

FINAL WATER & SEWER EXTENSION PLAN

6725 SANTA BARBARA COURT

ROUTE 100 BUSINESS PARK

BLOCK 'F' PARCEL 'F'

GENERAL NOTES

PART I

- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83/91.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS, UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEYS OWED TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE PROJECT SITE.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL " " AT THE LOCATIONS OF THE TEST PITS. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWING. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 AT&T 1-800-252-1133
 BGE (CONTRACTOR SERVICES) 410-850-4620
 BGE (UNDERGROUND DAMAGE CONTROL) 410-787-9068
 BUREAU OF UTILITIES 410-313-4900
 COLONIAL PIPELINE CO 410-795-1390
 MISS UTILITY 1-800-257-7777
 STATE HIGHWAY ADMINISTRATION 1-800-743-0033/ 410-224-9210

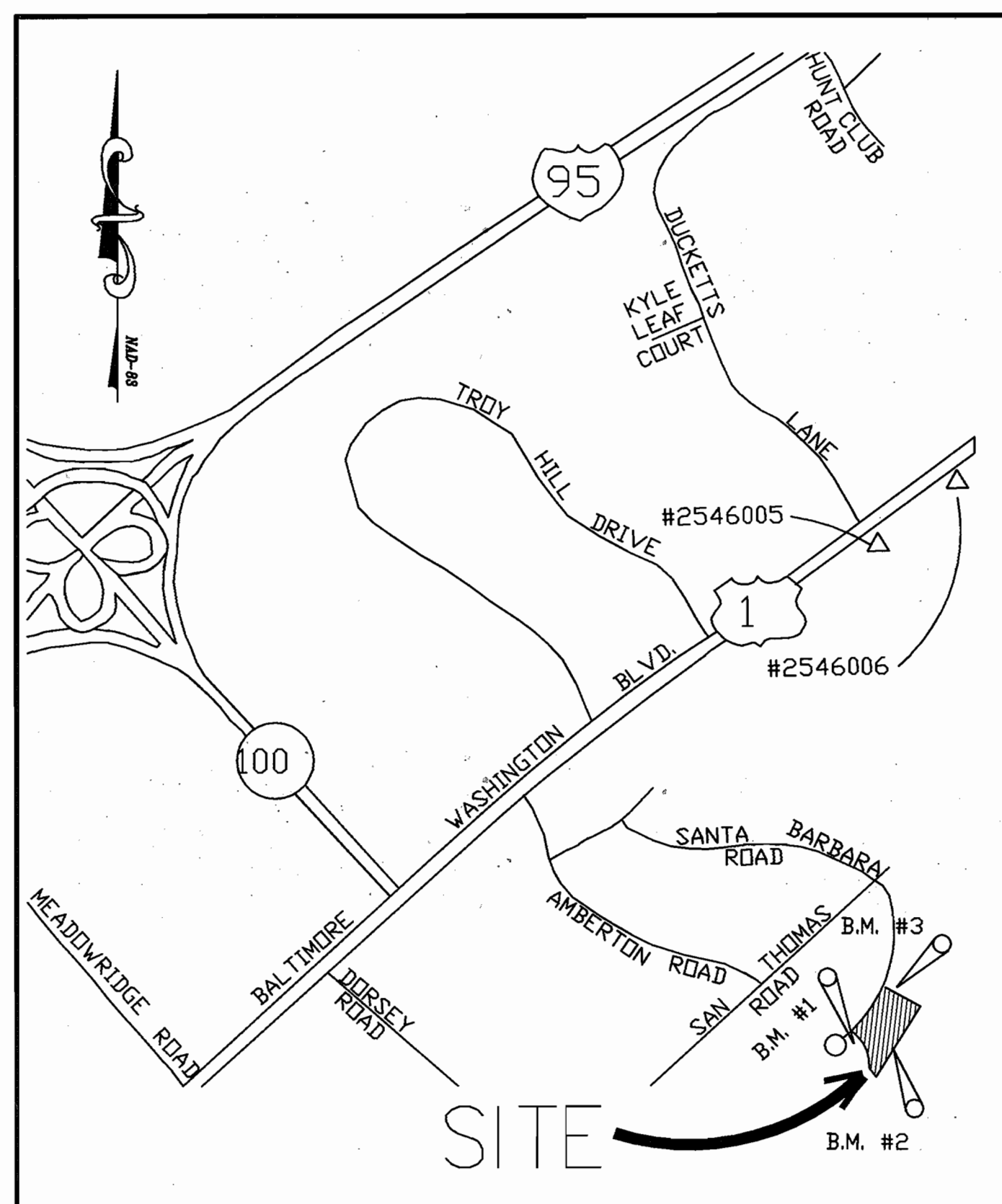
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)-313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTRY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(A) OF THE HOWARD COUNTY CODE.

PART II WATER

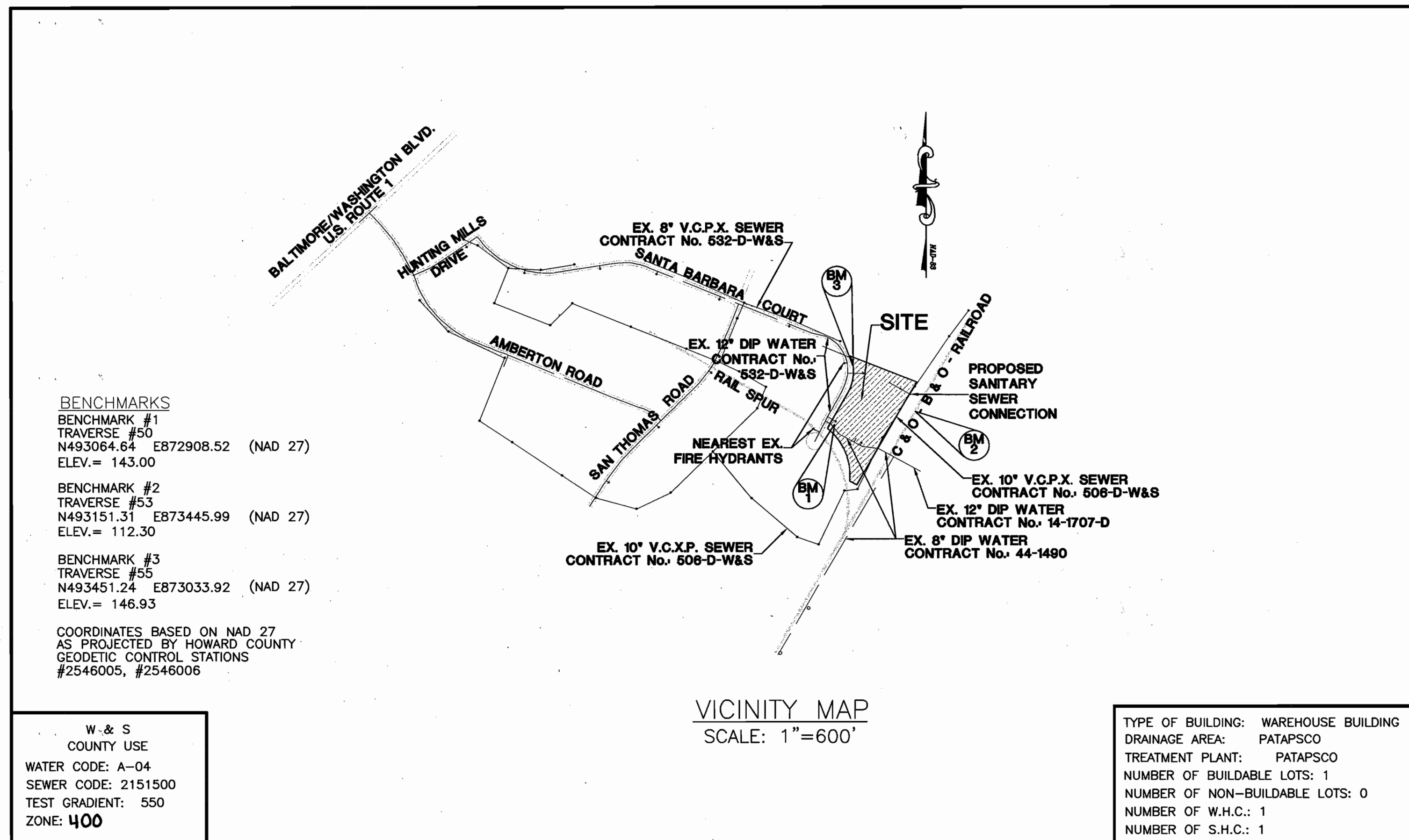
- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS, UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- THE WATER HOUSE CONNECTION SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS. SEE HOWARD COUNTY STANDARD DETAIL W-3.21.
- THE SPRINKLER SYSTEM FOR THE BUILDING WILL HAVE AN INTERNAL METER, AND WILL BE SEPARATED INTERNALLY FROM THE DOMESTIC SUPPLY.
- 8" WATER VALVES TO BE CLOSED IN CASE OF EMERGENCY ARE CONTRACT #44-1490, STA. 0+00 AND STA. 4+10.

PART III SEWER

- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C., UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED "W.T." IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.



LOCATION MAP
SCALE: 1"=1200'



VICINITY MAP
SCALE: 1"=600'

BENCHMARKS

BENCHMARK #1
TRAVERSE #50
N493064.64 E872908.52 (NAD 27)
ELEV.= 143.00

BENCHMARK #2
TRAVERSE #53
N493151.31 E873445.99 (NAD 27)
ELEV.= 112.30

BENCHMARK #3
TRAVERSE #55
N493451.24 E873033.92 (NAD 27)
ELEV.= 146.93

COORDINATES BASED ON NAD 27
AS PROJECTED BY HOWARD COUNTY
GEODETIC CONTROL STATIONS
#2546005, #2546006

W & S
COUNTY USE
WATER CODE: A-04
SEWER CODE: 2151500
TEST GRADIENT: 550
ZONE: 400

TYPE OF BUILDING: WAREHOUSE BUILDING
DRAINAGE AREA: PATAPSCO
TREATMENT PLANT: PATAPSCO
NUMBER OF BUILDABLE LOTS: 1
NUMBER OF NON-BUILDABLE LOTS: 0
NUMBER OF W.H.C.: 1
NUMBER OF S.H.C.: 1

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		MANUFACTURER/SUPPLIER
		QUANTITIES	TYPE	
8" WATER MAIN (DIP)	359 LF			
6" WATER MAIN (DIP)	20 LF			
8" VALVE	1 EA.			
6" F.H. VALVE	3 EA.			
6" FIRE HYDRANT	3 EA.			
INTERNAL METER	1 EA.			
3/4" BLOW-OFF VALVE	1 EA.			
12"x8" T.S. & V.	2 EA.			
8"x6" F.H. TEE	3 EA.			
8"x8" TEE	1 EA.			
8" CAP & BUTTRISS	2 EA.			
4' MANHOLE (FOR BLOW-OFF VALVE)	1 EA.			
8" SEWER MAIN	32 LF			
'B' DROP CONNECTION	1 EA.			
4' MANHOLE	1 EA.			

NAME OF UTILITY CONTRACTOR:

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND AS SHOWN ON SDP-02-123

CHECKBOX
AS-BUILT DATE:
SURVEY & DRAFTING DIVISION

REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REVIEW

Jim M. Jaffe 10-22-03
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Roberts 10-22-03
HOWARD SOIL CONSERVATION DISTRICT DATE

SHEET INDEX

1	TITLE SHEET
2	WATER & SEWER PLAN
3	WATER & SEWER PROFILES

DRAWER:		FAX NO: 410-964-0223	
A. NAME: Bruce Jaffe	B. DAYTIME TELEPHONE: 301-596-0222		
C. COMPANY: Morick L.L.C.			
D. ADDRESS: 11628 Log Jump Trail			
E. CITY: Ellicott City	STATE: MD	ZIP: 21042	
DEVELOPER:		FAX NO: 410-964-0223	
A. NAME: Bruce Jaffe	B. DAYTIME TELEPHONE: 301-596-0222		
C. COMPANY: The Sanford Companies, Inc.			
D. ADDRESS: 11628 Log Jump Trail			
E. CITY: Ellicott City	STATE: MD	ZIP: 21042	

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND



MORRIS & FITCHE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
9090 JUNCTION DRIVE SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395



DESIGN: TCN

DRAWN: TCN

CHECK: TCN

DATE: 09/05/03

BY NO.

REVISIONS

DATE

TITLE SHEET

600' SCALE MAP NO. 38

BLOCK NO. 21

FINAL WATER & SEWER EXTENSION PLAN
6725 SANTA BARBARA COURT
ROUTE 100 BUSINESS PARK
BLOCK F PARCEL F

CONTRACT # 14-4151-D
LIBER 4877 FOLIO 15
ZONED: M-2 TAX MAP: 38 GRID: 19 PARCEL 857
ELECTION DISTRICT NO.: 1 HOWARD COUNTY, MARYLAND

SCALE:
AS SHOWN

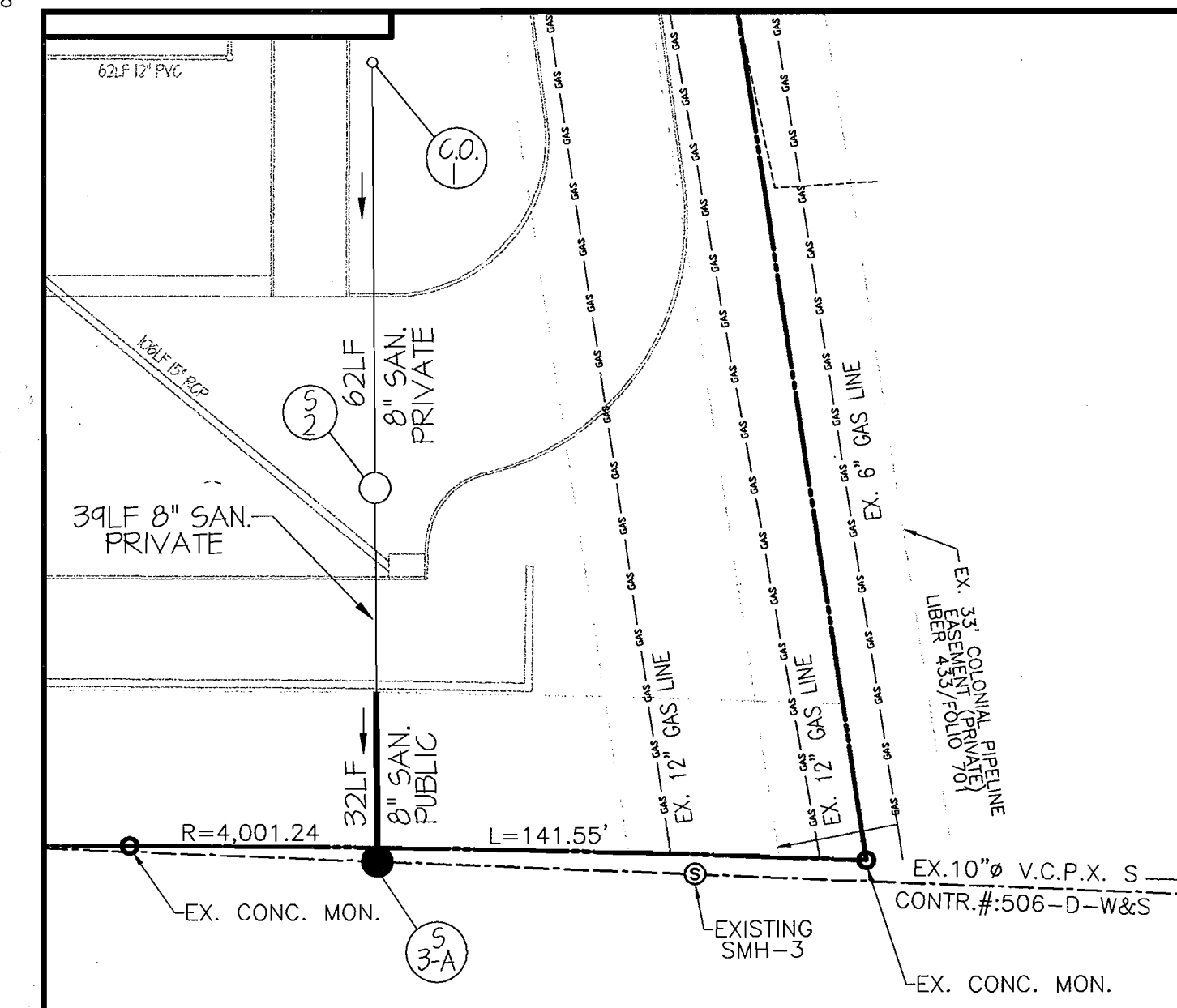
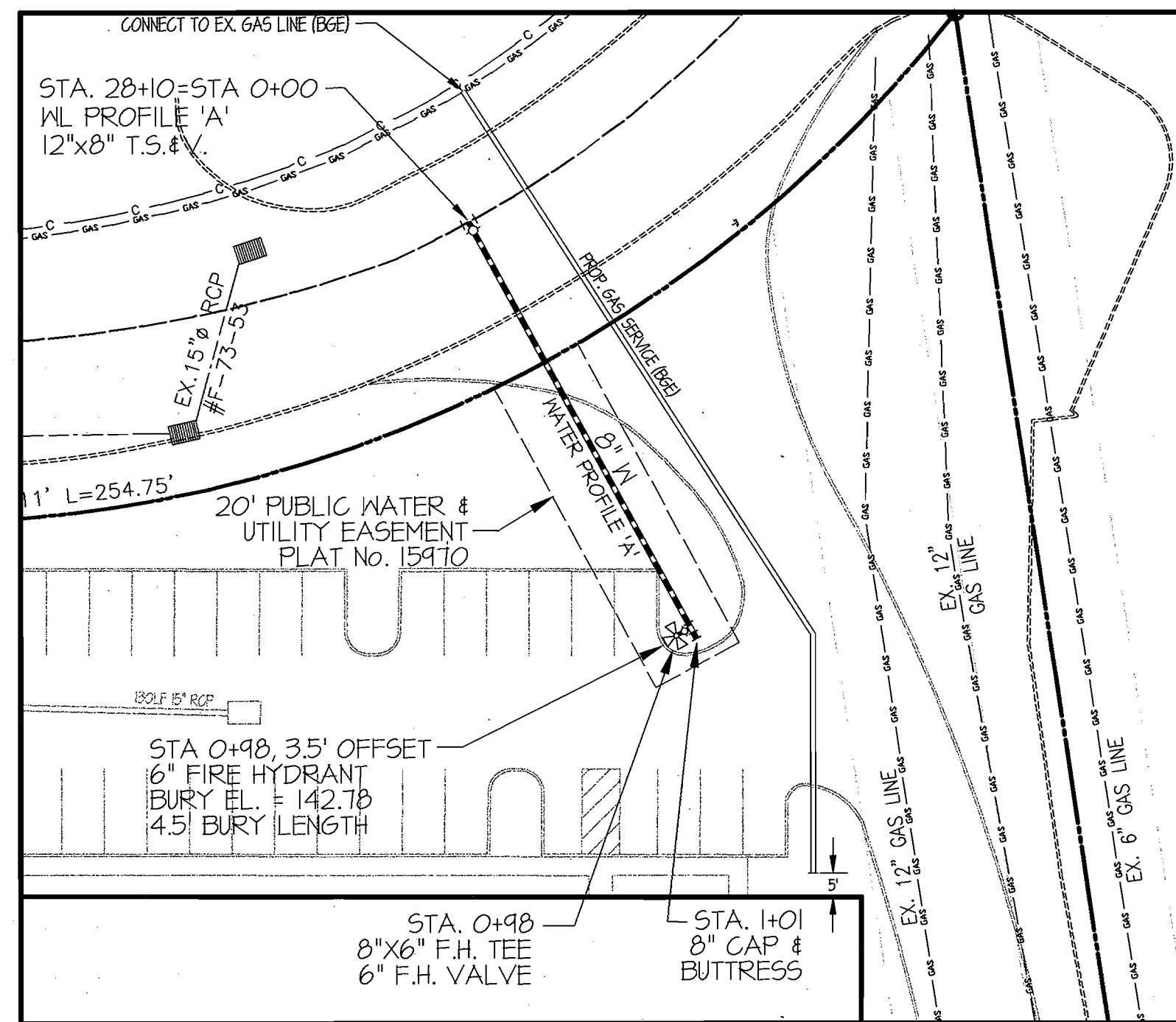
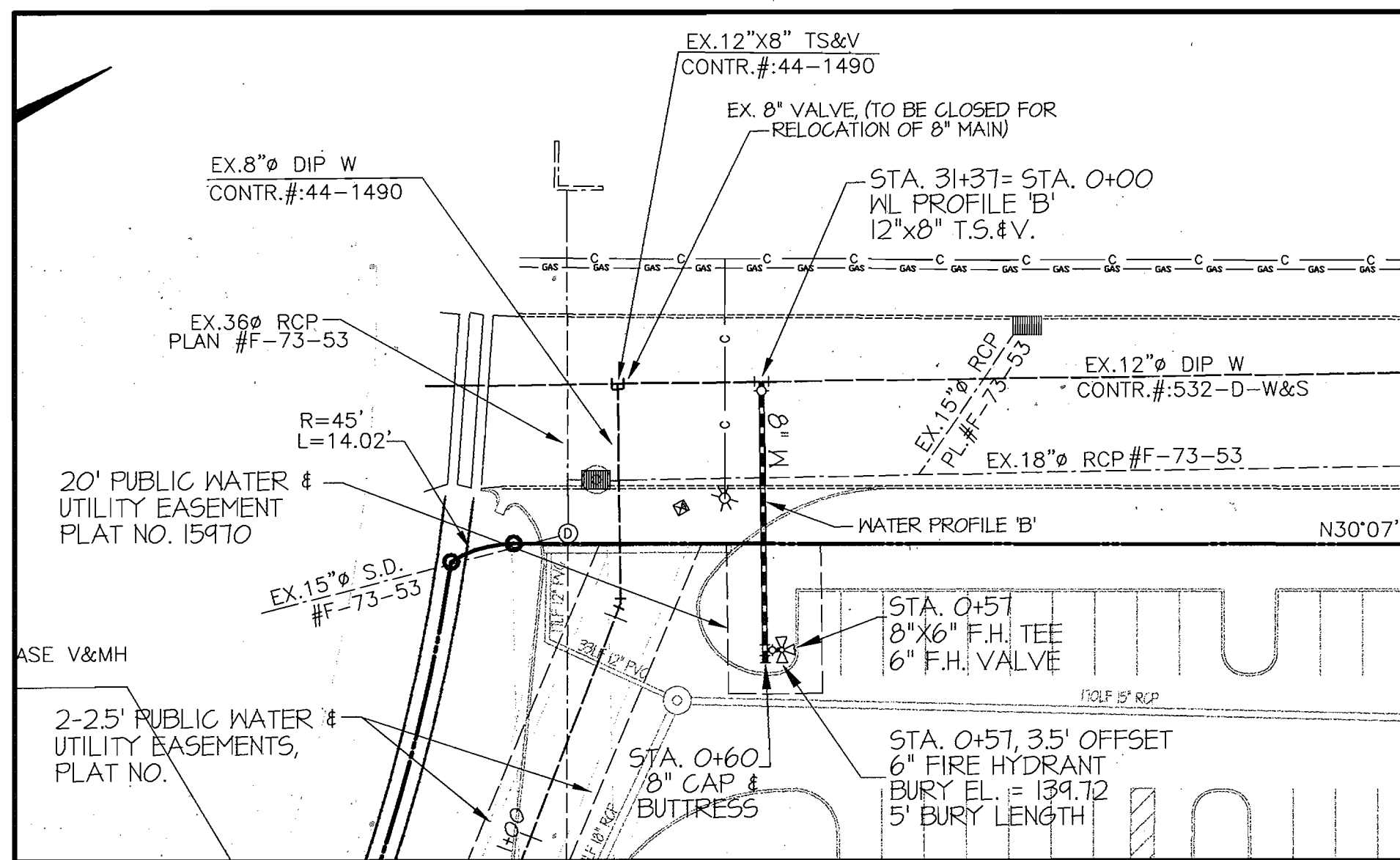
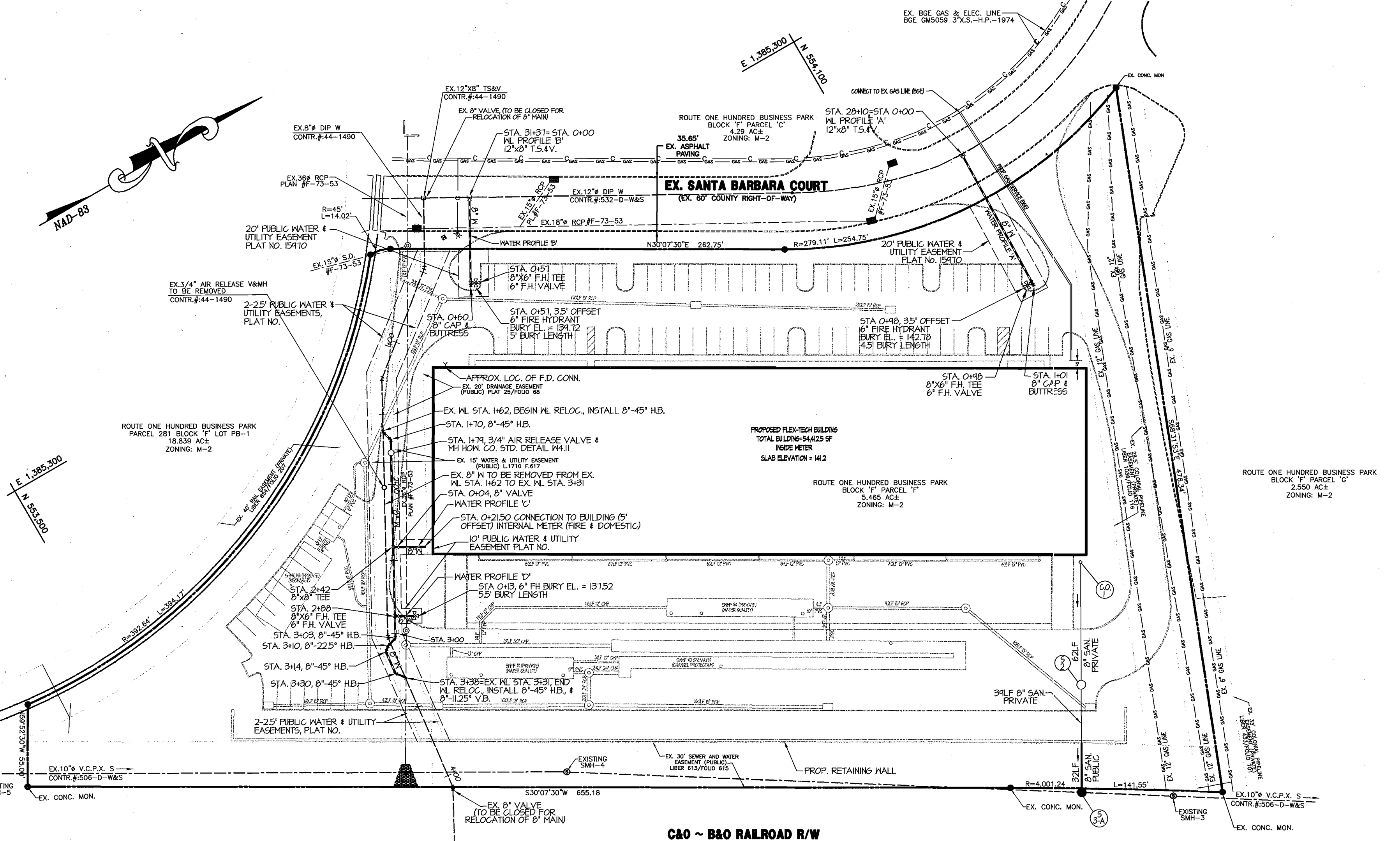
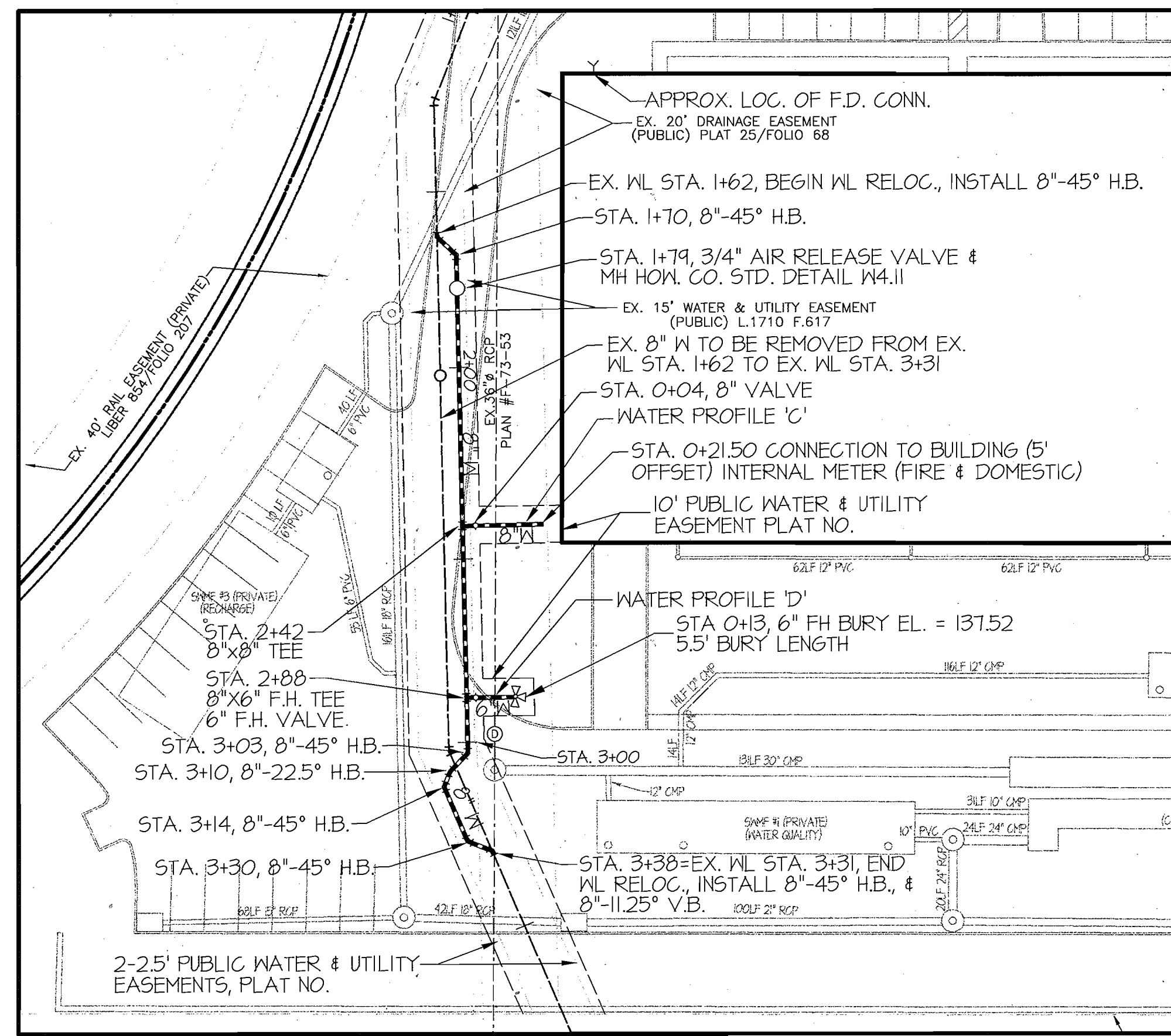
SHEET
1 OF 3

Robt. J. Bump 10-10-03
CHIEF, BUREAU OF UTILITIES DATE

John R. Roberts 11/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

LEGEND

- 404 EX. 2' CONTOUR
- 400 EX. 10' CONTOUR
- EX. CURB
- EX. PROPERTY LINE
- EX. WATER LINE
- EX. 12" W
- EX. 10" SAN
- EX. 36" SD
- EX. LIGHT/ELEC. POLE
- EX. FH/WATER VALVE
- EX. EASEMENT LINE
- PR. 15" SD
- PR. 6" W
- PR. 8" SAN
- PR. 8" SAN
- PR. 8" SAN
- PR. CURB & GUTTER
- PR. BUILDING



- INSTALLATION SEQUENCE FOR RELOCATION OF EX. 8" WATER LINE INSTALLED PER CONTRACT #44-1490**
- CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410)-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
 - INSTALL NEW 8" MAIN FROM WL STATION 1+70 TO 3+30. ALL WORK TO BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS SET FORTH BY HOWARD COUNTY BUREAU OF UTILITIES.
 - OBTAIN ALL NECESSARY INSPECTIONS AND APPROVALS BY HOWARD COUNTY BUREAU OF UTILITIES FOR THE NEW 8" MAIN.
 - INSTALL ALL BUTTRESSING AND RESTRAINTS AT WL STATION 1+62 AND 3+38 PRIOR TO FINAL CONNECTION INTO EXISTING 8" MAIN.
 - CONTACT HOWARD COUNTY BUREAU OF UTILITIES TO CLOSE VALVES AT STA. 0+40 AND AT STA. 4+10. THE CONTRACTOR SHALL NOT OPERATE THE EXISTING VALVES.
 - REMOVE A PORTION OF THE EXISTING 8" MAIN AT WL STATION 1+62 AND 3+38, AND CONNECT NEW 8" MAIN INTO EXISTING WATERLINE. THIS WORK IS TO BE PERFORMED AT NIGHT. HOWARD COUNTY BUREAU OF UTILITIES WILL ALLOW A SHORT NIGHTTIME DISRUPTION OF SERVICE TO MAKE THESE CONNECTIONS.
 - OBTAIN ALL NECESSARY INSPECTIONS AND APPROVALS BY HOWARD COUNTY BUREAU OF UTILITIES FOR THE CONNECTIONS INTO THE EXISTING 8" WATERLINE.
 - ONCE BUREAU OF UTILITIES HAS APPROVED THE CONNECTIONS, THE BUREAU OF UTILITIES WILL OPEN THE VALVES AT STA. 0+40 AND AT STA. 4+10. THE CONTRACTOR SHALL NOT OPERATE THE EXISTING VALVES.
 - REMOVE THE REMAINING PORTION OF THE EXISTING 8" MAIN FROM WL STATION 1+62 TO 3+38. ALL EXISTING PIPE, FITTINGS, VALVES, BLOW-OFFS, ETC. SHALL BE RETURNED TO THE BUREAU OF UTILITIES.

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND AS SHOWN ON SDP-02-123

REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REVIEW

NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

WITHIN THE LIMITS OF THE RELOCATED WATERLINE (RELOCATION OF EX. 8" MAIN INSTALLED UNDER CONTRACT #44-1490), ALL EXISTING PIPE, VALVES, FITTINGS, AIR RELEASE VALVES, FIRE HYDRANTS, ETC. SHALL BE REMOVED AND RETURNED TO HOWARD COUNTY BUREAU OF UTILITIES.

THE CONTRACTOR SHALL FURNISH AND INSTALL NEW 8" PIPE, VALVES, FITTINGS, AIR RELEASE VALVES, FIRE HYDRANTS, ETC. IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS SET FORTH BY HOWARD COUNTY BUREAU OF UTILITIES.

OWNER: Bruce Jaffe
DAYTIME TELEPHONE: 301-596-0222
FAX NO.: 410-964-0223

COMPANY: Morlick, L.L.C.
ADDRESS: 11628 Log Jump Trail
CITY: Ellicott City, STATE: MD, ZIP: 21042

DEVELOPER: Bruce Jaffe
DAYTIME TELEPHONE: 301-596-0222
FAX NO.: 410-964-0223

COMPANY: The Sanford Companies, Inc.
ADDRESS: 11628 Log Jump Trail
CITY: Ellicott City, STATE: MD, ZIP: 21042

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

10-10-03
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

11/1/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

9090 JUNCTION DRIVE SUITE 9
ANNAPOLIS JUNCTION, MARYLAND 20701
(410) 792-9792 or (301) 776-1680
FAX (410) 792-7395



DESIGN: TCN	BY NO.	REVISIONS	DATE
DRAWN: TCN			
CHECK: TCN			
DATE: 09/05/03			

WATER & SEWER PLAN

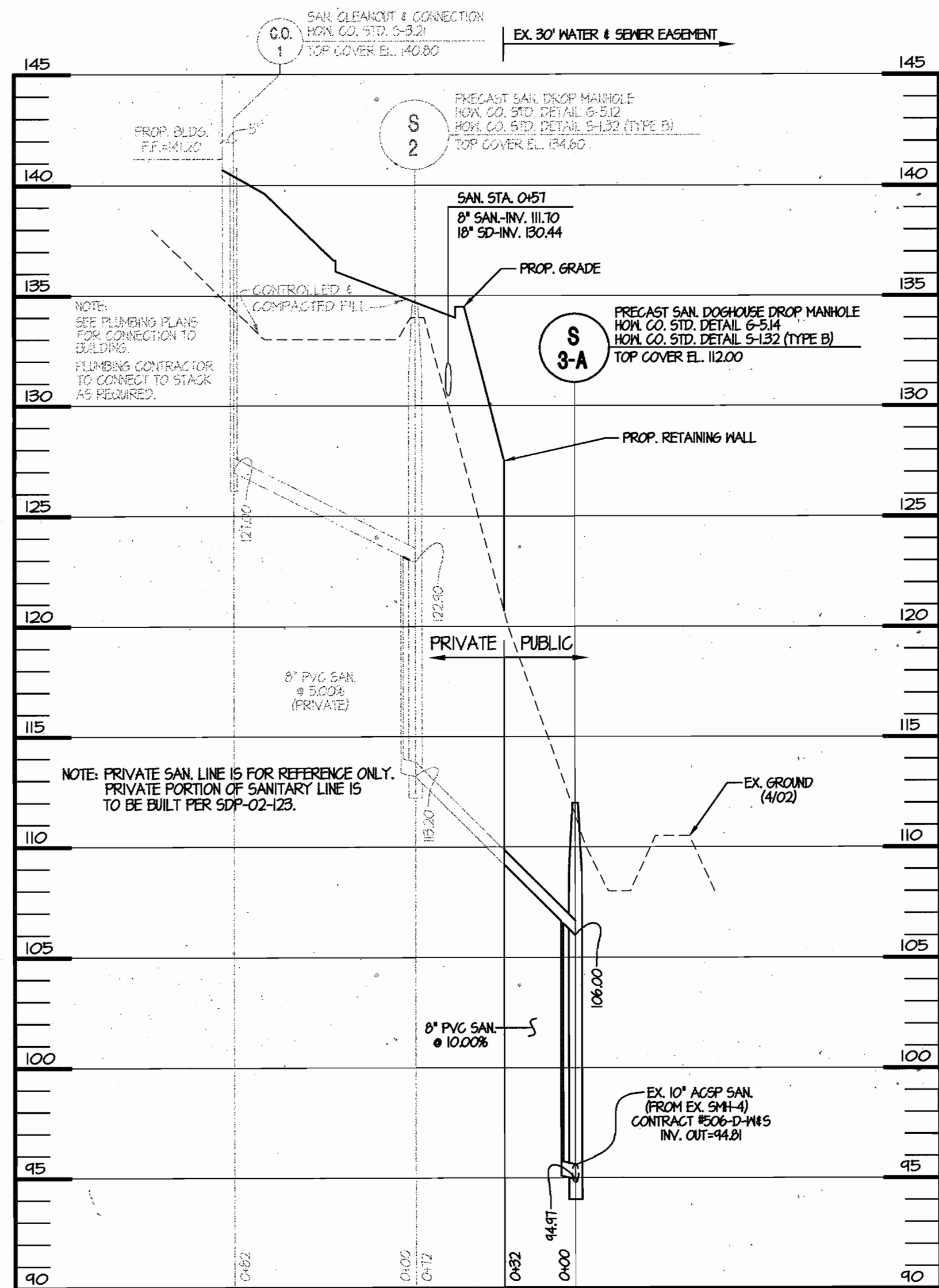
600' SCALE MAP NO. 38 BLOCK NO. 21

FINAL WATER & SEWER EXTENSION PLAN
8725 SANTA BARBARA COURT
ROUTE 100 BUSINESS PARK
BLOCK F PARCEL F

CONTRACT # 14-4151-D
LIBER 4877 FOLIO 15
ZONED: M-2 TAX MAP: 38 GRID: 19 PARCEL 857
ELECTION DISTRICT NO.: 1 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN

SHEET 2 OF 3



SANITARY SEWER PROFILE

SCALE: HOR. 1" = 50'
VERT. 1" = 5'

OWNER:		FAX NO: 410-964-0223	
A. NAME: Bruce Jaffe	B. DAYTIME TELEPHONE: 301-596-0222		
C. COMPANY: Morlick L.L.C.			
D. ADDRESS: 11628 Log Jump Trail			
E. CITY: Ellicott City	STATE: MD	ZIP: 21042	
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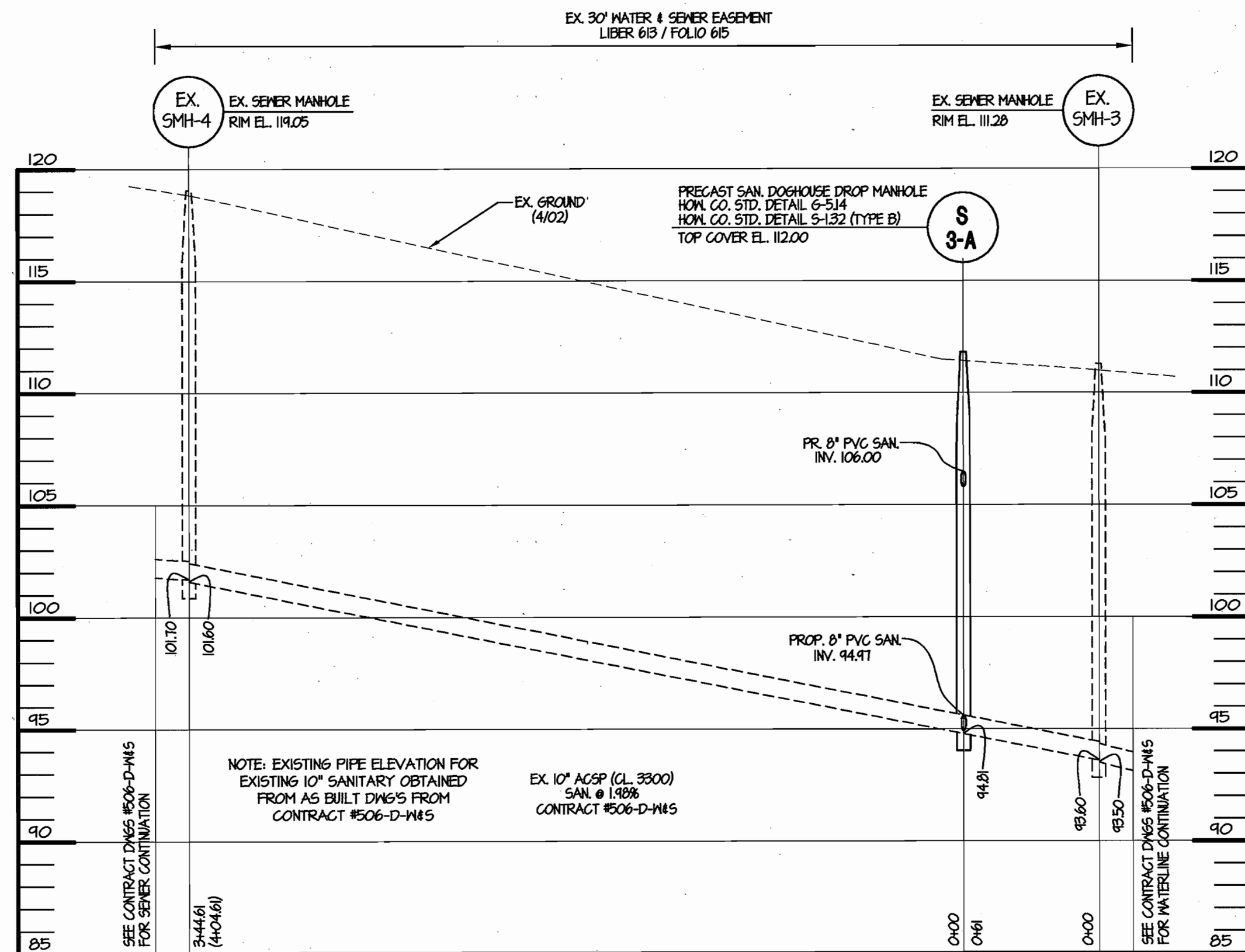
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REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REVIEW

NATURAL RESOURCES CONSERVATION SERVICE DATE

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HOWARD SOIL CONSERVATION DISTRICT DATE

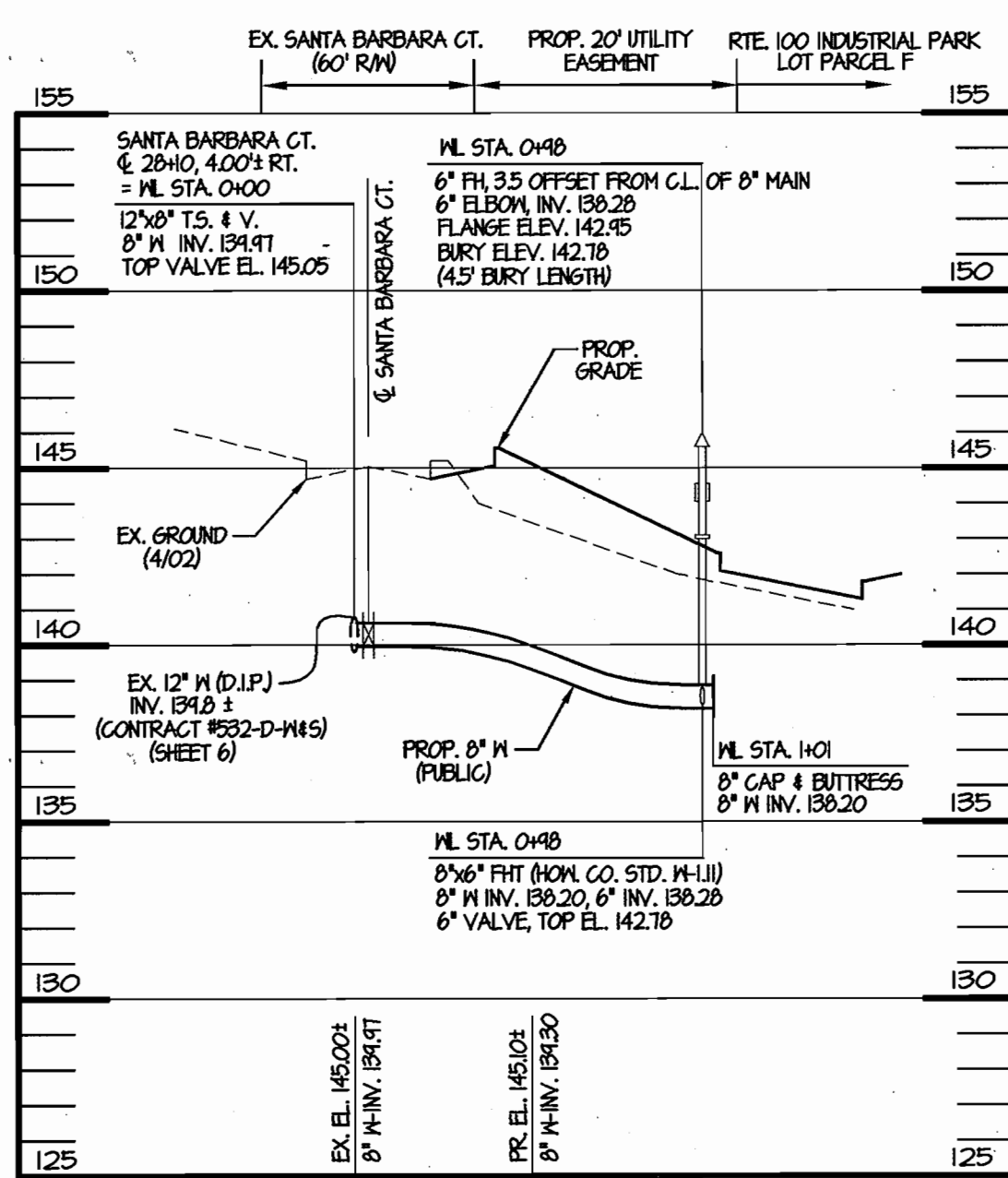


REVISION TO CONTRACT NO. 506-D-W&S

SCALE: HOR. 1" = 50'
VERT. 1" = 5'

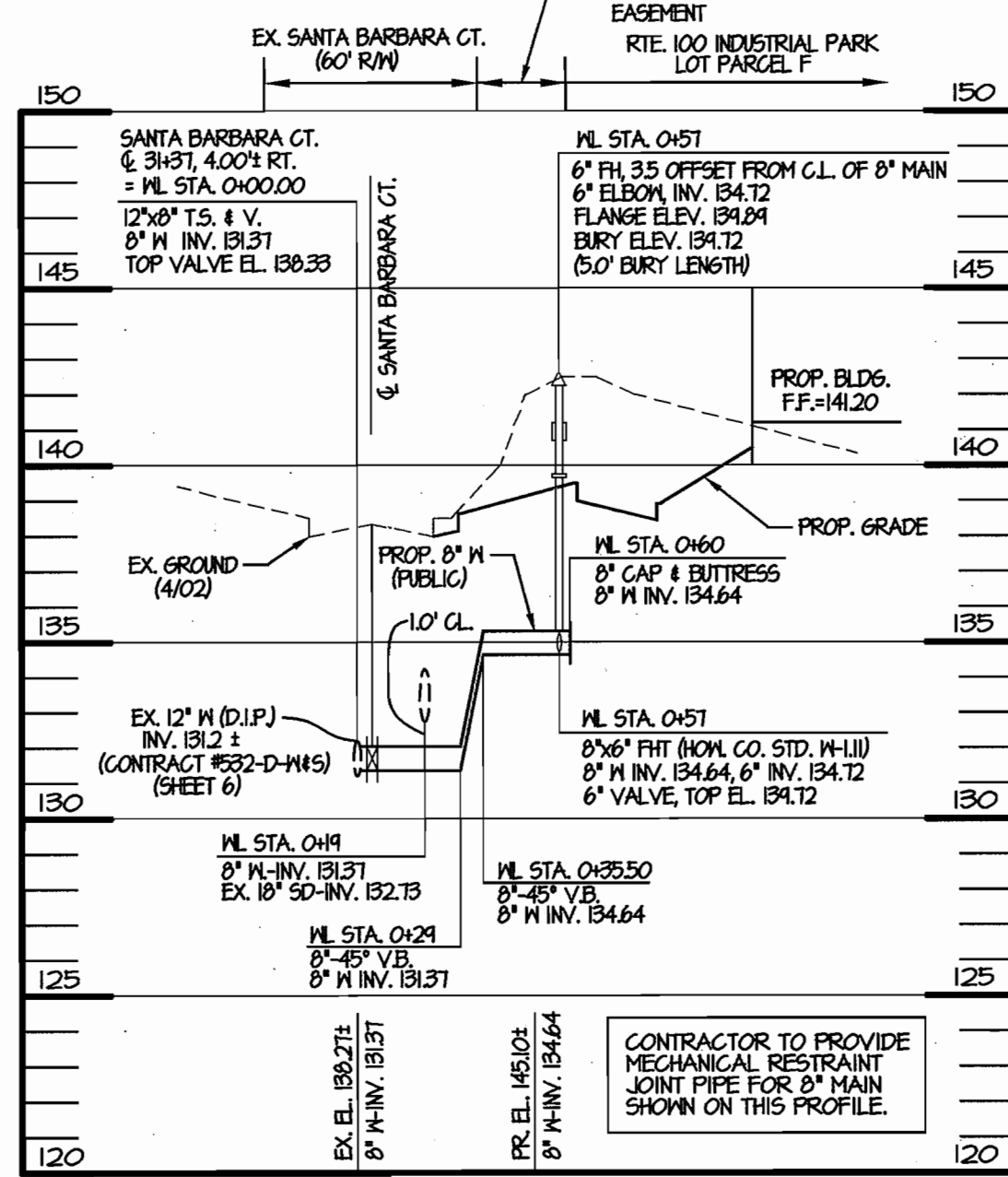
CONTRACTOR TO USE CAUTION DURING WATERLINE INSTALLATION. EXISTING UNDERGROUND UTILITIES ARE LOCATED BEHIND CURB WITHIN THE SANTA BARBARA CT. R/W

CONTRACTOR TO USE CAUTION DURING WATERLINE INSTALLATION. EXISTING UNDERGROUND UTILITIES ARE LOCATED BEHIND CURB WITHIN THE SANTA BARBARA CT. R/W



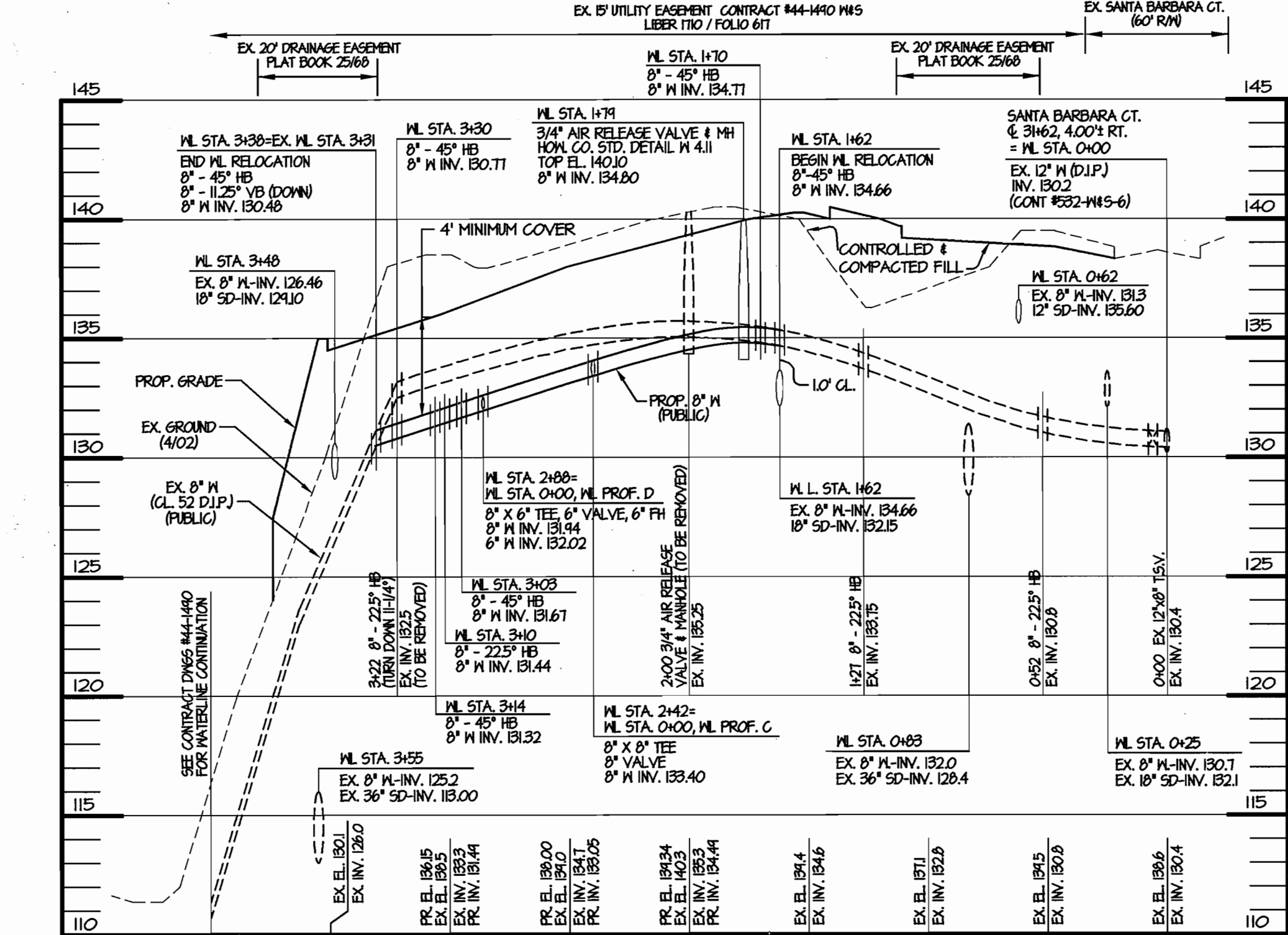
WATER PROFILE 'A'

SCALE: HOR. 1" = 50'
VERT. 1" = 5'



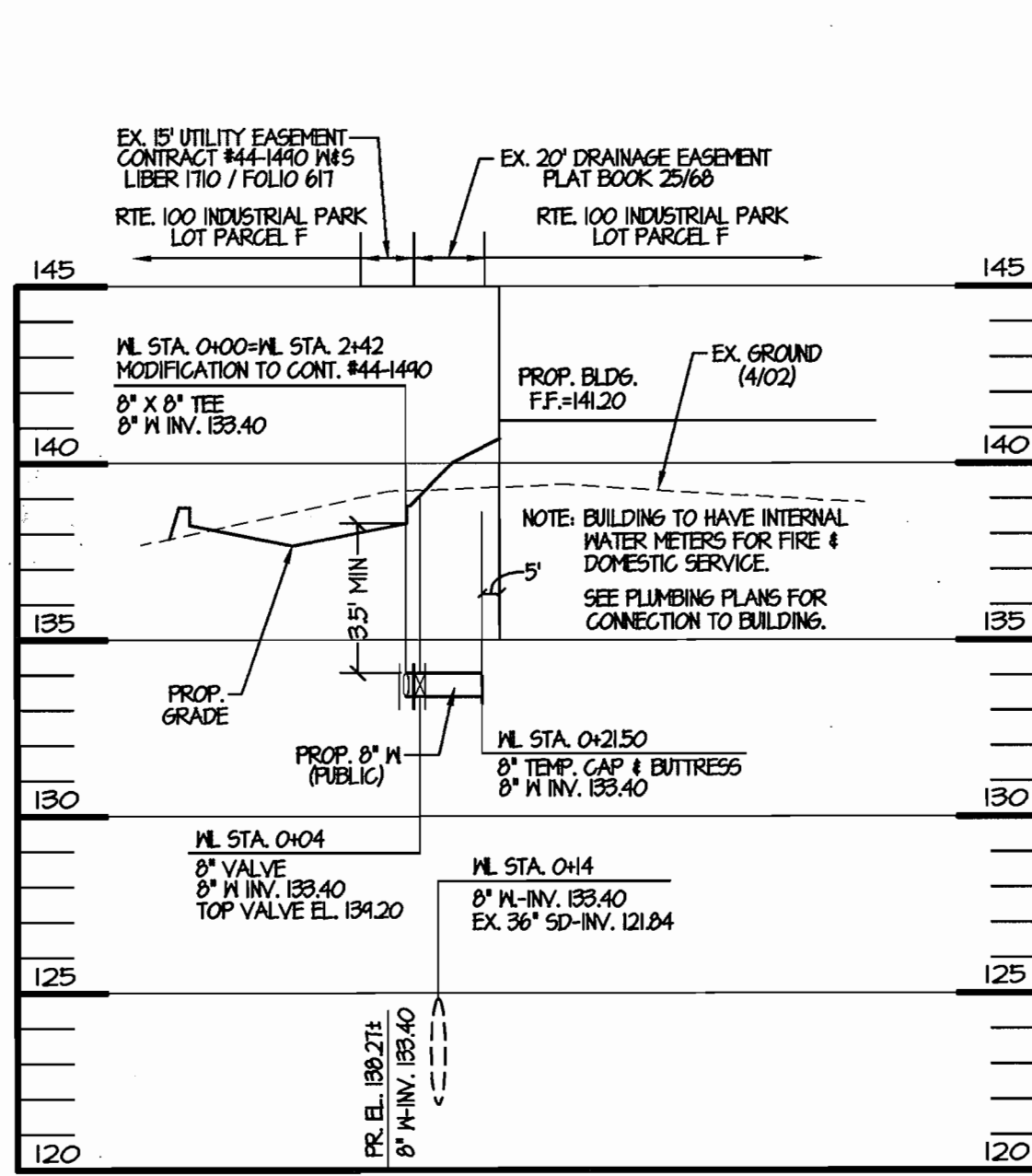
WATER PROFILE 'B'

SCALE: HOR. 1" = 50'
VERT. 1" = 5'



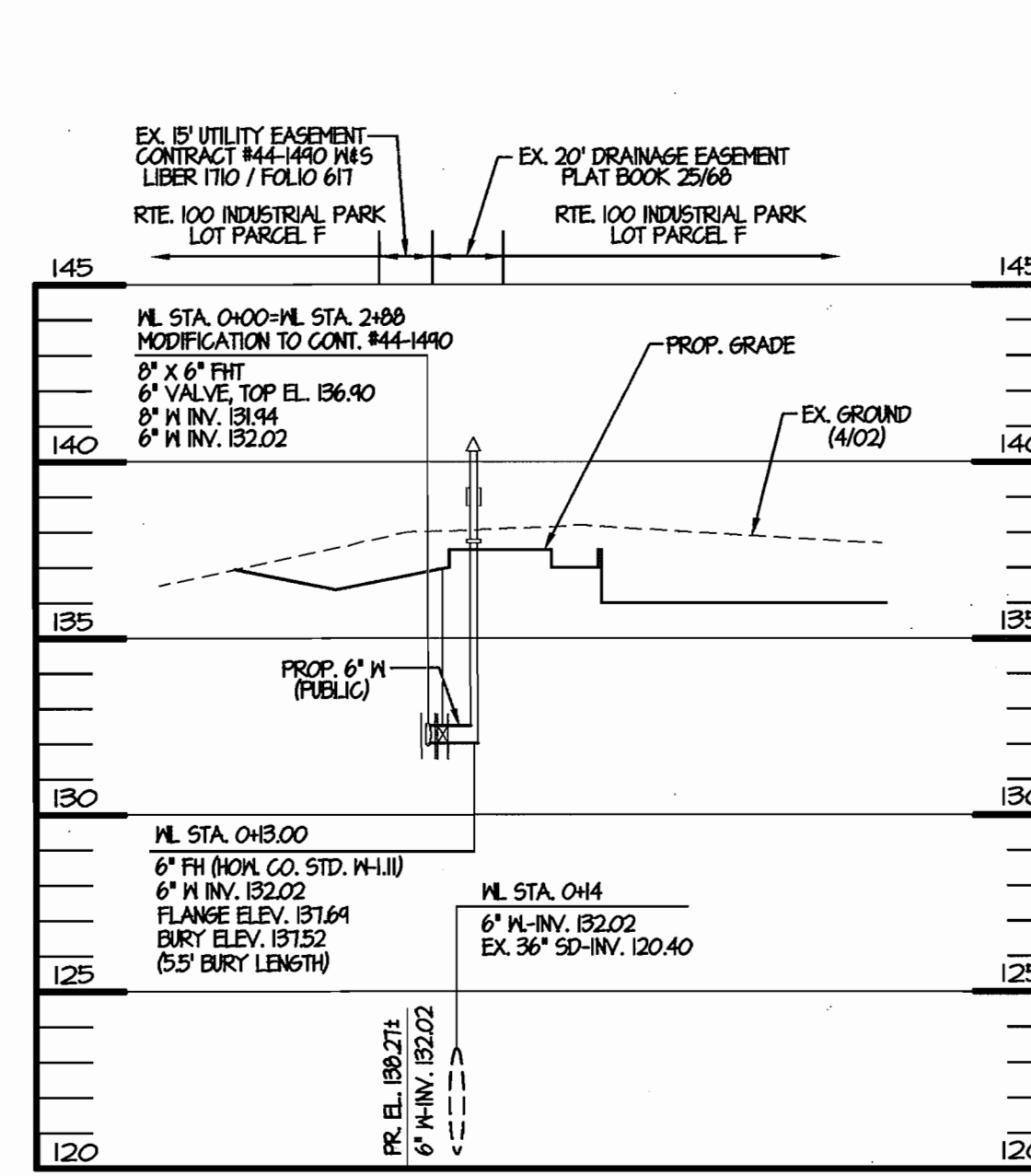
RELOCATION OF EXISTING WATER CONTRACT #44-1490

SCALE: HOR. 1" = 50'
VERT. 1" = 5'



WATER PROFILE 'C'

SCALE: HOR. 1" = 50'
VERT. 1" = 5'



WATER PROFILE 'D'

SCALE: HOR. 1" = 50'
VERT. 1" = 5'

- COORDINATES TO CENTER OF STRUCTURE FOR MANHOLES.
- TOP OF RIM ELEVATION AT CENTER OF STRUCTURE FOR MANHOLES.

SANITARY SEWER STRUCTURE SCHEDULE							LOCATION (MAD 83 COORDINATES)			
STR NO.	TOP ELEV	INV IN	INV IN	INV OUT	REMARKS	NORTHING	EASTING			
S-3A	* 112.00	106.00	94.97	EX94.81	PRECAST DOGHOUSE MANHOLE HOW. CO. G-5.14, S-1.32 'B' DROP	554,014.94	1,385,830.60			

- COORDINATES TO CENTER OF STRUCTURE FOR MANHOLES.
- TOP OF RIM ELEVATION AT CENTER OF STRUCTURE FOR MANHOLES.

WATERLINE STRUCTURE SCHEDULE							LOCATION (MAD 83 COORDINATES)			
STR NO.	TOP ELEV	INV IN	INV IN	INV OUT	REMARKS	NORTHING	EASTING			
AIR-REL. MH	* 140.10	134.80	---	134.80	PRECAST SHALLOW MANHOLE HOW. CO. STD. DET. G-5.12	553,729.94	1,385,403.53			

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief, Bureau of Utilities 10-10-03	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND Chief, Development Engineering Division MAJ 11/3/03	MRA MORRIS & RITCHE ASSOCIATES, INC. ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 9090 JUNCTION DRIVE SUITE 9 ANNAPOLIS JUNCTION, MARYLAND 20701 (410) 792-9792 or (301) 776-1690 FAX (410) 792-7995		DESIGN: TCN DRAWN: TCN CHECK: TCN DATE: 09/05/03	BY NO. _____ REVISIONS _____ DATE _____	WATER & SEWER PROFILES 600' SCALE MAP NO. 38 BLOCK NO. 21	FINAL WATER & SEWER EXTENSION PLAN 6725 SANTA BARBARA COURT ROUTE 100 BUSINESS PARK BLOCK F PARCEL F CONTRACT # 14-4151-D LIBER 4877 FOLIO 15 ZONED: M-2 TAX MAP: 38 GRID: 19 PARCEL 857 ELECTION DISTRICT NO.: 1 HOWARD COUNTY, MARYLAND	SCALE: AS SHOWN SHEET 3 OF 3
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