LEGAL DESCRIPTION

A PARCEL OF LAND LYING IN SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTH 1/4 CORNER OF SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, RUN THENCE NORTH 00°15'06" WEST, A DISTANCE OF50.00 FEET, TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF JAMES ROAD, A 50 FOOT DEDICATED STREET, THENCE NORTH 89°44'07" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE OF JAMES ROAD, A DISTANCE OF 2113.38 FEET, TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 9 (INTERSTATE 95), THENCE NORTH 18°18'53" WEST ALONG THE SAID EAST RIGHT-OF-WAY LINE OF STATE ROAD 9 (INTERSTATE 95), A DISTANCE OF 109.59 FEET TO A POINT OF CURVATURE OF A CURVE CONCAVE TO THE EAST, HAVING A RADIUS OF 3725.72 FEET, A CENTRAL ANGLE OF 18°07'00", THENCE NORTHWESTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 1178.06 FEET, THENCE NORTH 00°11'53" WEST, A DISTANCE OF 205.36 FEET, TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 528 (ALSO KNOWN AS THE "BEELINE EXPRESSWAY" FORMERLY KNOWN AS STATE ROAD NO. 524) AND A POINT OF CURVATURE OF A CURVE CONCAVE TO THE EAST, HAVING A RADIUS OF 600.49 FEET A CENTRAL ANGLE OF 56°36'47", THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 593.34 FEET, THENCE NORTH 56°24'54" EAST, A DISTANCE OF 1093.61 FEET, TO A POINT OF CURVATURE OF A CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 600.49 FEET, A CENTRAL ANGLE OF 32°11'38", THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE, A DISTANCE OF 337.41 FEET, THENCE NORTH 88°36'31" EAST, A DISTANCE OF 1179.23 FEET TO A POINT OF CURVATURE OF A CURVE CONCAVE TO THE SOUTH, HAVING A RADIUS OF 5579.58 FEET, A CENTRAL ANGLE OF 16°24'08", THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 1597.28 FEET, THENCE SOUTH 74°59'21" EAST A DISTANCE OF 774.87 FEET, TO A POINT ON THE EAST LINE OF SAID SECTION 10, THENCE SOUTH 00°04'36" EAST ALONG THE EAST LINE OF SAID SECTION 10, A DISTANCE OF 1056.66 FEET, THENCE NORTH 89°52'22" WEST, A DISTANCE OF 668.67 FEET, THENCE SOUTH 00°07'14" EAST, A DISTANCE OF 1273.27 FEET, TO A POINT ON THE AFOREMENTIONED JAMES ROAD, A 50 FEET DEDICATED STREET, THENCE NORTH 89°51'39" WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE A DISTANCE OF 2003.09 FEET, TO THE POINT OF BEGINNING.

LESS AND EXCEPT THAT PARCEL CONVEYED BY ORDER OF TAKING IN THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION RECORDED FEBRUARY 8, 2008 IN OFFICIAL RECORDS BOOK 5843, PAGE 351, OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA.

AND ALSO LESS AND EXCEPT LANDS DESCRIBED IN DEEDS TO BREVARD COUNTY PROPERTY HOLDINGS, LLC AS RECORDED IN OFFICIAL RECORDS BOOK 7000, PAGE 2377 AND OFFICIAL RECORDS BOOK 7434, PAGE 1216 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA. 2

CONTAINS 212.10 ACRES, MORE OR LESS.

PLANNED UNIT DEVELOPMENT PLANS 2

FOR

WINDWARD PRESERVE

PARCEL: 24-35-10-00-502
SECTION 10 TOWNSHIP 24 SOUTH RANGE 35 EAST
BREVARD COUNTY, FLORIDA

FOR

TAYLOR MORRISON, INC.

2600 LAKE LUCIEN DR, SUITE 350
MAITLAND, FLORIDA 32751

PROJECT TEAM MEMBERS:

OWNER:
BEACHLINE PARTNERS LLC
4024 HIGH POINT DRIVE
COCOA, FL 32926

DEVELOPER:
TAYLOR MORRISON
2600 LAKE LUCIEN DR. SUITE 350
MAITLAND, FL 32751

ENGINEER:
MADDEN, MOORHEAD, & STOKES, LLC
431 E HORATIO AVENUE, SUITE 260
MAITLAND, FL 32751
PHONE: (407) 629-8330
CONTACT: CHAD MOORHEAD, PE

TRAFFIC:
LTG ENGINEERING AND PLANNING
1450 W GRANADA BLVD #2
ORMOND BEACH, FL 32174

POTABLE WATER METER SUMMARY

PHASE 1
185 - 3/4" SINGLE FAMILY LOT METERS
1 - 2" METER AMENITY FACILITY TRACT F
1 - 1" METER LIFT STATION TRACT N

PHASE 2
200 - 3/4" SINGLE FAMILY LOT METERS

RECLAIMED WATER METER SUMMARY

PHASE 1
185 - 3/4" SINGLE FAMILY LOT METERS
1 - 2" METER AMENITY FACILITY TRACT F
1 - 2" METER OPEN SPACE TRACT C
1 - 2" METER OPEN SPACE TRACT H

PHASE 2
200 - 3/4" SINGLE FAMILY LOT METERS
1 - 2" METER OPEN SPACE TRACT G

NOTES:
- RIGHT-OF-WAY REVIEW AND APPROVAL DOES NOT CONSTITUTE COUNTY APPROVAL OR REVIEW OF ANY PRIVATE PARTY DEED RESTRICTIONS, COVENANTS, PRIVATE EASEMENTS, OR OTHER PRIVATE AGREEMENTS. ANY CHANGES TO THE APPROVED PLAN MUST BE COORDINATED THROUGH THE PUBLIC WORKS ENGINEERING PROGRAM. THE APPLICATION ASSUMES THE RISK THAT THE RIGHT-OF-WAY PERMIT MAY REQUIRE ADDITIONAL COUNTY REVIEWS INCLUDING ENGINEERING REVISIONS OR OTHER APPLICABLE COUNTY REVIEW PROCESSES SHOULD ANY ACTION TO ENFORCE ANY SUCH RESTRICTIONS REQUIRE REDESIGN OF THE PROJECT. 1

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1

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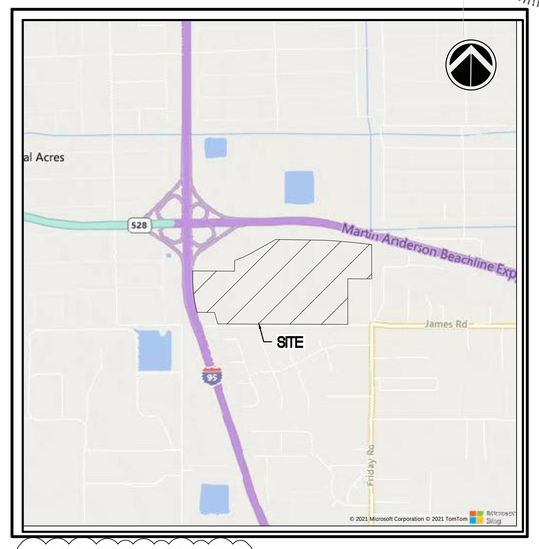
DAVID MICHAEL MOORHEAD
ASHLEY STOKES
LICENSE NUMBER 66527
No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
DAVID MICHAEL MOORHEAD, PE LICENSE NUMBER 66527
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

VICINITY MAP
1" = 2,000'



NAVD88 TO NGVD29 CONVERSION FACTOR IS +1.33 FT. 2

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ABBREVIATIONS

A	
A	AREA
AB	ANCHOR BOLT
ABD	ABANDON(ED)
AC	ACRE(S)
AC-FT	ACRE FOOT/FEET
ACP	ASBESTOS CEMENT PIPE
ADDL	ADDITIONAL
ADT	AVERAGE DAILY TRAFFIC
AL	ALUMINUM
ALT	ALTERNATE
AM	BEFORE NOON
AMP	AMPERE(S)
APPROX	APPROXIMATE
ARV	AIR RELEASE VALVE
ARVV	AIR RELEASE VACUUM VALVE
ASPH	ASPHALT
ASSY	ASSEMBLY
AVE	AVENUE
AVG	AVERAGE
AZ	AZIMUTH
B	
BFP	BACKFLOW PREVENTER
BL	BASELINE
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCH MARK
BND	BOUNDARY
BO	BLOWOFF
BOC	BACK OF CURB
BOT	BOTTOM
BRG	BEARING
BS	BOTTOM OF SLOPE
BV	BUTTERFLY VALVE
C	
CAP	CAPACITY
CB	CATCH BASIN
CC	CENTER TO CENTER
CEM	CEMENT
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
C&G	CURB AND GUTTER
CI	CAST IRON
CIP	CAST IRON PIPE
CJ	CONSTRUCTION JOINT
C/L	CENTER LINE
CLP	CONCRETE LIGHT POLE
CLR	CLEAR/CLEARANCE
CLS	CLASS
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CND	CONDUIT
CO.	COUNTY
CO	CLEANOUT
COL	COLUMN
COMP	COMPLETE
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION)
CONT	CONTINUOUS
COORD	COORDINATE(S)
COR	CORNER
CPLG	COUPLING
CPP	CONCRETE POWER POLE
CS	CONTROL STRUCTURE
CTG	COATING
CTR	CENTER
CTV	CABLE TELEVISION
CULV	CULVERT
CY	CUBIC YARD
CYL	CYLINDER
D	
DBL	DOUBLE
DEG OR °	DEGREE
DEFL	DEFLECT(ION)
DEPT	DEPARTMENT
DET	DETAIL
DHWL	DESIGN HIGH WATER LEVEL
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISCH	DISCHARGE
DIST	DISTANCE
DMH	DROP MANHOLE
DN	DOWN
DRN	DRAIN
DWG	DRAWING
DWY	DRIVEWAY
E	
E	EAST
EA	EACH
EC	EDGE OF CONCRETE
ED	ENERGY DISSIPATOR
EF	EACH FACE
EFF	EFFLUENT
EG	EXISTING GRADE
E/L	EASEMENT LINE
ELB	ELBOW
ELEC	ELECTRIC
ELEV	ELEVATION
ELLIP	ELLIPSE/ELLIPTICAL
ENC	ENCASEMENT
ENG	ENGINEER(ING)
EOP	EDGE OF PAVEMENT
EQ	EQUAL/EQUATION
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ESMT	EASEMENT
EST	ESTIMATE
EW	EACH WAY
EWL	ENDWALL
EXC	EXCAVATE/EXCAVATION
EXIST	EXISTING
EXP	EXPAND/EXPANSION
EXT	EXTEND/EXTENSION

F	
F&C	FRAME AND COVER
FD	FLOOR DRAIN
FDN	FOUNDATION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
F&I	FURNISH AND INSTALL
FIG	FIGURE
FIN	FINISHED
FIT	FITTING
FL	FENCE LINE
FLR	FLOOR
FLEX	FLEXIBLE
FLG	FLANGE
FM	FORCE MAIN
FND	FOUND
FPH	FEET PER HOUR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET/FOOT
FTG	FOOTING
G	
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GM	GAS MAIN
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPS	GALLONS PER SECOND
GR	GUARD RAIL
GRD	GROUND/GRADE
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
GV&B	GATE VALVE AND BOX
GW	GUY WIRE
GWT	GROUND WATER TABLE
H	
HB	HOSE BIBB
HDPE	HIGH DENSITY POLYETHYLENE
HDW	HARDWARE
HOA	HOME OWNERS ASSOCIATION
HORIZ	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HW	HEADWALL
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HYD	HYDRAULIC
I	
I-4	INTERSTATE HIGHWAY
IA	INTERSECTION ANGLE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCHES
INL	INLET
INS	INSERT
INST	INSTALL
IP	IRON PIPE
IR	IRON ROD
INT	INTERSECT/INTERSECTION
INV	INVERT
J	
JB	JUNCTION BOX
JCT	JUNCTION
JST	JOIST
JT	JOINT
L	
L	LENGTH
LAT	LATITUDE
LATL	LATERAL
LB	POUND
LF	LINEAR FEET/FOOT
LG	LONG
LIM	LIMIT(S)
LP	LIGHT POLE
LONG	LONG
LT	LEFT
LWL	LOW WATER LEVEL
M	
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
ME	MITERED END
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MHC	MANHOLE COVER
MHWL	MEAN HIGH WATER LEVEL
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MLP	METAL LIGHT POLE
MLWL	MEAN LOW WATER LEVEL
MON	MONUMENT
MPH	MILES PER HOUR
MSL	MEAN SEA LEVEL
MTG	MOUNTING
N	
NAWTH	NORTH
N	NORTH
NA	NOT APPLICABLE
N&C	NAIL AND CAP
NE	NORTHEAST
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NO OR #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
NW	NORTHWEST
NWL	NORMAL WATER LEVEL
O	
OC	ON CENTER
OD	OUTSIDE DIAMETER
OE	OR EQUAL
OPNG	OPENING
OPP	OPPOSITE
ORCP	OVAL REINFORCED CONCRETE PIPE
OS	OUTFALL STRUCTURE
OVFL	OVERFLOW
OVHD	OVERHEAD

P	
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PEP	POLYETHYLENE PIPE
PFGP	PROFILE GRADE POINT
PI	POINT OF INTERSECTION
P/L	PROPERTY LINE
POB	POINT OF BEGINNING
POJ	PUSH ON JOINT
PP	POLYPROPYLENE
PR	PHONE RISER
PRC	POINT OF REVERSE CURVATURE
PRESS	PRESSURE
PROJ	PROJECT
PROP	PROPOSED
PRVC	POINT OF REVERSE VERTICAL CURVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER
Q	
Q	FLOW RATE
R	
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
RDY	ROADWAY
RED	REDUCER
REF	REFERENCE
REINF	REINFORCE(D)
REQD	REQUIRED
REV	REVISE/REVISION
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RT	RIGHT
RV	RELIEF VALVE
R/W	RIGHT-OF-WAY
RWM	REUSE WATER MAIN
S	
S	SOUTH
SAN	SANITARY SEWER
SB	SPLASH BLOCK
SCH	SCHEDULE
SD	SIDE DRAIN
SDN	SHELF DRAIN
SE	SOUTHEAST
SEC	SECONDS
SECT	SECTION
SH	SHEET
SHGWT	SEASONAL HIGH GROUND WATER TABLE
SIM	SIMILAR
S/L	SETBACK LINE
SL	SLOPE
SM	SHEET METAL
SPEC	SPECIFICATION(S)
SQ	SQUARE
SQ IN	SQUARE INCH(ES)
SQ FT	SQUARE FOOT/FEET
SQ YD	SQUARE YARD(S)
SR	STATE ROAD
SS	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STR	STRUCTURE
STS	STORM SEWER
SUP	SUPPORT
SUSP	SUSPEND/SUSPENSION
SVC	SERVICE
SW	SOUTHWEST
SWK	SIDEWALK
SYM	SYMBOL(S)
SYMM	SYMMETRICAL
SYS	SYSTEM
T	
T	TANGENT
TB	TURFBLOCK
T&B	TOP AND BOTTOM
TBM	TEMPORARY BENCH MARK
TC	TIME OF CONCENTRATION
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TECH	TECHNICIAN/TECHNICAL
TEMP	TEMPORARY
TL	TERMINAL LAMPHOLE
TOB	TOP OF BANK
TOC	TOP OF CURB
TOS	TOE OF SLOPE
TOT	TOTAL
TS	TOP OF SLOPE
TWP	TOWNSHIP
TYP	TYPICAL
U	
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UTC	UNDERGROUND TELEPHONE CABLE
V	
VB	VALVE BOX
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VPC	VERTICAL POINT OF CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	
W	WEST
W/	WITH
WM	WATER MAIN
W/O	WITHOUT
WP	WATER/WEATHER PROOF
WPP	WOOD POWER POLE
WS	WATER SURFACE
WSWT	WET SEASON WATER TABLE
WT	WEIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
Y	
YD	YARD
YR	YEAR
MISC	
&	AND
@	AT
Δ	DELTA

EXISTING SYMBOLS

LINES

- CENTER LINE
- WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- GUARDRAIL
- EXISTING PLATS
- RETAINING WALL
- RIGHT-OF-WAY LINE
- SHORELINE
- SWALE
- BUILDING LINE
- CONTOURS (81 / 80)
- RAILROAD TRACKS
- GAS (GAS MAIN)
- UE (UNDERGROUND ELECTRIC)
- UGT (UNDERGROUND TELEPHONE)
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE
- CTV (UNDERGROUND CABLE TELEVISION)
- EASEMENT

SANITARY

- SANITARY SEWER LINE (S)
- CLEANOUT
- EX. FM — FORCE MAIN
- MANHOLE (S)

WATER & REUSE WATER

- EX. WM — WATER MAIN DIP PIPE
- EX. RM — REUSE WATER MAIN
- BACKFLOW PREVENTOR (B.F.P.)
- WV — WATER VALVE
- FIRE HYDRANT
- WATER METER

STORM DRAIN

- STORM SEWER
- MANHOLE (D)
- MITERED END
- STORM INLET
- FDOT TYPE 6 INLET
- FDOT TYPE 1 INLET
- FDOT TYPE 2 INLET
- FDOT TYPE 3 INLET
- FDOT TYPE 4 INLET
- FDOT TYPE 5 INLET

HIGHWAY & UTILITIES

- BENCHMARK
- RECOVERED 4x4 CM
- SET 4x4 CM
- SET IRON ROD
- RECOVERED IRON ROD
- CONCRETE
- 520 — COUNTY ROADS
- 95 — INTERSTATE ROADS
- 50 — STATE ROADS
- WOOD AND/OR METAL LIGHT POLE
- CONCRETE LIGHT POLE
- YARD LIGHT
- MISCELLANEOUS SIGN
- 16 15 / 21 22 — SECTION CORNER
- EDGE OF PAVEMENT W/O CURB
- EDGE OF PAVEMENT W/CURB
- GUY POLE
- WOOD UTILITY POLE
- CONCRETE UTILITY POLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE RISER
- ELECTRIC BOX / TRANSFORMER
- WELL
- MONITORING WELL
- DUMPSTER
- RR CROSSING SIGN
- RR CROSSING GATE
- TRAFFIC SIGNAL POLE
- SATELLITE DISH
- GUY WIRE
- HANDICAP PARKING
- 99.50 — SPOT ELEVATION
- BRICK PAVERS
- DIRT ROAD
- 8" MAPLE TREE
- 8" OAK TREE
- 8" PINE TREE
- 8" PALM TREE
- 8" MISC. TREE

PROPOSED SYMBOLS

LINES

- PROPERTY LINE
- CONSERVATION SETBACK
- CENTER LINE
- CHAIN LINK FENCE
- CONTOUR (81 / 80)
- EASEMENT
- FENCE
- GUARDRAIL
- LOT LINE
- RETAINING WALL
- RIGHT-OF-WAY LINE
- SETBACK LINE
- SHORELINE
- SWALE
- TREE LINE

SANITARY

- 100 LF SAN 8 PVC 0.40% — 100 LINEAR FEET SANITARY 8" PVC PIPE @ 0.40% SLOPE
- CLEANOUT
- DOUBLE SANITARY SERVICE
- FORCE MAIN PVC PIPE
- MANHOLE

WATER & REUSE WATER

- WATER MAIN PVC PIPE
- 11 1/2° BEND
- 22 1/2° BEND
- 45° BEND
- 90° BEND
- TEE
- CROSS
- CHECK VALVE
- DOUBLE DETECTOR CHECK VALVE
- DOUBLE WATER SERVICE
- GATE VALVE
- FIRE HYDRANT
- METER
- REDUCER
- BLOWOFF
- BACKFLOW PREVENTER
- SAMPLE POINT
- CEANOUT
- RECLAIM WATER MAIN
- DOUBLE RECLAIM WATER SERVICE

STORM DRAIN

- 100 LF STS 24 HDPE @ 0.20% — 100 LINEAR FEET STORM PIPE 24" HIGH DENSITY POLYETHELENE PIPE @ 0.20%
- UNDERDRAIN 6" HDPE PIPE
- DRAINAGE FLOW DIRECTION
- FDOT INLET TYPE 1
- FDOT INLET TYPE 2
- FDOT INLET TYPE 3
- FDOT INLET TYPE 4
- FDOT INLET TYPE 5
- FDOT INLET TYPE 6
- MANHOLE
- MITERED END SECTION
- SLOPE DIRECTION ARROW FOR POND SIDE SLOPE
- 000.00 — SPOT ELEVATION
- STORM INLET

HIGHWAY & UTILITIES

- BOUND CORNER
- CONCRETE
- 520 — COUNTY ROADS
- 711-001 / C900 — DETAIL REFERENCE
- DUMPSTER
- FF=98.76 TYPE A — FINISHED FLOOR ELEVATION W/ FHA LOT TYPE
- GUY POLE
- HANDICAP PARKING
- 95 — INTERSTATE ROADS
- LIGHT POLE
- SIGNS
- 16 15 / 21 22 — SECTION CORNER
- 50 — STATE ROADS
- SILT FENCE
- TRAFFIC FLOW PAVEMENT MARKING
- UTILITY POLE
- BLDG OR STRUCTURE
- TYPE F CURB & GUTTER
- MIAMI CURB
- 901 / 24 — CROSS SECTION DETAIL

MADDEN
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431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

SYMBOLS AND ABBREVIATIONS
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL — CHARLES STOKES — LICENSE No. 66527 — STATE OF FLORIDA — PROFESSIONAL ENGINEER — DATE 2023.11.27 — CERTIFICATE OF AUTHORIZATION NO. CA-0007723

DATE	REVISIONS
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

JOB #	21074
DATE:	9/26/22
SCALE:	N/A
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

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C002

GENERAL NOTES

1. ALL CONSTRUCTION WORK SHALL BE IN ACCORDANCE WITH THE LATEST LOCAL AGENCY DETAILS, THE FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED IN 1991 BY THE STATE OF FLORIDA, AND ALL SUPPLEMENTS THERETO, AND THE FDOT "DESIGN STANDARDS", WHICHEVER IS MORE STRINGENT.

2. ALL FDOT DESIGN INDICES ARE HEREBY INCORPORATED AS PLAN REFERENCES HEREIN. CONTRACTOR IS RESPONSIBLE FOR OBTAINING COMPLETE COPIES OF ALL APPLICABLE INDEX DRAWINGS AND CONSTRUCTING ALL WORKS IN CONFORMANCE WITH THE FDOT DESIGN STANDARDS, LATEST EDITION.

3. THE LOCATIONS OF EXISTING UTILITIES SUCH AS WATER MAINS, SEWER MAINS, GAS LINES, ETC., AS SHOWN ON THE PLANS, WITH THE EXCEPTION OF THE LOCATIONS OF EXISTING UTILITIES AT ALL POINTS OF CONNECTION TO AND AT ALL AREAS OF CONFLICT WITH UTILITY PROVIDER MAINS, WHICH HAVE BEEN FIELD VERIFIED, HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. HOWEVER, THE ENGINEER AND OWNER DO NOT ASSUME RESPONSIBILITY FOR THE SIZES AND LOCATIONS SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF THE SIZE AND LOCATION OF ALL EXISTING UTILITIES SHOWN AND NOT SHOWN ON THESE PLANS.

3. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR(S) TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND ARE IN HAND AT THE JOB SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS CONTAINED THEREIN. PERMITS INCLUDED (BUT NOT NECESSARILY LIMITED TO) ARE:
   - ACOE NATIONWIDE OR INDIVIDUAL DREDGE AND FILL
   - FDEP WATER DISTRIBUTION
   - FDEP SANITARY SEWER COLLECTION AND TRANSMISSION
   - FDEP REUSE
   - FDEP DREDGE AND FILL
   - FDEP NPDES GENERIC PERMIT FOR STORMWATERDISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES
   - FDOT DRIVEWAY CONNECTION
   - FDOT UTILITY
   - FDOT STORMWATER DISCHARGE CONNECTION
   - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION PERMIT FOR IMPACTS TO PROTECTED SPECIES
   - LOCAL RIGHT OF WAY USE
   - LOCAL UNDERGROUND UTILITIES
   - WATER MANAGEMENT DISTRICT CONSUMPTIVE USE FOR CONSTRUCTION DEWATERING (CUP)
   - WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMIT (ERP)

4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SETBACKS AND EASEMENTS BEFORE BEGINNING CONSTRUCTION.

5. BENCHMARKS AND OTHER REFERENCE POINTS SHALL BE CAREFULLY MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. IF DISTURBED OR DESTROYED, THESE POINTS SHALL BE REPLACED BY A LICENSED FLORIDA PROFESSIONAL LAND SURVEYOR (P.L.S.) AT CONTRACTOR'S EXPENSE.

6. DIFFERING SITE CONDITIONS FROM THAT WHICH IS REPRESENTED HEREON, WHETHER ABOVE, ON, OR BELOW THE SURFACE OF THE GROUND, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND OWNER IN WRITING. NO CLAIM FOR EXPENSES INCURRED BY THE CONTRACTOR DUE TO DIFFERING SITE CONDITIONS WILL BE ALLOWED IF CONTRACTOR FAILS TO PROVIDE THE REQUIRED WRITTEN NOTIFICATION OF SUCH CONDITIONS TO THE ENGINEER AND OWNER.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL EXISTING STRUCTURES, ETC., UNLESS OTHERWISE NOTED. ALL SOIL STRIPPINGS AND ANY UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER.

8. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND UTILITIES NOTED TO REMAIN FROM DAMAGE OR DISPLACEMENT DURING CONSTRUCTION. IN THE EVENT OBSTRUCTIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER AND THE UTILITY COMPANY. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS INCURRED TO REPAIR DAMAGE OR CORRECT DISPLACEMENT.

9. CONTRACTOR SHALL BE EXTREMELY CAUTIOUS WHEN WORKING NEAR TREES WHICH ARE TO BE SAVED, WHETHER SHOWN IN THE PLANS OR DESIGNATED IN THE FIELD. CONTRACTOR SHALL BECOME FAMILIAR WITH AND CONFORM WITH ALL TREE PROTECTION/PRESERVATION PROVISIONS OF THE PRELIMINARY SUBDIVISION PLAN / DEVELOPMENT PLAN AND LOCAL GOVERNMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT AND MITIGATION COSTS FOR ANY TREES REMOVED THAT WERE DESIGNATED TO BE PRESERVED.

10. WHEN DETAILS ARE PROVIDED, CONTRACTOR SHALL CONSTRUCT JOB PER SPECIFIC DETAILS, AND NOT BY SCALING FROM THESE PLANS.

11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ANY REQUIRED TRAFFIC CONTROL PLANS. ALL WORK SHALL BE EXECUTED UNDER THE ESTABLISHED PLAN AND FDOT, AND LOCAL AGENCY APPROVED PROCEDURES.

12. THE CONTRACTOR SHALL RESTORE OFF SITE CONSTRUCTION AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

13. AS-BUILT DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE PROJECT ENGINEER UPON PROJECT COMPLETION.

14. CONTRACTOR SHALL COMPLY WITH ALL LOCAL AGENCY REQUIREMENTS FOR INSPECTION AND TESTING.

15. ALL NEW UTILITIES AND UPGRADED UTILITIES PROVIDED TO OR ON THE SITE MUST BE INSTALLED UNDERGROUND.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF ANY TRAFFIC SIGNAL EQUIPMENT INCLUDING BUT NOT LIMITED TO FIBER LOOP SENSORS PULL BOXES, CONDUIT TRAFFIC SIGNALS, AND CABINETS. ANY ITEMS DAMAGED BY THE CONTRACTOR WILL BE RESTORED TO THEIR ORIGINAL CONDITIONS UNLESS OTHERWISE AGREED UPON BY THE COUNTY TRAFFIC ENGINEER.

17. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH UTILITY PROVIDER'S STANDARDS AND CONSTRUCTION SPECIFICATIONS, LATEST EDITION.

18. CONTRACTOR SHALL NOTIFY ALL APPROPRIATE UTILITY COMPANIES OF PROPOSED START OF WORK IN ACCORDANCE WITH THEIR STANDARD REQUIREMENTS; INCLUDING BUT NOT LIMITED TO, WATER, RECLAIMED WATER, SEWER, POWER, TELEPHONE, GAS AND CABLE TV COMPANIES.

19. PRIOR TO COMMENCEMENT, CONTRACTOR SHALL PROVIDE ENGINEER WITH CONSTRUCTION SCHEDULE FOR VARIOUS SITE WORK ELEMENTS SO THAT PERIODIC SITE VISITS MAY BE COORDINATED TO ENSURE TIMELY CERTIFICATION OF COMPLETION TO AGENCIES AND AVOID DELAYS IN ISSUANCE OF CERTIFICATES OF OCCUPANCY/COMPLETION.

20. ALL RECOMMENDATIONS AND REQUIREMENTS OF INSPECTION PERSONNEL OTHER THAN OWNER/OWNER'S REPRESENTATIVE SHALL BE REPORTED TO ENGINEER/OWNER/OWNER'S REPRESENTATIVE PRIOR TO IMPLEMENTATION. COMPENSATION WILL NOT BE ALLOWED FOR WORK THAT IS NOT AUTHORIZED BY ENGINEER/OWNER/OWNER'S REPRESENTATIVE.

21. CONTRACTOR SHALL CONFIRM COMPATIBILITY OF PIPE SLOPES AND INVERTS DURING SHOP DRAWING AND MATERIALS ORDERING PHASE OF PROJECT AND ADVISE ENGINEER OF ANY DISCREPANCIES.

22. NO EXISTING MATERIAL SHALL BE USED IN NEW CONSTRUCTION UNLESS APPROVED DURING THE SHOP DRAWING APPROVAL PROCESS BY ENGINEER/OWNER/OWNER'S REPRESENTATIVE IN WRITING.

23. CONTRACTOR SHALL STAKE ALL IMPROVEMENTS USING THE PLAT(S), ROAD CENTERLINE GEOMETRY, AND BUILDING COORDINATES PROVIDED IN THESE PLANS. CONTRACTOR SHALL CONFIRM WITH THE ENGINEER THAT THE PLAT IS CURRENT PRIOR TO CONSTRUCTION.

24. CONTRACTOR SHALL CONFIRM THE BUILDING DIMENSIONS SHOWN HEREIN WITH THOSE IN THE FINAL ARCHITECTURAL DRAWINGS PRIOR TO STAKEOUT. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COMPLETELY STAKE AND CHECK ALL IMPROVEMENTS TO ENSURE ADEQUATE POSITIONING, BOTH HORIZONTAL AND VERTICAL, INCLUDING MINIMUM BUILDING SETBACKS PRIOR TO THE INSTALLATION OF ANY IMPROVEMENT.

25. CONTRACTOR IS TO COPY THE CITY WITH ALL MATERIALS TESTING PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY.

26. CONTRACTOR TO VIDEO OR OTHERWISE DOCUMENT THE EXISTING CONDITIONS ON RIGHT-OF-WAYS AND ADJACENT PARCELS TO AVOID HAVING TO REPAIR DAMAGES NOT CAUSED DURING CONSTRUCTION.

SPECIAL PURPOSE

1. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.

PAVING AND DRAINAGE

1. THE CONTRACTOR SHALL CONSTRUCT PAVEMENT IN ACCORDANCE WITH TYPICAL PAVEMENT SECTIONS AND LOCAL AGENCY SPECIFICATIONS. THE FINISHED PAVEMENT GRADES SHALL CONFORM TO THOSE SPECIFIED ON THE GRADING PLAN.

2. FLORIDA LAW (F.S. 553.851) PROTECTION OF UNDERGROUND PIPELINES MANDATES THAT "NO EXCAVATOR SHALL COMMENCE OR PERFORM ANY EXCAVATION IN ANY PUBLIC OR PRIVATE STREET, ALLEY, RIGHT-OF-WAY DEDICATED TO THE PUBLIC USE, OR GAS UTILITY EASEMENT WITHOUT FIRST OBTAINING INFORMATION CONCERNING THE POSSIBLE LOCATION OF GAS PIPELINES IN THE AREA OF THE PROPOSED EXCAVATION." THIS INCLUDES ANY OPERATION UTILIZING HAND TOOLS OR POWER TOOLS WHICH MOVES OR REMOVES ANY STRUCTURE, EARTH, ROCK, OR OTHER MASS OF MATERIAL BY SUCH METHODS AS DIGGING, BACKFILLING, DEMOLITION, GRADING, DITCHING, DRILLING, BORING AND CABLE PLOWING. THE EXCAVATOR MUST NOTIFY THE GAS UTILITY A MINIMUM OF 48 HOURS AND A MAXIMUM OF 5 DAYS PRIOR TO EXCAVATING (EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS).

3. EXCAVATION, PAVING, AND STORM SEWER WORK SHALL BE DONE IN ACCORDANCE WITH FDOT "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION, AND LOCAL AGENCY SPECIFICATIONS.

4. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATIONS AT PROPERTY LINES. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE OF THE SITE TO THE RETENTION PONDS AS SHOWN BY PROPOSED GRADES AND FLOW ARROWS.

5. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE AND PROPER SOIL EROSION CONTROL MEASURES FOR PROTECTION OF ALL DRAINAGE AND SEWER STRUCTURES AND AT ALL ADJACENT LANDS AND ROADS.

6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL GEOTECHNICAL REPORTS PREPARED FOR THE SITE. GEOTECHNICAL RECOMMENDATIONS ARE NOT THE RESPONSIBILITY OF ENGINEER. ENGINEER HAS RELIED ON THE GEOTECHNICAL REPORT(S) IN PREPARATION OF THE DRAWINGS. ANY CONFLICT BETWEEN INFORMATION WITHIN THE REPORT AND THESE DRAWINGS SHALL BE REPORTED TO ENGINEER/OWNER /OWNER'S REPRESENTATIVE. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE CORRECTNESS, COMPLETENESS, OR ACCURACY OF GEOTECHNICAL INFORMATION.

7. THE SITE SHALL BE CLEARED OF ALL TREES EXCEPT THOSE WHICH ARE DESIGNATED TO BE SAVED OR RELOCATED. BEFORE CONSTRUCTION, THE CONTRACTOR SHALL MEET AT THE SITE WITH THE OWNER. AT THIS TIME, ANY TREES TO BE SAVED SHALL BE POINTED OUT AND TAGGED. THESE TREES SHALL BE PROTECTED FROM DAMAGE.

8. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE SUPERVISING ENGINEER IF A PAVEMENT OR FOUNDATION STAKE IS DISTURBED.

9. THE CONTRACTOR SHALL INSTALL DROP CURBS AND HANDICAP RAMPS AT ALL INTERSECTIONS OF THE SIDEWALK WITH THE PROPOSED PAVEMENT, UNLESS OTHERWISE SPECIFIED.

10. FOR HORIZONTAL AND VERTICAL CLEARANCES BETWEEN STORM PIPES AND WATER MAINS/SERVICES, SEE WATER NOTES ON THIS SHEET AND FDEP SEPARATION TABLE ON UTILITY PLAN.

11. ALL PUBLIC STORM PIPE MATERIALS SHALL BE REINFORCED CONCRETE PIPE (RCP) ASTM C-76 CLASS III, UNLESS OTHERWISE SPECIFIED. LIFTING HOLES ARE PROHIBITED.

12. ALL PRIVATE STORM PIPE MATERIALS SHALL BE AS FOLLOWS:
    - 12.1. DIAMETERS LESS THAN OR EQUAL TO 12-INCH SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) PIPE
    - 12.2. DIAMETERS GREATER THAN OR EQUAL TO 15-INCH SHALL BE HIGH PERFORMANCE POLYPROPYLENE (HP) PIPE.

13. MINIMUM COVER OVER ALL PIPE SHALL BE 36-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

14. ALL STORM SYSTEM MANHOLE AND INLET STRUCTURES SHALL BE PRECAST CONCRETE.

15. THE CONTRACTOR SHALL USE CONCRETE WITH A MINIMUM 28 DAY STRENGTH OF 3,000 P.S.I..

16. ALL SIDEWALK WIDTHS SHALL BE AS NOTED ON THE SITE PLAN AND SHALL HAVE 1-INCH DEEP CONTRACTION JOINTS EVERY 5-FEET AND AN EXPANSION JOINT EVERY 20-FEET (MINIMUM). MAXIMUM SIDEWALK CROSS SLOPES SHALL BE 2.00% AND MAXIMUM SIDEWALK RUNNING SLOPES SHALL BE 5.00% EXCEPT AT RAMP LOCATIONS. MAXIMUM RAMP SLOPES SHALL BE 8.33%.

17. PROVIDE FDOT TYPE III SILT FENCE ALONG THE PROPERTY LINES AND PHASE LINES AS WELL AS ANY CONSTRUCTION WITHIN THE OTHER PHASES THAT IS DEEMED NECESSARY.

18. ALL TEST REPORTS GENERATED BY A TESTING FIRM ARE TO HAVE COPIES SENT DIRECTLY TO THE LOCAL AGENCY AS SOON AS THEY ARE GENERATED. CLEARANCE FROM THE LOCAL AGENCY SHALL BE RECEIVED PRIOR TO PAVING.

19. THE BASE COURSE SHALL NOT BE CONSTRUCTED UNTIL AFTER SUBGRADE CONSTRUCTION HAS BEEN COMPLETED AND REQUIRED SUBGRADE TEST RESULTS HAVE BEEN SUBMITTED TO AND APPROVED BY THE LOCAL AGENCY'S ENGINEER.

20. THE FINISHED BASE COURSE SHALL BE PRIMED WITHOUT DELAY, PROTECTED FROM HEAVY TRAFFIC, AND CONTINUOUSLY MAINTAINED FREE OF DAMAGE UNTIL THE WEARING SURFACE IS APPLIED. ALL BAD AREAS SHALL BE CUT OUT AND REPLACED PRIOR TO APPLYING WEARING SURFACE.

21. ASSUMING ACCEPTABLE CURING, THE WEARING SURFACE SHALL BE APPLIED NO SOONER THAN SEVEN (7) DAYS AND NO LATER THAN THIRTY (30) DAYS AFTER BASE COMPLETION.

22. ALL CONCRETE PIPE JOINTS SHALL BE WRAPPED IN FILTER FABRIC.

23. ROADWAY MARKING, STRIPING, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD), INCLUDING SUBSEQUENT REVISIONS AND ADDENDUMS, AS PUBLISHED BY THE USDOT FEDERAL HIGHWAY ADMINISTRATION AS WELL AS FDOT AND LOCAL AGENCY STANDARDS AND SPECIFICATIONS.

24. REGULATORY SIGNS AND MARKINGS SHALL BE IN PLACE PRIOR TO FINAL INSPECTION OF PAVING AND DRAINAGE IMPROVEMENTS.

25. PAVEMENT RETURN RADII SHALL BE MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

26. POND SLOPES AND BERMS SHALL BE SODDED TO TWO (2) FEET BELOW THE NORMAL WATER LINE (N.W.L.). IN THE CASE OF DRY BOTTOM PONDS, THE BOTTOM WILL BE SEEDED AND MULCHED UNLESS OTHERWISE SPECIFIED.

27. ALL PRECAST DRAINAGE STRUCTURES TO HAVE STEEL FRAME. ALL STRUCTURES IN PAVED AREAS TO HAVE STEEL RECTILINEAR GRATES WITH H-20 LOADING.

28. CONTRACTOR SHALL NOT COMPACT, STABILIZE, OR CONSTRUCT BASE COURSE WITHIN LANDSCAPE ISLANDS, TRACTS OR MEDIANS. WHERE SUCH TREATMENT DOES OCCUR, IT SHALL BE REMOVED AND REPLACED WITH SUITABLE PLANTING SOILS ACCEPTABLE TO LANDSCAPE ARCHITECT.

29. YARD DRAINS SHALL BE NYOPLAST INLINE DRAINS AND DRAIN BASINS, OR APPROVED EQUAL, WITH CAST IRON GRATES AND WATERTIGHT ADAPTER CONNECTIONS. DOMED GRATES SHALL BE PROVIDED IN NON-SODDED AREAS.

30. ALL FIRE HYDRANT LOCATIONS SHALL BE MARKED BY PLACING BLUE REFLECTIVE PAVEMENT MARKERS IN THE CENTER OF THE NEAREST TRAVEL LANE.

31. MINIMUM LONGITUDINAL SLOPE OF CURB SHALL BE 0.30% UNLESS SPECIFIED OTHERWISE.

32. FINISHED FLOOR ELEVATION IS TYPICALLY 8" INCHES ABOVE DESIGN FINISHED GRADE AT OUTSIDE PERIMETER OF BUILDINGS EXCEPT AT ENTRIES AND WHERE OTHERWISE SHOWN.

33. CONTRACTOR SHALL REMOVE ALL MUCK DEPOSITS IN CONSTRUCTION AREAS AND AREAS TO BE FILLED. SEE GEOTECHNICAL REPORT.

34. DRAINAGE MANHOLES AND INLETS (NOT INCLUDING CONTROL STRUCTURES) IN THE PLANS ARE IDENTIFIED BY TOP TYPE ONLY. CONTRACTOR SHALL PROVIDE STANDARD DITCH BOTTOM INLET TOPS AND TYPE 'J' OR 'P' STRUCTURE BOTTOMS, SIZED AS REQUIRED TO ACCOMMODATE PIPE SIZES AND ORIENTATIONS SHOWN. SHOP DRAWINGS SHALL BE SUBMITTED WHICH CLEARLY REPRESENT SUCH DATA.

35. CONTRACTOR SHALL STABILIZE AND PROTECT ALL END WALL, MITERED END SECTION, FLARED END SECTION, ETC. STRUCTURES THROUGHOUT THE PROJECT UNTIL THE BANK SLOPES OF THE RECEIVING WATER BODY ARE STABILIZED AND ACCEPTED BY OWNER.

36. ALL PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC. THE FILTER FABRIC SHALL BE IN ACCORDANCE WITH FDOT INDEX 199, TYPE D-3, A.O.S. 70-100. INSTALL PER FDOT INDEX 280. PROVIDE A MINIMUM 12" OVERLAP

37. CLEAN THE SURFACE TO BE PRIMED AND ENSURE THAT THE MOISTURE OF THE BASE DOES NOT EXCEED 90% OF THE OPTIMUM MOISTURE. ENSURE THAT THE TEMPERATURE OF THE PRIME COAT IS AT 150 DEGREES. APPLY THE PRIME COAT WITH A PRESSURE DISTRIBUTOR. THE PROPER APPLICATION SPREAD RATE WILL BE AT 1% WHICH IS SUFFICIENT TO COAT THE BASE MATERIAL UNIFORMLY WITH NO EXCESS. ALSO, SECTION 311-5.2: APPLY SAND UNIFORMLY AND FREE OF FOREIGN MATERIALS. THEN ROLL THE ENTIRE PRIMED AND SANDED AREA WITH A RUBBER TIRE TRAFFIC ROLLER. PRIOR TO PUTTING DOWN THE ASPHALT, SWEEP THE ENTIRE AREA OF EXCESS SAND TO PREPARE FOR PAVING.

SANITARY SEWER

1. ROOF DRAINS, FOUNDATION DRAINS OR OTHER STORM WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

2. GRAVITY SEWER PIPE SHALL BE SDR35 PVC AND SHALL MEET ASTM D3034, UNLESS OTHERWISE SPECIFIED.

3. ALL SANITARY SERVICE LATERALS SHALL BE 6-INCH DIAMETER PVC AND SHALL END WITH A CLEAN OUT.

4. ALL SANITARY SEWER PIPE SHALL BE COLORED GREEN.

5. ALL SANITARY SEWER MANHOLES SHALL HAVE A MINIMUM DIAMETER OF 48-INCHES AND A MINIMUM ACCESS DIAMETER OF 24-INCHES.

6. MINIMUM COVER OVER ALL PIPE SHALL BE 36-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

7. FOR HORIZONTAL AND VERTICAL CLEARANCES BETWEEN SANITARY SEWER MAINS/ LATERALS AND WATER MAINS/SERVICES, SEE WATER NOTES ON THIS SHEET AND FDEP SEPARATION TABLE ON UTILITY PLAN.

8. WHERE SOIL REPORT INDICATES THE POSSIBILITY OF UNSUITABLE MATERIAL IN THE VICINITY OF SANITARY LINES, THE CONTRACTOR SHALL DETERMINE THE NATURE AND EXTENT OF THIS UNSUITABLE MATERIAL, PREPARE TRENCH, AND INSTALL THE SEWER LINE IN ACCORDANCE WITH ASTM D-2321. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF THIS UNSUITABLE MATERIAL.

9. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM INFILTRATION OR EXFILTRATION TEST, WHICHEVER IS APPLICABLE. INFILTRATION SHALL NOT EXCEED 50 GALLONS PER DAY PER INCH OF DIAMETER PER MILE OF LENGTH, OR THE COMPUTED EQUIVALENT FOR SHORTER LENGTHS OF TIME. THE CONTRACTOR SHALL MEET ALL REQUIREMENTS, CODES, AND ORDINANCES OF THE WASTEWATER TRANSMISSION AUTHORITY INCLUDING ADVANCED NOTIFICATION PRIOR TO CONSTRUCTION AND TESTING.

10. MADDEN, MOORHEAD & STOKES, INC. SHALL BE NOTIFIED A MINIMUM OF FIVE (5) FULL WORKING DAYS PRIOR TO CONSTRUCTION AND TESTING OF THE SANITARY SEWER, PHONE (407)-629-8330.

11. THE CONTRACTOR SHALL SUPPLY COMPLETE "AS BUILT" INFORMATION RELATIVE TO INVERTS, RIM ELEVATIONS, LOCATION OF MANHOLES AND LENGTHS OF PIPE. LATERALS SHALL BE LOCATED FROM THE CENTERLINE OF THE NEAREST DOWNSTREAM MANHOLE. THE INFORMATION SHALL BE SUBMITTED ON LEGIBLY MARKED-UP PRINTS TO THE ENGINEER WITHIN TWO (2) WEEKS OF COMPLETION OF SEWER CONSTRUCTION.

12. CONTRACTOR SHALL RECEIVE SEWER CERTIFICATION PRIOR TO PLACEMENT OF BASE COURSE.

13. MINIMUM SLOPE ON ALL SANITARY SEWER GRAVITY MAINS SHALL BE IN ACCORDANCE WITH UTILITY PROVIDER'S STANDARDS AND CONSTRUCTION SPECIFICATIONS, LATEST EDITION.

14. ALL SANITARY SERVICE LOCATIONS SHALL BE MARKED BY CUTTING AN "S" INTO THE CURB.

15. MARK RESIDENTIAL LATERALS WITH 6-FOOT HIGH PIECE OF 2"x4" PLANK PAINTED GREEN WITH LOT NUMBER CLEARLY MARKED AND AN 'S' IMPRESSED IN THE CURB.

16. AIR RELEASE VALVES SHALL BE REQUIRED AT ALL HIGH POINTS ALONG THE FORCE MAIN.

17. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT AN EVEN TRANSITION IS MAINTAINED WHERE ASPHALT PAVING ABUTS MANHOLE/VALVE COVERS IN PAVED AREAS. AT EACH OF THESE LOCATIONS THE CONTRACTOR SHALL POUR AN 8-INCH THICK CONCRETE APRON AROUND THE MANHOLE/VALVE COVER A MINIMUM OF 4'x4' AT MANHOLES, AND 2'x2' AT VALVE COVERS LEVEL WITH THE FINAL LIFT OF ASPHALT.

18. PIPE LENGTHS SHOWN REPRESENT SCALED DISTANCES BETWEEN MANHOLE CENTERLINE.

19. INVERTS OF SANITARY SERVICE LATERALS AT THEIR CONNECTION TO SANITARY MANHOLES SHALL BE NO MORE THAN ONE (1) FOOT ABOVE THE MANHOLE INVERT.

20. PRIOR TO PAVING, CONTRACTOR SHALL VERIFY THE AS-BUILT SANITARY SEWER PIPE SLOPES. MINIMUM SLOPES SHALL BE IN ACCORDANCE WITH THE GREATER OF FDEP OR THE UTILITY PROVIDER'S MINIMUM CRITERIA. ANY LINE NOT MEETING MINIMUM SLOPES SHALL BE RELAYED BY CONTRACTOR TO MEET THE MINIMUM SLOPE REQUIREMENT AT NO ADDITIONAL COST.

21. MANHOLE LIFT HOLES AND GRADE ADJUSTMENT RINGS SHALL BE SEALED WITH NON-SHRINKING MORTAR OR OTHER APPROPRIATE MATERIAL.

22. INLET AND OUTLET PIPES SHALL BE JOINED TO THE MANHOLE WITH A GASKETED FLEXIBLE WATER-TIGHT CONNECTION OR ANOTHER WATER-TIGHT CONNECTION ARRANGEMENT THAT ALLOWS DIFFERENTIAL SETTLEMENT OF THE PIPE AND MANHOLE WALL.

23. WATER-TIGHT MANHOLE COVERS SHALL BE USED WHEREVER THE MANHOLE TOPS MAY BE FLOODED BY STREET RUNOFF OF HIGH WATER.

FIRE

PLANS SHALL BE IN ACCORDANCE WITH
THE 6TH EDITION OF THE FLORIDA FIRE PREVENTION CODE;
NFPA 101, 2015 EDITION
NFPA 1, 2015 EDITION
NFPA 14, 2013 EDITION
NFPA 24, 2013 EDITION
NFPA 13, 2013 EDITION

1. FIRE HYDRANT(S) AND A STABILIZED WEATHER RESISTANT ROAD BASE SHALL BE REQUIRED BEFORE GOING VERTICAL WITH CONSTRUCTION. THERE SHALL BE NO CONCERNS FOR FIRE APPARATUS TO BE ABLE TO DRIVE THROUGH THE SITE EVEN DURING RAINY CONDITIONS. ROAD WIDTH SHALL BE AT LEAST 20 FEET WIDE AND 14 FEET ABOVE WITH NO OVERHEAD OBSTRUCTIONS.

2. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FT. THE ANGLE OF APPROACH AND DEPARTURE FOR ANY MEANS OF FIRE DEPARTMENT ACCESS ROAD SHALL NOT EXCEED 1 FT DROP IN 20 FT OR THE DESIGN LIMITATIONS OF THE FIRE APPARATUS OF THE FIRE DEPARTMENT AND SHALL BE SUBJECT TO APPROVAL BY THE FIRE DEPARTMENT.

3. FIRE DEPARTMENT ACCESS ROADS SHALL BE PROVIDED SUCH THAT ANY PORTION OF THE FACILITY OR ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY OF THE BUILDING IS LOCATED NOT MORE THAN 150 FT FROM FIRE DEPARTMENT ACCESS ROADS AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE BUILDING OR FACILITY. WHEN BUILDINGS ARE PROTECTED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM THAT IS INSTALLED IN ACCORDANCE WITH NFPA 13, NFPA 13D, OR NFPA 13R, THE DISTANCE IN SHALL BE PERMITTED TO BE INCREASED TO 450 FT.

4. ALL FIRE SPRINKLER SYSTEMS INSTALLED IN ANY AREA THAT IS SUBJECT TO TEMPERATURES OF 40 DEGREES OR LOWER SHALL BE INSTALLED AS A DRY PIPE OR ANTIFREEZE SYSTEM PER NFPA. APPROVALS WILL NOT BE GIVEN TO NON-CLIMATE-CONTROLLED FIRE SPRINKLER SYSTEM INSTALLS THAT DO NOT MEET THESE REQUIREMENTS. FIRE SPRINKLER SYSTEMS SHALL ALSO HAVE FLOOR ISOLATION CONTROL VALVES INSTALLED FOR EVERY MULTI-STORY STRUCTURE.

FDOT

1. MAINTENANCE OF TRAFFIC SHALL BE PER 2022-23 FDOT STANDARD PLANS INDEX Nos. 102-601 AND 102-602.

2. ALL STRIPING AND MARKING TO BE INSTALLED PER 2022-23 FDOT STANDARD PLANS INDEX No. 711-001. ALL STRIPING SHALL BE THERMOPLASTIC.

3. CONCRETE SIDEWALKS, CURBS, AND CURB RAMPS TO BE INSTALLED PER 2022-23 FDOT STANDARD PLANS INDEX Nos. 520-001, 522-001, 522-002.

4. CONTRACTOR TO INSTALL SOD AT ALL AREAS DISTURBED BY CONSTRUCTION WITHIN RIGHT OF WAY.

5. ALL AFFECTED SIDEWALKS, RAMPS, AND CROSSWALKS ARE TO BE BUILT AND INSPECTED TO MEET CURRENT ADA REQUIREMENTS.

6. INTERSECTION CLEAR SIGHT AREAS ARE DESIGNED PER 2022 FDOT DESIGN MANUAL SEC. 212.11.

7. REMOVE EXISTING STRIPING AS NEEDED TO ACCOMODATE FOR NEW STRIPING

8. PEDESTRIAN MOT SIGNAGE TO BE PROVIDED PER 2022-23 FDOT STANDARD PLANS INDEX NO. 102-660.

9. ALL CONSTRUCTION IN THE FDOT RIGHT OF WAY SHALL CONFORM TO THE LATEST EDITIONS OF THE FDOT DESIGN STANDARDS (INDICES), THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE FDOT UTILITY ACCOMMODATION MANUAL.

WATER

1. ALL MATERIALS AND CONSTRUCTION REQUIREMENTS FOR THE FIRE SERVICE, WATER LINES, CHECK VALVES, BACKFLOW PREVENTERS, GATE VALVES, ETC., SHALL BE IN ACCORDANCE WITH LOCAL AGENCY STANDARD DETAILS AND CONSTRUCTION SPECIFICATIONS.

2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN COMPLIANCE WITH AWWA STANDARDS AND IN ACCORDANCE WITH LOCAL AGENCY STANDARDS.

3. ALL PUBLIC WATER SYSTEM COMPONENTS, EXCLUDING FIRE HYDRANTS, THAT WILL BE INSTALLED UNDER THIS PROJECT AND THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61 AND WILL BE MARKED WITH THE NSF SEAL OF APPROVAL.

4. CONTRACTOR SHALL VERIFY SIZE AND TYPE OF EXISTING MAIN PRIOR TO ORDERING TAPPING MATERIALS FOR TIE-INS.

5. SITE CONTRACTOR SHALL COORDINATE AND VERIFY ALL UTILITY SERVICES WITH FINAL ARCHITECTURAL DRAWINGS AND BUILDING CONTRACTOR.

6. SITE UTILITY WORK SHALL TERMINATE 5-FEET FROM BUILDINGS UNLESS OTHERWISE STATED.

7. MINIMUM COVER OVER ALL PIPE SHALL BE 36-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

8. THE WATER MAIN SHALL BE LOCATED ABOVE THE STORMWATER AND SANITARY MAINS AT CONFLICTS, WHERE POSSIBLE.

9. VERTICAL SEPARATION BETWEEN UNDERGROUND POTABLE WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER PIPELINES:
   - 9.1. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
   - 9.2. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

10. HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS:
    - 10.1. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL 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 STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
    - 10.2. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
    - 10.3. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
    - 10.4. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE 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" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

11. AT THE UTILITY CROSSINGS DESCRIBED IN NOTES 8 AND 9 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSING, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER 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, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

12. WATER LINES 2-INCHES, OR LESS, IN DIAMETER SHALL BE POLYETHYLENE TUBING.

13. WATER LINES 4-INCH TO 12-INCH IN DIAMETER SHALL BE NSF LOGO PVC PIPE CONFORMING TO AWWA C-900 AND BE DR-18.

14. ALL FITTINGS SHALL BE DUCTILE IRON (D.I.) OR GRAY IRON MECHANICAL JOINTS WITH A MINIMUM PRESSURE RATING OF 250 P.S.I. CONFORMING TO ANSI A-21.10 / AWWA C-110, OR D.I. COMPACT FITTINGS FOR DIAMETERS 4-INCH TO 12-INCH CONFORMING TO ANSI A-21.53 / AWWA C-153.

15. FROM THE POINT OF SERVICE (P.O.S.) FORWARD AS DESIGNATED BY F.S. 633, FIRE SUPPLY PIPE SHALL BE DR-14 AND TESTED AT 200 PSI FOR TWO HOURS.

16. GATE VALVES SHALL CONFORM TO AWWA C-509-87, WITH WRENCH NUT EXTENSION STEMS AND OTHER APPURTENANCES AS REQUIRED AND SHALL BE IRON BODY, FULL BRONZE MOUNTED, DOUBLE DISK, PARALLEL SEAT, NON-RISING STEM VALVES WITH O-RING SEALS AND END CONNECTIONS AS CALLED FOR ON THE PLANS. ALL TEES, CAPS, PLUGS, BENDS, VALVES, ETC., SHALL BE PROVIDED WITH GRIP RING RESTRAINTS.

17. ALL NON-METALLIC WATER MAINS SHALL BE INSTALLED WITH A CONTINUOUS, INSULATED 10 GAUGE COPPER WIRE INSTALLED DIRECTLY ON TOP OF THE PIPE FOR LOCATION PURPOSES. IN ADDITION, ALL PVC WATER MAINS SHALL BE A SOLID BLUE COLOR. ALL LETTERING SHALL APPEAR LEGIBLY ON PIPE AND SHALL RUN THE ENTIRE LENGTH OF THE PIPE. LETTERING SHALL READ AS IS ACCEPTABLE FOR THE INTENDED USE.

18. SERVICE MAINS FOR FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 24, LATEST EDITION.

19. NEW FIRE HYDRANTS SHALL BE INSTALLED SO THAT 5-1/4" INCH PORT IS FACING THE ROADWAY BY WHICH IT IS ACCESSED. HYDRANTS SHALL BE POSITIONED NOT MORE THAN 5 FEET AWAY FROM THE CURB OR BERM OF THE ROADWAY.

20. HYDROSTATIC TESTING AND THE DISINFECTION OF THE WATER DISTRIBUTION SYSTEM SHALL BE DONE IN ACCORDANCE WITH AWWA STANDARDS. HYDROSTATIC TESTING TO BE DONE IN ACCORDANCE WITH AWWA C-600 FOR DUCTILE IRON PIPE AND C-605 FOR PVC PIPE. DISINFECTING AND BACTERIOLOGICAL EVALUATION TO BE DONE IN ACCORDANCE WITH AWWA C-651 AND RULE 62-555.340 F.A.C.

21. THE CONTRACTOR SHALL SUPPLY COMPLETE AS-BUILT INFORMATION RELATIVE TO LOCATION AND ELEVATION OF ALL WATER LINES AND SERVICES. THE INFORMATION SHALL BE SUBMITTED ON LEGIBLY MARKED-UP PRINTS TO THE ENGINEER WITHIN TWO (2) WEEKS OF THE COMPLETION OF THE WATER LINE CONSTRUCTION.

22. CONTRACTOR SHALL COORDINATE ALL UTILITIES SYSTEMS TEST SCHEDULING TO ALLOW ENGINEER'S ATTENDANCE PROVIDING MINIMUM NOTICE OF FIVE (5) WORKING DAYS. CONTRACTOR'S FAILURE TO PROPERLY NOTIFY ENGINEER MAY RESULT IN RETESTING AT ENGINEER'S OPTION AND AT CONTRACTOR'S EXPENSE.

23. NEW HYDRANTS SHALL BE TESTED AND IN PROPER WORKING ORDER WITH DUTILITY PROVIDERMENTATION SUPPLIED TO THE FIRE MARSHAL PRIOR TO ANY COMBUSTIBLE CONSTRUCTION. (I.E. FIRE FLOW TEST SHALL BE PERFORMED)

24. DEFLECTIONS AT PIPE JOINTS SHALL NOT EXCEED THE LESSOR OF THOSE RECOMMENDED BY THE PIPE MANUFACTURER OR UTILITY PROVIDER'S CONSTRUCTION SPECIFICATIONS.

25. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT SHALL BE COLOR CODED IN ACCORDANCE WITH SUB PARAGRAPH 62-555.320(21)(B)3, F.A.C. USING BLUE AS A PREDOMINANT COLOR. ALL DUCTILE IRON WATER MAINS SHALL BE MARKED WITH A CONTINUOUS STRIPE LOCATED WITHIN THE TOP 90 DEGREES OF THE PIPE. SAID STRIPE SHALL BE A MINIMUM 2 INCHES IN WIDTH AND SHALL BE BLUE IN COLOR. BACKFILL SHALL NOT BE PLACED FOR 30 MINUTES FOLLOWING PAINT APPLICATION. FOR PIPE WITH AN INTERNAL DIAMETER OF 24" OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS LINES A LONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE.

26. MARK RESIDENTIAL SERVICES WITH 6-FOOT HIGH PIECE OF 2"x4" PLANK PAINTED BLUE WITH LOT NUMBER CLEARLY MARKED AND A 'W' IMPRESSED IN THE CURB. IT IS THE INTENT THAT EVERY LOT IS PROVIDED WITH A WATER SERVICE; THEREFORE IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A WATER SERVICE TO EACH LOT.

27. PIPE MATERIALS:
    PVC - ALL PIPE, PIPE FITTINGS, PIPE JOINT PACKING AND JOINTING MATERIALS, VALVES, FIRE HYDRANTS, AND METERS INSTALLED UNDER THIS PROJECT SHALL CONFORM TO APPLICABLE AWWA STANDARDS AND SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C900, LATEST EDITION. PVC SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C900. THE PVC SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 P.S.I. AND SHALL HAVE A DIMENSION RATIO (DR) OF 18. PIPE SHALL BE THE SAME O.D. AS DUCTILE IRON PIPE.
    PVC JOINT - SHALL BE IN ACCORDANCE WITH ASTM D3139.
    DUCTILE IRON - SHALL CONFORM TO ANSI/AWWA C150/C151. A MINIMUM OF CLASS 50 PIPE SHALL BE SUPPLIED.
    DUCTILE IRON JOINT - SHALL BE IN ACCORDANCE WITH ANSI A21.11 AND AWWA C111.
    SERVICES - SHALL BE IN ACCORDANCE WITH AWWA C901/C800 STANDARDS FOR POLYETHYLENE TUBING, CLASS 160.

28. WATER MAIN CONNECTION SHALL BE MADE UNDER THE SUPERVISION OF THE UTILITY PROVIDER. ALL VALVES SHALL BE OPERATED BY UTILITY PROVIDER PERSONNEL ONLY.

29. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT SHALL CONTAIN NO MORE THAN 8.0% LEAD, AND ANY SOLDER OR FLUX USED IN THIS PROJECT SHALL CONTAIN NO MORE THAN 0.2% LEAD.

30. NEW OR ALTERED FIRE HYDRANT LEADS SHALL HAVE A MINIMUM INSIDE DIAMETER OF 6-INCH AND SHALL INCLUDE AN AUXILIARY VALVE.

31. A CONTINUOUS AND UNIFORM BEDDING WILL BE PROVIDED IN TRENCHES FOR UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT; BACKFILL MATERIAL WILL BE TAMPED IN LAYERS AROUND UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE; AND UNSUITABLY SIZED STONES (AS DESCRIBED IN APPLICABLE AWWA STANDARDS OR MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES) FOUND IN TRENCHES WILL BE REMOVED FOR A DEPTH OF A LEAST SIX INCHES BELOW THE BOTTOM OF UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT.

32. CONTRACTOR SHALL NOT ACTIVATE WATER SERVICE UNTIL FDEP HAS CLEARED THE SYSTEM FOR USE AND THE CLEARANCE LETTER HAS BEEN RECEIVED BY THE OWNER.

33. ENGINEER RESERVES THE RIGHT TO WITHHOLD AUTHORIZATION OF PAYMENT FOR ANY PORTION OF THE UTILITIES PIPE WORK WHICH HAS NOT BEEN TESTED, OBSERVED BY ENGINEER, AND REPORTED TO CONFORM TO PROJECT SPECIFICATIONS.

RECLAIMED WATER

1. POLYVINYL CHLORIDE PLASTIC PIPE (PVC) 4-INCH THROUGH 12-INCH SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C900 (LATEST EDITION) AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI AND HAVE A DR (DIMENSION RATIO) OF 18. PIPE SHALL BE PURPLE AND LABELED "RECLAIMED WATER" OR "NON POTABLE WATER" PROMINENTLY ON EACH PIPE JOINT. JOINTS SHALL BE OF THE PUSH-ON TYPE AND COUPLINGS SHALL CONFORM TO ASTM D3139 DR18 PIPE.

2. DUCTILE IRON PIPE (DIP) SHALL BE STANDARD PRESSURE CLASS 350 IN SIZES 4-INCH THROUGH 12-INCH AND CONFORM TO ANSI/AWWA C150/A21.50 (LATEST EDITION). ALL DUCTILE IRON PIPE SHALL HAVE CEMENT MORTAR LINING AS SPECIFIED IN ANSI/AWWA C104/A21.4 (LATEST EDITION). PIPE JOINTS SHALL BE OF THE PUSH-ON RUBBER GASKET TYPE CONFORMING TO ANSI/AWWA C111/A21.11 (LATEST EDITION).

3. PIPE SIZES GREATER THAN 12" IN BOTH PVC AND DUCTILE IRON SHALL BE SEPARATELY SPECIFIED ON THE PLANS; WITH THICKNESS CLASSES TO BE SHOWN BASED ON WORKING PRESSURES, PIPE DEPTH AND TRENCH CONDITIONS.

4. COMPACT FITTINGS FOR DUCTILE IRON PIPE AND PVC C900 PIPE SHALL BE DUCTILE IRON AND SHALL CONFORM TO ANSI/AWWA C153/A21.53 (LATEST EDITION) AND SHALL BE CEMENT LINED IN CONFORMANCE WITH ANSI/AWWA C104/A21.4 (LATEST EDITION). 350 PSI MINIMUM PRESSURE RATING.

5. GATE VALVES SHALL BE RESILIENT SEAT AND SHALL CONFORM TO ANSI/AWWA C509 (LATEST EDITION) WITH 2-INCH SQUARE WRENCH NUT, EXTENSION STEMS AND OTHER APPURTENANCES AS REQUIRED. MANUFACTURER'S CERTIFICATION OF THE VALVES' COMPLIANCE WITH AWWA C509 (LATEST EDITION) AND TESTS LISTED THEREIN WILL BE REQUIRED. VALVES SHALL BE CLOW, MUELLER, KENNEDY, M&H, AMERICAN DARLING, OR APPROVED EQUAL.

6. VALVE BOX PADS SHALL BE 18"x18"x4" THICK CONCRETE WITH FOUR (4) REINFORCING BARS. PAD IS TO BE SET AT FINISH GRADE.

7. UNDERGROUND VALVE IDENTIFICATION (UVI) MARKERS SHALL BE PROVIDED AT EACH VALVE LOCATION. MARKERS SHALL BE 3-INCH DIAMETER AND 1/8-INCH THICK SOLID HARD BRASS WITH 1/4-INCH ROD ANCHOR WITH "TAMPER-PROOF" HOOK END. SURFACE SHALL BE ENGRAVED WITH 1/4-INCH TO 3/8-INCH CAPITAL LETTERS APPROXIMATELY .015-INCH DEEP - HAND PUNCHED LETTERS NOT ACCEPTABLE. FOR MARKER TEXT, REFER TO UNDERGROUND VALVE MARKER DETAIL. SURFACE GROUND SMOOTH AND EPOXY COATED TO PREVENT TARNISHING. MARKERS ARE TO BE WAGCO MARKERS, OR APPROVED EQUAL.

8. BUTTERFLY VALVES SHALL MEET OR EXCEED THE DESIGN STRENGTH TESTING AND PERFORMANCE REQUIREMENTS OF AWWA C504 (LATEST EDITION), CLASS 150. VALVES SHALL BE DUCTILE IRON, RESILIENT SEAT, AND BE MANUFACTURED BY KENNEDY, MUELLER, M&H, AMERICAN DARLING, OR APPROVED EQUAL. BUTTERFLY VALVES TO BE USED FOR SIZES GREATER THAN 12-INCH.

9. AIR RELEASE VALVES SHALL BE PLACED AT HIGH POINTS OF THE TRANSMISSION MAIN TO PERMIT ESCAPE OF TRAPPED AIR. THE VALVE SIZE, LOCATION, AND METHOD OF INSTALLATION SHALL BE INDICATED ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER. AIR RELEASE VALVES SHALL BE VALMATIC OR APPROVED EQUAL.

10. VALVE BOXES ON BURIED RECLAIMED WATER SHALL BE ADJUSTABLE, CAST IRON CONSTRUCTION, WITH A MINIMUM INTERIOR DIAMETER OF 5-INCH WITH COVERS CAST WITH THE INSCRIPTION IN LEGIBLE LETTERING ON THE TOP: RECLAIMED WATER. BOXES SHALL BE SUITABLE FOR THE APPLICABLE SURFACE LOADING AND VALVE SIZE, AND SHALL BE MANUFACTURED BY MUELLER COMPANY, MODEL 10364, OR APPROVED EQUAL.

11. PIPE INSTALLATION OF PVC RECLAIMED WATER MAIN SHALL BE IN CONFORMANCE WITH ASTM D2774 (LATEST EDITION). INSTALLATION OF DUCTILE IRON PIPE RECLAIMED WATER MAIN SHALL BE IN CONFORMANCE WITH AWWA C600 (LATEST EDITION).

12. RECLAIMED WATER SYSTEM PIPES SHALL BE INSTALLED SO AS TO GIVE A MINIMUM HORIZONTAL SEPARATION OF 5 FEET (CENTER OF PIPE TO CENTER OF PIPE) FROM POTABLE WATER LINES AND MINIMUM 3-FOOT SEPARATION FORM OUTSIDE WALL TO OUTSIDE WALL AS WELL AS 18-INCH VERTICAL SEPARATION. IN THE CASE OF A CONFLICT WHERE THESE SEPARATIONS CANNOT BE MAINTAINED THE REUSE MAIN SHALL BE UPGRADED TO DIP.

13. COMPACTED BACKFILL SHALL BE TO 98 % MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 UNDER ALL PAVEMENTS WITH 12-INCH MAXIMUM LIFT THICKNESS. OTHER COMPACTION OF BACKFILL SHALL BE TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 WITH 12-INCH MAXIMUM LIFT THICKNESS. SEE PIPE TRENCHING DETAILS.

14. MINIMUM COVER OVER ALL PIPE SHALL BE 36-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

15. INDICATOR TAPE SHALL BE BURIED IN THE RECLAIMED WATER MAIN TRENCH 18-INCH DIRECTLY ABOVE THE MAIN. A CONTINUOUS COPPER DETECTOR WIRE SHALL BE ATTACHED AS SHOWN ON THE PIPE DETECTOR WIRE MARKER DETAIL. INDICATOR TAPE SHALL CALL OUT THAT A RECLAIMED OR NON POTABLE SYSTEM IS BELOW. PIPE SHALL BE COLOR CODED PURPLE IN ADDITION TO MARKINGS. SIGNS IN ENGLISH, SPANISH, AND INTERNATIONAL SYMBOLS SHALL BE INSTALLED NOTING THAT NO DRINKING IS ALLOWED. CONTINUITY CHECK WILL BE PERFORMED AND MUST BE ACCEPTABLE.

16. ALLOWABLE LEAKAGE FOR PVC PRESSURE MAINS WILL BE IN ACCORDANCE WITH AWWA M23.

17. THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES, AND OTHER EQUIPMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC AND LEAKAGE TESTING. CONTRACTOR SHALL CONTACT LOCAL AGENCY, UTILITY PROVIDER, AND ENGINEER IN WRITTEN FORM, FORTY-EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRETESTING PRIOR TO NOTIFICATION. NO TESTING WILL BE SCHEDULED ON A MONDAY OR FRIDAY.

18. THE RECLAIMED WATER SYSTEM SHALL BE TESTED FOR LEAKAGE AT 150 PSI FOR TWO (2) HOURS PER UTILITY PROVIDER STANDARDS.

19. ALL RECLAIMED WATER PIPES SHALL BE INSTALLED USING WATER PIPE CRITERIA. MAINS SHALL BE CLASS 52 D.I. PIPE. IF 24-INCHES TO 30-INCHES OF COVER IS PROVIDED AND CLASS 51 IF 30-NICHES TO 36-INCHES OF COVER IS PROVIDED.

20. SIGNS SHALL BE POSTED IN THE VICINITY OF PUBLIC RECLAIMED WATER RECLAIMED WATER IRRIGATION SYSTEMS, ADVISING THE PUBLIC THAT RECLAIMED WATER IS PRACTICED.

DEMOLITION NOTES:

1. THE SITE SHALL BE VISUALLY INSPECTED BY THE CONTRACTOR, PRIOR TO COMMENCEMENT OF THE WORK, TO DETERMINE THE FULL SCOPE OF WORK INVOLVED AND ITS RELATION TO ANY OTHER WORK IN THE AREA, PRIOR TO THE COMMENCEMENT OF ANY WORK, INCLUDING POSSIBLE INTERFERENCE FROM OTHER SIDE ACTIVITIES.

2. ALL ACTIONS REQUIRED BY LAW SHALL BE ACCOMPLISHED PRIOR TO PERMITTING AND ALL PERMITS REQUIRED BY LAW SHALL BE ACQUIRED, AT THE EXPENSE OF THE CONTRACTOR, PRIOR TO DEMOLITION. ALL PERMITS SHALL BE PROMINENTLY POSTED OR DISPLAYED DURING THE DEMOLITION PROCESS.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY AND ALL DEBRIS FROM THE JOB SITE DURING AND AFTER THE PERFORMANCE OF THE WORK. DEBRIS REMOVAL IS DEFINED AS THE REMOVAL, FROM A DEMOLITION SITE, OF DEBRIS RESULTING DIRECTLY FROM THE DEMOLITION. SUCH DEBRIS MAY CONSIST, BUT NOT BE LIMITED TO, PILES OF TRASH, BOARDS, SHINGLES, FALLEN TREES, WOODPILES, ETC. THE CHARGE FOR REMOVING SUCH DEBRIS SHALL INCLUDE ALL EXPENSES ASSOCIATED WITH ITS REMOVAL.

4. ALL MATERIALS DEEMED NON-HAZARDOUS SHALL BE TRANSPORTED AND DISPOSED OF BY THE CONTRACTOR AT AN APPROVED LANDFILL FACILITY.

5. THE CONTRACTOR SHALL ASSURE THAT ALL UTILITIES HAVE BEEN DISCONNECTED AND ALL UTILITY LINES ARE REMOVED FROM THE PROPERTY, IF APPLICABLE, PRIOR TO COMMENCEMENT OF ANY WORK.

6. THE CONTRACTOR SHALL PROVIDE FLAGMAN'S TRAFFIC CONTROL AND SAFETY AT ANY TIME THE DEMOLITION REQUIRES THE BLOCKING OF ANY ROAD OR HIGHWAY FOR ANY LENGTH OF TIME. THIS SHALL INCLUDE THE LOADING AND UNLOADING OF HEAVY EQUIPMENT. A COUNTY OR STATE R/W USE PERMIT IS REQUIRED FOR ANY WORK, INCLUDING EQUIPMENT CIRCULATION, ETC. WITHIN THE APPROPRIATE JURISDICTIONAL AREAS.

7. SALVAGING OF ANY PROPERTY SHALL BE THE PRIVILEGE OF THE CONTRACTOR; HOWEVER NO PERSON OR PERSONS OTHER THAN THE CONTRACTOR MAY SALVAGE ANY PROPERTY WHILE DEMOLITION IS IN PROCESS.

8. THE CONTRACTOR SHALL ASSUME ANY AND ALL LIABILITY FOR PERSONS AND PROPERTY DIRECTLY ON THE DEMOLITION SITE DURING THE DEMOLITION PROCESS.

9. ANY KNOWN WATER WELL LOCATED ON THE PROPERTY SHALL BE HANDLED BY ALL APPLICABLE CODES AND REGULATIONS.

10. THE CONTRACTOR SHALL FILL THE PROPERTY WITH CLEAN FILL DIRT IN ORDER TO MAINTAIN A LEVELED AND GRADED APPEARANCE. THE COST FOR FILL DIRT SHALL INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING THE FILL DIRT.

11. ALL FILL DIRT REMAINING AFTER DEMOLITION SHALL BE LEFT ON SITE FOR FINAL DISPOSITION.

12. THE CONTRACTOR SHALL LOCATE, DRAIN AND CRUSH IN PLACE ANY SEPTIC TANK(S) ON SITE. THE SEPTIC TANK DEBRIS SHALL BE COMPLETELY REMOVED. SEPTIC TANK(S) REMOVAL SHALL INCLUDE PUMPING OF DRAIN FIELD. THIS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS, CODES AND ORDINANCES.

13. THE CONTRACTOR SHALL ENSURE THAT NO RUBBLE IS BURIED ON SITE.

14. ALL STRUCTURES SHALL BE DEMOLISHED USING THE "WET METHOD" WITHOUT EXCEPTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND/ OR FURNISH THE NECESSARY WATER TO ACCOMPLISH THIS REQUIREMENT.

15. THE BOARDING UP OF STRUCTURES SHALL CONSIST OF THE BOARDING OF DOORS, WINDOWS AND ANY OTHER ENTRANCE/EGRESS POINT(S) INCLUDING, BUT NOT LIMITED TO, GARAGE DOOR OPENINGS, SLIDING GLASS DOORS, ETC.

16. THE BOARDING UP OF STRUCTURES SHALL BE ACCOMPLISHED BY AFFIXING THE PLYWOOD BOARDS, (CUT TO OPTIMUM SIZE) TO ALL AREAS AS SPECIFIED ABOVE, AND SHALL BE SCREWED INTO DOOR/ WINDOW FRAMES IN SUCH A MANNER AS TO PREVENT/ HINDER ENTRANCE TO THE STRUCTURE. EACH PLYWOOD BOARD (SHEET) SHALL BE AT LEAST (3) PLY, FOUR (4') FOOT BY EIGHT (8') FOOT AND ONE HALF (1/2) INCH THICK. THE BOARDING UP OF STRUCTURES SHALL TAKE PLACE IN ACCORDANCE WITH ALL STATE, COUNTY, AND LOCAL LAWS, REGULATIONS AND ORDINANCES.

17. IT IS UNDERSTOOD THAT ACTIONS MAY BE TAKEN BY A PERSON OR PERSONS TO ACCESS THE STRUCTURE AFTER IT IS BOARDED UP. THE BOARDING UP OF STRUCTURES SHALL BE ACCOMPLISHED SO AS TO MAKE THIS POSSIBILITY AS DIFFICULT AS POSSIBLE. SHOULD A BOARDED UP AREA BE BREACHED, THE CONTRACTOR, UPON NOTIFICATION BY THE OWNER/ DEVELOPER, SHALL RETURN TO THE STRUCTURE AND AFFIX NEW BOARDS TO THE AREA OR AREAS AFFECTED. IF DEEMED NECESSARY OR PRUDENT BY THE CONTRACTOR, THE APPROPRIATE LAW ENFORCEMENT AGENCY SHALL BE NOTIFIED IN ORDER TO ASSURE THAT THE STRUCTURE IS NOT OCCUPIED PRIOR TO THE RE-BOARDING PROCESS.

18. IF REQUESTED BY THE OWNER/ DEVELOPER, THE CONTRACTOR SHALL AFFIX, AT NO ADDITIONAL COST. "NO TRESPASSING" SIGNAGE TO THE BOARDED UP STRUCTURE SO AS TO ACHIEVE MAXIMUM VISIBILITY.

ADDITIONAL NOTES

1. ANY SIGN, PAVEMENT MARKINGS OR RPM'S THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED, RESTRIPED OR REINSTALLED AS PART OF THIS PROJECT. IF ANY SIGNS OR POSTS ARE DAMAGED, PLEASE REFER TO BCLD EXHIBIT 26 FOR THE REPLACEMENT REQUIREMENTS. THIS IS ALSO TO INCLUDE ANY PAVEMENT MARKINGS OR RPM'S THAT ARE DAMAGED 100 FT EITHER SIDE OF THE PROJECT LIMITS.
2. ALL POSTS AND HARDWARE FOR ANY SIGNS INSTALLED ON THE SITE OR IN THE B.C. R/W WILL ADHERE TO THE REQUIREMENTS SPELLED OUT IN EXHIBIT 26.
3. IF ANY STOP SIGNS OR REGULATORY SIGNS ARE REQUIRED TO BE TAKEN DOWN DURING THE WORKDAY HOURS, THEY SHALL BE REINSTALLED OR RELOCATED IMMEDIATELY AND BEFORE THE CONTRACTOR LEAVES THE SITE FOR THE DAY.
4. THE CONTRACTOR SHALL UTILIZE DITCHES, PIPES, AND/OR PUMPS AS NECESSARY TO MAINTAIN THE EXISTING DRAINAGE DURING ALL PHASES OF CONSTRUCTION. EXISTING DRAINAGE SHALL NOT BE BLOCKED OR ADVERSELY AFFECTED DURING CONSTRUCTION.
5. WHEREVER NEW PAVEMENT IS CONSTRUCTED ADJACENT TO THE EXISTING PAVEMENT, THE EXISTING ASPHALT SHALL BE SAW CUT AND REMOVED 12 INCHES FROM THE EDGE OF THE ASPHALT TO OFFSET THE ASPHALT/BASE COURSE JOINT.
6. NO IMPROVEMENTS SHALL TAKE PLACE WITHIN THE 50-FOOT RIGHT-OF-WAY FOR THE JAMES ROAD OUTFALL DITCH.

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PUD CONDITIONS AFFECTING THE SITE PLAN

AS A CONDITION OF APPROVAL OF THE FINAL PLANS, DEVELOPER SHALL DESIGN, PERMIT AND CONSTRUCT, AT ITS OWN EXPENSE, THE FOLLOWING MINIMUM SCHEDULE OF PROJECT AMENITIES AND ENHANCEMENTS IN SCOPE AND SCALE TO ADEQUATELY SUPPORT THE NUMBER OF RESIDENTIAL LOTS REQUIRED FOR THE PROJECT:

1. COMMUNITY CLUBHOUSE WITH A FEATURE POOL, OPEN SPACE AREA WITH A COMMUNITY PAVILION (PICNIC TABLES AND GRILLS) ALONG WITH A STATE-OF-THE-ART MODERN TOT-LOT AND PLAYGROUND. THE CITY PREFERS THAT THE TOT-LOT AND PLAYGROUND BE ADEQUATELY COVERED FROM SUN EXPOSURE BY A PLAYGROUND UV RATED CANOPY AND SHADE TREES AND THAT THE DEVELOPER SHALL SERIOUSLY EVALUATE AND CONSIDER PROVIDING SUCH COVERING WHEN THE AMENITIES SCHEDULE IS APPROVED DURING FINAL PLANS APPROVAL
   - A COMMUNITY POOL WITH CABANA WILL BE PROVIDED FOR THE COMMUNITY. THE CABANA WILL HAVE RESTROOMS, SHADE PAVILION, SEATING, TRASH RECEPTACLES, AND A GRILLING STATION. A MODERN TOT LOT WITH BENCHES AND TRASH RECEPTACLES WILL BE PROVIDED.
2. DOG PARK WITH DELUXE DOG PARK AMENITIES INCLUDING DOG PLAY EQUIPMENT, LEASH POST, CLEAN-UP WASTE STATION, TRASH RECEPTACLE, PET DRINKING FOUNTAIN, AND BENCHES.
   - A DOG PARK WILL BE PROVIDED WITH TRASH CANS, PLAY EQUIPMENT, BENCHES, FENCING TO SEPARATE BIG AND SMALL DOGS, LANDSCAPING, AND A WATER FOUNTAIN.
3. PARK AREA WITH PASSIVE PARK AMENITIES AND BENCHES INCLUDING OPEN PLAY AREAS, CHILDREN'S PLAY APPARATUS, GROUP PICNIC AREAS, COVERED PAVILIONS AND BARBECUE STATIONS. THE CITY PREFERS THAT THE PLAYGROUND AND BENCH AREAS BE ADEQUATELY COVERED FROM SUN EXPOSURE BY A UV RATED PLAYGROUND OR OTHER CANOPY AND SHADE TREES AND THAT THE DEVELOPER SHALL SERIOUSLY EVALUATE AND CONSIDER PROVIDING SUCH COVERING WHEN THE AMENITIES PROGRAM AND SCHEDULE IS APPROVED DURING FINAL PLANS APPROVAL.
   - WE ARE ALSO INCLUDING A NATURE TRAIL NETWORK IN THE 5 ACRE PARK AREA WITH SENSORY STATIONS FOR KIDS TO INTERACT WITH NATURE AS PART OF TAYLOR MORRISONS NATIONAL WILDLIFE FEDERATION PARTNERSHIP TO GET KIDS ENGAGED WITH NATURE. THIS AREA WILL HAVE BENCHES, TRASH RECEPTACLES, NATURAL SHADE AND AN OBSERVATION AREA.
4. CONNECTED MULTIPURPOSE WALKING PATH/NATURE TRAIL THROUGHOUT THE COMMUNITY THAT CONNECTS TO ALL RECREATIONAL COMMON OPEN SPACES INCLUDING THE PARK AREA, DOG PARK AND COMMUNITY CLUBHOUSE AREA.
   - SHEETS L100-L106 SHOW WALKING PATH/TRAILS THROUGHOUT THE SITE.
5. A STREETSCAPE DESIGN DEEMED ACCEPTABLE BY THE CITY, WHICH EMPHASIZES SIDEWALKS, CONNECTIVITY WITHIN THE COMMUNITY, TREE-LINED STREETS, AND DECORATIVE STREET LIGHTS TO ADD APPEAL AND SECURITY AND DECORATIVE SIGNAGE.
   - SHEETS L400-L422 FOR FULL LANDSCAPE PLANS SHOWING REQUIRED LANDSCAPE ALONG STREETS, LANDSCAPE BUFFERS, AND ENHANCEMENTS AT THE ENTRIES.
6. DECORATIVE AND LANDSCAPED ENTRANCE FEATURES TO THE PROJECT DEEMED ACCEPTABLE TO THE CITY WHICH MAY INCLUDE A RESTRICTED GATE ENTRY FEATURE.
   - ~~SHEETS L402-404 FOR ENTRY LANDSCAPE ENHANCEMENTS AT SIGNS/MONUMENT COLUMNS.~~
7. THE CITY PREFERS THAT THE REISDENTIAL DRIVEWAYS SHALL BE CONSTRUCTED BY STONE OR BRICK PAVERS, OR STAMPED AND STAINED CONCRETE. THE DEVELOPER SHALL SERIOUSLY EVALUATE AND CONSIDER PROVIDING SUCH DRIVEWAYS DURING THE APPROVAL OF FINAL PLANS.
   - TAYLOR MORRISON WILL USE BRICK PAVERS FOR THE DRIVEWAYS. 2
8. ALL UTILITIES CONSTRUCTED ON THE PROPERTY INCLUDING, BUT NOT LIMITED TO, ELECTRIC, WATER, SEWER, RECLAIMED WATER, CABLE, PHONE, FIBER OPTICS, NATURAL GAS AND OTHER SIMILAR KINDS OF UTILITIES TO SERVICE THE PROPERTY SHALL BE CONSTRUCTED UNDERGROUND UNLESS OTHERWISE NECESSARY TO BE ABOVE GROUND AND APPROVED BY THE CITY. EACH LOT AND ALL COMMON LANDSCAPED AREAS SHALL BE EQUIPPED WITH IN-GROUND RECLAIMED WATER IRRIGATION SYSTEMS TO MAXIMIZE THE USE OF THE CITY'S RECLAIMED WATER SERVICE.
   - ALL UTILITIES CAN BE FOUND ON THE UTILITY SHEETS. ELECTRIC, CABLE, PHONE, FIBER OPTICS, AND NATURAL GAS WILL BE DONE BY OTHER.
9. THE PROJECT SHALL INCORPORATE THE USE OF ENERGY EFFICIENT LIGHTING SYSTEMS, INSULATION AND ENERGY STAR RATED WINDOWS, LOW-FLOW WATER FIXTURES, MODERN HEAT PUMPS, ENERGY EFFICIENT HVAC SYSTEMS, AND THE ABILITY FOR ROOF TOP SOLAR PANELS.
   - TAYLOR MORRISION USES INSULATION AND ENERGY STAR PRODUCTS FOR THEIR HOMES. WE DO NOT PROVIDE SOLAR PANELS AS AN OPTION FOR OUR HOMES. IT WILL BE UP TO THE BUYER TO HAVE SOLAR PANELS INSTALLED BY OTHERS.

MADDEN
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GENERAL NOTES
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER: DAVID A. STOKES, P.E. No. 66527, STATE OF FLORIDA, PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	03/17/23	REVISED PER COUNTY COMMENTS
2	11/20/23	REVISED PER CITY COMMENTS
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JOB #	21074
DATE:	9/26/22
SCALE:	N/A
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C003

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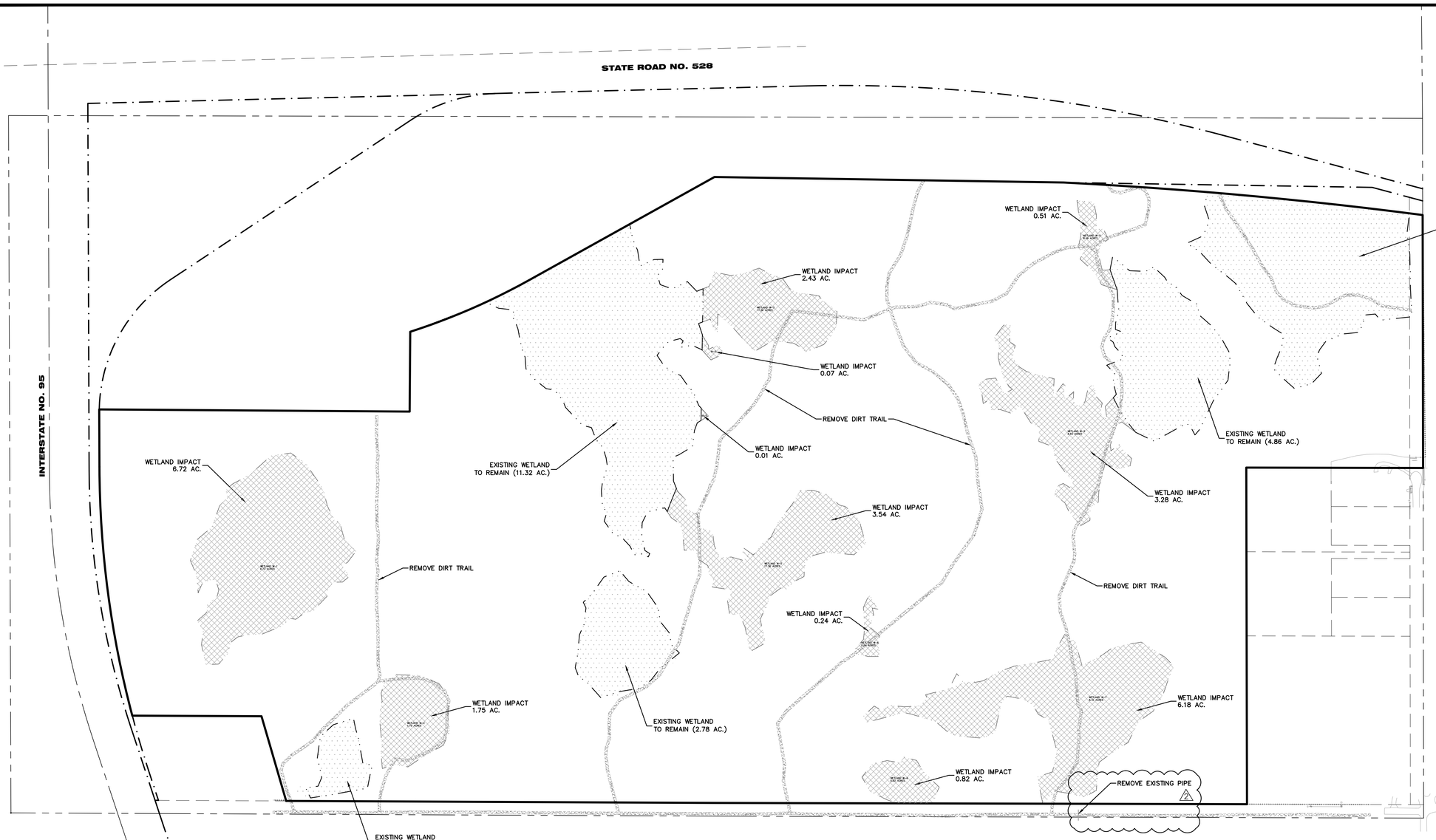

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 inch = 200 ft.

Wetland ID	Wetland Acreage	Direct Impact	Wetland to Remain
W1	6.72	6.72	0.00
W2	1.75	1.75	0.00
W3	1.17	0.15 (OSW)	1.02
W4	2.78	0.00	2.78
W5	17.38	6.06	11.32
W6	0.24	0.24	0.00
w7	6.18	6.18	0.00
w8	0.82	0.82	0.00
w9	8.65	3.79	4.86
W10	8.42	0.00	8.42
PROJECT TOTALS	54.11	25.56	28.40

1

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DEMOLITION / WETLAND IMPACT PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL
DAVID A. STOKES * LICENSE * No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	03/17/23	REVISED PER SJ COMMENTS
2	07/13/23	REVISED PER COUNTY COMMENTS
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JOB # 21074
DATE: 9/26/22
SCALE: 1" = 200'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C005

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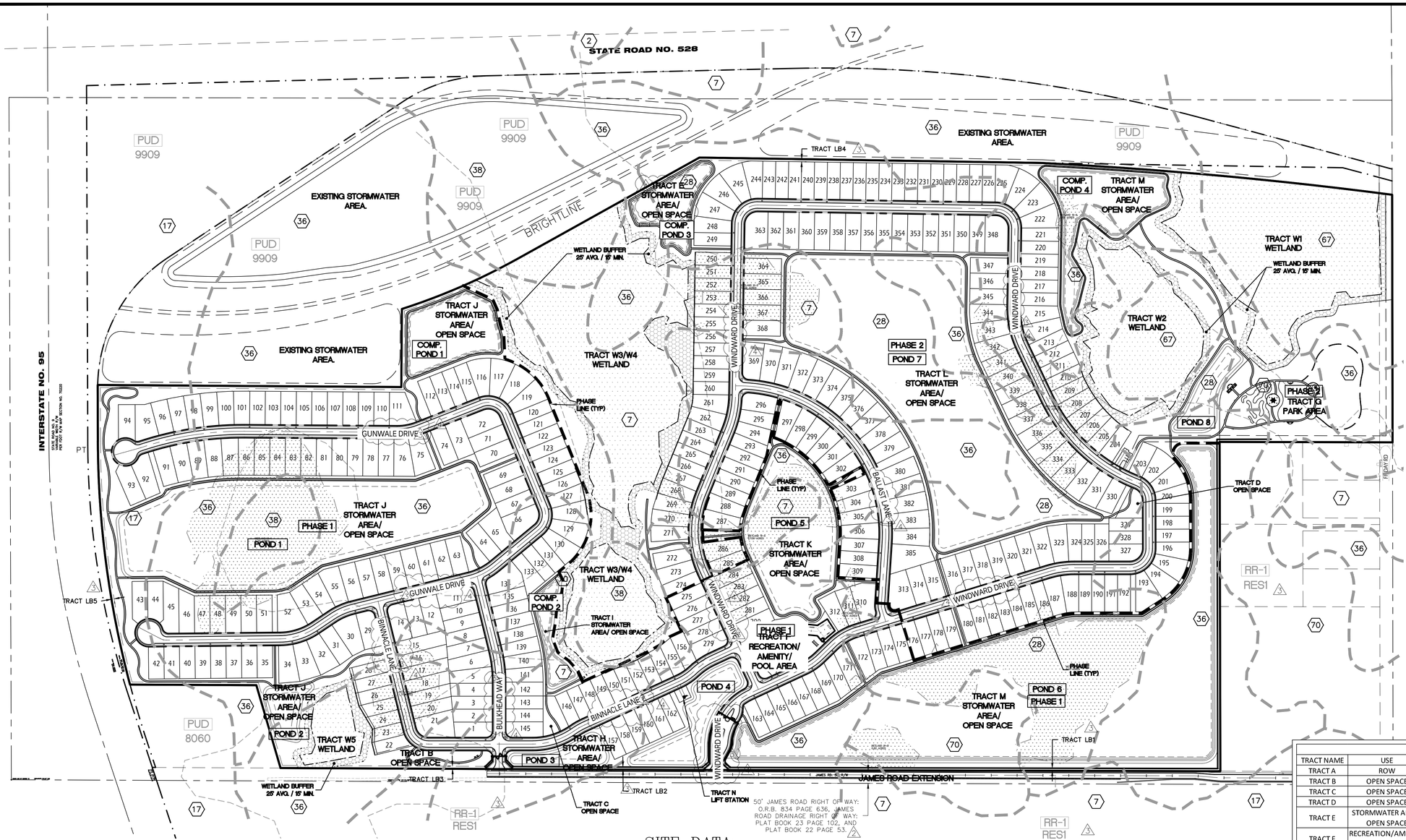

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 inch = 200 ft.

SOILS LEGEND

	SOILS LINE	
2	ANCLOTE SAND, FREQUENTLY PONDED	0 TO 1 PERCENT SLOPES
7	BASINGER SAND,	0 TO 2 PERCENT SLOPES
17	EAUGALLIE SAND,	0 TO 2 PERCENT SLOPES
28	IMMOKALEE SAND,	0 TO 2 PERCENT SLOPES
36	MYAKKA SAND,	0 TO 2 PERCENT SLOPES
38	MYAKKA SAND, DEPRESSIONAL	
67	TOMOKA MUCK, FREQUENTLY PONDED	0 TO 1 PERCENT SLOPES
70	VALKARIA SAND	

IND — ZONING CODE
4800 — LAND USE CODE

EASEMENTS MUST BE RECORDED PRIOR TO RECEIVING A CERTIFICATE OF COMPLETION (C.O.C.) 2

IMPERVIOUS AREA: 3

PROPOSED PAVEMENT & SIDEWALK:	34.50 AC. (19.42%)
PROPOSED BUILDINGS:	52.09 AC. (29.33%)
TOTAL IMPERVIOUS AREA:	86.59 AC. (48.87%)
TOTAL PERVIOUS AREA:	90.59 AC. (51.13%)
TOTAL PROJECT AREA:	177.18 AC (100%)

PROPOSED # OF LOTS

PHASE 1 = 185
PHASE 2 = 200 (50'S= 99, 60'S= 86)
TOTAL = 385 (50'S= 133, 60'S= 67) 4

LAND USE:

1. PROJECT AREA: 212.10 AC.
   WETLAND AREA: 28.40 AC.
   WETLAND BUFFER AREA: 6.52 AC.
   TOTAL SITE AREA: 177.18 AC.
2. OPEN SPACE:
   REQUIRED: 20% MINIMUM
   177.18 AC. X 0.20 = 35.44 AC. 2
   PROPOSED:
   OPEN SPACE/ RECREATION TRACTS B,C,D,F,G = 8.88 AC (4.99%)
   OPEN SPACE WITH TRAIL TRACTS M,J = 3.92 AC (2.21%)
   WALKING TRAIL THROUGH PROPERTY = 22.72 AC (12.80%)
   TOTAL OPEN SPACE = 35.52 AC (20%)
3. DENSITY:
   ESTIMATED NET BUILDABLE AREA:
   = PROPERTY AREA – ESTIMATED POST DEVELOPMENT WETLAND AREA = BUILDABLE AREA:
   = PROPERTY AREA (212.10 AC.) – ESTIMATED POST DEVELOPMENT WETLAND AREA (28.40 AC) = 183.70 AC.
   PROPOSED NET DENSITY:
   =# OF LOTS (385 DU) / BUILDABLE AREA (183.70 AC.)
   = 2.10 DU/AC.
   PROPOSED GROSS DENSITY:
   =# OF LOTS (385 DU) / TOTAL LOT AREA (212.10 AC.)
   = 1.82 DU/AC. 1

PARKING CALCULATIONS:

SINGLE FAMILY REQUIRED PARKING = 2 SPACES/LOT
385 LOTS * 2 SPACES/LOT= 770 SPACES

TOTAL PARKING REQUIRED: 770 SPACES

TOTAL PARKING PROVIDED: 770 SPACES

SITE DATA:

1. TOTAL PROJECT AREA: 212.10 ACRES
2. PARCEL ID'S: 24–35–10–00–502
3. CURRENT ZONING: RU–17
   EXISTING ZONING: PUD
4. FUTURE LAND USE: VLDR
5. RESIDENTIAL USE PROPOSED NUMBER OF LOTS: 385 LOTS
   50' LOTS– 232
   60' LOTS– 153 4
6. RESIDENTIAL USE MINIMUM LOT SIZE: 50'x110'
7. MINIMUM HOUSE FOOTPRINT = 2,400 SF
8. MINIMUM LIVING AREA = 1,500 SF, AVERAGE LIVING AREA TO BE 1,800 SF
9. RESIDENTIAL USE MAX BUILDING HEIGHT: 35' (2 STORIES)
10. RESIDENTIAL USE LOT SETBACKS:
    FRONT– 25'
    REAR– 20'
    SIDE– 5'
    SIDE STREET– 15'
    ACCESSORY STRUCTURE SETBACKS:
    POOL SCREEN:
    SIDE– 5'
    SIDE STREET– 15'
    REAR– 5'
    SWIMMING POOL:
    SIDE– 7.5'
    SIDE STREET– 15'
    REAR– 7.5'
11. PER REVIEW BY THE CITY OF COCOA PUBLIC SCHOOLS, THE INCREASE IN RESIDENTIAL DENSITY OF A MAXIMUM ADDITION OF 385 SINGLE FAMILY DETACHED RESIDENTIAL UNITS RESULTS IN THE FOLLOWING POTENTIAL SCHOOL ENROLLMENT IMPACTS:
    SCHOOL AGE CHILDREN:
    ELEMENTARY – (385 DU X 0.249 CHILD/DU)= 96 CHILDREN
    MIDDLE – (385 DU X 0.114 CHILD/DU)= 44 CHILDREN
    HIGH – (385 DU X 0.124 CHILD/DU)= 48 CHILDREN
    188 CHILDREN
12. PER THE FIRM PANEL NO. 12009C0325G, DATED MAR. 17, 2014, AND PANEL NO. 12009C0320H, DATED JAN. 29, 2021, THE SITE IS DESIGNATED FLOOD ZONE X; AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN AND ZONE A; AREAS WITH NO BASE FLOOD ELEVATIONS DETERMINED.
13. WATER AND SEWER, SERVICE WILL BE PROVIDED BY THE CITY OF COCOA.
14. UTILITY EASEMENTS DEDICATED TO THE CITY OF COCOA SHALL BE PROVIDED OVER ALL WATER AND SEWER MAINS LOCATED OUTSIDE THE PUBLIC RIGHT OF WAY.
15. ALL UTILITY LINES WILL BE DESIGNED TO MEET THE CITY OF COCOA REQUIREMENTS.
16. THE ROADS ARE TO BE PRIVATE. 3
17. THE STORMWATER SYSTEM IS DESIGNED TO MEET THE CITY OF COCOA AND SJRWMD (FDEP) REQUIREMENTS.
18. ALL CONSTRUCTION MATERIALS AND OTHER PROPOSED IMPROVEMENTS SHALL MEET THE APPLICABLE CODES OF THE CITY OF COCOA.
19. A MANDATORY HOMEOWNERS ASSOCIATION SHALL BE CREATED TO PROVIDE FOR MANAGEMENT OF ALL COMMON AREAS AND FACILITIES.
20. PROJECT SIGNAGE WILL COMPLY WITH THE CITY OF COCOA LAND DEVELOPMENT CODE.
21. BUFFERS WILL MEET THE REQUIREMENTS OF THE CITY OF COCOA LAND DEVELOPMENT CODE.
22. SIDEWALKS WILL BE REQUIRED IN ACCORDANCE WITH THE CODE.
23. SPEED LIMIT = 20 MPH.
24. DRIVEWAYS WILL BE CONSTRUCTED OF STONE OR BRICK PAVERS OR STAMPED AND STAINED CONCRETE.
25. LIGHTING TO BE PROVIDED IN ACCORDANCE WITH LDC, SECTION 8.0(6), AND DARK SKY REQUIREMENTS. A COPY OF THE LIGHTING PLAN WILL BE PROVIDED TO THE CITY OF COCOA PRIOR TO CONSTRUCTION. PLEASE SEE PROPOSED LIGHTING FIXTURE CUT SHEET ON SHEET C904 USING THE WASHINGTON POLE AND GRANVILLE LIGHT. 1

TRACT TABLE

TRACT NAME	USE	OWNERSHIP	MAINTENANCE	ACRE	(%)
TRACT A	ROW	H.O.A.	H.O.A.	16.31	7.69%
TRACT B	OPEN SPACE	H.O.A.	H.O.A.	0.85	0.40%
TRACT C	OPEN SPACE	H.O.A.	H.O.A.	0.25	0.12%
TRACT D	OPEN SPACE	H.O.A.	H.O.A.	0.24	0.11%
TRACT E	STORMWATER AREA/ OPEN SPACE	H.O.A.	H.O.A.	1.88	0.89%
TRACT F	RECREATION/AMENITY POOL AREA	H.O.A.	H.O.A.	1.26	0.59%
TRACT G	PARK AREA	H.O.A.	H.O.A.	6.28	2.96%
TRACT H	STORMWATER AREA/ OPEN SPACE	H.O.A.	H.O.A.	2.95	1.39%
TRACT I	STORMWATER AREA/ OPEN SPACE	H.O.A.	H.O.A.	2.4	1.13%
TRACT J	STORMWATER AREA/ OPEN SPACE	H.O.A.	H.O.A.	20.4	9.62%
TRACT K	STORMWATER AREA/ OPEN SPACE	H.O.A.	H.O.A.	5.1	2.40%
TRACT L	STORMWATER AREA/ OPEN SPACE	H.O.A.	H.O.A.	15.9	7.50%
TRACT M	STORMWATER AREA/ OPEN SPACE	H.O.A.	H.O.A.	29.79	14.05%
TRACT N	LIFT STATION	CITY	CITY	0.06	0.03%
TRACT LB1	LANDSCAPE BUFFER	H.O.A.	H.O.A.	0.44	0.21%
TRACT LB2	LANDSCAPE BUFFER	H.O.A.	H.O.A.	0.17	0.08%
TRACT LB3	LANDSCAPE BUFFER	H.O.A.	H.O.A.	0.13	0.06%
TRACT LB4	LANDSCAPE BUFFER	H.O.A.	H.O.A.	0.5	0.24%
TRACT LB5	LANDSCAPE BUFFER	H.O.A.	H.O.A.	0.87	0.41%
TRACT W1	WETLAND PRESERVATION	H.O.A.	H.O.A.	9.61	4.53%
TRACT W2	WETLAND PRESERVATION	H.O.A.	H.O.A.	6.11	2.88%
TRACT W3/W4	WETLAND PRESERVATION	H.O.A.	H.O.A.	13.6	6.41%
TRACT W5	WETLAND PRESERVATION	H.O.A.	H.O.A.	1.64	0.77%
SINGLE FAMILY LOTS:				75.39	35.54%
TOTAL PROJECT AREA:				212.1	100%

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OVERALL SITE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL. 32751
407–629–0077

ENGINEER'S SEAL: DAVID A. STOKES, LICENSE No. 66527, STATE OF FLORIDA, PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA–0007723

	DATE	REVISIONS
1	3/17/23	REVISED PER CITY AND COUNTY COMMENT
2	07/13/23	REVISED PER COUNTY COMMENTS
3	10/27/23	REVISED PER COUNTY COMMENTS
4	11/29/23	REVISED PER CITY COMMENTS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 200'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C100

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MATCHLINE - SHEET C105

MATCHLINE - SHEET C102

INTERSTATE 95

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT W5 WETLAND

POND 2

GUNWALE DRIVE

10' UE

5' UE

R25'

R45'

R54'

R227'

R250'

R275'

R225'

MIAMI CURB (TYP.) 300M C900

5' CONCRETE SIDEWALK (TYP.) 904 C902

CONSERVATION SIGN EVERY 100' (TYP.) 920 C900

A C900

RETAINING WALL W/ 42" HANDRAIL, WITHIN A 10' WALL EASEMENT (TYP.)

25' AVG./15' MIN WETLAND BUFFER (TYP.)

FEMA FLOODPLAIN ZONE A LINE

N89°44'07"W 2671.29' (R)

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

PROPOSED LIGHTING LOCATIONS
*SUBJECT TO CHANGE BASED ON LIGHTING DESIGN TO BE DONE BY POWER PROVIDER

KEY MAP
SCALE: 1"=2000'

MADDEN
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(407) 629-8330

SITE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2800 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER: ISSUED BY: LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER DAVID A. STOKES
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB # 21074
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APPROVED BY: DAS

C101

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MATCHLINE - SHEET C106

MATCHLINE - SHEET C101

MATCHLINE - SHEET C103

TRACT I STORMWATER AREA/ OPEN SPACE

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT W3/W4 WETLAND

COMP. POND 2

TRACT I STORMWATER AREA/ OPEN SPACE

GUNWALE DRIVE

BULGEWOOD WAY

WINDWARD DRIVE

SWAGGLE LANE

BINNACLE LANE

TRACT C OPEN SPACE

TRACT H STORMWATER AREA/ OPEN SPACE

POND 3

POND 4

TRACT N LIFT STATION

TRACT B OPEN SPACE

STOYFDC JAMES ROAD EXTENSION (PUBLIC ROW)

PHASE 2

PHASE 1

RETAINING WALL W/ 42" HANDRAIL, WITHIN A 10' WALL EASEMENT (TYP.)

25'AVG./15'MIN. WETLAND BUFFER (TYP.)

CONSERVATION SIGN EVERY 100' (TYP.) 920 C900

FEMA FLOODPLAIN ZONE A LINE

5' CONCRETE SIDEWALK (TYP.) 904 C902

MIAMI CURB (TYP.) 300M C900

STOP SIGN, STOP BAR, & CROSSWALK (TYP.) 212 C902

592-002 C902 ADA RAMP CR-L, WITH DETECTABLE WARNING PER FDOT INDEX (TYP.)

522-002 C902 ADA RAMP CR-F, WITH DETECTABLE WARNING PER FDOT INDEX (TYP.)

520-001 C900 FDOT TYPE F CURB & GUTTER PER FDOT INDEX (TYP.)

FDOT GUARDRAIL PER FDOT INDEX 536-001 (TYP.)

520-001 C900 FDOT 3' VALLEY GUTTER PER FDOT INDEX (TYP.)

PROPOSED GATED ENTRANCE
ALL MOTORIZED GATES SHALL INCLUDE A CLICK TO ENTER SYSTEM OR A SIREN OPERATED SWITCH AND KNOX KEY SWITCH BACKUP. ALL MANUAL GATES SHALL HAVE A KNOX PADLOCK.

ROAD CLOSED SIGN (R11-2) AND ROAD END OBJECT MARKER SIGN (OM4-1)

END FDOT GUARDRAIL PER FDOT INDEX 536-001 (TYP.)

267.29' (R)

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

PROPOSED LIGHTING LOCATIONS
*SUBJECT TO CHANGE BASED ON LIGHTING DESIGN TO BE DONE BY POWER PROVIDER

KEY MAP
SCALE: 1"=2000'

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SITE PLAN
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BREVARD COUNTY FLORIDA

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407-629-0077

ENGINEER'S CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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1	3/17/23	REVISED SHEET PER COUNTY COMMENTS
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JOB # 21074
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C102

MATCHLINE - SHEET C107

MATCHLINE - SHEET C102

MATCHLINE - SHEET C104

WINDWARD DRIVE

BALLAST LANE

BINNACLE LANE

PHASE 2
PHASE 1

FEMA FLOODPLAIN ZONE A LINE

TRACT K STORMWATER AREA/ OPEN SPACE

TRACT F RECREATION/ AMENITY/ POOL AREA
FOR MORE DETAIL PLEASE SEE AMENITY PLAN SET

TRACT H STORMWATER AREA/ OPEN SPACE

POND 4

TRACT M STORMWATER AREA/ OPEN SPACE

POND 6

MIAMI CURB (TYP.) 300M C900

700 C900 — 4" SPEED TABLE DETAIL WINDWARD DRIVE AND BINNACLE LANE TO HAVE RAISED INTERSECTION WITH STAMPED CONCRETE

212 C900 — STOP SIGN, STOP BAR, & CROSSWALK (TYP.)

804 C980 — 5' CONCRETE SIDEWALK (TYP.)

A C900

PROPOSED GATED ENTRANCE
ALL MOTORIZED GATES SHALL INCLUDE A CLICK TO ENTER SYSTEM OR A SIREN OPERATED SWITCH AND KNOX KEY SWITCH BACKUP. ALL MANUAL GATES SHALL HAVE A KNOX PADLOCK.

522-002 C902 — ADA RAMP CR-F, WITH DETECTABLE WARNING PER FDOT INDEX (TYP.)

520-001 C900 — FDOT TYPE F CURB & GUTTER PER FDOT INDEX (TYP.)

520-001 C900 — FDOT 3' VALLEY GUTTER PER FDOT INDEX (TYP.)

FDOT GUARDRAIL PER FDOT INDEX 536-001 (TYP.)

JAMES ROAD EXTENSION (PUBLIC ROW)

S89°51'39"E 2003.09' (R)

N89°50'31"W 2671.29

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

PROPOSED LIGHTING LOCATIONS
*SUBJECT TO CHANGE BASED ON LIGHTING DESIGN TO BE DONE BY POWER PROVIDER

KEY MAP
SCALE: 1"=2000'

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ENGINEER: DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
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C103

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MATCHLINE - SHEET C108

MATCHLINE - SHEET C103

WINDWARD DRIVE

PHASE 2

PHASE 1

POND 6

TRACT M
STORMWATER
AREA/
OPEN SPACE

MIAMI CURB (TYP.) 300M C900

5' CONCRETE SIDEWALK (TYP.) 904 C902

A C900

A-A C900

B C900

PROPOSED GUARDRAIL MAINTENANCE OPENING

ROAD CLOSED ½ MILE AHEAD SIGN (R11-3A)

520-001 C900 FDOT TYPE F CURB & GUTTER PER FDOT INDEX (TYP.)

NO OUTLET SIGNAGE (W14-2)

JAMES ROAD EXTENSION (PUBLIC ROW)

FDOT GUARDRAIL PER FDOT INDEX 536-001 (TYP.)

START GUARDRAIL PER FDOT INDEX 536-001 (TYP.)

FRIDAY RD

S00°07'14"E 1273.27' (R)

1"W 2671.29' (R)

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

PROPOSED LIGHTING LOCATIONS
*SUBJECT TO CHANGE BASED ON LIGHTING DESIGN TO BE DONE BY POWER PROVIDER

KEY MAP
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ENGINEER'S SEAL: DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	3/17/23	REVISED PER COUNTY COMMENTS
2	10/27/23	REVISED PER CITY COMMENTS
3	10/27/23	REVISED PER COUNTY COMMENTS
4	11/20/23	REVISED PER CITY COMMENTS
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JOB # 21074
DATE: 9/26/22
SCALE: 1" = 50'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C104

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MATCHLINE - SHEET C109

INTERSTATE 95

BRIGHT LINE

EXISTING STORMWATER AREA.

MATCHLINE - SHEET C106

TRACT J STORMWATER AREA/ OPEN SPACE

10' UE

5' CONCRETE SIDEWALK (TYP.)

904 C902

A C900

GUNWALE DRIVE

50' 24'

R1263'
R1238'

R1213'

R54'
R45'
R25'
R137'

MIAMI CURB (TYP.)

300M C900

5' UE

FEMA FLOODPLAIN ZONE A LINE

TRACT J STORMWATER AREA/ OPEN SPACE

POND 1

MATCHLINE - SHEET C101

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

PROPOSED LIGHTING LOCATIONS
*SUBJECT TO CHANGE BASED ON LIGHTING DESIGN TO BE DONE BY POWER PROVIDER

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

SITE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCEN DR SUITE 350
MAITLAND, FL. 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER DAVID A. STOKES
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	03/17/23	REVISED PER COMMENTS
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JOB # 21074
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C105

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MATCHLINE - SHEET C109

MATCHLINE - SHEET C105

TRACT J STORMWATER AREA/ OPEN SPACE

COMP. POND 1

TRACT W3/W4 WETLAND

RETAINING WALL W/ 42" HANDRAIL, WITHIN A 10' WALL EASEMENT (TYP.)

25'AVG./15'MIN. WETLAND BUFFER (TYP.)

PROPOSED LIGHTING LOCATIONS
*SUBJECT TO CHANGE BASED ON LIGHTING DESIGN TO BE DONE BY POWER PROVIDER

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

TRACT J STORMWATER AREA/ OPEN SPACE

FEMA FLOODPLAIN ZONE A LINE

PHASE 1

PHASE 2

QUINWALE DRIVE

MIAMI CURB (TYP.) 300M C900

5' CONCRETE SIDEWALK (TYP.) 904 C902

CONSERVATION SIGN EVERY 100' (TYP.) 920 C900

RETAINING WALL W/ 42" HANDRAIL, WITHIN A 10' WALL EASEMENT (TYP.)

MCDAVID DRIVE

MATCHLINE - SHEET C107

MATCHLINE - SHEET C102

POND 1

KEY MAP
SCALE: 1"=2000'

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CIVIL ENGINEERS
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Maitland, Florida 32751
(407) 629-8330

SITE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR. SUITE 350
MAITLAND, FL. 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA
MOORHEAD & STOKES, LLC
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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MATCHLINE - SHEET C110

MATCHLINE - SHEET C106

MATCHLINE - SHEET C108

MATCHLINE - SHEET C103

WINDWARD DRIVE

BALLAST LANE

PHASE 2

PHASE 1

POND 7

POND 8

TRACT L
STORMWATER
AREA/
OPEN SPACE

TRACT K
STORMWATER
AREA/
OPEN SPACE

212 C902 STOP SIGN, STOP BAR, & CROSSWALK (TYP.)

522-002 C902 ADA RAMP CR-F, WITH DETECTABLE WARNING PER FDOT INDEX (TYP.)

MIAMI CURB (TYP.) 300M C900

5' CONCRETE SIDEWALK (TYP.) C902

FEMA FLOODPLAIN ZONE A LINE

A C900

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

PROPOSED LIGHTING LOCATIONS
*SUBJECT TO CHANGE BASED ON LIGHTING DESIGN TO BE DONE BY POWER PROVIDER

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

SITE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL. 32751
407-629-0077

DAVID R. STOKES, P.E. LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB # 21074
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C107

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MATCHLINE - SHEET C111

TRACT M
STORMWATER
AREA/
OPEN SPACE

COMP.
POND 4

TRACT W2
WETLAND

25'AVG./15'MIN.
WETLAND BUFFER

TRACT M
STORMWATER
AREA/
OPEN SPACE

CONSERVATION SIGN
EVERY 100' (TYP.)
920
C900

25'AVG./15'MIN.
WETLAND BUFFER

MATCHLINE - SHEET C107

RETAINING WALL W/
42" HANDRAIL, WITHIN
A 10' WALL EASEMENT
(TYP.)

100'

TRACT Q
PARK AREA
FOR MORE DETAIL
PLEASE SEE
AMENITY PLAN SET

POND 8

TRACT M
STORMWATER
AREA/
OPEN SPACE

300V
C900
VERTICAL
CURB (TYP.)

300M
C900
MIAMI CURB
(TYP.)

818
C900
HANDICAP RAMP
AND PARKING
STALL DETAIL

PHASE 2
PHASE 1

25' UTILITY
EASEMENT

TRACT M
STORMWATER
AREA/
OPEN SPACE

FEMA FLOODPLAIN
ZONE A LINE

POND 6

WINDWARD DRIVE

A
C900
TRACT D
OPEN SPACE

118'

POND 7

5' CONCRETE
SIDEWALK
(TYP.)
904
C902

TRACT L
STORMWATER
AREA/
OPEN SPACE

MATCHLINE - SHEET C104

PROPOSED LIGHTING LOCATIONS
*SUBJECT TO CHANGE BASED ON
LIGHTING DESIGN TO BE DONE BY
POWER PROVIDER

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

SITE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERED BY DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
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C108

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GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

STATE ROAD 528

N88°36'37"E 1179.17' (R)

MATCHLINE - SHEET C110

BRIGHT LINE

EXISTING STORMWATER AREA

TRACT E STORMWATER AREA/ OPEN SPACE 1

COMP. POND 3

25'AVG./15'MIN. WETLAND BUFFER

RETAINING WALL W/ 42" HANDRAIL, WITHIN A 10' WALL EASEMENT (TYP.)

MATCHLINE - SHEET C106

KEY MAP
SCALE: 1"=2000'

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SITE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL
DAVID A. STOKES * LICENSE * No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

1	11/20/23	REVISED PER CITY COMMENTS
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	DATE	REVISIONS

JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
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C109

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GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

PROPOSED LIGHTING LOCATIONS
*SUBJECT TO CHANGE BASED ON LIGHTING DESIGN TO BE DONE BY POWER PROVIDER

S88°36'23"W 5492.10' (R)

STATE ROAD 528

Δ=16°24'19"
R=5579.58'
L=1597.58'
CB=S83°11'41"E
CHD.=1592.13' (R)

N89°53'09"W 2678.66'

MATCHLINE - SHEET C109

MATCHLINE - SHEET C111

EXISTING STORMWATER AREA.

TRACT E STORMWATER AREA/ OPEN SPACE

COMP. POND 3

MIAMI CURB (TYP.) 300M C900

A C900

5' UE

TRACT M STORMWATER AREA/ OPEN SPACE

WINDWARD DRIVE

5' CONCRETE SIDEWALK (TYP.) 904 C902

TRACT M STORMWATER AREA/ OPEN SPACE

TRACT L STORMWATER AREA/ OPEN SPACE

POND 7

TRACT L STORMWATER AREA/ OPEN SPACE

MATCHLINE - SHEET C107

KEY MAP
SCALE: 1"=2000'

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CIVIL ENGINEERS
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Maitland, Florida 32751
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SITE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL: DAVID A. STOKES, P.E. LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
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C110

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GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

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Maitland, Florida 32751
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SITE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL
DAVID A. STOKES * LICENSE * No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
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C111

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W 2676.66' (R)

MATCHLINE - SHEET C110

STATE ROAD 528

S75°00'11"E
774.64' (R)

N89°05'44"W 1166.60' (R)

197.51' (R)
N74°59'21"W

S00°05'30"E
15.92' (R)

COMP. POND 4

TRACT M
STORMWATER AREA/
OPEN SPACE

25'AVG./15'MIN.
WETLAND BUFFER

920 C900 CONSERVATION SIGN EVERY 100' (TYP.)

100'

TRACT W1
WETLAND

TRACT W2
WETLAND

TRACT M
STORMWATER AREA/
OPEN SPACE

TRACT M
STORMWATER AREA/
OPEN SPACE

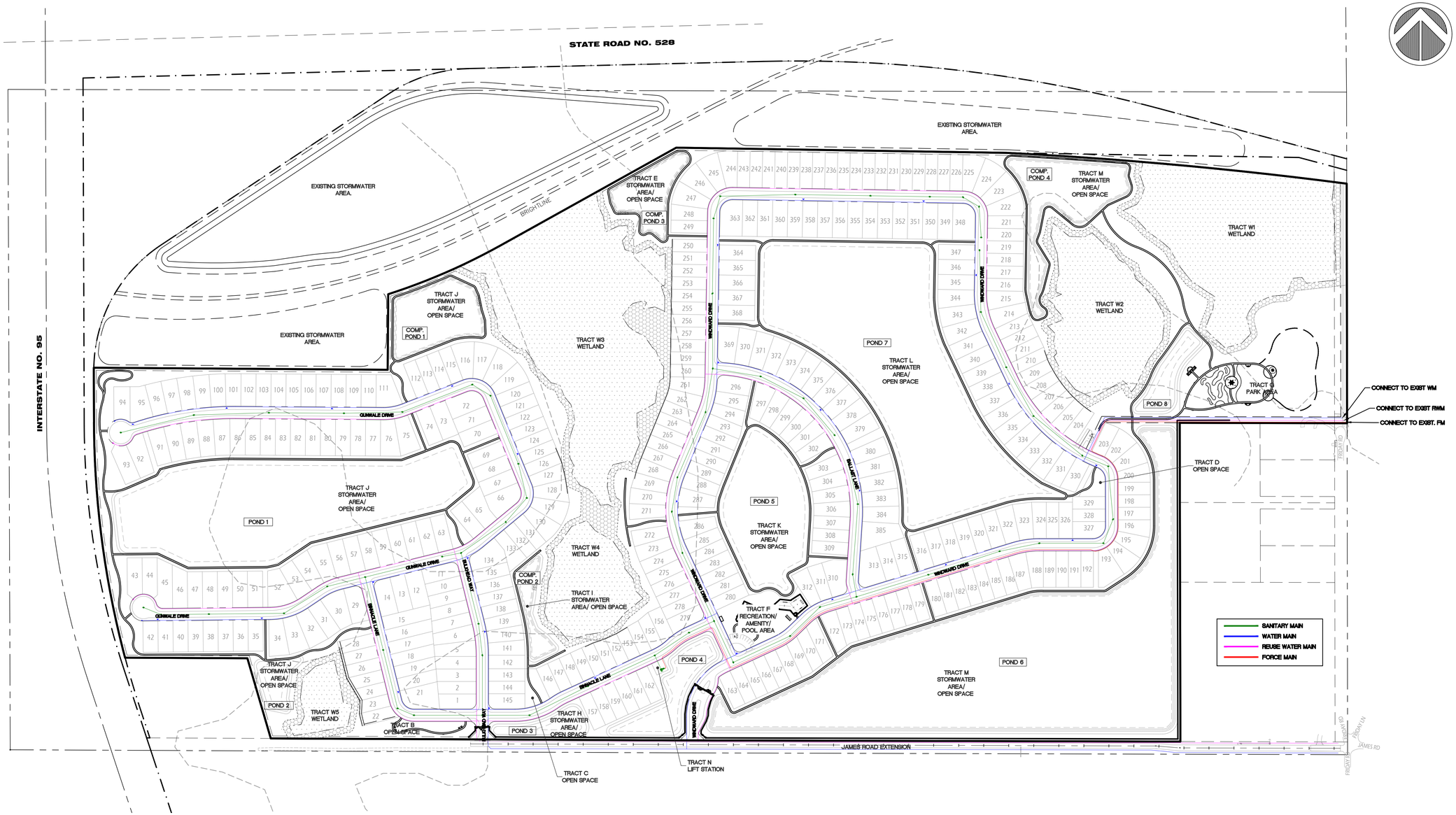
MATCHLINE - SHEET C108

KEY MAP
SCALE: 1"=2000'

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 inch = 200 ft.



POTABLE WATER METER SUMMARY	RECLAIMED WATER METER SUMMARY
PHASE 1 185 – 3/4" SINGLE FAMILY LOT METERS 1 – 2" METER AMENITY FACILITY TRACT F 1 – 1" METER LIFT STATION TRACT N	PHASE 1 185 – 3/4" SINGLE FAMILY LOT METERS 1 – 2" METER AMENITY FACILITY TRACT F 1 – 2" METER OPEN SPACE TRACT C 1 – 2" METER OPEN SPACE TRACT H
PHASE 2 200 – 3/4" SINGLE FAMILY LOT METERS	PHASE 2 200 – 3/4" SINGLE FAMILY LOT METERS 1 – 2" METER OPEN SPACE TRACT G ⚠1

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

OVERALL UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DAVID J. STOKES ★ LICENSED ★ No. 66527 ★ STATE OF FLORIDA ★ PROFESSIONAL ENGINEER
ENGINEER'S SEAL
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
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JOB # 21074
DATE: 9/26/22
SCALE: 1" = 200'
DESIGNED BY: RJS
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C200

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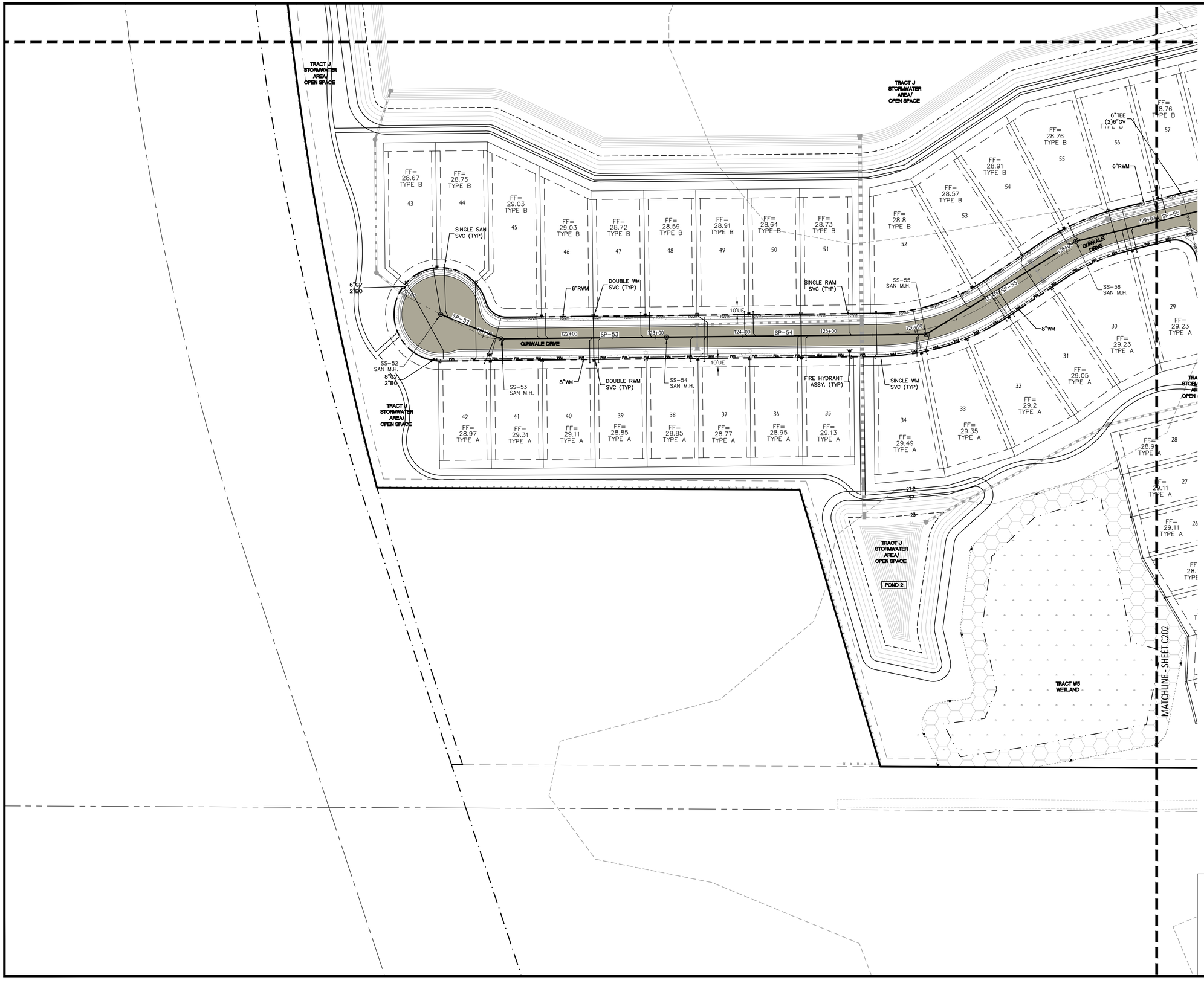

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE

ALL SERVICES SHALL BE PLACED ON OR AS CLOSE TO PROPERTY LINE AS POSSIBLE

KEY MAP
SCALE: 1"=2000'

MADDEN
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UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL: DAVID ASHLEY STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
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C201

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MATCHLINE - SHEET C206

MATCHLINE - SHEET C203

MATCHLINE - SHEET C201

GUNWALE DRIVE

BRIDGE LINE

BLUHEAD WAY

BINNACLE LANE

CHAPEL DRIVE

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT I STORMWATER AREA/ OPEN SPACE

TRACT W3/ W4 WETLAND

COMP. POND 2

TRACT C OPEN SPACE

TRACT B OPEN SPACE

TRACT H STORMWATER AREA/ OPEN SPACE

POND 3

POND 4

PHASE 1

PHASE 2

FIRE HYDRANT ASSY. (TYP)

SINGLE SAN SVC (TYP)

DOUBLE WM SVC (TYP)

DOUBLE RWM SVC (TYP)

SINGLE WM SVC (TYP)

SINGLE RWM SVC (TYP)

12"TEE (2)12"GV

12"TEE (1)12"GV (1)12"X8"REDUCER (1)8"GV

12"WM 12"CROSS (2)12"GV (1)12"x8"REDUCER (1)8"GV

1"RWM SVC & METER

6"CROSS (3)6"GV

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

ALL SERVICES SHALL BE PLACED ON OR AS CLOSE TO PROPERTY LINE AS POSSIBLE

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
DAVID J. STOKES
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB #	21074
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C202

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MATCHLINE - SHEET C207

MATCHLINE - SHEET C202

MATCHLINE - SHEET C204

PHASE 2

PHASE 1

TRACT K STORMWATER AREA/ OPEN SPACE

TRACT F RECREATION/ AMENITY/ POOL AREA

FOR MORE DETAIL PLEASE SEE AMENITY PLAN SET

TRACT H STORMWATER AREA/ OPEN SPACE

POND 4

TRACT M STORMWATER AREA/ OPEN SPACE

POND 6

BALLAST LANE

WINDWARD DRIVE

SINNACLE LANE

JAMES ROAD EXTENSION

SP-9 SP-10 SP-11 SP-12 SP-13 SP-14 SP-15 SP-16 SP-17 SP-18 SP-35 SP-36

SS-10 SAN M.H.
SS-11 SAN M.H.
SS-12 SAN M.H.
SS-13 SAN M.H.
SS-14 SAN M.H.
SS-15 SAN M.H.
SS-16 SAN M.H.
SS-17 SAN M.H.
SS-18 SAN M.H.
SS-36 SAN M.H.
SS-37 SAN M.H.

8"WM
6"RWM
10'UE
FIRE HYDRANT ASSY. (TYP)
SINGLE WM SVC (TYP)
8"TEE (2)8"GV
DOUBLE RWM SVC (TYP)
SINGLE RWM SVC (TYP)
SINGLE SAN SVC (TYP)
6"TEE (2)6"GV
2"POTABLE WM SVC & METER
2"RWM SVC & METER
DOUBLE WM SVC (TYP)
12"X8" TEE (1)12"GV (1)8"GV
12"WM

ALL SERVICES SHALL BE PLACED ON OR AS CLOSE TO PROPERTY LINE AS POSSIBLE

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
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UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
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ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER DAVID A. STOKES
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JOB #	21074
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C203

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MATCHLINE - SHEET C208

MATCHLINE - SHEET C203

FIRE HYDRANT ASSY. (TYP)

SS-9 SAN M.H.

8"WM

SS-8 SAN M.H.

SINGLE WM SVC (TYP)

SINGLE SAN SVC (TYP)

10'UE

WINDWARD DRIVE

SP-8

SP-9

17+00

18+00

19+00

20+00

6"RWM

SINGLE RWM SVC (TYP)

DOUBLE RWM SVC (TYP)

DOUBLE WM SVC (TYP)

FF= 28.99 TYPE A — 197

FF= 28.15 TYPE B — 196

FF= 28.25 TYPE B — 195

FF= 28.30 TYPE B — 194

FF= 28.35 TYPE B — 193

FF= 28.22 TYPE B — 188

FF= 28.40 TYPE B — 189

FF= 28.50 TYPE B — 190

FF= 28.50 TYPE B — 191

FF= 28.42 TYPE B — 192

FF= 28.07 TYPE B — 187

PHASE 2

PHASE 1

POND 6

TRACT M STORMWATER AREA/ OPEN SPACE

6"RWM

CONNECT TO EXISTING 8" RWM WITH 8"X6" TAPPING SLEEVE AND GV

FRIDAY RD

+75

12"WM

CONNECT TO EXISTING 12" WM WITH 12"X12"TAPPING SLEEVE AND GV

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

ALL SERVICES SHALL BE PLACED ON OR AS CLOSE TO PROPERTY LINE AS POSSIBLE

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL: DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER

CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	10/27/23	REVISED PER CITY COMMENTS
2	11/20/23	REVISED PER CITY COMMENTS
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JOB # 21074
DATE: 9/26/22
SCALE: 1" = 50'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C204

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MATCHLINE - SHEET C209

MATCHLINE - SHEET C206

MATCHLINE - SHEET C201

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

ALL SERVICES SHALL BE PLACED ON OR AS CLOSE TO PROPERTY LINE AS POSSIBLE

EXISTING STORMWATER AREA.

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT J STORMWATER AREA/ OPEN SPACE

POND 1

GUNWALE DRIVE

FF= 29.10 TYPE A 94
FF= 29.10 TYPE A 95
FF= 28.98 TYPE A 96
FF= 29.02 TYPE A 97
FF= 29.02 TYPE A 98
FF= 28.84 TYPE A 99
FF= 28.82 TYPE A 100
FF= 29.00 TYPE A 101
FF= 29.00 TYPE A 102
FF= 28.87 TYPE A 103
FF= 28.81 TYPE A 104
FF= 28.99 TYPE A 105
FF= 28.99 TYPE A 106
FF= 28.87 TYPE A 107
FF= 28.81 TYPE A 108
FF= 28.99 TYPE A 109

FF= 29.09 TYPE B 93
FF= 28.69 TYPE B 92
FF= 28.58 TYPE B 91
FF= 28.66 TYPE B 90
FF= 28.66 TYPE B 89
FF= 28.56 TYPE B 88
FF= 28.56 TYPE B 87
FF= 28.62 TYPE B 86
FF= 28.62 TYPE B 85
FF= 28.53 TYPE B 84
FF= 28.56 TYPE B 83
FF= 28.62 TYPE B 82
FF= 28.62 TYPE B 81
FF= 28.53 TYPE B 80
FF= 28.56 TYPE B 79
FF= 28.65 TYPE 78

SS-38 SAN M.H.
SS-39 SAN M.H.
SS-40 SAN M.H.
SS-41 SAN M.H.

FIRE HYDRANT ASSY. (TYP)

8"WM
10'UE
12" X 8" REDUCER
12" WM
8"GV 2"BO
6"GV 2"BO
6"RWM
SINGLE WM SVC (TYP)
SINGLE RWM SVC (TYP)
DOUBLE RWM SVC (TYP)
DOUBLE WM SVC (TYP)
SINGLE SAN SVC (TYP)

SP-38
SP-39
SP-40

152+00
153+00
154+00
155+00
156+00
157+00
151+00
150+00
149+00
148+00

27.2
27
23
21
15

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL DANIEL A. STOKES
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	10/27/23	REVISED PER CITY COMMENTS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C205

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MATCHLINE - SHEET C210

MATCHLINE - SHEET C205

TRACT J STORMWATER AREA/ OPEN SPACE

COMP. POND 1

25' AVERAGE 15' MIN UPLAND BUFFER

TRACT W3/W4 WETLAND

TRACT J STORMWATER AREA/ OPEN SPACE

POND 1

PHASE 1

PHASE 2

GUNWALE DRIVE

WINDWARD LANE

MATCHLINE - SHEET C207

MATCHLINE - SHEET C202

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

ALL SERVICES SHALL BE PLACED ON OR AS CLOSE TO PROPERTY LINE AS POSSIBLE

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C206

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MATCHLINE - SHEET C211

MATCHLINE - SHEET C206

MATCHLINE - SHEET C208

MATCHLINE - SHEET C203

WINDWARD DRIVE

BALLAST LANE

POND 7

POND 5

TRACT L
STORMWATER AREA/ OPEN SPACE

TRACT K
STORMWATER AREA/ OPEN SPACE

PHASE 2

PHASE 1

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

ALL SERVICES SHALL BE PLACED ON OR AS CLOSE TO PROPERTY LINE AS POSSIBLE

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S NUMBER LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER DAVID A. STOKES

CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C207

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MATCHLINE - SHEET C212

MATCHLINE - SHEET C207

MATCHLINE - SHEET C204

TRACT M
STORMWATER AREA/
OPEN SPACE

COMP. POND 4

TRACT W2
WETLAND

TRACT M
STORMWATER
AREA/
OPEN SPACE

TRACT Q
PARK AREA
FOR MORE DETAIL
PLEASE SEE
AMENITY PLAN SET

POND 8

TRACT M
STORMWATER AREA/
OPEN SPACE

POND 6

TRACT M
STORMWATER
AREA/
OPEN SPACE

TRACT D
OPEN SPACE

POND 7

TRACT L
STORMWATER
AREA/
OPEN SPACE

PHASE 2
PHASE 1

WINDWARD DRIVE

FRIDAY RD

FF= 29.26 TYPE A
FF= 29.10 TYPE A
FF= 29.30 TYPE A
FF= 29.43 TYPE A
FF= 29.26 TYPE A
FF= 29.1 TYPE A
FF= 29.06 TYPE A
FF= 29.29 TYPE A
FF= 29.32 TYPE A
FF= 29.12 TYPE A
FF= 29.03 TYPE A
FF= 28.22 TYPE B
FF= 28.21 TYPE B
FF= 28.13 TYPE B
FF= 28.04 TYPE B
FF= 27.97 TYPE B
FF= 28.08 TYPE B
FF= 28.04 TYPE B
FF= 27.99 TYPE B
FF= 27.92 TYPE B
FF= 28.01 TYPE B
FF= 28.15 TYPE B
FF= 28.82 TYPE A
FF= 28.99 TYPE A
FF= 28.10 TYPE B
FF= 28.29 TYPE B
FF= 28.50 TYPE B
FF= 28.90 TYPE B

SS-4 SAN M.H.
SS-5 SAN M.H.
SS-6 SAN M.H.
SS-7 SAN M.H.
SS-8
SS-9 SAN M.H.

SINGLE SAN SVC (TYP)
DOUBLE WM SVC (TYP)
DOUBLE RWM SVC (TYP)
SINGLE RWM SVC (TYP)
SINGLE WM SVC (TYP)

6"RWM
8"WM
12"TEE (2)12"GV (2)12"X8"REDUCER
6"TEE (2)6"GV
FIRE HYDRANT ASSY. (TYP)
6"FM
12"WM
6"FM
25'UE
10'UE
5'UE

EXISTING 12" WM (TO BE CONSTRUCTED BY OTHERS)
EXISTING 8" RWM (TO BE CONSTRUCTED BY OTHERS)
EXISTING 8" FM (TO BE CONSTRUCTED BY OTHERS)

1 CONNECT TO EXISTING 12" WM WITH 12"X12" TAPPING SLEEVE & GV

CONNECT TO EXISTING 8" FM WITH 8"X6" TAPPING SLEEVE AND GV

CONNECT TO EXISTING 8" RWM WITH 8"X6" TAPPING SLEEVE & GV

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

ALL SERVICES SHALL BE PLACED ON OR AS CLOSE TO PROPERTY LINE AS POSSIBLE

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER KSHANE STOKES 10/27/2023
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	03/17/23	REVISED PER COMMENTS
2	10/27/23	REVISED PER CITY COMMENTS
3	11/20/23	REVISED PER CITY COMMENTS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C208

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GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

ALL SERVICES SHALL BE PLACED ON OR AS CLOSE TO PROPERTY LINE AS POSSIBLE

MATCHLINE - SHEET C210

EXISTING STORMWATER AREA

TRACT E STORMWATER AREA/ OPEN SPACE

COMP. POND 3

FF= 29.34 TYPE A

FF= 29.34 TYPE A

FF= 29.34 TYPE A

FF= 28.96 TYPE A

FF= 28.96 TYPE A

MATCHLINE - SHEET C206

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ENGINEER'S SEAL AND AUTHENTICATION
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	11/29/23	REVISED PER CITY COMMENTS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C209

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GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

ALL SERVICES SHALL BE PLACED ON OR AS CLOSE TO PROPERTY LINE AS POSSIBLE

MATCHLINE - SHEET C209

MATCHLINE - SHEET C211

EXISTING STORMWATER AREA

WINDWARD DRIVE

SP-24 SP-23 SP-22 SP-21 SP-20 SP-25 SP-26

SS-25 SAN M.H. SS-24 SAN M.H. SS-23 SAN M.H. SS-22 SAN M.H. SS-21 SAN M.H. SS-20 SAN M.H. SS-26 SAN M.H. SS-19 SAN M.H. SS-1 SAN M.H.

44+00 45+00 43+00 42+00 41+00 40+00 39+00 38+00 37+00 47+00 48+00 34+00

10'UE

6"RWM 8"WM

DOUBLE RWM SVC (TYP)

SINGLE SAN SVC (TYP)

SINGLE WM SVC (TYP)

SINGLE RWM SVC (TYP)

FIRE HYDRANT ASSY. (TYP)

TRACT L STORMWATER AREA/ OPEN SPACE

POND 7

LOT	FF	TYPE
245	29.16	A
246	29.25	A
247	29.34	A
248	29.34	A
249	29.31	A
250	28.96	B
251	28.96	B
244	29.07	A
243	28.96	A
242	28.96	A
241	29.11	A
240	29.11	A
239	29.11	A
238	28.96	A
237	28.96	A
236	29.11	A
235	29.13	A
234	29.13	A
233	28.98	A
232	28.94	A
231	29.09	A
230	29.11	A
229	29.11	A
228	28.96	A
227	28.96	A
226	29.11	A
225	29.11	A
224	29.36	A
223	29.36	A
222	29.29	A
221	29.20	A
220	29.08	A
219	29.03	A
363	28.25	A
362	28.25	A
361	28.10	B
360	28.10	B
359	28.10	B
358	28.01	B
357	28.08	B
356	28.13	B
355	28.13	B
354	28.03	B
353	28.06	B
352	28.13	B
351	28.13	B
350	28.04	B
349	28.30	B
348	28.30	B
347	28.08	B
364	28.08	B

MATCHLINE - SHEET C207

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ENGINEER'S SEAL AND AUTHENTICATION
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C210

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MATCHLINE - SHEET C210

COMP. POND 4

TRACT M
STORMWATER
AREA/
OPEN SPACE

FF=
29.29
TYPE

FF=
29.20
TYPE

FF=
29.05
TYPE

FF=
29.03
TYPE

FF=
TYPE

TRACT W2
WETLAND

TRACT M
STORMWATER
AREA/
OPEN SPACE

TRACT M
STORMWATER
AREA/
OPEN SPACE

TRACT W1
WETLAND

25'UE

MATCHLINE - SHEET C208

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

ALL SERVICES SHALL BE PLACED ON OR
AS CLOSE TO PROPERTY LINE AS POSSIBLE

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

UTILITY PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL
DAVID A. STOKES
LICENSE
No. 66527
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C211

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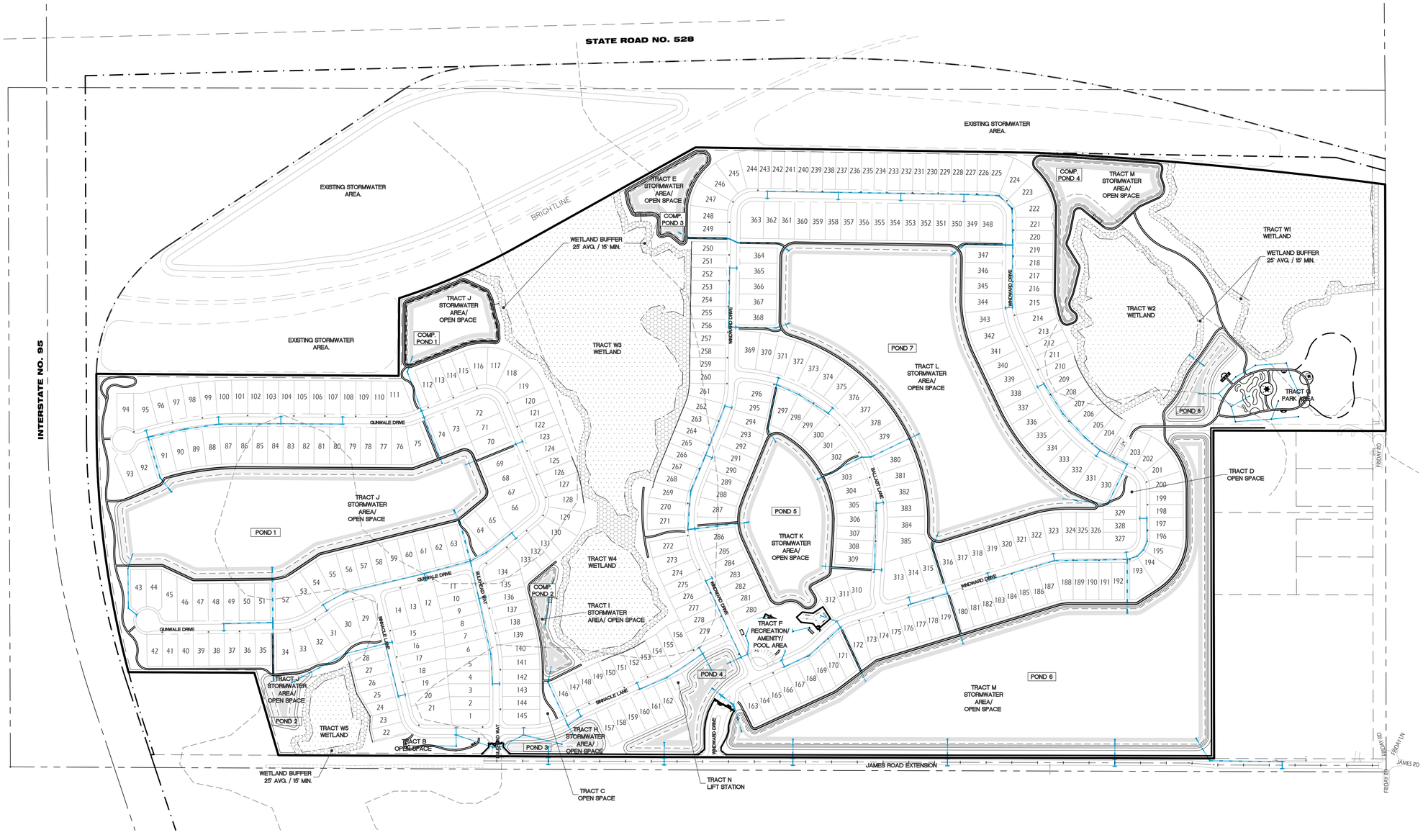
GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 inch = 200 ft.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

OVERALL DRAINAGE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DAVID R. STOKES, P.E. LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ENGINEERING BUSINESS CERTIFICATION NO. 27223
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 200'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

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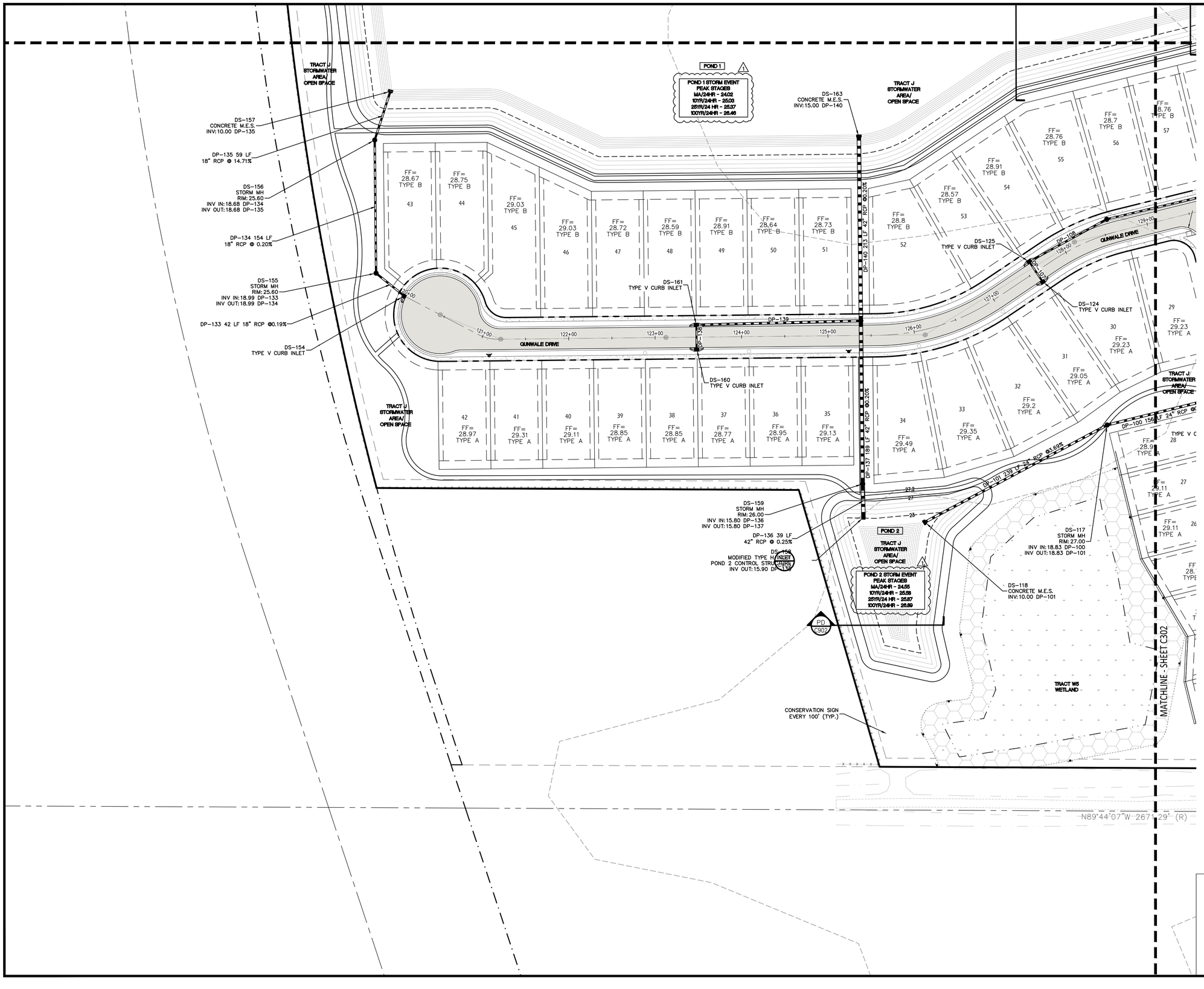
C300



GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

DRAINAGE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL: DAVID A. STOKES, P.E. LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	07/13/23	REVISED PER COUNTY COMMENTS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

KEY MAP
SCALE: 1"=2000'

C301

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MATCHLINE - SHEET C306

MATCHLINE - SHEET C303

MATCHLINE - SHEET C301

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

DS-130 TYPE V CURB INLET
DP-116 54 LF 42" RCP @ 14.48%
DS-129 TYPE V CURB INLET
DS-131 STORM MH
DS-132 STORM MH
DS-128 TYPE V CURB INLET
DS-127 TYPE V CURB INLET
DS-122 TYPE V CURB INLET
DS-123 TYPE V CURB INLET
DS-121 STORM MH
DS-115 TYPE V CURB INLET
DS-116 TYPE V CURB INLET
DS-113 TYPE V CURB INLET
DS-114 TYPE V CURB INLET
DS-106 TYPE V CURB INLET
DS-120 TYPE V CURB INLET
DS-119 TYPE V CURB INLET
DS-110 TYPE V CURB INLET
DS-107 TYPE V CURB INLET
DS-108 TYPE V CURB INLET
DS-111 TYPE V CURB INLET
DS-109 TYPE V CURB INLET
DS-112 CONCRETE M.E.S. INV:16.00 DP-96
DS-105 CONCRETE M.E.S. INV:13.00 DP-90
DS-104 STORM MH RIM: 25.50 INV IN:14.54 DP-89 INV OUT:14.54 DP-90
DS-101 TYPE V CURB INLET
DS-102 TYPE V CURB INLET
DS-103 STORM MH
DS-94 TYPE V CURB INLET
DS-95 TYPE V CURB INLET
DS-96 STORM MH
DS-97 TYPE V CURB INLET
DS-54 TYPE V CURB INLET
DS-63 TYPE V CURB INLET
DS-190 YARD DRAIN RIM: 24.50 INV OUT:19.50 DP-168
DS-191 YARD DRAIN RIM: 24.50 INV IN:18.50 DP-168 INV OUT:18.50 DP-169
DS-100 MODIFIED TYPE C INLET POND 3 CONTROL STRUCTURE
ODS-1 TYPE 6 CURB INLET
ODS-2 TYPE 6 CURB INLET
ODS-3 CONCRETE M.E.S. INV: 20.50 ODP-2
ODS-4 TYPE 6 CURB INLET
ODS-5 TYPE 6 CURB INLET
ODS-6 CONCRETE M.E.S. INV:14.00 ODP-4

DP-169 43 LF 12" RCP @1.16%
DP-168 104 LF 12" RCP @0.54%
DP-93 145 LF 15" RCP @0.55%
DP-92 153 LF 24" RCP @0.66%
DP-90 61 LF 24" RCP @ 2.51%
DP-89 154 LF 24" RCP @0.26%
DP-86 44 LF 24" RCP @ 0.20%
DP-82 156 LF 24" RCP @0.20%
DP-83 145 LF 24" RCP @ 0.20%
ODP-2 40 LF 24" RCP @ 0.74%
ODP-4 60 LF 24" RCP @ 9.03%

TRACT J STORMWATER AREA/ OPEN SPACE
TRACT W3/W4 WETLAND
TRACT I STORMWATER AREA/ OPEN SPACE
TRACT C OPEN SPACE
TRACT B OPEN SPACE
TRACT H STORMWATER AREA/ OPEN SPACE

BIO-ABSORPTION MEDIA PIPE ELEVATION 21.19
6" BIO-ABSORPTION MEDIA SYSTEM OUTFALL PIPE, SOLID WALL PVC PIPE INV. = 21.19 YARD DRAIN TOP = 22.00
CONSERVATION SIGN EVERY 100' (TYP.)
COMP POND 2
POND 3
POND 4
POND 3 STORM EVENT PEAK STAGES MA/24-HR - 23.85 10YR/24-HR - 24.66 25YR/24 HR - 24.82 100YR/24-HR - 25.46
POND 4 STORM EVENT PEAK STAGES MA/24-HR - 24.9 10YR/24-HR - 24.82 25YR/24 HR - 25.03 100YR/24-HR - 25.81

GUNWALE DRIVE
BULKHEAD WAY
BINNACLE LANE
SHACKLE LANE
WINDWARD DRIVE
JAMES ROAD EXTENSION
PHASE 1
PHASE 2

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

DRAINAGE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DANIEL STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	12/7/22	ADDED FILTER MEDIA INFO
2	07/13/23	REVISED PER COUNTY COMMENTS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C302

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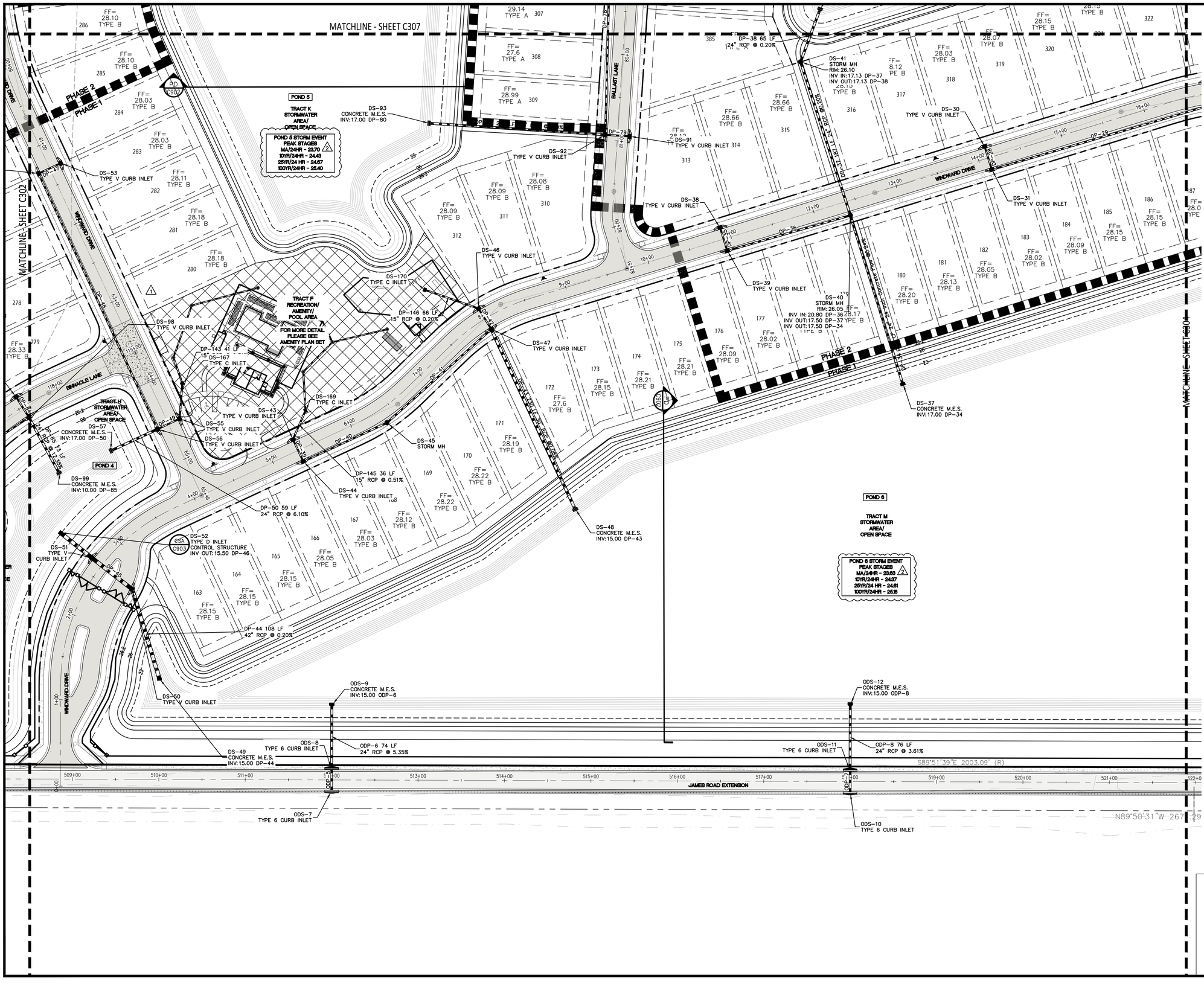

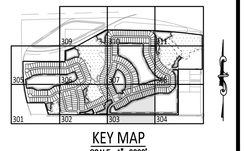

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CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

DRAINAGE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL. 32751
407-629-0077

ENGINEER'S CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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APPROVED BY:	DAS

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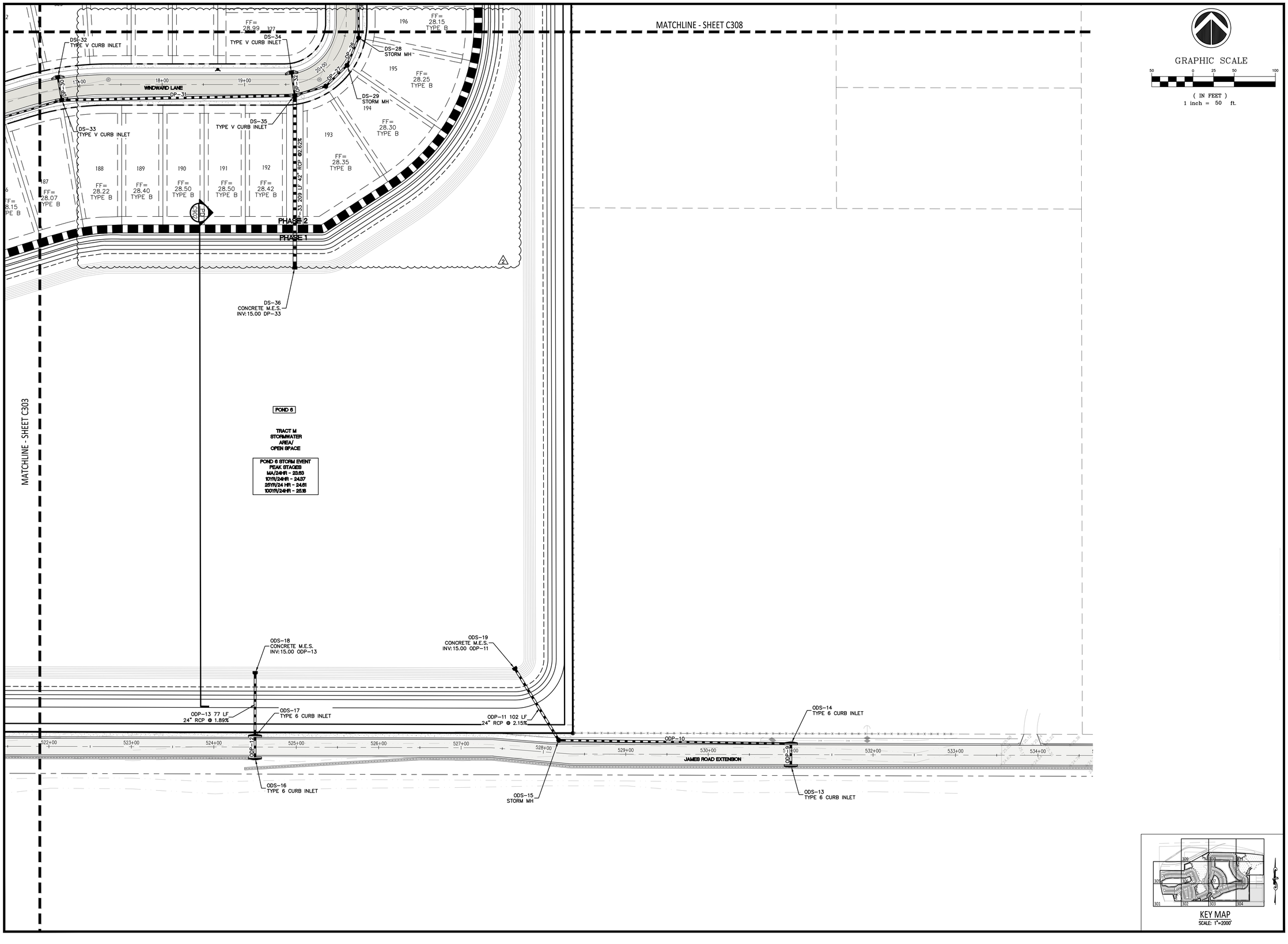

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DRAINAGE PLAN
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BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S CERTIFICATE OF AUTHORIZATION NO. CA-0007723
DAVID A. STOKES * LICENSE * No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY DAVID A. STOKES, P.E. ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

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JOB # 21074
DATE: 9/26/22
SCALE: 1" = 50'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

KEY MAP
SCALE: 1"=2000'

C304

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MATCHLINE - SHEET C309

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

EXISTING STORMWATER AREA.

MATCHLINE - SHEET C306

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT J STORMWATER AREA/ OPEN SPACE

FF= 29.10 TYPE A 94

FF= 29.10 TYPE A 95

FF= 28.98 TYPE A 96

FF= 29.02 TYPE A 97

FF= 29.02 TYPE A 98

FF= 28.84 TYPE A 99

FF= 28.82 TYPE A 100

FF= 29.00 TYPE A 101

FF= 29.00 TYPE A 102

FF= 28.87 TYPE A 103

FF= 28.81 TYPE A 104

FF= 28.99 TYPE A 105

FF= 28.99 TYPE A 106

FF= 28.87 TYPE A 107

FF= 28.81 TYPE A 108

FF= 28.99 TYPE A 109

DS-147 TYPE V CURB INLET

DS-145 TYPE V CURB INLET

DS-143 TYPE V CURB INLET

DS-150 TYPE V CURB INLET

GUNWALE DRIVE

DP-127

DP-125

DP-123

DP-126

DP-124

DP-128

DP-129

DS-148 TYPE V CURB INLET

DS-146 TYPE V CURB INLET

DS-144 TYPE V CURB INLET

DS-149 STORM MH

DS-151 TYPE V CURB INLET

FF= 28.56 TYPE B 88

FF= 28.62 TYPE B 87

FF= 28.62 TYPE B 86

FF= 28.62 TYPE B 85

FF= 28.53 TYPE B 84

FF= 28.56 TYPE B 83

FF= 28.62 TYPE B 82

FF= 28.62 TYPE B 81

FF= 28.53 TYPE B 80

FF= 28.56 TYPE B 79

FF= 28.65 TYPE 78

FF= 28.66 TYPE B 89

FF= 28.66 TYPE B 90

FF= 28.58 TYPE B 91

FF= 28.69 TYPE B 92

FF= 29.09 TYPE B 93

DS-152 STORM MH

DP-132 71 LF 36" RCP @ 12.76%

DS-153 CONCRETE M.E.S. INV:10.00 DP-132

TRACT J STORMWATER AREA/ OPEN SPACE

POND 1

POND 1 STORM EVENT PEAK STAGES
MA/24HR - 24.02
10YR/24HR - 25.03
25YR/24 HR - 25.37
100YR/24HR - 26.46

MATCHLINE - SHEET C301

KEY MAP
SCALE: 1"=2000'

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ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER DANIEL STOKES
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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C305

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MATCHLINE - SHEET C310

MATCHLINE - SHEET C305

MATCHLINE - SHEET C307

MATCHLINE - SHEET C302

BIO-ABSORPTION MEDIA PIPE ELEVATION 21.19 (BAM C902)

6" BIO-ABSORPTION MEDIA SYSTEM OUTFALL PIPE, SOLID WALL PVC PIPE INV. = 21.19 YARD DRAIN TOP = 22.00

TRACT J STORMWATER AREA/ OPEN SPACE

COMP POND 1 BROAD CRESTED WEIR (BCW C903)

COMP. POND 1

DS-142 CONCRETE M.E.S. INV: 13.00 DP-122

DP-122 62 LF 24" RCP @ 2.00%

DS-140 TYPE V CURB INLET

DP-121 181 LF 24" RCP @ 0.28%

DS-139 TYPE V CURB INLET

DP-119 192 LF 24" RCP @ 0.28%

DS-136 TYPE V CURB INLET

DP-118 210 LF 18" RCP @2.54%

DS-135 TYPE V CURB INLET

DP-117

DS-137 CONCRETE M.E.S. INV: 16.00 DP-118

DS-138 MODIFIED TYPE C INLET POND 1 CONTROL STRUCTURE (CSB C903)

POND 1

POND 1 STORM EVENT PEAK STAGES
MA/24HR - 24.02 (2)
10YR/24HR - 25.03
25YR/24 HR - 25.37
100YR/24HR - 26.46

DS-134 CONCRETE M.E.S. INV: 10.00 DP-116

DS-133 STORM MH RIM: 25.80 INV IN: 17.81 DP-115 INV OUT: 17.81 DP-116

DP-116 54 LF 42" RCP @ 14.48%

DS-130 TYPE V CURB INLET

DP-115

DS-129

GUNWALE DRIVE

PHASE 1

PHASE 2

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT W3/W4 WETLAND

CONSERVATION SIGN EVERY 100' (TYP.)

DS-62 STORM MH

DP-55

DP-56

DS-64 TYPE V CURB INLET

DS-63 TYPE V CURB INLET

MACHAND DRIVE

INV OUT:14.21 DP-67

TYPE V CU

TYPE

TYPE A

TYPE B

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

KEY MAP
SCALE: 1"=2000'

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DRAINAGE PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

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2600 LAKE LUCIEN DR SUITE 350
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ENGINEER: DAVID J. STOKES - LICENSE No. 66527 - STATE OF FLORIDA - PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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C306

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MATCHLINE - SHEET C311

MATCHLINE - SHEET C306

MATCHLINE - SHEET C303

MATCHLINE - SHEET C308

DS-67 TYPE V CURB INLET
DS-66 TYPE V CURB INLET
DP-58
DP-59 54+00
DS-68 TYPE V CURB INLET
DP-60
DS-69 TYPE V CURB INLET
DP-61 156 LF 30" RCP @0.20%
DP-62 55 LF 30" RCP @ 6.35%
DS-70 STORM MH
DS-71 CONCRETE M.E.S. INV:16.00 DP-62
DS-81 TYPE V CURB INLET
DS-80 STORM MH
DS-82 TYPE V CURB INLET
DS-78 TYPE V CURB INLET
DS-79 TYPE V CURB INLET
DP-73 62 LF 24" RCP @ 3.55%
DS-84 CONCRETE M.E.S. INV: 18.00 DP-73
DS-85 MODIFIED TYPE C INLET CSA POND 5 CONTROL STRUCTURE C903 INV OUT: 15.90 DP-74
DS-86 STORM MH
DP-75
DP-76 208 LF 24" RCP @0.20%
DS-87 STORM MH
DS-88 CONCRETE M.E.S. INV:15.00 DP-76
DS-90 TYPE V CURB INLET
DP-77
DS-89 TYPE V CURB INLET
DS-42 CONCRETE M.E.S. INV:17.00 DP-38
DP-38 65 LF 24" RCP @ 0.20%
DP-57 209 LF 36" RCP @0.63%
DS-59 TYPE V CURB INLET
DS-58 TYPE V CURB INLET
DS-60 TYPE V CURB INLET
DS-61 TYPE V CURB INLET
DP-53
DP-54
DP-55
DP-56
DP-15 71 LF 42" RCP @ 2.83%
DS-15 CONCRETE M.E.S. INV: 16.00 DP-15
DS-12 TYPE V CURB INLET
DP-11
DS-11 TYPE V CURB INLET
DP-12
DP-16
DS-17 TYPE V CURB INLET
DS-18 TYPE V CURB INLET

POND 7
TRACT L STORMWATER AREA/ OPEN SPACE
POND 7 STORM EVENT PEAK STAGES
MA/24HR - 23.59
10YR/24HR - 24.30
25YR/24 HR - 24.53
100YR/24HR - 25.11

POND 5
TRACT K STORMWATER AREA/ OPEN SPACE
POND 5 STORM EVENT PEAK STAGES
MA/24HR - 23.70
10YR/24HR - 24.43
25YR/24 HR - 24.67
100YR/24HR - 25.40

WINDWARD DRIVE
BALLAST LANE
PHASE 2
PHASE 1

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

KEY MAP
SCALE: 1"=2000'

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DRAINAGE PLAN
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WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER: DAVID R. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
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C307

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MATCHLINE - SHEET C312

MATCHLINE - SHEET C307

MATCHLINE - SHEET C304

TRACT M STORMWATER AREA/ OPEN SPACE

COMP. POND 4

TRACT W2 WETLAND

CONSERVATION SIGN EVERY 100' (TYP.)

TRACT M STORMWATER AREA/ OPEN SPACE

DS-172 CONCRETE M.E.S. INV:22.00 DP-147

DP-147 69 LF 30" RCP @ 0.73%

DS-171 MODIFIED TYPE C INLET POND 8 CONTROL STRUCTURE

DS-165 CONCRETE M.E.S. INV:13.00 DP-141

POND 8

DP-141 76 LF 24" RCP @ 2.63%

TRACT Q PARK AREA

FOR MORE DETAIL PLEASE SEE AMENITY PLAN SET

DS-164 TYPE C INLET RIM:24.50 INV IN:18.45 DP-167 INV IN:18.45 DP-161 INV OUT:15.00 DP-141

POND 8 STORM EVENT PEAK STAGES MA/24HR - 24.44 10YR/24HR - 25.08 25YR/24 HR - 25.36 100YR/24HR - 26.71

TRACT M STORMWATER AREA/ OPEN SPACE

DS-19 STORM MH

DS-20 STORM MH

DS-22 TYPE V CURB INLET

DS-21 TYPE V CURB INLET

WINDWARD DRIVE

PHASE 2

PHASE 1

TRACT M STORMWATER AREA/ OPEN SPACE

DS-23 STORM MH

POND 6

TRACT D OPEN SPACE

DS-24 STORM MH RIM:27.50 INV IN:20.78 DP-22 INV OUT:20.78 DP-23

DP-23 174 LF 24" RCP @ 0.20%

DP-22 173 LF 24" RCP @0.20%

POND 7

TRACT M STORMWATER AREA/ OPEN SPACE

DS-25 CONCRETE M.E.S. INV:15.00 DP-23

DS-26 TYPE V CURB INLET

DS-27 TYPE V CURB INLET

DS-32 TYPE V CURB INLET

DS-34 TYPE V CURB INLET

DS-28

DP-24

DP-25

DP-16

DP-18

DP-19

DP-20

DP-21

FF= 29.26 TYPE A

FF= 29.10 TYPE A

FF= 29.30 TYPE A

FF= 29.43 TYPE A

FF= 29.43 TYPE A

FF= 29.26 TYPE A

FF= 29.1 TYPE A

FF= 29.06 TYPE A

FF= 29.29 TYPE A

FF= 29.32 TYPE A

FF= 29.32 TYPE A

FF= 29.12 TYPE A

FF= 29.03 TYPE A

FF= 28.22 TYPE B

FF= 28.22 TYPE B

FF= 28.08 TYPE B

FF= 28.04 TYPE B

FF= 27.99 TYPE B

FF= 27.92 TYPE B

FF= 28.01 TYPE B

FF= 28.15 TYPE B

FF= 28.82 TYPE A

FF= 28.99 TYPE A

FF= 28.10 TYPE B

FF= 28.29 TYPE B

FF= 28.50 TYPE B

FF= 28.90 TYPE B

FF= 28.13 TYPE B

FF= 28.04 TYPE B

FF= 27.97 TYPE B

FF= 27.97 TYPE B

FF= 28.21 TYPE B

GRAPHIC SCALE

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(IN FEET)
1 inch = 50 ft.

KEY MAP
SCALE: 1"=2000'

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DRAINAGE PLAN
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BREVARD COUNTY FLORIDA

TAYLOR MORRISON
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ENGINEER: DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
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C308

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GRAPHIC SCALE

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(IN FEET)
1 inch = 50 ft.

STATE ROAD NO. 528

N88°36'37"E 1179.17' (R)

MATCHLINE - SHEET C310

EXISTING STORMWATER AREA

BIO-ABSORPTION MEDIA PIPE ELEVATION 21.19 (BAM / C902)

COMP. POND 3

TRACT E STORMWATER AREA/ OPEN SPACE

COMP POND 3 BROAD CRESTED WEIR (BCW / C903)

DS-77 CONCRETE M.E.S. INV:14.00 DP-67

CONSERVATION SIGN EVERY 100' (TYP.)

6" BIO-ABSORPTION MEDIA SYSTEM OUTFALL PIPE, SOLID WALL PVC PIPE INV. = 21.19 YARD DRAIN TOP = 22.00

DP-67 49 LF 36" RCP @ 0.43%

DP-66 153 LF 36" RCP @ 0.20%

DS-76 STORM MH RIM: 25.80 INV IN:14.21 DP-66 INV OUT:14.21 DP-67

FF= 29.34 TYPE A

FF= 29.34 TYPE A

FF= 29.34 TYPE A

FF= 28.96 TYPE A

248

249

250

251

MATCHLINE - SHEET C306

KEY MAP
SCALE: 1"=2000'

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ENGINEER'S SEAL
DAVID A. STOKES * LICENSE * No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
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GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

S88°36'23"W 5492.10' (R)

Δ=16°24'19"
R=5579.58'
L=1597.58'
CB=S8.3°11'41"E
CHD.=1592.13' (R)

N89°53'09"W 2678.86'

MATCHLINE - SHEET C309

MATCHLINE - SHEET C311

EXISTING STORMWATER AREA.

DS-1 TYPE V CURB INLET
DS-2 TYPE V CURB INLET
DS-3 TYPE V CURB INLET
DS-4 TYPE V CURB INLET
DS-5 TYPE V CURB INLET
DS-6 TYPE V CURB INLET
DS-7 TYPE V CURB INLET
DS-8 TYPE V CURB INLET
DS-9 STORM MH
DS-10 STORM MH
DS-13 TYPE V CURB INLET
DS-14 TYPE V CURB INLET
DS-15 STORM MH
RIM: 25.60
INV IN: 18.00 DP-14
INV OUT: 18.00 DP-15
DS-16 CONCRETE M.E.S.
INV: 16.00 DP-15
DS-66 TYPE V CURB INLET
DS-67 TYPE V CURB INLET
DS-72 TYPE H INLET CONTROL STRUCTURE
INV OUT: 15.00 DP-63
DS-73 STORM MH
RIM: 26.49
INV IN: 14.90 DP-63
INV OUT: 14.90 DP-64
DS-74 STORM MH
DS-75 STORM MH

DP-1 DP-2 DP-3 DP-4 DP-5 DP-6 DP-7 DP-8 DP-9 DP-10 DP-11 DP-12 DP-13 DP-14 DP-15 DP-58 DP-63 DP-64

DP-63 52 LF 36" RCP @ 0.20%
DP-64 156 LF 36" RCP @ 0.20%
DP-14 156 LF 42" RCP @0.20%
DP-15 71 LF 42" RCP @ 2.83%

WINDWARD DRIVE

TRACT L STORMWATER AREA/ OPEN SPACE

POND 7

MATCHLINE - SHEET C307

KEY MAP
SCALE: 1"=2000'

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ENGINEER'S SEAL AND AUTHENTICATION
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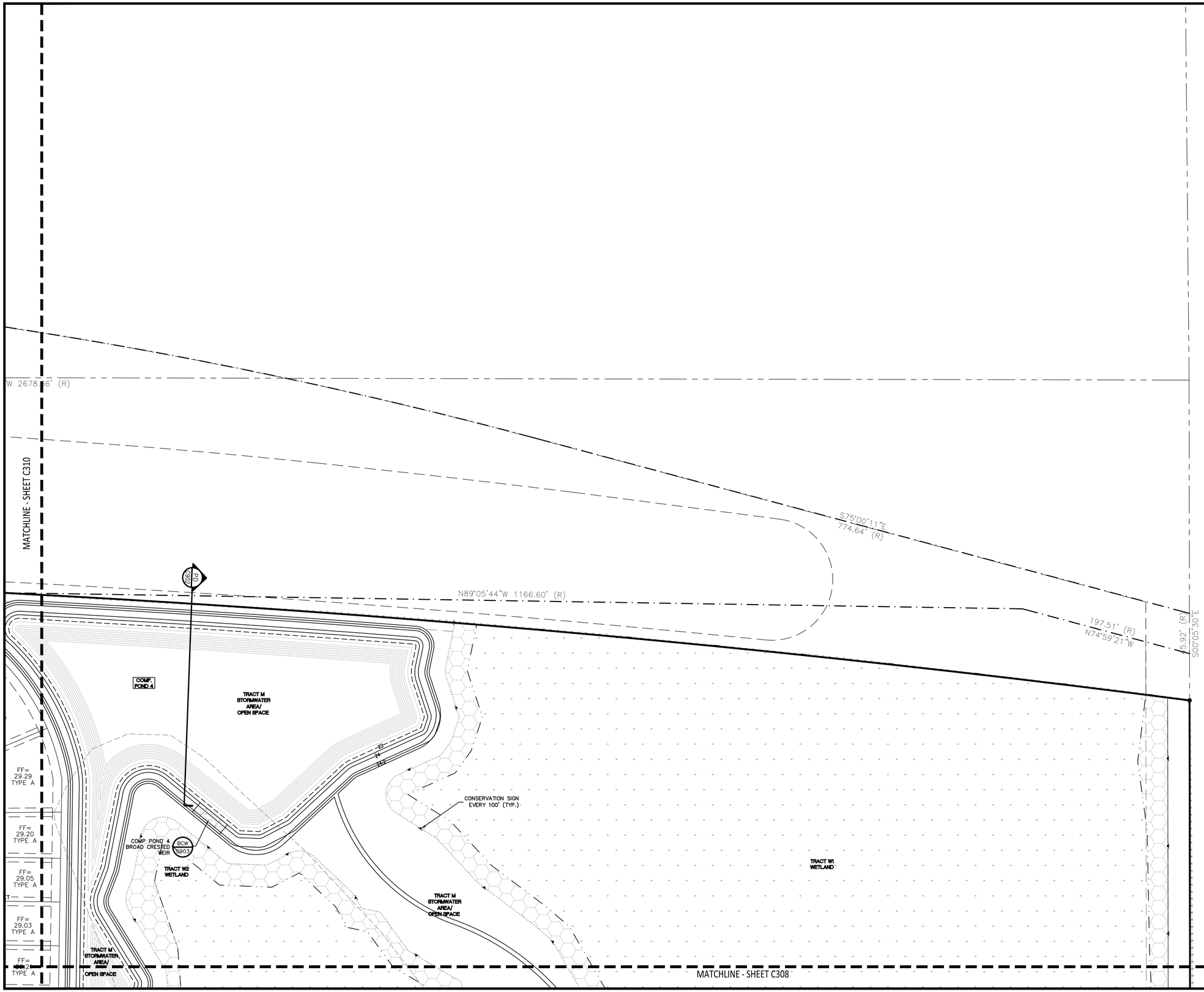

GRAPHIC SCALE

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(IN FEET)
1 inch = 50 ft.

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ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 27
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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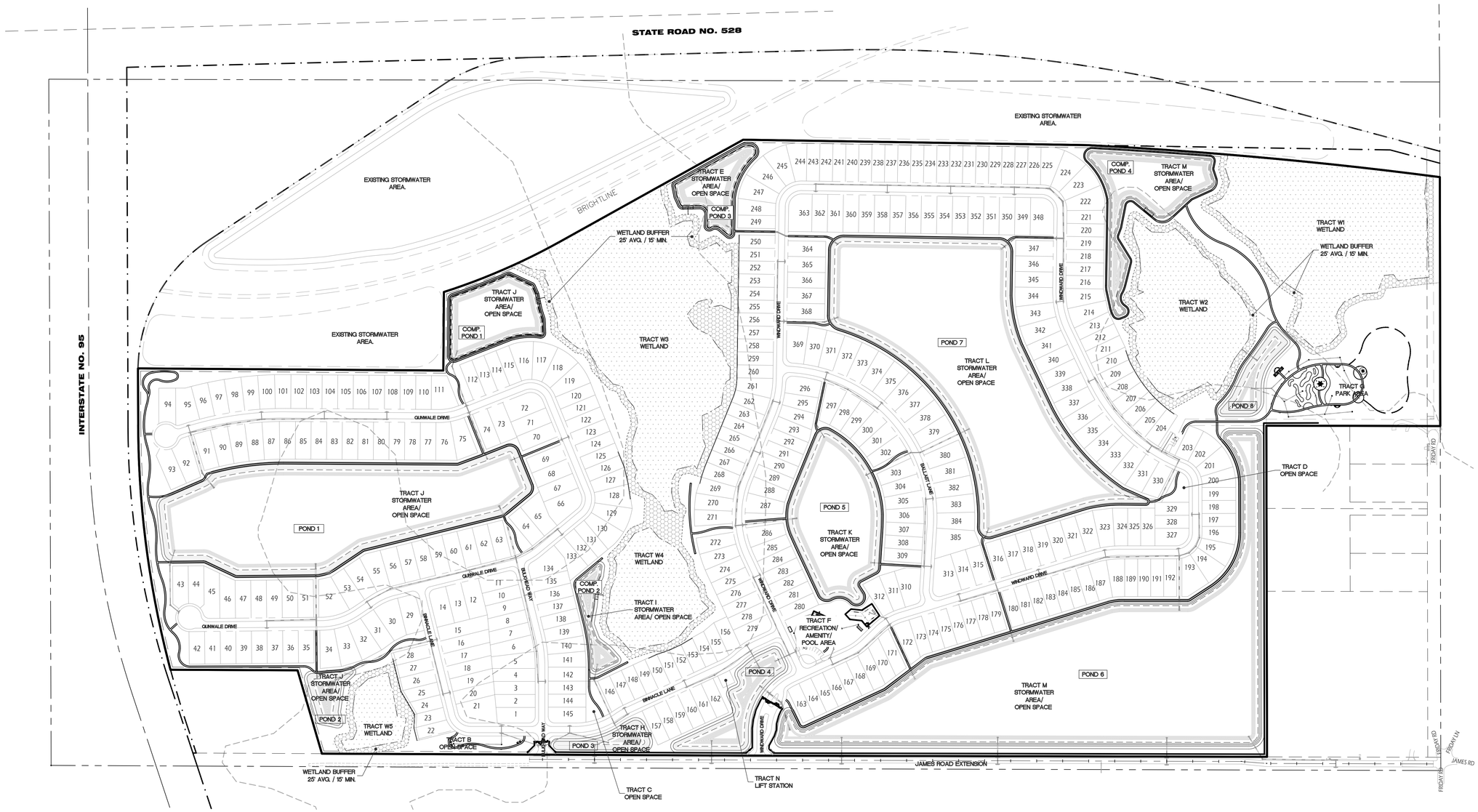
GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 inch = 200 ft.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

OVERALL GRADING PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL
DANIEL STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER

CERTIFICATE OF AUTHORIZATION NO. CA-0007223

	DATE	REVISIONS
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JOB # 21074
DATE: 9/26/22
SCALE: 1" = 200'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

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C400

MATCHLINE - SHEET C405

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT J STORMWATER AREA/ OPEN SPACE

TRACT J STORMWATER AREA/ OPEN SPACE

GUNWALE DRIVE

121+00 122+00 123+00 124+00 125+00 126+00 127+00 129+00

FF= 28.67 TYPE B 43
FF= 28.75 TYPE B 44
FF= 29.03 TYPE B 45
FF= 29.03 TYPE B 46
FF= 28.72 TYPE B 47
FF= 28.59 TYPE B 48
FF= 28.91 TYPE B 49
FF= 28.64 TYPE B 50
FF= 28.73 TYPE B 51
FF= 28.8 TYPE B 52
FF= 28.57 TYPE B 53
FF= 28.91 TYPE B 54
FF= 28.76 TYPE B 55
FF= 28.7 TYPE B 56
FF= 28.76 TYPE B 57

FF= 28.97 TYPE A 42
FF= 29.31 TYPE A 41
FF= 29.11 TYPE A 40
FF= 28.85 TYPE A 39
FF= 28.85 TYPE A 38
FF= 28.77 TYPE A 37
FF= 28.95 TYPE A 36
FF= 29.13 TYPE A 35
FF= 29.49 TYPE A 34
FF= 29.35 TYPE A 33
FF= 29.2 TYPE A 32
FF= 29.05 TYPE A 31
FF= 29.23 TYPE A 30
FF= 29.23 TYPE A 29
FF= 28.9 TYPE A 28
FF= 29.11 TYPE A 27
FF= 29.11 TYPE A 26

TOW = 28.00 BOW = 16.00
TOW = 28.10 BOW = 21.63
RETAINING WALL W/42" HANDRAIL IN A 10' WALL EASEMENT (TYP.)
TOW = 28.27 BOW = 21.39
TOW = 28.07 BOW = 21.08
TOW = 27.69 BOW = 21.53
TOW = 28.00 BOW = 28.00

TRACT J STORMWATER AREA/ OPEN SPACE
POND 2

25'AVG./15'MIN WETLAND BUFFER (TYP.)

TRACT W5 WETLAND

MATCHLINE - SHEET C402

N89°44'07"W 267.29' (R)

X1 X2 X3 X4 X4A

TRACT W5 — JAMES RD R.O.W. — WETLAND BOUNDARY — PROPERTY LINE — WETLAND BUFFER VARIES — EXISTING GRADE

X4A TIE IN SECTION #4A N.T.S.

TRACT W5 — JAMES RD R.O.W. — WETLAND BOUNDARY — WETLAND BUFFER 25'AVG/15'MIN — PROPERTY LINE — VARIES — EXISTING GRADE

X4 TIE IN SECTION #4 N.T.S.

PROPERTY LINE — VARIES — POND 2 — 10' BERM — 3:1 MAX. — 10:1 — 5:1 — 2:1 — TIE INTO EXISTING GRADE — EXISTING GRADE

X3 TIE IN SECTION #3 N.T.S.

LOTS — LOT LINE — VARIES (TRACT J) — PROPERTY LINE — 5' SW — 1.5% — 1% MIN — 4:1 MAX. — SOD — EXISTING GRADE — TIE INTO EXISTING GRADE

X2 TIE IN SECTION #2 N.T.S.

PROPERTY LINE — 15' — 4:1 MAX. — 1% MIN — PROPOSED GRADE — TIE INTO EXISTING GRADE — EXISTING GRADE

X1 TIE IN SECTION #1 N.T.S.

KEY MAP
SCALE: 1"=2000'

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

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CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

GRADING PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. CA-0007723

		DATE	REVISIONS
1			
2			
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10			
11			

JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C401

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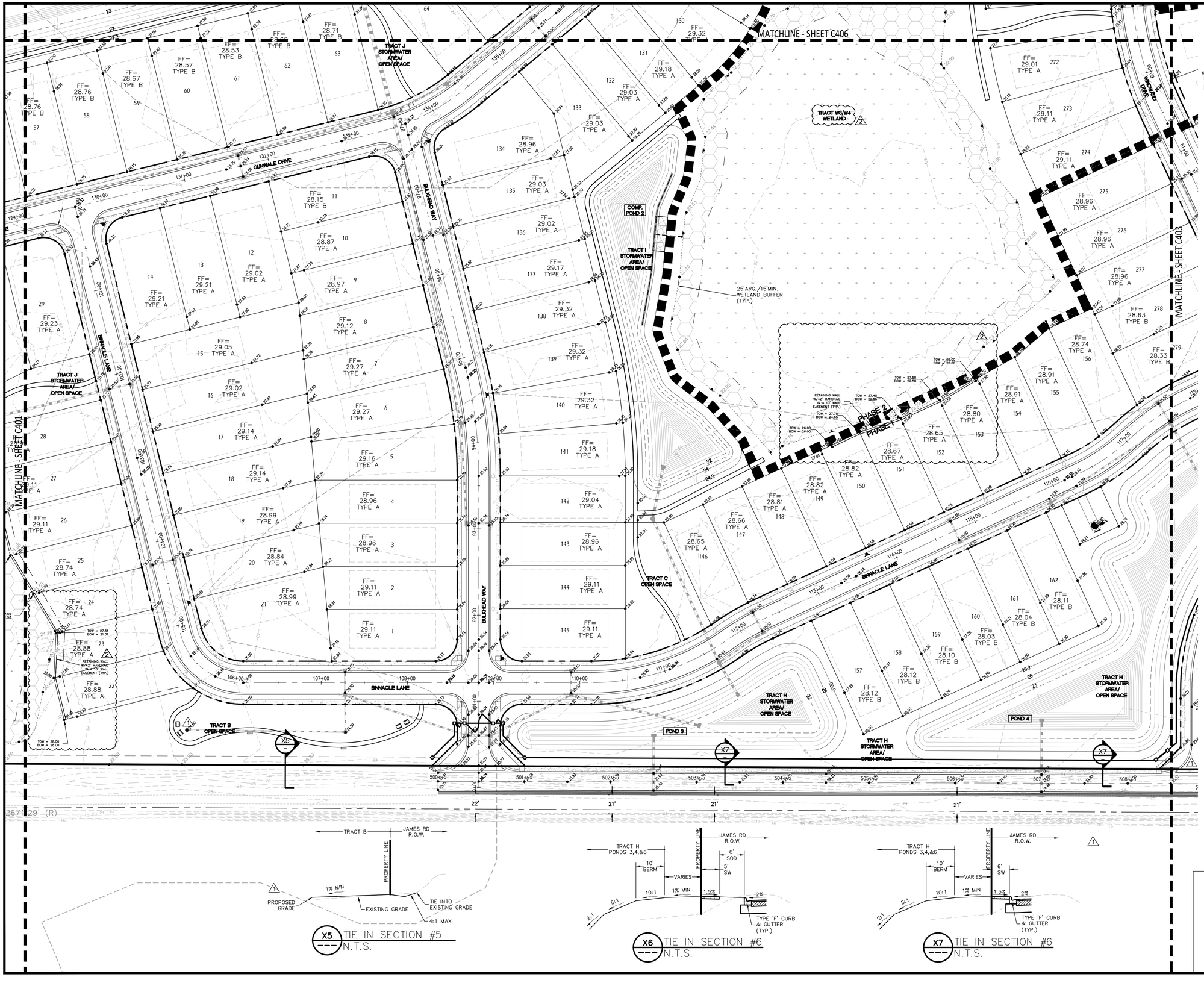

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
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GRADING PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL. 32751
407-629-0077

ENGINEER: DAVID R. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	07/13/23	REVISED PER COUNTY COMMENTS
2	10/27/23	REVISED PER CITY COMMENTS
3		
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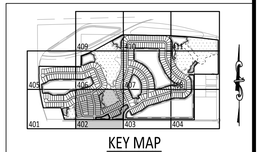
9		
10		
11		

JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS



KEY MAP
SCALE: 1"=2000'

C402

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X5 TIE IN SECTION #5
N.T.S.

X6 TIE IN SECTION #6
N.T.S.

X7 TIE IN SECTION #6
N.T.S.

MATCHLINE - SHEET C407

MATCHLINE - SHEET C402

MATCHLINE - SHEET C404

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
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GRADING PLAN
FOR
WINDWARD PRESERVE

BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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1	03/17/23	REVISED PER COMMENTS
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4		
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

KEY MAP
SCALE: 1"=2000'

C403

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MATCHLINE - SHEET C408

MATCHLINE - SHEET C403

WINDWARD DRIVE

PHASE 2

PHASE 1

POND 6

TRACT M
STORMWATER
AREA/
OPEN SPACE

X3
C401

X7
C403

X6
C402

24'

1"W 2671.29' (R)

S 00°07'14"E 1273.27' (R)

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
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GRADING PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA DAVID R. STOKES PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	07/13/23	REVISED PER COUNTY COMMENTS
2	11/20/23	REVISED PER CITY COMMENTS
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JOB # 21074
DATE: 9/26/22
SCALE: 1" = 50'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

KEY MAP
SCALE: 1"=2000'

C404

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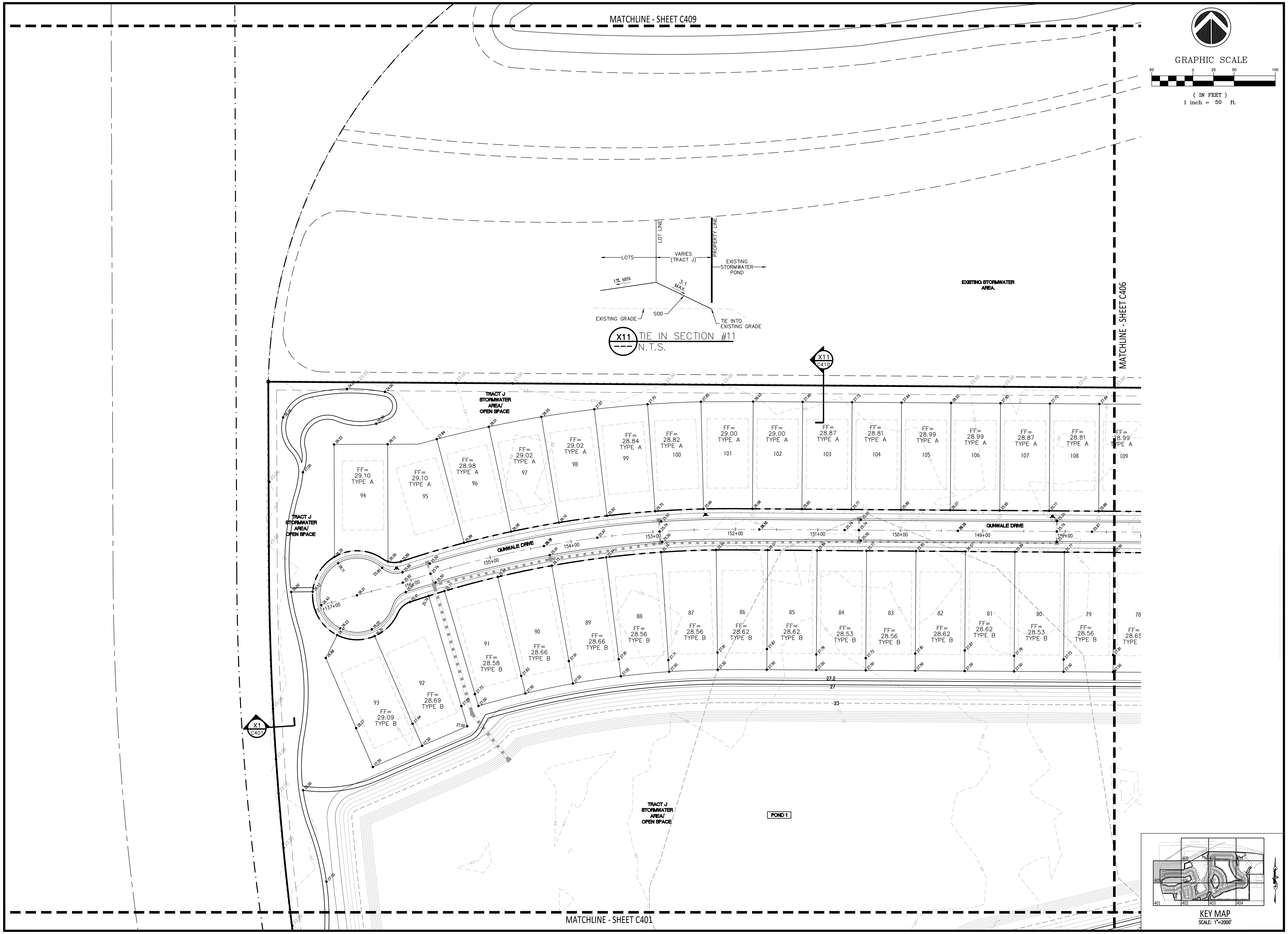

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GRADING PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER
DAVID ASHBY STOKES
LICENSE No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1		
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JOB #: 21074
DATE: 9/26/22
SCALE: 1" = 50'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C405

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MATCHLINE - SHEET C409

MATCHLINE - SHEET C405

MATCHLINE - SHEET C407

MATCHLINE - SHEET C402

X12
C409

TRACT J
STORMWATER
AREA/
OPEN SPACE

COMP.
POND 1

PROPERTY LINE

EXISTING
STORMWATER
POND

TRACT J
COMP. POND 1

VARIES

10'
BERM

3:1
MAX.

10:1

4:1

2:1

EXISTING GRADE

X12
TIE IN SECTION #12
N.T.S.

25'AVG./15'MIN.
WETLAND BUFFER
(TYP.)

TRACT W3/W4
WETLAND

PHASE 1

PHASE 2

GUNWALE DRIVE

WINDWARD DRIVE

TRACT J
STORMWATER
AREA/
OPEN SPACE

POND 1

RETAINING WALL
W/42" HANDRAIL
IN A 10' WALL
EASEMENT (TYP.)

LOT	FF
109	FF= 28.99 TYPE A
110	FF= 29.09 TYPE A
111	FF= 29.09 TYPE A
112	FF= 29.06 TYPE A
113	FF= 29.21 TYPE A
114	FF= 29.36 TYPE A
115	FF= 29.51 TYPE A
116	FF= 29.57 TYPE A
117	FF= 29.57 TYPE A
118	FF= 29.48 TYPE A
119	FF= 29.39 TYPE A
120	FF= 29.29 TYPE A
121	FF= 29.14 TYPE A
122	FF= 28.99 TYPE A
123	FF= 28.93 TYPE A
124	FF= 29.08 TYPE A
125	FF= 29.23 TYPE A
126	FF= 29.38 TYPE A
127	FF= 29.39 TYPE A
128	FF= 29.39 TYPE A
129	FF= 29.30 TYPE A
130	FF= 29.32 TYPE A
131	FF= 29.21 TYPE A
251	FF= 28.96 TYPE A
252	FF= 28.96 TYPE A
253	FF= 29.11 TYPE A
254	FF= 29.11 TYPE A
255	FF= 29.05 TYPE A
256	FF= 28.90 TYPE A
257	FF= 29.02 TYPE A
258	FF= 29.17 TYPE A
259	FF= 29.32 TYPE A
260	FF= 29.32 TYPE A
261	FF= 29.21 TYPE A
262	FF= 29.00 TYPE A
263	FF= 29.09 TYPE A
264	FF= 29.09 TYPE A
265	FF= 28.94 TYPE A
266	FF= 28.98 TYPE A
267	FF= 29.13 TYPE A
268	FF= 29.23 TYPE A
269	FF= 29.23 TYPE A
270	FF= 29.10 TYPE A
271	FF= 28.97 TYPE A
63	FF= 28.71 TYPE B
64	FF= 28.64 TYPE B
65	FF= 28.54 TYPE B
66	FF= 28.67 TYPE B
67	FF= 28.67 TYPE B
68	FF= 28.67 TYPE B
69	FF= 28.57 TYPE B
70	FF= 28.57 TYPE B
71	FF= 28.60 TYPE B
72	FF= 28.60 TYPE B
73	FF= 28.73 TYPE B
74	FF= 28.56 TYPE B
75	FF= 28.78 TYPE B
76	FF= 28.65 TYPE B
77	FF= 28.65 TYPE B
78	FF= 28.65 TYPE B

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

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MOORHEAD & STOKES, LLC
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Suite 260
Maitland, Florida 32751
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GRADING PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR. SUITE 350
MAITLAND, FL. 32751
407-629-0077

ENGINEER: DANIEL J. STOKES, P.E. LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007223

NO	DATE	REVISIONS
1	10/27/23	REVISED PER CITY COMMENTS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

KEY MAP
SCALE: 1"=2000'

C406

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MATCHLINE - SHEET C411

MATCHLINE - SHEET C406

MATCHLINE - SHEET C408

MATCHLINE - SHEET C403

WINDWARD DRIVE

BALLAST LANE

PHASE 2

PHASE 1

POND 7

POND 5

TRACT L
STORMWATER
AREA/
OPEN SPACE

TRACT K
STORMWATER
AREA/
OPEN SPACE

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
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Maitland, Florida 32751
(407) 629-8330

GRADING PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER DAVID A. STOKES 11/27/2023

CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C407

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MATCHLINE - SHEET C411

MATCHLINE - SHEET C407

MATCHLINE - SHEET C404

TRACT M STORMWATER AREA/ OPEN SPACE

COMP. POND 4

TRACT W2 WETLAND

TRACT W1 WETLAND

25'AVG./15'MIN. WETLAND BUFFER

TRACT M STORMWATER AREA/ OPEN SPACE

TRACT Q PARK AREA

FOR MORE DETAIL PLEASE SEE AMENITY PLAN SET.

POND 8

POND 6

POND 7

PHASE 2

PHASE 1

WINDWARD DRIVE

TRACT D OPEN SPACE

TRACT I STORMWATER AREA/ OPEN SPACE

RETAINING WALL W/42" HANDRAIL IN A 10' WALL EASEMENT (TYP.)

X8B

X8A

X9

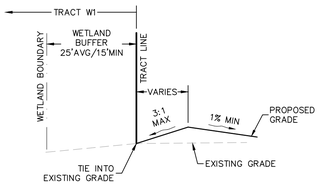
X7

X8

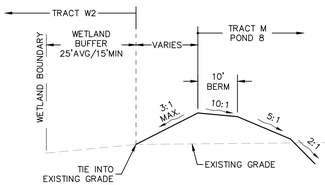
GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.



X9 TIE IN SECTION #9
N.T.S.



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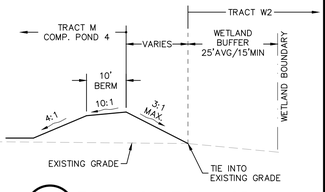
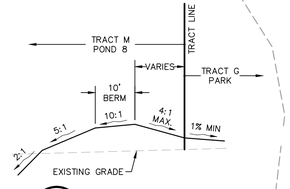
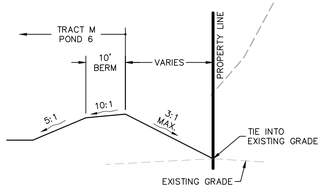
N.T.S.



X8B TIE IN SECTION #8B
N.T.S.



X8 TIE IN SECTION #8
N.T.S.



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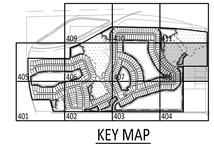
N.T.S.



KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

GRADING PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ENGINEER'S SEAL AND SIGNATURE
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	03/17/23	REVISED PER COMMENT
2	10/27/23	REVISED PER CITY COMMENTS
3	11/20/23	REVISED PER CITY COMMENTS
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C408

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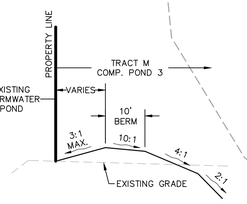
GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

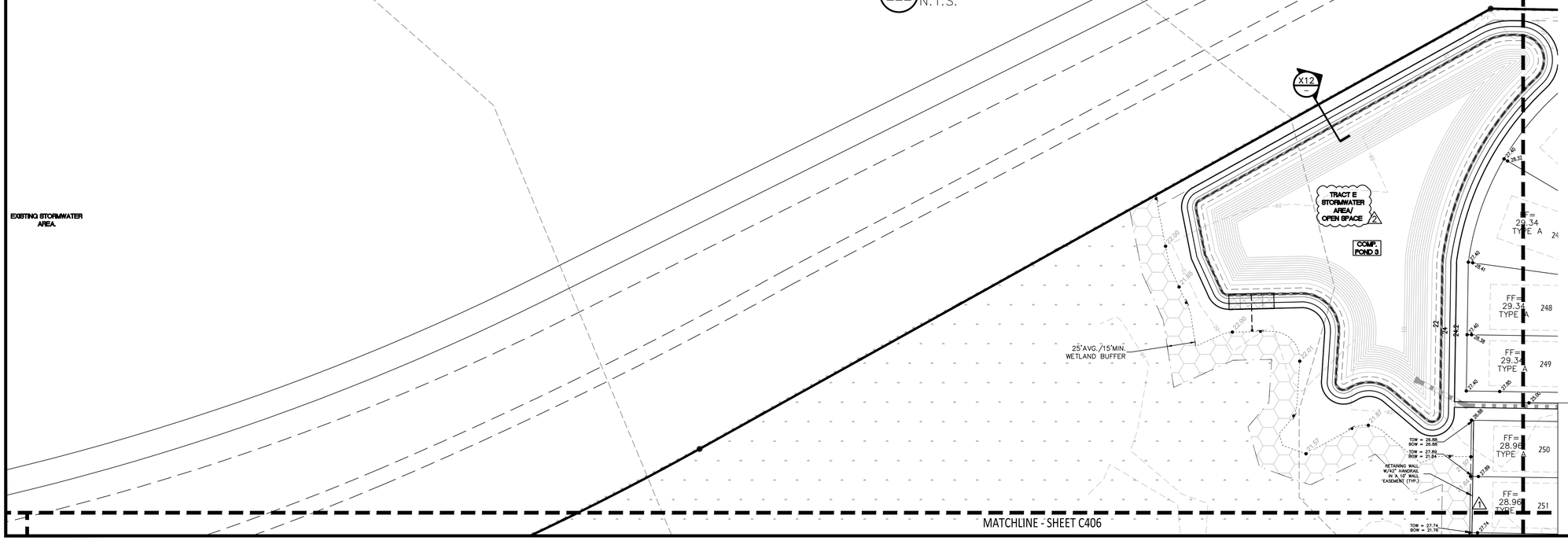
N88°36'37"E 1179.17' (R)

MATCHLINE - SHEET C410

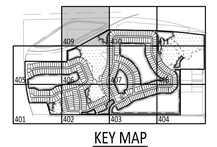


X12 TIE IN SECTION #12
N.T.S.

EXISTING STORMWATER AREA.



MATCHLINE - SHEET C406



KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
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Maitland, Florida 32751
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GRADING PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA DAVID A. STOKES PROFESSIONAL ENGINEER 10/27/23

CERTIFICATE OF AUTHORIZATION No. CA-0007723

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JOB #	21074
DATE:	9/26/22
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DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C409

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GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

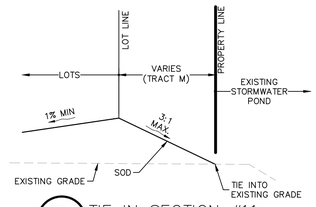
S88°36'23"W 5492.10' (R)

Δ=16°24'19"
R=5579.58'
L=1597.58'
CB=S83°11'41"E
CHD.=1592.13' (R)

N89°53'09"W 2678.66'

MATCHLINE - SHEET C409

MATCHLINE - SHEET C411



X11 TIE IN SECTION #11
N.T.S.

EXISTING STORMWATER AREA

WINDWARD DRIVE

TRACT L STORMWATER AREA/ OPEN SPACE

POND 7

MATCHLINE - SHEET C407

KEY MAP
SCALE: 1"=2000'

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

GRADING PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL. 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER DAVID STOKES
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1		
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JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C410

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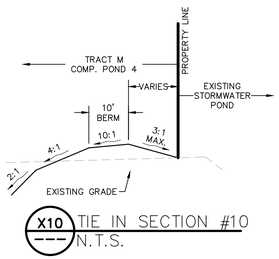

X10 TIE IN SECTION #10
N.T.S.

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

GRADING PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DAVID A. SHARP, P.E. LICENSE No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
ENGINEERING CERTIFICATE OF AUTHORIZATION NO. 27
SURVEYING CERTIFICATE OF AUTHORIZATION NO. LB-6723
MADDEN, MOORHEAD & STOKES, LLC CERTIFICATE OF AUTHORIZATION NO. CA-0007723

1		
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10		
11	DATE	REVISIONS

JOB #	21074
DATE:	9/26/22
SCALE:	1" = 50'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C411

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MATCHLINE - SHEET C410

W 2675.66' (R)

S75°00'11"E
774.64' (R)

N89°05'44"W 1166.60' (R)

197.51' (R)
N74°59'21"W

S00°05'30"E 15.92' (R)

X10

COMP. POND 4

TRACT M STORMWATER AREA/ OPEN SPACE

25'AVG./15'MIN. WETLAND BUFFER

TRACT W2 WETLAND

TRACT W1 WETLAND

TRACT M STORMWATER AREA/ OPEN SPACE

TRACT M STORMWATER AREA/ OPEN SPACE

FF= 29.29 TYPE

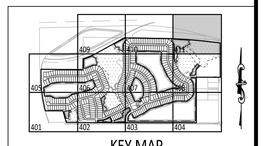
FF= 29.20 TYPE

FF= 29.05 TYPE

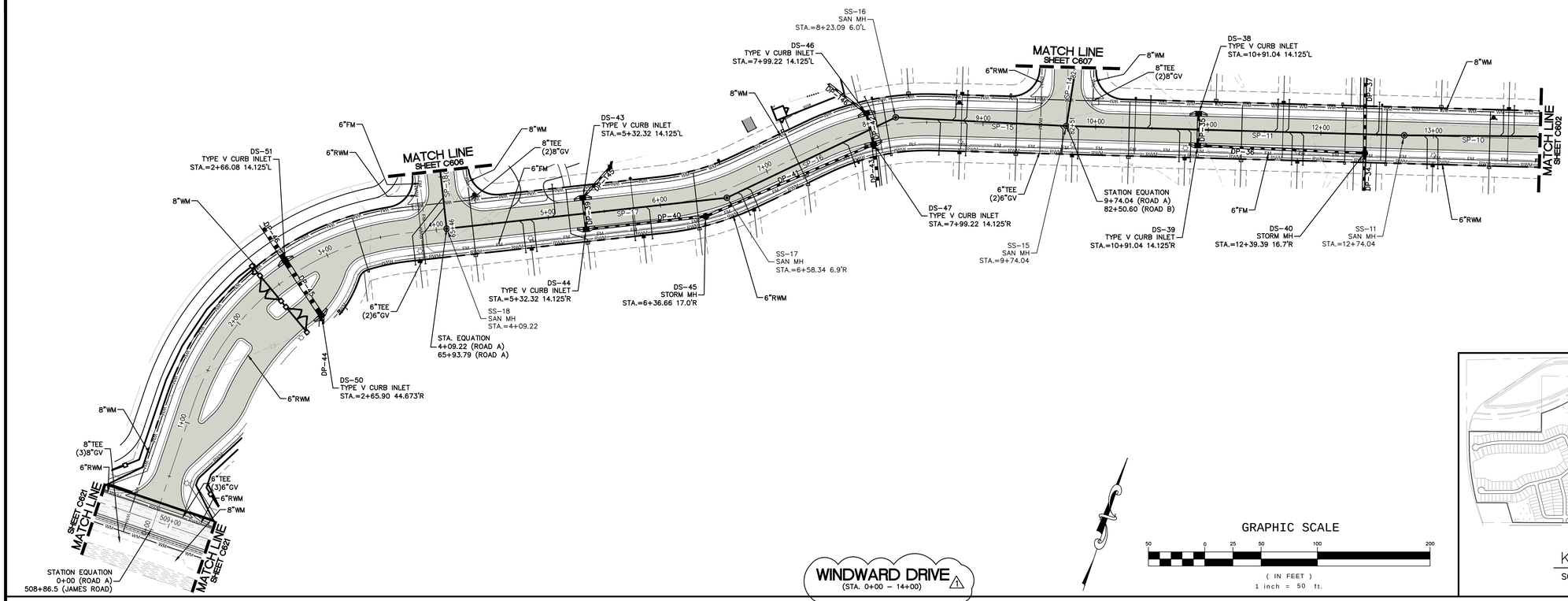
FF= 29.03 TYPE

FF= 29.02 TYPE

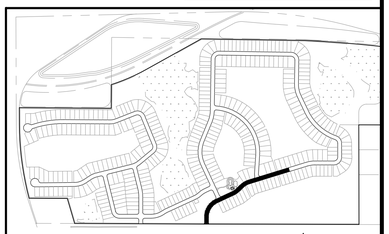
MATCHLINE - SHEET C408



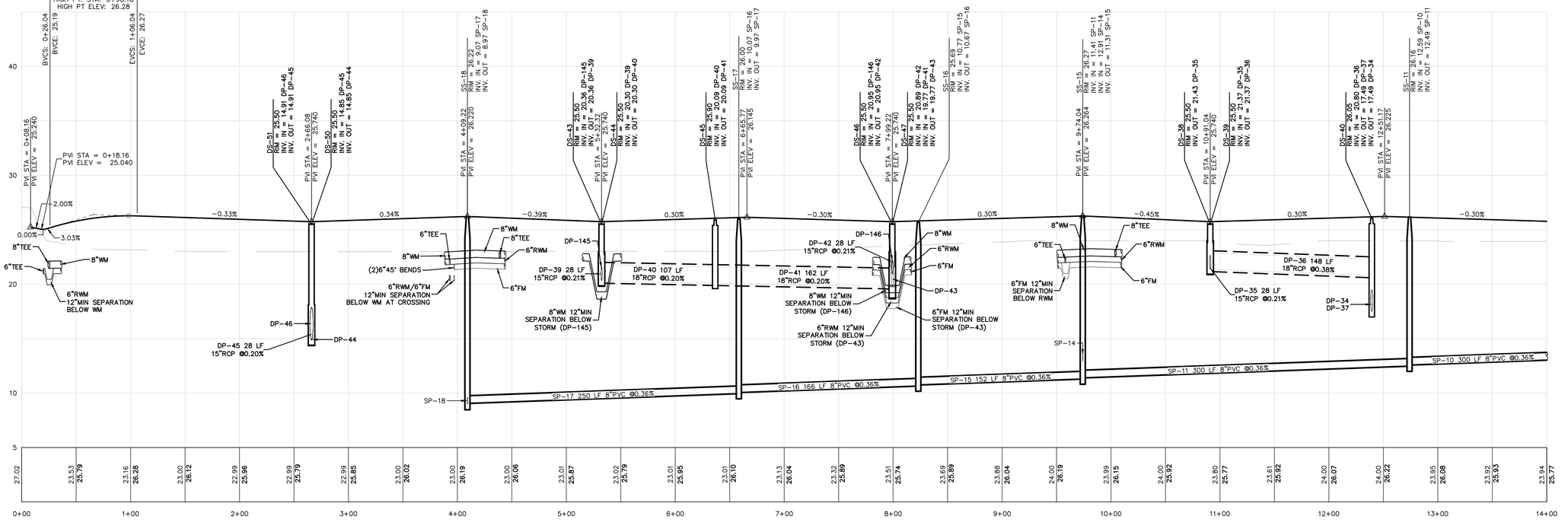
KEY MAP
SCALE: 1"=2000'



TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE



NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DANIEL R. STOKES
LICENSE
No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
ENGINEERING CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	11/20/23	REVISED PER CITY COMMENTS
2		
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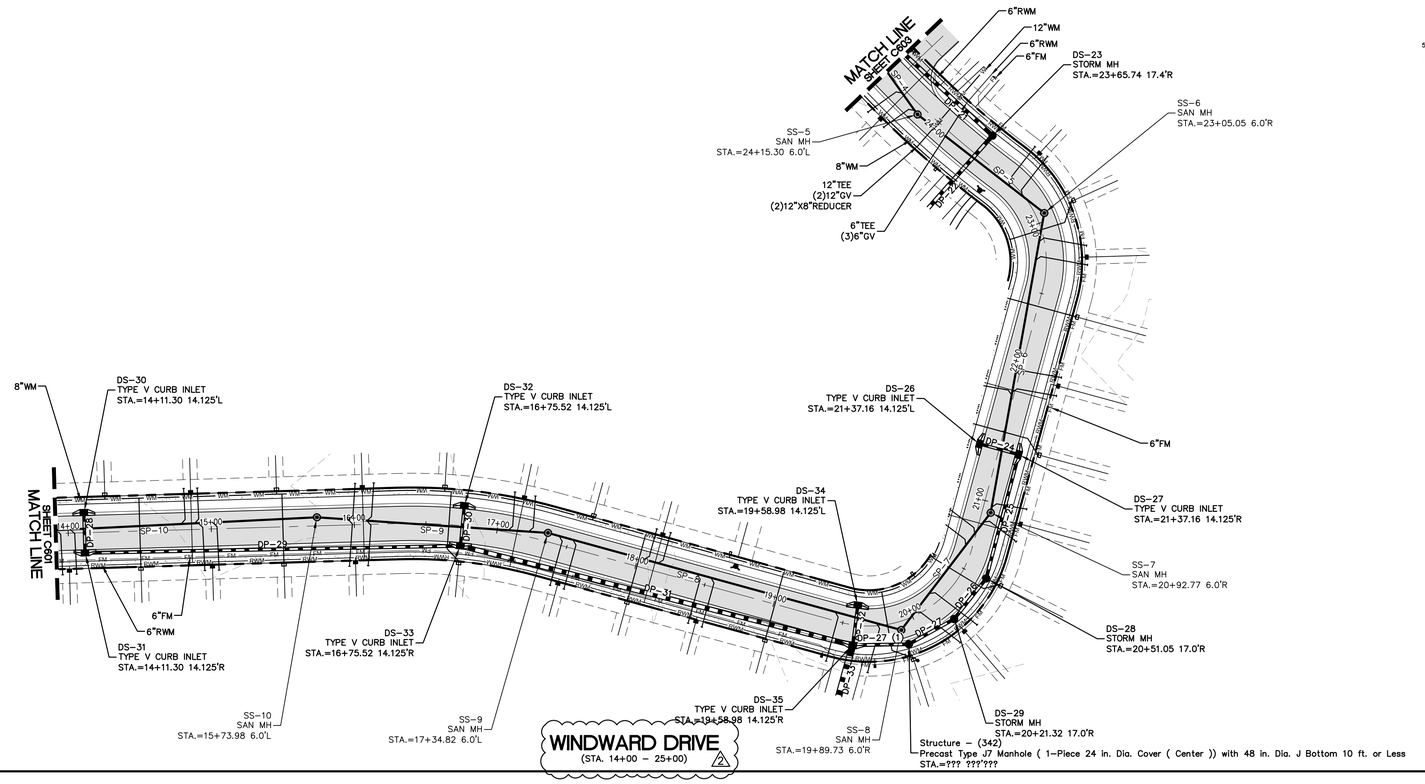
JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C601

H:\Data\21074\Engr\Final\21074_C601 ROAD A.dwg November 20, 2023 12:31 PM

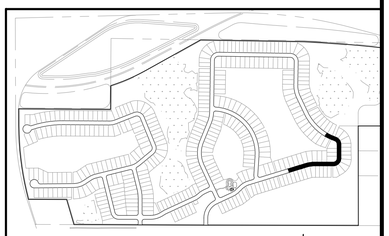


GRAPHIC SCALE

50 0 25 50 100 200

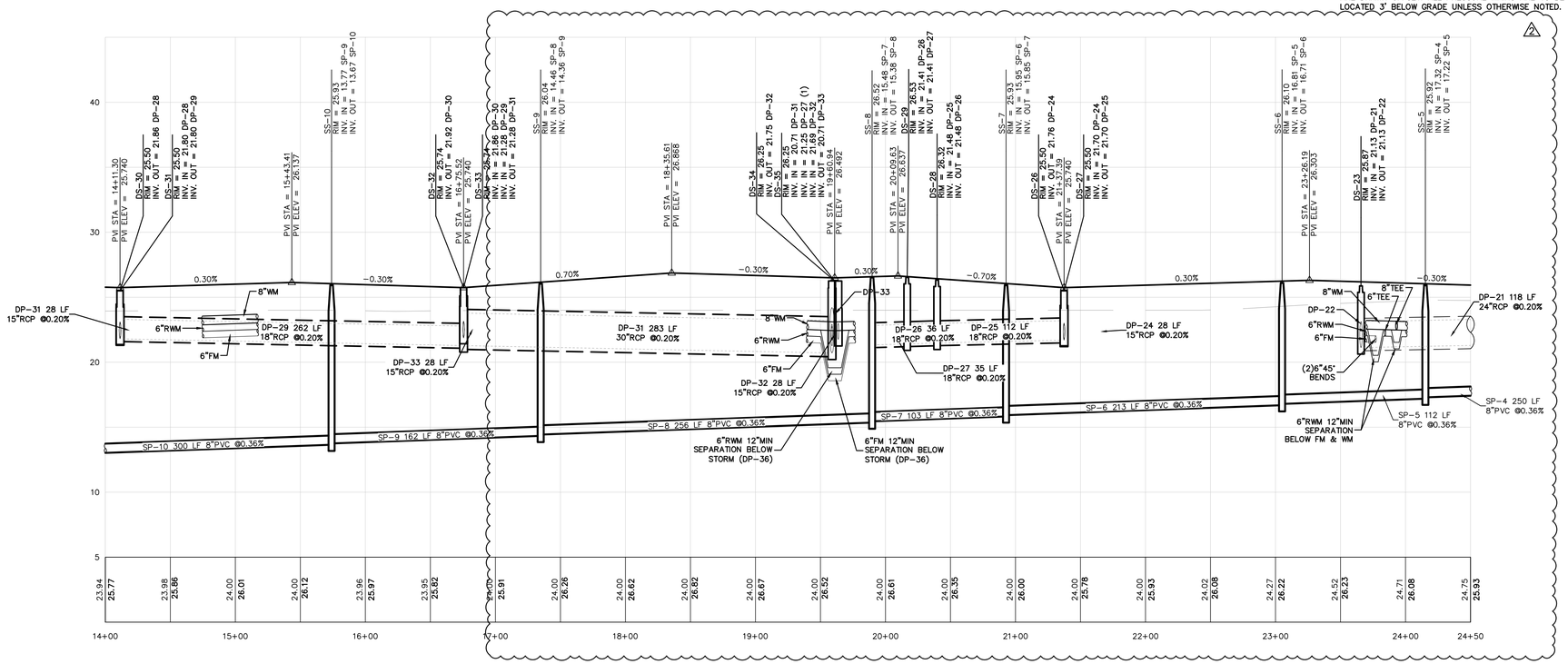
(IN FEET)
1 inch = 50 ft.

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE



KEY MAP
SCALE: 1"=3000'

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL. 32751
407-629-0077

DANIEL A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. EB-0007233
SURVEYING BUSINESS CERTIFICATE OF AUTHORIZATION NO. LB-0007233
CERTIFICATE OF AUTHORIZATION NO. CA-0007223

	DATE	REVISIONS
1	10/27/23	REVISED PER CITY COMMENTS
2	11/20/23	REVISED PER CITY COMMENTS
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JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C602

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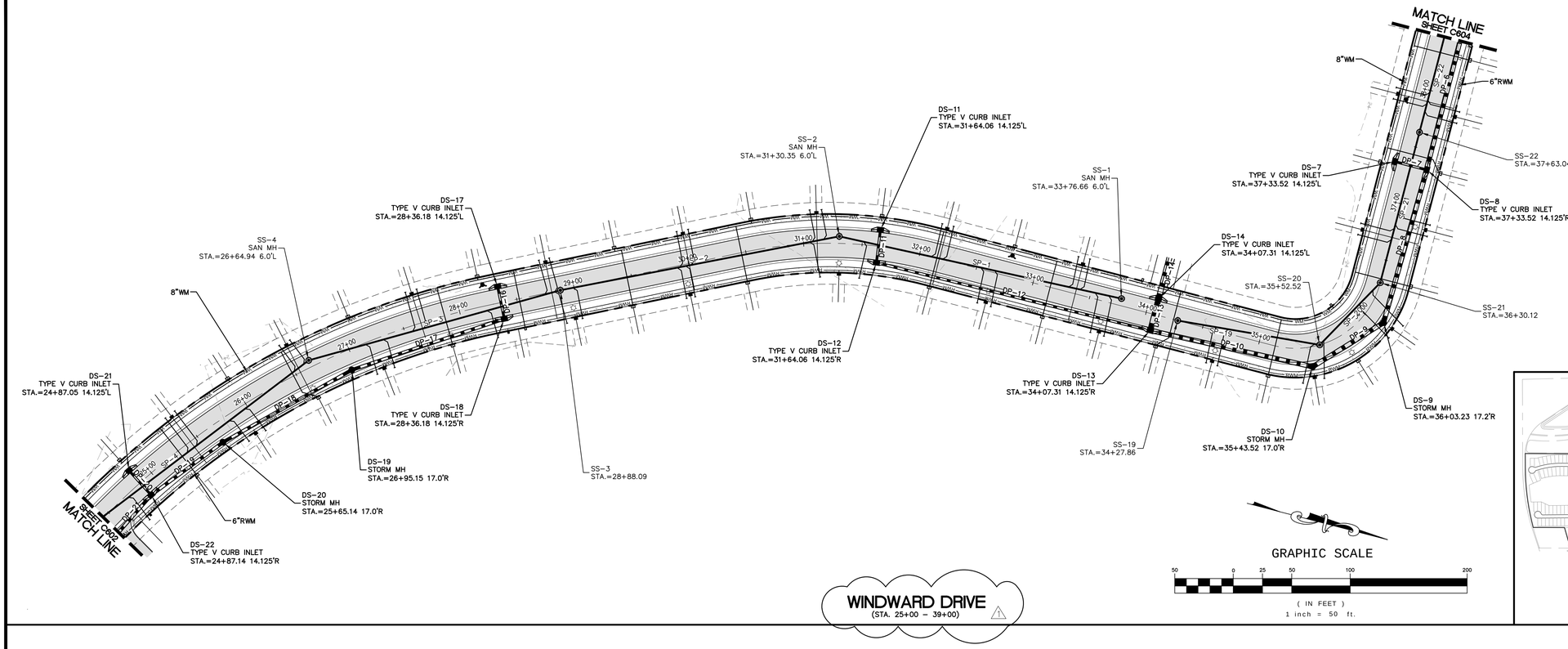
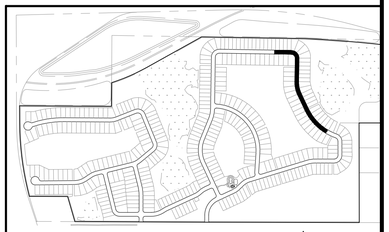
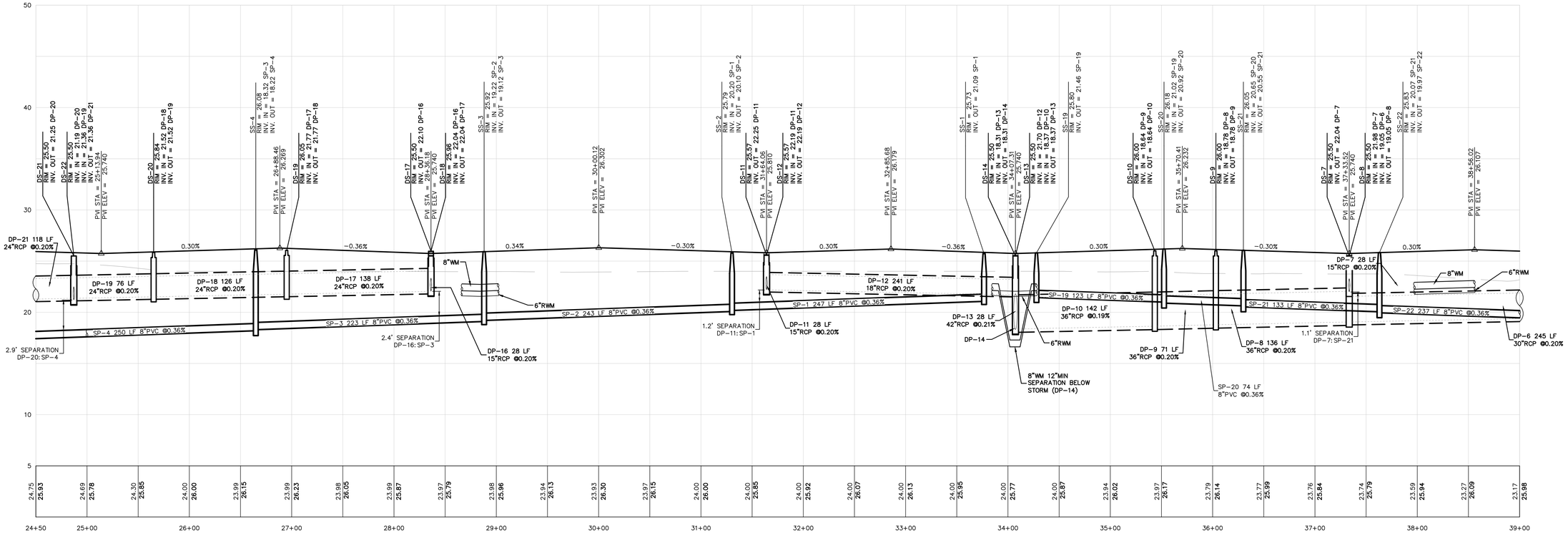


TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE



KEY MAP
SCALE: 1"=3000'

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER: DAVID R. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	11/20/23	REVISED PER CITY COMMENTS
2		
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JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C603

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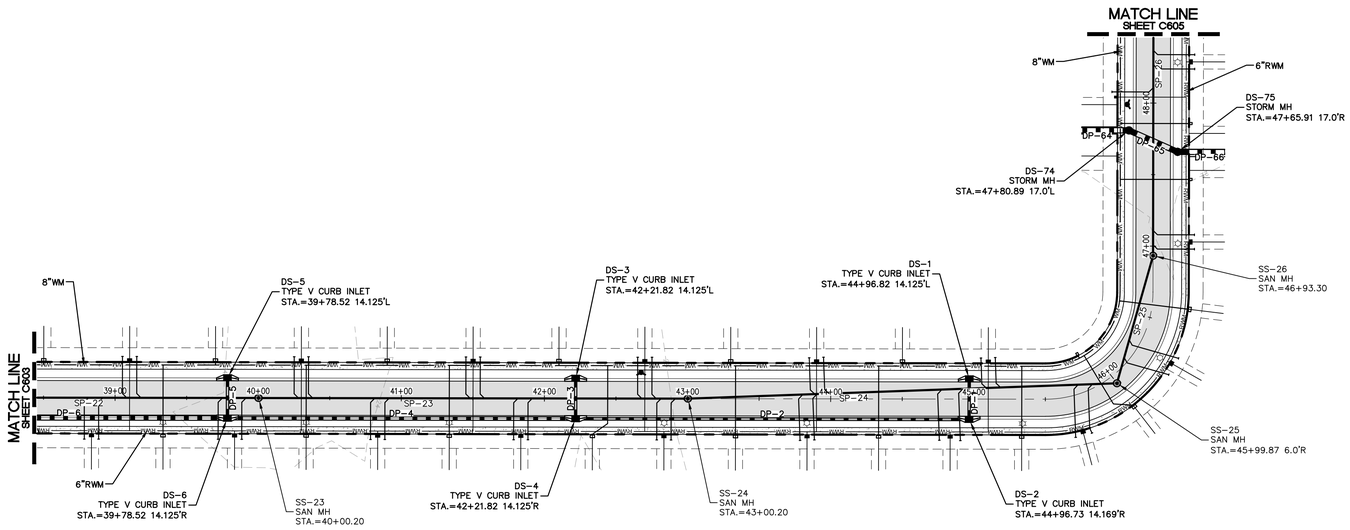
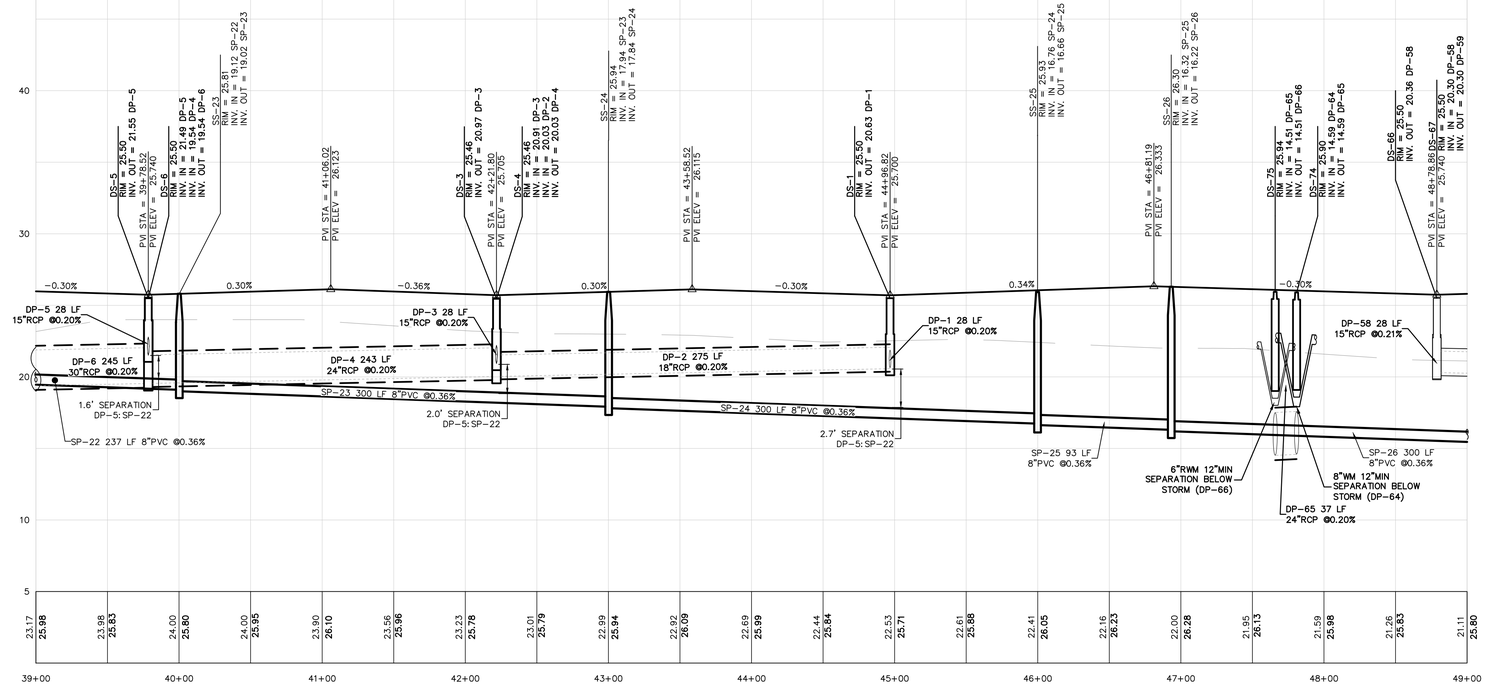


WINDWARD DRIVE
(STA. 39+00 – 49+00)

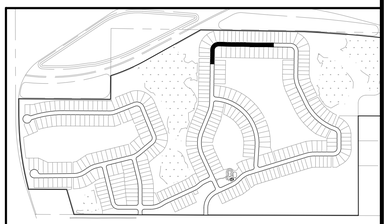


GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE



KEY MAP
SCALE: 1"=3000'

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DAVID RUSSELL STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ENGINEER: DAVID STOKES
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	11/20/23	REVISED PER CITY COMMENTS
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JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C604

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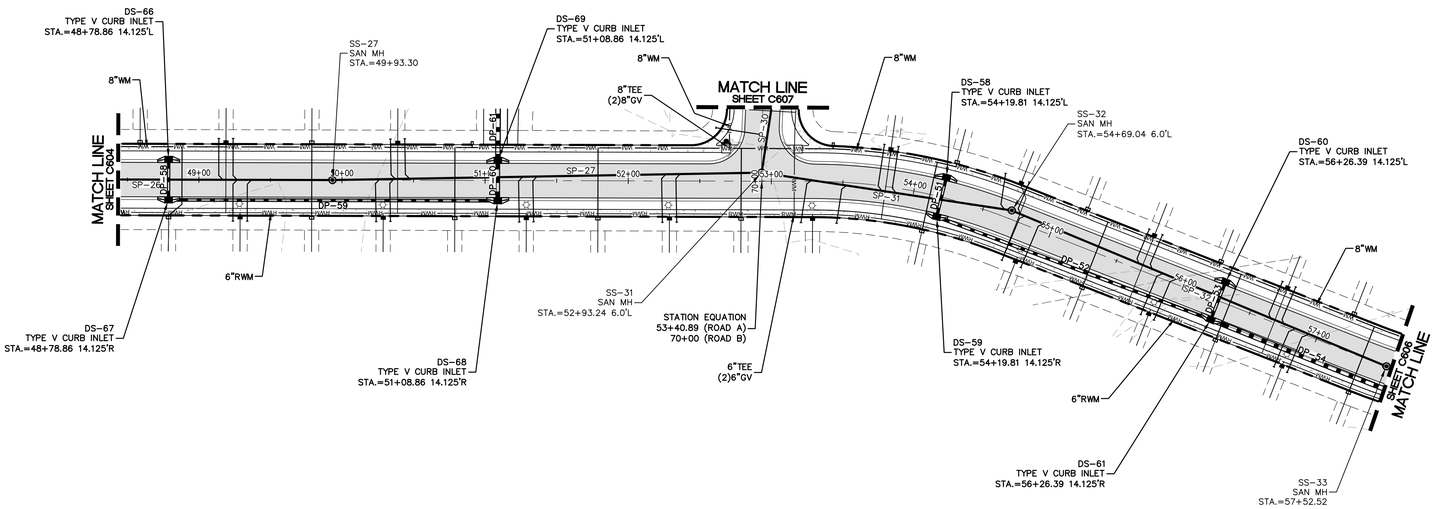


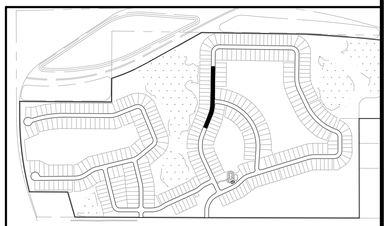
GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE

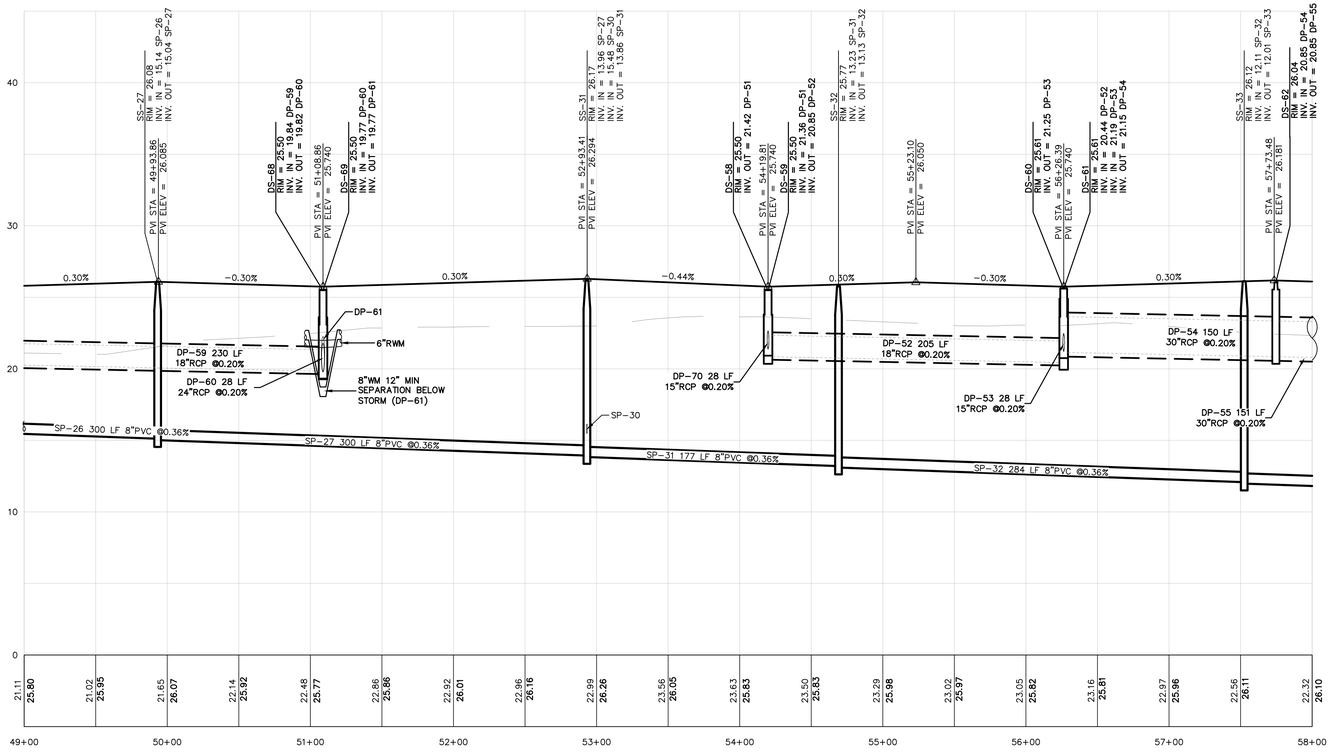


KEY MAP

SCALE: 1"=3000'

WINDWARD DRIVE
(STA. 49+00 – 58+00)

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2800 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ASHLEY D. STOKES
9/26/2023
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

DATE	REVISIONS
11/20/23	REVISED PER CITY COMMENTS

JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C605

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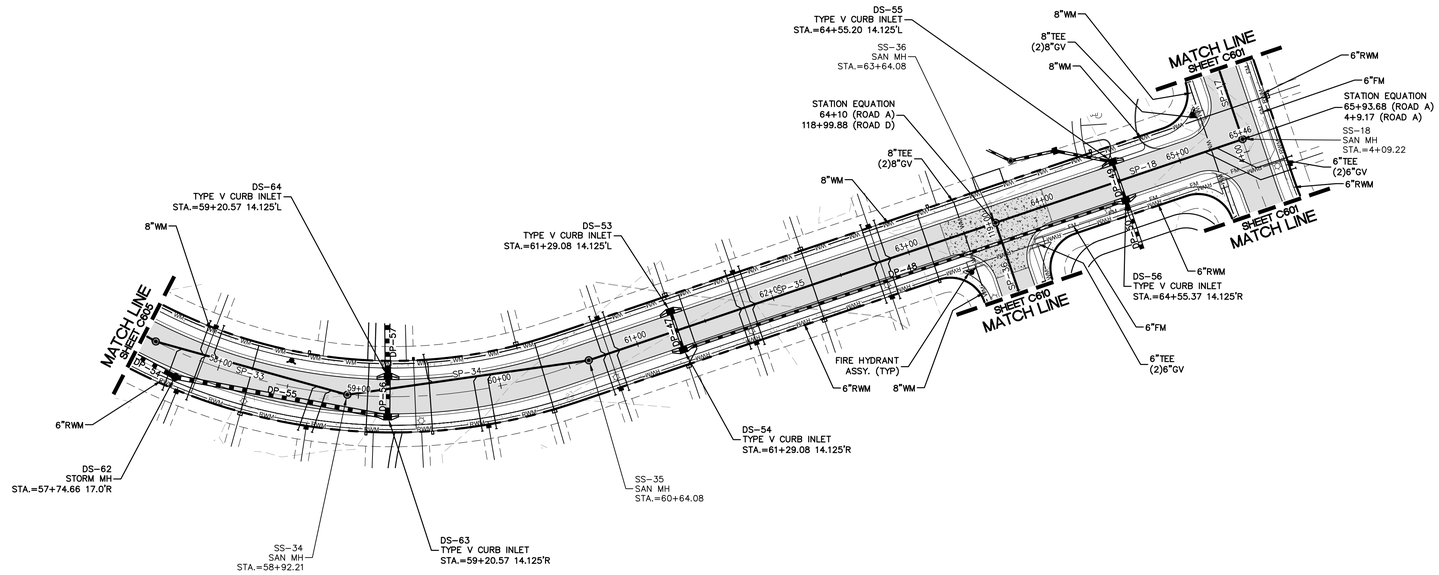
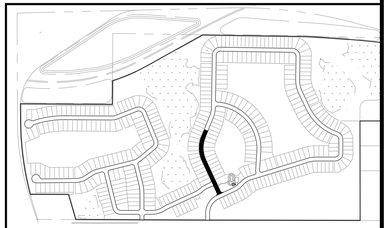


GRAPHIC SCALE

50 0 25 50 100 200

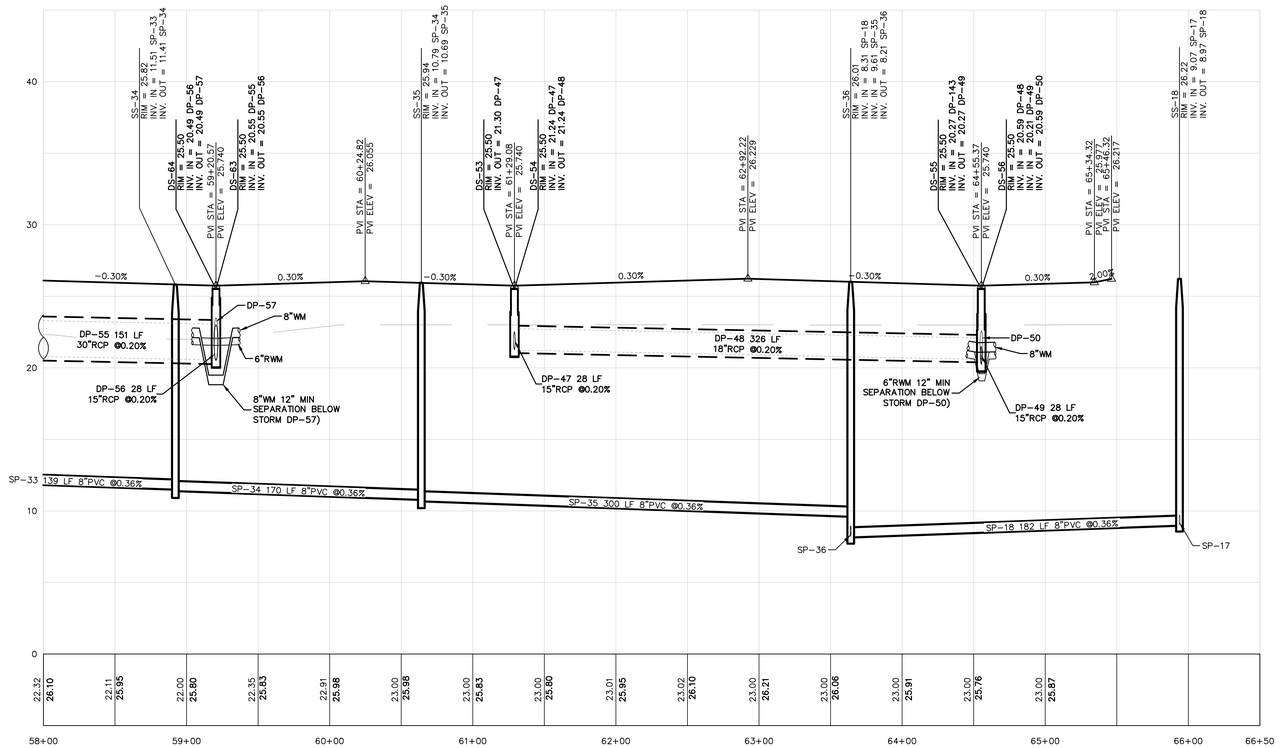
(IN FEET)
1 inch = 50 ft.

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE



KEY MAP
SCALE: 1"=3000'

WINDWARD DRIVE
(STA. 58+00 – 65+93.79)



NOTE:
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MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL: DAVID J. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	11/20/23	REVISED PER CITY COMMENTS
2		
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JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C606

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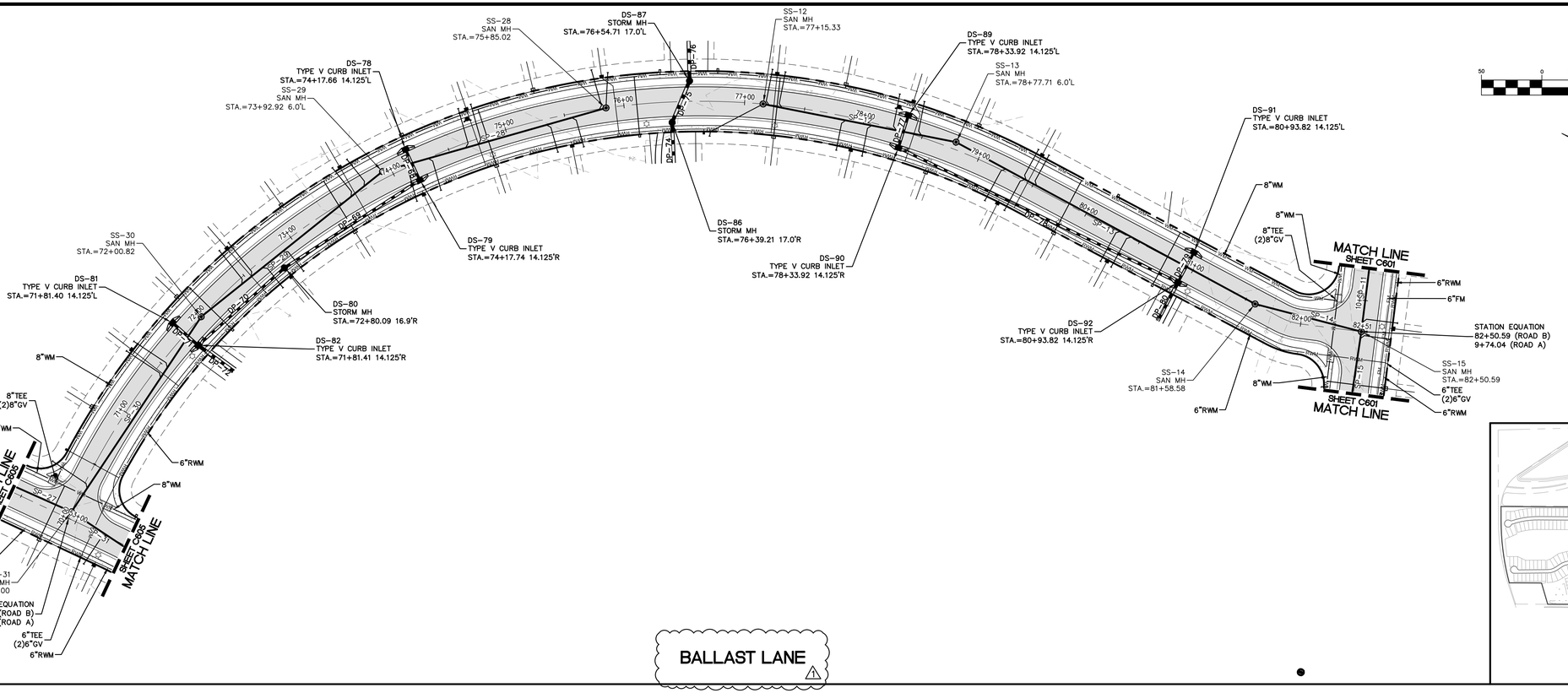


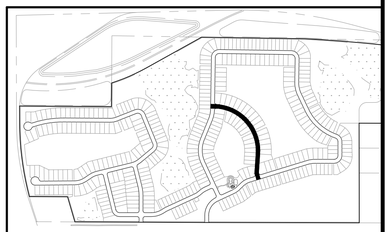
GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE

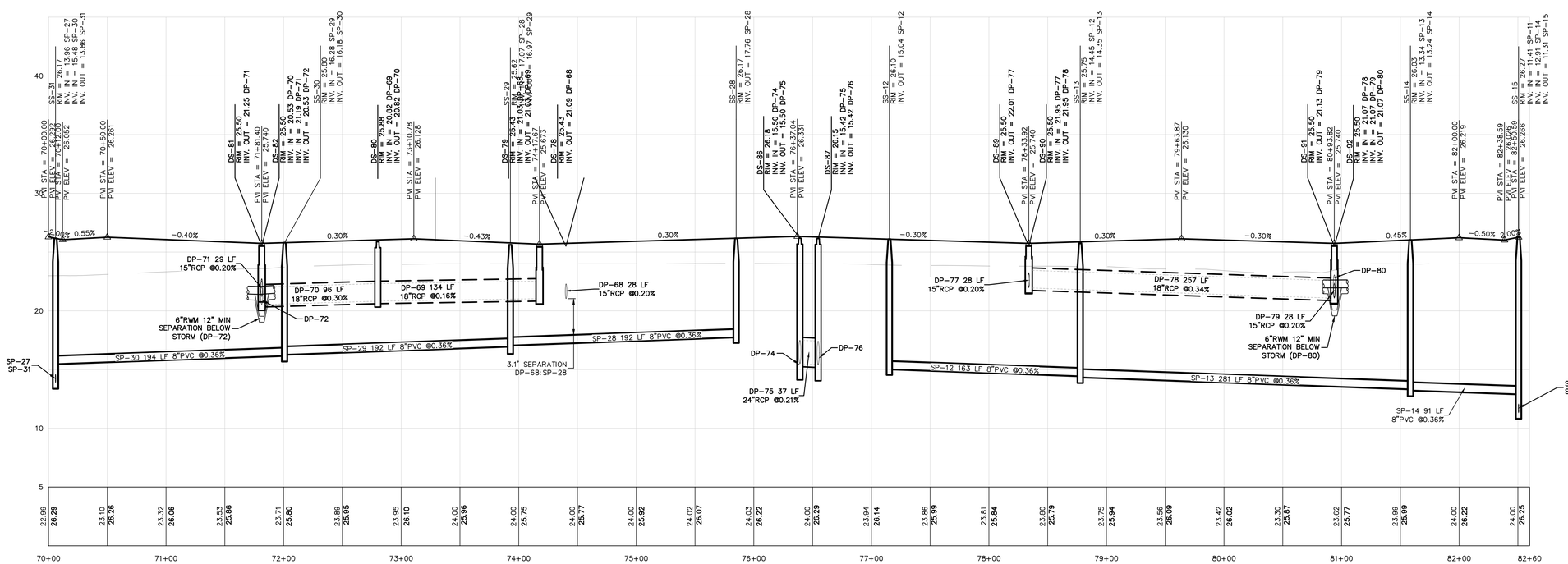


KEY MAP

SCALE: 1"=3000'

BALLAST LANE

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER: DAVID J. STOKES, P.E. LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
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10	11/20/23	REVISED PER CITY COMMENTS
11		

JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

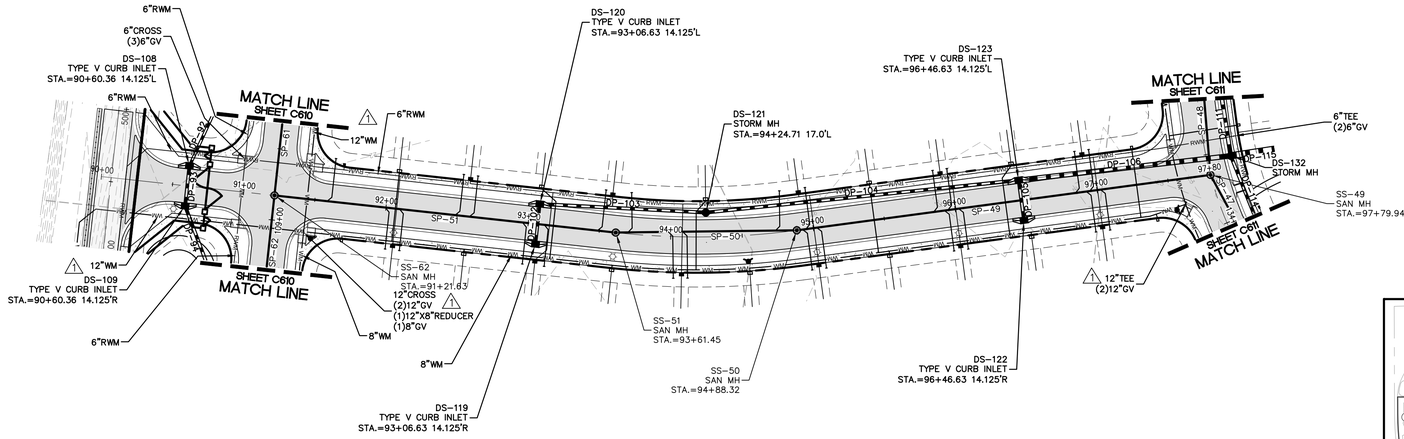
C607

H:\Data\21074\Eng\Final\21074_C607 ROAD B.dwg November 20, 2023 12:40 PM

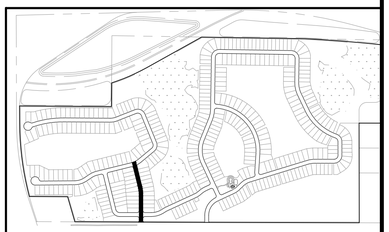
GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

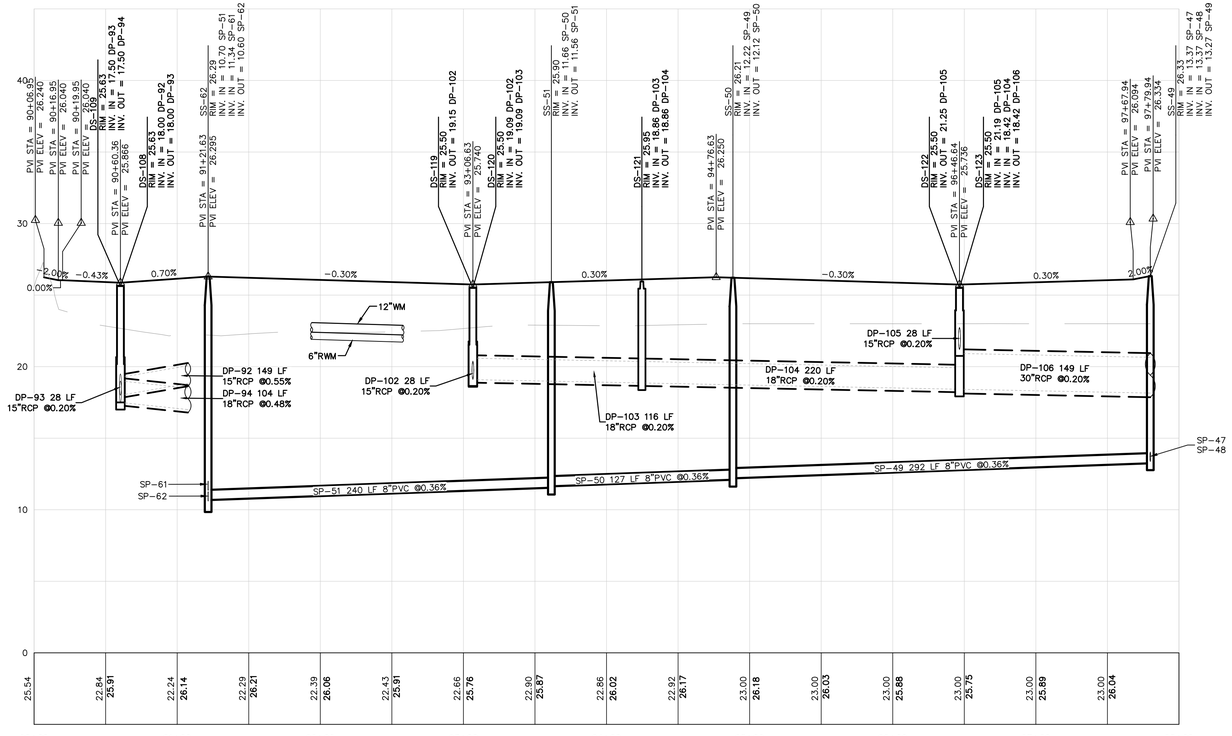


TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE



KEY MAP
SCALE: 1"=3000'

BULKHEAD WAY



NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL. 32751
407-629-0077

DAVID J. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ENGINEERING CERTIFICATE OF AUTHORIZATION NO. CA-00007723

	DATE	REVISIONS
1	10/27/23	REVISED PER CITY COMMENTS
2	11/20/23	REVISED PER CITY COMMENTS
3		
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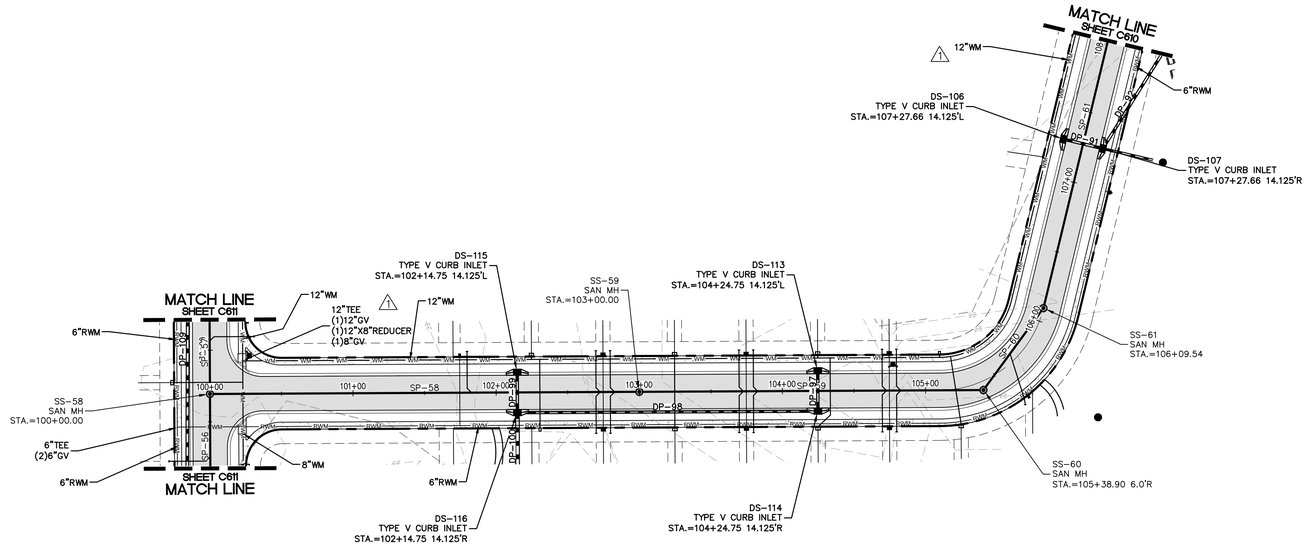
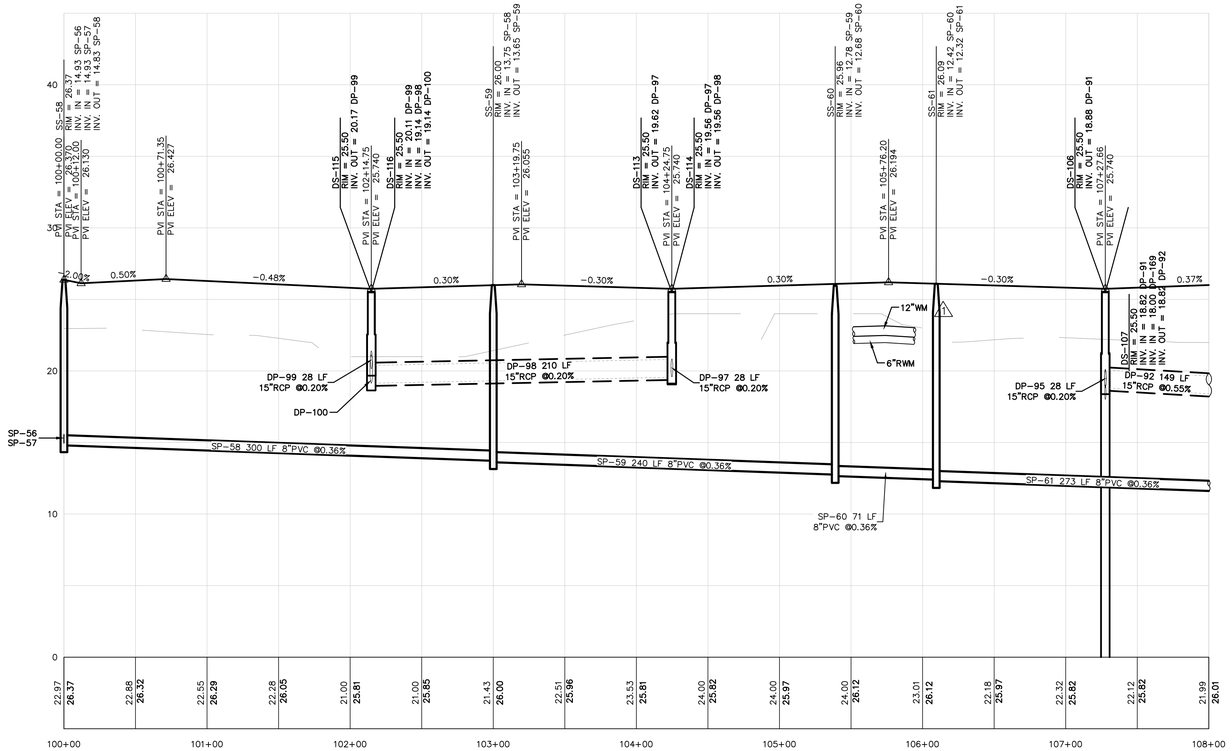
JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C608

H:\Data\21074\Eng\Final\21074_C608 ROAD C.dwg November 20, 2023 12:41 PM



BINNACLE LANE
(STA. 100+00 – 108+00)

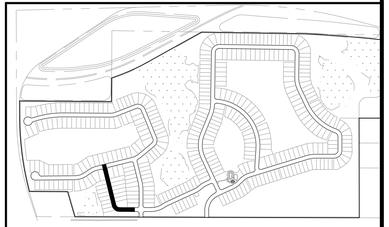


GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE



KEY MAP
SCALE: 1"=3000'

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER: DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

DATE	REVISIONS
10/27/23	REVISED PER CITY COMMENTS
11/28/23	REVISED PER CITY COMMENTS

JOB #	21074
DATE:	9/26/22
SCALE:	H:1"=50' V:1"=5'
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C609

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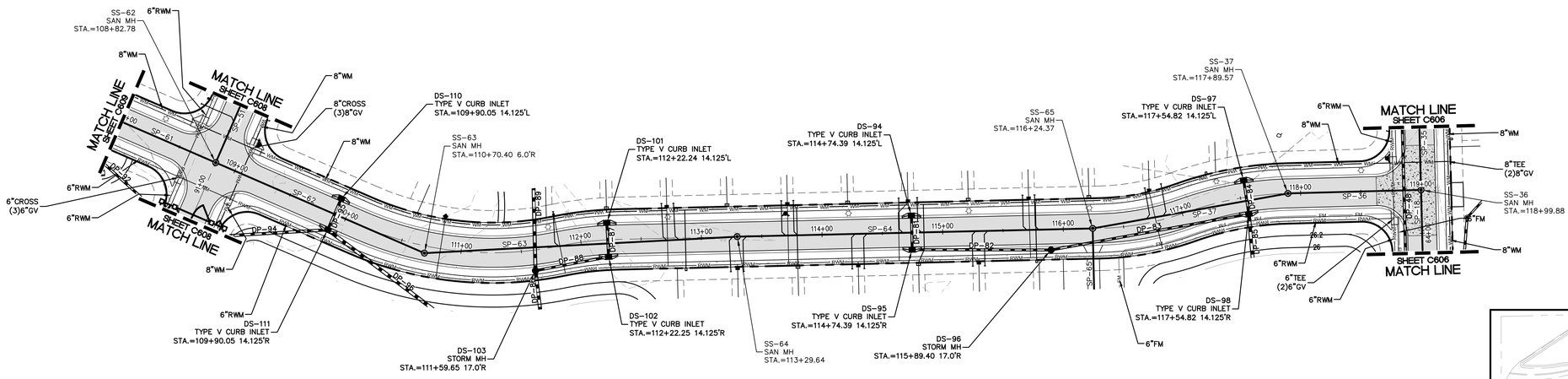
GRAPHIC SCALE

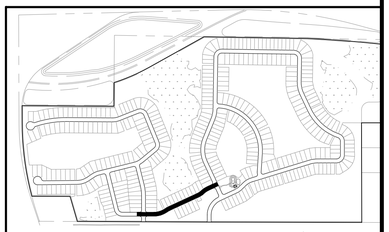
50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.



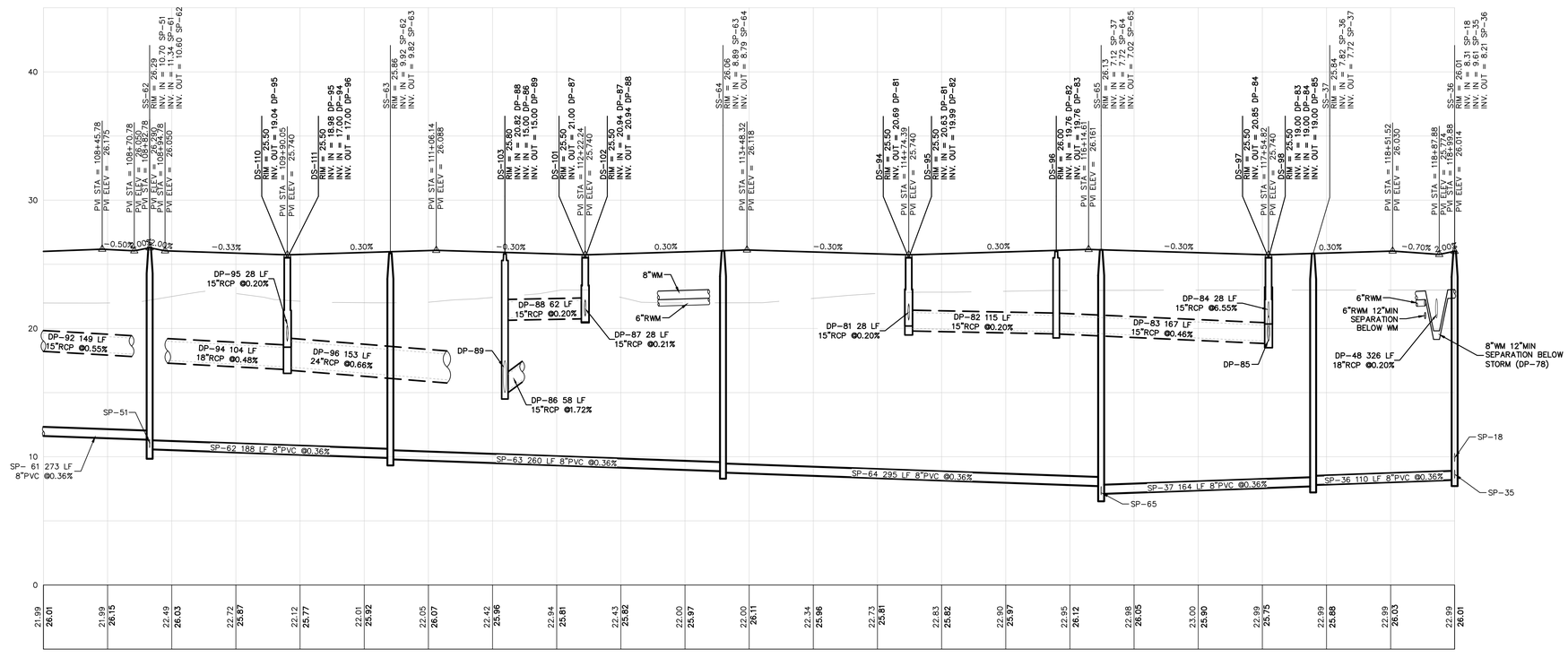
BINNACLE LANE
(STA. 108+00 – 118+99.88)

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE



KEY MAP
SCALE: 1"=3000'

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL. 32751
407-629-0077

DAVID ALLEN STOKES
LICENSE
No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. EB-0007723

	DATE	REVISIONS
1	11/20/23	REVISED PER CITY COMMENTS
2		
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JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C610

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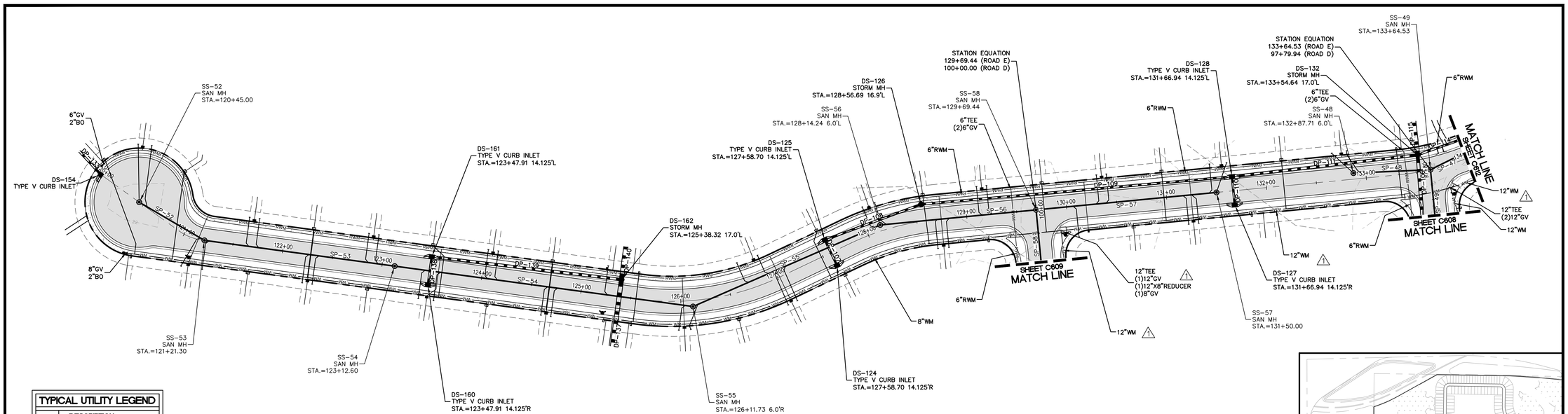


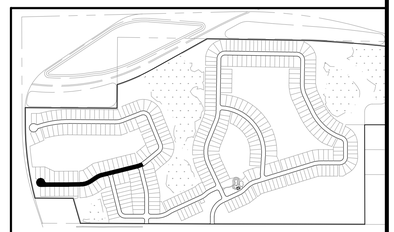
TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE

GUNWALE DRIVE
(STA. 120+00 – 134+00)

GRAPHIC SCALE

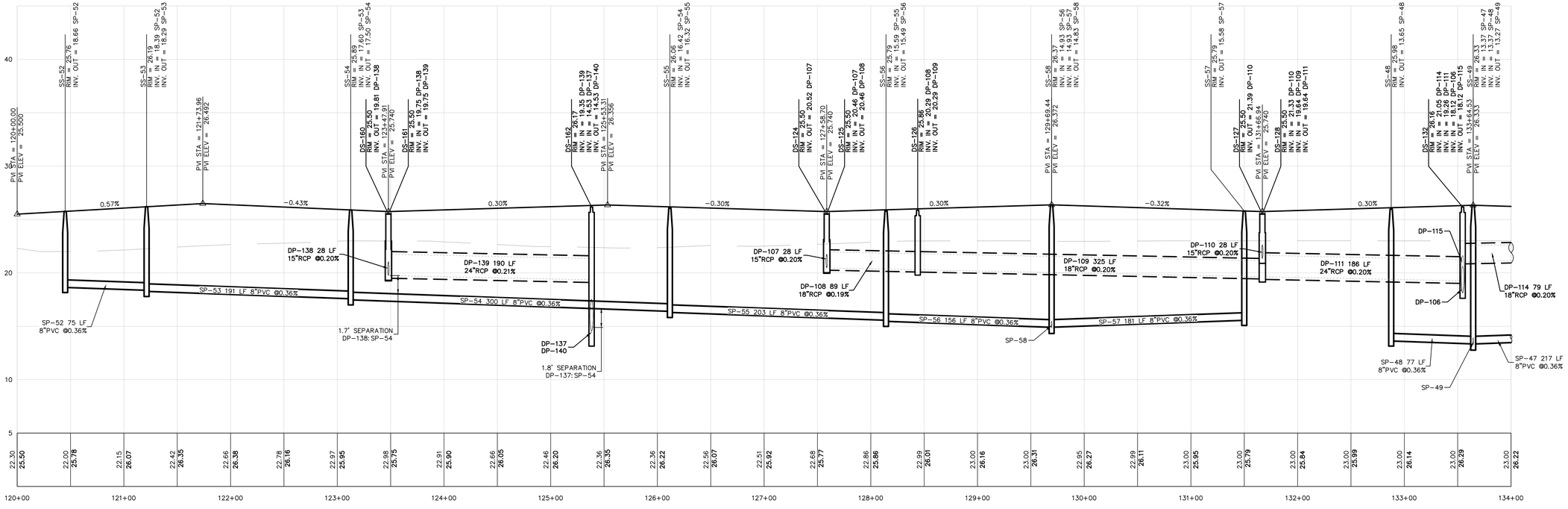
50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.



KEY MAP
SCALE: 1"=3000'

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER DAVID KSHEBE STOKES
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO	DATE	REVISIONS
1	10/27/22	REVISED PER CITY COMMENTS
2	11/28/23	REVISED PER CITY COMMENTS
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JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C611

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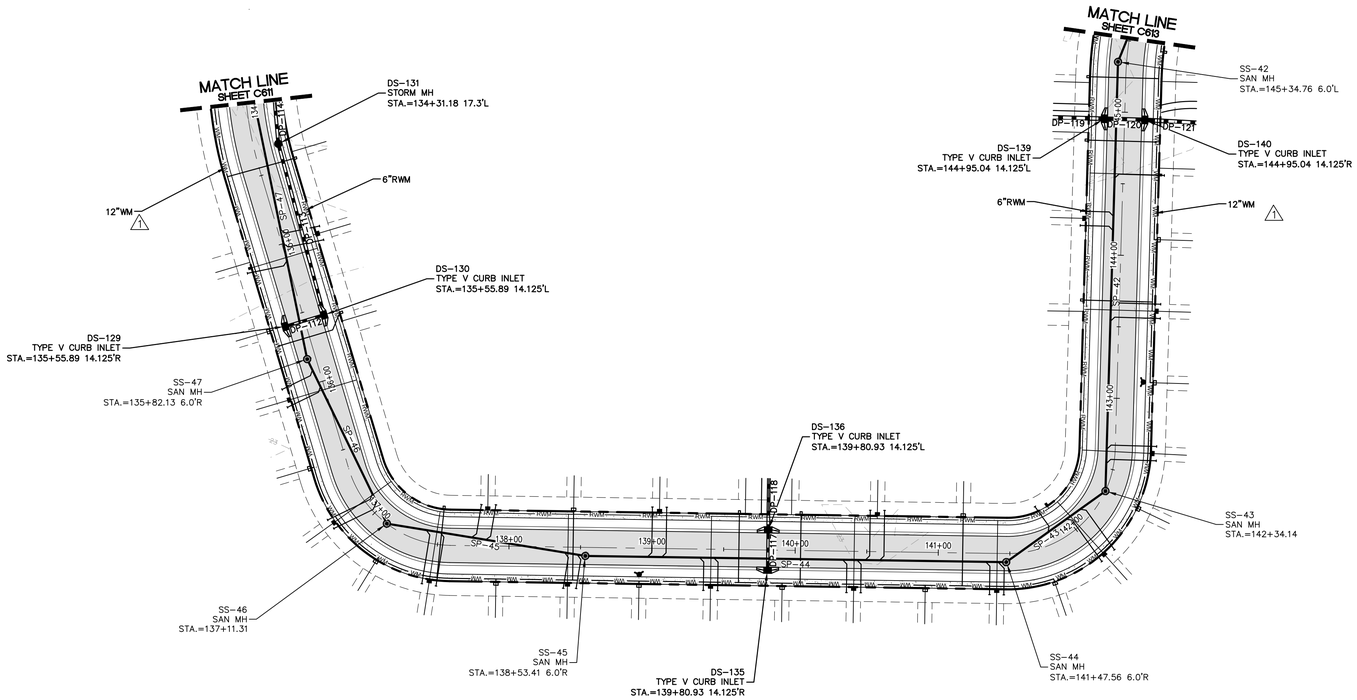


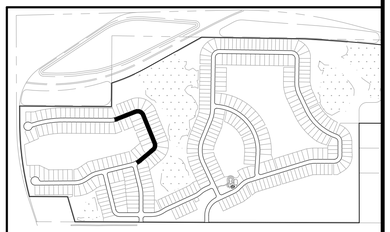
GUNWALE DRIVE
(STA. 134+00 – 145+50) 2

GRAPHIC SCALE

50 0 25 50 100 200

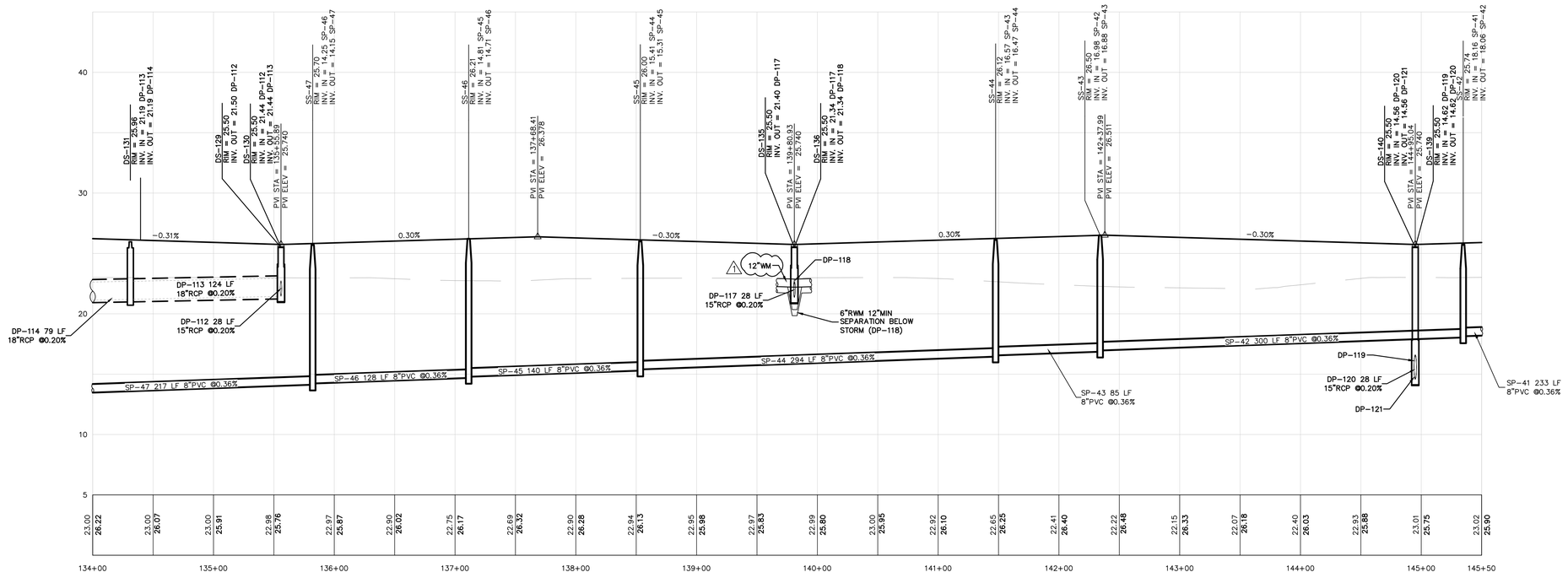
(IN FEET)
1 inch = 50 ft.

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE



KEY MAP
SCALE: 1"=3000'

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DANIEL R. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
ENGINEER'S SEAL
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1		
2	10/27/23	REVISED PER CITY COMMENTS
3	11/28/23	REVISED PER CITY COMMENTS
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JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

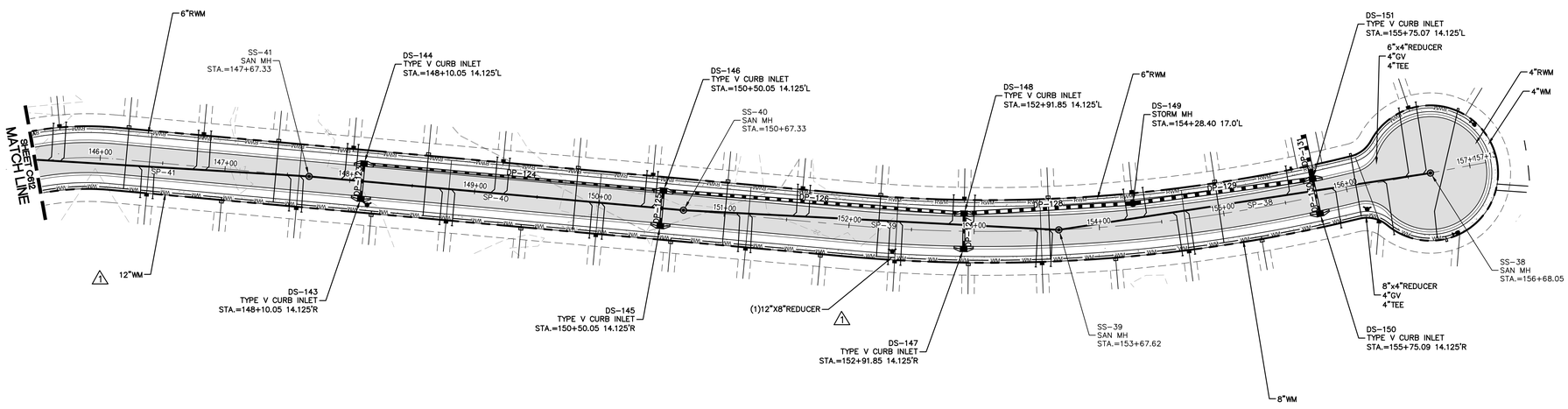
C612

H:\Data\21074\Eng\Final\21074_C612 ROAD E.dwg November 20, 2023 12:47 PM

GRAPHIC SCALE

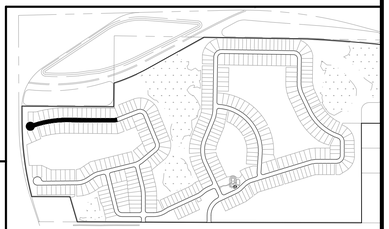
50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.



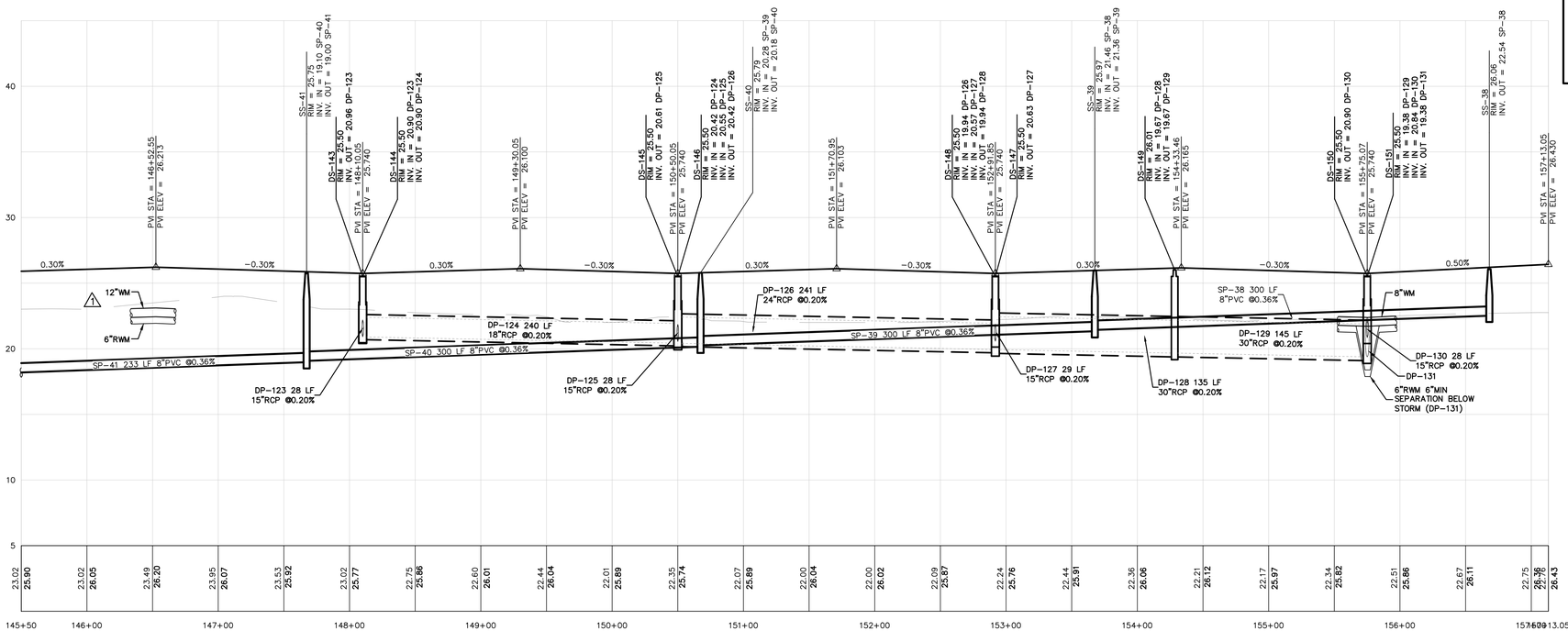
TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE

GUNWALE DRIVE
(STA. 145+50 – 157+13.05) 2



KEY MAP
SCALE: 1"=3000'

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING CERTIFICATE OF AUTHORIZATION NO. CA-0007723
DAVID A. STOKES LICENSE NO. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
DAVID ANDREW STOKES 66527
DATE: 2023.11.20 12:47:23 -05'00'

	DATE	REVISIONS
1	10/27/23	REVISED PER CITY COMMENTS
2	11/20/23	REVISED PER CITY COMMENTS
3		
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JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C613

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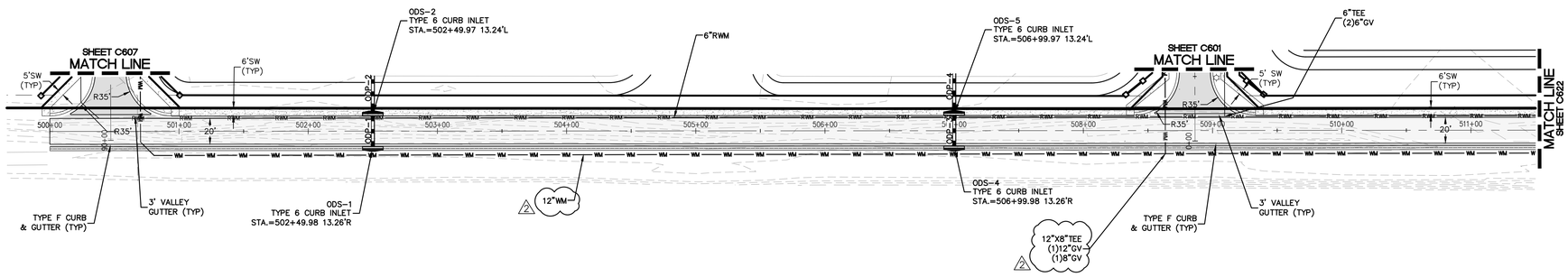


JAMES ROAD
(STA. 0+00 – 11+50)

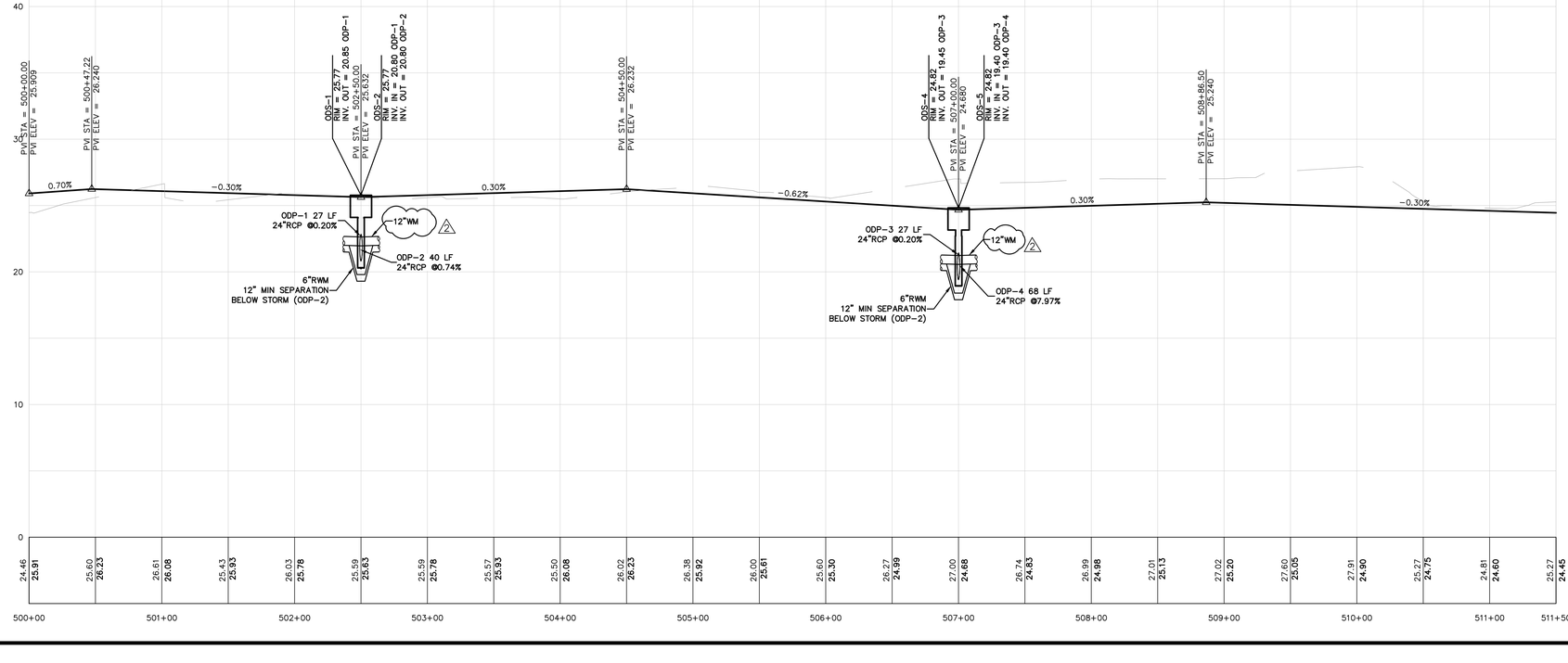
GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER: KENNETH J. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER DATE: 11/20/2023
CERTIFICATE OF AUTHORIZATION No. CA-0007723

	DATE	REVISIONS
1	07/13/23	REVISED PER COUNTY COMMENTS
2	10/27/23	REVISED PER CITY COMMENTS
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JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

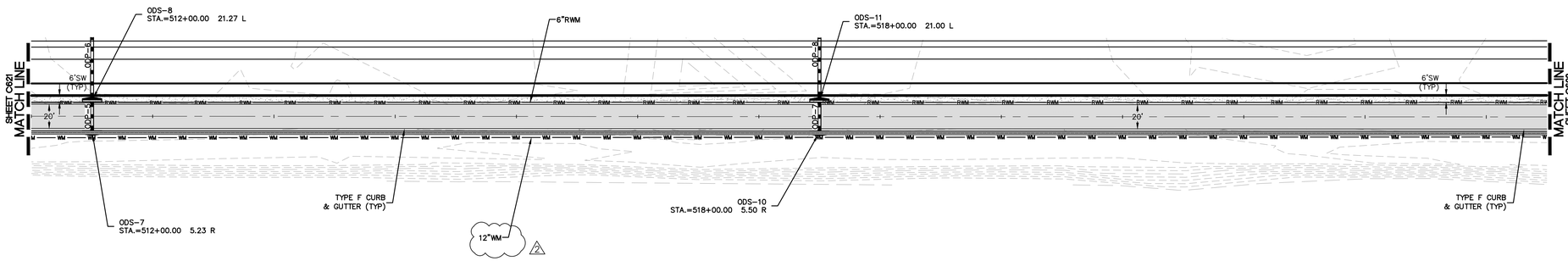
H:\Data\21074\Eng\Final\21074_C621 JAMES ROAD.dwg November 20, 2023 12:43 PM

C621

GRAPHIC SCALE

50 0 25 50 100 200

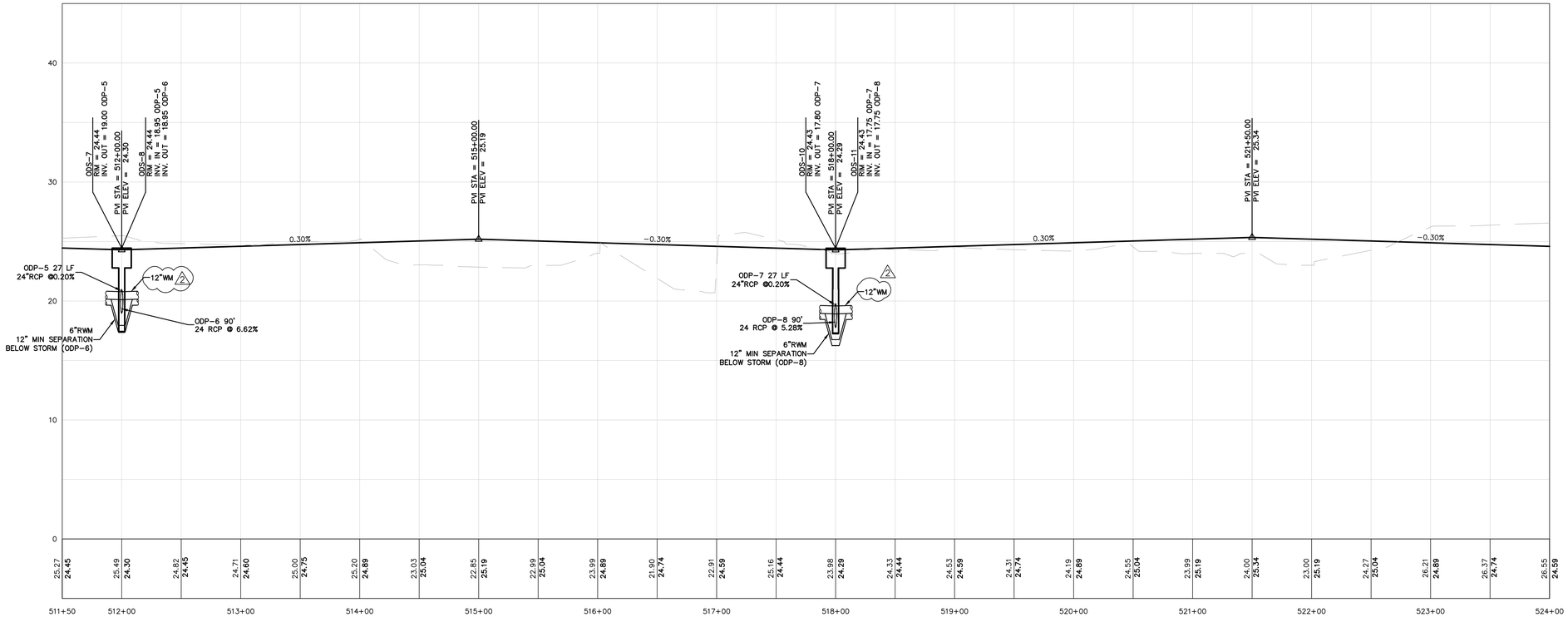
(IN FEET)
1 inch = 50 ft.



JAMES ROAD
(STA. 11+50 – 24+00)

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER: DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	07/13/23	REVISED PER COUNTY COMMENTS
2	10/27/23	REVISED PER CITY COMMENTS
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JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

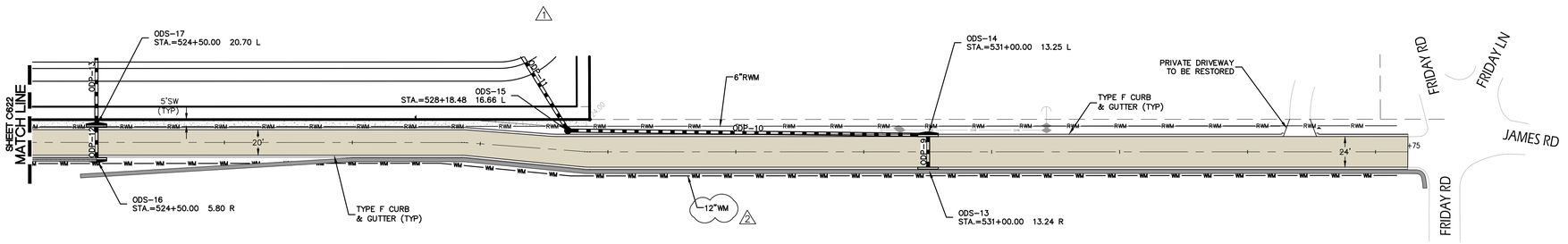
C622

H:\Data\21074\Eng\Final\21074_C622 JAMES ROAD.dwg November 20, 2023 12:44 PM

GRAPHIC SCALE

50 0 25 50 100 200

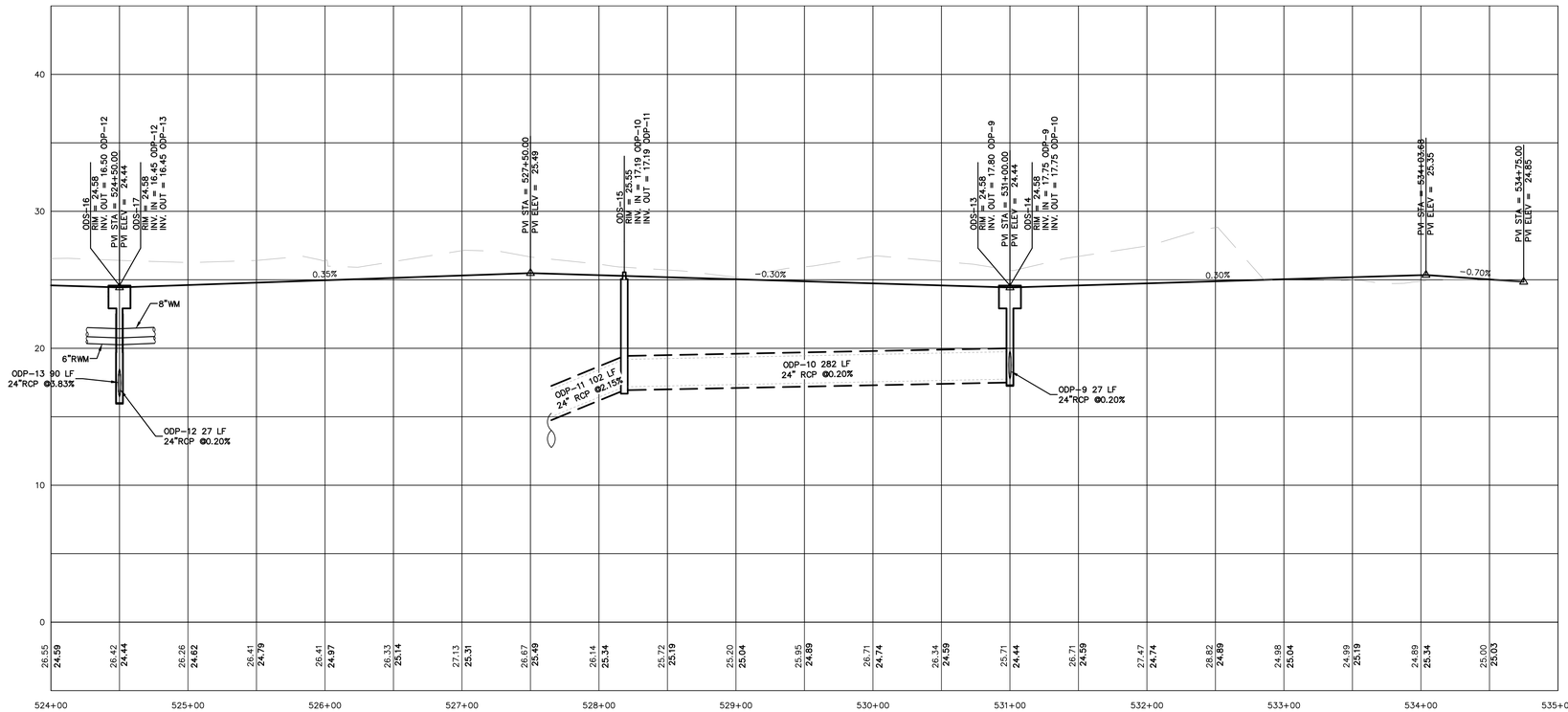
(IN FEET)
1 inch = 50 ft.



JAMES ROAD
(STA. 524+00 – 534+75)

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	DOUBLE RWM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE

NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.



MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER: DAVID STOKES
LICENSE No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

DATE	REVISIONS
07/13/23	REVISED PER COUNTY COMMENTS
10/27/23	REVISED PER CITY COMMENTS

JOB # 21074
DATE: 9/26/22
SCALE: H:1"=50' V:1"=5'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C623

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GRAPHIC SCALE

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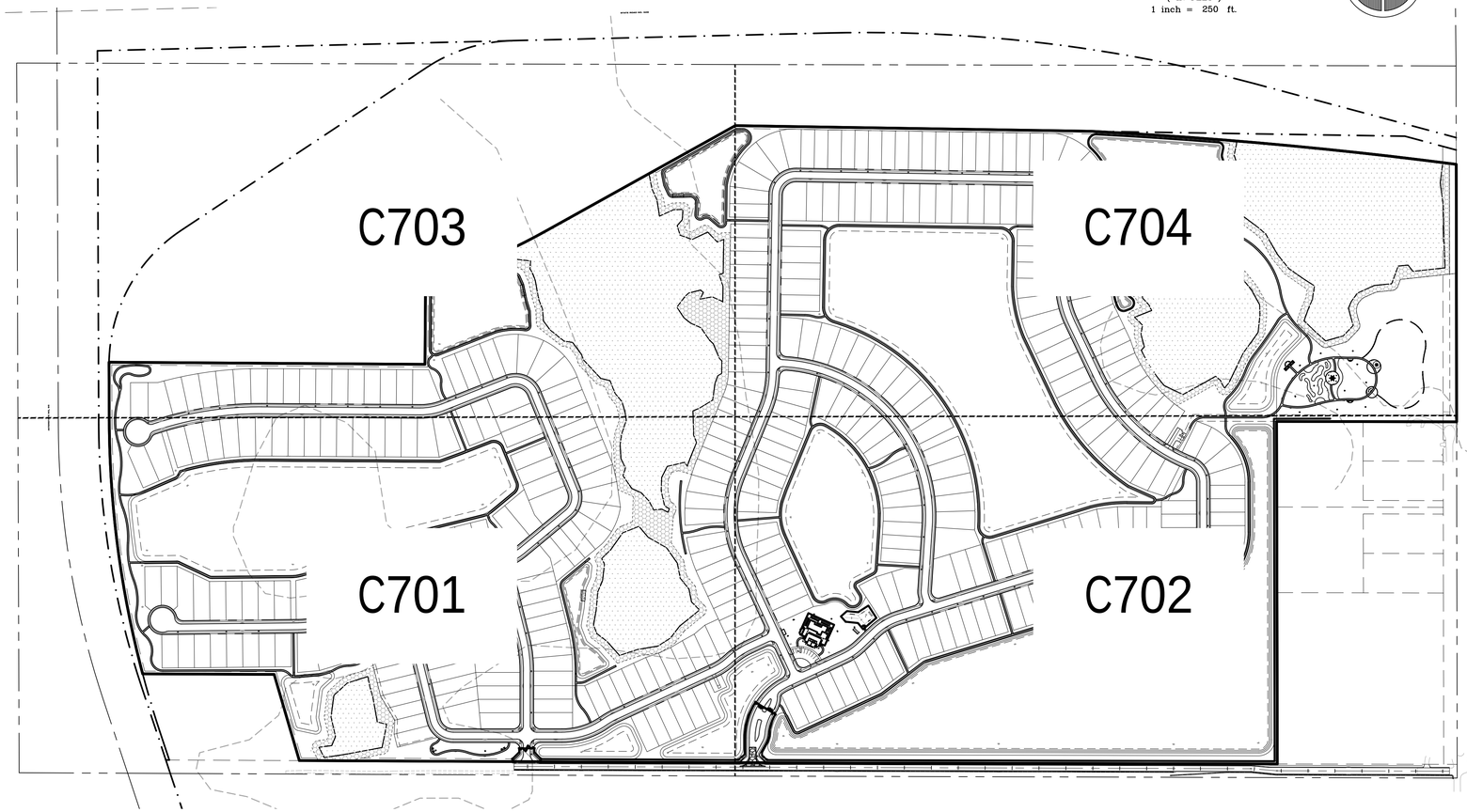
(IN FEET)
1 inch = 250 ft.



CERTIFICATION FOR CONTRACTORS AND SUB-CONTRACTORS

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

NAME: SIGNATURE: DATE:

ADDRESS: TELEPHONE:

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

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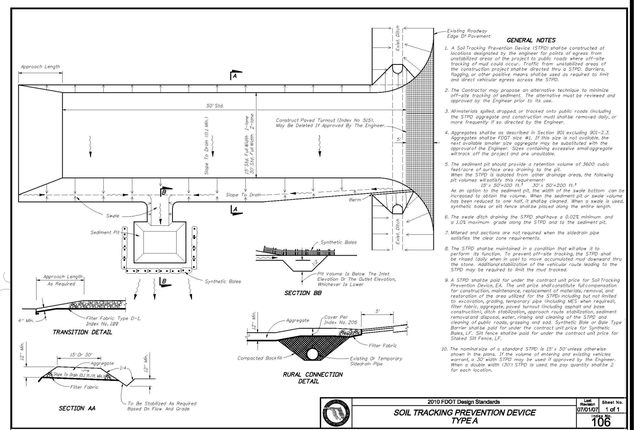


GENERAL NOTES

1. A Silt Tracking Prevention Device, STPD, shall be constructed at locations designated by the engineer for points of egress from unstabilized areas of the project to public roads where off-site tracking of mud could occur. Traffic from unstabilized areas of the project shall not be allowed to exit except through a STPD. Barricades, flagging or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
2. The Contractor may propose an alternative technique to minimize off-site tracking. Alternative STPD designs must be reviewed and approved by the Engineer prior to its use.
3. Aggregates spilled, dropped, or tracked onto public roads including the STPD aggregate and construction mud shall be removed daily, or more frequently if so directed by the Engineer.
4. Aggregates shall be as described in Section 901 excluding 901-2.3. Recycled concrete meeting 901-2.3.1 may be used. Should the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small-aggregate will knock off the project and are unsuitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is isolated from other drainage areas, the following pit volumes may be used as guidelines: 10' x 30'=300 ft.3 20' x 30'=600 ft.3 30' x 30'=900 ft.3 As an option to the sediment pit, the width of the swale bottom can be increased to provide the required volume. When a sediment pit has been reduced to one half, a shallow channel. When a swale is used synthetic bales or silt fence shall be placed along the entire length.
6. The swale ditch draining the STPD shall have a 0.02% minimum and a 2.0% maximum grade along the STPD and to the sediment pit.
7. Mitered end sections are not required when the sidedrain pipe satisfies the clear zone requirements.
8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent off-site tracking, the STPD shall be modified or rebuilt as conditions demand and additional must downward from the inlet. Additional stabilization of the construction route leading to the STPD may be required to limit the mud tracked.
9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, TYPE A. Such price shall be full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD including but not limited to excavation, fill, aggregate, wood formwork, wood bracing, wood wedges, filter fabric, aggregate, paved turnout (including asphalt and base construction), grade stabilization, approach route stabilization, sediment removal and disposal, water, raising and clearing of the STPD and clearing of public roads, grassing and sod. Synthetic Bale or Slide Type Sediment Barrier, LF. shall be paid for under the contract unit price for Bales, LF. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, LF.
10. The combination of a standard STPD (a 15' x 30' area) otherwise shown in the plans, if the volume of entering and existing vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.

2010 FDOT Design Standards	Last Revised 07/01/07	Sheet No. 1 of 1
SOIL TRACKING PREVENTION DEVICE TYPE A		STPD 106

EROSION CONTROL:

THE CONTRACTOR SHALL PERFORM EROSION CONTROL MEASURES IN ACCORDANCE WITH FDEP, STATE WATER MANAGMENT DISTRICT, CITY, AND COUNTY REGULATIONS, AS WELL AS THE FOLLOWING NOTES AND AS DIRECTED BY THE ENGINEER.

A. TEMPORARY EROSION CONTROL

1. STOCKPILING MATERIAL. NO EXCAVATING MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATERBODY OR STORMWATER COLLECTION FACILITY.

2. INLET PROTECTION – INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT-LADEN STORM RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATERBODY OR STORMWATER COLLECTION FACILITY.

3. TEMPORARY SEEDING / STRIP SODDING – AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN THIRTY DAYS SHALL BE STRIP-SODDED ALONG ALL DEDICATED ROW'S. THIS WILL PREVENT SEDIMENT RUNOFF FROM INDIVIDUAL LOTS INTO THE ROW AND DRAINAGE SYSTEMS, AND WILL NOT LATER COMPETE WITH THE PERMANENT LOT GRASSING.

4. TEMPORARY SEEDING AND MULCHING – SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN NOTE 3 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA TO A DEPTH OF 4 INCHES.

5. TEMPORARY GRASSING – THE SEEDED OR THE SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED AS REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.

6. TEMPORARY REGRASSING – IF AFTER FOURTEEN DAYS, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75% GOOD GRASS COVER THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATION COVER.

7. THE CONTRACTOR SHALL PLACE SYNTHETIC HAY BALES AROUND ALL EXISTING AND NEWLY CONSTRUCTED INLETS TO CONTROL EROSION DURING CONSTRUCTION.

8. MAINTENANCE – ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.

B. PERMANENT EROSION CONTROL

THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON OFF-SITE FACILITIES. ALL STORMWATER DISCHARGE FROM THE PROJECT LIMITS SHALL BE ROUTED THROUGH DETENTION BASINS TO TRAP SUSPENDED SEDIMENTS AND DISCHARGE FACILITIES FROM THESE BASINS SHALL BE PROVIDED WITH A SKIMMER DEVICE TO TRAP FLOATABLE DEBRIS.

1. PERMANENT SEEDING – ALL AREAS WHICH HAVE BEEN DISTURBED BY THE CONSTRUCTION WILL, AS A MINIMUM, BE FERTILIZED AND SEEDED.

2. PERMANENT SEEDING AND MULCHING – SLOPES OF 6:1 TO 4:1 INCLUSIVE WILL BE MULCHED WITH A UNIFORM THICKNESS OF APPROXIMATELY TWO INCHES, LOOSE MEASURE, OF MULCH MATERIAL INCORPORATED INTO THE SOIL BY MIXING TO A DEPTH OF FOUR INCHES.

3. PERMANENT SODDING – ALL RETENTION/DETENTION BASINS SHALL BE SODDED WITHIN THEIR LIMITS. ALL EXPOSED AREAS WITHIN PUBLIC RIGHTS-OF-WAY WILL BE SOLID SODDED. OTHER AREAS WITH SLOPES STEEPER THAN 4:1 WILL BE SODDED.

4. STRIP SODDING – STRIP SOD SHALL BE PLACED ADJACENT TO ALL CURBS, WALKS AND PAVEMENTS.

5. REGRASSING – ALL GRASSED AREAS WILL BE MAINTAINED TO ASSURE A GOOD STAND AND SUFFICIENT GROUND COVER TO MINIMIZE EROSION. IF, AFTER 60 DAYS AN ADEQUATE GROUND COVER HAS NOT BEEN ESTABLISHED, THE AREA WILL BE REGRASSED.

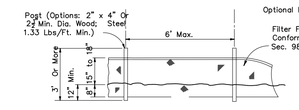
6. ADDITIONAL FERTILIZATION – GRASSED AREAS NOT ACCEPTED WITHIN 90 DAYS OF THEIR COMPLETION SHALL BE FERTILIZED.

7. FOR ADDITIONAL SODDING REQUIREMENTS, REFER TO THE LANDSCAPE PLANS.

8. FERTILIZATION TO COMPLY WITH LOCAL JURISDICTIONAL REQUIREMENTS.

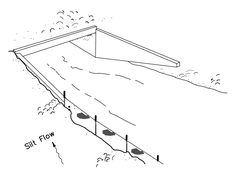
STORMWATER POLLUTION PREVENTION NOTES:

1. THE CONTRACTOR SHALL EXECUTE ALL MEASURES NECESSARY TO LIMIT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT TO THE VOLUME AND AMOUNT THAT ARE EXISTING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THIS CONDITION WILL BE SATISFIED FOR THE TOTAL ANTICIPATED CONSTRUCTION PERIOD. PROVISION MUST BE MADE TO PRESERVE THE INTEGRITY OF GRADING PATTERNS, ETC. REQUIRED TO MEET THIS PROVISION THROUGHOUT THE LIFE OF THE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE SILT BARRIERS, TEMPORARY GRASSING, ETC. AS REQUIRED TO FULLY COMPLY WITH THE INTENT OF THIS SPECIFICATION.
2. NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.
3. THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL BE CONTROLLED, SO THAT THIS OPERATION WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.
4. INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT LADEN STORMWATER RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.
5. AREAS OPENED BY CONSTRUCTION OPERATIONS THAT ARE NOT ANTICIPATED TO BE DRESSED OR RECEIVE FINAL GRASSING TREATMENT WITH IN THIRTY DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER, DURING THE SEASON IN WHICH IT IS PLANTED. TEMPORARY SEEDING SHALL BE CONTROLLED SO AS TO NOT ALTER OR COMPETE WITH PERMANENT GRASSING. THE RATE OF SEEDING SHALL BE 30 POUNDS PER ACRE.
6. THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED AS REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.
7. IF AFTER 14 DAYS, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75% GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED TO ESTABLISH THE DESIRED VEGETATION COVER.
8. ALL FEATURES OF THE PROJECT SHALL BE CONSTRUCTED TO PREVENT EROSION AND SEDIMENTATION AND SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION PROPERLY WITHOUT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT.
9. ALL DISTURBED AREAS OUTSIDE THE EXCAVATION AND FILL LIMITS WILL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THEIR CONDITION PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL NEWLY PLANTED GRASSES OR VEGETATION AND RETENTION/DETENTION FACILITIES UNTIL THE WORK HAS BEEN ACCEPTED BY THE COUNTY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF EMBANKMENTS AND SHALL REPLACE ANY PORTION, WHICH IN THE OPINION OF THE ENGINEER, HAS BECOME DISPLACED DUE TO EROSION OR DUE TO CARELESSNESS OR NEGLIGENCE ON THE PART OF THE CONTRACTOR.
12. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS CONTROLLING POLLUTION OF THE ENVIRONMENT. MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO CONTROL EROSION AND SEDIMENT RUNOFF FROM THE SITE DURING CONSTRUCTION. SUCH METHODS SHALL BE IN ACCORDANCE WITH CURRENT FDOT AND ORANGE COUNTY STANDARDS.
13. ABSOLUTELY NO WORK WILL BE ALLOWED WITHIN ANY CONSERVATION AREA, BUFFER AREA, MITIGATION AREA OR DESIGNATED WETLAND AREA UNLESS SO SPECIFICALLY DESCRIBED BY THE PLANS AND GRANTED BY REASON OF PERMIT FROM THE GOVERNMENTAL ENTITY HAVING JURISDICTION OVER SAID AREA.
14. PRIOR TO CLEARING AND GRUBBING, THE LIMITS OF WETLANDS, BUFFERS WETLANDS, BUFFERS AND MITIGATION AREAS SHALL BE CLEARLY MARKED ALONG THE PROPOSED RIGHT OF WAY LINE TO PROTECT THESE AREAS FROM ENCROACHMENT FROM CONSTRUCTION ACTIVITIES.
15. ALL FILL EMBANKMENT AND GRADED AREAS SHALL BE PROTECTED AGAINST EROSION BY METHODS STATED IN SECTION 104. STANDARD SPECIFICATIONS FOR BRIDGE AND ROAD CONSTRUCTION. SIDE SLOPE MAY BE SEED AND MULCHED, PROVIDED THAT THE MULCH MATERIAL IS DISC HARROWED AND THE SIDE SLOPES ARE NEITHER GREATER THAN 3:1 NOR PART OF A DRAINAGE CONVEYANCE.
16. REFER TO POND DETAIL SHEETS FOR EROSION CONTROL MEASURES AT POND OUTFALLS.
17. EROSION CONTROL AT ALL INLET DRAINAGE STRUCTURES DURING CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL MANUAL, LATEST EDITION.
18. INSPECTIONS ON EROSION CONTROL MEASURES WILL BE PERFORMED BY THE CONTRACTOR ONCE PER WEEK AND WITHIN 24 HOURS AFTER 1/4 INCH OF RAINFALL. THE INSPECTIONS MUST BE LOGGED BY THE CONTRACTOR AND KEPT WITH THE APPROVED PLANS AND SWPPP.
19. GRAVEL CONSTRUCTION ENTRANCES SHALL BE PROVIDED TO MINIMIZE EXPORT OF ONSITE DIRT. IF GRAVEL IS NOT ALLOWED, THE CONSTRUCTION ENTRANCES SHALL BE SWEPT PERIODICALLY AND LOGGED BY THE CONTRACTOR.



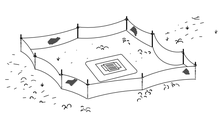
Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

TYPE III SILT FENCE

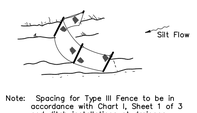


NOTES:
1. HAY OR STRAW BALES ARE PROHIBITED.

102 — SILT FENCES
N.T.S.



Type III Silt Fence Protection Around Ditch Bottom Inlets.



Note: Spacing for Type III Fence to be in accordance with Chart 1, Sheet 1 of 3 and ditch installations at drainage structures Sheet 2 of 3.

Type III Silt Fence

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

SILT FENCE APPLICATIONS

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2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DAVID E. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
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JOB # 21074
DATE: 9/26/22
SCALE: 1" = 250'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C700

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GRAPHIC SCALE

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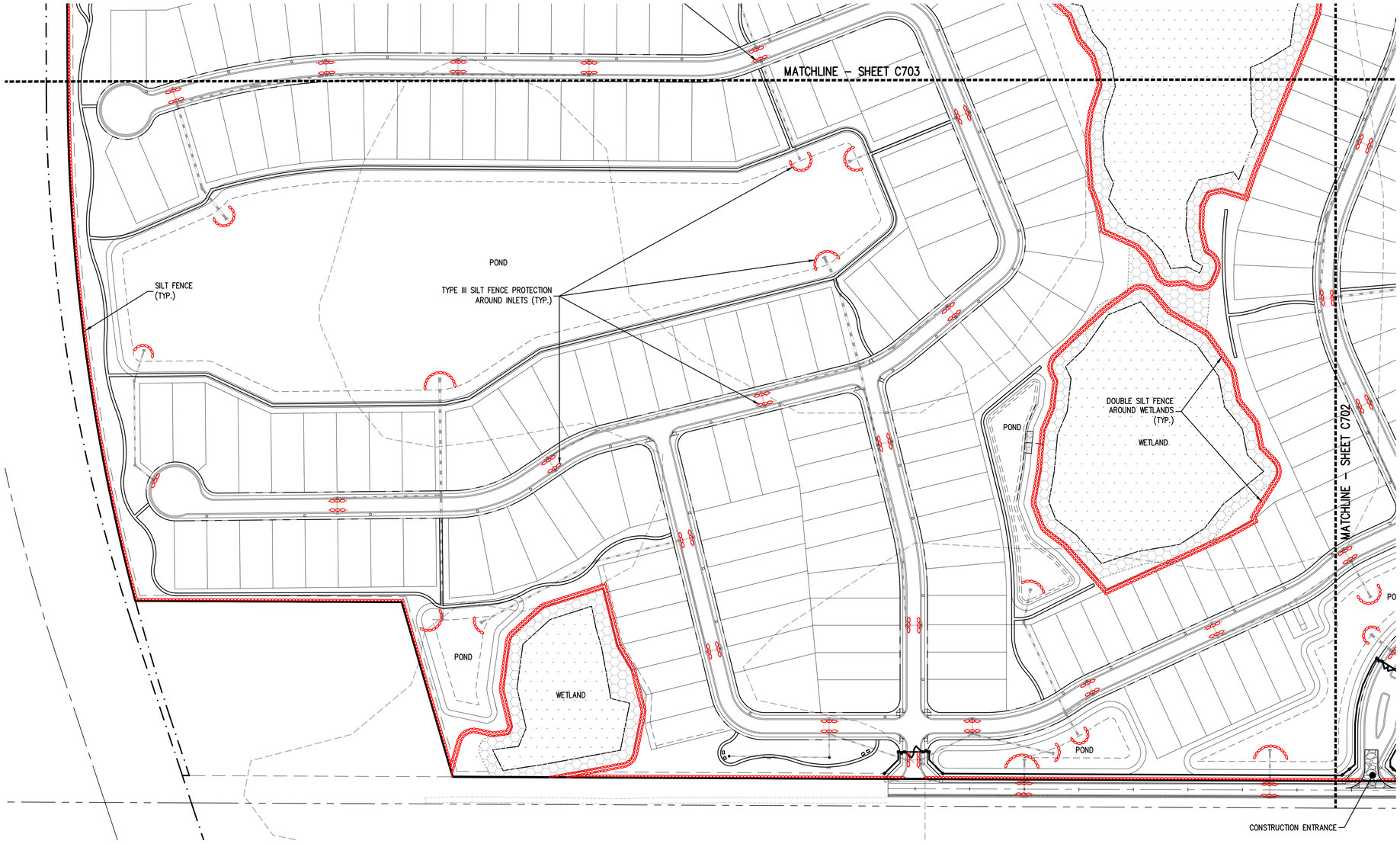

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ENGINEERING LICENSE No. 66527 STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER
SURVEYING LICENSE No. LS6247 STATE OF FLORIDA REGISTERED PROFESSIONAL SURVEYOR AND MAPPER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB # 21074
DATE: 9/26/22
SCALE: 1" = 100'
DESIGNED BY: RJS
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APPROVED BY: DAS

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GRAPHIC SCALE

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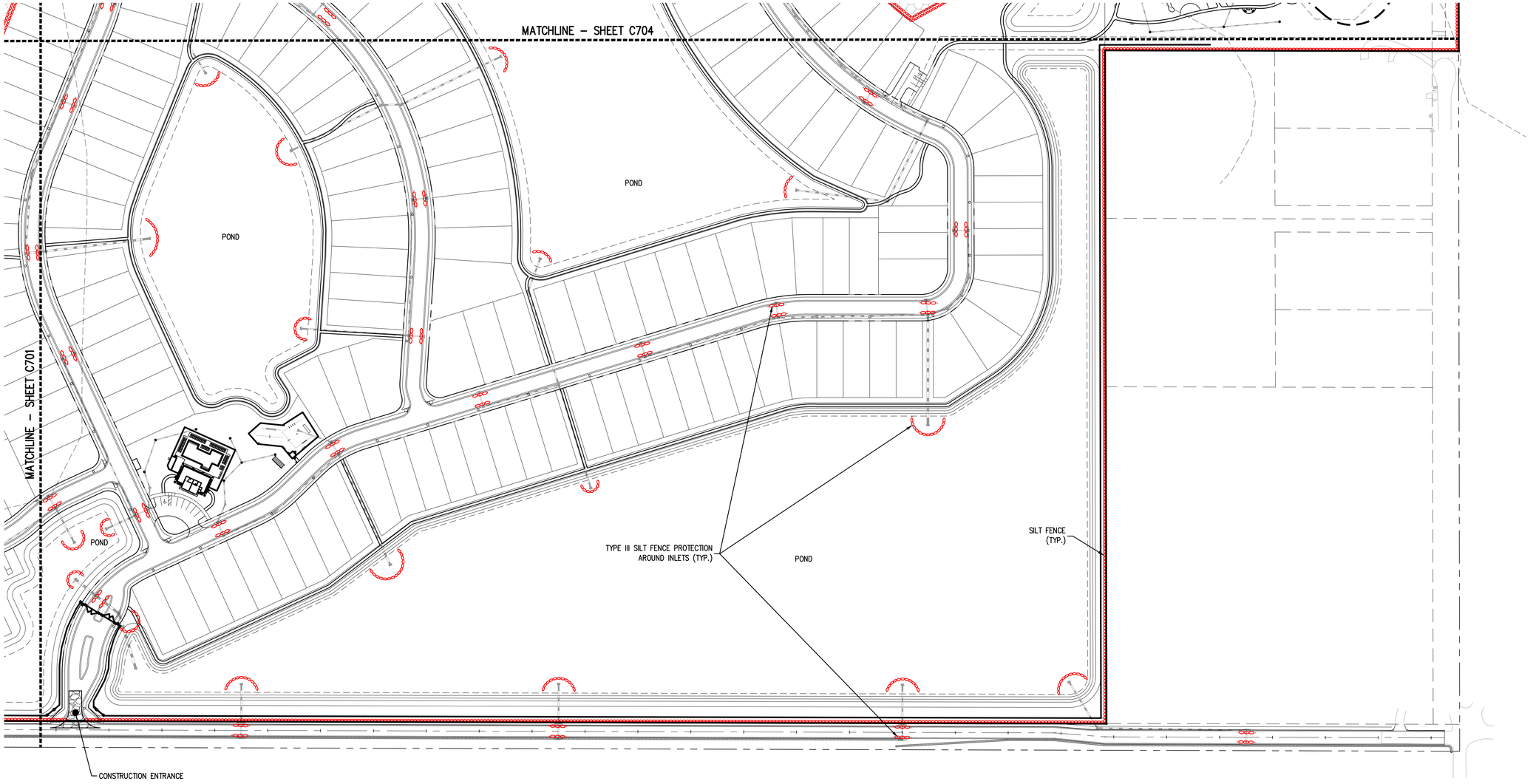

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DRAWN BY:	RJS
APPROVED BY:	DAS

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GRAPHIC SCALE

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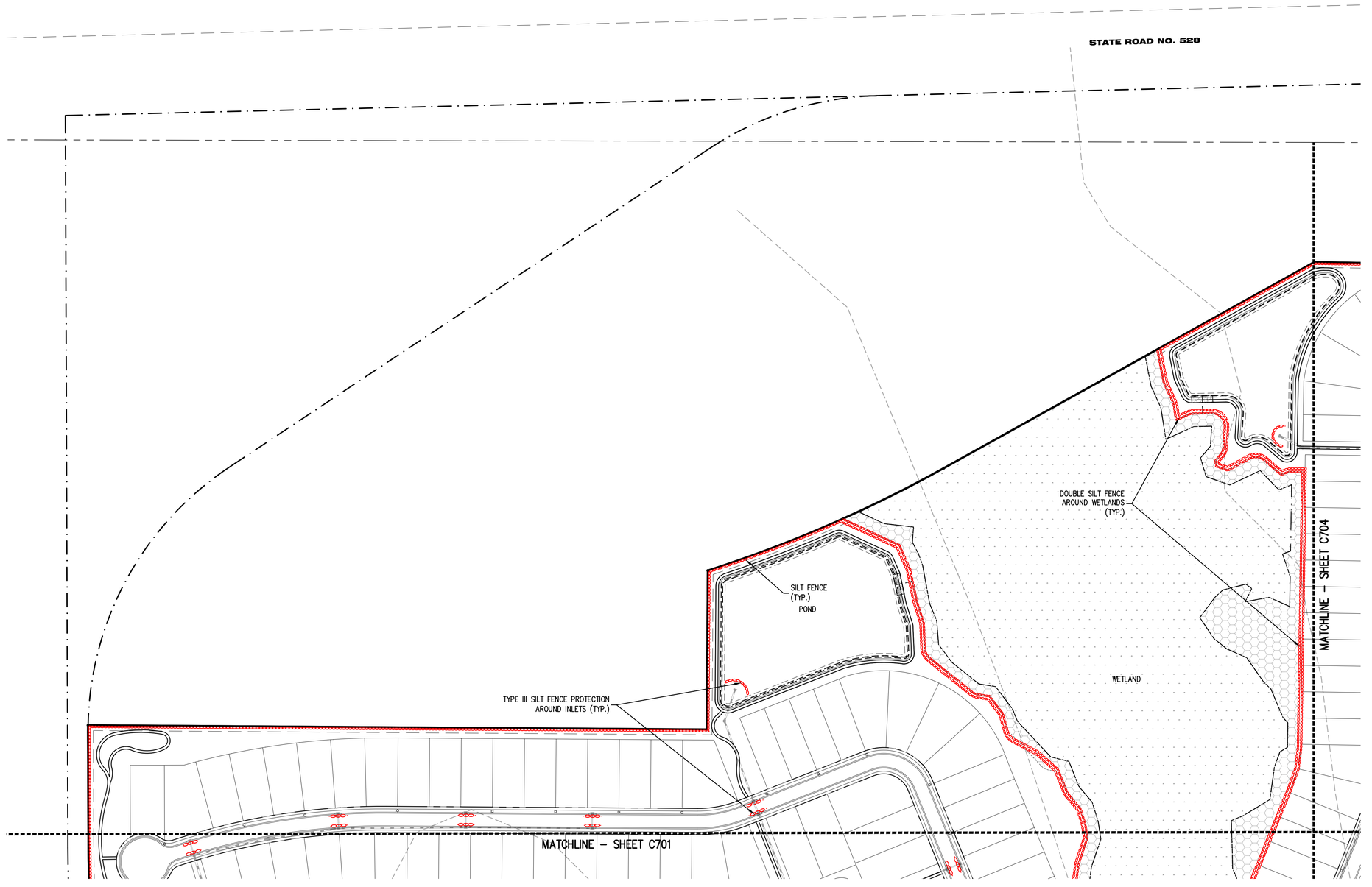

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ENGINEER'S SEAL
DAVID A. STOKES
LICENSE
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STATE OF FLORIDA
PROFESSIONAL ENGINEER

CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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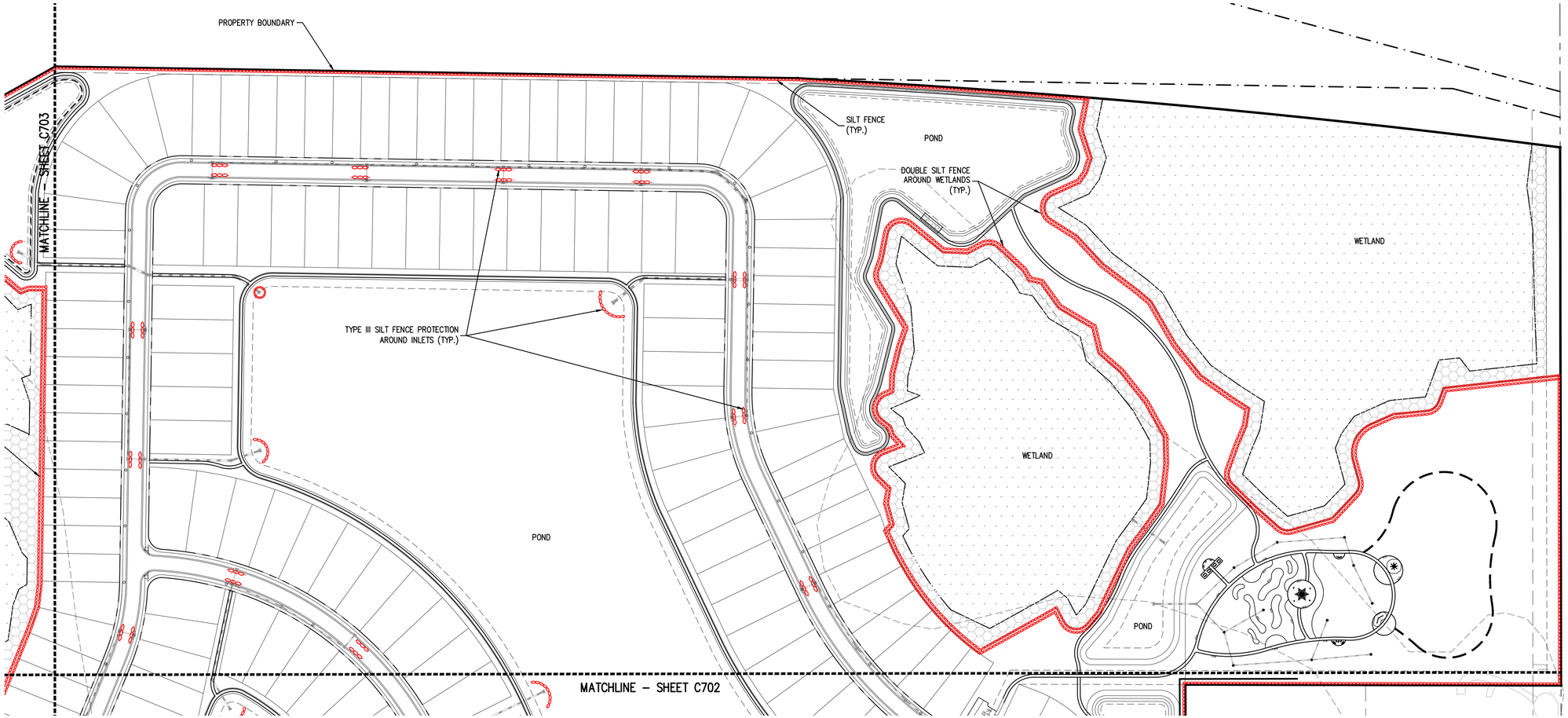

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MATCHLINE - SHEET C802

GRAPHIC SCALE

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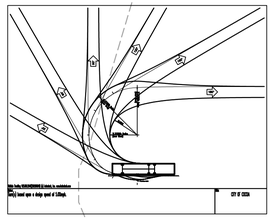
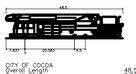
(IN FEET)
1 inch = 80 ft.





CITY OF COCOA

Overall Length	49.500ft
Overall Width	8.500ft
Overall Body Height	13.583ft
Min Ground Clearance	0.542ft
Track Width	8.500ft
Lock-to-lock time	6.000s
Max Steering Angle (Virtual)	42.000°

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

FIRE TRUCK CIRCULATION PLAN
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL: DAVID A. STOKES * LICENSE No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
SURVEYOR'S SEAL: [illegible] * PROFESSIONAL SURVEYOR AND MAPPER
CERTIFICATE OF AUTHORIZATION NO. LB-0007723

	DATE	REVISIONS
1	10/27/23	REVISED PER CITY COMMENTS
2		
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JOB # 21074
DATE: 9/26/22
SCALE: 1" = 80'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

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C801

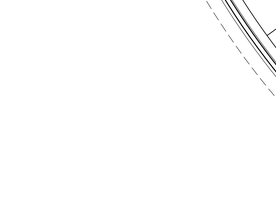
GRAPHIC SCALE

80 0 40 80 160

(IN FEET)
1 inch = 80 ft.

MATCHLINE - SHEET C803

MATCHLINE - SHEET C801



CITY OF COCOA
Overall Length 48.500ft
Overall Width 8.500ft
Overall Body Height 9.854ft
Min Body Ground Clearance 0.750ft
Track Width 8.500ft
Lock to Lock time 6.000s
Max Steering Angle (Virtual) 42.00°

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407-629-0077

ENGINEER'S SEAL
DAVID R. STOKES
LICENSE
No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB # 21074
DATE: 9/26/22
SCALE: 1" = 80'
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C802

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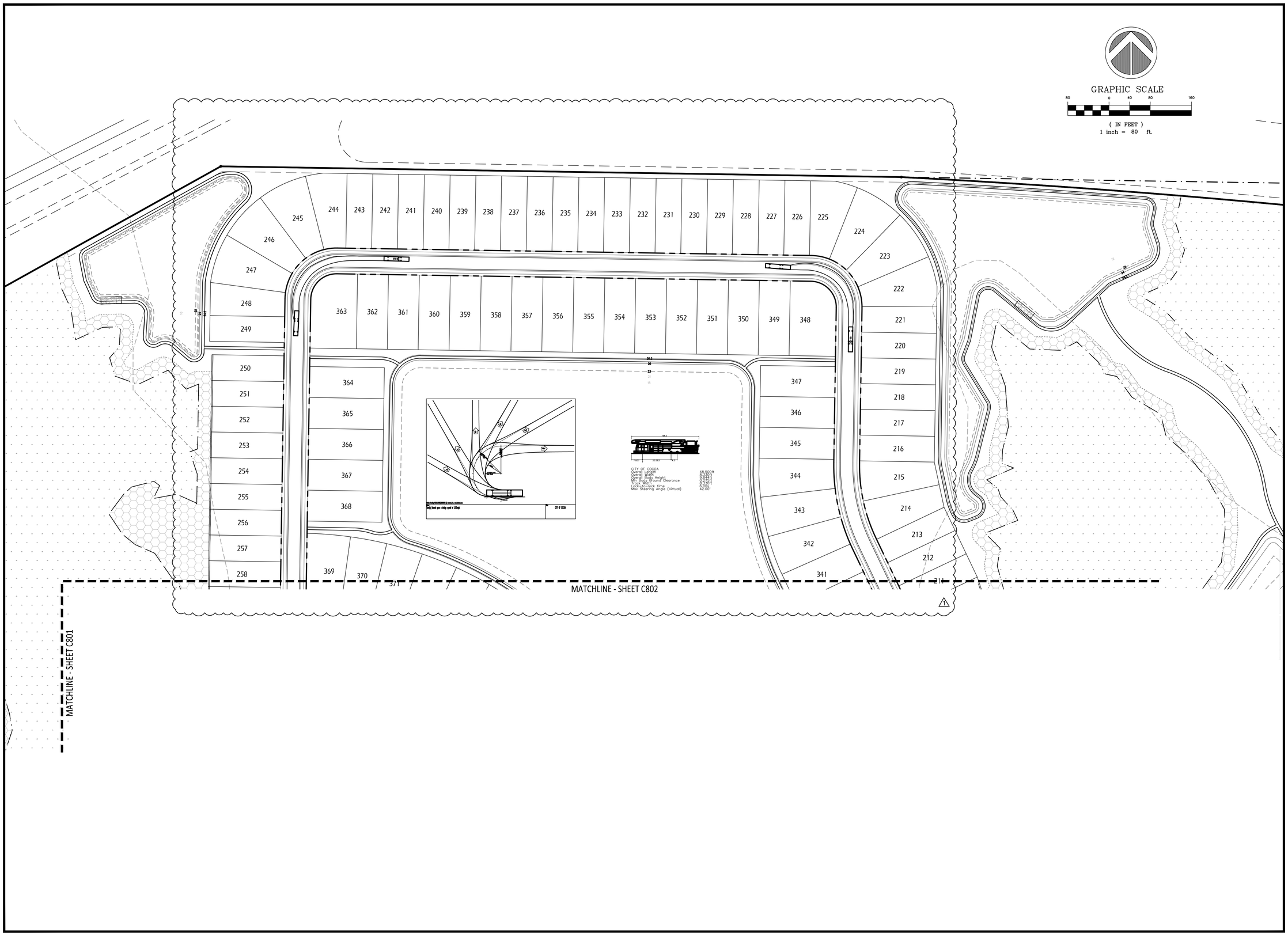

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Maitland, Florida 32751
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FIRE TRUCK CIRCULATION PLAN
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407-629-0077

ENGINEER'S SEAL: DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
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C803

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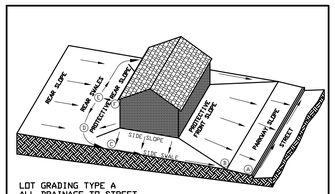
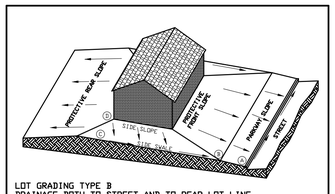


LOT GRADING TYPE A
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE A-F FOR A 60' LOT ON AN 0.5% STREET, WITH 28' SETBACK, 28' BUILDING DEPTH AND 2% SWALES	RESULTS USING 1% SWALES
A Curb-top on lot-line extension at high lot corner	
A-B Parkway slope: 12' grass and walk at 1/4"/ft. (2%) . . . 3" (0.3')	3" (0.3')
B-C Side swale: 56' grass at 1/4"/ft. (2%) . . . . . 14" (1.2')	7" (0.6')
C-D Swale turn with 10' radius: 16' grass at 1/4"/ft. . . . 4" (0.3')	6" (0.5')
D-E Rear swale: 12' grass at 1/4"/ft. (2%) . . . . . 3" (0.3')	1" (0.1')
E-F Protective rear slope up from high-point of swales . . . 6" (0.5')	6" (0.5')
Sub-total A-F from curb-top to ground at rear building wall. 30" (2.5')	19" (1.6')
Minimum rise from curb-top to slab floor: 30" + 8" . . . . . 38" (3.2')	27" (2.3')
Minimum rise for wood floor using 8" joists: 30" + 19" . . . 49" (4.1')	38" (3.2')

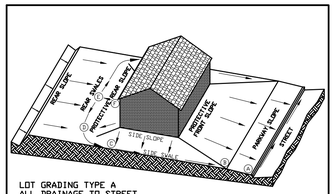
900A — FHA TYPE 'A' LOT GRADING
N.T.S.



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

SAMPLE COMPUTATION OF GRADING CONTROL LINE A-D FOR A 60' LOT WITH 28' SETBACK, 28' BUILDING DEPTH AND 2% SWALES	RESULTS USING 1% SWALES
A Curb-top on lot-line extension at high lot corner	
A-B Parkway slope: 12' grass and walk at 1/4"/ft. (2%) . . . 3" (0.3')	3" (0.3')
B-C Side swale: 56' grass at 1/4"/ft. (2%) . . . . . 14" (1.2')	7" (0.6')
C-D Protective side slope at extension of rear wall. . . . . 6" (0.5')	6" (0.5')
Sub-total A-D from curb-top to ground at rear building wall. 23" (1.9')	16" (1.3')
Minimum rise from curb-top to slab floor: 23" + 8" . . . . . 31" (2.6')	24" (2.0')
Minimum rise for wood floor using 8" joists: 23" + 19" . . . 42" (3.5')	35" (2.9')

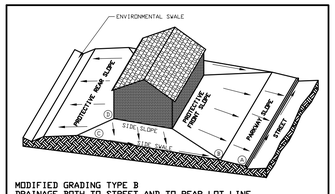
900B — FHA TYPE 'B' LOT GRADING
N.T.S.



LOT GRADING TYPE A
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE A-F FOR A 60' LOT ON AN 0.5% STREET, WITH 28' SETBACK, 28' BUILDING DEPTH AND 2% SWALES	RESULTS USING 1% SWALES
A Curb-top on lot-line extension at high lot corner	
A-B Parkway slope: 12' grass and walk at 1/4"/ft. (2%) . . . 3" (0.3')	3" (0.3')
B-C Side swale: 56' grass at 1/4"/ft. (2%) . . . . . 14" (1.2')	7" (0.6')
C-D Swale turn with 10' radius: 16' grass at 1/4"/ft. . . . 4" (0.3')	6" (0.5')
D-E Rear swale: 12' grass at 1/4"/ft. (2%) . . . . . 3" (0.3')	1" (0.1')
E-F Protective rear slope up from high-point of swales . . . 6" (0.5')	6" (0.5')
Sub-total A-F from curb-top to ground at rear building wall. 30" (2.5')	19" (1.6')
Minimum rise from curb-top to slab floor: 30" + 8" . . . . . 38" (3.2')	27" (2.3')
Minimum rise for wood floor using 8" joists: 30" + 19" . . . 49" (4.1')	38" (3.2')

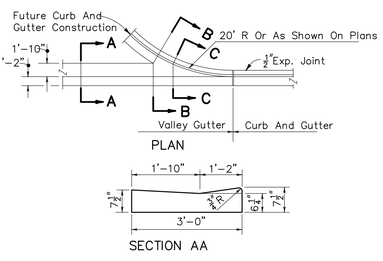
900AM — FHA TYPE 'A' MOD. LOT GRADING
N.T.S.

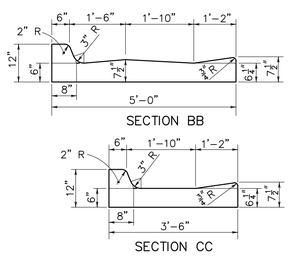


MODIFIED GRADING TYPE B
DRAINAGE BOTH TO STREET AND TO REAR LOT LINE

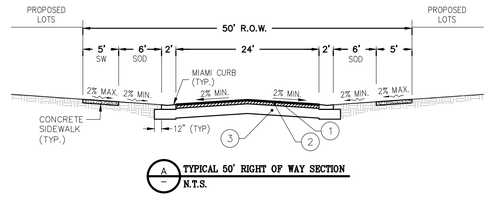
SAMPLE COMPUTATION OF GRADING CONTROL LINE A-D FOR A 60' LOT WITH 28' SETBACK, 28' BUILDING DEPTH AND 2% SWALES	RESULTS USING 1% SWALES
A Curb-top on lot-line extension at high lot corner	
A-B Parkway slope: 12' grass and walk at 1/4"/ft. (2%) . . . 3" (0.3')	3" (0.3')
B-C Side swale: 56' grass at 1/4"/ft. (2%) . . . . . 14" (1.2')	7" (0.6')
C-D Protective side slope at extension of rear wall. . . . . 6" (0.5')	6" (0.5')
Sub-total A-D from curb-top to ground at rear building wall. 23" (1.9')	16" (1.3')
Minimum rise from curb-top to slab floor: 23" + 8" . . . . . 31" (2.6')	24" (2.0')
Minimum rise for wood floor using 8" joists: 23" + 19" . . . 42" (3.5')	35" (2.9')

900BM — FHA TYPE 'B' MOD. LOT GRADING
N.T.S.

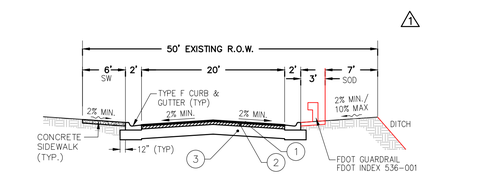




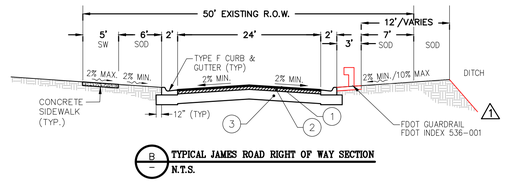
300V — VALLEY GUTTER DETAIL
N.T.S.



A — TYPICAL 50' RIGHT OF WAY SECTION
N.T.S.



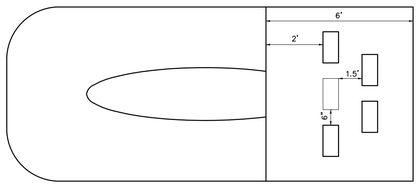
A–A — TYPICAL JAMES ROAD RIGHT OF WAY SECTION
N.T.S.



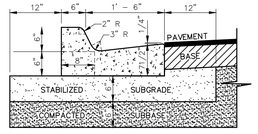
B — TYPICAL JAMES ROAD RIGHT OF WAY SECTION
N.T.S.

PAVEMENT SPECIFICATIONS

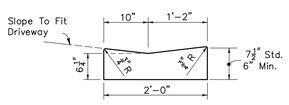
1. 1.5" SP-9.5 ASPHALTIC CONCRETE PLACED IN TWO LIFTS AND COMPACTED IN ACCORDANCE WITH FDOT SPECIFICATIONS
2. 6" CRUSHED CONCRETE, COMPACTED TO A MINIMUM DENSITY OF NOT LESS THAN 98 PERCENT OF AASHTO T-134.
3. 12" STABILIZED SUBGRADE, MINIMUM FBV=75 (OR MINIMUM LBR=40) AND COMPACTED TO A MINIMUM DENSITY EQUIVALENT TO 98 PERCENT OF THE SOIL'S MODIFIED PROCTOR DENSITY VALUE AS DETERMINED BY AASHTO T-180 TEST METHOD.



272a — ENERGY DISSIPATOR
N.T.S.

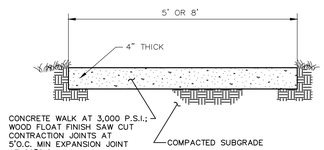


300F — STANDARD CURB AND GUTTER
N.T.S.

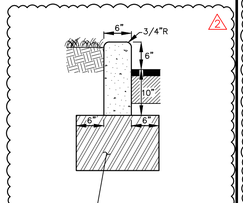


For curb, gutter, curb and gutter and traffic separators provide ½"–1" contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves are to match the pavement joints, with intermediate joints not to exceed 10' centers.

300M — MIAMI CURB
N.T.S.



907 — CONCRETE WALK
N.T.S.



300V — VERTICAL CURB
N.T.S.

Conservation Area

No dumping, mowing, land-clearing or other disturbance of native soils or vegetation is permitted

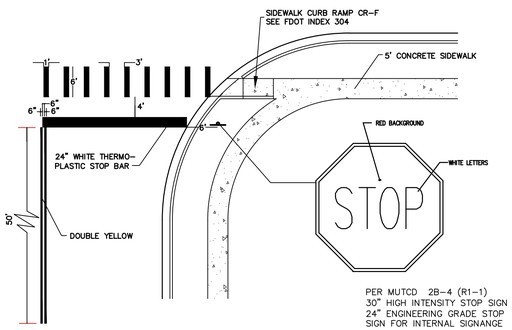
For more information contact the St. Johns River Water Management district

1-800-451-7106

18"
12"

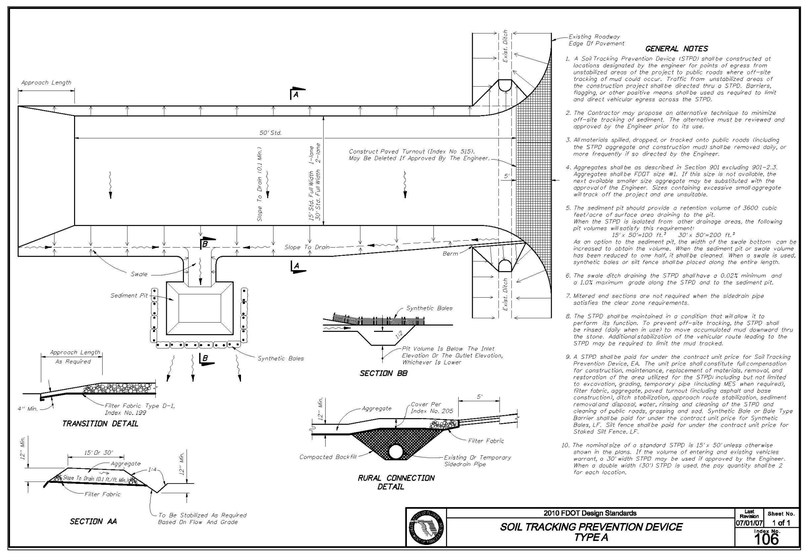
THE OWNER'S CONTACT INFORMATION WILL ALSO BE PLACED WITH THE ABOVE SIGN

920 — CONSERVATION AREA SIGN



PER MUTCD 2B-4 (R1-1)
30" HIGH INTENSITY STOP SIGN
24" ENGINEERING GRADE STOP SIGN FOR INTERNAL SIGNANGE

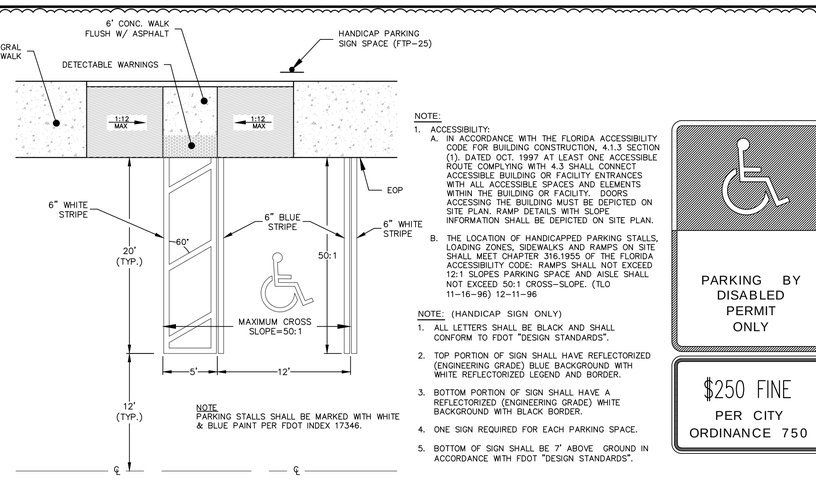
212 — STOP SIGN, BAR AND CROSSWALK
N.T.S.



GENERAL NOTES

1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the engineer for points of egress from unstabilized areas of the project to public roads where off-site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed thru a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
2. The Contractor may propose an alternative technique to minimize off-site tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.
3. All materials spilled, dropped, or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently if so directed by the Engineer.
4. Aggregates shall be as described in Section 901 excluding 901-2.3. Aggregates shall be FDOT size #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are unsuitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:
   15' x 50'=100 ft.³ 30' x 50'=200 ft.³
   As an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, synthetic bales or silt fence shall be placed along the entire length.
6. The swale ditch draining the STPD shall have a 0.02% minimum, and a 1.0% maximum grade along the STPD and to the sediment pit.
7. Altered end sections are not required when the sidedrain pipe satisfies the clear zone requirements.
8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent off-site tracking, the STPD shall be rinsed daily when in use or as often as necessary to move accumulated mud downward thru the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit the mud tracked.
9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD including but not limited to excavation, grading, temporary pipe (including MES when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water, rinsing and cleaning of the STPD and cleaning of public roads, grassing and sod. Synthetic Bale or Bale Type Barrier shall be paid for under the contract unit price for Synthetic Bales, LF. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, LF.
10. The nominal size of a standard STPD is 15' x 50' unless otherwise shown in the plans. If the volume of entering and existing vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.

2010 FDOT Design Standards	Last Revised 07/01/07	Sheet No. 1 of 1
SOIL TRACKING PREVENTION DEVICE TYPE A		Index No. 106



NOTE:
1. ACCESSIBILITY:
   A. IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, 4.1.3 SECTION (1), DATED OCT. 1997 AT LEAST ONE ACCESSIBLE ROUTE COMPLYING WITH 4.3 SHALL CONNECT ACCESSIBLE BUILDING OR FACILITY ENTRANCES WITH ALL ACCESSIBLE SPACES AND ELEMENTS WITHIN THE BUILDING OR FACILITY. DOORS ACCESSING THE BUILDING MUST BE DEPICTED ON SITE PLAN. RAMP DETAILS WITH SLOPE INFORMATION SHALL BE DEPICTED ON SITE PLAN.
   B. THE LOCATION OF HANDICAPPED PARKING STALLS, LOADING ZONES, SIDEWALKS AND RAMPS ON SITE SHALL MEET CHAPTER 316.1955 OF THE FLORIDA ACCESSIBILITY CODE: RAMPS SHALL NOT EXCEED 12:1 SLOPES PARKING SPACE AND AISLE SHALL NOT EXCEED 50:1 CROSS-SLOPE. (TLO 11-16-96) 12-11-96

NOTE: (HANDICAP SIGN ONLY)
1. ALL LETTERS SHALL BE BLACK AND SHALL CONFORM TO FDOT "DESIGN STANDARDS".
2. TOP PORTION OF SIGN SHALL HAVE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK BORDER.
4. ONE SIGN REQUIRED FOR EACH PARKING SPACE.
5. BOTTOM OF SIGN SHALL BE 7' ABOVE GROUND IN ACCORDANCE WITH FDOT "DESIGN STANDARDS".

NOTE
PARKING STALLS SHALL BE MARKED WITH WHITE & BLUE PAINT PER FDOT INDEX 17346.

PARKING BY DISABLED PERMIT ONLY

$250 FINE PER CITY ORDINANCE 750

818 — HANDICAP RAMP AND PARKING STALL DETAIL
N.T.S.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CONSTRUCTION DETAILS
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL — CHRISTOPHER J. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

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JOB #	21074
DATE:	9/26/22
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DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C900

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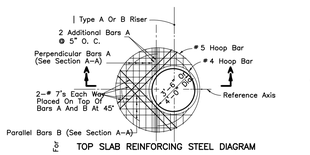
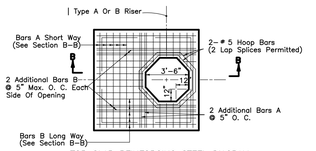
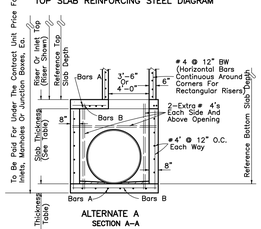


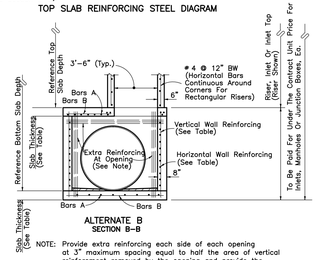
TOP SLAB REINFORCING STEEL DIAGRAM



TOP SLAB REINFORCING STEEL DIAGRAM



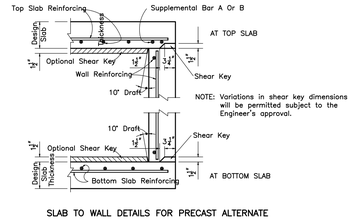
ALTERNATE A
SECTION A–A



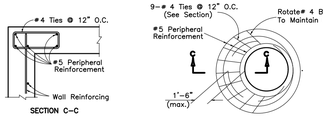
ALTERNATE B
SECTION B–B

* NOTE: When the inside diameter of a round structure is not more than 1'–6" larger than the opening in the riser or top slab, the top of the structure or riser shall be constructed according to the "Special Top Slab" details on this sheet.

NOTE: Provide extra reinforcing each side of each opening at 3" maximum spacing equal to half the area of vertical reinforcement removed by the opening and provide the same area of reinforcement above each opening at 3" maximum spacing as removed by the opening.



SLAB TO WALL DETAILS FOR PRECAST ALTERNATE



SPECIAL TOP SLAB*

SLAB DESIGNS – SQUARE AND RECTANGULAR STRUCTURES

(ALL SLABS 8" THICK – REINFORCING PARALLEL TO SHORT WAY AND LONG WAY)

SHORT–WAY SLAB DEPTH	SHORT–WAY SCHEDULE	LONG–WAY SLAB DEPTH	LONG–WAY SCHEDULE
SIZE: 3'–6"UNLIMITED			
≥ 0.5'< 29'	B	≥ 0.5'–40'	B
29'–40'	C		
SIZE: 4'–0"UNLIMITED			
≥ 0.5'< 19'	B	≥ 0.5'< 34'	B
19'< 29'	C	34'–40'	C
29'–40'	D		
SIZE: 5'15'			
≥ 0.5'< 3'	C	≥ 0.5'< 3'	C
3'< 19'	B	3'< 19'	B
19'< 28'	C	19'< 28'	C
28'< 38'	D	28'< 38'	D
38'–40'	F	38'–40'	F
SIZE: 5'16'			
≥ 0.5'< 3'	C	≥ 0.5'< 3'	C
3'< 16'	B	3'< 20'	B
16'< 24'	C	20'< 29'	C
24'< 34'	D	29'–40'	D
34'–40'	F		
SIZE: 5'17'			
≥ 0.5'< 3'	C	≥ 0.5'< 3'	C
3'< 14'	B	3'< 22'	B
14'< 21'	C	22'< 33'	C
21'< 39'	D	33'–40'	D
39'–40'	F		
SIZE: 5'18'			
≥ 0.5'< 3'	C	≥ 0.5'< 39'	B
3'< 8'	B	39'–40'	C
8'< 17'	C		
17'< 23'	D		
23'–40'	F		
SIZE: 5'19'			
≥ 0.5'< 3'	C	≥ 0.5'< 32'	B
3'< 8'	B	32'–40'	C
8'< 17'	C		
17'< 23'	D		
23'–40'	F		

SHORT–WAY SLAB DEPTH	SHORT–WAY SCHEDULE	LONG–WAY SLAB DEPTH	LONG–WAY SCHEDULE
SIZE: 6'16'			
≥ 0.5'< 3'	D	≥ 0.5'< 3'	D
3'< 4'	C	3'< 4'	C
4'< 14'	B	4'< 14'	B
14'< 21'	C	14'< 21'	C
21'< 28'	D	21'< 28'	D
28'–40'	F	28'–40'	F
SIZE: 6'17'			
≥ 0.5'< 3'	D	≥ 0.5'< 3'	D
3'< 4'	C	3'< 4'	C
4'< 12'	B	4'< 15'	B
12'< 19'	C	15'< 21'	C
19'< 26'	D	21'< 30'	D
26'–40'	F	30'–40'	F
SIZE: 6'18'			
≥ 0.5'< 3'	D	≥ 0.5'< 3'	D
3'< 4'	C	3'< 4'	C
4'< 7'	B	4'< 16'	B
7'< 16'	C	16'< 23'	C
16'< 23'	D	23'< 32'	D
23'–40'	F	32'–40'	F
SIZE: 6'19'			
≥ 0.5'< 3'	D	≥ 0.5'< 3'	D
3'< 15'	C	3'< 4'	C
15'< 21'	D	4'< 18'	B
21'< 27'	E	18'< 27'	C
27'–40'	G	27'< 37'	D
		37'–40'	E
SIZE: 7'17'			
≥ 0.5'< 3'	E	≥ 0.5'< 3'	E
3'< 4'	D	3'< 4'	D
4'< 16'	C	4'< 16'	C
16'< 22'	D	16'< 22'	D
22'< 28'	E	22'< 28'	E
28'–40'	G	28'–40'	G
SIZE: 7'18'			
≥ 0.5'< 3'	E	≥ 0.5'< 3'	E
3'< 4'	D	3'< 4'	D
4'< 15'	C	4'< 17'	C
15'< 21'	D	17'< 23'	D
21'< 27'	E	23'< 29'	E
27'–40'	G	29'–40'	G
SIZE: 7'19'			
≥ 0.5'< 3'	E	≥ 0.5'< 3'	E
3'< 4'	D	3'< 4'	D
4'< 12'	C	4'< 18'	C
12'< 18'	D	18'< 24'	D
18'< 24'	E	24'< 32'	E
24'–40'	G	32'–40'	G

SHORT–WAY SLAB DEPTH	SHORT–WAY SCHEDULE	LONG–WAY SLAB DEPTH	LONG–WAY SCHEDULE
SIZE: 8'18'			
≥ 0.5'< 3'	D	≥ 0.5'< 3'	D
3'< 4'	C	3'< 4'	C
4'< 9'	B	4'< 9'	B
9'< 17'	C	9'< 17'	C
17'< 31'	D	17'< 31'	D
31'–40'	G	31'–40'	G
SIZE: 8'19'			
≥ 0.5'< 3'	D	≥ 0.5'< 3'	E
3'< 4'	C	3'< 4'	D
4'< 16'	B	4'< 18'	C
16'< 22'	C	18'< 25'	D
22'< 29'	D	25'< 32'	F
29'–40'	F	32'–40'	G
SIZE: 9'19'			
≥ 0.5'< 3'	F	≥ 0.5'< 3'	F
3'< 14'	C	3'< 14'	C
14'< 20'	D	14'< 20'	D
20'< 26'	E	20'< 26'	E
26'–40'	G	26'–40'	G

REINFORCING SCHEDULE

SCHEDULE	GRADE 60 STEEL OR 65 KSI (WIRE FABRIC) IN²/Ft.
A	0.20
B	0.24
C	0.37
D	0.53
E	0.73
F	1.06
G	1.45

GENERAL NOTES

1. Slab reinforcement is appropriate for top, intermediate, and bottom slabs.
2. Slab depth is measured from finished grade to top of slab.
3. Wall design depth is measured to the top of the bottom slab for boxes and to the top of the intermediate slab for risers.
4. Wall height is the distance between top of lower slab to bottom of upper slab.

SLAB DESIGNS – ROUND STRUCTURES

SLAB DEPTH	SLAB THICKNESS	REINFORCING (2 WAYS) SCHEDULE
SIZE: 3'–6"		
≥ 0.5'–40'	8"	C
SIZE: 4'–0"		
≥ 0.5'–40'	8"	C
SIZE: 5'–0"		
≥ 0.5'< 30'	8"	C
30'–40'	8"	D
SIZE: 6'–0"		
≥ 0.5'< 8'	8"	B
8'< 18'	8"	C
18'< 30'	8"	D
30'< 37'	8"	E
37'–40'	8"	G
SIZE: 8'–0"		
≥ 0.5'< 9'	10"	C
9'< 15'	10"	D
15'< 23'	10"	E
23'< 33'	12"	E
33'–40'	12"	G
SIZE: 10'–0"		
≥ 0.5'< 6'	10"	C
6'< 11'	10"	D
11'< 17'	10"	E
17'< 23'	12"	E
23'–40'	12"	G
SIZE: 12'–0"		
≥ 0.5'< 6'	12"	C
6'< 11'	12"	D
11'< 16'	12"	E
16'< 20'	14"	E
20'–40'	14"	G

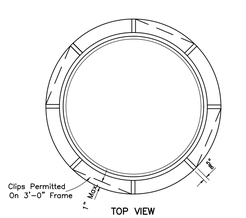
WALL DESIGNS – RECTANGULAR STRUCTURES

VERTICAL REINFORCING WALL DEPTH	VERTICAL REINFORCING SCHEDULE	HORIZONTAL REINFORCING WALL DEPTH	HORIZONTAL REINFORCING SCHEDULE
SIZE: 3'–6"			
≥ 1.17'–40'	A	≥ 1.17'–40'	B
SIZE: 4'–0"			
≥ 1.17'–40'	A	≥ 1.17'–40'	B
SIZE: 5'–0"			
≥ 1.17'–40'	A	≥ 1.17' 33'	B
		33'–40'	C
SIZE: 6'–0"			
≥ 1.17'–40'	A	≥ 1.17' 22'	B
		22'–40'	C
SIZE: 7'–0"			
≥ 1.17'–40'	A	≥ 1.17' 15'	B
		15'< 25'	C
		25'–40'	D
SIZE: 8'–0"			
≥ 1.17'–40'	A	≥ 1.17' 11'	B
		11'< 19'	C
		19'< 29'	D
		29'–40'	F
SIZE: 9'–0"			
≥ 1.17'–40'	A	≥ 1.17' 15'	C
		15'< 22'	D
		22'–40'	F

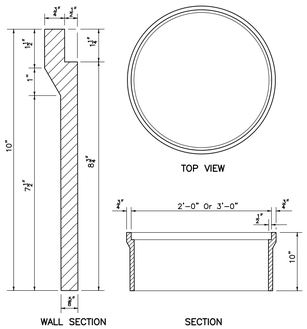
GENERAL NOTES

1. Standard structure bottoms 4'–0" diameter and smaller (Alt. A) and 3'–6" square (Alt. B) are designated Type P. Larger standard structure bottoms are designated Type J. Risers are permitted for all structures.
2. Walls of circular structures (Alternate A) constructed in place may be of non–reinforced concrete or brick or reinforced concrete. Precast and rectangular structures (Alternate B) shall be constructed of reinforced concrete only.
3. Wall thickness and reinforcement are for either reinforced cast–in–place or precast concrete units except that precast circular units may be furnished with walls in accordance with either A.S.T.M. C–478 (up to 96" diameter) or A.S.T.M. C–76, Class ~~~, B Wall, modified where the elliptical steel cage area is placed in the center one–third of the wall.
4. Top and floor slab thickness and reinforcement are for precast and cast in place construction. Top and floor slabs shall be of Class ~~ concrete. Concrete as specified in A.S.T.M. C–478 (4000 psi) may be used in lieu of Class ~ and Class ~~ concrete in precast items manufactured in plants which are under the "Standard Operating Procedures" for the inspection of precast drainage products.
5. All reinforcement shall be A.S.T.M. A615, Grade 60 or 65 KSI welded wire fabric, either smooth or deformed.
6. Structure bottoms may be used in conjunction with curb inlet tops Types 1, 2, 3, 4, 5, 6, 9, and 10, and any manhole or junction box unless otherwise shown in the plans or other standard drawings. Alt. B structure bottoms may be used in conjunction with curb inlet Types 7 & 8, or any ditch bottom inlet unless otherwise shown in the plans or other standard drawings.
7. Rectangular structures may be rotated as directed by the Engineer in order to facilitate connections between the structure walls and storm sewer pipes.
8. Except when ACI hooks are specifically required, embedment hooks in the top and bottom slabs may be replaced with straight embedments or peripheral reinforcement in accordance with the reinforcement detail shown under 'Rebar Straight End Embedment Or Peripheral Reinforcement In Lieu of ACI Standard Hooks For Top And Bottom Slabs', Index No. 201, Sheet 3 of 6.
9. All steel bars shall have 1½" minimum cover unless otherwise shown. Horizontal steel in rectangular structures shall be lapped a minimum of 24 bar diameters at corners.
10. The corner fillets shown are necessary for rectangular structures used with circular risers and inlet throats and used on skew with rectangular risers, inlet and inlet throats. Fillets will be required in lieu of the bottom slab of the Alt. B riser when used with the Alt. A box. Each fillet shall be reinforced with 2– 5 bars.
11. Inlet throats, riser or manhole tops shall be secured to structures as shown on Index No. 201.
12. Structures with depths over 14' are to be checked for floatation by designer of project drainage.
13. Units larger than specified standard may be substituted at the contractor's option when these units will not cause or increase the severity of utility conflicts. Such larger units shall be furnished at no additional cost to the Department. Larger Alternate A units cannot replace Alternate B units without approval of the Engineer. This note applies to this Index only.
14. For manhole and junction box tops, for frames and covers, and, for supplementary details see Index No. 201.

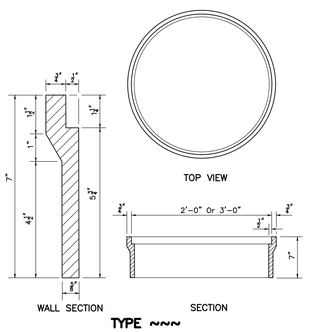
200 – STRUCTURE BOTTOMS TYPE J AND P
N.T.S.



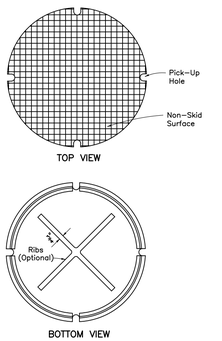
TYPE ~
For Manholes



TYPE ~~
For Curb Inlets Types 1, 2, 3, & 4



TYPE ~~~
For Curb Inlets Types 7 & 8



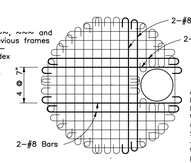
CAST IRON FRAMES

NOTES (FRAMES, AND COVER)

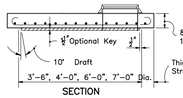
1. The 212 lb. cover is to be used for all frames Types ~, ~~, ~~~ and the 2–Piece Cover, and is the replacement cover for all previous frames with ½" deep seats (Traffic type). The 185 lb. cover (non–traffic type), 1984 Roadway and Traffic Design Standards Index No. 201, is the replacement cover for existing frames with deep seats. Installation of frames with deep seats is not permitted. The 185 lb. covers are to be placed in existing deep seated frames only when specifically called for in the plans or as specifically directed by the Engineer.

NOTES (TOPS)

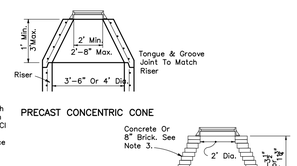
1. Manhole top Type 7 slabs shall be of Class ~~ concrete. Concrete as specified in ASTM C–478 may be used for precast units; see General Note No. 3.
2. Manhole top Type 7 slabs may be of cast–in–place or precast construction. The optional key is for precast tops and in lieu of dowels. Frame and slab openings are to be omitted when top is used over a junction box. Frames can be adjusted with from one to six courses of brick.
3. Manhole top Type 8 may be of cast–in–place or precast concrete construction or brick construction. For concrete construction, the concrete and steel reinforcement shall be the same as the supporting wall unit. An eccentric cone may be used.
4. Manhole tops shall be secured to structures by optional construction joints as shown on Sheet 3 of 6.



All Reinforcement No. 6 Bars Except 6–#8 Bars Shown. Bars Spaced @ 6" Centers Both Ways Except Middle Bars Shown @ 7" Centers. All Bars with ACI Standard Hooks Canted Approx. 45°, Or Embedded In Accordance With The Slab Reinforcement Detail Shown Under Optional Construction Joints, Sheet No. 3 of 6, Except All #8 Bars And #6 Bars Around Manhole Opening Shall Be Hooked.

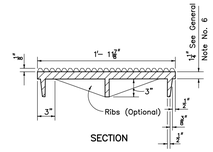


TYPE 7–T (TRAFFIC) (H–20)



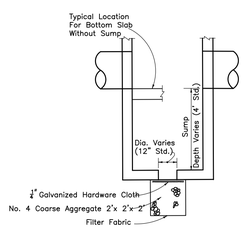
TYPE 8 MANHOLES

MANHOLE TOPS



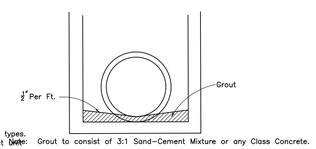
COVER FOR ALL FRAMES

WEIGHT OF CASTINGS						
Frame Type	2" OPENING		3" OPENING			
	Frame	Cover (Std.)	Frame	2–Piece Cover		
				Cover	Ring	Total
~	126 Lbs.	212 Lbs.	220 Lbs.	212 Lbs.	250 Lbs.	462 Lbs.
~~	134 Lbs.	212 Lbs.	260 Lbs.	212 Lbs.	250 Lbs.	462 Lbs.
~~	98 Lbs.	212 Lbs.	220 Lbs.	212 Lbs.	250 Lbs.	462 Lbs.



NOTE: Sump bottom appropriate for all manhole and inlet types. Cost for sump bottom to be included in the contract price for inlet or manhole.

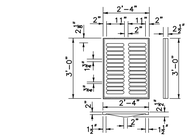
SUMP BOTTOM



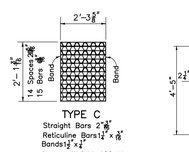
NOTE: Grout to consist of 3:1 Sand–Cement Mixture or any Class Concrete.
FOR ALL STRUCTURES UNLESS EXCLUDED BY SPECIAL DETAIL

DRAINAGE STRUCTURE INVERT

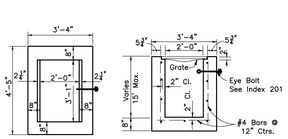
201 – SUPPLEMENTARY DETAILS FOR MANHOLES AND INLETS
N.T.S.



CAST IRON GRATE

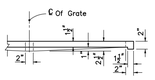


STEEL GRATE



TYPE C

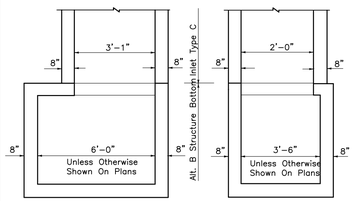
Recommended Maximum Pipe Size:
2'–0" Wall–18" Pipe
3'–1" Wall–24" Pipe



HALF SECTION CAST IRON GRATES

GENERAL NOTES

1. These inlets are suitable for bicycle and pedestrian areas and are to be used in ditches, medians and other areas subject to infrequent traffic loadings but are not to be placed in areas subject to any heavy wheel loads.
2. Inlets subject to minimal debris should be constructed without slots. Where debris is a problem inlets should be constructed with slots. Slotted inlets located within roadway clear zones and in areas accessible to pedestrians shall have traversable slots. The traversable slot modification is not adaptable to inlet Type H. Slots may be constructed at either or both ends as shown on plans.
3. Steel grates are to be used on all inlets where bicycle traffic is anticipated. Steel grates are to be used on all inlets with traversable slots. Either cast iron or steel grates may be used on inlets without slots where bicycle traffic is not anticipated. Either cast iron or steel grates may be used on all inlets with non–traversable slots. Subject to the selection described above, when Alternate G grate is specified in the plans, either the steel grate, hot dipped galvanized after fabrication, or the cast iron grate may be used, unless the plans stipulate the particular type.
4. Recommended maximum pipe sizes shown are for concrete pipe. Pipe sizes larger than those recommended must be checked for fit.
5. All exposed corners and edges of concrete are to be chamfered .
6. Pavement to be used on inlets without slots and inlets with non–traversable slots only when called for in the plans; but required on all traversable slot inlets. Cost to be included in contract unit price for inlets. Quantities shown are for information only.
7. Traversable slots constructed in existing inlets shall be paid for as inlets partial, and shall include the cost for slot openings, paving and any required replacement grates.
8. Sodding to be used on all inlets not located in paved areas and paid for under contract unit price for Sodding SY.
9. For supplementary details see Detail No. 201.
10. When used in traffic areas use four sided bearing grate. U.S. Foundry#6450 or equal.



NOTE: Alt. B Structure Bottom Only. See Detail No. 200

STRUCTURE BOTTOM FOR INLETS TYPE C

232C – F.D.O.T. TYPE C INLET
N.T.S.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629–8330

CONSTRUCTION DETAILS FOR WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL. 32751
407–629–0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL
DAVID A. STOKES
CERTIFICATE OF AUTHORIZATION NO. CA–0007723

NO.	DATE	REVISIONS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

JOB #	21074
DATE:	9/26/22
SCALE:	N/A
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C901

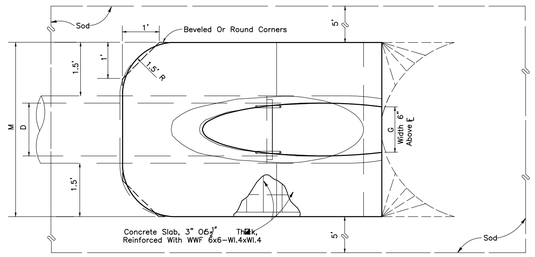
H:\Data\21074\Eng\Final\21074_C900 Construction Details.dwg November 20, 2023 12:48 PM

DIMENSIONS AND QUANTITIES

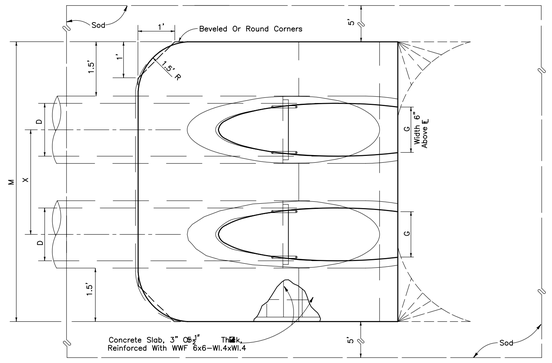
	D	X	A	B	C	E	F	G	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	5½" CONCRETE SLAB (CY) ◪ Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	SODDING (SQ. YDS.) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
2:1 Slope	15"	2'-7"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	4.63'	7.21'	9.79'	12.37'	1.19'	0.38	0.58	0.77	0.96	21	24	27	30
	18"	2'-10"	1.97'	2.74'	4.71'	2.56'	6'	1.41'	4.92'	7.75'	10.58'	13.42'	1.21'	0.44	0.65	0.87	1.09	22	25	28	31
	24"	3'-5"	2.06'	3.85'	5.91'	3.56'	7'	1.73'	5.50'	8.92'	12.33'	15.75'	1.25'	0.54	0.83	1.12	1.42	24	28	32	35
	30"	4'-3"	2.15'	4.95'	7.10'	4.56'	8'	2.00'	6.08'	10.13'	14.58'	18.83'	1.29'	0.66	1.09	1.50	1.91	26	31	35	40
	36"	5'-1"	2.25'	6.08'	8.33'	5.56'	9'	2.24'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.95	2.51	28	34	39	45
	42"	6'-0"	2.34'	7.21'	9.55'	6.56'	10'	2.45'	7.25'	13.25'	19.25'	25.25'	1.38'	0.97	1.70	2.45	3.19	30	37	43	50
	48"	6'-10"	2.43'	8.31'	10.76'	7.56'	11'	2.65'	7.83'	14.58'	21.33'	28.08'	1.42'	1.13	2.04	3.03	3.84	32	39	47	54
	54"	7'-8"	2.52'	9.44'	11.96'	8.56'	12'	2.83'	8.42'	16.08'	23.75'	31.42'	1.45'	1.31	2.44	3.58	4.72	34	42	51	59
	60"	8'-6"	2.62'	10.56'	13.18'	9.56'	14'	3.00'	9.00'	17.50'	26.00'	34.50'	1.50'	1.51	2.89	4.26	5.68	36	45	55	64
	66"	9'-2"	2.71'	11.68'	14.39'	10.56'	15'	3.18'	9.58'	18.75'	27.92'	37.08'	1.54'	1.68	3.25	4.84	6.43	38	48	58	68
	72"	10'-0"	2.80'	12.80'	15.60'	11.56'	16'	3.30'	10.16'	20.16'	30.16'	40.16'	1.58'	1.89	3.74	5.59	7.45	40	51	62	73
4:1 Slope	15"	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.63'	7.21'	9.79'	12.37'	1.19'	0.57	0.87	1.15	1.44	23	26	29	32
	18"	2'-10"	2.39'	5.12'	7.51'	5.03'	9'	1.41'	4.92'	7.75'	10.58'	13.42'	1.21'	0.66	0.99	1.31	1.65	25	28	31	35
	24"	3'-5"	2.53'	7.18Δ	9.71'	7.03Δ	11'	1.73'	5.50'	8.92'	12.33'	15.75'	1.25'	0.85	1.30	1.75	2.20	28	32	36	40
	30"	4'-3"	2.70'	9.25	11.95'	9.03	13'	2.00'	6.08'	10.13'	14.58'	18.83'	1.29'	1.10	1.74	2.39	3.05	31	36	41	46
	36"	5'-1"	2.87'	11.36Δ	14.18'	11.06Δ	15'	2.24'	6.67'	11.75'	16.83'	21.92'	1.33'	1.32	2.21	3.08	3.96	34	40	46	52
	42"	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	7.25'	13.25'	19.25'	25.25'	1.38'	1.58	2.76	3.91	5.09	38	44	51	58
	48"	6'-10"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	7.83'	14.58'	21.33'	28.08'	1.42'	1.85	3.30	4.73	6.17	41	48	56	63
	54"	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	8.42'	16.08'	23.75'	31.42'	1.46'	2.14	3.95	5.77	7.58	44	52	61	69
	60"	8'-6"	3.56'	19.56'	23.11'	19.03'	23'	3.00'	9.00'	17.50'	26.00'	34.50'	1.50'	2.45	4.66	6.87	9.07	47	56	66	75
	66"	9'-2"	3.73'	21.62'	25.35'	21.03'	25'	3.18'	9.58'	18.75'	27.92'	37.08'	1.54'	2.88	5.54	8.18	10.84	49	59	69	80
	72"	10'-0"	3.91'	22.68'	26.59'	23.03'	27'	3.30'	10.16'	20.16'	30.16'	40.16'	1.58'	3.18	6.27	9.36	12.45	52	63	74	85

◪ See General Note No. 3.
See Sheet 5 Of 6 For 3" Slab Quantities

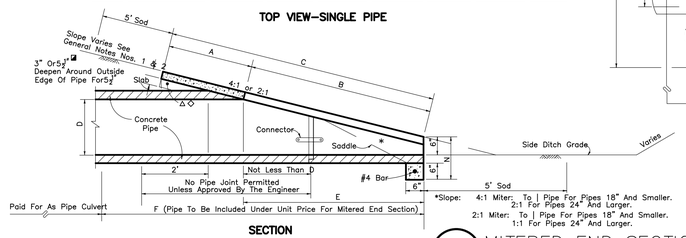
B E
△ 6.42' △ 6.25' Dimensions permitted to allow use of 8' standard pipe lengths.
◇ 10.40' ◇ 10.10' Dimensions permitted to allow use of 12' standard pipe lengths.
△◇ Concrete slab shall be deepened to form bridge across crown of pipe. See section below.



TOP VIEW–SINGLE PIPE



TOP VIEW–MULTIPLE PIPE

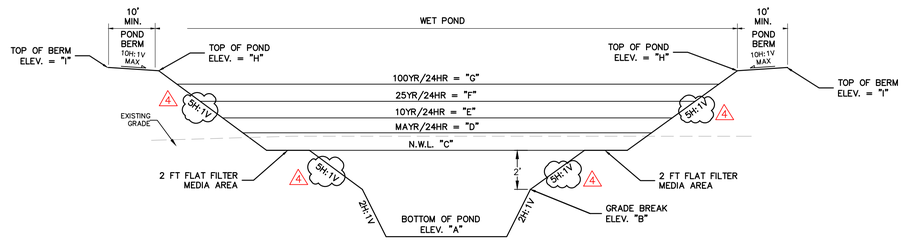


SECTION

NOTE: See sheet 6 for details and notes.

*Slope: 4:1 Miter: To | Pipe For Pipes 18" And Smaller.
2:1 For Pipes 24" And Larger.
2:1 Miter: To | Pipe For Pipes 18" And Smaller.
1:1 For Pipes 24" And Larger.

272 – MITERED END SECTION
N.T.S.



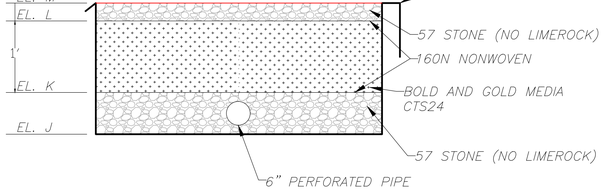
NOTE: POND SIDE SLOPES TO BE SODDED TO 2' BELOW THE NORMAL WATER LEVEL

2

COMP POND										
POND #	POND BOTTOM	SLOPE GRADE BREAK	NWL	MAYR/24HR PEAK STAGE	10YR/24HR PEAK STAGE	25YR/24HR PEAK STAGE	FREEBOARD DESIGN STORM	100YR/24HR PEAK STAGE	POND TOP	BERM TOP
	A	B	C	D	E	F	-	G	H	I
COMP 1	13	20	22	23.19	23.29	23.34	-	23.44	24	24.2
COMP 2	10	20	22	23.02	23.15	23.34	-	23.46	24	24.2
COMP 3	10	20	22	23.23	23.31	23.39	-	23.62	24	24.2
COMP 4	12	20	22	22.42	22.78	23.03	-	23.13	24	24.2

3

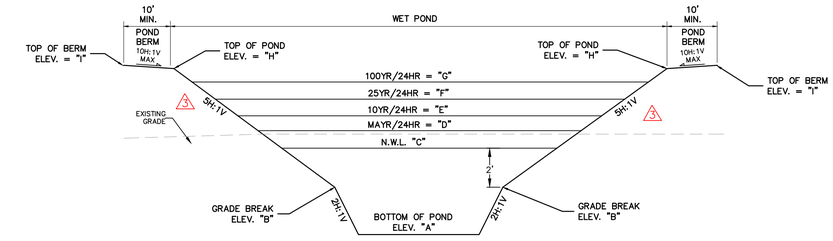
PD – WET POND SECTION
N.T.S.



BIO–ABSORPTION MEDIA TRENCH AND PIPE LENGTHS		
POND#	PIPE LENGTH	TRENCH LENGTH
CP1	2,000 LF	2,000 LF
CP2	175 LF	175 LF
CP3	1,000 LF	1,000 LF

BIO ABSORPTION MEDIA				
POND #	STONE BOTTOM	B&G CTS24 BOTTOM	B&G CTS24 TOP	STONE TOP
	J	K	L	M
COMP 1	20.88	22.00	22.50	23.00
COMP 2	20.88	22.00	22.50	23.00
COMP 3	20.88	22.00	22.50	23.00

BAM – BIO–ABSORPTION MEDIA
N.T.S.



NOTE: POND SIDE SLOPES TO BE SODDED TO 2' BELOW THE NORMAL WATER LEVEL

2

WET POND										
POND #	POND BOTTOM	SLOPE GRADE BREAK	NWL	MAYR/24HR PEAK STAGE	10YR/24HR PEAK STAGE	25YR/24HR PEAK STAGE	FREEBOARD DESIGN STORM	100YR/24HR PEAK STAGE	POND TOP	BERM TOP
	A	B	C	D	E	F	-	G	H	I
1	15	21	23	24.19	25.01	23.63	3.37	26.75	27	27.2
2	10	21	23	24.92	25.37	25.74	1.26	26.76	27	27.2
3	10	20	22	24.32	24.74	25.03	0.97	25.75	26	26.2
4	11	21	23	24.35	24.8	25.11	0.89	25.77	26	26.2
5	14	21	23	23.81	24.39	24.83	1.17	25.58	26	26.2
6	15	21	23	23.74	24.33	24.74	1.26	25.36	26	26.2
7	15	21	23	23.7	24.27	24.67	1.33	25.3	26	26.2
8	14	21	23	24.76	25.33	25.79	1.21	26.62	27	27.2

3

PD – WET POND SECTION
N.T.S.

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(407) 629-8330

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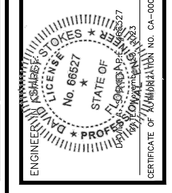

	DATE	REVISIONS
1	12/7/22	REVISED POND AND MEDIA DETAILS
2	08/10/22	REVISED POND STAGES
3	10/27/23	REVISED DEP COMMENTS
4	11/29/23	REVISED PER CITY COMMENTS
5		
6		
7		
8		
9		
10		
11		

JOB # 21074
DATE: 9/26/22
SCALE: N/A
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C902

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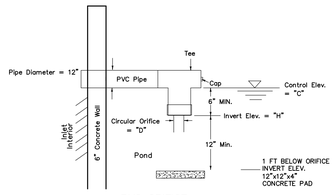
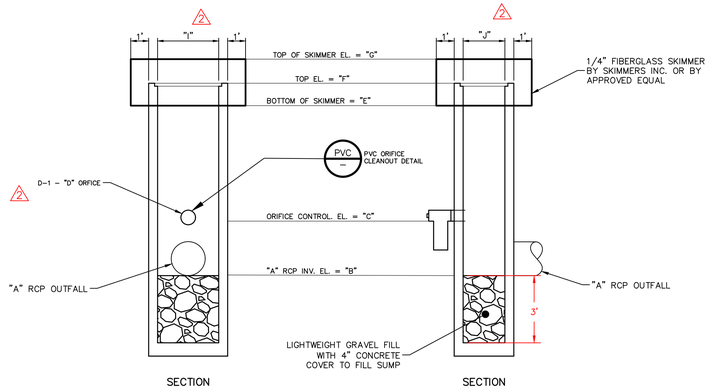


PVC ORIFICE

Hole faces down by using elbow to prevent hole blockage.
Control Elevation of pipe to be placed at Average Seasonal
High Ground Water Elevation (Avg.S.H.G.W.). See pond details.

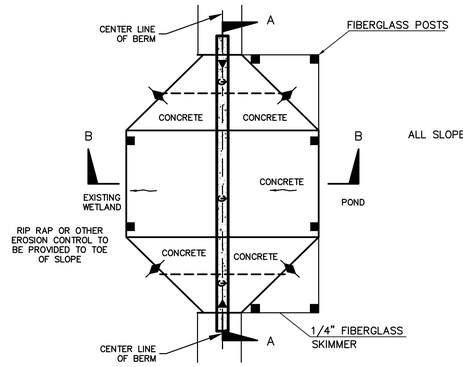
PVC — ORIFICE DETAIL

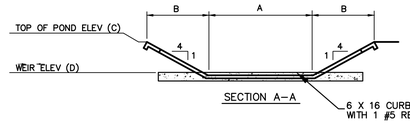


POND #	A	B	C	D	D-1	E	F	G	H	I	J
2	42	15	23	6	1	24.34	24.84	25.34	22.5	6.58	3
3	24	15	23	2.75	1	23.9	24.4	24.9	22.5	3	2
4	42	15	23	6	1	23.68	24.18	24.68	22.5	6.58	3
5	24	15	23	6	1	22.97	23.47	23.97	22.5	3	2
7	36	15	23	9	5	24	24.5	25	22.5	6.58	3

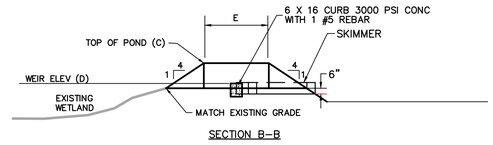
*D-1 IS THE NUMBER OF ORIFICES

CSA — FDOT INLET — CONTROL STRUCTURES
N.T.S.





ALL SLOPES OF STRUCTURE TO BE REINFORCED CONCRETE

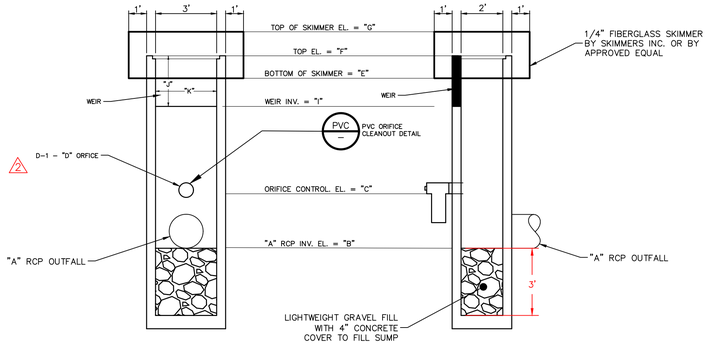


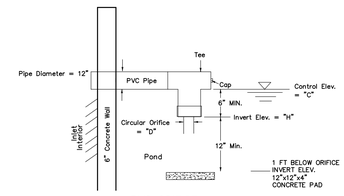
TOP OF SKIMMER 6" ABOVE DESIGN STORM PEAK
BOTTOM OF SKIMMER 6" BELOW WIER ELEVATION

POND #	WEIR WIDTH	SLOPE WIDTH	TOP OF POND	WEIR ELEV.	BERM WIDTH
	A	B	C	D	E
CP1	20	10	24	23	10
CP2	20	10	24	23	10
CP3	20	10	24	23	10
CP4	20	10	24	22	10

4

BCW — BROAD CRESTED WEIR — COMPENSATING STORAGE PONDS
N.T.S.





PVC ORIFICE

Hole faces down by using elbow to prevent hole blockage.
Control Elevation of pipe to be placed at Average Seasonal
High Ground Water Elevation (Avg.S.H.G.W.). See pond details.

PVC — ORIFICE DETAIL

POND #	A	B	C	D	D-1	E	F	G	H	I	J	K
1	24	15	23	5.4	4	26.12	26.62	27.12	22.5	23.63	3	1.5
8	30	23	23	2.75	1	25.5	26	26.5	22.5	24.54	1.53	3

*D-1 IS THE NUMBER OF ORIFICES

CSB — FDOT TYPE "C" INLET — CONTROL STRUCTURES
N.T.S.

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CIVIL ENGINEERS
431 E. Horatio Avenue
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Maitland, Florida 32751
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BREVARD COUNTY FLORIDA

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2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL. 32751
407-629-0077

ENGINEERING LICENSE No. 66527 STATE OF FLORIDA DAVID A. STOKES PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	3/17/23	REVISED PER COUNTY COMMENT
2	08/10/23	REVISED POND STRUCTURES
3	10/20/23	REVISED PER COMMENTS
4	11/27/23	REVISED PER CITY COMMENTS
5		
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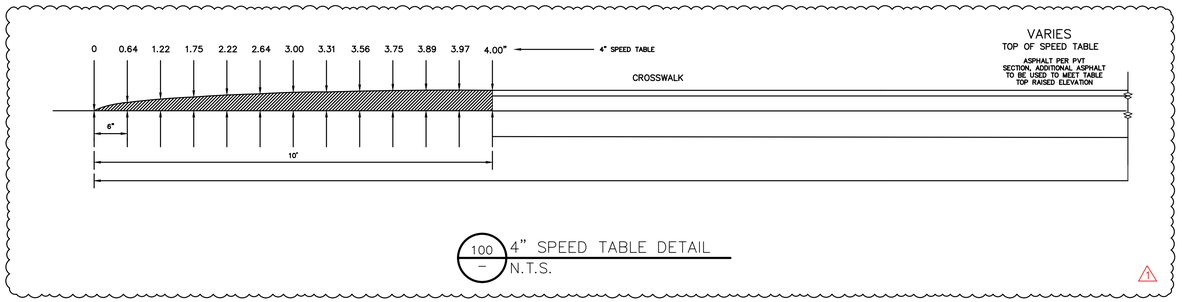
C903



100 – 4" SPEED TABLE DETAIL
N.T.S.

POST TOP LIGHTING (Page 2 of 2)

Manufacturer	Style	Fixture	Pole Options	Bracket Options	Light Pattern	Line Watts/ NEMA Label	Color Temp	Lumens	Glare Rating (BUG)	.ies File	Billing Tier
Holophane	Granville		1, 5, 8*	NA or 4,6	3	39/40	3000K	5,190	B2-U4-G5	GVD3_P20_30K_XXXX_GL3_FC.ies	C5
			1, 5, 8*	NA or 4,6	3	39/40	4000K	5,286	B2-U4-G5	GVD3_P20_40K_XXXX_GL3_FC.ies	C5
		Black/Black	1, 5, 8*	NA or 4,6	3	60/60	3000K	7,811	B2-U4-G5	GVD3_P30_30K_XXXX_GL3_FC_FPD98.ies	E5
			1, 5, 8*	NA or 4,6	3	60/60	4000K	7,956	B2-U4-G5	GVD3 _P30_40K_XXXX_GL3_FC_FPD98.ies	E5
	Granville w/ Ribs and Bands		1, 5, 8*	NA or 4,6	3	39/40	3000K	4,619	B2-U3-G4	GVD3_P20_30K_XXXX_GL3_FC_FPB98.ies	C5
			1, 5, 8*	NA or 4,6	3	39/40	4000K	4,705	B2-U3-G4	GVD3_P20_40K_XXXX_GL3_FC_FPB98.ies	C5
		Black/Black	1, 5, 8*	NA or 4,6	3	60/60	3000K	6,953	B2-U4-G5	GVD3_P30_30K_XXXX_GL3_RB_FC_FPD98.ies	E5
			1, 5, 8*	NA or 4,6	3	60/60	4000K	7,082	B2-U4-G5	GVD3_P30_40K_XXXX_GL3_RB_FC_FPD98.ies	E5
	Granville		1, 5	NA or 4	3	39/40	3000K	5,190	B2-U4-G5	GVD3_P20_30K_XXXX_GL3_FC.ies	C5
		Green/Green	1, 5	NA or 4	3	60/60	3000K	7,811	B2-U4-G5	GVD3_P30_30K_XXXX_GL3_FC_FPD98.ies	E5
King	Victorian (No lens)		1, 2, 5, 8	NA	3	60	3000K	4,598	B1-U0-G1	0056TP4NL3X0603OXXE.ies	E6
			1, 2, 5, 8	NA	3	100	3000K	6,731	B2-U0-G2	0056TP4NL3X1003OXXE.ies	G6
	Vizcaya (No lens)		1, 2, 5, 8	N/A or 4, 6	3	40	3000K	4,190	B1-U0-G1	0100WP4NG3X0403OXXE.ies	C5
			1, 2, 5, 8	N/A or 4, 6	3	60	3000K	5,986	B2-U0-G2	0100WP4NG3X0603OXXE.ies	E5

*Also available in double bracket configuration
**New construction only

POLES

1 Standard Concrete
Tenon Mount
20' (13' MH)
35' (27'6" MH)

2 Standard Black Fiberglass
Tenon Mount
13' (10' MH)
20' (15'6" MH)

3 Black Washington Concrete
Tenon Mount
23' (16' MH)

4 Black Octagonal Concrete
Tenon Mount
37' (30' MH)

5 Black or Green Washington Concrete
Tenon Mount
18.5' (14'6" MH)

6 Standard Wood
Arm Mount
35' (29' MH)
40' (33'6" MH)
45' (38" MH)

7 Standard Concrete
Arm Mount
30' (22'6" MH)
35' (27'6" MH)
40' (30'" MH)
45' (35' MH)

8 Black Tapered Concrete
Tenon Mount
14'6" (10' MH)
21'(15'6" MH)
33' (24' MH)

9 Grey or Black Round Concrete Pole on Concrete Base
(Non-roadway Only)
22' pole
25' MH

10 Unfinished Round Tapered Concrete
Arm Mount
28' pole
35' MH
(For use with bracket 7 only)

*MH = Approximate Mounting Height

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CONSTRUCTION DETAILS
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER DAVID A. STOKES
CERTIFICATE OF AUTHORIZATION NO. CA-0007723

	DATE	REVISIONS
1	11/20/23	REVISED PER CITY COMMENTS
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

JOB # 21074
DATE: 9/26/22
SCALE: N/A
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

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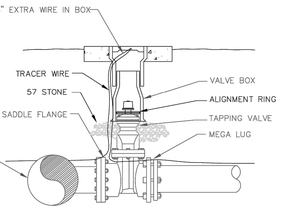
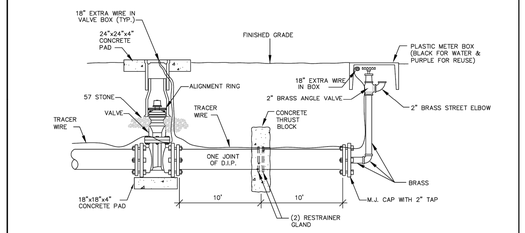


NOTE: FOR VALVE ASSEMBLY, SEE "VALVE" DETAIL

CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

TAPPING SADDLE AND VALVE

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: TAPPING SADDLE AND VALVE	



NOTE: PERMANENT BLOW-OFFS DO NOT REQUIRE A JOINT OF D.I.P. OR A VALVE. ALSO ALL BLOW-OFFS NEED TO BE PLACED AT PROPERTY LINES.

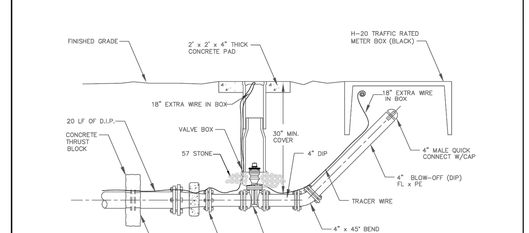
PROPER AMOUNT OF RESTRAINED PIPE UPSTREAM OF VALVE MAY BE USED IN LIEU OF THRUST COLLAR.

2" BLOW-OFF FOR 10" WATER MAINS AND SMALLER

CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

BLOW-OFF DETAIL 1

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 3
ACAD NAME: BLOW OFF DETAIL 1	

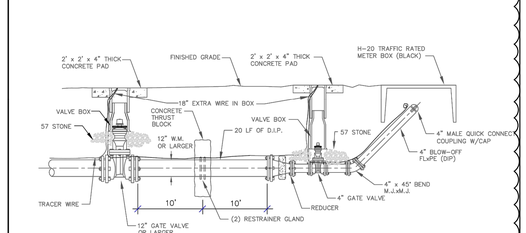


4" PERMANENT BLOW-OFF FOR 12" WATER MAINS AND LARGER

CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

BLOW-OFF DETAIL 2

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 2 OF 3
ACAD NAME: BLOW OFF DETAIL 2	



4" TEMPORARY BLOW-OFF DETAIL
12" WATER MAINS AND LARGER

CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

BLOW-OFF DETAIL 3

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 3 OF 3
ACAD NAME: BLOW OFF DETAIL 3	

THRUST BLOCK NOTES

1.) WRAP ALL FITTINGS WITH POLYETHYLENE FILM BEFORE POURING THRUST BLOCK, MAKING CERTAIN TO KEEP CONCRETE AWAY FROM ALL BOLTS, GLANDS, AND FLANGES.

2.) THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED EARTH.

3.) REQUIRED VOLUMES OF BEARING AREAS TO BE AS SHOWN IN CHART. ADJUSTMENTS, IF NEEDED, WILL BE ALLOWED TO CONFORM TO TEST PRESSURE AND ALLOWABLE SOIL BEARING STRESS AS SHOWN IN SPECIFICATIONS.

4.) BEARING AREA FOR TRANSIT BLOCKS ON HORIZONTAL BENDS IS BASED ON A TEST PRESSURE OF 150 P.S.I AND SOIL BEARING STRESS OF 2,000 P.S.F., THE DEPTH TO THE THRUST BLOCK BASE TO BE EQUAL TO OR GREATER THAN TWICE THE HEIGHT. (EXAMPLE: IF BLOCK IS 2' THICK, THE BASE IS TO BE NO GREATER THAN 4' BELOW GRADE.)

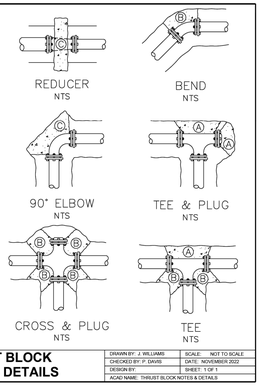
5.) VERTICAL BEND THRUST BLOCKS TO BE THE SAME AS HORIZONTAL BENDS.

6.) BEARING AREA OF THRUST BLOCK TO BE NOT LESS THAN ONE SQUARE FOOT.

MINIMUM BEARING AREA (SQ. FT.)

LETTER	PIPE SIZE 4"	6"	8"	10"	12"	16"	20"
A	1-1/2	2-3/4	5	7-1/4	10-1/4	18	27-1/2
B (22-1/2°)	3/4	1	2	3	4	7	11
B (45°)	1	2-1/4	3-3/4	5-1/2	8	13-3/4	21
C	2	4	7	11-1/4	14-1/2	25-1/4	39

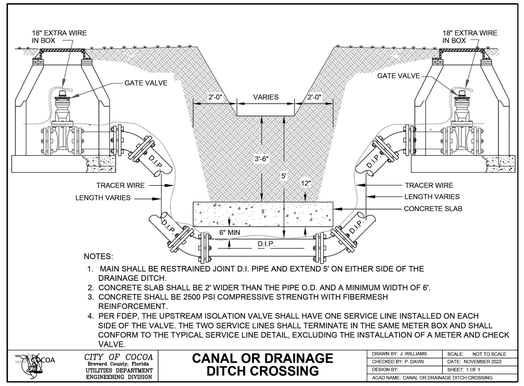
THE FIGURES IN THIS TABLE REPRESENT AREA OF CONCRETE BLOCKING AGAINST THE VERTICAL TRENCH WALL OF UNDISTURBED EARTH IN SQUARE FEET AT 2000 P.S.F. SOIL BEARING CAPACITY.



CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

THRUST BLOCK NOTES & DETAILS

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: THRUST BLOCK NOTES & DETAILS	

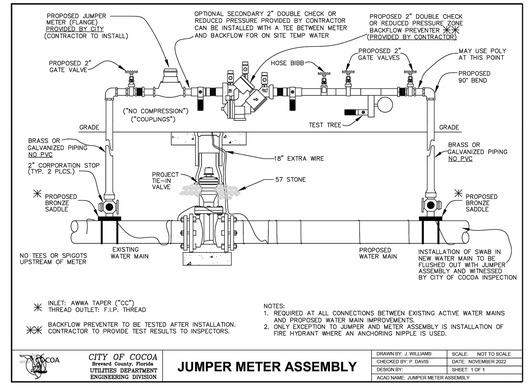


NOTES:
1. MAIN SHALL BE RESTRAINED JOINT D.I. PIPE AND EXTEND 5' ON EITHER SIDE OF THE DRAINAGE DITCH.
2. CONCRETE SLAB SHALL BE 2' WIDER THAN THE PIPE O.D. AND A MINIMUM WIDTH OF 6'.
3. CONCRETE SHALL BE 2500 PSI COMPRESSIVE STRENGTH WITH FIBERMESH REINFORCEMENT.
4. PER FDEP, THE UPSTREAM ISOLATION VALVE SHALL HAVE ONE SERVICE LINE INSTALLED ON EACH SIDE OF THE VALVE. THE TWO SERVICE LINES SHALL TERMINATE IN THE SAME METER BOX AND SHALL CONFORM TO THE TYPICAL SERVICE LINE DETAIL, EXCLUDING THE INSTALLATION OF A METER AND CHECK VALVE.

CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

CANAL OR DRAINAGE DITCH CROSSING

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: CANAL OR DRAINAGE DITCH CROSSING	



✳ INLET: AWWA TAPER ("CC") THREAD OUTLET: F.I.P. THREAD

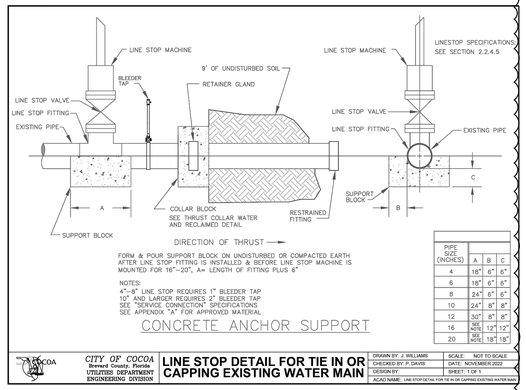
✳✳ BACKFLOW PREVENTER TO BE TESTED AFTER INSTALLATION. CONTRACTOR TO PROVIDE TEST RESULTS TO INSPECTORS.

NOTES:
1. REQUIRED AT ALL CONNECTIONS BETWEEN EXISTING ACTIVE WATER MAINS AND PROPOSED WATER MAIN IMPROVEMENTS.
2. ONLY EXCEPTION TO JUMPER AND METER ASSEMBLY IS INSTALLATION OF FIRE HYDRANT WHERE AN ANCHORING NIPPLE IS USED.

CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

JUMPER METER ASSEMBLY

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: JUMPER METER ASSEMBLY	



DIRECTION OF THRUST

FORM & POUR SUPPORT BLOCK ON UNDISTURBED OR COMPACTED EARTH AFTER LINE STOP FITTING IS INSTALLED & BEFORE LINE STOP MACHINE IS MOUNTED FOR 16"–20", A= LENGTH OF FITTING PLUS 6"

NOTES:
4"–8" LINE STOP REQUIRES 1" BLEEDER TAP
10" AND LARGER REQUIRES 2" BLEEDER TAP
SEE "SERVICE CONNECTION" SPECIFICATIONS
SEE APPENDIX "A" FOR APPROVED MATERIAL

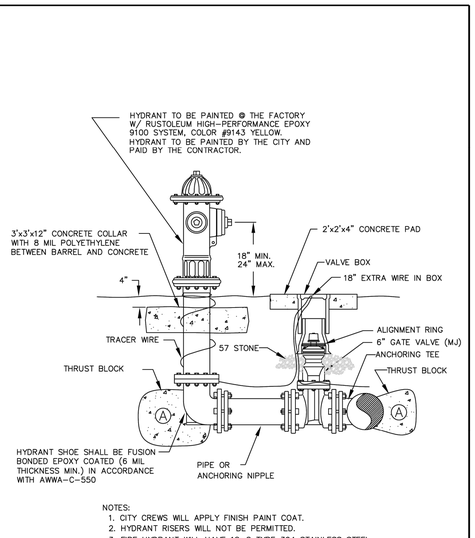
CONCRETE ANCHOR SUPPORT

PIPE SIZE (INCHES)	A	B	C
4	18"	6"	6"
6	18"	6"	6"
8	24"	6"	6"
10	24"	8"	8"
12	30"	8"	8"
16	SEE 40%	12"	12"
20	SEE 40%	18"	18"

CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

LINE STOP DETAIL FOR TIE IN OR CAPPING EXISTING WATER MAIN

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: LINE STOP DETAIL FOR TIE IN OR CAPPING EXISTING WATER MAIN	



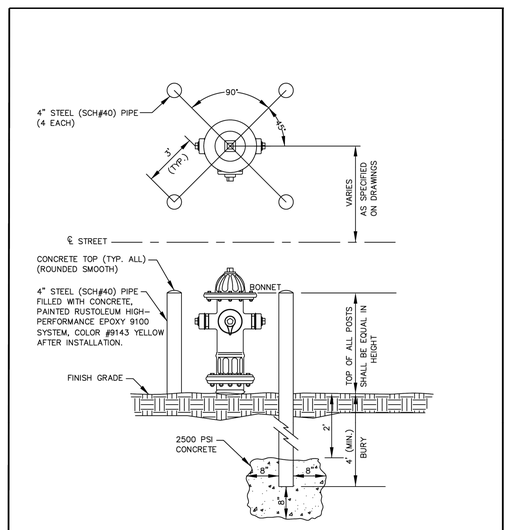
NOTES:
1. CITY CREWS WILL APPLY FINISH PAINT COAT.
2. HYDRANT RISERS WILL NOT BE PERMITTED.
3. FIRE HYDRANT WILL HAVE 18-8 TYPE 304 STAINLESS STEEL BOLTS AND NUTS (BONNET, TRAFFIC FLANGE AND SHOE).
4. SEE "FIRE HYDRANTS" SPECIFICATIONS.
5. PAINT PAID BY THE CONTRACTOR.

(A) REFER TO THRUST BLOCK NOTES AND DETAILS.

CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

FIRE HYDRANT DETAIL

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: FIRE HYDRANT DETAIL	

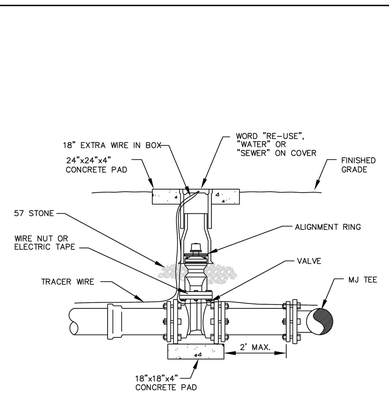


NOTES:
1. GUARD POSTS WILL BE FURNISHED & INSTALLED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
2. GUARD POSTS SHALL BE INSTALLED PLUMB AND LOCATED TO ALLOW UNRESTRICTED ACCESS TO PUMPER AND HOSE CONNECTIONS.

CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

FIRE HYDRANT GUARD POSTS

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: FIRE HYDRANT GUARD POSTS	

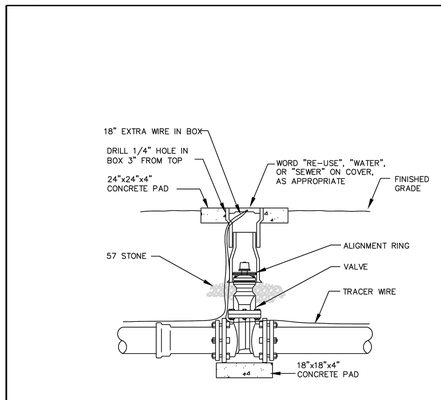


NOTE: PROPER SIZE VALVE BOX SHALL BE INSTALLED. PVC PIPE OR DUCTILE IRON PIPE EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.

CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

GATE VALVE AND FITTING DETAIL

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: GATE VALVE & FITTING DETAIL	



NOTES:
1. PVC PIPE OR DUCTILE IRON PIPE EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
2. IF THE DEPTH OF THE VALVE NUT IS GREATER THAN 48" BELOW GRADE, OR 30" BELOW GRADE AND UNDER THE WATER TABLE, A VALVE EXTENTION WILL BE REQUIRED. SEE VALVE EXTENSION STEM DETAIL.
3. PROVIDE A PLASTIC DEBRIS SHIELD/ALIGNMENT RING WHICH INSTALLS BELOW THE VALVE ACTUATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE BOX OVER THE ACTUATING NUT AND MINIMIZE INFILTRATION.
4. TRACER WIRE SHALL BE CONTINUOUS WITH NO SPLICES AND SHALL EXTEND 18" ABOVE TOP OF COLLAR. WIRE SHALL BE COLOR CODED TO MATCH THE UTILITY INSTALLED.
5. FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS.

THIS DETAIL APPLIES TO ALL BURIED VALVES.

CITY OF COCOA — Brevard County, Florida — UTILITIES DEPARTMENT — ENGINEERING DIVISION

GATE VALVE AND VALVE BOX DETAIL

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: GATE VALVE & VALVE BOX DETAIL	

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
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Maitland, Florida 32751
(407) 629-8330

CITY OF COCOA DETAILS FOR WINDWARD PRESERVE

BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER: KISHEN S. PATEL — LICENSE No. 66527 — STATE OF FLORIDA — PROFESSIONAL ENGINEER — 03/31/2023

CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	11/20/23	REVISED PER CITY COMMENTS
2		
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JOB #	21074
DATE:	9/26/22
SCALE:	N/A
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C910

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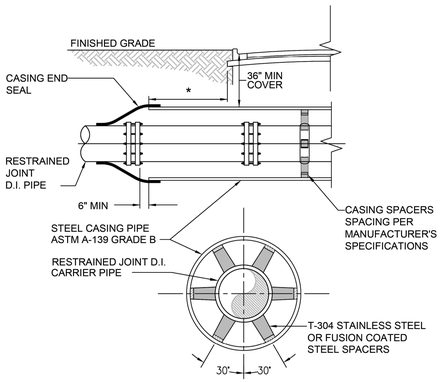


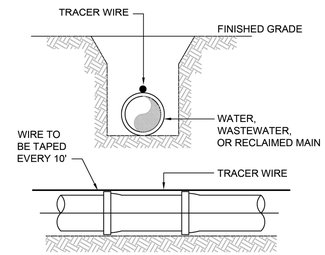
(VARIES BY CASING SIZE)

NOTES:
1. WHEN CONSTRUCTION IS WITHIN FDOT JURISDICTION, ADDITIONAL REQUIREMENTS OF THE UTILITY ACCOMMODATION GUIDE SHALL BE MET.
2. DISTANCE BETWEEN SPACERS TO BE PER MANUFACTURER'S SPECIFICATIONS.
3. NO FLOWABLE FILL BETWEEN THE ANULAR SPACE OF THE CASING OR CARRIER PIPE.

* SHALL BE A MINIMUM OF 6' OR MEET FDOT REQUIREMENTS, WHICHEVER IS GREATER.

SEE "JACK AND BORE" SPECIFICATIONS

CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	JACK AND BORE	DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
		CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 1 OF 1
		ACAD NAME: JACK AND BORE	



NOTES:
1. ALL PIPE SHALL REQUIRE INSULATED TRACER WIRE CAPABLE OF DETECTION AND SHALL BE TAPED EVERY 10' TO TOP CENTERLINE OF THE PIPE.
2. WIRE IS TO BE CONNECTED TOGETHER USING AN UNDERGROUND WIRE NUT WITH A SILICON BASED SEALANT.
3. SEE "TRACER WIRE" SPECIFICATIONS.

CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	TRACER WIRE DETAIL	DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
		CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 1 OF 1
		ACAD NAME: TRACER WIRE DETAIL	

RESTRAINED PIPE TABLE
WATER AND RECLAIMED WATER MAINS

MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S)								
TYPE	PIPE SIZE							
	4"	6"	8"	10"	12"	16"	20"	24"
90°BEND	21	29	38	45	53	66	79	91
45°BEND	9	12	16	19	22	45	33	38
22-1/2°BEND	5	6	8	9	11	14	16	19
11-1/4°BEND	3	3	4	5	6	7	8	9
PLUG, BRANCH OF TEE, VALVE	58	82	107	128	151	193	234	273

NOTES:
1. FITTINGS SHALL BE RESTRAINED JOINTS.
2. INSTALL FULL LENGTH JOINTS WITH TOTAL LENGTH EQUAL TO OR GREATER THAN SHOWN IN THE TABLE.
3. WHERE TWO OR MORE FITTINGS ARE TOGETHER, USE FITTING WHICH YIELDS GREATEST LENGTH OF RESTRAINED PIPE.
4. ALL LINE VALVES AND THROUGH RUN OF TEES SHALL BE RESTRAINED.
5. LENGTHS SHOWN IN THE TABLE HAVE BEEN CALCULATED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" AS PUBLISHED BY DIPRA, WITH THE FOLLOWING ASSUMPTIONS:

   WORKING PRESSURE: 150 PSI
   SOIL DESIGNATION: SM (SAND SILT)
   LAYING CONDITIONS: 3

6. TABLE IS FOR PVC AND WRAPPED DUCTILE IRON.

CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	RESTRAINED PIPE TABLE WATER & RECLAIMED WATER MAINS	DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
		CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 1 OF 1
		ACAD NAME: RESTRAINED PIPE TABLE WATER AND RECLAIMED	

RESTRAINED PIPE TABLE
FORCE MAINS

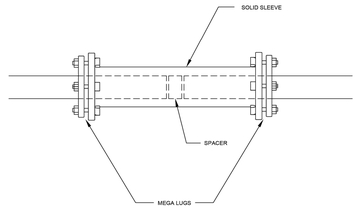
MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S)						
TYPE	PIPE SIZE					
	4"	6"	8"	10"	12"	16"
90°BEND	11	16	20	24	28	36
45°BEND	5	7	9	10	11	15
22-1/2°BEND	3	4	4	5	6	8
11-1/4°BEND	2	2	2	3	3	4
PLUG, BRANCH OF TEE, VALVE	25	35	45	54	64	82

NOTES:
1. FITTINGS SHALL BE RESTRAINED JOINTS.
2. INSTALL FULL LENGTH JOINTS WITH TOTAL LENGTH EQUAL TO OR GREATER THAN SHOWN IN THE TABLE.
3. WHERE TWO OR MORE FITTINGS ARE TOGETHER, USE FITTING WHICH YIELDS GREATEST LENGTH OF RESTRAINED PIPE.
4. ALL LINE VALVES AND THROUGH RUN OF TEES SHALL BE RESTRAINED.
5. LENGTHS SHOWN IN THE TABLE HAVE BEEN CALCULATED USING THE EBAA IRON RESTRAINT LENGTH CALCULATOR WITH THE FOLLOWING ASSUMPTIONS:

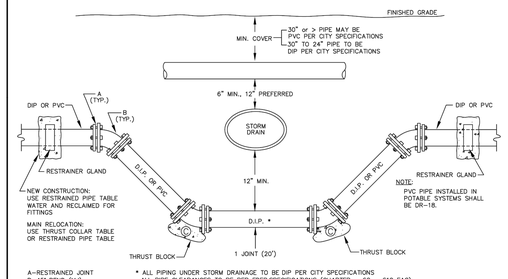
   WORKING PRESSURE: 70 PSI
   SOIL DESIGNATION: SM (SAND SILT)
   SAFETY FACTOR: 2.0 TO 1
   TRENCH TYPE 3
   DEPTH OF BURY 3 FT

6. TABLE IS FOR PVC ONLY. RESTRAINED LENGTH FOR ALTERNATE MATERIALS WILL NEED TO BE SUBMITTED TO THE ENGINEERING DIVISION FOR APPROVAL.

CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	RESTRAINED PIPE TABLE FORCE MAINS	DRAWN BY: P. DAVIS	SCALE: NOT TO SCALE
		CHECKED BY: K. JOSEPH	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 1 OF 1
		ACAD NAME: RESTRAINED PIPE TABLE FORCE MAINS	



CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	SOLID SLEEVE DETAIL	DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
		CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 1 OF 1
		ACAD NAME: SOLID SLEEVE DETAIL	



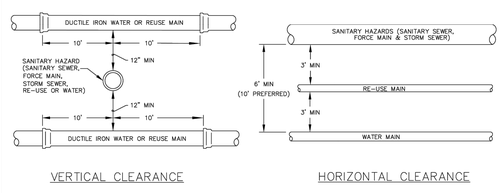
A–RESTRAINED JOINT
B–45° BEND (MJ)

* ALL PIPING UNDER STORM DRAINAGE TO BE DIP PER CITY SPECIFICATIONS
ALL PIPE CLEARANCES TO BE PER FDEP SPECIFICATIONS (CHAPTER – 62 – 610 FAC)

PER FDEP 62-555.314

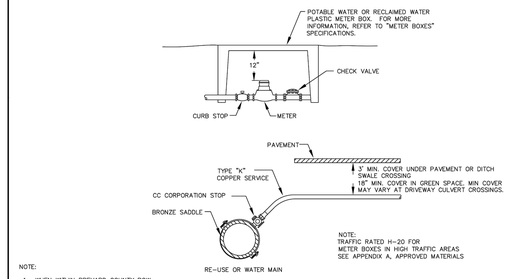
CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	STORM DRAIN CROSSING	DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
		CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 1 OF 1
		ACAD NAME: STORM DRAIN CROSSING	

1. IF DEPTH IS 30" OR >, PIPE MAY BE PVC PER CITY SPECIFICATIONS
2. IF DEPTH IS 30" TO 24", PIPE TO BE DIP PER CITY SPECIFICATIONS



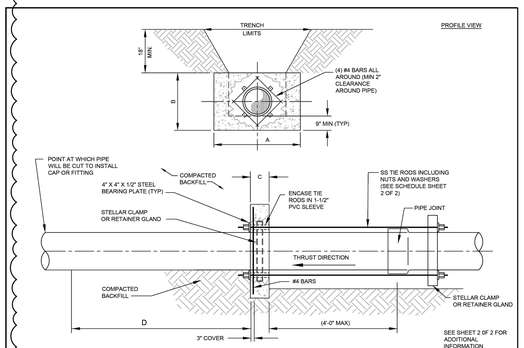
PER FDEP 62-555.314

CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	TYPICAL REQUIRED SEPARATION	DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
		CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 1 OF 1
		ACAD NAME: TYPICAL REQUIRED SEPARATION	



NOTE:
1. WHEN WITHIN BREVARD COUNTY ROW, ANY EXCAVATION WITHIN 8' OF THE EOP OR 3' FROM THE EDGE OF SIDWALK WILL REQUIRE SHORING TO PREVENT UNDERMINING.

CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	TYPICAL 3/4"- 2" SERVICE LINE	DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
		CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 1 OF 1
		ACAD NAME: TYPICAL SERVICE LINE	



CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	THRUST COLLAR WATER AND RECLAIMED	DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
		CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 1 OF 2
		ACAD NAME: THRUST COLLAR	

SCHEDULE OF DIMENSIONS AND MATERIALS

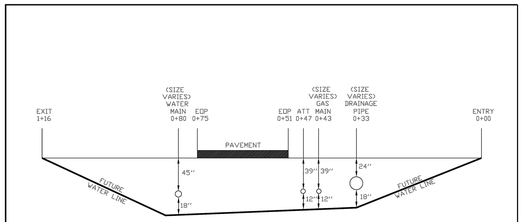
PIPE SIZE (INCHES)	DIMENSIONS (FT.)				TIE RODS REQ'D	
	A	B	C	D	DIA. (in.)	NO.
4	2.0	2.0	1.0	2.0	3/4	2
6	2.0	2.0	1.0	4.0	3/4	2
8	3.0	3.0	1.0	5.0	3/4	2
10	4.0	3.0	1.0	8.0	3/4	4
12	5.0	3.0	1.0	10.0	3/4	4
16	*	*	*	*	*	*
20	*	*	*	*	*	*
24	*	*	*	*	*	*

NOTE: THRUST COLLAR AREAS TO BE COMPUTED ON BASIS OF 2000 LBS/SF SOIL RESTRAINT BEARING. SOIL DENSITY ASSUMED 120 PCF. SOIL COHESION 20".

NOTES:
1. ADDITIONAL REINFORCEMENTS SHALL BE AS SPECIFIED BY THE ENGINEER.
2. MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE SHALL BE 3000 PSI.
3. BEDDING, BACKFILL AND COMPACTION SHALL BE AS SPECIFIED ELSEWHERE IN THE STANDARD DRAWINGS.
4. ALL FORM BOARDS SHALL BE REMOVED PRIOR TO BACKFILL.
5. NO ALLOWANCE SHALL BE MADE FOR FRICTION BETWEEN THE PIPE WALL AND THE THRUST COLLAR.
6. DESIGN PRESSURE: 150 PSI.
7. TIE RODS TO BE 3/4" SS 18-8 TYPE 304.

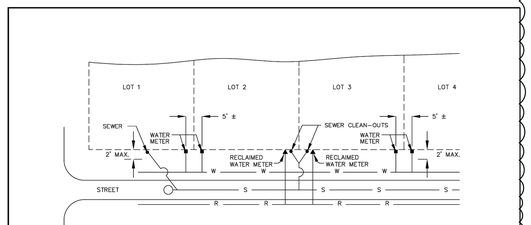
* TO BE DESIGNED BY ENGINEER OF RECORD.

CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	THRUST COLLAR WATER AND RECLAIMED	DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
		CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 2 OF 2
		ACAD NAME: THRUST COLLAR	



NOTES:
1. BORE PLAN TO SHOW SIZE, DEPTH, AND LOCATION OF ALL UTILITIES.
2. BORE PLAN TO BE IN ACCORDANCE WITH LATEST TECHNICAL PROVISIONS.
3. BORE PLAN MUST BE APPROVED BY ENGINEERING DEPARTMENT PRIOR TO ANY CONSTRUCTION.
4. DEPTH OF BORE PER BREVARD COUNTY OR FDOT JURISDICTION.

CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	TYPICAL BORE PLAN	DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
		CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 1 OF 1
		ACAD NAME: TYPICAL BORE PLAN	



CITY OF COCOA Brevard County, Florida UTILITIES DEPARTMENT ENGINEERING DIVISION	TYPICAL LOT SERVICE LINE LOCATION	DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
		CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
		DESIGN BY:	SHEET: 1 OF 1
		ACAD NAME: TYPICAL LOT	

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CITY OF COCOA DETAILS
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEER'S SEAL: CHARLES E. STOKES, LICENSE No. 66527, STATE OF FLORIDA, PROFESSIONAL ENGINEER, DATE 11/20/23

CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	11/20/23	REVISED PER CITY COMMENTS
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

JOB #	21074
DATE:	9/26/22
SCALE:	N/A
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C911

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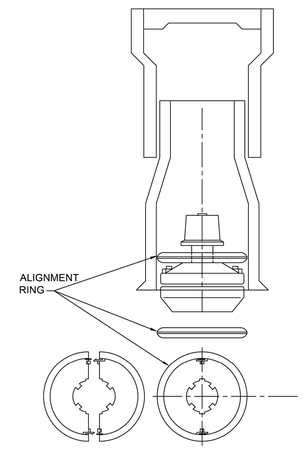
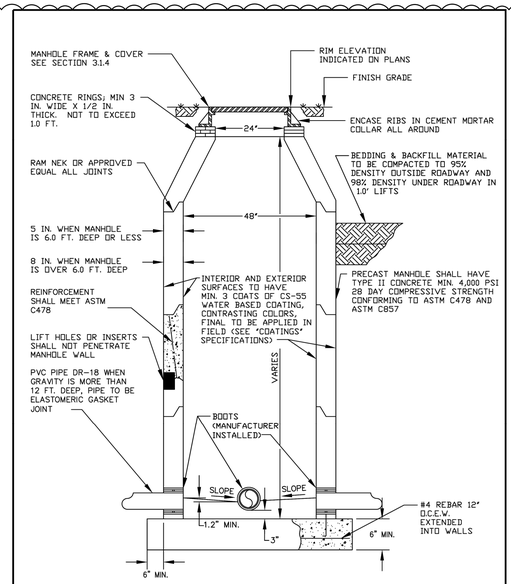


NOTES:
1. FOR ALL VALVES REGARDLESS OF SIZE AND DEPTH.

CITY OF COCOA
Brevard County, Florida
UTILITIES DEPARTMENT
ENGINEERING DIVISION

ALIGNMENT RING

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: ALIGNMENT RING	

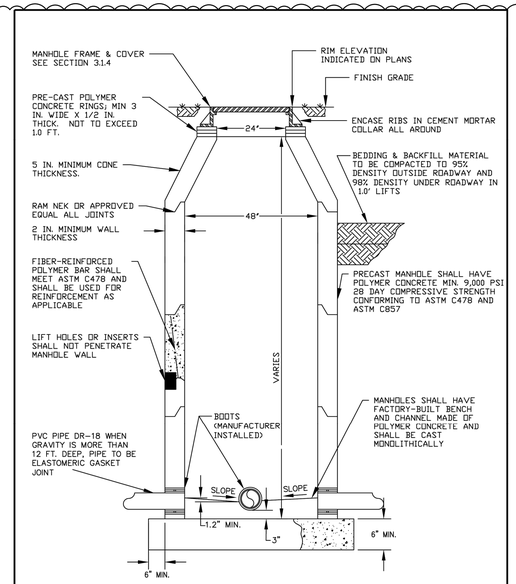


CROSS SECTION

CITY OF COCOA
Brevard County, Florida
UTILITIES DEPARTMENT
ENGINEERING DIVISION

TYPICAL MANHOLE

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: TYPICAL MANHOLE	

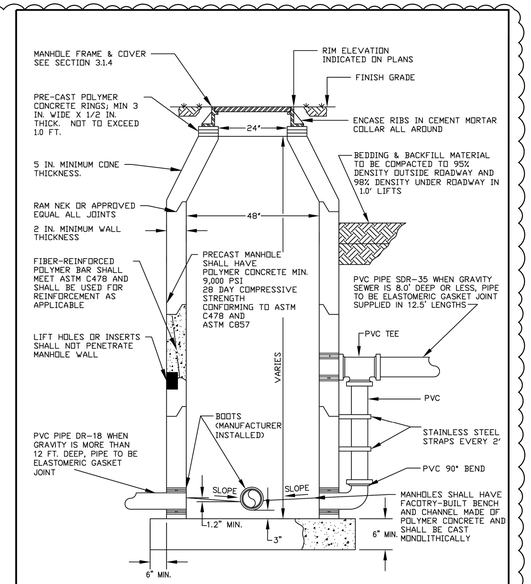


CROSS SECTION

CITY OF COCOA
Brevard County, Florida
UTILITIES DEPARTMENT
ENGINEERING DIVISION

TYPICAL POLYMER CONCRETE MANHOLE

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: TYPICAL POLYMER CONCRETE MANHOLE	

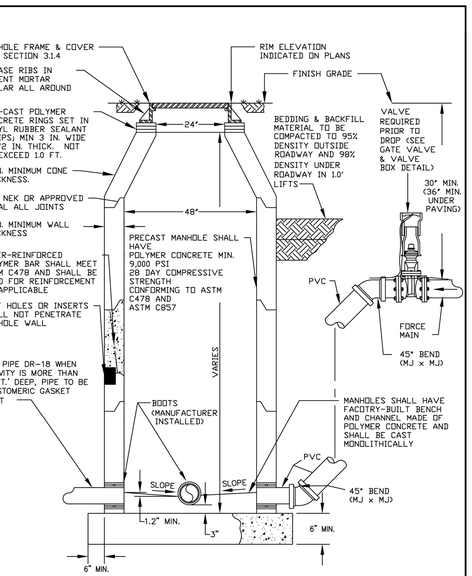


CROSS SECTION

CITY OF COCOA
Brevard County, Florida
UTILITIES DEPARTMENT
ENGINEERING DIVISION

TYPICAL MANHOLE WITH OUTSIDE DROP

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: TYPICAL MANHOLE WITH OUTSIDE DROP	

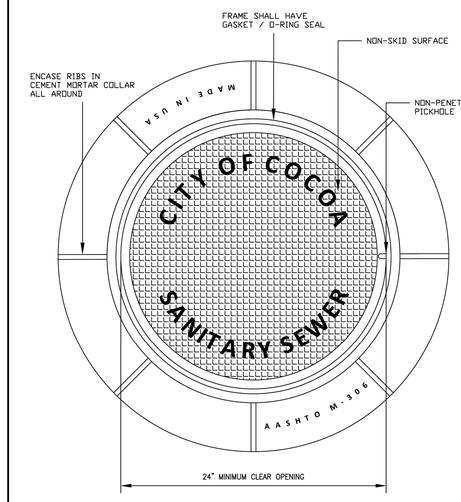


CROSS SECTION

CITY OF COCOA
Brevard County, Florida
UTILITIES DEPARTMENT
ENGINEERING DIVISION

FORCE MAIN CONNECTION TO MANHOLE

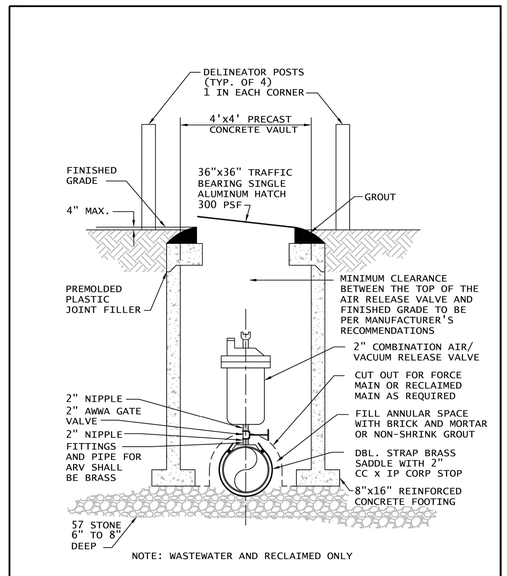
DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: FORCE MAIN CONNECTION TO MANHOLE	



CITY OF COCOA
Brevard County, Florida
UTILITIES DEPARTMENT
ENGINEERING DIVISION

MANHOLE FRAME AND COVER

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: MANHOLE FRAME AND COVER	

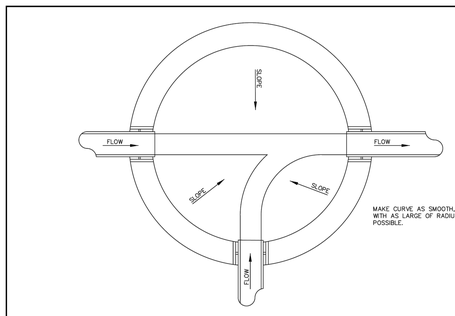


AIR OR COMBINATION AIR/VACUUM RELEASE VALVE

CITY OF COCOA
Brevard County, Florida
UTILITIES DEPARTMENT
ENGINEERING DIVISION

AIR RELEASE VALVE

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: AIR RELEASE VALVE	



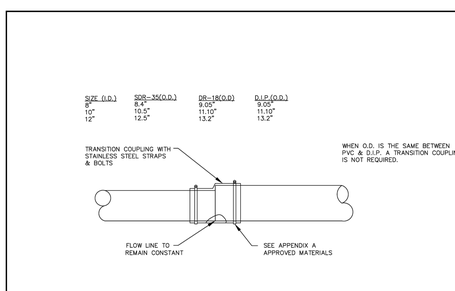
MAKE CURVE AS SMOOTH, WITH AS LARGE OF RADIUS AS POSSIBLE.

PLAN

CITY OF COCOA
Brevard County, Florida
UTILITIES DEPARTMENT
ENGINEERING DIVISION

MANHOLE INVERT

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: MANHOLE INVERT	



CITY OF COCOA
Brevard County, Florida
UTILITIES DEPARTMENT
ENGINEERING DIVISION

TRANSITION COUPLING

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: TRANSITION COUPLING	

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CITY OF COCOA DETAILS
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

ENGINEERING STAMP: DAVID R. STOKES, LICENSE No. 66527, STATE OF FLORIDA, PROFESSIONAL ENGINEER, 2023

CERTIFICATE OF AUTHORIZATION NO. CA-0007723

NO.	DATE	REVISIONS
1	11/20/23	REVISED PER CITY COMMENTS
2		
3		
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JOB #	21074
DATE:	9/26/22
SCALE:	N/A
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

C912

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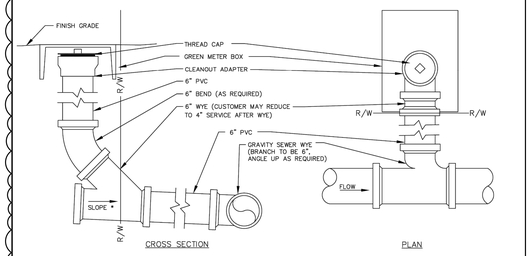
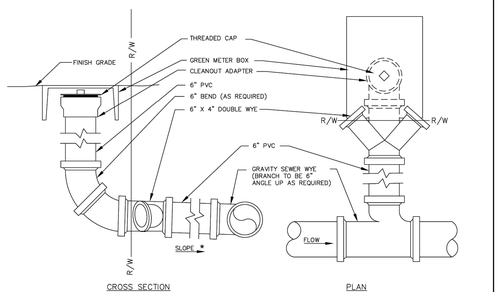


* MINIMUM SLOPE PER TECHNICAL SPECIFICATIONS

CITY OF COCOA, Brevard County, Florida, UTILITIES DEPARTMENT, ENGINEERING DIVISION

SINGLE SERVICE DETAIL

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: SINGLE SERVICE DETAIL	

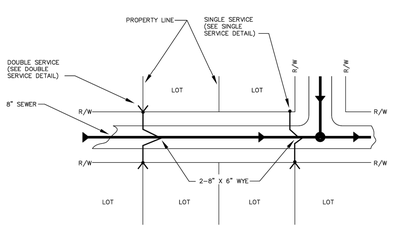


* MINIMUM SLOPE PER TECHNICAL SPECIFICATIONS

CITY OF COCOA, Brevard County, Florida, UTILITIES DEPARTMENT, ENGINEERING DIVISION

DOUBLE SERVICE DETAIL

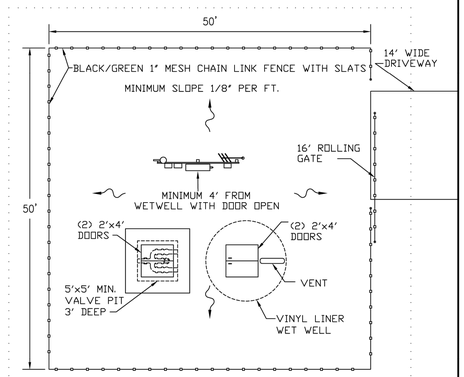
DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: DOUBLE SERVICE DETAIL	



CITY OF COCOA, Brevard County, Florida, UTILITIES DEPARTMENT, ENGINEERING DIVISION

TYPICAL SERVICE

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: TYPICAL SERVICE	



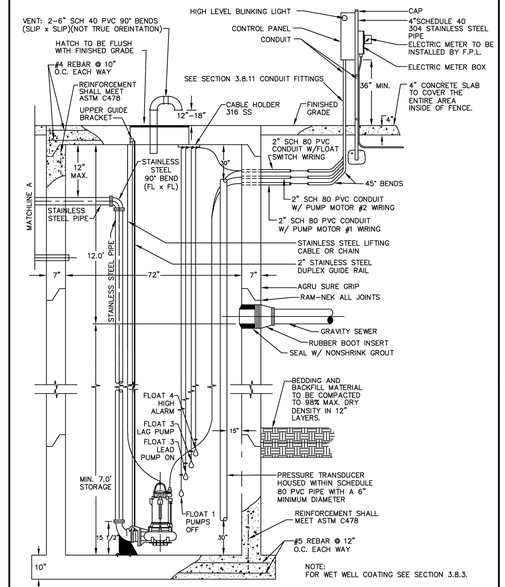
NOTES:

1. CONTROL PANEL DOOR WHEN OPEN SHALL BE NO MORE THAN 4 FEET FROM WET WELL.
2. 6" THICK REINFORCED CONCRETE DRIVEWAY (NOT PICTURED) REQUIRED FROM STREET TO WET WELL
3. EXACT SITE LAYOUT, INCLUDING DRIVEWAY AND GATE, WILL BE SITE SPECIFIC.

CITY OF COCOA, Brevard County, Florida, UTILITIES DEPARTMENT, ENGINEERING DIVISION

LIFT STATION SITE PLAN (TYP)

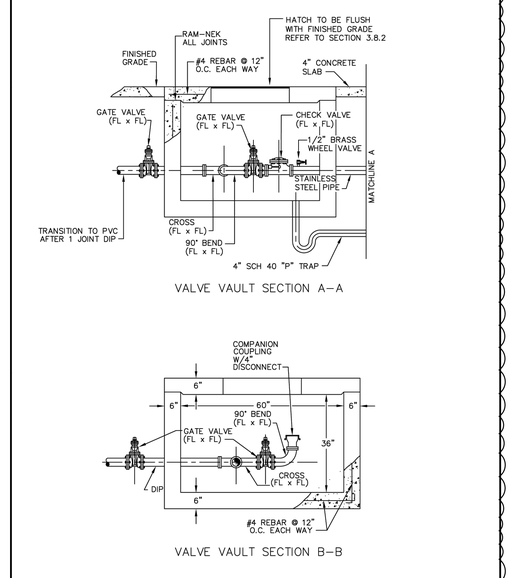
DRAWN BY: R. HALL	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: LIFT STATION SITE PLAN	



CITY OF COCOA, Brevard County, Florida, UTILITIES DEPARTMENT, ENGINEERING DIVISION

LIFT STATION WET WELL CROSS SECTION

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 4
ACAD NAME: LIFT STATION 1 OF 4	



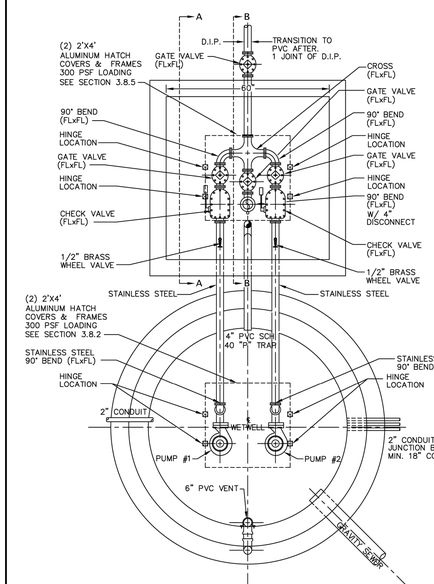
VALVE VAULT SECTION A-A

VALVE VAULT SECTION B-B

CITY OF COCOA, Brevard County, Florida, UTILITIES DEPARTMENT, ENGINEERING DIVISION

LIFT STATION VALVE VAULT SECTION VIEWS

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 2 OF 4
ACAD NAME: LIFT STATION 2 OF 4	



CITY OF COCOA, Brevard County, Florida, UTILITIES DEPARTMENT, ENGINEERING DIVISION

LIFT STATION VALVE VAULT AND WET WELL PLAN VIEW

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 3 OF 4
ACAD NAME: LIFT STATION 3 OF 4	

LIFT STATION ELECTRICAL REQUIREMENTS

- –NEMA 4 OR 4x ENCLOSURE – STAINLESS STEEL SIZE 36"x 48"x 12" MIN.
- –MAIN CIRCUIT BREAKER –(GENERAL ELECTRIC, SQUARE D)
- –BRANCH CIRCUIT BREAKER FOR EACH PUMP (GENERAL ELECTRIC, SQUARE D) ADJUSTABLE TRIP.
- –20 AMP, 1 POLE CIRCUIT BREAKER FOR 115 VOLT DUPLEX CONVENIENCE RECEPTACLE (GIF)
- –MERCURY FLOAT CONTROLS
- –HIGH LEVEL ALARM (FLASHING LIGHT)
- –ALTERNATOR
- –120 VOLT CONTROL VOLTAGE
- –MOTOR STARTERS SQUARE D
- –3 LEG OVERLOAD PROTECTION
- –LOW VOLTAGE MOTOR START
- –DELAY START ON 2nd PUMP STARTUP
- –THERMAL OVERLOAD IN PUMP MOTOR (W/ WARNING LIGHT)
- –MOISTURE PROBE IN PUMP MOTOR (W/ WARNING LIGHT)
- –PUMPS TO BE INSTALLED W/ GUIDE RAIL (STAINLESS STEEL)
- –HAND OFF AUTO SWITCH FOR EACH PUMP
- –PHASE FAILURE RELAY PUMPS AND MAIN
- –LIGHTNING ARRESTOR, OUTSIDE BACK OF DISCONNECT BOX
- –CONDUIT FROM PUMP J–BOX TO CONTROL PANEL MUST BE VAPOR TIGHT (BY USE OF CONDUIT SEAL)
- –THREE CONDUIT RUNS FROM PUMP J–BOX TO WETWELL
- –2 COPPER CLAD GROUND RODS SIZE 10' BY 3/4"
- –MAIN DISCONNECT
- –MYERS TYPE ALUMINUM HUBS FOR ALL CONDUIT TERMINATIONS INTO ALL ENCLOSURES.

FENCE SPECIFICATIONS:

1) FABRIC 9–GA, HOT DIPPED GALVANIZED BLACK OR GREEN SMALL MESH.
2) CORNER POSTS AND GATE POSTS TO BE 3" O.D., SCHEDULE 40x 9'–0"
3) LINE POSTS ON 10' CENTERS TO BE 2" O.D., SCHEDULE 40x 8'–0"
4) TOP RAIL TO BE 1–5/8" O.D., SCHEDULE 40
5) 16'–0" ROLLING GATE TO BE CONSTRUCTED OF 1–5/8" O.D., SCHEDULE 40 TUBE AND TO BE EQUIPPED WITH CENTER LOCKING DROP RODS AND DIAGONAL TRUSS RODS.

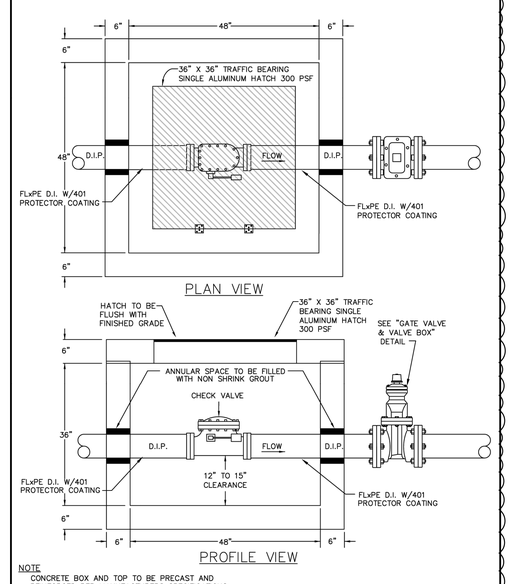
NOTES:

1) PUMPS TO BE FURNISHED WITH HIGH PRESSURE DISCHARGE COUPLING, STAINLESS STEEL SLIDERAIL SYSTEM, SEAL FAILURE AND THERMAL OVERLOAD INDICATORS.
2) ALL PIPES, INVERTS AND HATCHES TO BE THE SIZE AND KIND SPECIFIED ON THE SET OF APPROVED CONSTRUCTION PLANS.
3) D.I.P. TO BE CLASS 54 MIN. THICKNESS.
4) ALL HARDWARE INSIDE WETWELL TO BE 316 STAINLESS STEEL.

CITY OF COCOA, Brevard County, Florida, UTILITIES DEPARTMENT, ENGINEERING DIVISION

LIFT STATION SPECIFICATIONS AND NOTES

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 4 OF 4
ACAD NAME: LIFT STATION 4 OF 4	



NOTE

CONCRETE BOX AND TOP TO BE PRECAST AND REINFORCED PER MANUFACTURERS SPECIFICATIONS

CITY OF COCOA, Brevard County, Florida, UTILITIES DEPARTMENT, ENGINEERING DIVISION

CHECK VALVE VAULT

DRAWN BY: J. WILLIAMS	SCALE: NOT TO SCALE
CHECKED BY: P. DAVIS	DATE: NOVEMBER 2022
DESIGN BY:	SHEET: 1 OF 1
ACAD NAME: CHECK VALVE VAULT	

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CITY OF COCOA DETAILS
FOR
WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077

DAVID J. STOKES, LICENSE No. 66527, STATE OF FLORIDA, PROFESSIONAL ENGINEER

CERTIFICATE OF AUTHORIZATION NO. CA-00007723

	DATE	REVISIONS
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JOB #	21074
DATE:	9/26/22
SCALE:	N/A
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

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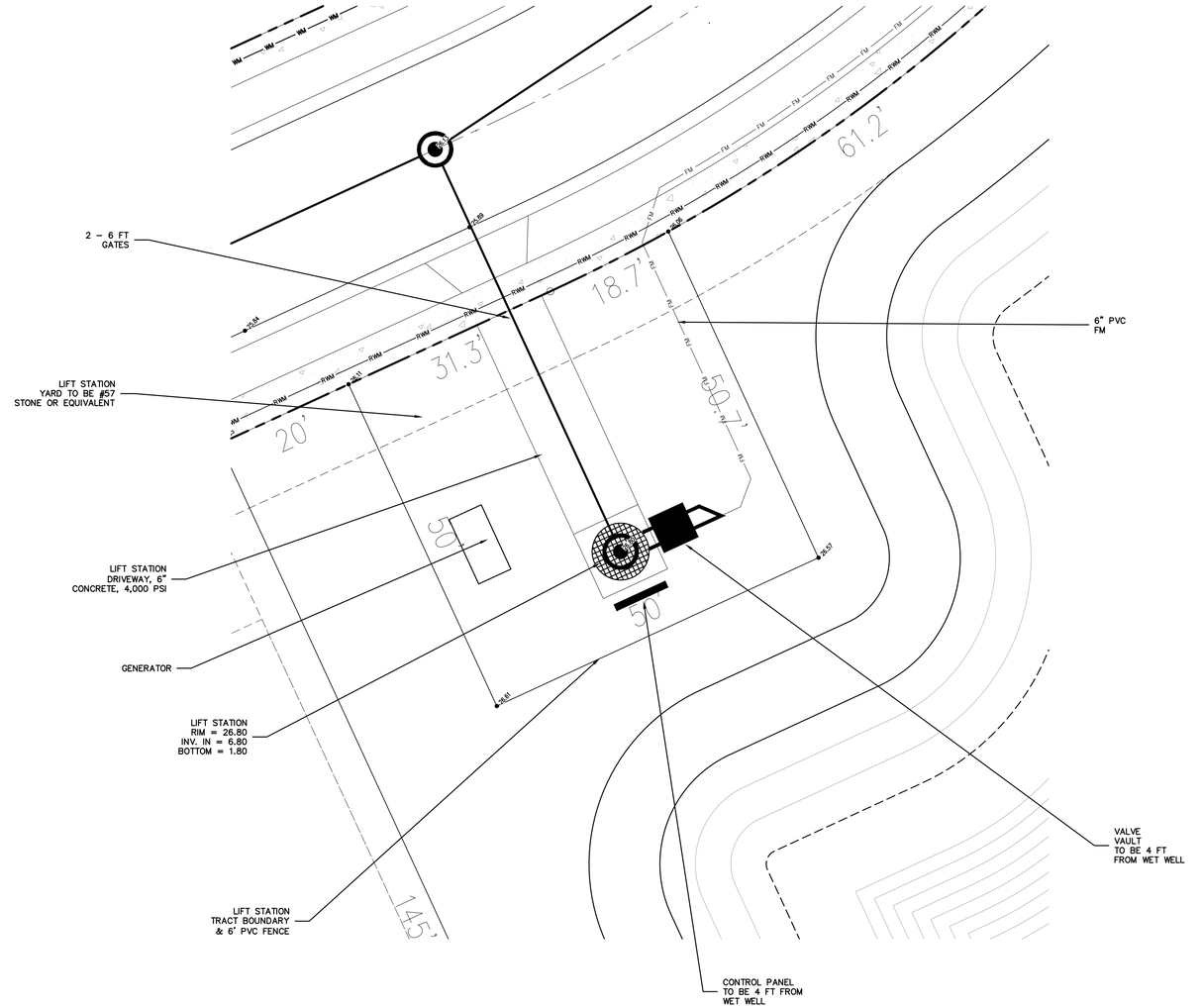

LIFT STATION PUMP
ABS XFP100G CB1 60HZ
CURVE PE 185/4–G–60HZ

OPERATING POINT = 327.6 GPM AT 101.5 FT TDH

Wet well diameter	6 ft
Top of wet well	26.80 ft
Influent invert in	6.80 ft
High-level alarm	6.80 ft
Lag pump ON	6.30 ft
Lead pump ON	5.80 ft
Storage depth	2.00 ft
Pumps OFF	3.80 ft
Sump depth	2.00 ft
Floor of wet well	1.80 ft
Wet well depth	25.00 ft

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ENGINEERING BY MADDEN, MOORHEAD & STOKES, LLC
DAVID A. STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. CA–0007723

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BREVARD COUNTY PUBLIC WORKS ENGINEERING STANDARD DEVELOPMENT NOTES

GENERAL

1. ALL CONSTRUCTION SHALL CONFORM TO FDOT DESIGN STANDARDS (LATEST EDITION), FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION (LATEST EDITION), BREVARD COUNTY UTILITY SERVICES CRITERIA FOR WATER AND SANITARY SEWER SYSTEMS, AND BREVARD COUNTY CODE OF ORDINANCES.
2. ISSUANCE OF CERTIFICATE OF COMPLETION: UPON COMPLETION OF CONSTRUCTION OF THE PROJECT AND PRIOR TO SCHEDULING OF THE FINAL INSPECTION, THE APPLICANT OR THEIR AUTHORIZED REPRESENTATIVE, SHALL PROVIDE THE FOLLOWING DOCUMENTATION TO BREVARD COUNTY PUBLIC WORKS ENGINEERING:
   a. A CERTIFICATE OF COMPLETION - REQUEST FOR FINAL INSPECTION FORM. THE FORM MUST BE FROM A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA WITH THEIR SEAL AFFIXED. THE FORM CERTIFIES THAT THE IMPROVEMENTS HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS.
   b. A COMPLETE SET OF TESTING REPORTS FOR ALL TESTS PERFORMED ON THE PROJECT WITHIN THE COUNTY RIGHT-O- WAY AND/OR FOR ALL SUBDIVISION CONSTRUCTION REGARDLESS OF PUBLIC OR PRIVATE.
   c. THREE SETS OF AS-BUILT DRAWINGS MEETING THE REQUIREMENTS OF SECTION 61G17, F.A.C., AND SIGNED AND SEALED BY A SURVEYOR LICENSED IN THE STATE OF FLORIDA. AT A MINIMUM, ALL AS-BUILT DRAWINGS MUST INCLUDE:
      i. ROAD/PAVEMENT ELEVATIONS; ROADWAY CROSS SLOPES; PAVEMENT WIDTH; PAVEMENT SPOT ELEVATIONS NECESSARY TO CONFIRM STORMWATER DRAINAGE PATTERNS AT INTERSECTIONS AND SIDEWALKS; CURB SLOPES;
      ii. STORMWATER PIPE SIZES AND INVERT ELEVATIONS; LOCATION OF OUTFALL STRUCTURE(S) WITH AS-BUILT ELEVATIONS FOR ALL CONTROL STRUCTURE & SKIMMER ELEVATIONS SHOWN ON THE APPROVED PLANS; TOP OF BANK, GRADE BREAKS, BOTTOM ELEVATIONS FOR ALL STORMWATER PONDS OR BERM AREAS;
      iii. ANY OTHER ADDITIONAL AS-BUILT DATA THAT IS APPLICABLE TO THE PROJECT TO ENSURE COMPLETION IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS.
   d. PIPE INSPECTION VIDEO PER FDOT REQUIREMENTS. (IF APPLICABLE PER NOTE 4 OF DRAINAGE NOTES)
   e. IF A MUNICIPALITY IS ACCEPTING A PUBLIC WATER AND/OR SEWER SYSTEM, THERE MUST BE DOCUMENTATION INDICATING MUNICIPAL ACCEPTANCE OF THE CONSTRUCTION OF THE WATER AND/OR SEWER SYSTEM.
   f. PUBLIC WORKS ENGINEERING WILL NOT SIGN OFF ON A TEMPORARY CERTIFICATE OF OCCUPANCY (TCO) FROM THE BREVARD COUNTY BUILDING DEPARTMENT UNTIL THE AS-BUILT DRAWINGS AND OTHER DOCUMENTATION LISTED ABOVE HAVE BEEN SUBMITTED AND REVIEWED BY PUBLIC WORKS ENGINEERING.
   g. PROJECTS CONNECTED TO THE BREVARD COUNTY WATER, SANITARY SEWER, AND/OR RECLAIMED WATER SYSTEMS MUST OBTAIN FINAL APPROVAL FOR THE PROJECT DIRECTLY FROM BREVARD COUNTY UTILITY SERVICES AS OUTLINED IN THE BREVARD COUNTY CRITERIA FOR WATER AND SANITARY SEWERAGE SYSTEMS.
3. UPON APPROVAL OF FINAL INSPECTION, AN ENGINEER'S CERTIFIED COST ESTIMATE WILL BE REQUIRED ALONG WITH A 2-YEAR MAINTENANCE BOND FOR ALL IMPROVEMENTS WITHIN THE COUNTY RIGHT-OF-WAY AS REQUIRED BY CHAPTER 86 OF THE BREVARD COUNTY CODE OF ORDINANCES. THE MAINTENANCE BOND SHALL BE 25% OF THE ENGINEER'S CERTIFIED COST ESTIMATE.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO THE COUNTY INFRASTRUCTURE DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE STRUCTURAL INTEGRITY OF THE ROADWAY ASPHALT, BASE, AND STABILIZED SUB-BASE, SIDEWALKS, STORMWATER DRAINAGE SYSTEM, DRAINAGE STRUCTURES, CURBS, GROUND COVER, WATER SYSTEMS, SANITARY SEWER SYSTEMS, AND RECLAIMED WATER SYSTEMS. ALL REPAIRS SHALL BE COMPLETED IN ACCORDANCE WITH FDOT AND BREVARD COUNTY STANDARDS. ALL REPAIRS SHALL BE COMPLETED PRIOR TO THE FINAL INSPECTION OF THE PROJECT. SIDEWALK PATCHING WILL NOT BE ACCEPTABLE.
5. A VISUAL OR MECHANICAL INTERIOR INSPECTION OF EXISTING CULVERTS WILL BE REQUIRED PRIOR TO THE FINAL INSPECTION.
6. ALL DISTURBED AREAS WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE SODDED. SEED & MULCH IS NOT ACCEPTABLE. SOD SHALL MATCH EXISTING SOD TYPE. BAHIA SOD SHALL BE USED IN AREAS ADJACENT TO VACANT PROPERTY. DISTURBED AREAS OUTSIDE THE CONSTRUCTION LIMITS WILL BE SODDED AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SURVEY MONUMENTATION. ANY SURVEY MONUMENTATION DISTURBED OR DESTROYED DURING CONSTRUCTION SHALL BE REPLACED BY A FLORIDA LICENSED SURVEYOR PRIOR TO ISSUANCE OF A CERTIFICATE OF COMPLETION FOR THE PROJECT.
8. REGARDLESS OF PRIVATE OR PUBLIC DEDICATION, THERE SHALL BE NO UTILITY CONNECTIONS OR METER BOXES WITHIN PROPOSED OR EXISTING SIDEWALKS OR DRIVEWAY AREAS.
9. ALL DIRECTIONAL BORES SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 555, DIRECTIONAL BORES AND THE FDOT UTILITIES ACCOMMODATION MANUAL.
10. ALL DIRECTIONAL BORES MUST EXTEND A MINIMUM OF EIGHT(8) FEET PAST THE EDGE OF PAVEMENT OF ANY ROADWAY OR COMMERCIAL DRIVEWAY. FOR RESIDENTIAL DRIVEWAYS AND SIDEWALKS, THE BORE MUST EXTEND THREE (3) FEET PAST THE EDGE ON EITHER SIDE.
11. THE CONTRACTOR SHALL CONTROL DUST GENERATED BY THIS PROJECT AT ALL TIMES, SHALL PROVIDE STREET SWEEPING AS REQUIRED, AND PREVENT SEDIMENT FROM ENTERING INTO THE EXISTING DRAINAGE SYSTEM AT ALL TIMES.
12. THE CONTRACTOR SHALL NOT EXCEED NOISE LEVELS AS SPECIFIED IN BREVARD COUNTY CODE OF ORDINANCES SECTION 62-2271.
13. ALL STRIPING AND PAVEMENT MARKINGS IN THE COUNTY RIGHT-OF-WAY SHALL BE THERMOPLASTIC AND SHALL NOT BE APPLIED UNTIL A MINIMUM OF 30 DAYS AFTER THE PLACEMENT OF THE FINAL ASPHALT SURFACE. IN THE INTERIM, STRIPING SHALL BE PAINT AND ANY REQUIRED RPM'S INSTALLED PER THE PLANS. DO NOT STRIPE ACROSS MANHOLE LIDS OR DRAINAGE GRATES.
14. REFLECTIVE PAVEMENT MARKINGS (RPM'S) SHALL BE INSTALLED IN ALL LOCATIONS AS REQUIRED BY FDOT DESIGN STANDARD,(LATEST EDITION)
15. ANY PAVEMENT MARKINGS AND RPM'S THAT ARE DESTROYED, DAMAGED, OR DIMINISHED BY CONSTRUCTION ACTIVITIES FOR UP TO 500 FEET IN EITHER DIRECTION BEYOND THE LIMITS OF CONSTRUCTION SHALL BE REPLACED OR REFURBISHED BY THE CONTRACTOR.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE COUNTY RIGHT-OF-WAY FOR THE DURATION OF CONSTRUCTION. AT A MINIMUM, THE CONTRACTOR SHALL MOW THE RIGHT-OF-WAY ON AN AS NEEDED BASIS AND MAINTAIN THE DRAINAGE CONVEYANCE SYSTEM. ADDITIONAL MAINTENANCE MAY BE REQUIRED ON A CASE BY CASE BASIS.

TRAFFIC CONTROL

1. MOT PLAN REVIEW: A PROJECT-SPECIFIC MAINTENANCE OF TRAFFIC (MOT) PLAN OR ROADWAY CLOSURE MOT/DETOUR PLAN MUST BE SUBMITTED TO BREVARD COUNTY TRAFFIC OPERATIONS (321-633-2077) FOR APPROVAL A MINIMUM OF TWO (2) WEEKS PRIOR TO START OF CONSTRUCTION. THE MOT PLAN SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND FDOT STANDARD INDEX 600 SERIES,(LATEST EDITIONS). PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS OR VMS) MAY BE REQUIRED TO SUPPLEMENT THE STANDARD MOT SIGNAGE.
2. ROAD CLOSURES: THE CONTRACTOR SHALL NOTIFY BREVARD COUNTY TRAFFIC OPERATIONS (321-633-2077) A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF THE PROPOSED START DATE OF CONSTRUCTION WITHIN THE RIGHT-OF-WAY, FOR EACH PHASE OF CONSTRUCTION, IF APPLICABLE. CONSTRUCTION SHALL NOT BEGIN UNTIL THE MOT PLAN IS APPROVED AND NOTIFICATIONS HAVE BEEN SENT TO AFFECTED AGENCIES. CERTAIN LOCATIONS MAY REQUIRE WORK IN THE RIGHT-OF-WAY TO BE PERFORMED AT NIGHT ONLY.
3. LANE CLOSURES: THE CONTRACTOR SHALL NOTIFY BREVARD COUNTY TRAFFIC OPERATIONS (321-633-2077) A MINIMUM OF ONE (1) WEEK IN ADVANCE OF THE PROPOSED START DATE OF CONSTRUCTION WITHIN THE RIGHT-OF-WAY. CONSTRUCTION SHALL NOT BEGIN UNTIL THE MOT PLAN IS APPROVED AND NOTIFICATIONS HAVE BEEN SENT TO AFFECTED AGENCIES. NO LANE CLOSURES WILL BE PERMITTED DURING PEAK HOUR TRAFFIC VOLUMES.
4. ALL TRAFFIC CONTROL DEVICES SHALL MEET THE REQUIREMENTS OF THE MUTCD FOR STREETS AND HIGHWAYS, FDOT STANDARDS (LATEST EDITIONS), AND BREVARD COUNTY LAND DEVELOPMENT EXHIBIT #26.

DRAINAGE - ROADWAYS

1. ALL DRAINAGE SYSTEM CONSTRUCTION SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS AND FDOT DESIGN STANDARDS,(LATEST EDITIONS).
2. ALL RETICULINE STEEL GRATES SHALL BE HOT DIPPED GALVANIZED AND HAVE A TRAFFIC BEARING H-20 LOAD RATING.
3. ALL GRATES UTILIZED WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE TRAFFIC BEARING H-20 LOADING.
4. ALL STORMWATER PIPING WITHIN THE ROAD RIGHT-OF-WAY, REGARDLESS OF PUBLIC OR PRIVATE, OR STORMWATER PIPING THAT CONVEYS STORMWATER UNDER THE ROADWAY BETWEEN STORMWATER TREATMENT PONDS, SHALL BE INSPECTED PER SECTIONS 430-4.8, 430-4.8.1, AND 430-4.8.2 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION,(LATEST EDITION). A COPY OF THE PIPE VIDEO SHALL BE PROVIDED TO THE COUNTY AS PART OF THE SUBMITTAL OF THE CERTIFICATION OF COMPLETION REQUEST FOR FINAL INSPECTION. THE COUNTY SHALL BE NOTIFIED ONE WEEK PRIOR TO THE START OF THE PIPE VIDEO INSPECTION PROCESS.
5. ALL OPEN CUTS SHALL CONFORM TO LAND DEVELOPMENT EXHIBIT #25. FOR ALL OPEN CUTS, THE FLOWABLE FILL AND TEMPORARY ASPHALT SHALL BE INSTALLED WITHIN TWO (2) DAYS OF THE EXCAVATION (UNLESS OTHERWISE APPROVED IN WRITING BY BREVARD COUNTY PUBLIC WORKS ENGINEERING). PERMANENT ASPHALT INCLUDING MILLING AND RESURFACING, IF NEEDED, SHALL BE COMPLETED WITHIN THIRTY (30) DAYS OF EXCAVATION.
6. THE CONTRACTOR SHALL REMOVE THE SHOULDER OF THE ROADWAY TO A POINT WHERE THE BASE MATERIAL OF THE EXISTING ROADWAY MEETS THE MINIMUM THICKNESS OF THE PROPOSED ROADWAY/COMMERCIAL DRIVEWAY CONNECTION.

CONCRETE PAVING AND SIDEWALK

1. ALL DRIVEWAYS SHALL BE CONSTRUCTED PER FDOT INDEX 515 AND/OR BREVARD COUNTY STANDARD EXHIBITS UNLESS OTHERWISE NOTED.
2. ALL CONCRETE SHALL MEET FDOT DESIGN MIX AND SPECIFICATIONS. CURING METHOD SHALL BE IN ACCORDANCE WITH THE FDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION,(LATEST EDITION).
3. ALL SIDEWALKS WITHIN THE COUNTY RIGHT-OF-WAY OR WITHIN A PUBLIC SIDEWALK EASEMENT SHALL BE CONSTRUCTED OF 6-INCH THICK, 3000-PSI CONCRETE WITH FIBER MESH REINFORCEMENT. CONCRETE SIDEWALKS (OR PEDWAYS) AND CONCRETE DRIVEWAY APRONS SHALL BE CONSTRUCTED OVER SOILS COMPACTED TO 98% DENSITY, OF AASHTO T -180. SHOULD EXISTING SOILS BE FOUND UNSUITABLE FOR COMPACTION, ADDITIONAL COMPATIBLE MATERIALS SHALL BE BROUGHT TO THE SITE FOR USE AS SUBGRADE. ALTERNATE METHODS OF COMPACTION MAY BE REQUIRED TO AVOID DAMAGE TO SURROUNDING PROPERTIES.
4. CONSTRUCT SIDEWALK JOINTS PURSUANT TO FDOT INDEX 310 (LATEST EDITION). EXPANSION JOINTS SHALL BE EVERY 50 FEET, AND BETWEEN NEW AND OLD CONCRETE.
5. TWO BY FOUR FORM BOARDS SHALL NOT BE USED FOR SIDEWALK/DRIVEWAY CONSTRUCTION. FORM BOARDS SHALL MATCH PROPOSED CONCRETE THICKNESS. SLIP FORMS SHALL NOT BE USED FOR SIDEWALK CONSTRUCTION. FIXED FORMWORK SHALL BE REQUIRED PER FDOT INDEX 300.
6. THE CONTRACTOR SHALL PROVIDE A 3-FOOT CURB TRANSITION AT ALL CURB TERMINATIONS.
7. ALL SIDEWALK AND ACCESS RAMP CONSTRUCTION SHALL COMPLY WITH THE DEPARTMENT OF JUSTICE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, FDOT DESIGN STANDARDS (LATEST EDITION), AND BREVARD COUNTY DEVELOPMENT REQUIREMENTS.

ASPHALT PAVING AND TESTING

THE FOLLOWING TESTING REQUIREMENTS APPLY TO:

a. ALL PUBLIC AND PRIVATE SUBDIVISION PROJECTS PERMITTED THROUGH BREVARD COUNTY PLANNING AND DEVELOPMENT;
b. ALL SITE PLAN PROJECTS PERMITTED THROUGH BREVARD COUNTY PLANNING AND DEVELOPMENT REQUIRING WORK IN THE COUNTY RIGHT-OF-WAY;
c. ALL PROJECTS PERMITTED THROUGH BREVARD COUNTY PUBLIC WORKS FOR WORK WITHIN THE COUNTY RIGHT-OF-WAY.

SECTIONS WITHIN THE FDOT STANDARD SPECIFICATIONS LIMITING TESTING REQUIREMENTS BASED ON LOT SIZE, SUB-LOT SIZE, TONNAGE, MINIMUM THICKNESS, OR SPREAD RATE WILL NOT APPLY TO THE PROJECTS LISTED ABOVE. AT A MINIMUM, ONE SET OF TESTS WILL BE REQUIRED FOR ALL PAVING PROJECTS LARGER THAN 50 TONS TOTAL AND ADDITIONAL TESTING MAY BE REQUIRED ON A CASE BY CASE EVALUATION OF THE PROJECT. TESTING REQUIREMENTS AT THE ASPHALT PLANT WILL NOT APPLY.

FOR S-TYPE ASPHALT AS SPECIFIED IN THE 2000-2004 FDOT STANDARD SPECIFICATION :

1. THE CONTRACTOR SHALL PROVIDE A DESIGN MIX SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA AND APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 331-4 (2000). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS WILL NOT BE ACCEPTED.
2. THE CONTRACTOR SHALL PROVIDE EXTRACTION/GRADATION TESTS IN ACCORDANCE WITH SECTION 331-4.4.2 (2000).
3. THE CONTRACTOR SHALL PROVIDE MARSHALL STABILITY TESTING IN ACCORDANCE WITH SECTION 331-5.5.1 (2000).
4. PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-13 (2000).
5. THE CONTRACTOR SHALL PROVIDE SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH SECTION 330-13.3 (2000).
6. QUALITY CONTROL CORE BORINGS SHALL BE OBTAINED FOR THICKNESS PER SECTION 330-2.2 ROADWAY, (2004) AND DENSITY PER SECTION 330-11, TABLE 330-3 (2000).
7. ASPHALT TEST RESULTS FOR EACH CORE TAKEN ARE REVIEWED ON AN INDIVIDUAL BASIS FOR THICKNESS AND DENSITY. THICKNESS AND DENSITY AVERAGES WILL NOT BE ACCEPTED. NO UNDER TOLERANCE FOR THE THICKNESS OF EACH ASPHALT CORE WILL BE ALLOWED.

FOR SUPERPAVE (SP) ASPHALT AS SPECIFIED IN THE 2010 FDOT STANDARD SPECIFICATION :

1. THE CONTRACTOR SHALL PROVIDE AN FDOT APPROVED DESIGN MIX, APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT, TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 334-2 & 334-3 (2010). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS THAT ARE NOT FDOT APPROVED WILL NOT BE ACCEPTED.
2. THE CONTRACTOR SHALL PROVIDE GRADATION AND BINDER CONTENT TESTING IN ACCORDANCE WITH SECTION 334-5, (2010) HOWEVER, THE SAMPLE(S) MAY BE TAKEN AT THE PROJECT LOCATION IN LIEU OF AT THE ASPHALT PLANT AS SPECIFIED. RESULTS MUST BE PROVIDED TO THE COUNTY WITHIN ONE WEEK AFTER THE COMPLETION OF PAVING.
3. THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL, DENSITY, AND THICKNESS TESTING IN ACCORDANCE WITH SECTIONS 334-3, 334-4, 334-5, AND 334-5.2.3 (2010).
4. ASPHALT TESTING RESULTS FOR EACH CORE TAKEN ARE REVIEWED ON AN INDIVIDUAL BASIS FOR THICKNESS AND DENSITY. THICKNESS AND DENSITY AVERAGES, AS NOTED IN TABLE 334-5, NOTE 2, OF SECTION 334-5 (2010) WILL NOT BE ACCEPTED. NO UNDER TOLERANCE FOR THE THICKNESS OF EACH ASPHALT CORE WILL BE ALLOWED.
5. PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-12 (2010).
6. THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH 330-12 (2010).

FOR FRICTION COURSE FC-5 AS SPECIFIED IN THE 2010 FDOT STANDARD SPECIFICATION :

1. THE CONTRACTOR SHALL PROVIDE PROVIDE AN FDOT APPROVED DESIGN MIX, APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT, TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 337-4 (2010). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS THAT ARE NOT FDOT APPROVED WILL NOT BE ACCEPTED.
2. THE CONTRACTOR SHALL PROVIDE GRADATION AND BINDER CONTENT TESTING IN ACCORDANCE WITH SECTION 337-5 & 337-6 (2010). THE SAMPLE(S) MAY BE TAKEN AT THE PROJECT LOCATION IN LIEU OF AT THE ASPHALT PLANT AS SPECIFIED. RESULTS MUST BE PROVIDED TO THE COUNTY WITHIN ONE WEEK AFTER THE COMPLETION OF PAVING.
3. PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-12 (2010).
4. QUALITY CONTROL CORE BORINGS SHALL BE OBTAINED FOR THICKNESS TESTING USING SECTION 334-5.2.3 (2010).
5. THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH SECTION 330-12 (2010).

FOR SUPERPAVE FRICTION COURSES FC-9.5 & FC-12.5 AS SPECIFIED IN THE 2010 FDOT STANDARD SPECIFICATIONS:

1. THE CONTRACTOR SHALL PROVIDE AN FDOT APPROVED DESIGN MIX, APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT, TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 337-4 (2010). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS THAT ARE NOT FDOT APPROVED WILL NOT BE ACCEPTED.
2. THE CONTRACTOR SHALL PROVIDE GRADATION AND BINDER CONTENT TESTING IN ACCORDANCE WITH SECTION 337-5 & 337-6 (2010). THE SAMPLE(S) MAY BE TAKEN AT THE PROJECT LOCATION IN LIEU OF AT THE ASPHALT PLANT, AS SPECIFIED. RESULTS MUST BE PROVIDED TO THE COUNTY WITHIN ONE WEEK AFTER THE COMPLETION OF PAVING.
3. THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL, DENSITY, AND THICKNESS TESTING IN ACCORDANCE WITH SECTIONS 337-1, 337-3, 337-4, 337-6, 337-8, AND 334-5.2.3 (2010).
4. ASPHALT TESTING RESULTS FOR EACH CORE TAKEN ARE REVIEWED ON AN INDIVIDUAL BASIS FOR THICKNESS AND DENSITY. THICKNESS AND DENSITY AVERAGES, AS NOTED IN TABLE 334-5, NOTE 2, OF SECTION 334-5 (2010) WILL NOT ACCEPTED. NO UNDER TOLERANCE FOR THE THICKNESS OF EACH ASPHALT CORE WILL BE ALLOWED.
5. PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-12 (2010).
6. THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH 330-12 (2010).

CONCRETE BOX CULVERT NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH FDOT DESIGN STANDARDS (LATEST EDITION), FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), AND BREVARD COUNTY STANDARDS.
2. PRIOR TO START OF CONSTRUCTION, THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING STRUCTURAL ENGINEERING DRAWINGS (SIGNED & SEALED BY A PROFESSIONAL ENGINEER LICENSED & REGISTERED IN THE STATE OF FLORIDA) FOR ALL COMPONENTS OF THE CONCRETE BOX CULVERTS, INCLUDING WINGWALLS, TOE SLAB & CUTOFF WALLS, AND HEADWALLS. THE DRAWINGS SHALL INCLUDE QUANTITIES TABULATIONS FOR CLASS IV CONCRETE (CUBIC YARDS), AND REINFORCING STEEL (POUNDS). THE DESIGN MUST BE BASED ON FDOT'S LOAD & RESISTANCE FACTOR DESIGN (LRFD) PROGRAM. SEPARATE DRAWINGS ARE REQUIRED FOR ALL WINGWALLS, TOE SLABS & CUTOFF WALLS, AND HEADWALLS, WHICH MUST BE CAST-IN-PLACE PER FDOT SPECIFICATIONS.
3. ALL BOX CULVERT MATERIALS THAT ARE TO BE INSTALLED UNDER ROADWAYS AND/OR DRIVEWAYS ARE TO BE DELIVERED TO SITE (AND PASS INITIAL INSPECTIONS) PRIOR TO START OF DEMOLITION OF EXISTING SYSTEM.
4. CONCRETE (PRECAST OR CAST-IN-PLACE) REQUIREMENTS: CLASS IV (5500 PSI).
5. REINFORCING STEEL REQUIREMENTS: ASTM A615 GRADE 60 DEFORMED BAR UNLESS OTHERWISE NOTED. WITH A MINIMUM CLEARANCE OF 3" (THREE INCHES), UNLESS OTHERWISE SHOWN. EQUAL AREA SUBSTITUTION OF WELDED WIRE (WWR) REINFORCEMENT IS PERMITTED.
6. REFER TO FDOT INDEX 292 FOR PRECAST CONCRETE BOX CULVERT SLAB & WALL THICKNESSES, REINFORCEMENT AREAS, GENERAL NOTES (SHEET 2 OF 14), AND WELDED WIRE REINFORCEMENT BENDING DIAGRAMS (SHEET 14 OF 14).
7. REFER TO FDOT INDEX 289 FOR CONCRETE BOX CULVERT DETAILS RELATED TO LRFD.
8. REFER TO FDOT INDEX 291 FOR SUPPLEMENTAL DETAILS FOR PRECAST CONCRETE BOX CULVERTS.
9. IF REQUIRED, BY-PASS PUMPING AND/OR PIPING SHALL BE APPROVED BY BREVARD COUNTY PUBLIC WORKS PRIOR TO THE START OF CONSTRUCTION.

PROJECT NAME.DWG / DESIGNED/DRAWN BY: / CHECKED BY:	DATE:	REVISION:	BY:
JB / RBS	1.	FOR DISTRIBUTION 10-10-12	
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PREPARED BY: PUBLIC WORKS DEPARTMENT
ENGINEERING PROGRAM
BREVARD COUNTY BOARD OF COUNTY COMMISSIONERS
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PH: (321) 637-5437, FAX: (321) 633-2094

DATE: OCTOBER 2012

APPROVED BY:
RICHARD B. SZPYRKA, P.E.
ENGINEERING PROGRAM MANAGER

BREVARD COUNTY PUBLIC WORKS ENGINEERING STANDARD DEVELOPMENT NOTES

SHEET 1 OF 1

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BREVARD COUNTY DETAILS FOR WINDWARD PRESERVE
BREVARD COUNTY FLORIDA

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SCALE: N/A
DESIGNED BY: RJS
DRAWN BY: RJS
APPROVED BY: DAS

C915

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STREET NAME SIGN NOTES:

1. SIGNS IN PUBLIC R.O.W. SHALL BE GREEN WITH 5/8" WHITE BORDER AND WHITE LETTERS AND NUMBERS.
2. SIGNS IN PRIVATE R.O.W. SHALL BE WHITE WITH 5/8" BLACK BORDER AND BLACK LETTERS AND NUMBERS.
3. STREET NAME BLADES SHALL BE RIVETED TOGETHER AT EACH CORNER WITH 3/16" SMALL FLANGE AVEX RIVETS. ATTACH BLADES TO POST WITH CHERRY-MATE ALUMINUM RIVETS, # BALM6BP34, OR 5/16" X 2-1/2" S.S. BOLTS, 1-1/4" X 5/16" S.S. FENDER WASHERS, W/ S.S. STOP HEX NUT HAVING NYLON INSERTS (LOCK NUTS).

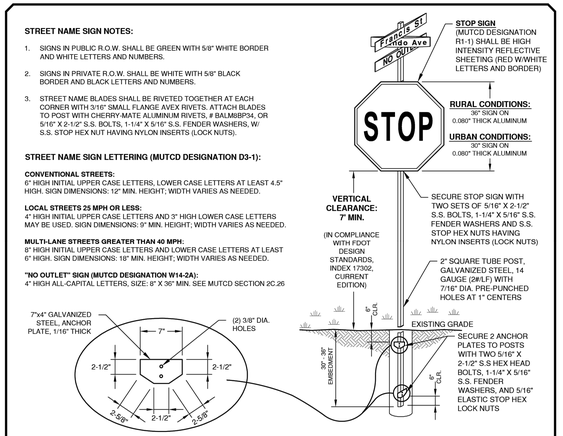
STREET NAME SIGN LETTERING (MUTCD DESIGNATION D3-1):

CONVENTIONAL STREETS:
6" HIGH INITIAL UPPER CASE LETTERS, LOWER CASE LETTERS AT LEAST 4.5" HIGH. SIGN DIMENSIONS: 12" MIN. HEIGHT; WIDTH VARIES AS NEEDED.

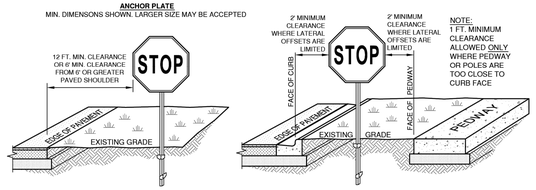
LOCAL STREETS 25 MPH OR LESS:
4" HIGH INITIAL UPPER CASE LETTERS AND 3" HIGH LOWER CASE LETTERS MAY BE USED. SIGN DIMENSIONS: 9" MIN. HEIGHT; WIDTH VARIES AS NEEDED.

MULTI-LANE STREETS GREATER THAN 40 MPH:
8" HIGH INITIAL UPPER CASE LETTERS AND LOWER CASE LETTERS AT LEAST 6" HIGH. SIGN DIMENSIONS: 18" MIN. HEIGHT; WIDTH VARIES AS NEEDED.

"NO OUTLET" SIGN (MUTCD DESIGNATION W14-2A):
4" HIGH ALL-CAPITAL LETTERS, SIZE: 8" X 36" MIN. SEE MUTCD SECTION 2C.26



ANCHOR PLATE
MIN. DIMENSONS SHOWN. LARGER SIZE MAY BE ACCEPTED



HORIZONTAL CLEARANCE (WITHOUT CURB AND GUTTER)

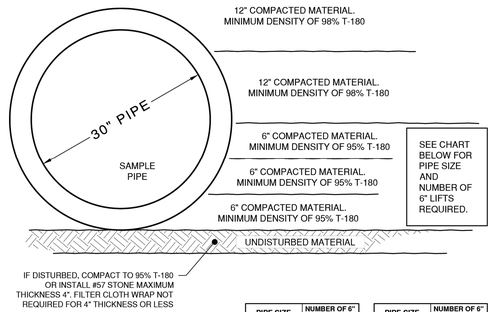
NOTE:
1 FT. MINIMUM CLEARANCE ALLOWED ONLY WHERE PEDWAY OR POLES ARE TOO CLOSE TO CURB FACE

HORIZONTAL CLEARANCE (WITH CURB AND GUTTER)

STOP SIGN AND STREET MARKER DETAILS

BREVARD COUNTY LAND DEVELOPMENT 2725 JUDGE FRAN JAMIESON WAY, VIERA, FL 32940	**EXHIBIT - 26**	DATE: OCT-2014

12" THICK UNIFORM LIFTS COMPACTED TO A MINIMUM DENSITY OF 98% T-180, FROM TOP OF PIPE TO FINISHED GRADE OR BOTTOM OF BASE MATERIAL



PIPE SIZE	NUMBER OF 6" LIFTS
15"	2
18"	2
24"	2
30"	3
36"	4
42"	5
48"	5
54"	6
60"	6
66"	7
72"	7

PIPE SIZE	NUMBER OF 6" LIFTS
11" x 17"	2
14" x 23"	2
19" x 30"	2
24" x 38"	2
29" x 45"	4
34" x 53"	4
38" x 60"	4
43" x 68"	5
48" x 76"	5
58" x 91"	6

NOTES:

1. NUMBER OF LIFTS REQUIRED FOR PIPE SIZES IN EXCESS OF THOSE SHOWN IN CHART SHALL BE APPROVED BY THE ENGINEER OF RECORD AND BREVARD COUNTY ENGINEERING, IN WRITING, PRIOR TO INSTALLATION.
2. THESE REQUIREMENTS APPLY TO ALL STORMWATER PIPE INSTALLATIONS IN SUBDIVISIONS, PUBLIC OR PRIVATE, DRAINAGE EASEMENTS, PUBLIC OR PRIVATE, ALL COUNTY RIGHTS-OF-WAY, AND FOR ANY OTHER STORMWATER PIPE INSTALLATIONS THAT WILL BECOME COUNTY MAINTAINED INFRASTRUCTURE.
3. BACKFILL AROUND STORMWATER STRUCTURES SHALL BE COMPACTED IN 12" LIFTS TO A MINIMUM DENSITY OF 98% T-180.

STORMWATER PIPE INSTALLATION BACKFILL REQUIREMENTS

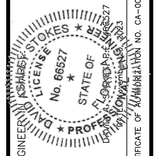
BREVARD COUNTY LAND DEVELOPMENT 2725 JUDGE FRAN JAMIESON WAY, VIERA, FL 32940	**EXHIBIT - 27**	DATE: OCT-2014

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

BREVARD COUNTY DETAILS FOR WINDWARD PRESERVE

BREVARD COUNTY FLORIDA

TAYLOR MORRISON
2600 LAKE LUCIEN DR SUITE 350
MAITLAND, FL 32751
407-629-0077



NO.	DATE	REVISIONS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

JOB #	21074
DATE:	3/17/23
SCALE:	N/A
DESIGNED BY:	RJS
DRAWN BY:	RJS
APPROVED BY:	DAS

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