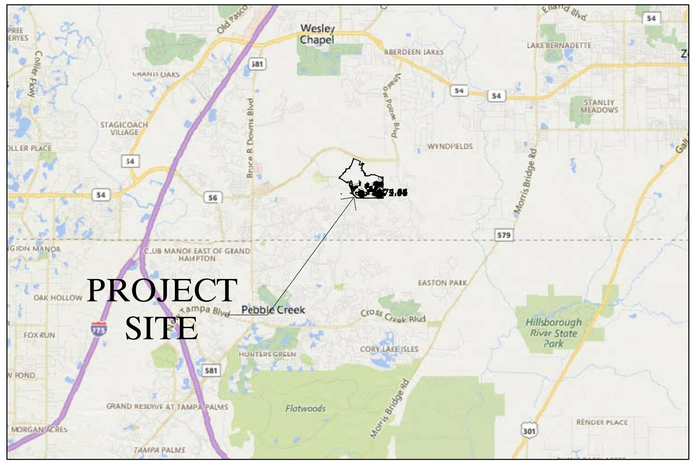
Q:\CIVIL\3858\002\200\Production\Drawings\COVER.dwg

THE RIDGE AT WIREGRASS

PHASE 2 AND MASS GRADING PHASE 3

CONSTRUCTION DRAWINGS

SECTION 28, TOWNSHIP 26 S, RANGE 20 E
PASCO COUNTY, FLORIDA



LOCATION MAP

FOR:

PASCO COUNTY ASSOCIATES II, LLLP

1600 SAWGRASS CORPORATE PARKWAY, SUITE 400
SUNRISE, FLORIDA 33323

Permit Type	Permit No.	Status
A.C.O.E.	SAJ-2013-00031.(NW-TEH)	APPROVED
S.W.F.W.M.D.		
F.D.E.P. (WATER)		
F.D.E.P. (SEWER)		
N.P.D.E.S.		
PASCO COUNTY		
PASCO CO. UTILTIES		

BY:

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SWFWMD SUBMITTAL	UTILITY SUBMITTAL	COUNTY/CITY SUBMITTAL	DRAWING INDEX	
			SHEET NUMBER	SHEET TITLE
*	*	*	C1.01	COVER
*	*	*	C1.02 - C1.03	NOTES AND LEGENDS
*		*	C2.01	CONSTRUCTION POLLUTION PREVENTION PLAN
*		*	C2.02	OVERALL SITE PLAN
*		*	C2.03	EROSION CONTROL AND SITE PREPARATION PLAN
		*	C3.01 - C3.13	SIGNING AND PAVEMENT MARKING PLAN
*		*	C4.01 - C4.13	PAVING, GRADING AND DRAINAGE PLAN
*		*	C4.14 - C4.16	GRADING AND DRAINAGE PLAN
*		*	C4.17	POND 6 GRADING AND DRAINAGE PLAN
*		*	C4.18	MITIGATION PLAN
*	*	*	C4.19	MANSFIELD PLAN AND PROFILE
	*	*	C5.01 - C5.13	SANITARY SEWER AND WATER DISTRIBUTION PLAN
*	*	*	C6.01 - C6.09	PROFILES
*	*	*	C7.01 - C7.02	TYPICAL SECTIONS AND DETAILS
*		*	C8.01	EROSION CONTROL DETAILS
*		*	C9.01	GRADING DETAILS
*		*	C9.02	SUPPLEMENTAL WETLAND CREATION NOTES AND DETAILS
*		*	C10.01 - C10.02	STORM SEWER DETAIL
	*	*	C11.01 - C11.02	WATER DISTRIBUTION DETAILS
	*	*	C12.01 - C12.02	SANITARY SEWER DETAILS
		*	L1.01 - L1.06	CODE LANDSCAPE PLAN
		*	IR1.01 - IR1.03	CODE IRRIGATION PLAN
	*	*	M1.01	PUMP STATION NOTES
	*	*	M1.02	PUMP STATION MECHANICAL SHEET
	*	*	E1.01 - E1.03	PUMP STATION ELECTRICAL PLANS AND DETAILS

NO.	DATE	REVISION	BY

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

C1.01

PASCO CO. SUBMITTAL
APRIL 01, 2016

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EROSION AND SEDIMENTATION CONTROL NOTES:

1. THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.
2. THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL USUALLY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR SYNTHETIC BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHOULD BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORMWATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES, AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.
3. WHERE PUMPS ARE TO BE USED TO REMOVE TURBID WATERS FROM THE CONSTRUCTION AREA, THE WATER SHALL BE TREATED TO REDUCE TURBIDITY TO STATE WATER QUALITY STANDARDS PRIOR TO DISCHARGE TO THE WETLANDS. TREATMENT METHODS INCLUDE, FOR EXAMPLE, TURBID WATER BEING PUMPED INTO GRASSED SWALES OR APPROPRIATE VEGETATED AREAS (OTHER THAN UPLAND PRESERVATION AREAS AND WETLAND BUFFERS), SEDIMENT BASINS, OR CONFINED BY AN APPROPRIATE ENCLOSURE SUCH AS TURBIDITY BARRIERS, AND KEPT CONFINED UNTIL ITS TURBIDITY LEVEL MEETS STATE WATER QUALITY STANDARDS.
4. THE CONTRACTOR SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOIL STABILIZED. SILTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE-HALF THE DEPTH OF THE SILTATION CONTROL BARRIER SHALL BE IMMEDIATELY REMOVED AND PLACED IN UPLAND AREAS.
5. WATER REMAINING IN THE EXCAVATIONS AFTER CONSTRUCTION MUST BE KEPT CONFINED WITHIN THE EXCAVATIONS PRIOR TO DISCHARGE (IF APPLICABLE), UNTIL THE TURBIDITY LEVEL OF THE POND WATER MEETS STATE WATER QUALITY STANDARDS.
6. NO CLAY MATERIAL SHALL BE LEFT EXPOSED IN THE EXCAVATIONS. IF CLAY OR SANDY CLAYS ARE LEFT EXPOSED AT THE PERMITTED DEPTH, THE CONTRACTOR SHALL OVER EXCAVATE THE POND'S BOTTOM AND SIDE SLOPES BY A MINIMUM OF 12 INCHES AND BACKFILL WITH CLEAN SANDS.
7. PROVIDE ALL DISTURBED AREAS WITHIN THE LIMITS OF THE WORK WITH TEMPORARY SOIL EROSION CONTROL AND SEDIMENT CONTROL, UTILIZING EARTH DAMS & PONDS, GRADE TO DRAIN SWALES, SETTLING BASINS, SILT FENCES, STONE FILTERS, SYNTHETIC BALE FILTERS, ETC., TREATING ALL SOIL SURFACES WITH SEEDED TOPSOIL AND / OR MULCH AFTER GRADING.
8. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
9. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED. STATE AND LOCAL LAWS SHALL BE COMPLIED WITH AT ALL TIMES.
10. TO MINIMIZE SOIL EROSION, PROPOSED LAND ALTERATION ACTIVITIES SHALL NOT UNNECESSARILY REMOVE EXISTING VEGETATION AND ALTER EXISTING TOPOGRAPHY. ADEQUATE PROTECTION MEASURES (I.E. SYNTHETIC BALES, BAFFLES, SODDING AND SANDBAGGING) SHALL BE PROVIDED, AS NECESSARY, TO MINIMIZE EROSION AND DOWNSTREAM SEDIMENTATION CAUSED BY SURFACE WATER RUN-OFF ON EXPOSED LAND SURFACES.
11. PERMANENT VEGETATION SHALL BE BY SEEDING OR SODDING ALL EXPOSED AREAS WITHIN THREE DAYS AFTER FINAL GRADING. MULCH SHALL BE USED AS NECESSARY FOR PROTECTION UNTIL 75% GROWTH IS ESTABLISHED. AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL WHICH WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY AS TO PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER.
12. ALL NEW EROSION AND SILT CONTROL METHODS AND LOCATIONS INDICATED ON THIS DRAWING ARE FOR START-UP AND GENERAL REFERENCE ONLY AND SHALL BE ADJUSTED, AS REQUIRED, TO SUIT THE PROCESS OF THE CONSTRUCTION.
13. ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATIVE MATERIAL THAT WILL, WITHIN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE. SODDING, PLUGGING, SPRIGGING. OR SEEDING IS ACCEPTABLE FOR STABILIZATION; HOWEVER, SODDING MAY BE REQUIRED IN AREAS OF EROSION-PRONE SOILS OR WHERE SLOPES ARE GREATER THAN 5:1. VEGETATION OTHER THAN GRASS IS ACCEPTABLE UNLESS OTHERWISE SPECIFIED.

    FOR COMMERCIAL SITE DEVELOPMENT PROJECTS, NO MORE THAN 50% OF THE LANDSCAPED AREA MAY BE PLANTED WITH SHALLOW-ROOTED (I.E., ST AUGUSTINE) TURF GRASS VARIETIES. THESE TURF GRASS VARIETIES SHALL BE CONSOLIDATED IN AND LIMITED TO AREAS THAT ARE PROVIDED WITH CENTRAL AUTOMATIC IRRIGATION SYSTEMS. A METHOD OF STABILIZATION MUST BE SHOWN ON THE SITE DEVELOPMENT CONSTRUCTION PLANS.
14. SEE PGD PLANS FOR ADDITIONAL EROSION CONTROL LOCATION INFORMATION AND DETAILS.
15. CONTRACTOR TO COMPLY WITH ALL REGULATIONS AS SET FORTH BY THE FDEP NPDES STORMWATER REGULATORY PROGRAM.
16. CONTRACTOR TO CONSTRUCT PROPOSED STORMWATER PONDS IN EITHER CELLS OR SEQUENCED SO THAT THE FIRST PONDS FUNCTION AS SEDIMENT BASINS TO SEPARATE SUSPENDED SOLIDS FROM PRODUCED GROUNDWATER. ALL PRODUCED GROUNDWATER MUST MEET CRITERIA OF "STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUNDWATER FROM ANY NON-CONTAMINATED SITE ACTIVITY" EFFECTIVE DATE FEBRUARY 14, 2000; DOCUMENT NUMBER 62-621.300(2).
17. DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE TO REMAIN ON THE SITE UNLESS OTHERWISE APPROVED BY THE COUNTY.

PASCO COUNTY SIGNING & PAVEMENT MARKING NOTES:

1. PAVEMENT MARKINGS SHOULD BE PLACED AS SHOWN IN THE PLANS AND THE APPROPRIATE FDOT DESIGN STANDARD INDEX.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LENGTH OF COLUMN SUPPORTS IN THE FIELD PRIOR TO FABRICATION.
3. REFER TO FDOT DESIGN STANDARDS INDEX NO 17352 FOR RETRO-REFLECTIVE PAVEMENT MARKER PLACEMENT.
4. PAINT ALL MEDIAN NOSES AND RAISED ISLAND NOSES REFLECTIVE WHITE OR REFLECTIVE YELLOW AS INDICATED IN THE PLANS.
5. ANY EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED IN THE PLANS.
6. CAUTION SHOULD BE EXERCISED WHILE RELOCATING EXISTING SIGNS SO LONG AS TO PREVENT DAMAGE TO THE SIGNS. IF THE SIGNS ARE DAMAGED BEYOND USE, AS DETERMINED BY THE ENGINEER, THEY SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
7. THE SIGN LOCATIONS SHOWN ARE APPROXIMATE AND MAY REQUIRE FIELD ADJUSTMENT AS DIRECTED BY THE ENGINEER.
8. ANY EXISTING SIGN TO REMAIN THAT IS DISTURBED DURING CONSTRUCTION OR RELOCATED SHALL BE RESET TO CURRENT STANDARDS FOR HEIGHT, OFFSET, AND METHOD OF INSTALLATION.
9. CAUTION SHOULD BE EXERCISED WHILE RELOCATING EXISTING SIGNS TO PREVENT DAMAGE TO THE SIGNS. IF THE SIGNS ARE DAMAGED BEYOND USE, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL REPLACE THEM AT HIS EXPENSE.
10. ON CONCRETE SURFACE, INCLUDING BRIDGE DECKS, ALL SKIP STRIPE PAVEMENT MARKINGS SHALL ALTERNATE WHITE (THERMOPLASTIC) AND BLACK (PAINT) (20' WHITE/20' BLACK/20' SKIP).
11. ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE U.S. DEPARTMENT OF TRANSPORTATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", 2009 EDITION.
12. STREET SIGNAGE IS TO MEET MINIMUM PASCO COUNTY AND FDOT STANDARDS FOR DESIGN, AND CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS TO THE ENGINEER OF RECORD AND THE DEVELOPER FOR APPROVAL. CONTRACTOR SHALL USE W-SHAPED STEEL POSTS FOR ROADWAY SIGNS.
13. ALL PAVEMENT MARKINGS SHALL BE LEAD-FREE, NON-SOLVENT BASED PAINT. THERMOPLASTIC ONLY WHERE NOTED.
14. ALL PAVEMENT MARKINGS TO BE REMOVED SHALL BE PERFORMED BY HYDRO BLASTING (EXCEPT WITHIN FDOT R/W)
15. ALL ROUTE MARKERS AUXILIARIES SHALL MATCH THE COLOR COMBINATION OF THE RESPECTIVE MARKER WHICH THEY SUPPLEMENT.
16. LOCATION OF STOP BARS IS TO BE PER SECTION 3B.16 OF THE MUTCD.
17. LOCATION OF SIGNS IS TO BE PER SECTION 2A.18 THROUGH 2A.20 OF THE MUTCD.
18. ALL LOCAL ROADS ARE PRIVATE.

PASCO COUNTY SANITARY SEWER & WATER DISTRIBUTION NOTES:

1. NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT WILL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, STORM SEWER, OR STORMWATER FORCE MAIN REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER (OR A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN WILL BE LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER); A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, OR WASTEWATER FORCE MAIN NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM." [FAC 62-555.314(1); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)]
2. NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE; AND NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPELINE. [FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)]
3. AT THE UTILITY CROSSINGS DESCRIBED IN NOTE #1 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS OR STORMWATER FORCE MAINS REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS OR WASTEWATER FORCE MAINS NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. [FAC62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)]
4. ALL SEWER AND WATER SERVICE LATERALS ARE TO BE MARKED WITH PAINT ON THE EDGE OF PAVEMENT AND WITH WOOD STAKES AT THE END OF SERVICE LATERALS (BLUE PAINT FOR WATER, GREEN PAINT FOR SEWER).
5. CONFLICTS OF WATER LINES WITH SANITARY SEWER AND STORM SEWER SYSTEMS TO BE RESOLVED BY ADJUSTING WATER LINES AS NECESSARY.
6. WATER LINES ARE TO HAVE A MINIMUM OF 36-INCHES OF COVER FROM PROPOSED GRADE.
7. APPROXIMATE WATER LINE DISTANCES ARE SHOWN BETWEEN CENTERS OF MAIN FITTINGS. THE CONTRACTOR SHALL PROVIDE ALL FITTINGS REQUIRED FOR COMPLETE SYSTEMS IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE.
8. THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AS SHOWN AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF THE UTILITIES PRIOR TO CONSTRUCTION IN THEIR VICINITY.
9. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES IN THE AREA BEFORE BEGINNING CONSTRUCTION.
10. ALL UNDERGROUND UTILITIES MUST BE INSTALLED BEFORE SUB-BASE, BASE & SURFACE ARE CONSTRUCTED.
11. SPECIAL CARE IS TO BE TAKEN SO TREES THAT ARE TO REMAIN ARE UNHARMED DURING CONSTRUCTION.
12. ALL WATER MAINS ARE TO BE PVC OR AS NOTED ON PLANS.
    - A. PIPE SIZES FROM 2" TO 3" SHALL CONFORM TO ASTM DESIGNATION D- 1784 AND D-2241, CLASS 1120 OR 1220 (SDR 21).
    - B. PIPE SIZES FROM 4" TO 12" SHALL CONFORM TO AWWA C-900 SPECIFICATIONS (DR-18).
13. SANITARY PIPE MATERIAL SHALL BE AS FOLLOWS:
    SDR 35 FOR PIPES 3'-12' DEEP
    SDR 26 FOR PIPES 12'-18' DEEP
    C900 FOR PIPES GREATER THAN 18' DEEP WITH FERNCO ADAPTERS.
14. SANITARY SEWER PIPE MEASUREMENTS ARE TO THE CENTER OF MANHOLES.
15. WATER MAINS WILL NOT BE INSTALLED PRIOR TO INSTALLATION OF THE SANITARY AND STORM SEWER SYSTEMS UNLESS WATER MAIN IS TO BE BELOW UTILITIES OR STORM SEWER AS SHOWN ON THE PLANS.
    WATER MAIN: ALL INSTALLED UNDERGROUND WATER MAINS SHALL BE MARKED WITH A CONTINUOUS TAPE LOCATED DIRECTLY OVER THE PIPE 12 INCHES TO 18 INCHES BELOW GRADE. SAID TAPE SHALL BE A MINIMUM OF TWO INCHES IN WIDTH AND SHALL BE METALLIC-BACKED, BLUE, AND MARKED "WATER MAIN BURIED BELOW".
16. CONNECTIONS INTO EXISTING COUNTY-OWNED SYSTEMS SHALL BE VIA WET TAP. WET TAPS SHALL BE PERFORMED BY THE PASCO COUNTY UTILITIES SERVICES BRANCH AT THE OWNER'S EXPENSE. EXCAVATION, BACKFILL, AND SURFACE RESTORATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY. MATERIAL FOR WET TAPS LARGER THAN 2" SHALL BE PROVIDED AND INSTALLED BY THE PROJECT CONTRACTOR.
17. WATER MAIN DEFLECTIONS SHALL NOT EXCEED MANUFACTURER'S RECOMMENDATION.
18. TYPICAL-ALL WATER AND SANITARY SEWER PIPE LINES-CONSTRUCT USING PIPE DEFLECTION METHOD AS REQUIRED BY P.C.U.D.
19. ALL UTILITY SYSTEM DESIGN MATERIALS AND WORKMANSHIP SHALL COMPLY WITH "STANDARDS FOR DESIGN AND CONSTRUCTION OF WATER, WASTEWATER AND RECLAIMED WATER FACILITIES SPECIFICATIONS," LATEST EDITION
20. CONTRACTOR SHALL HAVE ALL FIRE HYDRANTS FLOW-TESTED AND COLOR-CODED BASED ON FLOW RESULTS.
21. IN CONSIDERATION OF PASCO COUNTY'S AGREEMENT TO PROVIDE POTABLE WATER AND/OR RECLAIMED WATER TO THE SUBJECT PROPERTY, DEVELOPER/OWNER, AND ITS SUCCESSORS AND ASSIGNS, AGREE TO THE FOLLOWING:
    - (a) IN THE EVENT OF PRODUCTION FAILURE OR SHORTFALL BY TAMPA BAY WATER, AS SET FORTH IN SECTION 3.19 OF THE INTERLOCAL AGREEMENT CREATING TAMPA BAY WATER, DEVELOPER/OWNER SHALL TRANSFER TO PASCO COUNTY ANY AND ALL WATER USE PERMITS OR WATER USE RIGHTS THE DEVELOPER/OWNER MAY HAVE TO USE OR CONSUME SURFACE OR GROUNDWATER WITHIN PASCO COUNTY.
    - (b) PRIOR TO DEVELOPER/OWNER SELLING WATER OR WATER USE PERMITS OR WATER USE RIGHTS, DEVELOPER/OWNER SHALL NOTIFY PASCO COUNTY, AND PASCO COUNTY SHALL HAVE A RIGHT OF FIRST REFUSAL TO PURCHASE SUCH WATER OR WATER USE PERMITS OR WATER USE RIGHT
22. CONTRACTOR'S RESPONSIBILITIES:
    - A. 2" ONLY - THIS EXCAVATED TRENCH MUST BE DRY OR THE TRENCH WILL REQUIRE ROCK AND A PUMP TO BE IN PLACE. THE MINIMUM DISTANCE FROM THE FACE OF THE VALVE TO THE WALL OF THE TRENCH IS TO BE SIX FEET.
    - B. 3" AND LARGER - THE CONTRACTOR WILL SUPPLY A TAPPING SADDLE BEING EPOXY COATED, A TAPPING VALVE WITH MECHANICAL JOINT AND THE EQUIPMENT TO PROVIDE, AND CONDUCT A PRESSURE TEST. COUNTY PERSONNEL WILL WITNESS THE PRESSURE TEST WHICH MUST BE AT 150 PSI FOR A DURATION OF THIRTY MINUTES.
    - C. THE CONTRACTOR IS RESPONSIBLE FOR THE EXCAVATION BEFORE ANY COUNTY PERSONNEL WILL ENTER AN EXCAVATED AREA. IF THE TRENCH IS FOUR FEET IN DEPTH OR DEEPER, IT WILL REQUIRE A TRENCH BOX OR SLOPING, AND A LADDER ACCORDING TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS.
    - D. THE TAPPING VALVE WILL REQUIRE A BLOCKING DEVICE MADE OF SUITABLE MATERIAL OR DEVICE. THIS BLOCKING DEVICE OR MATERIAL WILL BE PLACED UNDER THE VALVE AND REMAIN IN PLACE UNTIL THE TAP MACHINE IS REMOVED AND THE TAP IS COMPLETED.
    - E. NOTE: IF THE CONTRACTOR HAS NOT FULFILLED HIS RESPONSIBILITIES, AS STATED ABOVE, PRIOR TO THE ARRIVAL OF PASCO COUNTY UTILITIES OPERATIONS AND MAINTENANCE TAPPING CREW, THERE WILL BE AN ADDITIONAL CHARGE OF $92.00.

PASCO COUNTY STANDARD FIRE PROTECTION NOTES:

1. ALL PROJECTS MUST COMPLY WITH PASCO COUNTY FIRE HYDRANT ORDINANCE NO. 46-51.
2. FIRE HYDRANTS SHALL BE INSTALLED AND IN SERVICE PRIOR TO THE ACCUMULATION OF COMBUSTIBLES.
3. PER THE NATIONAL FIRE PROTECTION ASSOCIATION, NFPA-1, 16.4.3.1.3: WHERE UNDERGROUND WATER MAINS AND HYDRANTS ARE TO BE PROVIDED, THEY SHALL BE INSTALLED, COMPLETED, AND IN SERVICE PRIOR TO CONSTRUCTION WORK.
4. PER NFPA-1, 18.3.4.1: CLEARANCES OF 7.5 FEET IN FRONT OF AND TO THE SIDES OF THE FIRE HYDRANT WITH A 4-FOOT CLEARANCE TO THE REAR MUST BE MAINTAINED AT ALL TIMES.
5. GATED ENTRIES REQUIRE A SIREN OPERATING SYSTEM OR A 3M OPTICOM SYSTEM FOR EMERGENCY ACCESS.
6. THE FIRE PROTECTION SYSTEM WILL BE INSTALLED IN ACCORDANCE WITH THE PASCO COUNTY CODE OF ORDINANCES, CHAPTER 46, ARTICLE III AND ANY SUBSEQUENT AMENDMENTS. RAISED PAVEMENT MARKINGS WILL BE INSTALLED TO INDICATE THE LOCATION OF EACH FIRE HYDRANT AND WILL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS APPROVED BY THE COUNTY ENGINEER.
7. CONTRACTOR SHALL FLOW TEST AND COLOR CODE FIRE HYDRANT(S) PER FLOW TEST RESULTS FOR NFPA 291.
8. FIRE PROTECTION SHALL BE PROVIDED BY THE USE OF ON SITE FIRE HYDRANTS PROVIDED IN ACCORDANCE WITH THE SBCCI STANDARD FIRE PROTECTION CODE, LATEST EDITION. THE PROJECT WILL COMPLY WITH PASCO COUNTY HYDRANT ORDINANCE.
9. IF APPLICABLE, DYNATORQUE GPI POSITION INDICATOR TO BE INSTALLED ON FIRE MAIN AT FIRST UPSTREAM GATE VALVE FROM EACH HABITABLE BUILDING.

PAVING, GRADING, AND DRAINAGE NOTES:

1. ALL UNDERGROUND UTILITIES INCLUDING CONDUIT FOR ELECTRICAL, IRRIGATION, CABLE TV AND TELEPHONE CROSSINGS SHALL BE INSTALLED PRIOR TO PAVEMENT CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF ANY ADDITIONAL CONDUIT LOCATIONS WITH OWNER.
2. PIPE MEASUREMENTS ARE TO CENTER OF STRUCTURES FOR INLETS AND MANHOLES. STATION OFFSETS (LT OR RT) REFER TO CENTER OF STRUCTURES FOR MANHOLES. ALL PIPE LENGTHS ARE PLUS OR MINUS. ALL PIPE LENGTHS INCLUDE END TREATMENT.
3. ALL CURB CUT RAMPS TO BE CONSTRUCTED PER FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS (FDOT INDEX 304) AND BE ADA COMPLIANT INCLUDING USE OF TRUNCATED DOME TACTILE SURFACE
4. ALL EARTHWORK, PLACEMENT OF FILL AND PAVEMENT PREPARATION TO CONFORM TO THE MORE STRICT OF THE PASCO COUNTY TECHNICAL SPECIFICATIONS OR THE GEOTECHNICAL REPORT.
5. TERMINATION OF BOTH FDOT TYPE "F" AND 6" VERTICAL CURB SHALL INCLUDE A 3' TRANSITION TO FLUSH UNLESS OTHERWISE NOTED ON THE CONSTRUCTION DRAWINGS.
6. EXTRA MATERIAL IS REQUIRED PER FDOT INDEX 205 (SHEET 1 OF 5) AROUND STORM PIPE MEETING COVER CRITERIA OF SAID INDEX.
7. JOINTS OF STORM SEWER SHALL BE STAGGERED FOR CROSSINGS OF THE SANITARY SEWER WITH LESS THAN 18 INCHES OF VERTICAL CLEARANCE SO THAT THE PIPE BELL IS NOT LOCATED AT THE CROSSING.
8. AS A COST SAVINGS MEASURE STORM STRUCTURES WITH MULTIPLE PIPE CONNECTIONS MAY BE OFFSET FROM THE CENTER OF THE STRUCTURE TO REDUCE THE OVERALL STRUCTURE SIZE. CONTRACTOR IS TO COORDINATE OFFSET CONNECTIONS WITH APPROPRIATE SUB CONTRACTORS INCLUDING PROJECT SURVEYOR.
9. POND T.O.B. LINE INDICATES TOP OF BANK; I.E., THE POINT AT WHICH THE SLOPE BEGINS. T.O.F. INDICATES TOP OF FREEBOARD.
10. DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE REMAINING ON SITE UNLESS APPROVED BY THE COUNTY.
11. ALL TRIMMING UNDERTAKEN ON A TREE PROTECTED BY PROVISIONS OF LAND DEVELOPMENT CODE SHALL BE PRUNED IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) A-300 PRUNING STANDARDS.
12. ALL STORM DRAIN STRUCTURES TO CONFORM THE "FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS FOR CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" MANUAL DATED JANUARY 2010 OR LATEST EDITION, OR THE PASCO COUNTY DEVELOPMENT CODE. ALL STORM PIPES TO STRUCTURES ARE TO BE WRAPPED PER FDOT INDEX 201.
13. ALL PROPOSED STORM GRATES, RING & COVERS AND SANITARY SEWER RING & COVERS TO MEET H-20 LOADING RATING. ALL STORM GRATES TO BE HOT DIPPED GALVANIZED RETICULINE STEEL GRATES. ALL EXISTING STRUCTURES TO BE MODIFIED AS REQUIRED TO MEET H-20 LOAD RATING AND ADJUSTED TO MEET PROPOSED GRADE.
14. THE STAKED SILT FENCE SHALL BE INSTALLED PRIOR TO EARTHWORK OPERATIONS COMMENCING AND IS TO BE MAINTAINED THROUGH PROJECT COMPLETION.
15. ALL SWALES SHALL BE SODDED AS SHOWN ON THE SECTIONS.
16. STORM SEWER PIPE LINES WILL NOT BE INSTALLED PRIOR TO PLACEMENT AND ALIGNMENT OF INLET STRUCTURES.
17. NO EXCAVATION SHALL EXTEND BELOW THE PERMITTED DESIGN DEPTHS/ELEVATIONS SHOWN ON THE DRAWINGS, UNLESS ADDITIONAL TESTING SUPPORTS OTHERWISE; AND NO LOWER SEMI-CONFINING UNIT CLAYEY SOIL MATERIAL AND/OR LIMESTONE MATERIALS SHALL BE EXCAVATED, REGARDLESS IF THESE MATERIALS ARE ENCOUNTERED WITHIN THE PERMITTED EXCAVATION DEPTHS/ELEVATIONS. IF ABOVE THE PERMITTED DEPTHS/ELEVATIONS, THEN EXCAVATION OPERATIONS SHALL CEASE IN THE GENERAL AREA. EPC WETLANDS MANAGEMENT STAFF MUST BE CONTACTED PRIOR TO ANY EXCAVATION OF CLAYS. * IN THE ABSENCE OF ANY CONFINING OR SEMI-CONFINING UNIT CLAYEY SOILS, A MINIMUM OF FIVE FEET OF UNDISTURBED SOILS SHALL REMAIN ABOVE THE UNDERLYING LIMESTONE.
18. PRUNING OF A GRAND OAK, WITH THE EXCEPTION OF MINOR PRUNING, IS PROHIBITED UNLESS CONDUCTED IN ACCORDANCE WITH THE ANSI A-300 PRUNING STANDARDS, AND PERFORMED BY AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) OR A REGISTERED CONSULTING ARBORIST WITH THE AMERICAN SOCIETY OF CONSULTING ARBORISTS (ASCA). MINOR PRUNING IS THE PRUNING OF A TREE BY THE REMOVAL OF BRANCHES NO GREATER THAN THREE INCHES IN DIAMETER AT THE POINT OF CONNECTION TO A SUPPORTING BRANCH AND SHALL BE IN ACCORDANCE WITH THE ANSI A-300 PRUNING STANDARDS. A NOTARIZED AFFIDAVIT (ATTACHED) AFFIRMING AN ISA CERTIFIED ARBORIST OR AN ASCA REGISTERED CONSULTING ARBORIST WILL CONDUCT OR PROVIDE ONSITE SUPERVISION OF THE PRUNING SHALL BE SUBMITTED TO THE COUNTY PRIOR TO THE PRUNING OF A GRAND OAK. AN ISA CERTIFIED ARBORIST OR AN ASCA REGISTERED CONSULTING ARBORIST CONTRACTED BY A PROPERTY OWNER TO PRUNE A GRAND OAK SHALL ASSUME FULL RESPONSIBILITY FOR ALL PRUNING ACTIVITIES DETERMINED IN COMPLIANCE WITH STANDARDS SPECIFIED WITHIN THE LAND DEVELOPMENT CODE.
19. IN ACCORDANCE WITH SECTION 603.2.C.8 OF THE PASCO COUNTY LAND DEVELOPMENT CODE, DRAINAGE AREAS THAT ABUT ROAD RIGHTS-OF-WAY SHALL BE PLANTED WITH TREES SELECTED FROM THE TREE LIST AT A RATE OF ONE (1) TREE PER FIFTY (50) LINEAR FEET OF POND BANK. SEE LANDSCAPE PLANS.
20. ANY OFF SITE DISTURBANCE SHALL BE RESTORED TO THE PRE OR BETTER CONDITION PER LDC 902.2.D.15-16.
21. PRIOR TO THE START OF CLEARING AND GRUBBING, OR ANY SOIL DISTURBANCE, THE CONTRACTOR SHALL CONTACT PASCO COUNTY STORMWATER MANAGEMENT AT (727) 834-3611 FOR A SOIL EROSION AND SEDIMENT CONTROL PRE INSPECTION MEETING.
22. ALL FIRST FLOOR ELEVATIONS (FFE) SHALL BE A MINIMUM OF ONE (1) FOOT ABOVE BASE FLOOD ELEVATION OR AS REQUIRED BY PASCO COUNTY LDC 1104, AND/OR SIXTEEN INCHES (16") ABOVE THE HIGHEST CROWN LINE OF THE STREET LYING BETWEEN THE PROJECTION OF THE SIDE BUILDING LINES PER LDC 902.2M.
23. THE DEVELOPER SHALL PROVIDE COPIES OF REQUIRED PERMITS FROM THE RESPECTIVE GOVERNING AGENCIES PRIOR TO ISSUANCE OF THE SITE DEVELOPMENT PERMIT PER LDC 902.2.C.
24. THE SITE SHALL BE GRADED TO WITHIN TWELVE INCHES (12") OF THE FINAL GRADE. WHERE FILL IS PROPOSED, IT SHALL BE PLACED IN COMPLIANCE WITH THE GEOTECHNICAL/GEOLOGICAL ENGINEERING REPORT RECOMMENDATIONS (INCLUDING ANY LIFT DEPTHS RECOMMENDED) AND COMPACTED TO A MINIMUM OF 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. DENSITY TESTS TO CONFIRM COMPACTION SHALL BE REQUIRED WITHIN THE BUILDING PAD AREA BEFORE THE NEXT LIFT IS PLACED. UPON COMPLETION OF THE LAND DEVELOPMENT CONSTRUCTION, A PROFESSIONAL ENGINEER SHALL PROVIDE A CERTIFICATION TO PASCO COUNTY THAT THE PROJECT, INCLUDING EACH PAD AREA, COMPLIES WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL/GEOLOGICAL ENGINEERING REPORT PER LDC 807.5.5.
25. ALL FLARED END SECTIONS TO HAVE TOE WALLS PER INDEX 270.

PASCO COUNTY DEVELOPMENT REVIEW NOTES:

1. ALL UTILITY CONSTRUCTION SHALL COMPLY WITH THE PASCO COUNTY STANDARDS FOR DESIGN AND CONSTRUCTION OF WATER AND WASTEWATER FACILITIES SPECIFICATIONS, LATEST EDITION.
2. ALL ON-SITE WATER AND SEWER FACILITIES SHALL BE OWNED AND MAINTAINED BY THE OWNER-DEVELOPER.
3. INSTALLATION OF FUEL STORAGE TANKS REQUIRES REVIEW AND APPROVAL BY THE FIRE MARSHAL AND THE ISSUANCE OF A SEPARATE BUILDING PERMIT. APPROVAL OF THE SITE PLAN DOES NOT CONSTITUTE APPROVAL OF THE LOCATION OF THE FUEL TANKS.
4. ALL PROPOSED SIGNS MUST BE APPLIED FOR, APPROVED, AND PERMITTED ON AN INDIVIDUAL BASIS APART FROM ANY ULTIMATELY-APPROVED SITE PLAN. APPROVAL OF THIS SITE PLAN DOES NOT CONSTITUTE APPROVAL OF ANY SIGNAGE.
5. HANDICAP PARKING SPACES WILL BE PROPERLY SIGNED AND STRIPED IN ACCORDANCE WITH FLORIDA STATUTE 316, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, OR OTHER APPLICABLE STANDARDS.
6. THE ARCHITECT/ENGINEER CERTIFIES THAT THE SITE HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2012 FLORIDA ACCESSIBILITY CODE.
7. ALL ON-SITE PARKING SPACES WILL BE STRIPED AND SIGNED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. PARKING SPACES, DIRECTIONAL ARROWS, AND STOP BARS SHALL BE STRIPED IN WHITE. IT SHALL BE THE OWNER/DEVELOPERS' RESPONSIBILITY TO PROPERLY SIGN AND STRIPE THE SITE IN ACCORDANCE WITH APPLICABLE STANDARDS.
8. THE OWNER/DEVELOPER ACKNOWLEDGES THAT THIS APPROVAL DOES NOT INCLUDE ANY WORK IN COUNTY RIGHT-OF-WAY. ALL RIGHT-OF-WAY WORK SHALL BE A FUNCTION OF AN APPROVED PASCO COUNTY RIGHT-OF-WAY USE PERMIT.
9. ALL CLEAR-SITE AREAS SHALL BE KEPT FREE OF ANY SIGNAGE, PLANTINGS, TREES, ETC. IN EXCESS OF THREE-AND-A-HALF (3-1/2) FEET IN HEIGHT.
10. NO IRRIGATION SYSTEM OR LANDSCAPING SHALL BE INSTALLED IN ANY COUNTY OR STATE RIGHT-OF-WAY WITHOUT ISSUANCE OF APPROPRIATE RIGHT-OF-WAY USE PERMIT.
11. THE OWNER/DEVELOPER ACKNOWLEDGES THAT THE SITE AND ITS SUBSEQUENT BUILDING PERMITS SHALL COMPLY WITH ALL REZONING/MPUD/PUD CONDITIONS.
12. ALL STRUCTURES, INCLUDING BUFFER WALLS, RETAINING WALLS, SIGNAGE ETC. REQUIRE SEPARATE BUILDING PERMITS THROUGH PASCO COUNTY CENTRAL PERMITTING.
13. PRIOR TO THE START OF CLEARING AND GRUBBING, OR ANY SOIL DISTURBANCE CONTACT PASCO COUNTY STORMWATER MANAGEMENT AT 727-834-3611 FOR A SOIL EROSION AND SEDIMENT CONTROL, PRE-INSPECTION MEETING.

GENERAL NOTES:

1. ALL PRACTICABLE AND NECESSARY EFFORT SHALL BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT MATERIAL TO INLETS, SURFACE DRAINS, WETLANDS AND LAKE AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION EFFORTS THAT MAY BE REQUIRED.
2. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED AND/OR ACCEPTED BY THE OWNER AND/OR AUTHORIZED REPRESENTATIVE.
3. THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER THE WETLAND CONSERVATION AREAS THAT ARE DESIGNATED TO REMAIN. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINE RESULTING FROM HIS VIOLATION OF PERMIT CONDITIONS.
4. SPECIAL CARE SHALL BE TAKEN TO ENSURE THAT EXISTING TREES TO BE SAVED REMAIN UNDAMAGED DURING CONSTRUCTION. REFERENCE LANDSCAPE AND LAND ALTERATION ORDINANCE. DEVELOPMENT SHALL COMPLY WITH THE TREE AND LANDSCAPE CODES AS SET FORTH IN THE LAND DEVELOPMENT CODE UNLESS PERMITTED OTHERWISE.
5. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL EXPOSE ALL EXISTING UTILITIES TO BE EXTENDED OR CROSSED AND CONTACT THE ENGINEER AT (813) 880-8881 FOR RESOLUTION OF ANY CONFLICTS BETWEEN FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS.
6. IT IS THE ENGINEER OF RECORD RESPONSIBILITY TO FIELD LOCATE ALL VISIBLE UTILITIES AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF THE UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION IN THEIR VICINITY. THE CONTRACTOR SHALL NOTIFY "SUNSHINE" (1-800-432-4770) AND ALL UTILITY COMPANIES IN THE AREA FIVE (5) DAYS IN ADVANCE OF BEGINNING CONSTRUCTION.
7. CONTRACTOR TO REMOVE AND LEGALLY DISPOSE OF ALL EXISTING OCCUPATION AS NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE OWNER RETAINS THE RIGHT TO KEEP ANY OCCUPATION DEEMED VALUABLE.
8. DIGITAL OR ELECTRONIC REPRESENTATION OF THESE CONSTRUCTION PLANS DOES NOT CONSTITUTE A COORDINATE CONTROL MAP OR MATHEMATICALLY CONTROLLED INFORMATION FOR THE USE OF CONSTRUCTION STAKEOUT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR CONTRACTOR'S SURVEYOR TO ENSURE THAT ANY DIGITAL OR ELECTRONIC REPRESENTATION OF THESE PLANS IS IN COMPLETE CONFORMANCE WITH ALL OF THE NOTATIONS, SPECIFICATIONS, DETAILS AND OTHER DATA APPEARING ON OR AS MAY BE DERIVED FROM THESE CONSTRUCTION PLANS.
9. CONTRACTOR IS RESPONSIBLE FOR PREPARING AND IMPLEMENTING MAINTENANCE OF TRAFFIC PLANS AS REQUIRED.
10. EXISTING WELL(S) WITHIN THE LIMITS OF DISTURBANCE SHALL BE SEALED AND ABANDONED BY A LICENSED WELL CONTRACTOR IN ACCORDANCE WITH RULE 40D-3.531. OWNER RESERVES THE RIGHT TO TRANSFER ANY EXISTING WATER USE RIGHTS TO OTHER EXISTING OR PROPOSED WELL(S).
11. CONTRACTOR RESPONSIBLE FOR REPAIR AND REPLACEMENT OF INFRASTRUCTURE / FACILITIES WITHIN THE RIGHT-OF-WAY THAT ARE DAMAGED DURING CONSTRUCTION ACTIVITY.
12. BURN AREAS, IF REQUIRED, WILL BE OBTAINED FROM THE DIVISION OF FORESTRY BY THE CONTRACTOR.
13. SIDEWALKS ARE TO BE PROVIDED AS REQUIRED WITHIN THE LAND DEVELOPMENT CODE. SIDEWALKS SHALL BE CONSTRUCTED OF NATURAL OR COLORED CONCRETE AT 3,000 PSI IN STRENGTH, FIBER REINFORCED, AND A MINIMUM OF FOUR INCHES (4") IN THICKNESS. AT DRIVEWAY CROSSINGS, THE THICKNESS SHALL BE A MINIMUM OF SIX INCHES (6").
14. SIDEWALK CROSSINGS TO PROVIDE STRIPING AND SIGNAGE PER FDOT INDEX NUMBERS 17346 AND 17355. THE DETECTABLE WARNING SHALL BE ALIGNED TO THE DIRECTION OF PEDESTRIAN TRAVEL.
15. GRASS OR OTHER LOW GROWING VEGETATION THAT IS EASILY MAINTAINED SHALL BE USED IN CLEAR ZONES.
16. UTILITY LINES OF ALL KINDS, INCLUDING, BUT NOT LIMITED TO, ELECTRIC POWER AND LIGHT, TELEPHONE AND TELEGRAPH, CABLE TELEVISION, WATER, SEWER, AND GAS SHALL BE CONSTRUCTED AND INSTALLED BENEATH THE SURFACE OF THE GROUND.
17. THERE ARE NO KNOWN HISTORIC RESOURCES ON SITE. HOWEVER, IF, DURING CONSTRUCTION ACTIVITIES, ANY EVIDENCE OF HISTORIC RESOURCES INCLUDING, BUT NOT LIMITED TO, ABORIGINAL OR HISTORIC POTTERY, PREHISTORIC STONE TOOLS, BONE OR SHELL TOOLS, HISTORIC TRASH PITS, OR HISTORIC BUILDING FOUNDATIONS ARE DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP, AND THE LOCAL MUNICIPALITY AND THE FLORIDA DIVISION OF HISTORICAL RESOURCES (STATE HISTORIC PRESERVATION OFFICER) SHALL BE NOTIFIED WITHIN TWO WORKING DAYS.
18. IF, DURING CONSTRUCTION ACTIVITIES, ANY EVIDENCE OF THE PRESENCE OF STATE AND FEDERALLY PROTECTED PLANT AND/OR ANIMAL SPECIES ARE DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP AND THE LOCAL MUNICIPALITY SHALL BE NOTIFIED WITHIN TWO WORKING DAYS.
19. SITE TRIANGLES SHALL BE UNOBSTRUCTED, AND SHALL BE INSPECTED AND MAINTAINED IN CONFORMANCE WITH FDOT INDEX 546.
20. AS APPLICABLE, ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF:
    - A. PASCO COUNTY LAND DEVELOPMENT CODE (IN EFFECT AT THE TIME THE PLANS WERE PREPARED)
    - B. PASCO COUNTY STANDARDS FOR DESIGN AND CONSTRUCTION OF WATER, WASTEWATER AND RECLAIMED WATER FACILITIES
    - C. PASCO COUNTY ENGINEERS SERVICES DEPARTMENT TESTING SPECIFICATIONS FOR CONSTRUCTION OF ROADS, STORM DRAINAGE AND UTILITIES
    - D. PASCO COUNTY LAND DEVELOPMENT CODE, CHAPTER 300, SECTION 309, CONSTRUCTION AND INSPECTION IMPROVEMENTS, AND CHAPTER 900, SECTION 902, STORMWATER MANAGEMENT REQUIREMENTS, PART D, PERFORMANCE AND DESIGN STANDARDS
    - E. FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS
    - F. FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
21. ALL AREAS WITHIN THE LIMITS OF THE PROPOSED PRELIMINARY PLAN ARE ZONE "X", A OR "AE" AS NOTED ON F.E.M.A. FIRM COMMUNITY PANELS #120230 0433F, #120230 0429F, #120230 0437F & 120230 0441F ALL DATED SEPT. 26 2014. THE 100 YEAR BASE FLOOD ELEVATION ESTABLISHED WITHIN THE WETLANDS VARIES FROM ELEVATION 68.7 TO ELEVATION 75.1 (ESTIMATED)(NAVD 88 DATUM)

GENERAL INFORMATION:

PROJECT DEVELOPER:
PASCO COUNTY ASSOCIATES II, LLLP
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PROJECT ENGINEER:
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WEST PASCO COUNTY GOVERNMENT
19420 CENTRAL BLVD
LAND O' LAKES, FLORIDA 34637-7006
PHONE: (727) 847-8145

SEWER SUPPLY:
PASCO COUNTY UTILITIES DEPARTMENT
WEST PASCO COUNTY GOVERNMENT
LAND O' LAKES, FLORIDA 34637-7006
PHONE: (727) 847-8145

FIRE DEPARTMENT:
PASCO COUNTY EMERGENCY SERVICES
4111 LAND O' LAKES BOULEVARD
LAND O' LAKES, FLORIDA 34639
PHONE: (727) 847-8102

ELECTRICAL SUPPLY:
WITHLACOOCHEE RIVER ELECTRIC CO-OP
ONE PASCO CENTER DISTRICT
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SAN ANTONIO, FLORIDA 33576
CONTACT: COREY LITTLEFIELD
RLITTLEFIELD@WREC.NET
PHONE: (352) 588-5115

AERIAL PHOTOGRAMMETRY NOTES:

PERFORMED BY: PICKETT & ASSOCIATES INC.
TYPE OF SURVEY: TOPOGRAPHIC SURVEY
DATE OF IMAGERY: SEPTEMBER 19, 2003
PROJECT: WIREGRASS RANCH

ACCURACY STATEMENT:
THE FOLLOWING STATED PLUS OR MINUS TOLERANCES ENCOMPASS A MINIMUM OF 90% OF THE DIFFERENCE BETWEEN PHOTOGRAMMETRICALLY MEASURED VALUES AND GROUND TRUTH OF ALL WELL-IDENTIFIED FEATURES. MAPPED FEATURES MEET OR EXCEED THE FLORIDA MINIMUM TECHNICAL STANDARDS

VERTICAL:
CONTOURS HAVE BEEN MEASURED TO AN ESTIMATE VERTICAL POSITIONAL ACCURACY OF 0.5'. SPOT ELEVATIONS AND WELL-IDENTIFIED FEATURES HAVE BEEN MEASURED TO AN ESTIMATED VERTICAL POSITIONAL ACCURACY OF 0.25'.

HORIZONTAL:
WELL-IDENTIFIED FEATURES HAVE BEEN MEASURED TO AN ESTIMATED HORIZONTAL POSITIONAL ACCURACY OF 1.33'.

MAP PLOTTING:
THE MAP PLOTTING IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=50' (1:600) OR SMALLER.

DATUM:
HORIZONTAL COORDINATES ARE REFERENCED TO AN ASSUMED CARTESIAN GRID AND WERE PROVIDED BY KING ENGINEERING ASSOCIATES, INC.
VERTICAL ELEVATIONS WERE CONVERTED AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (FOR INFORMATIONAL PURPOSES NAVD 88=NGVD 29 (-)1.00')

MEASUREMENT METHODS:
IN AREAS WHERE VEGETATION MAKES THE GROUND DIFFICULT TO DETERMINE CONTOURS ARE SHOWN DASHED AND DO NOT MEET THE ABOVE STATED ACCURACY. CONTOURS ARE REMOVED FROM AREAS WHERE VEGETATION COMPLETELY HIDES THE GROUND. THIS MAP IS LIMITED TO THOSE FEATURES VISIBLE ON AERIAL PHOTOGRAPHY.

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Engineering License #2610

NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA
NOTES AND LEGENDS

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

C1.02

PASCO CO. SUBMITTAL
APRIL 01, 2016

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Q:\CIVIL\3858\002\200\Production\Drawings\NTS-LEG01.dwg

LEGAL DESCRIPTION:

A TRACT OR PARCEL OF LAND LYING AND BEING IN SECTION 28, TOWNSHIP 26 SOUTH, RANGE 20 EAST, PASCO COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF SECTION 28, TOWNSHIP 26 SOUTH, RANGE 20 EAST, PASCO COUNTY, FLORIDA; THENCE NORTH 89°34'44" WEST, ALONG THE SOUTH LINE OF SAID SOUTHWEST 1/4 OF SECTION 28, A DISTANCE OF 542.37 FEET; THENCE NORTH 42°35'58" WEST, A DISTANCE OF 805.55 FEET TO THE POINT OF INTERSECTION WITH THE EASTERLY RIGHT-OF-WAY OF MANSFIELD BOULEVARD ACCORDING TO OFFICIAL RECORDS BOOK 8038, PAGE 1258 OF THE PUBLIC RECORDS OF PASCO COUNTY, FLORIDA, SAME BEING A POINT ON A NON-TANGENT CURVE TO THE LEFT; THENCE NORTHERLY 1,102.18 FEET ALONG THE ARC OF SAID CURVE, SAME BEING SAID EASTERLY RIGHT-OF-WAY OF MANSFIELD BOULEVARD, HAVING A RADIUS OF 2,030.00 FEET, A CENTRAL ANGLE OF 31°06'31", AND A CHORD BEARING AND DISTANCE OF NORTH 20°36'17" WEST 1,088.69 FEET; THENCE LEAVING SAID EASTERLY RIGHT-OF-WAY, NORTH 53°58'43" EAST, A DISTANCE OF 65.22 FEET; THENCE NORTH 00°39'48" EAST, A DISTANCE OF 215.34 FEET; THENCE NORTH 46°28'57" WEST, A DISTANCE OF 226.91 FEET; THENCE SOUTH 53°53'16" WEST, A DISTANCE OF 63.08 FEET; THENCE NORTH 41°16'12" WEST, A DISTANCE OF 38.35 FEET; THENCE SOUTH 47°42'52" WEST, A DISTANCE OF 20.00 FEET; THENCE SOUTH 41°16'12" EAST, A DISTANCE OF 36.19 FEET; THENCE SOUTH 53°53'16" WEST, A DISTANCE OF 23.23 FEET; THENCE SOUTH 05°27'21" WEST, A DISTANCE OF 68.23 FEET; THENCE SOUTH 44°13'02" WEST, A DISTANCE OF 30.92 FEET TO THE POINT OF INTERSECTION WITH SAID EASTERLY RIGHT-OF-WAY OF MANSFIELD BOULEVARD, SAME BEING A POINT ON A NON-TANGENT CURVE TO THE LEFT; THENCE THE FOLLOWING THREE (3) COURSES ALONG SAID EASTERLY RIGHT-OF-WAY OF MANSFIELD BOULEVARD; (1) NORTHWESTERLY 930.86 FEET ALONG THE ARC OF SAID CURVE, HAVING A RADIUS OF 2,030.00 FEET, A CENTRAL ANGLE OF 26°16'23", AND A CHORD BEARING AND DISTANCE OF NORTH 58°55'09" WEST 922.72 FEET; (2) NORTH 17°56'40" EAST, A DISTANCE OF 20.00 FEET TO THE POINT ON A NON-TANGENT CURVE TO THE LEFT; (3) WESTERLY 200.04 FEET ALONG THE ARC OF SAID CURVE, HAVING A RADIUS OF 2,050.00 FEET, A CENTRAL ANGLE OF 05°35'27", AND A CHORD BEARING AND DISTANCE OF NORTH 74°51'04" WEST 199.96 FEET; THENCE NORTH 12°18'51" EAST, A DISTANCE OF 127.94 FEET; THENCE NORTH 46°07'58" EAST, A DISTANCE OF 530.90 FEET; THENCE NORTH 48°25'19" EAST, A DISTANCE OF 62.27 FEET; THENCE NORTH 13°54'10" EAST, A DISTANCE OF 72.06 FEET; THENCE NORTH 46°09'46" EAST, A DISTANCE OF 175.13 FEET; THENCE NORTH 47°12'39" EAST, A DISTANCE OF 47.08 FEET; THENCE NORTH 68°12'39" EAST, A DISTANCE OF 32.02 FEET; THENCE NORTH 54°07'42" EAST, A DISTANCE OF 61.67 FEET; THENCE NORTH 39°51'27" EAST, A DISTANCE OF 81.29 FEET; THENCE NORTH 11°51'05" EAST, A DISTANCE OF 252.32 FEET; THENCE NORTH 79°28'31" EAST, A DISTANCE OF 419.90 FEET; THENCE NORTH 12°13'45" EAST, A DISTANCE OF 161.52 FEET; THENCE NORTH 26°33'24" EAST, A DISTANCE OF 67.49 FEET; THENCE NORTH 43°30'37" EAST, A DISTANCE OF 97.40 FEET; THENCE NORTH 40°04'07" EAST, A DISTANCE OF 80.97 FEET; THENCE NORTH 21°39'13" EAST, A DISTANCE OF 888.55 FEET TO THE POINT OF INTERSECTION WITH THE SOUTHERLY RIGHT-OF-WAY OF STATE ROAD 56 ACCORDING TO OFFICIAL RECORDS BOOK 8732, PAGE 3596 OF THE PUBLIC RECORDS OF PASCO COUNTY, FLORIDA; THENCE THE FOLLOWING TWO (2) COURSES ALONG SAID SOUTHERLY RIGHT-OF-WAY OF STATE ROAD 56; (1) SOUTH 65°29'36" EAST, A DISTANCE OF 557.80 FEET TO A POINT ON A CURVE TO THE LEFT; (2) EASTERLY 270.57 FEET ALONG THE ARC OF SAID CURVE, HAVING A RADIUS OF 3,725.00 FEET, A CENTRAL ANGLE OF 04°09'43", AND A CHORD BEARING AND DISTANCE OF SOUTH 67°34'27" EAST 270.52 FEET; THENCE SOUTH 11°47'03" WEST, A DISTANCE OF 429.98 FEET; THENCE SOUTH 78°12'57" EAST, A DISTANCE OF 199.99 FEET; THENCE NORTH 11°37'35" EAST, A DISTANCE OF 151.88 FEET; THENCE NORTH 51°33'42" EAST, A DISTANCE OF 104.40 FEET; THENCE SOUTH 86°01'10" EAST, A DISTANCE OF 208.10 FEET; THENCE SOUTH 46°21'34" EAST, A DISTANCE OF 16.93 FEET; THENCE SOUTH 44°13'04" WEST, A DISTANCE OF 68.45 FEET; THENCE SOUTH 36°32'09" WEST, A DISTANCE OF 91.45 FEET; THENCE SOUTH 27°37'29" WEST, A DISTANCE OF 116.21 FEET; THENCE SOUTH 19°44'26" WEST, A DISTANCE OF 129.99 FEET; THENCE SOUTH 08°06'57" WEST, A DISTANCE OF 148.28 FEET; THENCE SOUTH 39°22'47" WEST, A DISTANCE OF 53.10 FEET; THENCE SOUTH 69°52'29" WEST, A DISTANCE OF 58.75 FEET; THENCE SOUTH 38°12'43" EAST, A DISTANCE OF 190.60 FEET; THENCE SOUTH 31°28'41" WEST, A DISTANCE OF 95.64 FEET; THENCE SOUTH 12°55'52" WEST, A DISTANCE OF 36.45 FEET; THENCE NORTH 61°55'19" EAST, A DISTANCE OF 51.01 FEET; THENCE SOUTH 67°54'24" EAST, A DISTANCE OF 68.64 FEET; THENCE SOUTH 29°44'32" EAST, A DISTANCE OF 108.80 FEET; THENCE SOUTH 39°21'03" EAST, A DISTANCE OF 238.78 FEET; THENCE SOUTH 68°32'53" EAST, A DISTANCE OF 66.37 FEET; THENCE SOUTH 83°57'36" EAST, A DISTANCE OF 39.29 FEET; THENCE SOUTH 05°34'44" EAST, A DISTANCE OF 119.16 FEET; THENCE NORTH 59°30'52" WEST, A DISTANCE OF 53.96 FEET; THENCE NORTH 80°20'29" WEST, A DISTANCE OF 40.03 FEET; THENCE SOUTH 10°01'57" EAST, A DISTANCE OF 130.74 FEET; THENCE SOUTH 20°51'26" EAST, A DISTANCE OF 67.11 FEET; THENCE SOUTH 76°14'18" EAST, A DISTANCE OF 67.16 FEET; THENCE NORTH 86°36'23" EAST, A DISTANCE OF 63.57 FEET; THENCE SOUTH 77°34'25" EAST, A DISTANCE OF 175.56 FEET; THENCE SOUTH 89°44'15" EAST, A DISTANCE OF 173.59 FEET; THENCE NORTH 60°22'59" EAST, A DISTANCE OF 240.47 FEET; THENCE NORTH 88°48'02" EAST, A DISTANCE OF 477.09 FEET; THENCE SOUTH 67°50'16" EAST, A DISTANCE OF 763.34 FEET; THENCE NORTH 90°00'00" EAST, A DISTANCE OF 391.96 FEET TO THE POINT OF INTERSECTION WITH THE EAST LINE OF THE SOUTHEAST 1/4 OF SAID SECTION 28; THENCE SOUTH 00°16'42" WEST, ALONG SAID EAST LINE OF THE SOUTHEAST 1/4 OF SECTION 28, A DISTANCE OF 2,564.87 FEET; THENCE NORTH 89°56'42" WEST, ALONG THE SOUTH LINE OF SAID SOUTHEAST 1/4 OF SECTION 28, A DISTANCE OF 2,652.67 FEET TO THE POINT OF BEGINNING.

LESS AND EXCEPT:

ALL OF WIREGRASS M23 PHASE 1A, 1B ACCORDING TO PLAT BOOK 71, PAGE 9 OF THE PUBLIC RECORDS OF PASCO COUNTY, FLORIDA.

CONTAINING 185.198 ACRES

PARKING SPACE NOTES

RESIDENT PARKING SPACE REQUIREMENTS:

1, 2, AND 3 BEDROOM UNITS = 2 SPACES PER UNIT

4 OR MORE BEDROOM UNITS = 3 SPACES PER UNIT

VISITOR PARKING SPACE REQUIREMENTS:

VISITOR PARKING = 0.25 SPACE PER UNIT

ESTIMATED TOTAL PARKING SPACES PROVIDED:

1, 2, AND 3 BEDROOM UNITS = MIN 3 SPACES (2 SPACES IN GARAGE AND 1 SPACE IN DRIVEWAY) *

4 OR MORE BEDROOM UNITS = AVERAGE 4 SPACES (2 SPACES IN GARAGE AND 2 SPACE IN DRIVEWAY) *

* DRIVEWAYS MIN 20' DEPTH AND 18' WIDTH FOR 4 OR MORE BEDROOMS

EARTHWORK

CUT ON SITE: ± 169,340 CY

REQUIRED FILL: ± 472,390 CY

NET: ± 303,050 CY <FILL>

1. EARTHWORK COMPACTION AND LIFTS SHALL BE PER FDOT SECTION 120, EXCAVATION AND EMBANKMENT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

2. EARTHWORK IS APPROXIMATE FOR PERMITTING PURPOSES ONLY.

TREE LEGEND

- = 12" UNKNOWN TYPE TREE
- = 12" CHERRY LAUREL
- = 12" WILLOW TREE
- = 12" HOLLY TREE
- = 12" DEAD TREE
- = 12" CHINESE TALLOW TREE
- = 12" CHINABERRY TREE
- = 12" OAK TREE
- = 12" JACARANDA TREE
- = 12" MULBERRY TREE
- = 12" PALM TREE
- = 12" BAY TREE
- = 12" MAGNOLIA TREE
- = 12" CITRUS TREE
- = 12" PECAN TREE
- = 12" EUCALYPTUS TREE
- = 12" CAMPHOR TREE
- = 12" SYCAMORE TREE
- = 12" PINE TREE
- = 12" AUSTRALIAN PINE
- = 12" CEDAR TREE
- = 12" ELM TREE
- = 12" MAPLE TREE
- = 12" WAX MYRTLE TREE
- = 12" PUNK TREE
- = 12" CYPRESS TREE
- = 12" EAR TREE
- = 12" SWEET GUM TREE
- = 12" BIRCH
- = 12" HICKORY

- = TREE HAVING ONE TRUNK AT BREAST HEIGHT, 12" IN DIAMETER
- = TREE HAVING MULTIPLE TRUNKS AT BREAST HEIGHT 12", 13" AND 5" IN DIAMETER

- = PALM TRANSPLANT
- = TREE SAVE
- = TREE REMOVE

WETLAND IMPACT INFORMATION

IMPACT APPEARS ON SHEET	IMPACT NAME	IMPACT SIZE (AC.)	TYPE
C4.05	X33	0.28	FILL
C4.05	Y32	0.84	FILL
C4.06	Z31	1.60	FILL
C4.07	Z30-2	0.61	FILL
C4.08	Z30-1	0.02	FILL
C4.08	AA30-4	0.07	FILL
C4.08	AA31	1.03	FILL
C4.09	AA32-2	0.08	FILL
C4.09	AA32-2	0.02	FILL
C4.09	AA32-3	0.08	FILL
C4.12	V33	0.31	FILL
C4.12	W33	1.36	FILL
C4.16	AA32-1	0.09	FILL

SIGN LEGEND

NO.	SYMBOL	DESCRIPTION	REGULATORY NO.	SIZE
1	STOP	STOP	R1-1	30"x30"
2	STREET	STREET SIGN	D3	VARIES
3	STOP	STOP	R1-1	36"x36"
4	SPEED LIMIT 20	SPEED LIMIT	R2-1	24"x30"
5		OBJECT MARKER W/9 RETROREFLECTORS	OM1-1	18"x18"
6	RESIDENTS KEEP LEFT / ALL OTHERS USE MAIN ENTRY LOCATED ON SR. 56	RESIDENTS KEEP LEFT	CUSTOM	30"x30"
7	RESIDENTS ONLY ACCESS / ALL OTHERS USE TURNAROUND AHEAD MAIN ENTRY LOCATED ON SR. 56	RESIDENTS ONLY ACCESS	CUSTOM	30"x30"

EXISTING LEGEND

- UNDERGROUND CABLE TELEVISION MARKER
- CABLE TELEVISION UTILITY BOX
- UNDERGROUND TELEPHONE CABLE ROUTE SIGN
- TELEPHONE UTILITY BOX
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- UTILITY POLE
- LIGHT POLE
- UTILITY & LIGHT POLE
- GUY POLE
- METER POLE
- GUY WIRE
- ELECTRIC TRANSFORMER
- ELECTRIC HAND-HOLE
- UNDERGROUND GAS LINE MARKER
- TRAFFIC SIGN
- TRAFFIC SIGNAL UTILITY BOX
- TRAFFIC SIGNAL POLE
- CONCRETE
- CONCRETE CURB INLETS
- CONCRETE CURB INLETS
- CONCRETE MITERED END SECTION
- CONCRETE FLARED END SECTION
- GRATE INLET
- STORM SEWER CLEANOUT, PIPE & MANHOLE
- CONTOUR LINE
- BEARING/DISTANCE PER RECORDED PLAT
- BEARING/DISTANCE PER DEED DESCRIPTION
- BEARING/DISTANCE PER FIELD MEASUREMENT
- BEARING/DISTANCE PER CALCULATION
- TYPICAL ROADWAY SPOT ELEVATIONS (IF SHOWN)
- TYPICAL GROUND SPOT ELEVATIONS (IF SHOWN)
- OVERHEAD LINES
- SANITARY SEWER PIPE, MANHOLE, CLEANOUT, VALVE & PAINT MARK IDENTIFYING PROBABLE LOCATION OF PIPE
- TELEPHONE UTILITY MANHOLE, TELEPHONE UTILITY CABLE & PAINT MARK IDENTIFYING PROBABLE LOCATION OF UTILITY
- GAS LINE WITH GAS VALVE, GAS METER & PAINT MARK IDENTIFYING PROBABLE LOCATION OF UTILITY
- WATER LINE WITH WATER VALVE, WATER METER & PAINT MARK IDENTIFYING PROBABLE LOCATION OF UTILITY
- ELECTRIC UTILITY LINE WITH ELECTRIC UTILITY MANHOLE & PAINT MARK IDENTIFYING PROBABLE LOCATION OF UTILITY
- 6' CHAIN LINK FENCE UNLESS OTHERWISE NOTED
- MAIL BOX
- FOUND IRON ROD (SIZE AND TYPE AS INDICATED)
- FOUND IRON PIPE (SIZE AND TYPE AS INDICATED)
- SET 1/2" IRON ROD & CAP L.B.#2610
- FOUND CONCRETE MONUMENT (SIZE AND TYPE AS INDICATED)
- SET 4"X4" CONCRETE MONUMENT "PRM LB#2610"
- EXISTING POND LIMITS

PROPOSED LEGEND

- SPOT ELEVATIONS (× 27.5)
- SWALE
- DIRECTION OF FLOW
- TOP OF BANK
- STORM SEWER (XXX LF OF XX" RCP @ X.XX%)
- STORM SEWER INLET
- FLARED/MITERED END SECTION
- SANITARY SEWER
- SANITARY SEWER SERVICE
- WATER MAIN (XXX LF OF XX" WM)
- REDUCER
- GATE VALVE
- WATER MAIN SERVICE (SINGLE)
- CONSTRUCTION BLOW-OFF
- FIRE HYDRANT ASSEMBLY
- FORCEMAIN
- RECLAIMED WATER MAIN (RCW)
- RECLAIMED WATER SERVICE (DOUBLE) (SINGLE) (RCW)
- OVERHEAD UTILITY (OHW)
- FIBER OPTIC (BFO)
- RAW WATER MAIN (RWM)
- GAS LINE (GAS)
- CABLE TV (CTV)
- ELECTRIC LINE (ELC)
- PHONE LINE (TEL)
- PROPERTY LINE
- EXTERIOR BUILDING WALL
- CONTOUR LINE (MAJOR) (10)
- CONTOUR LINE (MINOR) (1)
- WETLAND LINE
- SETBACK LINE
- BUFFER LINE
- EASEMENT LINE
- CENTERLINE
- RIGHT OF WAY LINE
- PHASE LINE
- TREE BARRICADE
- HEAVY DUTY SILT FENCE *
- FDOT TYPE III SILT FENCE
- FEMA FLOOD ZONE LINE
- FENCE LINE
- LIMITS OF CONSTRUCTION
- PROJECT LIMITS

- PROPOSED CAR COUNT
- EXISTING TREE TO BE REMOVED
- DIRECTION OF SLOPE
- UTLITY CAP
- SIGN
- STREET SIGN
- WHEELSTOP
- HANDICAP SPACE
- BARRICADE
- TEMPORARY BARRICADE
- AIR RELEASE VALVE
- BLOW-OFF ASSEMBLY
- CHLORINE INJECTION POINT
- SAMPLE POINT
- WELL LOCATION
- BORING ELEVATION / BORING NUMBER (27.83 / BH06)
- WETLAND SHW/NP LOCATION (G14 / SHW 69.28 / NP 68.92)
- SEASONAL HIGH WATER ELEVATION (PROFILE VIEW) (AB-1 / 84.25)
- LEFT HAND OR RIGHT HAND GARAGE, RESTRICTED LOT (LH RH R)
- FF ELEVATION / PAD ELEVATION (FFE ??.?? / PAD ??.??) ? — LOT TYPE
- SECTION NAME / SECTION LOCATED ON SHEET NO. (A / 50)
- SECTION NAME (SECTION A / 28) SCALE
- SECTION TAKEN ON SHEET NO.

* SEE SHEET C8.01 FOR HEAVY DUTY SILT FENCE INFORMATION

HATCH DESCRIPTION

- CONCRETE LIMITS
- LIMITS OF CLEARING
- PROPOSED POND LIMITS
- WETLAND LIMITS
- WETLAND IMPACTS
- SURFACE WATER IMPACTS
- MASS GRADING LIMITS

BENCHMARK INFORMATION:

Plat Book 71, Page 9
Section 28, Township 26 South, Range 20 East
Pasco County, Florida

Description	Elevation (NAVD 88)	(NGVD 29)
Benchmark (K1532P19A) Set Rivet and Disc stamped "KING BM LB 2610" K1532P19A in curb inlet 150' +/- North of the driveway centerline of the Lift Station Site (Tract PS), Oakwood Preserve Drive.	(73.36')	(74.36')
Benchmark (K1532P19B) Set Rivet and Disc stamped "KING BM LB 2610" K1532P19B in curb inlet between Lot 149 and 150, Spruceberry Court.	(72.17')	(73.17')
Benchmark (K1532P19C) Set Rivet and Disc stamped "KING BM LB 2610" K1532P19C in curb inlet between Lot 109 and 110, Southernwood Court.	(72.21')	(73.21')
Benchmark (K1532P19D) Set Rivet and Disc stamped "KING BM LB 2610" K1532P19D in curb inlet between Lot 57 and 58, Tarragona Way.	(74.86')	(75.86')
Benchmark (K1532P20A) Set Rivet and Disc stamped "KING BM LB 2610" K1532P20A in curb inlet by Lot 41, Tarragona Way.	(75.06')	(76.06')
Benchmark (K1532P20B) Set Rivet and Disc stamped "KING BM LB 2610" K1532P20B in curb inlet between Lot 2 and 3, Sunland Court.	(75.56')	(76.56')
Benchmark (K1532P20C) Set Rivet and Disc stamped "KING BM LB 2610" K1532P20C in curb inlet between Lot 171 and 172, Coco Palm Circle.	(73.61')	(74.61')

National Geodetic Vertical Datum, 1929 adjustment (NGVD 29) elevations are based on the Florida Department of Transportation Benchmark "581-05" having an elevation of 61.01' (NGVD 29). North American Vertical Datum, 1988 adjustment (NAVD 88) elevations are based on the National Geodetic Survey Control Monument "Q 762" having an elevation of 64.42' (NAVD 88).

RESIDENTIAL DESIGN STANDARDS

BASED ON RZ PETITION NO. RZ7073, CONDITIONS OF APPROVAL 53a, 53c AND 53e

LOT TYPE	MIN. LOT WIDTH	MIN. LOT DEPTH	FRONT YARD SETBACK(e)	SIDE YARD SETBACK	REAR YARD SETBACK	MAXIMUM HEIGHT	MAX. LOT COVERAGE
SINGLE-FAMILY DETACHED	45'	100'	20'(a)	7.5'	15'	35'	65%(c)

(a) 20' SETBACK TO PRIMARY STRUCTURE AND 25' FROM THE BACK OF SIDEWALK TO THE FRONT LOADED GARAGE.
(c) LOT COVERAGE REPRESENTS 55% FOR PRIMARY STRUCTURE AND 10% FOR ACCESSORY STRUCTURES.
(e) ON CORNER LOTS WHERE THERE IS MORE THAN ONE FRONT, ONE FRONT-YARD SETBACK MAY BE REDUCED TO 10 FEET.

53c – BUILDINGS LOCATED WITHIN GOLF COURSE, RECREATIONAL AREAS, CIVIC USES OR LIMITED NEIGHBORHOOD COMMERCIAL DEVELOPMENT INTERNAL TO A RESIDENTIAL COMMUNITY SHALL BE DEVELOPED IN ACCORDANCE WITH THE C-1 NEIGHBORHOOD COMMERCIAL DISTRICT STANDARDS AND SHALL BE ALLOWABLE USES ON ALL S OR M PARCELS. SHORT TERM RENTALS, FRACTIONAL AND VACATION OWNERSHIP UNITS SHALL BE ALLOWABLE USES ON PARCELS S2 AND S4.

53e – THE SOUTHERNMOST 760 FEET OF PARCEL M23 SHALL BE LIMITED TO RESIDENTIAL USES.

PASCO COUNTY APPROVALS

1. DEVELOPMENT ORDER (DO) WAS APPROVED FOR WIREGRASS RANCH DRI 260 (RESOLUTION NO. 07-291) ON 7-17-07 BY BCC.
2. DCA APPEALED RESOLUTION NO. 07-291 ON 9-14-07.
3. BCC APPROVED AGREEMENT WITH DCA AND AMENDED DO ON 9-25-07.
4. BCC ADOPTED DO AGREEMENT TO SETTLE DCA APPEAL ON 10-9-07. (RESOLUTION NO. 08-06)
5. BCC APPROVED FUTURE LAND USE AMENDMENT ON 6-22-10. (PGM 10-206)
6. BCC ADOPTED AN AMENDED DO FOR DRI 260 (AMENDED AND RESTATED DO) ON 9-7-10. (RESOLUTION NO. 10-376)
7. BCC APPROVED FUTURE LAND USE AMENDMENT ON 9-21-10. (ORDINANCE NO. 10-46)
8. DA WAS APPROVED BY THE BCC ON 2-5-14.
9. BCC ADOPTED AMENDMENT TO DRI DO (RESOLUTION NO. 14-66) ON 1-14-14.
10. DRC APPROVED DRI/MPUD PARKS PLAN, MASTER BICYCLE AND PEDESTRIAN PLAN AND MASTER ROADWAY PLAN (MRP) (PGM 11-84, PGM 11-85, PGM 11-86) ON 2-13-14.
11. BCC APPROVED REZONING FOR DRI ON 2-25-14 (REZONING PETITION NO. 7073).
12. BCC APPROVED MPUD ON 11-30-15 (PDD 16-307).
13. BCC APPROVED MRP ON 12-03-2015 (PDD 16-003).

SITE DATA PHASE 1 , 2 AND 3

TOTAL SITE AREA = (T.S.A.)	332.09	ACRES
TOTAL WETLANDS	92.53	ACRES
TOTAL UPLANDS	239.56	ACRES
	332.09	ACRES
TOTAL TRACT ACREAGE	210.73	ACRES
TOTAL LOT ACREAGE	28.83	ACRES
	239.56	ACRES
PRESENT ZONING	MPUD (RZ PETITION #7073, BCC APPROVED ON 11-30-15) (PDD 16-307)	
FOLIO #'S	28-26-20-0000-00100-0000	
LAND USE DESIGNATION	PD	
EXISTING ZONING	MPUD	
CURRENT LAND USE	VACANT	
PROPOSED GROSS DENSITY	1.69 DU/AC	
PROPOSED NET DENSITY	2.21 DU/AC	
TOTAL PARK AREA REQUIRED	REFER TO WIREGRASS RANCH CONCEPTUAL MASTER PARKS PLAN (MIN. +/- 2 ACRES)	
TOTAL PARK AREA PROVIDED	5.12 ACRES	

GEOLOGIC HAZARD NOTES

SHOULD ANY NOTICEABLE SOIL SLUMPING OR SINKHOLE FORMATION BECOME EVIDENT, THE APPLICANT/DEVELOPER SHALL IMMEDIATELY NOTIFY THE COUNTY, TAMPA BAY WATER (TBW), AND SWFWMD, AND ADOPT ONE OR MORE OF THE FOLLOWING PROCEDURES AS DETERMINED TO BE APPROPRIATE BY THE COUNTY AND SWFWMD:

1. IF THE SLUMPING OR SINKHOLE FORMATION BECOMES EVIDENT BEFORE OR DURING CONSTRUCTION ACTIVITIES, STOP ALL WORK (EXCEPT FOR MITIGATION ACTIVITIES) IN THE AFFECTED AREA AND REMAIN STOPPED UNTIL THE COUNTY AND SWFWMD APPROVE RESUMING CONSTRUCTION ACTIVITIES.
2. TAKE IMMEDIATE MEASURES TO ENSURE NO SURFACE WATER DRAINS INTO THE AFFECTED AREAS.
3. VISUALLY INSPECT THE AFFECTED AREA.
4. EXCAVATE AND BACKFILL OR GROUT AS REQUIRED TO FILL THE AFFECTED AREA AND PREVENT FURTHER SUBSIDENCE.
5. USE SOIL REINFORCEMENT MATERIALS IN THE BACKFILLING OPERATION, WHEN APPROPRIATE.
6. IF THE AFFECTED AREA IS IN THE VICINITY OF A WATER-RETENTION AREA, MAINTAIN A MINIMUM DISTANCE OF TWO FEET FROM THE BOTTOM OF THE RETENTION POND TO THE SURFACE OF THE LIME-ROCK OR KARST CONNECTION.
7. IF THE AFFECTED AREA IS IN THE VICINITY OF A WATER-RETENTION AREA AND THE ABOVE METHODS DO NOT STABILIZE THE COLLAPSE, RELOCATE THE RETENTION AREA.
8. DISCHARGE OF STORM-WATER INTO DEPRESSIONS WITH DIRECT OR DEMONSTRATED HYDROLOGIC CONNECTION TO THE FLORIDAN AQUIFER SHALL BE PROHIBITED.
9. UPON COMPLETION OF THE LAND DEVELOPMENT CONSTRUCTION, A PROFESSIONAL ENGINEER SHALL PROVIDE A CERTIFICATION TO PASCO COUNTY THAT THE PROJECT, INCLUDING EACH PAD AREA, COMPLIES WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL/GEOLOGICAL ENGINEERING REPORT.

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Engineering License #2610

NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA
NOTES AND LEGENDS

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

C1.03

PASCO CO. SUBMITTAL
APRIL 01, 2016

SITE DESCRIPTION

PROJECT NAME:
THE RIDGE AT WIREGRASS PHASE 2 AND MASS GRADING PHASE 3
LATITUDE: N 28° 11' 20"
LONGITUDE: W 82° 18' 30"

OWNER:
PASCO COUNTY ASSOCIATES II, LLLP
OWNER'S ADDRESS:
1600 SAWGRASS CORPORATE PARKWAY, SUITE 400
SUNRISE, FLORIDA 33323

DESCRIPTION OF NATURE OF CONSTRUCTION ACTIVITY

CONSTRUCTION OF A RESIDENTIAL DEVELOPMENT CONSISTING OF INTERNAL ROADWAYS, INFRASTRUCTURE UTILITIES, STORMWATER PONDS, STORMWATER UTILITIES AND WETLAND MITIGATION AREAS.

SOIL DISTURBING ACTIVITIES INLCLUDE:
INSTALLING STABALIZED CONSTRUCTION ENTRANCES, CONSTRUCTING EROSION AND SEDIMENT CONTROLS, CLEARING AND GRUBBING, GRADING EXCAVATION OF STORMWATER PONDS, CONSTRUCTION OF STORM SEWER, ROADS, WETLAND MITIGATION AREAS AND TEMPORARY HAUL ROUTES.

TOTAL AREA: +/- 185 ACRES

SEQUENCE OF MAJOR ACTIVITIES:

1. PRIOR TO THE COMMENCEMENT OF CLEARING, GRUBBING, AND DEMOLITION, THE SITE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL DEVICES CALLED FOR ON THE PLANS.
2. UPON INSTALLATION OF THE EROSION CONTROL DEVICES, THE SITE CONTRACTOR MAY BEGIN SITE CLEARING, DEMOLITION, EARTHWORK, DRAINAGE, UTILITY AND ROADWAY CONSTRUCTION ACTIVITIES WITHIN THE CONSTRUCTION LIMITS. THE SITE CONTRACTOR SHALL STABILIZE ALL AREAS DISTURBED WITHIN FIVE DAYS OF THE COMPLETION OF GRADING ACTIVITIES OF THE DISTURBED AREA.
3. THE SITE CONTRACTOR SHALL MAINTAIN THE EXISTING STORMWATER SYSTEM UNTIL THE PROPOSED SYSTEM HAS BEEN RE-ROUTED. ONCE THE PROPOSED SYSTEM IS IN PLACE, THE CONTRACTOR MAY BEGIN THE REMOVAL OF THE EXISTING STORMWATER PIPES AS INDICATED ON THE CONSTRUCTION DOCUMENTS.
4. THE SITE CONTRACTOR SHALL REMOVE ALL EROSION PROTECTION DEVICES WITHIN EACH CONTRIBUTING AREA FOLLOWING PERMANENT STABILIZATION OF ALL DISTURBED AREAS.

NAME OF RECEIVING WATERS: CLAY GULLY

CONTROLS

EROSION AND SEDIMENT CONTROLS

STABILIZATION PRACTICES

WIND EROSION STABILIZATION: THE CONTRACTOR SHALL DENUDE ONLY AREAS WHERE IT IS EXPECTED TO BE GRADED OR ALTERED WITHIN A TWO (2) WEEK TIME-FRAME. FINAL GRADES SHALL BE PERFORMED AND TEMPORARY OR PERMANENT SOIL STABILIZATION SHALL BE APPLIED. AREAS WHERE CONSTRUCTION OPERATIONS WILL BE CONTINUOUS, FUGITIVE DUST SHALL BE MANAGED BY APPLYING A WATER SPRAY TO SATURATE THE SURFACE SOILS ON A DAILY BASIS, OR AS NEEDED TO MAINTAIN MINIMAL DUST TRANSPORT. FUGITIVE DUST SHALL BE MONITORED CONTINUOUSLY AND ADDITIONAL MEASURES MAY NEED TO BE TAKEN TO CONTROL OFF-SITE TRANSPORT OF UNACCEPTABLE LEVELS OF DUST.

TEMPORARY STABILIZATION: TOP OF SOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS WILL BE STABILIZED WITH TEMPORARY GRASS AND MULCH NO LATER THAN 5 DAYS FROM THE LAST CONSTRUCTION ACTIVITY. GRASS SEED SHALL BE A MIXTURE OF 20 PARTS OF BERMUDA SEED AND 80 PARTS OF PENSACOLA BAHIA. THE SEPARATE TYPES OF SEED USED SHALL BE THOROUGHLY DRY MIXED IMMEDIATELY BEFORE SOWING. SEED WHICH HAS BECOME WET SHALL NOT BE USED. THE MULCH MATERIAL USED SHALL NORMALLY BE DRY MULCH. DRY MULCH SHALL BE STRAW OR HAY, CONSISTING OF OAT, RYE OR WHEAT STRAW, OR OF PANGOLA, PEANUT, COASTAL BERMUDA OR BAHIA GRASS HAY. ONLY UNDETERIORATED MULCH WHICH CAN BE READILY CUT INTO THE SOIL SHALL BE USED. AREAS OF THE SITE WHICH ARE TO BE PAVED WILL BE TEMPORARILY STABILIZED BY APPLYING STABILIZATION AND BASE.

PERMANENT STABILIZATION: DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASES SHALL BE STABILIZED WITH SOD NO LATER THAN 5 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

STRUCTURAL PRACTICES

STAKED SILT FENCES: THE STAKED SILT FENCES WILL BE CONSTRUCTED ALONG THE PERIMETER AS PREVIOUSLY EXPLAINED. THESE DEVICES WILL STOP AND DIVERT RUNOFF TO THE SEDIMENT BASINS.

SEDIMENT BASINS: THE STORM WATER MANAGEMENT AREAS WILL ACT AS SEDIMENT BASINS DURING CONSTRUCTION. THE SEDIMENT BASINS WILL BE CONSTRUCTED TO THE DESIGN CROSS-SECTION, OR A MINIMUM OF 2' BELOW EXISTING GROUND AT THE CONTRACTORS DISCRETION TO ALLOW SILTS TO BE COLLECTED AND REMOVED PRIOR TO COMPLETION OF THE GRADING.

STORM WATER MANAGEMENT

STORM WATER DRAINAGE WILL BE PROVIDED BY A CURB, SWALE, STORM SEWER, OR CATCH BASIN SYSTEM FOR THE DEVELOPED AREAS. SWALES TO BE SODDED AND INCLUDE CHECK DAMS AND RIPRAP TO CONTROL RUNOFF VELOCITY AND TRANSPORT OF SEDIMENT. WHEN CONSTRUCTION IS COMPLETE THE IMPROVED PORTION OF THE SITE WILL DRAIN TO STORM WATER PONDS. THE PONDS WILL BE IN THE LOCATION OF THE TEMPORARY SEDIMENT BASINS. WHEN UPSLOPE AREAS ARE STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT BASINS. THE PONDS HAVE BEEN DESIGNED BY A PROFESSIONAL ENGINEER TO LIMIT PEAK FLOW RATES FROM THE DESIGN STORM EVENT AT OR BELOW PRE-DEVELOPMENT RATES, AND CONSTRUCTION PER DETAILS SHOWN IN THE PLANS IS IMPERATIVE.

OTHER CONTROLS

WASTE DISPOSAL

WASTE MATERIALS: ALL WASTE MATERIAL WILL BE COLLECTED AND STORED IN DUMPSTERS PER LOCAL AGENCIES REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTERS. THE DUMPSTERS WILL BE EMPTIED A MINIMUM OF ONCE A WEEK OR MORE OFTEN IF NECESSARY, AND THE TRASH WILL BE HAULED TO A REGISTERED LANDFILL FOR DISPOSAL. NO CONSTRUCTION MATERIALS WILL BE BURIED ON-SITE. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED IN THE ON-SITE OFFICE TRAILER AND THE CONSTRUCTION MANGER RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE: ALL HAZARDOUS WASTE MATERIALS, IF ENCOUNTERED, WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATIONS. THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE: ALL SANITARY WASTE WILL BE COLLECTED FROM PORTABLE UNITS A MINIMUM OF THREE TIMES PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR, AS REQUIRED BY LOCAL REGULATION.

OFFSITE VEHICLE TRACKING

STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREETS WILL BE CLEANED AS NEEDED TO REMOVE ANY EXCESS MUD. DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM OR TO THE SITE WILL BE COVERED WITH A TARPAULIN AT ALL TIMES.

TIMING OF CONTROL MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, STAKED SILT BARRIERS, STABILIZED CONSTRUCTION ENTRANCES AND SEDIMENT BASINS WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 21 DAYS WILL BE STABILIZED WITH A TEMPORARY GRASS AND MULCH WITHIN 5 DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN THAT AREA, THAT AREA WILL BE STABILIZED WITH PERMANENT SOD. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE TRAPS AND THE STAKED SILT BARRIERS WILL BE REMOVED.

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

THE STORM WATER POLLUTION PREVENTION PLAN REFLECTS THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT'S (SWFWMD) REQUIREMENTS FOR STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL, AS ESTABLISHED BY THE FLORIDA ADMINISTRATIVE CODE, CHAPTER 40D-4 AND 40D-40. TO ENSURE COMPLIANCE, THIS PLAN WAS PREPARED IN ACCORDANCE WITH SWFWMD'S "BASIS OF REVIEW FOR SURFACE WATER MANAGEMENT PERMIT APPLICATIONS WITHIN THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT." THIS PLAN ALSO REFLECTS THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR WORK IN BRANCH 6.

MAINTENANCE INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

THESE ARE THE INSPECTION AND MAINTENANCE PRACTICES THAT SHALL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROL.

ALL CONTROL MEASURES IN DISTURBED AREAS WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND WITHIN 24 HOURS OF THE END OF ANY STORM EVENT OF 0.25 INCHES OR GREATER BY A CONTRACTORS REPRESENTATIVE. (WHERE SITES HAVE BEEN FINALLY STABILIZED SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH.) ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A 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 REGULARLY 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 DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB. TEMPORARY AND PERMANENT GRASSING, MULCHING AND SODDING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH. A MAINTENANCE INSPECTION REPORT SHALL BE MADE AFTER EACH INSPECTION BY THE CONTRACTOR AND SHALL BE KEPT IN AN ACTIVE LOG READILY AVAILABLE AT THE JOB SITE CONSTRUCTION TRAILER. THE SITE SUPERINTENDENT WILL SELECT INDIVIDUALS WHO WILL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES. FILLING OUT THE INSPECTION AND MAINTENANCE REPORT WILL BE BY THE CONTRACTOR. PERSONNEL SELECTED FOR MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ON-SITE IN GOOD WORKING ORDER.

NON-STORM WATER DISCHARGES

IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

WATER FROM FIRE FIGHTING ACTIVITIES, FIRE HYDRANT FLUSHING, WATER LINE FLUSHING, WATER USED TO SPRAY OFF LOOSE SOILS FROM VEHICLES, DUST CONTROL, PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED). ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.

GROUNDWATER DEWATERING ACTIVITIES ARE NOT COVERED BY THIS PERMIT. THE CONTRACTOR MUST APPLY FOR COVERAGE UNDER THE GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUNDWATER FROM ANY NON-CONTAMINATED SITE ACTIVITY PURSUANT TO 62-621.300 (2), F.A.C.

INVENTORY FOR POLLUTION PREVENTION PLAN

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED, BUT NOT LIMITED, TO BE PRESENT ON-SITE DURING CONSTRUCTION:

CONCRETE
DETERGENTS
PAINTS (ENAMEL AND LATEX)
METAL STUDS
GLASS
TAR
SAND
FERTILIZERS
PETROLEUM BASED PRODUCTS AND FUELS
CLEANING SOLVENTS
WOOD
MASONRY BLOCK
ROOFING SHINGLES
STONE

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

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.

GOOD HOUSEKEEPING:

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES SHALL BE FOLLOWED ON-SITE DURING THE CONSTRUCTION PROJECT.

AN EFFORT SHALL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER CONTAINED ENCLOSURE. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL MANUFACTURER'S LABELED CONTAINERS. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER. WHENEVER POSSIBLE, ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER. MANUFACTURERS' RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ON-SITE.

HAZARDOUS PRODUCTS:

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

PRODUCTS SHALL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURERS' OR LOCAL AND STATE RECOMMENDED METHODS OF PROPER DISPOSAL SHALL BE FOLLOWED.

THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON-SITE:

PETROLEUM PRODUCTS:

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.

FERTILIZERS:

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 SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINTS:

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 MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

CONCRETE TRUCKS:

CONTRACTOR SHALL DESIGNATE AN AREA FOR DISCHARGE OF SURPLUS CONCRETE OR DRUM WASH WATER AND SHALL INSTALL A CONTAINMENT BERM AROUND THIS AREA TO PREVENT RUNOFF TO THE REMAINDER OF THE SITE. HARD DEBRIS SHALL BE DISPOSED OF BY CONTRACTOR UPON COMPLETION OF THE PROJECT.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

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, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

THE SPILL AREAS WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.

THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL,WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE WILL DESIGNATE 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 IN THE OFFICE TRAILER ON-SITE.

NOTICE OF INTENT (NOI) / NOTICE OF TERMINATION (NOT)

- THIS NOTICE OF INTENT (NOI) FORM IS TO BE COMPLETED AND SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) BEFORE USE OF THE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES PROVIDED IN SUBSECTION 62-621.300(4), F.A.C.
- A NOTICE OF TERMINATION WILL BE SUBMITTED TO EPA AFTER THE CONSTRUCTION HAS BEEN COMPLETED AND THE SITE HAS UNDERGONE FINAL STABILIZATION.

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THESE CONSTRUCTION PLANS, THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM, AS SHOWN ON THESE CONSTRUCTION PLANS, DESIGNED TO ASSURE THAT APPROPRIATE POLLUTION PREVENTION MEASURES ARE IMPLEMENTED DURING CONSTRUCTION AND TO ASSURE THAT THE QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THE 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.

PERMITTEE

SIGNED: _____

NAME AND TITLE: JOHN STROWBRIDGE

COMPANY: PASCO COUNTY ASSOCIATES II, LLLP

ADDRESS: 1600 SAWGRASS CORPORATE PARKWAY, SUITE 400 SUNRISE, FLORIDA 33323

DATE: 3-3-16

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERIC STORM WATER PERMIT ISSUED PURSUANT TO SECTION 403.0885, F.S., THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

SIGNATURE	FOR	RESPONSIBLE FOR
COMPANY:	COMPANY:	GENERAL CONTRACTOR
NAME:	NAME:	
TITLE:	TITLE:	
DATE:	DATE:	
COMPANY:	COMPANY:	TEMPORARY AND PERMANENT STABILIZATION
NAME:	NAME:	
TITLE:	TITLE:	
DATE:	DATE:	
COMPANY:	COMPANY:	STABILIZED CONSTRUCTION ENTRANCE, EARTH DIKES, SEDIMENT BASIN
NAME:	NAME:	
TITLE:	TITLE:	
DATE:	DATE:	

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA
CONSTRUCTION POLLUTION PREVENTION PLAN

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

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PASCO CO. SUBMITTAL
APRIL 01, 2016

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THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA

OVERALL SITE PLAN

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
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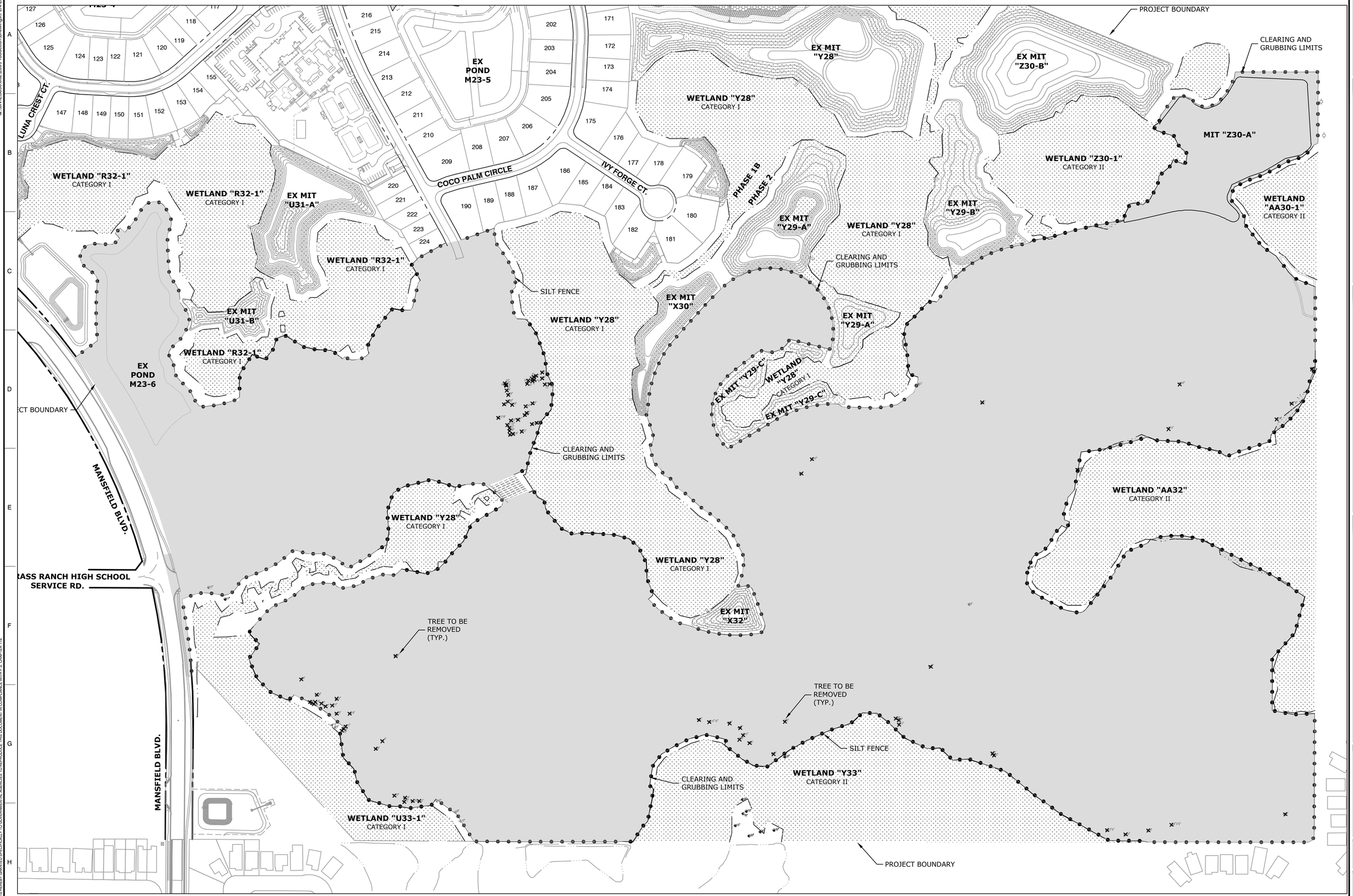

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THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA

EROSION CONTROL AND SITE PREPARATION PLAN

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

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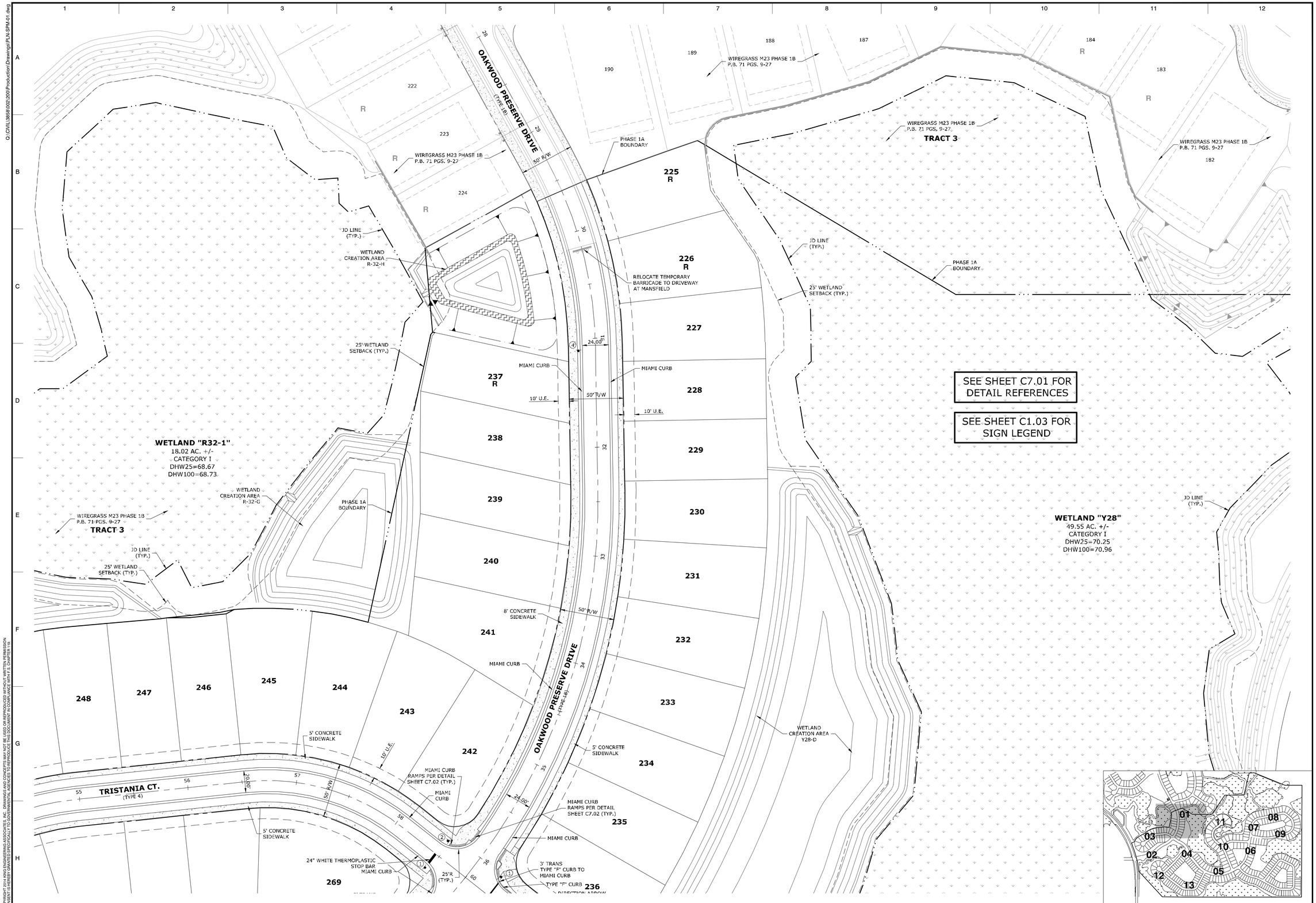

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PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA

SIGNING AND PAVEMENT MARKING PLAN

TUYEN L. TRAN
APRIL-01-2016
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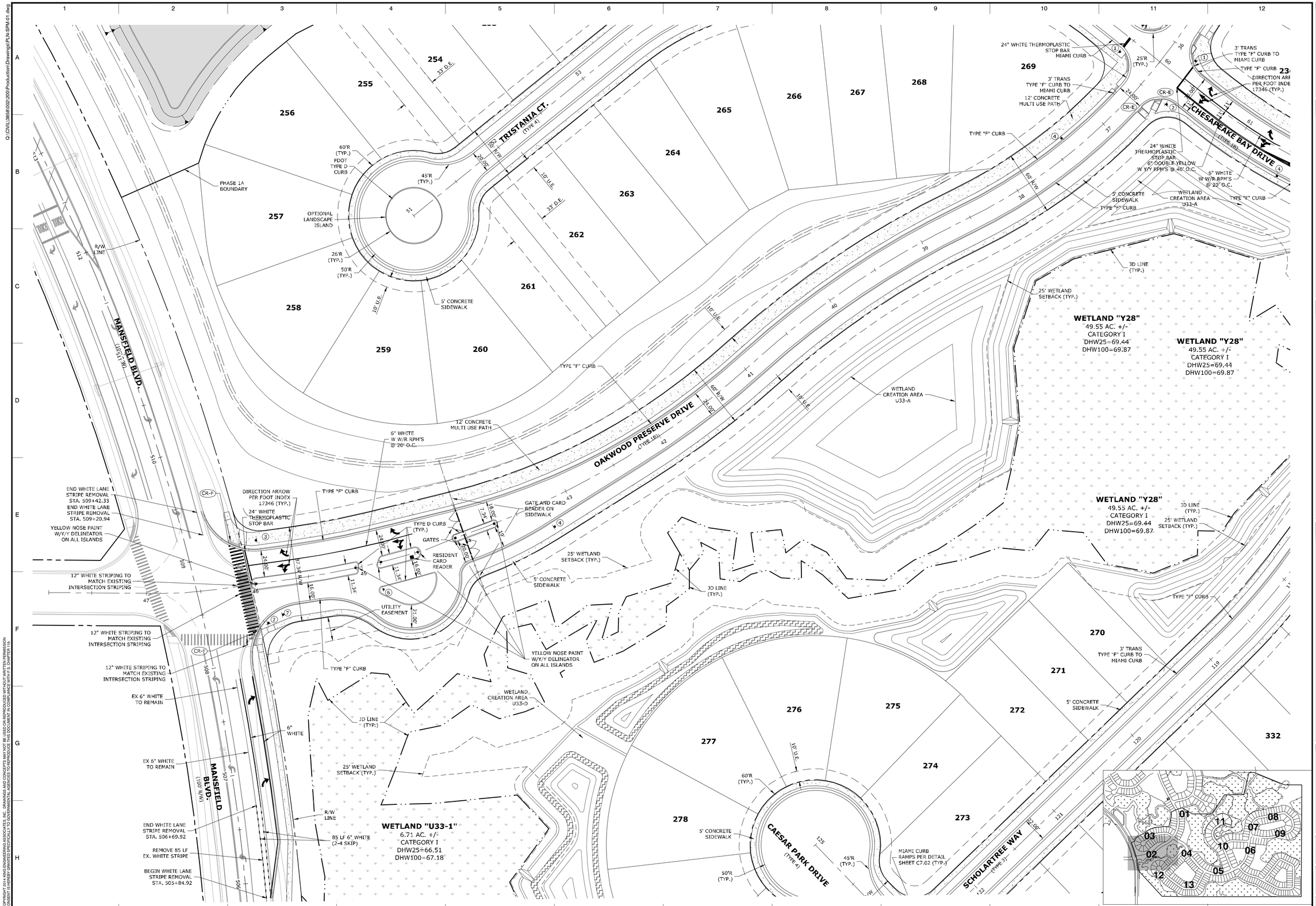

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PASCO COUNTY, FLORIDA
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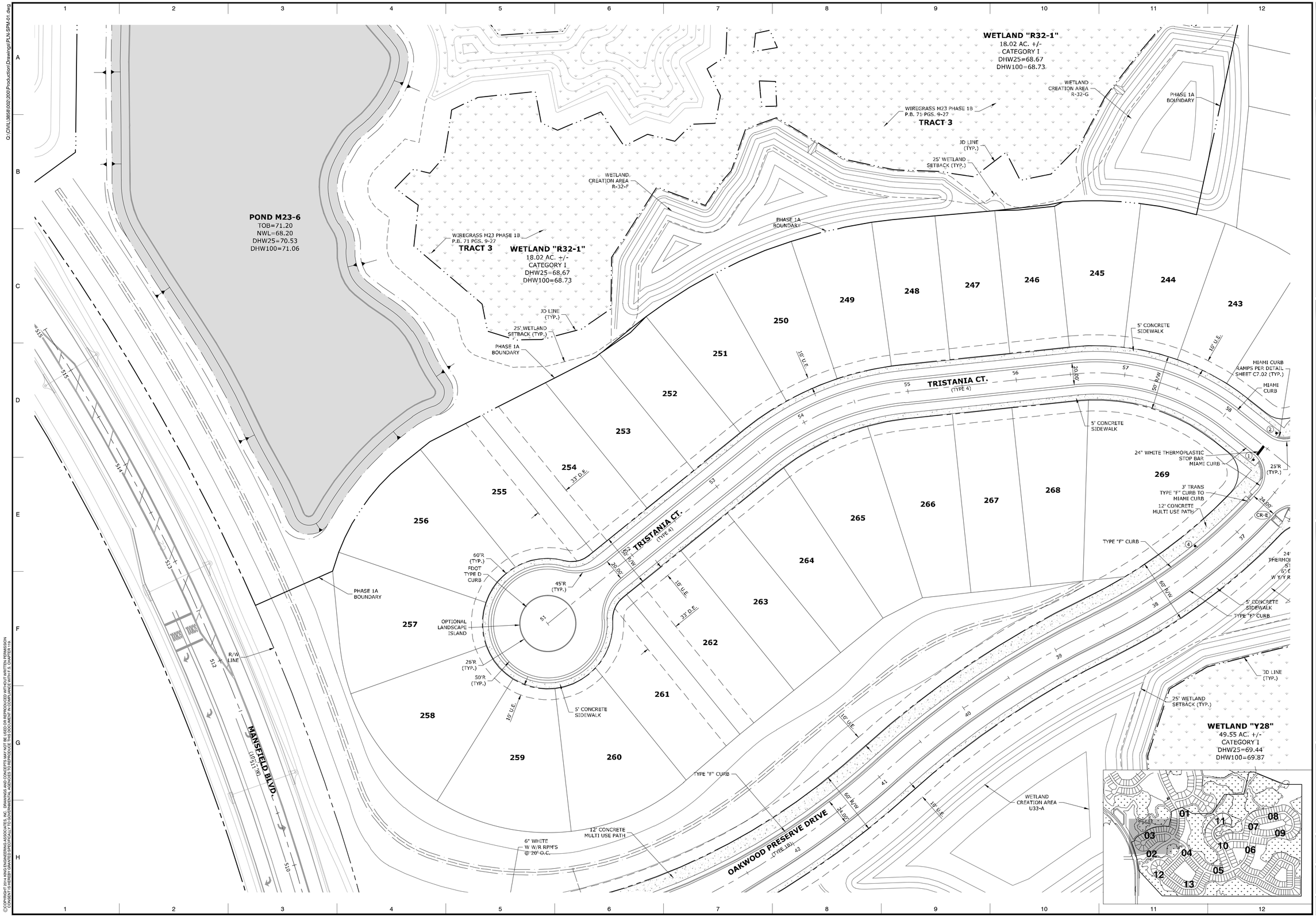

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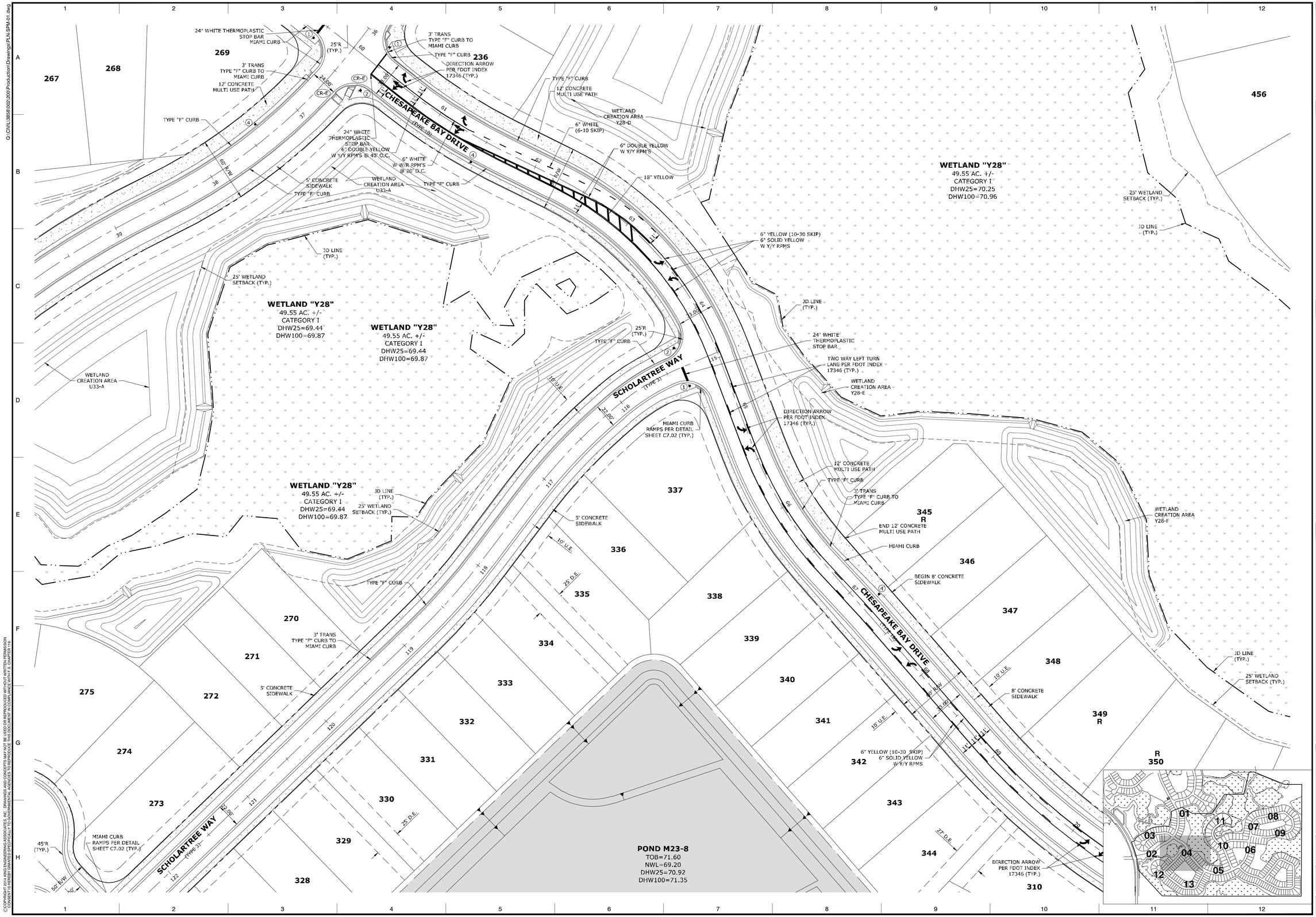

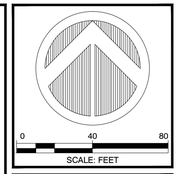

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THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA

SIGNING AND PAVEMENT MARKING PLAN

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
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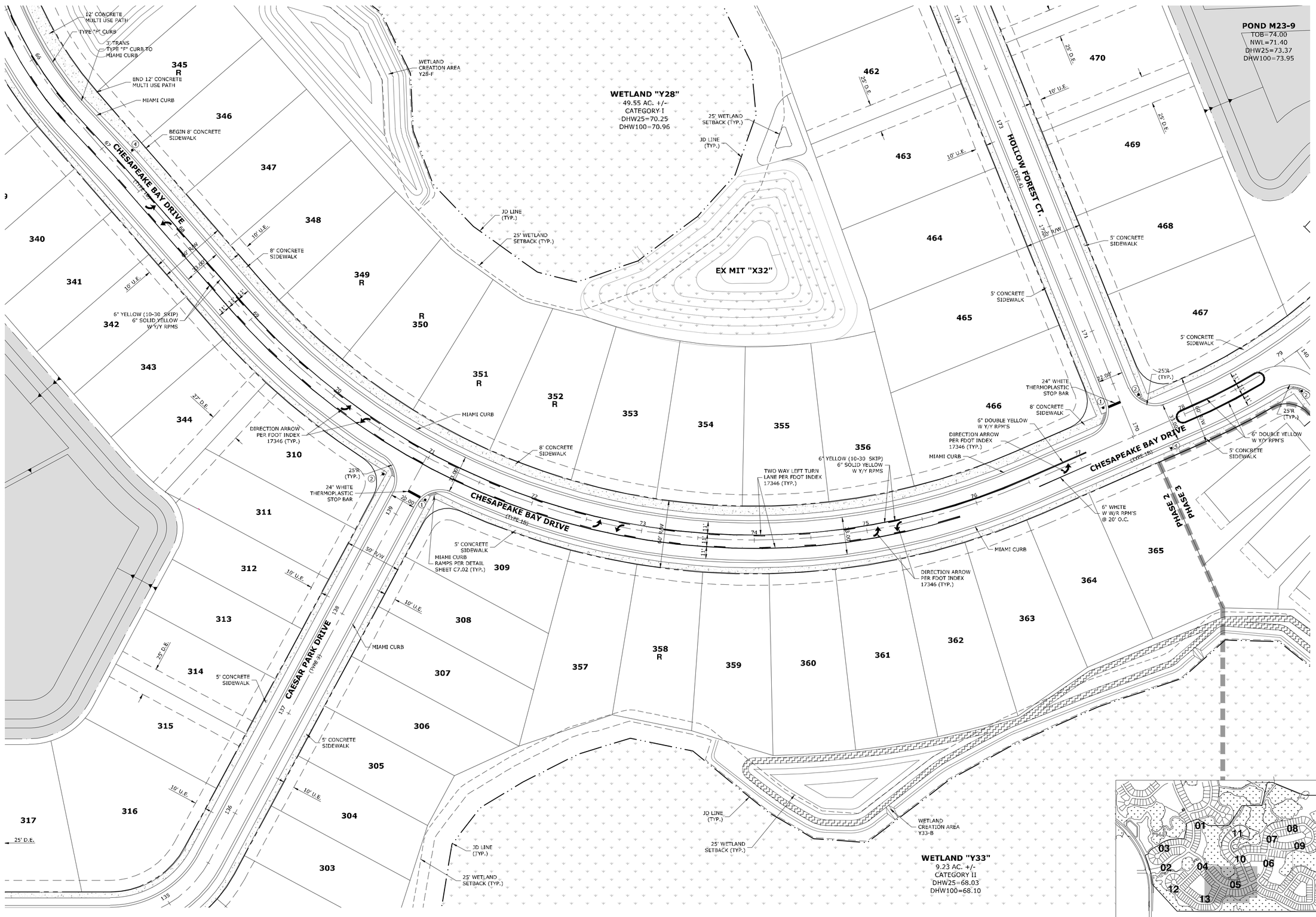

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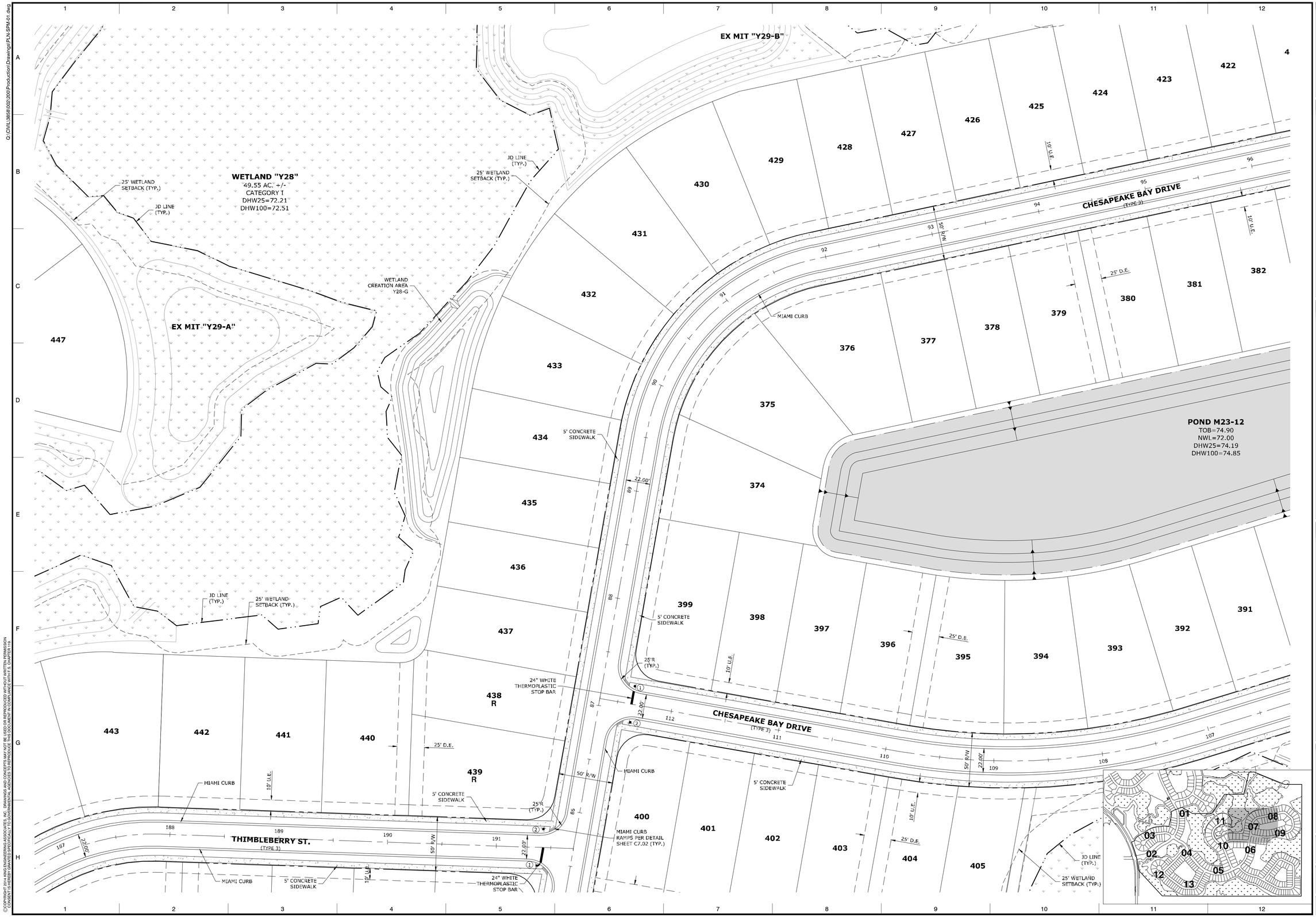

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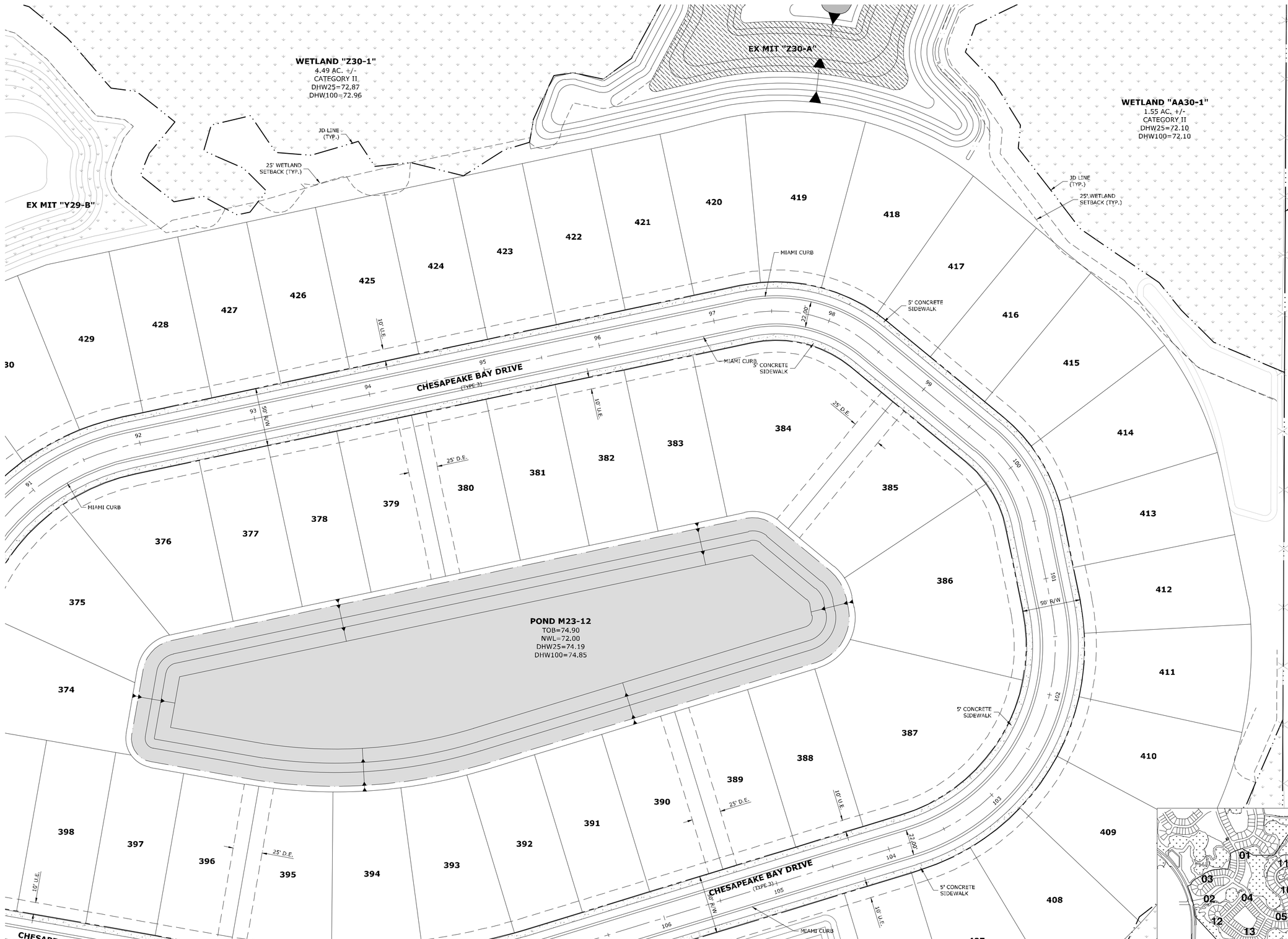

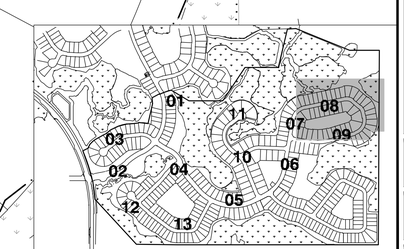

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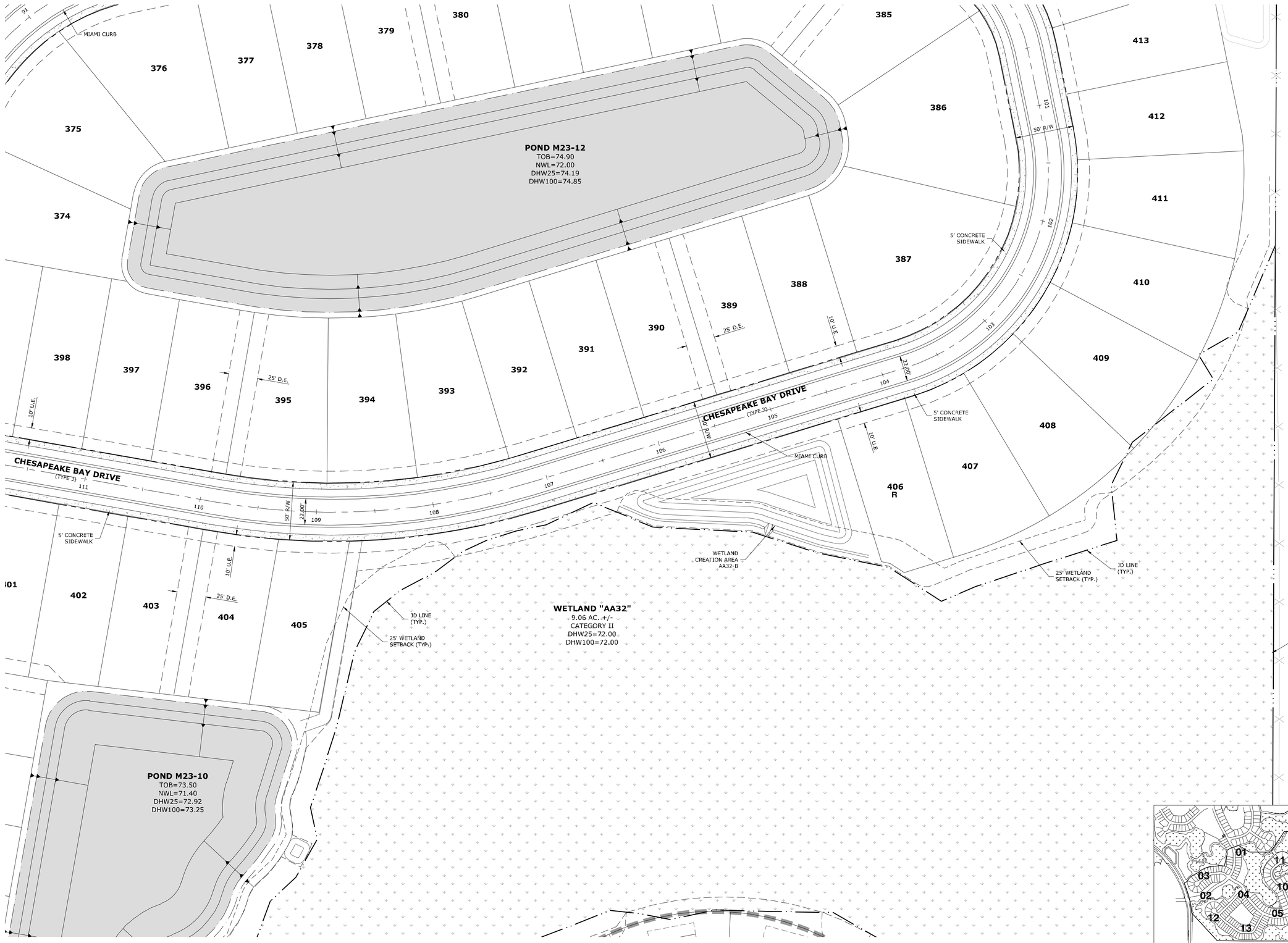

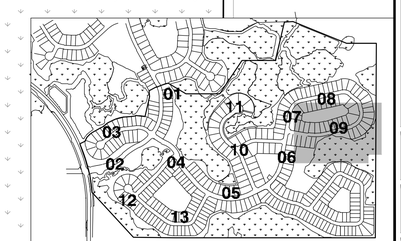

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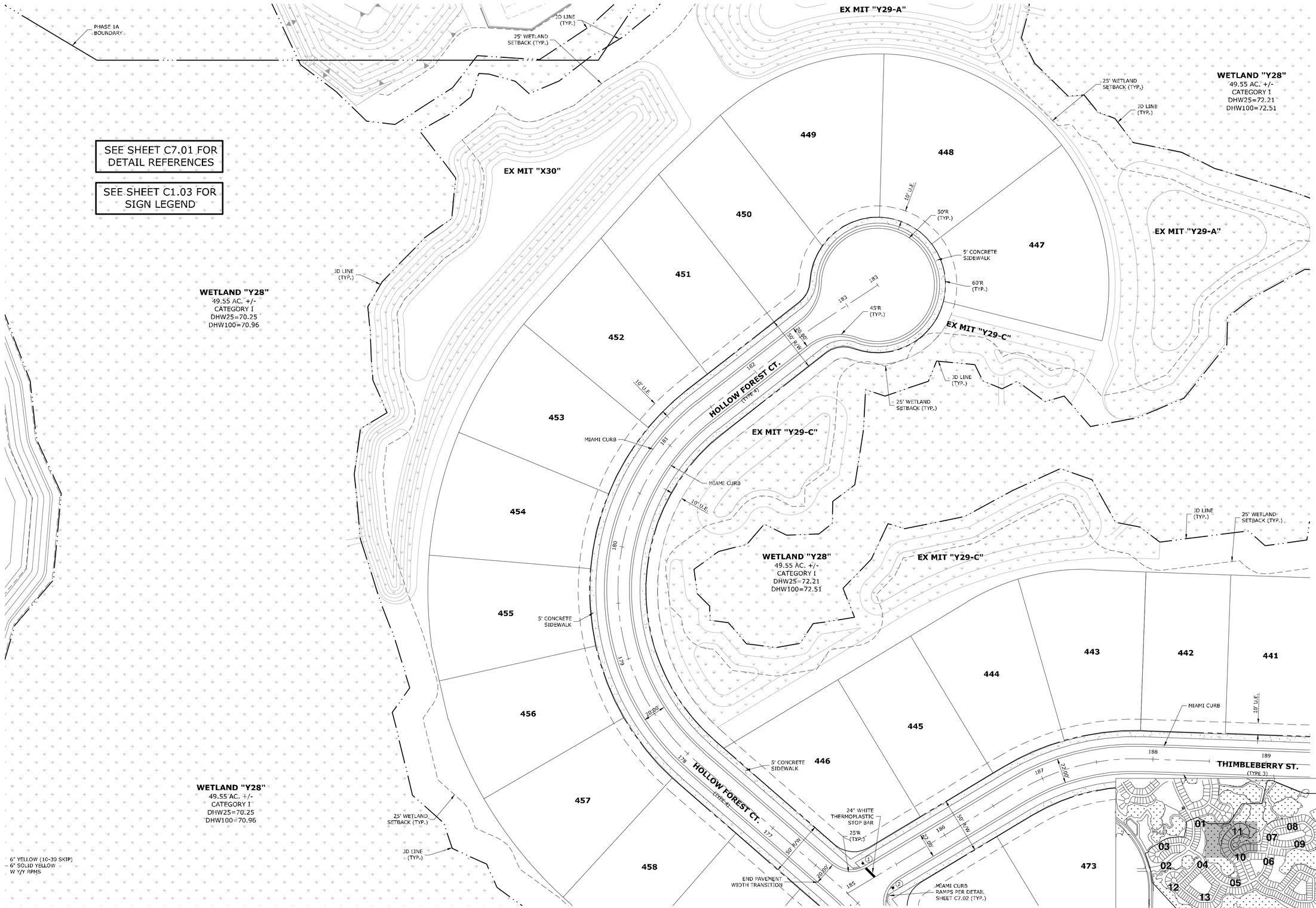

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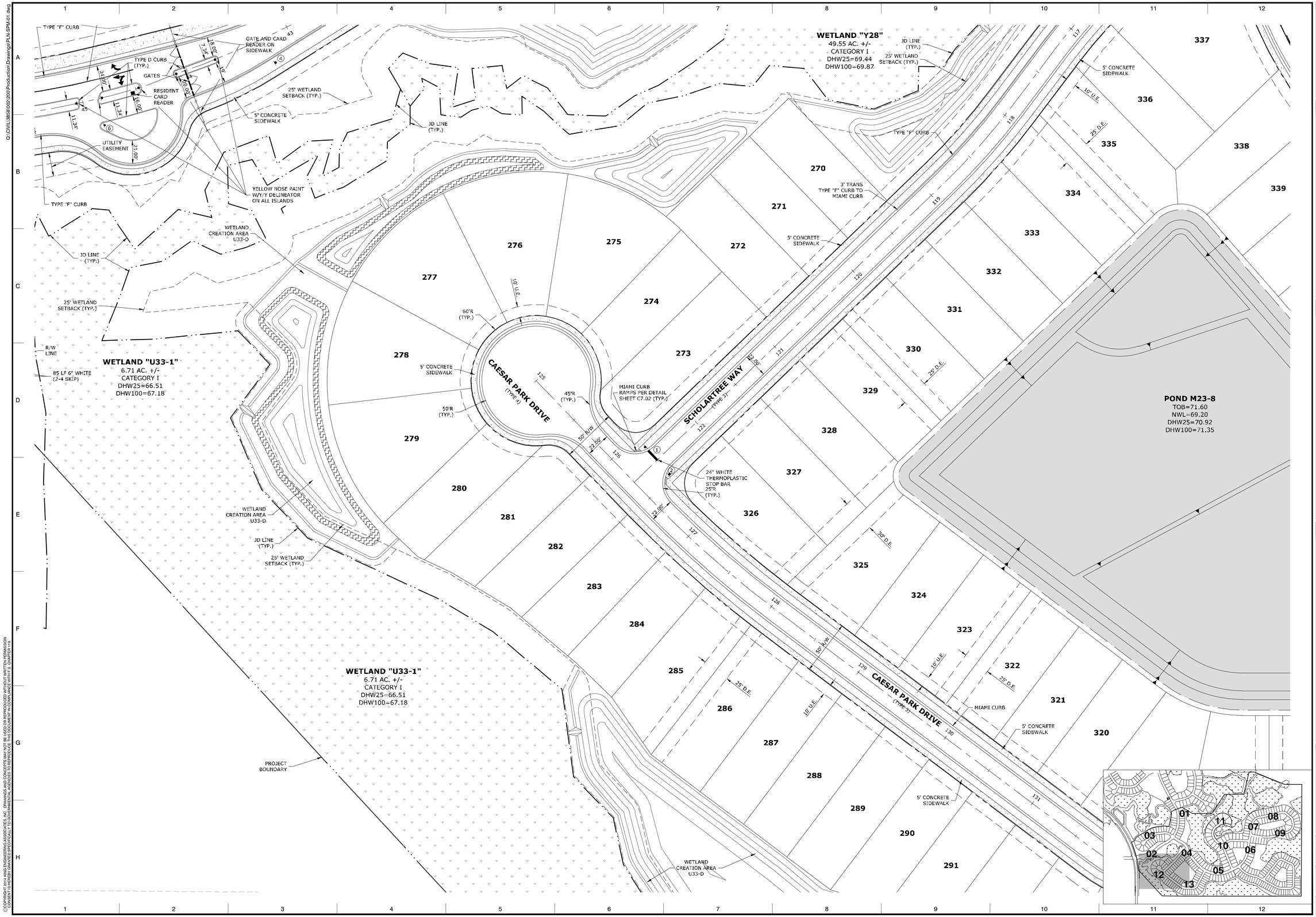

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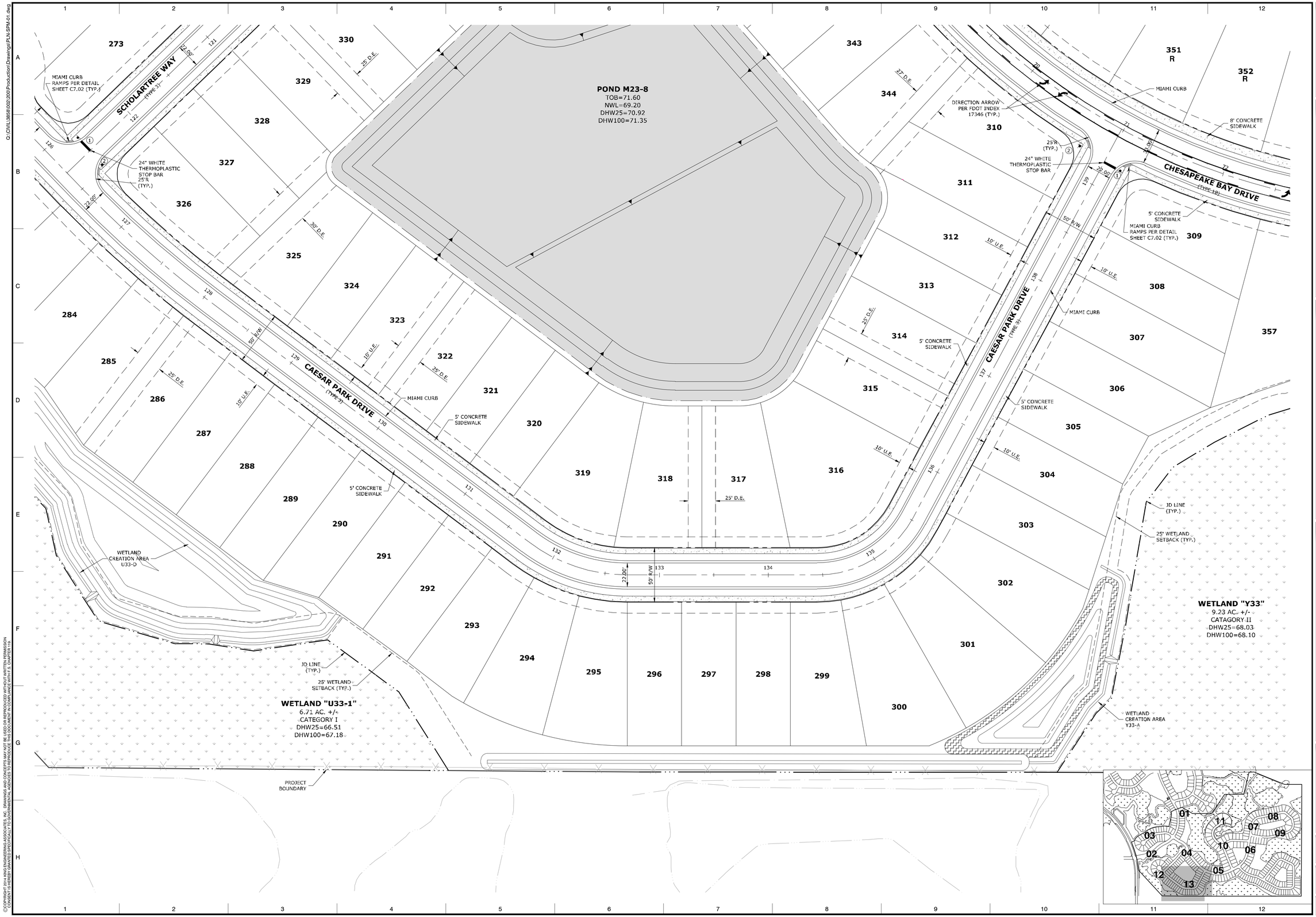

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PASCO COUNTY, FLORIDA

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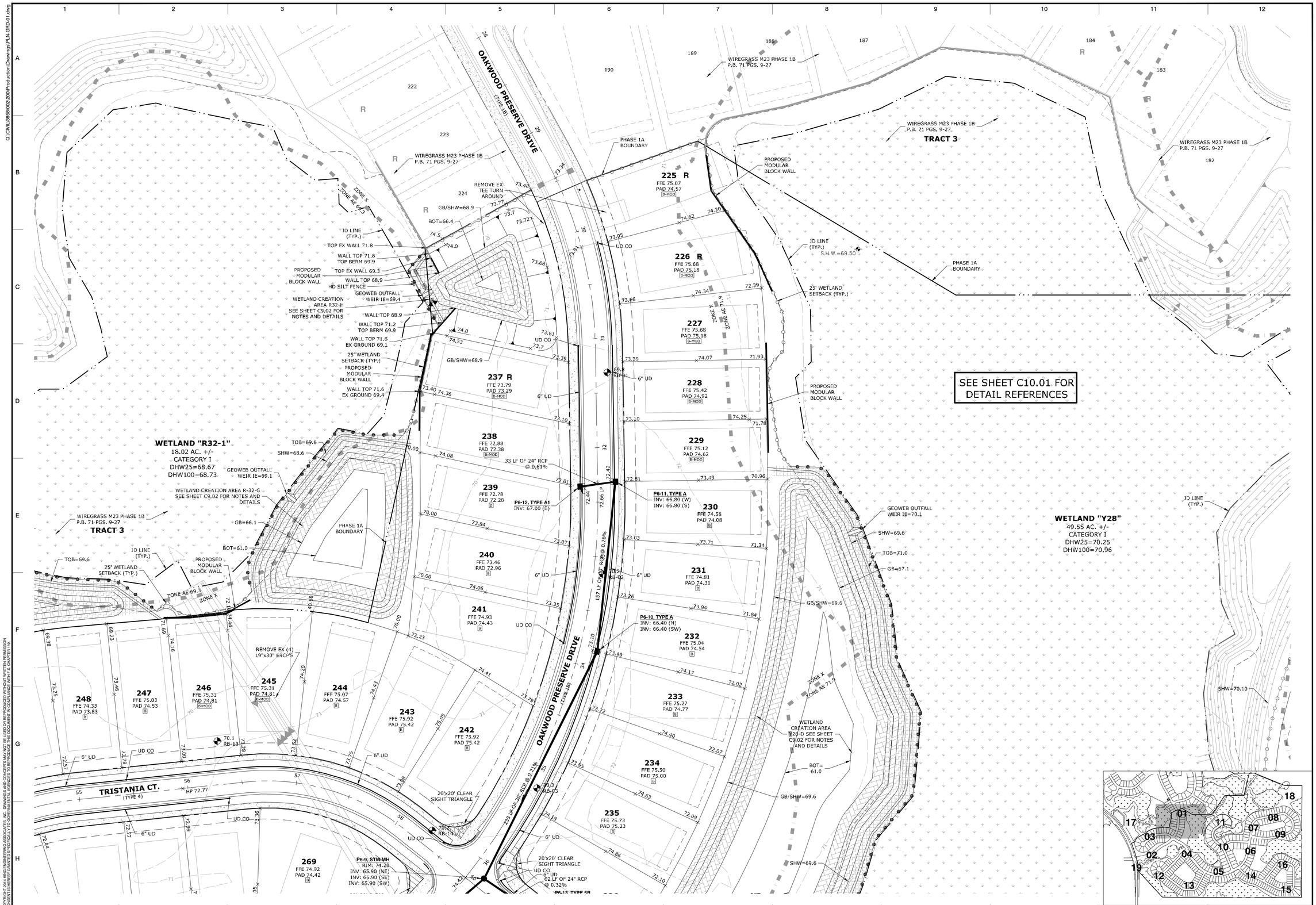

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PASCO COUNTY, FLORIDA
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TUYEN L. TRAN
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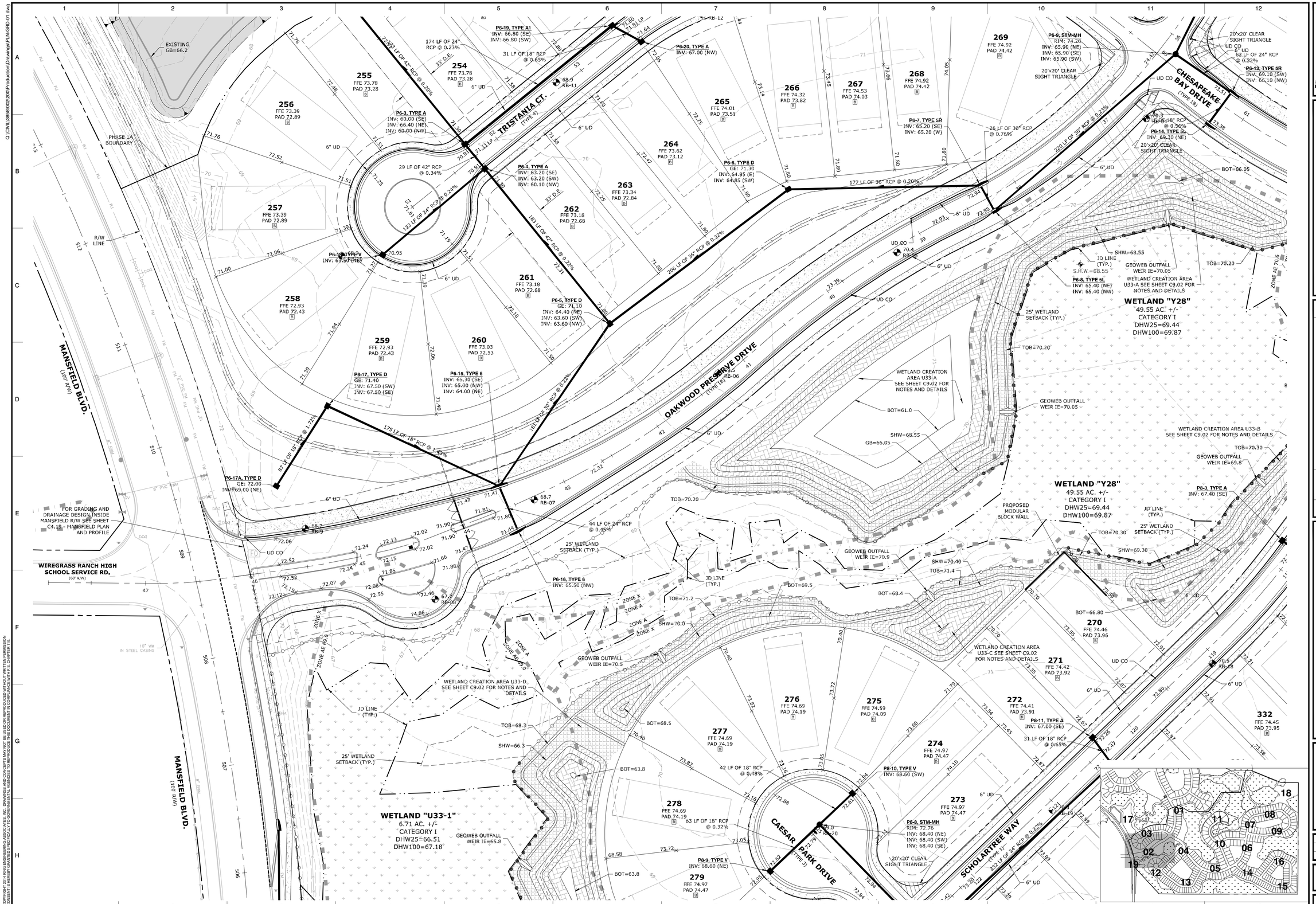

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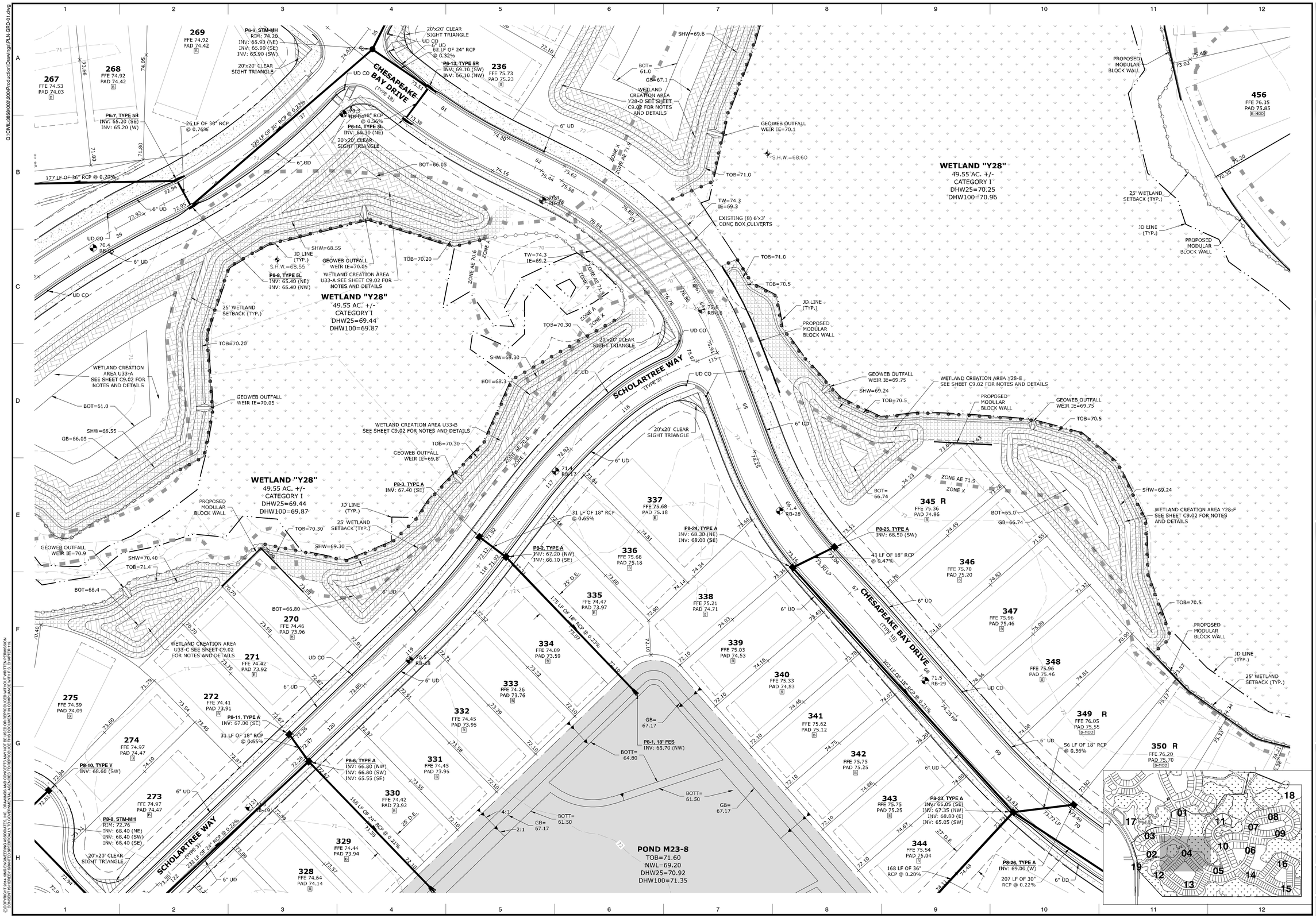

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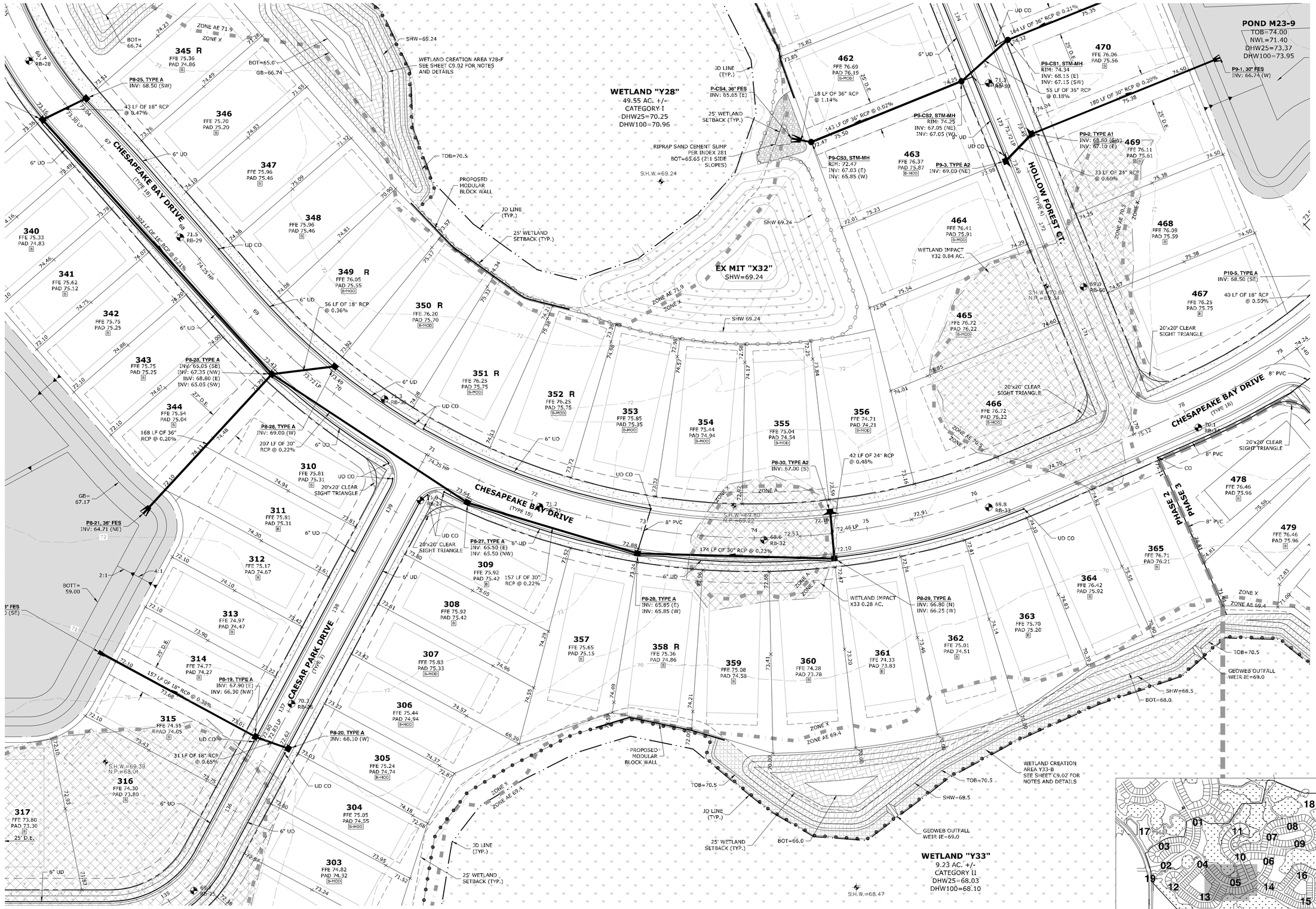

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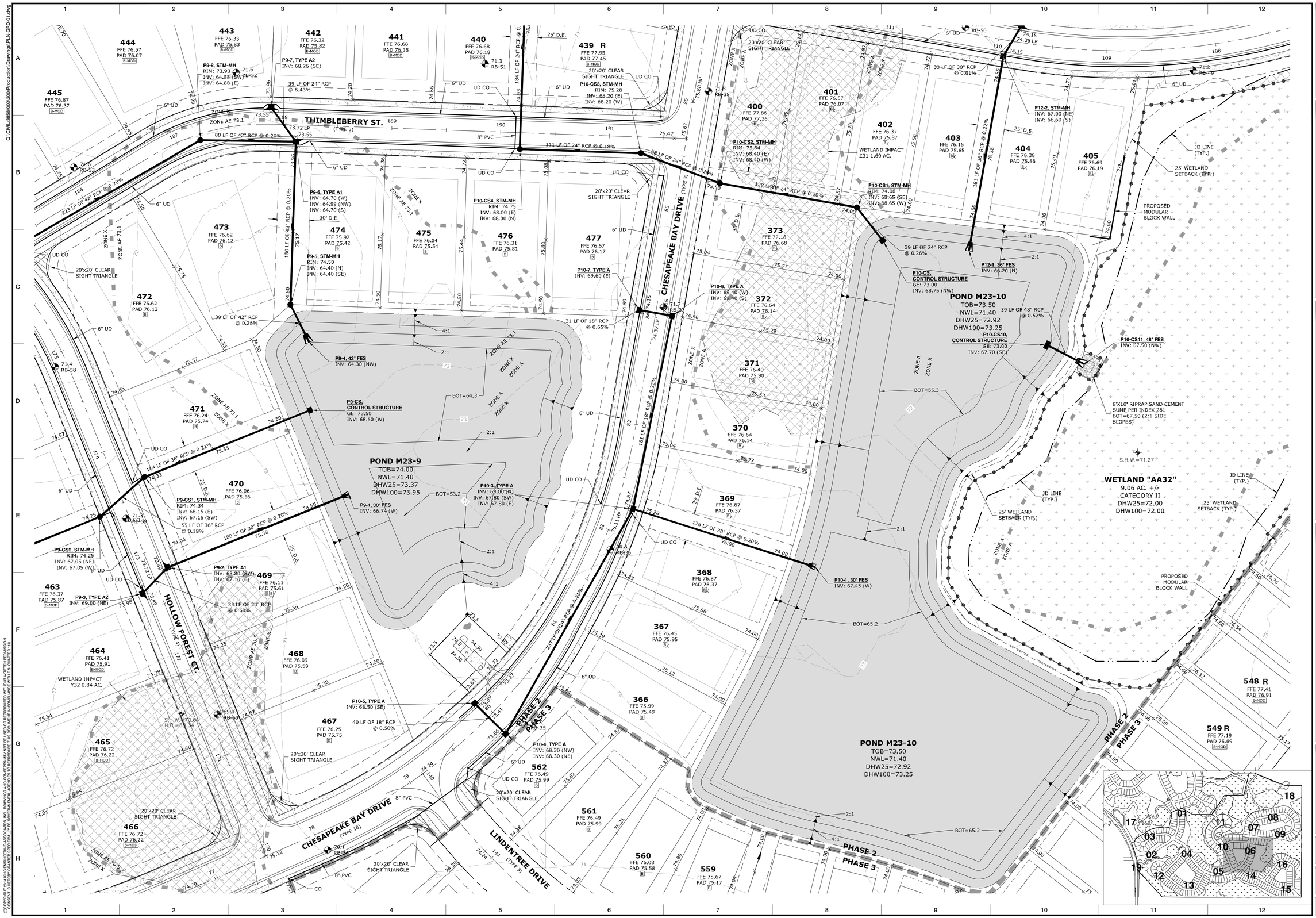

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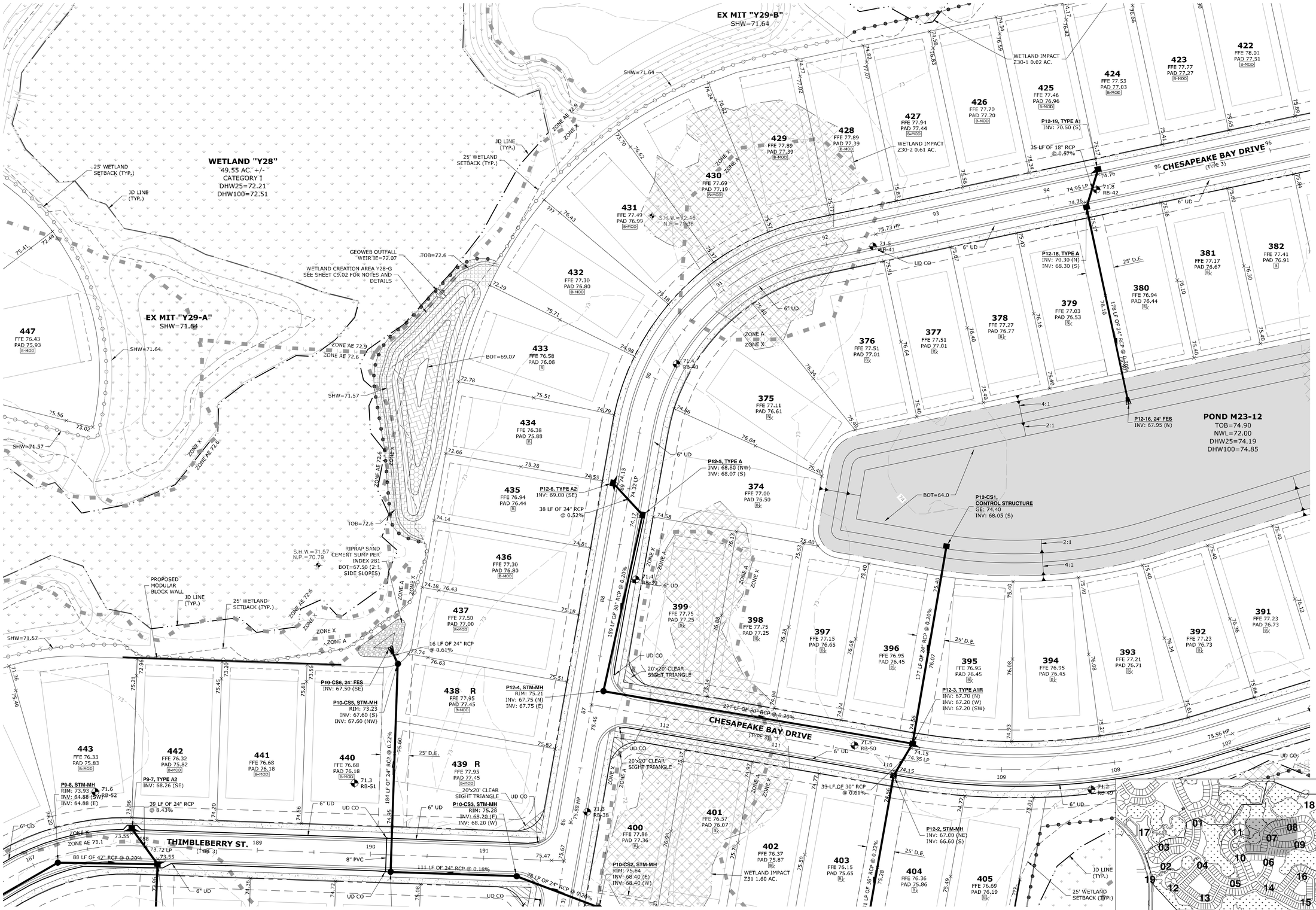

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THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA

PAVING, GRADING AND DRAINAGE PLAN

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
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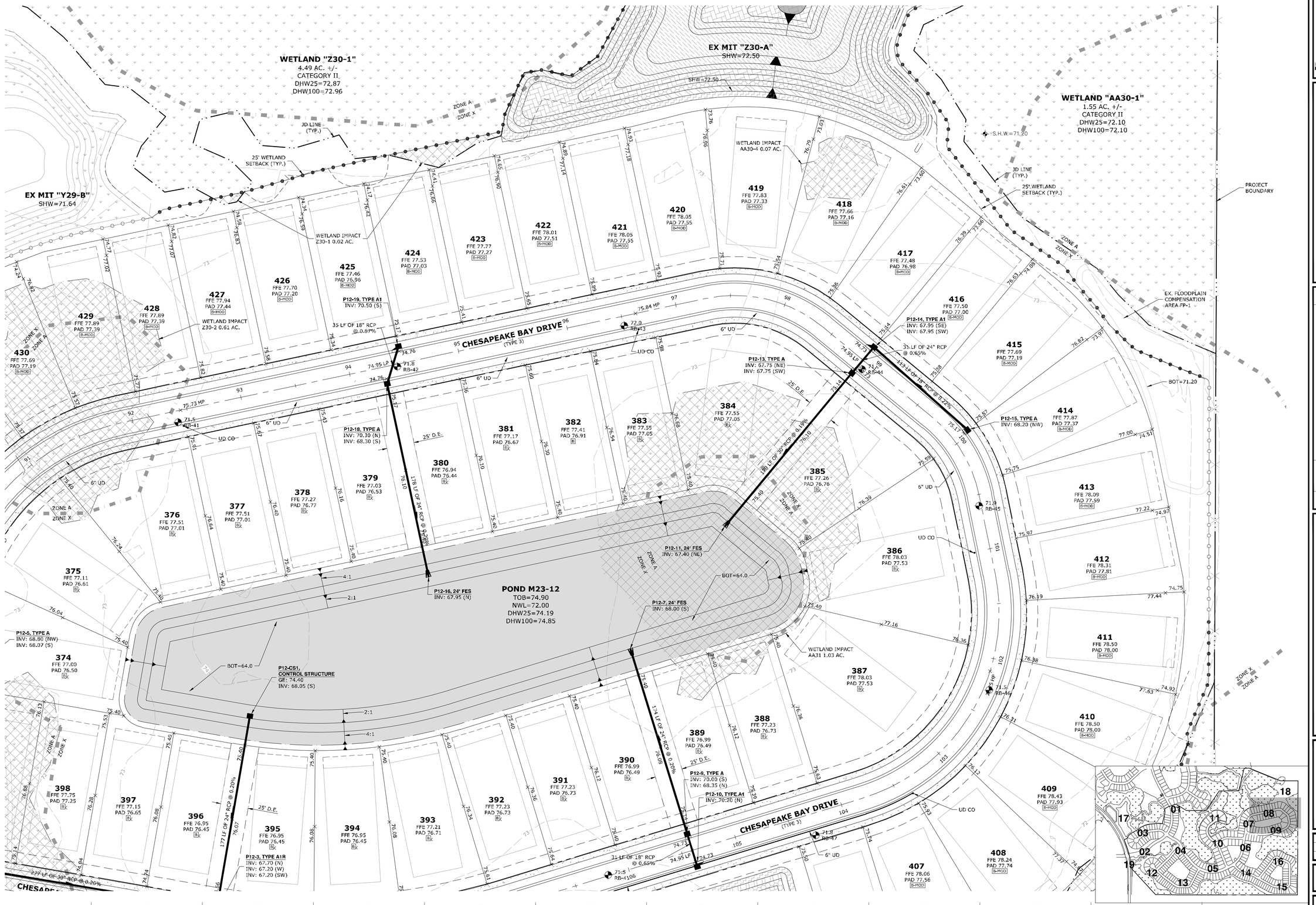

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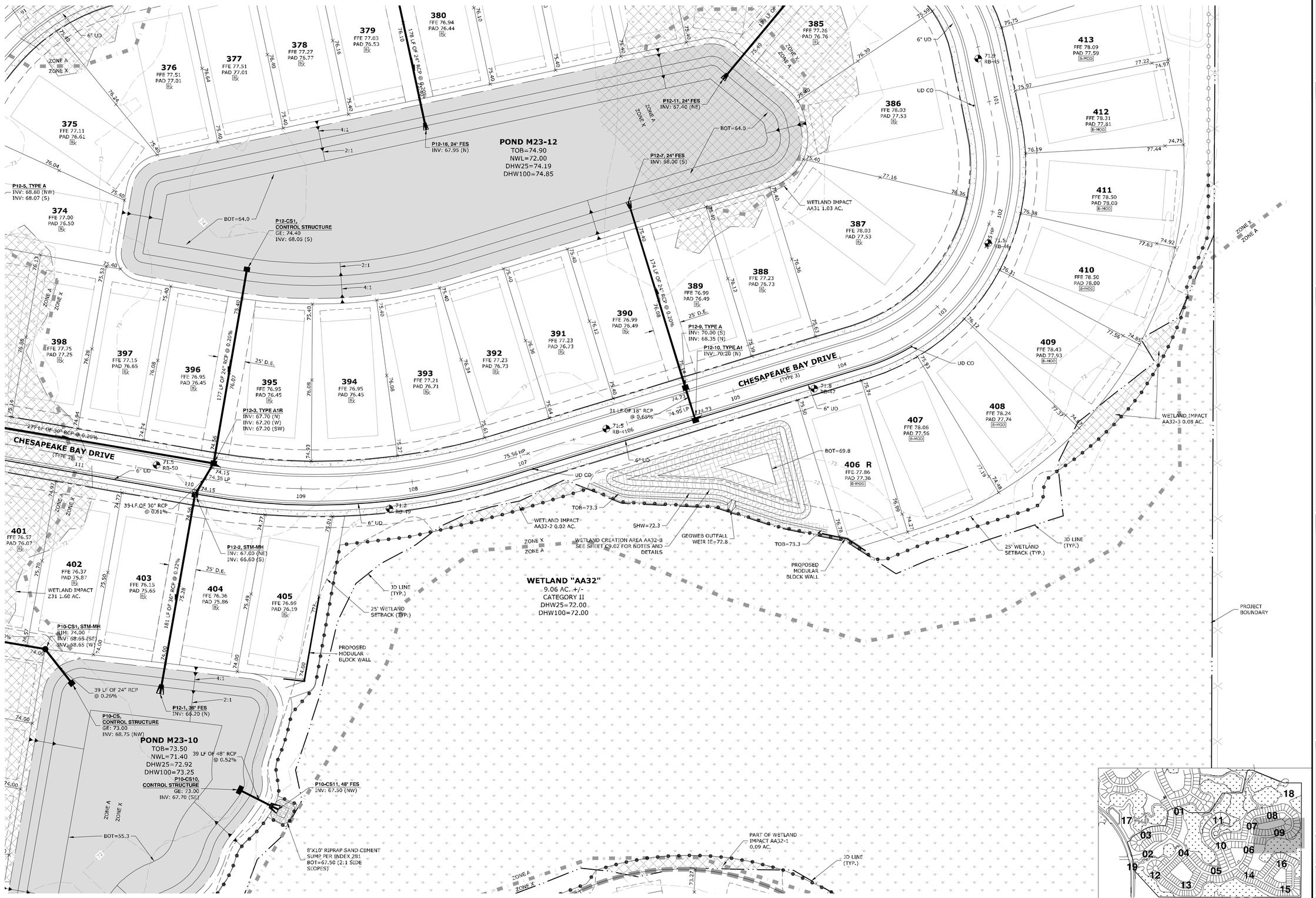

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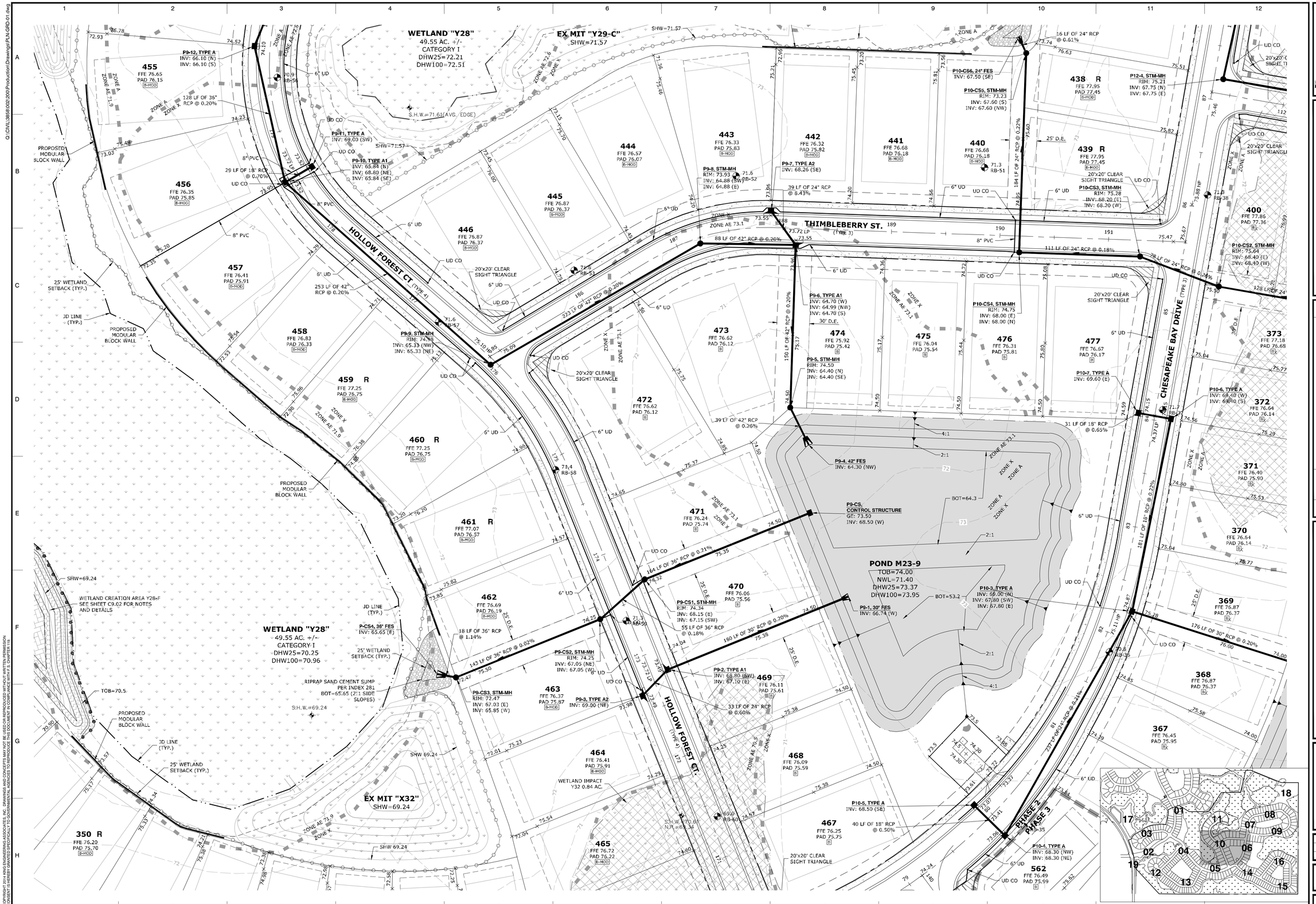

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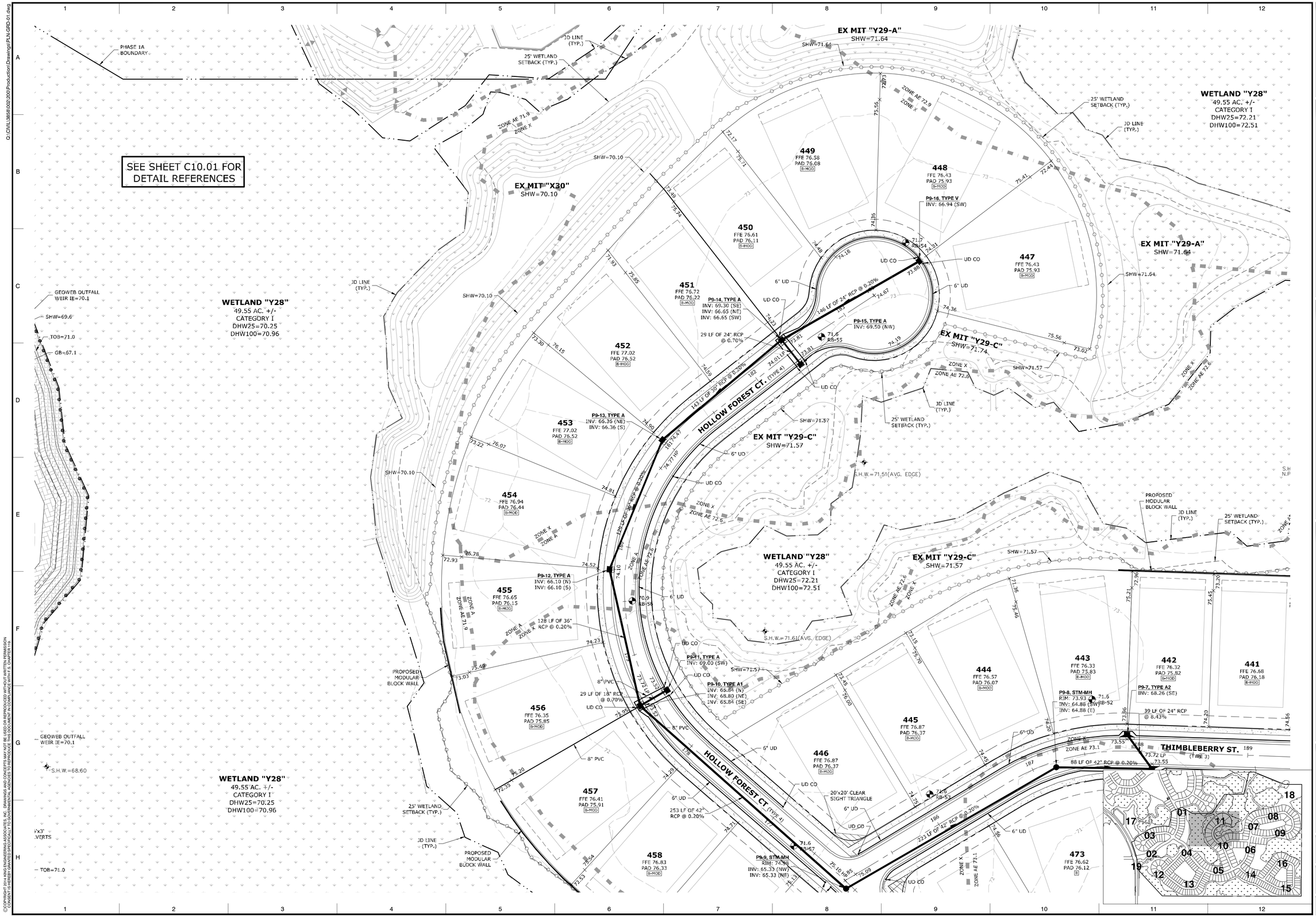

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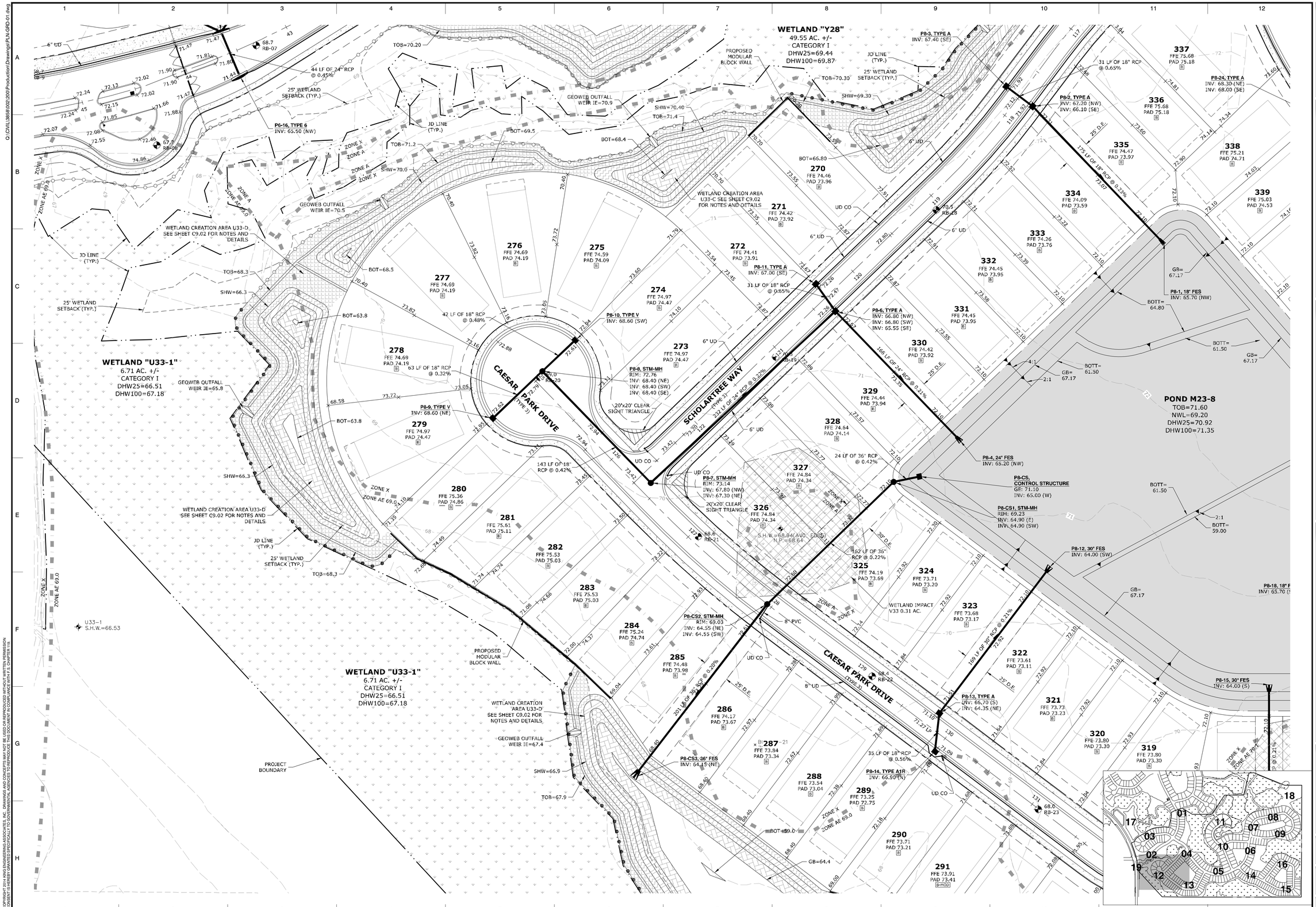

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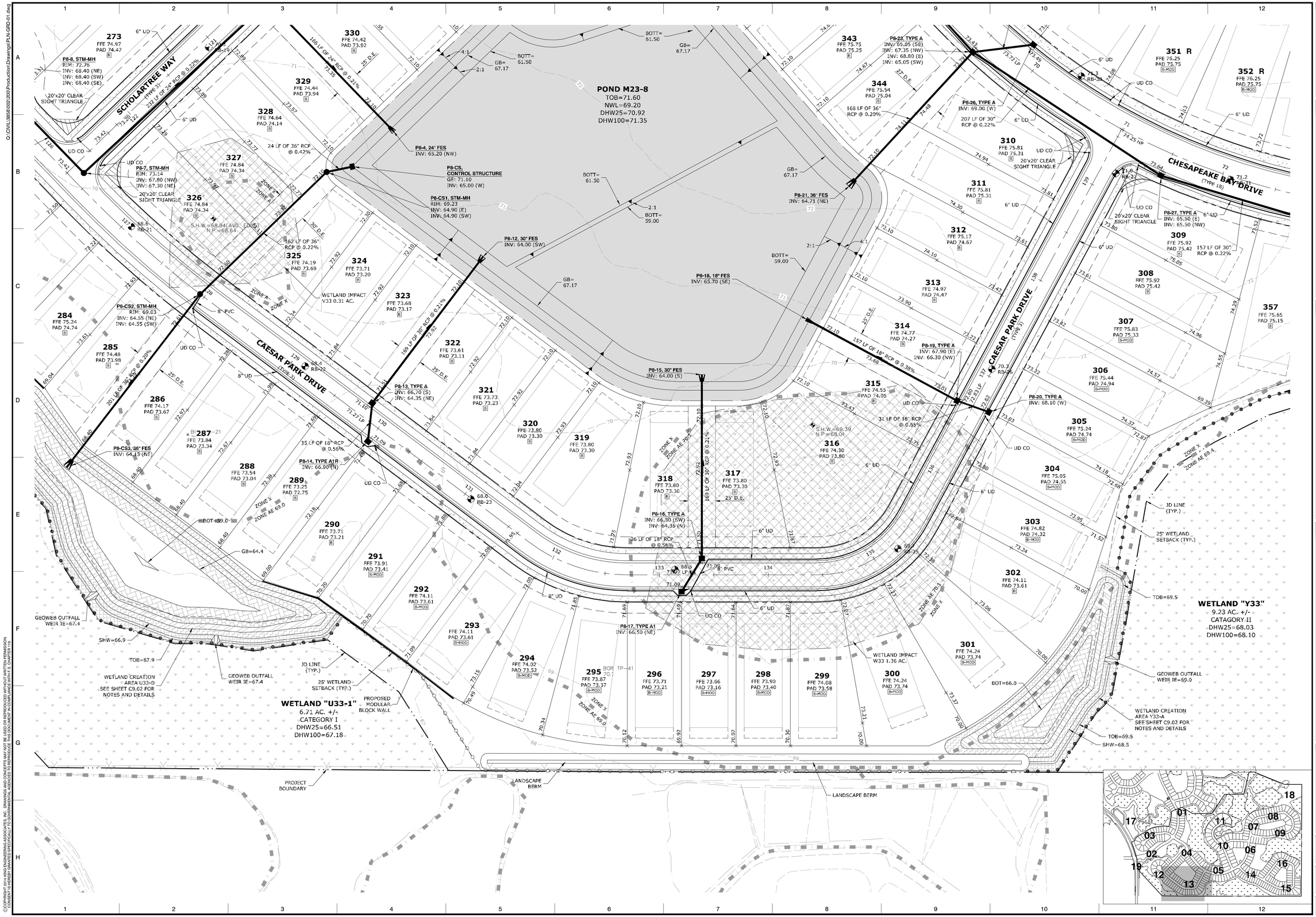

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THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

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PAVING, GRADING AND DRAINAGE PLAN

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GRADING AND DRAINAGE PLAN

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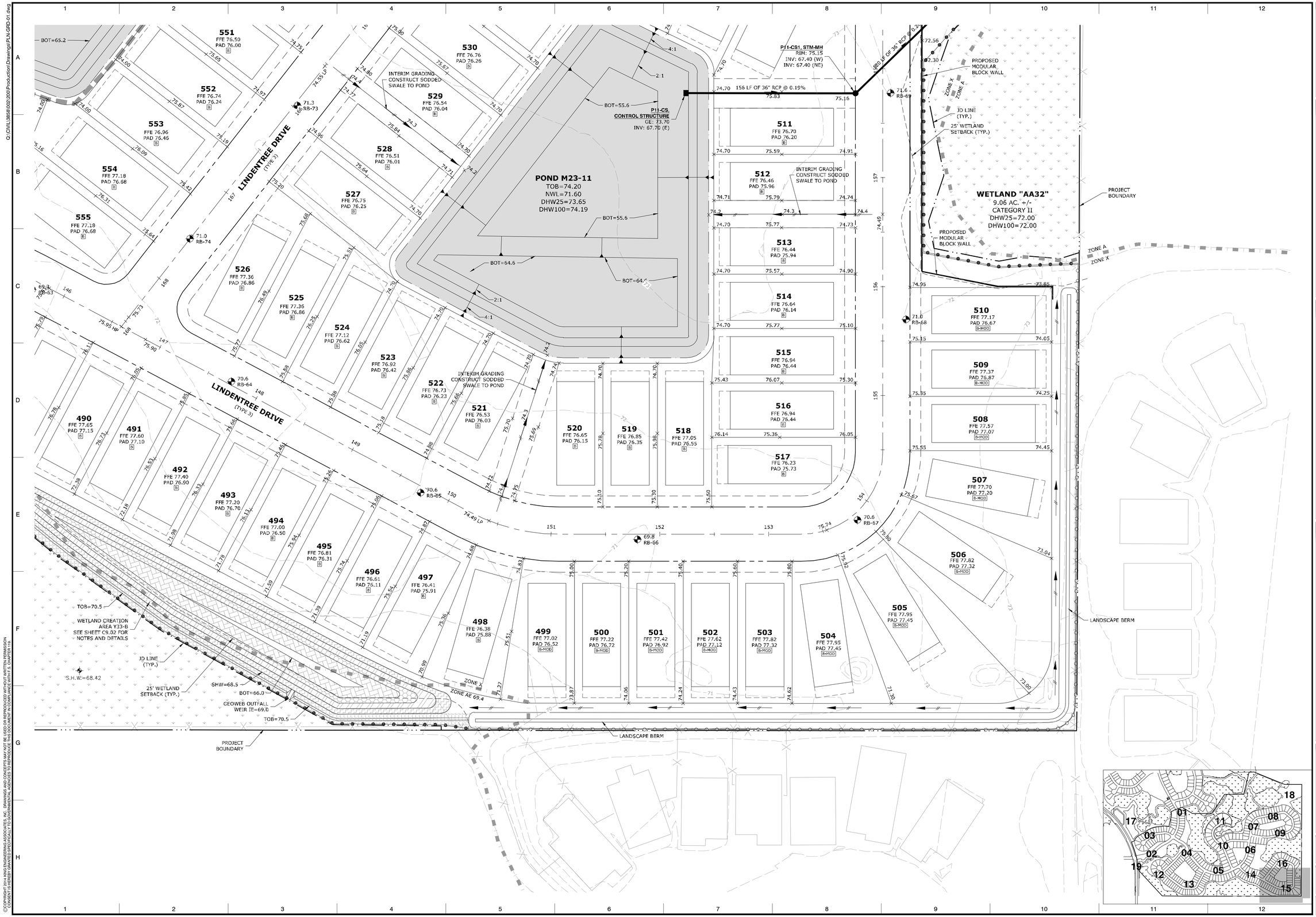

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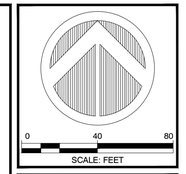

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GRADING AND DRAINAGE PLAN

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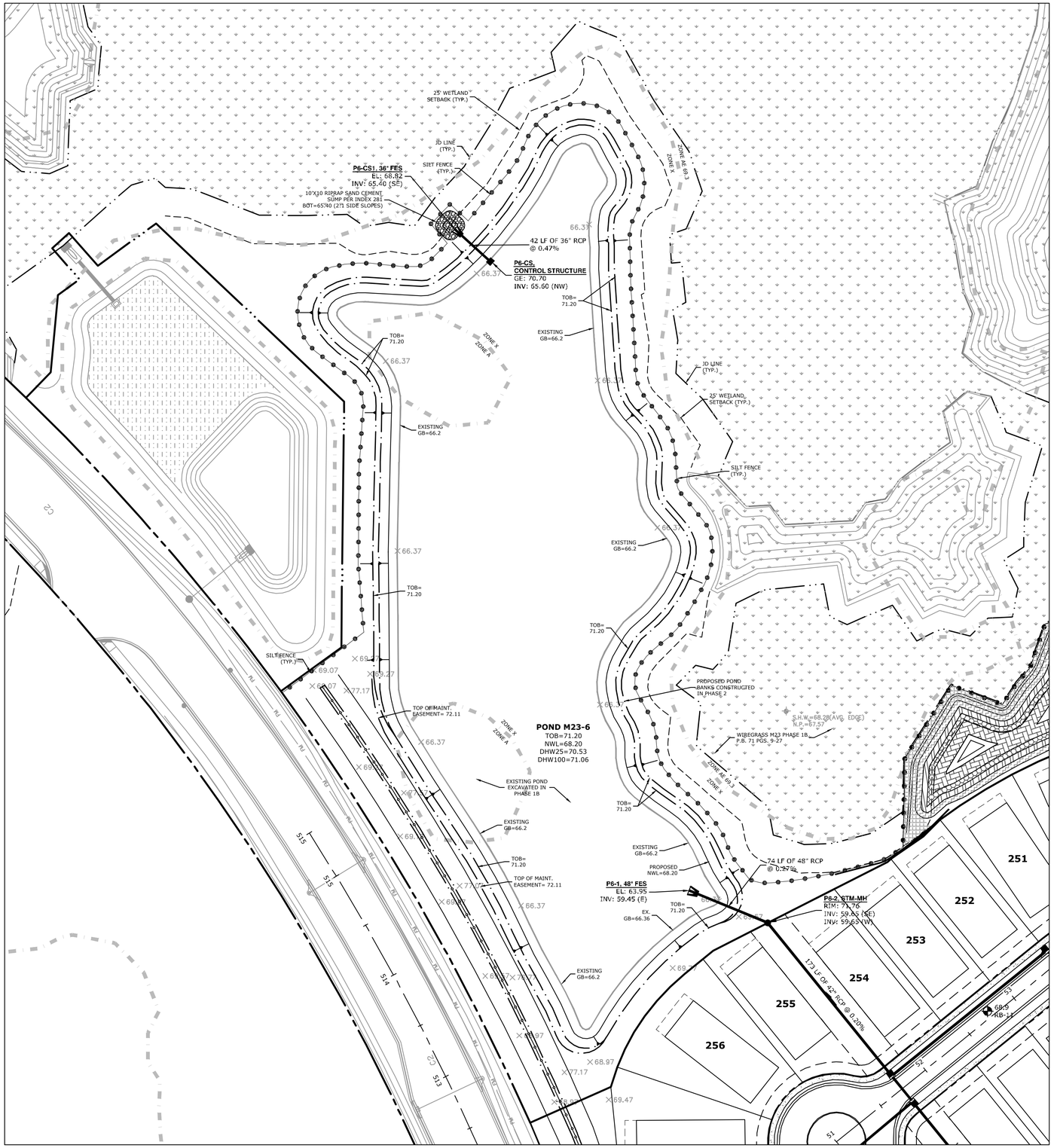

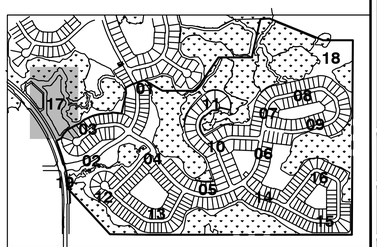

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THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

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PASCO COUNTY, FLORIDA

POND 6 GRADING AND DRAINAGE PLAN

TUYEN L. TRAN
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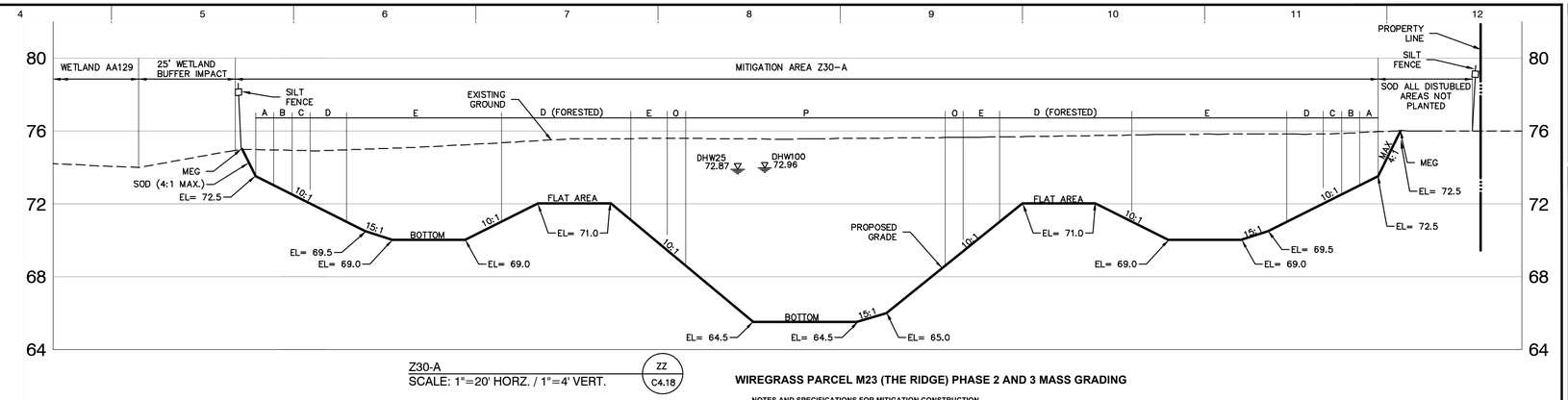
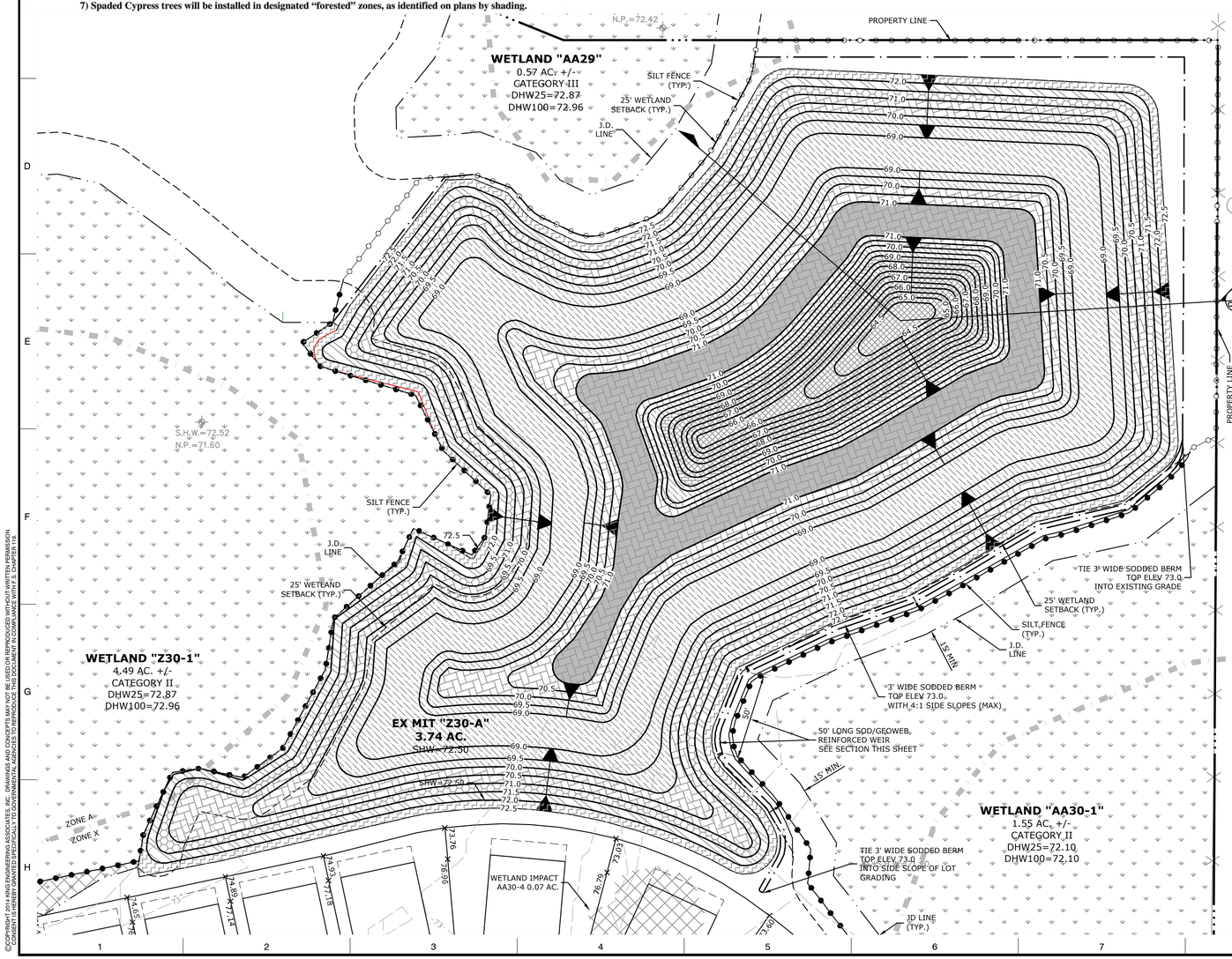
PARCEL M23 @ WIREGRASS (AKA THE RIDGE)
WETLAND MITIGATION AREA Z30-A PLANTING SCHEDULE

ZONE	ELEV.	SCIENTIFIC NAME	COMMON NAME	SPACING	SIZE	No. UNITS
A	72.0' to 72.52'	*Spartina bakeri*	Sand Cordgrass	3' O.C.	4" pot	432
	72.0' to 72.52	*Amphicarpum muhlenbergianum*	Blue Maidencane	3' O.C.	2" plug	432
	72.0' to 72.52	*Coreopsis laevenworthii*	Tickseed	3' O.C.	2" plug	150
	72.0' to 72.52	*Dichromena colorata*	White-topped Grass	3' O.C.	2" plug	150
	72.0' to 72.52	*Eragrostis spectabilis*	Purple Lovegrass	5' O.C.	4" pot	315
	72.0' to 72.52	*Hibiscus coccinea*	Swamp Hibiscus	5' O.C.	1 Gal.	105
	72.0' to 72.52	*Ilex cassine*	Dahoon Holly	8' O.C.	3 Gal.	--
	72.0' to 72.52	*Acer rubrum*	Red Maple	8' O.C.	3 Gal.	--
B	71.5' to 72.0'	*Canna flaccida*	Golden Canna	3' O.C.	4" pot	300
	71.5' to 72.0'	*Juncus effusus*	Soft Rush	3' O.C.	2" plug	300
	71.5' to 72.0'	*Cladium jamaicense*	Sawgrass	3' O.C.	4" pot	240
	71.5' to 72.0'	*Panicum hemitomon*	Maidencane	3' O.C.	2" plug	360
	71.5' to 72.0'	*Itea virginica*	Sweet Pepper	5' O.C.	1 Gal.	85
	71.5' to 72.0'	*Fraxinus carolinianus*	Pop Ash	8' O.C.	3 Gal.	32
	71.5' to 72.0'	*Taxodium distichum*	Bald Cypress	8' O.C.	3 Gal.	32
C	71.0' to 71.5'	*Pontederia cordata*	Pickerelweed	3' O.C.	4" pot	390
	71.0' to 71.5'	*Eleocharis cellulosa*	Coastal Spikerush	3' O.C.	4" pot	390
	71.0' to 71.5'	*Sagittaria latifolia*	Common Arrowhead	3' O.C.	4" pot	390
	71.0' to 71.5'	*Saururus cernuus*	Lizard's Tail	3' O.C.	4" pot	--
	71.0' to 71.5'	*Taxodium distichum*	Bald Cypress	10' O.C.	SPADE	164
D	70.5' to 71.0'	*Scirpus validus*	Soft-stem Bulrush	3' O.C.	4" pot	1710
	70.5' to 71.0'	*Thalia geniculata*	Alligator Flag	3' O.C.	4" pot	1710
	70.0' to 70.5'	*Scirpus californicus*	Giant Bulrush	5' O.C.	4" pot	1110
	70.0' to 70.5'	*Nelumbo lutea*	American Lotus	5' O.C.	B.R.	125
E	69.0' to 70.0'	*Nuphar luteum*	Spatterdock	5' O.C.	B.R.	700
	69.0' to 70.0'	*Nymphaea odorata*	Fragrant Water Lily	5' O.C.	B.R.	1620

Notes:
1) Plants to be obtained from local, licensed nursery.
2) Plants to be installed in naturalistic groupings where possible.
3) Substitution of equivalent size, bare root/collected material may be acceptable if verified by King Ecologists.
4) Substitution of species providing equivalent function may be acceptable based on availability at time of planting King Ecologists must review all proposed substitutions prior to approval for use.
5) O.C. = On Center
6) B.R. = Bare Root
7) Spaded Cypress trees will be installed in designated "forested" zones, as identified on plans by shading.





WIREGRASS PARCEL M23 (THE RIDGE) PHASE 2 AND 3 MASS GRADING

NOTES AND SPECIFICATIONS FOR MITIGATION CONSTRUCTION

IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE CONSTRUCTION OF, THE SUITABILITY OF, AND THE PLANTING OF THE MITIGATION AREAS WITH HIS SUBCONTRACTOR(S), IF ANY, TO INSURE THAT THE PLANTING BEDS ARE APPROPRIATE FOR THE PLANTINGS AND IN CONFORMANCE WITH THE CRITERIA BELOW. SOME INITIAL CONSTRUCTION HAS BEEN CONDUCTED WITHIN THE LIMITS OF WETLAND MITIGATION AREA Z30-A. SPECIFICALLY, THE MITIGATION SITE WAS CLEARED AND PARTIAL EXCAVATION OF THE INTERIOR OF THE MITIGATION AREA WAS CONDUCTED IN ORDER TO OBTAIN FILL MATERIAL FOR PHASE 1 LOT CONSTRUCTION. **THE CONTRACTOR WILL BE RESPONSIBLE FOR VERIFYING THE EXTENT OF THE PREVIOUS CONSTRUCTION BY OTHERS, AND WILL BE RESPONSIBLE FOR MAKING ANY CORRECTIONS TO THE PREVIOUSLY CONSTRUCTED GRADES AND/OR CLEARING AREAS IN ORDER TO ACHIEVE THE DESIGN GRADES AND PLANTING AREAS.** MITIGATION AREA Z30-A WILL BE CREATED AS FOLLOWS:

1) THE CONTRACTOR SHALL COMMENCE THE CONSTRUCTION OF THE MITIGATION AREA CONCURRENT WITH THE CONSTRUCTION OF THE WETLAND IMPACT AREAS. THE CONTRACTOR MUST PLAN TO EXCAVATE THE MITIGATION SITE, TRANSLOCATE TREES VIA TREE SPADING, SCRAPE ORGANIC TOPSOIL FROM AUTHORIZED WETLAND IMPACT AREAS (SEE EXCEPTIONS BELOW), SPREAD THE SOILS FROM THE PERMITTED WETLAND IMPACT AREAS TO ACHIEVE FINAL DESIGN GRADES AND COMPLETE THE PLANTING OF THE MITIGATION AREA (I.E. **COMPLETE ALL ASPECTS OF CONSTRUCTION AND PLANTING**) WITHIN 120 DAYS OF THE COMMENCEMENT DATE UNLESS A TIME EXTENSION IS APPROVED IN WRITING BY THE DISTRICT.
2) THE CONTRACTOR WILL FIELD RE-STAKE THE LIMITS OF CLEARING ASSOCIATED WITH MITIGATION AREA Z30-A IN AN EFFORT TO VERIFY THE PREVIOUS CONSTRUCTION STAKING, AND TO CONFIRM THAT SILT FENCING IS INSTALLED IN THE LOCATION(S) INDICATED BY THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAKING ANY CORRECTIONS TO THE LOCATIONS OF REQUIRED SILT FENCING.
3) MITIGATION AREA Z30-A WILL BE EXCAVATED AND ROUGH GRADED TO ELEVATIONS THAT CORRESPOND TO SIX (6) TO 12 INCHES LOWER THAN THE DESIGN GRADES AND PLAN SPECIFICATIONS. AFTER ROUGH GRADING, THE CONTRACTOR WILL DOCUMENT REPRESENTATIVE GRADE ELEVATIONS BY ONE OF THE FOLLOWING METHODS: CONTRACTOR WILL COLLECT REPRESENTATIVE GRADE ELEVATIONS AND WILL PROVIDE AN INITIAL AS-BUILT SURVEY DRAWING IN ORDER TO DOCUMENT THE ROUGH-GRADED CONDITION. ALTERNATIVELY, THE CONTRACTOR WILL PROVIDE CONSTRUCTION STAKING WITH "CUT TO" ELEVATIONS MARKED ON THE STAKES SUCH THAT THE INITIAL ROUGH GRADING CAN BE FIELD VERIFIED. KING WILL BE NOTIFIED WHEN ROUGH GRADING OF THE MITIGATION AREA IS COMPLETE, AND UPON RECEIPT OF THE AS-BUILT DATA AND/OR NOTICE THAT THE CONTRACTOR HAS EXCAVATED PURSUANT TO CONSTRUCTION STAKING, KING WILL SCHEDULE AN INSPECTION TO REVIEW THE ROUGH-GRADED CONDITIONS.
4) FOLLOWING VERIFICATION OF THE ROUGH GRADING PURSUANT TO NOTE 3 ABOVE, KING WILL INSTRUCT THE CONTRACTOR TO COMPLETE THE REMAINDER OF THE MITIGATION AREA TREE SPADING AND CONSTRUCTION PURSUANT TO THE SPECIFICATIONS BELOW. IF THE CONTRACTOR HAS NOT ROUGH-GRADED THE PLANTING AREAS WITHIN 0.2-FEET OF THE SPECIFICATIONS DESCRIBED ABOVE, THE CONTRACTOR WILL RE-GRADE THE PORTIONS OF THE PLANTING AREAS THAT HAVE NOT MET THE SPECIFICATIONS. THE CONTRACTOR WILL FURNISH ADDITIONAL AS-BUILT SURVEY DRAWING(S) OR FIELD STAKING, AS NECESSARY, TO DOCUMENT THE ROUGH GRADED CONDITIONS OF ANY AREAS THAT REQUIRED RE-GRADING.
5) IF THE CONTRACTOR AND/OR HIS PLANTING SUBCONTRACTOR DETERMINE THAT THE UNDERLYING SOILS IN THE PROPOSED MITIGATION AREA ARE UNSUITABLE FOR ESTABLISHMENT OF WETLAND PLANT SPECIES, THE FORESTED PLANTING AREAS WILL BE OVER-EXCAVATED BY A MINIMUM OF 24 INCHES, AND HERBACEOUS PLANTING AREAS OVER-EXCAVATED BY A MINIMUM OF 18 INCHES, TO ALLOW THE PLACEMENT OF SOIL MATERIAL TAKEN FROM A SOURCE OF CLEAN ORGANIC OR SANDY FILL MATERIAL, TO BE IDENTIFIED BY THE CONTRACTOR AND APPROVED BY A QUALIFIED GEOTECHNICAL FIRM FOR USE IN THE MITIGATION AREA. BACKFILL MATERIAL SHALL NOT CONSIST OF UNSUITABLE MATERIALS SUCH AS CLAY, LARGE BRANCHES OR ROOTS GREATER THAN 0.25 INCH IN DIAMETER, CONSTRUCTION DEBRIS/STRIPPINGS, OR OTHER UNSUITABLE MATERIAL. THE UPPER SIX (6) TO 12 INCHES OF BACKFILL MATERIAL WILL BE TRANSLOCATED FROM THE WETLAND IMPACT AREAS, IF SUITABLE (SEE NOTE 9 BELOW). THE FINAL DESIGN GRADE WILL BE ACHIEVED BY PLACEMENT OF THE IDENTIFIED SOIL MATERIAL TAKEN FROM THE APPROVED DONOR SOURCE.
6) MITIGATION AREA Z30-A IS TO RECEIVE TREE SPADED CYPRESS TREES FROM THE ONSITE WETLAND IMPACT AREAS (AS WELL AS SOME NURSERY GROWN TREE PLANTINGS). THE CONTRACTOR AND/OR HIS SUBCONTRACTOR WILL SPADE HARVEST A MINIMUM OF 164 HEALTHY, UNDAMAGED CYPRESS TREES FROM FORESTED WETLAND IMPACT AREAS W33, X33 AND Z31, AND SPADE PLACE THEM INTO THE FORESTED MITIGATION AREA PLANTING ZONES DESIGNATED ON THE PLANTING PLAN. **IF A SUBCONTRACTOR OR SPECIFIC TREE SPADE SPECIALIST IS SELECTED TO CONDUCT THE HARVESTING AND SPADING OF CYPRESS TREES, THE CONTRACTOR WILL MAKE TREE SPADE PLANTING ZONES ACCESSIBLE TO THE SUBCONTRACTOR, WHICH MAY INCLUDE, BUT MAY NOT BE LIMITED TO, FILLING TO PROVIDE A CAUSEWAY FOR ACCESS TO THE TREE SPADE PLANTING AREAS, THE PUMPING DOWN OF WETLAND DONOR AREA WATER LEVELS TO PROVIDE ACCESS FOR TREE HARVEST, THE PUMPING DOWN OF MITIGATION SITE WATER LEVELS TO TEMPORARILY LOWER WATER STAGES FOR TREE SPADING MACHINERY ACCESS, AND GENERALLY FACILITATING THE TREE-SPADING OPERATION.**
7) THE SELECTION OF 164 OR MORE HEALTHY, UNDAMAGED CANDIDATE CYPRESS TREES FOR SPADE HARVESTING MAY BE MADE BY AN EXPERIENCED TREE SPADE SUBCONTRACTOR OR BY KING ENGINEERING ASSOCIATES, INC. (KING) ECOLOGICAL SERVICES STAFF. **CYPRESS TREES SHALL NOT BE SPADE HARVESTED FROM WETLAND IMPACT AREA AA31, EITHER ALL OR IN PART, UNLESS AUTHORIZED IN THE FIELD BY KING ECOLOGICAL SERVICES STAFF.** THE TREE PLUGS ARE TO BE PLACED SUCH THAT THE TOP SURFACE OF AN INDIVIDUAL SPADE PLUG WILL BE AT THE FINAL PROPOSED GRADE FOR A GIVEN FORESTED PLANTING ZONE. THE FINAL GRADING OF INFILL AREAS BETWEEN SPADE PLUGS, AS WELL AS THE FINAL GRADING OF ANY PROPOSED HERBACEOUS ONLY PLANTING ZONES WITHIN THE REFERENCED MITIGATION AREAS WILL BE ACHIEVED SUBJECT TO NOTE 9 BELOW.
8) THE CONTRACTOR AND/OR HIS SUBCONTRACTOR WILL STAKE AND GUY WIRE ANY TREE SPADED TREES THAT MAY REQUIRE STABILIZATION AFTER PLACEMENT WITHIN THE MITIGATION AREAS. TREE STABILIZATION WILL BE CONDUCTED PURSUANT TO STANDARD/ACCEPTED LANDSCAPE METHODS.
9) WHEN THE ROUGH GRADING HAS BEEN DOCUMENTED TO MEET THE SPECIFICATIONS ABOVE (ACCURATE WITHIN A TOLERANCE OF 0.2-FEET), AND AS DIRECTED BY KING, THE CONTRACTOR WILL BEGIN BACKFILLING THE PLANTING AREAS WITH TOPSOIL MATERIAL FROM THE PROPOSED WETLAND IMPACT (DONOR) AREAS. THE CONTRACTOR WILL SCRAPE THE UPPER 12 TO 24 INCHES OF TOPSOIL FROM THE IDENTIFIED WETLAND IMPACT AREAS, AND WILL TRANSLOCATE THE TOPSOIL MATERIAL TO THE MITIGATION SITE, WHERE THE SOILS WILL BE SPREAD TO MAKE UP THE UPPER 6 INCHES OF THE SOIL PROFILE, THEREBY ACHIEVING FINAL DESIGN GRADES ON PLANTING ZONES "E" THROUGH "O" PURSUANT TO THE CONSTRUCTION PLANS. WETLAND TOPSOIL SHOULD NOT BE PLACED WITHIN ANY GRADED AREAS LOWER THAN ELEVATION 68.5 FEET (I.E., NOT IN MITIGATION AREA ZONE "P"). **WETLAND TOPSOIL MATERIAL SHALL NOT BE TAKEN FROM WETLAND IMPACT AREA AA31, EITHER ALL OR IN PART, UNLESS AUTHORIZED IN THE FIELD BY KING ECOLOGICAL SERVICES STAFF.**
10) FOLLOWING THE FINAL GRADING, THE CONTRACTOR WILL COLLECT AS-BUILT SURVEY DATA TO DOCUMENT THE MITIGATION PERIMETER AT THE SHW ELEVATION (ELEVATION 72.5 FEET) AS WELL AS THE TOPS AND BOTTOMS OF THE WETLAND PLANTING AREAS SUFFICIENT TO DOCUMENT THE CONSTRUCTED GRADES. THE CONTRACTOR WILL PREPARE, AND PROVIDE TO KING, UPDATED AS-BUILT DRAWINGS IN ORDER TO DOCUMENT THE FINAL GRADED PLANTING ELEVATIONS. KING WILL BE NOTIFIED WHEN FINAL GRADING OF THE MITIGATION AREA IS COMPLETE, AND UPON RECEIPT OF THE AS-BUILT DATA, KING WILL SCHEDULE AN INSPECTION TO REVIEW THE FINAL GRADED CONDITIONS.
11) PLANTING OF THE HERBACEOUS GROUNDCOVER WITHIN FORESTED AND MARSH MITIGATION AREAS, AND THE NURSERY GROWN TREE PLANTINGS WITHIN THE FORESTED PLANTING ZONE, SHALL OCCUR AFTER AS-BUILT SURVEY APPROVAL AND INSPECTION OF THE MITIGATION AREA BY KING.
12)WITHIN 48 HOURS OF PLANTING, THE MITIGATION AREA WILL BE WATERED TO THE POINT OF SATURATION.
13)TO HELP PROMOTE THE ESTABLISHMENT OF THE PLANTED VEGETATION, THE MITIGATION AREA WILL BE WATERED A MINIMUM OF EVERY 15 DAYS UNTIL TIME ZERO MONITORING INSPECTIONS ARE COMPLETED BY THE AGENCIES.

MITIGATION AREA MAINTENANCE NOTES

MAINTENANCE WILL BE PERFORMED BY A QUALIFIED LOCAL CONTRACTOR VERSED IN REGULATORY AGENCY REQUIREMENTS.
MAINTENANCE WILL BE PERFORMED ON A REGULAR SCHEDULE SUCH THAT NUISANCE & EXOTIC VEGETATION IS MAINTAINED BELOW PERMIT SPECIFIED LEVELS AT ALL TIMES.
MAINTENANCE SHALL CONSIST OF HAND REMOVAL OF NUISANCE VEGETATION. HERBICIDE APPLICATION IS NOT PERMITTED WITHOUT PRIOR APPROVAL BY THE PERMITTING AGENCIES.

MITIGATION AREA MONITORING NOTES

ONSITE MITIGATION AREAS WILL BE MONITORED BY A QUALIFIED ENVIRONMENTAL SCIENTIST ACCORDING TO THE FOLLOWING CONDITIONS:
A WETLAND MITIGATION COMPLETION REPORT WILL BE PREPARED AND SUBMITTED WITHIN 30 DAYS OF COMPLETING CONSTRUCTION AND PLANTING OF THE WETLAND MITIGATION AREA(S).
UPON AGENCY INSPECTION AND APPROVAL OF THE MITIGATION AREA(S), THE MONITORING PROGRAM SHALL BE INITIATED WITH THE DATE OF THE AGENCY FIELD INSPECTION BEING THE CONSTRUCTION COMPLETION DATE OF THE MITIGATION AREA(S). MONITORING EVENTS SHALL OCCUR BETWEEN MARCH 1 AND NOVEMBER 30 OF EACH YEAR.
WETLAND MITIGATION MONITORING REPORTS SHALL BE PREPARED AND SUBMITTED TO THE PERMITTING AGENCIES ACCORDING TO THE PERMIT-SPECIFIED SCHEDULE. SPECIFIC CONDITIONS OF THE CORPS PERMIT REQUIRE THAT HERBACEOUS SYSTEMS BE MONITORED AND RELATED REPORTS SUBMITTED UNTIL SUCCESS CRITERIA ARE MET, BUT IN NO CASE LESS THAN FIVE YEARS, AND THAT FORESTED SYSTEMS BE MONITORED AND RELATED REPORTS SUBMITTED UNTIL SUCCESS CRITERIA ARE MET, BUT IN NO CASE LESS THAN 10 YEARS. MONITORING REPORTS MUST BE SUBMITTED TO THE PERMITTING AGENCIES ON THE ONE YEAR ANNIVERSARY DATE OF INITIATION OF MONITORING.
MONITORING REPORTS SHALL PROVIDE DOCUMENTATION THAT A SUFFICIENT NUMBER OF MAINTENANCE INSPECTION/ACTIVITIES WERE CONDUCTED TO MAINTAIN SITE(S) IN COMPLIANCE ACCORDING TO PERMIT CONDITIONS. NOTE THAT THE PERFORMANCE OF MAINTENANCE INSPECTIONS AND MAINTENANCE ACTIVITIES WILL NORMALLY NEED TO BE CONDUCTED MORE FREQUENTLY THAN THE COLLECTION OF OTHER MONITORING DATA TO MAINTAIN THE MITIGATION SITE(S) IN COMPLIANCE WITH PERMIT CONDITIONS. EACH MONITORING REPORT WILL INCLUDE THE FOLLOWING:
- DATE OF PLANTING AND NUMBER OF PLANTS INSTALLED;
- SOIL STABILIZATION MEASURES;
- PERCENT SURVIVAL FOR ALL PLANTED SPECIES;
- PERCENT COVERAGE FOR RECRUITED SPECIES;
- NOTES ON WILDLIFE OBSERVATIONS;
- WATER QUALITY OBSERVATIONS;
- WATER LEVEL DATA RELATIVE TO ESTABLISHED SEASONAL HIGH WATER LEVELS;
- PHOTOGRAPHIC DOCUMENTATION FROM FIXED POINT PHOTO STATIONS;
- PROBLEMS ENCOUNTERED AND CORRECTIVE ACTIONS RECOMMENDED; AND
- DISCUSSION OF DEGREE OF SUCCESS CRITERIA ATTAINED.
-

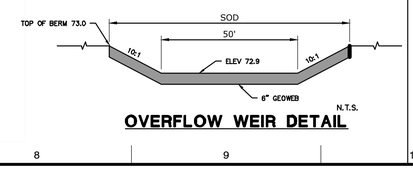
CONTINGENCY REPLANTING/REMEDIATION PLAN

SHOULD MONITORING OF THE HERBACEOUS COMPENSATION ZONES INDICATE THAT COVERAGE OF DESIRABLE WETLAND SPECIES DOES NOT EQUAL OR EXCEED 50 PERCENT BY THE END OF THE FIRST YEAR, 70 PERCENT BY THE SECOND YEAR OR 85 PERCENT BY THE END OF THE THIRD YEAR POST CREATION, OR IF FORESTED COMPENSATION ZONES NOT EXHIBIT A MINIMUM OF 85 PERCENT SURVIVAL AT ANY TIME, THOSE WETLAND MITIGATION AREAS (OR PORTIONS THEREOF) NOT MEETING THE TARGET LEVELS WILL RECEIVE PLANTINGS (AS APPROVED BY THE REGULATORY AGENCIES) TO AUGMENT THE VEGETATIVE COVERAGE.
IF REQUIRED, PLANTING WILL BE CONDUCTED ON AN ANNUAL BASIS TO ENSURE SUFFICIENT COVERAGE TO MEET THE MINIMUM SUCCESS CRITERIA.

LEGEND

ZONE PATTERN	ZONE (ELEVATION)		
	ZONE A (0.0' TO -0.5')		ZONE E (-2.5' TO -3.5')
	ZONE B (-0.5' TO -1.0')		ZONE O (-3.5' TO -4.0')
	ZONE C (-1.0' TO -1.5')		ZONE P (> -4.0')
	ZONE D (-1.5' TO -2.5')		FORESTED AREA

*ZONE ELEVATIONS ARE RELATIVE TO SEASONAL HIGH WATER ELEVATION.



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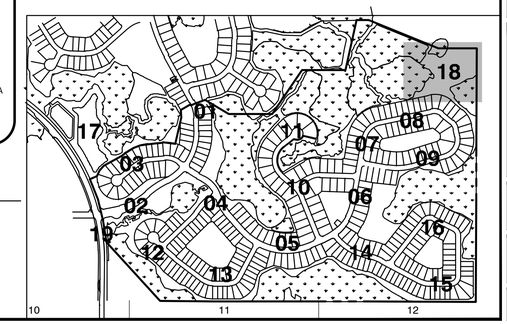

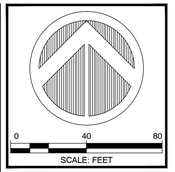

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PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA

MITIGATION PLAN

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
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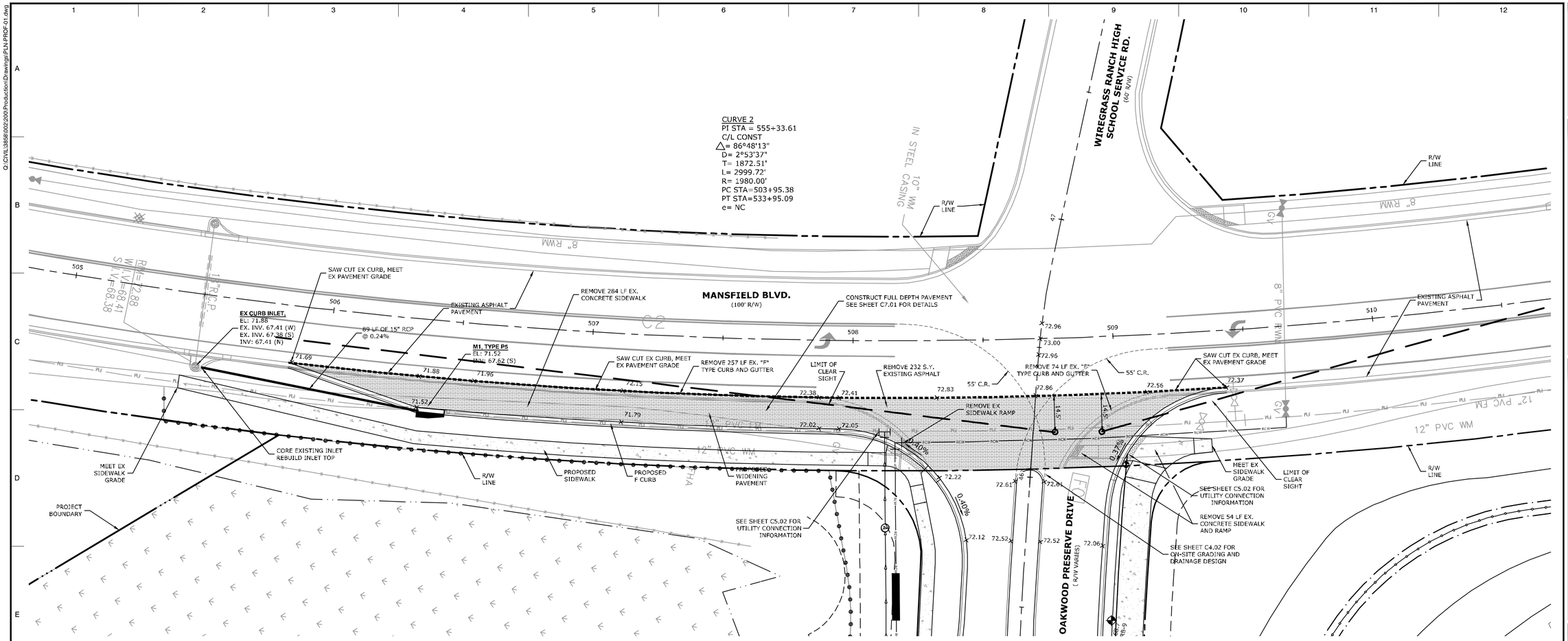

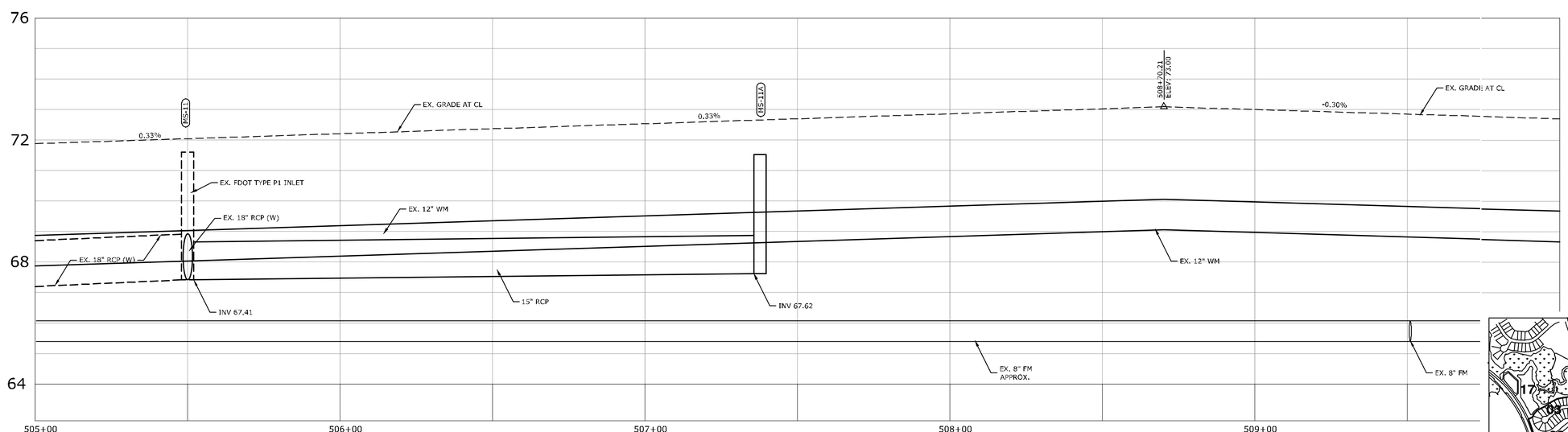

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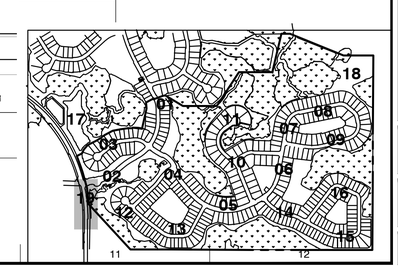

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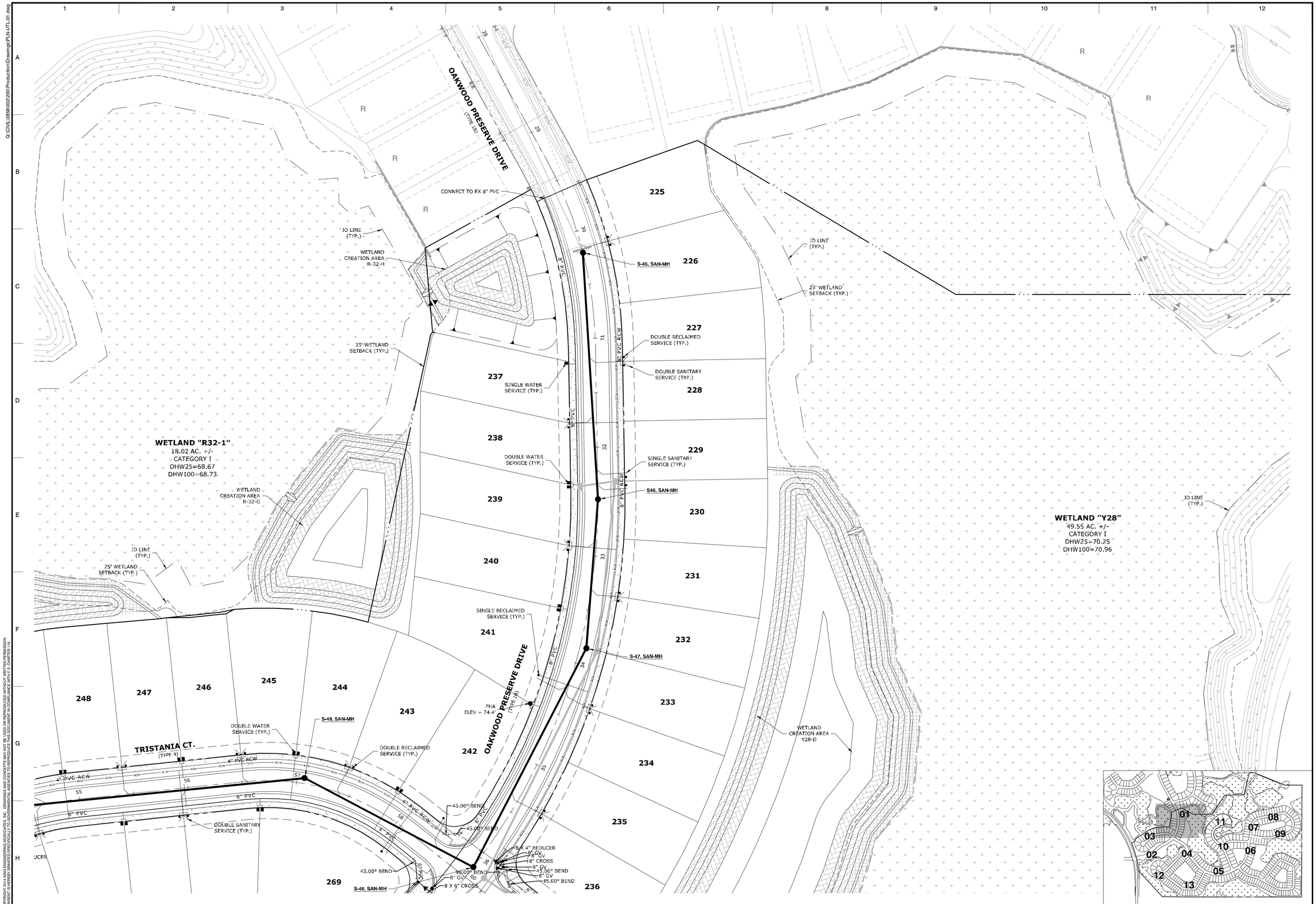

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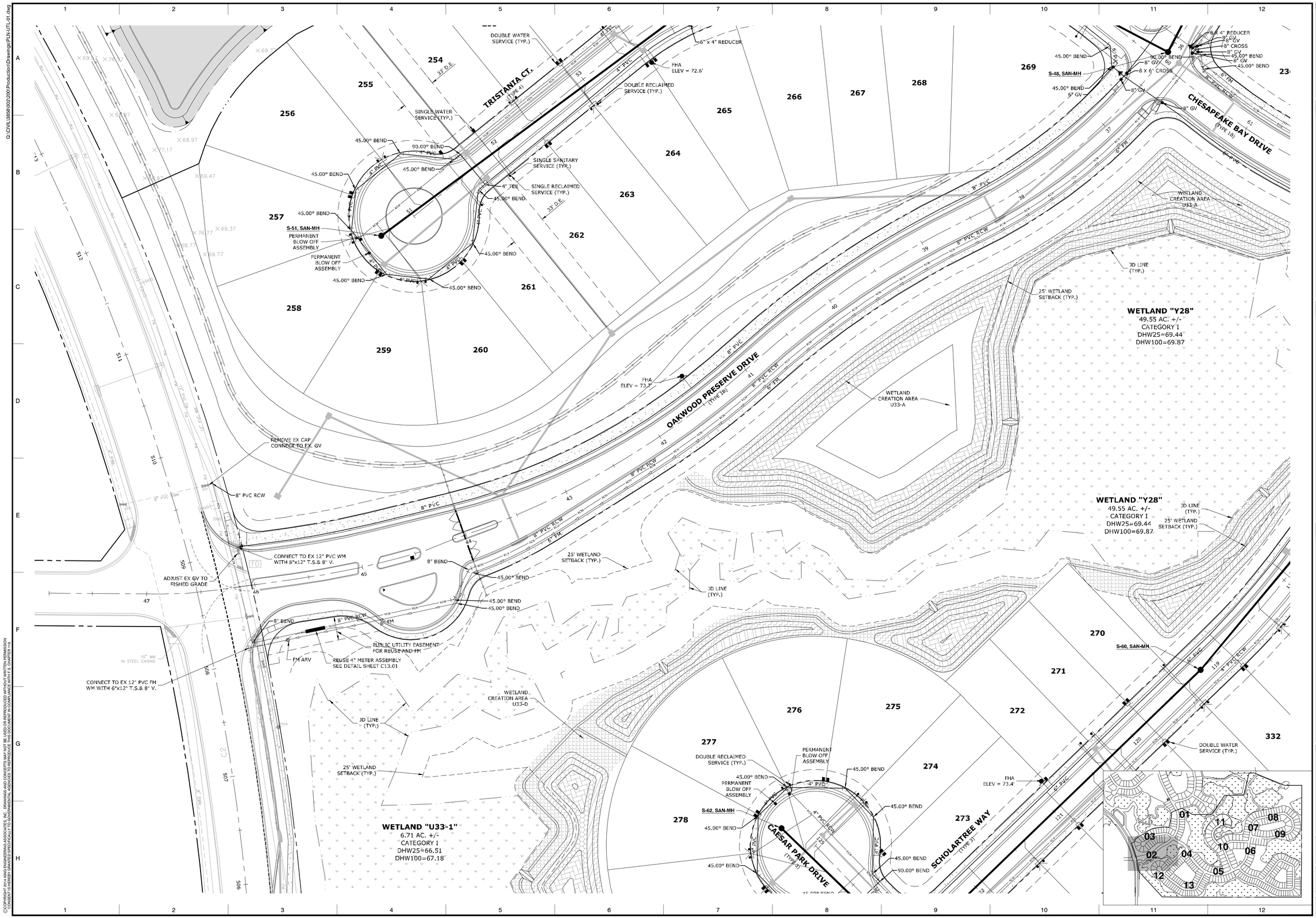

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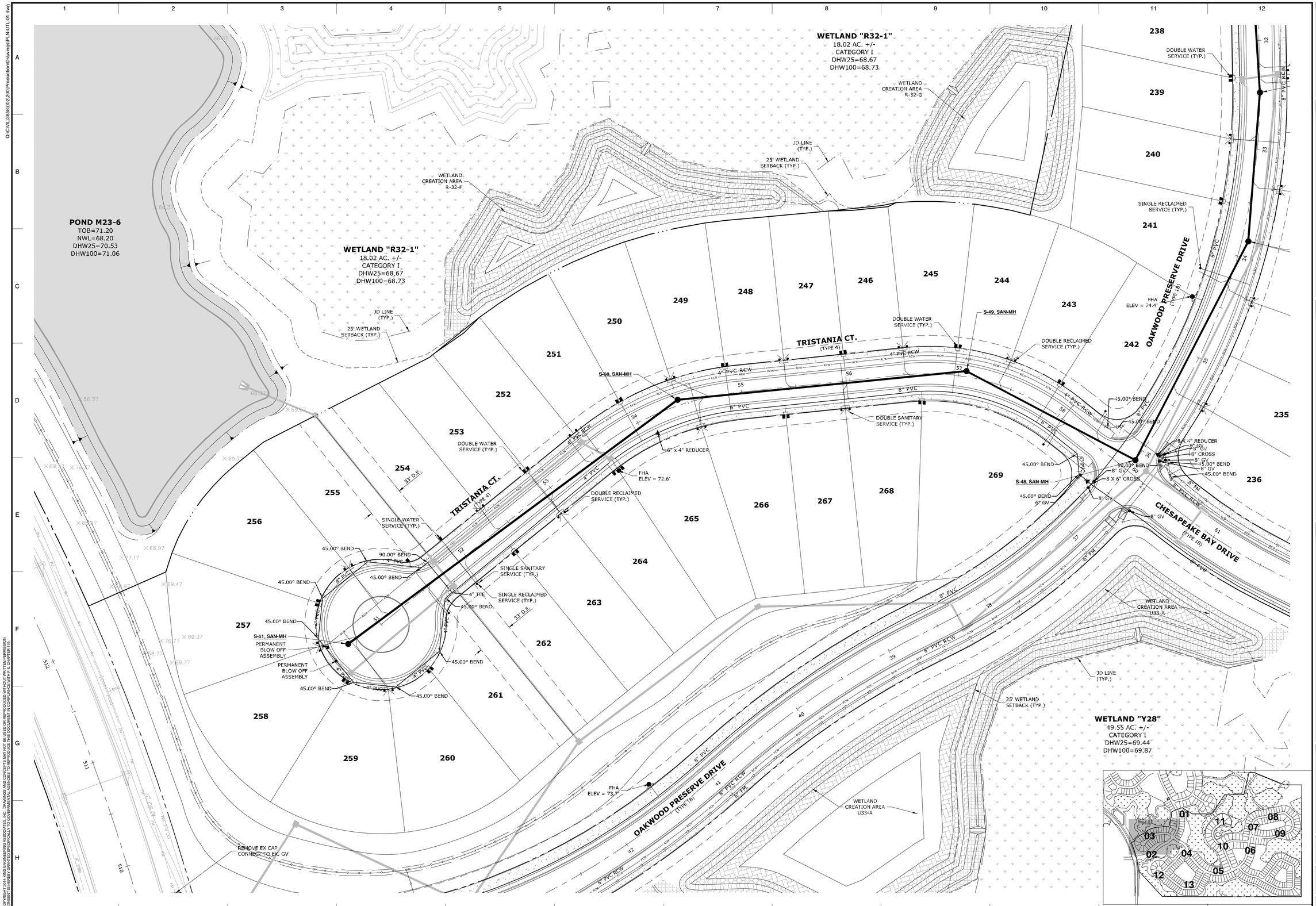

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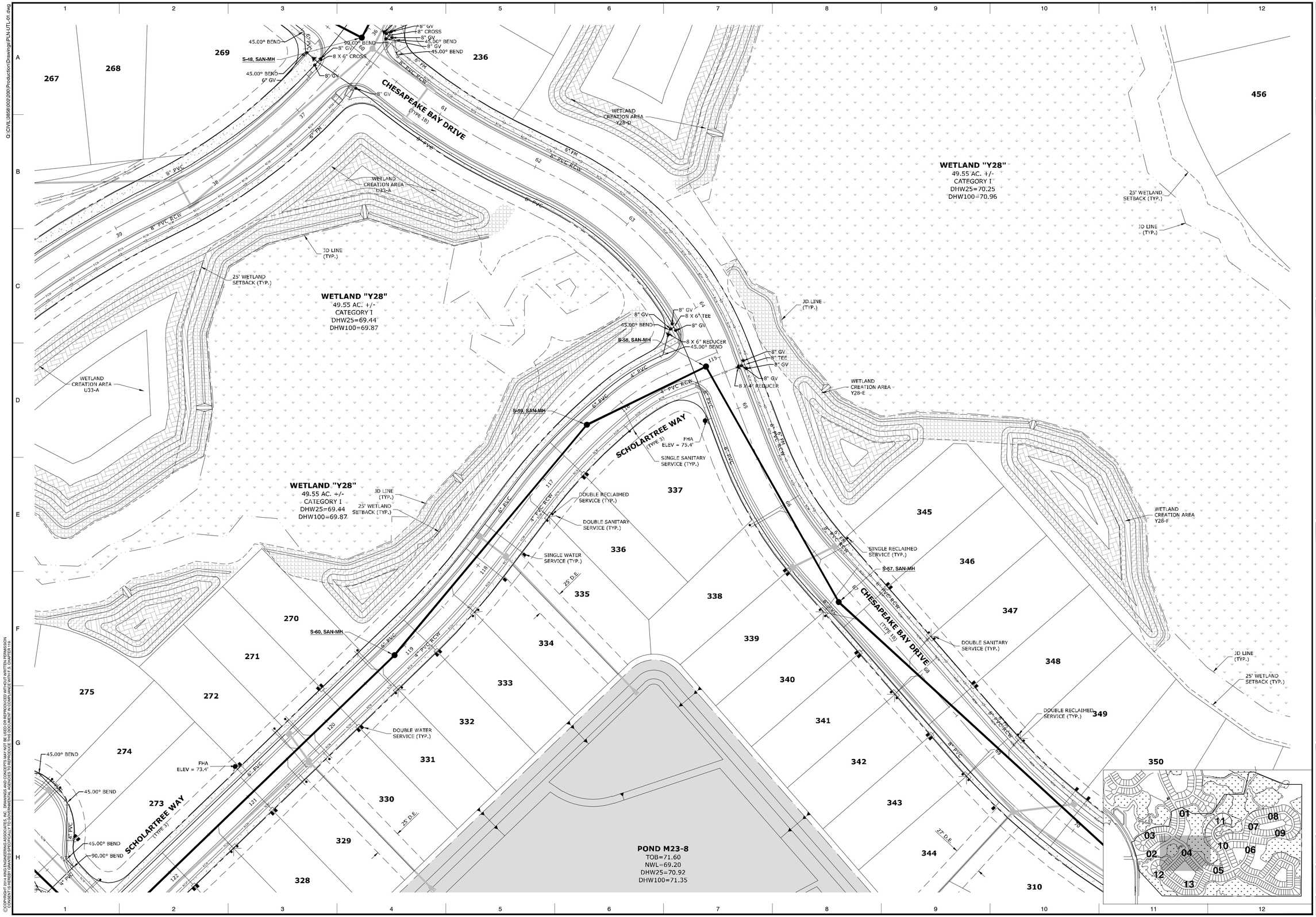

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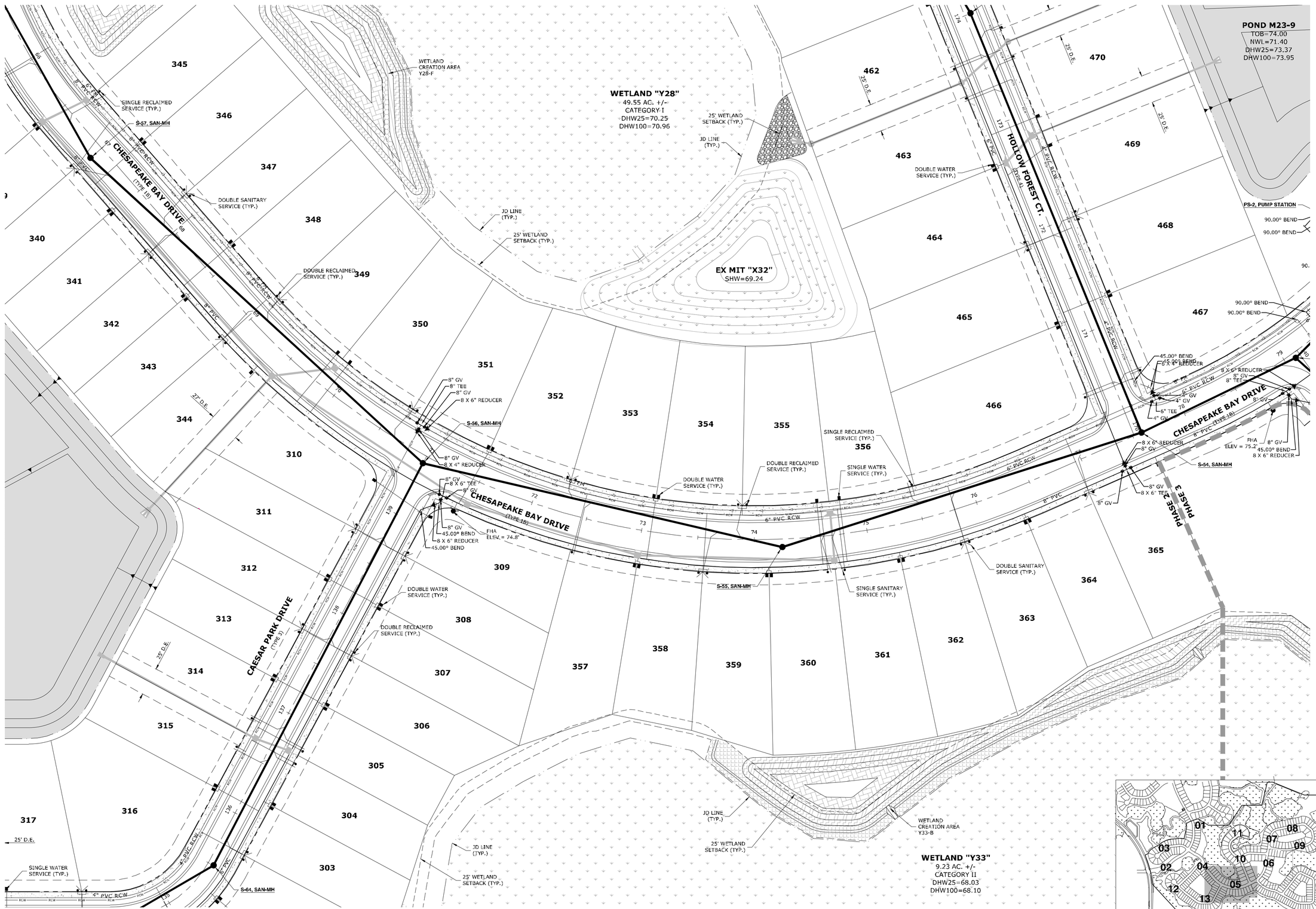

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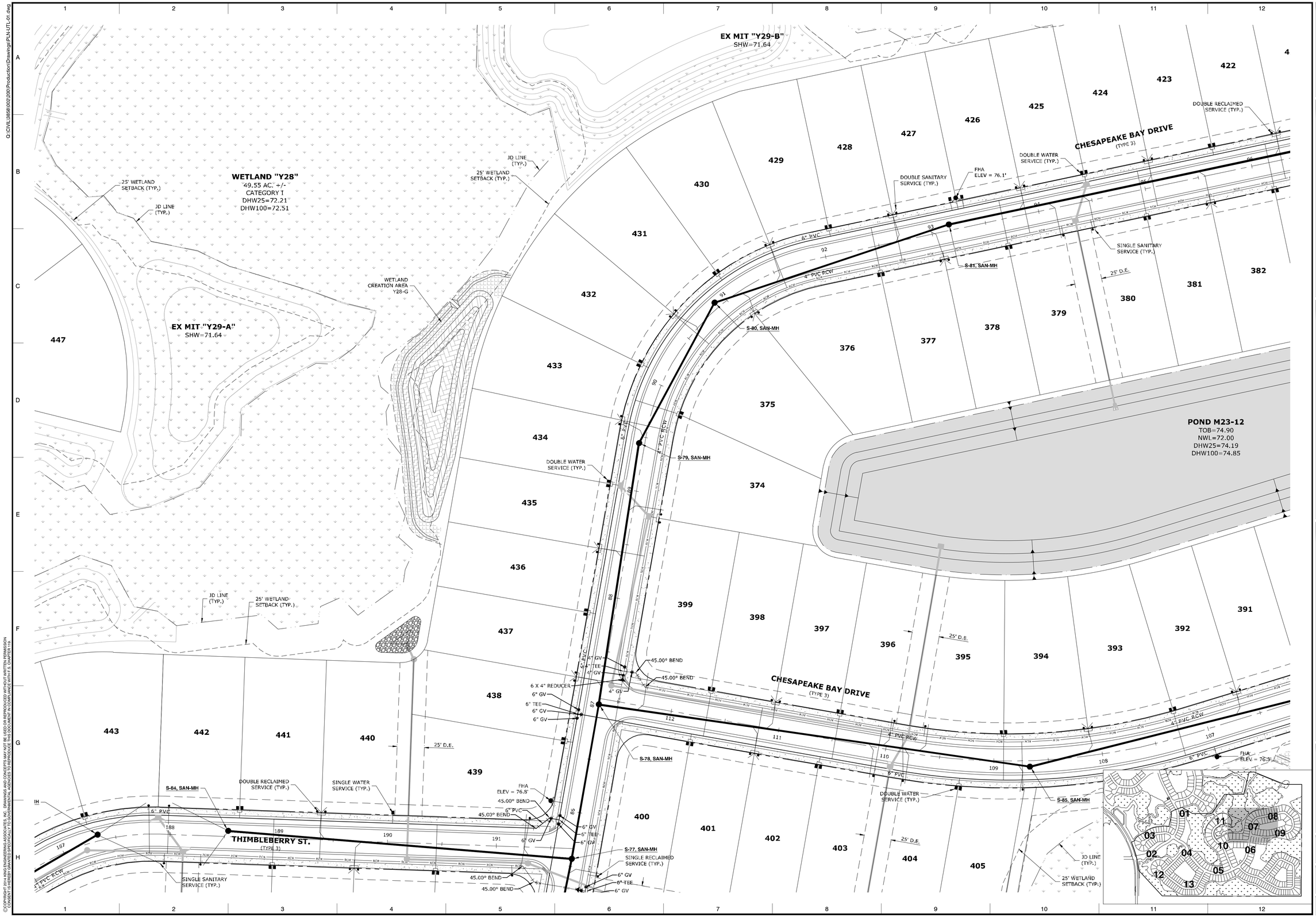

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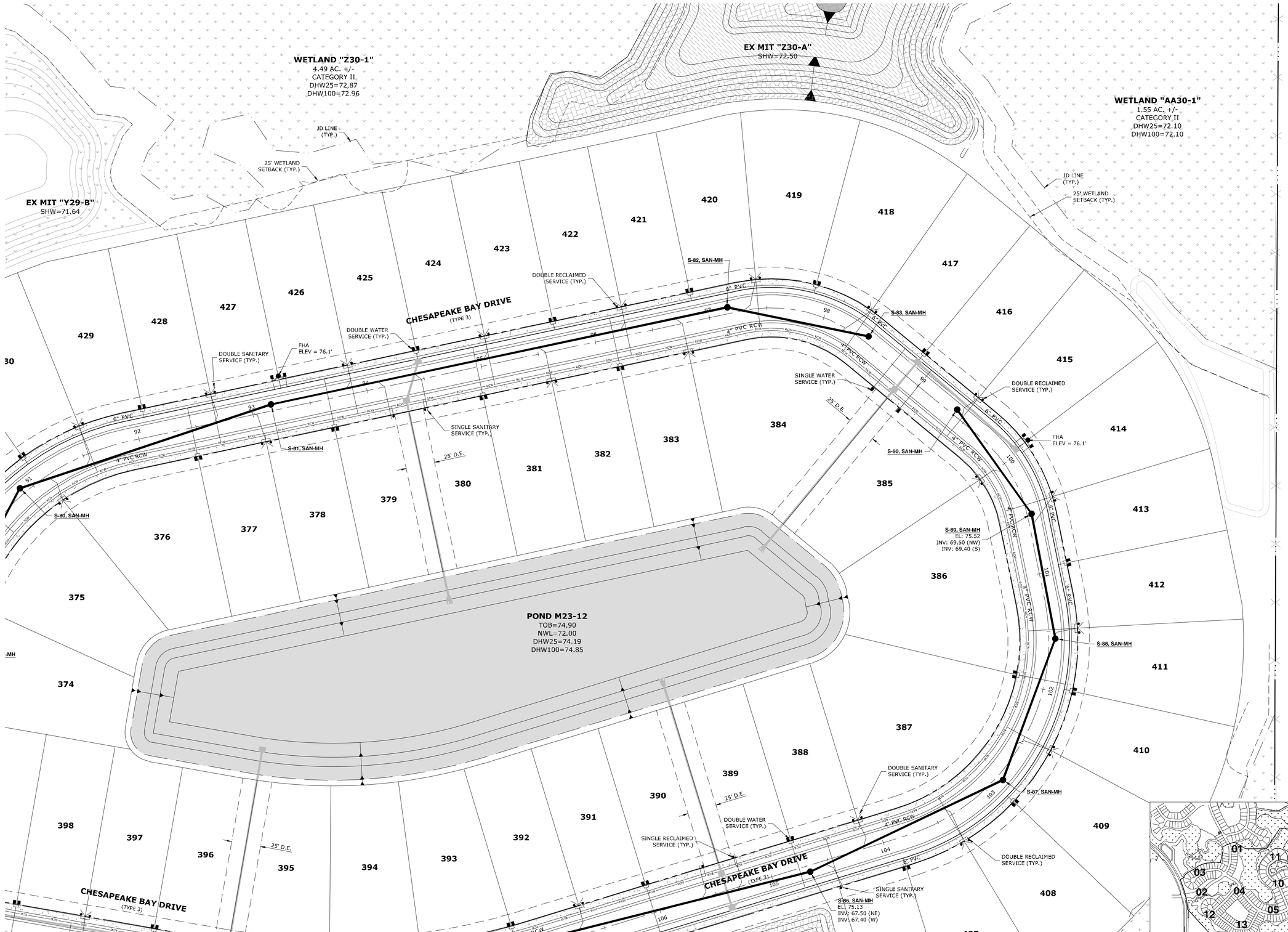

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THE RIDGE AT WIREGRASS
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PASCO COUNTY, FLORIDA

SANITARY SEWER AND WATER DISTRIBUTION PLAN

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

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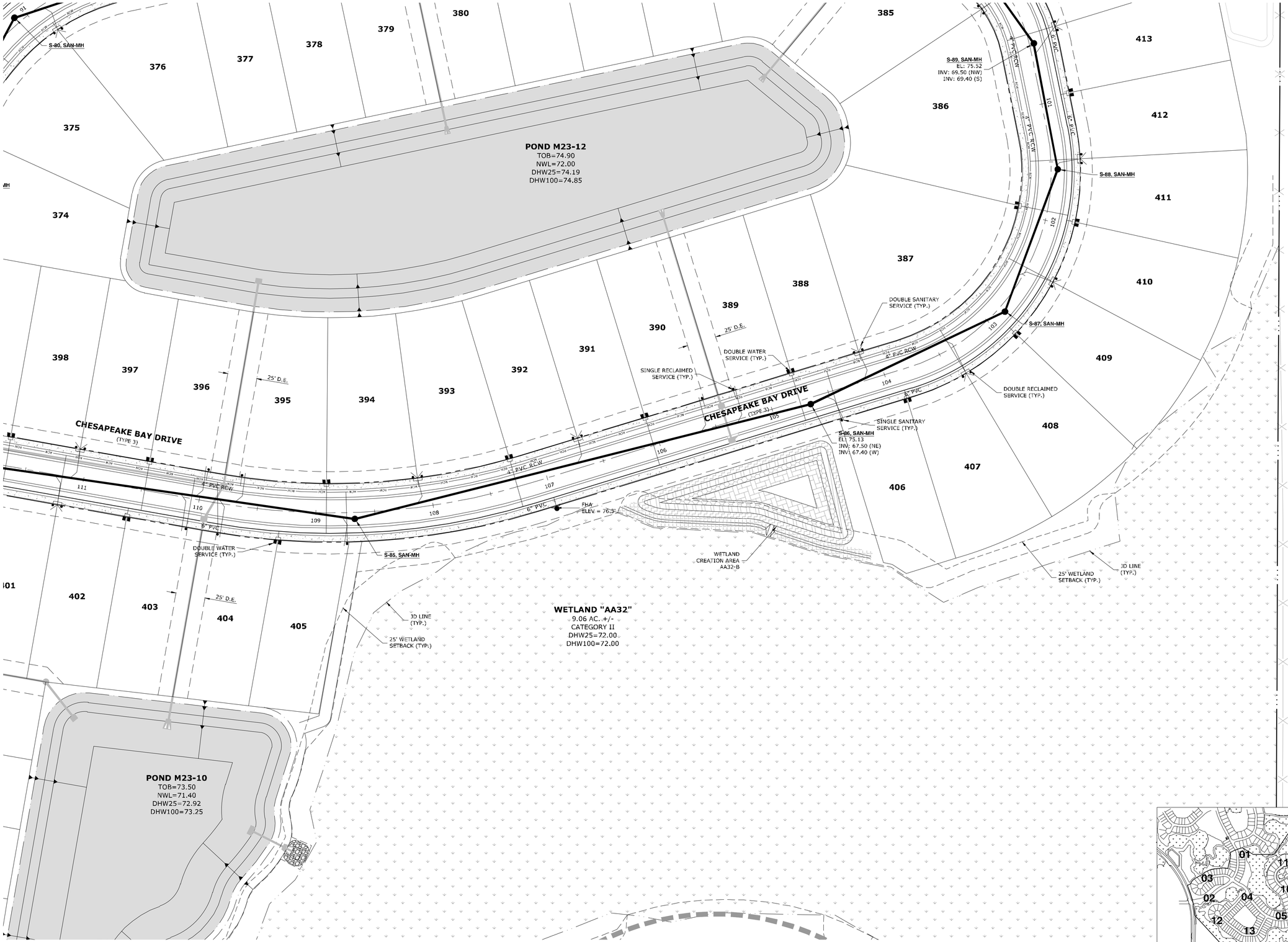

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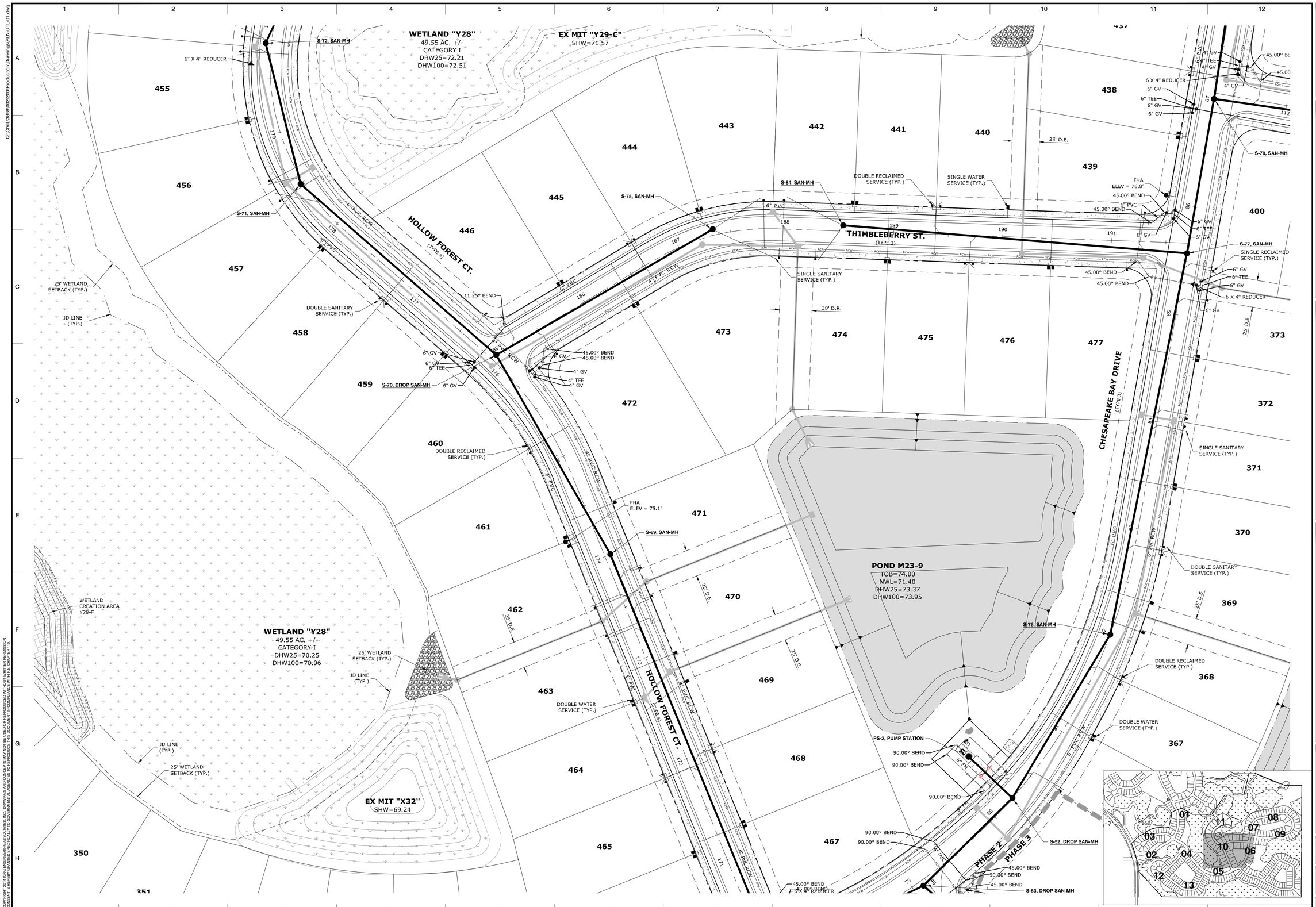

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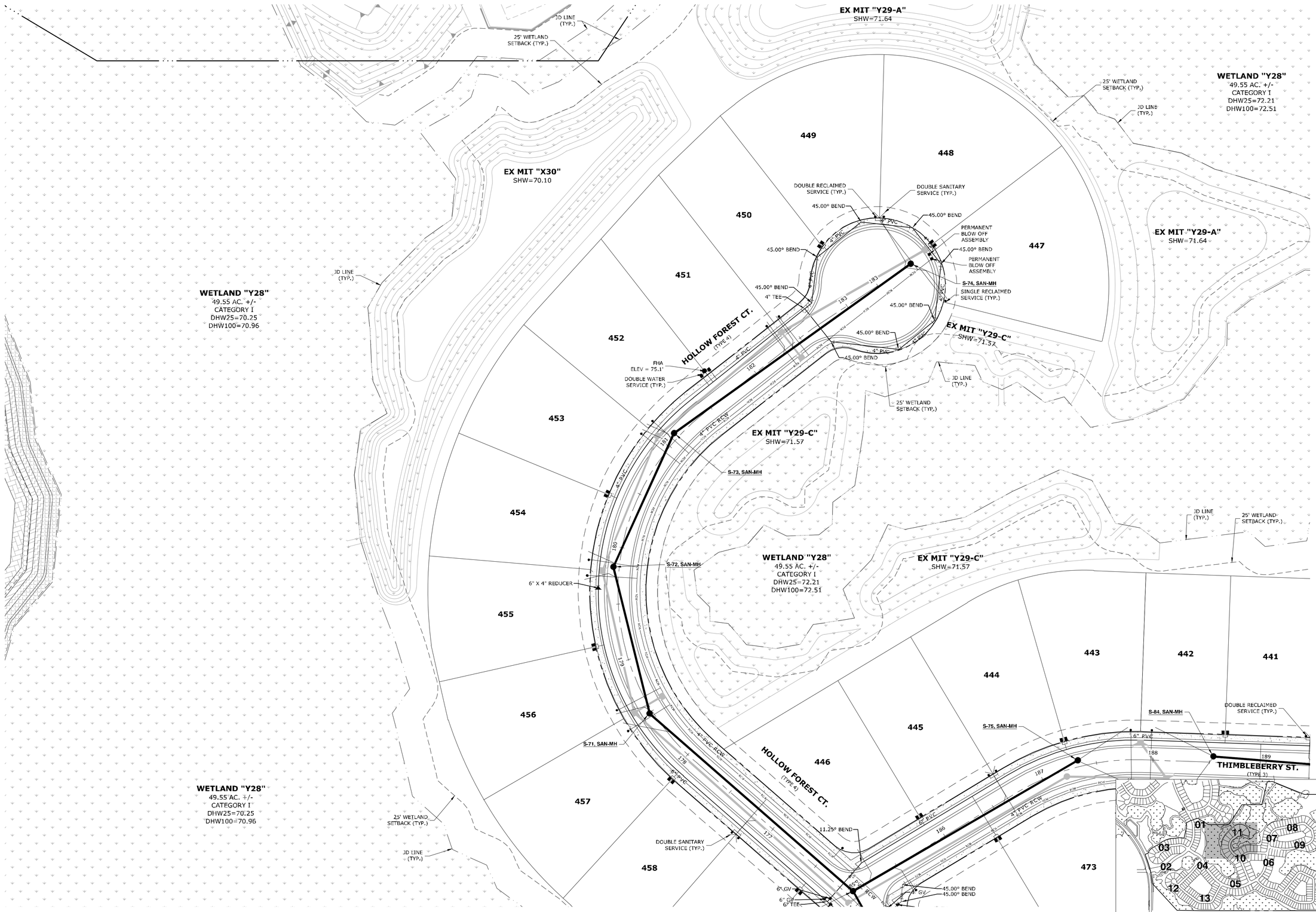

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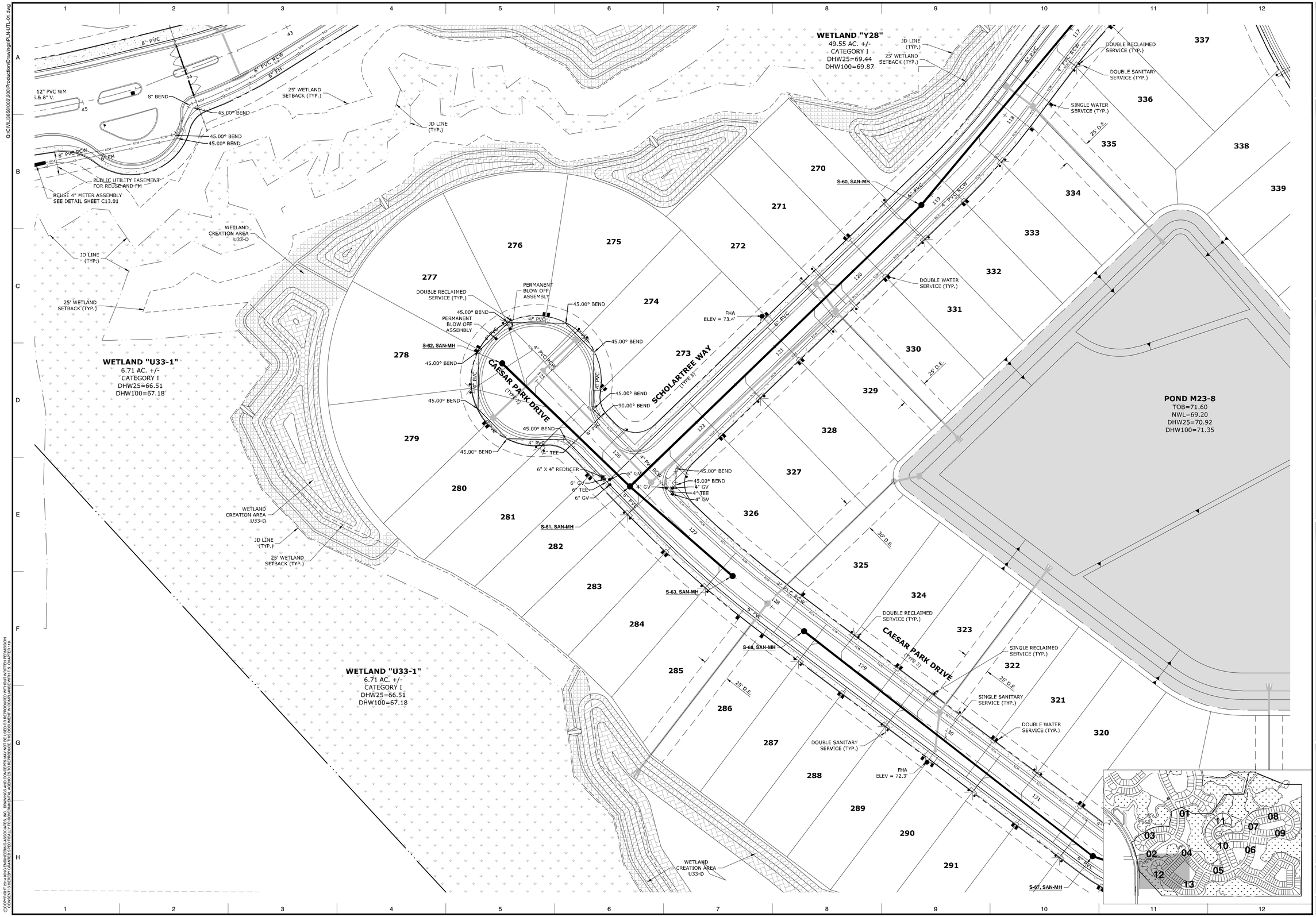

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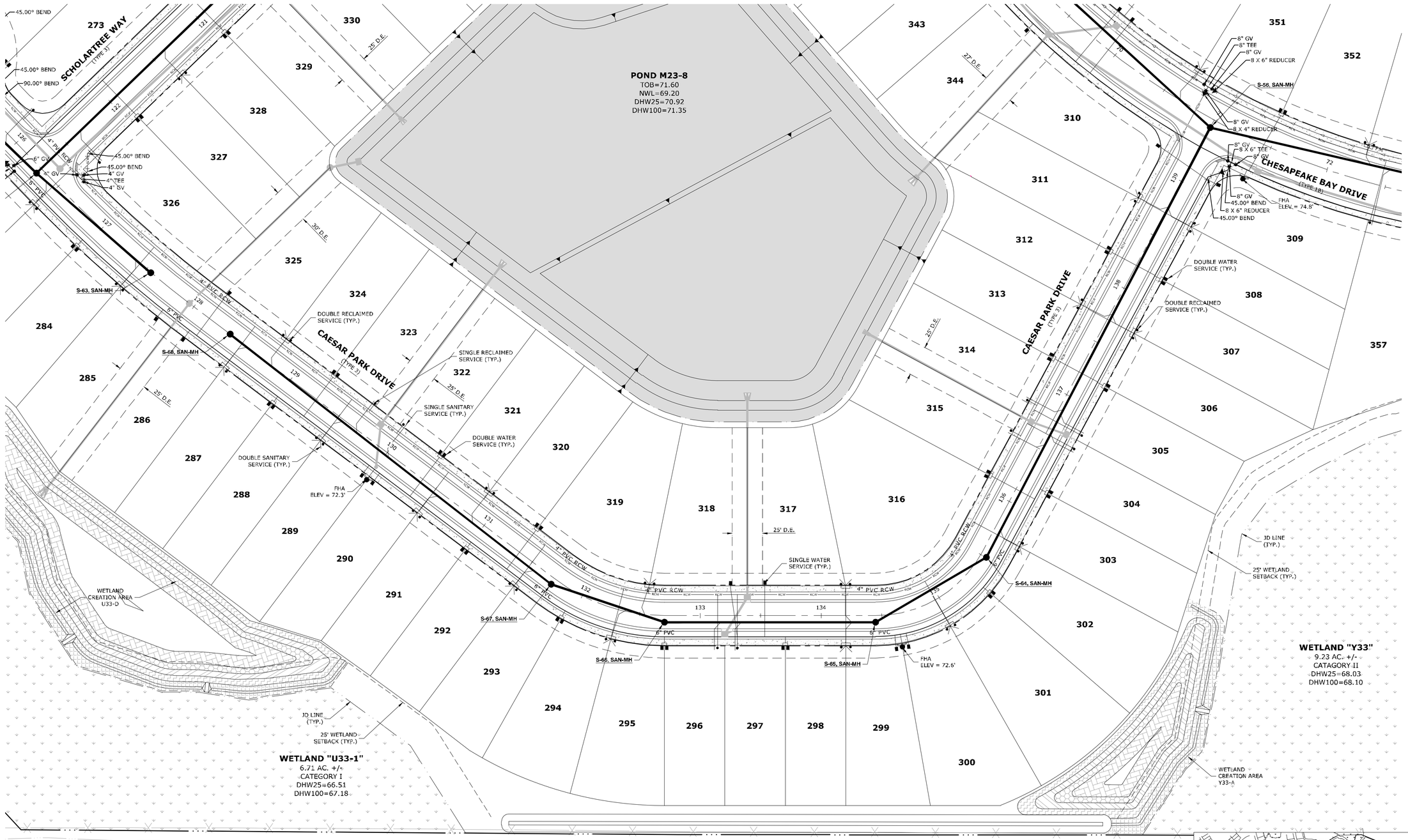

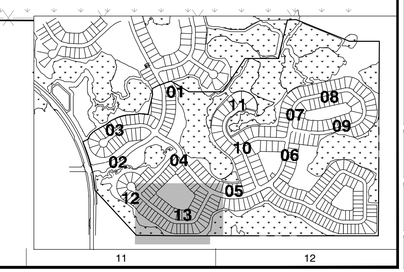

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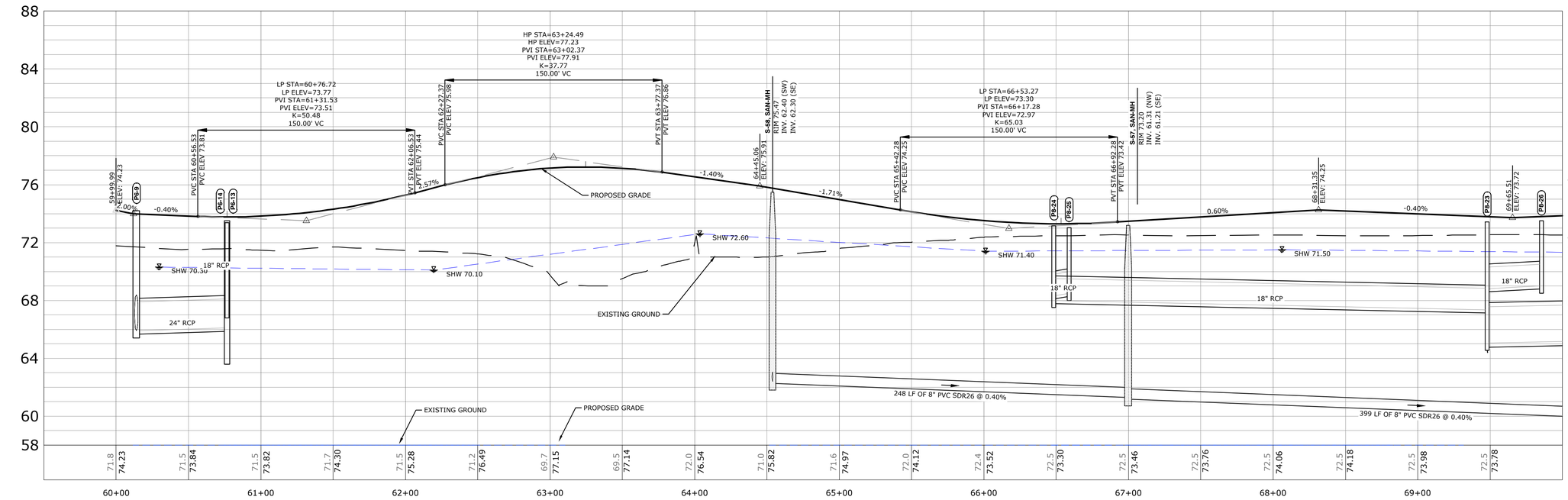

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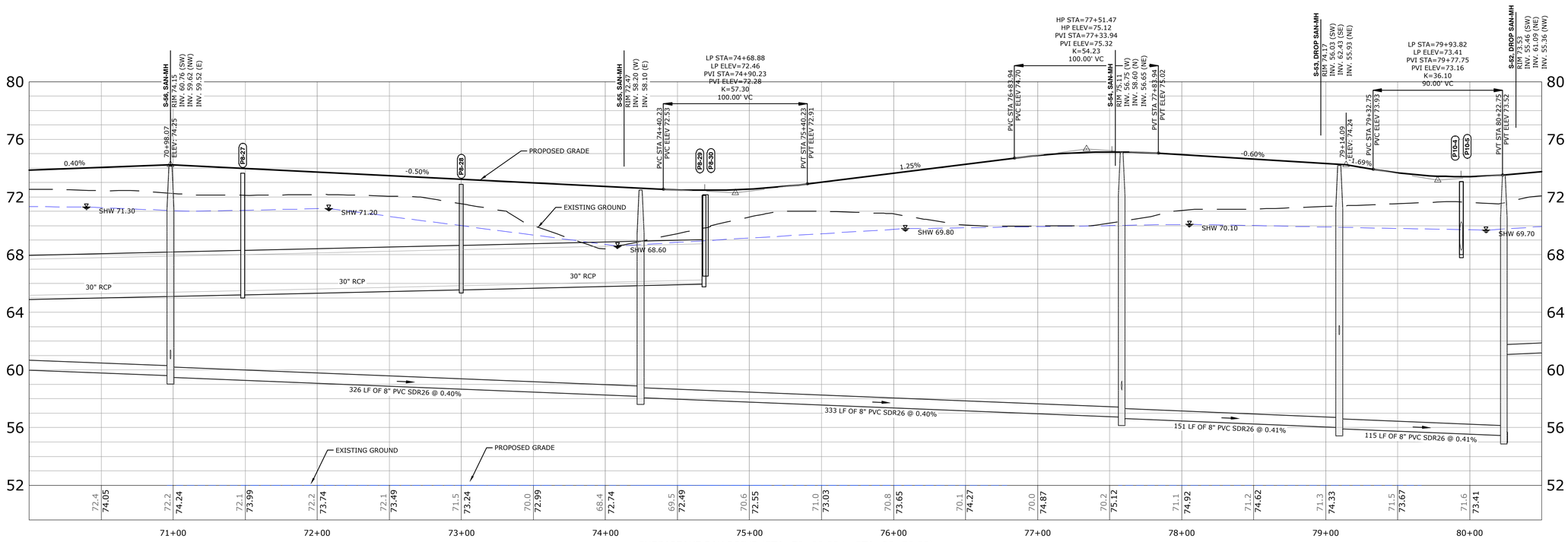
SCALE: 1"=40' HORZ. / 1"=4' VERT.



CHESAPEAKE BAY DRIVE (STA: 70+00.00 to STA: 80+50.00)
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SCALE: FEET

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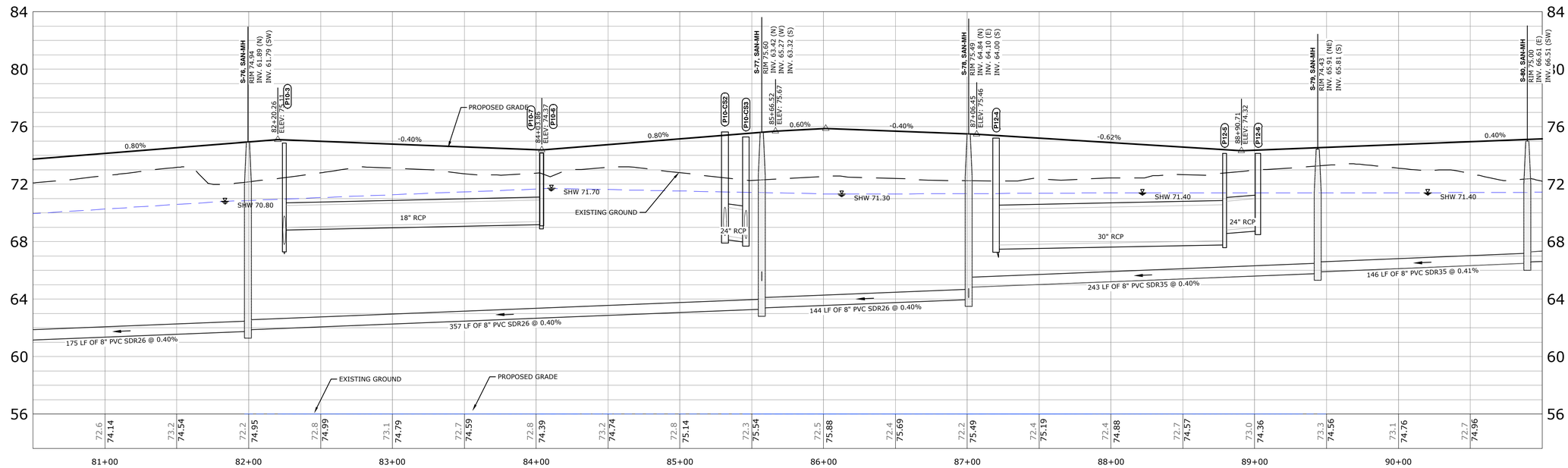

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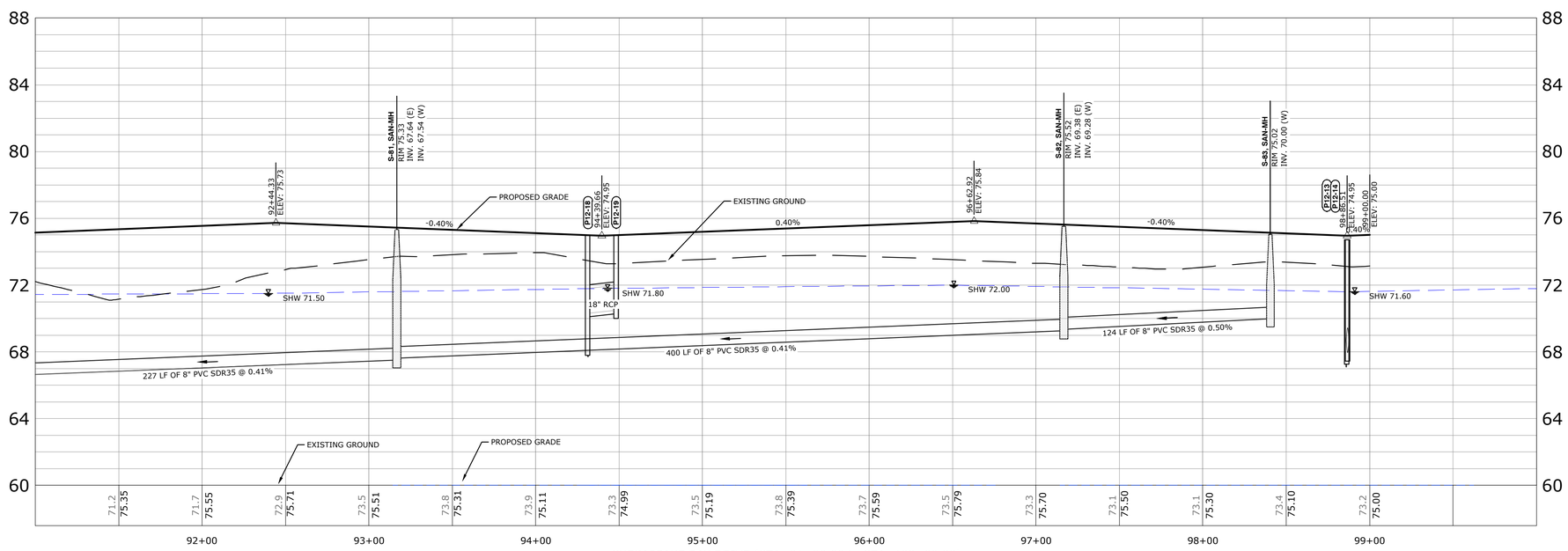

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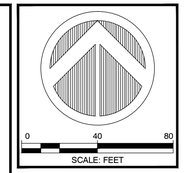

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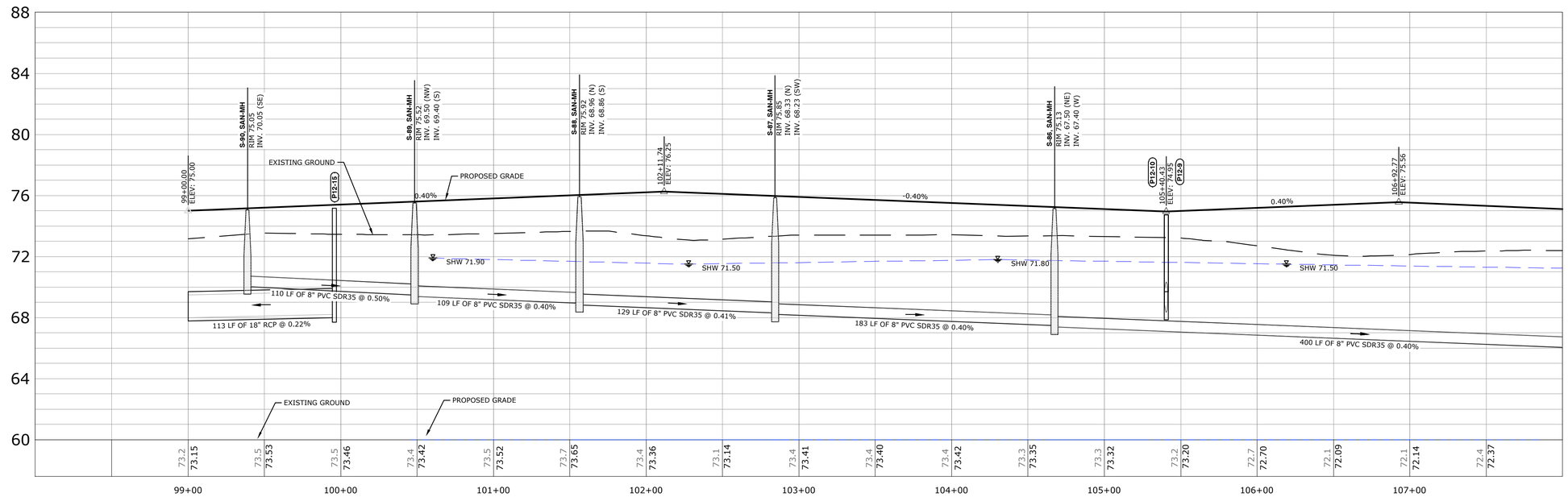

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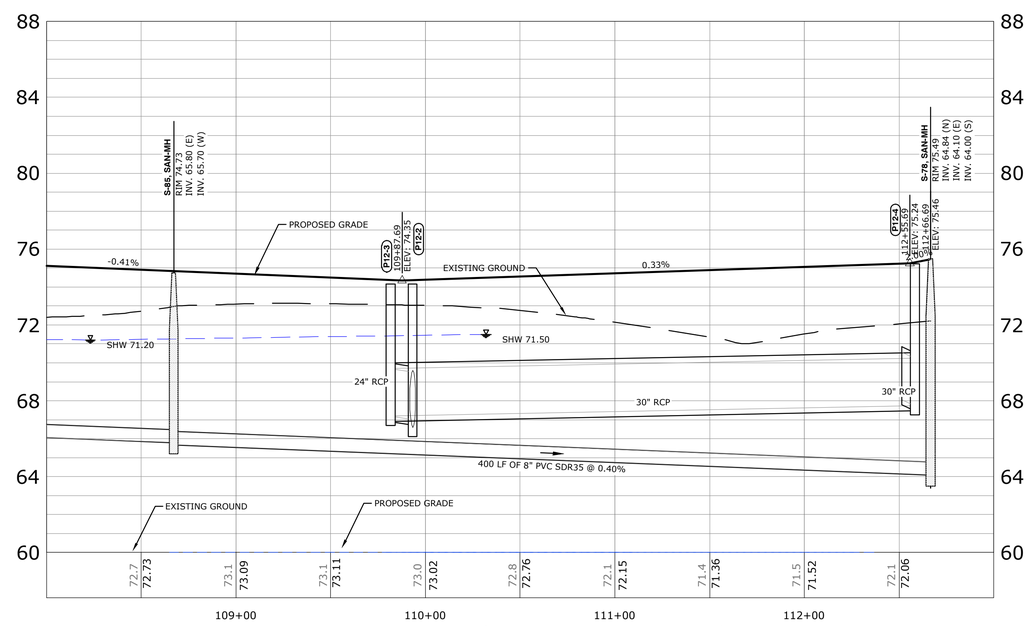

CHESAPEAKE BAY DRIVE. (STA: 108+00.00 to STA: 113+00.00)
SCALE: 1"=40' HORZ. / 1"=4' VERT.

SCALE: FEET

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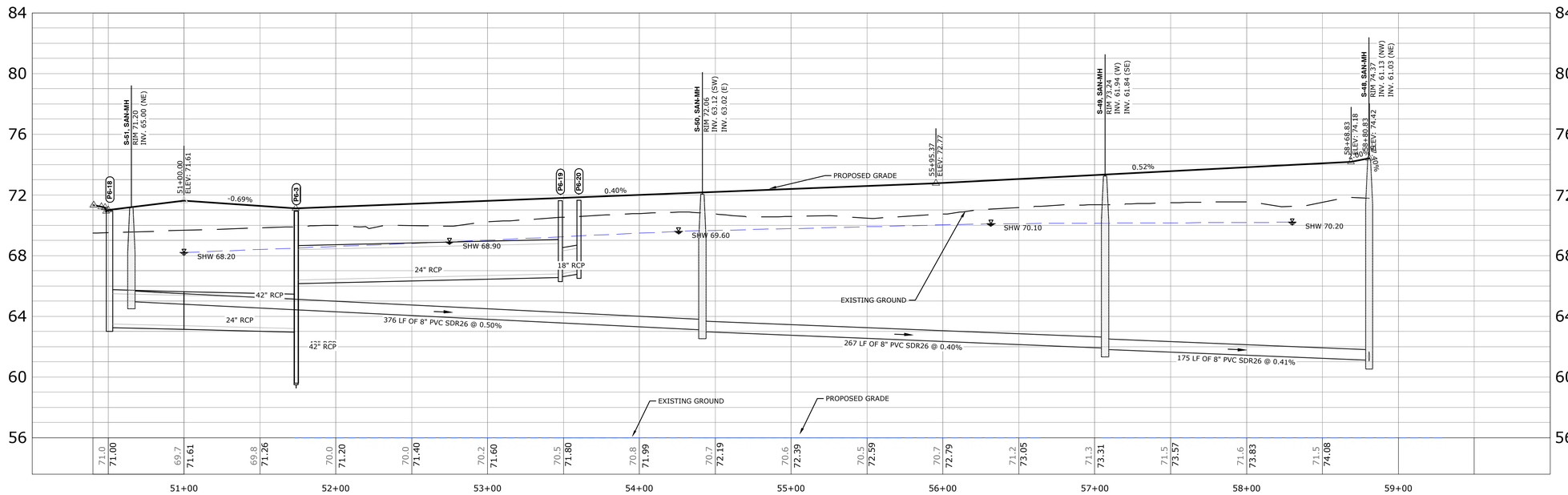

TRISTANIA CT. (STA: 50+00.00 to STA: 60+00.00)
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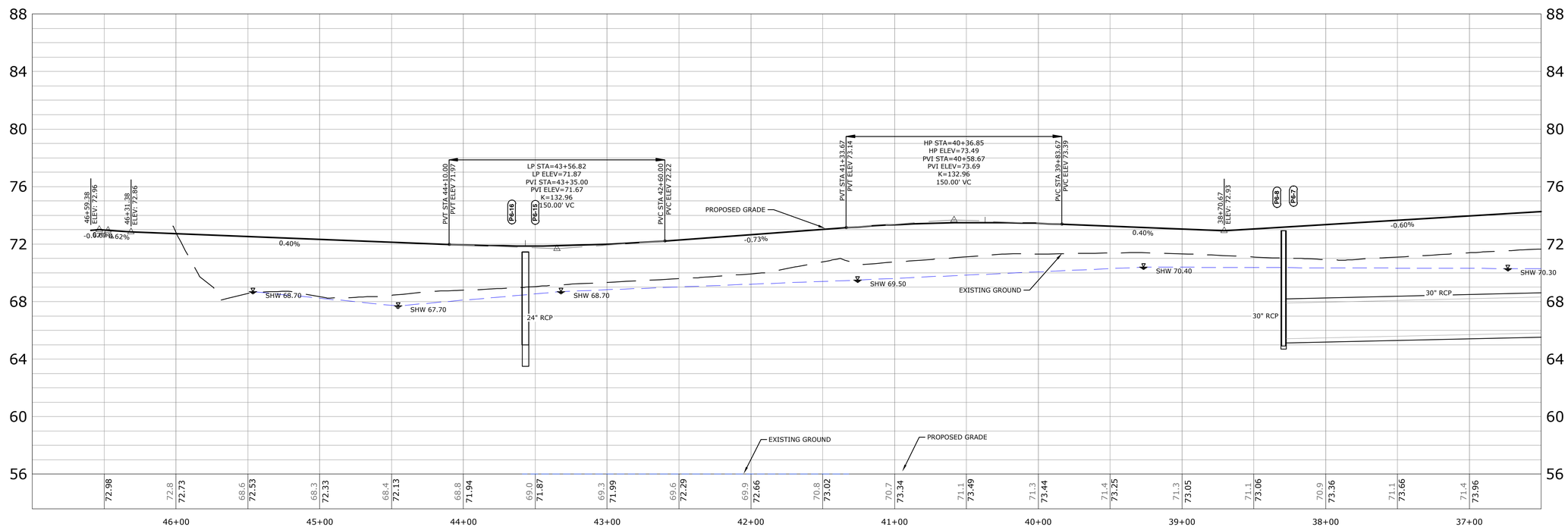

OAKWOOD PRESERVE DRIVE (STA: 36+50.00 to STA: 47+00.00)
SCALE: 1"=40' HORZ. / 1"=4' VERT.

SCALE: FEET

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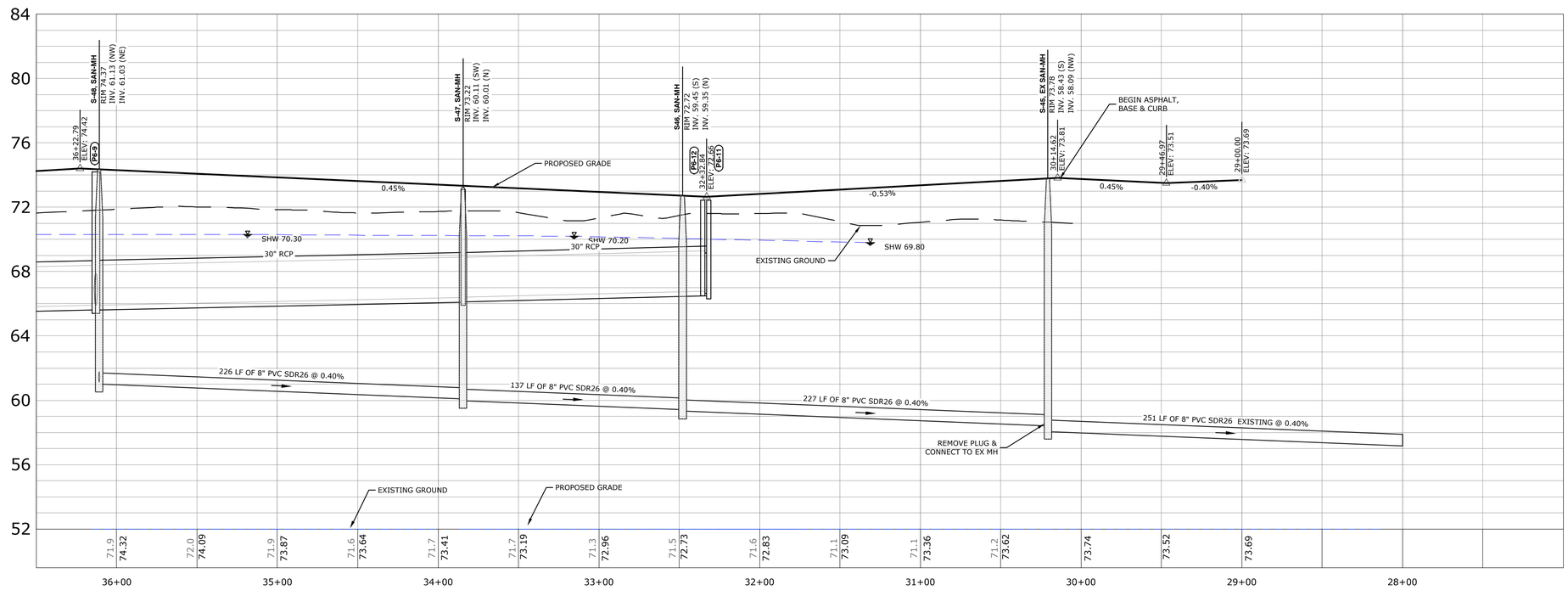

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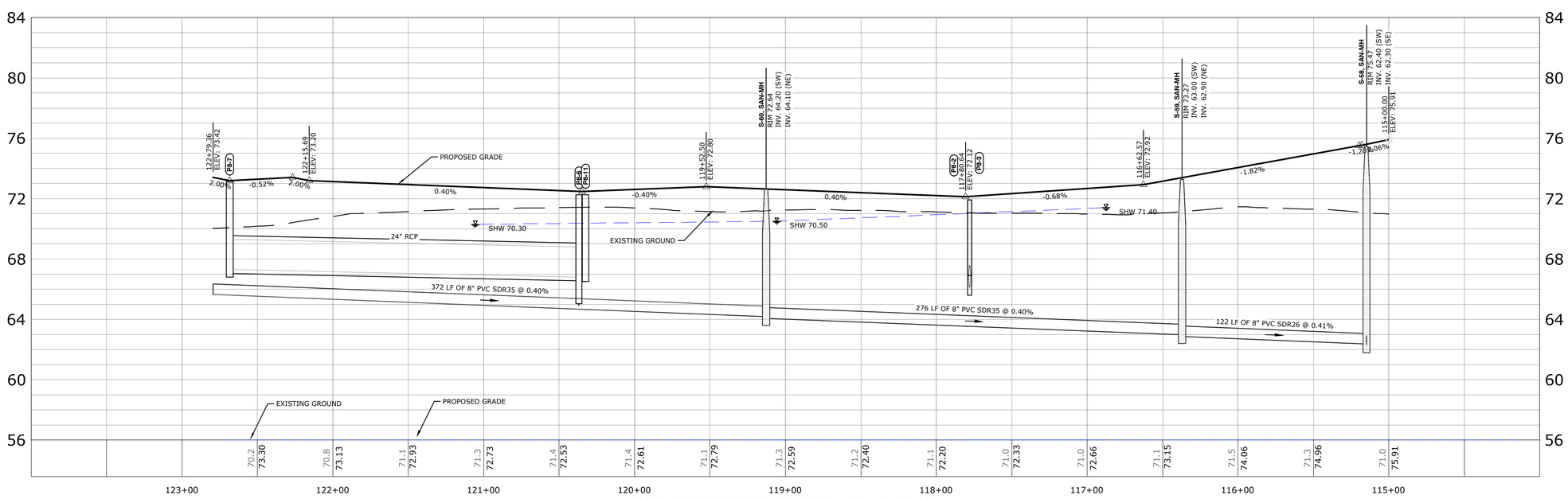

SCHOLARTREE WAY (STA: 114+00.00 to STA: 124+00.00)
SCALE: 1"=40' HORZ. / 1"=4' VERT.

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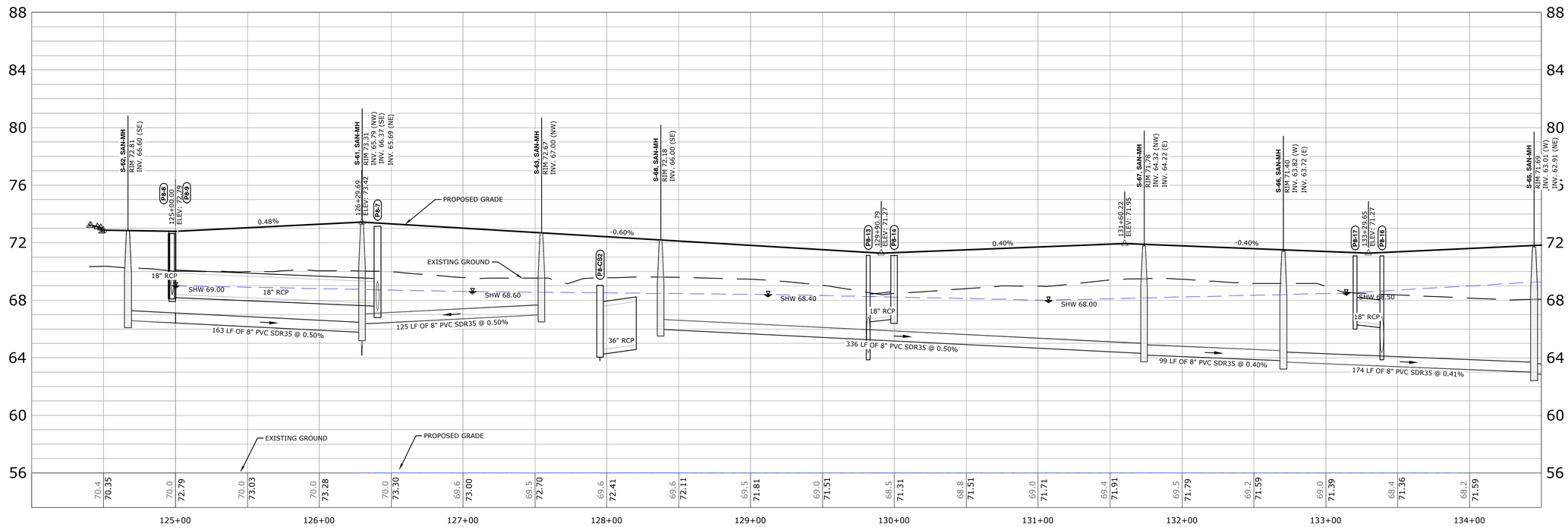

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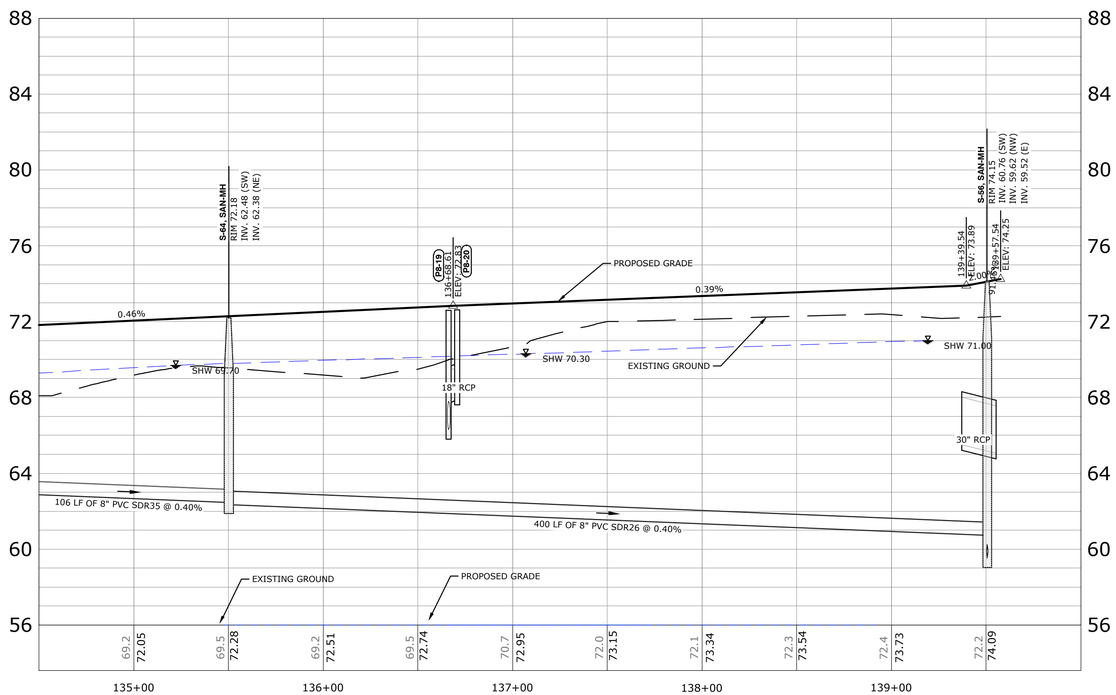

CAESAR PARK DRIVE (STA: 134+50.00 to STA: 140+00.00)
SCALE: 1"=40' HORZ. / 1"=4' VERT.

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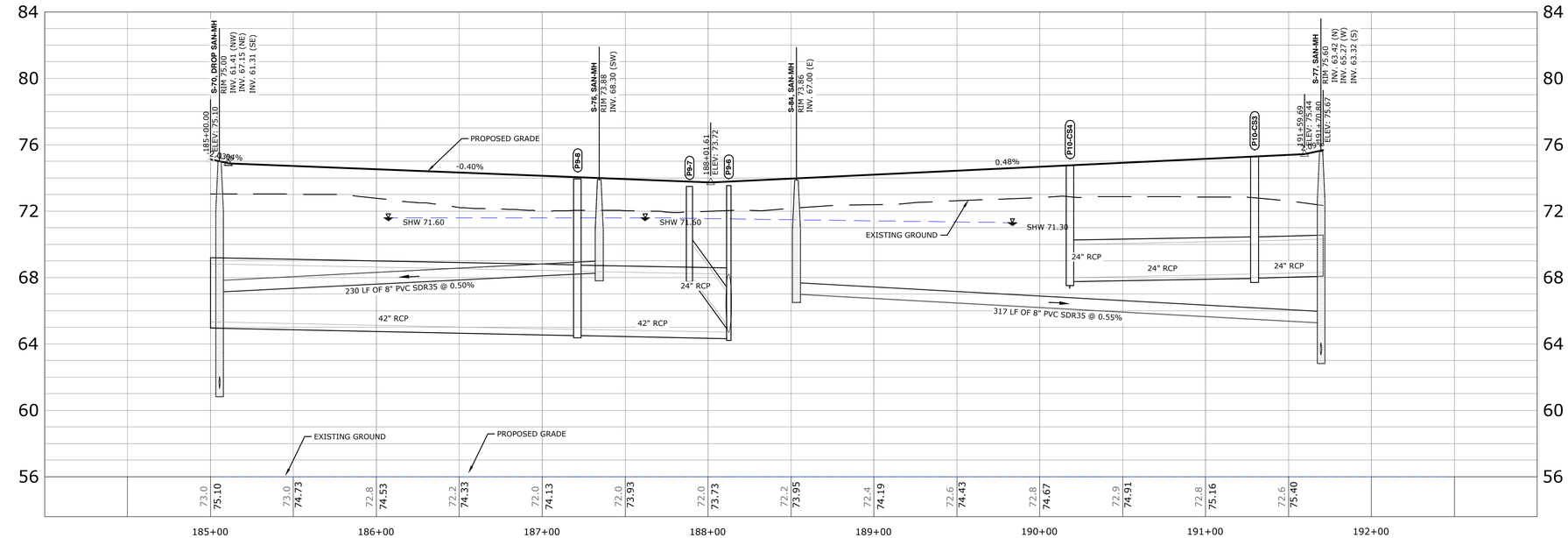

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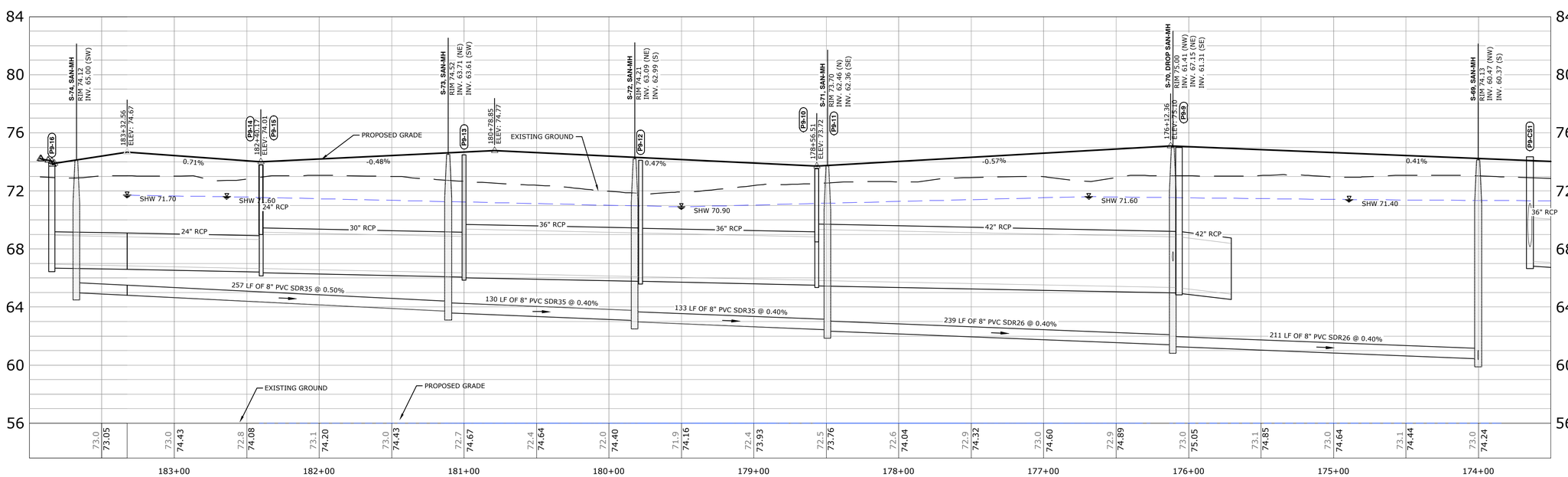

HOLLOW FOREST CT. (STA: 173+50.00 to STA: 184+00.00)
SCALE: 1"=40' HORZ. / 1"=4' VERT.

0 40 80
SCALE: FEET

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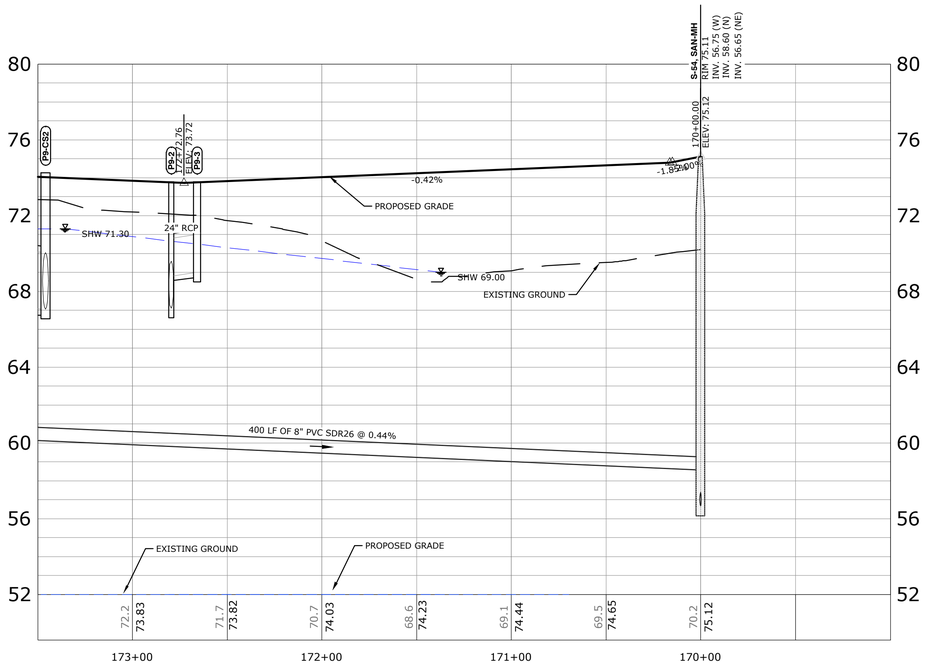

HOLLOW FOREST CT. (STA: 169+00.00 to STA: 173+50.00)
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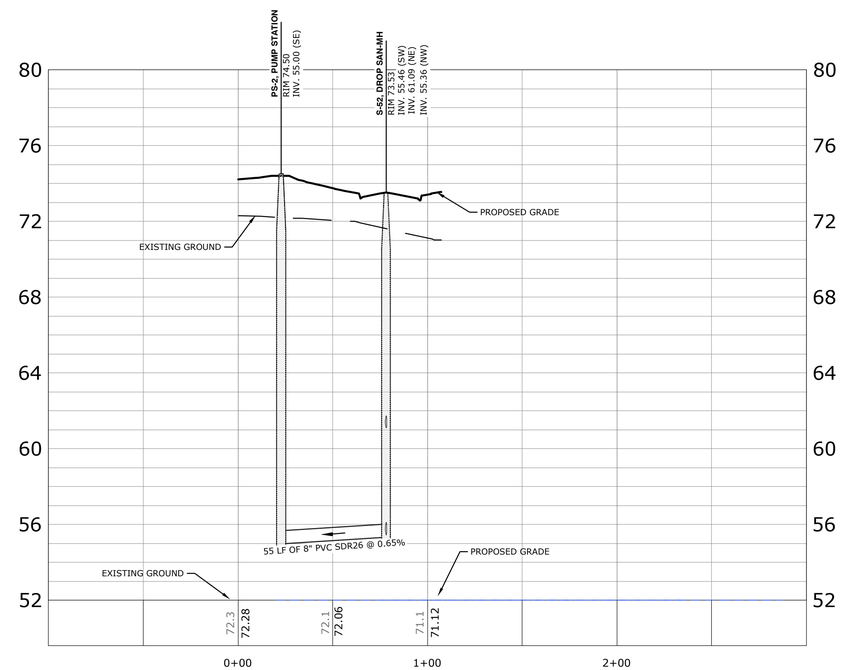

PUMPSTATION (STA: -1+00.00 to STA: 3+00.00)
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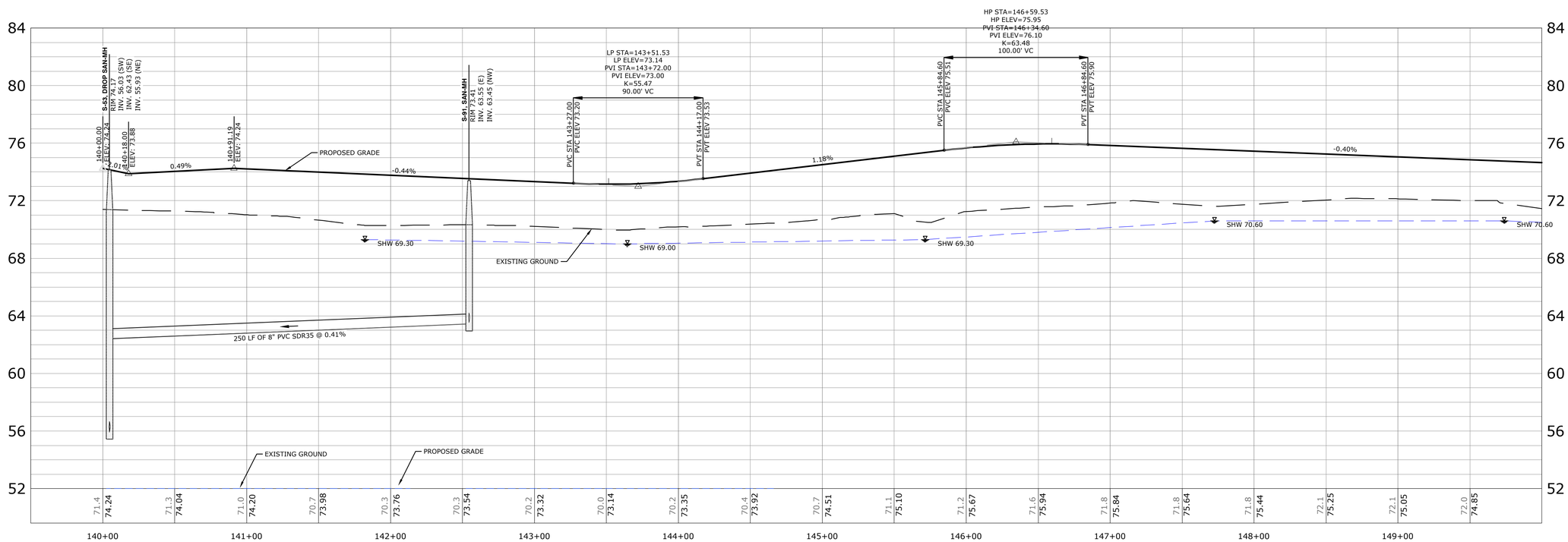

LINDENTREE DRIVE (STA: 139+50.00 to STA: 150+00.00)
SCALE: 1"=40' HORZ. / 1"=4' VERT.

0 40 80
SCALE: FEET

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA

PROFILES

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

C6.08

PASCO CO. SUBMITTAL
APRIL 01, 2016

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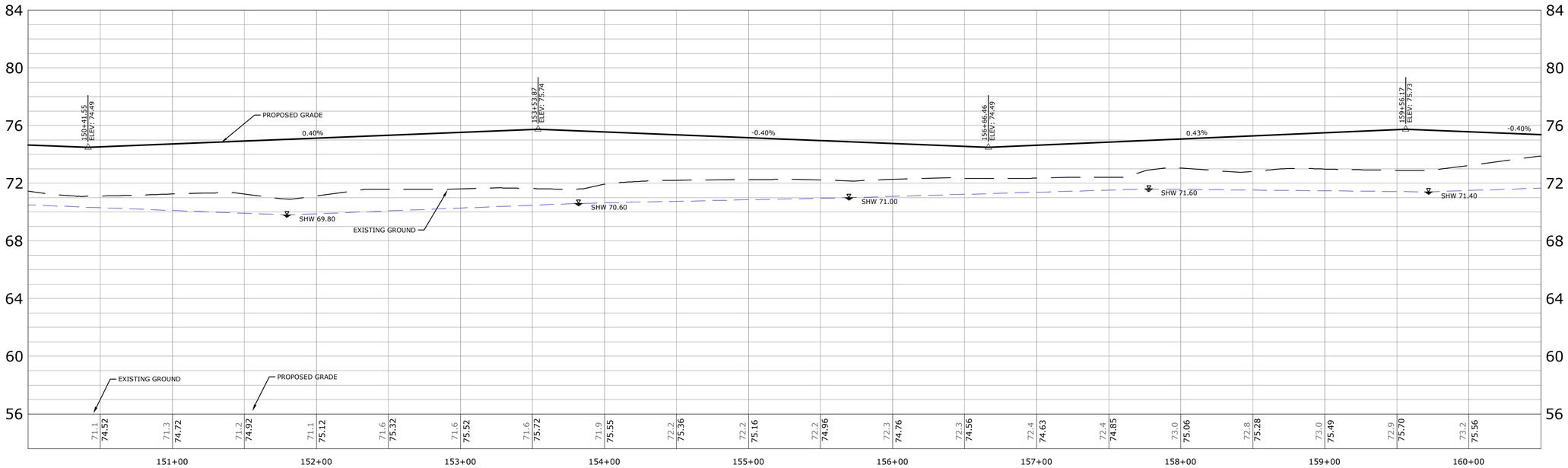

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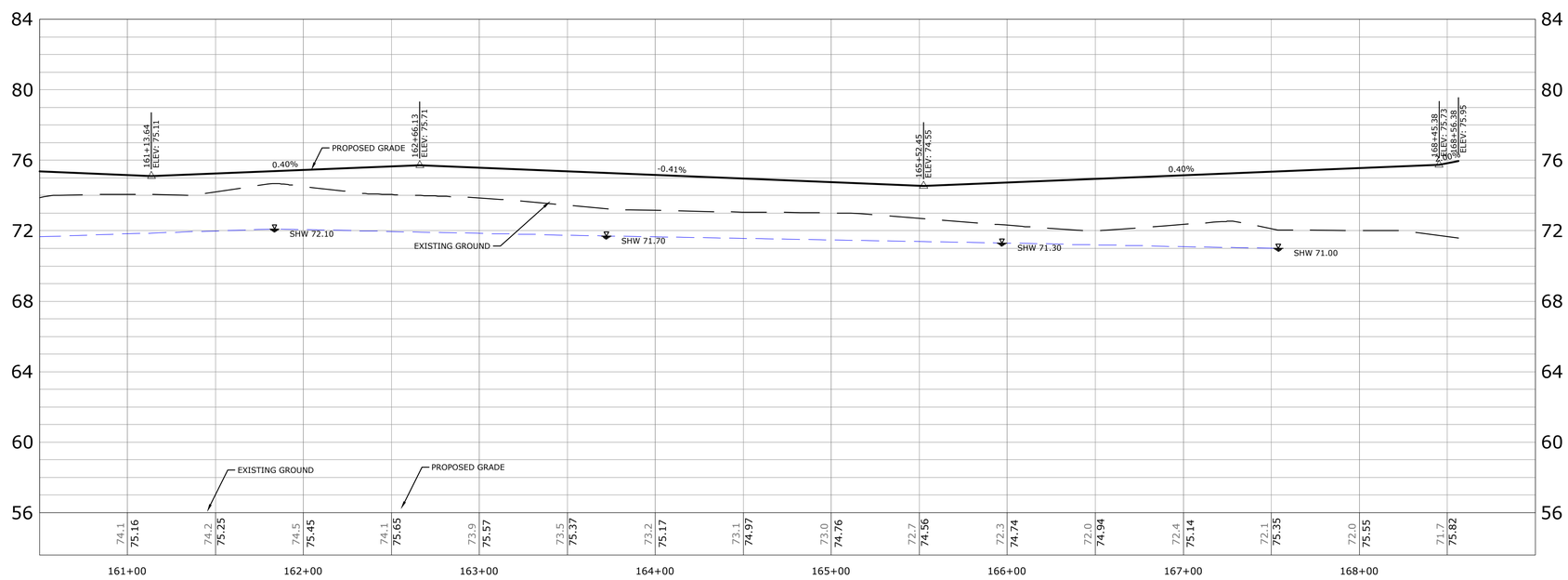

LINDENTREE DRIVE (STA: 160+50.00 to STA: 169+00.00)
SCALE: 1"=40' HORZ. / 1"=4' VERT.

0 40 80
SCALE: FEET

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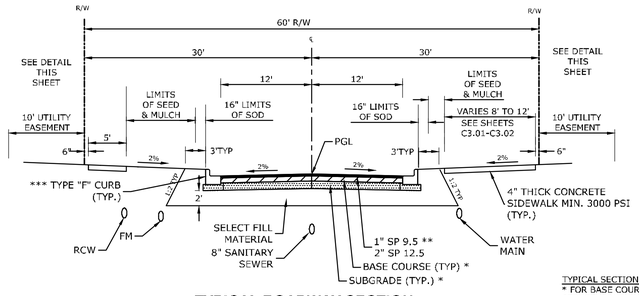
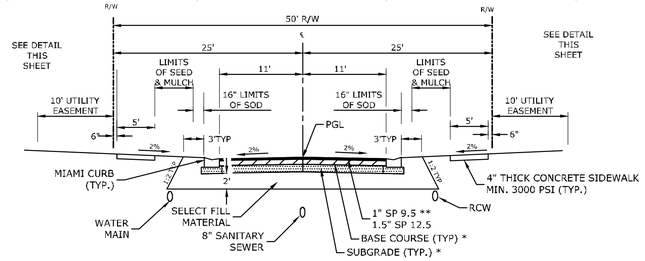


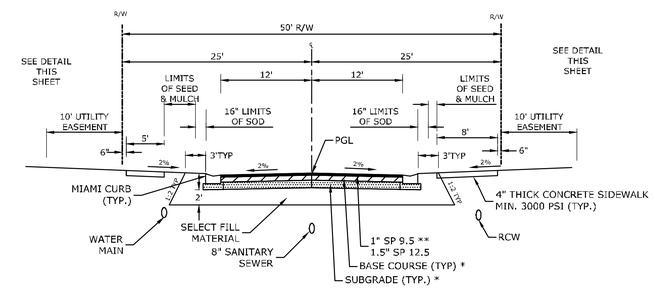
TYPICAL ROADWAY SECTION
TYPE 1B ROADWAY
N.T.S.

TYPICAL SECTION NOTES :
* FOR BASE COURSE AND STABILIZED SUBGRADE SEE STRUCTURAL NUMBERS CHART THIS SHEET
** FINAL LIFT OF ASPHALT TO BE INSTALLED UPON SUBSTANTIAL COMPLETION OF VERTICAL HOME CONSTRUCTION IN THIS PHASE.
*** MIAMI CURB WHERE LOTS FRONT TYPE 1B ROADWAY

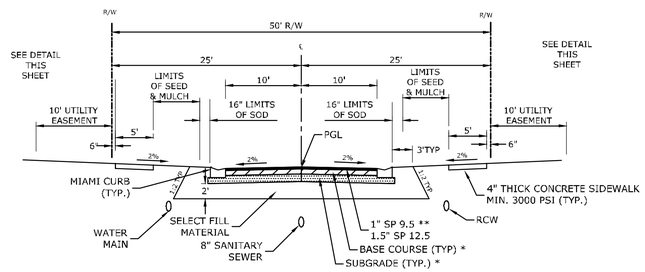


TYPICAL ROADWAY SECTION
TYPE 3 ROADWAY
N.T.S.

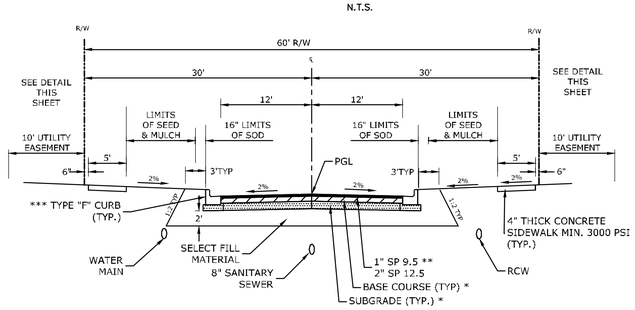
UNDERDRAIN NOTE
FOR ROADWAYS WITH UNDERDRAIN SEE SHEET C10.01 FOR DETAILS INCLUDING LIMITS OF SELECT BACKFILL BEHIND CURB



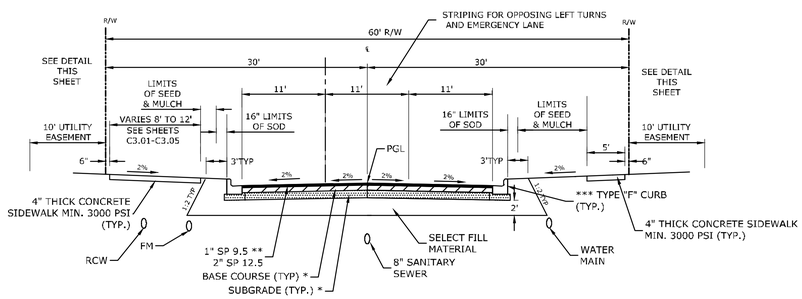
TYPICAL ROADWAY SECTION
TYPE 2 ROADWAY
N.T.S.



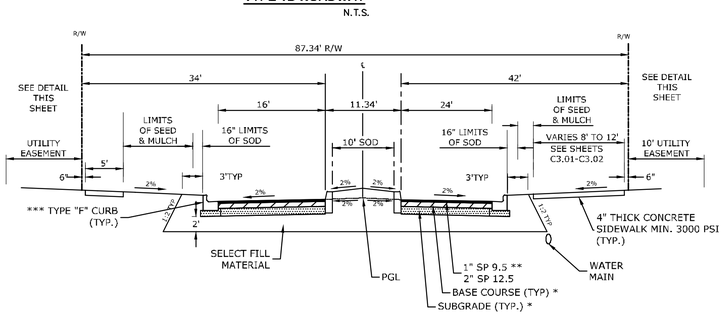
TYPICAL ROADWAY SECTION
TYPE 4 ROADWAY
N.T.S.



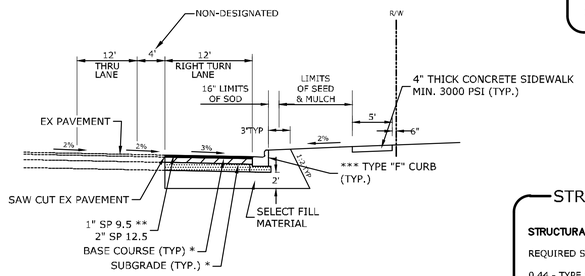
TYPICAL ROADWAY SECTION
CHESAPEAKE BAY DRIVE STA. 79+56.83 TO STA 112+66.69
TYPE 1B ROADWAY
N.T.S.



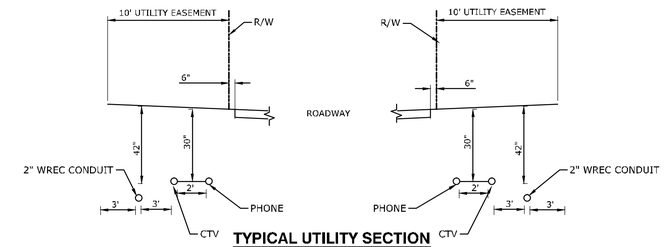
TYPICAL ROADWAY SECTION
CHESAPEAKE BAY DRIVE STA. 60+00.00 TO STA. 79+56.83
TYPE 1B ROADWAY WITH EMERGENCY LANE
N.T.S.



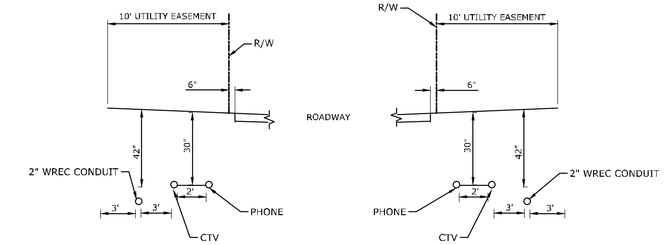
TYPICAL ROADWAY SECTION
OAKWOOD PRESERVE AT MANSFIELD
N.T.S.



TYPICAL ROADWAY SECTION
MANSFIELD BLVD.



TYPICAL UTILITY SECTION
(ALL ROADWAY TYPES)
N.T.S.



TYPICAL UTILITY SECTION
(ROAD TYPES 2, 3 & 4)
N.T.S.

DETAIL REFERENCES

CURB NAME	DETAIL LOCATION
TYPE "D" CURB	TYPE "D" CURB, FDOT INDEX 300
TYPE "F" CURB	TYPE "F" CURB, FDOT INDEX 300
DROP CURB	DROP CURB, FDOT INDEX 300
MIAMI CURB	MIAMI CURB SEE DETAIL SHEET C7.02
MIAMI CURB RAMP	MIAMI CURB SIDEWALK RAMP SEE DETAIL SHEET C7.02
CR-E	TYPE F CURB SIDEWALK RAMP PER FDOT INDEX 304

SELECT FILL MATERIAL CERTIFICATION NOTE
THE ENGINEER RESPONSIBLE FOR THE PROJECT SHALL CERTIFY TO THE COUNTY ENGINEERING SERVICES DIRECTOR (THROUGH PC ENGINEERING INSPECTIONS) THAT THE SELECT MATERIAL MEETS THESE STANDARDS PRIOR TO THE INSTALLATION OF THE BASE. CERTIFICATION SHALL STRICTLY COMPLY WITH THE SUBGRADE CERTIFICATION FORM AVAILABLE IN ***"ENGINEERING SERVICES DEPARTMENT: A PROCEDURAL GUIDE FOR THE PREPARATION OF ASSURANCES OF COMPLETION AND MAINTENANCE."***

STREET TYPES & DESIGN SPEEDS

STREET TYPE	CRITERIA	DESIGN SPEED	POSTED SPEED
TYPE 1B	201–600 LOTS	30 M.P.H.	25 M.P.H.
TYPE 2	101–200	25 M.P.H.	20 M.P.H.
TYPE 3	51–100 LOTS	20 M.P.H.	20 M.P.H.
TYPE 4	1–50 LOTS (CUL–DE–SACS)	20 M.P.H.	20 M.P.H.

SIDEWALK NOTE
SIDEWALKS SHALL BE CONSTRUCTED OF FIBER REINFORCED CONCRETE ON A COMPACTED NON YIELDING SUBGRADE. SIDEWALK THICKNESS SHALL BE 6" WHERE SIDEWALK IS CROSSED BY A DRIVEWAY.

SELECT FILL MATERIAL NOTE
SELECT FILL MATERIAL SHALL BE 24 INCHES, DIMENSIONS ARE MEASURED FROM THE BOTTOM OF SUBGRADE MATERIAL. SELECT MATERIAL SHALL BE A-3(SP) SOIL AND/OR A-2-4 WITH A MAXIMUM 15 PERCENT PASSING NUMBER 200 SIEVE.

NOTE
ALL HANDICAP RAMPS THROUGHOUT THE PROJECT SHALL BE PER FDOT INDEX NO. 304 AND SIDEWALKS AND BIKE PATHS SHALL TRANSITION TO THE RAMPS PER PLAN, SEE C70.02 FOR MIAMI CURB SIDEWALK RAMPS

CLEAR ZONE NOTE
ROAD SIDE CLEAR ZONE SHALL BE FREE OF ANY OBSTRUCTIONS (BASED ON THE CROSS-SECTIONS 6' CLEAR ZONE SHALL BE PROVIDED FOR TYPES 2, 3, 4 STREET TYPES WITHOUT BARRIER CURB AND 4' FOR ALL STREET TYPES WITH BARRIER CURB.) THE REQUIRED CLEAR ZONE FOR THE TYPE 1 STREET WITH MOUNTABLE CURB IS 10'.

STRUCTURAL NUMBERS

STRUCTURAL NUMBER FOR TYPES 1B

REQUIRED SN = 3.50

0.44 - TYPE SP 9.5
0.44 - TYPE SP 12.5
0.15 - CRUSHED CONCRETE (LBR 150 MIN.)
0.08 - STABILIZED SUBGRADE (LBR 40 MIN.)

SN = (0.44) (1" SP 9.5) + (0.44) (2" SP 12.5) + (0.15) (8.5") + (0.08) (12") = 3.55
PROVIDED SN = 3.55

NOTE: MIN. PAVEMENT SECTION IS 3" SURFACE COURSE, 8" BASE COURSE AND 12" STABILIZED SUBBASE FOR TYPE 1 ROADWAYS PER RECOMMENDATIONS BY HSA ENGINEERS & SCIENTISTS.

STRUCTURAL NUMBERS

STRUCTURAL NUMBER FOR TYPES 2, 3, & 4

REQUIRED SN = 2.36

0.44 - TYPE SP 9.5
0.44 - TYPE SP 12.5
0.15 - CRUSHED CONCRETE (LBR 150 MIN.)
0.08 - STABILIZED SUBGRADE (LBR 40 MIN.)

SN = (0.44) (1" SP 9.5)+ (0.44) (1.5" SP 12.5) + (0.15) (6") + (0.08) (12") = 2.96
PROVIDED SN = 2.96

ALTERNATE BASE COURSE
SOIL CEMENT (300 PSI @ 7 DAYS)

REQUIRED SN = 2.36

0.44 - TYPE SP 9.5
0.44 - TYPE SP 12.5
0.15 - SOIL CEMENT BASE (300 PSI @ 7 DAYS)
0.04 - COMPACTED SUBGRADE (LBR 20 MIN.)

SN = (0.44) (1" SP 9.5)+ (0.44) (1.5" SP 12.5) + (0.15) (6") + (0.04) (12") = 2.48
PROVIDED SN = 2.48

NOTE: MIN. PAVEMENT SECTION IS 1.5" SURFACE COURSE, 6" BASE COURSE AND 12" STABILIZED SUBBASE FOR TYPE 2, 3 & 4 ROADWAYS PER RECOMMENDATIONS BY HSA ENGINEERS & SCIENTISTS.
SOIL CEMENT BASE SHALL BE CONSTRUCTED ON A STABLE NON-YEILDING SUBGRADE OF LBR 20.

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA
TYPICAL SECTIONS AND DETAILS

TUYEN L. TRAN, P.E.
STATE OF FLORIDA PROFESSIONAL ENGINEER
P.E. LICENSE NO. 54099

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APRIL 01, 2016

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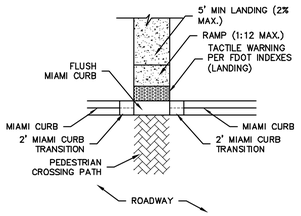
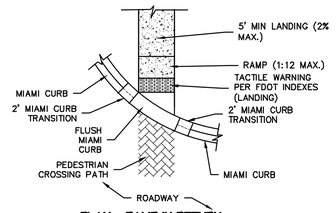
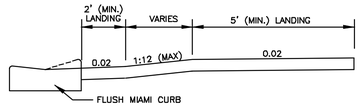


PLAN - RAMP PERPENDICULAR



PLAN - RAMP IN RETURN

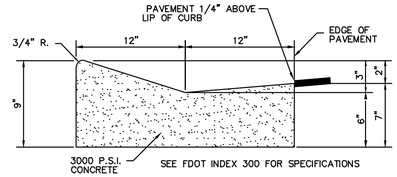


SECTION THROUGH RAMP RUN AND LANDING

NOTE:
1. ALL SIDEWALK RAMPS SHALL BE BUILT PER THE LATEST FDOT DESIGN STANDARDS AT THE TIME OF CONSTRUCTION.
2. ALL THE LATEST FDOT CRITERIA FOR RAMPS AND DETECTABLE WARNING SURFACES SHALL BE MET INCLUDING DESIGN STANDARDS – INDEX 304, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION – SECTION 527, AND THE QUALIFIED PRODUCTS LIST.
3. FOR OTHER CURB TYPES OTHER THAN MIAMI CURB AND CONDITIONS, REFER TO FDOT DESIGN STANDARD INDEX 304 – PUBLIC SIDEWALK CURB RAMPS, LATEST EDITION.
4. ALL NEW DEVELOPMENT INTERSECTIONS SHALL CONFORM TO ANY AND ALL FDOT APPLICABLE DESIGN STANDARDS, LATEST EDITION. DIAGONAL RAMPS SHALL NOT BE APPLICABLE AT NEW INTERSECTIONS.
5. SIDEWALK SHALL NOT BE IN CONFLICT WITH A DRAINAGE INLET. IF THIS OCCURS, SIDEWALK OR STRUCTURE SHALL BE ADJUSTED IN THE FIELD.
6. THE PREFERRED COLOR FOR CURB CUT DETECTABLE WARNING SURFACES IS RED. HOWEVER, THE COLOR USED MUST BE A CONTRASTING COLOR.
7. THE DETECTABLE WARNING STRIP SHALL BE ALIGNED IN THE DIRECTION OF TRAVEL.

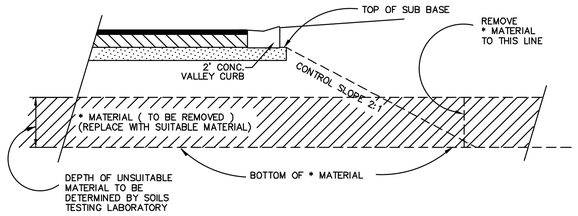
MIAMI CURB RAMP DETAIL

N.T.S.



CONCRETE VALLEY CURB (MIAMI CURB)

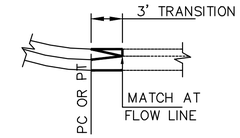
N.T.S.



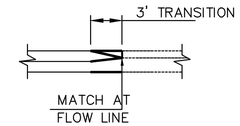
* = A-2-5, A-2-6, A-2-7, A-4, A-5, A-6, A-7 AND A-8

UNSUITABLE MATERIAL REMOVAL LIMITS

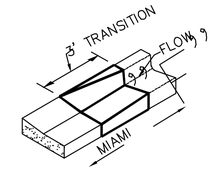
N.T.S.



AT CURB RETURN



AT TANGENT SECTION



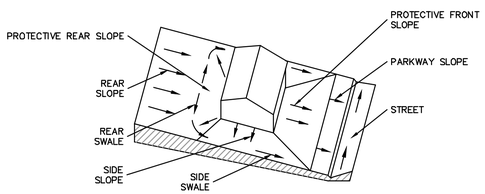
ISOMETRIC

NOTE: ALL TRANSITIONS SHALL BE 3'-0" IN LENGTH.

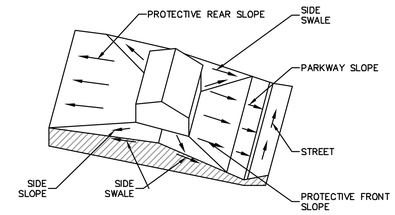
MIAMI CURB TO TYPE "F"

MIAMI CURB TRANSITION TYPICAL DETAILS

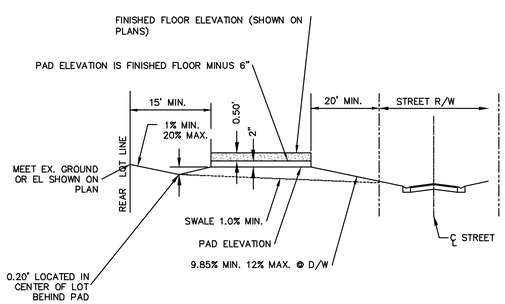
N.T.S.



LOT GRADING TYPE A ALL DRAINAGE TO STREET

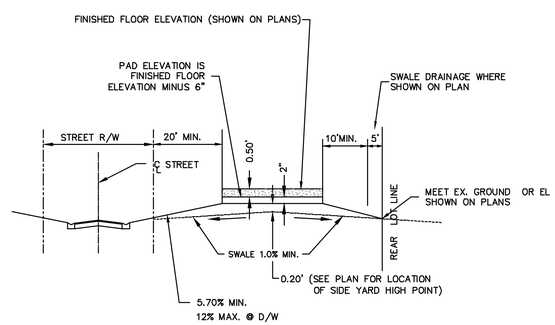


LOT GRADING TYPE B DRAINAGE TO BOTH STREET AND REAR LOT LINE



GRADING TYPE A

NOTE:
ALL FIRST FLOOR ELEVATIONS (FF) SHALL BE A MIN. OF 1' ABOVE THE BASE FLOOD ELEVATION (USE THE HIGHEST BFE BASED ON FEMA/FLOOD STUDY) OR AS REQUIRED BY THE LCD SECTION 701. (LCD 306.3.c, 701.9.b2) 16" ABOVE THE HIGHEST CROWN LINE OF THE STREET LYING BETWEEN THE PROJECTION OF THE SIDE BUILDING LINES (SUBDIVISION).

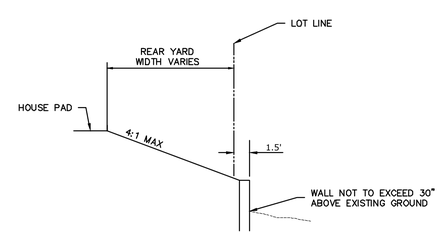


GRADING TYPE B

NOTE:
ALL FIRST FLOOR ELEVATIONS (FF) SHALL BE A MIN. OF 1' ABOVE THE BASE FLOOD ELEVATION (USE THE HIGHEST BFE BASED ON FEMA/FLOOD STUDY) OR AS REQUIRED BY THE LCD SECTION 701. (LCD 306.3.c, 701.9.b2) 16" ABOVE THE HIGHEST CROWN LINE OF THE STREET LYING BETWEEN THE PROJECTION OF THE SIDE BUILDING LINES (SUBDIVISION).

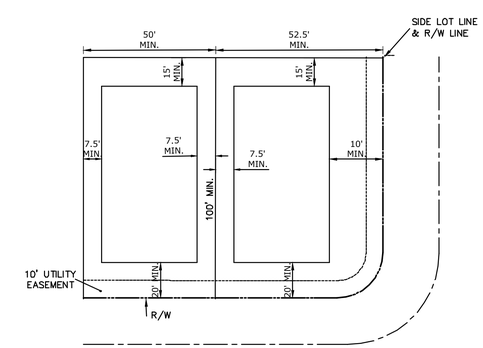
LOT GRADING DETAILS SINGLE FAMILY DETACHED

N.T.S.



TYPICAL WALL DETAIL

N.T.S.



NOTE :
FOR ADDITIONAL INFORMATION SEE RESIDENTIAL DESIGN STANDARD NOTES SHEET C1.02

TYPICAL MINIMUM LOT DIMENSION / SETBACK DETAIL

N.T.S.

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA
TYPICAL SECTIONS AND DETAILS

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

C7.02

PASCO CO. SUBMITTAL
APRIL 01, 2016

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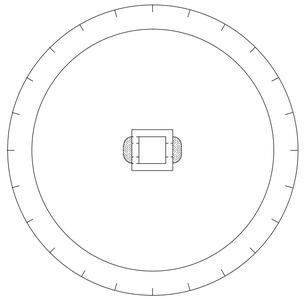
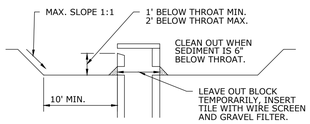


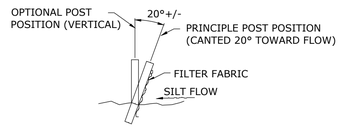
PLAN VIEW



CROSS SECTION

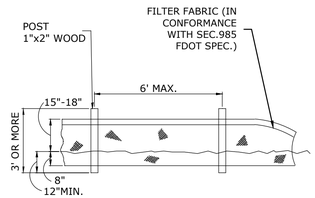
CIRCULAR SHAPE IS NOT ESSENTIAL - VARY SHAPE TO FIT DRAINAGE AREA AND TERRAIN. OBSERVE TO CHECK TRAP EFFICIENCY AND MODIFY AS NECESSARY TO INSURE SATISFACTORY TRAPPING OF SEDIMENT.

TEMPORARY SEDIMENT TRAP AT STORM INLET



SECTION

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 PERMANANT BODIES OF WATER.

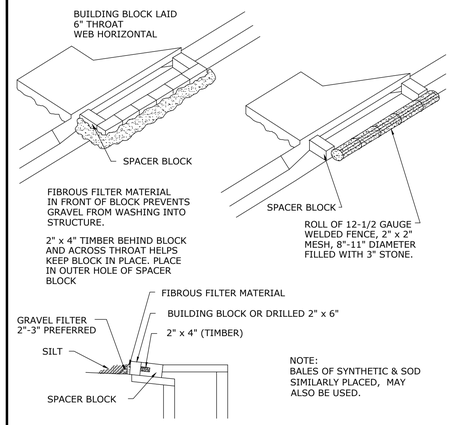


ELEVATION

NOTES:

1. FOR ADDITIONAL INFORMATION AND DETAILS, SEE F.D.O.T. INDEX No. 102
2. ADDITIONAL POSTS AND RAILS MAY BE NECESSARY TO SECURE AND SUPPORT BARRIERS.
3. ADDITIONAL FENCE LENGTHS MAY BE REQUIRED BY THE COUNTY ENGINEER OR BY REGULATORY AGENCIES.
4. SEE THE "FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL MANUAL FOR DETAILS

TYPE III SILT FENCE



NOTE:
BALES OF SYNTHETIC & SOD SIMILARLY PLACED, MAY ALSO BE USED.

TEMPORARY SEDIMENT TRAP AT CURB INLET

PROTECTIVE BARRIER REQUIREMENTS
AND
SPECIFICATIONS FOR EXISTING TREES TO REMAIN

PROTECTIVE BARRIERS are used during land alterations and construction activities to protect trees and natural areas to be retained on site

PROTECTIVE BARRIERS must be erected around TREES to be retained within an area where land alteration and construction activities will occur as well as along NATURAL AREAS where such areas are adjacent to permitted land alterations or construction activities. A PROTECTIVE BARRIER must remain in place until the land alteration and construction activities are completed or until commencement of grade finishing and sodding.
No ground disturbance must occur within the barricade area. The following represents the County's minimum protective barrier specifications.

FIG. A

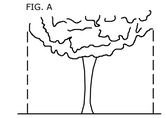


FIG. B

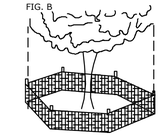
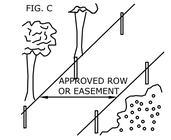


FIG. C



1. TREES - To restrict access into the area within the CANOPY DRIPLINE of a tree, a physical structure not less than 3 feet in height, comprised of wood or other suitable material, is placed around the tree at the C ANOPY DRIPLINE, except where land alteration or construction activities are approved with the CANOPY DRIPLINE.

   The CANOPY DRIPLINE of a tree is the imaginary, vertical line that extends downward from the outermost tips of the tree's branches to the ground. Fig. A

   BARRIER SPECIFICATIONS FOR TREES:

   Four corner upright stakes of no less than 2"x2" lumber connected by horizontal members of no less than 1"x4" lumber; or upright stakes spaced at 5' intervals of no less than 2"x2" lumber connected by silt screen fabric or material of comparable durability. Fig. B

2. NATURAL AREAS - To restrict access into areas where land alterations and construction activities are not authorized a physical structure not less than 3 feet in height is placed along the perimeter of such area.

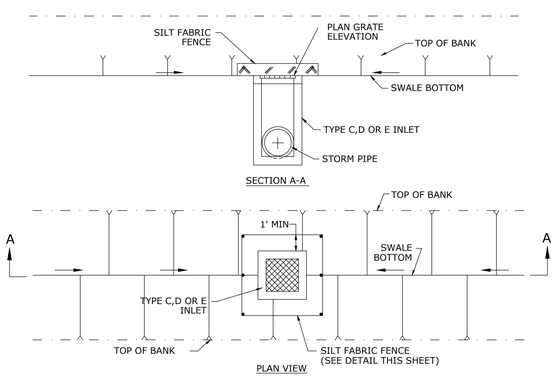
   BARRIER SPECIFICATIONS FOR NATURAL AREAS:

   Upright stakes of no less than 2"x2" lumber spaced no more than 25' apart and connected by twine flagged with plastic surveying tape at regular intervals of 5-10'. Fig C. Other methods of demarcation will be considered depending upon the characteristics of the site.

   WHY A BARRIER

   1. To protect all above ground portions of trees and other significant vegetation from mechanical damage.
   2. To protect root systems from compaction.
   3. To provide a awareness of protected areas to equipment operators.

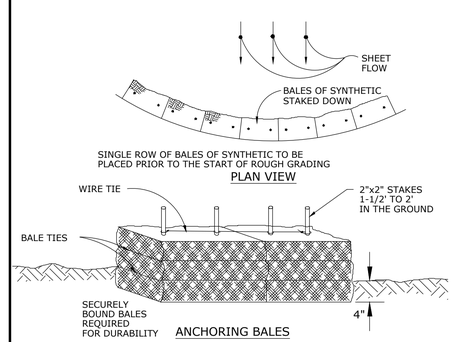
TREE BARRICADE DETAIL



NOTES:

1. CONTRACTOR TO INSTALL TEMPORARY PLYWOOD OVER GRATE OF INLET DURING CONSTRUCTION UNTIL GRATE IS PUT IN PLACE.
2. MIRAFI FABRIC IS TO BE PLACED UNDER GRATE DURING CONSTRUCTION TO LIMIT SILTS FROM ENTERING THE STRUCTURE.
3. SILT FENCE TO BE MAINTAINED BY CONTRACTOR DURING CONSTRUCTION AND LEFT IN GOOD CONDITION AT COMPLETION OF SITE WORK.
4. BUILDING DIVISION SHALL BE RESPONSIBLE FOR MAINTENANCE OF SILT FENCES AND SEDIMENT IN PIPES AFTER ACCEPTANCE OF SITE WORK.

TEMPORARY SILT FENCE



ANCHORING BALES

TEMPORARY SYNTHETIC BALE SEDIMENT BARRIER

HEAVY DUTY SILT FENCE TO BE INSTALLED PER MANUFACTURES SPECIFICATIONS. SILT SAVER PRIORIY 1 IS PROPOSED AS HEAVY DUTY SILT FENCE PER THIS CONSTRUCTION PLAN SET, ANY OTHER SUBSTITUTION MUST BE PRE APPROVED BY SWFWMD AND EOR PRIOR TO INSTALLATION.

BELTED SILT RETENTION FENCE
INSTALLATION DETAIL
Sediment Control
PRIORITY 1 – **GREEN BAND**

Manufacturer's Installation Instructions – Belted Silt Retention Fence (BSRF)
Silt Fence System Designed for the Control of Sheet Flow
Priority 1 – GREEN BAND

Product Description: The fabric is a 36" wide, non-woven spun-bond polyester fabric with an internal scrim. The system utilizes wood stakes and a specific method of attachment. The BSRF, when installed as specified, produces a proven system with superior filtering capabilities in slurry conditions.

Purpose: The BSRF shall be used as a vertical interceptor of sediment transported by overland flow on construction sites. The Belted Silt Retention Fence (BSRF) has been designed and tested as a Silt Fence **System**.

Supporting Documents: The BSRF Silt Fence System underwent comprehensive testing by the University of Georgia. The study describes the proven performance and efficiency of the BSRF and provides documentation of its superior attributes. As evidenced by the study, the BSRF meets the 75% filtration efficiency requirements of the Federal Highway Administration. The University of Georgia study, in its entirety, may be found on the following websites: www.siltsaver.com or www.asdhe.org

Installation Specifications: The method of installation for the BSRF is an integral part of the system and is unlike any other installation practices. Our specifically designed process includes wood (oak) stakes and wood bonding strips at four (4') foot intervals. Four foot stakes are driven to a depth which allows 24" of fabric to be above ground. The fabric is then stretched along the ***inside*** perimeter of the stakes, pulled tightly and held in place with bonding strips. The bonding strips (typically 1" x 3/8" x 24") are attached to the stake with 1" x 1 ¼" staples. Four staples are used to secure the fabric in place against the 1 ½" x 1 ½" (or equal density) oak posts. This installation bonds the fabric and support system (ecrim) to the vertical post. The remaining fabric is now tucked into the trench forming a "J" and, when filled with dirt, creates a "ground bite". With its firm attachment to each post, the load is now spread to the total linear strength of all the posts within the system. **Any variance from the material specifications installation requirements may alter the performance of this product.**

This product is available pre-staked to these specifications from the manufacturer.

Design Limitations: Designed for control of ***sheet flow,*** silt fence shall not be installed across streams, ditches, waterways, or anywhere there is ***concentrated flow.*** Silt fence shall not be placed around ***storm water inlets*** which are designed to receive ***concentrated flow.***

Maintenance: Silt fence should be inspected at the end of each work day and particularly after each rainfall event. Accumulated sediment should be removed when it reaches half the height of the fence to prevent failures. Remove the fence and the accumulated sediment and stabilize the exposed area when the project is finished.

Longevity: The life of this product is determined at the point in which it is no longer effective or needed to do the job for which it was designed. (Approximately one (1) year)

10

HEAVY DUTY SILT FENCE SPECIFICATIONS

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THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA
EROSION CONTROL DETAILS

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

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C8.01

PASCO CO. SUBMITTAL
APRIL 01, 2016

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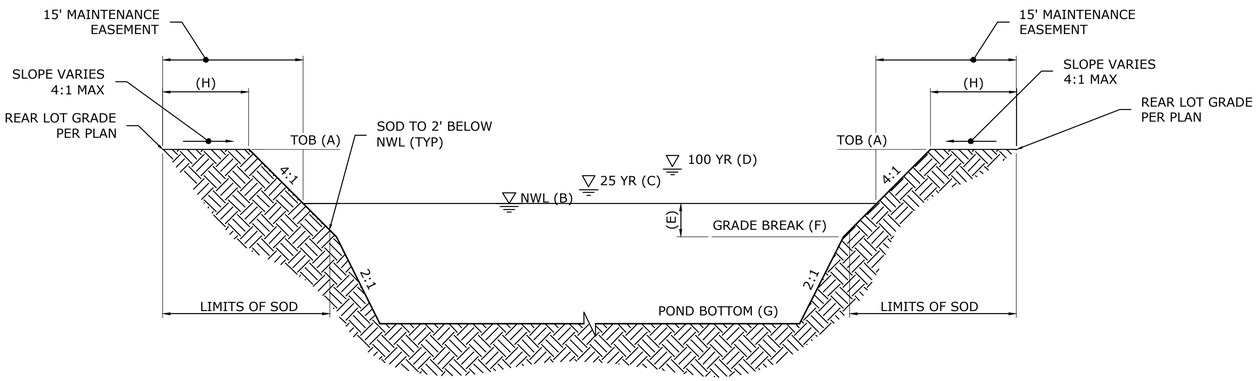

POND SECTION

POND DATA

POND NO.	A (TOB)	B (NWL)	C (25YR)	D (100YR)	E (DIM)	F (GB)	G (BOTTOM)	H
M23-6	71.20	68.20	70.53	71.06	2'-0"	66.20	*	5'
AS-BUILT								
M23-8	71.60	69.20	70.92	71.35	2'-0"	67.20	*	5'
AS-BUILT								
M23-9	74.00	71.40	73.37	73.95	2'-0"	69.40	*	5'
AS-BUILT								
M23-10	73.50	71.40	72.92	73.25	2'-0"	69.40	*	5'
AS-BUILT								
M23-11	74.20	71.60	73.65	74.19	2'-0"	69.60	*	5'
AS-BUILT								
M23-12	74.90	72.00	74.19	74.85	2'-0"	70.00	*	5'
AS-BUILT								

* POND BOTTOM (G) ELEVATION VARIES, SEE PLAN SHEETS FOR ELEVATION

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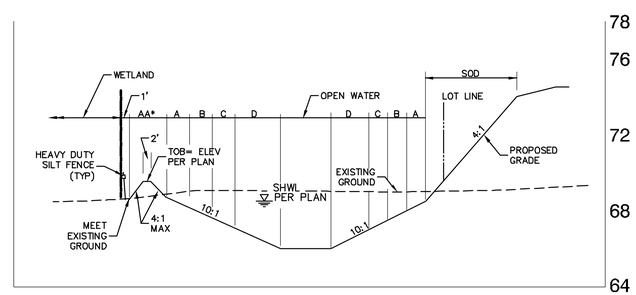
SUPPLEMENTAL WETLAND CREATION AREA PLANTING SCHEDULE

ZONE	ELEV.	SPECIES	COMMON NAME	SPACING	SIZE
AA	0' to +1.0'	*Eragrostis spectabilis*	Purple Lovegrass	3' O.C.	4" pot
	0' to +1.0'	*Muhlenbergia capillaris*	Muhly Grass	3' O.C.	4" pot
	0' to +1.0'	*Coreopsis laevenworthii*	Tickseed	3' O.C.	4" pot
A	0' to -0.5'	*Spartina bakeri*	Sand Cordgrass	5' O.C.	1 Gal.
	0' to -0.5'	*Canna flaccida*	Golden Canna	3' O.C.	4" pot
B	-0.5' to -1.0'	*Panicum hemitomon*	Maidencane	3' O.C.	4" pot
	-0.5' to -1.0'	*Juncus effusus*	Soft Rush	3' O.C.	4" pot
C	-1.0' to -1.5'	*Pontederia cordata*	Pickerelweed	3' O.C.	4" pot
	-1.0' to -1.5'	*Eleocharis cellulosa*	Coastal Spikerush	3' O.C.	4" pot
	-1.0' to -1.5'	*Sagittaria latifolia*	Common Arrowhead	3' O.C.	4" pot
D	-1.5' to -2.0'	*Scirpus validus*	Soft-stem Bulrush	3' O.C.	4" pot
	-2.0' to -2.5'	*Scirpus californicus*	Giant Bulrush	3' O.C.	4" pot
	-2.0' to -2.5'	*Nelumbo lutea*	American Lotus	5' O.C.	B.R.
OPEN WATER	-2.5'	*Nymphaea odorata*	Fragrant Water Lily	5' O.C.	B.R.

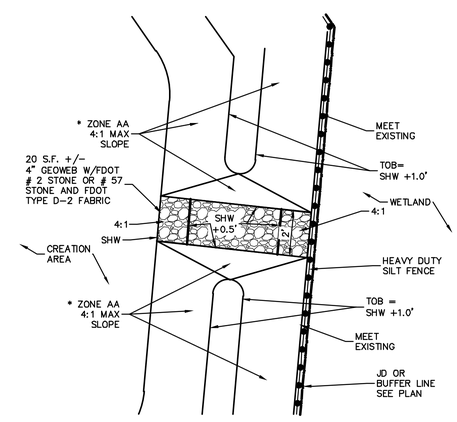
Notes:
1) Plants to be obtained from local, licensed nursery.
2) Plants to be installed in naturalistic groupings where possible.
3) Substitution of equivalent size, bare root/collected material may be acceptable if verified by King Ecologists.
4) Substitution of species providing equivalent function will be acceptable based on availability at time of planting. King Ecologists will approve all proposed substitutions.
5) O.C. = On Center
6) B.R. = Bare Root

* ZONE AA SHALL BE COVERED WITH NORTH AMERICAN GREEN SC150BN BIODEGRADABLE STRAW/COCONUT EROSION CONTROL NETTING



TYPICAL GRADING SECTION
SCALE: 1"=20' HORZ. / 1"=4' VERT.

SM-C



GEOWEB OUTFALL
SCALE: 1"=5'

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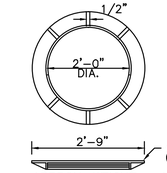
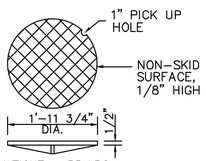


APPROX. WEIGHT = 120 LBS.

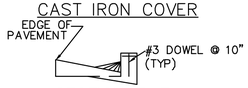
CAST IRON FRAME

TYPE A = WITHOUT WING
TYPE A1 = SINGLE WING
TYPE A2 = DOUBLE WING

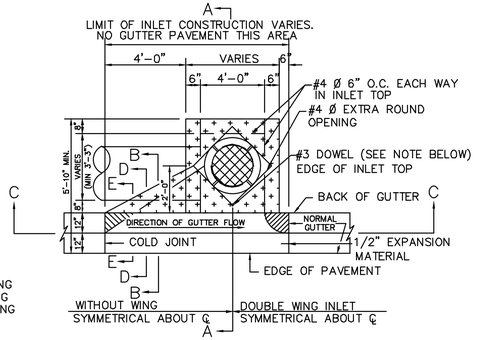


APPROX. WEIGHT = 55 LBS.
USF NO. 1255 AJ

CAST IRON COVER

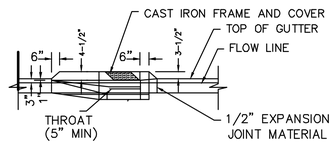


SECTION E–E



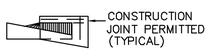
INLET PLAN

NOTE:
6"x6" COLUMN WITH #3 DOWELS TO BE INSTALLED ONLY IN TYPE A–2 INLETS.



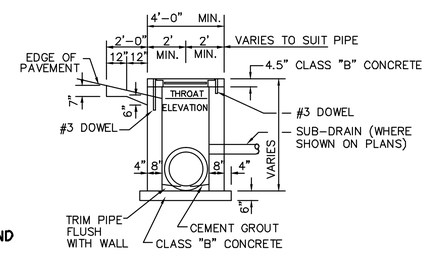
SECTION C–C

SECTION D–D



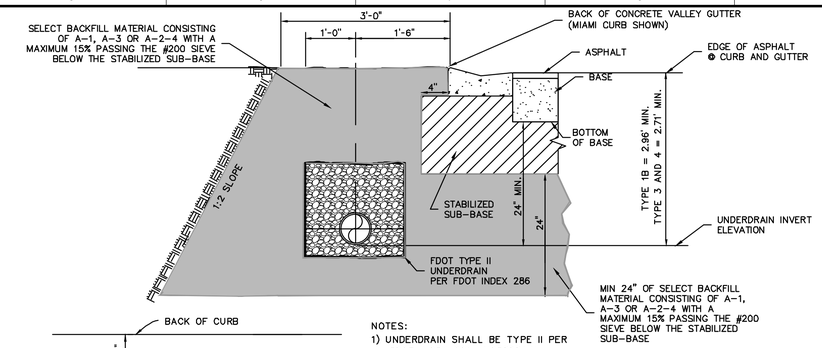
SECTION B–B

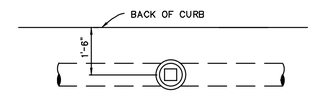
NOTE: CONTRACTOR TO EXTEND INLET BOX AS REQUIRED TO ACCOMODATE STORM PIPE & UNDERDRAIN



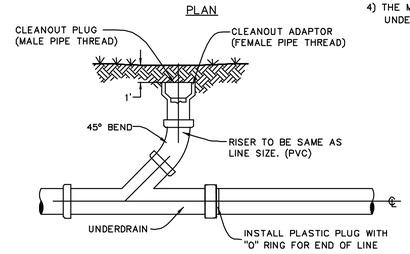
SECTION A–A

VALLEY GUTTER INLET TYPE "A" A-1 AND A-2





PLAN



NOTES:
1) UNDERDRAIN SHALL BE TYPE II PER FDOT INDEX 286 UNDERDRAIN.
3) USE NON-PERFORATED PIPE UNDER ROADWAYS. (CONTINUE FILTER MATERIAL)
4) THE MINIMUM GRADE OF THE UNDERDRAIN PIPE SHALL BE 0.2%.

NOTE:
MARK UNDERDRAIN CLEANOUT LOCATIONS WITH ETCHED CURB. CLEANOUT CAP TO BE BURIED 1' BELOW GRADE AND MARKED WITH A METAL MARKER.

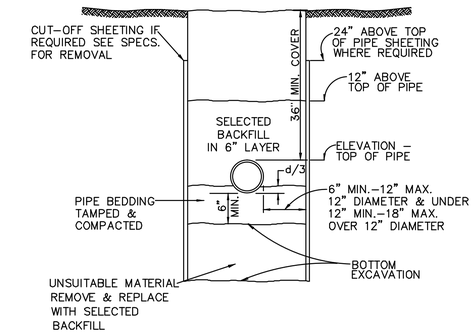
NOTE:
THE ENGINEER RESPONSIBLE FOR THE PROJECT SHALL CERTIFY TO COUNTY ENGINEERING SERVICES DIRECTOR THAT THE UNDERDRAINS HAVE BEEN PROPERLY INSTALLED PRIOR TO THE INSTALLATION OF ANY ASPHALT. CERTIFICATION SHALL STRICTLY COMPLY WITH THE UNDERDRAIN CERTIFICATION FORM AVAILABLE IN ENGINEERING SERVICES DEPARTMANT:A PROCEDURAL GUIDE FOR THE PREPARATION OF ASSURANCE OF COMPLETION AND MAINTENANCE.

UNDERDRAIN AND CLEANOUT DETAIL

DETAIL REFERENCES

STRUCTURE NAME	DETAIL LOCATION
TYPE D	DITCH BOTTOM INLET TYPE "D" FDOT INDEX 232
STORM MH	STORM MANHOLE PER FDOT INDEX 200 AND 201
FES	CONCRETE FLARED END SECTION PER FDOT INDEX 270 (INCLUDING TOE WALL)
TYPE P5 TYPE P6	CURB INLET TOP TYPE 5 OR 6 , FDOT INDEX 211, 201 AND 200
TYPE A, TYPE A1 & TYPE A2	CURB INLET SEE DETAILS SHEET C10.01
CONTROL STRUCTURE	DITCH BOTTOM INLET TYPE "D" AND "H" FDOT INDEX 232, SEE ALSO SHEET C10.02
SAND CEMENT RIP RAP	RIP RAP SAND CEMENT PER FDOT INDEX 281

DETAIL REFERENCES



TYPICAL TRENCH SECTION

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA
STORM SEWER DETAIL

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

C10.01

PASCO CO. SUBMITTAL
APRIL 01, 2016

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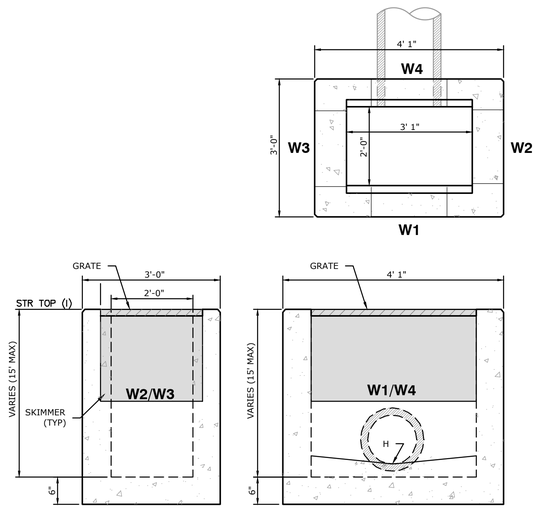
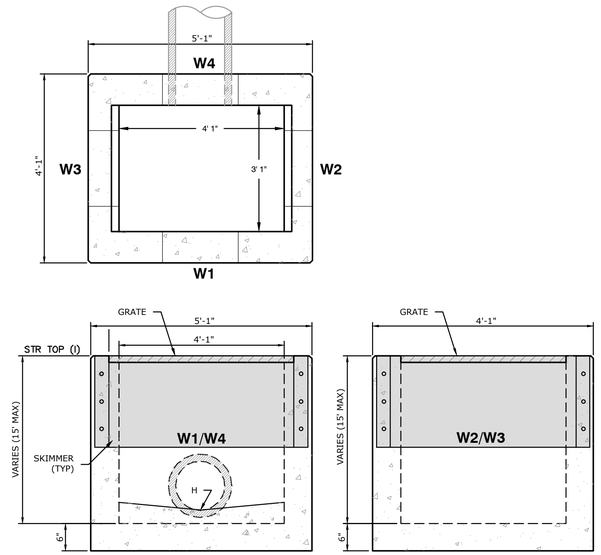


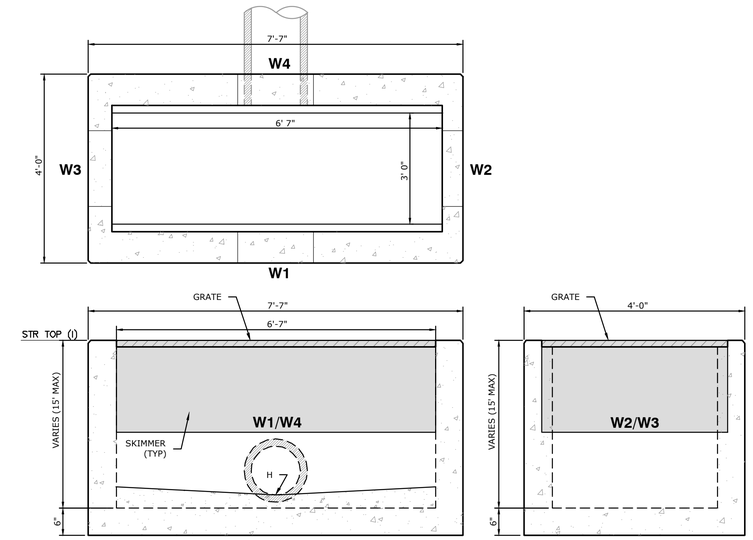
MODIFIED TYPE C CONTROL STRUCTURE
PER FDOT INDEX 232

RECOMMENDED PIPE SIZES PER FDOT INDEX:
2'-0" WALL - 18" PIPE
3'-1" WALL - 24" PIPE (18" WHEN 18" ENTERS 2'-0" WALL)



MODIFIED TYPE D CONTROL STRUCTURE
PER FDOT INDEX 232

RECOMMENDED PIPE SIZES PER FDOT:
3'-1" WALL - 24" PIPE
4'-1" WALL - 36" PIPE



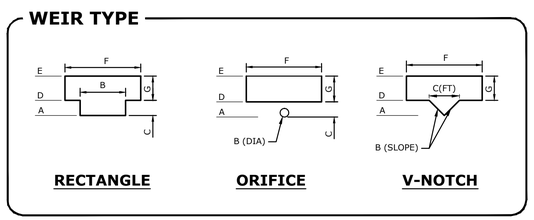
MODIFIED TYPE H (2 & 3 GRATE) CONTROL STRUCTURE
PER FDOT INDEX 232

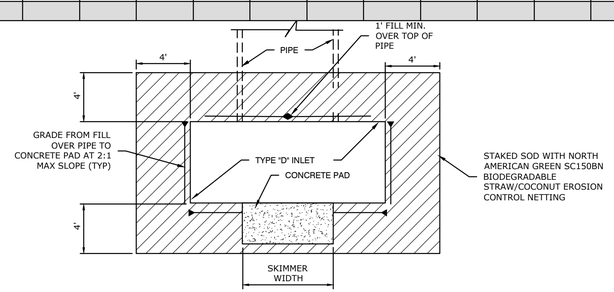
RECOMMENDED PIPE SIZES PER FDOT:
3'-0" WALL - 24" PIPE
6'-7" WALL - 1-60" PIPE OR 2-24" PIPES (S=3'-5")

CONTROL STRUCTURE DATA

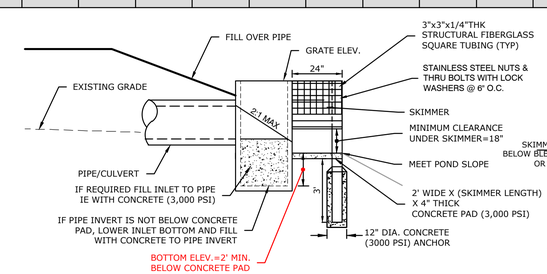
				W1							W2							W3							W4								
STRUCTURE NO.	STRUCTURE TYPE	WEIR TYPE	PIPE SIZE	1A	1B	1C	1D	1E	1F	1G	2A	2B	2C	2D	2E	2F	2G	3A	3B	3C	3D	3E	3F	3G	4A	4B	4C	4D	4E	4F	4G	H	I
P6-CS	D	RECTANGULAR	36"	-	-	-	68.20	68.87	26"	8"				-	-	-	-				-	-	-	-								65.60	70.7
P8-CS	D	RECTANGULAR	36"	69.2	26"	4.8"	69.60	70.43	48"	10"				69.6	70.43	36"	10"				69.6	70.43	36"	10"								65.0	71.1
P9-CS	D	RECTANGULAR	36"	71.4	11"	7.2"	72.00	72.83	48"	10"				72.0	72.83	36"	10"				72.0	72.83	36"	10"								68.50	73.5
P10-CS	D	RECTANGULAR	24"	-	-	-	71.70	72.33	48"	7.6"				71.7	72.33	36"	7.6"				71.7	72.33	36"	7.6"								68.75	73.0
P10-CS10	H	RECTANGULAR	48"	71.4	24"	3.6"	71.70	72.33	67"	7.6"				71.7	72.33	30"	7.6"				71.7	72.33	30"	7.6"								67.70	73.0
P11-CS	D	RECTANGULAR	36"	71.6	12"	6.0"	72.10	73.03	48"	11.2"				72.1	73.03	36"	11.2"				72.1	73.03	36"	11.2"								67.70	73.7
P12-CS	D	RECTANGULAR	24"	72.0	16"	4.8"	72.40	73.73	48"	16.0"				72.4	73.73	36"	16.0"				72.4	73.73	36"	16.0"								68.05	74.4

WEIR TYPE

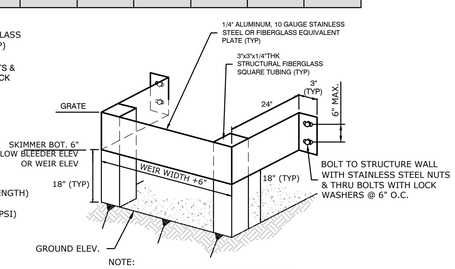




SKIMMER & GRADING DETAIL (PLAN)



SKIMMER & GRADING DETAIL (SECTION)



SKIMMER & GRADING DETAIL (ISOMETRIC)

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PASCO CO. SUBMITTAL
APRIL 01, 2016

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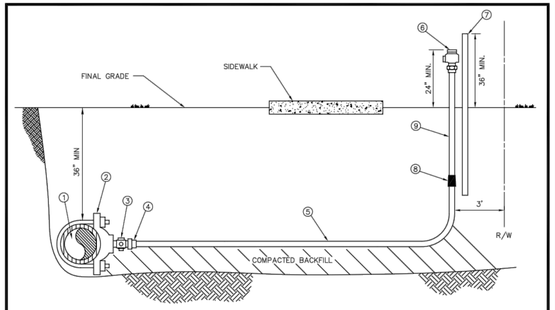

MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (M.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	1	3/4" WATER OR 1" REUSE CURB STOP BALL VALVE W/ LOCK WINGS (F.I.P. x COMP.)
7	1	2" x 4" P.T. MARKER STAKE
8	1	1" x 3/4" COUPLING (COMP. x COMP.) WATER ONLY
9	1	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'

NOTES:
- ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" – 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

CREATED 02/24/03
REVISED

SINGLE NEAR SIDE WATER SERVICE – 3/4"
SINGLE NEAR SIDE REUSE SERVICE – 1"
POLYETHYLENE TUBING

PASCO COUNTY UTILITIES

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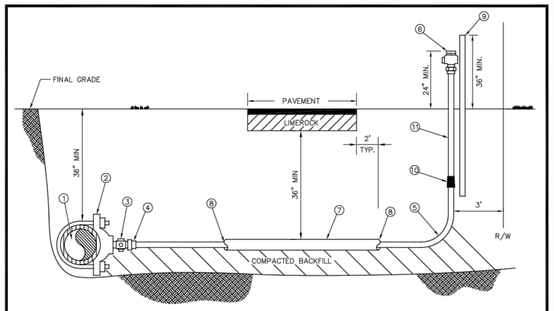
DETAIL 17



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (M.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	1	3/4" WATER OR 1" REUSE CURB STOP BALL VALVE W/ LOCK WINGS (F.I.P. x COMP.)
7	*	2" CASING, PVC OR HDPE – 2' BEYOND EDGE PAVEMENT
8	*	SEALER, RAM-NEK
9	1	2" x 4" P.T. MARKER STAKE
10	1	1" x 3/4" COUPLING (COMP. x COMP.) WATER ONLY
11	1	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'

NOTES:
- ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" – 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

CREATED 02/24/03
REVISED

SINGLE FAR SIDE WATER SERVICE – 3/4"
SINGLE FAR SIDE REUSE SERVICE – 1"
POLYETHYLENE TUBING

PASCO COUNTY UTILITIES

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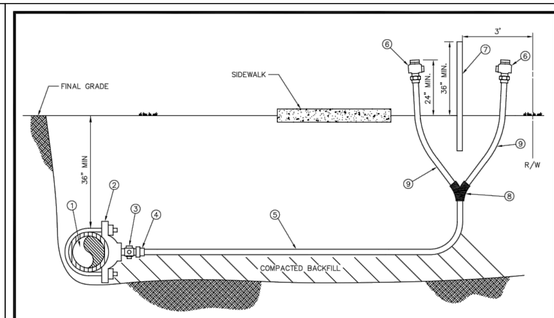
DETAIL 18



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (M.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	1	3/4" WATER OR 1" REUSE CURB STOP BALL VALVE W/ LOCK WINGS (F.I.P. x COMP.)
7	1	2" x 4" P.T. MARKER STAKE
8	1	1" x 3/4" WYE BRANCH (COMP. x COMP.) WATER ONLY
		1" x 1" WYE BRANCH (COMP. x COMP.) REUSE ONLY
9	1	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'

NOTES:
- ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" – 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

CREATED 02/24/03
REVISED

DOUBLE NEAR SIDE WATER SERVICE – 3/4"
DOUBLE NEAR SIDE REUSE SERVICE – 1"
POLYETHYLENE TUBING

PASCO COUNTY UTILITIES

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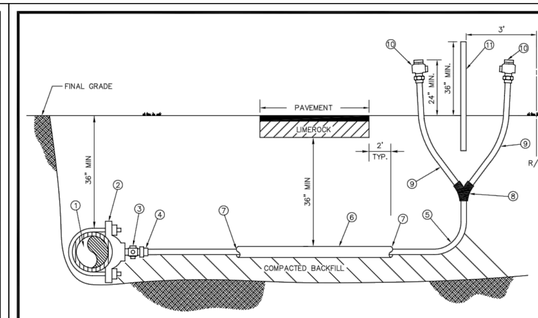
DETAIL 19



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (M.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	*	2" CASING, PVC OR HDPE – 2' BEYOND EDGE PAVEMENT
7	*	SEALER, RAM-NEK
8	1	WYE BRANCH FOR POLY TUBING
9	2	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'
10	2	3/4" WATER OR 1" REUSE CURB STOP BALL VALVE W/ LOCK WINGS (F.I.P. x COMP.)
11	1	2" x 4" P.T. MARKER STAKE

NOTES:
- ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" – 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

CREATED 02/24/03
REVISED

WATER AND REUSE LATERAL SERVICE 3/4"
(DOUBLE – FAR SIDE)
POLYETHYLENE TUBING

PASCO COUNTY UTILITIES

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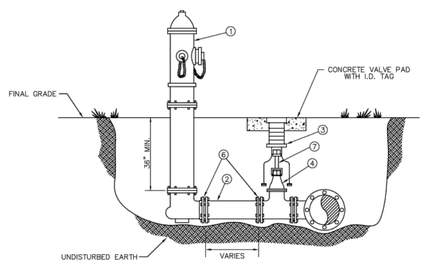
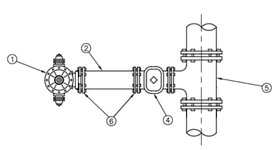
DETAIL 20





MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	HYDRANT, FIRE (5 1/4" VALVE MIN.), PAINTED YELLOW
2	*	6" PIPE, P.V.C. (DR-18)
3	1	BOX, VALVE SLIP TYPE
4	1	6" VALVE, GATE, M.J. RESILIENT WEDGE
5	1	TEE, ANCHORING, M.J.
6	*	6" RESTRAINER GLAND (MEGALUG)
7	*	VALVE EXTENSION ROD, AS NECESSARY (3' MAX. BELOW GRADE)

CREATED 02/24/03
REVISED

FIRE HYDRANT
PERPENDICULAR TO THE MAIN

PASCO COUNTY UTILITIES

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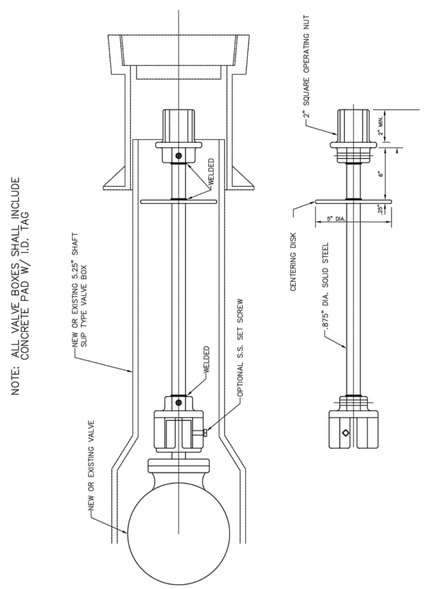
DETAIL 27



CREATED 02/24/03
REVISED

VALVE EXTENSION RODS

PASCO COUNTY UTILITIES

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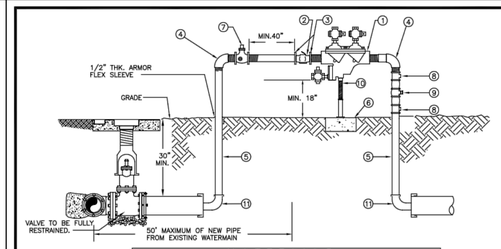
DETAIL 29



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	2" BACKFLOW PREVENTER ASSEMBLY, REDUCED PRESSURE ZONE
2	1	2" METER FURNISHED BY PASCO COUNTY UTILITIES
3	2	BRASS-METER FLANGES OR ADAPTORS
4	2	2" ELBOWS – GALV. 90°
5	2	2" RISER – GALV.
6	*	CONCRETE SLAB
7	1	2" VALVE – BRASS OR S.S.
8	2	TEE/ VALVES – BRASS OR S.S.
9	1	2" GATE VALVE – BRASS OR S.S.
10	1	PIPE STAND (SUPPORT)
11	2	M.J. CAP WITH 2" TAP

NOTE:
- CONTRACTOR/CUSTOMER SHALL APPLY AT PASCO COUNTY UTILITIES CUSTOMER SERVICE FOR TEMPORARY WATER SERVICE AT LEAST THREE DAYS PRIOR TO REQUIRED SERVICE DATE.
- THE METER WILL BE FURNISHED, INSTALLED AND INITIAL READING TAKEN BY PASCO COUNTY UTILITIES. ALL FITTINGS, PIPING, VALVES AND MATERIALS INCLUDING THE PASCO COUNTY APPROVED REDUCED PRESSURE BACKFLOW PREVENTION DEVICE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR/CUSTOMER.
- CONTRACTOR/CUSTOMER FURNISHED REDUCED PRESSURE BACKFLOW PREVENTION DEVICE MUST BE INSTALLED BEFORE THE METER IS INSTALLED BY PASCO COUNTY UTILITIES. THE APPROVED BACKFLOW PREVENTION DEVICE SHALL BE TESTED AND CERTIFIED BY PASCO COUNTY UTILITIES CERTIFIED BACKFLOW PREVENTION TECHNICIAN AT TIME OF METER INSTALLATION.
- CONTRACTOR/CUSTOMER SHALL PROTECT THE JUMPER/METER ASSEMBLY FROM DAMAGE.
- CONTRACTOR/CUSTOMER IS RESPONSIBLE FOR BACTERIOLOGICAL TESTING AFTER CONNECTION OF TEMPORARY WATER SERVICE.
- TEMPORARY CONSTRUCTION JUMPER/METER ASSEMBLY SHALL NOT BE REMOVED UNTIL SYSTEM IS ACCEPTED AND DEPARTMENT OF HEALTH CERTIFICATION AND CLEARANCE FOR SERVICE FORM HAS BEEN RECEIVED BY PASCO COUNTY UTILITIES.
- WHEN THE NEW SYSTEM IS ACCEPTED AND THE FINAL METER READING TAKEN BY PASCO COUNTY, THE TEMPORARY CONSTRUCTION JUMPER/METER ASSEMBLY MUST BE COMPLETELY REMOVED FROM M.J CAP TO M.J. CAP AND A NEW WATER MAIN IS TO BE CHLORINATED AND INSTALLED COMPLETING THE FINAL CONNECTION.
- BY APPLYING FOR SERVICE, CONTRACTOR/CUSTOMER AGREES TO TAKE WATER SERVICE FROM PASCO COUNTY UTILITIES IN ACCORDANCE WITH THE APPROPRIATE RATE SCHEDULE AND IN ACCORDANCE WITH PASCO COUNTY UTILITIES RULES AND REGULATION.

CREATED 11/18/05
REVISED

TEMPORARY CONSTRUCTION WATER SERVICE

PASCO COUNTY UTILITIES

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DETAIL 01

PIPE RESTRAINT LENGTHS IN FEET
TEES (BRANCH SIDE)

WATER MAINS - TEST PRESSURE 150 PSI									
		BRANCH SIZE								
		3"	4"	6"	8"	10"	12"	16"	20"	24"
RUN SIZE	3"	6'	14'	30'	—	—	—	—	—	—
	4"	2'	11'	28'	44'	—	—	—	—	—
	6"	1'	2'	22'	40'	52'	—	—	—	—
	8"	1'	1'	16'	35'	48'	62'	—	—	—
	10"	1'	1'	10'	30'	44'	58'	83'	—	—
	12"	1'	1'	3'	25'	40'	55'	80'	103'	—
	16"	1'	1'	1'	14'	31'	48'	75'	98'	119'
	20"	1'	1'	1'	2'	22'	40'	69'	94'	116'
	24"	1'	1'	1'	1'	11'	31'	63'	89'	111'

RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE TEE ALONG THE BRANCH FOR THE DISTANCE INDICATED. A MINIMUM OF 5 FEET OF RESTRAINED PIPE MUST BE INSTALLED ON BOTH RUNS OF THE TEE. MEGALUG TYPE RESTRAINERS ARE REQUIRED ON ALL JOINTS.

CREATED 02/24/03
REVISED

RESTRAINED JOINT TABLE
TEES (BRANCH SIDE)

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PASCO CO. SUBMITTAL
APRIL 01, 2016

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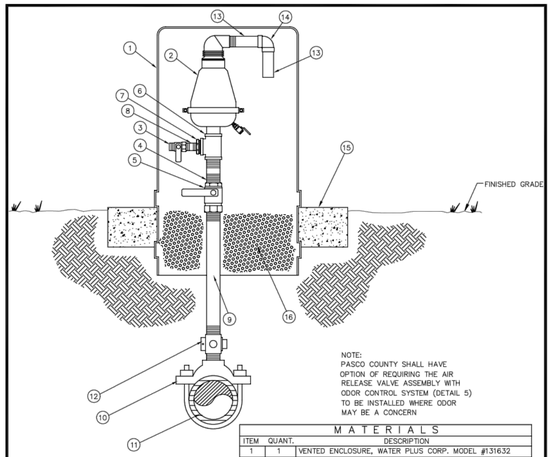

NOTE:
PASCO COUNTY SHALL HAVE OPTION OF REQUIRING THE AIR RELEASE VALVE ASSEMBLY WITH ODOR CONTROL SYSTEM (DETAIL 5) TO BE INSTALLED WHERE ODOR MAY BE A CONCERN

NOTE:

VENTED ENCLOSURE TO BE COLOR CODED AS FOLLOWS:

WATER MAIN – BLUE
FORCE MAIN – GREEN
REUSE MAIN – PURPLE

MATERIALS

ITEM	QUANT.	DESCRIPTION
1	1	VENTED ENCLOSURE, WATER PLUS CORP. MODEL #131632
2	1	AIR RELEASE VALVE 2" NPT (SEE BELOW)
		SEWER AIR RELEASE VALVES SHALL BE ARI MODEL D-025
		WATER AIR RELEASE VALVES SHALL BE VALMATIC OR EQUAL
3	1	1" CURB STOP, S.S.
4	1	2" x 4" NIPPLE, S.S.
5	1	2" BALL VALVE, S.S.
6	1	2" TEE, S.S.
7	1	2" X 1" REDUCER, S.S.
8	1	1" SHORT NIPPLE, S.S.
9	1	2" PIPE, S.S. LENGTH AS REQUIRED
10	1	2" DOUBLE STRAP TAPPING SADDLE, S.S.
11	1	4" & LARGER PIPE, D.I. OR PVC (DR-18)
12	1	2" CORPORATION BRASS
13	2	1-1/2" PIPE, PVC, LENGTH AS REQUIRED
14	1	1-1/2" x 90° ELBOW, PVC
15	1	CONCRETE SLAB AROUND ENCLOSURE
16	1	#57 WHITE ROCK

CREATED 02/24/03
REVISED

STANDARD AIR RELEASE VALVE ASSEMBLY
(VERTICAL PIPE LAYOUT)

PASCO COUNTY UTILITIES

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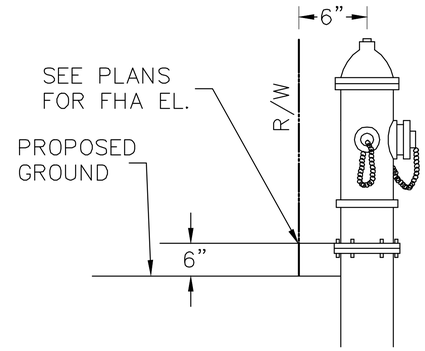
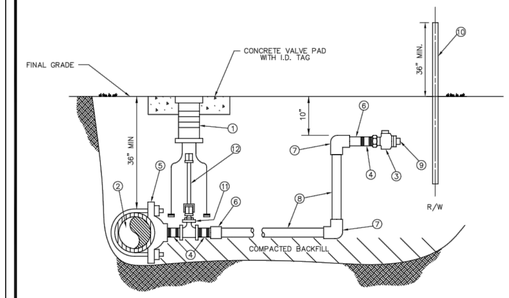
DETAIL 4



FHA LOCATION
N.T.S.



MATERIALS

ITEM	QUANT.	DESCRIPTION
1	1	BOX, VALVE CAST IRON SLIP TYPE
2	*	4" & LARGER PIPE, PVC (DR-18) OR D.I.P. (CLASS 50)
3	2	1 1/2", 2" CURB STOP BALL VALVE W/ LOCK WINGS (FIP x FIP OR FIP x CTS)
4	3	1 1/2", 2" NIPPLE, BRASS OR STAINLESS STEEL
5	1	1 1/2", 2" SADDLE, SERVICE (I.P. THREADS)
6	2	1 1/2", 2" ADAPTER (PVC SCH 40 / SLIP x FPT OR BRASS MIP x CTS)
7	2	1 1/2", 2" 90° ELBOW (SLIP x SLIP) SCH 40 (NOT REQUIRED FOR HDPE)
8	*	1 1/2", 2" PIPE, PVC (SCH 40) OR HDPE (3408) – LENGTH VARIES
9	1	1 1/2", 2" PLUG, THREADED (W/ TEFLON TAPE)
10	1	2" x 4" P.T. MARKER STAKE
11	1	2" GATE VALVE, IRON BODY W/ SQUARE NUT
12	1	VALVE EXTENSION ROD, AS REQUIRED (3' MAX. BELOW GRADE)

NOTE:
- A VALVE BOX SHALL BE REQUIRED ON ALL GATE VALVES.
- SERVICE SADDLES SHALL BE INSTALLED ON ALL TAPS TO P.V.C. (DR-18) WATER MAINS.
- 2" GATE VALVE TO BE RESILIENT WEDGE IRON BODY TYPE WITH 2" OPERATING UNIT.
- SADDLES 4" AND LARGER TO BE DUCTILE IRON DUAL STRAP TYPE.
- 1 1/2" BRASS REDUCER BUSHING REQUIRED WITH ITEM NO. 11 FOR 1 1/2" SERVICE.
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.
- 4" DIAMETER CASING REQUIRED FOR ROAD CROSSINGS

CREATED 02/24/03
REVISED

WATER AND REUSE LATERAL SERVICE
1 1/2" OR 2"
SERVICE LATERAL PVC (SCHEDULE 40)

PASCO COUNTY UTILITIES

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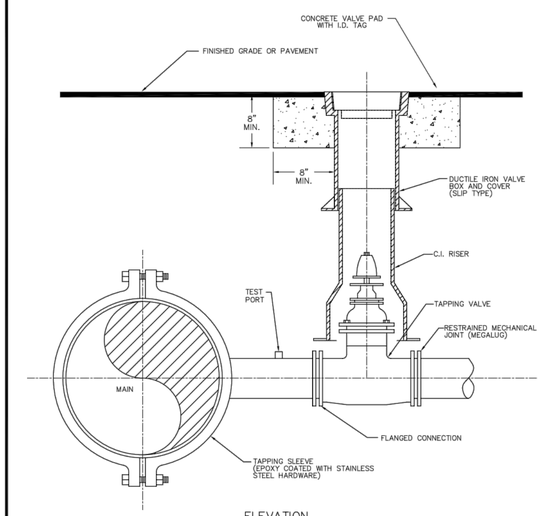
DETAIL 21



ELEVATION

NOTES:
- SADDLE CONNECTION WILL BE TESTED TO 150 PSI PRIOR TO TAPPING MAIN.
- MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED BY COUNTY/ENGINEER.
- VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

CREATED 02/24/03
REVISED

WATER, REUSE, AND FORCE MAIN
TAPPING DETAIL W/ VALVE LOCATION

PASCO COUNTY UTILITIES

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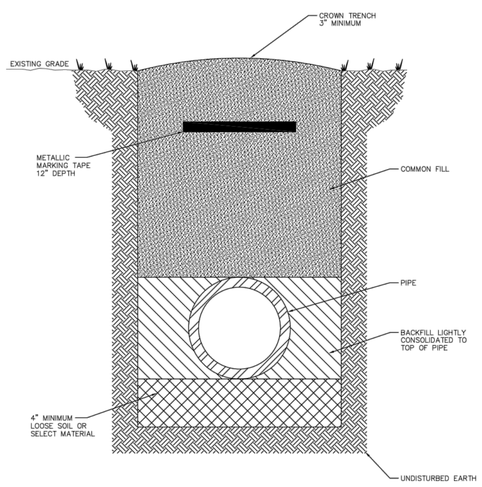
DETAIL 37



NOTES: –LOOSE SOIL OR SELECT MATERIAL IS NATIVE SOIL EXCAVATED FROM THE TRENCH FREE OF ROCKS AND FOREIGN MATERIAL.
–COMMON FILL TO BE PLACED AND COMPACTED IN 12" LAYERS. ROLLING EQUIPMENT SHALL NOT BE USED FOR COMPACTION UNTIL A MINIMUM OF 18" OF COMMON FILL HAS BEEN PLACED AND COMPACTED OVER THE PIPE. THREE FEET OF FILL SHALL BE PLACED BEFORE A HYDROHAMMER MAY BE USED FOR COMPACTION.

NTS

CREATED 02/24/03
REVISED

PIPE LAYING CONDITIONS
STANDARD UNPAVED AREAS

PASCO COUNTY UTILITIES

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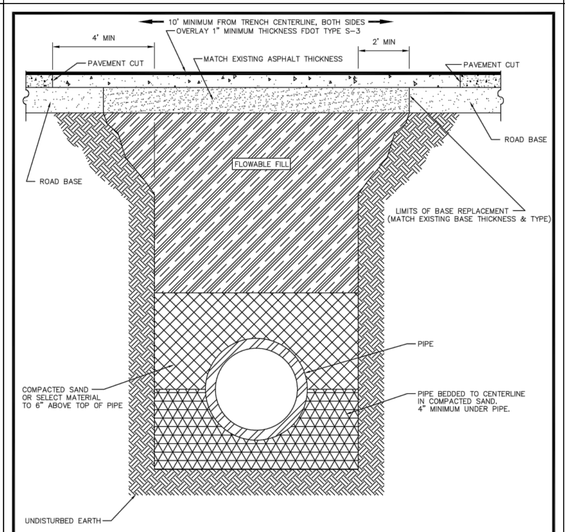
DETAIL 35



NOTE: –SELECT MATERIAL IS NATIVE SOIL EXCAVATED FROM THE TRENCH FREE OF ROCKS AND FOREIGN MATERIAL.
–COMPACTION TO TOP OF PILE IS TO BE APPROXIMATELY 90% STANDARD PROCTOR, AASHTO T-99.
–EXISTING CONCRETE/ASPHALT PAVEMENT SURFACE AND BASE TO BE CUT SQUARE WITH CONCRETE SAW.

NTS

CREATED 03/06/03
REVISED

PIPE LAYING CONDITIONS
FLOWABLE FILL BACKFILL
STANDARD EXISTING PAVED AREAS & ROADWAYS

PASCO COUNTY UTILITIES

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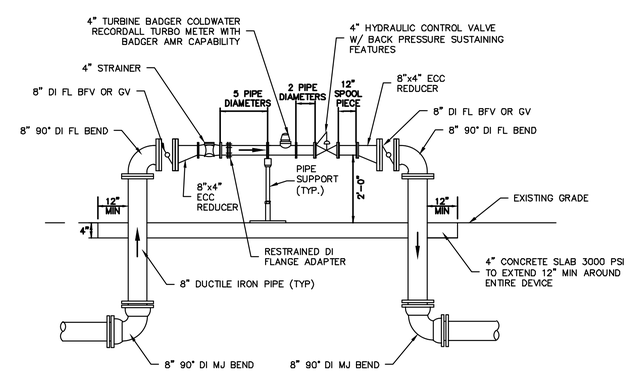
DETAIL 36



REUSE METER ASSEMBLY
N.T.S.

King
ENGINEERING ASSOCIATES, INC.
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Tampa, Florida 33634
Phone: (813) 880-8881, Fax: (813) 880-8882
www.kingengineering.com
Engineering License #2610

NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA

WATER DISTRIBUTION DETAILS

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

C11.02

PASCO CO. SUBMITTAL
APRIL 01, 2016

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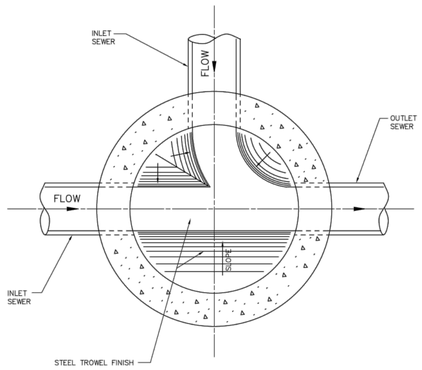

CREATED 02/24/03
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STANDARD MANHOLE (BENCH AND INVERTS)

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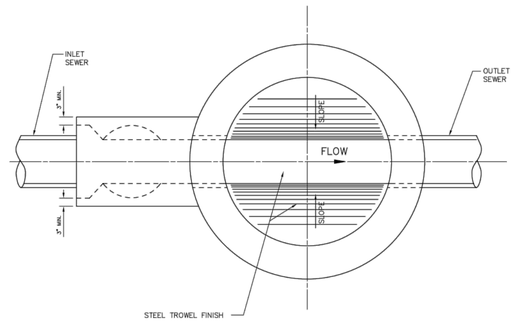
PASCO COUNTY UTILITIES — DETAIL 39



NOTE:
DROP MANHOLE TO BE USED WHEN THE DIFFERENCE BETWEEN INVERTS IS 2' OR MORE.

CREATED 02/24/03
REVISED

DROP MANHOLE (BENCH AND INVERTS)

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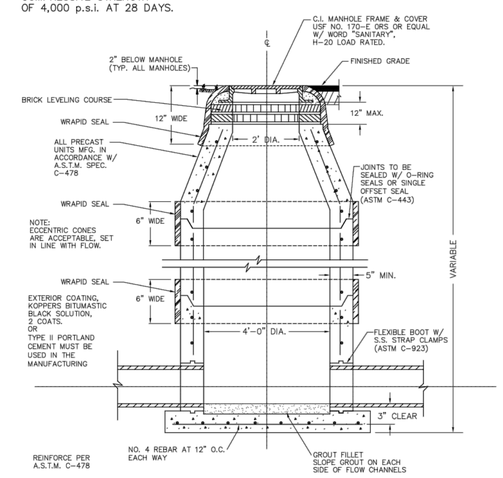
PASCO COUNTY UTILITIES — DETAIL 40

NOTE:
PRECAST CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,000 p.s.i. AT 28 DAYS.



NOTE:
1. WRAPID SEAL MUST BE USED ON ALL JOINTS, CASTINGS AND RISER RINGS: ON ALL JOINTS ON AIR RELEASES, MANHOLES, GREASE/WATER, OIL/WATER SEPARATORS, AND WETWELLS.
2. WRAPID SEAL MUST BE USED IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
3. PASCO COUNTY SHALL HAVE THE OPTION OF SPECIFYING THE TYPE OF INTERIOR LINING TO BE INSTALLED FOR EACH INDIVIDUAL MANHOLE.
4. PASCO COUNTY SHALL HAVE THE OPTION OF REQUIRING A NEGATIVE PRESSURE TEST PER ASTM C-1244
5. LIFT HOLES MUST NOT PENETRATE THE WALLS

CREATED 02/24/03
REVISED

STANDARD MANHOLE

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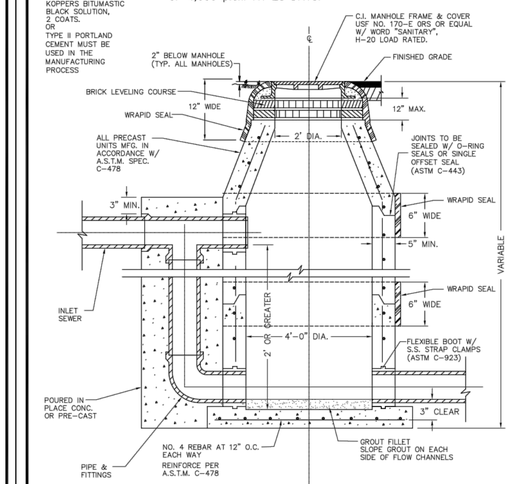
PASCO COUNTY UTILITIES — DETAIL 41

NOTE:
ECCENTRIC CONES ARE ACCEPTABLE, SET IN LINE WITH FLOW.

EXTERIOR COATING, KOPPERS BITUMASTIC BLACK SOLUTION, 2 COATS. OR TYPE II PORTLAND CEMENT MUST BE USED IN THE MANUFACTURING PROCESS

NOTE:
PRECAST CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,000 p.s.i. AT 28 DAYS.



NOTE:
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5. LIFT HOLES MUST NOT PENETRATE THE WALLS

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DROP MANHOLE

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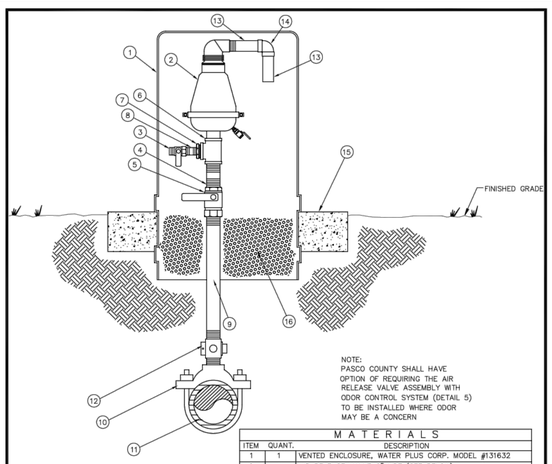
PASCO COUNTY UTILITIES — DETAIL 42



NOTE:
PASCO COUNTY SHALL HAVE OPTION OF REQUIRING THE AIR RELEASE VALVE ASSEMBLY WITH ODOR CONTROL SYSTEM (DETAIL 5) TO BE INSTALLED WHERE ODOR MAY BE A CONCERN

NOTE:
VENTED ENCLOSURE TO BE COLOR CODED AS FOLLOWS:

WATER MAIN – BLUE
FORCE MAIN – GREEN
REUSE MAIN – PURPLE

MATERIALS

ITEM	QUANT.	DESCRIPTION
1	1	VENTED ENCLOSURE, WATER PLUS CORP. MODEL #131632
2	1	AIR RELEASE VALVE 2" NPT (SEE BELOW)
		SEWER AIR RELEASE VALVES SHALL BE ARI MODEL D-025
		WATER AIR RELEASE VALVES SHALL BE VALMATIC OR EQUAL
3	1	1" CURB STOP, S.S.
4	1	2" x 4" NIPPLE, S.S.
5	1	2" BALL VALVE, S.S.
6	1	2" TEE, S.S.
7	1	2" X 1" REDUCER, S.S.
8	1	1" SHORT NIPPLE, S.S.
9	1	2" PIPE, S.S. LENGTH AS REQUIRED
10	1	2" DOUBLE STRAP TAPPING SADDLE, S.S.
11	1	4" & LARGER PIPE, D.I. OR PVC (DR-18)
12	1	2" CORPORATION BRASS
13	2	1-1/2" PIPE, PVC, LENGTH AS REQUIRED
14	1	1-1/2" x 90° ELBOW, PVC
15	1	CONCRETE SLAB AROUND ENCLOSURE
16	1	#57 WHITE ROCK

CREATED 02/24/03
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STANDARD AIR RELEASE VALVE ASSEMBLY (VERTICAL PIPE LAYOUT)

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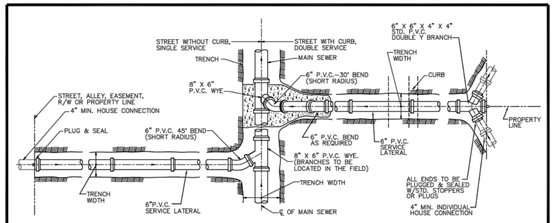
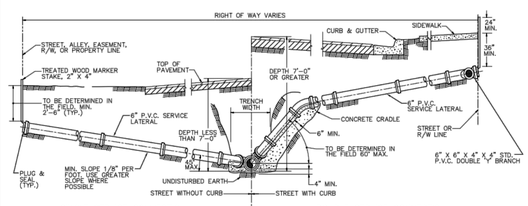
PASCO COUNTY UTILITIES — DETAIL 4



PLAN



SECTION

NOTE:
– CONTRACTOR SHALL MAKE, ON A CLEAN SET OF PLANS, THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE OF EACH SERVICE LATERAL AND THEN GIVE TO ENGINEER FOR RECORD PURPOSES.
– PROVIDE 2" x 4" PRESSURE TREATED WOOD MARKER STAKE AT ALL SANITARY SERVICES (INCLUDE IN PIPE PRICE), TOP OF STAKE TO BE PAINTED WITH GREEN PAINT.
– THE MINIMUM DIAMETER OF ALL SERVICE LATERALS SHALL BE 6 INCHES.

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SEWER LATERAL CONNECTION

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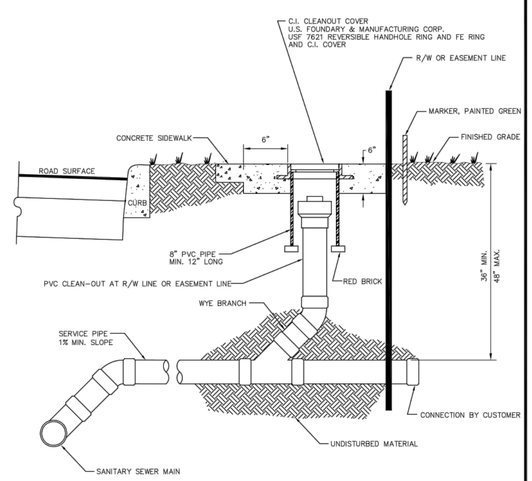
PASCO COUNTY UTILITIES — DETAIL 44



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SANITARY SEWER – SINGLE WYE CONNECTION AND TYPICAL CLEAN-OUT

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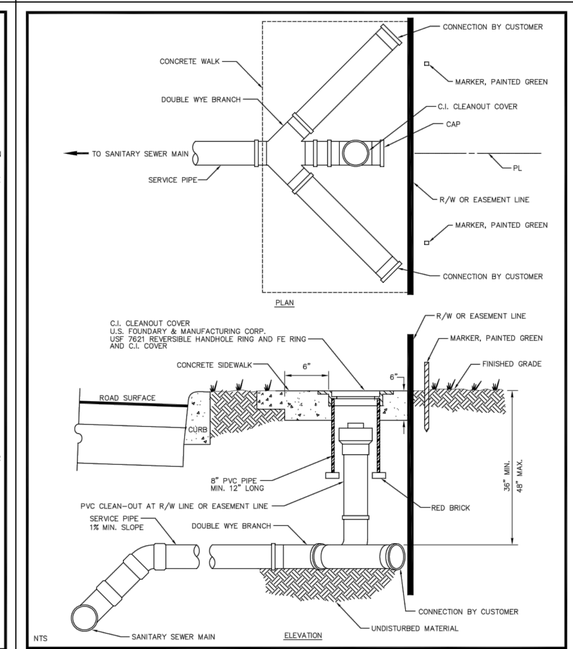
PASCO COUNTY UTILITIES — DETAIL 45



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SANITARY SEWER – DOUBLE WYE CONNECTION AND TYPICAL CLEAN-OUT

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PASCO COUNTY UTILITIES — DETAIL 46

King ENGINEERING ASSOCIATES, INC.
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www.kingengineering.com
Engineering License #2610

NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA
SANITARY SEWER DETAILS

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

C12.01

PASCO CO. SUBMITTAL APRIL 01, 2016

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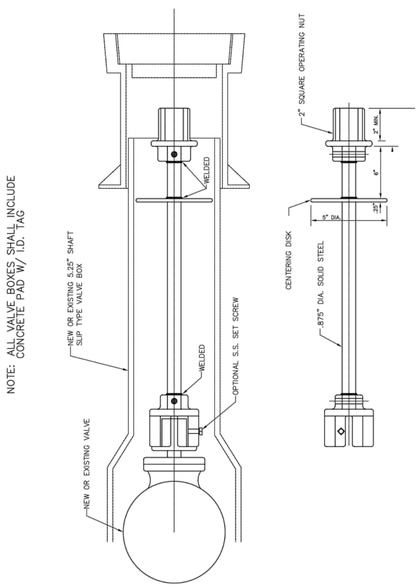

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VALVE EXTENSION RODS

PASCO COUNTY UTILITIES

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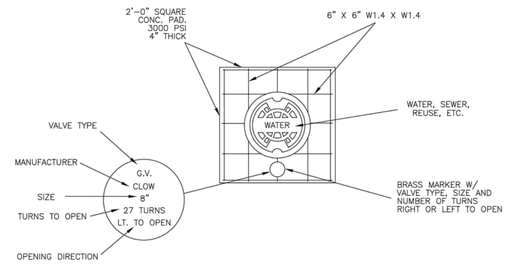
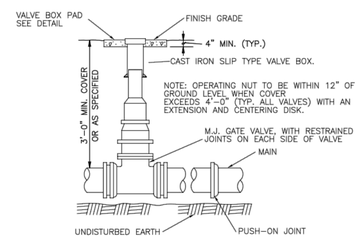
DETAIL 29



TYPICAL CONCRETE VALVE PAD



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VALVE BOX DETAIL
SLIP TYPE

PASCO COUNTY UTILITIES

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DETAIL 30

PIPE RESTRAINT LENGTHS IN FEET
COMMON FITTINGS

		WATER MAINS - TEST PRESSURE 150 PSI				
		FITTING TYPE				
		11-1/4°	22-1/2°	45°	90°	DEAD END
PIPE SIZE	4"	2'	4'	8'	20'	45'
	6"	3'	6'	12'	28'	63'
	8"	4'	7'	15'	36'	82'
	10"	4'	9'	18'	43'	98'
	12"	5'	10'	21'	50'	116'
	16"	6'	13'	26'	63'	148'
	20"	7'	15'	31'	76'	179'
	24"	9'	17'	36'	87'	208'

		FORCE MAINS - TEST PRESSURE 100 PSI				
		FITTING TYPE				
		11-1/4°	22-1/2°	45°	90°	DEAD END
PIPE SIZE	4"	1'	3'	6'	13'	30'
	6"	2'	4'	8'	19'	42'
	8"	2'	5'	10'	24'	55'
	10"	3'	6'	12'	29'	66'
	12"	3'	7'	14'	34'	77'
	16"	4'	8'	18'	42'	99'
	20"	5'	10'	21'	50'	119'
	24"	6'	11'	24'	58'	139'

RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE FITTING ALONG THE PIPE IN BOTH DIRECTIONS (EXCEPT DEAD ENDS).

CREATED 02/24/03
REVISED

RESTRAINED JOINT TABLE
COMMON FITTINGS

PASCO COUNTY UTILITIES

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DETAIL 31

PIPE RESTRAINT LENGTHS IN FEET
TEES (BRANCH SIDE)

		WATER MAINS - TEST PRESSURE 150 PSI								
		BRANCH SIZE								
		3"	4"	6"	8"	10"	12"	16"	20"	24"
RUN SIZE	3"	6'	14'	30'	—	—	—	—	—	—
	4"	2'	11'	28'	44'	—	—	—	—	—
	6"	1'	2'	22'	40'	52'	—	—	—	—
	8"	1'	1'	16'	35'	48'	62'	—	—	—
	10"	1'	1'	10'	30'	44'	58'	83'	—	—
	12"	1'	1'	3'	25'	40'	55'	80'	103'	—
	16"	1'	1'	1'	14'	31'	48'	75'	98'	119'
	20"	1'	1'	1'	2'	22'	40'	69'	94'	116'
	24"	1'	1'	1'	1'	11'	31'	63'	89'	111'

RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE TEE ALONG THE BRANCH FOR THE DISTANCE INDICATED. A MINIMUM OF 5 FEET OF RESTRAINED PIPE MUST BE INSTALLED ON BOTH RUNS OF THE TEE. MEGALUG TYPE RESTRAINERS ARE REQUIRED ON ALL JOINTS.

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REVISED

RESTRAINED JOINT TABLE
TEES (BRANCH SIDE)

PASCO COUNTY UTILITIES

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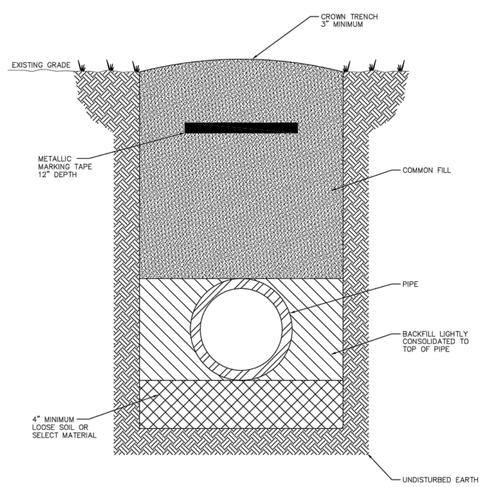
DETAIL 32



NOTES: –LOOSE SOIL OR SELECT MATERIAL IS NATIVE SOIL EXCAVATED FROM THE TRENCH FREE OF ROCKS AND FOREIGN MATERIAL.
–COMMON FILL TO BE PLACED AND COMPACTED IN 12" LAYERS. ROLLING EQUIPMENT SHALL NOT BE USED FOR COMPACTION UNTIL A MINIMUM OF 18" OF COMMON FILL HAS BEEN PLACED AND COMPACTED OVER THE PIPE. THREE FEET OF FILL SHALL BE PLACED BEFORE A HYDROHAMMER MAY BE USED FOR COMPACTION.

NTS

CREATED 02/24/03
REVISED

PIPE LAYING CONDITIONS
STANDARD UNPAVED AREAS

PASCO COUNTY UTILITIES

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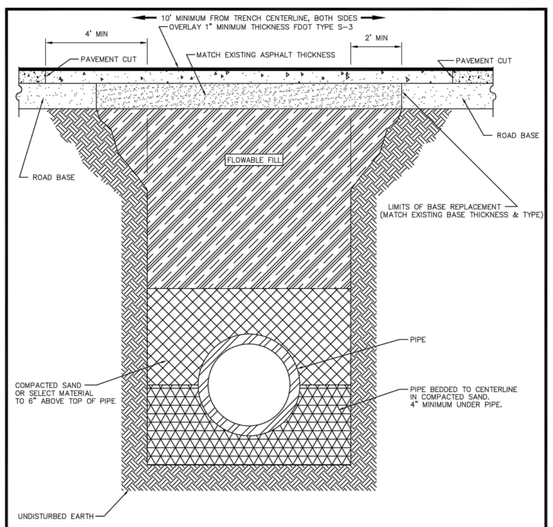
DETAIL 35



NOTE: –SELECT MATERIAL IS NATIVE SOIL EXCAVATED FROM THE TRENCH FREE OF ROCKS AND FOREIGN MATERIAL.
–COMPACTION TO TOP OF PILE IS TO BE APPROXIMATELY 90% STANDARD PROCTOR, AASHTO T–99.
–EXISTING CONCRETE/ASPHALT PAVEMENT SURFACE AND BASE TO BE CUT SQUARE WITH CONCRETE SAW.

NTS

CREATED 03/06/03
REVISED

PIPE LAYING CONDITIONS
FLOWABLE FILL BACKFILL
STANDARD EXISTING PAVED AREAS & ROADWAYS

PASCO COUNTY UTILITIES

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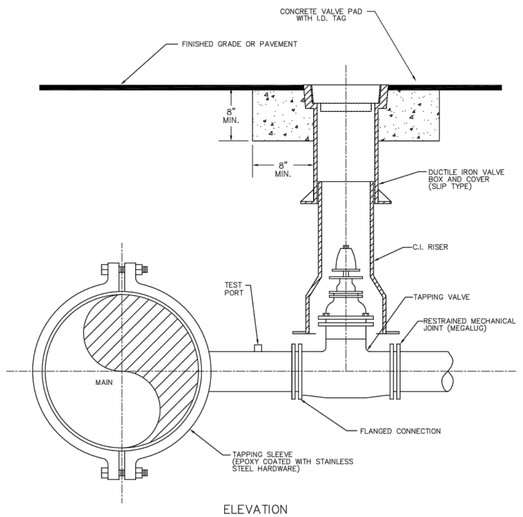
DETAIL 36



ELEVATION

NOTES:
– SADDLE CONNECTION WILL BE TESTED TO 150 PSI PRIOR TO TAPPING MAIN.
– MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED BY COUNTY/ENGINEER.
– VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

CREATED 02/24/03
REVISED

WATER, REUSE, AND FORCE MAIN
TAPPING DETAIL W/ VALVE LOCATION

PASCO COUNTY UTILITIES

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DETAIL 37

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www.kingengineering.com
Engineering License #2610

NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA
SANITARY SEWER DETAILS

TUYEN L. TRAN
APRIL-01-2016
FL P.E. No. 54099

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

C12.02

PASCO CO. SUBMITTAL
APRIL 01, 2016

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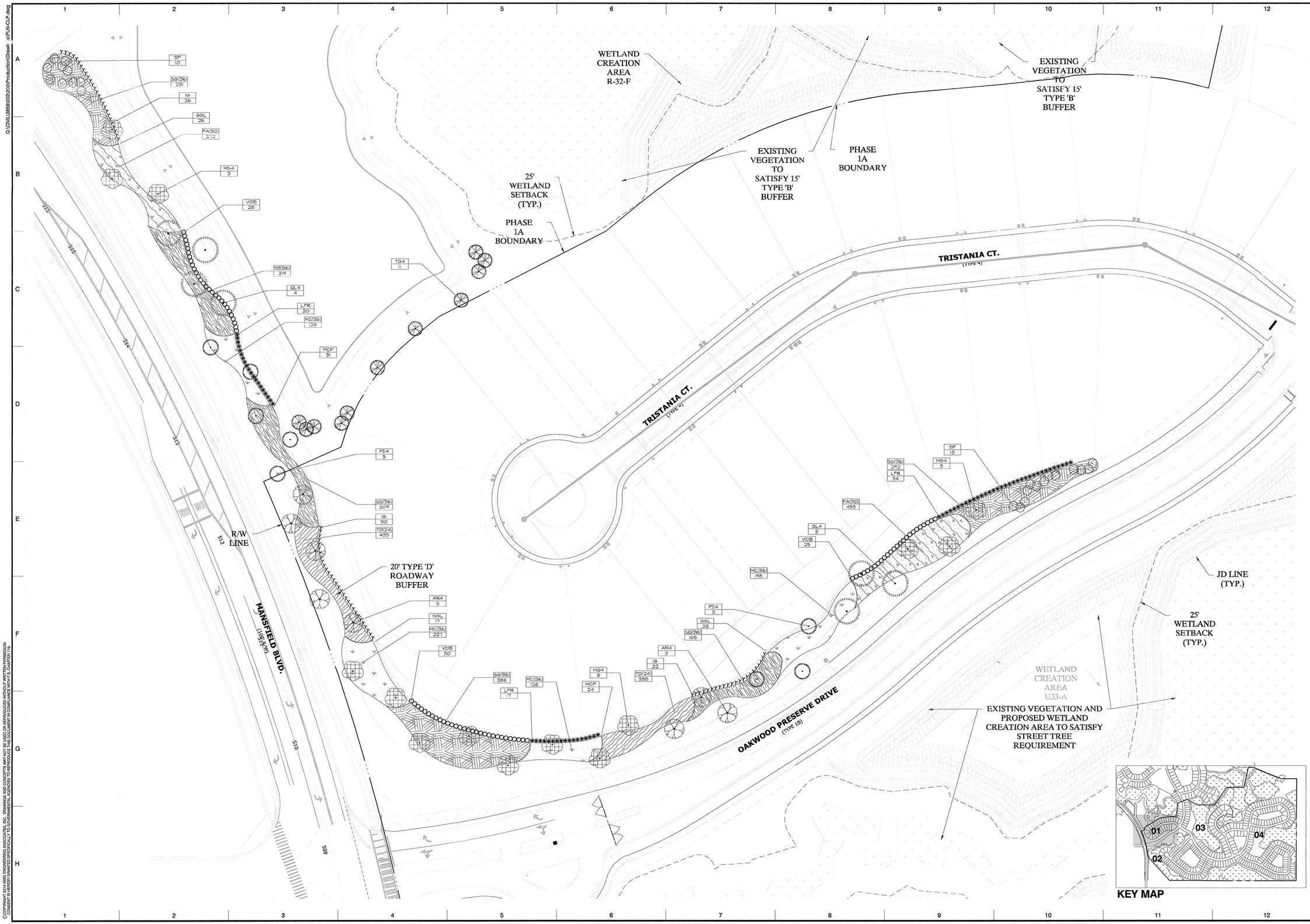

SCALE: FEET

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA

CODE LANDSCAPE PLAN

Clark C Lohmiller
APRIL 1, 2016
L.A. 6667167

JOB NO:	3858-002-200
DATE:	3/31/2016
SCALE:	AS SHOWN

L1.01

GL CHECK SET
MARCH 30, 2016

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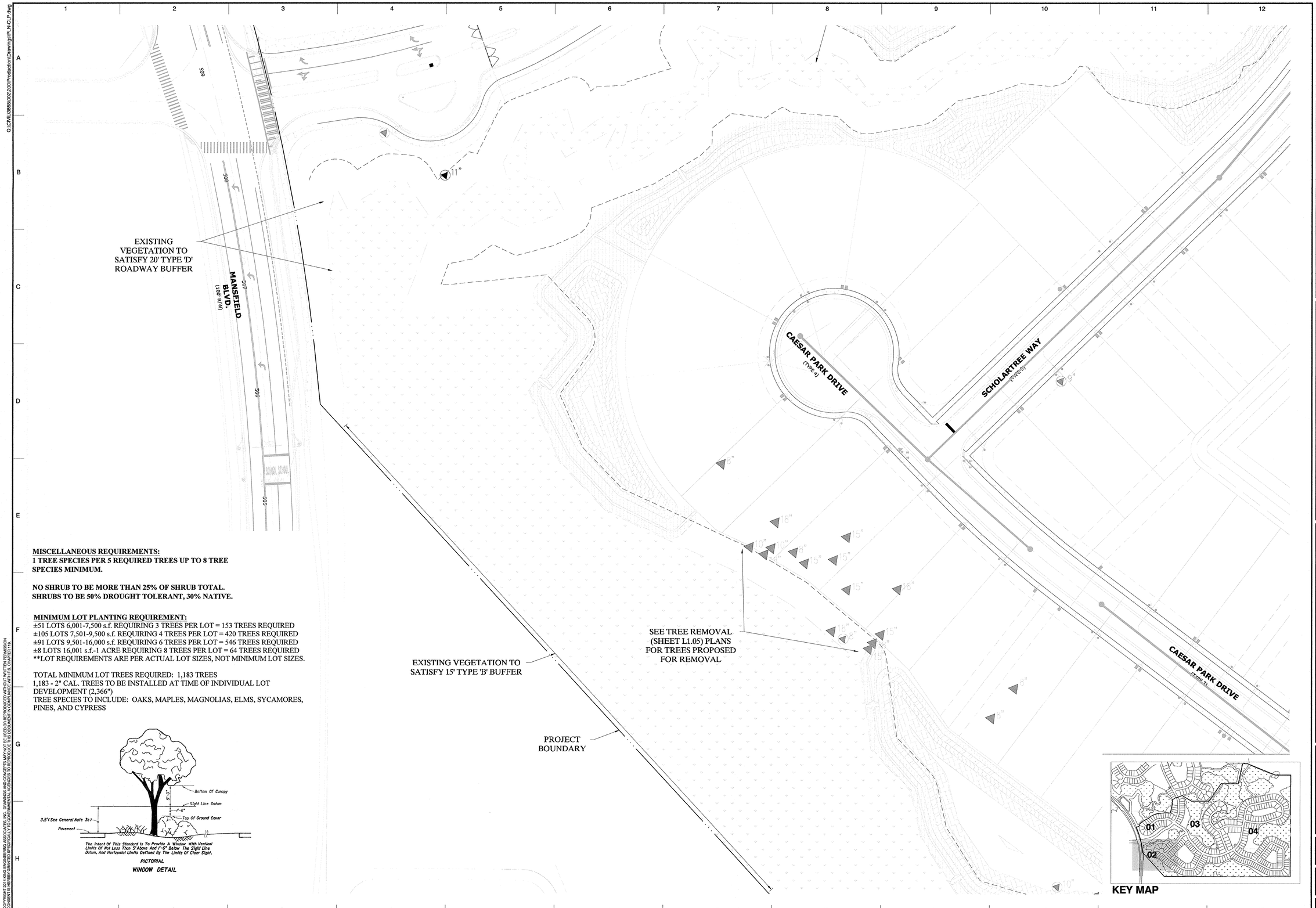

MISCELLANEOUS REQUIREMENTS:
1 TREE SPECIES PER 5 REQUIRED TREES UP TO 8 TREE SPECIES MINIMUM.

NO SHRUB TO BE MORE THAN 25% OF SHRUB TOTAL.
SHRUBS TO BE 50% DROUGHT TOLERANT, 30% NATIVE.

MINIMUM LOT PLANTING REQUIREMENT:
±51 LOTS 6,001-7,500 s.f. REQUIRING 3 TREES PER LOT = 153 TREES REQUIRED
±105 LOTS 7,501-9,500 s.f. REQUIRING 4 TREES PER LOT = 420 TREES REQUIRED
±91 LOTS 9,501-16,000 s.f. REQUIRING 6 TREES PER LOT = 546 TREES REQUIRED
±8 LOTS 16,001 s.f.-1 ACRE REQUIRING 8 TREES PER LOT = 64 TREES REQUIRED
**LOT REQUIREMENTS ARE PER ACTUAL LOT SIZES, NOT MINIMUM LOT SIZES.

TOTAL MINIMUM LOT TREES REQUIRED: 1,183 TREES
1,183 - 2" CAL. TREES TO BE INSTALLED AT TIME OF INDIVIDUAL LOT DEVELOPMENT (2,366")
TREE SPECIES TO INCLUDE: OAKS, MAPLES, MAGNOLIAS, ELMS, SYCAMORES, PINES, AND CYPRESS

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THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA

CODE LANDSCAPE PLAN

Clark C. Lohmiller
APRIL 1, 2016
L.A. 6667167

JOB NO:	3858-002-200
DATE:	3/31/2016
SCALE:	AS SHOWN

L1.02

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MARCH 30, 2016

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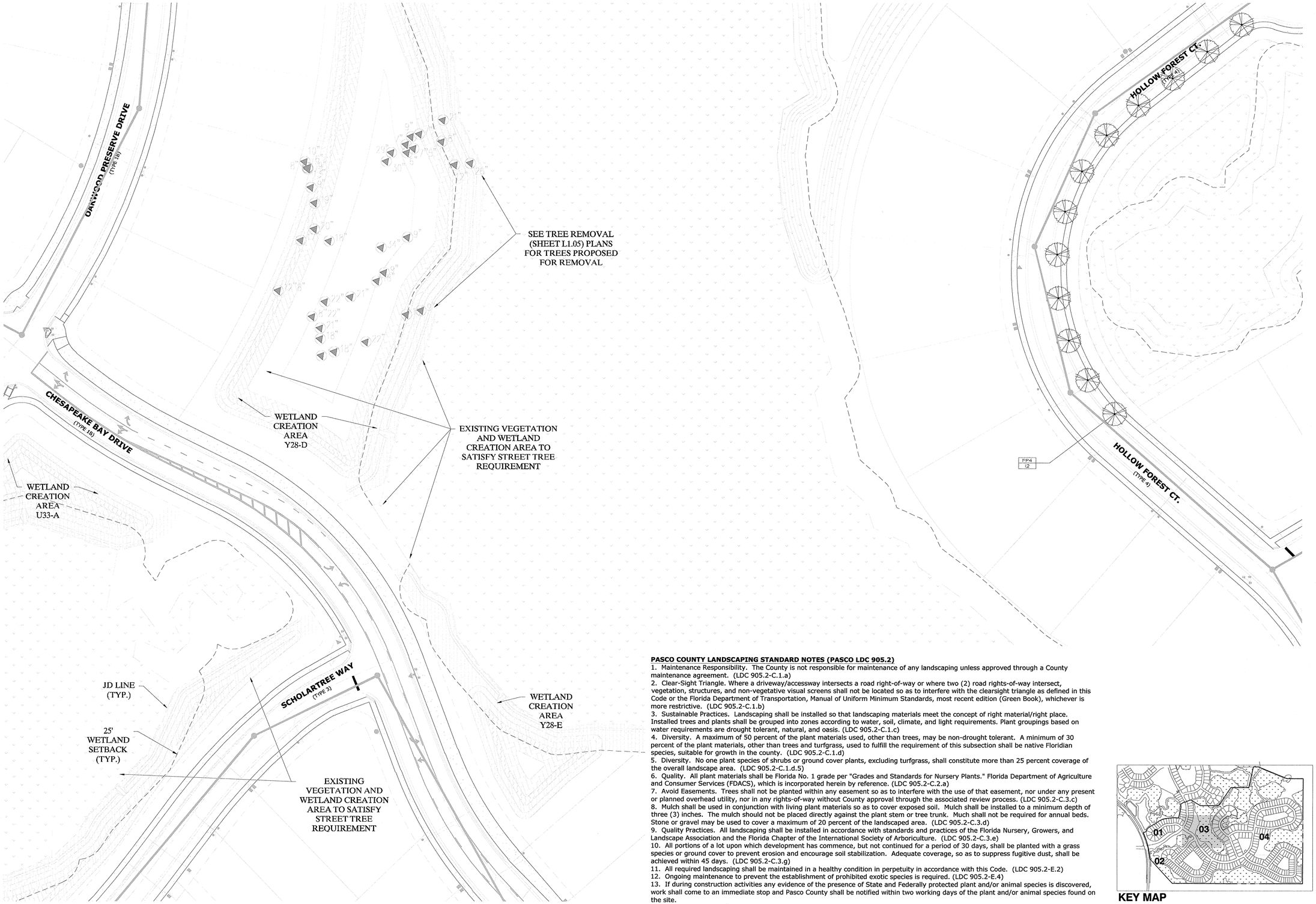

PASCO COUNTY LANDSCAPING STANDARD NOTES (PASCO LDC 905.2)

1. Maintenance Responsibility. The County is not responsible for maintenance of any landscaping unless approved through a County maintenance agreement. (LDC 905.2-C.1.a)
2. Clear-Sight Triangle. Where a driveway/accessway intersects a road right-of-way or where two (2) road rights-of-way intersect, vegetation, structures, and non-vegetative visual screens shall not be located so as to interfere with the clearsight triangle as defined in this Code or the Florida Department of Transportation, Manual of Uniform Minimum Standards, most recent edition (Green Book), whichever is more restrictive. (LDC 905.2-C.1.b)
3. Sustainable Practices. Landscaping shall be installed so that landscaping materials meet the concept of right material/right place. Installed trees and plants shall be grouped into zones according to water, soil, climate, and light requirements. Plant groupings based on water requirements are drought tolerant, natural, and oasis. (LDC 905.2-C.1.c)
4. Diversity. A maximum of 50 percent of the plant materials used, other than trees, may be non-drought tolerant. A minimum of 30 percent of the plant materials, other than trees and turfgrass, used to fulfill the requirement of this subsection shall be native Floridian species, suitable for growth in the county. (LDC 905.2-C.1.d)
5. Diversity. No one plant species of shrubs or ground cover plants, excluding turfgrass, shall constitute more than 25 percent coverage of the overall landscape area. (LDC 905.2-C.1.d.5)
6. Quality. All plant materials shall be Florida No. 1 grade per "Grades and Standards for Nursery Plants." Florida Department of Agriculture and Consumer Services (FDACS), which is incorporated herein by reference. (LDC 905.2-C.2.a)
7. Avoid Easements. Trees shall not be planted within any easement so as to interfere with the use of that easement, nor under any present or planned overhead utility, nor in any rights-of-way without County approval through the associated review process. (LDC 905.2-C.3.c)
8. Mulch shall be used in conjunction with living plant materials so as to cover exposed soil. Mulch shall be installed to a minimum depth of three (3) inches. The mulch should not be placed directly against the plant stem or tree trunk. Much shall not be required for annual beds. Stone or gravel may be used to cover a maximum of 20 percent of the landscaped area. (LDC 905.2-C.3.d)
9. Quality Practices. All landscaping shall be installed in accordance with standards and practices of the Florida Nursery, Growers, and Landscape Association and the Florida Chapter of the International Society of Arboriculture. (LDC 905.2-C.3.e)
10. All portions of a lot upon which development has commence, but not continued for a period of 30 days, shall be planted with a grass species or ground cover to prevent erosion and encourage soil stabilization. Adequate coverage, so as to suppress fugitive dust, shall be achieved within 45 days. (LDC 905.2-C.3.g)
11. All required landscaping shall be maintained in a healthy condition in perpetuity in accordance with this Code. (LDC 905.2-E.2)
12. Ongoing maintenance to prevent the establishment of prohibited exotic species is required. (LDC 905.2-E.4)
13. If during construction activities any evidence of the presence of State and Federally protected plant and/or animal species is discovered, work shall come to an immediate stop and Pasco County shall be notified within two working days of the plant and/or animal species found on the site.

KEY MAP

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA

CODE LANDSCAPE PLAN

Clark C Lohmiller
APRIL 1, 2016
L.A. 6667167
STATE OF FLORIDA

JOB NO:	3858-002-200
DATE:	3/31/2016
SCALE:	AS SHOWN

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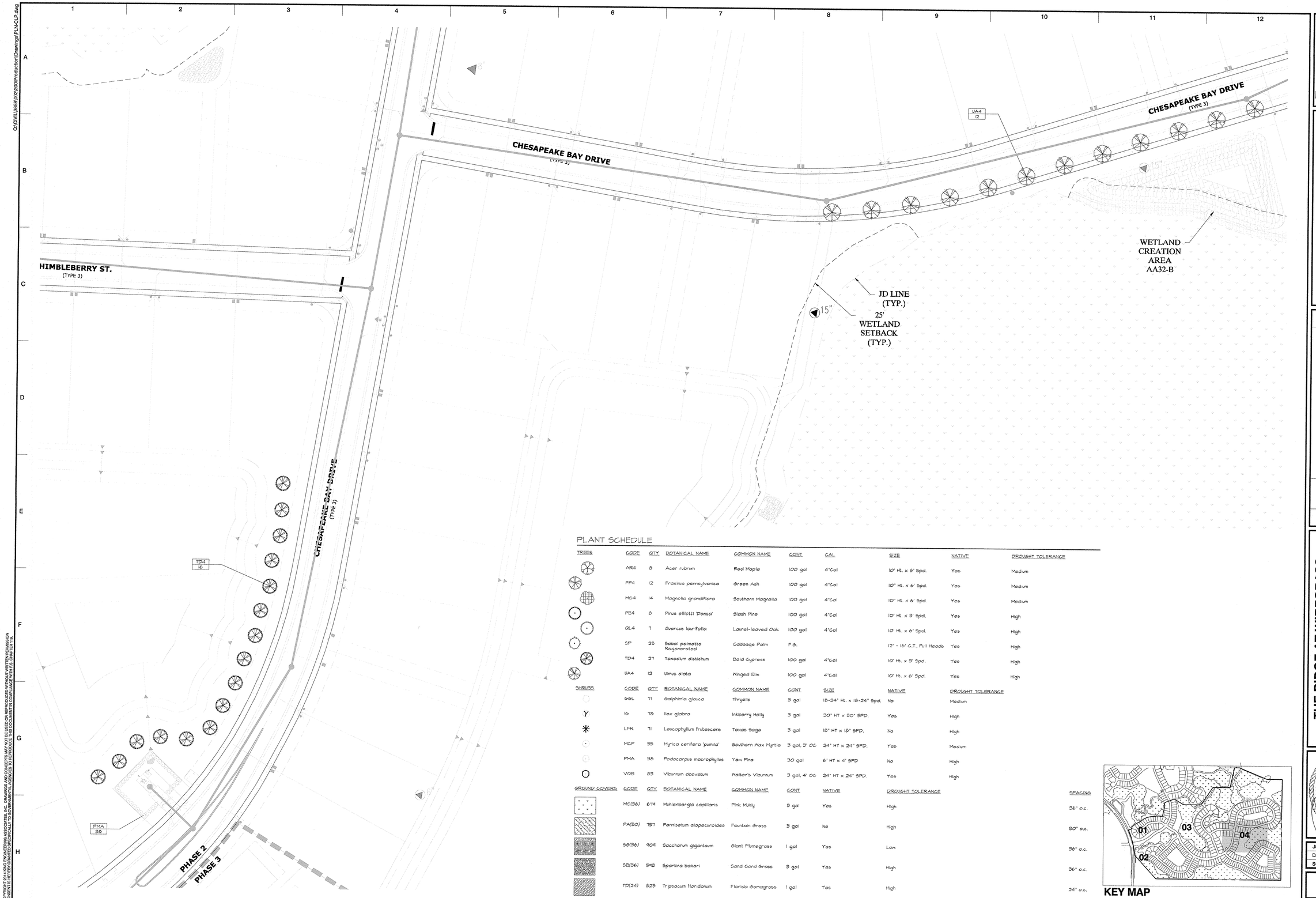

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	NATIVE	DROUGHT TOLERANCE
	AR4	8	Acer rubrum	Red Maple	100 gal	4"Cal	10' Ht. x 6' Spd.	Yes	Medium
	FP4	12	Fraxinus pennsylvanica	Green Ash	100 gal	4"Cal	10" Ht. x 6' Spd.	Yes	Medium
	MG4	14	Magnolia grandiflora	Southern Magnolia	100 gal	4"Cal	10" Ht. x 6' Spd.	Yes	Medium
	PE4	8	Pinus elliotti 'Densa'	Slash Pine	100 gal	4"Cal	10' Ht. x 3' Spd.	Yes	High
	QL4	7	Quercus laurifolia	Laurel-leaved Oak	100 gal	4"Cal	10' Ht. x 6' Spd.	Yes	High
	SP	23	Sabal palmetto Regenerated	Cabbage Palm	F.G.		12' - 16' C.T., Full Heads	Yes	High
	TD4	27	Taxodium distichum	Bald Cypress	100 gal	4"Cal	10' Ht. x 3' Spd.	Yes	High
	UA4	12	Ulmus alata	Winged Elm	100 gal	4"Cal	10' Ht. x 6' Spd.	Yes	High

SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	NATIVE	DROUGHT TOLERANCE
	GGL	71	Galphimia glauca	Thryalis	3 gal	18-24" Ht. x 18-24" Spd.	No	Medium
	IG	78	Ilex glabra	Inkberry Holly	3 gal	30" HT x 30" SPD.	Yes	High
	LFR	71	Leucophyllum frutescens	Texas Sage	3 gal	18" HT x 18" SPD.	No	High
	MCP	55	Myrica cerifera 'pumila'	Southern Wax Myrtle	3 gal, 3' OC	24" HT x 24" SPD.	Yes	Medium
	PMA	38	Podocarpus macrophyllus	Yew Pine	30 gal	6' HT x 4' SPD	No	High
	VOB	83	Viburnum obovatum	Walter's Viburnum	3 gal, 4' OC	24" HT x 24" SPD.	Yes	High

GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	NATIVE	DROUGHT TOLERANCE	SPACING
	MC(36)	679	Muhlenbergia capillaris	Pink Muhly	3 gal	Yes	High	36" o.c.
	PA(30)	757	Pennisetum alopecuroides	Fountain Grass	3 gal	No	High	30" o.c.
	SG(36)	909	Saccharum giganteum	Giant Plumegrass	1 gal	Yes	Low	36" o.c.
	SB(36)	593	Spartina bakeri	Sand Cord Grass	3 gal	Yes	High	36" o.c.
	TD(24)	823	Tripsacum floridanum	Florida Gamagrass	1 gal	Yes	High	24" o.c.

KEY MAP

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA

CODE LANDSCAPE PLAN

Clark C Lohmiller
APRIL 1, 2016
L.A. 6667167

JOB NO:	3858-002-200
DATE:	3/31/2016
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THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA

CODE LANDSCAPE PLAN

REGISTERED LANDSCAPE ARCHITECT
CLARK C LOHMILLER
LA 6667167
APRIL 1, 2016
LA 6667167
FLORIDA

JOB NO:	3858-002-200
DATE:	3/31/2016
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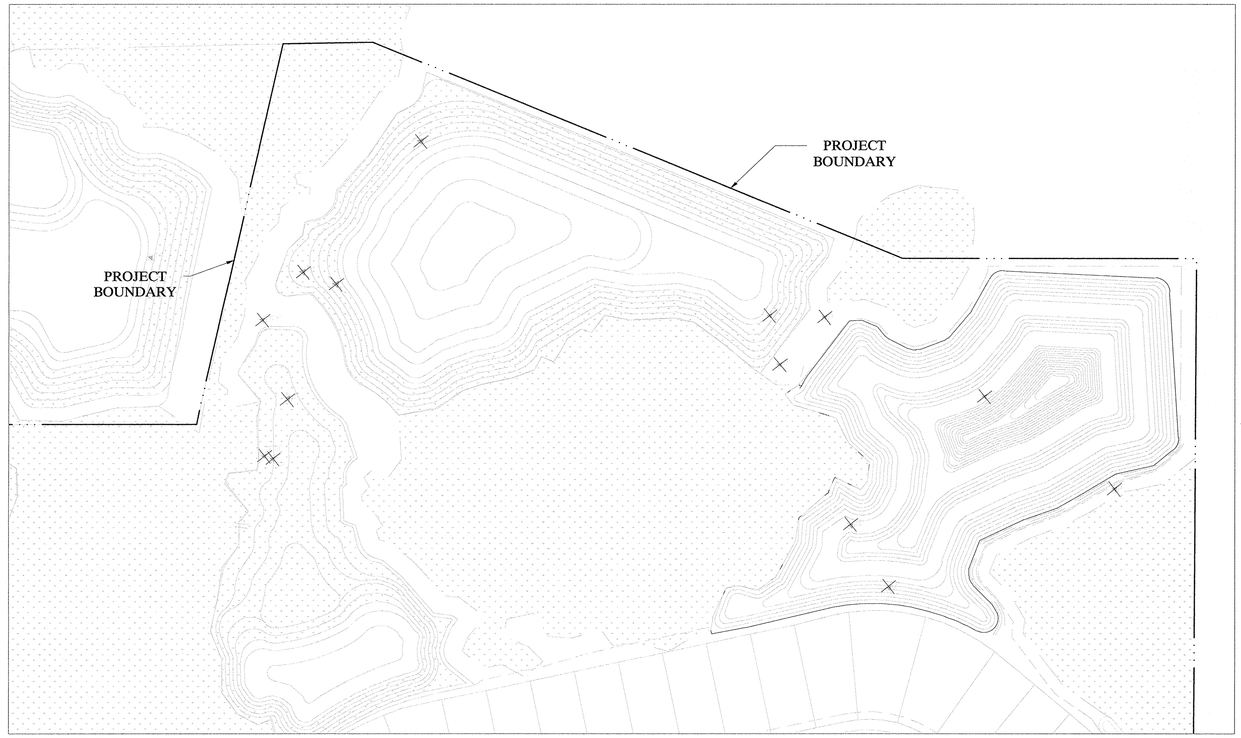

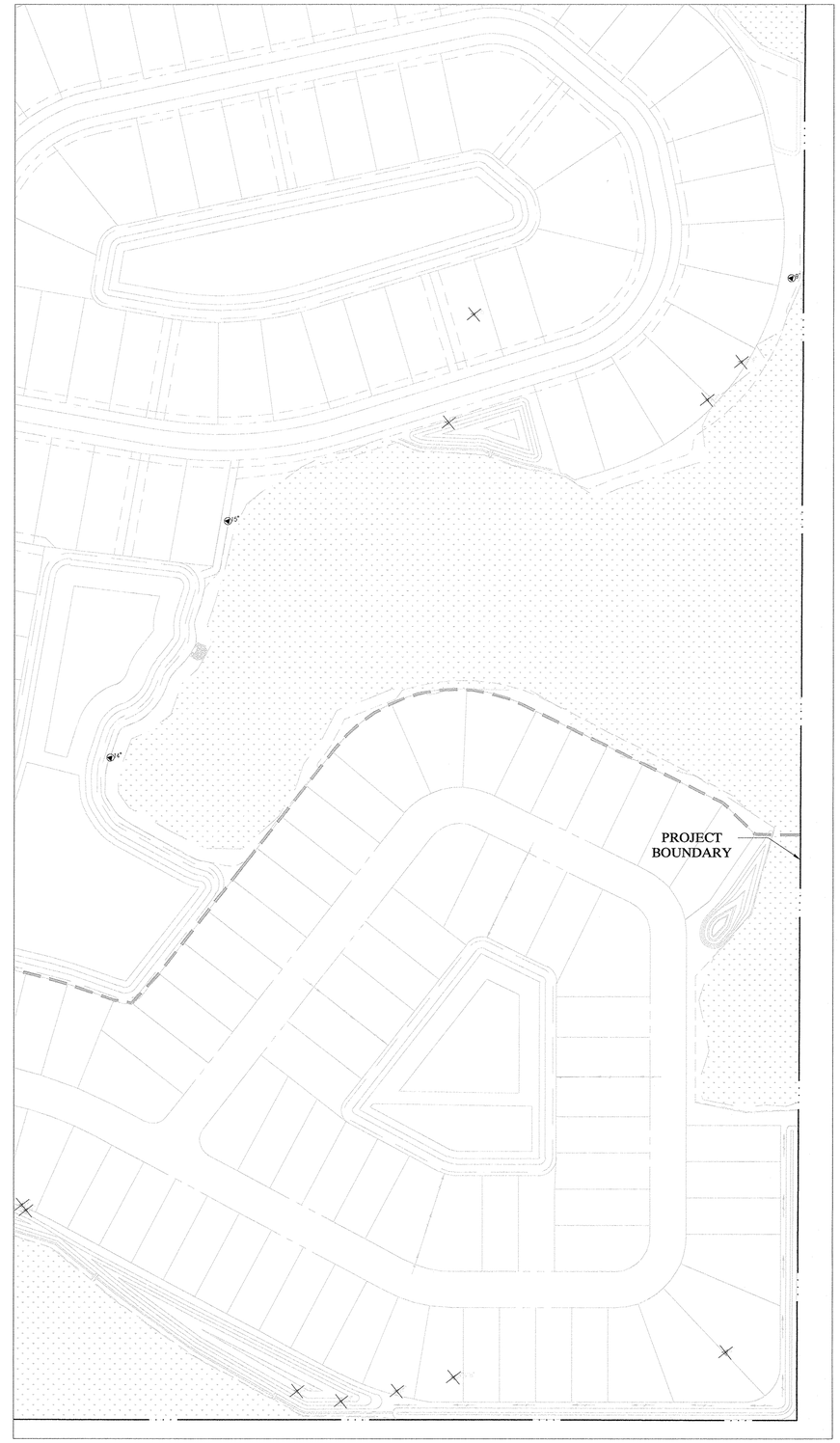

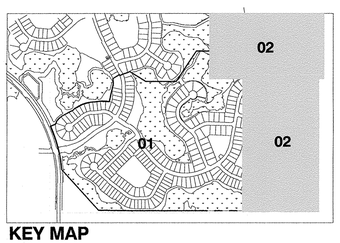

KEY MAP

TREE REMOVAL TABLE

TREE SPECIES	INCHES REMOVED	REPLACEMENT REQ.	INCHES REQUIRED
LIVE OAK	394"	1 : 1	394"
OTHER OAK	351"	1/3 : 1	117"
MAPLES	32"	1/3 : 1	11"
PINES	320"	1/3 : 1	107"
TOTAL REPLACEMENT INCHES REQUIRED:			629"

NOTE:
ALL PROTECTED TREES 10" AND LARGER PROPOSED FOR REMOVAL ARE INCLUDED

TREE LEGEND

- 12" = 12" UNKNOWN TYPE TREE
- 12" = 12" CHERRY LAUREL
- 12" = 12" WILLOW TREE
- 12" = 12" HOLLY TREE
- 12" = 12" DEAD TREE
- 12" = 12" CHINESE TALLOW TREE
- 12" = 12" CHINABERRY TREE
- 12" = 12" OAK TREE
- 12" = 12" JACARANDA TREE
- 12" = 12" MULBERRY TREE
- 12" = 12" PALM TREE
- 12" = 12" BAY TREE
- 12" = 12" MAGNOLIA TREE
- 12" = 12" CITRUS TREE
- 12" = 12" PECAN TREE
- 12" = 12" EUCALYPTUS TREE
- 12" = 12" CAMPHOR TREE
- 12" = 12" SYCAMORE TREE
- 12" = 12" LONGLEAF PINE TREE
- 12" = 12" AUSTRALIAN PINE
- 12" = 12" CEDAR TREE
- 12" = 12" ELM TREE
- 12" = 12" MAPLE TREE
- 12" = 12" WAX MYRTLE TREE
- 12" = 12" PUNK TREE
- 12" = 12" CYPRESS TREE
- 12" = 12" EAR TREE
- 12" = 12" SWEET GUM TREE
- 12" = 12" BIRCH
- 12" = 12" HICKORY

12" = TREE HAVING ONE TRUNK AT BREAST HEIGHT, 12" IN DIAMETER

12"13"5" = TREE HAVING MULTIPLE TRUNKS AT BREAST HEIGHT 12", 13" AND 5" IN DIAMETER

= TREE REMOVE

12" = TREE SAVE

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA

CODE LANDSCAPE PLAN

Clark C Lohmiller
APRIL 1, 2016
L.A. 6667167

JOB NO:	3858-002-200
DATE:	3/31/2016
SCALE:	AS SHOWN

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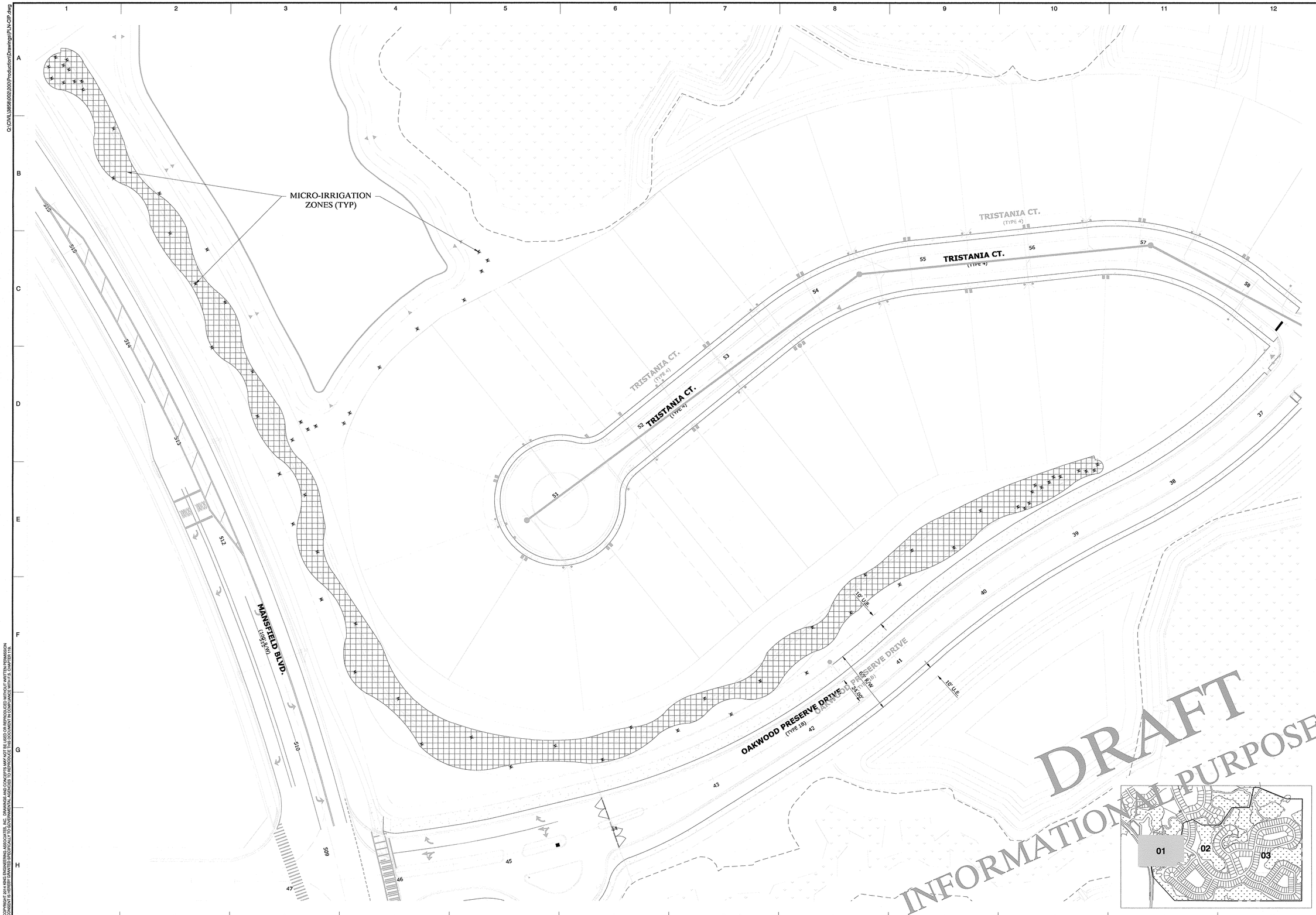

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THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA

CODE IRRIGATION PLAN

REGISTERED LANDSCAPE ARCHITECT
CLARK LOHMILLER
FLORIDA
Clark C. Lohmiller
APRIL 1, 2016
L.A. 0667167

JOB NO:	3858-002-200
DATE:	3/31/2016
SCALE:	AS SHOWN

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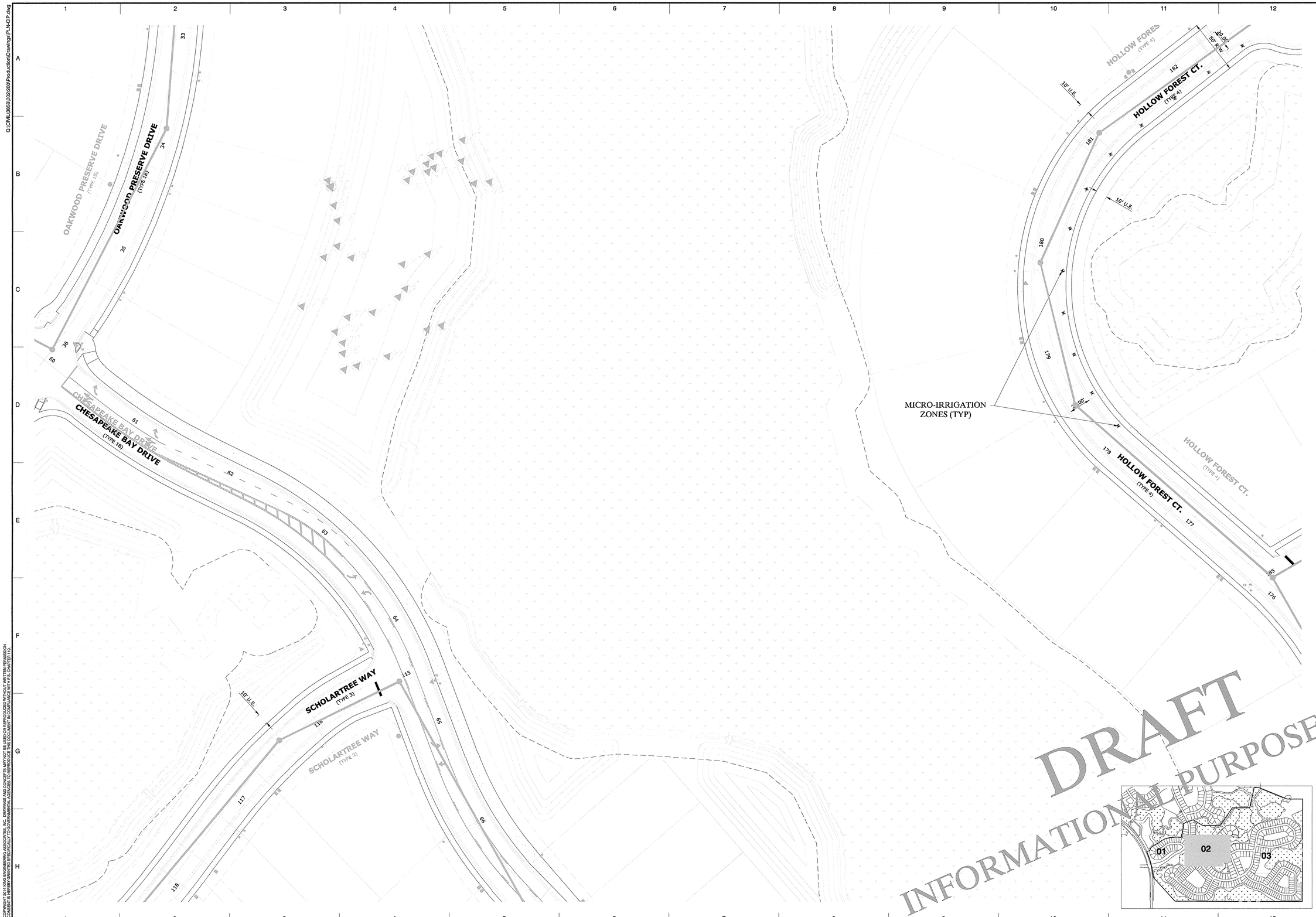

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PHASE 2 AND MASS GRADING PHASE 3

PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA

CODE IRRIGATION PLAN

Clark C Lohmiller
APRIL 1, 2016
L.A. 6667167

JOB NO:	3858-002-200
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MARCH 30, 2016

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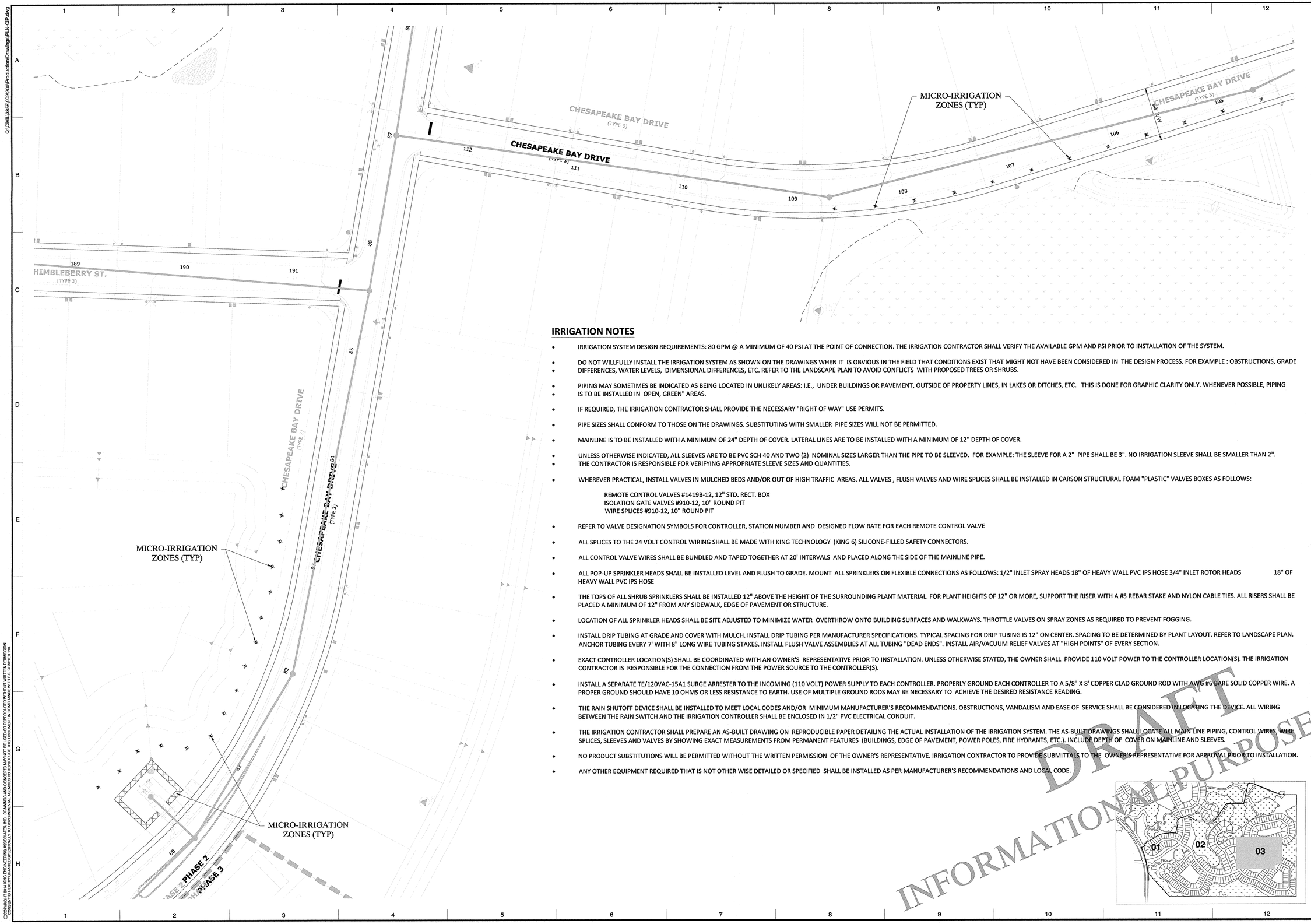

IRRIGATION NOTES

- IRRIGATION SYSTEM DESIGN REQUIREMENTS: 80 GPM @ A MINIMUM OF 40 PSI AT THE POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY THE AVAILABLE GPM AND PSI PRIOR TO INSTALLATION OF THE SYSTEM.
- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT CONDITIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN PROCESS. FOR EXAMPLE : OBSTRUCTIONS, GRADE DIFFERENCES, WATER LEVELS, DIMENSIONAL DIFFERENCES, ETC. REFER TO THE LANDSCAPE PLAN TO AVOID CONFLICTS WITH PROPOSED TREES OR SHRUBS.
- PIPING MAY SOMETIMES BE INDICATED AS BEING LOCATED IN UNLIKELY AREAS: I.E., UNDER BUILDINGS OR PAVEMENT, OUTSIDE OF PROPERTY LINES, IN LAKES OR DITCHES, ETC. THIS IS DONE FOR GRAPHIC CLARITY ONLY. WHENEVER POSSIBLE, PIPING IS TO BE INSTALLED IN OPEN, GREEN" AREAS.
- IF REQUIRED, THE IRRIGATION CONTRACTOR SHALL PROVIDE THE NECESSARY "RIGHT OF WAY" USE PERMITS.
- PIPE SIZES SHALL CONFORM TO THOSE ON THE DRAWINGS. SUBSTITUTING WITH SMALLER PIPE SIZES WILL NOT BE PERMITTED.
- MAINLINE IS TO BE INSTALLED WITH A MINIMUM OF 24" DEPTH OF COVER. LATERAL LINES ARE TO BE INSTALLED WITH A MINIMUM OF 12" DEPTH OF COVER.
- UNLESS OTHERWISE INDICATED, ALL SLEEVES ARE TO BE PVC SCH 40 AND TWO (2) NOMINAL SIZES LARGER THAN THE PIPE TO BE SLEEVED. FOR EXAMPLE: THE SLEEVE FOR A 2" PIPE SHALL BE 3". NO IRRIGATION SLEEVE SHALL BE SMALLER THAN 2".
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING APPROPRIATE SLEEVE SIZES AND QUANTITIES.
- WHEREVER PRACTICAL, INSTALL VALVES IN MULCHED BEDS AND/OR OUT OF HIGH TRAFFIC AREAS. ALL VALVES , FLUSH VALVES AND WIRE SPLICES SHALL BE INSTALLED IN CARSON STRUCTURAL FOAM "PLASTIC" VALVES BOXES AS FOLLOWS:

  REMOTE CONTROL VALVES #1419B-12, 12" STD. RECT. BOX
  ISOLATION GATE VALVES #910-12, 10" ROUND PIT
  WIRE SPLICES #910-12, 10" ROUND PIT
- REFER TO VALVE DESIGNATION SYMBOLS FOR CONTROLLER, STATION NUMBER AND DESIGNED FLOW RATE FOR EACH REMOTE CONTROL VALVE
- ALL SPLICES TO THE 24 VOLT CONTROL WIRING SHALL BE MADE WITH KING TECHNOLOGY (KING 6) SILICONE-FILLED SAFETY CONNECTORS.
- ALL CONTROL VALVE WIRES SHALL BE BUNDLED AND TAPED TOGETHER AT 20' INTERVALS AND PLACED ALONG THE SIDE OF THE MAINLINE PIPE.
- ALL POP-UP SPRINKLER HEADS SHALL BE INSTALLED LEVEL AND FLUSH TO GRADE. MOUNT ALL SPRINKLERS ON FLEXIBLE CONNECTIONS AS FOLLOWS: 1/2" INLET SPRAY HEADS 18" OF HEAVY WALL PVC IPS HOSE 3/4" INLET ROTOR HEADS 18" OF HEAVY WALL PVC IPS HOSE
- THE TOPS OF ALL SHRUB SPRINKLERS SHALL BE INSTALLED 12" ABOVE THE HEIGHT OF THE SURROUNDING PLANT MATERIAL. FOR PLANT HEIGHTS OF 12" OR MORE, SUPPORT THE RISER WITH A #5 REBAR STAKE AND NYLON CABLE TIES. ALL RISERS SHALL BE PLACED A MINIMUM OF 12" FROM ANY SIDEWALK, EDGE OF PAVEMENT OR STRUCTURE.
- LOCATION OF ALL SPRINKLER HEADS SHALL BE SITE ADJUSTED TO MINIMIZE WATER OVERTHROW ONTO BUILDING SURFACES AND WALKWAYS. THROTTLE VALVES ON SPRAY ZONES AS REQUIRED TO PREVENT FOGGING.
- INSTALL DRIP TUBING AT GRADE AND COVER WITH MULCH. INSTALL DRIP TUBING PER MANUFACTURER SPECIFICATIONS. TYPICAL SPACING FOR DRIP TUBING IS 12" ON CENTER. SPACING TO BE DETERMINED BY PLANT LAYOUT. REFER TO LANDSCAPE PLAN. ANCHOR TUBING EVERY 7' WITH 8" LONG WIRE TUBING STAKES. INSTALL FLUSH VALVE ASSEMBLIES AT ALL TUBING "DEAD ENDS". INSTALL AIR/VACUUM RELIEF VALVES AT "HIGH POINTS" OF EVERY SECTION.
- EXACT CONTROLLER LOCATION(S) SHALL BE COORDINATED WITH AN OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. UNLESS OTHERWISE STATED, THE OWNER SHALL PROVIDE 110 VOLT POWER TO THE CONTROLLER LOCATION(S). THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE CONNECTION FROM THE POWER SOURCE TO THE CONTROLLER(S).
- INSTALL A SEPARATE TE/120VAC-15A1 SURGE ARRESTER TO THE INCOMING (110 VOLT) POWER SUPPLY TO EACH CONTROLLER. PROPERLY GROUND EACH CONTROLLER TO A 5/8" X 8' COPPER CLAD GROUND ROD WITH AWG #6 BARE SOLID COPPER WIRE. A PROPER GROUND SHOULD HAVE 10 OHMS OR LESS RESISTANCE TO EARTH. USE OF MULTIPLE GROUND RODS MAY BE NECESSARY TO ACHIEVE THE DESIRED RESISTANCE READING.
- THE RAIN SHUTOFF DEVICE SHALL BE INSTALLED TO MEET LOCAL CODES AND/OR MINIMUM MANUFACTURER'S RECOMMENDATIONS. OBSTRUCTIONS, VANDALISM AND EASE OF SERVICE SHALL BE CONSIDERED IN LOCATING THE DEVICE. ALL WIRING BETWEEN THE RAIN SWITCH AND THE IRRIGATION CONTROLLER SHALL BE ENCLOSED IN 1/2" PVC ELECTRICAL CONDUIT.
- THE IRRIGATION CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING ON REPRODUCIBLE PAPER DETAILING THE ACTUAL INSTALLATION OF THE IRRIGATION SYSTEM. THE AS-BUILT DRAWINGS SHALL LOCATE ALL MAIN LINE PIPING, CONTROL WIRES, WIRE SPLICES, SLEEVES AND VALVES BY SHOWING EXACT MEASUREMENTS FROM PERMANENT FEATURES (BUILDINGS, EDGE OF PAVEMENT, POWER POLES, FIRE HYDRANTS, ETC.). INCLUDE DEPTH OF COVER ON MAINLINE AND SLEEVES.
- NO PRODUCT SUBSTITUTIONS WILL BE PERMITTED WITHOUT THE WRITTEN PERMISSION OF THE OWNER'S REPRESENTATIVE. IRRIGATION CONTRACTOR TO PROVIDE SUBMITTALS TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION.
- ANY OTHER EQUIPMENT REQUIRED THAT IS NOT OTHER WISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODE.

DRAFT
INFORMATIONAL PURPOSES ONLY

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA

CODE IRRIGATION PLAN

Clark C. Lohmiller
APRIL 1, 2016
FL.A. 0067167

JOB NO:	3858-002-200
DATE:	3/31/2016
SCALE:	AS SHOWN

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MARCH 30, 2016

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GENERAL UTILITY NOTES

ALL PROPOSED MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES, UNLESS OTHERWISE SPECIFIED. ANY INSTANCE WHERE THE COVER IS LESS THAN 36 INCHES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION.

THE MINIMUM HORIZONTAL SEPARATION BETWEEN POTABLE WATER MAINS AND SEWAGE FORCE MAINS AND SANITARY SEWERS SHALL BE 6-FEET FACE-TO-FACE UNLESS OTHERWISE SHOWN ON THE DRAWINGS OR ALLOWED BY THE PROJECT PERMITS. ALTERNATE PIPE MATERIAL OR CONCRETE ENCASEMENT SHALL BE UTILIZED AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.

THE MINIMUM HORIZONTAL SEPARATION BETWEEN FORCE MAINS AND RECLAIMED WATER MAINS SHALL BE 3-FEET FACE-TO-FACE UNLESS OTHERWISE SHOWN ON THE DRAWINGS OR ALLOWED BY THE PROJECT PERMITS. ALTERNATE PIPE MATERIAL OR CONCRETE ENCASEMENT SHALL BE UTILIZED AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.

WHERE MINIMUM HORIZONTAL SEPARATION OR DEPTH OF COVER REQUIREMENTS CANNOT BE MAINTAINED, THE CONTRACTOR SHALL ENCASE THE MAIN IN A 4-INCH THICK MINIMUM LAYER OF CONCRETE. CONCRETE ENCASED PIPE SHALL BE POLYETHYLENE WRAPPED DUCTILE IRON PIPE. A 4-INCH MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN THE FACE OF EXISTING UTILITIES AND THE FACE OF THE CONCRETE ENCASEMENT.

WHERE A MINIMUM 12-INCH VERTICAL SEPARATION CANNOT BE MAINTAINED BETWEEN FORCE MAINS AND OTHER UTILITIES, THE CROSSING SHALL BE ARRANGED SUCH THAT THE JOINTS OF THE PROPOSED MAIN ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN 10 FEET BETWEEN ANY TWO JOINTS.

ALL TRENCHING, PIPE LAYING, BACKFILL, FLUSHING AND PRESSURE TESTING MUST COMPLY CITY, COUNTY, STATE AND FEDERAL HEALTH DEPARTMENT STANDARDS.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE NOTICE TO ALL EXISTING UTILITY COMPANIES IN ORDER TO ALLOW FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL CONTACT, "SUNSHINE STATE ONE CALL" 72 HOURS PRIOIR TO ANY EXCAVATION AT 1-800-432-4770.

THE CONTRACTOR SHALL COMPLY WITH THE "TRENCH SAFETY ACT", CHAPTER 90-96, OF THE FLORIDA STATUTES. THE CONTRACTOR SHALL INSTALL BARRIER WALLS, SHEETING, SHORING, ETC. THAT COMPLIES WITH THE LATEST FDOT STANDARDS AND OSHA REQUIREMENTS.

UPON COMPLETION ALL NEW POTABLE WATER MAINS, RECLAIMED WATER MAINS AND SANITARY SEWER FORCE MAINS SHALL BE CLEANED AND FLUSHED, AND SUBJECTED HYDROSTATIC PRESSURE TESTED. PRESSURE TESTS SHALL BE PERFORMED AND WITNESSED BY A CERTIFIED REPRESENTATIVE OF THE COUNTY. THE MINIMUM REQUIREMENTS OF THIS PRESSURE TEST ARE 150 P.S.I. FOR A DURATION OF TWO HOURS, FOR WATER AND RECLAIMED MAINS, AND 100 P.S.I. FOR A DURATION OF ONE HOUR FOR SANITARY SEWER FORCE MAINS.

THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED AND INSTALL, PLACE IN OPERATION, AND FIELD TEST ALL STRUCTURES, SITE WORK, VALVES, PIPING, MECHANICAL EQUIPMENT, ELECTRICAL, AND TELEMETRY FOR THE SUBMERSIBLE WASTEWATER PUMP STATIONS TO BE CONSTRUCTED UNDER THIS CONTRACT. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH PASCO COUNTY STANDARDS.

ALL CONSTRUCTION ACTIVITY SHALL BE LIMITED TO NORMAL COUNTY WORK HOURS - 7AM TO 6PM, MON-FRI, EXCLUDING WEEKENDS AND HOLIDAYS AND SHALL BE SUBJECT TO COUNTY NOISE ORDINANCES.

GENERAL PUMP STATION NOTES

IF LIFT CABLES ARE USED IN LIEU OF CHAINS, LIFTING RINGS MUST BE PROVIDED EVERY 4 FT. LIFT CABLES AND RINGS SHALL BE 316 STAINLESS STEEL.

INDIVIDUAL WALL PENETRATION SLEEVES SHALL BE PROVIDED FOR EACH PUMP CABLE.

ALL HARDWARE (INCLUDING FLANGE BOLTS & NUTS) SHALL BE 316 STAINLESS STEEL WITH LOCK WASHERS.

THE CONTRACTOR SHALL INSTALL THE CONTROL PANEL, COVERS, PUMPS, GUIDE RAILS AND ASSOCIATED EQUIPMENT TO PUMP MANUFACTURERS RECOMMENDATIONS AND APPROVED SHOP DRAWINGS.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CLEARANCES, ORIENTATIONS, AND LOCATIONS OF ALL EQUIPMENT WITH THE RESPECTIVE MANUFACTURERS.

PUMPS

PUMPS SHALL BE OF THE MANUFACTURER AS INDICATED ON THE DESIGN DRAWINGS. (SHEET: M1.01)

USE OF ANY OTHER PUMPS (ALTERNATIVE MANUFACTURERS MAY BE ACCEPTED) SHALL REQUIRE THE CONTRACTOR, AT HIS/HER OWN EXPENSE, TO PROVIDE SIGNED AND SEALED REVISED DRAWINGS AND/OR DESIGN CALCULATIONS DEMONSTRATING ACCEPTABLE PERFORMANCE.

THE PUMPS SHALL BE TOTALLY SUBMERSIBLE NON-CLOG CENTRIFUGAL PUMPS WITH SUBMERSIBLE CLOSE-COUPLED MOTORS DESIGNED TO PUMP DOMESTIC WASTEWATER. THE DESIGN SHALL BE SUCH THAT THE PUMPING UNITS AUTOMATICALLY CONNECT TO THE DISCHARGE PIPING WHEN LOWERED INTO PLACE ON THE DISCHARGE CONNECTION/BASE ELBOW. THE IMPELLER SHALL BE CONSTRUCTED OF DUCTILE IRON, CAPABLE OF PASSING FIBROUS MATERIAL AND 3-INCH (MINIMUM) DIAMETER SOLIDS. PUMP MOTORS SHALL BE HOUSED IN AN AIR-FILLED OR OIL FILLED WATERTIGHT CASING AND SHALL HAVE CLASS F OR HIGHER INSULATED WINDINGS WHICH SHALL BE MOISTURE RESISTANT. MOTORS SHALL BE NEMA DESIGN B RATE 155°C CODE LETTER F, OR BETTER. PUMP MOTORS SHALL HAVE COOLING CHARACTERISTICS SUITABLE TO PERMIT CONTINUOUS OPERATION, IN A TOTALLY, PARTIALLY OR NON-SUBMERGED CONDITION. EACH MOTOR SHALL INCORPORATE AN AMBIENT TEMPERATURE COMPENSATED OVERHEAT SENSING DEVICE. EACH MOTOR SHALL ALSO INCORPORATE A MOISTURE-SENSING DEVICE WIRED IN SERIES. THE PROTECTIVE DEVICES SHALL BE WIRED INTO THE PUMP CONTROLS IN SUCH A WAY THAT IF EITHER DEVICE OPERATES, THE PUMP WILL SHUT DOWN. THE TEMPERATURE DEVICE SHALL BE SELF-RESETTING. THE PUMP SHALL BE CAPABLE OF RUNNING CONTINUOUSLY IN A TOTALLY DRY CONDITION UNDER FULL LOAD WITHOUT DAMAGE, FOR EXTENDED PERIODS. HARDWARE SHALL BE CORROSION-RESISTANT, TYPE 316 STAINLESS STEEL THROUGHOUT. BITUMINOUS COATING SHALL BE PROVIDED BY THE CONTRACTOR ON ALL ALUMINUM OR FERROUS SURFACES TO BE CAST INTO CONCRETE.

WARRANTY

IN ORDER TO ASSURE THE PROPER PERFORMANCE AND COMPATIBILITY OF INTERACTING COMPONENTS WITHIN THE INTENT OF THESE SPECIFICATIONS, THE PUMPS, CONTROL CENTER, ACCESS FRAME, AND ASSOCIATED APPURTENANCES SHALL BE WARRANTED BY THE SAME SUPPLIER. THE PUMP MANUFACTURER SHALL WARRANT THE PUMPS AND ACCESSORIES BEING SUPPLIED AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF 18 MO. UNDER NORMAL USE, OPERATION, AND SERVICE. THE WARRANTY SHALL BE IN PUBLISHED FORM FROM THE MANUFACTURER AND APPLY TO ALL SIMILAR UNITS.

TOOLS AND SPARE PARTS

ONE (1) SET OF ALL SPECIAL TOOLS REQUIRED FOR NORMAL OPERATION AND MAINTENANCE SHALL BE PROVIDED. THE MANUFACTURER SHALL FURNISH A COMPLETE SET OF RECOMMENDED SPARE PARTS NECESSARY FOR THE FIRST YEAR OPERATION OF THE PUMPING SYSTEM. ALSO SUFFICIENT REPLACEMENT SEALS FOR SERVICE LIFE OF FIVE (5)-YEARS MINIMUM. SPARE PARTS SHALL INCLUDE, AS A MINIMUM: SEAL KIT ASSEMBLIES (2 SETS); ONE SET OF PUMP FLANGE RUBBER GROMMETS (AS REQUIRED); SPARE FUSES (2 OF EACH SIZE); SPARE PARTS SHALL BE PROPERLY BOUND AND LABELED FOR EASY IDENTIFICATION WITHOUT OPENING THE PACKAGING AND SUITABLY PROTECTED FOR LONG-TERM STORAGE.

ACCESS FRAMES AND GUIDES

THE PUMPING STATIONS SHALL BE FURNISHED WITH THE NECESSARY ALUMINUM ACCESS FRAMES, COMPLETE WITH HINGED AND HASP-EQUIPPED COVERS AS APPROPRIATE, STAINLESS STEEL UPPER GUIDE HOLDER AND LEVEL SENSOR AND POWER CABLE HOLDER(S). THE FRAMES SHALL BE SECURELY MOUNTED ABOVE THE PUMPS AND POSITIONED IN THE TOP SLAB PER THE PUMP MANUFACTURER'S RECOMMENDATION. HATCHES SHALL HAVE SAFETY-LOCKING HANDLE TO RETAIN DOORS IN OPEN POSITION. HATCHES SHALL BE OF ALUMINUM CHECKERED AND SHALL BE RATED FOR 300 POUND PER SQUARE FOOT LOADING WHERE CHANNEL FRAMES ARE PROVIDED. APPROPRIATE DRAINAGE SHALL BE PROVIDED. USE PIVOT TORSION BARS FOR COUNTERBALANCE OR SPRING OPERATORS FOR EASY OPERATION. ACCEPTABLE MANUFACTURERS ARE HALLIDAY, USF FABRICATORS, OR APPROVED EQUAL. HATCH COVER SHOULD BE PROVIDED WITH A SAFETY NET OR APPROVED FALL PREVENTION SYSTEM. LOWER GUIDE HOLDERS SHALL BE INTEGRAL WITH THE DISCHARGE CONNECTION. GUIDE BARS SHALL BE OF SCHEDULE 40, WELDED TYPE 316 STAINLESS STEEL PIPE OF THE SIZE INDICATED ON THE DRAWINGS AND OF THE LENGTH REQUIRED BY THE PUMP MANUFACTURER. DOORS TO BE SIZED TO PROVIDE UNOBSTRUCTED ACCESS FOR REMOVAL OF PUMPS. OPENINGS EXCEEDING 36 INCHES WILL INCORPORATE A DOUBLE-DOOR DESIGN FOR ACCESS COVERS.

PRESSURE GAUGES (WHERE INDICATED ON THE DRAWINGS)

ONE PRESSURE GAUGE SHALL BE PROVIDED FOR EACH PUMP, AS MANUFACTURED BY DWYER, AMETEK, ASHCROFT, OR EQUAL.. THE GAUGE SHALL BE DIRECT MOUNTED, PHENOLIC, SHOCK RESISTANT, 316 STAINLESS STEEL CASE WITH A MINIMUM 2-INCH DIAMETER GLYCERINE-FILLED DIAL AND FURNISHED WITH A CLEAR GLASS CRYSTAL WINDOW, AND 1/2-INCH SHUT-OFF VALVE. PROVIDE DIAPHRAGM SEALS BETWEEN SHUT-OFF VALVE AND PRESSURE GAUGE. THE GAUGE SHALL BE WEATHERPROOFED. GAUGE SHALL READ FROM 0 TO 100 PSI. AND SHALL BE MOUNTED ON TOP OF THE GATE VALVE. ONE VALVE SHALL BE PROVIDED ON THE FORCE MAIN HEADER, DOWN STREAM OF THE CHECK VALVES.

SWING CHECK VALVES

CHECK VALVES SHALL BE HEAVY CAST OR DUCTILE IRON, LEVER AND WEIGHT TYPE WITH AN ADJUSTABLE POSITION WEIGHT AND LEVER ARM ATTACHED TO THE DISC ASSEMBLY TO ALLOW ADJUSTMENT OF THE CLOSURE FORCE. THE VALVES SHALL BE AS MANUFACTURED BY THE MUELLER, CLOW MCWANE, GOLDEN ANDERSON, OR APPROVED EQUAL.

GATE VALVES

ALL VALVES 4-IN IN DIAMETER AND GREATER SHALL BE RESILIENT WEDGE GATE VALVES MANUFACTURED TO MEET OR EXCEED THE STANDARDS OF AWWA C509 OR C515. VALVES SHALL BE RATED FOR A MINIMUM OF 250 PSI WORKING PRESSURE. ALL VALVES SHALL BE NON-RISING STEM TYPE OPENING COUNTER-CLOCKWISE. VALVES SHALL BE AMERICAN FLOW CONTROL MODEL 2500-1, MUELLER OR APPROVED EQUAL. VALVES TO BE INSTALLED IN BURIED SERVICE APPLICATIONS SHALL BE MECHANICAL JOINT CONNECTION TYPE AND SHALL BE PROVIDED WITH A 2-INCH SQUARE OPERATING NUT. VALVES INSTALLED IN VAULTS OR ABOVE GROUND SHALL BE FLANGE-TYPE AND SHALL BE PROVIDED WITH ACTUATION HAND WHEELS. ALL BURIED VALVES SHALL BE WRAPPED IN POLYETHYLENE COLOR CODED FOR SERVICE TYPE (GREEN FOR SANITARY FORCE MAIN).

PIPE COATINGS

ALL EXTERIOR SURFACES SHALL BE CLEAN, DRY AND FREE FROM RUST AND GREASE BEFORE COATING. FOR BURIED OR IN-VAULT PIPING AND VALVES, EXTERIOR FERROUS PARTS SHALL BE COATED AT THE FACTORY WITH AN ASPHALTIC COATING IN ACCORDANCE WITH ANSI/AWWA C151 LATEST REVISIONS. PRIOR TO BACKFILLING, ALL UNCOATED NUTS, BOLTS, GLANDS, RODS AND OTHER PARTS OF JOINTS SHALL BE COATED IN THE FIELD WITH COAL TAR EPOXY EQUAL TO KOPPERS BITUMASTIC NO. 300_M.

ALL ABOVE-GRADE AND VAULTED PIPING AND VALVES SHALL BE FIELD PAINTED GREEN WITH A COMPATIBLE SERIES OF: 3-6 MILS OF TWO-PART HIGH-BUILD EPOXY (TNEMEC SERIES N69 OR EQ.) AND TOP-COAT 3-6 MILS TWO PART ACRYLIC POLYURETHANE FOR OUTDOOR EXPOSURE (TNEMEC 1075 OR EQ.)

LEVEL FLOAT SWITCHES

1. LEVEL FLOAT SWITCHES - MOLDED HIGH DENSITY POLYETHYLENE.
2. SWITCH - TOTALLY ENCAPSULATED MERCURY-FREE SWITCH.
3. CABLE - HEAVY DUTY, SYNTHETIC RUBBER JACKETED, INTEGRAL TO FLOAT.
4. THE LEAD WIRE SHALL BE A WATERPROOF CABLE OF SUFFICIENT LENGTH SO THAT NO SPLICE IS REQUIRED PRIOR TO THE JUNCTION BOX.
5. PROVIDE A CASTLE-ALUMINUM WEATHERPROOF JUNCTION BOX WITH TERMINALS FOR ALL FLOATS AND TAPPED AS REQUIRED FOR CONDUIT CONNECTIONS.
6. SHALL BE FLYGT ENM-10 OR APPROVED EQUAL.

AIR RELEASE VALVES (WHERE INDICATED ON THE DRAWINGS)

AIR RELEASE VALVES SHALL HAVE A NYLON SINGLE-SECTION BODY, 2-INCH THREADED CONNECTION, A MINIMUM 1-INCH DRAIN PORT, AND STAINLESS STEEL TRIM. AN ISOLATION BALL VALVE SHALL BE PROVIDED BETWEEN THE ARV BODY AND THE TAPPED CONNECTION. THE ARV SHALL BE ARI MODEL D-025 OR APPROVED EQUAL.

STARTUP

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 72 HRS PRIOR TO PROPOSED START UP OF PUMPS. AT LEAST 24 HRS PRIOR TO STARTUP, THE PUMP MANUFACTURER'S REPRESENTATIVE SHALL HAVE WITNESSED A FULL TEST OF OPERATION, INCLUDING PUMP OPERATION AND IMPELLER DIRECTION, FLOAT AND ALARM OPERATION, AND AMPERAGE TESTING OF THE PANEL. WRITTEN CERTIFICATION BY THE PUMP SUPPLIER THAT IT MEETS ALL HIS STANDARD PERFORMANCE CRITERIA SHALL BE PROVIDED, TO THE ENGINEER. AT OFFICIAL STARTUP, MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT TO ANSWER ENGINEER'S QUESTIONS. CONTRACTOR SHALL HAVE EQUIPMENT AVAILABLE TO PULL PUMPS FROM WETWELL TO VERIFY SERIAL NUMBERS, DEMONSTRATE SEATING, ETC. A PRESSURE GAUGE SHALL BE CONNECTED TO THE FORCE MAIN TO SHOW PERFORMANCE. ALL PANEL SYSTEMS SHALL BE VERIFIED FOR PROPER CONTROL.

GENERATORS SHALL BE DEMONSTRATED BY FULL LOAD-TESTING, AND ALL INTERSTITIAL / SPILL / OVERFLOW ALARMS TESTED.

OPERATING INSTRUCTIONS

OPERATING AND MAINTENANCE MANUALS SHALL BE FURNISHED. THE MANUALS SHALL BE PREPARED SPECIFICALLY FOR THIS INSTALLATION AND SHALL INCLUDE ALL REQUIRED CUTS, DRAWINGS, EQUIPMENT LISTS, DESCRIPTIONS, ETC., THAT ARE REQUIRED TO INSTRUCT OPERATING AND MAINTENANCE PERSONNEL UNFAMILIAR WITH SUCH EQUIPMENT. A FACTORY REPRESENTATIVE OF ALL MAJOR COMPONENT MANUFACTURERS, WHO HAS COMPLETE KNOWLEDGE OF PROPER OPERATION AND MAINTENANCE, SHALL BE PROVIDED FOR ONE (1) DAY TO INSTRUCT REPRESENTATIVES OF THE OWNER AND THE ENGINEER ON PROPER OPERATION AND MAINTENANCE. WITH THE PERMISSION OF THE OWNER, THIS WORK MAY BE CONDUCTED IN CONJUNCTION WITH THE INSPECTION OF THE INSTALLATION AND TEST RUN. IF THERE ARE DIFFICULTIES IN OPERATION OF THE EQUIPMENT, DUE TO THE MANUFACTURER'S DESIGN OR FABRICATION, ADDITIONAL SERVICE SHALL BE PROVIDED AT NO COST TO THE OWNER.

PVC PIPE (FORCE MAIN)

UNLESS OTHERWISE NOTED, ALL FORCE MAINS 12-INCH DIAMETER AND SMALLER SHALL BE AWWA C900-07, DR-18 PVC PIPE FOR SEWER APPLICATIONS AS MANUFACTURED BY NORTH AMERICAN PIPE CORPORATION OR APPROVED EQUAL. PIPE SHALL BE COLORED GREEN AND INSTALLED WITH TWO NO. 14 GAUGE TRAVEL WIRES ATTACHED TO THE PIPE WITH DUCT-TAPE EVERY 10 FEET AND STUBBED OUT AT EACH VALVE BOX. ALL PIPE SHALL BE INSTALLED WITH A 2-INCH METALLIC MARKING TAPE COLOR CODED FOR THE TYPE OF SERVICE. THE MARKING TAPE SHALL BE BURIED 2 FEET OVER THE PIPE.

DUCTILE IRON PIPE

ALL ABOVE GROUND AND VAULTED DUCTILE IRON PIPE SHALL BE PRESSURE CLASS 350 MINIMUM FLANGED DUCTILE IRON PIPE. NO FIELD ATTACHED FLANGES WILL BE ALLOWED. ALL BURIED SERVICE DUCTILE IRON PIPE SHALL BE PRESSURE CLASS 350 MINIMUM AND BE FULLY RESTRAINED BELL AND SPIGOT PIPE. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE PROVIDED WITH PROTECTO 401 INTERIOR CERAMIC EPOXY LINER.

COMPACTION

ALL BACKFILL SHALL BE COMPACTED TO 98% OF THE OPTIMUM LABORATORY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D1557). BACKFILL SHALL BE FREE OF ROCKS LARGER THAN 2-IN AND OTHER DELETERIOUS MATERIALS GENERALLY CONSISTING OF CLEAN READILY COMPATIBLE SOILS. BACKFILL SHALL BE PLACED IN 12-IN LIFTS AND COMPACTED IN ACCORDANCE WITH COUNTY STANDARDS.

FITTINGS/RESTRAINTS

ALL FITTINGS FOR USE ALONG SANITARY FORCE MAINS SHALL BE 350 PSI AWWA C153 DUCTILE IRON WITH AN INTERIOR LINING OF PROTECTO 401 EPOXY. MECHANICAL JOINT RESTRAINTS SHALL BE PROVIDED AT ALL MJ FITTINGS UNLESS OTHERWISE NOTED ON THE DRAWINGS. RESTRAINTS SHALL BE MECHANICAL GLAND TYPE SUCH AS "MEGALUG" MANUFACTURED BY EBAA OR APPROVED EQUAL. ALL FORCE MAIN PIPE INSTALLED SHALL BE FULLY RESTRAINED BOTH UPSTREAM AND DOWNSTREAM OF FITTINGS WITH BELL JOINT RESTRAINTS AS MANUFACTURED BY EBAA OR APPROVED EQUAL.

GASKETS

GASKETS FOR FLANGED JOINTS SHALL BE IN ACCORDANCE WITH AWWA C115 AND BE RING TYPE EPDM GASKETS ONE-EIGHTH (1/8) INCH THICK. ALL GASKETS FOR FLANGED JOINTS SHALL BE EPDM HAVING A DUROMETER OF 75 TO 85. GASKETS FOR BELL AND SPIGOT JOINTS SHALL BE EPDM HAVING A DUROMETER OF 75 TO 85 AND FABRICATED AND TESTED IN ACCORDANCE WITH AWWA C111. BOTH TYPES OF GASKET SHALL BE SUITABLE FOR SERVICE WITH CHLORAMINES UP TO 5.0 PPM.

CONCRETE STRUCTURES, SLABS AND DRIVEWAYS

PRECAST REINFORCED CONCRETE STRUCTURES SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-478. THE CONCRETE SHALL CONSIST OF 4000 PSI/28 DAY TYPE II PORTLAND CEMENT. THE WALLS FOR WETWELLS SHALL BE NO LESS THAN 8" THICK. CONES SHALL BE CONCENTRIC. BOTTOM SECTIONS OF WETWELL AND MANHOLES SHALL BE INTEGRALLY PRECAST WITH BASE SLABS. ALL PIPE PENETRATIONS SHALL BE AT LEAST 12 INCHES AWAY FROM WETWELL AND MANHOLE SECTION JOINTS, MEASURED FROM EDGE TO EDGE. ALL INTERIOR CONCRETE, AND UNDERSIDE OF TOP SLAB AND HATCH, SHALL BE COATED W/30 MILS KOPPERS 300M BITUMASTIC OR EQUAL. ALL WETWELL AND VAULT PENETRATIONS SHALL BE CAST-IN PLACE. THE GRAVITY INFLUENT PENETRATION AT THE WETWELL SHALL BE MADE WITH A PRECAST A-LOK/Z-LOK BOOT.

CONCRETE DRIVEWAYS SHALL BE POURED IN PLACE W/ MIN. 4000 PSI/28 DAY TYPE II PORTLAND CEMENT. THICKNESS SHALL BE MIN 6" WITH MIN. REINFORCEMENT OF 6X6X10 WWF UNLESS SHOWN OTHERWISE ON THE DRAWINGS. MIN. 6" OF COMPACTED BASE MATERIAL (CRUSHED CONCRETE OR 57 STONE EQUIVALENT) SHALL BE APPLIED ON COMPACTED SUB BASE.

VALVE BOXES

VALVE BOXES SHALL BE CAST IRON, TWO-PIECE SLIP TYPE WITH A MINIMUM INSIDE SHAFT DIAMETER OF 5-1/4". BOXES SHALL HAVE THE WORD "WATER", "SEWER" OR "RECLAIM" CAST INTO THE COVER AS APPLICABLE.

CONTROL PANEL

ENCLOSURES SHALL BE NEMA 4X STAINLESS STEEL, BY HOFFMAN OR APPROVED EQUIVALENT. THE ENCLOSURE SHALL HAVE A HEAVY-DUTY PAD LOCKABLE CLASP. A DOORSTOP KIT SHALL BE PROVIDED TO HOLD THE ENCLOSURE DOOR OPEN DURING MAINTENANCE.

PANEL SHALL INCLUDE ONE ALUMINUM INNER SAFETY DOOR, 12 GAUGE NOMINAL THICKNESS (MINIMUM) WITH ¾ INCHES, 90° BREAK BEND ON ALL EDGES FOR RIGIDITY; FULL LENGTH ALUMINUM HINGE; POSITIVE TWIST LOCK HANDLE, SAFETY LATCH TO KEEP DOOR OPEN DURING MAINTENANCE. THE PANEL SHALL INCLUDE CIRCUIT BREAKERS SIZED AS REQUIRED FOR MAIN POWER AND EMERGENCY POWER DISCONNECT, IT SHALL BE MOUNTED ON A SUBPANEL WITH HANDLES THROUGH INNER DOOR.

THE PANEL SHALL INCLUDE A VAPOR-PROOF RED LIGHT MOUNTED ON TOP OF THE ENCLOSURE FOR HIGH LEVEL ALARM VISUAL INDICATION AND WEATHERPROOF HORN MOUNTED ON THE OUTSIDE OF THE PANEL BOX. THE ALARM LIGHT AND HORN SHALL BE PREWIRED TO TERMINALS TO OPERATE ON A HIGH LEVEL CONTROL SIGNAL. AN ALARM SILENCE PUSH BUTTON LABELED "ALARM SILENCE" SHALL BE MOUNTED ON THE OUTSIDE OF THE ENCLOSURE AND PREWIRED TO A RELAY WHICH WILL SILENCE THE HORN UNDER ALL CONDITIONS, AND AUTOMATICALLY RESET WHEN HIGH LEVEL CONDITION IS CORRECTED. THE HIGH LEVEL SHALL HAVE A FLASHER TO PULSE THE RED EXTERNAL VISUAL INDICATOR LIGHT DURING A HIGH LEVEL CONDITION. ALARM LIGHT SHALL BE DESIGNED AND POSITIONED TO PROVIDE UNOBSTRUCTED ACCESS FOR CHANGING LIGHT BULB.

THE PANEL SHALL INCLUDE A NONRESETTABLE TYPE ELAPSED TIME METER FOR EACH STARTER MOUNTED ON THE INNER DOOR TO RECORD THE ACCUMULATED RUNNING TIME OF EACH PUMP. THE PANEL SHALL HAVE A GFI (GROUND FAULT INTERRUPTER) TYPE CONVENIENCE DUPLEX RECEPTACLE MOUNTED ON THE INNER DOOR TO PROVIDE PLUG-IN 120V POWER WITH GROUND FAULT PROTECTION. THE PANEL SHALL HAVE A LINE VOLTAGE RATED PHASE SEQUENCE AND LOSS MONITOR RELAY. THE MONITOR RELAY SHALL BE THE ADJUSTABLE TYPE TO BE FIELD SET FOR NOMINAL AVAILABLE INCOMING VOLTAGE. THE MONITOR RELAY WILL BE PREWIRED TO TAKE THE CONTROL CIRCUIT OUT OF SERVICE IF A PHASE IS REVERSED, IS LOST, OR DROPS BELOW NOMINAL VOLTAGE OR IF ALL THREE PHASES DROP BELOW NOMINAL VOLTAGE. THE UNIT WILL AUTOMATICALLY RESTORE WHEN NORMAL CONDITIONS ARE RESTORED.

THE PANEL SHALL HAVE A SEAL FAILURE (LEAK DETECTOR) INDICATOR PILOT LIGHT FOR EACH PUMP. THESE PILOT LIGHTS SHALL BE OPERATED BY MOISTURE SENSING MONITORS WHICH ARE SIGNALED BY PROBES SUPPLIED IN EACH PUMP. MOMENTARY TEST SWITCHES TO SIMULATE SEAL FAILURE TO BE INCLUDED AND SO MARKED WITH PERMANENT WEATHERPROOF NAMEPLATES.

HEAT SENSOR THERMOSTATS FROM EACH PUMP WILL HAVE AN INDICATOR LIGHT IN THE PANEL. THE OVERHEAT CONDITION WILL DISCONNECT POWER TO THE MOTOR. TEST SWITCHES TO SIMULATE MOTOR OVERHEATING ARE TO BE INCLUDED AND SO MARKED WITH PERMANENT WEATHERPROOF NAME PLATES.

THE PANEL SHALL HAVE THREE-PHASE LIGHTING ARRESTER PROTECTION. THE ARRESTERS SHALL BE PREWIRED TO THE POINT OF INCOMING LINE SERVICE AND SHALL BE MOUNTED ON THE OUTSIDE OF THE PANEL BOX.

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA
PUMP STATION NOTES

Patience S. Anastasio
APRIL-01-2016
FL P.E. No. 75402

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

M1.01

PASCO CO. SUBMITTAL
APRIL 01, 2016

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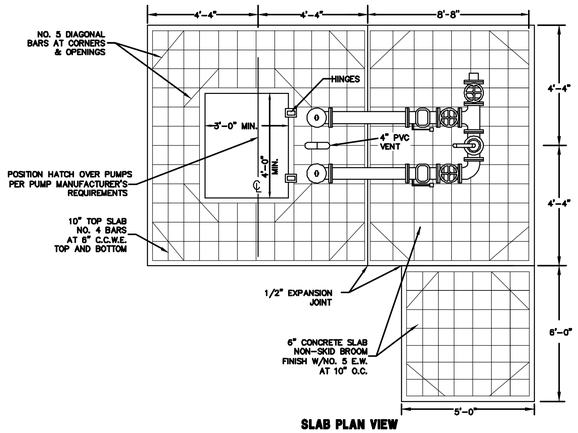
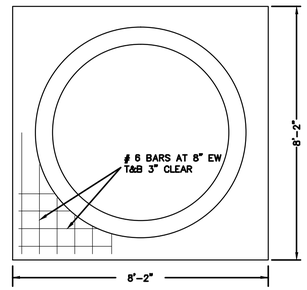


SLAB PLAN VIEW
LIFT STATION & PIPING
N.T.S.



BOTTOM SLAB DETAIL
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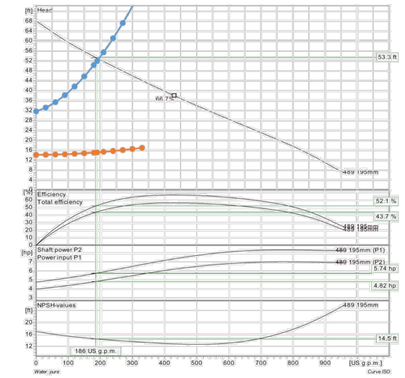

PUMP PERFORMANCE CURVE DATA
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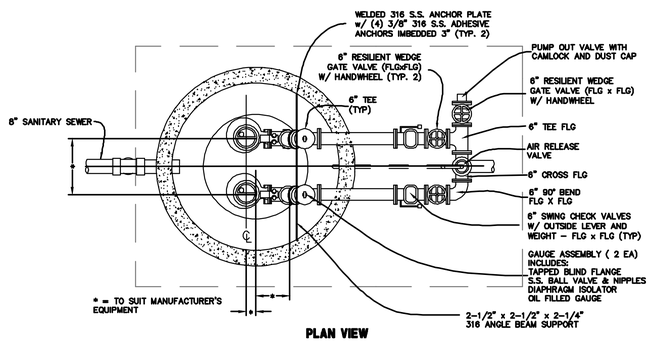
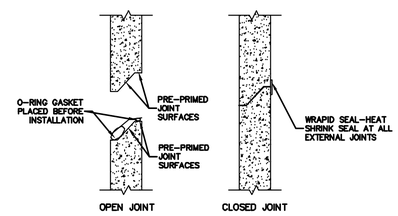


PLAN VIEW
LIFT STATION & PIPING
N.T.S.



PRECAST JOINT DETAIL
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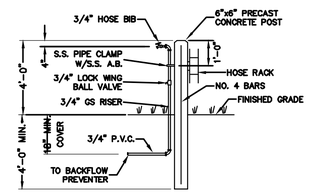
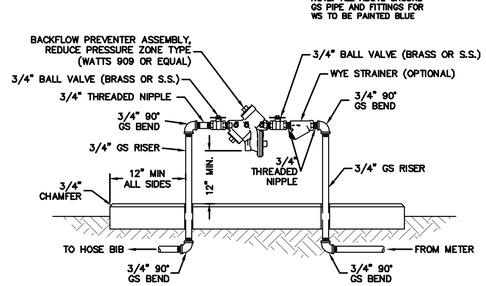


HOSE BIB
N.T.S.

NOTE: ALL ABOVE GROUND GS PIPE AND FITTINGS FOR WS TO BE PAINTED BLUE



REDUCED PRESSURE BACKFLOW PREVENTER
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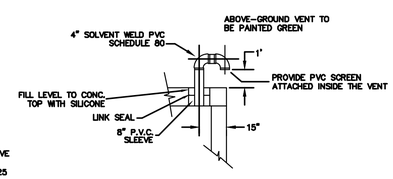

VENT DETAIL
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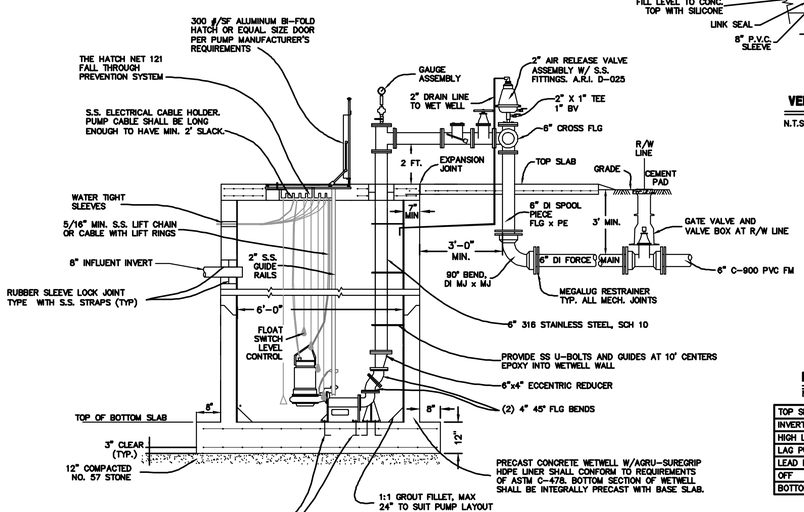


SECTION VIEW
LIFT STATION & PIPING
N.T.S.

ELEVATION TYPICAL
LIFT STATION & PIPING
N.T.S.

TOP SLAB	ELEV. =	74.50
INVERT	ELEV. =	55.00
HIGH LEVEL ALARM	ELEV. =	54.75
LAG PUMP ON	ELEV. =	54.25
LEAD PUMP ON	ELEV. =	53.75
OFF	ELEV. =	53.10
BOTTOM	ELEV. =	50.85

NOTE:
AT NO POINT SHALL THE PUMP OVERLOAD ON ITS CURVE, AND RUN-OUT VELOCITIES SHALL NOT BE EXCESSIVE SO AS TO DAMAGE 8-IN. DISCHARGE PIPING. SEE SYSTEM CURVE ABOVE.

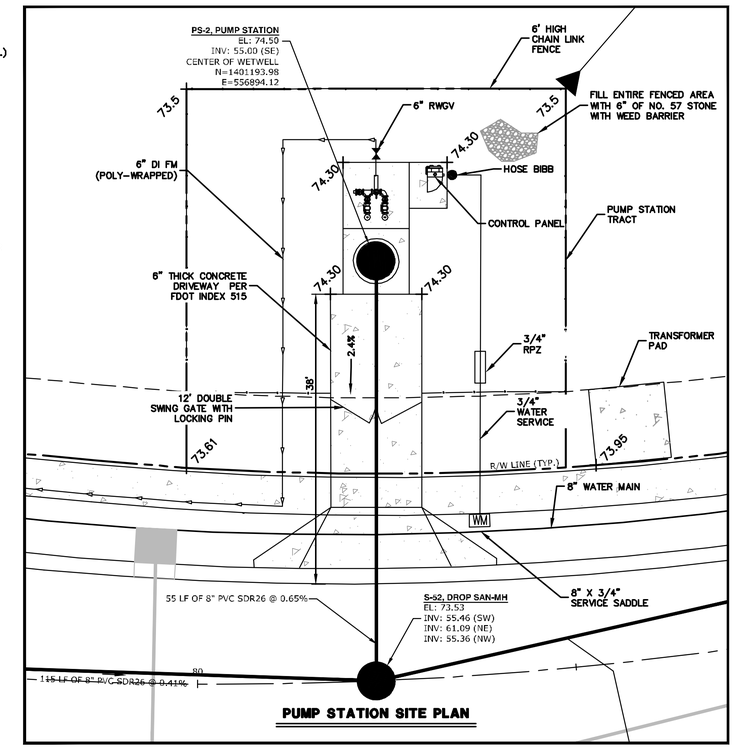
PUMP DESIGN CRITERIA

MANUFACTURER	FLYGT	
MODEL	3127.185	
TYPE OF PUMP	NON CLOG	
IMPELLER SIZE	7 11/16	IN
DESIGN FLOW RATE	180	GPM
DESIGN TOTAL DYNAMIC HEAD	50	FEET
MIN. SHUT OFF HEAD	68	FEET
NOL RUNOUT FLOW RATE	980	FEET
NOL RUNOUT TOTAL DYNAMIC HEAD	7	FEET
DISCH. DIAMETER	3	INCHES
HORSEPOWER (MIN. - MAX.)	7.5	HP
PUMP SPEED	1740	RPM
MINIMUM SOLIDS SIZE	3	INCHES

NOTES

1. CONTRACTOR SHALL COORDINATE INSTALLATION OF NEW 240V/3PA TRANSFORMER, APPROPRIATELY SIZED PER PUMP MANUFACTURER'S POWER REQUIREMENTS, TO BE INSTALLED BY ELECTRIC COMPANY. CONTRACTOR SHALL PROVIDE APPROPRIATELY-SIZED LATERAL, CONDUIT AND FUSED DISCONNECT TO NEW PUMP STATION.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CLEARANCES, ORIENTATIONS, AND LOCATIONS OF ALL EQUIPMENT WITH THE RESPECTIVE MANUFACTURERS.
3. EXCAVATIONS SHALL REMAIN FULLY DEWATERED UNTIL BACKFILLING IS COMPLETED. CONTRACTOR IS RESPONSIBLE FOR ALL BALLAST REQUIRED DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL INSTALL THE CONTROL PANEL, COVERS, PUMPS, GUIDE RAIL AND ASSOCIATED EQUIPMENT TO PUMP MANUFACTURERS RECOMMENDATIONS AND APPROVED SHOP DRAWINGS.
5. ALL HARDWARE (INCLUDING FLANGE BOLTS & NUTS) SHALL BE 316 STAINLESS STEEL UNLESS OTHERWISE SHOWN.
6. INDIVIDUAL WALL PENETRATION SLEEVES SHALL BE PROVIDED FOR EACH PUMP CABLE.
7. IF LIFT CABLES ARE USED IN LIEU OF CHAINS, LIFTING RINGS MUST BE PROVIDED EVERY 4 FT. LIFT CABLES AND RINGS SHALL BE 316 STAINLESS STEEL. CHAINS SHALL BE MINIMUM 5/16" DIAMETER.
8. ALL UNDERGROUND FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT DUCTILE IRON AND SHALL BE PROVIDED WITH PROTECTO 401 INTERIOR LINING.
9. ALL ABOVE GROUND PIPING SHALL BE MANUFACTURED PRESSURE CLASS 350 MINIMUM FLANGED DUCTILE IRON PIPE, PAINTED GREEN.
10. BURIED DISCHARGE FORCE MAIN SHALL HAVE MINIMUM 36" COVER IN ALL LOCATIONS. INSTALL GREEN METALLIC IDENTIFICATION TAPE MARKED "FORCE MAIN BURIED BELOW" AT 12-18 INCHES BELOW GRADE ABOVE THE PIPE.
11. ELECTRICAL AND CONTROLS: THE FOLLOWING SHALL BE MINIMUM ELECTRICAL/CONTROLS REQUIREMENTS. ADDITIONAL ITEMS SHALL BE AS SHOWN ON PUMP STATION ELECTRICAL PLAN IF ANY. ALL PANELS SHALL BE SS, NEMA 4/4X. A 110-VOLT GFI POWER RECEPTACLE SHALL BE PROVIDED INSIDE THE PANEL DEAD FRONT, OR IN A SEPARATE OUT-DOOR RATED BOX WIRED TO THE PANEL. A SS NEMA 4/4X JUNCTION BOX SHALL BE PROVIDED BETWEEN THE WETWELL AND CONTROL PANEL PER THE ELECTRICAL SHEET. SEAL-OFFS SHALL BE PROVIDED AT ALL PENETRATIONS INTO THE WETWELL AND AT THE JUNCTION BOX UPSTREAM OF THE WET WELL. ALL PUMP MOTOR POWER CORDS SHALL BE HEAVY-DUTY FOR WASTEWATER APPLICATIONS, WITH CORROSION-RESISTANT TERMINAL FITTINGS. ALL PANELS SHALL BE MOUNTED ONTO TWO 6 INCH CONCRETE POSTS WITH SS UNI-STRUTS. THE PUMP STATION CONTROL SHALL BE PROVIDED WITH THE FOLLOWING FEATURES/OPTIONS, AT A MINIMUM.

   FDEP REQUIREMENTS, AT MINIMUM, INCLUDING:
   - PUMP FAIL INDICATOR LIGHTS AND MOMENTARY TEST SWITCHES. FAIL CONDITION SHALL INCLUDE PUMP SEAL FAIL/LEAK.
   - EXTERNALLY MOUNTED LIGHTNING ARRESTOR.
   - RECEPTACLE FOR PORTABLE GENERATOR, PROTECTED FROM DAMAGE IN THE EVENT OF RESTORATION OF POWER.
   - ALARM LIGHT AND HORN, WITH EMERGENCY BATTERY BACKUP UPON LOSS OF MAIN POWER.
   - ELAPSED TIME METER FOR EACH PUMP
   - ALTERNATION OF LEAD/LAG PUMP AFTER EACH OFF CYCLE.
   - HOA SWITCH, EACH PUMP. PUMP RUN/FAIL/STDBY/LIGHTS
   - ALARM BATTERY BACKUP (1 HR)
17. AGRU-SURE GRIP CONCRETE PROTECTIVE INTERIOR LINER SHALL BE PROVIDED.
18. POST AN UNOBSTRUCTED SIGN MADE OF DURABLE WEATHER RESISTANT MATERIAL MIN. 2" BLACK LETTERING ON REFLECTIVE BACKGROUND AT A LOCATION VISIBLE TO THE PUBLIC WITH A TELEPHONE NUMBER FOR A POINT OF CONTACT IN CASE OF EMERGENCY.



PUMP STATION SITE PLAN

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THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO COUNTY, FLORIDA
PUMP STATION MECHANICAL SHEET

Patience S. Anastasio
APRIL-01-2016
FL P.E. No. 75402

JOB NO:	3858-002-200
DATE:	04/01/2016
SCALE:	AS SHOWN

M1.02

PASCO CO. SUBMITTAL
APRIL 01, 2016

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ELECTRICAL SPECIFICATIONS

SCOPE

A. THE WORK, APPARATUS AND MATERIALS WHICH SHALL BE FURNISHED UNDER THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS SHALL INCLUDE ALL ITEMS SPECIFIED HEREINAFTER AND SHOWN ON THE DRAWINGS. ALL OTHER MATERIALS NECESSARY FOR THE COMPLETE INSTALLATION SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR TO PROVIDE COMPLETE ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.

B. THE CONTRACTOR SHALL EXTEND THE SERVICE FROM THE POINT OF SERVICE ATTACHMENT FURNISHING ALL PROTECTIVE DEVICES, CONDUCTORS, SUPPORTS, RACEWAYS, ETC. TO PROVIDE COMPLETE ELECTRICAL SYSTEMS TO SERVE MOTOR LOADS, LIGHTING LOADS AND MISCELLANEOUS ELECTRICAL LOADS, AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREINAFTER. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF THE WORK AND MAKING ANY MINOR CONNECTION CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT. ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY AND NO SUBSTANDARD WORK WILL BE ACCEPTED.

C. VERIFY CONDITIONS AT THE FIELD PRIOR TO PRICING THE JOB. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL DETAILS OF THE WORK AND EXISTING CONDITIONS.

D. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL ENSURE THAT ALL SYSTEMS, OPERATE AS DESIGNATED AND REQUIRED AND SHALL REVIEW THEIR OPERATION WITH THE OWNER.

E. A SET OF RECORD DRAWINGS SHALL BE COMPLIED AND ISSUED TO THE ENGINEER OF RECORD UPON COMPLETION OF CONSTRUCTION AND TESTING.

CODES

A. THE WORK UNDER THE REQUIREMENTS OF THESE SPECIFICATIONS SHALL BE IN CONFORMANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE. THE INSTALLATION SHALL ALSO COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS OF LOCAL AND STATE LAWS AND ORDINANCES.

INTERFERENCES

A. THE PLANS ARE GENERALLY DIAGRAMMATIC AND THE CONTRACTOR SHALL COORDINATE THE WORK WITH THE DIFFERENT TRADES SO THAT INTERFERENCES BETWEEN CONDUITS, PIPING, EQUIPMENT, AND STRUCTURAL WORK WILL BE AVOIDED. ALL NECESSARY OFFSETS IN RACEWAYS, FITTINGS, ETC. REQUIRED TO PROPERLY INSTALL THE WORK SHALL BE FURNISHED SO AS TO TAKE UP A MINIMUM SPACE, AND ALL MATERIALS REQUIRED TO ACCOMPLISH THIS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER. IN CASE INTERFERENCE DEVELOPS, THE OWNER'S AUTHORIZED REPRESENTATIVE WILL DECIDE WHICH EQUIPMENT, PIPING, ETC., MUST BE RELOCATED, REGARDLESS OF WHICH WAS INSTALLED FIRST.

SAFETY

A. ALL ELECTRICAL EQUIPMENT SHALL BE SO CONSTRUCTED. INSTALLED, PROTECTED AND MAINTAINED THAT SAID ELECTRICAL EQUIPMENT WILL BE TO SUCH EXTENT AS IS REASONABLY POSSIBLE, SAFE AND FREE FROM DANGER OF ACCIDENT OR INJURY BY SHOCK, FIRE OR OTHERWISE TO EITHER PERSON OR PROPERTY.

MATERIALS

A. IN GENERAL, MATERIALS AND APPARATUS SHALL COMPLY WITH ALL APPLICABLE TESTS, RATINGS, SPECIFICATIONS, AND REQUIREMENTS OF THE IEEE AND NEMA AND SHALL BEAR THE APPROVED DEVICE LABEL OF THE UNDERWRITERS' LABORATORIES, INC.

B. ANY MATERIAL OR PRODUCT SPECIFIED HEREIN OR ON THE DRAWINGS BY MANUFACTURER AND CATALOG NUMBER AFTER WHICH THE TERM "OR EQUAL" DOES NOT APPEAR SHALL BE INTERPRETED AS LIMITING SUCH ITEMS BY A PREDETERMINED SELECTION AS STATED. IN SUCH INSTANCES NO SUB-STITUTIONS WILL BE ALLOWED. ANY MANUFACTURER AND CATALOG NUMBER FOLLOWED BY THE TERM "OR EQUAL" SHALL BE INTERPRETED TO MEAN EQUAL IN QUALITY, VALUE, AND INTEGRAL PROPERTIES AND SIMILAR IN APPEARANCE, DESIGN, AND FUNCTIONS. THE CONTRACTOR MAY IN THESE INSTANCES AFTER OBTAINING WRITTEN APPROVAL OF THE OWNER, SUBSTITUTE MATERIALS OR PRODUCTS OTHER THAN THE ONE NAMED.

C. THE CONTRACTOR SHALL SUBMIT A LIST OF PRINCIPAL MATERIAL ITEMS, GIVING MANUFACTURER'S NAMES AND CATALOG NUMBERS. APPROVAL OF THE LIST SHALL BE OBTAINED FROM THE OWNER BEFORE ORDERS ARE PLACED.

GUARANTEE

A. CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION. CONTRACTOR SHALL RECTIFY ANY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP AND PAY FOR ANY DAMAGE TO OTHER WORK RESULTING THEREFROM WITHIN SAID PERIOD. THE OWNER WILL GIVE NOTICE OF DEFECTS WITH REASONABLE PROMPTNESS.

IDENTIFICATION OF EQUIPMENT

A. IDENTIFICATION OF EQUIPMENT SHALL BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT INSTALLED BY THE CONTRACTOR. ENGRAVED LAMINATED PLASTIC NAMEPLATES SHALL BE PROVIDED AND IDENTIFICATION SHALL CLEARLY DESCRIBE THE EQUIPMENT AND FUNCTION. COORDINATE NAMES ABBREVIATIONS AND OTHER DESIGNATIONS USED IN ELECTRICAL IDENTIFICATION WORK WITH CORRESPONDING DESIGNATIONS SHOWN, SPECIFIED OR SCHEDULED. PROVIDE NUMBERS, LETTERS AND WORDING AS INDICATED OR IF NOT OTHERWISE INDICATED, AS RECOMMENDED BY MANUFACTURER OR AS REQUIRED FOR PROPER IDENTIFICATION AND MAINTENANCE OF ELECTRICAL SYSTEMS AND EQUIPMENT. ALL LAMINATED NAMEPLATES SHALL BE FASTENED TO ENCLOSURES WITH STAINLESS STEEL SCREWS.

B. INSTALL LABEL TAGS ON ALL WIRE AND CABLE IN JUNCTION BOXES, WIREWAYS AND WIRING GUTTERS OF PANELS. TAGS SHALL IDENTIFY WIRE OR CABLE CIRCUIT NUMBER AND/OR EQUIPMENT SERVED AS SHOWN ON DRAWINGS.

C. ALL JUNCTION BOXES TO BE DESIGNATED WITH PERMANENT MARKER INDICATING PANELBOARD AND CIRCUIT NUMBERS OF BRANCH CIRCUIT WIRING CONTAINED WITHIN.

D. PANELBOARD DIRECTORIES SHALL BE UPDATED/TYPEWRITTEN WITH ACCURATE AND CURRENT INFORMATION BY THE CONTRACTOR AT THE END OF CONSTRUCTION. DIRECTORIES SHALL REFLECT EXISTING UNCHANGED AND NEW RECORD CONDITIONS AND INCLUDE CIRCUIT NUMBER, TENANT NAME, TYPE AND LOCATION OF LOAD.

RACEWAYS AND FITTINGS

A. CONDUITS RUN EXPOSED ON EXTERIOR OF THE BUILDING OR BELOW GRADE SHALL BE RIGID GALVANIZED STEEL CONDUIT. SCH 80 PVC CONDUIT IS ACCEPTABLE BELOW GRADE PROVIDED RIGID GALVANIZED STEEL CONDUIT ELBOWS AND RISERS ARE USED.

B. RACEWAYS:

1. FOR CONNECTIONS TO MOTORS, ETC. EXPOSED TO WEATHER-SEALTIGHT. (SEALTIGHT FITTINGS SHALL BE STEEL - INSULATED THROAT TYPE).
2. GROUNDING TYPE INSULATED THROAT BUSHINGS SHALL BE PROVIDED ON ALL RACEWAYS ENTERING ENCLOSURES AND BOXES. ALL GROUNDING BUSHINGS SHALL BE BONDED TOGETHER AND CONNECTED TO EACH ENCLOSURE OR JUNCTION BOX WITH GROUND CONDUCTOR SIZED AS REQUIRED BY NEC.

C. ALL CONDUITS SHALL BE PROPERLY ALIGNED, GROUPED AND SUPPORTED. EXPOSED CONDUIT SHALL BE INSTALLED AT RIGHT ANGLES TO OR PARALLEL TO THE PRINCIPAL STRUCTURAL MEMBERS. PROVIDE SUPPORT A MINIMUM OF 18" FROM BENDS AND OUTLET BOXES AND ON INTERVALS NOT TO EXCEED 8'-0". CONDUIT IS NOT TO SPAN ANY SPACE UNSUPPORTED. ALL CONDUIT SHALL BE SUPPORTED FROM STRUCTURE AND NOT FROM EQUIPMENT SUPPORT SYSTEM.

D. PROVIDE NYLON PULL CORD AND LEAVE IN PLACE IN EACH EMPTY CONDUIT.

F. FLEXIBLE METALLIC CONDUIT:

1. FLEXIBLE METALLIC CONDUIT IN DRY LOCATIONS SHALL BE UNDERWRITERS' APPROVED, ZINC COATED, SINGLE STRIP TYPE. FITTINGS SHALL BE AS MANUFACTURED BY THOMAS AND BETTS "TITE-BITE", STRAIGHT OR ANGLE CONNECTORS OR APPROVED EQUAL.
2. FLEXIBLE CONDUIT IN DAMP OR WET LOCATIONS SHALL BE UNDERWRITERS' APPROVED FLEXIBLE, LIQUID-TIGHT METAL CONDUIT. FITTINGS SHALL BE AS MANUFACTURED BY APPLETON, CROUSE-HINDS OR THOMAS AND BETTS.

G. RIGID STEEL CONDUIT:

1. RIGID STEEL CONDUIT SHALL BE UNDERWRITERS' APPROVED HOT-DIP GALVANIZED, ZINC METTALIZED, OR SHERADIZED. THE THREADED ENDS OF THE CONDUIT SHALL BE ZINC COATED AND SHALL BE THREADED TYPE. DOUBLE LOCK NUTS SHALL BE USED ON ALL CONDUIT TERMINATIONS EXCEPT THREADED HUBS.
2. ALL CONDUIT SHALL BE MADE UP TIGHT AND NO RUNNING THREADS WILL BE PERMITTED, "ERICSON" COUPLINGS BEING USED WHERE NECESSARY. ALL CONDUIT RUNS BELOW GRADE OR UNDER FLOORS ON GRADE SHALL BE GIVEN A HEAVY COAT OF ASPHALTIC TYPE PAINT.

BOXES

A. THE CONTROL PANEL SHALL BE NEMA 4X STAINLESS STEEL, RIGIDLY MOUNTED AND SHALL BE EQUIPPED WITH SUITABLE STAINLESS STEEL SCREW FASTENED COVERS. OPEN KNOCK-OUTS OR HOLES IN BOXES SHALL BE PLUGGED WITH A SUITABLE BLANKING DEVICE.

B. OUTLET BOXES FOR EXPOSED OUTDOOR INSTALLATIONS SHALL BE CAST METAL TYPE "FS" OR "FD" BOXES WITH SUITABLE GALVANIZED SHEET COVERS, OR CAST METAL WEATHERPROOF OR VAPOR TIGHT COVERS WHEN NOTED ON THE DRAWINGS. WEATHERPROOF RECEPTACLE COVERS SHALL HAVE SPRING HINGE LIDS.

C. JUNCTION BOXES FOR CONDUITS (POWER AND CONTROL) ENTERING WET WELL SHALL BE SUITABLE FOR CLASS 1 DIV. 1, NEMA 7 RAINTIGHT ENVIRONMENT.

CONDUCTORS

A. UNLESS OTHERWISE INDICATED, ALL BRANCH CIRCUIT CONDUCTORS SHALL BE NO. 12 AWG. BRANCH CIRCUITS RUN OVER 75 FEET IN LENGTH, MEASURING ONE WAY FROM THE FIRST OUTLET OF THE CIRCUIT TO THE PANEL, SHALL BE NO. 10 AWG FOR THE ENTIRE CIRCUIT

B. SPLICES, TAPS AND ATTACHMENT FITTINGS AND LUGS SHALL BE ELECTRICALLY AND MECHANICALLY SECURE AND SOLDERLESS FOR CONDUCTORS SIZES NO. 8 AWG AND LARGER. THERE SHALL BE PLENTY OF SLACK CABLE IN BOXES, OUTLETS AND CABINETS TO ENSURE THAT THERE IS NO BINDING AT THE BUSHINGS. ALL LUGS SHALL BE OF THE CORRECT SIZES FOR THE CONDUCTORS JOINED AND IN NO CASE SHALL STRANDS BE CUT FROM A CONDUCTOR IN ORDER TO FIT THE CONDUCTOR INTO A LUG. TAPING OF JOINTS SHALL BE WITH VINYL PLASTIC ELECTRICAL TAPE TO SECURE INSULATION STRENGTH EQUAL TO THAT OF THE CONDUCTORS JOINED.

C. ALL CONDUCTORS SHALL BE COPPER, CONDUCTOR INSULATION SHALL BE DUAL TYPE THHN/THWN 75°C. (167°F.) FOR DRY, DAMP & WET LOCATIONS. CONDUCTOR INSULATION WITH SINGLE TYPE MARKING THHN 90°C. (194°F.)MAY BE USED FOR DRY LOCATIONS ONLY. ALL CONDUCTORS SHALL BE COLOR CODED AS REQUIRED BY NEC AND FURTHER IDENTIFIED AND CODED AS SPECIFIED HEREINAFTER. COLOR CODING SHALL BE BY MEANS OF COLORED INSULATING MATERIAL, COLORED BRAID OR JACKET OVER THE INSULATION OR BY MEANS OF SUITABLE COLORED, PERMANENT, NON-AGING, INSULATING TAPE APPLIED TO CONDUCTORS AT EACH CABINET OR JUNCTION POINT. THE COLOR CODING SHALL BE ACCOMPLISHED AS THE CONDUCTORS ARE INSTALLED. THE FOLLOWING SYSTEMS OF COLOR CODING SHALL BE STRICTLY ADHERED TO:

1) ISOLATED GROUND LEADS: GREEN AND YELLOW
2) GROUND LEADS: GREEN
3) GROUNDED NEUTRAL LEADS: WHITE
4) 120/208 VOLT, UNGROUNDED PHASE WIRES: BLACK, RED AND BLUE
5) 277/480 VOLT, UNGROUNDED PHASE WIRES: BROWN, ORANGE AND YELLOW.

THE COLOR CODE ASSIGNED TO EACH PHASE WIRE SHALL BE CONSISTENTLY FOLLOWED THROUGHOUT.

NOTE: WHERE EXISTING BASE BUILDING COLOR CODING DIFFERS FROM COLOR CODING ASSIGNED HERE-IN. CONTRACTOR SHALL USE EXISTING COLOR CODING AS REQUIRED TO MAINTAIN CONSISTENCY. ADVISE ENGINEER (IN WRITING) OF COLOR CODING TO BE USED.

D. USE ONLY APPROVED LUBRICANTS FOR WIRE PULLING. DO NOT ALLOW THE USE OF OIL OR GREASE BASED LUBRICANTS FOR PULLING.

E. ALL FEEDERS, SUB FEEDERS, SPECIAL SYSTEM WIRING AND CONTROL WIRING IN EACH PULLBOX AND GUTTER SPACE, SHALL BE TAGGED, DENOTING POINTS OF ORIGIN AND TERMINATION OF WIRES AND CABLES.

F. ALL CIRCUIT CONDUCTORS OF ALL SYSTEMS SHALL BE IDENTIFIED, IN ACCESSIBLE BOXES AND AT TERMINATION'S, WITH THE PROPER COLOR CODE, AND PROPERLY PHASED.

G. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR AND MAKE ALL REQUIRED CONNECTIONS TO SERVE MECHANICAL EQUIPMENT FURNISHED.

H. THE INTERIOR ELECTRICAL SYSTEMS SHALL BE COMPLETELY AND EFFECTIVELY GROUNDED AS REQUIRED BY THE NEC AND AS SPECIFIED HEREINAFTER.

I. ALL RACEWAYS WITH NO. 10 OR NO. 12 AWG PHASE CONDUCTORS FOR RECEPTACLES, LIGHTING FIXTURES AND SIMILAR CIRCUITS SHALL BE PROVIDED WITH A PARITY SIZED GREEN EQUIPMENT GROUND CONDUCTOR. GROUND CONDUCTOR SHALL BE INSTALLED IN ENTIRE RACEWAY SYSTEM INCLUDING WALL SWITCHES AND FLEXIBLE CONDUIT TO LIGHTING FIXTURES. EQUIPMENT GROUND CONDUCTOR SIZES FOR CIRCUITS WITH PHASE CONDUCTORS LARGER THAN NO. 12 AWG ARE INDICATED ON DRAWINGS. GROUND CONDUCTORS SHALL BE CONNECTED TO GROUND BUSS IN PANELBOARDS.

GROUNDING

A. THE ELECTRICAL SYSTEMS SHALL BE COMPLETELY AND EFFECTIVELY GROUNDED AS REQUIRED BY THE NEC AND AS SPECIFIED HEREINAFTER.

B. ALL METALLIC RACEWAYS SHALL BE MECHANICALLY AND ELECTRICALLY SECURE AT ALL JOINTS AND AT ALL BOXES, CABINETS, FITTINGS, AND EQUIPMENT. METALLIC RACEWAYS SHALL BE CONNECTED TO A DIRECT GROUND AT THE POINT OF ELECTRICAL SERVICE ENTRANCE AND SHALL BE ELECTRICALLY CONTINUOUS THROUGHOUT THE ENTIRE SYSTEM.

C. ALL GROUND CONDUCTORS SHALL BE INSULATED COPPER UNLESS OTHERWISE NOTED.

D. ALL RACEWAYS WITH NO. 10 OR 12 AWG PHASE CONDUCTORS FOR RECEPTACLES, LIGHTING FIXTURES AND SIMILAR CIRCUITS (NEW BRANCH CIRCUITS) SHALL BE PROVIDED WITH A PARITY SIZED GREEN EQUIPMENT GROUND CONDUCTOR. GROUND CONDUCTOR SHALL BE INSTALLED IN ENTIRE RACEWAY SYSTEM INCLUDING WALL SWITCHES AND FLEXIBLE CONDUIT TO LIGHT FIXTURES. EQUIPMENT GROUND CONDUCTOR SIZES FOR CIRCUITS WITH PHASE CONDUCTORS LARGER THAN NO. 12 AWG ARE INDICATED ON DRAWINGS. GROUND CONDUCTORS SHALL BE CONNECTED TO GROUND BUSS IN PANELBOARDS.

E. TERMINATE FEEDER AND BRANCH CIRCUIT INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH GROUNDING LUG, BUS, OR BUSHING. CONDUCTORS LOOPED UNDER SCREW OR BOLT HEADS WILL NOT BE PERMITTED.

F. INSTALL CLAMP-ON CONNECTORS ON CLEAN METAL CONTACT SURFACES TO ENSURE ELECTRICAL CONDUCTIVITY AND CIRCUIT INTEGRITY.

G. PROVIDE A GROUNDING BUSHING AND A CONTINUOUS COPPER BONDING JUMPER FROM THE BUSHING TO THE EQUIPMENT GROUND BUS IN ALL FEEDERS. THE BONDING JUMPER SHALL BE THE SAME SIZE AS THE EQUIPMENT GROUND CONDUCTOR.

CIRCUIT PROTECTIVE DEVICES

A. GENERAL:

1. UNLESS OTHERWISE INDICATED, PROTECTIVE DEVICES SHALL BE MOUNTED WITH TOP OF CABINET OR ENCLOSURE 6'-6" ABOVE FINISHED FLOOR, SHALL BE PROPERLY ALIGNED, AND SHALL BE ADEQUATELY SUPPORTED INDEPENDENTLY OF THE CONNECTING RACEWAYS. ALL STEEL SHAPES, ETC., NECESSARY FOR THE SUPPORT OF THE EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. UNLESS OTHERWISE INDICATED, ALL BRANCH CIRCUIT PROTECTIVE DEVICES ENCLOSURES SHALL BE NEMA TYPE I, GENERAL PURPOSE TYPE. CIRCUIT PROTECTIVE DEVICES INSTALLED OUTDOORS OR EXPOSED TO THE WEATHER SHALL HAVE WEATHERPROOF ENCLOSURES, NEMA TYPE 4X STAINLESS STEEL.
2. INSTALL DISCONNECT SWITCHES FOR USE WITH MOTOR-DRIVEN APPLIANCES, AND MOTORS AND CONTROLLERS WITHIN SIGHT OF CONTROLLER POSITION UNLESS OTHERWISE INDICATED.
3. SUBMIT MANUFACTURER'S DATA (MINIMUM 5 COPIES) ON CIRCUIT AND MOTOR DISCONNECT SWITCHES AND/OR MOTOR STARTERS. SUBMIT SHOP DRAWINGS IN BOOKLET FORM WITH SEPARATE SHEET FOR EACH DEVICE. PROVIDE EQUIPMENT IDENTIFICATION AS DESIGNATED ON PLANS FOR EACH SHOP DRAWING CUT SHEET SUBMITTED.

B. CIRCUIT BREAKERS:

1. SQUARE 'D' CIRCUIT BREAKERS FOR MOUNTING IN CONTROL PANEL SHALL BE MOLDED PLASTIC CASE TYPE. BREAKERS SHALL HAVE THERMAL MAGNETIC TRIP UNITS AND MULTI-POLE BREAKERS SHALL HAVE A COMMON TRIP BAR SO THAT THE TRIPPING OF ONE POLE WILL AUTOMATICALLY TRIP ALL POLES OF THE BREAKER. BREAKERS SHALL BE TRIP FREE AND TRIP INDICATING AND SHALL HAVE QUICK-MAKE, QUICK-BREAK CONTACTS.

C. SAFETY SWITCHES:

1. ALL SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE. SWITCH MECHANISM SHALL BE QUICK-MAKE, QUICK-BREAK. COVER SHALL BE INTERLOCKED WITH MECHANISM TO PREVENT OPENING UNLESS SWITCH IS IN THE "OFF" POSITION. ALL ENCLOSURES SHALL BE PRIMED AND FINISHED TO RESIST RUSTING AND CORROSION. SWITCHES SHALL BE GENERAL ELECTRIC, SQUARE-D, OR CUTLER-HAMMER. (MATCH LIFT STATION STANDARD WHERE APPLICABLE)

D. FUSES:

1. ALL FUSES FOR SWITCHES SHALL BE DUAL ELEMENT, CARTRIDGE TYPE. FUSES SHALL BE BUSSMAN "FUSETRON" OR CHASE SHAWMUT "TRIONIC". THE CONTRACTOR SHALL FURNISH AND INSTALL PROPER SIZE FUSES WHERE REQUIRED FOR ALL FUSIBLE EQUIPMENT AND SHALL FURNISH TO THE OWNER A SPARE DUPLICATE CARTRIDGE FOR EACH FUSE INSTALLED.

RECEPTACLES

A. ALL RECEPTACLES SHALL BE THE GROUNDING TYPE WITH GROUND CONNECTION MADE THROUGH AN EXTRA POLE WHICH SHALL BE PERMANENTLY CONNECTED TO GROUND CONDUCTOR.

B. RECEPTACLES FOR 20 AMPERE, 120V SERVICE SHALL BE SPECIFICATION GRADE THREE-WIRE, TWO POLE RECEPTACLES RATED 20 AMPERES AT 125V VOLTS. ALL NEW RECEPTACLES SHALL BE THAT OF LEVITON OR PRE-APPROVED EQUAL.

C. WALLPLATES: PROVIDE WALLPLATES FOR SINGLE AND COMBINATION WIRING DEVICES, OF TYPES, SIZES, AND WITH GANGING AND CUTOUTS AS INDICATED. SELECT PLATES WHICH MATE AND MATCH WIRING DEVICES TO WHICH ATTACHED. CONSTRUCT WITH METAL SCREWS FOR SECURING PLATES TO DEVICES; SCREW HEADS COLORED TO MATCH FINISH OF PLATES, WALLPLATES COLORED TO MATCH WIRING DEVICES.

D. ELECTRICAL CONTRACTOR SHALL CONFIRM RECEPTACLE CONFIGURATION, VOLTAGE, PHASE AND AMPERAGE FOR ALL EQUIPMENT FURNISHED AND INSTALLED FOR THIS WORK. ADVISE ENGINEER IF REQUIRED.

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE RUBBER MATS AND PLYWOOD COVERS FOR ALL OWNERS EQUIPMENT SUSCEPTIBLE TO DAMAGE. VERIFY SPECIFIC LOCATIONS WITH OWNER'S REPRESENTATIVE.
2. ALL WORK SHALL BE PERFORMED DURING TIME PERIODS ACCEPTABLE TO THE OWNER. SCHEDULE ALL WORK WITH THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING.
3. THE CONTRACTOR SHALL PERFORM ALL TEMPORARY WORK NECESSARY TO MAINTAIN CONTINUITY OF ELECTRICAL SERVICE WHEN CONNECTION IS MADE TO EXISTING SYSTEMS AND FACILITIES. EXISTING SERVICE SHALL NOT BE INTERRUPTED WITHOUT PRIOR CONSENT OF THE OWNER'S REPRESENTATIVE AND MAY BE INTERRUPTED ONLY AT AND FOR THE SPECIFIED TIME DESIGNATED BY OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL BE GUIDED BY THE OWNER'S REPRESENTATIVE AT ALL TIMES IN MATTERS AFFECTING THE EXISTING FACILITIES.
4. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL ENSURE THAT ALL SYSTEMS OPERATE AS DESIGNED AND REQUIRED AND SHALL REVIEW THEIR OPERATION WITH THE OWNER. COMPLETE SET OF AS-BUILT DRAWINGS SHALL BE COMPILED (BY THE CONTRACTOR) AND ISSUED (1 EACH) TO THE ENGINEER AND BUILDING MAINTENANCE PERSONNEL UPON COMPLETION OF CONSTRUCTION AND TESTING.
5. PROVIDE REQUIRED NUMBER AND/OR EXACT QUANTITY OF CONDUCTORS IN ALL CONDUITS WHETHER SHOWN OR NOT SHOWN ON PLANS FOR COMPLETE & PROPER INSTALLATION AND SATISFACTORY OPERATION OF ALL LIGHTING FIXTURES, EQUIPMENT AND/OR DEVICES.
(NOTE: FOR MULTIWIRE BRANCH CIRCUITS, PROVIDE DEDICATED OR SEPARATE NEUTRAL CONDUCTOR FOR EACH 120V HOMERUN BRANCH CIRCUIT WIRING THROUGH-OUT THE CIRCUIT AS REQUIRED PER 2008 NEC SECTION 210.4(B)).

LIFT STATION CONTROL PANEL:

1. BREAKERS & CONTROL/SELECTOR SWITCHES DISPLAY SHALL BE MOUNTED FOR OPERATION THROUGH INNER SAFETY DOOR.
2. ELAPSE TIME METER AND G.F.I. RECEPTACLE TO BE MOUNTED ON INNER SAFETY DOOR.
3. POSITION PANEL BOX SO OPERATORS BACK IS NOT TO WET WELL WHILE FACING BOX.
4. PANEL BOX TO BE LOCATED TO ALLOW UNOBSTRUCTED ACCESS TO WET WELL BY EQUIPMENT.
5. INNER SAFETY DOOR (DEAD FRONT) SHALL BE ALUMINUM.
6. THERE SHALL BE PERMANENTLY AFFIXED TO THE INTERIOR SIDE OF THE EXTERIOR ENCLOSURE DOOR BOTH A NAMEPLATE AND A 10" X 12" POCKET FOR LOG SHEET STORAGE. THE NAMEPLATE SHALL CONTAIN THE FOLLOWING INFORMATION: VOLTAGE, PHASE, RATED HORSEPOWER, SPEED, DATE MANUFACTURED AND PUMP DATA, INCLUDING IMPELLER DATA, OPERATING POINT AND HEAD, KW INPUT, AND AMPS AT THE OPERATING POINT AND AT LEAST TWO OTHER POINTS ON THE PUMP CURVE.
7. PUMP STATION CONTROLS SHALL BE AS SHOWN ON MECHANICAL SHEETS.
8. PROVIDE SURGE PROTECTION DEVICE PER COUNTY REQUIREMENTS.
9. CONTRACTOR SHALL FURNISH SHOP DRAWINGS FOR CONTROL PANEL. INCLUDE DIMENSION, MOUNTING AND MATERIAL REQUIREMENTS OF CONTROL PANEL. FURNISH WIRING DIAGRAMS OF ALL INTERNAL COMPONENTS AND DEVICES, SCHEMATIC DIAGRAM OF SYSTEM AND PLC CONNECTION DIAGRAMS AND DATA SHEET AND PROGRAMMING FUNCTIONS. FURNISH OPERATING AND MAINTENANCE AND PROGRAMMING MANUALS.

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA
PUMP STATION
ELECTRICAL SPECIFICATIONS

PAUL S. CARASTRO LICENSE No. 45830 STATE OF FLORIDA PROFESSIONAL ENGINEER
3/24/16

JOB NO:	3858-002-200
DATE:	04/01/16
SCALE:	AS SHOWN

E1.01

PASCO COUNTY SUBMITTAL
APRIL 1, 2016

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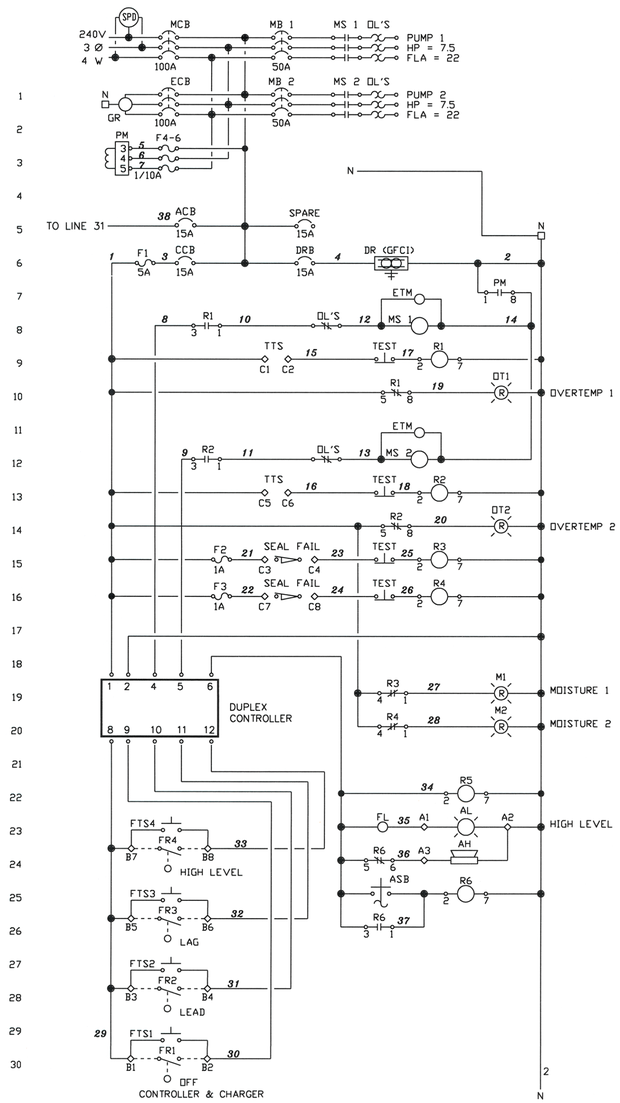

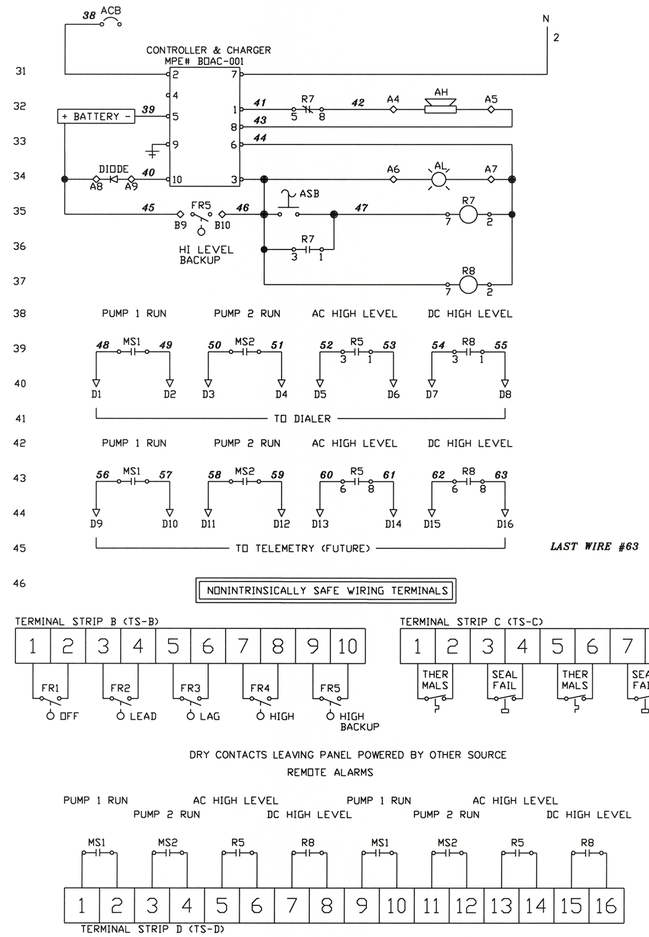

CONTROL PANEL ABBREVIATIONS

ACB	DC ALARM CIRCUIT BREAKER
AH	ALARM HORN-ADJUSTIBLE VOLUME
AL	ALARM LIGHT
AR	ALARM RELAY
ASB	ALARM SILENCER BELL
ATS	ALTERNATOR TEST SWITCH (TEST/OFF/AUTO)
AV	AIR VENT
CCB	CONTROL CIRCUIT BREAKER
CPT	CONTROL POWER TRANSFORMER
DR	DUPLEX RECEPTACLE
DRB	DUPLEX RECEPTACLE BARKER
ECB	EMERGENCY CIRCUIT BREAKER
ETM	ELAPSED TIME METER
F	FUSE
FEB	FLOW ELEMENT BREAKER
FL	FLASHER
FS	FLOAT SWITCH
FTS	FLOAT TEST SWITCH
GFDR	GROUND FAULT DUPLEX RECEPTACLE
GND	GROUND
GR	GENERATOR RECEPTACLE
HLR	HIGH LEVEL RELAY
HLT	HIGH LEVEL TIMER
HOA	HANDS-OFF-AUTOMATIC SELECTOR
LA	LIGHTING ARRESTOR
LAB	LIGHTING ARRESTOR BREAKER
LEB	LEVEL ELEMENT BREAKER
LLR	LOW LEVEL RELAY
LTS	LIGHT TEST SWITCH
M	MOTOR RELAY
MCB	MAIN CIRCUIT BREAKER
MB	MOTOR BREAKER
MS	MOTOR STARTER
N	NEUTRAL
O	OVERLOAD HEATERS
PL	LEVEL INDICATORS (PUSH-TO-TEST)
PM	PHASE MONITOR
R	PUMP RUN INDICATORS (PUSH-TO-TEST)
SS	STAINLESS STEEL
TL	TROUBLE LIGHT (100W INCANDESCENT)
TLS	TROUBLE LIGHT SWITCH
VRB	VAULT RECEPTACLE BREAKER
XR	CONTROL RELAY

OPERATIONS:

1. THE FUNCTION OF CONTROL CIRCUIT PROVIDES FOR ALTERNATING OPERATION OF THE LEAD PUMP UNDER NORMAL CONDITIONS. SHOULD INCOMING FLOW EXCEED THE PUMPING CAPACITY OF THE LEAD PUMP, THE LAG PUMP SHALL AUTOMATICALLY BE ACTIVATED, AND BOTH PUMPS SHALL OPERATE SIMULTANEOUSLY UNTIL DISENGAGED BY THE SHUT-OFF FLOAT. IN THE EVENT OF MALFUNCTION OR AN INCOMING FLOW THAT EXCEEDS THE PUMPING CAPACITY OF BOTH PUMPS, AN AUDIBLE ALARM AND VISUAL LIGHT SHALL BE ENERGIZED TO INDICATE ALARM CONDITIONS. A SILENCING SWITCH SHALL DISCONTINUE THE AUDIBLE ALARM, BUT THE ALARM LIGHT SHALL REMAIN ACTIVATED UNTIL THE HIGH LEVEL CONDITION IS CORRECTED.
2. IF ONE PUMP SHOULD FAIL FOR ANY REASON, THE SECOND PUMP SHALL BE ACTIVATED AT THE "LAG-PUMP-ON" ELEVATION. IF THE "TURN OFF" LEVEL CONTROL SHOULD FAIL FOR ANY REASON, THE CONTROL CIRCUIT SHALL HAVE THE CAPABILITY OF STARTING THE PUMPS AND KEEPING THE STATION IN OPERATION. IN ADDITION, A LIGHT SHALL GIVE VISUAL INDICATION OF THE FAILURE.
3. OPERATION SHALL BE AS FOLLOWS:
   - A. AT THE "LEAD ON" LEVEL, THE FIRST PUMP IN SEQUENCE SHALL OPERATE. SHOULD THE LEVEL IN THE WET WELL CONTINUE TO RISE WITH ONE PUMP ACTIVE, THE "LAG ON" FLOAT SHALL ACTIVATE THE SECOND PUMP IN SEQUENCE.
   - B. FOR ALL CASES, ALL ACTIVATED PUMPS SHALL REMAIN ENERGIZED UNTIL THE LEVEL IN THE WET WELL REACHES THAT OF THE "ALL PUMPS OFF" LEVEL.
   - C. THE SYSTEM SHALL ALTERNATE THE LEAD AND LAG PUMPS.
   - D. IN THE EVENT OF PUMP FAILURE, AN ALARM SHALL BE INDICATED AND THE NEXT PUMP IN SEQUENCE SHALL ASSUME THE OPERATIVE FUNCTION OF THE FAILED PUMP.

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NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA
PUMP STATION
INSTRUMENTATION PLAN

PAUL S. CARASTRO LICENSE No. 45830 STATE OF FLORIDA PROFESSIONAL ENGINEER
7/29/16

JOB NO:	3858-002-200
DATE:	04/01/16
SCALE:	AS SHOWN

E1.02

PASCO COUNTY SUBMITTAL
APRIL 1, 2016

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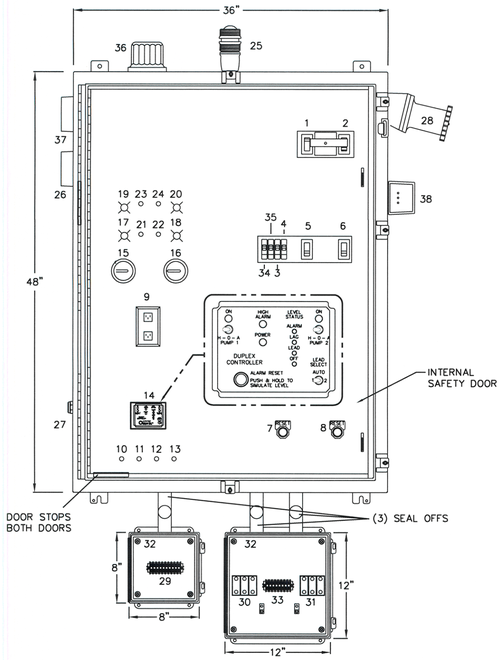
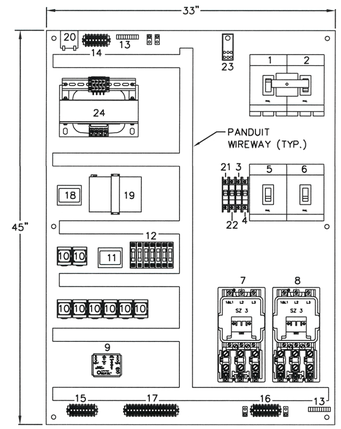


OUTER DOOR HAS BEEN REMOVED FOR CLARITY

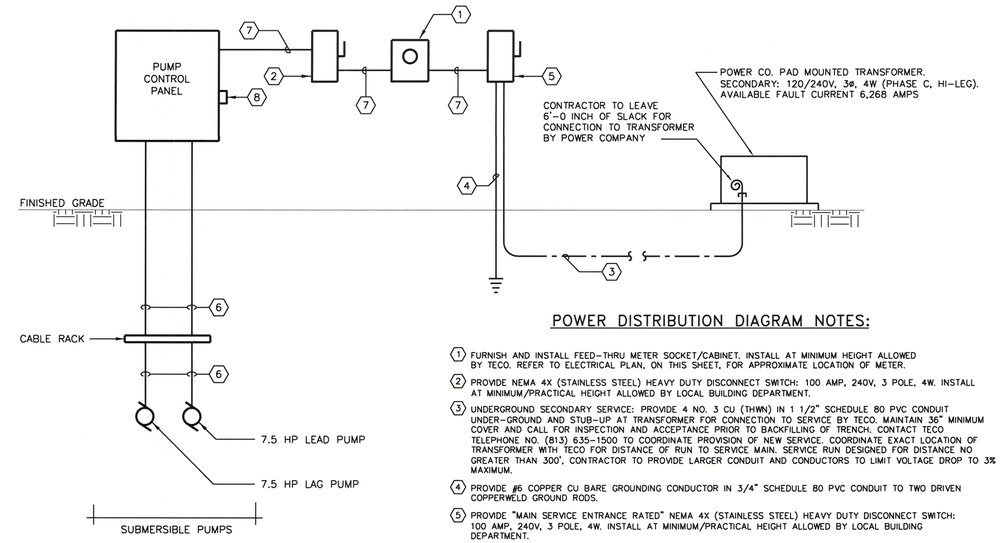


INTERIOR MOUNTING PANEL

1 – MAIN BREAKER W/MECH. INTERLOCK
2 – EMER. BREAKER W/MECH. INTERLOCK
3 – RECEPTACLE BREAKER
4 – CONTROL BREAKER
5 – MB1 MOTOR BREAKER 1
6 – MB2 MOTOR BREAKER 2
7 – OVERLOAD 1 RESET
8 – OVERLOAD 2 RESET
9 – DUPLEX RECEPTACLE (GFI)
10 – FTS1 FLOAT TEST SWITCH 1
11 – FTS2 FLOAT TEST SWITCH 2
12 – FTS3 FLOAT TEST SWITCH 3
13 – FTS4 FLOAT TEST SWITCH 4
14 – DUPLEXOR
15 – ELAPSE TIME METER 1
16 – ELAPSE TIME METER 2
17 – PL1 OVERTEMP 1
18 – PL2 OVERTEMP 2
19 – PL3 MOISTURE 1
20 – PL4 MOISTURE 2
21 – OVERTEMP 1 TEST BUTTON
22 – OVERTEMP 2 TEST BUTTON
23 – MOISTURE 1 TEST BUTTON
24 – MOISTURE 2 TEST BUTTON
25 – AL ALARM LIGHT (DC)
26 – AH ALARM HORN (DC)
27 – ASB ALARM SILENCE BUTTON
28 – GR GENERATOR RECEPTACLE
29 – FLOAT TERMINAL STRIP
30 – PUMP 1 POWER TERMINAL BLOCK
31 – PUMP 2 POWER TERMINAL BLOCK
32 – (2) JUNCTION BOXES
33 – TSC TERMINAL STRIP C
34 – SPARE CIRCUIT BREAKER
35 – ACB DC ALARM CIRCUIT BREAKER
36 – AL ALARM LIGHT (AC)
37 – ALARM HORN (AC)
38 – SPD SURGE PROTECTION DEVICE

1 – MCB MAIN CIRCUIT BREAKER WITH MECHANICAL INTERLOCK
2 – ECB EMERGENCY CIRCUIT BREAKER WITH MECHANICAL INTERLOCK
3 – DRB RECEPTACLE BREAKER
4 – CCB CONTROL CIRCUIT BREAKER
5 – MB1 MOTOR BREAKER 1
6 – MB2 MOTOR BREAKER 2
7 – MS1 MOTOR STARTER 1
8 – MS2 MOTOR STARTER 2
9 – DUPLEXOR
10 – R1–8 RELAYS 1–8
11 – PM PHASE MONITOR
12 – FUSE BLOCKS
13 – GROUND BUSBAR
14 – TSA TERMINAL STRIP A
15 – TSB TERMINAL STRIP B
16 – TSC TERMINAL STRIP C
17 – TSD TERMINAL STRIP D
18 – BOAC BATTERY OPERATED ALARM CIRCUIT
19 – BOAC BATTERY BACKUP
20 – FL FLASHER
21 – SPARE CIRCUIT BREAKER
22 – ACB DC ALARM CIRCUIT BREAKER
23 – N NEUTRAL BLOCK
24 – CPT CONTROL POWER TRANSFORMER

PANEL BOX COMPONENT LAY–OUT



POWER DISTRIBUTION DIAGRAM

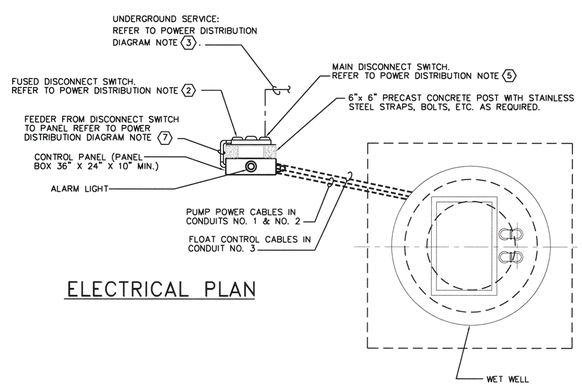
N.T.S.

POWER DISTRIBUTION DIAGRAM NOTES:

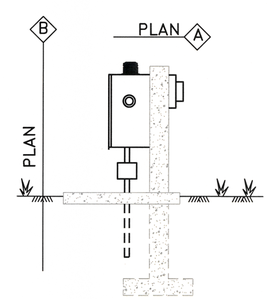
1. FURNISH AND INSTALL FEED–THRU METER SOCKET/CABINET. INSTALL AT MINIMUM HEIGHT ALLOWED BY TECO. REFER TO ELECTRICAL PLAN, ON THIS SHEET, FOR APPROXIMATE LOCATION OF METER.
2. PROVIDE NEMA 4X (STAINLESS STEEL) HEAVY DUTY DISCONNECT SWITCH: 100 AMP, 240V, 3 POLE, 4W. INSTALL AT MINIMUM/PRACTICAL HEIGHT ALLOWED BY LOCAL BUILDING DEPARTMENT.
3. UNDERGROUND SECONDARY SERVICE: PROVIDE 4 NO. 3 CU (THWN) IN 1 1/2" SCHEDULE 80 PVC CONDUIT UNDER–GROUND AND STUB–UP AT TRANSFORMER FOR CONNECTION TO SERVICE BY TECO. MAINTAIN 36" MINIMUM COVER AND CALL FOR INSPECTION AND ACCEPTANCE PRIOR TO BACKFILLING OF TRENCH. CONTACT TECO TELEPHONE NO. (813) 635–1500 TO COORDINATE PROVISION OF NEW SERVICE. COORDINATE EXACT LOCATION OF TRANSFORMER WITH TECO FOR DISTANCE OF RUN TO SERVICE MAIN. SERVICE RUN DESIGNED FOR DISTANCE NO GREATER THAN 300', CONTRACTOR TO PROVIDE LARGER CONDUIT AND CONDUCTORS TO LIMIT VOLTAGE DROP TO 3% MAXIMUM.
4. PROVIDE #6 COPPER CU BARE GROUNDING CONDUCTOR IN 3/4" SCHEDULE 80 PVC CONDUIT TO TWO DRIVEN COPPERWELD GROUND RODS.
5. PROVIDE "MAIN SERVICE ENTRANCE RATED" NEMA 4X (STAINLESS STEEL) HEAVY DUTY DISCONNECT SWITCH: 100 AMP, 240V, 3 POLE, 4W. INSTALL AT MINIMUM/PRACTICAL HEIGHT ALLOWED BY LOCAL BUILDING DEPARTMENT.
6. 3 NO. 10 AND 1 NO. 10 E.G. – 3/4"C.
7. PROVIDE 4 NO. 3 THWN CU AND 1 NO. 6 THWN CU EQUIPMENT GR IN 1 1/2" PVC CONDUIT.
8. THREE–PHASE, 240 VOLT SURGE PROTECTION DEVICE, SQUARE D NO. SDSA3650 (SHIPPED WITH PUMP CONTROL PANEL). PROVIDE FUSING, 22K AIC MIN., AND CONNECT TO LOAD SIDE OF MAIN CIRCUIT BREAKER WITH MINIMUM LENGTH OF CONDUCTORS, IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.

ELECTRICAL PLAN GENERAL NOTES:

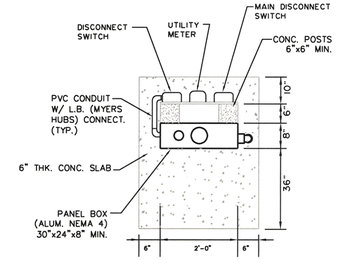
1. ALL ELECTRICAL WIRING SHALL BE COPPER. NO SPLICES IN WET WELL.
2. A REMOVABLE GAS SEAL SHALL BE INSTALLED IN WIRING CONDUIT AT WET WELL, AND TERMINAL STRIP JUNCTION BOX. CONDUIT FROM JUNCTION BOX TO CONTROL PANEL SHALL BE COMPLETELY SEALED.
3. ALL WIRING SIZES AND EQUIPMENT SHALL BE IN ACCORDANCE WITH N.E.C. AND MANUFACTURERS RECOMMENDATIONS.
4. PHASE MONITOR REQUIRED IN CONTROL CIRCUIT. SIEMENS NO. 47TA32G (240V.).
5. POSITION PANEL BOX SO OPERATOR'S BACK IS NOT TO WET WELL WHILE FACING BOX.
6. PANEL BOX TO BE LOCATED TO ALLOW UNOBSTRUCTED ACCESS TO WET WELL BY PAVED ACCESS ROAD.
7. PANEL ELEVATION SHALL BE ABOVE 100–YEAR FLOOD ELEV. AND MUST BE SHOWN ON ALL PLANS.
8. DUPLEXOR SHALL BE AN T.T.I. 6012. ANY ALTERNATE TYPE MUST BE SPECIFICALLY APPROVED BY HILLSBOROUGH COUNTY.
9. ALL PANELS SHALL BE LOCKABLE WITH PADLOCK.
10. CONTROL PANEL SHALL BE FDEP COMPLIANT PER FAC 62–604.



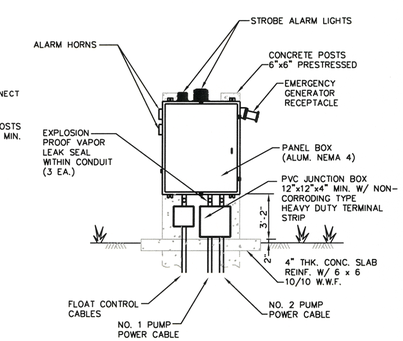
ELECTRICAL PLAN



PANEL BOX ELEV.



PLAN A



PLAN B

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www.kingengineering.com
Engineering License #2610

NO.	DATE	REVISION	BY

THE RIDGE AT WIREGRASS
PHASE 2 AND MASS GRADING PHASE 3
PASCO COUNTY ASSOCIATES II, LLLP
PASCO, FLORIDA
PUMP STATION
ELECTRICAL ONE-LINE DIAGRAM & DETAILS

PAUL S. CARASTRO LICENSE STATE OF FLORIDA PROFESSIONAL ENGINEER
3/29/16

JOB NO:	3858-002-200
DATE:	04/01/16
SCALE:	AS SHOWN

E1.03

PASCO COUNTY SUBMITTAL
APRIL 1, 2016

CARASTRO & ASSOCIATES, INC.
CONSULTING ENGINEERS EB–0001160
2609 W. DE LEON STREET TAMPA, FLORIDA 33609
TELEPHONE: (813) 874–9494 FAX: (813) 874–9794
ELECTRICAL ENGINEER: PAUL S. CARASTRO PE#45830

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