEST: \_\_\_\_\_ City Secretary

The following minimum setbacks apply from the property lines:

- Adjacent to through streets
- Where garage faces through street: 14.5 feet to garage door, 10.5 feet to remainder of structure if 2-story, 5.5 feet to remainder of structure if 1-story
- Where garage does not face through street: 10.5 feet to entire structure if 2-story, 5.5 feet to entire structure if 1-story
- Adjacent to out-lets
- 20.0 feet to garage door, 15.0 feet to remainder of structure (1 or 2-story)

All internal property line setbacks shall be 5 feet. Driveway access/cutouts to Les Lacs Avenue are prohibited. Driveway access/cutouts to Beau Park Lane are prohibited for Lot 1, Block A, and Lots 1 and 2, Block B.

**MONUMENTATION LEGEND**

- 1/2" IRON ROD SET
- 1/2" IRON ROD FOUND
- ✕ CUT 'X' FOUND
- ✕ CUT 'X' SET

**SURVEYOR'S CERTIFICATE**

STATE OF TEXAS  
COUNTY OF DALLAS

THAT, G. Dennis Qualls, hereby certifies that this plat was prepared from an actual and accurate survey of the land and that the corner monuments were properly placed under my personal supervision and in accordance with the platting rules and regulations of the City of Frisco, Texas.

G. Dennis Qualls  
Registered Professional Land Surveyor  
Texas Registration No. 4276

Date \_\_\_\_\_

BEFORE me, the undersigned, a Notary Public in and for Dallas County, Texas, on this day personally appeared G. Dennis Qualls known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein expressed, and in the capacity herein stated.

Given under my hand and seal of office, this \_\_\_ day of \_\_\_\_\_, 1993.

Notary Public State of Texas

**FINAL PLAT**

OF

**GRAND ADDISON III**

SITUATED IN THE

THOMAS L. CHENOWETH SURVEY,  
ABSTRACT NO. 273  
91 LOTS, 12,837 ACRES

**TOWN OF ADDISON,  
DALLAS COUNTY, TEXAS**

BELTWAY-LES LACS, LTD.  
4835 LBJ FREEWAY, SUITE 280  
DALLAS, TEXAS 75244

received  
11-13-93

**Lichtler/Jameson & Associates, Inc.**  
CONSULTING ENGINEERS and PLANNERS  
1420 W. MOCKINGBIRD LANE, SUITE 300, DALLAS, TEXAS 75247, 214/630-8667

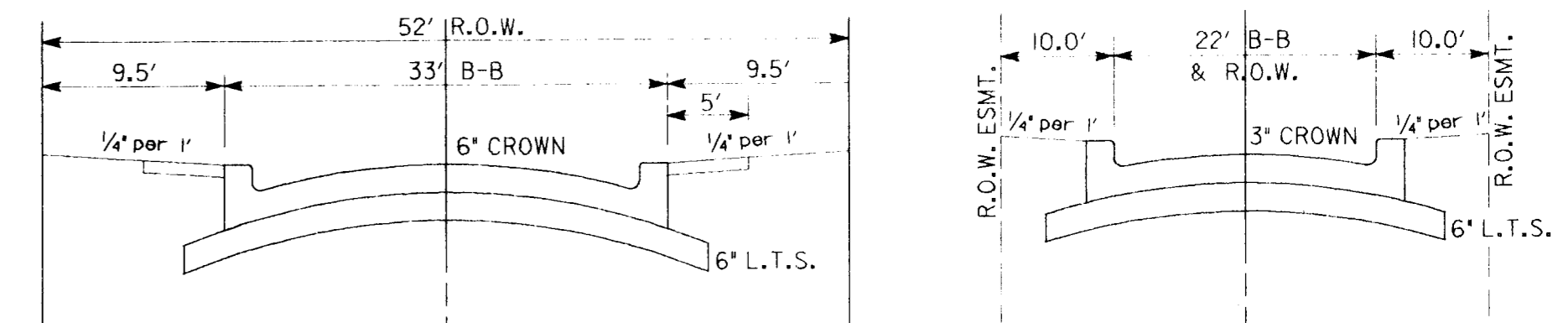
STATE OF TEXAS  
COUNTY OF DALLAS

BEFORE me, the undersigned, a Notary Public in and for Dallas County, Texas, on this day personally appeared G. Dennis Qualls known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein expressed, and in the capacity herein stated.

Given under my hand and seal of office, this \_\_\_ day of \_\_\_\_\_, 1993.

Notary Public State of Texas

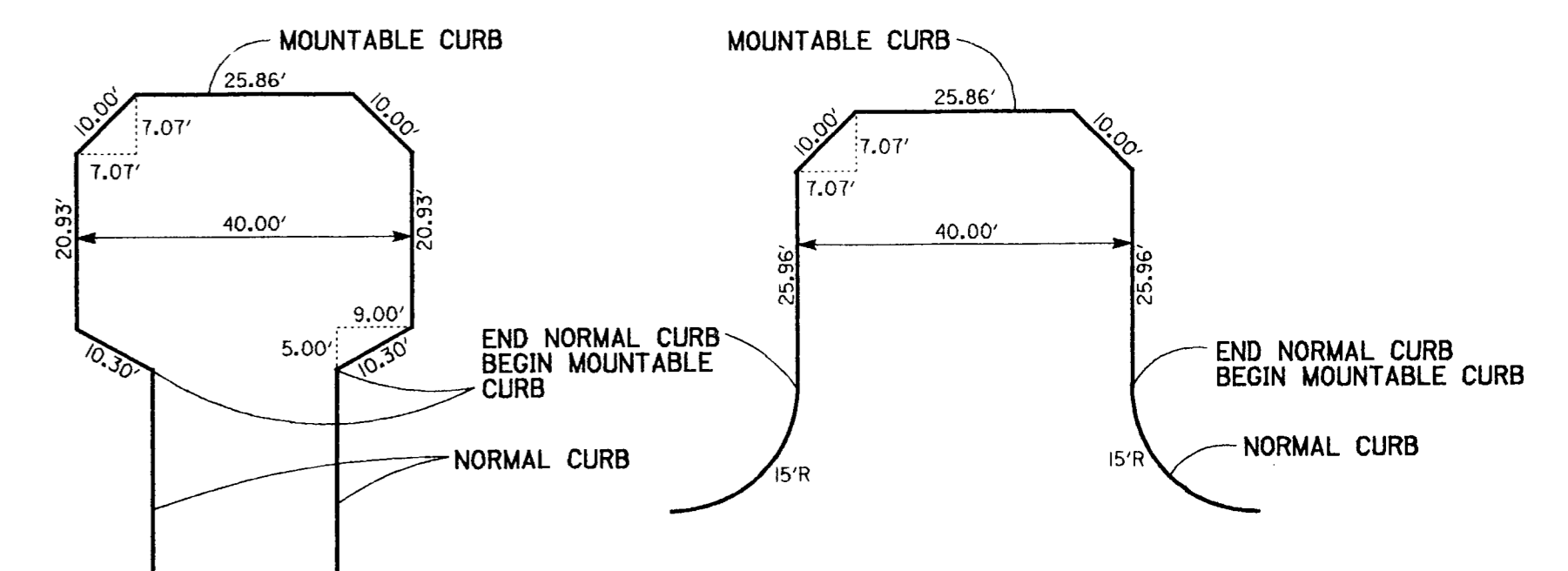
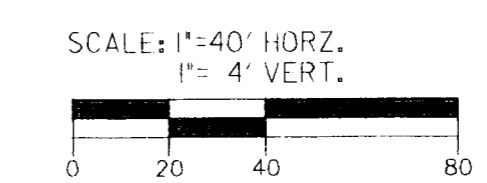




PAVEMENT SECTIONS  
N.T.S.

PAVING NOTES

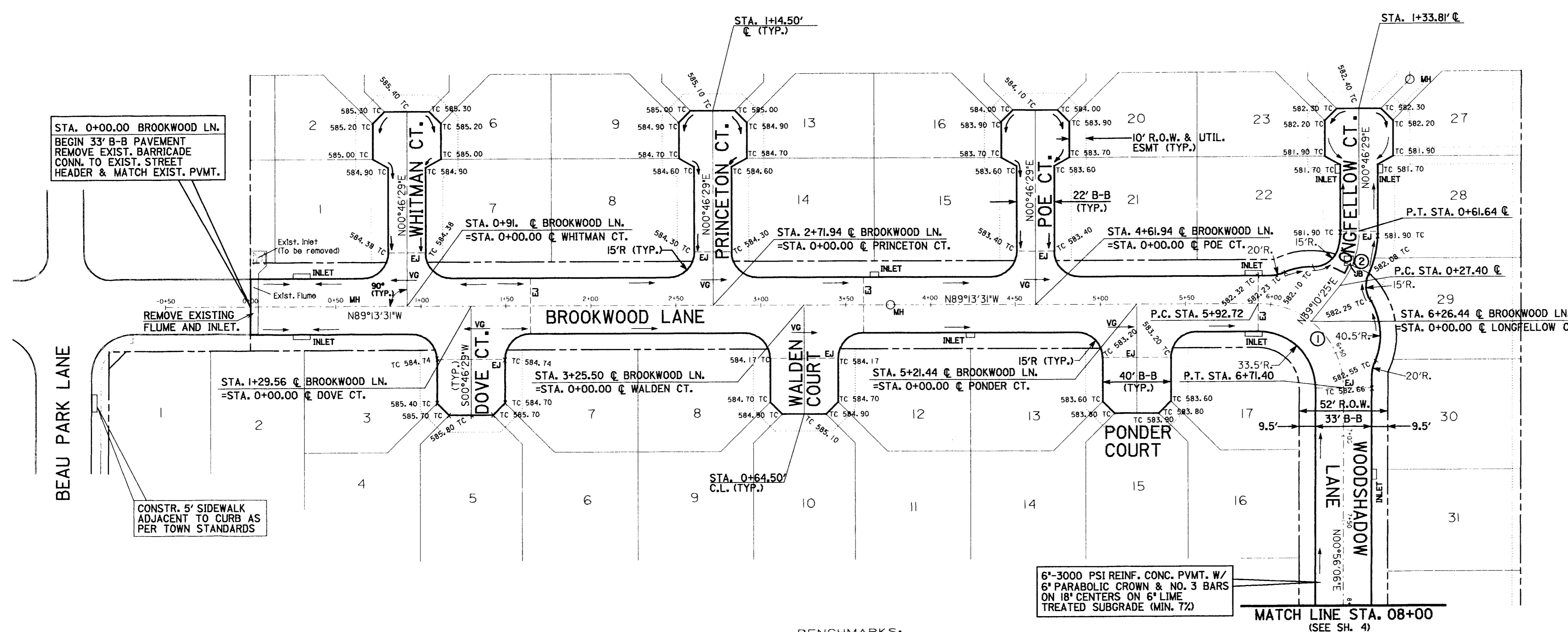
- All concrete used for construction on these improvements shall be Class 'A' concrete providing a compressive strength of 3000 PSI at 28 days (5 Sack Cement). Reinforcing shall be No. 3 bars on 18" centers.
- Where PI > 15 all pavement subgrade to be stabilized six-inches (6") thick with six-percent (7%) hydrated lime by weight, and compacted to 95% minimum Standard Proctor Density. PI should be approximately 12. Test shall be conducted by a qualified geotechnical firm, to be provided by the Developer. Test results shall be provided to the Town of Addison. Separate test are required when subgrade conditions change.
- Curbs to be tapered down by Paving Contractor at Intersection curb returns to allow construction of curb ramps by Sidewalk Contractor (No Pay Item). 5' sidewalks (including barrier-free ramps) to be constructed at Builder's expense and are not part of this contract.
- All fill within the street right-of-way shall be compacted to 95% minimum Standard Proctor Density within 2 percentage points of optimum moisture.
- Construct transverse sawed dummy joints every 15' max.
- All dimensions are to the back of curb unless noted otherwise.
- Minimum slope for gutters/curbs = 0.50%.



CUL-DE SAC DETAILS

NOTE: ALL CUL-DE-SACS SHALL BE STRIPED AS FIRE LANES

SCALE: 1" = 20'



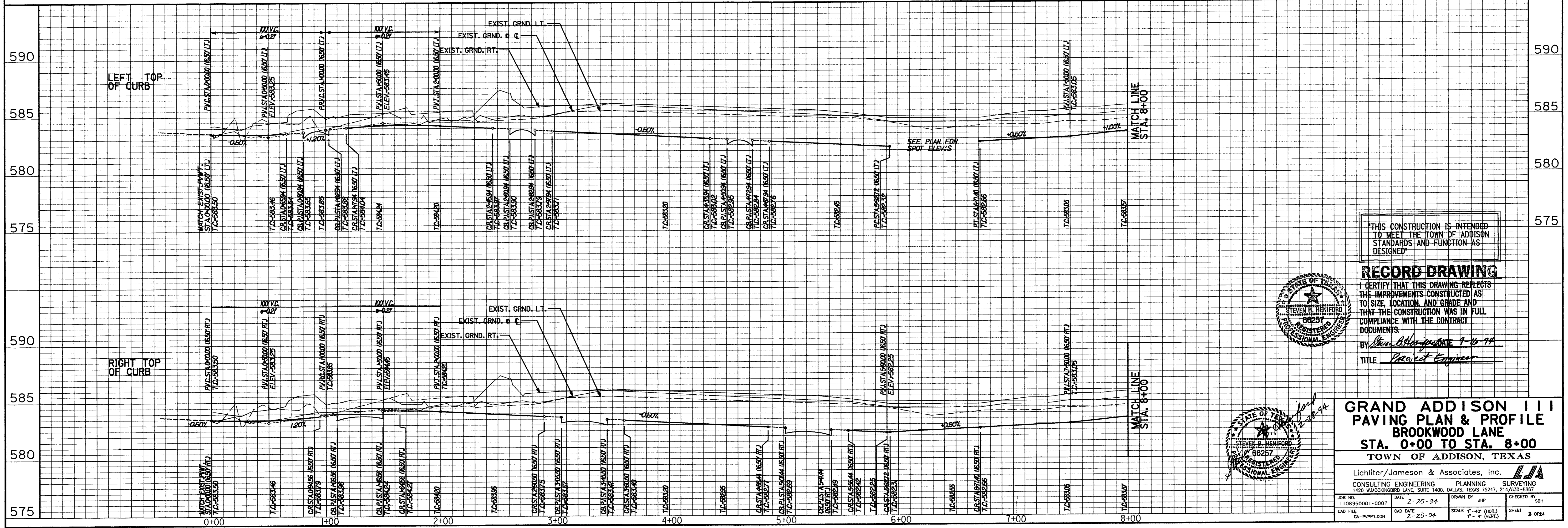
Ⓐ CURVE DATA ①

Δ = 90°09'37"
R = 50.00'
T = 50.14'
L = 78.68'

Ⓑ CURVE DATA ②

Δ = 35°01'56"
R = 56.00'
T = 17.67'
L = 34.24'

BENCHMARKS:  
 \*X' IN CENTERLINE OF LES LACS AVENUE  
 325' +/- SOUTH OF PROTON AVENUE  
 ELEV. 601.80  
 † ON TOP OF CURB NORTH SIDE OF LES  
 LACS AVENUE AT NORTHWEST CORNER  
 MEADOWS CREEK CIRCLE ELEV. 587.30

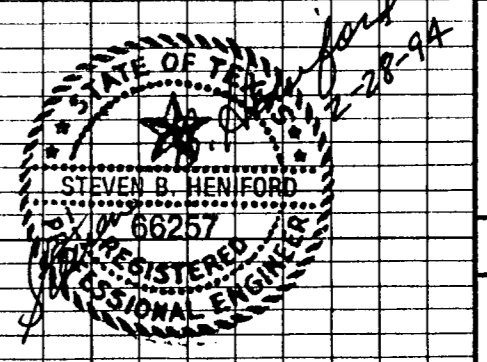
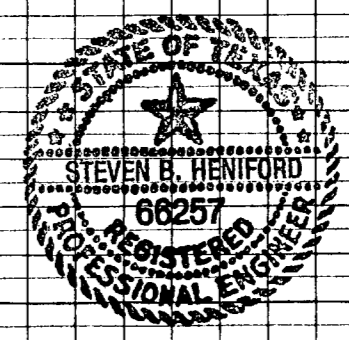


THIS CONSTRUCTION IS INTENDED TO MEET THE TOWN OF ADDISON STANDARDS AND FUNCTION AS DESIGNED

RECORD DRAWING

I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION, AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS.

BY: *Steven B. Henford* DATE: 9-10-14  
 TITLE: *Project Engineer*



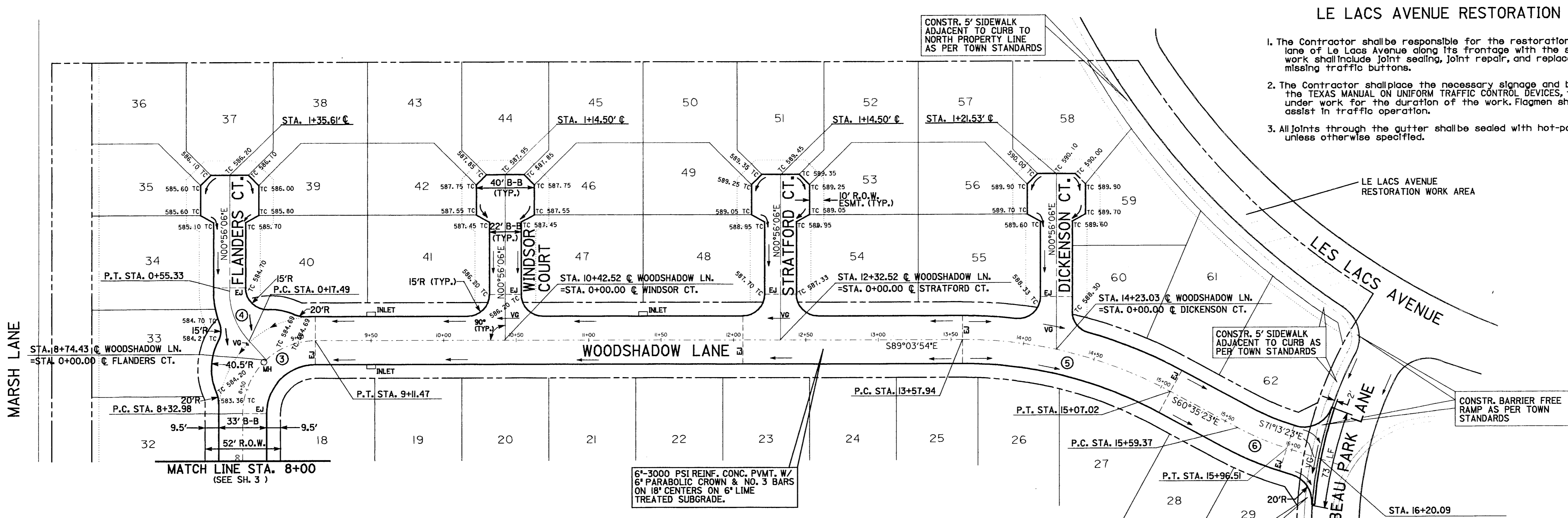
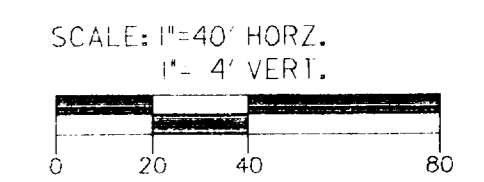
GRAND ADDISON III  
 PAVING PLAN & PROFILE  
 BROOKWOOD LANE  
 STA. 0+00 TO STA. 8+00  
 TOWN OF ADDISON, TEXAS

Lichter/Jameson & Associates, Inc.		PLANNING SURVEYING	
CONSULTING ENGINEERING		1420 WOODSHADOW LANE, SUITE 1420, DALLAS, TEXAS 75247, 214/353-8887	
JOB NO. 1108950001-0007	DATE 2-25-94	DRAWN BY JHP	CHECKED BY SBH
CAD FILE GA-P1P1.DGN	CAD DATE 2-25-94	SCALE 1" = 40' (HOR.) 1" = 4' (VERT.)	SHEET 3 OF 4



LE LACS AVENUE RESTORATION NOTES

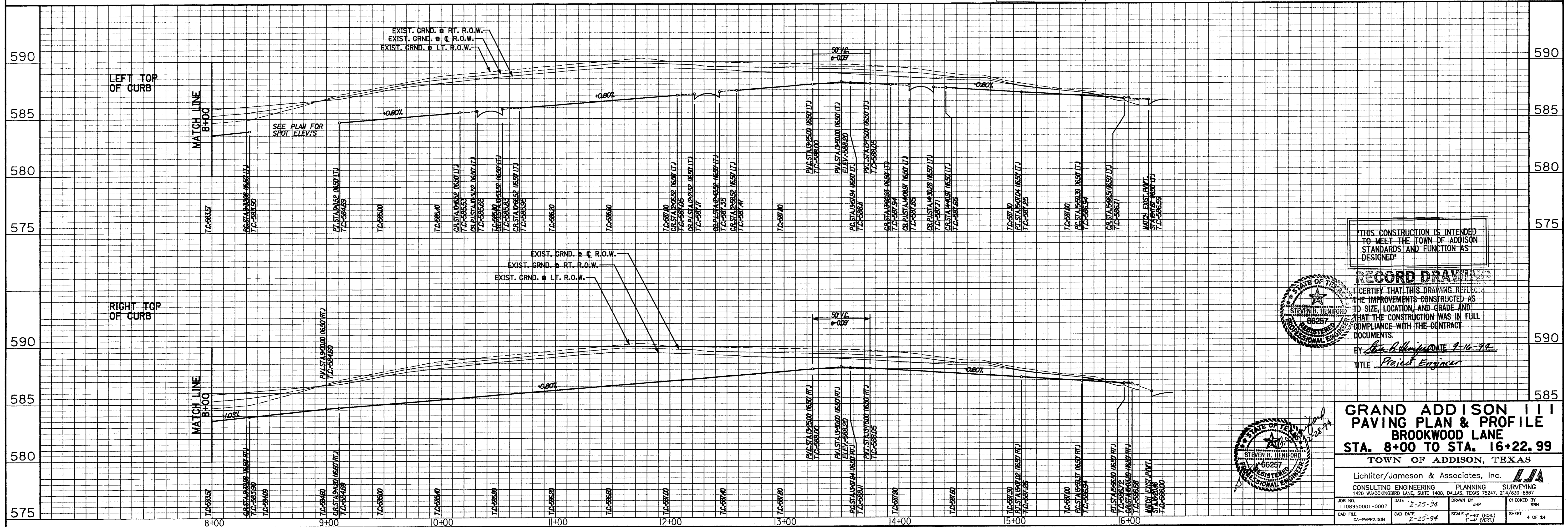
- The Contractor shall be responsible for the restoration of the southern lane of Le Lacs Avenue along its frontage with the subject property. This work shall include joint sealing, joint repair, and replacement of missing traffic buttons.
- The Contractor shall place the necessary signage and barricades, as per the TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, to close the area under work for the duration of the work. Flagmen should be employed to assist in traffic operation.
- All joints through the gutter shall be sealed with hot-poured rubber sealer unless otherwise specified.



③	④	⑤	⑥
Δ = 90°00'00"	Δ = 42°32'40"	Δ = 28°28'31"	Δ = 10°38'00"
R = 50.00'	R = 51.00'	R = 300.00'	R = 200.00'
T = 50.00'	T = 19.83'	T = 76.12'	T = 18.61'
L = 78.54'	L = 37.84'	L = 149.10'	L = 37.12'

6"-3000 PSI REINF. CONC. PVMT. W/ 6" PARABOLIC CROWN & NO. 3 BARS ON 18" CENTERS ON 6" LIME TREATED SUBGRADE.

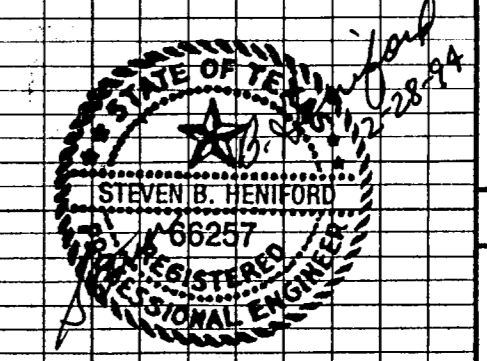
BENCHMARKS:  
 \*X IN CENTERLINE OF LES LACS AVENUE 325'+/- SOUTH OF PROTON AVENUE ELEV. 601.80  
 \*T ON TOP OF CURB NORTH SIDE OF LES LACS AVENUE AT NORTHWEST CORNER MEADOWS CREEK CIRCLE ELEV. 587.30



THIS CONSTRUCTION IS INTENDED TO MEET THE TOWN OF ADDISON STANDARDS AND FUNCTION AS DESIGNED.



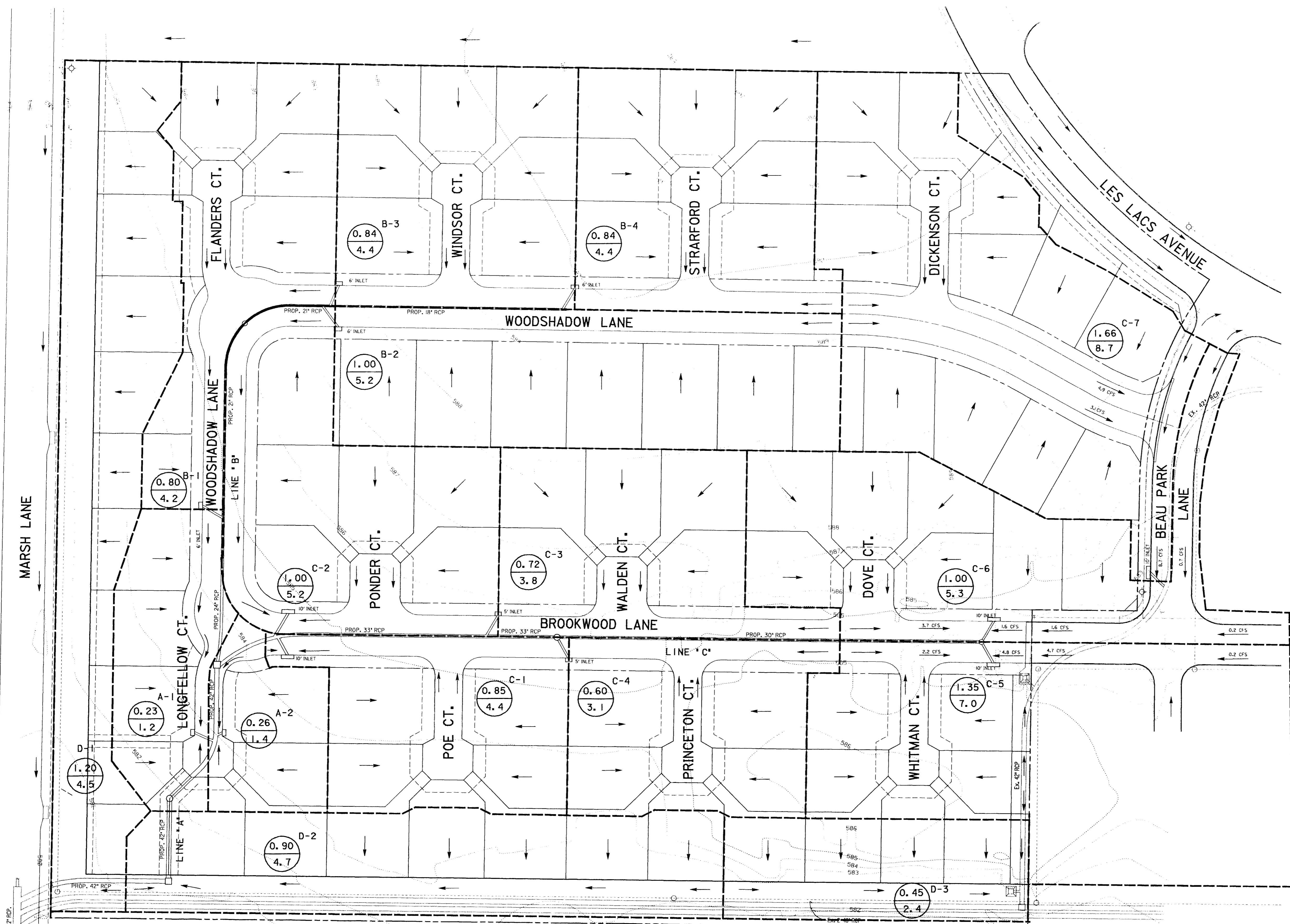
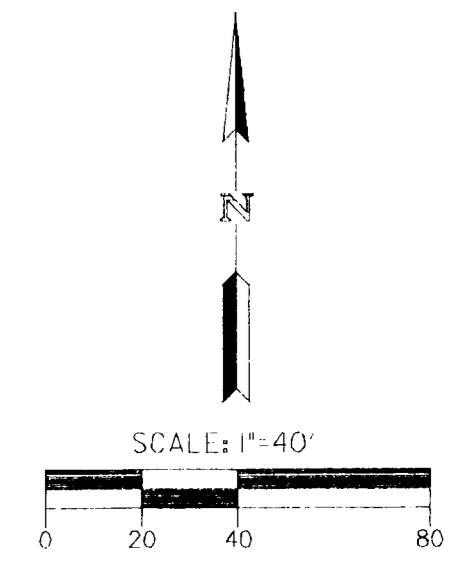
**RECORD DRAWING**  
 I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION, AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS.  
 BY *Steven B. Henington* DATE 7-16-94  
 TITLE *Project Engineer*



**GRAND ADDISON III PAVING PLAN & PROFILE**  
**BROOKWOOD LANE**  
**STA. 8+00 TO STA. 16+22.99**  
 TOWN OF ADDISON, TEXAS

Lichter/Jameson & Associates, Inc.		PLANNING SURVEYING	
1420 W. WOODKINGBROD LANE, SUITE 1400, DALLAS, TEXAS 75247, 214/630-8867			
JOB NO. 1108950001-0007	DATE 2-25-94	DRAWN BY JHP	CHECKED BY SBH
CAD FILE GA-PVP2.DGN	CAD DATE 2-25-94	SCALE 1"=40' (HOR.) 1"=4' (VERT.)	SHEET 4 OF 24





**DRAINAGE SUMMARY**

AREA #	ACREAGE	C	Tc min.	I <sub>100</sub> In./hr.	Q <sub>100</sub> c. f. s.
A-1	0.23	0.7	15	7.5	1.2
A-2	0.26	0.7	15	7.5	1.4
B-1	0.80	0.7	15	7.5	4.2
B-2	1.00	0.7	15	7.5	5.2
B-3	0.84	0.7	15	7.5	4.4
B-4	0.84	0.7	15	7.5	4.4
C-1	0.85	0.7	15	7.5	4.4
C-2	1.00	0.7	15	7.5	5.2
C-3	0.72	0.7	15	7.5	3.8
C-4	0.60	0.7	15	7.5	3.1
C-5	1.35	0.7	15	7.5	7.0
C-6	1.00	0.7	15	7.5	5.3
C-7	1.66	0.7	15	7.5	8.7
D-1	1.20	0.5	15	7.5	4.5
D-2	0.90	0.5	15	7.5	4.7
D-3	0.45	0.5	15	7.5	2.4

'THIS CONSTRUCTION IS INTENDED TO MEET THE TOWN OF ADDISON STANDARDS AND FUNCTION AS DESIGNED'

**RECORD DRAWING**

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BY *Steven B. Heniford* DATE 9-16-94

TITLE *Project Engineer*



**LEGEND**

- A-1 DRAINAGE AREA NUMBER
- AREA (ACRES)
- DISCHARGE (C.F.S.) 100 YEAR
- DRAINAGE AREA DIVIDE
- FLOW DIRECTION

**GRAND ADDISON III DRAINAGE AREA MAP**

TOWN OF ADDISON, TEXAS

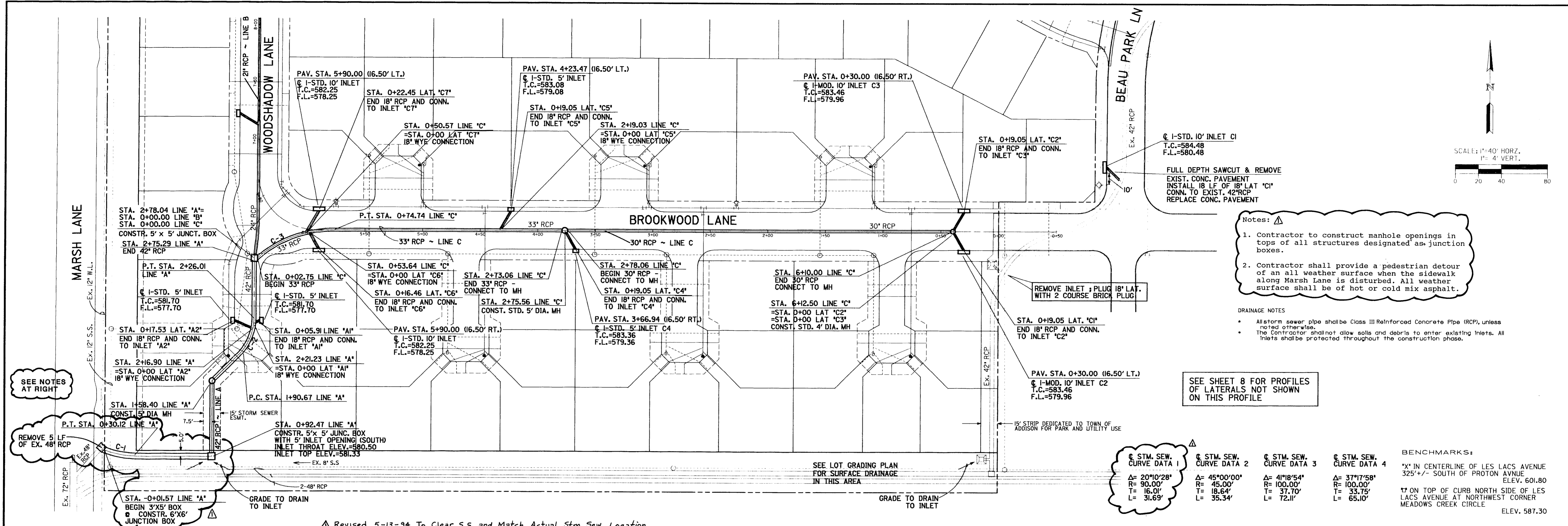
Lichliter/Jameson & Associates, Inc.

CONSULTING ENGINEERING PLANNING SURVEYING  
1420 W. MOCKINGBIRD LANE, SUITE 1400, DALLAS, TEXAS 75247, 214/630-8867

JOB NO. 1108950001-0007	DATE 2-25-94	DRAWN BY	CHECKED BY
CAD FILE CA-DAM.DGN	CAD DATE 2-25-94	SCALE 1" = 40'	SHEET 5 OF 24







**Notes:**

- Contractor to construct manhole openings in tops of all structures designated as junction boxes.
- Contractor shall provide a pedestrian detour of an all weather surface when the sidewalk along Marsh Lane is disturbed. All weather surface shall be of hot or cold mix asphalt.

**DRAINAGE NOTES**

- All storm sewer pipe shall be Class III Reinforced Concrete Pipe (RCP), unless noted otherwise.
- The Contractor shall not allow silt and debris to enter existing inlets. All inlets shall be protected throughout the construction phase.

SEE SHEET 8 FOR PROFILES OF LATERALS NOT SHOWN ON THIS PROFILE

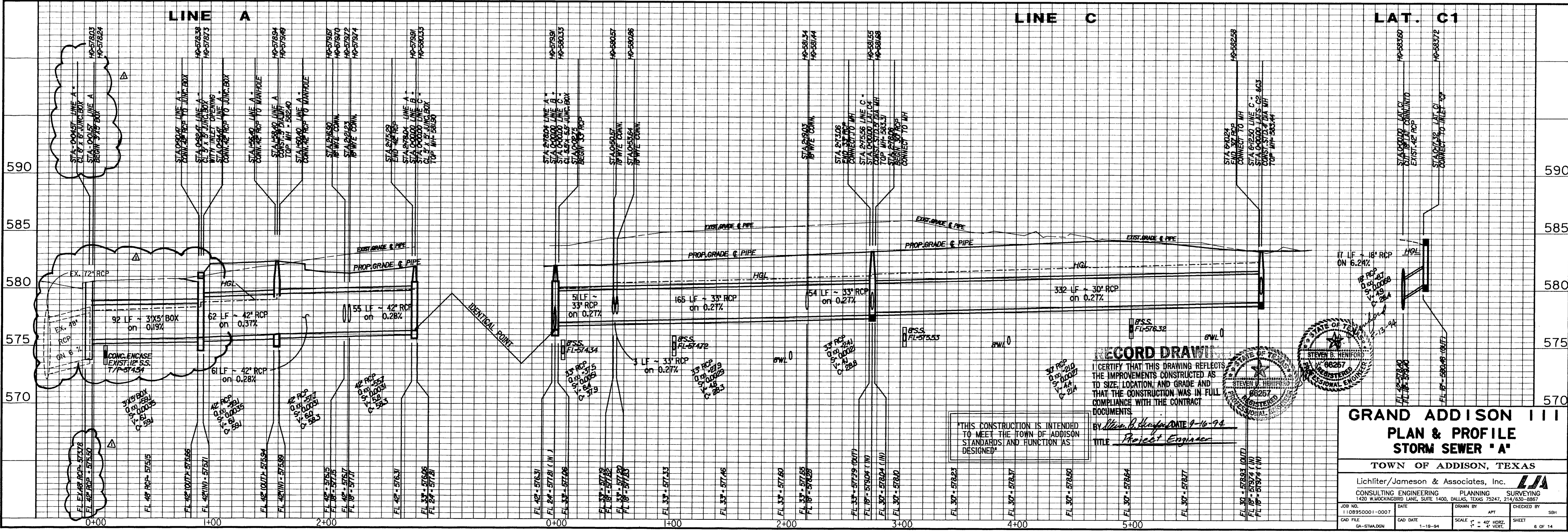
**STM. SEW. CURVE DATA**

Δ = 20°10'28"	Δ = 45°00'00"	Δ = 41°18'54"	Δ = 37°17'58"
R = 90.00'	R = 45.00'	R = 100.00'	R = 100.00'
T = 16.01'	T = 18.64'	T = 37.70'	T = 33.75'
L = 31.69'	L = 35.34'	L = 72.11'	L = 65.10'

**BENCHMARKS:**

- "X" IN CENTERLINE OF LES LACS AVENUE 325'+/- SOUTH OF PROTON AVENUE ELEV. 601.80
- "T" ON TOP OF CURB NORTH SIDE OF LES LACS AVENUE AT NORTHWEST CORNER MEADOWS CREEK CIRCLE ELEV. 587.30

Revised 5-13-94 To Clear S.S. and Match Actual Stm. Sew. Location



**RECORD DRAWING**

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BY *Steven B. Hemford* DATE 9-16-94  
 TITLE *Project Engineer*

"THIS CONSTRUCTION IS INTENDED TO MEET THE TOWN OF ADDISON STANDARDS AND FUNCTION AS DESIGNED"

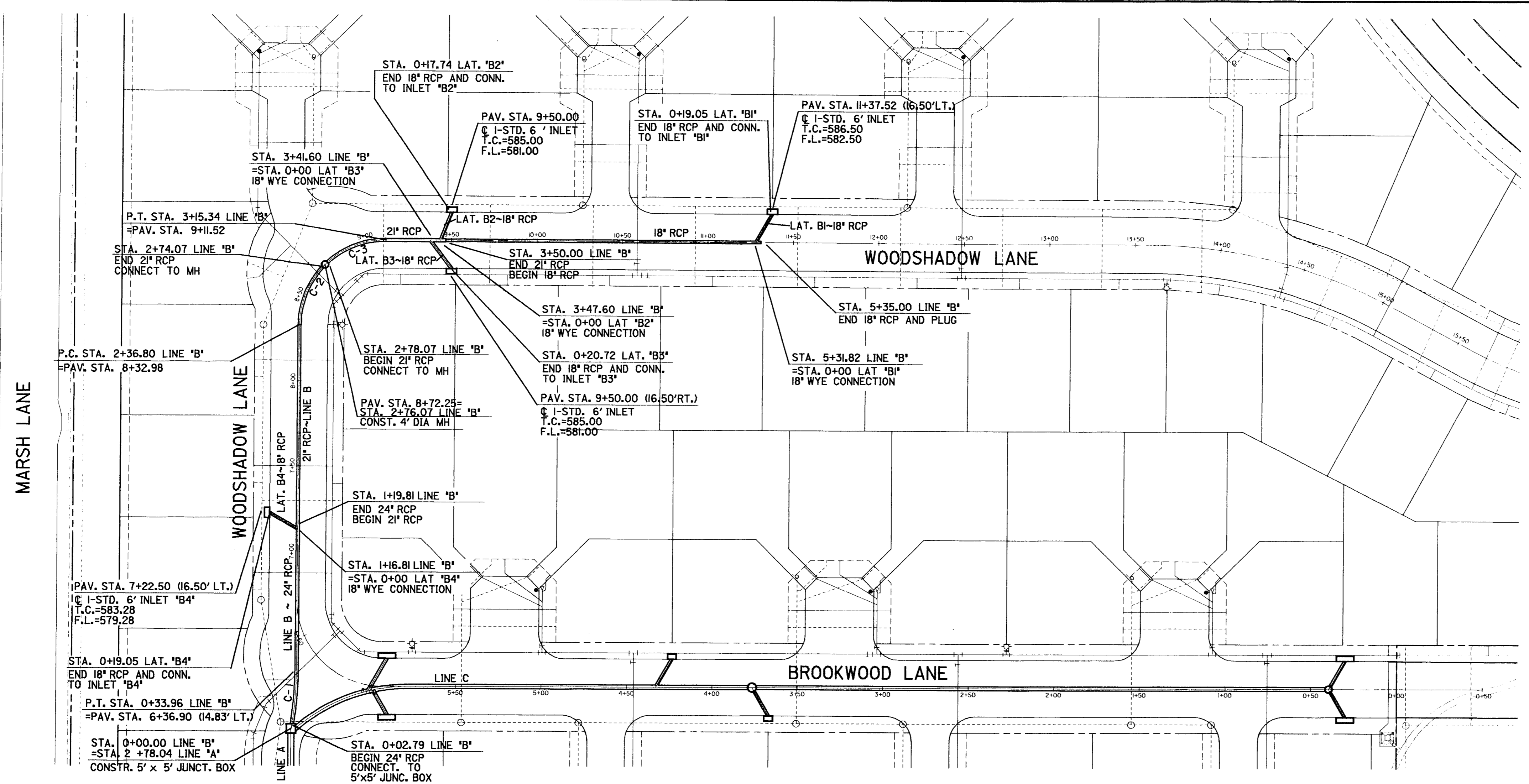
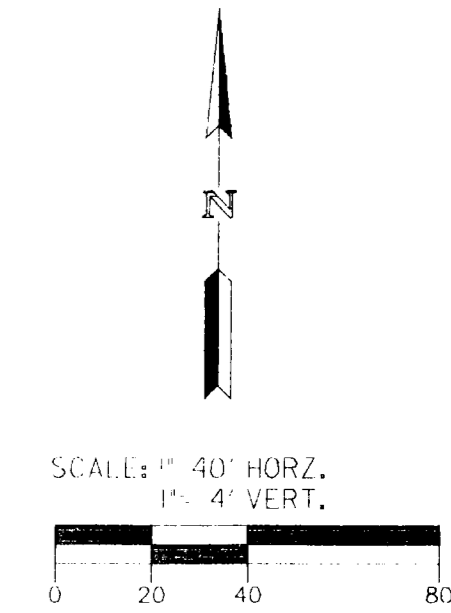
**GRAND ADDISON III  
 PLAN & PROFILE  
 STORM SEWER 'A'**

TOWN OF ADDISON, TEXAS

Lichliter/Jameson & Associates, Inc.  
 CONSULTING ENGINEERING PLANNING SURVEYING  
 1420 W. WICKINGBIRD LANE, SUITE 1400, DALLAS, TEXAS 75247, 214/630-8867

JOB NO. 1108950001-0007 DATE DRAWN BY APT CHECKED BY SBH  
 CAD FILE GA-STWADDN CAD DATE 1-19-94 SCALE 1" = 40' HORIZ. 1" = 4' VERT. SHEET 6 OF 14

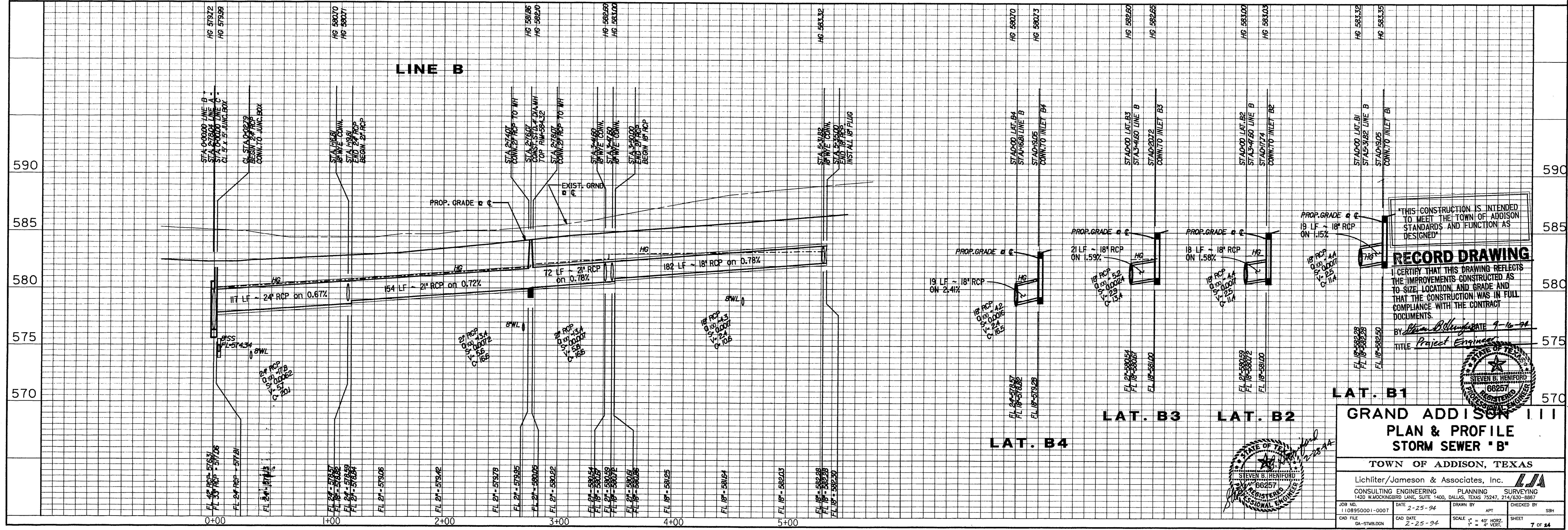




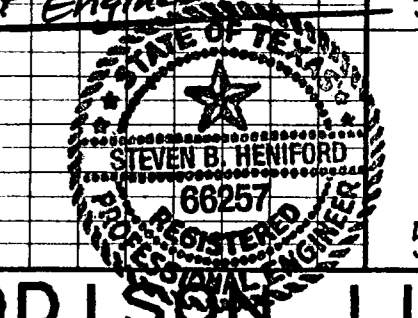
SEE SH. 19 FOR DRAINAGE DETAILS  
SEE SH. 6 FOR DRAINAGE GENERAL NOTES

STM. SEW. CURVE DATA 1	STM. SEW. CURVE DATA 2	STM. SEW. CURVE DATA 3
A= 08°55'26"	A= 42°42'29"	A= 42°42'30"
R= 200.00'	R= 50.00'	R= 50.00'
T= 15.61'	T= 19.55'	T= 19.55'
L= 31.51'	L= 37.27'	L= 37.27'

**BENCHMARKS:**  
 \*X' IN CENTERLINE OF LES LACS AVENUE  
 325' +/- SOUTH OF PROTON AVENUE ELEV. 601.80  
 □ ON TOP OF CURB NORTH SIDE OF LES LACS AVENUE AT NORTHWEST CORNER MEADOWS CREEK CIRCLE ELEV. 587.30



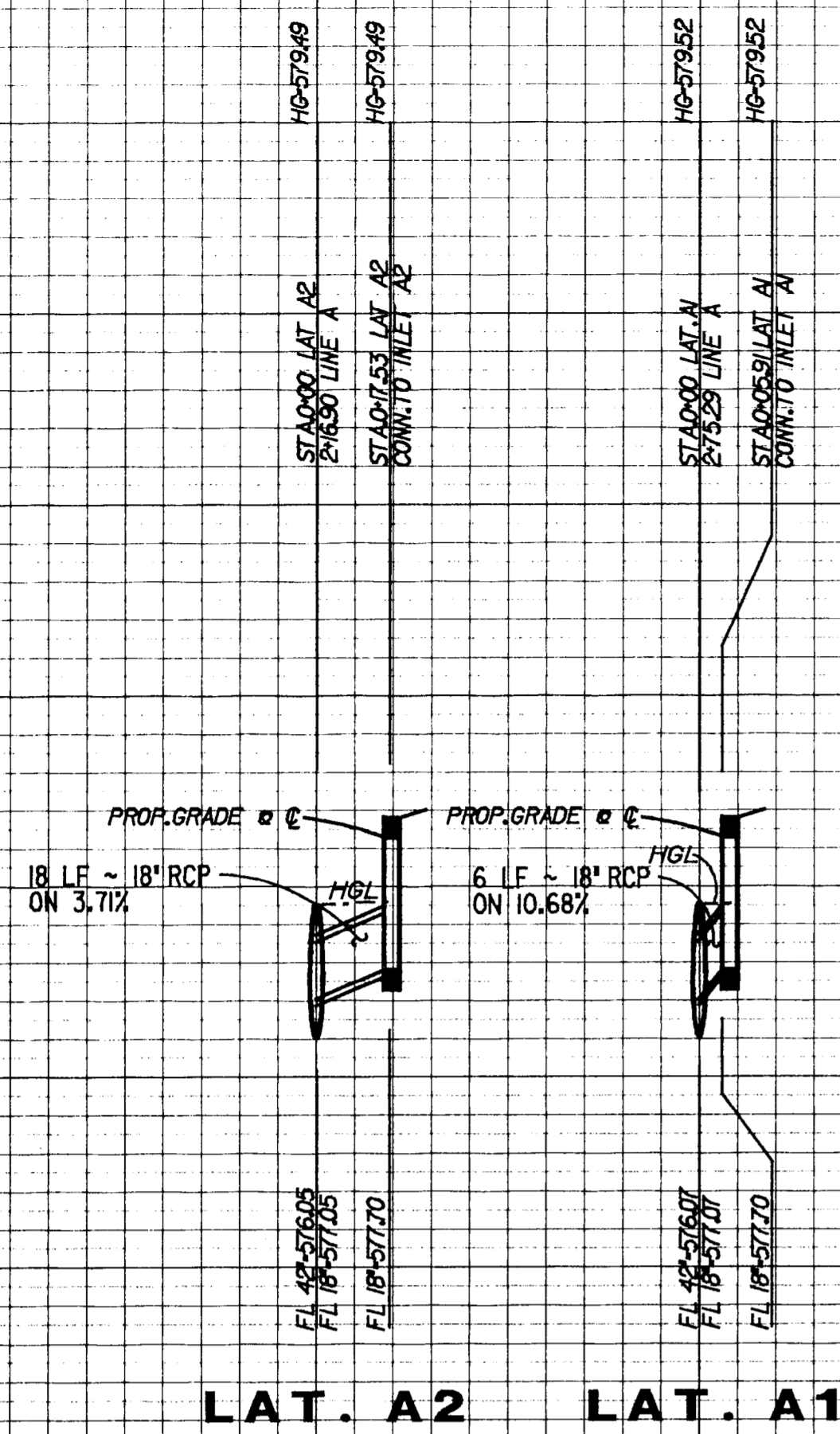
THIS CONSTRUCTION IS INTENDED TO MEET THE TOWN OF ADDISON STANDARDS AND FUNCTION AS DESIGNED.  
**RECORD DRAWING**  
 I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION, AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS.  
 BY: *Steven B. Heniford* DATE: 9-16-94  
 TITLE: Project Engineer



**LAT. B1**  
**GRAND ADDISON III**  
**PLAN & PROFILE**  
**STORM SEWER 'B'**

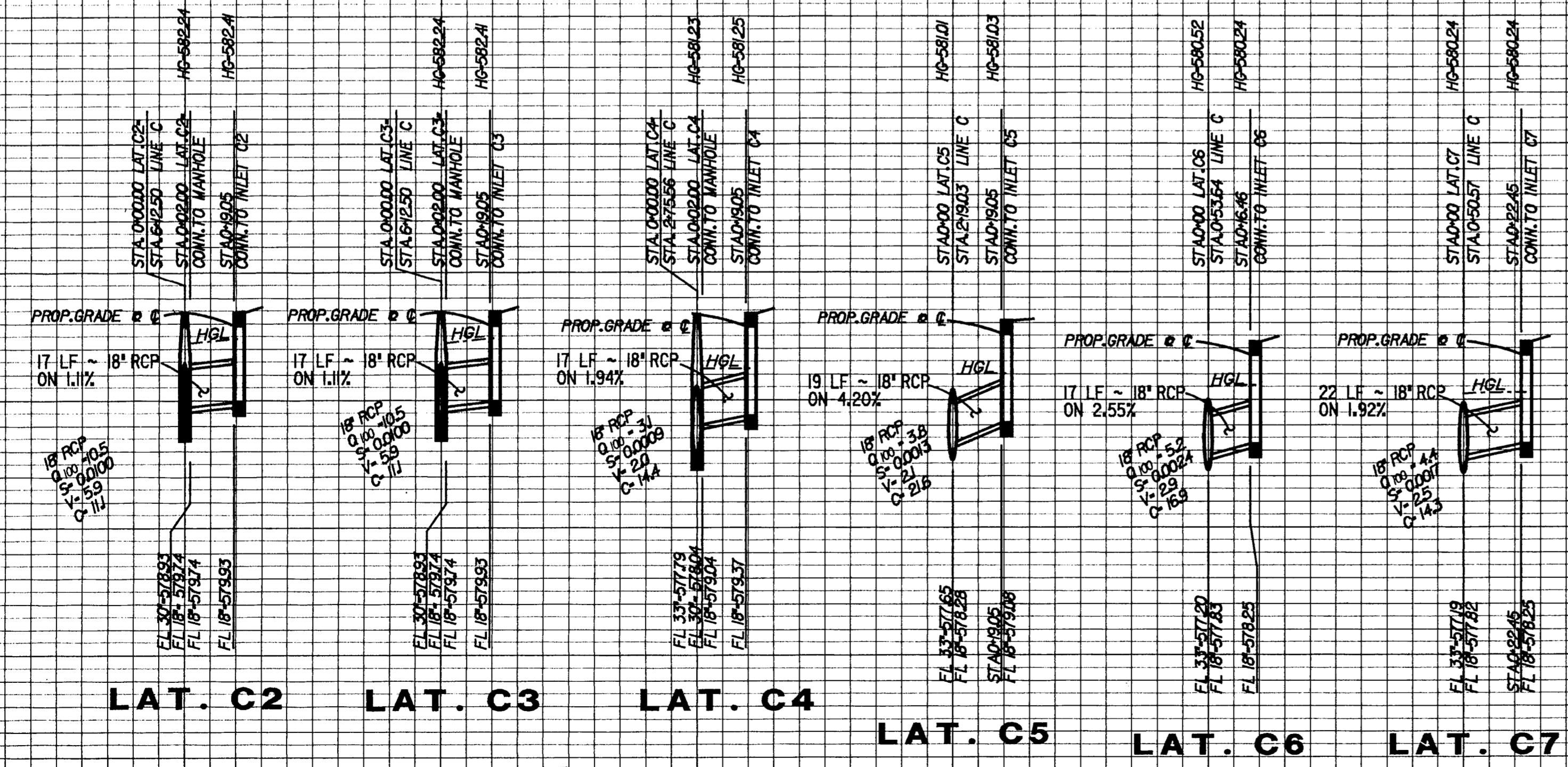
**TOWN OF ADDISON, TEXAS**  
 Lichliter/Jameson & Associates, Inc.   
 CONSULTING ENGINEERING PLANNING SURVEYING  
 1409 WOODSHADOW LANE, SUITE 1400, DALLAS, TEXAS 75247, 214/630-8887  
 JOB NO. 1108950001-0001 DATE 2-25-94 DRAWN BY APT CHECKED BY SBH  
 CAD FILE 94-STMBLDGN CAD DATE 2-25-94 SCALE 1" = 40' HORZ. 1" = 4' VERT. SHEET 7 OF 24





LAT. A2 LAT. A1

NOTE: SEE SHT. 6 FOR PLAN VIEW OF LATERALS SHOWN ON THIS SHEET



LAT. C2 LAT. C3 LAT. C4 LAT. C5 LAT. C6 LAT. C7

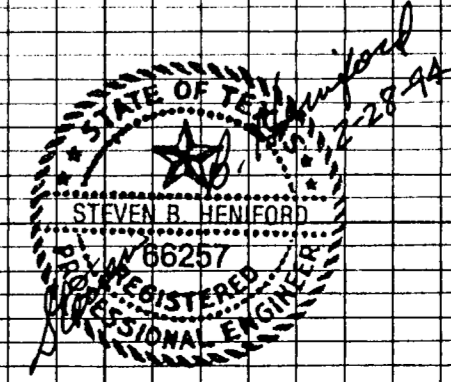
THIS CONSTRUCTION IS INTENDED TO MEET THE TOWN OF ADDISON STANDARDS AND FUNCTION AS DESIGNED

**RECORD DRAWING**

I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION, AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS.

BY Kevin B. Hendrick DATE 9-16-94

TITLE Project Engineer

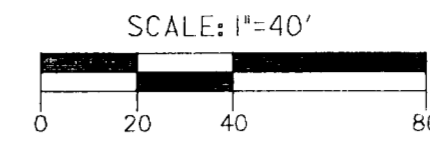


**GRAND ADDISON III**  
**PLAN & PROFILE**  
**STORM SEWER LATERALS**  
 TOWN OF ADDISON, TEXAS

Lichliter/Jameson & Associates, Inc.  
 CONSULTING ENGINEERING PLANNING SURVEYING  
 1420 W. DUCKINGBIRD LANE, SUITE 1400, DALLAS, TEXAS 75247, 214/630-8867

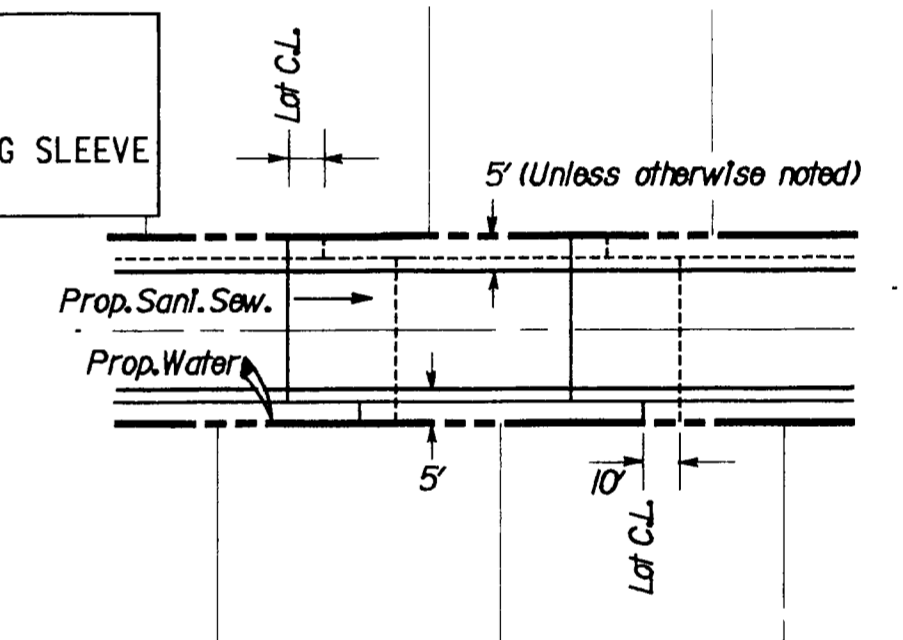
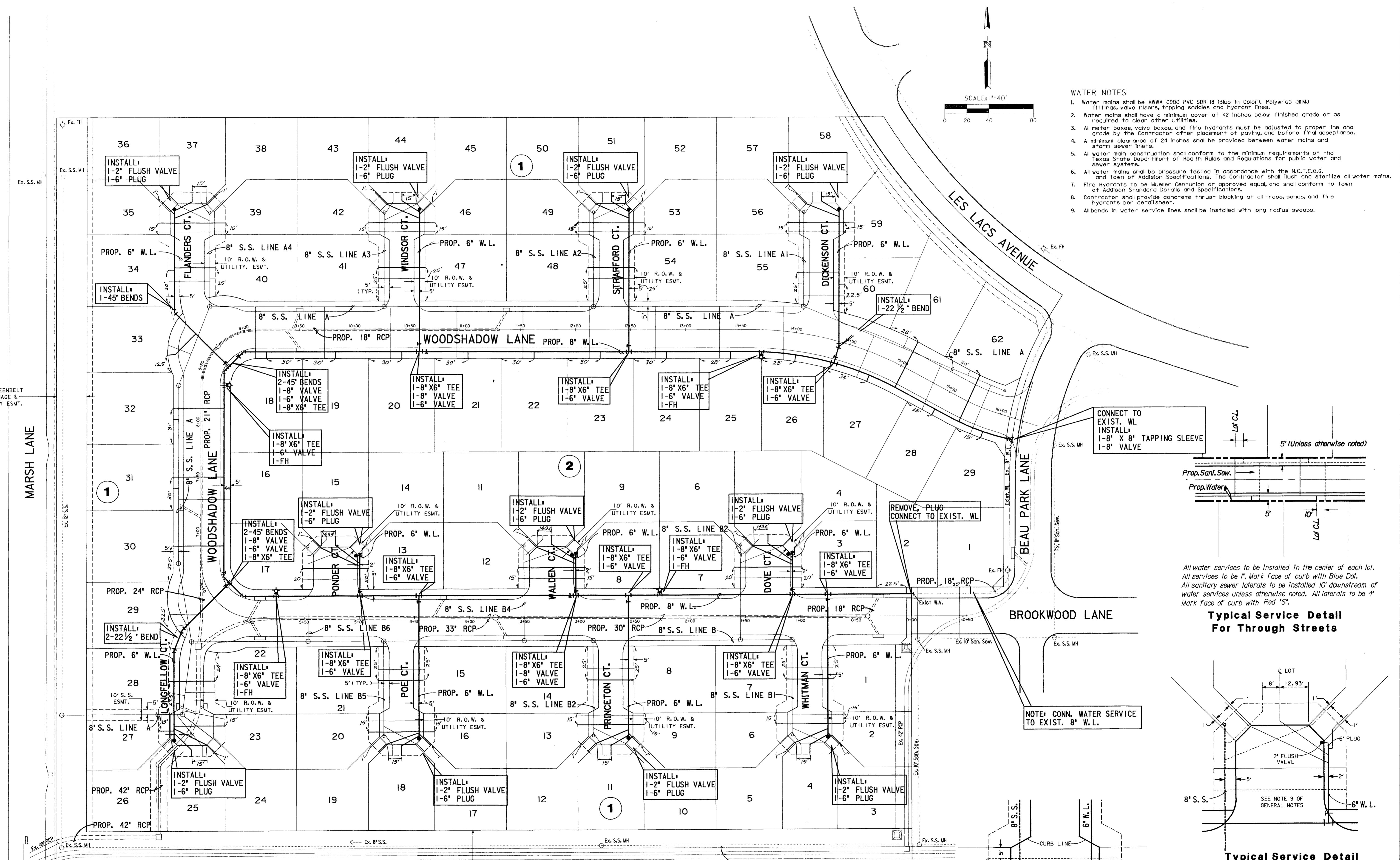
JOB NO. 1108950001-0007	DATE 2-25-94	DRAWN BY APT	CHECKED BY SBH
CAD FILE DA-STWLT.DGN	CAD DATE 2-25-94	SCALE 1" = 4' HORIZ. 1" = 4' VERT.	SHEET 8 OF 24





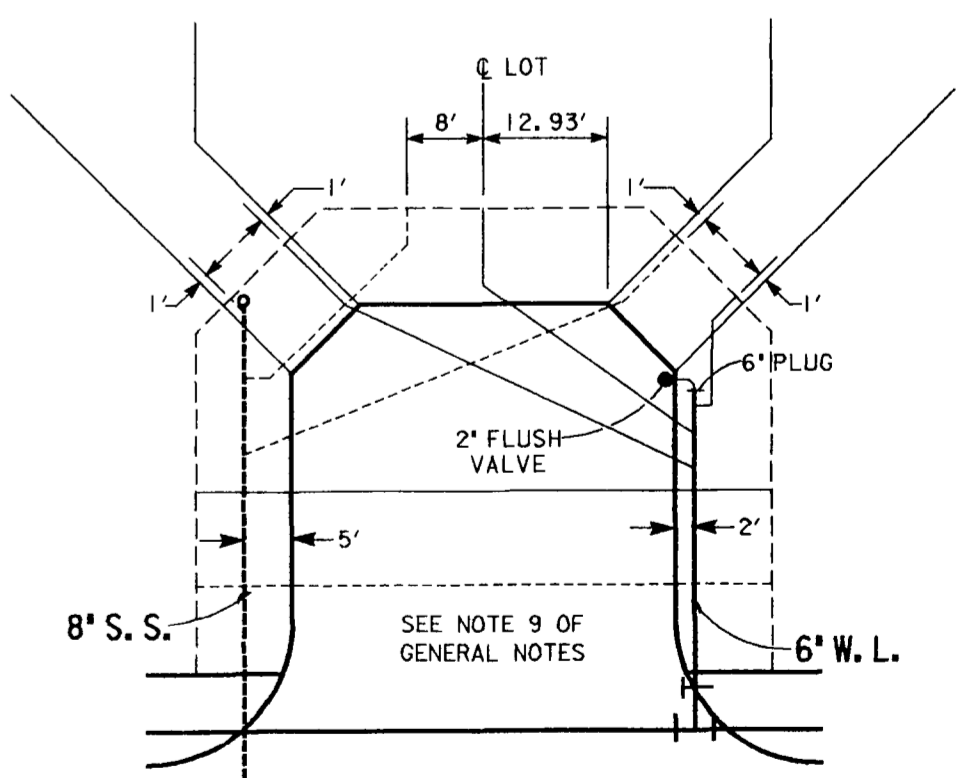
**WATER NOTES**

1. Water mains shall be AWWA C900 PVC SDR 18 (Blue In Color). Polywrap all MJ fittings, valve risers, tapping saddles and hydrant lines.
2. Water mains shall have a minimum cover of 42 inches below finished grade or as required to clear other utilities.
3. All meter boxes, valve boxes, and fire hydrants must be adjusted to proper line and grade by the Contractor after placement of paving, and before final acceptance.
4. A minimum clearance of 24 inches shall be provided between water mains and storm sewer inlets.
5. All water main construction shall conform to the minimum requirements of the Texas State Department of Health Rules and Regulations for public water and sewer systems.
6. All water mains shall be pressure tested in accordance with the N.C.T.C.O.G. and Town of Addison Specifications. The Contractor shall flush and sterilize all water mains.
7. Fire Hydrants to be Mueller Centurion or approved equal, and shall conform to Town of Addison Standard Details and Specifications.
8. Contractor shall provide concrete thrust blocking at all trees, bends, and fire hydrants per detailsheet.
9. All bends in water service lines shall be installed with long radius sweeps.

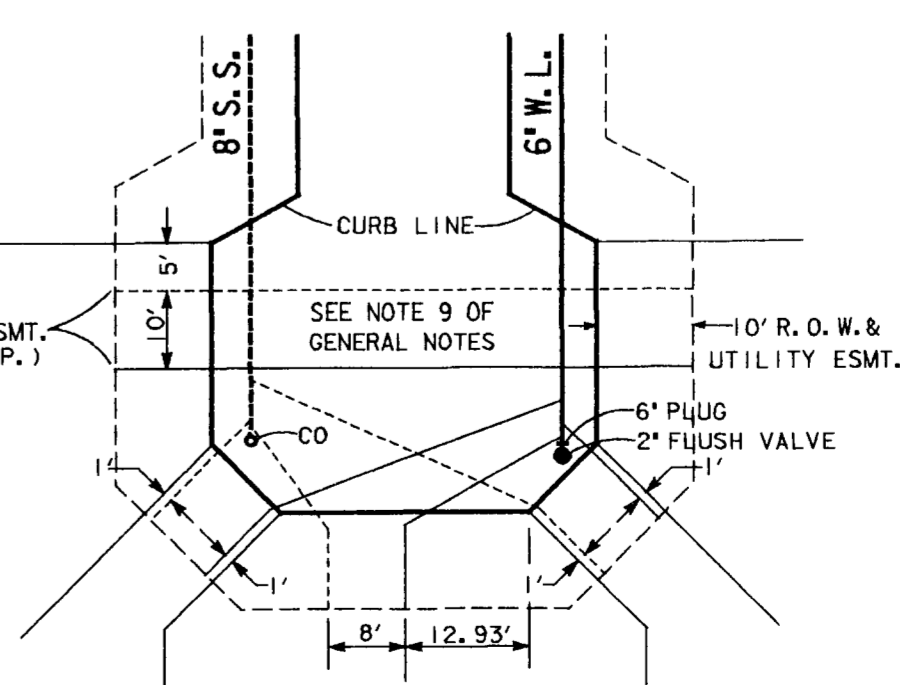


All water services to be installed in the center of each lot. All services to be 4\"/>

**Typical Service Detail For Through Streets**



**Typical Service Detail For Short Cul-De-Sacs**



**Typical Service Detail For Long Cul-De-Sacs**

**RECORD DRAWING**

I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION, AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS.

BY *Steven B. Hendrix* DATE 2-25-94  
**Project Engineer**



NOTE: Irrigation Services to be installed as directed by Landscape Architect.

**BENCHMARKS:**

- \* IN CENTERLINE OF LES LACS AVENUE 325' +/- SOUTH OF PRON AVENUE ELEV. 601.80
- ON TOP OF CURB NORTH SIDE OF LES LACS AVENUE AT NORTHWEST CORNER MEADOWS CREEK CIRCLE ELEV. 587.30



THIS CONSTRUCTION IS INTENDED TO MEET THE TOWN OF ADDISON STANDARDS AND FUNCTION AS DESIGNED

**GRAND ADDISON III WATER LINE PLAN**

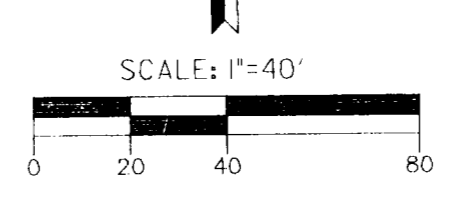
TOWN OF ADDISON, TEXAS

Lichter/Jameson & Associates, Inc.

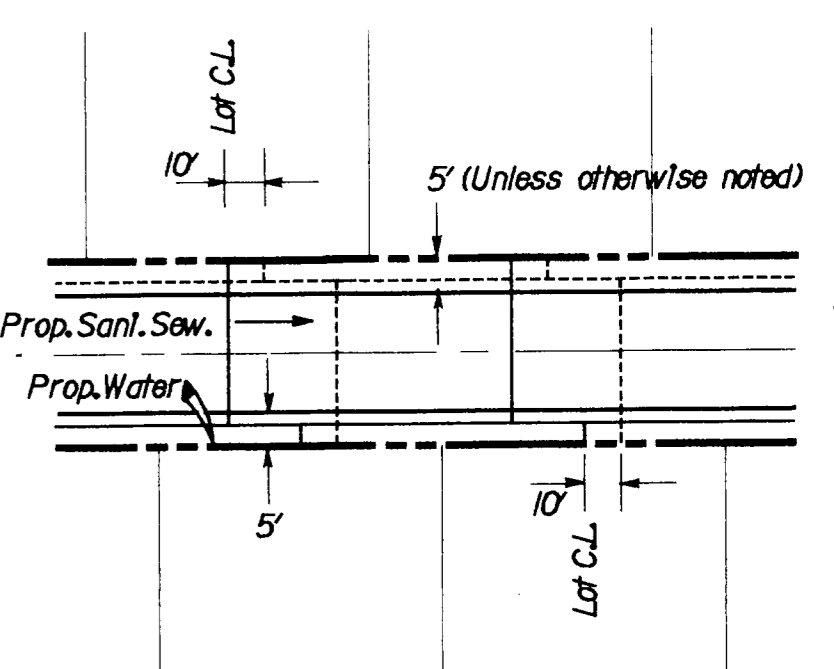
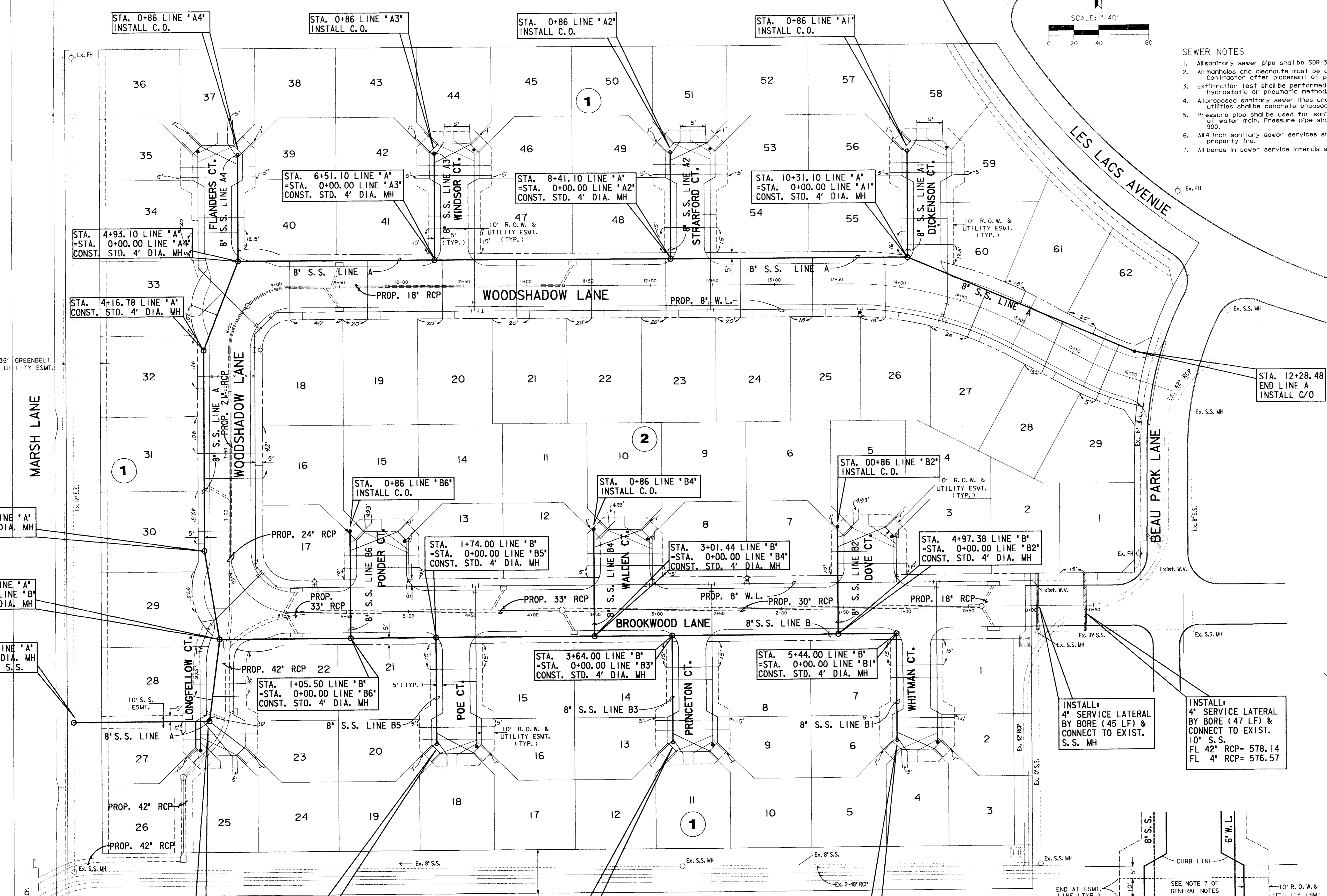
CONSULTING ENGINEERING PLANNING SURVEYING

JOB NO. 1108950001-0007	DATE 2-25-94	DRAWN BY JHP	CHECKED BY
CAD FILE GA-WDPN	CAD DATE 2-25-94	SCALE 1" = 40'	SHEET 9 OF 24



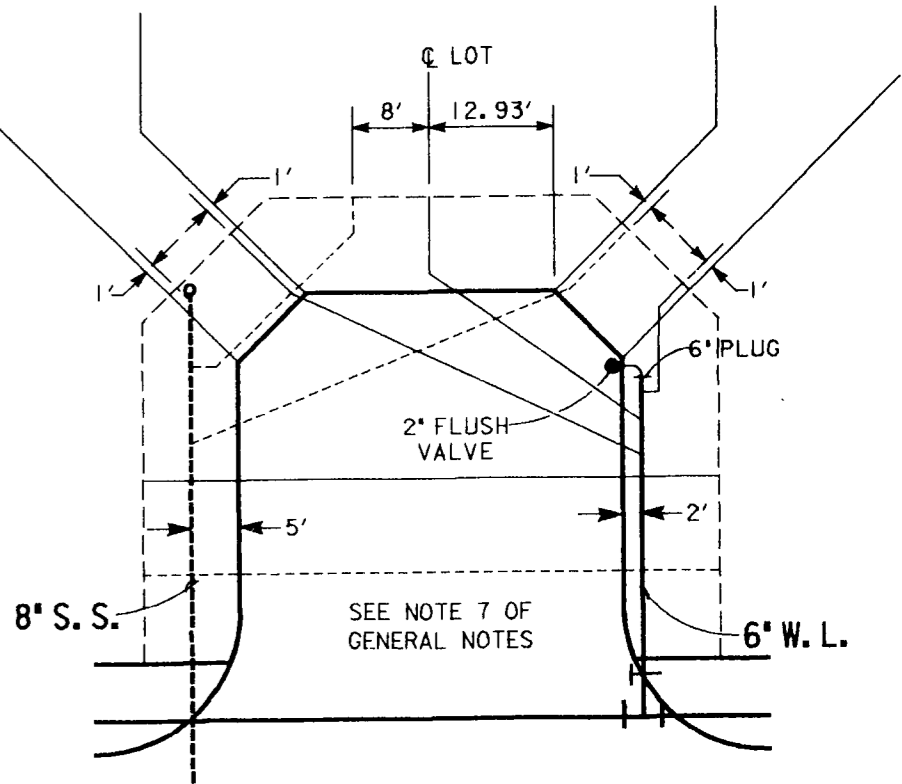


- SEWER NOTES**
- All sanitary sewer pipe shall be SDR 35 PVC ASTM D3034 (Green In Color).
  - All manholes and cleanouts must be adjusted to proper line and grade by the Contractor after placement of paving, and before final acceptance.
  - Exfiltration test shall be performed by Contractor on all sewer pipe by either hydrostatic or pneumatic method, as specified by the Town of Addison.
  - All proposed sanitary sewer lines and laterals within five feet of other subterranean utilities shall be concrete encased.
  - Pressure pipe shall be used for sanitary sewer mains located within nine (9) feet of water main. Pressure pipe shall be either cast Iron or PVC, SDR 18 AWWA C-900.
  - All 4 inch sanitary sewer services shall have a minimum cover of 4.0 feet at the property line.
  - All bands in sewer service laterals shall be installed as long radius sweeps.

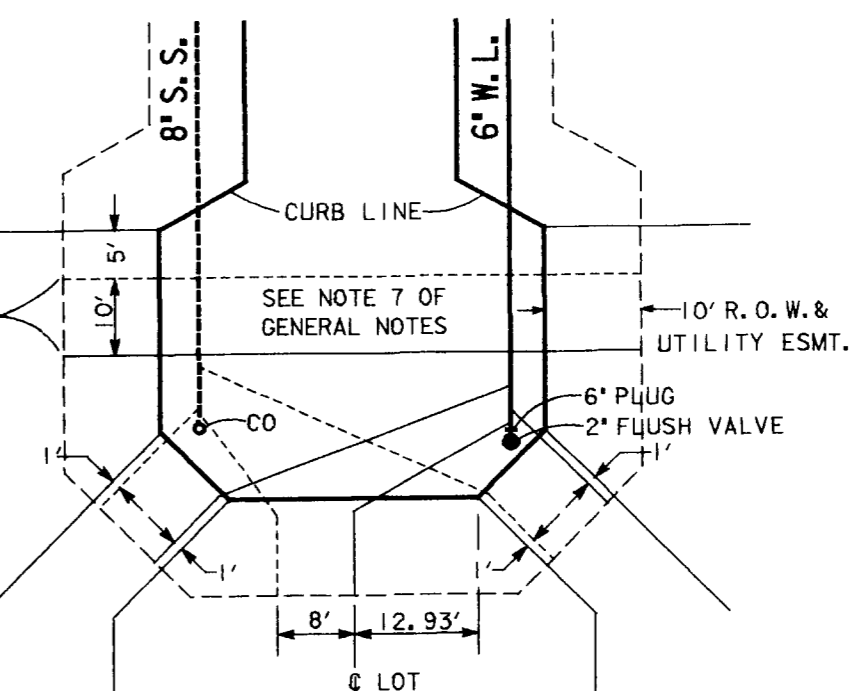


All water services to be installed in the center of each lot. All services to be 1" Mark face of curb with Blue Dot. All sanitary sewer laterals to be installed 10' downstream of water services unless otherwise noted. All laterals to be 4" Mark face of curb with Red 'S'.

**Typical Service Detail For Through Streets**



**Typical Service Detail For Short Cul-De-Sacs**



**Typical Service Detail For Long Cul-De-Sacs**

**RECORD DRAWING**

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BY *Steven B. Heniford* DATE 9-16-94  
 TITLE *Project Engineer*



**BENCHMARKS:**  
 \*X\* IN CENTERLINE OF LES LACS AVENUE 325'+/- SOUTH OF PROTON AVENUE ELEV. 601.80  
 † ON TOP OF CURB NORTH SIDE OF LES LACS AVENUE AT NORTHWEST CORNER MEADOWS CREEK CIRCLE ELEV. 587.30

"THIS CONSTRUCTION IS INTENDED TO MEET THE TOWN OF ADDISON STANDARDS AND FUNCTION AS DESIGNED"

**GRAND ADDISON III SANITARY SEWER PLAN**

TOWN OF ADDISON, TEXAS

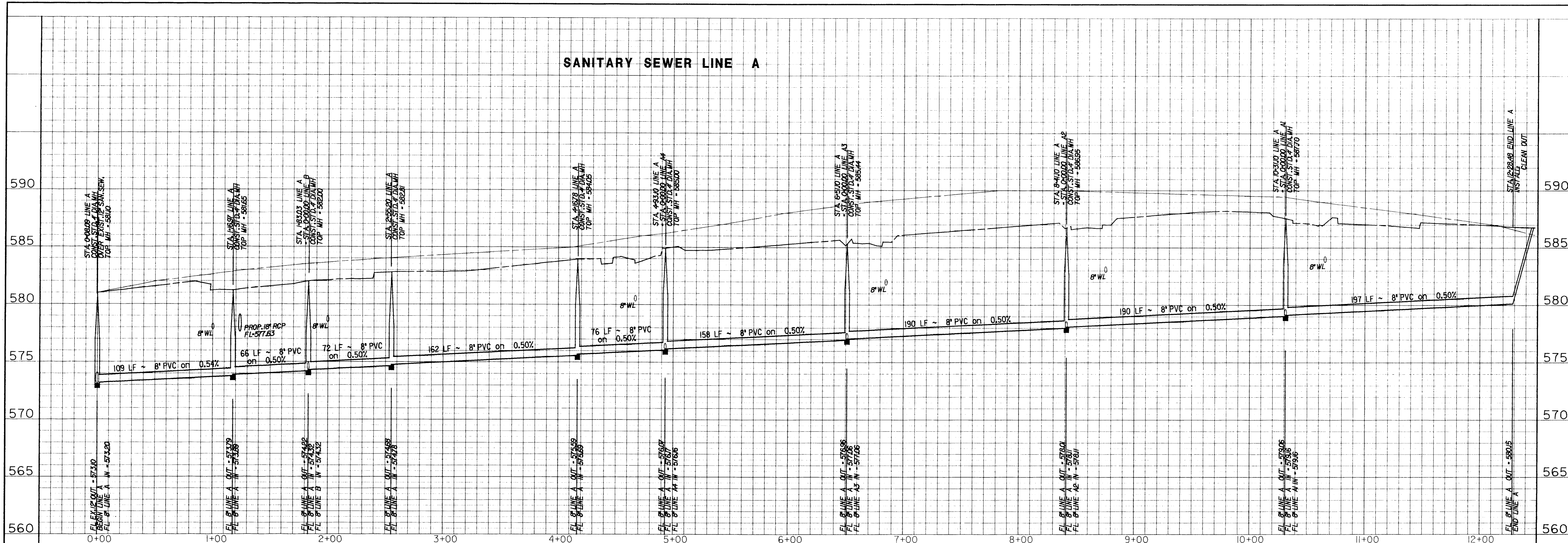
Lichter/Jameson & Associates, Inc.

CONSULTING ENGINEERING SURVEYING  
 1420 WOODCKINGBRO LANE, SUITE 1400, DALLAS, TEXAS 75247, 214/630-9887

JOB NO. 1108950001-0007	DATE 2-25-94	DRAWN BY JHP	CHECKED BY
CAD FILE GA-SS.DGN	CAD DATE 2-25-94	SCALE 1" = 40'	SHEET 10 OF 24



**SANITARY SEWER LINE A**

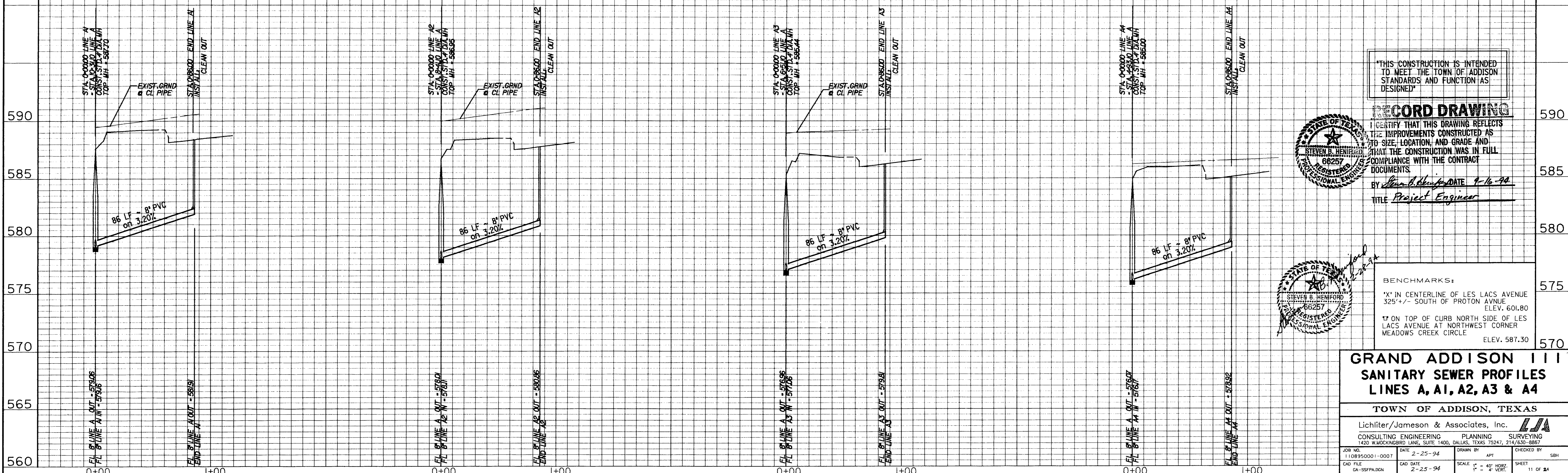


**SANITARY SEWER LINE A1**

**SANITARY SEWER LINE A2**

**SANITARY SEWER LINE A3**

**SANITARY SEWER LINE A4**

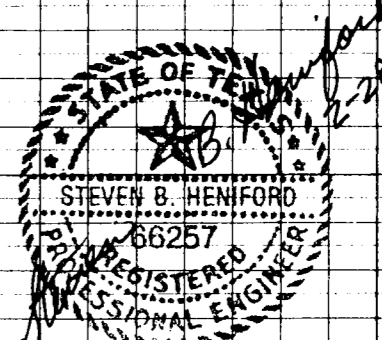
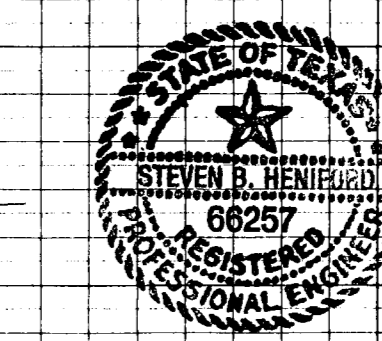


"THIS CONSTRUCTION IS INTENDED TO MEET THE TOWN OF ADDISON STANDARDS AND FUNCTION AS DESIGNED"

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BY *Steven B. Henford* DATE *9-16-94*  
TITLE *Project Engineer*



**BENCHMARKS:**  
"X" IN CENTERLINE OF LES LACS AVENUE 325' +/- SOUTH OF PROTON AVENUE. ELEV. 601.80  
"7" ON TOP OF CURB NORTH SIDE OF LES LACS AVENUE AT NORTHWEST CORNER MEADOWS CREEK CIRCLE. ELEV. 587.30

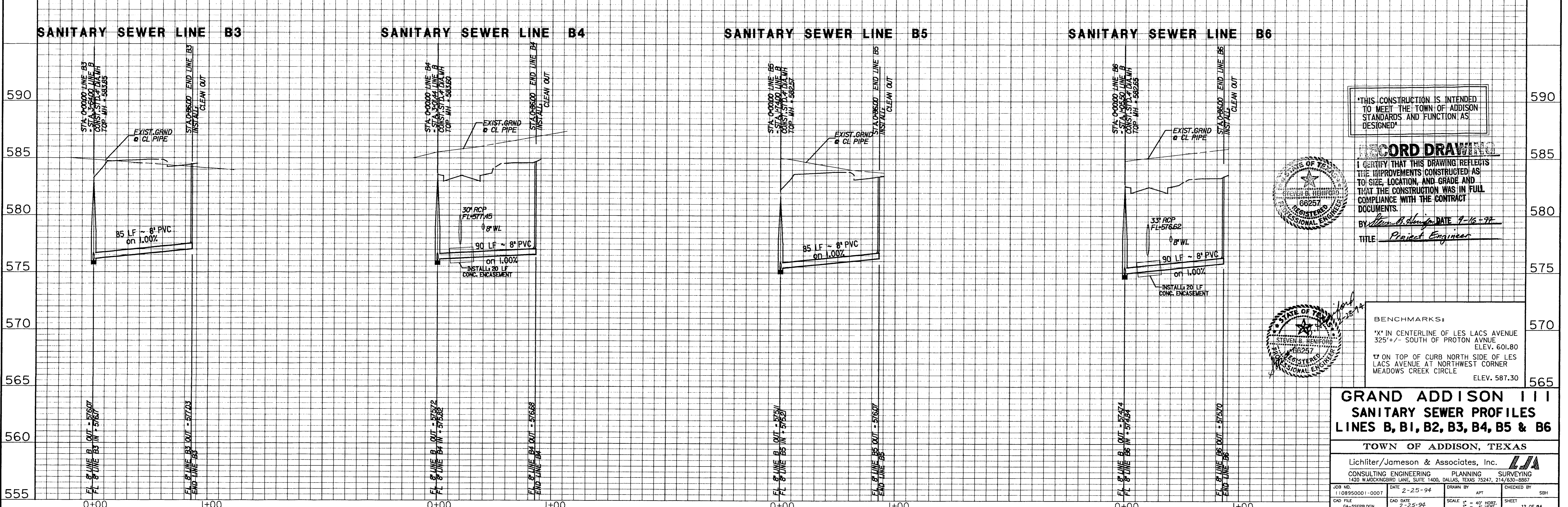
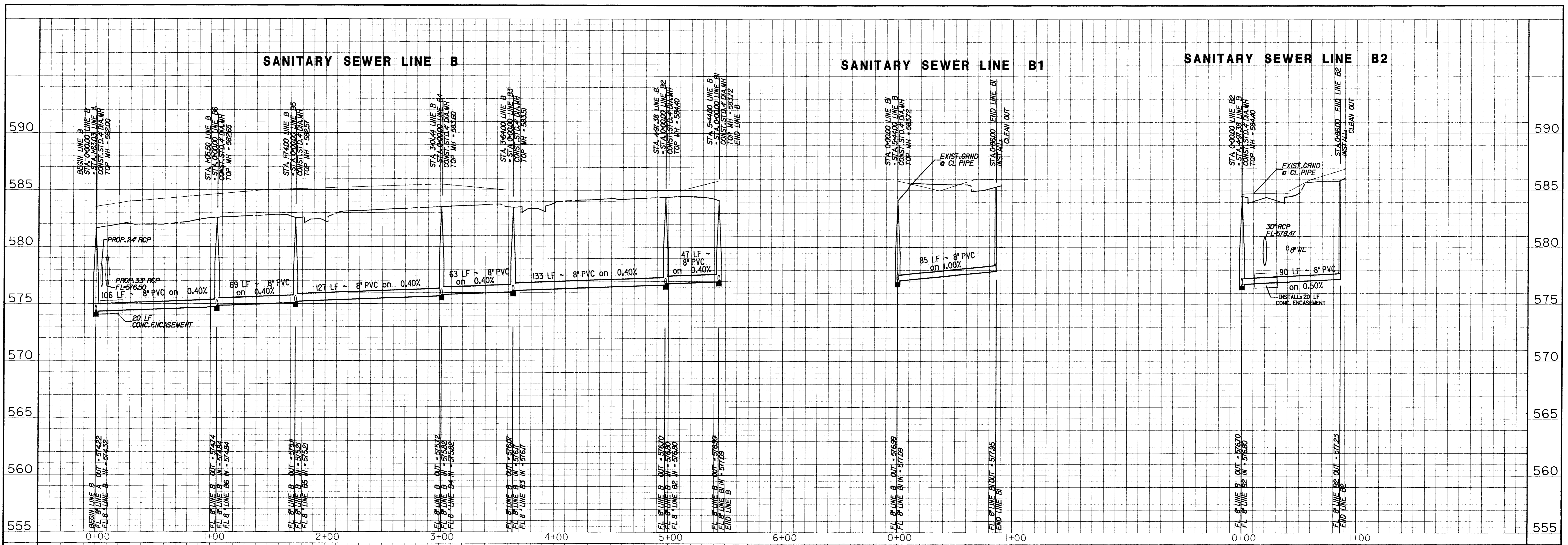
**GRAND ADDISON III  
SANITARY SEWER PROFILES  
LINES A, A1, A2, A3 & A4**

TOWN OF ADDISON, TEXAS

Lichliter/Jameson & Associates, Inc.  
CONSULTING ENGINEERING SURVEYING  
1420 W. MOCKINGBIRD LANE, SUITE 1400, DALLAS, TEXAS 75247, 214/630-8867

JOB NO. 1108950001-0007	DATE 2-25-94	DRAWN BY APT	CHECKED BY SBH
CAD FILE GA-SSFPALDGN	CAD DATE 2-25-94	SCALE 1" = 40' HORIZ. 1" = 4' VERT.	SHEET 11 OF 24



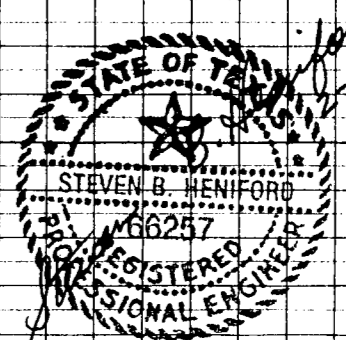
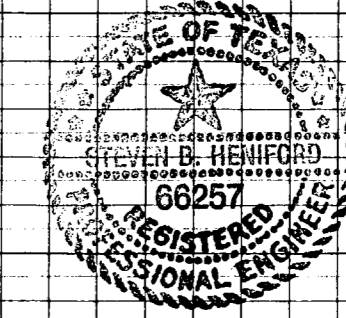


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BY Steven B. Henford DATE 7-16-94  
TITLE Project Engineer



**BENCHMARKS:**  
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 † ON TOP OF CURB NORTH SIDE OF LES LACS AVENUE AT NORTHWEST CORNER MEADOWS CREEK CIRCLE ELEV. 587.30

**GRAND ADDISON III  
 SANITARY SEWER PROFILES  
 LINES B, B1, B2, B3, B4, B5 & B6**

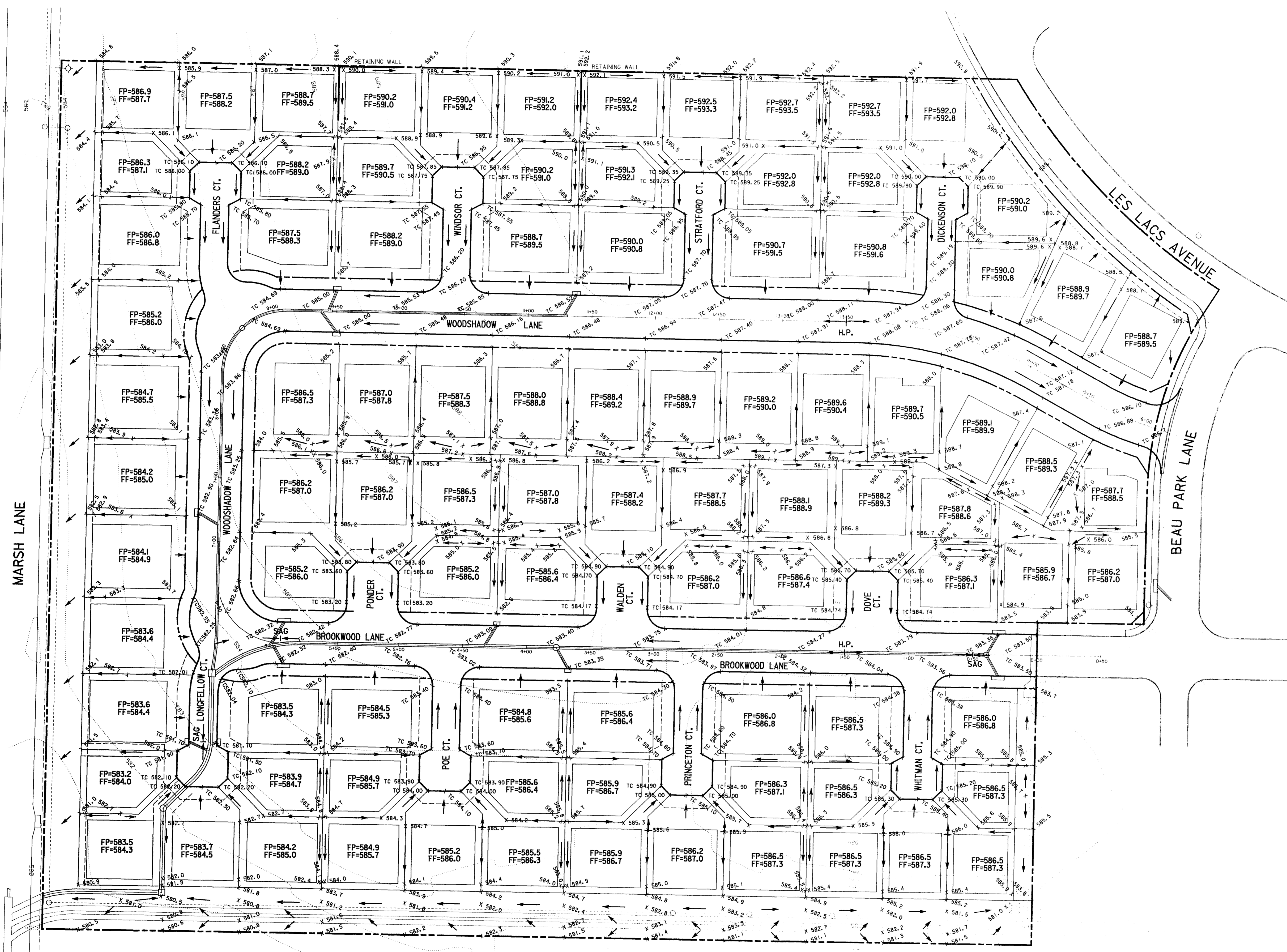
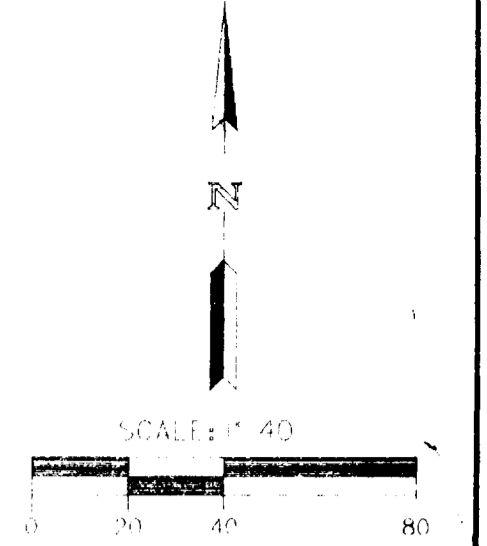
TOWN OF ADDISON, TEXAS

Lichter/Jameson & Associates, Inc.

CONSULTING ENGINEERING PLANNING SURVEYING  
 1400 W. MCKINNEY BLVD., SUITE 1400, DALLAS, TEXAS 75247, 214/650-8857

JOB NO. 1108950001-0007 DATE 2-25-94 DRAWN BY APT CHECKED BY SBH  
 CAD FILE GA-SSFPB.DGN CAD DATE 2-25-94 SCALE 1" = 40' HORIZ. 1" = 4' VERT. SHEET 12 OF 24



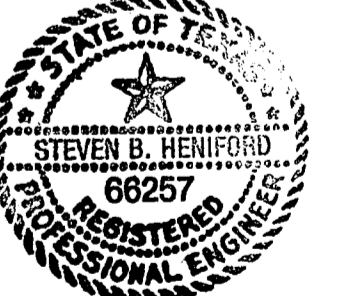


'THIS CONSTRUCTION IS INTENDED TO MEET THE TOWN OF ADDISON STANDARDS AND FUNCTION AS DESIGNED'

**RECORD DRAWING**

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BY Steve B. Heniford DATE 9-16-94  
TITLE Project Engineer



**GRAND ADDISON III GRADING PLAN**

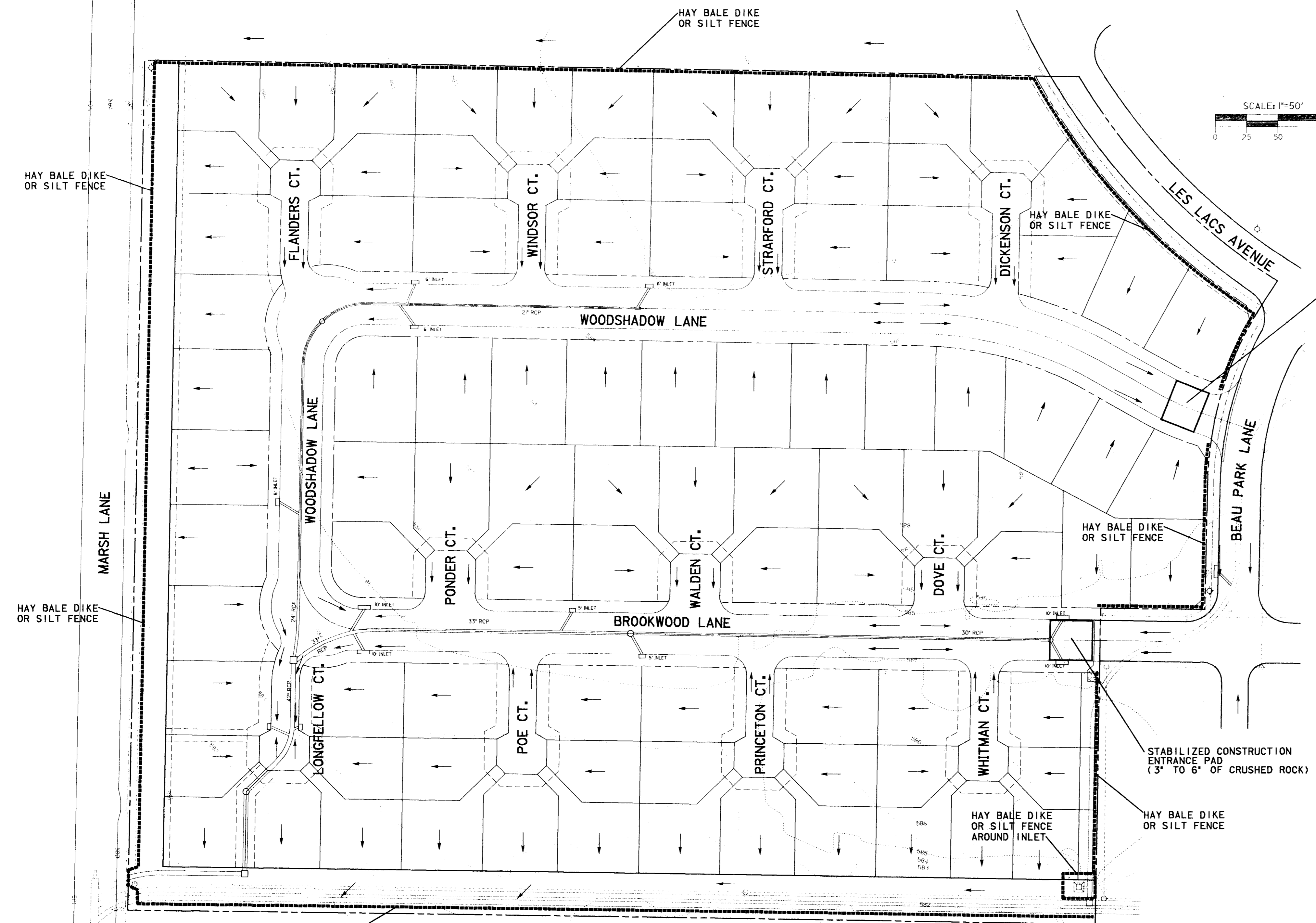
TOWN OF ADDISON, TEXAS

Lichtler/Jameson & Associates, Inc.

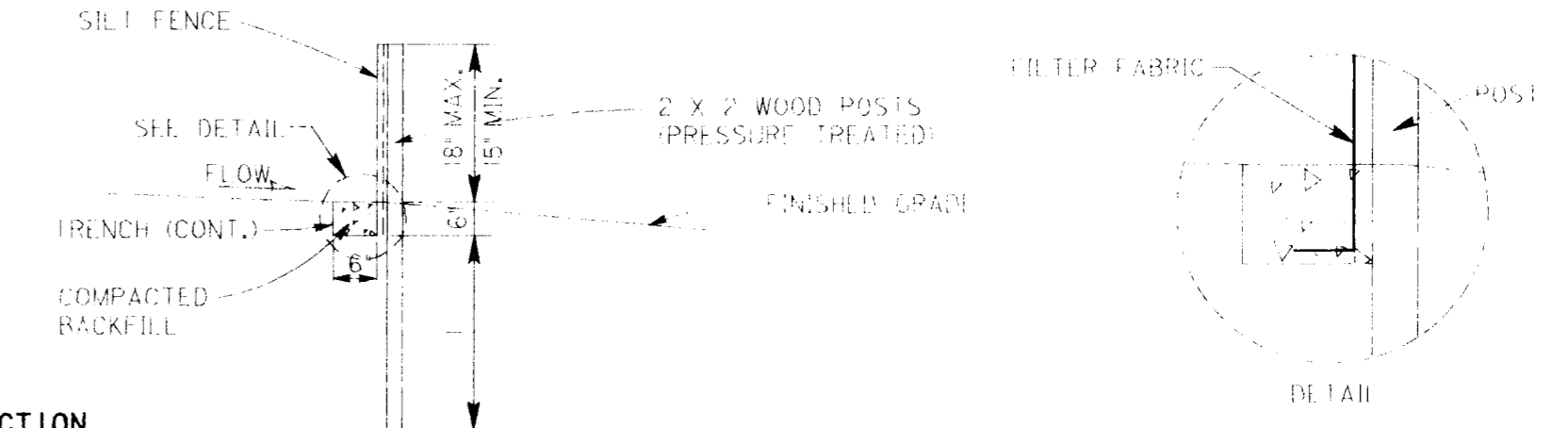
CONSULTING ENGINEERING - PLANNING SURVEYING  
1420 W. LOCKINGBIRD LANE, SUITE 1400, DALLAS, TEXAS 75247, 214/630-8867

JOB NO. 1108950001-0007 DATE 2-25-94 DRAWN BY CHECKED BY S.B.H.  
CAD FILE CA-GRAD.DGN CAD DATE 2-25-94 SCALE 1" = 40' SHEET 13 OF 24





- SILT BARRIER FENCE NOTES:**
1. A CONTINUOUS SILT BARRIER FENCE SHALL BE CONSTRUCTED AROUND ALL FIRST STAGE INLETS BY THE UTILITY CONTRACTOR.
  2. A CONTINUOUS SILT BARRIER FENCE SHALL BE CONSTRUCTED BEHIND ALL CURB LINES ON THIS PROJECT BY THE PAVING CONTRACTOR.



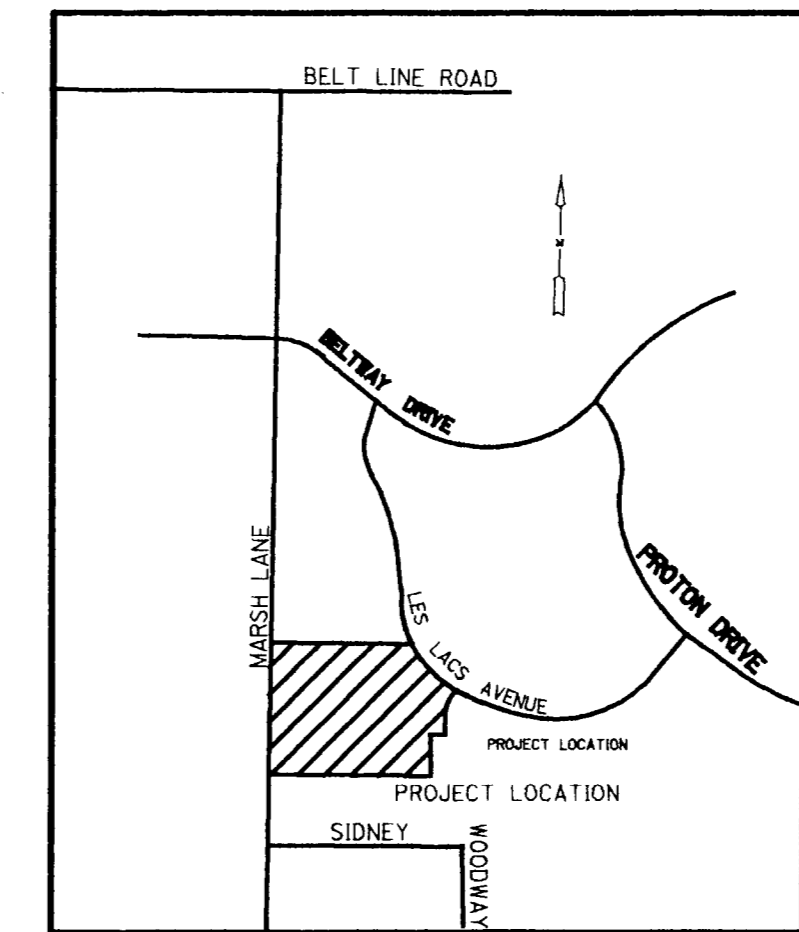
**SILT BARRIER FENCE**

**CONSTRUCTION SPECIFICATIONS FOR SILT BARRIER FENCE**

- A. MATERIALS**
1. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS (PER ASTM METHODS):
- | PHYSICAL PROPERTY                      | REQUIREMENTS   |
|--|--|
| FILTERING EFFICIENCY                   | 75% (MIN.)   |
| TENSILE STRENGTH @ 20% MAX. ELONGATION | EXT. STRENGTH = 50 LBS./1 IN. (MIN.)<br>STD. STRENGTH = 30 LBS./1 IN. (MIN.) |
| FLOW RATE                              | 0.3 GAL./SQ. FT./MIN. (MIN.)   |
2. SYNTHETIC FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0° TO 120°.

- B. INSTALLATION**
1. THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 15" AND A MAXIMUM OF 18" ABOVE FINAL GRADE.
  2. STANDARD STRENGTH SYNTHETIC FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL AND CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS (AND THUS IMPROVE THE BARRIER'S STRENGTH AND EFFICIENCY).
  3. STAKES FOR THE SILT FENCE SHALL BE 2" x 2" WOOD WITH A MINIMUM LENGTH OF 3 FEET.
  4. THE STAKES SHALL BE SPACED A MAXIMUM OF 3' APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (18" MIN.).
  5. A TRENCH SHALL BE EXCAVATED APPROX. 6" WIDE AND 6" DEEP ALONG THE LINE OF STAKES AND UPSLOPE FROM THE BARRIER.
  6. THE SILT FENCE SHALL BE STAPLED TO THE STAKES, WITH 8" (MIN.) OF FABRIC EXTENDED INTO THE TRENCH. HEAVY DUTY WIRE STAPLES AT LEAST ONE-HALF INCH LONG SHALL BE USED. THE FENCE SHALL NOT BE STAPLED TO EXISTING TREES.
  7. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FENCE MATERIAL.
  8. IF A SILT FENCE IS TO BE CONSTRUCTED ACROSS A DITCH LINE OR SWALE, THE BARRIER SHALL BE OF SUFFICIENT LENGTH TO ELIMINATE END FLOW, AND THE PLAN CONFIGURATION SHALL RESEMBLE AN ARC OR HORSESHOE WITH THE ENDS ORIENTED UPSLOPE.
  9. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

- C. MAINTENANCE:**
1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
  2. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE SILT FENCE IS STILL NECESSARY, IT SHALL BE REPLACED IMMEDIATELY.
  3. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY 1/2 THE HEIGHT OF THE FENCE.
  4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
  5. THERE SHOULD BE NO GAPS OR SAGS IN THE SILT FENCE.

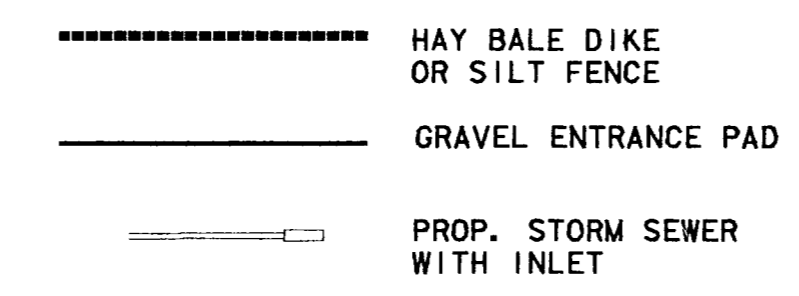


**VICINITY MAP (N.T.S.)**

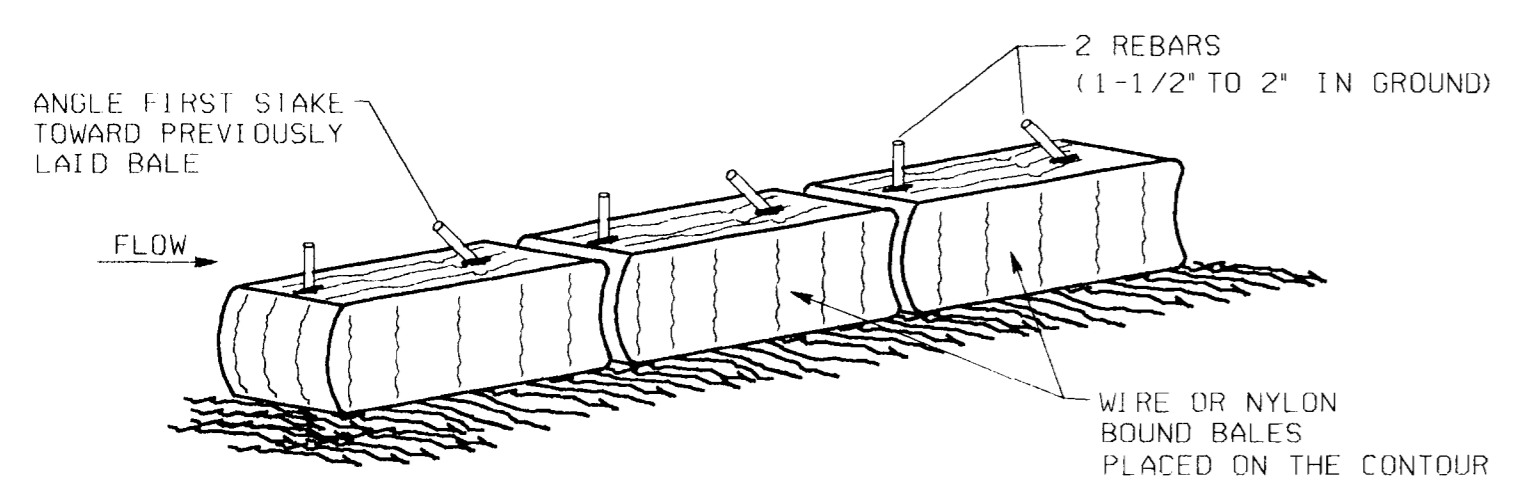
**GENERAL NOTES TO CONTRACTOR**

1. LOCATE FUEL/MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONVEYANCE SYSTEMS. USE A LINER UNDER ABOVE GROUND STORAGE TANKS. USE SILT FENCING, HAY BALES, OR BERMS AROUND FUEL STORAGE AREAS.
2. CONTRACTOR WILL ADVISE OWNER IMMEDIATELY, VERBALLY, AND IN WRITING, OF ANY FUEL SPILLS ONTO THE PROJECT/CONSTRUCTION AREA AND THE ACTIONS TAKEN TO REMEDY THE PROBLEM.
3. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL ENVIRONMENTAL LAWS.
4. CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF FUELS, MATERIALS, AND EXCAVATIONS IN A LEGALLY APPROVED MANNER.
5. CONTRACTOR IS TO INSPECT ALL STRUCTURAL CONTROLS SPECIFIED HEREIN, AT A MINIMUM, ONCE EVERY 7 CALENDAR DAYS OR WITHIN 24 HOURS AFTER ANY STORM EVENT THAT MEETS OR EXCEEDS 0.5 INCHES/24 HOUR PERIOD.
6. CONTRACTOR WILL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
7. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATELY MAINTAINED SANITARY FACILITIES.
8. CONTRACTOR SHALL STABILIZE ALL AREAS DISTURBED DURING CONSTRUCTION, INCLUDING STORAGE AREAS, WITHIN 14 DAYS OF COMPLETION UNLESS CONSTRUCTION IS TO RESUME IN THAT AREA WITHIN 21 DAYS.
9. CONTRACTOR SHALL GRADE ALL GREENBELT AREAS ACCORDING TO THE LOT GRADING PLAN LEAVING A SMOOTH EVEN SURFACE. THE FINISHED GRADE IN THE GREENBELT AREAS SHALL BE SEEDED WITH BERMUDA GRASS AT THE RATE OF 8 LBS. PER ACRE WITHIN 14 DAYS OF GRADING WORK IN THE SPECIFIED AREA. FERTILIZER SHALL BE APPLIED AT THE RATE SPECIFIED BY THE MANUFACTURER. ALL SEEDING WORK SHALL CONFORM TO N.C.T.C.G. SPECIFICATIONS.

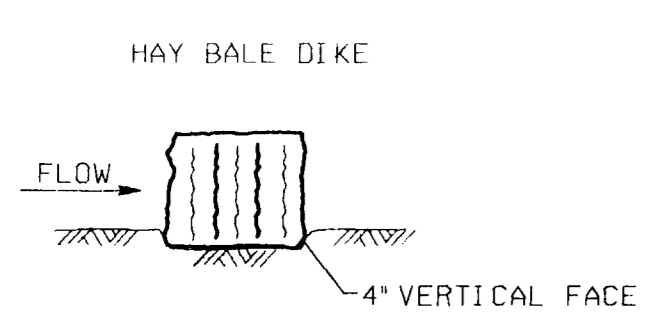
**LEGEND**



- HAY BALE DIKE GENERAL NOTES:**
1. Each bale shall be embedded in the soil a minimum of four inches.
  2. Bales shall be securely anchored in place by 3/8 inch rebar stakes driven through the bales. The first stake in each bale shall be angled toward previously laid bale to force bales together.
  3. Inspection shall be weekly or after each rainfall event and repair or replacement shall be made promptly as needed by the contractor.
  4. When silt reaches a depth of 6 inches, it shall be removed and disposed of in an approved site as to not create a siltation problem.
  5. After the development site is completely stabilized, the bales and accumulated silt shall be removed and disposed of at an approved spoil disposal site.



**ANCHORING DETAIL  
HAY BALE DIKE**



**EMBEDDING DETAIL  
HAY BALE DIKE**



**GRAND ADDISON III  
EROSION CONTROL PLAN**

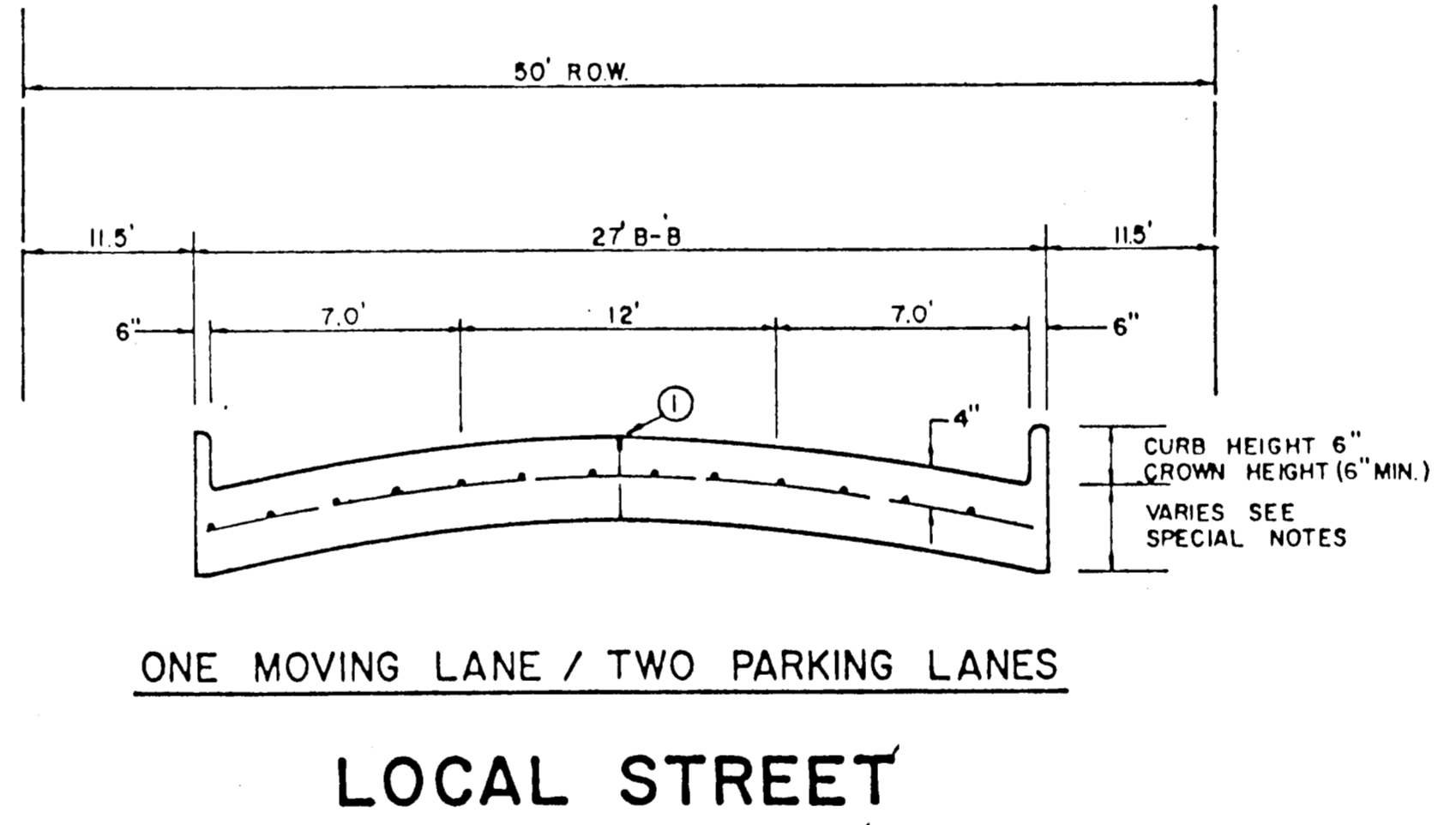
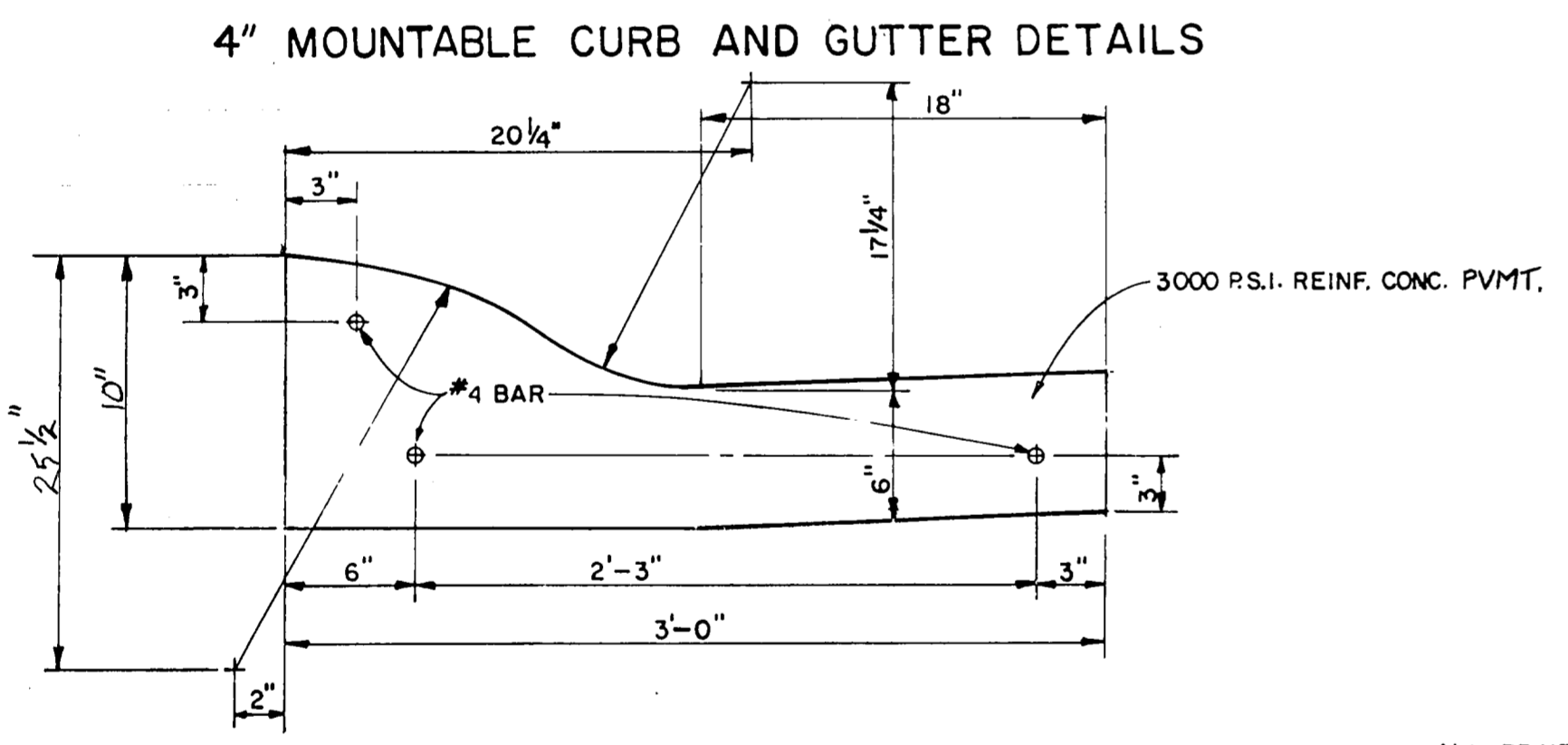
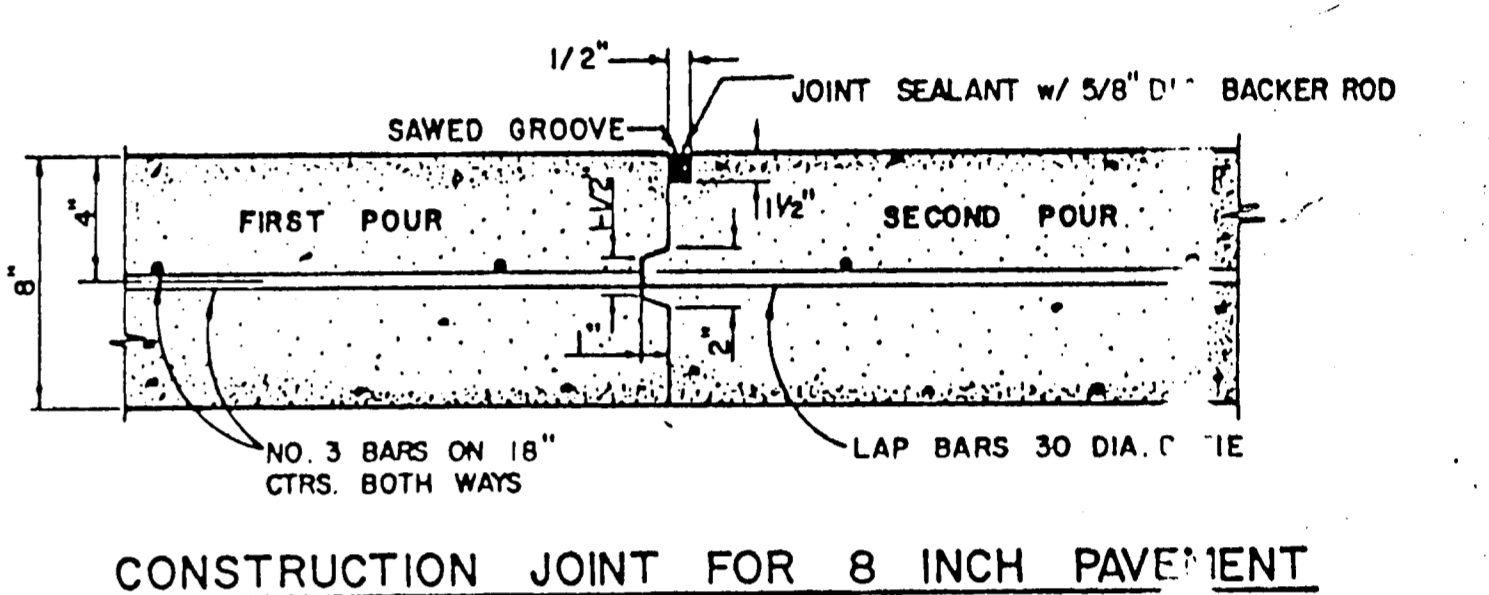
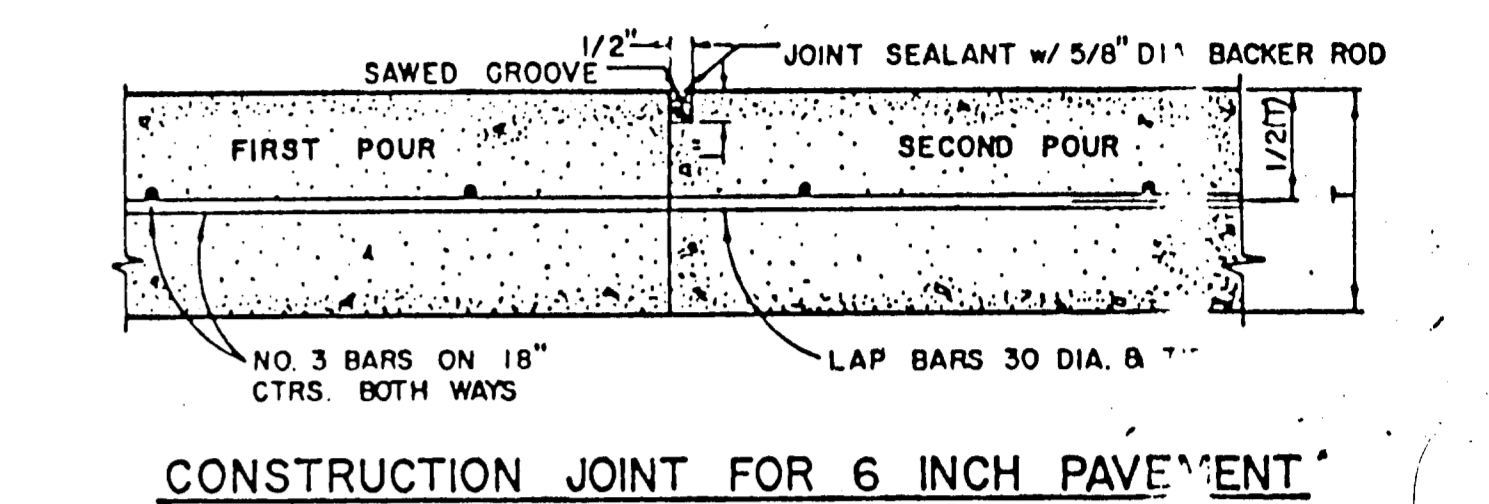
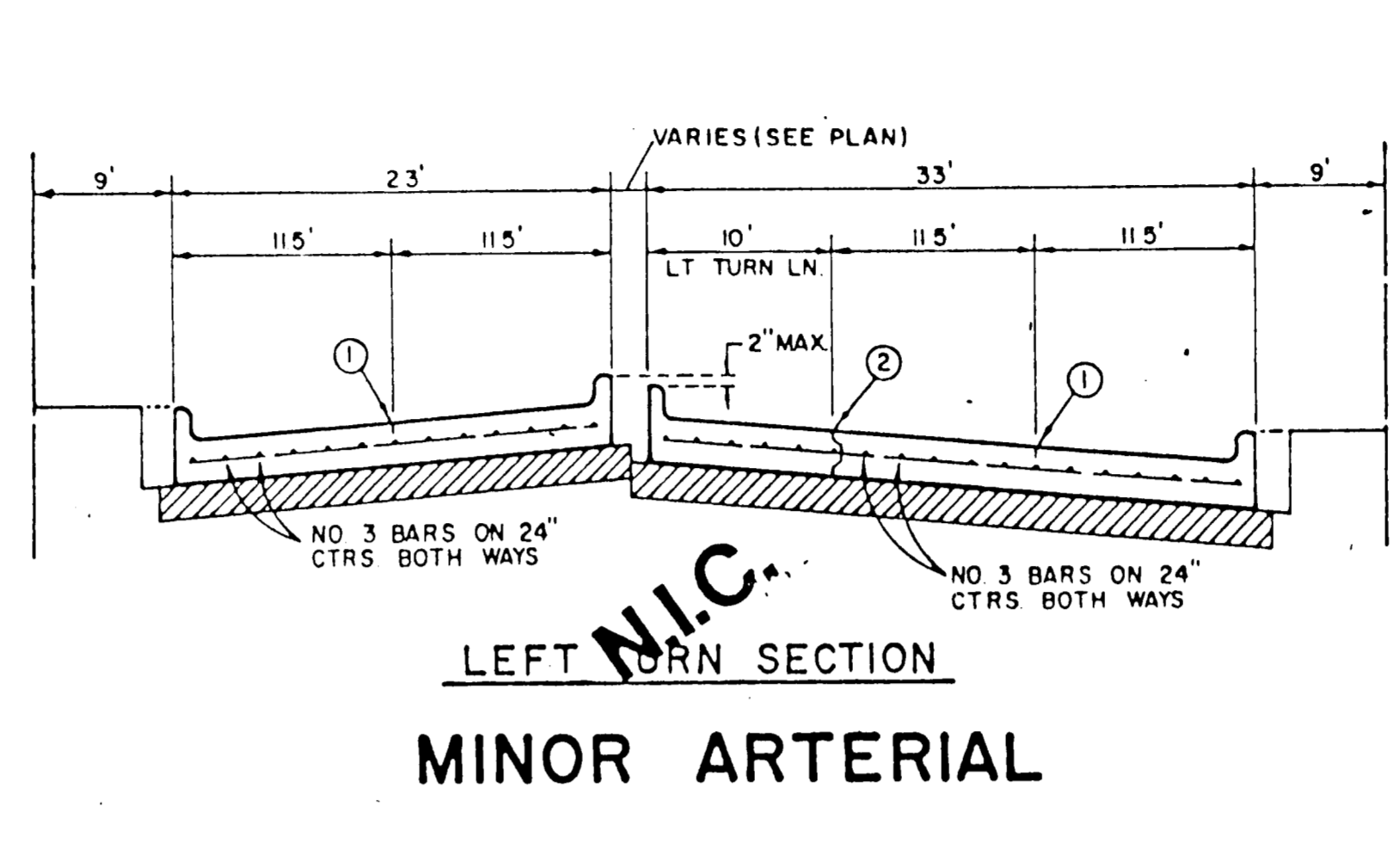
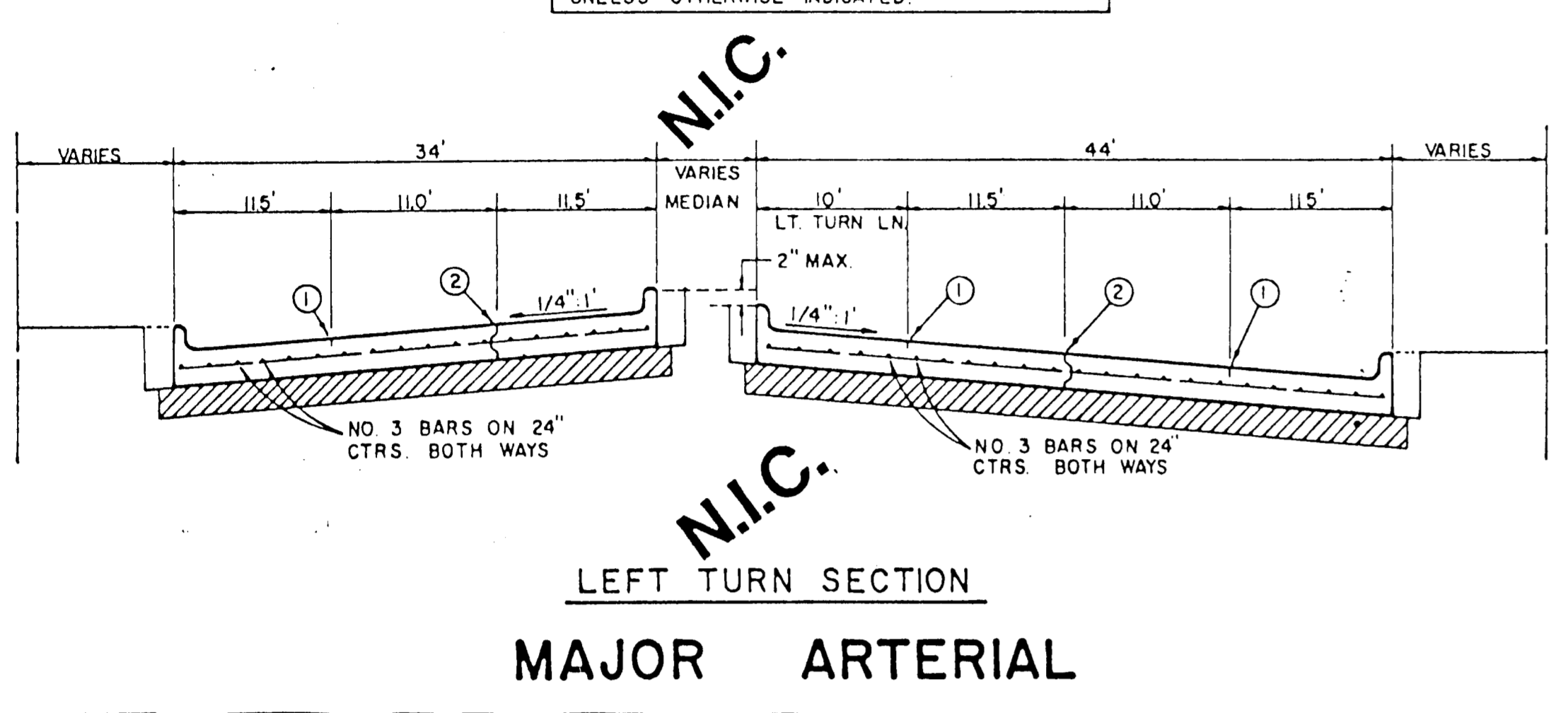
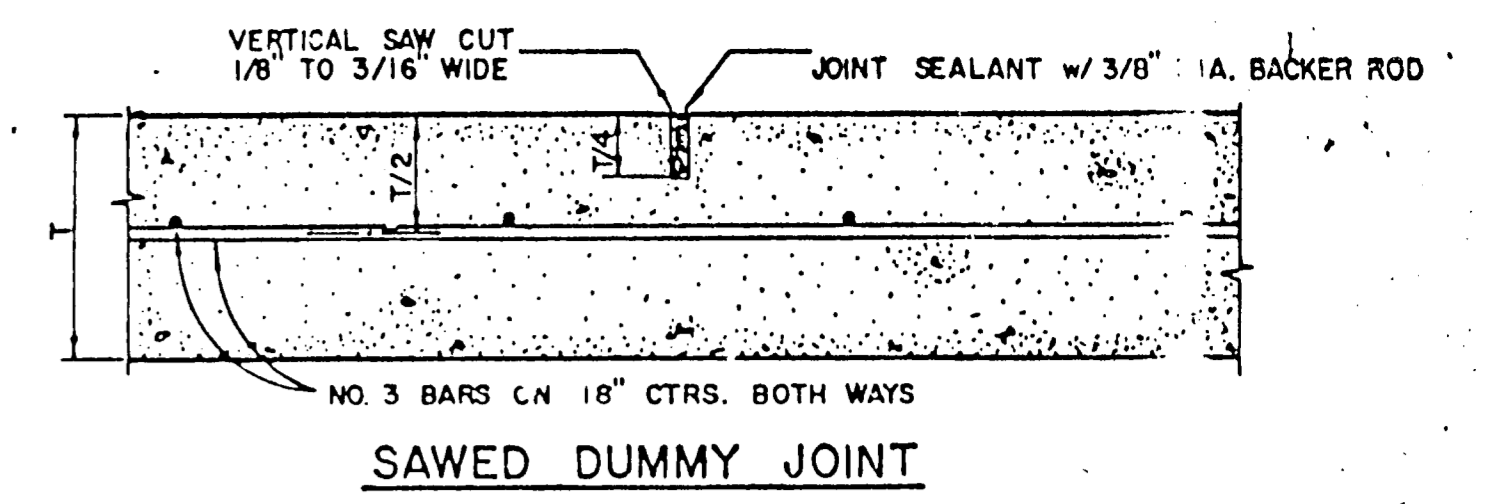
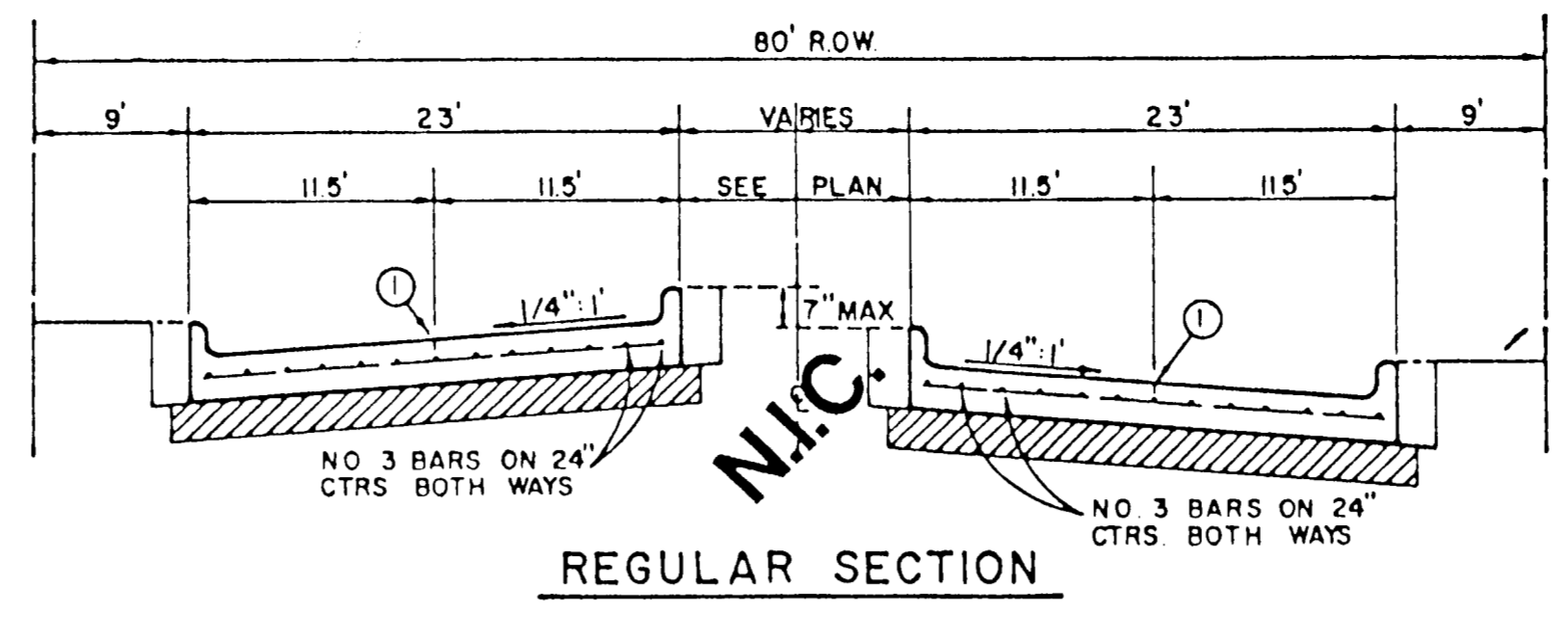
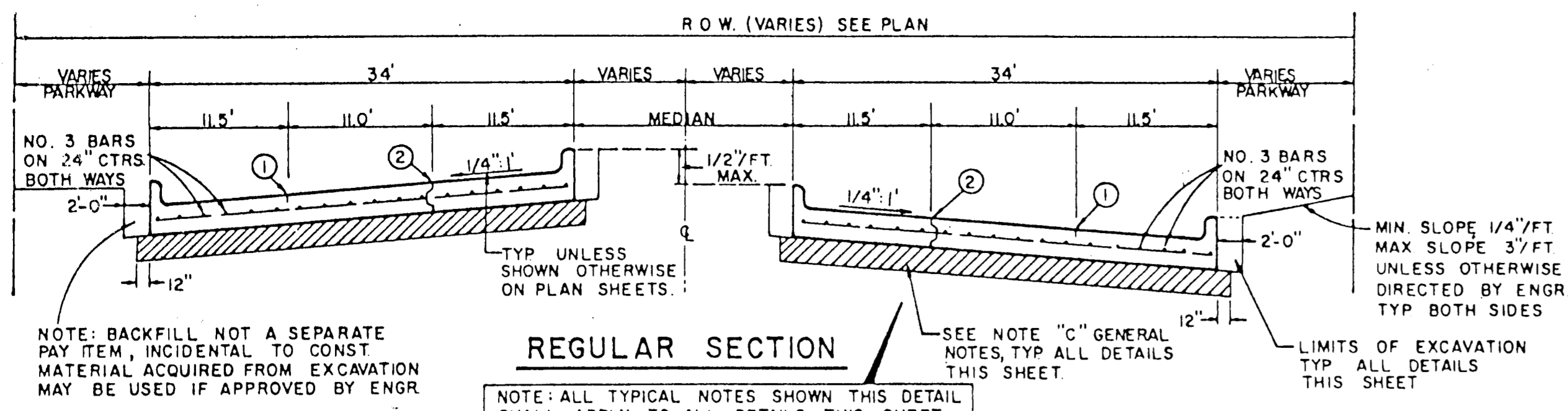
TOWN OF ADDISON, TEXAS

Lichter/Jameson & Associates, Inc.

CONSULTING ENGINEERING PLANNING SURVEYING  
1420 WACKINGBROD LANE, SUITE 1400, DALLAS, TEXAS 75247, 214/630-8887

JOB NO. GA-DAM.DGN DATE 2-25-94 DRAWN CHECKED BY  
1108950001-0007 CAD DATE 2-25-94 SCALE 1"=50' SHEET 14 OF 24





**REINFORCED CONCRETE PAVEMENT**

ALL REINFORCING BARS SHALL BE NO. 3 TRANSVERSE BARS TO BE SPACED ON 1'-6" CENTERS; LONGITUDINAL BARS TO BE SPACED ON 1'-6" EXCEPT WHERE NOTED.

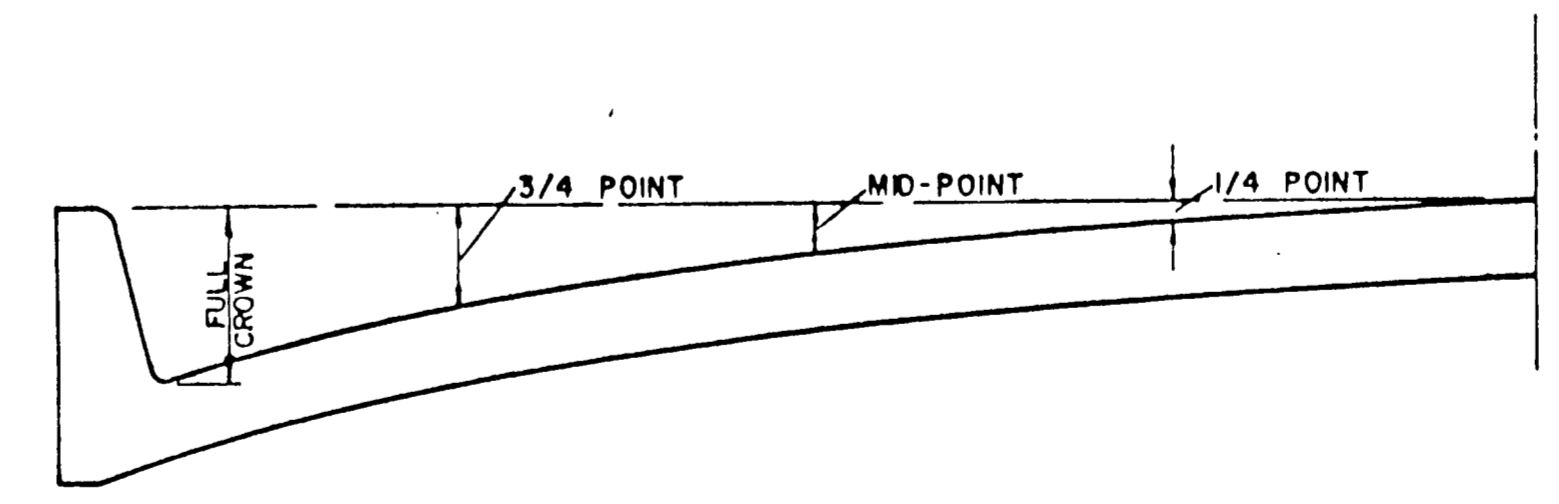
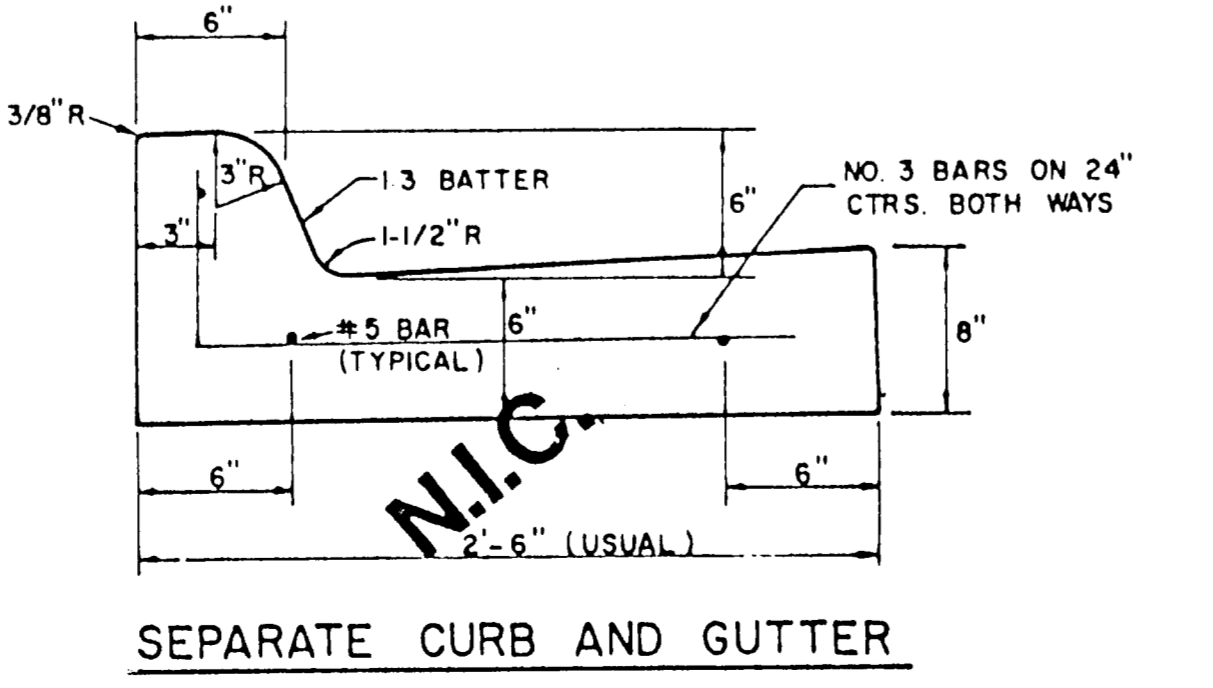
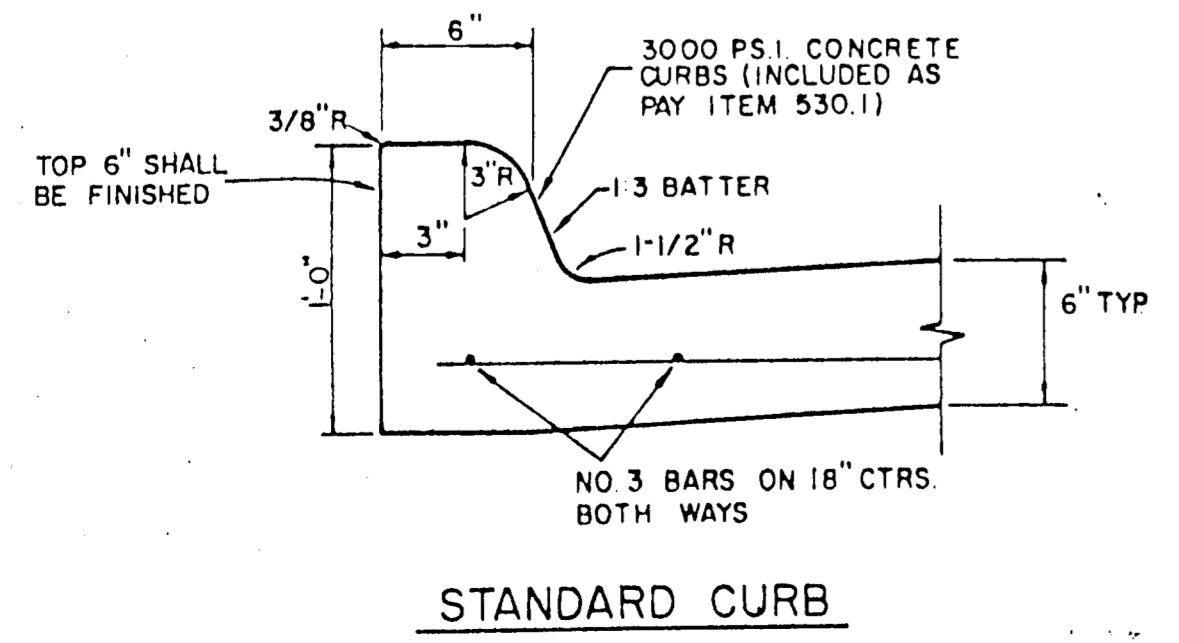
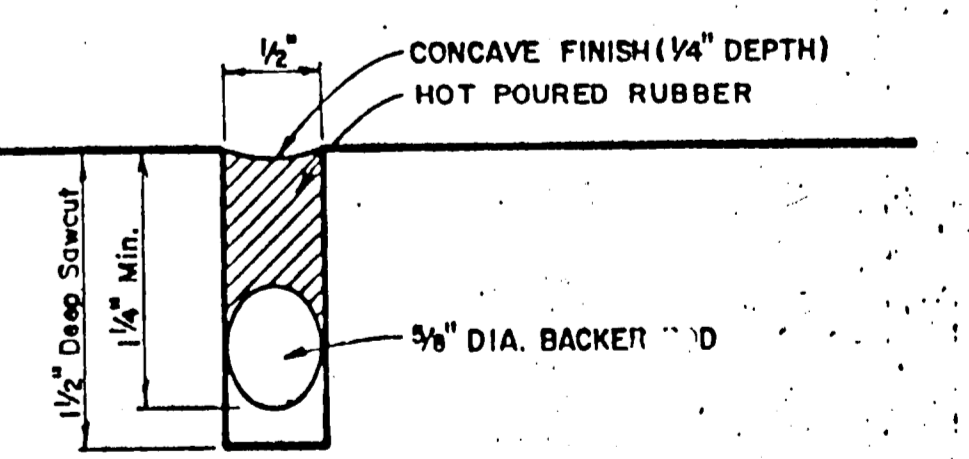
UNDIVIDED STREETS-PROVIDE 4" DBL-REF YELLOW & BUTTON P-117-Y PATTERNS TO BE ESTABLISHED BY ENGINEER SEE DETAIL SHEET

① SAWED LONGITUDINAL DUMMY JOINT.

② CONSTRUCTION JOINT (FULL WIDTH PVMT IS ALLOWED WHERE APPROVED BY ENGINEER.

③ FINISH SHALL BE TRANSVERSE WITH TRAFFIC LANES AND SHALL BE STEEL TINED BROOM FINISH.

- GENERAL NOTES**
- A. GENERAL PAVEMENT THICKNESS FOR STREETS SHALL BE AS SPECIFIED BELOW IN SPECIAL NOTES.
- D. STANDARD SPECIFICATIONS REINFORCED CONCRETE PAVEMENTS
1. ALL CURBS SHALL BE PLACED INTEGRAL WITH PAVEMENT
  2. CURBS SHALL MEET THE SAME COMPRESSIVE STRENGTH AS SPECIFIED FOR THE CONCRETE PAVEMENT.
  3. DETAIL AND ARRANGEMENT OF JOINTS, ALL TYPES, SHALL BE AS SHOWN ON THE STANDARD CONSTRUCTION DETAILS, OR AS APPROVED BY ENGINEER.
  4. BAR LAPS SHALL BE 30 DIAMETERS.
- C. BAR CHAIRS OR AN APPROVED SUPPORTING DEVICE SHALL BE FURNISHED.



ROADWAY WIDTH (W)	TOTAL CROWN HEIGHT	3/4 POINT	MID-POINT	1/4 POINT
26'	6"	3 - 3/8"	1 - 1/2"	3/8"
36'	6"	3 - 3/8"	1 - 1/2"	3/8"
44'	6"	3 - 3/8"	1 - 1/2"	3/8"
48'	6"	3 - 3/8"	1 - 1/2"	3/8"

TABLE OF CROWN HEIGHTS AND ORDINATES FOR VARIOUS PARABOLIC SECTIONS



TOWN OF ADDISON, TEXAS  
DEPARTMENT OF ENGINEERING

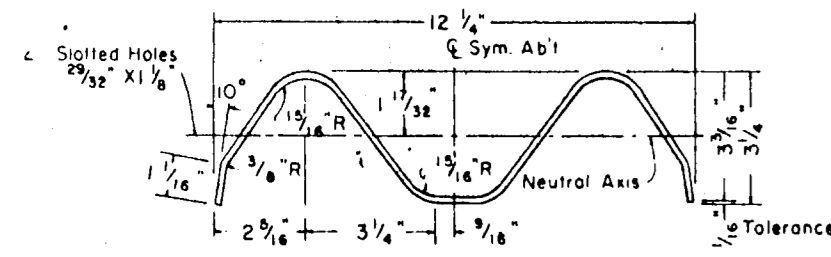
**STANDARD CONSTRUCTION DETAILS PAVING**

**STREET CROWNS & JOINTS**

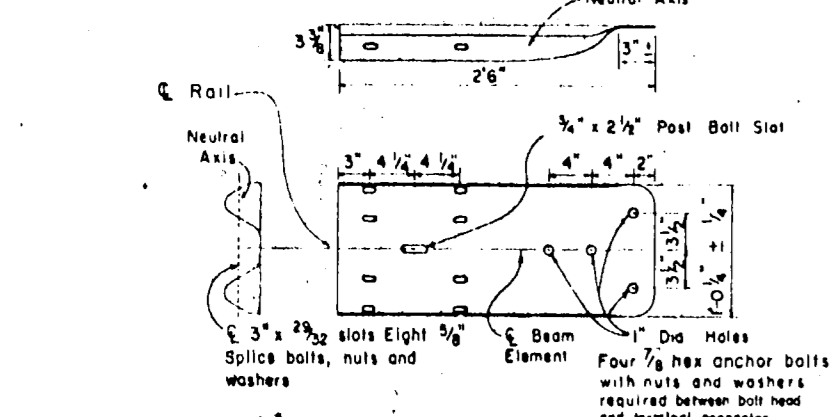
Designed - \_\_\_\_\_ Drawn - \_\_\_\_\_ Date - \_\_\_\_\_ Job No. - \_\_\_\_\_  
Approved - \_\_\_\_\_ Checked - \_\_\_\_\_ Scale - \_\_\_\_\_ Sheet 16



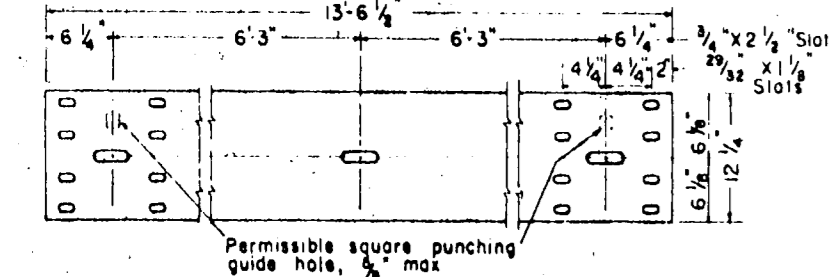
ALLEY WIDTH (A)	HALF SECTION WIDTH (L)	INVERT DEPTH (d)
10'	5'	4"
12'	6'	6"
16'	8'	6"
20'	10'	6"



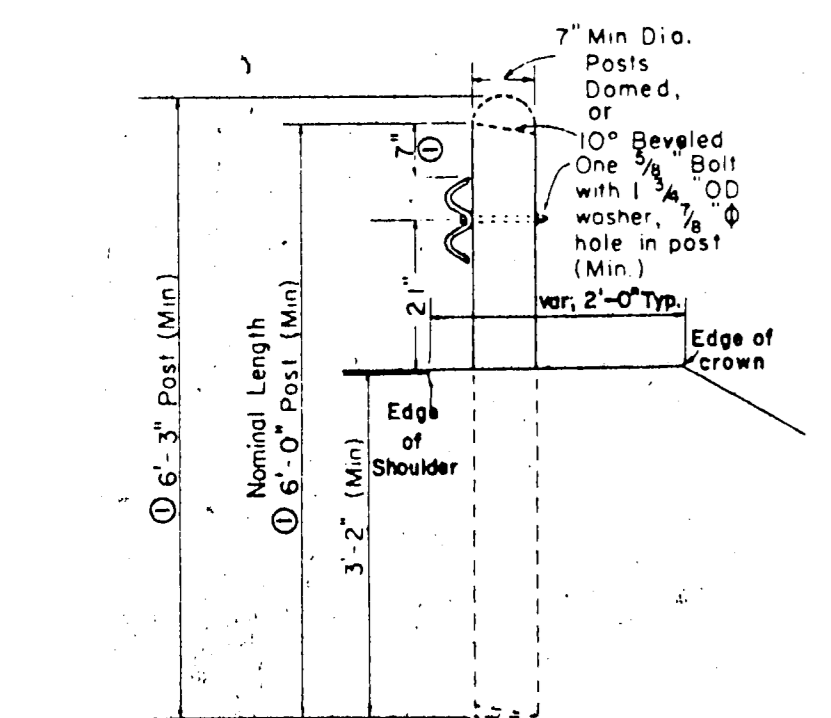
SECTION THRU GUARD RAIL AND BACK-UP PLATE



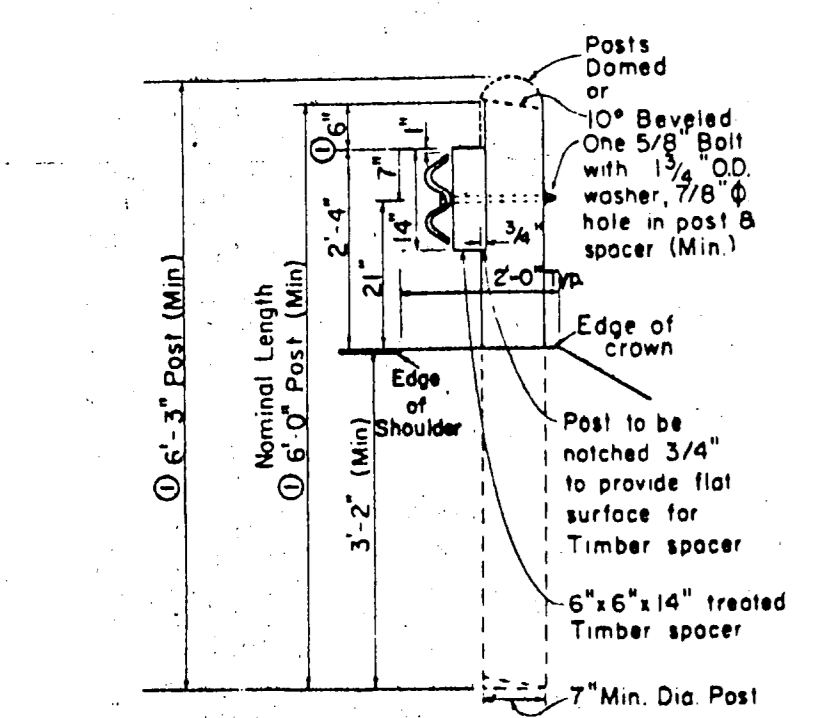
TERMINAL CONNECTOR (10 GAUGE MINIMUM)



ELEVATION OF NOMINAL 1 1/2 FOOT GUARD RAIL (25 Foot sections may also be supplied)

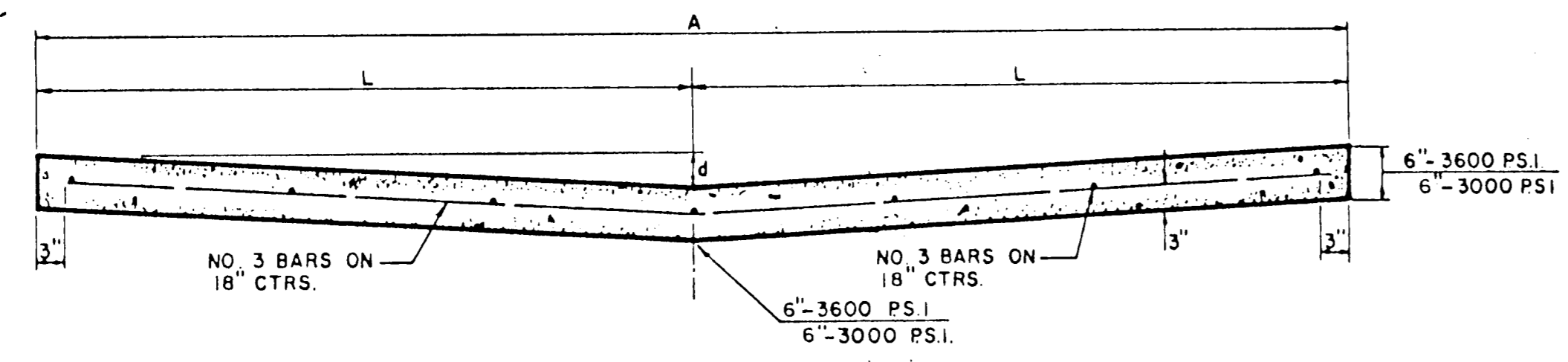


WOOD LINE POST

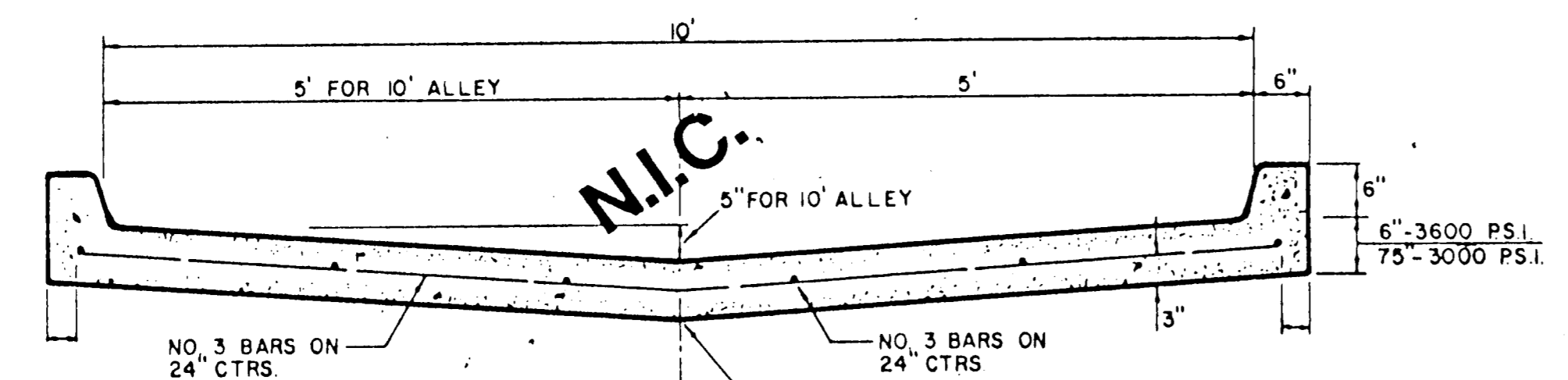


WOOD LINE POST (Blockout)

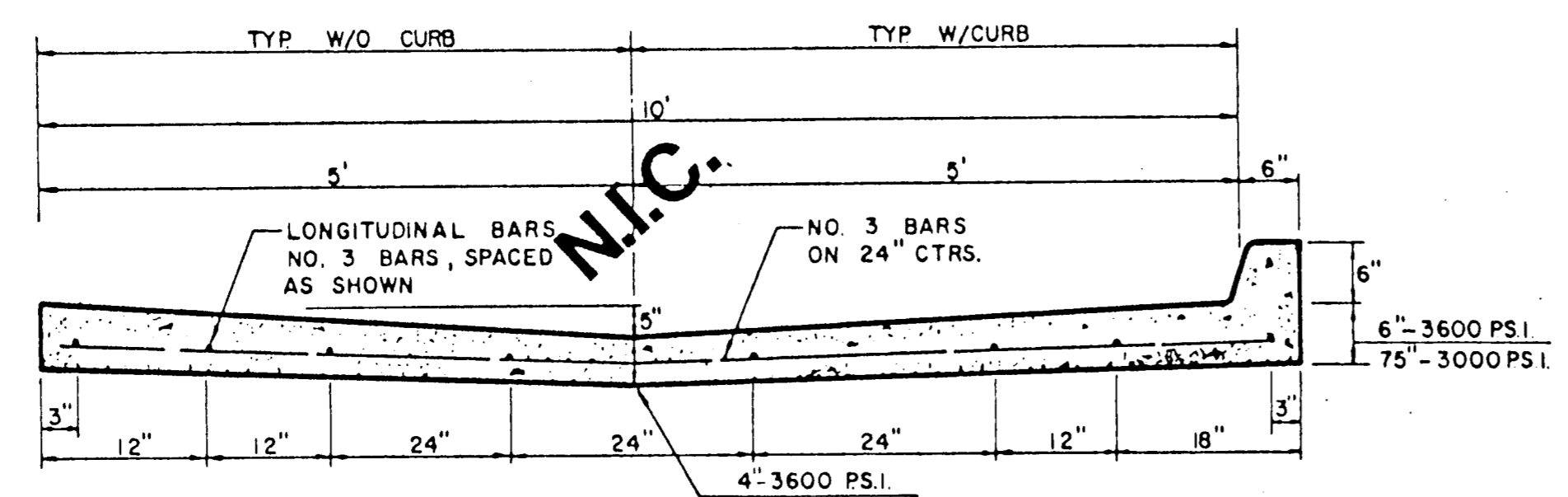
BARRICADE DETAIL



STANDARD 10', 12', 16', & 20' ALLEY SECTION



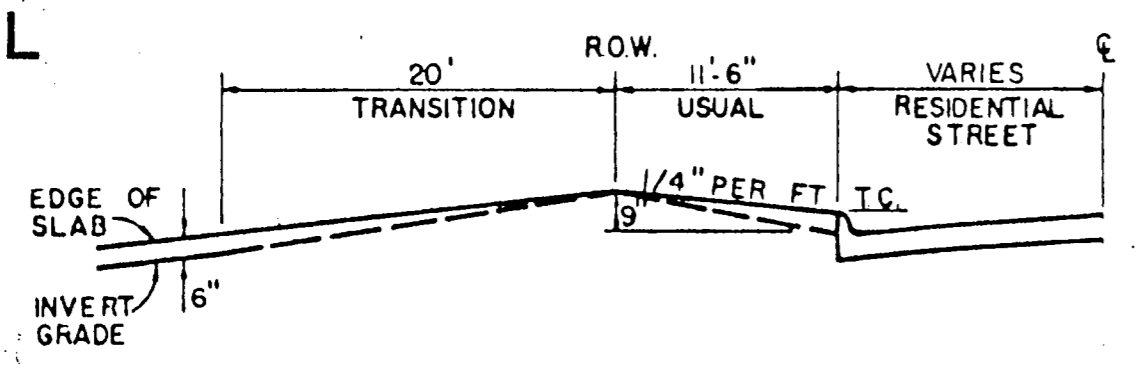
STANDARD ALLEY SECTION WITH CURBS



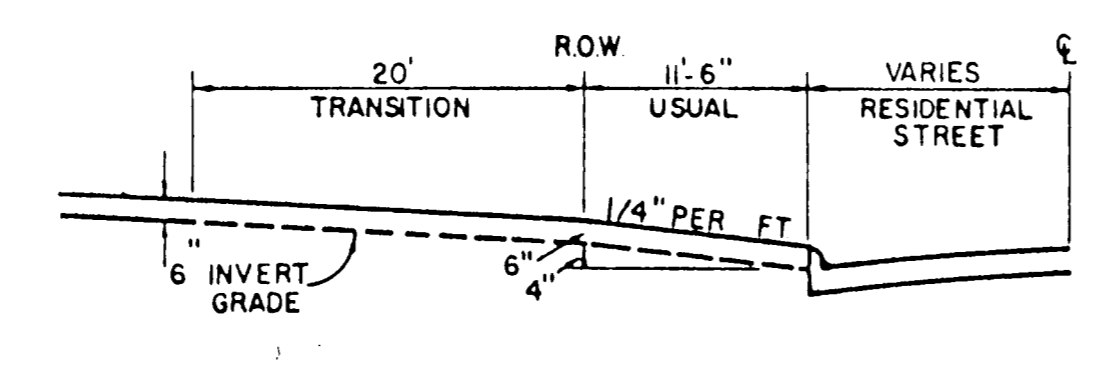
ALTERNATE 10' ALLEY SECTION / CURB

NOTE: CURBS NOT ALLOWED IN RESIDENTIAL AREAS EXCEPT AS APPROVED BY THE ENGINEER.

NOTE: CURBS NOT ALLOWED IN RESIDENTIAL AREAS EXCEPT AS APPROVED BY THE ENGINEER.

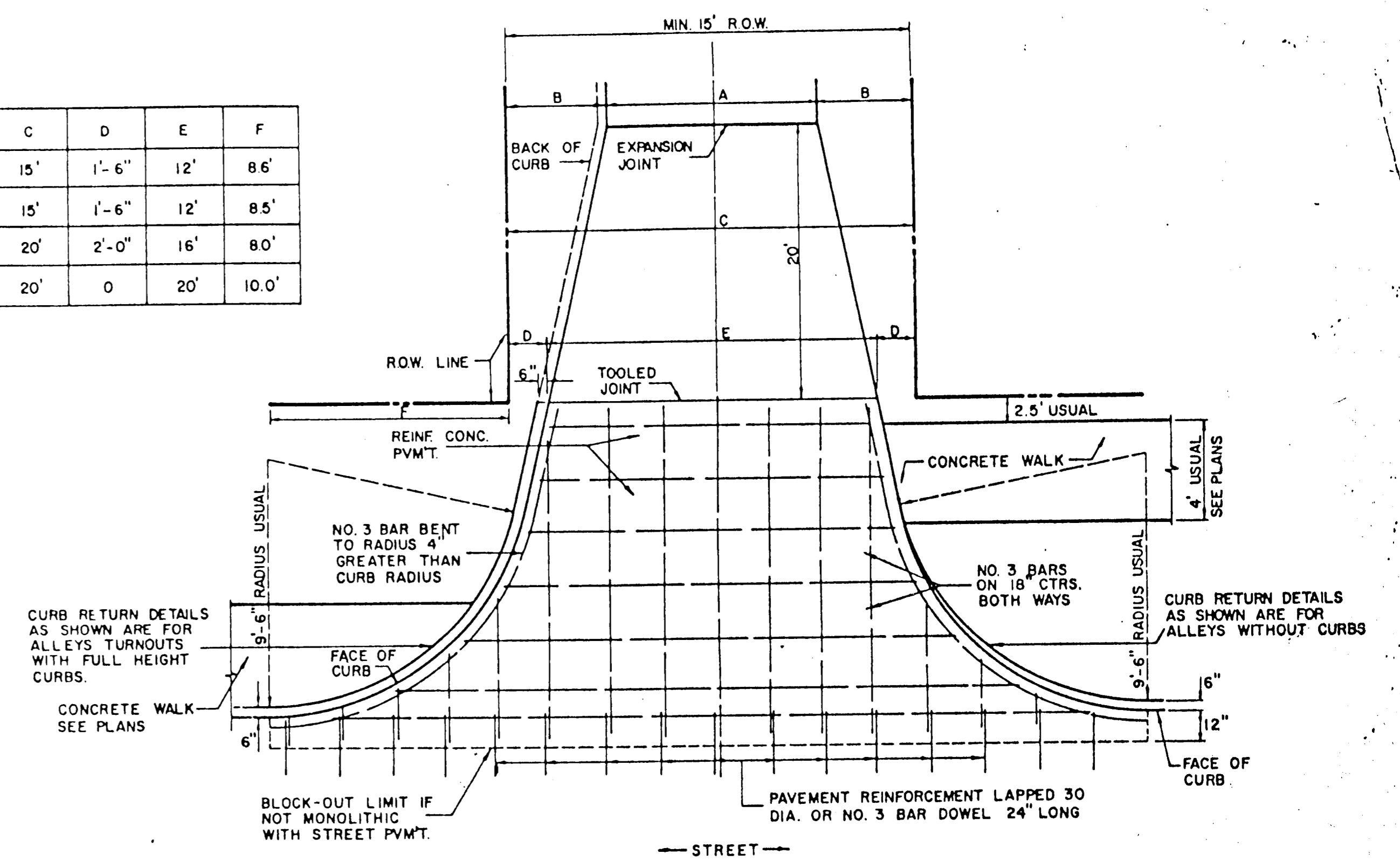


TYPE I ALLEY ENTRANCE



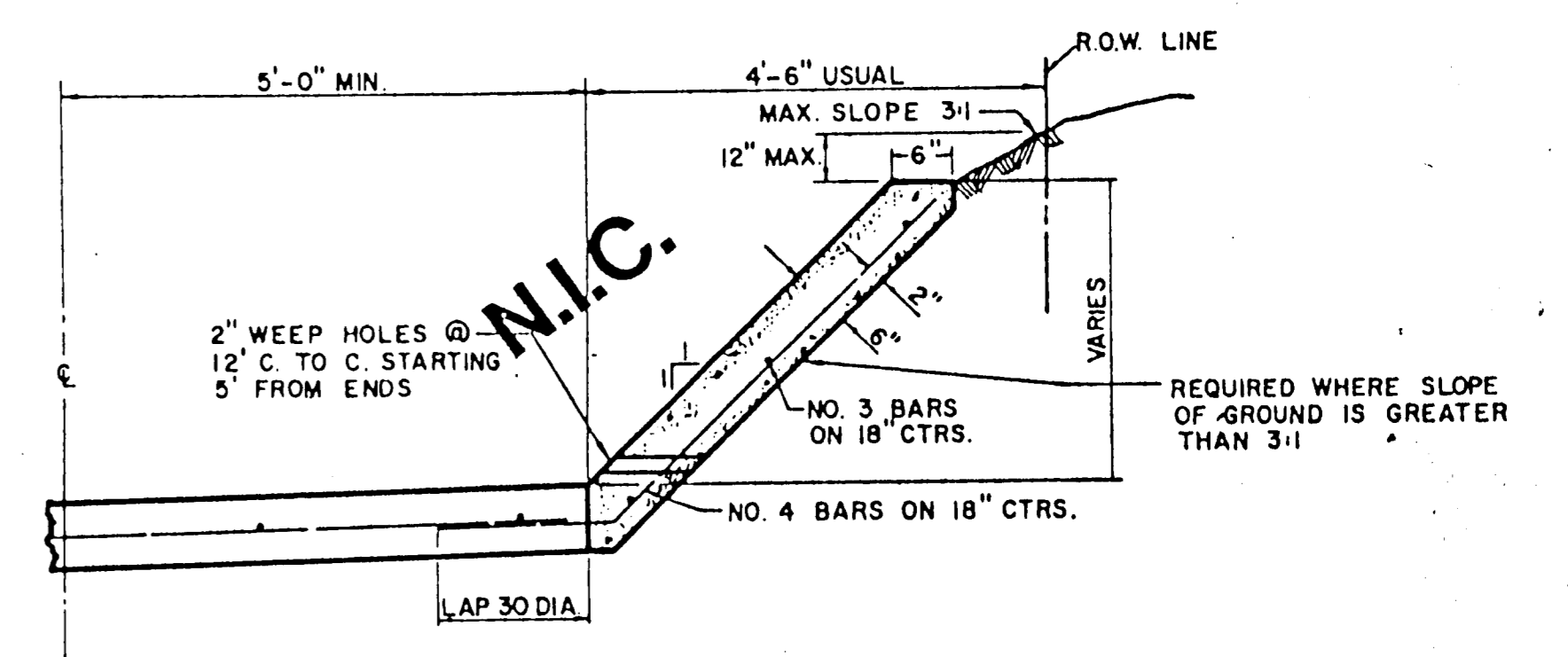
TYPE II ALLEY ENTRANCE

ALLEY WIDTH	A	B	C	D	E	F
10'	10'	2'-6"	15'	1'-6"	12'	8.6'
12'	12'	1'-6"	15'	1'-6"	12'	8.5'
16'	16'	2'-0"	20'	2'-0"	16'	8.0'
20'	20'	0	20'	0	20'	10.0'

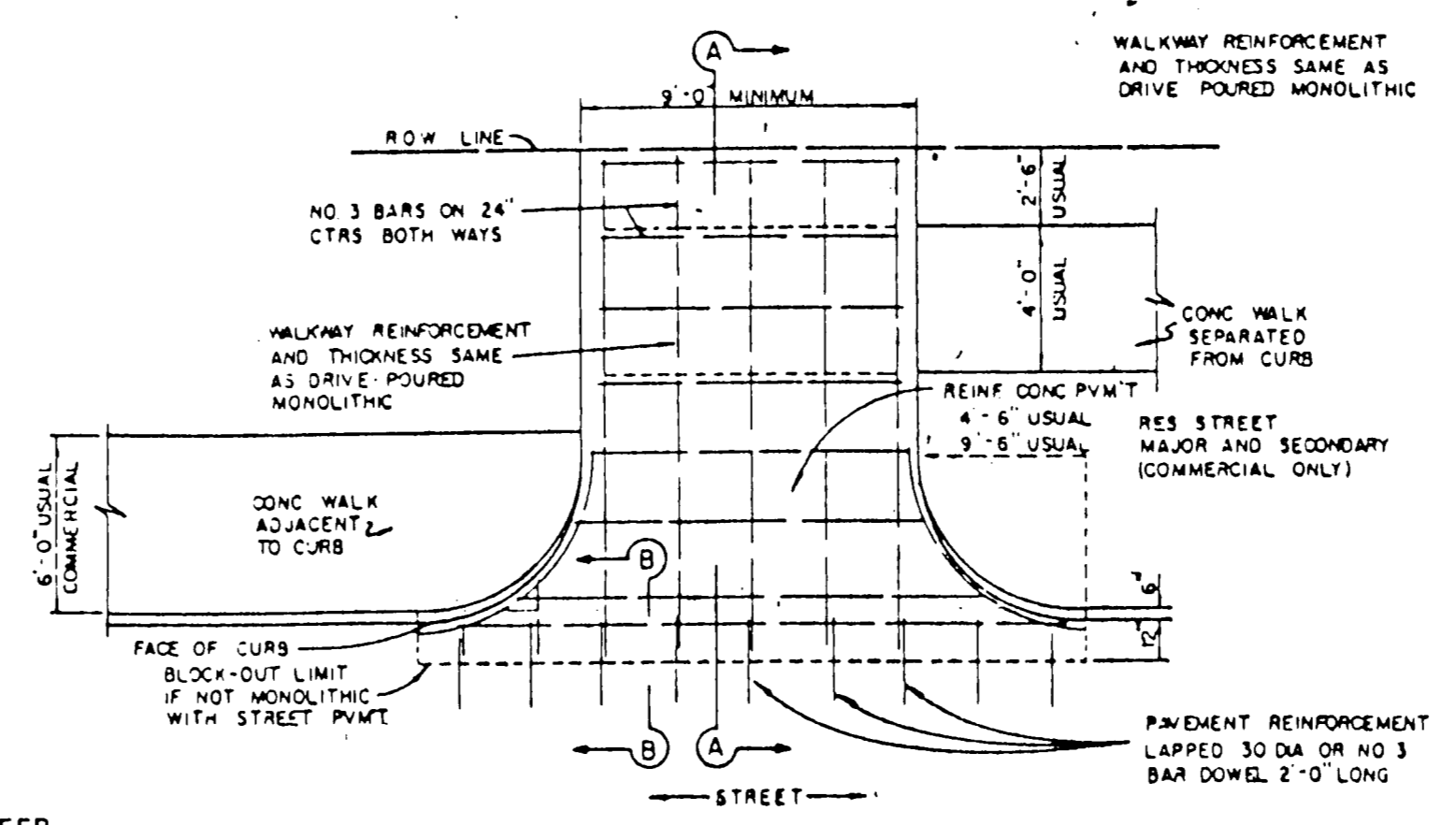


ALLEY RETURN DETAILS

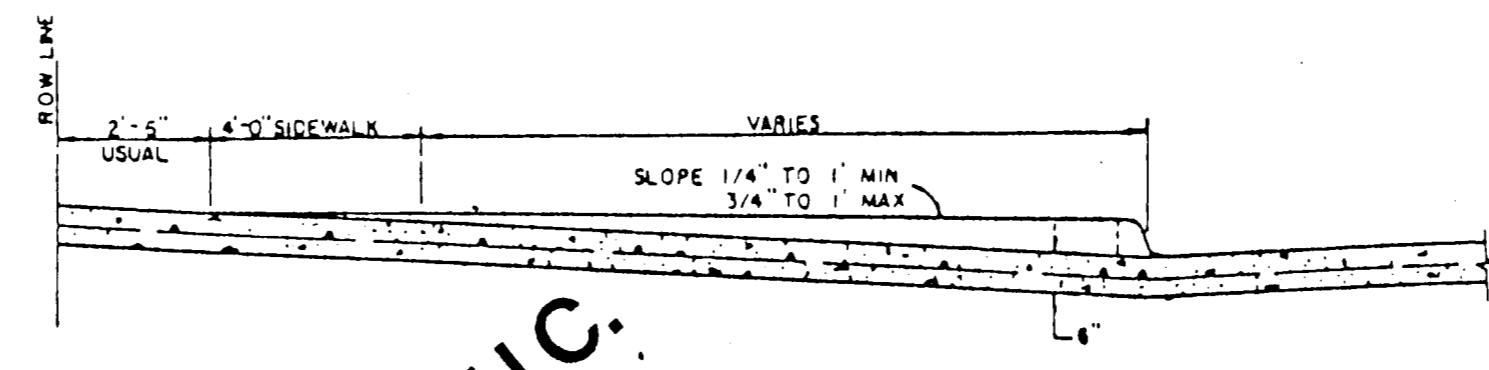
FOR DETAILS ONLY - SEE PLAN FOR DIMENSIONS



ALLEY SLOPE PROTECTION



DRIVEWAY RETURN TO STREET



DRIVEWAY RETURN DETAILS

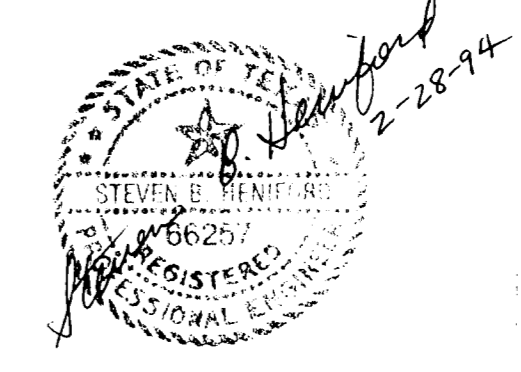
GENERAL NOTES FOR ALLEYS AND DRIVEWAYS

1. CONCRETE FOR ALLEY RETURNS AND DRIVEWAYS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS IDENTICAL TO THAT SPECIFIED FOR THE STREET PAVEMENT OR BASE WHEN BUILT AS COMPONENTS OF A CONCRETE PAVING PROJECT WHEN BUILT SEPARATELY, THE STRENGTH SHALL BE AS SPECIFIED ON THE CONSTRUCTION PLANS.
2. CONCRETE FOR ALLEY PAVEMENT SHALL BE OF THE STRENGTH SPECIFIED ON THE CONSTRUCTION PLANS. (3000 PSI. OR 3600 PSI. MINIMUM COMPRESSIVE)
3. SPACING AND CONSTRUCTION OF JOINTS SHALL CONFORM TO STREET PAVEMENT DETAILS.

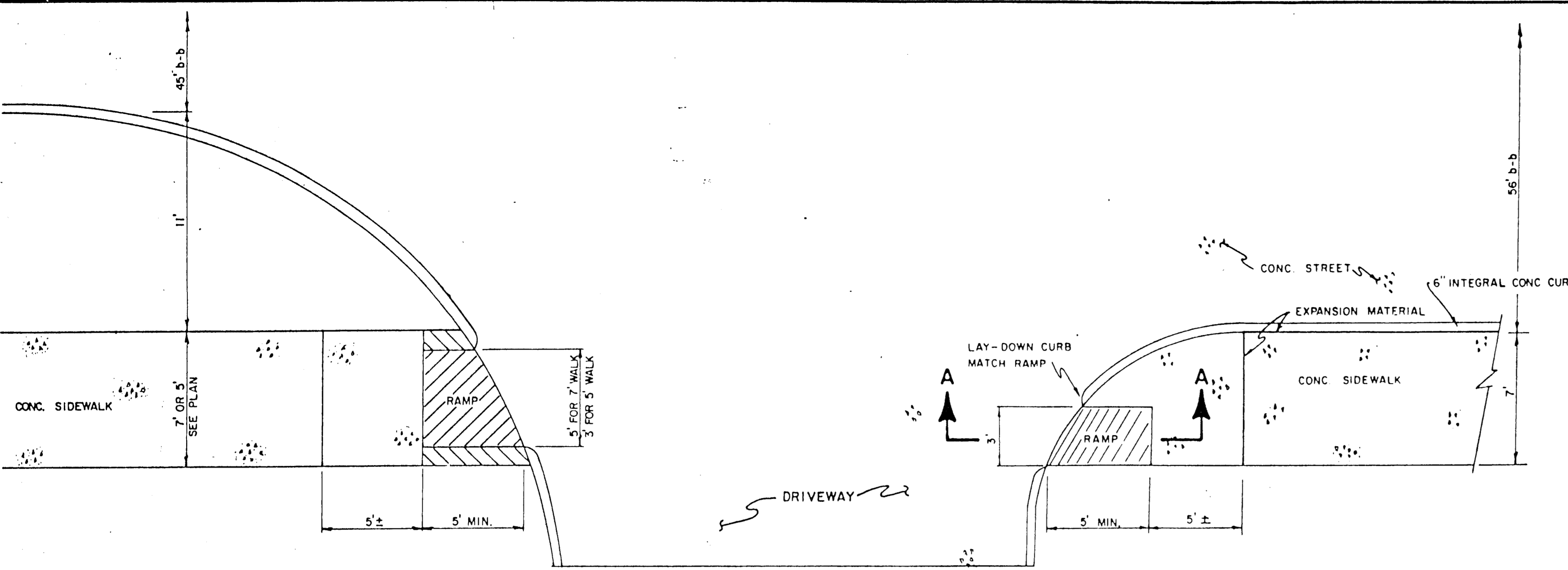
TOWN OF ADDISON, TEXAS  
DEPARTMENT OF ENGINEERING  
STANDARD CONSTRUCTION DETAILS  
PAVING

ALLEY & DRIVEWAY RETURNS

Designed -	Drawn -	Date -	Job No. -
Approved -	Checked -	Scale -	Sheet 18'

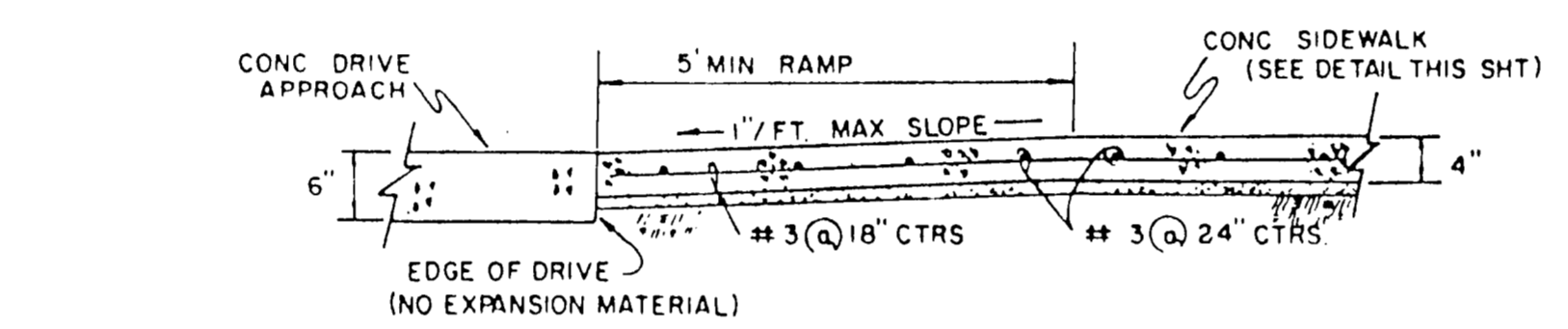






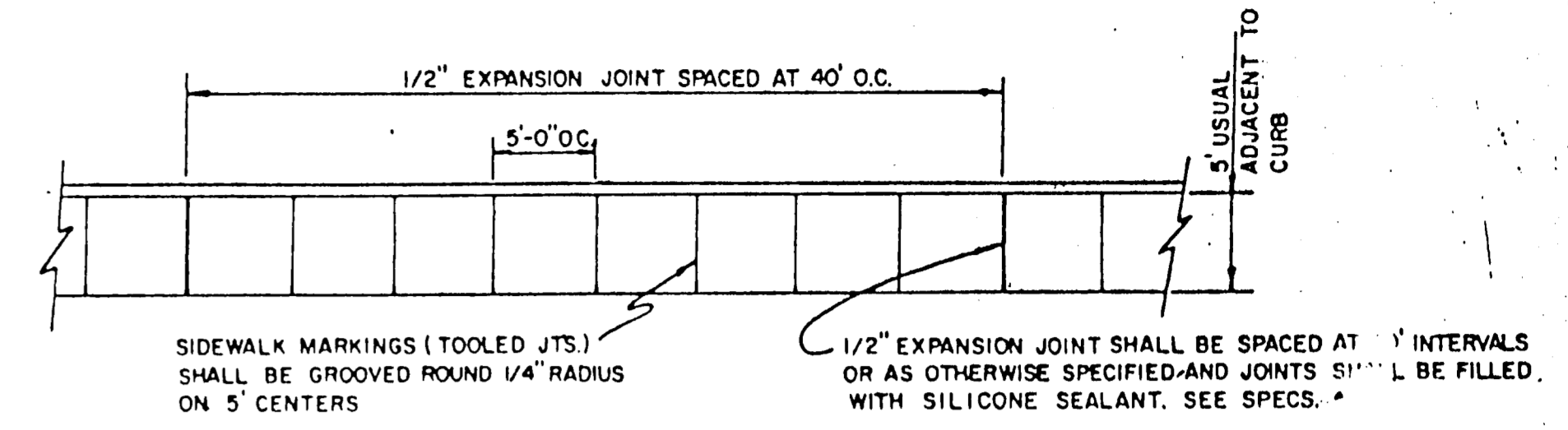
PLAN

NOTE:  
MODIFY RAMP TO  
FIT DIFFERENT RADIUS

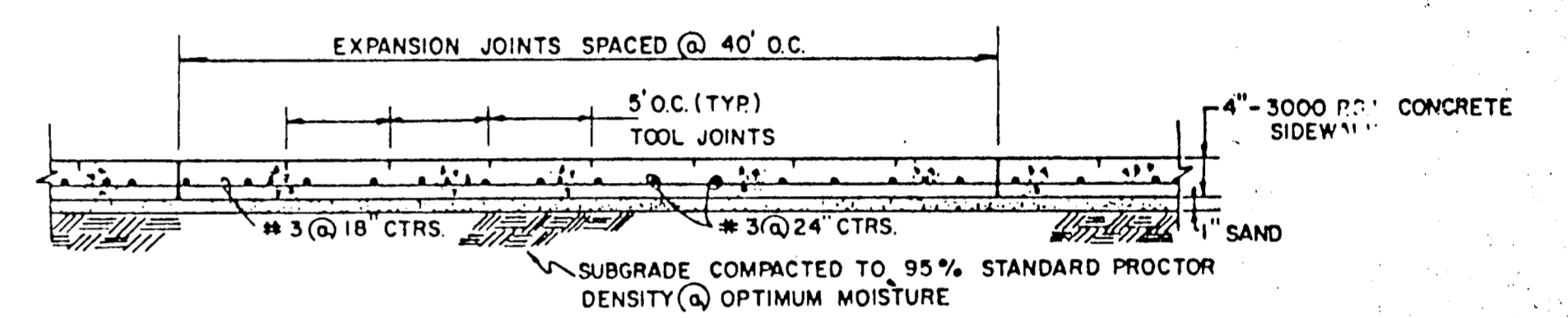


SECTION A-A

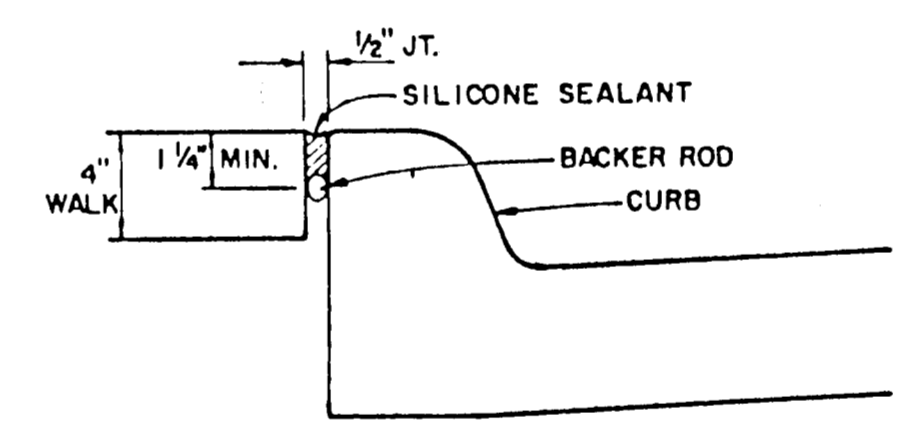
**BARRIER-FREE RAMP DETAIL  
WITH WALK ADJACENT TO CURB**



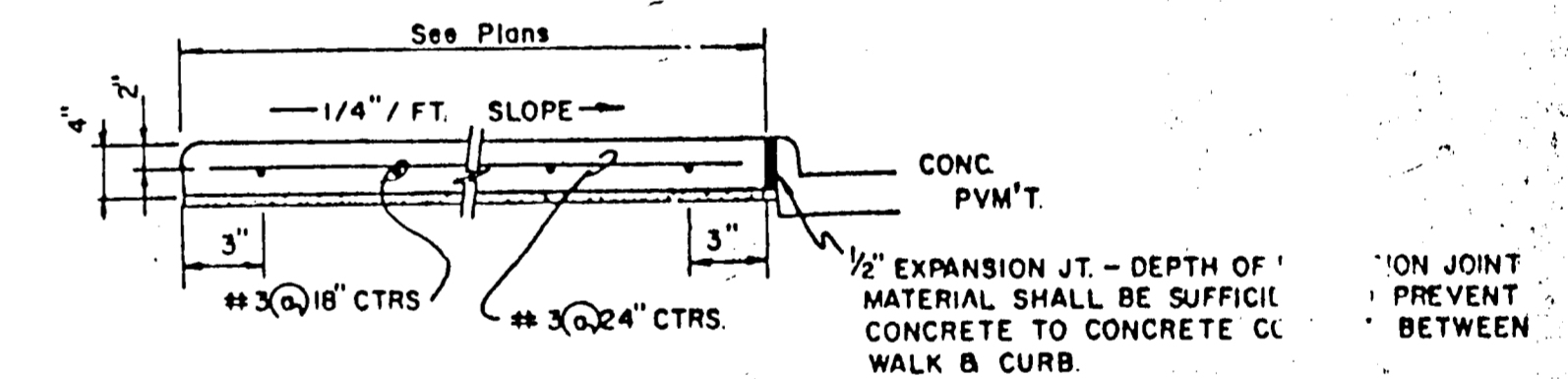
PLAN



SIDE ELEVATION

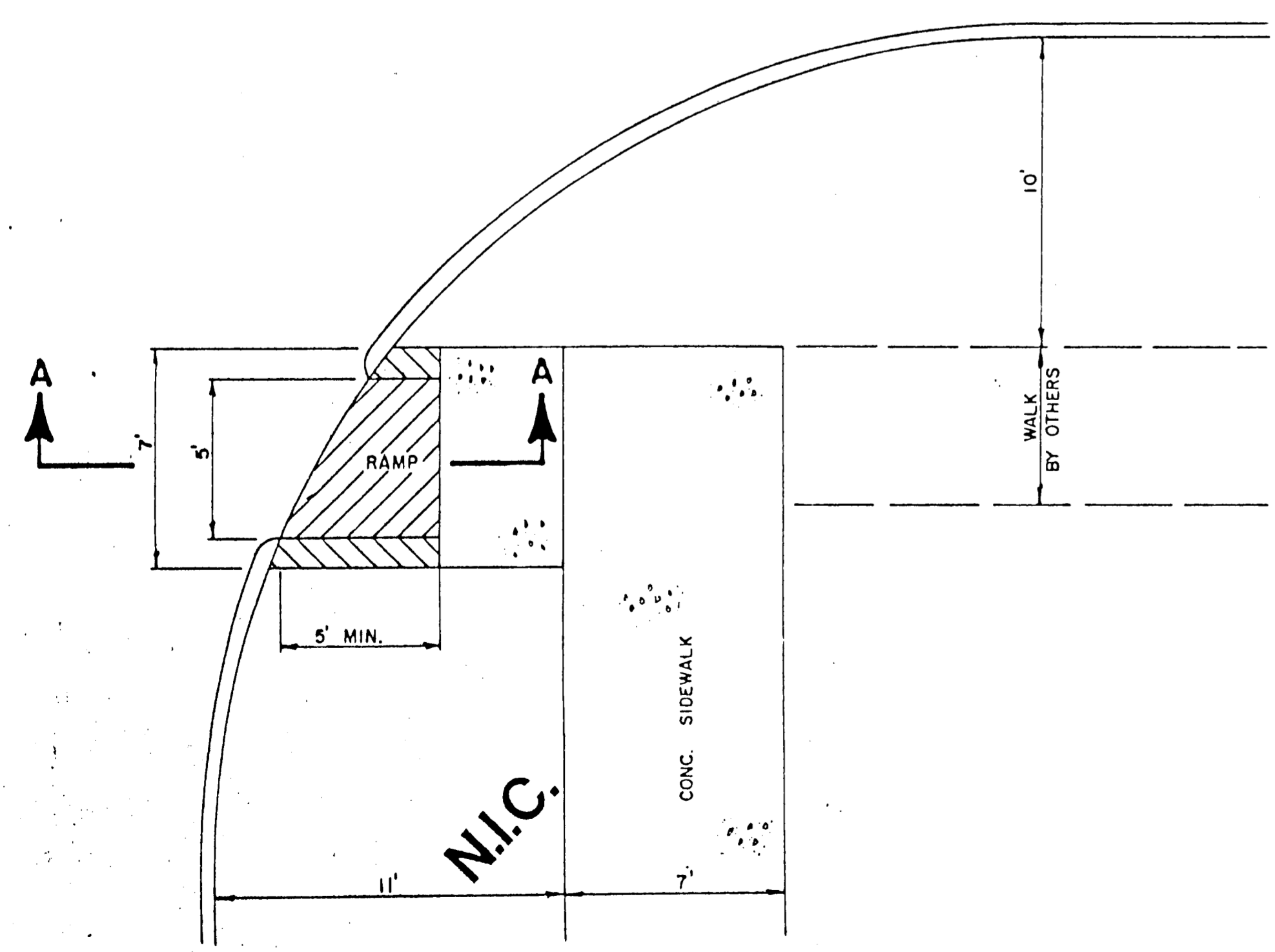


EXPANSION JOINT DETAIL

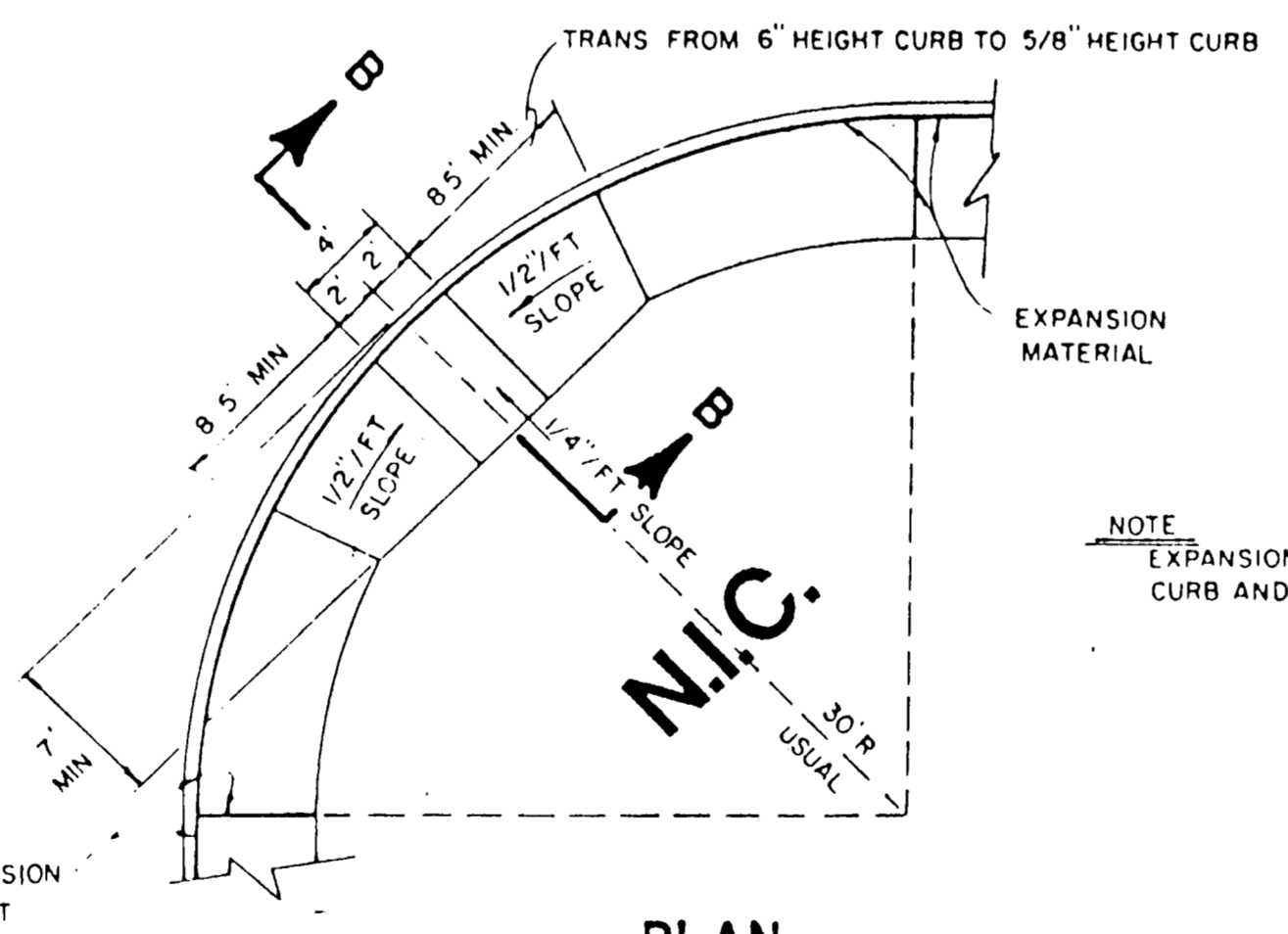


SECTION

**CONCRETE SIDEWALK DETAIL**

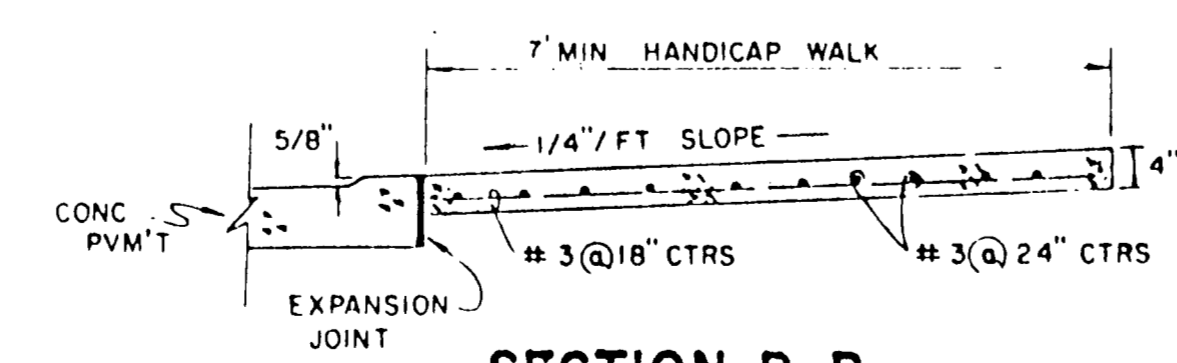


**BARRIER FREE RAMP DETAIL  
WITH WALK SEPARATE FROM CURB**



PLAN

NOTE:  
EXPANSION MATERIAL ALONG  
CURB AND AT CURB RETURNS

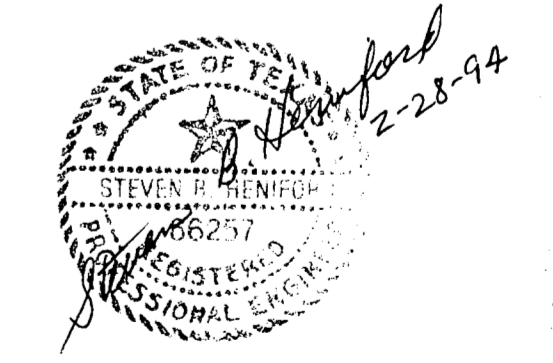


SECTION B-B

**HANDICAP ROLL-DOWN CURB DETAIL**

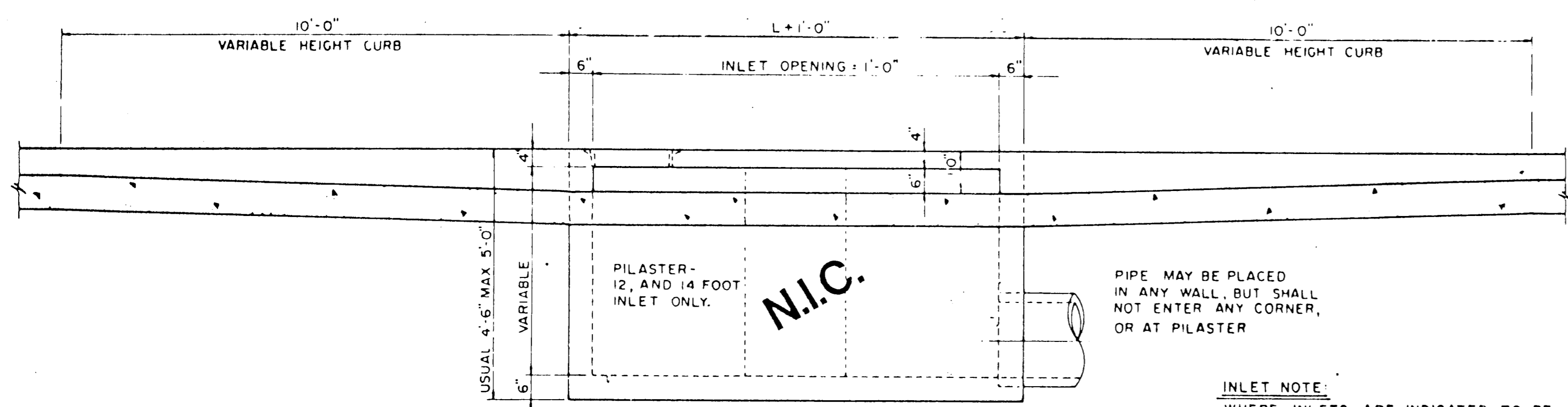
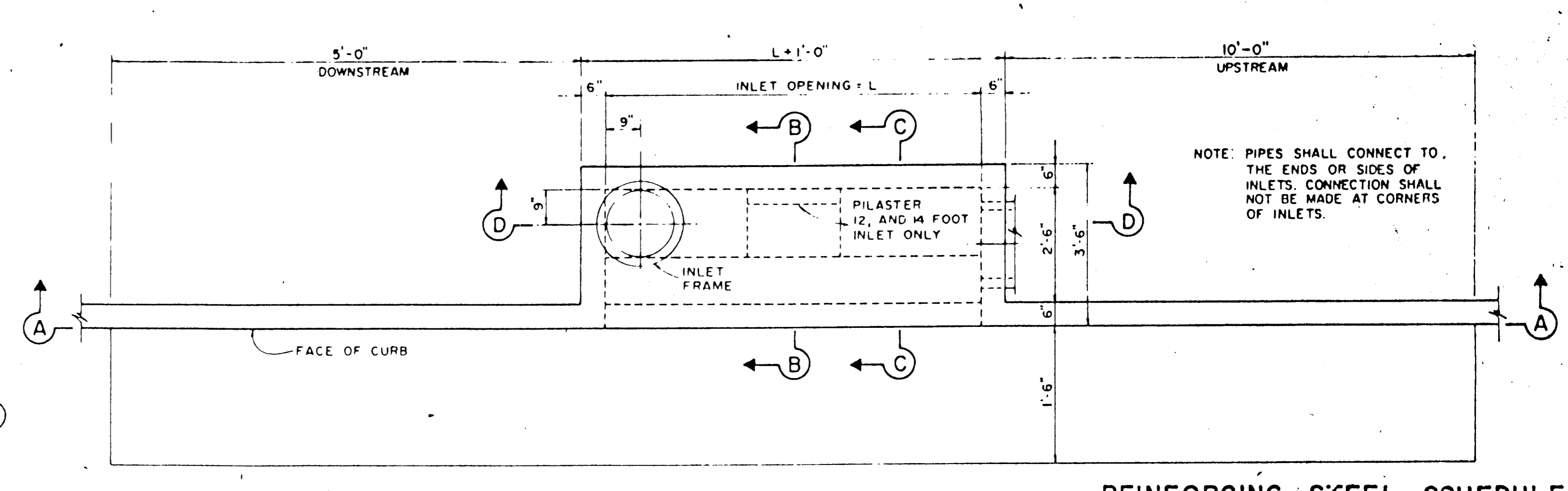
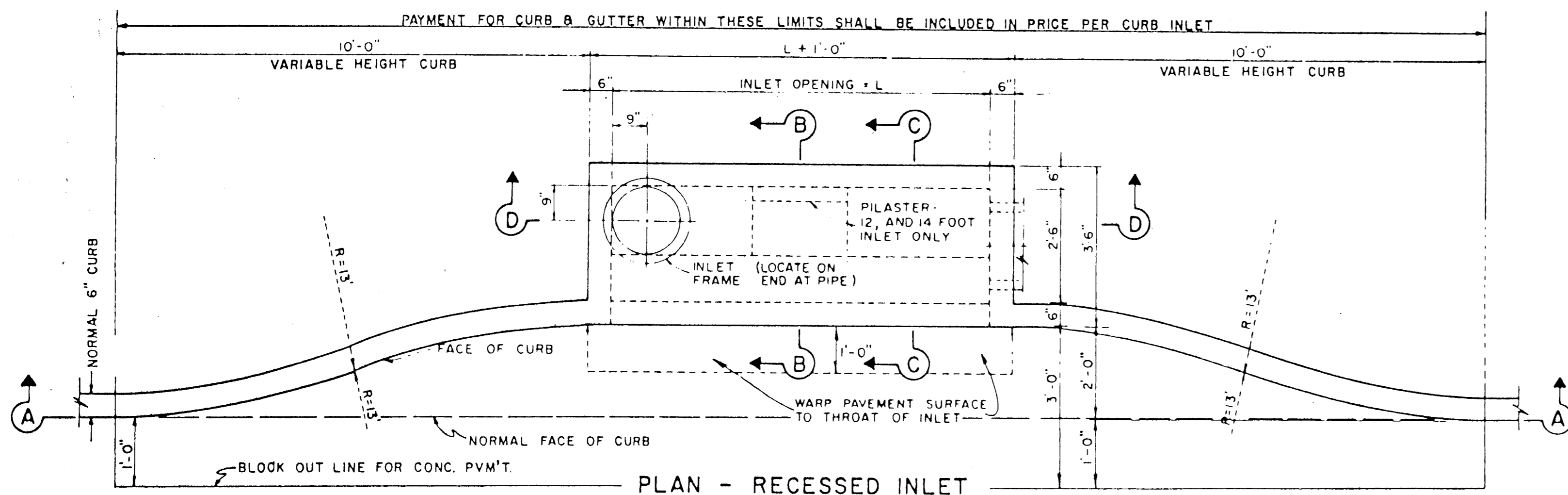
**GENERAL NOTES**

1. Reinforced concrete sidewalk shall be 5 or 7 feet wide, a minimum of four (4) inches thick and shall be 3000 psi at 28 days (5 sack mix). Unless noted otherwise.
2. Chamfer all exposed edges of concrete (1/4) inch.
3. All bar dimensions are given as center to center of bars and are located as shown.
4. All reinforcing steel shall be No. 3 on 18 inch centers longitudinally, 24 inch centers transversely and shall conform to the requirements of ASTM A-615, Grade 60.
5. 1" thick min. fine, washed sand cushion shall be free from organic materials or clays and shall be used for grade adjustment.
6. Subgrade shall be compacted to a density not less than 95% at optimum moisture.
7. Tooled joints (contraction joints) shall be on five (5) foot centers and shall be round one-fourth (1/4) inch radius.
8. A one-half (1/2) inch expansion joint shall be placed every eight (8) tooled joints, and where works about old work, or where new work is constructed adjacent to other concrete, a one-half inch expansion joint shall be used where sidewalk is adjacent to curb, the expansion joint shall be made of pre-molded bituminous expansion joint filler or redwood with silicone sealant. See Specs.
9. Sidewalks shall be finished by lightly brooming surface transversely to direction of main traffic or where adjacent sidewalks differ from this standard, new sidewalks shall conform to adjacent sidewalk (e.g. exposed aggregate).
10. Cross slope walk one-fourth (1/4) inch per foot towards curb or as shown on the drawings to provide drainage.



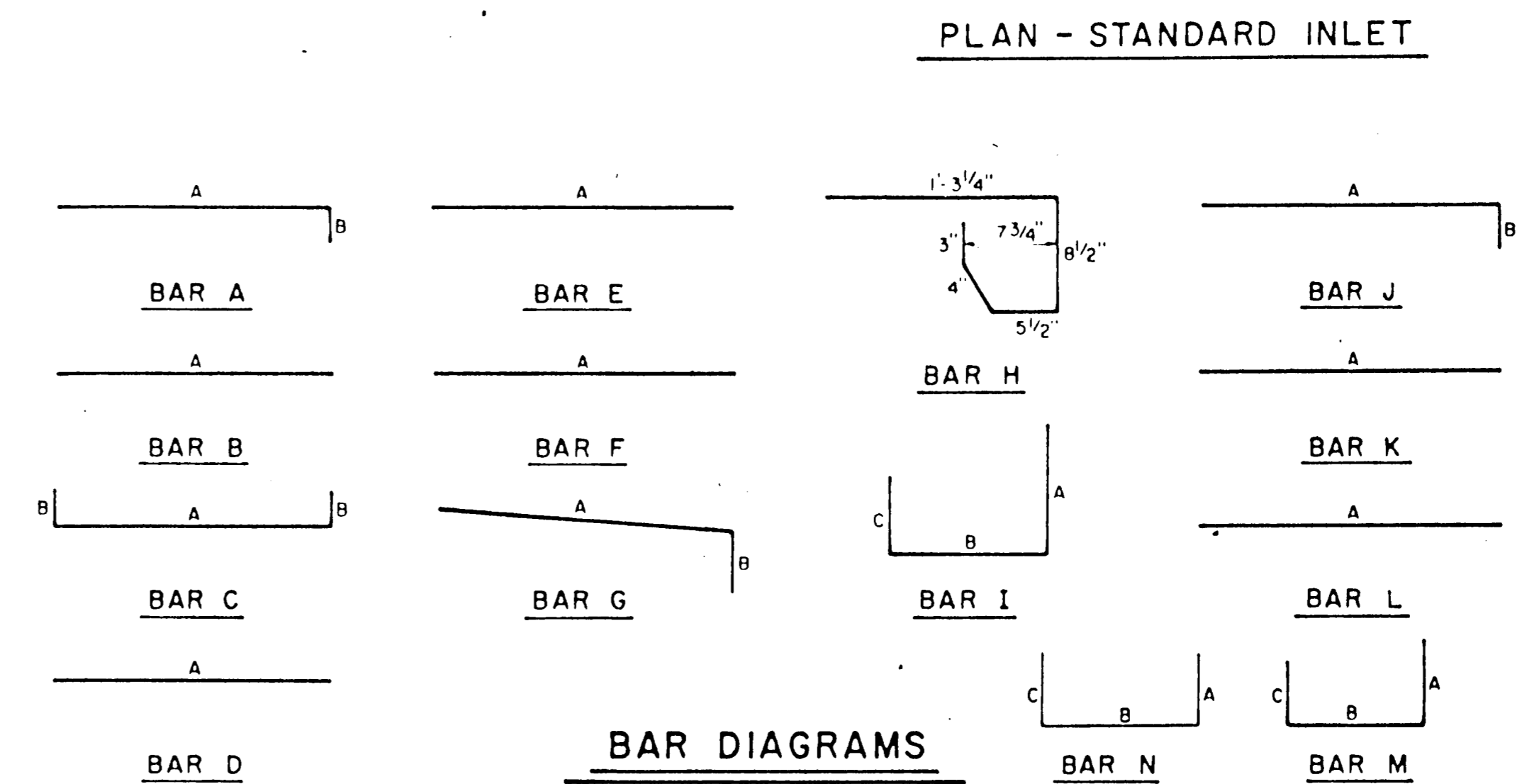
NO.	REVISION	BY	DATE
TOWN OF ADDISON, TEXAS DEPARTMENT OF ENGINEERING			
STANDARD CONSTRUCTION DETAILS PAVING			
SIDEWALKS & RAMPS			
APPROVED _____			
3-1-97			





SECTION A-A-RECESSED AND STANDARD INLETS  
4, 6, 8, 10, 12, AND 14 FOOT INLETS

**INLET NOTE:**  
WHERE INLETS ARE INDICATED TO BE MODIFIED, REFER TO PLAN/PROFILE SHEETS FOR ELEV. DIFFERENT SIZES OF MODIFICATIONS. ALL OTHER ITEMS SHALL REMAIN AS SHOWN ON THIS STANDARD DETAIL SHEET.

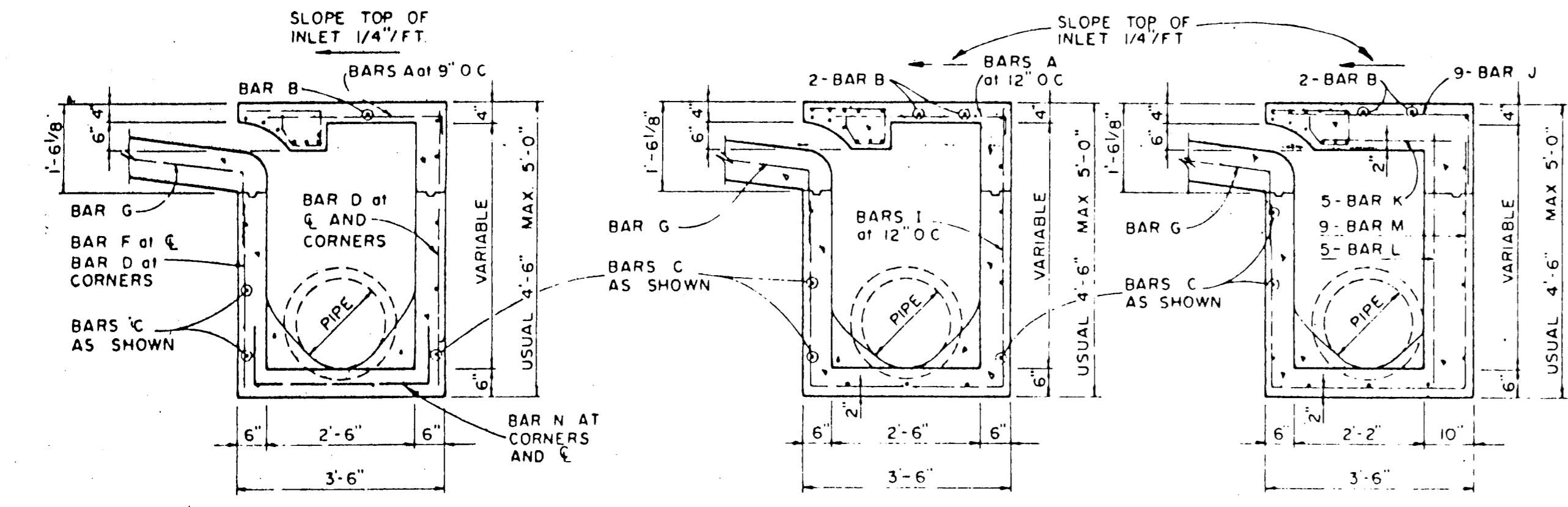


**REINFORCING STEEL SCHEDULE**

DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS		
				A	B	C
4	A	3	6	3'-2"	0'-3"	-
	B	3	1	2'-10"	-	-
	C	4	15	4'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	4	2'-0"	-	-
	N	3	3	3'-2"	3'-2"	3'-2"
	A	3	9	3'-2"	0'-3"	-
6	B	3	1	4'-10"	-	-
	C	4	15	6'-8"	0'-6"	-
	D	4	5	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	6	2'-0"	-	-
	N	3	3	3'-2"	3'-2"	3'-2"
8	A	3	12	3'-2"	0'-3"	-
	B	3	2	8'-10"	-	-
	C	4	16	6'-10"	0'-6"	-
	D	4	4	4'-8"	-	-
	F	4	1	3'-2"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	8	2'-0"	-	-
	N	3	3	3'-2"	3'-2"	3'-2"
10	A	3	10	3'-2"	0'-3"	-
	B	3	2	8'-10"	-	-
	C	4	16	10'-8"	0'-6"	-
	D	4	4	4'-8"	-	-
	E	5	6	10'-8"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	15	4'-8"	3'-2"	3'-2"
	I	4	8	4'-8"	3'-2"	3'-2"
	L	4	5	4'-3"	-	-
12	A	3	12	3'-2"	0'-3"	-
	B	3	2	10'-10"	-	-
	C	4	16	12'-8"	0'-6"	-
	D	4	4	4'-8"	-	-
	E	5	6	12'-8"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	18	4'-8"	3'-2"	3'-2"
	I	4	10	4'-8"	3'-2"	3'-2"
	J	5	9	3'-2"	1'-3"	-
	K	4	5	2'-3"	-	-
	L	4	5	4'-3"	-	-
	M	5	9	4'-3"	3'-2"	3'-9"
14	A	3	14	3'-2"	0'-3"	-
	B	3	2	10'-10"	-	-
	C	4	16	14'-8"	0'-6"	-
	D	4	4	4'-8"	-	-
	E	5	6	14'-8"	-	-
	G	3	5	2'-0"	1'-3"	-
	H	3	21	4'-8"	3'-2"	3'-2"
	I	4	12	4'-8"	3'-2"	3'-2"
	J	5	9	3'-2"	1'-3"	-
	K	4	5	2'-3"	-	-
	L	4	5	4'-3"	-	-
	M	5	9	4'-3"	3'-2"	3'-9"

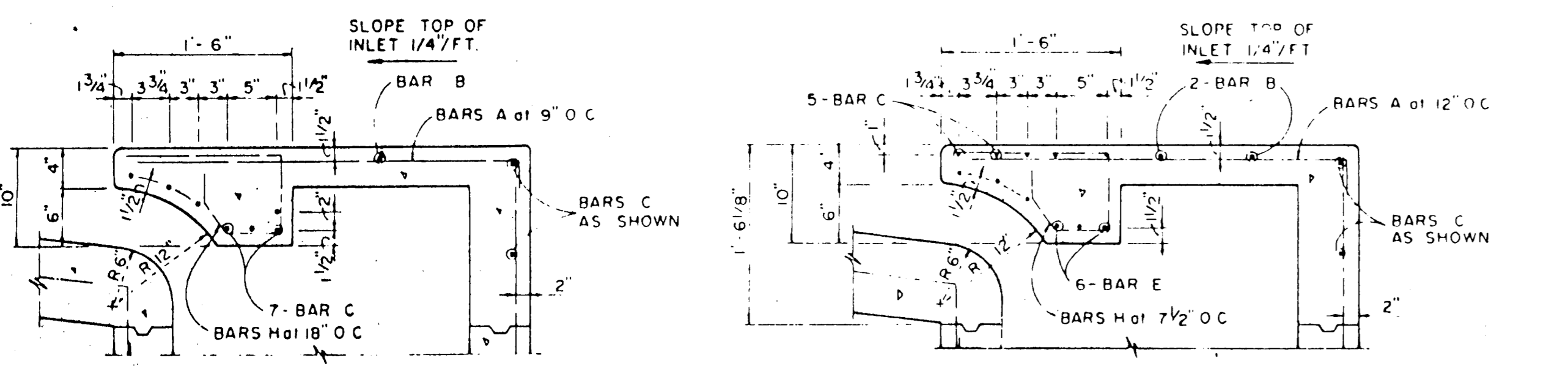
\* SEE DIAGRAM FOR DIMENSIONS



SECTION B-B

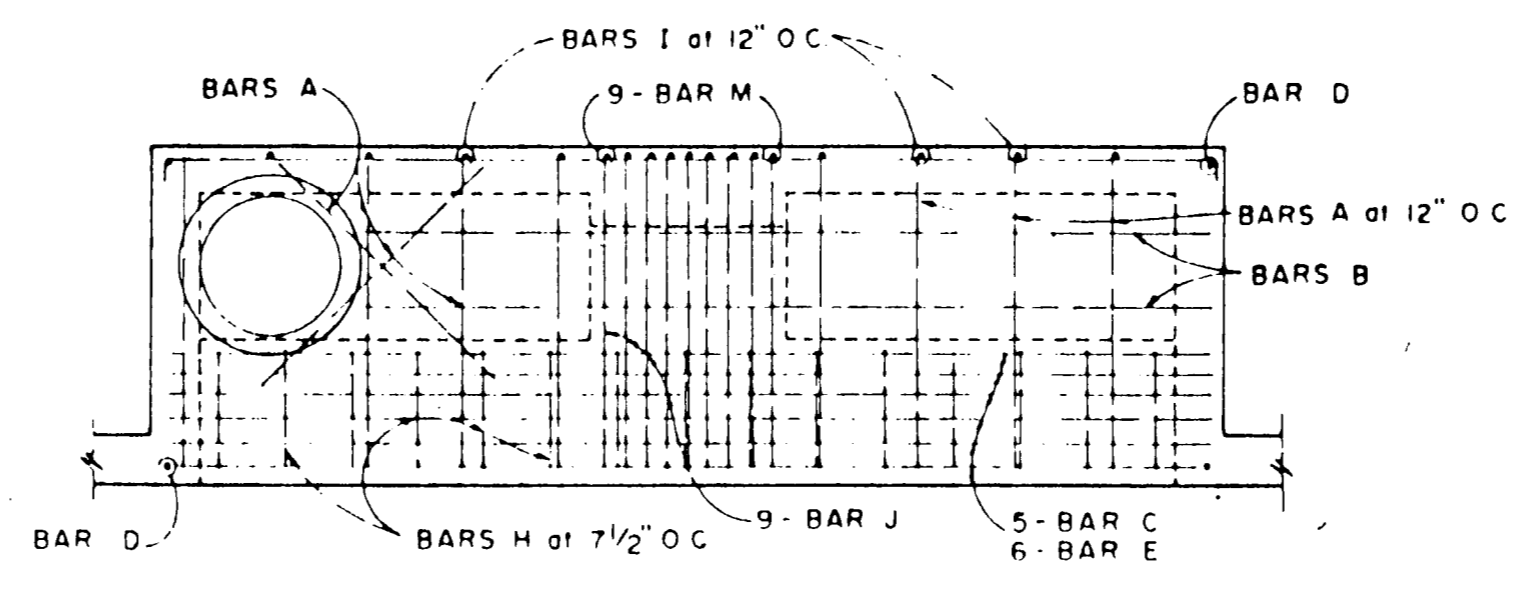
SECTION C-C

SECTION B-B

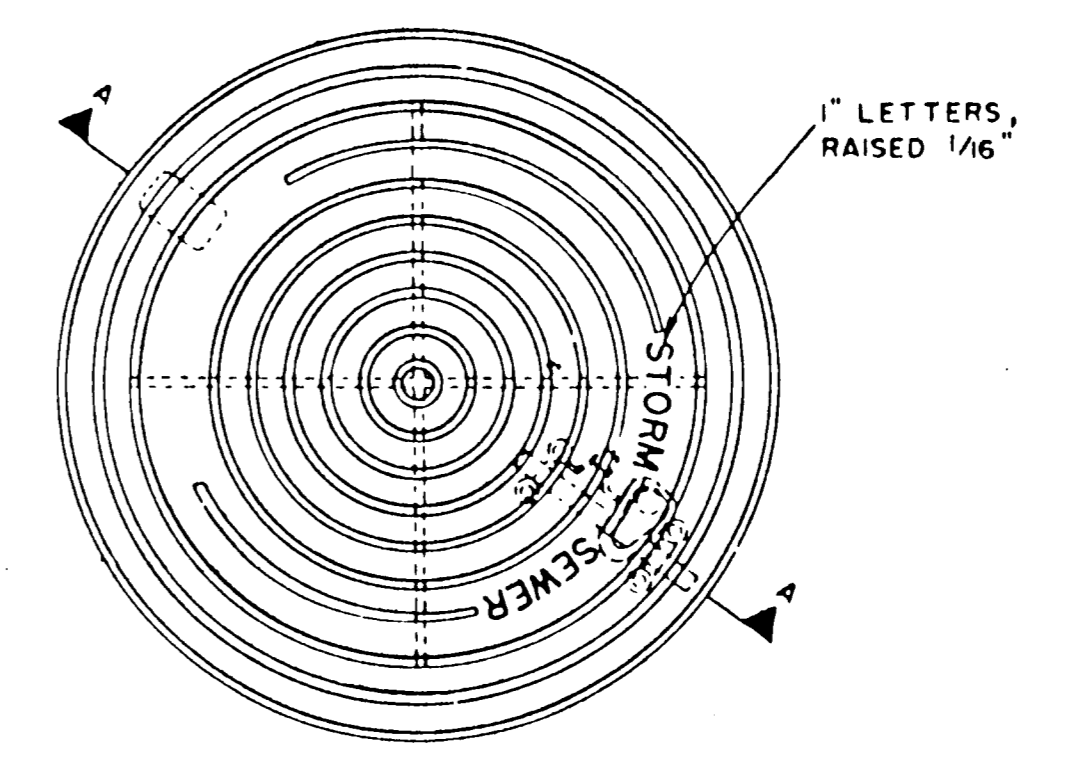


SECTION C-C

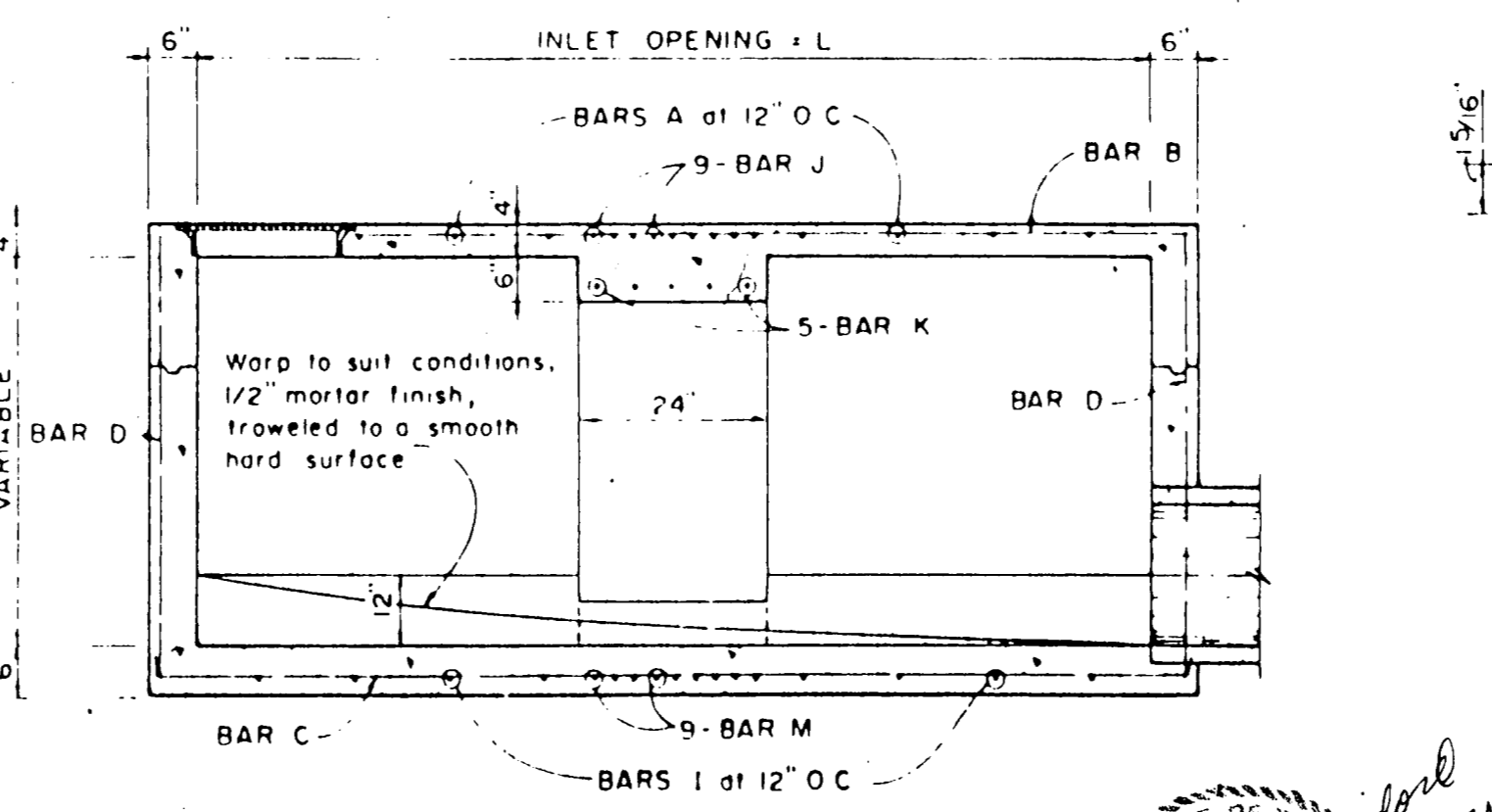
4, 6, AND 8 FOOT INLETS



PLAN

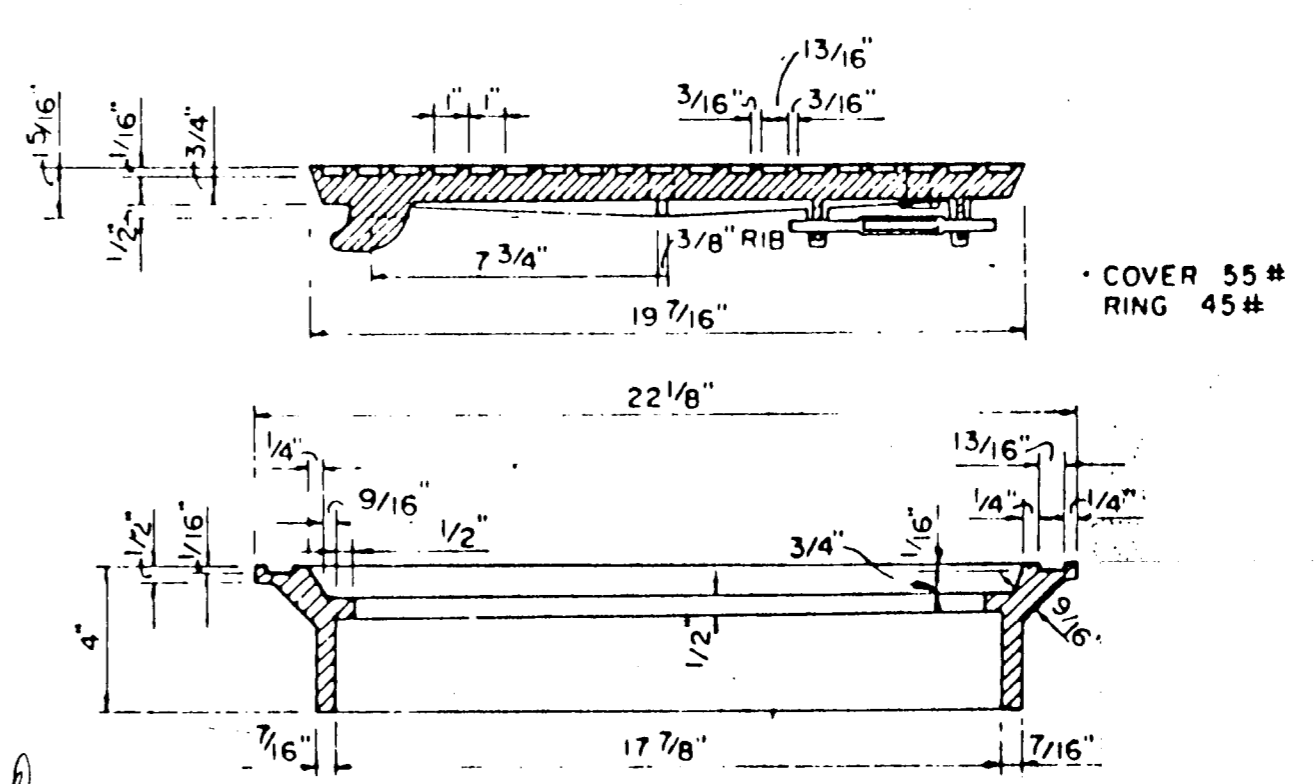


PLAN OF FRAME



SECTION D-D FOR 12' & 14' ONLY

10, 12, AND 14 FOOT INLETS



SECTION OF FRAME AND COVER

INLET FRAME AND COVER



TOWN OF ADDISON, TEXAS  
DEPARTMENT OF ENGINEERING

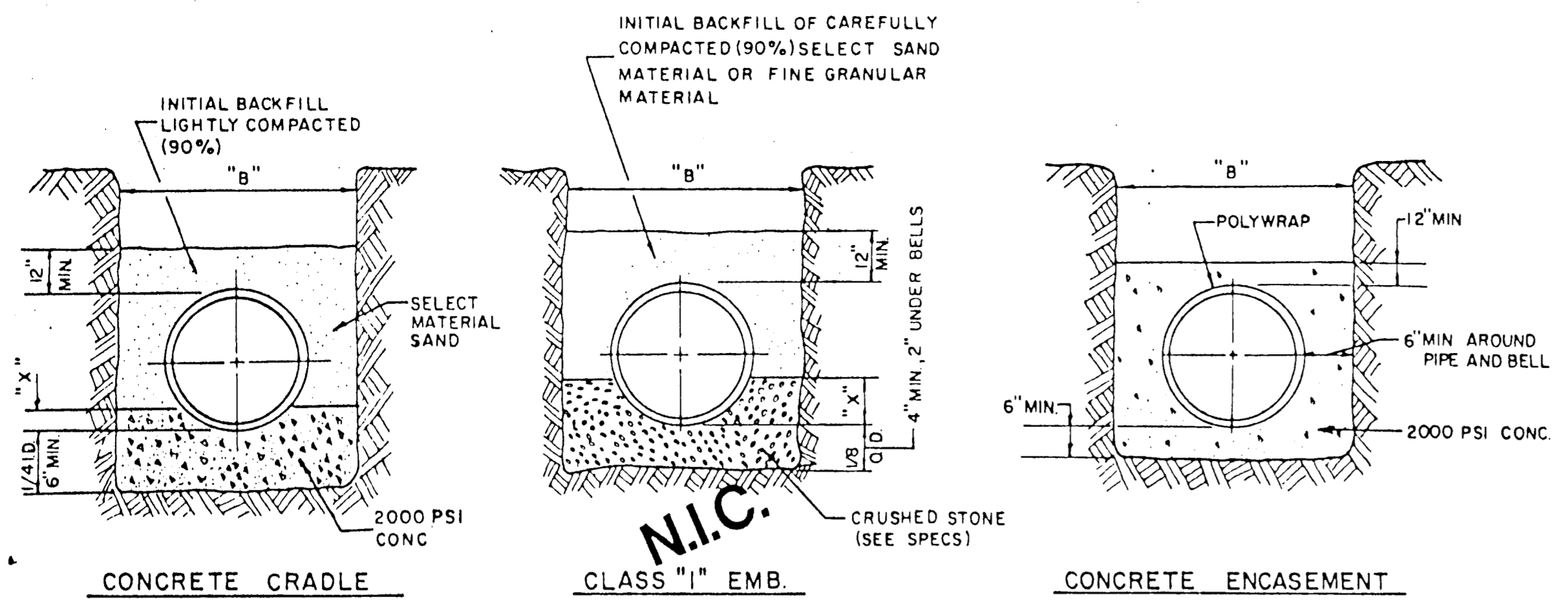
**STANDARD CONSTRUCTION DETAIL**  
**STORM DRAINAGE**

**CURB INLETS**

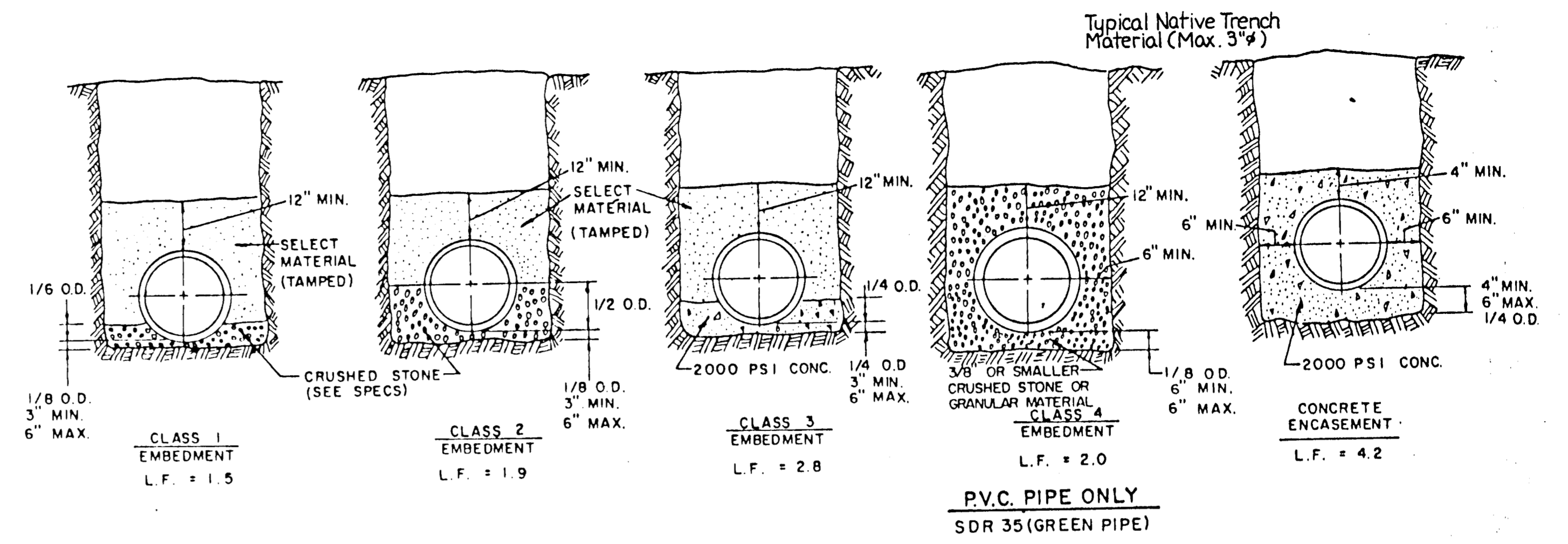
Designed - \_\_\_\_\_ Drawn - \_\_\_\_\_ Date - \_\_\_\_\_ Job No. - \_\_\_\_\_  
Approved - \_\_\_\_\_ Checked - \_\_\_\_\_ Scale - \_\_\_\_\_ Sheet 18



TYPICAL NATIVE MATERIAL COMPACTED TO:  
 95% OPTIMUM MOISTURE 0 TO +3% UNDER PAVEMENT  
 95% OPTIMUM MOISTURE 0 TO +3% OUTSIDE CURB LINES  
 JETTING IS NOT ALLOWED  
 BACKFILL TO BE COMPACTED IN 6"± LIFTS



**EMBEDMENT DETAILS FOR RCCP WATERLINE**



**EMBEDMENT DETAILS FOR SANITARY SEWER**

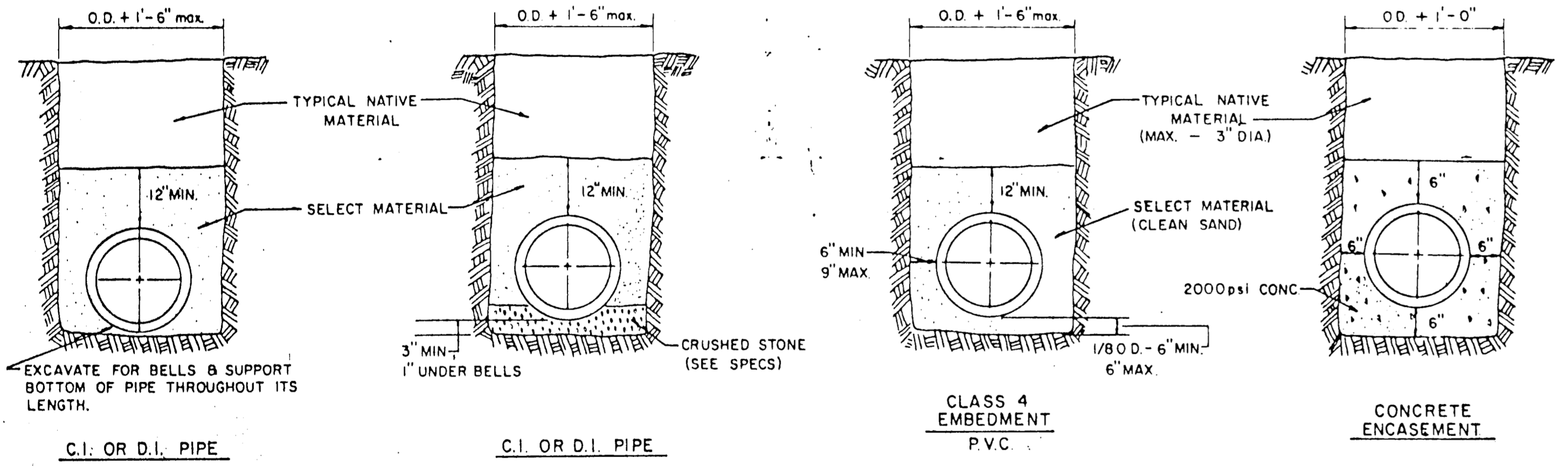
TABLE OF QUANTITIES OF MATERIALS IN CUBIC YARDS PER 100 LINEAR FEET

INSIDE DIAMETER OF PIPE	APPROX. OUTSIDE DIAMETER OF PIPE	"X" IS A MINIMUM DEPTH	"B" TRENCH WIDTH FOR COMPUTATION OF QUANTITIES	CONCRETE		CRUSHED STONE FOR CLASS "1" EMBEDMENT
				FOR EMBEDMENT	FOR ENCASEMENT	
REINFORCED CONCRETE CYLINDER PIPE						
14"	17.25"	2.53'	3.4'	6.91	16.07	5.16
16"	19.38"	2.84'	3.6'	7.50	17.76	5.64
18"	21.78"	3.19'	3.8'	8.11	19.52	6.16
24"	27.75"	4.06'	4.4'	9.97	24.90	9.28

TABLE OF QUANTITIES OF 2000 PSI CONCRETE, GRAVEL OR CRUSHED STONE IN CUBIC YARDS PER 100 LINEAR FEET FOR EACH CLASS EMBEDMENT

TABLE OF QUANTITIES PER 100 LINEAR FEET REINFORCED CONCRETE PIPE

SIZE OF PIPE IN INCHES I.D.	O.D. OF PIPE IN INCHES	TRENCH WIDTH IN INCHES	TRENCH WIDTH IN FEET	CLASS 1 EMBEDMENT CRUSHED STONE	CLASS 2 EMBEDMENT CRUSHED STONE	CLASS 3 EMBEDMENT CONCRETE	CONCRETE ENCASEMENT
12	16.00	32	2.67	4.1	6.5	4.8	15.8
15	19.50	36	3.00	4.8	7.8	6.4	19.2
18	23.00	39	3.25	5.7	9.2	8.2	21.2
21	26.50	43	3.58	6.9	11.0	10.2	24.9
24	30.00	46	3.83	8.3	13.1	12.4	28.7
27	33.50	51	4.25	10.3	16.1	14.4	32.8
30	37.00	57	4.75	12.7	20.1	17.0	34.8
33	40.50	62	5.17	15.1	23.8	19.3	39.2
36	44.00	67	5.58	18.0	28.6	22.1	43.8

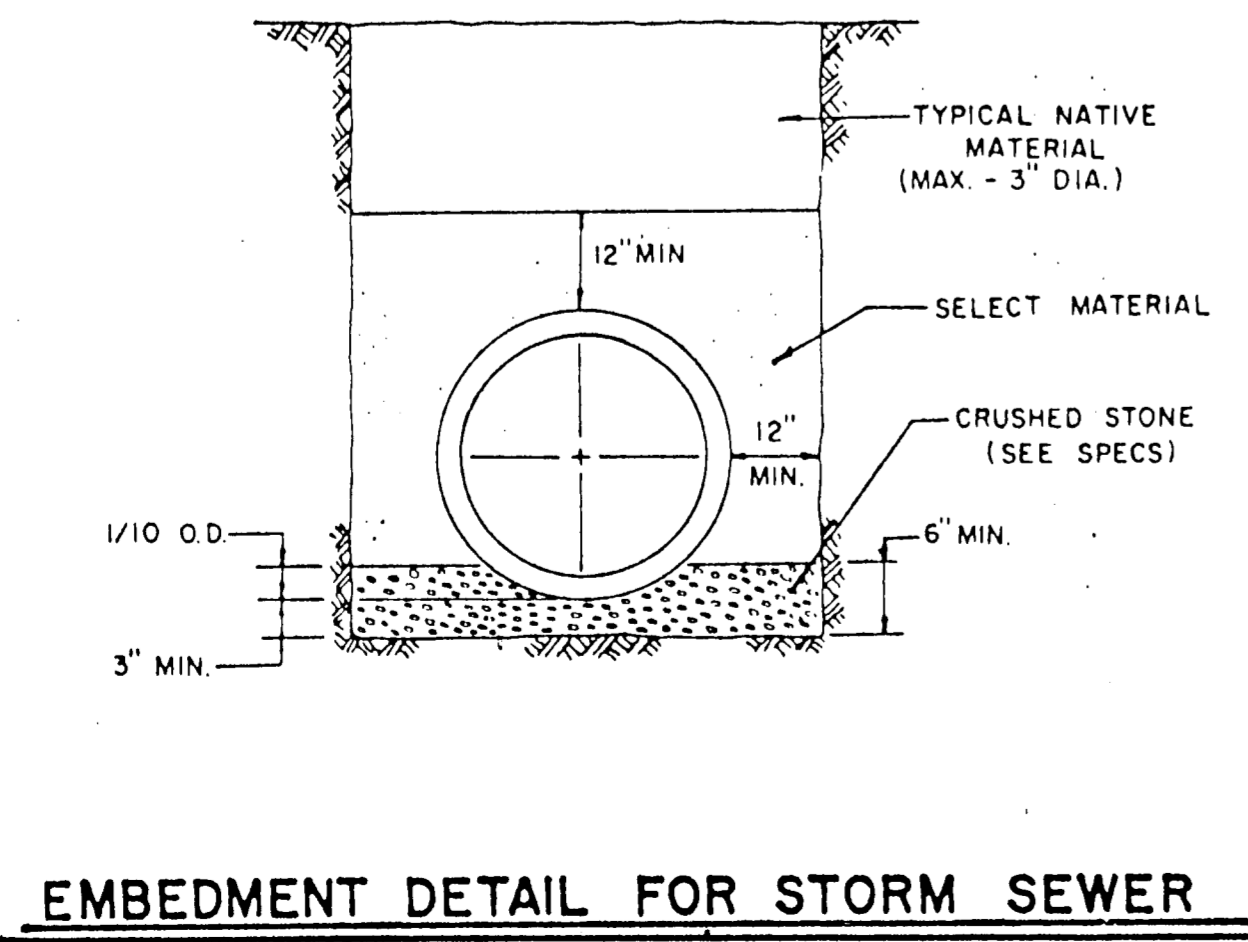
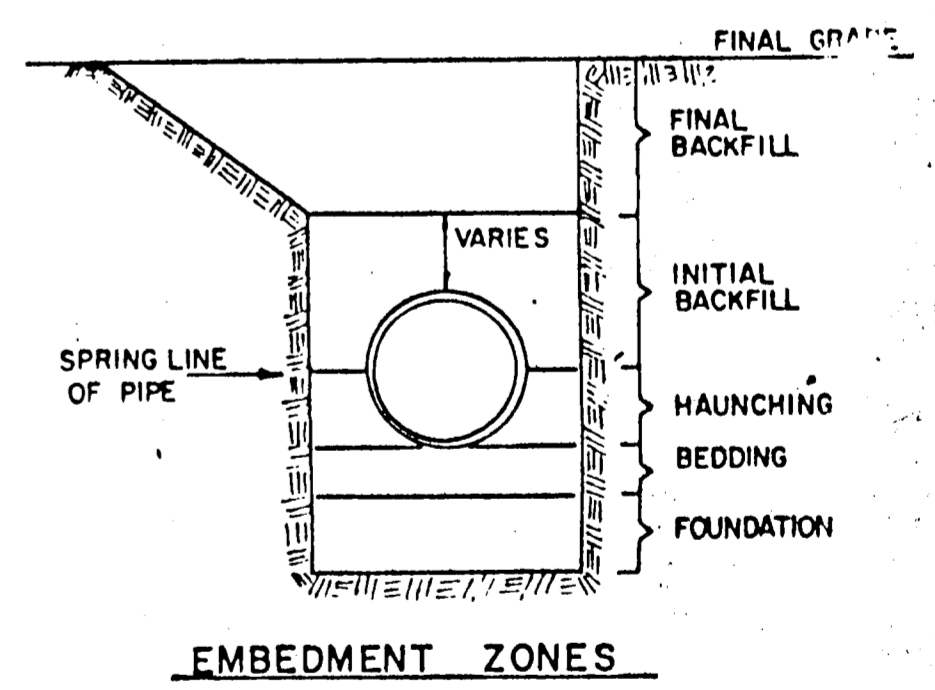


**EMBEDMENT DETAILS FOR WATER MAIN**

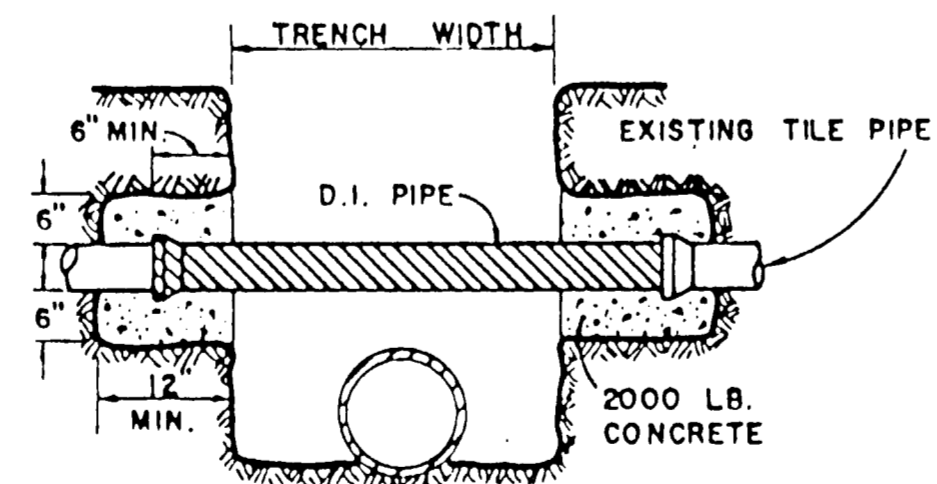
TABLE OF QUANTITIES PER 100 LINEAR FEET-PVC PIPE (IN CUBIC YARDS)

SIZE OF PIPE IN INCHES	O.D. OF PIPE IN INCHES	TRENCH WIDTH IN INCHES	TRENCH WIDTH IN FEET	CLASS 4 EMBEDMENT CRUSHED STONE	CONCRETE ENCASEMENT
6	6.28	24	2.00	8.0	11.7
8	8.16	24	2.00	8.7	12.4
10	10.20	26	2.18	10.7	14.2
12	12.24	28	2.35	11.7	15.9
16	15.30	31	2.61	14.0	18.8
24		36	3.00		
30		42	3.50		

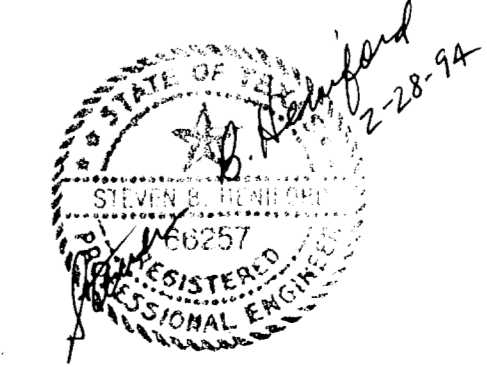
NOTE: ALL SANITARY SEWER LINES THIS PROJECT SHALL HAVE CLASS 4 EMBEDMENT UNLESS OTHERWISE NOTED.



**EMBEDMENT DETAIL FOR STORM SEWER**



**DETAIL OF UTILITY SUPPORT**



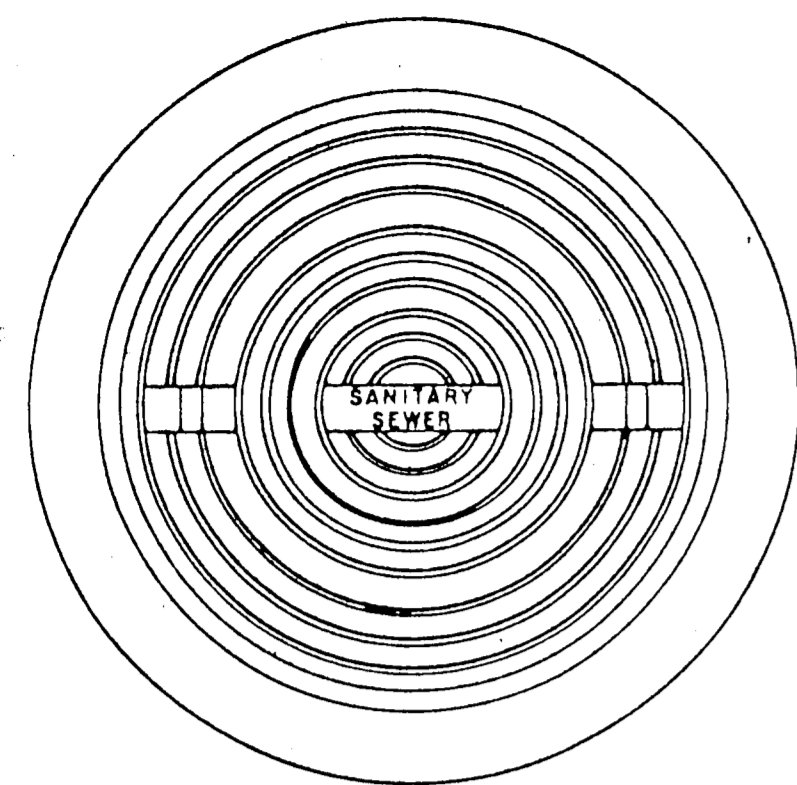
TOWN OF ADDISON, TEXAS  
 DEPARTMENT OF ENGINEERING

STANDARD CONSTRUCTION DETAILS

EMBEDMENT DETAILS

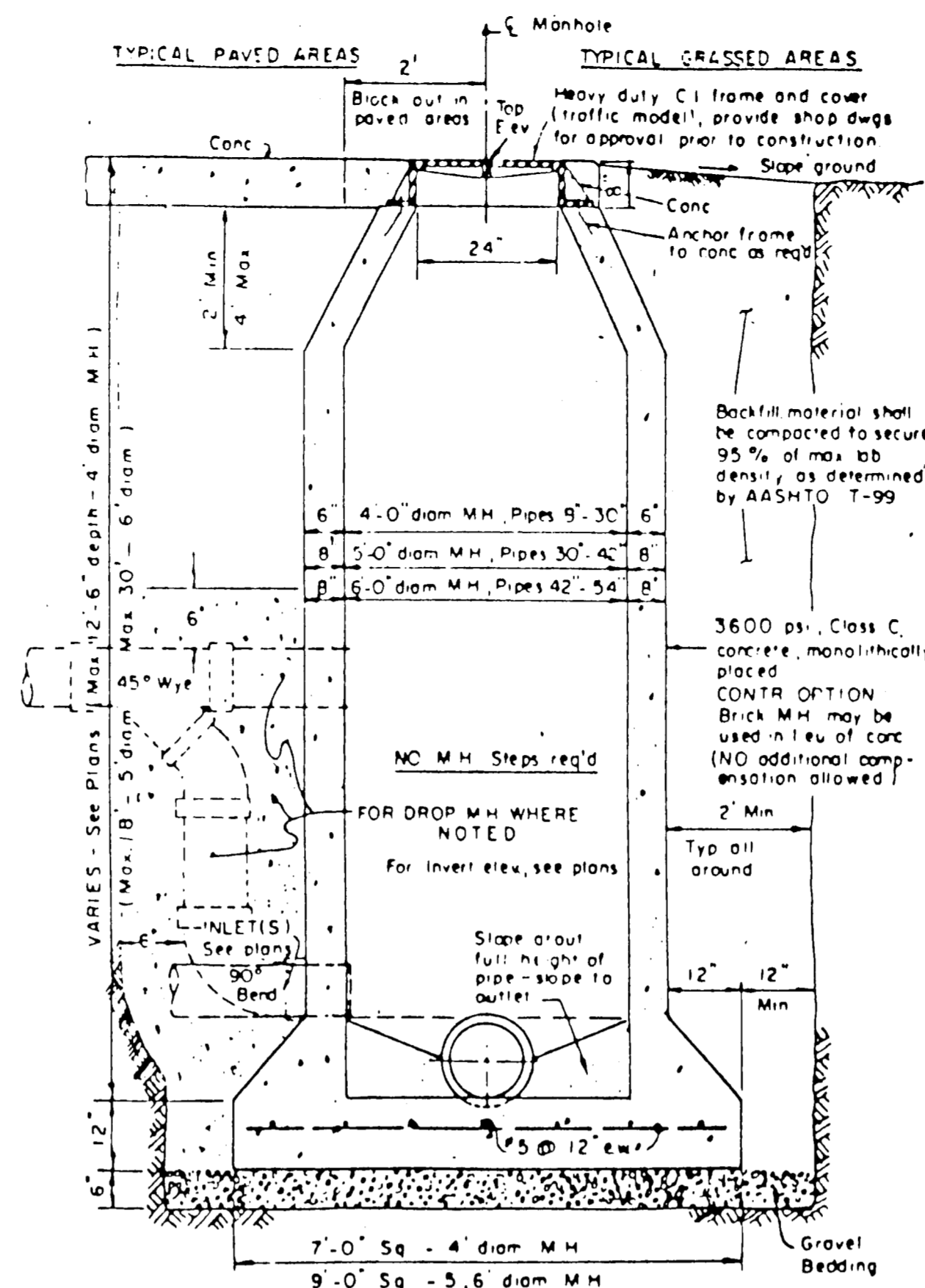
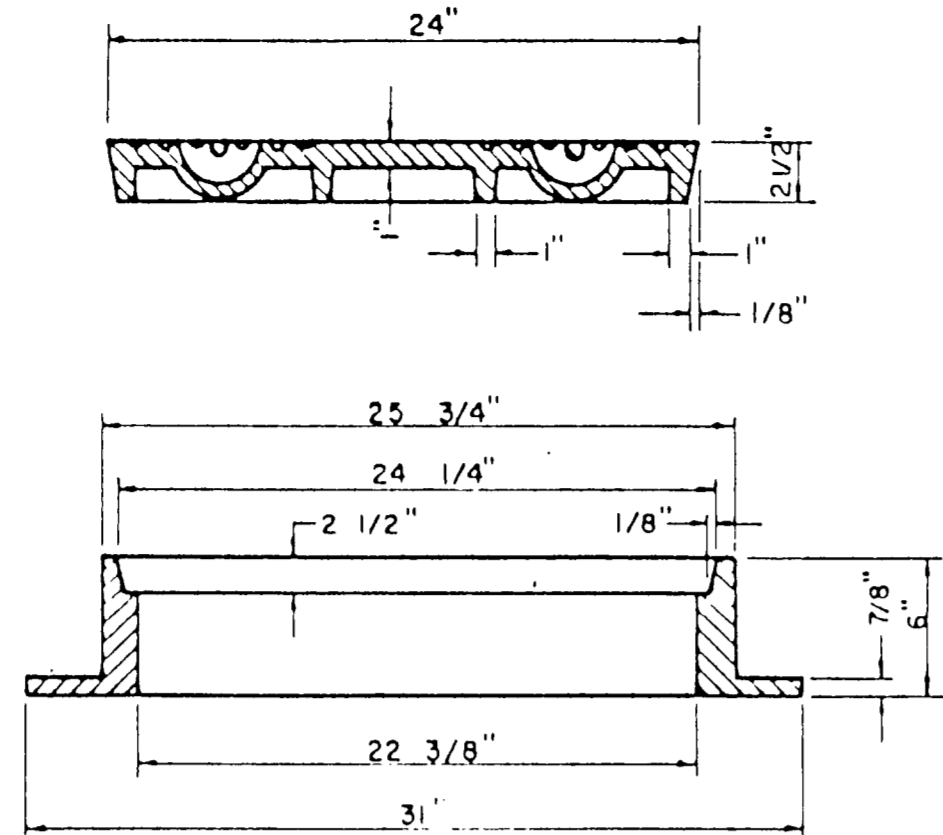
Designed -	Drawn -	Date - AUGUST, 1991	Job No. -
Approved -	Checked -	Scale -	Sheet 18





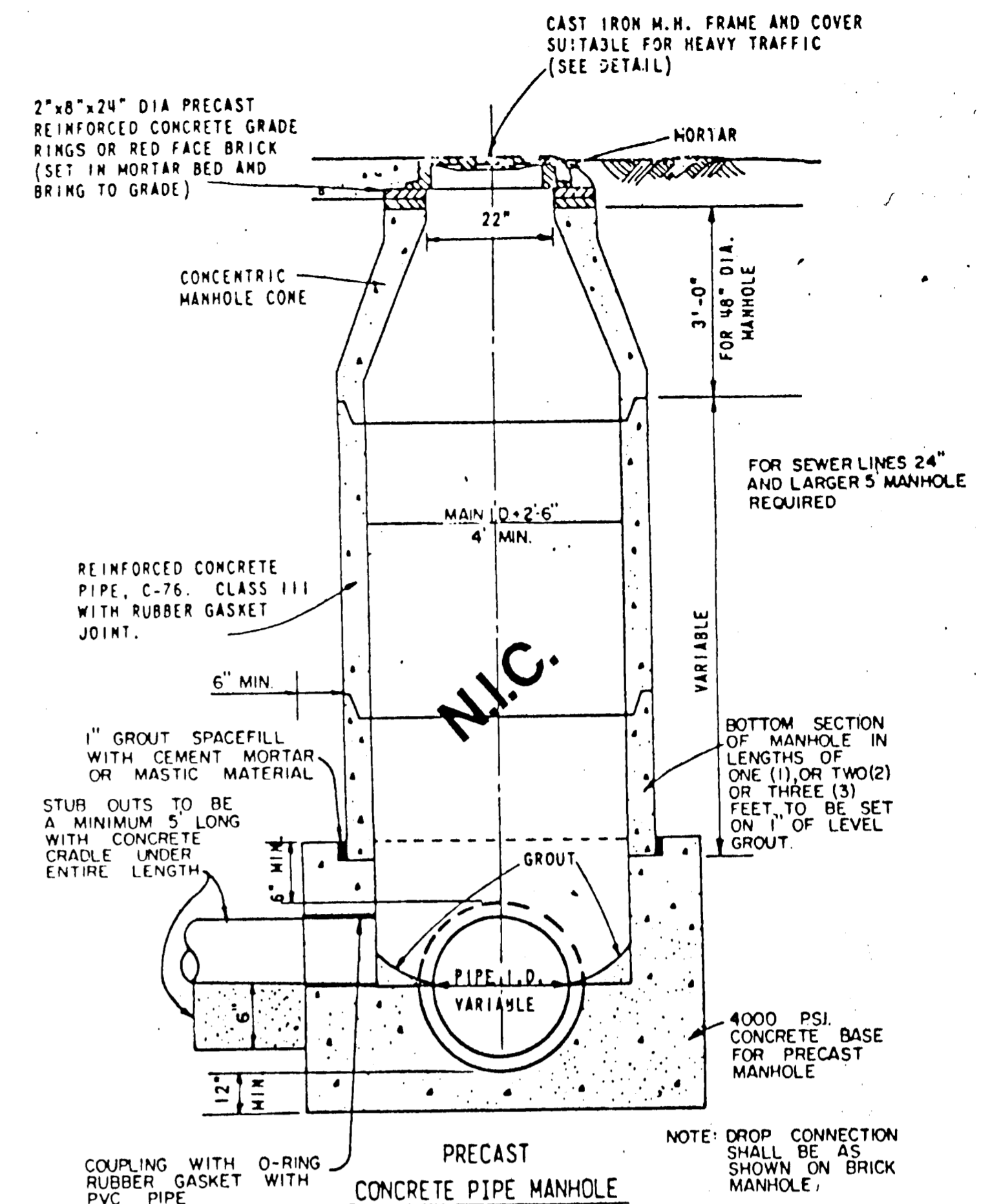
APPROX.  
WEIGHT  
RING AND COVER  
385 LBS.

CAST IRON GRATE AND FRAME DETAIL

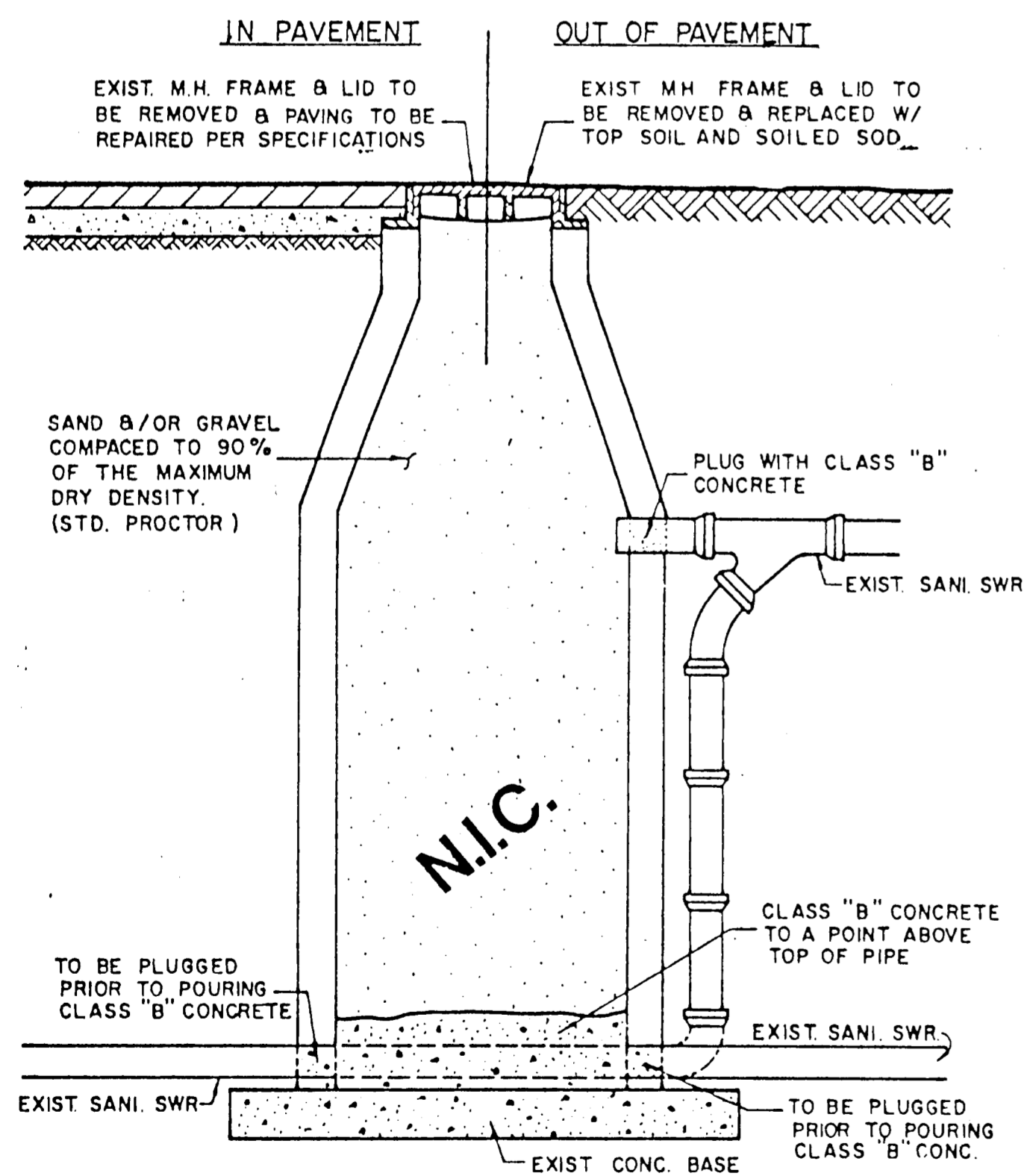


CAST IN PLACE MANHOLE

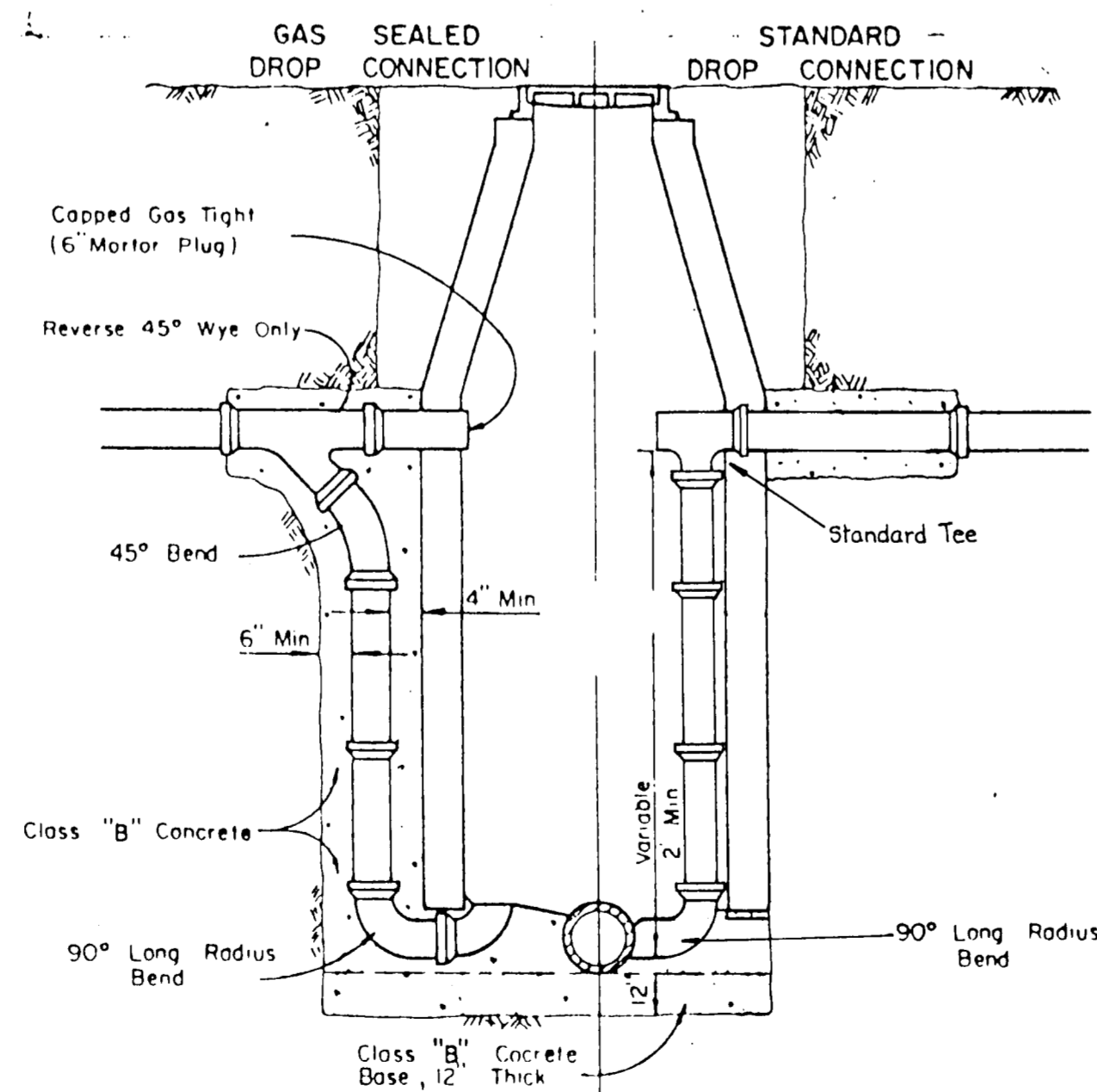
WHERE DROP M.H. IS REQUIRED, USE INSIDE DROP CONNECTION AS PER TOWN OF ADDISON STANDARDS.



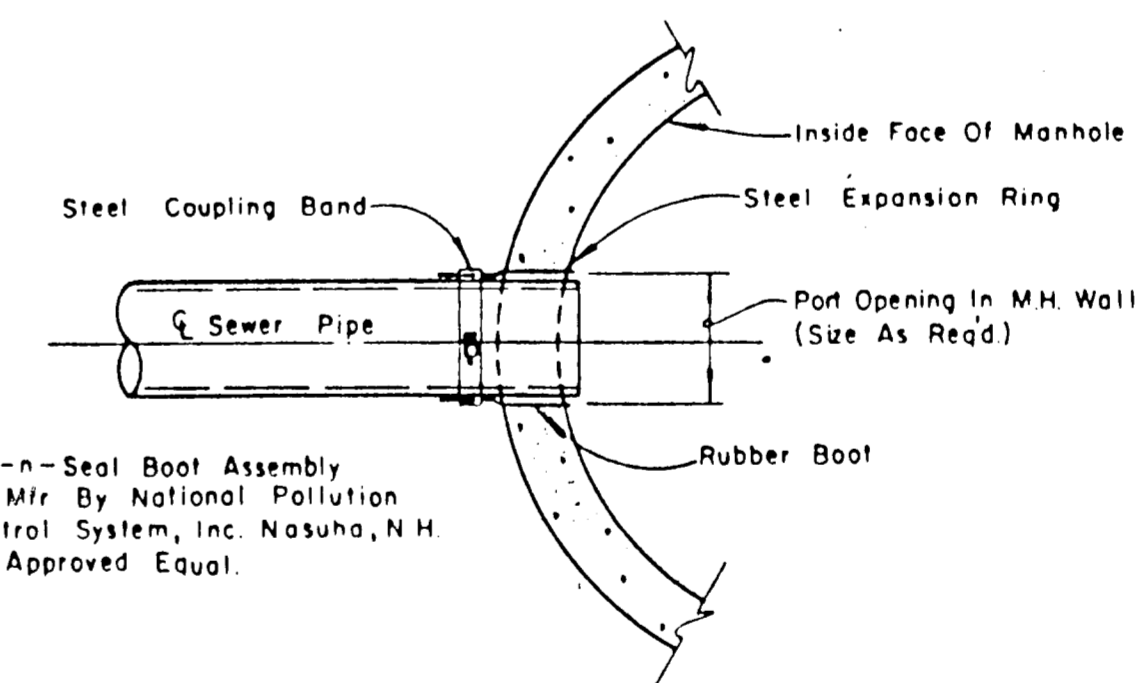
PRECAST MANHOLE



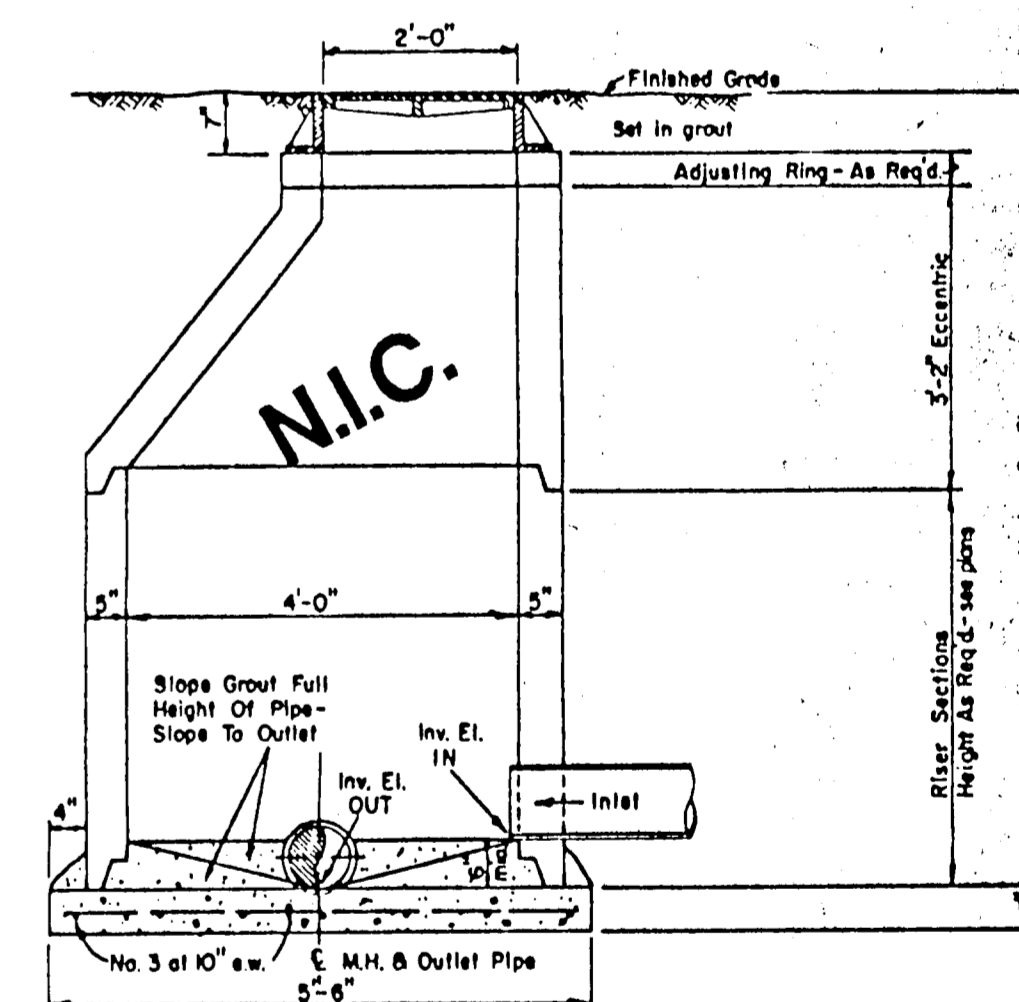
ABANDONMENT OF EXISTING MANHOLE IN AND OUT OF PAVEMENT



DROP CONNECTIONS FOR SANITARY SEWER MANHOLES



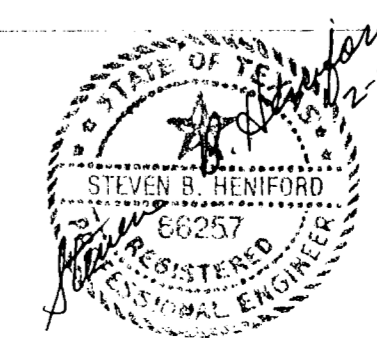
TYPICAL SEWER CONNECTION AT MANHOLE



ECCENTRIC MANHOLE DETAIL

NOTE:  
Contractor To Install Kor-n-Seal Boot Assembly Per Mfr Recommendations In A Neat And Workman-Like Manner

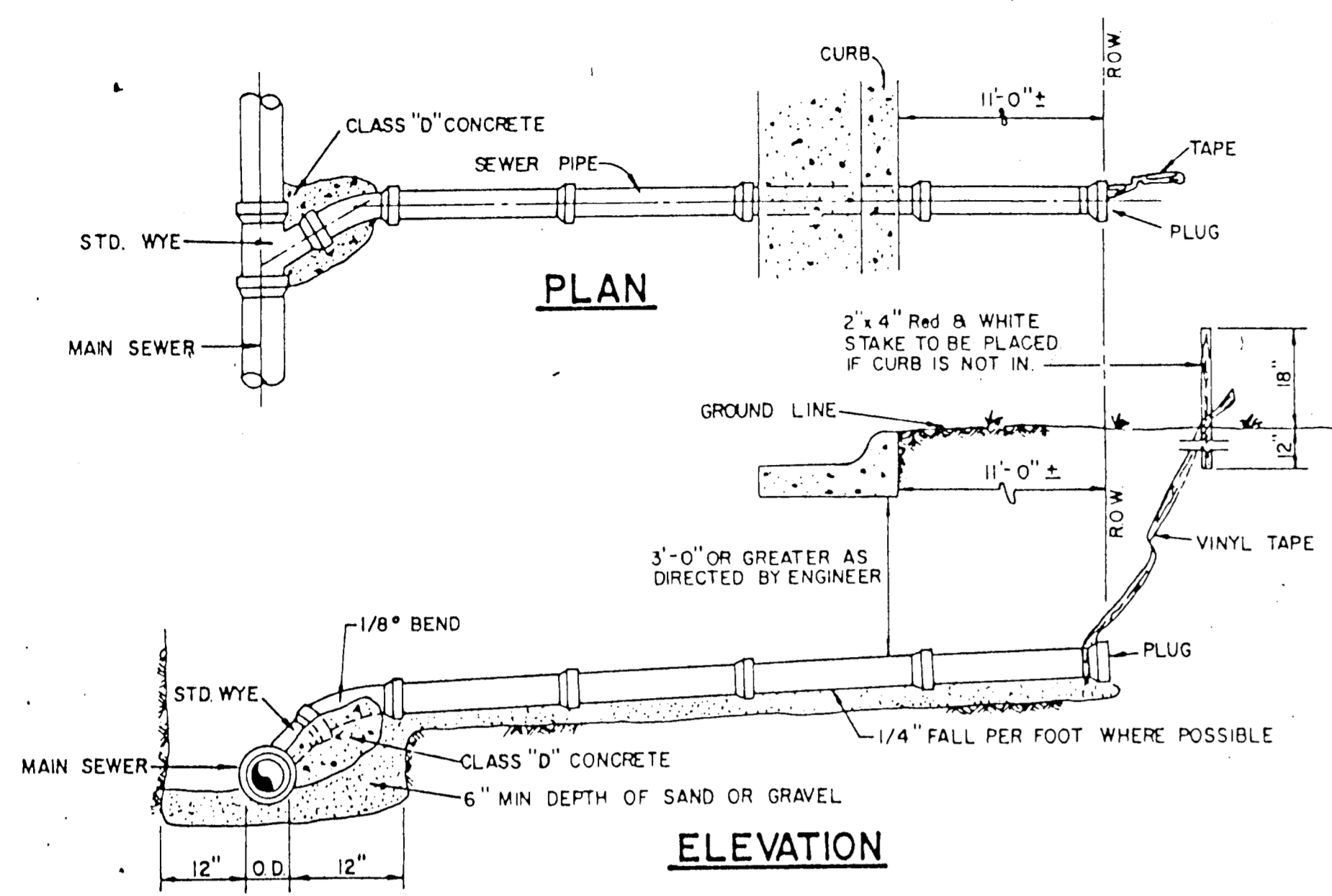
CLASS B Conc. - 2000psi at 28 days (Compressive)



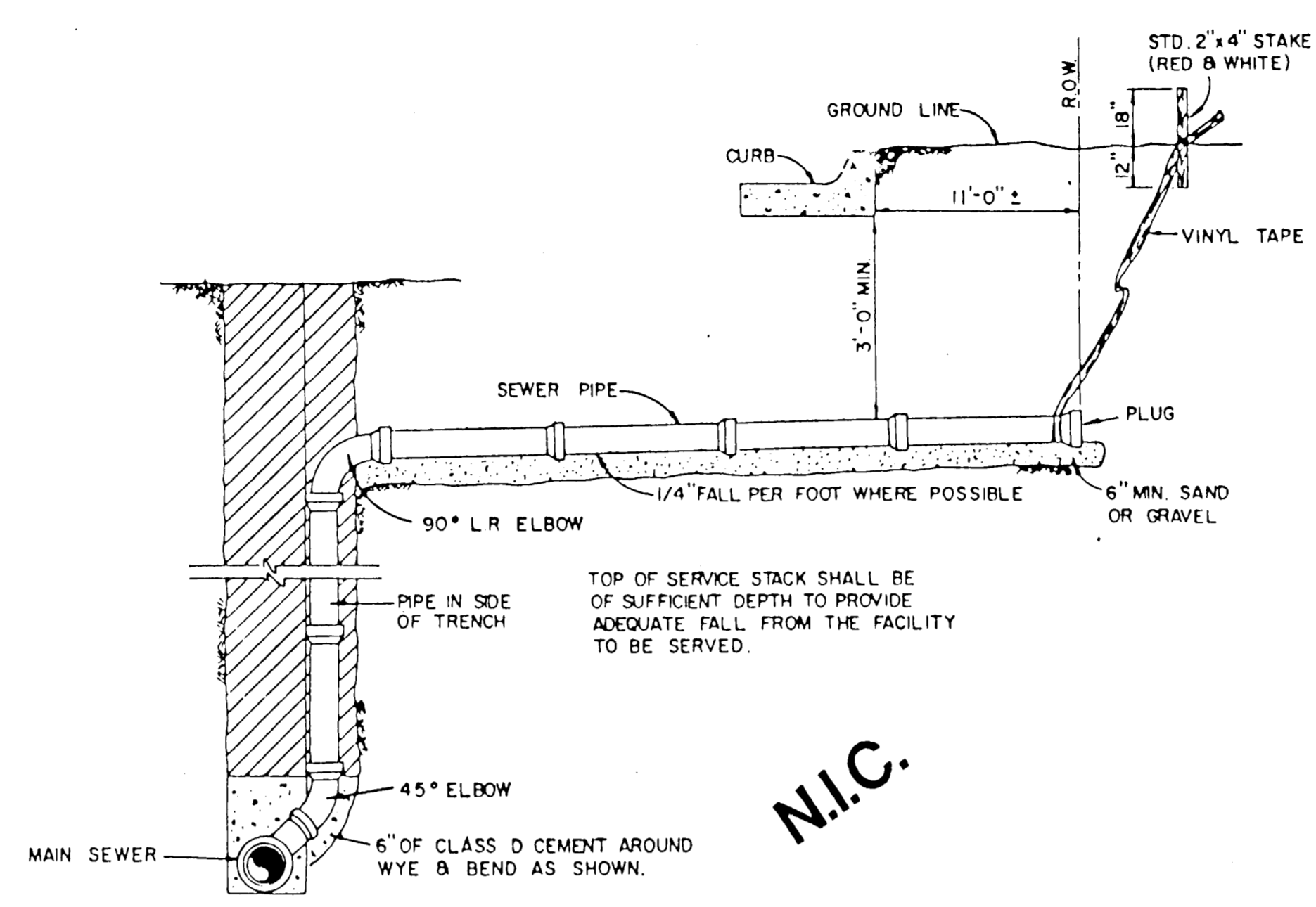
TOWN OF ADDISON, TEXAS  
DEPARTMENT OF ENGINEERING  
STANDARD CONSTRUCTION DETAILS  
SANITARY SEWER  
MANHOLES AND CONNECTIONS

Designed -	Drawn -	Date -	Job No. -
Approved -	Checked -	Scale -	Sheet 20

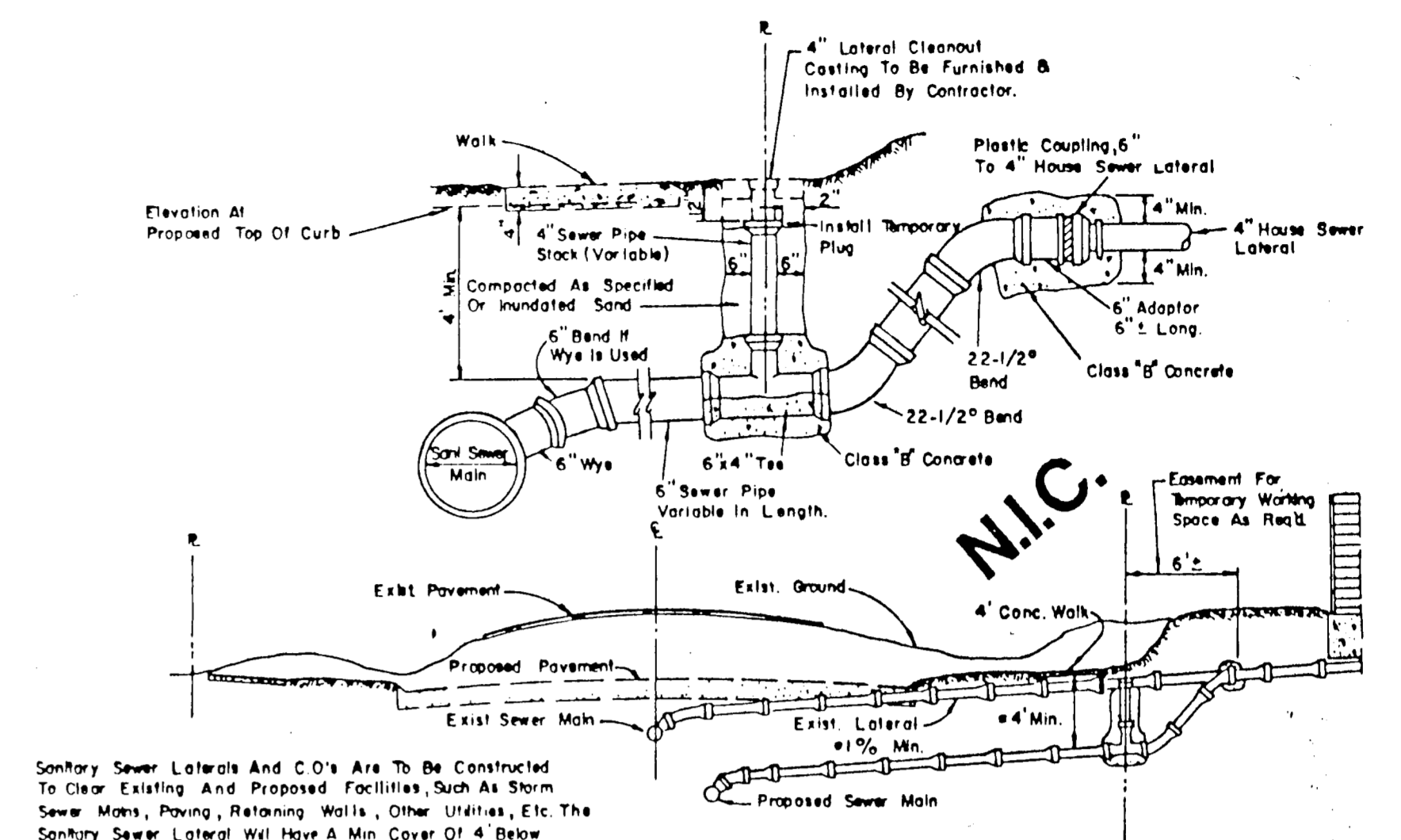




**SANITARY SEWER SERVICE CONNECTION**

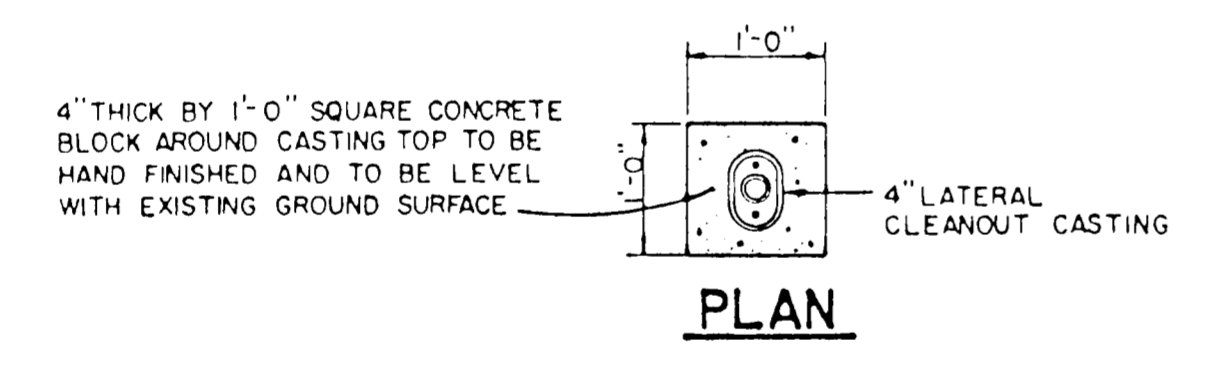


**SANITARY SEWER DEEP SERVICE CONNECTION**

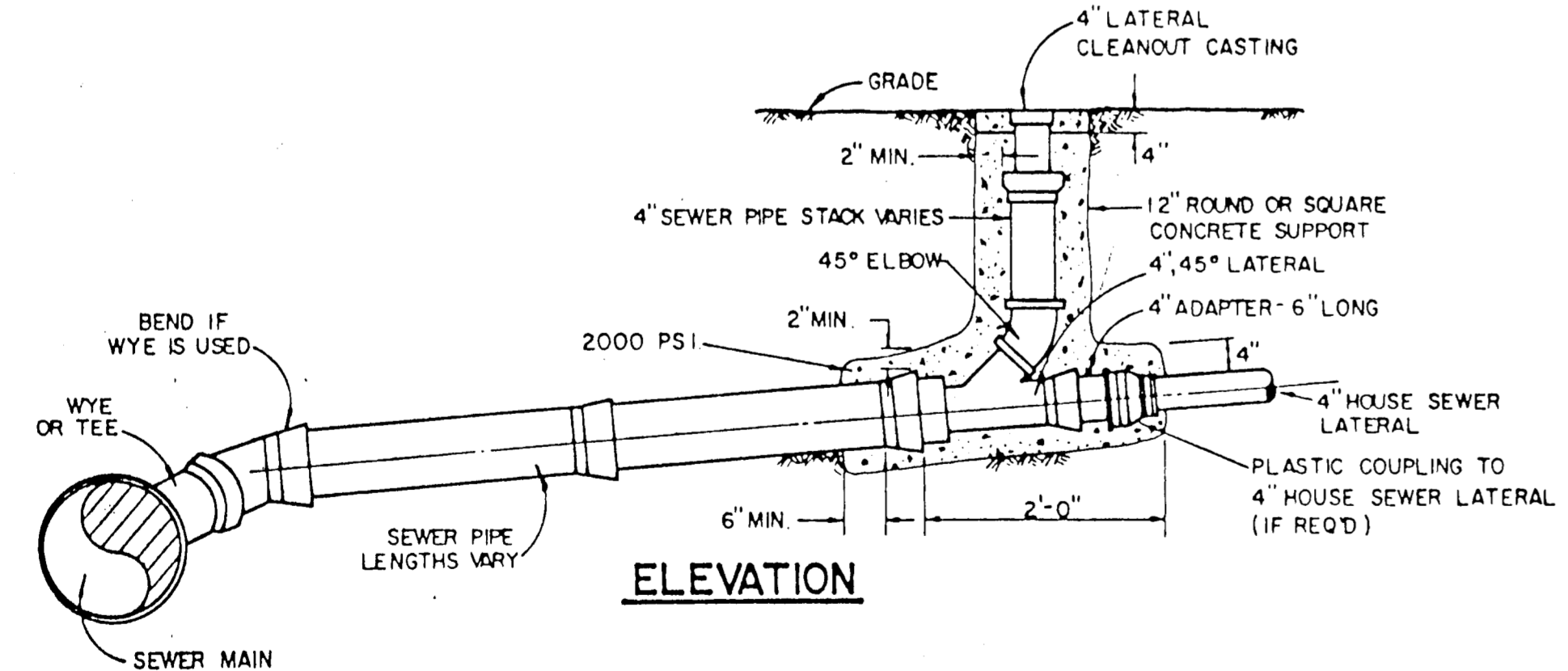


**SANITARY SEWER LATERAL REPLACEMENT**

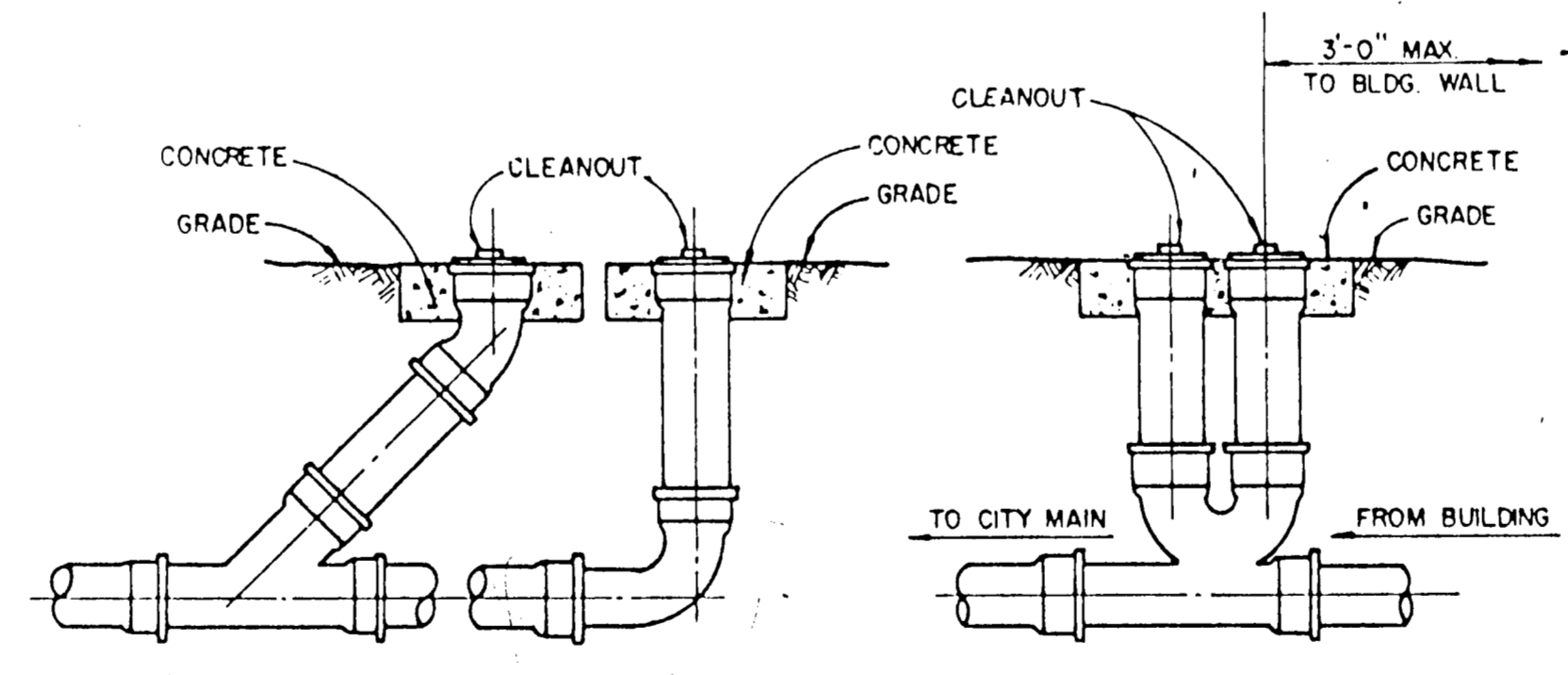
NOTE: Cleanout To Be Installed On Property Line Except As Required To Avoid Conflict With Existing Or Proposed Facilities In Which Case The Location Shall Be Determined By The Engineer.



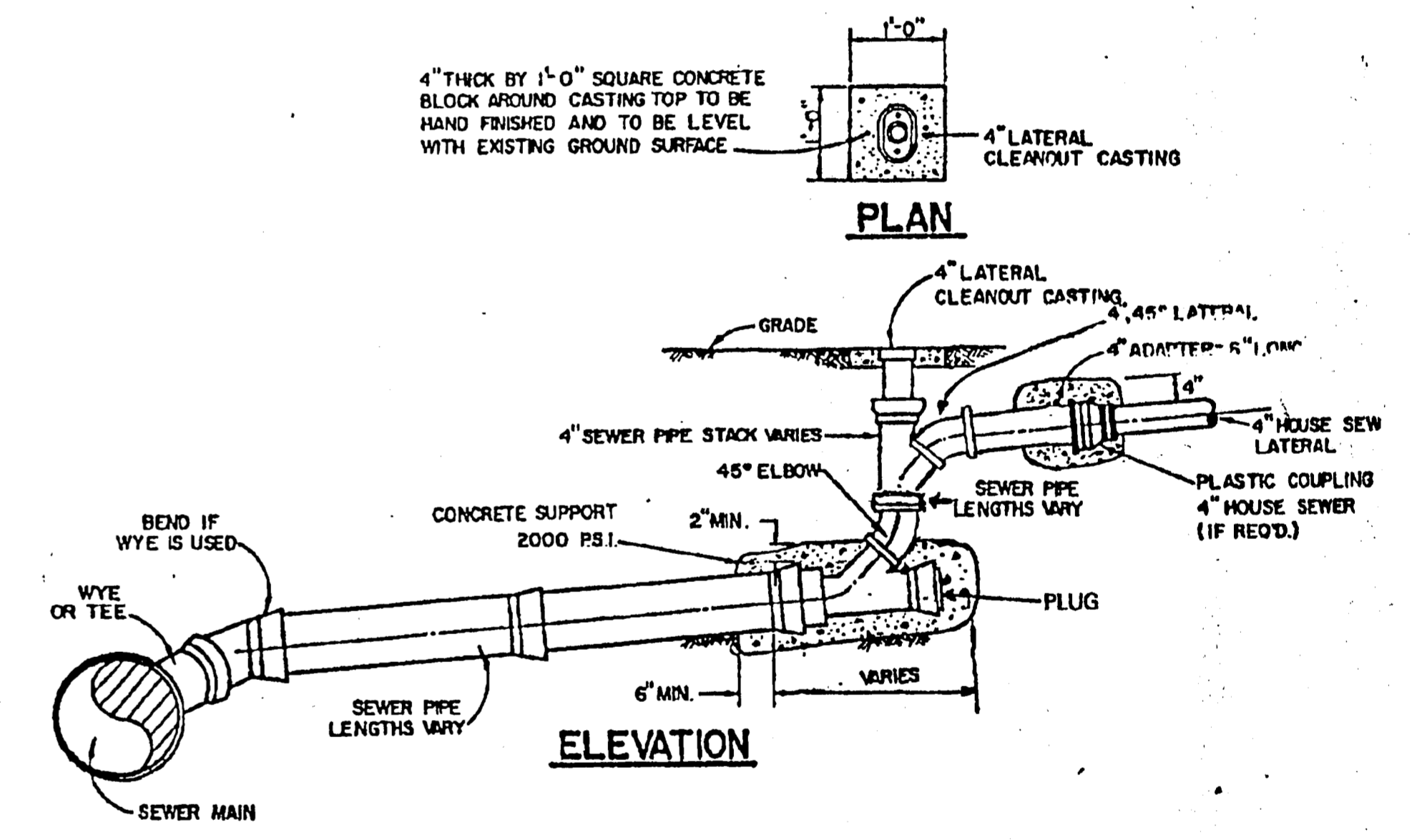
**PLAN**



**ELEVATION**



**TYPICAL CLEANOUTS**



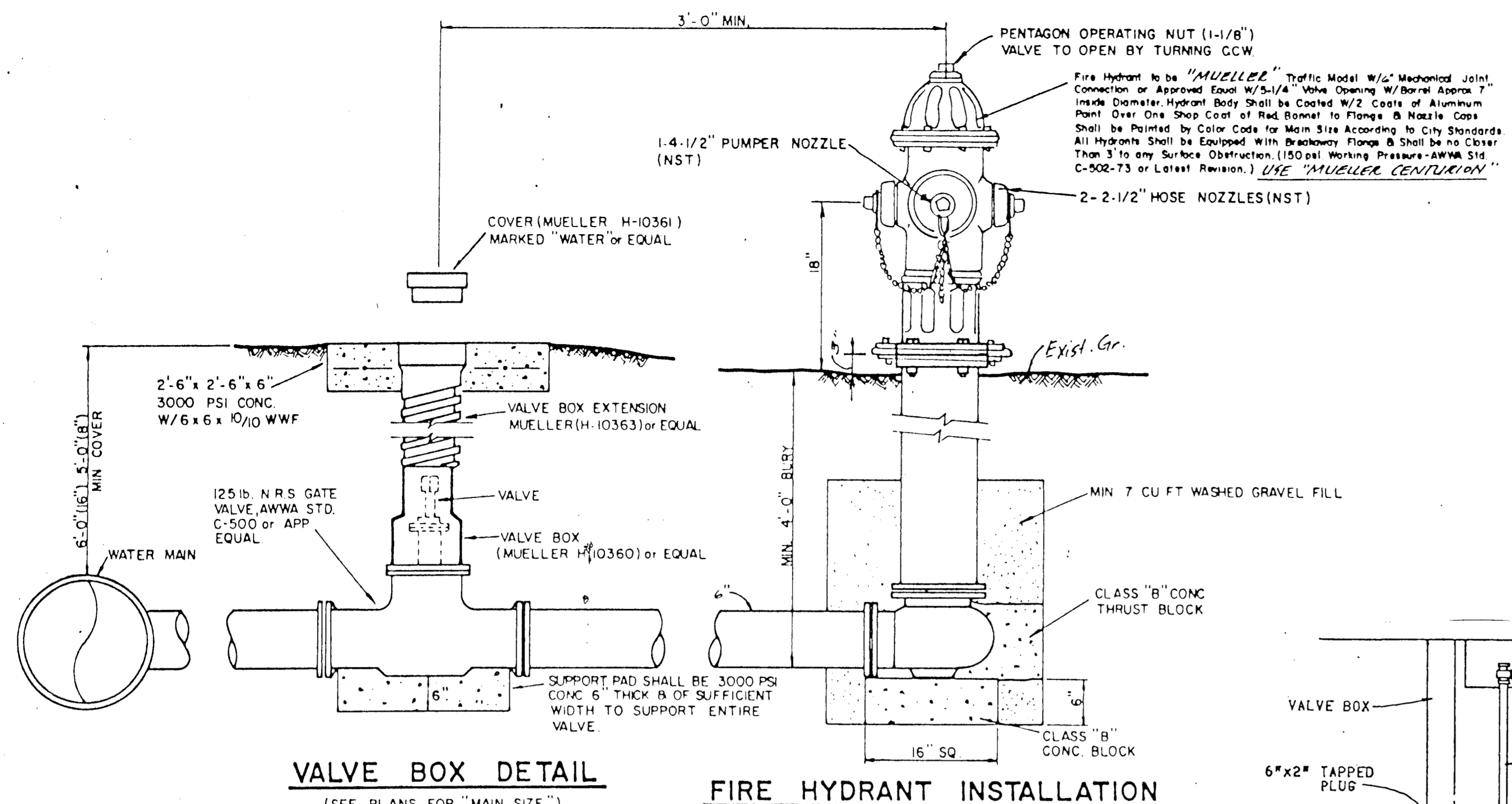
**ELEVATION**

ALL PVC SANITARY SEWER PIPE TO BE SDR 35 WITH INTEGRAL BELL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE HORIZONTALLY EACH 4" SERVICE IN RELATION TO THE SANITARY SEWER STATIONING.

TOWN OF ADDISON, TEXAS			
DEPARTMENT OF ENGINEERING			
STANDARD CONSTRUCTION DETAILS			
SANITARY SEWER			
LATERALS AND CLEANOUTS			
Designed -	Drawn -	Date -	Job No. -
Approved -	Checked -	Scale -	Sheet 21

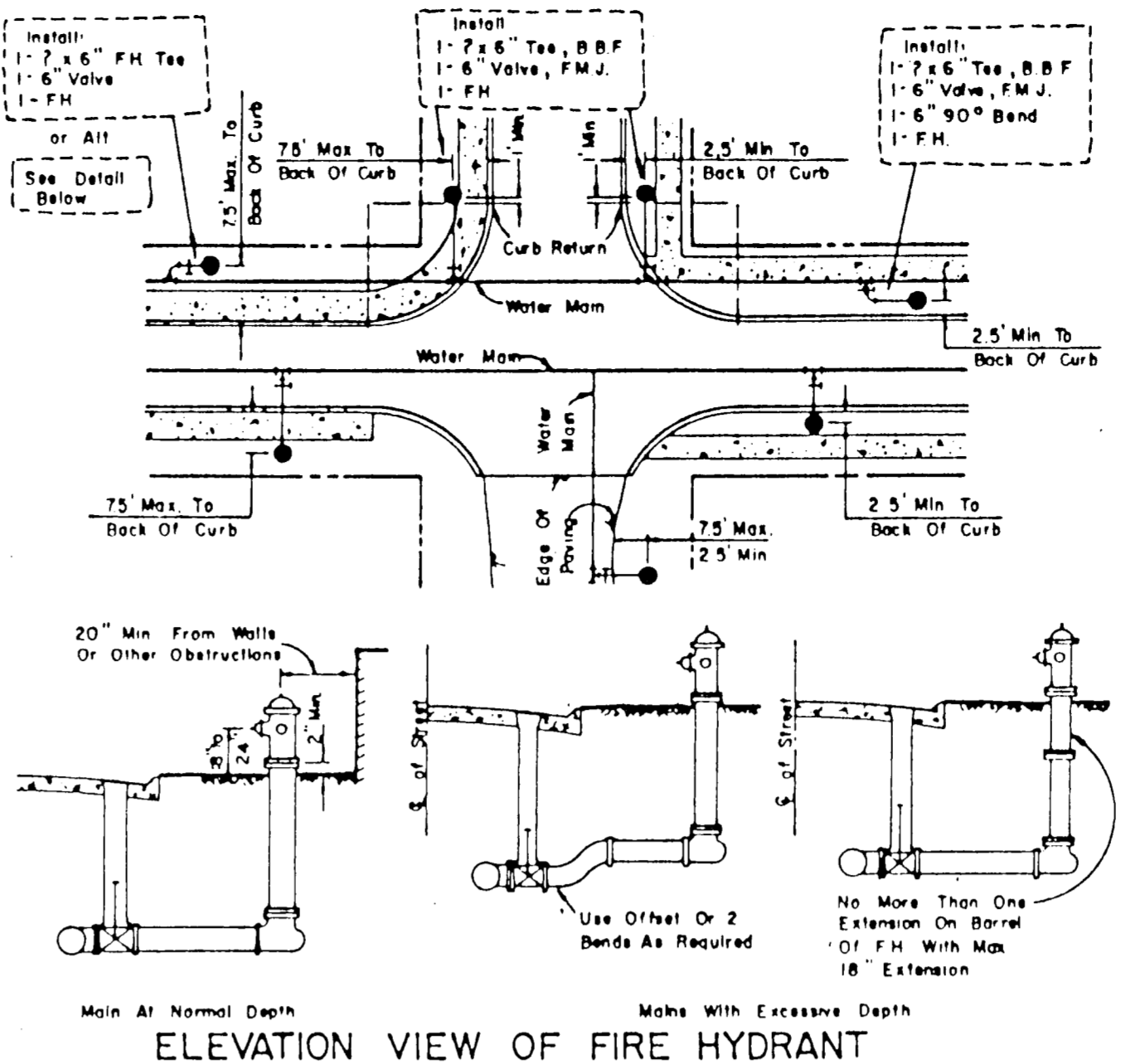




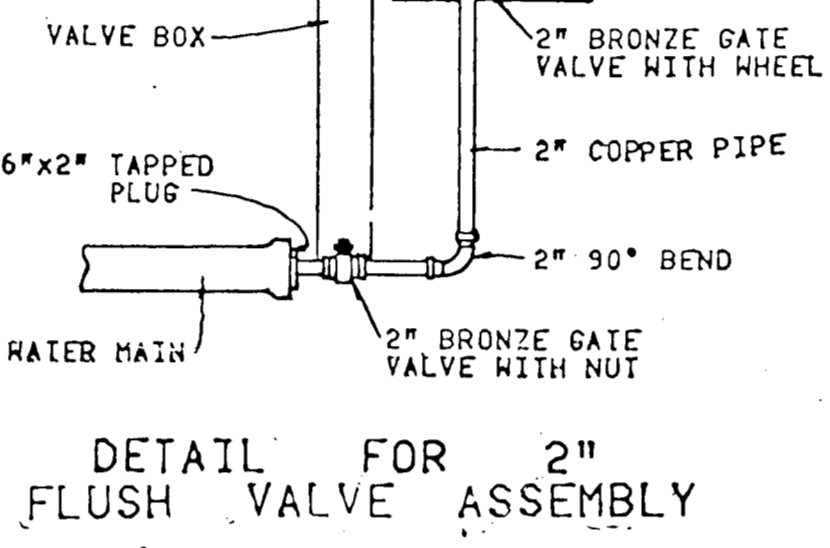


**GATE VALVES AND VALVE BOXES.**

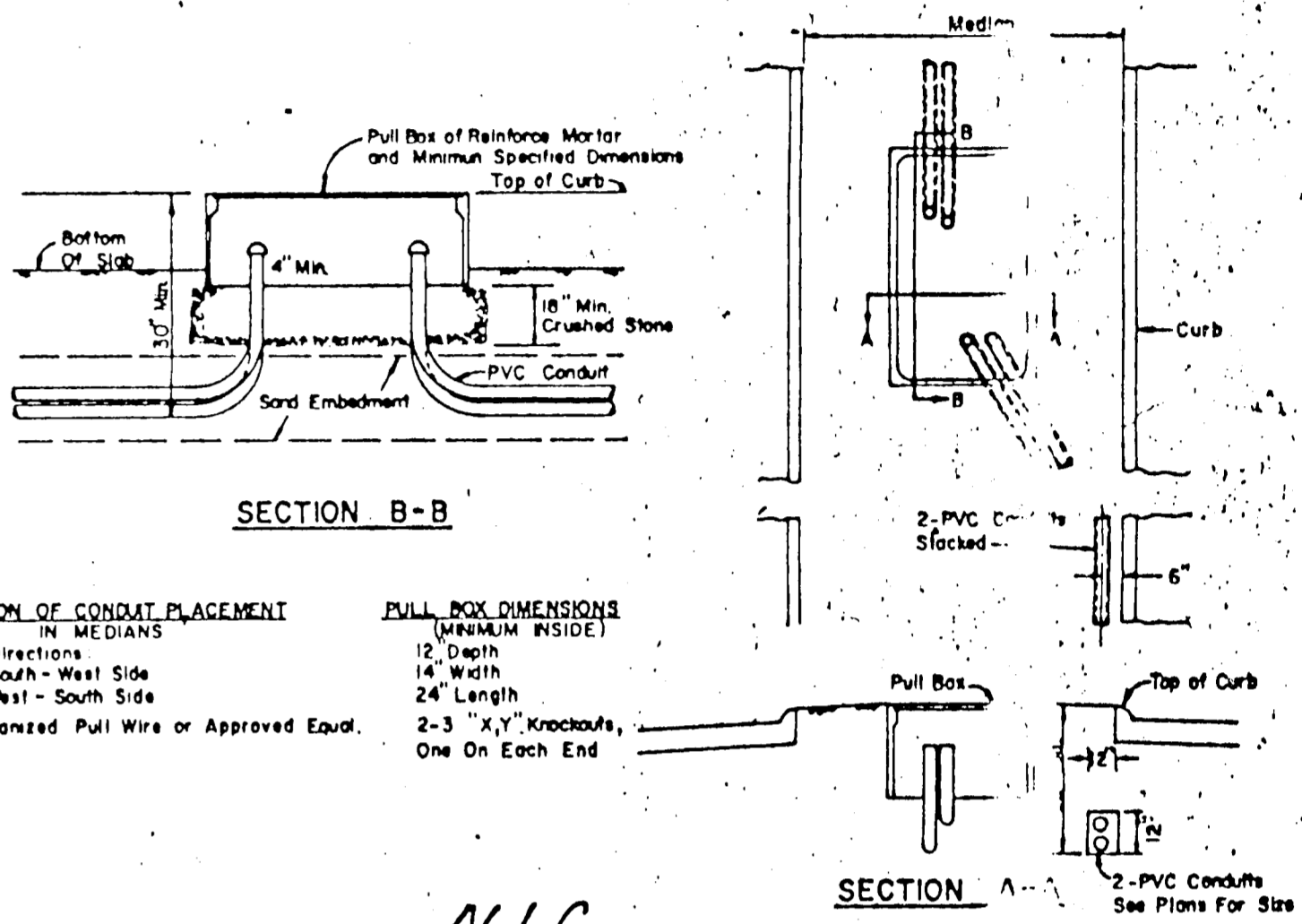
- GATE VALVES SHALL BE IRON BODY, BRONZE OR BRASS MOUNTED, NON-RISING STEM, PARALLEL SEAT TYPE VALVES SHALL BE OF EQUAL OR GREATER PRESSURE CLASS THAN THE PIPING IN WHICH THEY ARE TO BE INSTALLED.
- VALVE BOXES SHALL BE CAST IRON AND SHALL BE OF SUFFICIENT LENGTH AND DIAMETER TO OPERATE. ALL VALVES BURIED IN THE GROUND COVERS SHALL BE MARKED "WATER" THE BOXES SHALL REST ON THE VALVE AND BE ADJUSTED SO THAT THE COVER MAY BE SET FLUSH WITH THE FINISHED GRADE.



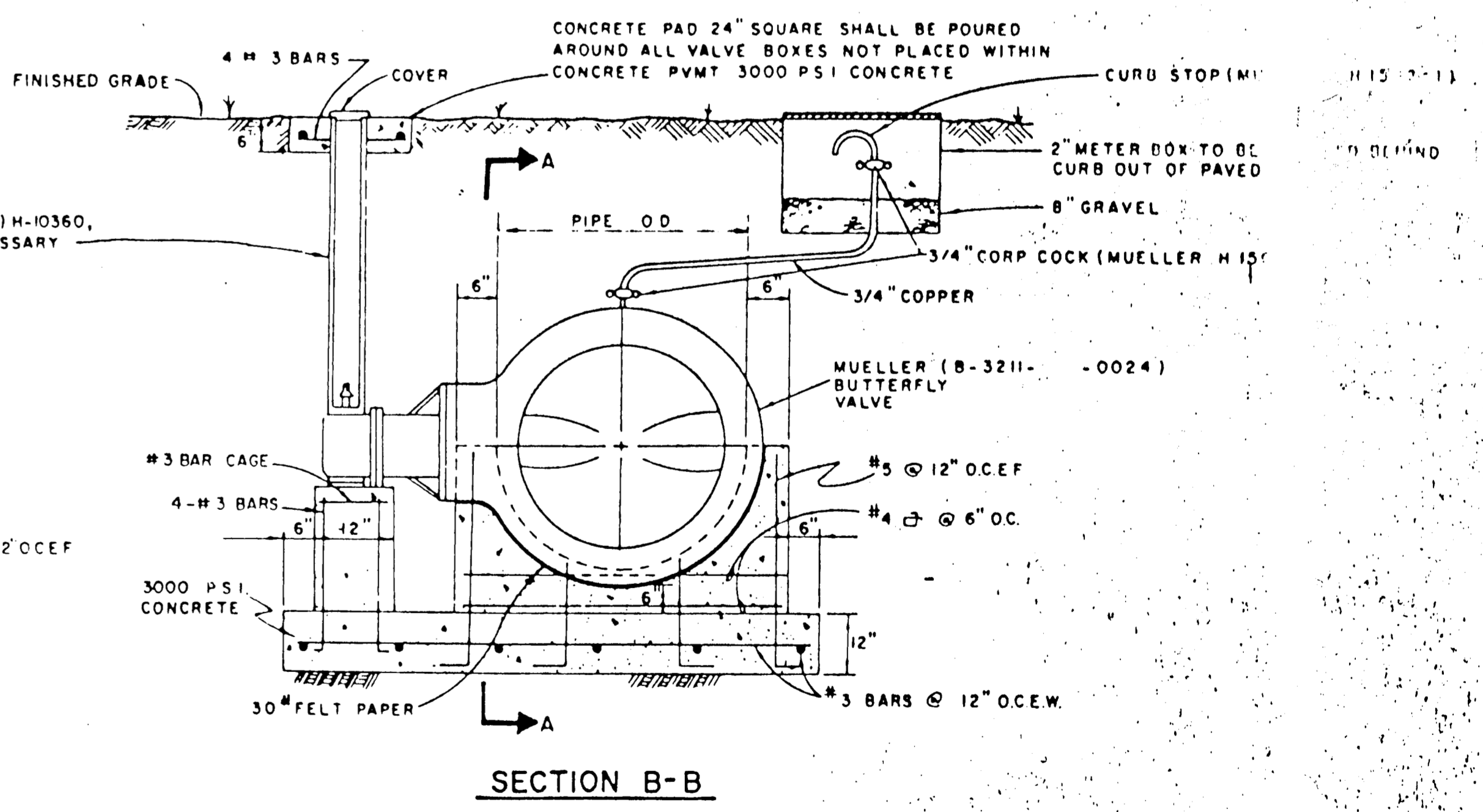
- GENERAL NOTES**
- Q. of FH Barrel Shall Be Not Less Than 6.0' Or More Than 9.0' From Back Of Curb Or Edge Of Pavement.
  - Do Not Set FH in an Existing or Proposed Sidewalk, Unless Otherwise Noted.
  - All FH Tees Shall Be M.J. With Anchoring On The Branch With M.J., M.J. & 6" Valve Possible.
  - Set FH On The Lot Line Extended When Possible.
  - On Private Contracts, The Developer/Engineer Will Stake Location & Grade.
  - Never Place FH Where Fire Truck Could Not Park Beside It.



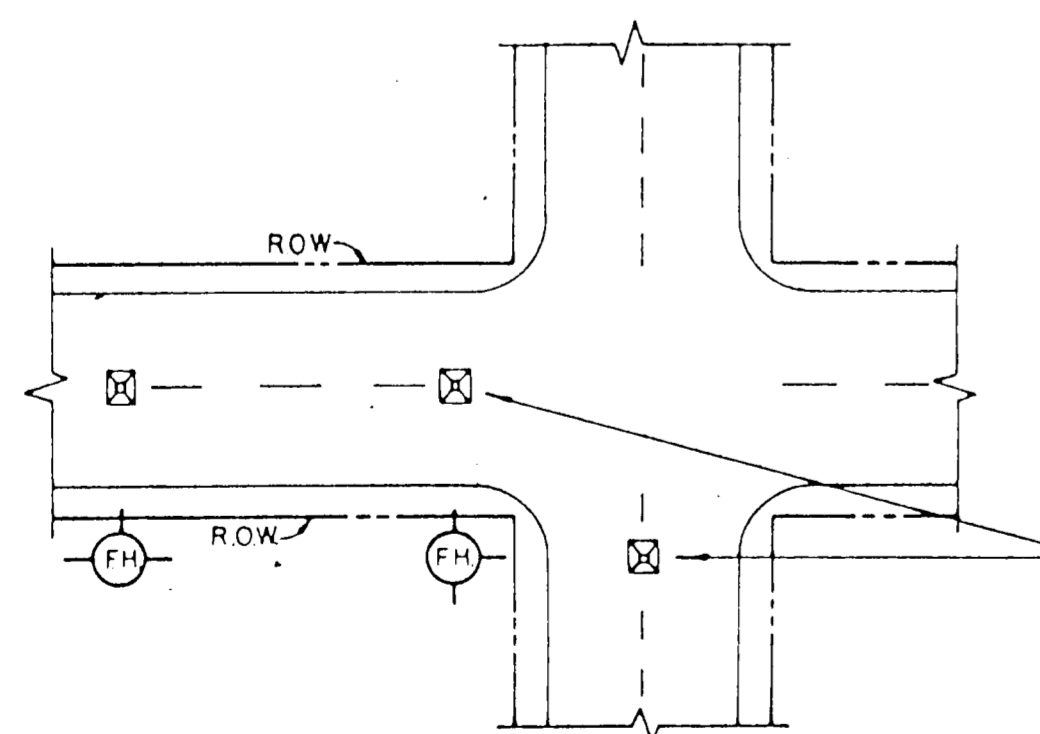
**PVC SLEEVE FOR FUTURE IRRIGATION**  
N.I.C.



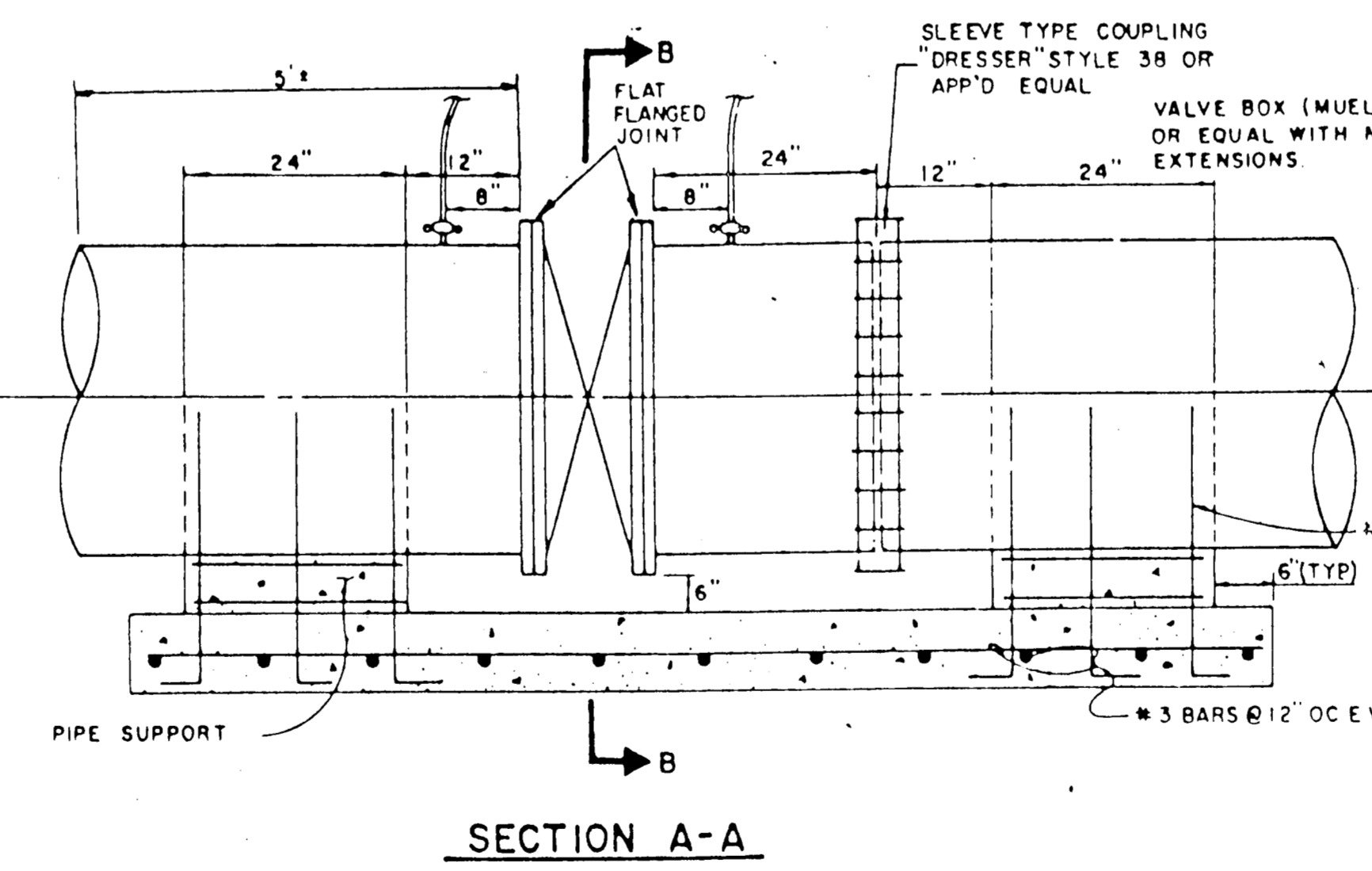
**PULL BOX & CONDUIT DETAIL**  
N.I.C.



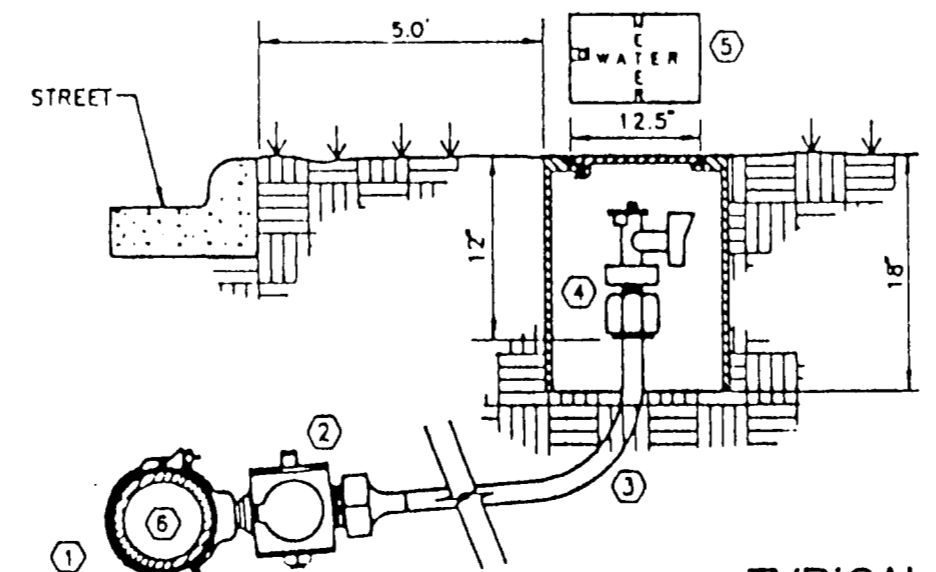
**TYPICAL FIRE HYDRANT INSTALLATION**



A BLUE STIMSONITE FIRE-LITE REFLECTOR (OR APPROVED EQUAL) TO BE PLACED IN THE CENTER OF STREET OPPOSITE FIRE HYDRANTS THE INSTALLATION OF THIS REFLECTOR SHALL BE AS PRESCRIBED BY THE MANUFACTURER.



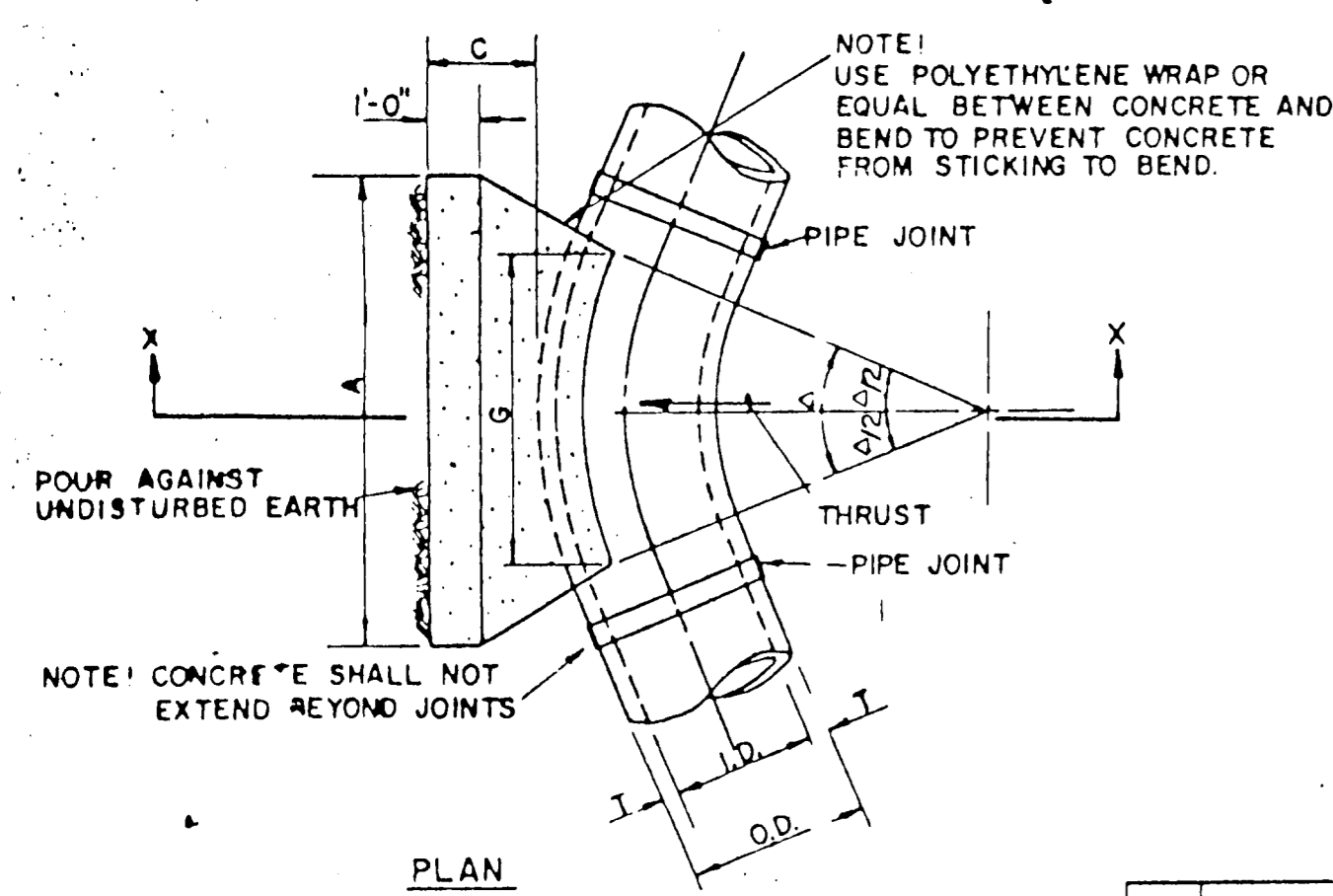
**TYPICAL FIRE HYDRANT REFLECTOR INSTALLATION**



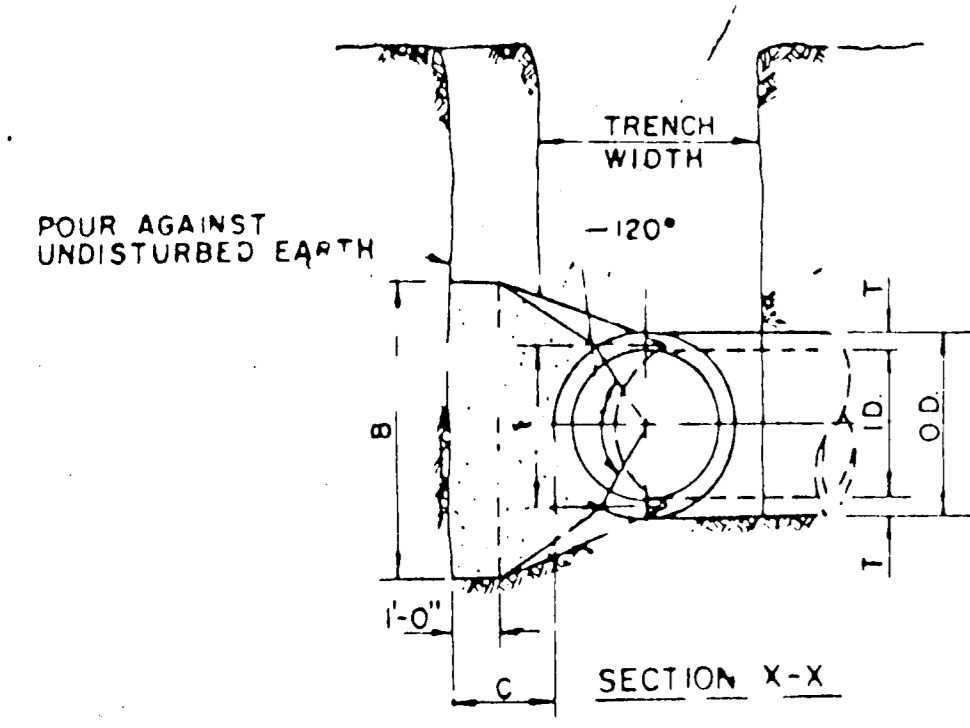
- DOUBLE STRAP BRONZE SADDLE W/CCW THREADS. MUELLER
- CORPORATION STOP W/CCW THREADS. MUELLER H-15008 COMPRESSION OR H-15000 FLARED.
- 1" TYPE "X" SOFT COPPER W/NO SPLICES
- ANGLE STOP W/LOCK WING. MUELLER H-14256 COMPRESSION OR H-14255 FLARED.
- WATER METER BOX (RECTANGULAR SHAPE ONLY) CONCRETE OR METAL SHELL CONSTRUCTION
- WATER MAIN PVC AWWA C900 SDR 14/18 INTEGRAL WALL BELL

TOWN OF ADDISON, TEXAS			
DEPARTMENT OF ENGINEERING			
STANDARD CONSTRUCTION DETAILS			
WATER			
FIRE HYDRANTS, PULL BOXES AND VALVES			
Designed -	Drawn -	Date -	Job No. -
Approved -	Checked -	Scale -	Sheet 22





I.D. (IN.)	T (IN.)	C		E (FT.)
		11.25"	22.50"	
4.6, 8	0.4	1.5	1.5	0.8
10.12	0.5	1.5	1.5	1.2
16.18	0.6	1.5	1.5	1.6
20	0.7	1.5	1.5	1.8
24	0.9	1.5	1.5	2.1
30	2.9	1.5	1.9	2.6
36	4.5	1.5	2.3	3.5
42	5.0	1.8	2.6	3.8
48	5.5	2.0	3.0	4.3
54	6.0	2.3	3.4	4.8
60	6.5	2.5	3.8	5.3
66	6.8	2.8	4.1	5.7
72	7.5	3.0	4.5	6.3
78	7.5	3.3	4.9	6.7
84	8.0	3.5	5.3	7.2
90	8.5	3.8	5.6	7.7
96	9.0	4.0	6.0	8.2



I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK		
			A (FT.)	B (FT.)	VOL. (CY.)	A (FT.)	B (FT.)	VOL. (CY.)				A (FT.)	B (FT.)	VOL. (CY.)	A (FT.)	B (FT.)	VOL. (CY.)
4.6, 8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4.6, 8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1
10.12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10.12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1
16.18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	16.18	1.6	9.9	3.0	3.5	0.4	2.0	2.5	0.3
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.3	20	1.8	12.3	3.5	3.5	0.7	2.0	3.5	0.4
24	1.1	8.9	3.0	3.0	0.5	1.5	3.0	0.3	24	2.2	17.7	4.0	4.5	1.0	3.0	3.0	0.5
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	30	2.7	20.7	5.0	4.5	1.5	3.0	4.0	0.8
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5	36	3.3	29.8	5.5	5.5	2.3	4.0	4.0	1.3
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8	42	3.8	40.5	7.0	6.0	3.9	4.5	5.0	2.1
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1	48	4.4	52.9	8.0	7.0	5.7	4.8	6.0	2.8
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	1.4	54	4.9	67.0	9.0	8.0	8.0	6.0	6.0	4.1
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	1.8	60	5.5	82.7	9.5	9.0	10.6	6.0	7.0	5.3
66	3.0	50.3	6.0	8.0	5.1	3.5	8.0	2.7	66	6.0	100.1	10.5	10.0	14.1	6.5	8.0	7.2
72	3.3	59.9	7.5	8.0	6.3	4.0	8.0	3.7	72	6.4	119.1	11.0	11.0	17.6	7.5	8.0	9.1
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	3.9	78	7.1	139.8	12.0	12.0	22.5	8.0	9.0	11.7
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	5.3	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0	14.8
90	4.1	93.5	9.5	10.0	12.2	5.0	10.0	6.3	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0	17.7
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	7.4	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0	21.8

HORIZONTAL BEND THRUST BLOCK

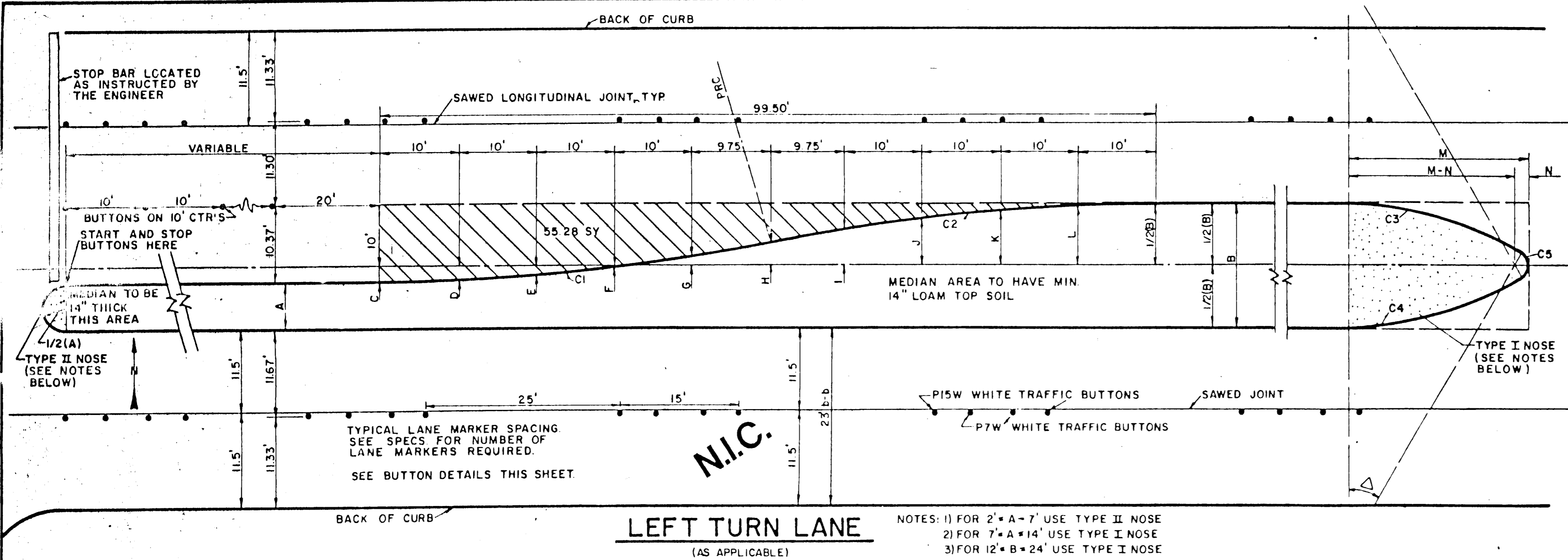
I.D. (IN.)	T (IN.)	A = 30°			A = 45°			I.D. (IN.)	T (IN.)	A = 60°			A = 90°				
		EARTH	ROCK	ROCK	EARTH	ROCK	ROCK			EARTH	ROCK	ROCK	EARTH	ROCK	ROCK		
4.6, 8	1.0	2.6	2.0	1.5	0.2	1.0	1.8	0.1	4.6, 8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1
10.12	1.5	5.9	2.5	2.5	0.3	2.0	1.8	0.2	10.12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3
16.18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.8	16.18	3.2	19.5	4.5	4.5	1.2	3.0	3.5	0.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1
30	3.6	27.5	5.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.8	8.5	5.0	3.2	5.0	4.0	1.6
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.4	36	6.5	58.5	10.0	6.0	3.3	6.5	4.5	2.4
42	5.1	53.8	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	79.6	11.5	7.0	4.1	8.0	5.0	4.2
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3	54	9.7	131.8	15.0	9.0	17.1	10.5	6.5	8.9
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.4	66	11.8	194.5	18.0	11.0	30.1	12.0	8.5	16.2
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.8	14.0	8.5	20.7
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.4	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19.5	84	15.0	318.4	23.0	14.0	61.2	15.5	10.5	32.6
90	10.9	247.1	16.5	15.0	45.0	11.5	11.0	23.9	90	16.1	365.5	24.5	15.0	74.5	17.5	10.5	39.6
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9	96	17.1	415.6	26.0	16.0	89.5	18.5	11.5	48.5

I.D. (IN.)	G (FT.)	THRUST (TONS)	A = 11.25°			A = 22.50°			I.D. (IN.)	G (FT.)	THRUST (TONS)	A = 37.50°			A = 60°		
			EARTH	ROCK	ROCK	EARTH	ROCK	ROCK				EARTH	ROCK	ROCK	EARTH	ROCK	ROCK
4.6, 8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4.6, 8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1
10.12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10.12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1
16.18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	16.18	1.6	9.9	3.0	3.5	0.4	2.0	2.5	0.3
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.3	20	1.8	12.3	3.5	3.5	0.7	2.0	3.5	0.4
24	1.1	8.9	3.0	3.0	0.5	1.5	3.0	0.3	24	2.2	17.7	4.0	4.5	1.0	3.0	3.0	0.5
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	30	2.7	20.7	5.0	4.5	1.5	3.0	4.0	0.8
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5	36	3.3	29.8	5.5	5.5	2.3	4.0	4.0	1.3
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8	42	3.8	40.5	7.0	6.0	3.9	4.5	5.0	2.1
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1	48	4.4	52.9	8.0	7.0	5.7	4.8	6.0	2.8
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	1.4	54	4.9	67.0	9.0	8.0	8.0	6.0	6.0	4.1
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	1.8	60	5.5	82.7	9.5	9.0	10.6	6.0	7.0	5.3
66	3.0	50.3	6.0	8.0	5.1	3.5	8.0	2.7	66	6.0	100.1	10.5	10.0	14.1	6.5	8.0	7.2
72	3.3	59.9	7.5	8.0	6.3	4.0	8.0	3.7	72	6.4	119.1	11.0	11.0	17.6	7.5	8.0	9.1
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	3.9	78	7.1	139.8	12.0	12.0	22.5	8.0	9.0	11.7
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	5.3	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0	14.8
90	4.1	93.5	9.5	10.0	12.2	5.0	10.0	6.3	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0	17.7
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	7.4	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0	21.8

HORIZONTAL BEND THRUST BLOCK

I.D. (IN.)	T (IN.)	A = 30°			A = 45°			I.D. (IN.)	T (IN.)	A = 60°			A = 90°				
		EARTH	ROCK	ROCK	EARTH	ROCK	ROCK			EARTH	ROCK	ROCK	EARTH	ROCK	ROCK		
4.6, 8	1.0	2.6	2.0	1.5	0.2	1.0	1.8	0.1	4.6, 8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1
10.12	1.5	5.9	2.5	2.5	0.3	2.0	1.8	0.2	10.12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3
16.18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.8	16.18	3.2	19.5	4.5	4.5	1.2	3.0	3.5	0.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1
30	3.6	27.5	5.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.8	8.5	5.0	3.2	5.0	4.0	1.6
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.4	36	6.5	58.5	10.0	6.0	3.3	6.5	4.5	2.4
42	5.1	53.8	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	79.6	11.5	7.0	4.1	8.0	5.0	4.2
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3	54	9.7	131.8	15.0	9.0	17.1	10.5	6.5	8.9
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.4	66	11.8	194.5	18.0	11.0	30.1	12.0	8.5	16.2
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.8	14.0	8.5	20.7
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.4	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19									





### MEDIAN DIMENSION CHART

B	C	D	E	F	G	H	I	J	K	L	M	N
12	4.00'S	3.80'S	3.20'S	2.19'S	0.78'S	1.00'N	2.78'N	4.19'N	5.20'N	5.80'N	22.56'	1.00'
13	3.50'S	3.30'S	2.70'S	1.69'S	0.28'S	1.50'N	3.28'N	4.69'N	5.70'N	6.30'N	23.56'	1.00'
14	3.00'S	2.80'S	2.20'S	1.19'S	0.22'N	2.00'N	3.78'N	5.19'N	6.20'N	6.80'N	22.68'	2.50'
15	2.50'S	2.30'S	1.70'S	0.69'S	0.72'N	2.50'N	4.28'N	5.69'N	6.70'N	7.30'N	23.71'	2.50'
16	2.00'S	1.80'S	1.20'S	0.19'S	1.22'N	3.00'N	4.78'N	6.19'N	7.20'N	7.80'N	23.46'	3.50'
17	1.50'S	1.30'S	0.70'S	0.31'N	1.72'N	3.50'N	5.28'N	6.69'N	7.70'N	8.30'N	24.48'	3.50'
18	1.00'S	0.80'S	0.20'S	0.81'N	2.22'N	4.00'N	5.78'N	7.19'N	8.20'N	8.80'N	25.44'	3.50'
19	0.50'S	0.30'S	0.30'N	1.31'N	2.72'N	4.50'N	6.28'N	7.69'N	8.70'N	9.30'N	26.34'	3.50'
20	0.00'	0.20'N	0.80'N	1.81'N	3.22'N	5.00'N	6.78'N	8.19'N	9.20'N	9.80'N	26.72'	4.00'
21	0.50'N	0.70'N	1.30'N	2.31'N	3.72'N	5.50'N	7.28'N	8.69'N	9.70'N	10.30'N	27.57'	4.00'
22	1.00'N	1.20'N	1.80'N	2.81'N	4.22'N	6.00'N	7.78'N	9.19'N	10.20'N	10.80'N	28.39'	4.00'
23	1.50'N	1.70'N	2.30'N	3.31'N	4.72'N	6.50'N	8.28'N	9.69'N	10.70'N	11.30'N	29.17'	4.00'
24	2.00'N	2.30'N	2.80'N	3.81'N	5.22'N	7.00'N	8.78'N	10.19'N	11.20'N	11.80'N	29.92'	4.00'

N = NORTH OF CENTERLINE  
S = SOUTH OF CENTERLINE

### CURVE DATA C3 & C4 FOR 7' A=14'

A	R	T	L	M	N
7	18°22'52"	50'	8.09'	16.04'	16.45'
8	20°09'11"		8.89'	17.59'	17.88'
9	21°47'12"		9.62'	19.01'	19.19'
10	23°18'41"		10.31'	20.34'	20.59'
11	24°44'50"		10.97'	21.60'	21.51'
12	26°06'32"		11.59'	22.78'	22.56'
13	27°24'27"		12.19'	23.92'	23.56'
14	28°08'28"		11.15'	21.94'	22.68'

### CURVE DATA C1 & C2

Δ = 11°28'40"  
R = 250'  
T = 25.13'  
L = 50.08'

### CURVE DATA C3 & C4 FOR 12' x B=24'

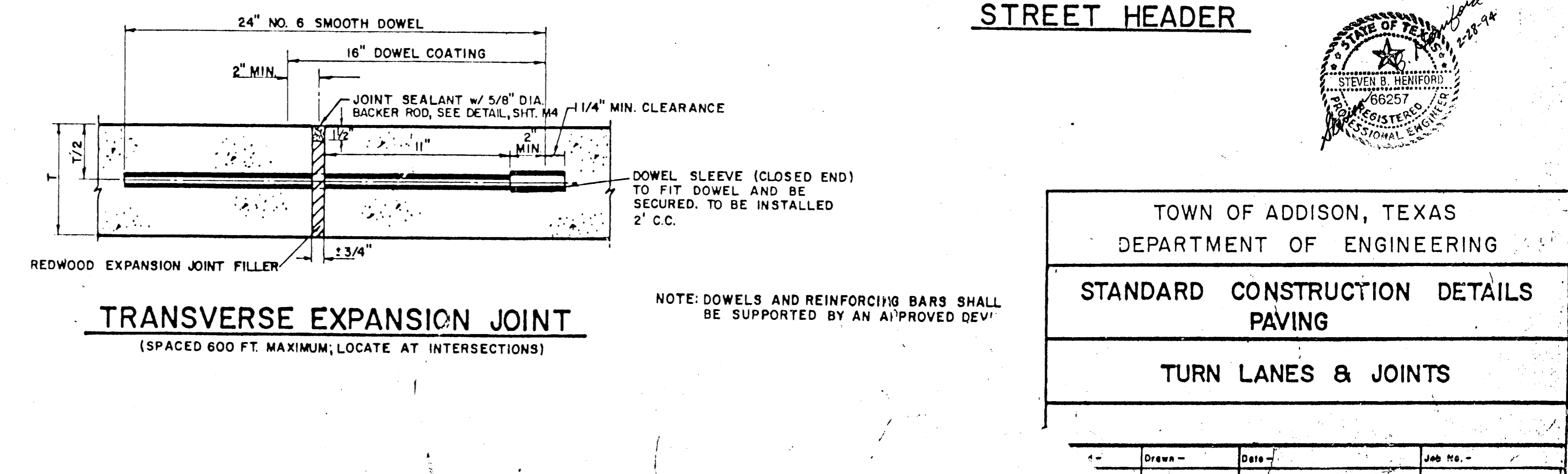
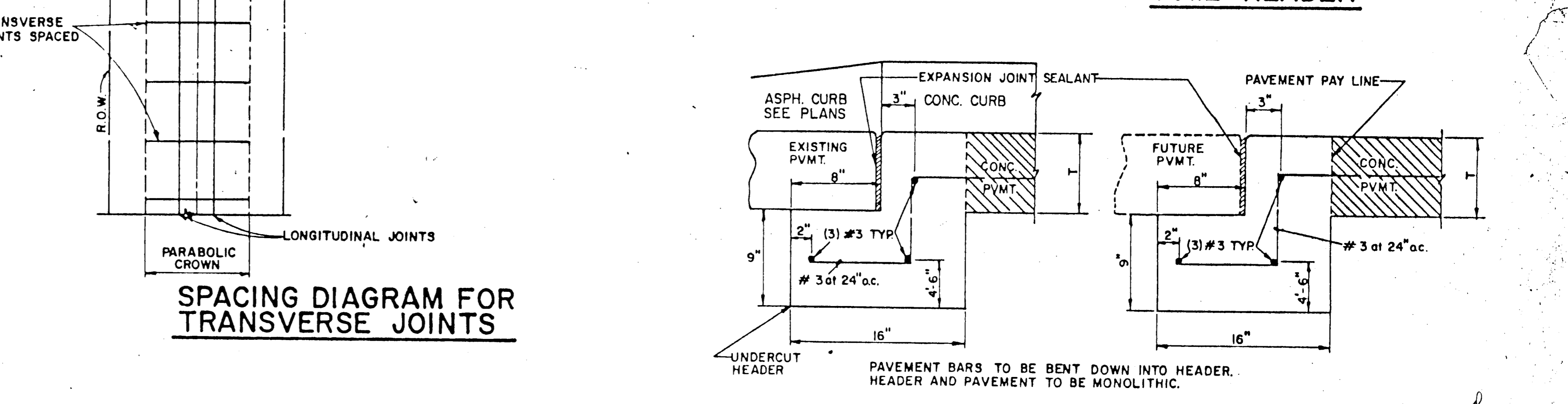
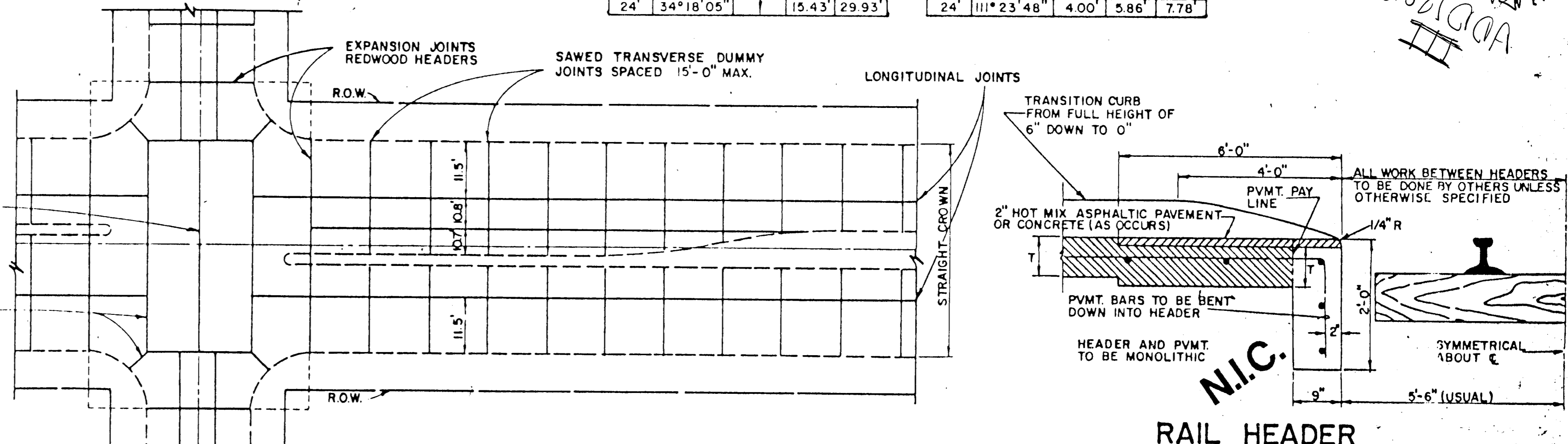
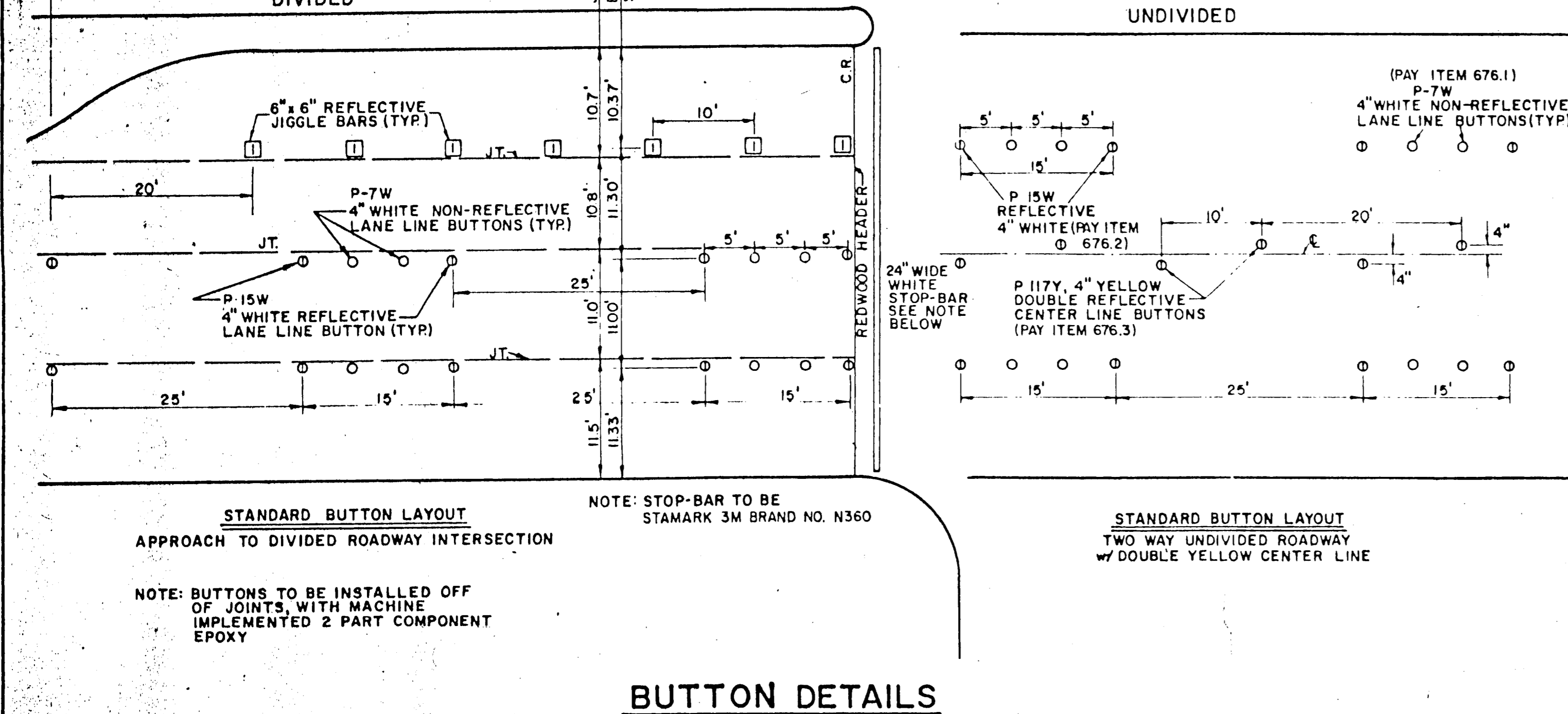
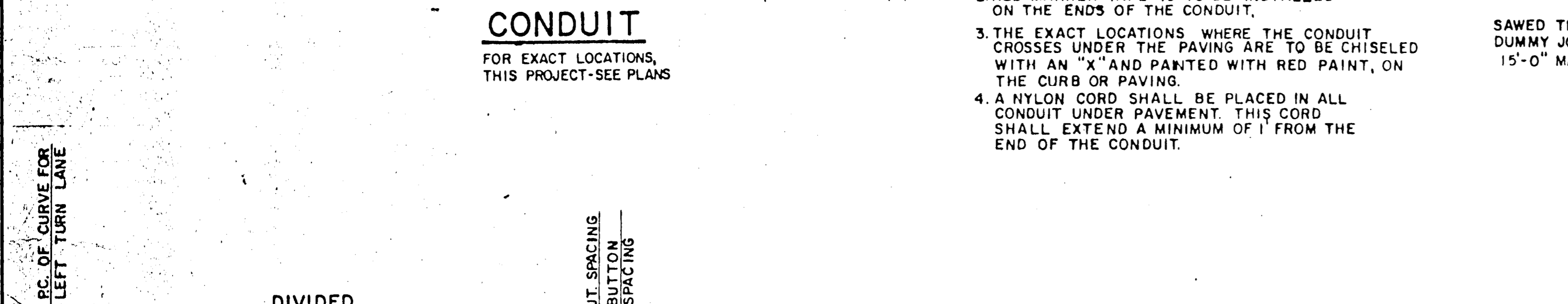
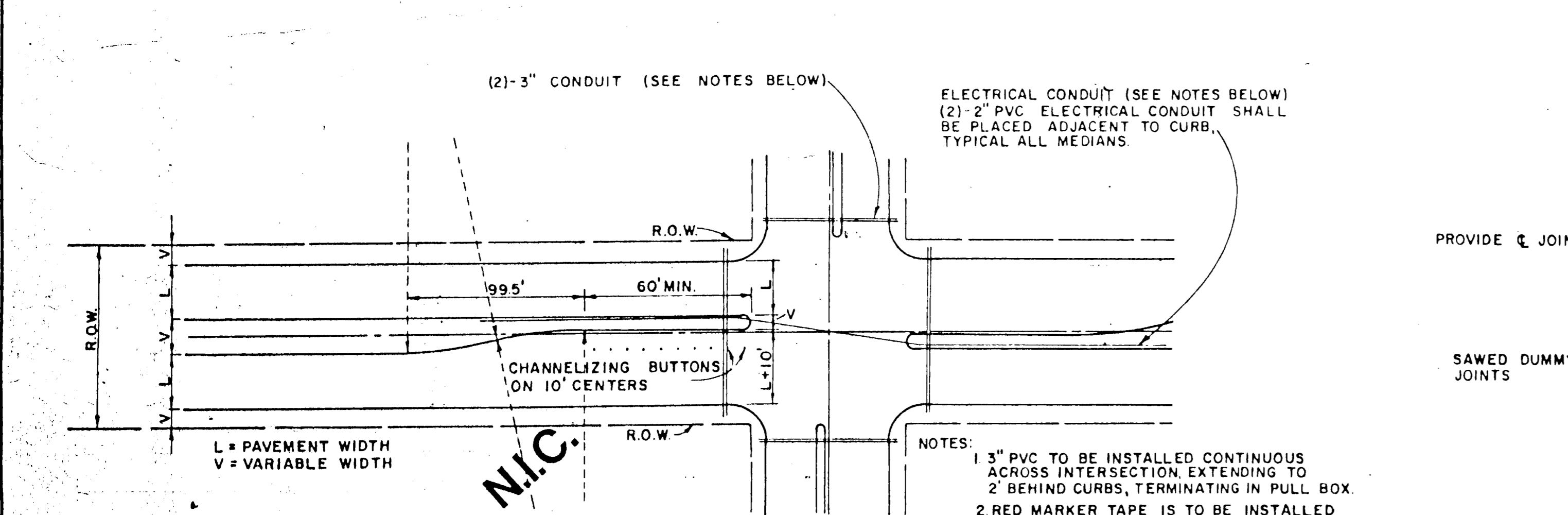
B	Δ	R	T	L
12	26°06'32"	50.00'	11.59'	22.78'
13	27°24'27"		12.19'	23.92'
14	28°08'28"		11.15'	21.94'
15	26°31'32"		11.79'	23.15'
16	25°24'53"		11.27'	22.18'
17	26°48'51"		11.92'	23.40'
18	28°08'58"		12.54'	24.57'
19	29°25'43"		13.13'	25.68'
20	29°35'30"		13.21'	25.82'
21	30°49'46"		13.79'	26.90'
22	32°01'26"		14.35'	27.95'
23	33°10'48"		14.90'	28.96'
24	34°18'05"		15.43'	29.93'

### CURVE DATA C5 FOR 12' x B=24'

B	Δ	R	T	L
12	127°47'32"	1.00'	2.04'	2.23'
13	125°12'46"	1.00'	1.93'	2.19'
14	129°43'08"	2.50'	5.33'	5.66'
15	126°57'31"	2.50'	5.01'	5.54'
16	129°09'33"	3.50'	7.36'	7.89'
17	126°21'44"	3.50'	6.92'	7.72'
18	123°41'38"	3.50'	6.54'	7.56'
19	120°52'03"	3.50'	6.17'	7.38'
20	120°48'56"	4.00'	7.04'	8.43'
21	118°21'08"	4.00'	6.70'	8.26'
22	115°57'07"	4.00'	6.40'	8.10'
23	113°38'22"	4.00'	6.12'	7.93'
24	111°23'48"	4.00'	5.86'	7.78'

### CURVE DATA C5 FOR 7' x A=14'

A	R	T	L
7	143°14'15"	1.00'	3.01'
8	139°41'38"	1.00'	2.72'
9	136°25'35"	1.00'	2.50'
10	133°22'38"	1.00'	2.32'
11	130°30'20"	1.00'	2.17'
12	127°47'32"	1.00'	2.04'
13	125°12'46"	1.00'	1.93'
14	129°43'08"	2.50'	5.33'



TOWN OF ADDISON, TEXAS  
DEPARTMENT OF ENGINEERING

STANDARD CONSTRUCTION DETAILS  
PAVING

TURN LANES & JOINTS

Drawn - Date - Job No. -  
Checked - Scale - Sheet 24

QUARED  
ADDITIONAL  
III

