MEMORIAL DR CULVERT

MEMORIAL DR, FL 33825

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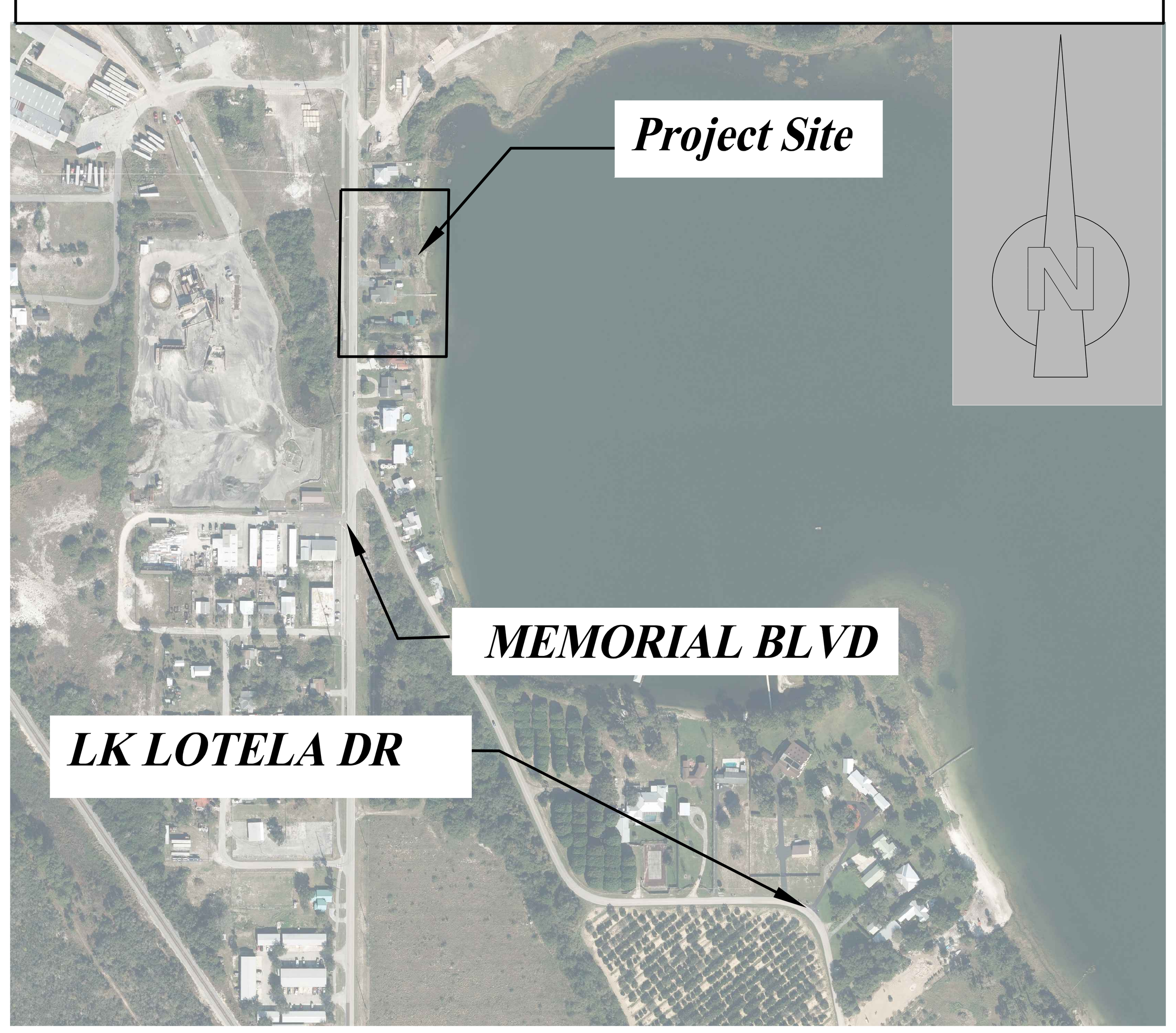
INDEX

ESTIMATED TABULATION OF QUANTITIES (DEWATERING PLAN ONLY)

TASK NO.	DESCRIPTION	QUANTITY	UNIT
1	Mobilization	1	LS
2	Maintenance of Traffic	1	LS
3	Survey Staking (Includes As-Builts)	1	LS
4	Clearing and Grubbing	1	LS
5	Sediment Barrier / Silt Fence	642	LF
6	Floating Turbidity Barrier	749	LF
7	Sediment Hay Bales (Staked)	48	Ea
8	Regular Excavation	1	LS
9	Sod	1	LS
10	Dewatering System(Well Point System, Dewatering Pump, Sediment Tanks, Discharge Pipe, etc.)	1	LS
11	By Pass System (By-Pass Pump, Discharge Pipe, Traffice Rated Discharge Pipe, etc)	1	LS
12	By-Pass Pipe Culvert (Temporary) 36"	153	LF
13	By-Pass Coffer Dam	1	LS
14	Earth Coffer Dam	1	LS
15	Riprap (with Geofabric) Temporary	25	CY
16	57 Stone (Sediment Basin, Bedding)	47	CY
17	Sheet Piles (28' Long PZ-27 Sheet Piles)	2,688	SF
18	Asphalt (Driveway Replacement)	15	Tons
19	Optional Base Group 4 (6" Shellrock Driveway Replacement)	1,311	SY

Disclosure: The above Estimated Tabulation of Quantities is simply an estimate. It is the Contractors responsibility to provide his/her own quantity take-offs prior to bidding and for construction purposes. Contractor shall ensure his/her bid includes adequate quantities to

LOCATION MAP



DEWATERING SPECIFICATIONS

PART 1 - GENERAL

1.1 DESCRIPTION:

THIS SECTION SPECIFIES PERFORMANCE OF DEWATERING REQUIRED TO LOWER AND CONTROL GROUND WATER TABLE LEVELS AND HYDROSTATIC PRESSURES TO PERMIT EXCAVATION, BACKFILL, AND CONSTRUCTION TO BE PERFORMED IN THE DRY. CONTROL OF SURFACE WATER SHALL BE CONSIDERED AS PART OF THE WORK UNDER THIS SPECIFICATION.

1.2 SUMMARY:

A. THE WORK TO BE COMPLETED BY THE CONTRACTOR INCLUDES, BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:

1. IMPLEMENTATION OF THE EROSION AND SEDIMENTATION CONTROL PLAN.

2. DEWATER EXCAVATIONS, INCLUDING SEEPAGE AND PRECIPITATION.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MATERIALS, EQUIPMENT, LABOR, AND SERVICES NECESSARY FOR CARE OF WATER AND EROSION CONTROL. EXCAVATION WORK SHALL NOT BEGIN BEFORE THE EROSION AND SEDIMENTATION CONTROL PLAN IS IN PLACE.

1.3 REQUIREMENT:

A. DEWATERING SYSTEM SHALL BE OF SUFFICIENT SIZE AND CAPACITY NECESSARY TO LOWER AND MAINTAIN GROUND WATER TABLE TO AN ELEVATION AT LEAST (2 FEET) BELOW LOWEST FOUNDATION SUBGRADE OR BOTTOM OF PIPE TRENCH AND TO ALLOW MATERIAL TO BE EXCAVATED AND CONCRETE PLACED, IN A REASONABLY DRY CONDITION. MATERIALS TO BE REMOVED SHALL BE SUFFICIENTLY DRY TO PERMIT EXCAVATION TO GRADES SHOWN AND TO STABILIZE EXCAVATION SLOPES WHERE SHEETING IS NOT REQUIRED. OPERATE DEWATERING SYSTEM CONTINUOUSLY UNTIL BACKFILL WORK HAS BEEN COMPLETED.

B. REDUCE HYDROSTATIC HEAD BELOW ANY EXCAVATION TO THE EXTENT THAT WATER LEVEL IN THE CONSTRUCTION AREA IS A MINIMUM OF (2 FEET) BELOW PREVAILING EXCAVATION SURFACE.

C. PREVENT LOSS OF FINES, SEEPAGE, BOILS, QUICK CONDITIONS OR SOFTENING OF FOUNDATION STRATA.

D. MAINTAIN STABILITY OF SIDES AND BOTTOM OF EXCAVATION.

E. CONSTRUCTION OPERATIONS ARE PERFORMED IN THE DRY.

F. CONTROL OF SURFACE AND SUBSURFACE WATER IS PART OF DEWATERING REQUIREMENTS. MAINTAIN ADEQUATE CONTROL SO THAT:

1. THE STABILITY OF EXCAVATED AND CONSTRUCTED SLOPES ARE NOT ADVERSELY AFFECTED BY SATURATED SOIL, INCLUDING WATER ENTERING PREPARED SUBBASE AND SUBGRADES WHERE UNDERLYING MATERIALS ARE NOT FREE DRAINING OR ARE SUBJECT TO SWELLING OR FREEZE-THAW ACTION.

2. 2. EROSION IS CONTROLLED.

3. FLOODING OF EXCAVATIONS OR DAMAGE TO STRUCTURES DOES NOT OCCUR.

4. SURFACE WATER DRAINS AWAY FROM EXCAVATIONS.

5. EXCAVATIONS ARE PROTECTED FROM BECOMING WET FROM SURFACE WATER, OR ENSURE EXCAVATIONS ARE DRY BEFORE ADDITIONAL WORK IS UNDERTAKEN.

G. PERMITTING REQUIREMENTS: THE CONTRACTOR SHALL COMPLY WITH AND OBTAIN THE REQUIRED STATE AND COUNTY PERMITS WHERE THE WORK IS PERFORMED.

PART 2 - EXECUTION

3.1 INSTALLATION:

A. INSTALL A DEWATERING SYSTEM TO LOWER AND CONTROL GROUND SURFACE WATER IN ORDER TO PERMIT EXCAVATION, CONSTRUCTION OF STRUCTURE, AND PLACEMENT OF BACKFILL MATERIALS TO BE PERFORMED UNDER DRY CONDITIONS. MAKE THE DEWATERING SYSTEM ADEQUATE TO PRE-DRAIN THE WATER-BEARING STRATA ABOVE AND BELOW THE BOTTOM OF STRUCTURE FOUNDATIONS, UTILITIES, AND OTHER EXCAVATIONS.

B. IN ADDITION, REDUCE HYDROSTATIC PRESSURE HEAD IN WATER-BEARING STRATA BELOW STRUCTURE FOUNDATIONS, UTILITY LINES, AND OTHER EXCAVATIONS, TO EXTENT THAT WATER LEVELS IN CONSTRUCTION AREA ARE A MINIMUM OF (2 FEET) BELOW PREVAILING EXCAVATION SURFACE AT ALL TIMES.

3.2 OPERATION:

A. PRIOR TO ANY EXCAVATION BELOW THE GROUND WATER TABLE, PLACE SYSTEM INTO OPERATION TO LOWER WATER TABLE AS REQUIRED AND OPERATE IT CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK UNTIL UTILITIES AND STRUCTURES HAVE BEEN SATISFACTORILY CONSTRUCTED, WHICH INCLUDES THE PLACEMENT OF BACKFILL MATERIALS AND DEWATERING IS NO LONGER REQUIRED.

B. PLACE AN ADEQUATE WEIGHT OF BACKFILL MATERIAL TO PREVENT BUOYANCY PRIOR TO DISCONTINUING OPERATION OF THE SYSTEM.

3.3 WATER DISPOSAL:

A. DISPOSE OF WATER REMOVED FROM THE EXCAVATIONS IN SUCH A MANNER AS:

1. WILL NOT ENDANGER PORTIONS OF WORK UNDER CONSTRUCTION OR COMPLETED.

2. WILL CAUSE NO INCONVENIENCE TO GOVERNMENT OR TO OTHERS WORKING NEAR SITE.

3. WILL COMPLY WITH THE STIPULATIONS OF REQUIRED PERMITS FOR DISPOSAL OF WATER.

4. WILL CONTROL RUNOFF: THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL OF RUNOFF IN ALL WORK AREAS INCLUDING BUT NOT LIMITED TO: EXCAVATIONS, ACCESS ROADS, PARKING AREAS, LAYDOWN, AND STAGING AREAS. THE CONTRACTOR SHALL PROVIDE, OPERATE, AND MAINTAIN ALL DITCHES, BASINS, SUMPS, CULVERTS, SITE GRADING, AND PUMPING FACILITIES TO DIVERT, COLLECT, AND REMOVE ALL WATER FROM THE WORK AREAS. ALL WATER SHALL BE REMOVED FROM THE IMMEDIATE WORK AREAS AND SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE PERMITS.

B. EXCAVATION DEWATERING:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FACILITIES REQUIRED TO DIVERT, COLLECT, CONTROL, AND REMOVE WATER FROM ALL CONSTRUCTION WORK AREAS AND EXCAVATIONS.

2. DRAINAGE FEATURES SHALL HAVE SUFFICIENT CAPACITY TO AVOID FLOODING OF WORK AREAS.

3. DRAINAGE FEATURES SHALL BE SO ARRANGED AND ALTERED AS REQUIRED TO AVOID DEGRADATION OF THE FINAL EXCAVATED SURFACE(S).

4. THE CONTRACTOR SHALL UTILIZE ALL NECESSARY EROSION AND SEDIMENT CONTROL MEASURES AS DESCRIBED HEREIN TO AVOID CONSTRUCTION RELATED DEGRADATION OF THE NATURAL WATER QUALITY.

C. DEWATERING EQUIPMENT SHALL BE PROVIDED TO REMOVE AND DISPOSE OF ALL SURFACE AND GROUND WATER ENTERING EXCAVATIONS, TRENCHES, OR OTHER PARTS OF THE WORK DURING CONSTRUCTION. EACH EXCAVATION SHALL BE KEPT DRY DURING SUBGRADE PREPARATION AND CONTINUALLY THEREAFTER UNTIL THE STRUCTURE TO BE BUILT, OR THE PIPE TO BE INSTALLED THEREIN, IS COMPLETED TO THE EXTENT THAT NO DAMAGE FROM HYDROSTATIC PRESSURE, FLOTATION, OR OTHER CAUSE WILL RESULT.

3.4 STANDBY EQUIPMENT:

PROVIDE COMPLETE STANDBY EQUIPMENT, INSTALLED AND AVAILABLE FOR IMMEDIATE OPERATION, AS MAY BE REQUIRED TO ADEQUATELY MAINTAIN DE-WATERING ON A CONTINUOUS BASIS AND IN THE EVENT THAT ALL OR ANY PART OF THE SYSTEM MAY BECOME INADEQUATE OR FAIL.

3.5 CORRECTIVE ACTION:

IF DEWATERING REQUIREMENTS ARE NOT SATISFIED DUE TO INADEQUACY OR FAILURE OF THE DEWATERING SYSTEM (LOOSENING OF THE FOUNDATION STRATA, OR INSTABILITY OF SLOPES, OR DAMAGE TO FOUNDATIONS OR STRUCTURES), PERFORM WORK NECESSARY FOR REINSTATEMENT OF FOUNDATION SOIL AND DAMAGED STRUCTURE OR DAMAGES TO WORK IN PLACE RESULTING FROM SUCH INADEQUACY OR FAILURE BY CONTRACTOR, AT NO ADDITIONAL COST TO GOVERNMENT.

3.6 DAMAGES:

IMMEDIATELY REPAIR DAMAGES TO ADJACENT FACILITIES CAUSED BY DEWATERING OPERATIONS.

3.7 REMOVAL:

ENSURE COMPLIANCE WITH ALL CONDITIONS OF REGULATING PERMITS AND PROVIDE SUCH INFORMATION TO THE RESIDENT ENGINEER. OBTAIN WRITTEN APPROVAL FROM RESIDENT ENGINEER BEFORE DISCONTINUING OPERATION OF DEWATERING SYSTEM.

BID SET

PROJECT
HIGHLANDS COUNTY BOCC
MEMORIAL DR CULVERT REPLACEMENT
MEMORIAL DR
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James "Mason" Cobb, P.E.
Wednesday, January 12, 2022

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REVISIONS:
01/7/22 BW

PROJECT #21-144-1126

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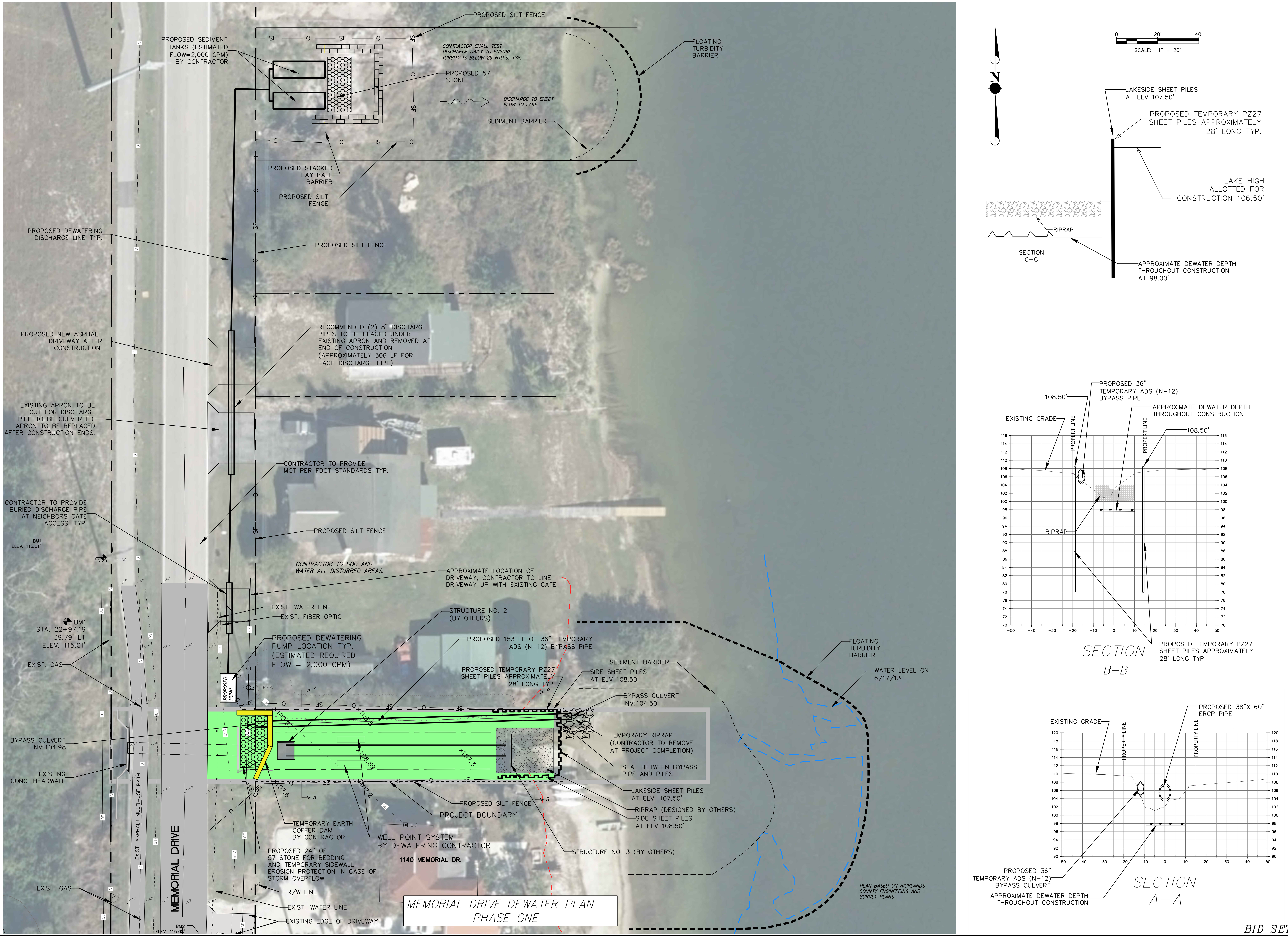
Appendix C



PROJECT

HIGHLANDS COUNTY BOCC

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MEMORIAL DR
AVON PARK FL, 33825

SEAL

James "Mason" Cobb, P.E.
Wednesday, January 12, 2022

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10/5/21 BW

PROJECT #21-144-1126

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SHEET 2 of 3

PROPOSED SILT FENCE
PROPOSED SEDIMENT TANKS (ESTIMATED FLOW=2,000 GPM) BY CONTRACTOR
CONTRACTOR SHALL TEST DISCHARGE DAILY TO ENSURE TURBITY IS BELOW 29 NTU'S, TYP.
FLOATING TURBIDITY BARRIER
PROPOSED 57 STONE
DISCHARGE TO SHEET FLOW TO LAKE
SEDIMENT BARRIER
PROPOSED STACKED HAY BALE BARRIER
PROPOSED SILT FENCE
PROPOSED DEWATERING DISCHARGE LINE TYP.
PROPOSED SILT FENCE
PROPOSED NEW ASPHALT DRIVEWAY AFTER CONSTRUCTION.
RECOMMENDED (2) 8" DISCHARGE PIPES TO BE PLACED UNDER EXISTING APRON AND REMOVED AT END OF CONSTRUCTION (APPROXIMATELY 306 LF FOR EACH DISCHARGE PIPE)
EXISTING APRON TO BE CUT FOR DISCHARGE PIPE TO BE CULVERTED. APRON TO BE REPLACED AFTER CONSTRUCTION ENDS.
CONTRACTOR TO PROVIDE MOT PER FDOT STANDARDS TYP.
CONTRACTOR TO PROVIDE BURIED DISCHARGE PIPE AT NEIGHBORS GATE ACCESS, TYP.
PROPOSED SILT FENCE
BM1 ELEV. 115.01'
PROPOSED BYPASS PUMP LOCATION TYP. ESTIMATED FLOW REQUIRED 2,500 GPM
CONTRACTOR TO SOD AND WATER ALL DISTURBED AREAS.
APPROXIMATE LOCATION OF DRIVEWAY, CONTRACTOR TO LINE DRIVEWAY UP WITH EXISTING GATE
EXIST. WATER LINE
EXIST. FIBER OPTIC
STRUCTURE NO. 2 (BY OTHERS)
BM1 STA. 22+97.19 39.79' LT ELEV. 115.01'
PROPOSED DEWATERING PUMP LOCATION TYP. (ESTIMATED REQUIRED FLOW = 2,000 GPM)
PROPOSED 225 LF BY PASS DISCHARGE LINE TYP.
PROPOSED TEMPORARY PZ27 SHEET PILES APPROXIMATELY 28' LONG TYP.
SEDIMENT BARRIER
SIDE SHEET PILES AT ELV 108.50'
FLOATING TURBIDITY BARRIER
WATER LEVEL ON 6/17/13
EXIST. GAS
DEWATER LINE
BYPASS INTAKE LOCATION
TEMPORARY ALUMINUM STRUCTURE COFFER DAM ELV 108.00' BY CONTRACTOR
TEMPORARY RIPRAP (CONTRACTOR TO REMOVE AT PROJECT COMPLETION)
SEAL BETWEEN BYPASS PIPE AND PILES
EXISTING CONC. HEADWALL
LAKESIDE SHEET PILES AT ELV. 107.50'
RIPRAP (DESIGNED BY OTHERS)
SIDE SHEET PILES AT ELV 108.50'
TRAFFIC WEIGHTED DISCHARGE RAMP FOR ROADWAYS
PROPOSED SILT FENCE
PROJECT BOUNDARY
STRUCTURE NO. 1 (BY OTHERS)
WELL POINT SYSTEM BY DEWATERING CONTRACTOR
1140 MEMORIAL DR.
STRUCTURE NO. 3 (BY OTHERS)
PROPOSED 24" OF #57 STONE FOR BEDDING AND TEMPORARY SIDEWALL EROSION PROTECTION IN CASE OF STORM OVERFLOW
R/W LINE
EXIST. GAS
EXIST. WATER LINE
EXISTING EDGE OF DRIVEWAY
BM2 ELEV. 115.08'
EXIST. ASPHALT MULTI-USE PATH
MEMORIAL DRIVE
PLAN BASED ON HIGHLANDS COUNTY ENGINEERING AND SURVEY PLANS

MEMORIAL DRIVE DEWATER PLAN PHASE TWO

0 20' 40'
SCALE: 1" = 20'

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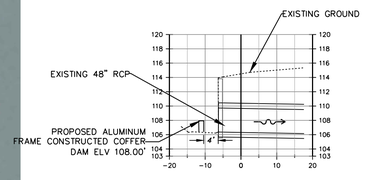
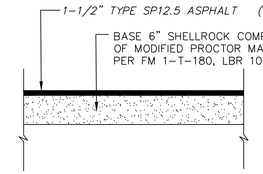


SECTION D–D

ALUMINUM COFFER DAM TO DAM CONTRIBUTING WATER RUN OFF FROM FLOWING THRU CULVERT. BY PASS SYSTEM TO REROUTE CONTRIBUTING WATER RUN OFF AROUND EXISTING CULVERT AND DISCHARGE TO LAKE. IN THE EVENT A STORM CREATES EXCESSIVE CONTRIBUTING RUN OFF, FLOW WILL OVERFLOW TEMPORARY ALUMINUM STRUCTURE AND FLOW THRU WORK ZONE. CONTRACTOR TO MONITOR RUN OFF TO CULVERT AND INSURE SAFE WORKING CONDITIONS AT ALL TIMES.



ASPHALT PAVING
N.T.S.

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SHEET 3 of 3

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