

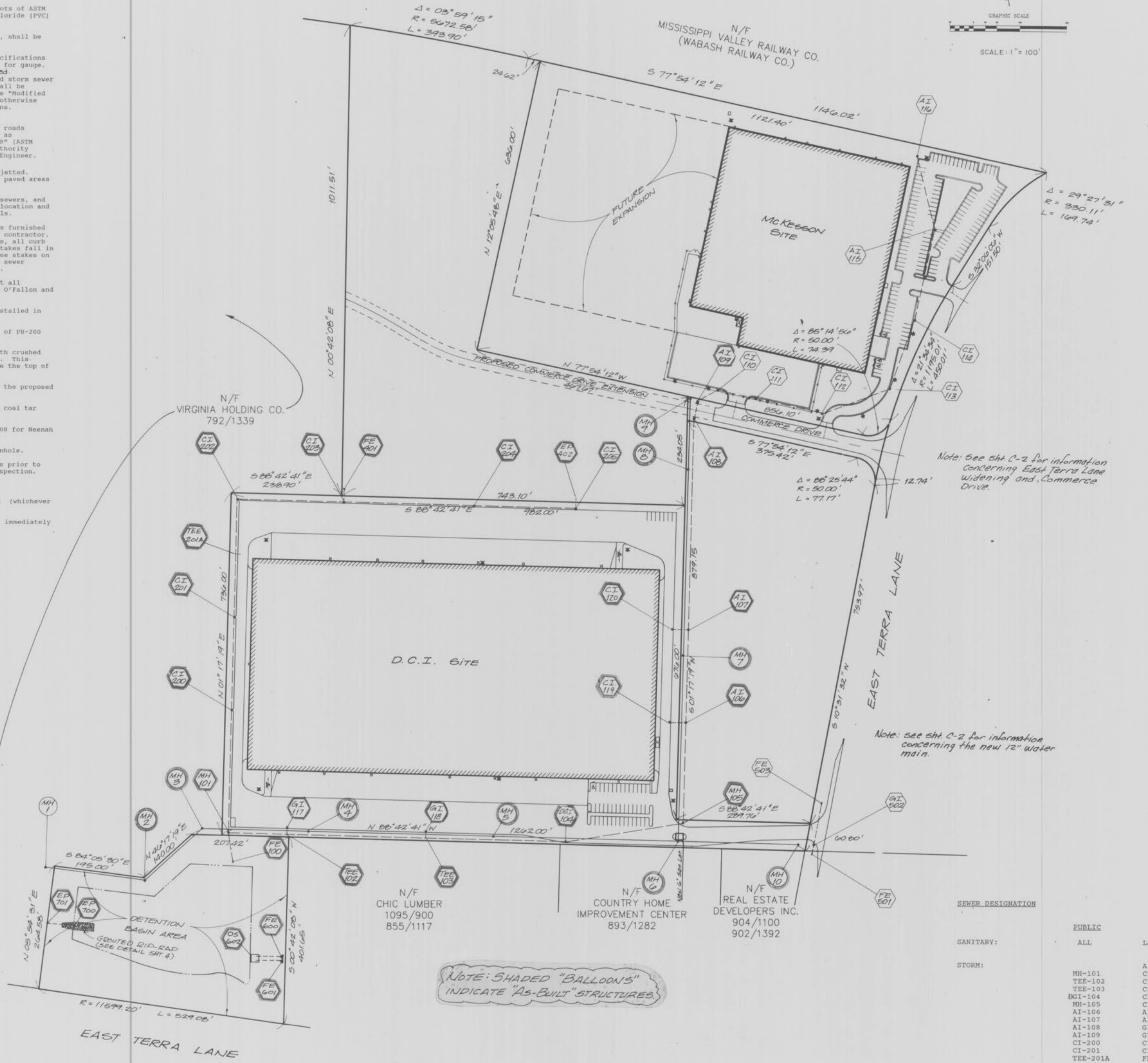
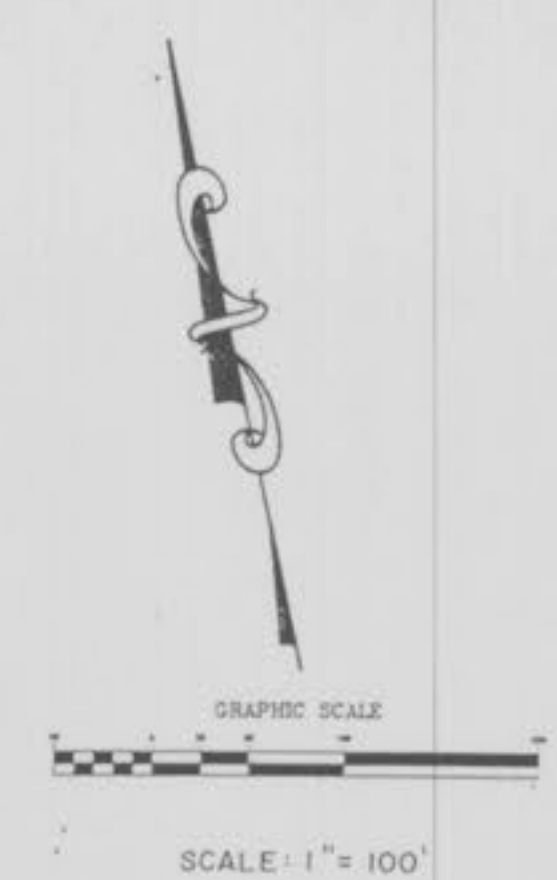


**GENERAL NOTES:**

- Contractor shall contact R.W. Murray Company concerning standards and specifications pertaining to any work to be performed on this project.
- Contractors shall coordinate all utility removals, disconnections, relocations, and new service connections with the appropriate agencies/companies, and include these costs in their bid proposals.
- All construction and materials used shall conform to current City of O'Fallon and St. Peters Fire Protection District, Missouri Highway and Transportation Department, and standards within their respective jurisdictions.
- Contractor to contact utility companies to locate existing underground utilities in areas of excavation work. If utilities are indicated to remain in place, provide adequate means of support and protection during earthwork operations.
- 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.
- All storm sewer pipe under pavement, regardless of size, shall be reinforced concrete pipe (ASTM C-76, Class III).
- Corrugated metal pipe shall conform to the standard specifications for corrugated culvert pipe M-36, A.A.S.H.O. See plans for gauge. Corrugated pipe may be dunnitized or bituminous coated.
- All filled places under buildings, proposed sanitary and storm sewer lines, and/or paved areas including trench backfills shall be compacted to 98% 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. Clean granular fill or compacted fill may be used under paved areas or building area.
- 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.
- 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.
- Water Lines, valves, sleeves, meters and etc. shall meet all specifications and installation requirements of City of O'Fallon and St. Peters Fire Department.
- All water hydrants and valves shall be cast iron and installed in accordance with plans and details.
- All PVC water pipe shall have a minimum pressure rating of PR-200 or SDR-21.
- All PVC sanitary sewer pipe shall be SDR-35 or equal with crushed stone bedding uniformly graded between 1" and 1 1/4" size. This bedding shall extend from 6" below the pipe to 12" above the top of the pipe.
- 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.
- Manhole frame and cover shall be Clay and Bailey No. 2008 for Heenan 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.
- A drop of 0.2 feet or match 0.8 pipe diameters (whichever is greater) is required through each storm structure.
- Contractor shall notify the engineer immediately concerning any discrepancies in the plans.

**UTILITIES TO NOTIFY**

- M.N.E.I. (Water and Sewer).....(314) 281-2858
- Union Electric Company.....(314) 272-6203
- St. Charles Gas Company.....(314) 946-8937
- Contel Telephone Company.....(314)1-800-344-7483



**LEGEND**

---	EXISTING CONTOUR
---	PROPOSED CONTOUR
○	EXISTING MANHOLE
○	PROPOSED MANHOLE
○	PROPOSED CURB INLET
---	EXISTING STORM SEWER
---	PROPOSED STORM SEWER
---	EXISTING SANITARY SEWER
---	PROPOSED SANITARY SEWER
---	WATER LINE WITH SIZE
---	FLARED END SECTION
○	EXISTING POWER POLE
○	PROPOSED FIRE HYDRANT
○	PROPOSED WATER VALVE
○	PROPOSED WATER METER
○	PROPOSED "TEE" SECTION
○	PROPOSED CAP
○	TEST HOLE
○	PROPOSED SINGLE LIGHT STANDARD
○	PROPOSED DOUBLE LIGHT STANDARD
○	STORM SEWER
○	SANITARY SEWER
---	SILTATION CONTROL
---	EXISTING R.R. TRACKS
---	EXISTING TREE LINE
---	CONCRETE
---	U.G.E. UNDERGROUND ELECTRIC
---	O.H.E. OVERHEAD ELECTRIC
---	RCP REINFORCED CONCRETE PIPE
---	PVC POLY-VINYL CHLORIDE PIPE
---	SAN. SANITARY SEWER
---	CONC. CONCRETE
---	C.O. CLEAN-OUT
---	R/W RIGHT-OF-WAY
---	W.V. WATER VALVE

**INDEX OF DRAWINGS**

C-1	Site Plan
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C-5	Detention Basin
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C-7	Sanitary Sewer Profiles
C-8	Construction Details
C-9	Construction Details
C-10	Construction Details

**SEWER DESIGNATION**

	PUBLIC	PRIVATE
SANITARY:	ALL	Laterals to buildings
STORM:		All roof drain laterals

This is to certify to City of O'Fallon that these "As-Built" Sanitary Sewer plans are based on actual field surveys conducted during November, 1990 and the results are shown here on.

by Pickett Ray & Silver  
 Delmar F. Vincent  
 MO R.L.S. No 1869  
 Date 11/29/90  
 11-29-90  
 "AS-BUILTS"

PREPARED BY:  
**PICKETT RAY & SILVER**  
 Civil Engineers  
 Planners  
 Land Surveyors

WEST 70 COMMERCE CENTER  
**OWNER: Trammell Crow Company**  
**CONTRACTOR: R.W. Murray Co.**

**Revision Dates**

3 14 / 90  
 3 2 / 90

**Issue Date**  
 3 2 / 90

**Sheet Title**  
 SITE PLAN

**RWM Job Number**  
 552

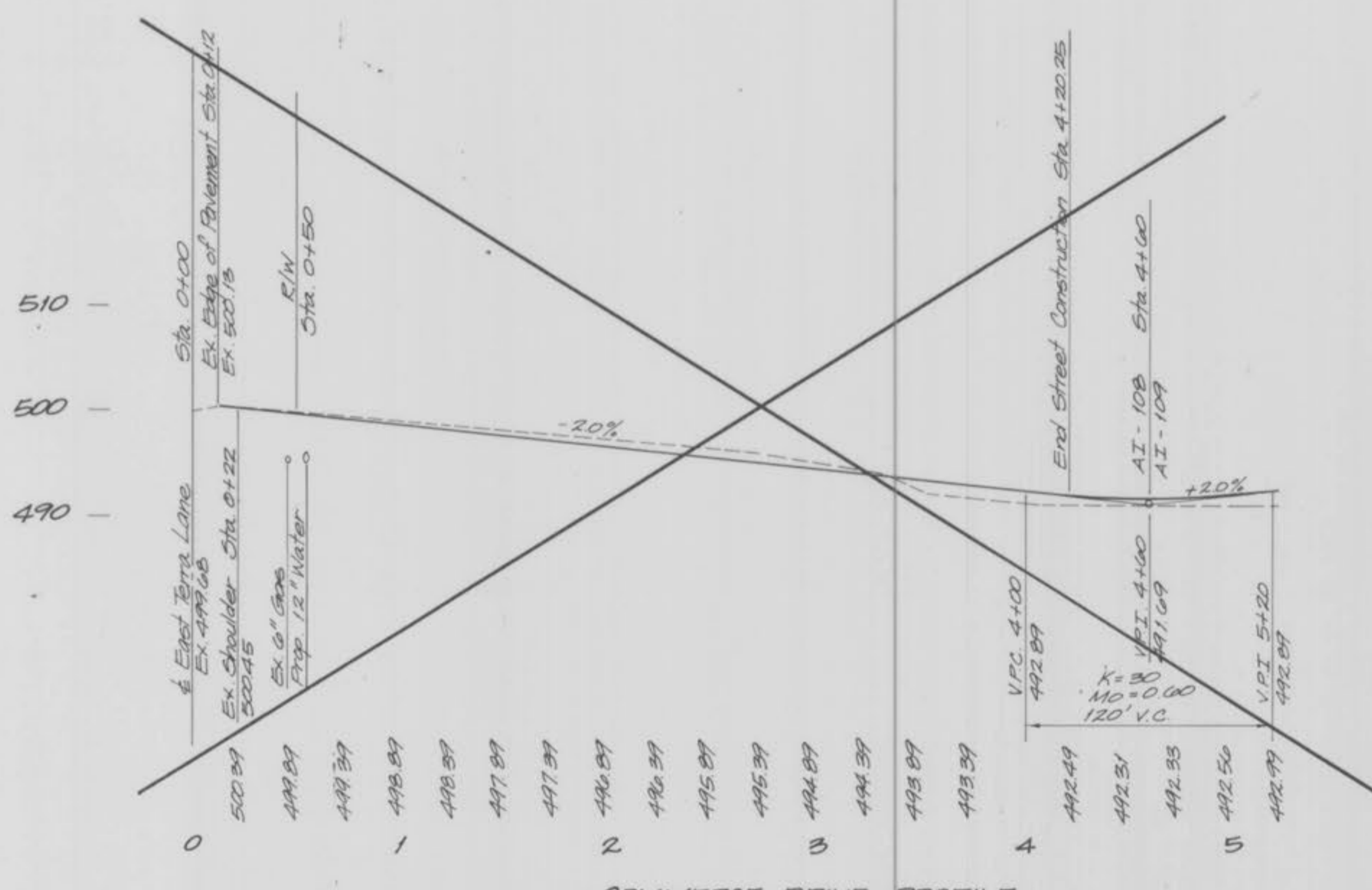
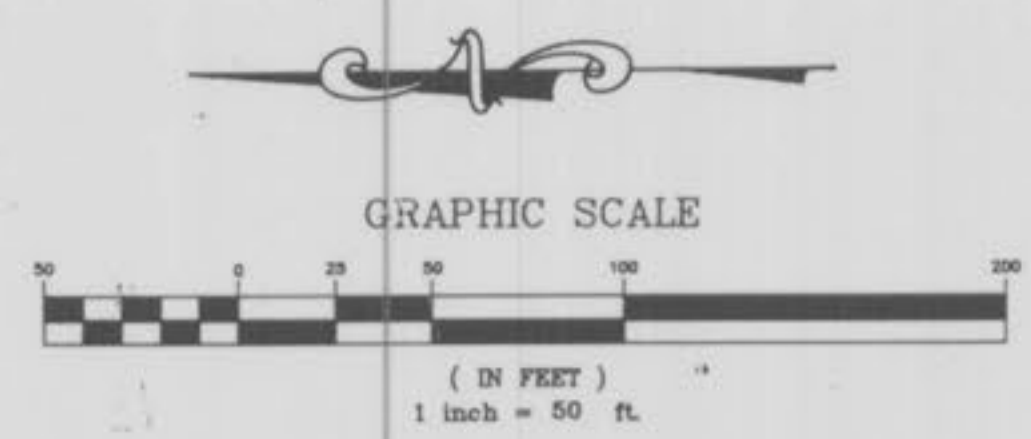
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 C-1

NOTE: SHADED "BALLOONS" INDICATE "AS-BUILT" STRUCTURES.

Note: See Sht. C-2 for information concerning East Terra Lane widening and Commerce Drive.

Note: see Sht. C-2 for information concerning the new 12" water main.



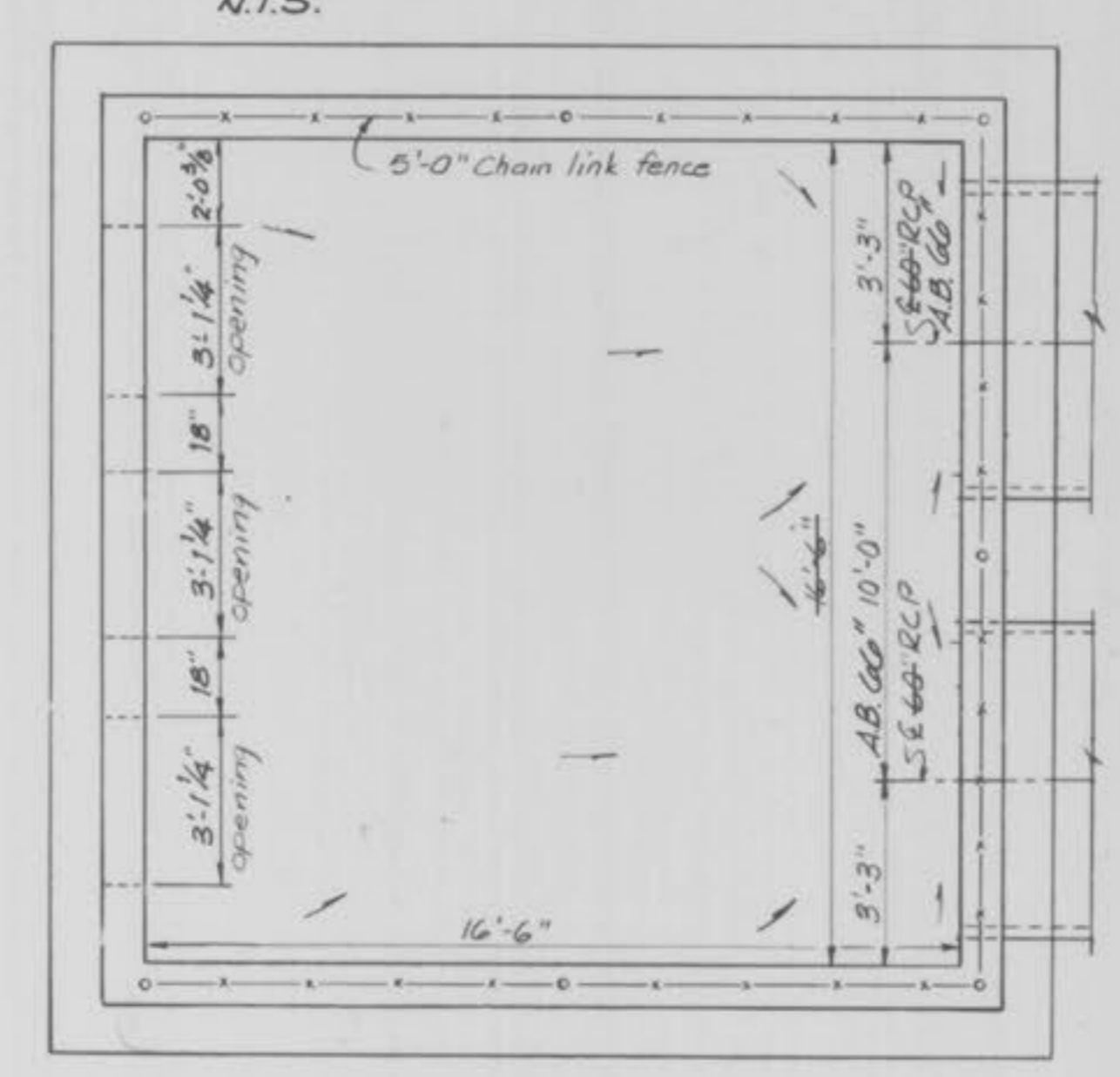
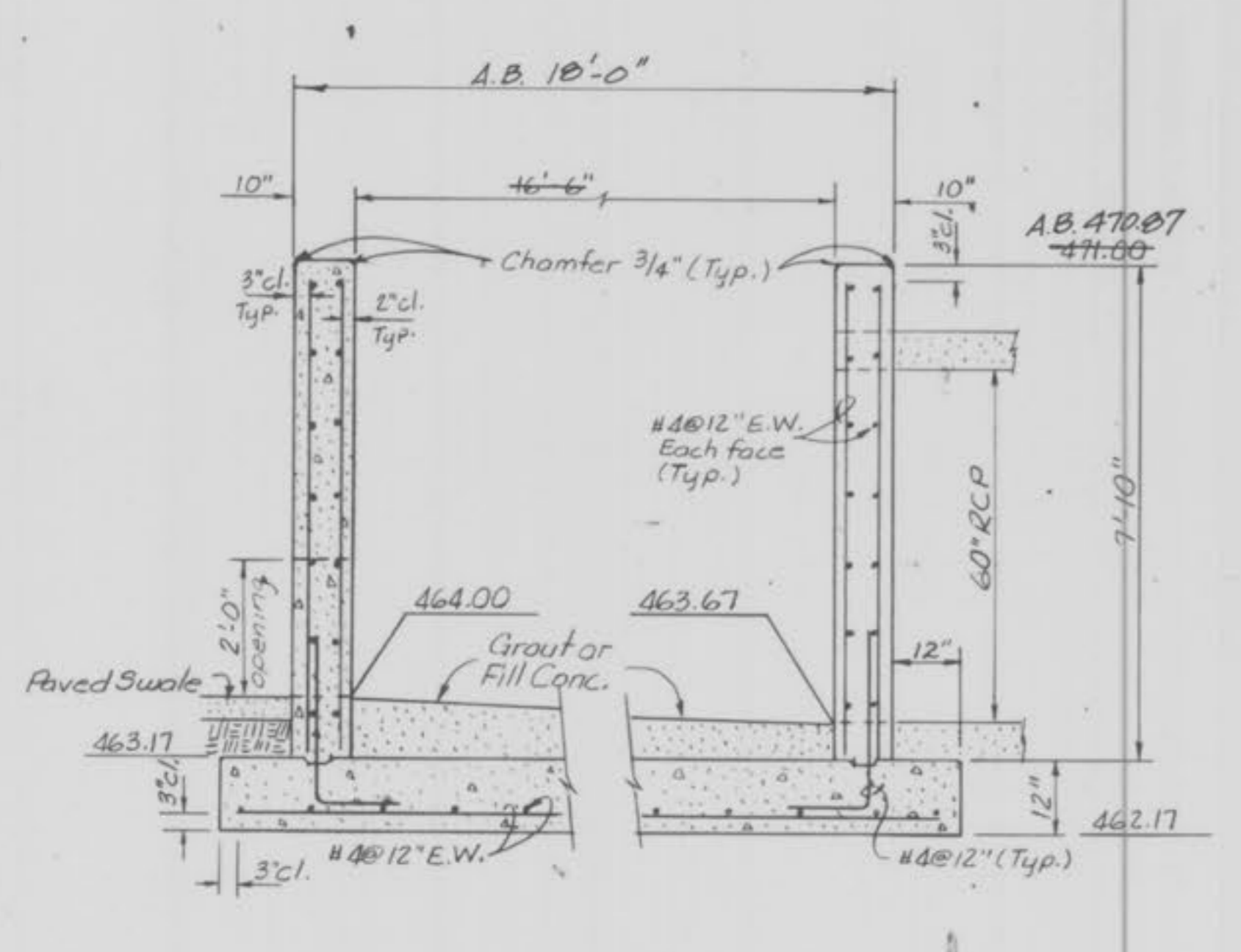
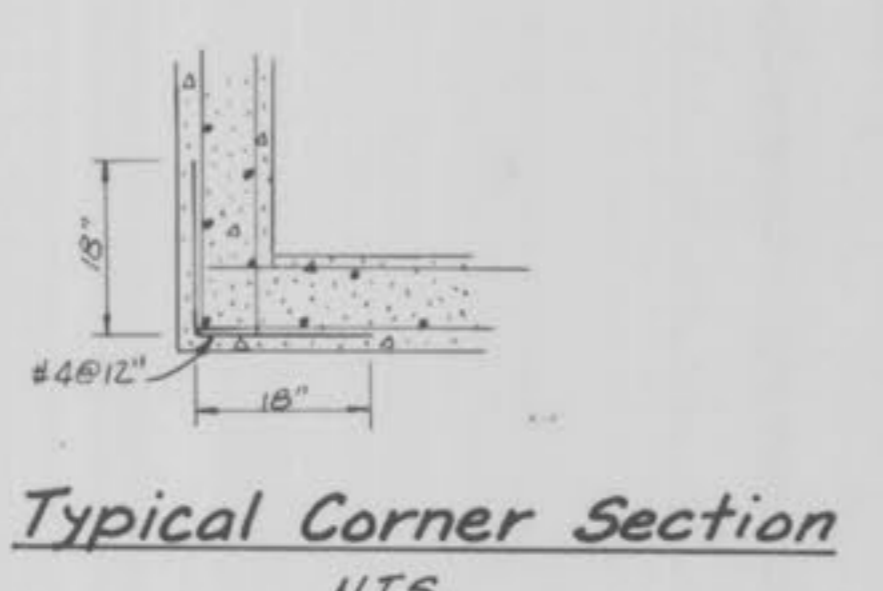
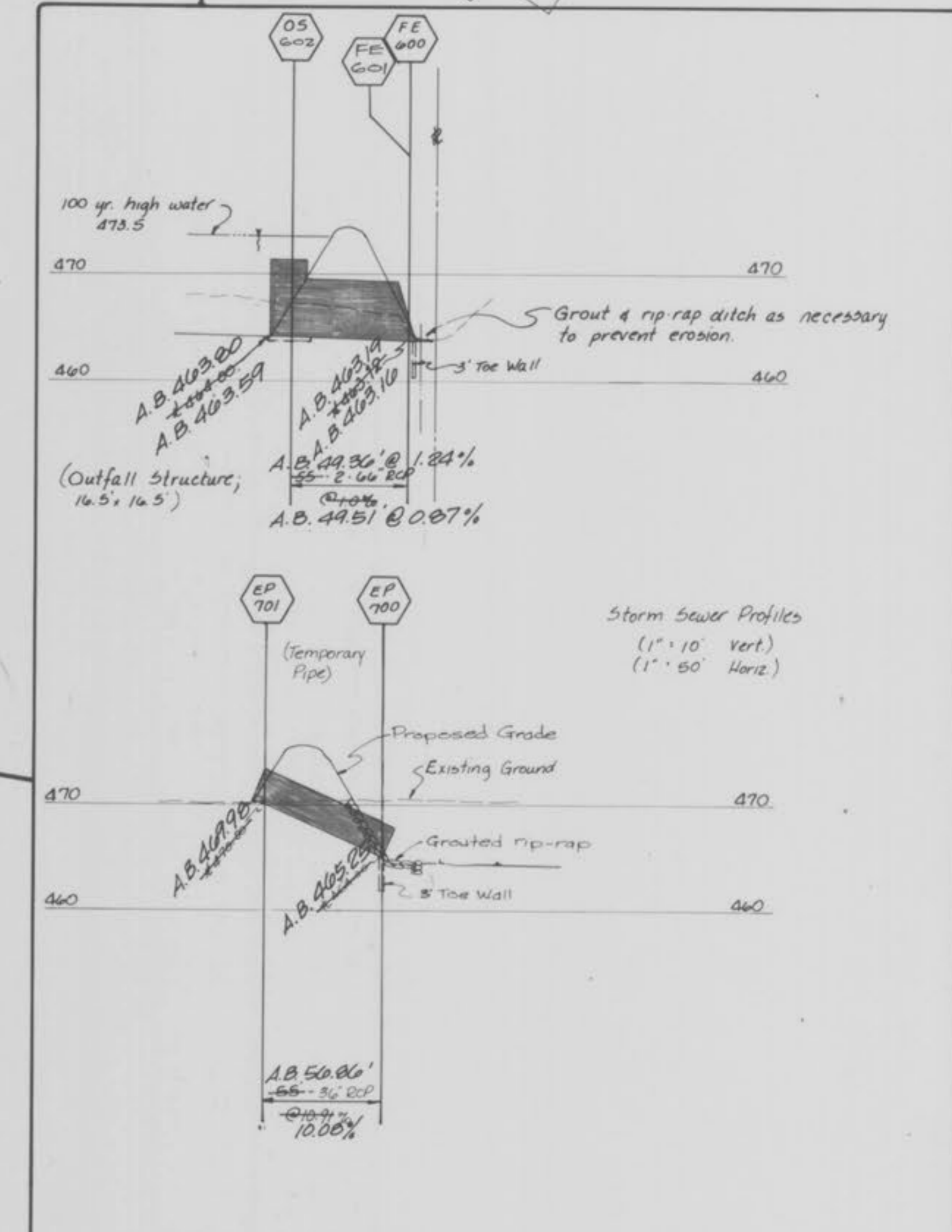
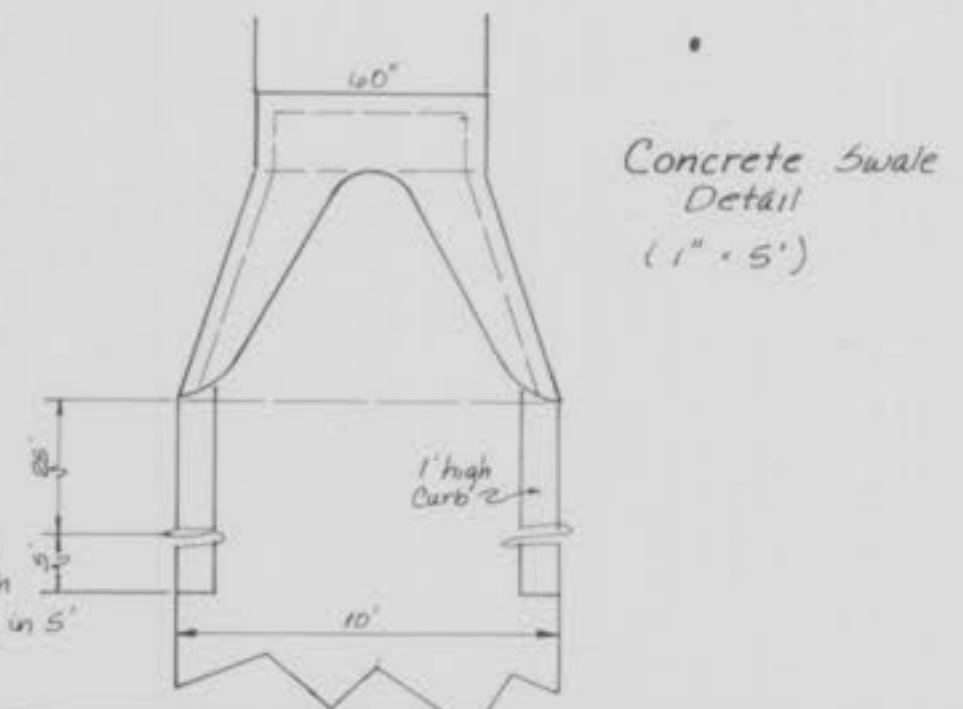
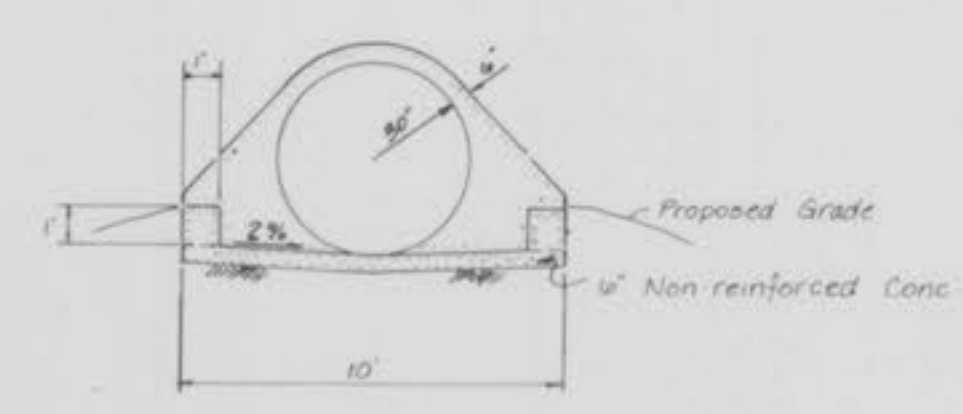
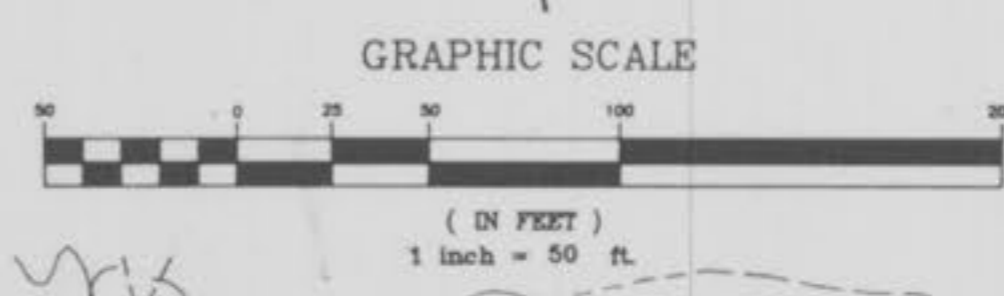
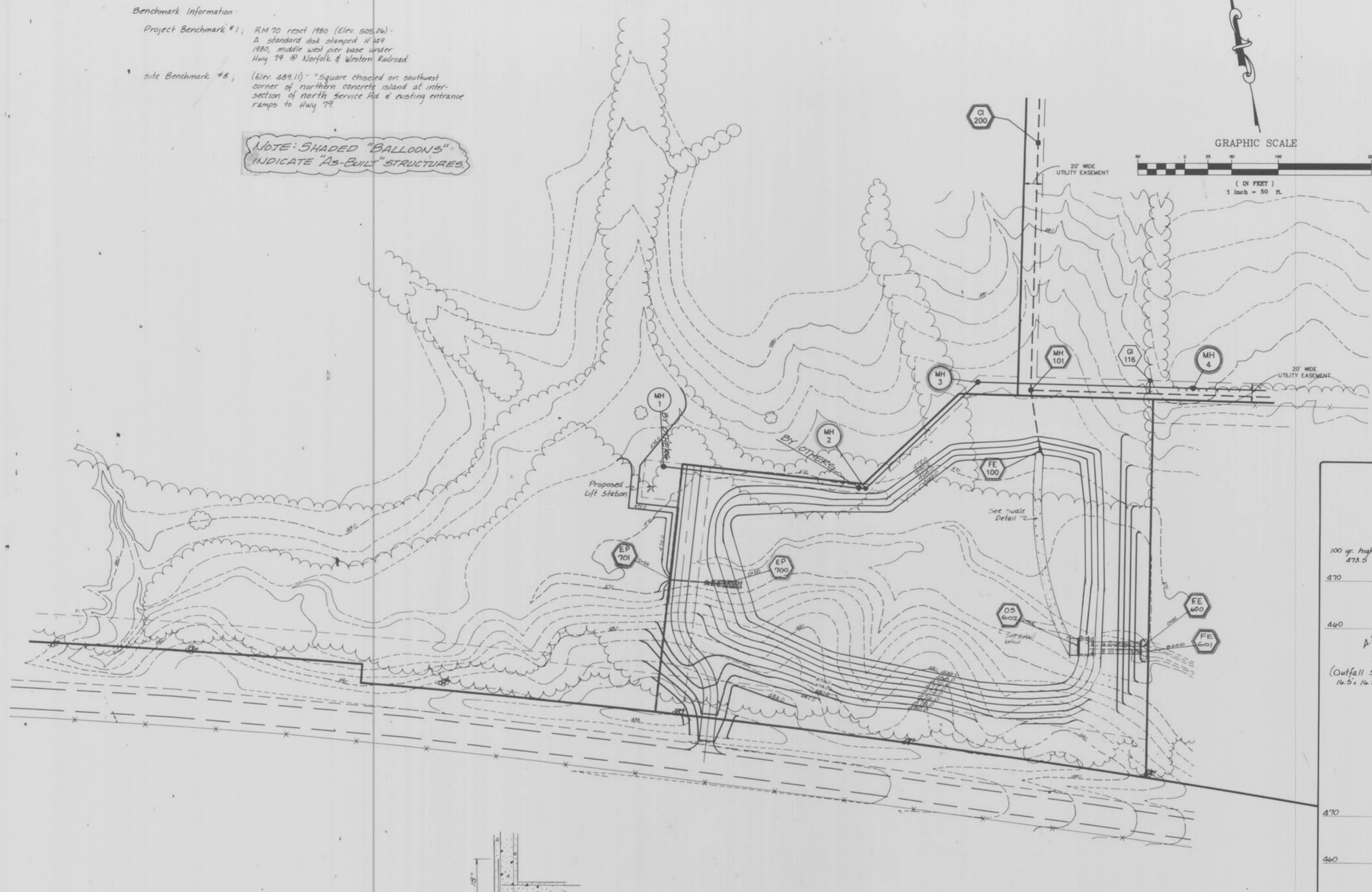


**Benchmark Information:**

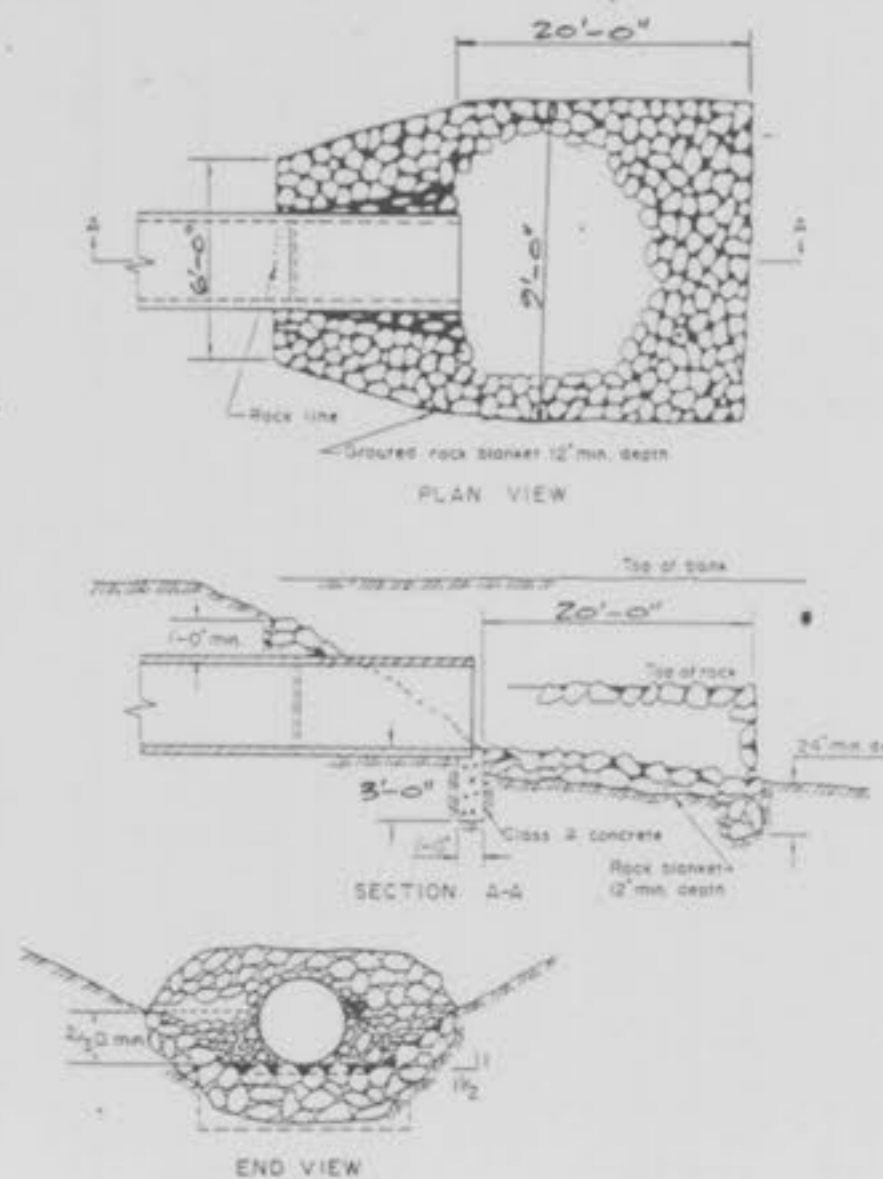
Project Benchmark #1, RM 70 reset 1980 (Elev 505.26)  
 A standard disk stamped H 149  
 1980, middle west pier base under  
 Hwy 79 @ Norfolk & Western Railroad

Site Benchmark #8, (Elev 489.11) - Square chiseled on southwest  
 corner of northern concrete island at inter-  
 section of North Service Rd & existing entrance  
 ramps to Hwy 79

NOTE: SHADED "BALLOONS"  
 INDICATE "AS-BUILT" STRUCTURES



- GENERAL NOTES:**
1. Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing and proposed sanitary and storm sewers.
  2. 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.
  3. All earthen filled places within State, County, or City roads (Highways) shall be compacted to 90% 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.
  4. No slope shall be greater than 3:1 and shall be either sodded or seeded and mulched.
  5. All existing improvements damaged or destroyed during construction shall be replaced or repaired in kind.
  6. All pipe backfill in the dam shall be "cohesive soil" compacted to 88% of maximum density as determined by the "Modified Proctor Compaction Test" (ASTM D-1557), also, no granular backfill shall be used in the dam.
  7. A soils investigation needs to be completed prior to grading, to insure the capability of the basin to retain water for the specified amount of time.
  8. All recommendations in soils report shall be followed and verified by a qualified soils engineer.



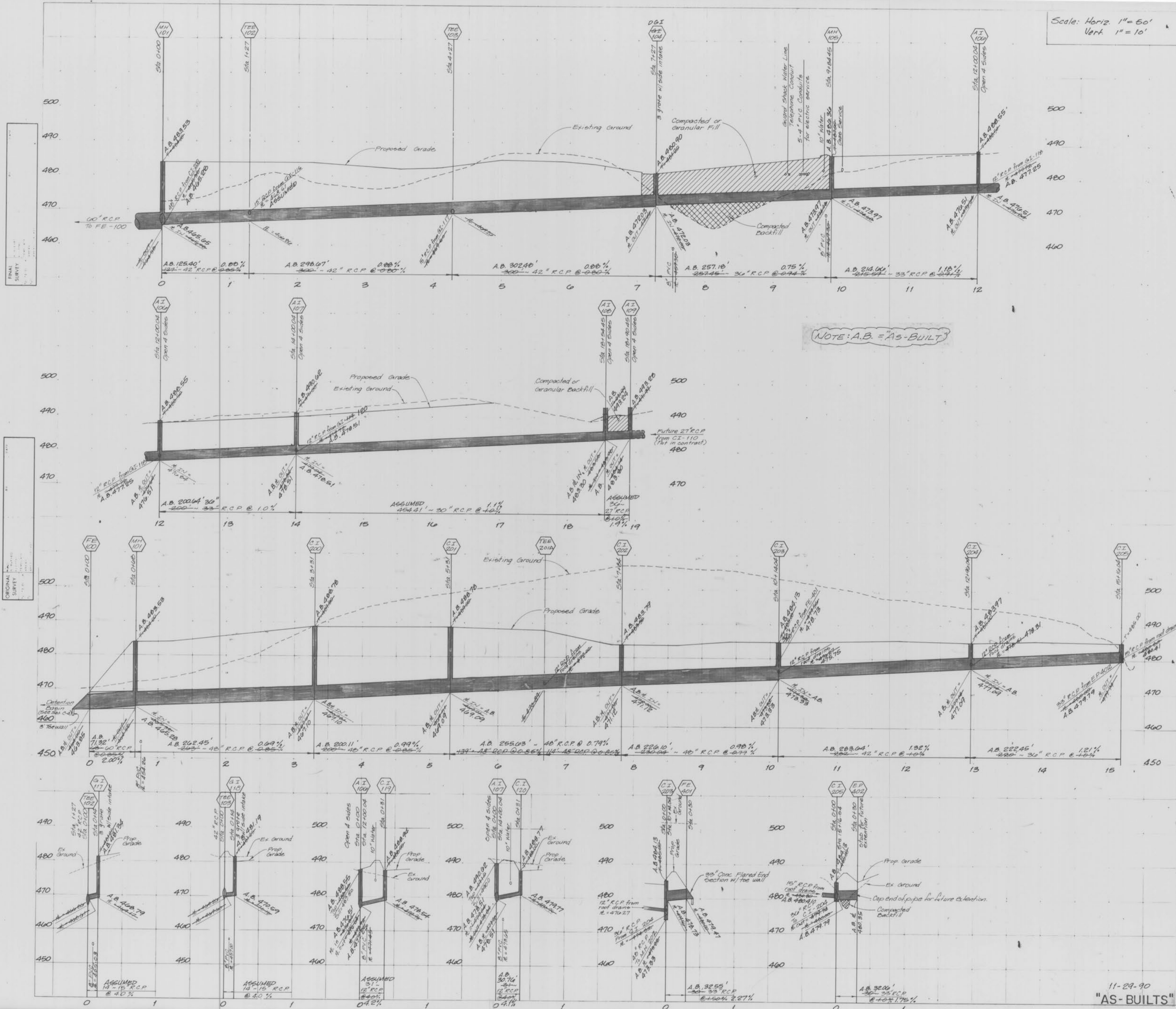
PREPARED BY:  
**PICKETT RAY & SILVER**  
 Civil Engineers  
 Land Surveyors

WEST 70 COMMERCE CENTER  
 OWNER: Trammell Crow Company  
 CONTRACTOR: R.W. Murray Co.

Revision Dates  
 Issue Date: 3/2/90  
 Sheet Title: DETENTION BASIN  
 RWM Job Number: 552  
 Sheet Number: C-4

11-29-90  
 "AS-BUILTS"

Scale: Horiz 1" = 60'  
Vert 1" = 10'



PREPARED BY:

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WEST 70 COMMERCE CENTER

OWNER: Trammell Crow Company

CONTRACTOR: R.W. Murray Co.

Revision Dates

Issue Date: 3/2/90

Sheet Title: STORM SEWER PROFILES

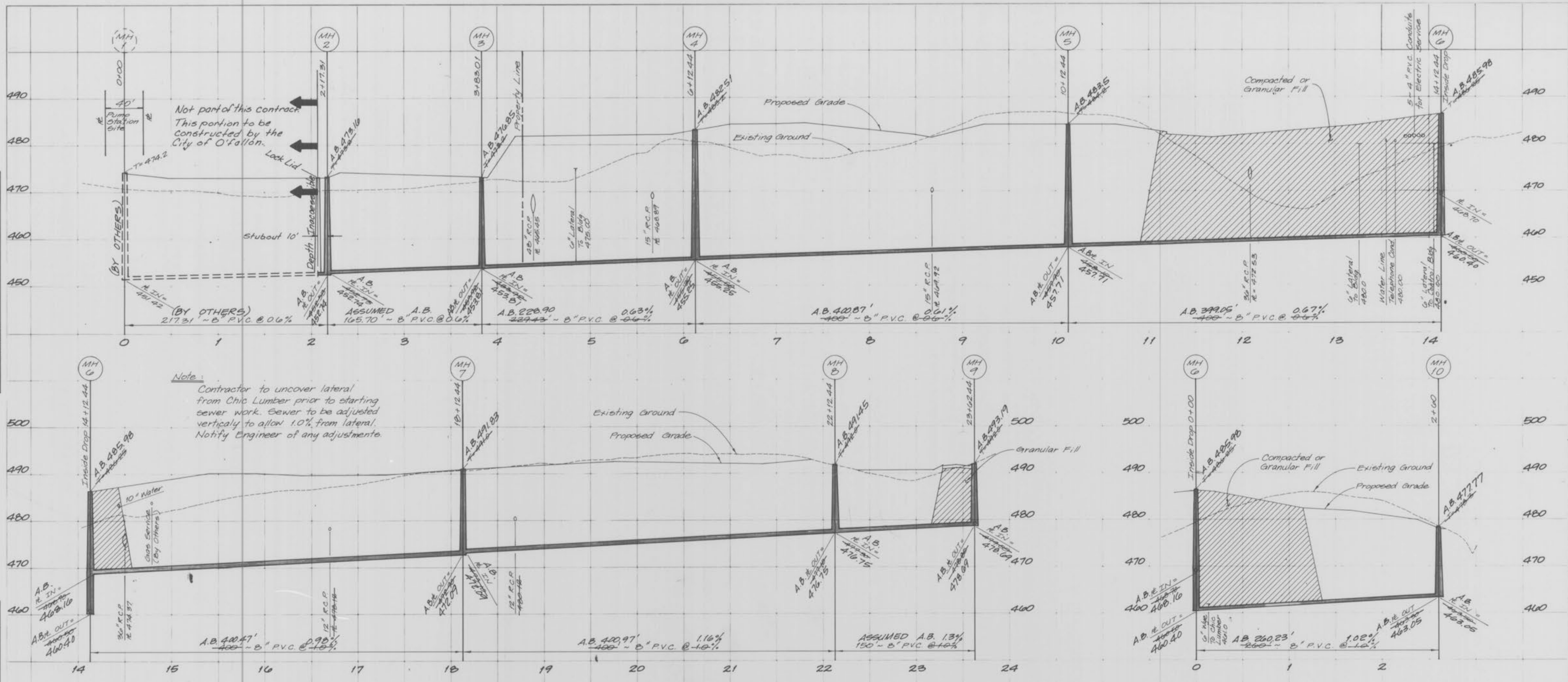
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Sheet Number: C-5

11-29-90  
"AS-BUILTS"

FINAL SURVEY  
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 CHECKED BY: [Signature]  
 DATE: 11-29-90

ORIGINAL SURVEY  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 DATE: 11-29-90



NOTE: A.B. = AS-BUILT

Scale: Horiz. 1" = 50'  
 Vert. 1" = 10'

11-29-90  
 "AS-BUILTS"

PREPARED BY:

PICKETT RAY & SILVER  
 Civil Engineers  
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WEST 70 COMMERCE CENTER

OWNER: Trammell Crow Company

CONTRACTOR: R.W. Murray Co.



Revision	Date
1	11/29/90
2	
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Issue Date: 3/2/90

Sheet Title: SANITARY SEWER PROFILES

RWM Job Number: 552

Sheet Number: C-6