

OWNER / DEVELOPER  
 ERPENBECK COMPANY  
 927 DUDLEY ROAD  
 EDGEWOOD, KENTUCKY 41017

# WETHERINGTON

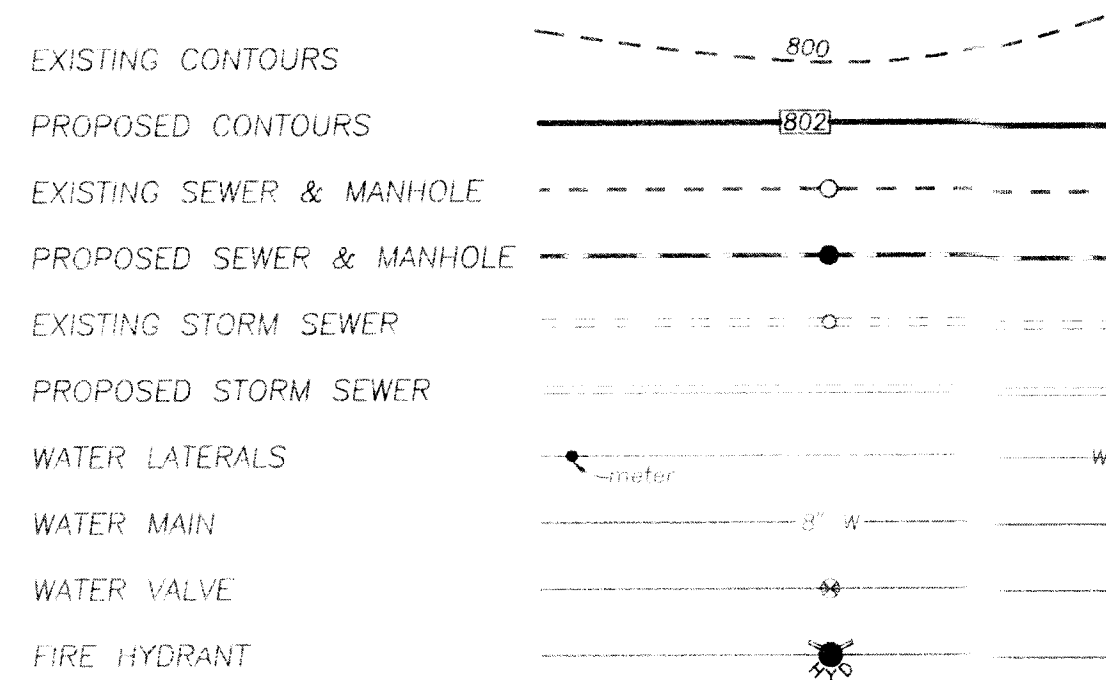
## SECTION 14

### SECTION 18, TOWN 3, RANGE 2

### UNION TOWNSHIP

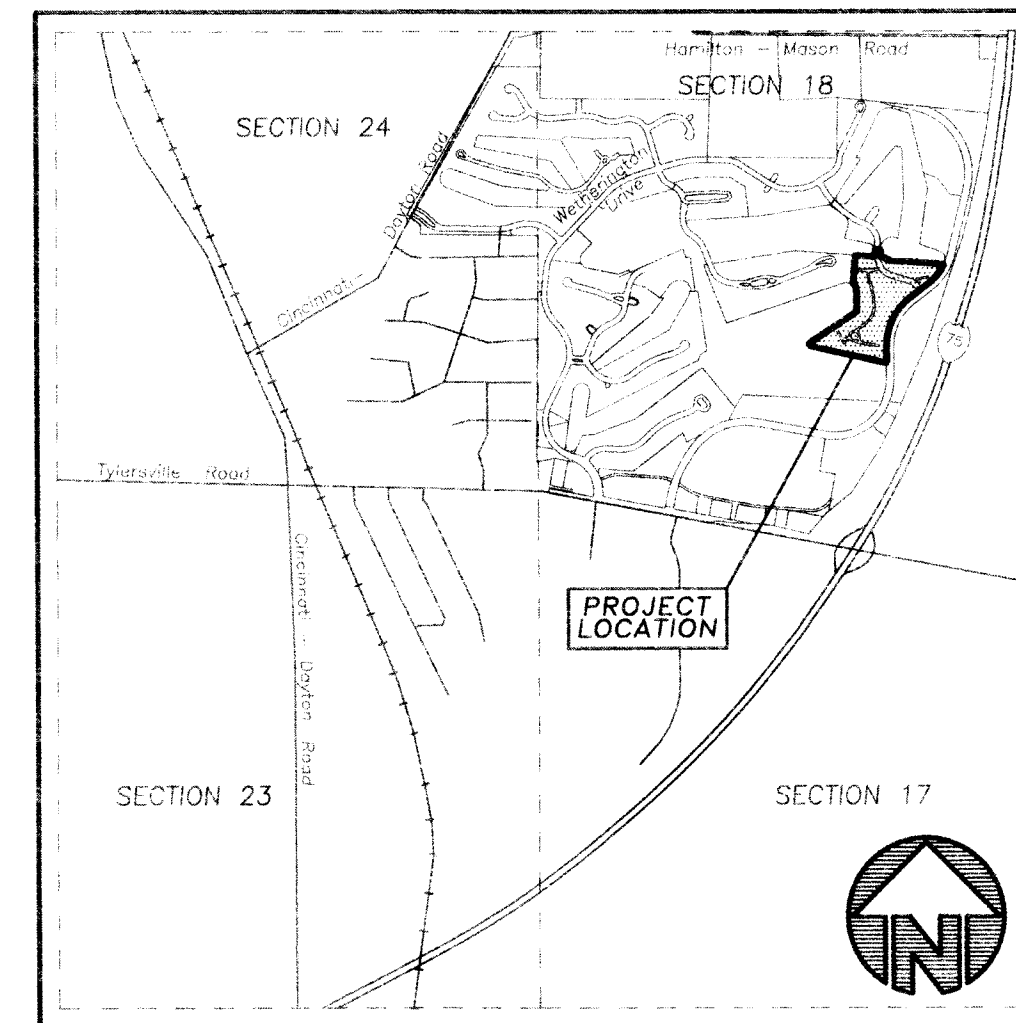
## BUTLER COUNTY, OHIO

**LEGEND**



**INDEX TO SHEETS**

1. TITLE SHEET
2. FINAL DEVELOPMENT PLAN
3. UTILITY PLAN
- 4-6 MISCELLANEOUS DETAIL AND PROFILE SHEETS
7. INTERSECTION DETAIL SHEET
8. GRADING, SEDIMENTATION AND EROSION CONTROL DETAIL SHEET
9. PRESERVATION CONTROL PLAN
10. SEDIMENTATION AND EROSION CONTROL DETAIL SHEET
- 11-12 STANDARD DETAIL



**VICINITY MAP**

Not to Scale

**BENCH MARK**

SPIKE IN TREE 60' LEFT OF CENTERLINE OF TYLERS PLACE BOULEVARD STA. 30+50. ELEV.=874.05

**SEDIMENTATION CONTROL NOTES**

The project has been designed to control erosion and prevent damage to other property. All stripping, earthwork, and grading shall be performed to minimize erosion. Natural vegetation shall be retained wherever possible. The proposed plan will allow almost all eroded materials to be retained on site.

All areas disturbed by the construction of the roadways, ditches and sedimentation basins shall be seeded. Payment will be the number of square yards disturbed as per the grading plan.

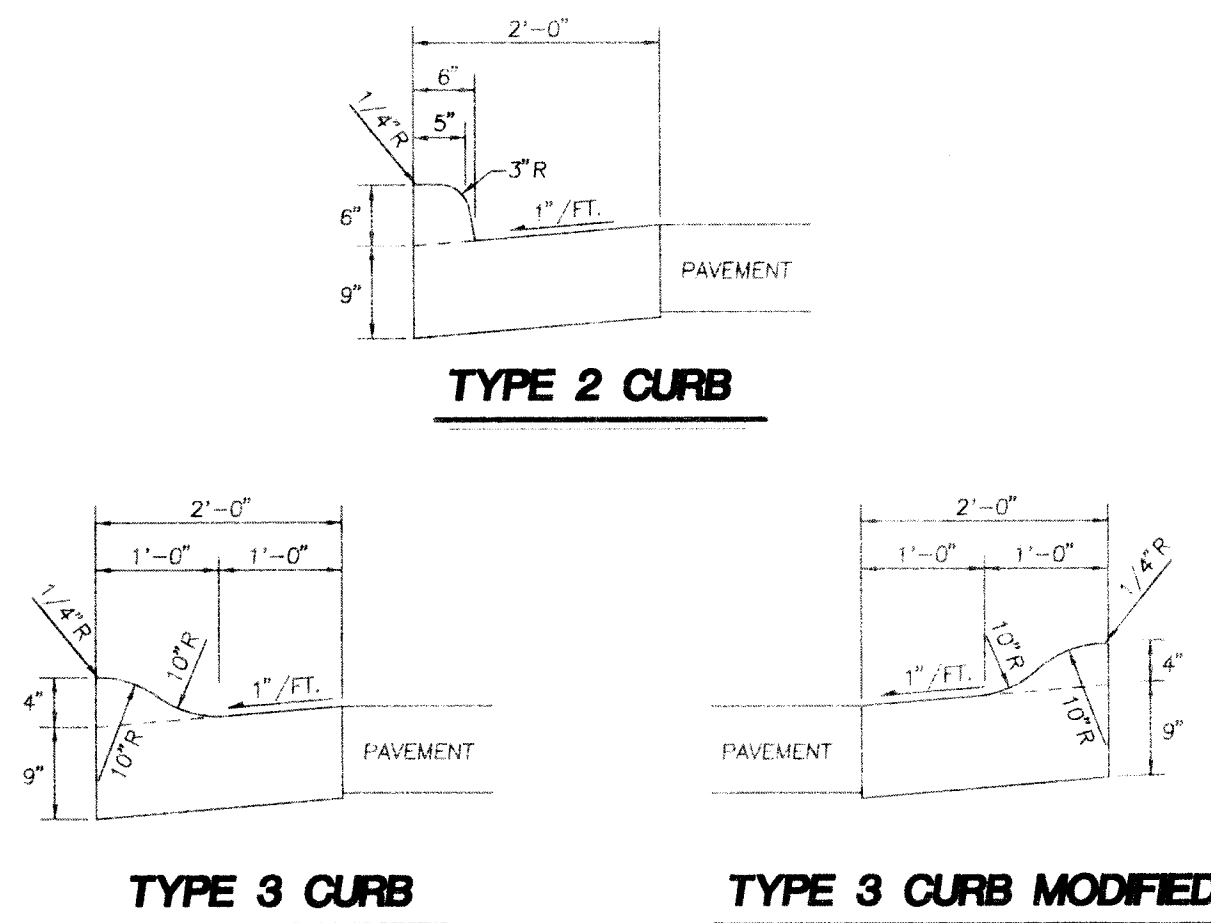
**METHOD**

Straw bales are to be utilized to create temporary dams to catch the silt. These are to be installed at points where the flow is concentrated.

Surface water is to be directed into these temporary silt basins by means of temporary swales and ditches.

As the installation of the storm sewer progresses, straw bales are to be placed at the inlet and outlet of storm sewers to control the silt.

Payment for the above work shall be included in the items Excavation, Embankment.



**CONSTRUCTION APPROVAL**

Date \_\_\_\_\_

Butler Co. Water & Sewer Dept.  
 Butler Co. Engineer's Office

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These plans are not for construction until ALL approval dates have been filled in.

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

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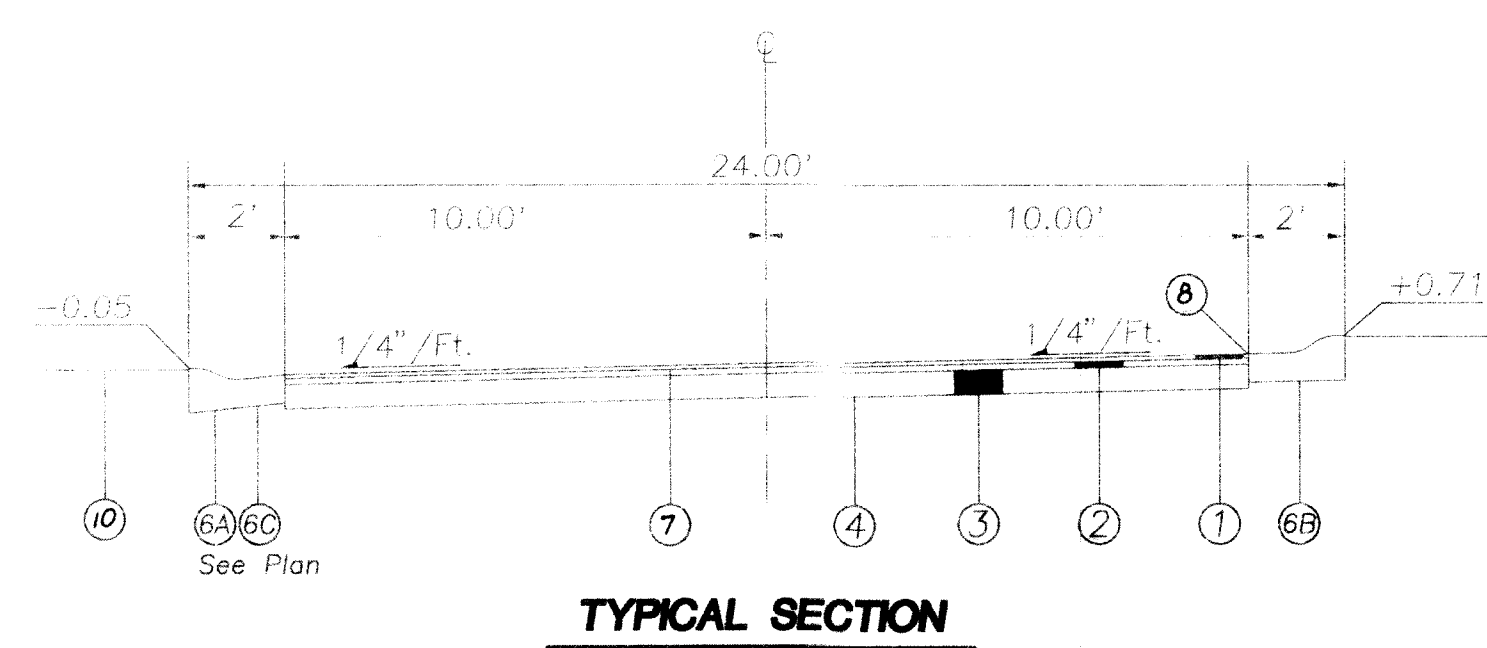
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**LEGEND**

- ① 1" surface course of item 404 asphaltic concrete (95-100 of AC-20).
- ② 1-1/2" leveling course of item 402 asphaltic concrete (85-100 of AC-20).
- ③ 6" base course of item 301 bituminous aggregate base.
- ④ Compacted subgrade, item 203.13.
- ⑤ Roll type curb and gutter, item 609 (Butler County Standard C-1).
- ⑥ O.D.O.T. curb and gutter, Type 3.
- ⑦ O.D.O.T. curb and gutter, Type 3 Modified.
- ⑧ O.D.O.T. curb and gutter, Type 2.
- ⑨ Tack coat, item 407 - to be applied at rate of 0.05 gallon per yard.
- ⑩ Tack coat shall be applied to front face of curb prior to installation of 301 bituminous aggregate base. Also to be applied to curb joint after its installation of 402 leveling course. (typical-All Curb)
- ⑪ Item 659 - Seeding and Mulching



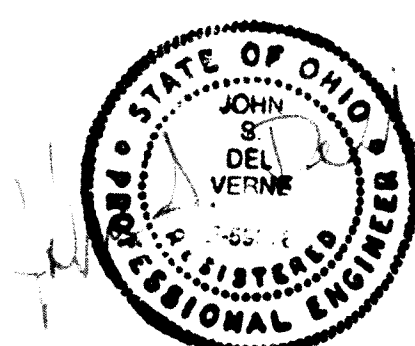
**TYPICAL SECTION**

**UNDERGROUND UTILITIES 2 WORKING DAYS BEFORE YOU DIG**  
 Call 1-800-362-2764  
 OHIO UTILITY PROTECTION SERVICE  
 NON MEMBERS MUST BE CALLED DIRECTLY

(901AK11S.DWG)

**GENERAL NOTES**

1. Item numbers refer to the Ohio Department of Transportation construction and material specifications, and all construction work shall be done according to said specifications or Butler County requirements and standards for subdivision. When in conflict, the County requirements shall prevail.
2. Items that pertain to underground utilities such as watermain pipe, sanitary sewer pipe, water valves and manhole frames and covers, etc., will remain under specifications of the utility serving the area. Storm sewers shall be designed and constructed in accordance with the requirements of the Butler County Engineer.
3. All trenches within the right-of-way and 10' utility easement shall be compacted and backfilled in accordance with item 203 and 603 in the state specifications.
4. Surface course (item 404) and tack coat (item 407) are to be applied nine (9) months after the leveling course.
5. Developer shall be responsible for the installation of conduits for the full width of the Private Access Easement at a depth of 36" for use by the electric, telephones and cable TV services. The location of these lines shall be coordinated with utility companies by the developer.
6. Water main materials, valves, fire-hydrants, fittings and appurtenances to be installed to be as per Butler County Specifications, using Class 53 Ductile Iron as per AWWA C-151 with 4' minimum cover.
7. Sanitary sewer materials and installation to be as per Butler County specifications, using ① ABS 6" pipe, as per ASTM D-2751 with joint specification as per ASTM D-3212, using ② ABS Composite 8" pipe, as per ASTM D-2680 with joint specification as per ASTM D-2235. (Note: depth limit 25'). ③ ASTM D-3034 with joint specification as per ASTM D-2855, D ASTM C-76 Wall B or C with joint specification as per ASTM C-443, E ASTM C-700 with joint specification as per ASTM C-425.
8. Minimum 10' horizontal, 18" vertical separation between Water Main and Sanitary and/or Storm Sewer.
9. Storm sewer pipe to be 16 gauge Aluminized Corrugated Metal pipe Helical Design unpaved or ASTM C-14, extra strength concrete unless otherwise noted on plans. Bedding to be First Class. All sewers to be installed as per Butler County specifications.
10. Roof drains, foundation drains, and other clean water connections to the sanitary sewer system are prohibited.
11. All catch basins with a depth greater than 4.5' shall be provided with steps. Steps shall meet the requirements of 604 and shall conform to the details as shown on Butler County Standard Drawing MH-1A.
12. All sanitary sewer laterals shall be at least 4 feet below a proposed basement floor elevation at the point of connection to the sewer main and shall not exceed a depth of 12 feet below finish grade at the end of the lateral unless specifically authorized by the County.
13. Butler County Water and Sewer Department does not accept any responsibility for the relocation, repair, or replacement of any other utility installed within five (5) feet of the centerline of any sanitary sewer main or water main.
14. All water main valves to have a minimum depth of 2.5' from proposed grade to the top of the Valve Operating Nut.



JOHN S. DELVERNE, P.E. #59378

**PRINTED**  
 001 00005

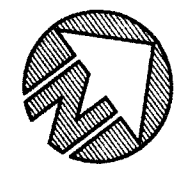
JOB LOG		REVISIONS	
DATE	COMMENT	No.	DATE REVISION
		1.	4-3-96 Rev. as per Internal
		2.	4-12-96 Rev. as per Internal and County
		3.	4-19-96 Rev. as per Twp. (Entrance Gate)
		4.	6-18-96 Rev. as per G.T.
		5.	6-25-96 Rev. as per Internal
		6.	7-3-96 Per Butler Co. W & S
		7.	7-16-96 Rev. as per W & S
		8.	7-26-96 Per Butler Co. W & S
		9.	8-1-96 Per Developer
		10.	8-5-96 Per Internal
		11.	8-15-96 Per Developer
		12.	8-28-96 Per Internal
		13.	9-19-96 Rev Water Services
		14.	10-17-96 Per Developer

**bayer-becker engineers**  
 engineers - planners - surveyors  
 865 Illa avenue milford, ohio 45150  
 513-248-8311

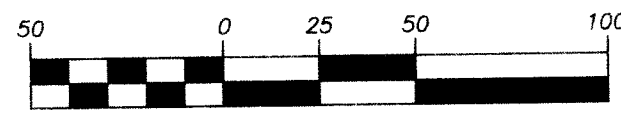
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**WETHERINGTON SECTION 14**  
 SECTION 18 TOWN 3 RANGE 2  
 UNION TOWNSHIP  
 BUTLER COUNTY, OHIO  
 TITLE SHEET

date: 3/12/96  
 scale: N/A  
 dwg by: J.H.C.  
 sheet: 1 OF 12  
 job #: 96K001



GRAPHIC SCALE



( IN FEET )  
1 inch = 50 ft.

Point	Northing	Easting	Elevation	Description
200	7143.97675	9168.09630		NEAT
201	7155.84154	9238.88418		NEAT
202	7151.04954	9115.79225		NEAT
203	7206.50506	8854.03415		NEAT
204	7259.98047	8669.48082		NEAT
205	7263.91107	8554.66288		NEAT
206	7197.69314	8590.66504		NEAT
207	7034.37840	8641.35324		NEAT
208	6975.13396	8652.82843		NEAT
209	6804.21400	8658.05977		NEAT
210	6994.14681	8721.59235		NEAT
211	6813.36213	8730.18273		NEAT
212	6779.62695	8730.72808		NEAT
213	6679.38269	8674.60633		NEAT
214	6735.60083	8620.91245		NEAT
215	6647.24851	8547.47928		NEAT
216	6637.10690	8484.85325		NEAT
217	6514.31853	8351.01719		NEAT
218	6532.35363	8262.26835		NEAT
219	6454.42618	8146.67114		NEAT
220	6463.56128	8187.35232		NEAT
221	6446.10112	8154.19876		NEAT
222	6443.41548	8183.34835		NEAT
223	6413.87242	8151.77899		NEAT
224	6482.30434	8153.27865		NEAT
225	6514.14998	8185.27015		NEAT
226	7129.39887	8189.61540		NEAT
227	7057.56212	8075.31715		NEAT
229	7145.11143	8672.24082		NEAT
230	7204.61655	8770.51443		NEAT

Point	Northing	Easting	Elevation	Description
300	6234.67738	8806.51782		PROP
301	6441.99973	7998.54660		PROP
302	6468.47300	7979.88200		PROP
303	6790.34343	8504.66807		PROP
304	7009.56291	8510.95008		PROP
305	7013.00022	8390.99984		can
306	7085.65500	8478.18403		PROP
307	7391.27523	8510.02046		PROP
308	7368.39816	8722.60976		PROP
309	7444.01013	8722.60976		PROP
310	7445.17092	8782.60976		PROP
311	7361.93890	8782.60976		PROP
312	7357.58977	8823.20711		PROP
313	7447.63331	8908.88790		can
314	7323.18457	8898.05575		PROP
315	7269.63655	9459.22202		PROP
316	7063.61504	9283.15896		PROP
317	6919.39804	9080.97419		PROP
318	6420.69978	8813.01398		PROP

Point	Northing	Easting	Elevation	Description
400	6582.19413	8531.62036		CC
401	6543.74182	8505.66094		CC
402	6675.09894	8425.84041		CPI
403	6533.09836	8456.80904		CC
404	6543.74182	8505.66094		CC
405	6477.39658	8468.95390		CPI
406	6496.69423	8522.58852		CC
407	6543.74182	8505.66094		CC
408	6526.29936	8604.87108		CPI
409	6582.19413	8531.62036		CC
410	6506.39465	8426.11422		CC
411	6330.88706	8468.72729		RAD
412	6511.76242	8383.16871		PT
413	6465.72206	8409.69187		CC
414	6497.87820	8364.22914		PT
415	6496.69423	8522.58852		CC
416	6463.30786	8566.15298		CC
417	6770.07442	8654.27123		CPI
418	6477.61580	8584.02534		CC
419	6474.98957	8602.44129		CC
420	7183.66691	8642.63442		CC
421	7176.82923	8642.51733		CC
422	7149.85295	8641.47685		CC
423	7117.53978	8651.50593		CC
424	7094.91894	8667.83793		CC
425	6916.70781	8190.30944		CC
426	7004.74851	8686.51310		CC
427	6981.62615	8681.67811		CC
428	6833.65252	8695.11926		CC
429	6826.11702	8545.30866		CC
430	6775.22740	8696.05806		CC
431	6730.23875	8660.66618		CC
432	7236.73054	8746.61048		CC
433	7324.98826	8696.58374		CC
434	7224.12987	8722.95708		CC
435	7225.04680	8696.17240		CC
436	7481.86953	8752.60976		CC
437	7444.59053	8752.60976		CC
438	7346.47069	8752.60976		CC
439	7346.47069	8752.60976		CC
440	7203.60987	8752.60976		CC
441	7157.27992	8887.74950		CC
442	7089.54519	9085.32489		CC
443	6900.35439	9020.46463		CC
444	7068.73533	9146.02506		CC
445	7016.49499	9183.28773		CC
446	6967.94574	9217.91758		CC
447	7085.67113	9133.02740		CC
448	7097.44713	9154.66341		CC
449	7073.80895	9189.37992		CC
450	7115.52201	9184.47885		CC
451	7118.36548	9208.67964		CC
452	7113.28598	9165.44794		CC
453	6909.18067	8840.41381		CC
454	6419.30380	8802.98958		CC
455	6398.36411	9452.62408		CC
456	6715.01081	8865.31590		CC
457	6886.83341	9104.20230		CC
458	7031.05042	9306.38708		CC
459	7519.51973	8957.96530		CC
460	7154.25720	9479.11660		CC
461	7358.65811	9535.99500		CC
468	6593.73097	8506.69299		CC
469	6519.80716	8411.76172		CC
471	6543.74182	8505.66094		CC
472	6675.09894	8425.84041		CC
474	6543.74182	8505.66094		CC
478	6526.29936	8604.87108		CC
480	6491.97743	8398.75755		BEND
481	6536.27601	8310.98434		END

Δ = 45°02'40"  
R = 120.00'  
L = 94.34'  
Ch = N 20°52'51" W  
91.93'

Δ = 38°28'19"  
R = 125.00'  
L = 83.93'  
Ch = S 65°19'57" E  
82.36'

Δ = 52°30'00"  
R = 640.00'  
L = 588.43'  
Ch = S 28°15'00" W  
566.13'

Δ = 28°01'17"  
R = 560.00'  
L = 273.88'  
Ch = S 40°29'21" W  
271.16'

CURVE #1	CURVE #4	CURVE #7	CURVE #10
Δ = 39°34'36"	Δ = 49°02'53"	Δ = 28°02'43"	Δ = 142°14'48"
R = 200.00'	R = 42.00'	R = 100.00'	R = 500.00'
T = 64.17'	T = 19.18'	T = 49.95'	T = 63.00'
L = 124.19'	L = 35.98'	L = 97.90'	L = 125.34'
Ch = S 53°17'18" E 122.20'	Ch = N 88°46'29" E 34.87'	Ch = N 14°01'21" W 96.92'	Ch = S 10°03'40" E 125.02'

CURVE #2	CURVE #5	CURVE #8	CURVE #11	CURVE #13
Δ = 15°19'39"	Δ = 71°04'36"	Δ = 30°00'21"	Δ = 42°38'39"	Δ = 120°13'27"
R = 200.00'	R = 100.00'	R = 150.00'	R = 200.00'	R = 300.00'
T = 26.91'	T = 142.86'	T = 26.80'	T = 58.50'	T = 22.83'
L = 53.50'	L = 248.10'	L = 52.37'	L = 111.56'	L = 45.47'
Ch = N 63°24'47" W 53.34'	Ch = S 39°30'18" E 232.50'	Ch = N 18°23'33" E 51.77'	Ch = N 78°29'06" W 109.00'	Ch = N 71°11'07" E 45.37'

CURVE #3	CURVE #6	CURVE #9	CURVE #12	CURVE #14
Δ = 20°14'58"	Δ = 43°01'54"	Δ = 19°12'13"	Δ = 07°07'57"	Δ = 21°50'01"
R = 200.00'	R = 200.00'	R = 200.00'	R = 300.00'	R = 60.00'
T = 35.71'	T = 78.88'	T = 33.83'	T = 18.70'	T = 11.98'
L = 70.68'	L = 150.21'	L = 67.03'	L = 37.38'	L = 23.63'
Ch = S 45°37'28" E 70.32'	Ch = S 48°33'28" E 146.70'	Ch = S 07°38'28" E 66.72'	Ch = N 78°29'06" W 37.32'	Ch = S 3°45'20" W 23.48'

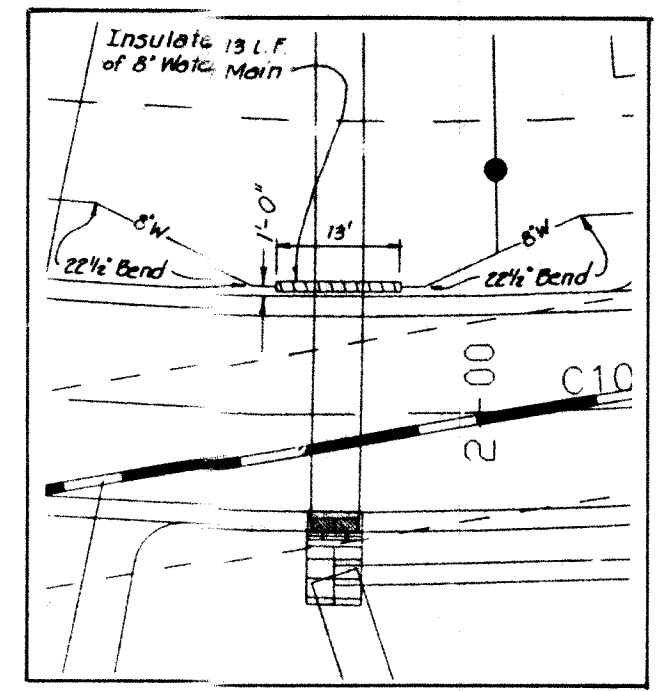
\* FOR BLDG. GRADES, SEE GRADING PLAN

no.	date	revision
1	4/12/96	REV. AS PER INTERNAL
2	6/12/96	REV. AS PER CC
3	9/15/96	REV. PER INTERNAL
4	9/15/96	REV. PER INTERNAL/PERFECT

WETHERINGTON  
SECTION 14  
FINAL DEVELOPMENT PLAN

date: 6/12/96  
sheet: 2 of 12  
dwg by: C11  
job #: 96001



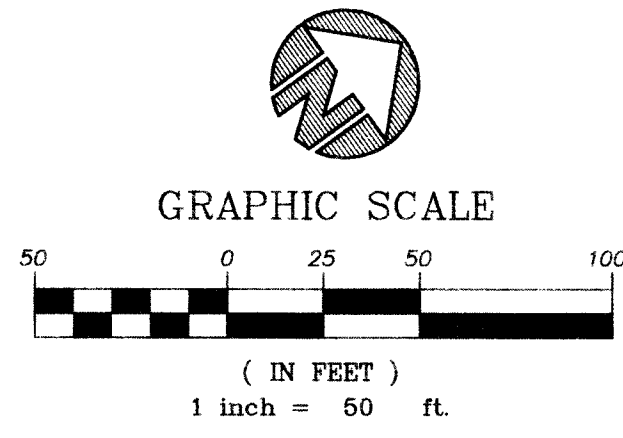


DETAILED WATER MAIN



- NOTES:**
- FIELD LOCATE EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - SANITARY LATERALS STATIONED FROM DOWNSTREAM MANHOLE (0+00).
  - SANITARY MANHOLES STATIONED FROM CENTERLINE OF ROADWAY.
  - WHEN IN CONFLICT, LOWER WATER UNDER STORM BY DEFLECTION.
  - FOR ROADWAY PROFILES, SEE PAGE 4.
  - FOR STORM PROFILES, SEE PAGE 5.
  - FOR SANITARY PROFILES, SEE PAGE 5.
  - FOR INTERSECTION DETAILS, SEE PAGE 7.
  - SEE STATION INFORMATION FOR TAPER ON GREAT WATERS LANE.
  - STORM SEWER MATERIAL TO BE USED MUST HAVE n=0.016 AS DEFINED BY THE BUTLER COUNTY ENGINEERS OFFICE.

CURVE #1	CURVE #4	CURVE #7	CURVE #10	CURVE #13
Δ = 35°34'36"	Δ = 49°02'53"	Δ = 28°02'43"	Δ = 14°21'48"	Δ = 13°01'32"
R = 200.00'	R = 42.00'	R = 200.00'	R = 500.00'	R = 200.00'
T = 64.17'	T = 13.16'	T = 49.95'	T = 63.00'	T = 22.83'
L = 124.19'	L = 35.95'	L = 97.90'	L = 125.34'	L = 45.47'
Ch = S 53°17'18" E 122.20'	Ch = N 58°46'29" E 34.87'	Ch = N 14°01'21" W 96.92'	Ch = S 10°03'40" E 125.02'	Ch = N 7°10'07" E 48.37'
CURVE #2	CURVE #5	CURVE #8	CURVE #11	CURVE #14
Δ = 15°19'39"	Δ = 71°04'36"	Δ = 30°00'21"	Δ = 42°36'39"	Δ = 21°50'01"
R = 200.00'	R = 200.00'	R = 100.00'	R = 150.00'	R = 62.00'
T = 26.91'	T = 142.86'	T = 26.80'	T = 58.50'	T = 11.96'
L = 53.50'	L = 248.10'	L = 52.37'	L = 111.56'	L = 23.63'
Ch = N 63°24'47" W 53.34'	Ch = S 35°32'18" E 122.20'	Ch = N 78°57'28" E 109.00'	Ch = N 18°25'33" E 109.00'	Ch = S 53°48'20" W 23.48'
CURVE #3	CURVE #6	CURVE #9	CURVE #12	
Δ = 20°14'58"	Δ = 43°01'54"	Δ = 19°12'13"	Δ = 07°11'57"	
R = 200.00'	R = 200.00'	R = 200.00'	R = 300.00'	
T = 35.71'	T = 78.85'	T = 33.83'	T = 18.70'	
L = 70.68'	L = 150.21'	L = 67.03'	L = 37.15'	
Ch = S 45°37'29" E 70.32'	Ch = S 49°33'39" E 146.70'	Ch = S 07°38'28" E 66.72'	Ch = N 76°29'06" W 37.32'	



9-19-96 Rev. Water Services  
8-28-96 Per Internal

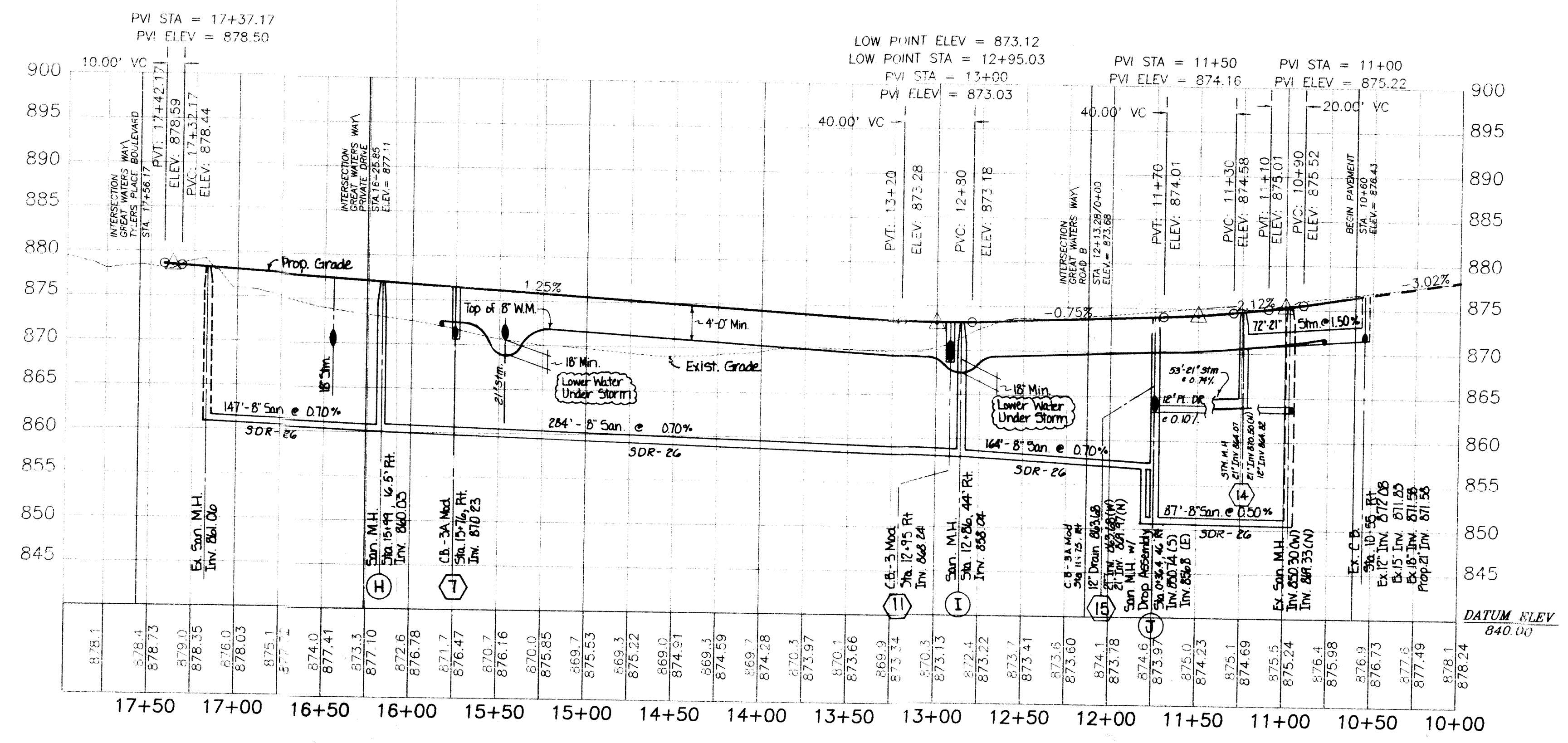
no.	date	revision
1.	4-3-96	REV. AS PER INTERNAL
2.	4-12-96	REV. AS PER INTERNAL
3.	6-21-96	REV. AS PER G.T.
4.	6-25-96	REV. AS PER INTERNAL
5.	7-3-96	Per Butler Co. Water & Sewer 12-9-95 Rev. 1 Added 5th Sewer Bldg. #3
6.	7-10-96	Per Butler Co. Water & Sewer 12-9-95 Rev. 1 Added Turnaround
7.	9-11-96	Per Designer

001AK1DV.DWG

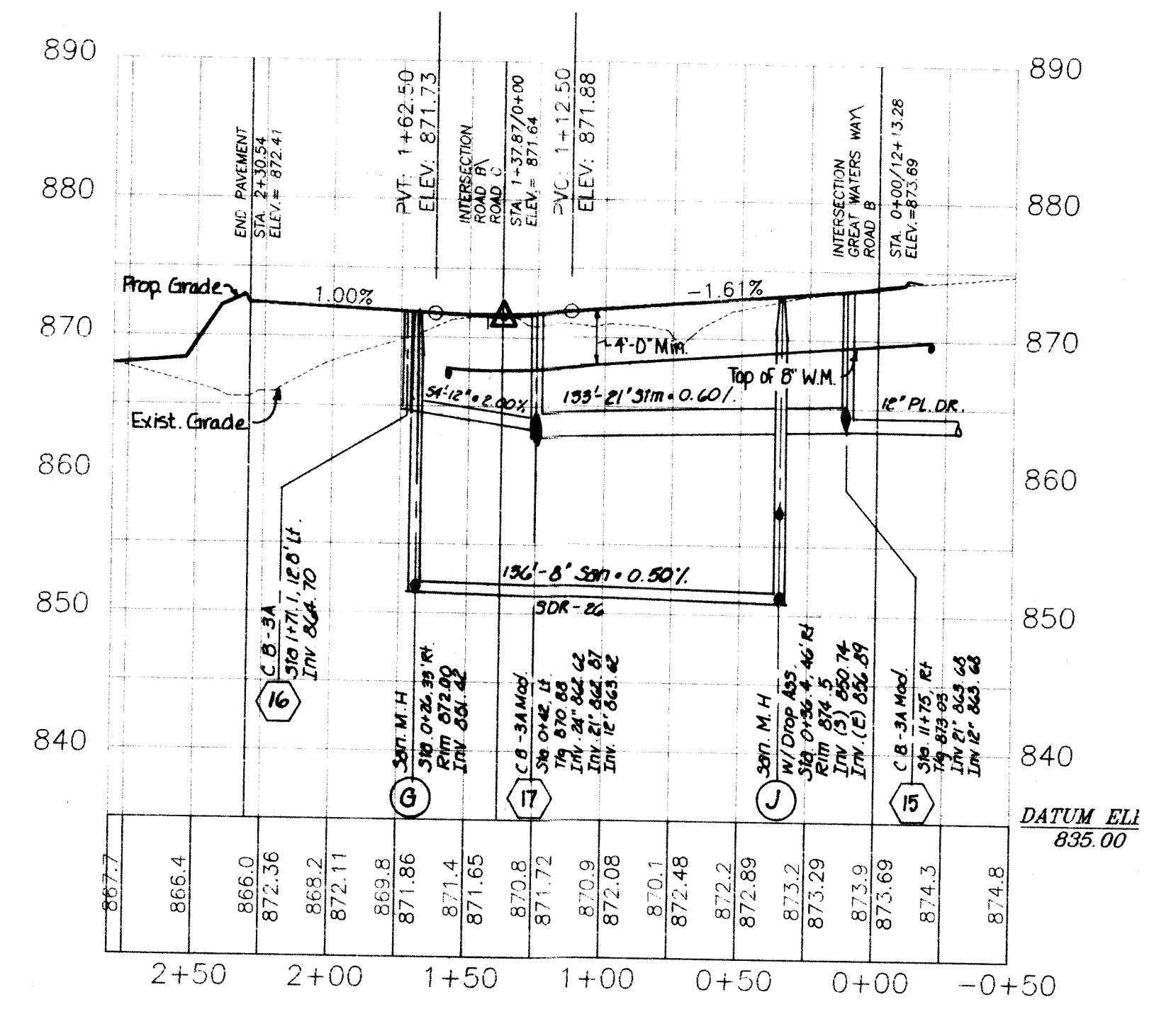
**WETHERINGTON SECTION 14 UTILITY PLAN**

date: 3/27/96  
sheet: 3 of 12  
dwg by: CTH  
job #: 96K001

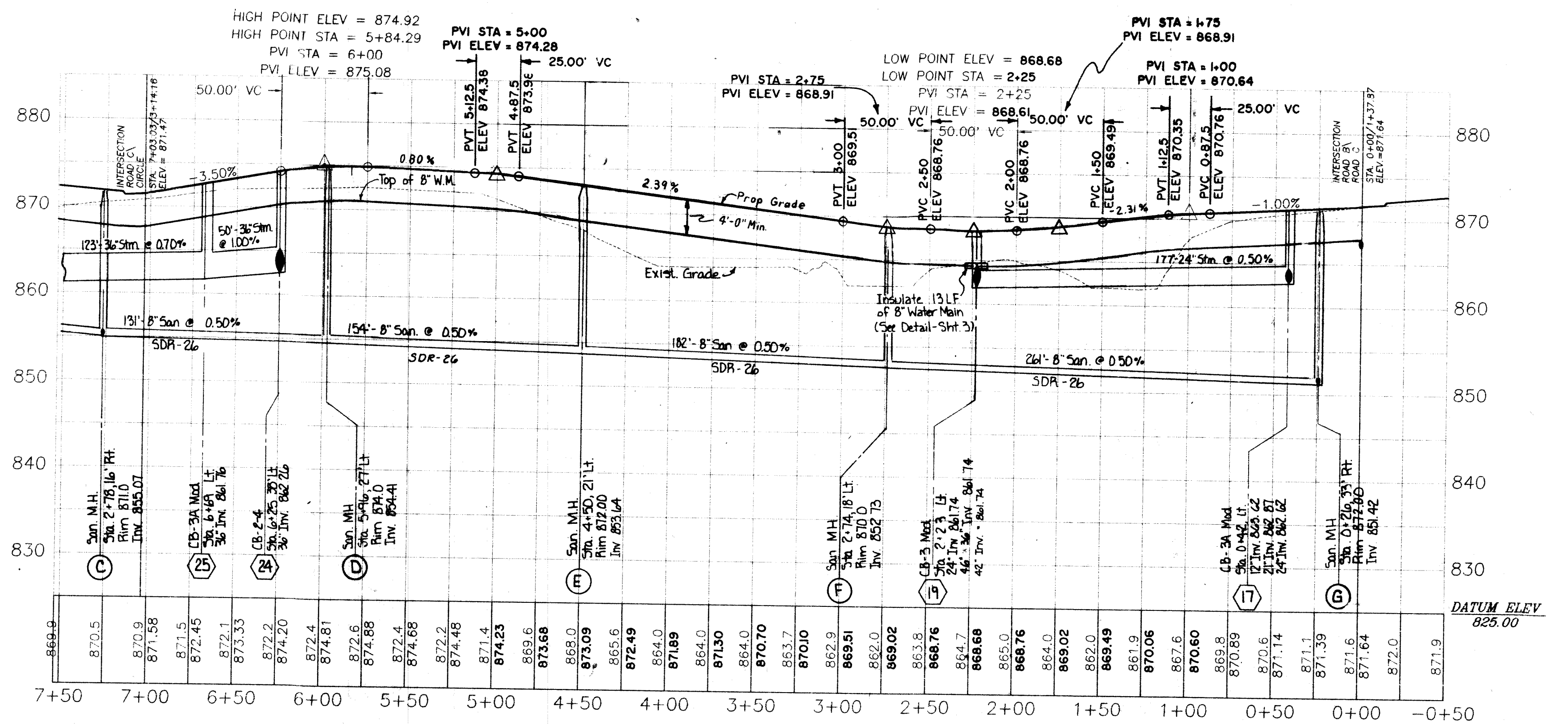




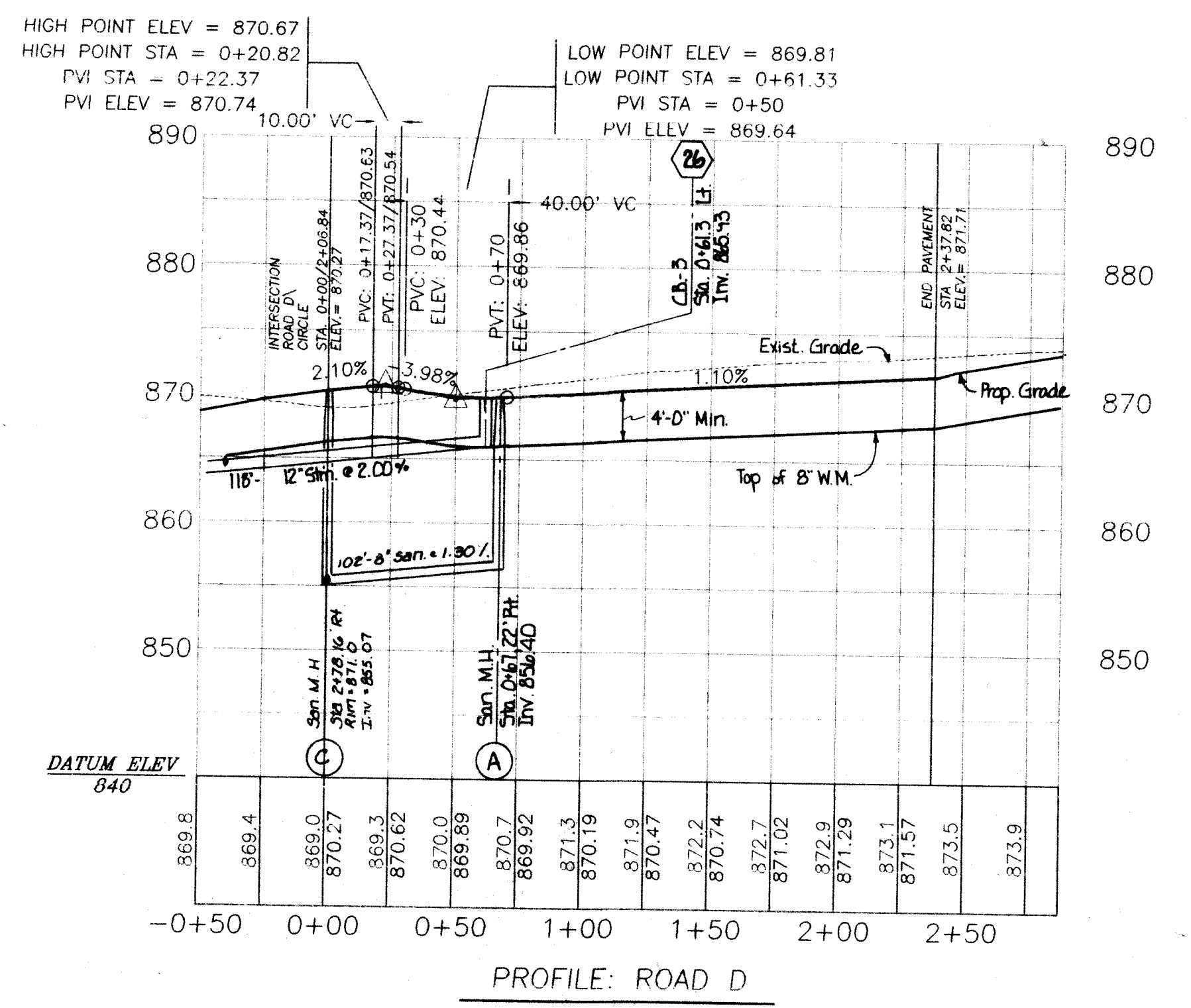
PROFILE: GREAT WATERS LANE



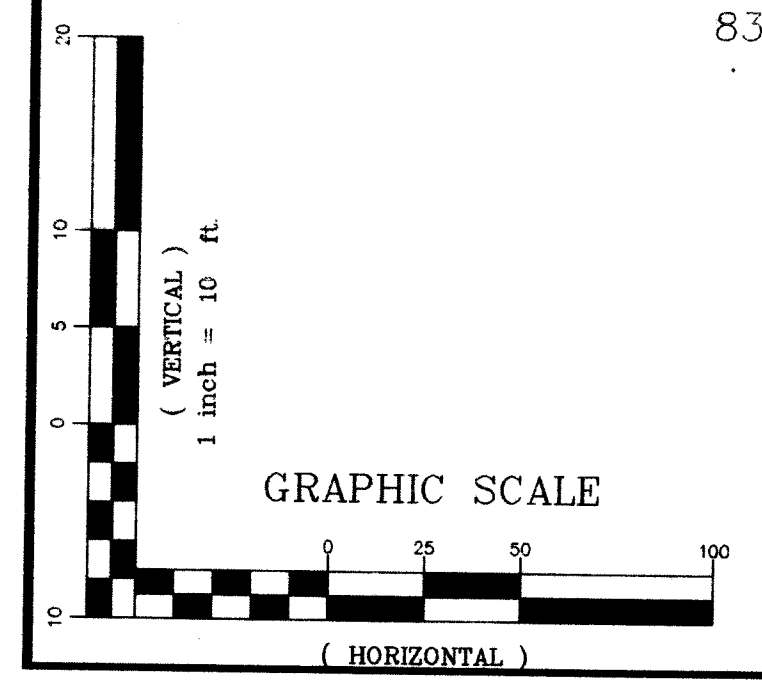
PROFILE: ROAD B



PROFILE: ROAD C



PROFILE: ROAD D



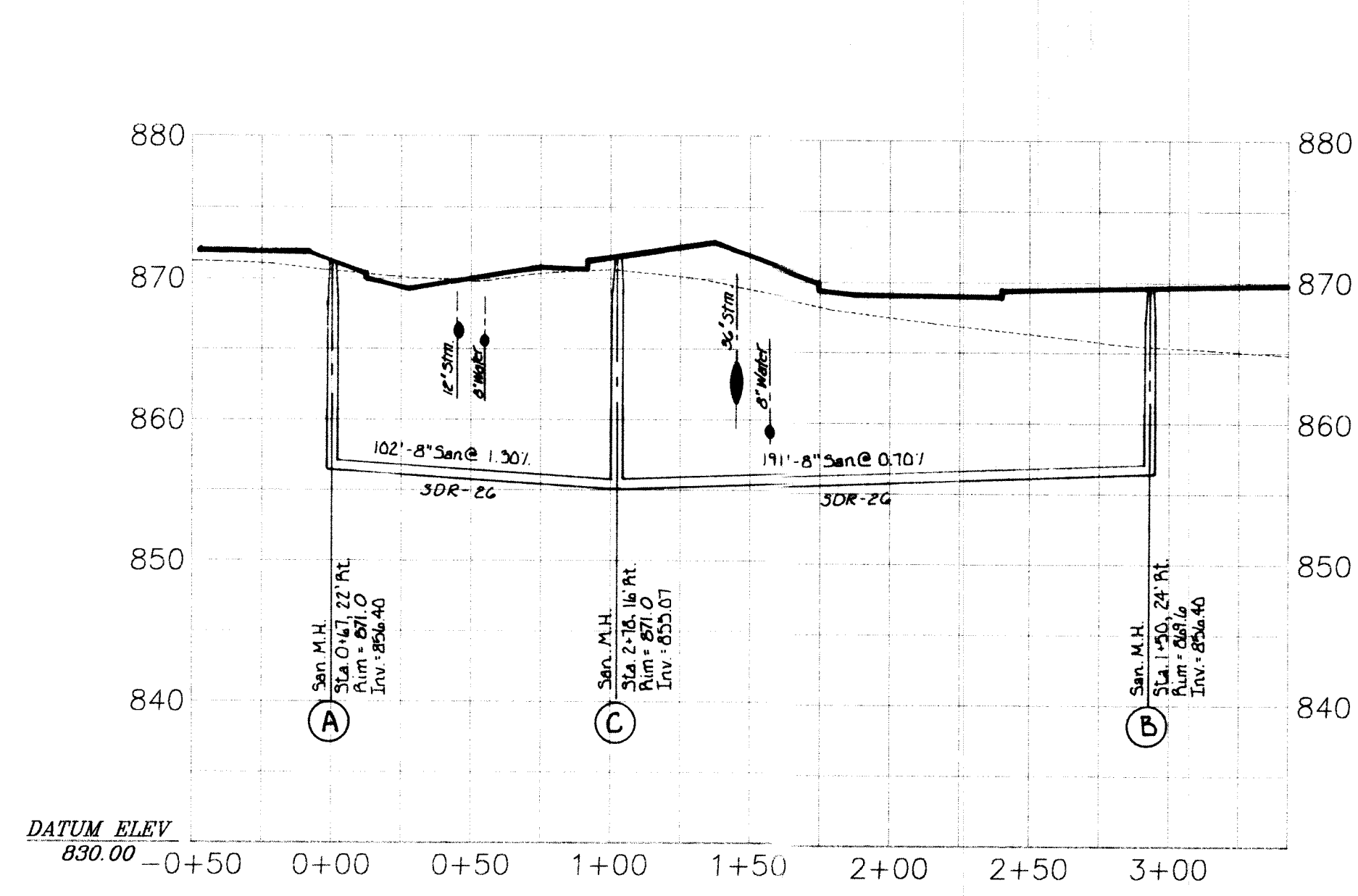
NO.	DATE	REVISION
1.	4-3-96	REV. AS PER INTERNAL
2.	4-12-96	REV. AS PER INTERNAL
3.	6-11-96	REV. AS PER GT.
4.	7-9-96	Per Quiller Co. notes & Survey
5.	7-16-96	Per Butler Co. We's

10 10-17-96 Per Developer  
9 8-25-96 Per Internal

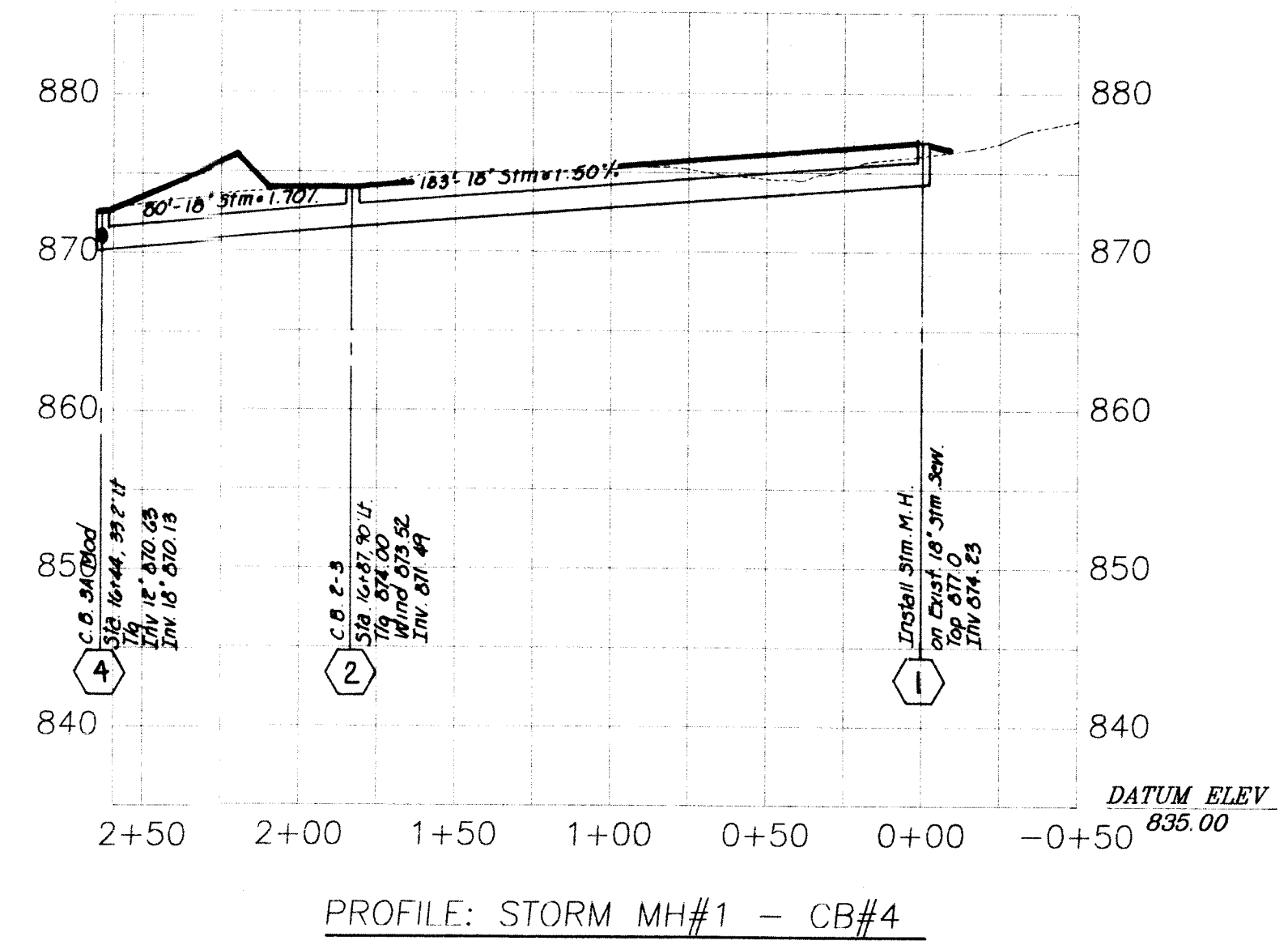
DATE: 3/21/96  
SHEET: 4 of 12  
DWG BY: cjh  
JOB #: 96K001

WETHERINGTON SECTION 14 PROFILE SHEET

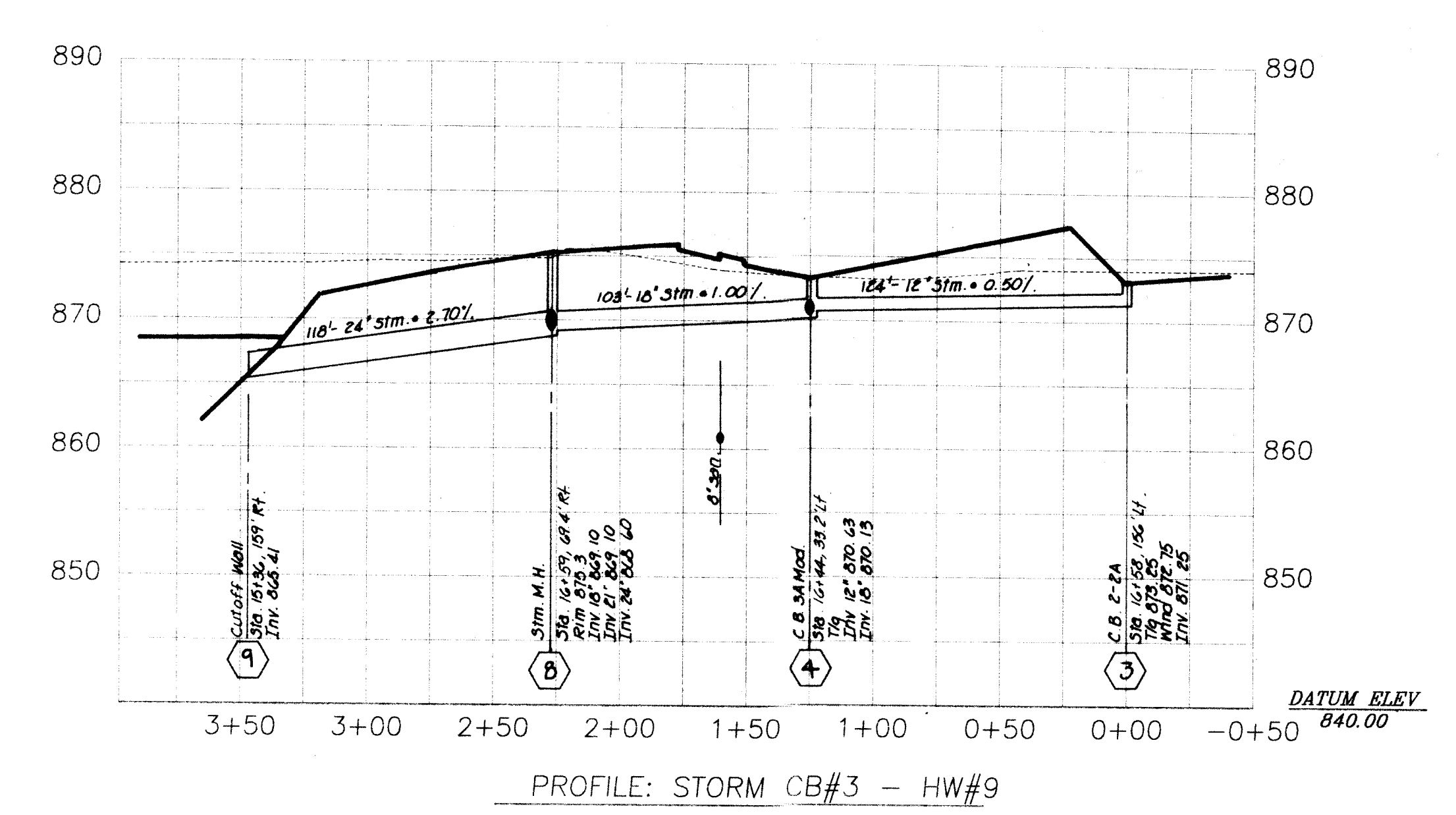




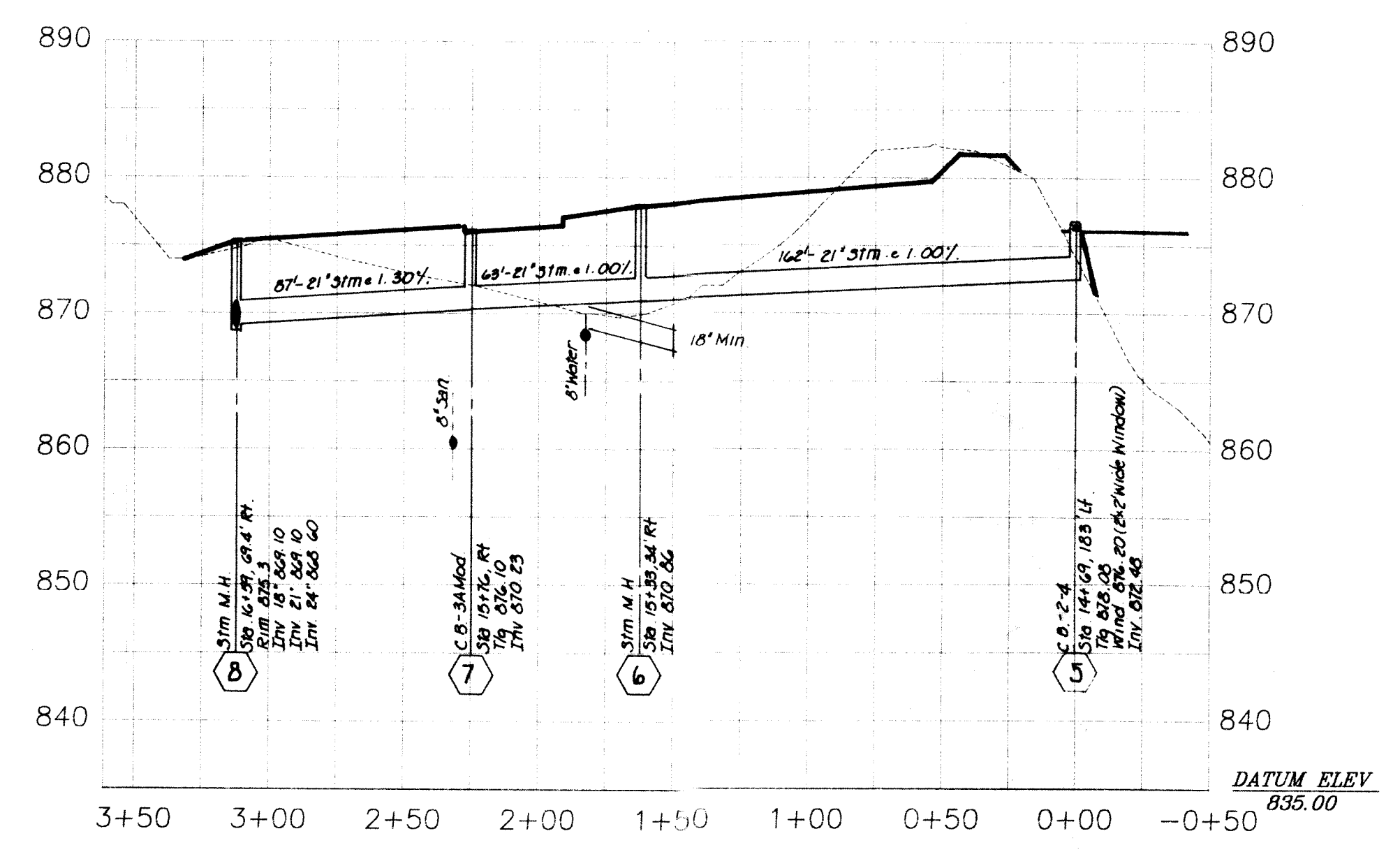
PROFILE: SANITARY MH#A - MH#B



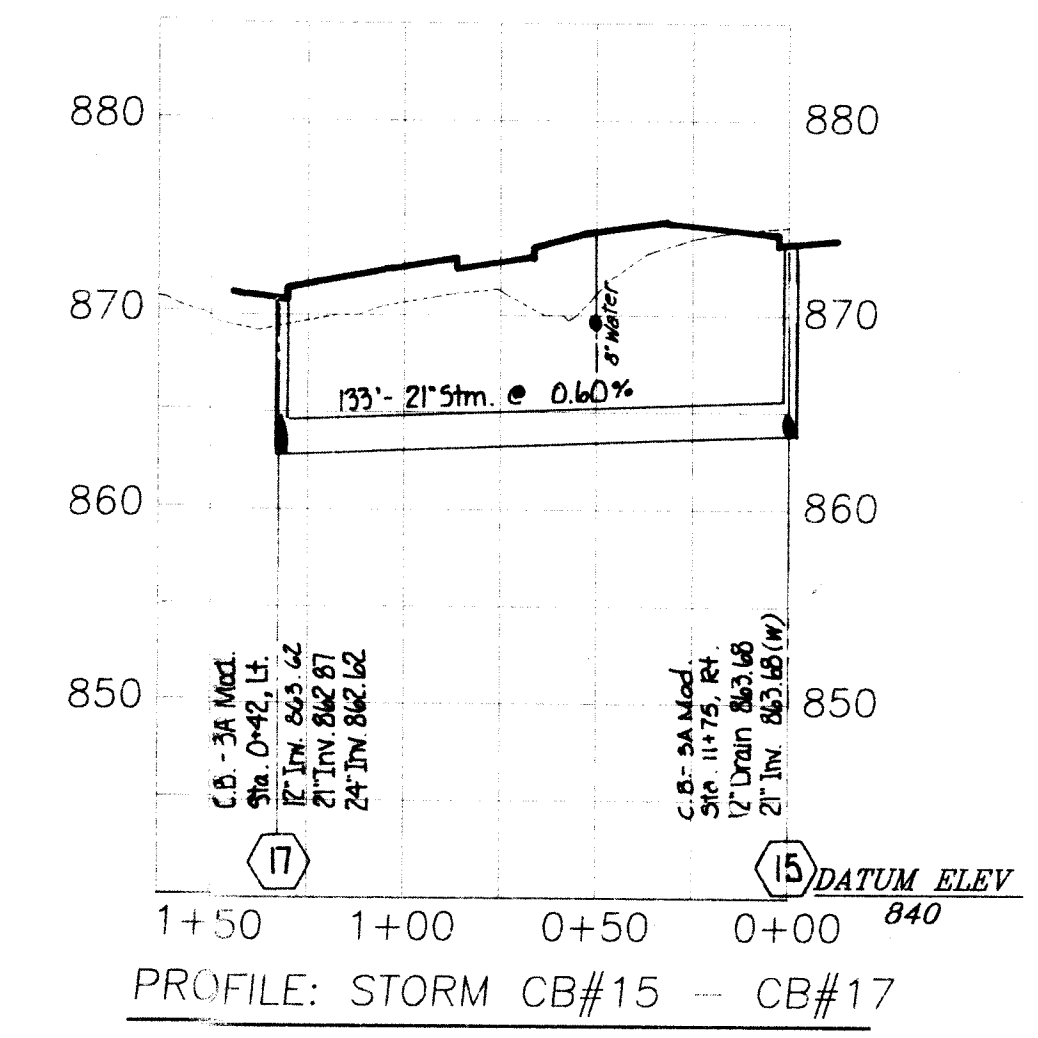
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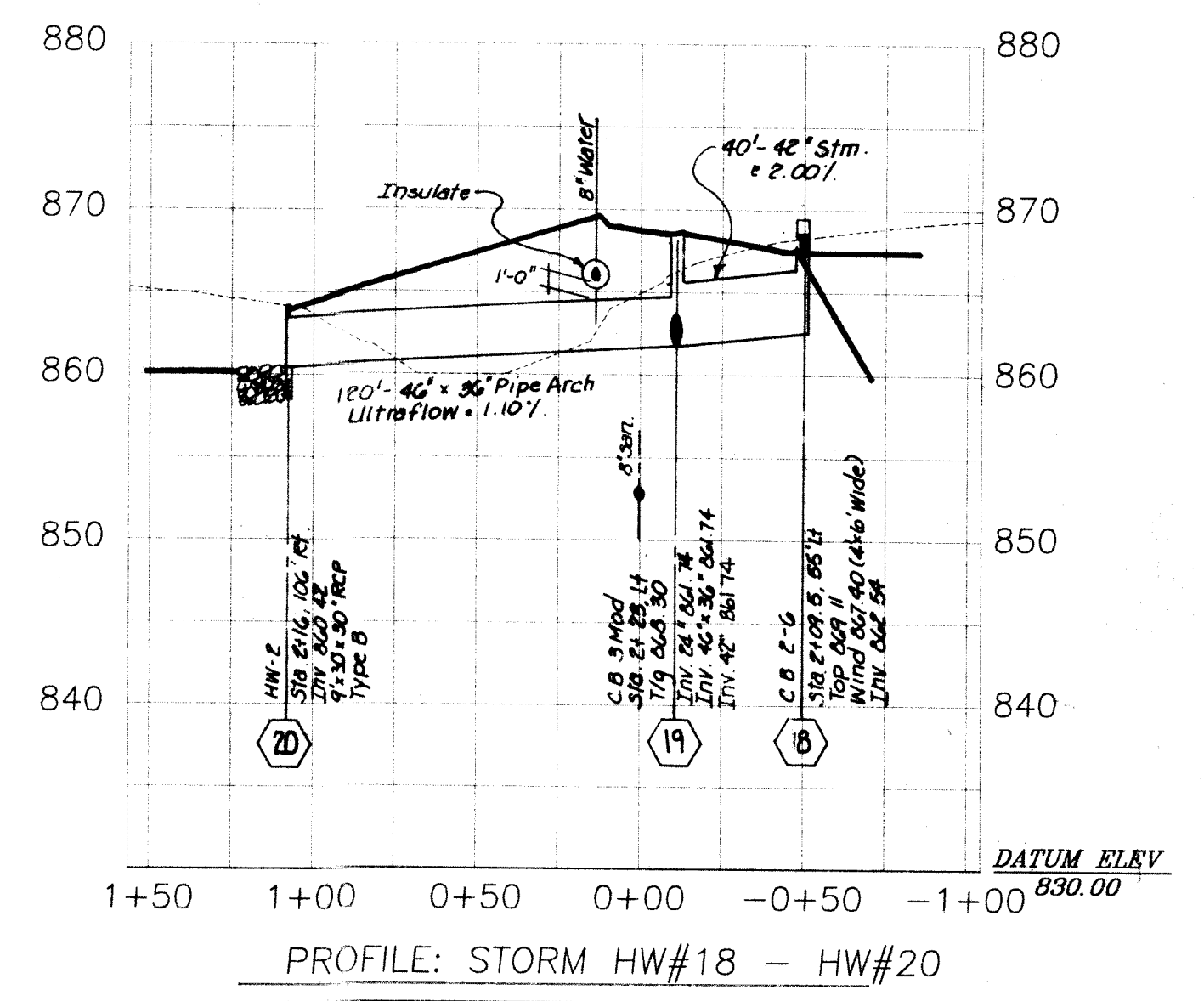
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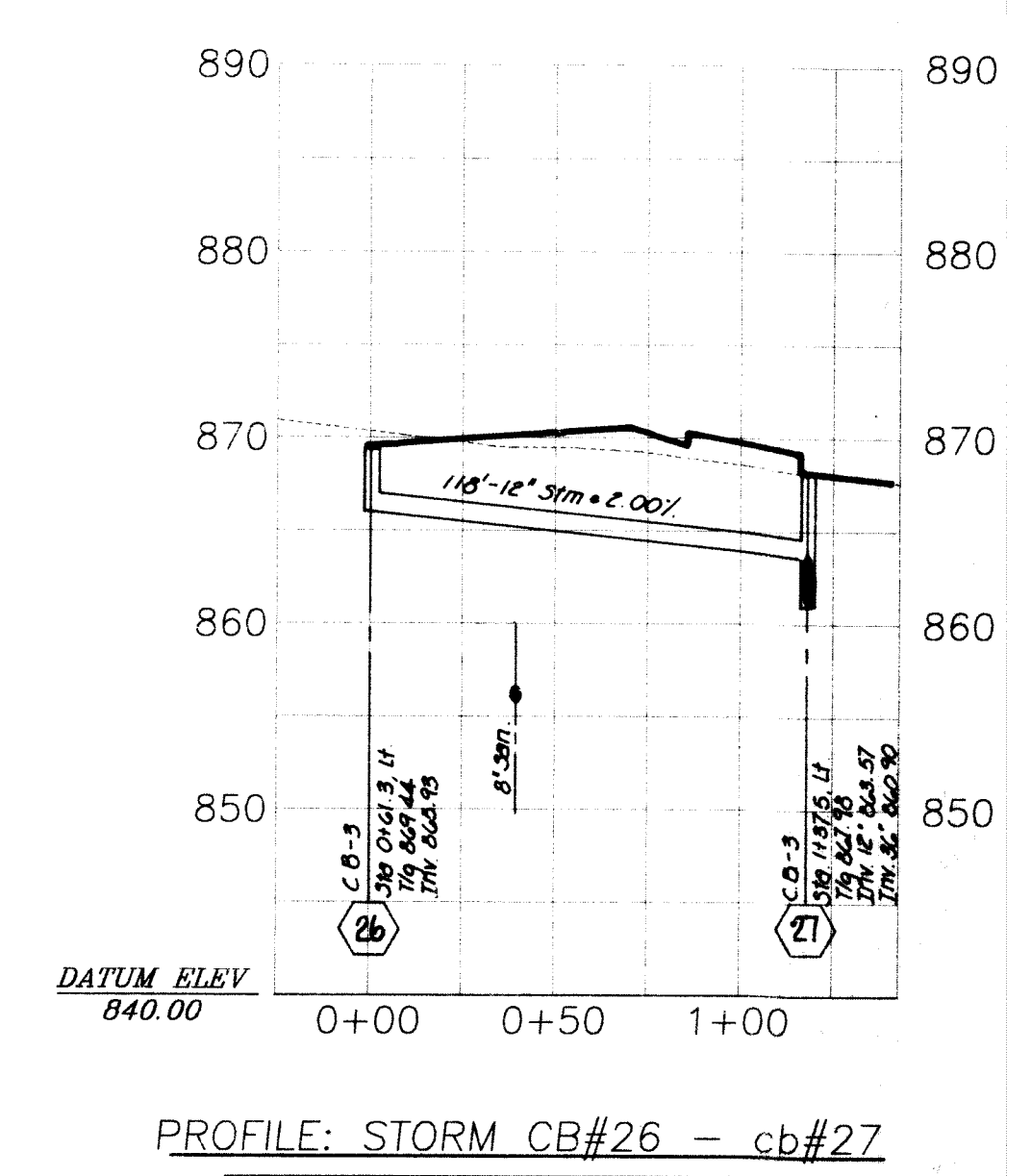
PROFILE: STORM CB#5 - MH#8



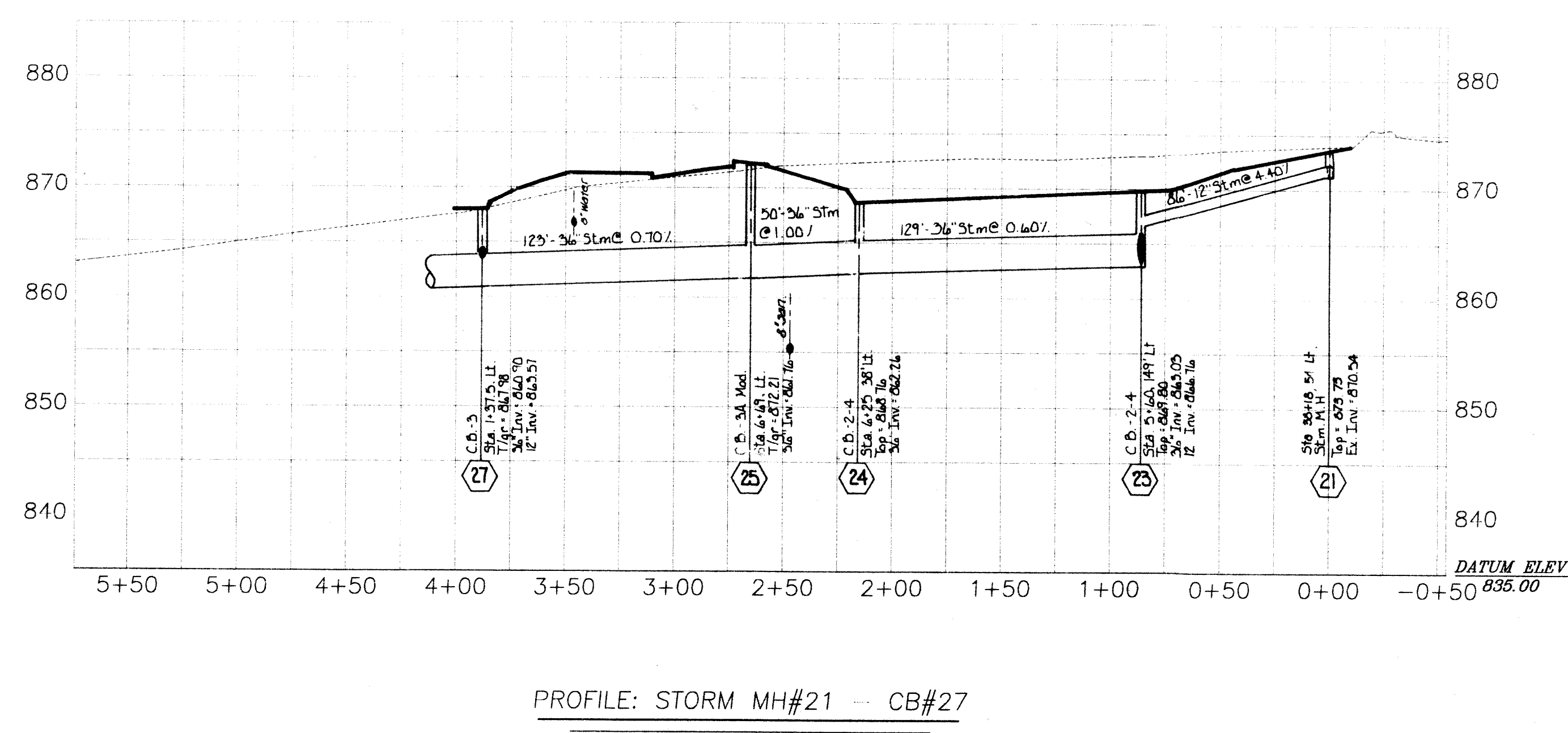
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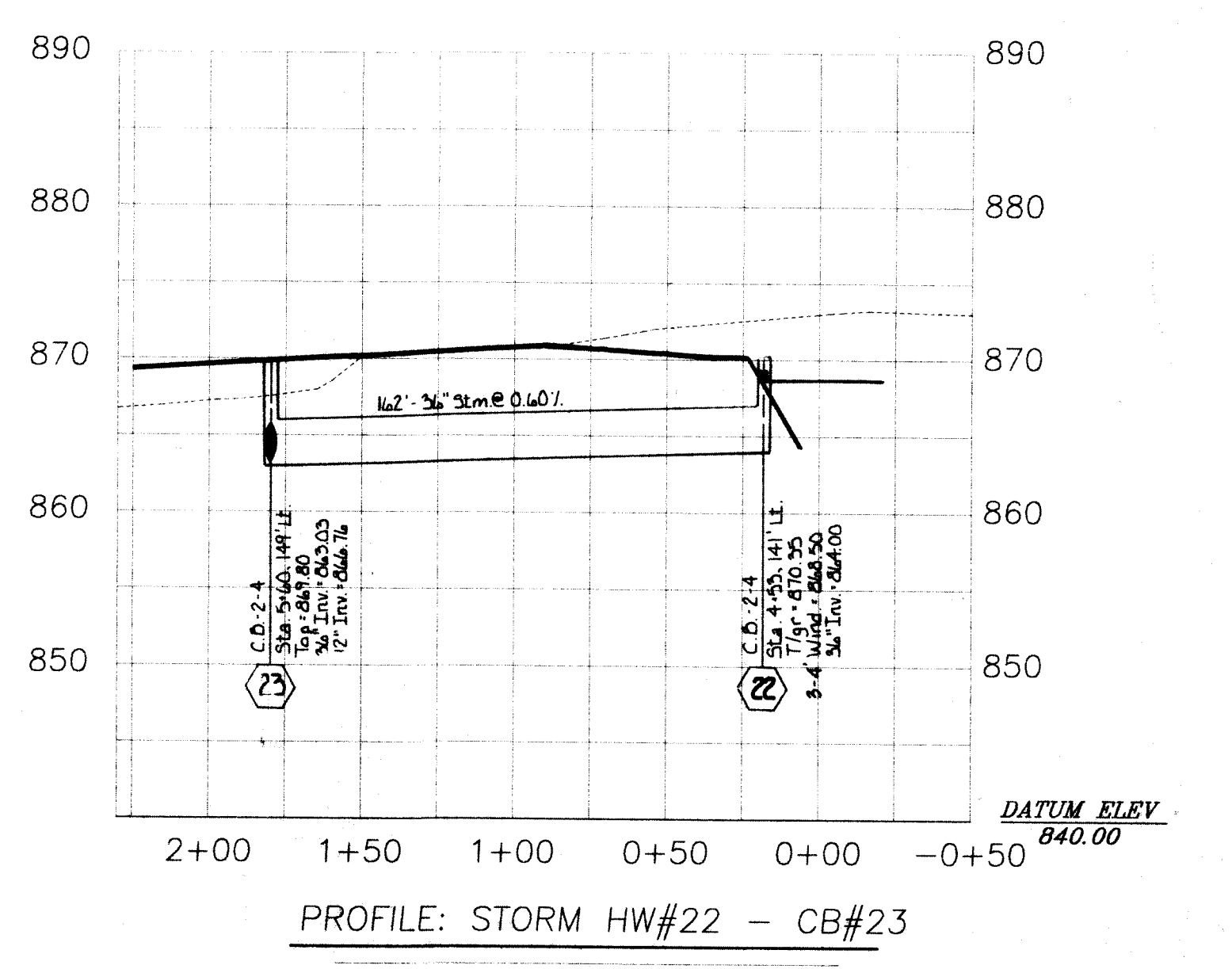
PROFILE: STORM HW#18 - HW#20



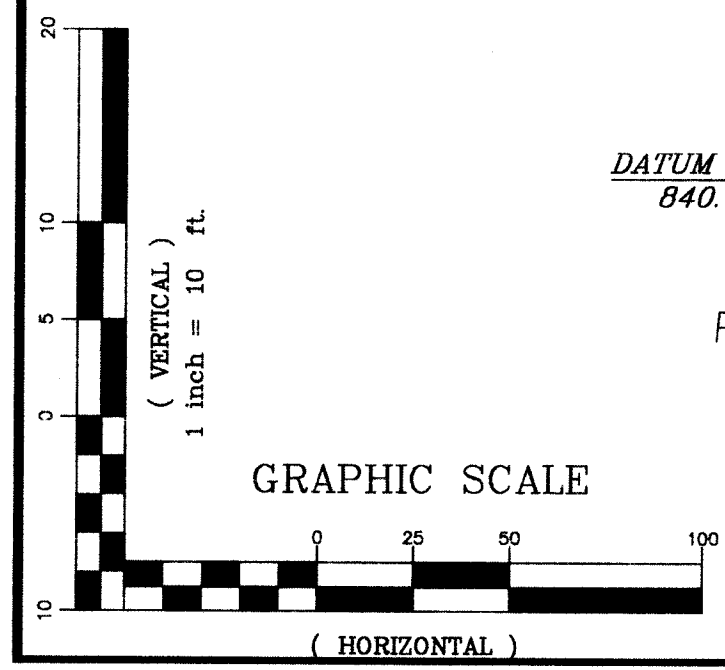
PROFILE: STORM CB#26 - CB#27



PROFILE: STORM MH#21 - CB#27



PROFILE: STORM HW#22 - CB#23



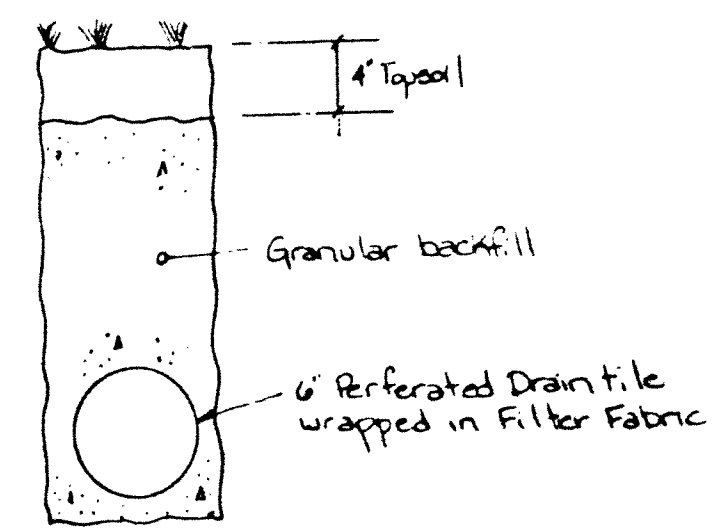
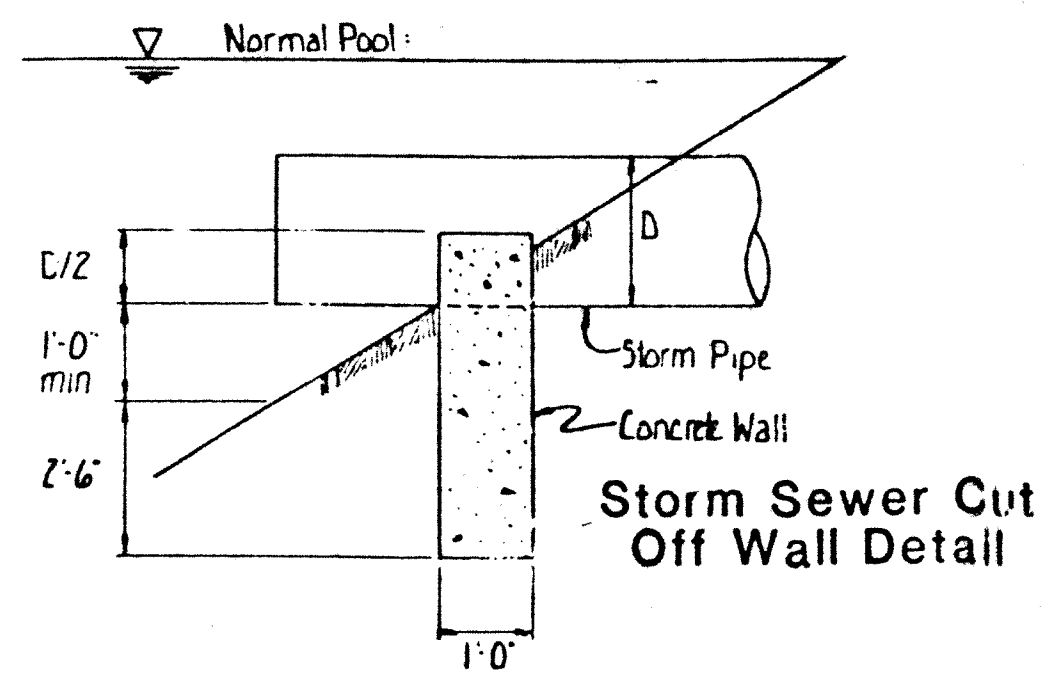
no.	date	revision
1.	4-3-96	REV AS PER INTERNAL
2.	4-12-96	REV AS PER INTERNAL
3.	6-21-96	REV AS PER G.T.
4.	6-25-96	Added Prop Overdig

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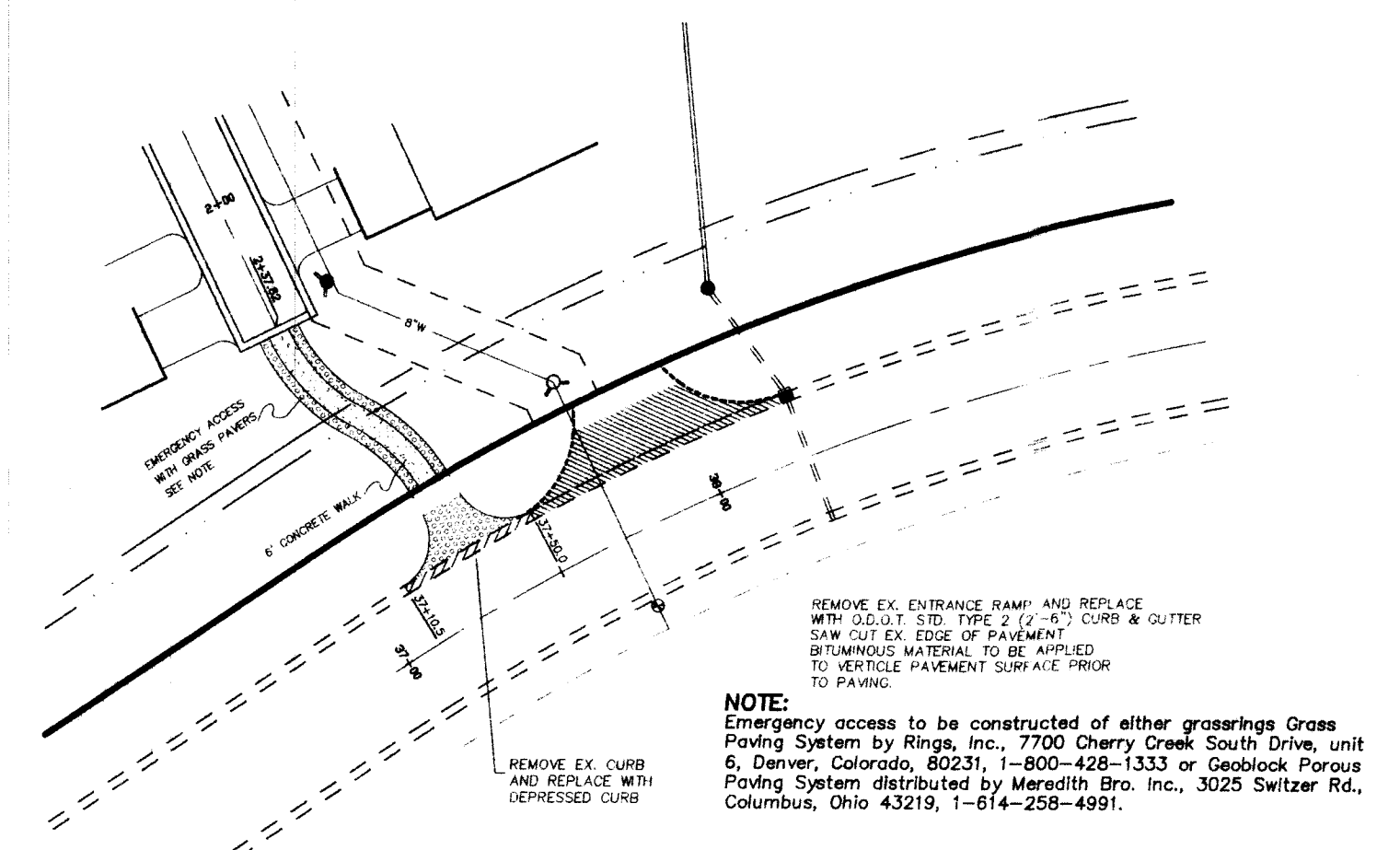
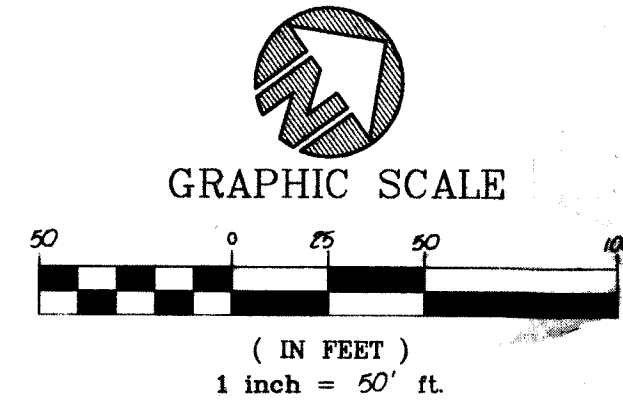
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6	7-16-96	Rev Butler Co Water & Sewer
7	8-1-96	Rev Developer

date: 3/21/98  
sheet 5 of 12  
dwg by: CTH  
job # 96K001

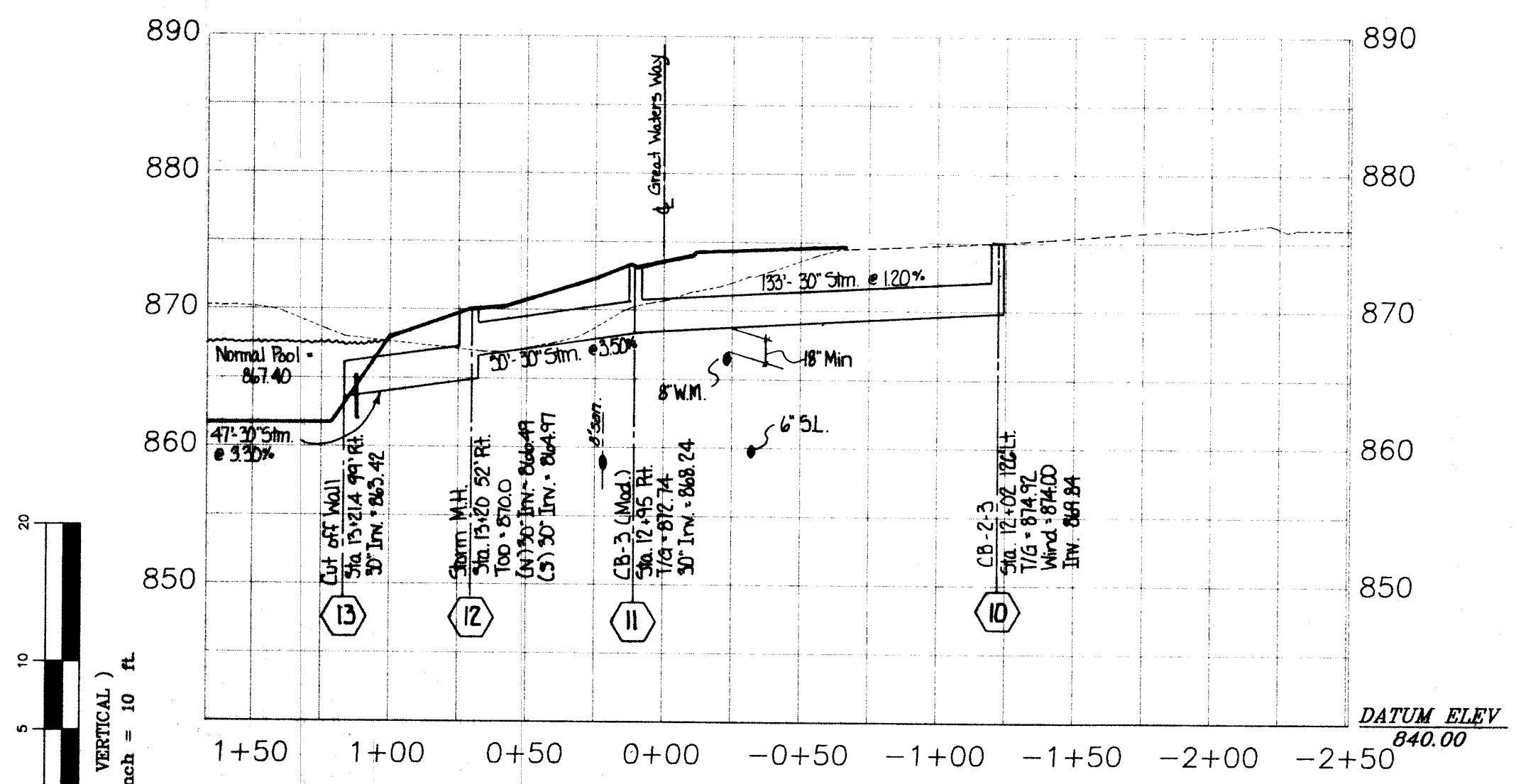
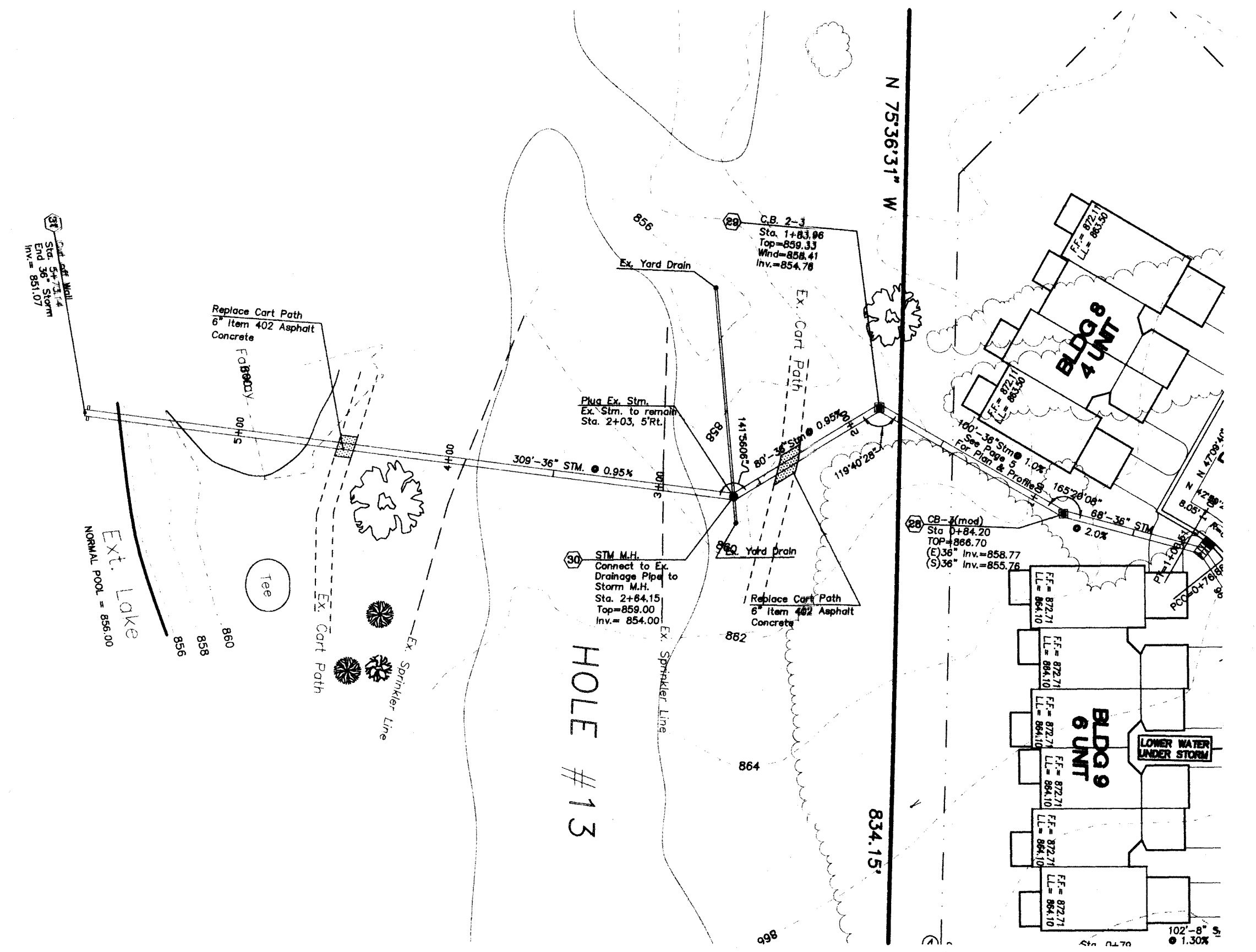
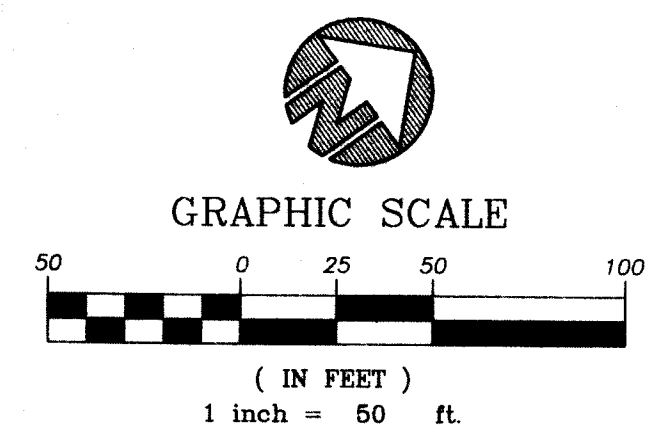
WETHERINGTON  
SECTION 14  
PROFILE SHEET



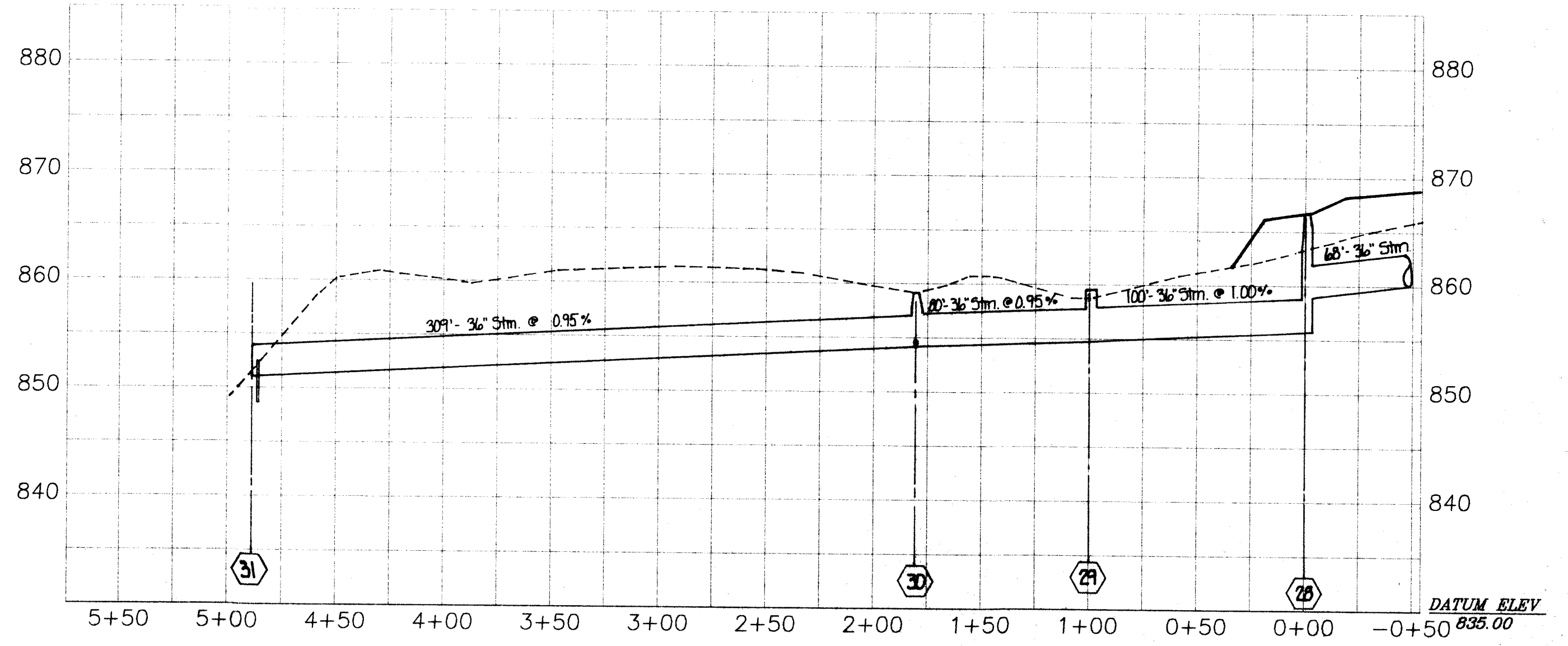
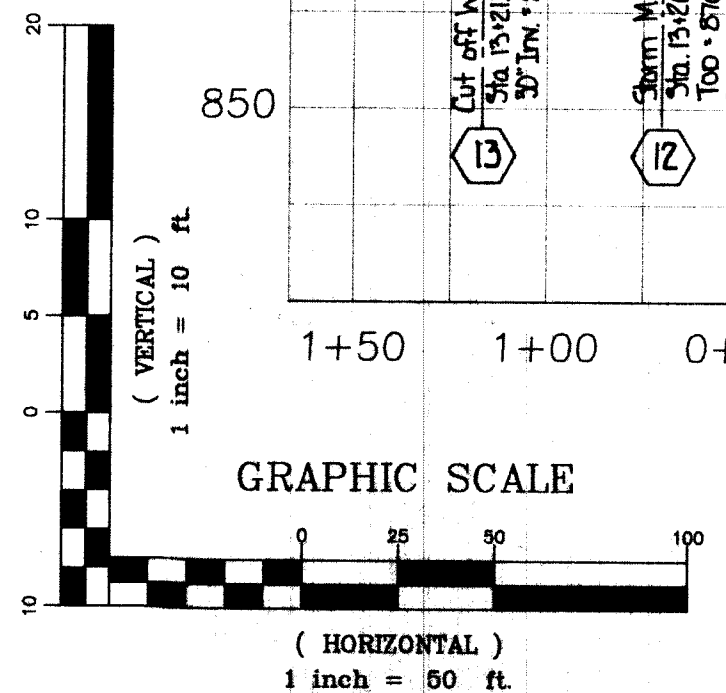
French Drain Detail



DETAIL: EMERGENCY ACCESS



PROFILE: STORM CB#10 - HW#13



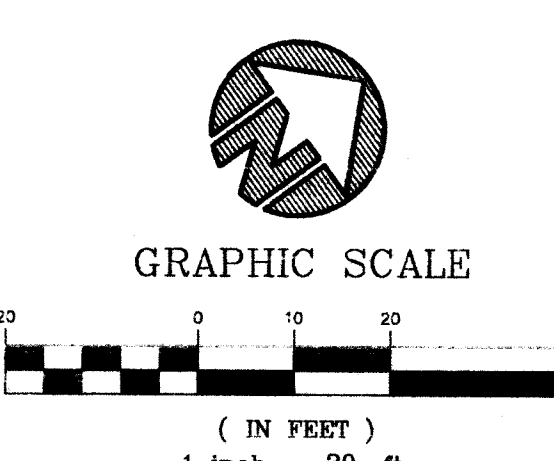
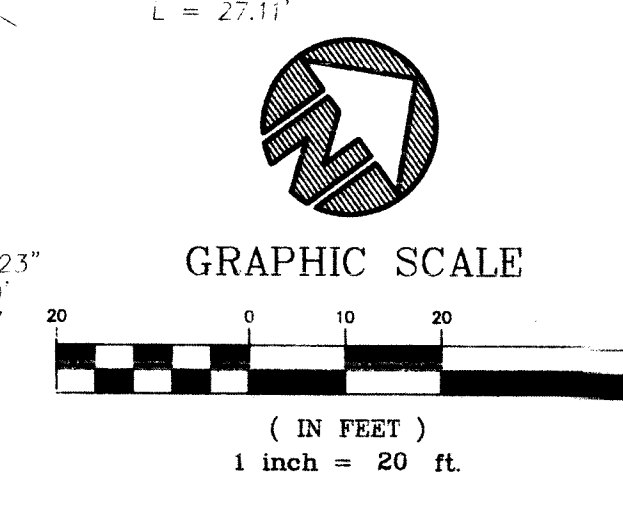
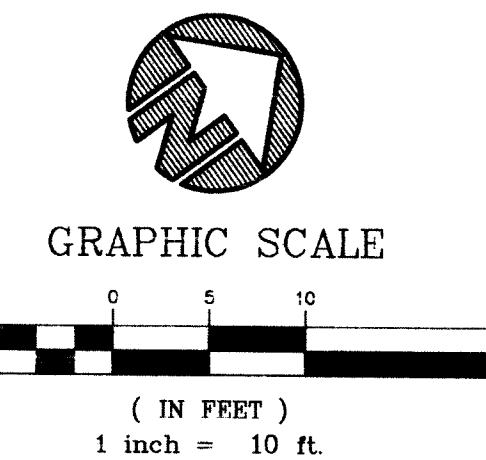
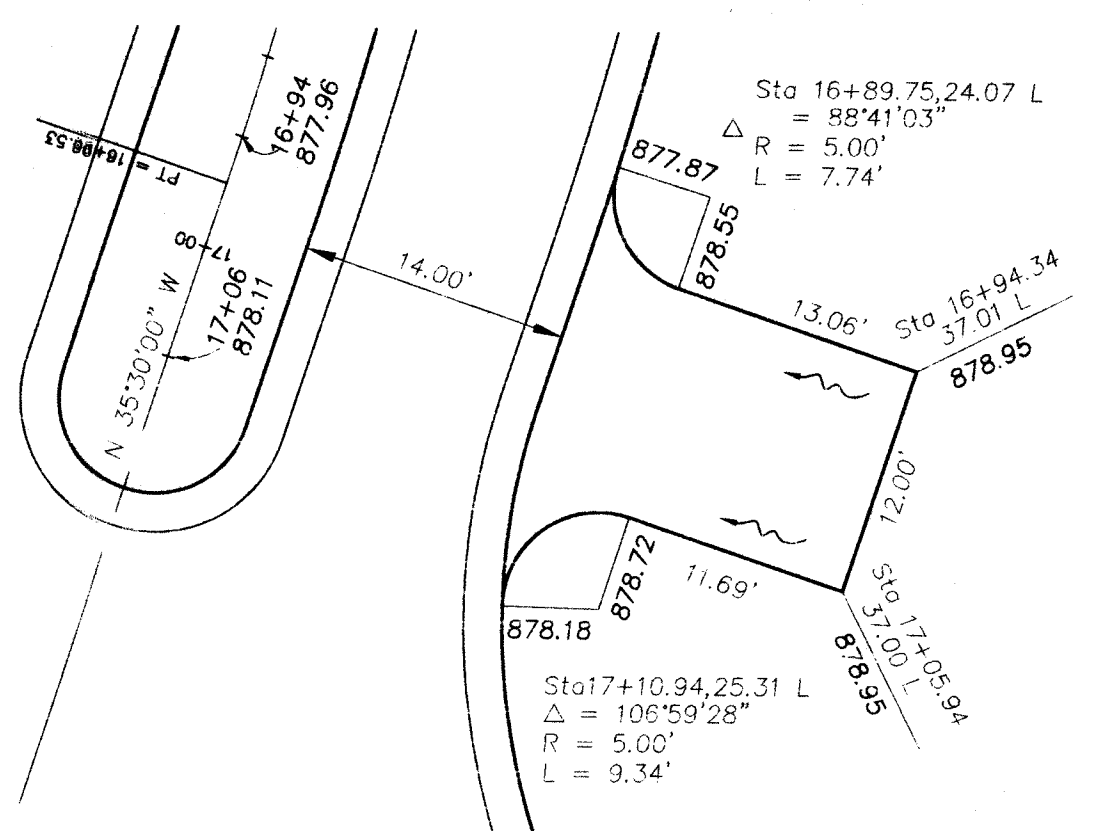
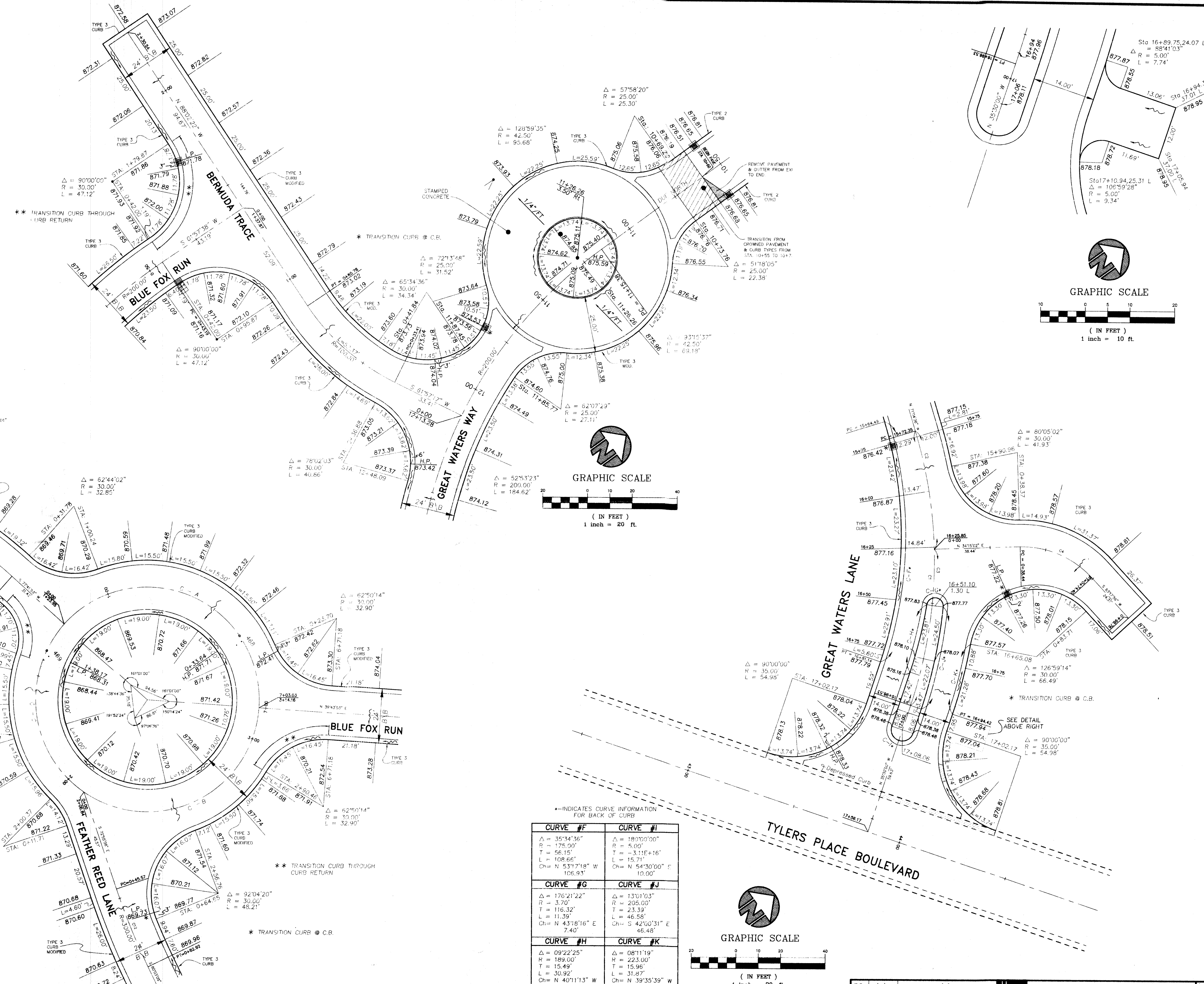
PROFILE: STORM CB#28 - HW#31

no.	date	revision
1.	6-25-96	REV AS PER INTERNAL
2.	7-16-96	PER DUTLER CO. W 65
3.	8-5-96	PER INTERNAL
4.	8-14-96	PER ESPENDECK
5.	8-28-96	Per Internal

WETHERINGTON  
SECTION 14  
MISCELLANEOUS DETAIL & PROFILE SHEET

date: 3/12/96  
sheet: 6 of 12  
dwg by: GHA  
job #: 980001





CURVE #A
$\Delta = 142^{\circ}02'00''$
$R = 50.00'$
$T = 145.35'$
$L = 123.93'$
$Ch = N 58^{\circ}42'53'' E$ $94.56'$

CURVE #B
$\Delta = 120^{\circ}28'48''$
$R = 30.00'$
$T = 67.45'$
$L = 105.14'$
$Ch = S 39^{\circ}58'17'' W$ $86.81'$

CURVE #C
$\Delta = 97^{\circ}29'12''$
$R = 50.00'$
$T = 57.00'$
$L = 85.07'$
$Ch = S 61^{\circ}02'43'' E$ $75.18'$

---INDICATES CURVE INFORMATION FOR BACK OF CURB

CURVE #F	CURVE #I
$\Delta = 35^{\circ}34'36''$	$\Delta = 180^{\circ}00'00''$
$R = 175.90'$	$R = 5.00'$
$T = 56.15'$	$T = -3.11E+16'$
$L = 108.66'$	$L = 15.71'$
$Ch = N 53^{\circ}17'18'' W$ $106.93'$	$Ch = N 54^{\circ}30'00'' E$ $10.00'$

CURVE #G	CURVE #J
$\Delta = 176^{\circ}21'22''$	$\Delta = 131^{\circ}01'03''$
$R = 3.70'$	$R = 205.00'$
$T = 116.32'$	$T = 23.33'$
$L = 11.39'$	$L = 46.58'$
$Ch = N 43^{\circ}18'16'' E$ $7.40'$	$Ch = S 42^{\circ}00'31'' E$ $46.48'$

CURVE #H	CURVE #K
$\Delta = 09^{\circ}22'25''$	$\Delta = 08^{\circ}11'19''$
$R = 189.00'$	$R = 223.00'$
$T = 15.49'$	$T = 15.96'$
$L = 30.92'$	$L = 31.87'$
$Ch = N 40^{\circ}11'13'' W$ $30.89'$	$Ch = N 39^{\circ}35'39'' W$ $31.84'$

no.	date	revision
1	8/15/96	Revised Per Developer
2	8/28/96	Revised Per Internal
3	10/22/96	Revised Great Waters Way

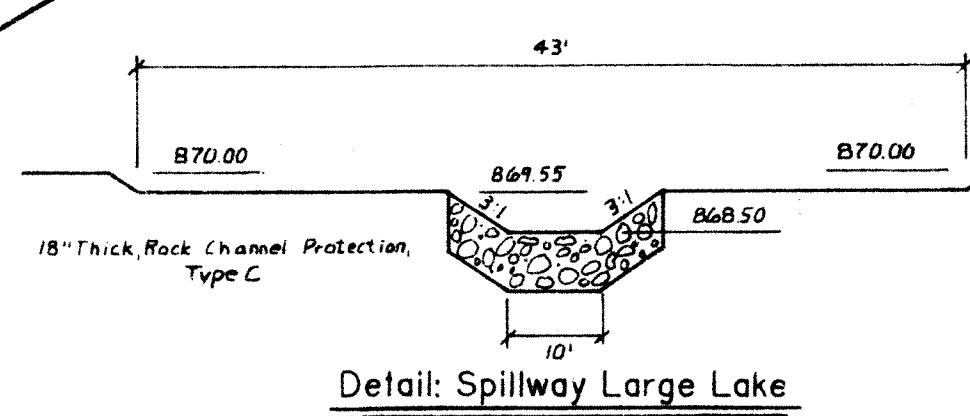
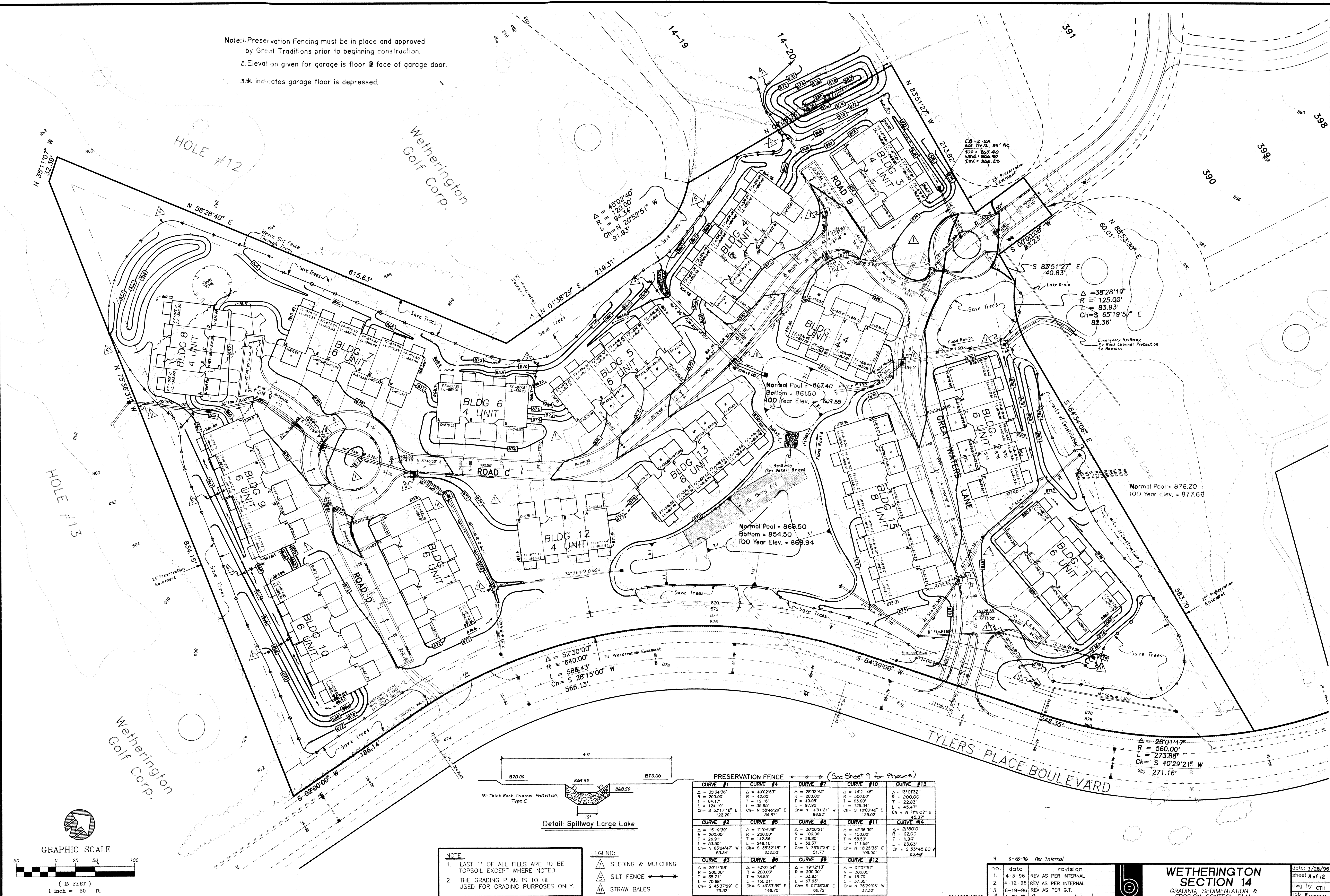
**WETHERINGTON  
PARCEL 17  
INTERSECTION DETAILS**

note: 3/28/96  
sheet 7 of 12  
dwg by: cth  
job # 96K001

001A02D.DWG



- Note: 1. Preservation Fencing must be in place and approved by Great Traditions prior to beginning construction.  
 2. Elevation given for garage is floor @ face of garage door.  
 3. \* indicates garage floor is depressed.

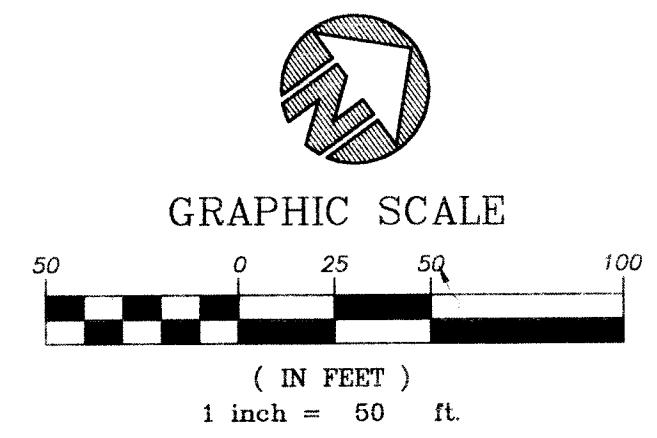


PRESERVATION FENCE (See Sheet 9 for Phases)

CURVE #1	CURVE #4	CURVE #7	CURVE #10	CURVE #13
$\Delta = 35^{\circ}34'36''$ R = 200.00' T = 44.17' L = 124.19' Ch = S 53^{\circ}11'18'' E 122.20'	$\Delta = 49^{\circ}02'53''$ R = 200.00' T = 19.16' L = 35.95' Ch = N 58^{\circ}46'29'' E 34.87'	$\Delta = 28^{\circ}02'43''$ R = 200.00' T = 49.80' L = 97.50' Ch = N 14^{\circ}01'21'' W 96.92'	$\Delta = 142^{\circ}14'48''$ R = 500.00' T = 83.00' L = 125.34' Ch = S 10^{\circ}03'40'' E 125.02'	$\Delta = 13^{\circ}01'32''$ R = 200.00' T = 22.83' L = 45.47' Ch = N 71^{\circ}10'07'' E 45.37'
CURVE #2	CURVE #5	CURVE #8	CURVE #11	CURVE #14
$\Delta = 15^{\circ}19'39''$ R = 200.00' T = 35.71' L = 53.50' Ch = N 67^{\circ}24'47'' W 53.34'	$\Delta = 71^{\circ}04'38''$ R = 200.00' T = 142.88' L = 248.10' Ch = S 35^{\circ}32'18'' E 53.34'	$\Delta = 30^{\circ}00'21''$ R = 100.00' T = 49.80' L = 52.37' Ch = N 78^{\circ}57'28'' E 108.00'	$\Delta = 42^{\circ}36'39''$ R = 150.00' T = 58.50' L = 111.56' Ch = N 18^{\circ}29'33'' E 108.00'	$\Delta = 21^{\circ}50'01''$ R = 62.00' T = 10.96' L = 23.63' Ch = S 53^{\circ}45'20'' W 23.48'
CURVE #3	CURVE #6	CURVE #9	CURVE #12	
$\Delta = 20^{\circ}14'58''$ R = 200.00' T = 35.71' L = 70.88' Ch = S 45^{\circ}37'29'' E 70.32'	$\Delta = 43^{\circ}01'54''$ R = 78.85' L = 150.21' Ch = S 49^{\circ}33'39'' E 146.70'	$\Delta = 19^{\circ}12'13''$ R = 200.00' T = 33.83' L = 67.03' Ch = S 07^{\circ}38'28'' E 66.72'	$\Delta = 07^{\circ}07'57''$ R = 300.00' T = 18.70' L = 37.35' Ch = N 78^{\circ}29'06'' W 37.32'	

- NOTE:
- LAST 1' OF ALL FILLS ARE TO BE TOPSOIL EXCEPT WHERE NOTED.
  - THE GRADING PLAN IS TO BE USED FOR GRADING PURPOSES ONLY.

- LEGEND:
- SEEDING & MULCHING
  - SILT FENCE
  - STRAW BALES



9. 8-26-96 Per Internal

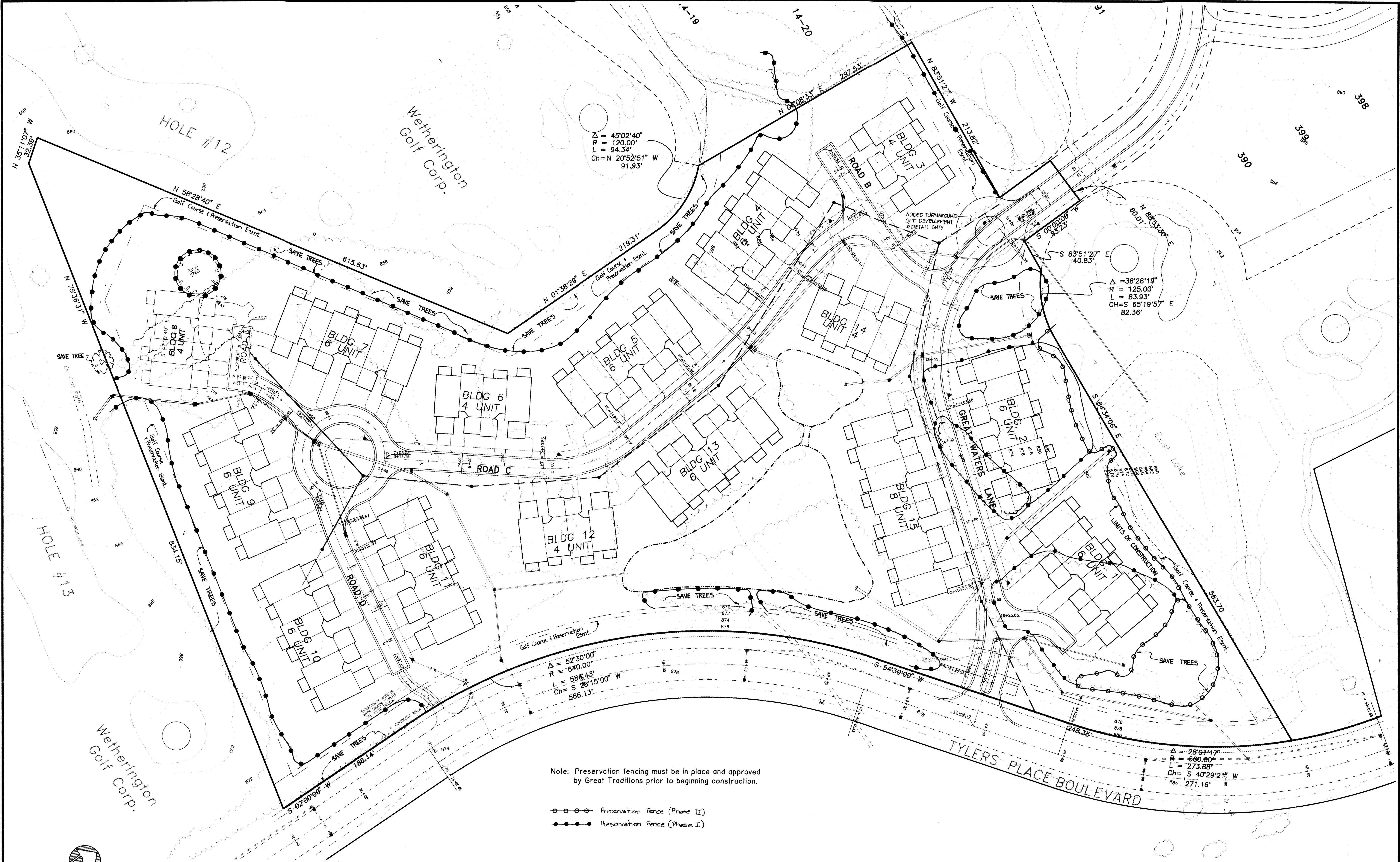
NO.	DATE	REVISION
1.	4-3-96	REV AS PER INTERNAL
2.	4-12-96	REV AS PER INTERNAL
3.	6-19-96	REV AS PER G.T.
4.	6-26-96	REV AS PER INTERNAL
5.	8-1-96	Per Developer
6.	8-2-96	Per Developer
7.	8-5-96	Per Internal
8.	9-23-96	REV GRADING PLAN BLDG 7'S
9.	11-10-96	Added Turnaround

**WETHERINGTON SECTION 14**  
 GRADING, SEDIMENTATION & EROSION CONTROL PLAN

date: 3/28/96  
 sheet 8 of 12  
 dwg by: CTH  
 job # 86K001

001A02DV.DWG





$\Delta = 45^{\circ}02'40''$   
 $R = 120.00'$   
 $L = 94.34'$   
 $Ch = N 20^{\circ}52'51'' W$   
 $91.93'$

$\Delta = 38^{\circ}28'19''$   
 $R = 125.00'$   
 $L = 83.93'$   
 $Ch = S 65^{\circ}19'57'' E$   
 $82.36'$

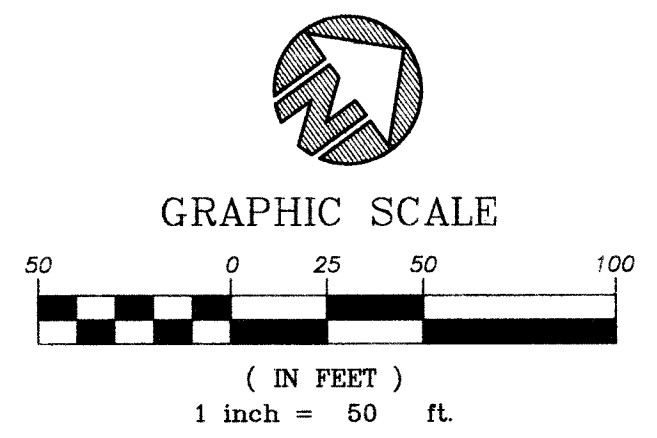
$\Delta = 52^{\circ}30'00''$   
 $R = 640.00'$   
 $L = 586.43'$   
 $Ch = S 28^{\circ}15'00'' W$   
 $566.13'$

$\Delta = 28^{\circ}01'17''$   
 $R = 560.00'$   
 $L = 273.88'$   
 $Ch = S 40^{\circ}29'21'' W$   
 $271.16'$

Note: Preservation fencing must be in place and approved by Great Traditions prior to beginning construction.

- Preservation Fence (Phase II)
- Preservation Fence (Phase I)

PLAN TO BE USED FOR PRESERVATION FENCING ONLY.



no.	date	revision
1	6-26-96	Rev. as per internal
2	8-15-96	Rev. Per developer
3	10-17-96	ADDED TURNAROUND

**WETHERINGTON SECTION 14**  
 PRESERVATION CONTROL PLAN  
 date: 3/27/98  
 sheet: 9 of 12  
 dwn by: CTH  
 job #: 86K001

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**GENERAL NOTES**

**EROSION AND SEDIMENT CONTROLS**

**Vegetative practices.** Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing and protection of trees. The contractor shall initiate appropriate vegetative practices on all disturbed areas within seven (7) days if they are to remain dormant (undisturbed) for more than forty-five (45) days. Permanent or temporary soil stabilization shall be applied to disturbed areas within seven (7) days after final grade is reached on any portion of the site.

**Structural practices.** Structural practices shall be used to control erosion and trap sediment from all sites remaining disturbed for more than fourteen (14) days.

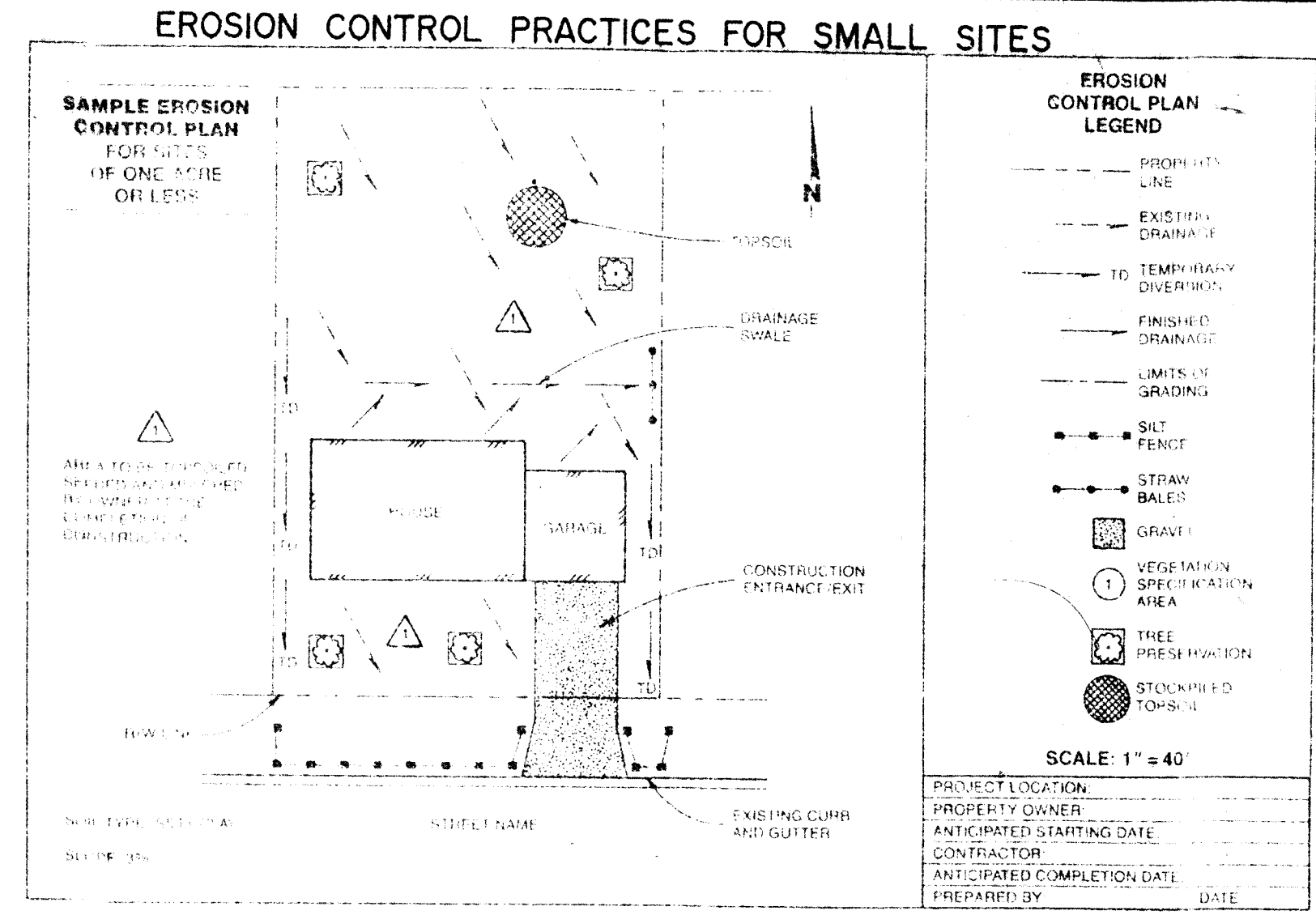
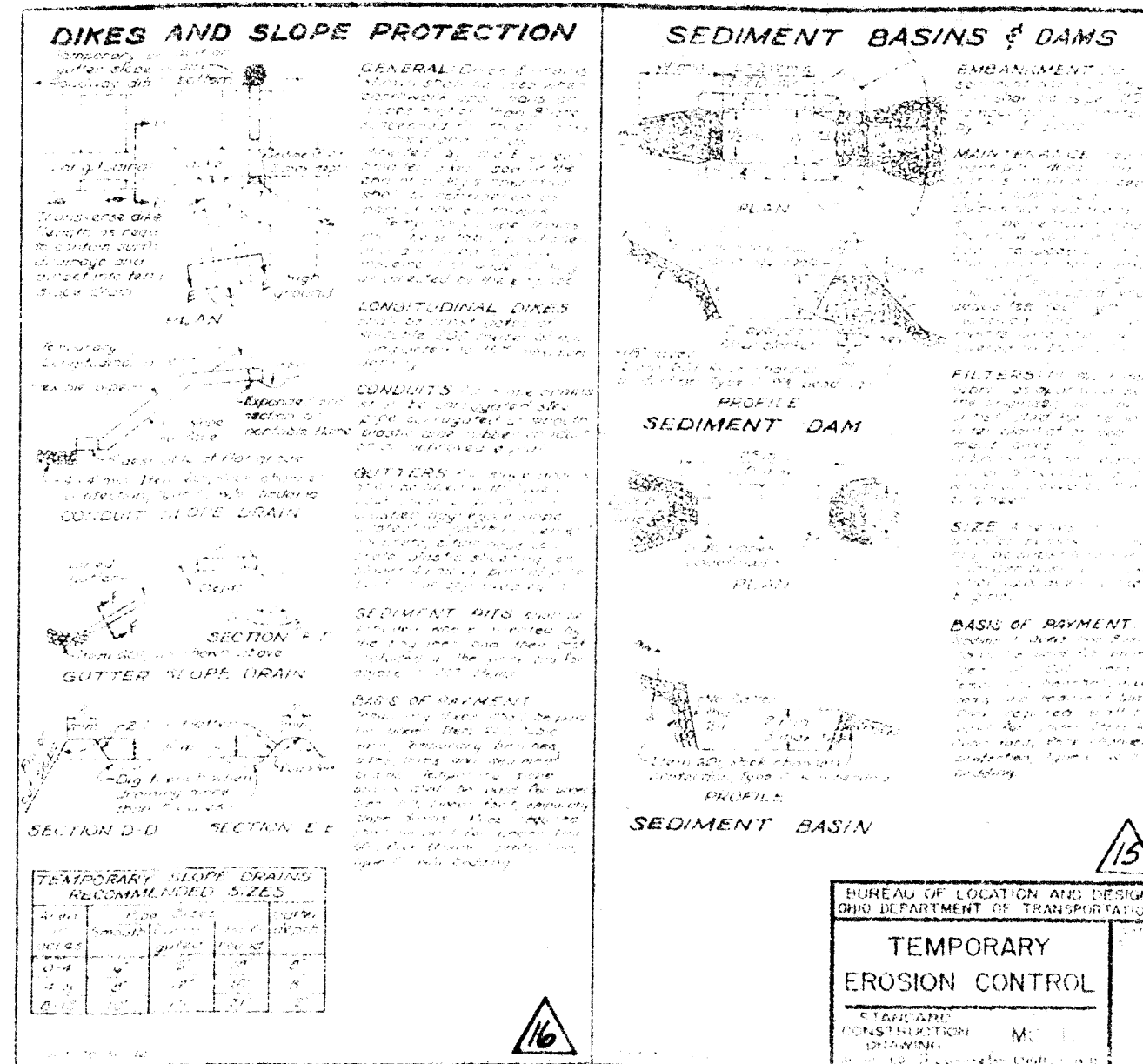
**Timing** Sediment control structures shall be functional throughout earth disturbing activity. Sediment ponds and perimeter sediment barriers shall be implemented as the first step of grading and within seven days from the start of grubbing. They shall continue to function until the upslope development area is restabilized.

**Sediment Barriers** Sheet flow runoff from denuded areas shall be intercepted by sediment barriers. Sediment barriers, such as sediment fences or diversions direction runoff to settling facilities, shall protect adjacent properties and water resources from sediment transported by sheet flow.

Erosion and sediment control practices used to satisfy the conditions of this plan shall meet the standards and specifications in the current edition of Water Management and Sediment Control in Urbanizing Areas (Soil Conservation Service).

**Waste Disposal** No solid or liquid waste, including building materials, shall be discharged in storm water runoff. Off-site vehicle tracking of sediments shall be minimized. The plan shall ensure and demonstrate compliance with applicable State or local waste disposal, sanitary sewer or septic system regulations.

**Maintenance** All temporary and permanent control practices shall be maintained and repaired as needed to assure continued performance of their intended function.



- REVEGETATION**  
Seed, sod or mulch bare soil as soon as possible.
- SEEDING AND MULCHING**
- Spread 4 to 6 inches of topsoil.
  - Fertilize according to soil test (or apply 10 lb/1000 sq. ft. of 20-10-10 or 10-10-10 fertilizer).
  - Seed with an appropriate mix for the site (see table).
  - Rake lightly to cover seed with 1/4" of soil. Roll lightly.
  - Mulch with straw (70-90 lb. or one bale per 1000 sq. ft.).
  - Anchor mulch by punching 2 inches into the soil with a dull, weighted disk or by using netting or other measures on steep slopes, or windy areas.
  - Water gently every day or two to keep soil moist. Less watering is needed once grass is 2 inches tall.

- SODDING**
- Spread 4 to 6 inches of topsoil.
  - Fertilize according to soil test (or apply 10 lb/1000 sq. ft. of 20-10-10 or 10-10-10 fertilizer).
  - Lightly water the soil.
  - Lay sod. Tamp or roll lightly.
  - On slopes, lay sod starting at the bottom and work toward the top. Peg each piece down in several places.
  - Initial watering should wet soil 6 inches deep (or until water stands 1 inch deep in a straight-sided container).
  - Then water lightly every day or two for 2 weeks.

If construction is completed after October 31, seeding or sodding may be delayed. Applying mulch or temporary seed (such as rye or winter wheat) is recommended if weather permits. Straw bale or silt fences must be maintained until final seeding or sodding is completed in spring March 15 - May 31.

- PRESERVING EXISTING VEGETATION**
- Wherever possible, preserve existing trees, shrubs, and other vegetation.
  - To prevent root damage, do not grade, place soil piles, or park vehicles near trees marked for preservation.
  - Place plastic mesh or snow fence barriers around trees to protect the area below their branches.

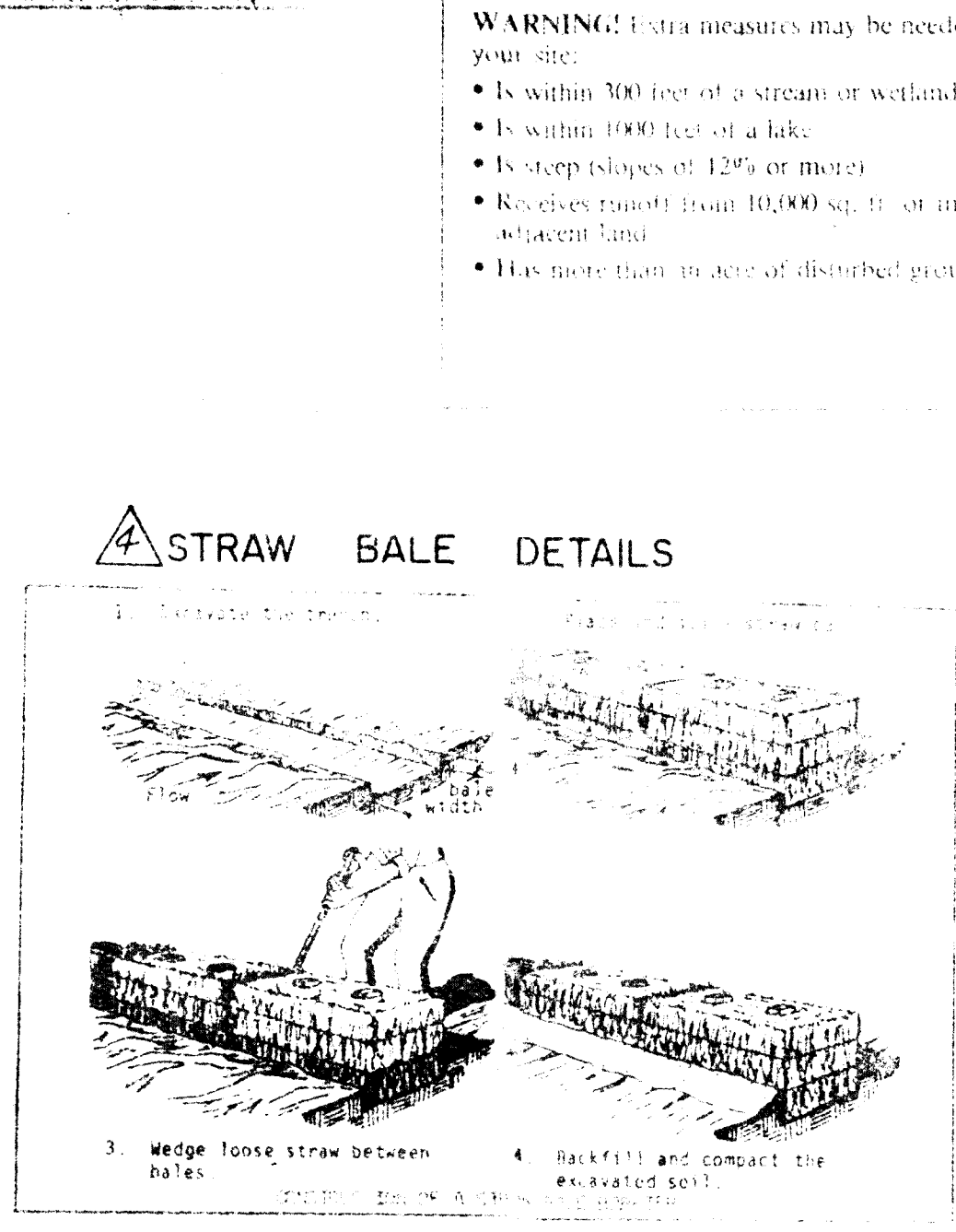
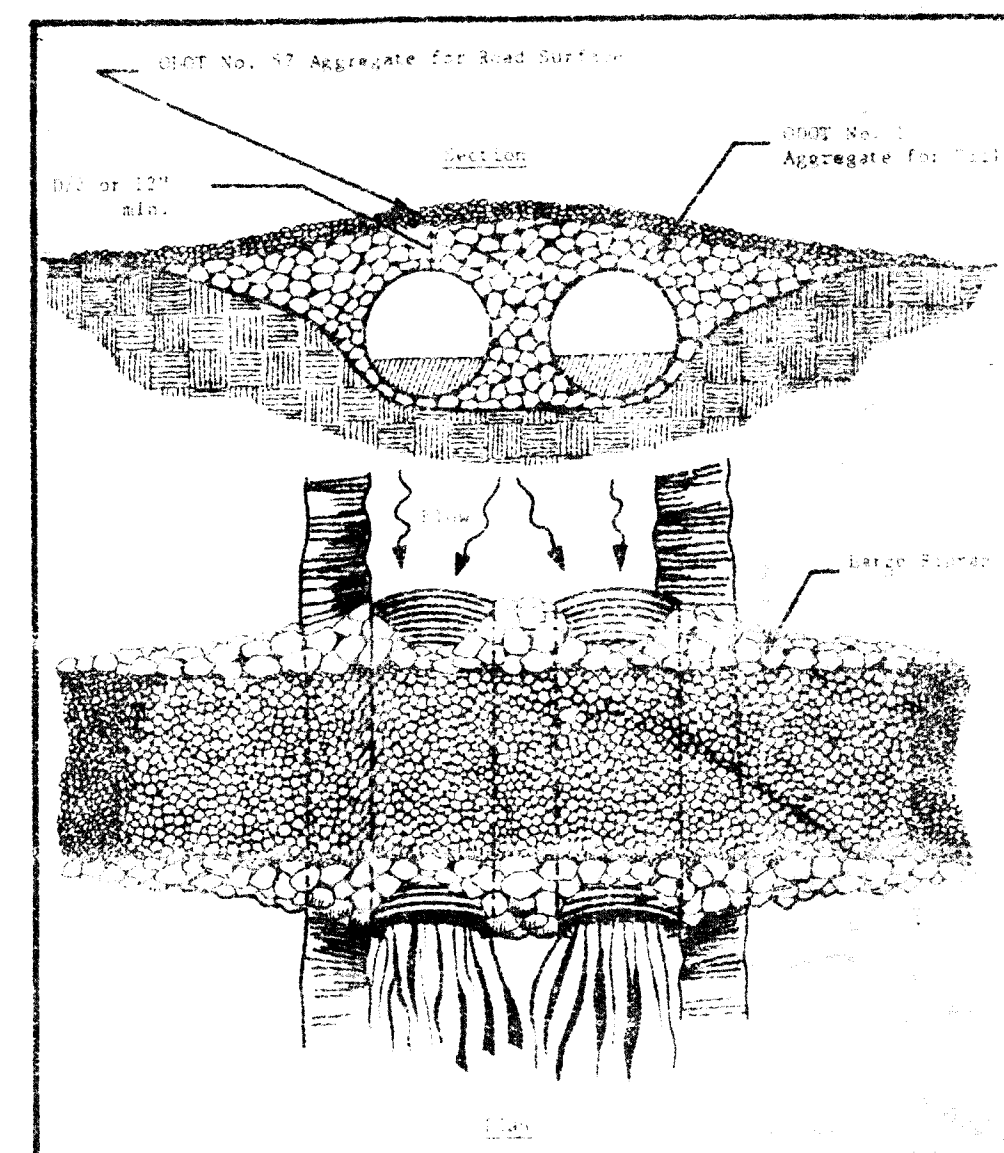
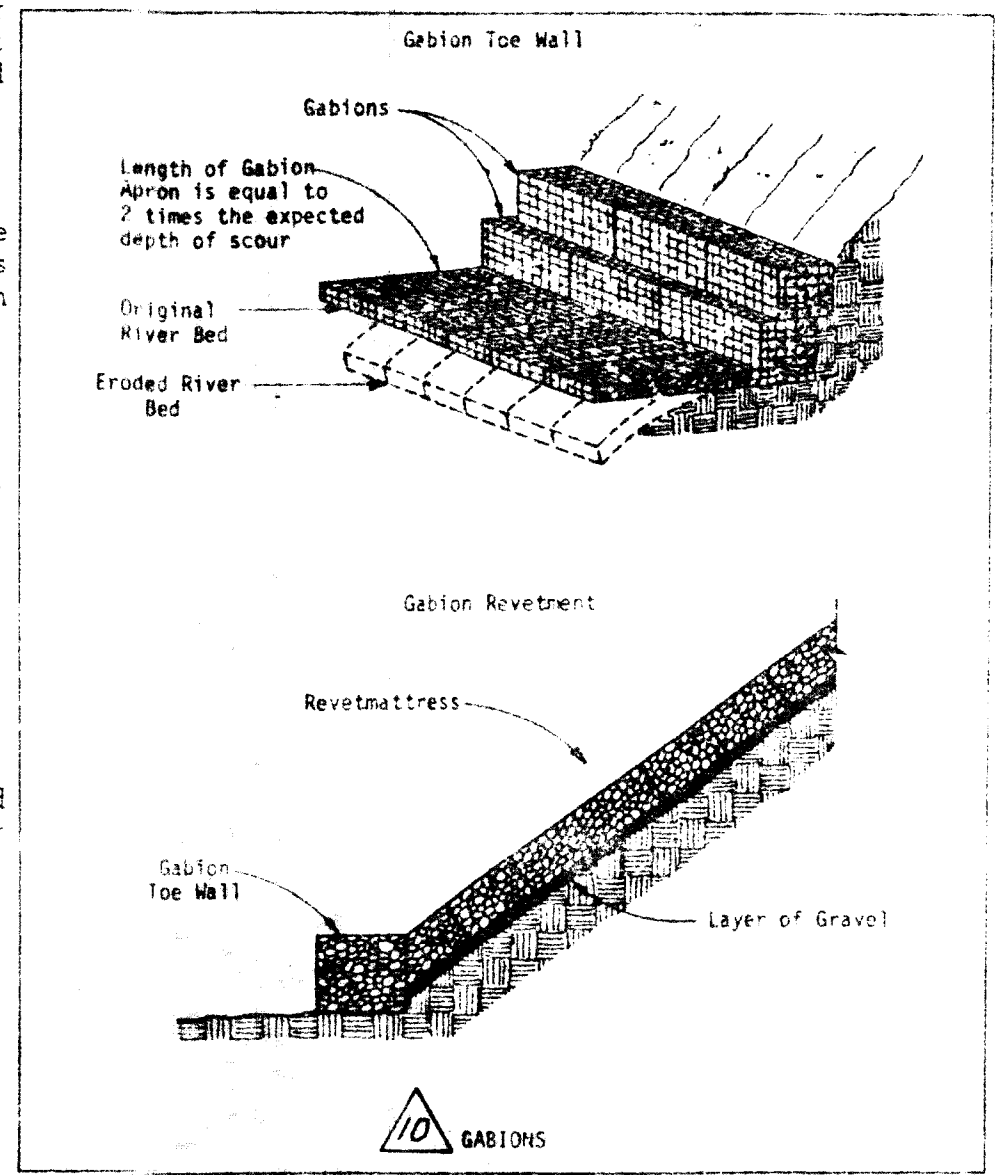
- STRAW BALE or SILT FENCE**
- Put up before any other work is done.
  - Install on downslope side(s) of site with ends extended up upslopes a short distance.
  - Place parallel to the contour of the land to allow water to pond behind fence.
  - Entrench 4 inches deep (see back page).
  - Stake (2 stakes per bale OR 1 stake every 3 feet for silt fence).
  - Leave no gaps between bales or sections of silt fence.
  - Inspect and repair once a week and after every 1/2 inch rain. Remove sediment if deposits reach half the fence or straw bale height.
  - Maintain until a lawn is established.

- SOIL PILES**
- Located away from any downslope street, driveway, stream, lake, wetland, ditch or drainage way.
  - Temporary seed such as annual rye is recommended for topsoil piles.
  - Surround with straw bales or silt fence.

- GRAVEL DRIVE**
- Install a single access drive using 3 to 5 inch aggregate over a geotextile material.
  - Lay gravel 6 inches deep and 10 feet wide from the foundation to the street.
  - Use to prevent tracking dirt onto the road by all vehicles.
  - Maintain throughout construction until driveway is paved.
  - Park all construction vehicles on the street and off of the site.

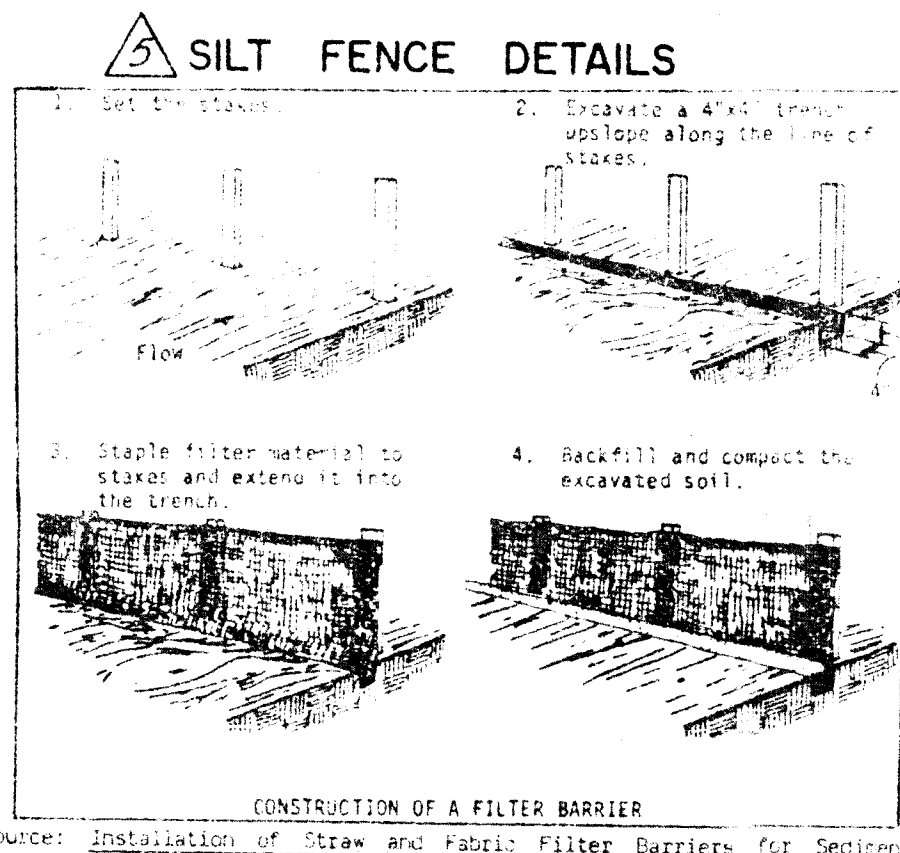
- SEDIMENT CLEANUP**
- By the end of each work day, sweep or scrape up soil tracked onto the road.
  - By the end of the next work day after a storm, clean up soil washed off-site, and check straw bales and silt fence for damage or sediment buildup.

- DOWNSPOUT EXTENDERS**
- Not required, but highly recommended.
  - Install as soon as gutters and downspouts are completed.
  - Route water to a grassed or paved area.
  - Maintain until a lawn is established.

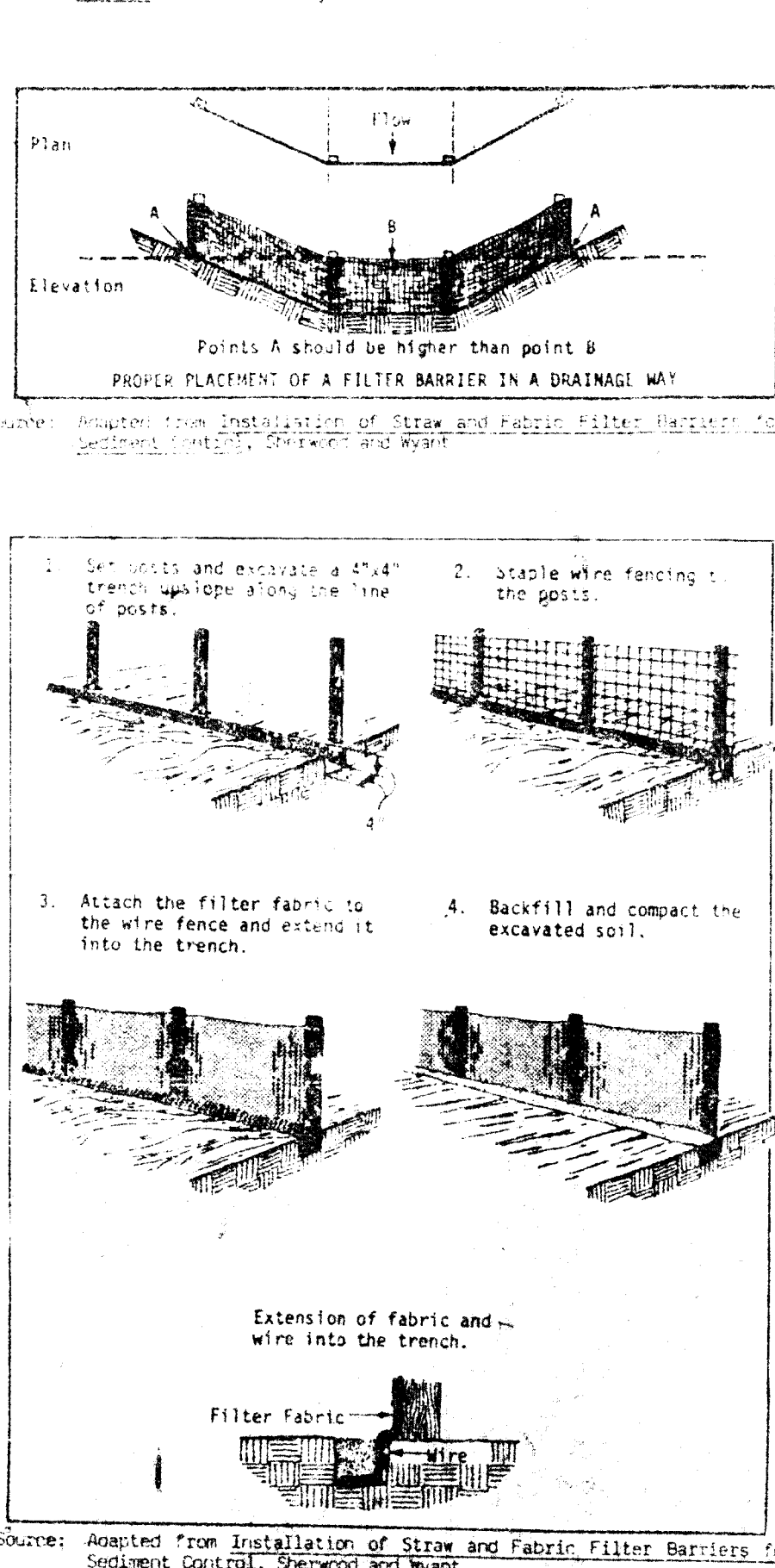
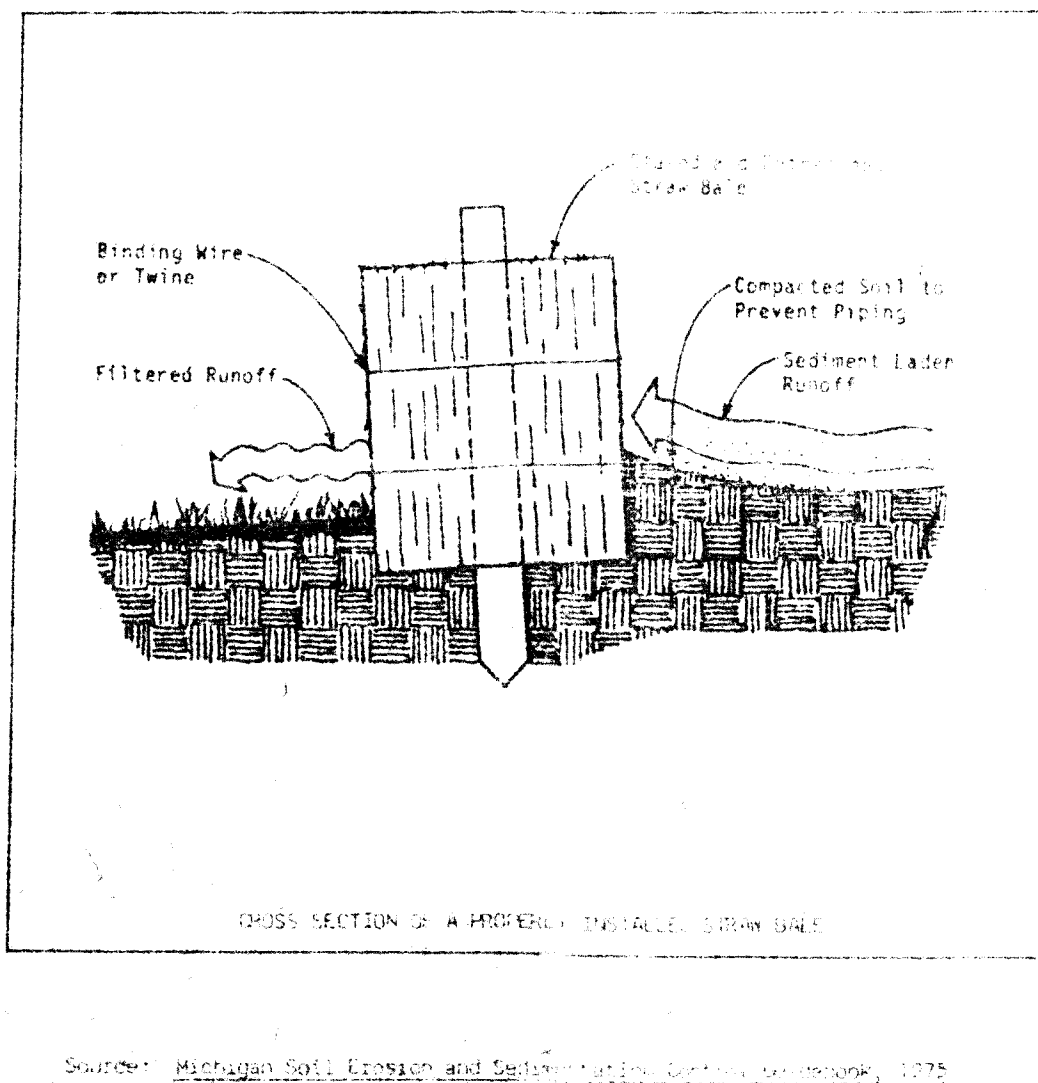
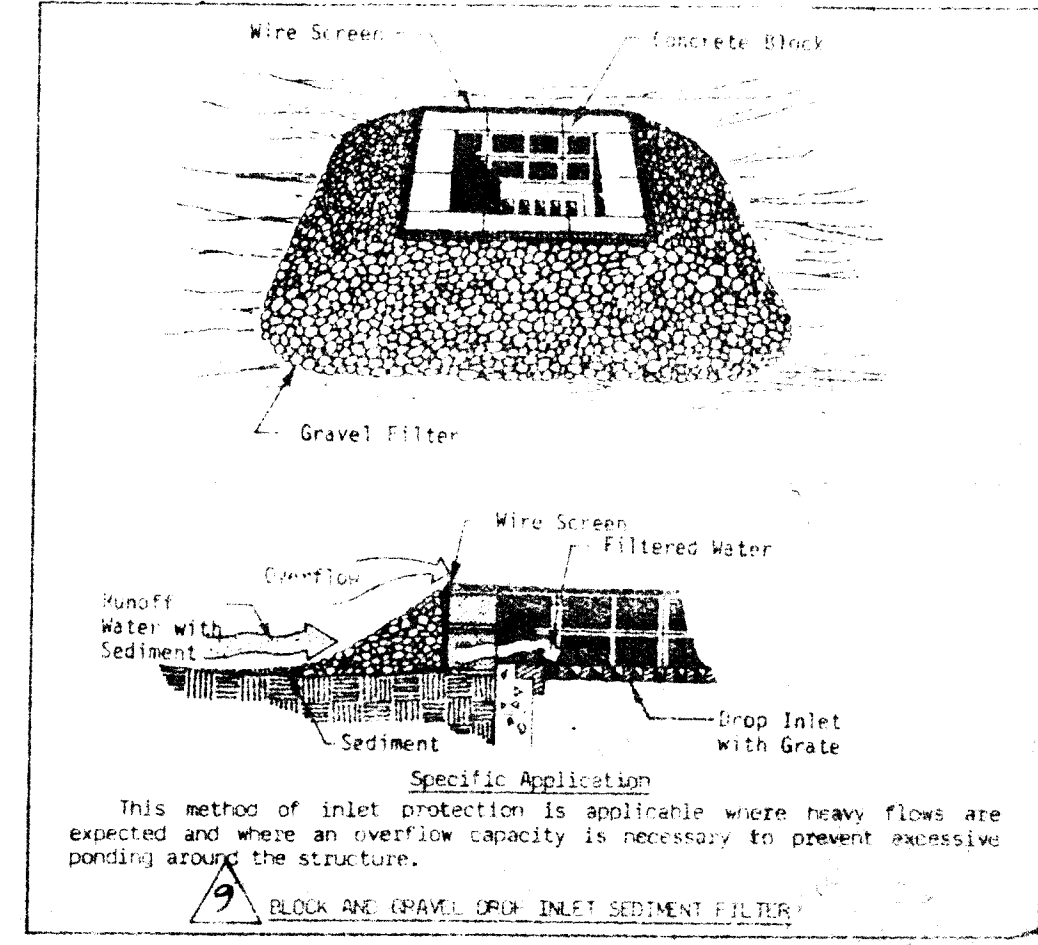
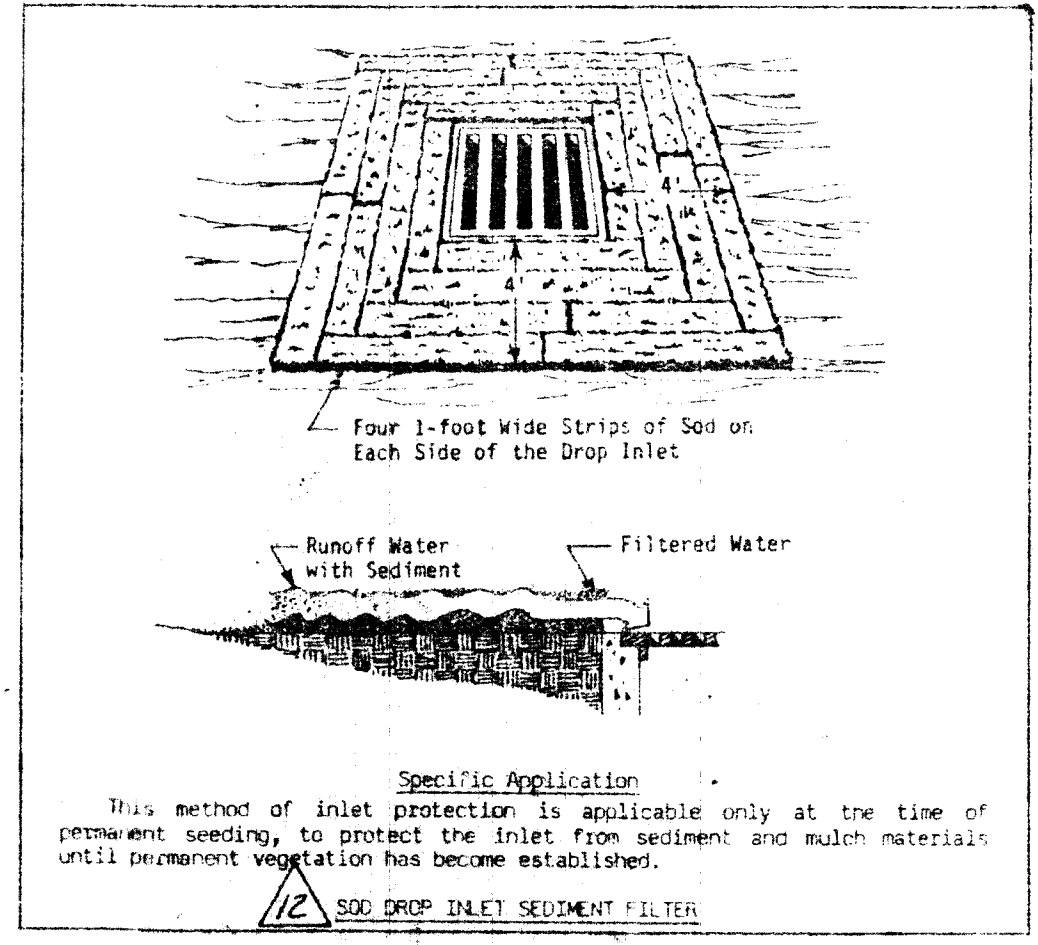
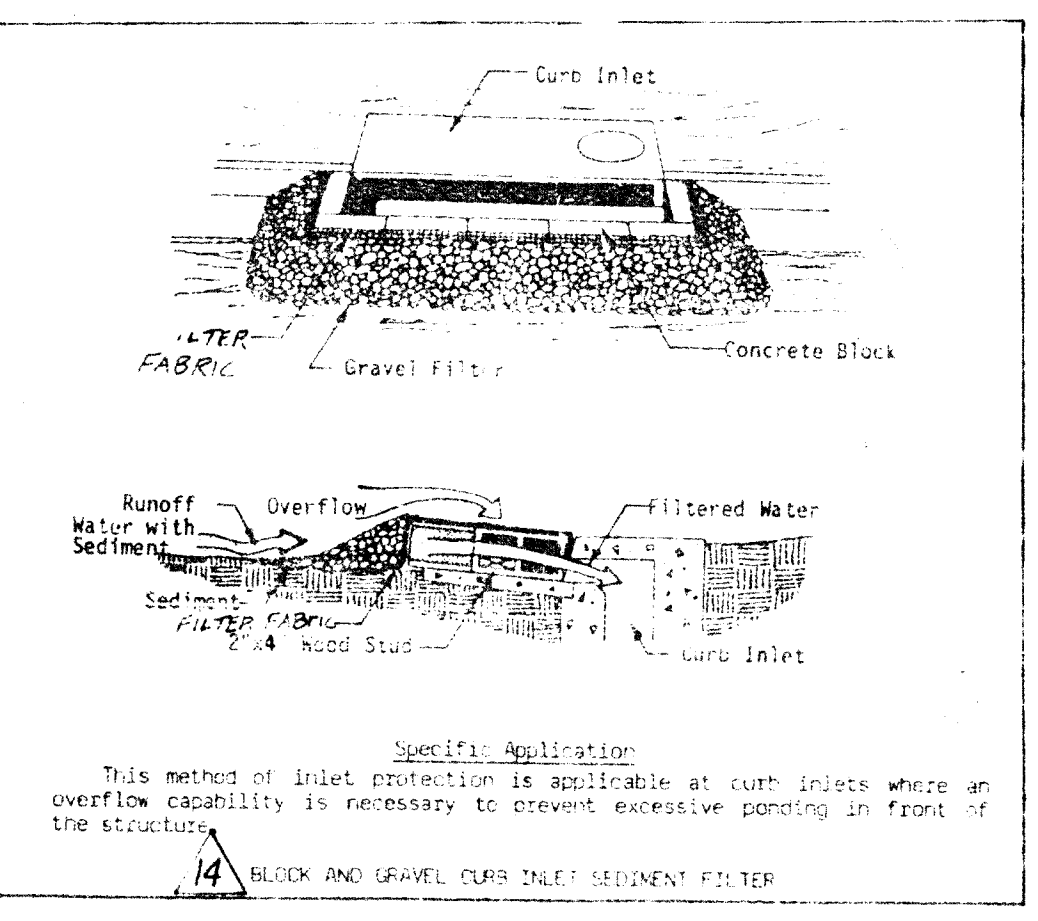
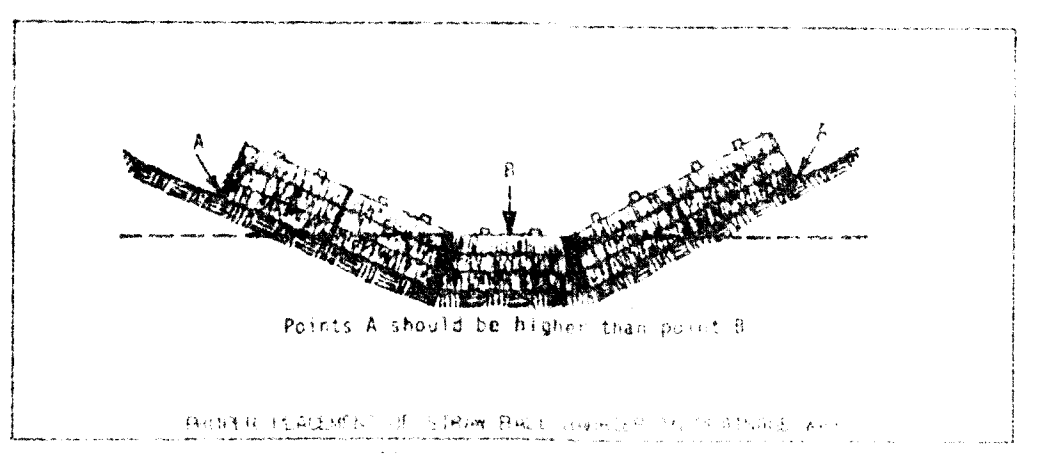
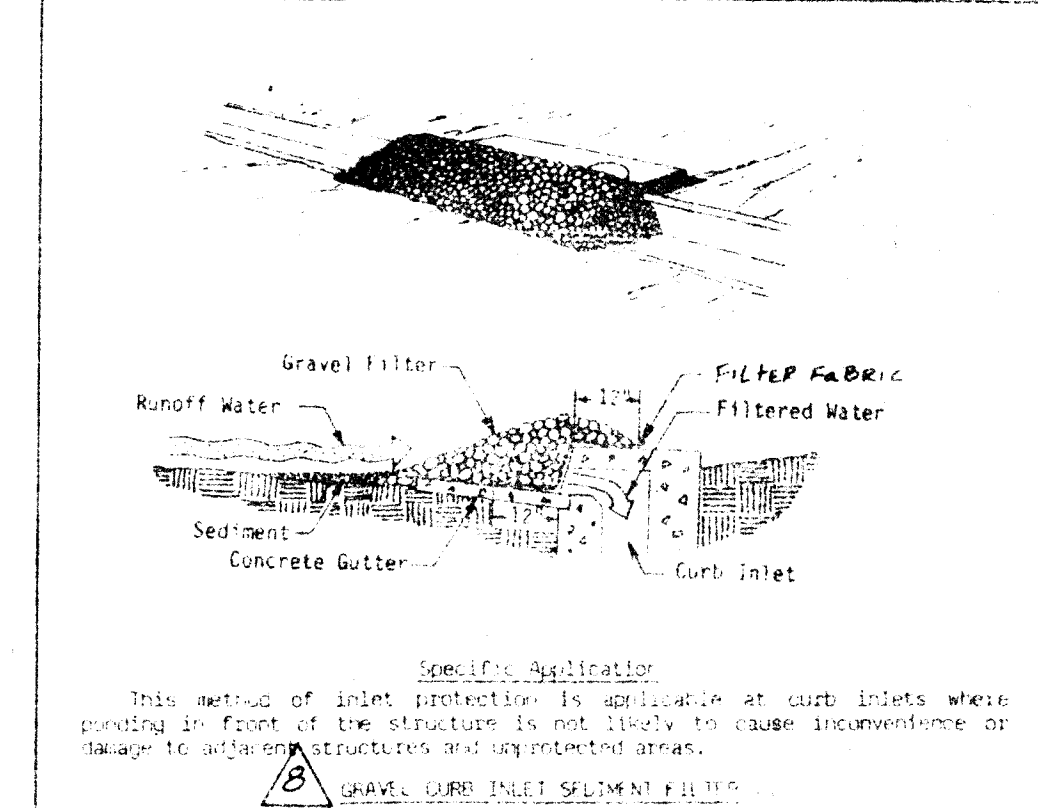
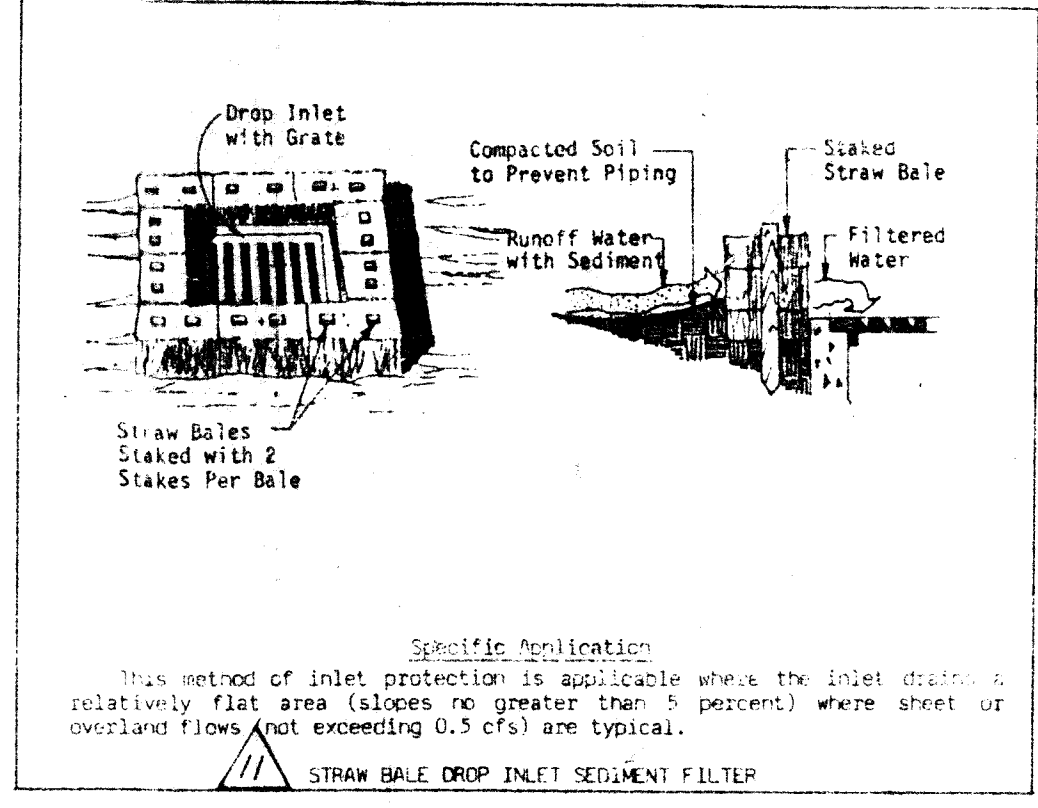
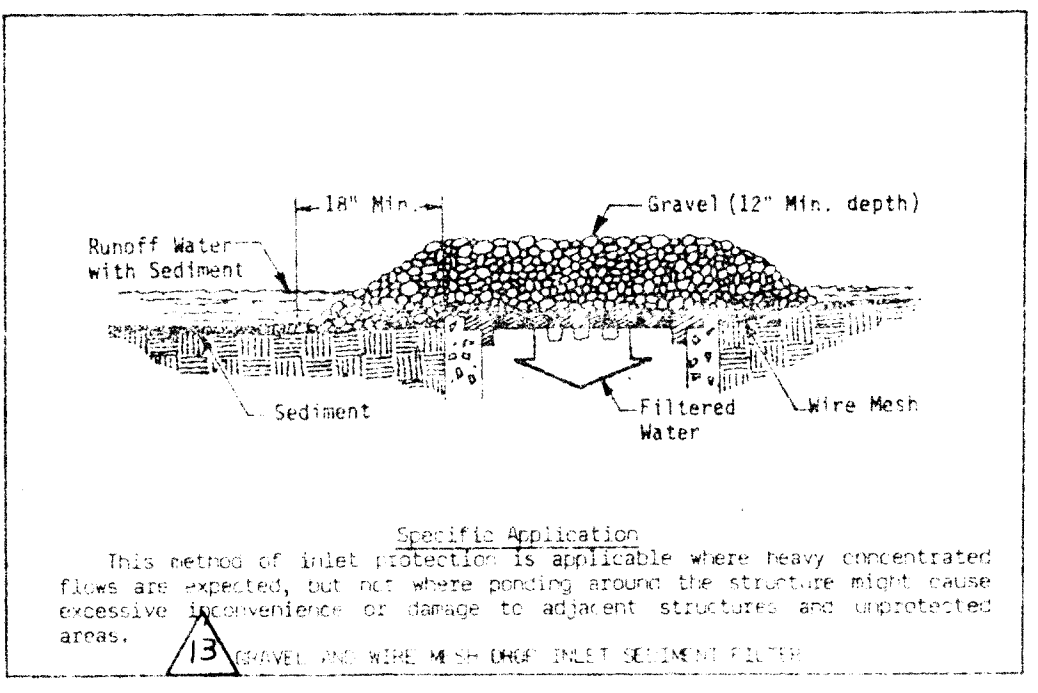


**Typical Lawn Seed Mixtures**

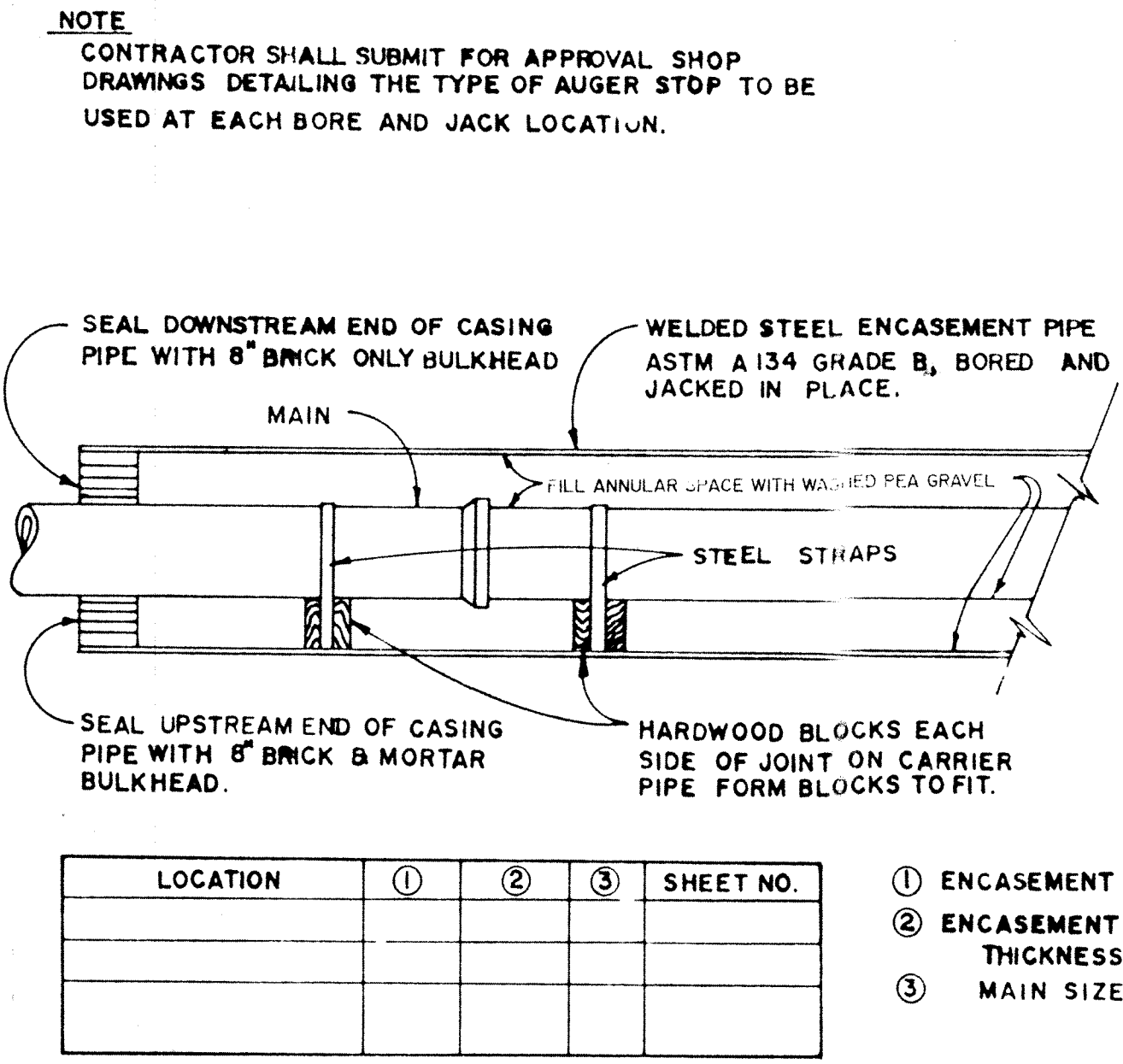
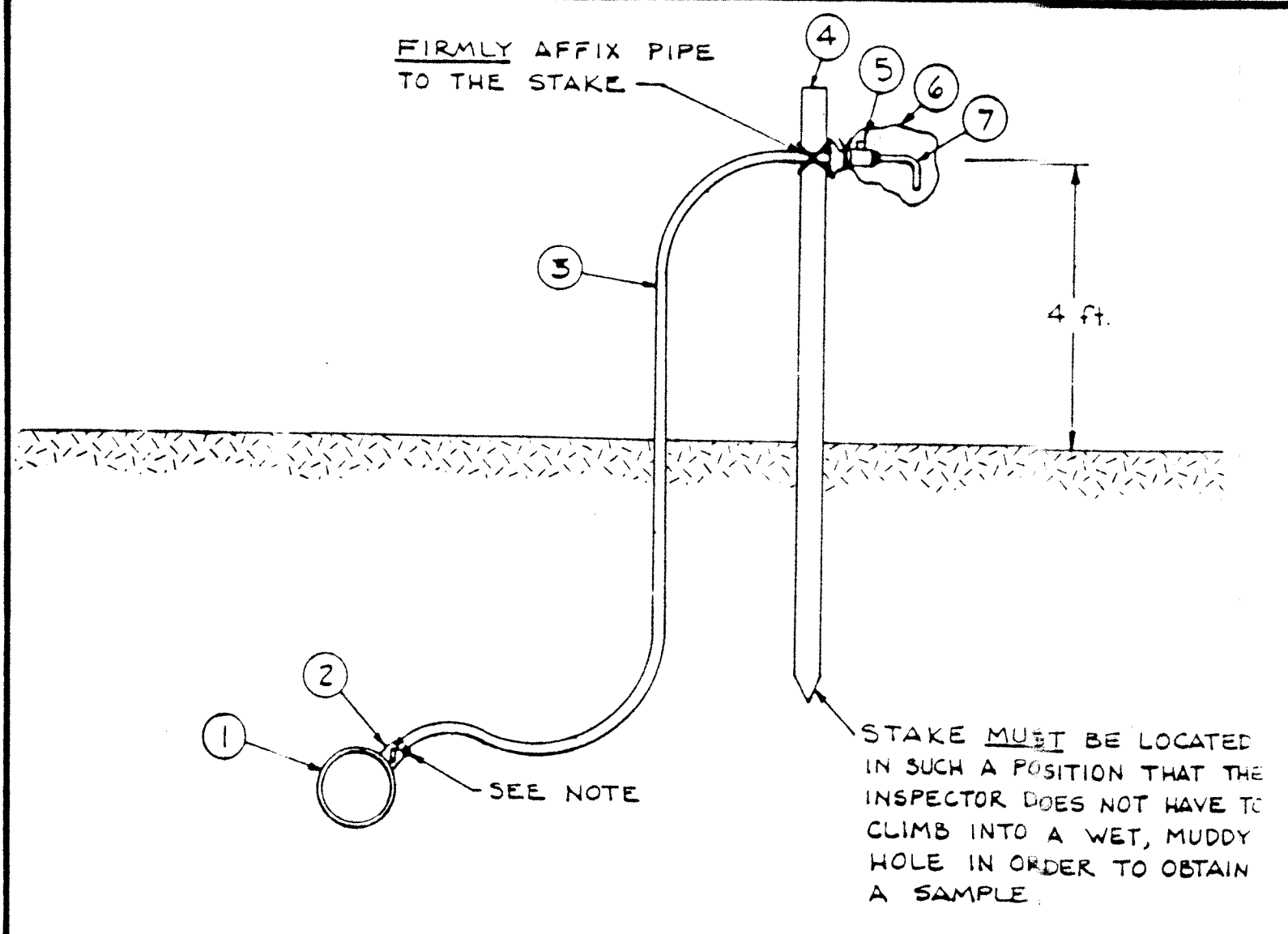
Grass	Percent by Weight	Sunny Site	Shady Site
Kentucky bluegrass	65%	15%	
Fine fescue	20%	70%	
Perennial ryegrass	15%	15%	
Seeding rate (lb./1000 sq. ft.)	3-4	4-5	



**INLET PROTECTION DETAILS**



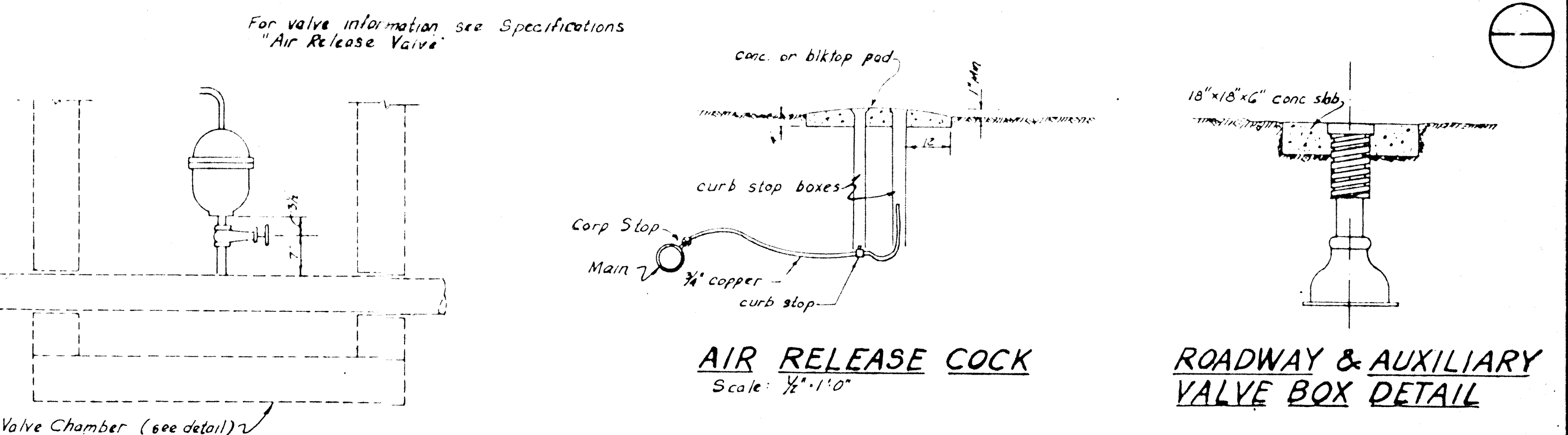




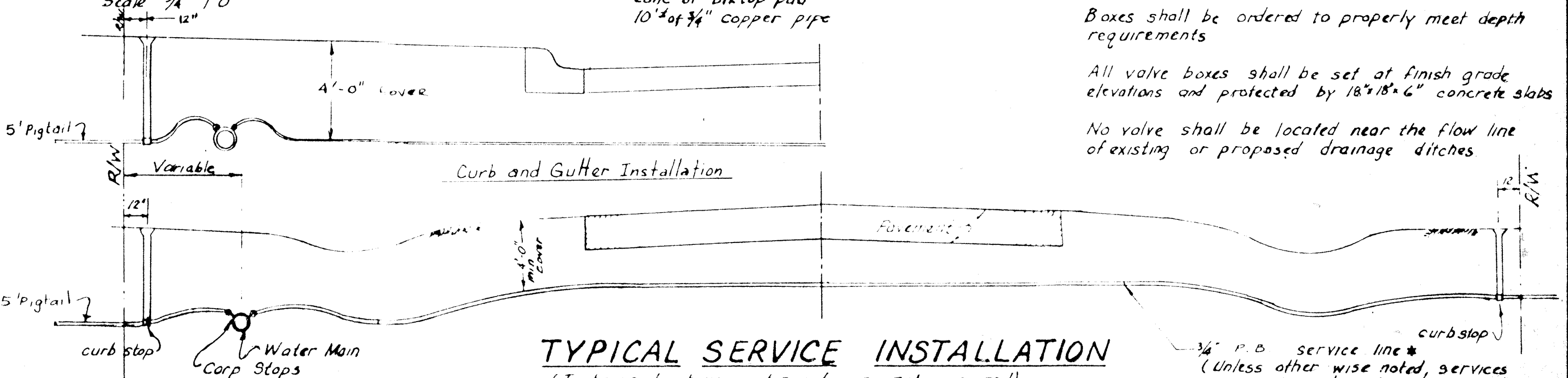
LOCATION	①	②	③	SHEET NO.

- ① ENCASEMENT PIPE SIZE
- ② ENCASEMENT PIPE WALL THICKNESS
- ③ MAIN SIZE

**ENCASEMENT PIPE DETAIL**



**AIR RELEASE VALVE**



**TYPICAL SERVICE INSTALLATION**

(To be used where meter pits are not required)  
Monitor Cover with frost lid No. 24, 30 or 36 with No. RML -IT lid, "Ford" or equal.

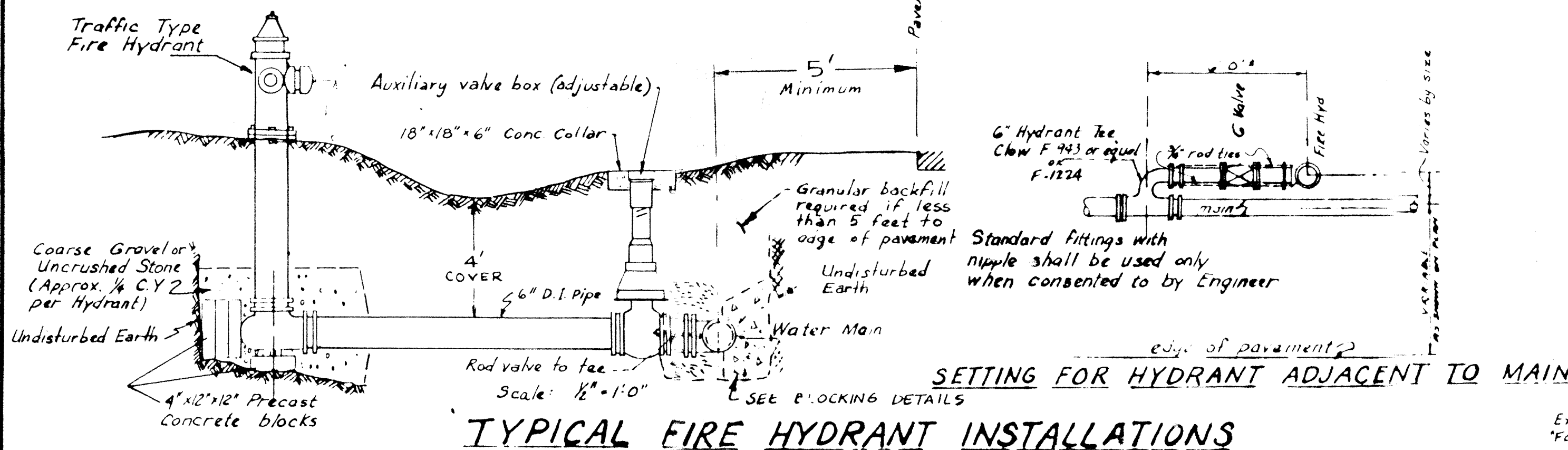
Pipe Size	CY conc. per 10' of encasement	# of G. Bars per ft. of encasement	Length of #3 Bars per ft. of encasement	# of #3 Bars per ft. of encasement
6"	0.21	1.502	3'-3"	0.21
8"	0.37	"	4'-3"	0.30
10"	0.57	"	4'-9"	0.39
12"	0.77	"	5'-3"	0.48
16"	1.20	"	6'-3"	1.17
18"	0.247	"	8'-10"	1.28
20"	0.270	"	7'-8"	1.39
24"	0.315	"	8'-0"	1.69

**BILL OF MATERIAL**

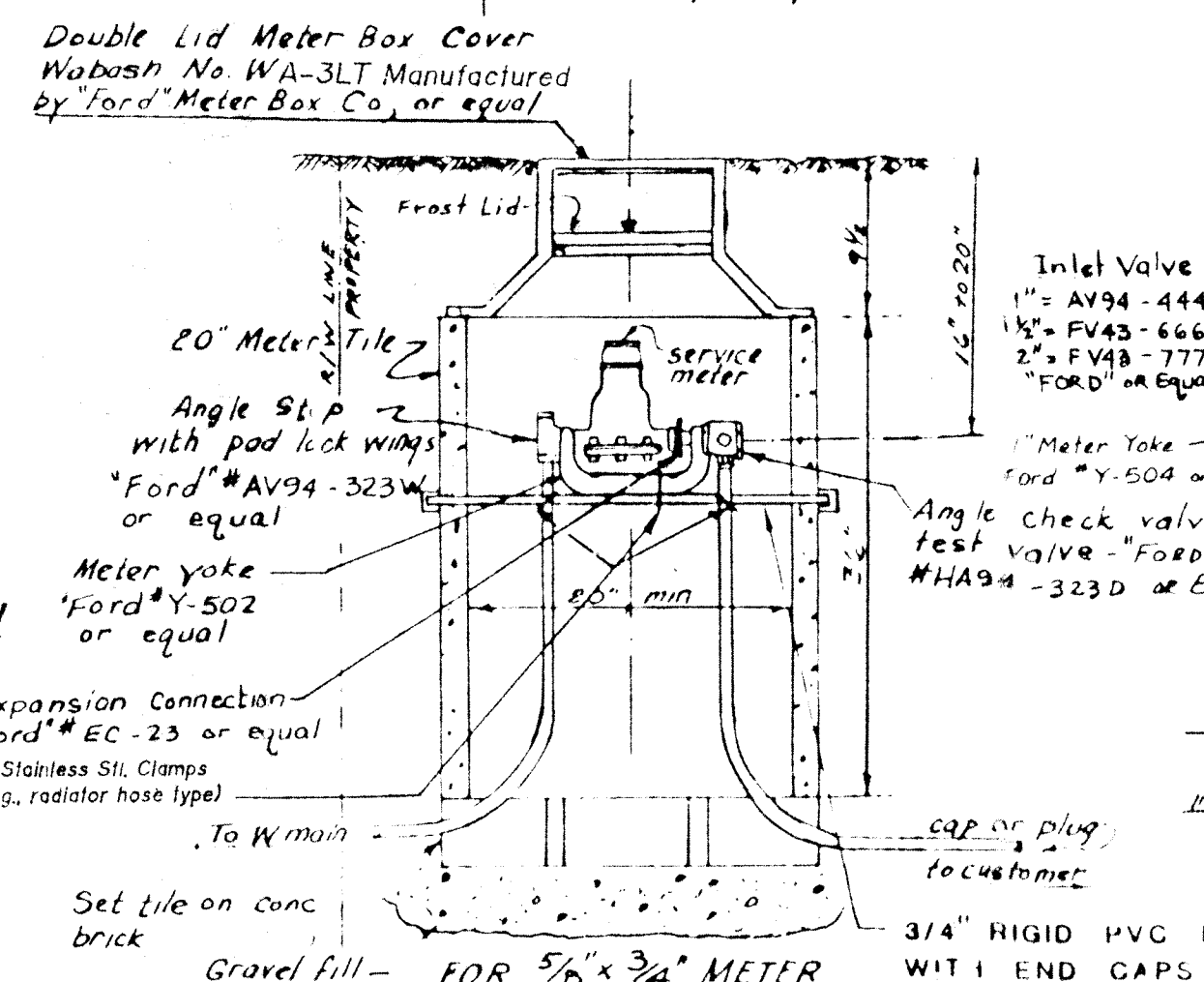
- ① WATER MAIN
- ② CORPORATION STOP
- ③ SERVICE PIPE (POLYBUTYLENE)
- ④ STURDY STAKE
- ⑤ 3/4" CURB STOP
- ⑥ PLASTIC "BAGGY" W/ TWIST TIE (NO TAPE)
- ⑦ 3/8" COPPER (6" TO 8" LONG - BENT DOWN)

NOTE: DURING FREEZING CONDITIONS THE LINE WILL BE DRAINED AT THE CORP. STOP AND RETIGHTENED, THEN RE-ACTIVATED BY THE CONTRACTOR'S PERSONNEL AT THE TIME OF THE TEST.

**PURITY TEST STATION**

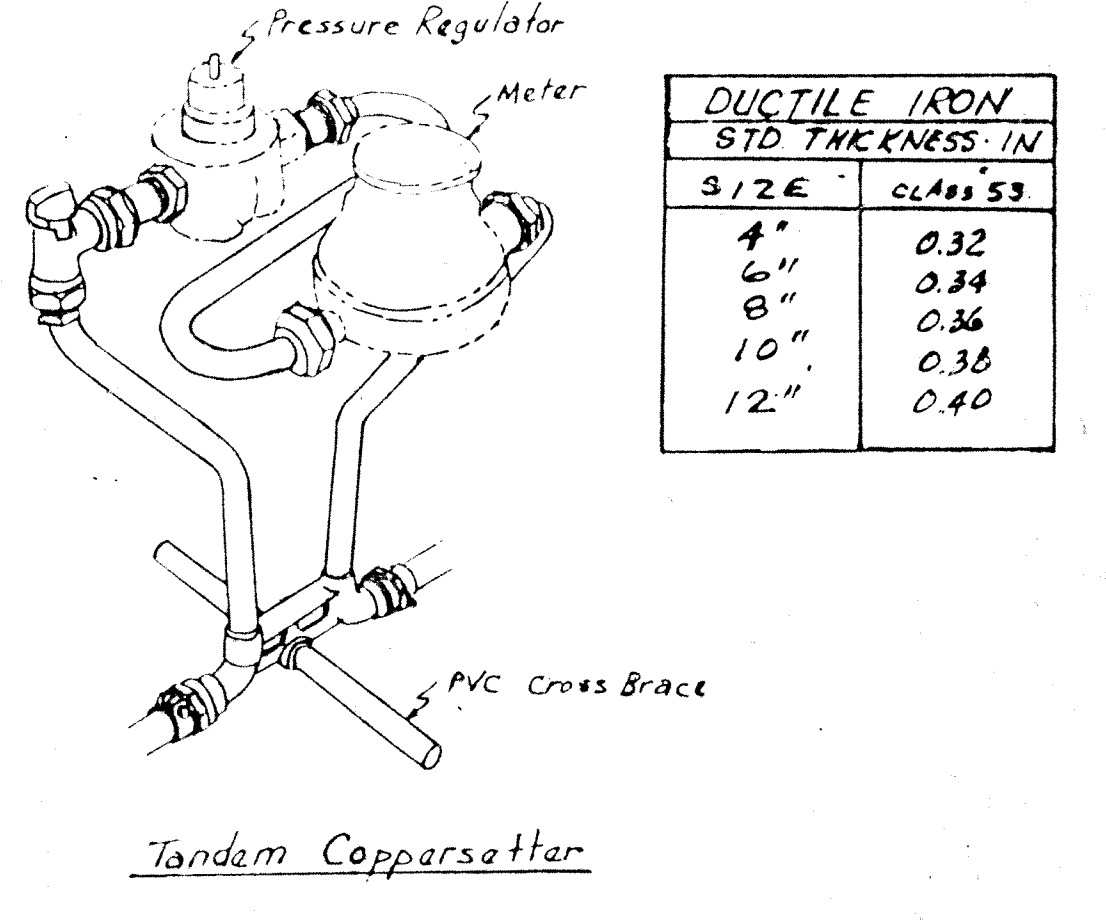


**TYPICAL FIRE HYDRANT INSTALLATIONS**



**STANDARD METER SETTINGS**

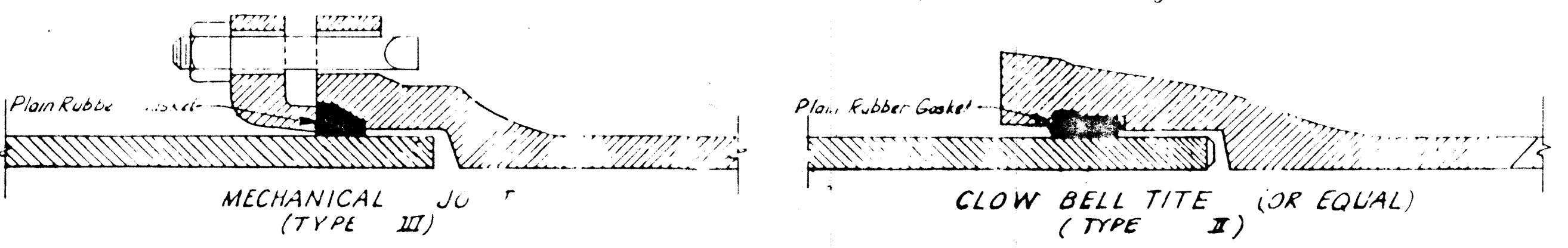
**CONCRETE MAIN ENCASEMENT**



PIPE SIZE	STD THICKNESS IN
3/2"	CLASS 53
4"	0.32
6"	0.34
8"	0.36
10"	0.38
12"	0.40

Notes:  
All fire hydrants shall be rodded and set on a large flat stone or concrete block. The rods shall be given a protective bituminous coating.  
Hydrants shall be of the top quality of the manufacturer.

Concrete block shall be evenly and firmly bedded against firm earth backing and bedded in sand if directed by the engineer.  
Auxiliary valves shall be used in all installations. Auxiliary valves and valve boxes are paid for under the appropriate item and are not included in the fire hydrant item for payment.  
No valves or fire hydrants shall be located near the flow line of existing or proposed ditches.  
Fire hydrant leads crossing roadside ditches shall have 4'-0" min. cover.



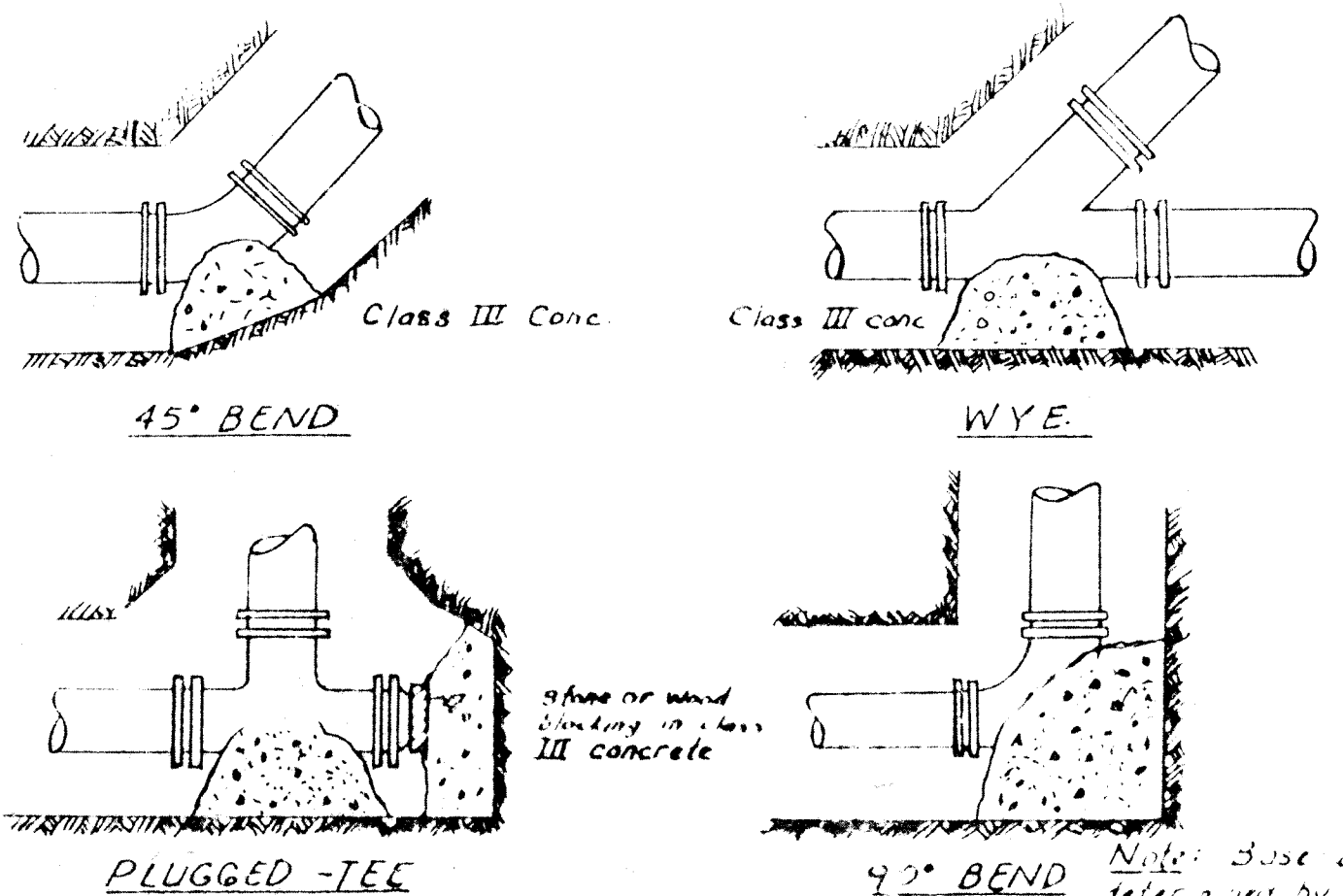
**PIPE JOINTS**

Size	MAXIMUM DEFLECTIONS FOR MECHANICAL JOINT PIPE		
	Based on 18' Length	Angle	Radius of Curve
6"	1:07	27'	145'
8", 10", 12"	5:21	20'	195'

Size	MAXIMUM DEFLECTIONS FOR PUSH-ON TYPE PIPE		
	Based on 18' Length	Angle	Radius of Curve
6", 8"	5°	19'	20:1

Note: Standard bends shall be used where radii are less than those shown in table.

FOR PIPE GREATER THAN 12" SEE THE CONTRACT DOCUMENT SECTION 9.3D



**BLOCKING DETAILS**

DESCRIPTION	CU. FT.
6" to 12" Tees	7
" " " Y's	4
" " " Bends	3
" " " Crosses	8
16" & 18" Tees	12
" " " Y's	5
" " " Bends	7
" " " Crosses	14
20" & 24" Tees	20
" " " Y's	10
" " " Bends	8

Note: Base area of concrete blocking to be determined by Engineer from size and pressure in pipe and permissible bearing capacity of soil. No extra payment will be made for concrete where it is necessary to use more than is shown in table.

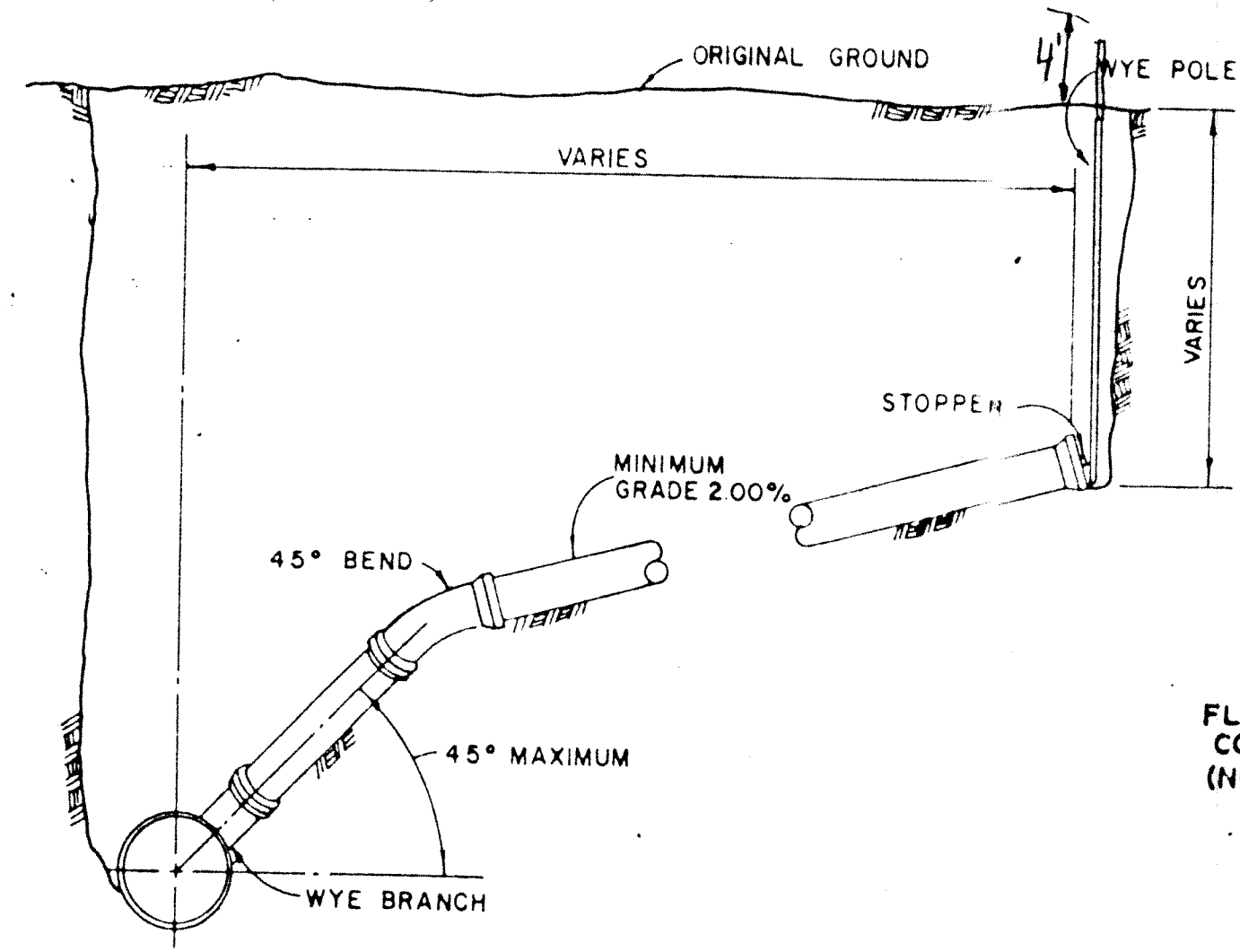
NO.	BY	DATE
1	JL	8-2-82
2	BP	11-24-82
3	BP	12-21-82

**BUTLER COUNTY, OHIO**

**STANDARD DETAILS FOR WATER MAINS AND APPURTENANCES**

DATE	SCALE	NAME	JOB NO.



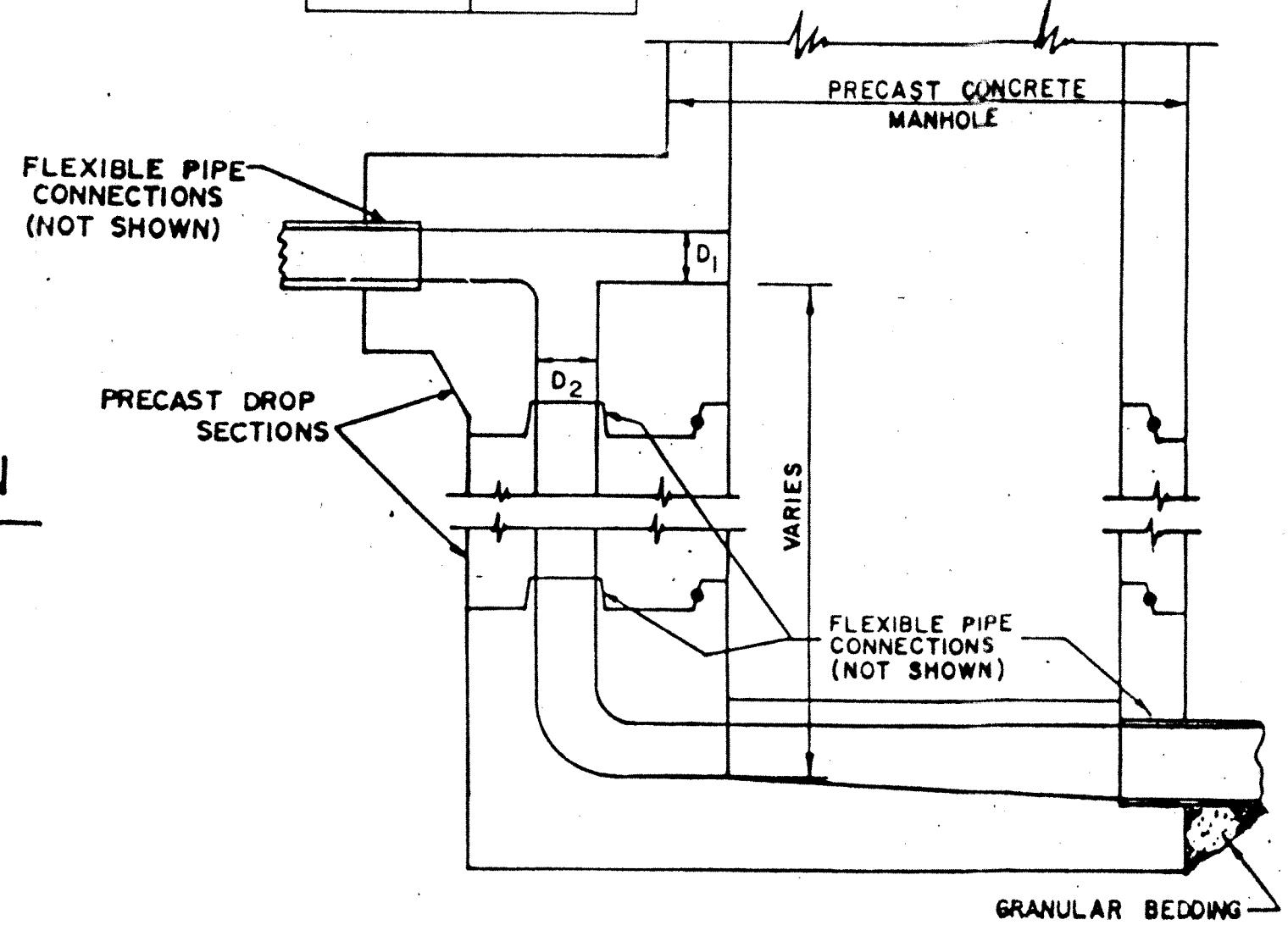


**TYPICAL SERVICE CONNECTION**  
NO SCALE

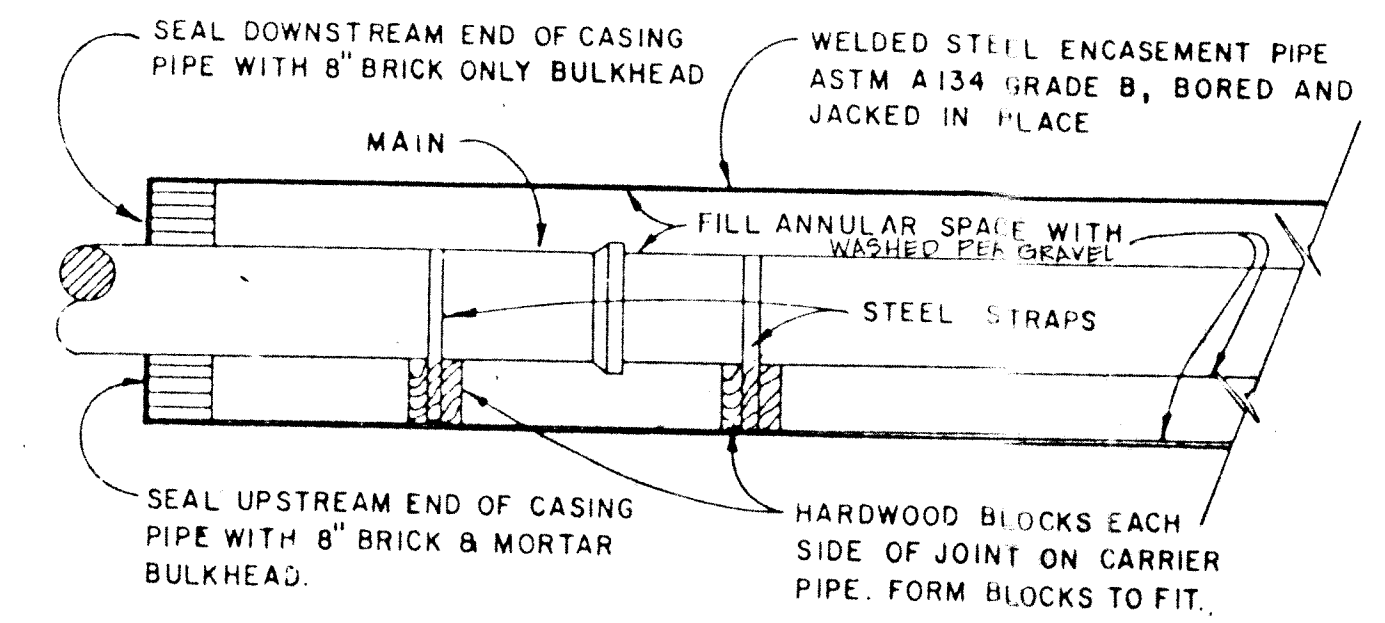
NOTE:  
CONTRACTOR SHALL SUBMIT FOR APPROVAL SHOP DRAWINGS DETAILING THE TYPE OF AUGER STOP TO BE USED AT EACH BORE AND JACK LOCATION.

D <sub>1</sub>	D <sub>2</sub> (MIN.)
6"	6"
8"	6"
10"	6"
12"	8"
15"	8"
18"	10"
21"	10"
24"	12"
27"	15"
30"	18"

DROP MANHOLES SHALL BE USED WHEN THE DIFFERENCE IN ELEVATION BETWEEN THE INVERT OF THE INLET AND THE OUTLET PIPE EXCEEDS 2.0 FEET.



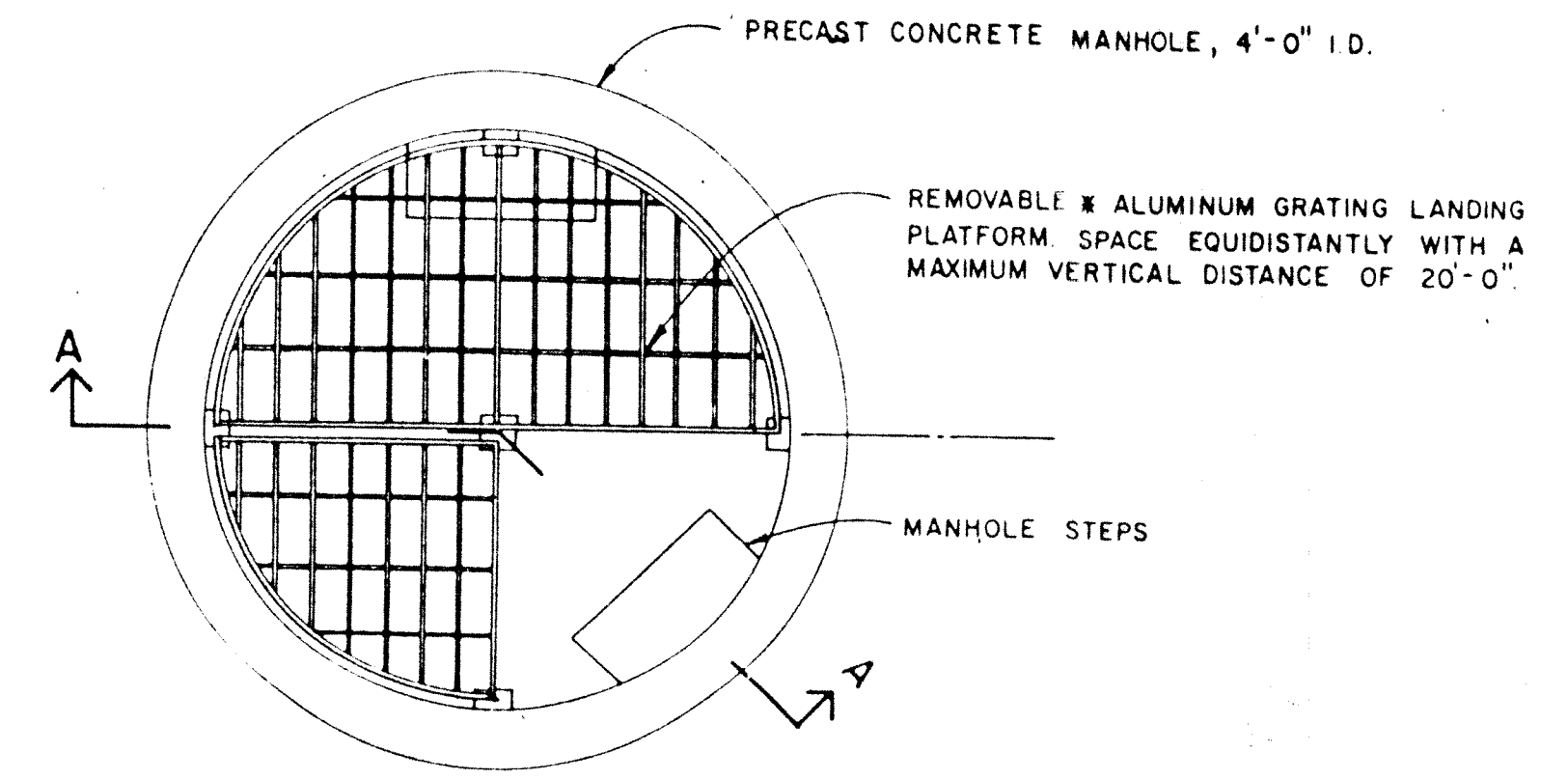
**PRECAST DROP MANHOLE**  
NO SCALE



LOCATION	①	②	③	SHEET NO.

- ① ENCASEMENT PIPE SIZE"
- ② ENCASEMENT PIPE WALL THICKNESS
- ③ MAIN SIZE

**ENCASEMENT PIPE DETAIL**  
NO SCALE

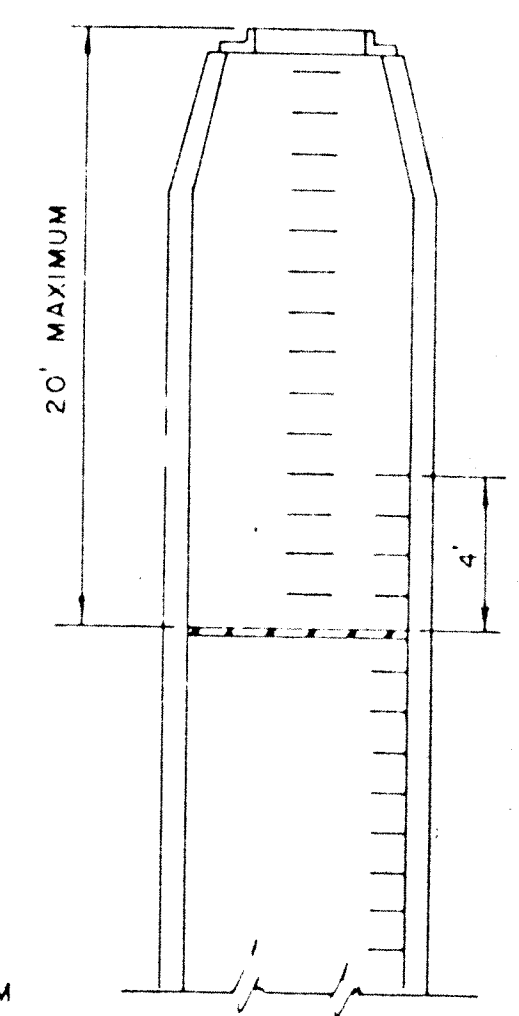


**PLAN**  
Ø12'-0" BELOW GRADE

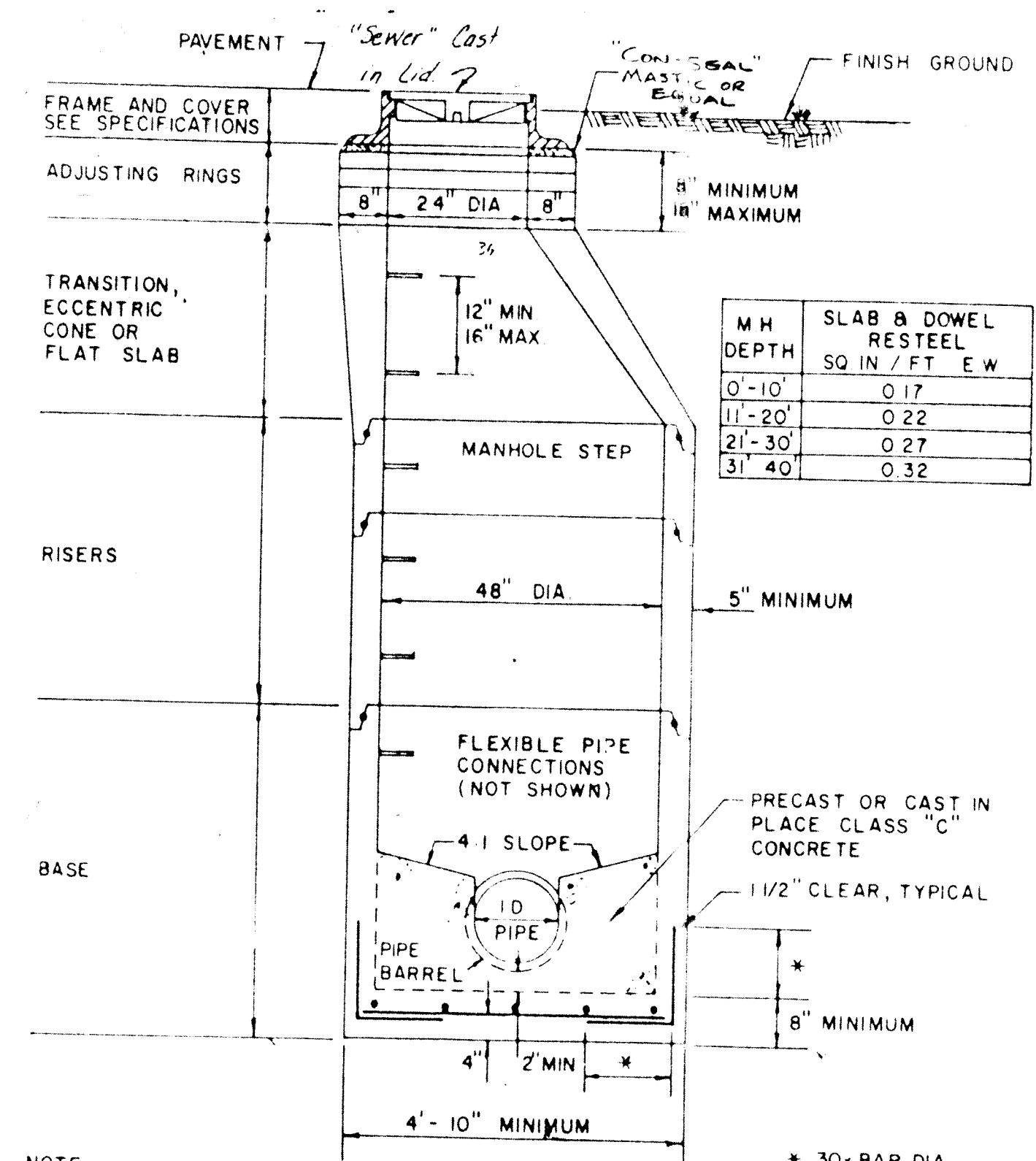
**MANHOLE GRATING DETAIL**  
NO SCALE

\* ALUMINUM GRATING SHALL BE RECTANGULAR PRESSURE LOCKED TYPE PROPERLY SUPPORTED BY AMPLE FRAMES ANCHORED INTO CONCRETE. GRATING SHALL BE OF SUCH CONSTRUCTION AS TO HAVE A UNIFORM LOAD OF 250 LB PER SQUARE FOOT WITH A DEFLECTION OF THAN 1/160 OF THE SPAN. BEARING BARS SHALL NOT BE LESS THAN 3/16" THICK AND A MINIMUM OF 1-1/4" IN DEPTH. ALL OPENINGS AND EDGES SHALL BE BANDED.

ALUMINUM GRATING SHALL BE PROVIDED AS SHOWN AT ALL MANHOLES WHERE THE VERTICAL DISTANCE FROM THE TOP OF THE MANHOLE CASTING TO THE DOWNSTREAM INVERT IS GREATER THAN 20 FEET. THE COST FOR THE MANHOLE GRATING SHALL BE INCLUDED IN THE PRICE BID PER MANHOLE.

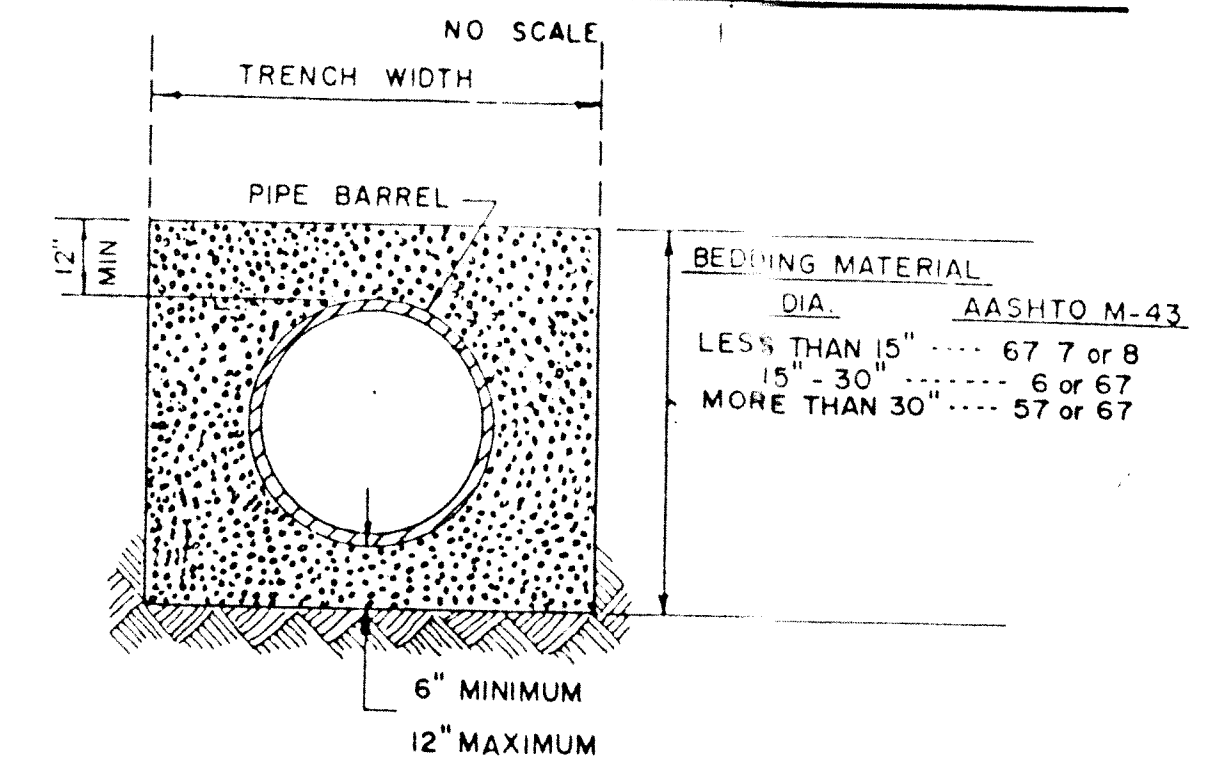


**SECTION A-A**

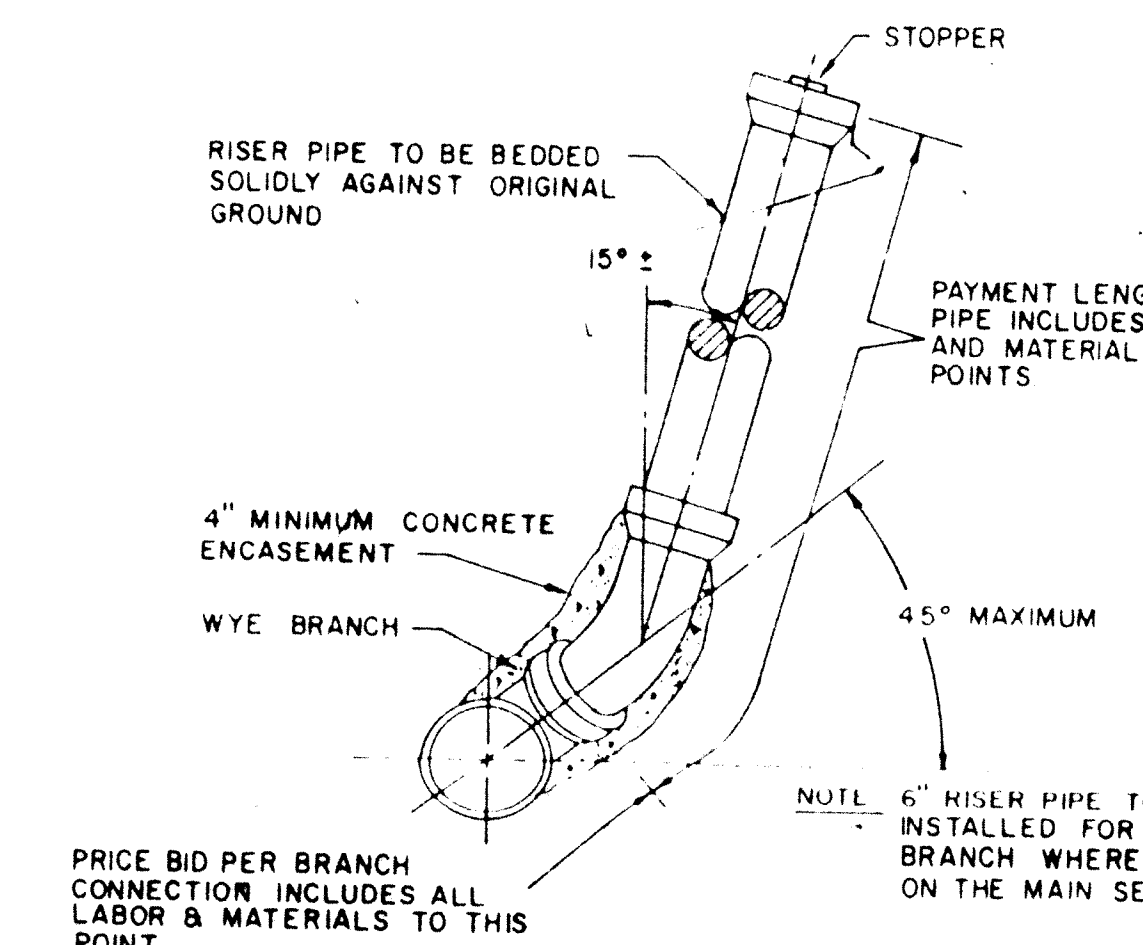


**TYPE "A" PRECAST CONCRETE MANHOLE**  
NO SCALE

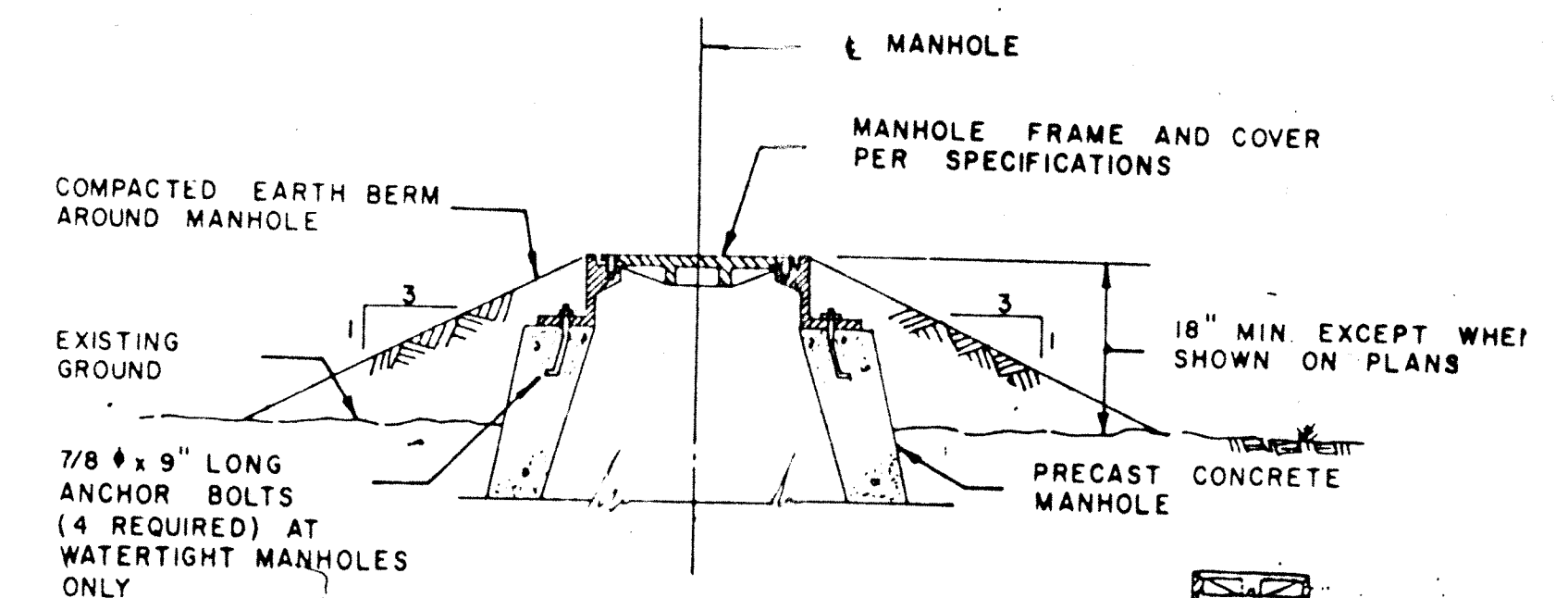
NOTE:  
SEE SPECIFICATIONS FOR ALTERNATE MANHOLE DETAILS



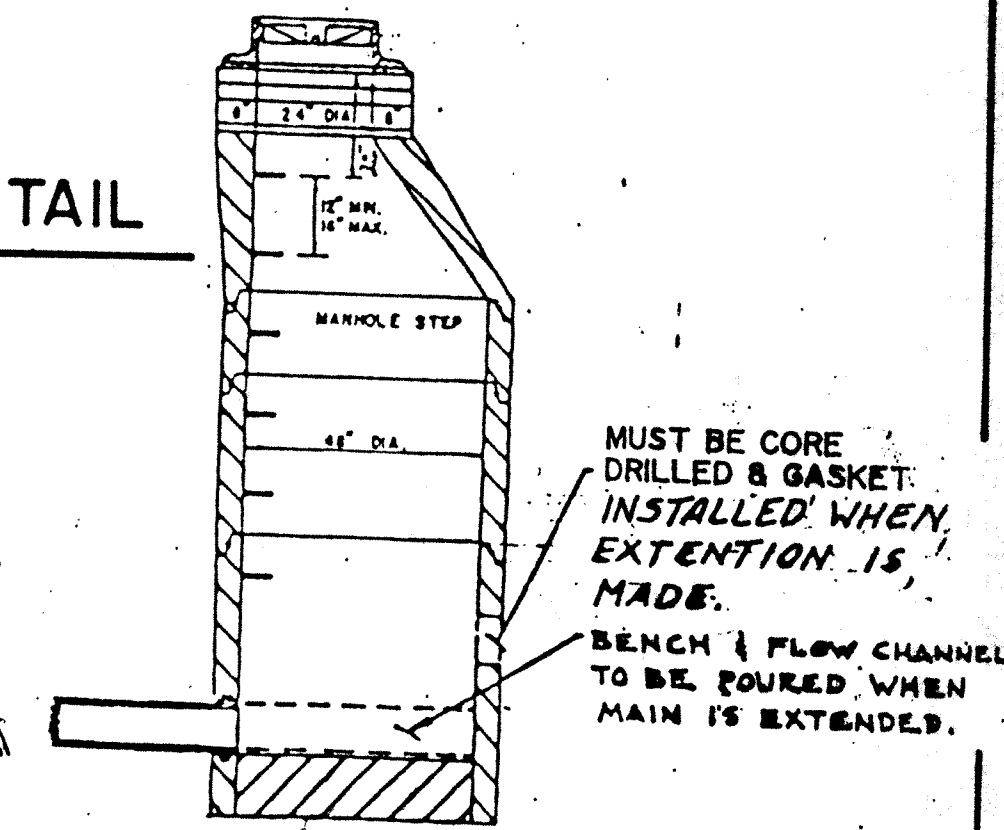
**SEWER INSTALLATION**  
NO SCALE



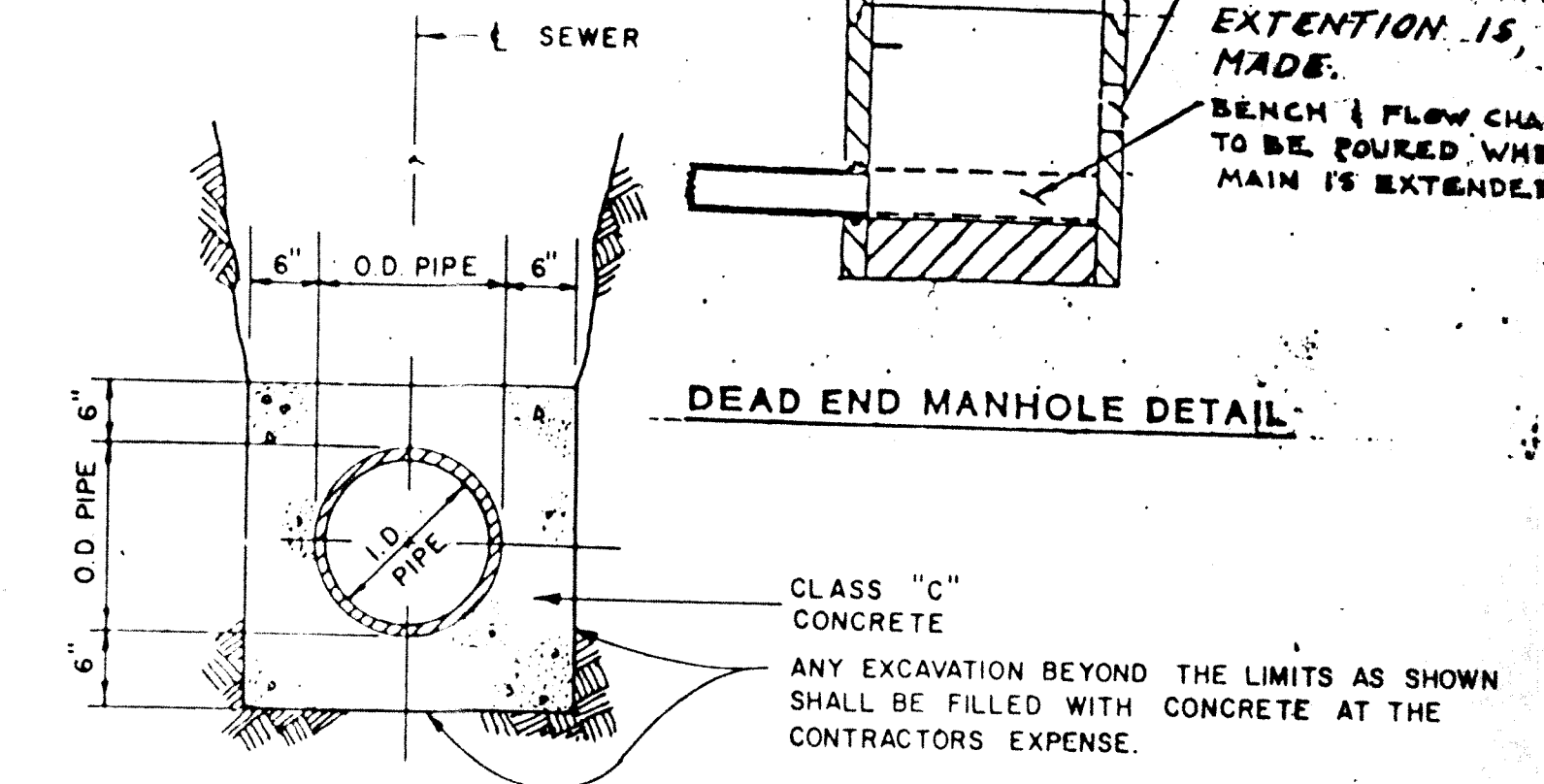
**DETAIL OF BRANCH CONNECTION AND RISER PIPE**  
NO SCALE



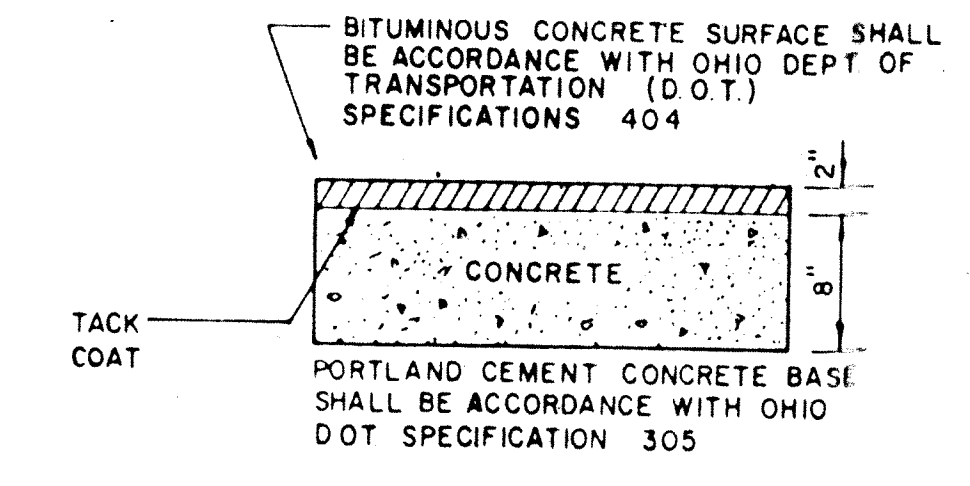
**ELEVATED MANHOLE DETAIL**  
NO SCALE



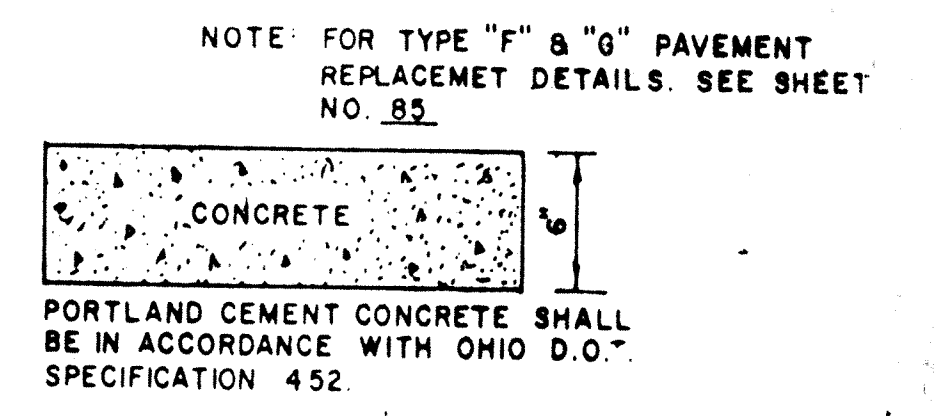
**DEAD END MANHOLE DETAIL**



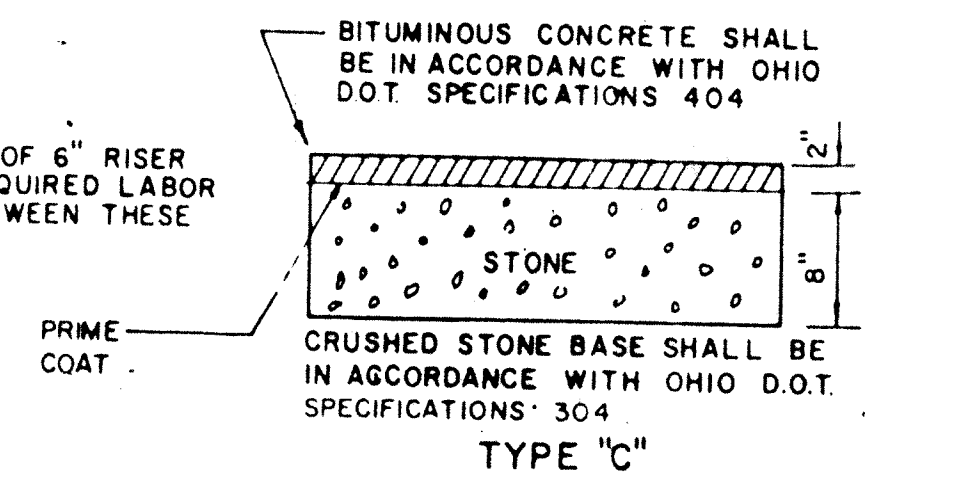
**CONCRETE ENCASEMENT**



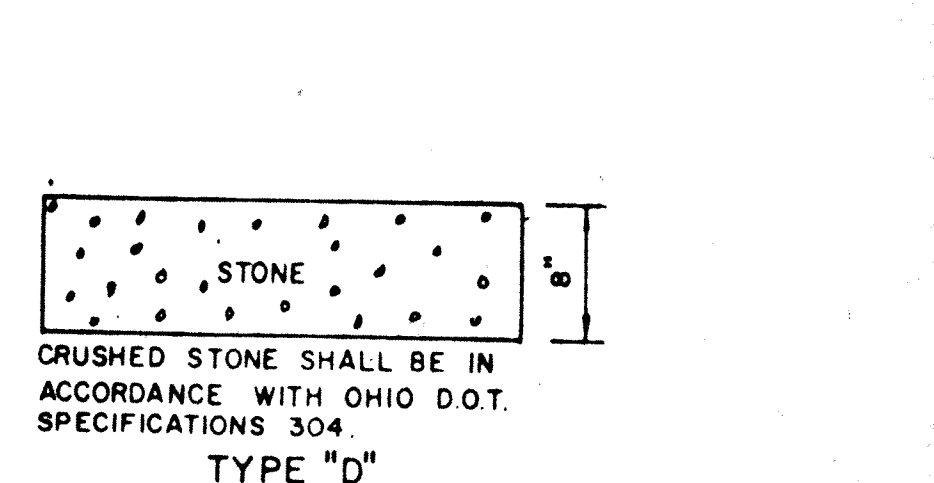
**TYPE "A"**



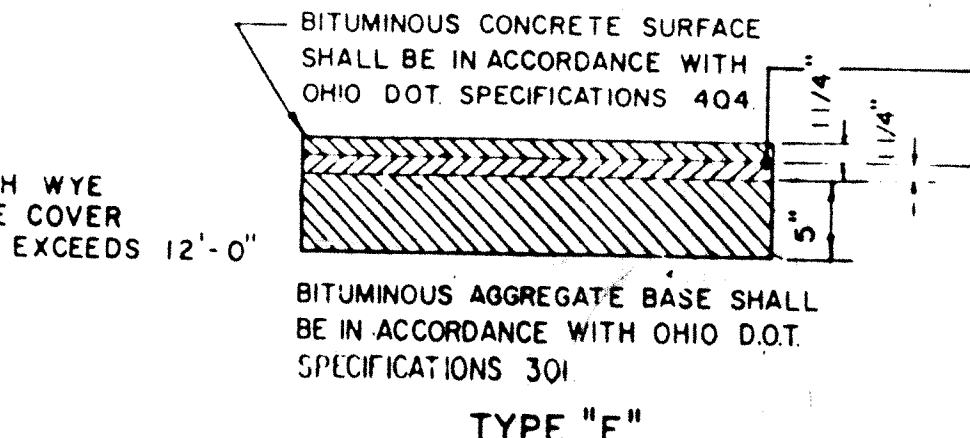
**TYPE "B"**



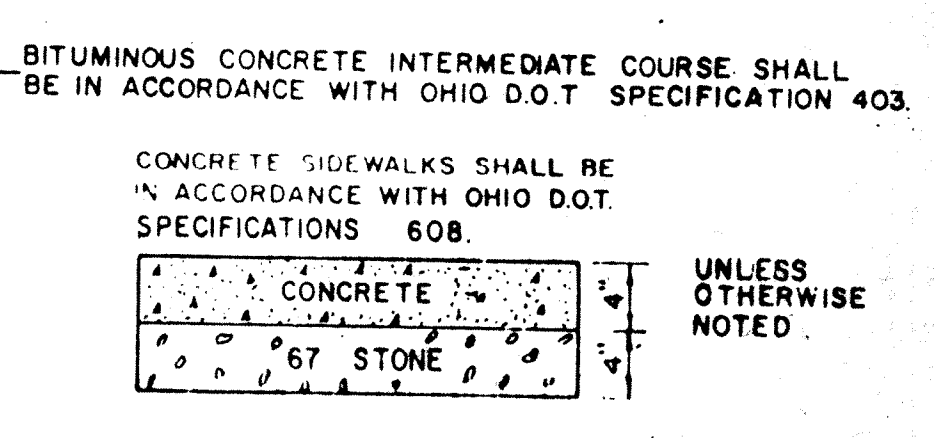
**TYPE "C"**



**TYPE "D"**



**TYPE "E"**



**WALK REPLACEMENT DETAIL**  
NO SCALE

BUTLER COUNTY, OHIO

DESIGNED BY AJL  
DRAWN BY RDR  
CHECKED BY AJL

REVISIONS

SCALE  
AS SHOWN

**STANDARD DETAILS**

SHEET NO.