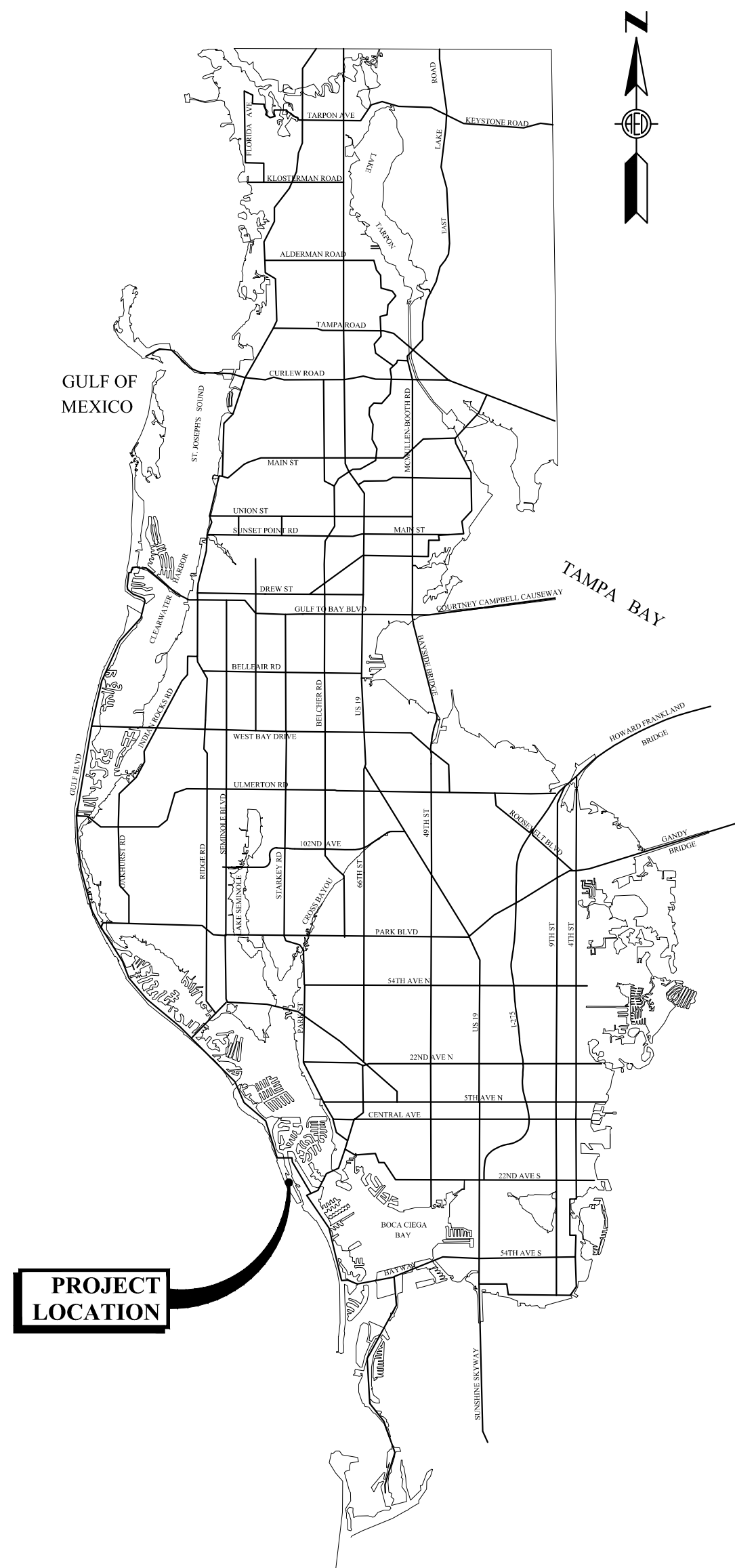


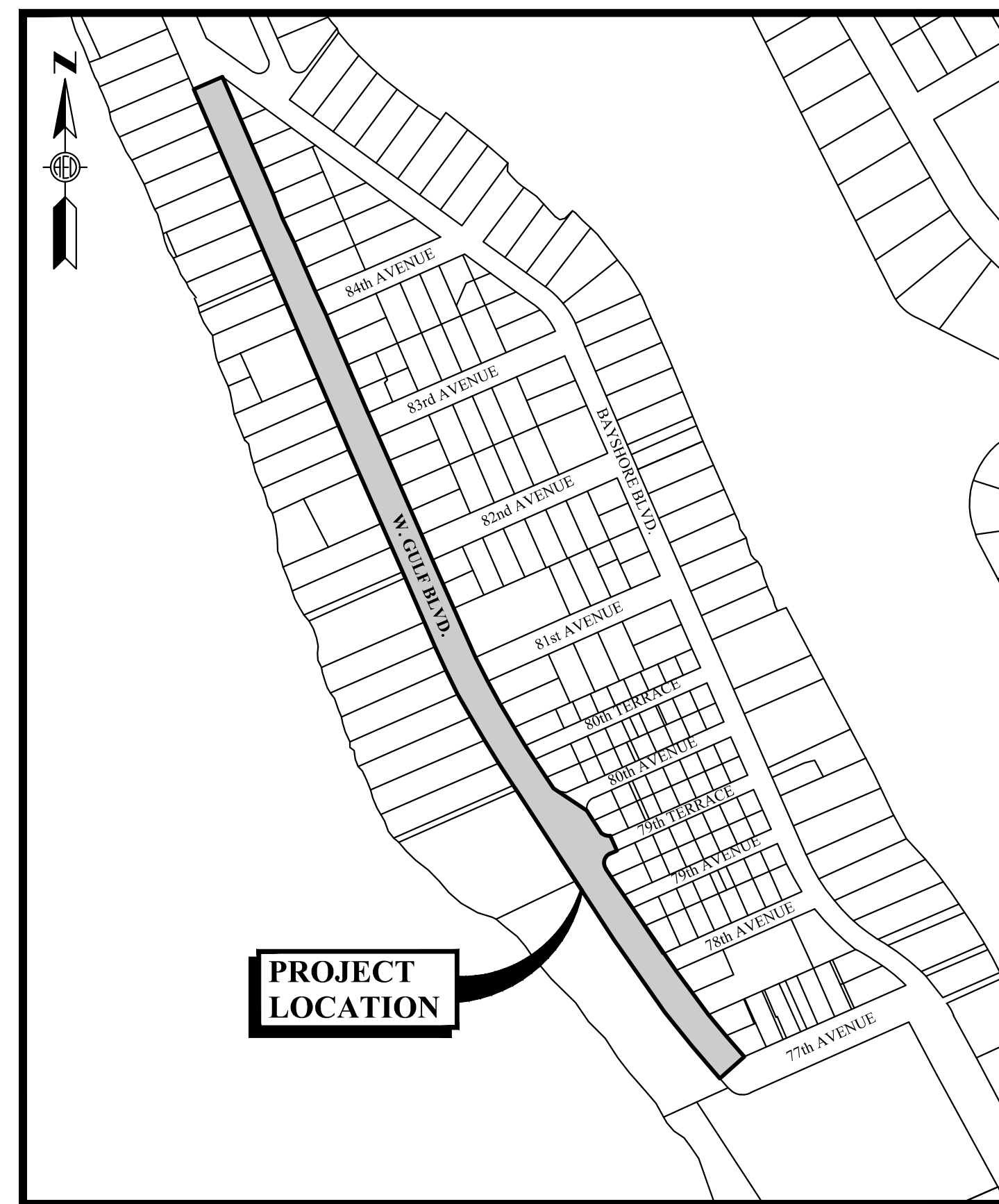
CONSTRUCTION PLANS FOR:

# IMPLEMENTATION OF BMPs WITHIN THE SUNSET BEACH WATERSHED (PHASE VI)(N674)

SECTION 36, TOWNSHIP 31 SOUTH, RANGE 15 EAST  
PINELLAS COUNTY, FLORIDA



**VICINITY MAP**  
N.T.S.



**LOCATION MAP**  
N.T.S.

DRAWING INDEX	
DWG. NO.	SHEET TITLE
C1	COVER SHEET
C2	GENERAL NOTES & LEGENDS
C3	KEY / CONTROL MAP
C4-C7	PLAN & PROFILE
C8	CONCEPTUAL CONSTRUCTION PHASING PLAN
C9-C10	GENERAL DETAILS

**CONSTRUCTION PLANS**

 INVESTIGATE BEFORE YOU EXCAVATE  
**CALL LOCAL PUBLIC UTILITY NOTIFICATION CENTER**  
TOLL FREE  
1-800-432-4770  
MIN. 48 HOURS BEFORE YOU EXCAVATE

PREPARED FOR:  
**CITY OF TREASURE ISLAND**  
120 - 108th AVENUE  
TREASURE ISLAND, FL 33706

Prepared By:

 **ADVANCED**  
ENGINEERING & DESIGN, INC.  
CIVIL • MUNICIPAL • SITE DESIGN • PERMITTING • PLANNING  
3931 68TH AVENUE NORTH • PINELLAS PARK, FL 33781 • Phone: 727.526.9158 • Fax: 727.527.9683

**GENERAL NOTES:**

- LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THE WORK, PRIOR TO CONSTRUCTION.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ANY EXISTING UTILITIES INCLUDING GAS, WATER, ELECTRIC, COMMUNICATIONS, CABLE TV AND SANITARY SEWER WITHIN THE PROJECT LIMITS.
- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL CALL "SUNSHINE" AT 800-432-4770 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION TO ARRANGE FOR UTILITY LOCATIONS
- DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE GENERAL PUBLIC AND THE SAFETY OF HIS PERSONNEL.
- ALL SUBSURFACE CONSTRUCTION SHALL COMPLY WITH THE "TRENCH SAFETY ACT". THE CONTRACTOR SHALL INSURE THAT THE METHOD OF TRENCH PROTECTION AND CONSTRUCTION IS IN COMPLIANCE WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.
- ALL NEW CONSTRUCTION (STORM DRAINS, INLET & UTILITY ADJUSTMENTS) MUST BE IN-PLACE, TESTED, PROPERLY COMPACTED AND INSPECTED PRIOR TO BASE AND SURFACE PAVEMENT CONSTRUCTION.
- ANY MATERIALS AND WORK ON THIS PROJECT WHICH ARE REQUIRED TO MEET "FDOT" STANDARDS AND SPECIFICATIONS SHALL BE REFERENCED TO THE FOLLOWING: FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS" AND FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (LATEST EDITIONS).
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL MATERIALS AND PRODUCTS UTILIZED TO COMPLETE THE CIVIL WORK AS DELINEATED WITHIN THESE PLANS. SUBMITTALS SHALL INCLUDE, BUT NOT BE LIMITED TO: PIPE, FITTINGS, PRECAST STRUCTURES, CONCRETE MIX DESIGN, ASPHALT MIX DESIGN & BASE MATERIALS.
- THE CONTRACTOR SHALL INSTALL TEMPORARY FENCING WHERE REQUIRED TO SECURE SIDE/REAR YARD AREAS. YARDS SHALL BE SECURED AT THE END OF WORK DAY AND OVER WEEKENDS UNTIL WORK IS COMPLETED.
- CONTRACTOR SHALL RETAIN THE SERVICES OF A FLORIDA LICENSED, PROFESSIONAL LAND SURVEYOR FOR ALL SURVEY AND CONSTRUCTION TAKEOUT. AS-BUILT INFORMATION SHALL BE COMPILED THROUGHOUT CONSTRUCTION AND DELINEATED ON A SET OF PLANS BY RED-MARKING.
- CONTRACTOR SHALL RETAIN THE SERVICES OF A FLORIDA LICENSED PROFESSIONAL LAND SURVEYOR TO RE-SET ALL PROPERTY CORNERS IMPACTED BY CONSTRUCTION ACTIVITY.
- CONTRACTOR SHALL RETAIN THE SERVICES OF A CERTIFIED TESTING LABORATORY FOR MATERIALS TESTING OF CONCRETE, ASPHALT AND SOILS DENSITY. TESTING RESULTS SHALL BE SUBMITTED TO THE CITY AND CITY'S REPRESENTATIVE.
- AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY OF ALL WORK PERFORMED IN AUTOCAD FORMAT. THIS AS-BUILT WILL BE COMPARED TO THE DESIGN PLANS FOR ACCURACY AND COMPLETENESS OF WORK. ANY DEVIATIONS FROM THE DESIGN PLANS WHICH WERE NOT APPROVED BY THE DESIGN ENGINEER AND/OR CITY IN WRITING, SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL ADHERE TO ALL PERMITTING CONDITIONS SET FORTH WITHIN THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD), ARMY CORPS OF ENGINEERS AND PINELLAS COUNTY WATER & NAVIGATION AUTHORITY PERMITS. THESE PERMITS HAVE BEEN PROVIDED IN THE SPECIFICATIONS.
- THE CONTRACTOR SHALL ENDEAVOR TO PROTECT PRIVATE PROPERTY. ANY DAMAGE CAUSED BY THE CONTRACTOR IN THE PERFORMANCE OF HIS WORK SHALL BE CORRECTED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING. NO PAYMENT SHALL BE MADE FOR THIS WORK. THE CONTRACTOR SHALL USE SHEETING/SHORING/TRENCH PROTECTION MEASURES TO ENSURE NO PRIVATE PROPERTY IMPACTS.
- THE CONTRACTOR SHALL MAINTAIN ACCESS FOR ALL EMERGENCY VEHICLES TO RESIDENTIAL AND COMMERCIAL PROPERTIES AT ALL TIMES.
- EXISTING CONCRETE CURB THAT IS DISTURBED SHALL BE REPLACED IN KIND.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND SHALL PROVIDE BRACING, SHEETING AND SHORING (PROPRIETARY AND NON-PROPRIETARY) AS NECESSARY. DEWATERING SHALL BE UTILIZED TO KEEP TRENCHES AND EXCAVATIONS DRY THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE GENERAL PUBLIC'S SAFETY WHEN CONSTRUCTION EXCAVATIONS ARE LEFT UNATTENDED. EXCAVATIONS SHALL HAVE TEMPORARY SAFETY FENCING PLACED AROUND THE PERIMETER OF THE EXCAVATION. EXCAVATION PROTECTION MEASURES SHALL BE COMPLETED PRIOR TO CONSTRUCTION PERSONNEL LEAVING THE SITE THROUGHOUT THE DURATION OF CONSTRUCTION.
- ALL IRRIGATION SYSTEMS DISTURBED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED. CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS NECESSARY TO COMPLETE THE WORK. THE RESTORATION OF IRRIGATION SYSTEMS SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE & CONSIDERED INCIDENTAL.
- ALL EXISTING STRIPING AND SIGNAGE DISTURBED DURING CONSTRUCTION SHALL BE FULLY RESTORED (IN-KIND) PER FDOT STANDARD SPECIFICATIONS. TEMPORARY STRIPING AND SIGNING SHALL BE PROVIDED AS NEEDED OR AS ORDERED BY THE CITY. ALL STRIPING SHALL BE RESTORED USING THERMOPLASTIC STRIPING. SIGNAGE SHALL BE RESET IN ACCORDANCE WITH FDOT SPECIFICATIONS.
- ALL EXISTING UTILITIES SHALL BE PROTECTED THROUGHOUT THE DURATION OF CONSTRUCTION. THE CONTRACTOR MAY NEED TO TEMPORARILY SUPPORT UTILITIES.
- ALL STRUCTURE DIMENSIONS LISTED ON THE PLAN VIEW ARE INTERNAL DIMENSIONS.
- THE CONTRACTOR SHALL USE CAUTION WHEN OPERATING VIBRATORY EQUIPMENT WITHIN THE VICINITY OF ANY RESIDENTIAL OR COMMERCIAL STRUCTURES.
- STORMWATER STRUCTURES SHALL BE SET ON A 12" BEDDING OF FDOT NO. 57 STONE. BEDDING LIMITS SHALL EXTEND ONE FOOT BEYOND THE STRUCTURE'S BOTTOM SLAB IN ALL DIRECTIONS.
- THE CONTRACTOR SHALL RESTORE ALL LANDSCAPING DAMAGED DURING CONSTRUCTION. REPLACEMENT LANDSCAPING SHALL REPLICATE THE SIZE AND SPECIES OF THE REMOVED LANDSCAPING.
- A WOVEN FILTER FABRIC SHALL BE PLACED BENEATH ALL SHELL/ROCK/GRAVEL PARKWAY AREAS RESTORED BY THE CONTRACTOR.
- SHELL/ROCK/GRAVEL THICKNESS SHALL MATCH EXISTING PLUS 2" (PARKWAY AREAS).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF SHEETING/SHORING/TRENCH PROTECTION SYSTEMS. THIS INCLUDES, BUT IS NOT LIMITED TO, SHEET THICKNESS, REQUIRED EMBEDMENT, ETC.
- STORMWATER AND UTILITY INFRASTRUCTURE SHALL BE CONSTRUCTED WITHIN DRY TRENCHES/EXCAVATIONS. NON-DEWATERED SOILS SHALL NOT BE CONSIDERED UNSUITABLE MATERIAL.
- SHELL SHALL BE ¾" WASHED MATERIAL (DREDGED).

**CLEARING & SITE PREPARATION NOTES:**

- THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THOSE AREAS NECESSARY FOR CONSTRUCTION. ALL DISTURBED AREAS MUST BE RESTORED IMMEDIATELY FOLLOWING CONSTRUCTION OR AS INDICATED ON THE PLANS.
- ANY UNUSED EXCESS GROUND MATERIAL STRIPPED DURING CLEARING AND GRUBBING ACTIVITIES SHALL BE REMOVED FROM THE PROJECT SITES.
- ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS.
- THE CONTRACTOR SHALL NOTE THAT THERE ARE BURIED TELEPHONE, BURIED ELECTRICAL, WATER AND SANITARY SEWER SERVICES NEAR PROJECT SITES. THESE FACILITIES SHALL BE ACCURATELY FIELD LOCATED PRIOR TO ANY CLEARING AND GRUBBING WORK AND SHALL BE PROTECTED THROUGHOUT CONSTRUCTION ANY DAMAGE TO THESE FACILITIES WILL BE PROMPTLY CORRECTED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SPRINKLER SYSTEMS. HE MUST COORDINATE WITH

EACH HOMEOWNER/RESIDENT TO TEST THE SPRINKLER SYSTEM ONCE REPAIRS ARE MADE. ALL WORK MUST MEET THE APPROVAL OF THE HOMEOWNER/RESIDENT AND CITY REPRESENTATIVE.

**EROSION CONTROL NOTES:**

- THE CONTRACTOR SHALL PROVIDE EROSION CONTROL/ SEDIMENTATION BARRIERS (SYNTHETIC HAY BALES OR SILTATION CURTAINS) AS NEEDED TO PREVENT SITE EROSION DUE TO CONSTRUCTION ACTIVITY. STOCKPILED DIRT SHALL BE COVERED TO PREVENT EROSION DUE TO WIND AND/OR RAINFALL.
- IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHOD. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR WATER USED FOR THESE PURPOSES.
- THE CONTRACTOR SHALL INSPECT AND MAINTAIN, ON A DAILY BASIS, ALL EROSION/SEDIMENTATION CONTROL FACILITIES.
- CONTRACTOR SHALL PROVIDE EROSION/SEDIMENTATION CONTROL IN THE EVENT THAT TEMPORARY FILL PLACEMENT ON SITE IS REQUIRED DURING CONSTRUCTION.
- DEBRIS & SEDIMENT SHALL BE CLEANED FROM VEHICLE USE AREAS ON A DAILY BASIS.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PRODUCE A "STORMWATER POLLUTION PREVENTION PLAN" (SWPPP) AND OBTAIN COVERAGE UNDER A "NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM" (NPDES) PERMIT BEFORE CONSTRUCTION PROCEEDS. A "NOTICE OF INTENT" (NOI) FORM SHALL BE COMPLETED AND SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). FOR MORE INFORMATION, CONTACT 850-245-7520 OR VISIT THE FOLLOWING WEB SITE: [www.dep.fl.us/water/stormwater/npdes/index.htm](http://www.dep.fl.us/water/stormwater/npdes/index.htm).
- PRIOR TO THE NOTICE TO PROCEED, THE CONTRACTOR SHALL COMPLETE ILLICIT DISCHARGE TRAINING. THIS IS A NEW STATEWIDE REQUIREMENT. AT LEAST ONE PERSON WHO HAS RECEIVED THE TRAINING MUCH BE PRESENT AT THE CONSTRUCTION SITE. THERE ARE A FEW OPTIONS TO RECEIVE THE TRAINING:
  - THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION IS CREATING AN ONLINE ILLICIT DISCHARGE TRAINING PROGRAM. IF THIS COURSE HAS BEEN COMPLETED, PLEASE PROVIDE THE CERTIFICATION NUMBERS OF THE APPLICABLE PERSONNEL.
  - OTHER MUNICIPALITIES IN FLORIDA HAVE THE SAME REQUIREMENT. PROVIDE EVIDENCE THAT APPLICABLE PERSONNEL HAVE RECEIVED TRAINING THROUGH ANOTHER MUNICIPALITY OR SOURCE.

**DEWATERING NOTES:**

- ANY DEWATERING ACTIVITY THAT DISCHARGES PRODUCED GROUND WATER TO WATERS OF THE STATE MUST OBTAIN COVERAGE UNDER THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S (FDEP'S) "GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUNDWATER FROM ANY NON-CONTAMINATED SITE ACTIVITY" IN ACCORDANCE WITH RULE 62-621.300(2) (F.A.C.). THIS EFFORT SHALL BE THE CONTRACTORS RESPONSIBILITY.
- WATERS PUMPED FROM CONSTRUCTION ACTIVITIES SHALL BE ROUTED TO A DEWATERING BAG (DEWATERING BAG AS MANUFACTURED R.H. MOORE & ASSOCIATES OR APPROVED EQUAL). DEWATERING BAG SHALL MEASURE 5'X5' (MINIMUM) AND CONTAIN OPENINGS NO LARGER THAN 0.177 MM (NO. 80 SIEVE). NO WATER PUMPED FROM THE CONSTRUCTION SITE SHALL BE ROUTED AWAY FROM THE DEWATERING BAG.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED GROUNDWATER TESTING. THIS INCLUDES PRELIMINARY WATER SAMPLING TO SATISFY THE PERMIT FOR DISCHARGE OF PRODUCED GROUNDWATER. ANY GROUNDWATER TREATMENT AS REQUIRED AS A RESULT OF THE PERMIT SAMPLING WILL BE DIRECTED BY AND PAID FOR BY OTHERS. THE CONTRACTOR MAY OR MAY NOT BE INVOLVED WITH TREATMENT SHOULD IT BECOME NECESSARY.
- THE CONTRACTOR SHALL USE CAUTION WHEN FILLING DEWATERING BAGS AS HIGH PUMPING RATES CAN DAMAGE THE UNIT(S).
- ONCE THE DEWATERING BAG IS FULL, THE CONTRACTOR SHALL SUITABLY DISPOSE OF THE MATERIAL OFFSITE.
- THE CONTRACTOR SHALL ADHERE TO MONITORING REQUIREMENTS SET FORTH IN THE SWFWMD PERMIT (SEE SPECIFICATIONS).
- DEWATERING BAGS WHICH ARE FULL, TORN OR DAMAGED IN ANY WAY SHALL IMMEDIATELY BE REMOVED FROM THE SITE.
- DEWATERING FOR PIPE/STRUCTURE INSTALLATION SHALL BE ROUTED THROUGH DEWATERING BAGS. THE ABOVE-REFERENCED DEWATERING BAG CRITERIA WILL REMAIN IN EFFECT.

**PAVING & GRADING NOTES:**

- ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS, ETC.) SHALL BE EXCAVATED AND REMOVED FROM THE SITE. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED IN ACCORDANCE WITH THESE PLANS AND OR SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND SHALL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE, STRUCTURES AND OTHER APPURTENANCES ARE PLACED.
- THE CONTRACTOR SHALL RESTORE THE ROADWAY AND CURBING TO THE PRE-CONSTRUCTION ELEVATIONS UNLESS SPECIFIED OTHERWISE. THE CONTRACTOR SHALL MAKE ALL EFFORTS TO PROVIDE POSITIVE DRAINAGE TOWARDS THE EXISTING AND/OR NEWLY INSTALLED STORMWATER COLLECTION STRUCTURES.
- THE CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
- ALL PAVEMENT MARKINGS SHALL BE MADE IN ACCORDANCE WITH FDOT STANDARD INDEX NO. 17346.
- ALL VALVE BOXES, MANHOLE FRAMES, CLEAN-OUTS, IRRIGATION BOXES, ELECTRICAL MANHOLE COVERS, ETC. SHALL BE ADJUSTED TO MATCH FINISHED GRADES. FOR MANHOLE FRAME, & COVERS, UTILIZE BRICK AND MORTAR OR CONCRETE ADJUSTMENT RINGS AS REQUIRED. SEPARATE PAYMENT SHALL NOT BE PROVIDED FOR THIS TASK.
- MILLING SHALL BE DONE IN COMPLIANCE WITH FDOT SPECIFICATION SECTION 327. MILLINGS SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL RESTORE ALL ROADWAY STRIPING REMOVED DURING CONSTRUCTION ACTIVITIES/MILLING. TEMPORARY STRIPING SHALL BE PAINTED & PERMANENT STRIPING SHALL BE THERMOPLASTIC. SPECIFIC PAYMENT FOR TEMPORARY STRIPING SHALL NOT BE PROVIDED.
- THE CONTRACTOR SHALL SAW CUT EXISTING ASPHALT PROPOSED TO BE REMOVED IN LOCATIONS WHERE FULL WIDTH ROADWAY RESTORATION ISN'T PROPOSED. ALL SAW CUTS SHALL BE CLEAN AND STRAIGHT. CONTRACTOR SHALL USE SHEETING/SHORING/TRENCH PROTECTION MEASURES AS NEEDED TO ENSURE LIMITS OF ROADWAY RESTORATION ARE NOT INCREASED.

**DRAINAGE SYSTEM NOTES:**

- REINFORCED CONCRETE PIPE AND ELLIPTICAL REINFORCED CONCRETE PIPE SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE FDOT STANDARD. ALL PIPING SHALL BE STEEL REINFORCED.
- NO PRECAST STRUCTURES SHALL BE ORDERED UNTIL THE DESIGN ENGINEER HAS REVIEWED AND APPROVED SHOP DRAWINGS SUBMITTED BY THE CONTRACTOR.
- ALL PIPE SHALL HAVE ALL JOINTS WRAPPED WITH A FILTER FABRIC JACKET PER FDOT INDEX 280.
- CONTRACTOR SHALL MODIFY AND FULLY RESTORE EXISTING CATCH BASINS, INLETS, MANHOLES AND END STRUCTURES AS REQUIRED FOR THE INSTALLATION OF NEW STORM PIPE. THIS SHALL INCLUDE REMOVAL OF EXISTING PIPE, SAWING, CORING, WALL REPAIRS, BRICK WORK AND FLOW CHANNEL/BENCH RESTORATION. CONTRACTOR SHALL USE CAUTION SO AS NOT TO DAMAGE EXISTING STRUCTURES.
- ALL GRATES SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION & BE RATED FOR H-20 LOADING.
- THE CONTRACTOR SHALL FIELD CONFIRM EXISTING STORMWATER PIPE INVERTS WHERE AN EXISTING PIPING IS PROPOSED TO BE CONNECTED TO A NEW STRUCTURE.
- EXPANSION JOINT MATERIAL (1/2") SHALL BE USED WHEN GRATED INLETS ABUT CONCRETE SIDEWALK (WEST GULF BLVD.).
- BRICK ADJUSTMENT CAPABILITIES ARE MINIMAL BASED UPON THE PROPOSED INVERTS AND THE PROPOSED RIM ELEVATIONS NEEDED TO MATCH EXISTING GRADES.

9. BENCHES SHALL BE POURED IN STRUCTURES PER FDOT INDEX NO. 201

**SANITARY SEWER SYSTEM NOTES:**

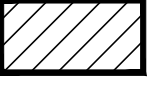



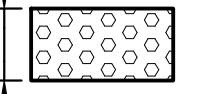
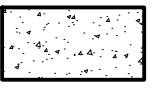
- CONTRACTOR SHALL NOTIFY RESIDENTS PRIOR TO SHUTOFF OF SERVICE.
- CONTRACTOR SHALL BYPASS PUMP OR TEMPORARY PLUG LINES TO CONSTRUCT SANITARY SEWER REPLACEMENT.
- CONTRACTOR SHALL ENSURE ADEQUATE COVER, AS STATED IN THE SPECIFICATIONS AS PROVIDED ON ALL LATERALS AFTER ROADWAY RECONSTRUCTION IS COMPLETE.
- SANITARY PIPING GOING THRU STORMWATER STRUCTURES SHALL BE DUCTILE IRON.

**MAINTENANCE OF TRAFFIC NOTES:**

- THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL AND SAFETY DEVICES, IN ACCORDANCE WITH THE U.S. DEPARTMENT OF TRANSPORTATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE FLORIDA DEPARTMENT OF TRANSPORTATION'S "ROADWAY AND TRAFFIC DESIGN STANDARDS" (ALL LATEST EDITIONS). CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL. THE M.O.T. SHALL BE PREPARED BY QUALIFIED PERSONNEL AND SHOW ALL HAUL ROUTES, EMERGENCY EXITS AND RESIDENT ACCESS DURING EACH PHASE OF CONSTRUCTION. THE CONTRACTOR WILL NOT BE PERMITTED TO CLOSE ACCESS TO RESIDENCES OR PLACES OF BUSINESS. PROVISIONS WILL BE MADE TO PROVIDE ACCESS TO CONSTRUCTION VEHICLES FOR PICK-UP AND DELIVERY OF MATERIALS DURING THE CONSTRUCTION PERIOD.
- THE CITY WILL REQUIRE THAT THE MAINTENANCE OF TRAFFIC PLAN BE SUBMITTED FOR APPROVAL TWO WEEKS PRIOR TO IMPLEMENTATION.
- THE CONCEPTUAL CONSTRUCTION PHASING PLAN (SEEN ON SHEET C8) SHALL BE USED AS THE BASIS OF CONTRACTOR MAINTENANCE OF TRAFFIC PLAN DEVELOPMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE NECESSARY SIGNAGE, TEMPORARY STRIPING, CHANNELIZING DEVICES / BARRICADES NEEDED TO PROPERLY IMPLEMENT THE PHASING PLAN.
- PEDESTRIAN MAINTENANCE OF TRAFFIC SHALL BE IMPLEMENTED IN ACCORDANCE WITH FDOT INDEX NO. 660 (LATEST EDITION).
- THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY CROSSWALK DURING PHASE II WHERE PEDESTRIAN TRAFFIC CROSSES WEST GULF BLVD.
- THE USE OF A VARIABLE MESSAGE BOARD WILL BE REQUIRED THROUGHOUT THE DURATION OF THE PROJECT.

SUE DATA TABLE								
VVH No.	Utility Description (Owner, Type)	Size (in.)	Material	Location Information			Existing Ground Elevation	Top of Utility Elevation (Approx.) (ft.)
				Station	Offset	LT. / RT.		
VVH01	FRONTIER BURIED TELEPHONE	6"	PVC	14+15.35	30.36	LT.	4.65'	2.22'
VVH02	PINELLAS COUNTY, RCW	4"	UNK	15+8.8	18.51'	LT.	4.41'	3.26'
VVH03	PINELLAS COUNTY, RCW	4"	PVC	16+21.83	29.79'	LT.	4.49'	0.65'
VVH04	PINELLAS COUNTY, RCW	4"	UNK	21+33.01	9.17'	LT.	3.94'	1.12'
VVH05	PINELLAS COUNTY, RCW	4"	UNK	26+71.87	10.38'	LT.	4.74'	3.29'

**"PROPOSED" LEGEND:**
































-  PROPOSED REMOVAL & RESTORATION LIMITS
-  PROPOSED STORM DRAINAGE PIPE
-  PROPOSED MANHOLE
-  PROPOSED GRATED INLET
-  DETECTABLE WARNING SURFACE PER FDOT NO. 304
-  CONCRETE SIDEWALK PER FDOT INDEX NO. 310 (6" THICK, UNLESS SPECIFIED OTHERWISE)

**"EXISTING" LEGEND:**

- FND FOUND
- FCIR FOUND CAPPED IRON ROD (SIZE NOTED)
- FCM FOUND CONCRETE MONUMENT (SIZE NOTED)
- FIP FOUND IRON PIPE (SIZE NOTED)
- FIR FOUND IRON ROD (SIZE NOTED)
- FN&D FOUND NAIL & BRASS DISK
- PK PARKER KAYLON NAIL
- LB LICENSED BUSINESS
- PLS PROFESSIONAL LAND SURVEYOR
- PSM PROFESSIONAL SURVEYOR & MAPPER
- RLS REGISTERED LAND SURVEYOR
- PLB PLAT BOOK
- PC PAGE
- PC POINT OF CURVATURE
- POT POINT ON TANGENT
- PT POINT OF TANGENCY
- BOS BEGINNING OF SURVEY
- EOS END OF SURVEY
- STA. STATION
- BFP BACKFLOW PREVENTER
- CLD CENTERLINE DITCH
- DIA. DIAMETER
- DCV DOUBLE CHECK VALVE
- EL. ELEVATION
- FFE FINISH FLOOR ELEVATION
- INV INVERT
- No. NUMBER
- ORB OFFICIAL RECORDS BOOK
- R/W RIGHT OF WAY
- S/W SIDEWALK
- TBM TEMPORARY BENCHMARK
- TOB TOP OF BANK
- TOS TOE OF SLOPE
- TPY TYPICAL
- UG UNDERGROUND
- A/C AIR CONDITIONER
- VVF VINYL FENCE
- WDF WOOD PANEL FENCE
- C/B CONCRETE BLOCK
- FCG F-TYPE CURB AND GUTTER
- VCG VALLEY CURB AND GUTTER
- CMP CORRUGATED METAL PIPE
- DI DUCTILE IRON PIPE
- HDPE HIGH DENSITY POLYETHYLENE PIPE
- PVC POLYVINYL CHLORIDE PIPE
- VCP VITRIFIED CLAY PIPE
- RCP REINFORCED CONCRETE PIPE
- EOP EDGE OF PAVEMENT
- CONC CONCRETE
- MH MANHOLE
- OHW OVERHEAD WIRES (CABLE, TELEPHONE, ELECTRICAL)
- ←W→ PAINT OR FLAG MARKING UG WATER LINE
- BENCHMARK
- BOLLARD/POST
- CONCRETE UTILITY POLE
- CLEANOUT
- DECORATIVE LIGHT
- ELECTRIC BOX
- FIRE HYDRANT
- GAS MARKER POST
- GUY WIRE
- IRRIGATION CONTROL VALVE
- MAIL BOX
- STATION
- METAL LIGHT POLE
- RECLAIMED WATER METER BOX
- RECLAIMED WATER VALVE
- SANITARY MANHOLE
- SIGN
- STORM OR DRAINAGE MANHOLE
- TELECOMMUNICATIONS MANHOLE
- TELEPHONE BOX
- TELEPHONE LINE MARKER POST
- TYPICAL
- VERIZON ACCESS BOX
- WATER VALVE
- WATER METER BOX
- WOOD LIGHT POLE
- WOOD UTILITY POLE

**"TREE" LEGEND:**

WITH SIZES (IN INCHES) AS NOTED

-  BAY
-  BOTTLEBRUSH
-  BUSH
-  CAMPHOR
-  CARROTWOOD
-  CEDAR
-  CHERRY LAUREL
-  CHINABERRY
-  CHINESE TALLOW
-  CITRUS
-  CREPE MYRTLE
-  CYPRESS
-  ELEPHANT-EAR
-  ELM
-  HICKORY
-  HOLLY
-  JACARANDA
-  JAPANESE PLUM
-  MAGNOLIA
-  MAPLE
-  MIMOSA
-  MULBERRY
-  OAK
-  ORCHID
-  PALM
-  PINE
-  PODOCARPUS
-  SWEETGUM
-  SYCAMORE
-  UNKNOWN
-  OTHER (as labeled)

NO.	REVISIONS	BY	DATE

SCALE:	N.T.S.
DRAWN:	S.A.T.
DESIGNED:	A.E.D.
APPROVED:	W.G.R.

**ADVANCED**  
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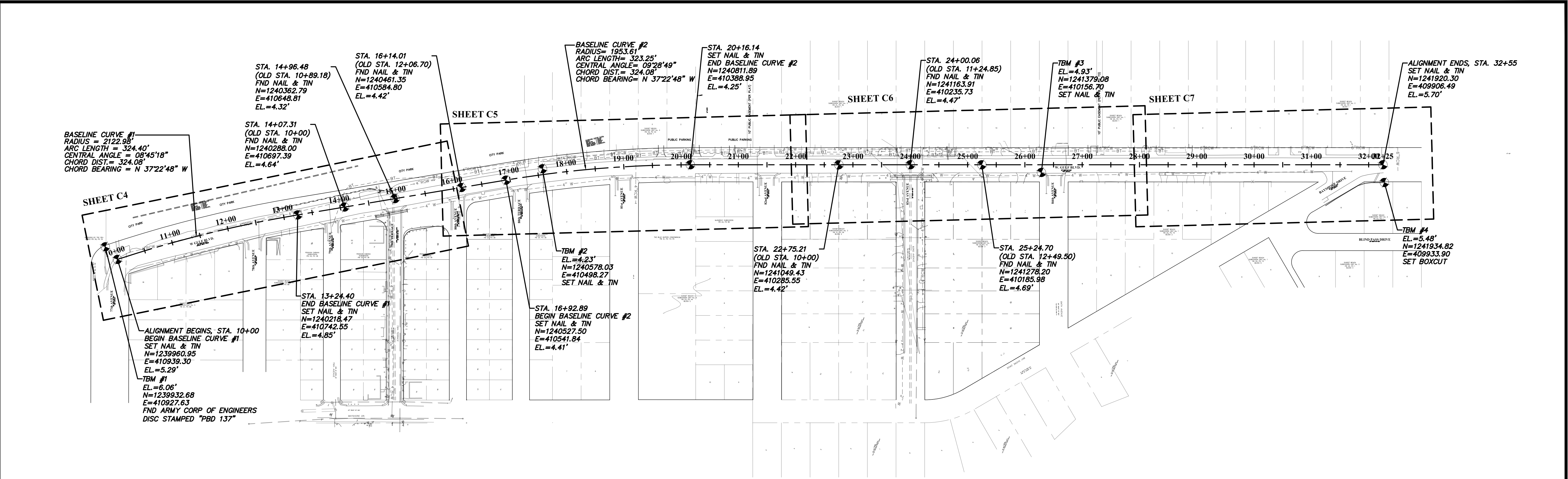
**CITY OF TREASURE ISLAND**  
IMPLEMENTATION OF BMPS WITHIN THE  
SUNSET BEACH WATERSHED (PHASE VI)

**GENERAL NOTES & LEGENDS**

DATE:	8/4/17
PROJECT NO:	16-11-65
SHEET NO:	<b>C2</b>



Date: 11/3/2017 Time: 9:38 AM Filename: \\AED-SERVER\Shared\_Folders\CADD\Municipal\Treasure Island\16-TI-65 (Phase VI BMPs)\Cadd\Currrent\TI-65\_C3.dwg



**CONTROL PLAN (W. GULF BLVD.)**

**SURVEY NOTES:**

- DESCRIPTION**  
 A PORTION OF SECTION 36, TOWNSHIP 31 SOUTH, RANGE 15 EAST, PINELLAS COUNTY, FLORIDA.
- SURVEYOR'S REPORT:**
1. SURVEY CREW: DAN McINTURFF, DINO SPENDL
  2. NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED EXCEPT AS SHOWN.
  3. NO INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHT OF WAY AND/OR OWNERSHIP WERE FURNISHED TO THIS SURVEYOR EXCEPT AS SHOWN.
  4. THIS SURVEY DOES NOT REFLECT OR DETERMINE OWNERSHIP.
  5. USE OF THIS SURVEY BY ANYONE OTHER THAN THOSE PREPARED FOR WILL BE THE RE-USERS SOLE RISK WITHOUT LIABILITY TO THE SURVEYOR.
  6. THERE MAY BE ITEMS DRAWN OUT OF SCALE TO GRAPHICALLY SHOW THEIR LOCATION.
  7. THE SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE COMMITMENT AND IS SUBJECT TO EASEMENTS, RIGHTS-OF-WAY AND SIMILAR MATTERS OF TITLE.
  8. NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
  9. THE HORIZONTAL DATUM WAS BASED ON STATE PLANE VALUES ARE TIED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM (GRID), WEST ZONE NORTH AMERICAN DATUM 1983-1991, ADJUSTMENT 1990, AND WERE DERIVED FROM COORDINATES PROVIDED BY THE CLIENT.
  10. HORIZONTAL CONTROL POINT No.1: FOP 3/4", N=1241321.12, E=410658.22
  11. HORIZONTAL CONTROL POINT No.2: FOP 5/8" "PLS 2550", N=1241405.45, E=410615.01
  12. ELEVATIONS SHOWN HEREON ARE IN FEET AND REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988. (N.A.V.D.) BENCHMARKS USED WERE PROVIDED BY CLIENT.
  13. REFERENCE BENCHMARK No.1: FOUND NAIL & DISK STAMPED "TRAV PT. SSMC" ELEVATION = 3.31'
  14. REFERENCE BENCHMARK No.2: FOUND NAIL & DISK STAMPED "TRAV PT. SSMC" ELEVATION = 2.66'
  15. THIS SURVEY IS FOR TOPOGRAPHIC PURPOSES AND IS NOT A BOUNDARY SURVEY.
  16. SURVEY DATE: JULY 29, 2016.

NO.	REVISIONS	BY	DATE

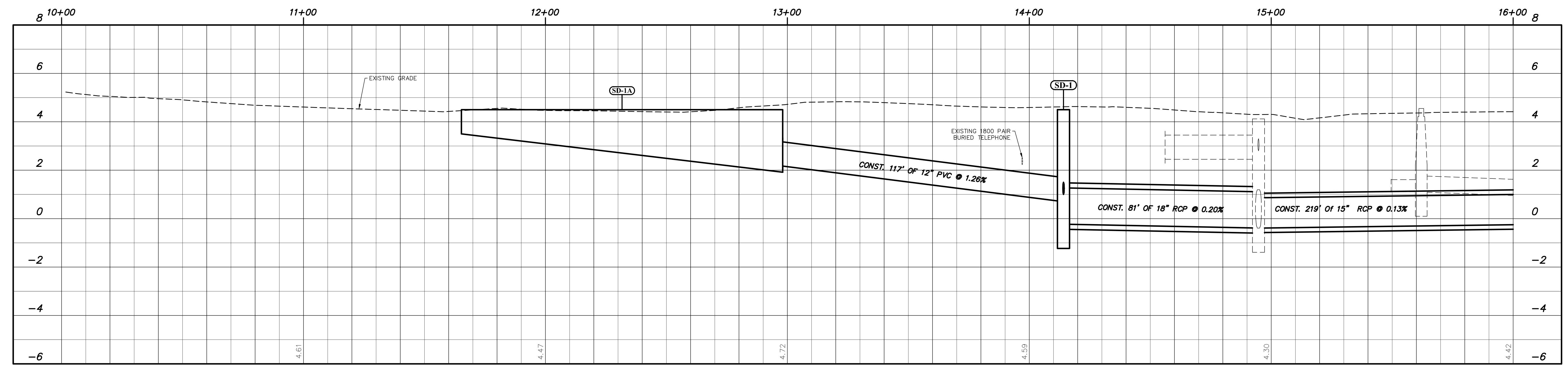
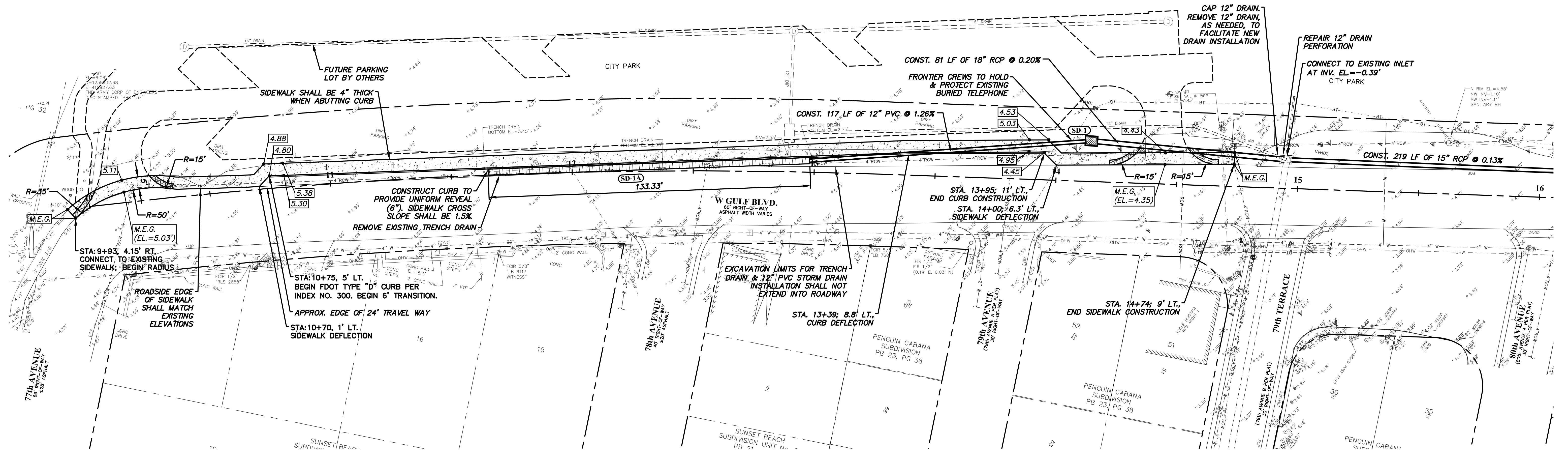
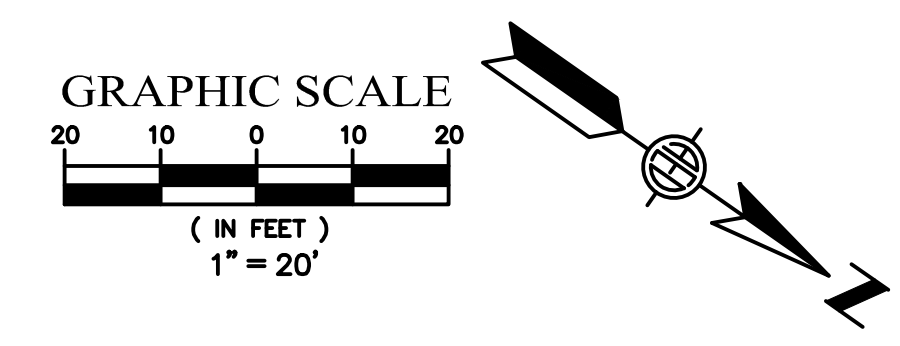
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DRAWN:	S.A.T.
DESIGNED:	A.E.D.
APPROVED:	W.G.R.

<b>CITY OF TREASURE ISLAND</b>	
IMPLEMENTATION OF BMPS WITHIN THE SUNSET BEACH WATERSHED (PHASE VI)	

DATE:	8/4/17
PROJECT NO:	16.TI-65
SHEET NO:	<b>C3</b>

<b>CONTROL PLAN</b>	
---------------------	--

STRUCTURE TABLE	
SD-1 CONSTRUCT FDOT TYPE "D" DITCH BOTTOM INLET * STA. 14+14, 16.75' LT. RIM = 4.25' INV. EL. = -0.23' (18" RCP) (N) INV. EL. = 0.70' (12" PVC) (S) INV. EL. = 1.00' (6" PVC) (SW) * * BASED UPON PERVIOUS CONCRETE OPTION FOR TERN LOT. STRUCTURE TYPE & INVERT/PIPE SIZE TO BE REVISED IF ASPHALT OPTION IS SELECTED.	SD-1A CONSTRUCT TRENCH DRAIN WITH 1% SLOPE & DUCTILE IRON SLOTTED GRATE (CLASS E) STA. 12+31.5, .5' LT. ZURN MODEL Z874-18 (OR APPROVED EQUAL) GRATE = 4.40' TO 4.67' (SLOPE AS NEEDED TO MATCH EXISTING PAVEMENT) INV. EL. = 2.17' (12" PVC) (N)



Date: 11/3/2017 Time: 9:39 AM File: \\VED-SERVER\Shared\_Folders\CADD\Municipal\Treasure Island\16.TI-65 (Phase VI BMPs)\Cadd\Cadd\Current\TI-65\_C4-C7.dwg

NO.	REVISIONS	BY	DATE

SCALE:	1"=20' (HORIZ.) 1"=2' (VERT.)
DRAWN:	S.A.T.
DESIGNED:	A.E.D.
APPROVED:	W.G.R.

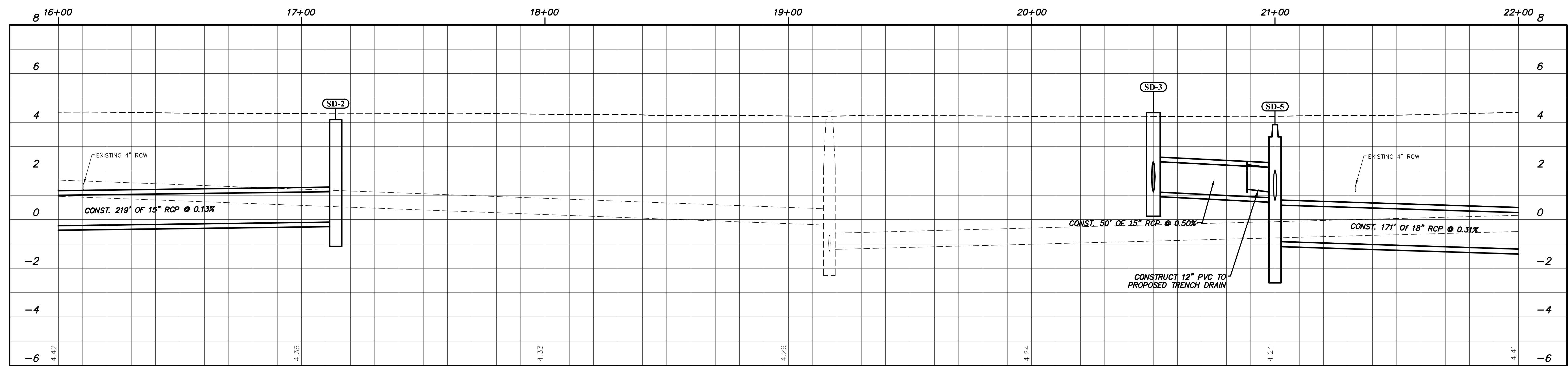
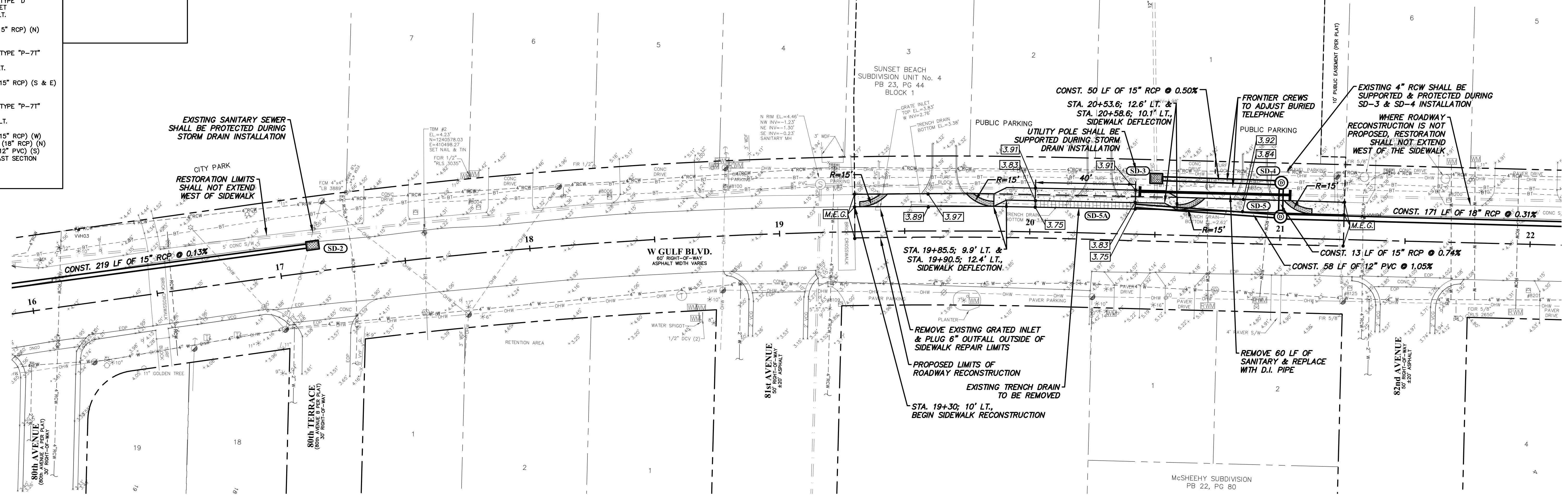
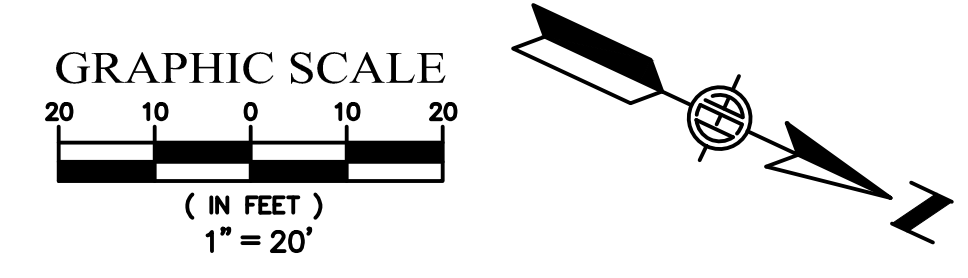
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**CITY OF TREASURE ISLAND**  
IMPLEMENTATION OF BMPs WITHIN THE  
SUNSET BEACH WATERSHED (PHASE VI)

**PLAN & PROFILE**

DATE:	10/31/17
PROJECT NO:	16.TI-65
SHEET NO:	<b>C4</b>

STRUCTURE TABLE	
<b>SD-2</b> CONSTRUCT FDOT TYPE "F" DITCH BOTTOM INLET STA. 17+14, 10.50' LT. GRATE = 4.11' INV. EL. = -0.10' (15" RCP) (S)	<b>SD-5A</b> CONSTRUCT TRENCH DRAIN WITH 1% SLOPE & DUCTILE IRON SLOTTED GRATE (CLASS E) STA. 20+53, 11.4' LT. ZURN MODEL Z874-18 (OR APPROVED EQUAL) GRATE = 3.75' INV. EL. = 1.75'
<b>SD-3</b> CONSTRUCT FDOT TYPE "D" DITCH BOTTOM INLET STA. 20+50, 23' LT. GRATE = 4.40' INV. EL. = 1.14' (15" RCP) (N)	
<b>SD-4</b> CONSTRUCT FDOT TYPE "P-7" MANHOLE (4' DIA.) STA. 21+00, 22' LT. RIM = 4.40' INV. EL. = 0.89' (15" RCP) (S & E)	
<b>SD-5</b> CONSTRUCT FDOT TYPE "P-7" MANHOLE (4' DIA.) STA. 21+00, 8.5' LT. RIM = 3.89' INV. EL. = 0.79' (15" RCP) (W) INV. EL. = -0.90' (18" RCP) (N) INV. EL. = 1.14' (12" PVC) (S) PROVIDE 3' PRECAST SECTION	



Date: 11/3/2017 Time: 9:39 AM File: \\VED-SERVER\Shared\_Folders\CADD\Municipal\Treasure Island\16-TI-65 (Phase VI BMPs)\Cadd\Cadd\Current\TI-65\_C4-C7.dwg

NO.	REVISIONS	BY	DATE

SCALE:	1"=20' (HORIZ.) 1"=2' (VERT.)
DRAWN:	S.A.T.
DESIGNED:	A.E.D.
APPROVED:	W.G.R.

**ADVANCED**  
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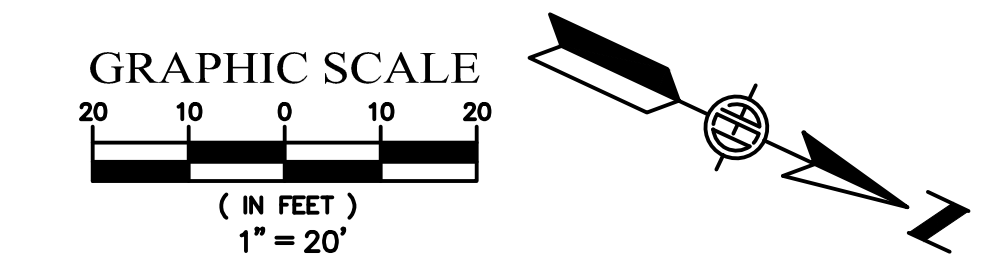
**CITY OF TREASURE ISLAND**  
IMPLEMENTATION OF BMPs WITHIN THE  
SUNSET BEACH WATERSHED (PHASE VI)

**PLAN & PROFILE**

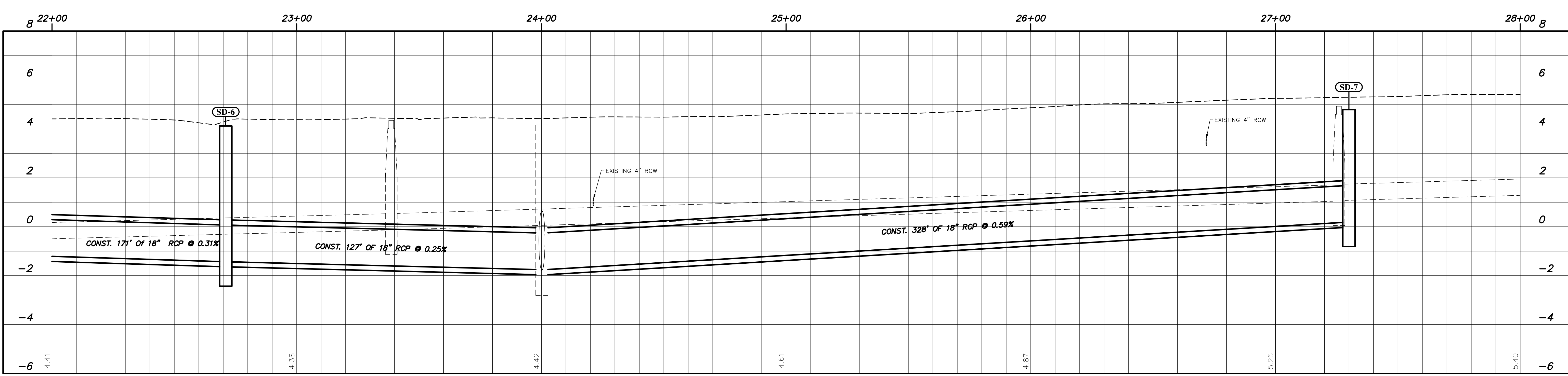
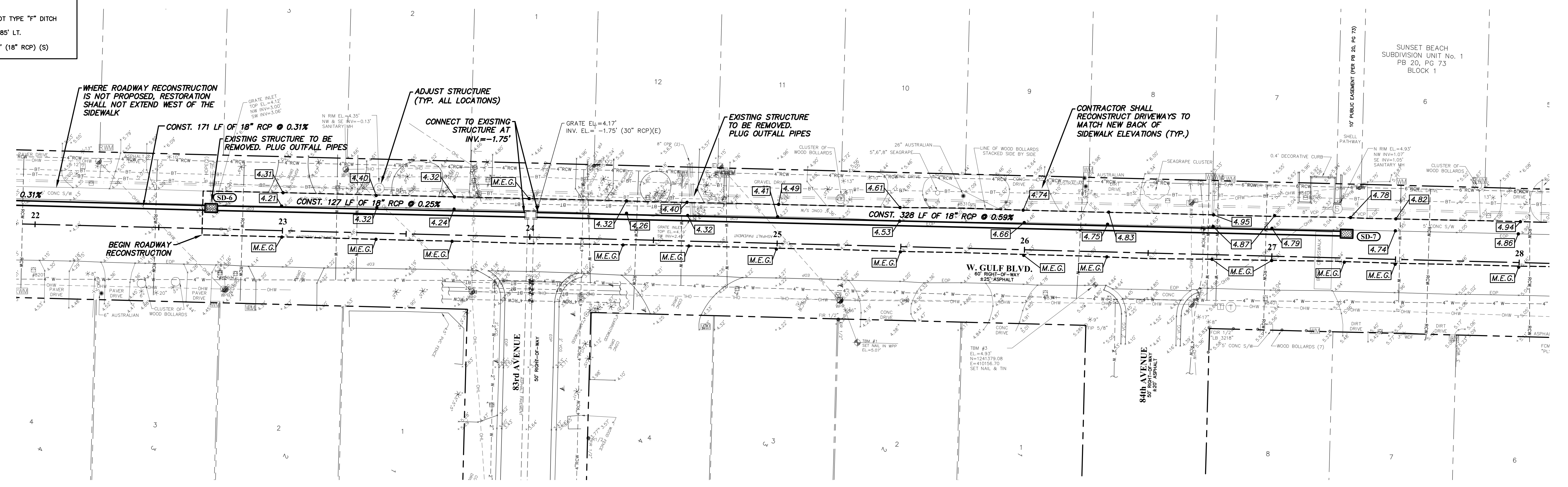
DATE:	10/31/17
PROJECT NO:	16.TI-65
SHEET NO:	<b>C5</b>



STRUCTURE TABLE	
SD-6	CONSTRUCT FDOT TYPE "F" DITCH BOTTOM INLET STA. 22+71, 8.40' LT. GRATE = 4.12' INV. EL. = -1.43' (18" RCP) (N & S)
SD-7	CONSTRUCT FDOT TYPE "F" DITCH BOTTOM INLET STA. 27+30, 9.85' LT. GRATE = 4.70' INV. EL. = 0.19' (18" RCP) (S)



SUNSET BEACH  
SUBDIVISION UNIT No. 1  
PB 20, PG 73  
BLOCK 1



Date: 11/3/2017 Time: 9:39 AM File: \\VED-SERVER\Shared\Folders\CADD\Municipal\Treasure Island\16.TI-65 (Phase VI BMPs)\Cadd\Curr\TI-65\_C4-C7.dwg

NO.	REVISIONS	BY	DATE

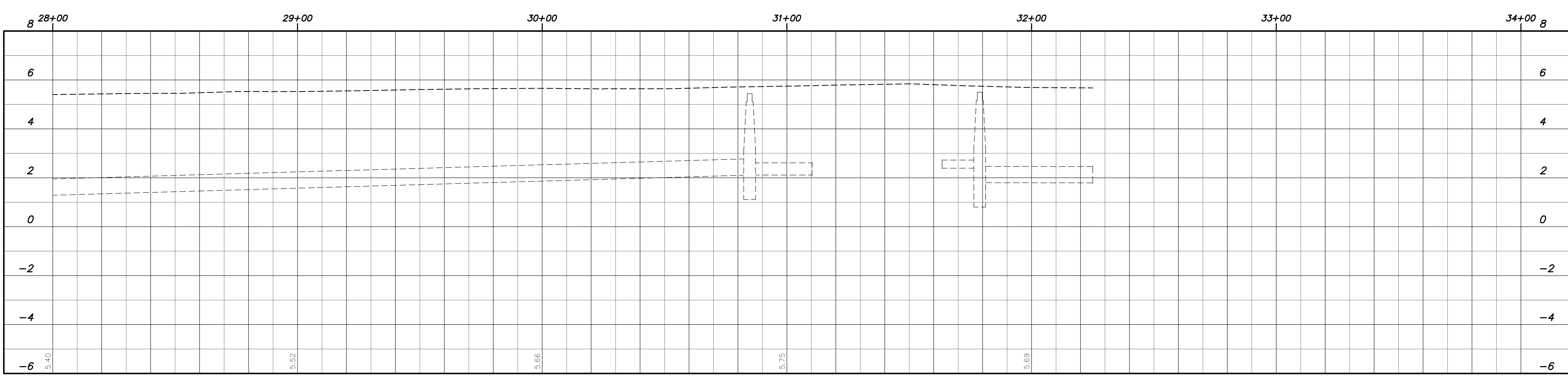
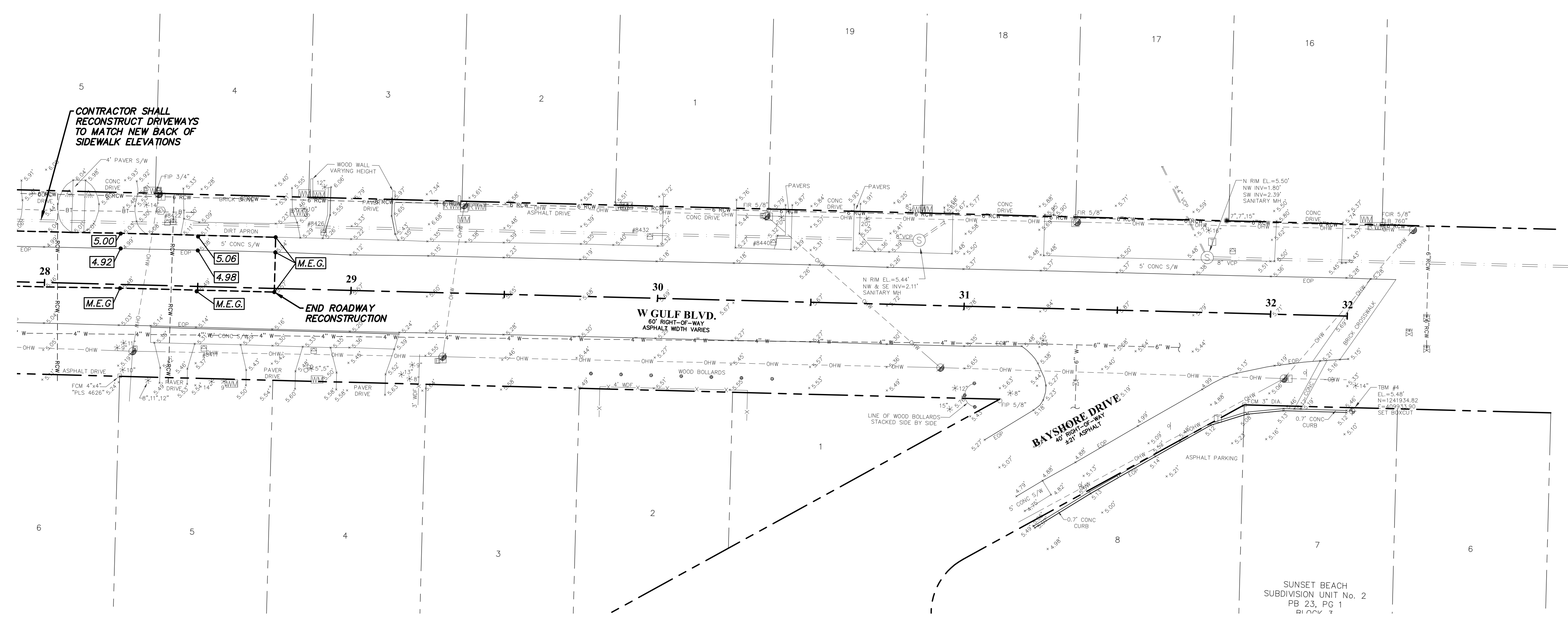
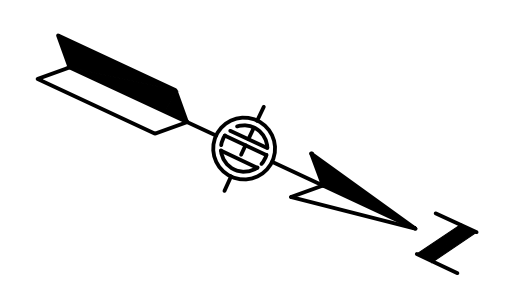
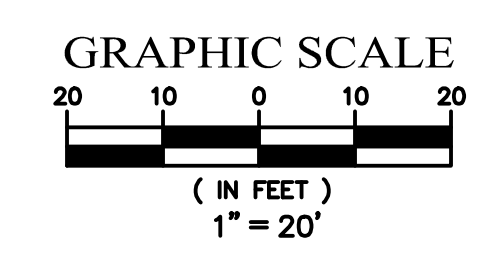
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DRAWN:	S.A.T.
DESIGNED:	A.E.D.
APPROVED:	W.G.R.

**ADVANCED**  
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**CITY OF TREASURE ISLAND**  
IMPLEMENTATION OF BMPS WITHIN THE  
SUNSET BEACH WATERSHED (PHASE VI)

**PLAN & PROFILE**

DATE:	10/31/17
PROJECT NO:	16.TI-65
SHEET NO:	<b>C6</b>



Date: 11/3/2017 Time: 9:40 AM Filename: \\AED-SERVER\Shared\_Folders\CADD\Municipal\Treasure Island\16.TI-65 (Phase VI BMPs)\Cadd\Cadd\Current\TI-65\_C4-C7.dwg

NO.	REVISIONS	BY	DATE

SCALE:	1"=20' (HORIZ.) 1"=2' (VERT.)
DRAWN:	S.A.T.
DESIGNED:	A.E.D.
APPROVED:	W.G.R.

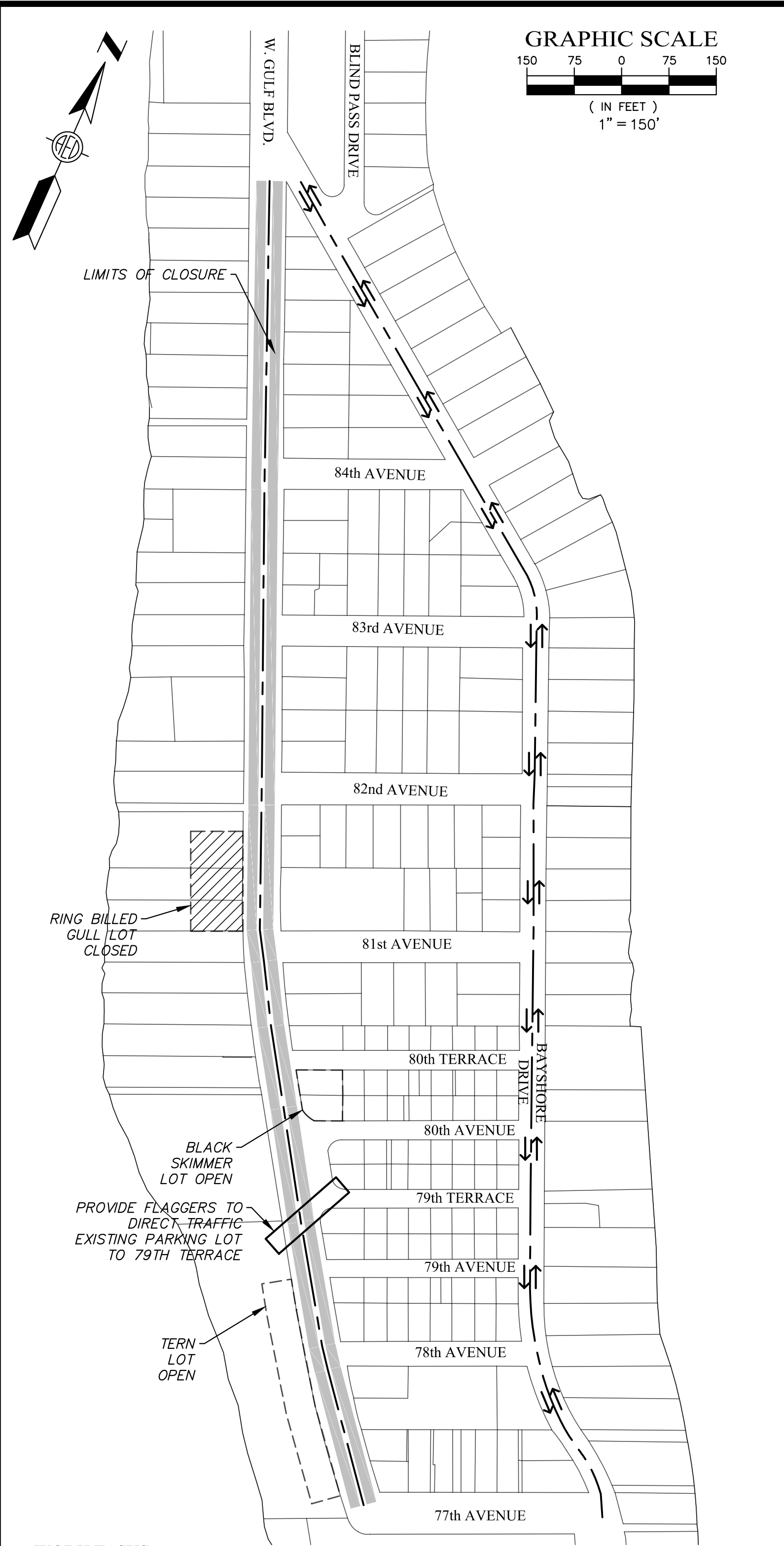
**ADVANCED**  
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**CITY OF TREASURE ISLAND**  
IMPLEMENTATION OF BMPS WITHIN THE  
SUNSET BEACH WATERSHED (PHASE VI)

**PLAN & PROFILE**

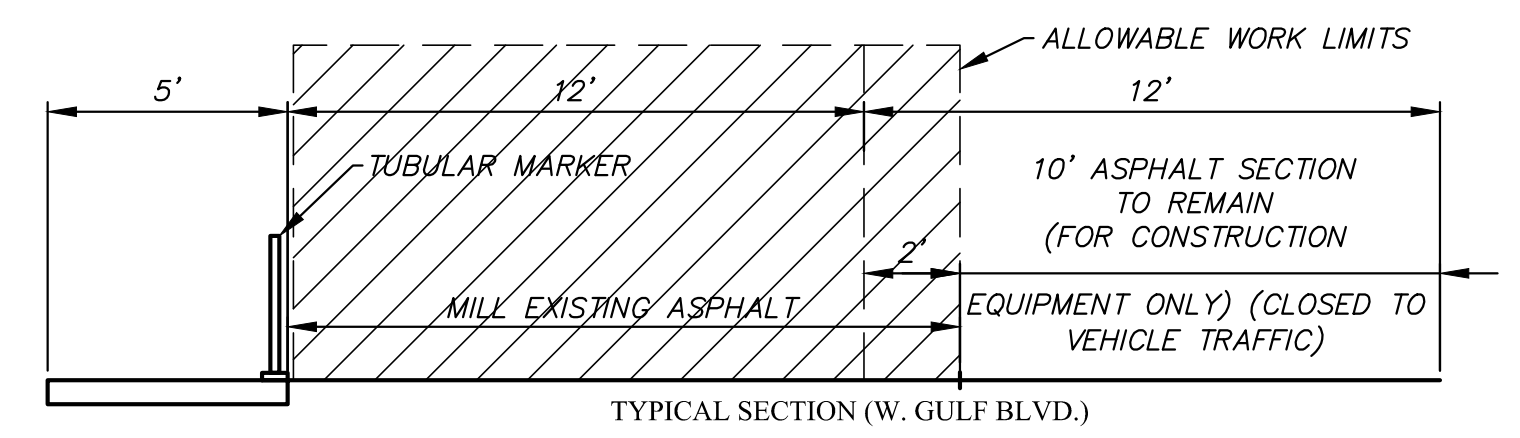
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PROJECT NO:	16.TI-65
SHEET NO:	<b>C7</b>

Date: 11/23/2017 Time: 9:41 AM File: \\VED-SERVER\Shared\_Folders\CADD\Municipal\Treasure Island\16-TI-65 (Phase VI BMPs)\Cadd\Current\TI-65\_C8.dwg

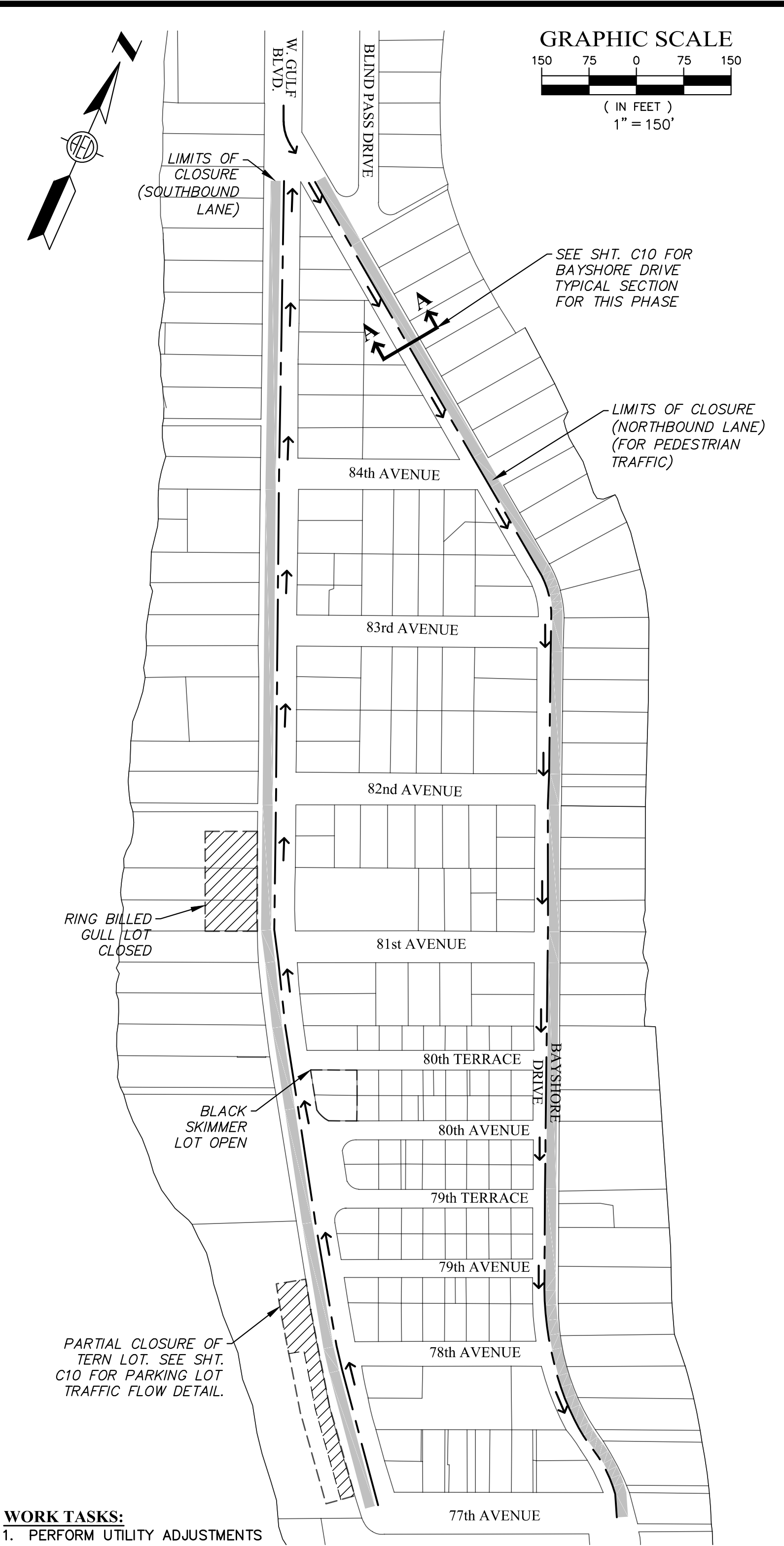


**WORK TASKS:**  
1. MILL SOUTHBOUND LANE, 2' OF NORTHBOUND LANE ON W. GULF BLVD.

**WORK SUMMARY:**  
IN THIS PHASE, WEST GULF BLVD. WILL BE CLOSED FOR MILLING OF THE EXISTING ROADWAY TO EXTENT SHOWN BELOW. ALL TRAFFIC WILL BE ROUTED TO BAYSHORE DRIVE. PEDESTRIAN TRAFFIC WILL CONTINUE TO UTILIZE THE EXISTING SIDEWALK ON WEST GULF BLVD.

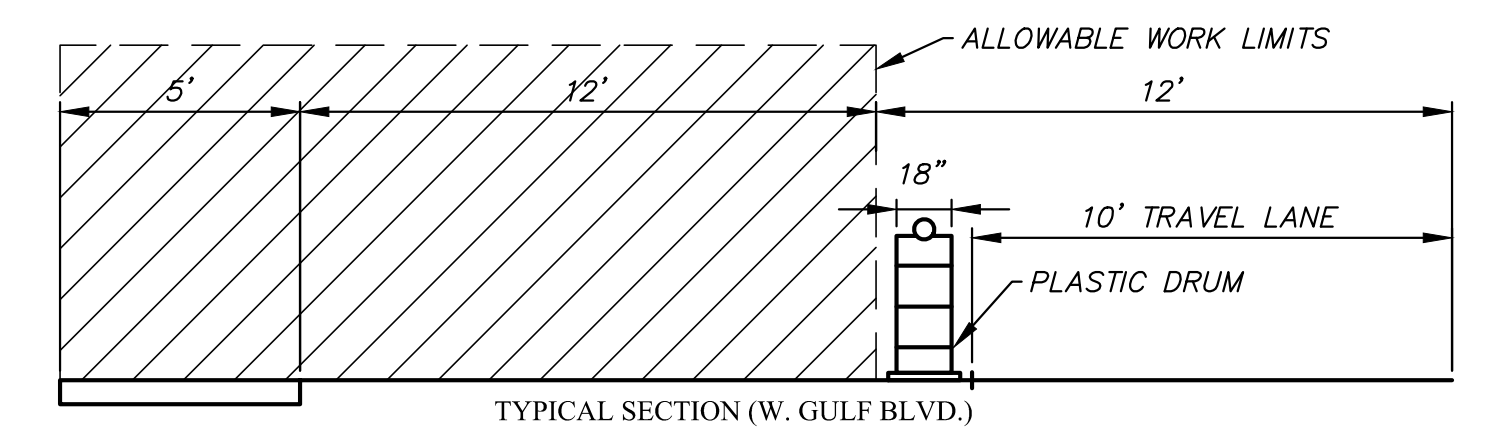


**PHASE I**  
SCALE: 1"=4'

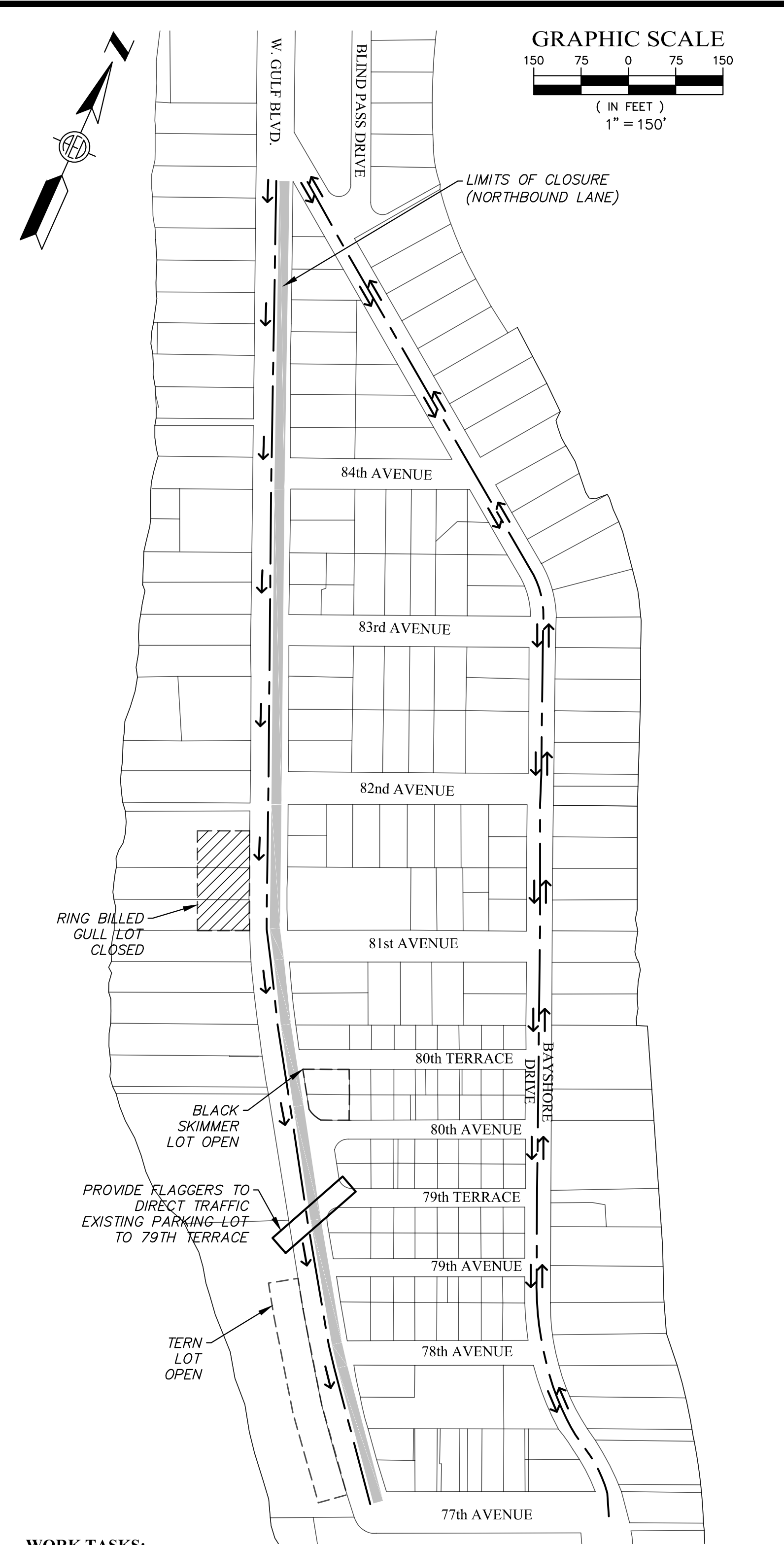


**WORK TASKS:**  
1. PERFORM UTILITY ADJUSTMENTS  
2. CONSTRUCT STORMWATER PIPING  
3. PERFORM ROADWAY RECONSTRUCTION  
4. OVERLAY ROADWAY

**WORK SUMMARY:**  
IN THIS PHASE, WEST GULF BLVD. WILL BE PARTIALLY CLOSED FOR STORMWATER AND ROADWAY IMPROVEMENTS TO EXTENT SHOWN BELOW. ALL PEDESTRIAN TRAFFIC WILL BE ROUTED TO BAYSHORE DRIVE. BAYSHORE DRIVE WILL BE PARTIALLY CLOSED TO ACCOMMODATE PEDESTRIAN TRAFFIC. A TEMPORARY CROSSWALK SHALL BE INSTALLED TO DIRECT PEDESTRIAN TRAFFIC ACROSS WEST GULF BLVD.

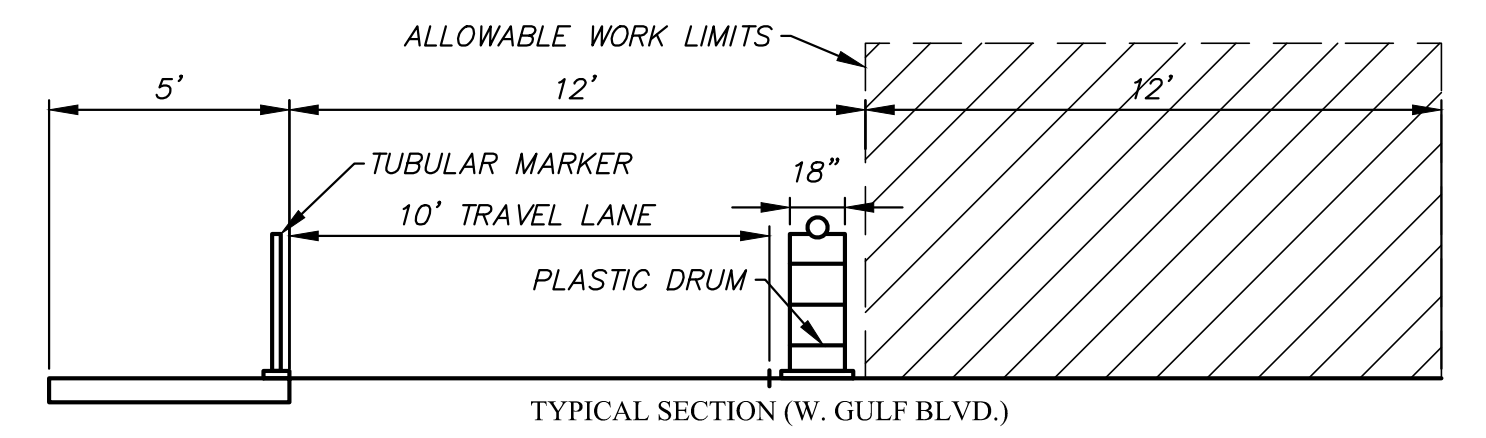


**PHASE II**  
SCALE: 1"=4'

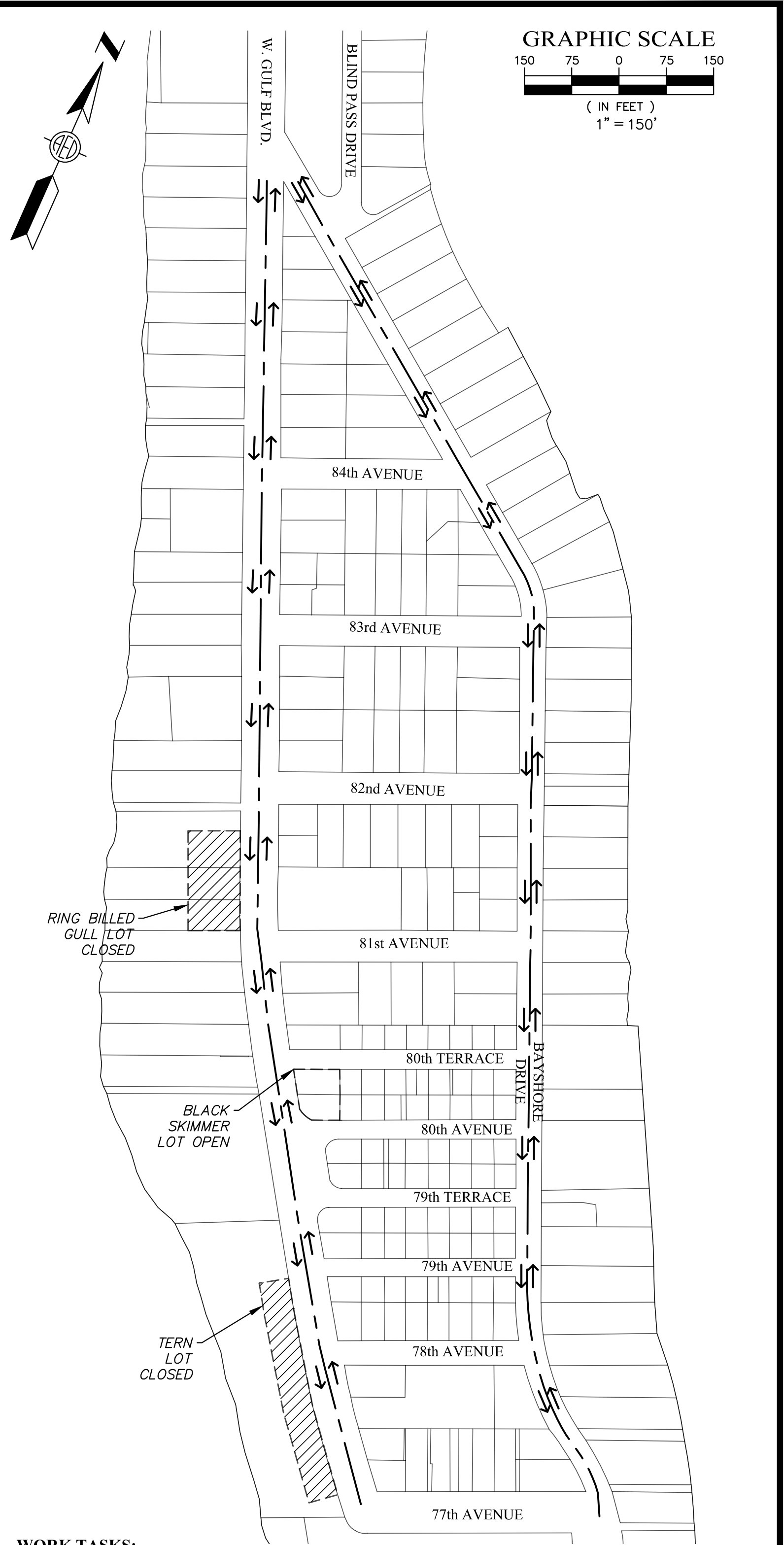


**WORK TASKS:**  
1. MILL & OVERLAY ROADWAY  
2. RECONSTRUCT PARKING LOTS

**WORK SUMMARY:**  
IN THIS PHASE, WEST GULF BLVD. WILL BE PARTIALLY CLOSED FOR MILLING AND OVERLAY OF THE EXISTING ROADWAY TO EXTENT SHOWN BELOW. PEDESTRIAN TRAFFIC WILL UTILIZE THE EXISTING/NEWLY RESTORED SIDEWALK ON WEST GULF BLVD. NO PARTIAL OR COMPLETE CLOSURES OF BAYSHORE DRIVE ARE PROPOSED.

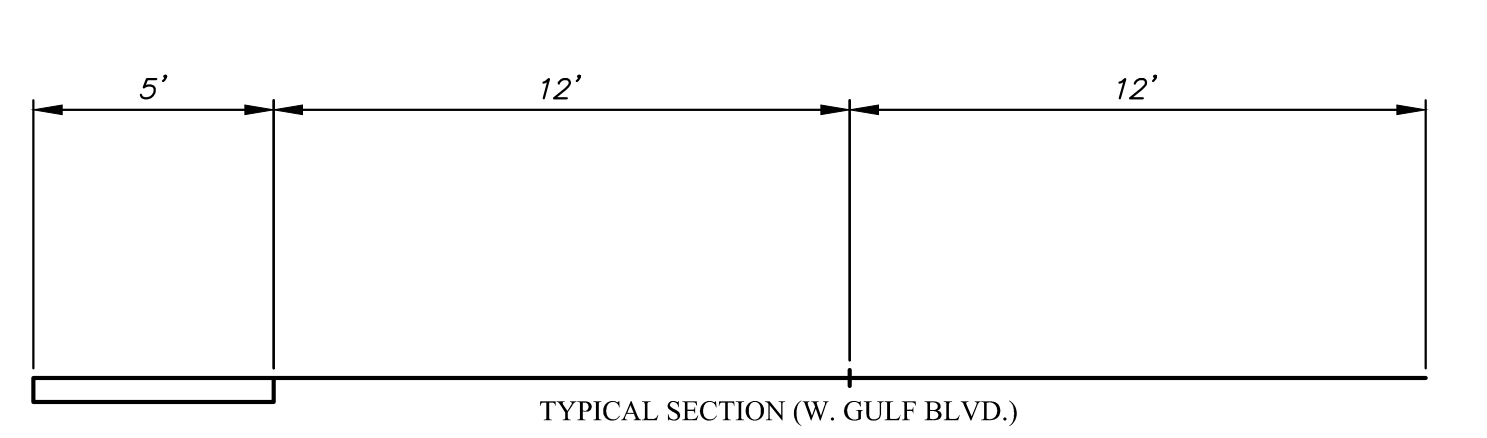


**PHASE III**  
SCALE: 1"=4'



**WORK TASKS:**  
1. RECONSTRUCT PARKING LOTS

**WORK SUMMARY:**  
IN THIS PHASE, NO ROADWAY PARTIAL OR COMPLETE CLOSURES ARE PROPOSED.



**PHASE IV**  
SCALE: 1"=4'

NO.	REVISIONS	BY	DATE

SCALE:	AS SHOWN
DRAWN:	S.A.T.
DESIGNED:	A.E.D.
APPROVED:	W.G.R.

**ADVANCED**  
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**CITY OF TREASURE ISLAND**  
IMPLEMENTATION OF BMPS WITHIN THE  
SUNSET BEACH WATERSHED (PHASE VI)

**CONCEPTUAL CONSTRUCTION PHASING PLAN**

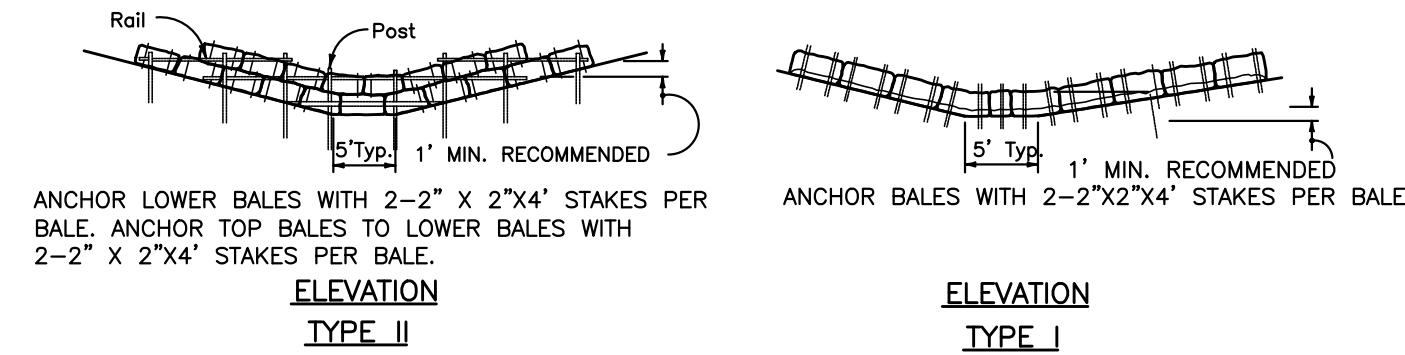
DATE:	8/23/17
PROJECT NO:	16.TI-65
SHEET NO:	<b>C8</b>



**NOTES FOR STORM STRUCTURES**

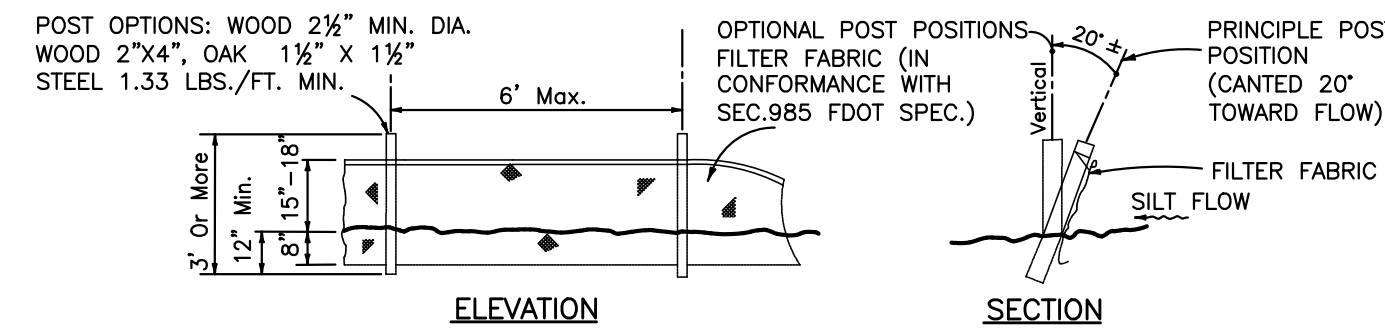
- FOR APPLICABLE RING AND COVER, SEE STANDARD DETAIL - MANHOLE RING AND COVER CASTING. (NON FDOT STRUCTURES).
- STORM STRUCTURES SHALL NOT HAVE OUTSIDE DROP CONNECTIONS.
- PROVIDE MINIMUM 8" SOLID WALL BETWEEN ALL OPENINGS FOR PIPES. SEAL BETWEEN PIPE AND STRUCTURE WITH NON SHRINK GROUT.
- ALL BRICK SHALL BE CONCRETE OR CLAY BRICK AND SHALL HAVE A MINIMUM 3/4" CEMENT PLASTER COATING ON ALL SURFACES.
- BENCH SHALL SLOPE @ 1:12 MINIMUM.
- PRIOR TO PRECASTING STRUCTURES THE PRECASTER SHALL SUBMIT SITE SPECIFIC INDIVIDUAL SHOP DRAWINGS FOR APPROVAL. SHOP DRAWINGS SUBMITTED FOR NONSTANDARD STRUCTURES OR STRUCTURES THAT DEVIATE FROM THE STANDARD DETAILS MUST BE DESIGNED AND CERTIFIED BY A REGISTERED FLORIDA PROFESSIONAL ENGINEER.
- PRECAST MANHOLES SHALL CONSIST OF A LIMITED NUMBER OF SECTIONS, AS APPROVED BY THE ENGINEER.
- ALL PRECAST STRUCTURES SHALL HAVE AN INTEGRAL FLOOR AND BASE RISER SECTION.
- FOR PRECAST STRUCTURE JOINT ASSEMBLY, SEE STANDARD DETAIL - PRECAST STRUCTURE JOINT ASSEMBLY.
- ALL EXPOSED EDGES TO HAVE 3/4" CHAMFER.
- A PROTECTIVE COATING SHALL BE APPLIED TO THE INSIDE AND OUTSIDE SURFACES OF INLETS, CATCH BASINS, MANHOLES AND ALL OTHER DRAINAGE STRUCTURES. THE PROTECTIVE COATING SHALL COVER THE COMPLETE EXTERIOR AND INTERIOR SURFACE OF THE STRUCTURE (INCLUDING CONE SECTIONS, RISERS, AND INVERT) FROM THE BOTTOM SLAB TO THE GROUND SURFACE EXCLUDING THE COVER CASTING, LID, AND THE HORIZONTAL PLANE OF THE PIPE PENETRATIONS OR CUT OPENINGS. THE UNDERSIDE OF THE BOTTOM SLAB MAY ALSO BE EXCLUDED AT THE CONTRACTOR'S OPTION. THE PROTECTIVE COATING SHALL BE ONE COAT OF COAL TAR EPOXY, KOP-COAT BITUMASTIC 300-M OR APPROVED EQUAL. THE COATING SHALL YIELD A FINAL DRY THICKNESS OF 9 MILS.
- ALL REINFORCING STEEL SHALL HAVE A MINIMUM 2" CONCRETE COVER.
- ADDITIONAL REINFORCEMENT IS REQUIRED IN THOSE STRUCTURE WALLS WITH OPENINGS FOR PIPE OR CULVERT. THE VERTICAL AND HORIZONTAL WALL REINFORCEMENT DISPLACED DUE TO OPENINGS SHALL BE REPLACED WITH ADDITIONAL REINFORCEMENT BARS ABOVE, BELOW, AND ON BOTH SIDES OF OPENING EQUAL IN AREA TO THOSE DISPLACED. REPLACEMENT REINFORCEMENT SHALL BE PLACED WITH 3" CLEARANCES.

**1 STORM STRUCTURE NOTES**



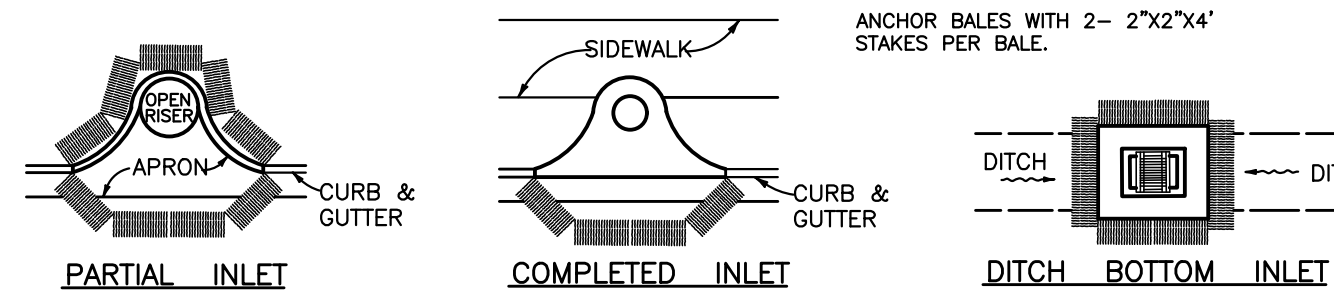
APPLICATION AND SPACING: THE USE OF TYPES I & II BALE BARRIERS SHOULD BE LIMITED TO THE CONDITIONS OUTLINED IN CHART I, SHEET 1 OF 3, INDEX NO. 102

**BARRIER FOR UNPAVED DITCHES**



NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF).

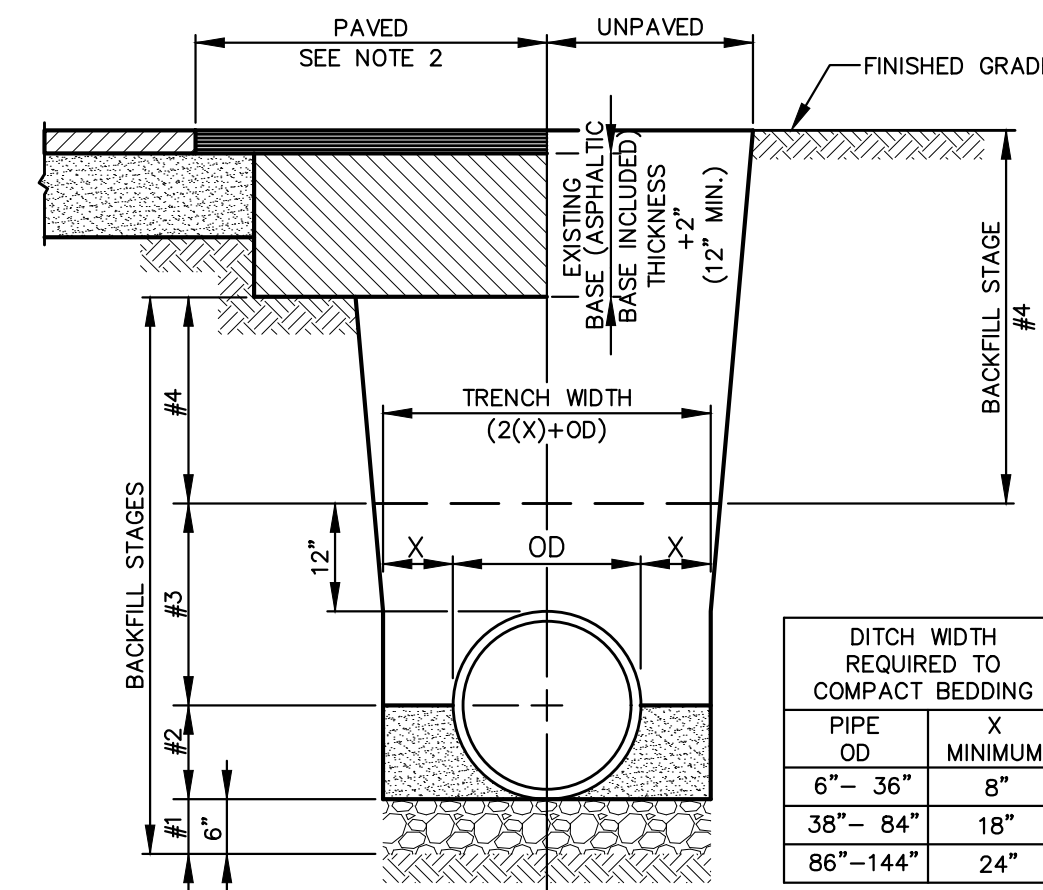
**TYPE III SILT FENCE**



**PROTECTION AROUND INLETS OR SIMILAR STRUCTURES**

- NOTES:
- EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED THROUGHOUT CONSTRUCTION TO PREVENT THE INFILTRATION OF PROJECT SITE SOILS INTO A PUBLIC DRAINAGE SYSTEM.
  - FOR ADDITIONAL DETAIL, REFER TO F.D.O.T. INDEX #102, 103, AND 104. (2010)

**2 EROSION CONTROL DEVICES**



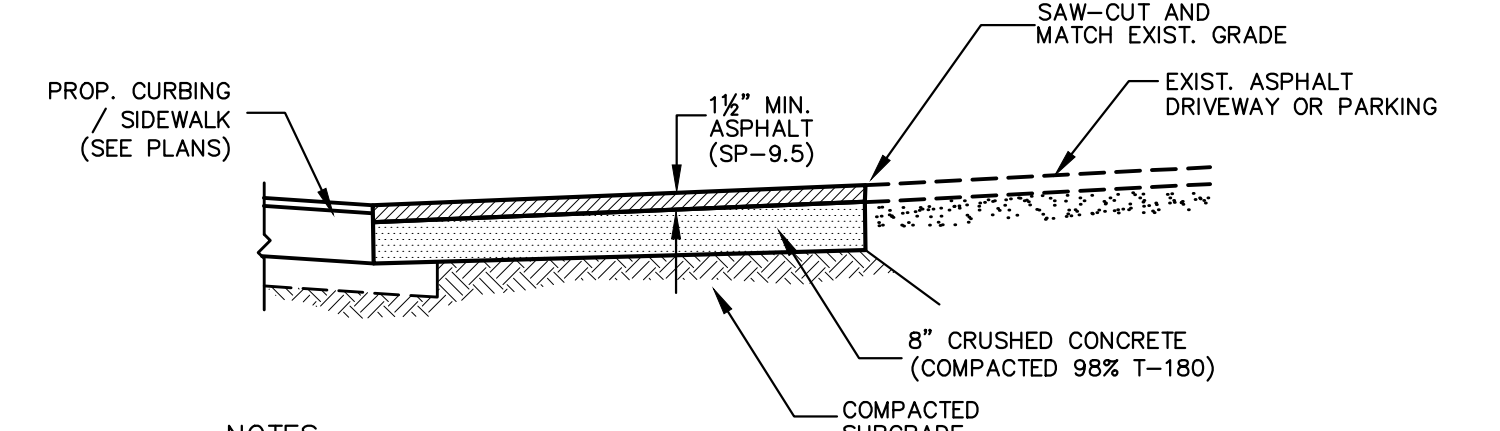
**SCHEDULE**

STAGE	MATERIAL
#1	BEDDING: FDOT NO. 57 STONE WITH WATERSTOP @ 100' INTERVALS.
#2	PIPE BEDDING: LOCAL SAND
#3	PIPE BACKFILL: LOCAL SAND TO 12" ABOVE TOP OF PIPE
#4	TRENCH BACKFILL: PAVED ROADWAYS-IN 6" LIFTS UNPAVED ROADWAYS-IN 6" LIFTS GRASS SURFACE-IN 12" LIFTS

NOTES:

- ALL BACKFILL SHALL BE PLACED IN LIFTS AND COMPACTED AS PER SPECIFICATION.
- ALL ASPHALT ROADWAYS SHALL BE RESTORED USING TYPE SP-12.5 ASPHALT (2"). SEE ADDITIONAL DETAILS FOR SPECIFIC PAVEMENT RESTORATION LIMITS.
- THIS DETAIL IS APPLICABLE FOR CIRCULAR, ELLIPTICAL & RECTANGULAR PIPES.
- ROADWAY BASE MATERIAL SHALL BE RECYCLED CONCRETE AGGREGATE (COMPACTED TO 98% MAX. DRY DENSITY) PER FDOT SPECIFICATION SECTION 911.

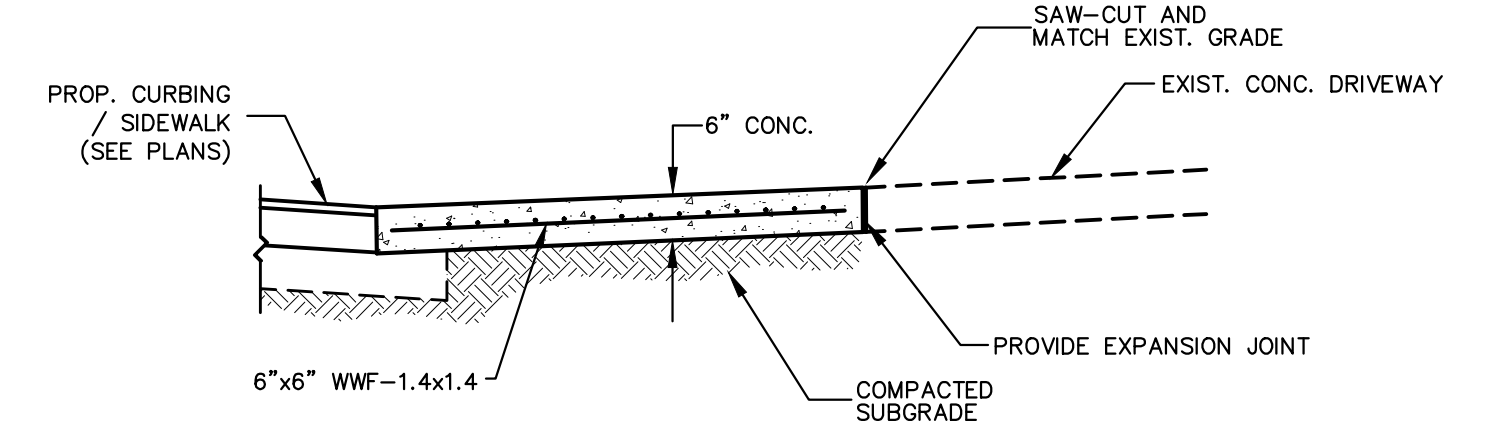
**3 PIPE BEDDING DETAIL**



NOTES:

- THIS DETAIL SHALL BE UTILIZED IN AREAS WHERE EXISTING ASPHALT DRIVEWAYS OR PARKING AREAS REQUIRE RECONSTRUCTION.
- ASPHALT SHALL BE TYPE SP-9.5.
- CRUSHED CONCRETE SHALL BE IDENTICAL TO ROADWAY MATERIAL.

**ASPHALT DRIVEWAY**

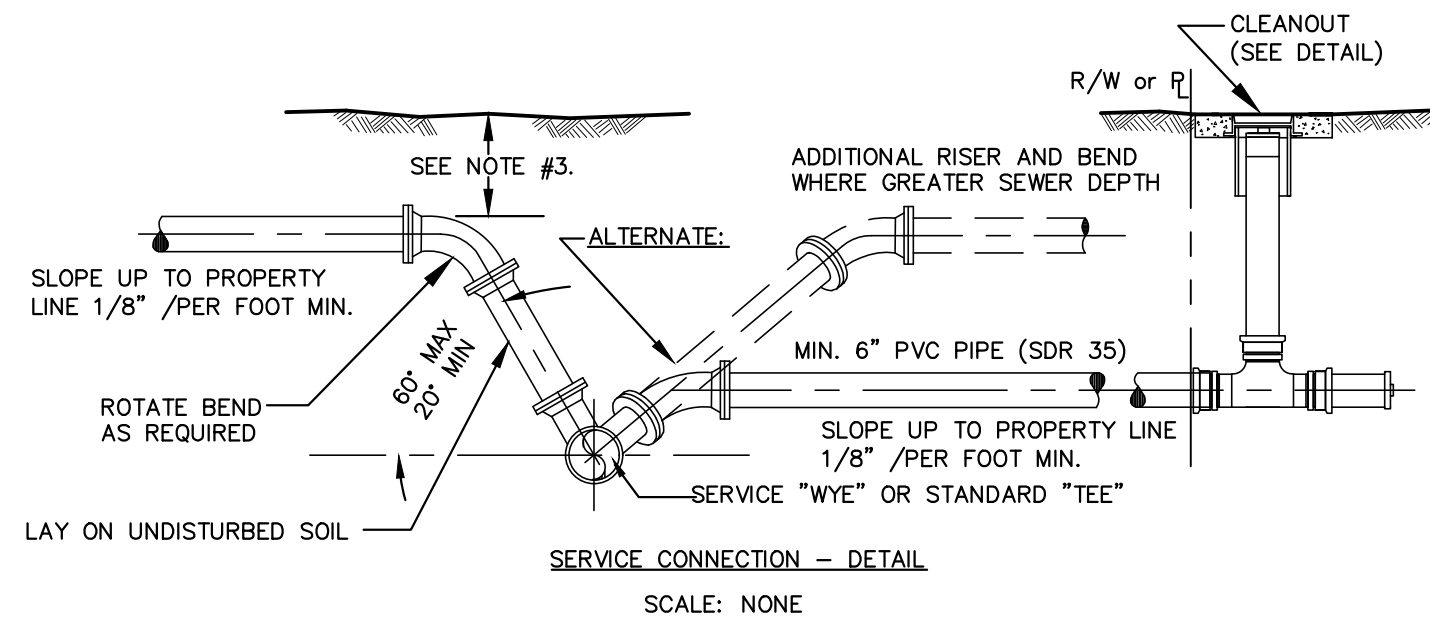


NOTES:

- THIS DETAIL SHALL BE UTILIZED IN AREAS WHERE EXISTING CONCRETE DRIVEWAYS, SLABS OR PARKING AREAS REQUIRE RECONSTRUCTION.
- EXPANSION JOINTS SHALL BE INSTALLED AS NEEDED.
- EXPANSION JOINTS SHALL CONSIST OF CONTINUOUS 1/2" BITUMINOUS EXPANSION STRIP.
- PROVIDE EXPANSION JOINT PERPENDICULAR TO CURB ALONG DRIVEWAY, IF CONCRETE DRIVEWAY WIDTH EXCEEDS 20 FEET.
- THIS DETAIL SHALL BE USED FOR CONCRETE FLUME CONSTRUCTION.

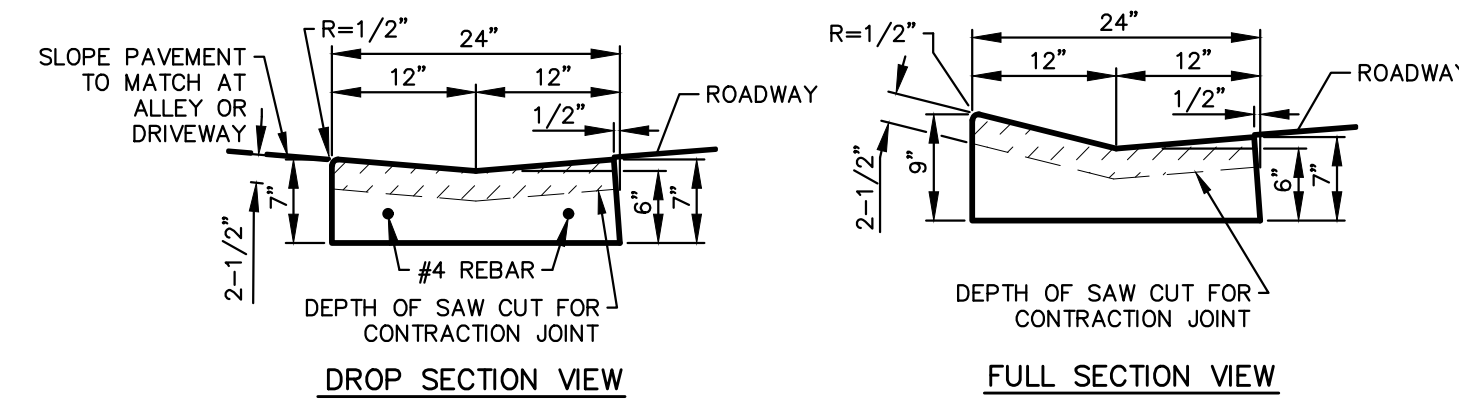
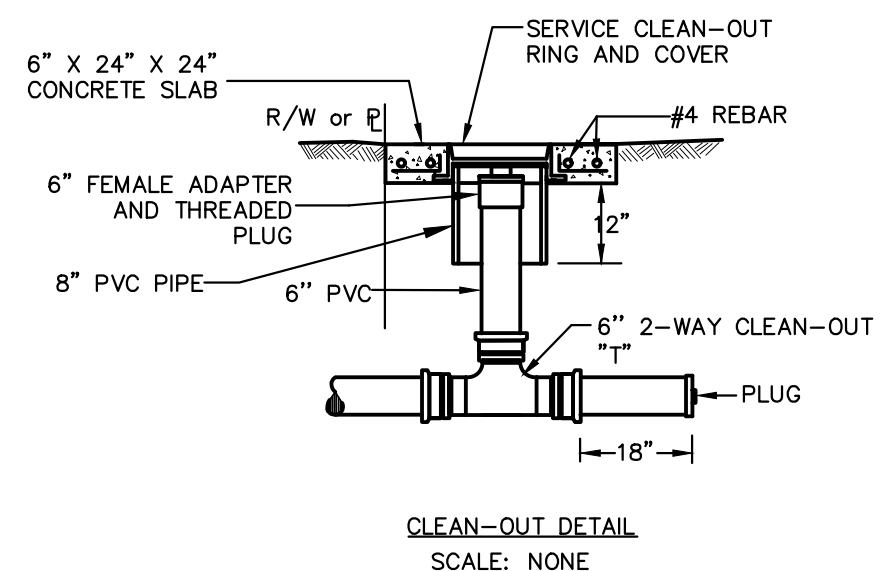
**CONCRETE DRIVEWAY**

**4 DRIVEWAY RECONSTRUCTION SECTIONS**

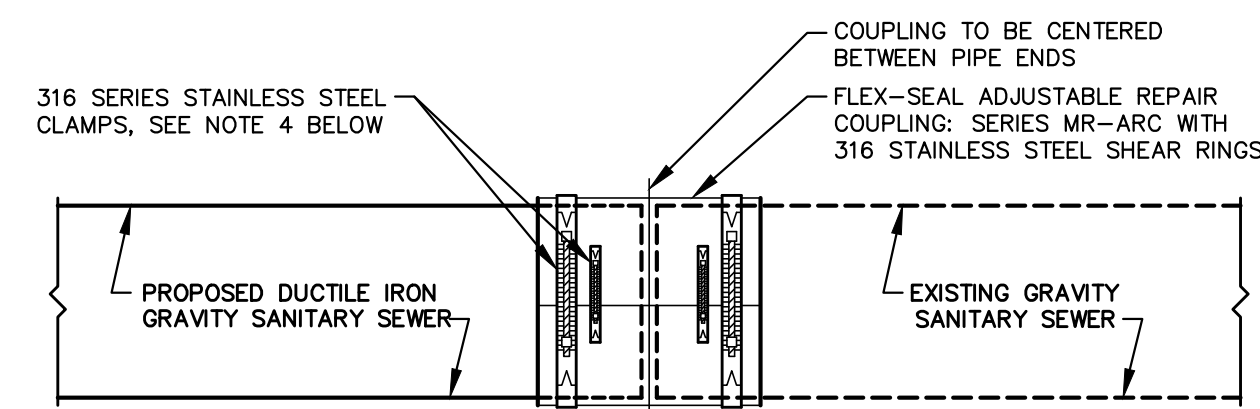


- NOTE:
- ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
  - SERVICE CONNECTIONS MAY NOT HAVE BEEN SHOWN ON PLAN/PROFILE SHEETS. SERVICE CONNECTION LOCATIONS SHALL BE DETERMINED IN THE FIELD AND CONNECTIONS CONSTRUCTED IN ACCORDANCE WITH P.C.U. APPROVED TECHNICAL SPECIFICATIONS, MATERIALS MANUAL & THESE DETAILS. FOR NEW DEVELOPMENT, THE SERVICE CONNECTION SHALL BE CONSTRUCTED IN THE CENTER OF THE LOT.
  - MINIMUM DEPTH UNDER ROADWAY - 42" MINIMUM DEPTH AT PROPERTY LINE - 36" (OR AS REQUIRED FOR SERVICE).
  - SERVICE LINES SHALL BE A MIN. OF 6" TO ALL RESIDENCES.
  - NO DOUBLE WYE UNITS SHALL BE PERMITTED ON SERVICE LINE. ALL RESIDENCES SHALL BE SERVED BY A SINGLE SERVICE.
  - RISERS SHALL BE INSTALLED ON ALL WYES (BOTH PRESENT & FUTURE SERVICES).
  - RISERS SHALL PREFERABLY FOLLOW SLOPE OF BANK TO REQUIRED DEPTH.
  - IT SHALL BE NOTED THAT 4" LATERALS MAY EXIST.

**5 SEWER SERVICE CONNECTION AND CLEAN-OUT DETAIL**

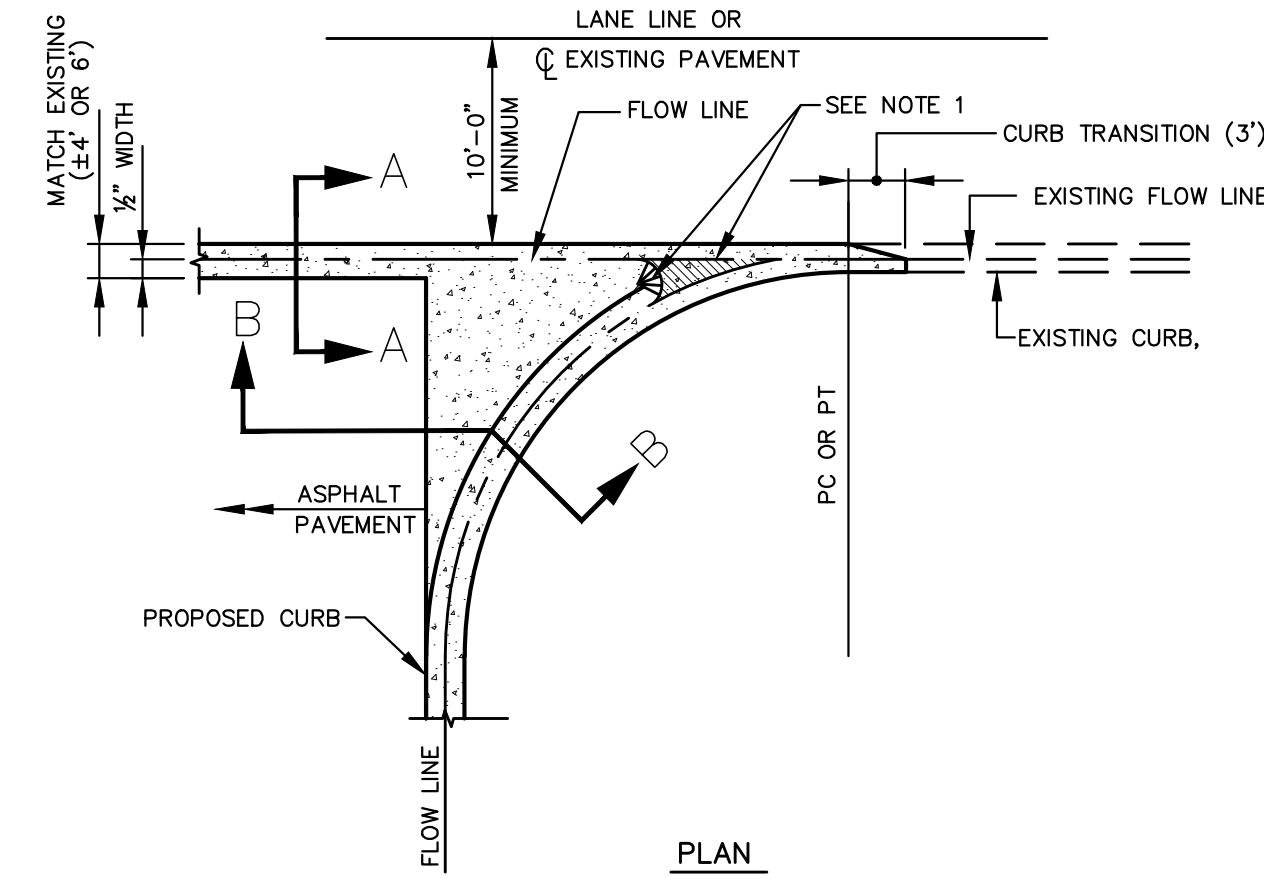
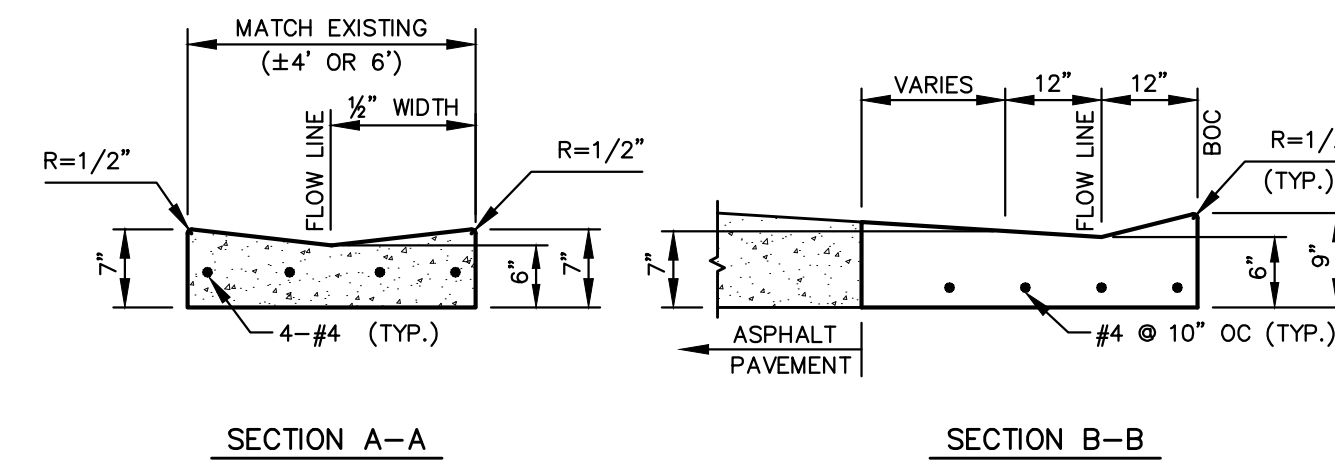


**6 MIAMI CURB DETAIL**

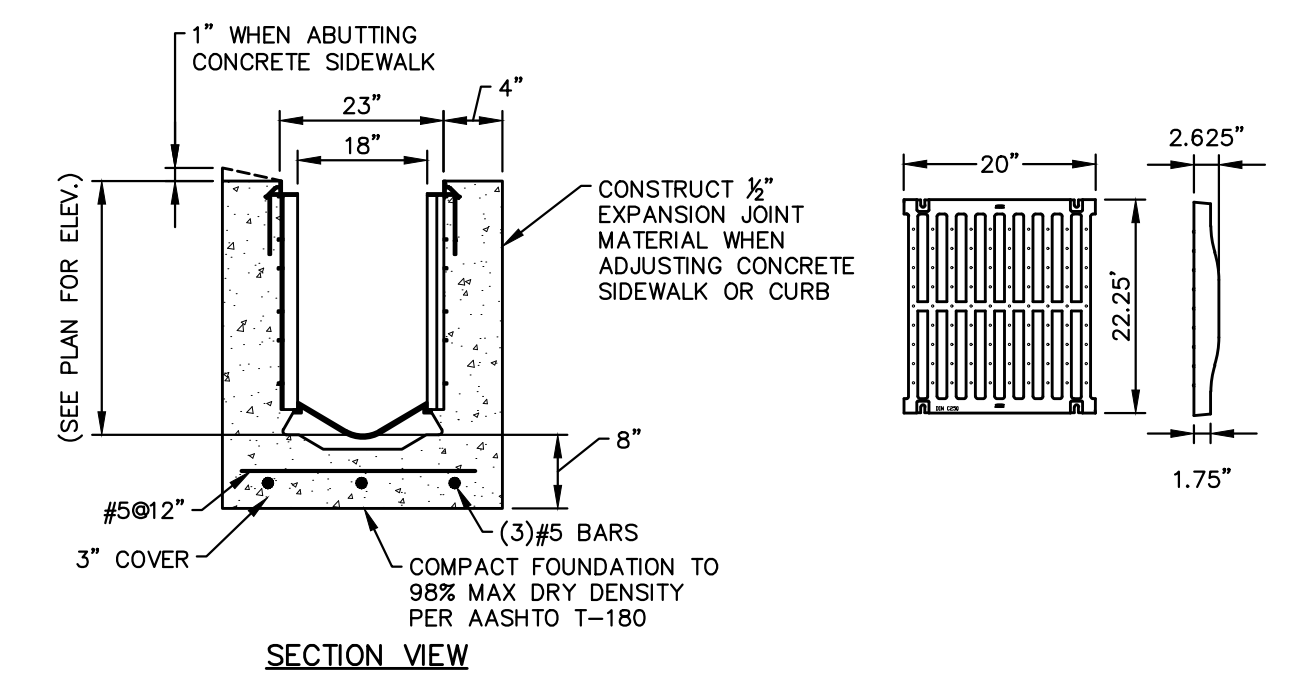


- NOTES:
- THE SPACE BETWEEN PIPE ENDS SHALL NOT EXCEED 1-INCH. PIPE ENDS SHALL BE EVEN AND CLEAN.
  - THE NOMINAL DIAMETER OF THE PROPOSED PIPE SHALL BE EQUAL TO THE NOMINAL DIAMETER OF THE EXISTING PIPE.
  - FLEX-SEAL ADJUSTABLE REPAIR CLAMP SHALL BE MANUFACTURED BY THE MISSION RUBBER COMPANY, OR APPROVED EQUAL.
  - FOR APPLICATIONS OF 24" DIAMETER AND LARGER, USE 316 SERIES, WIDE, T-BOLT CLAMPS.

**7 DISSIMILAR PIPE COUPLING DETAIL**



**8 VALLEY CURB DETAIL**



DOE (GALVANIZED)		
Material	316 STAINLESS STEEL	
DN Rating	CLASS E	
Weight	50 LBS PER FT	
Cover Area	111.36 SQ IN PER FT	
ANSI Rating	SPECIAL DUTY	
Application	EXTREME DRAINAGE	
Std. Width/Max. Size	1.00'	
ADA	1:12:20	FAA
No	Yes	Yes

**9 TRENCH DRAIN SYSTEM**  
ZURN MODEL Z874-18 H-20/25 CLASS E

Date: 11/23/2017 Time: 9:41 AM Filename: \\AED-SERVER\Shared\_Folders\CADD\Municipal\Treasure Island\6-TI-65 (Phase VI BMPs)\Cadd\Current\TI-65\_C9-C10.dwg

NO.	REVISIONS	BY	DATE

SCALE:	NOT TO SCALE
DRAWN:	S.A.T.
DESIGNED:	J.V.K.
APPROVED:	W.G.R.

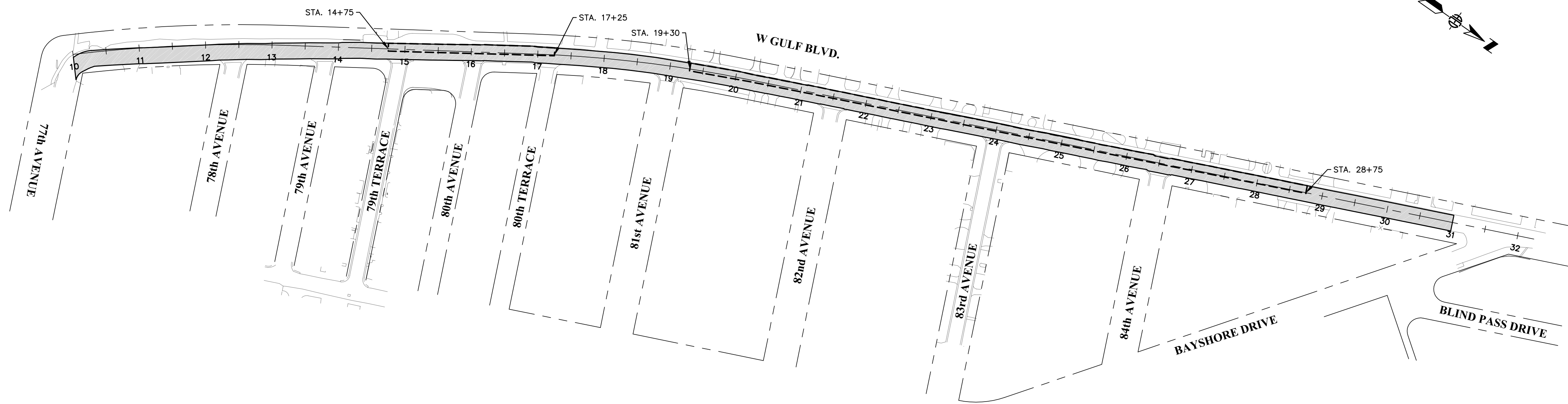
**ADVANCED**  
ENGINEERING & DESIGN, INC.  
CIVIL • MUNICIPAL • SITE DESIGN • PERMITTING • PLANNING  
3931 68TH AVENUE NORTH • PINELLAS PARK, FL 33781 • Phone: 727.526.9158 • Fax: 727.527.9683

**CITY OF TREASURE ISLAND**  
IMPLEMENTATION OF BMPs WITHIN THE  
SUNSET BEACH WATERSHED (PHASE VI)

**GENERAL DETAILS**

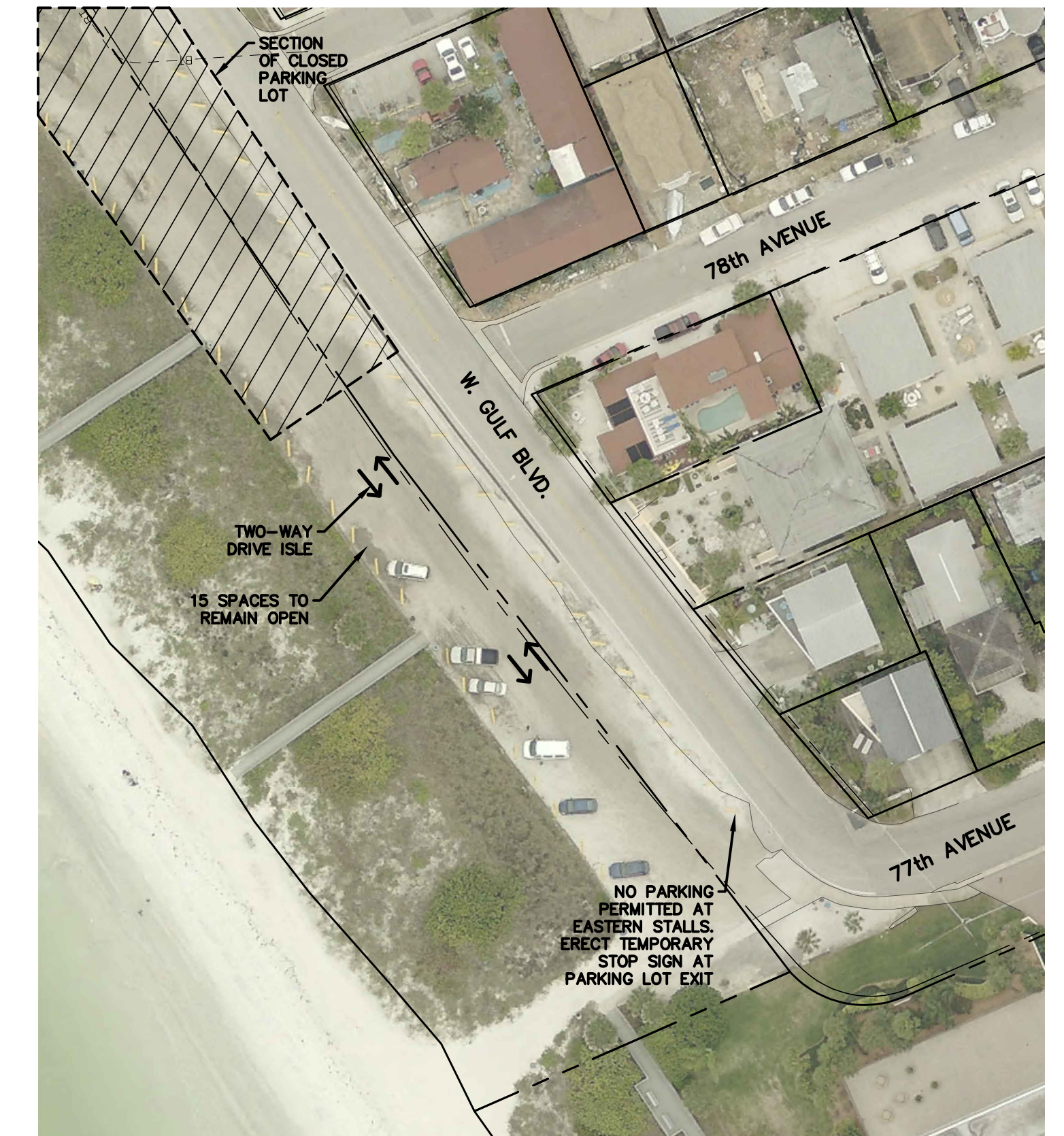
DATE:	10/31/17
PROJECT NO:	16.TI-65
SHEET NO:	<b>C9</b>





- NOTE:**
- ROADWAY RESTORATION (½ ROAD)  
14+75 TO 17+25  
21+25 TO 22+68
  - ROADWAY RECONSTRUCTION (½ ROAD)  
19+30 TO 21+25  
22+68 TO 28+75
  - SEE "PAVING & GRADING NOTES" ON SHT. C2 FOR ADDITIONAL INFORMATION
- LEGEND:**
- LIMITS OF 2" MILL/LIMITS OF 2" OVERLAY
  - SWFWMD FUNDED WORK LIMITS

**1 ASPHALT ROADWAY WORK LIMITS**



**2 TERN PARKING LOT TRAFFIC FLOW DETAIL (PHASE II ONLY)**  
SCALE: 1"=50'

**WATER QUALITY CALCULATIONS**



To: SWFWMD CFI Personnel  
 From: Advanced Engineering & Design, Inc. (AED)  
 CC: Michael Helfrich, P.E., City of Treasure Island; Stacy Boyles, P.E., City of Treasure Island; File  
 Date: October 2, 2015  
 Re: Implementation of BMPs within the Sunset Beach Watershed (Phase VI)  
 FY2017 Cooperative Funding Initiative Application

**Total Basin Areas**  
 2.93 Ac. (North Basin)  
 1.91 Ac. (South Basin)

**Existing Baffle Box Design Criteria**  
 North Baffle Box → Peak Design Flow of 90 CFS  
 South Baffle Box → Peak Design Flow of 100 CFS

**Baffle Box Removal Efficiencies (Averaged from Manufacturer Study; see attached)**  
 71.08% TSS  
 37.57% TP  
 48% TN

**Rainfall Data**  
 53" (per Evaluation of Current Stormwater Design Criteria within the State of Florida, Harvey H. Harper)

**Average Nutrient & TSS Concentrations (per FDEP Stormwater Treatment Report; see attached)**  
 TN = 2.32 mg/L  
 TP = 0.340 mg/L  
 TSS = 48.4 mg/L

**Rational Coefficient**  
 C = 0.68 (North and south contain mixture of single family and multifamily)  
 (per Introduction to Hydrology, Third Edition © 1988)

**Volume Routed Thru Treatment Structure**  
 Northern Basin → 127,630.80 SF \* (53"/12") \* 0.68  
 383,317.84 CF  
 (10,854,352.47 Liters)

Southern Basin → 83,199.60 SF \* (53"/12") \* 0.68  
 249,876.13 CF  
 (7,075,704.04 Liters)

**Nutrient Removal Calculations**

**TSS**  
 10,854,352.47 L \* 48.4 mg/L = 525,350,659.55 mg/year (1,158.2 lb./yr.) (North Basin)  
 @ 71.08% Removal = **823.25 lbs. / year**  
 7,075,704.04 L \* 48.4 mg/L = 342,464,075.54 mg/year (755.0 lb./yr.) (South Basin)  
 @ 71.08% Removal = **536.66 lbs. / year**

**TP**  
 10,854,352.47 L \* 0.340 mg/L = 3,690,478.64 mg/year (8.14 lbs./year) (North Basin)  
 @ 37.57% Removal = **3.06 lbs. / year**  
 7,075,704.04 L \* 0.340 mg/L = 2,405,739.37 mg/year (5.30 lbs./year) (South Basin)  
 @ 37.57% Removal = **1.99 lbs. / year**

**TN**  
 10,854,352.47 L \* 2.32 mg/L = 25,182,097.73 mg/year (55.12 lbs./year) (North Basin)  
 @ 48% Removal = **26.46 lbs. / year**  
 7,075,704.04 L \* 2.32 mg/L = 16,415,633.37 mg/year (36.19 lbs./year) (South Basin)  
 @ 48% Removal = **17.37 lbs. / year**

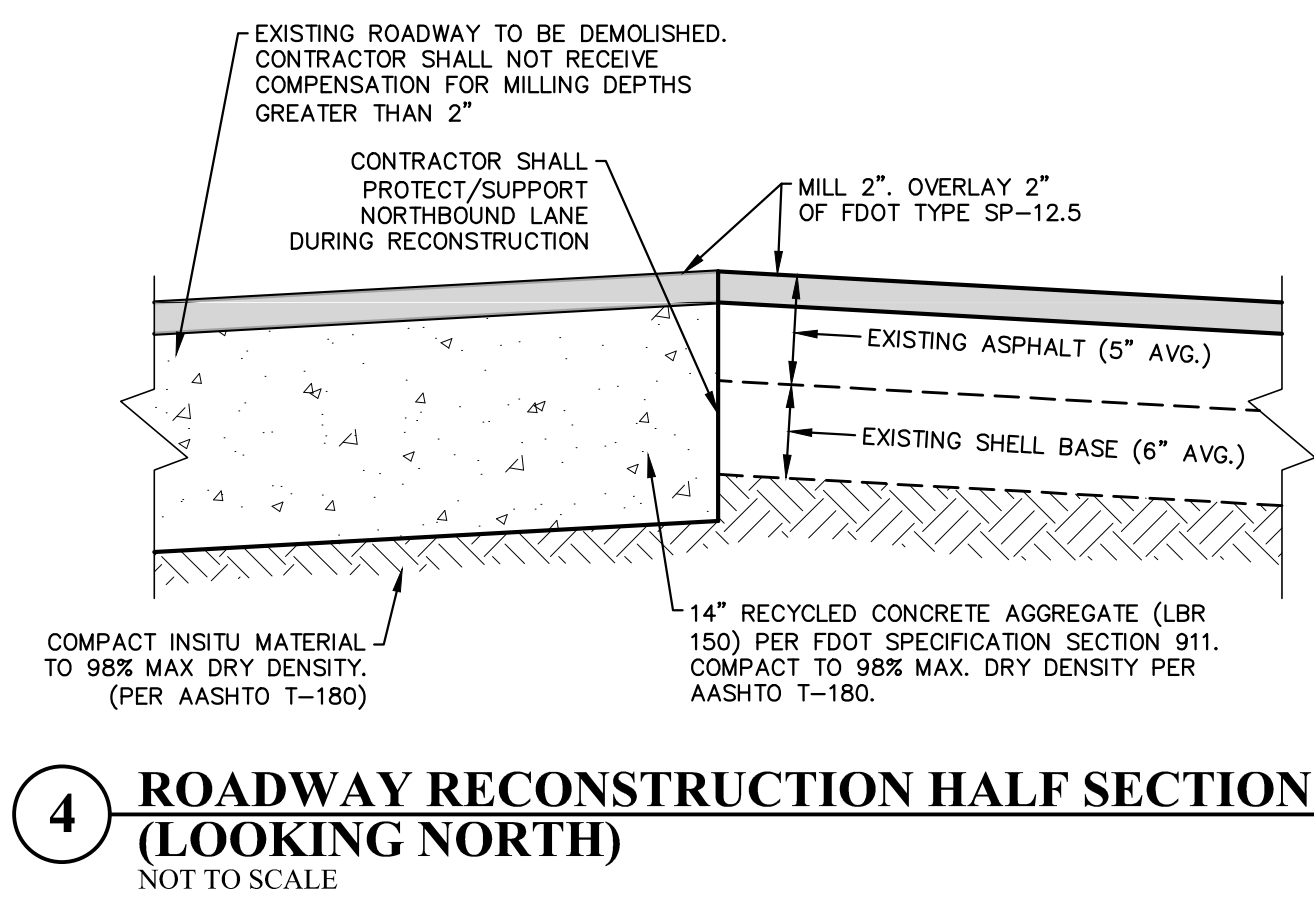
**Cost Effective Calculations**

**Total Nutrients Removed**  
 TSS  
 1,359.91 lbs / year \* 20 years = 27,198.20 pounds removed  
 TP  
 5.05 lbs. / year \* 20 years = 101.02 pounds removed  
 TN  
 43.83 lbs. / year \* 20 years = 876.63 pounds removed

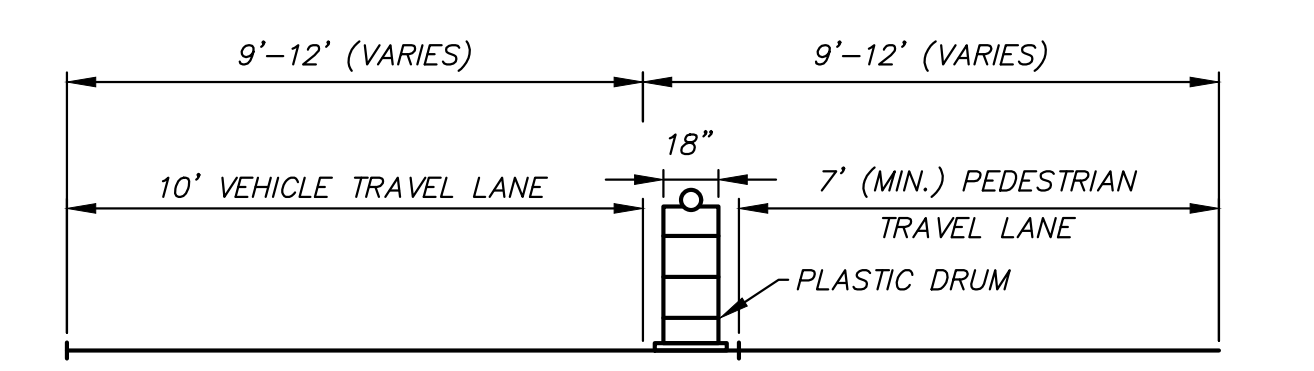
**SWFWMD Funds Requested**  
 FY16/17 Project Total = \$620,000.00

**TSS Removal @ \$22.80/lb.**  
**TP Removal @ \$6,137.40/lb.**  
**TN Removal @ \$707.25/lb.**

**3 RESOURCE BENEFIT CALCULATIONS**  
NOT TO SCALE



**4 ROADWAY RECONSTRUCTION HALF SECTION (LOOKING NORTH)**  
NOT TO SCALE



**5 BAYSHORE DRIVE TYPICAL SECTION (PHASE II ONLY)**  
SCALE: 1"=4'

Date: 11/23/2017 Time: 9:41 AM File: \\AED-SERVER\Shored\_Folders\CADD\Municipal\Treasure\_Island\16.TI-65 (Phase VI BMPs)\Cadd\Current\TI-65\_C9-C10.dwg

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**CITY OF TREASURE ISLAND**  
 IMPLEMENTATION OF BMPS WITHIN THE  
 SUNSET BEACH WATERSHED (PHASE VI)

**GENERAL DETAILS**

DATE:	10/31/17
PROJECT NO:	16.TI-65
SHEET NO:	<b>C10</b>