

CITY OF NAPLES PUMP STATION 6 IMPROVEMENT PROJECT

LOCATED IN SECTION 03, TOWNSHIP 50 SOUTH, RANGE 25 EAST COLLIER COUNTY, FLORIDA

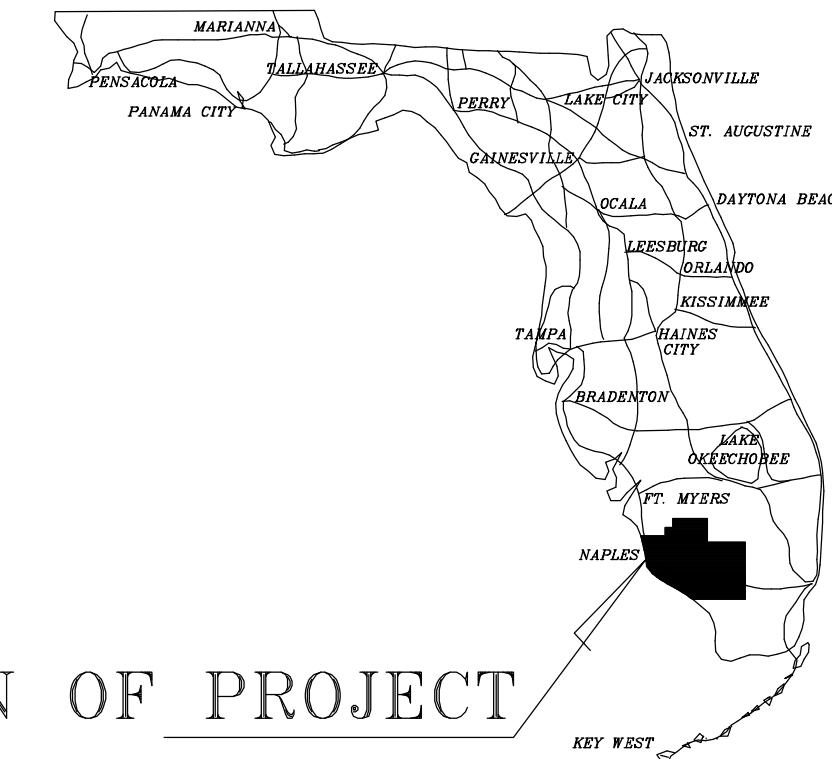
AGNOLI BARBER & BRUNDAGE, INC.
Professional engineers, planners, & land surveyors
Certificate of Authorization No. LB 3664 and EB 3664
Collier County
7400 Tamiami Trail, North, Suite 200
Naples, FL 34108
Phone: (239)597-3111
Fax: (239)566-8203

PLANS PREPARED BY:

AGNOLI BARBER & BRUNDAGE, INC.
Professional engineers, planners, & land surveyors
Collier County: Suite 200, 7400 Tamiami Trail, North; Naples, FL 34108 (239)597-3111
Certificate of Authorization Nos. LB 3664 and EB 3664 Fax: (239)566-2203

PLANS PREPARED FOR:

CITY OF NAPLES UTILITIES
380 RIVERSIDE CIRCLE
NAPLES, FLORIDA 34102
PHONE: 239-213-4712

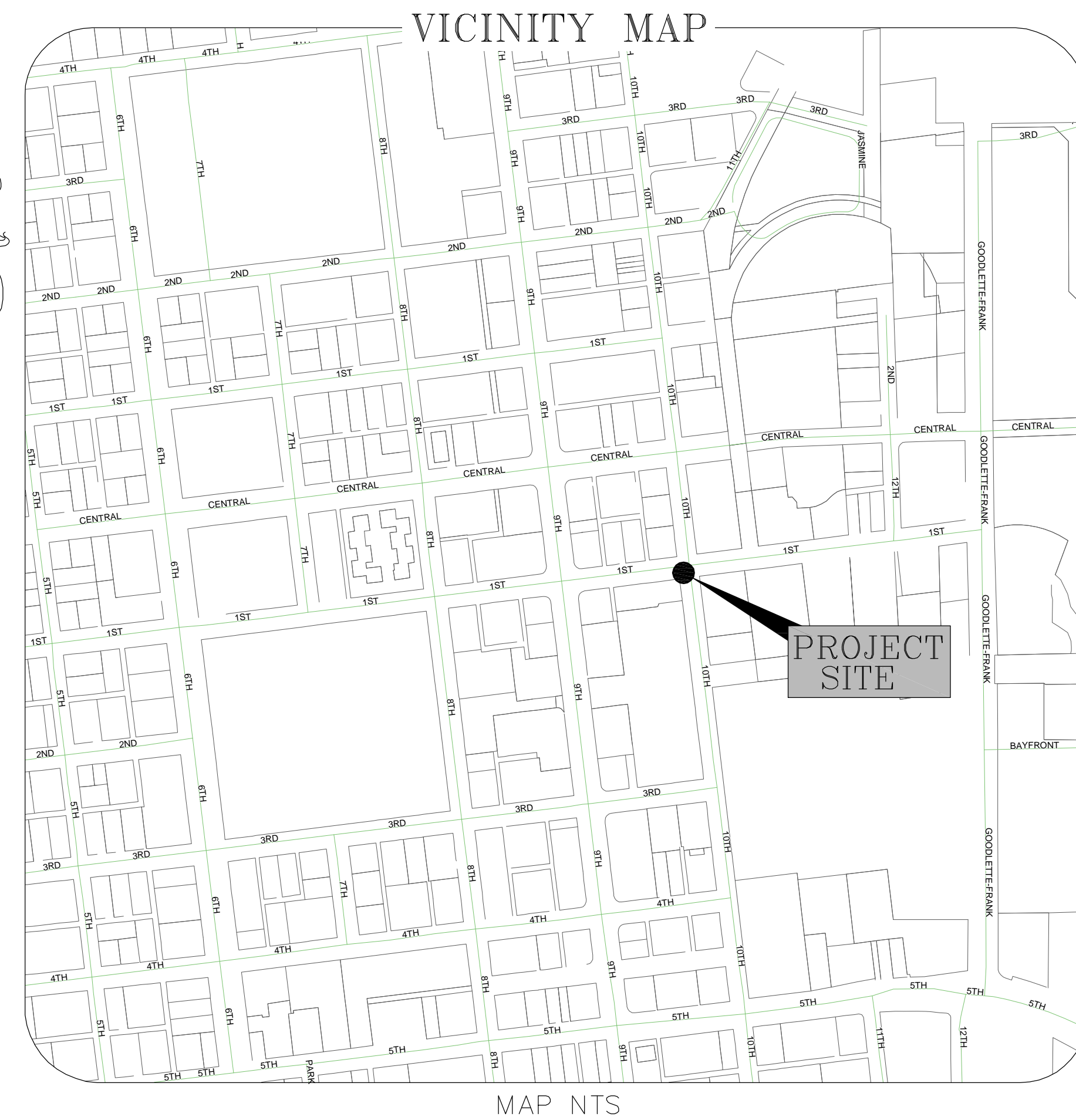


LOCATION OF PROJECT

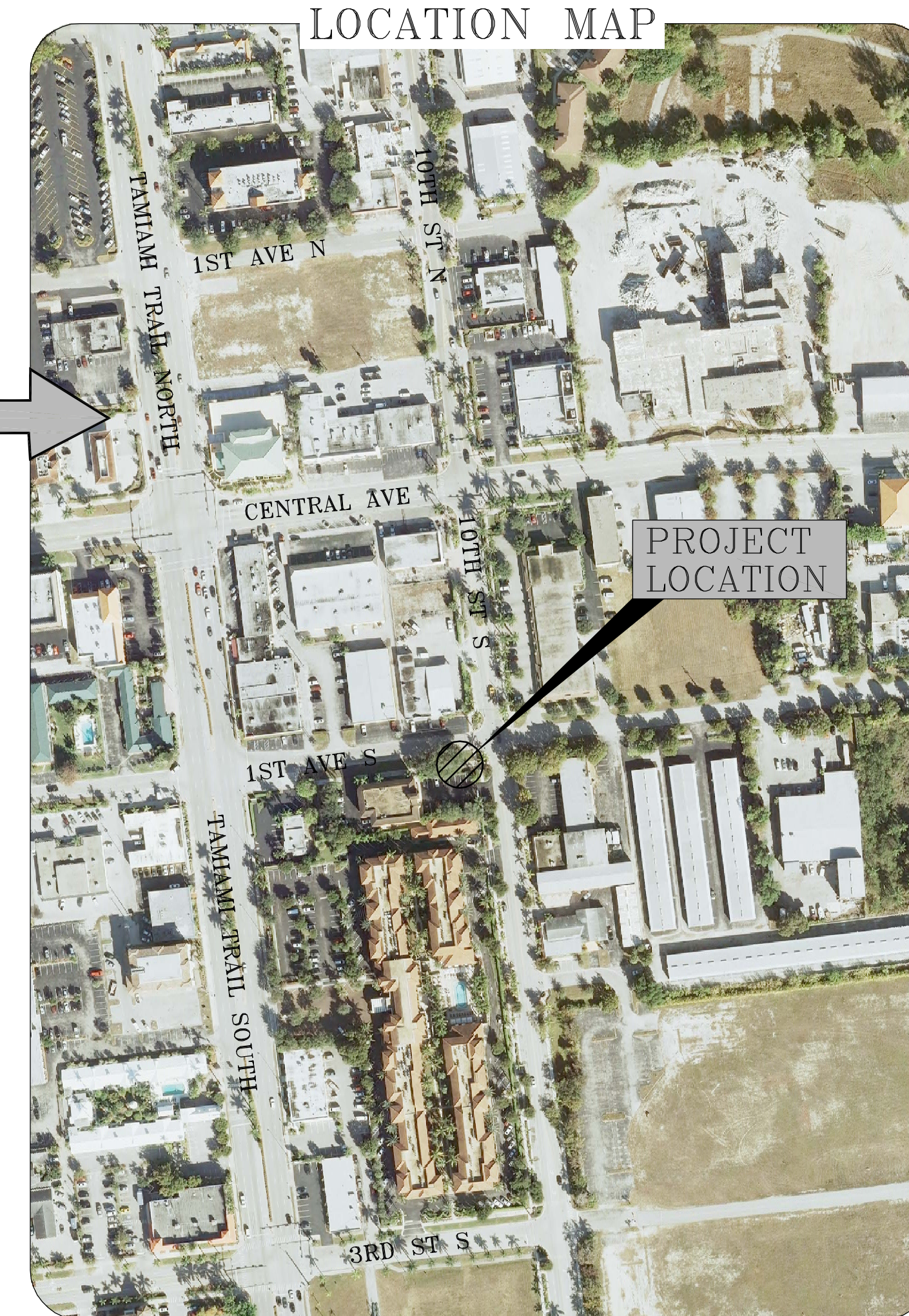
SHEET #	SHEET DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS W/AERIAL
3	MASTER SITE PLAN
4	DEMOLITION & PUMP STATION GRADING PLAN
5	PUMP STATION DETAILS
6	PUMP STATION & EROSION CONTROL DETAILS

UTILITY PROVIDERS	
FPL 4105 15th Ave. SW Naples, FL 34116 (239) 353-6090	Comcast 301 Tower Road Naples, FL 34113 (239) 417-4795
CenturyLink 3940 Prospect Ave. Naples, FL 34104 (239) 263-6210	City of Naples Utilities 380 Riverside Circle Naples, FL 34102 (239) 231-4745

LEGEND	
— ELEC OVHD —	= ELECTRIC
— ELEC UGND —	= ELECTRIC UGND
— WATR —	= WATER
— SSWR —	= SANITARY SEWER
— COMM OVHD —	= COMMUNICATION/CATV OVHD
— COMM UGND —	= COMMUNICATION/CATV UGND
— GAS —	= GAS
○	= FOUND 5/8" IRON ROD/CAP
□	= FOUND CONCRETE MONUMENT
+	= MISCELLANEOUS SIGNS
⊗	= LIGHT POLE
⊗	= WATER VALVE
◇	= WOOD POWER POLE
◆	= CONCRETE POWER POLE
○	= BACKFLOW PREVENTOR
⊗	= OAK TREE
⊗	= SEWER MANHOLE
⊗	= SEWER VALVE



MAP NTS



SCALE: 1" = 200'
(11"x17" SCALE: 1" = 400')

General Statement of Work
The project involves replacing an existing 1960's era drywell sanitary pump station with a modern designed submersible pump station. Included with the work is the conversion of the wetwell into a manhole and 184' of new gravity line necessary to route flows to the new station and 120' of 6" forcemain. Demolition of the existing facility is also included in the work as specified in the plans. The City of Naples will be purchasing much of the mechanical equipment for this project, a listing of which is included in the contract documents. Contractor is required to provide all other specified materials and labor to provide a complete installation including but not limited to all piping, concrete structures, fill, erosion control, temporary bypass pumping systems, fencing, and power.

CITY OF NAPLES UTILITIES
380 RIVERSIDE CIRCLE
NAPLES, FLORIDA 34102
PHONE: 239-213-4712

CITY OF NAPLES P.S. 6
IMPROVEMENT PROJECT

COVER SHEET

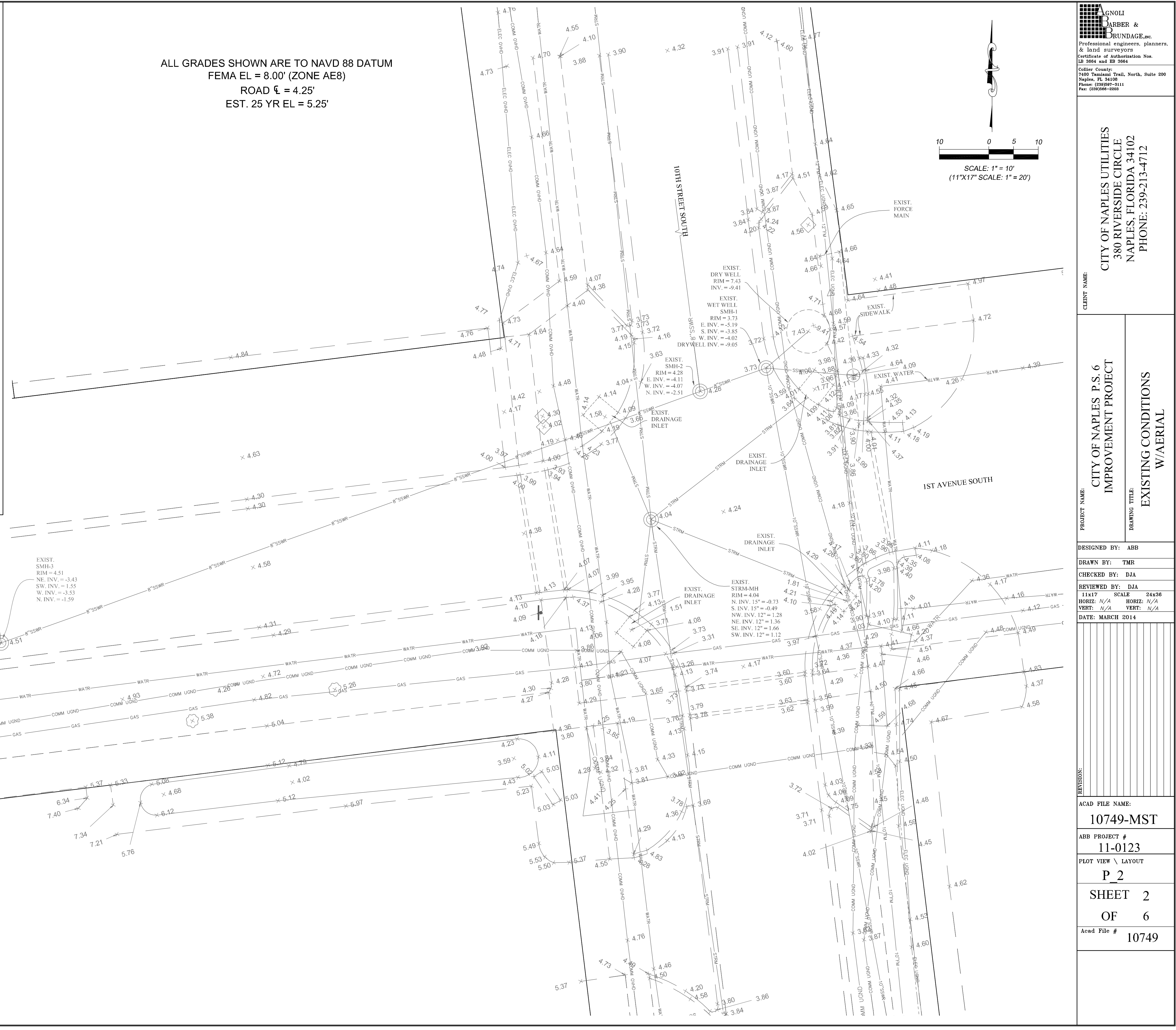
DESIGNED BY: ABB
DRAWN BY: TMR
CHECKED BY: DJA
REVIEWED BY: DJA
11x17 SCALE: 24x36
HORIZ: AS NOTED VERT: AS NOTED
DATE: MARCH 2014

ACAD FILE NAME:
10750-CVR
ABB PROJECT #
11-0123
PLOT VIEW \ LAYOUT
P_1
SHEET 1
OF 6
Acad File #
10749



SCALE: 1" = 30'
(11"X17" SCALE: 1" = 60')

EXISTING CONDITIONS W/AERIAL



ALL GRADES SHOWN ARE TO NAVD 88 DATUM
FEMA EL = 8.00' (ZONE AE8)
ROAD ζ = 4.25'
EST. 25 YR EL = 5.25'

SCALE: 1" = 10'
(11"X17" SCALE: 1" = 20')

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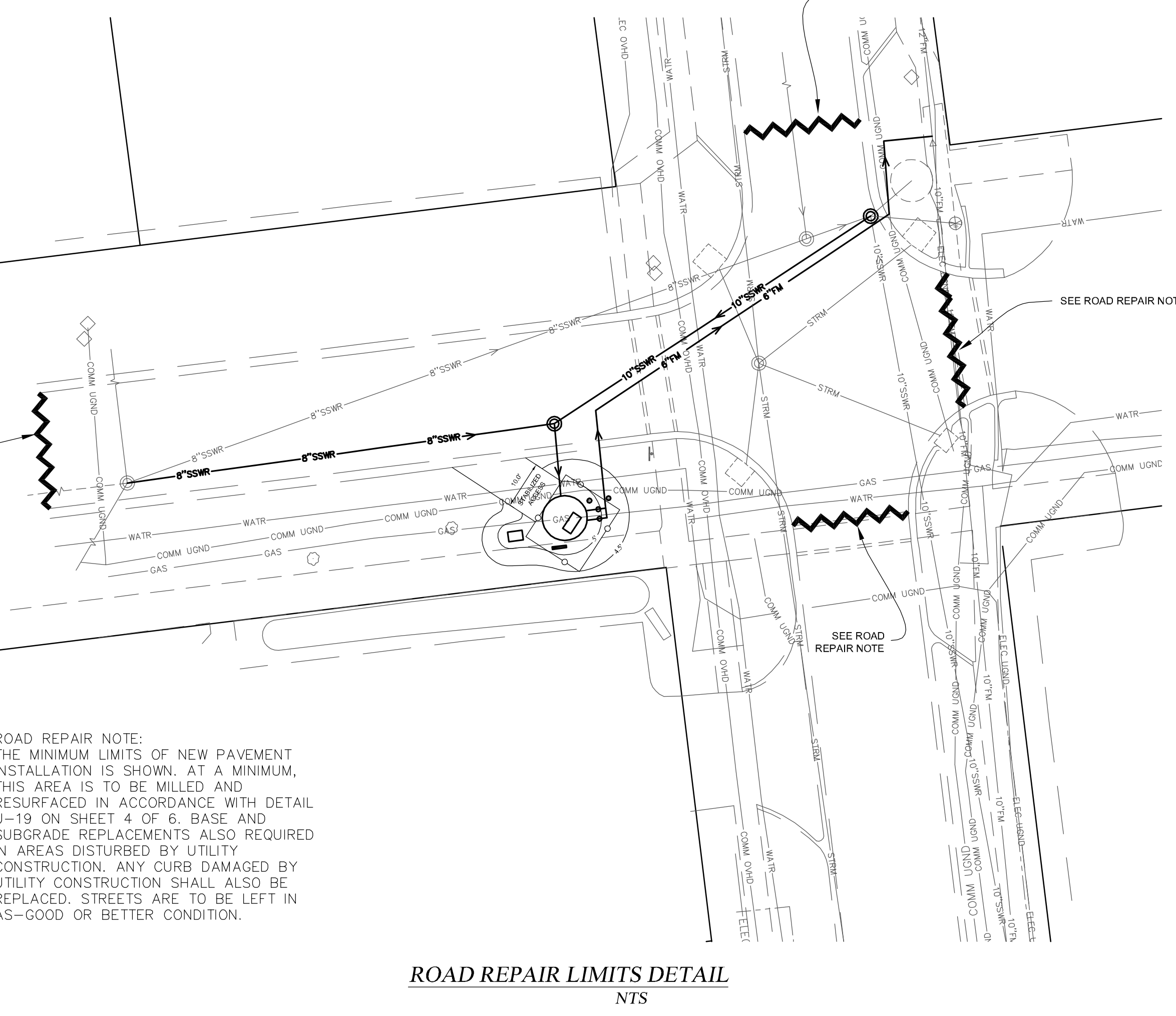
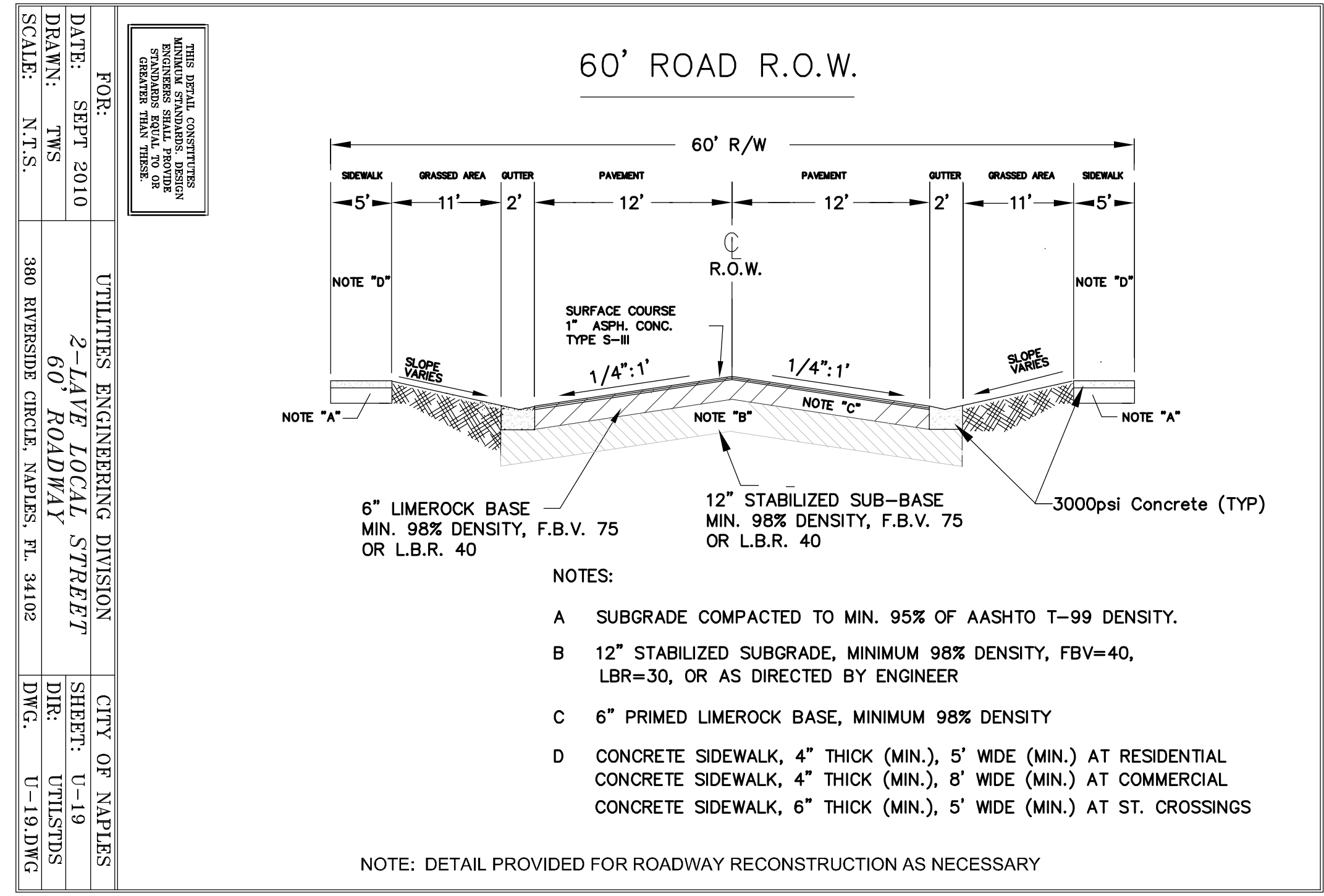
CLIENT NAME:
CITY OF NAPLES UTILITIES
380 RIVERSIDE CIRCLE
NAPLES, FLORIDA 34102
PHONE: 239-213-4712

PROJECT NAME:
CITY OF NAPLES P.S. 6 IMPROVEMENT PROJECT
DRAWING TITLE:
EXISTING CONDITIONS W/AERIAL

DESIGNED BY: ABB
DRAWN BY: TMR
CHECKED BY: DJA
REVIEWED BY: DJA
11x17 SCALE 24x36
HORIZ: N/A HORIZ: N/A
VERT: N/A VERT: N/A
DATE: MARCH 2014

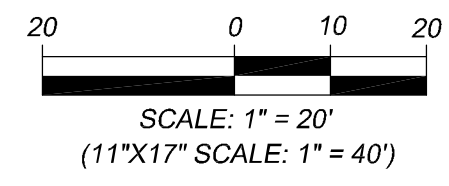
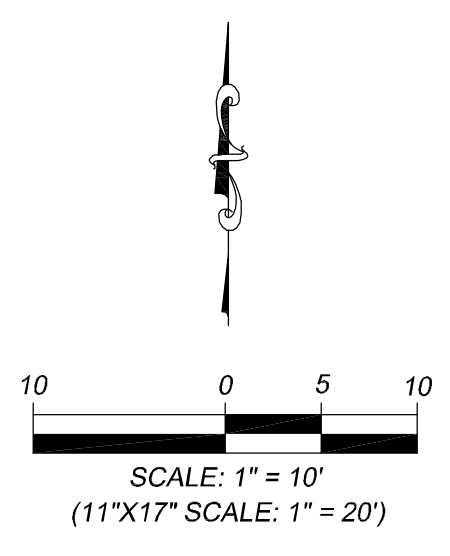
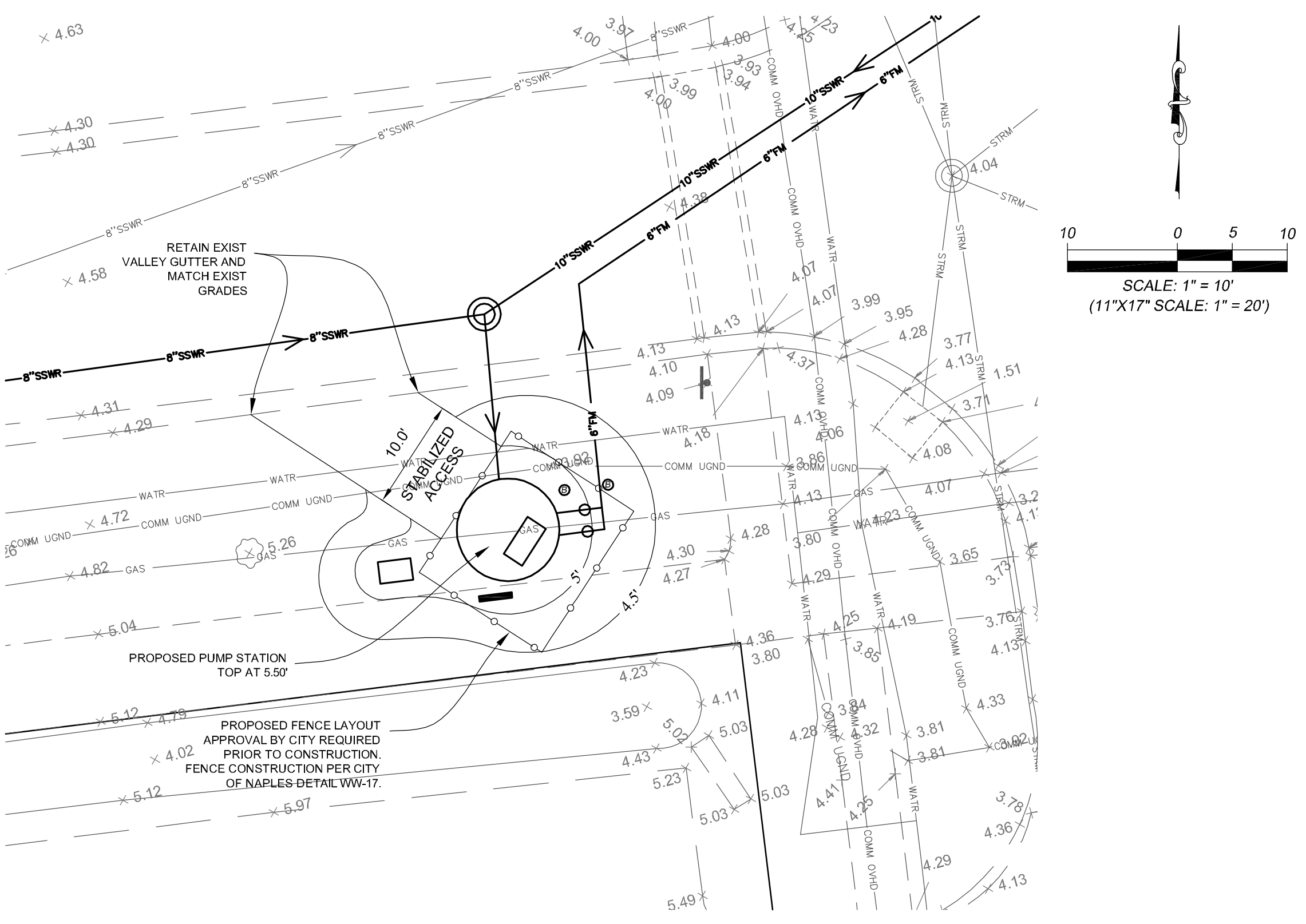
ACAD FILE NAME:
10749-MST
ABB PROJECT #
11-0123
PLOT VIEW \ LAYOUT
P 2
SHEET 2
OF 6
Acad File #
10749

- LEGEND**
- ELEC OVHD — ELEC OVHD = ELECTRIC
 - ELEC UGND — ELEC UGND = ELECTRIC UGND
 - WATR — WATR = WATER
 - SSWR — SSWR = SANITARY SEWER
 - COMM OVHD — COMM OVHD = COMMUNICATION/CATV OVHD
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 - GAS — GAS = GAS
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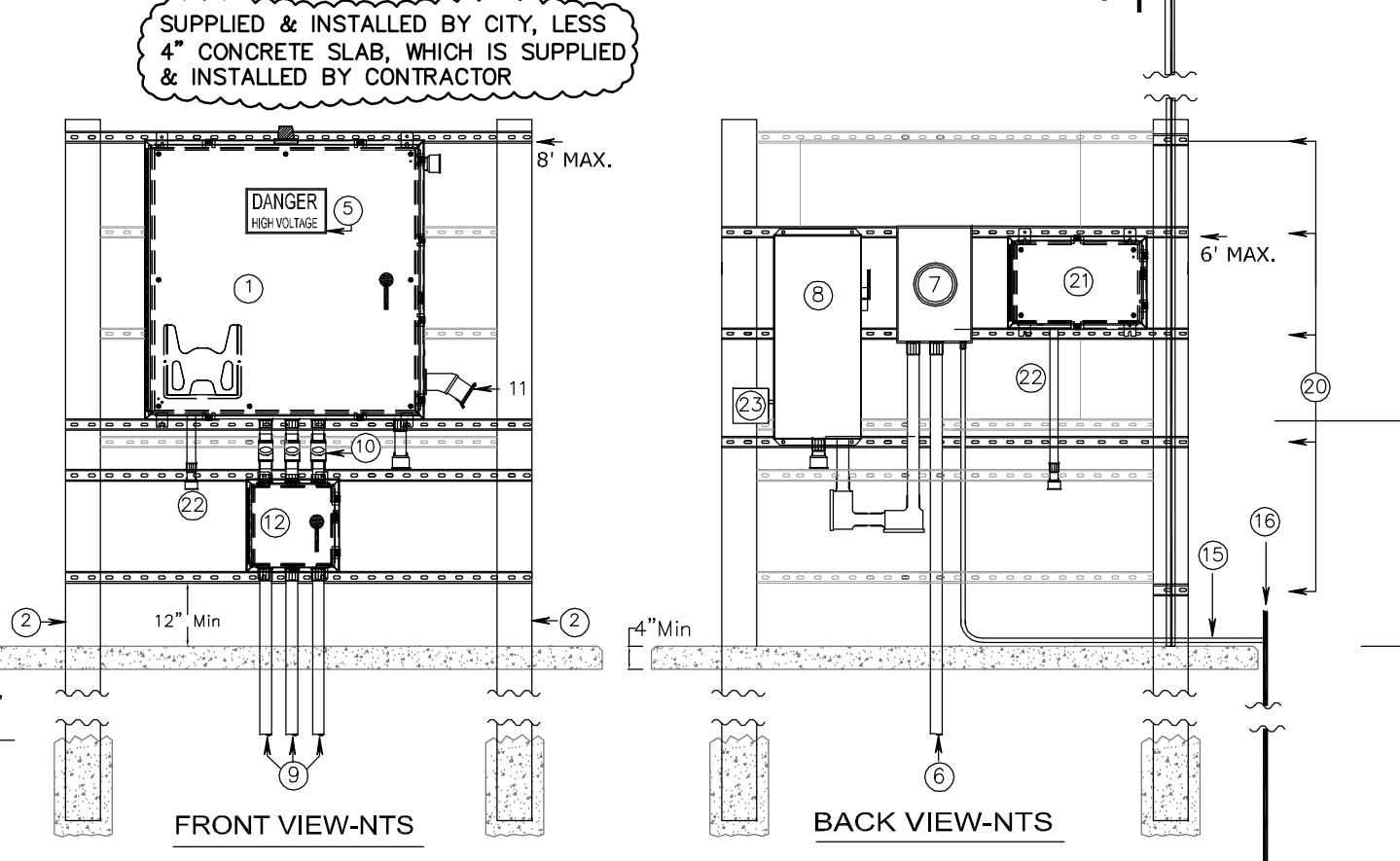


DATE: SEPT 2010	FOR: UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DRAWN: TMS	2-LAVE LOCAL STREET	SHEET: U-19
SCALE: N.T.S.	60' ROADWAY	DIR: UTILISTS
	380 RIVERSIDE CIRCLE, NAPLES, FL 34102	DMG: U-19.DWG

THIS DETAIL, CONTAINING MINIMUM STANDARD SPECIFICATIONS, SHALL BE USED FOR ALL ROADWAY RECONSTRUCTION, UNLESS OTHERWISE NOTED.

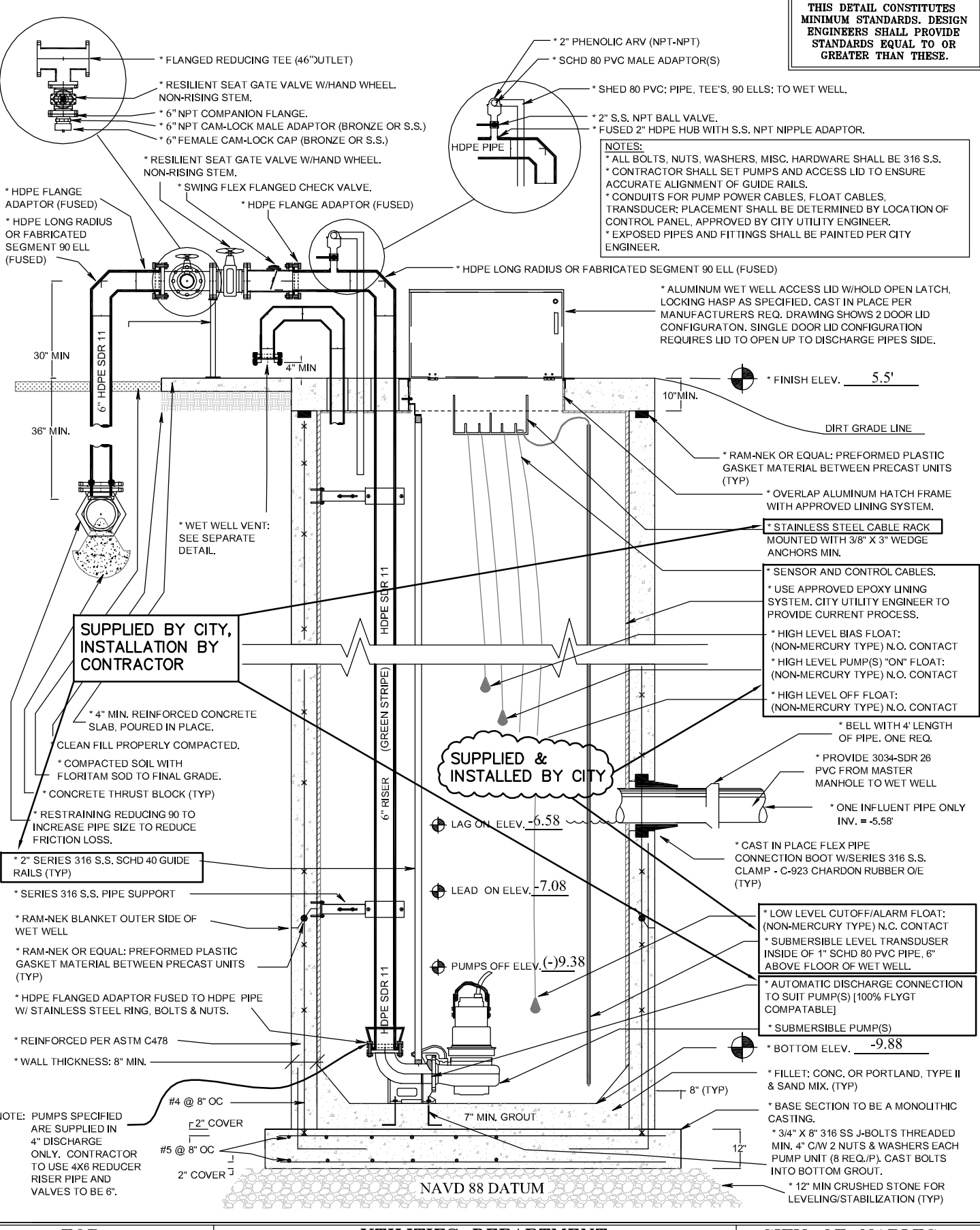


DETAILS OF CONTROL PANEL MOUNTING

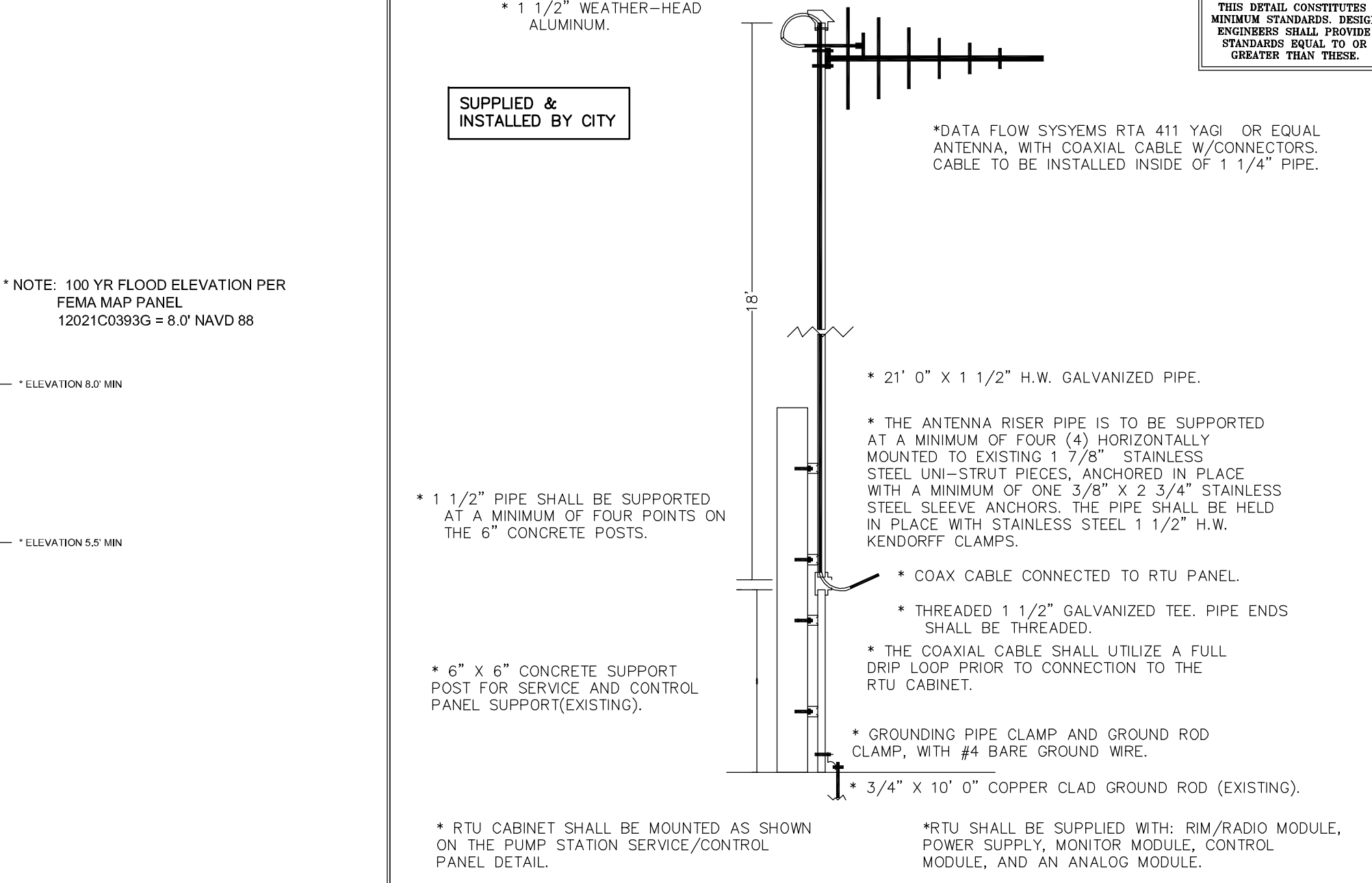


ITEM	DESCRIPTION/NOTES
1	Enclosure - 4' x 4' x 7' with minimum 1/2\"/>
2	4\"/>
3	All enclosures, conduits, and associated equipment shall be mounted to Type 304 Stainless Steel 1/2\"/>
4	All structural and/or components of the control panel installation shall be as specified herein and approved by the electrical contractor. All electrical components shall be installed in accordance with the latest edition of any local electrical codes in conflict with the details shown, shall be installed by the Electrical Contractor/Engineer, with the Approval of the City Utility Engineer, prior to construction.
5	Plastic Warning Label stating "DANGER HIGH VOLTAGE" (to OSHA Standards) shall be installed and mounted on the outer door of the Control Panel by means of weather-proof adhesive or cement.
6	3 Phase, 3 Wire underground power supply (DU Only) - 4 of conductors, wire gauge in 2\"/>
7	Service Meter - per spec or to be furnished by the Contractor.
8	1 Amp, Fused Safety Disconnect Switch in Items 3, 4, or 4X (As Required) - 120V, 15A, 1 Pole, 1 Throw. Power Supply to control panel shall exit through underside of the switch. The disconnect switch shall have a hinged door, lockable, with release latch.
9	2\"/>
10	"WET" Explosion Proof Seal - Cast Aluminum, Min. 2\"/>

FOR: UTILITIES DEPARTMENT CITY OF NAPLES
 DATE: FEB. 2011 WASTEWATER PUMP STATION SHEET: WW-15
 DRAWN: JAF/DAG WASTEWATER DIR: WASTEWATER
 SCALE: N.T.S. 380 RIVERSIDE CIRCLE, NAPLES, FLORIDA, 34102 DWG. WW-15.DWG

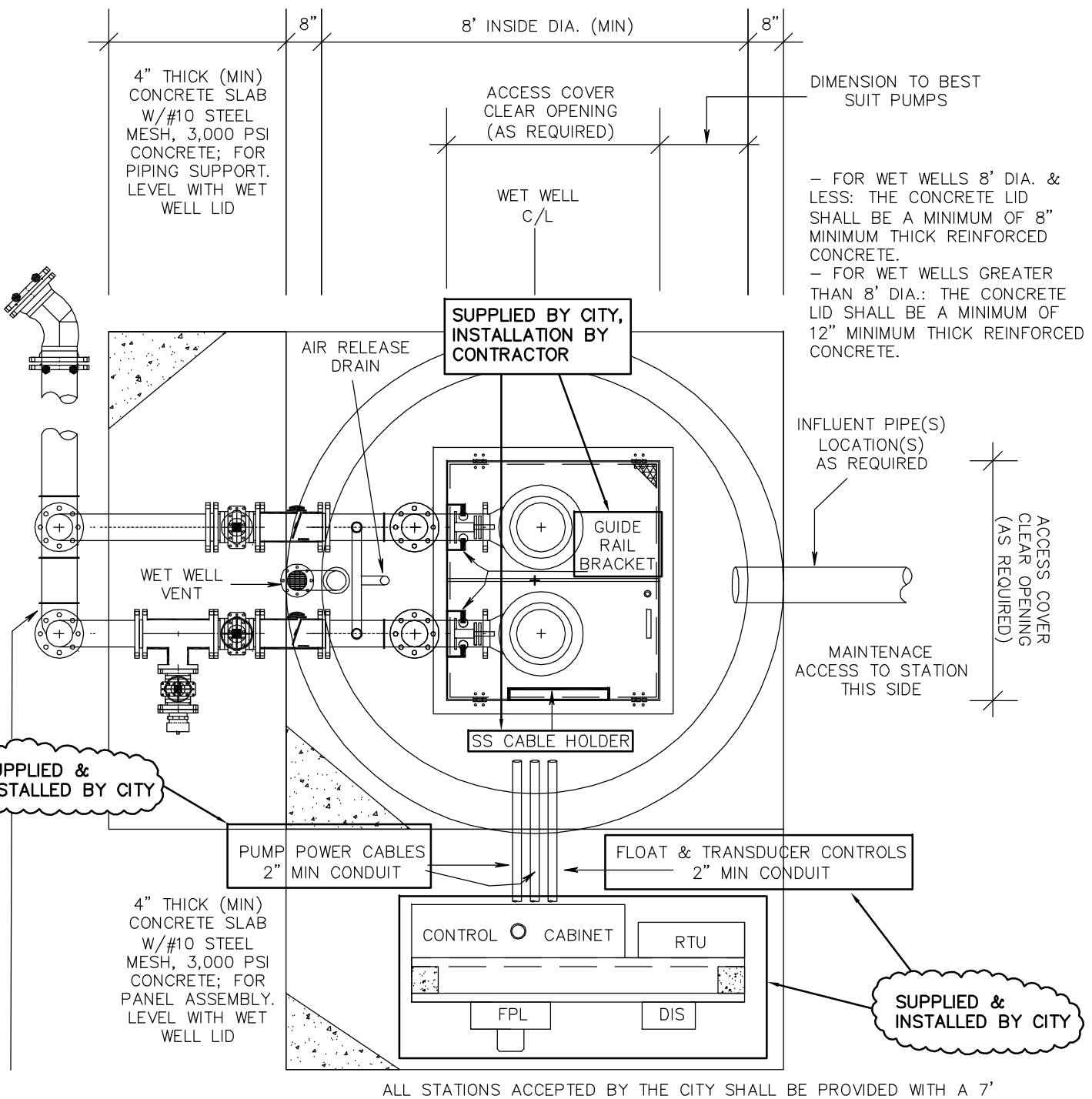
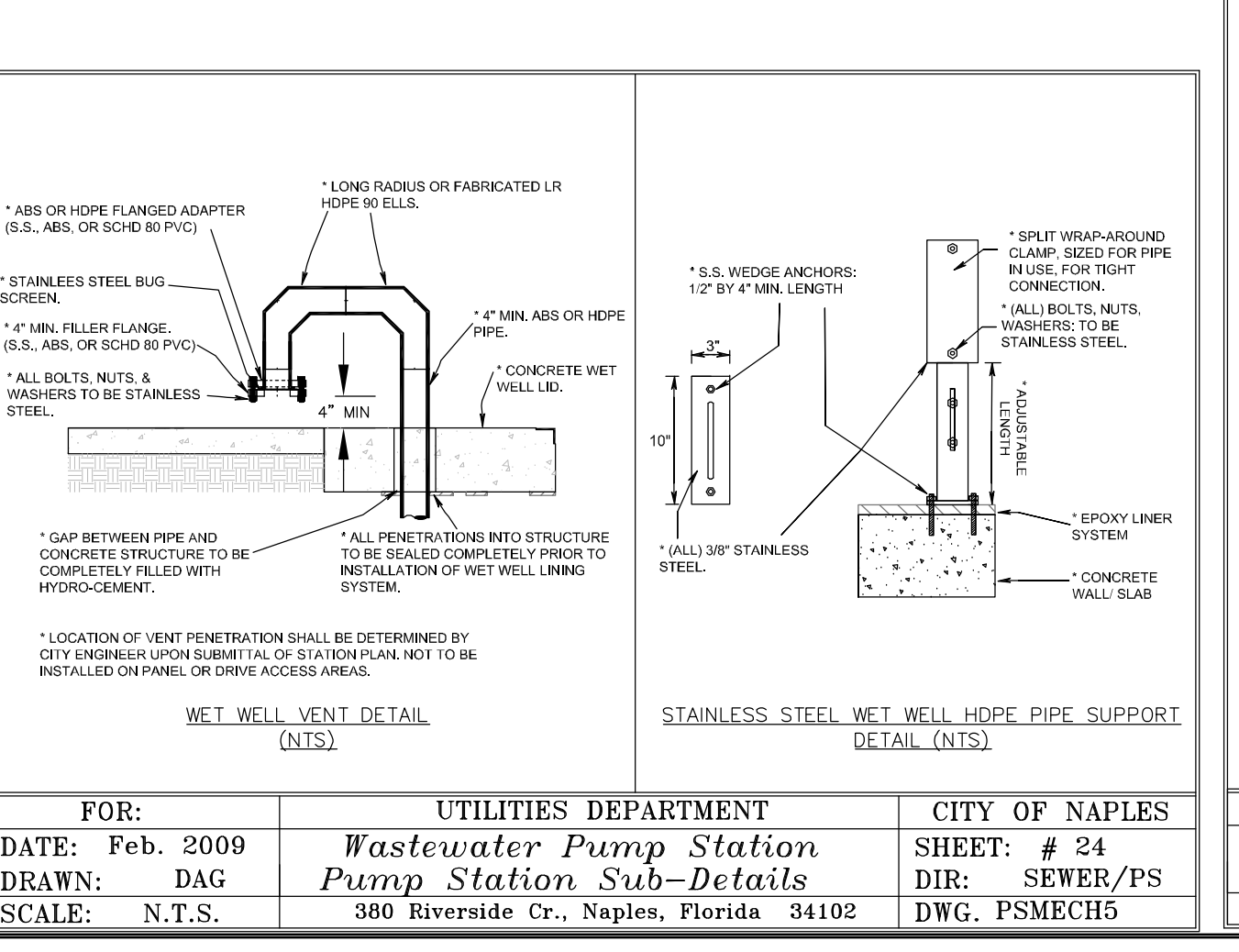
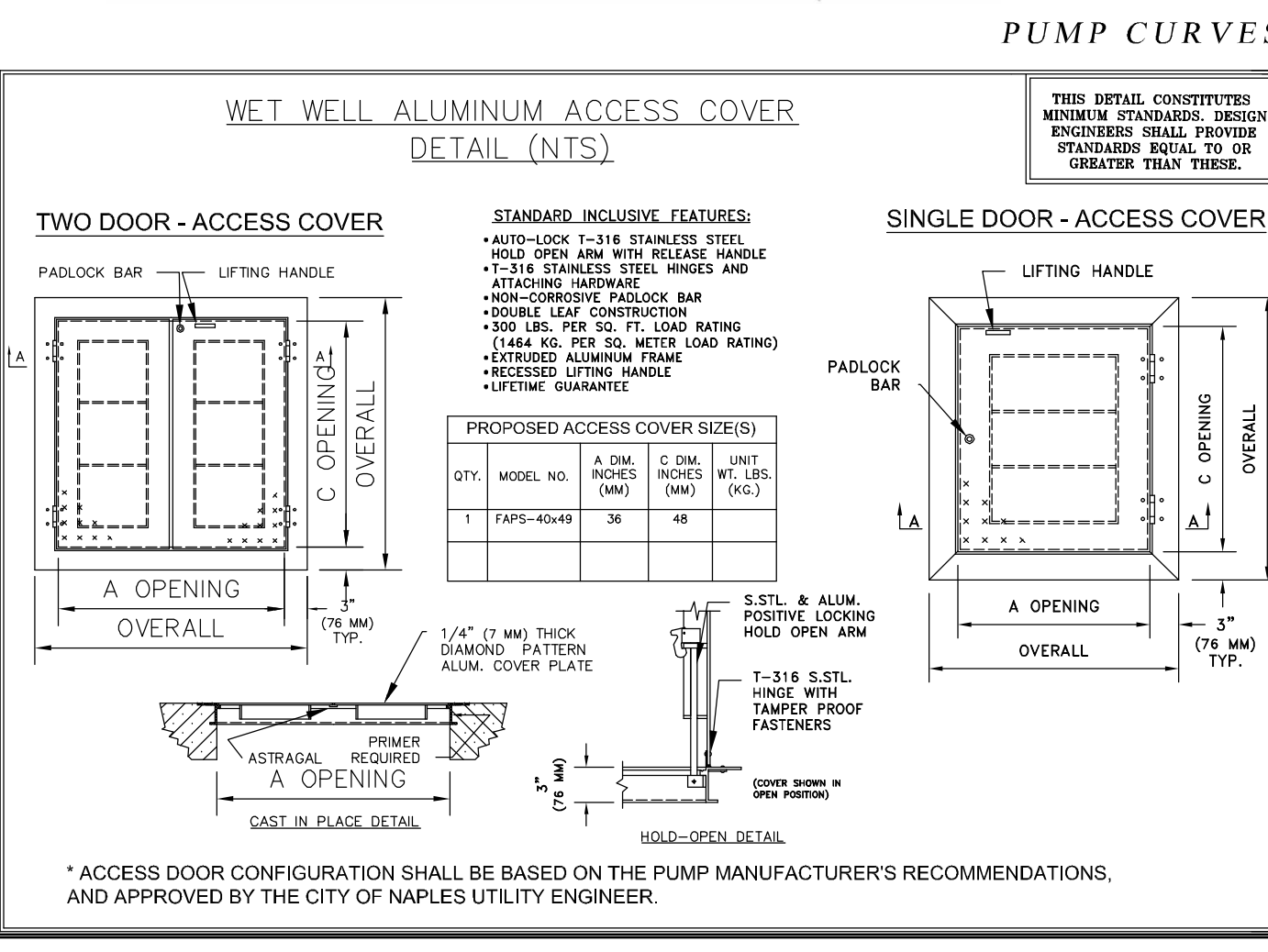
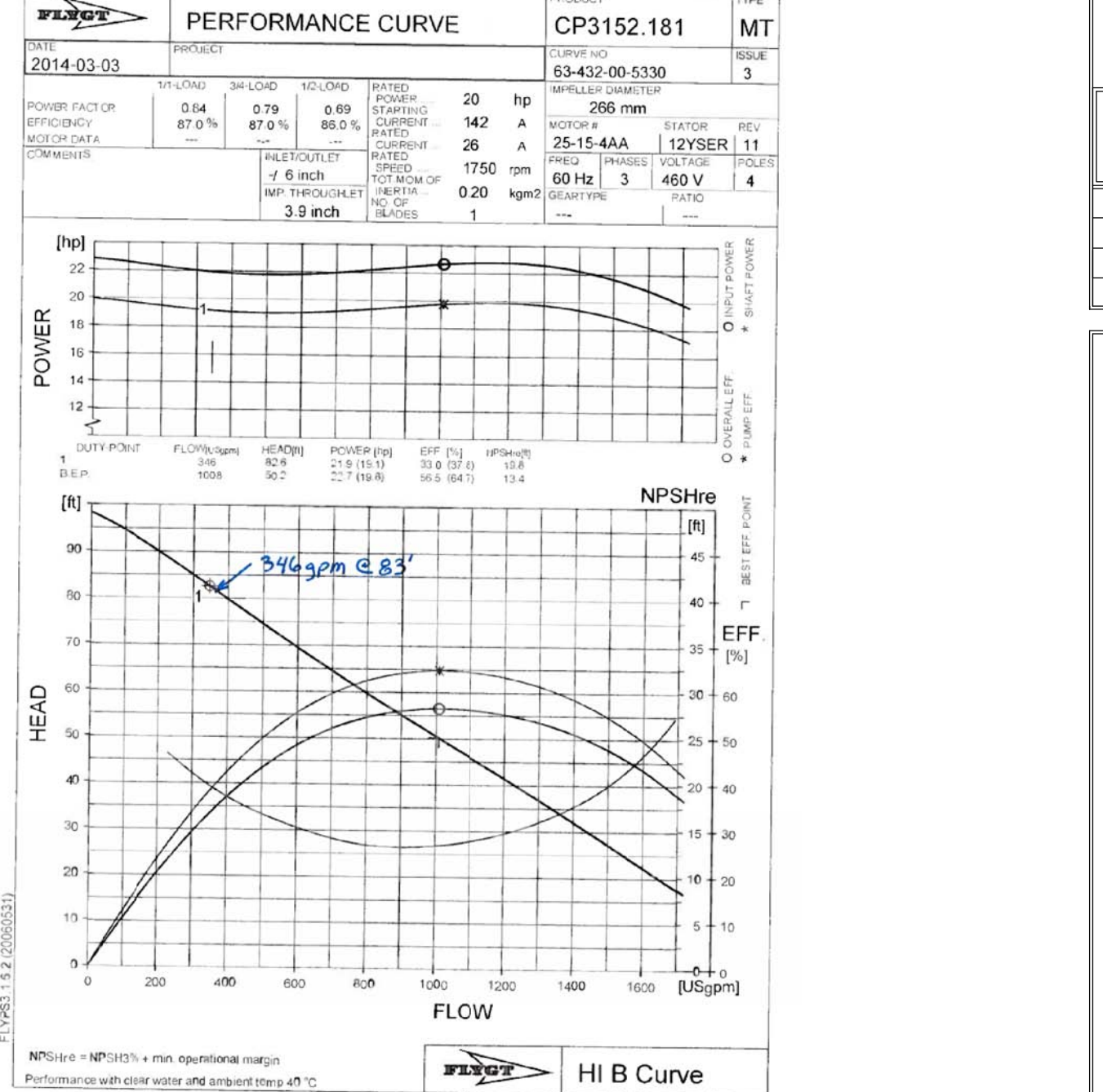
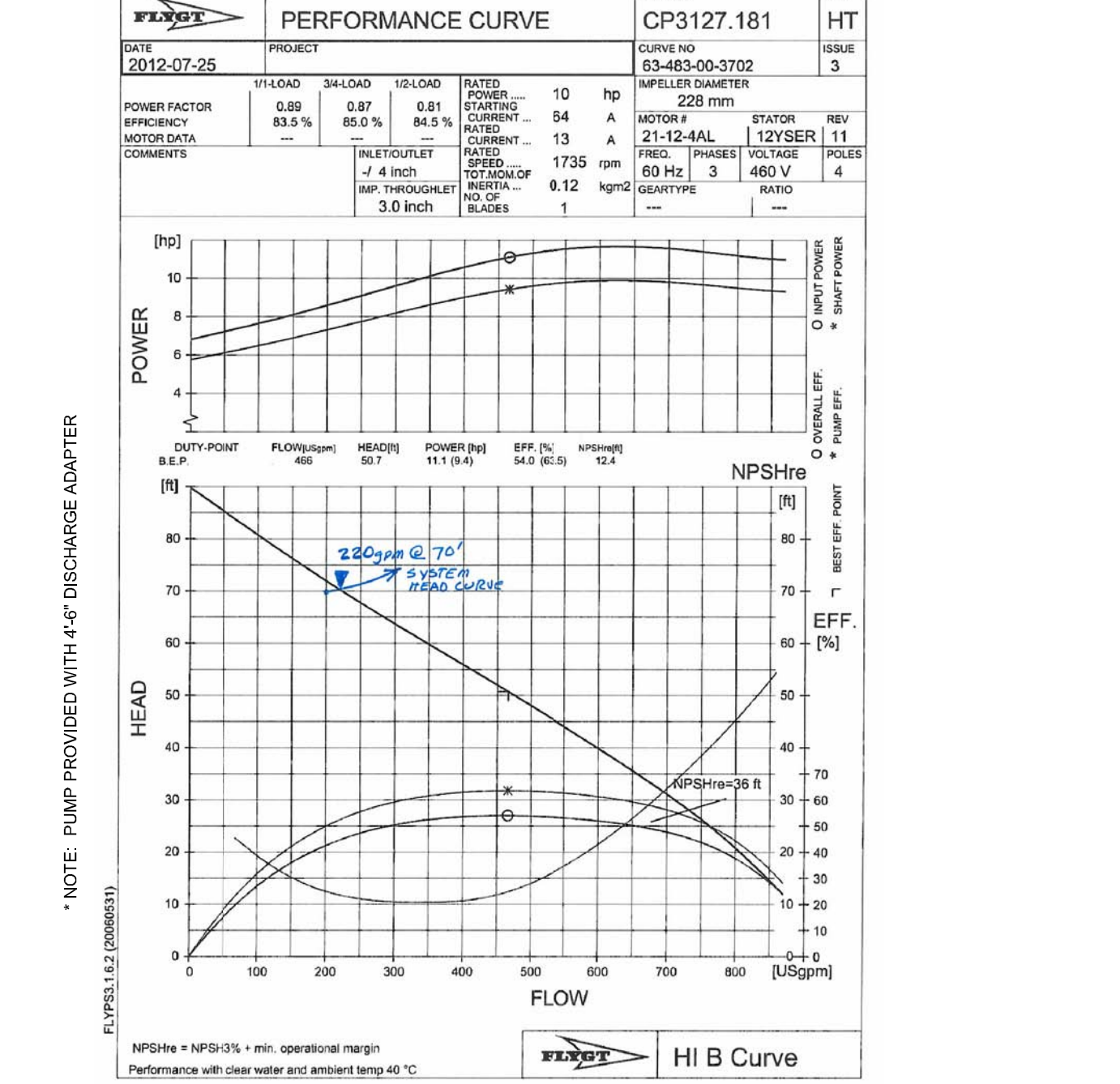


FOR: UTILITIES DEPARTMENT CITY OF NAPLES
 DATE: JULY 2013 WASTEWATER PUMP STATION SHEET: WW-18
 DRAWN: DAG WASTEWATER DIR: WASTEWATER
 SCALE: N.T.S. 380 RIVERSIDE CIRCLE, NAPLES, FLORIDA 34102 DWG. WW-18.DWG



FOR: UTILITIES DEPARTMENT CITY OF NAPLES
 DATE: SEPT 2010 WASTEWATER PUMP STATION SHEET: WW-16
 DRAWN: JAF WASTEWATER DIR: WASTEWATER
 SCALE: N.T.S. 380 RIVERSIDE CIRCLE, NAPLES, FLORIDA, 34102 DWG. WW-16.DWG

INITIAL PUMP (PROVIDED BY CITY) ULTIMATE PUMP (FUTURE USE)



FOR: UTILITIES DEPARTMENT CITY OF NAPLES
 DATE: SEPT 2010 WASTEWATER PUMP STATION SHEET: WW-17
 DRAWN: DAG WASTEWATER DIR: WASTEWATER
 SCALE: N.T.S. 380 RIVERSIDE CIRCLE, NAPLES, FLORIDA 34102 DWG. WW-17.DWG

Notes And Specifications

1. SERIES 18 STAINLESS STEEL SHALL BE USED IN THE WET WELL AND HAVE ASSEMBLY FOR FLANGE, BOLTS, NUTS, BRACKETS, GUIDE RAILS, AND OTHER HARDWARE CONTROL PANEL STRUCTURE HARDWARE SHALL BE S.S.
2. ALL EXTERIOR SURFACES FOR BELOW-GROUND STRUCTURES SHALL BE COPPER, ETC. 300 COAT TAP EPOXY PAINTING 3-Axis EPOXY REAR BY WEIGHT OR ENOUGH OF REQUIRED APPROVED COATING TWO COATS WITH A TOTAL DRY FILM THICKNESS OF 1/16 (0.0625) INCH. APPLICATION BY SPRAY OR BRUSH.
3. CONTRACTOR SHALL PROVIDE THE DESIGN MASTER HANGING EYE LIDS WITH NUMBER & MODEL PROVIDED BY CITY UTILITY ENGINEER. THERE SHALL BE TWO KEYS PER LOCK PROVIDED AT EACH END OF THE WET WELL. THE KEYS SHALL BE PROVIDED BY THE CITY ENGINEER.
4. ALL CONCRETE SHALL BE TYPE C-3000 PER MINIMUM.
5. CONTRACTOR SHALL PROVIDE PRECAST STRUCTURES AND SUBMIT SHOP DRAWINGS TO THE CITY UTILITY ENGINEER FOR REVIEW AND APPROVAL. STRUCTURES SHALL BE LIMITED TO 10' MAX. HEIGHT AND 10' MAX. WIDTH. MINIMUM REINFORCED CONCRETE. AS ACCORDANCE WITH ALL CITY, STATE, FEDERAL, AND LOCAL CODES AND REGULATIONS. WHENEVER POSSIBLE, NO OPENING SHALL BE WITHIN 12" OF END OF ANY SECTION.
6. SEE PUMP STATION DATA TABLES FOR SPECIFIC ELEVATIONS AND DIMENSIONS.
7. DISTANCE BETWEEN PUMPS SHALL BE DETERMINED BY MANUFACTURER'S RECOMMENDATIONS OR THE DISTANCE BETWEEN THE DISCHARGE PIPES, WHICHEVER IS GREATER.
8. DISCHARGE PIPES SHALL BE PARALLEL TO EACH OTHER.
9. DURING INSTALLATION, THE CONTRACTOR SHALL MAINTAIN GROUND WATER ELEVATION BELOW THE BOTTOM OF THE WET WELL. UNTIL FULL BACKFILL AND COMPACTED TO AVOID SHIFTING OR FLUTTERING.
10. ALARM LIGHT SHALL BE WHITE/AMBER/RED. IMPACT RESISTANT PLASTIC. WHENEVER IS GREATER.
11. INSTALLATION OF ACCESS COVER, PUMP ANCHOR BOLTS, GUIDE RAILS/BRACKETS, ETC. SHALL BE COORDINATED WITH THE DESIGN AND SPECIFICATIONS AS RECOMMENDED BY THE PUMP MANUFACTURER.
12. THE ELECTRIC SERVICE WIRING TO THE PUMP STATION, RECOMBINED PLASTIC AND CONTROL PANEL SHALL BE USED BY THE ELECTRICAL CONTRACTOR TO PROVIDE A VOLTAGE DROP NOT GREATER THAN 3% AT THE PUMP STATION. THE CONTRACTOR SHALL ENSURE THAT THE WET WELLS LEAK FREE PRIOR TO APPLICATION OF REQUIRED EPOXY LINING SYSTEM. CONTRACTOR TO CONTACT CITY UTILITY ENGINEER FOR CORRECT APPROVED EPOXY LINING SYSTEM.
13. ALL ABOVE GROUND PIPING, VALVES, CHECK VALVES, AND HYDRON SHALL BE PAINTED WITH TWO COATS OF COLOR AND TYPE OF PAINT PROVIDED BY THE CITY ENGINEER.
14. THE CONTRACTOR SHALL PROVIDE COMPLETE ELECTRICAL SERVICE, ALL COSTS OF POWER SERVICE, CONTRACTOR FEES, AND USER FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN APPROVAL OF THE CITY ENGINEER FOR THE PUMP STATION.
15. 3/4" X 3/8" S.S. BOLTS THREADED MIN. 4" CW, W/ NUTS & 2 WASHERS EACH FOR DISCHARGE EYELET. CAST BOLTS TO NOT BOTTOM GROUND.
16. CONTRACTOR SHALL ENSURE THAT THE WET WELLS LEAK FREE PRIOR TO APPLICATION OF REQUIRED EPOXY LINING SYSTEM. CONTRACTOR TO CONTACT CITY UTILITY ENGINEER FOR CORRECT APPROVED EPOXY LINING SYSTEM.

PUMP STATION SPECIFICATIONS

DESCRIPTION	PUMP 1	PUMP 2	UNITS
NUMBER OF PUMPS	#1	#2	
PUMP MANUFACTURER	FLYGT	FLYGT	
PUMP MODEL NUMBER	C-3127	C-3127	
IMPELLER NUMBER	483	483	
TYPE OF PUMP	SUB	SUB	
DESIGN CAPACITY PER PUMP	225	225	(GPM)
TOTAL DYNAMIC HEAD	71	71	(TDH)
SHUT OFF HEAD	90	90	(TDH)
DESIGN SPEED	1735	1735	(RPM)
MIN. HORSEPOWER PER PUMP	10	10	(HP)
VOLTS	460	460	(VOLTS)
AMPS	64	64	(AMPS)
PHASE POWER	3	3	(PH)
PUMP DISCHARGE SIZE	4	4	(INCHES)
RISER PIPE SIZE	6	6	(INCHES)
TOP OF WET WELL ELEV.	5.5	5.5	(FEET) M.A.S.D.
BAS HIGH WATER ALARM ELEV.	-6.08	-6.08	(FEET)
HIGH LEVEL PUMP(S) ON ELEV.	-6.58	-6.58	(FEET)
HIGH LEVEL PUMPS OFF ELEV.	-7.08	-7.08	(FEET)
GRAVITY INFLUENT PIPE ELEV.	-5.58	-5.58	(FEET)
LAG PUMP ON ELEV.	-6.58	-6.58	(FEET)
LEAD PUMP ON ELEV.	-7.08	-7.08	(FEET)
PUMPS OFF ELEV.	-9.38	-9.38	(FEET)
BOTTOM OF WET WELL ELEV.	-9.88	-9.88	(FEET)

BASIS OF DESIGN

	ADP (GPM)	PHF (GPM)	EDU (1 EDU = 2500 GPM)
EXISTING	90	225	500
INTERIM			
FUTURE	90	225	500

* NOTE: BASIS OF DESIGN FOR INITIAL PUMPS. WETWELL SIZED FOR ULTIMATE PUMPS

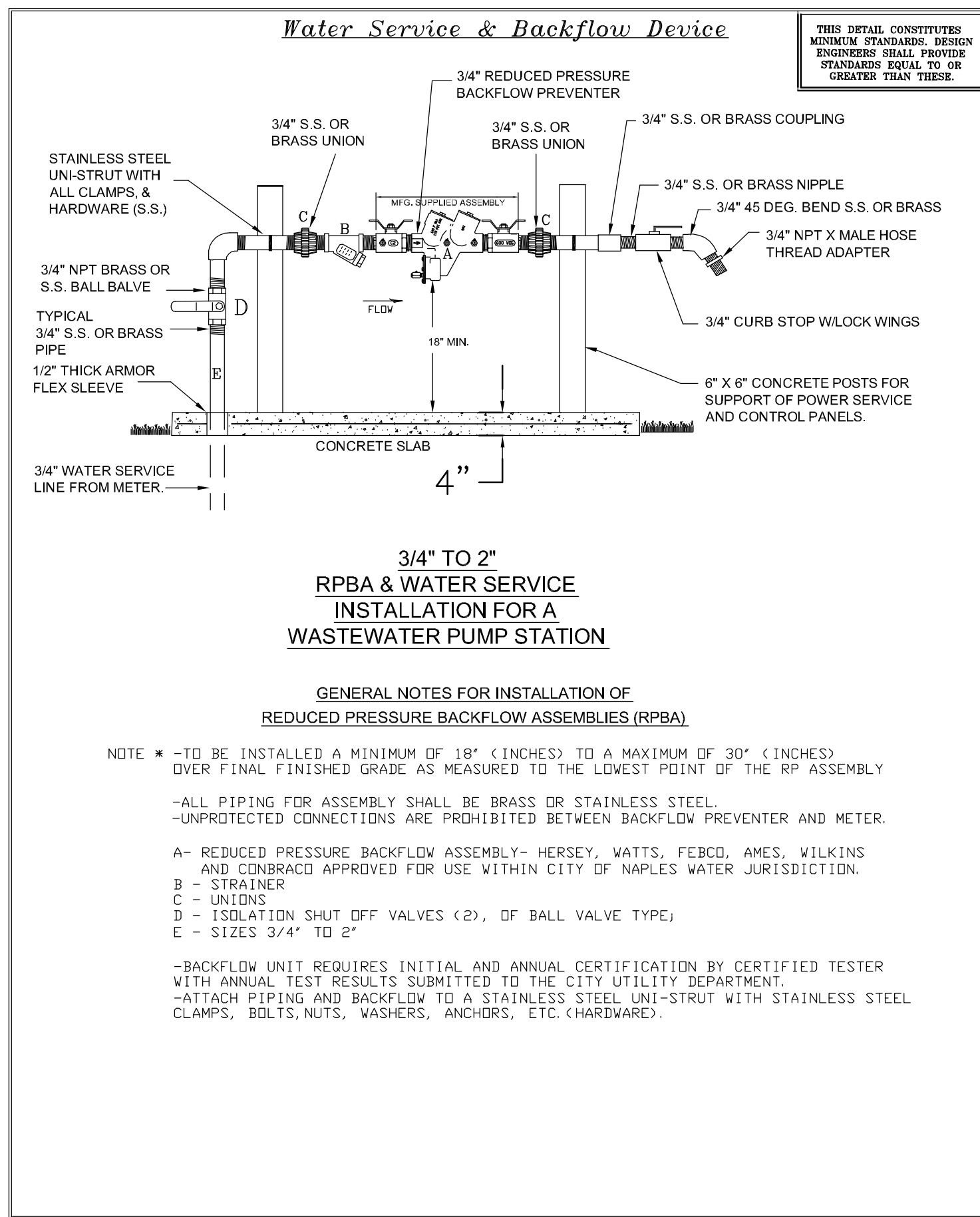
GNOLI BARBER & RUNDAGE, Inc.
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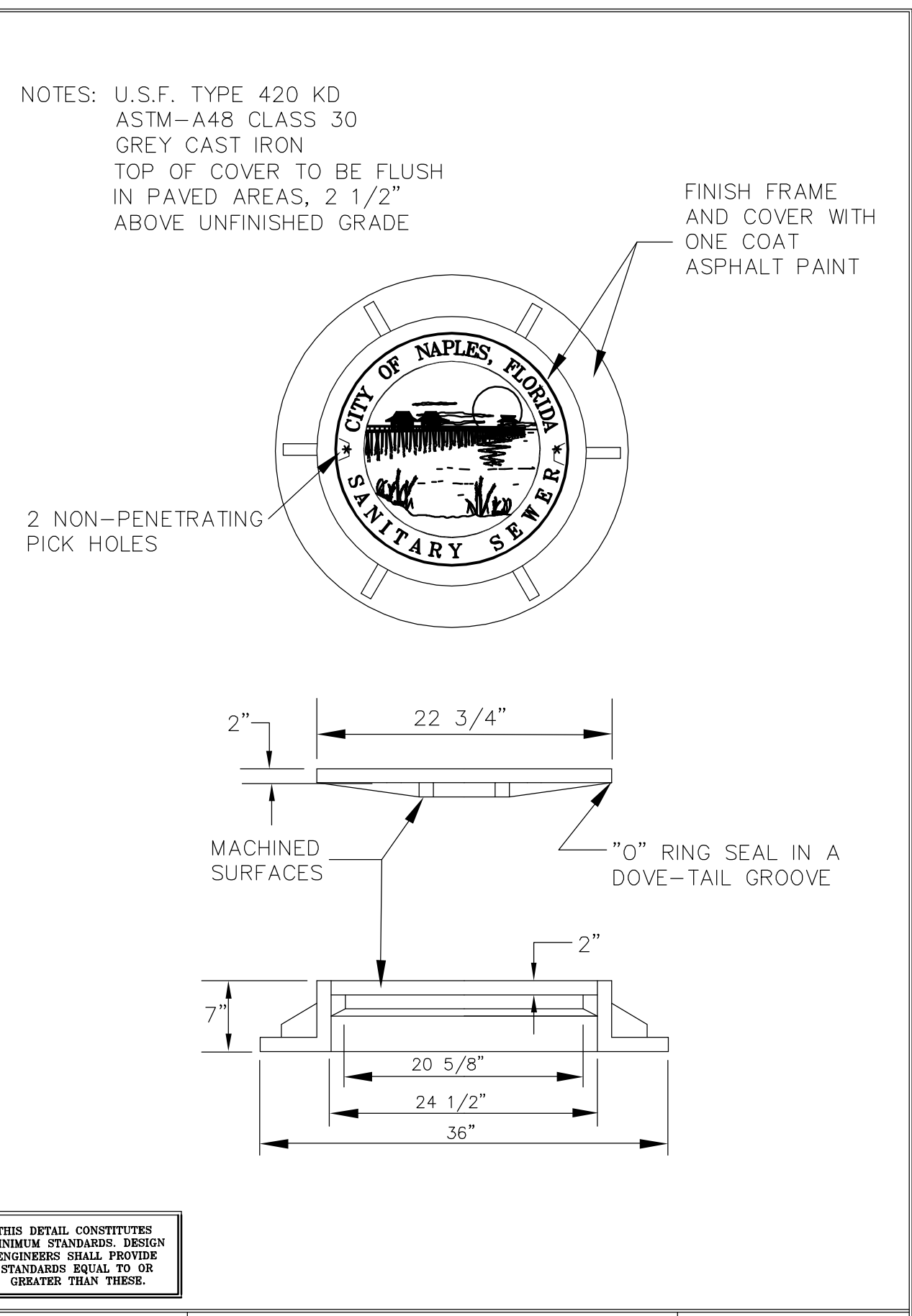
PROJECT NAME: CITY OF NAPLES P.S. 6 IMPROVEMENT PROJECT
 DRAWING TITLE: PUMP STATION DETAILS

DESIGNED BY: ABB
 DRAWN BY: TMR
 CHECKED BY: DJA
 HORIZ: VERT:
 SCALE: 1/16" = 1'-0" SCALE: 24x36
 DATE: MARCH 2014

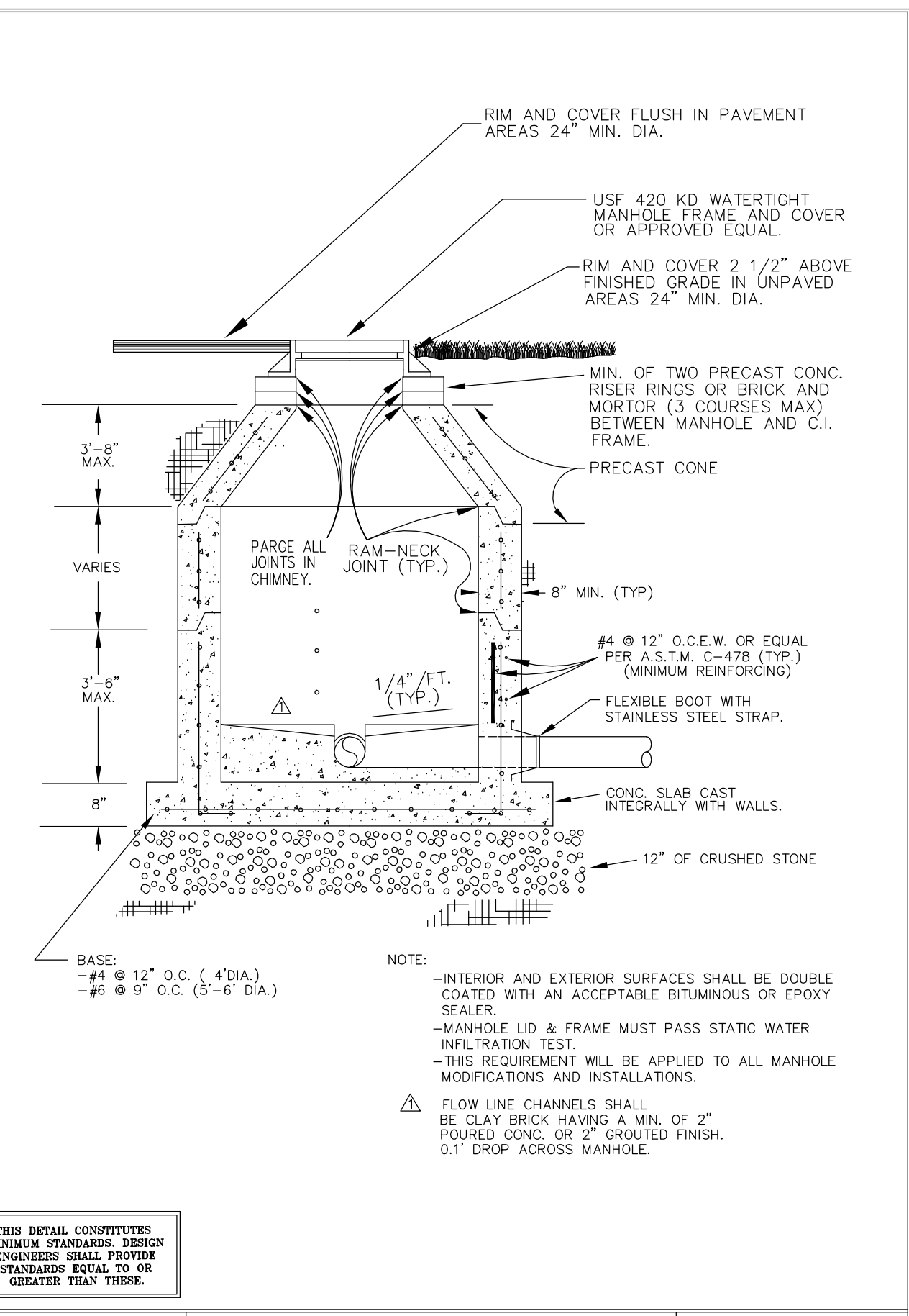
ACAD FILE NAME: 10749-DET
 ABB PROJECT # 11-0123
 PLOT VIEW / LAYOUT P 5
 SHEET 5 OF 6
 Acad File # 10749



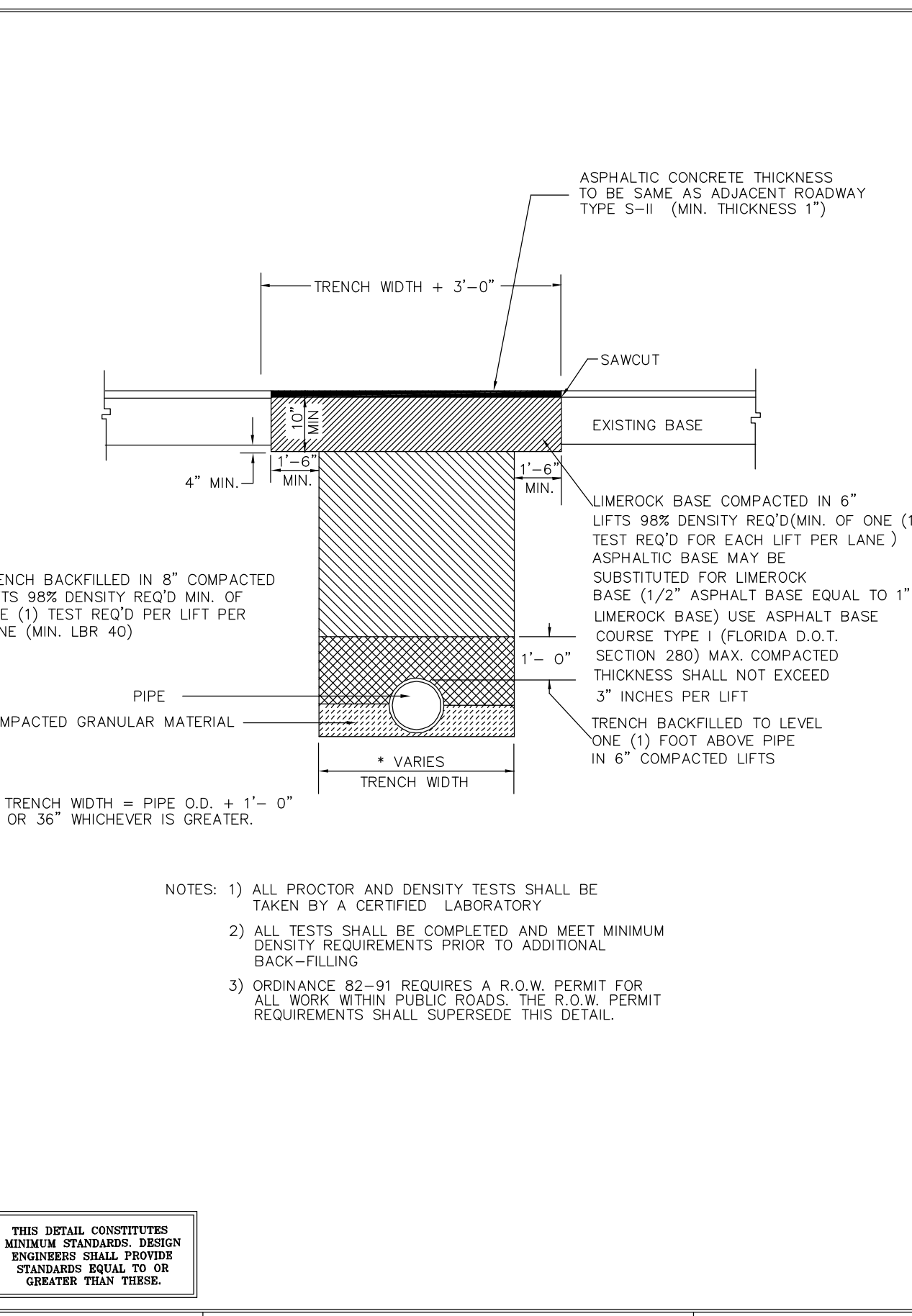
FOR:	UTILITIES DEPARTMENT	CITY OF NAPLES
DATE:	Feb. 2009	Wastewater Pump Station
DRAWN:	DAG	Water Service & Backflow Device
SCALE:	N.T.S.	380 RIVERSIDE CR., NAPLES, FLORIDA 34102
		SHEET: # 26
		DIR: SEWER/PS
		DWG. PSMECH7



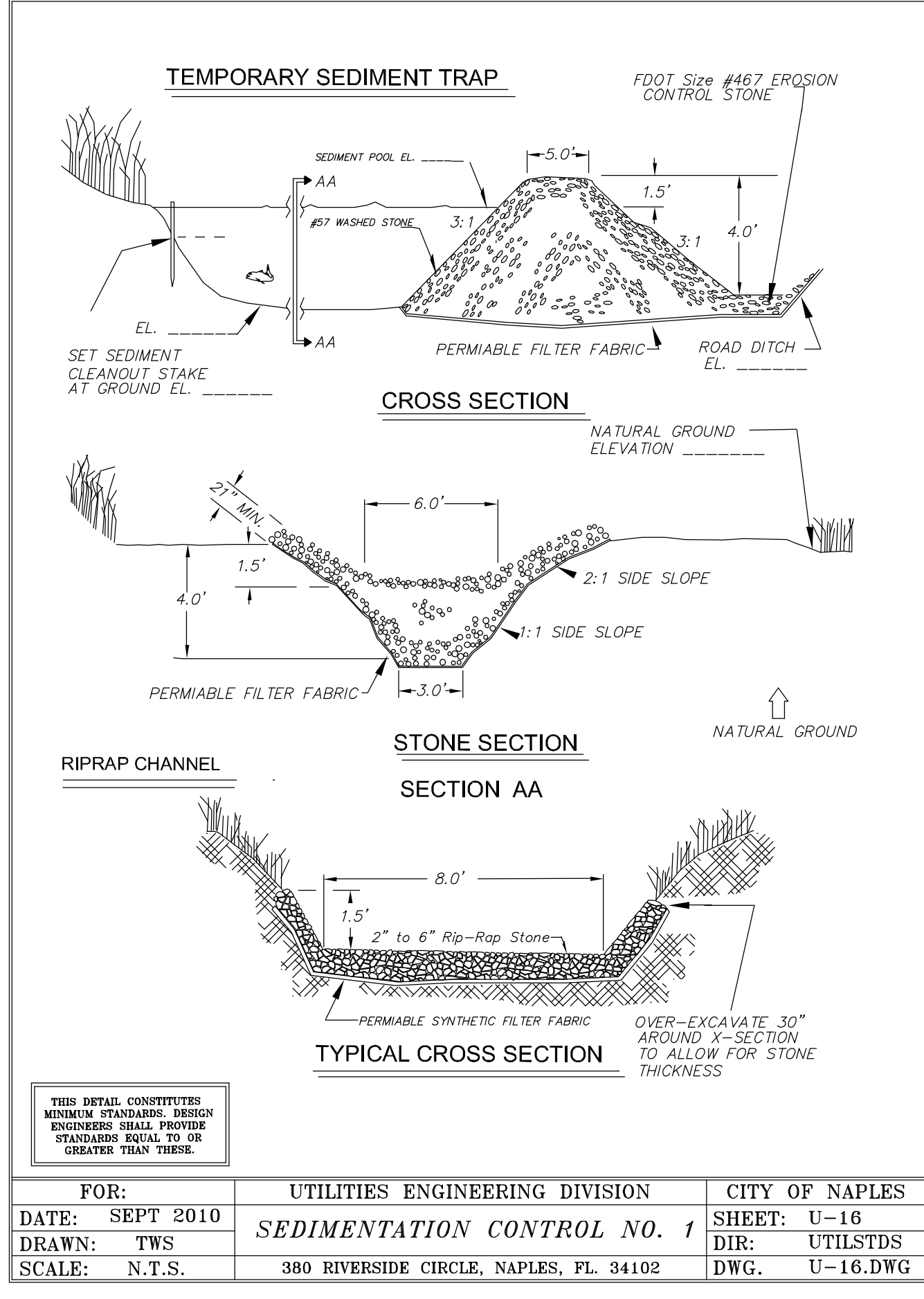
FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE:	April 1998	Standard Manhole Cover Detail
DRAWN:	TWS	DIR: SEWER
SCALE:	N.T.S.	735-EIGHTH STREET SOUTH, NAPLES, FL. 34102
		SHEET: # 9
		DIR: SEWER
		DWG. MHC0VER



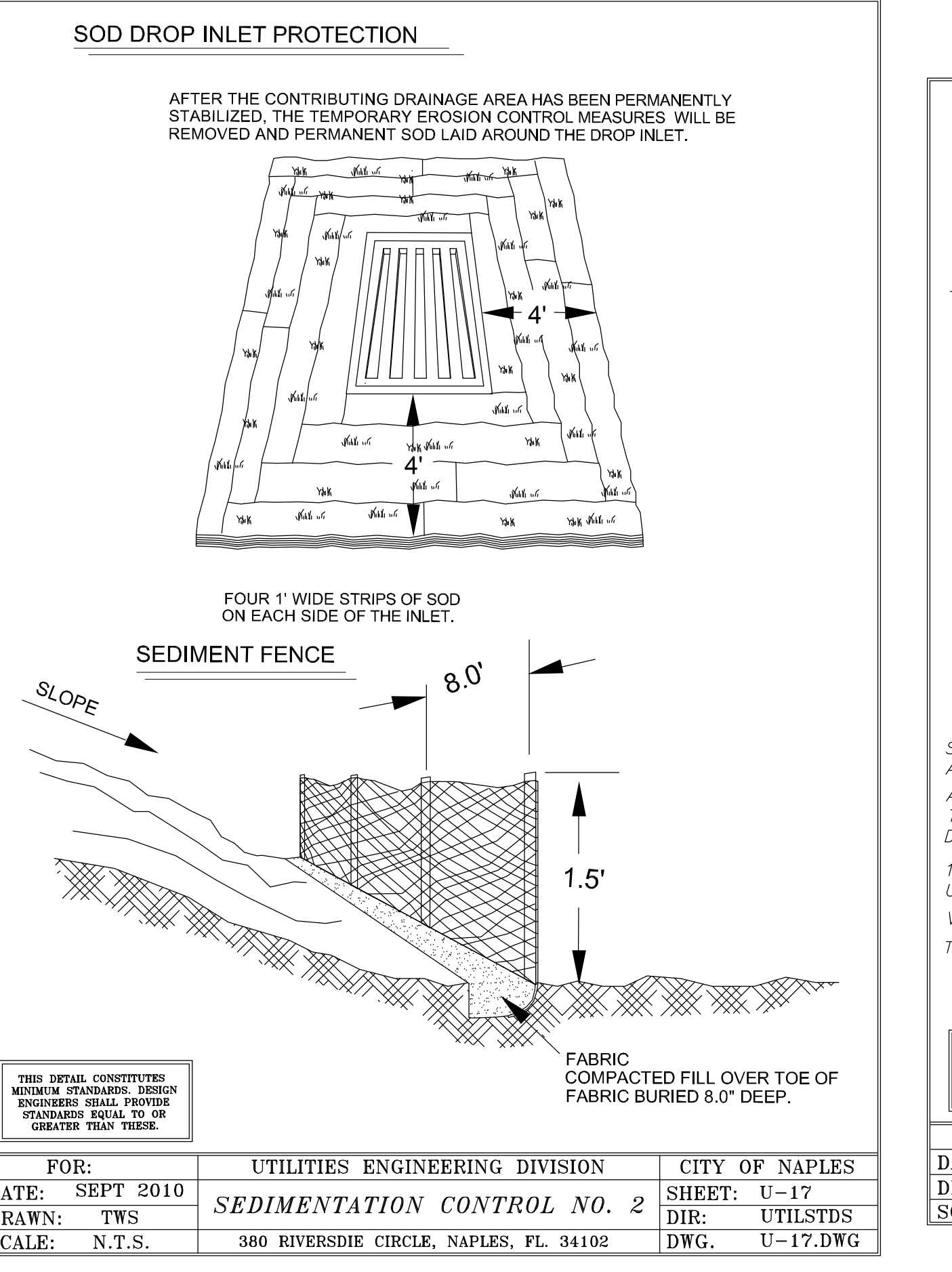
FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE:	Jan 2009	Standard Pre-Cast Manhole
DRAWN:	TWS	DIR: SEWER
SCALE:	N.T.S.	735-EIGHTH STREET SOUTH, NAPLES, FL. 34102
		SHEET: # 5
		DIR: SEWER
		DWG. PCASTMH



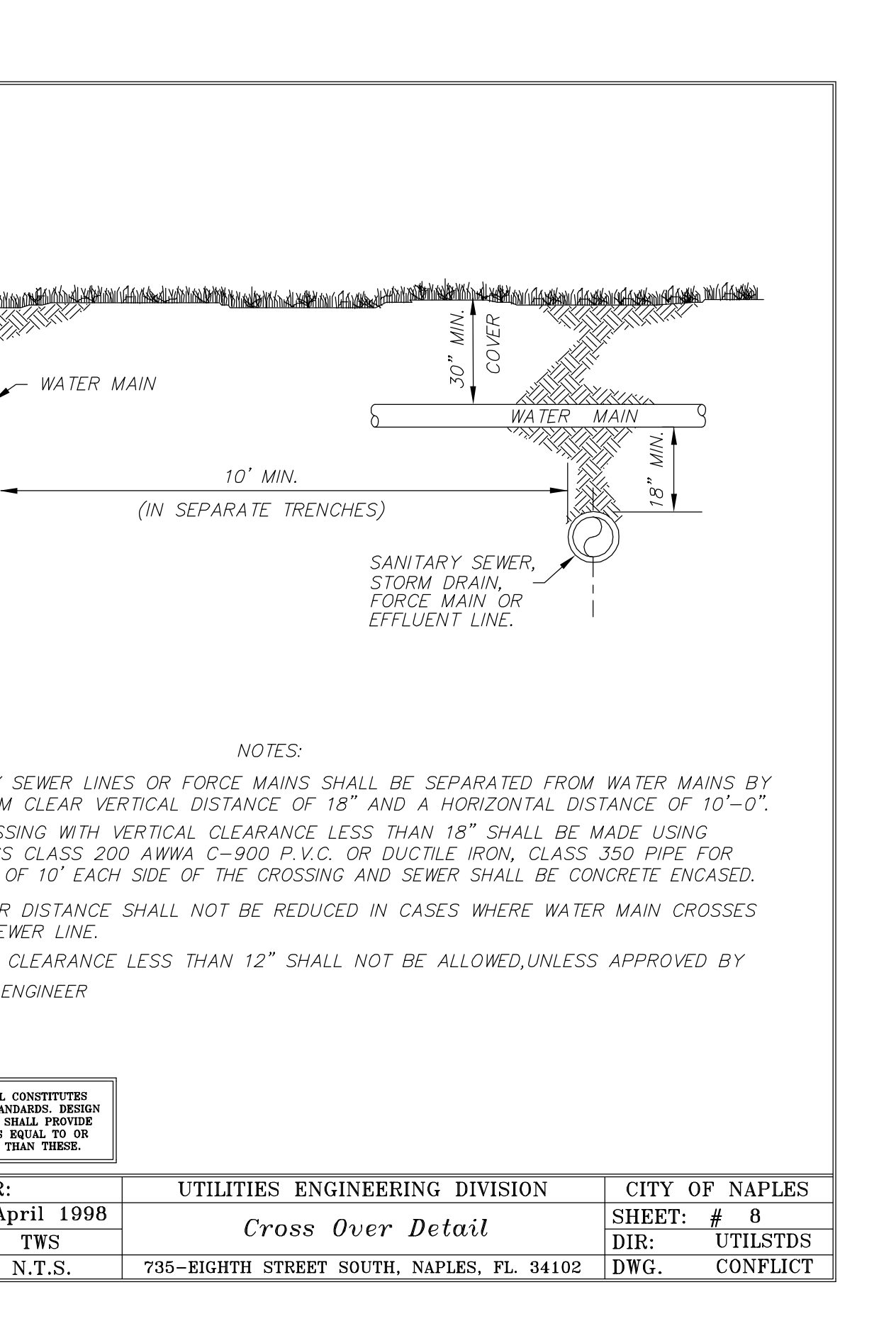
FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE:	April 1998	Backfill - Paved Roadways
DRAWN:	TWS	DIR: UTILSTDS
SCALE:	N.T.S.	735-EIGHTH STREET SOUTH, NAPLES, FL. 34102
		SHEET: # 2
		DIR: UTILSTDS
		DWG. PAVDFILL



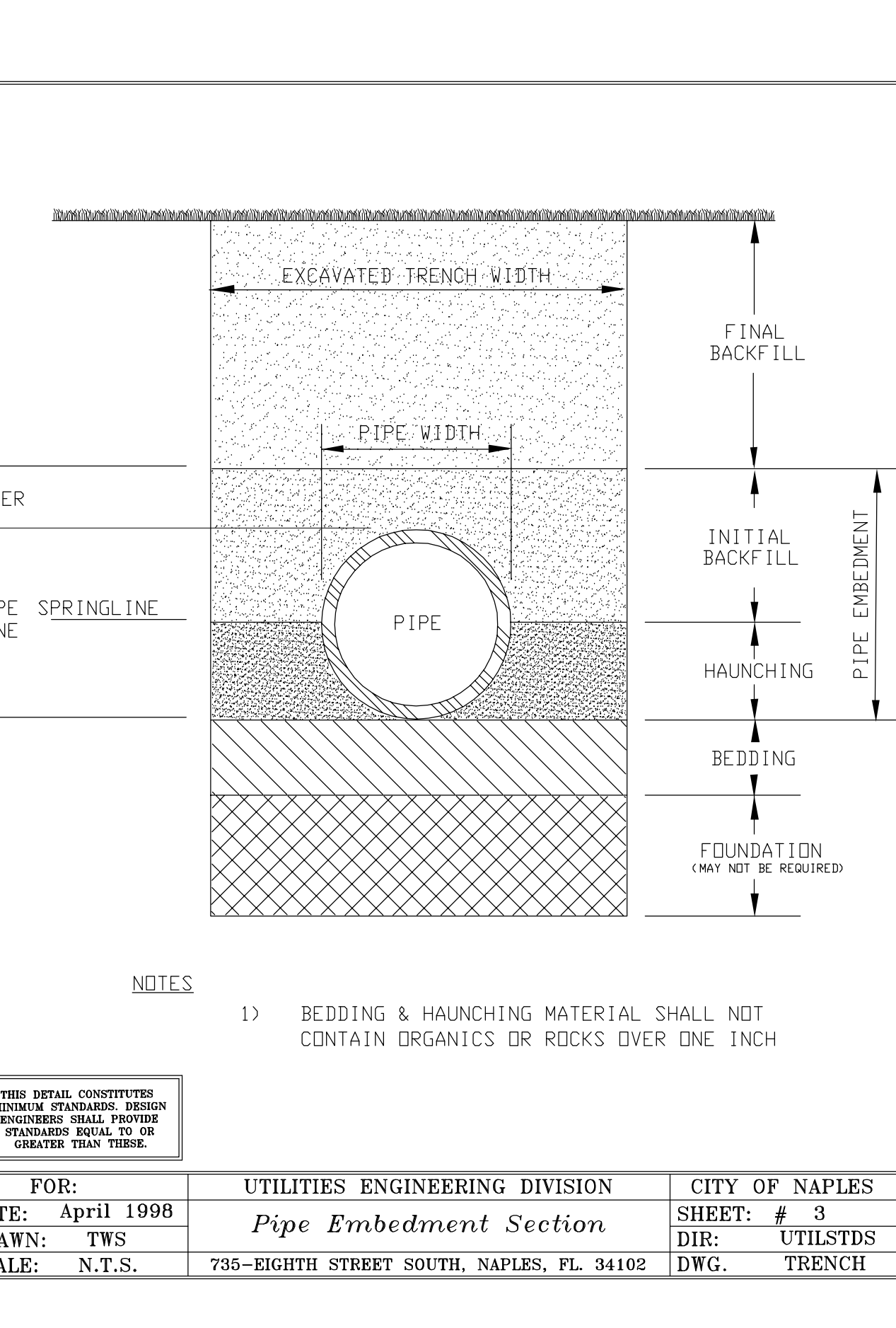
FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE:	SEPT 2010	SEDIMENTATION CONTROL NO. 1
DRAWN:	TWS	DIR: UTILSTDS
SCALE:	N.T.S.	380 RIVERSIDE CIRCLE, NAPLES, FL. 34102
		SHEET: U-16
		DIR: UTILSTDS
		DWG. U-16.DWG



FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE:	SEPT 2010	SEDIMENTATION CONTROL NO. 2
DRAWN:	TWS	DIR: UTILSTDS
SCALE:	N.T.S.	380 RIVERSIDE CIRCLE, NAPLES, FL. 34102
		SHEET: U-17
		DIR: UTILSTDS
		DWG. U-17.DWG



FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE:	April 1998	Cross Over Detail
DRAWN:	TWS	DIR: UTILSTDS
SCALE:	N.T.S.	735-EIGHTH STREET SOUTH, NAPLES, FL. 34102
		SHEET: # 8
		DIR: UTILSTDS
		DWG. CONFLICT



FOR:	UTILITIES ENGINEERING DIVISION	CITY OF NAPLES
DATE:	April 1998	Pipe Embedment Section
DRAWN:	TWS	DIR: UTILSTDS
SCALE:	N.T.S.	735-EIGHTH STREET SOUTH, NAPLES, FL. 34102
		SHEET: # 3
		DIR: UTILSTDS
		DWG. TRENCH

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PHONE: 239-213-4712

CITY OF NAPLES P.S. 6 IMPROVEMENT PROJECT

CONSTRUCTION DETAILS & EROSION CONTROL DETAILS

DESIGNED BY: ABB
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11x17 SCALE 24x36
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ACAD FILE NAME: 10749-DET
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PLOT VIEW LAYOUT P 6
SHEET 6 OF 6
Acad File # 10749