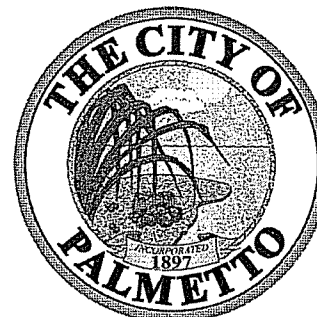
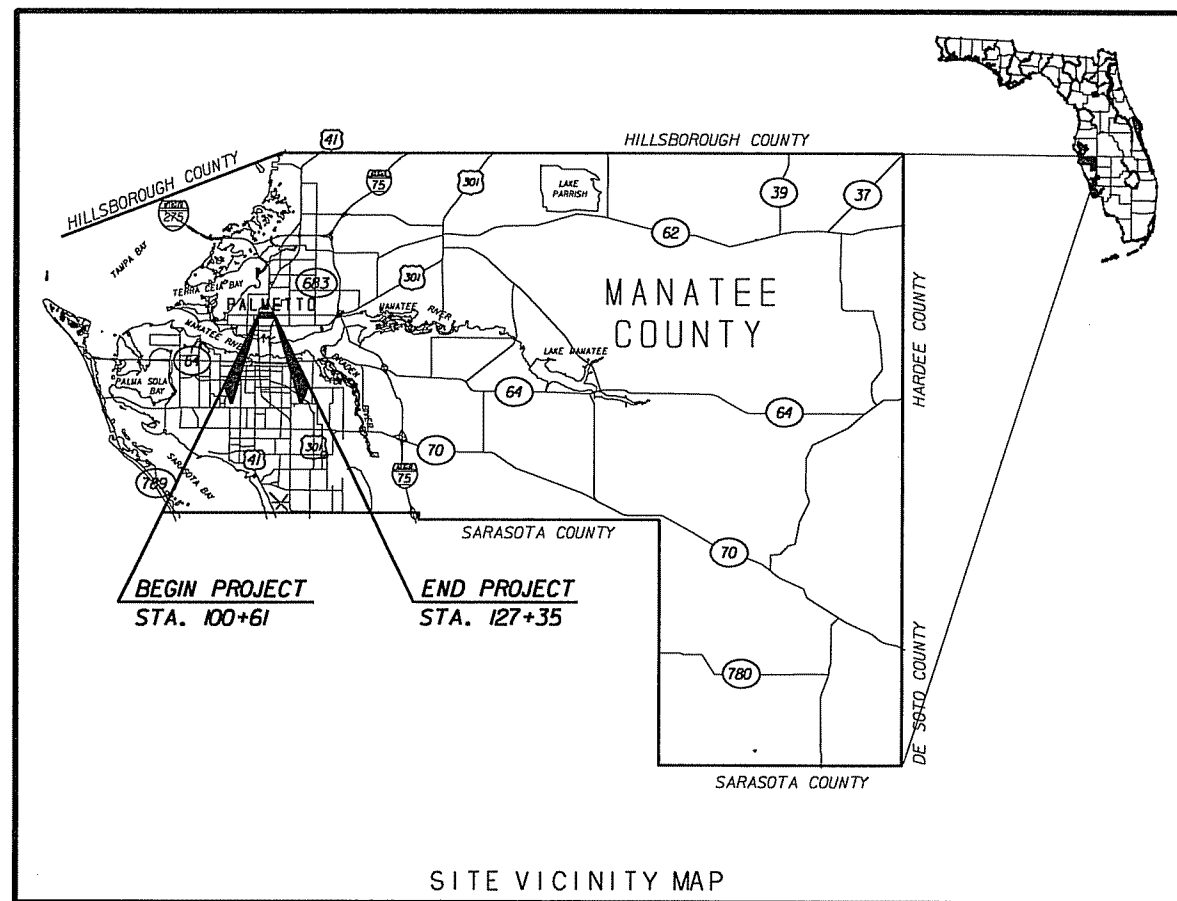


17th STREET WEST UTILITY REPLACEMENT PROJECT PALMETTO, FLORIDA



CITY PROJECT NO.
05-435

JONES EDMUNDS PROJECT NO.
09502073

DATE
MAY, 2009

PREPARED BY:

JONES EDMUNDS

730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

DRAWING INDEX

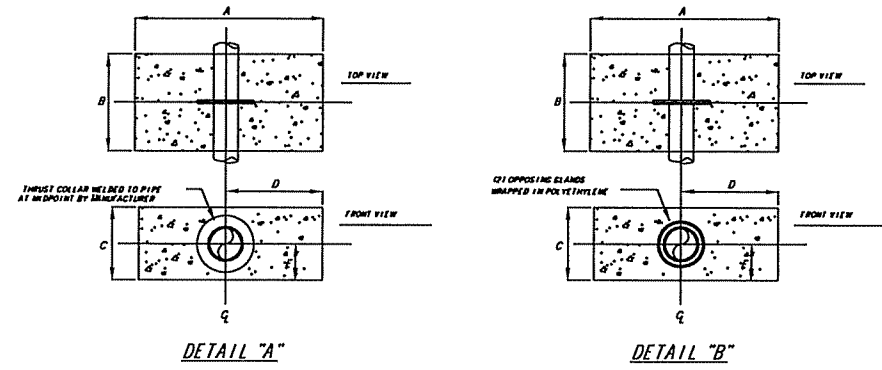
SHEET	DESCRIPTION
1	PROJECT COVER SHEET
2	DETAILS AND GENERAL NOTES
3	DETAILS AND GENERAL NOTES
4	PLAN AND PROFILE - STA. 100+00 TO 104+00
5	PLAN AND PROFILE - STA. 104+00 TO 110+00
6	PLAN AND PROFILE - STA. 110+00 TO 115+00
7	PLAN AND PROFILE - STA. 115+00 TO 121+00
8	PLAN AND PROFILE - STA. 121+00 TO 126+00
9	PLAN AND PROFILE - STA. 126+00 TO 132+00
10	PLAN AND PROFILE - STA. 300+00 TO 306+00
11	PLAN AND PROFILE - STA. 306+00 TO 311+00

LEGEND

SYMBOL	DESCRIPTION
	SANITARY SEWER, MANHOLE, AND SERVICE
	WATER MAIN, SIZE INDICATED
	FORCE MAIN, SIZE INDICATED
	NON-POTABLE WATER MAIN, SIZE INDICATED
	DUCTILE IRON PIPE, SIZE INDICATED
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	THRUST BLOCK
	RECLAIMED WATER USAGE SIGN

MAY, 2009

- NOTES:
 1) DIMENSIONS OF CONCRETE COLLARS BASED ON 2000 P.S.F. SOIL BEARING.
 2) SPECIFICATIONS OF SPLIT GLAND SHALL CONFORM TO THE PIPE MANUFACTURER'S SUPPLIED SHOP DRAWINGS, WHICH SHALL SPECIFY A THURST MATING NOT LESS THAN THAT INCLUDED IN THE CHART BELOW.
 3) DIMENSIONS OF WELDED STEEL OR DUCTILE IRON THURST COLLARS SHALL CONFORM TO THE PIPE MANUFACTURER'S SUPPLIED SHOP DRAWINGS WHICH SHALL SPECIFY A THURST MATING NOT LESS THAN THAT INCLUDED IN THE CHART BELOW.
 4) CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS. "HIGH EARLY" CONCRETE SHALL BE USED.
 5) SOIL CONDITIONS SHALL BE VERIFIED BY THE CITY'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
 6) FOR 3" PIPE USE 4" DIAMETER THURST MATING.



PIPE SIZE	A	B	C	D	CE	CY.	WELDED THURST COLLAR MINIMUM THICKNESS
4"	3'-0"	2'-0"	1'-5"	1'-6"	0'-8"	0.33	4,500 lbs
6"	4'-0"	2'-0"	1'-5"	2'-0"	0'-8"	0.44	9,300 lbs
8"	4'-6"	2'-0"	2'-0"	2'-3"	1'-0"	0.67	16,000 lbs
12"	5'-0"	2'-0"	3'-0"	3'-0"	1'-5"	1.33	34,000 lbs
16"	5'-6"	2'-0"	4'-6"	3'-3"	2'-3"	2.17	59,000 lbs

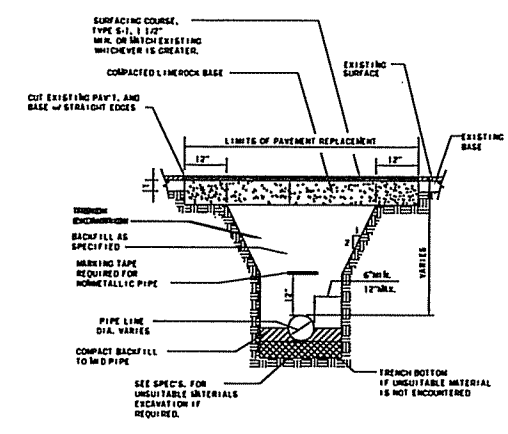
TYPICAL CONCRETE COLLAR DETAIL
 N.T.S.

PIPE SIZE	HORIZONTAL BENDS				VALVE OR DEAD END
	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	
18"	80	33	16	8	202
12"	55	23	11	6	143
8"	39	16	8	4	101

PIPE SIZE	VERTICAL BENDS			
	45°		22 1/2°	
	HIGH END	LOW END	HIGH END	LOW END
18"	84	15	40	7
12"	59	10	28	5
8"	42	7	20	3

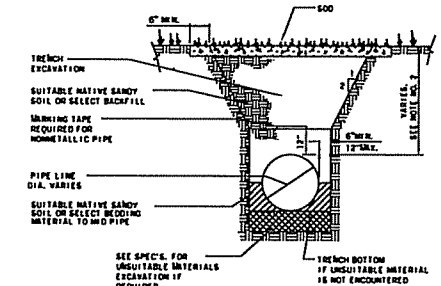
- NOTES:
 1. RESTRAINED LENGTHS ARE IN FEET AND ARE FOR PVC PIPE.
 2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING RESTRAINED JOINTS.
 3. THE SCHEDULE SHOWN IS FOR THE FOLLOWING SERVICE CONDITIONS:
 SOIL TYPE = ML (CLAYEY FINE SAND)
 GRANULAR BEDDING
 150 PSI TEST PRESSURE
 TYPE 4 TRENCH
 3 FEET COVER
 SAFETY FACTOR = 2
 4. RESTRAINED LENGTHS SHOWN IN TABLE ARE IN FEET AND ARE MINIMUM LENGTHS REQUIRED IN EACH DIRECTION FROM FITTINGS OR VALVES.
 5. ALL PIPE SHALL BE RESTRAINED TO THE NEXT JOINT BEYOND THE RESTRAINED LENGTH GIVEN.

RESTRAINED JOINT SCHEDULE



- NOTES:
 1. DEWATERING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE PIPE.
 2. SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPPED AND FEATHERED.

TRENCH AND PAVEMENT REPLACEMENT DETAIL
 N.T.S.

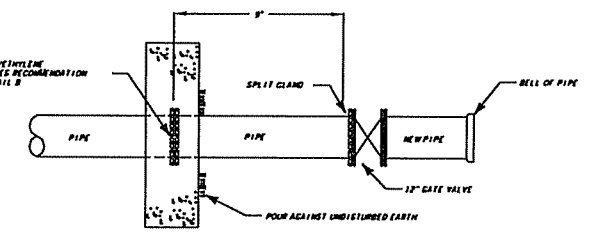


- NOTES:
 1. DEWATERING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE PIPE.
 2. 60" MIN. COVER OUTSIDE FENCE, 30" MIN. COVER INSIDE FENCE.

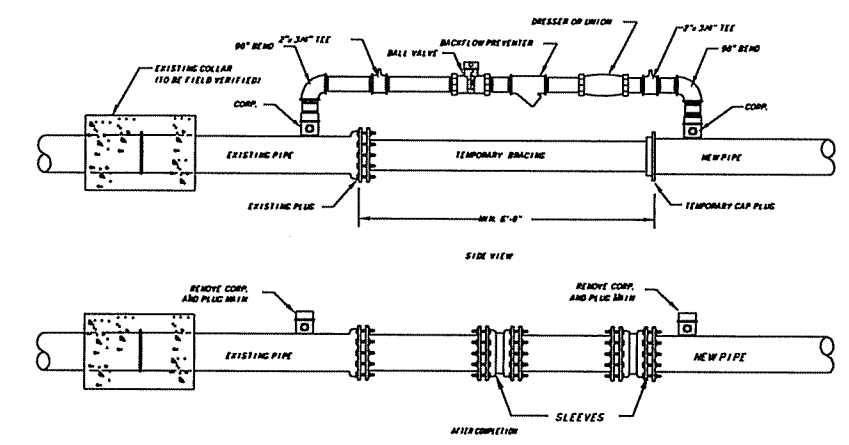
TRENCH DETAIL
 N.T.S.

GENERAL NOTES-WATER

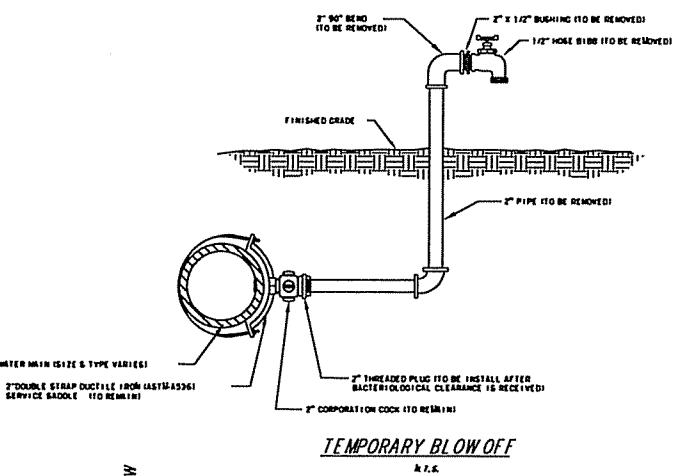
- LAY MAINS WITH MINIMUM 3' COVER.
- LOCATION OF UTILITIES IS BASED ON INFORMATION SUPPLIED BY THE UTILITY COMPANIES, THE CITY OF PALMETTO AND JONES EDMUNDS & ASSOC. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION. CONTRACTOR TO CONTACT UTILITIES FOR VERIFICATION OF UTILITIES PRIOR TO CONSTRUCTION.
- ANY TRENCHES WHICH REQUIRE ENTRY BY C.O.P. OR JEA PERSONNEL, MUST BE IN ACCORDANCE WITH ALL O.S.H.A. TRENCH SAFETY STANDARDS.
- DIMENSIONS, STRUCTURES AND FACILITIES ARE TAKEN FROM A PLAN BY OTHERS AND ARE SUBJECT TO CHANGE. C.O.P. & JEA ASSUMES NO RESPONSIBILITY FOR ACCURACY OF PLANS BY OTHERS.
- FINAL GRADE MUST BE ESTABLISHED PRIOR TO BEGINNING WATER LINE CONSTRUCTION.
- MAINTAIN MINIMUM 6" VERTICAL SEPARATION WHEN CROSSING OTHER UTILITIES, STORM DRAIN, ETC. 18" VERTICAL OR 10" HORIZONTAL WHEN CROSSING SANITARY SEWERS.
- ALL AIR RELIEF TAPS TO BE FIELD LOCATED BY THE CITY'S REPRESENTATIVE.
- HORIZONTAL AND VERTICAL BENDS ARE TO BE USED AS DETERMINED BY THE CITY'S REPRESENTATIVE.
- P.V.C. PIPE SHALL MEET ALL REQUIREMENTS OF A.W.W.A. C900-89. PIPE SHALL BE CLASS 200 (DR 141) AND SHALL BE NSF APPROVED.
- THE LAST JOINT OF PIPE ON EACH EXTENSION SHALL BE DUCTILE IRON PIPE IN ACCORDANCE WITH A.W.W.A. C151-91 WITH A WELDED ON THURST COLLAR AS INDICATED BY THE CONCRETE COLLAR DETAIL.
- ANY CONCRETE VALVE MARKERS DEEMED NECESSARY BY THE CITY'S REPRESENTATIVE MUST BE FURNISHED AND SET BY THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL TAPS INCLUDING THE MAIN LINE TAP.
- ALL HORIZONTAL AND VERTICAL BENDS, TEES, TAPS, ETC. ARE TO HAVE AN APPROVED RESTRAINT MECHANISM.
- WHEREVER PVC PIPE IS INSTALLED, TRACER WIRE AND MARKING TAPE SHALL BE INSTALLED TO FACILITATE FUTURE LOCATION OF THE MAIN.



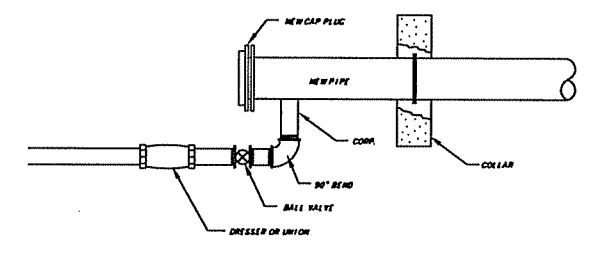
VALVE RESTRAINT DETAIL
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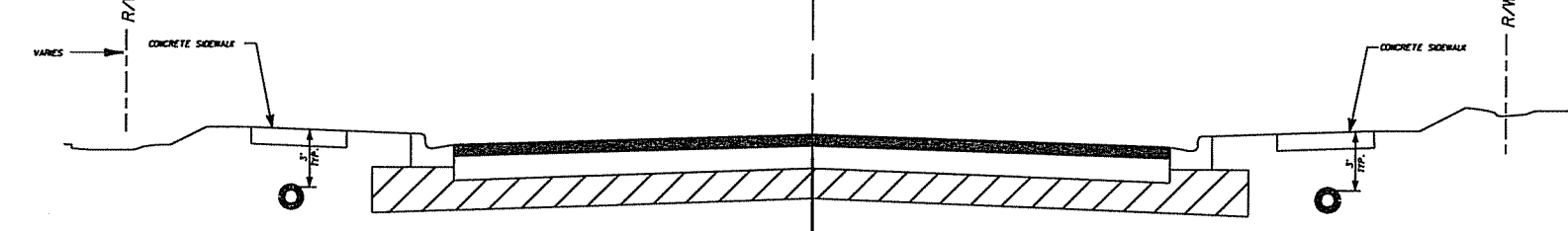
TYPICAL JUMPER CONNECTION DETAIL
 N.T.S.



TEMPORARY BLOW OFF
 N.T.S.



TIE IN DETAIL
 N.T.S.



TYPICAL STREET SECTIONS
 N.T.S.
 NOTE: ROADWAY DIMENSIONS ARE PER MANATEE COUNTY

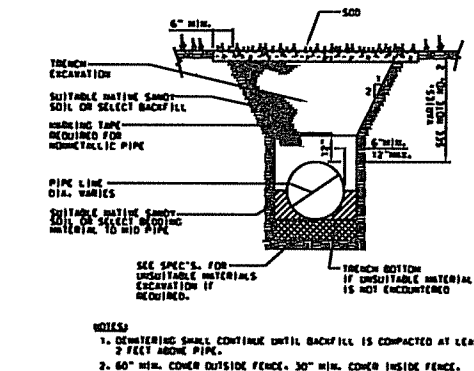
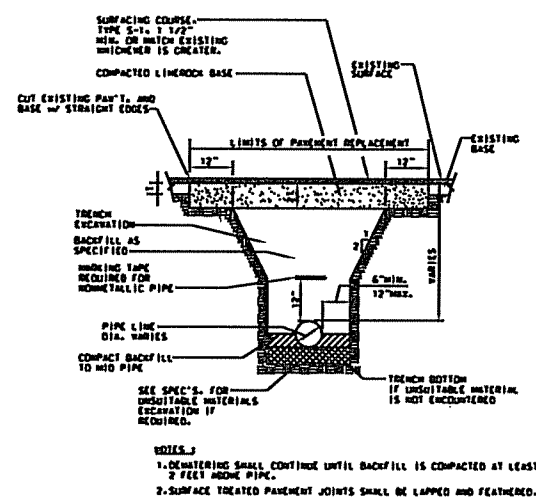
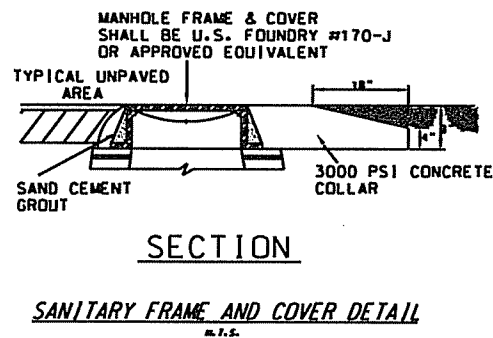
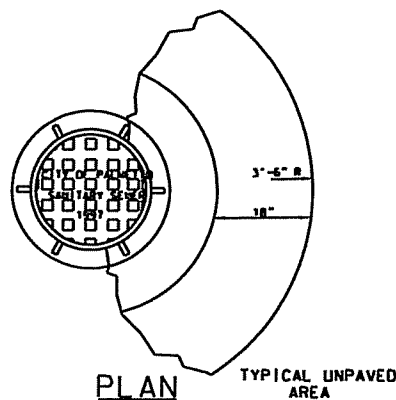
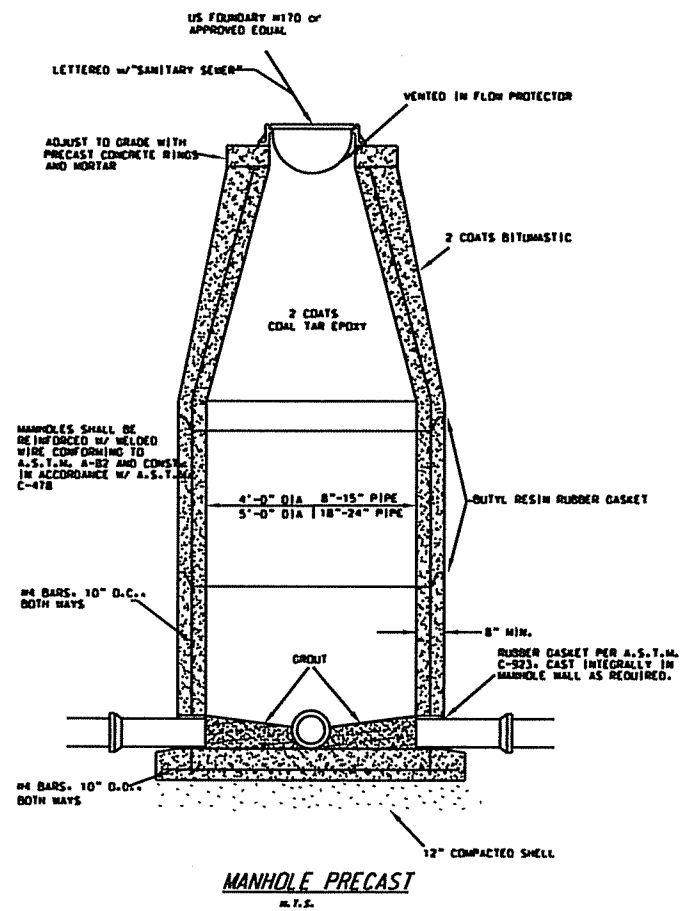
DESIGNED	WTH
DRAWN	MAW
CHECKED	
WILLIAM T. HARLEY, P.E.	
PROJECT ENGINEER	

JONES EDMUNDS
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 1100 CESERY BLVD., SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

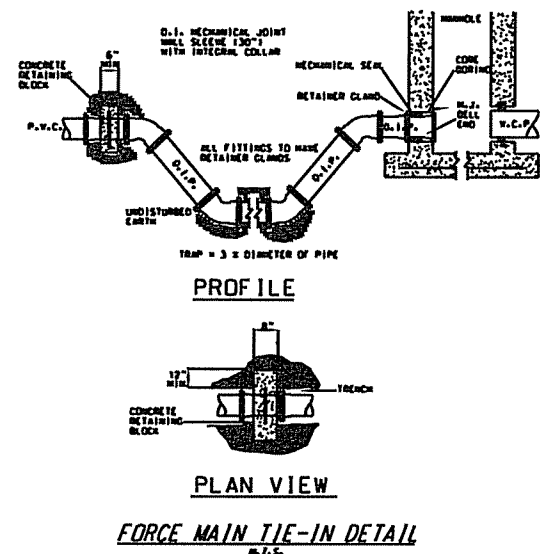
17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

GENERAL WATER NOTES
 AND DETAILS

CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
WILLIAM T. HARLEY, P.E.	MAY 2009	0950207301
P.E. #63321	SCALE	DWG. NO.
	NTS	2



- GENERAL NOTES - SEWER**
1. LOCATION OF UTILITIES IS BASED UPON INFORMATION SUPPLIED BY THE UTILITY COMPANIES. THE ENGINEER AND CITY OF PALMETTO ASSUME NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION. CONTRACTOR TO CONTACT LOCATE SERVICE FOR VERIFICATION OF UTILITIES PRIOR TO CONSTRUCTION.
 2. PRECAST MANHOLE SHALL CONFORM TO ASTM C478, AND SHALL CONSIST OF PRECAST REINFORCED CONCRETE RISER SECTIONS, A MONOLITHIC BASE SECTION, AN ECCENTRIC, CONCENTRIC OR FLAT SLAB TOP SECTION AS REQUIRED, ALL IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
 3. JOINT SEALANT SHALL BE BUTYL RUBBER RING JOINT, 1-INCH DIAMETER, CONFORMING TO FEDERAL SPECIFICATION SS-5-00210, TYPE 1. CEMENT MORTAR JOINTS WILL NOT BE ACCEPTABLE, EXCEPT THAT EACH JOINT SHALL BE WIPED INSIDE THE MANHOLE WITH CEMENT MORTAR AFTER ASSEMBLY.
 4. INVERTS SHALL BE FACTORY CONSTRUCTED PRECAST CONCRETE OR FIELD CONSTRUCTED CEMENT MORTAR, BRICKWORK AND PLASTER. AT END MANHOLES, A "FALSE" INVERT SHALL BE CONSTRUCTED TO DRAIN ACCUMULATION OF WATER FROM MANHOLE BOTTOM. TROUGHS SHALL BE TROWELED SMOOTH AND FREE OF HIGH OR LOW SPOTS AND RUBBED SMOOTH AFTER SETTING UP.
 5. MANHOLE STEPS SHALL BE OF ALUMINUM OR COMPOSITE PLASTIC STEEL CONSTRUCTION. MINIMUM DESIGN LIVE LOAD SHALL BE A SINGLE CONCENTRATED LOAD OF 300 POUNDS. STEPS SHALL HAVE NONSKID TOP SURFACES, AND SHALL BE DESIGNED SO THAT THE FOOT CANNOT SLIP OFF THE END. STEPS SHALL HAVE A MINIMUM CROSS-SECTIONAL DIMENSION OF 1-INCH, AND A MINIMUM WIDTH OF 10-INCHES. STEPS SHALL BE EVENLY PLACED ON 16-INCH CENTERS WITH EACH STEP EMBEDDED IN THE WALL A MINIMUM OF 3-INCHES. EACH STEP SHALL PROJECT A MINIMUM OF 4-INCHES FROM THE WALL AS MEASURED FROM THE POINT OF EMBEDMENT.
 6. GRAVITY SEWER PIPE SHALL BE LAID TO PRODUCE A STRAIGHT LINE OF PIPE ON A UNIFORM GRADE. ALL MISALIGNMENT OF PIPE SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.
 7. WHENEVER PVC PIPE IS INSTALLED, TRACER WIRE AND WARNING TAPE SHALL BE INSTALLED TO FACILITATE FUTURE LOCATION OF THE FORCE MAIN.
 8. SERVICE CONNECTIONS SHALL BE PROPERLY INSTALLED AT THE REQUIRED LOCATIONS. ALL WYES, BENDS SERVICE PIPE AND OTHER APPURTENANCES SHALL BE PROVIDED AS REQUIRED FOR EACH CONNECTION. ALL JOINTS SHALL BE INSTALLED SO AS TO PROVIDE WATERTIGHT CONNECTIONS.
 9. ALL BACKFILL WILL BE SUBJECT TO A COMPACTION TEST BY AN INDEPENDENT LABORATORY SELECTED BY THE ENGINEER OR OWNER. IF COMPACTION FAILS THE TEST, CONTRACTOR SHALL REMOVE AND REPLACE TO THE SATISFACTION OF THE ENGINEER AND THE OWNER, AND SHALL ALSO PAY FOR THE COST OF THE TEST.
 10. NEW DISCHARGE MANHOLE INTERIOR SHALL BE PROTECTED FROM BIOGENIC CORROSION BY THE APPLICATION OF COAL TAR EPOXY IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS. ACCEPTABLE MANUFACTURERS ARE BENJAMIN-MOORE M47 OR M48, CARBOLINE BITUMASTIC 300M, OR APPROVED EQUAL.



DESIGNED	WITH
DRAWN	MAW
CHECKED	
WILLIAM T. HARLEY, P.E.	
PROJECT ENGINEER	

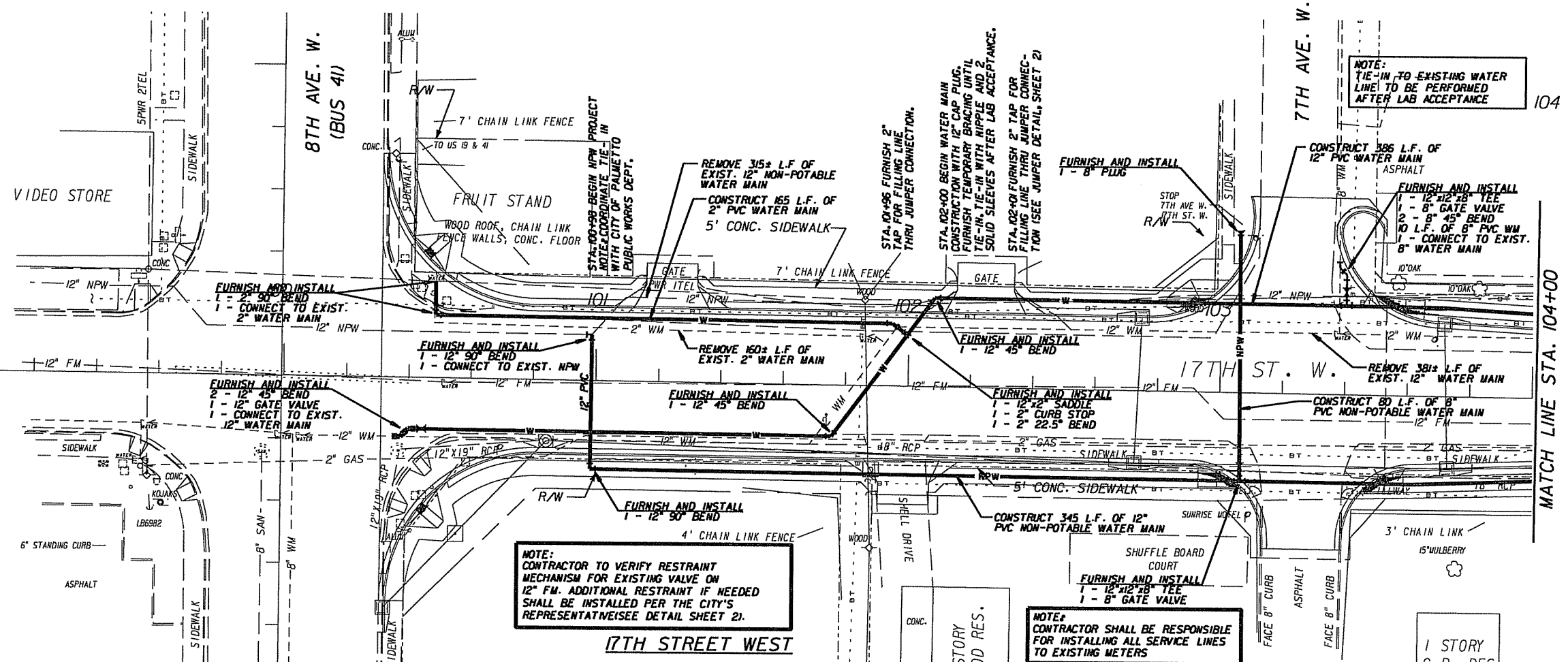
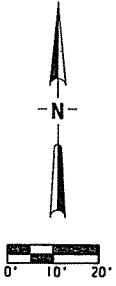
JONES EDMUNDS

730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32217 / (904) 744-5401

17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

GENERAL SEWER NOTES
AND DETAILS

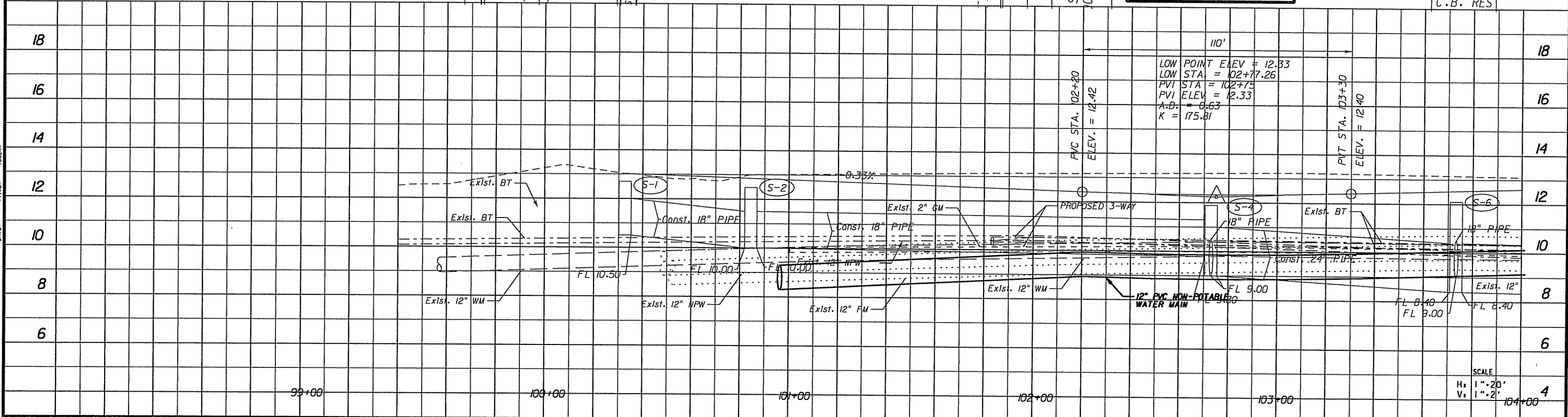
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WILLIAM T. HARLEY, P.E.	MAY 2009	0950207301
P.E. #63321	SCALE	DWG. NO.
	NTS	3



NOTE:
CONTRACTOR TO VERIFY RESTRAINT MECHANISM FOR EXISTING VALVE ON 12\"/>

NOTE:
CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL SERVICE LINES TO EXISTING METERS

NOTE:
TIE-IN TO EXISTING WATER LINE TO BE PERFORMED AFTER LAB ACCEPTANCE



REVISIONS
 DATE
 BY
 APPR.
 LTR.

DESIGNED WITH
 DRAWN MAW
 CHECKED WILLIAM T. HARLEY, P.E.
 PROJECT ENGINEER

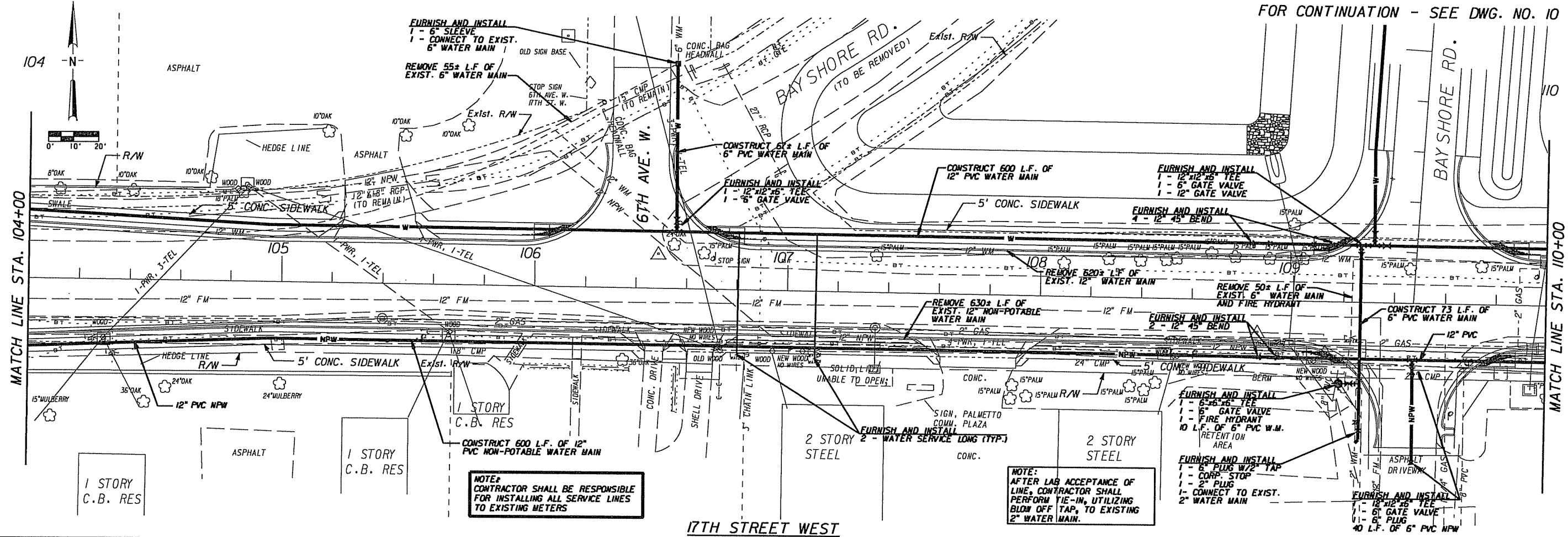


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

PLAN AND PROFILE

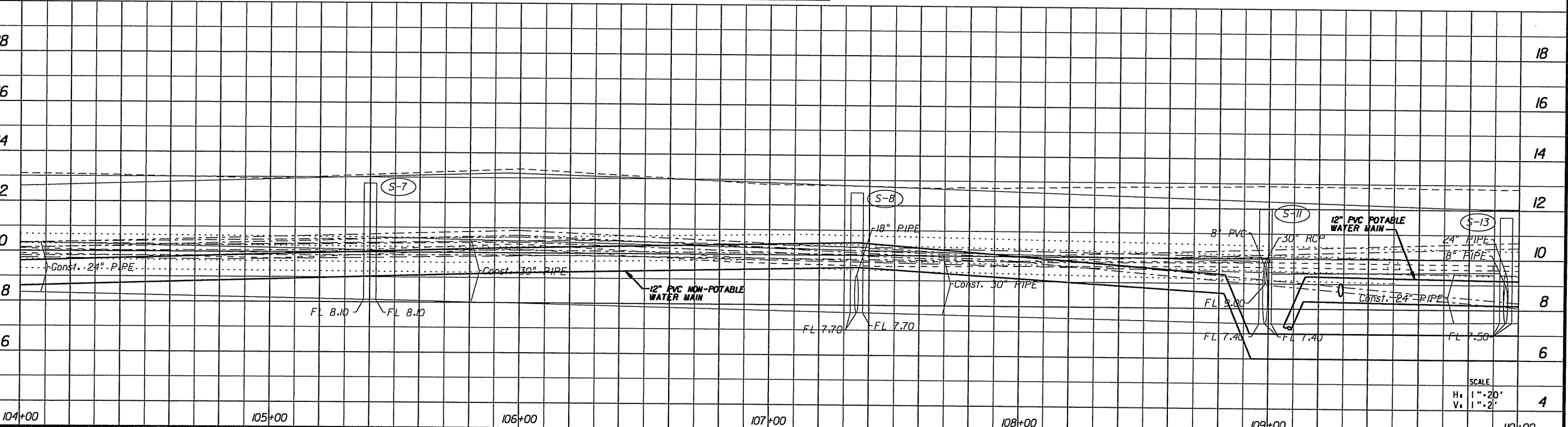
CERTIFICATE OF AUTHORIZATION #1814 DATE MAY 2009 PROJECT NO. 0950207301
 SCALE 1"=20' DWG. NO. 4
 WILLIAM T. HARLEY, P.E. P.E. #63321

FOR CONTINUATION - SEE DWG. NO. 10

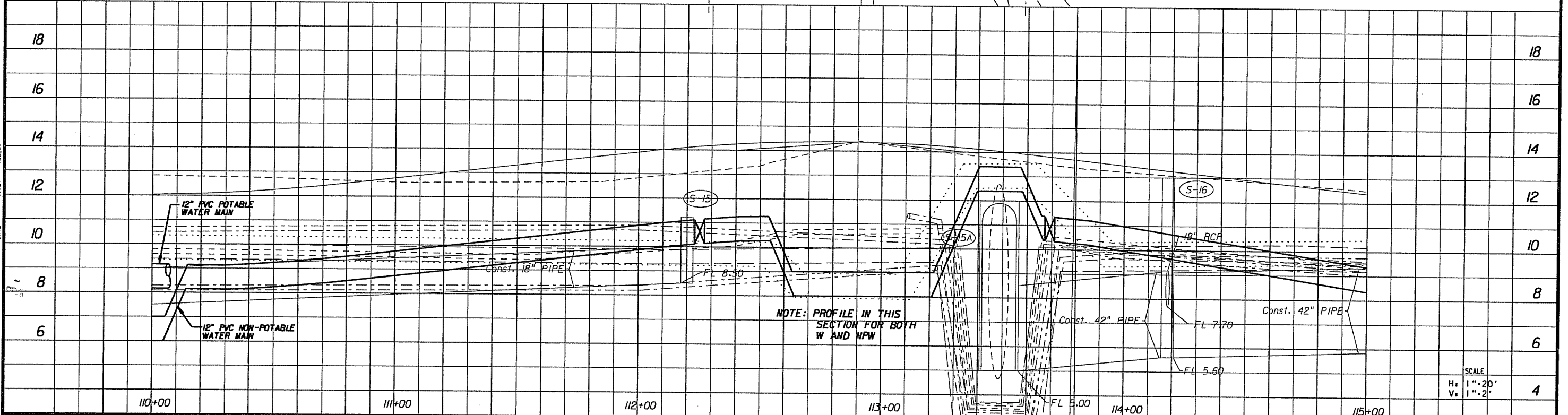
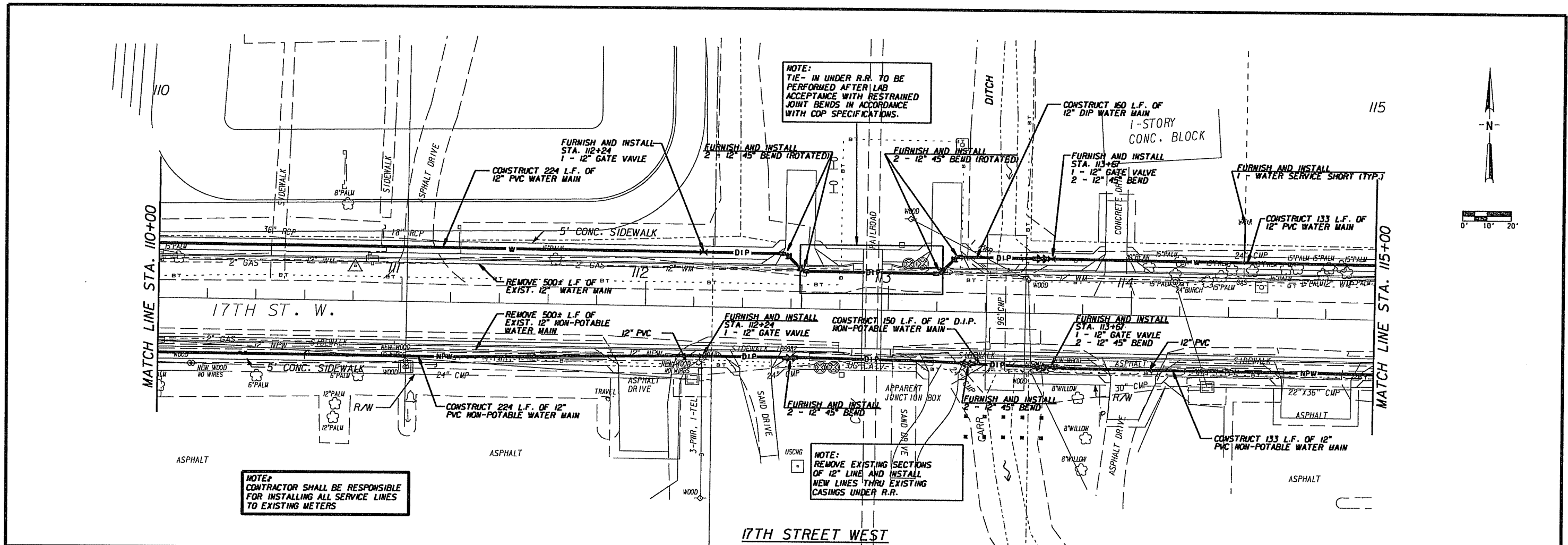


NOTE:
CONTRACTOR SHALL BE RESPONSIBLE
FOR INSTALLING ALL SERVICE LINES
TO EXISTING METERS

NOTE:
AFTER LAB ACCEPTANCE OF
LINE, CONTRACTOR SHALL
PERFORM TIE-IN, UTILIZING
BLOW OFF TAP, TO EXISTING
2\"/>



DESIGNED	WTH		17TH STREET WEST FROM BUSINESS U.S. 41 TO U.S. 41 MANATEE COUNTY, FLORIDA		PLAN AND PROFILE	CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
DRAWN	MAW					MAY 2009	0950207301	
CHECKED						SCALE	DWG. NO.	
BY	WILLIAM T. HARLEY, P.E. PROJECT ENGINEER					1"=20'	5	
LTR.	DATE	REVISIONS	BY	APPROD.		WILLIAM T. HARLEY, P.E. P.E. #63321		



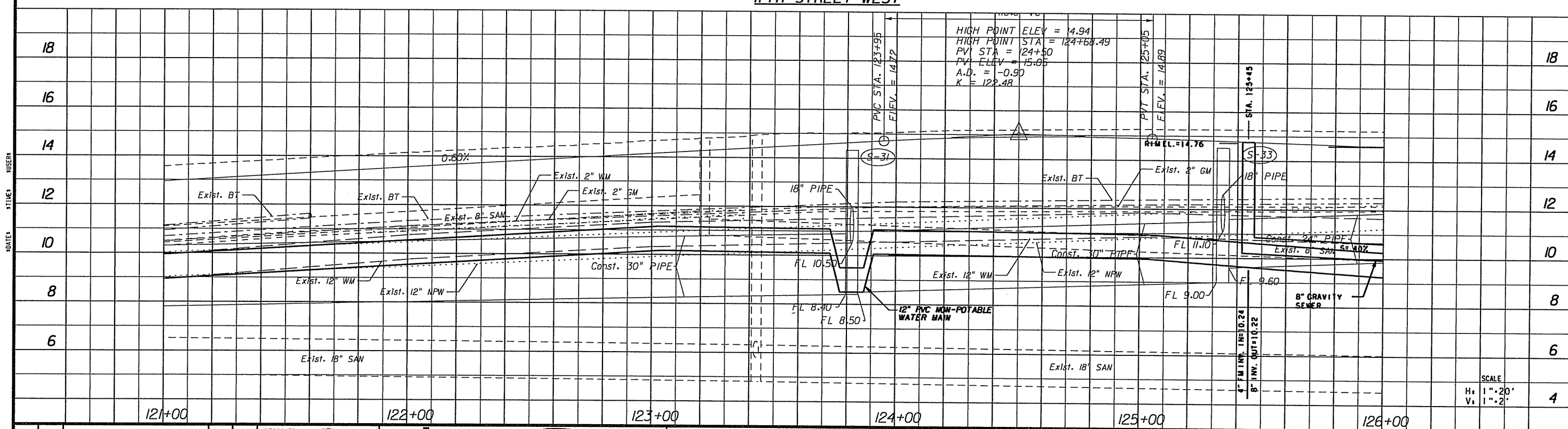
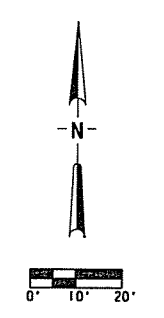
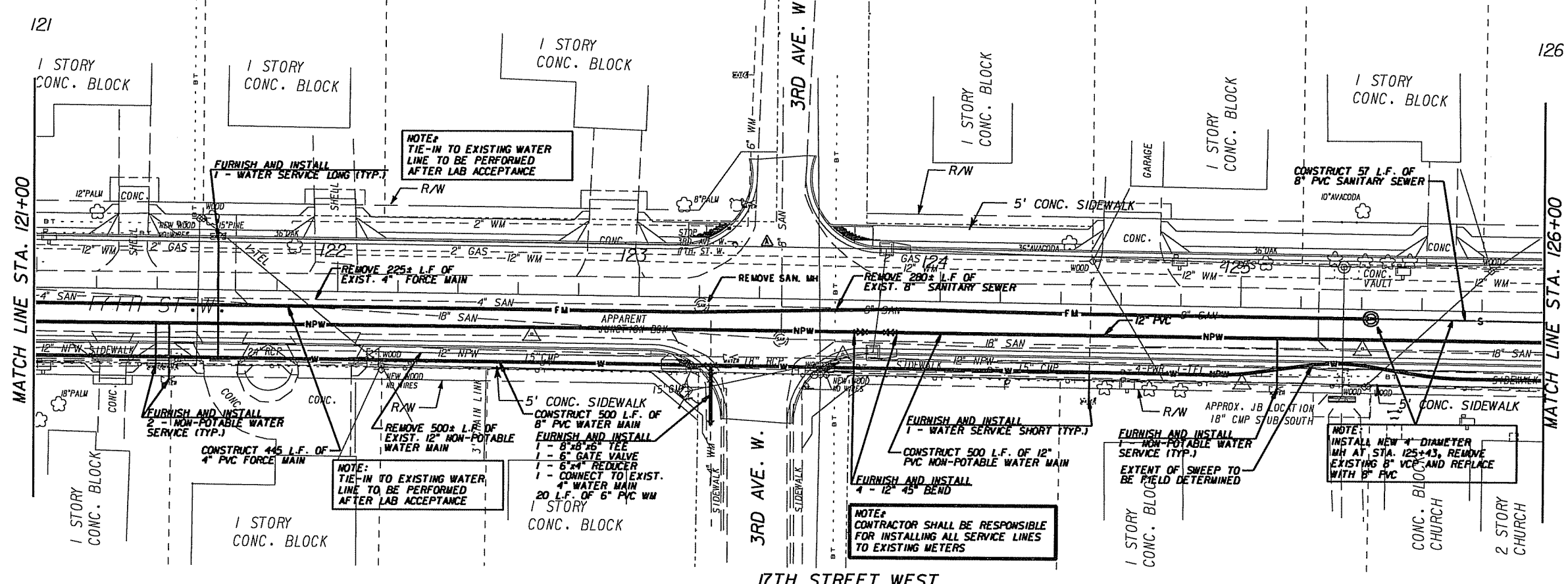
DATE	BY	REVISIONS

DESIGNED: WTH
 DRAWN: MAW
 CHECKED: WILLIAM T. HARLEY, P.E.
 PROJECT ENGINEER

JONES EDMUNDS
 17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

PLAN AND PROFILE

CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
WILLIAM T. HARLEY, P.E.	MAY 2009	0950207301
P.E. #63321	SCALE	DWG. NO.
	1"=20'	6



DESIGNED	WTH
DRAWN	MAW
CHECKED	
PROJECT ENGINEER	WILLIAM T. HARLEY, P.E.

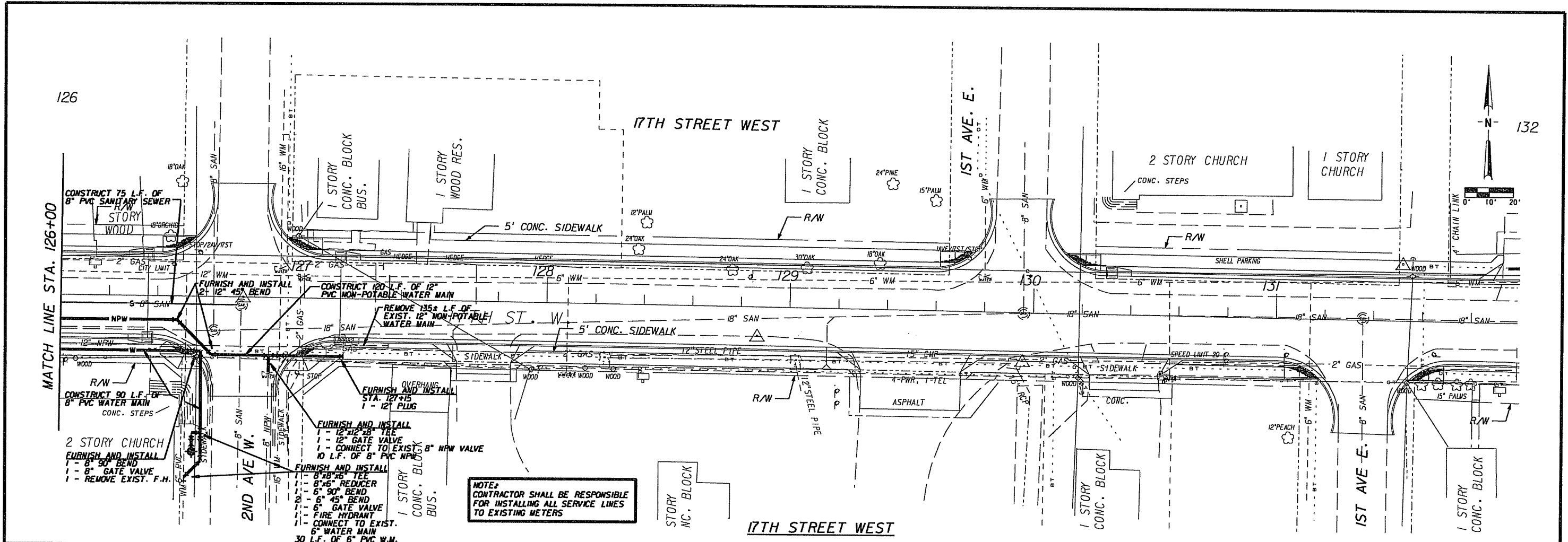
JONES EDMUNDS
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 1100 CECILY BLVD., SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

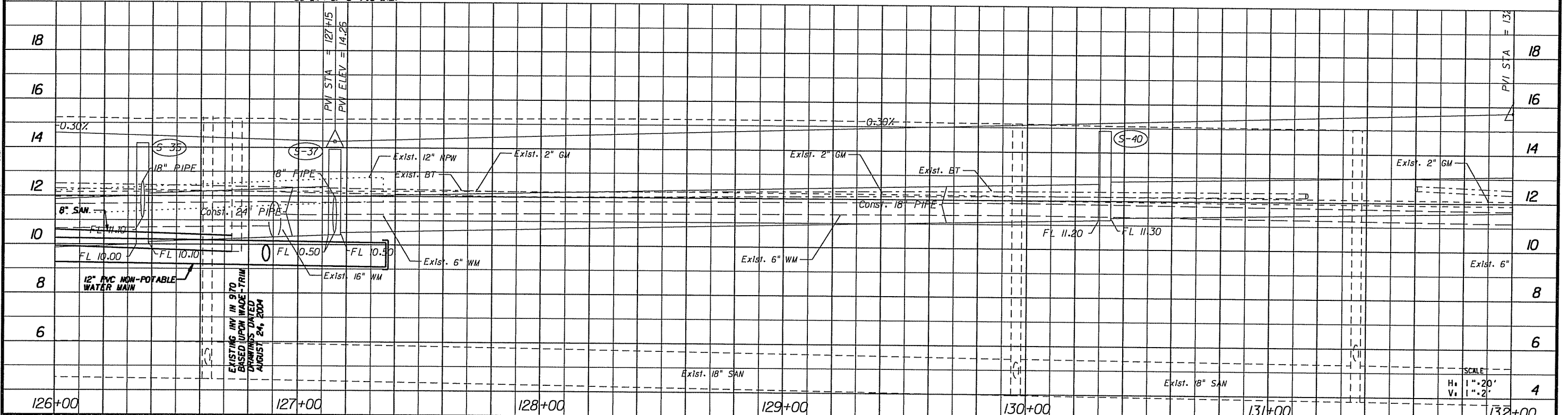
PLAN AND PROFILE

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WILLIAM T. HARLEY, P.E.	MAY 2009	0950207301
P.E. #63321	SCALE	DWG. NO.
	1"=20'	8

FILED
 DATES
 REVISIONS
 USER



NOTE:
CONTRACTOR SHALL BE RESPONSIBLE
FOR INSTALLING ALL SERVICE LINES
TO EXISTING METERS



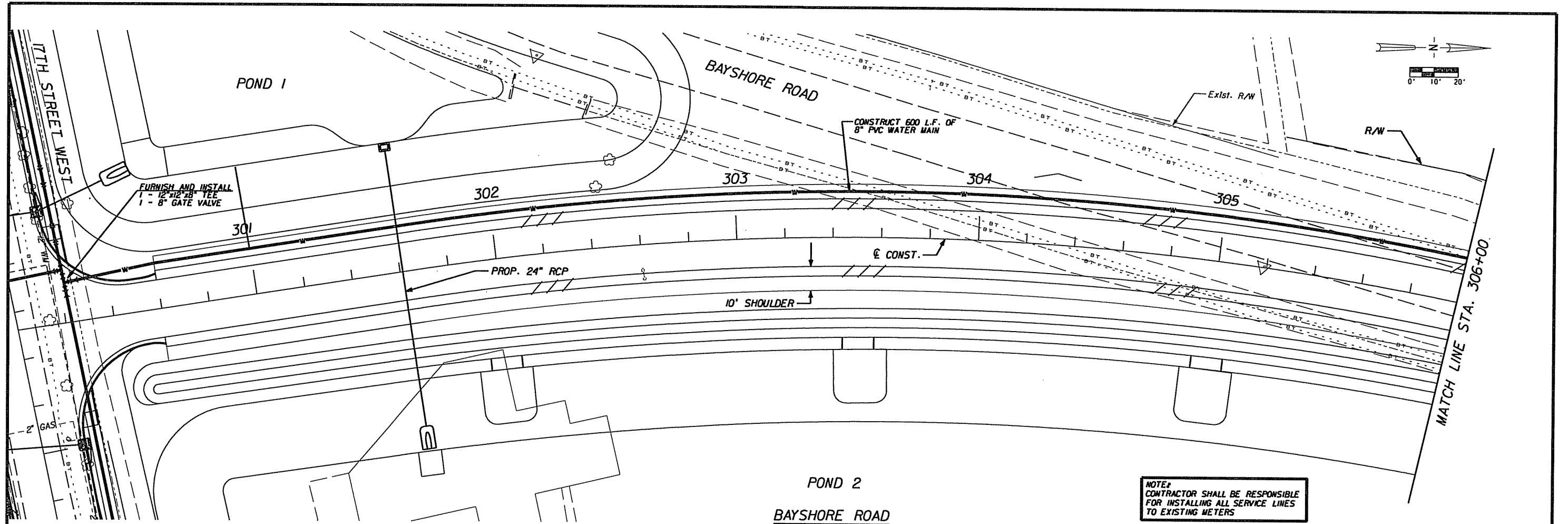
DATE	REVISIONS	BY	APPROV.

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
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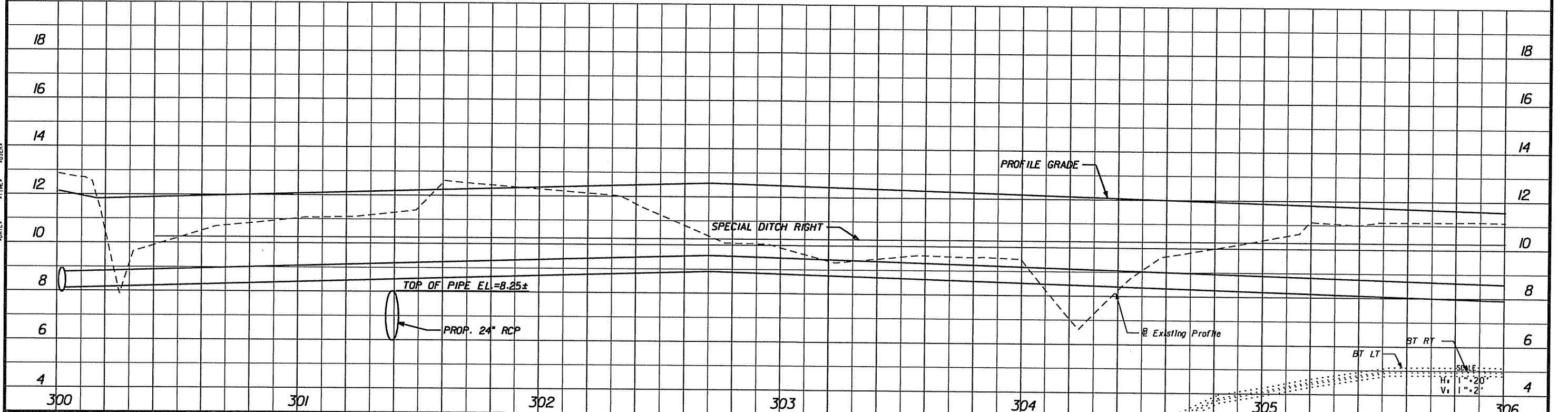
**17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA**

PLAN AND PROFILE

CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
	MAY 2009	0950207301
WILLIAM T. HARLEY, P.E.	SCALE	DWG. NO.
P.E. #63321	1"=20'	9



NOTE:
CONTRACTOR SHALL BE RESPONSIBLE
FOR INSTALLING ALL SERVICE LINES
TO EXISTING METERS



DESIGNED	WTH
DRAWN	MAW
CHECKED	
PROJECT ENGINEER	WILLIAM T. HARLEY, P.E.

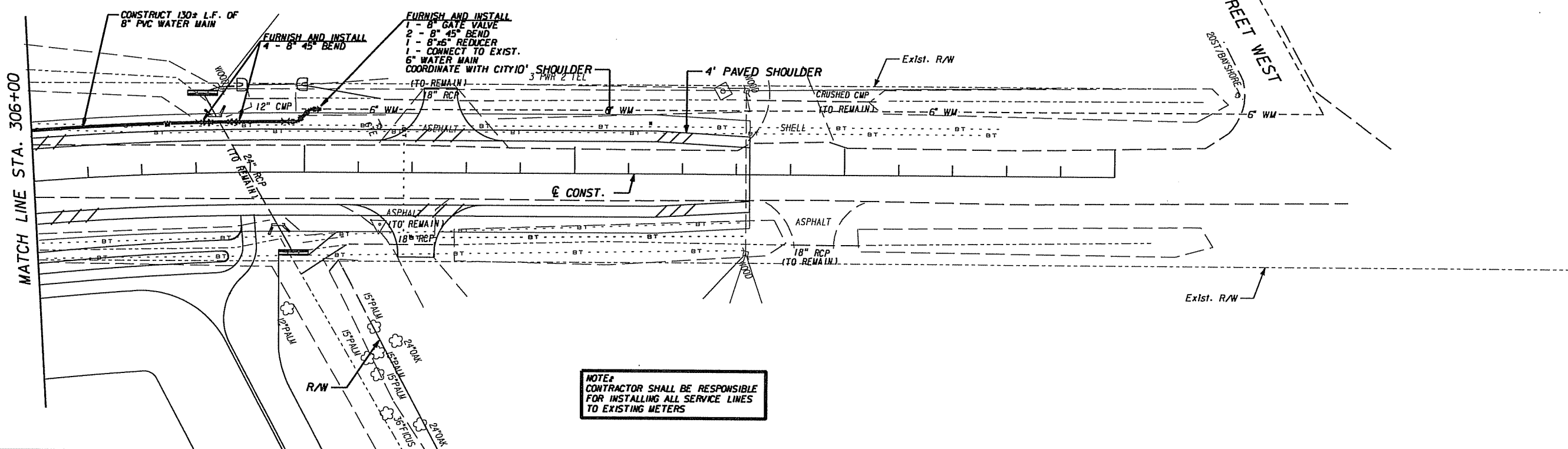
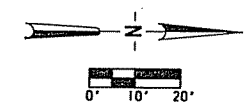
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17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

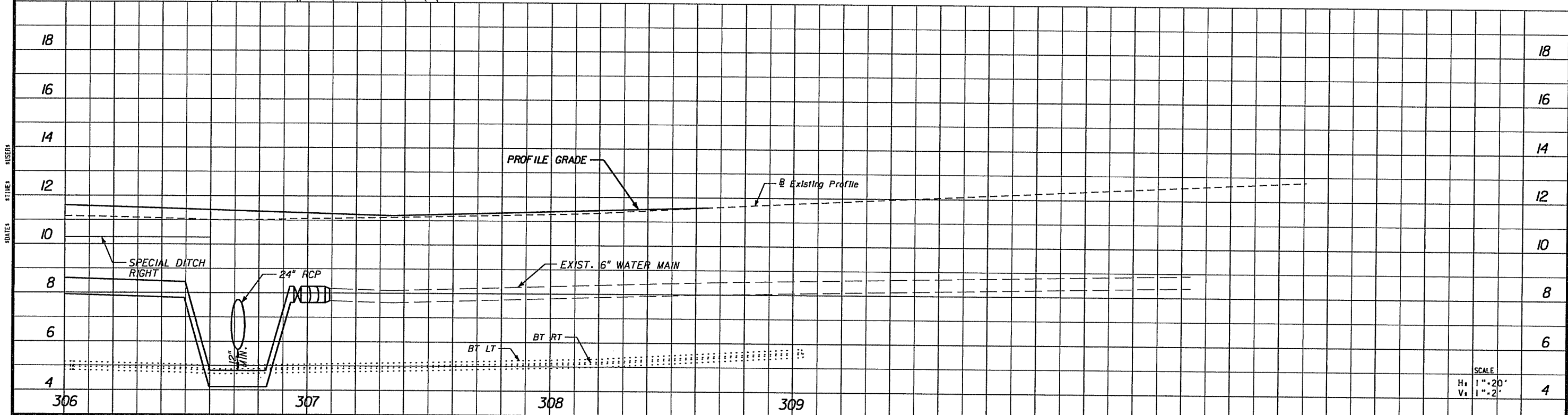
PLAN AND PROFILE

CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
	MAY 2009	0950207301
SCALE	DWG. NO.	
1"=20'	10	

DATE	REVISIONS	BY	APPRD.



NOTE:
CONTRACTOR SHALL BE RESPONSIBLE
FOR INSTALLING ALL SERVICE LINES
TO EXISTING METERS



DATE	BY	REVISIONS

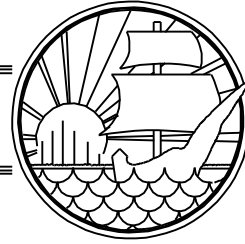
DESIGNED WTH
DRAWN MAW
CHECKED
WILLIAM T. HARLEY, P.E.
PROJECT ENGINEER

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CECILY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

PLAN AND PROFILE

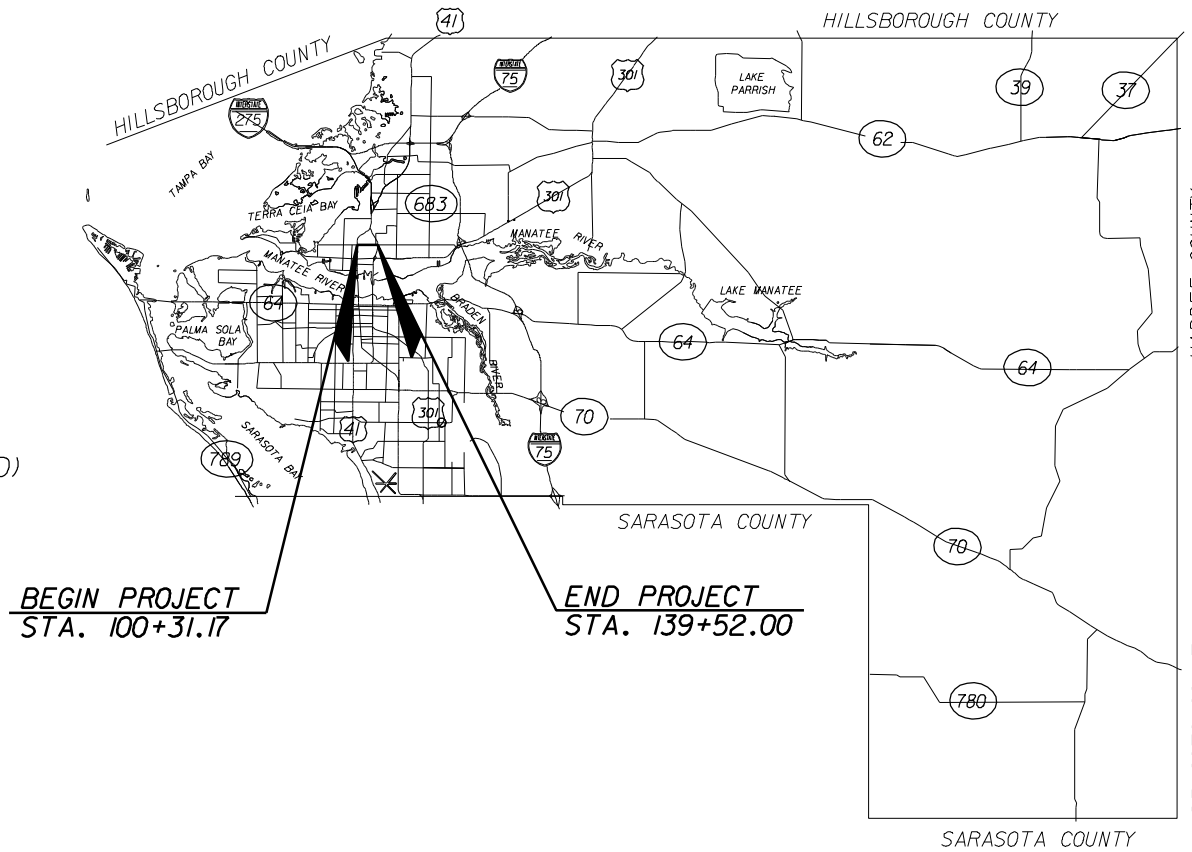
CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
	MAY 2009	0950207301
WILLIAM T. HARLEY, P.E.	SCALE	DWG. NO.
P.E. #63321	1"=20'	11



MANATEE COUNTY, FLORIDA
17th STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
COUNTY PROJECT NO. 6035261

NO. INDEX OF SHEETS

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3,4	DRAINAGE MAP
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GOVERNING STANDARDS AND SPECIFICATIONS:

FLORIDA DEPARTMENT OF TRANSPORTATION,
 DESIGN STANDARDS DATED 2008.

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE
 CONSTRUCTION DATED 2007, AS AMENDED
 BY CONTRACT DOCUMENTS.

MANATEE COUNTY TRANSPORTATION HIGHWAY & DRAINAGE STANDARDS
 DATED 2007.

MANATEE COUNTY UTILITY STANDARDS FOR GENERAL
 UTILITY CONSTRUCTION, DATED 2009.

AT LEAST 72 HOURS IN ADVANCE OF BEGINNING CONSTRUCTION
 OF THE PROJECT, THE CONTRACTOR SHALL CONTACT THE LOCAL
 MAINTENANCE FDOT ENGINEER'S OFFICE TO SECURE GENERAL
 USE PERMIT AND/OR OTHER PERMITS AS REQUIRED FOR WORKING
 WITHIN THE DEPARTMENT'S RIGHT-OF-WAY.

REVISIONS

05/26/09 - REVISED SHEETS 1-8, 11-19, 22, 29-35, 39-75, 79, 81 & 83

LENGTH OF PROJECT	
	FEET
ROADWAY	3920.83
BRIDGES	N/A
NET LENGTH OF PROJ.	3920.83
EXCEPTIONS	N/A
GROSS LENGTH OF PROJ.	3920.83

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

PLANS PREPARED BY:



8745 Henderson Road, Suite 220
 Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952
 Vendor No. 59-2417170

ROADWAY PLANS
 ENGINEER OF RECORD: DAVID O. THEUNG, P.E.

P.E. NO.: 44786

MANATEE COUNTY PROJECT MANAGER : PAUL SCHAMELL

BID PLANS - REVISED 05/26/09

DESIGN FILE: *****SPECIFICATION***** PLOT FILE: *****PREFSPECIFICATION***** PLOT DATE: *****SYTIME*****

ROADWAY			
FDOT PAY ITEM	DESCRIPTION	UNIT	QUANTITY
101-1	Mobilization	LS	1
102-1	Maintenance of Traffic	LS	1
102-3	Commercial Mat for Drwy Maint	CY	800
TSP	Utility Coordination	LS	1
TSP	Railroad Coordination	LS	1
104-10-2	Synthetic Bales	LF	1,050
104-11	Floating Turbidity Barrier	LF	50
104-12	Staked Turbidity Barrier	LF	80
104-13-1	Staked Silt Fence (Type III)	LF	10,600
104-15	Soil Tracking Prevention Device	EA	2
104-16	Rock Bags	EA	550
110-1-1	Clearing & Grubbing	AC	15.1
110-3	Removal of Exist. Struct. (Bridge Remnants)	LS	1
110-4	Removal of Exist. Conc. Pvmt.	SY	3,500
110-7-1	Mailbox (Furnish & Install)	EA	15
120-1	Regular Excavation	CY	35,659
120-4	Excavation, Subsoil	CY	5,231
120-6	Embankment	CY	13,636
160-4	Type B Stabilization	SY	418
160-6	12" Stabilized Sub-base	SY	24,246
285-701	4" Type ABC-III Base	SY	591
285-709	10" Limerock Base	SY	19,929
285-709	10" Limerock Base Compacted to 98% of Max. Density LBR 100 or 6" Asphalt Base Type B12.5	SY	365
327-70-6	Milling Exist. Asphalt Pavement (1.5" Avg. Depth)	SY	1,447
334-1-12	3" SP 12.5 Structure Course	TN	55
334-1-14	2" Type S-1 Asphalt Concrete (Inc. Tack Coat)	TN	3,049
334-1-14	1" Type S-III Asphalt Concrete (Inc. Tack Coat)	TN	1,025
337-7-6	1-1/2" FC-6 Friction Course	TN	120
400-1-2	Class I Concrete (Endwalls)	CY	6.00
400-1-15	Class I Concrete (Misc)	CY	10
400-4-1	Class IV Concrete (Culverts)	CY	27
415-1-6	Reinforcing Steel	LB	3,400
425-1-351	Inlets (Curb) (Type P-5) (<10')	EA	23
425-1-361	Inlets (Curb) (Type P-6) (<10')	EA	2
425-1-451	Inlets (Curb) (Type J-5) (<10')	EA	3
425-1-521	Inlet (Dt Bot) (Type C) (<10')	EA	4
425-1-541	Inlet (Dt Bot) (Type D) (<10')	EA	6
425-1-581	Inlet (Dt Bot) (Type H) (<10')	EA	2
425-1-900	Diversion Structure (Attenuation Pond)	EA	1
425-2-41	Manholes (P-7) (<10')	EA	7
425-2-71	Manholes (J-7) (<10')	EA	6
425-11	Modify Existing City Conflict Manholes	EA	6
430-175-101	Pipe Storm Sewer Culv (RCP) (15")	LF	127
430-175-101	Pipe Storm Sewer Culv (RCP) (18")	LF	1882
430-175-101	Pipe Storm Sewer Culv (RCP) (24")	LF	1620
430-175-102	Pipe Storm Sewer Culv (RCP) (30")	LF	195
430-175-201	Pipe Storm Sewer Culv (ERCP) (14"x23")	LF	40
430-175-202	Pipe Storm Sewer Culv (ERCP) (29"x45")	LF	427
430-175-204	Pipe Storm Sewer Culv (ERCP) (43"x68")	LF	96
430-175-205	Pipe Storm Sewer Culv (ERCP) (58"x91")	LF	105
430-983-2	Pipe, Polyvinyl Chloride (8")	LF	29
430-984-123	MES (Round) (15" SD)	EA	1
430-984-129	MES (Round) (24" SD)	EA	2
430-984-642	MES (Ellip) (43"x68") (SD)	EA	3
430-984-645	MES (Ellip) (58"x91") (SD)	EA	2
MD	ConSpan or Equal Structure (64"x7"x16")	LS	1
515-1-2	Pipe Handrail (Aluminum)	LF	78
520-1-10	Type F Curb & Gutter	LF	8,012
522-1	4" Concrete Sidewalk	SY	3,899
522-2	6" Concrete Sidewalk	SY	1,525
530-3-3	Rip-Rap (Rubble) (Bank & Shore)	TN	366.8
547-70-2	Rip-Rap (Fabric Formed Conc) (10")	SY	63
570-1-2	Sodding (Performance Turf) (Incl. Mowing, Fert. & Water)	SY	19,335

TSP DENOTES TECHNICAL SPECIAL PROVISION
MD DENOTES MANUFACTURER SPECIFICATIONS

SEWER IMPROVEMENTS			
FDOT PAY ITEM	DESCRIPTION	UNIT	QUANTITY
1060-15	Manhole Rim & Cover	EA	8
1060-15	Manhole Rim Adjustment	EA	3
1060-15	Install Manhole Liner	EA	8

WATER IMPROVEMENTS			
FDOT PAY ITEM	DESCRIPTION	UNIT	QUANTITY
110-3	Removal of Existing Structure (Vault)	LS	1
1000-6	Utility Work-Water (Master Meter Assembly)	LS	1
1050-11-92	Water Service Conn. (F&I) (HDPE) CI 200 (1")	EA	9
1050-11-420	Pipe (CI/DI) (Epoxy) (F&I) Class 50 (2") (Inc Ftgs)	LF	226
1050-11-420	Pipe (CI/DI) (Epoxy) (F&I) Class 50 (6") (Inc Ftgs)	LF	140
1050-11-424	Pipe (CI/DI) (Epoxy) (F&I) Class 50 (8")	LF	1,274
1050-11-424	Pipe (CI/DI) (Epoxy) (F&I) Class 50 (12")	LF	644
1050-11-424	Pipe (CI/DI) (Epoxy) (F&I) Class 50 (16")	LF	64
1050-16-224	Pipe Removal (Less than 18")	LF	1,915
1055-11-414	Bend (DI) (45 Degree) (12")	EA	3
1055-11-414	Bend (DI) (45 Degree) (12") (Cut-In)	EA	1
1055-11-414	Bend (DI) (45 Degree) (16")	EA	2
1055-11-414	Bend (DI) (45 Degree) (16") (Cut-In)	EA	2
1055-11-424	Tee (DI) (6"x2")	EA	1
1055-11-424	Tee (DI) (8"x6")	EA	5
1055-11-424	Tee (DI) (12"x12")	EA	1
1055-11-424	Tee (DI) (16"x12")	EA	1
1055-11-434	Reducer (DI) (8"x6")	EA	1
1055-11-434	Reducer (DI) (12"x6")	EA	1
1055-11-434	Reducer (DI) (12"x8")	EA	1
1055-11-494	Sleeve (DI) (16")	EA	2
1080-11-101	Water Meter Box (Relocate)	EA	9
1080-11-25	Blowoff Assembly (F&I) (2")	EA	1
1080-11-11	Valve Assembly Gate (F&I) (CI) (250 PSI) (2")	EA	1
1080-11-34	Valve Assembly Gate (F&I) (CI) (250 PSI) (6")	EA	10
1080-11-44	Valve Assembly Gate (F&I) (CI) (250 PSI) (8")	EA	1
1080-11-44	Valve Assembly Gate (F&I) (CI) (250 PSI) (12")	EA	1
1080-11-44	Valve Assembly Butterfly (F&I) (CI) (250 PSI) (16")	EA	2
1644-13	Fire Hydrant Assembly (Standard) (F&I) (6")	EA	1
1644-53	Fire Hydrant Assembly (Relocate)	EA	1

SIGNING AND PAVEMENT MARKING			
FDOT PAY ITEM	DESCRIPTION	UNIT	QUANTITY
700-20-11	Sign Single Post (Less than 12 SF)	AS	42
700-20-12	Sign Single Post (12 - 20 SF)	AS	15
700-20-41	Sign Single Post, (Relocate)	AS	19
706-3	Retro-Reflective Pavement Markers	EA	390
711-11-160	Pavement Messages, Thermoplastic (School)	EA	2
711-11-160	Pavement Messages, Thermoplastic (R.R. Markings)	EA	4
711-11-160	Pavement Messages, Thermoplastic (Bike Lane Markings)	EA	24
711-11-170	Directional Arrows, Thermoplastic	EA	9
711-11-151	Guide Lines, Thermoplastic (White)	LF	1,239
711-11-141	Skip Traffic Stripe, 10'-30' White, Thermoplastic	LF	180
711-11-241	Skip Traffic Stripe, 10'-30' Yellow, Thermoplastic	LF	1,072
711-11-123	Solid Traffic Stripe, 12" White, Thermoplastic (Crosswalk)	LF	2,426
711-11-125	Solid Traffic Stripe, 24" White, Thermoplastic (Stop Bar)	LF	650
711-11-224	Solid Traffic Stripe, 18" Yellow, Thermoplastic (Chevron)	LF	208
711-11-111	Solid Traffic Stripe, 6" White, Thermoplastic	NM	1,393
711-11-211	Solid Traffic Stripe, 6" Yellow, Thermoplastic	NM	1,866

SIGNALIZATION			
FDOT PAY ITEM	DESCRIPTION	UNIT	QUANTITY
555-1-2	Directional Bore (6" to <12")	LF	200
630-1-12	Conduit (F&I) (Underground)	LF	331
632-7-1	Cable (Signal) (F&I)	PI	1
635-1-11	Pull & Junction Boxes	EA	9
649-31-202	M/Arm F&I (E3-T2)	EA	2
650-51-311	Signal Traffic (F&I) (3 Sct 1 Way)	AS	2
650-51-311	Signal Traffic (F&I) (5 Sct 2 Way)	AS	3
653-191	Signal Pedestrian (LED) (Countdown) (1-Way)	AS	4
659-101	Signal Head Auxiliaries (Back Plates 3 Sct)	EA	4
659-107	Signal Head Auxiliaries (Aluminum Pedestal)	EA	4
659-118	Signal Head Auxiliaries (Back Plates 5 Sct)	EA	3
660-2-102	Loop Assembly (F&I) (Type B)	AS	4
660-2-106	Loop Assembly (F&I) (Type F)	AS	6
665-13	Detector Pedestal (F&I) (Det w/ sign only)	EA	4
670-5-410	Traffic Cntrl Assembly (Modify)	AS	1
690-10	Remove Traffic Signal Head Assembly	EA	4
690-20	Remove Pedestrian Assembly	EA	4
690-33-1	Pole Removal (Deep) (Direct Burial)	LF	40
690-70	Remove Pedestrian Detector Assembly	EA	4
690-90	Remove Cabling and Conduit	PI	1
690-100	Remove Miscellaneous Signal Equipment	PI	1
699-41	Internally Illuminated Sign (Relocate)(Street Name)	EA	2

LIGHTING			
FDOT PAY ITEM	DESCRIPTION	UNIT	QUANTITY
715-1-12	Conductor (F&I) (Insulated) (No. 6)	LF	7,365
715-1-13	Conductor (F&I) (Insulated) (No. 4)	LF	16,089
715-2-11	Conduit (F&I) (Underground) (PVC SCH 40) (2")	LF	7,875
715-7-11	Load Center (F&I) (Secondary Voltage)	EA	2
715-14-11	Pull Box (F&I) (Roadside) (Moulded)	EA	130
715-14-42	Pull Box (Relocate) (Sidewalk)	EA	2
715-500-1	Pole Cable Distribution System (Conventional)	EA	94
715-516-112	Light Pole Comp (F&I) (Ornamental) (MH 12')	EA	93
715-540-000	Light Pole Comp (Relocate)	EA	1

PAY ITEMS FOOTNOTES

- 110-4 INCLUDES 250 SY EXISTING ROADWAY CONCRETE BASE REMOVAL
- 104-13-1 BASED ON REPLACEMENT EVERY 12 MONTHS
- 160-6 LBR 60 REQUIRED
- 400-1-15 INCLUDES 5 CY FOR MISCELLANEOUS CONSTRUCTION, AS DIRECTED BY THE ENGINEER.
- 522-1 INCLUDES ADDITIONAL CONCRETE UNDER HANDRAIL
- 530-3-3 BASED ON 1.5' THICKNESS
- 715-1-12 PAYMENT SHALL BE BASED ON THE LINEAR FOOT OF A SINGLE CONDUCTOR
- 715-1-13
- 1000-6 STANDARD MANATEE COUNTY MASTER METER ASSEMBLY AND ALL APPURTENANCES.

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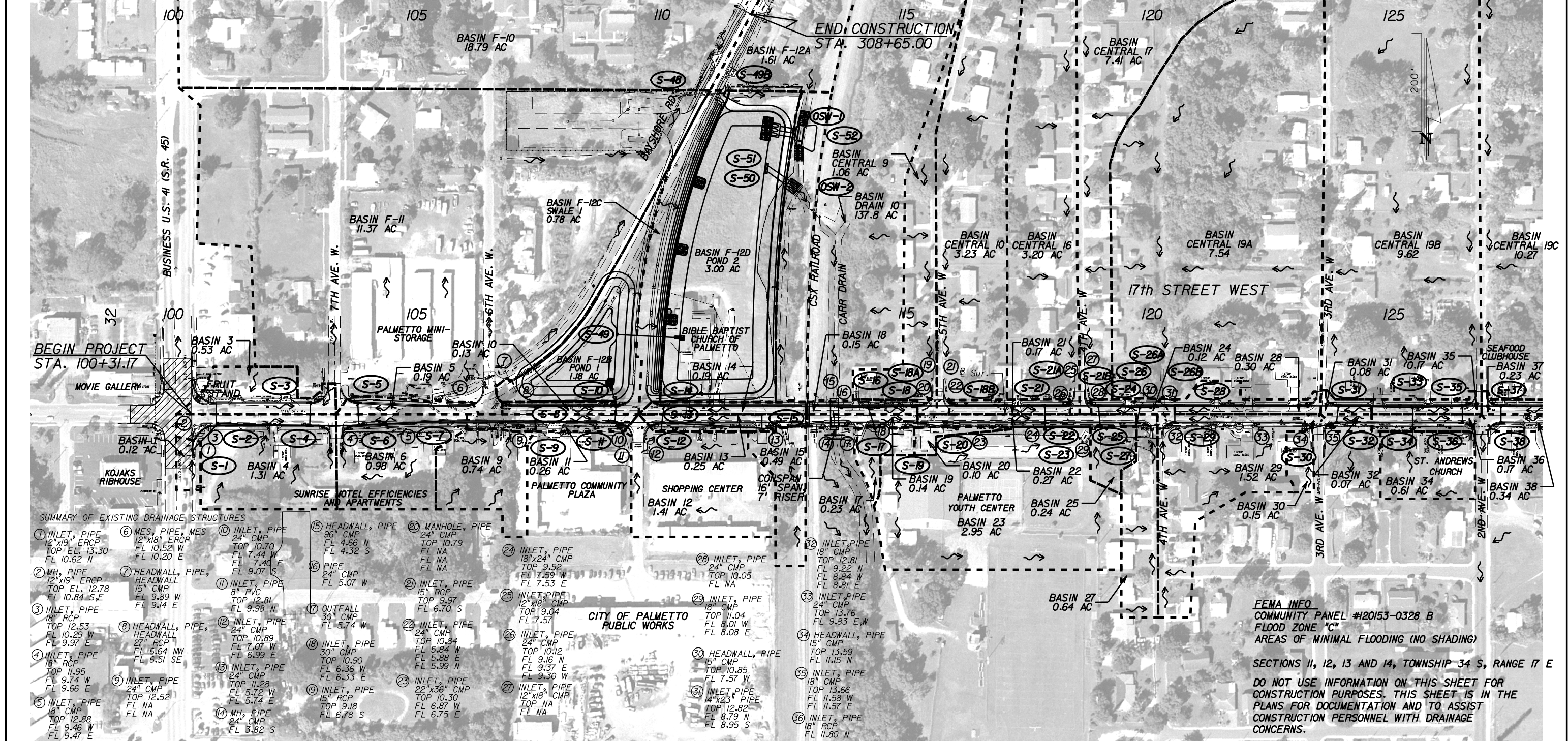
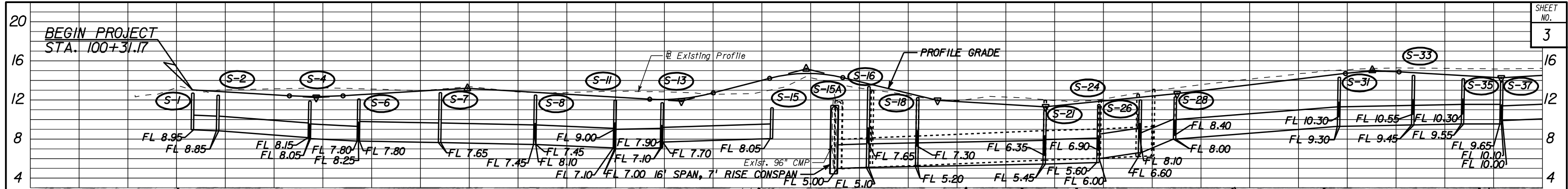
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CHECKED BY	BDG	DATE	5/09		
DRAWN BY	KDR	DATE	5/09		
CHECKED BY	BDG	DATE	5/09		
SUPERVISED BY	DAVID O. THEUNG, PE #44786				



17th STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035261
	Dwg. Date May 26, 2009
SUMMARY OF PAY ITEMS	



SUMMARY OF EXISTING DRAINAGE STRUCTURES

1 INLET, PIPE 12"x18" ERCP TOP EL. 13.30 FL 10.62 N	6 MES, PIPE, MES 12"x18" ERCP FL 10.52 W FL 10.20 E	10 INLET, PIPE 24" CMP TOP 10.70 FL 7.44 W FL 7.40 E	15 HEADWALL, PIPE 96" CMP FL 4.66 N FL 4.32 S	20 MANHOLE, PIPE 24" CMP TOP 10.79 FL NA FL NA
2 MH, PIPE 12"x19" ERCP TOP EL. 12.78 FL 10.84 S,E	7 HEADWALL, PIPE, HEADWALL 15" CMP FL 9.89 W FL 9.14 E	11 INLET, PIPE 8" PVC TOP 12.81 FL 9.98 N	16 PIPE 24" CMP FL 5.07 W	21 INLET, PIPE 15" RCP TOP 9.97 FL 6.70 S
3 INLET, PIPE 18" RCP TOP 12.53 FL 10.29 W FL 9.97 E	8 HEADWALL, PIPE, HEADWALL 27" RCP FL 6.64 NW FL 6.51 SE	12 INLET, PIPE 24" CMP TOP 10.89 FL 7.07 W FL 6.99 E	17 OUTFALL 30" CMP FL 5.74 W	22 INLET, PIPE 24" CMP TOP 10.84 FL 5.84 W FL 5.88 E
4 INLET, PIPE 18" RCP TOP 11.95 FL 9.74 W FL 9.66 E	9 INLET, PIPE 24" CMP TOP 12.52 FL NA	13 INLET, PIPE 24" CMP TOP 11.28 FL 5.72 W FL 5.74 E	18 INLET, PIPE 30" CMP TOP 10.90 FL 6.36 W FL 6.33 E	23 INLET, PIPE 22"x36" CMP TOP 10.30 FL 6.87 W FL 6.75 E
5 INLET, PIPE 16" CMP TOP 12.88 FL 9.46 W FL 9.47 E	14 MH, PIPE 24" CMP FL NA	19 INLET, PIPE 15" RCP TOP 9.18 FL 6.78 S	24 INLET, PIPE 18"x24" CMP TOP 9.52 FL 7.59 W FL 7.53 E	25 INLET, PIPE 12"x18" CMP TOP 9.04 FL 7.57
			26 INLET, PIPE 24" CMP TOP 10.12 FL 9.16 N FL 9.37 E	29 INLET, PIPE 18" CMP TOP 13.76 FL 9.83 E,W
			27 INLET, PIPE 12"x18" CMP TOP NA FL NA	30 HEADWALL, PIPE 15" CMP TOP 10.85 FL 7.57 W
				31 INLET, PIPE 4"x23" PIPE TOP 12.82 FL 8.79 N FL 8.95 S
				32 INLET, PIPE 18" CMP TOP 12.81 FL 9.22 N FL 8.84 W FL 8.81 E
				33 INLET, PIPE 24" CMP TOP 13.76 FL 9.83 E,W
				34 HEADWALL, PIPE 15" CMP TOP 15.59 FL 11.15 N
				35 INLET, PIPE 18" CMP TOP 13.66 FL 11.58 W FL 11.57 E
				36 INLET, PIPE 18" RCP FL 11.80 N

FEMA INFO
 COMMUNITY PANEL #20153-0328 B
 FLOOD ZONE "C"
 AREAS OF MINIMAL FLOODING (NO SHADING)
 SECTIONS 11, 12, 13 AND 14, TOWNSHIP 34 S, RANGE 17 E
 DO NOT USE INFORMATION ON THIS SHEET FOR CONSTRUCTION PURPOSES. THIS SHEET IS IN THE PLANS FOR DOCUMENTATION AND TO ASSIST CONSTRUCTION PERSONNEL WITH DRAINAGE CONCERNS.

DESIGNED BY	MR	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE			
DRAWN BY	KDR	DATE			
CHECKED BY	BDG	DATE			
SUPERVISED BY	DAVID O. THEUNG, PE 44786				

MANATEE COUNTY
 FLORIDA

17th STREET WEST

FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 6035261
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
DRAINAGE MAP	

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FEMA INFO
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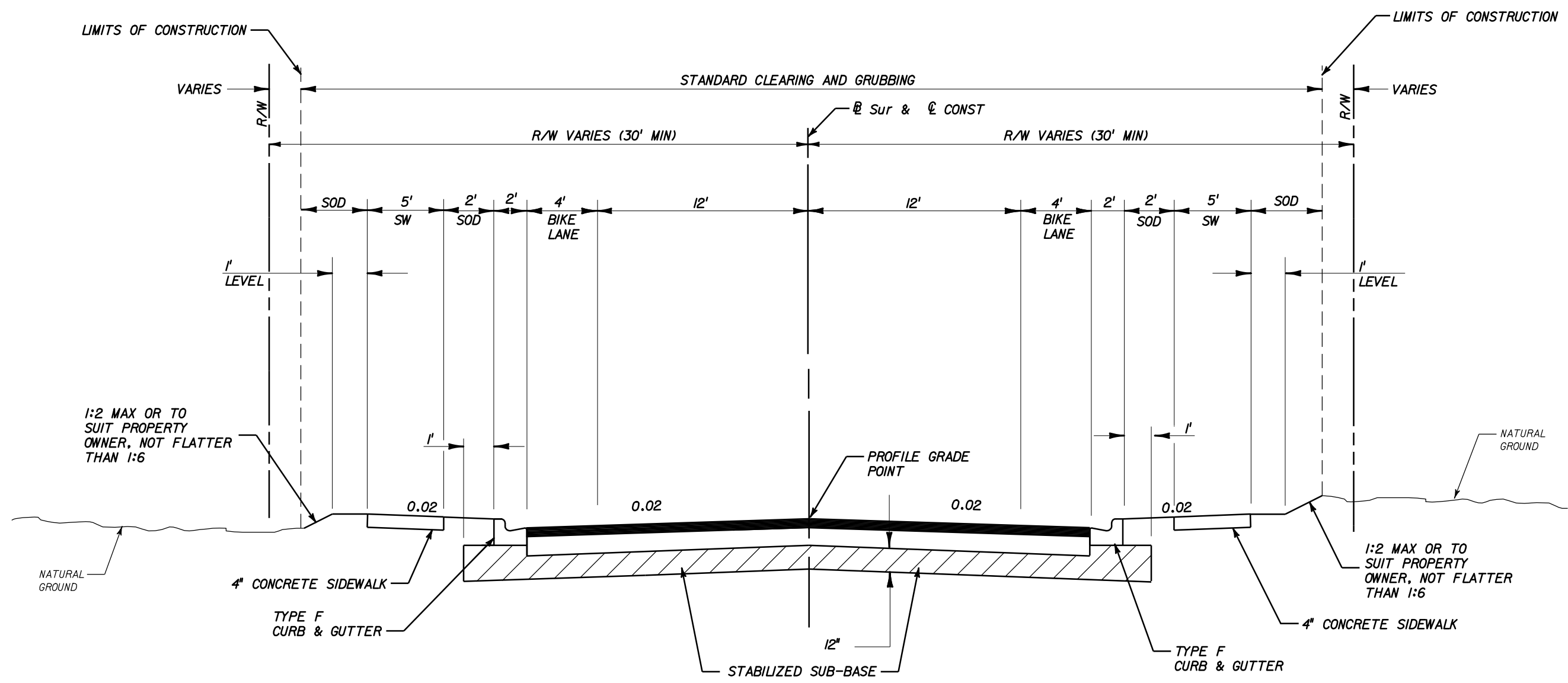
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17th STREET WEST
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 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 6035261
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
DRAINAGE MAP	



TYPICAL SECTION
17th STREET WEST
STA. 100+81.39 TO STA. 139+52.00

FDOT PAVEMENT
17TH STREET WEST
STA. 100+31.17 TO STA. 100+81.39

TRAFFIC DATA
DESIGN SPEED = 35 MPH

NEW CONSTRUCTION
 12" STABILIZED SUB-BASE SHELL MARL BLENDED WITH SANDY SUB-GRADE MINIMUM LBR 60, 98% T180 AASHTO.
 10" BASE COURSE LIMEROCK (OR APPROVED EQUAL) COMPACTED TO 98% T180 AASHTO OR 8" SOIL CEMENT.
 2" STRUCTURAL COURSE TYPE S-I WITH PRIME COAT.
 1" SURFACE COURSE TYPE S-III.

NEW CONSTRUCTION
 12" OF STABILIZED SUBGRADE COMPACTED TO 98% OF MAX. DENSITY LBR 40.
 10" LIME ROCK BASE COMPACTED TO 98% OF MAX. DENSITY LBR 100 OR 6" ASPHALT BASE TYPE B 12.5.
 3" SP 12.5 STRUCTURE COURSE.
 1-1/2" FC-6 FRICTION COURSE

NOTE: SEE MANATEE COUNTY TRANSPORTATION DEPARTMENT HIGHWAY, TRAFFIC AND STORMWATER STANDARDS GENERAL NOTES SECTION 400.1 AND 400.2 FOR PAVEMENT SPECIFICATIONS.

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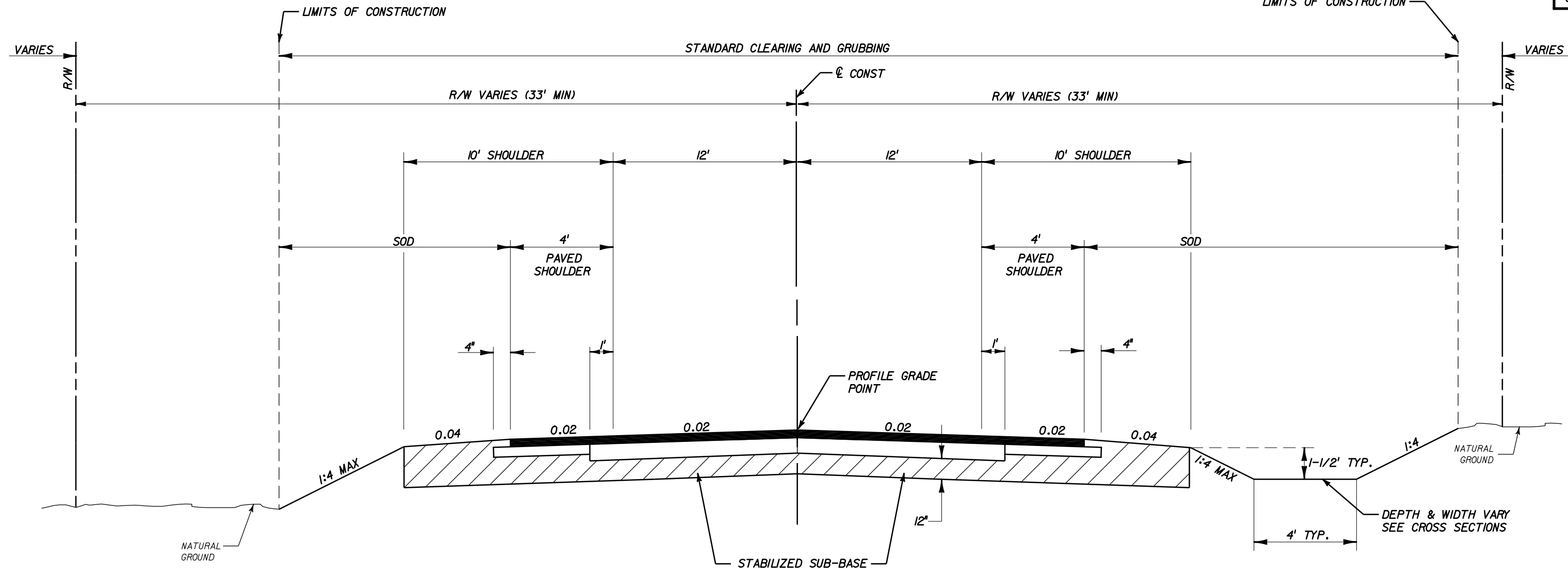
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ENGINEER	Proj. No. 6035261
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
TYPICAL SECTION	



**TYPICAL SECTION
BAYSHORE ROAD
STA. 300+00.00 TO STA. 308+65.00**

NEW CONSTRUCTION

12" STABILIZED SUB-BASE SHELL MARL BLENDED WITH SANDY SUB-GRADE MINIMUM LBR 60, 98% T180 AASHTO.
10" BASE COURSE LIMEROCK (OR APPROVED EQUAL) COMPACTED TO 98% T180 AASHTO OR 8" SOIL CEMENT.
2" STRUCTURAL COURSE TYPE S-I WITH PRIME COAT.
1" SURFACE COURSE TYPE S-III.

SHOULDER PAVEMENT

4" ABC-III BASE OR APPROVED EQUAL.
2" STRUCTURAL COURSE TYPE S-I WITH PRIME COAT.
1" SURFACE COURSE TYPE S-III.

TRAFFIC DATA

DESIGN SPEED = 45 MPH

NOTE: SEE MANATEE COUNTY TRANSPORTATION DEPARTMENT HIGHWAY, TRAFFIC AND STORMWATER STANDARDS GENERAL NOTES SECTION 400.1 AND 400.2 FOR PAVEMENT SPECIFICATIONS.

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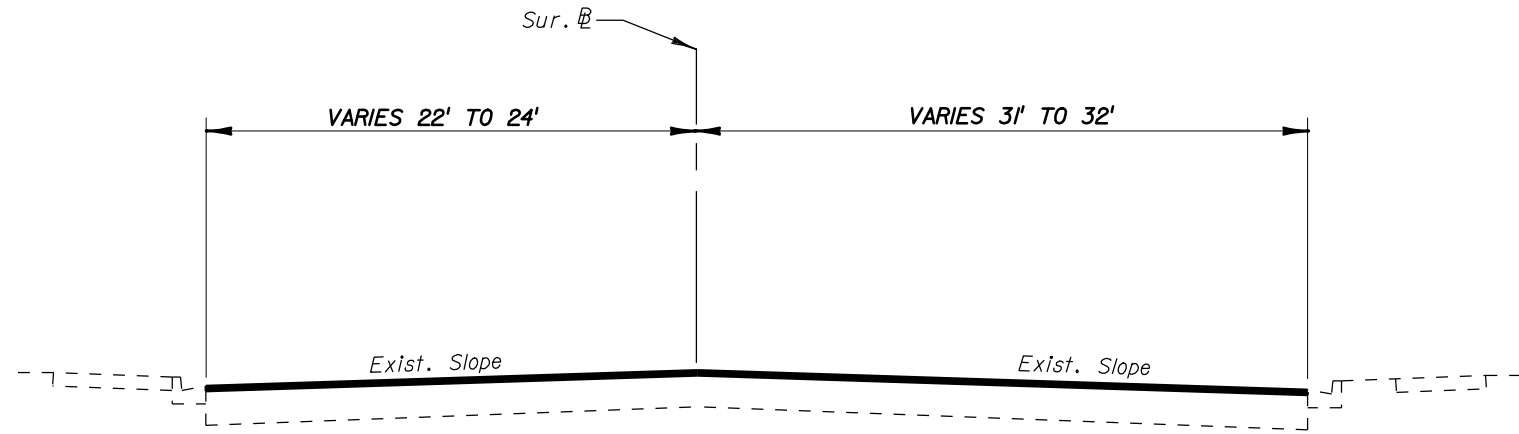
DESIGNED BY	SRR	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17th STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 6035261
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
TYPICAL SECTION	



TYPICAL SECTION
BUSINESS U.S. 41
STA. 28+90 TO STA. 31+15

MILLING
 MILL EXISTING ASPHALT PAVEMENT (1.5" AVG. DEPTH)

RESURFACING
 1-1/2" FC-6 FRICTION COURSE

DESIGN FILE: P:\Mte2008\01m\CADD-data\Tjpsrd03.dgn PLOT FILE: _PLOTFILE_ PLOT DATE: 5/27/2009

DESIGNED BY	SRR	DATE		REVISION DESCRIPTION & DATE	BY	NO.
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CHECKED BY	BDG	DATE	1/09			
SUPERVISED BY	DAVID O. THEUNG, PE 44786					



17th STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER David O. Theung, PE No. 44786	Proj. No. 6035261
	Dwg. Date January 8, 2009
TYPICAL SECTION	

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM DRAIN (RCP)										CURB INLETS			MANHOLE		MITERED END SECTION				DITCH BOTTOM INLETS			STRAIGHT ENDWALL	RIP RAP	FABRIC-FORMED CONCRETE	REMARKS			
						15"	18"	14"x23"	24"	29"x45"	30"	42"	43"x68"	58"x91"	J-5 <10'	P-5 <10'	P-6 <10'	P-7 <10'	J-7 <10'	15" 4#	24" 4#	43"x68" 4#	58"x91" 4#	C <10'	D <10'	H <10'	CY	TN	SY					
P	1	100+32.64	RT	INLET, PIPE	1		75																											
F																																		
P	2	100+84.44	RT	MANHOLE, PIPE	1		189																											
F																																		
P	3	102+74.75	LT	INLET, PIPE	1		47																											
F																																		
P	4	102+72.91	RT	INLET, PIPE	1		100																											
F																																		
P	5	103+71.75	LT	INLET, PIPE	1		46																											
F																																		
P	6	103+73.25	RT	INLET, PIPE	1				167																									
F																																		
P	7	105+40.00	RT	MANHOLE, PIPE	1				195																									
F																																		
P	8	107+35.00	RT	MANHOLE, PIPE	1				164																									
F																																		
P	9	107+35.00	RT	INLET, PIPE	1		17																											
F																																		
P	10	109+00.87	LT	INLET, PIPE, MES	1				29																									
F																																		
P	11	108+98.63	RT	PIPE, INLET, PIPE	1				35																								29 LF OF 8" PVC	
F																																		
P	12	109+94.00	RT	INLET, PIPE	1				16																									
F																																		
P	13	109+94.82	RT	INLET, PIPE	1				96																									
F																																		
P	14	109+99.50	LT	INLET, PIPE	1		35																											
F																																		
P	15	112+20.00	RT	INLET, PIPE	1		226																											
F																																		
P	15A	113+48.44		CONSPAN	1																												16'x7'x64' CONSPAN	
F																																		
P	16	114+18.00	LT	MANHOLE, PIPE	1				64																									
F																																		
P	17	114+32.00	RT	INLET, PIPE	1		45																											
F																																		
P	18	115+18.50	LT	INLET, PIPE	1				101																								3.5'x9' J-BOTTOM	
F																																		
P	18A	115+43.00	LT	MANHOLE																														
F																																		
P	18B	115+83.00	LT	MANHOLE																													PARTIAL	
F																																		
P	19	115+18.50	RT	INLET, PIPE	1		35																											
F																																		
P	20	116+00.00	RT	INLET, PIPE	1		83																											
F																																		
P	21	117+80.00	LT	INLET, PIPE	1				262																									
F																																		
P	21A	118+30.00	LT	MANHOLE																													PARTIAL	
F																																		
P	21B	118+73.50	LT	MANHOLE																													PARTIAL	
F																																		
SUB-TOTALS																																		
						PLAN QUANTITY	0	898	0	703	427	0	0	0	0	2	9	1	3	5	0	1	0	0	0	5	0	0	0	0	0	0		
						FINAL QUANTITY																												

DESIGN FILE: P:\Mca20080\01m\CADD-deta\sumdr-d01.dgn PLOT FILE: _PLOTFILE_ PLOT DATE: 5/27/2009

DESIGNED BY	CRL	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE 1/09			
DRAWN BY	KDR	DATE 1/09			
CHECKED BY	BDG	DATE 1/09			
SUPERVISED BY	DAVID O. THEUNG, P.E.*44786				



17th STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	David O. Theung, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
SUMMARY OF DRAINAGE STRUCTURES			

DESIGN FILE: P:\Mca2008\01m\CADD-data\sumdr-d03.dgn PLOT FILE: _PLOTFILE_ PLOT DATE: 5/27/2009

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM DRAIN (RCP)										CURB INLETS				MANHOLE		MITERED END SECTION					DITCH BOTTOM INLETS			STRAIGHT ENDWALL	RIP RAP	FABRIC-FORMED CONCRETE	REMARKS	SHEET NO.				
						15"	18"	14"x23"	24"	29"x45"	30"	36"	42"	43"x68"	58"x91"	J-5 <10'	J-6 <10'	P-5 <10'	P-6 <10'	P-7 <10'	J-7 <10'	14"x23" 2#	15" 4#	24" 4#	43"x68" 4#	58"x91" 4#	C <10'	D <10'	H <10'					CY	TN	9		
						P	48	307+02.00	LT	INLET, PIPE	1		62																									
F																																						
P	49B	306+96.11	RT	ENDWALL	1			12																														
F																																						
P	49	301+61.00	LT	INLET, PIPE, MES	1			116																														
F																																						
P	50	305+77.88	RT	INLET, PIPE, MES	1																																	
F																																						
P	51	305+91.06	RT	INLET, PIPE, MES	1																																	
F																																						
P	52	306+91.85	RT	DIVERSION STR, PIPE, MES	3																																	
F																																						
SUB-TOTALS						0	62	0	128	0	0	0	0	96	105	0	0	0	0	0	0	0	0	1	3	2	2	0	2	2	188	63						
TOTALS						127	1882	40	1620	427	195	0	0	96	105	3	0	23	2	7	6	0	1	2	3	2	4	6	2	4	188	63						

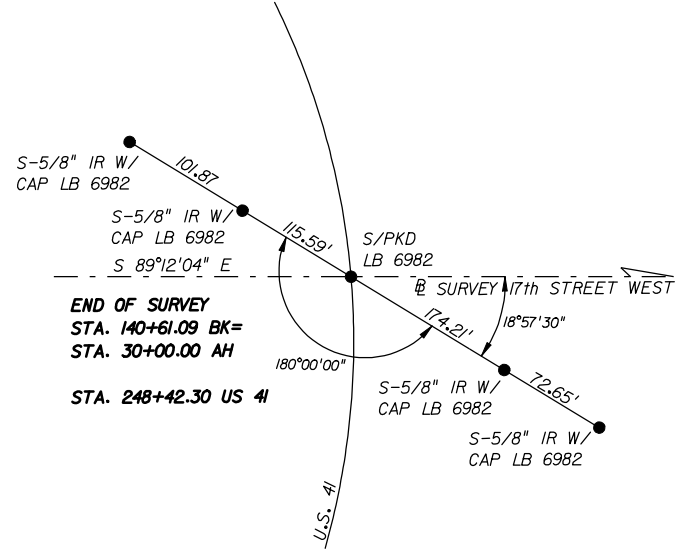
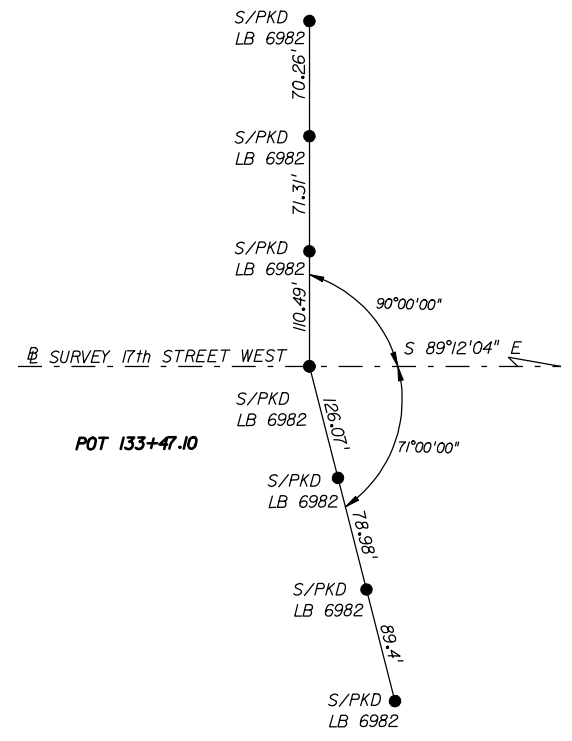
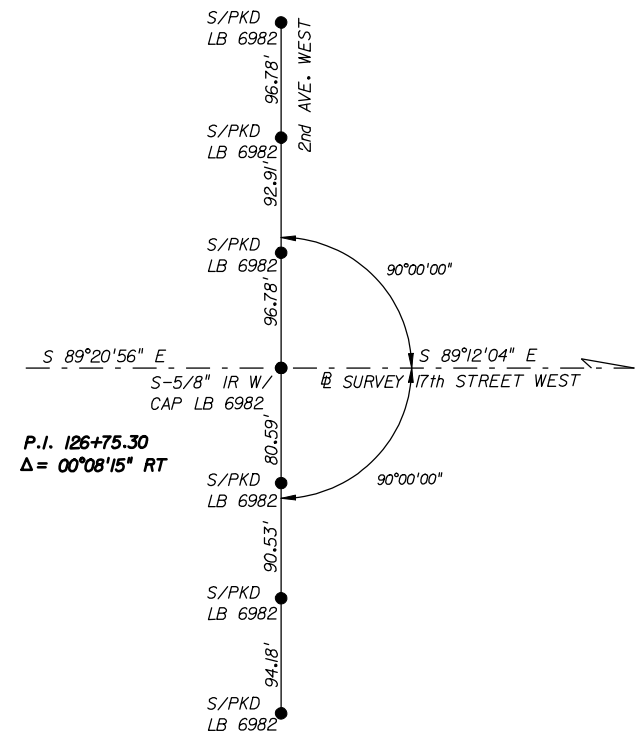
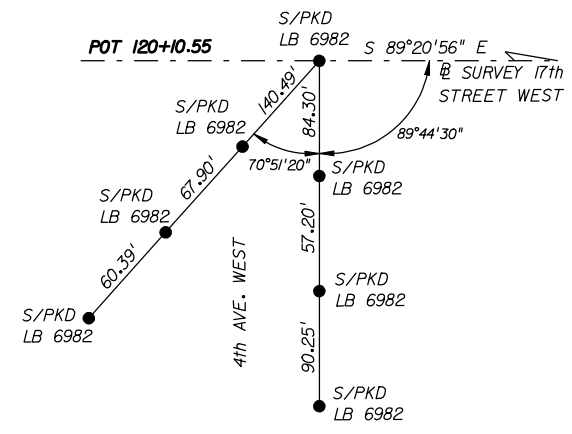
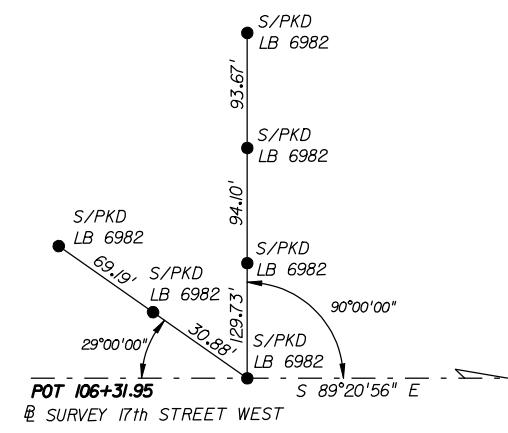
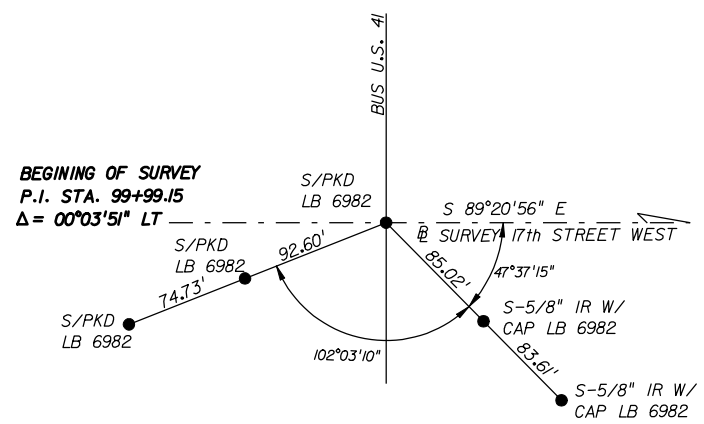
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CHECKED BY	BDG	DATE	1/09			
SUPERVISED BY	DAVID O. THEUNG, P.E.*44786					



17th STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	David O. Theung, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
SUMMARY OF DRAINAGE STRUCTURES			



DESIGN FILE: P:\Mte20080\01m\CADD-data\refpoints01.dgn PLOT FILE: _PLOTFILE_ PLOT DATE: 5/27/2009

DESIGNED BY	SRR	DATE	REVISION DESCRIPTION & DATE	BY	NO.
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SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER
David O. Theung, PE No. 44786

Proj. No. 603526I
Dwg. Date January 8, 2009

REFERENCE POINTS

S-1
 STA. 100+32.64 (74.21' RT.)
 CONST. TYPE P-5 INLET, ALT. B
 INDEX 211
 FL 8.95 (NE)
 EOP EL. 12.77

S-2
 STA. 100+84.44 (19.70' RT.)
 CONST. TYPE P-7 MH
 INDEX 201
 FL 8.85 (SW) (E)
 RIM EL 12.48

S-3
 STA. 102+74.75 (23.25' LT.)
 CONST. TYPE P-5 INLET, ALT. B
 INDEX 211
 FL 8.15 (S)
 EOP EL. 11.89

S-4
 STA. 102+72.91 (23.25' RT.)
 CONST. TYPE P-6 INLET, ALT. B
 INDEX 211
 FL 8.05 (N) (E)
 FL 8.15 (W)
 EOP EL. 11.89

S-5
 STA. 103+71.75 (23.18' LT.)
 CONST. TYPE P-5 INLET, ALT. B
 INDEX 211
 FL 8.35 (S)
 EOP EL. 12.08

S-3
 CONST. 47 LF OF 18" RCP

S-4
 CONST. 100 LF OF 18" RCP

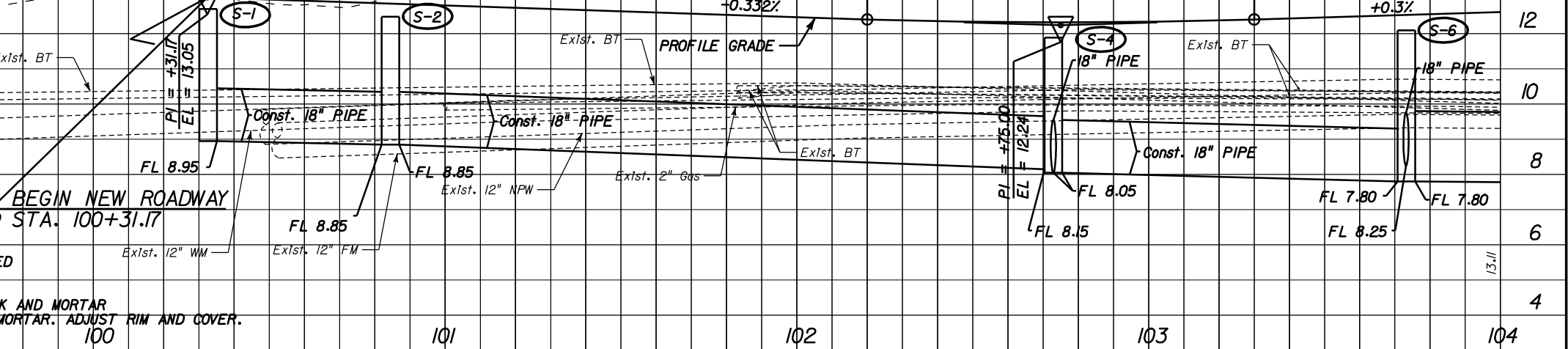
S-6
 STA. 103+73.25 (23.18' RT.)
 CONST. TYPE P-5 INLET, ALT. B
 INDEX 211
 FL 8.25 (N)
 FL 7.80 (W) (E)
 EOP EL. 12.08

Station Equation
 Sta. 99+99.15 @ Sur. 17th St. W.
 Sta. 30+00.00 @ Sur. Bus. U.S. 41

RETURN NO.	RADIUS	PC STA.	OFFSET	ELEV.	PT. STA.	OFFSET	ELEV.
18	50'	100+30.77	71.62' LT	12.53 (EXIST.)	100+80.77	22.00' LT	12.45
2	50'	100+31.39	71.96' RT	12.77 (EXIST.)	100+81.39	22.00' RT	12.44
16	35'	102+77.02	22.00' LT	11.89	103+12.02	57.00' LT	12.28
2	25'	102+90.92	22.00' RT	11.85	103+15.91	46.94' RT	13.15
3	25'	103+37.76	47.00' RT	13.55	103+61.63	22.02' RT	12.06
4	35'	103+36.15	58.30 LT	12.22	103+69.44	22.04' LT	12.08


GENERAL NOTES

- EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMIT SHALL BE REMOVED UNLESS OTHERWISE NOTED.
- SPECIAL ATTENTION IS DIRECTED TO THE FACT THAT PORTIONS OF SOME DRAINAGE STRUCTURES EXTEND INTO THE STABILIZED PORTION OF THE ROADBED AND EXTREME CAUTION WILL NECESSARY IN STABILIZATION OPERATIONS AT THESE LOCATIONS.
- ANY PUBLIC LAND CORNER WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE ENGINEER SHOULD NOTIFY THE DISTRICT LOCATION SURVEYOR, WITHOUT DELAY, BY TELEPHONE.
- EXISTING DRIVEWAYS WITHIN THE LIMITS OF THIS PROJECT ARE TO BE REPLACED AT THE SAME LOCATION AND WIDTH, UNLESS OTHERWISE SHOWN IN THE PLANS.
- MODIFY EXISTING CONFLICT STORM MANHOLES AS SHOWN. REMOVE EXISTING BRICK AND MORTAR NORTH AND SOUTH. CONSTRUCT PROPOSED 18" RCP THROUGH MANHOLE AND RE-MORTAR. ADJUST RIM AND COVER.



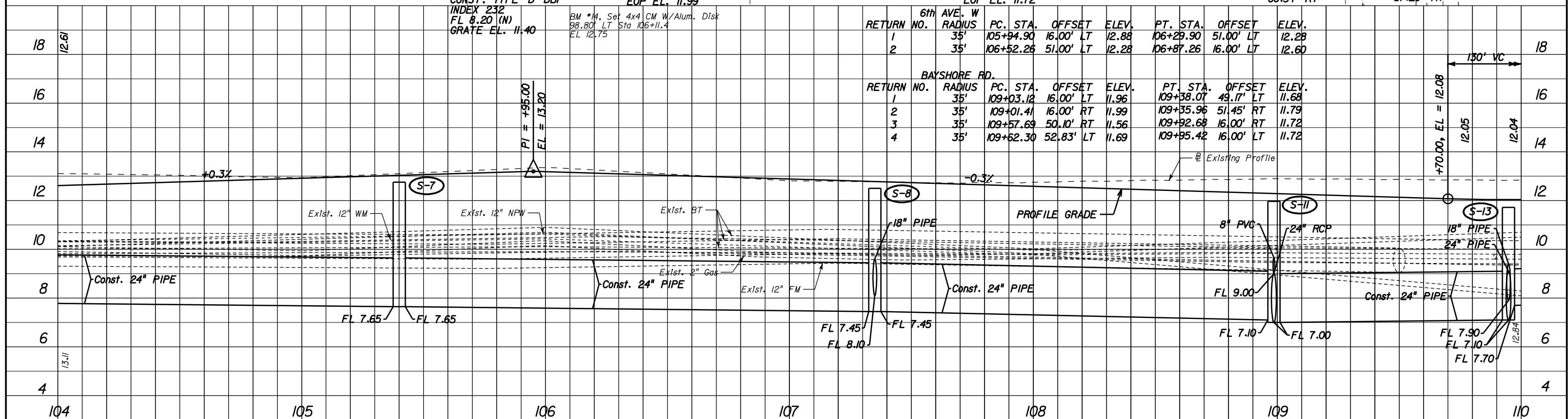
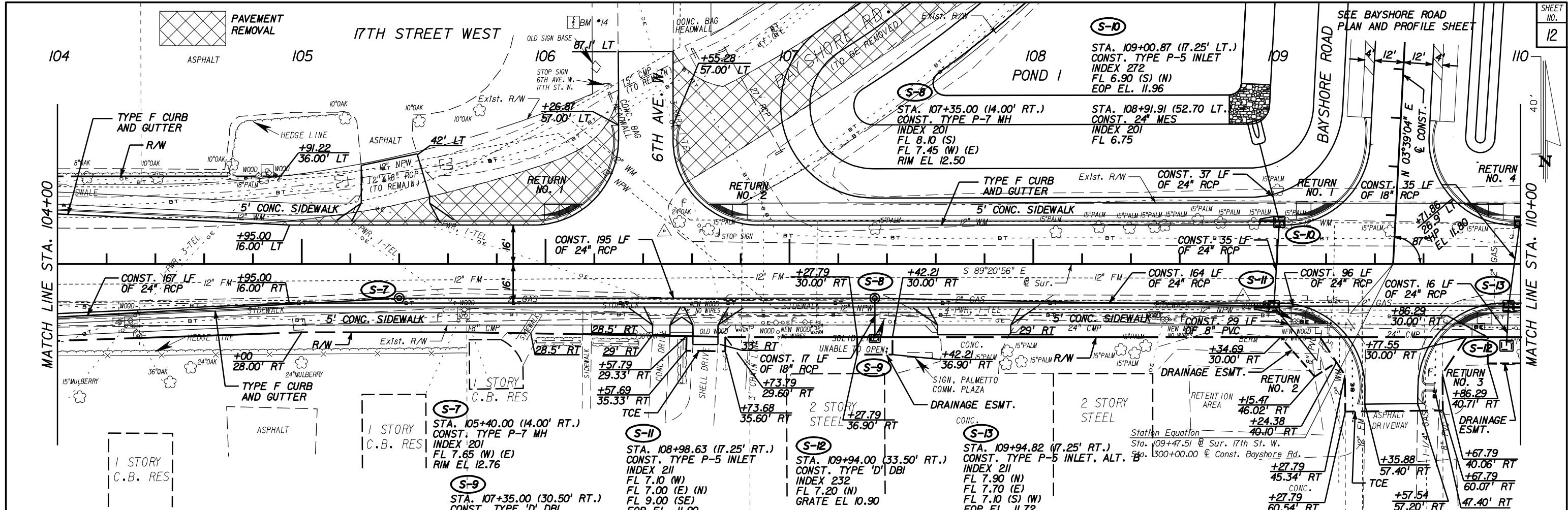
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CHECKED BY	BDG	DATE			
SUPERVISED BY	DAVID O. THEUNG, PE 44786				


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA


 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
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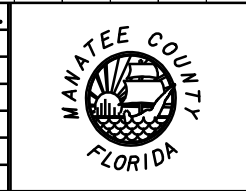
ENGINEER
 David O. Theung, PE No. 44786
 Proj. No. 6035261
 Dwg. Date January 8, 2009
PLAN AND PROFILE

PLOT FILE: P:\Mtc2008\01m\CADD-de\p1prr-d01.dgn
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 PLOT DATE: 5/27/2009



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CHECKED BY	BDG	DATE	1/09
SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION DESCRIPTION & DATE	BY	NO.

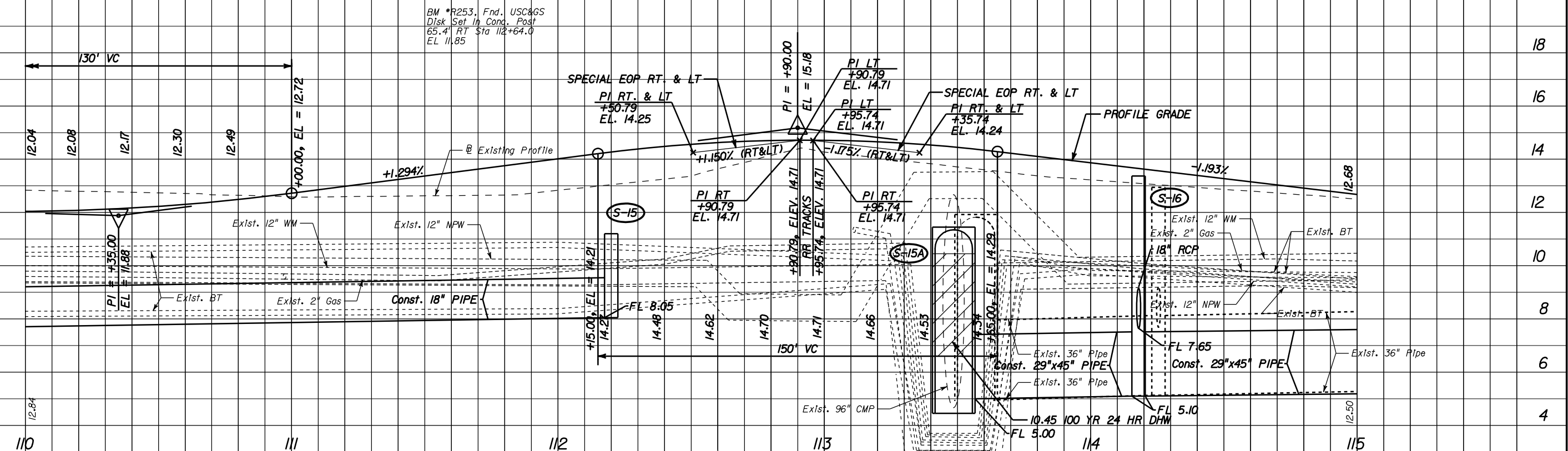
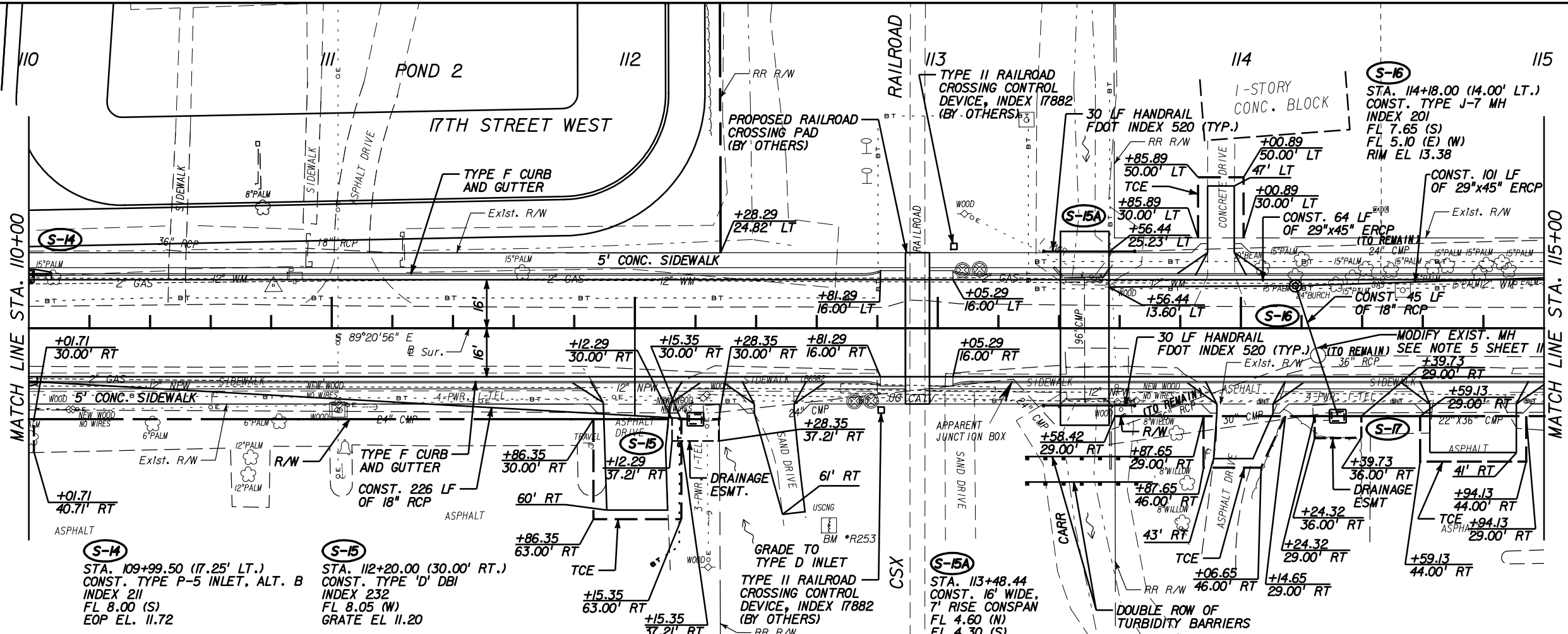


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	David O. Theung, PE No. 44786
Proj. No.	6035261
Dwg. Date	January 8, 2009
PLAN AND PROFILE	

PLOT DATE: 5/27/2009
 DESIGN FILE: P:\Mtc2009\01m\CADD-deta\plprr-d02.dgn
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SUPERVISED BY	DAVID O. THEUNG, PE 44786		

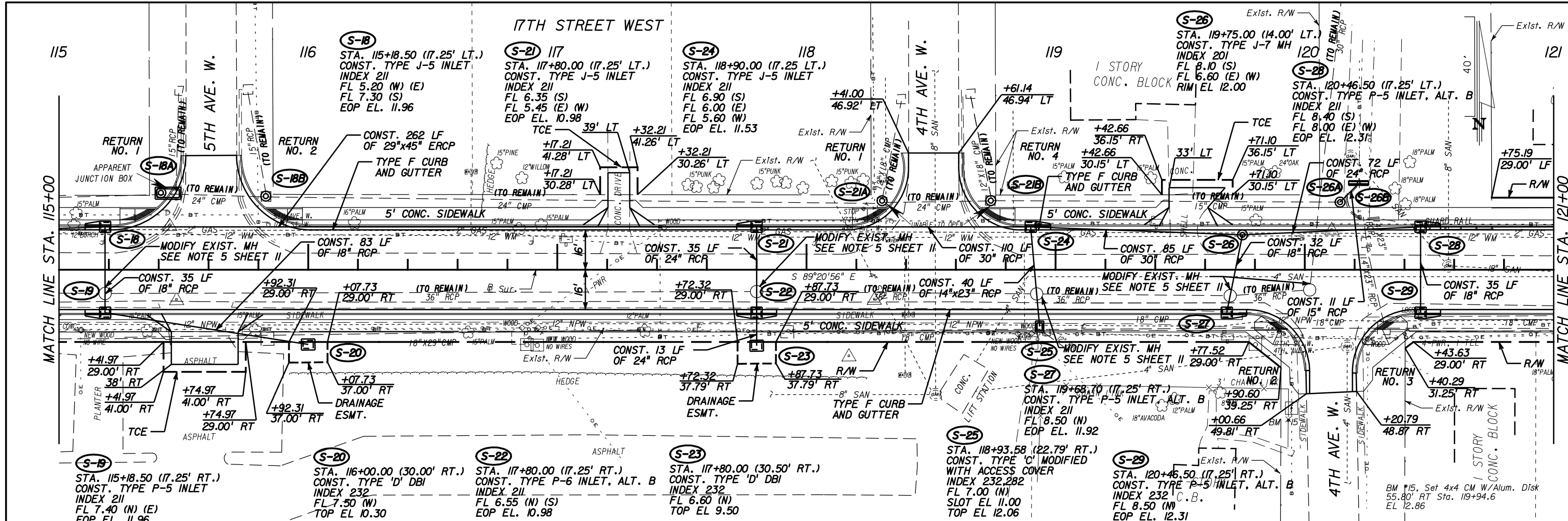
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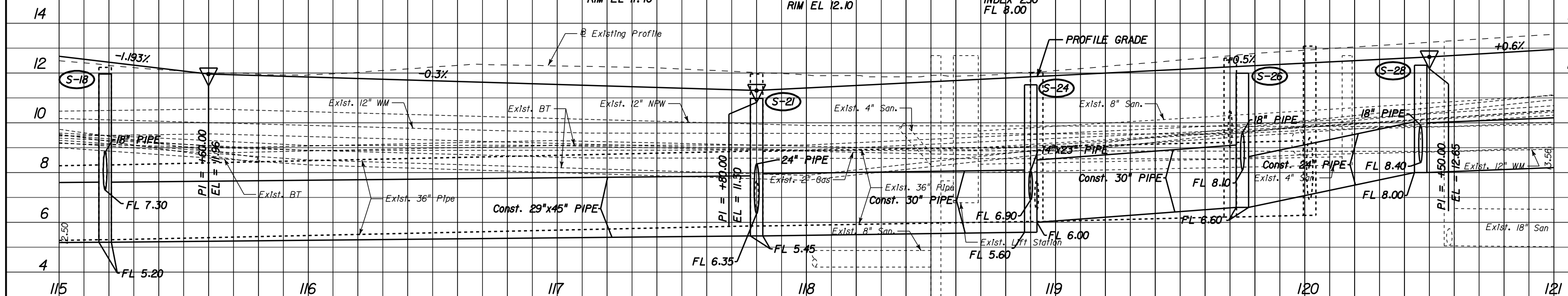
17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA


 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
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ENGINEER	David O. Theung, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
<h2>PLAN AND PROFILE</h2>			

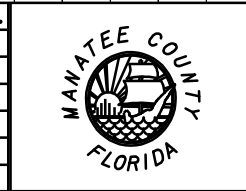


RETURN NO.	RADIUS	PC STA.	OFFSET	ELEV.	PT. STA.	OFFSET	ELEV.
18	30'	115+20.88	16.00' LT	12.11	115+50.88	45.81' LT	9.98 (EXIST.)
16	25'	118+5.98	16.00' LT	11.16	118+40.98	40.93' LT	9.96
14	25'	119+76.96	16.00' LT	11.96	120+01.96	40.44' RT	12.50
12	25'	120+19.15	41.49' RT	12.49	120+44.14	16.00' RT	12.30
10	25'	118+61.14	40.99' LT	9.96	118+86.14	16.00' LT	11.51



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SUPERVISED BY	DAVID O. THEUNG, PE 44786	

REVISION DESCRIPTION & DATE	BY	NO.

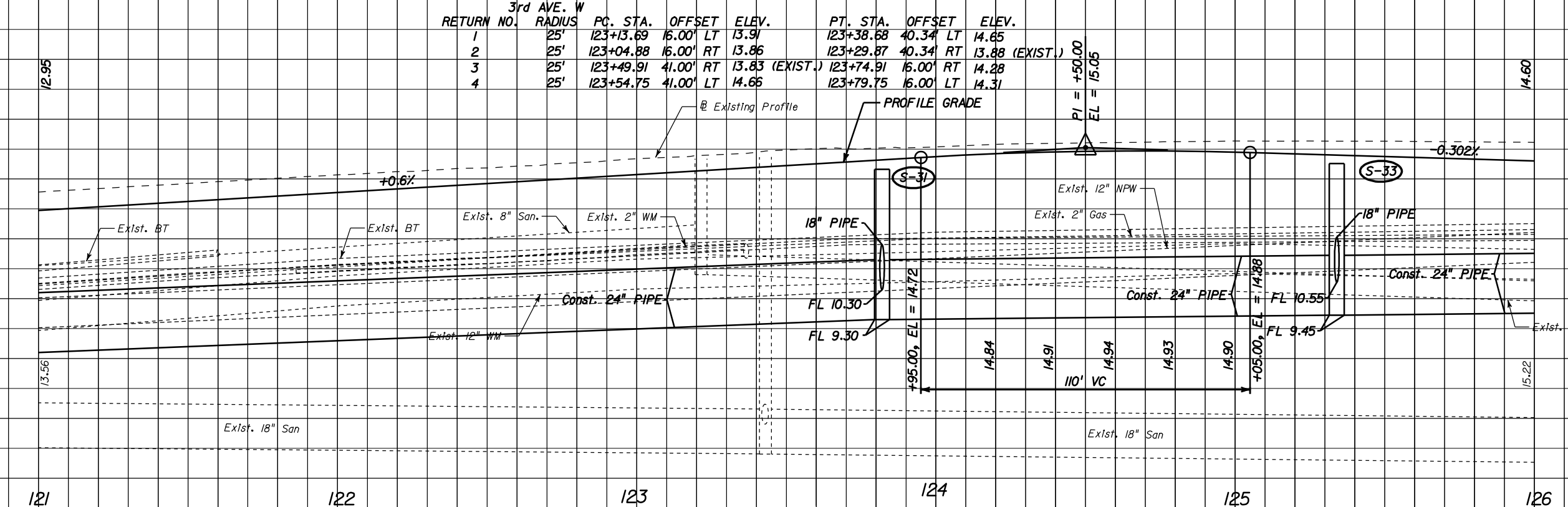
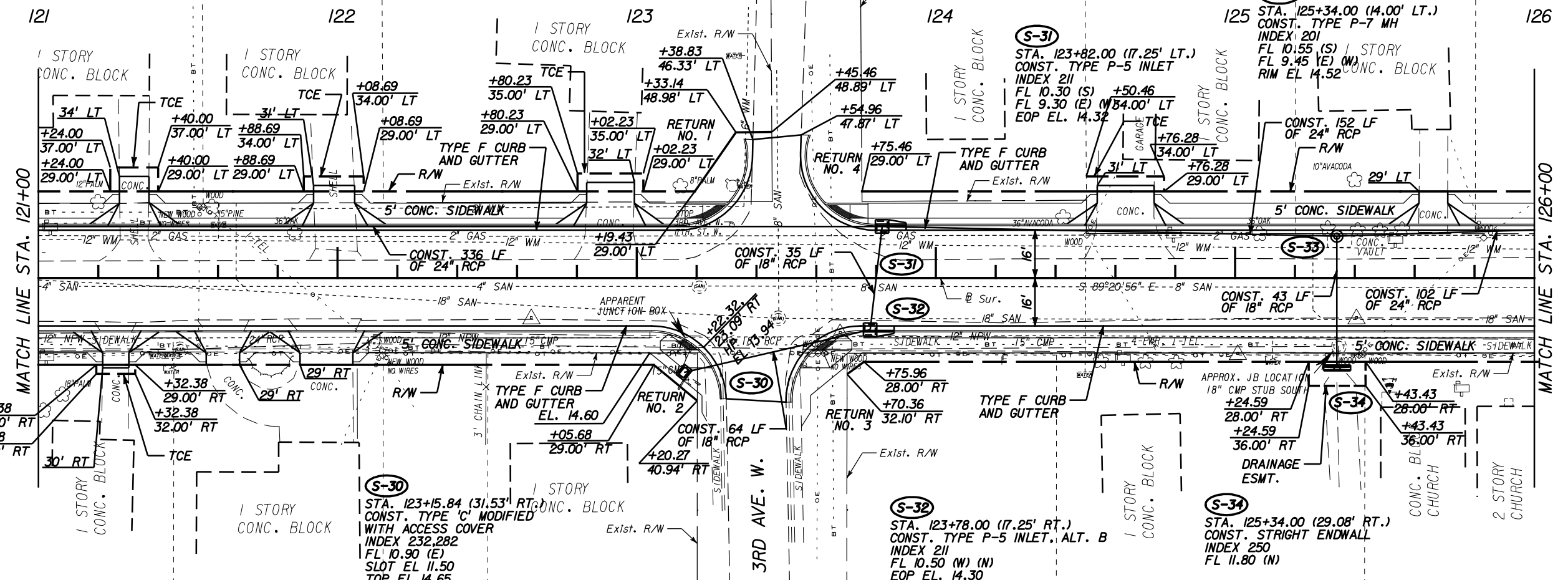
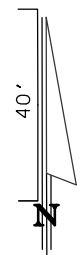


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
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WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
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ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035261
	Dwg. Date January 8, 2009
PLAN AND PROFILE	

PLOT DATE: 5/27/2009
 DESIGN FILE: P:\Mtc\2009\01m\CADD\data\plprr-d04.dgn
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RETURN NO.	RADIUS	PC STA.	OFFSET	ELEV.	PT. STA.	OFFSET	ELEV.
1	25'	123+13.69	16.00' LT	13.91	123+38.68	40.34' LT	14.65
2	25'	123+04.88	16.00' RT	13.86	123+29.87	40.34' RT	13.88 (EXIST.)
3	25'	123+49.91	41.00' RT	13.83 (EXIST.)	123+74.91	16.00' RT	14.28
4	25'	123+54.75	41.00' LT	14.66	123+79.75	16.00' LT	14.31

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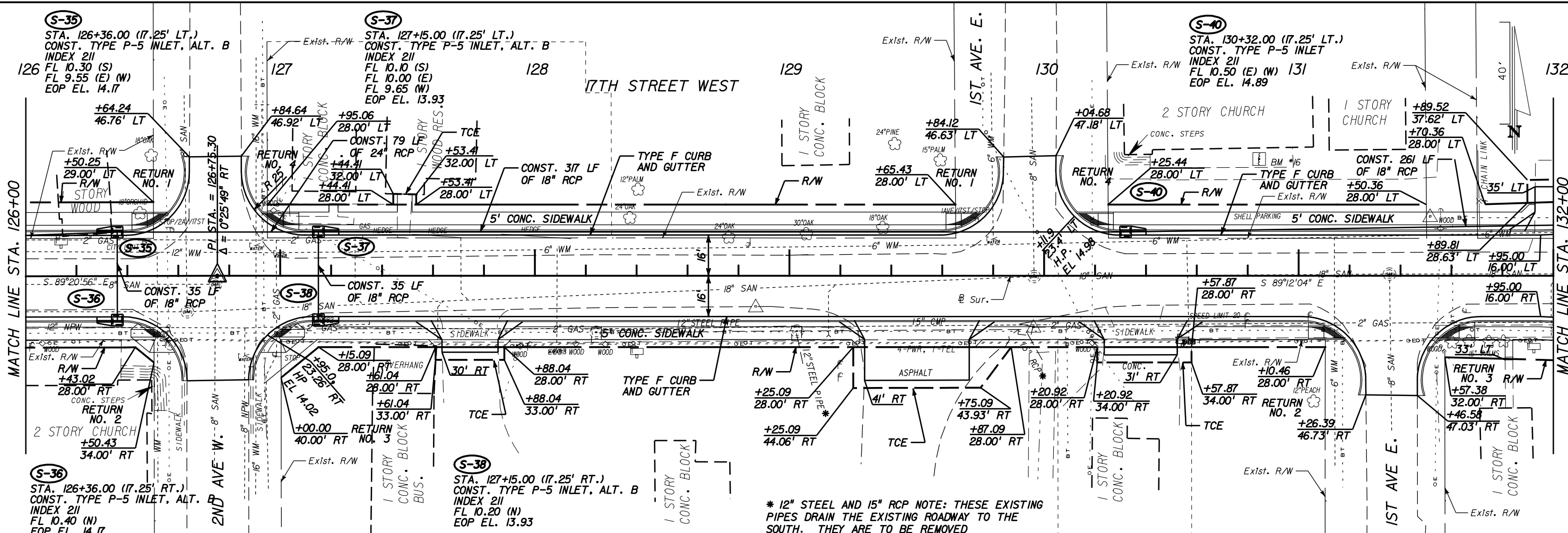
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17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

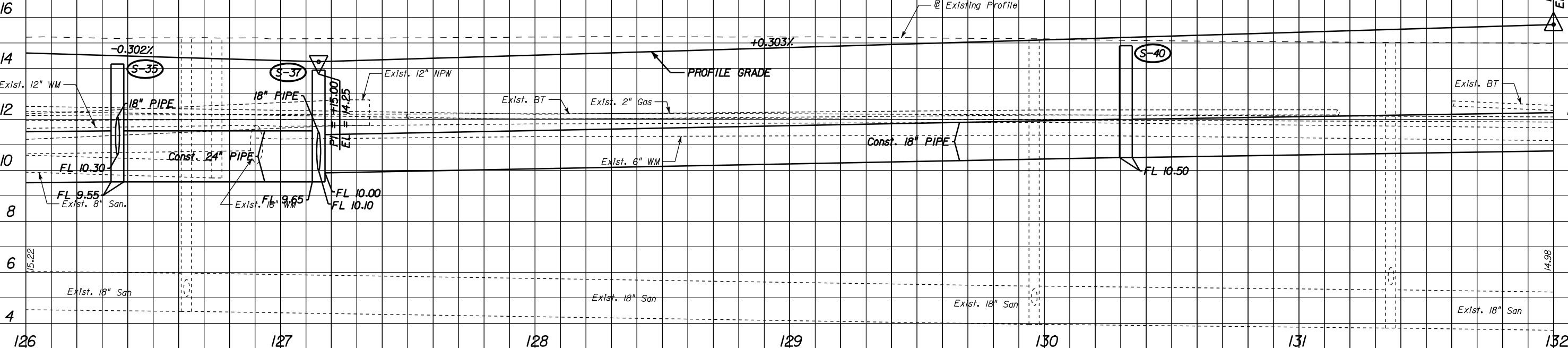
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ENGINEER	David O. Theung, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
PLAN AND PROFILE			



* 12" STEEL AND 15" RCP NOTE: THESE EXISTING PIPES DRAIN THE EXISTING ROADWAY TO THE SOUTH. THEY ARE TO BE REMOVED

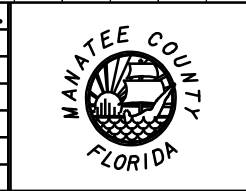
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1	25'	126+39.41	16.00' LT	14.16	126+64.41	40.77' LT	14.69	1	25'	129+59.04	16.00' LT	14.67	129+84.04	40.64' LT	14.79
2	25'	126+38.50	16.00' RT	14.16	126+63.31	41.19' RT	14.07 (EXIST.)	2	25'	131+01.34	16.00' RT	15.10	131+26.33	40.73' RT	14.80
3	25'	126+87.61	40.81' RT	13.96 (EXIST.)	127+12.61	16.00' RT	13.94	3	25'	131+46.58	41.03' RT	14.80	131+71.55	16.00' RT	15.31
4	25'	126+84.76	40.95' LT	14.65	127+09.76	16.00' LT	13.95	4	25'	130+04.64	41.19' LT	14.92	130+29.46	16.00' LT	14.88



DESIGN FILE: P:\Mta20080\01m\CADD-deta\plprr-d06.dgn
 PLOT FILE: _PLOTFILE_

DESIGNED BY	SRR	DATE
CHECKED BY	BDG	DATE 1/09
DRAWN BY	KDR	DATE 1/09
CHECKED BY	BDG	DATE 1/09
SUPERVISED BY	DAVID O. THEUNG, PE 44786	

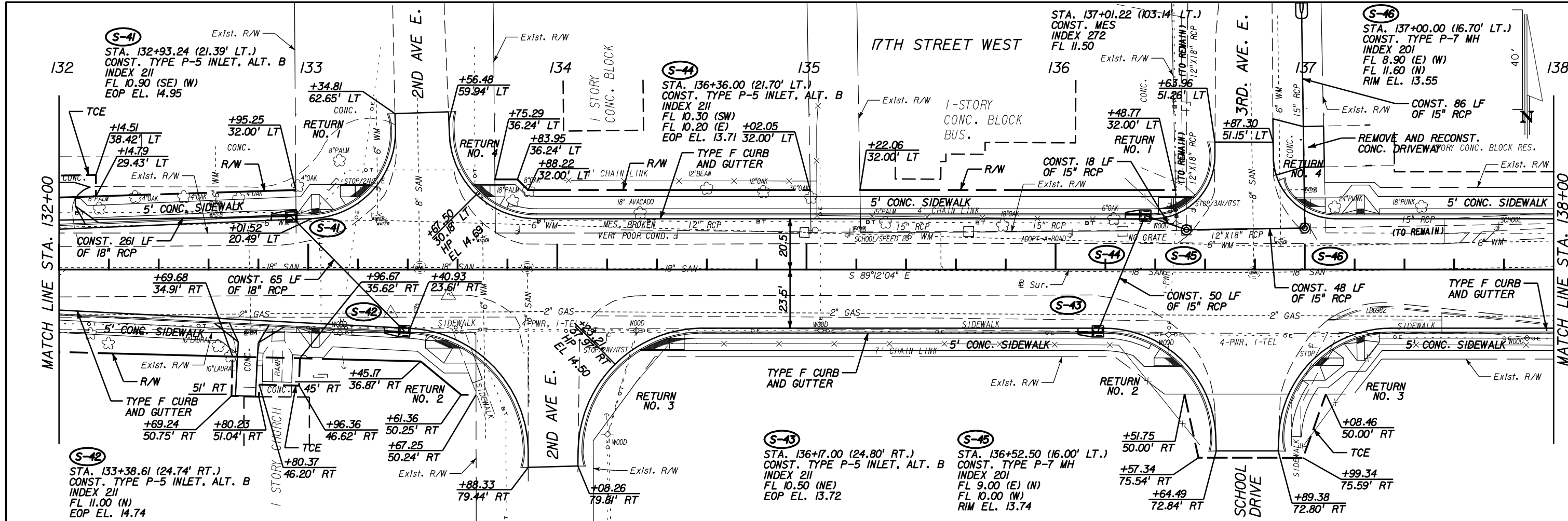
REVISION DESCRIPTION & DATE	BY	NO.



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

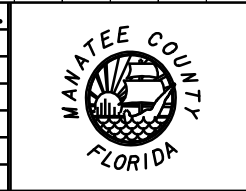
ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035261
	Dwg. Date January 8, 2009
PLAN AND PROFILE	



STATION	2nd AVE. E					3rd AVE. E (SCHOOL ENTRANCE)					STATION		
	RETURN NO.	RADIUS	PC. STA.	OFFSET	ELEV.	RETURN NO.	RADIUS	PC. STA.	OFFSET	ELEV.		PT. STA.	OFFSET
18 PI = 15.72 EL = 15.72	1	35'	133+01.52	20.49' LT	14.94	1	25'	136+38.93	20.50' LT	13.70	136+63.93	45.27' LT	14.00
	2	50'	133+40.93	23.61' RT	14.73	2	45'	136+19.30	23.50' RT	13.72	136+64.26	66.84' RT	14.35
	3	50'	134+08.35	72.91' RT	14.38	3	45'	136+89.61	66.80' RT	14.35	137+34.58	23.50' RT	13.29
	4	35'	133+56.74	53.96' LT	14.60	4	25'	136+87.38	45.16' LT	14.00	137+12.38	20.50' LT	13.43
16	<p>Existing Profile</p> <p>0.366%</p>												
14	<p>Const. 18" PIPE</p> <p>FL 10.90</p> <p>Exst. 2" Gas</p> <p>Exst. BT</p> <p>PROFILE GRADE</p> <p>Exst. 6" WM</p> <p>Exst. 15" Pipe</p>												
12	<p>Const. 15" PIPE</p> <p>FL 11.60</p> <p>Const. 15" PIPE</p> <p>FL 11.60</p> <p>Const. 15" PIPE</p> <p>FL 11.60</p> <p>Const. 15" PIPE</p> <p>FL 11.60</p> <p>12"x18" Ellip. Pipe</p> <p>FL 10.30</p> <p>FL 10.20</p> <p>FL 10.00</p> <p>FL 9.00</p>												
10	<p>Exst. 18" San</p> <p>Exst. 18" San</p> <p>Exst. 18" San</p> <p>Exst. 18" San</p>												
8	<p>FL 8.90</p>												
6	<p>14.98</p> <p>14.23</p>												
4	<p>132</p> <p>133</p> <p>134</p> <p>135</p> <p>136</p> <p>137</p> <p>138</p>												

DESIGNED BY	SRR	DATE	
CHECKED BY	BDG	DATE	1/09
DRAWN BY	KDR	DATE	1/09
CHECKED BY	BDG	DATE	1/09
SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION DESCRIPTION & DATE	BY	NO.



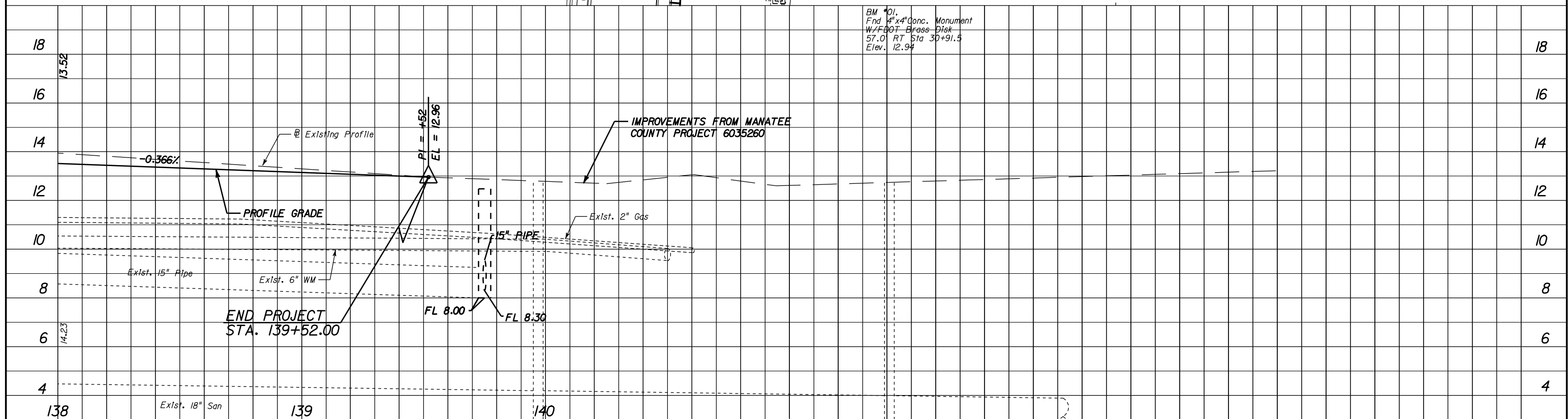
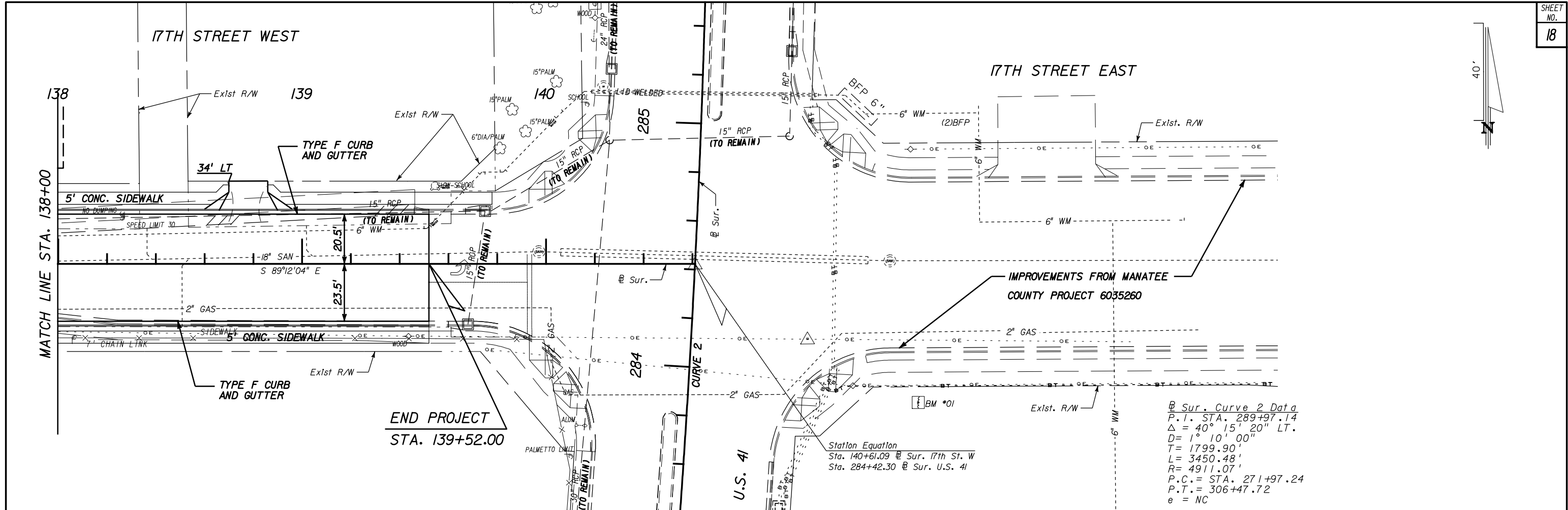
17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER
David O. Theung, PE No. 44786

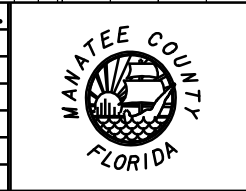
Proj. No. 6035261
Dwg. Date January 8, 2009
PLAN AND PROFILE

PLOT DATE: 5/27/2009
DESIGN FILE: P:\Mtc20080\01m\CADD-data\plprr-d07.dgn
PLOT FILE: _PLOTFILE_



DESIGNED BY	SRR	DATE	
CHECKED BY	BDG	DATE	1/09
DRAWN BY	KDR	DATE	1/09
CHECKED BY	BDG	DATE	1/09
SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION DESCRIPTION & DATE	BY	NO.



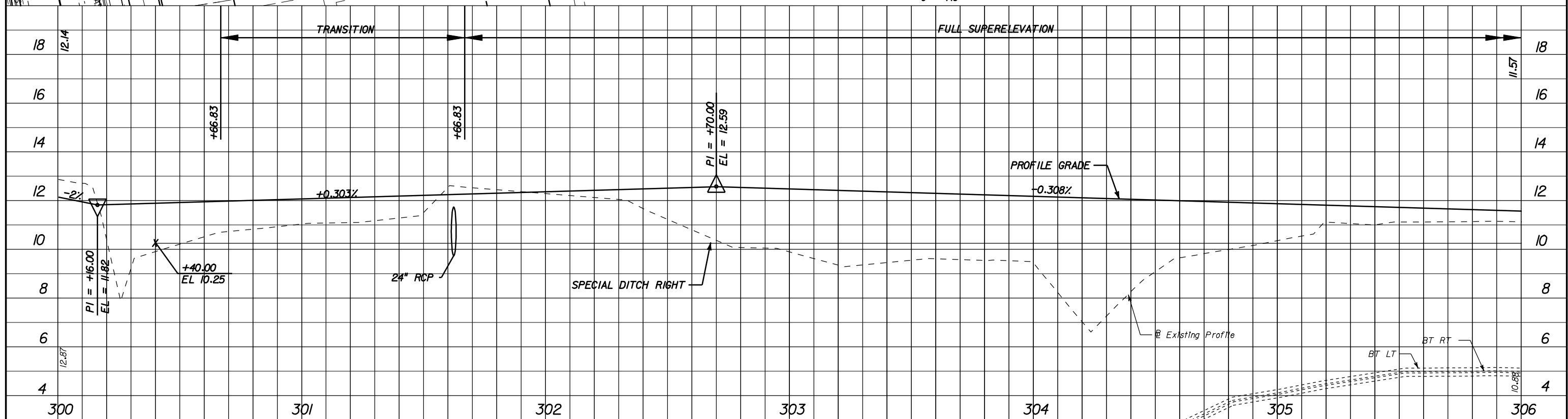
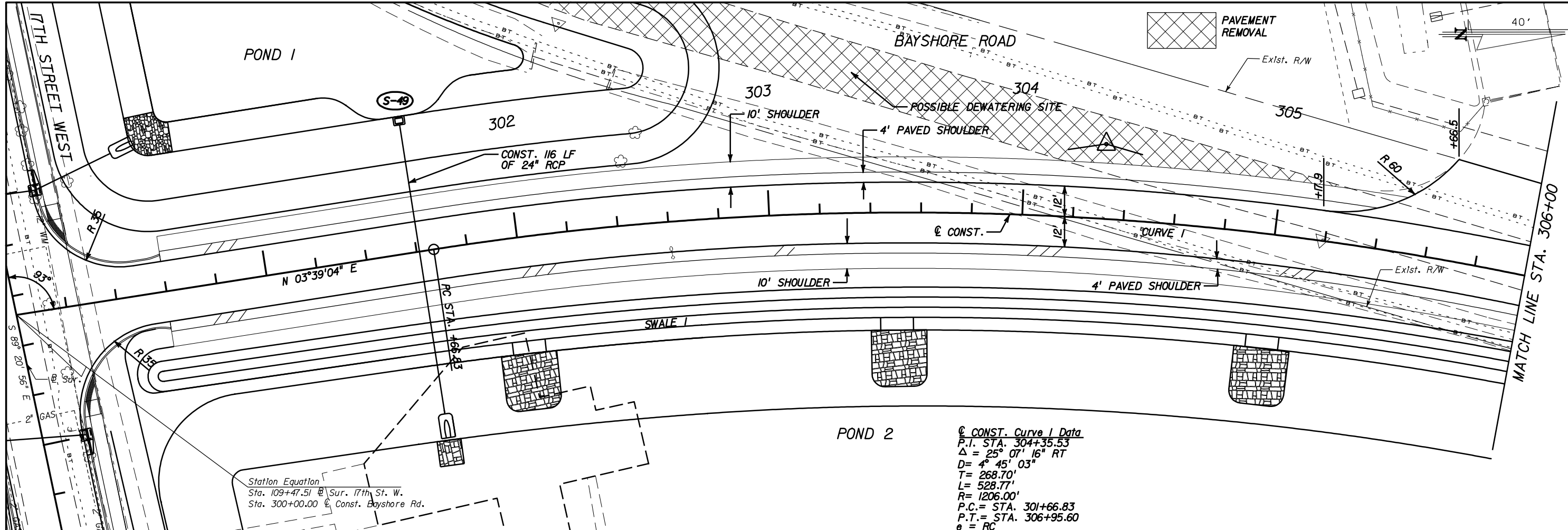
17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER
David O. Theung, PE No. 44786

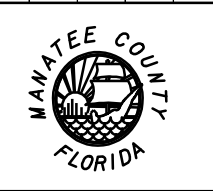
Proj. No. 6035261
Dwg. Date January 8, 2009
PLAN AND PROFILE

PLOT DATE: 5/27/2009
DESIGN FILE: P:\Mtw2008\01m\CADD-data\plpr-rd08.dgn
PLOT FILE: _PLOTFILE_



DESIGN FILE: P:\Mta2008\01m\CADD-deta\plrr-d09.dgn
 PLOT FILE: _PLOTFILE_
 PLOT DATE: 5/27/2009

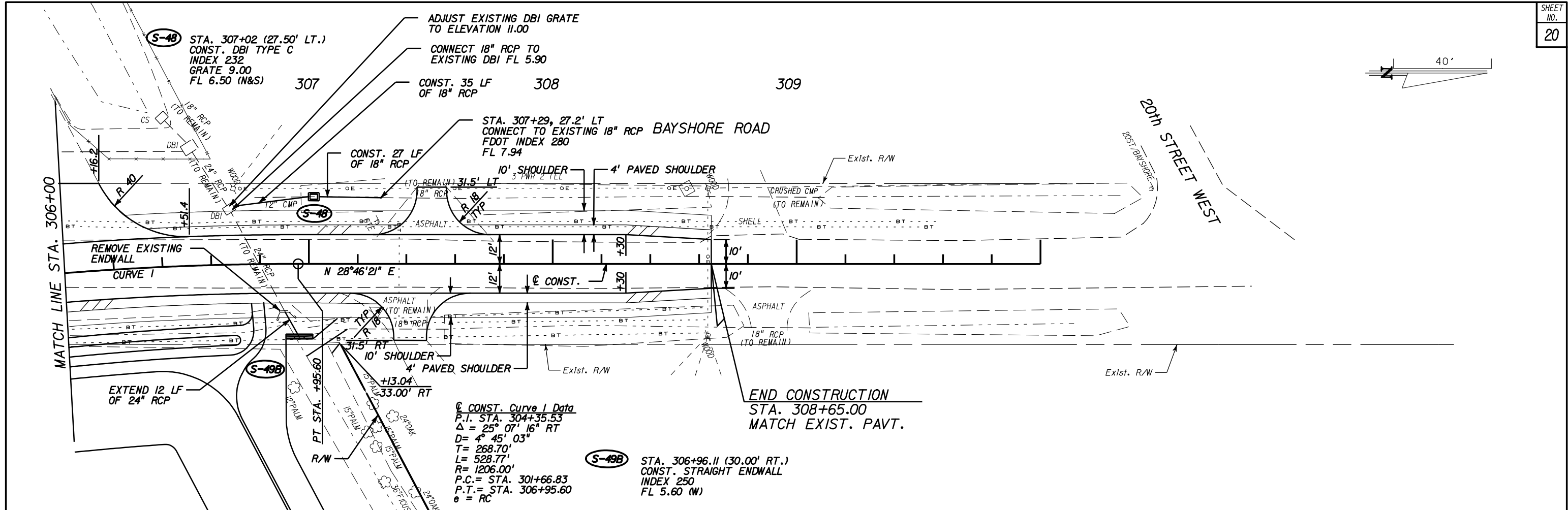
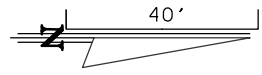
DESIGNED BY	SRR	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE			
DRAWN BY	KDR	DATE			
CHECKED BY	BDG	DATE			
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

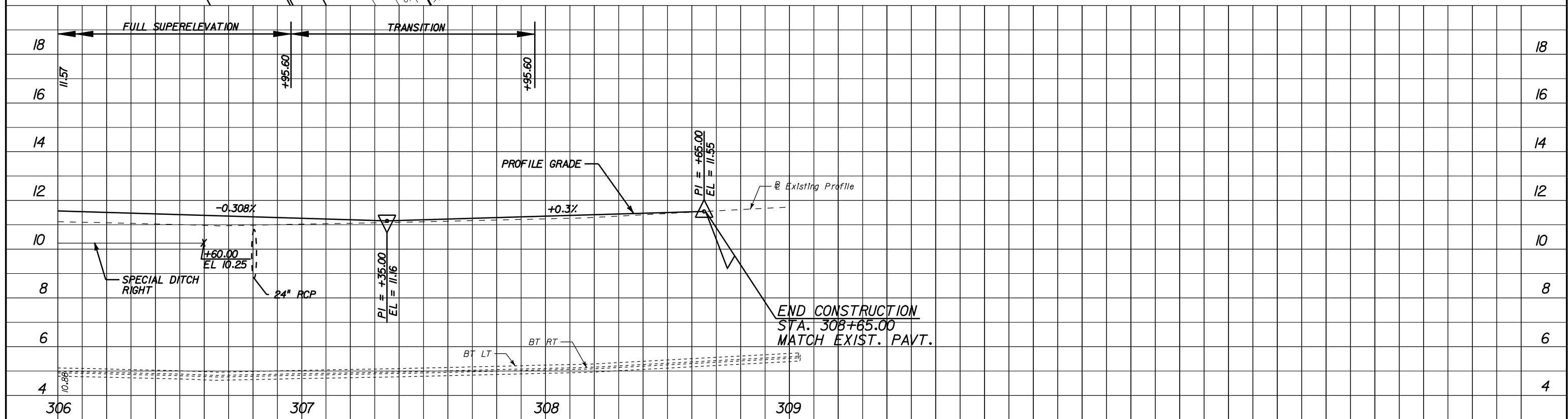
8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER David O. Theung, PE No. 44786	Proj. No. 6035261 Dwg. Date January 8, 2009
PLAN AND PROFILE	



CONST. Curve 1 Data
 P.I. STA. 304+35.53
 $\Delta = 25^\circ 07' 16''$ RT
 $D = 4^\circ 45' 03''$
 $T = 268.70'$
 $L = 528.77'$
 $R = 1206.00'$
 P.C. = STA. 301+66.83
 P.T. = STA. 306+95.60
 $e = RC$

S-498 STA. 306+96.11 (30.00' RT.)
 CONST. STRAIGHT ENDWALL
 INDEX 250
 FL 5.60 (W)



DESIGNED BY	SRR	DATE	
CHECKED BY	BDG	DATE	1/09
DRAWN BY	KDR	DATE	1/09
CHECKED BY	BDG	DATE	1/09
SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION DESCRIPTION & DATE	BY	NO.

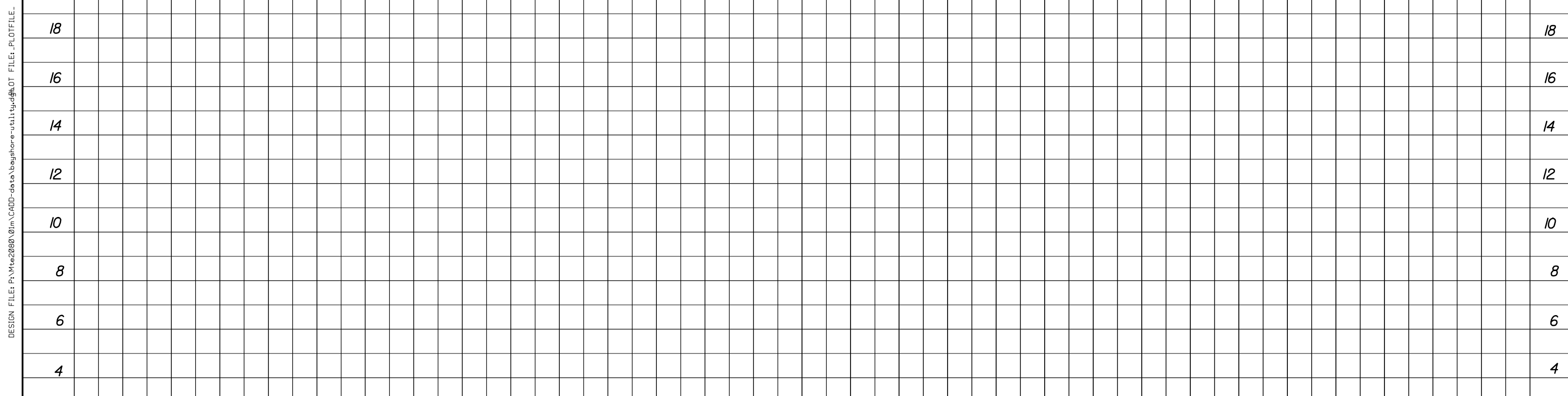
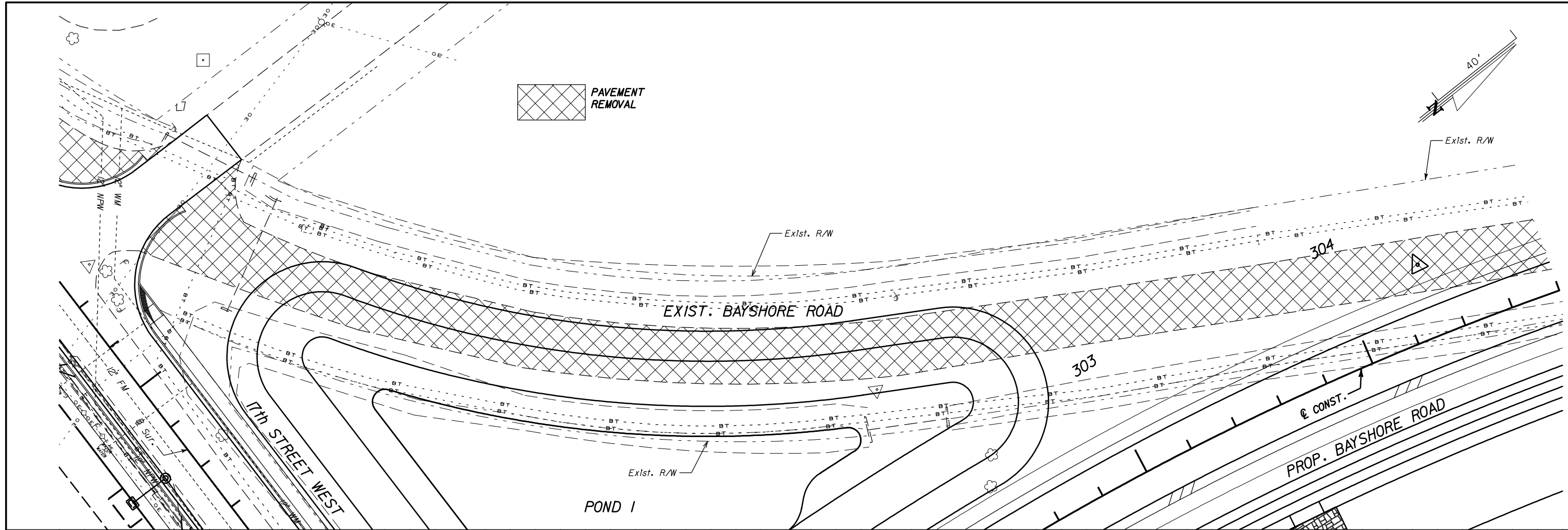


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

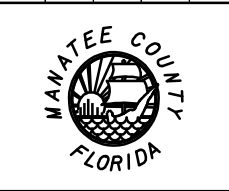
ENGINEER	Proj. No. 6035261
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
PLAN AND PROFILE	

PLOT DATE: 5/27/2009
 DESIGN FILE: P:\Mtw2008\01m\CADD-data\plprr-d10.dgn
 PLOT FILE: _PLOTFILE_



DESIGNED BY	SRR	DATE	
CHECKED BY	BDG	DATE	1/09
DRAWN BY	KDR	DATE	1/09
CHECKED BY	BDG	DATE	1/09
SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION DESCRIPTION & DATE	BY	NO.



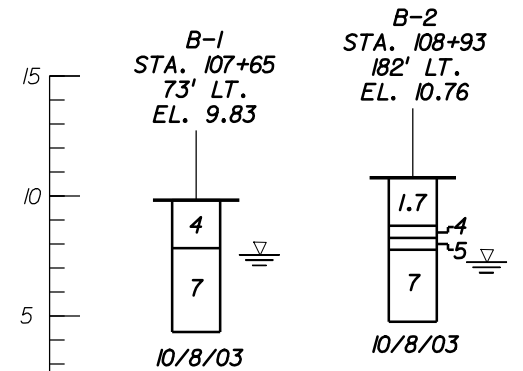
17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER
 David O. Theung, PE No. 44786

Proj. No. 6035261
 Dwg. Date January 8, 2009
PLAN AND PROFILE

DESIGN FILE: P:\Mte2008\01m\CADD-deta\bayshore-utility.dgn OT FILE: _PLOTFILE_ PLOT DATE: 5/27/2009



STAGE	A (SF)	A (AC)	VOL. (AC-FT)	TOT. VOL. (AC-FT)
4.00	9,055	0.208	---	---
7.00	14,697	0.337	0.789	0.789
7.82	17,152	0.394	0.297	1.086
11.50	28,397	0.652	1.890	2.976

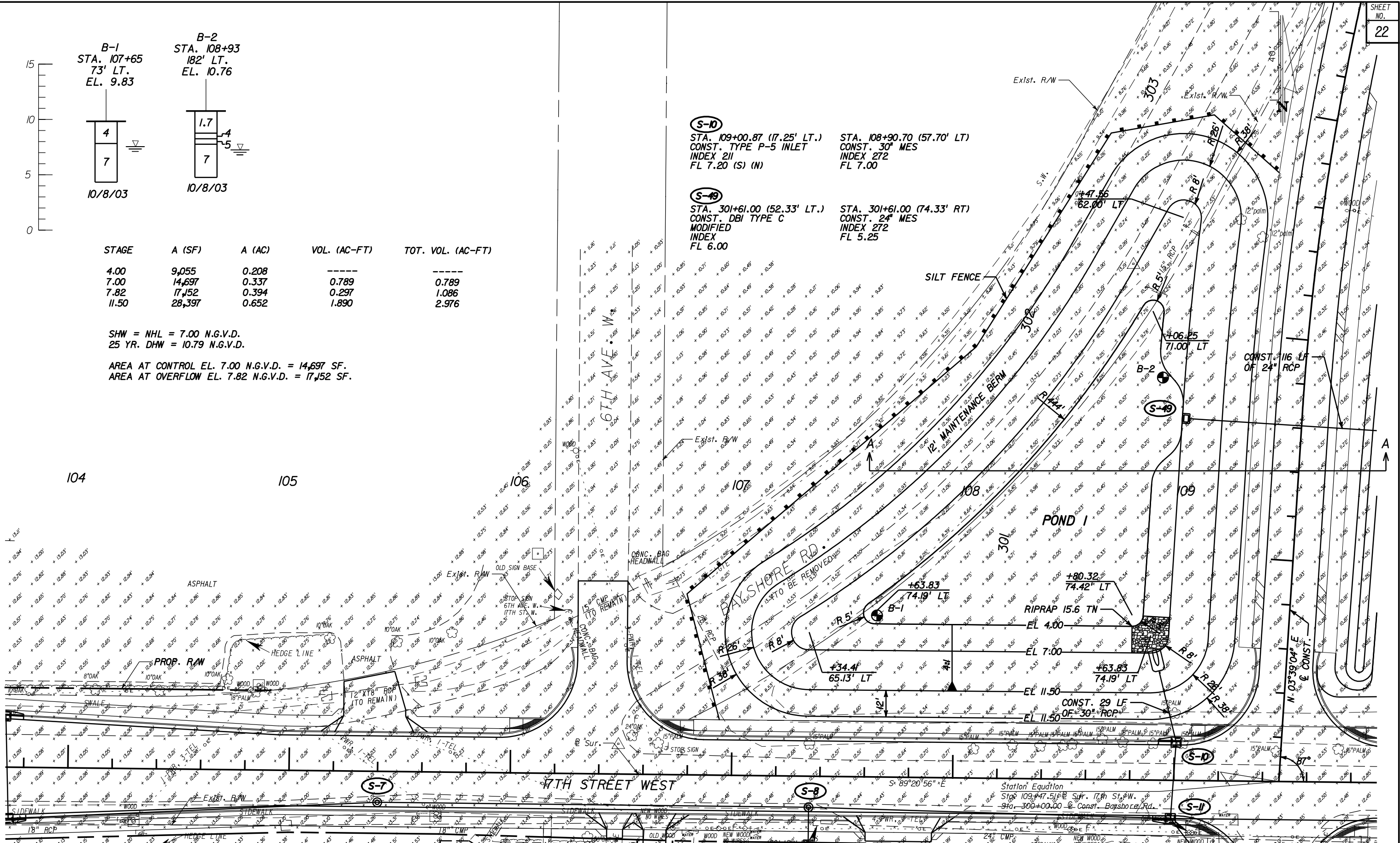
SHW = NHL = 7.00 N.G.V.D.
 25 YR. DHW = 10.79 N.G.V.D.
 AREA AT CONTROL EL. 7.00 N.G.V.D. = 14,697 SF.
 AREA AT OVERFLOW EL. 7.82 N.G.V.D. = 17,152 SF.

S-10
 STA. 109+00.87 (17.25' LT.)
 CONST. TYPE P-5 INLET
 INDEX 211
 FL 7.20 (S) (N)

S-10
 STA. 108+90.70 (57.70' LT.)
 CONST. 30" MES
 INDEX 272
 FL 7.00

S-49
 STA. 301+61.00 (52.33' LT.)
 CONST. DBI TYPE C
 MODIFIED
 INDEX
 FL 6.00

S-49
 STA. 301+61.00 (74.33' RT.)
 CONST. 24" MES
 INDEX 272
 FL 5.25



DESIGN FILE: P:\Mtc\2009\01m\CADD\data\det\p-01.dgn PLOT FILE: _PLOTFILE_

DESIGNED BY	CRL	DATE	
CHECKED BY	BDG	DATE	1/09
DRAWN BY	KDR	DATE	1/09
CHECKED BY	BDG	DATE	1/09
SUPERVISED BY	DAVID O. THEUNG, PE 44786		

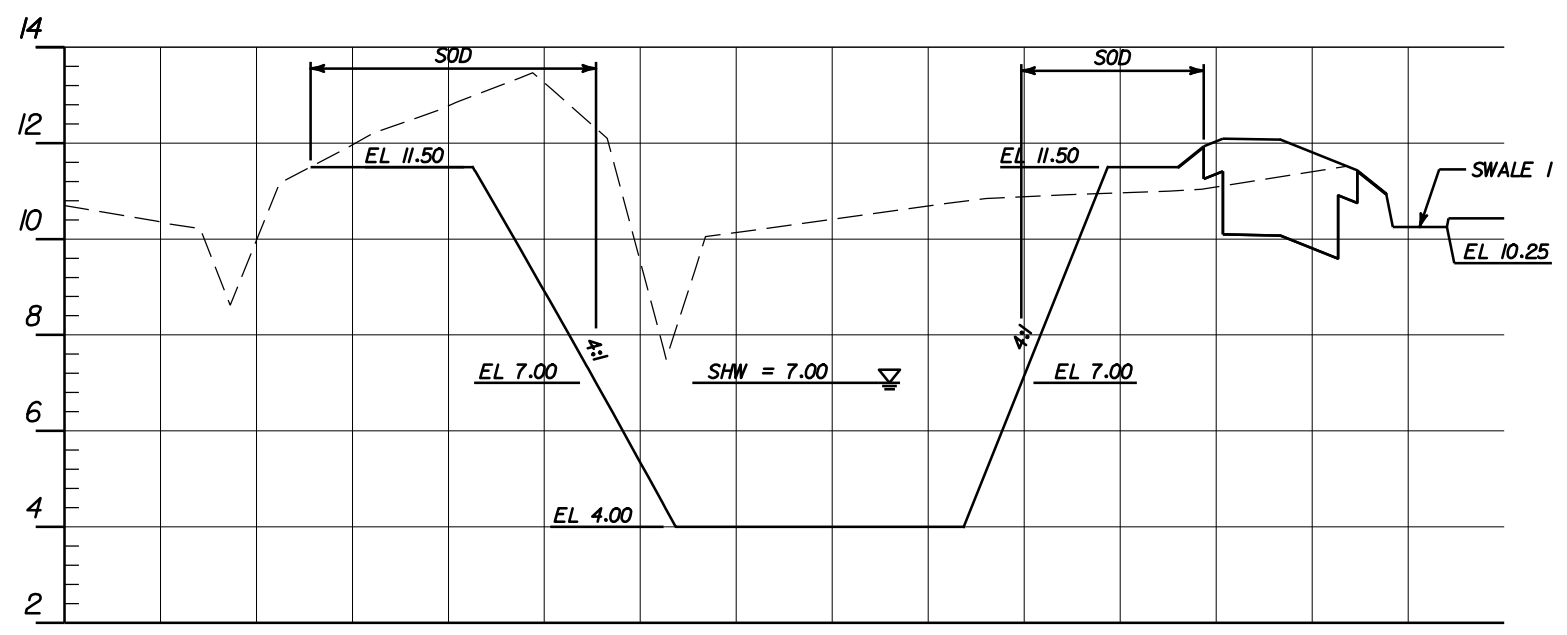
REVISION DESCRIPTION & DATE	BY	NO.



17th STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

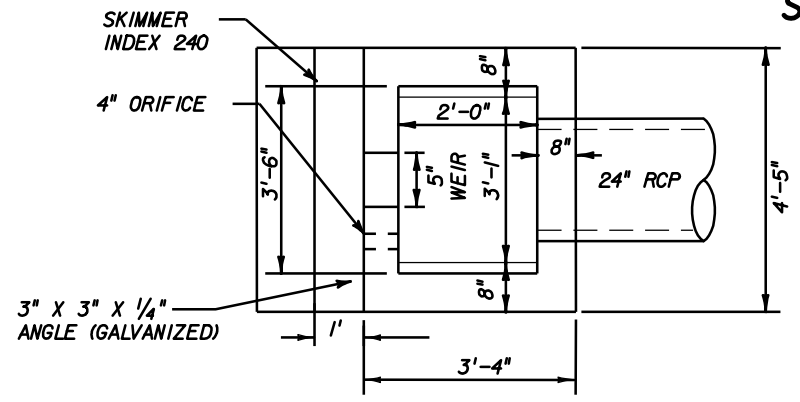
WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	David O. Theung, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
		POND DETAILS POND 1	

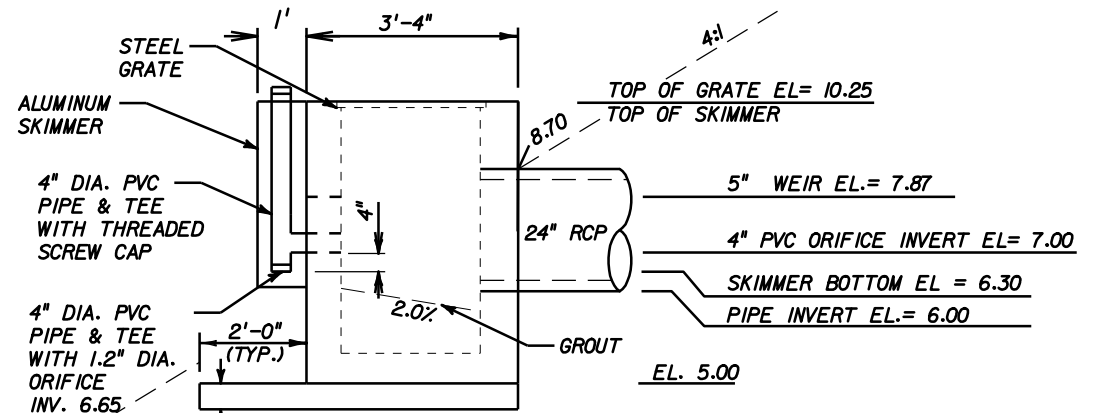


**SECTION A-A
NTS**

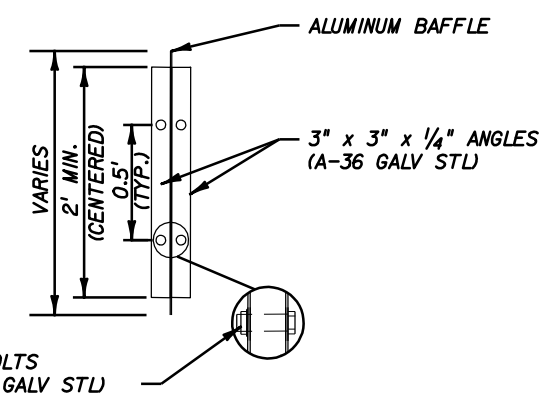
NOTE : DO NOT SOD BELOW SHW EL=7.00



**TOP VIEW
N.T.S.**



**SIDE VIEW
N.T.S.**



**ANGLE DETAIL
N.T.S.**

**DITCH BOTTOM INLET
TYPE 'C' (MODIFIED) (S-49)**
(SEE INDEX No. 232)

POND 1

DESIGN FILE: P:\Mte20080\01m\CADD-data\SPDTLS03.dgn PLOT FILE: _PLOTFILE_ PLOT DATE: 5/27/2009

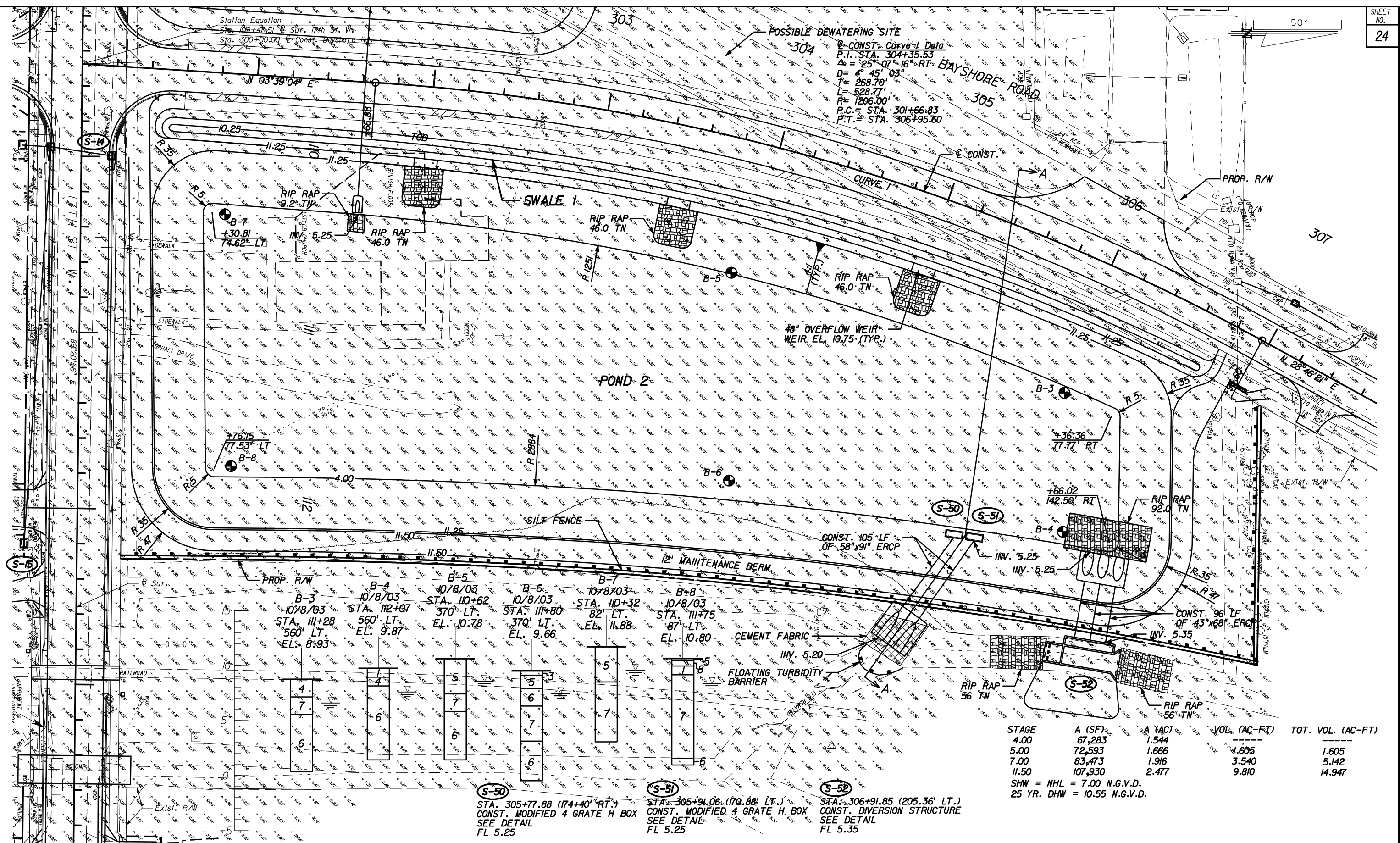
DESIGNED BY	MR	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE	44786			



17TH STREET WEST
FROM US 41 TO CANAL ROAD
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035260
	Dwg. Date January 8, 2009
POND DETAILS	



DESIGN FILE: P:\Mtc\2009\01m\CADD-deta\det-d02.dgn PLOT FILE: PLOTFILE.PLOT DATE: 5/27/2009

DESIGNED BY	CRL	DATE	
CHECKED BY	BDG	DATE	1/09
DRAWN BY	KDR	DATE	1/09
CHECKED BY	BDG	DATE	1/09
SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION	DESCRIPTION & DATE	BY	NO.



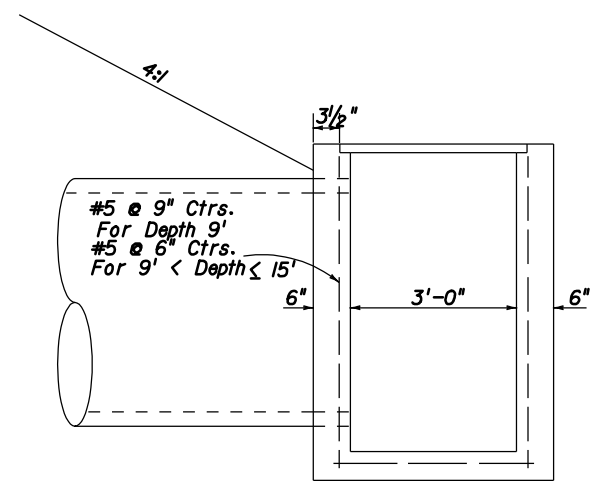
17th STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

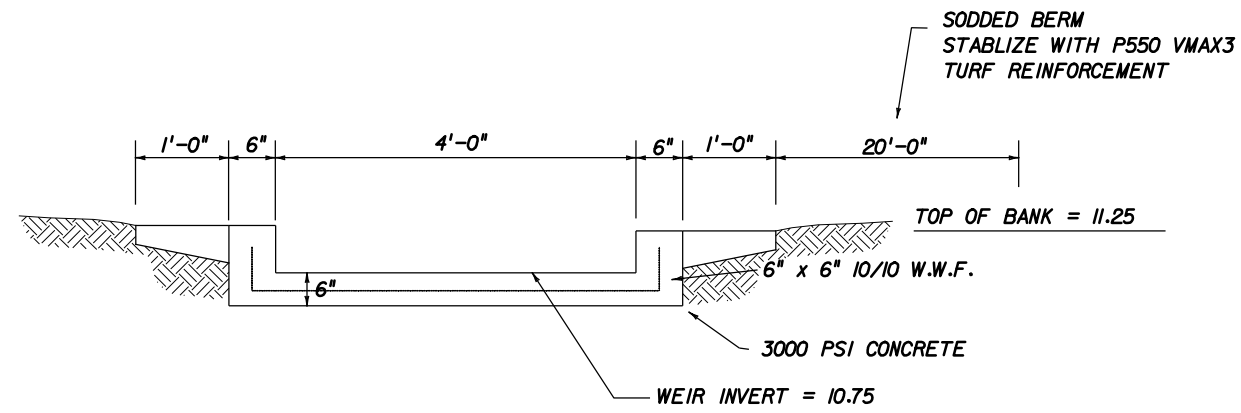
ENGINEER
David O. Theung, PE No. 44786

Proj. No. 6035261
Dwg. Date January 8, 2009

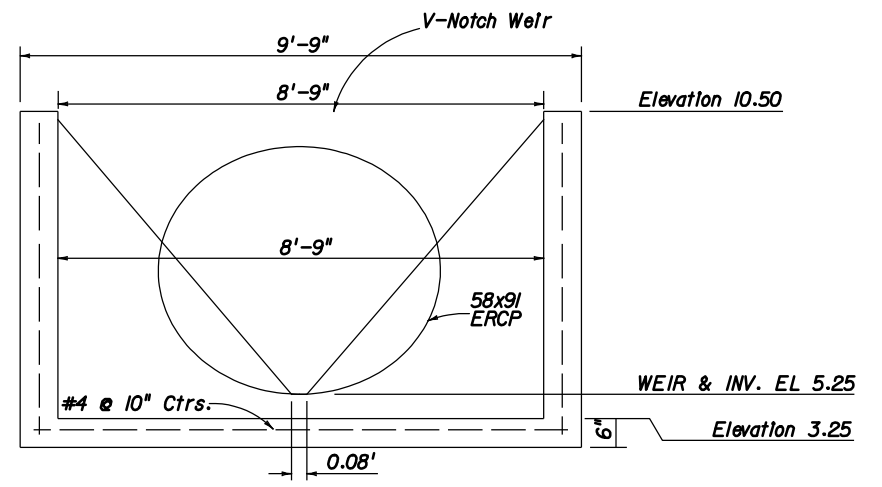
**POND DETAILS
SWALE 1 POND 2**



PARTIAL SECTION



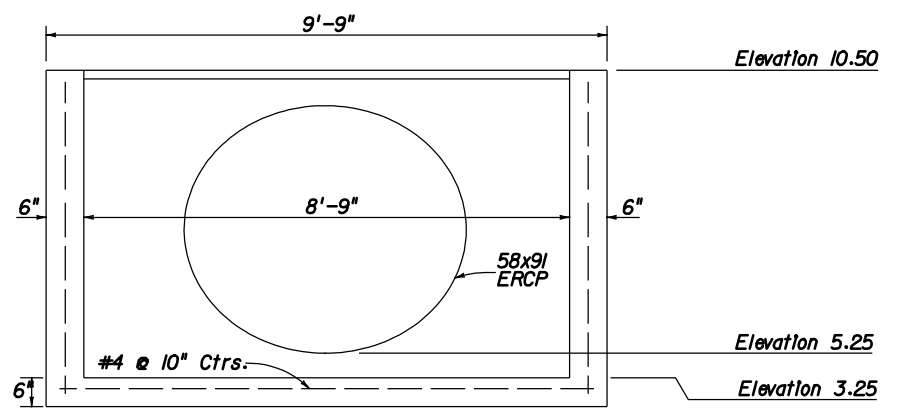
OVERFLOW WEIR NTS



WEIR STRUCTURE SECTION TYPE H INLET (A) NTS

(S-50)

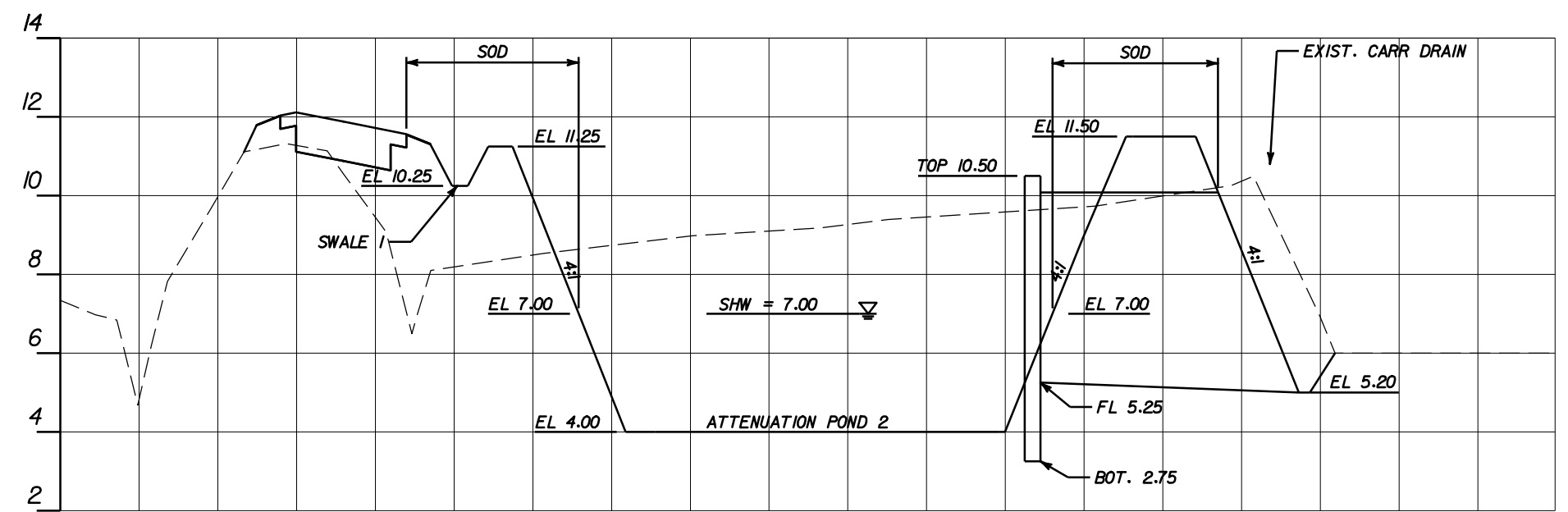
DITCH BOTTOM INLET H (4-GRATE) INLETS



STRUCTURE SECTION TYPE H INLET (B) NTS

(S-51)

NOTE : DO NOT SOD BELOW SHW EL = 7.00



SECTION A-A NTS

ATTENUATION SWALE 1 & POND 2

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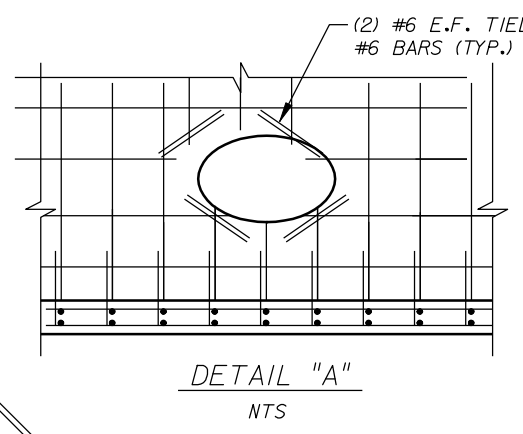
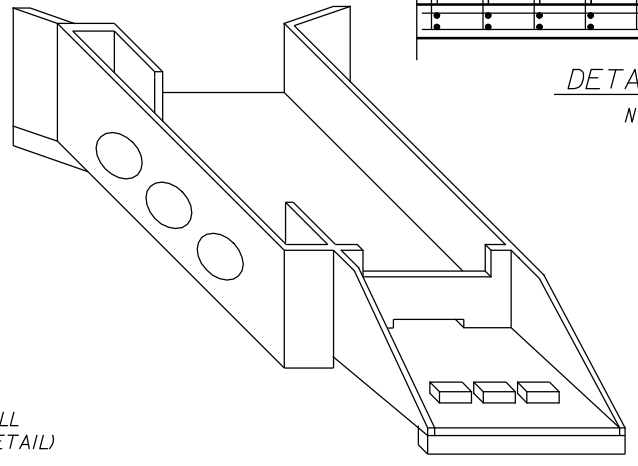
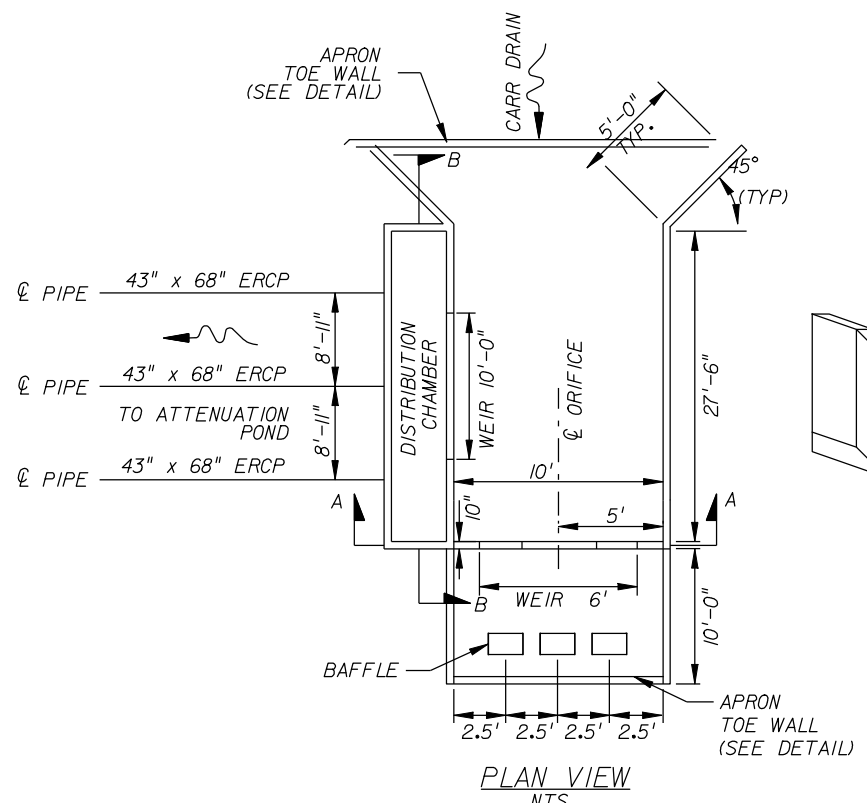
DESIGNED BY	MR	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE	44786			



17TH STREET WEST
FROM US 41 TO CANAL ROAD
MANATEE COUNTY, FLORIDA

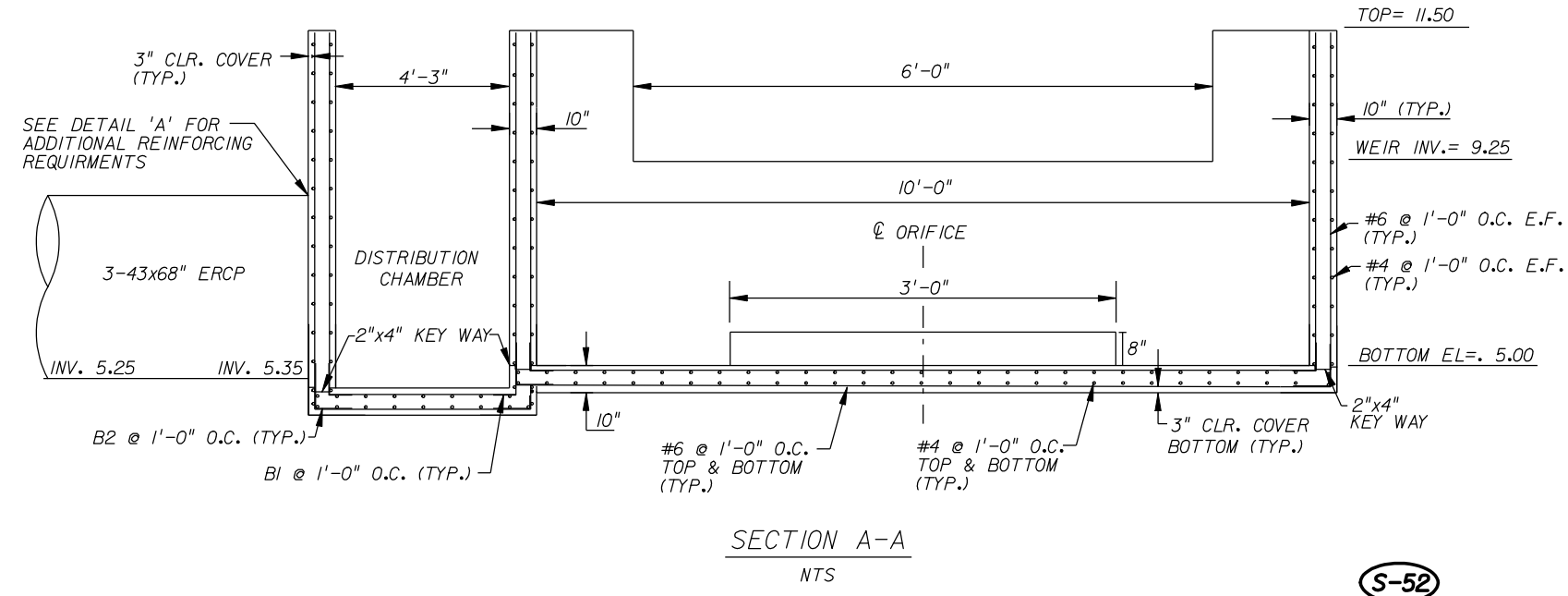
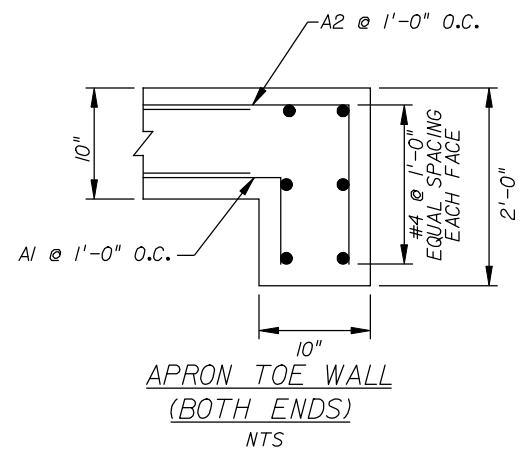
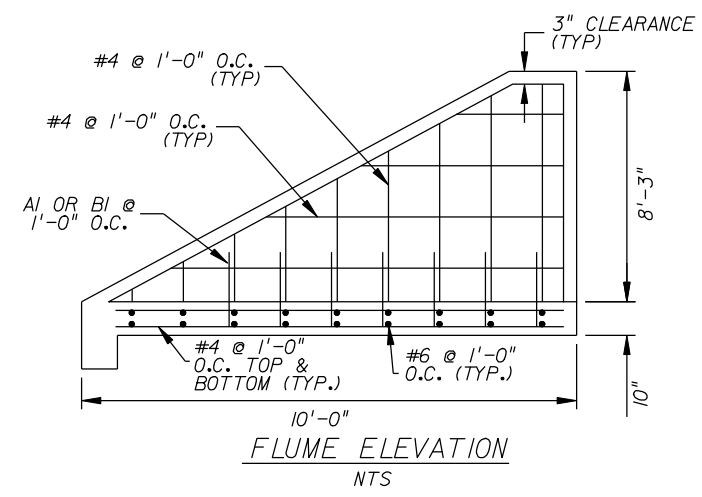
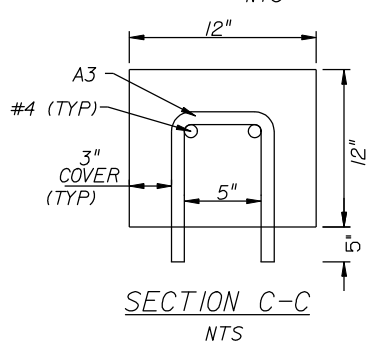
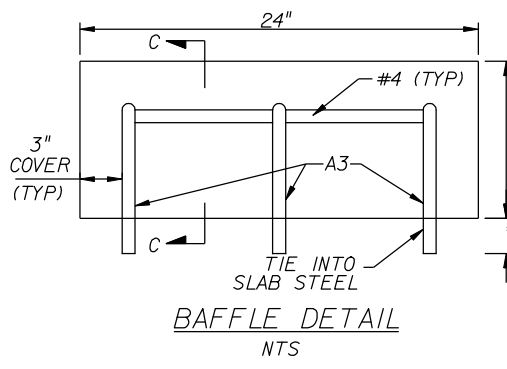
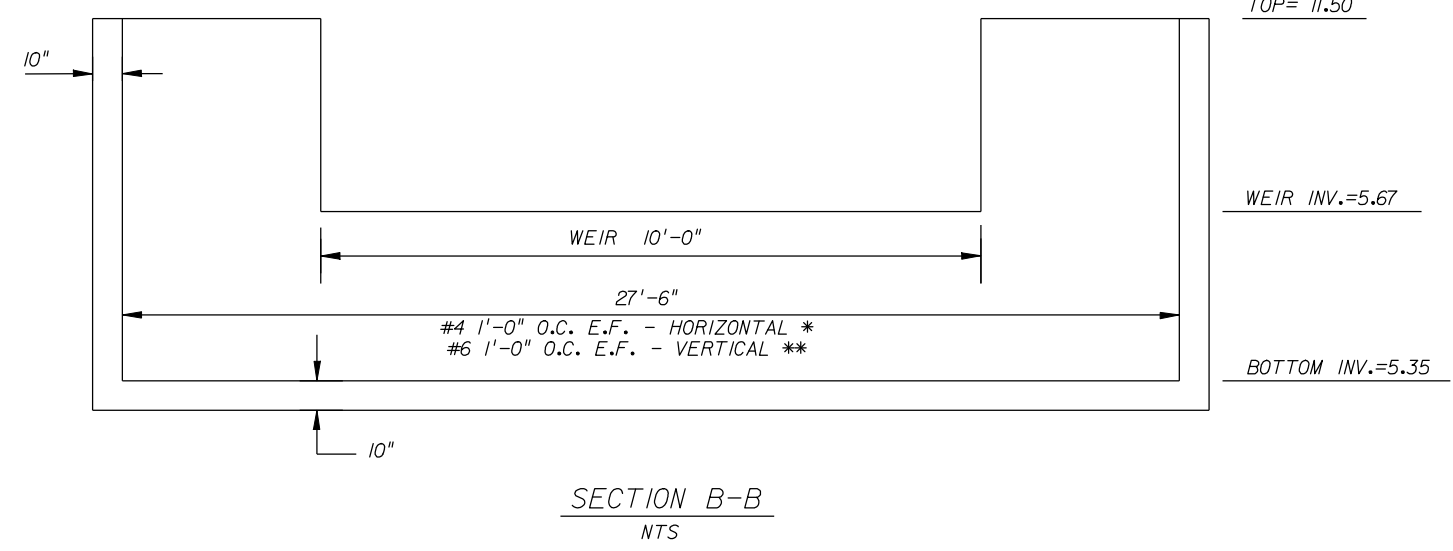
WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035260
	Dwg. Date January 8, 2009
POND DETAILS	



SIZE	DESCRIPTION	LENGTH		TYPE	B		C		D	
		FT	IN		FT	IN	FT	IN	FT	IN
4	A1	2	4	10	1	2	1	2	--	--
4	A2	3	0	10	1	6	1	6	--	--
4	A3	2	10	11	0	6	1	2	1	2
6	B1	2	4	10	1	2	1	2	--	--
6	B2	3	0	10	1	6	1	6	--	--

* USE BAR A1 & A2 ON ENDS
** USE BAR B1 & B2 ON ENDS



S-52

PLOT DATE: 5/27/2009 PLOT FILE: _PLOTFILE_ DESIGN FILE: P:\m\20080\01m\CADD-deta\SPDTLS02.dgn

DESIGNED BY	MR	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE	44786			



17TH STREET WEST
FROM US 41 TO CANAL ROAD
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035260
	Dwg. Date January 8, 2009
POND DETAILS	

MANATEE COUNTY, FLORIDA

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS

DATE OF SURVEY: 10/8/03 - 10/18/03

ROAD NO.: 17th Street West

SUBMITTED BY: Nicholas T. Korecki, P.E.

COUNTY: Manatee


SURVEY BEGINS STA. : 100+31.172 SURVEY ENDS STA. : 140+24.507
 (STATIONING REFERENCED TO 17th STREET WEST)
 AND BAYSHORE ROAD TO STA. 308+65.000

STRATUM NO.	ORGANIC CONTENT		SIEVE ANALYSIS RESULTS % PASSING STANDARD U.S. SIEVE							ATTERBERG LIMITS			AASHTO GROUP	DESCRIPTION
	NO. OF TESTS	% ORGANIC	NO. OF TESTS	SIZE 10	SIZE 20	SIZE 40	SIZE 60	SIZE 100	SIZE 200	NO. OF TESTS	LIQUID LIMIT	PLASTICITY INDEX		
1	--	nil	2	100	99-100	95-97	84-87	37-47	10-12	--	NP	NP	(A-3/A-2-4)	FINE SAND TO SLIGHTLY SILTY FINE SAND (Dark gray or brown)
2	--	nil	--	--	--	--	--	--	--	--	NP	NP	(A-3/A-2-4)	FINE SAND TO SLIGHTLY SILTY FINE SAND (Gray, dark gray or dark brown with variable content of finely divided organic material)
3	1	3.8	1	100	99	96	85	53	19	--	NP	NP	(A-3/A-2-4/A-8)	SLIGHTLY ORGANIC TO ORGANIC FINE SAND (Dark brown or dark gray)
4	2	7.3-13.0	1	100	98	93	81	44	21	1	48	25	(A-8)	HIGHLY ORGANIC FINE SAND TO SLIGHTLY SILTY FINE SAND OR HIGHLY ORGANIC SILT (Dark brown or dark gray)
5	--	nil	1	98	93	81	44	21	15	--	NP	NP	(A-3/A-2-4)	FINE SAND, SLIGHTLY SILTY TO SILTY FINE SAND (Brown or gray with variable content of rock and shell fragments)
6	--	nil	--	--	--	--	--	--	--	--	NP	NP	(A-4)	CEMENTED SILT (Light gray or yellow)
7	--	nil	1	100	100	100	94	78	65	1	60	40	(A-7-6)	CLAY (Gray, green or greenish-gray)
8	--	nil	5	100	99-100	92-95	81-85	45-59	20-31	5	25-39	10-20	(A-2-6)	CLAYEY FINE SAND (Light brown, light gray, gray and brown, dark brown, dark gray or pale brownish-gray)
9	--	nil	2	100	93-100	88-97	76-86	47	14-21	1	NP	NP	(A-2-4)	SILTY TO SLIGHTLY CLAYEY FINE SAND (Brown and gray)
10	--	--	--	--	--	--	--	--	--	--	--	--	--	ASPHALT PAVEMENT
11	--	--	--	--	--	--	--	--	--	--	--	--	--	CONCRETE

EMBANKMENT AND SUBGRADE MATERIAL

- The material from Strata Number 1, 2, 5 and 9 appears satisfactory for use in the embankment when utilized in accordance with FDOT Index Nos. 500 and 505.
- The material from Stratum Number 3 appears satisfactory for use in the embankment when utilized in accordance with FDOT Index Nos. 500 and 505. The material from Stratum Number 3 may not be used in the subgrade portion of the roadbed where exhibiting an excessive Organic Content.
- The material from Stratum Number 4 is MUCK A-8 material and shall be removed in accordance with FDOT Index No. 500.
- The material from Strata Number 6, 7 and 8 is plastic A-2-6/A-7-6/A-4 material and shall be removed in accordance with FDOT Index No. 500.
- The material from Stratum Number 10 is Asphalt Pavement.
- The material from Stratum Number 11 is Concrete.

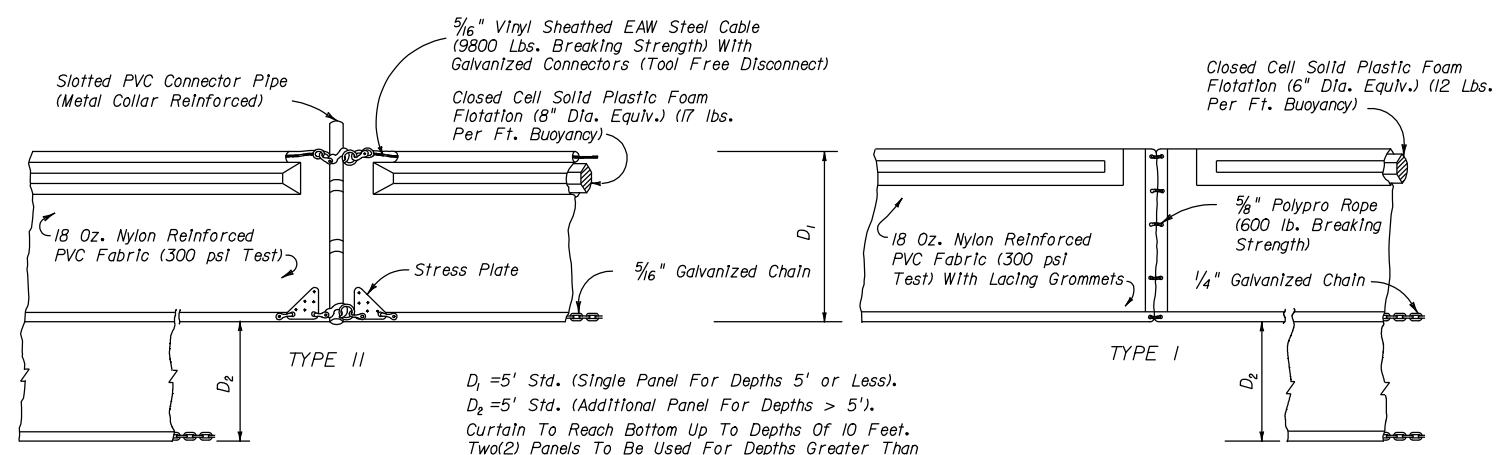
REVISIONS										DESIGNED BY		DRAWN BY		CHECKED BY		SUPERVISED BY			
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY



DESIGNER'S ENGINEERING SERVICES, INCORPORATED

ROAD NO. 17th STREET WEST COUNTY MANATEE PROJECT NO. DES 034798

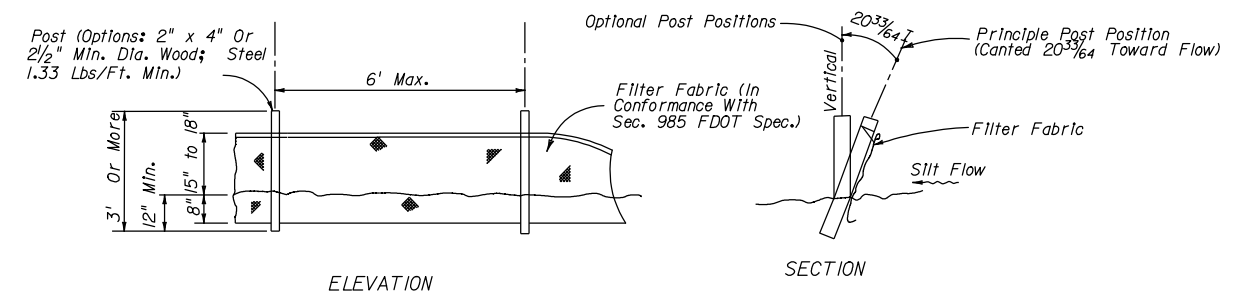
ROADWAY SOILS SURVEY



D_1 = 5' Std. (Single Panel For Depths 5' or Less).
 D_2 = 5' Std. (Additional Panel For Depths > 5').
 Curtain To Reach Bottom Up To Depths Of 10 Feet.
 Two(2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Specifically Called For In The Plans Or As Determined By The Engineer.

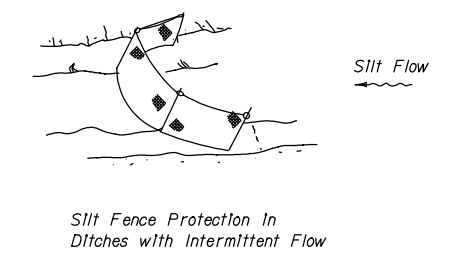
NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS
 N.T.S.

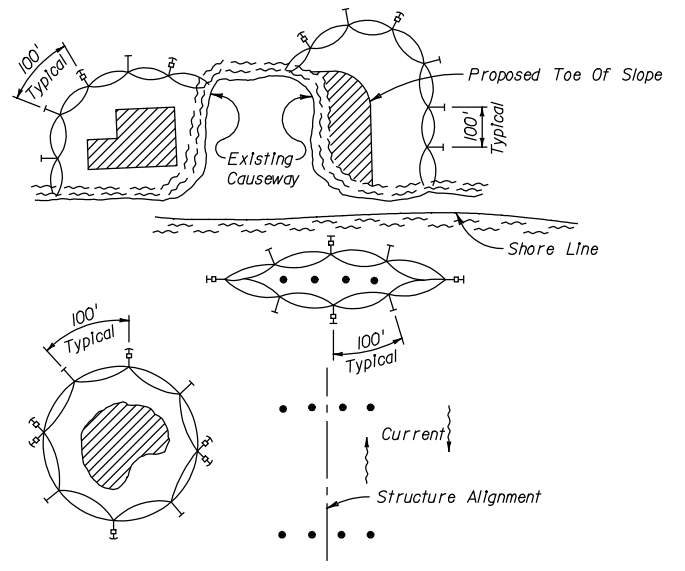


Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

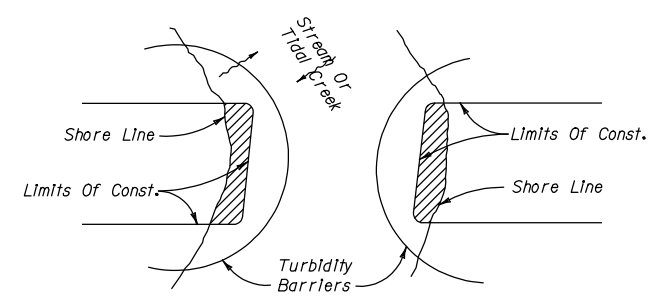
TYPE III SILT FENCE



Silt Fence Protection In Ditches with Intermittent Flow



LEGEND
 • Pile Locations
 ▨ Dredge Or Fill Area
 → Mooring Buoy w/Anchor
 — Anchor
 ○ Barrier Movement Due To Current Action

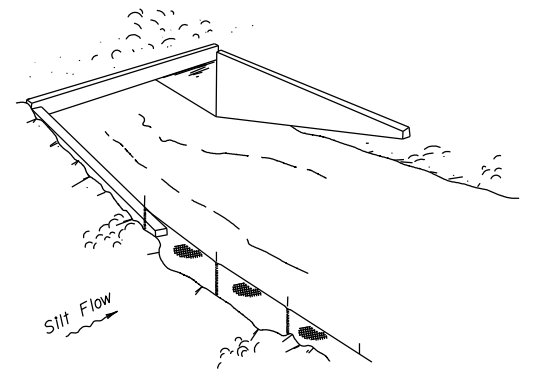


Note:
 Turbidity barriers for flowing streams and tidal creeks may be either floating, or staked types or any combinations of types that will suit site conditions and meet erosion control and water quality requirements. The barrier type(s) will be at the Contractor's option unless otherwise specified in the plans, however payment will be under the pay item(s) established in the plans for Floating Turbidity Barrier and/or Staked Turbidity Barrier. Posts in staked turbidity barriers to be installed in vertical position unless otherwise directed by the Engineer.

GENERAL NOTES

- Floating turbidity barriers are to be paid for under the contract unit price for Floating Turbidity Barrier, LF.
- Staked turbidity barriers are to be paid for under the contract unit price for Staked Turbidity Barrier, LF.
- Contractor will provide silt fence pollution prevention measure along R/W prior to construction
- Contractor will request pollution prevention device inspection prior to commencement of construction from appropriate agencies

TURBIDITY BARRIER APPLICATIONS
 N.T.S.



Type III Silt Fence Protection Around Ditch Bottom Inlets.

Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

TYPE III SILT FENCE
 N.T.S.

SILT FENCE APPLICATIONS

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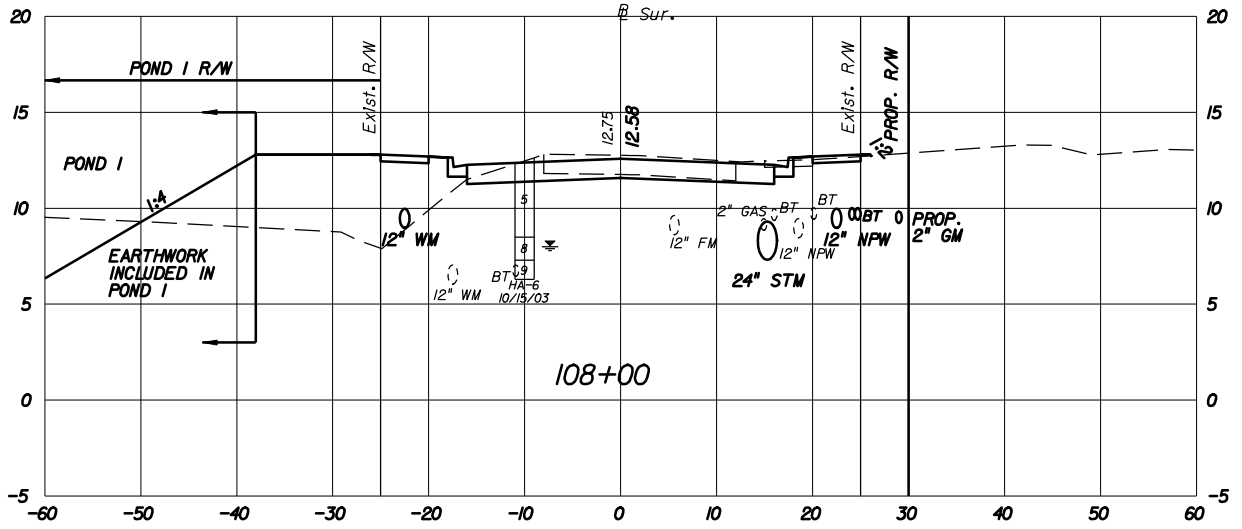
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DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



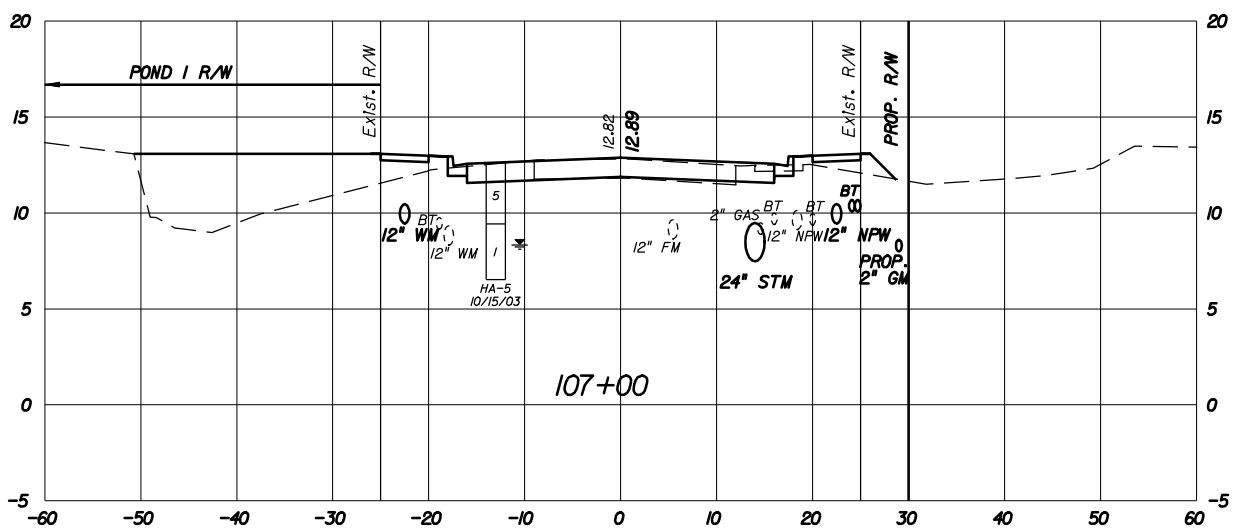
17TH STREET WEST
 FROM US 41 TO CANAL ROAD
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

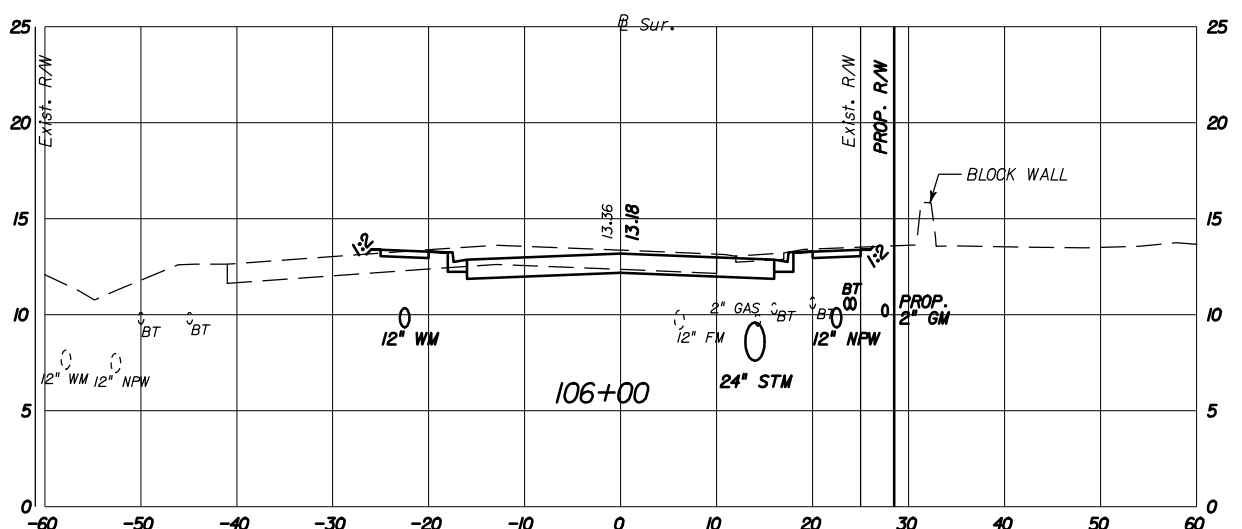
ENGINEER David O. Theung, PE No. 44786	Proj. No. 6035260
	Dwg. Date January 8, 2009
POND DETAILS	



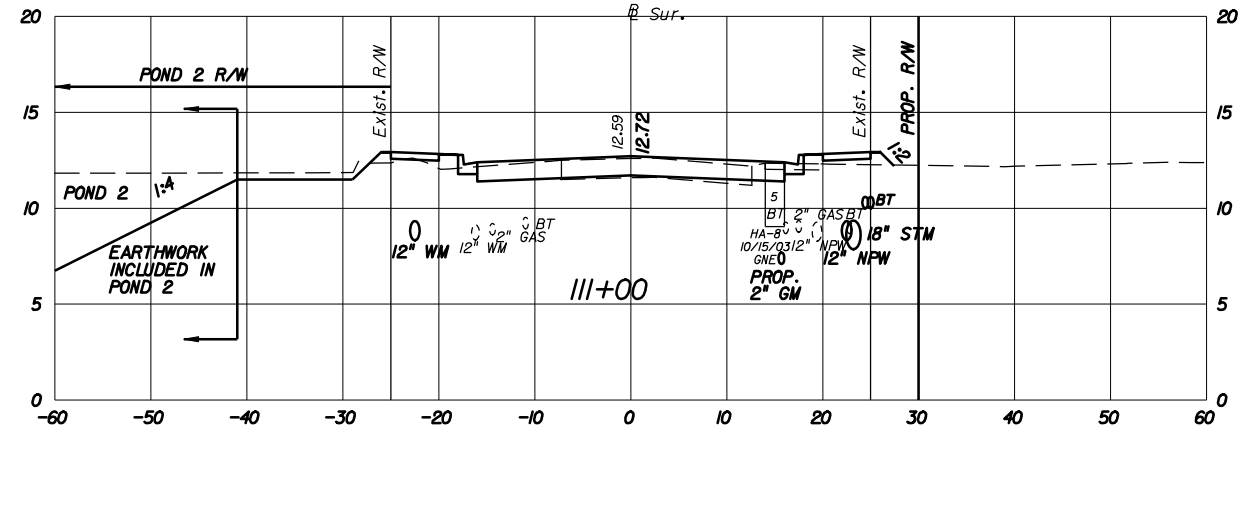
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0		144		128	
0		154		31	
0		169		7	



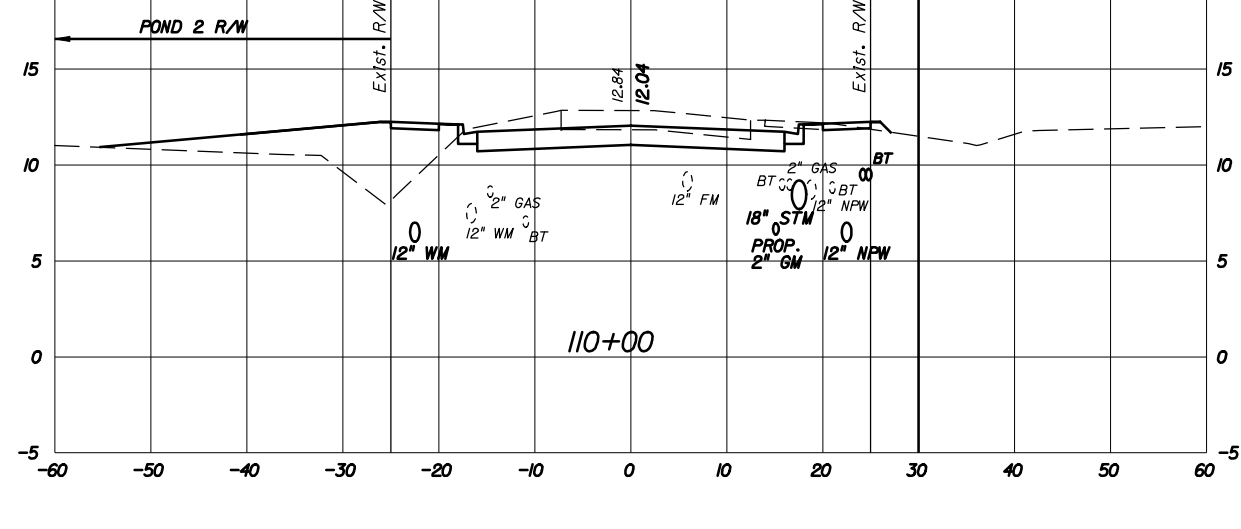
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0		154		31	



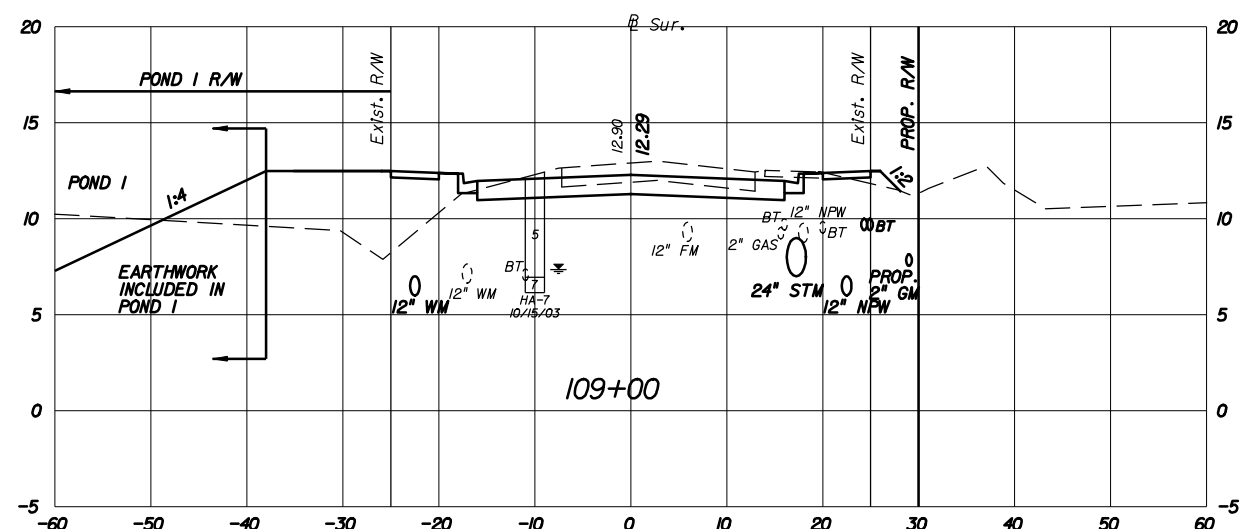
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A	V	A	V	A	V
0		51		1	
0		169		7	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		36		9	
0		233		76	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		90		32	
0		287		135	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		65		41	
0		206		174	

17th STREET WEST

DESIGN FILE: P:\Mw2008\01m\CADD\data\rdxsr-d02.dgn PLOT FILE: _PLOTFILE_ PLOT DATE: 5/27/2009

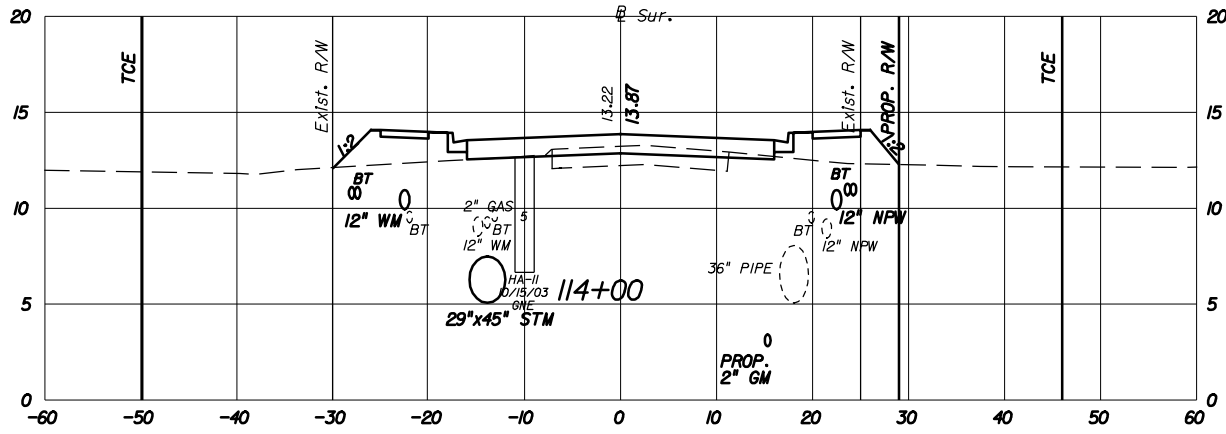
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DRAWN BY	KDR	DATE			
CHECKED BY	BDG	DATE			
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



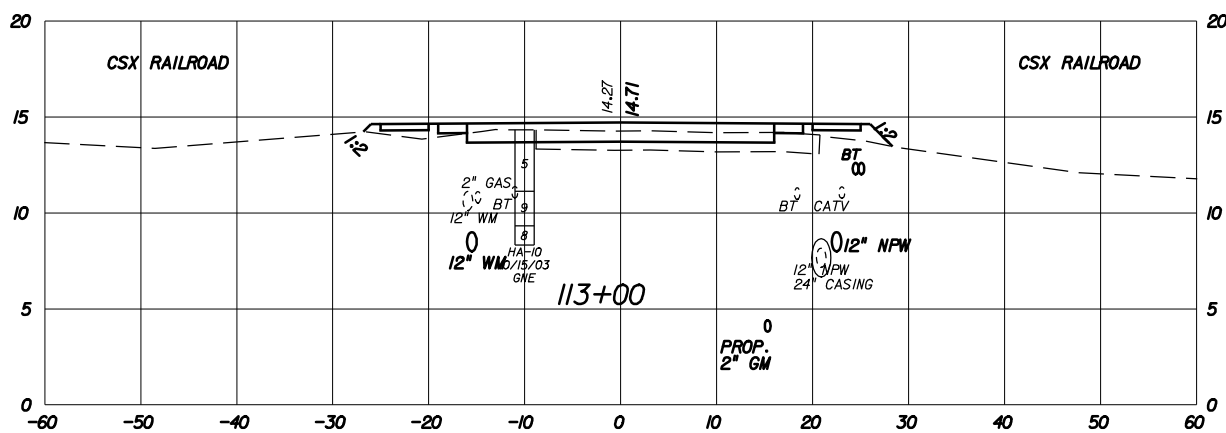
17th STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

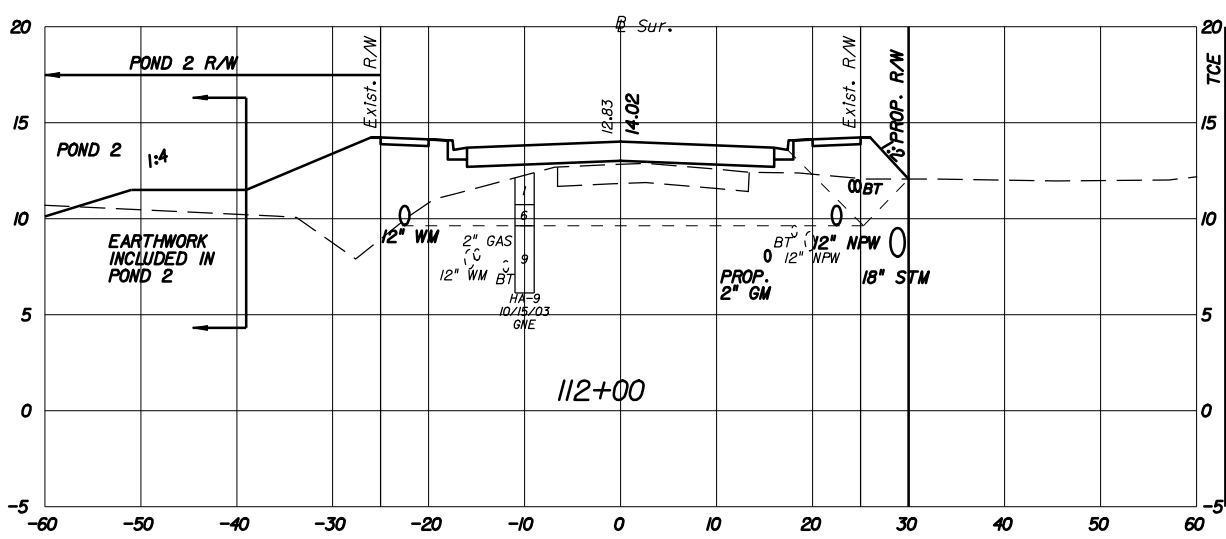
ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035261
	Dwg. Date January 8, 2009
CROSS SECTIONS	



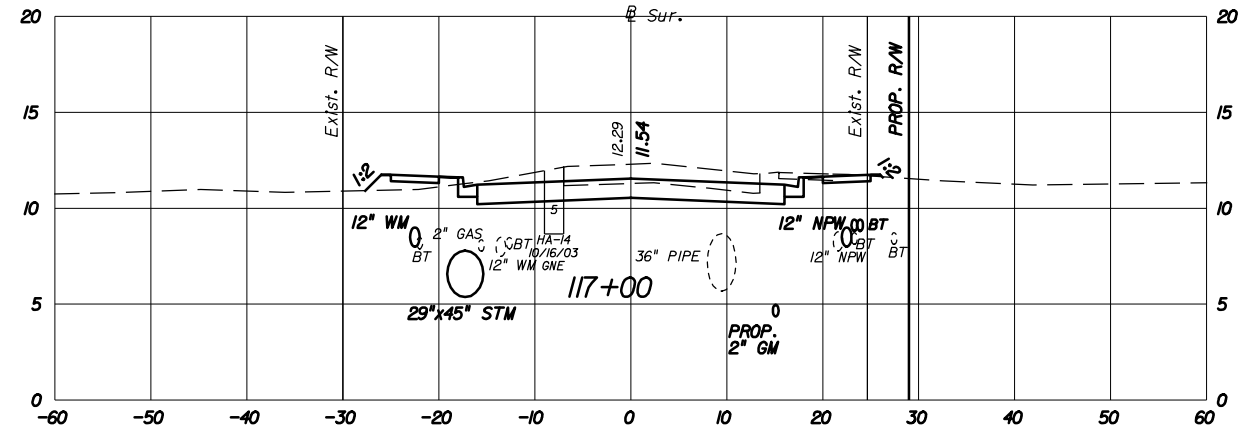
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0		100		122	



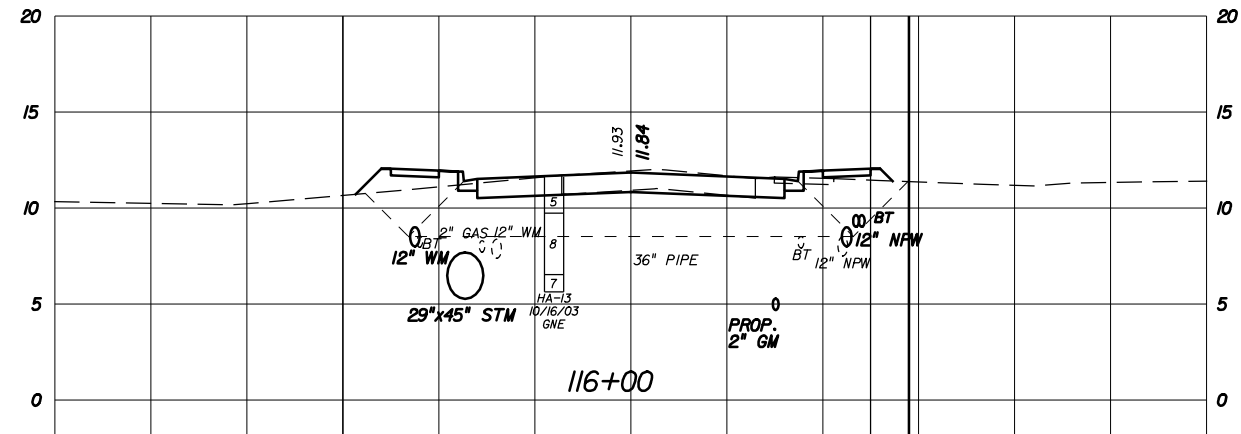
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A	V	A	V	A	V
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206		100		250	



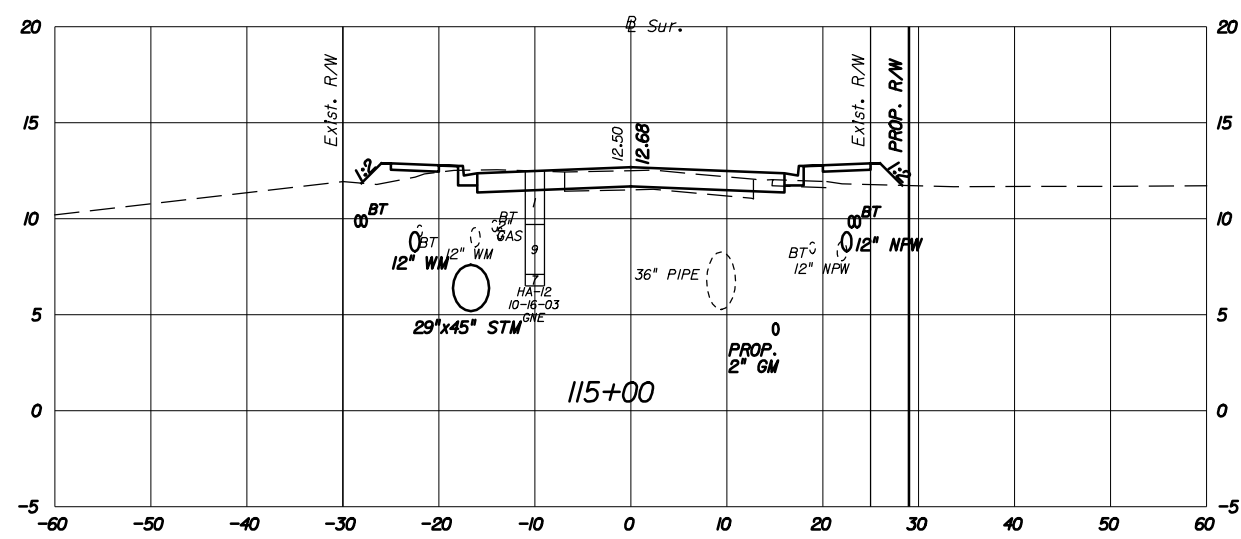
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A	V	A	V	A	V
III		20		III	
206		104		222	



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A	V	A	V	A	V
0		73		1	
222		226		231	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
120		49		124	
222		152		259	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		33		16	
0		98		107	

17th STREET WEST

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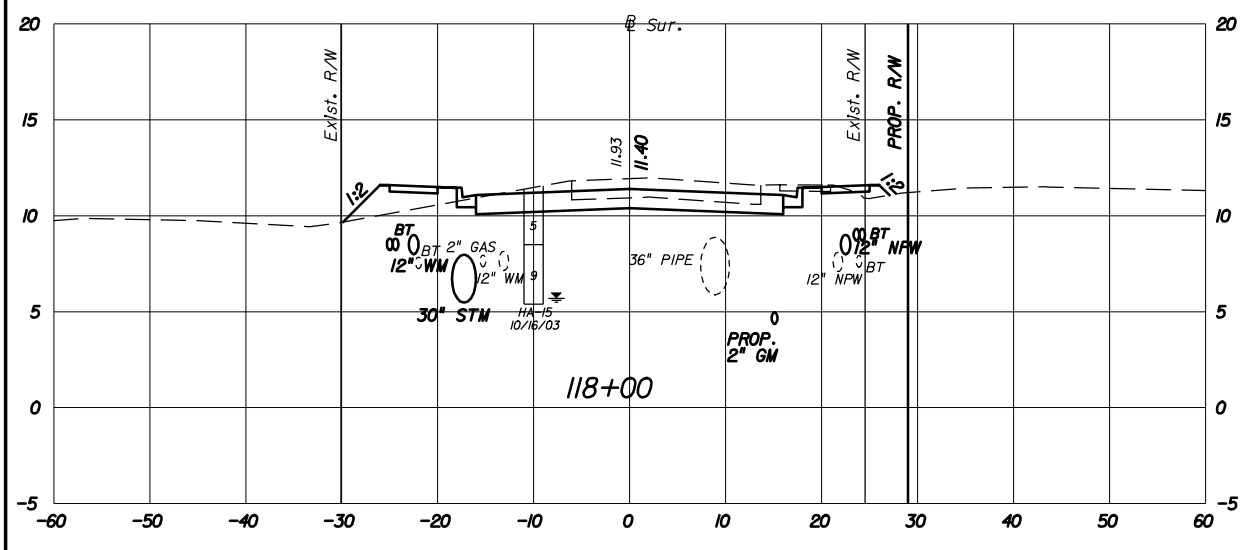
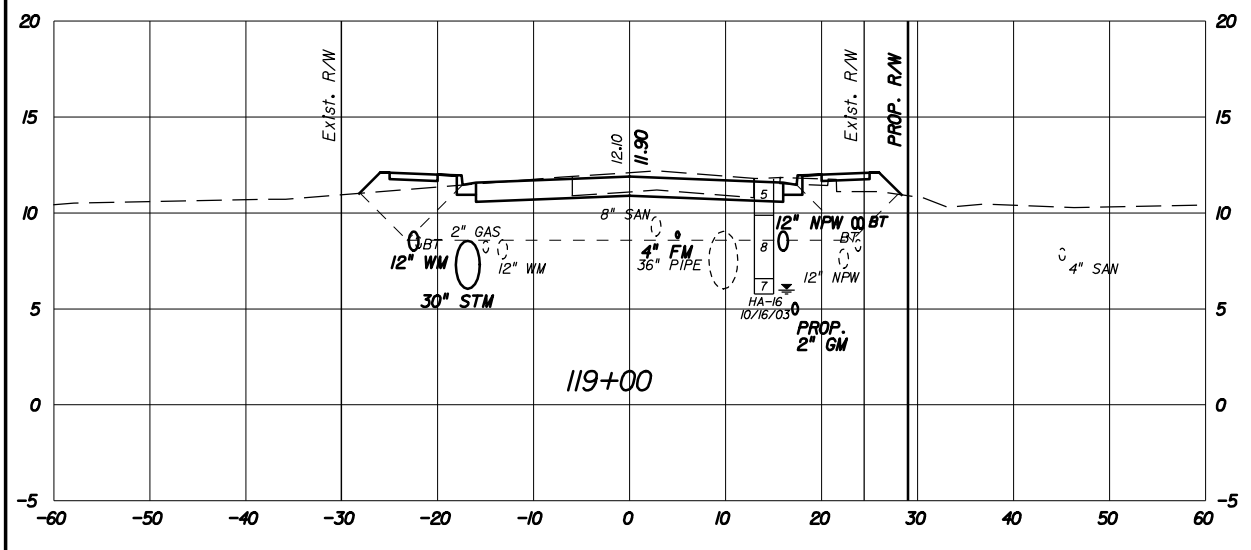
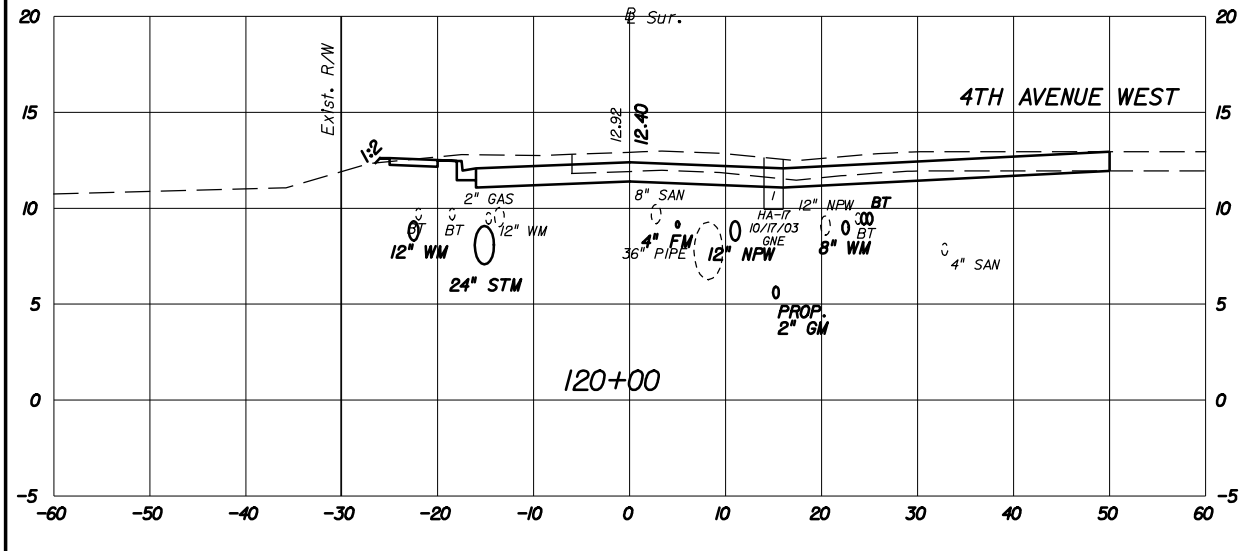
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DRAWN BY	KDR	DATE			
CHECKED BY	BDG	DATE			
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



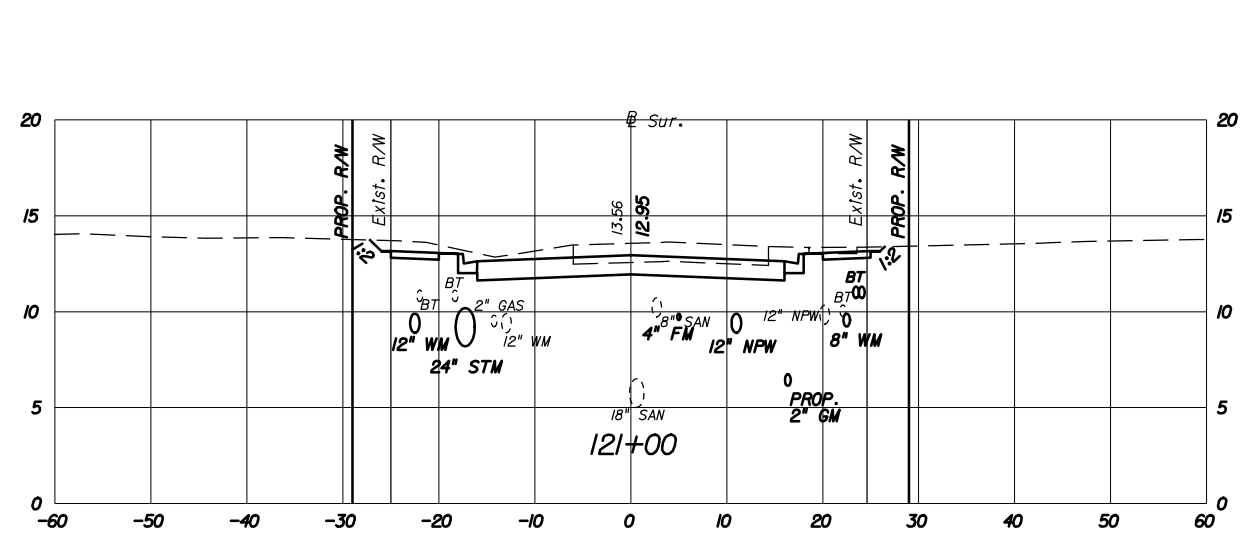
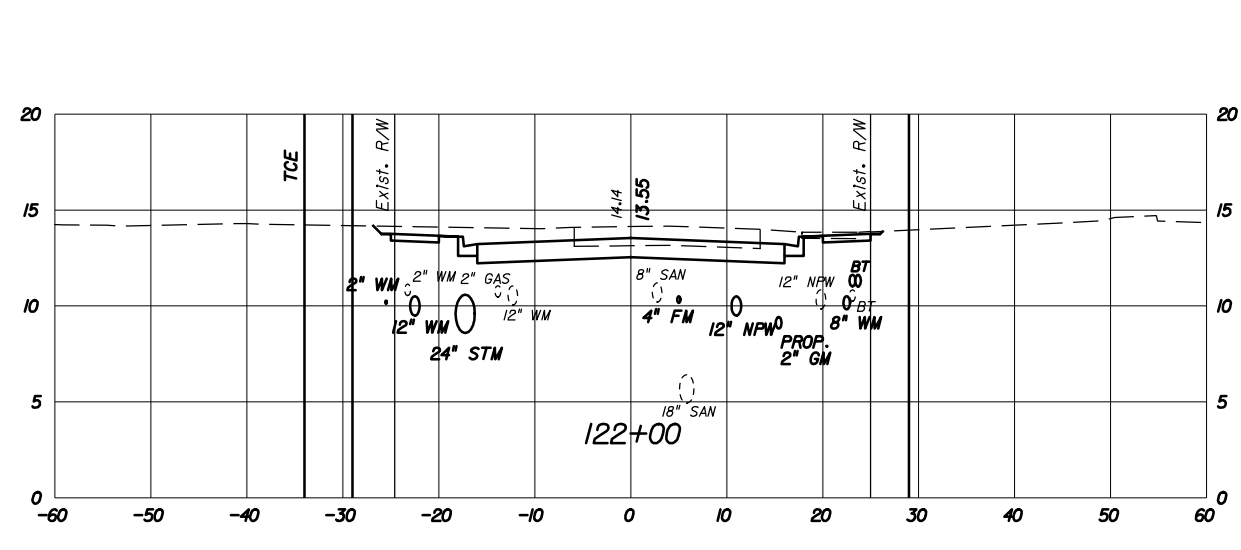
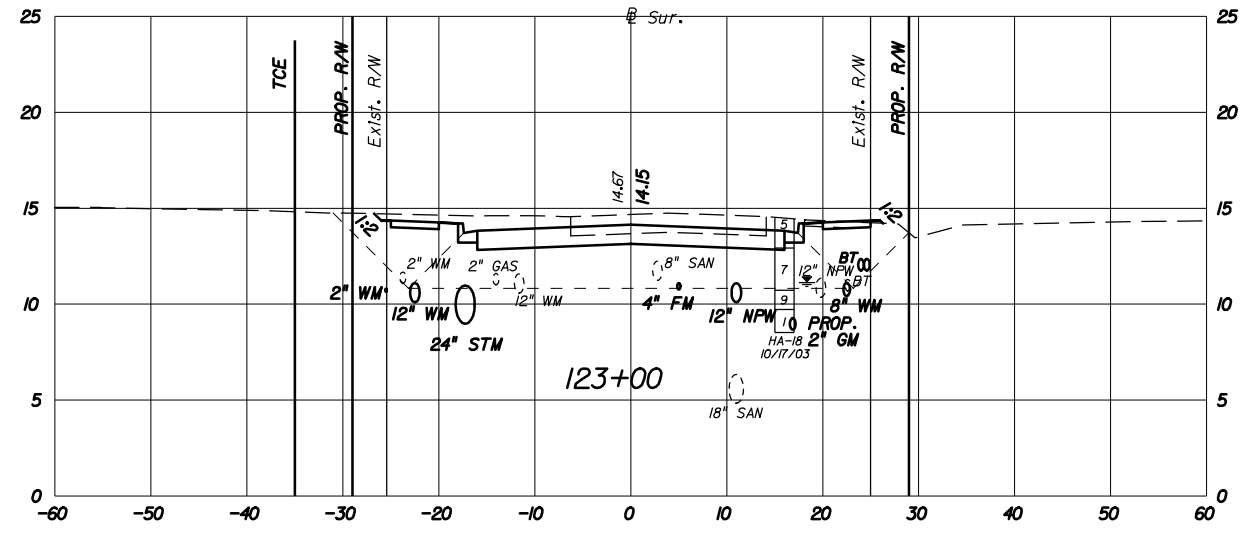
17th STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035261
	Dwg. Date January 8, 2009
CROSS SECTIONS	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		101		1	
222		250		250	
120		34		134	
222		143		276	
0		43		15	
0		215		30	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
136		69		136	
252		252		252	
0		67		0	
0		235		0	
0		60		0	
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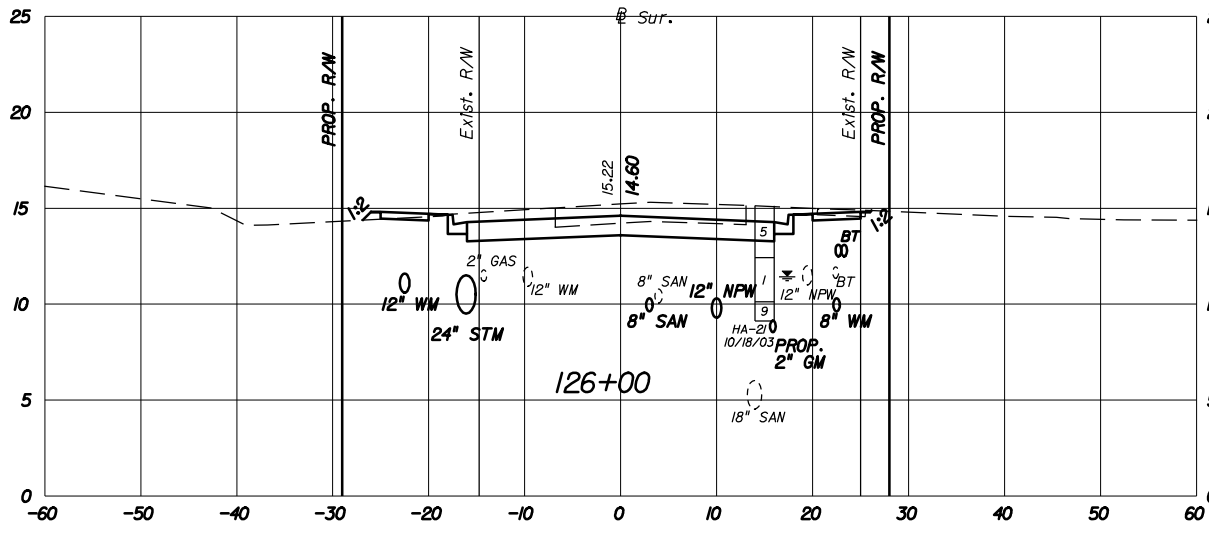
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CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



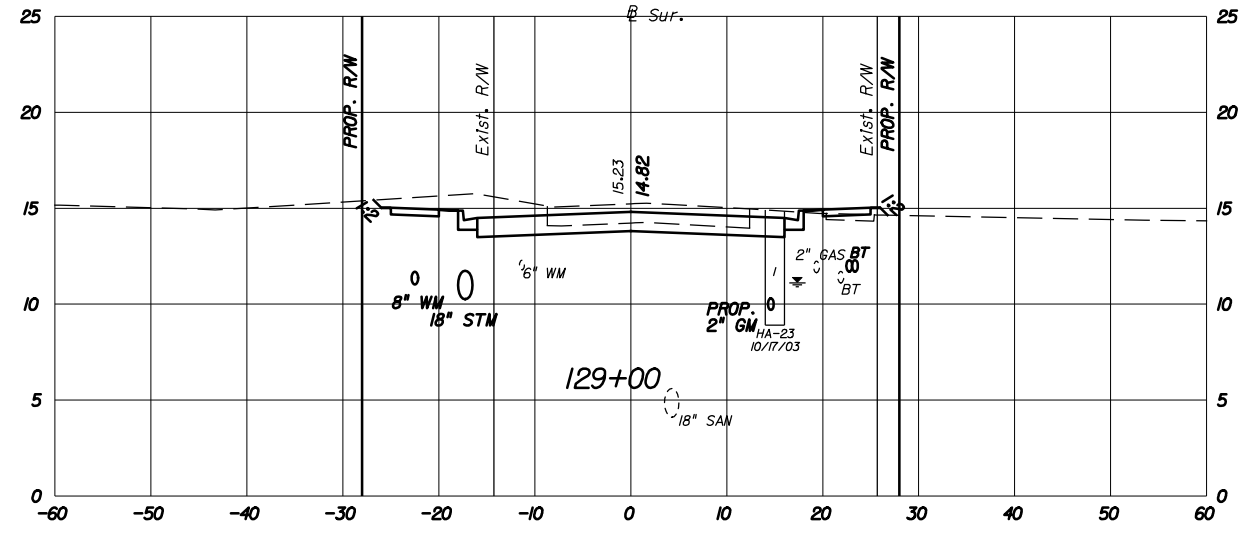
17th STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADE TRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

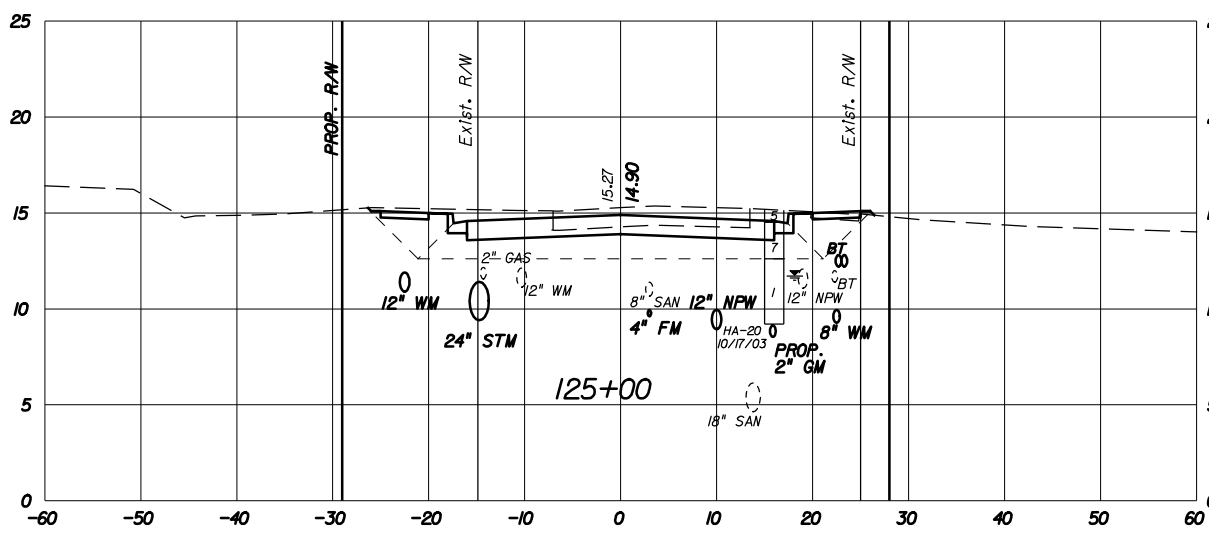
ENGINEER	DAVID O. THEUNG, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
CROSS SECTIONS			



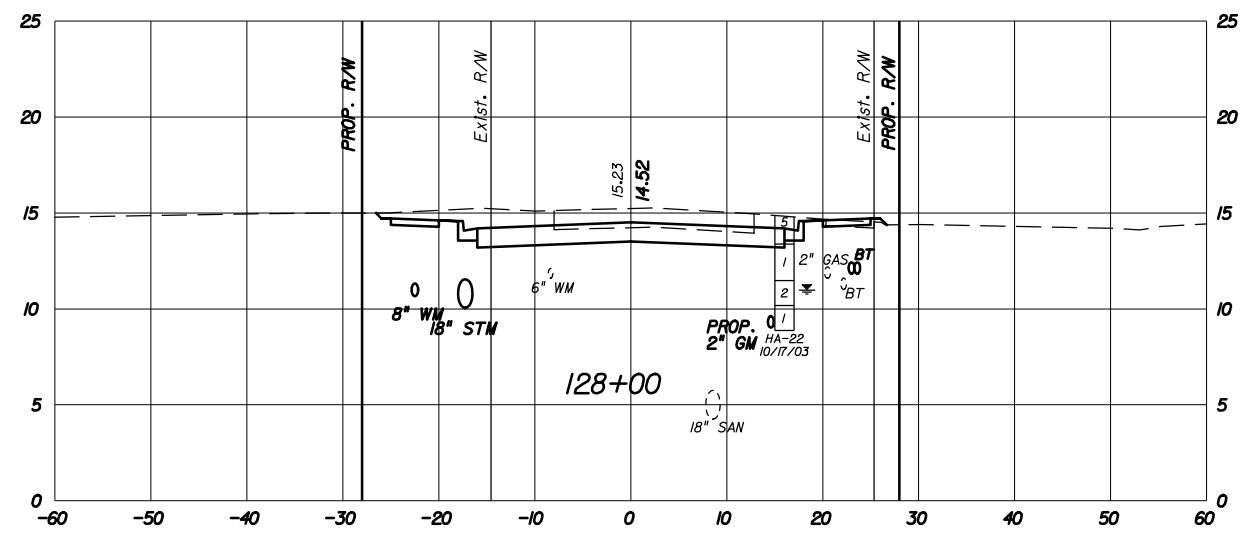
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A	V	A	V	A	V
0		74		0	
120		265		120	



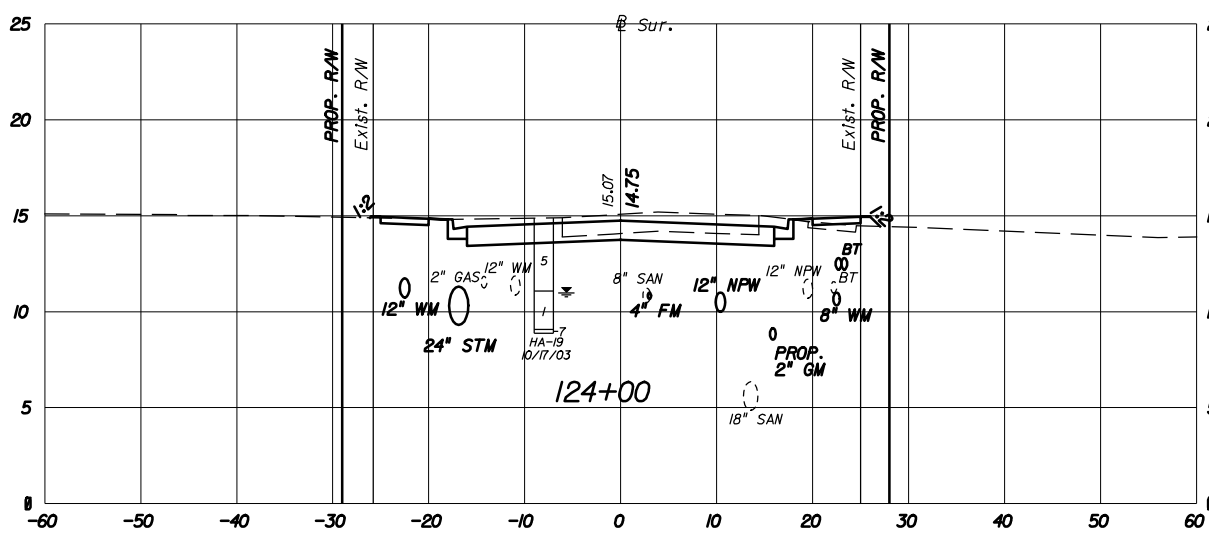
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0		73		0	
0		285		0	



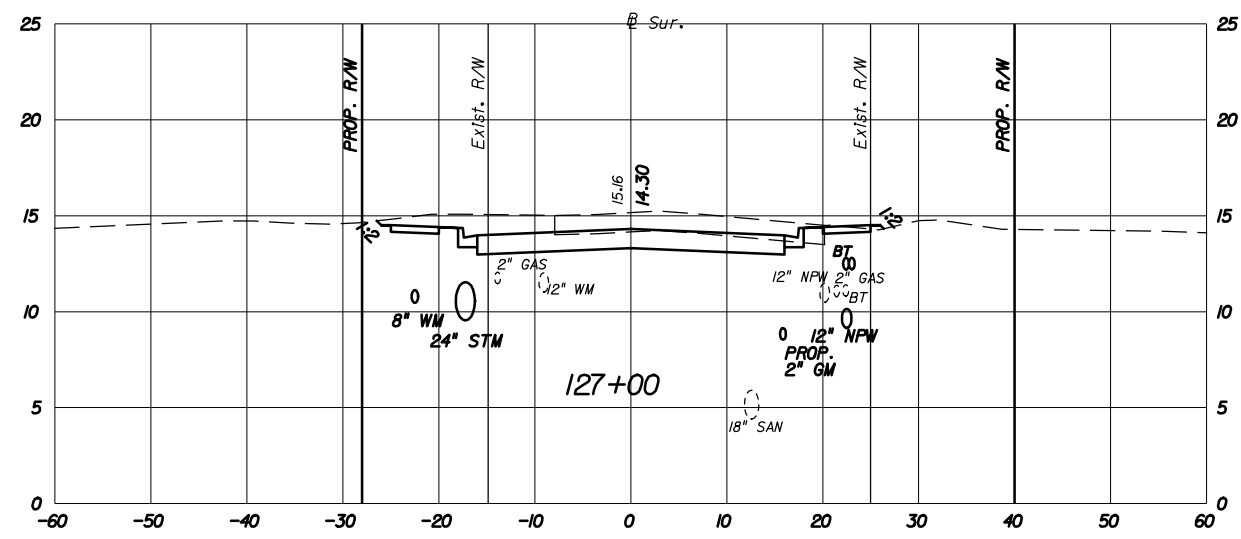
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A	V	A	V	A	V
65		69		65	
120		239		122	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		81		0	
0		309		0	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		60		1	
252		239		254	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		86		0	
0		296		0	

17th STREET WEST

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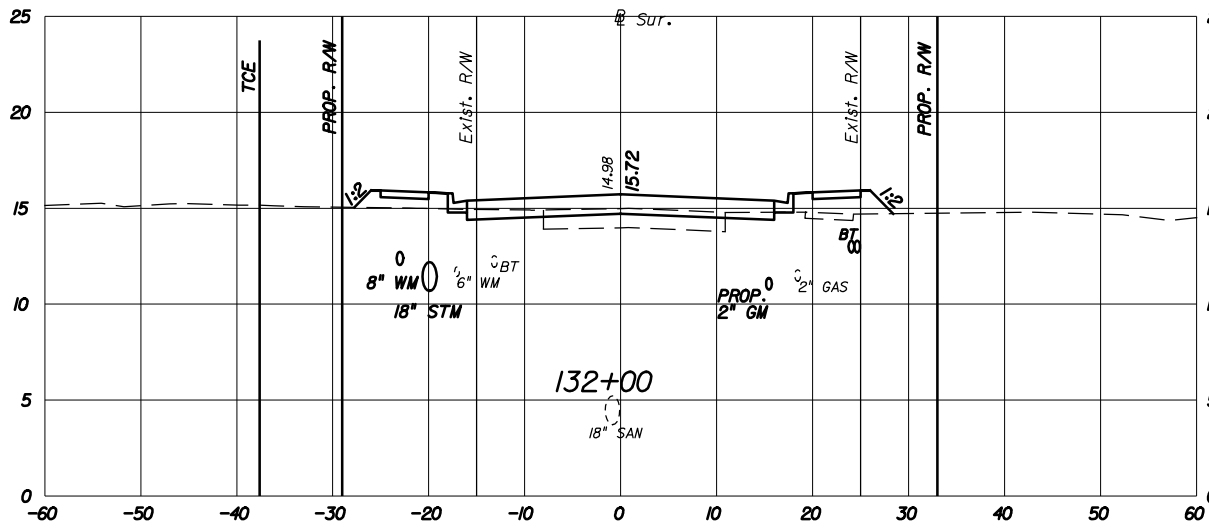
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SUPERVISED BY	DAVID O. THEUNG, PE 44786				



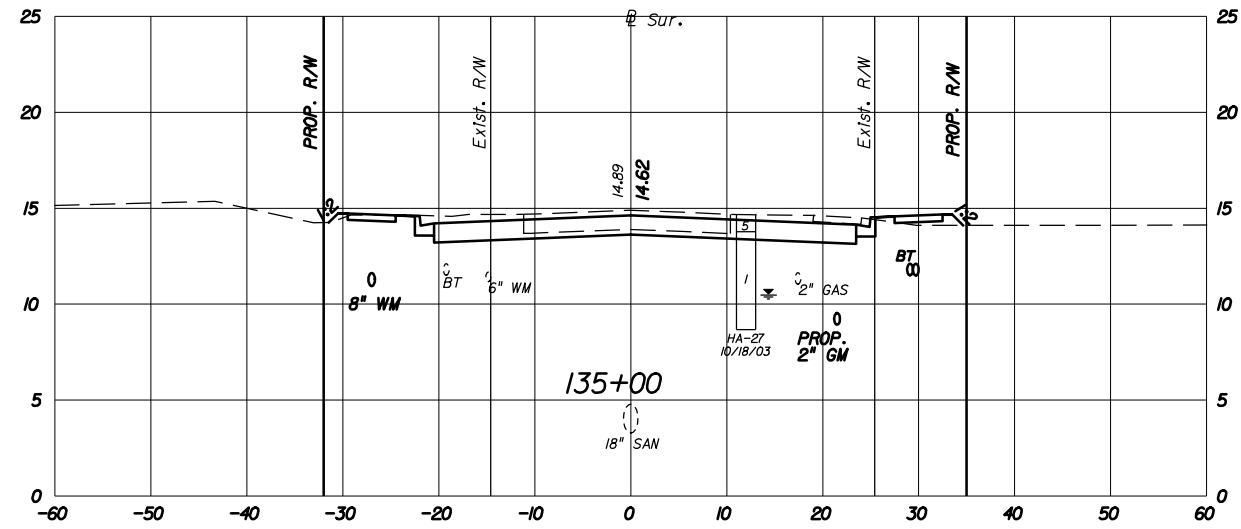
17th STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

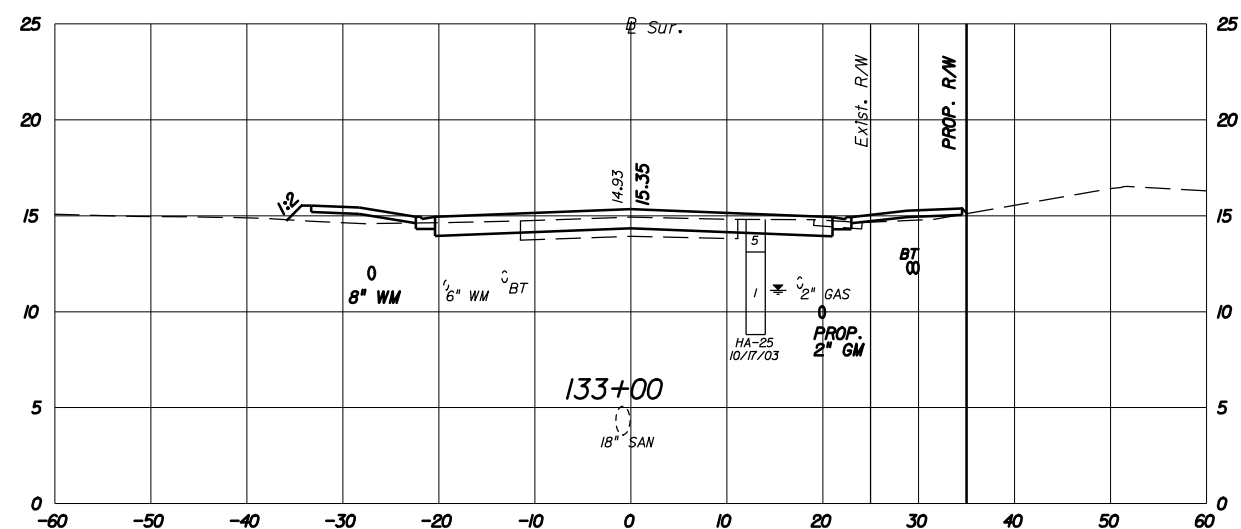
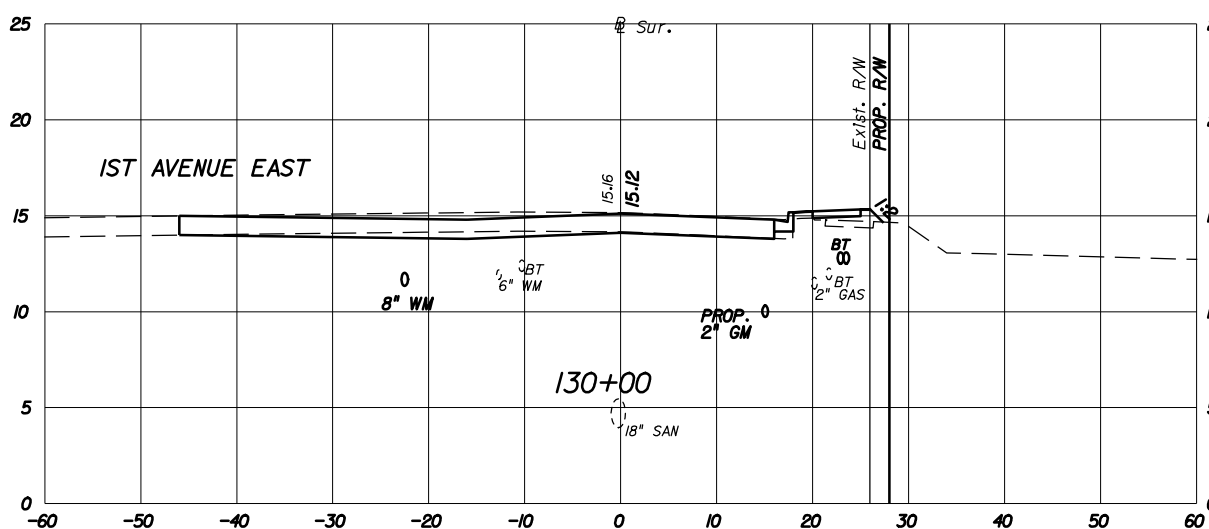
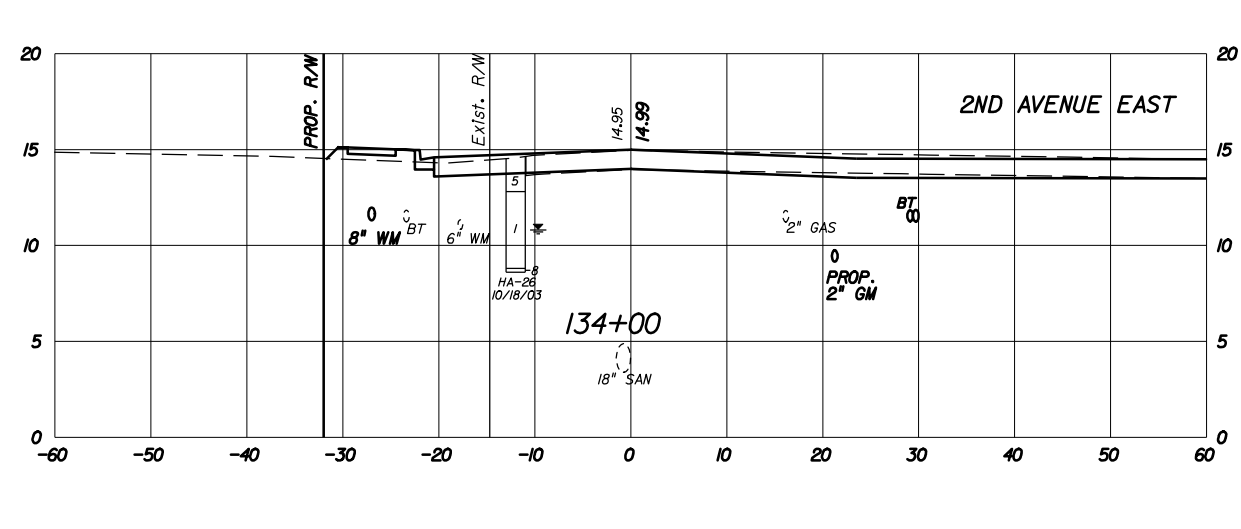
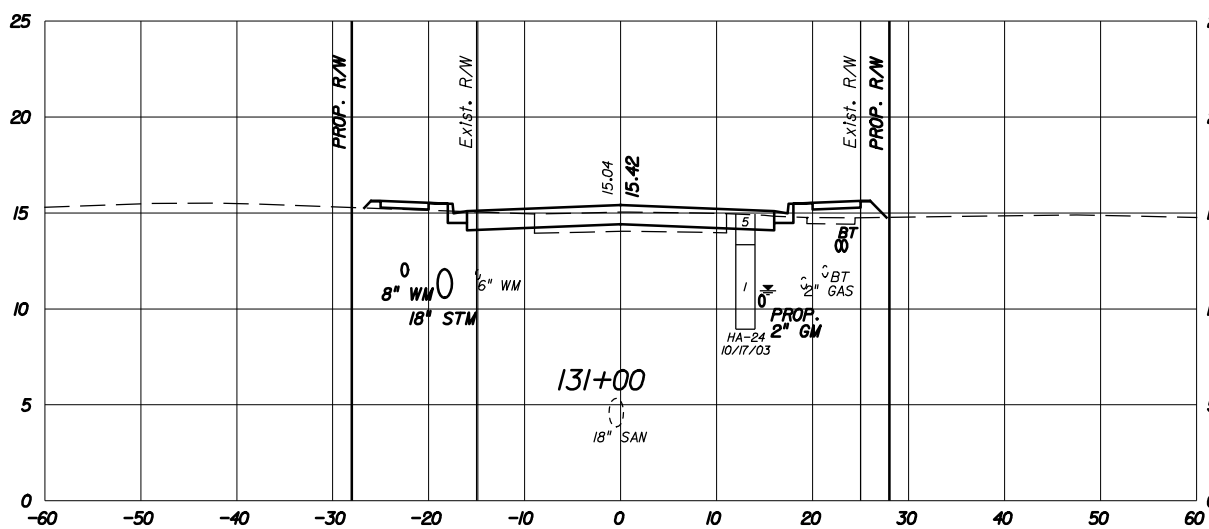
ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035261
	Dwg. Date January 8, 2009
CROSS SECTIONS	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		26		7	
0		III		20	
0		34		4	
0		198		9	
0		73		1	
0		270		2	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		79		0	
0		304		2	
0		85		1	
0		241		7	
0		45		3	
0		131		19	

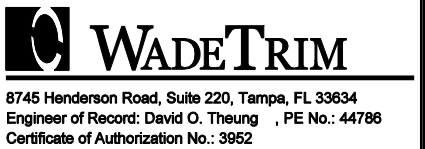


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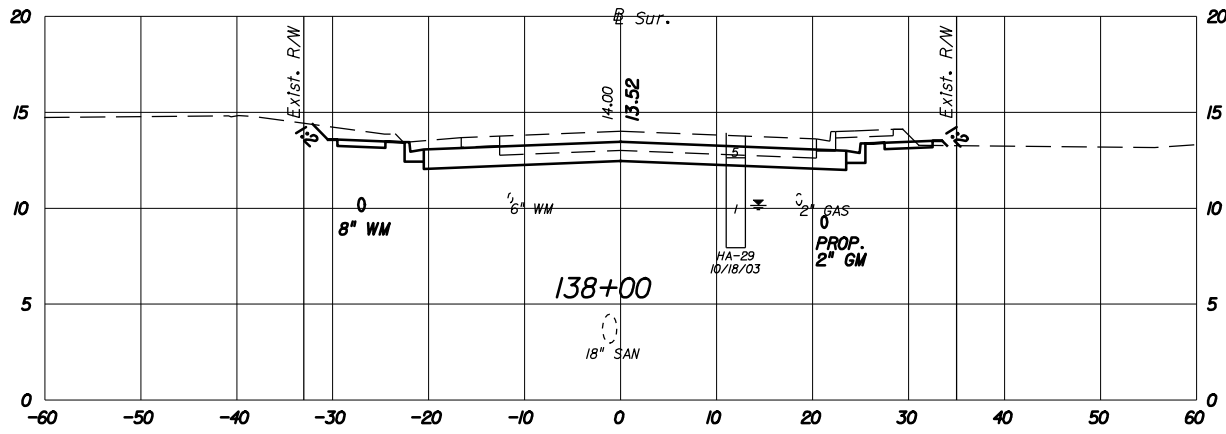
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SUPERVISED BY	DAVID O. THEUNG, PE 44786				



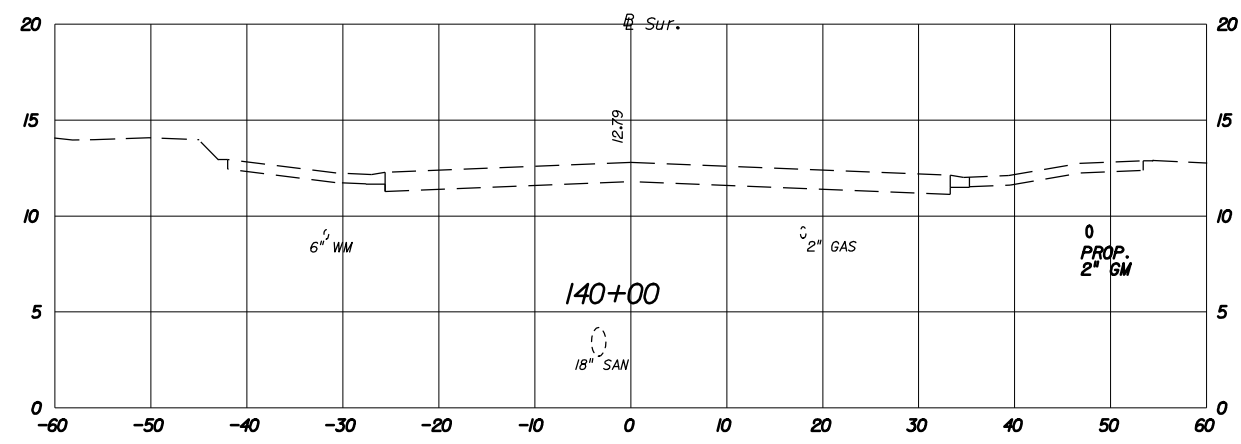
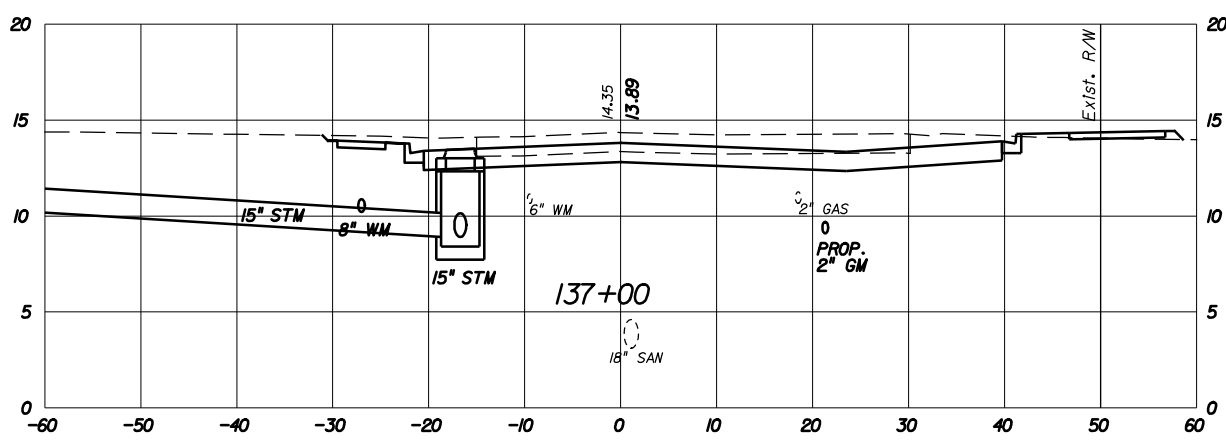
17th STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA



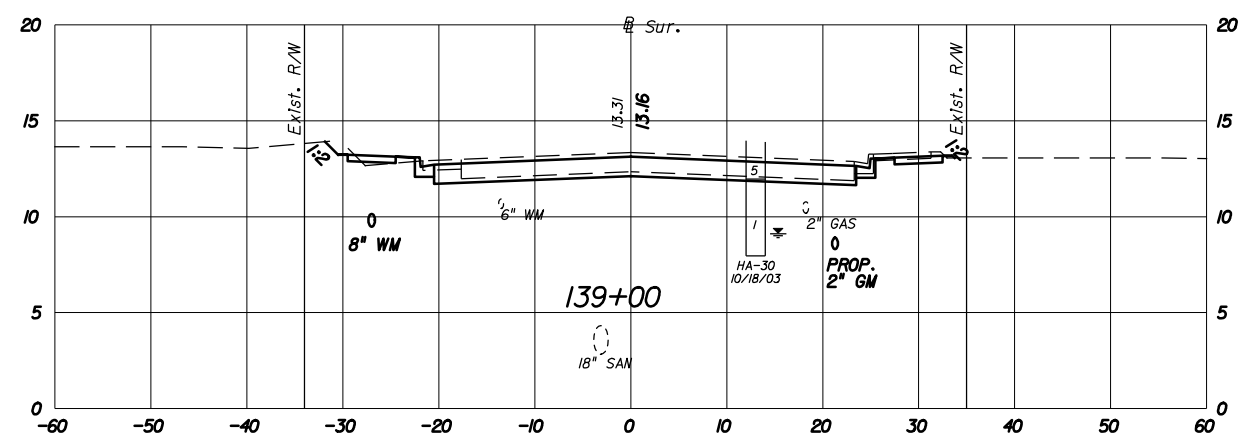
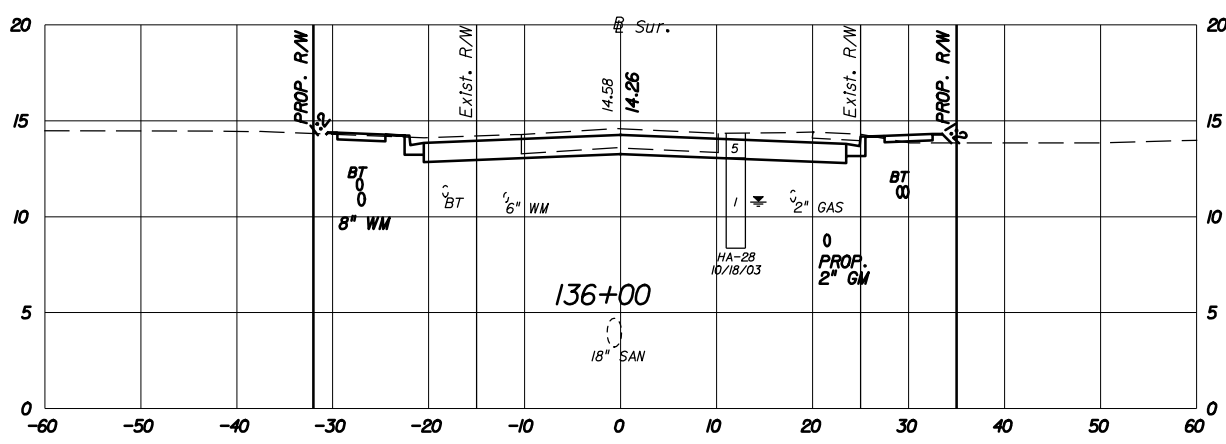
ENGINEER	David O. Theung, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
CROSS SECTIONS			



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		46		1	
0		259		2	
0		94		0	
0		319		0	
0		78		0	
0		291		0	



END EARTHWORK
END PROJECT
STA. 139+52.00



17th STREET WEST

DESIGNED BY	SRR	DATE	
CHECKED BY	BDG	DATE	1/09
DRAWN BY	KDR	DATE	1/09
CHECKED BY	BDG	DATE	1/09
SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION DESCRIPTION & DATE	BY	NO.

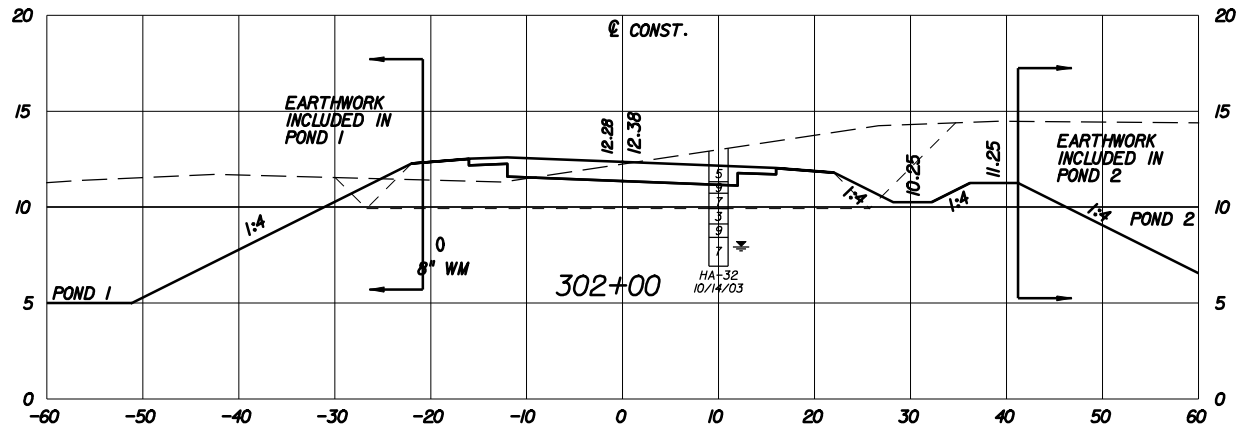


17th STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

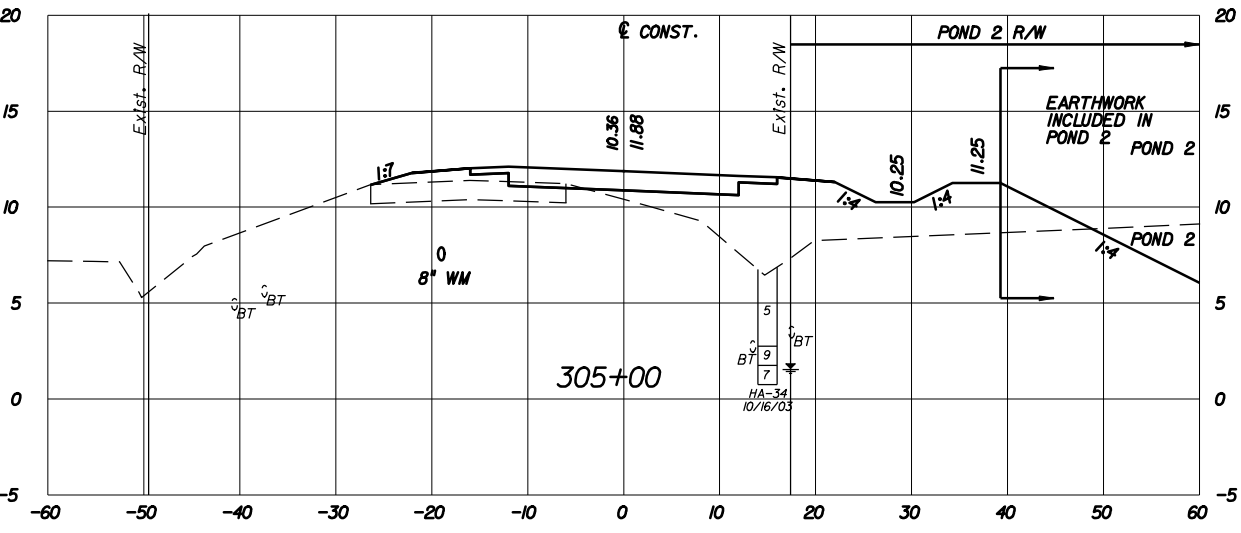
WADE TRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	David O. Theung, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
CROSS SECTIONS			

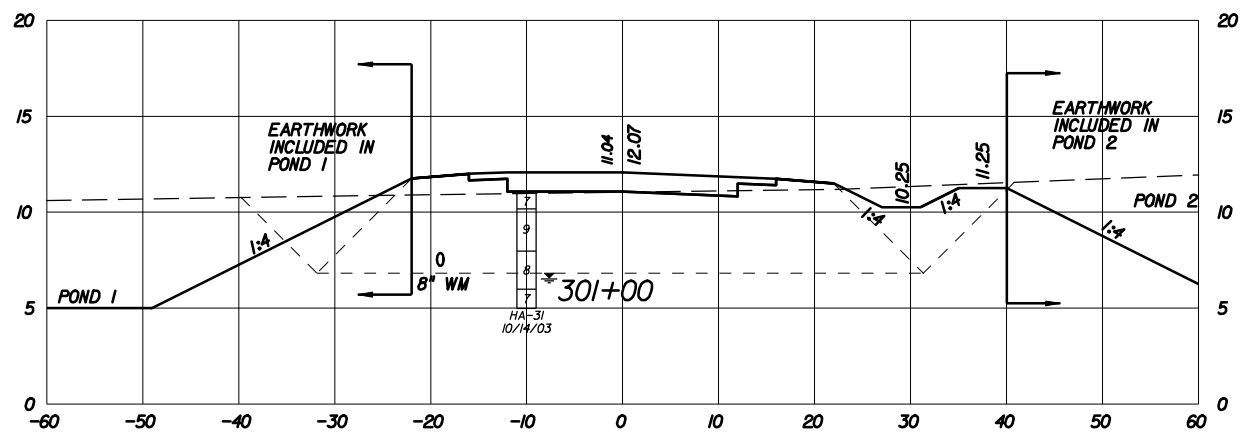
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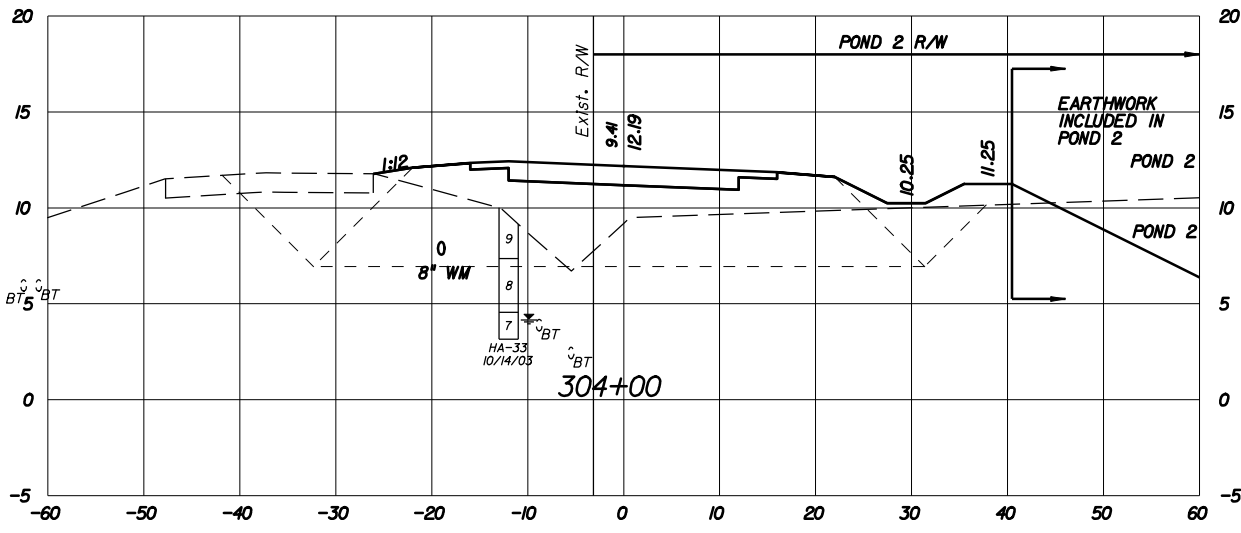
SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
82		150		93	
	711		331		759



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		2		81	
	381		15		715

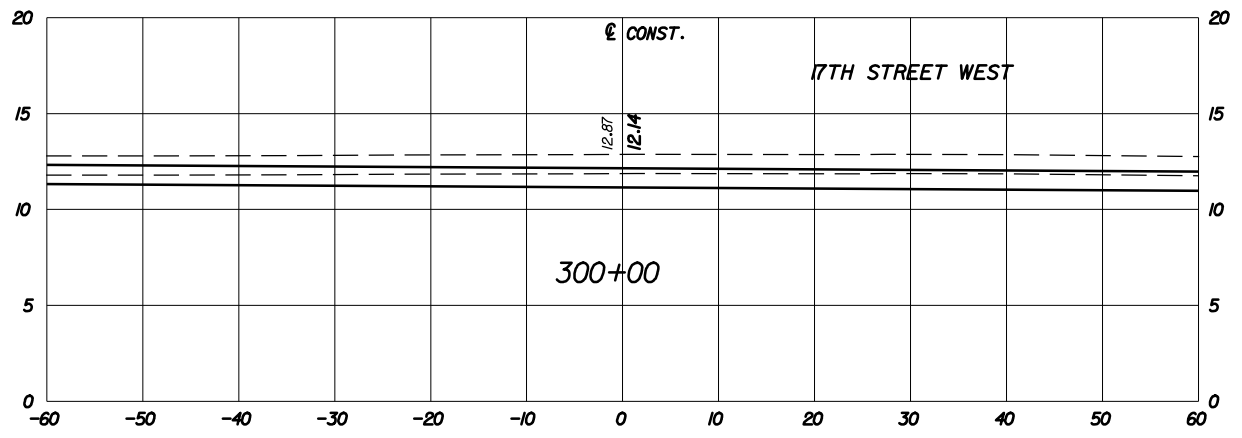


SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
302		29		317	
	260		25		273

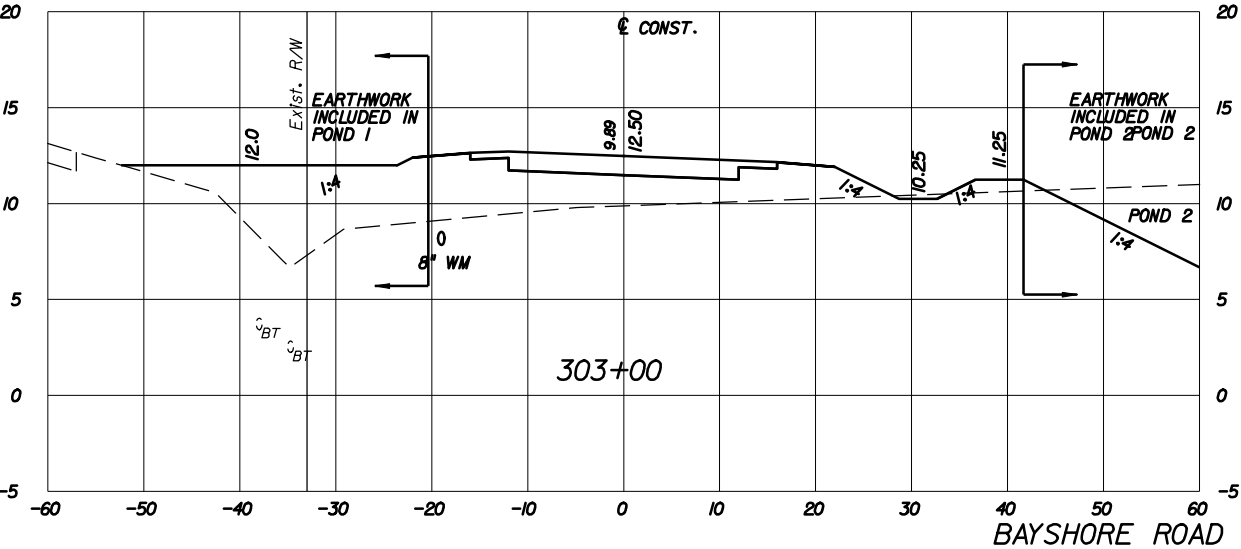


SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
206		6		305	
	381		33		806

BEGIN EARTHWORK STA. 300+53.53



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		0		0	



SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		12		130	
	152		300		413

DESIGN FILE: P:\Mta2008\01m\CADD\data\rdxsr\d08.dgn PLOT FILE: _PLOTFILE_ PLOT DATE: 5/27/2009

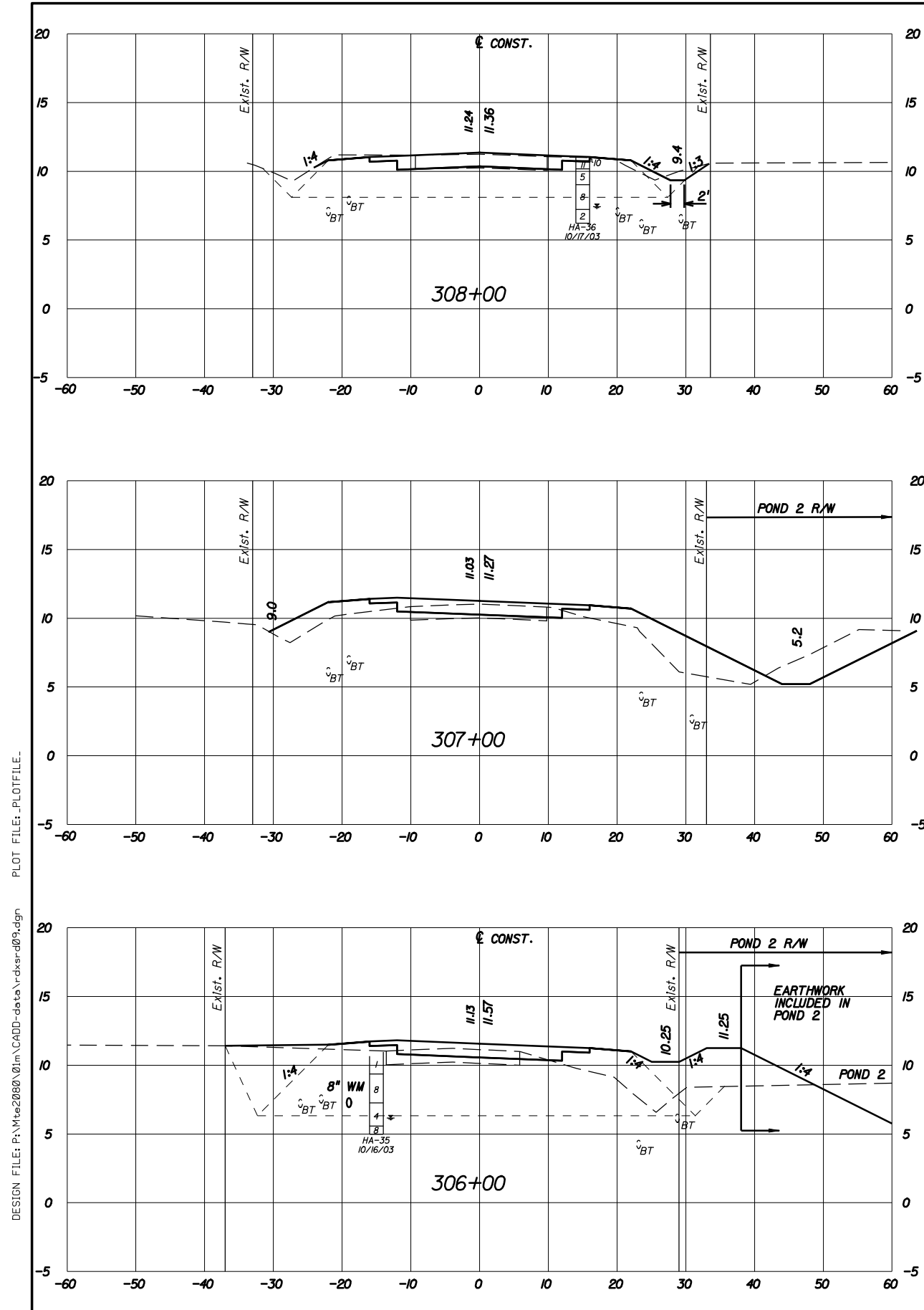
DESIGNED BY	SRR	DATE		REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE	1/09			
DRAWN BY	KDR	DATE	1/09			
CHECKED BY	BDG	DATE	1/09			
SUPERVISED BY	DAVID O. THEUNG, PE 44786					



17th STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	David O. Theung, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
CROSS SECTIONS			

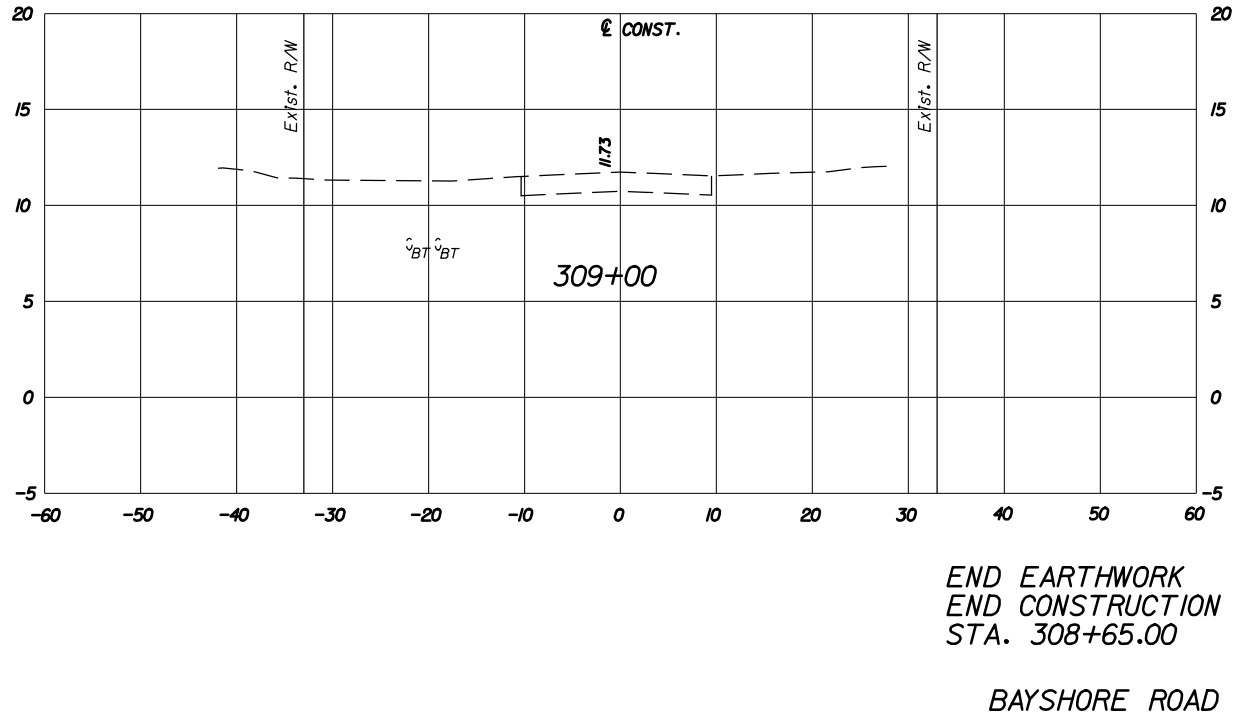


SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
129		33		132	
239		178		359	
0		55		62	
454		120		219	
245		10		56	
454		22		254	

SUMMARY OF EARTHWORK

DESCRIPTION	CY	
	P	F
ROADWAY EXCAVATION, 17th ST. W	8533	
ROADWAY EXCAVATION, BAYSHORE RD.	1064	
REGULAR EXCAVATION, POND 1	4957	
REGULAR EXCAVATION, POND 2	21105	
TOTAL REGULAR EXCAVATION	35659	
EMBANKMENT, 17th ST. W	3128	
EMBANKMENT, BAYSHORE RD.	3957	
EMBANKMENT, POND 1	543	
EMBANKMENT, POND 2	777	
SUBSOIL EXCAVATION, 17th ST. W.	2044	
SUBSOIL EXCAVATION, BAYSHORE RD.	3187	
TOTAL SUBSOIL EXCAVATION	5231	
TOTAL EMBANKMENT	13636	

Earthwork has been calculated using the Limerock base option. If another option is constructed, there shall not be any revision to the earthwork quantities for which payment is made by Plan Quantity.



END EARTHWORK
END CONSTRUCTION
STA. 308+65.00

BAYSHORE ROAD

SUBSOIL EXC.		REGULAR EXC.		EMBANKMENT	
A	V	A	V	A	V
0		0		0	
155		40		159	

DESIGN FILE: P:\Mte2008\01m\CADD-deta\rdxsr-d09.dgn PLOT DATE: 5/27/2009 PLOT FILE: _PLOTFILE_

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CHECKED BY	BDG	DATE			
DRAWN BY	KDR	DATE			
CHECKED BY	BDG	DATE			
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17th STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
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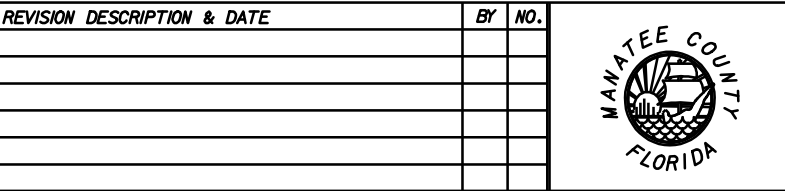
STORM WATER POLLUTION PREVENTION PLAN/BEST MANAGEMENT PRACTICES

OWNER'S REQUIREMENTS		CONTRACTOR'S REQUIREMENTS																	
<p>SITE DESCRIPTION</p> <p>PROJECT NAME AND LOCATION: 17TH STREET WEST BETWEEN BUSINESS US 41 AND US 41 PALMETTO, FL 34220</p> <p>SECTION 13, T34S, R17E LONGITUDE 82°32'30" LATITUDE 27°32'30"</p> <p>SECTION 11-14, T34S R17E</p> <p>OWNER NAME AND ADDRESS: MANATEE COUNTY 1022 26TH AVENUE EAST BRADENTON, FL 34208</p> <p>DESCRIPTION: THIS PROJECT WILL CONSIST OF: RECONSTRUCTION OF 17TH STREET WEST BETWEEN BUSINESS US 41 AND US 41 IN MANATEE COUNTY AND CITY OF PALMETTO. THE ROAD IS CURRENTLY A TWO LANE, "RURAL SECTION" ROAD. THE PROPOSED ROAD WILL ALSO HAVE TWO LANES. THE MAJOR DIFFERENCE WILL BE THAT THE PROPOSED ROADWAY WILL BE A TWO LANE "URBAN SECTION" WITH TURNING LANES AT THE MAJOR INTERSECTIONS. CONSEQUENTLY THE INCREASE IN IMPERVIOUS AREA WILL BE DUE TO THE ADDITIONAL SIDEWALK, BICYCLE LANES AND TURNING LANES. IN CONJUNCTION WITH THE ROADWAY IMPROVEMENTS MANATEE COUNTY WOULD LIKE TO PROVIDE ADDITIONAL STORAGE CAPACITY IN AN OFF-LINE ATTENUATION POND ALONG CARR DRAIN TO HELP REDUCE SOME OF THE FLOODING IN THE AREA. THE PROPOSED STORMWATER SYSTEM WOULD CONSIST OF TWO PONDS AND ONE SWALE.</p> <p>SOIL DISTURBING ACTIVITIES WILL INCLUDE: CLEARING AND GRUBBING; INSTALLING A STABILIZED CONSTRUCTION ENTRANCE, PERMETER, AND OTHER EROSION AND SEDIMENT CONTROL; GRADING/EXCAVATION FOR THE SEDIMENTATION POND, STORM SEWER, UTILITIES, AND RETENTION PONDS</p> <p>SOILS: SEE ATTACHED DRAINAGE REPORT</p> <p>SITE MAPS: SEE ATTACHED DRAINAGE REPORT</p> <p>SEE ATTACHED CONSTRUCTION PLANS FOR LOCATION OF TEMPORARY STABILIZATION PRACTICES, AND TURBIDITY BARRIERS</p> <p>SITE AREA: 1. TOTAL AREA OF SITE = 24 +/- ACRES 2. TOTAL IMPERVIOUS AREA OF SITE = 10.6 +/- ACRES</p> <p>NAME OF RECEIVING WATERS: CARR DRAIN TO MANATEE RIVER</p>		<p>GENERAL</p> <p>THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENT OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS. PENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULANTS TO THE RETENTION SYSTEM, PRIOR TO PLACING THE SYSTEM INTO OPERATION.</p> <p>SEQUENCE OF MAJOR ACTIVITIES:</p> <p>THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:</p> <table border="1"> <tr> <td>1. INSTALL STABILIZER</td> <td>9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTERS</td> </tr> <tr> <td>2. INSTALL SILT FENCES, TURBIDITY BARRIERS AND HAY BALES AS REQUIRED</td> <td>10. APPLY BASE TO PARKING AREAS</td> </tr> <tr> <td>3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN</td> <td>11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING</td> </tr> <tr> <td>4. BASIN</td> <td>12. PLANTING</td> </tr> <tr> <td>5. CONSTRUCTION SEDIMENTATION</td> <td>13. COMPLETE FINAL PAVING REMOVE ACCUMULATED SEDIMENT FROM BASINS</td> </tr> <tr> <td>6. BASIN</td> <td>14. FROM BASINS WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED</td> </tr> <tr> <td>7. CONTINUE CLEARING AND GRUBBING</td> <td></td> </tr> <tr> <td>8. STOCKPILE TOP SOIL IF REQUIRED PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED</td> <td></td> </tr> </table> <p>TIMING OF CONTROLS/MEASURES</p> <p>AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES, TURBIDITY BARRIERS AND HAY BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL. IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED, ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKE/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE SEDIMENT AND EROSION CONTROL PLAN.</p> <p>CONTROLS</p> <p>IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN IN THE SEDIMENT AND EROSION CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE SEDIMENT AND EROSION CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.</p> <p>EROSION AND SEDIMENT CONTROLS STABILIZATION PRACTICES</p> <ol style="list-style-type: none"> STRAW BALE BARRIER: STRAW BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS: <ol style="list-style-type: none"> WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES. WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF STRAW BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT. IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO INSURE AGAINST WASHOUT. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS: <ol style="list-style-type: none"> WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SIDEMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL RECONCENTRATE AFTER RELEASE. STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT-LOADED STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 30 DAYS SHALL BE SEEDING WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDING AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH. 		1. INSTALL STABILIZER	9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTERS	2. INSTALL SILT FENCES, TURBIDITY BARRIERS AND HAY BALES AS REQUIRED	10. APPLY BASE TO PARKING AREAS	3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN	11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING	4. BASIN	12. PLANTING	5. CONSTRUCTION SEDIMENTATION	13. COMPLETE FINAL PAVING REMOVE ACCUMULATED SEDIMENT FROM BASINS	6. BASIN	14. FROM BASINS WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED	7. CONTINUE CLEARING AND GRUBBING		8. STOCKPILE TOP SOIL IF REQUIRED PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED	
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7. CONTINUE CLEARING AND GRUBBING																			
8. STOCKPILE TOP SOIL IF REQUIRED PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED																			
<p>CONTROLS</p> <p>THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN OFF. THE CONSTRUCTION PLANS HAVE BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS AS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL STATE AND LOCAL LAWS. REFER TO "CONTRACTORS REQUIREMENTS" FOR A VERBAL DESCRIPTION OF THE CONTROLS THAT MAY BE IMPLEMENTED.</p> <p>STORM WATER MANAGEMENT</p> <p>THE PROPOSED WESTERN DRAINAGE SYSTEM WOULD TAKE THE ROADWAY AND OFF-SITE DRAINAGE FROM U.S. BUSINESS 41 AND DISCHARGE TO A TWO CELLED POND SYSTEM AT THE SIBLE BAPTIST CHURCH PROPERTY JUST NORTHWEST OF THE CARR DRAIN AND 17TH STREET WEST. THE FIRST CELL, 12B, WOULD PROVIDE WATER QUALITY TREATMENT AND THE SECOND CELL, F-12D, WOULD PROVIDE WATER QUANTITY ATTENUATION. THE EASTERN MOST PROPOSED DRAINAGE SYSTEM WILL DISCHARGE DIRECTLY INTO THE FOOT RIGHT-OF-WAY FROM ABOUT 3RD AVENUE EAST TO U.S. 41. THE CENTRAL PORTION OF THE PROJECT FROM THE RAILROAD RIGHT-OF-WAY TO 3RD AVENUE EAST WILL BE DIRECTLY DISCHARGED INTO THE CARR DRAIN.</p> <p>REFER TO "CONTRACTORS REQUIREMENTS" FOR THE TIMING OF CONTROL/MEASURES.</p> <p>CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS</p> <p>IN AN EFFORT TO ENSURE COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS REGARDING EROSION AND TURBIDITY CONTROLS, THE FOLLOWING PERMITS HAVE BEEN OBTAINED:</p> <table border="1"> <tr> <td>C.O.E. DREDGE/FILL PERMIT</td> <td>N/A</td> </tr> <tr> <td>S.W.F.W.M.D. E.R.P. PERMIT</td> <td></td> </tr> <tr> <td>MANATEE COUNTY DEVELOPMENT PERMIT</td> <td></td> </tr> </table> <p>CONTROLS</p> <p>I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.</p> <p>SIGNED: _____ TITLE: _____ DATE: _____ CORPORATE OFFICER, GENERAL PARTNER, PROPRIETOR, EXECUTIVE OFFICER, OR TANKING ELECTED OFFICIAL</p>		C.O.E. DREDGE/FILL PERMIT	N/A	S.W.F.W.M.D. E.R.P. PERMIT		MANATEE COUNTY DEVELOPMENT PERMIT		<p>GOOD HOUSEKEEPING</p> <p>THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ON SITE DURING THE CONSTRUCTION PROJECT.</p> <ul style="list-style-type: none"> AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB. ALL MATERIALS STORED ON SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THE IR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER. WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED. THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ON SITE RECEIVE PROPER USE AND DISPOSAL. <p>HAZARDOUS PRODUCTS</p> <p>THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.</p> <ul style="list-style-type: none"> PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND/OR STATE RECOMMENDED METHOD FOR PROPER DISPOSAL WILL BE FOLLOWED. <p>PRODUCT SPECIFIC PRACTICES</p> <p>THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON SITE:</p> <p>PETROLEUM PRODUCTS</p> <p>ALL ON SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.</p> <p>FERTILIZERS</p> <p>FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAG OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.</p> <p>PAINTS</p> <p>ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.</p> <p>CONCRETE TRUCKS</p> <p>CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.</p> <p>SPILL CONTROL PRACTICES</p> <p>IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:</p> <p>MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.</p> <p>MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (I.E. KITTY LITTER OR EQUAL), SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.</p> <p>ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.</p> <p>THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.</p> <p>SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.</p> <p>THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILLS IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.</p> <p>THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ON SITE.</p> <p>MATERIAL MANAGEMENT PRACTICES</p> <p>THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.</p>											
C.O.E. DREDGE/FILL PERMIT	N/A																		
S.W.F.W.M.D. E.R.P. PERMIT																			
MANATEE COUNTY DEVELOPMENT PERMIT																			
<p>EROSION AND SEDIMENT CONTROLS STABILIZATION PRACTICES</p>		<p>STRUCTURAL PRACTICES</p> <ol style="list-style-type: none"> TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIXES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY. TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP IS USUALLY INSTALLED IN A DRAINAGE WAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA WITH THE FOLLOWING LIMITATIONS. <ol style="list-style-type: none"> THE SEDIMENT TRAP MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION DIKE. OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE VELOCITY OF FLOW AT DESIGN CAPACITY OF THE OUTLET WILL EXCEED THE PERMISSIBLE VELOCITY OF THE RECEIVING CHANNEL OR AREA. SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME. THE PROPOSED STORM WATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASIN. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE. THE 3,600 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFF-SITE AREAS AND FLOWS FROM ON-SITE AREAS THAT ARE WITHIN UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACK FILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION. <p>OTHER CONTROLS</p> <p>WASTE DISPOSAL</p> <p>WASTE MATERIALS</p> <p>ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPLOYED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.</p> <p>HAZARDOUS WASTE</p> <p>ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES BY THE SITE SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.</p> <p>SANITARY WASTE</p> <p>ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.</p> <p>OFFSITE VEHICLE TRACKING</p> <p>A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEP DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARP AULIN.</p> <p>INVENTORY FOR POLLUTION PREVENTION PLAN</p> <p>THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ON SITE DURING CONSTRUCTION:</p> <table border="1"> <tr> <td>CONCRETE</td> <td>FERTILIZERS</td> <td>WOOD</td> </tr> <tr> <td>ASPHALT</td> <td>PETROLEUM BASED PRODUCTS</td> <td>MASONRY BLOCKS</td> </tr> <tr> <td>TAR</td> <td>CLEANING SOLVENTS</td> <td>ROOFING MATERIALS</td> </tr> <tr> <td>DETERGENTS</td> <td>PAINTS</td> <td>METAL STUDS</td> </tr> </table> <p>SPILL PREVENTION</p> <p>MATERIAL MANAGEMENT PRACTICES</p> <p>THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.</p>		CONCRETE	FERTILIZERS	WOOD	ASPHALT	PETROLEUM BASED PRODUCTS	MASONRY BLOCKS	TAR	CLEANING SOLVENTS	ROOFING MATERIALS	DETERGENTS	PAINTS	METAL STUDS				
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DETERGENTS	PAINTS	METAL STUDS																	
<p>SPILL CONTROL PRACTICES</p> <p>EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES</p> <p>THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.</p> <ul style="list-style-type: none"> NO MORE THAN 10 ACRES OF THE SITE WILL BE DENUED AT ONE TIME WITH OUT WRITTEN PERMISSION FROM THE ENGINEER. ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE. SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND. THE SEDIMENT BASINS WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE SEEDING CAPACITY OR AT THE END OF THE JOB. DIVERSION DIKES/SWALES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED. TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM TO BE COMPLETED BY THE INSPECTOR IS ATTACHED. THE REPORTS WILL BE KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND EROSION PLANS, OR STORMWATER MANAGEMENT PLANS. THE REPORTS SHALL BE MADE AND RETAINED AS PART OF THE STORMWATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED AND THE NOTICE OF TERMINATION IS SUBMITTED. THE REPORTS SHALL IDENTIFY AND INCIDENTS OF NON-COMPLIANCE. THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT. PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ON SITE IN GOOD WORKING ORDER. <p>NON-STORM WATER DISCHARGES</p> <ul style="list-style-type: none"> IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD: <ul style="list-style-type: none"> WATER FROM WATER LINE FLUSHING. PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED). UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION). <p>ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.</p> <p>CONTRACTOR'S CERTIFICATION</p> <p>I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIES AS PART OF THIS CERTIFICATION.</p> <table border="1"> <thead> <tr> <th>SIGNATURE</th> <th>BUSINESS NAME AND ADDRESS OF CONTRACTOR & ALL SUBS</th> <th>RESPONSIBLE FOR/DUTIES</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>GENERAL CONTRACTOR</td> </tr> <tr> <td></td> <td></td> <td>SUBCONTRACTOR</td> </tr> <tr> <td></td> <td></td> <td>SUBCONTRACTOR</td> </tr> <tr> <td></td> <td></td> <td>SUBCONTRACTOR</td> </tr> <tr> <td></td> <td></td> <td>OWNER REPRESENTATIVE</td> </tr> </tbody> </table> <p>Contractor Note</p> <p>PRIOR TO CONSTRUCTION, CONTRACTOR WILL INSTALL BMP DEVICES, SILT FENCE, HAY BALE, TURBIDITY BARRIERS, ETC., ALONG RWAS PART OF THE POLLUTION PREVENTION PLAN FOR APPLICABLE AGENCY APPROVAL</p> <p>Paul Schamell Date Manatee County Project Manager</p>		SIGNATURE	BUSINESS NAME AND ADDRESS OF CONTRACTOR & ALL SUBS	RESPONSIBLE FOR/DUTIES			GENERAL CONTRACTOR			SUBCONTRACTOR			SUBCONTRACTOR			SUBCONTRACTOR			OWNER REPRESENTATIVE
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		SUBCONTRACTOR																	
		OWNER REPRESENTATIVE																	

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PLOT DATE: 5/27/2009

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DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADE TRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No. 44786
Certificate of Authorization No.: 3952

ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035261
	Dwg. Date January 8, 2009

STORMWATER POLLUTION PREVENTION PLAN

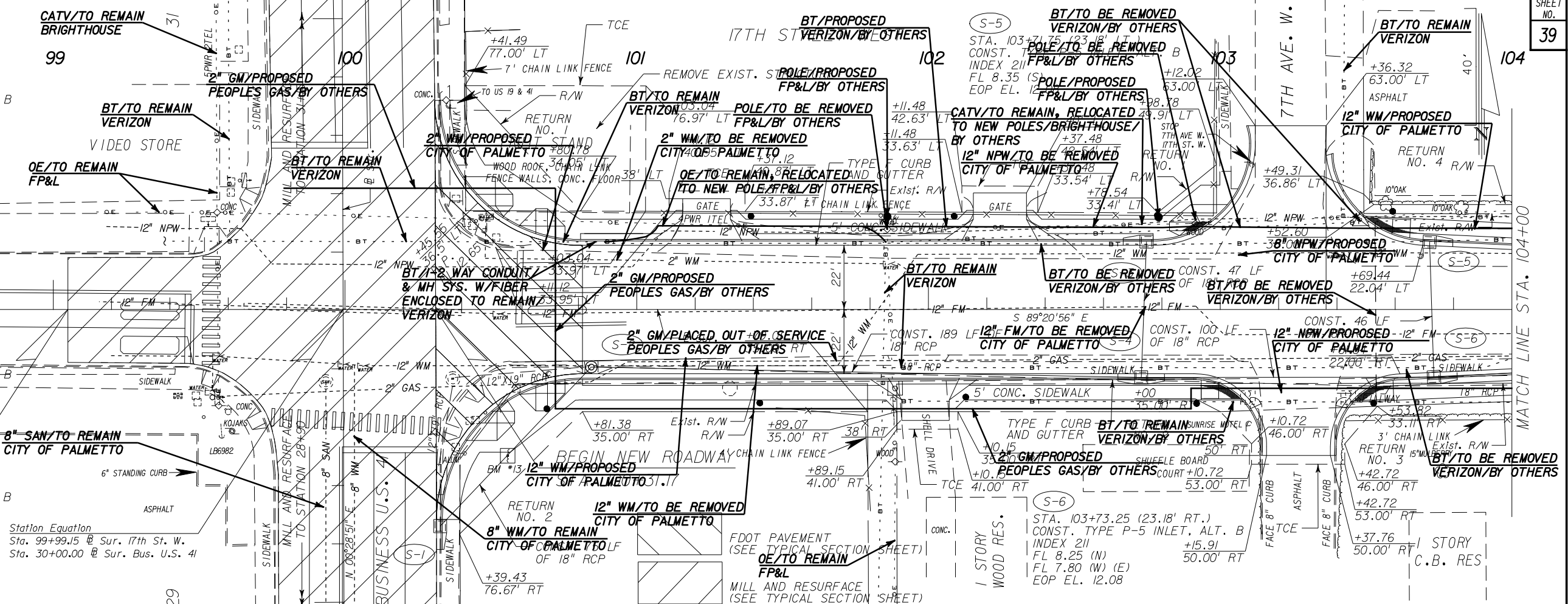
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STA. 100+32.64 (74.21' RT.)
CONST. TYPE P-5 INLET, ALT. B
INDEX 211
FL 8.95 (NE)
EOP EL. 12.77

S-2
STA. 100+84.44 (19.70' RT.)
CONST. TYPE P-7 MH
INDEX 201
FL 8.85 (SW) (E)
RIM EL 12.48

S-3
STA. 102+74.75 (23.25' LT.)
CONST. TYPE P-5 INLET, ALT. B
INDEX 211
FL 8.15 (S)
EOP EL. 11.89

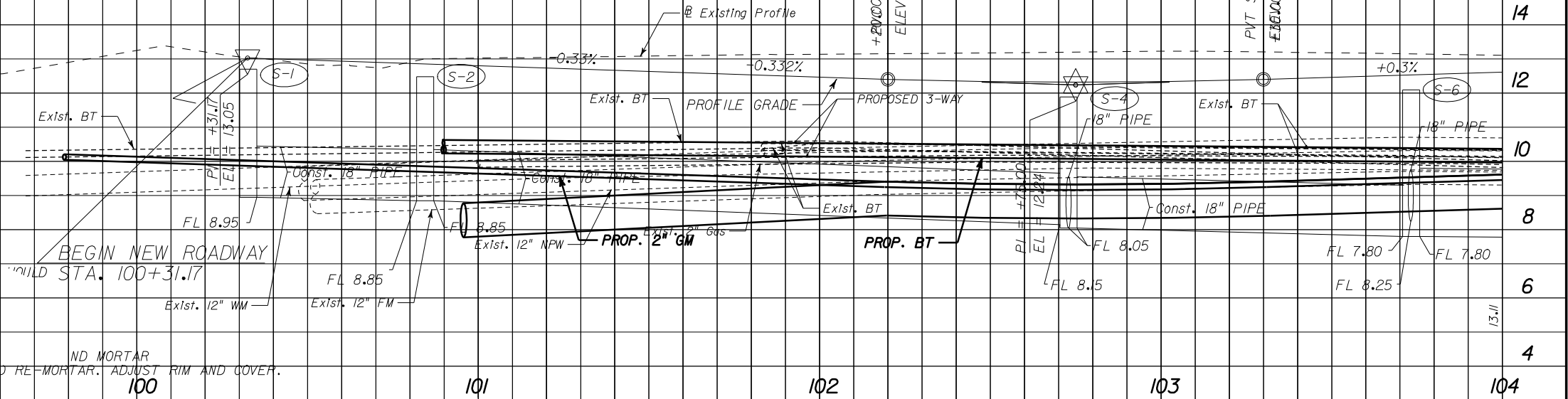
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STA. 102+72.91 (23.25' RT.)
CONST. TYPE P-6 INLET, ALT. B
INDEX 211
FL 8.05 (N) (E)
FL 8.15 (W)
EOP EL. 11.89



Station Equation
Sta. 99+99.15 @ Sur. 17th St. W.
Sta. 30+00.00 @ Sur. Bus. U.S. 41

18	1. THE LOCATIONS OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED W, V, AND VM) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED	18	
16	2. UTILITY OWNERS:	16	
14	BRIGHT HOUSE MR. TOM WRIGHT 4601 15th STREET EAST BRADENTON, FL 34203 (941) 748-3816	TECO PEOPLES GAS MR. TED FELEGY 8261 VICO COURT SARASOTA, FL 34240 (941) 542-4026	14
12	CITY OF PALMETTO MR. VAN BROWN 600 7th STREET WEST PALMETTO, FL 34221 (941) 723-4580	VERIZON FLORIDA INC MS. DENISE HUTTON 1701 RINGLING BLVD. MC FLSS #113 SARASOTA, FL. 34236 (941) 906-6722	12
10	FP&L MR. GREG COKER 1253 12TH AVENUE EAST PALMETTO, FL 34221 (941) 723-4430		10
8	MANATEE COUNTY UTILITY OPERATIONS MR. MOHAN THAMPI, PE 1022 26TH AVENUE EAST BRADENTON, FL 34208 (941) 708-7400		8
6	MANATEE COUNTY TRANSPORTATION DEPARTMENT 1022 26TH AVENUE EAST BRADENTON, FL 34208 (941) 708-7400		6
4			4

NOTE: UTILITY CONFLICTS THAT OCCUR WITH THE CITY OF PALMETTO'S UTILITIES ARE RESOLVED UNDER THE CITY'S PLANS IN THIS CONTRACT.



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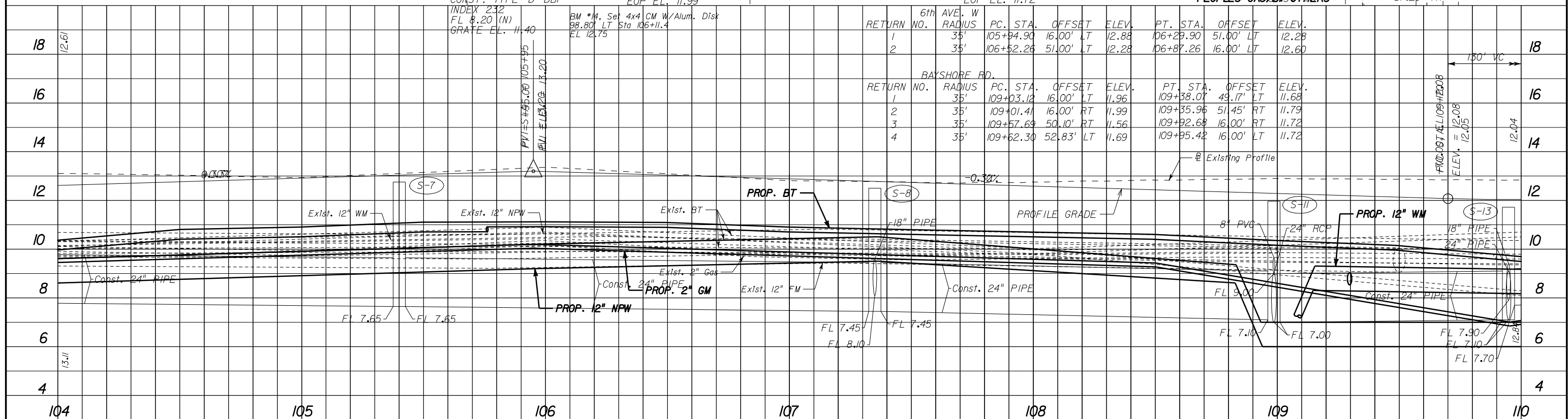
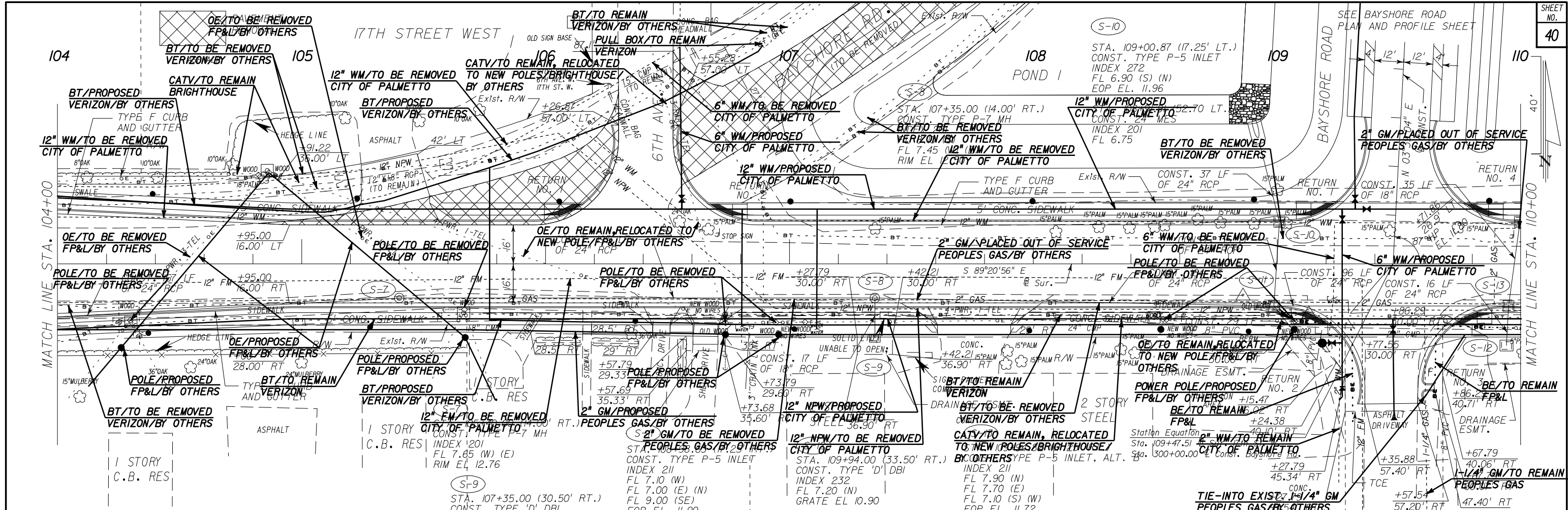
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David O. Theung, PE No. 44786	6035261
	Dwg. Date
	January 8, 2009
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MANATEE COUNTY
FLORIDA

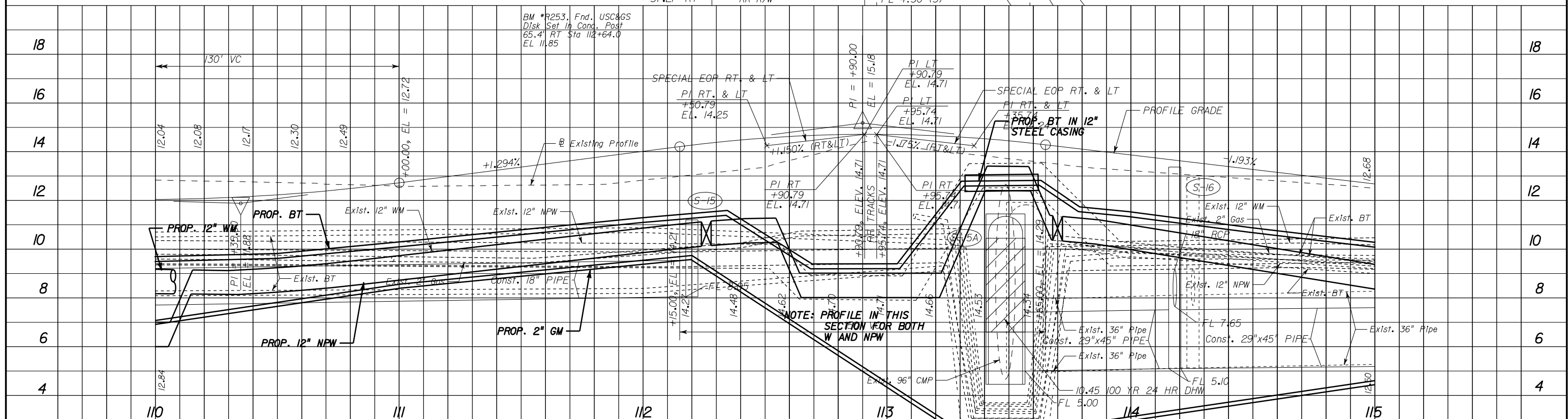
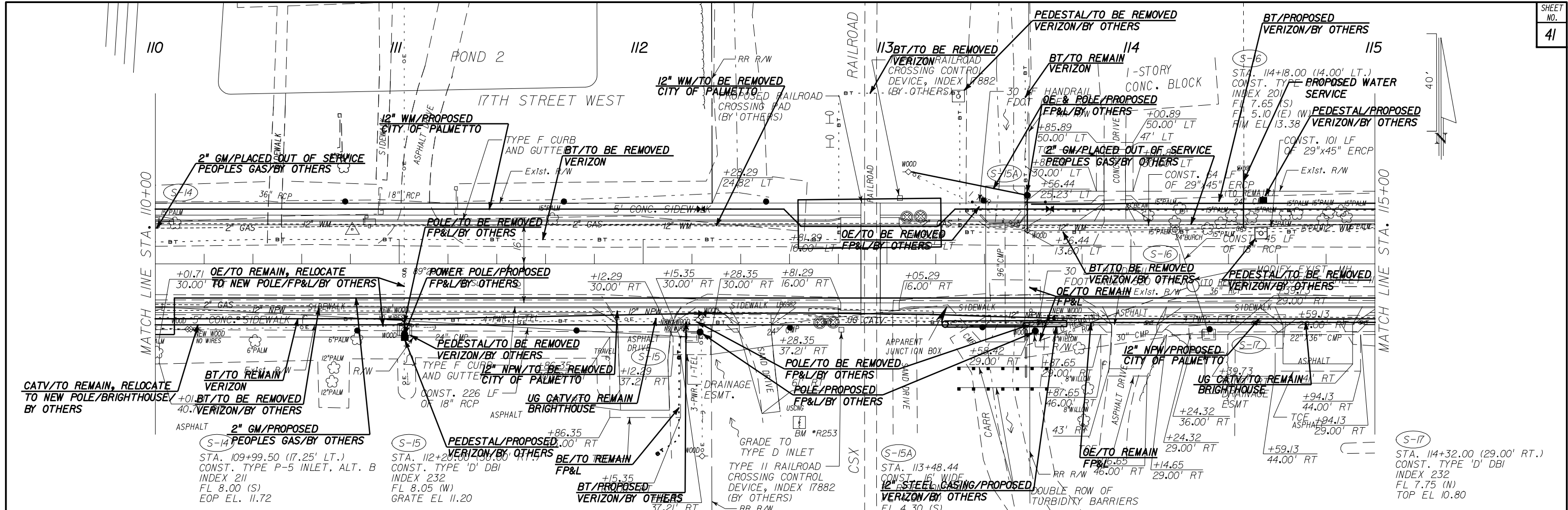
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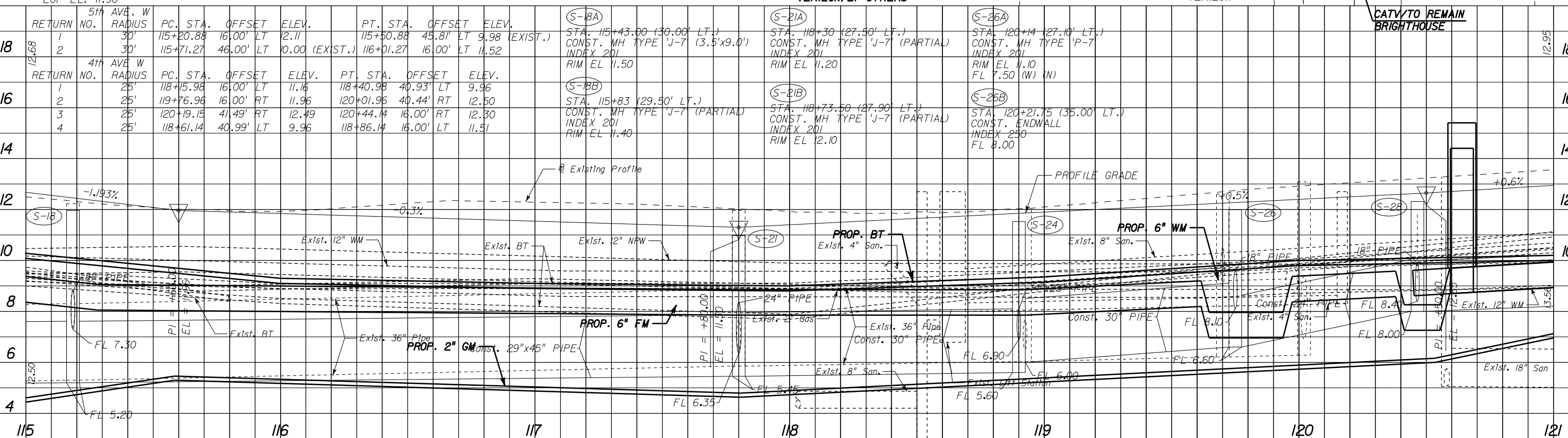
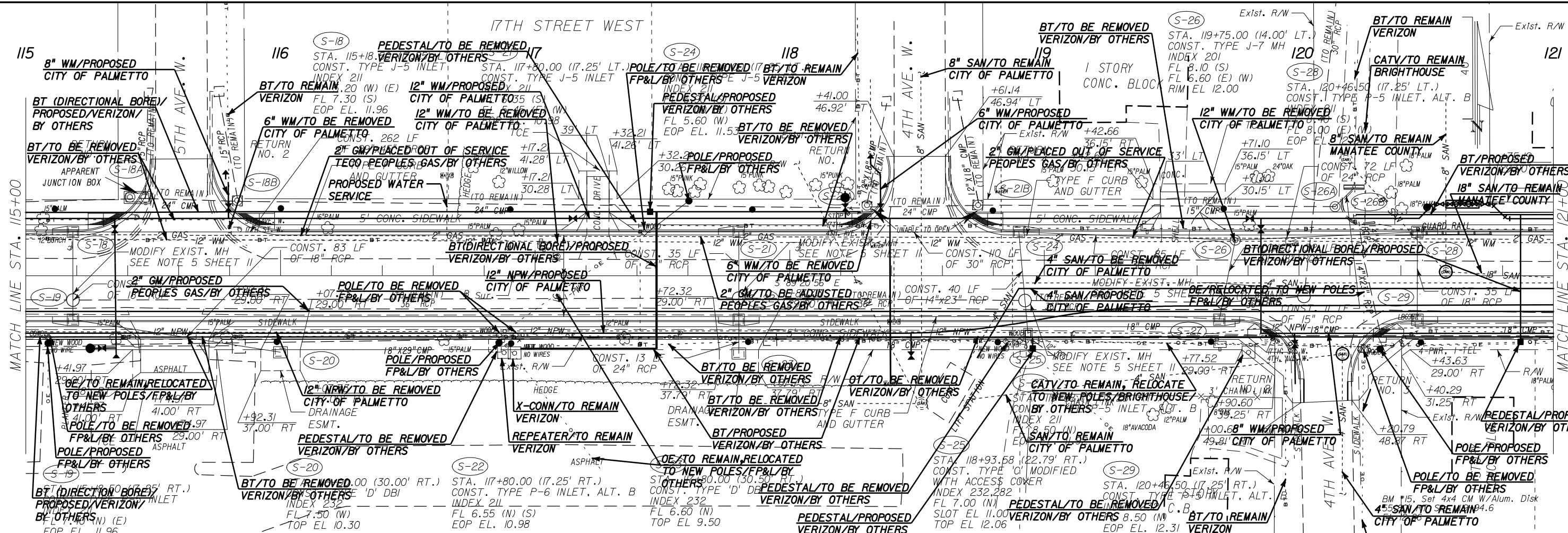
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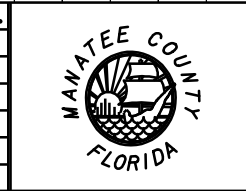
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Proj. No.	6035261
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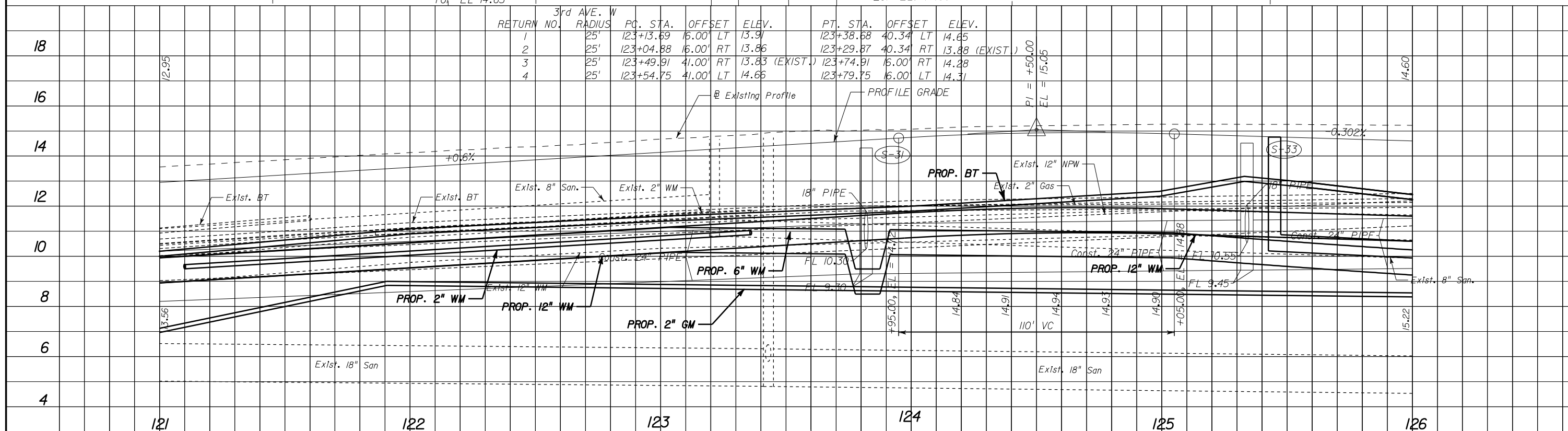
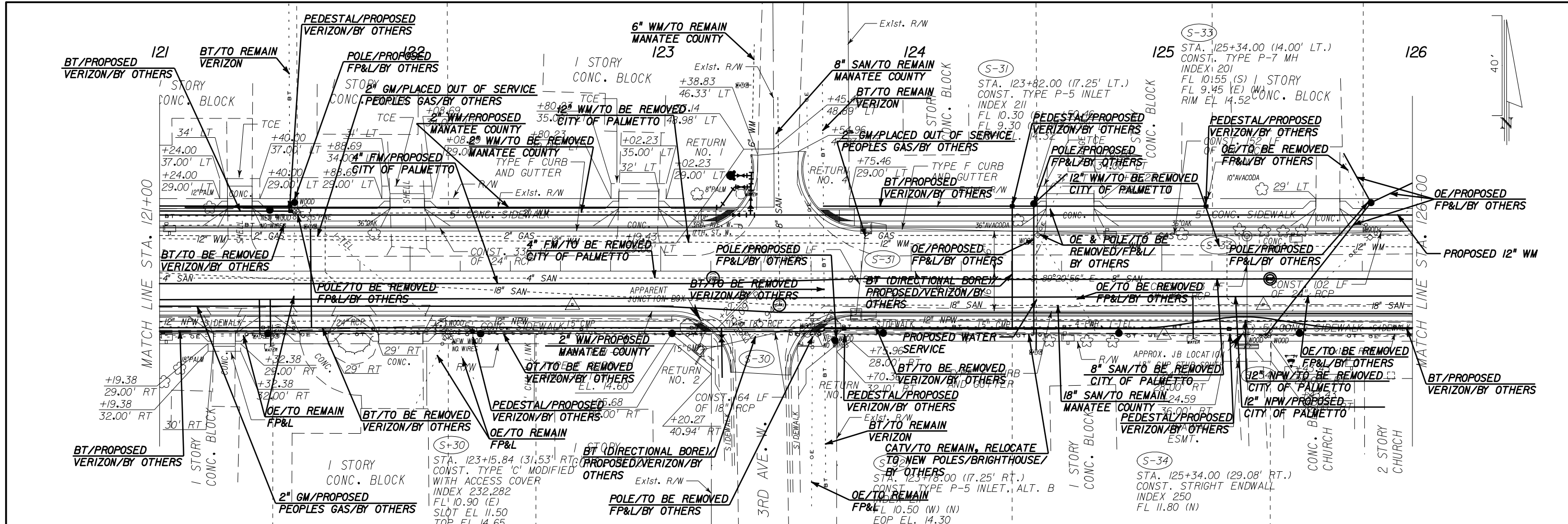
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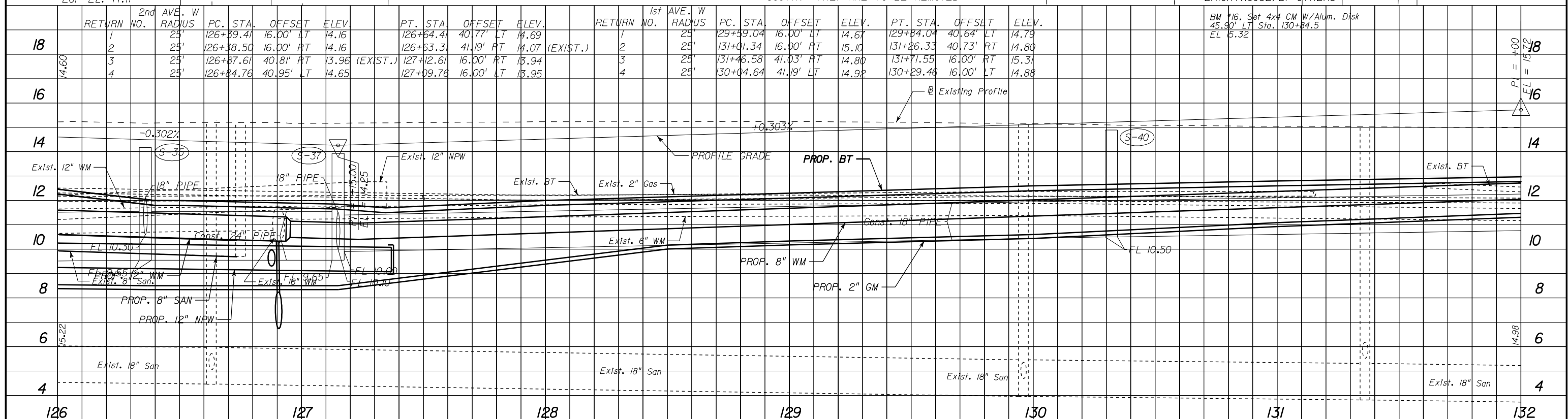
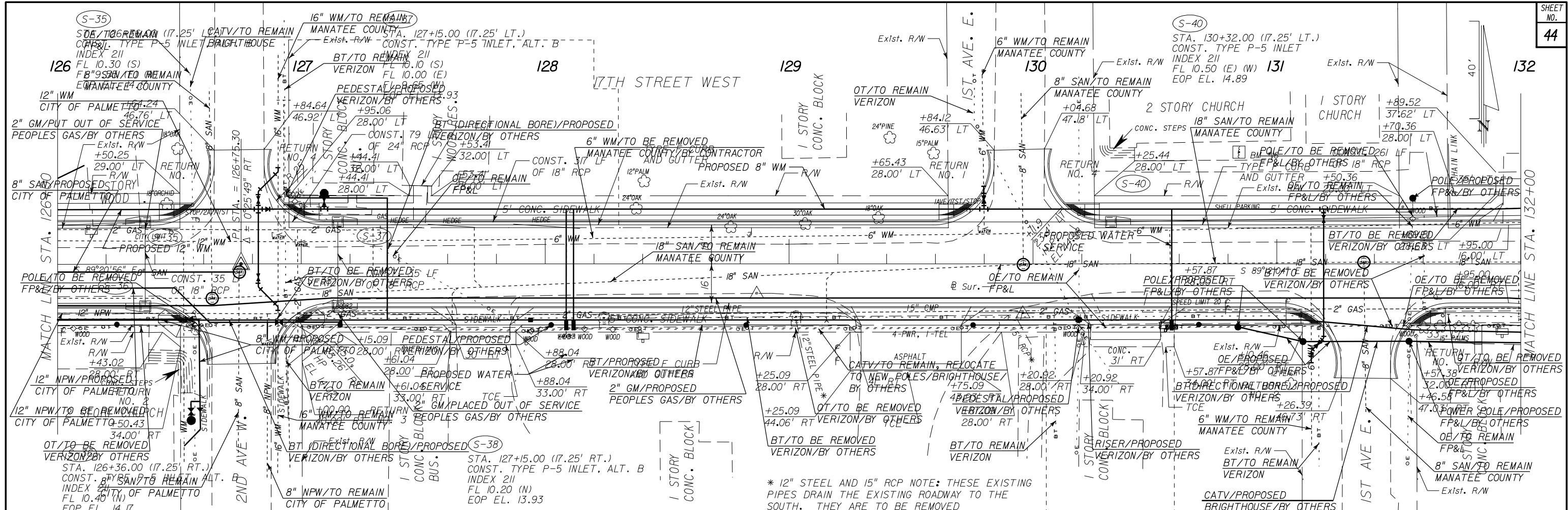


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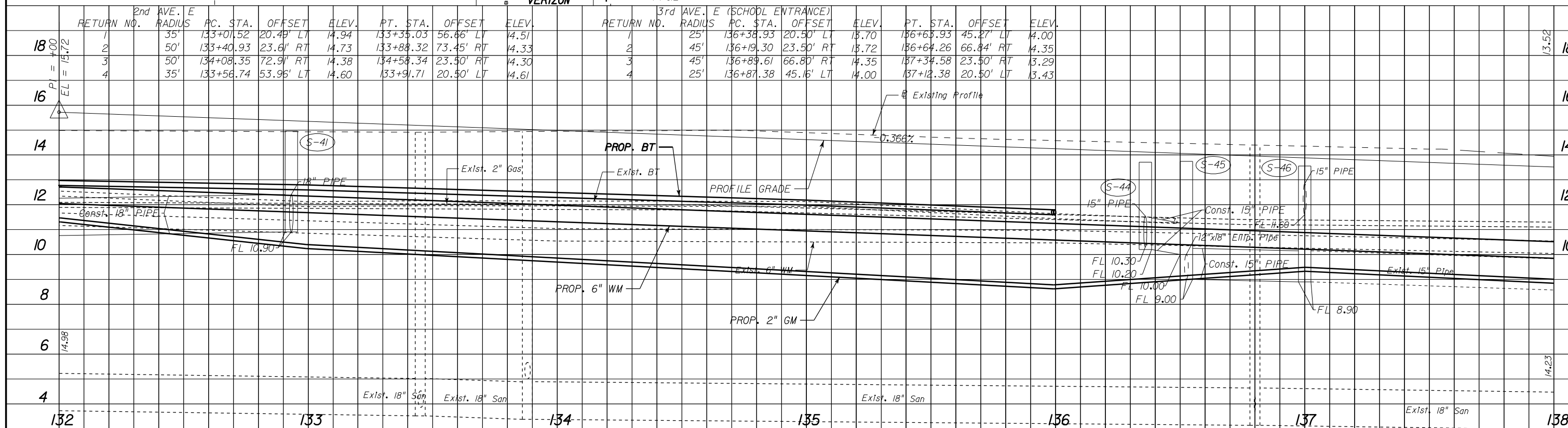
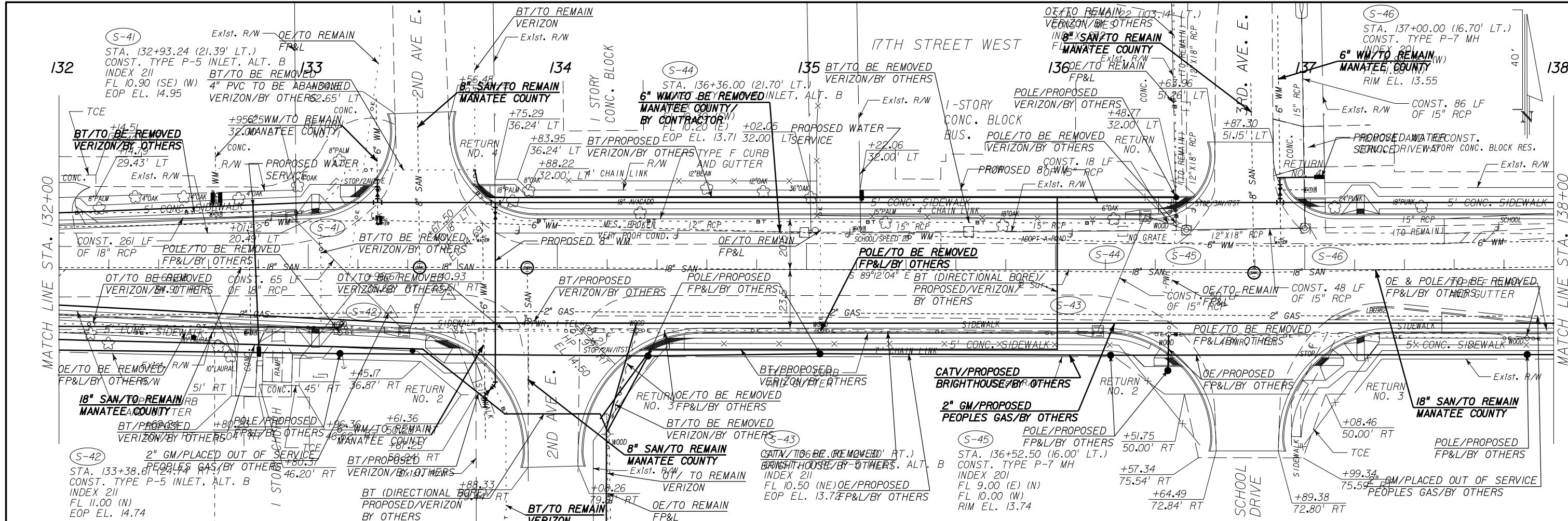
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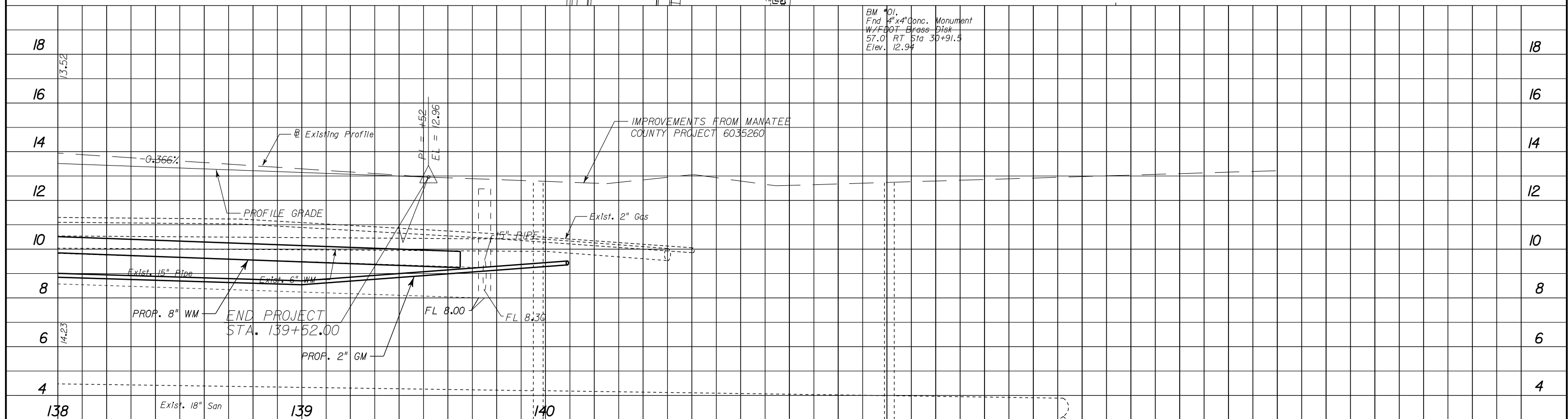
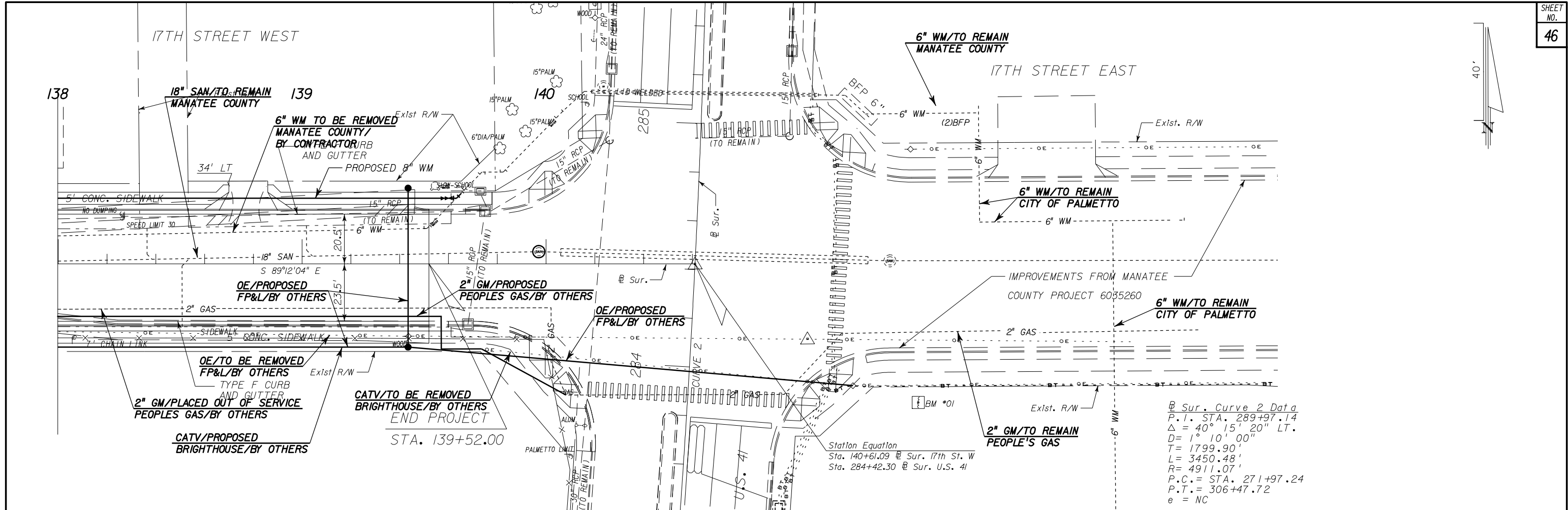
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SUPERVISED BY	DATE			


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA


 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER
 David O. Theung, PE No. 44786
 Proj. No. 6035261
 Dwg. Date January 8, 2009
UTILITY ADJUSTMENTS

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 PLOT DATE: 5/27/2009
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DRAWN BY	KDR	DATE	1/09
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SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION DESCRIPTION & DATE	BY	NO.



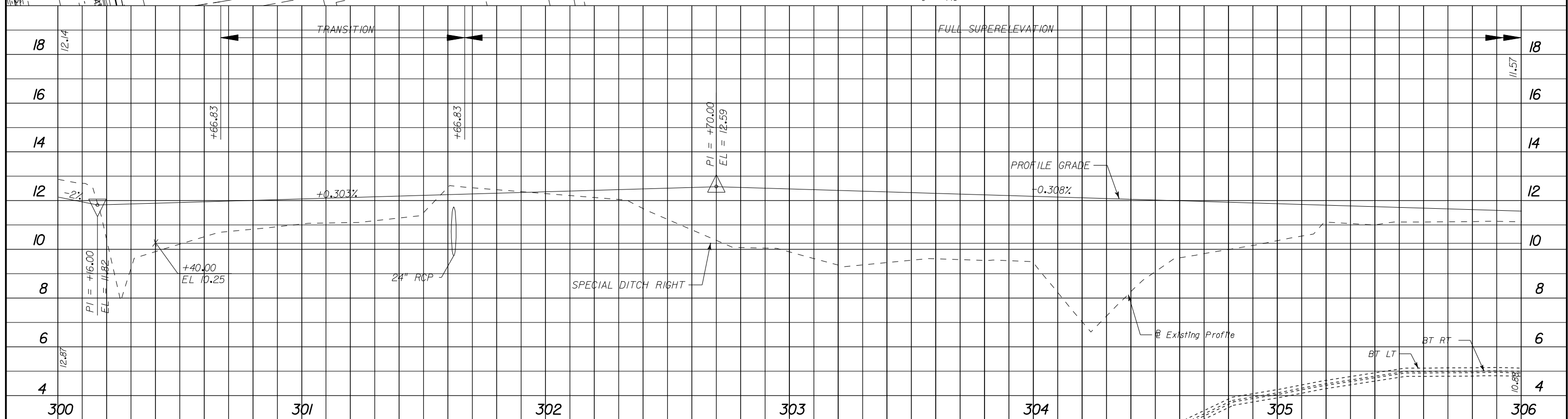
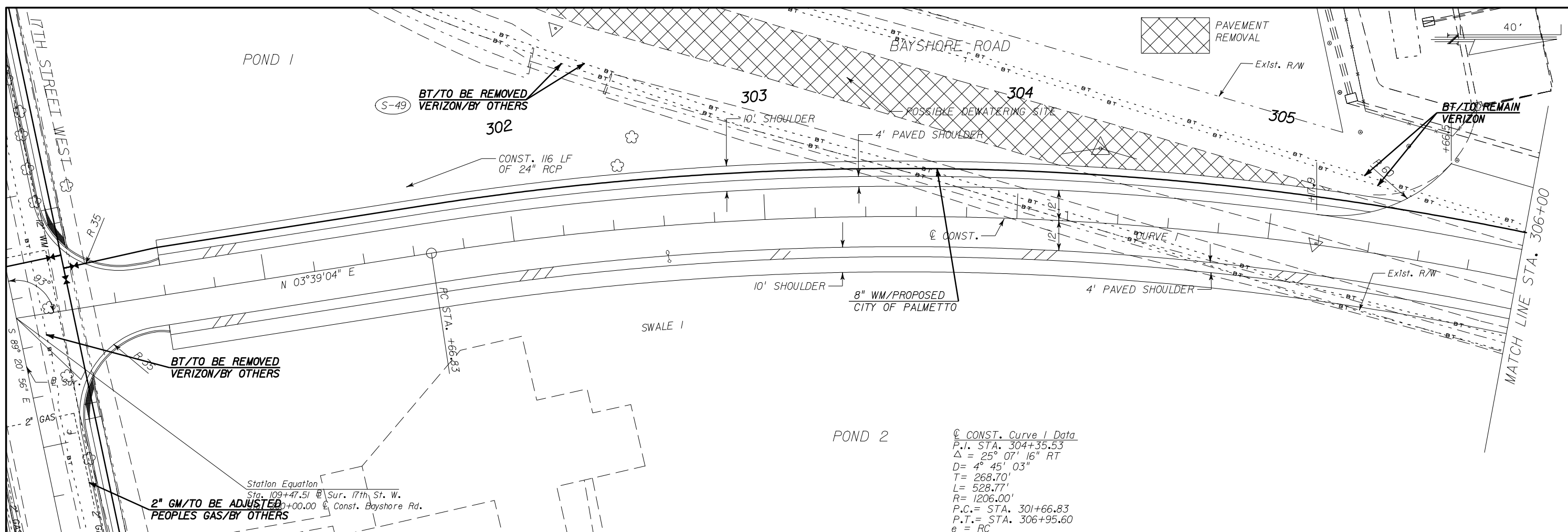
17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
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ENGINEER
David O. Theung, PE No. 44786

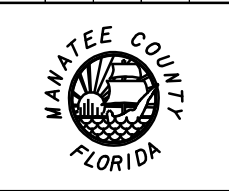
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Dwg. Date January 8, 2009
UTILITY ADJUSTMENTS

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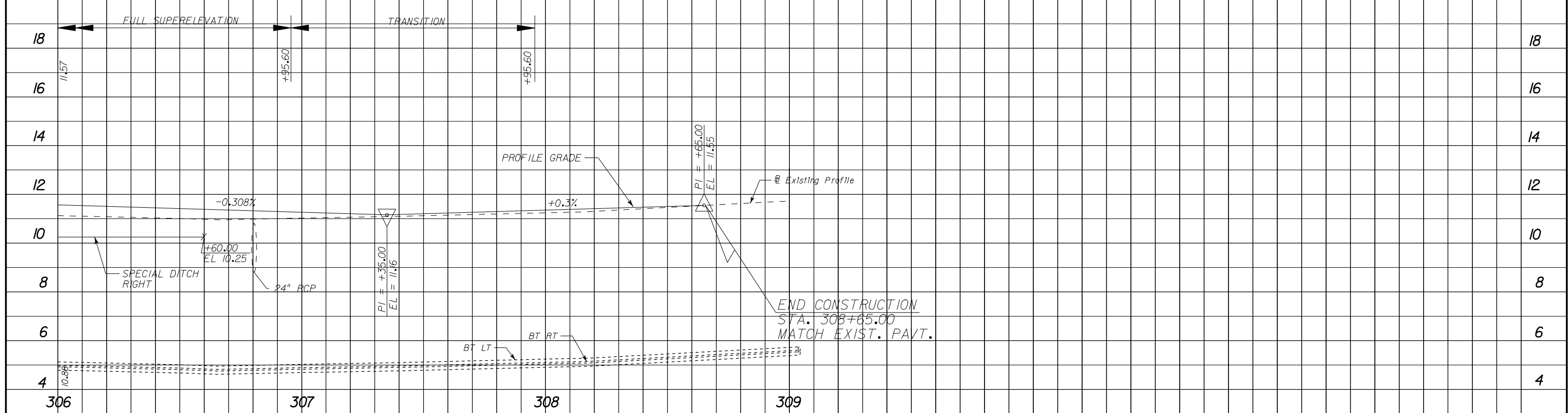
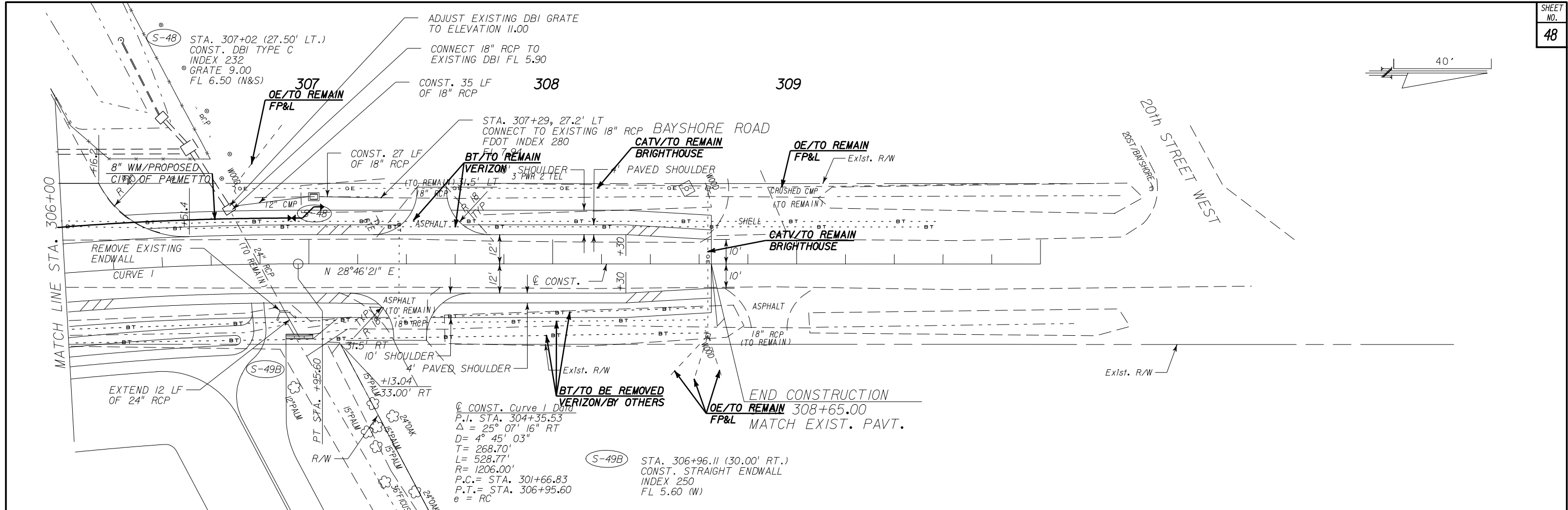
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17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

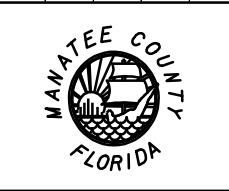
8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER David O. Theung, PE No. 44786	Proj. No. 6035261 Dwg. Date January 8, 2009
UTILITY ADJUSTMENTS	



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17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 6035261
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
UTILITY ADJUSTMENTS	

TABULATION OF QUANTITIES

BID ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
							55		56		57		58		59		PLAN	FINAL	PLAN	FINAL	
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL					
WATER																					
110-3	Removal of Existing Structure (Vault)	LS					0	1	0	0	0	0	0	0	0	1	1				
1000-6	Utility Work-Water (Master Meter Assembly)	LS					1	0	0	0	0	0	0	0	0	1	1				
1050-II-92	Water Service Conn. (F&I) (HDPE) CI 200 (1")	EA					0	2	3	4					9	9					
1050-II-420	Pipe (CI/DI) (Epoxy) (F&I) Class 50 (2") (Inc Ftgs)	LF					0	226	0	0					226	226					
1050-II-420	Pipe (CI/DI) (Epoxy) (F&I) Class 50 (6") (Inc Ftgs)	LF					0	0	60	80					140	140					
1050-II-424	Pipe (CI/DI) (Epoxy) (F&I) Class 50 (8")	LF					0	0	509	600					1274	1274					
1050-II-424	Pipe (CI/DI) (Epoxy) (F&I) Class 50 (12")	LF					53	500	91	0					644	644					
1050-II-424	Pipe (CI/DI) (Epoxy) (F&I) Class 50 (16")	LF					0	0	64	0					64	64					
1050-I6-224	Pipe Removal (Less than 18")	LF					0	288	730	742					1915	1915					
1055-II-414	Bend (DI) (45 Degree) (12")	EA					3	0	0	0					3	3					
1055-II-414	Bend (DI) (45 Degree) (12") (Cut-In)	EA					1	0	0	0					1	1					
1055-II-414	Bend (DI) (45 Degree) (16")	EA					0	0	2	0					2	2					
1055-II-414	Bend (DI) (45 Degree) (16") (Cut-In)	EA					0	0	2	0					2	2					
1055-II-42	Tee (DI) (6"x2")	EA					1	0	0	0					1	1					
1055-II-424	Tee (DI) (8"x6")	EA					0	0	2	3					5	5					
1055-II-424	Tee (DI) (12"x12")	EA					0	1	1	0					1	1					
1055-II-424	Tee (DI) (16"x12")	EA					0	0	1	0					1	1					
1055-II-434	Reducer (DI) (8"x6")	EA					0	0	0	0					1	1					
1055-II-434	Reducer (DI) (12"x6")	EA					1	0	0	0					1	1					
1055-II-434	Reducer (DI) (12"x8")	EA					0	0	1	0					1	1					
1055-II-494	Sleeve (DI) (16")	EA					0	0	2	0					2	2					
1080-II-101	1" Water Service, Meter & Meterbox	EA					0	1	3	5					9	9					
1080-II-25	Blowoff Assembly (F&I) (2")	EA					1	0	0	0					1	1					
1080-II-11	Valve Assembly Gate (F&I) (CI) (250 PSI) (2")	EA					1	0	0	0					1	1					
1080-II-34	Valve Assembly Gate (F&I) (CI) (250 PSI) (6")	EA					0	1	4	4					10	10					
1080-II-44	Valve Assembly Gate (F&I) (CI) (250 PSI) (8")	EA					0	0	1	0					1	1					
1080-II-44	Valve Assembly Gate (F&I) (CI) (250 PSI) (12")	EA					1	0	0	0					1	1					
1080-II-44	Valve Assembly Butterfly (F&I) (CI) (250 PSI) (16")	EA					0	0	2	0					2	2					
1644-13	Fire Hydrant Assembly (Standard) (F&I) (6")	EA					0	0	1	0					1	1					
1644-53	Fire Hydrant Assembly (Relocate)	EA					0	1	0	0					1	1					
SEWER																					
1060-15	Manhole Rim & Cover	EA					0	1	3	3					8	8					
1060-15	Manhole Rim Adjustment	EA					1	1	1	0					3	3					
1060-15	Install Manhole LIner	EA					0	1	3	3					8	8					

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SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION DESCRIPTION & DATE	BY	NO.



17th STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER <small>David O. Theung, PE No. 44786</small>	Proj. No. 6035261 Dwg. Date January 8, 2009
MANATEE COUNTY UTILITIES	

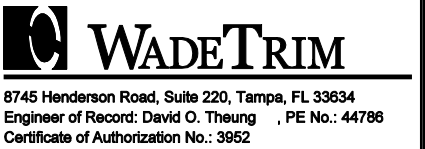
- 1) THE LOCATION OF EXISTING UTILITIES, AS SHOWN ON THE PLANS, ARE APPROXIMATE AND ARE BASED ON THE INFORMATION FURNISHED TO THE ENGINEER BY THE UTILITY OWNERS (S). THE UTILITY LOCATIONS ARE SHOWN ON THE PLANS AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. THE CONTRACTOR SHALL NOTIFY THE OWNERS(S) OF THE UTILITY FOR LOCATION AND STAKING OF THEIR UNDERGROUND FACILITIES BEFORE EXCAVATING.
- 2) FLORIDA STATUE 553.857 (1978) REQUIERES THAT BEFORE EXCAVATING, NOTICE BE GIVEN TO THE UTILITY OWNER(S) A MINIMUM OF FIVE DAYS, EXCLUDING SATURDAY, SUNDAY AND LEGAL HOLIDAYS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF "SUNSHINE STATE ONE CALL," (800) 282-8881. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ALL HIS SUBCONTRACTORS TO CONTACT SUNSHINE ONE CALL CENTER OF FLORIDA.
- 3) THE CONTRACTOR SHALL NOTIFY THE ELECTRIC UTILITY AT LEAST 48 HOURS PRIOR TO ANY INSTALLATION THAT IS WITHIN TEN FEET OF AN ENERGIZED ELECTRICAL CONDUCTOR(S). EXTREME CAUTION SHALL BE EXERCISED AT ALL TIMES IN PERFORMANCE OF ANY WORK AROUND THE PRIMARY HIGH VOLTAGE COMPONENTS.
- 4) ALL EXISTING ASBESTOS CEMENT WATER MAINS TO BE ABANDONED SHALL BE CUT AND ABANDONED IN ACCORDANCE WITH FAC 17-251, FS 455.300 AND MANATEE COUNTY REQUIREMENTS. THE COST FOR THIS WORK IS TO BE INCLUDED IN THE COST FOR THE WATER MAINS. THE ABESTOS CEMENT WATER MAINS SHALL BE ABANDONED WITHIN THE RIGHT OF WAY OR TO THE POINT OF CONNECTION WITH NEW WATER MAIN. THE LOCATION OF THE ASBESTOS CEMENT WATER MAIN SHOWN ON THE PLANS ARE BASED ON INFORMATION FURNISHED BY THE UTILITY OWNER.
- 5) ALL VALVE BOXES AND MANHOLES NOTED ON THE PLANS SHALL BE ADJUSTED BY THE CONTRACTOR TO PROPOSED ELEVATIONS. THE EXISTING WATER MAIN VALVES ON THE WATER MAINS TO BE ABANDONED SHALL BE PLUGGED OR CAPPED AND SHALL BE PLACED IN THE CLOSED POSITION (NO FLOW THROUGH THE VALVE).
- 6) ALL FITTINGS FOR THE PROPOSED WATER MAINS, RECLAIMED WATER MAINS AND SANITARY SEWER FORCE MAINS SHALL BE DIP RESTRAINED JOINT FITTINGS, UNLESS OTHERWISE DIRECTED BY THE COUNTY.
- 7) THE WATER MAINS, RECLAIMED WATER MAINS, SANITARY SEWER, AND SANITARY SEWER FORCE MAIN SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE MANATEE COUNTY SPECIFICATIONS AND FDEP REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS TO PERFORM THE SAMPLING AND TESTING IN ACCORDANCE WITH MANATEE COUNTY SPECIFICATIONS AND FDEP REQUIREMENTS.
- 8) ALL RECLAIMED WATER MAINS SHALL BE CONSTRUCTED TO THE SAME STANDARDS AS THE POTABLE WATER MAINS EXCEPT FOR THE COLOR CODING AND THE DISINFECTION REQUIREMENTS. THE RECLAIMED WATER LINES ARE NOT REQUIRED TO BE DISINFECTED AND THE COLOR CODING FOR RECLAIMED WATER MAINS SHALL BE PURPLE (SEE MANATEE COUNTY STANDARDS).
- 9) A MINIMUM HORIZONTAL SEPERATION OF 5 FEET IS REQUIRED WHEN RECLAIMED WATER LINES ARE INSTALLED PARALLEL TO THE POTABLE WATER MAINS OR SANITARY SEWER LINES. A MINIMUM VERTICAL SEPERATION OF 18" IS REQUIRED BETWEEN A NON-POTABLE LINE AND A POTABLE WATER MAIN.
- 10) THE CONTRACTOR SHALL DEWATER THE PIPE TRENCH TO A DEPTH OF 6 INCHES MINIMUM BELOW THE BOTTOM OF THE PIPE TRENCH AND SHALL MAINTAIN THE DEWATERING UNTIL THE PIPE TRENCH IS BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATION. THE RUNOFF FROM THE DEWATERING OPERATION SHALL BE DISPOSED OF IN ACCORDANCE WITH MANATEE COUNTY, FDEP AND SWFWMD REQUIREMENTS.
- 11) EXISTING WATER METERS SHALL BE RELOCATED BY THE CONTRACTOR TO THE NEW RIGHT OF WAY LINE.
- 12) THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE PROVISIONS OF THE TRENCH SAFETY ACT (FLA STATUES SECTION 553.60ET. SEQ.) AND STANDARDS 29 C.F.R., SECTION 1926.650, SUB-PART P, WHICH SHALL APPLY TO THIS PROJECT.
- 13) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WATER AND SEWER SERVICES TO PROPERTY OWNERS AT ALL TIMES. THE CONTRACTOR SHALL INSTALL TEMPORARY SERVICES AS REQUIRED. THE CONTRACTOR SHALL NOTIFY RESPECTIVE PROPERTY OWNERS A MINIMUM OF 24 HOURS IN ADVANCE OF ANY WORK REQUIRING A DISRUPTION OF WATER OR SANITARY SEWER SERVICES.
- 14) THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH CUT SHEETS FOR THE PROPOSED WATER MAINS AND RECLAIMED WATER MAINS TO BE INSTALLED ACROSS 17TH ST. W. APPROVAL BY THE ENGINEER IS REQUIRED PRIOR TO THE INSTALLATION OF THE PROPOSED WATER MAINS AND RECLAIMED WATER MAINS ACROSS 17TH ST. W. SEE TYPICAL UTILITY ROADWAY CROSSING DETAIL.
- 15) ALL WATER MAINS, RECLAIMED WATER MAINS, SANITARY SEWERS AND SANITARY SEWER FORCE MAINS INSTALLED SHALL HAVE TYPE A-2 PIPE BEDDING UNLESS NOTED OTHERWISE OR AS DIRECTED BY THE ENGINEER.
- 16) CONTRACTOR SHALL MAKE ALL CONNECTIONS TO THE EXISTING WATER MAINS, SANITARY SEWERS, FORCE MAINS, AND RECLAIMED WATER MAINS.
- 17) ALL RESTORATION SHALL CONFORM TO MANATEE COUNTY STANDARDS.
- 18) MANHOLE LINERS SHALL BE INSTALLED PER MANATEE COUNTY STANDARDS FOR GENERAL UTILITY CONSTRUCTION, LATEST EDITION.

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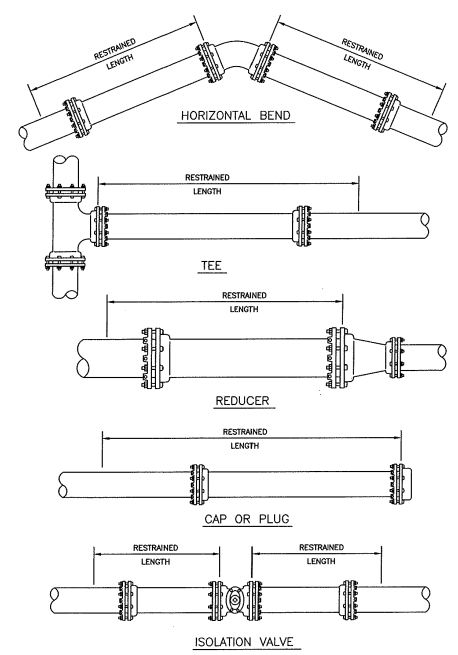
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SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA



ENGINEER	Proj. No. 603526I
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
MANATEE COUNTY UTILITIES	



RESTRAINED LENGTHS FOR PIPE UG-18

REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (POLY-WRAPPED)

MAIN PIPE SIZE	HORIZ. BENDS			TEES						REDUCERS						PLUGS		VALVES			
	90°	45°	22.5°	SIZE			LENGTH			SIZE			LENGTH			B	d	B	d		
36	142	59	28	36	30	24	18	12	6	30	24	18	12	6	30	24	18	12	6	453	227
30	124	51	25	30	24	18	12	6	24	18	12	6	24	18	12	6	24	18	12	391	196
24	106	44	21	24	18	12	6	3	24	18	12	6	24	18	12	6	24	18	12	327	164
20	92	38	18	20	15	10	6	3	20	15	10	6	20	15	10	6	20	15	10	280	140
16	77	32	15	16	12	8	4	3	16	12	8	4	16	12	8	4	16	12	8	231	116
12	61	25	12	12	9	6	3	3	12	9	6	3	12	9	6	3	12	9	6	181	91
10	52	22	10	10	7	5	2	3	10	7	5	2	10	7	5	2	10	7	5	153	77
8	44	18	9	8	6	4	2	3	8	6	4	2	8	6	4	2	8	6	4	128	64
6	34	14	7	6	4	3	1	3	6	4	3	1	6	4	3	1	6	4	3	98	49
4	24	10	5	4	3	2	1	3	4	3	2	1	4	3	2	1	4	3	2	69	35

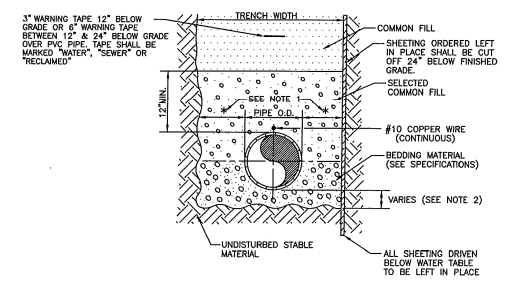
REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (NON-WRAPPED)

MAIN PIPE SIZE	HORIZ. BENDS			TEES						REDUCERS						PLUGS		VALVES			
	90°	45°	22.5°	SIZE			LENGTH			SIZE			LENGTH			B	d	B	d		
36	100	42	20	36	30	24	18	12	6	30	24	18	12	6	30	24	18	12	6	188	94
30	88	37	18	30	24	18	12	6	24	18	12	6	24	18	12	6	24	18	12	162	81
24	76	31	15	24	18	12	6	3	24	18	12	6	24	18	12	6	24	18	12	135	68
20	65	27	13	20	15	10	6	3	20	15	10	6	20	15	10	6	20	15	10	116	58
16	54	22	11	16	12	8	4	3	16	12	8	4	16	12	8	4	16	12	8	98	48
12	43	18	8	12	9	6	3	3	12	9	6	3	12	9	6	3	12	9	6	75	38
10	37	16	7	10	7	5	2	3	10	7	5	2	10	7	5	2	10	7	5	63	32
8	30	13	6	8	6	4	2	3	8	6	4	2	8	6	4	2	8	6	4	53	27
6	24	10	5	6	4	3	1	3	6	4	3	1	6	4	3	1	6	4	3	41	21
4	17	7	3	4	3	2	1	3	4	3	2	1	4	3	2	1	4	3	2	29	15

NOTE: SEE "RESTRAINED LENGTHS FOR PVC PIPE" DETAIL FOR NOTES 1 THROUGH 8 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR DIP.

CONCRETE THRUST BLOCKS UG-7

- NOTES:
- 1) 10" MAX. FOR PIPE DIAMETER LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
 - 2) 4" MAX. FOR PIPE 18" DIAMETER AND LESS; 6" MAX. FOR PIPE DIAMETER 18" TO 36" AND 9" MAX. FOR PIPE DIAMETER 42" AND OVER.
 - 3) INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - 4) BACKFILL ASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% ASHTO T-100 DENSITY.

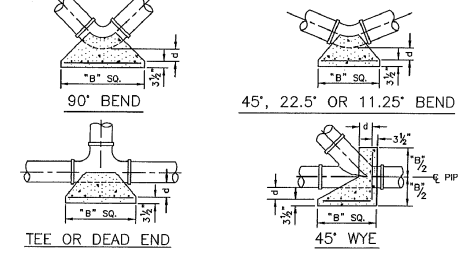


TRENCH WITH TYPE A-2 PIPE BEDDING UG-15

PIPE SIZE (IN.)	THRUST BLOCK DIMENSIONS B ft. x d inches											
	90° BEND		45° BEND		22.5° BEND		11.25° BEND		DEAD END & TEE		45° WYE	
4	1.5	3 1/2	1.1	3 1/2	0.8	3 1/2	0.8	3 1/2	1.3	3 1/2	1.1	3 1/2
6	2.2	5 1/4	1.6	3 3/4	1.2	3 3/4	0.8	3 3/4	1.9	4 1/2	1.6	3 3/4
8	2.9	7	2.1	5	1.5	3 1/2	1.1	3 1/2	2.4	6 1/4	2.0	4 1/4
10	3.5	8 1/2	2.6	6 1/4	1.9	4 1/2	1.3	3 1/2	3.0	7 1/4	2.5	6
12	4.2	10	3.1	7 1/2	2.2	5 1/4	1.6	3 3/4	3.5	8 1/2	3.0	7 1/4
14	4.9	11 1/4	3.6	8 3/4	2.6	6 1/4	1.8	4 1/4	4.1	9 3/4	3.4	8 1/4
16	5.5	13 1/4	4.1	9 3/4	2.9	7	2.1	5	4.7	11 1/4	3.9	9 1/4
18	6.2	15	4.6	11	3.3	8	2.3	6 1/2	5.2	12 1/2	4.4	10 1/2
20	6.9	16 1/2	5.0	12	3.6	8 3/4	2.6	6 1/2	5.8	14	4.8	11 3/4
24	8.2	19 1/4	6.0	14 1/2	4.3	10 1/4	3.1	7 1/2	6.9	16 1/2	5.8	14
30	10.1	24 1/4	7.5	18	5.3	12 3/4	3.8	9	8.5	20 1/2	7.2	17 1/4
36	12.1	29	8.9	21 1/4	6.4	15 1/4	4.5	10 3/4	10.2	24 1/2	8.6	20 3/4

REINFORCEMENT MAT SCHEDULE FOR DIM. "B" BETWEEN 5.75' & 11.5' USE #4 @ 8" EACH WAY FOR DIM. "B" LESS THAN 5.75' USE #3 @ 8" EACH WAY

- NOTES:
1. ALL THRUST BLOCKS SHALL BE CAST IN PLACE.
 2. THIS TABLE IS BASED ON WATER PRESSURE=180 PSI WITH AN ALLOWABLE SOIL BEARING PRESSURE=2000 PSF. CONCRETE STRENGTH f_c=3000 PSI, REINFORCEMENT f_y=60,000 KSI THRUST BLOCK SHALL BE CAST AGAINST FIRM UNDISTURBED SOIL.
 3. FOR LARGER "B" DIMENSIONS IT IS NECESSARY TO CHECK THAT PIPE IS SUFFICIENTLY DEEP TO ALLOW 15" MIN. SOIL COVER OVER TOP EDGE OF THRUST BLOCK.



RESTRAINED LENGTHS FOR DIP UG-9

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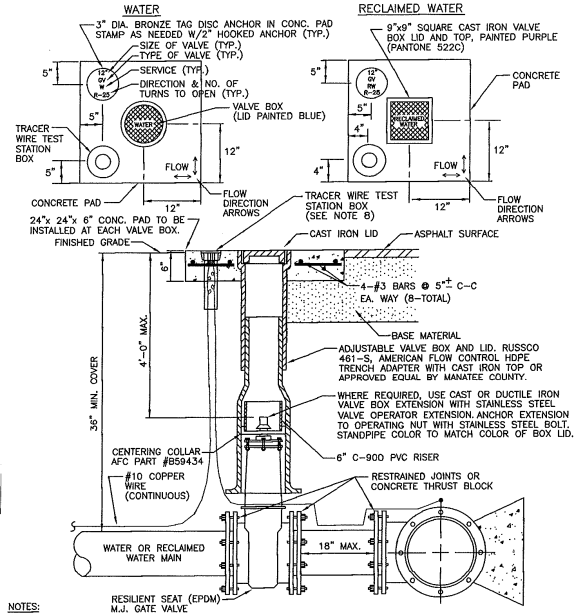
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17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

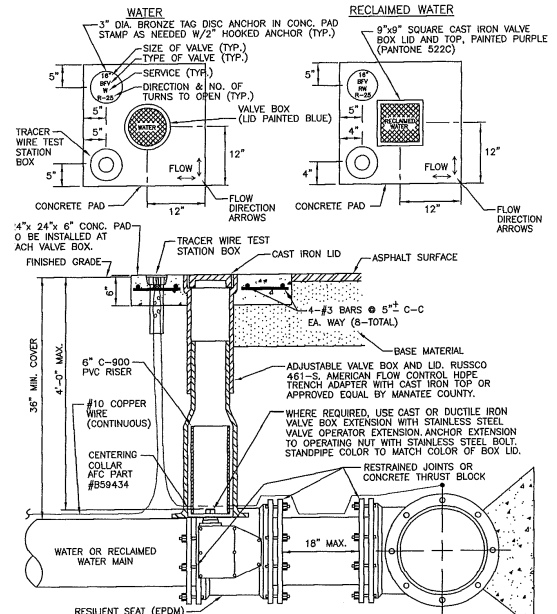
WADE TRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035261
	Dwg. Date January 8, 2009
MANATEE COUNTY UTILITIES	



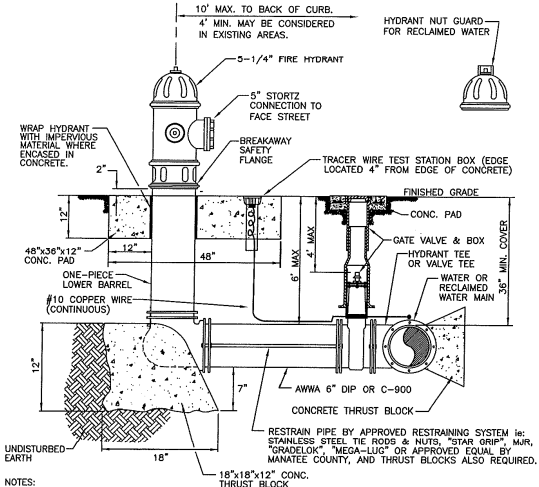
- NOTES:
1. "WV" OR "RWV" TO BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A BLUE DISC WITH "WV" OR PURPLE DISC WITH "RWV" AND A 1/8"x1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
 2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS DETERMINED IN THE FIELD.
 3. WATER VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS.
 4. PRECAST CONCRETE PADS & THRUST BLOCKS SHALL NOT BE USED.
 5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
 6. FOR VALVES 16" AND LARGER, USE BUTTERFLY VALVES.
 7. "FLOW" AND FLOW DIRECTION ARROWS TO BE IMPRESSED INTO NEWLY POURED CONCRETE PAD.
 8. TRACER WIRE TEST STATION BOX IS NOT REQUIRED IN VALVE BOX PAD IF THE GATE VALVE IS LOCATED WITHIN 200 FEET OF A WATER SERVICE, BLOW-OFF, BACKFLOW PREVENTER OR FIRE HYDRANT THAT HAS A TRACER WIRE BOX. A TRACER WIRE BOX IS REQUIRED IN THE CONCRETE PAD AT ALL GATE VALVES AT CONNECTIONS.

GATE VALVE, BOX, LID AND TAG
UW-2



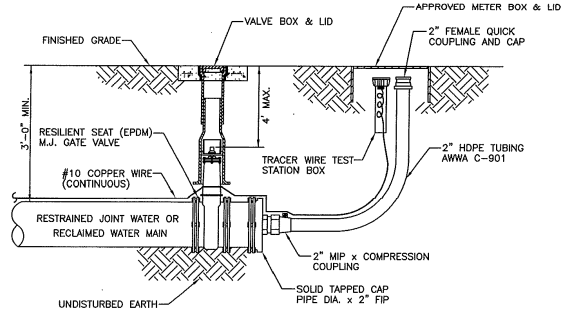
- NOTES:
1. "WV" OR "RWV" TO BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A BLUE DISC WITH "WV" OR PURPLE DISC WITH "RWV" AND A 1/8"x1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
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 5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
 6. FOR VALVES 16" AND LARGER, USE BUTTERFLY VALVES.
 7. "FLOW" AND FLOW DIRECTION ARROWS TO BE IMPRESSED INTO NEWLY POURED CONCRETE PAD.

BUTTERFLY VALVE, BOX, LID AND TAG
UW-3



- NOTES:
1. WEEPHOLES TO BE PLUGGED WITH BRASS PLUGS.
 2. FIRE HYDRANTS SHALL BE A MINIMUM OF 6" OFF EDGE OF PAVEMENT AND 10' MAX. FROM BACK OF CURB. WHERE POSSIBLE AND WHERE SIDEWALK IS TO BE INSTALLED, FIRE HYDRANT SHALL BE LOCATED BETWEEN SIDEWALK AND RIGHT-OF-WAY LINE.
 3. HYDRANTS SHALL BE FUSION BONDED EPOXY COATED SAFETY YELLOW FOR WATER AND PURPLE (PANTONE 522C) FOR RECLAIMED WATER. HYDRANT SHALL BE DUCTILE IRON CONSTRUCTION.
 4. FIRE HYDRANTS SHALL BE PLACED SO THAT STORM WATER FLOWS AWAY FROM THE HYDRANT.
 5. FIRE HYDRANTS SHALL BE CONSTRUCTED WITH "GROUND LINE" SET TO FINISHED GRADES AS ESTABLISHED IN THE FIELD. NORMAL BURY IS 3 FEET OF COVER FOR ALL WATER LINES.
 6. FIRE HYDRANTS MAY BE CONSTRUCTED WITH "GRADELOK" OFFSET FITTINGS.
 7. RAISED REFLECTIVE PAVEMENT MARKER (BLUE) FOR POTABLE WATER (PURPLE) FOR RECLAIMED WATER SHALL BE INSTALLED AT CENTERLINE OF PAVEMENT ADJACENT TO EACH HYDRANT.
 8. PRECAST CONCRETE THRUST BLOCKS & PADS SHALL NOT BE USED.
 9. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE 1/2" CHAMFER.
 10. FIRE HYDRANT VALVE SHALL BE FASTENED DIRECTLY TO TEE.
 11. IN-LINE VALVES SHOULD BE LOCATED AT HYDRANT TEES.
 12. HYDRANTS SHALL BE LOCATED ON SAME SIDE OF ROAD AS WATER MAIN UNLESS APPROVED BY M.C.U.O.D.
 13. THERE MUST BE A CLEARANCE OF 7 1/2 FEET FROM FRONT AND BOTH SIDES, AND FOUR FEET TO THE REAR OF FENCES, TREES, ETC.
 14. SEE GATE VALVE, BOX AND LID STANDARD DETAIL UW-2.

FIRE HYDRANT ASSEMBLY
UW-5



- NOTES:
1. SEE GATE VALVE, BOX AND LID STANDARD DETAIL.
 2. SEE MANATEE COUNTY PUBLIC WORKS UTILITY CONSTRUCTION STANDARD SPECIFICATIONS.

BUTTERFLY VALVE, BOX, LID AND TAG
UW-3

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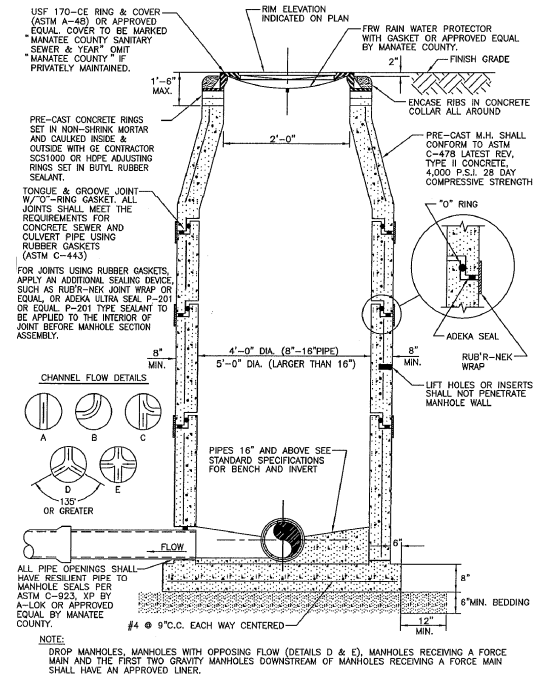
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DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



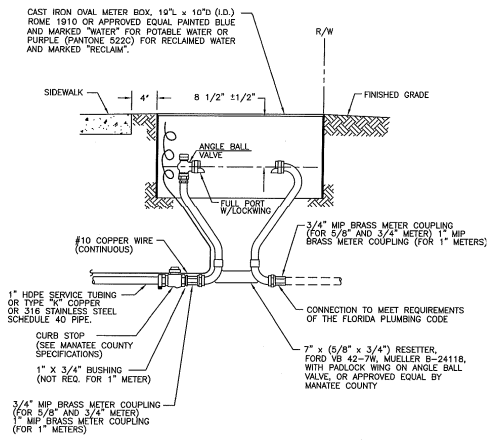
17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADE TRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

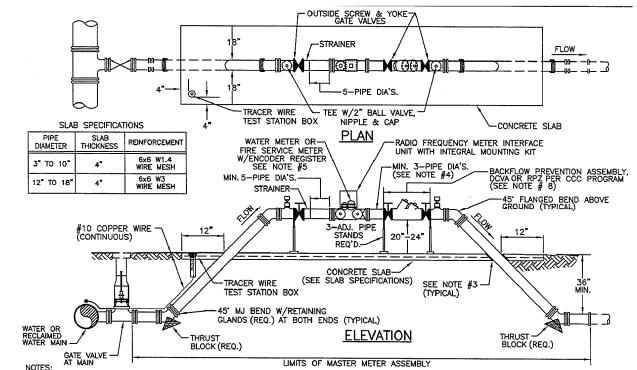
ENGINEER David O. Theung, PE No. 44786	Proj. No. 6035261
	Dwg. Date January 8, 2009
MANATEE COUNTY UTILITIES	



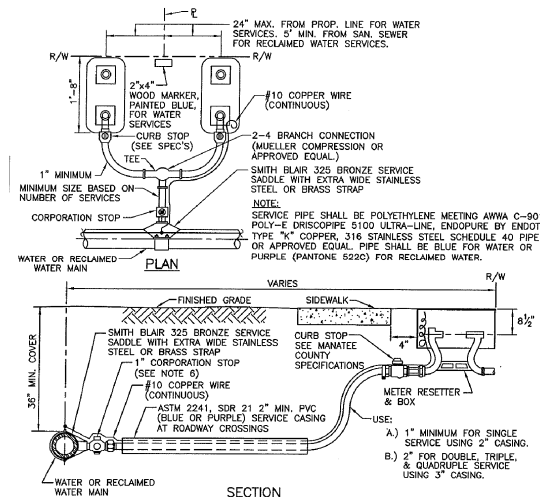
STANDARD PRE-CAST SANITARY SEWER MANHOLE FOR UNDISTURBED FLOW
US-2



METER BOX ASSEMBLY FOR 5/8" x 3/4", 3/4" & 1" METERS
UW-17



3" AND ABOVE MASTER METER
UW-15



TYPICAL SERVICE CONNECTION
UW-19

DESIGN FILE: P:\Mts20080\01m\CADD-deta\gntm03.dgn PLOT FILE: _PLOTFILE_

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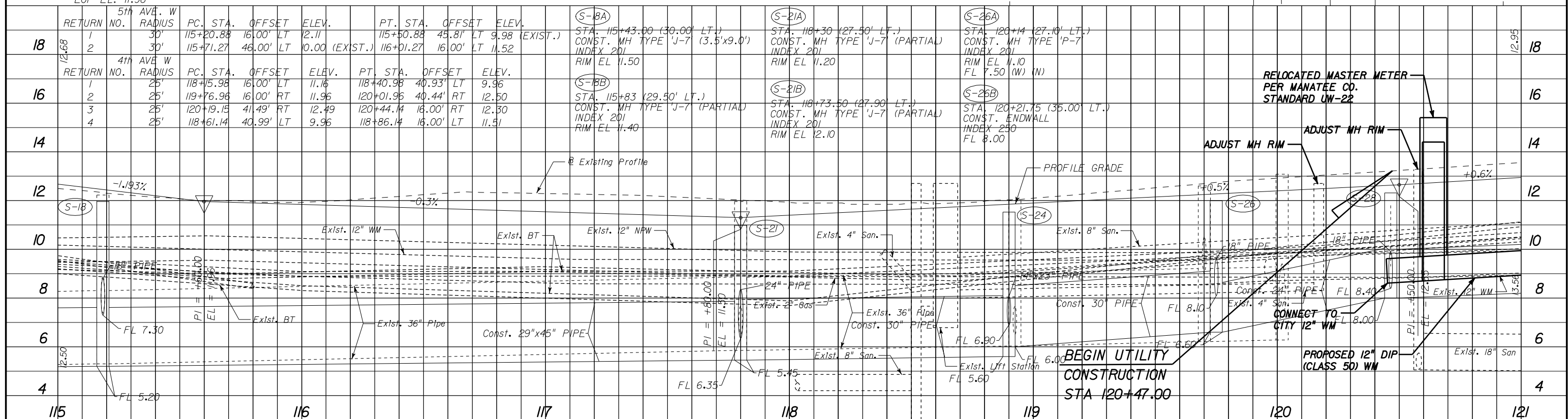
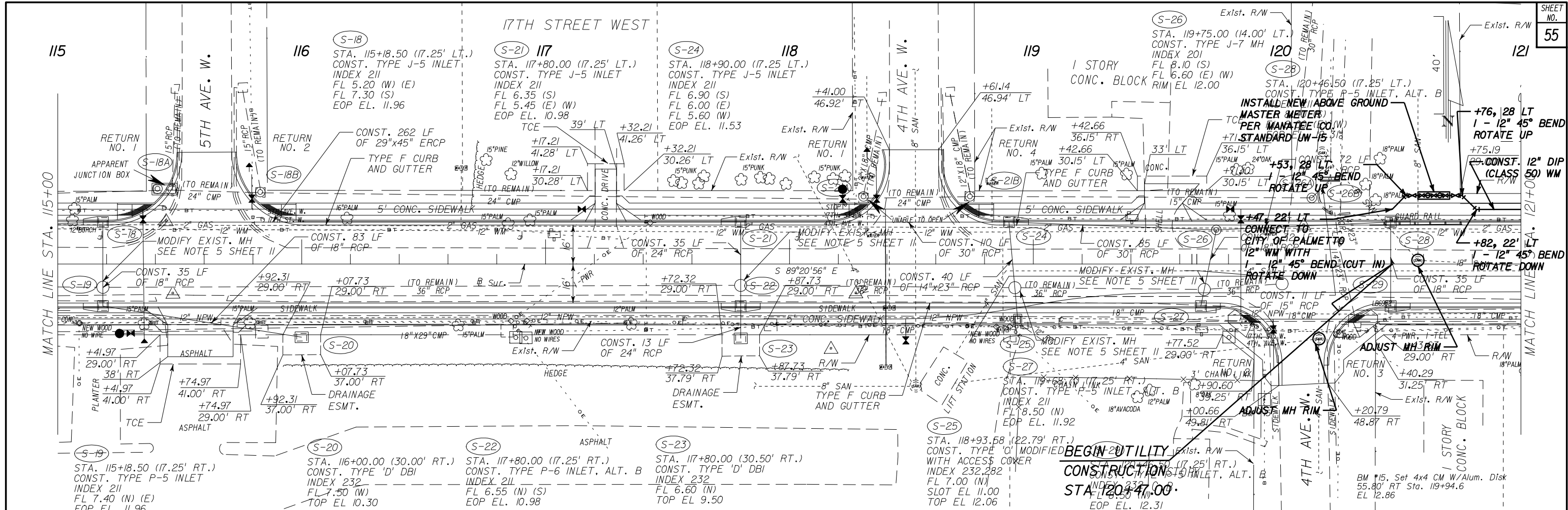
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CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE	44786			



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

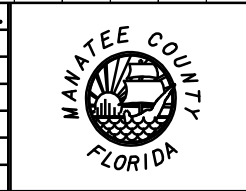
WADE TRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
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ENGINEER David O. Theung, PE No. 44786	Proj. No. 6035261
	Dwg. Date January 8, 2009
MANATEE COUNTY UTILITIES	



DESIGNED BY	SRR	DATE	
CHECKED BY	BDG	DATE	1/09
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SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION	DESCRIPTION & DATE	BY	NO.



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

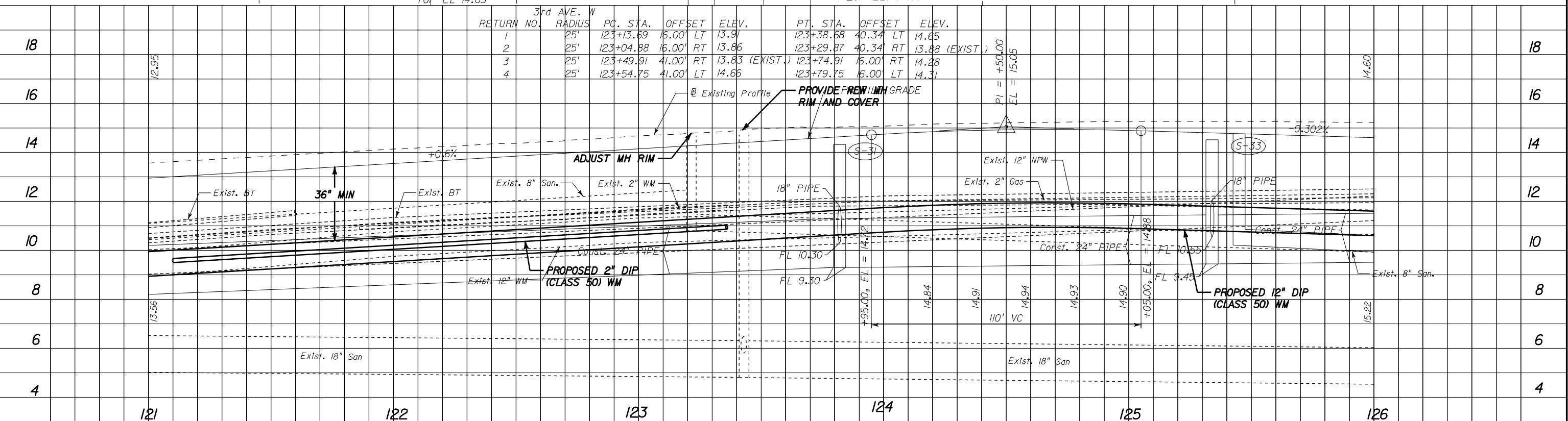
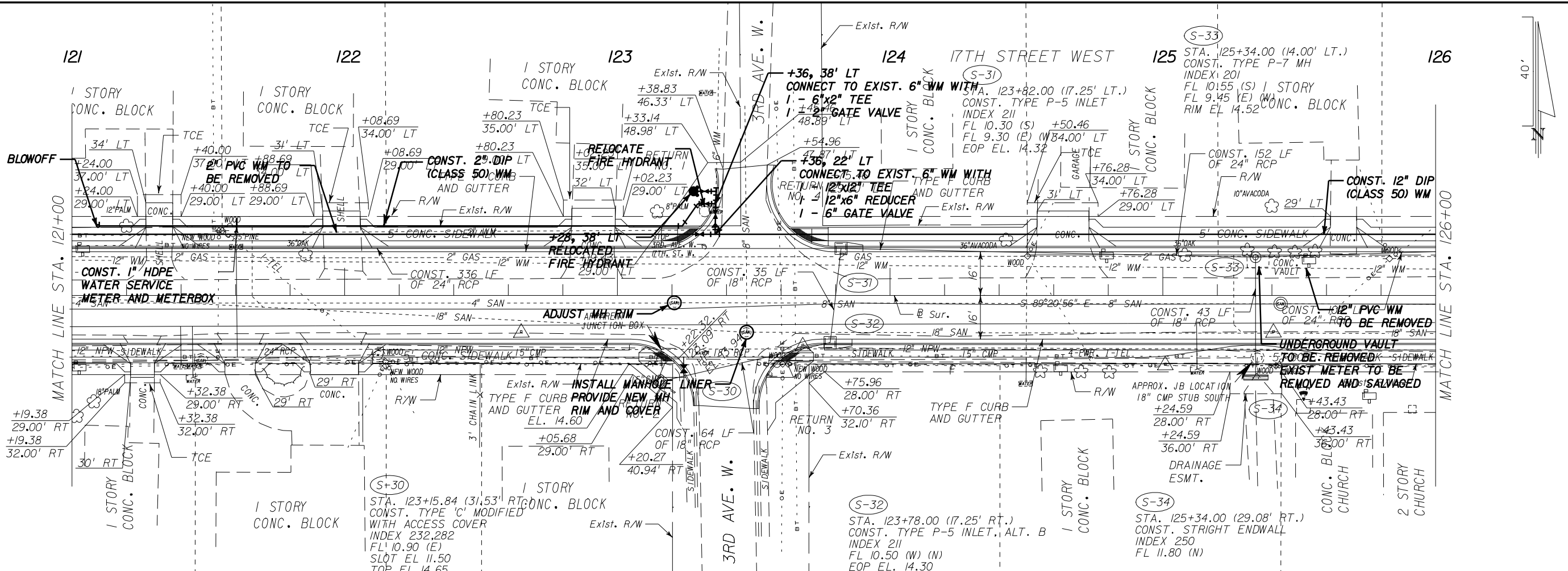
WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No. 44786
Certificate of Authorization No.: 3952

ENGINEER
David O. Theung, PE No. 44786

Proj. No. 6035261
Dwg. Date January 8, 2009

MANATEE COUNTY UTILITIES

PLOT DATE: 5/27/2009
DESIGN FILE: P:\Mte2008\01m\CADD-deta\utopr-d04.dgn
PLOT FILE: _PLOTFILE_



RETURN NO.	RADIUS	PG. STA.	OFFSET	ELEV.	PT. STA.	OFFSET	ELEV.
1	25'	123+13.69	15.00' LT	13.91	123+38.68	40.34' LT	14.65
2	25'	123+04.88	16.00' RT	13.86	123+29.87	40.34' RT	13.88 (EXIST.)
3	25'	123+49.91	41.00' RT	13.83 (EXIST.)	123+74.91	16.00' RT	14.28
4	25'	123+54.75	41.00' LT	14.66	123+79.75	16.00' LT	14.31

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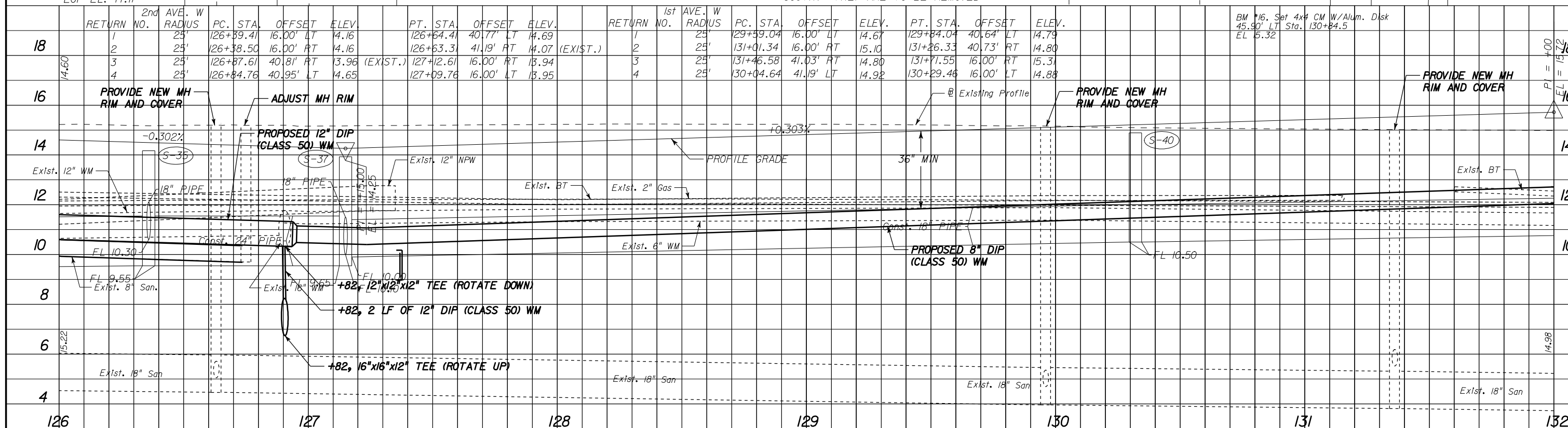
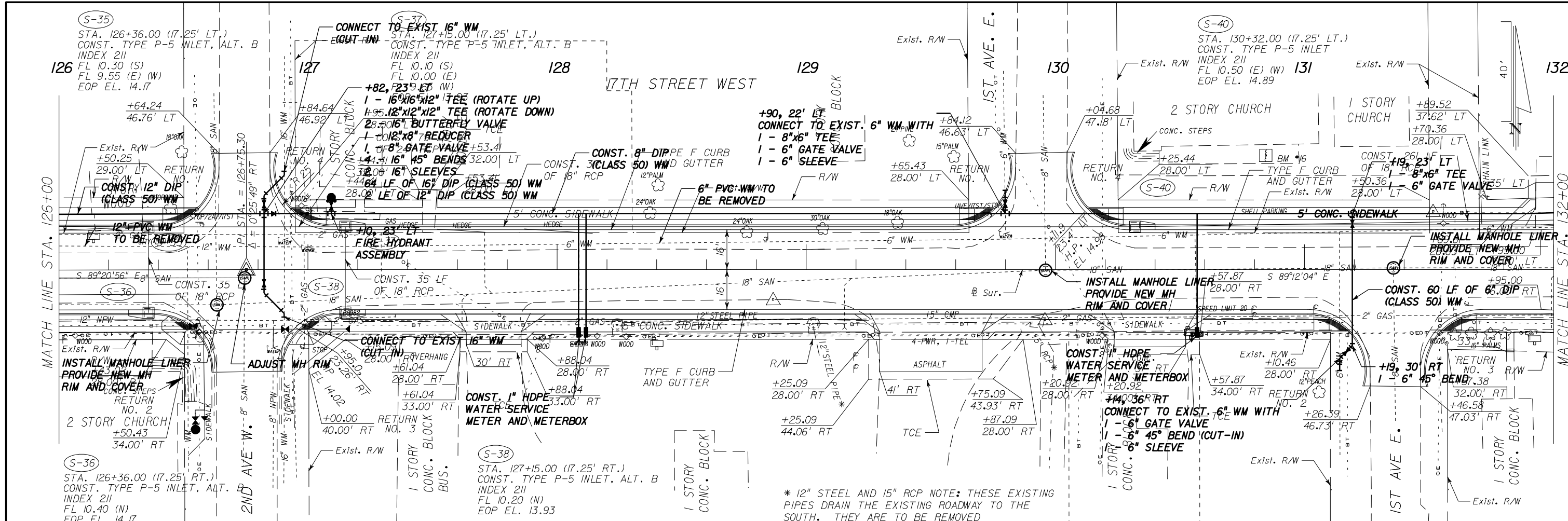
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CHECKED BY	BDG	DATE			
DRAWN BY	KDR	DATE			
CHECKED BY	BDG	DATE			
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

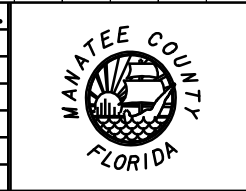
WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No. 44786
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ENGINEER	David O. Theung, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
MANATEE COUNTY UTILITIES			



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SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION	DESCRIPTION & DATE	BY	NO.



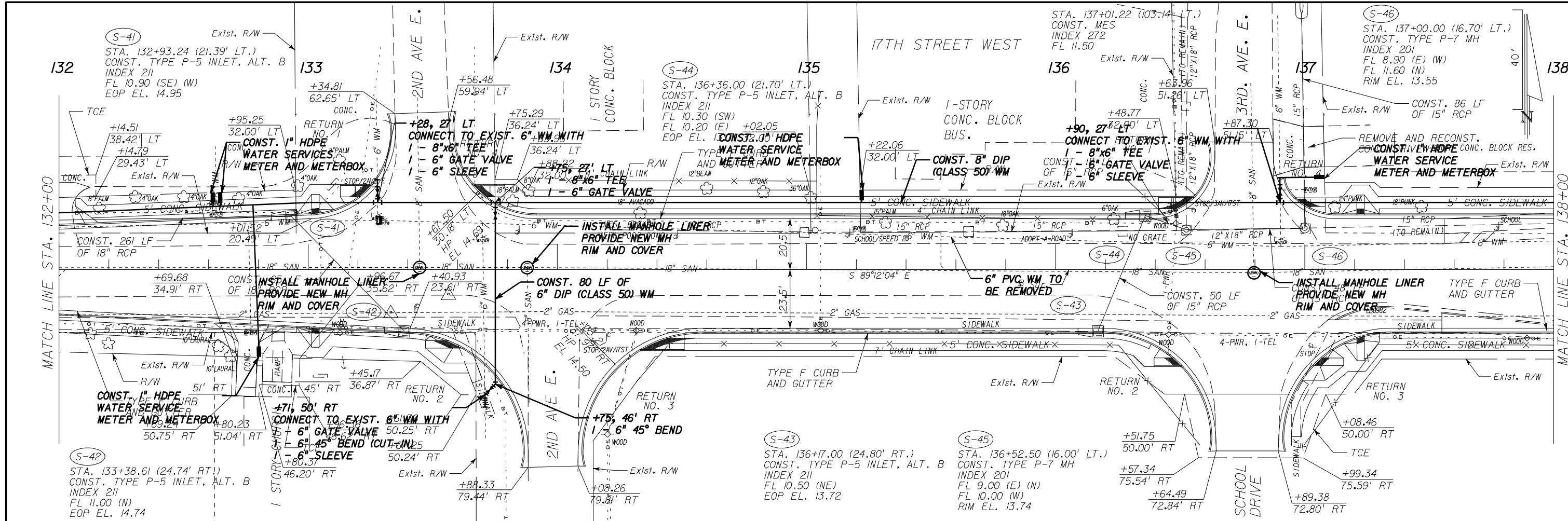
17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No. 44786
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ENGINEER
David O. Theung, PE No. 44786

Proj. No. 6035261
Dwg. Date January 8, 2009
MANATEE COUNTY UTILITIES

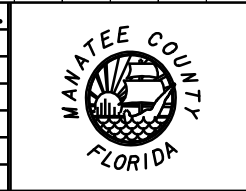
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DESIGN FILE: P:\Mtc20080\01m\CADD-data\utpr-d06.dgn
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STATION	2nd AVE. E				3rd AVE. E (SCHOOL ENTRANCE)			
	RETURN NO.	RADIUS	PC. STA.	OFFSET	ELEV.	PT. STA.	OFFSET	ELEV.
18	1	35'	133+01.52	20.49' LT	14.94	133+35.03	56.86' LT	14.51
	2	50'	133+40.93	23.61' RT	14.73	133+88.32	73.45' RT	14.33
	3	50'	134+08.35	72.91' RT	14.38	134+58.34	23.50' RT	14.30
	4	35'	133+56.74	53.96' LT	14.60	133+91.71	20.50' LT	14.61
16	1	35'	133+01.52	20.49' LT	14.94	133+35.03	56.86' LT	14.51
	2	50'	133+40.93	23.61' RT	14.73	133+88.32	73.45' RT	14.33
	3	50'	134+08.35	72.91' RT	14.38	134+58.34	23.50' RT	14.30
	4	35'	133+56.74	53.96' LT	14.60	133+91.71	20.50' LT	14.61
14	1	35'	133+01.52	20.49' LT	14.94	133+35.03	56.86' LT	14.51
	2	50'	133+40.93	23.61' RT	14.73	133+88.32	73.45' RT	14.33
	3	50'	134+08.35	72.91' RT	14.38	134+58.34	23.50' RT	14.30
	4	35'	133+56.74	53.96' LT	14.60	133+91.71	20.50' LT	14.61
12	1	35'	133+01.52	20.49' LT	14.94	133+35.03	56.86' LT	14.51
	2	50'	133+40.93	23.61' RT	14.73	133+88.32	73.45' RT	14.33
	3	50'	134+08.35	72.91' RT	14.38	134+58.34	23.50' RT	14.30
	4	35'	133+56.74	53.96' LT	14.60	133+91.71	20.50' LT	14.61
10	1	35'	133+01.52	20.49' LT	14.94	133+35.03	56.86' LT	14.51
	2	50'	133+40.93	23.61' RT	14.73	133+88.32	73.45' RT	14.33
	3	50'	134+08.35	72.91' RT	14.38	134+58.34	23.50' RT	14.30
	4	35'	133+56.74	53.96' LT	14.60	133+91.71	20.50' LT	14.61
8	1	35'	133+01.52	20.49' LT	14.94	133+35.03	56.86' LT	14.51
	2	50'	133+40.93	23.61' RT	14.73	133+88.32	73.45' RT	14.33
	3	50'	134+08.35	72.91' RT	14.38	134+58.34	23.50' RT	14.30
	4	35'	133+56.74	53.96' LT	14.60	133+91.71	20.50' LT	14.61
6	1	35'	133+01.52	20.49' LT	14.94	133+35.03	56.86' LT	14.51
	2	50'	133+40.93	23.61' RT	14.73	133+88.32	73.45' RT	14.33
	3	50'	134+08.35	72.91' RT	14.38	134+58.34	23.50' RT	14.30
	4	35'	133+56.74	53.96' LT	14.60	133+91.71	20.50' LT	14.61
4	1	35'	133+01.52	20.49' LT	14.94	133+35.03	56.86' LT	14.51
	2	50'	133+40.93	23.61' RT	14.73	133+88.32	73.45' RT	14.33
	3	50'	134+08.35	72.91' RT	14.38	134+58.34	23.50' RT	14.30
	4	35'	133+56.74	53.96' LT	14.60	133+91.71	20.50' LT	14.61

DESIGNED BY	SRR	DATE	
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DRAWN BY	KDR	DATE	1/09
CHECKED BY	BDG	DATE	1/09
SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION DESCRIPTION & DATE	BY	NO.



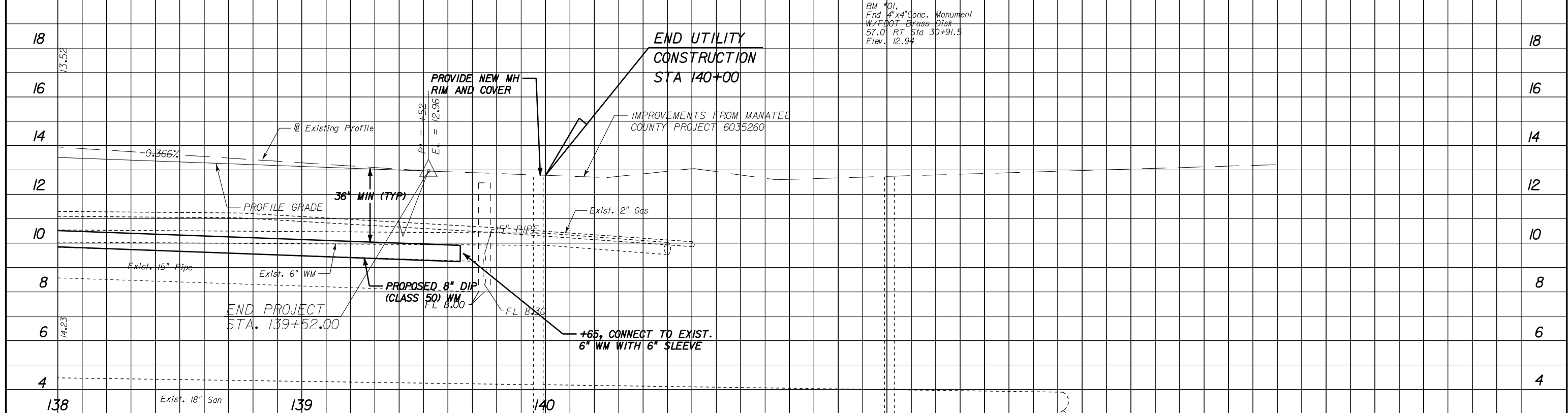
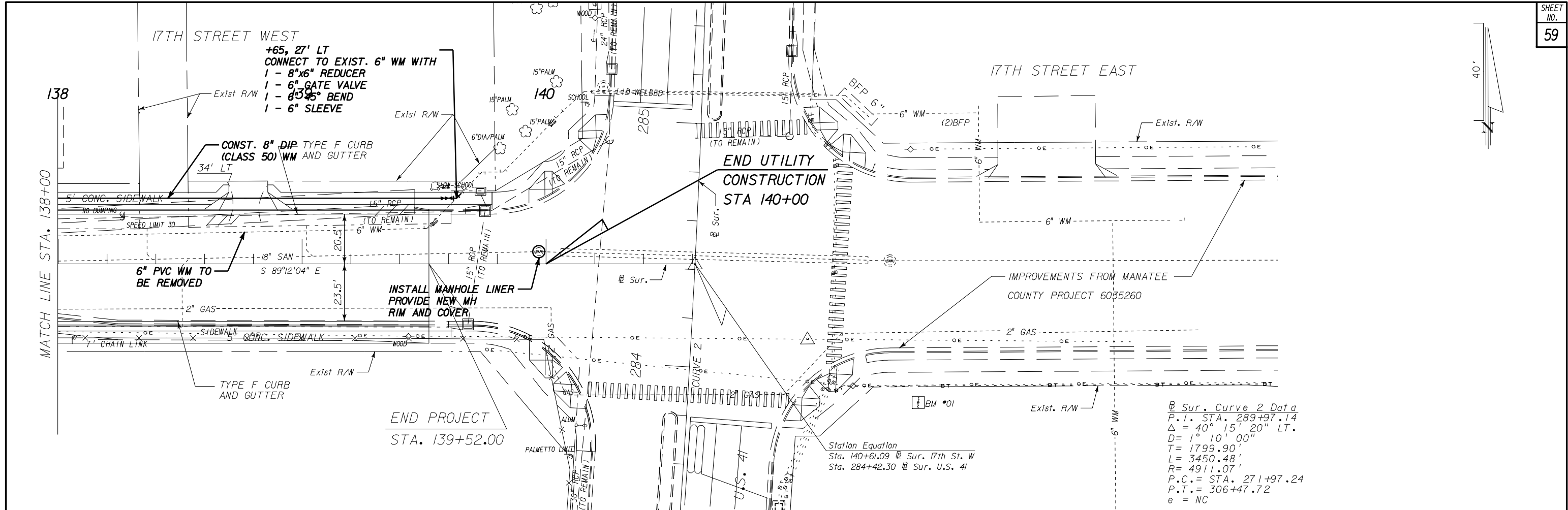
17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No. 44786
Certificate of Authorization No.: 3952

ENGINEER
David O. Theung, PE No. 44786

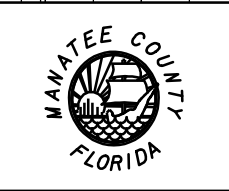
Proj. No. 6035261
Dwg. Date January 8, 2009
MANATEE COUNTY UTILITIES

PLOT DATE: 5/27/2009
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 PLOT DATE: 5/27/2009

DESIGNED BY	SRR	DATE	REVISION DESCRIPTION & DATE	BY	NO.
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CHECKED BY	BDG	DATE			
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
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ENGINEER	David O. Theung, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
MANATEE COUNTY UTILITIES			

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			62		63		64		65		66		67		68		69		PLAN	FINAL	PLAN	FINAL	
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL							
700-20-11	Sign Single Post (Less than 12 SF)	AS	4		7		2		7		2		8		4		2		36				
700-20-12	Sign Single Post (12-20 SF)	AS	2		0		0		1		0		3		6		2		14				
700-20-41	Sign Single Post, (Relocate)	AS	2		3		0		5		0		4		3		2		19				
706-3	Retro-Reflective Pavement Markers	EA	70		40		24		34		32		36		88		24		348				
711-11-160	Pavement Messages, Thermoplastic (School)	EA	0		0		0		0		0		1		0		1		2				
711-11-160	Pavement Messages, Thermoplastic (R.R. Markings)	EA	0		0		4		0		0		0		0		0		4				
711-11-160	Pavement Messages, Thermoplastic (Bike Lane Markings)	EA	3		3		4		3		2		4		4		1		24				
711-11-170	Directional Arrows, Thermoplastic	EA	6		0		0		0		0		0		2		1		9				
711-11-151	Guide Lines, Thermoplastic (White)	LF	188		224		137		194		100		275		71		50		1239				
711-11-131	Skip Traffic Stripe, 10'-30' White, Thermoplastic	GM	0.034		0		0		0		0		0		0		0		0.034				
711-11-231	Skip Traffic Stripe, 10'-30' Yellow, Thermoplastic	GM	0		0		0		0.067		0.082		0.054		0		0		0.203				
711-11-123	Solid Traffic Stripe, 12" White, Thermoplastic (Crosswalk)	LF	660		320		0		234		144		312		636		0		2503				
711-11-125	Solid Traffic Stripe, 24" White, Thermoplastic (Stop Bar)	LF	161		58		80		41		25		78		188		0		631				
711-11-224	Solid Traffic Stripe, 18" Yellow, Thermoplastic (Chevron)	LF	39		17		0		0		0		0		152		10		208				
711-11-111	Solid Traffic Stripe, 6" White, Thermoplastic	NM	0.188		0.132		0.158		0.148		0.145		0.123		0.108		0.083		1.085				
711-11-211	Solid Traffic Stripe, 6" Yellow, Thermoplastic	NM	0.234		0.288		0.183		0.123		0.076		0.189		0.379		0.078		1.550				

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CHECKED BY	BDG	DATE	1/09			
DRAWN BY	KDR	DATE	1/09			
CHECKED BY	BDG	DATE	1/09			
SUPERVISED BY	DAVID O. THEUNG, PE *44786					



17th STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 6035261
<small>David O. Theung, PE No. 44786</small>	Dwg. Date January 8, 2009
SIGNING AND PAVEMENT MARKING	

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			70		71																		
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL			
700-20-11	Sign Single Post (Less than 12 SF)	AS	4		2													6	42				
700-20-12	Sign Single Post (12-20 SF)	AS	0		1													1	15				
700-20-41	Sign Single Post, (Relocate)	AS	0		0													0	19				
706-3	Retro-Reflective Pavement Markers	EA	28		14													42	390				
711-11-160	Pavement Messages, Thermoplastic (School)	EA	0		0													0	2				
711-11-160	Pavement Messages, Thermoplastic (R.R. Markings)	EA	0		0													0	4				
711-11-160	Pavement Messages, Thermoplastic (Bike Lane Markings)	EA	0		0													0	24				
711-11-170	Directional Arrows, Thermoplastic	EA	0		0													0	9				
711-11-151	Guide Lines, Thermoplastic (White)	LF	0		0													0	1239				
711-11-131	Skip Traffic Stripe, 10'-30' White, Thermoplastic	GM	0		0													0	0.034				
711-11-231	Skip Traffic Stripe, 10'-30' Yellow, Thermoplastic	GM	0		0													0	0.203				
711-11-123	Solid Traffic Stripe, 12" White, Thermoplastic (Crosswalk)	LF	118		0													118	2426				
711-11-125	Solid Traffic Stripe, 24" White, Thermoplastic (Stop Bar)	LF	19		0													19	650				
711-11-224	Solid Traffic Stripe, 18" Yellow, Thermoplastic (Chevron)	LF	0		0													0	208				
711-11-111	Solid Traffic Stripe, 6" White, Thermoplastic	NM	0.208		0.100													0.308	1.393				
711-11-211	Solid Traffic Stripe, 6" Yellow, Thermoplastic	NM	0.216		0.100													0.316	1.866				

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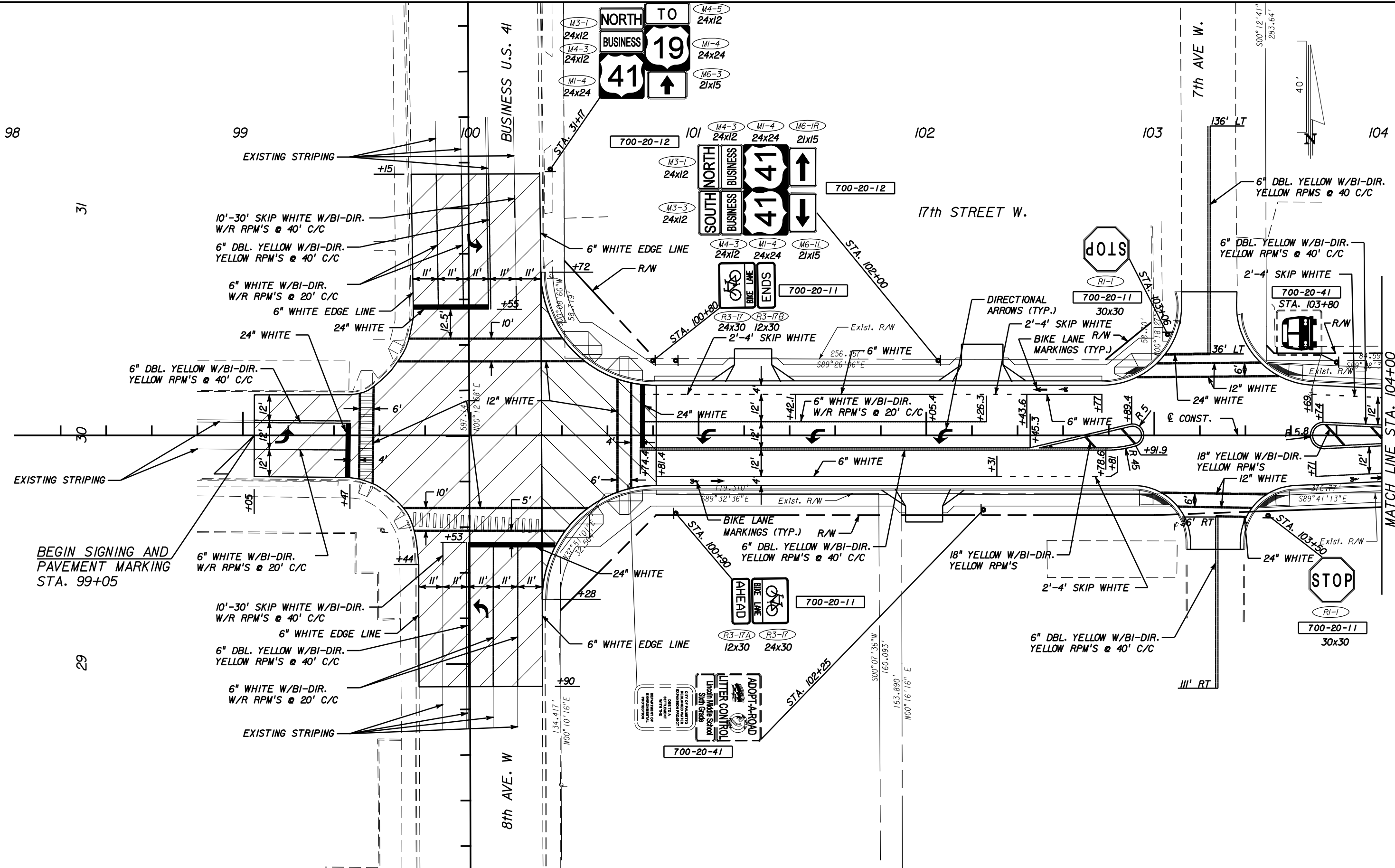
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DRAWN BY	KDR	DATE	1/09			
CHECKED BY	BDG	DATE	1/09			
SUPERVISED BY	DAVID O. THEUNG, PE *44786					



17th STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER <small>David O. Theung, PE No. 44786</small>	Proj. No. 6035261 Dwg. Date January 8, 2009
SIGNING AND PAVEMENT MARKING	



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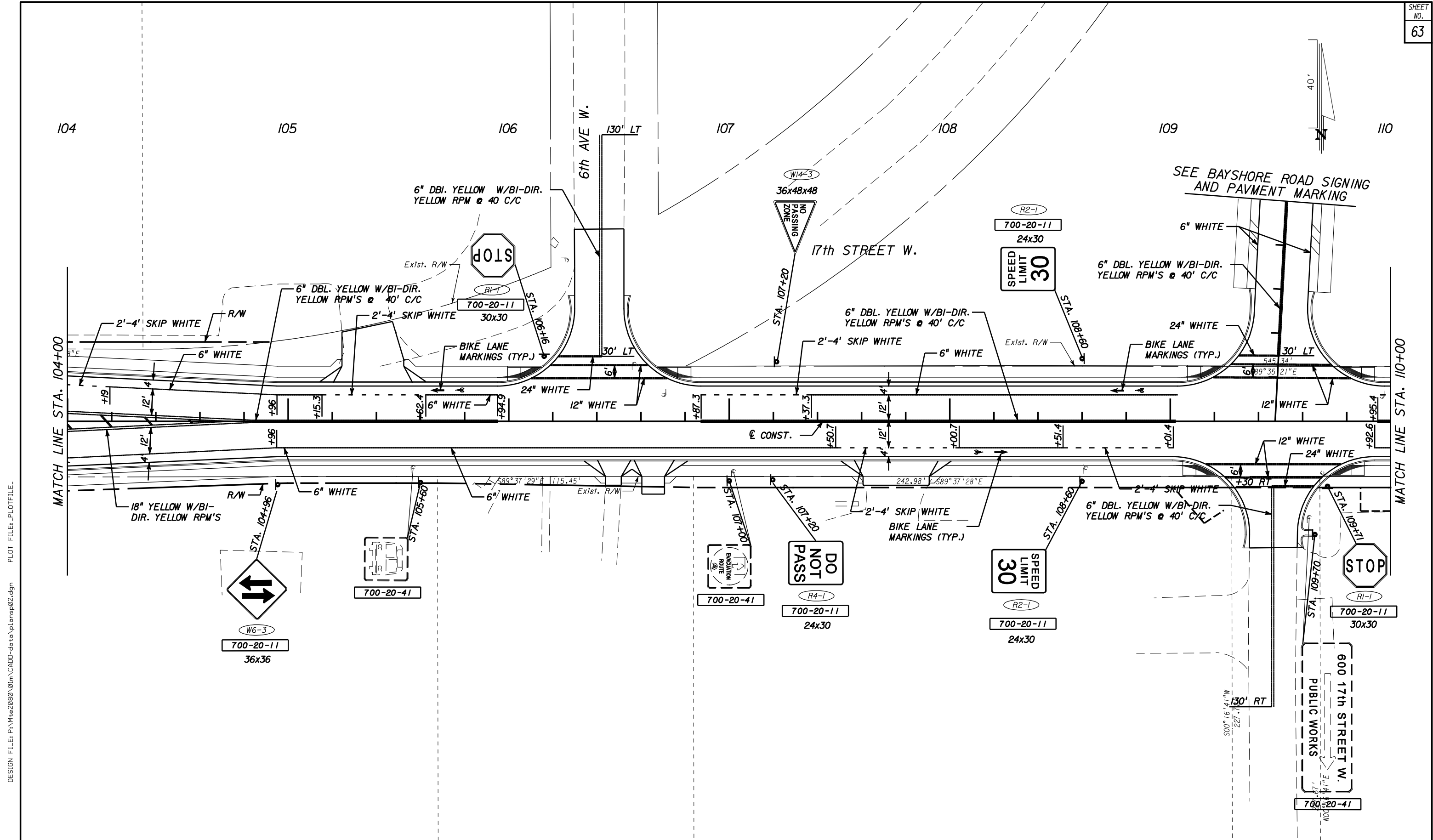
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CHECKED BY	BDG	DATE			
DRAWN BY	KDR	DATE			
CHECKED BY	BDG	DATE			
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No.
David O. Theung, PE No. 44786	6035261
	Dwg. Date January 8, 2009
SIGNING AND PAVEMENT MARKING	



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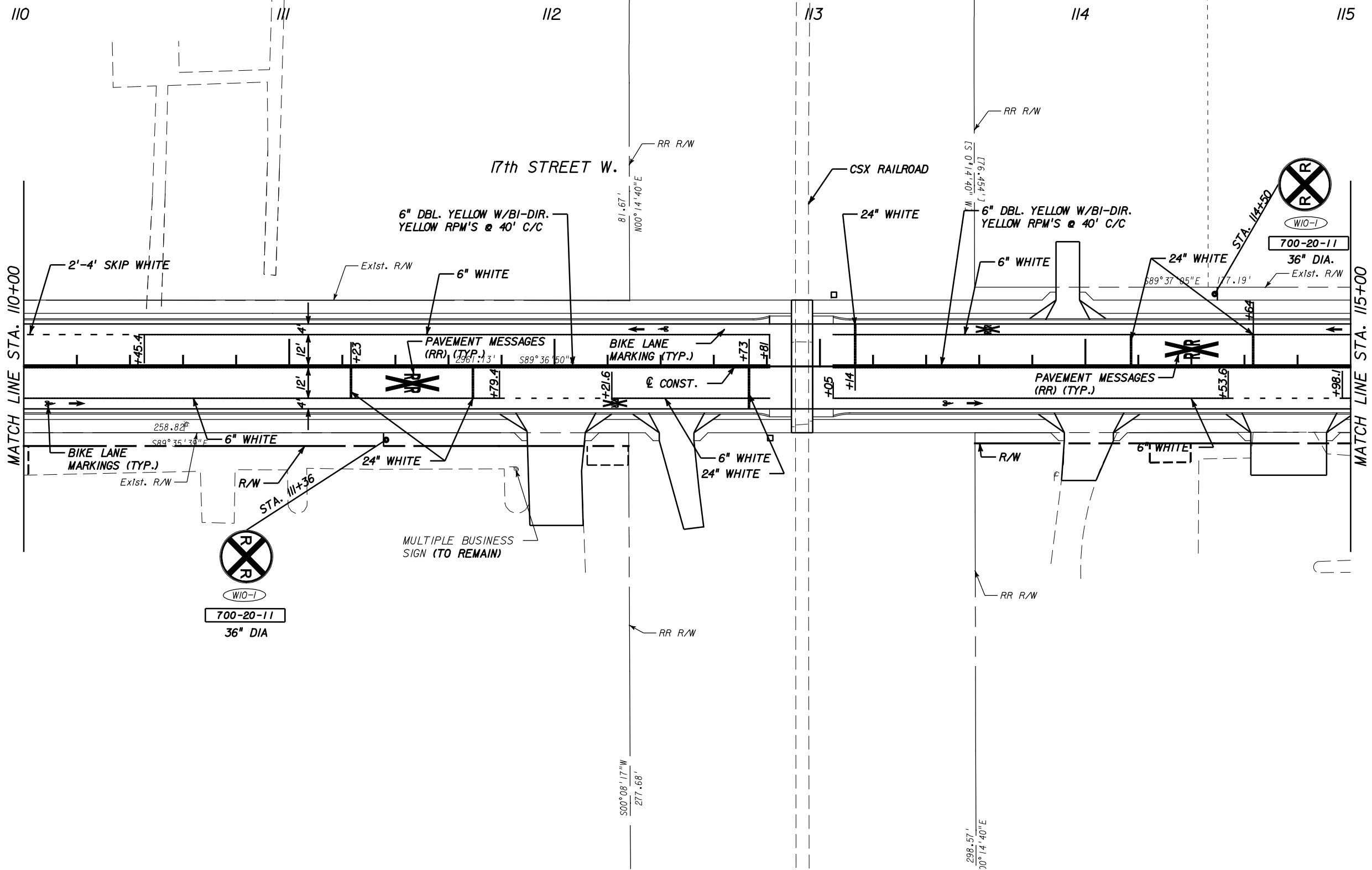
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CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 603526I
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
SIGNING AND PAVEMENT MARKING	



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SUPERVISED BY	DAVID O. THEUNG, PE 44786				

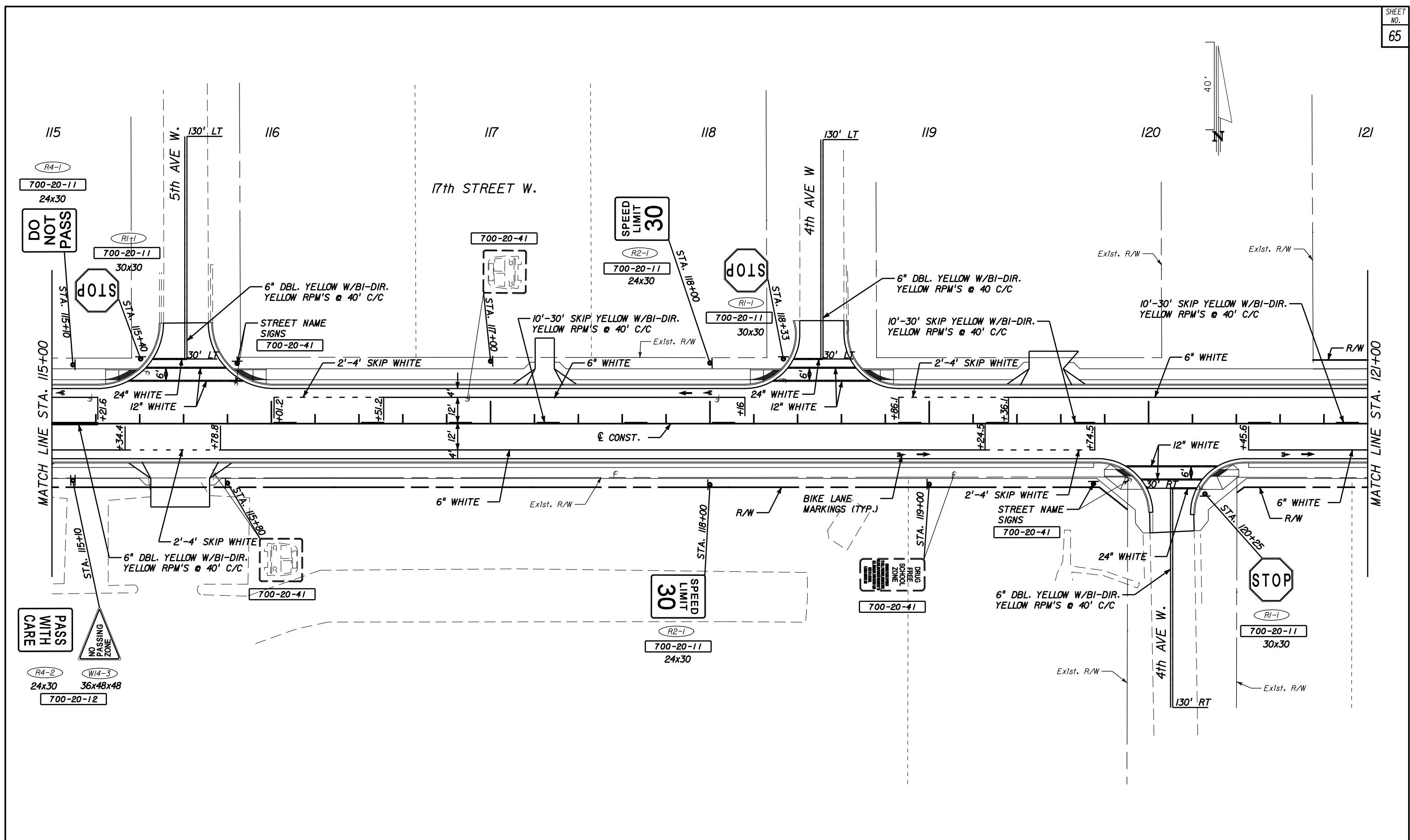


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 6035261
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
SIGNING AND PAVEMENT MARKING	

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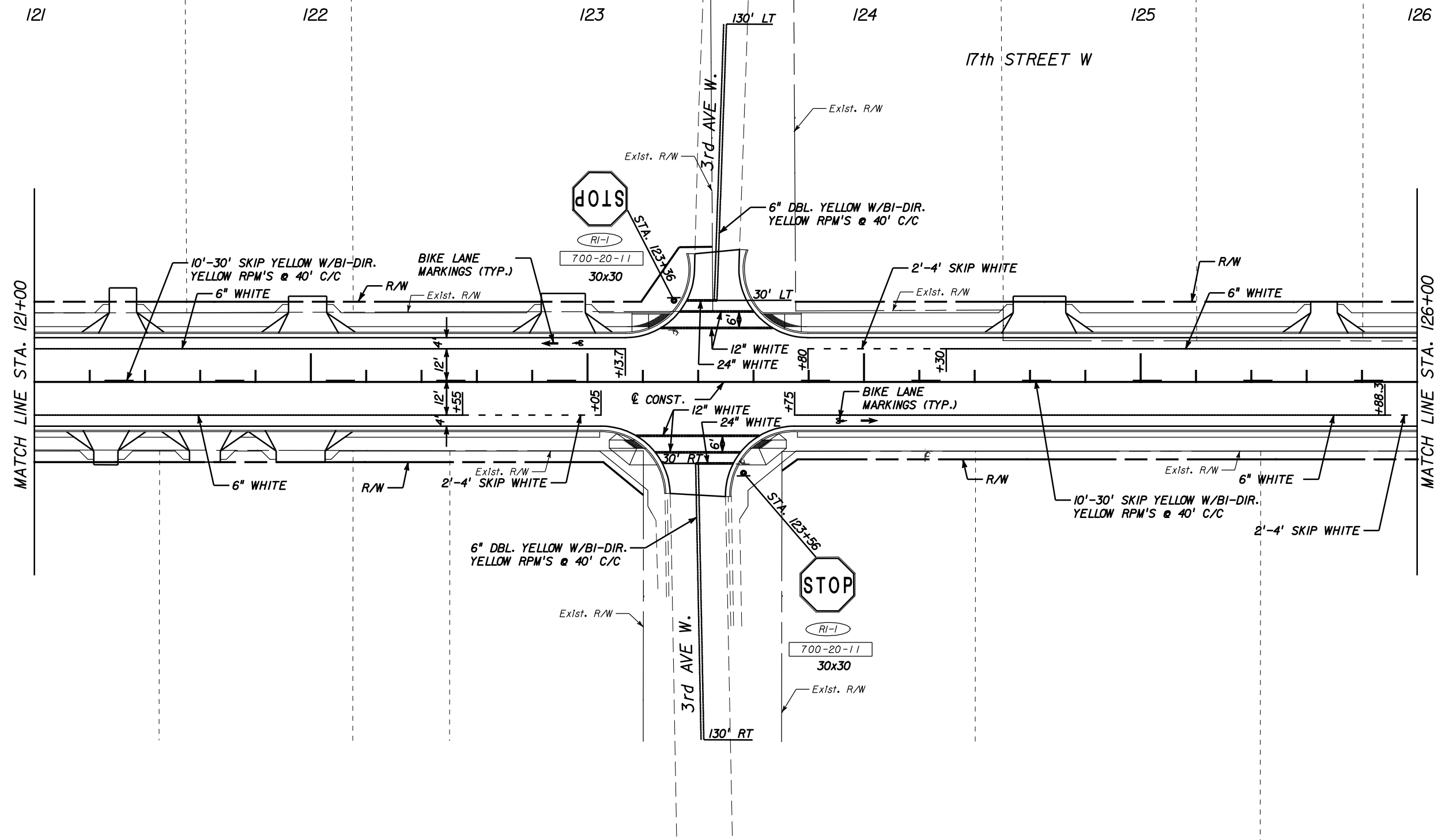
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CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 603526I
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
SIGNING AND PAVEMENT MARKING	



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CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE 44786				

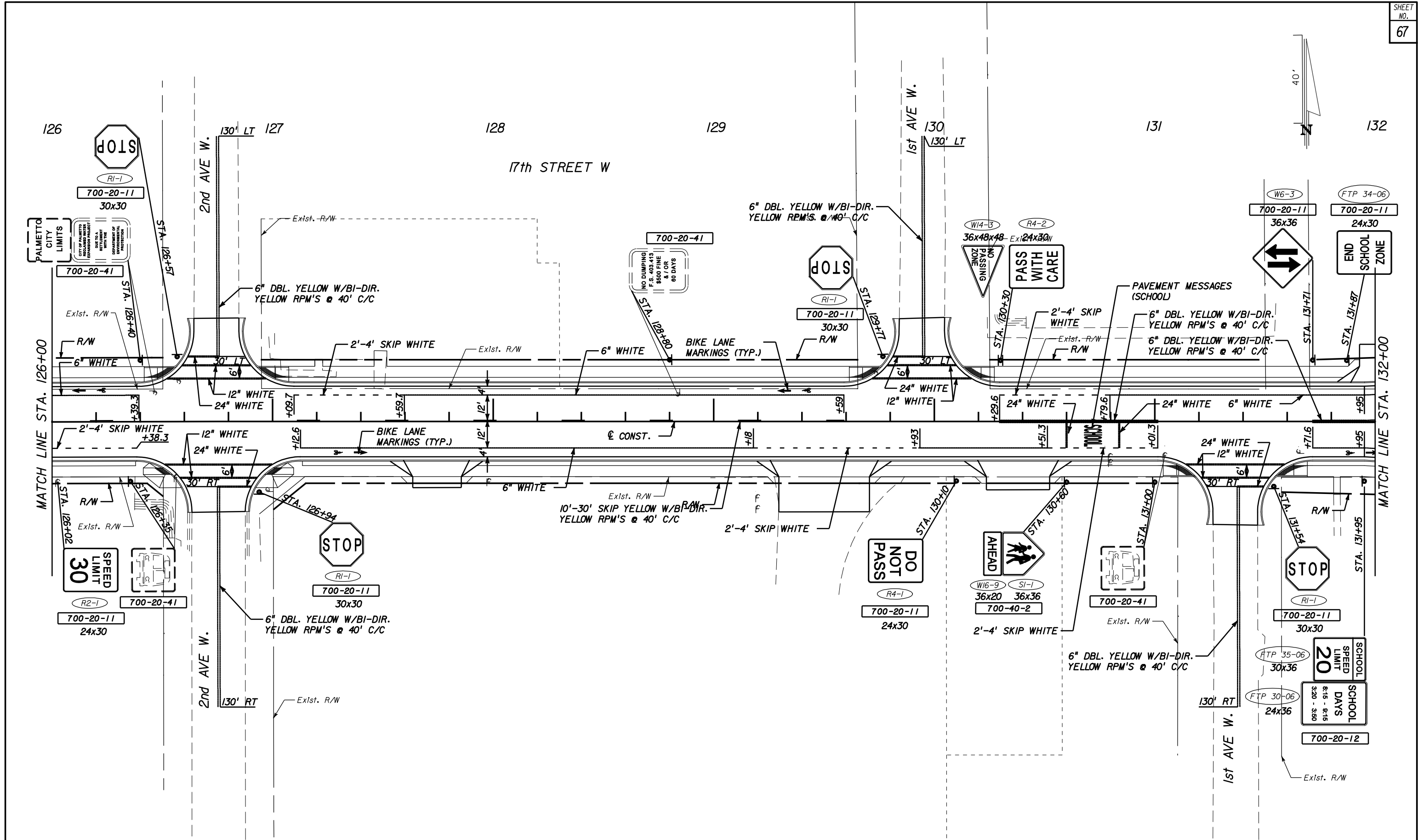


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 6035261
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
SIGNING AND PAVEMENT MARKING	

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DRAWN BY	KDR	DATE			
CHECKED BY	BDG	DATE			
SUPERVISED BY	DAVID O. THEUNG, PE 44786				

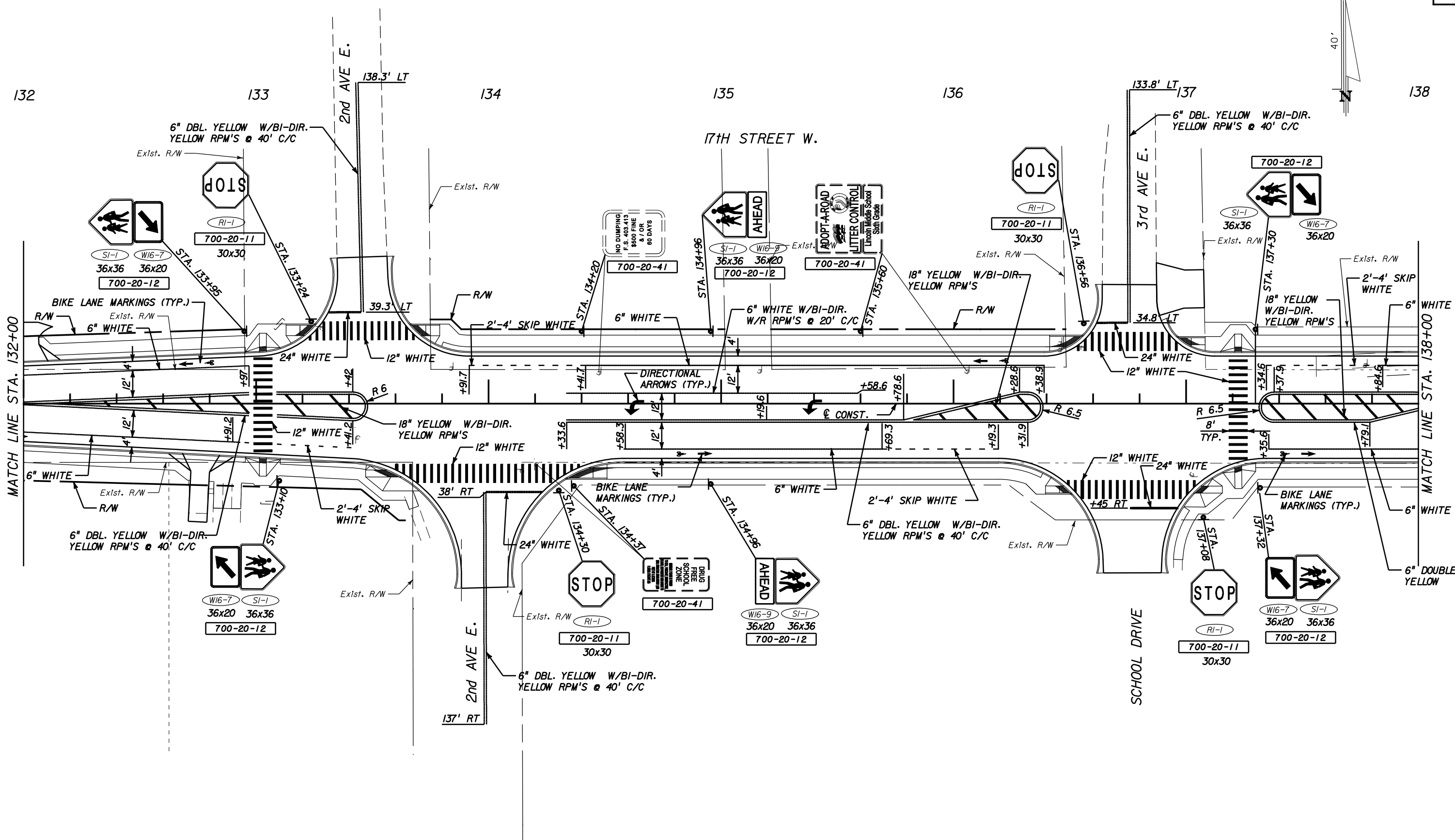


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

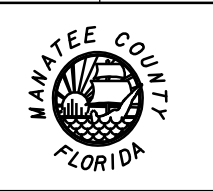
8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	David O. Theung, PE No. 44786	Proj. No.	6035261
		Dwg. Date	January 8, 2009
		SIGNING AND PAVEMENT MARKING	

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SUPERVISED BY	DAVID O. THEUNG, PE 44786				

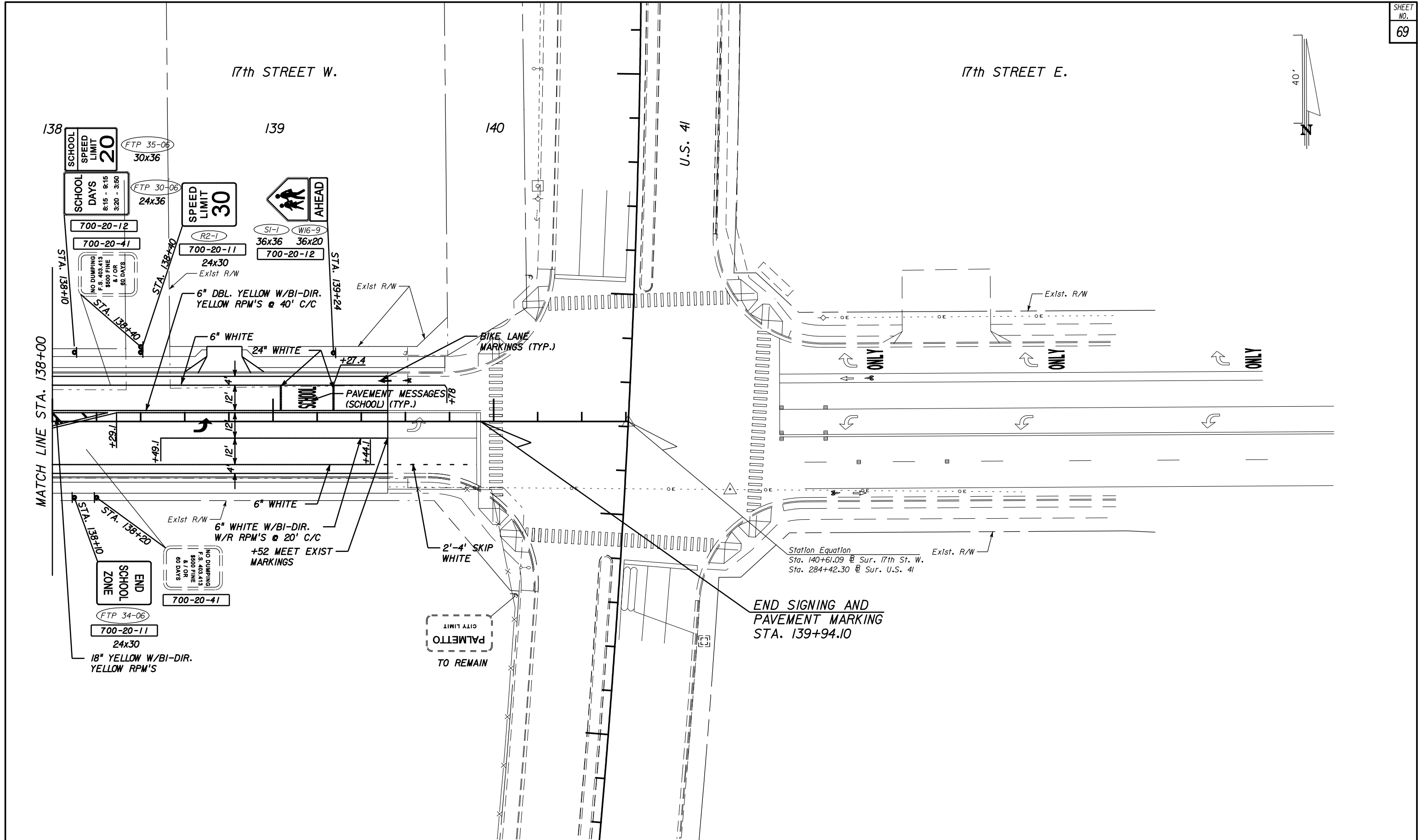


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

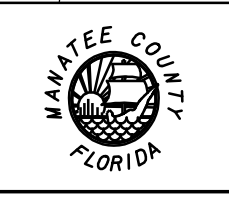
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 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 6035261
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
SIGNING AND PAVEMENT MARKING	

PLOT DATE: 5/27/2009
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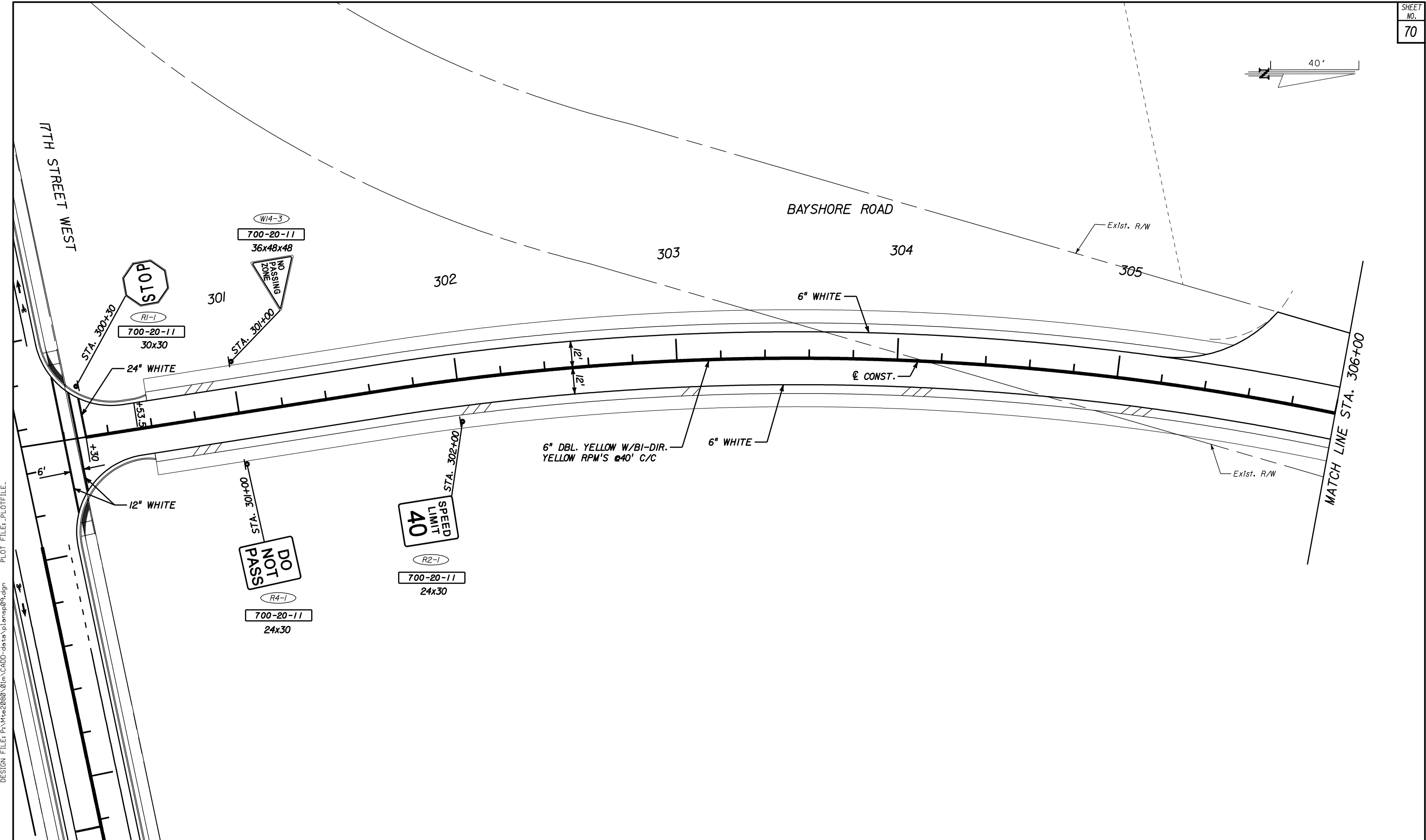
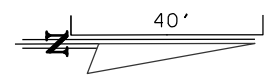
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CHECKED BY	BDG	DATE			
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 6035261
David O. Theung, PE No. 44786	Dwg. Date January 8, 2009
SIGNING AND PAVEMENT MARKING	



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SUPERVISED BY	DAVID O. THEUNG, PE 44786		

REVISION DESCRIPTION & DATE	BY	NO.

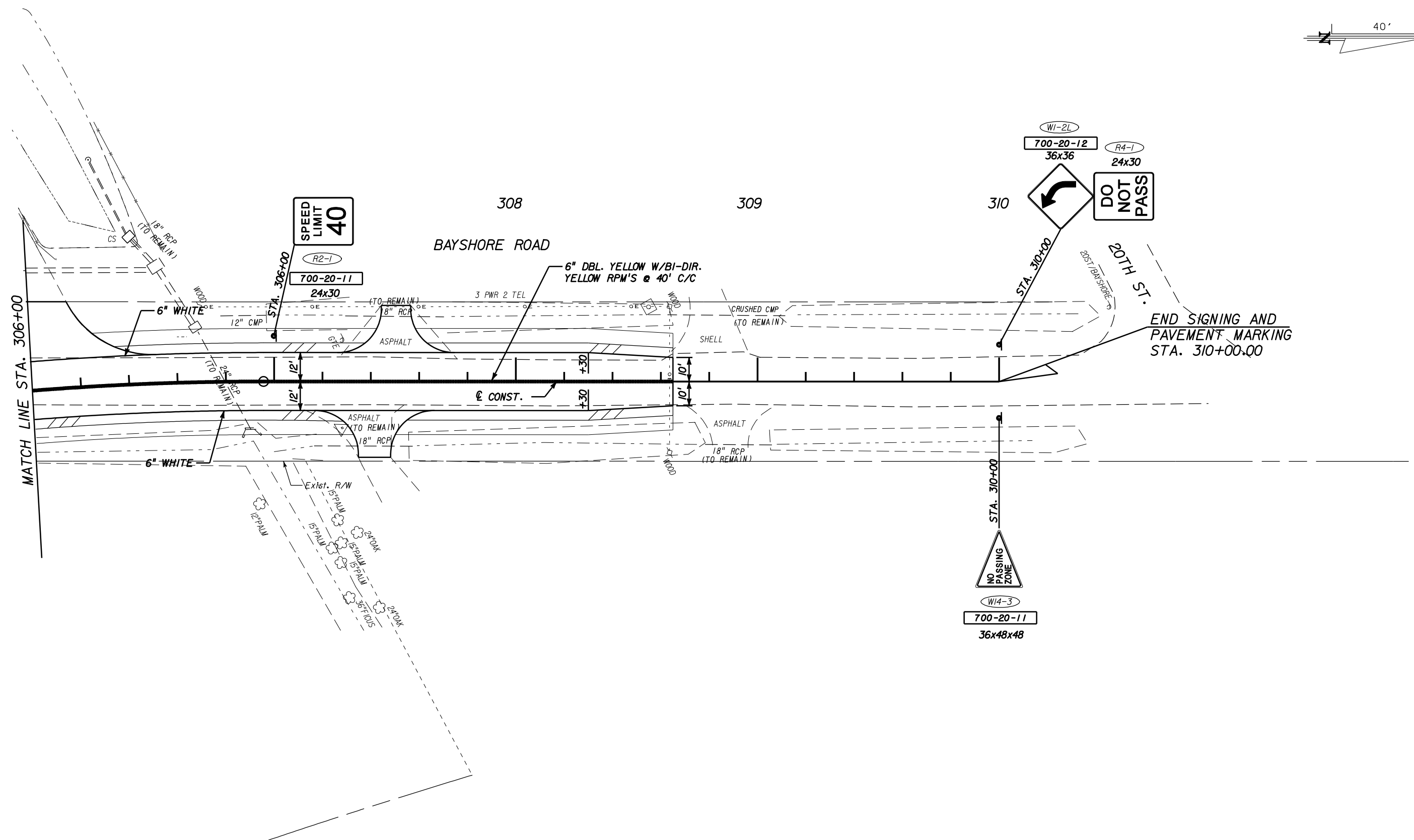
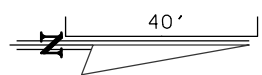


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER
 David O. Theung, PE No. 44786

Proj. No. 6035261
 Dwg. Date January 8, 2009
SIGNING AND PAVEMENT MARKING



DESIGN FILE: P:\Mte20080\01m\CADD-data\pltemp10.dgn

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DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	DAVID O. THEUNG, PE 44786				



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER David O. Theung, PE No. 44786	Proj. No. 6035261
	Dwg. Date January 8, 2009
SIGNING AND PAVEMENT MARKING	

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			75																				
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL			
555-1-2	Directional Bore (6" TO <12")	LF	200															200		200			
630-1-12	Conduit (F&I) (Underground)	LF	331															331		331			
632-7-1	Cable (Signal) (F&I)	PI	1															1		1			
635-1-11	Pull & Junction Boxes	EA	9															9		9			
649-31-202	M/Arm (F&I) (E3-T2)	EA	2															2		2			
650-51-311	Signal Traffic, 12" (F&I) (3 Sct 1Way)	AS	2															2		2			
650-51-511	Signal Traffic, (F&I) (5 Sct 1Way)	AS	3															3		3			
653-191	Signal Pedestrian (LED) (Countdown) (1-Way)	AS	4															4		4			
659-101	Signal Head Auxiliaries (Back Plates 3 Sct)	EA	4															4		4			
659-107	Signal Head Auxiliaries (Aluminum Pedestal)	EA	4															4		4			
659-118	Signal Head Auxiliaries (Back Plates 5 Sct)	EA	3															3		3			
660-2-102	Loop Assembly (F&I) (Type B)	AS	4															4		4			
660-2-106	Loop Assembly (F&I) (Type F)	AS	6															6		6			
665-13	Detector Pedestal (F&I) (Det w/sign only)	EA	4															4		4			
670-5-410	Traffic Cntrl Assembly (Modify)	AS	1															1		1			
690-10	Remove Traffic Signal Head Assembly	EA	4															4		4			
690-20	Remove Pedestrian Assembly	EA	4															4		4			
690-33-1	Pole Removal (Deep) (Direct Burial)	LF	40															40		40			
690-70	Remove Pedestrian Detector Assembly	EA	4															4		4			
690-90	Remove Cabling and Conduit	PI	1															1		1			
690-100	Remove Miscellaneous Signal Equipment	PI	1															1		1			
699-41	Internally Illuminated Sign (Relocate) (Street Name)	EA	2															2		2			

PLOT DATE: 5/27/2009
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DRAWN BY	KDR	DATE	1/09		
CHECKED BY	PCJ	DATE	1/09		
SUPERVISED BY	PATRICK C. JOHNSON, PE 55180				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER <small>Patrick C. Johnson, PE No. 55180</small>	Proj. No. 6035261 Dwg. Date January 8, 2008
SIGNALIZATION	

GENERAL NOTES

555-1-2:
USE A MINIMUM OF 3" DIAMETER CONDUIT FOR INTERCONNECT CABLE.

630-1-12:
IN LIEU OF THE INSTALLATION OF NEW CONDUIT, EXISTING CONDUIT (IF NOT DAMAGED) MAY BE RE-USED, AS DIRECTED BY THE PROJECT ENGINEER.
PAYMENT SHALL INCLUDE THE COST OF TRENCHING AND ALL CONDUIT IN TRENCH.
ALL CONDUIT UNDER PROPOSED ROADWAY AND/OR SIDEWALK SHALL BE INSTALLED PRIOR TO INSTALLATION OF ROADWAY BASE AND SURFACE OR CONCRETE.

632-7-1:
VERIFY THE COLOR CODE OF SIGNAL CABLE WITH THE MAINTAINING AGENCY PRIOR TO WIRING INTERSECTION.
USE A MINIMUM OF 7 CONDUCTOR SIGNAL CABLE.

635-1-11:
APPROPRIATELY SIZE EACH PULL BOX SO THE COMMUNICATION AND/OR INTERCONNECT CABLE DOES NOT EXCEED MANUFACTURERS RECOMMENDED BENDING RADIUS.
USE POLYMER CONCRETE CONSTRUCTION PULL BOX WITH A POLYMER CONCRETE, COVER MARKED "TRAFFIC SIGNAL" FOR COMMUNICATION AND/OR INTERCONNECT CABLE. USE 24" X 36" PULL BOXES PLACED A MINIMUM OF 800' APART.
PULL BOXES ARE TO BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, PULL BOXES SHALL BE PLACED A MINIMUM OF 7' FROM THE EDGE OF PAVEMENT.

649-31-202:
USE THREE 2" AND ONE 3/4" CONDUITS STUBBED OUT THROUGH THE MAST ARM POLE FOUNDATION AND TEMPORARILY SEAL.

650-51-311 AND 650-51-511:
USE SIGNAL HEAD SUPPORTING TUBE THAT IS CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 1.5 FEET.

653-191:
PEDESTRIAN SIGNALS SHALL BE SINGLE-SECTION, INTERNATIONAL SYMBOL HEADS WITH COUNTDOWN TIMERS, L.E.D. HEADS.

659-101 AND 659-118:
USE LOUVERED POLYCARBONATE (OR EQUIVALENT) SIGNAL BACK PLATES.

659-107:
USE BREAKAWAY ALUMINUM SQUARE BASE ASSEMBLIES WITH ALUMINUM DOORS FOR PEDESTRIAN PEDESTALS. INSIDE DIAMETER OF PEDESTALS SHALL BE FOUR INCHES (4").

660-2-102 AND 660-2-106:
PERMANENTLY MARK EACH LOOP PER PHASE AND PER VEHICLE MOVEMENT AT EACH SPLICE POINT AND AT THE CABINET TERMINATION POINT.

665-13:
USE PEDESTRIAN BUTTON SIGNAL SIGNS FTP-69A-06 OR FTP-69B-06. STREET NAME SHALL BE IN ACCORDANCE WITH THE STREET NAMES SHOWN ON THE SIGNALIZATION PLAN SHEETS.

670-5-410:
THE COORDINATION TIMINGS WILL BE SUPPLIED TO THE PROJECT ENGINEER UPON HIS REQUEST. REQUESTS SHOULD BE MADE TO MR. KENNETH E. BASS, SENIOR TRAFFIC SIGNAL SYSTEMS SPECIALIST AT (863)519-2788

699-1-1:
ALL INTERNALLY ILLUMINATED STREET NAME SIGNS TO BE MOUNTED FREE SWINGING ON POLE BRACKET ARM ATTACHED TO POLE.
CONNECT INTERNALLY ILLUMINATED STREET NAME SIGN CONDUCTORS TO PHOTOELECTRIC CELL LOCATED OUTSIDE THE ELECTRICAL SERVICE DISCONNECT BOX AND PHOTOELECTRIC CELL CONDUCTORS TO DEDICATED 15 AMP./120 VOLT CIRCUIT BREAKER LOCATED INSIDE THE ELECTRICAL SERVICE DISCONNECT BOX.
INSTALL PHOTOELECTRIC CELL FOR INTERNALLY ILLUMINATED STREET NAME SIGNS ON TRAFFIC SIGNAL ELECTRICAL SERVICE DISCONNECT.
USE LED INTERNALLY ILLUMINATED STREET NAME SIGNS.

MODIFY EXISTING PHASING AND TIMING IN CONTROLLER AND PERFORM ANY CABINET AND FIELD WIRING NECESSARY TO ADD LEFT TURN PHASING.
CORE-DRILL EXISTING CONTROLLER CABINET BASE AND INSTALL NEW CONDUITS IF SPARE CONDUIT STUB-OUTS CANNOT BE USED. INSTALL NEW CONDUITS INTO THE EXISTING FOUNDATION AS REQUIRED IN PLANS. WHEN ADDITIONAL CONDUITS ARE REQUIRED, THE CONDUIT SHALL BE A MINIMUM OF 3" IN DIAMETER. LOCATE NEW CONDUITS SO THEY WILL NOT OBSTRUCT THE MAINTENANCE OF EQUIPMENT IN THE CABINET OR THE ANCHORING OF THE CABINET FLANGE TO THE CONCRETE FOUNDATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING INTERNAL CABINET AND EQUIPMENT FROM DUST AND DEBRIS CAUSED BY CORE DRILLING.

THE PERMITTEE SHALL SECURE, UPON PRIOR APPROVAL FROM THE DEPARTMENT, THE SERVICES OF A QUALIFIED INSPECTOR IN ACCORDANCE TO CHAPTER 471, FLORIDA STATUTES, TO PERFORM CONSTRUCTION ENGINEERING & INSPECTION SERVICES FOR THE INSTALLATION OF THE TRAFFIC SIGNAL, AND TO CERTIFY THAT ALL WORK HAS BEEN DONE IN ACCORDANCE WITH THE DEPARTMENT'S STANDARDS, SPECIFICATIONS, PERMIT REQUIREMENTS, AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL STATUTES, RULES, AND REGULATIONS. IN ADDITION, THE ON-SITE INSPECTOR SHALL BE IMSA LEVEL II CERTIFIED.
FOR OWNERSHIP OF REMOVED SIGNAL EQUIPMENT CONTACT FDOT. ANY REMOVED SIGNAL EQUIPMENT NOT CLAIMED WILL BE DISPOSED OF BY THE CONTRACTOR.
MAINTAINING AGENCY: MANATEE COUNTY
FOR PAVEMENT MARKINGS, SEE PAVEMENT MARKING PLANS.
INSURANCE AS REFERENCED IN SECTION 7-13 IN THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION (EDITION AS SHOWN ON KEY SHEET) SHALL BE PROVIDED BY THE CONTRACTOR WHEN INSTALLING OR WHEN WORKING ON OR IN THE VICINITY OF JOINT-USE POLES OR WHEN WORKING IN THE VICINITY OF POWER LINES.

FLORIDA POWER AND LIGHT POWER COMPANY TO ASSIST CONTRACTOR IN PERFORMING ALL NECESSARY WORK UNDER THEIR POWER LINES, SUCH AS THE INSTALLATION OF SPAN WIRE, SIGNAL CABLE, FIBERGLASS INSULATORS AND SIGNAL POLES. CONTRACTOR SHALL NOTIFY THE POWER COMPANY AT LEAST 72 HOURS PRIOR TO INSTALLATION OF THIS EQUIPMENT.

THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE MAINTAINING AGENCY MANATEE COUNTY, AT TELEPHONE NUMBER (941) 708-7510, FOR THE ASSIGNMENT OF THE PHYSICAL ADDRESS ONCE THE SERVICE DROP LOCATION HAS BEEN ESTABLISHED.

THE CONTRACTOR TO PROVIDE A WARRANTY/MAINTENANCE BOND FOR SIGNAL INSTALLATIONS IN ACCORDANCE WITH F.D.O.T. SPECIFICATION SECTION 611-5.
MAINTAINING AGENCY SHALL COORDINATE UTILITY RELOCATIONS IF NECESSARY.

ALL TRAFFIC SIGNAL POLES SHALL BE LOCATED IN ACCORDANCE WITH PLANS PREPARATION MANUAL (LATEST EDITION), SECTION 2.11 AND TABLE 2.11.9 (CLEAR ZONE WIDTHS). IN THE EVENT R/W OR IRRESOLVABLE UTILITY CONFLICTS PROHIBIT POLE PLACEMENT ACCORDING TO SECTION 2.11, PERMITTEE TO CONTACT TRAFFIC SIGNAL INSPECTOR/LIAISON TO OBTAIN PERMISSION TO PLACE POLES IN ACCORDANCE WITH THE RRR CRITERIA FOR CLEAR ZONE.

SECTION 611, TRAFFIC SIGNAL ACCEPTANCE:
SCHEDULING OF THE PARTIAL AND FINAL ACCEPTANCE INSPECTIONS SHALL BE COORDINATED WITH F.D.O.T TRAFFIC SIGNAL INSPECTOR/LIAISON WITH A MINIMUM OF 48 HOURS NOTICE.
RESULTS OF FIELD TESTS (I.E., SECTION 614) SHALL BE MADE AVAILABLE TO THE PROJECT ENGINEER IN WRITTEN FORM. A QUALIFIED CONTRACTOR'S REPRESENTATIVE SHALL BE PRESENT AT THE CONDITIONAL ACCEPTANCE INSPECTION OF THE CONTROLLER ASSEMBLY. THE QUALIFICATIONS OF THE REPRESENTATIVE SHALL INCLUDE:
(A) COMPLETE FAMILIARITY WITH ALL SYSTEM ELEMENTS INCLUDING CONTROLLERS, COORDINATING UNITS, SYSTEM CLOCKS AND SYSTEM COMMUNICATIONS ELEMENTS. THE REPRESENTATIVE SHALL BE QUALIFIED TO INPUT AND RECALL ALL CONTROLLER AND SYSTEM TIMING FUNCTIONS.

THE PERMITTEE TO SECURE, UPON PRIOR APPROVAL FROM THE DEPARTMENT, THE SERVICES OF A QUALIFIED INSPECTOR IN ACCORDANCE TO CHAPTER 471, FLORIDA STATUTES, TO PERFORM CONSTRUCTION ENGINEERING & INSPECTION SERVICES FOR THE INSTALLATION OF THE TRAFFIC SIGNAL, AND TO CERTIFY THAT ALL WORK HAS BEEN DONE IN ACCORDANCE WITH THE DEPARTMENT'S STANDARDS, SPECIFICATIONS, PERMIT REQUIREMENTS, AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL STATUTES, RULES, AND REGULATIONS. IN ADDITION, THE ON-SITE INSPECTOR SHALL BE IMSA LEVEL II CERTIFIED.
AT LEAST 48 HOURS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION, CONTRACTOR SHALL CONTACT THE TRAFFIC SIGNAL INSPECTOR/LIAISON:
MANATEE AND SARASOTA COUNTY
MR. SCOTT J. GUTHRIE
FLORIDA DEPARTMENT OF TRANSPORTATION
SARASOTA OPERATIONS CENTER
1838 61ST STREET
SARASOTA, FL 34243
PH: 941-359-7353
(SUNCOM 537-7353)

FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING CONSTRUCTION, CONTACT F.D.O.T. MAINTENANCE OFFICE IN SARASOTA, TELEPHONE 941-359-7300.
WHEN CONSTRUCTION IS COMPLETE, PROVIDE A SET OF "AS-BUILT" PLANS TO:
MANATEE COUNTY
TRAFFIC DIVISION MANAGER
P. O. BOX 1000
BRADENTON, FL 34206-1000

SUBMITTAL DATA FOR ALL PERMIT JOBS MUST BE DONE IN ACCORDANCE WITH F.D.O.T. SPECIFICATION SECTION 603.5.
WHEN CONSTRUCTION DEVIATES FROM APPROVED PERMIT PLANS, INCLUDING POSSIBLE EASEMENTS, PERMITTEE TO FURNISH THE DEPARTMENT OF TRANSPORTATION ONE SET OF "AS BUILT" PLANS FOR OUR RECORDS:
DEPARTMENT OF TRANSPORTATION
P.O. BOX 1249
(STREET ADDRESS: 801 N. BROADWAY AVE.)
BARTOW, FLORIDA 33831
ATTN: TRAFFIC OPERATIONS - SIGNAL DIVISION

DESIGN FILE: P:\Mte2008\01m\CADD-deta\NOTES\001.dgn PLOT FILE: _PLOTFILE_ PLOT DATE: 5/27/2009

DESIGNED BY	FAS/PJS	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	PCJ	DATE	1/09		
SUPERVISED BY	PATRICK C. JOHNSON, PE 55180				



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	Proj. No.	Dwg. Date
Patrick C. Johnson, PE No. 55180	6035261	January 8, 2008
SIGNALIZATION		

GENERAL NOTES

PULL BOXES ARE TO BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, THEN PULL BOXES SHALL BE PLACED A MINIMUM OF 7' FROM THE EDGE OF PAVEMENT.

EXTREME CARE SHALL BE TAKEN TO INSURE THAT ALL SIGNAL EQUIPMENT IS INSTALLED AS SHOWN IN PLANS WITHIN EXISTING RIGHT-OF-WAY. IN THE EVENT THAT EXISTING UTILITIES OR OTHER PHYSICAL CONDITIONS NECESSITATE INSTALLATION OF ANY SIGNAL EQUIPMENT OUTSIDE OF RIGHT-OF-WAY, IT WILL BE THE RESPONSIBILITY OF THE PERMITTEE TO ACQUIRE ALL NECESSARY LEGAL, PERPETUAL EASEMENTS PRIOR TO INSTALLATION OF SAID EQUIPMENT.

INFORMATION REQUIRED FOR ACQUISITION OF EASEMENTS CONSIST OF:

1. A SURVEY SKETCH OF THE AREA TO BE DONATED, WHICH IS PREPARED AND CERTIFIED BY A LICENSED PROFESSIONAL LAND SURVEYOR.
2. A LEGAL DESCRIPTION WHICH CONFORMS TO THE SURVEYOR'S SKETCH OF THE AREA TO BE DONATED AND WHICH IS ADEQUATE FOR USE IN DEEDS OF CONVEYANCE.
3. A TITLE SEARCH (LESS THAN SIX MONTHS OLD) CERTIFIED BY AN ABSTRACT COMPANY WHICH RELATES TO THE PARENT TRACT OF THE PARCEL TO BE DONATED TO THE DEPARTMENT.

COPIES OF THESE EASEMENTS SHALL BE SENT TO:

TRAFFIC SIGNAL DESIGN ENGINEER
 ASSISTANT DISTRICT TRAFFIC OPERATIONS ENGINEER
 FLORIDA DEPARTMENT OF TRANSPORTATION
 P.O. BOX 1249
 801 N. BROADWAY
 BARTOW, FL. 33831

WORK ZONE TRAFFIC CONTROL (REWORK EXISTING SIGNAL)

- A. THE CRITERIA AS OUTLINED IN THE "MINIMUM SPECIFICATIONS FOR TRAFFIC CONTROL SIGNALS AND DEVICES", SHALL BE ADHERED TO FOR ALL SIGNALS, BOTH PERMANENT AND TEMPORARY. MAINTAIN TRAFFIC BY USE OF TRAFFIC CONTROL INDEXES IN THE F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS BOOKLET DATED JANUARY 2000. NO LANE CLOSURES WILL BE ALLOWED BETWEEN 6:00 A.M. AND 9:00 A.M. AND BETWEEN 4:00 P.M. AND 7:00 P.M.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING SAFE AND EFFICIENT OPERATION OF ALL SIGNALS, AND THE SIGNALIZED MOVEMENT OF TRAFFIC WITHIN THE LIMITS OF THE PROJECTS. THIS IS TO INCLUDE DETERMINING TRAFFIC SIGNAL TIMINGS, AND ADJUSTING SIGNAL TIMINGS AS NECESSARY DURING EACH PHASE OF CONSTRUCTION. THIS SHALL ALSO INCLUDE MAINTAINING SIGNAL COORDINATION WITH SIGNALS BOTH INSIDE AND OUTSIDE THE PROJECT LIMITS.
- C. MODIFICATION TO PERMANENT SIGNAL EQUIPMENT FOR TEMPORARY MAINTENANCE OF TRAFFIC PHASING SHALL BE ACCOMPLISHED IN A MANNER SO AS NOT TO CAUSE DAMAGE TO MAST ARMS, POLES, OR OTHER SIGNAL EQUIPMENT.
- D. DURING EACH PHASE OF CONSTRUCTION, THE CONTRACTOR SHALL PROPERLY ALIGN SIGNAL HEADS.
- E. *ALL SIGNALS SHALL REMAIN IN ACTUATED OPERATION THROUGHOUT THE DURATION OF THE PROJECT. THE CONTRACTOR MAY UTILIZE STANDARD LOOPS, PREFORMED LOOPS, OR AN ALTERNATIVE METHOD. ANY ALTERNATIVE DEVICE MUST BE ON THE APPROVED PRODUCTS LIST AND APPROVED BY THE PROJECT ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER PLACEMENT AND ANY NECESSARY RELOCATION, ADJUSTMENT OR REPLACEMENT OF THESE DETECTORS AS NECESSARY TO MAINTAIN ACTUATED OPERATION FOR ALL MAIN STREET AND SIDE STREET MOVEMENTS FOR THE DURATION OF THE PROJECT. ALL COSTS OF TEMPORARY VEHICLE DETECTION, INCLUDING DETECTORS, INSTALLATION, RELOCATION, ADJUSTMENT, OR REPLACEMENT SHALL BE INCLUDED AND PAID FOR UNDER PAY ITEMS 2102-1 OR 102-1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH LOCAL UTILITY COMPANIES AND VERIFY THAT TEMPORARY POLES WILL NOT CONFLICT WITH ANY EXISTING UTILITIES*.

INSTALLATION NEAR OVERHEAD POWER LINES

THE TYPE OF EQUIPMENT USED IN INSTALLATION OF MAST ARMS / FOUNDATIONS, OVERHEAD / CANTILEVER SIGNS / FOUNDATIONS, AND THE MOVEMENT / INSTALLATION OF STRAIN POLES SHALL MEET THE FOLLOWING REQUIREMENTS:

1. OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY.
2. CONTRACTOR SHALL MEET ALL APPLICABLE OSHA REQUIREMENTS (10' MINIMUM DISTANCE MAINTAINED BETWEEN THE EQUIPMENT AND THE ELECTRICAL OVERHEAD FACILITY).

ANY COST ASSOCIATED WITH THE TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEM.

DESIGN FILE: P:\Mta2008\01m\CADD-data\NOTES\02.dgn PLOT FILE: _PLOTFILE_

PLOT DATE: 5/27/2009

GENERAL NOTES

DESIGNED BY	FAS/PJS	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	PCJ	DATE	1/09		
SUPERVISED BY	PATRICK C. JOHNSON, PE 55180				

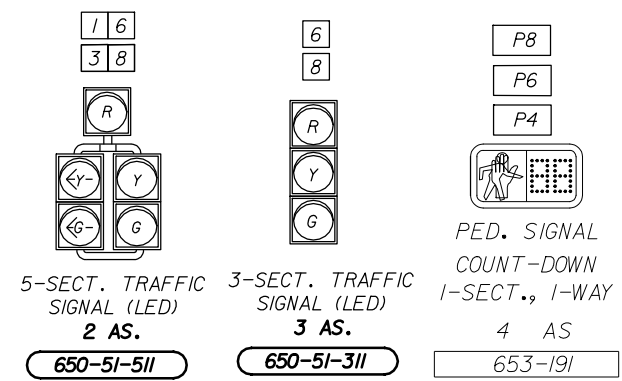


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

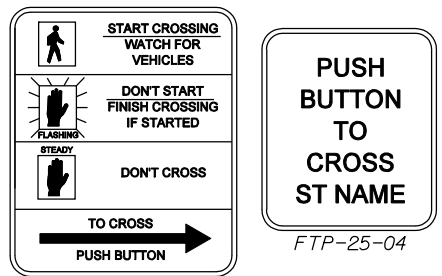
WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 603526I
Patrick C. Johnson, PE No. 55180	Dwg. Date January 8, 2008
SIGNALIZATION	

SIGNAL HEAD DETAILS



PED SIGNAL SIGNS



ALL SIGNAL HEADS REQUIRE LOUVERED, POLYCARBONATE BACKPLATES.

659-101 4 EA 659-118 3 EA

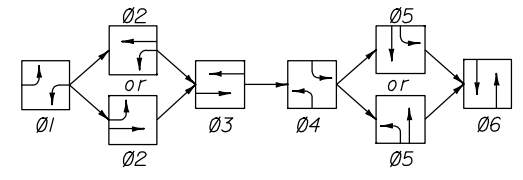
CONTROLLER OPERATION NOTES

- MAJOR STREET IS BUSINESS U.S. 41, PHASES 1, 2 & 3 (MOVEMENTS 1, 2, 5 & 6) AND MINOR STREET IS 17TH STREET WEST, PHASES 4, 5 & 6 (MOVEMENTS 3, 4, 7 & 8).
- EXISTING CONTROLLER TIMINGS AT 17TH STREET WEST AND BUSINESS U.S. 41 INTERSECTION ARE TO REMAIN.

SIGNALIZATION NOTES

- ANY BUS. U.S. 41 LOOP LEAD-INS CUT DUE TO NEW CONSTRUCTION ARE TO BE REPLACED IN THE NEW PAVEMENT AND THE COST IS TO BE PAID FOR UNDER ITEM 660-2-106.
- RELOCATE THE EXISTING POLE MOUNTED, INTERNALLY ILLUMINATED SIGNS TO POLES 1 & 2. COST INCLUDED IN PAY ITEM 699-41.
- LOOPS L-1, L-3, L-4, L-5, L-7 & L-8 ARE TYPE F AND ARE 40' IN LENGTH.

EXISTING SOP 10

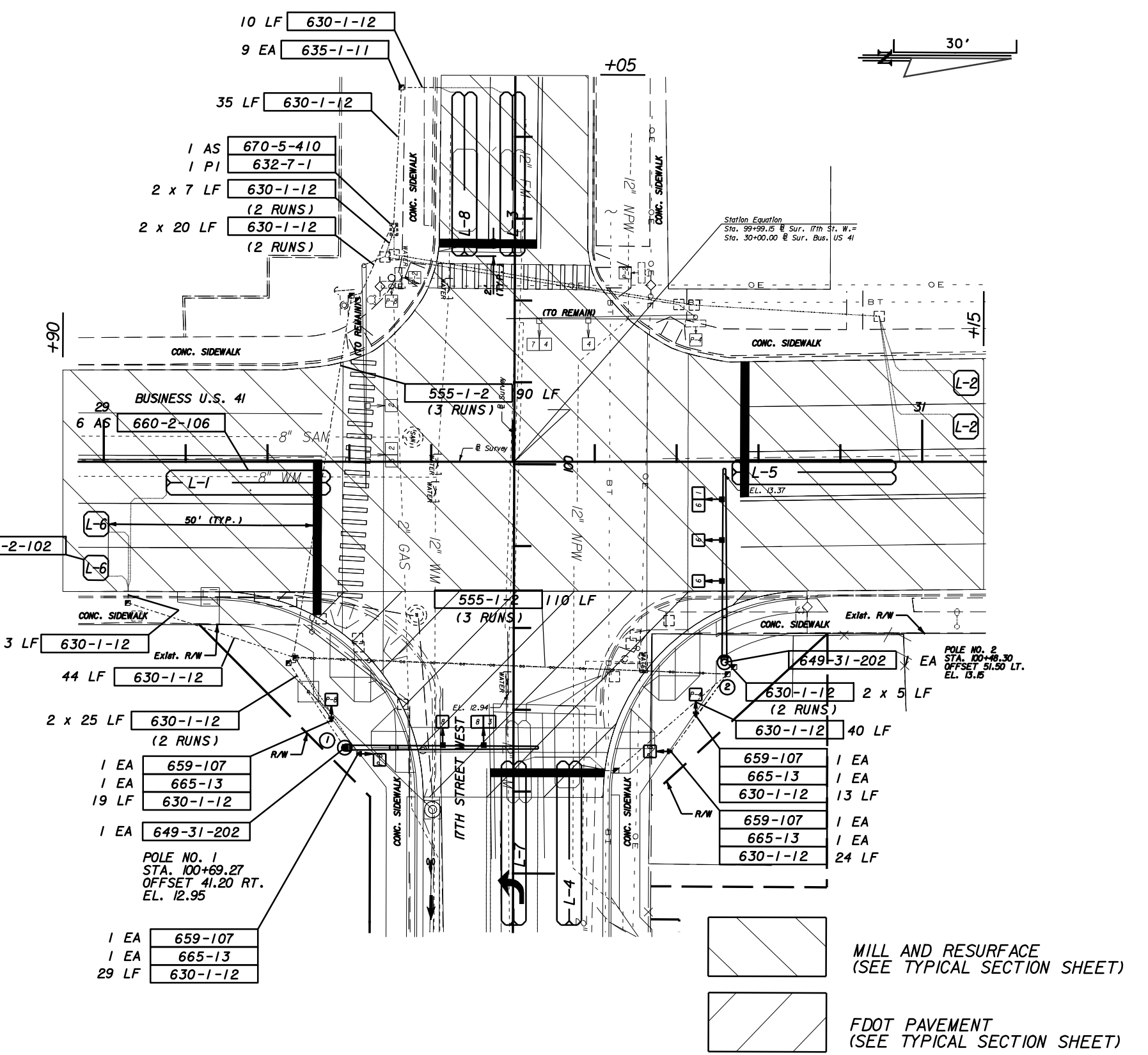


REMOVAL PAY ITEMS

690-10	4 EA
690-20	4 EA
690-70	4 EA
690-90	1 PI
690-100	1 PI
690-33-1	40 LF
699-41	2 EA

CONTROLLER TIMINGS

TIMING FUNCTION	TF1	TF2	TF3	TF4	TF5	TF6	TF7	TF8
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	7	20	7	7	7	20	7	7
EXTENSION	3.0	5.0	3.0	3.0	3.0	5.0	3.0	3.0
MAXIMUM GREEN 1	15	35	16	25	15	35	16	25
MAXIMUM GREEN 2	20	50	21	45	24	50	24	45
YELLOW CLEARANCE	5.0	5.0	4.0	4.0	5.0	5.0	4.0	4.0
ALL RED	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
PEDESTRIAN WALK	10		10		10		10	
PED. CLEARANCE	14		25		16		25	
RECALL		MIN			MIN			



MILL AND RESURFACE (SEE TYPICAL SECTION SHEET)

FDOT PAVEMENT (SEE TYPICAL SECTION SHEET)

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DESIGNED BY	FAS/PJS	DATE	
CHECKED BY	BDG	DATE	1/09
DRAWN BY	KDR	DATE	1/09
CHECKED BY	PCJ	DATE	1/09
SUPERVISED BY	PATRICK C. JOHNSON, PE 5580		

REVISION DESCRIPTION & DATE	BY	NO.



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 6035261
Patrick C. Johnson, PE No. 55180	Dwg. Date January 8, 2008
SIGNALIZATION	

STANDARD MAST ARM ASSEMBLIES DESIGN TABLE

STRUCTURE ID NUMBERS	ASSEMBLY NUMBERS (1)	FIRST ARM			SECOND ARM			UF (deg)	POLE				SPECIAL DRILLED SHAFT DATA ⁽⁴⁾			
		ARM TYPE	FAA (ft.) ⁽²⁾	FBA (in.) ⁽²⁾	ARM TYPE	FAA (ft.) ⁽²⁾	FBA (in.) ⁽²⁾		POLE TYPE	UAA (ft.) ⁽³⁾	UB (ft.)	UCA (in.) ⁽³⁾	DA (ft.)	DB (ft.)	RA	RB
1	E3-T2	E3	33.3	7.37	-	-	-	-	T2	22	20	12.92	-	-	-	-
2	E3-T2	E3	-	-	-	-	-	-	T2	22	20	12.92	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE NOTES:

(1) Assembly Number Legend
 Single Arm
 E# - T# = Arm Number - Pole Number
 Double Arm
 E# - E# - T# = First Arm Number - Second Arm Number - Pole Number

(2) If an entry appears in columns "FAA" and "FBA", a shorter arm is required.
 This is obtained by removing length from the arm tip. For these cases the mast arm length shall be shortened from "FA" to "FAA" and the arm tip diameter shall be increased from "FB" to "FBA".

(3) If an entry appears in columns "UAA" and "UCA", a shorter pole is required.
 This is obtained by removing length from the pole tip. For these cases the pole height shall be shortened from "UA" to "UAA" and the pole tip diameter shall be increased from "UC" to "UCA".

(4) The foundations for Standard Mast Arm Assemblies are pre-designed and are based upon the following conservative soil criteria which covers the great majority of soil types found in Florida. Only complete the "Special Drilled Shaft Data" information if site conditions dictate drilled shafts in soils with lesser strength properties.

Classification = Cohesionless (Fine Sand)
 Friction Angle = 30 Degrees (30°)
 Unit Weight = 50 lbs./cu. ft. (assumed saturated)

GENERAL NOTES:

(1) Work this sheet with the Signal Designer's "Mast Arm Tabulation".
 See "Mast Arm Tabulation" for special instructions that include non-standard Handhole location, paint color, terminal compartment requirement, and pedestrian features.

(2) Work this sheet with "Roadway and Traffic Design Standards"
 Index Nos. 17743 and 17745.

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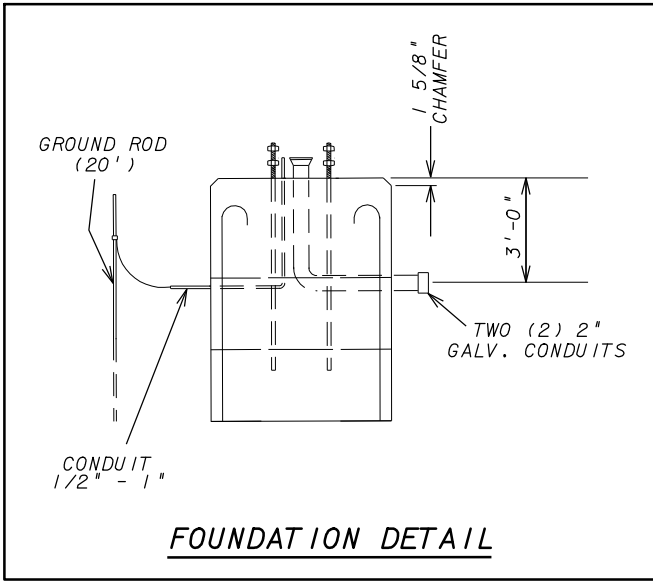
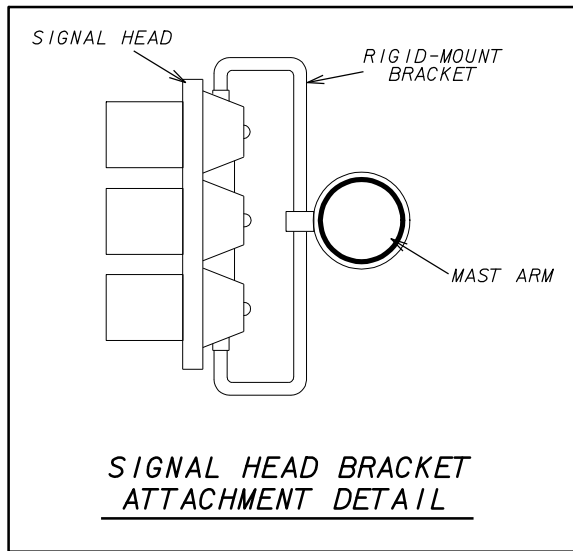
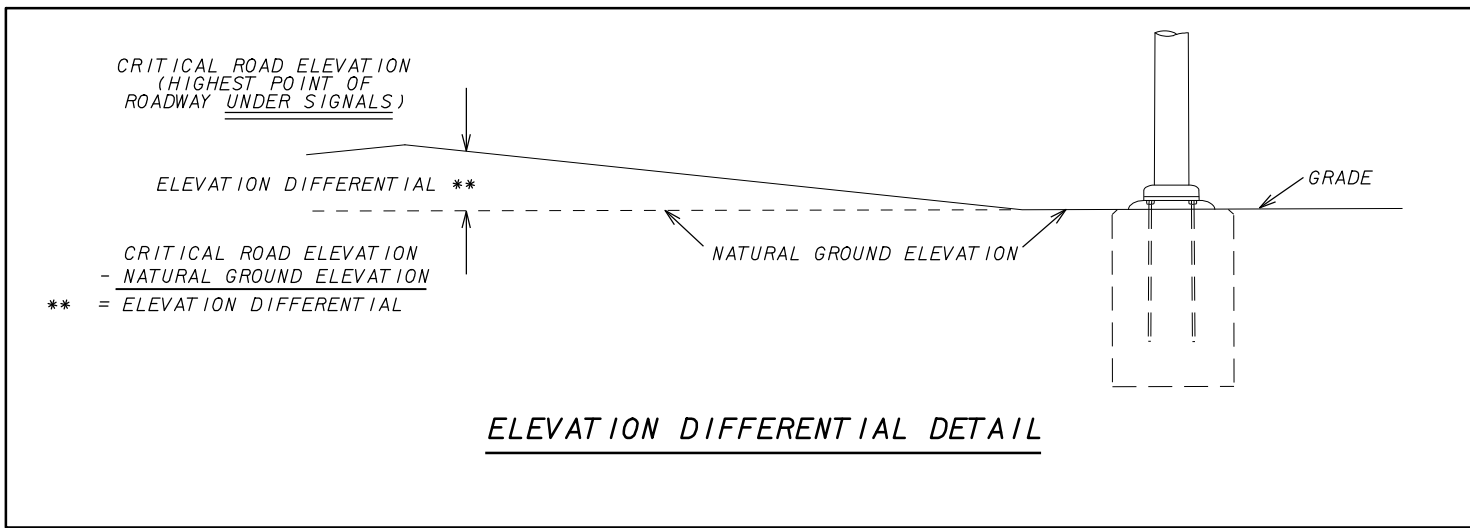
DESIGNED BY	FAS/PJS	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	PCJ	DATE	1/09		
SUPERVISED BY	PATRICK C. JOHNSON, PE 55180				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Patrick C. Johnson, PE No. 55180	Proj. No.	6035261
		Dwg. Date	January 8, 2008
SIGNALIZATION			



DESIGN FILE: P:\Mte20080\01m\CADD-data\MASTARM SHEETS.dwg PLOT FILE: _PLOTFILE_ PLOT DATE: 5/27/2009

DESIGNED BY	FAS/PJS	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE	1/09		
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CHECKED BY	PCJ	DATE	1/09		
SUPERVISED BY	PATRICK C. JOHNSON, PE 55180				



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 44786
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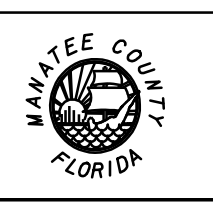
ENGINEER	Patrick C. Johnson, PE No. 55180	Proj. No.	6035261
		Dwg. Date	January 8, 2008
SIGNALIZATION			

TABULATION OF QUANTITIES

BID ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			83		84		85		86		87		88		89		90		PLAN	FINAL	PLAN	FINAL	
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL					
715-1-12	Conductor (F&I) (Insulated) (No. 6)	LF	1911		3924		1530		0		0		0		0		0		7365		7365		
715-1-13	Conductor (F&I) (Insulated) (No. 4)	LF	0		0		960		3600		3000		3918		3615		1119		16089		16089		
715-2-11	Conduit (F&I Underground) (PVC SCH 40) (2")	LF	637		1254		830		1200		1000		1253		1205		373		7875		7875		
715-7-11	Load Center (F&I) (Secondary Voltage)	EA	0		1		0		0		0		1		0		0		2		2		
715-14-11	Pull Box (F&I) (Roadside) (Moulded)	EA	14		22		10		20		15		23		20		6		130		130		
715-14-12	Pull Box (F&I) (Sidewalk)	EA	2		0		0		0		0		0		0		0		2		2		
715-500-1	Pole Cable Distribution System (Conventional)	EA	11		14		10		14		12		14		13		6		94		94		
715-516-112	Light Pole Comp (F&I) (Ornamental) (MH 12")	EA	10		14		10		14		12		14		13		6		93		93		
715-4-400	Light Pole Comp (Relocate)	EA	1		0		0		0		0		0		0		0		1		1		

PLOT DATE: 5/27/2009
 DESIGN FILE: P:\Mte2008\01m\CADD-data\tebaq1t01.dgn
 PLOT FILE: _PLOTFILE_

DESIGNED BY	SRR	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	AEJ	DATE	1/09		
SUPERVISED BY	ALAN M. SCHWAB, PE	6/3/13			



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Alan M. Schwab, PE No. 61313	Proj. No.	6035261
		Dwg. Date	January 8, 2009
LIGHTING			

POLE DATA

POLE NO.	CIRCUIT	STATION	LUMINAIRE WATTAGE	MOUNTING HEIGHT	POLE SETBACK	PAY ITEM
1	A-I	100+82, 31.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
2	A-II	100+82, 31.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
3	A-I	101+39, 31.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
4	A-II	101+39, 31.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
5	A-I	102+09, 31.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
6	A-II	102+13, 31.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
7	A-I	102+78, 31.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
8	A-II	102+85, 31.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
9	A-I	103+59, 32' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
10	A-II	103+59, 32' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
11	A-I	104+39, 28.25' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
12	A-II	104+39, 28.25' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
13	A-I	105+19, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
14	A-II	105+19, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
15	A-I	106+05, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
16	A-II	106+05, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
17	A-I	107+00, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
18	A-II	107+00, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
19	A-III	107+96, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
20	A-IV	107+96, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
21	A-III	108+92, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
22	A-IV	108+92, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
23	A-III	109+88, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
24	A-IV	109+88, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
25	A-III	110+79, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
26	A-IV	110+79, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
27	A-III	111+65, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
28	A-IV	111+69, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
29	A-III	112+51, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
30	A-IV	112+59, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
31	B-I	113+40, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
32	B-II	113+40, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
33	B-I	114+26, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
34	B-II	114+26, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
35	B-I	115+13, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
36	B-II	115+13, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
37	B-I	115+99, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
38	B-II	115+99, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
39	B-I	116+91, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
40	B-II	116+91, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
41	B-I	117+85, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
42	B-II	117+85, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
43	B-I	118+80, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
44	B-II	118+80, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
45	B-I	119+67, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
46	B-II	119+67, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
47	B-I	120+52, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
48	B-II	120+52, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
49	B-I	121+43, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
50	B-II	121+43, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112

POLE DATA

POLE NO.	CIRCUIT	STATION	LUMINAIRE WATTAGE	MOUNTING HEIGHT	POLE SETBACK	PAY ITEM
51	B-I	122+24, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
52	B-II	122+24, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
53	B-I	123+05, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
54	B-II	123+05, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
55	B-I	123+91, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
56	B-II	123+91, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
57	B-I	124+79, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
58	B-II	124+79, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
59	B-I	125+56, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
60	B-II	125+56, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
61	B-III	126+26, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
62	B-IV	126+26, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
63	B-III	127+18, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
64	B-IV	127+18, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
65	B-III	128+02, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
66	B-IV	128+02, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
67	B-III	128+86, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
68	B-IV	128+86, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
69	B-III	129+66, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
70	B-IV	129+76, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
71	B-III	130+48, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
72	B-IV	130+70, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
73	B-III	131+30, 25.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
74	B-IV	131+63, 25.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
75	B-III	132+13, 26.8' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
76	B-IV	132+53, 28.6' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
77	B-III	132+94, 30.4' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
78	B-IV	133+43, 33.4' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
79	B-III	133+89, 30' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
80	B-IV	134+43, 33' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
81	B-III	134+71, 30' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
82	B-IV	135+37, 33' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
83	B-III	135+52, 30' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
84	B-IV	136+30, 35' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
85	B-III	136+33, 30' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
86	B-III	137+14, 30.5' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
87	B-IV	137+32, 33' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
88	B-III	138+07, 30' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
89	B-IV	138+18, 33' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
90	B-III	138+98, 30' LT, BL 17th ST. W	150	12'	9.50'	715-516-112
91	B-IV	139+01, 33' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
92	B-IV	139+85, 33.5' RT, BL 17th ST. W	150	12'	9.50'	715-516-112
93	B-III	139+88, 31.1' LT, BL 17th ST. W	150	12'	9.50'	715-516-112

POLE DATA

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DRAWN BY	KDR	DATE	1/09		
CHECKED BY	AEJ	DATE	1/09		
SUPERVISED BY	ALAN M. SCHWAB, PE 61313				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No. 44786
 Certificate of Authorization No.: 3952

ENGINEER Alan M. Schwab, PE No. 61313	Proj. No. 6035261
	Dwg. Date January 8, 2009
LIGHTING	

**CONVENTIONAL
LIGHTING DESIGN CRITERIA**

Average Initial Intensity 1.0 Foot Candles
 Uniformity Ratio Avg./Min. 4:1 Or Less
 Max./Min. 10:1 Or Less
 Wind Speed 120 MPH

LEGEND

SYMBOLS

DESCRIPTION



150 watt high pressure sodium luminaire. GE Patriarch luminaire, tradition standard globe with internal light shield (house side) Catalog# PTRF-15-S-5-H-2-IAC-5-ALUM-FNLBL-ACN-PEC5TL, GE aluminum non-tapered pole, standard color, meets or exceeds wind speed design criteria with mounting foundation not to exceed 30" depth. Integral regulator type ballast wired for 480 volt operation. Pole mounting height 12 ft. Use GE curve 452128 (Patriarch) or equal. Foundation pole specification see index no. 17515.



Existing pole and luminaire to remain.



Existing pole and luminaire to be removed.



Schedule 40 PVC conduit with THW or THWN conductors inside (conduit and conductor size as shown on plan sheets). Run one (1) 6 AWG or 4 AWG (see plans) copper bond conductor (TW green insulation) inside conduit with other conductors.



Rigid galvanized steel conduit, directional bored under pavement with THW or THWN conductors inside (conduit and conductor size as shown on plan sheets). Extend conduit beyond edge of pavement to pull boxes. Run one (1) 6 AWG or 4 AWG (see plans) copper bond conductor (TW green insulation) inside conduit with other conductors.



Pull box. For specifications see Section 635 of Standard Specifications For Road And Bridge Construction.



Distribution point. For requirements see Index No. 17504 of Design Standards.

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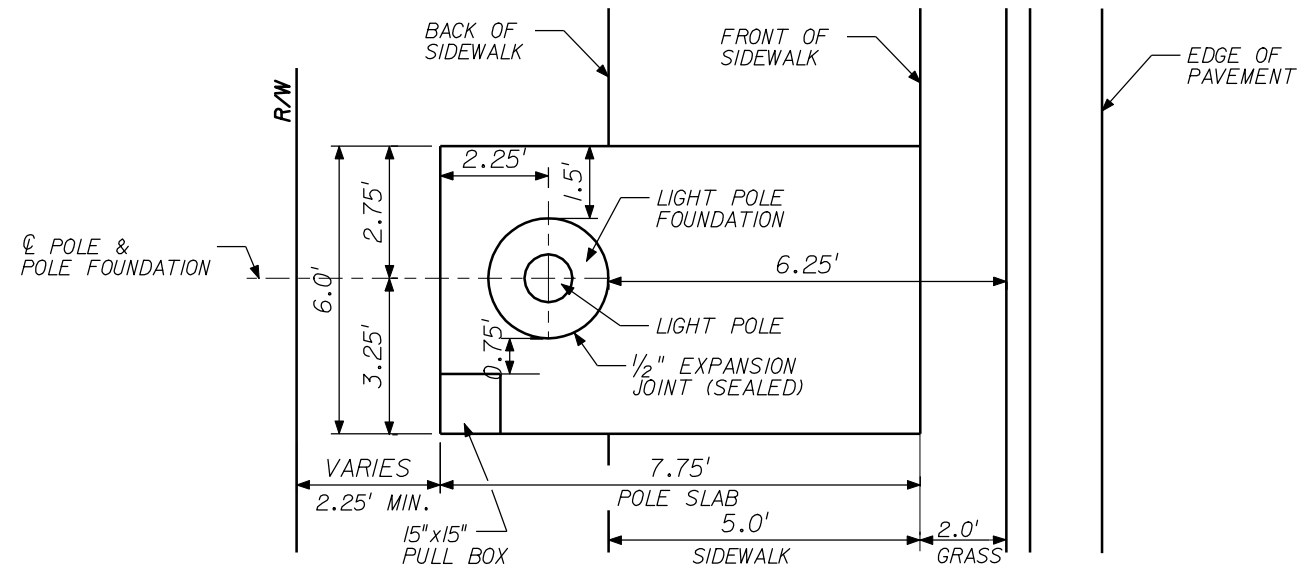
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DRAWN BY	KDR	DATE	1/09			
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SUPERVISED BY	ALAN M. SCHWAB, PE 61313					



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

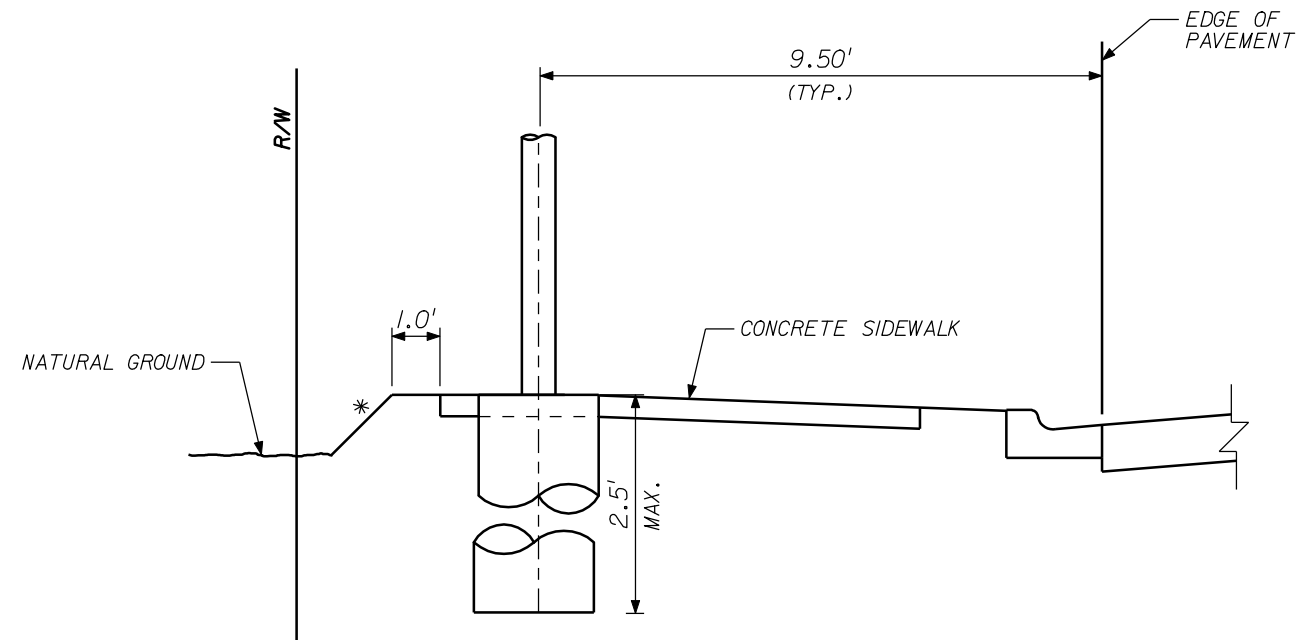
WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 44786
 Certificate of Authorization No.: 3952

ENGINEER	Proj. No. 6035261
Alan M. Schwab, PE No. 61313	Dwg. Date January 8, 2009
LIGHTING	



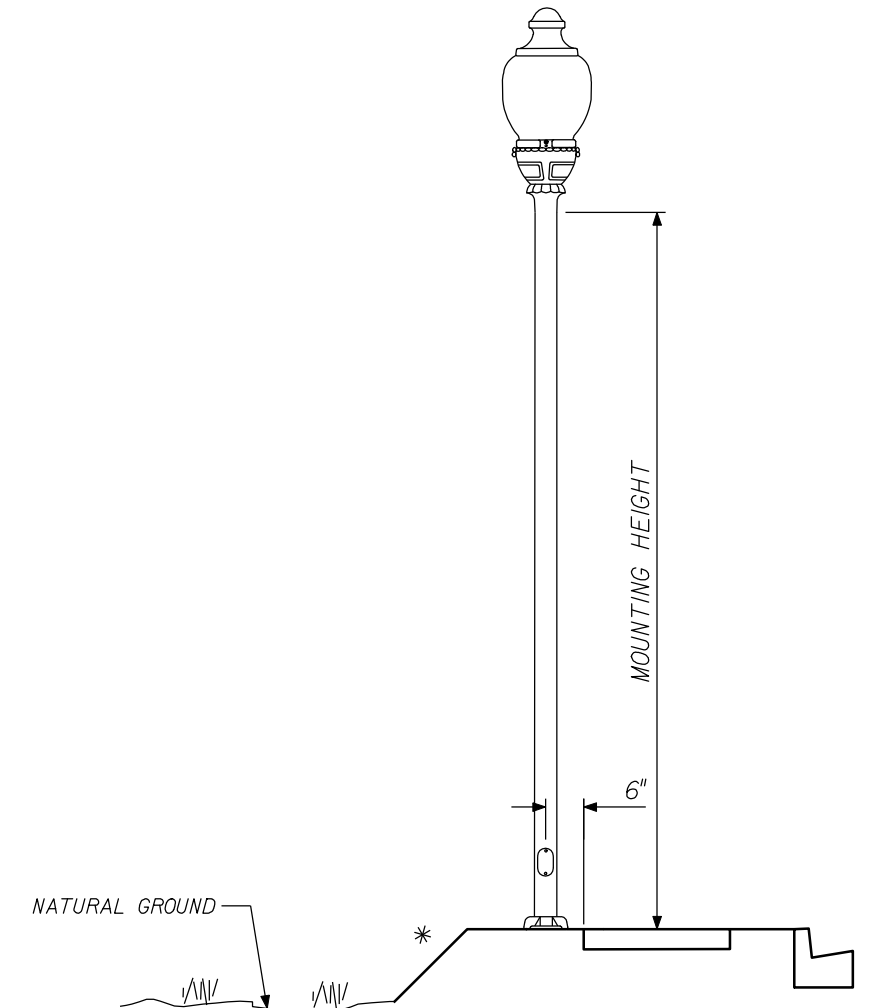
POLE SLAB DETAIL
NTS

- NOTES:**
1. THE POLE SLAB DETAILS SHOWN ON THIS SHEET ARE FOR THOSE AREAS WHERE R/W AND/OR SLOPES PREVENT THE USE OF STANDARD SLAB DETAIL, AS SHOWN ON INDEX NO. 17500.
 2. FOR POLE LOCATIONS IN OR ADJACENT TO THE SIDEWALK, CONCRETE SLABS ARE TO BE PAID FOR AS CONCRETE SIDEWALK 4" THICK.
 3. ALL PADS NOT LOCATED IN SIDEWALK AREA, ARE STANDARD PADS FOR PULL BOXES AND SHALL BE INSTALLED AS PER STANDARD INDEX NO. 17500, SHEET 2 OF 3.



POLE INSTALLATION
NTS

* SLOPES IN VARIOUS LOCATIONS ARE TO BE ADJUSTED TO ACCOMMODATE INSTALLATION OF POLES. DRESS SLOPES 1' BACK OF POLE SLAB.



GE PATRIARCH LUMINAIRE WITH TRADITIONAL GLOBE AND ALUMINUM NON-TAPERED POLE OR EQUAL.

LUMINAIRE DETAIL
NTS

DETAILS

DESIGNED BY	SRR	DATE	REVISION DESCRIPTION & DATE	BY	NO.
CHECKED BY	BDG	DATE	1/09		
DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	JEFFREY D. TRIM, PE 42106				



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

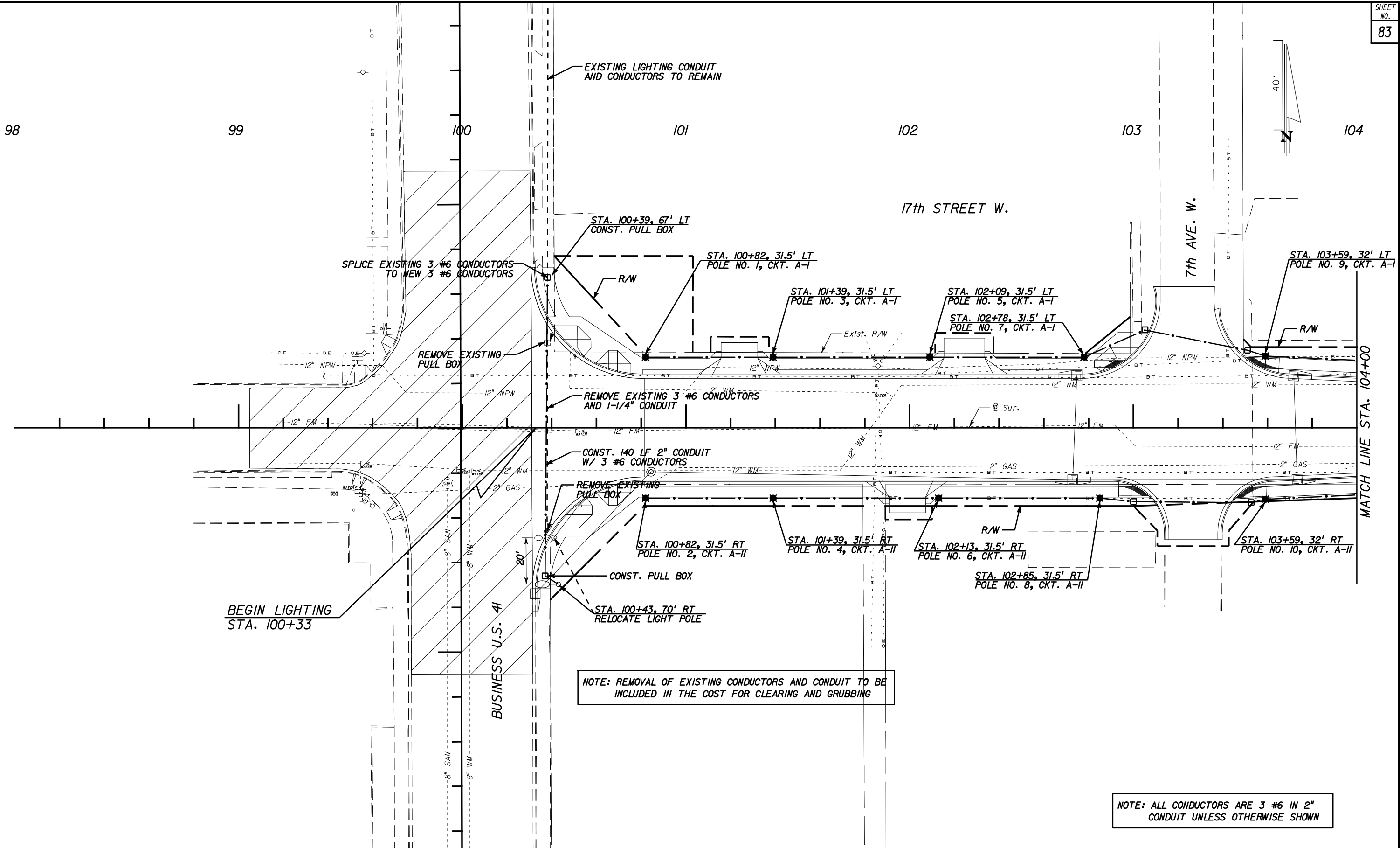
WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: Jeffrey D. Trim, PE No.: 42106
Certificate of Authorization No.: 3952

ENGINEER Jeffrey D. Trim, PE No. 42106	Proj. No. 6035261
	Dwg. Date January 8, 2009

LIGHTING

PLOT DATE: 5/27/2009 PLOT FILE: P:\Mte2009\01m\CADD-data\1det1t01.dgn PLOT FILE: _PLOTFILE_

98 99 100 101 102 103 104



BEGIN LIGHTING
STA. 100+33

NOTE: REMOVAL OF EXISTING CONDUCTORS AND CONDUIT TO BE INCLUDED IN THE COST FOR CLEARING AND GRUBBING

NOTE: ALL CONDUCTORS ARE 3 #6 IN 2\"/>

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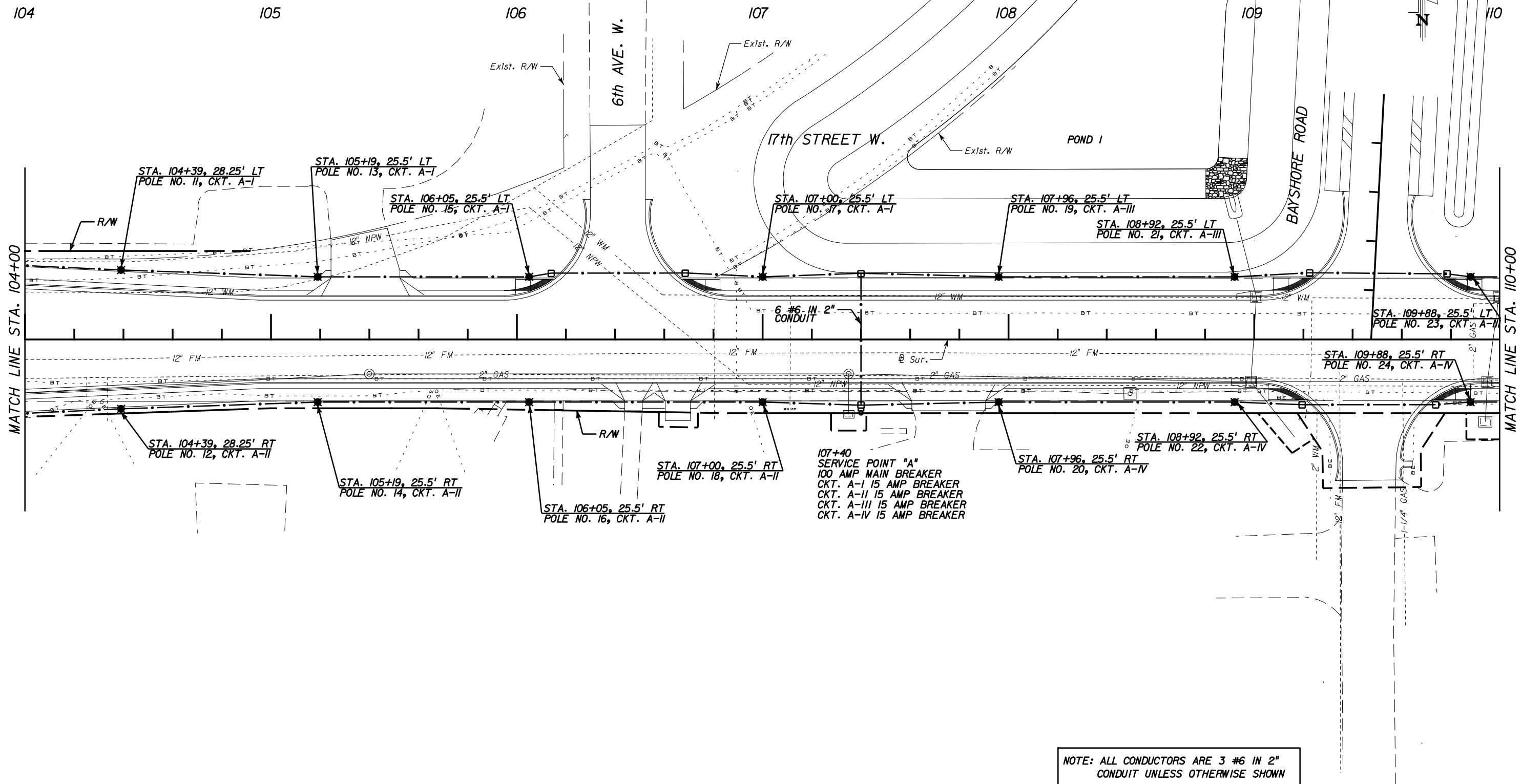
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DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	ALAN M. SCHWAB, PE 61313				



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 42106
Certificate of Authorization No.: 3952

ENGINEER	Alan M. Schwab, PE No. 61313	Proj. No.	6035261
		Dwg. Date	January 8, 2009
LIGHTING			



NOTE: ALL CONDUCTORS ARE 3 #6 IN 2\"/>

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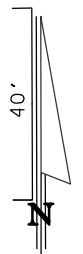
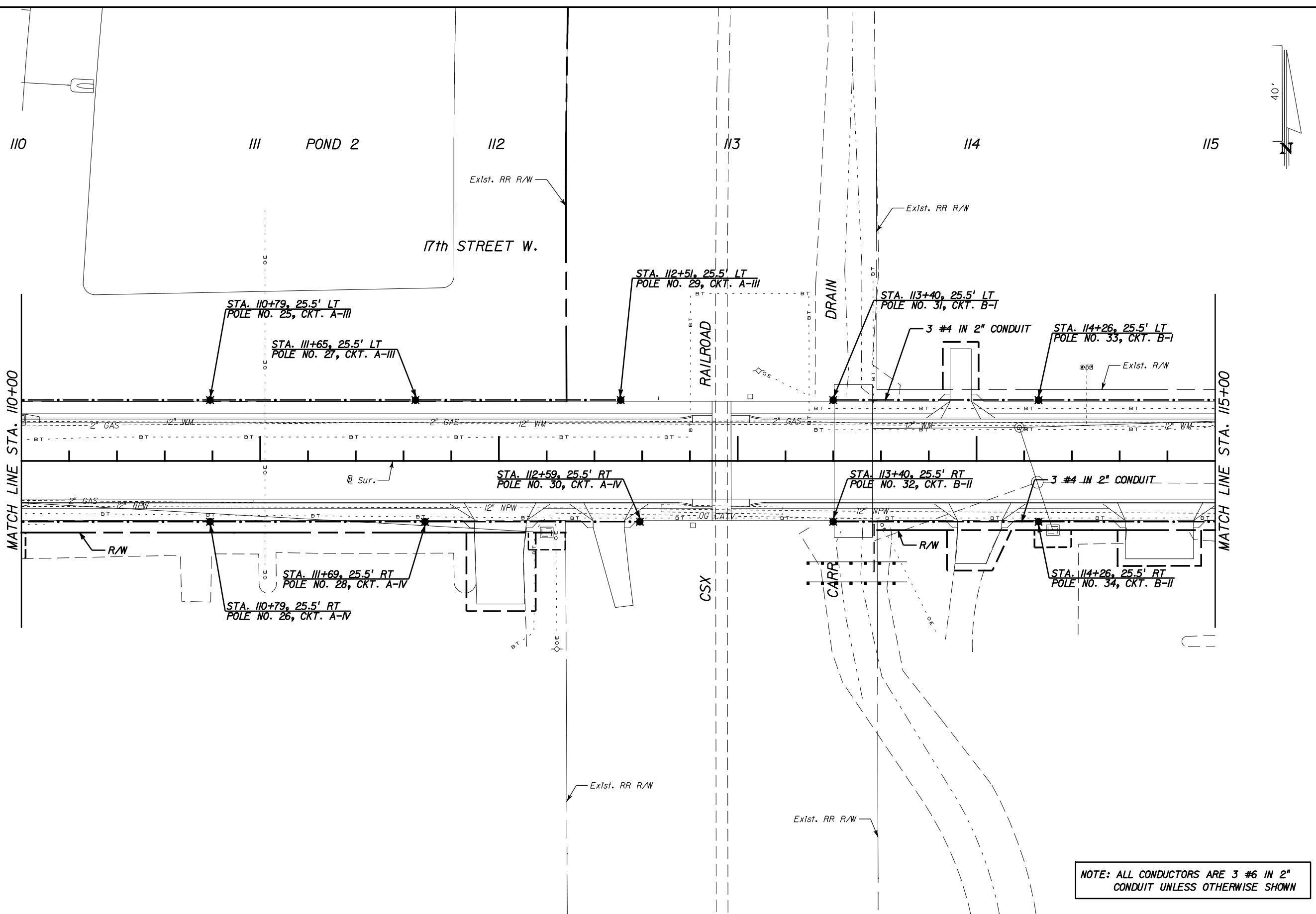
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DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	ALAN M. SCHWAB, PE 61313				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 42106
 Certificate of Authorization No.: 3952

ENGINEER	Alan M. Schwab, PE No. 61313	Proj. No.	6035261
		Dwg. Date	January 8, 2009
LIGHTING			



NOTE: ALL CONDUCTORS ARE 3 #6 IN 2" CONDUIT UNLESS OTHERWISE SHOWN

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SUPERVISED BY	ALAN M. SCHWAB, PE 61313				

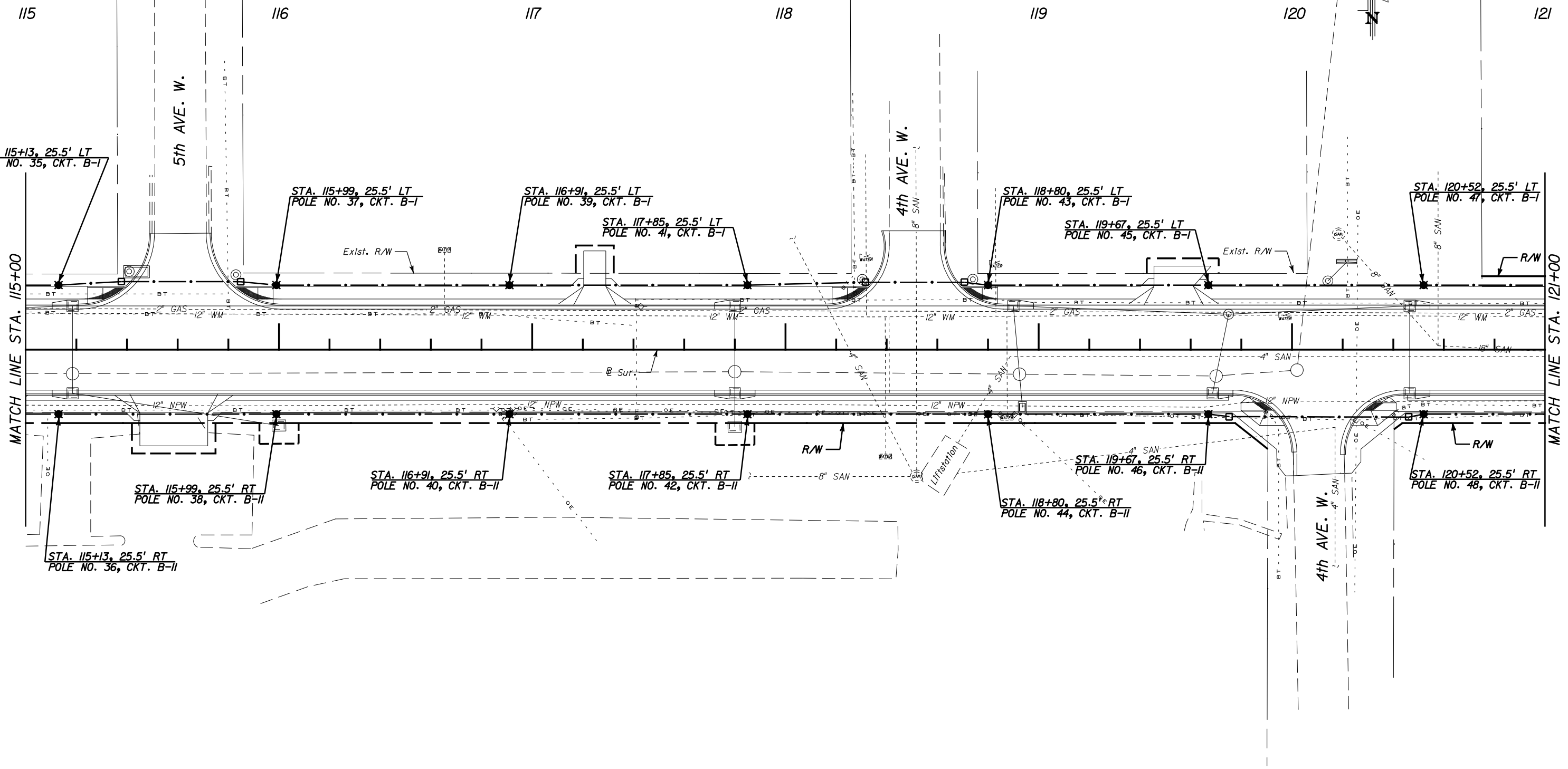


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA


 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 42106
 Certificate of Authorization No.: 3952

ENGINEER	Alan M. Schwab, PE No. 61313	Proj. No.	6035261
		Dwg. Date	January 8, 2009
LIGHTING			

17th STREET W.



NOTE: ALL CONDUCTORS ARE 3 #4 IN 2" CONDUIT UNLESS OTHERWISE SHOWN

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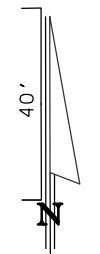
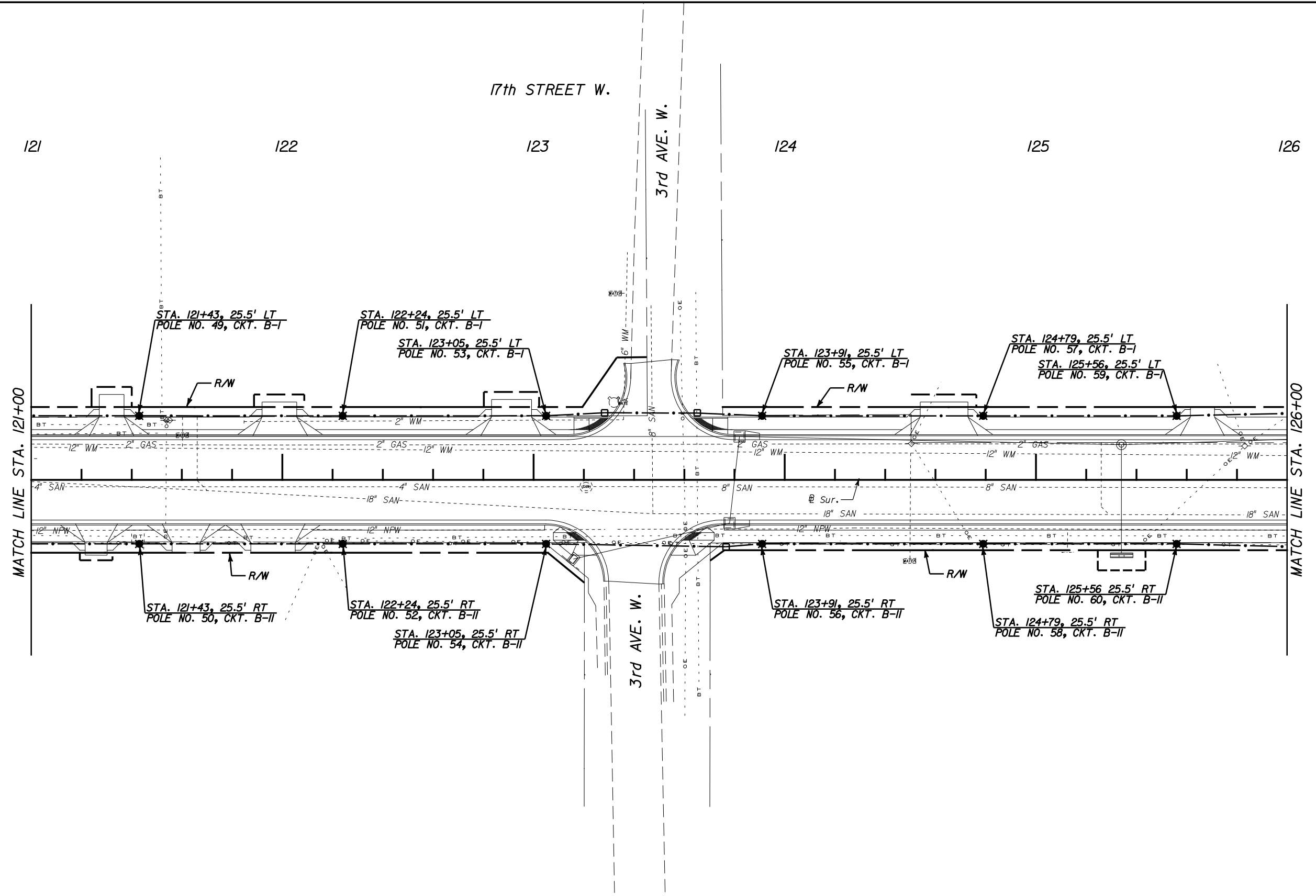
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CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	ALAN M. SCHWAB, PE 61313				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 42106
 Certificate of Authorization No.: 3952

ENGINEER Alan M. Schwab, PE No. 61313	Proj. No. 6035261
	Dwg. Date January 8, 2009
LIGHTING	




NOTE: ALL CONDUCTORS ARE 3 #4 IN 2" CONDUIT UNLESS OTHERWISE SHOWN

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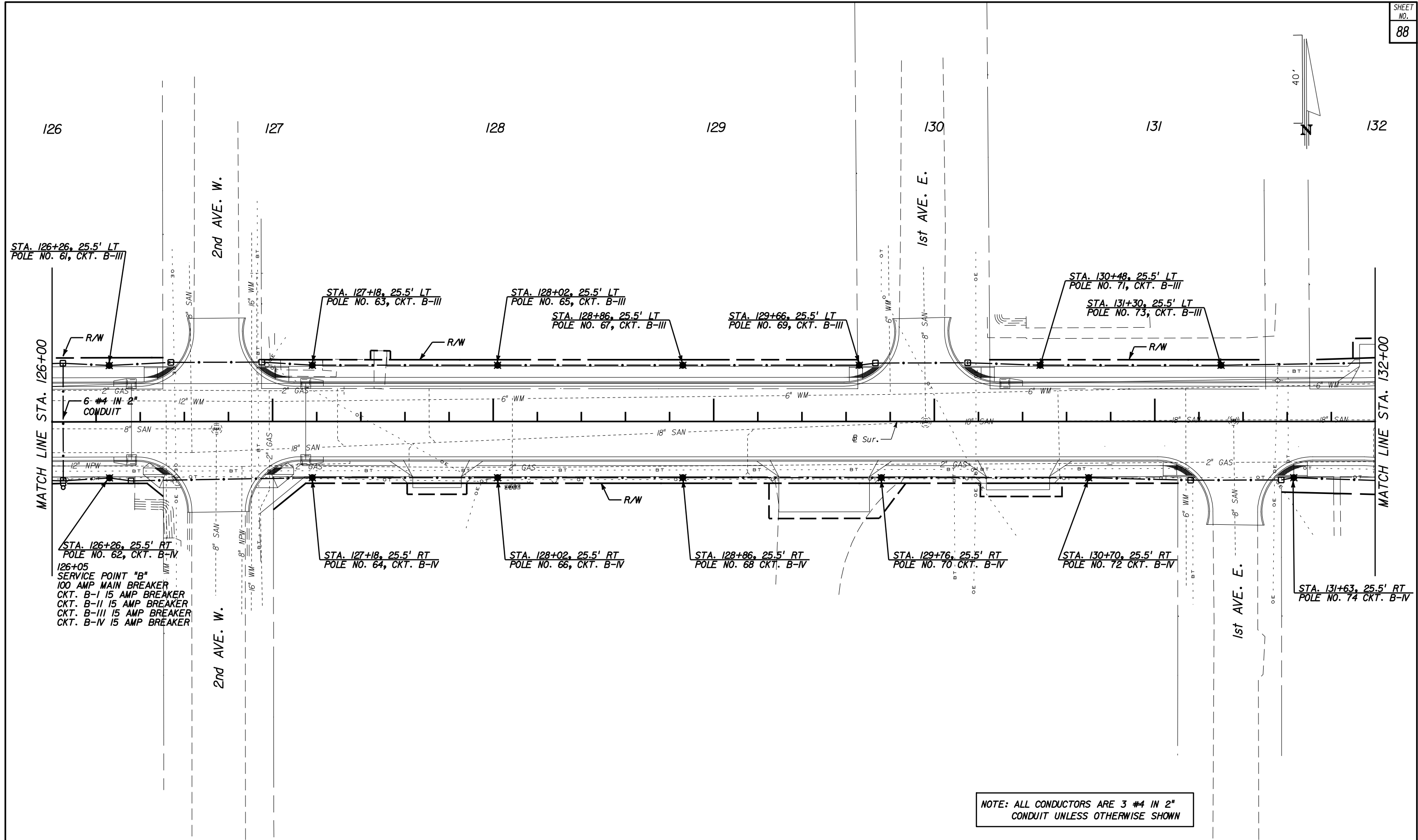
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SUPERVISED BY	ALAN M. SCHWAB, PE 61313				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA


 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 42106
 Certificate of Authorization No.: 3952

ENGINEER	Alan M. Schwab, PE No. 61313	Proj. No.	6035261
		Dwg. Date	January 8, 2009
LIGHTING			



NOTE: ALL CONDUCTORS ARE 3 #4 IN 2" CONDUIT UNLESS OTHERWISE SHOWN

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SUPERVISED BY	ALAN M. SCHWAB, PE 61313				

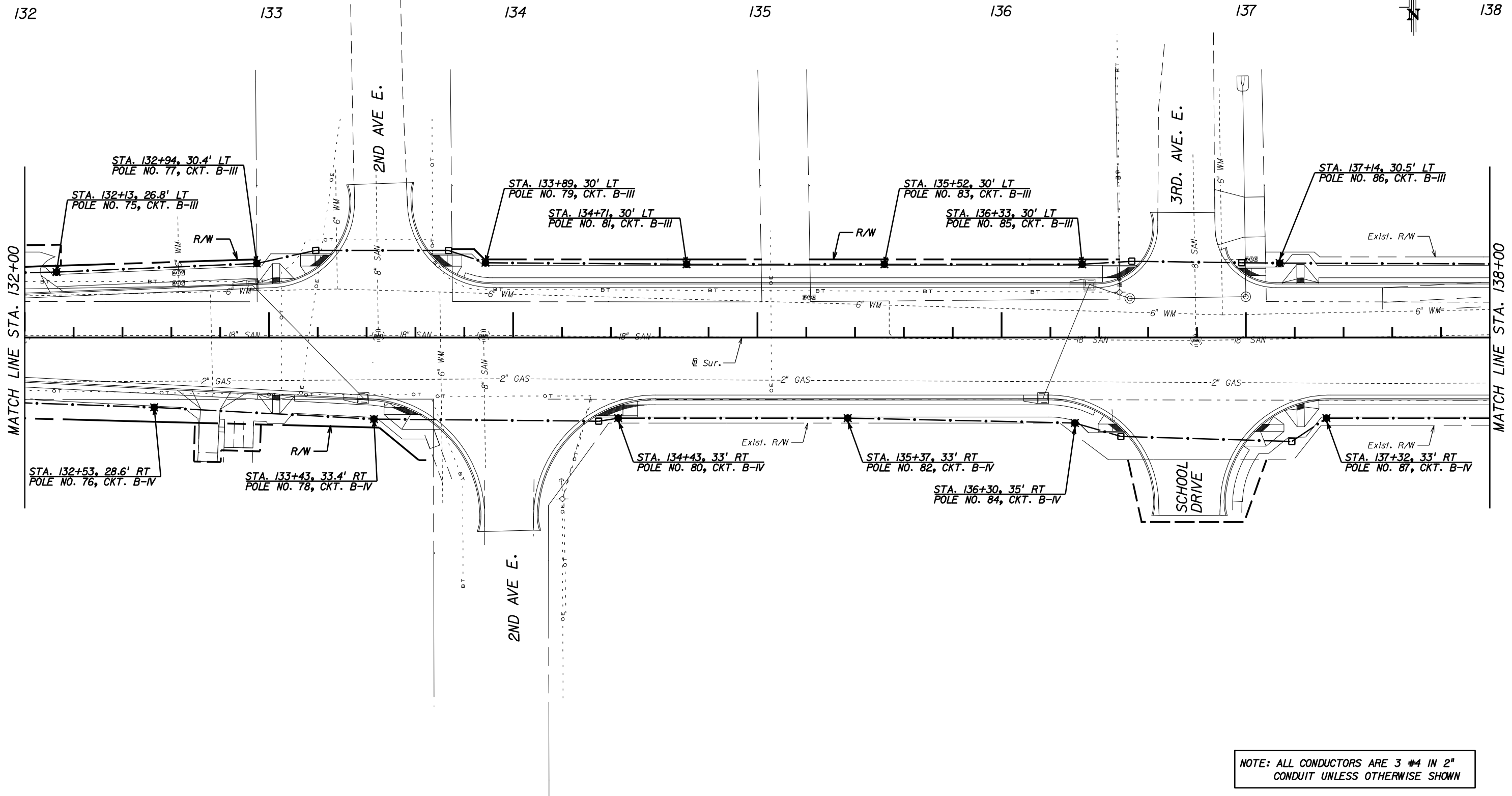


17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 42106
 Certificate of Authorization No.: 3952

ENGINEER	Alan M. Schwab, PE No. 61313	Proj. No.	6035261
		Dwg. Date	January 8, 2009
LIGHTING			

17th STREET W



NOTE: ALL CONDUCTORS ARE 3 #4 IN 2" CONDUIT UNLESS OTHERWISE SHOWN

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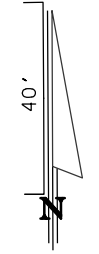
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SUPERVISED BY	ALAN M. SCHWAB, PE 61313				



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

WADETRIM
 8745 Henderson Road, Suite 220, Tampa, FL 33634
 Engineer of Record: David O. Theung, PE No.: 42106
 Certificate of Authorization No.: 3952

ENGINEER	Alan M. Schwab, PE No. 61313	Proj. No.	6035261
		Dwg. Date	January 8, 2009
LIGHTING			



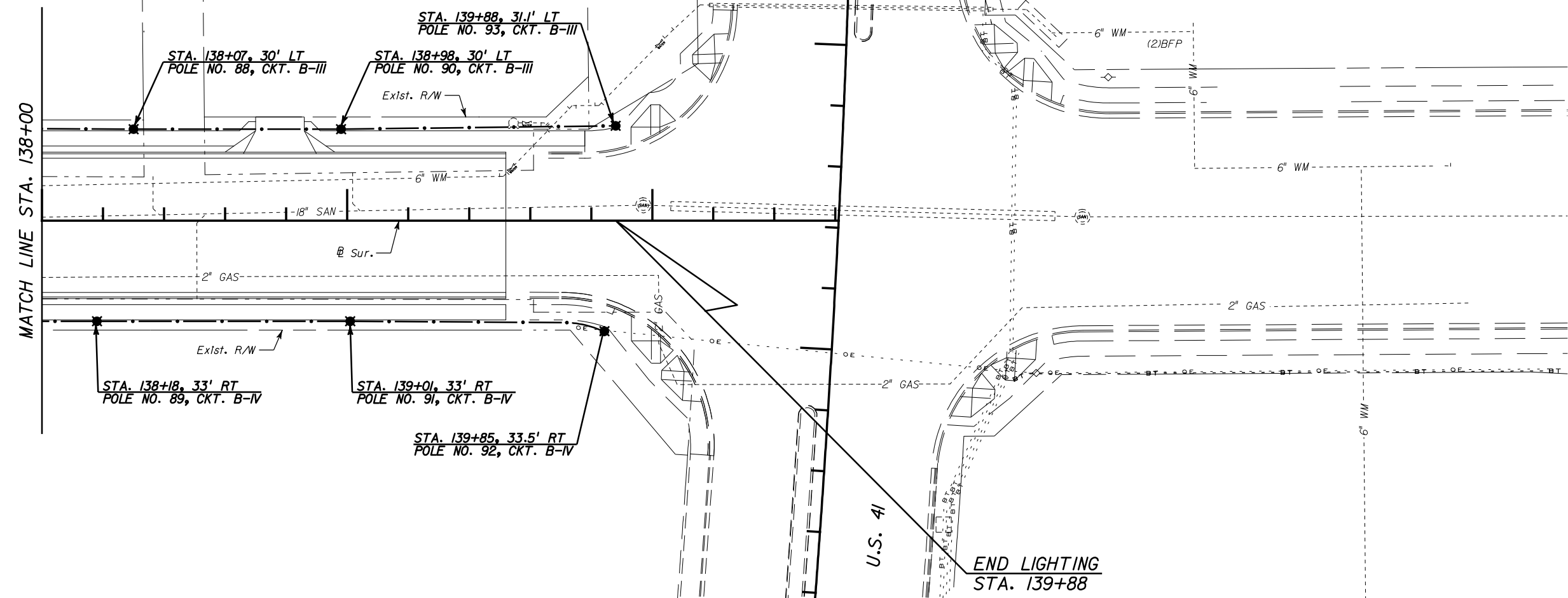
138

139

140

17TH STREET WEST

17TH STREET EAST



NOTE: ALL CONDUCTORS ARE 3 #4 IN 2" CONDUIT UNLESS OTHERWISE SHOWN

PLOT DATE: 5/27/2009

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DRAWN BY	KDR	DATE	1/09		
CHECKED BY	BDG	DATE	1/09		
SUPERVISED BY	ALAN M. SCHWAB, PE 61313				



17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

WADETRIM
8745 Henderson Road, Suite 220, Tampa, FL 33634
Engineer of Record: David O. Theung, PE No.: 42106
Certificate of Authorization No.: 3952

ENGINEER	Alan M. Schwab, PE No. 61313	Proj. No.	6035261
		Dwg. Date	January 8, 2009
LIGHTING			