

FINAL / CONSTRUCTION PLANS
FOR
GRAND STRAND WATER AND
SEWER AUTHORITY
S.C. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION NO. 140

SHEET INDEX

SHEET	DESCRIPTION
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GENERAL NOTES:

- WORK WITHIN PUBLIC RIGHT-OF-WAYS OR PRIVATE EASEMENTS SHALL BE ACCOMPLISHED BY THE CONTRACTOR ACCORDING TO THE REQUIREMENTS OR CONDITIONS OF THE ENCROACHMENT PERMIT OR OTHER LEGAL DOCUMENTS AS THOUGH DOCUMENTS WERE ISSUED IN THE CONTRACTORS NAME. THE CONTRACTOR SHALL MAINTAIN COPIES OF THESE DOCUMENTS ON THE SITE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF PUBLIC RIGHT-OF-WAYS DURING CONSTRUCTION OF THE PROJECT AND UNTIL THE CONTRACTOR OBTAINS AND DELIVERS TO THE OWNER A WRITTEN SIGN-OFF FROM HORRY COUNTY AND/OR THE S.C.D.O.T. THAT THE PUBLIC AGENCY HAS ACCEPTED THE RIGHT-OF-WAY BACK FOR MAINTENANCE. FINAL PAYMENT AND RELEASE OF RETAINAGE WILL NOT BE MADE TO THE CONTRACTOR UNTIL WRITTEN SIGN-OFF HAS BEEN OBTAINED FROM THE APPROPRIATE PUBLIC AGENCY AND PROVIDED TO THE OWNER.
- PROVISIONS SHALL BE MADE TO PREVENT EROSION AND SILTATION CAUSED BY CONSTRUCTION. TEMPORARY GRASSING, HAY BALES, SILT FENCES OR OTHER METHODS, AS CALLED FOR ON THE PLAN OR THAT MAY BE REQUIRED, SHALL BE USED.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND EXISTENCE OF ALL UNDERGROUND UTILITIES. LOCATION OF UTILITIES ON THE PLAN, WHETHER FULLY AND CORRECTLY LOCATED OR OMITTED, WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OR LIABILITY FOR DAMAGE TO UTILITIES. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING LOCAL UTILITIES FOR ASSISTANCE IN LOCATING UTILITIES. THE CONTRACTOR MUST FULLY COMPLY WITH THE SOUTH CAROLINA UNDERGROUND UTILITIES DAMAGE PREVENTION ACT, GENERAL STATUTES 58-35, SECTIONS 20 THROUGH 120.
- WHEN THE CONTRACTOR IS UNABLE TO COMPLETE HIS WORK AS SHOWN ON THE PLANS BECAUSE OF AN EXISTING UTILITY, THE CONTRACTOR SHALL STAKE THE LOCATION OF THE UTILITY PRIOR TO PROCEEDING AND CONTACT THE ENGINEER.
- THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AGENCIES, THE OWNER, THE ENGINEER AND ALL OTHER CONCERNED PARTIES WHEN CONSTRUCTION IS TO COMMENCE SO THAT INSPECTIONS AND OTHER SITE VISITS MAY BE SCHEDULED.
- DATA REQUIRED FOR PREPARATION OF AS-BUILT DRAWINGS SHALL BE OBTAINED BY THE CONTRACTOR AT THE TIME OF INSTALLATION. THIS DATA SHALL BE ACCUMULATED BY THE CONTRACTOR AND COORDINATED WITH THE PROJECT INSPECTOR ON A DAILY BASIS DURING THE CONSTRUCTION PERIOD AND SHALL BE SUBMITTED TO THE PROJECT INSPECTOR IN A NEAT AND LEGIBLE MANNER AFTER COMPLETION OF HIS PROJECT.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE FEDERAL, SOUTH CAROLINA AND LOCAL ORDINANCES, REGULATIONS, SPECIFICATIONS AND PERMITS.
- SPECIAL NOTE: PRIOR TO ANY EXCAVATION THE CONTRACTOR IS REQUIRED TO CONTACT HORRY TELEPHONE AND CABLE FOR CABLE LOCATIONS AT 365-2151. THIS PROJECT HAS SEVERAL CABLES OFF THE EDGE OF PAVEMENT THAT THE CONTRACTOR WILL BE REQUIRED TO LOCATE AND EXPOSE PRIOR TO THE INSTALLATION OF ANY MATERIALS.
- REPLACE IN KIND ALL AREAS PROPERTY OWNER HAS DEVELOPED SPECIAL GRASS, TURF, OR LANDSCAPING. ALL DISTURBED AREAS ARE TO BE RAKED AND SEEDED.

CONSTRUCTION NOTES:

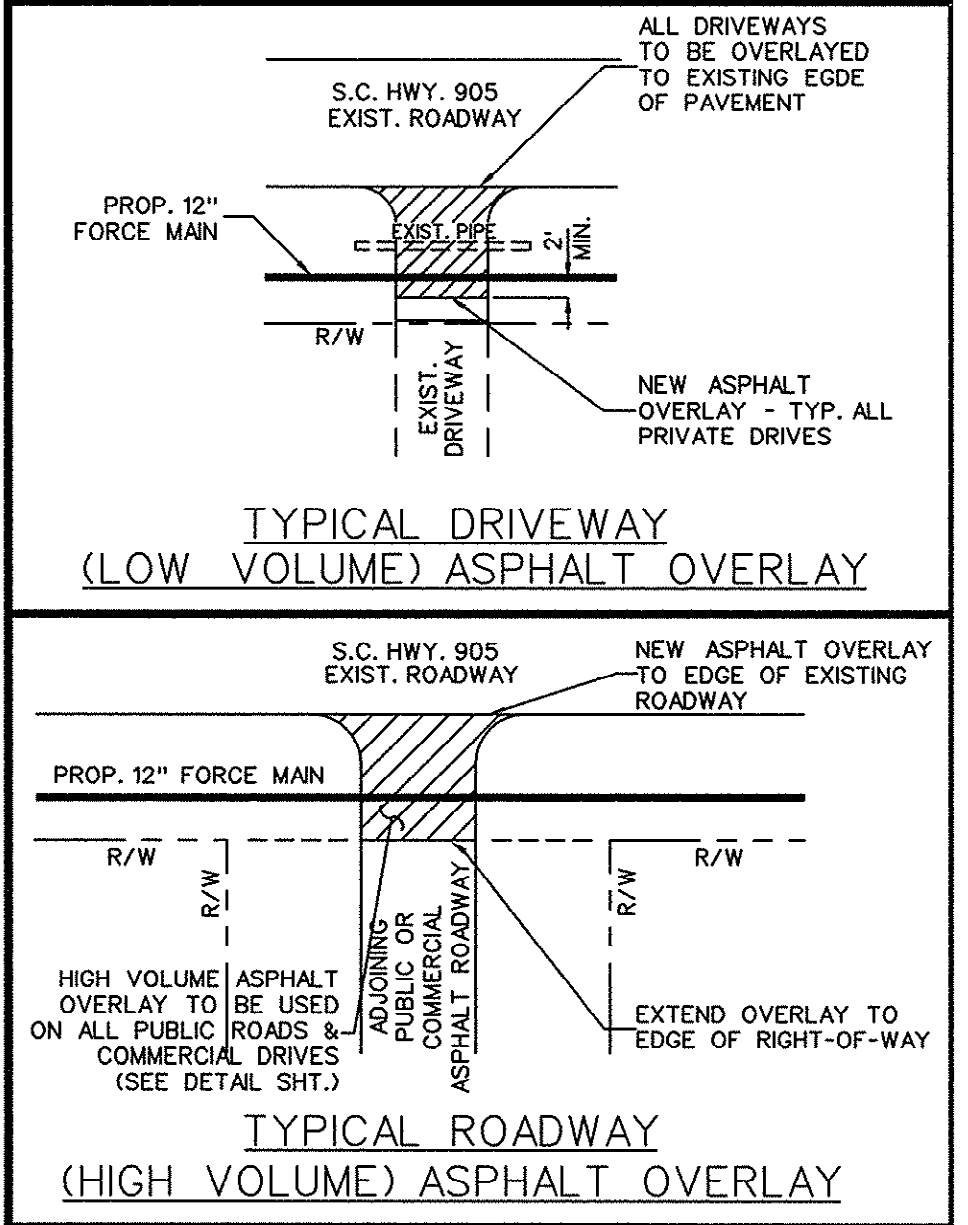
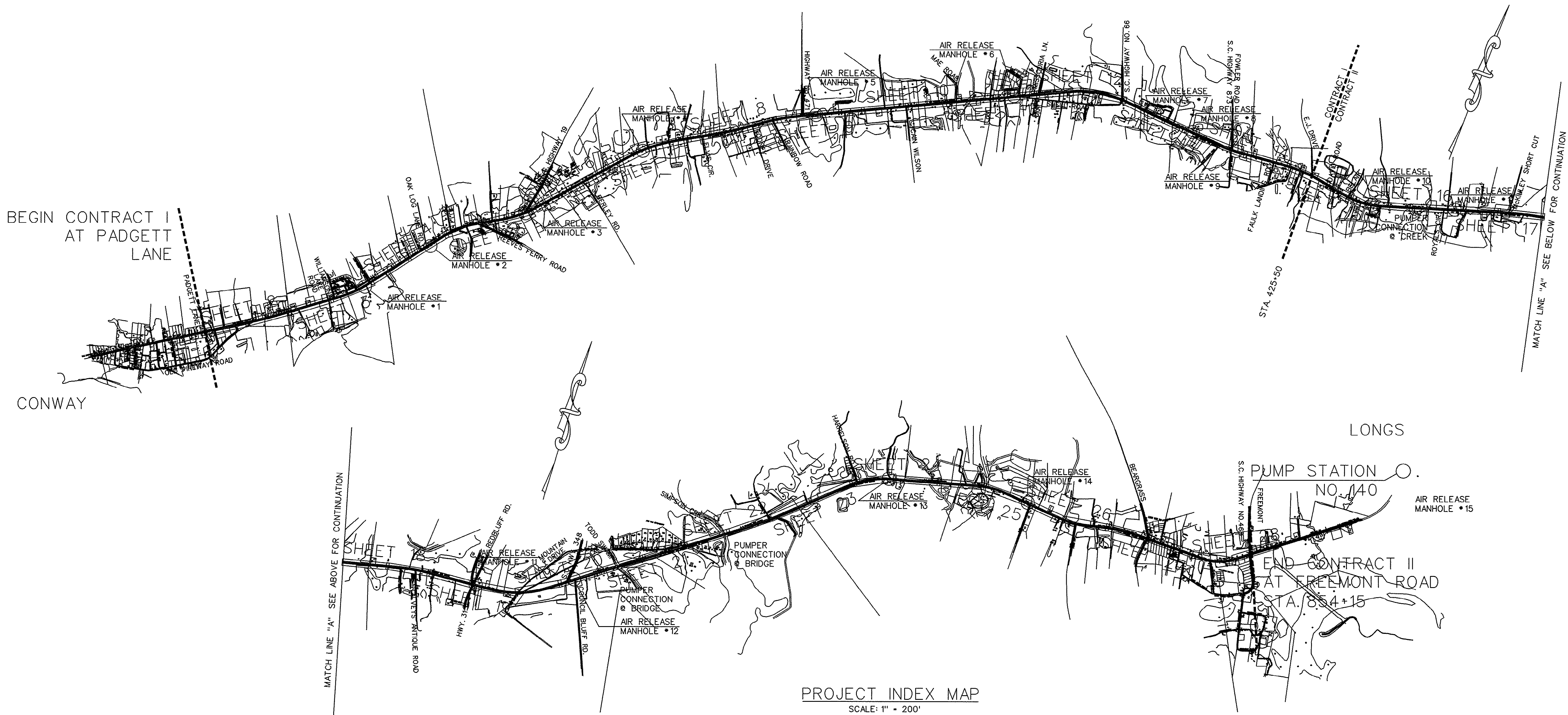
- HORRY TELEPHONE (611) & A.T.T. FIBER OPTIC CABLES ARE LOCATED ON THE BOTH SIDES OF S.C. HWY. 905 AND CROSSINGS AT PEDESTALS ARE TYPICAL.
- CALL S.C.E.&G. FOR GAS LINE LOCATIONS AT 1-800-922-0983, ALLOW AT LEAST 3 DAYS NOTICE.
- CALL G.S.W.&S.A. FOR WATER LINE LOCATIONS AT 347-4641, EXT. 267, ALLOW AT LEAST (3) DAYS NOTICE.
- ALL ELEVATIONS SHOWN ON THIS DRAWING ARE BASED ON MEAN SEA LEVEL.
- REPLACE ALL DISTURBED DRIVEWAY ASPHALT AND LANDSCAPING TO ITS ORIGINAL CONDITION OR BETTER. ALL DRIVEWAYS TO BE OPEN CUT UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL CONTACT PALMETTO UTILITIES LOCATING SERVICE 1-800-922-0983 PRIOR TO CONSTRUCTION. INFORMATION GIVEN FOR UTILITY CONTACTS ARE FOR ADDITIONAL INFORMATION AND NOT INTENDED AS A COMPLETE LISTING.
- ALL FITTINGS AND ASSOCIATED PIPING TO BE RESTRAINED PER G.S.W.&S.A. AND MANUFACTURER'S REQUIREMENTS, IN LIEU OF CONCRETE THRUST BLOCKING.
- AIR RELEASE MANHOLE EXACT LOCATIONS TO BE DETERMINED IN FIELD BY G.S.W.S.A. REPRESENTATIVE. LOCATIONS SHOWN IN PLAN VIEW ARE FOR REFERENCE PURPOSES ONLY.
- SEE G.S.W.&S.A. WASTEWATER DETAIL SHEETS FOR ALL REQUIRED STANDARD CONSTRUCTION DETAILS.
- CONTRACTOR TO PLACE THE PROPOSED FORCE MAIN A MINIMUM OF TWO (2) FOOT OFF REGULAR UNDERGROUND CABLE TELEPHONE LINE; THREE (3) FEET OFF FIBER OPTIC TELEPHONE LINE AND FIVE (5) FEET OFF EDGE OF PAVEMENT WHERE APPLICABLE.

HORRY COUNTY, SOUTH CAROLINA
MARCH, 1998

THESE DRAWINGS REFLECT	
AS-BUILT	
CONDITIONS	
REVIEWED BY: <i>[Signature]</i>	DATE: 28 Sep 99
INSPECTIONS	
REVIEWED BY: <i>[Signature]</i>	DATE:
ENGINEERING	
GRAND STRAND WATER AND SEWER AUTHORITY	

CIVIL ENGINEERING BY:
ENGINEERING & TECHNICAL SERVICES
PAWLEYS BUSINESS CENTER
58 CENTERMARSH LANE
P.O. BOX 2040
PAWLEYS ISLAND, SOUTH CAROLINA 29585
(803) 237 - 3002

S.C. HIGHWAY 905 FORCE MAIN - PADGETT LANE TO
G.S.W.S.A. PUMP STATION #140 PROJECT NO. 793-04



CONSTRUCTION NOTES:

IN ORDER TO MINIMIZE THE IMPACTS OF SEDIMENTATION AND EROSION, THE CONTRACTOR SHALL OBSERVE THE FOLLOWING SEQUENCE OF CONSTRUCTION OPERATIONS:

- CLEARING, GRUBBING.
- MAINTAIN EXISTING VEGETATIVE BUFFERS FOR EROSION AND SEDIMENT CONTROL.
- INSTALLATION OF SEDIMENT BASINS & TRAPS AND OTHER ITEMS WHERE SHOWN OR REQUIRED BY THE PLANS AND SPECIFICATIONS.
- INSTALLATION OF PERIMETER CONTROLS.
- ROAD GRADING.
- COMPLETION OF SITE GRADING.
- STORM WATER INFRASTRUCTURE INSTALLATION.
- UTILITY INSTALLATION (WASTEWATER AND STORM WATER).
- WATER MAIN AND ELECTRIC, TELEPHONE AND CABLE TELEVISION INSTALLATION.
- FINAL GRADING AND LANDSCAPING STABILIZATIONS.
- REMOVAL OF SEDIMENT CONTROLS.

THE CONTRACTOR WILL BE REQUIRED TO OBSERVE THE FOLLOWING:

- ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION HAS BEEN OBTAINED.
ON-SITE INSPECTOR FRED J. TOWN, TELEPHONE (803) -347-4641 EXT. 319
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME IN 21 DAYS.

SEDIMENTATION AND EROSION

CONTROL NOTES:

CONTRACTOR TO PROVIDE SEDIMENTATION AND EROSION CONTROL AS FOLLOWS:

- DURING EARLY PHASES OF CLEARING AND OTHER CONSTRUCTION, CONTRACTOR TO ROUTE DRAINAGE THROUGH NATURAL VEGETATIVE BUFFER AREAS. PROVIDE SILT FENCING ALONG DRAINAGEWAYS AS SHOWN.
- ONCE DEFINED SWALES ARE CONSTRUCTED, CONTRACTOR WILL PROVIDE AND MAINTAIN SEDIMENTATION CONTROL AT ALL CATCH BASINS, PIPE OUTLETS AND OTHER CRITICAL AREAS AS SHOWN ON THE PLANS.
- CONTRACTOR TO MAINTAIN EROSION CONTROL METHODS DURING THE ENTIRE COURSE OF CONSTRUCTION AND WILL PREVENT INFILTRATION OF SEDIMENTATION AND EROSION INTO LAKES OR WETLANDS. UNDER NO CIRCUMSTANCES WILL WETLAND AREAS BE UTILIZED FOR SEDIMENTATION BASINS.

EXISTING LEGEND:

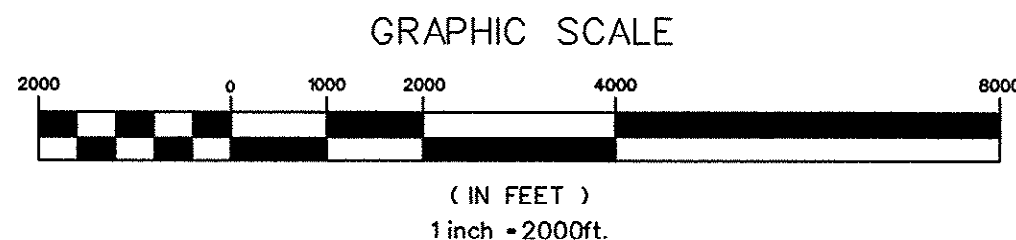
	EXISTING WOODS LINE
	EXISTING TREES W/SIZE & TYPE
	EXISTING SHRUB
	EXISTING FENCE
	EXISTING DRAINAGE DITCH OR SWALE
	EXISTING STORM WATER PIPING W/FLOW ARROW
	EXISTING POWER POLE & LIGHT POLE
	EXISTING TELE., TV, PEDESTAL & ELECTRIC BOX
	EXISTING WATER METER & SERVICE LINE
	EXISTING WATER LINE AND GATE VALVE
	EXISTING WASTEWATER LINE W/FLOW ARROW & MANHOLE
	EXISTING FORCE MAIN
	EXISTING WASTEWATER SERVICE LINE AND CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING POST HYDRANT
	VALVE MARKER
	EXISTING ROADWAY W/SURFACE DESCRIPTION
	EXISTING TELEPHONE LINE
	EXISTING ELECTRICAL LINE
	EXISTING TV LINE
	EXISTING GAS LINE
	EXISTING LANDSCAPED AREA
	EXISTING TOP OF BANK
	EXISTING MARSH/WETLAND
	EXISTING CATCH BASIN & JUNCTION BOX
	EXISTING STRUCTURE

GENERAL NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND AND/OR ABOVE GROUND UTILITIES AND OTHER STRUCTURES SUCH AS, BUT NOT LIMITED TO: WATER MAINS, WASTEWATER MAINS, GAS MAINS, TELEPHONE LINES, T.V. CABLE LINES, ELECTRICAL LINES, DRAINAGE PIPING, SERVICES, FENCES, TREES, SHRUBS, WATER METERS, TELEPHONE PEDESTALS, POWER POLES, ETC. THE CONTRACTOR WILL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL UTILITIES OR STRUCTURES AND SHALL REPLACE OR REPAIR ANY DAMAGED ITEMS AT THE CONTRACTOR'S EXPENSE WITH NO COST TO THE OWNER, ENGINEER OR OTHER PARTIES. THE EXISTING STRUCTURES OR UTILITIES SHOWN ON THE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REPRESENT A COMPLETE DESCRIPTION OF SAID ITEMS.
- ALL ROADWAYS WILL BE LEFT IN A STABLE CONDITION SO THAT TRAFFIC CAN BE MAINTAINED AT THE END OF EVERY CONSTRUCTION DAY. ALL DRAINAGE SUCH AS SWALES OR CULVERTS SHALL BE REPLACED OR RESTORED IN AN OPEN OR NATURAL CONDITION AT THE END OF EVERY CONSTRUCTION DAY. DRAINAGE PIPING DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT THE SITE CONTRACTOR'S EXPENSE. NO TRENCHES TO BE LEFT OPEN OVERNIGHT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC CONTROL DURING ALL PHASES OF CONSTRUCTION. TRAFFIC SIGNING OF CONSTRUCTION AREA WILL COMPLY WITH 1972 S.C.D.O.T. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS REV. 06-01-76 AND ALL ADDENDUMS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ANY AND ALL ITEMS TO AN OFFSITE LOCATION SUCH AS BUT NOT LIMITED TO EXCESS AND UNSUITABLE EXISTING SUBGRADE, CURBING, PAVEMENT, STONE BASE, PIPING, ETC.
- CONTRACTOR SHALL HAVE ALL NECESSARY PERMITS IN HAND BEFORE BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL ATTEND A WATER AND WASTEWATER PRECONSTRUCTION CONFERENCE WITH THE PROJECT ENGINEER, AND LOCAL AUTHORITY REPRESENTATIVE.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY AND ALL SAFETY EQUIPMENT NECESSARY FOR THE OWNER'S REPRESENTATIVE, STATE AND LOCAL OFFICIALS & THE ENGINEER FOR THE PURPOSES OF INSPECTING ANY SITES WORK CONSTRUCTION. THE SITE CONTRACTOR SHALL BE REQUIRED TO FOLLOW ALL LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR GRASSING ALL DISTURBED AREAS NOT DESIGNATED FOR LANDSCAPING.
- THE CONTRACTOR SHALL INSTALL EROSION CONTROL PROTECTION MEASURES PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL REFER TO OTHER SHEETS WITHIN THE SET SUCH AS THE DETAILS, COVER SHEET ETC., FOR POSSIBLE ADDITIONAL WORK RESPONSIBILITIES OTHER THAN LISTED HERE.
- THE CONTRACTOR WILL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES OR STRUCTURES AND SHALL REPLACE OR REPAIR ALL DAMAGED ITEMS AT HIS EXPENSE WITH NO COST TO THE OWNER, ENGINEER OR OTHER PARTIES.

GENERAL NOTES CONT.:

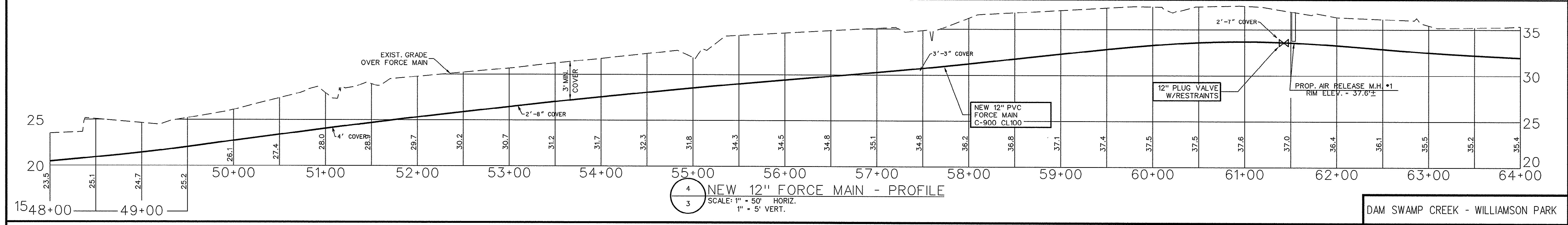
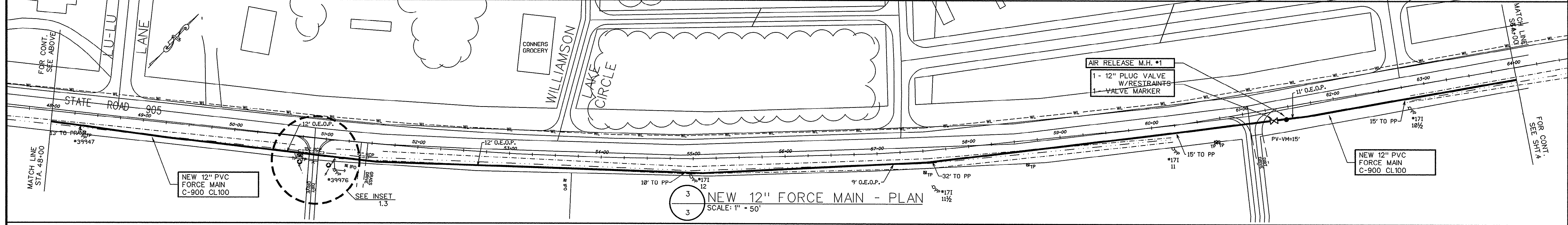
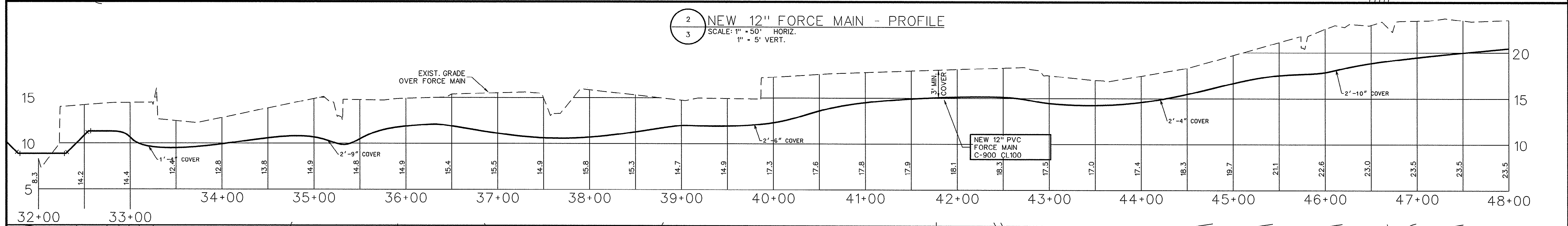
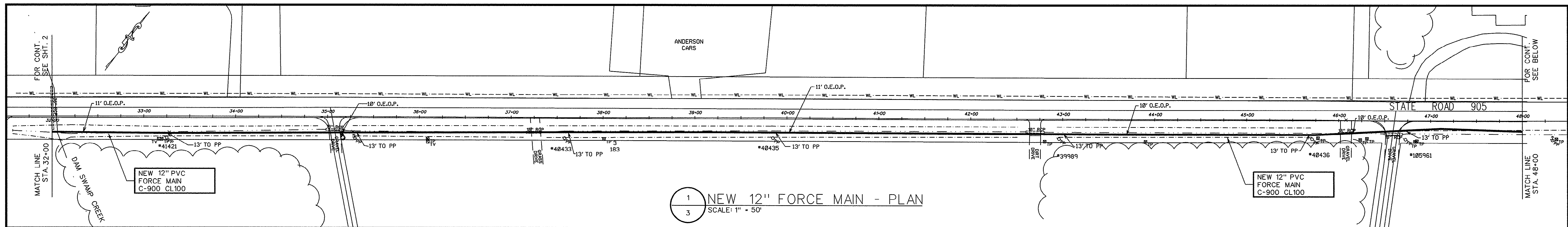
- CONTRACTOR TO INSTALL A NO. 12 BLUE COATED COPPER WIRE APPROXIMATELY 12" - 18" DEEP IN TRENCH ALONG ALL FORCE MAINS AND WATER MAINS.
- ON-SITE INSPECTOR:
FRED J. TOWN, INSPECTIONS SUPERINTENDANT, GSWA
PHONE: 803-347-4641 EXT. 319



THESE DRAWINGS REFLECT	
AS-BUILT	
CONDITIONS	
REVIEWED BY:	DATE: 28 Sep 99
INSPECTIONS	
REVIEWED BY:	DATE:
ENGINEERING	
GRAND STRAND WATER AND SEWER AUTHORITY	

APP'D.	ENGINEER:	DATE:	SEAL	DRAWN BY: R.S.A.	CHECKED BY: K.C.H.	APP'D BY:	GENERAL NOTES, LEGEND, PROJECT & VICINITY MAP		
							FORCE MAIN & PUMP STATION IMPROVEMENTS FOR G.S.W. & S.A. U.S. HIGHWAY 905 FORCE MAIN PADGETT LANE TO PUMP STATION #140 PROJECT NO. 793-04 HORRY COUNTY, SOUTH CAROLINA		
MARK	DATE	REVISIONS	APP'D.	ENGINEER:	DATE:	SEAL	E.T.S. ENGINEERING AND TECHNICAL SERVICES, INC. PAWLKEY'S ISLAND, SOUTH CAROLINA (803) 237-3002		
							SCALE: 1" = 200'	JOB NO. 1997078	SHEET 2 OF 34

30-27-002/34-S



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- FM
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- WL
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL
- TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

INSET 1.3
N.T.S.

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99 DATE

REVIEWED BY: *[Signature]* DATE

ENGINEERING
GRAND STRAND WATER AND SEWER AUTHORITY

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

MARK	DATE	REVISIONS	APP.
8-6-99		AS-BUILT	

ENGINEER:

DATE:

SEAL

DRAWN BY: R.S.A.

CHECKED BY: K.C.H.

APP'D BY:

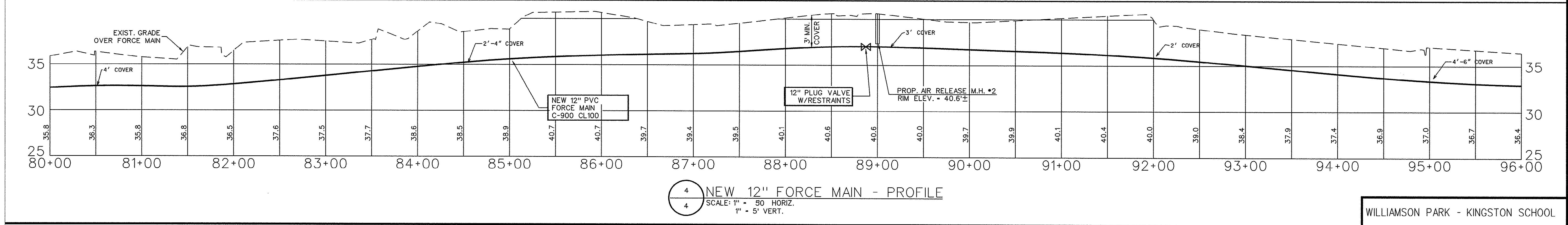
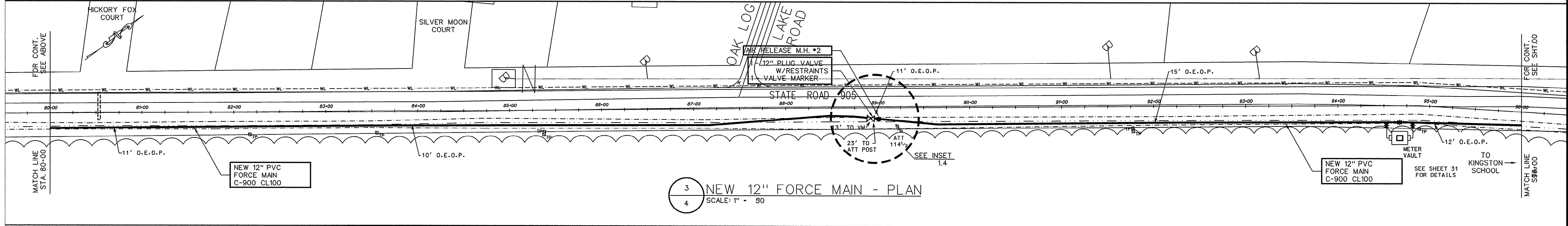
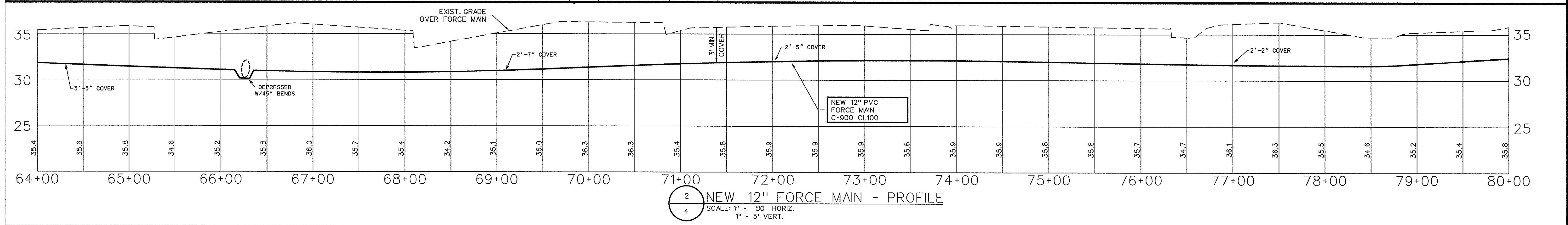
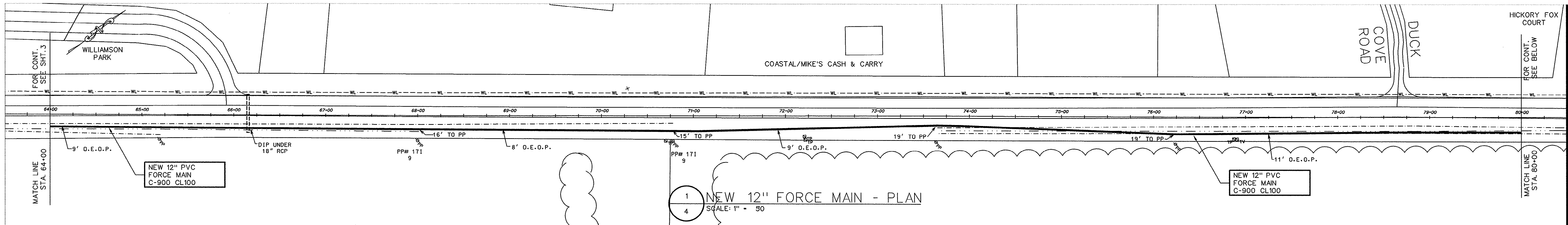
DAM SWAMP CREEK - WILLIAMSON PARK

NEW 12" FORCE MAIN
PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEYS ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 4 OF 4



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL
- EXISTING TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* DATE: 28 Sep 99

REVIEWED BY: *[Signature]* DATE: _____

ENGINEERING
GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.4
N.T.S.

GRAPHIC SCALE
0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

30-27-005/34+S

WILLIAMSON PARK - KINGSTON SCHOOL

NEW 12" FORCE MAIN
PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEY'S ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET OF 31

ENGINEER: _____

DATE: _____

SEAL

DRAWN BY: R.S.A.

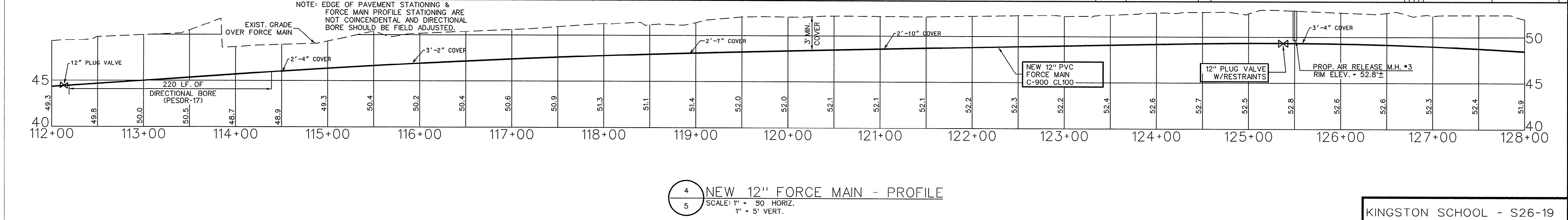
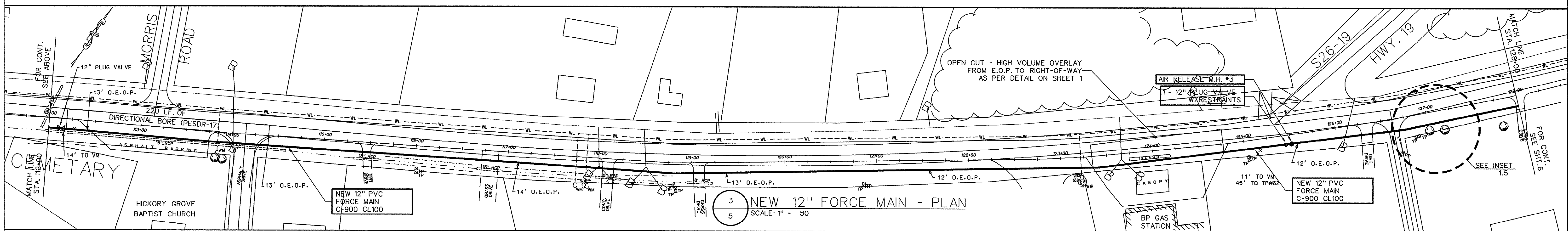
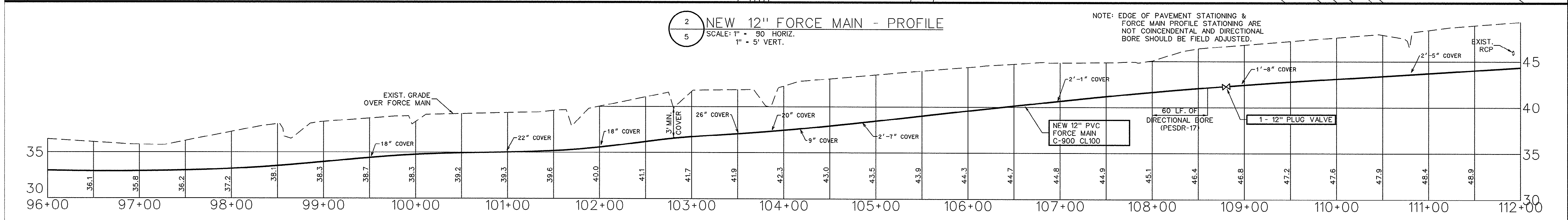
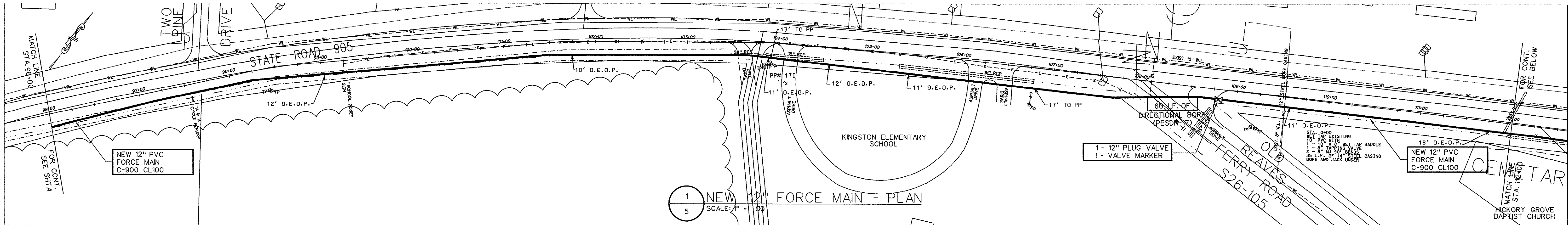
CHECKED BY: K.C.H.

APP'D BY: _____

8/99 AS-BUILT

REVISIONS

MARK DATE



LEGEND:

- PROPOSED FORCE MAIN
- - - EXISTING DITCH/SWALE LINE
- - - EXISTING DITCH TOP OF BANK
- - - FM EXISTING WASTEWATER FORCE MAIN
- - - 15" RCP EXISTING STORM WATER SYSTEM
- - - EXISTING UNDERGROUND ELECTRICAL LINE
- - - WL EXISTING WATER LINE
- - - 5" DIV EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- - - 5" DIV ROAD EDGE STATIONING
- - - PP EXISTING POWER POLE
- - - EXISTING STRUCTURE (SURVEYED)
- - - EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* DATE: 28 Sep 99

REVIEWED BY: *[Signature]* DATE: _____

ENGINEERING
GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.5
N.T.S.

GRAPHIC SCALE
0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

APP'D	ENGINEER
8/99	AS-BUILT

REVISIONS	DATE

MARK	DATE

DRAWN BY:	R.S.A.

CHECKED BY:	K.C.H.

APP'D BY:	

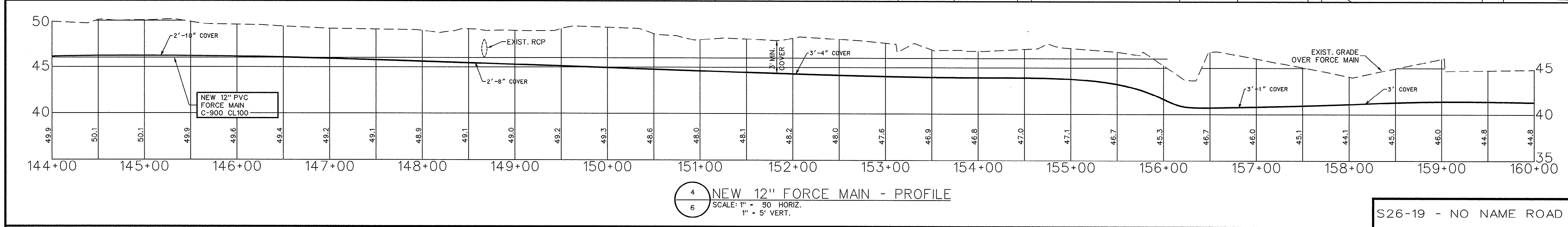
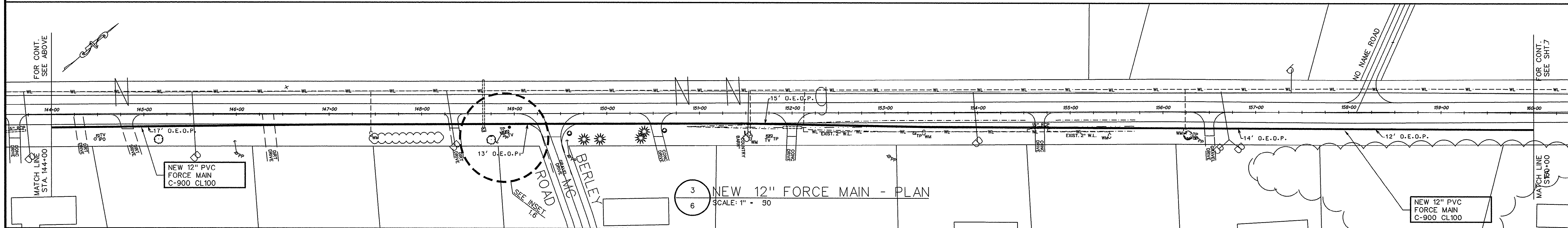
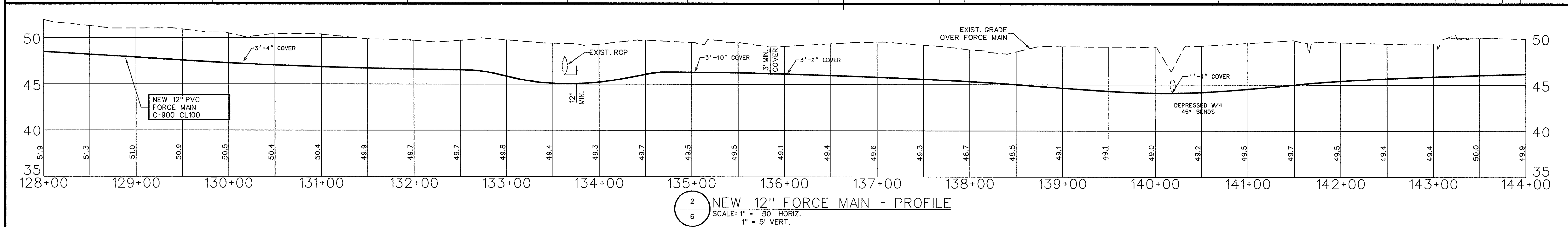
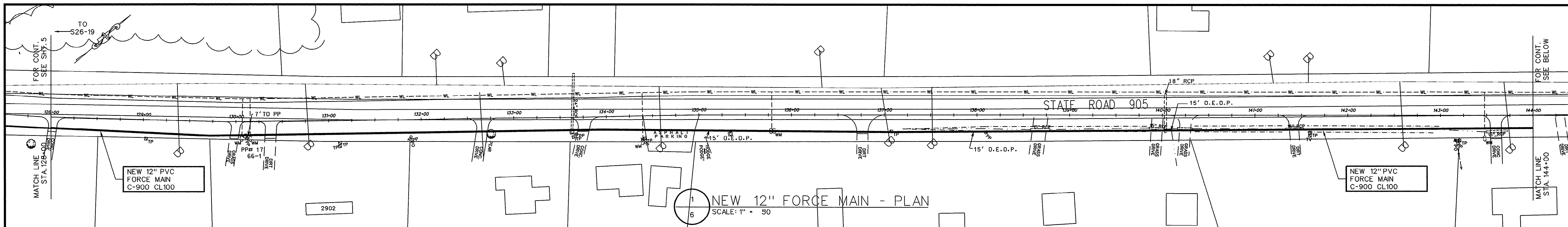
KINGSTON SCHOOL - S26-19

**NEW 12" FORCE MAIN
PLAN & PROFILE**

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEYS ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 6 OF 34



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

INSET 1.6
N.T.S.

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* DATE: 28 Sep 99
INSPECTIONS

REVIEWED BY: *[Signature]* DATE:
ENGINEERING

GRAND STRAND WATER AND SEWER AUTHORITY

GRAPHIC SCALE
0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

APP.	ENGINEER:	DRAWN BY: R.S.A.	CHECKED BY: K.C.H.	APP'D BY:
REVISIONS	DATE:			
8/99	AS-BUILT			
MARK	DATE			

S26-19 - NO NAME ROAD

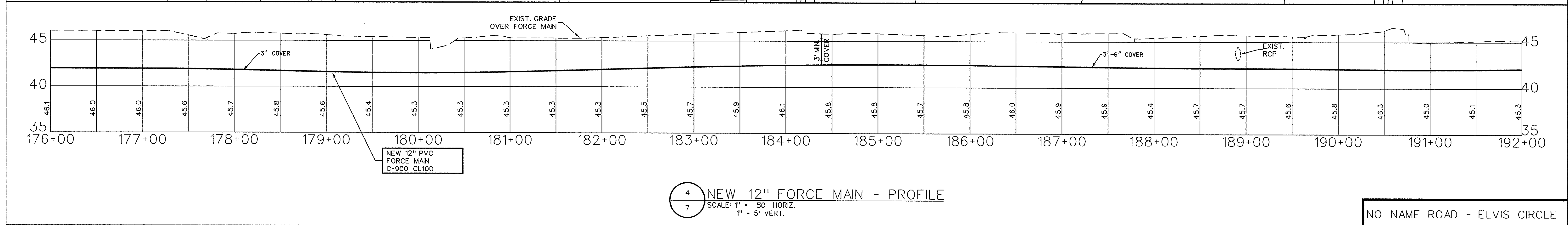
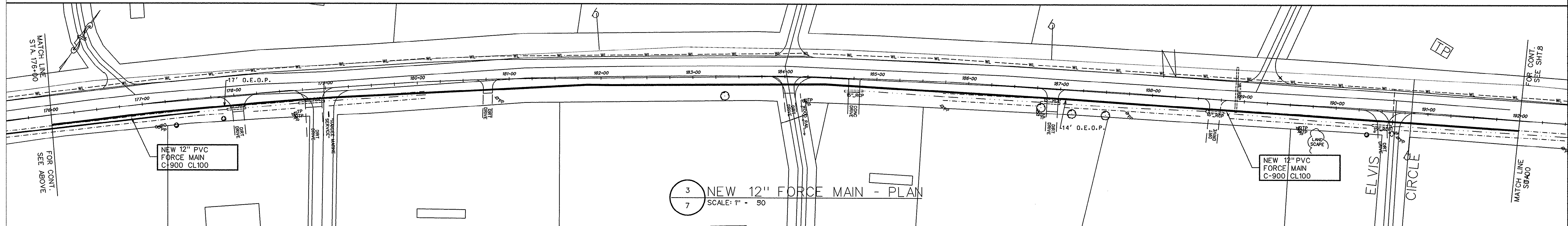
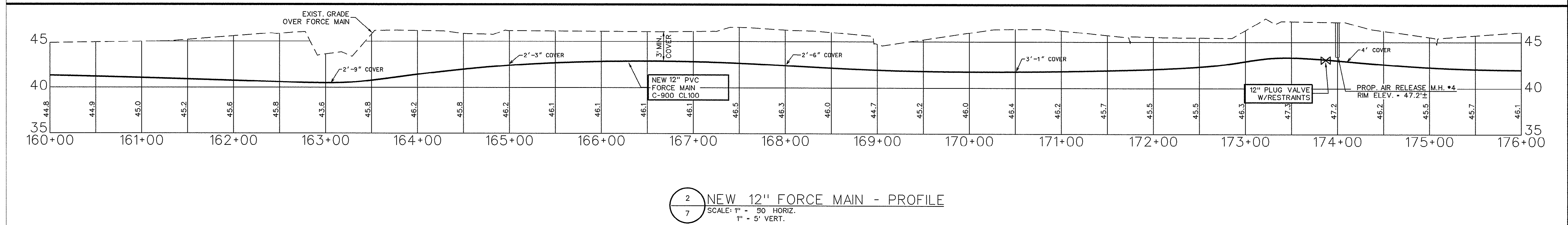
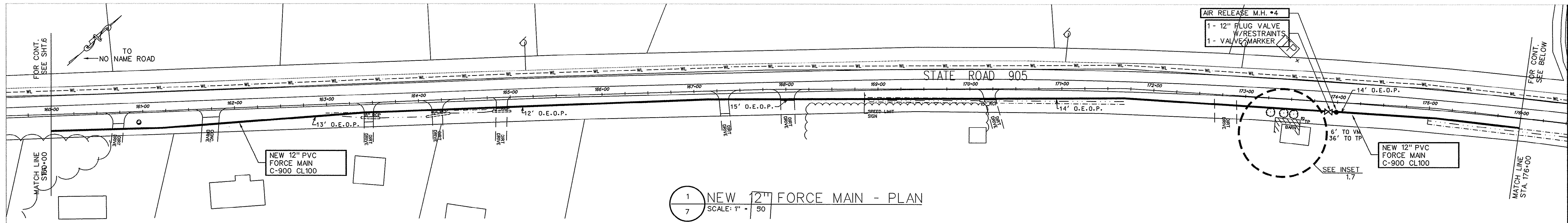
**NEW 12" FORCE MAIN
PLAN & PROFILE**

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEYS ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 34 OF 34

30-27-007/34-S



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- FM - EXISTING WASTEWATER FORCE MAIN
- SW - EXISTING STORM WATER SYSTEM
- EL - EXISTING UNDERGROUND ELECTRICAL LINE
- WL - EXISTING WATER LINE
- ETP - EXISTING ELECTRICAL PEDESTAL
- TV & TEL - EXISTING TELEPHONE
- RS - ROAD EDGE STATIONING
- PP - EXISTING POWER POLE
- SS - EXISTING STRUCTURE (SURVEYED)
- US - EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *Fried* 28 Sep 99 DATE

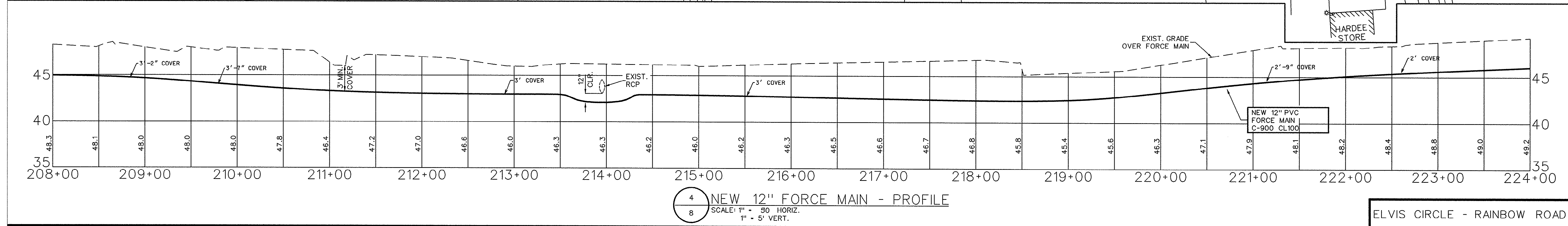
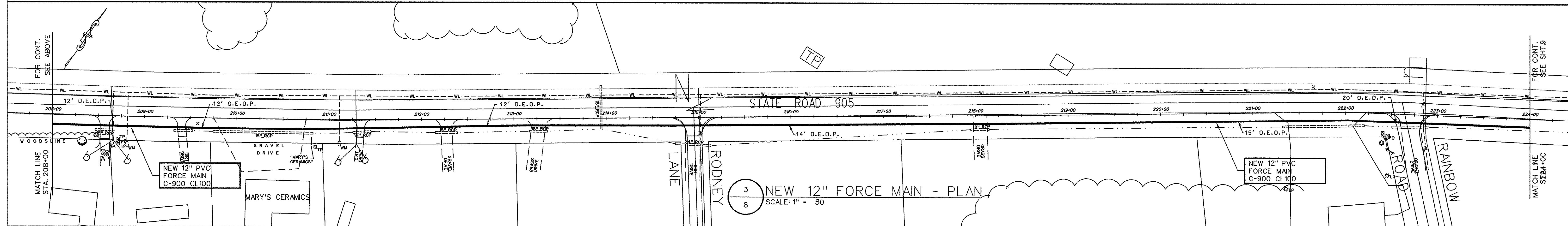
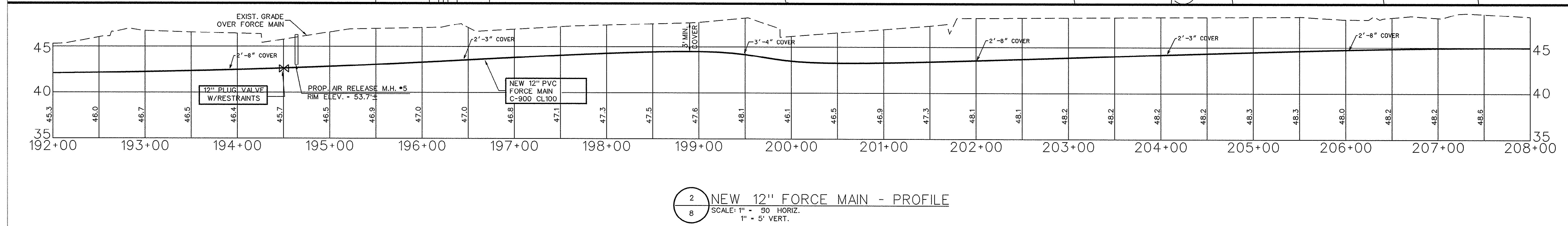
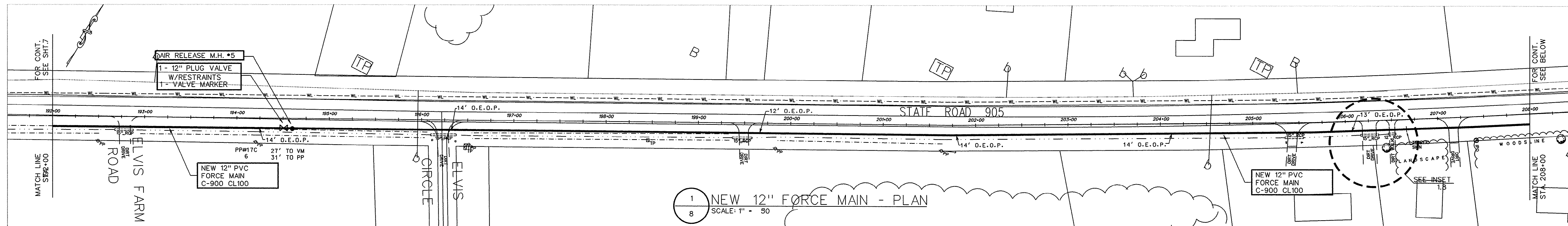
REVIEWED BY: *Witt* DATE

ENGINEERING
GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.7
N.T.S.

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

APP.		ENGINEER:		NO NAME ROAD - ELVIS CIRCLE	
8/98	AS-BUILT	DATE:	SEAL	NEW 12" FORCE MAIN PLAN & PROFILE FORCE MAIN & PUMP STATION IMPROVEMENTS FOR G.S.W. & S.A. U.S. HIGHWAY 905 FORCE MAIN PADGETT LANE TO PUMP STATION #140 PROJECT NO. 793-04 HORRY COUNTY, SOUTH CAROLINA E.T.S. ENGINEERING AND TECHNICAL SERVICES, INC. PAWLEY'S ISLAND, SOUTH CAROLINA (803) 237-3002	
		REVISIONS			
MARK	DATE	DRAWN BY: R.S.A.	CHECKED BY: K.C.H.	APP'D BY:	SCALE: 1" = 50' JOB NO. 1997078 SHEET 8 OF 34



LEGEND:

- PROPOSED FORCE MAIN
- - - EXISTING DITCH/SWALE LINE
- - - EXISTING DITCH TOP OF BANK
- - - FM EXISTING WASTEWATER FORCE MAIN
- - - EXISTING STORM WATER SYSTEM
- - - EXISTING UNDERGROUND ELECTRICAL LINE
- - - EXISTING WATER LINE
- - - EXISTING ELECTRICAL PEDESTAL
- - - TV & TELEPHONE
- - - ROAD EDGE STATIONING
- - - EXISTING POWER POLE
- - - EXISTING STRUCTURE (SURVEYED)
- - - EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99 DATE

REVIEWED BY: *[Signature]* DATE

ENGINEERING
GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.8
N.T.S.

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

30-27-009/34-S

ENGINEER: _____

DATE: _____

SEAL: _____

REVISIONS

MARK	DATE	DESCRIPTION
8/99	AS-BUILT	

DRAWN BY: R.S.A.

CHECKED BY: K.C.H.

APP'D BY: _____

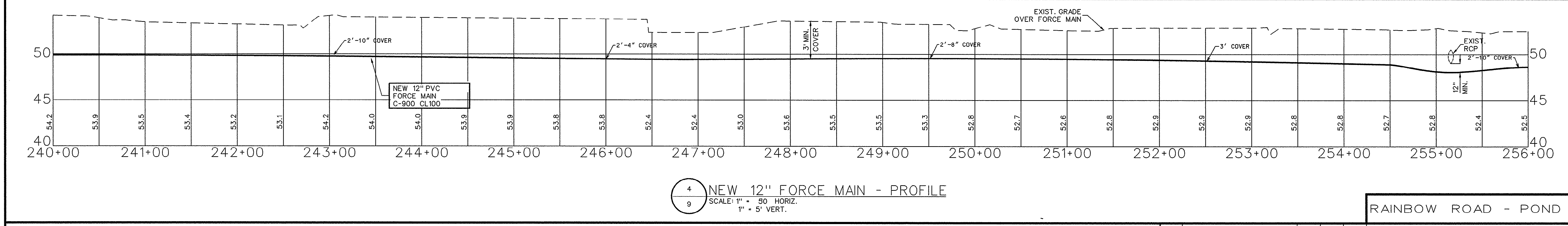
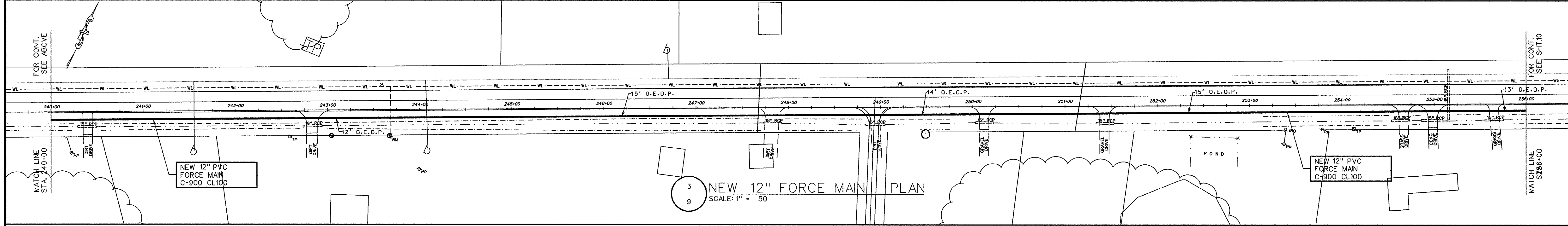
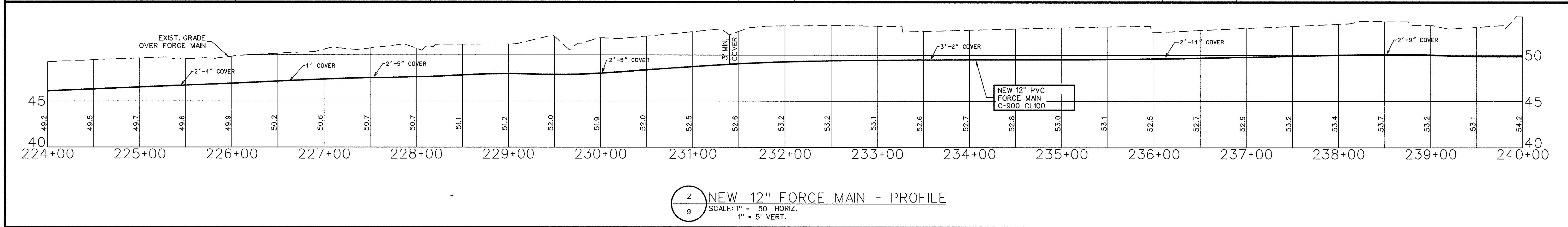
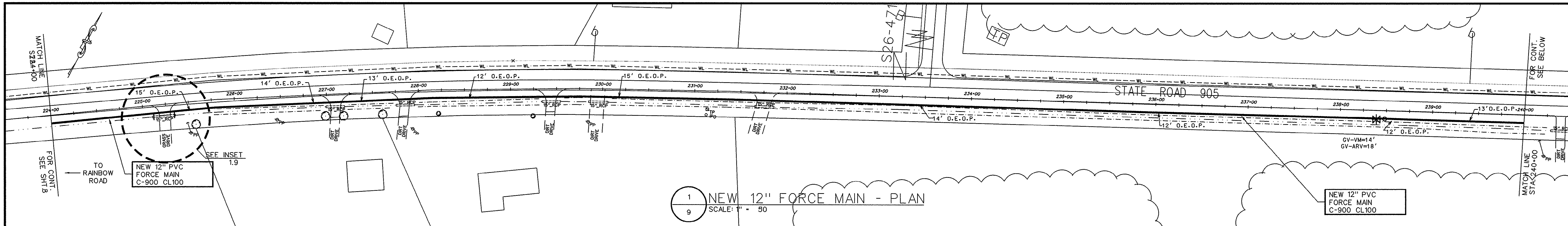
ELVIS CIRCLE - RAINBOW ROAD

**NEW 12" FORCE MAIN
PLAN & PROFILE**

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEYS ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 9 OF 34



LEGEND:

- PROPOSED FORCE MAIN
- - - EXISTING DITCH/SWALE LINE
- - - EXISTING DITCH TOP OF BANK
- - - EXISTING WASTEWATER FORCE MAIN
- - - EXISTING STORM WATER SYSTEM
- - - EXISTING UNDERGROUND ELECTRICAL LINE
- - - EXISTING WATER LINE
- - - EXISTING ELECTRICAL PEDESTAL
- - - EXISTING TELEPHONE
- - - ROAD EDGE STATIONING
- - - EXISTING POWER POLE
- - - EXISTING STRUCTURE (SURVEYED)
- - - EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

INSET 1.2
N.T.S.

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* DATE: 27 Sep 99

INSPECTIONS

REVIEWED BY: *[Signature]* DATE:

ENGINEERING

GRAND STRAND WATER AND SEWER AUTHORITY

GRAPHIC SCALE

(IN FEET)

1 inch = 50 ft.

REVISIONS

MARK	DATE	DESCRIPTION
8/99	AS-BUILT	

ENGINEER:

DATE:

SEAL

DRAWN BY: R.S.A.

CHECKED BY: K.C.H.

APP'D BY:

RAINBOW ROAD - POND

**NEW 12" FORCE MAIN
PLAN & PROFILE**

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR

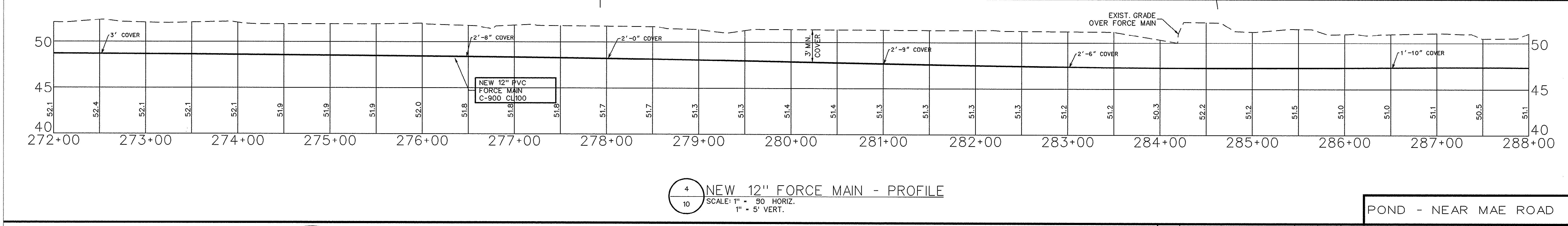
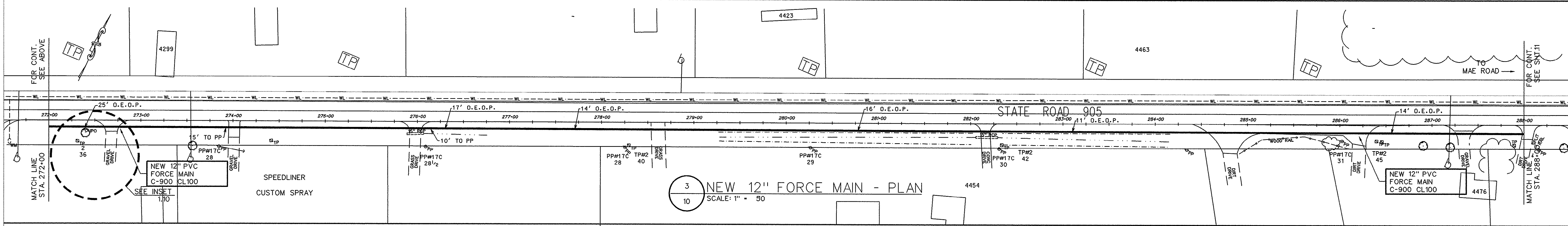
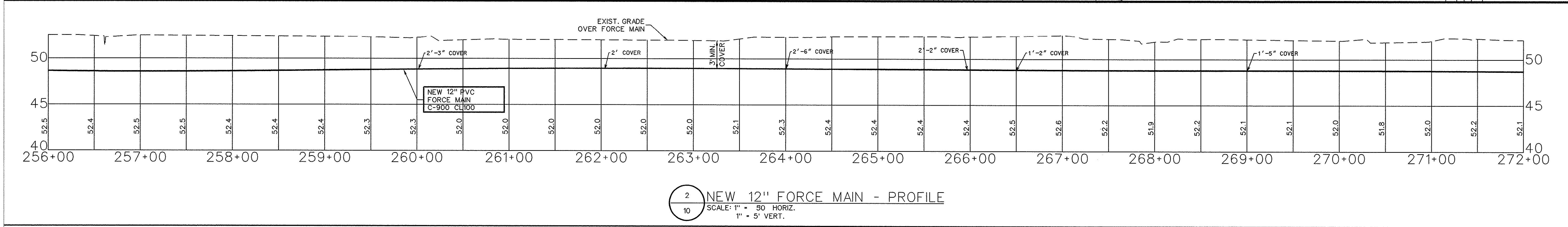
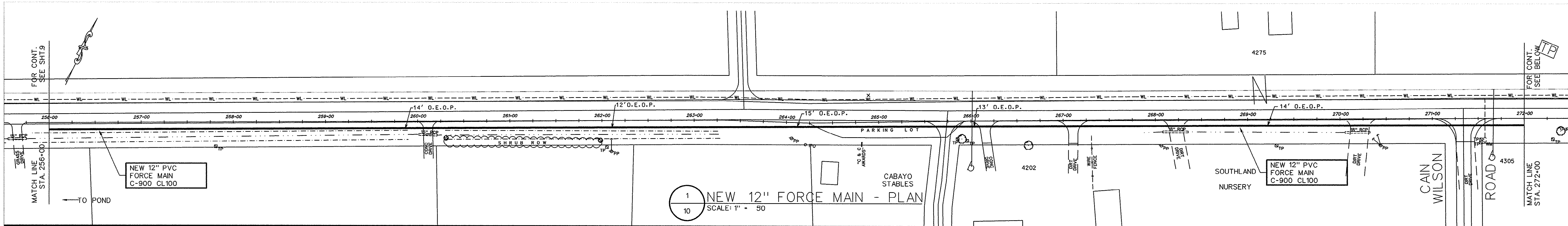
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEYS ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50'

JOB NO. 1997078

SHEET 10 OF 34



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- FM - EXISTING WASTEWATER FORCE MAIN
- 15" RCP - EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL
- TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

INSET 1.10

N.T.S.

THESE DRAWINGS REFLECT

AS-BUILT

CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99 DATE

INSPECTIONS

REVIEWED BY: *[Signature]* DATE

ENGINEERING

GRAND STRAND WATER AND SEWER AUTHORITY

GRAPHIC SCALE

0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

30-27-011/34-S

ENGINEER:

DATE:

SEAL

REVISIONS

NO.	DATE	DESCRIPTION
1	8/99	AS-BUILT

MARK

DATE

APP.

DRAWN BY: R.S.A.

CHECKED BY: K.C.H.

APP'D BY:

ENGINEERING AND TECHNICAL SERVICES, INC.

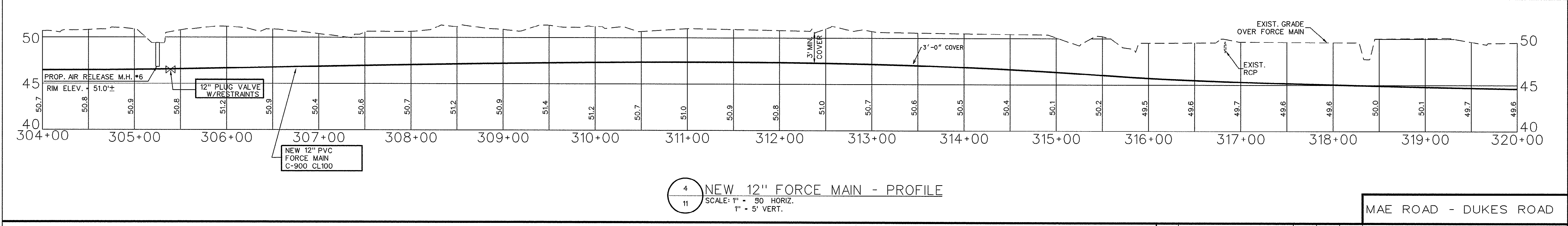
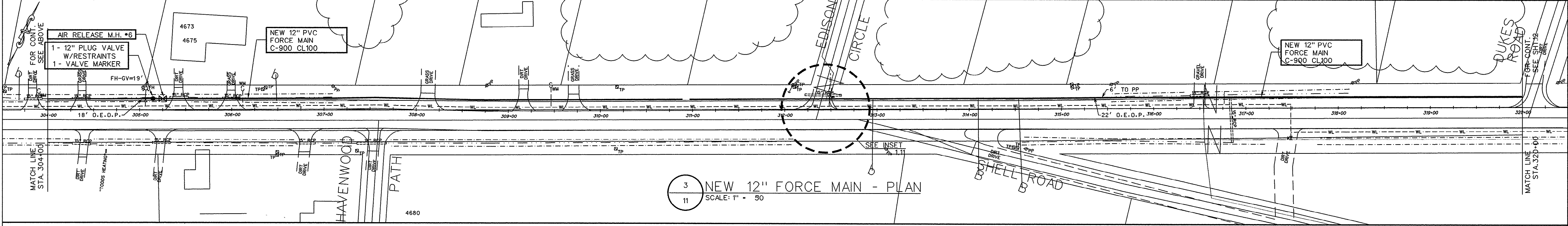
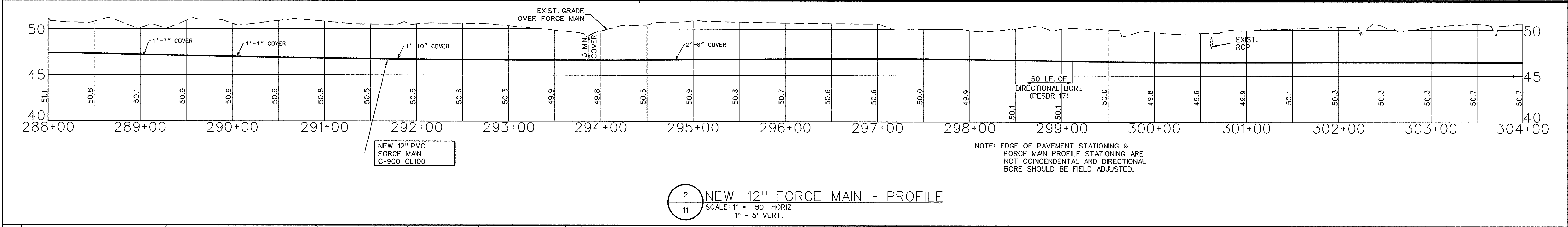
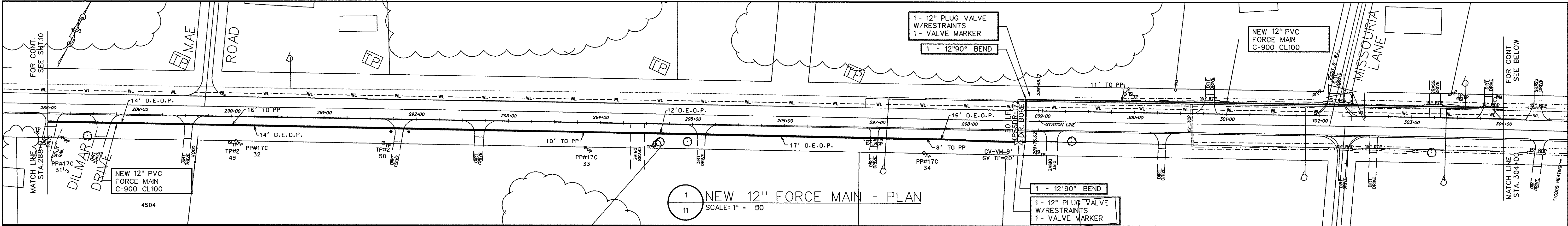
PAWLEYS ISLAND, SOUTH CAROLINA

(803) 237-3002

SCALE: 1" = 50'

JOB NO. 1997078

SHEET 10 **OF** 34



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *Free* 28 Sep 99 DATE

REVIEWED BY: *gjk* DATE

ENGINEERING
GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.11
N.T.S.

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

APP.	ENGINEER:
8/99 <td>AS-BUILT</td>	AS-BUILT

REVISIONS	DATE
1	8/99

MARK	DATE
1	8/99

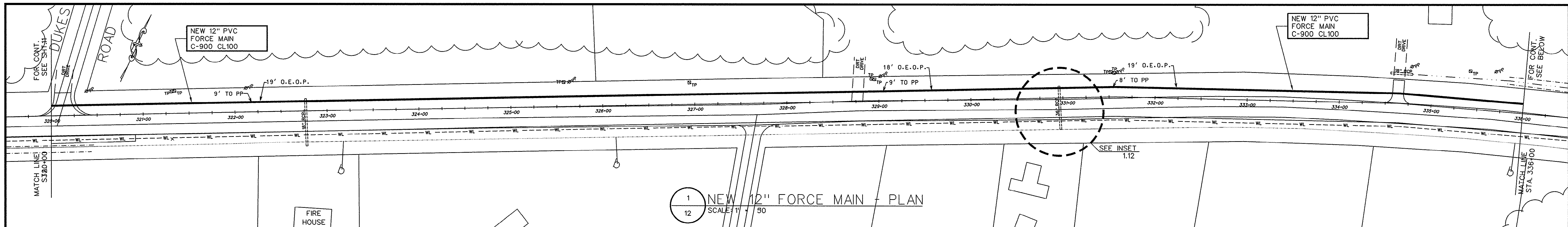
MAE ROAD - DUKES ROAD

**NEW 12" FORCE MAIN
PLAN & PROFILE**

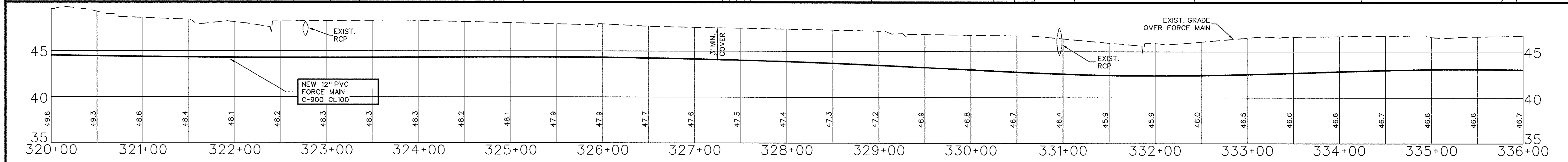
FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEYS ISLAND, SOUTH CAROLINA
(803) 237-3002

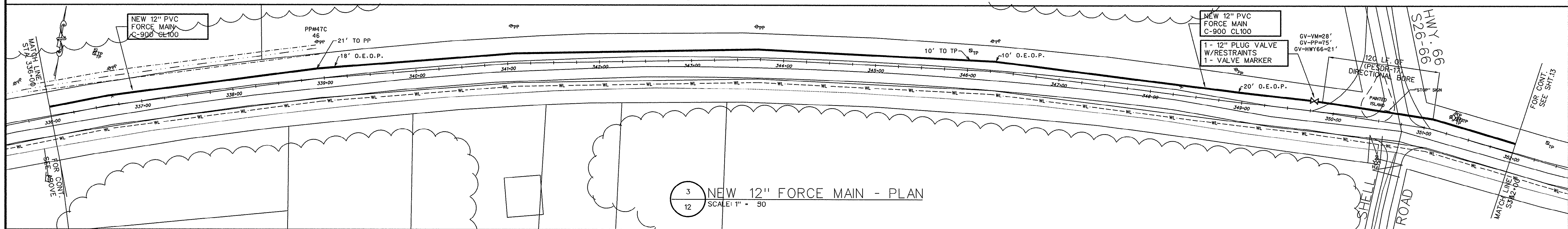
SCALE: 1" = 50' JOB NO. 1997078 SHEET 12 OF 34



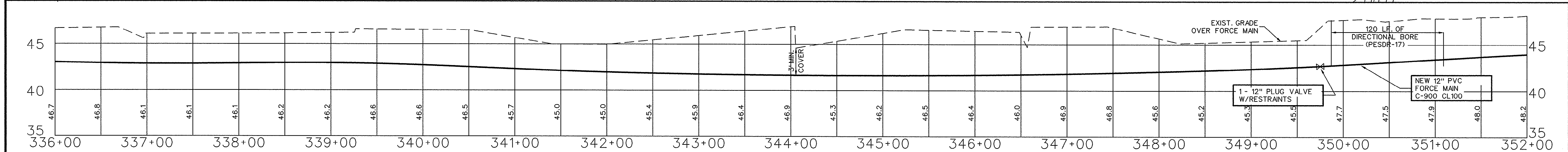
1 NEW 12" FORCE MAIN - PLAN
SCALE: 1" = 50'



2 NEW 12" FORCE MAIN - PROFILE
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



3 NEW 12" FORCE MAIN - PLAN
SCALE: 1" = 50'



4 NEW 12" FORCE MAIN - PROFILE
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL
- EXISTING TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

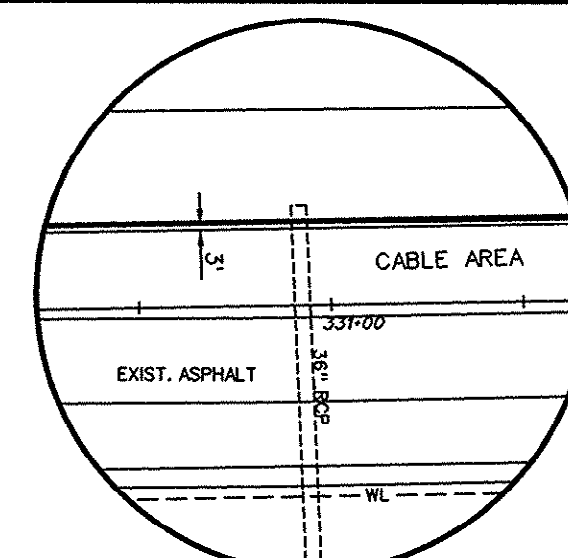
REVIEWED BY: *[Signature]* 28 Sep 99 DATE

INSPECTIONS

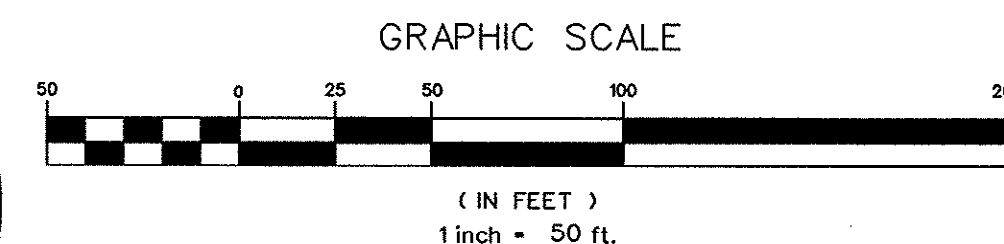
REVIEWED BY: *[Signature]* DATE

ENGINEERING

GRAND STRAND WATER AND SEWER AUTHORITY



INSET 1.12
N.T.S.



30-27-013/34-S

APP.	ENGINEER:	DATE:	SEAL
REVISIONS			
MARK	DATE		

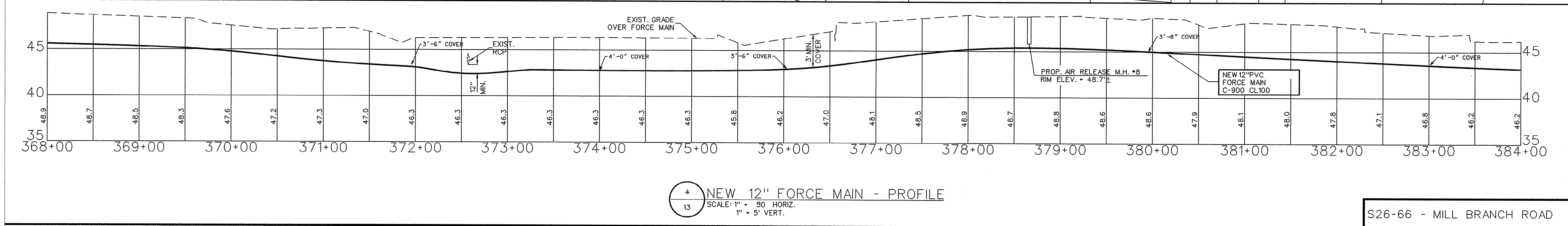
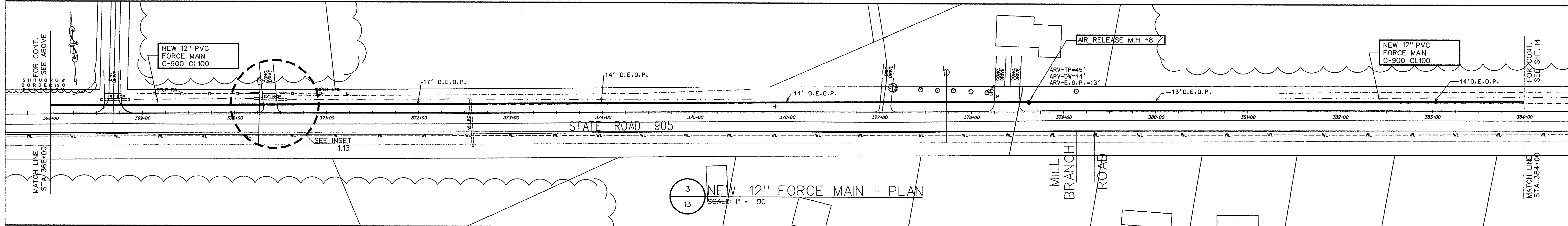
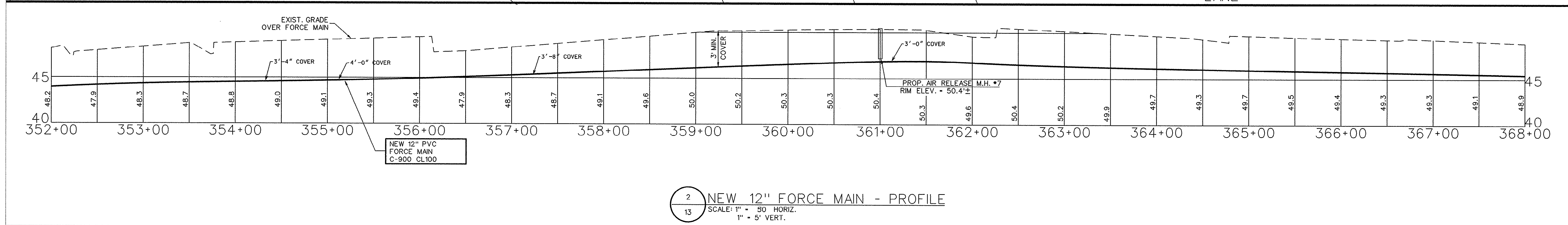
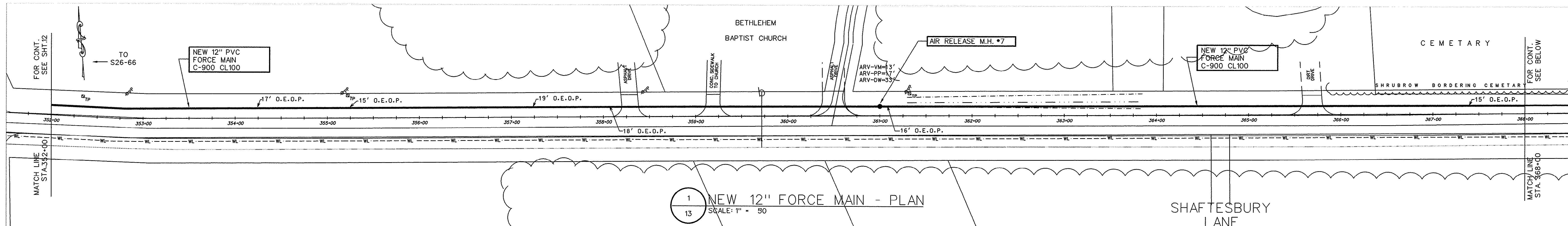
DUKES ROAD - S26-66

NEW 12" FORCE MAIN
PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEYS ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 13 OF 34



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- FM - EXISTING WASTEWATER FORCE MAIN
- STW - EXISTING STORM WATER SYSTEM
- EL - EXISTING UNDERGROUND ELECTRICAL LINE
- WL - EXISTING WATER LINE
- ETV - EXISTING ELECTRICAL PEDESTAL
- TV & TEL - EXISTING TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

INSET 1.13
N.T.S.

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99 DATE

REVIEWED BY: *[Signature]* DATE

GRAND STRAND WATER AND SEWER AUTHORITY

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

30-27-014/34-S

REVISIONS

MARK	DATE	DESCRIPTION
8/99	AS-BUILT	

ENGINEER:

DATE:

SEAL

DRAWN BY: R.S.A.

CHECKED BY: K.C.H.

APP'D BY:

S26-66 - MILL BRANCH ROAD

NEW 12" FORCE MAIN PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS FOR

G.S.W. & S.A.

U.S. HIGHWAY 905 FORCE MAIN

PADGETT LANE TO PUMP STATION #140

PROJECT NO. 793-04

HORRY COUNTY, SOUTH CAROLINA

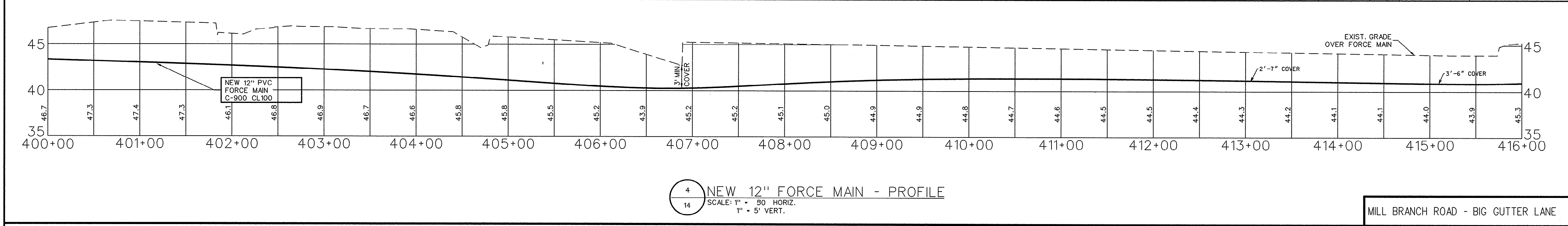
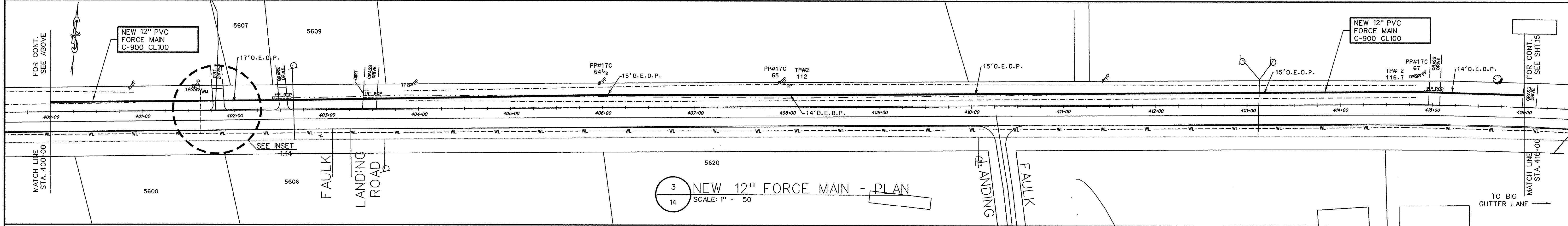
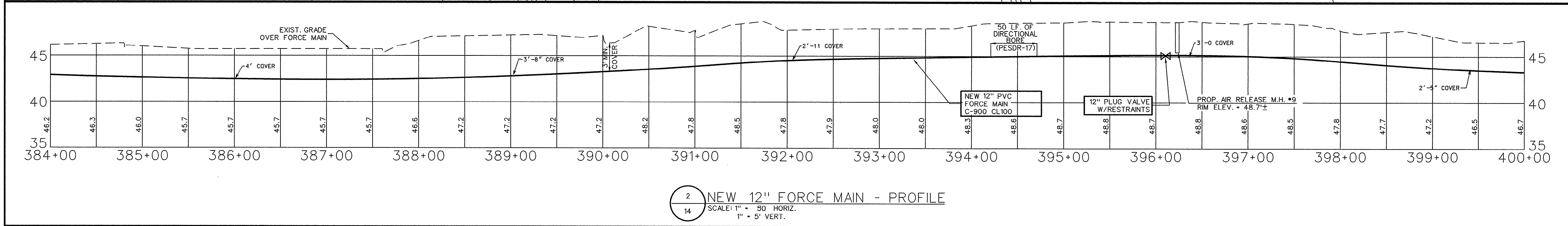
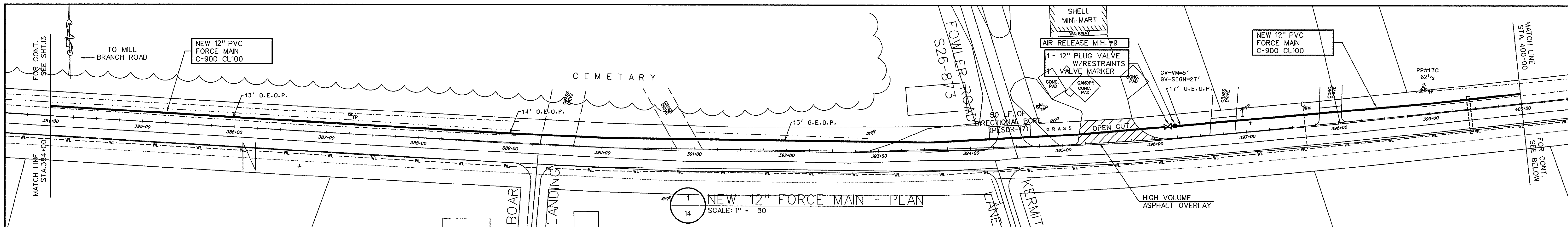
E.T.S.

ENGINEERING AND TECHNICAL SERVICES, INC.

PAWLEY'S ISLAND, SOUTH CAROLINA

(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 14 OF 34



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL
- EXISTING TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99
INSPECTIONS DATE

REVIEWED BY: *[Signature]*
ENGINEERING DATE

GRAND STRAND WATER AND SEWER AUTHORITY

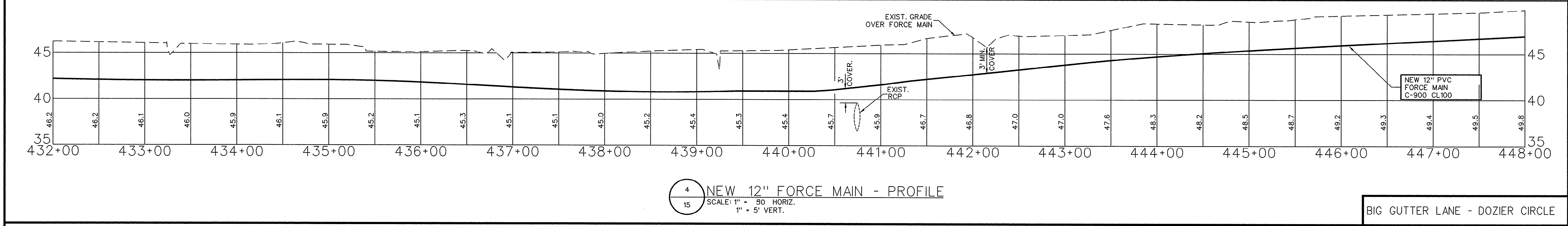
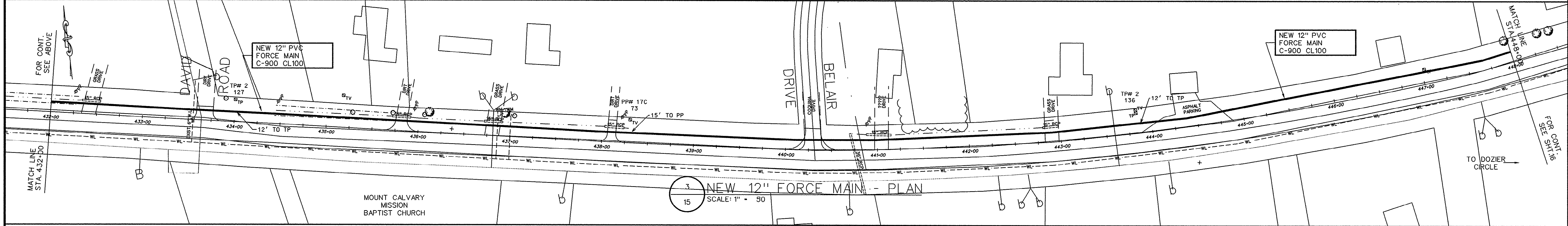
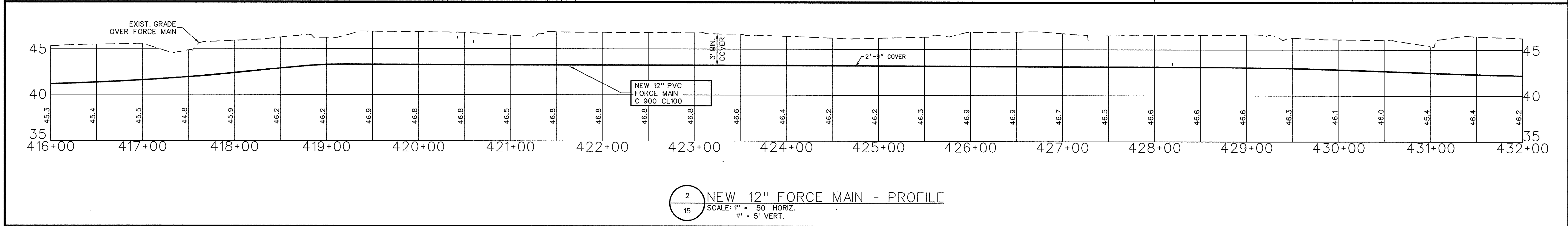
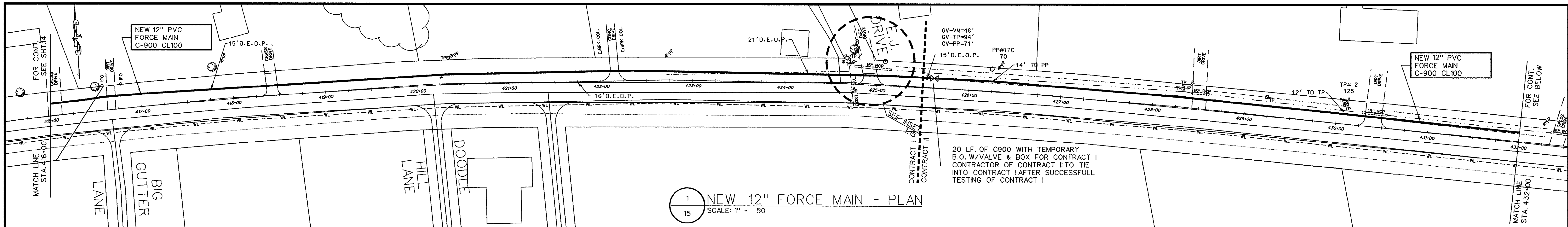
GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

30-27-015/34-S

INSET 1.14
N.T.S.

MILL BRANCH ROAD - BIG GUTTER LANE	
NEW 12" FORCE MAIN PLAN & PROFILE	
FORCE MAIN & PUMP STATION IMPROVEMENTS FOR G.S.W. & S.A. U.S. HIGHWAY 905 FORCE MAIN PADGETT LANE TO PUMP STATION #140 PROJECT NO. 793-04 HORRY COUNTY, SOUTH CAROLINA	
E.T.S. ENGINEERING AND TECHNICAL SERVICES, INC. PAWLEYS ISLAND, SOUTH CAROLINA (803) 237-3002	
SCALE: 1" = 50'	JOB NO. 1997078
SHEET 15	OF 34



LEGEND:

- PROPOSED FORCE MAIN
- - - EXISTING DITCH/SWALE LINE
- - - EXISTING DITCH TOP OF BANK
- - - EXISTING WASTEWATER FORCE MAIN
- - - EXISTING STORM WATER SYSTEM
- - - EXISTING UNDERGROUND ELECTRICAL LINE
- - - EXISTING WATER LINE
- - - EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- - - ROAD EDGE STATIONING
- - - EXISTING POWER POLE
- - - EXISTING STRUCTURE (SURVEYED)
- - - EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99 DATE

REVIEWED BY: *[Signature]* DATE

ENGINEERING
GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.15
N.T.S.

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

30-27-016/34-S

REVISIONS

APP.	REVISIONS	DATE
8/99	AS-BUILT	

ENGINEER:

DATE:

SEAL

DRAWN BY: R.S.A.

CHECKED BY: K.C.H.

APP'D BY:

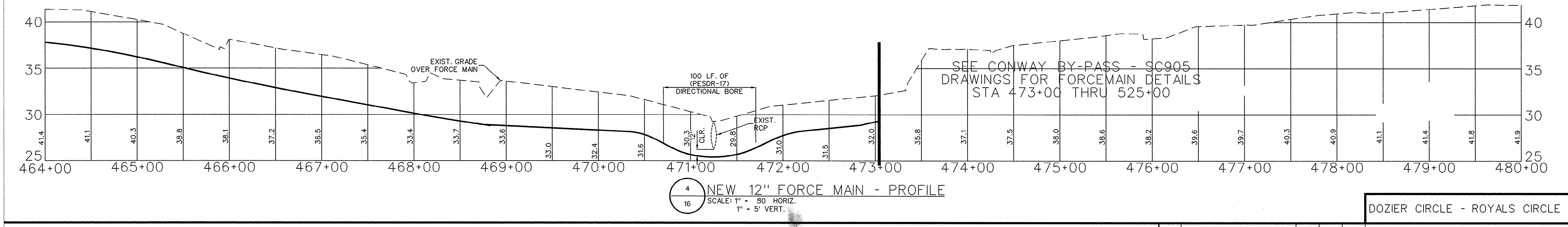
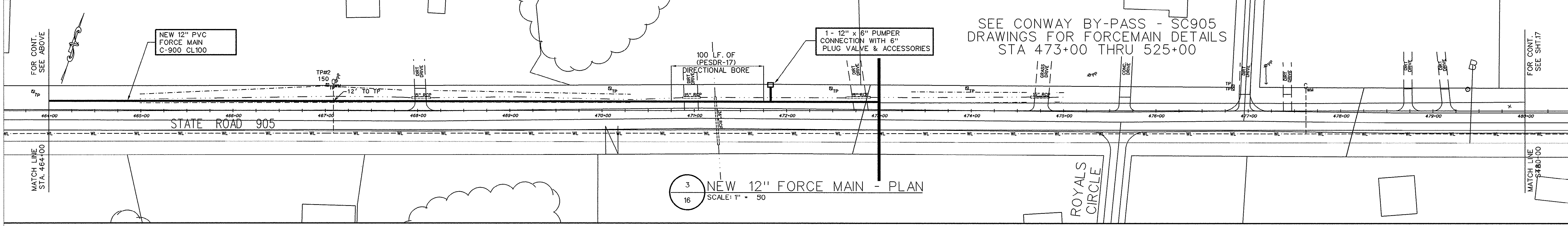
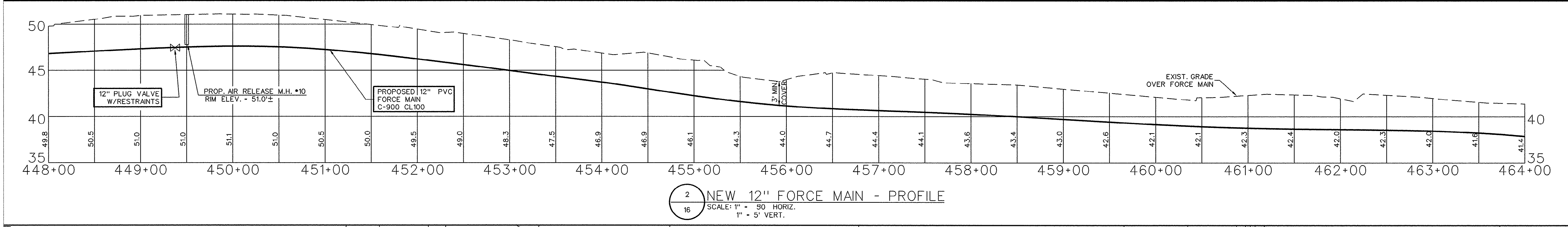
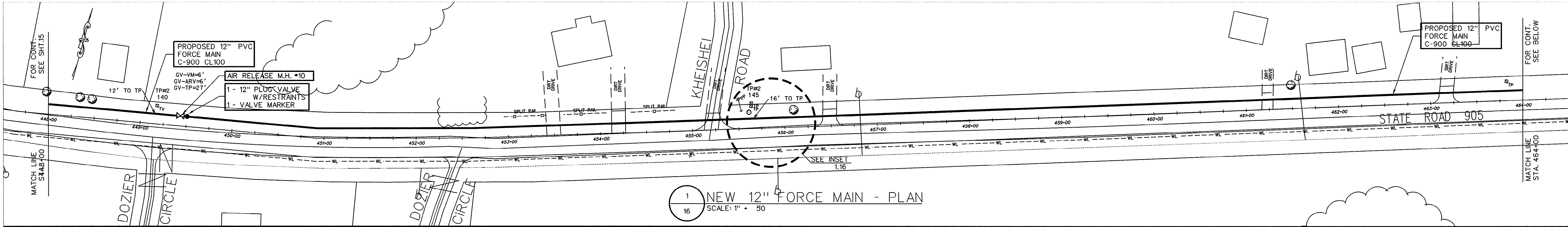
BIG GUTTER LANE - DOZIER CIRCLE

NEW 12" FORCE MAIN PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEY'S ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 16 OF 38



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT AS-BUILT CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99 DATE

INSPECTIONS

REVIEWED BY: *[Signature]* DATE

ENGINEERING

GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.16 N.T.S.

GRAPHIC SCALE

(IN FEET)

1 inch = 50 ft.

30-27-017/34-S

APP.	ENGINEER:	DATE:	SEAL
REVISIONS			
MARK	DATE		

DOZIER CIRCLE - ROYALS CIRCLE

PROPOSED 12" FORCE MAIN PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS FOR

G.S.W. & S.A.

U.S. HIGHWAY 905 FORCE MAIN PADGETT LANE TO PUMP STATION #140

PROJECT NO. 793-04

HORRY COUNTY, SOUTH CAROLINA

E.T.S.

ENGINEERING AND TECHNICAL SERVICES, INC.

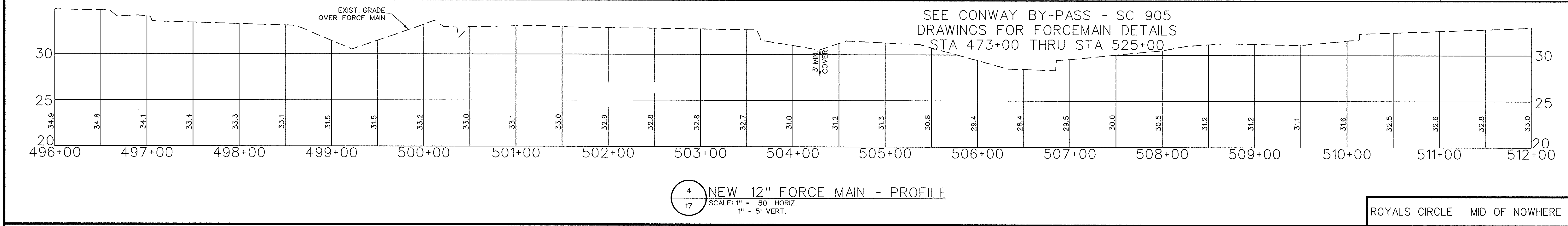
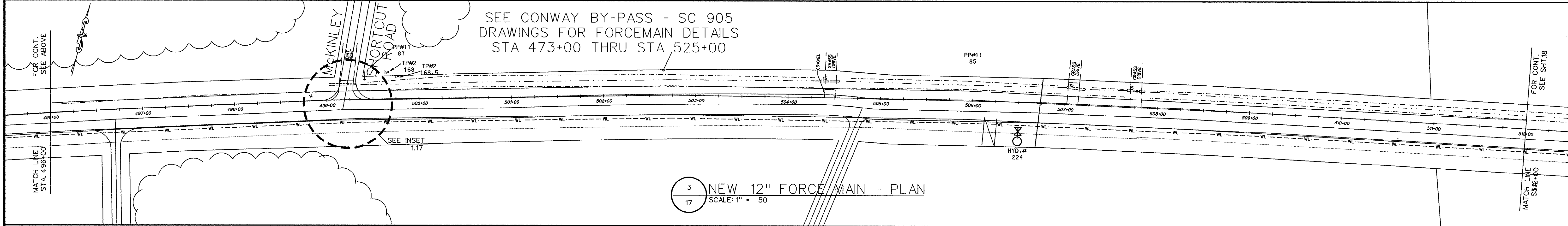
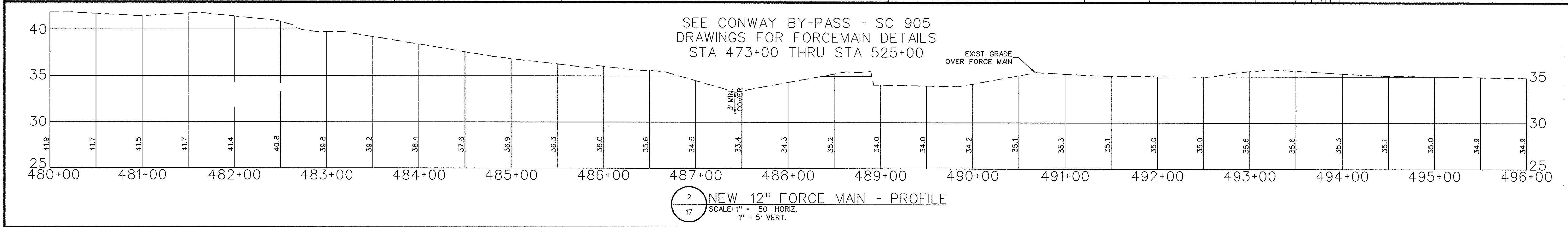
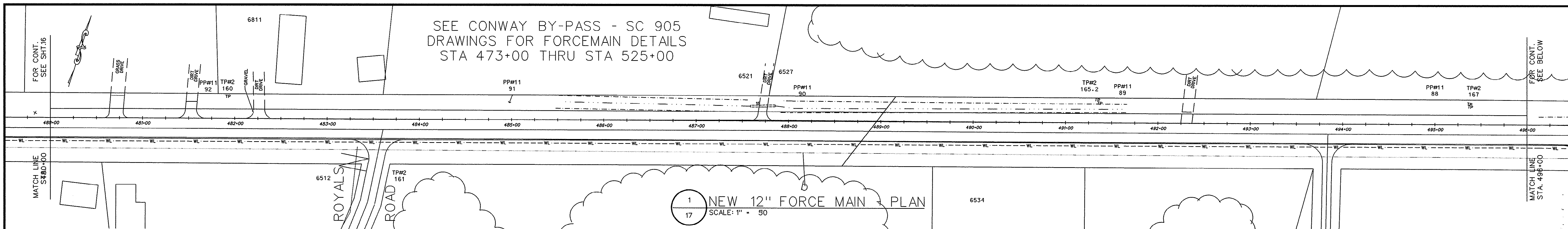
PAWLEYS ISLAND, SOUTH CAROLINA

(803) 237-3002

SCALE: 1" = 50'

JOB NO. 1997078

SHEET 17 OF 34



LEGEND:

- PROPOSED FORCE MAIN
- - - EXISTING DITCH/SWALE LINE
- - - EXISTING DITCH TOP OF BANK
- - - EXISTING WASTEWATER FORCE MAIN
- - - EXISTING STORM WATER SYSTEM
- - - EXISTING UNDERGROUND ELECTRICAL LINE
- - - EXISTING WATER LINE
- - - EXISTING ELECTRICAL PEDESTAL
- - - EXISTING POWER POLE
- - - EXISTING STRUCTURE (SURVEYED)
- - - EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99 DATE

REVIEWED BY: *[Signature]* DATE

GRAND STRAND WATER AND SEWER AUTHORITY

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

INSET 1.17
N.T.S.

REVISIONS		DATE	MARK
8/99	AS-BUILT		

ENGINEER:	DATE:	SEAL:

DRAWN BY: R.S.A.	CHECKED BY: K.C.H.	APPD BY:

ROYALS CIRCLE - MID OF NOWHERE

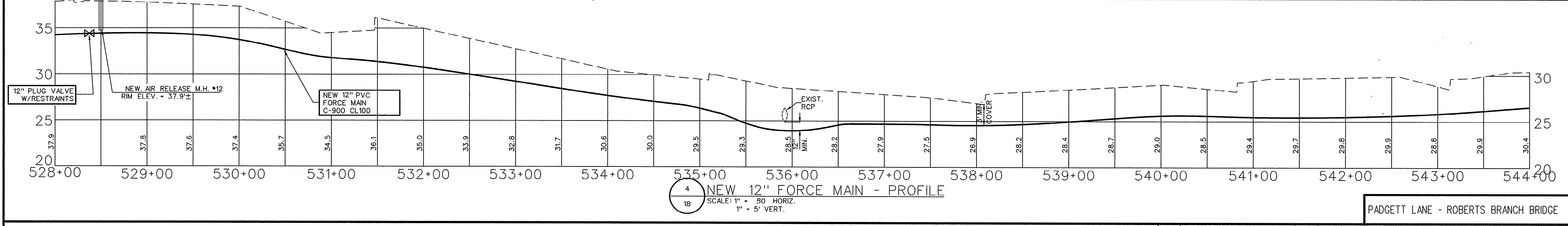
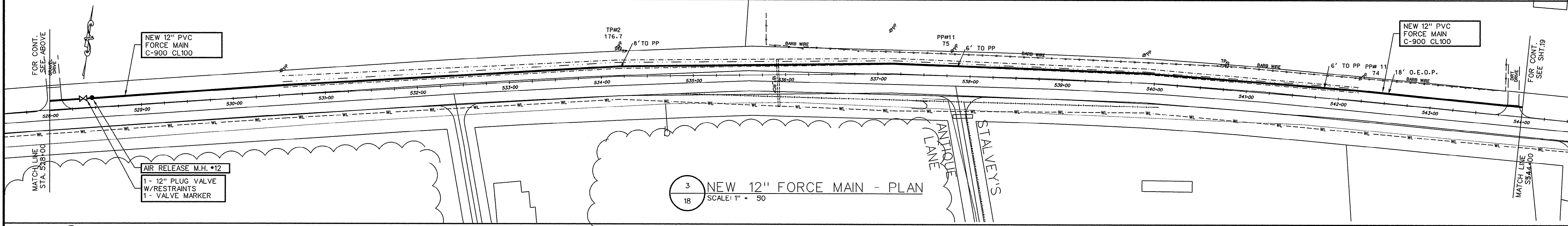
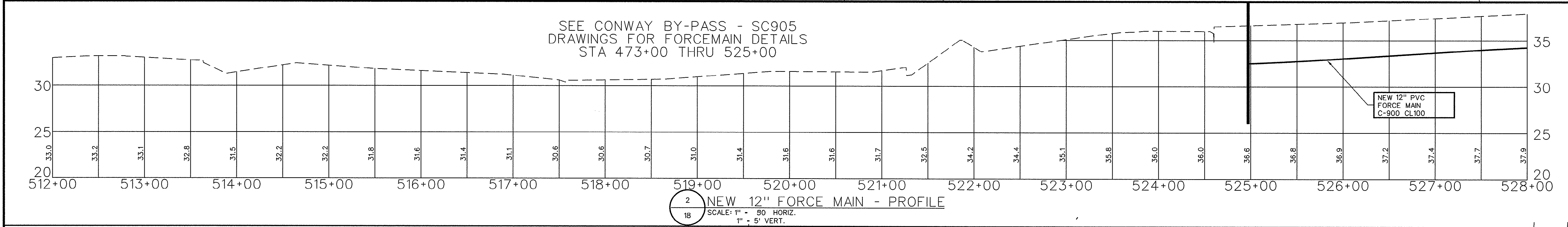
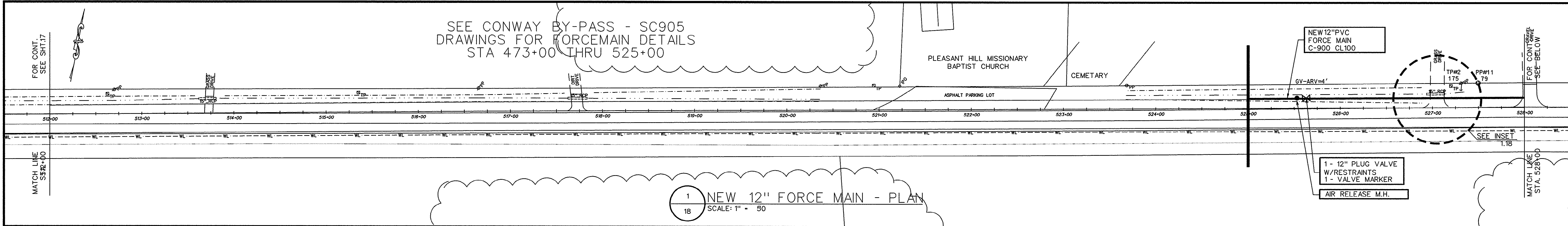
**NEW 12" FORCE MAIN
PLAN & PROFILE**

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEY'S ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 18 OF 34

30-27-018/34-S



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
COMBINATIONS

REVIEWED BY: *[Signature]* DATE: 28 Sept 99

REVIEWED BY: *[Signature]* DATE: _____

ENGINEERING
GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.18
N.T.S.

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

30-27-019/34-S

APP.	ENGINEER:	DATE:	SEAL	DRAWN BY:	CHECKED BY:	APP'D BY:
REVISIONS						
MARK						

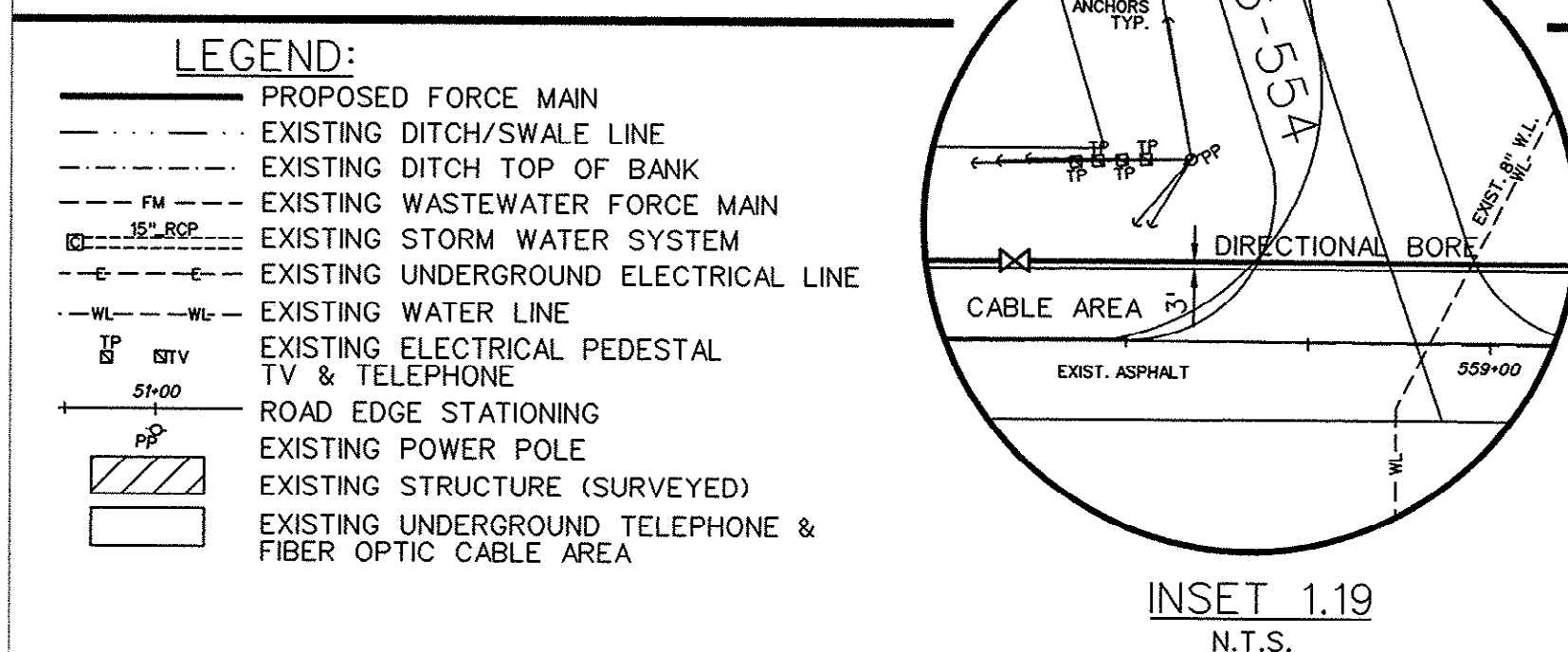
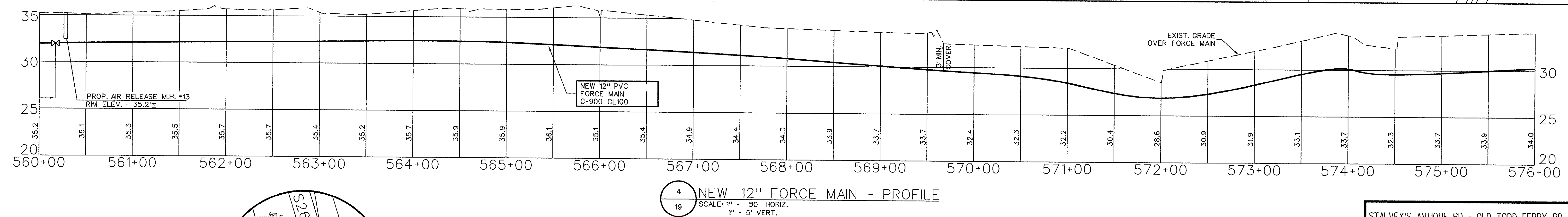
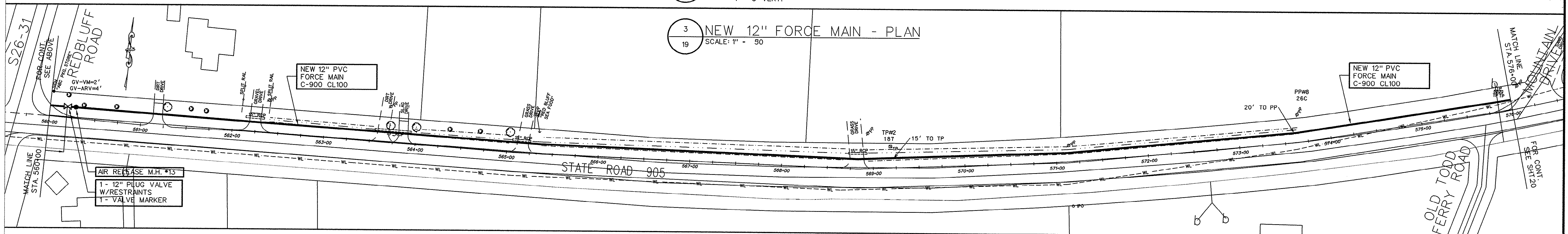
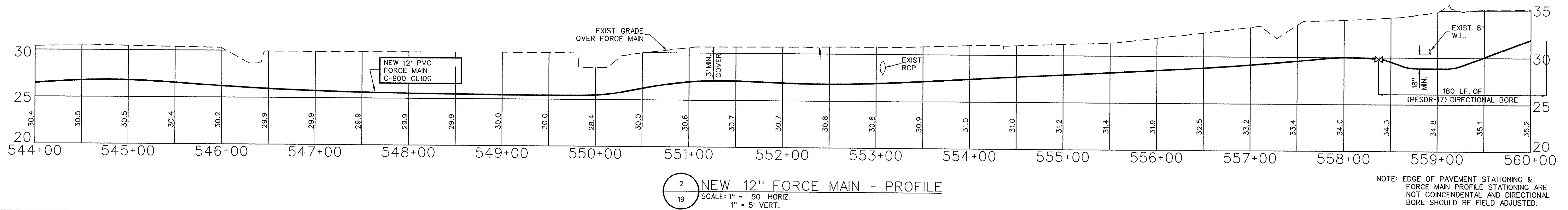
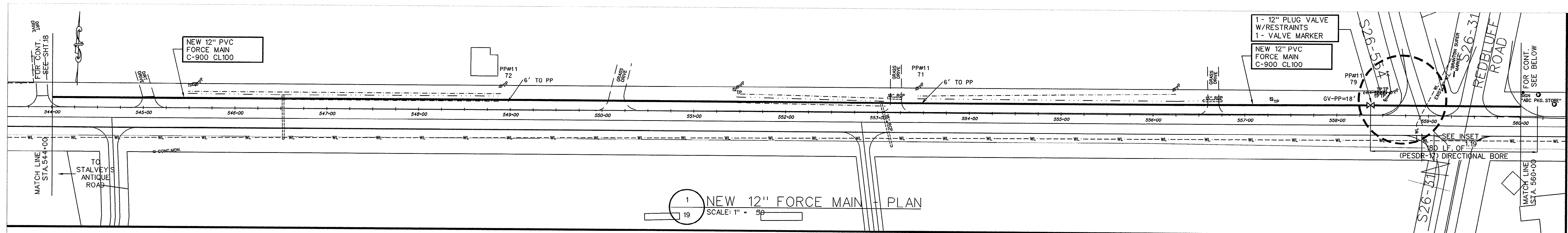
PADGETT LANE - ROBERTS BRANCH BRIDGE

NEW 12" FORCE MAIN
PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEY'S ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 19 OF 34

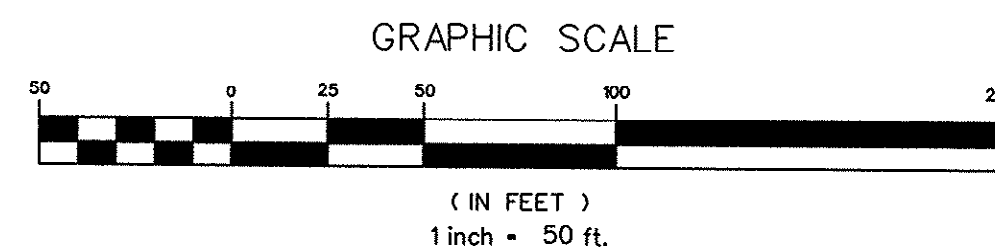


THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* 20 Sep 99
INSPECTIONS DATE

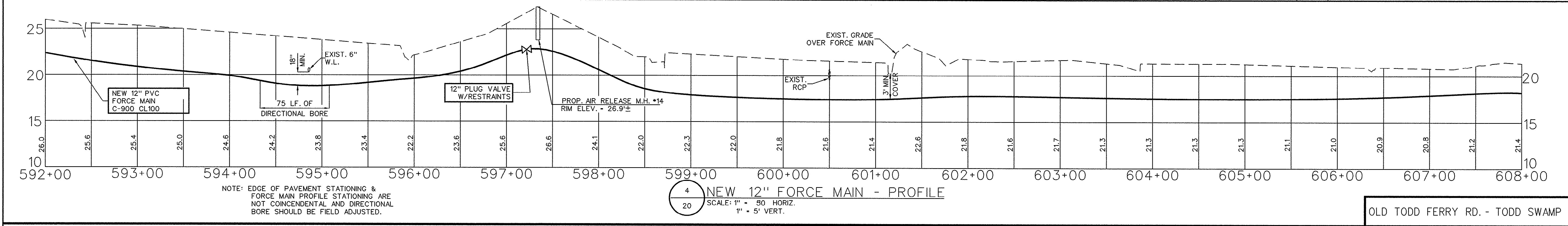
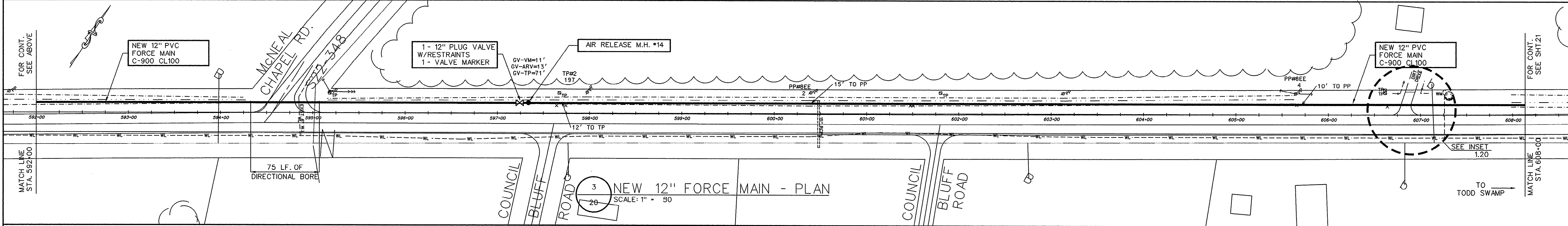
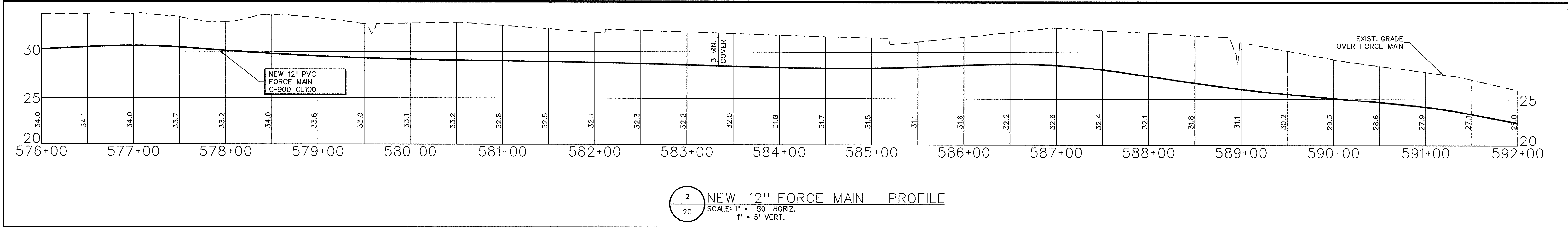
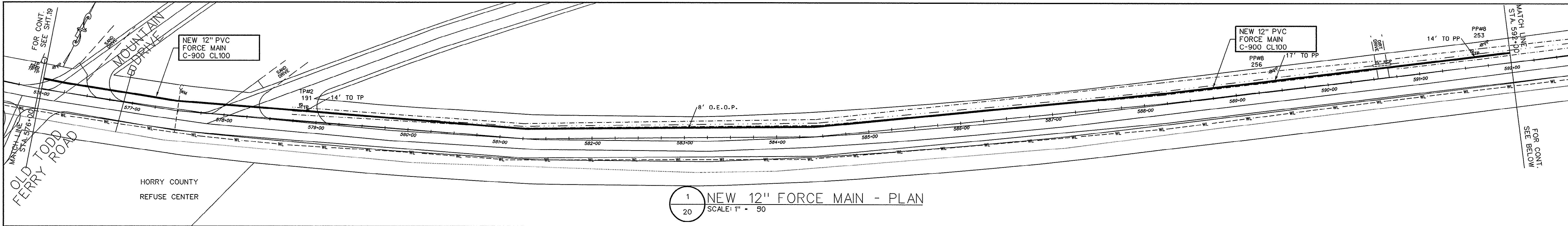
REVIEWED BY: *[Signature]*
ENGINEERING DATE

GRAND STRAND WATER AND SEWER AUTHORITY



8/99	MARK	DATE	AS-BUILT	REVISIONS	APP.	ENGINEER:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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30-27-010/34-S



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99 DATE

REVIEWED BY: *[Signature]* DATE

ENGINEERING
GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.20
N.T.S.

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

APP.	ENGINEER:	DATE:	SEAL	DRAWN BY:	CHECKED BY:	APP'D BY:
8/99	AS-BUILT	REVISIONS		R.S.A.	K.C.H.	
MARK	DATE					

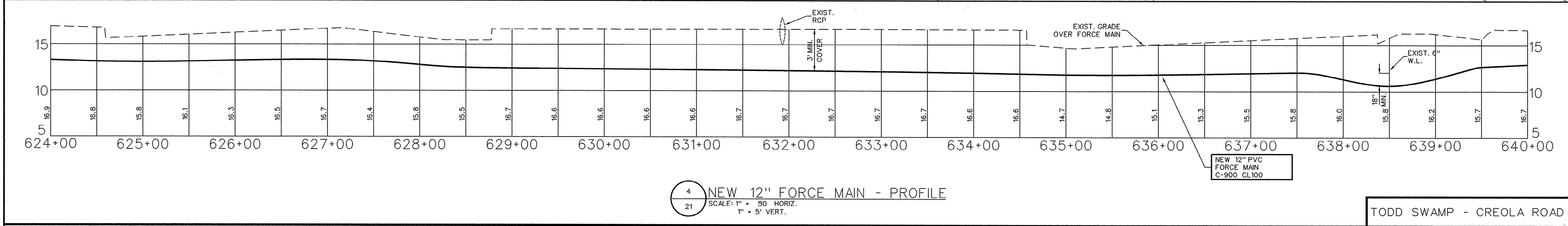
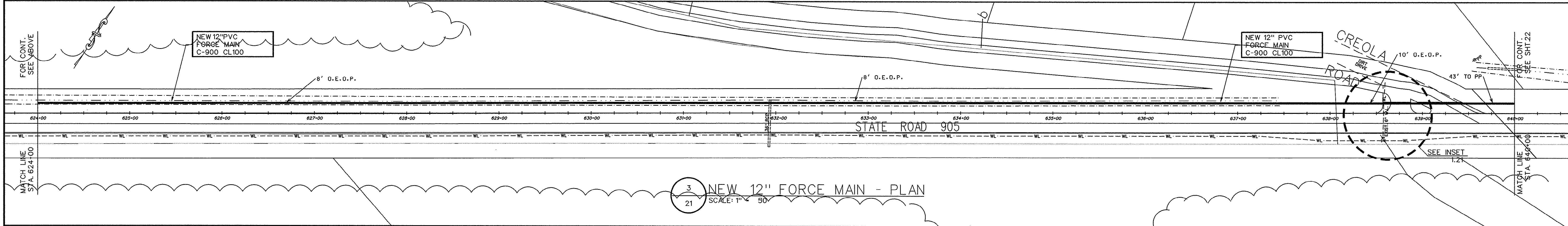
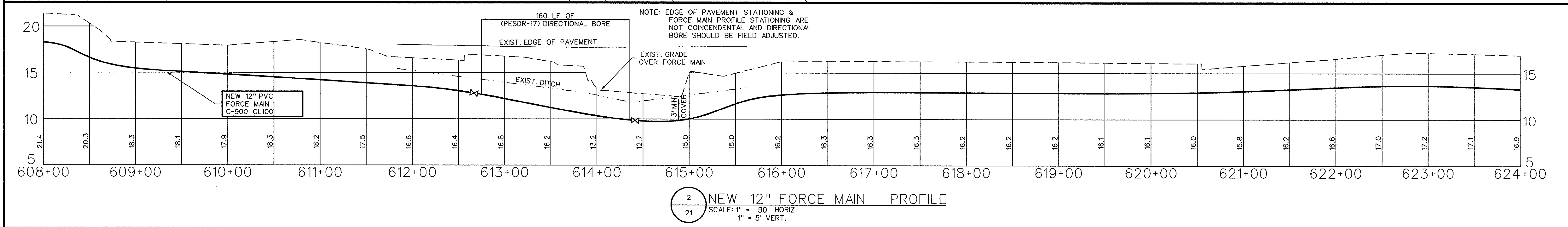
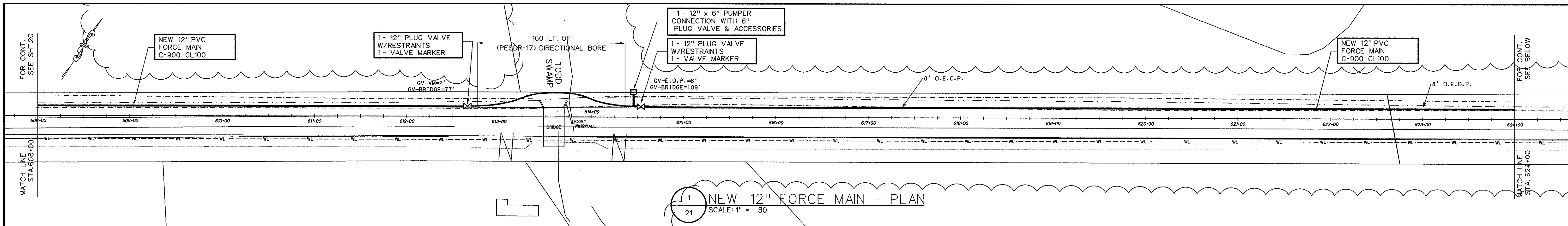
OLD TODD FERRY RD. - TODD SWAMP

**NEW 12" FORCE MAIN
PLAN & PROFILE**

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEYS ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 22 OF 34



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT AS-BUILT CONDITIONS

REVIEWED BY: *[Signature]* 25 Sep 99 DATE

REVIEWED BY: *[Signature]* DATE

ENGINEERING

GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.21

N.T.S.

GRAPHIC SCALE

(IN FEET)

1 inch = 50 ft.

30-27-022/34-S

ENGINEER:

DATE:

SEAL

REVISIONS

AS-BUILT

DATE

MARK

DRAWN BY: R.S.A.

CHECKED BY: K.C.H.

APP'D BY:

TODD SWAMP - CREOLA ROAD

NEW 12" FORCE MAIN PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS FOR

G.S.W. & S.A.

U.S. HIGHWAY 905 FORCE MAIN PADGETT LANE TO PUMP STATION #140

PROJECT NO. 793-04

HORRY COUNTY, SOUTH CAROLINA

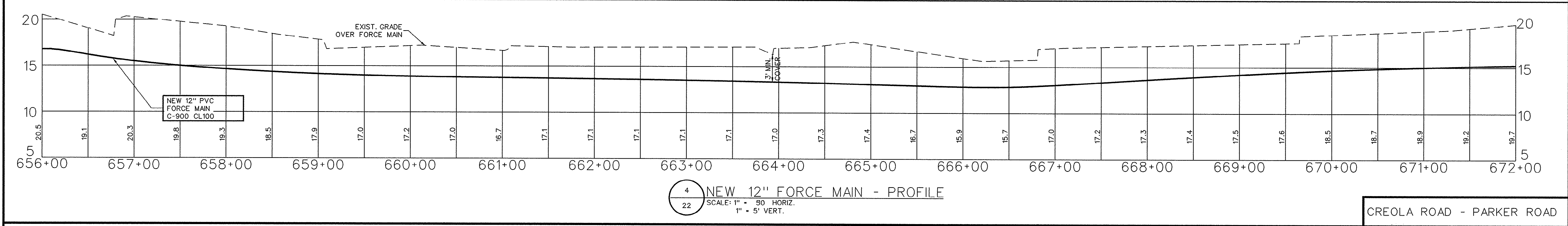
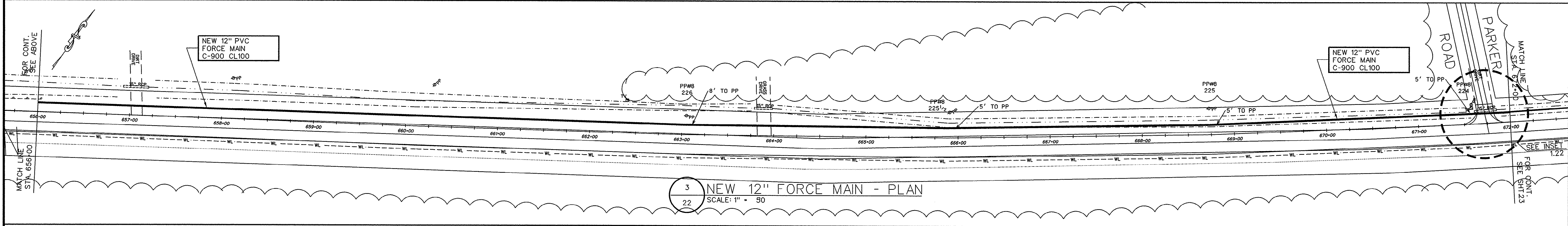
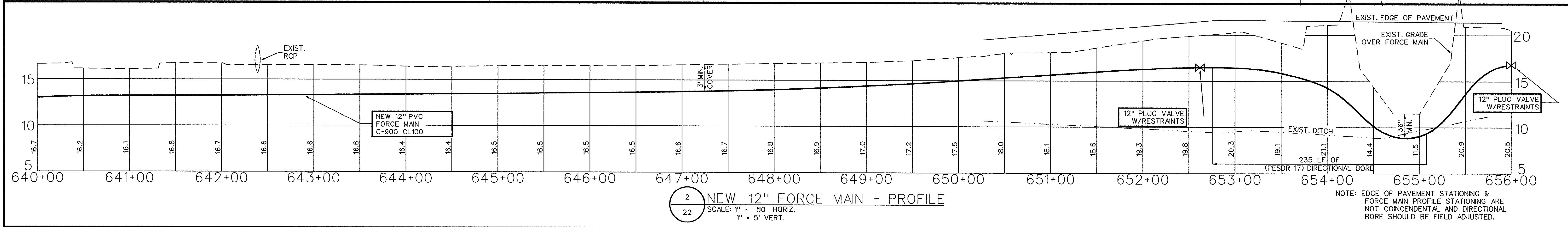
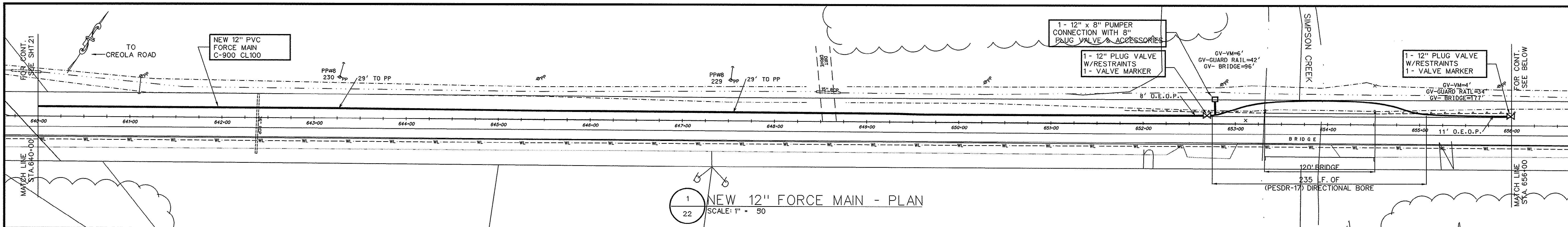
E.T.S.

ENGINEERING AND TECHNICAL SERVICES, INC.

PAWLEYS ISLAND, SOUTH CAROLINA

(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 22 OF 34



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- FM - EXISTING WASTEWATER FORCE MAIN
- SW - EXISTING STORM WATER SYSTEM
- EW - EXISTING UNDERGROUND ELECTRICAL LINE
- WL - EXISTING WATER LINE
- EP - EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- ROAD - EXISTING ROAD
- PP - EXISTING POWER POLE
- STRUCT - EXISTING STRUCTURE (SURVEYED)
- UT - EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99 DATE

REVIEWED BY: *[Signature]* DATE

ENGINEERING
GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.22
N.T.S.

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

30-27-023/34-S

CREOLA ROAD - PARKER ROAD

NEW 12" FORCE MAIN
PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEY ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 23 OF 34

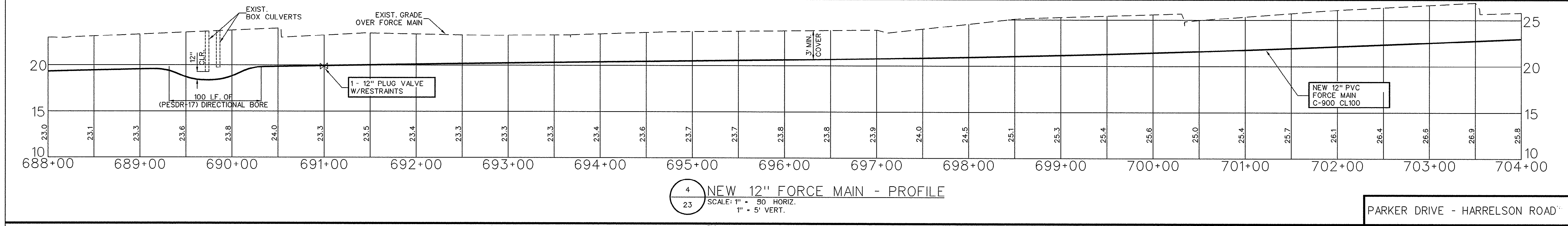
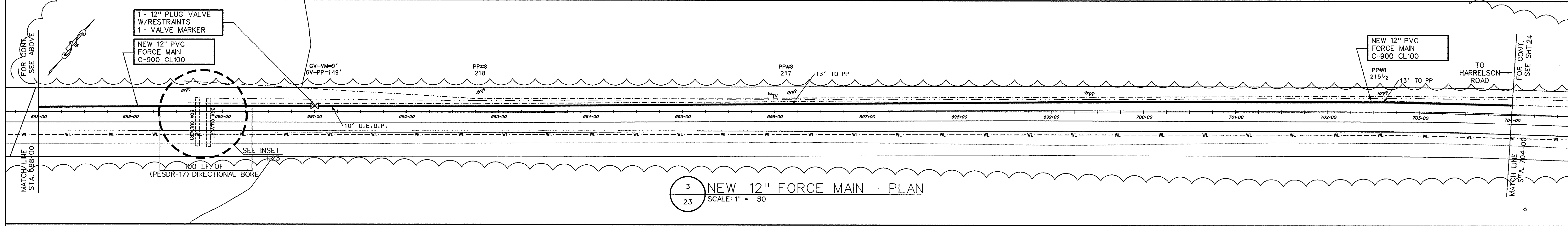
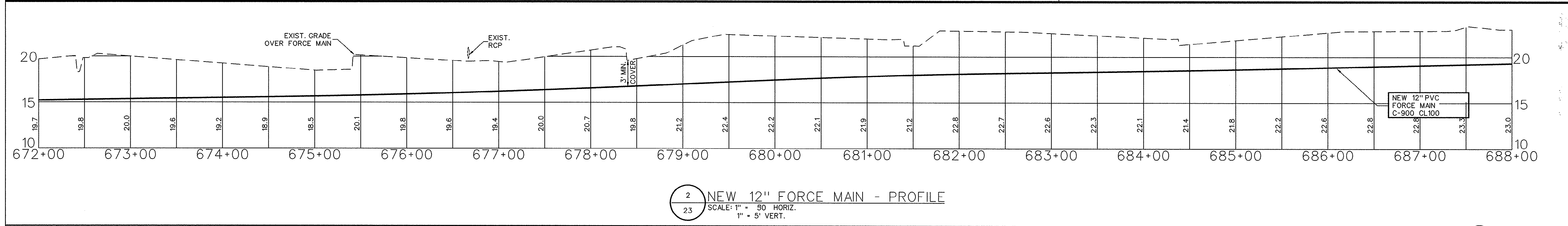
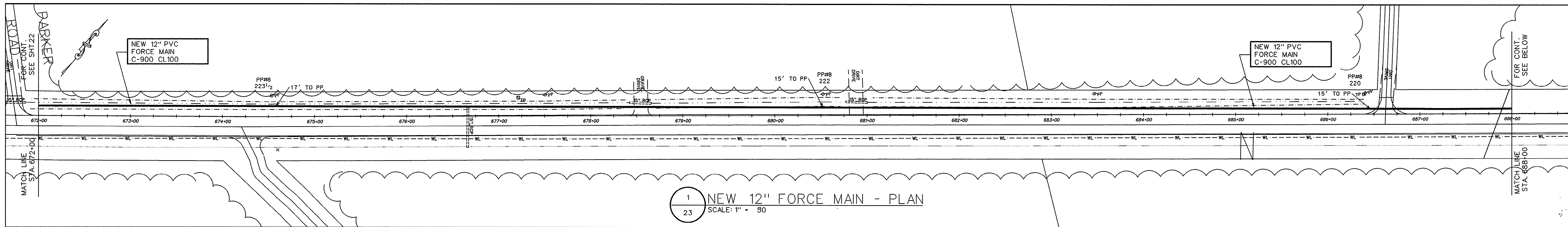
APPROVED		ENGINEER:		DATE:	
SEAL					
REVISIONS					
DATE					
MARK					

DRAWN BY: R.S.A.

CHECKED BY: K.C.H.

APP'D BY:

8/99 AS-BUILT



LEGEND:

- PROPOSED FORCE MAIN
- - - EXISTING DITCH/SWALE LINE
- - - EXISTING DITCH TOP OF BANK
- - - EXISTING WASTEWATER FORCE MAIN
- - - EXISTING STORM WATER SYSTEM
- - - EXISTING UNDERGROUND ELECTRICAL LINE
- - - EXISTING WATER LINE
- - - EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- - - ROAD EDGE STATIONING
- - - EXISTING POWER POLE
- - - EXISTING STRUCTURE (SURVEYED)
- - - EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

INSET 1.23
N.T.S.

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99 DATE

REVIEWED BY: *[Signature]* DATE

ENGINEERING
GRAND STRAND WATER AND SEWER AUTHORITY

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

APP.	ENGINEER:
DATE:	SEAL

REVISIONS	DATE	DESCRIPTION
B/99	AS-BUILT	

MARK	DATE	DESCRIPTION

PARKER DRIVE - HARRELSON ROAD

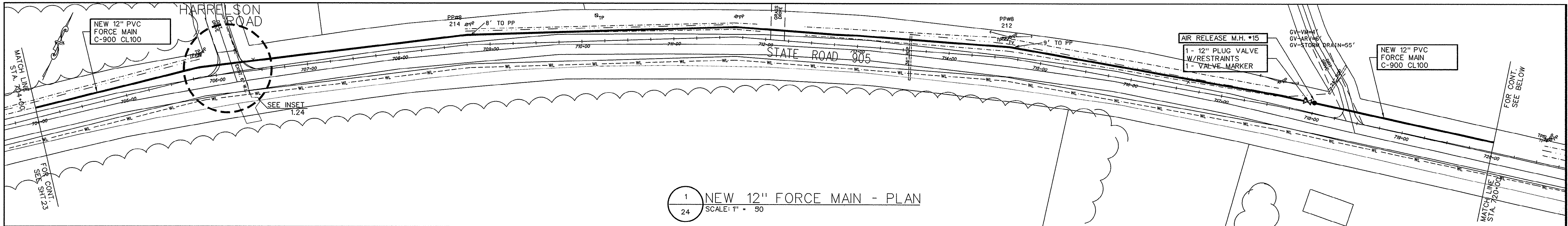
**NEW 12" FORCE MAIN
PLAN & PROFILE**

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

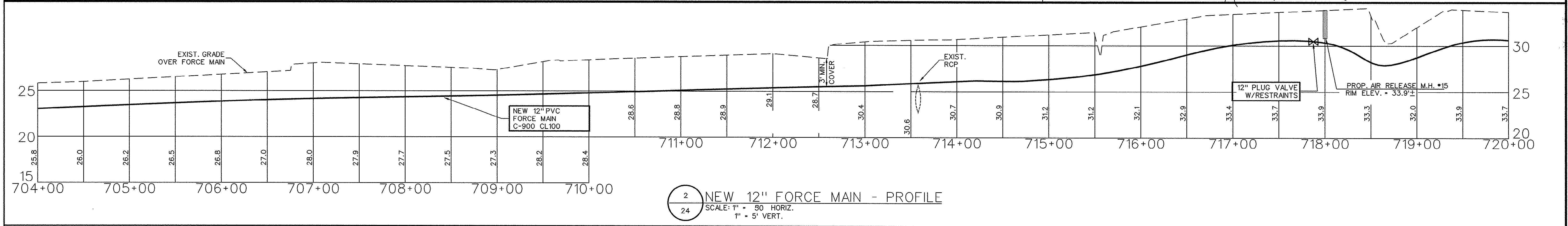
E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEYS ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 24 OF 34

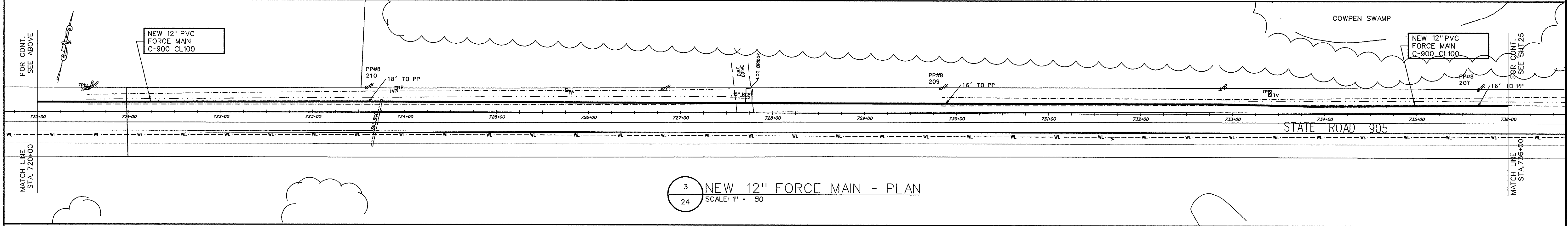
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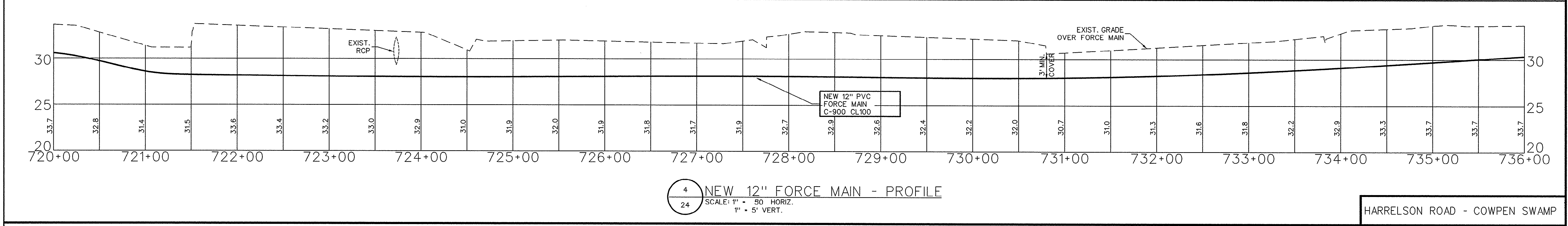
1 NEW 12" FORCE MAIN - PLAN
SCALE: 1" = 50'



2 NEW 12" FORCE MAIN - PROFILE
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



3 NEW 12" FORCE MAIN - PLAN
SCALE: 1" = 50'



4 NEW 12" FORCE MAIN - PROFILE
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL
- EXISTING TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

INSET 1.24
N.T.S.

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* DATE: 28 Sep 99

REVIEWED BY: *[Signature]* DATE: _____

ENGINEERING: *[Signature]* DATE: _____

GRAND STRAND WATER AND SEWER AUTHORITY

GRAPHIC SCALE

0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

APP.	ENGINEER:	DATE:	SEAL	R.S.A.	K.C.H.	APP'D BY:
8/99	AS-BUILT	REVISIONS	DATE			

HARRELSON ROAD - COWPEN SWAMP

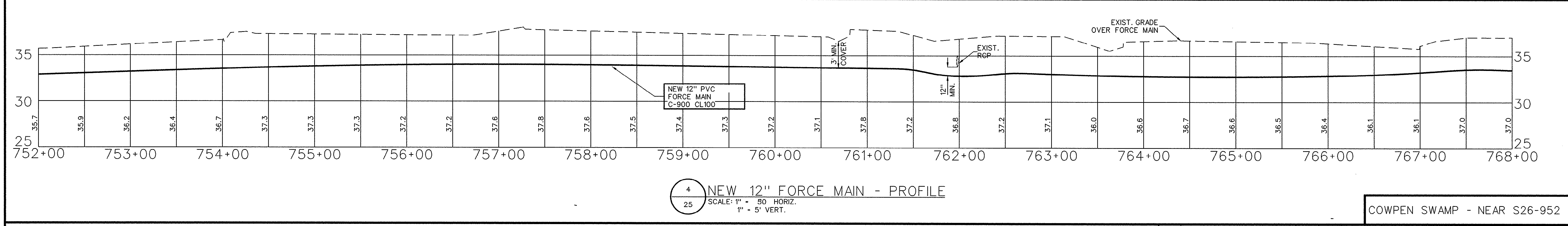
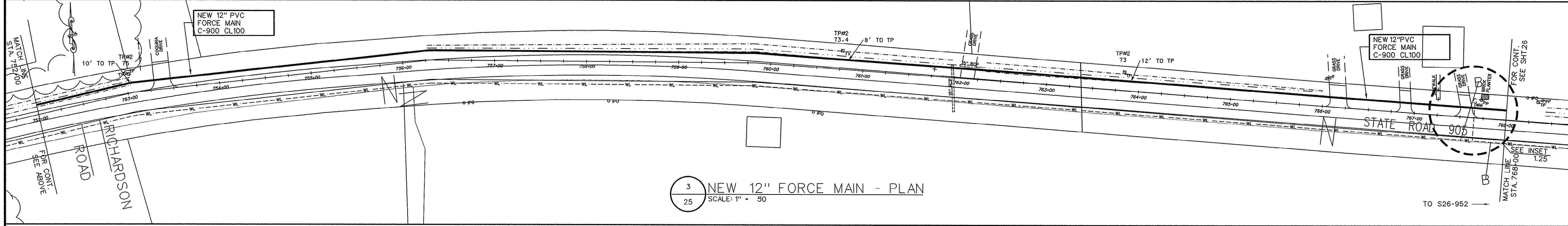
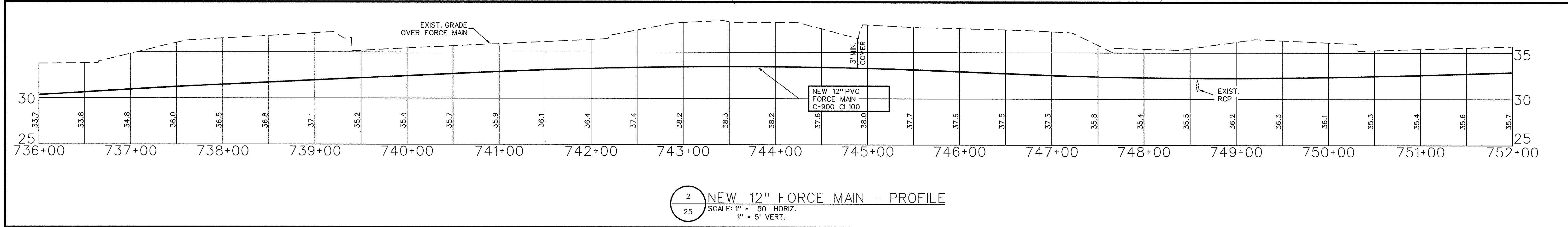
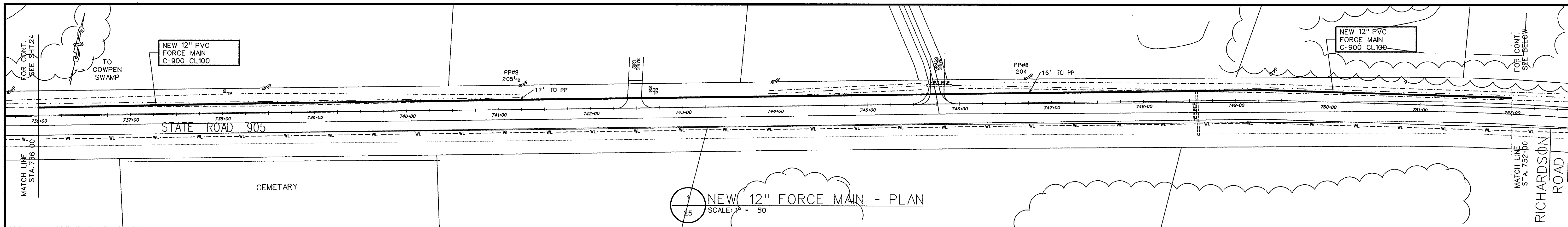
**NEW 12" FORCE MAIN
PLAN & PROFILE**

FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEYS ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 25 OF 34

30-27-025/34-S



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- FM - EXISTING WASTEWATER FORCE MAIN
- IS-RCP - EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT

AS-BUILT

CONDITIONS

REVIEWED BY: *[Signature]* 28 SEP 99 DATE

INSPECTIONS

REVIEWED BY: *[Signature]* DATE

ENGINEERING

GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.25

N.T.S.

GRAPHIC SCALE

(IN FEET)

1 inch = 50 ft.

30-27-026/34-S

COWPEN SWAMP - NEAR S26-952

NEW 12" FORCE MAIN PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS FOR

G.S.W. & S.A.

U.S. HIGHWAY 905 FORCE MAIN

PADGETT LANE TO PUMP STATION #140

PROJECT NO. 793-04

HORRY COUNTY, SOUTH CAROLINA

E.T.S.

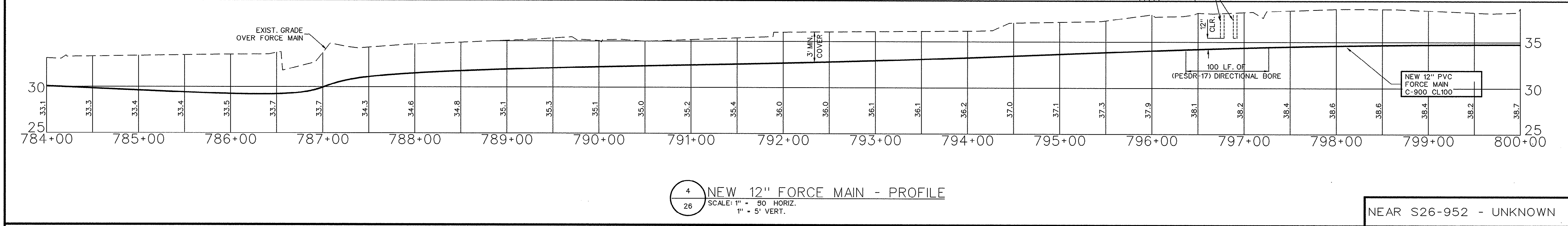
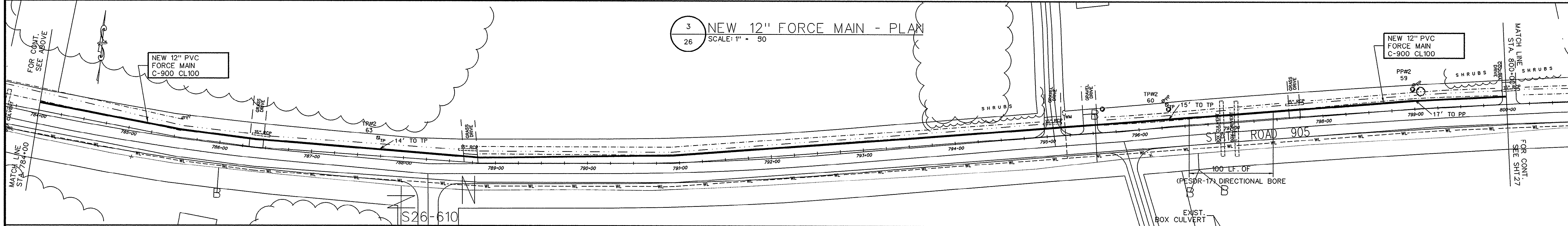
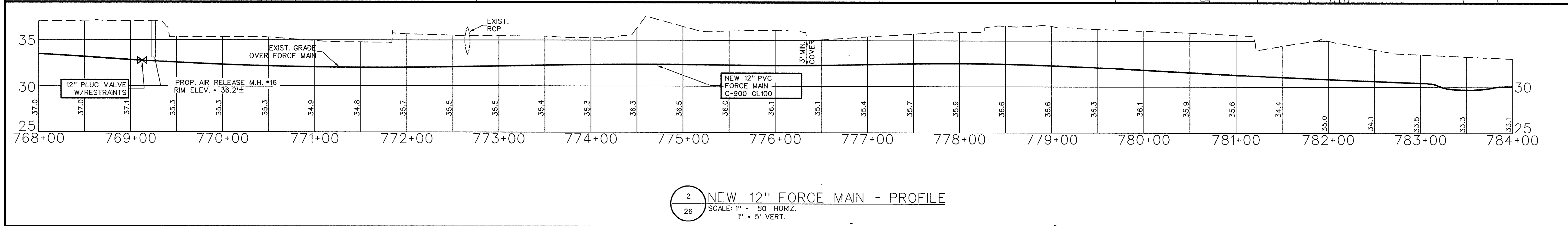
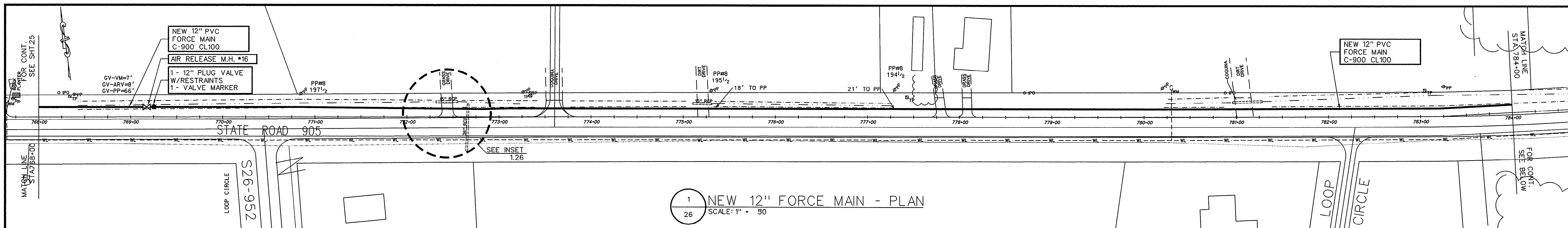
ENGINEERING AND TECHNICAL SERVICES, INC.

PAWLEYS ISLAND, SOUTH CAROLINA

(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 26 OF 34

APP.	ENGINEER:	DRAWN BY: R.S.A.	CHECKED BY: K.C.H.	APP'D BY:
	DATE:			
REVISIONS	SEAL	B/99	AS-BUILT	MARK



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

INSET 1.26
N.T.S.

THESE DRAWINGS REFLECT
AS-BUILT
CONDITIONS

REVIEWED BY: *[Signature]* 28 Sep 99
INSPECTIONS DATE

REVIEWED BY: *[Signature]*
ENGINEERING DATE

GRAND STRAND WATER AND SEWER AUTHORITY

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

30-27-028/34-S

MARK	DATE	AS-BUILT	REVISIONS	APP.	ENGINEER:
					DATE:
					SEAL

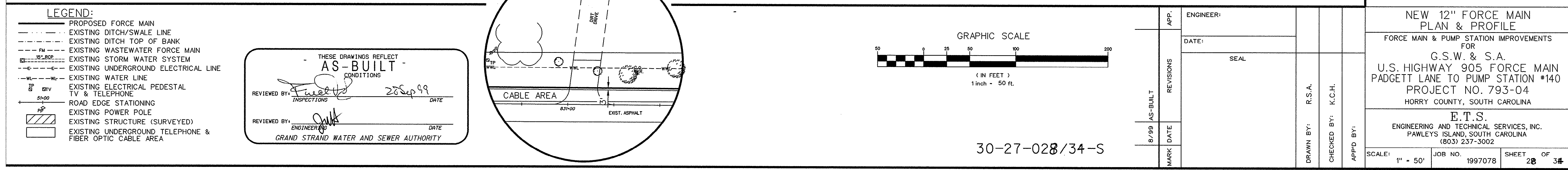
DRAWN BY: R.S.A.
CHECKED BY: K.C.H.
APPROVED BY:

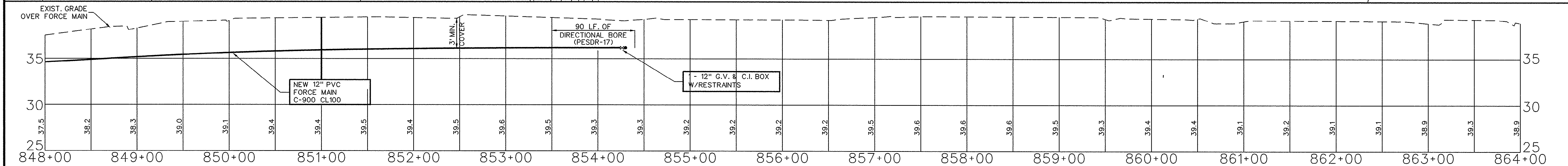
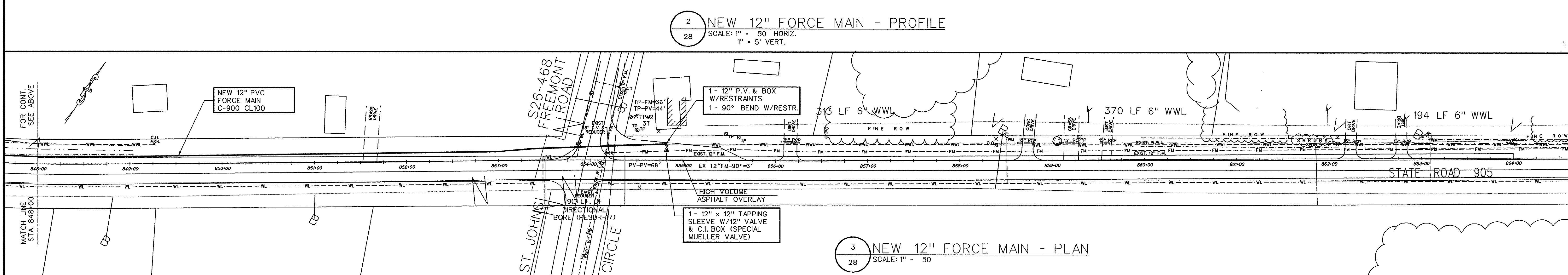
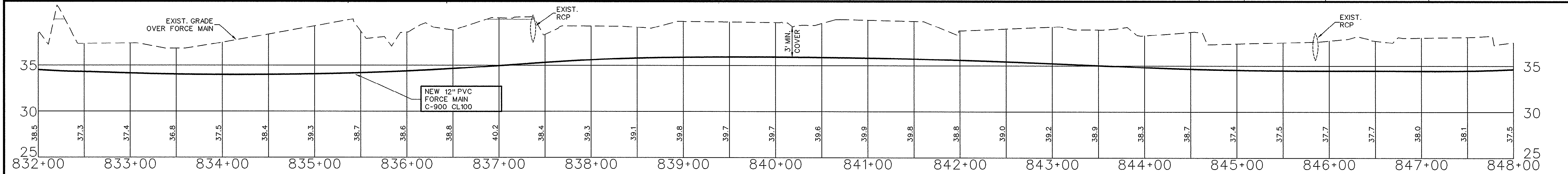
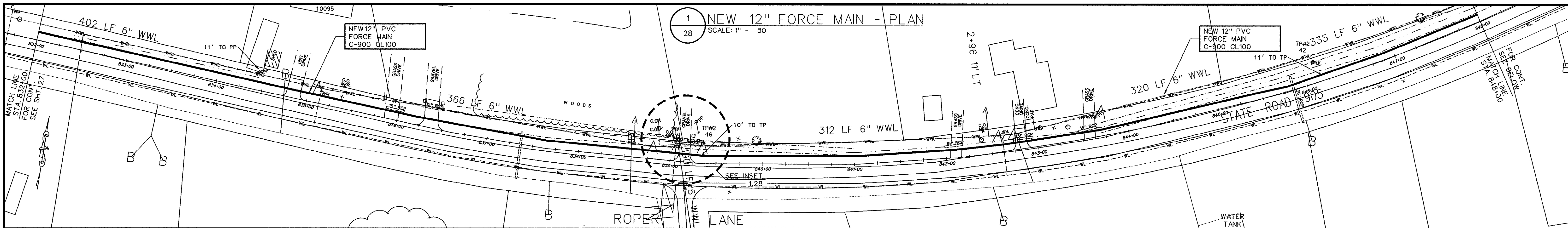
NEAR S26-952 - UNKNOWN

PROPOSED 12" FORCE MAIN
PLAN & PROFILE
FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04
HORRY COUNTY, SOUTH CAROLINA

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEYS ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 28 OF 34





LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT AS-BUILT CONDITIONS

REVIEWED BY: *[Signature]* DATE: 28 Sep 99

REVIEWED BY: *[Signature]* DATE: *[Blank]*

ENGINEERING: *[Signature]* DATE: *[Blank]*

GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.28 N.T.S.

GRAPHIC SCALE

0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

30-27-029/34-S

APP.	ENGINEER:	DATE:	SEAL
8/99	AS-BUILT	REVISIONS	DATE
MARK	DATE	REVISIONS	DATE

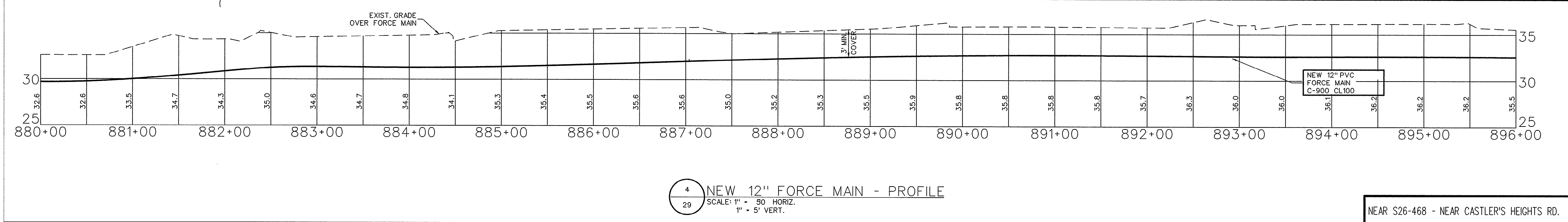
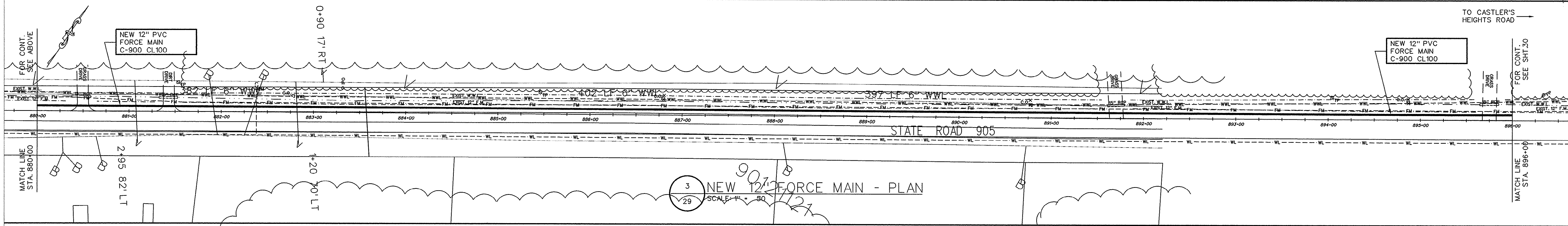
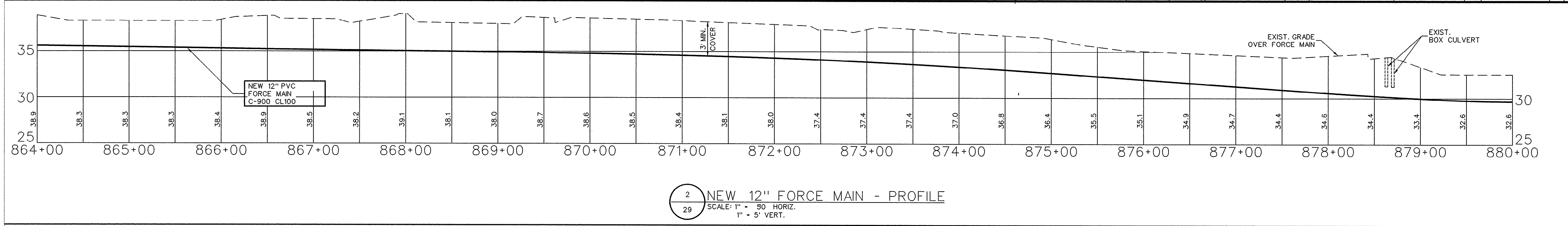
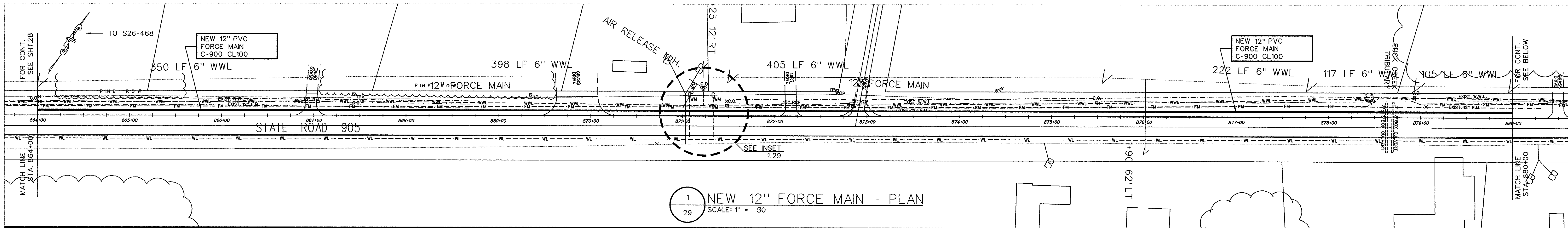
ST. JOHNS CHURCH - NEAR S26-468

NEW 12" FORCE MAIN PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS FOR G.S.W. & S.A. U.S. HIGHWAY 905 FORCE MAIN PADGETT LANE TO PUMP STATION #140 PROJECT NO. 793-04 HORRY COUNTY, SOUTH CAROLINA

E.T.S. ENGINEERING AND TECHNICAL SERVICES, INC. PAWLEYS ISLAND, SOUTH CAROLINA (803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 29 OF 34



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- EXISTING WASTEWATER FORCE MAIN
- EXISTING STORM WATER SYSTEM
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING WATER LINE
- EXISTING ELECTRICAL PEDESTAL
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT AS-BUILT CONDITIONS

REVIEWED BY: *[Signature]* 2/28/99 DATE

REVIEWED BY: *[Signature]* DATE

GRAND STRAND WATER AND SEWER AUTHORITY

INSET 1.29

N.T.S.

GRAPHIC SCALE

(IN FEET)

1 inch = 50 ft.

30-27-030/34-S

ENGINEER:	DATE:	SEAL:
DRAWN BY: R.S.A.		
CHECKED BY:		
APP'D BY:		

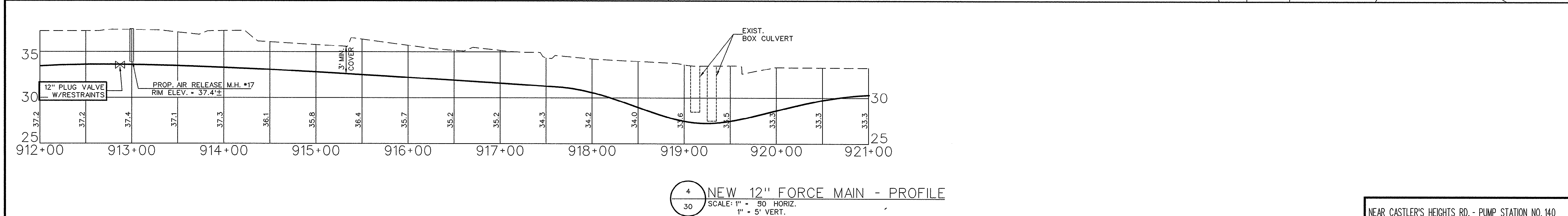
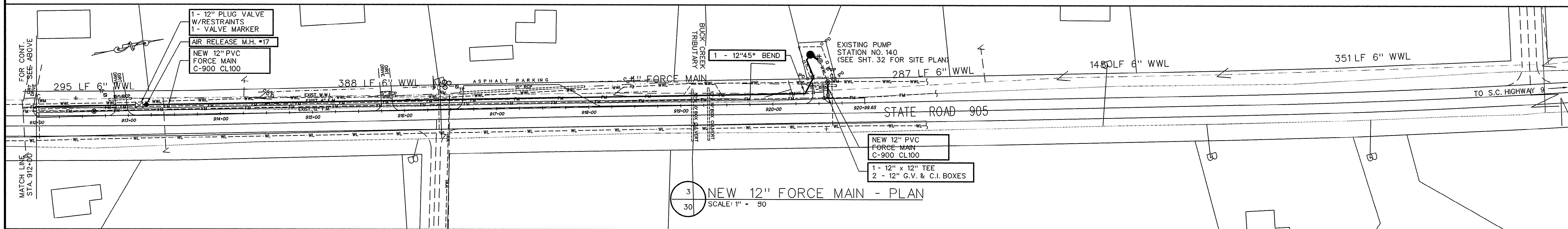
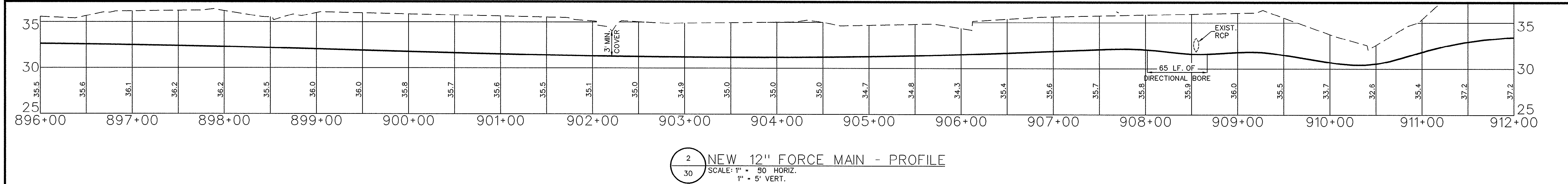
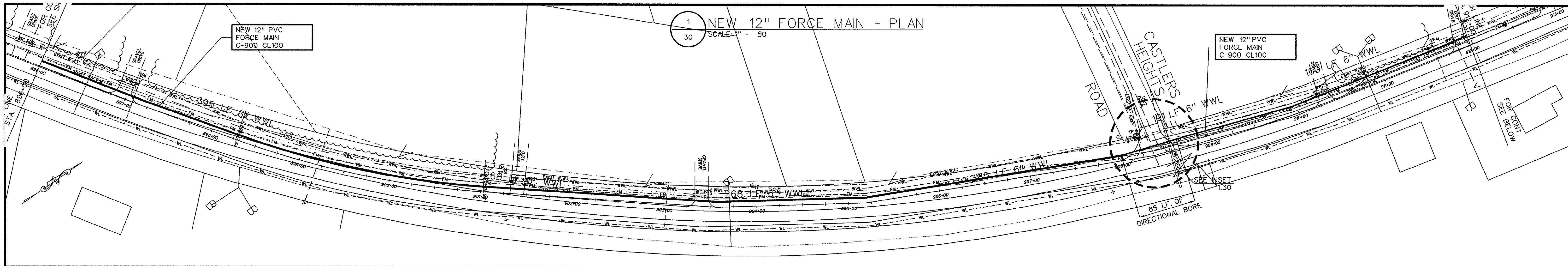
NEAR S26-468 - NEAR CASTLER'S HEIGHTS RD.

NEW 12" FORCE MAIN PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS FOR G.S.W. & S.A. U.S. HIGHWAY 905 FORCE MAIN PADGETT LANE TO PUMP STATION #140 PROJECT NO. 793-04 Horry County, South Carolina

E.T.S.
ENGINEERING AND TECHNICAL SERVICES, INC.
PAWLEY'S ISLAND, SOUTH CAROLINA
(803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 30 OF 34



LEGEND:

- PROPOSED FORCE MAIN
- EXISTING DITCH/SWALE LINE
- EXISTING DITCH TOP OF BANK
- FM - EXISTING WASTEWATER FORCE MAIN
- SW - EXISTING STORM WATER SYSTEM
- EL - EXISTING UNDERGROUND ELECTRICAL LINE
- WL - EXISTING WATER LINE
- ESTV - EXISTING ELECTRICAL PEDESTAL TV & TELEPHONE
- ROAD EDGE STATIONING
- EXISTING POWER POLE
- EXISTING STRUCTURE (SURVEYED)
- EXISTING UNDERGROUND TELEPHONE & FIBER OPTIC CABLE AREA

THESE DRAWINGS REFLECT AS-BUILT CONDITIONS

REVIEWED BY: *[Signature]* DATE: 28 Sep 99

REVIEWED BY: *[Signature]* DATE: *[Blank]*

ENGINEERING

GRAPHIC SCALE

1 inch = 50 ft.

INSET 1.30

30-27-030/34-S

APP.	ENGINEER:
8/99 <td>AS-BUILT</td>	AS-BUILT
DATE <td>SEAL</td>	SEAL
MARK <td>REVISIONS</td>	REVISIONS

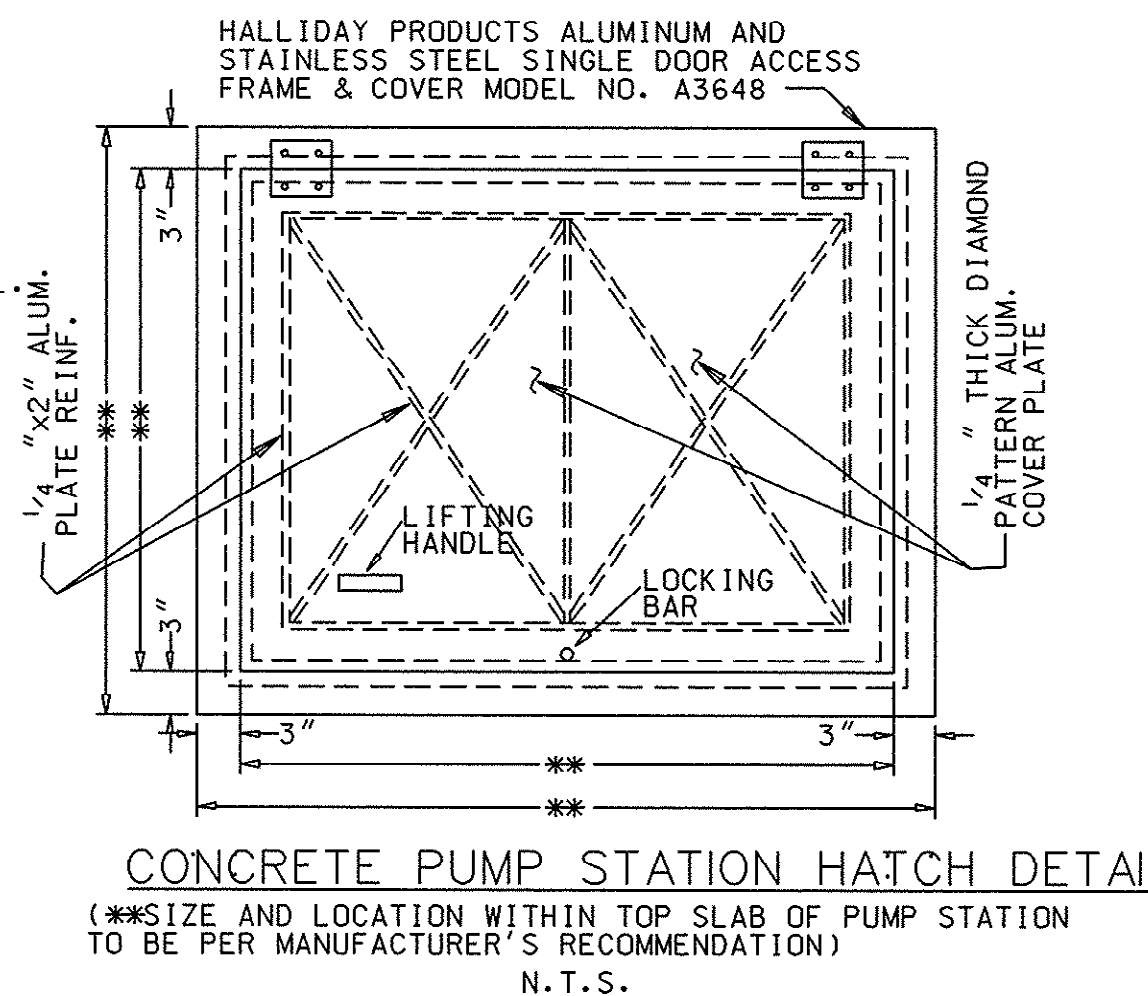
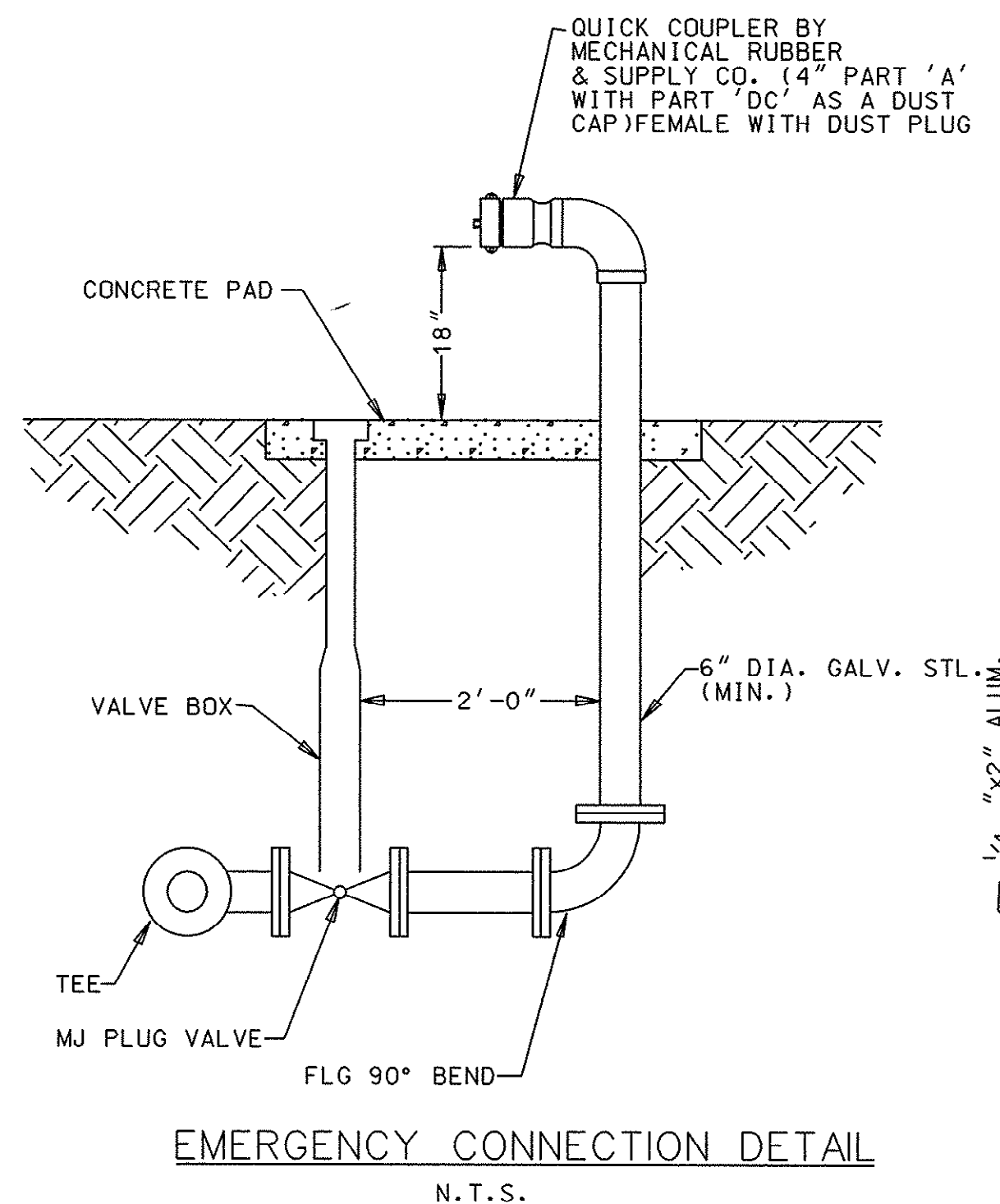
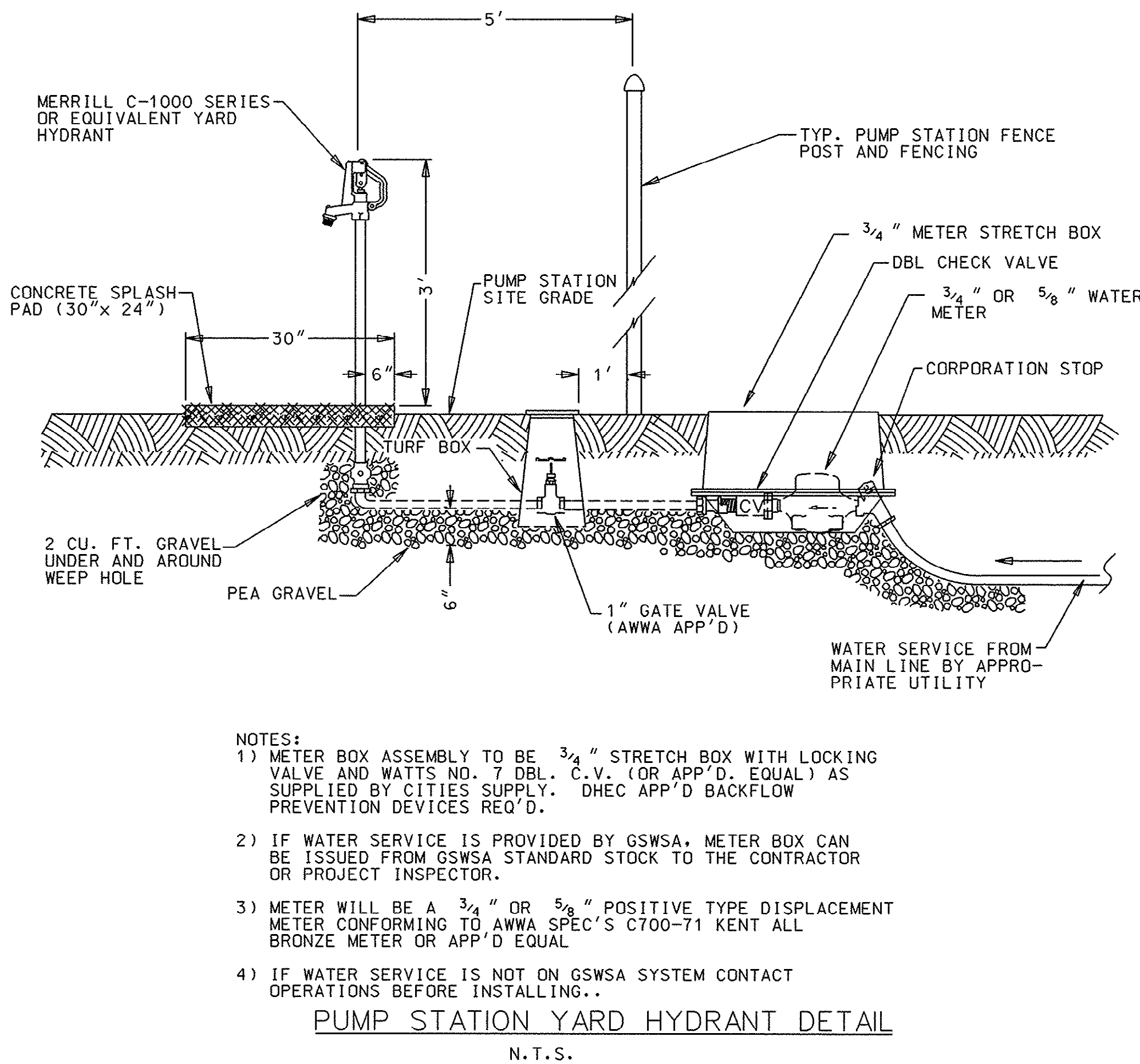
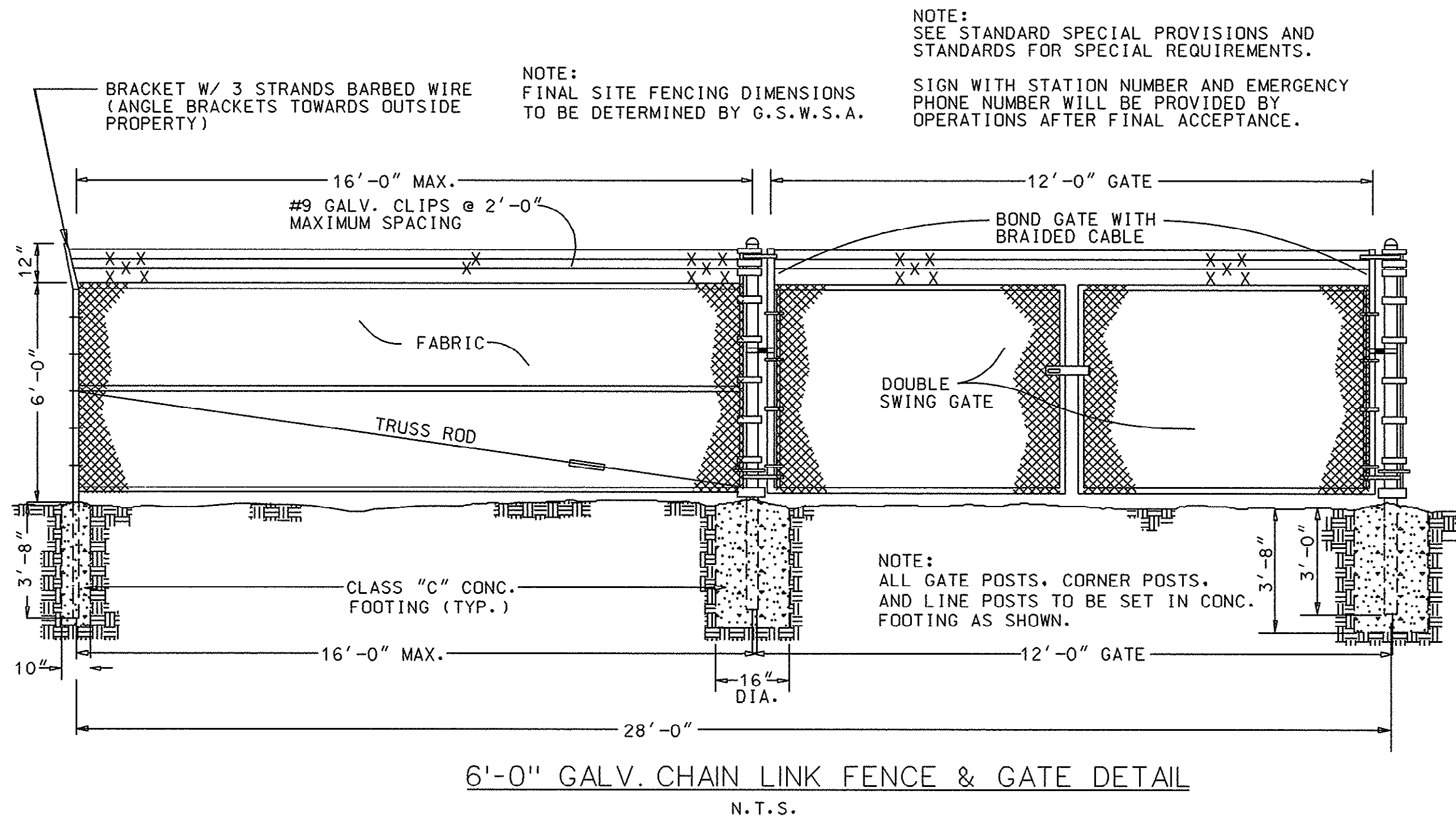
NEAR CASTLER'S HEIGHTS RD. - PUMP STATION NO. 140

PROPOSED 12" FORCE MAIN PLAN & PROFILE

FORCE MAIN & PUMP STATION IMPROVEMENTS FOR G.S.W. & S.A. U.S. HIGHWAY 905 FORCE MAIN PADGETT LANE TO PUMP STATION #140 PROJECT NO. 793-04 Horry County, South Carolina

E.T.S. ENGINEERING AND TECHNICAL SERVICES, INC. PAWLEY'S ISLAND, SOUTH CAROLINA (803) 237-3002

SCALE: 1" = 50' JOB NO. 1997078 SHEET 34 OF 34



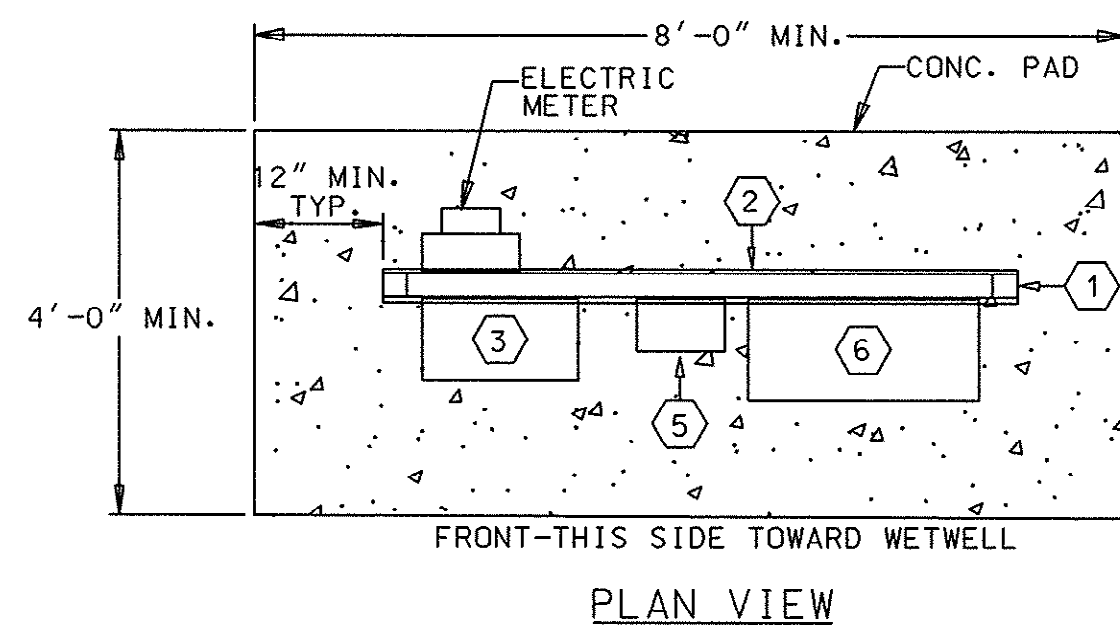
ELECTRICAL KEY NOTES

- ALUMINUM SQUARE TUBE 3"x 3"x 1/8"x 9'-3" LONG WITH ALUMINUM 3"x 3"x 1/2" TOP CAP. SET SQUARE TUBE IN CONCRETE.
- ALUMINUM FLAT BAR 3"x 1/2"x 6'-6". ALL BOLTS, NUTS, WASHERS, ETC. NECESSARY TO FABRICATE RACK AND INSTALL EQUIPMENT SHALL BE STAINLESS STEEL.
- SQUARE D NEMA 3R DOUBLE THROW SWITCH, 200A, 600V, 3 PHASE.
- APPLETON AR20044 RECEPTACLE FOR GENERATOR CONNECTION.
- NEMA TYPE 4 GALVANIZED ENCLOSURE. SQUARE D QO OR QI CIRCUIT BREAKERS.
- PUMP CONTROLLER MOUNT TOP SIX FEET ABOVE SLAB. NEMA 3RX STAINLESS STEEL WITH 3 POINT LATCH AND DRIP SHIELD. PAD LOCKABLE.
- EYS SEALOFF FITTINGS WITH DUXSEAL.
- (2) 2" PVC CONDUITS TO WETWELL FOR PUMP POWER CABLES. 1-1 1/2" PVC CONDUIT TO WETWELL FOR FLOAT CABLES.
- 2" PVC CONDUIT WITH 4-3/0THHN CONDUCTORS TO UTILITY COMPANY POLE.
- GROUND ROD AND CLAMP.

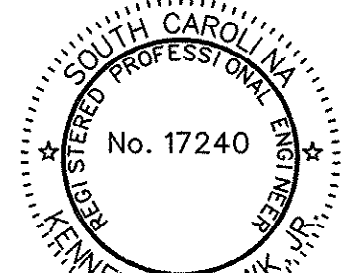
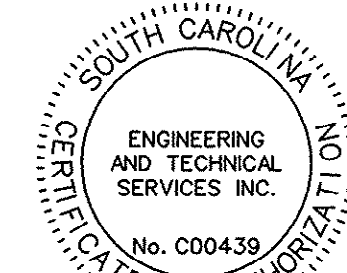
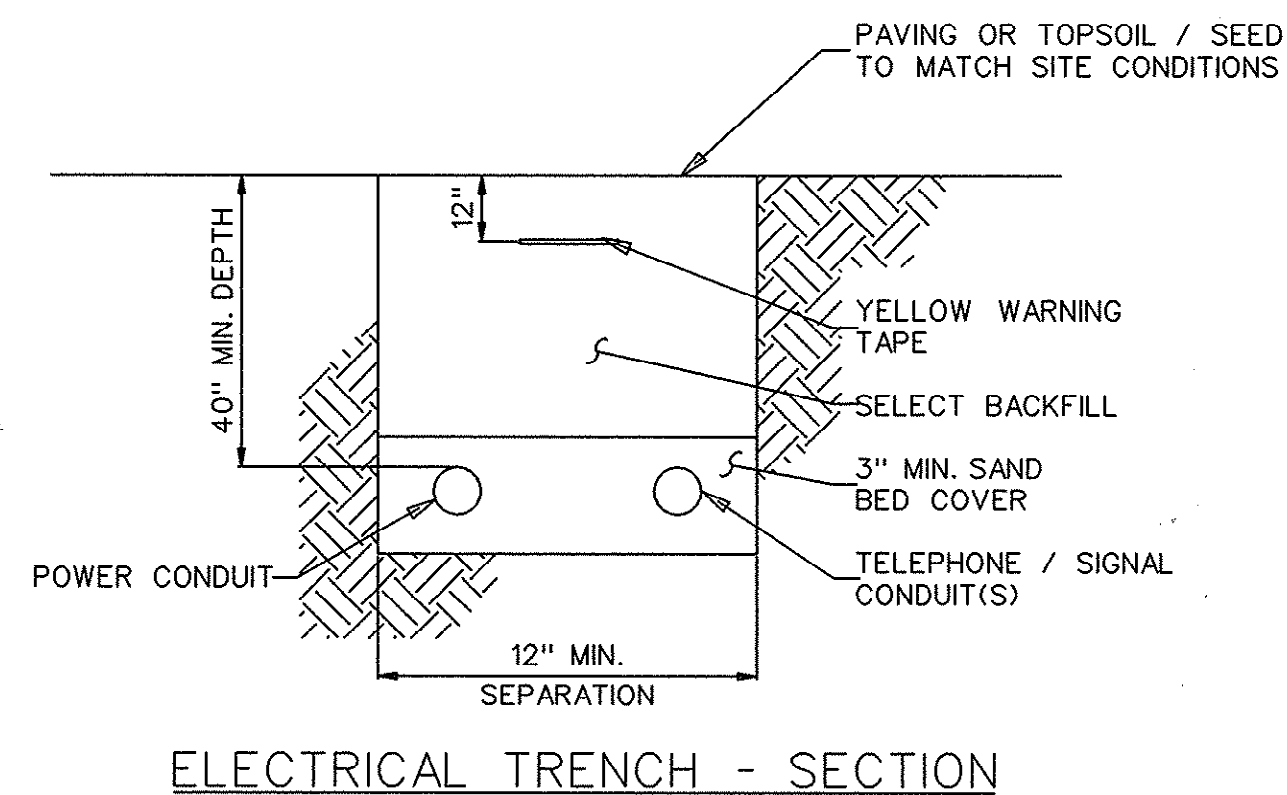
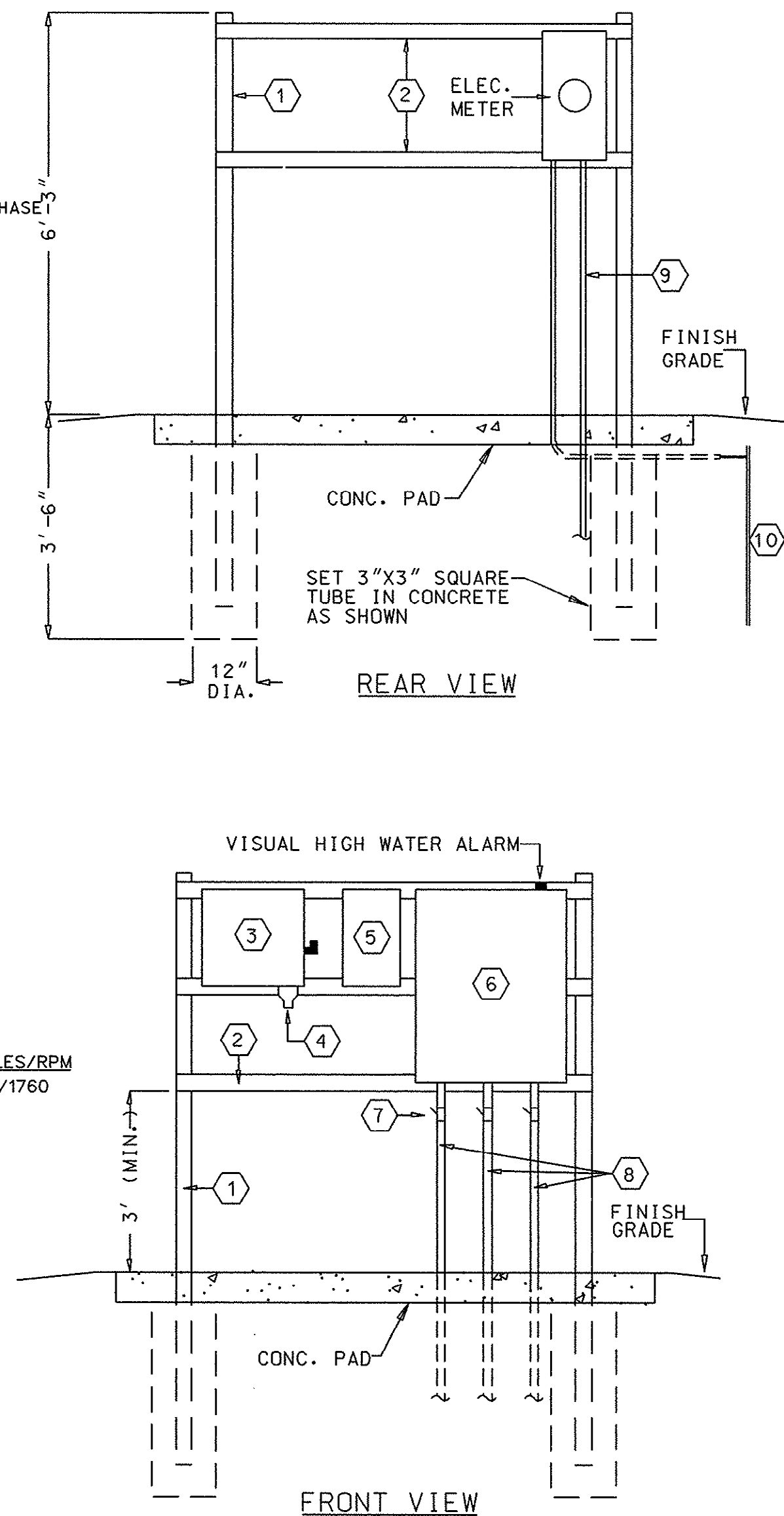
GENERAL ELECTRICAL NOTES

- ELECTRICAL WORK SHALL BE PERFORMED BY AN ELECTRICAL CONTRACTOR WITH AN APPROPRIATE BUSINESS LICENSE.
- ELECTRICAL PERMITS SHALL BE APPLIED FOR AT HORRY COUNTY BUILDING INSPECTION OFFICE.
- SEE PUMP STATION SPECIFICATIONS FOR ALL PLC/RADIO CONTROL REQUIREMENTS AND ALL ELECTRIC AND CONTROL REQUIREMENTS. PLC/RADIO PACKAGE NOT SHOWN.
- ELECTRIC UTILITY IS HORRY ELECTRIC. CONTACT IS TERRY WILLIAMS AT 248-2211 EXT. 334. CONTACT THEM FOR METER PAN REQUIREMENTS.
- RETAIN EXISTING 208 VOLT ELECTRICAL SERVICE IN PLACE UNTIL NEW PUMPS ARE READY FOR OPERATION. THEN INSTALL NEW SERVICE OF 277/480 VOLT 3 PHASE, 4 WIRE, 200A.
- REDUCED VOLTAGE STARTING SHALL BE INCLUDED IN THE PUMP CONTROL PACKAGE, SEE SPECIFICATIONS.
- REMOVE ALL EXISTING 208 VOLT ELECTRICAL EQUIPMENT AFTER NEW 480 VOLT SERVICE IS COMPLETE INCLUDING: METER CONDUIT, CONDUCTORS, PANELS, ETC...
- PUMP ELECTRICAL DETAIL:

HP	KW	PHASE	VOLTAGE	FLA	LRA	CODE	RATED INPUT KW	POLES/RPM
47	35	3	460	58	405	H	40	4/1760



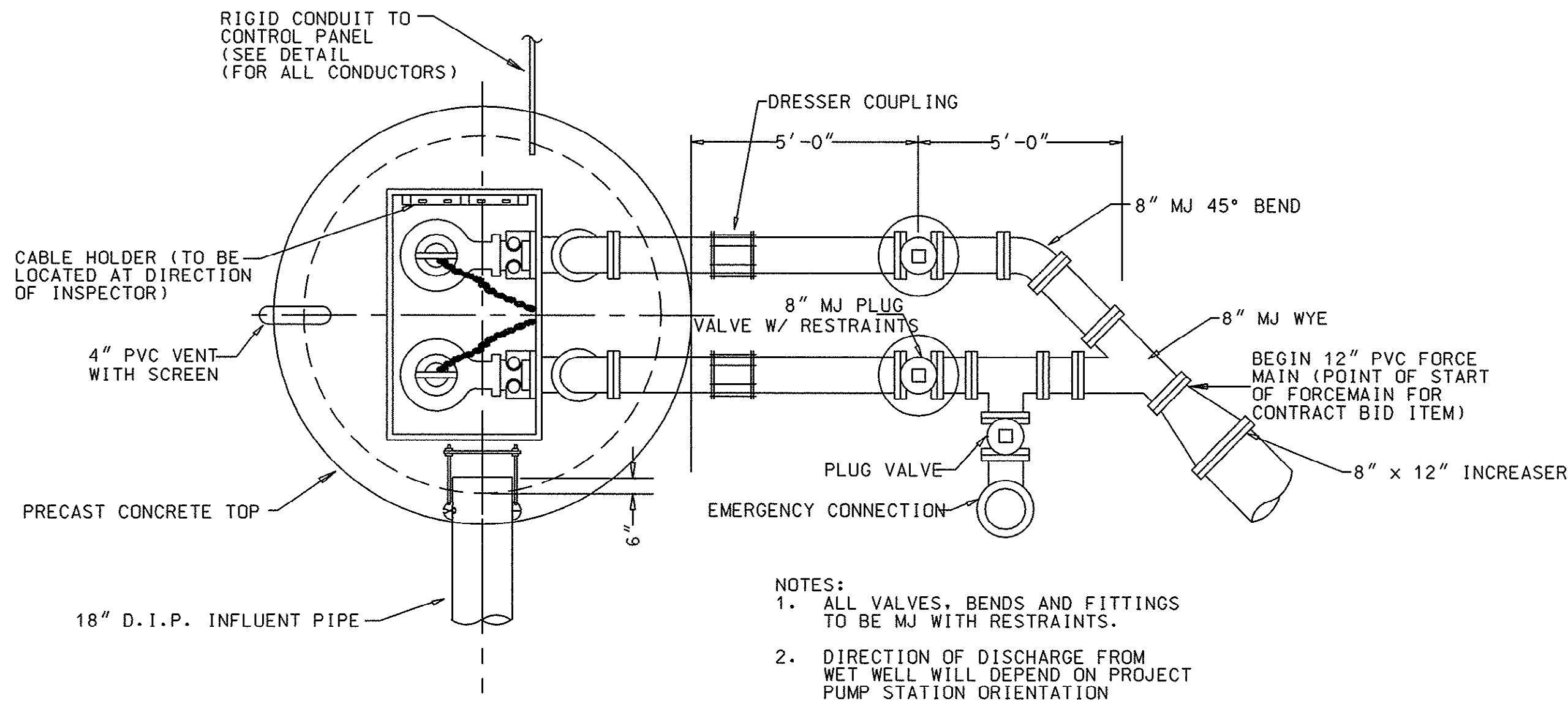
PUMP STATION CONTROL PANEL DETAIL
N.T.S.



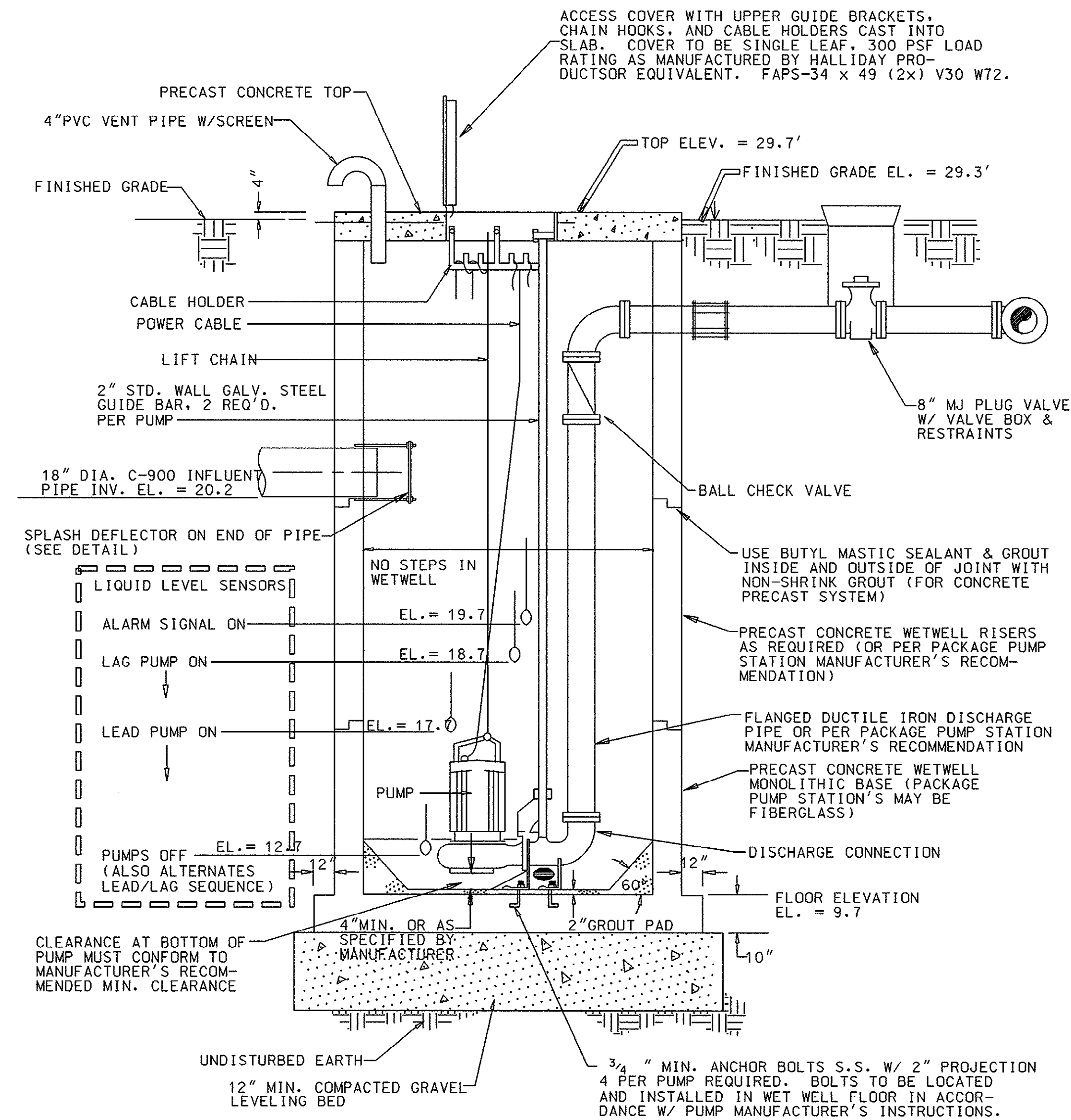
FORCE MAIN & PUMP STATION IMPROVEMENTS
FOR
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04

30-27-032/34-S

BY DATE	
REVISION	
PADGETT LANE - PUMP STATION NO. 140 (TYPICAL PUMP STATION DETAILS) GRAND STRAND WATER & SEWER AUTHORITY	
P.O. BOX 1537, CONWAY, SC 29526 TELEPHONE (803) 347-4641 OR 448-1686	
PROJECT #08-654-03(F.M.) PROJECT #08-680-01(P.S.)	DATE: JANUARY 21, 1998
SCALE: AS SHOWN	FILENAME: PS-DTL.DGN
DRAWN BY: JOHN HINSON	CHECKED BY: K.C.H.
APPROVED BY: JIM HEMBREE	
FRED E. AKEL P.E. #12859	SHEET 22 OF 34
DRAWING NO. 97078_PS	



TYPICAL PLAN - DUPLEX PUMP STATION
N.T.S.

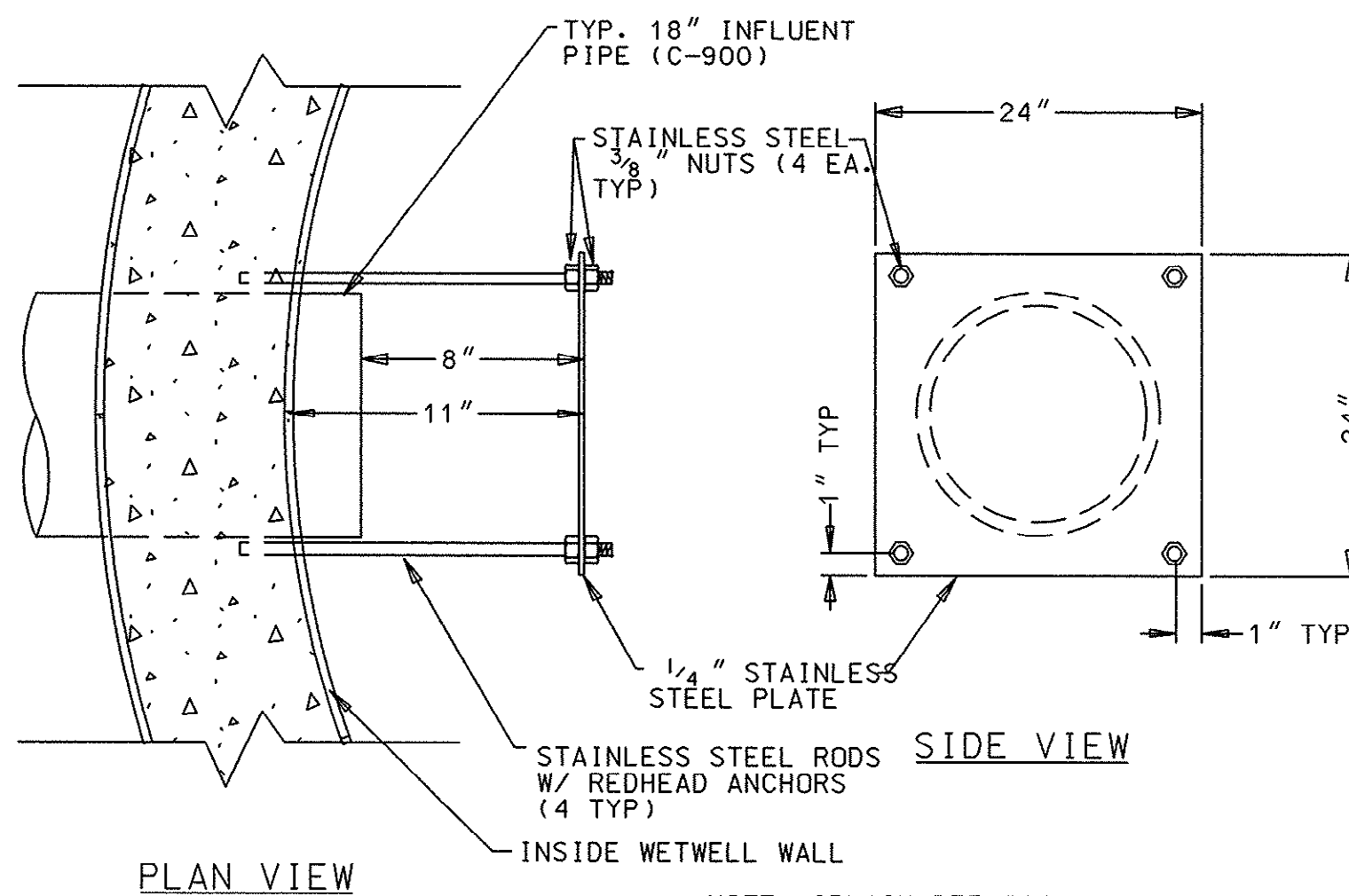


TYPICAL SECTION THRU PUMP STATION
N.T.S.

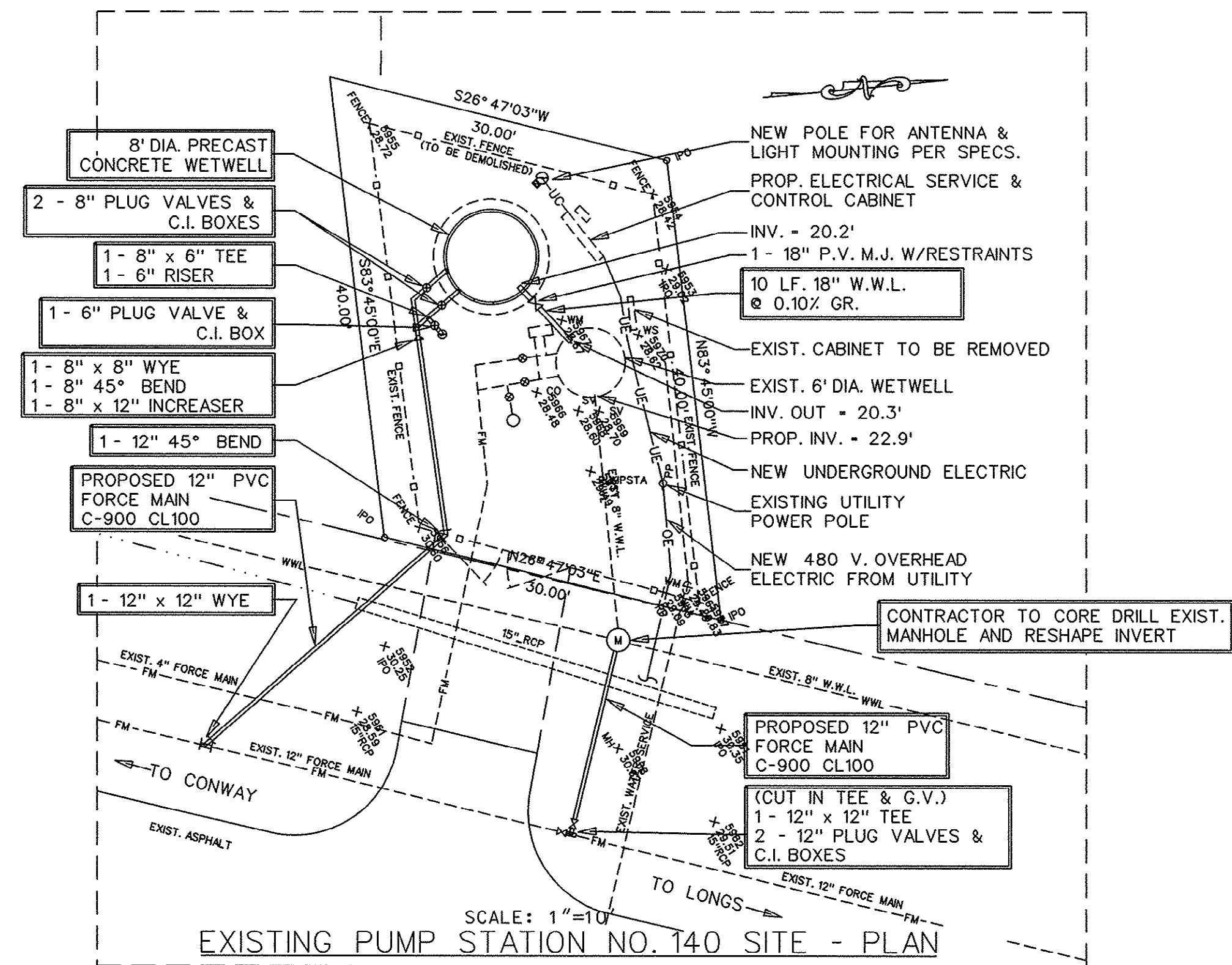
PUMP STATION SCHEDULE			
		PHASE I	PHASE II
PIPE I.D.		18" C-900	18" C-900
ELEVATION		20.2	20.2
INSIDE DIAMETER		8'	8'
TOP ELEVATION		29.7	29.7
HIGH WATER LEVEL		20.2	20.2
LOW WATER LEVEL		12.7	12.7
FLOOR ELEVATION		9.7	9.7
ALARM SIGNAL ON		19.7	19.7
LAG PUMP ON		18.7	18.7
LEAD PUMP ON		17.7	17.7
PUMPS OFF		12.7	12.7
MODEL (PUMP/MANUF.)		FLYGT CP3201	FLYGT CP3300
IMPELLER (SELECTION)		452	462
DISCHARGE PIPING		8"	8"
CHECK VALVE SIZE		8"	8"
PLUG VALVE SIZE		8"	8"
DESIGN FLOW*		600 GPM	790 GPM
DESIGN HEAD* (TDH)		128'	219'
VOLTAGE		460	460
PHASE		30	30
HORSEPOWER		47	88
RPM (PUMP/MOTOR)		1770	1770

PUMP STATION NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO REQUIREMENTS OF THE GRAND STRAND WATER & SEWER AUTHORITY.
2. ALL HINGES, GUIDE HOLDERS, CHAIN HOLDERS, ALL NUTS, BOLTS, WASHERS, AND OTHER FASTENERS SHALL BE 302 STAINLESS STEEL.
3. THE NEMA 3RX ENCLOSURES SHALL BE STAINLESS STEEL OR FIBERGLASS, AND RAIN TIGHT.
4. ALL WETWELL HARDWARE SHALL BE MOUNTED SUCH THAT ANY COMPONENT CAN BE REMOVED.
5. THE POWER CABLE IS TO BE WIRED NON-STOP FROM THE PUMP TO THE BOTTOM OF THE STARTER WITH NO JUNCTION BOXES OR SPLICES IN BETWEEN.
6. WETWELL SECTIONS SHALL CONFORM TO ASTM C-478.
7. ALL PIPING WITHIN THE WETWELL SHALL BE CLASS 50 DUCTILE IRON PIPE, AND ALL FITTINGS SHALL BE AMERICAN CAST IRON PIPE COMPANY "DURALINE" OR EQUIVALENT (OR PER PACKAGE PUMP STATION RECOMMENDATION).
8. PUMPS AND MOTORS SHALL HAVE A STAINLESS STEEL CHAIN FOR LIFTING. THE LENGTH SHALL REACH TO THE TOP OF THE STATION PLUS AN ADDITIONAL SIX FEET.
9. LOCATION OF THE CONTROL PANEL WILL BE DETERMINED IN THE FIELD BY GSWA OPERATIONS DEPT.
10. INFLUENT PIPING TO PUMP STATION SHALL BE DUCTILE IRON.
11. PUMPS ARE TO BE FLYGT CP3201 WITH A 452 IMPELLER' 47 HP, 460 VOLTS, 3 PH MOTOR. SHOP DRAWINGS WILL BE REQUIRED.
12. CONTROL PANEL IS TO CONTAIN AN AUDIO AND VISUAL HIGH LEVEL ALARM VISUAL ALARM MUST HAVE 360° VISIBILITY.
13. PROVIDE ALUMINUM LADDER, LENGTH ADEQUATE TO EXTEND FROM BOTTOM OF WETWELL TO 4' BEYOND HATCH. LADDER TO BE PROVIDED TO GSWA O&M DEPT. AT TIME OF FINAL INSPECTION.
14. PUMP SPARE PARTS TO BE PROVIDED PER GSWA SPECIAL CONTRACT PROVISIONS.
15. ALL PACKAGE PUMP STATIONS SUBMITTALS TO BE APPROVED PRIOR TO ORDERING OF EQUIPMENT.
16. SEE BID SPECIFICATIONS FOR SPECIAL WETWELL INTERIOR LINER REQUIRED.



TYPICAL SPLASH DEFLECTOR PLATE
N.T.S.



ELECTRIC LEGEND:

- OE OVERHEAD ELECTRIC
- UC UNDERGROUND ELECTRIC, SEE TRENCH SECTION
- OWNERS.
- UC UNDERGROUND CABLE FOR RADIO SYSTEM
- POLE MOUNTED LIGHT (500 WATT QUARTZ WITH WEATHERPROOF SWITCH

SEE FLYGT PUMP CATALOG OR PROJECT FOR THE FOLLOWING PUMP CURVES:

47 HP. PUMP (C-3201), 452 IMPELLER
(600 GPM AT 129 FT. T.D.H.)

AND

88 HP. PUMP (C-3300), 462 IMPELLER
(790 GPM AT 219 FT. T.D.H.)

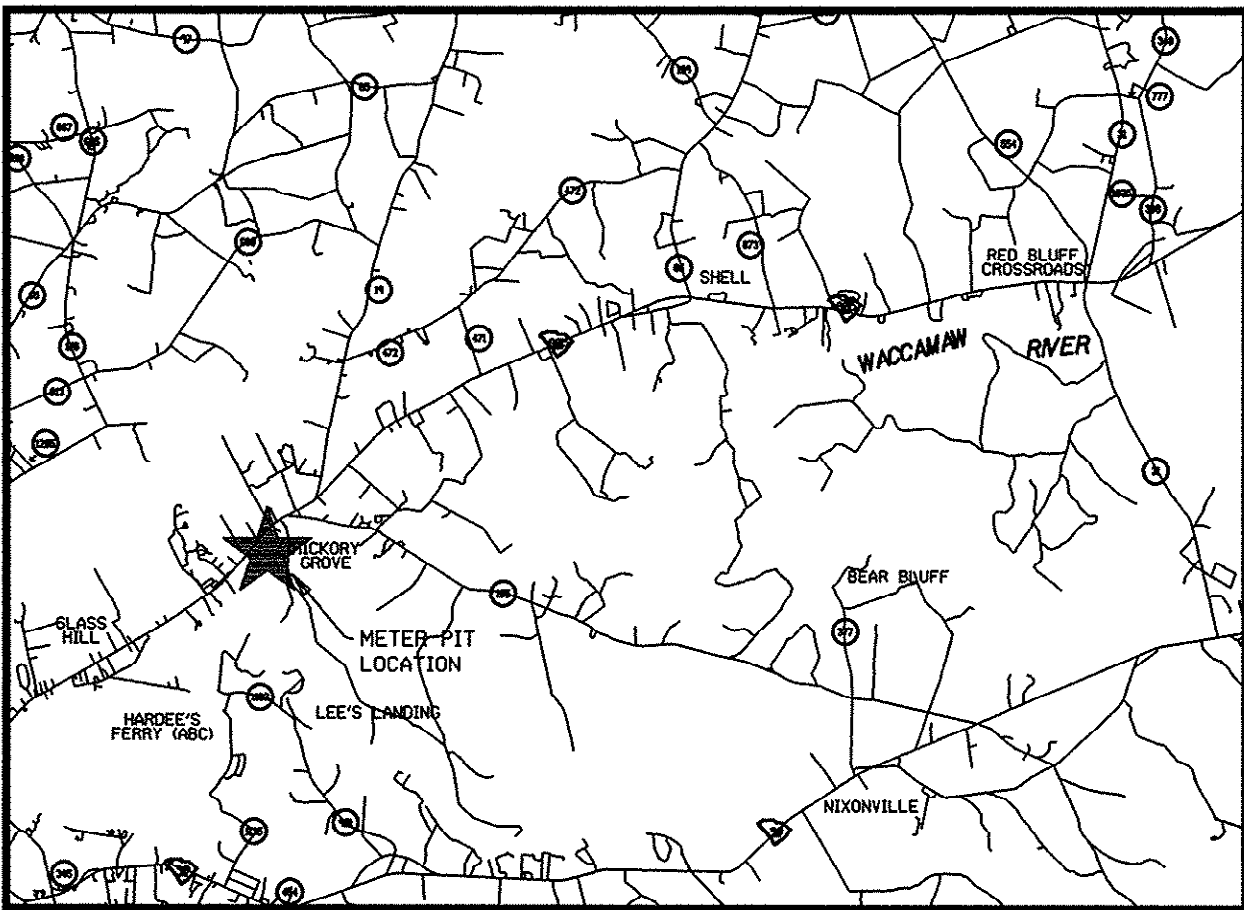
PUMP PERFORMANCE CURVE

FORCE MAIN & PUMP STATION IMPROVEMENTS FOR

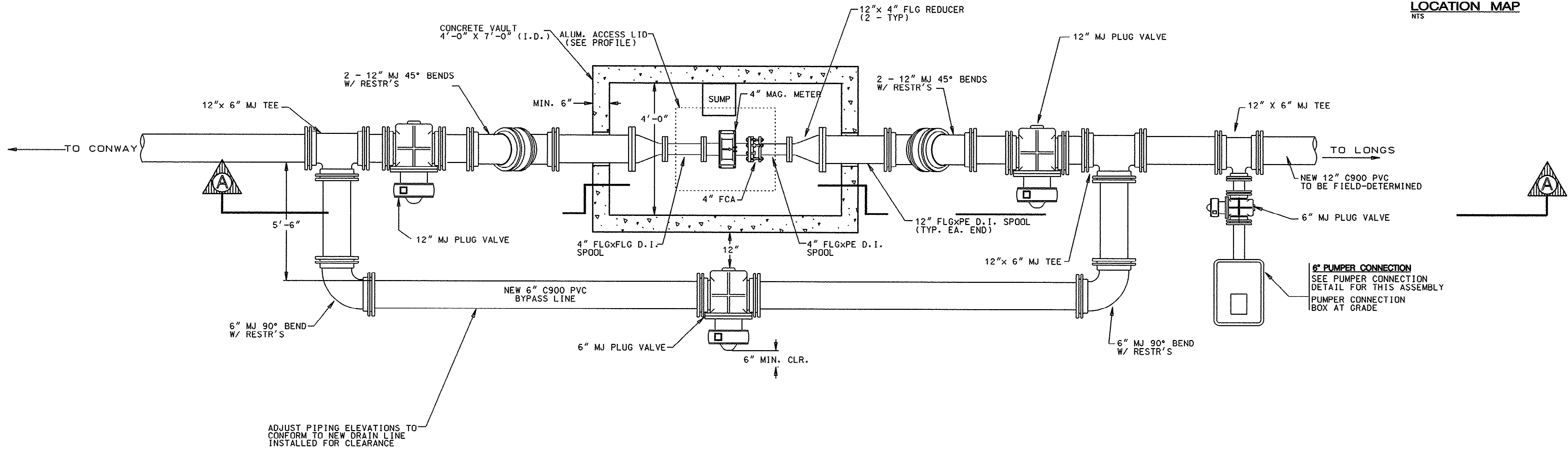
G.S.W. & S.A.
U.S. HIGHWAY 905 FORCE MAIN
PADGETT LANE TO PUMP STATION #140
PROJECT NO. 793-04

30-27-033-S

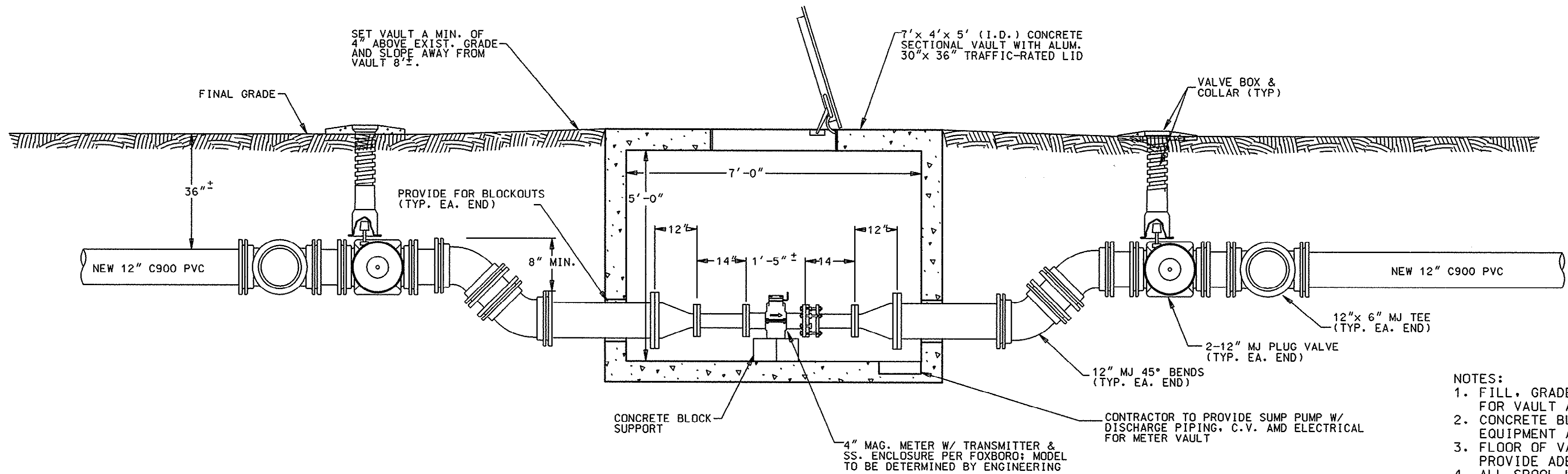
BY	DATE
REVISION	
PADGETT LANE - PUMP STATION NO. 140 (TYPICAL PUMP STATION DETAILS) GRAND STRAND WATER & SEWER AUTHORITY	
P.O. BOX 1537, CONWAY, SC 29526 TELEPHONE (803) 347-4641 OR 448-1686	
PROJECT #	
DATE:	FEB. 5, 1997
SCALE:	N.T.S.
FILENAME:	
DRAWN BY	JOHN HINSON
CHECKED BY	K.C.H. JIM HEMBREE
APPROVED BY	
FRED E. AKEL	P.E. #12859
SHEET 38	OF 34
DRAWING NO.	97078_PS



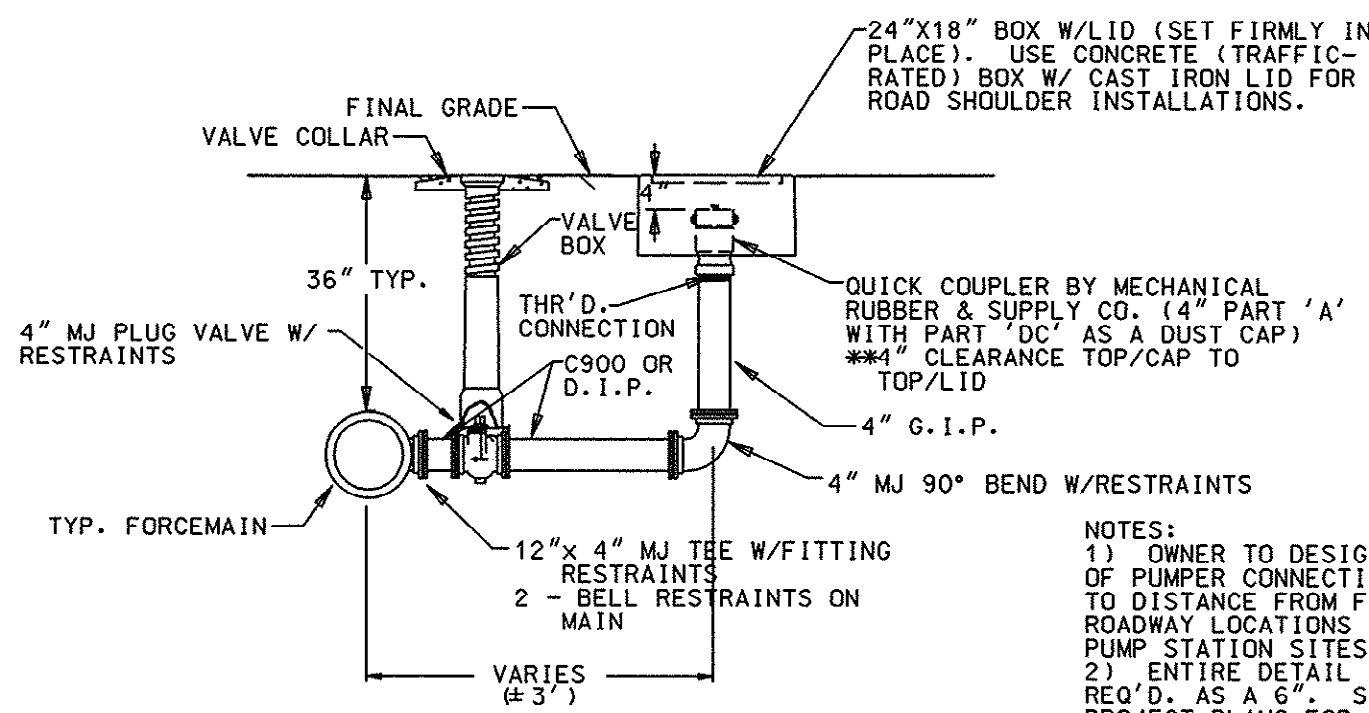
LOCATION MAP
NTS



PLAN



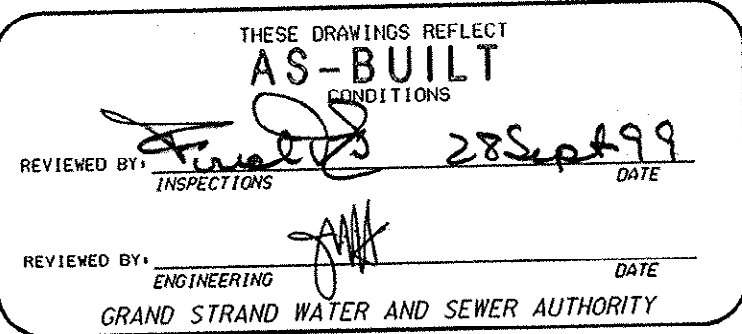
PROFILE ('A-A')



PUMPER CONNECTION DETAIL
NTS

- NOTES:
- 1) OWNER TO DESIGNATE LOCATION OF PUMPER CONNECTION RELATIVE TO DISTANCE FROM FORCEMAIN AT ROADWAY LOCATIONS AND WITHIN PUMP STATION SITES.
 - 2) ENTIRE DETAIL MAY ALSO BE REQ'D. AS A 6" SEE SPECIFIC PROJECT PLANS FOR 4" OR 6".
 - 3) TOP OF VALVE BOX & COLLAR TO BE 6" BELOW FINAL GRADE IF INSTALLED IN ROADWAY OR SHOULDER.

- NOTES:
1. FILL, GRADE & RESHAPE EXIST. SHOULDER LOCATION FOR VAULT AND BYPASS LINE.
 2. CONCRETE BLOCK SUPPORTS TO BE USED UNDER ALL EQUIPMENT AND PIPING WITHIN VAULT.
 3. FLOOR OF VAULT SHALL TAPER TOWARDS SUMP TO PROVIDE ADEQUATE DRAINAGE OF VAULT.
 4. ALL SPOOL LENGTHS TO BE FIELD-DETERMINED.
 5. ALL PIPING TO BE DUCTILE IRON INSIDE VAULT.
 6. USE RUBBER BOOTS FOR 12" D.I.P. ON END BLOCKOUTS.
 7. GSWA TO PROVIDE 4" METER FOR CONTRACTOR TO INSTALL.
 8. CONTRACTOR TO INSTALL SUMP PUMP & ELEC..
 9. GSWA TO PROVIDE CABLE & WIRES TO METER & PROVIDE METER START UP WITH CONTRACTOR ASSISTANCE.
 10. LOCATION/INSTALLATION TO BE DETERMINED BY G.S.W.S.A.



REVISION	BY	DATE
1) AS-BUILT	CAW	9/24/99

HIGHWAY 905

FORCEMAIN METER

GRAND STRAND WATER & SEWER AUTHORITY

P.O. BOX 1537, CONWAY, SC 29526
TELEPHONE (803) 247-1641 OR 448-1686

PROJECT #08-815-01	
DATE: SEPTEMBER 1999	
SCALE: 1" = 2'-0"	
FILENAME: HWY905.METER.DGN	
DRAWN BY	CAROLYN WRIGHT
CHECKED BY	JIM HEMBREE
APPROVED BY	
FRED E. AKEL P.E. #12859	
SHEET 34 OF 34	
DRAWING NO. 30-27-034-S	