

NOTE:
ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

> DATE **REVISIONS** DES: CB CITY of TAMPA DRN: GP 2 CKD:

> > DATE:

WASTEWATER DEPARTMENT

Forest Hills Wastewater Collection System Rehabilitation By CIPP **COVER** 

SHEET

JACINTO CARLOS FERRAS, P.E. #49454 WASTEWATER DEPARTMENT

## GENERAL NOTES

- THE SCOPE OF THIS PROJECT SHALL CONSIST OF REHABILITATION OF 8", 10", 12", 15", 21" AND 24" DIA WASTEWATER PIPELINE BY INSTALLATION OF CURED IN PLACE PIPE LINER AND ALL APPURTENANCE ASSOCIATED
- ELEVATION INFORMATION SHOWN ON THESE PLANS IS REFERENCED TO N.G.V.D. 1929 UNLESS OTHERWISE STATED AND ARE BASED ON RECORD DRAWINGS.
- 3. SHEETS 23-94 ARE THE EXISTING AS-BUILTS OF THE SEWER PIPE TO BE REHABILITATED.
- 4. DURING THE MOT, CONTRACTOR MUST MAINTAIN ACCESS TO ALL DRIVEWAYS FOR THE DURATION OF THE PROJECT.
- CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR OBTAINING THE NECESSARY ROAD CLOSURE AND RIGHT-OF-WAY PERMITS FROM THE APPROPRIATE GOVERNMENT AGENCIES HAVING JURISDICTION OVER THE SPECIFIC ROADWAYS. A CITY OF TAMPA RIGHT OF WAY ACCELA PERMIT SHALL BE SUBMITTED FOR EACH ROADWAY AT THE FOLLOWING WEBSITE HTTP://ACA.TAMPAGOV.NET/
- IN ORDER TO OBTAIN ROADWAY CLOSURE OR RIGHT-OF WAY PERMITS, AT MINIMUM, THE CONTRACTOR MUST SUBMIT DETAILED MAINTENANCE OF TRAFFIC (MOT) PLANS ALONG WITH APPLICATIONS TO THE APPROPRIATE AGENCY. THE MOT(S) SHALL CONFORM TO APPLICABLE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) INDEX DRAWINGS (MOST CURRENT EDITION). THE GOVERNING AGENCIES MAY REQUIRE ADDITIONAL INFORMATION AND DICTATE SPECIFIC WORK TIMES DURING NON-PEAK TRAFFIC HOURS. REFER TO SPECIFIC PROVISIONS FOR SPECIFIC TRAFFIC CONTROL REQUIREMENTS.
- CONTINUOUS SEWER SERVICE MUST BE MAINTAINED AT ALL TIMES. WORK DURING LOW FLOW PERIODS OR NIGHT WORK MAY BE REQUIRED. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PRIVATE AND CITY PUMPING STATIONS AND SEWER SERVICE VIA VACUUM TRUCKS. CONTRACTOR IS RESPONSIBLE FOR DEWATERING, COLLECTING AND DISPOSING OF ALL WATER AND SLUDGE FROM EXISTING FACILITIES AS NECESSARY TO MAINTAIN SERVICE. COST FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS CONTRACT ITEMS AND NO ADDITIONAL PAYMENT WILL BE MADE.
- 8. BYPASS PUMPS SHALL BE CAPABLE OF DELIVERING 300 GPM FOR 8", 600 GPM FOR 10", 800 GPM FOR 12", 1,400 GPM FOR 15", 2,000 GPM FOR 21" AND 24" DIAMETER PIPES. THE BYPASS PUMPS SHALL BE OF THE SELF PRIMING QUIET FLOW TYPE PUMP. BYPASS PUMP NOISE SHALL STRICTLY COMPLY TO ALL LOCAL REGULATIONS AND ORDINANCES COVERING NOISE CONTROL. THIS MAY REQUIRE CONSTRUCTING SOUND ATTENUATING ENCLOSURE AROUND PUMPS. BYPASS METHOD SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER.
- THE PROPOSED CURED LINER THICKNESS FOR THE 8" DIA. SEWER SHALL BE 6 MM THICKNESS, 10", 12" AND 15" DIA. SEWERS SHALL BE 7.5 MM THICKNESS, 21" DIA SEWER SHALL BE 10.5 MM THICKNESS AND 24" DIA SEWERS SHALL BE 12.0 MM THICKNESS.
- 10. CONTRACTOR SHALL RESTORE ALL LANDSCAPING, SODDING, SPRINKLER SYSTEM PIPING AND PAVEMENT THAT MAY HAVE BEEN DAMAGED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER.
- 11. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH WASTEWATER PERSONNEL AND PUMPING
- 12. OSHA STANDARD EQUIPMENT SUCH AS SAFETY HARNESSES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, ETC. SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE.
- 13. THIS PROJECT INCLUDES REHABILITATION OF MANHOLES BY APPLICATION OF A STRUCTURAL COATING SYSTEM AND ALL APPURENTANCES ASSOCIATED WITH THE PROJECT.
- 14. DURING THE MANHOLE'S INTERIOR CLEANING OPERATION, THE CONTRACTOR MUST PROVIDE A MEANS OF CAPTURING AND DISPOSING OF THE REMOVED DEBRIS. THIS METHOD SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND
- 15. ALL EXPOSED STEEL REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ANY DETERIORATION/RUST AND COATED WITH THE PROPOSED COATING SYSTEM.
- 16. THE ONLY EXCAVATION NECESSARY FOR THIS PROJECT IS FOR THE REMOVAL AND REPLACEMENT OF THE MANHOLE FRAME AND COVERS. FOR THESE CASES, THE CONTRACTOR IS REQUIRED TO CALL SUNSHINE AT 1-800-432-4770 TO DETERMINE UTILITY LOCATIONS PRIOR TO EXCAVATION.

PROPOSED MANHOLE COATING SYSTEM THICKNESS					
Location	Coating System				
Manhole Barrel	250 MILS (MIN)				
Manhole Benches	250 MILS (MIN)				

INDEX					
Sheet Number	DESRIPTION				
1	COVER				
2	Index and Notes				
3	OVERVIEW LOCATION MAP				
4 - 20	AREA MAPS				
21	MANHOLE REHABILITATION				
22	MANHOLE DETAIL				
23 - 94	WASTEWATER RECORD DRAWINGS FOR REFERENCE				

\*\* RECORD DRAWINGS ARE BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT INTENDED TO SHOW ADDITIONAL WORK FOR THIS CONTRACT. THE CITY DOES NOT GUARANTEE THE ACCURACY OF THE RECORD DRAWINGS.

	#	DATE	REVISIONS	DES:	CITY of TARE	Forest Hills Wastewater Collection System	SHEET
	1			DRN:	CITION IAMPA	Rehabilitation By CIPP	
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	WASTEWATER DEPARTMENT	Index And Notes	つ
WASTEWATER DEPARTMENT	3			DATE:	WASIEWATER DELARIMENT	Index And Notes	

Area Collection System TOSHIBA\_UNI\_COLOR

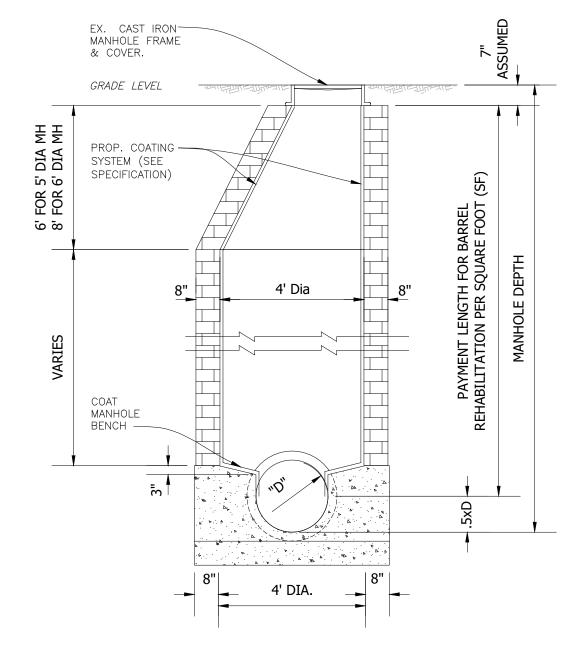
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Area 70Si

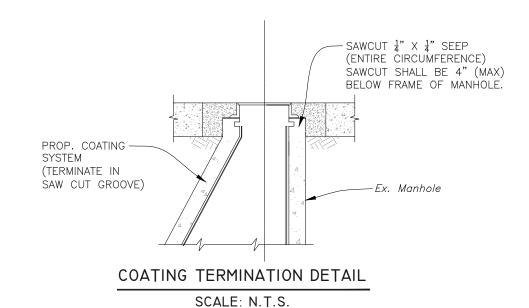
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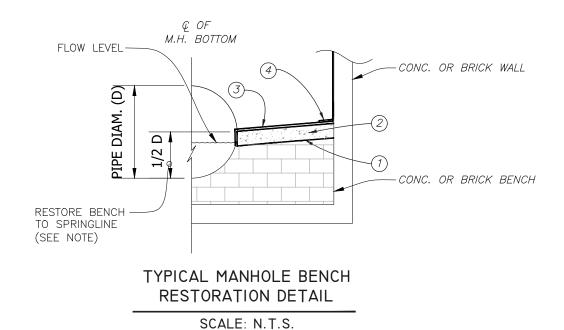
## <u>NOTES</u>

- 1. REMOVE ALL DEBRIS AND LOOSE BRICKS FROM THE TOP OF THE BENCH.
- 2. INSTALL A MINIMUM 1" THICK CLASS "D" CONCRETE OVER EXISTING BENCH. ALLOW CONCRETE TO CURE (MIN. 24 HRS. UNLESS OTHERWISE APPROVED BY THE ENGINEER).
- 3. OVERLAY BENCHES WITH PROPOSED COATING SYSTEM.
- 4. PROVIDE 6" COATING THICKNESS TRANSITION. PAYMENT FOR THIS ITEM IS INCLUDED IN THE BENCH RESTORATION.



BRICK OR CONCRETE MANHOLE (TYPICAL) SCALE: N.T.S.





DATE **REVISIONS** DES: DRN: 2 CKD: WASTEWATER DEPARTMENT DATE:

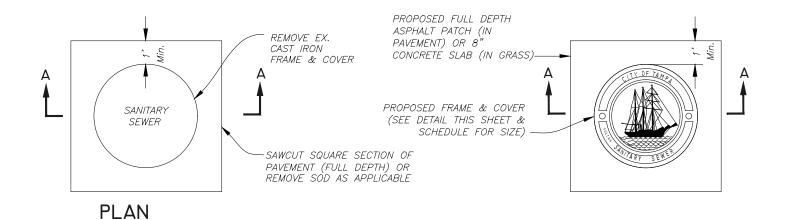
CITY of TAMPA WASTEWATER DEPARTMENT Forest Hills Wastewater Collection System Rehabilitation By CIPP MANHOLE REHABILITATION

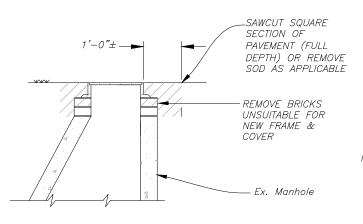
SHEET

JACINTO CARLOS FERRAS, P.E. #49454

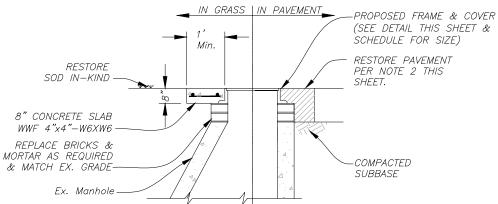
## <u>NOTES</u>

- 1. FOR MANHOLE COVER SIZES AND WHETHER THE COVERS ARE LOCATED IN GRASS OR PAVEMENT, WILL BE PROVIDED ON EACH INDIVIDUAL WORK ORDER ISSUED UNDER THIS CONTRACT.
- 2. PAVEMENT RESTORATION SHALL CONSIST OF 8" PERMANENT BASE (CRUSHED CONCRETE OR CRUSHED LIMEROCK BASE) AND PERMANENT ASPHALT SUPERPAVE PAVEMENT, UNLESS OTHERWISE NOTED. IF LOCATED IN D.O.T. ROW, AN ADDITIONAL 1 1/2" SUPER PAVE ASPHALT IS REQUIRED.

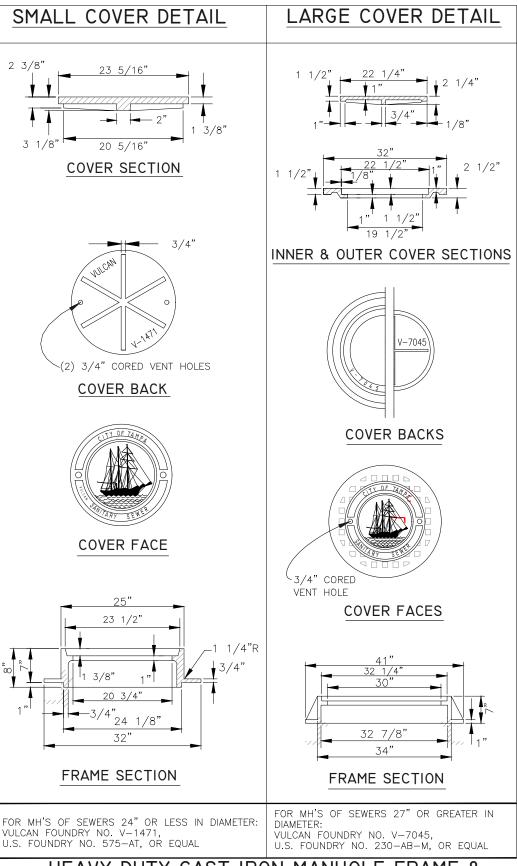








SECTION B-B REPLACEMENT DETAIL



## HEAVY DUTY CAST IRON MANHOLE FRAME & COVER DETAILS

# DATE REVISIONS DES:

1 DRN:

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

## DATE REVISIONS

DES:

CITY of TAMPA
WASTEWATER DEPARTMENT

DATE:

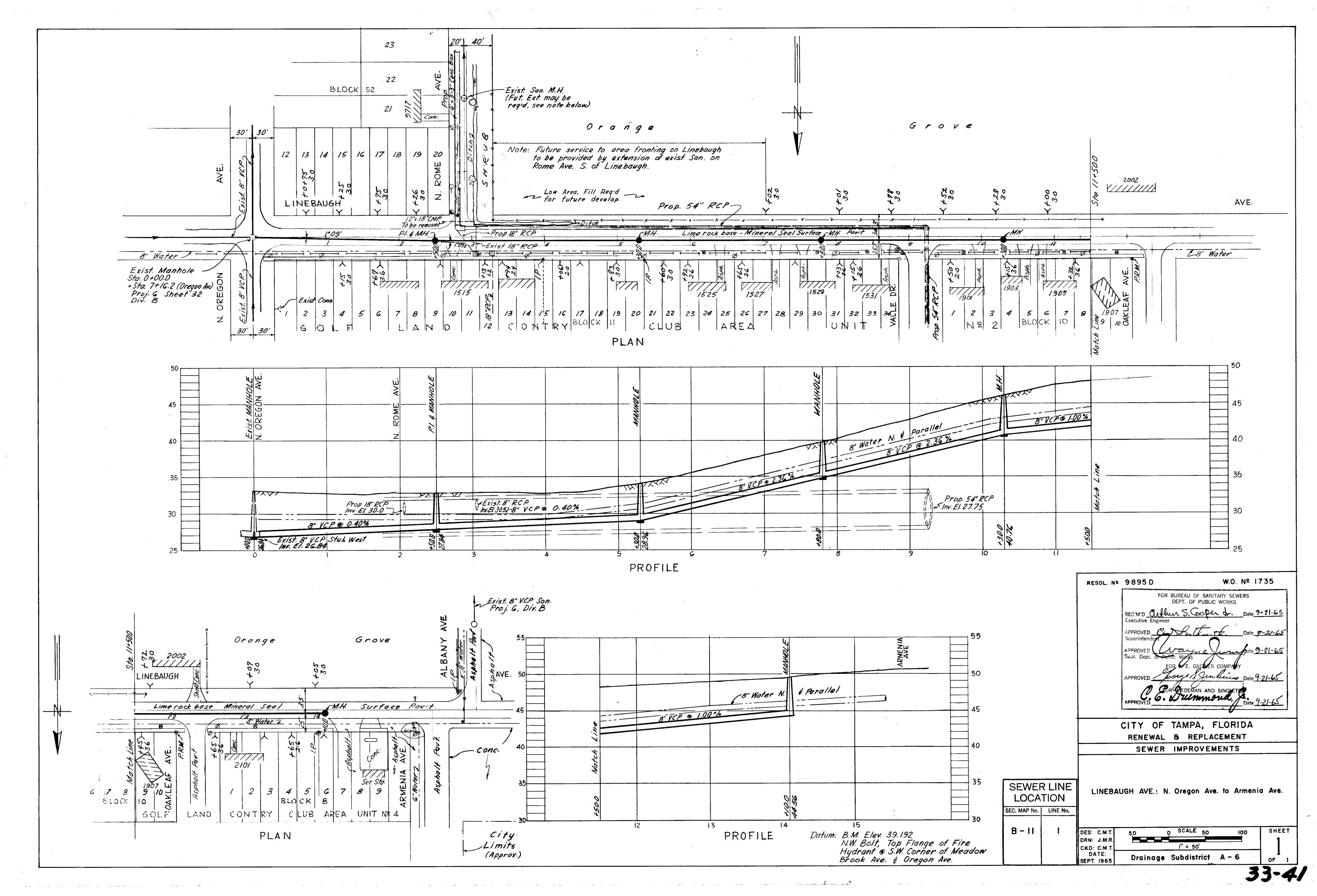
Forest Hills Wastewater Collection System Rehabilitation By CIPP

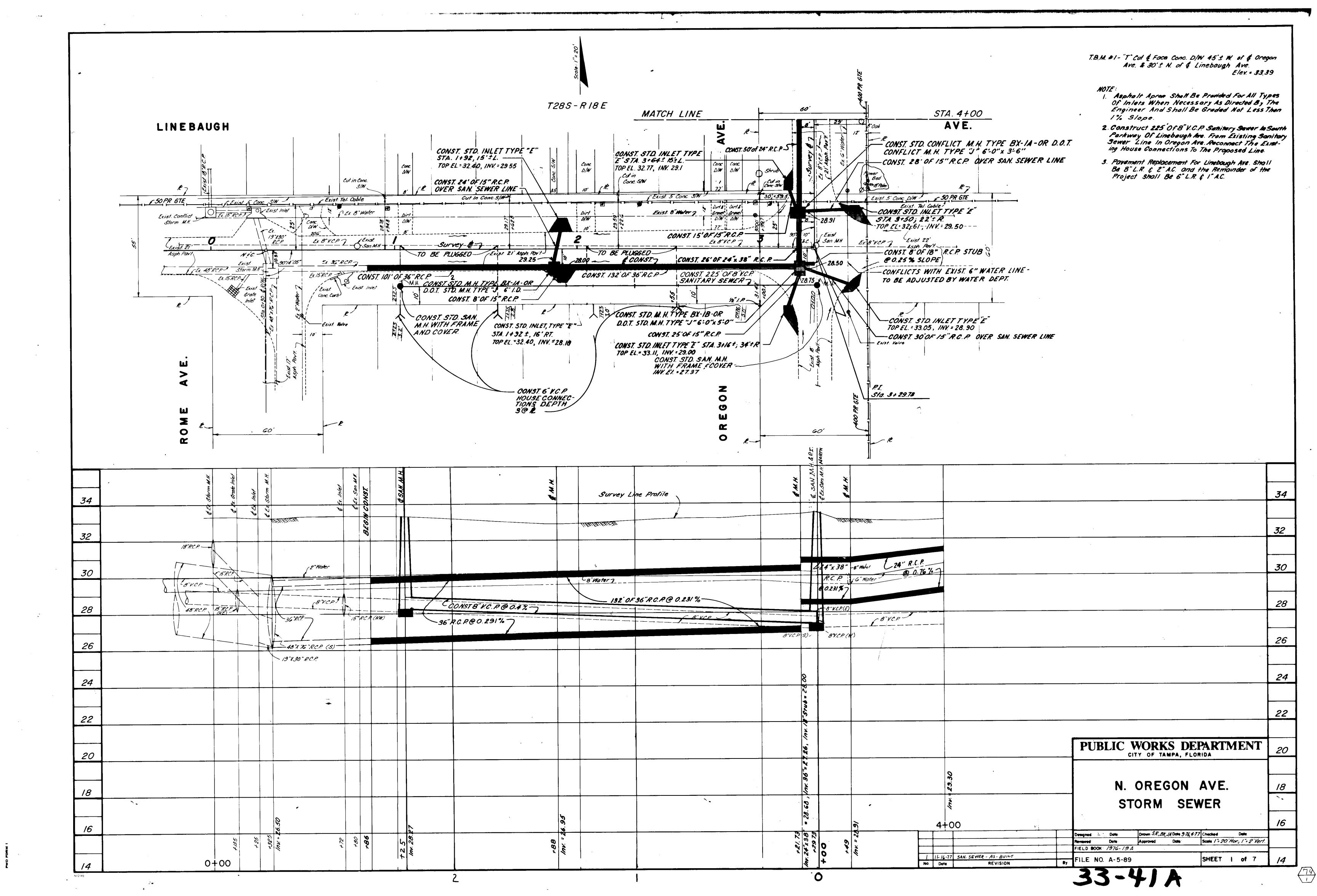
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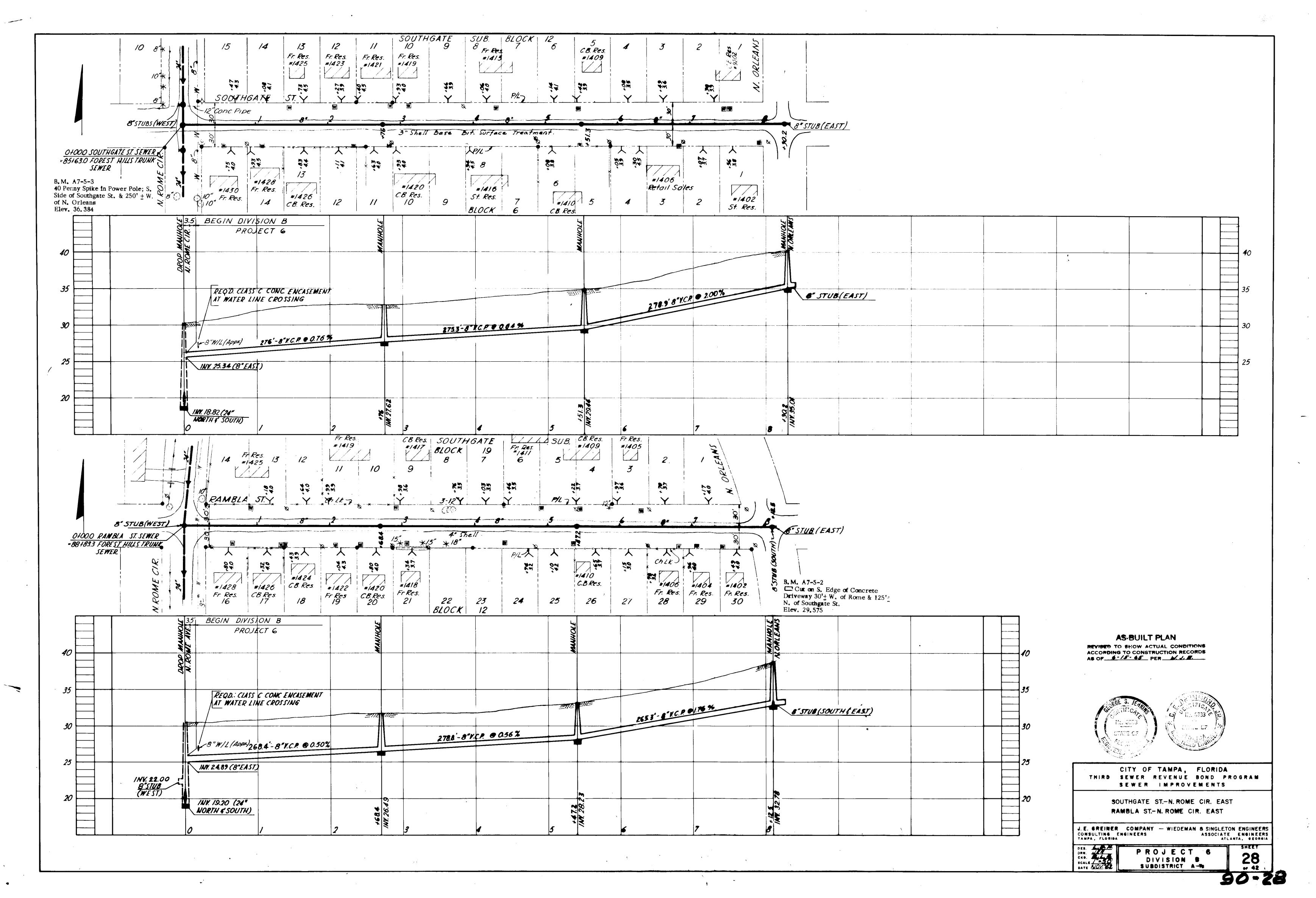
MANHOLE DETAIL

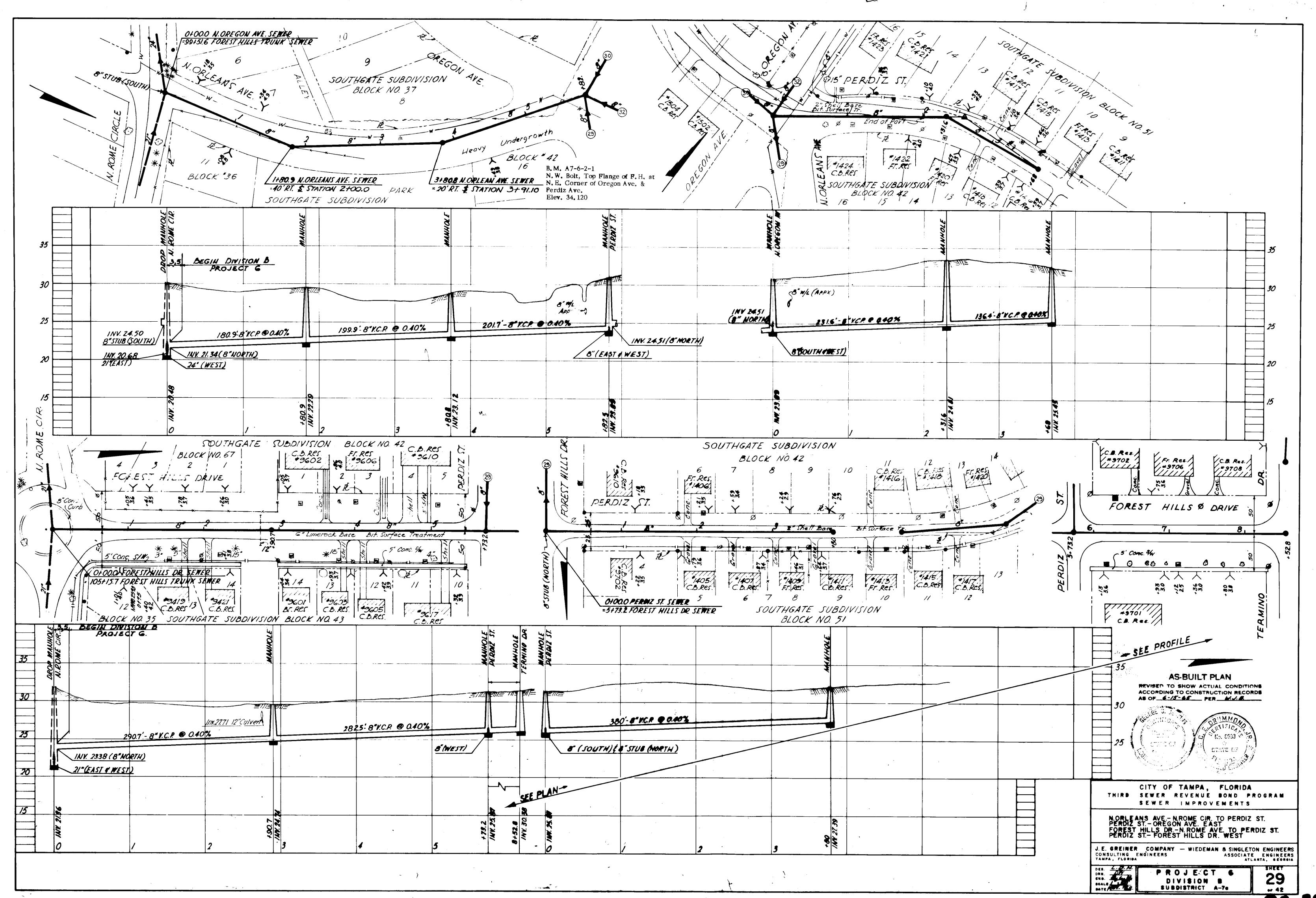
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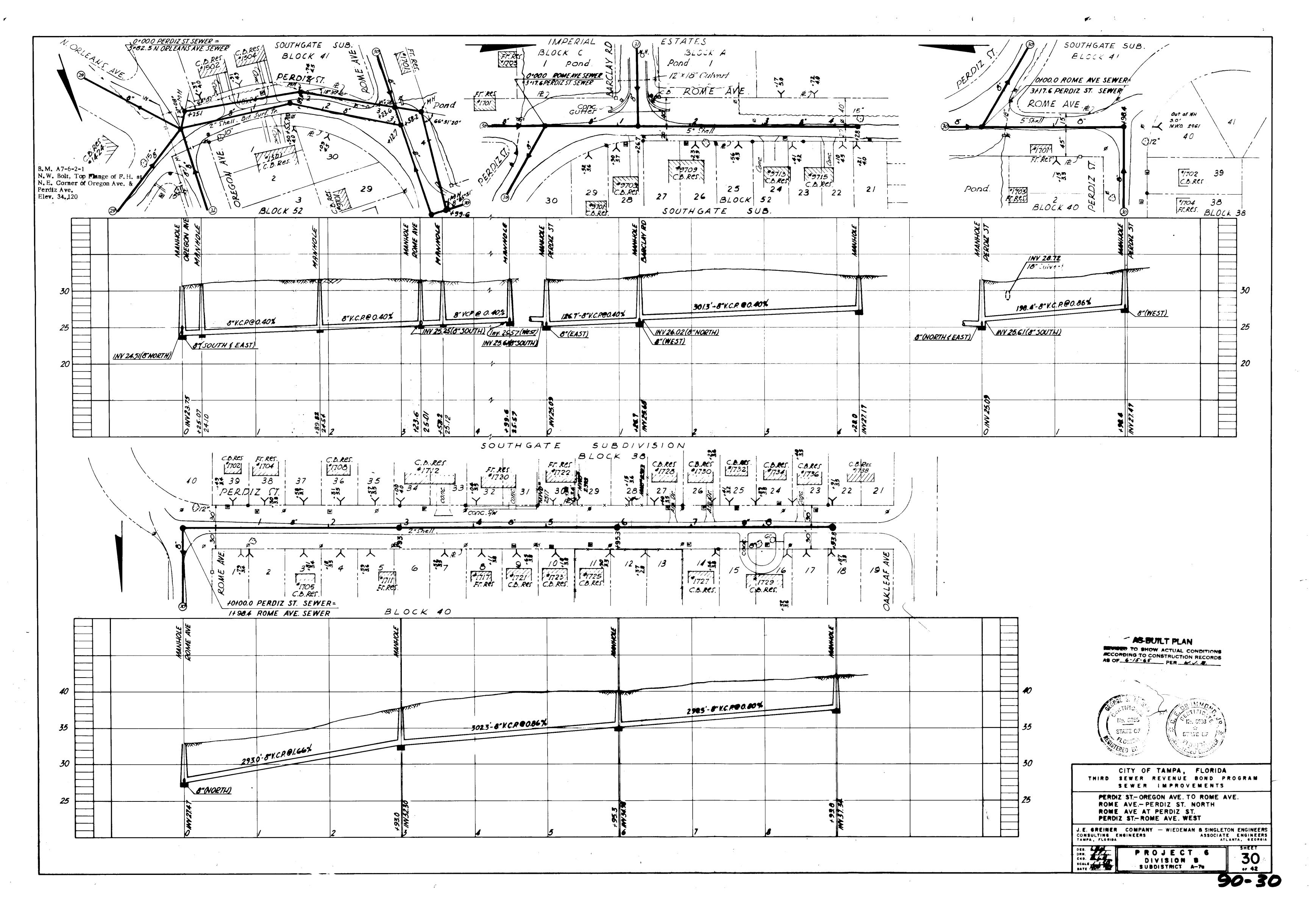


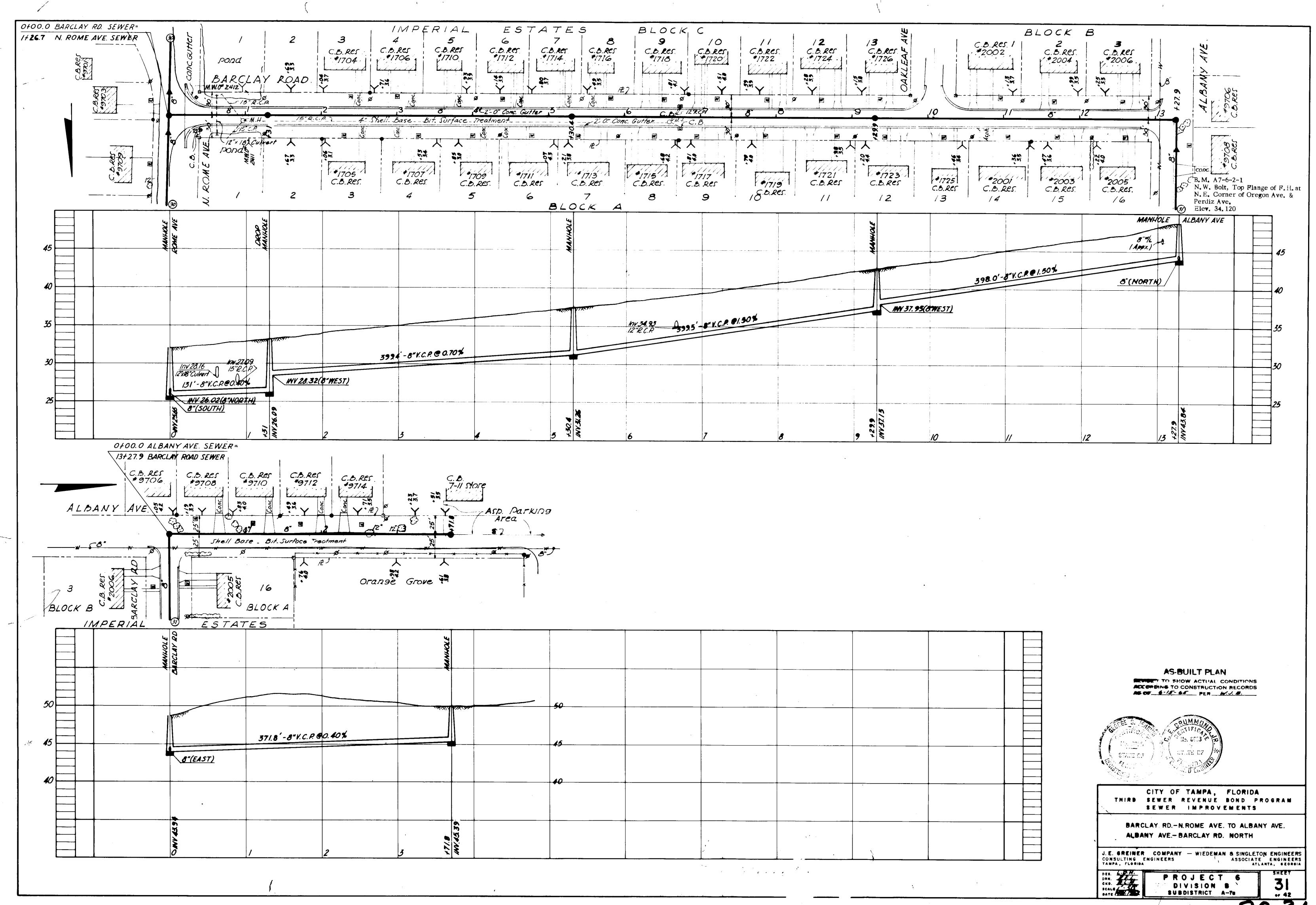


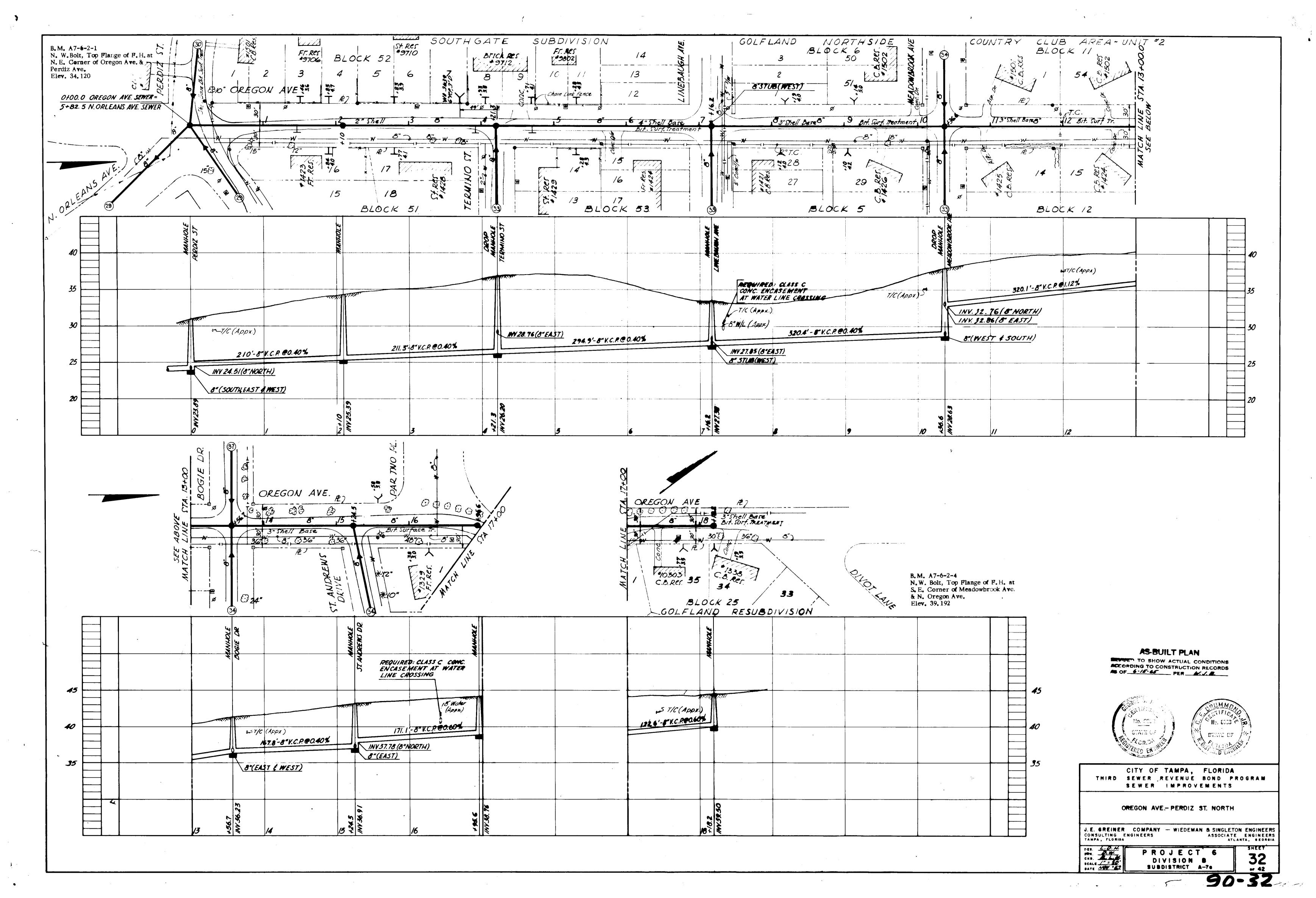


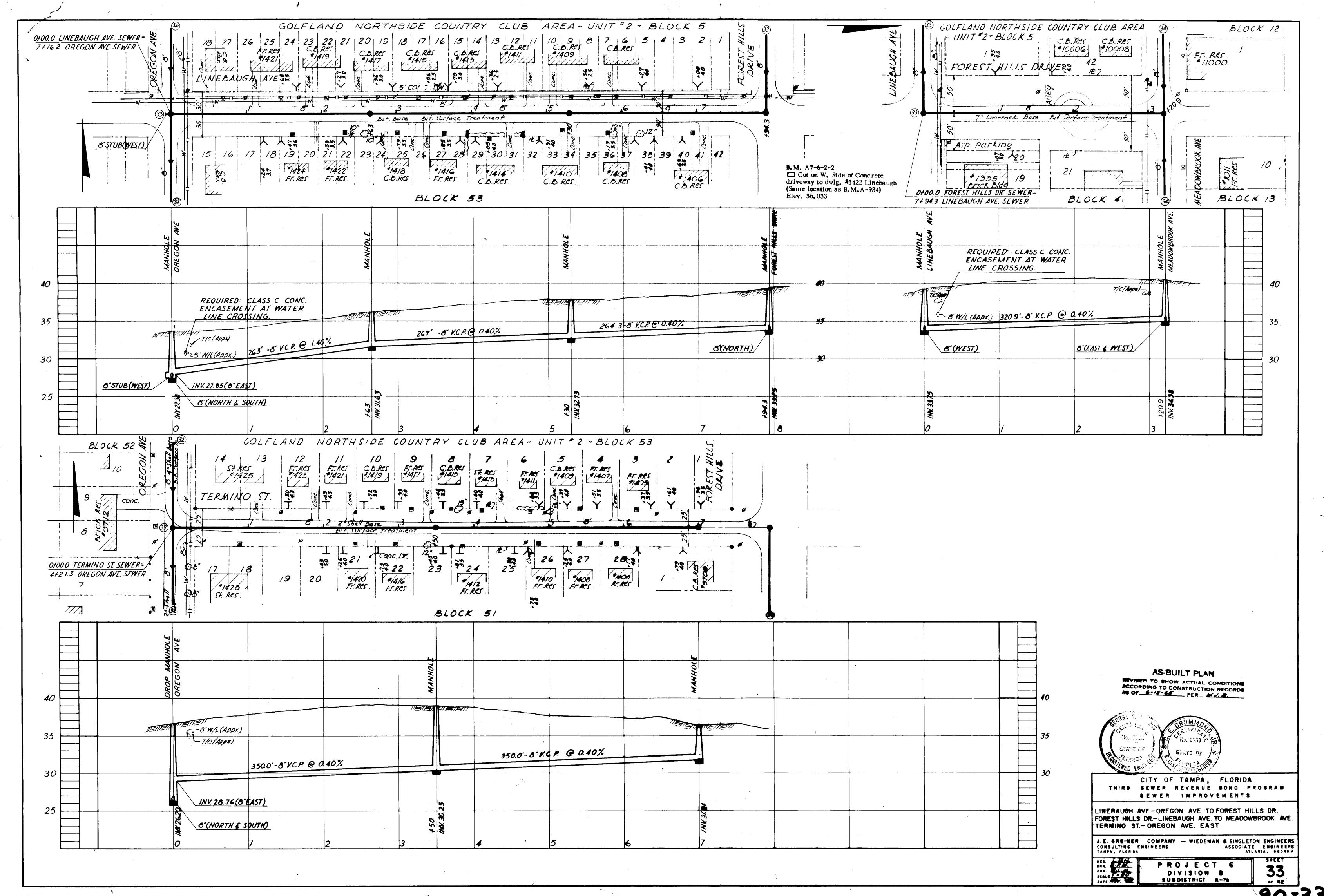


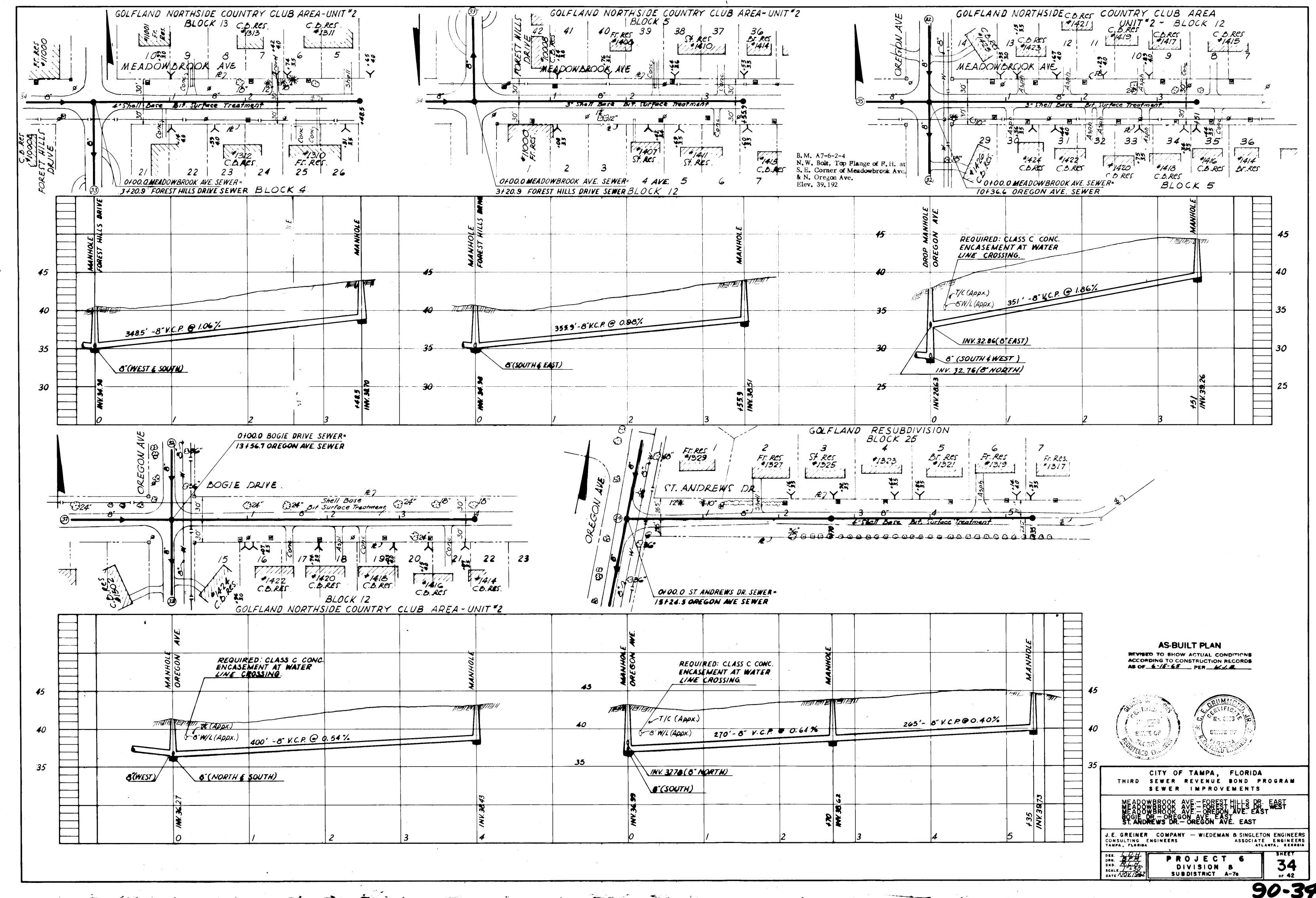
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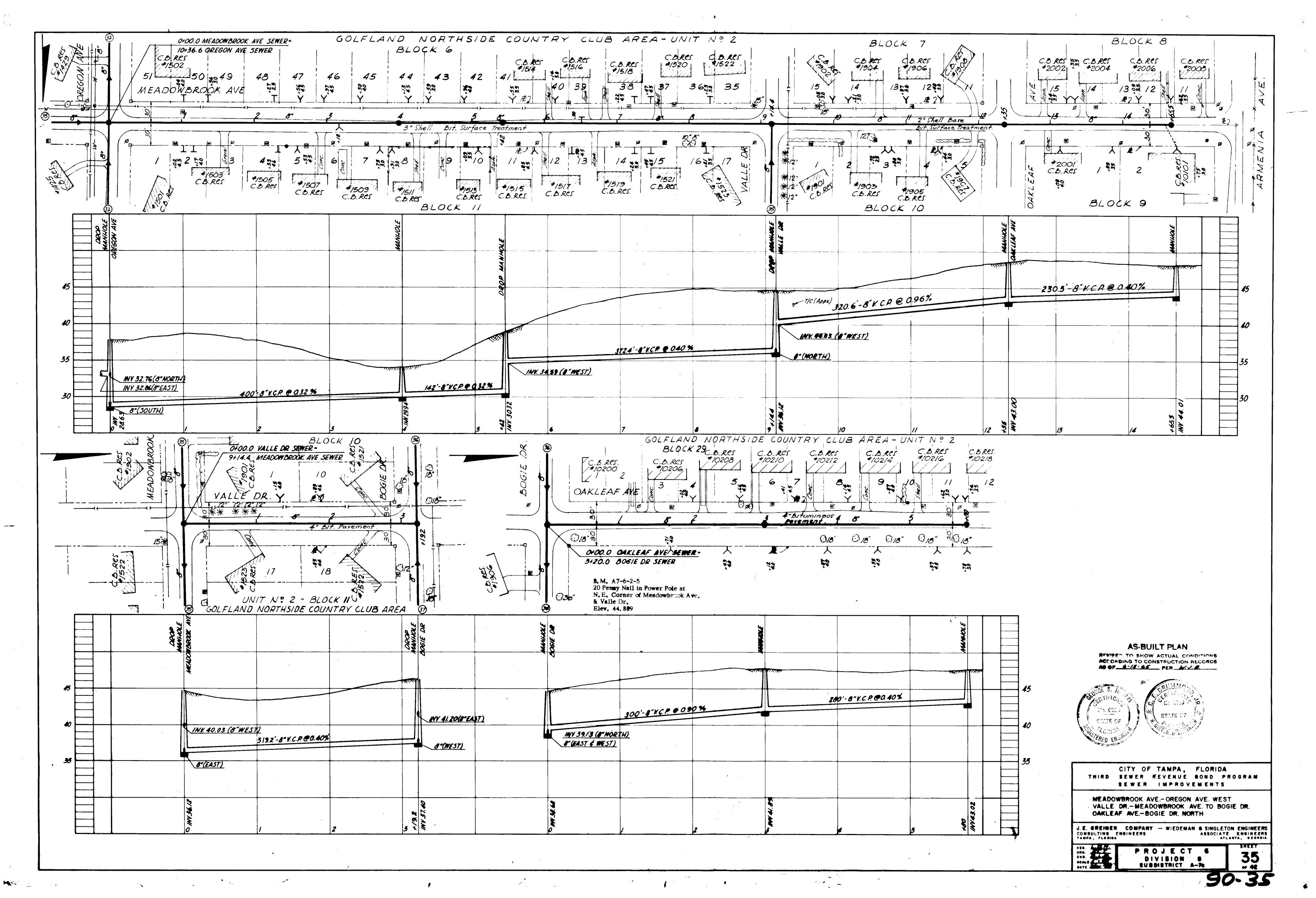


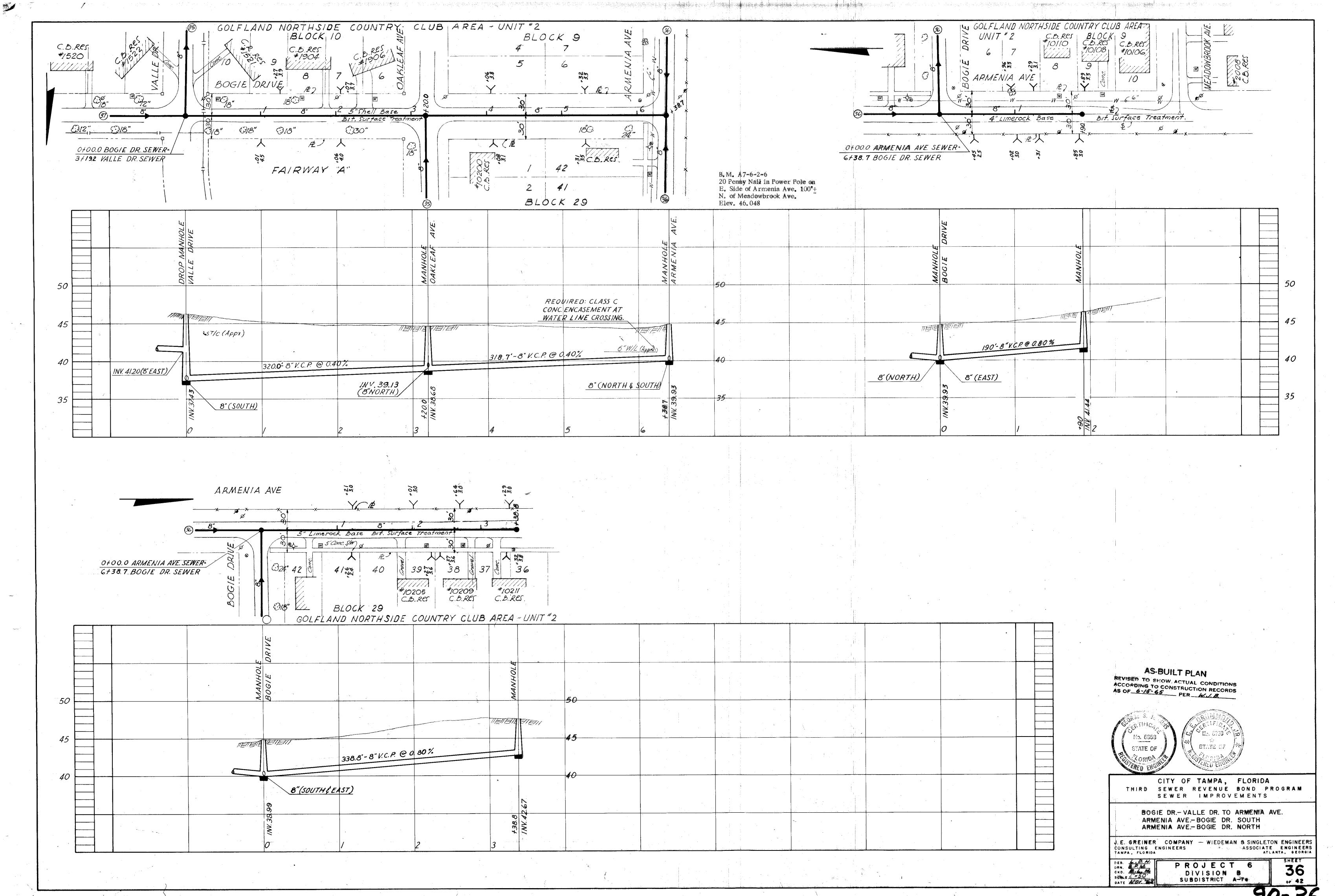


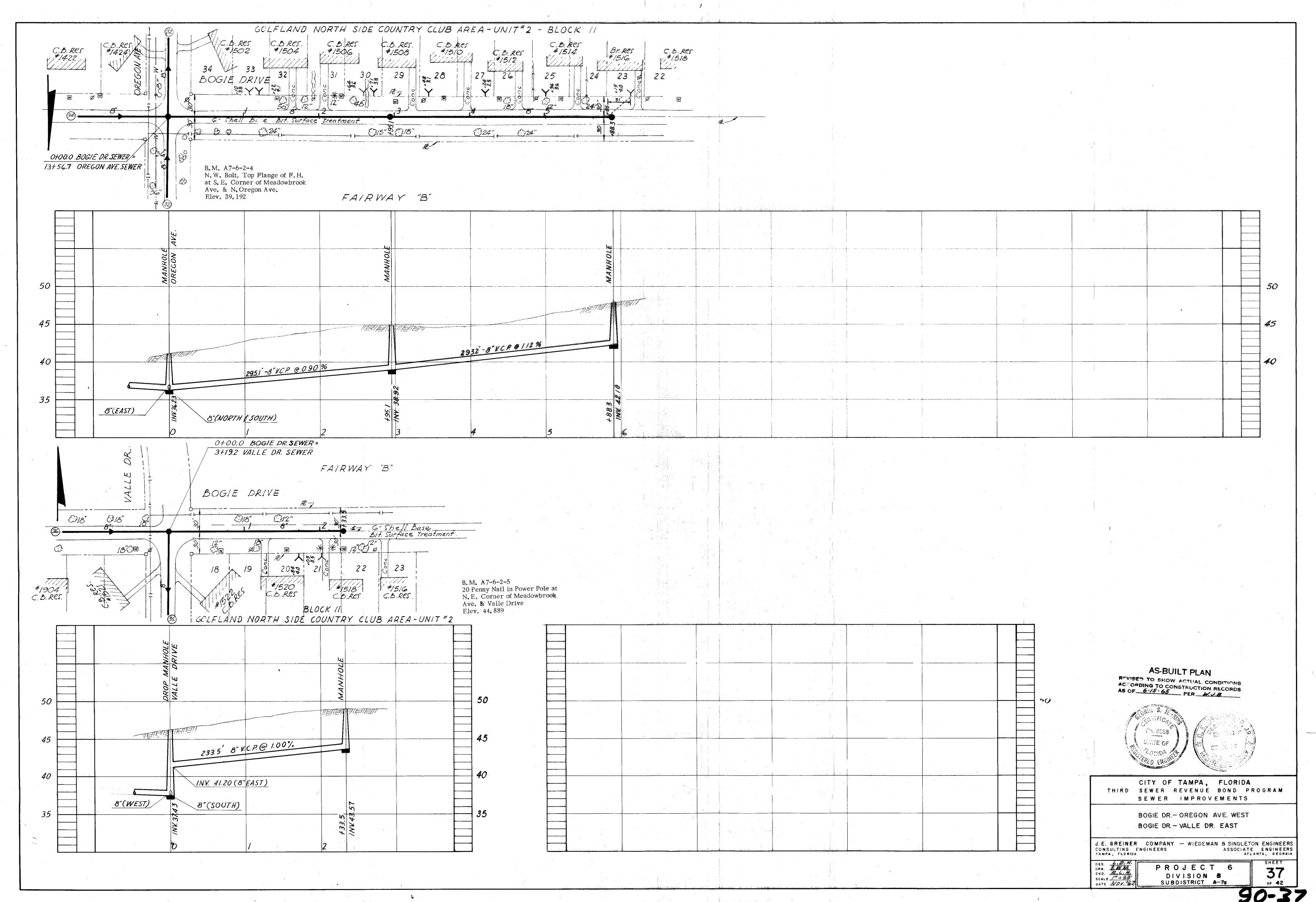


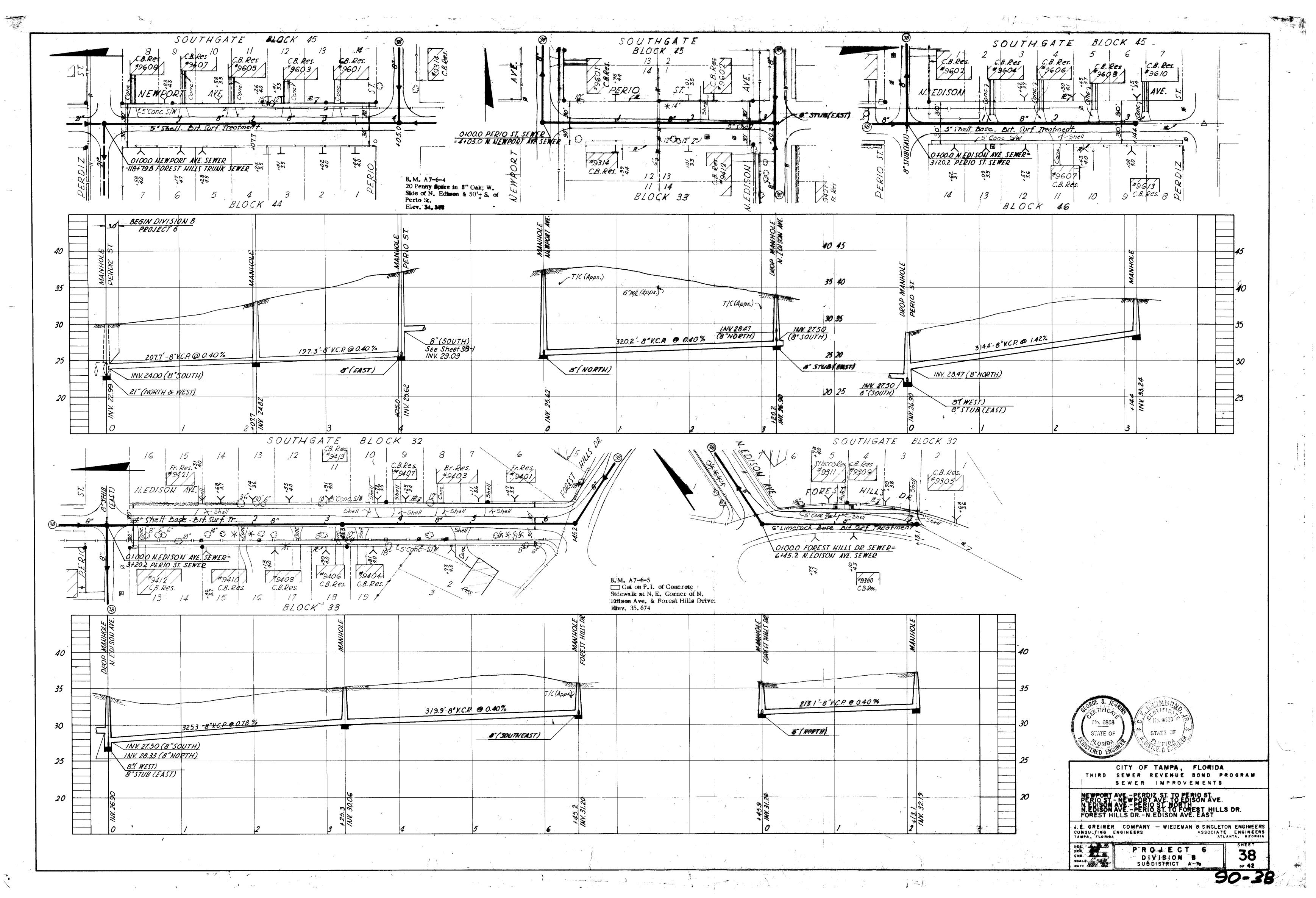






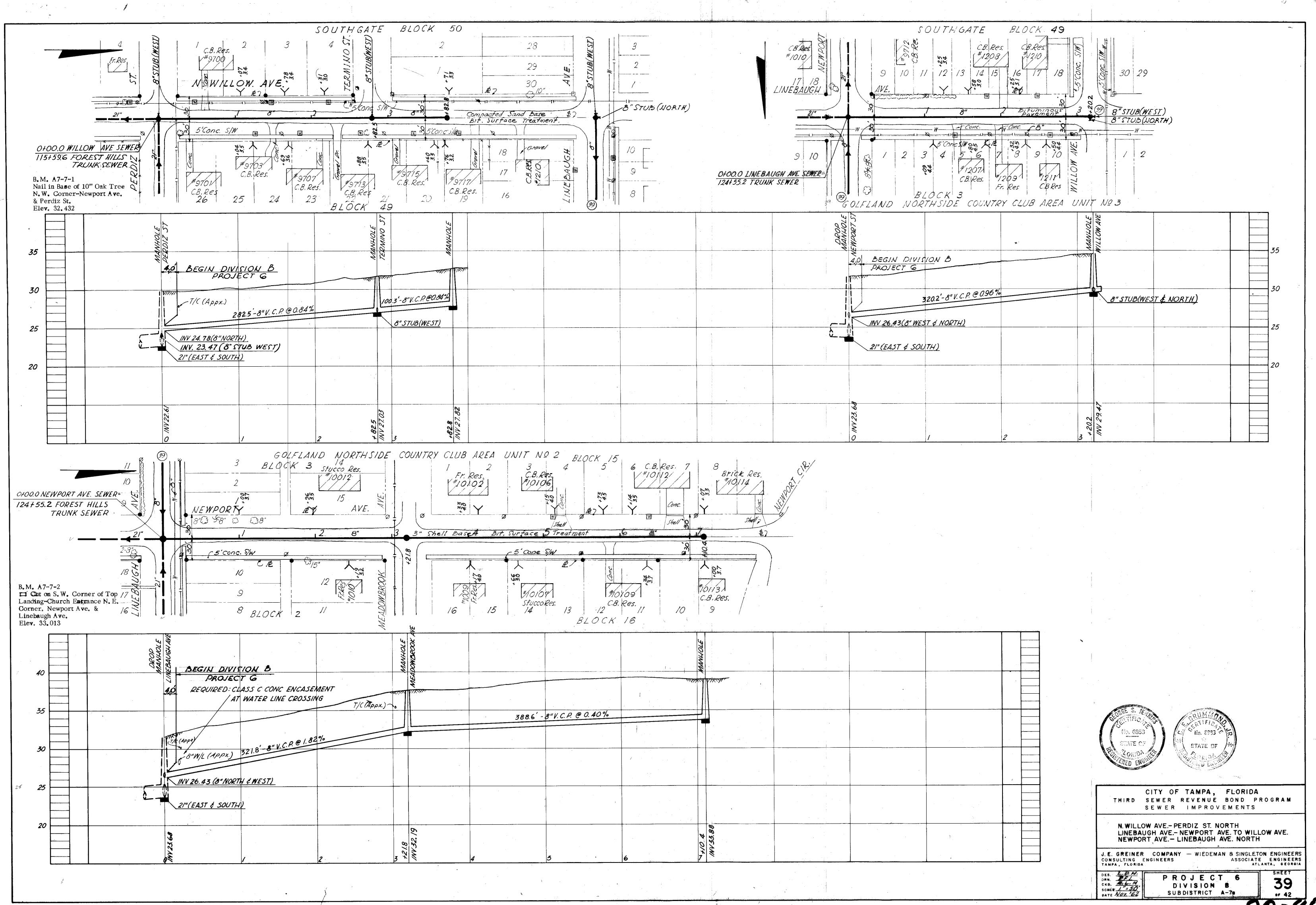






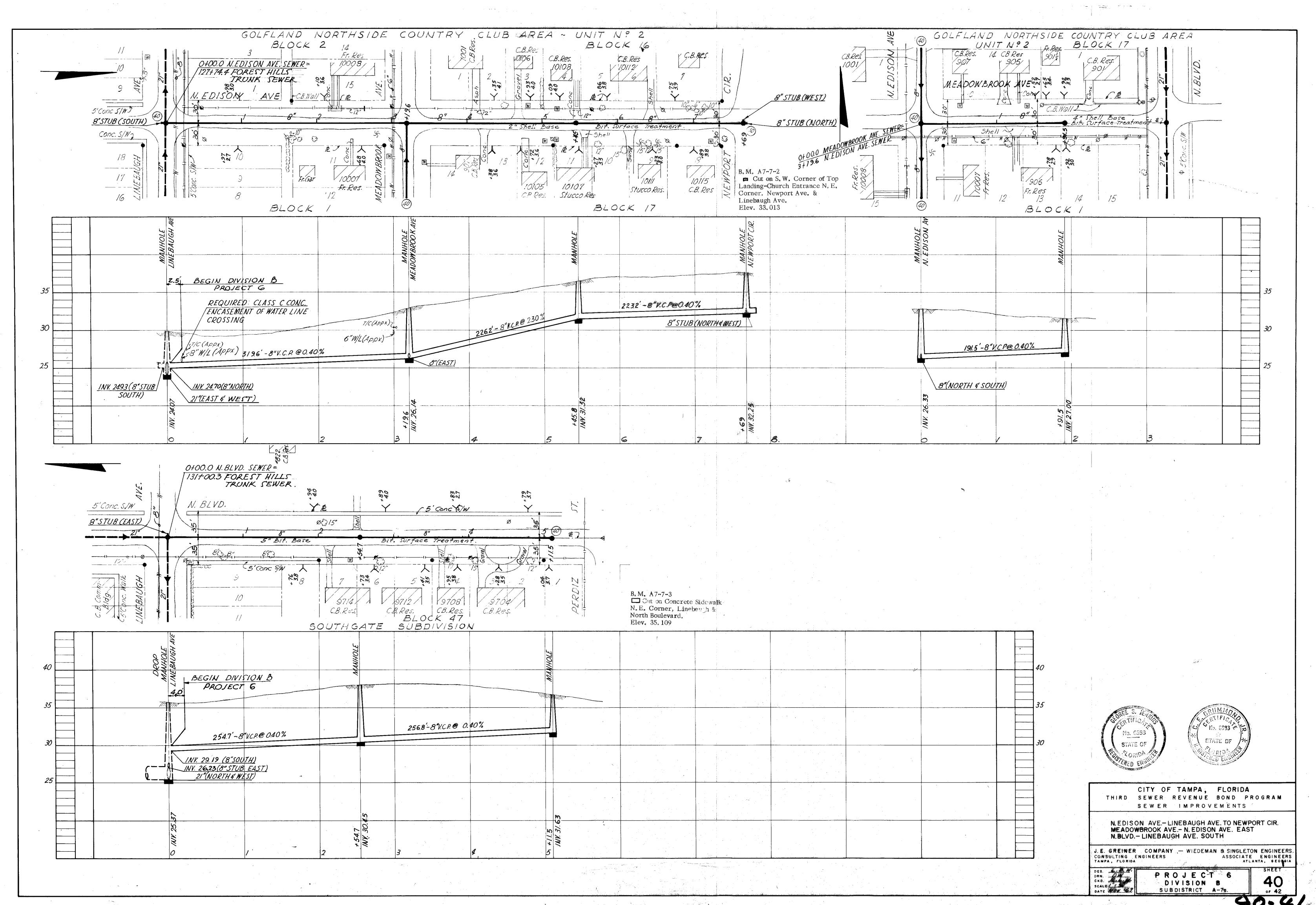
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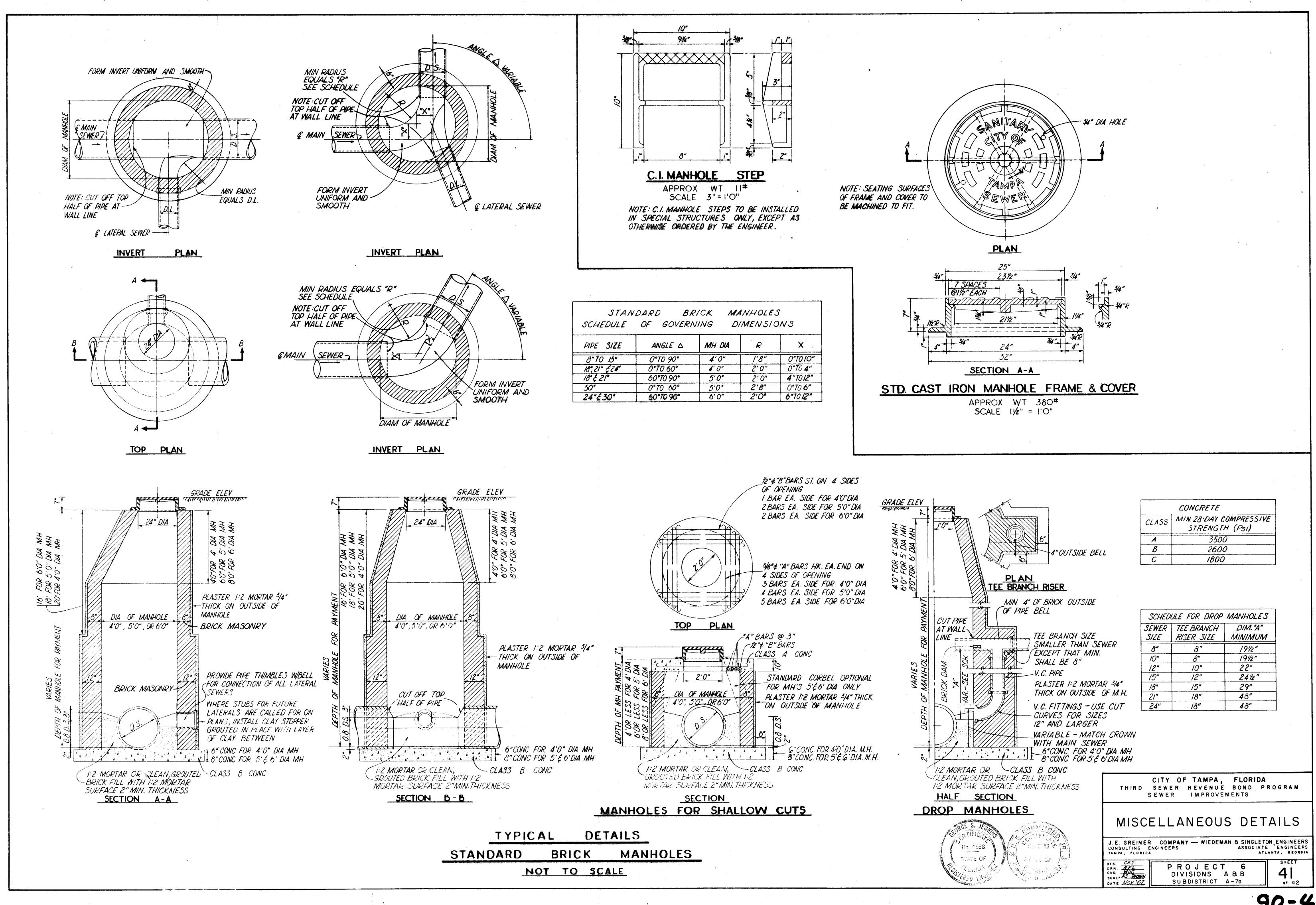
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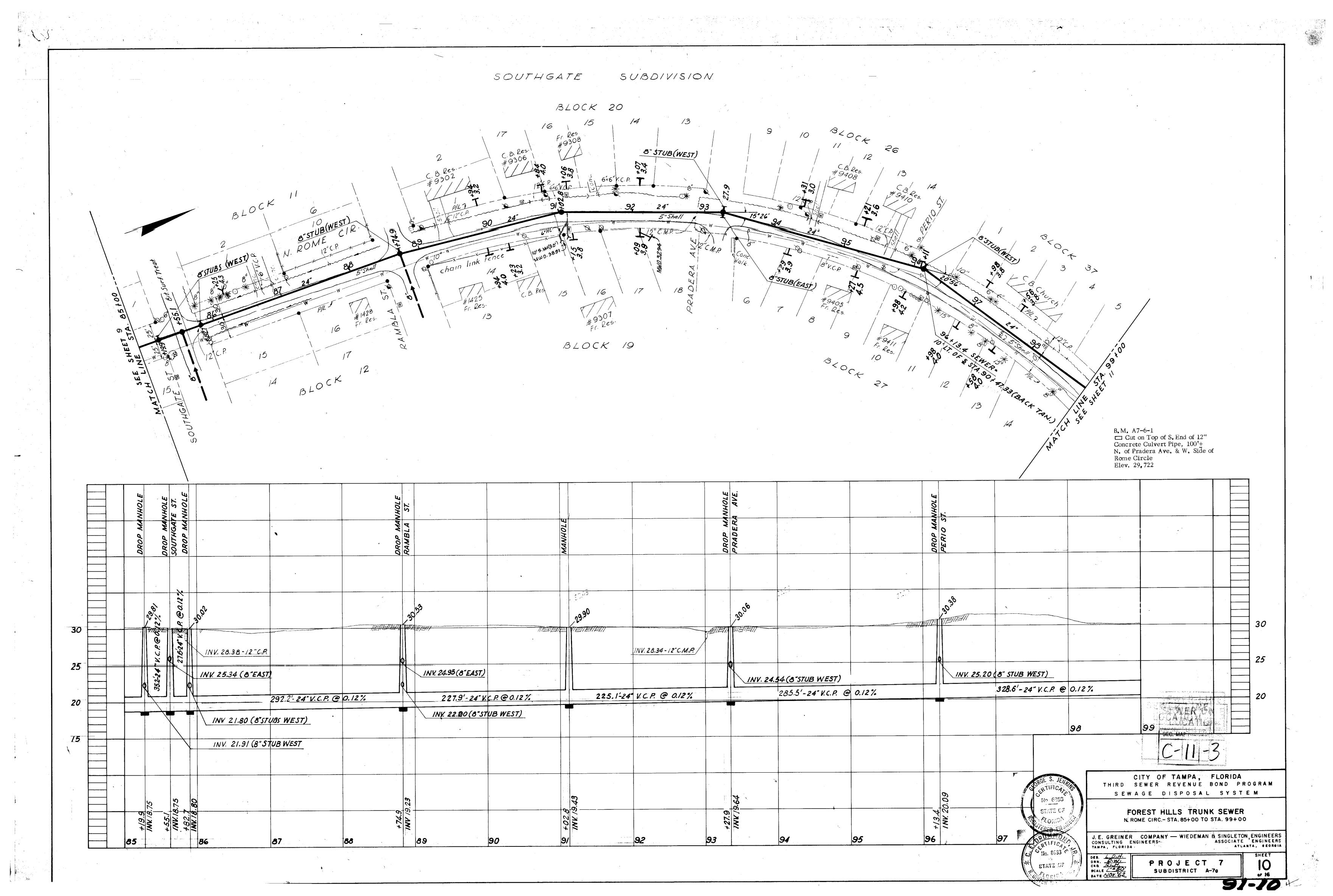


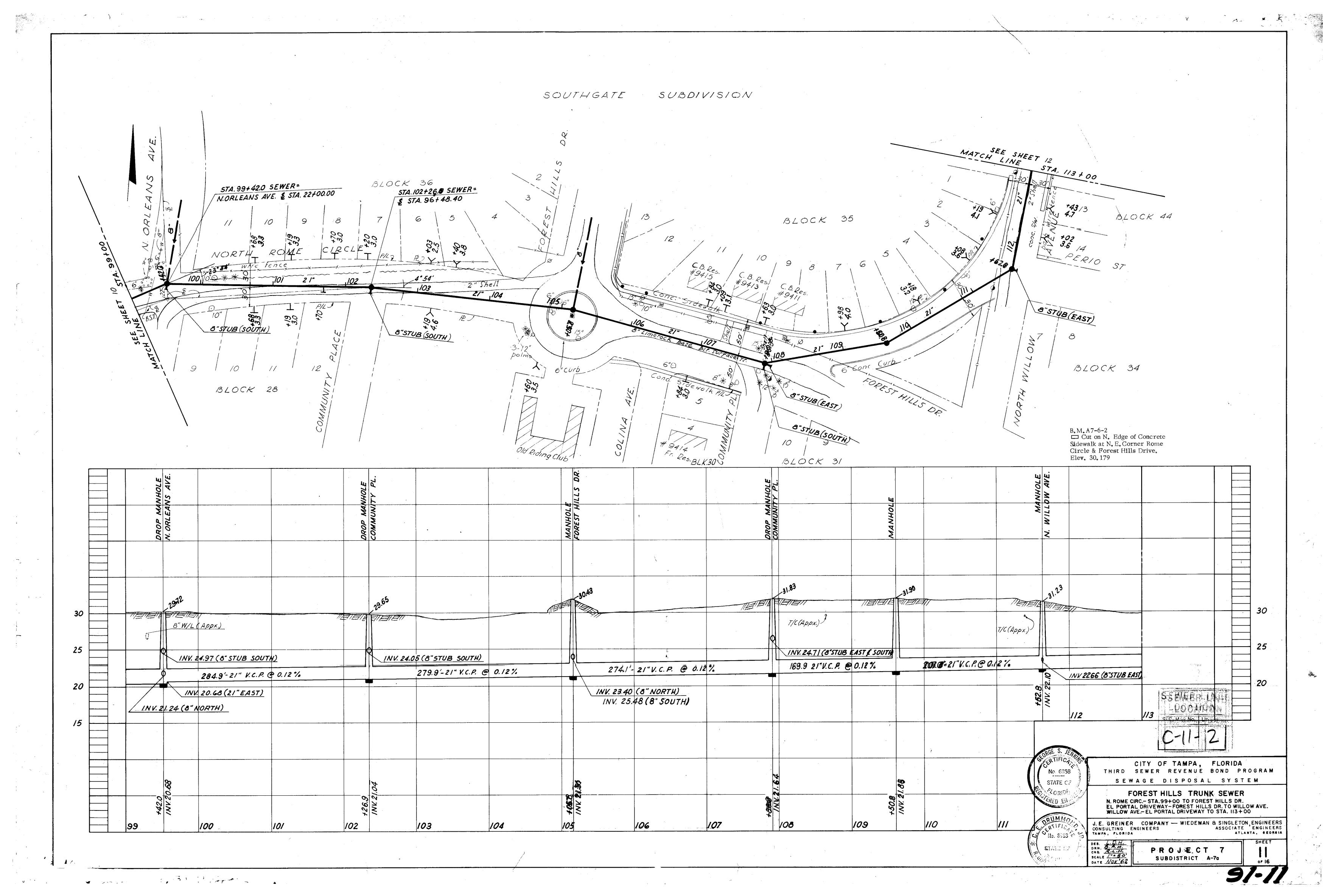
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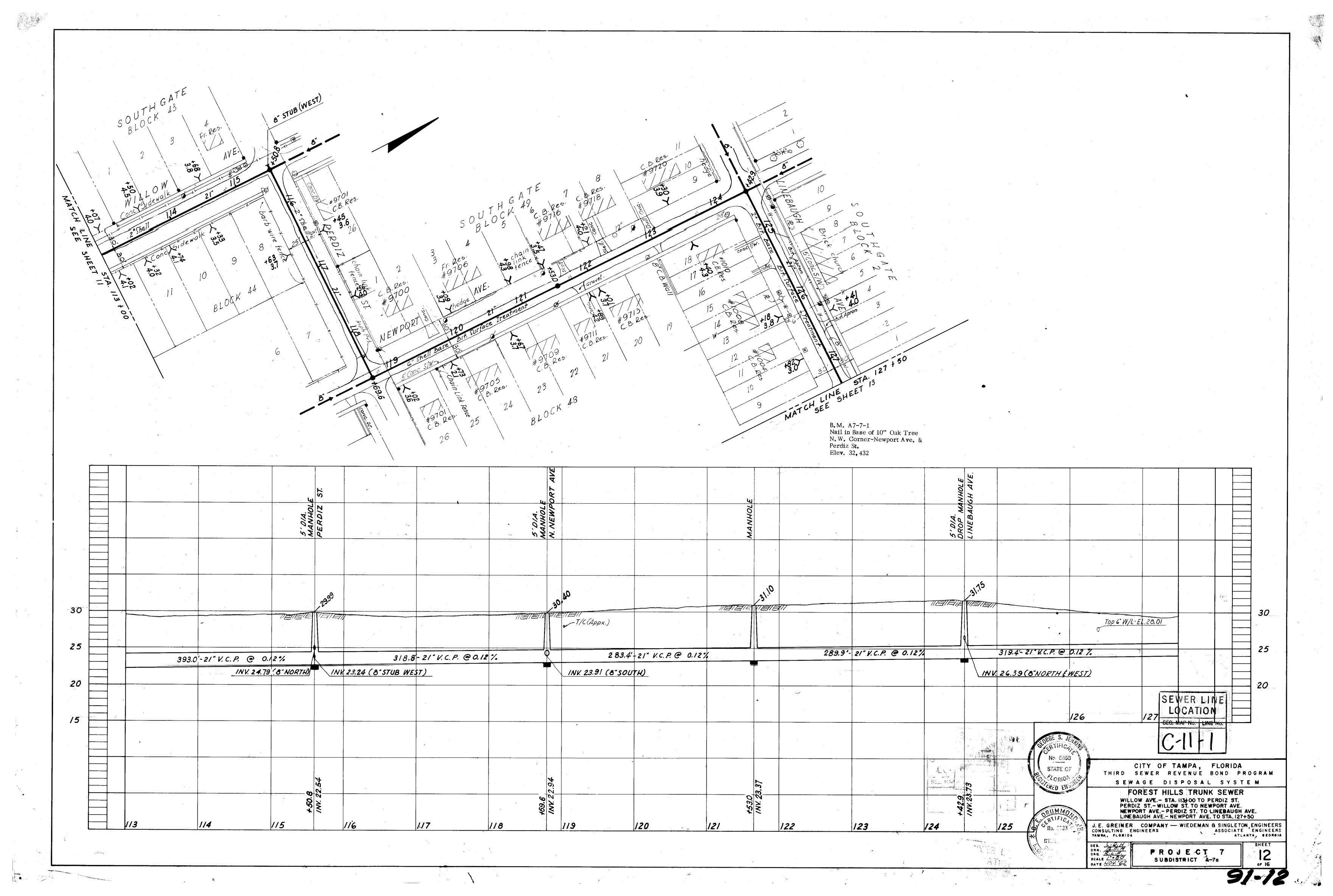
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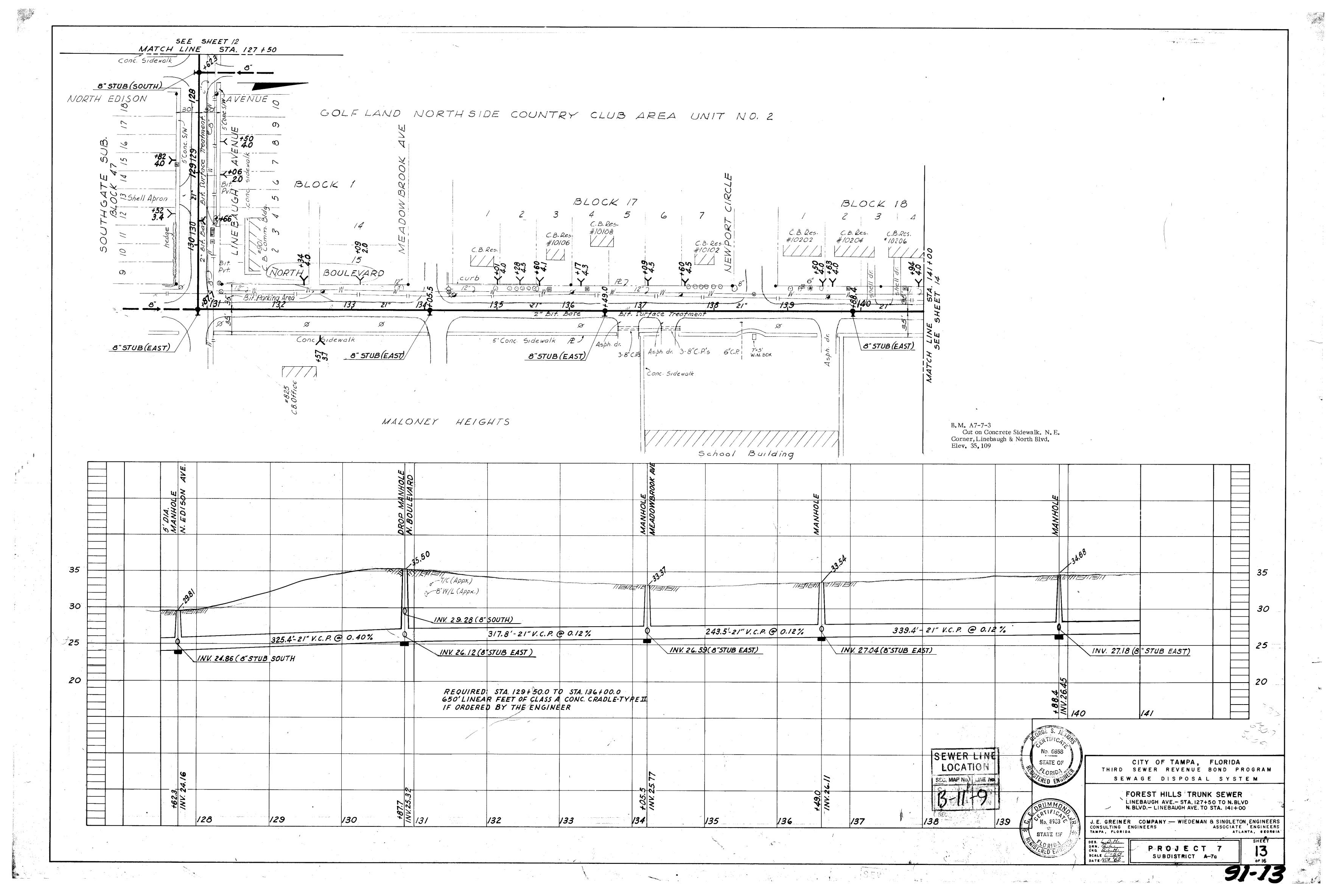


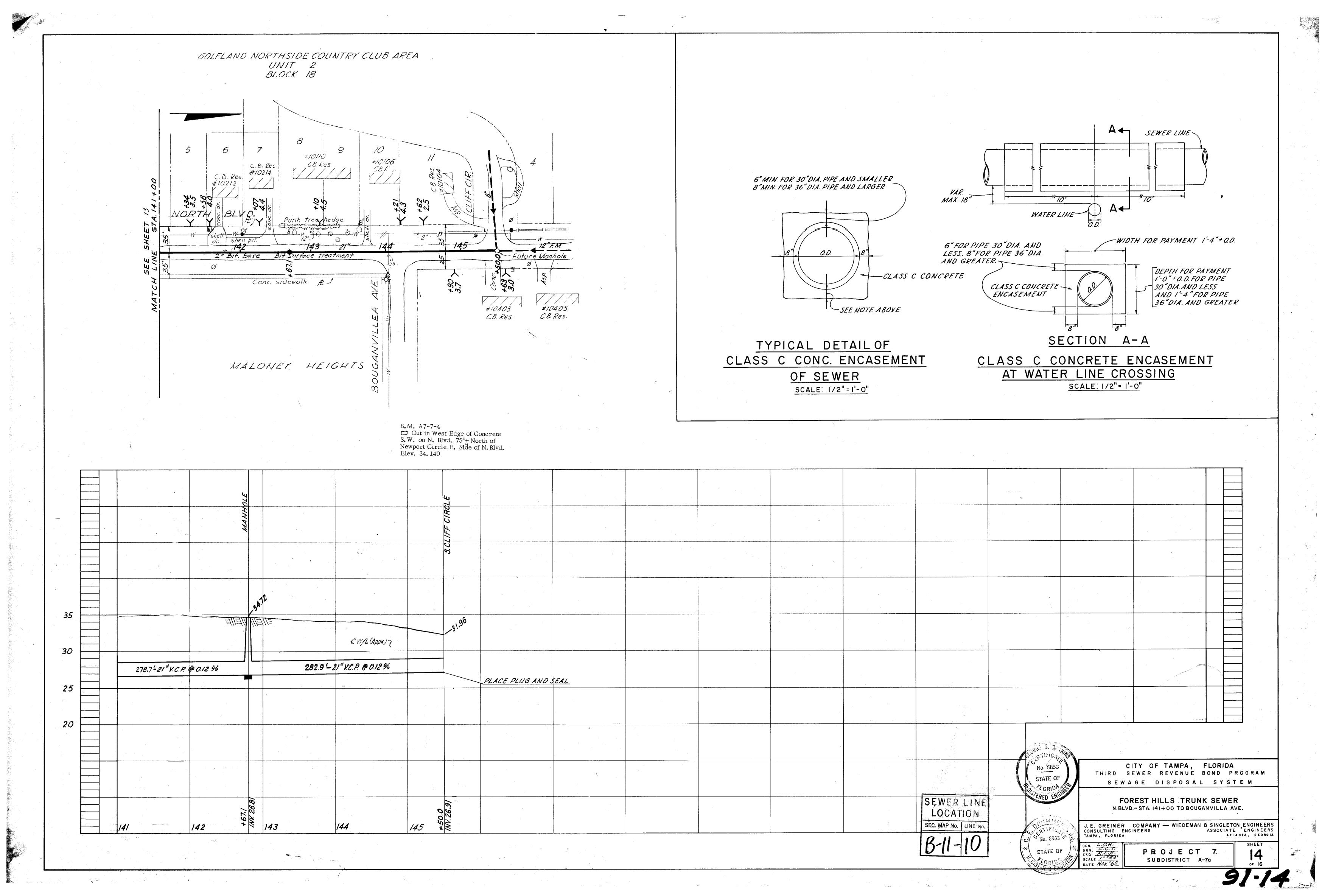


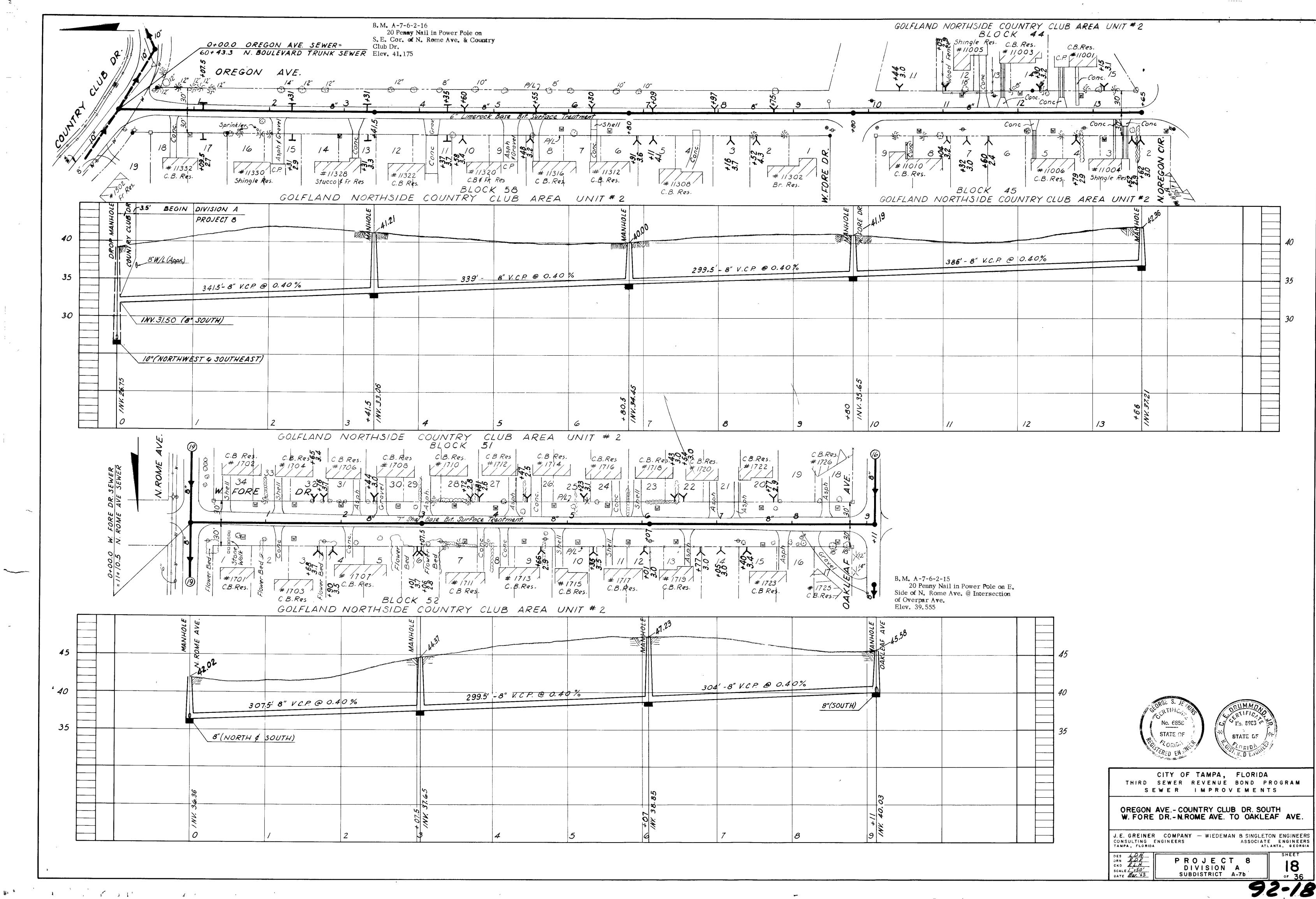


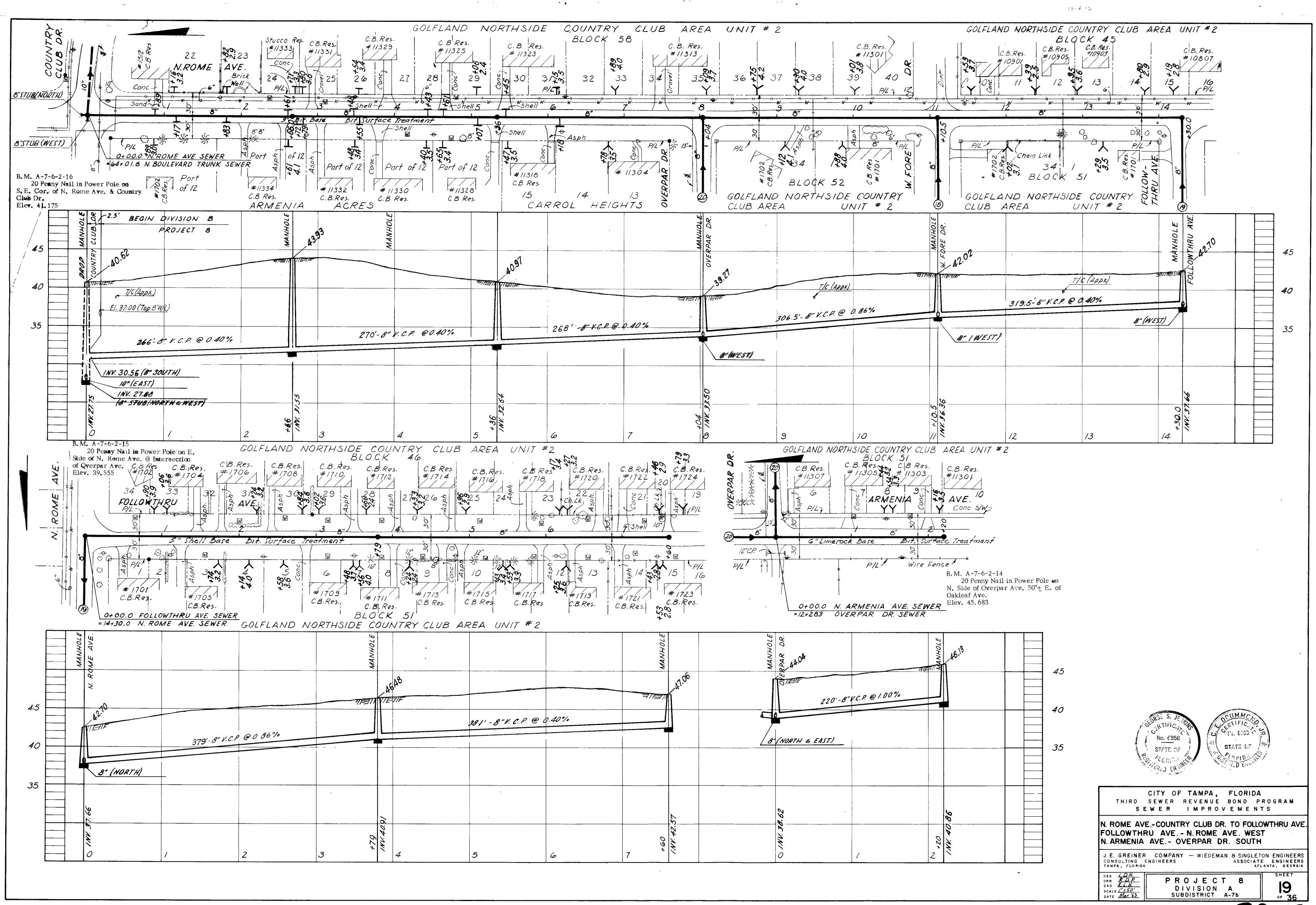


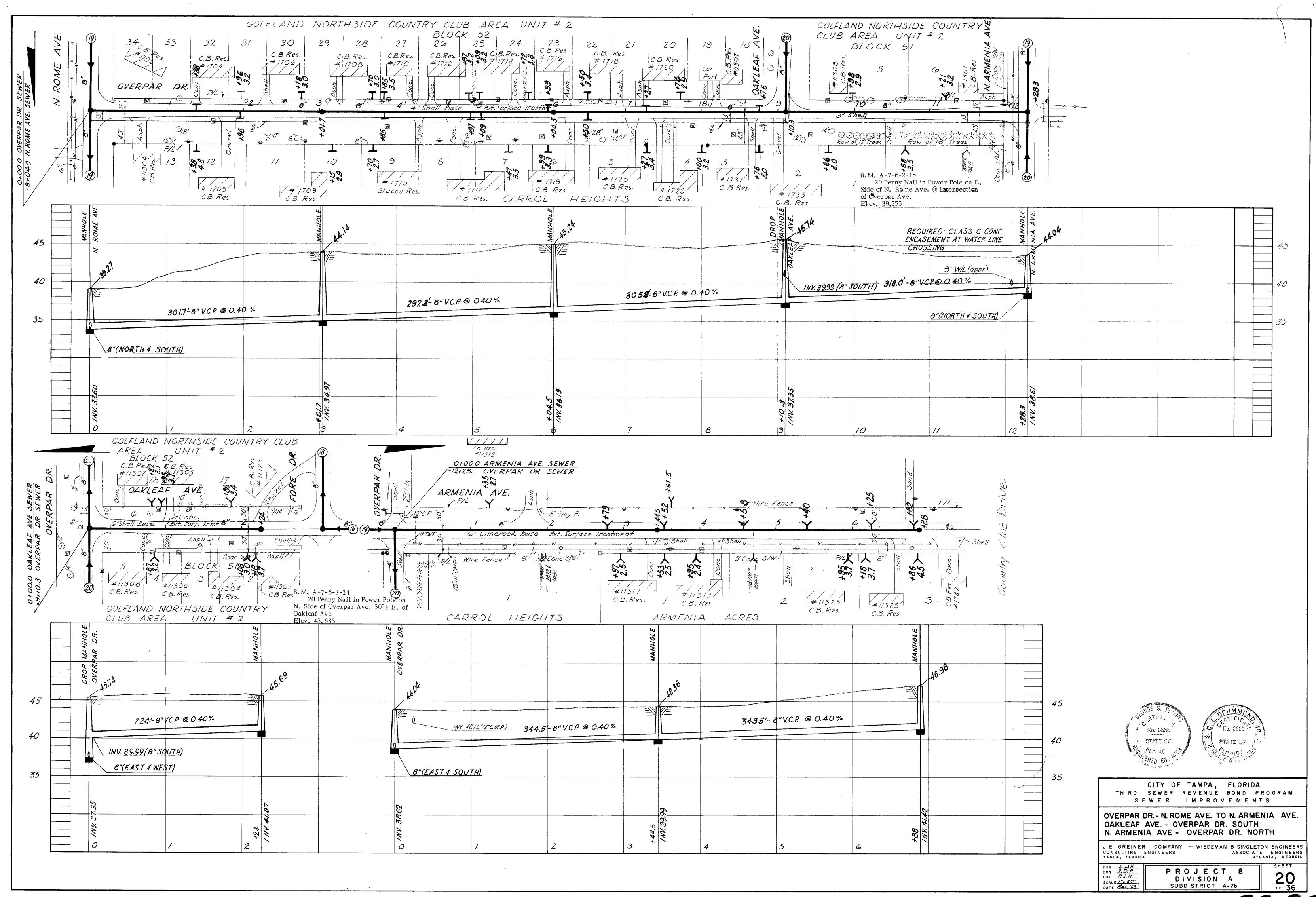


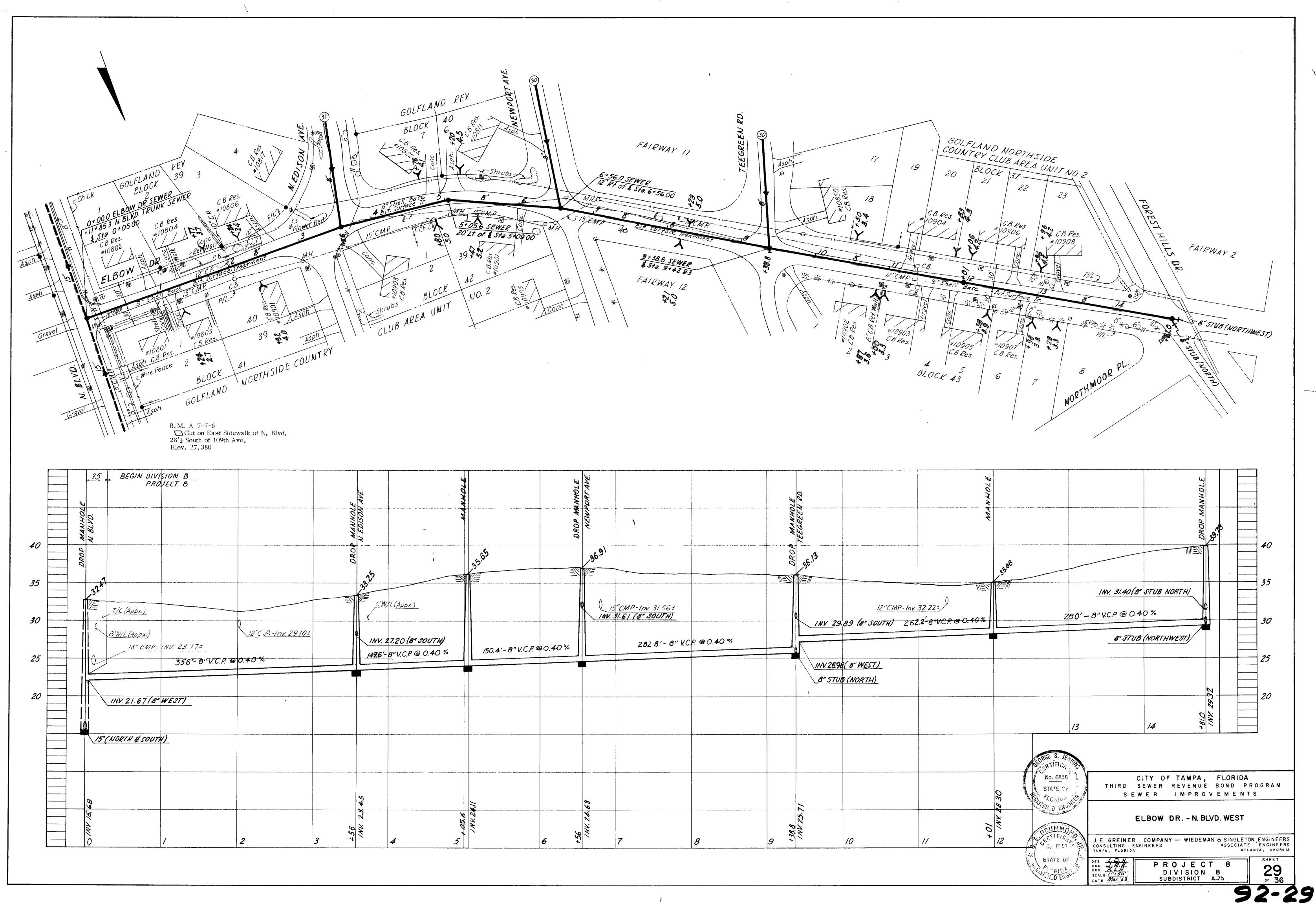


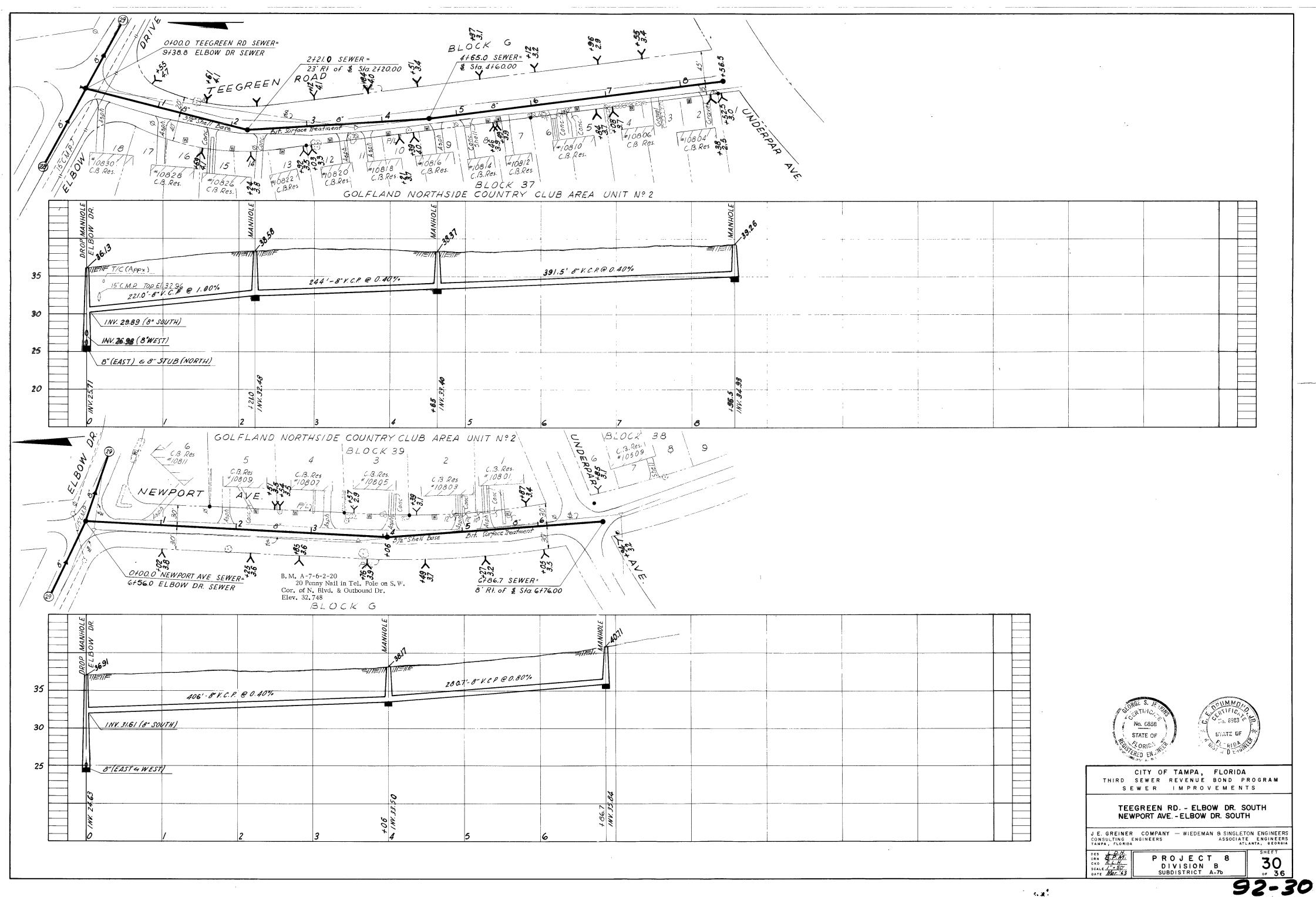






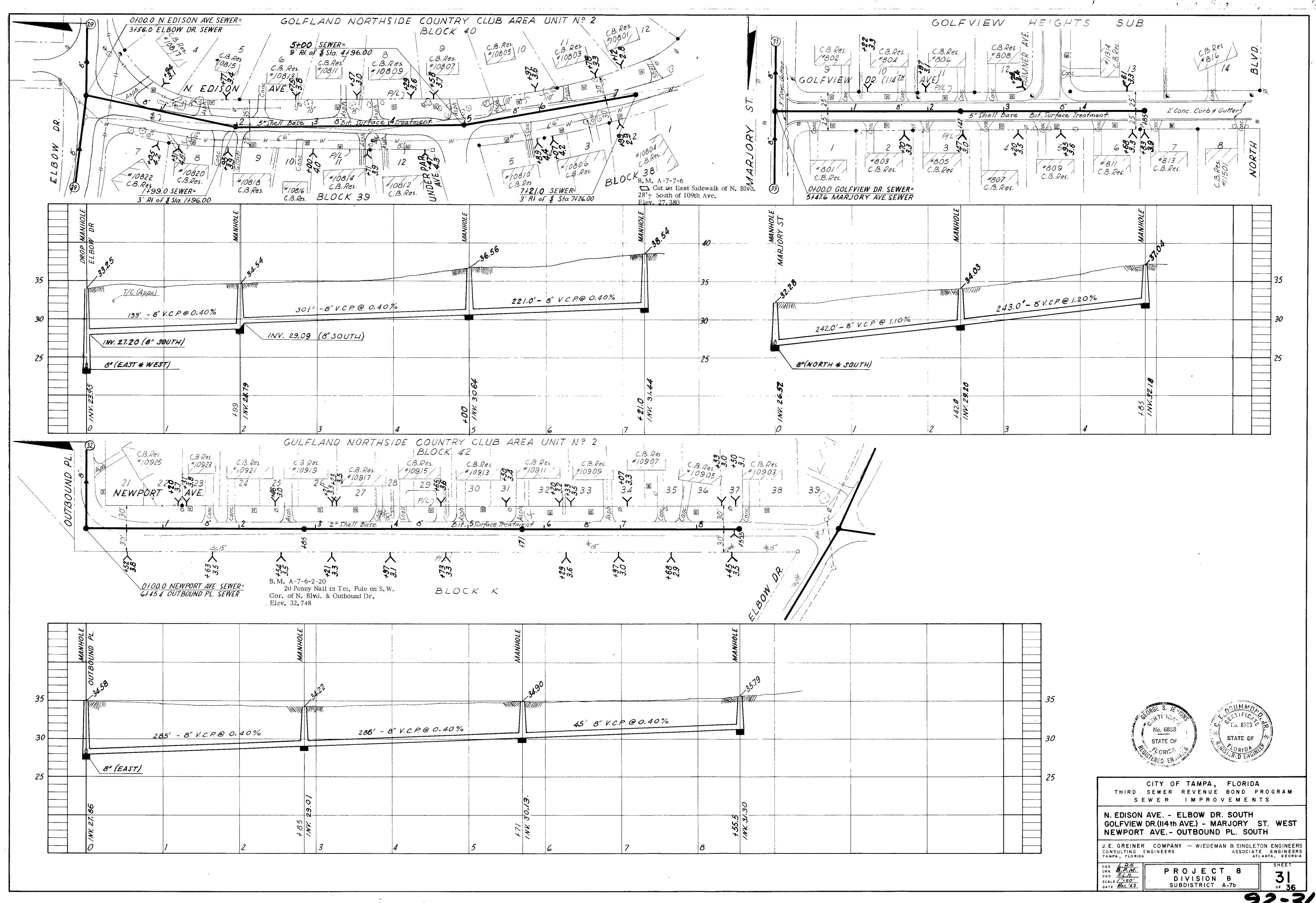


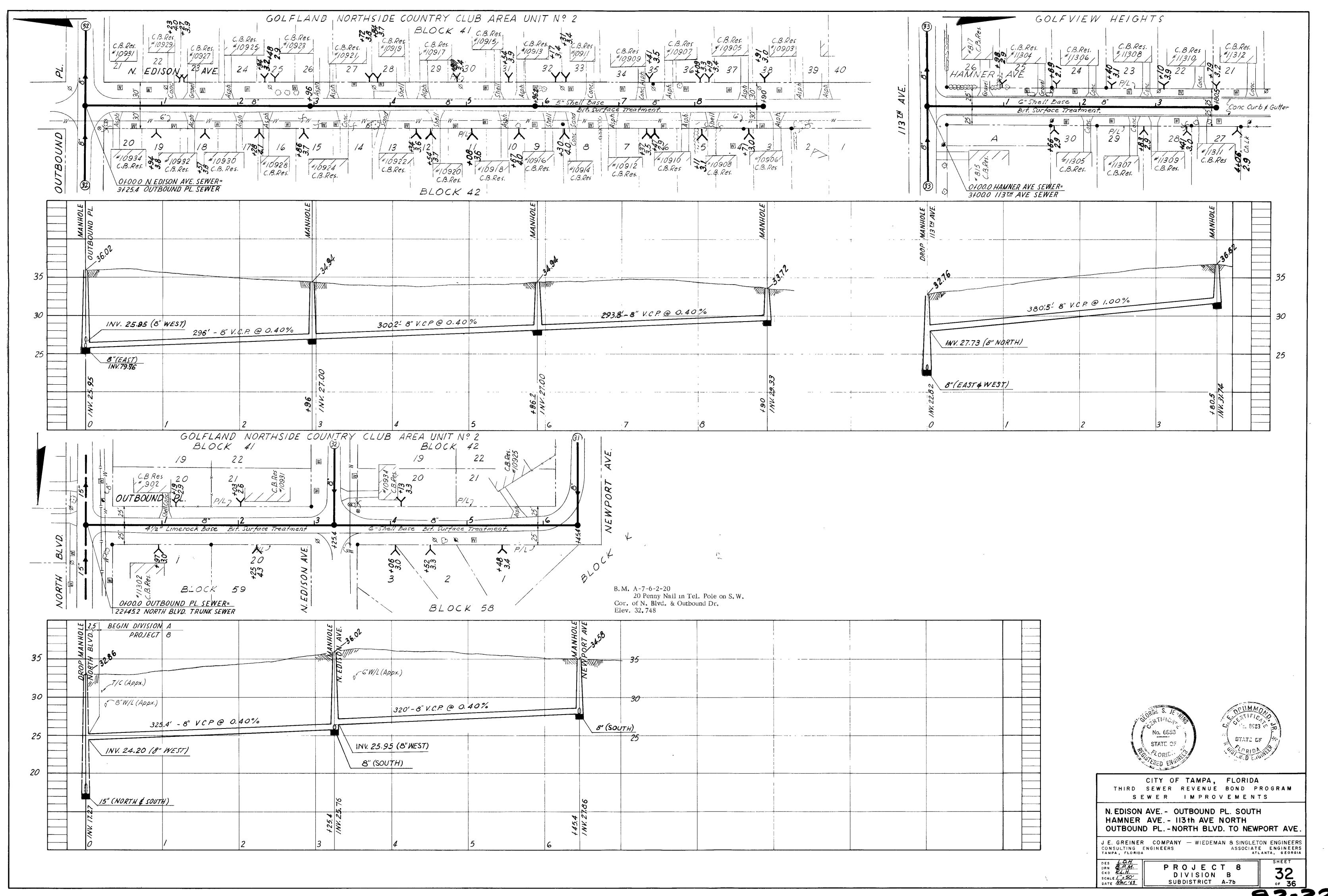


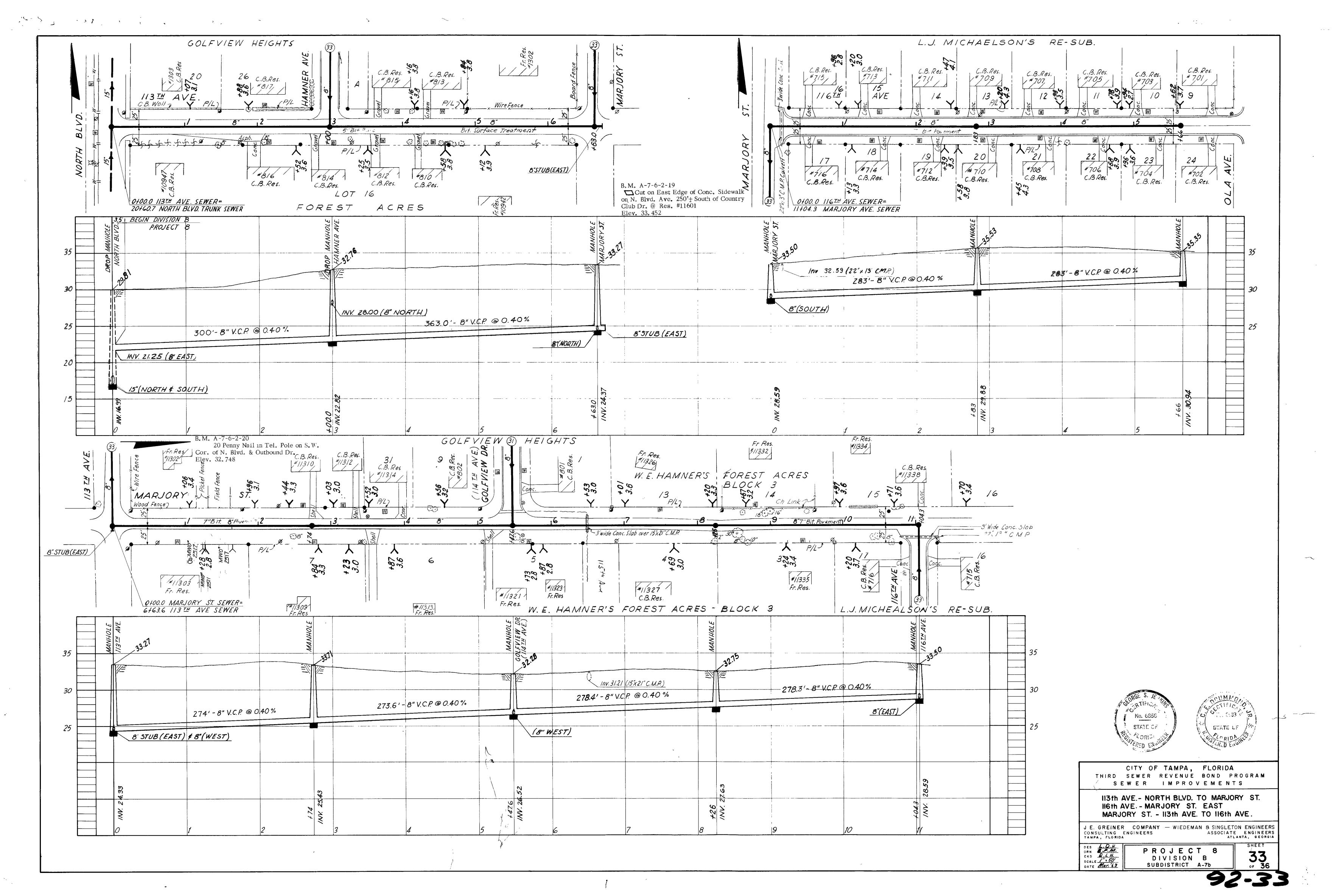


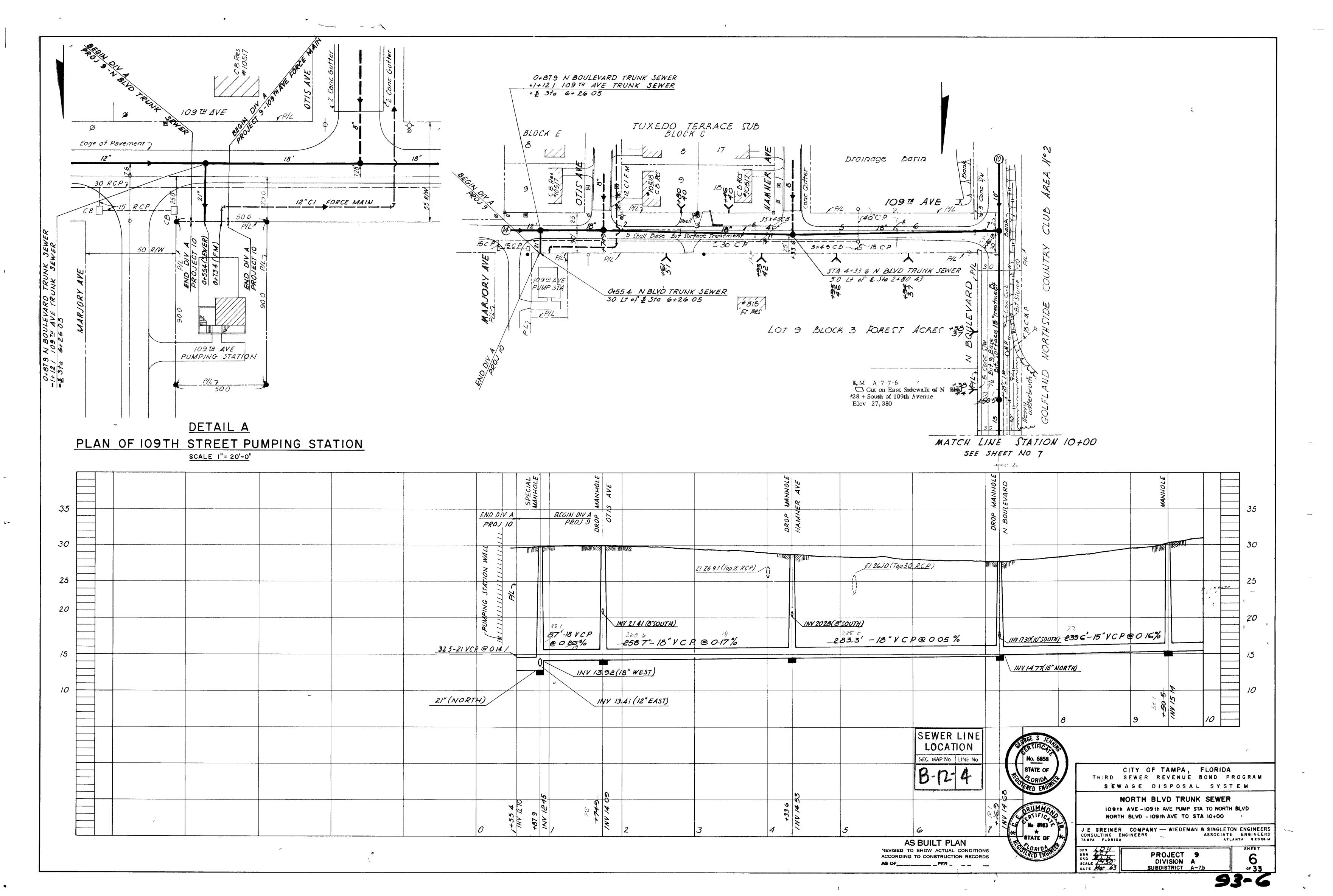
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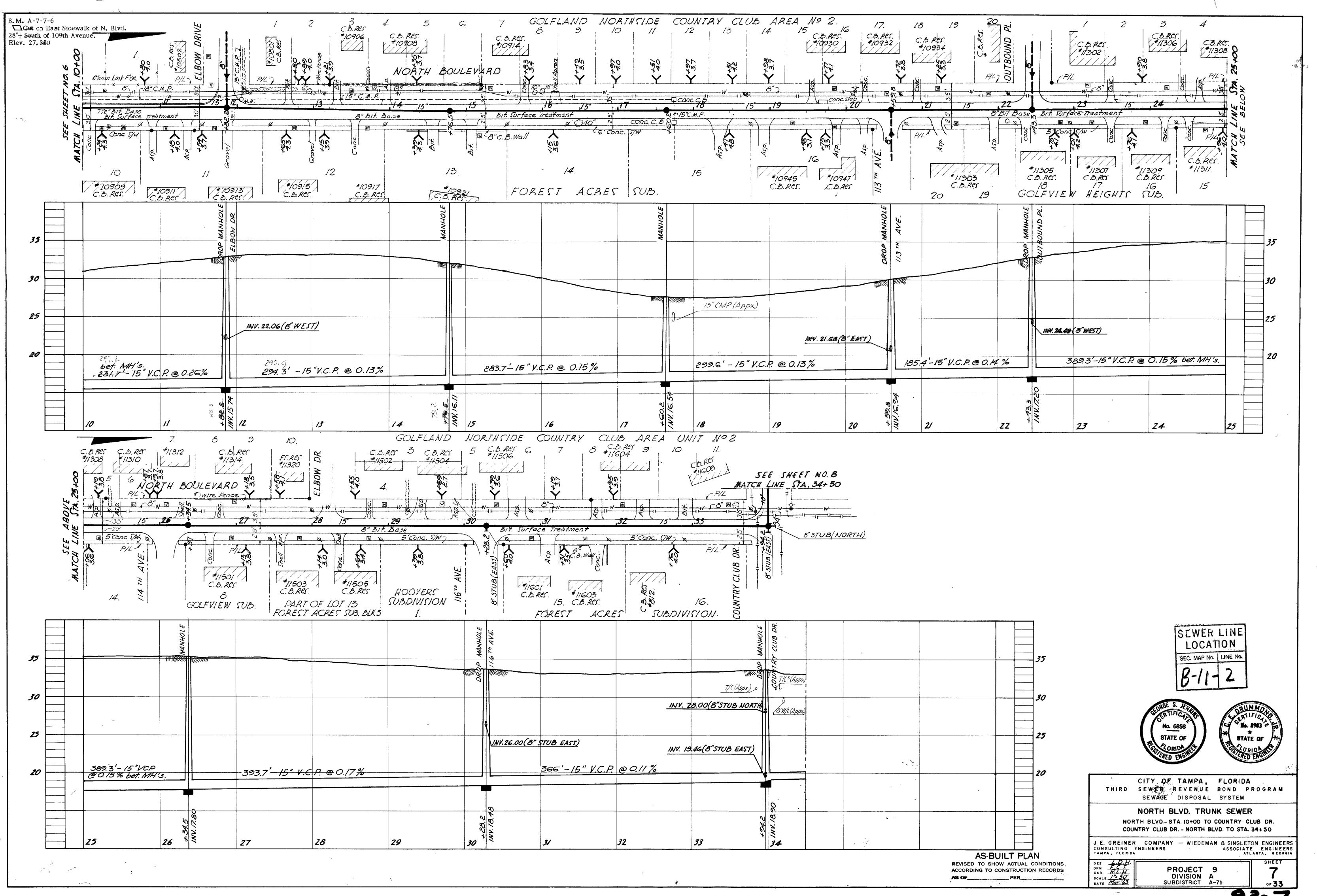
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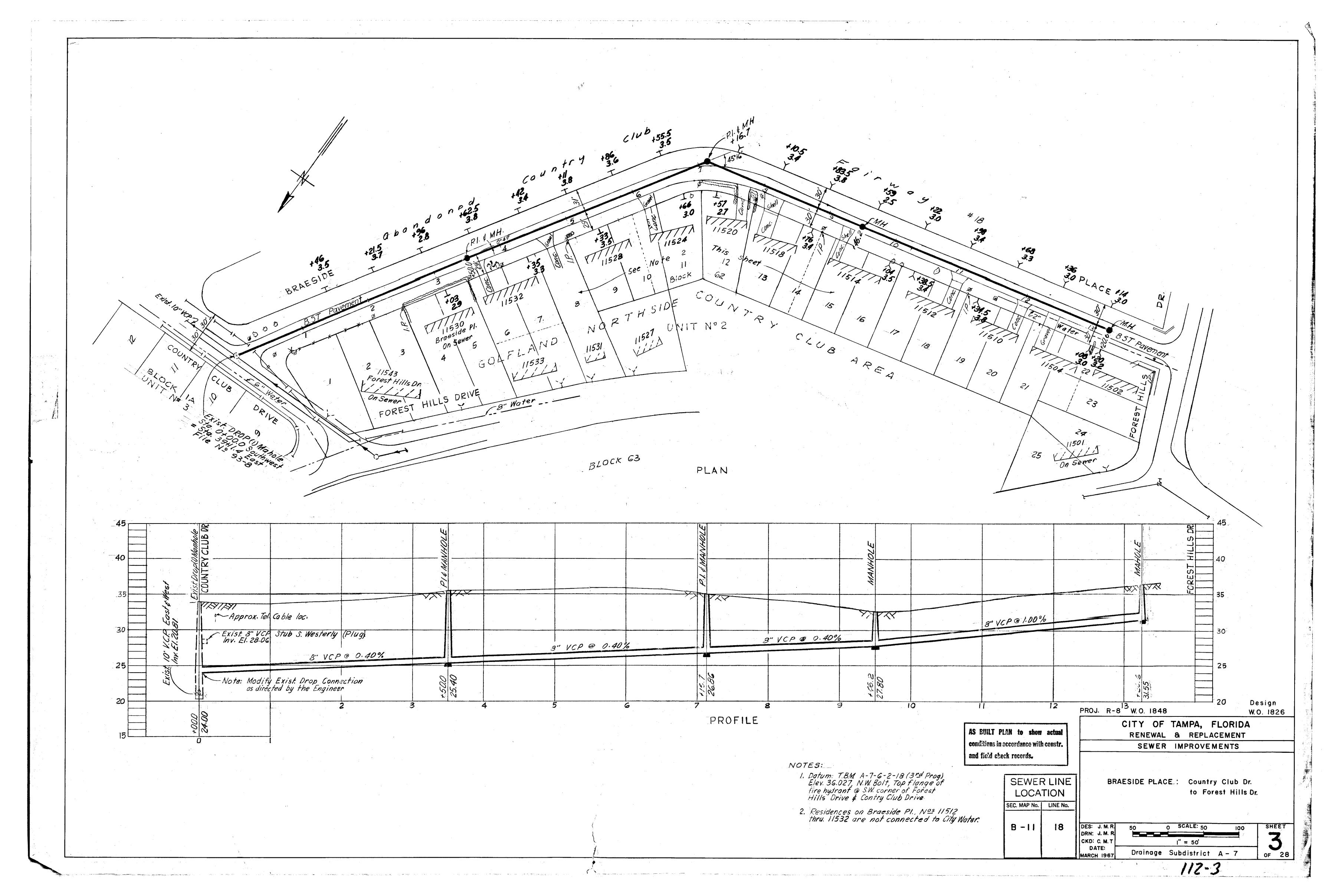


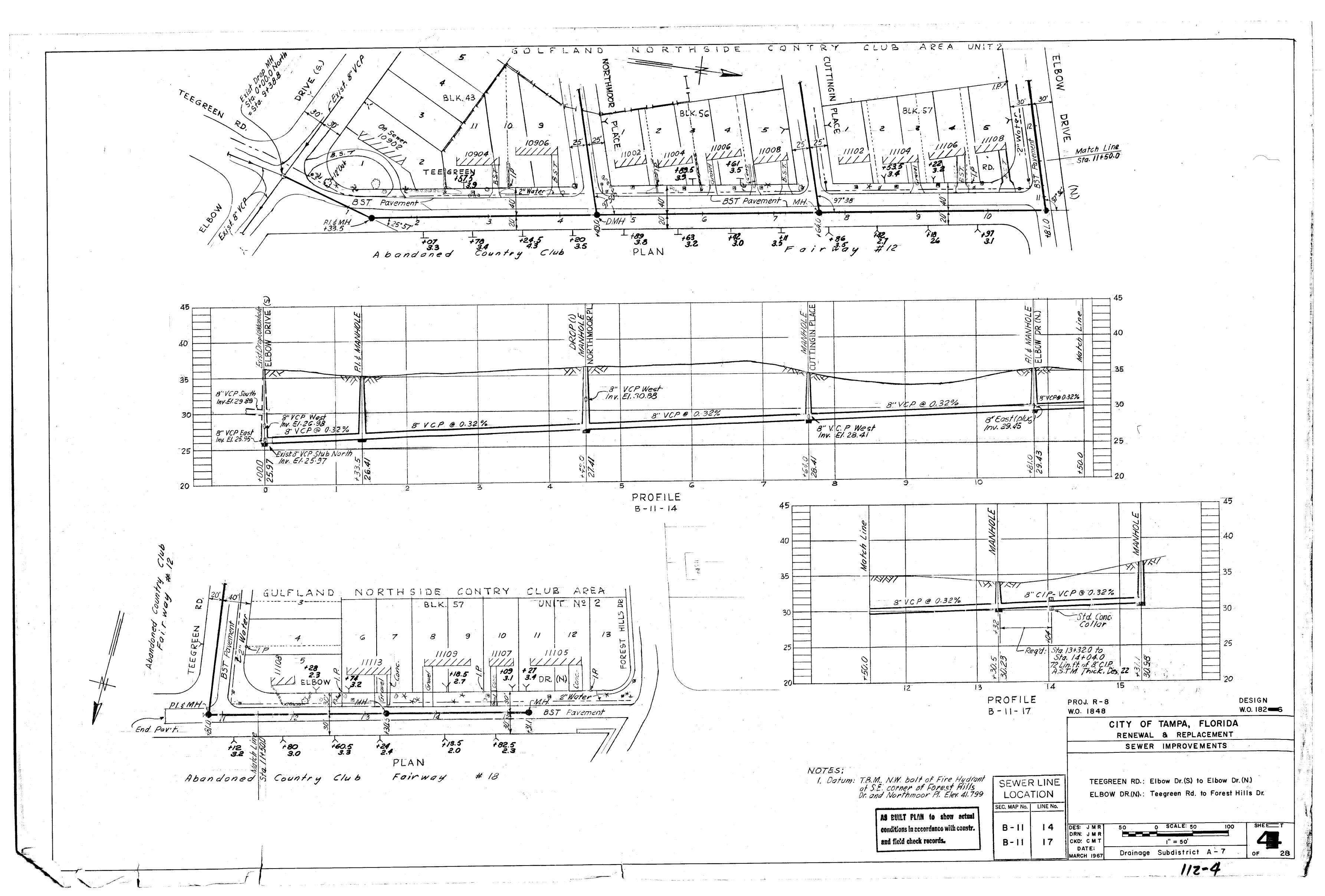


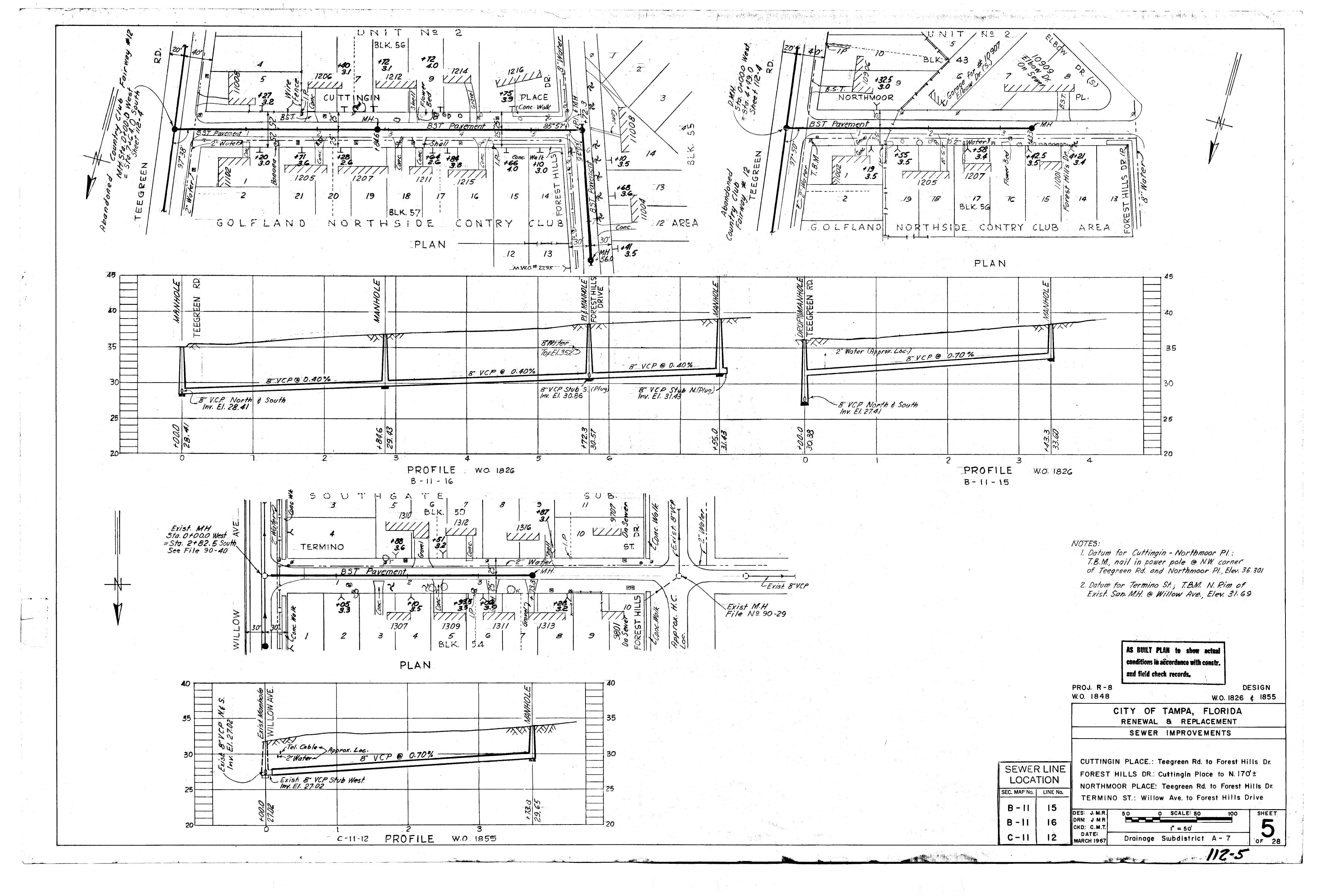


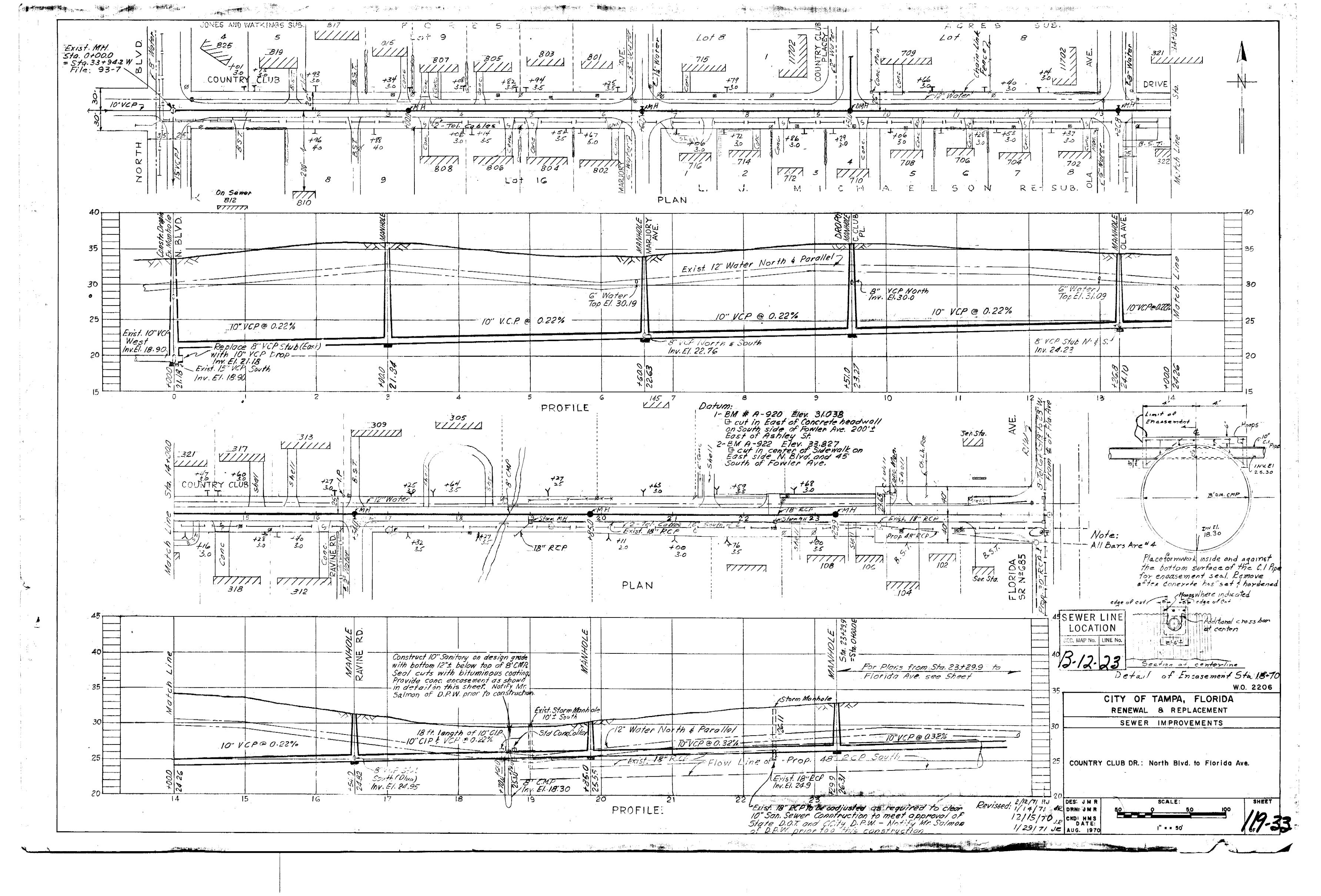


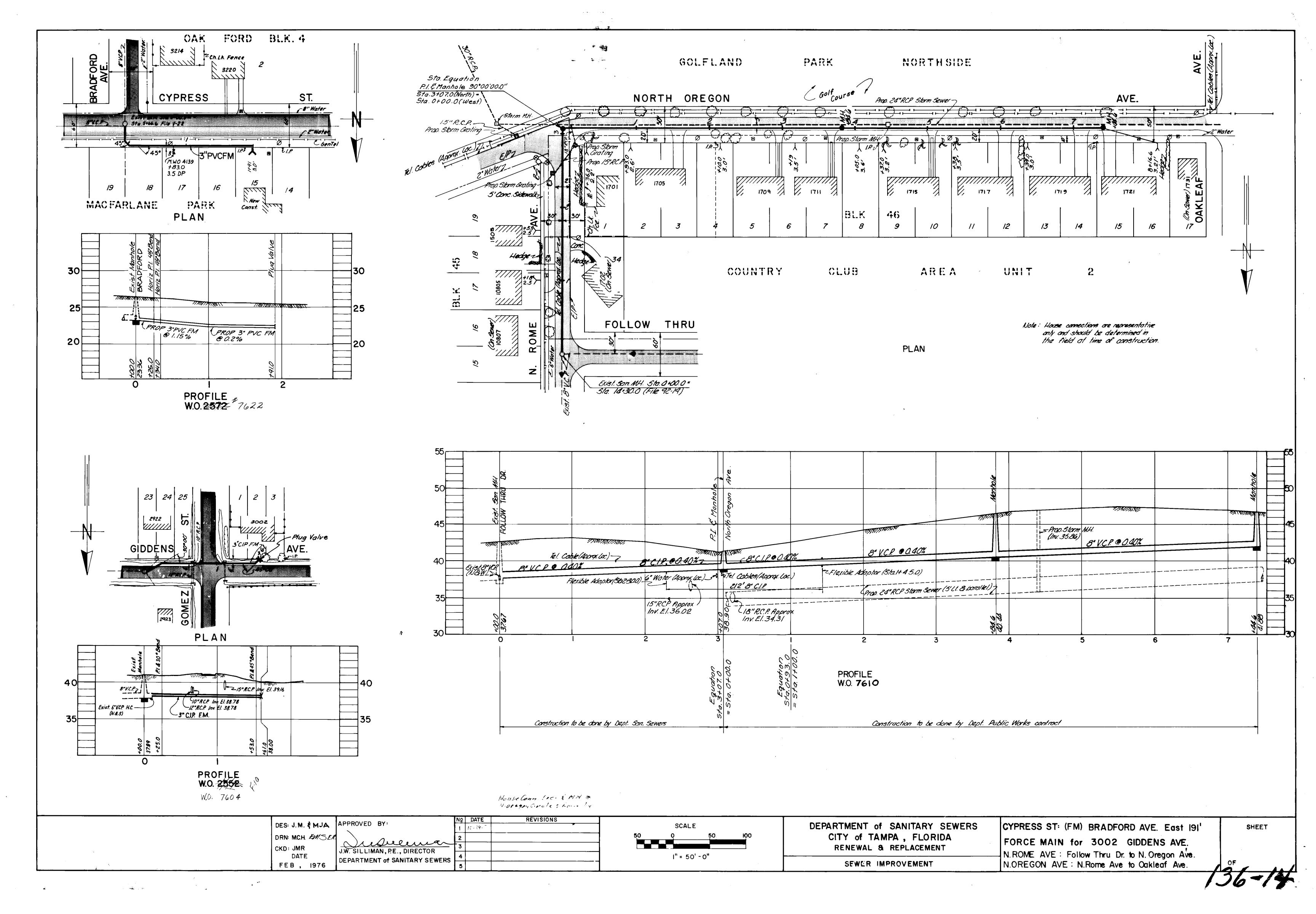


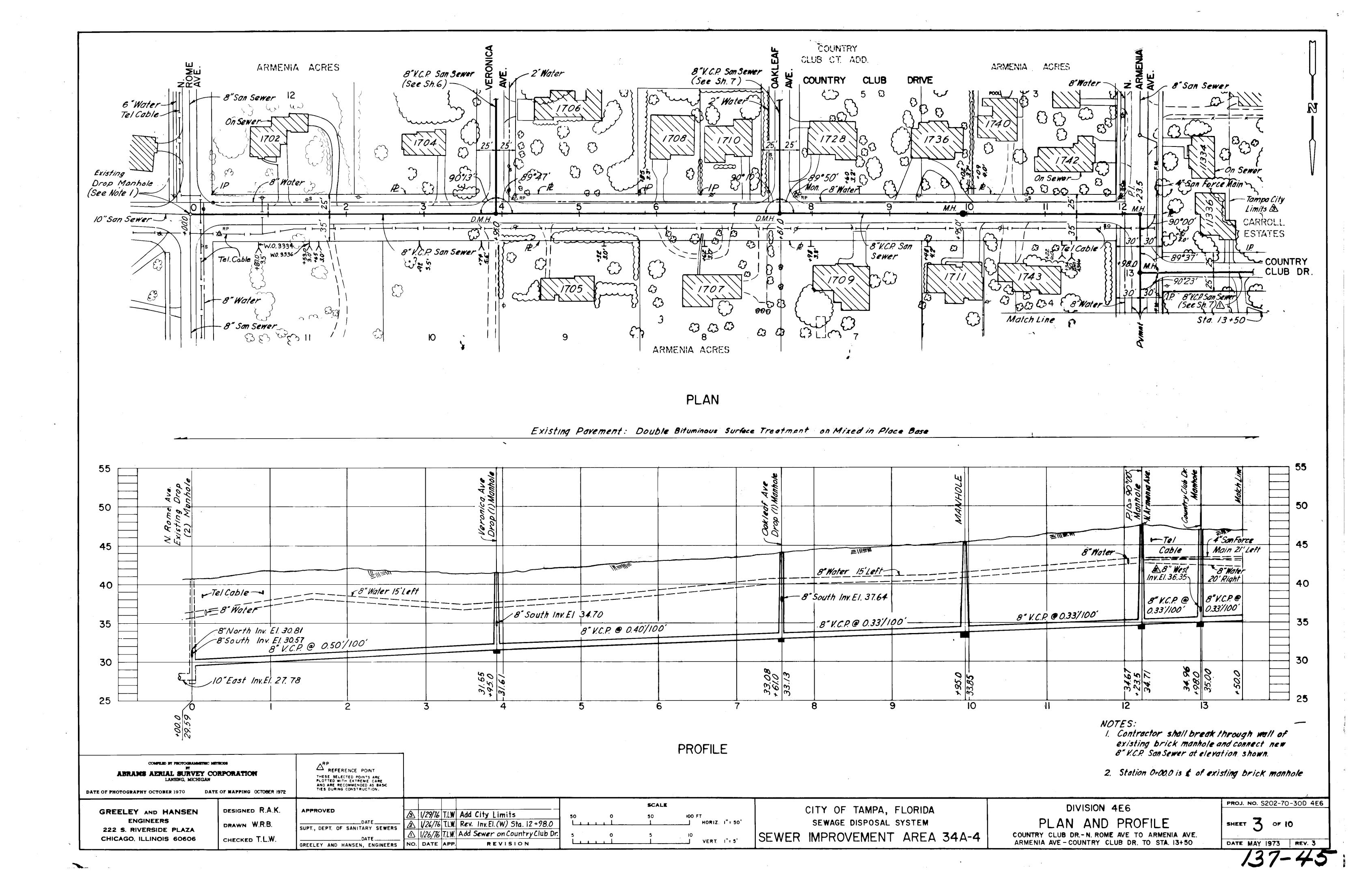


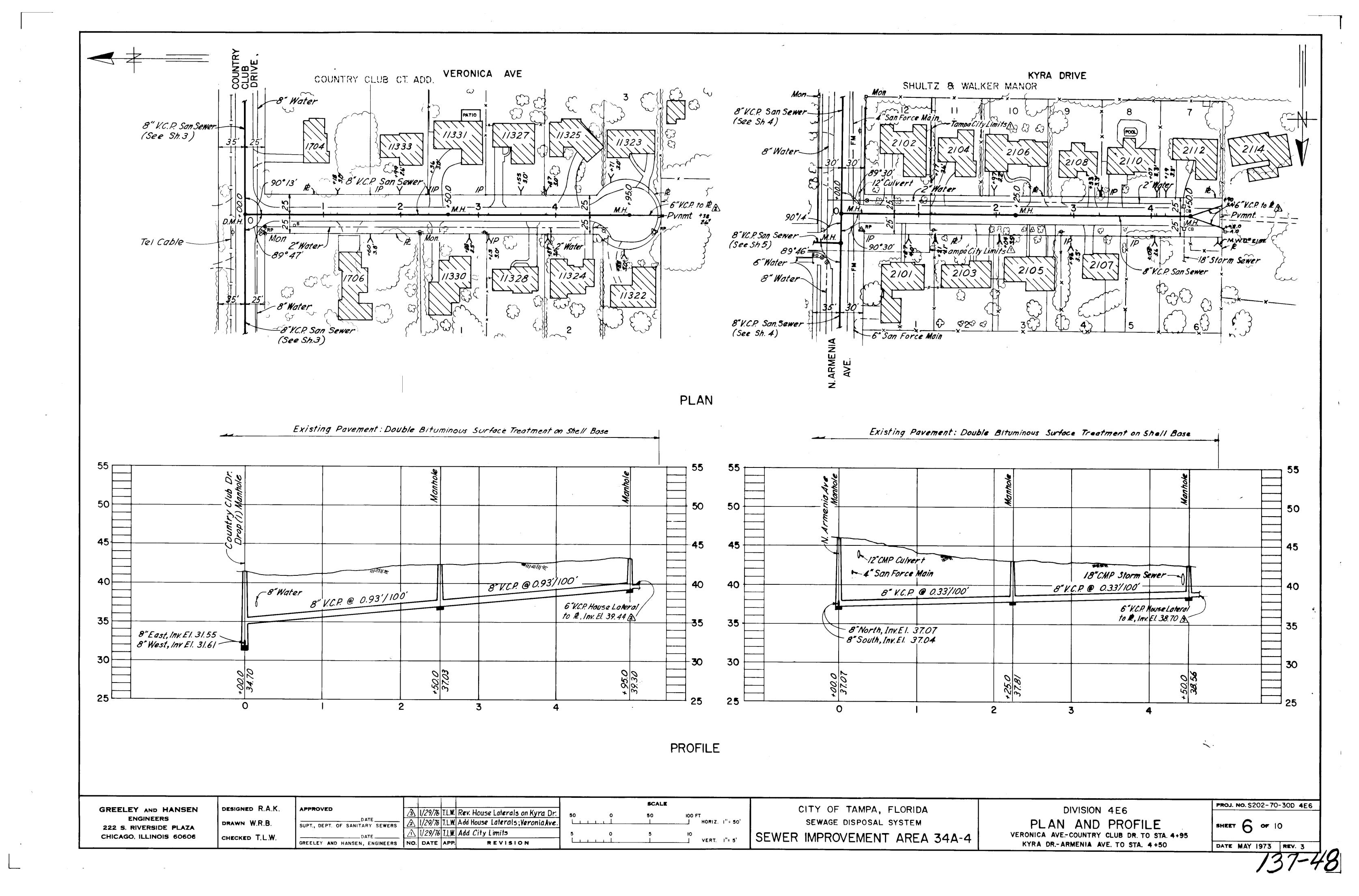


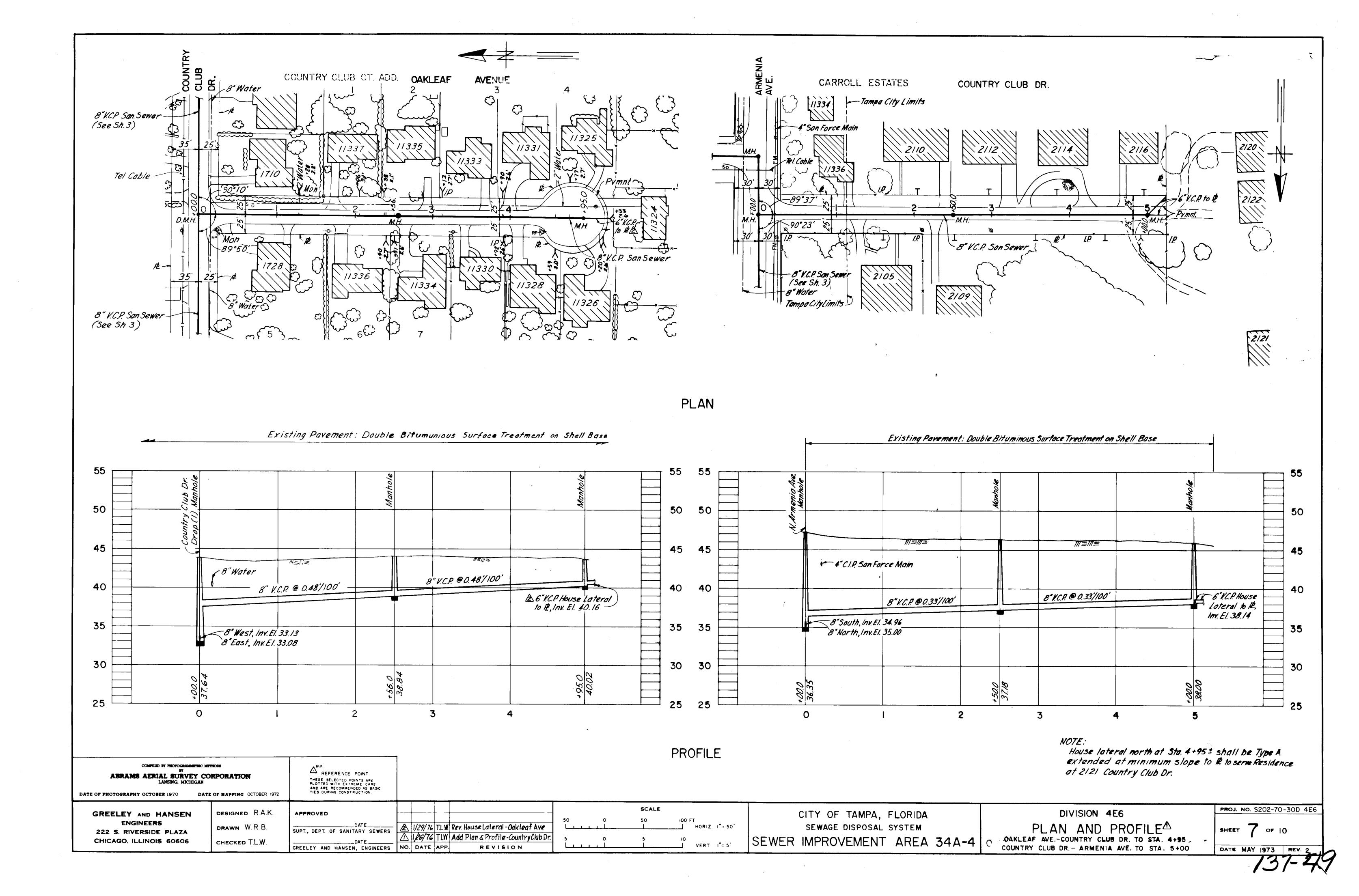


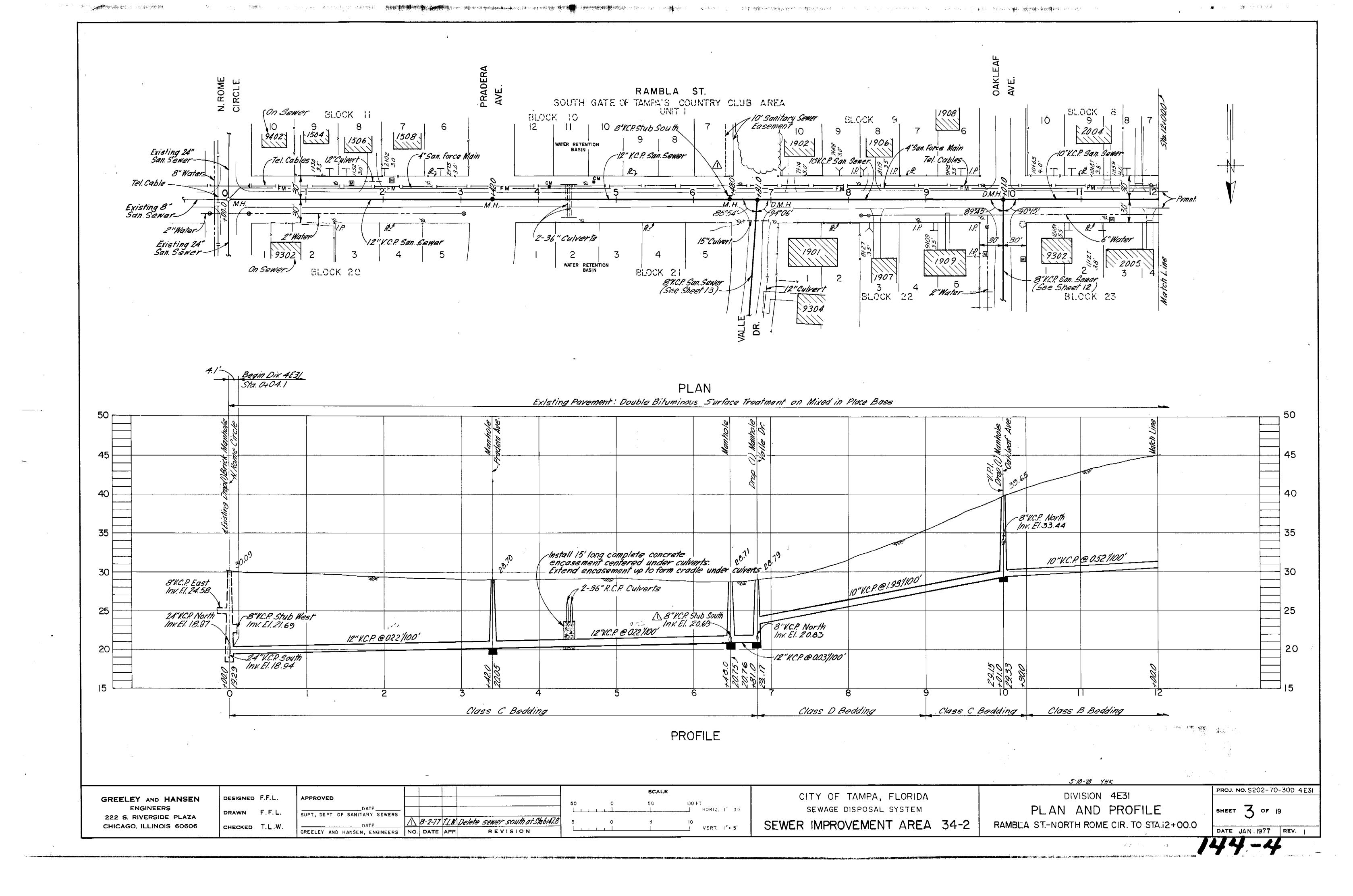


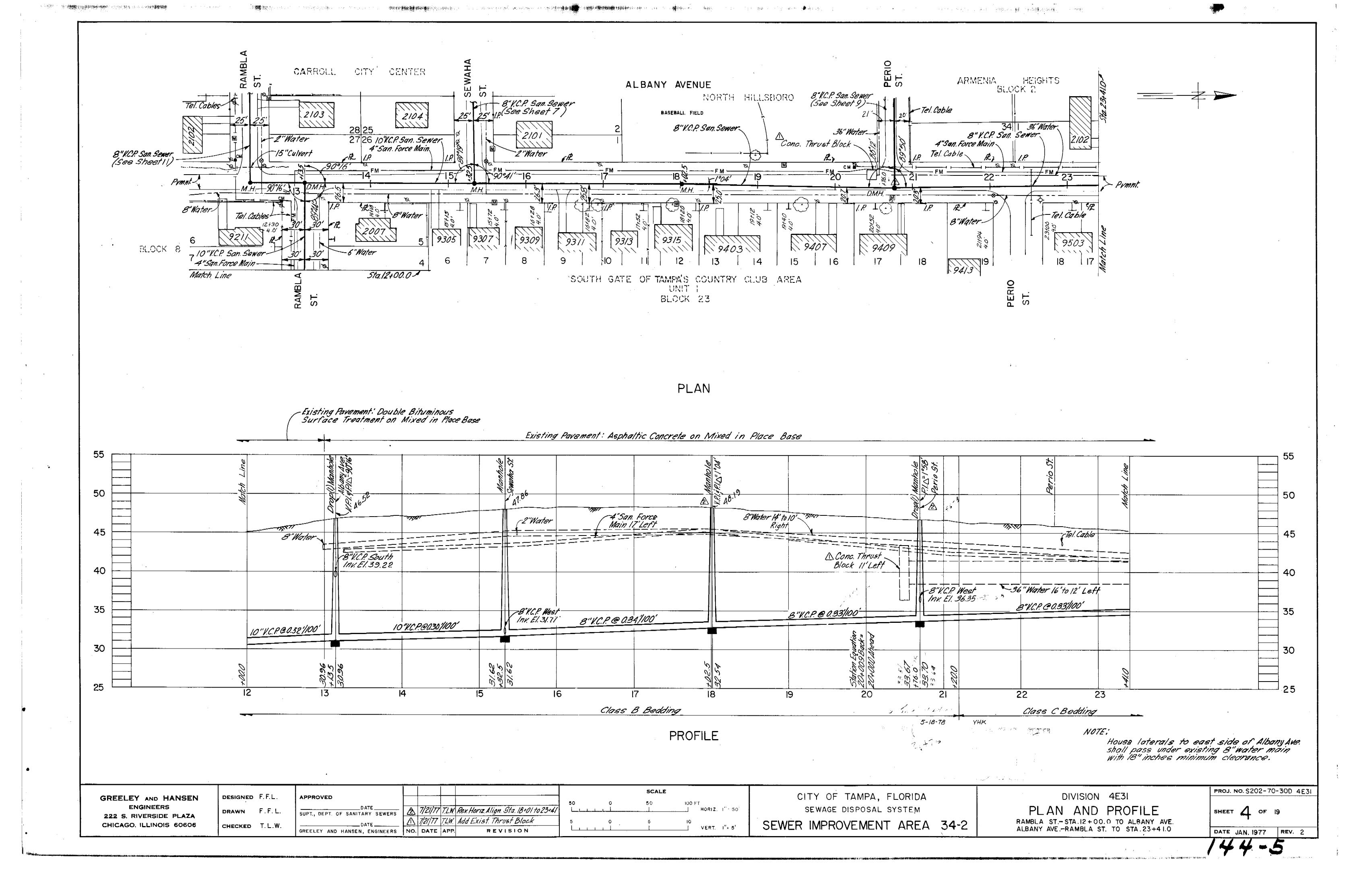


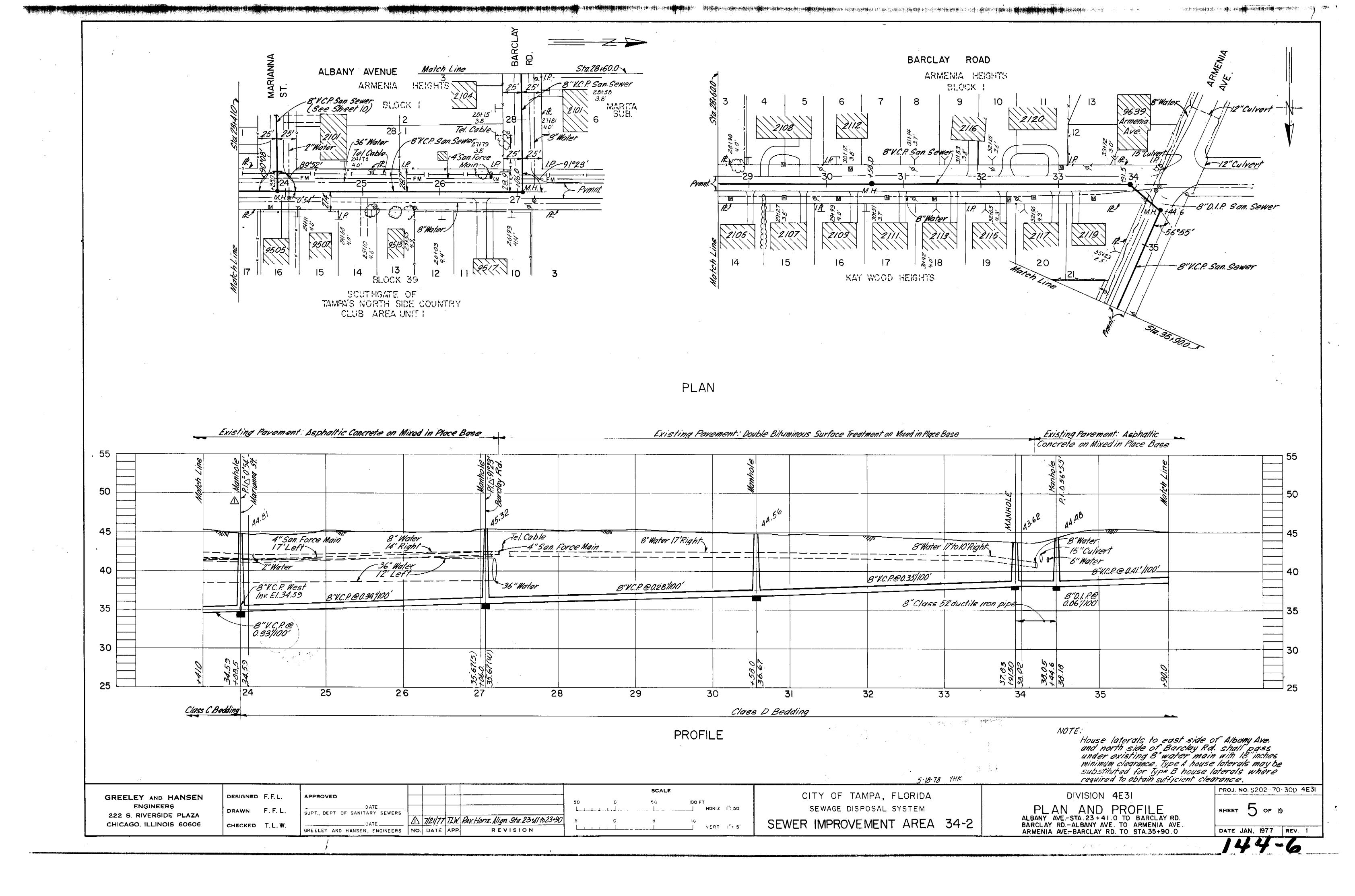


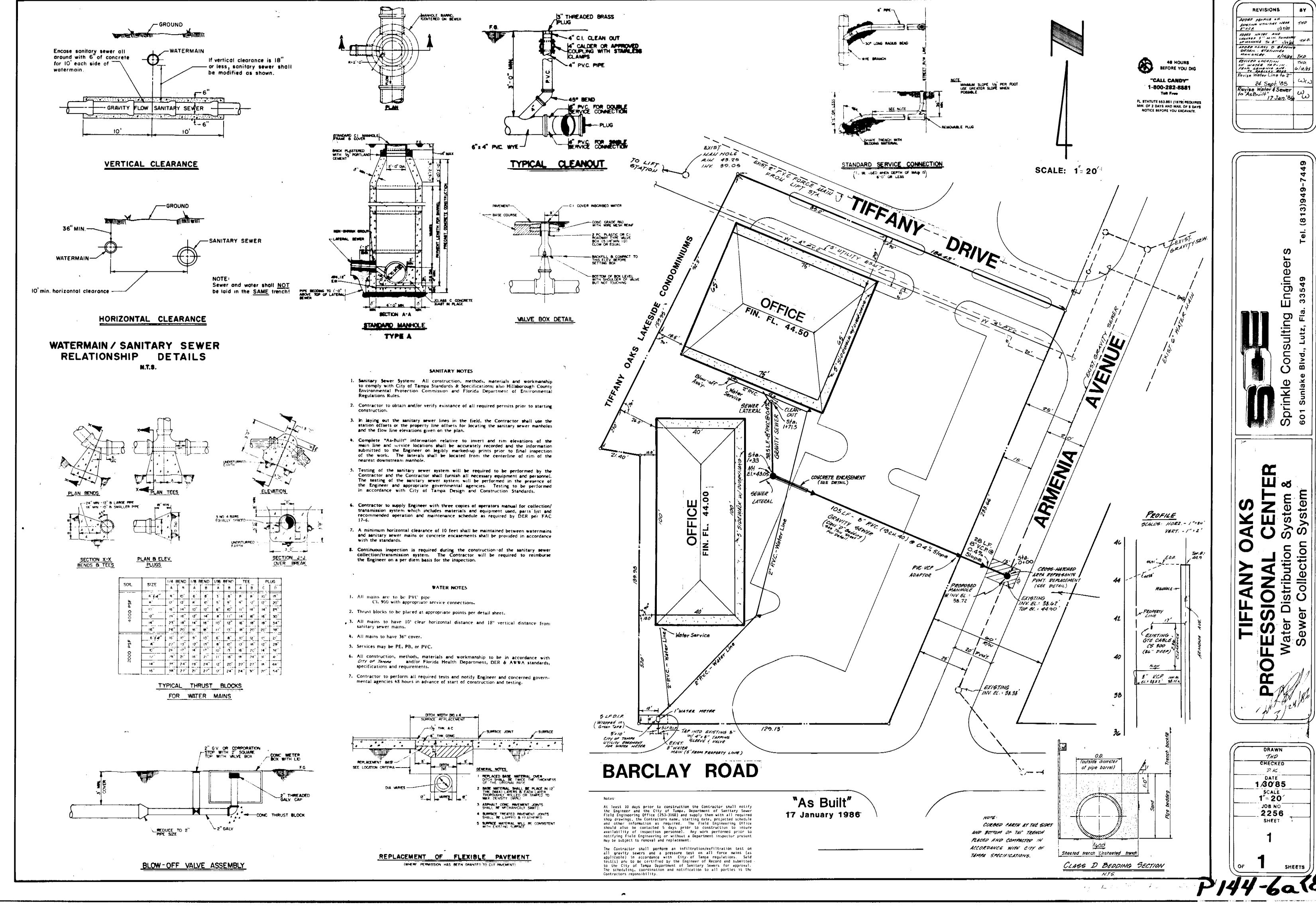








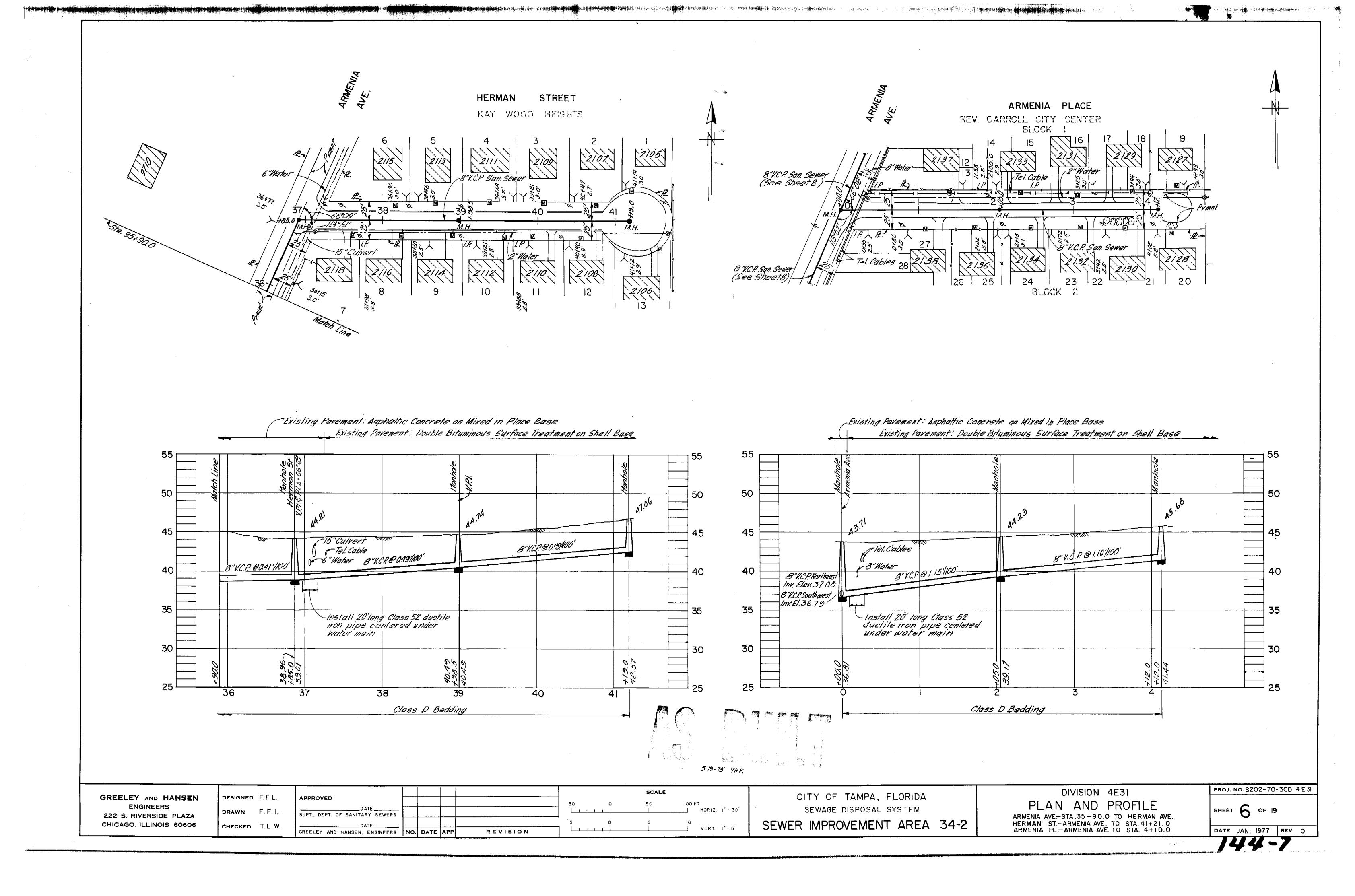


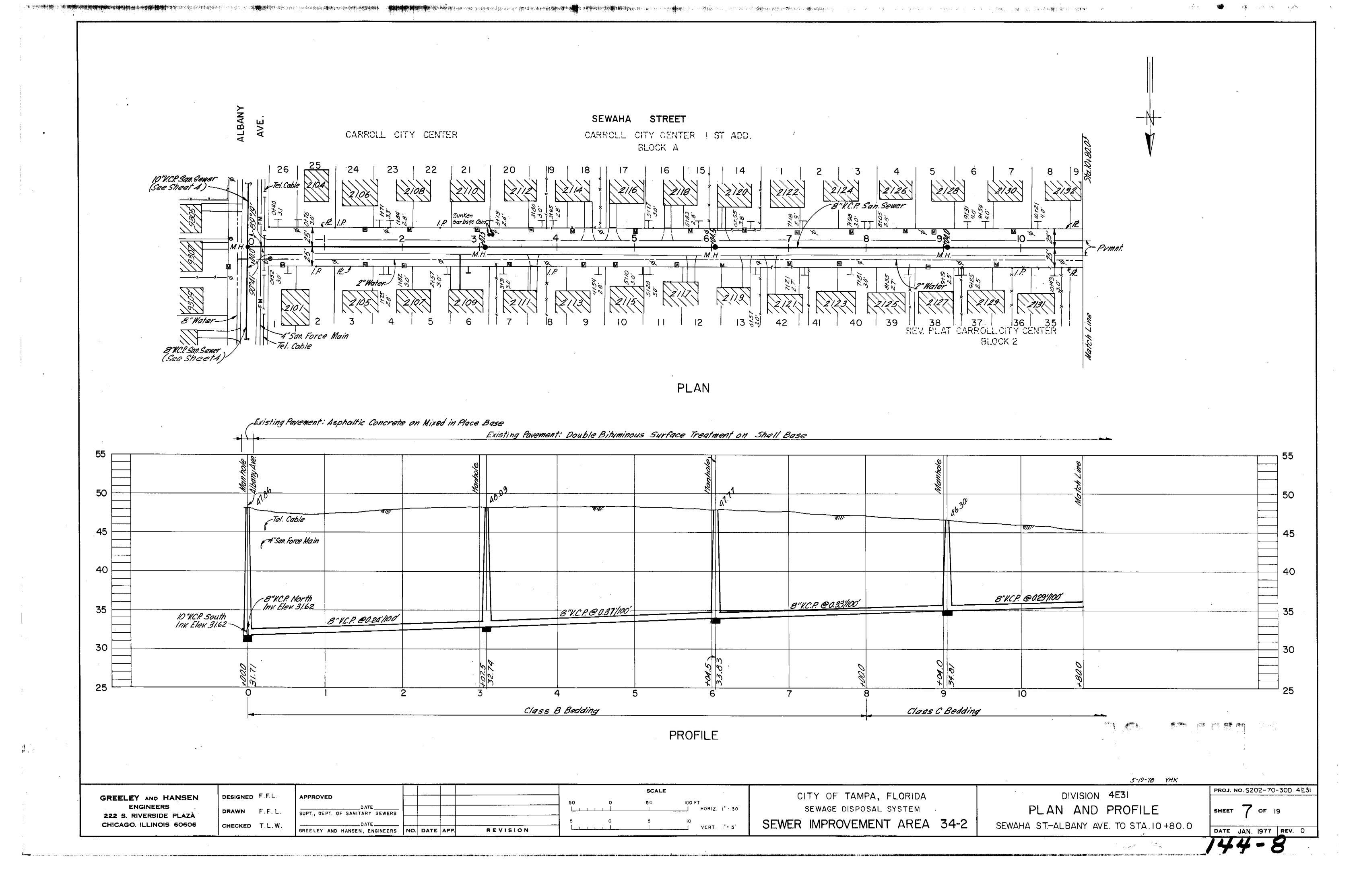


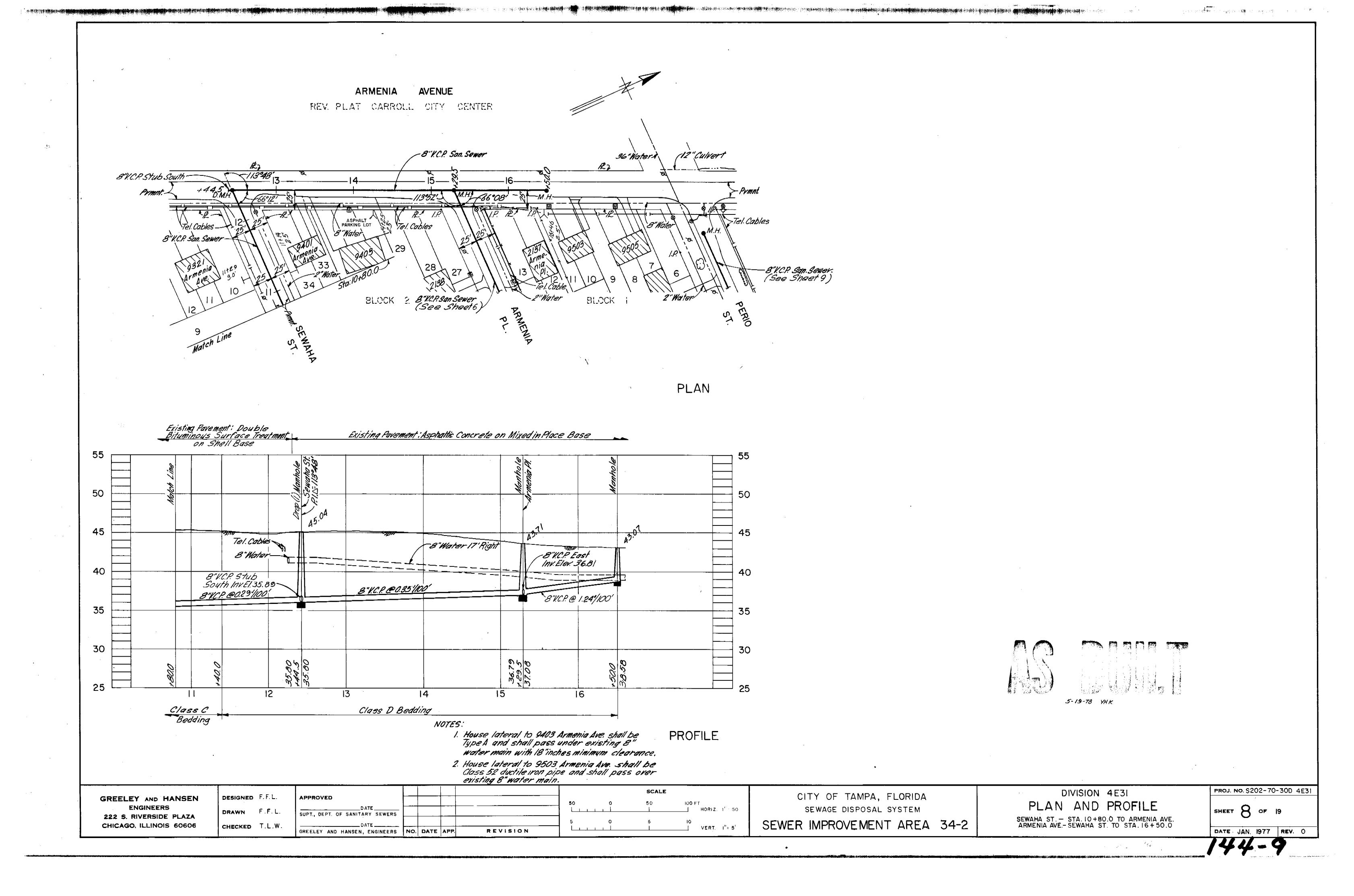
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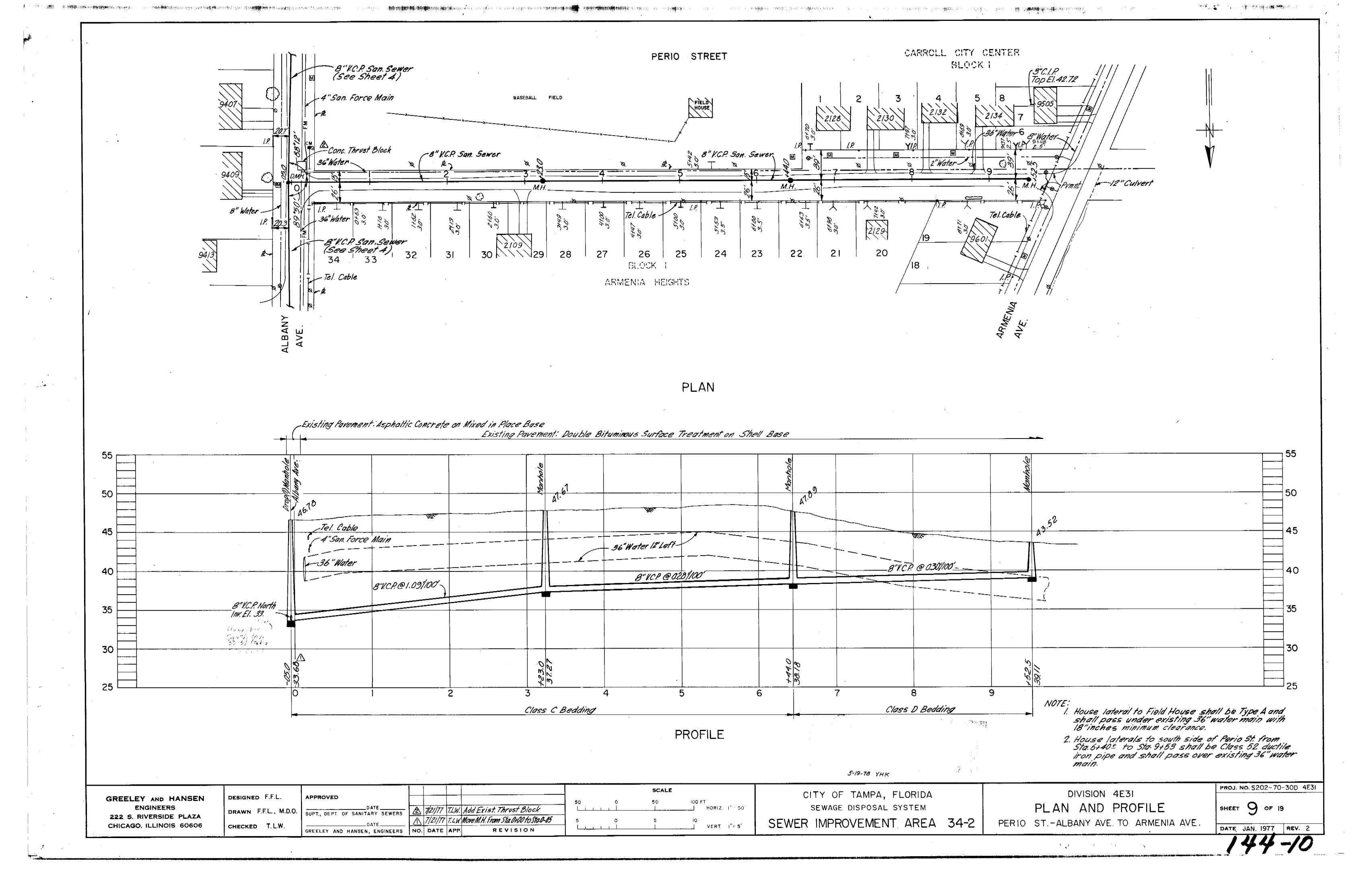
,这个时间也是有一种的一种,我们的一个人,我们就是一个人的人,我们就是一个人的人,我们也没有一个人,我们也没有一个人,我们也没有一个人,我们也没有一个人,我们

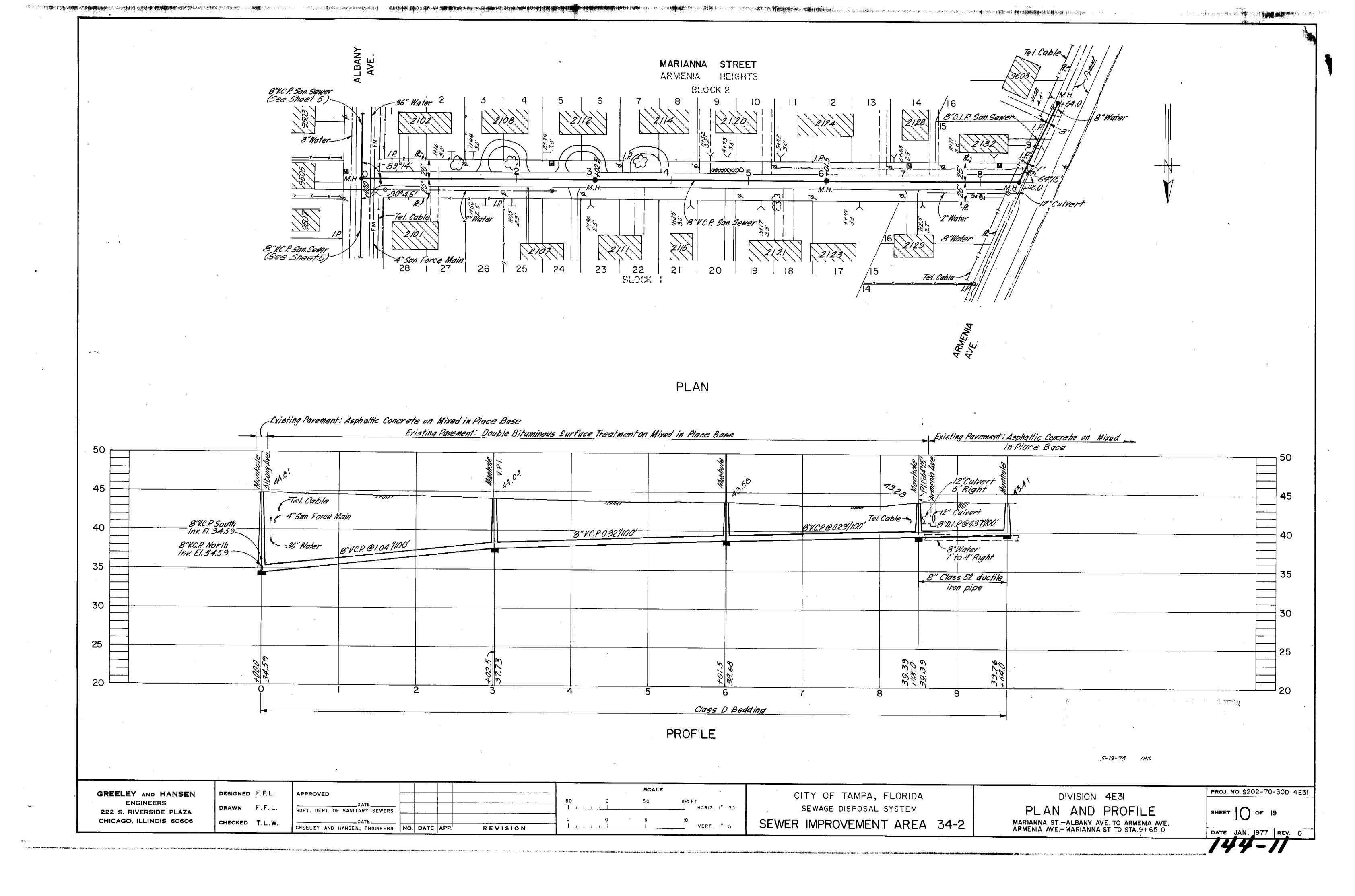
· 幽漠海绵增于李泽(1997),1997,1997年,1997年,1998年3月18日中的1997年,1997年1997年

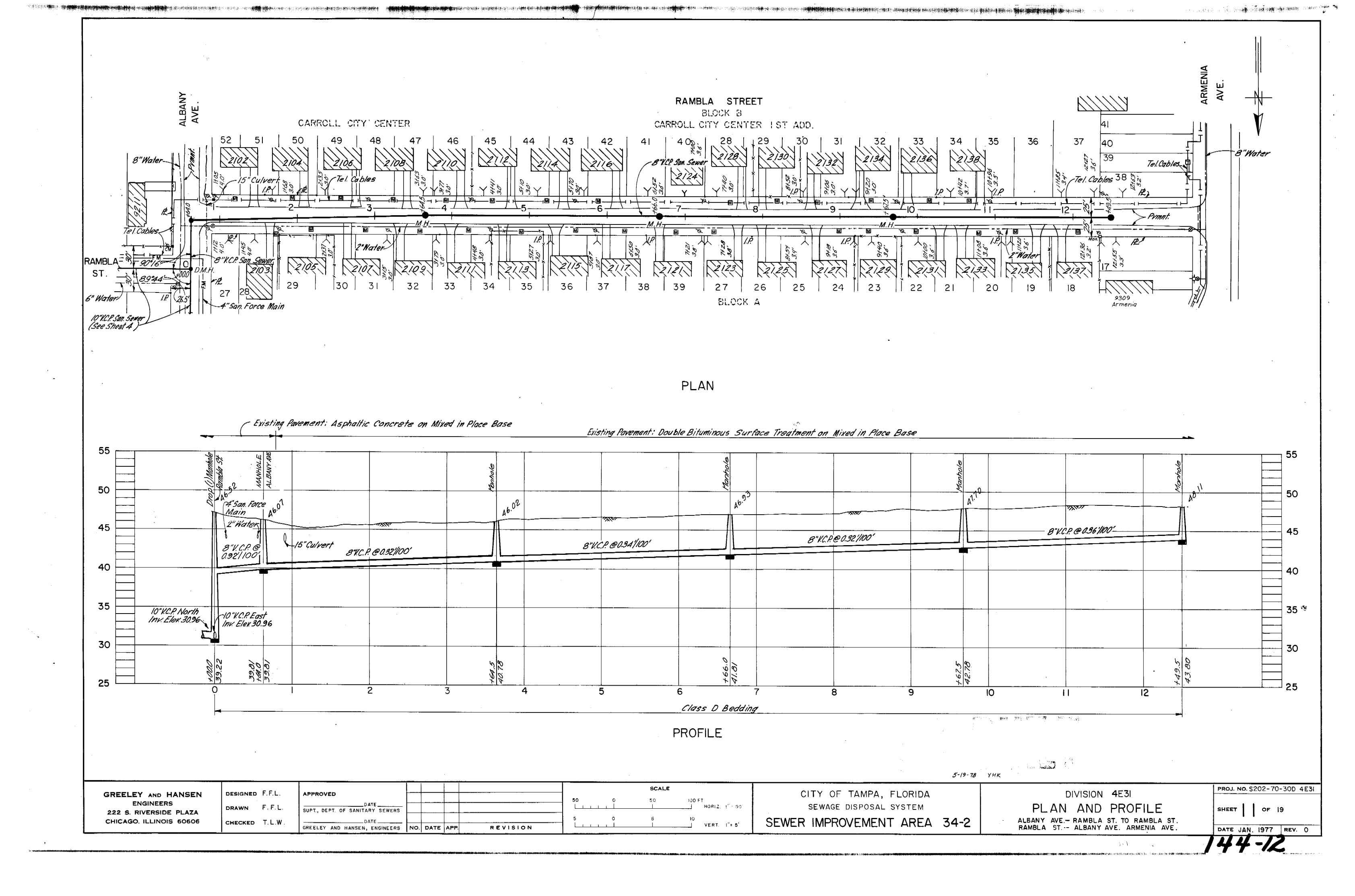


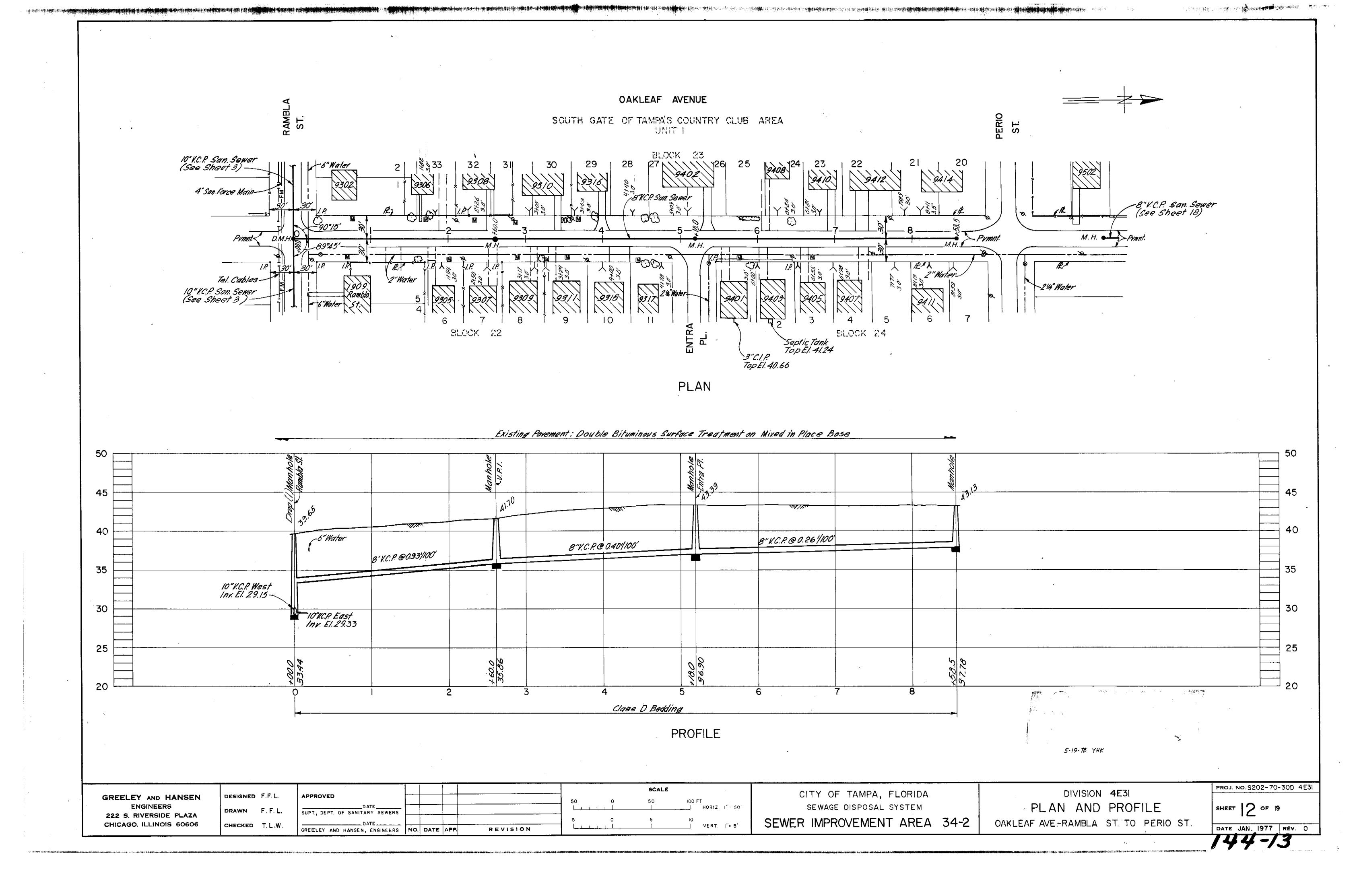


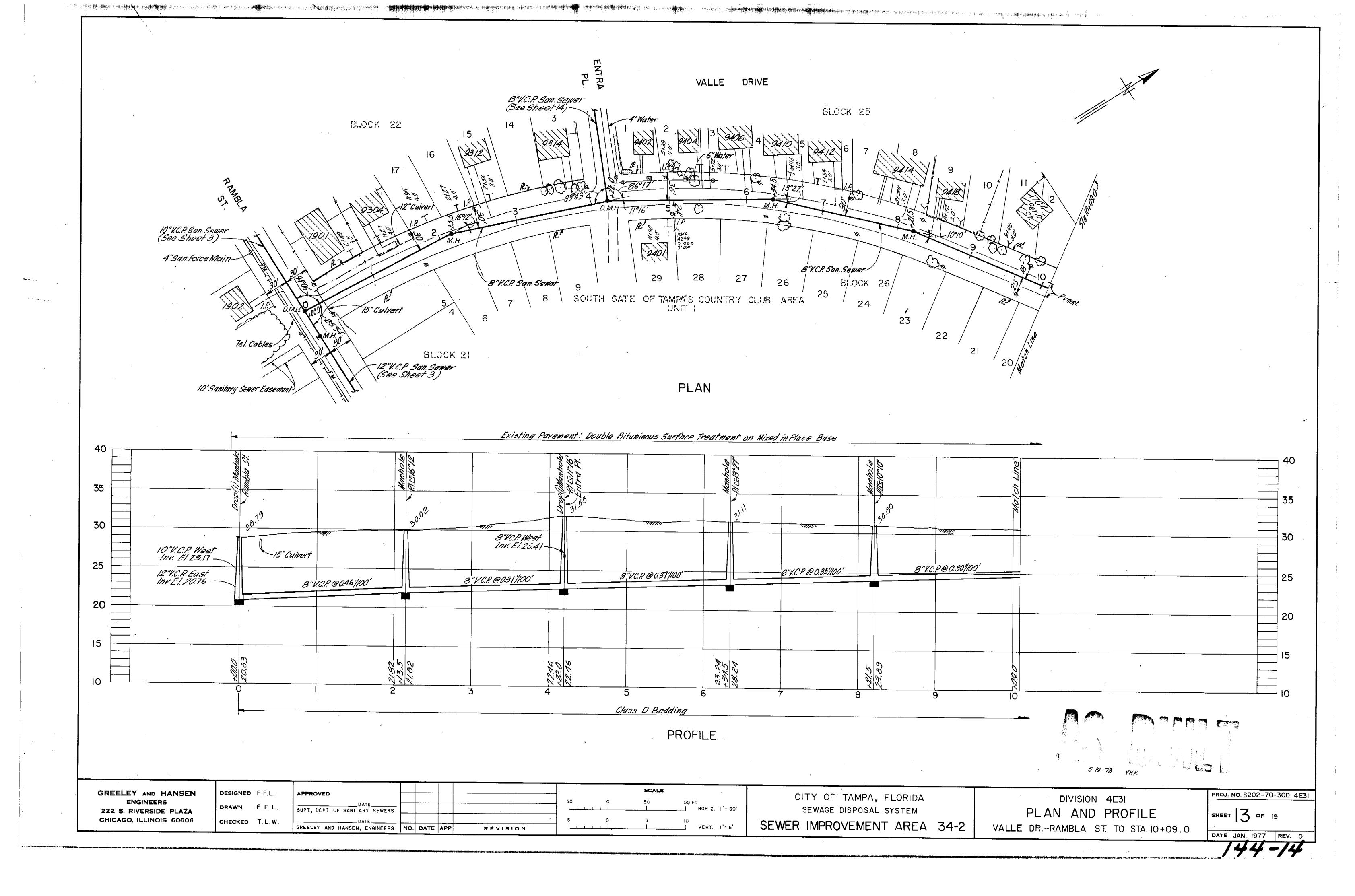


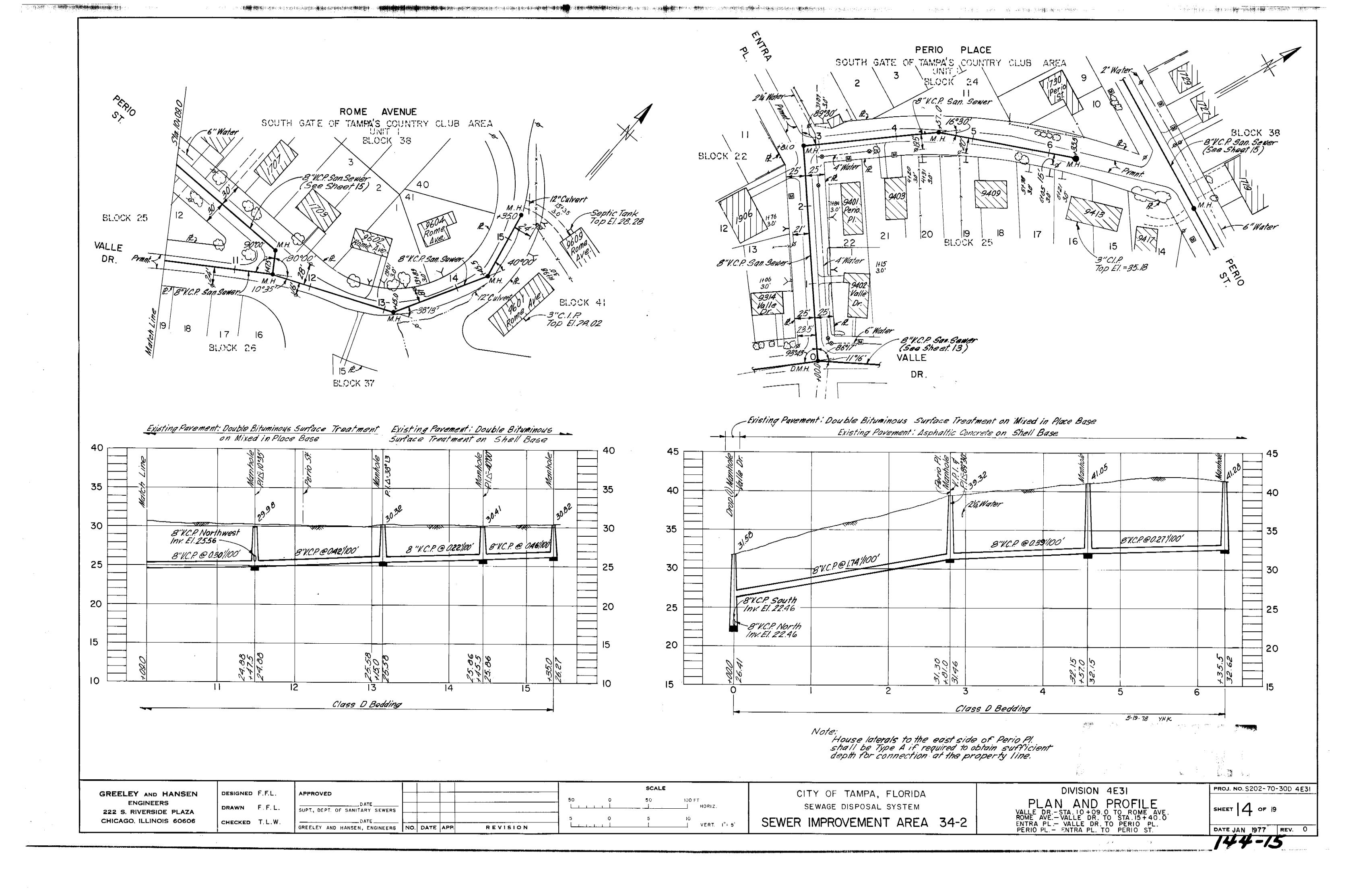


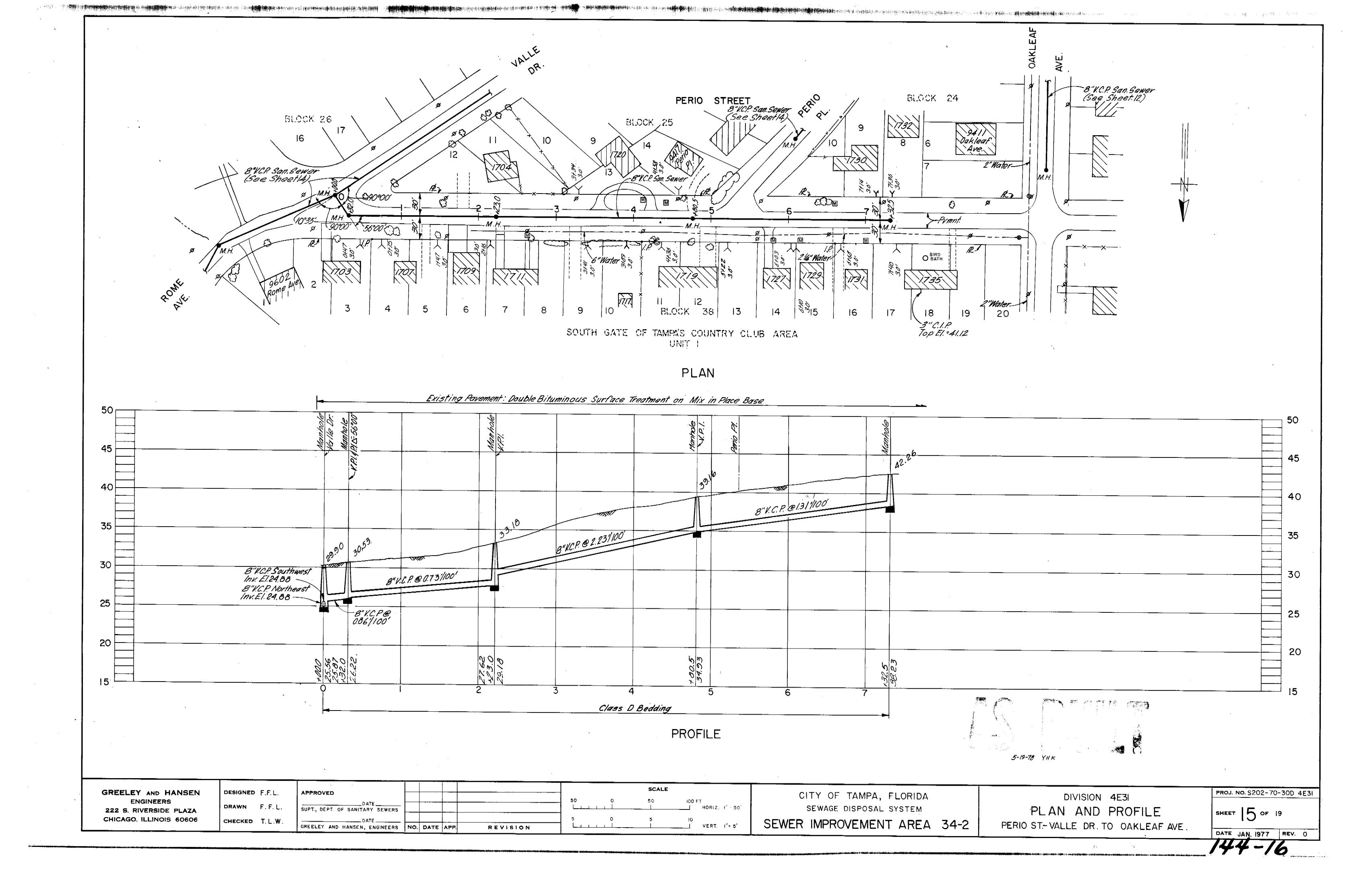


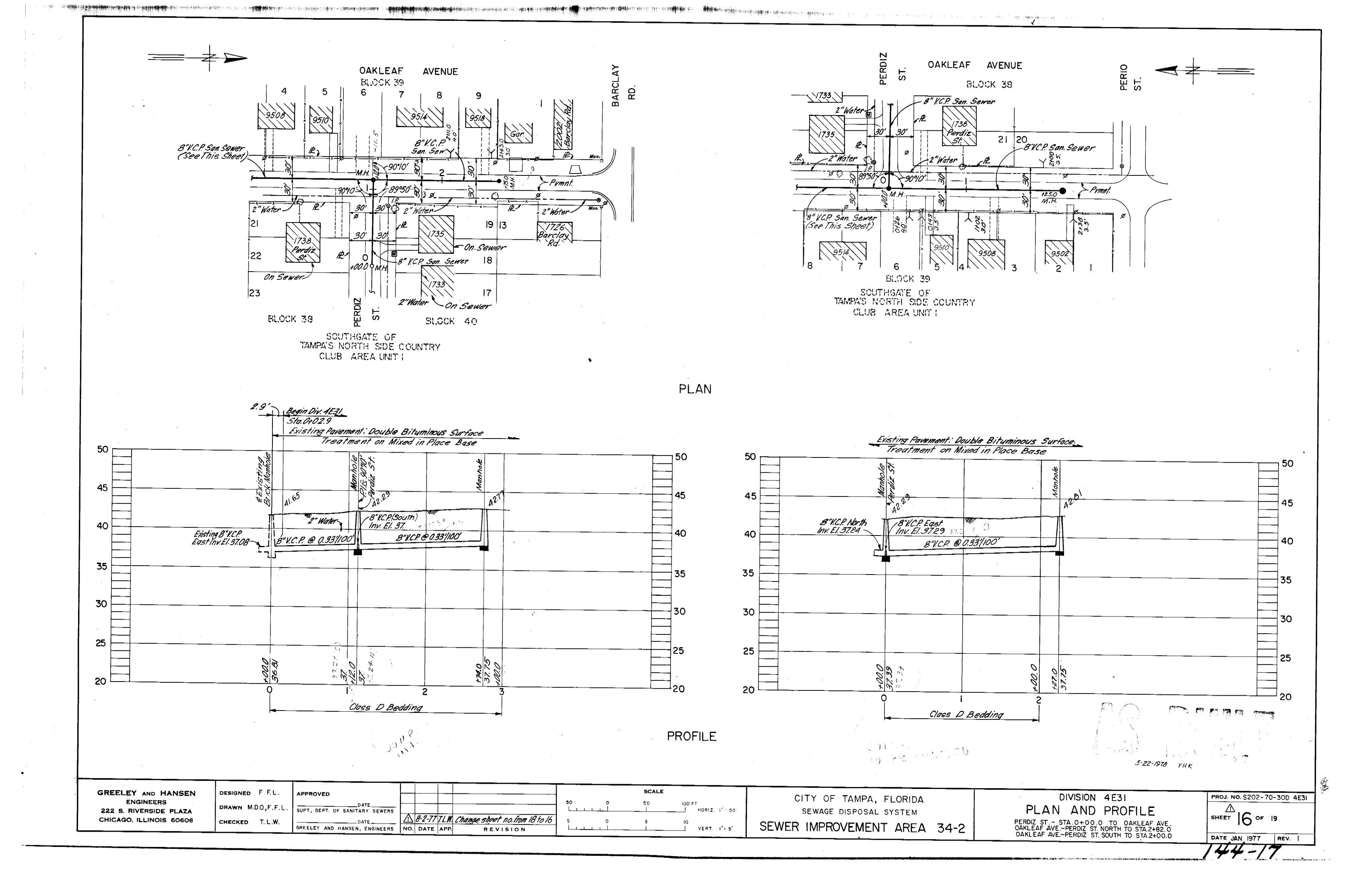


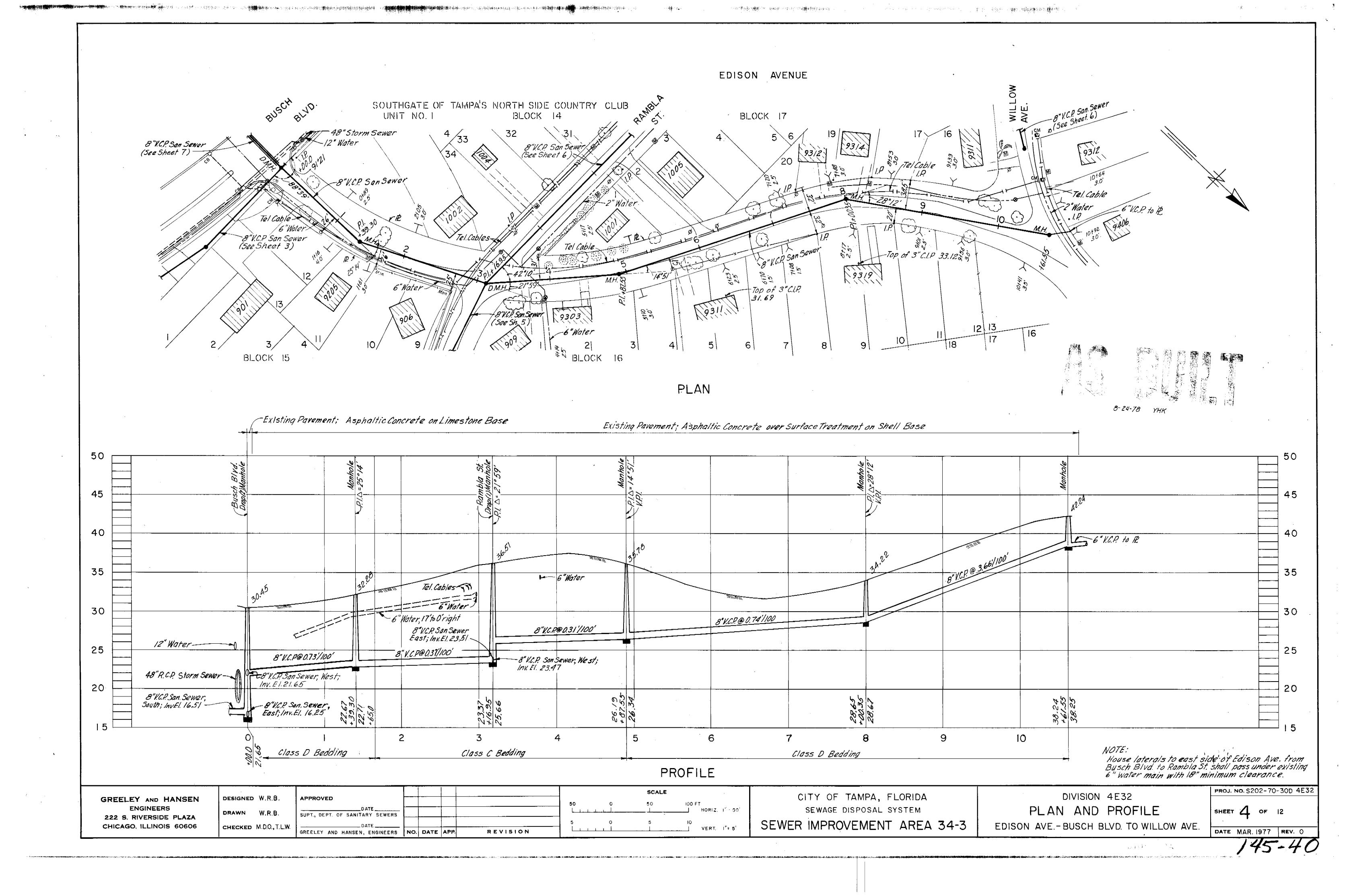


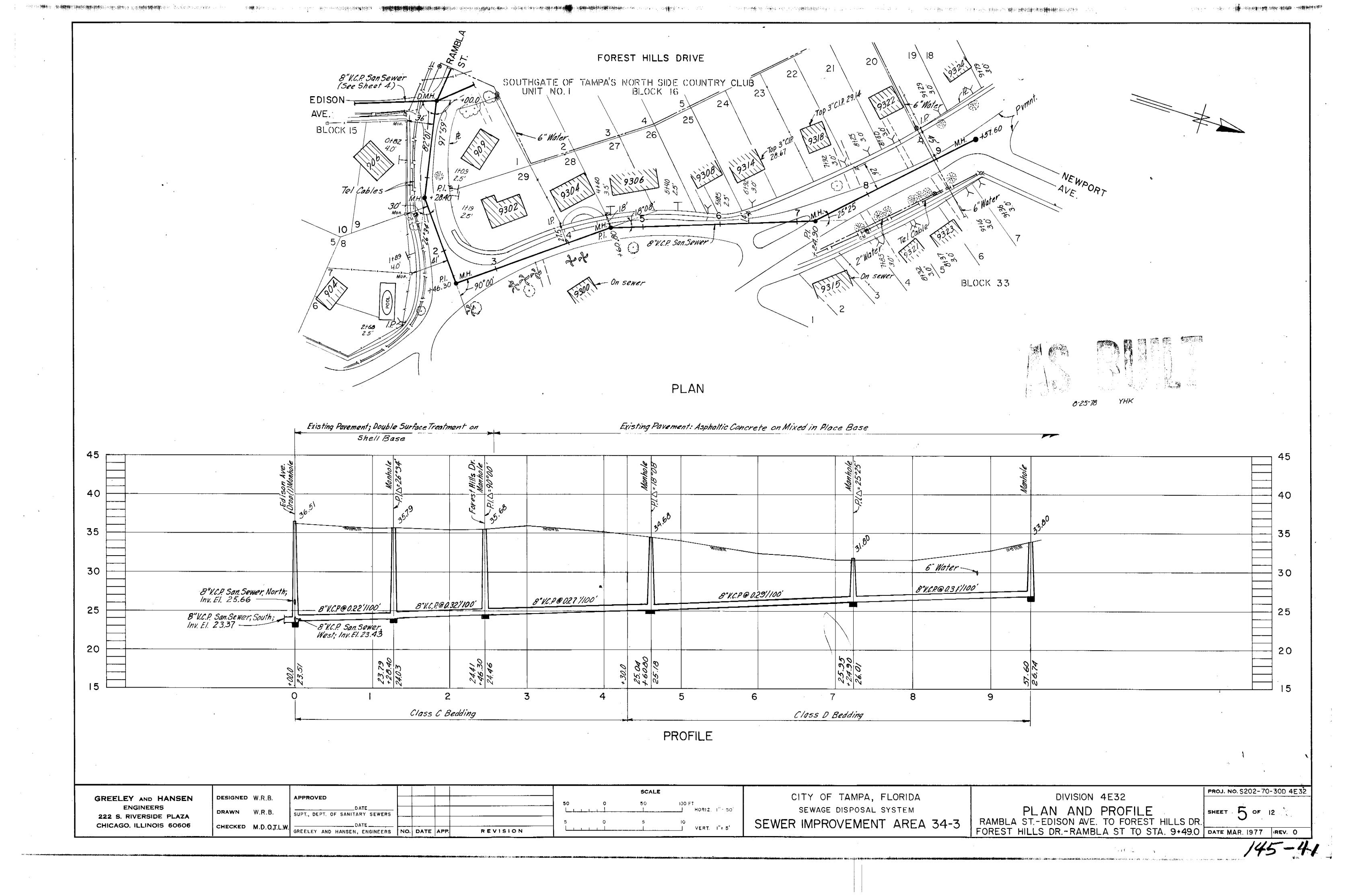


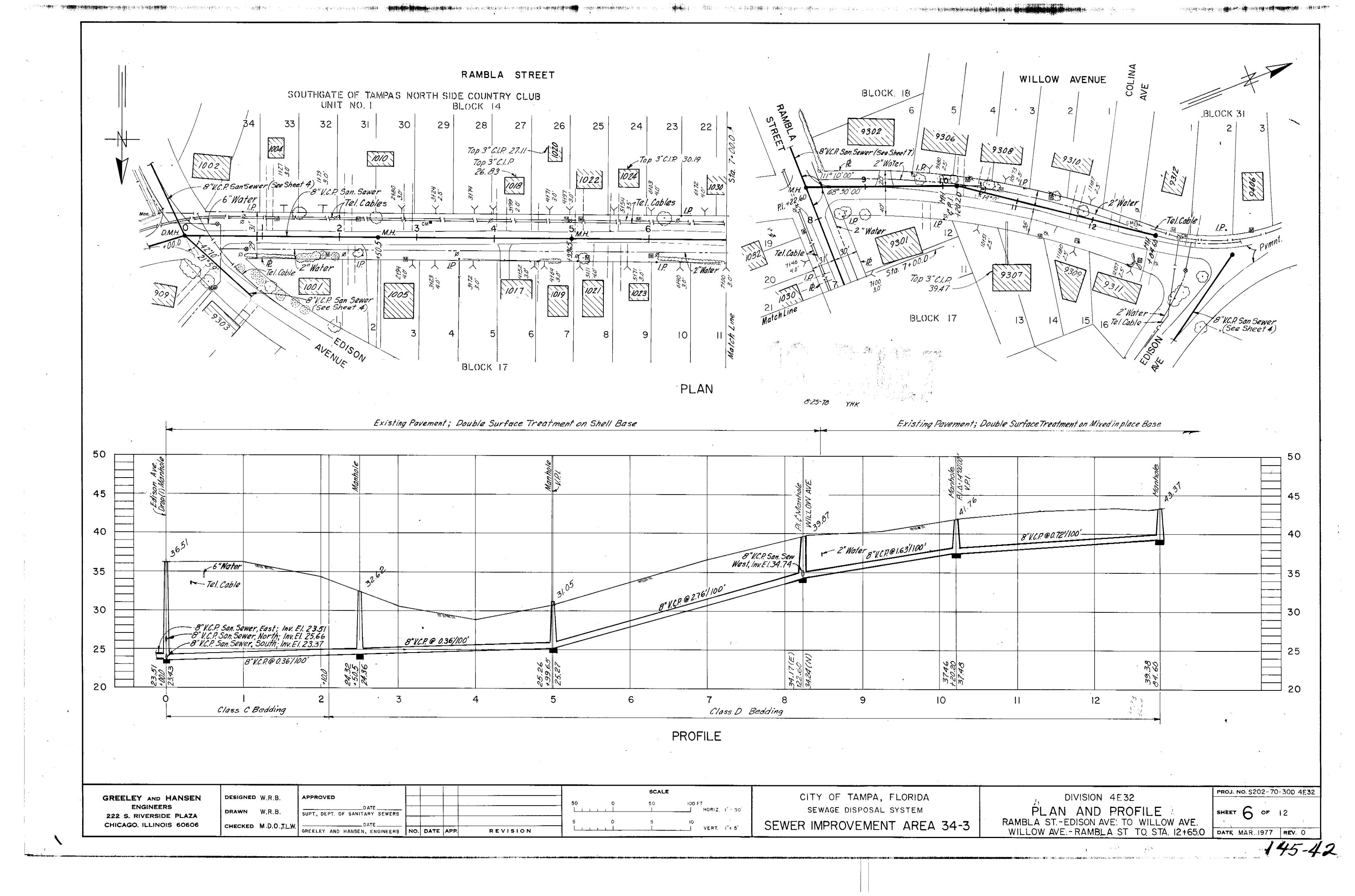


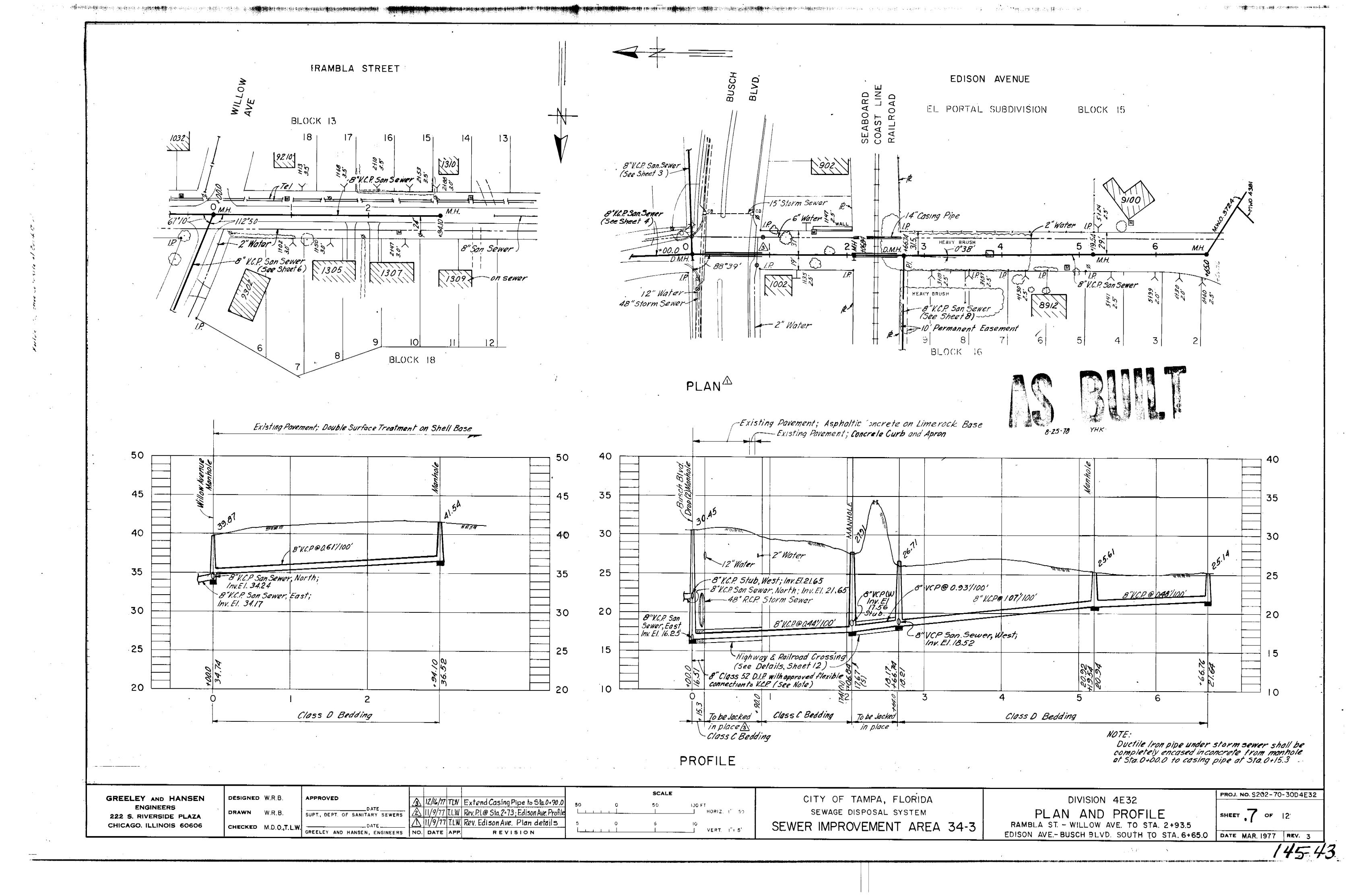


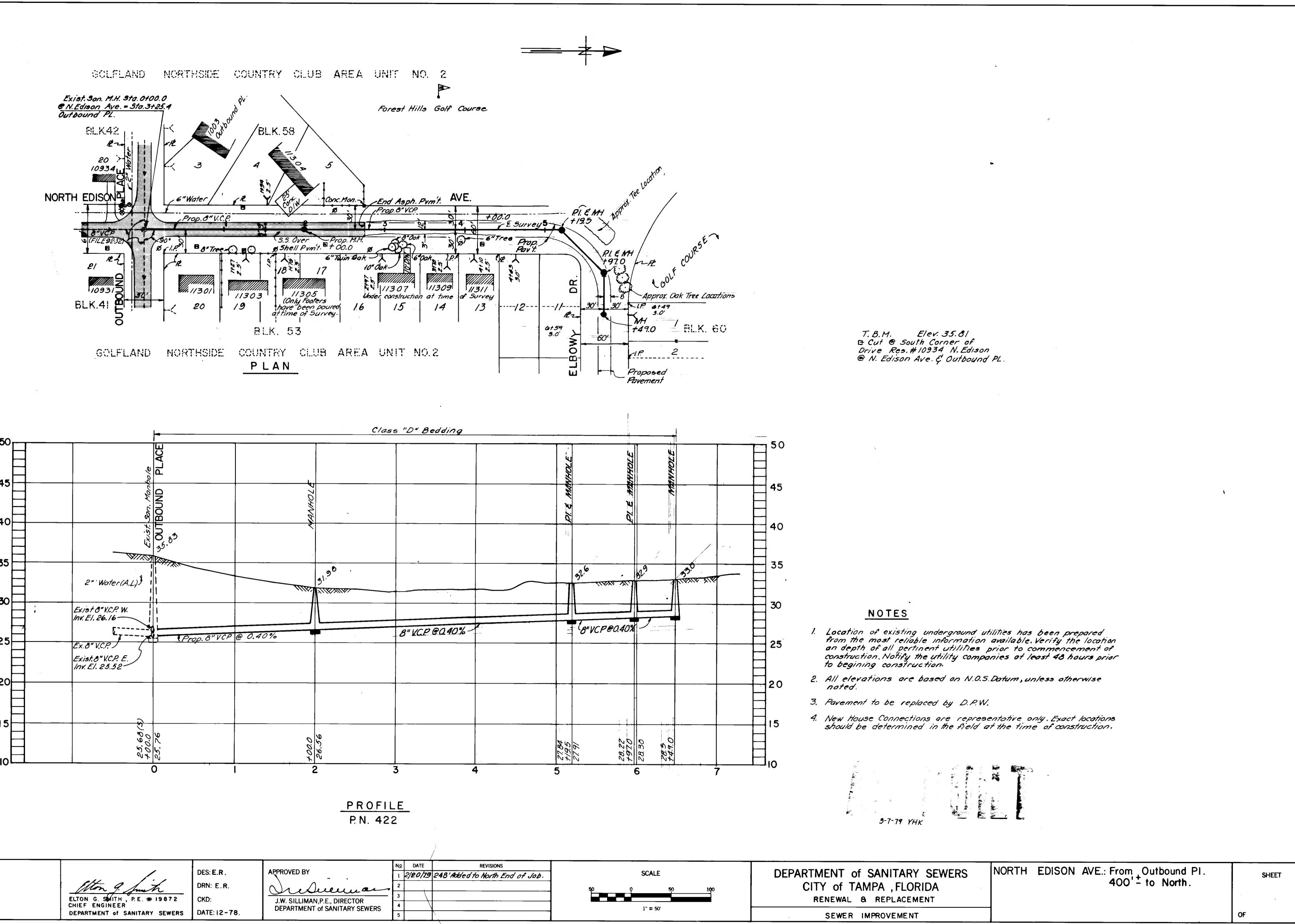


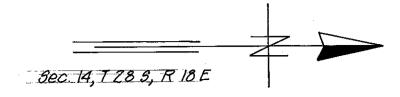












GOLFLAND NORTSIDE COUNTRY CLUB AREA UNIT 2

Station Equation

Existing Manhole

Star. 0100.0 (Willow)

-Bta 3120.2 (Linebaugh)

File 90-40 Station Equation

§ P.I.

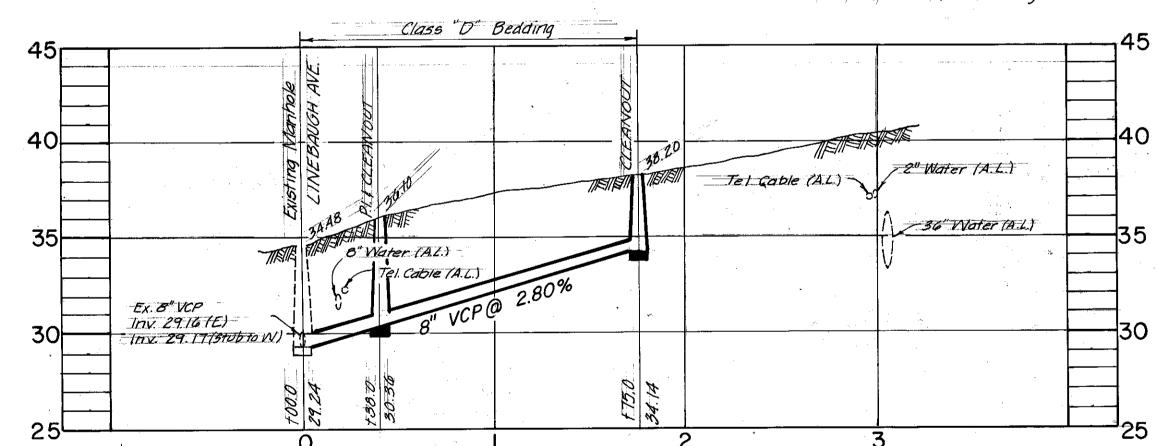
Sta. 3121.46 (Willow) = Sta 3+20.59 (Meadowbrook) Z" Water)

PLAN

BM A-936 Elev. 34.48

Cut W edge S/W, 8' S of N end, SE

corner Willow & Linebaugh.

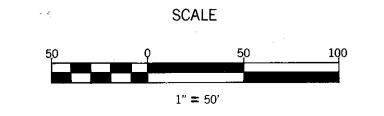


PROFILE WO 5546



REVISIONS

DES:JMR ELTON G. SMITH, P.E. # 19872 CKD:
DEPUTY DIRECTOR
DEPARTMENT of SANITARY SEWERS DATE: J.W. SILLIMAN,P.E., DIRECTOR DEPARTMENT of SANITARY SEWERS



I All elevations are NOS Datum unless

2. Location of existing underground util-ities was prepared from the most re-

liable information available. Verify the location and depth of all perti-

ment utilities prior to construction.

3 Service lateral for 1210 Meadow-

brook is approximate only. Exact location to be determined in the field at the time of construction.

4 Replace pavement full width with DST.

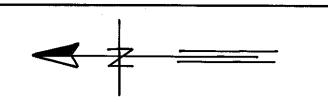
Notify utility companies in the area at least 48 hours prior to construction.

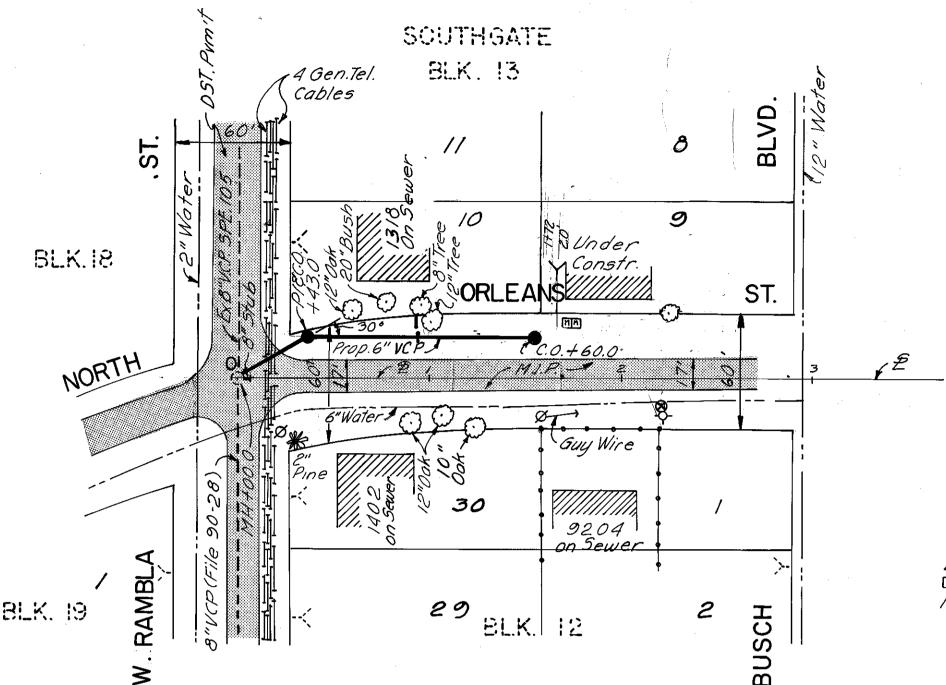
otherwise noted.

DEPARTMENT of SANITARY SEWERS CITY of TAMPA , FLORIDA RENEWAL & REPLACEMENT

SEWAGE DISPOSAL SYSTEM

WILLOW AVE: Linebaugh to Meadowbrook



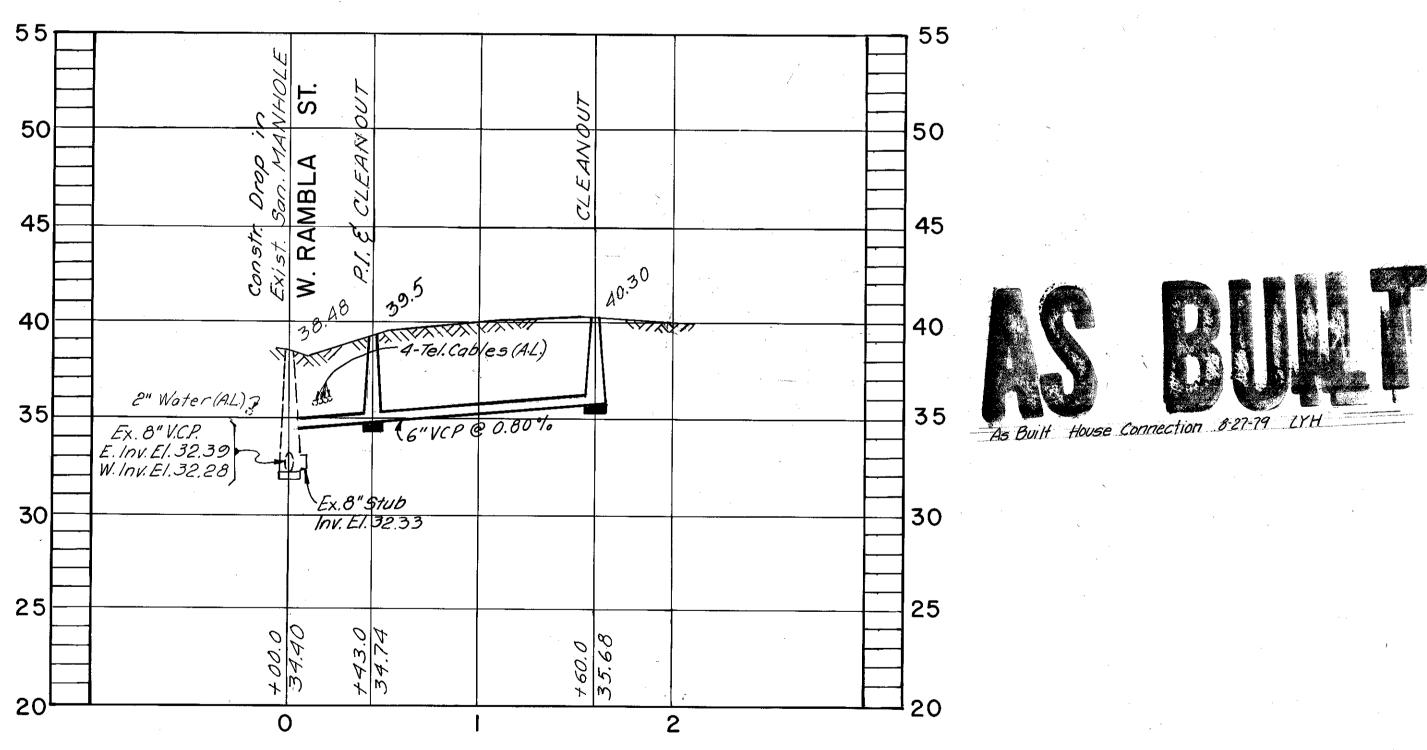


B.M. Elev. 39.92

G Cut Top C.B. N.E. Corner

North Orleans St. & Busch Blvd.

## PROJ. NO. 431



NOTES PROFILE

W. O. 5559

1.- All elevations are based on N.O.S. Datum unless otherwise noted 2.- Location of existing underground utilities was prepared from the most reliable information available. Verify the location and depth of all pertinent utilities prior to construction. Notify companies in the area of least 48 hours prior to construction,

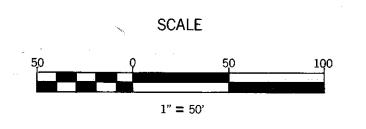
3.- New House Connections are representative only. Exact locations should be determined in the field at the time of construction.

4.- Patch payement as required with Asph. Concrete Type I.

ELTON G. SMITH, P.E. # 19872
DEPUTY DIRECTOR
DEPARTMENT of SANITARY SEWERS

DES: J.M.R.

APPROVED BY 6-19-79 Line was shortened by 40'. J.W. SILLIMAN, P.E., DIRECTOR DEPARTMENT of SANITARY SEWERS



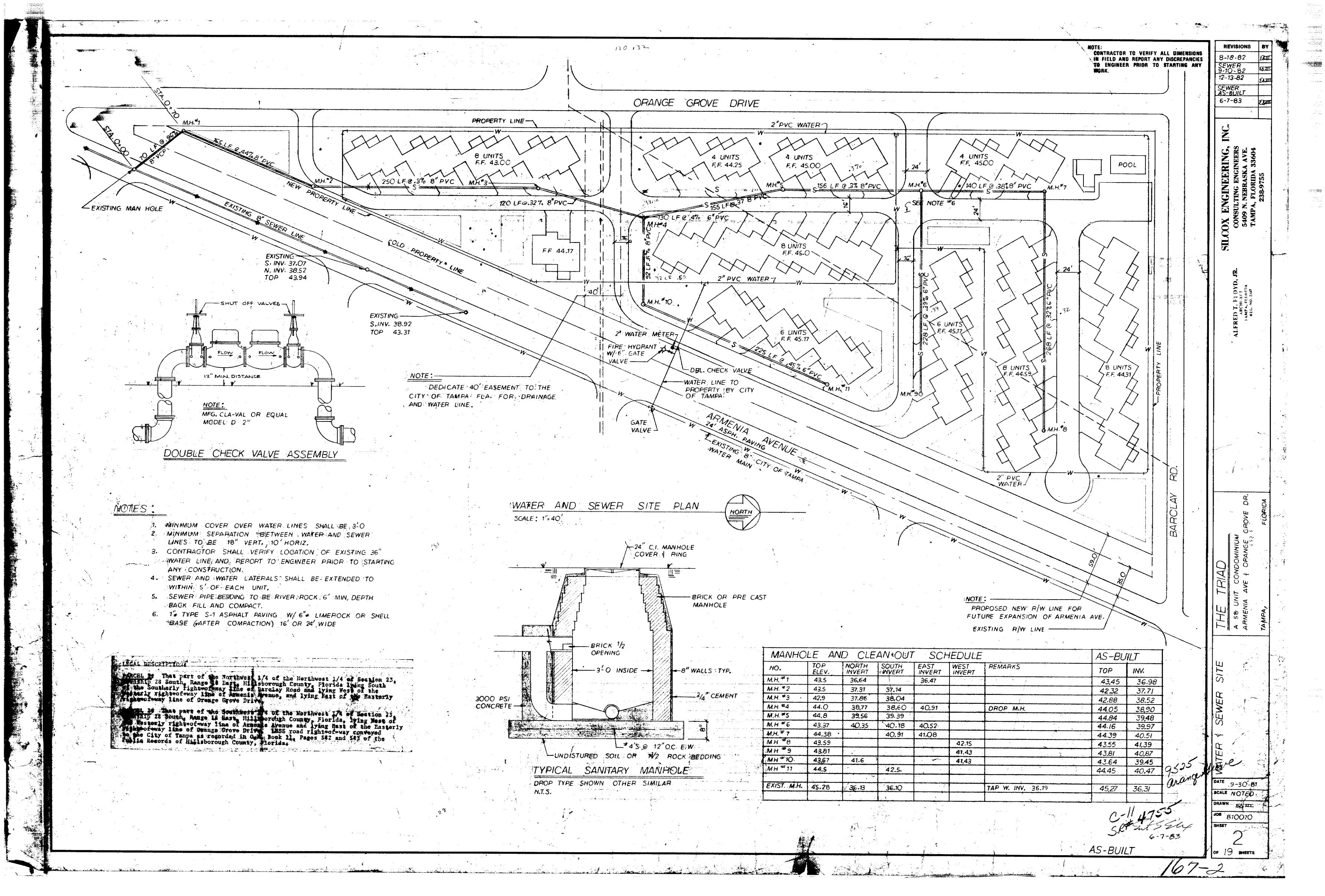
DEPARTMENT of SANITARY SEWERS CITY of TAMPA, FLORIDA

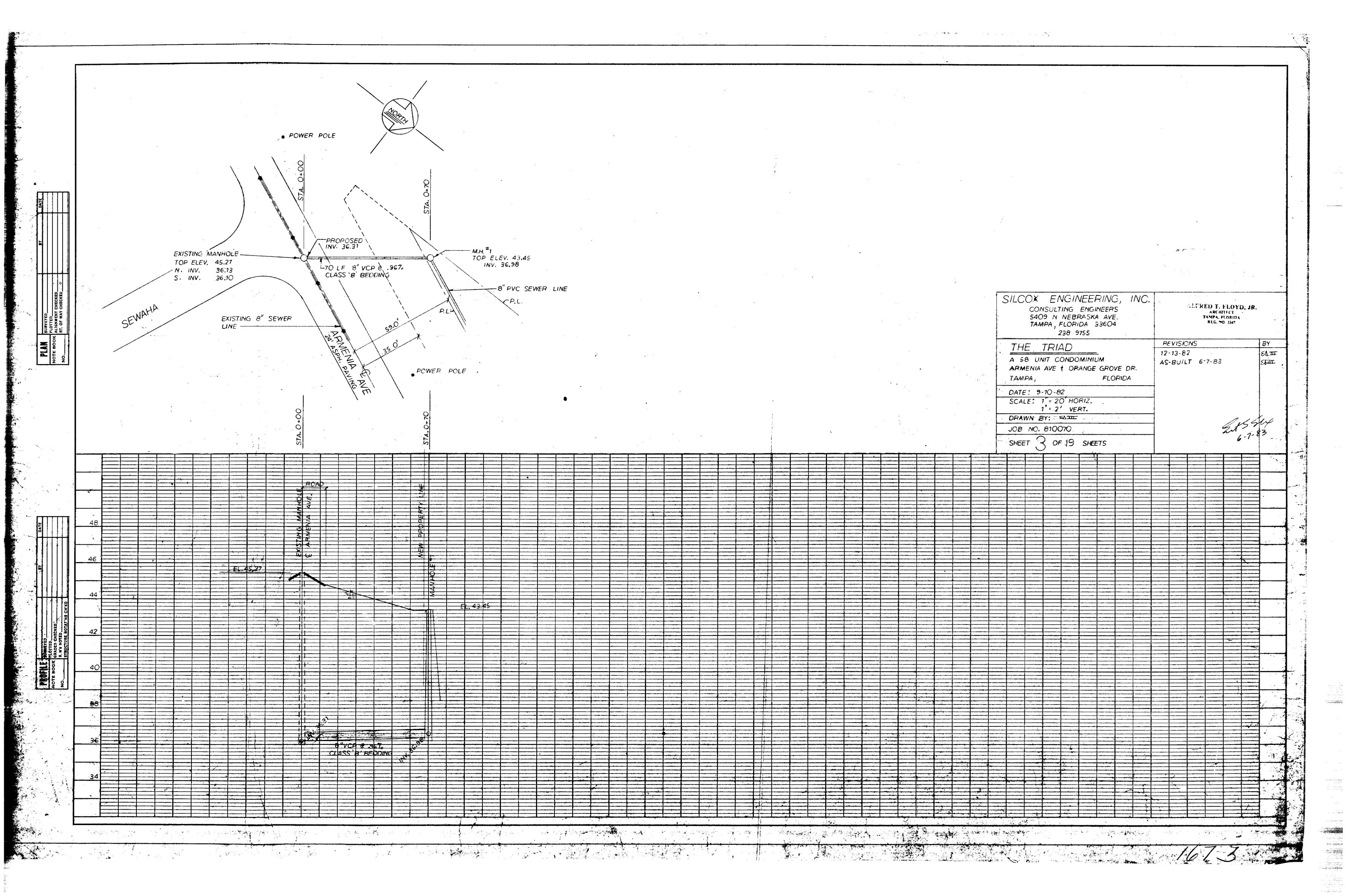
SEWER IMPROVEMENT

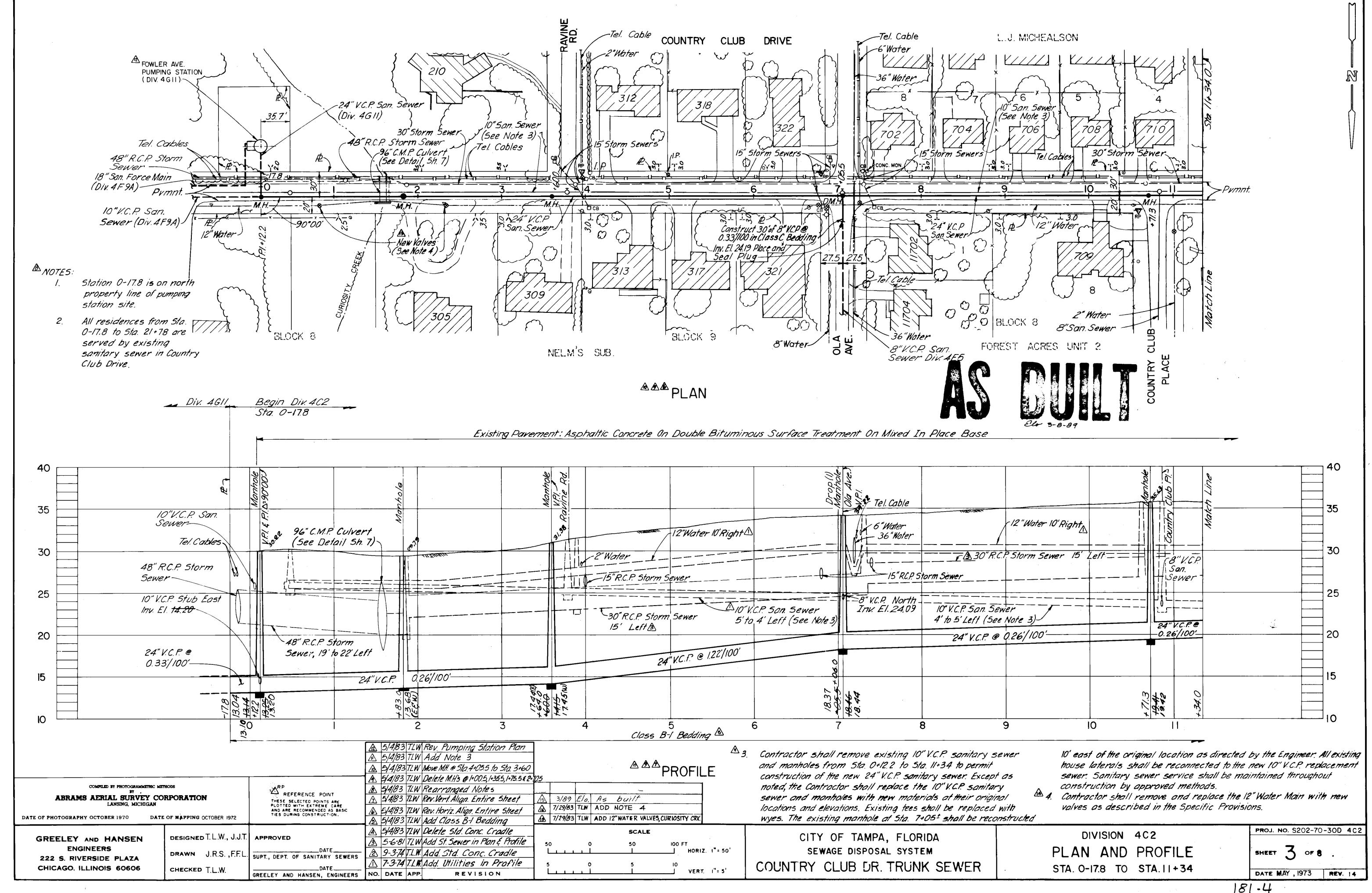
RENEWAL & REPLACEMENT

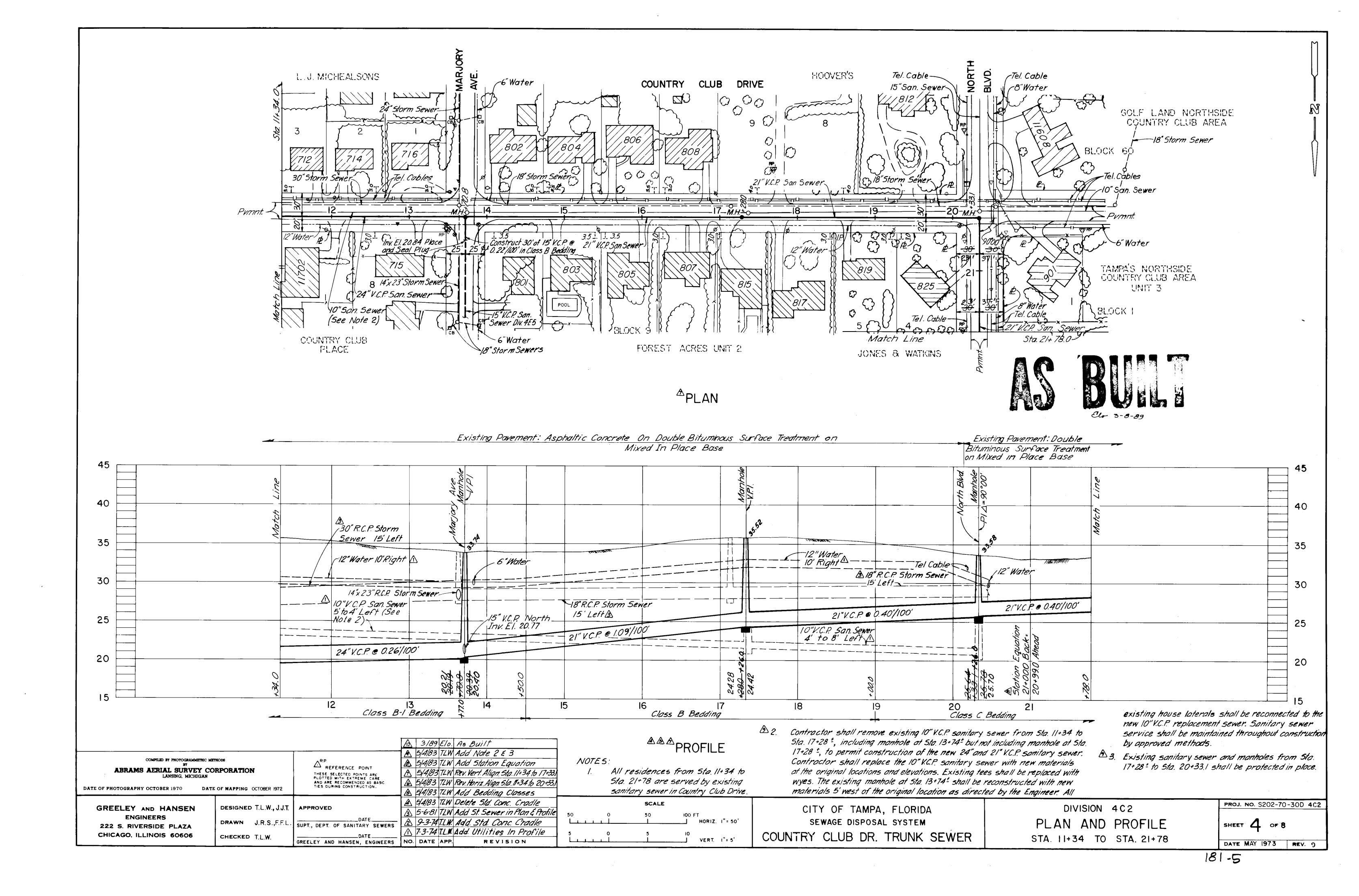
NORTH ORLEANS ST.: From W. Rambla St. to Busch Blvd.

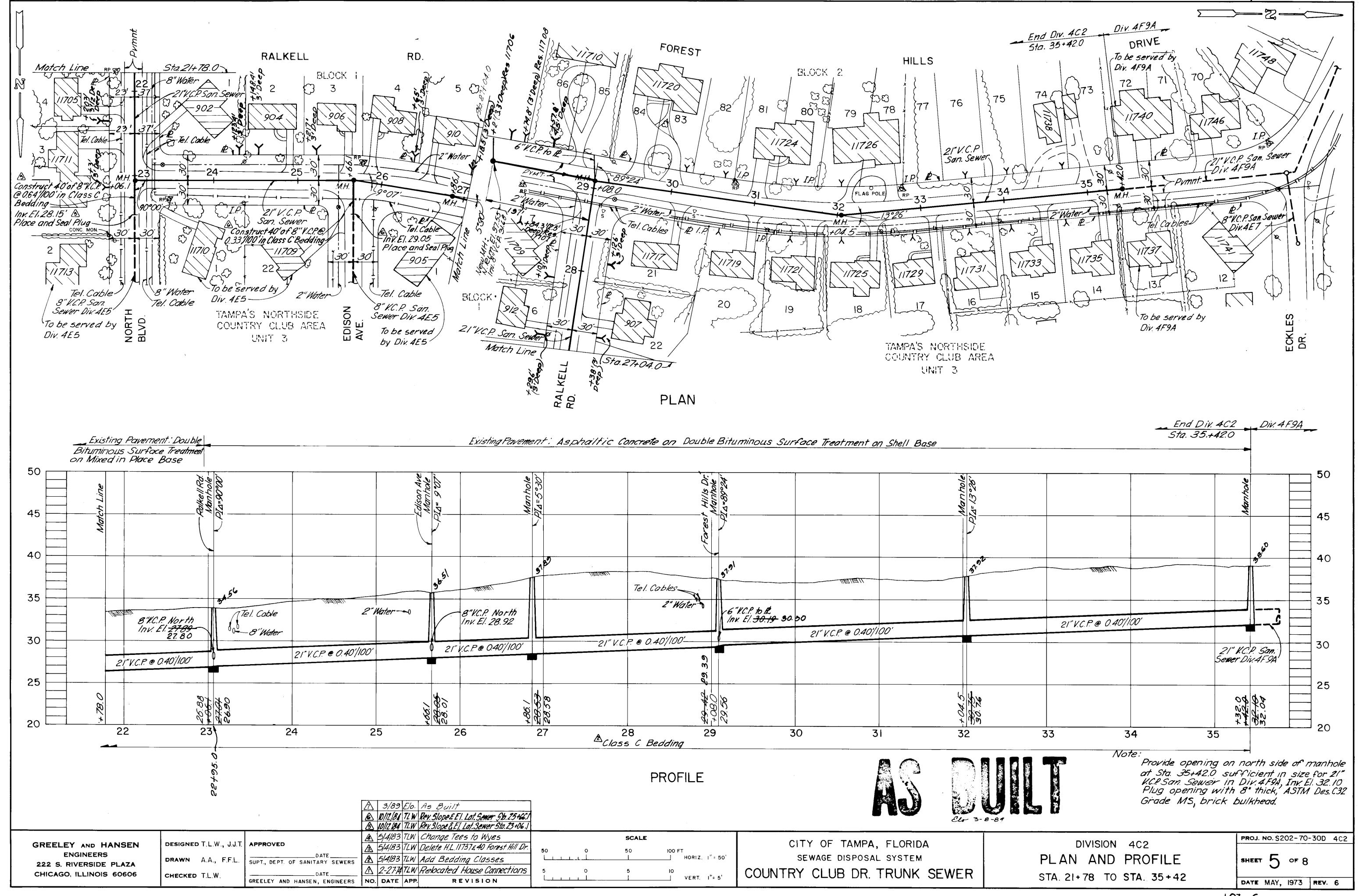
SHEET

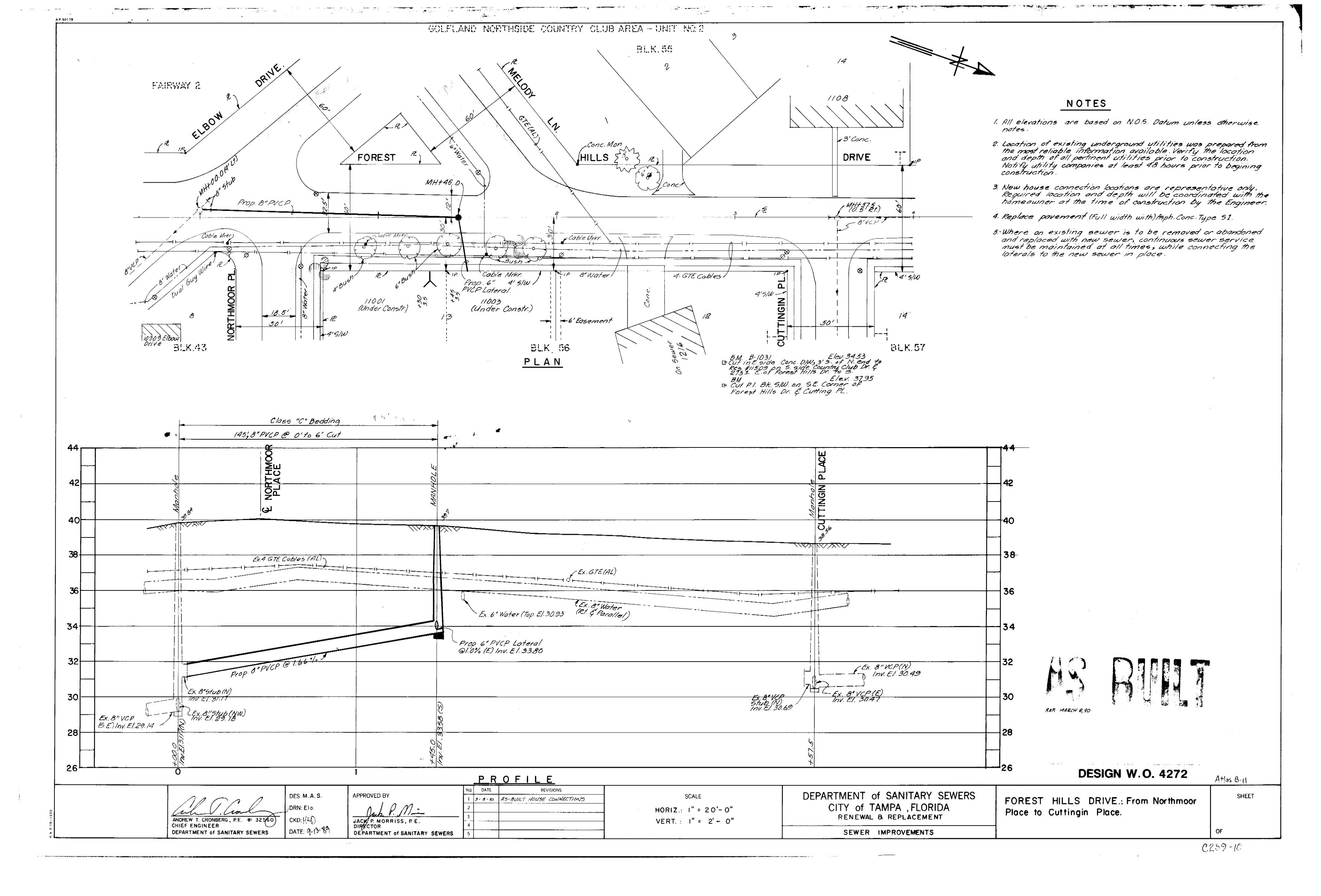


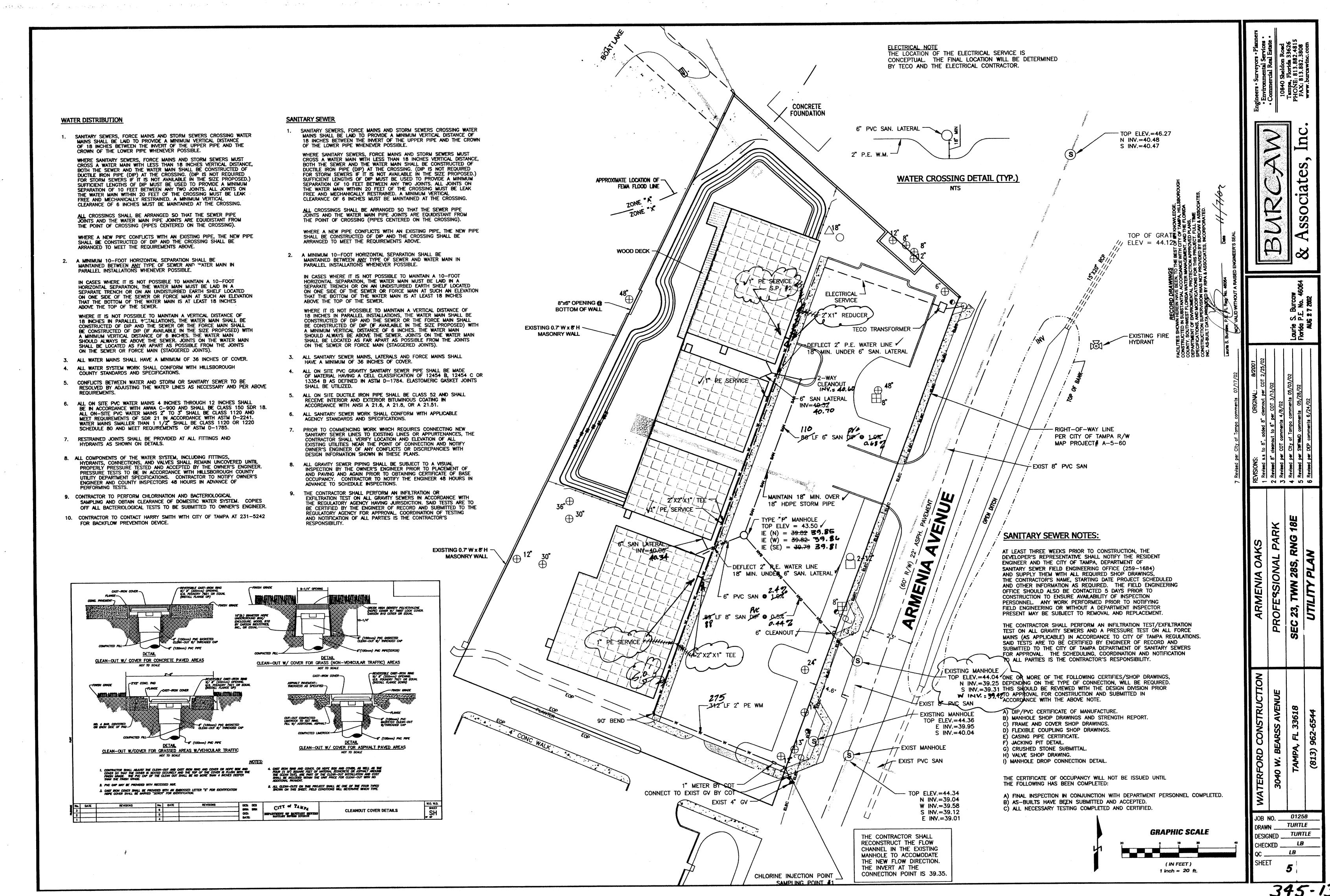


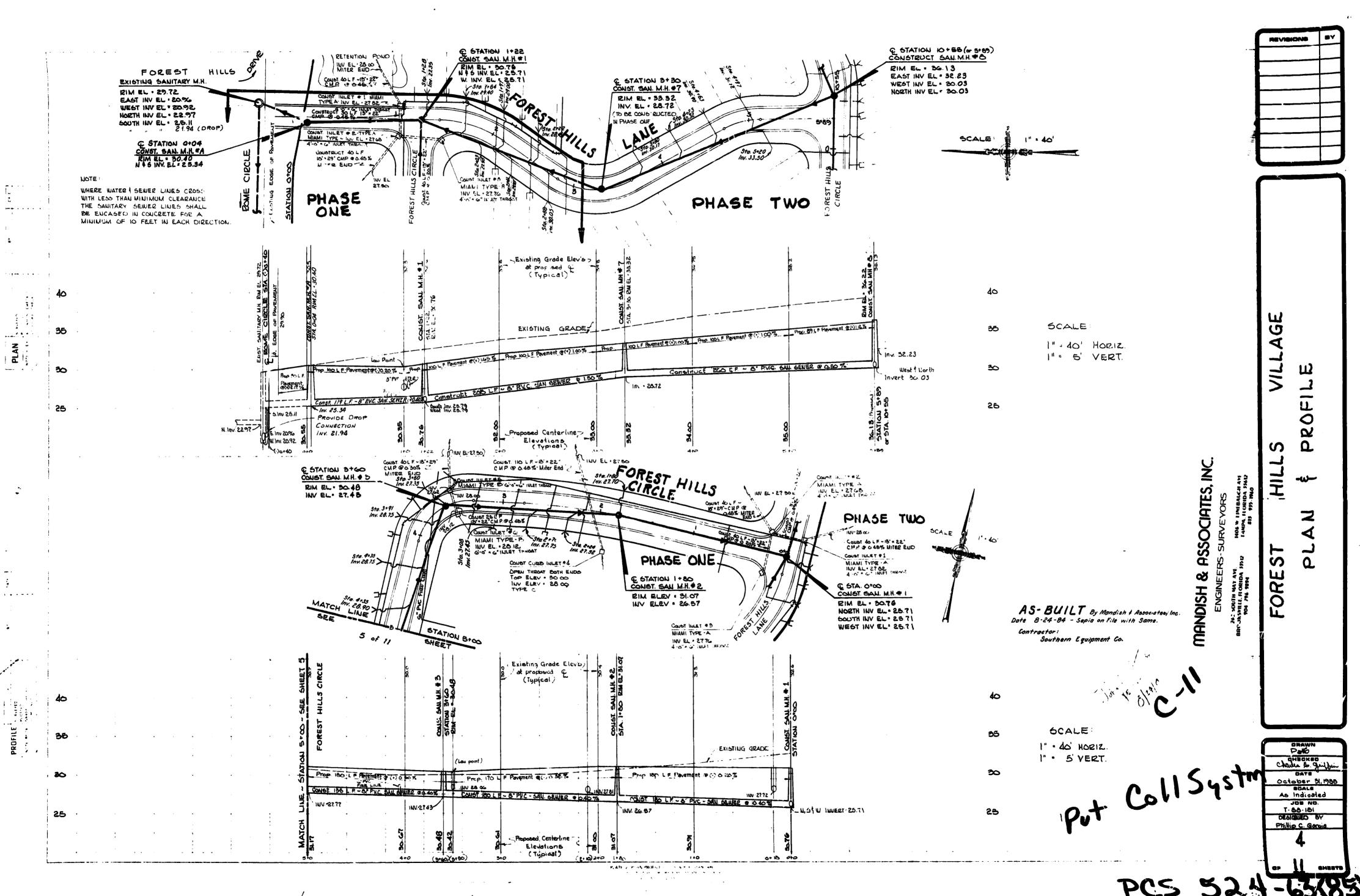












PCS 524

Ln

