

City of O'Fallon

General Notes

- Gas, water and other underground utilities shall not conflict with the depth or horizontal locations of existing and proposed sanitary and storm sewers, including house laterals.
- Underground utilities have been plotted from available information and, therefore, their locations must be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor, and shall be located prior to grading or construction of improvements.
- Polyvinyl Chloride (PVC) shall conform to the requirements of ASTM D-3034 Standard Specifications for the PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings, SDR-35.
- Storm sewers 18" in diameter or smaller shall be ASTM C-14.
- Storm sewers 21" in diameter or larger shall be ASTM C-76, Class II.
- All storm sewer pipe under pavement, regardless of size, shall be reinforced concrete pipe (ASTM C-76, Class III) unless noted otherwise on the plans.
- Corrugated metal pipe shall conform to the standard specifications for corrugated culvert pipe M-36, A.A.S.H.O. See plans for gauge.
- All filled places under buildings, proposed sanitary and storm sewer lines, and/or paved areas including trench backfills shall be compacted to 90% of maximum density as determined by the "Modified A.A.S.H.O. T-180 Compaction Test" (ASTM D-1557) unless otherwise specified by the local governing authority specifications. All tests will be verified by a Soils Engineer.
- All earthen filled places within State, County, or City roads (Highways) shall be compacted to 95% of maximum density as determined by the "Standard Proctor Test A.A.S.H.O. T-99" (ASTM D-698) unless otherwise specified by local governing authority specifications. All tests will be verified by a Soils Engineer.
- All storm and sanitary trench backfills shall be water jetted. Granular fill will be used under paved areas.
- Easements shall be provided for storm sewers, sanitary sewers, and all utilities on the record plat. See record plat for location and size of easements. This does not apply to house laterals.
- No area shall be cleared without the permission of the developer.
- All grade shall be within 0.2 feet (more or less) of those shown on the grading plan.
- No slope shall be greater than 3:1 and shall be either sodded or seeded and mulched.
- Hazard markers will consist of three (3) standard specification, "Manual on Uniform Traffic Control Devices", and of roadway markers mounted on two (2) pound "U" channel sign post. Each marker shall consist of an eighteen (18) inch diamond reflectorized red panel. The bottom of each panel shall be mounted a minimum of four (4) feet above the elevation of the pavement surface.
- All manhole and curb inlet tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor. At the time of construction stake-out of the sewer lines, all curb and grate inlets will be face staked. If normal face stakes fall in line with sewer construction, the Engineer will set these stakes on a double offset. It shall be the responsibility of the sewer contractor to preserve all face stakes from destruction.
- All standard street curb inlets to have front of inlet 2 feet behind curb.
- The minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding house connection shall not be less than the diameter of the sanitary sewer plus a vertical distance of not less than 2-1/2 feet.
- Water Lines, valves, sleeves, meters and etc. shall meet all specifications and installation requirements of the local governing authority.
- All cast iron pipe for water mains shall conform to A.W.W.A. specification C-106 and/or C-108. The cast iron fittings shall conform to A.W.W.A. specification C-110. All rubber gasket joints for water cast iron pressure pipe and fittings shall conform to A.W.W.A. specification C-111.
- All water hydrants and valves shall be cast iron and installed in accordance with plans and details.
- All sanitary and storm sewers shall meet all specifications and installation requirements of the local governing authority.
- All PVC water pipe shall have a minimum pressure rating of PP-200 or SDR-21.
- All PVC sanitary sewer pipe shall be DR-35 or equal with crushed stone bedding uniformly graded between 1" and 1/4" size. This bedding shall extend from 6" below the pipe to 12" above the top of the pipe.
- All grading on Missouri State Highway Right-of-Way shall be seeded and mulched and all disturbed Right-of-Way markers shall be reset at the completion of grading.
- All streets must meet the specifications and installation requirements of the City of O'Fallon.
- All sanitary manhole tops shall be set 0.2' higher than the proposed ground except in pavement areas.
- All sanitary manholes shall have a 31 mil thick coat of coal tar pitch waterproofing.
- All sanitary service lines shall have a 6" diameter for Multi-family and a 4" diameter for Single-family developments.
- Manhole frame and cover shall be Clay and Bailey No. 2008 for Neenah R-1736 or Deeter 1315 or approved equal.
- A drop of 0.2 feet is required through each sanitary manhole.
- The City of O'Fallon shall be notified at least 48 hours prior to construction of sanitary sewers for coordination and inspection.
- Brick shall not be used on manholes.
- Sewer contractor shall maintain 24" vertical separation between all storm sewers and the sludge force main. Contractor shall be responsible for verifying separation prior to storm sewer installation.
- This tract is served by:
  - Union Electric
  - GTE Telephone Co.
  - St. Charles Gas Co.
  - City of O'Fallon Sewers
  - City of O'Fallon Water
  - O'Fallon Fire District
- Waterproofing: Waterproofing will be required on the exterior of all manholes. The bitumen shall consist of two coats of asphalt, coal-tar pitch, or a coating meeting American Society for Testing and Materials (ASTM) D-41. Asphalt shall conform to the requirements of ASTM D 449. Coal-tar pitch shall conform to the requirements of ASTM D 450. Coating shall be 31 mils thickness.
- The existing and proposed sanitary sewer tops will be a minimum of 1.0' above Flood Plain Elev.

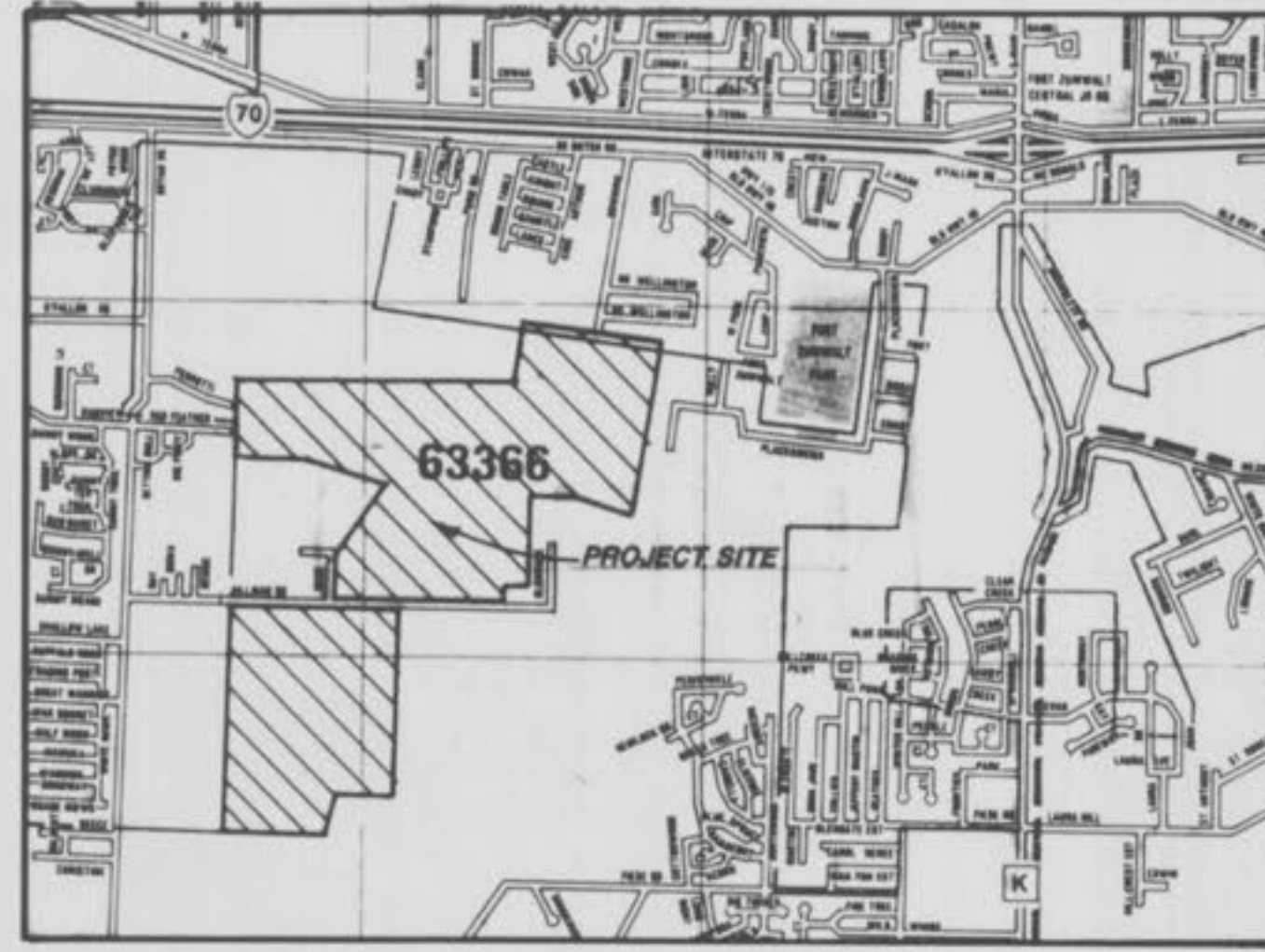
# GLEN EAGLE

# MUNICIPAL GOLF COURSE

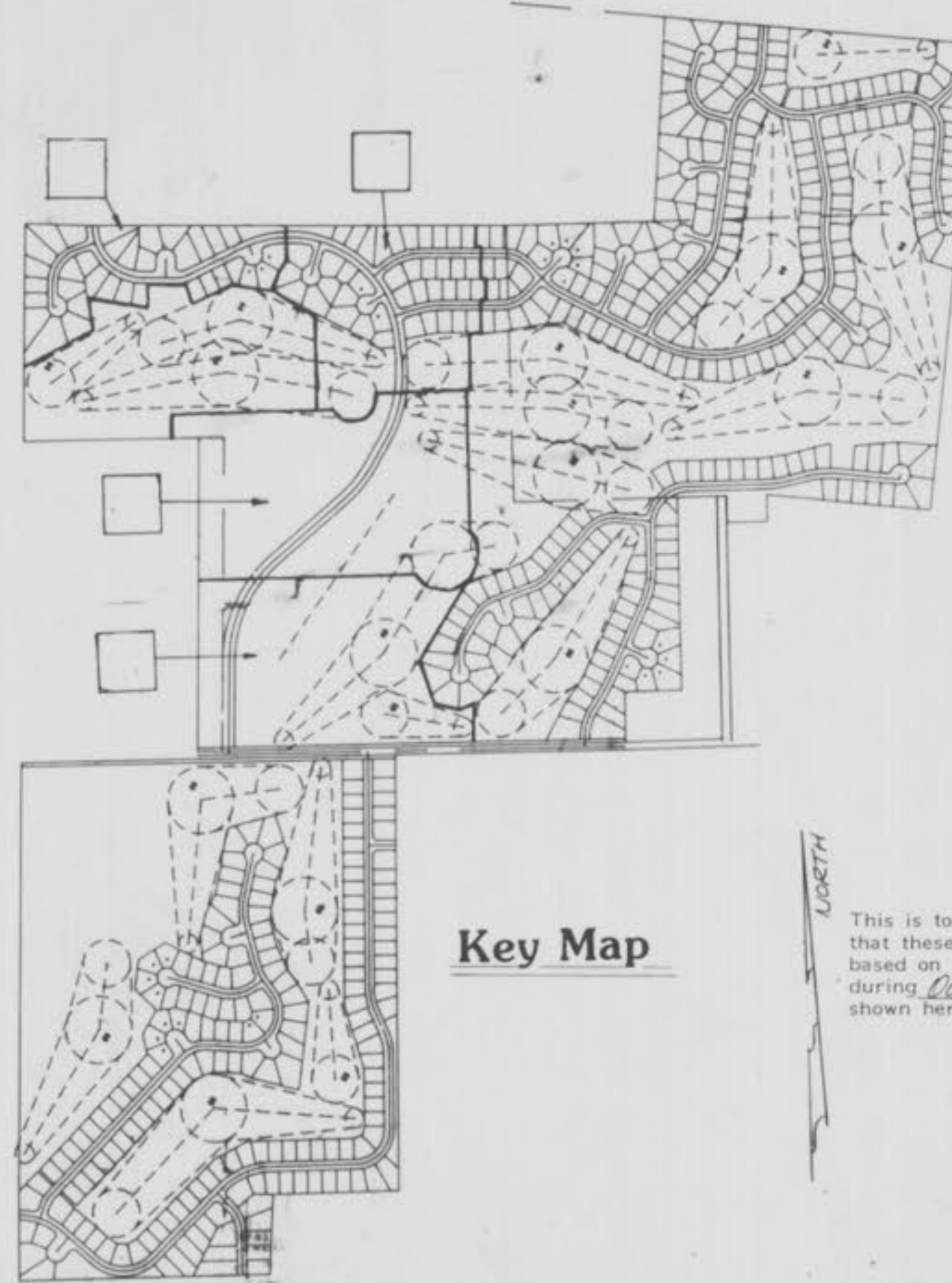
## O'FALLON, MISSOURI

### SANITARY SEWER EXTENSION

# "AS-BUILTS"



Location Map



Key Map

### Index

Sheet	Description
1	COVER SHEET
2-3	SANITARY SEWER PLAN & DETAILS
4	SANITARY SEWER PROFILE

### Benchmark

PT. V72.4 - located at the end of existing pavement, West of South Wellington in Punny Meade. Elev: 417.08.

### Legend

	Sanitary Sewer (Proposed)	C.I.	Curb Inlet
	Sanitary Sewer (Existing)	D.C.I.	Double Curb Inlet
	Storm Sewer (Proposed)	G.I.	Grate Inlet
	Storm Sewer (Existing)	A.I.	Area Inlet
	Water Line & Size	D.A.I.	Double Area Inlet
	Tee & Valve	C.C.	Concrete Collar
	Hydrant	F.E.	Flared End Section
	Cap	E.P.	End Pipe
	18 Lot or Building Number	E.D.	Energy Dissipator
	Existing Tree Line	M.H.	Manhole
	Existing Tree Line	C.P.	Concrete Pipe
	Street Sign	R.C.P.	Reinforced Concrete Pipe
	Direction of Proposed Residence	C.M.P.	Corrugated Metal Pipe
	Existing Contour	C.I.P.	Cast Iron Pipe
	Proposed Contour	P.V.C.	Polyvinyl Chloride
	Grouted Rip-Rap	V.C.P.	Vitrified Clay Pipe
	End of Lateral	C.O.	Clean Out
	Asphalt Pavement	V.T.	Vent Trap
	Concrete Pavement		
	Storm/Sanitary Structure		
	Test Hole		
	Power Pole		
	Light Standard		

7-3-97 AS-BUILTS  
 Rev. 7-22-94 to, Sheet 4 of 4  
 Rev. 8-22-92 to, Sheets 3 & 4  
 Rev. 3-31-92 to, Extend across Memo & Detail  
 Rev. 2-5-92 to, Pipe Size  
 Rev. 1-20-92 to, Per City of O'Fallon Comments

This is to certify to the City of O'Fallon that these "As-Built" Sanitary Sewer plans are based on actual field surveys conducted during Oct., 1994 and the results are shown here on.

by Pickett Ray & Silver

Delmar F. Vincent  
 MO R.L.S. No. 1869



7-3-97  
 Date

**ENGINEERS AUTHENTICATION**  
 The responsibility for professional engineering liability on this project is hereby limited to the set of plans authorized by the seal, signature and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in the project and specifically excludes revisions after the date unless reauthorized.

**PICKETT RAY & SILVER, INC.**

Civil Engineers  
 Planners  
 Land Surveyors

333 Mid Rivers Mall Dr  
 St. Peters, MO 63376  
 441-1211 278-1211

**PREPARED FOR:**  
**ST. ANDREWS GOLF MANAGEMENT**  
 10449 ST. CHARLES ROCK ROAD  
 ST. ANN, MISSOURI 63074  
 (314) 427-4000

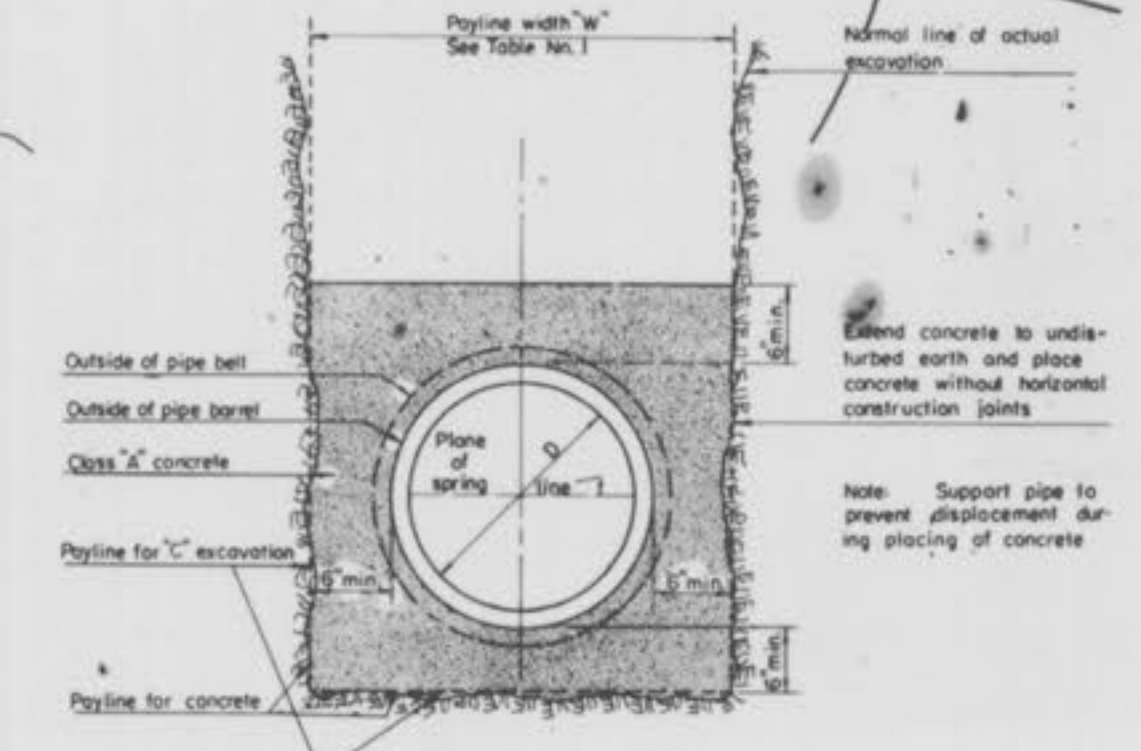
DRAWN: T. Dietz DATE: May 15, 1991  
 CHECKED: DATE: \_\_\_\_\_

FIELD BOOK: 479 PROJECT: 89-204  
 JOB ORDER: \_\_\_\_\_

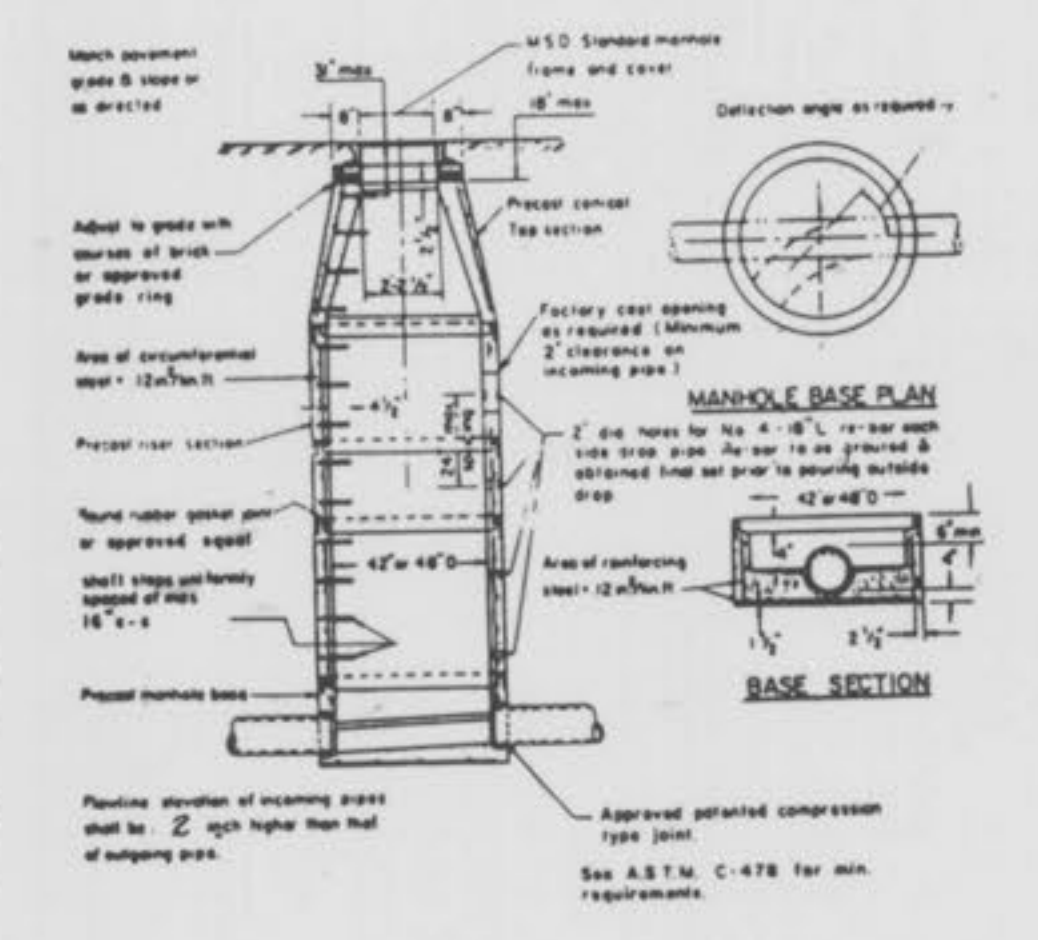
Signature: *Harold J. Bartick* Date: 5-5-91



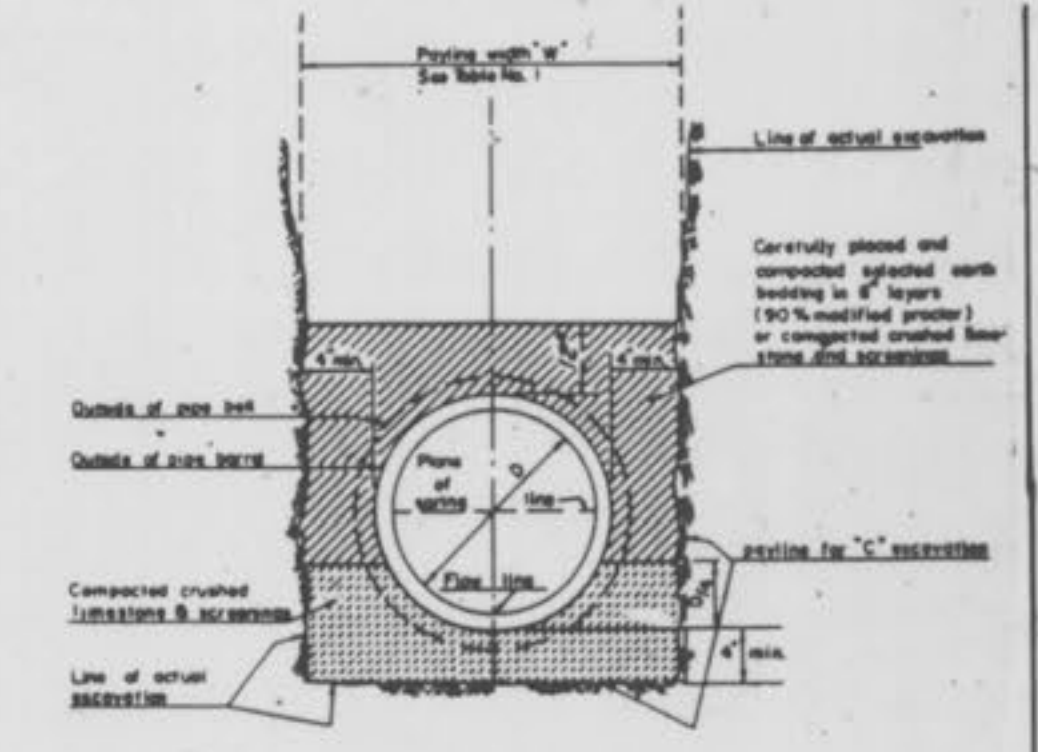
- ENTRANCE DRIVE - 8" ROCK - 3" TYPE 'C' ASPHALT
- WEST PARKING LOT - 8" ROCK - 3" TYPE 'C' ASPHALT
- SERVICE AREA - 4" ROCK - 6" 110# REINFORCED CONCRETE
- WALKS - 4" CONCRETE SLAB ON COMPACTED SUBBASE
- EAST PARKING LOT - 6" ROCK - 2 1/2" TYPE 'C' ASPHALT
- ASPHALT CURB WITH 1/4" TYPE 'X' ASPHALT ON COMPACTED SUBBASE



CONCRETE ENCASEMENT

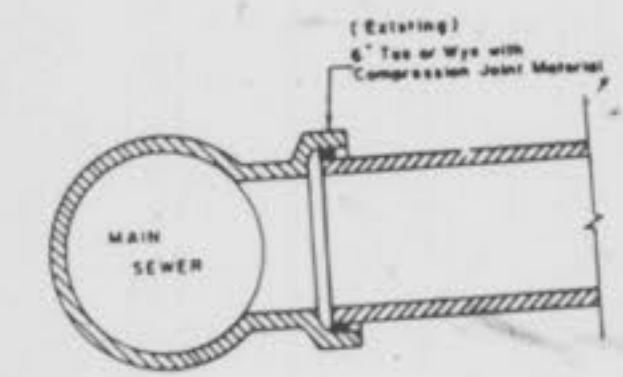


PRE-CAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 12"



PIPE BEDDING CLASS 'C' (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)

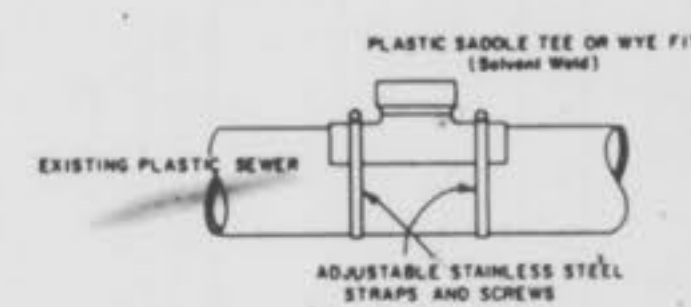
DETAIL 2



- HOUSE SERVICE**
- 6" V.C.P. 1100 compression joint
  - 6" V.C.P. 1100 compression joint. Use sewer tile and sealum.
  - If a house connection is approved, a 4" to 6" increase is required.
  - If 6" P.V.C. is used a Furnace Adapter or sewer tile and sealum may be used to make the joint.
  - A 1/2" thick bedding material is required around the completed connection before back filling. The bedding material shall be one of the following:
    - A. M.S.D. No. 1 Bedding. See detail no. 50.
    - B. 1/2" concrete and sand.
    - C. PRE-MIX concrete.
- Designation: HD 1 - bedding  
For Pipes 27 inch in diameter and smaller:  
Slope      4 lb Weight Packing      Maximum  
1 inch      100      100  
3/4 inch      100      100  
1/2 inch      80      80  
# 100      50      50

HOUSE CONNECTION TO EXISTING TEE OR WYE

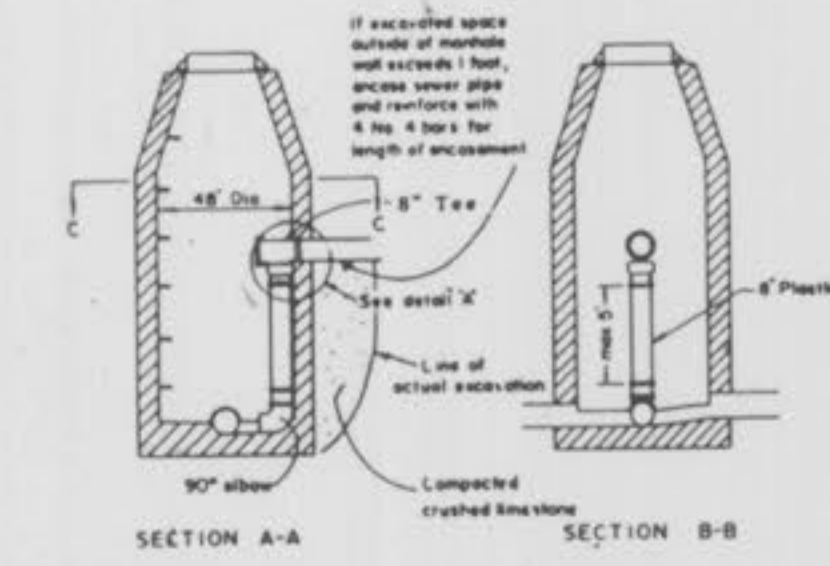
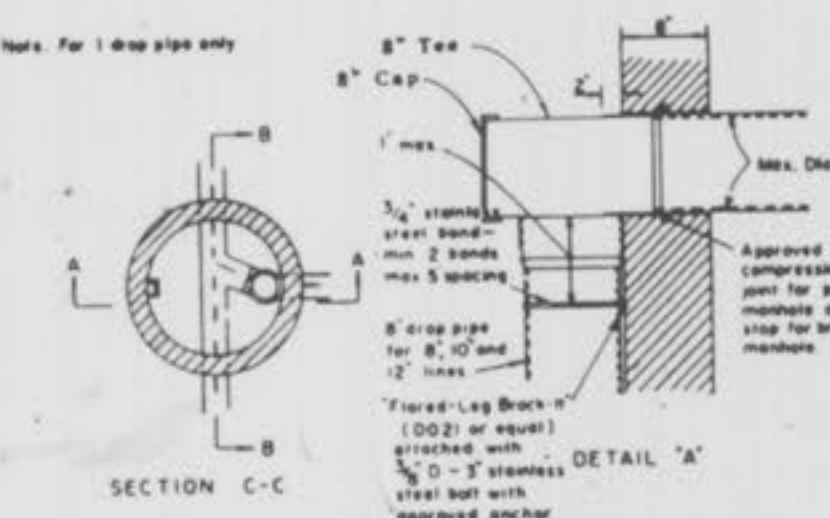
DETAIL 50



- When a connection to a plastic pipe is allowed and a connection is larger than 6" in diameter, a solvent weld joint or the fitting of a similar material must be used. (Example 10" x 6")
- This is accomplished by carefully cutting a hole with a saw in the main of the required section. After cutting and shaping the hole to the size of the fitting, the following steps should be taken:
- Clean and dry both inside saddle eye surface and pipe surface to be solvent connected.
  - Impregnate: Apply a liberal, heavy coat of a ONE-STEP SOLVENT CEMENT to the inside surface of the saddle eye and to the exterior surface of the hole in the pipe.
  - Without delay, mate the two surfaces and clamp down tightly. A bead of solvent should appear after saddle has been strapped down tightly.
  - Using a rag or paper towel, wipe bead and any excess solvent cement off pipe and saddle.
  - Allow 30-60 minutes for set-up time before backfilling. Cure time depends on size and fit of material being installed and various soil and damp conditions.
  - Discard old solvent if it becomes gelled or turny.
  - A clean, dry bedding material is required around the completed connection before backfilling. The bedding material should be one of the following:
    - A. M.S.D. #1 Bedding. See detail no. 50.
    - B. 1/2" Concrete or Sand Mix.
    - C. "Pro-Mix" Concrete.

8" (8 LARGER) CONNECTION TO PLASTIC MAIN

DETAIL 53



FOULWATER INSIDE DROP MANHOLE FOR PLASTIC PIPE

DETAIL 15

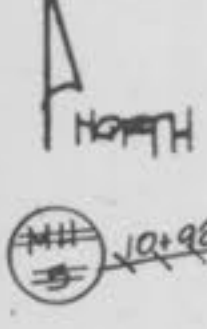
LINE MANHOLE PIPE SEWERS 8" - 24" DIA.

DETAIL 7



GLEN EAGLE GOLF COURSE  
CLUBHOUSE AREA PAVING PLAN

4.8.92 SCALE: 1"=50'-0" DRAWN: [Signature]

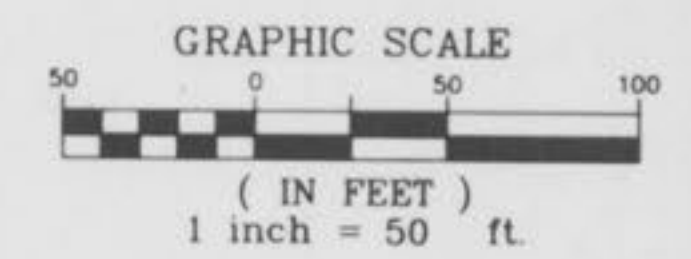
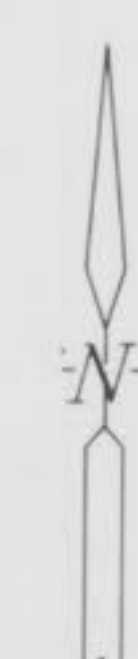
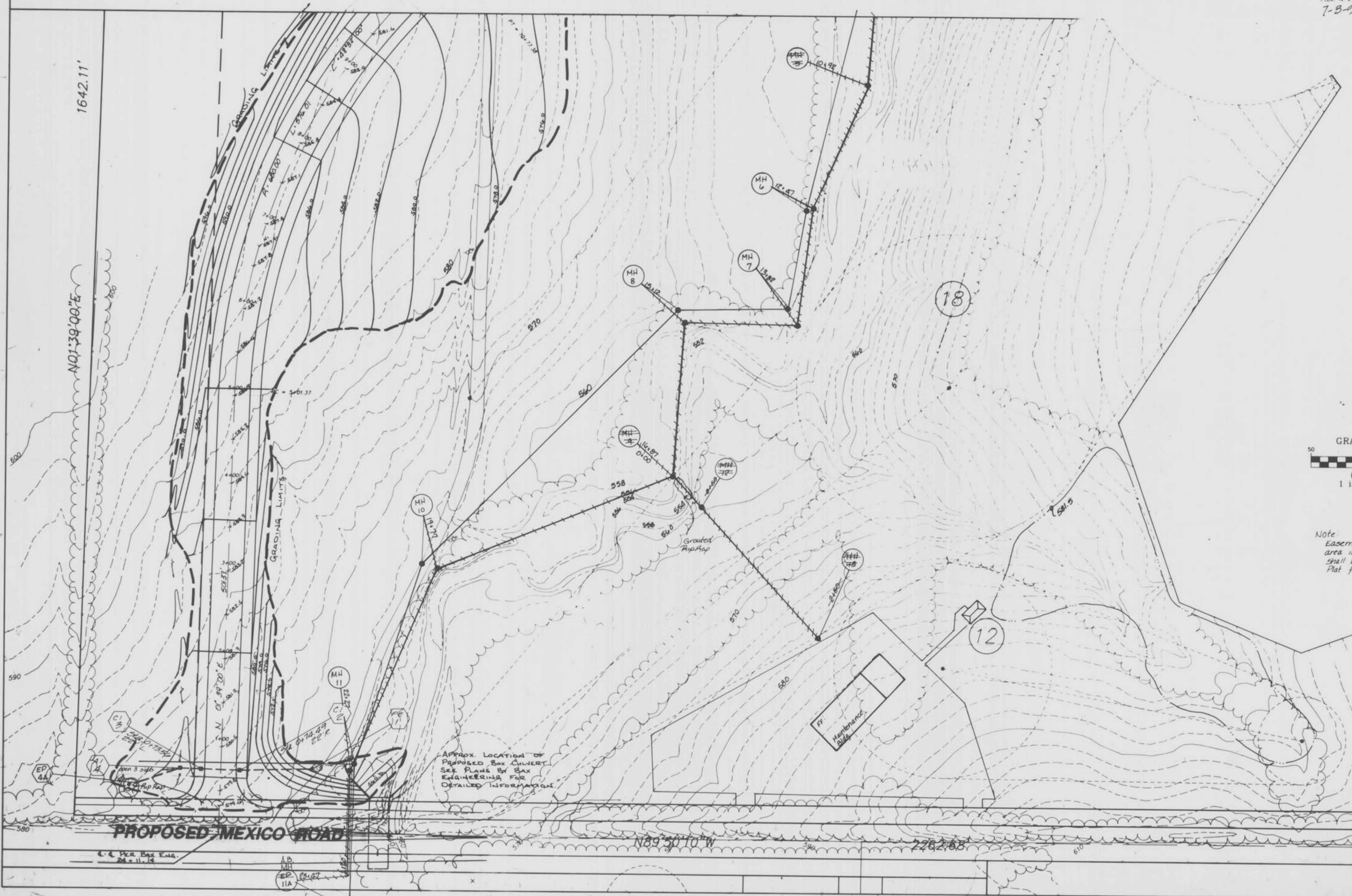




**GLEN EAGLE  
SANITARY SEWER PLAN**

JOB NUMBER 89-204

Rev. 3/21/92 - (EPA)  
Rev. 4/22/92 (S.C. EMP. 11414) C.G.S.  
7-3-97 AS-BUILTS



Note:  
 Easements for swales, channels,  
 area inlets, flared ends & pipes  
 shall be granted on an Easement  
 Plat for Recording.

NOTE:  
 Underground utilities and structures have  
 been plotted from available information and  
 therefore, their location must be considered  
 approximate only. It is the responsibility  
 of the individual contractors to notify the  
 utility companies before actual construction.

3  
4



**GLEN EAGLE  
SANITARY SEWER PROFILE**

89-204

Rev. 3/20/92 GP 11A TOS  
Rev. 4/22/93 TOS (2" cap)  
Rev. 7/20/94 TOS  
7-3-97 AS-BUILT

DATE  
BY  
ORIGINAL SURVEY PLOTTED  
DATE  
BY  
FINAL SURVEY PLOTTED  
DATE  
BY  
NOTE BOOK NO.  
AREA CHECKED

DATE  
BY  
ORIGINAL SURVEY PLOTTED  
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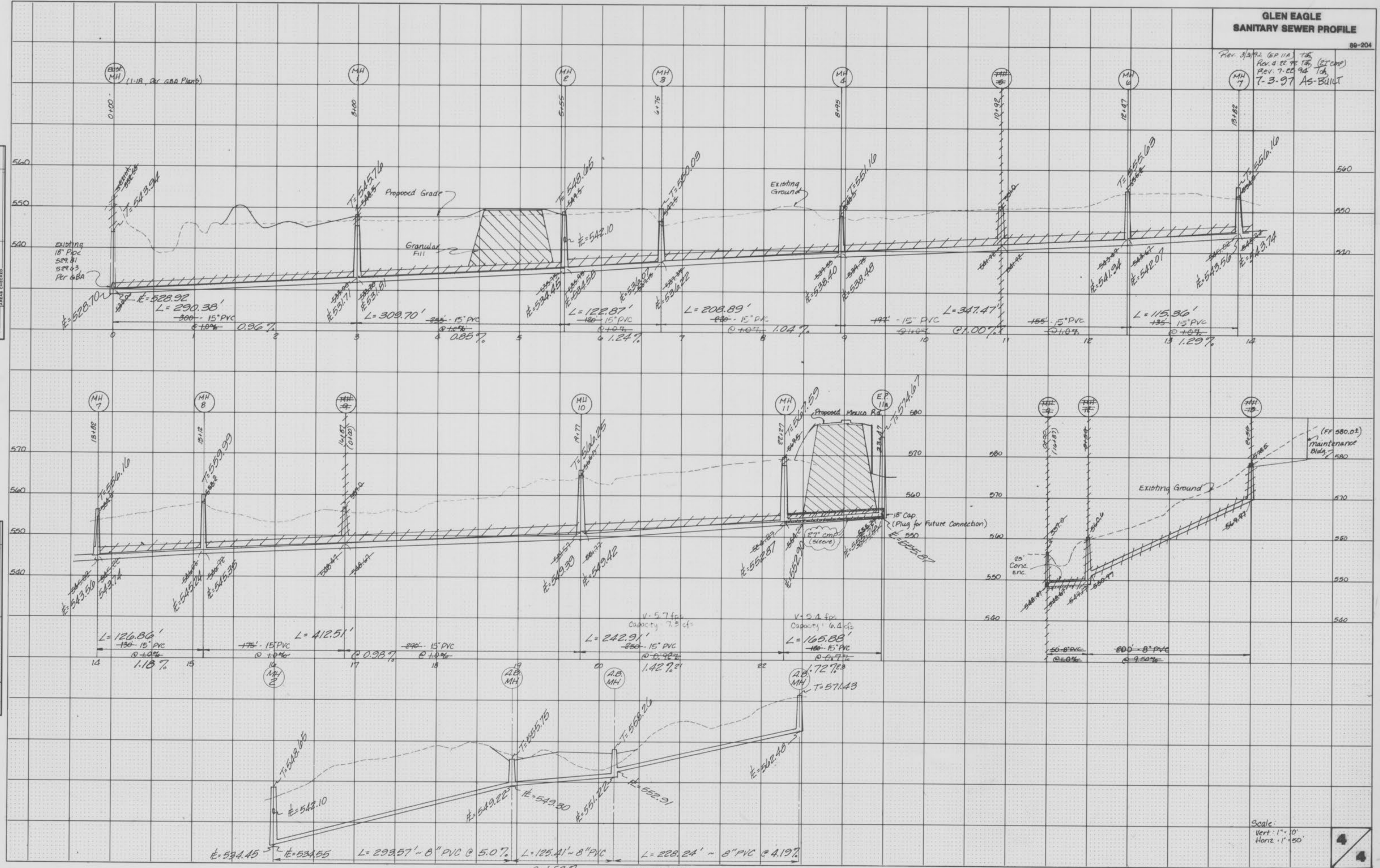


PLATE 3-FULL CROSS SECTION LINE & DOT  
PRINTED IN U.S.A.