

HILLIARD TOWN COUNCIL MEETING

Hilliard Town Hall / Council Chambers
15859 West County Road 108
Post Office Box 249
Hilliard, FL 32046

TOWN COUNCIL MEMBERS

John P. Beasley, Mayor
Kenny Sims, Council President
Lee Pickett, Council Pro Tem
Joe Michaels, Councilman
Jared Wollitz, Councilman
Dallis Hunter, Councilman

ADMINISTRATIVE STAFF

Lisa Purvis, Town Clerk
Richie Rowe, Public Works Director
Gabe Whittenburg, Parks & Rec Director

TOWN ATTORNEY

Christian Waugh

AGENDA

THURSDAY, MARCH 02, 2023, 7:00 PM

NOTICE TO PUBLIC

Anyone wishing to address the Town Council regarding any item on this agenda is requested to complete an agenda item sheet in advance and give it to the Town Clerk. The sheets are located next to the printed agendas in the back of the Council Chambers. Speakers are respectfully requested to limit their comments to three (3) minutes. A speaker's time may not be allocated to others.

PLEDGE OF CIVILITY

WE WILL BE RESPECTFUL OF ONE ANOTHER
EVEN WHEN WE DISAGREE.
WE WILL DIRECT ALL COMMENTS TO THE ISSUES.
WE WILL AVOID PERSONAL ATTACKS.
"Politeness costs so little." – ABRAHAM LINCOLN

CALL TO ORDER

PRAYER & PLEDGE OF ALLEGIANCE

ROLL CALL

MAYOR To call on members of the audience wishing to address the Council on matters not on the Agenda.

REGULAR MEETING

ITEM-1 Additions/Deletions to Agenda

ITEM-2 Town Council approval of Final Plat for the Whisper Ridge Subdivision, Application # 20220728, Parcel No. ID. 04-3N-24-0000-0006-0010 and 04-3N-24-0000-0004-0100 and acceptance of the Performance Bond for Completion of the Infrastructure Improvements for the Whisper Ridge Subdivision
Janis K. Fleet, AICP – Town Planning Consultant

ITEM-3 Town Council to establish a process to close, abandon, or vacate, streets, alleys, easements, or right of ways, within the Town of Hilliard.
Christian Waugh – Town Attorney

- ITEM-4** Town Council approval of Right of Way Mowing Contract for mowing, weed eating, and trash clean-up, a quantity of eight (8) times per contract year, at a bid unit price from April 10, 2023, through the last cycle in 2025.
Ritchie Rowe – Public Works Director
- ITEM-5** Town Council to discuss a Car show lead by David Taylor to be held on Town Hall Property at the Town Hall Park in October 2023.
Alicia Head – Administrative Assistant
- ITEM-6** Town Council Adoption of Resolution No. 2023-06; Water and Wastewater Utility Specifications and Documentation Requirements; Manual of Standards and Specifications for Utilities Construction, for the Town of Hilliard; and providing for an effective date.
Lee Anne Wollitz - Land Use Administrator
- ITEM-7** Town Council approval to hire Justin C. Tuten as a Streets and Water & Wastewater Technician at \$15.00 per hour as a Non-Exempt, Introductory or Probationary Employee.
Richie Rowe - Public Works Director
- ITEM-8** Town Council approval of Contract for Audit and Accounting Services for the fiscal years ended September 30, 2023, 2024, and 2025, with Powell and Jones CPA.
Lisa Purvis, MMC - Town Clerk
- ITEM-9** Town Council to approve Town Attorney entering, into discussion with CSX Railroad to renegotiate maintenance of the Easement Agreement with the Town of Hilliard.
Christian Waugh – Town Attorney
- ITEM-10** Town Council approval of Resolution No. 2023-05; a Resolution amending Resolution No. 2022-08, adding a fee for Development Investigation Applications; adding a deposit in addition to consultant cost plus 10%, for the Town of Hilliard; and providing for an effective date.
Lisa Purvis, MMC – Town Clerk
- ITEM-11** Town Council approval of the FY 2023 Revenues and Expenditures Report for the period ending December 31, 2022.
Lisa Purvis, MMC – Town Clerk
- ITEM-12** Town Council discussion and approval to allow the Hilliard Gardening Club to Landscape around the Welcome to Hilliard sign on US Highway 1 Northbound, and for the Town of Hilliard to fund the project.
Lisa Purvis, MMC - Town Clerk
- ITEM-13** Town Council approval of the Minutes from the February 16, 2023, Regular Meeting.
Lisa Purvis, MMC - Town Clerk

ITEM-14 Town Council approval of CXT Incorporated, Payable through February 23, 2023, Project Name: Town Hall Park Phase I, FRDAP Project No. A21009 at the Hilliard Town Hall Park in the amount of \$82,217.73.
FDEP FRDAP 100% GRANT FUNDED PROJECT LUMP SUM GRANT
\$200,000.00

ITEM-15 Town Council approval of MAE Contracting, LLC, Payable through February 20, 2023, Project Name: Oxford Street Park Phase IV, FRDAP Project No. A21011 at the Hilliard Oxford Street Park in the amount of \$10,936.00.
FDEP FRDAP 100% GRANT FUNDED PROJECT LUMP SUM GRANT
\$200,00.00

ITEM-16 Town Council approval of MAE Contracting, LLC, Payable through February 20, 2023, Project Name: Oxford Street Park Phase IV, FRDAP Project No. A21011 at the Hilliard Oxford Street Park in the amount of \$15,267.00.
FDEP FRDAP 100% GRANT FUNDED PROJECT LUMP SUM GRANT
\$200,000.00

ADDED ITEMS

ADDITIONAL COMMENTS

PUBLIC

MAYOR & TOWN COUNCIL

ADMINISTRATIVE STAFF

TOWN ATTORNEY

ADJOURNMENT

The Town may take action on any matter during this meeting, including items that are not set forth within this agenda.

TOWN COUNCIL MEETINGS

The Town Council meets the first and third Thursday of each month beginning at 7:00 p.m., unless otherwise scheduled. Meetings are held in the Town Hall Council Chambers located at 15859 West County Road 108. Video and audio recordings of the meetings are available in the Town Clerk's Office upon request.

PLANNING & ZONING BOARD MEETINGS

The Planning & Zoning Board meets the second Tuesday of each month beginning at 7:00 p.m., unless otherwise scheduled. Meetings are held in the Town Hall Council Chambers located at 15859 West County Road 108. Video and audio recordings of the meetings are available in the Town Clerk's Office upon request.

MINUTES & TRANSCRIPTS

Minutes of the Town Council meetings can be obtained from the Town Clerk's Office. The Meetings are usually recorded but are not transcribed verbatim for the minutes. Persons requiring a verbatim transcript may make arrangements with the Town Clerk to duplicate the recordings, if

available, or arrange to have a court reporter present at the meeting. The cost of duplication and/or court reporter will be at the expense of the requesting party.

TOWN WEBSITE & YOUTUBE MEETING VIDEO

The Town’s Website can be access at www.townofhilliard.com.

Live & recorded videos can be access at www.youtube.com search - Town of Hilliard, FL.

ADA NOTICE

In accordance with Section 286.26, Florida Statutes, persons with disabilities needing special accommodations to participate in this meeting should contact the Town Clerk’s Office at (904) 845-3555 at least seventy-two hours in advance to request such accommodations.

APPEALS

Pursuant to the requirements of Section 286.0105, Florida Statues, the following notification is given: If a person decides to appeal any decision made by the Council with respect to any matter considered at such meeting, he or she may need to ensure that a verbatim record of the proceeding is made, which record includes the testimony and evidence upon which the appeal is to be based.

PUBLIC PARTICIPATION

Pursuant to Section 286.0114, Florida Statutes, effective October 1, 2013, the public is invited to speak on any “proposition” before a board, commission, council, or appointed committee takes official action regardless of whether the issue is on the Agenda. Certain exemptions for emergencies, ministerial acts, etc. apply. This public participation does not affect the right of a person to be heard as otherwise provided by law.

EXPARTE COMMUNICATIONS

Oral or written exchanges (sometimes referred to as lobbying or information gathering) between a Council Member and others, including staff, where there is a substantive discussion regarding a quasi-judicial decision by the Town Council. The exchanges must be disclosed by the Town Council so the public may respond to such exchanges before a vote is taken.

2023 HOLIDAYS

TOWN HALL OFFICES CLOSED

- | | |
|----------------------------------|-----------------------------|
| 1. Martin Luther King, Jr. Day | Monday, January 16, 2023 |
| 2. Memorial Day | Monday, May 29, 2023 |
| 3. Independence Day Monday | Tuesday, July 4, 2023 |
| 4. Labor Day | Monday, September 4, 2023 |
| 5. Veterans Day | Friday, November 10, 2023 |
| 6. Thanksgiving Day | Thursday, November 23, 2023 |
| 7. Friday after Thanksgiving Day | Friday, November 24, 2023 |
| 8. Christmas Eve | Monday, December 25, 2023 |
| 9. Christmas Day | Tuesday, December 26, 2023 |
| 10. New Year’s Eve | Monday, January 1, 2024 |
| 11. New Year’s Day | Tuesday, January 2, 2024 |



AGENDA ITEM REPORT

TOWN OF HILLIARD, FLORIDA

TO: Town Council Regular Meeting Meeting Date: March 2, 2023

FROM: **Janis K. Fleet, AICP – Town Planning Consultant**

SUBJECT: Town Council approval of Final Plat for the Whisper Ridge Subdivision, Application # 20220728, Parcel No. ID. 04-3N-24-0000-0006-0010 and 04-3N-24-0000-0004-0100 and acceptance of the Performance Bond for Completion of the Infrastructure Improvements for the Whisper Ridge Subdivision

BACKGROUND:

Mr. Ed Kassik has applied for the Final Plat approval to create the Whisper Ridge Subdivision. The plat complies with the site plan and written description of the approved Whisper Ridge PUD. The engineering plans for the infrastructure for the subdivision have been previously submitted to the Town. A site plan application for the infrastructure with the engineering plans has been reviewed and approved by the Town Engineers and the Planning & Zoning Board. A Performance Bond has been submitted in a form approved by the Town Attorney and the cost estimate for the remaining items has been approved by the Town’s Engineer.

The Town Council approved the Preliminary Plat for the Whisper Ridge Subdivision on October 20, 2022. The Final Plat and a draft of the Performance bond is attached to the agenda item report.

FINANCIAL IMPACT:

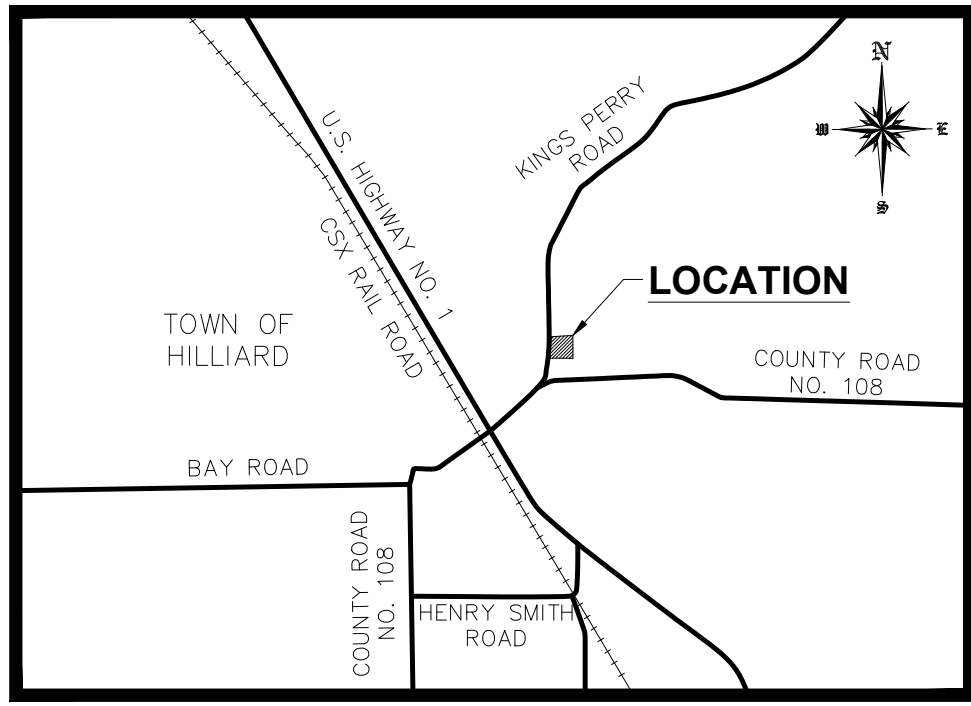
None to the Town. The applicant is required to pay for all costs for reviews by the Town’s consultants and any permitting costs.

RECOMMENDATION:

Approve the Final Plat for the Whisper Ridge Subdivision for the property with the Parcel ID No. 04-3N-24-0000-0006-0010 and 04-3N-24-0000-0004-0100, authorize the Mayor and Town Clerk to sign the Final Plat after the executed Performance Bond had been received by the Town and for the Town to accept the Performance Bond.

WHISPER RIDGE

A PART OF SECTION 4, TOWNSHIP 3 NORTH, RANGE 24 EAST, TOWN OF HILLIARD, NASSAU COUNTY, FLORIDA



VICINITY MAP
NOT TO SCALE

CAPTION

PARCEL 1

ALL THAT CERTAIN TRACT OF LAND BEING A PORTION OF SECTION 4, TOWNSHIP 3 NORTH, RANGE 24 EAST, NASSAU COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

POINT OF BEGINNING IS A 2 1/2" IRON PIPE AS SHOWN ON THE FLORIDA STATE ROAD DEPARTMENT RIGHT OF WAY MAP, SECTION NO. 7452-150 AS RECORDED IN MAP BOOK 6, PAGE 26 OF THE PUBLIC RECORDS OF NASSAU COUNTY, FLORIDA; THENCE PROCEED SOUTH 87°57'25" WEST, ALONG THE SOUTH LINE OF SAID SECTION 4, A DISTANCE OF 16.86 FEET TO THE EAST LINE OF THE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 97, PAGE 47, OF THE PUBLIC RECORDS OF NASSAU COUNTY, FLORIDA; THENCE NORTH 00°36'17" WEST, ALONG SAID EAST LINE, A DISTANCE OF 417.89 FEET TO A CONCRETE MONUMENT; THENCE SOUTH 89°45'45" WEST, ALONG THE NORTH LINE OF SAID LANDS, A DISTANCE OF 1144.09 FEET TO A CONCRETE MONUMENT ON THE EASTERLY RIGHT OF WAY LINE OF COUNTY ROAD 115-A (FORMERLY STATE ROAD NO. 115-A) (A 100 FOOT PUBLIC RIGHT OF WAY); THENCE NORTH 07°59'22" EAST, ALONG SAID EASTERLY RIGHT OF WAY OF SAID COUNTY ROAD NO. 115-A, A DISTANCE OF 687.25 FEET TO A CONCRETE MONUMENT AND A POINT OF CURVE SAID CURVE BEING CONCAVE TO THE NORTHWEST WITH A RADIUS OF 2914.79 FEET, A CENTRAL ANGLE OF 04°31'07" AND A CHORD BEARING OF NORTH 05°43'48" EAST AND A DISTANCE OF 229.82 FEET; THENCE NORTHEASTERLY ALONG SAID RIGHT OF WAY LINE AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 229.88 FEET TO A CONCRETE MONUMENT; THENCE NORTH 87°16'05" EAST, DEPARTING SAID EASTERLY RIGHT OF WAY LINE OF COUNTY ROAD NO. 115-A AND ALONG THE NORTH LINE OF THE SOUTH 1/2 OF THE NORTHEAST 1/4 AS MONUMENTED AND OCCUPIED, A DISTANCE OF 1029.48 FEET TO AN OLD AXLE; THENCE SOUTH 00°46'33" EAST, ALONG THE EAST LINE OF SECTION 4, A DISTANCE OF 1370.96 FEET TO THE POINT OF BEGINNING.

CONTAINING 23.44 ACRES, MORE OR LESS

PARCEL IDENTIFICATION NUMBER: 04-3N-24-0000-0006-0010

PARCEL 2

THAT PORTION OF THE NORTH ONE-HALF (N 1/2) OF THE SOUTHEAST ONE-QUARTER (SE 1/4) OF SECTION 4, TOWNSHIP 3 NORTH, RANGE 24 EAST, NASSAU COUNTY, FLORIDA, BEING BOUNDED AS FOLLOWS:

ON THE NORTH: BY THE SOUTHERLY RIGHT-OF-WAY LINE OF OLD PINE RIDGE ROAD AS NOW LAID OUT AND IN USE.

ON THE EAST: BY THE EAST LINE OF THE NORTH ONE-HALF (N 1/2) OF THE SOUTHEAST ONE-QUARTER (SE 1/4) OF SECTION 4, TOWNSHIP 3 NORTH, RANGE 24 EAST, NASSAU COUNTY, FLORIDA. ON THE SOUTH: BY THE SOUTH LINE OF THE NORTH ONE-HALF (N 1/2) OF THE SOUTHEAST ONE-QUARTER (SE 1/4) OF SECTION 4, TOWNSHIP 3 NORTH, RANGE 24 EAST, NASSAU COUNTY, FLORIDA.

ON THE WEST: BY THE EASTERLY RIGHT-OF-WAY LINE OF COUNTY ROAD C-115-A (KINGS FERRY ROAD A 100 FOOT RIGHT-OF-WAY) AS NOW LAID OUT AND IN USE.

AND MORE FULLY DESCRIBED AS FOLLOWS:

ALL THAT CERTAIN TRACT OF LAND BEING A PORTION OF SECTION 4, TOWNSHIP 3 NORTH, RANGE 24 EAST, NASSAU COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEING AT THE INTERSECTION OF THE EASTERLY RIGHT OF WAY LINE OF KINGS FERRY ROAD (COUNTY ROAD NO. 115-A) (A 100 FOOT RIGHT OF WAY) WITH THE SOUTHERLY RIGHT OF WAY LINE OF OLD PINERIDGE ROAD (A 60 FOOT RIGHT OF WAY); THENCE NORTH 86°59'42" EAST, ALONG SAID SOUTHERLY RIGHT OF WAY LINE OF OLD PINERIDGE ROAD, 952.07 FEET TO A POINT OF CURVE TO THE LEFT AND HAVING A RADIUS OF 1301.00 FEET; THENCE ALONG AND AROUND SAID CURVE TO THE LEFT AN ARC DISTANCE OF 70.51 FEET TO ITS INTERSECTION WITH THE WESTERLY LINE OF LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 901, PAGE 1124, OF THE PUBLIC RECORDS OF SAID COUNTY AND BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 85°26'52" EAST, 70.50 FEET; THENCE SOUTH 01°10'38" EAST, ALONG SAID WESTERLY LINE OF OFFICIAL RECORDS BOOK 901, PAGE 1124, 123.69 FEET TO THE NORTHEAST CORNER OF LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 1076, PAGE 1440, OF THE PUBLIC RECORDS OF SAID COUNTY; THENCE SOUTH 87°17'33" WEST, ALONG THE NORTH LINE OF SAID OFFICIAL RECORDS BOOK 1076, PAGE 1440, 1029.68 FEET TO ITS INTERSECTION OF THE EASTERLY RIGHT OF WAY LINE OF KINGS FERRY ROAD (COUNTY ROAD NO. 115-A) SAID POINT BEING A POINT OF NON TANGENT CURVE TO THE LEFT AND HAVING A RADIUS OF 2914.79 FEET; THENCE NORTHERLY, ALONG SAID EASTERLY RIGHT OF WAY LINE OF KINGS FERRY ROAD AND ALONG THE ARC OF SAID CURVE, AN ARC DISTANCE OF 116.91 FEET, SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 02°25'35" EAST, 116.90 FEET TO THE POINT OF BEGINNING.

THIS PARCEL CONTAINS 2.80 ACRES, MORE OR LESS.

PARCEL IDENTIFICATION NUMBER: 04-3N-24-0000-0004-0100

ADOPTION AND DEDICATION

THIS IS TO CERTIFY THAT LGI HOMES - FLORIDA, LLC, A FLORIDA LIMITED LIABILITY COMPANY ("OWNER") IS THE SIMPLE OWNER OF THE LANDS DESCRIBED IN THIS CAPTION HEREON KNOWN AS WHISPER RIDGE, HAS CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED AND THAT THIS PLAT, MADE IN ACCORDANCE WITH SAID SURVEY, IS HEREBY ADOPTED AS THE TRUE AND CORRECT PLAT OF SAID LANDS.

ALL EASEMENTS, RIGHTS OF WAY (WHISPER WAY, WHIPPOORWILL COURT, AND WARDIER LANE), AND PUBLIC AREAS SHOWN ON THIS PLAT ARE DEDICATED TO THE TOWN OF HILLIARD FOR THE USES AND PURPOSES THEREON STATED. NOTHING HEREIN SHALL BE CONSTRUED AS CREATING AN OBLIGATION UPON TOWN OF HILLIARD, FLORIDA TO PERFORM ANY ACT OF CONSTRUCTION WITHIN SUCH DEDICATED AREAS.

TRACT A (LIFT STATION), TRACTS B, G, H, AND I (OPEN SPACES), TRACT C, F (RECREATION), AND TRACT E (STORM WATER MANAGEMENT FACILITY AND DRAINAGE, ACCESS AND MAINTENANCE EASEMENT), TRACT J (VEGETATED BUFFER) ARE HEREBY RETAINED BY THE UNDERSIGNED OWNER, ITS SUCCESSORS AND ASSIGNS; PROVIDED, HOWEVER, THE UNDERSIGNED OWNER RESERVES THE RIGHT TO CONVEY TITLE TO SAID TRACTS TO ANY ENTITY, INCLUDING WITHOUT LIMITATION, A PROPERTY OWNERS' ASSOCIATION, A MUNICIPAL SERVICES TAXING UNIT, COMMUNITY DEVELOPMENT DISTRICT, OR OTHER SUCH ENTITY AS WILL ASSUME ALL OBLIGATION OF MAINTENANCE AND OPERATION THEREOF UNDER THE PLAT.

TRACT D IS FOR CONSERVATION AND SHALL REMAIN PRIVATELY OWNED AND THE SOLE AND EXCLUSIVE PROPERTY OF THE OWNER, ITS SUCCESSORS AND ASSIGNS.

THOSE EASEMENTS DESIGNATED AS OKEEFENOKEE RURAL POWER COOPERATIVE (OREM-C EASEMENT) ARE HEREBY IRREVOCABLY DEDICATED TO OKEEFENOKEE RURAL POWER COOPERATIVE, ITS SUCCESSORS AND ASSIGNS, FOR ITS NON-EXCLUSIVE USE IN CONJUNCTION WITH ITS UNDERGROUND ELECTRICAL SYSTEM. ADDITIONAL UTILITY EASEMENTS MAY BE GRANTED TO OKEEFENOKEE RURAL POWER COOPERATIVE OVER ADDITIONAL PORTIONS OF THE PLAT AS NEEDED, THE RIGHTS RESERVED HEREBY FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF ELECTRICAL SERVICE.

ALL UTILITY EASEMENTS SHOWN ON THIS PLAT SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE AND OPERATION OF CABLE TELEVISION SERVICES IN THE MANNER AND SUBJECT TO THE PROVISIONS OF CHAPTER 177, PART 1, SECTION 177.0091 (28) OF THE FLORIDA STATUTES. HOWEVER, ONLY CABLE TELEVISION SERVICE PROVIDERS SPECIFICALLY AUTHORIZED BY THE UNDERSIGNED OWNERS, THEIR SUCCESSORS AND ASSIGNS, TO SERVE THE LANDS SHOWN ON THIS PLAT, SHALL HAVE THE BENEFIT OF SAID CABLE TELEVISION SERVICE EASEMENTS.

ALL PLATTED UTILITY EASEMENTS SHALL PROVIDE THAT SUCH EASEMENTS SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICE; PROVIDED, HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES SHALL INTERFERE WITH THE FACILITIES AND SERVICES OF AN ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. IN THE EVENT A CABLE TELEVISION COMPANY DAMAGES THE FACILITIES OF A PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE FOR THE DAMAGES. THE SECTION SHALL NOT APPLY TO THOSE PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS OR OTHER PUBLIC UTILITY. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRIC SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.

IN WITNESS WHEREOF, THE "OWNER" HAS CAUSED THIS PLAT AND DEDICATION TO BE EXECUTED BY ITS DULY ELECTED OFFICERS, ACTING BY AND WITH THE AUTHORITY OF ITS BOARD OF DIRECTORS.

WITNESS

OWNER: BRIAN MARTIN

PRINTED NAME

BY: BRIAN MARTIN, VP OF LAND DEVELOPMENT AND ACQUISITION
LGI HOMES - FLORIDA, LLC
A FLORIDA LIMITED LIABILITY COMPANY

WITNESS

PRINTED NAME

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BY MEANS OF _____ PHYSICAL PRESENCE OR _____ ONLINE NOTARIZATION BEFORE ME THIS _____ DAY OF _____, 2022, BY _____ ON BEHALF OF LGI HOMES - FLORIDA, LLC, A FLORIDA LIMITED LIABILITY COMPANY, HE BEING KNOWN TO ME DID NOT TAKE AN OATH.

NOTARY PUBLIC, STATE OF FLORIDA AT LARGE

MY COMMISSION EXPIRES _____

PRINT NAME

COMMISSION NUMBER _____

SURVEYOR'S CERTIFICATE:

KNOW ALL YE MEN BY THESE PRESENTS, THAT THE UNDERSIGNED, BEING CURRENTLY LICENSED AND REGISTERED BY THE STATE OF FLORIDA AS A PROFESSIONAL SURVEYOR AND MAPPER, DOES HEREBY CERTIFY THAT THE ABOVE PLAT WAS MADE UNDER THE UNDERSIGNED'S RESPONSIBLE DIRECTION AND SUPERVISION, AND THAT THE PLAT COMPLIES WITH ALL OF THE SURVEY REQUIREMENTS OF PART 1, CHAPTER 177 FLORIDA STATUTES.

SIGNED AND SEALED THIS ____ DAY OF _____, 2022 A.D.

JOHN S. THOMAS
PROFESSIONAL SURVEYOR & MAPPER, LICENSE NUMBER 6223
SURVEYING AND MAPPING, LLC. CERTIFICATE OF AUTHORIZATION No. LB 7908

COUNTY HEALTH CERTIFICATE:

THIS IS TO CERTIFY THAT I HAVE REVIEWED THE ABOVE PLAT THIS _____ DAY OF _____, ANNO DOMINI 2022, AND THESE LOTS ARE APPROVED TO BE PLACED ON APPROVED PUBLIC WATER AND APPROVED PUBLIC SEWAGE SYSTEMS.

BY: _____

COUNTY HEALTH DEPARTMENT

MAYOR CERTIFICATION:

THIS IS TO CERTIFY THAT THIS THAT THE ABOVE PLAT BEEN EXAMINED AND APPROVED BY THE MAYOR OF TOWN OF HILLIARD, FLORIDA. THIS _____ DAY OF _____, ANNO DOMINI 2022.

TOWN OF HILLIARD MAYOR

TOWN CLERK CERTIFICATION:

THIS IS TO CERTIFY THAT THIS THAT THE ABOVE PLAT BEEN EXAMINED AND APPROVED BY THE TOWN CLERK OF TOWN OF HILLIARD, FLORIDA. THIS _____ DAY OF _____, ANNO DOMINI 2022.

TOWN OF HILLIARD CLERK

TOWN ENGINEER CERTIFICATION:

THIS IS TO CERTIFY THAT THIS THAT THE ABOVE PLAT BEEN EXAMINED AND APPROVED BY THE TOWN ENGINEER OF TOWN OF HILLIARD, FLORIDA.

THIS _____ DAY OF _____, ANNO DOMINI 2022.

TOWN OF HILLIARD ENGINEER

CERTIFICATE OF APPROVAL BY TOWN ATTORNEY:

APPROVED FOR THE RECORDS, THIS IS TO CERTIFY THAT THIS PLAT HAS BEEN EXAMINED AND APPROVED BY THE TOWN OF HILLIARD ATTORNEY, THIS _____ DAY OF _____, ANNO DOMINI 2022.

TOWN OF HILLIARD ATTORNEY

COUNTY TAX COLLECTOR CERTIFICATE:

TAX IDENTIFICATION NUMBER: 04-3N-24-0000-0006-0010 (PARCEL 1), 04-3N-24-0000-0004-0100 (PARCEL 2)
I, THE UNDERSIGNED, DO HEREBY AFFIRM THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THERE ARE NO UNPAID REAL PROPERTY TAXES APPLICATION TO THE LANDS SUBJECT TO THIS PLAT:

SIGNED THIS _____ DAY OF _____, ANNO DOMINI 2022.

TAX COLLECTOR
NASSAU COUNTY, FLORIDA

CERTIFICATE OF THE CLERK:

THIS IS TO CERTIFY THAT THIS PLAT HAS BEEN EXAMINED AND APPROVED AND THAT IT COMPLIES IN FORM WITH THE PLATTING REQUIREMENTS SET FORTH IN PART 1 OF CHAPTER 177 OF THE FLORIDA STATUTES, AND IS RECORDED IN MAP BOOK _____ PAGE(S) _____ OF THE PUBLIC RECORDS OF NASSAU COUNTY, FLORIDA ON THIS _____ DAY OF _____, ANNO DOMINI 2022.

CLERK OF COURTS NASSAU COUNTY, FLORIDA

CERTIFICATION OF REVIEW BY COUNTY EMPLOYED/CONTRACTED SURVEYOR AND MAPPER

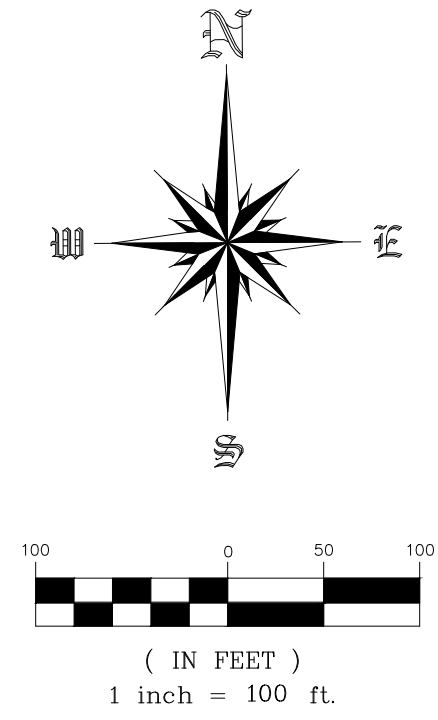
I HEREBY CERTIFY THAT I HAVE REVIEWED THIS PLAT FOR CONFORMITY TO CHARTER 177, F.S., AND THAT I AM EMPLOYED BY OR UNDER CONTRACT TO THE APPROPRIATE LOCAL GOVERNING BODY AND ACTING HERETO AS AN AGENT THEREOF. THIS LIMITED CERTIFICATION AS TO FACIAL CONFORMITY WITH THE REQUIREMENTS OF CHARTER 177, F.S., IS NOT INTENDED TO BE AND SHOULD NOT BE CONSTRUED AS A CERTIFICATION OF THE ACCURACY OR QUALITY OF THE SURVEYING / MAPPING REFLECTED ON THIS PLAT.

BY: _____ DAY _____

PRINT NAME _____
FLORIDA REGISTRATION NO. : _____

WHISPER RIDGE

A PART OF SECTION 4, TOWNSHIP 3 NORTH, RANGE 24 EAST, TOWN OF HILLIARD,
NASSAU COUNTY, FLORIDA

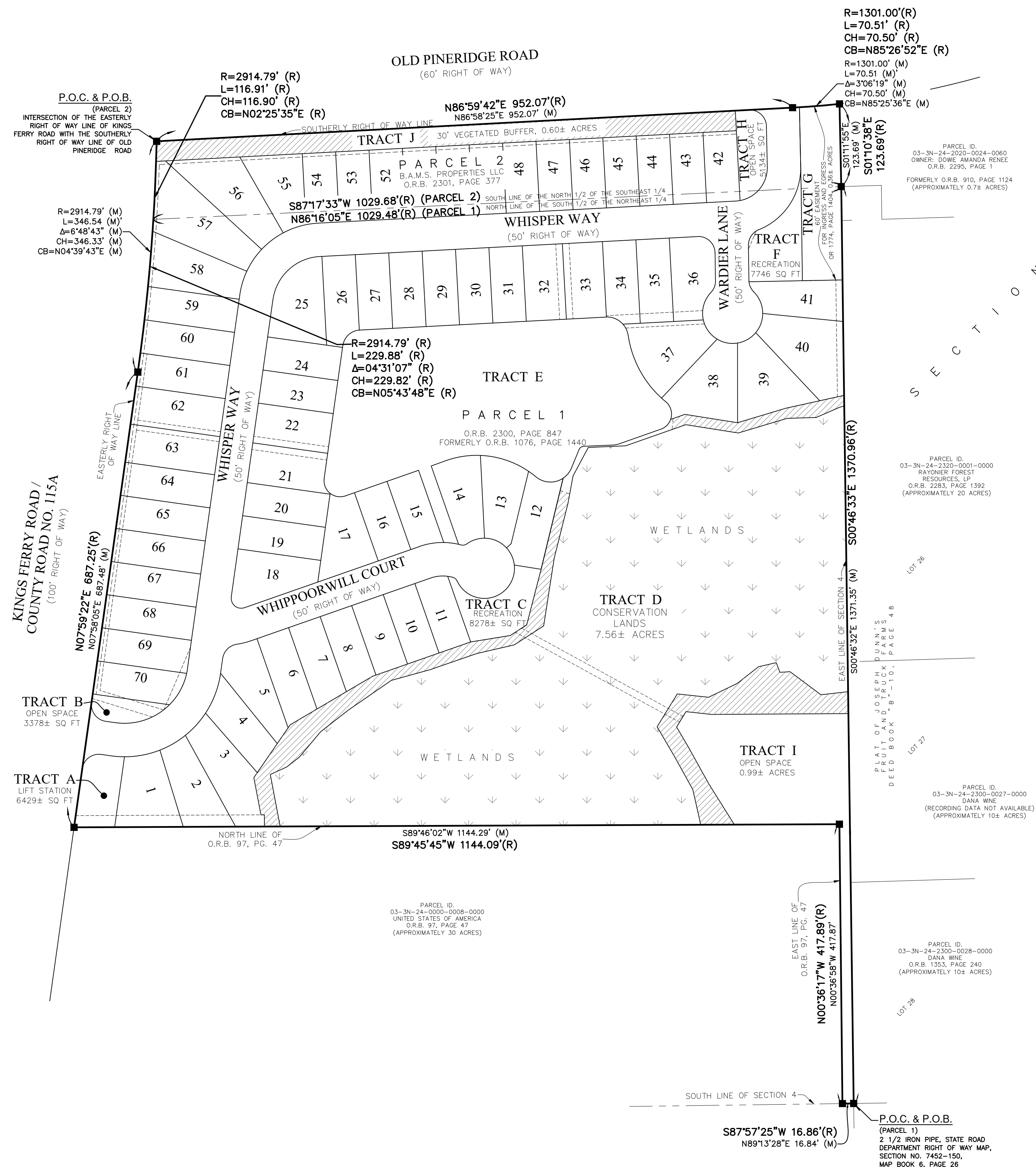


GENERAL NOTES

- BEARINGS SHOWN HEREON ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FOOT, (NAD '83, 2011 ADJUSTMENT) AND ARE REFERENCED TO THE SOUTHERLY RIGHT OF WAY LINE OF OLD PINERIDGE ROAD, HAVING BEARING OF NORTH 86°58'25" EAST.
- COORDINATES ARE GPS DERIVED. COORDINATE DATUM: STATE PLANE VALUES REFERENCE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FOOT, (NAD '83, 2011 ADJUSTMENT).
- THE CURRENT ZONING FOR THE LANDS SHOWN ON THIS PLAT AS OF THE DATE OF RECORDING IS PLANNED UNIT DEVELOPMENT (PUD) PER ORDINANCE NO. 2012-02.
- BUILDING RESTRICTION SETBACK LINES SHALL BE IN ACCORDANCE WITH THE CURRENT COUNTY ZONING ORDINANCE AND CURRENTLY ARE AS FOLLOWS:
BUILDING RESTRICTION LINE (B.R.L.):
FRONT LINES: TWENTY (20) FEET
SIDE LINES: FIVE (5) FEET
REAR LINES: TEN (10) FEET
MAXIMUM BUILDING HEIGHT: THIRTY-FIVE (35) FEET
REFER TO WHISPER RIDGE PUD FOR ADDITIONAL SETBACK CONDITIONS.
- ACCORDING TO THE STORM SURGE MAP PROVIDED ON THE NASSAU COUNTY GIS, AS OF NOVEMBER 23, 2021, THIS PROPERTY IS NOT SUBJECT TO STORM SURGE INUNDATION DURING A CATEGORY 1, 2, 3, 4, OR 5 HURRICANE.
- NOTICE: THIS PLAT, AS RECORDED IN ITS GRAPHICAL FORM, IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY ANY OTHER GRAPHIC OR DIGITAL FORM OF THE PLAT. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.
- BEARINGS AND DISTANCES SHOWN ON CURVES REFER TO CHORD BEARINGS AND DISTANCES.
- THE TABULATED CURVE TABLE(S) SHOWN ON EACH SHEET IS APPLICABLE ONLY TO THE CURVES THAT APPEAR ON THAT SHEET.
- LAKES AND TOPS OF BANK SHOWN HEREON AREA FOR PICTORIAL PURPOSES ONLY AND DO NOT REPRESENT ACTUAL "AS-BUILT" SITUATIONS. THEY AREA BASED ON THE ENGINEERING PLANS FOR THIS PLAT.
- BY GRAPHICAL PLOTTING ONLY, THIS PROPERTY LIES WITHIN THE FOLLOWING FLOOD ZONE: ZONE X AS SHOWN ON THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 12089C 0135F, EFFECTIVE DECEMBER 17, 2010.
- CURRENT LAW PROVIDES THAT NO CONSTRUCTION, FILLING REMOVAL OF EARTH, CUTTING OF TREES OR OTHER PLANTS SHALL TAKE PLACE WATERWARD OF THE JURISDICTIONAL WETLAND LINES AS DEPICTED ON THIS PLAT, WITHOUT THE WRITTEN APPROVAL OF THE CITY OF ST. AUGUSTINE AND OTHER REGULATORY AGENCIES WITH JURISDICTION OVER SUCH WETLANDS. IT IS THE RESPONSIBILITY OF THE LOT OWNER, HIS AGENT, AND THE ENTITY PERFORMING ANY ACTIVITY WITHIN THE WETLAND AREA, TO ACQUIRE THE NECESSARY WRITTEN APPROVALS PRIOR TO THE BEGINNING OF WORK. THIS WETLANDS JURISDICTIONAL LINE MAY BE SUPERSEDED AND REFINED FROM TIME TO TIME BY APPROPRIATE GOVERNMENT AGENCIES.
- "OREMC-E" DENOTES OKEEFENOKE RURAL ELECTRIC MEMBERSHIP COOPERATIVE (OREMC) EASEMENT. OREMC WILL ALLOW CERTAIN NON-PERMANENT IMPROVEMENTS WHICH DO NOT IMPED THE USE OF SAID EASEMENTS BY OREMC. THE INSTALLATION OF FENCES, HEDGES, AND LANDSCAPING IS PERMISSIBLE BUT SUBJECT TO REMOVAL BY OREMC AT THE EXPENSE OF EACH LOT OWNER FOR THE REMOVAL AND FOR REPLACEMENT OF SUCH ITEMS.
- UPLAND BUFFERS ARE TO REMAIN NATURALLY VEGETATED AND UNDISTURBED.
- TOTAL NUMBER OF LOTS: 70 LOTS, 10 TRACTS.
- TOTAL ACREAGE: 26.35± ACRES.
- THE LANDS SHOWN HEREON AREA SUBJECT TO THE FOLLOWING RECORDINGS (NUMBERS SHOWN BELOW DIRECTLY CORRESPOND TO THOSE IN ALLIANT NATIONAL TITLE INSURANCE COMPANY, POLICY NUMBER: 2321313, OWNER'S POLICY OF TITLE INSURANCE, POLICY EFFECTIVE DATE: NOVEMBER 3, 2021 AT 2:50 PM):
6. INGRESS AND EGRESS AND UTILITY EASEMENT AS CONTAINED IN THAT CERTAIN INSTRUMENT RECORDED IN OFFICIAL RECORDS BOOK 2420, PAGE 106, OF THE PUBLIC RECORDS OF NASSAU COUNTY, FLORIDA. (SHOWN HEREON)
- ALL PLATTED UTILITY EASEMENTS SHALL PROVIDED THAT SUCH EASEMENTS SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES; PROVIDED, HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE SERVICES SHALL INTERFERE WITH THE FACILITIES AND SERVICES OF AN ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. IN THE EVENT A CABLE TELEVISION COMPANY DAMAGES THE FACILITIES OF A PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE FOR THE DAMAGES. THIS SECTION SHALL NOT APPLY TO THOSE PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.

LEGEND:

- = SET 4"x4" CONCRETE MONUMENT STAMPED "LB 6508", UNLESS OTHERWISE NOTED
- = SET NAIL & DISK STAMPED "LB 6508"
- ⋯ = WETLAND AREA
- ▨ = WETLAND SETBACK
- P.C. = POINT OF CURVATURE
- P.O.B. = POINT OF BEGINNING
- P.O.C. = POINT OF COMMENCE
- P.R.C. = POINT OF REVERSE CURVATURE
- P.C.P. = PERMANENT CONTROL POINT
- P.T. = POINT OF TANGENCY
- CL.I. = CENTERLINE INTERSECTION
- CH = CURVE NUMBER
- CC# = CENTERLINE CURVE NUMBER
- RC# = RIGHT OF WAY CURVE NUMBER
- FPLE = FLORIDA POWER & LIGHT EASEMENT
- OREMC-E = OKEEFENOKE RURAL ELECTRIC MEMBERSHIP COOPERATIVE EASEMENT
- O.R.B. = OFFICIAL RECORDS BOOK
- PG. = PAGE
- ESMT. = EASEMENT
- R.P. = RADIUS POINT
- ℄ = CENTERLINE
- ± = MORE OR LESS
- R = ARC RADIUS
- L = ARC LENGTH
- Δ = ARC CENTRAL ANGLE (DELTA)
- CH = ARC CHORD LENGTH
- CB = ARCH CHORD BEARING
- SQ.FT. = SQUARE FEET
- UDE = UTILITY DRAINAGE EASEMENT
- ID. = IDENTIFICATION
- (M) = MEASURED
- (R) = RECORD



KEY MAP
SCALE 1" = 100'

PROPERTY IDENTIFICATION NUMBER (PIN) PARCEL 1: 04-3N-24-0000-0006-0010
PROPERTY IDENTIFICATION NUMBER (PIN) PARCEL 2: 04-3N-24-0000-0004-0100

PREPARED BY
SURVEYING AND MAPPING, LLC
CERTIFICATE OF AUTHORIZATION No. LB 7908
SAM
2426 PHILIPS HIGHWAY
JACKSONVILLE, FLORIDA 32207
(904) 886-0071
www.SAM.biz (904) 886-7174 FAX

WHISPER RIDGE

A PART OF SECTION 4, TOWNSHIP 3 NORTH, RANGE 24 EAST, TOWN OF HILLIARD, NASSAU COUNTY, FLORIDA

OLD PINERIDGE ROAD
(60' RIGHT OF WAY)

OFFICIAL RECORDS BOOK _____ PAGE _____

SHEET 3 OF 3 SHEETS
SEE SHEET 2 FOR GENERAL NOTES

R=1301.00'(M)
L=70.51'(R)
L=308.19'(M)
CH=70.50'(M)
CB=N85°25'36"E (M)

R=1301.00'(R)
L=70.51'(R)
L=70.51'(R)
CH=70.50'(R)
CB=N85°26'52"E (R)

LINE TABLE		
LINE #	BEARING	LENGTH
L1	N86°58'25"E	50.82'
L2	N86°58'25"E	14.63'

CURVE TABLE					CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE	CURVE	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C28	60.12'	1301.00'	2°38'52"	N85°11'52"E	60.12'	C78	76.83'	138.00'	31°53'53"	N71°44'35"W	75.84'
C29	10.39'	1301.00'	0°27'27"	N86°45'02"E	10.39'	C79	54.23'	138.00'	22°31'01"	S81°02'59"W	53.88'
C30	70.25'	50.00'	80°30'12"	N39°03'11"E	64.61'	C80	144.65'	138.00'	60°03'25"	N80°10'49"W	138.12'
C31	6.69'	50.00'	7°40'08"	N83°08'21"E	6.69'	C81	16.60'	1012.00'	0°56'23"	N70°15'40"E	16.60'
C32	18.43'	125.00'	8°26'53"	S82°44'59"W	18.41'	C82	23.98'	24.00'	57°14'13"	S80°39'02"E	22.99'
C33	36.25'	125.00'	16°37'04"	S70°13'00"W	36.13'	C83	25.13'	24.00'	60°00'00"	S20°15'55"E	24.00'
C34	40.79'	125.00'	18°41'44"	S52°33'36"W	40.61'	C84	49.11'	24.00'	117°14'13"	S50°39'02"E	40.98'
C35	39.73'	125.00'	18°12'43"	S34°06'22"W	39.57'	C85	36.61'	27.00'	77°41'35"	S46°49'33"W	33.87'
C36	37.13'	125.00'	17°01'16"	S16°29'23"W	37.00'	C86	6.61'	27.00'	11°18'05"	S86°19'22"W	0.61'
C37	7.25'	95.00'	4°22'23"	N10°09'16"E	7.25'	C87	37.23'	27.00'	78°59'40"	S47°28'35"W	34.35'
C38	54.18'	95.00'	32°40'41"	N28°40'48"E	53.45'	C88	9.90'	32.00'	1°36'17"	S87°46'34"W	0.90'
C39	11.06'	95.00'	6°40'22"	N48°21'19"E	11.06'	C89	27.77'	32.00'	49°42'47"	N66°33'54"W	26.90'
C40	0.64'	95.00'	0°23'04"	N51°53'02"E	0.64'	C90	18.64'	32.00'	33°22'41"	N25°01'10"W	18.38'
C41	19.92'	95.00'	12°00'55"	N58°05'01"E	19.89'	C91	47.30'	32.00'	84°41'45"	N50°40'42"W	43.11'
C42	56.19'	95.00'	33°53'17"	N81°02'07"E	55.37'	C92	108.49'	158.00'	39°20'34"	S28°00'06"E	106.37'
C43	30.10'	2914.79'	0°35'30"	N1°33'06"E	30.10'	C93	8.12'	158.00'	2°56'39"	S49°08'43"E	8.12'
C44	104.69'	2914.79'	2°03'29"	N2°52'35"E	104.69'	C94	116.61'	158.00'	42°17'13"	S29°28'26"E	113.98'
C45	82.85'	2914.79'	1°37'43"	N4°43'11"E	82.85'	C95	29.29'	24.00'	69°55'09"	N15°39'28"W	27.50'
C46	50.03'	2914.79'	0°59'00"	N6°01'33"E	50.03'	C96	21.50'	24.00'	51°19'04"	N44°57'39"E	20.78'
C47	50.01'	2914.79'	0°58'59"	N7°00'32"E	50.01'	C97	50.78'	24.00'	121°14'13"	N10°00'04"E	41.83'
C48	28.86'	2914.79'	0°34'02"	N7°47'03"E	28.86'	C98	12.37'	42.00'	16°52'40"	N79°03'31"E	12.33'
C49	20.09'	145.00'	7°56'21"	S85°59'28"E	20.08'	C99	9.08'	8.00'	65°01'47"	S54°58'57"W	8.60'
C50	54.16'	145.00'	21°24'01"	N79°20'23"E	53.84'	CC1	115.42'	75.00'	88°10'20"	N42°53'15"E	104.36'
C51	44.19'	145.00'	17°27'45"	N59°54'30"E	44.02'	CC2	137.87'	100.00'	78°59'40"	S47°28'35"W	127.21'
C52	45.09'	145.00'	17°48'56"	N42°16'10"E	44.90'	CC3	188.52'	120.00'	90°00'40"	N52°58'25"E	169.72'
C53	64.17'	145.00'	25°21'16"	N20°41'04"E	63.64'	CC4	38.05'	80.00'	27°14'54"	N84°21'18"E	37.69'
C54	0.10'	145.00'	0°02'21"	N7°59'15"E	0.10'	CC5	47.36'	80.00'	33°55'13"	S87°41'28"W	46.67'
C55	25.89'	55.00'	36°22'27"	N24°27'31"W	25.89'	CC6	30.01'	25.00'	68°47'14"	S33°37'05"W	28.24'
C56	6.67'	55.00'	6°56'49"	N78°49'20"W	6.66'	CC7	120.79'	100.00'	69°12'37"	N33°24'24"E	113.58'
C57	126.76'	45.00'	161°24'05"	N74°25'45"E	88.82'	CC8	40.07'	25.00'	91°49'40"	N47°06'45"W	35.91'
C58	28.57'	45.00'	36°22'27"	N24°27'31"W	28.09'	CC9	76.94'	50.00'	88°10'20"	N42°53'15"E	69.57'
C59	36.89'	45.00'	46°57'48"	N66°07'39"W	35.86'	CC10	172.34'	125.00'	78°59'40"	S47°28'35"W	159.01'
C60	28.45'	45.00'	36°13'07"	S72°16'54"W	27.97'	CC11	149.24'	95.00'	90°00'40"	N52°58'25"E	134.36'
C61	2.97'	105.00'	1°37'08"	N76°09'30"W	2.97'	CC12	39.27'	25.00'	89°59'20"	S37°01'35"E	35.35'
C62	22.33'	105.00'	12°11'13"	N8°03'40"W	22.29'	CC13	39.27'	25.00'	90°00'40"	S52°58'24"W	35.36'
C63	36.86'	105.00'	20°06'52"	S80°47'17"W	36.67'	CC14	227.79'	145.00'	90°00'40"	N52°58'25"E	205.08'
C64	44.23'	45.00'	56°19'05"	S15°28'34"W	42.47'	CC15	32.38'	25.00'	74°13'13"	S45°04'41"W	30.17'
C65	36.37'	45.00'	46°18'47"	S35°50'22"E	35.39'	CC16	21.00'	105.00'	11°27'26"	N76°27'34"E	20.96'
C66	31.71'	45.00'	40°22'31"	S79°11'01"E	31.06'	CC17	32.56'	55.00'	33°55'13"	S87°41'28"W	32.09'
C67	32.01'	45.00'	40°45'34"	N60°14'56"E	31.34'	CC18	8.81'	10.00'	50°28'44"	N50°06'34"W	8.53'
C68	31.15'	45.00'	39°39'26"	N20°02'26"E	30.53'	CC19	220.66'	45.00'	280°57'27"	N14°39'04"E	57.27'
C69	35.66'	45.00'	45°24'27"	N22°29'30"W	34.74'	CC20	8.81'	10.00'	50°28'44"	N79°24'42"E	8.53'
C70	17.26'	25.00'	39°33'40"	S25°24'53"E	16.92'	CC21	62.16'	105.00'	33°55'13"	S87°41'28"W	61.26'
C71	2.12'	25.00'	4°51'31"	S3°12'17"E	2.12'	CC22	30.84'	14.88'	118°43'59"	S50°39'02"E	25.61'
C72	25.42'	25.00'	58°16'01"	S28°21'29"W	24.34'	CC23	103.40'	75.00'	78°59'40"	S47°28'35"W	95.41'
C73	4.59'	25.00'	10°31'13"	S62°45'06"W	4.58'	CC24	40.25'	25.00'	92°15'03"	N46°54'03"W	36.04'
C74	19.93'	34.00'	33°35'36"	N39°15'52"E	19.65'	CC25	19.38'	25.00'	44°24'39"	N21°25'48"E	18.90'
C75	43.79'	34.00'	73°47'13"	S87°02'44"E	40.82'	CC26	211.14'	45.00'	268°49'50"	N89°13'12"E	64.29'
C76	63.72'	34.00'	107°22'49"	N76°09'28"E	54.80'	CC27	19.38'	25.00'	44°25'12"	S22°59'08"E	18.90'
C77	13.59'	138.00'	5°38'31"	N52°58'23"W	13.58'						

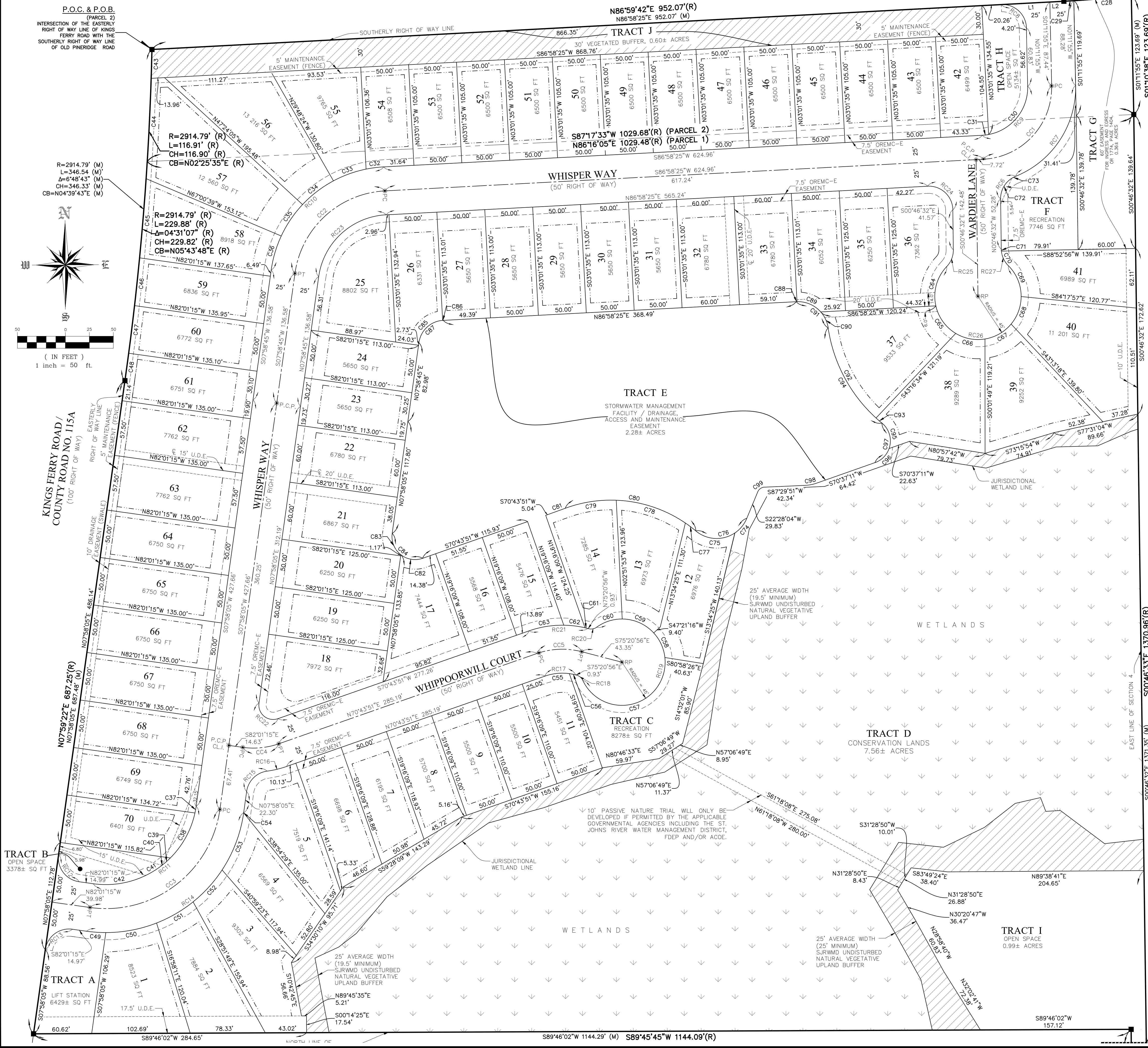
LEGEND:

- = SET 4"x4" CONCRETE MONUMENT STAMPED "LB 6508", UNLESS OTHERWISE NOTED
- = SET NAIL & DISK STAMPED "LB 6508"
- = WETLAND AREA
- ▨ = WETLAND SETBACK
- P.C. = POINT OF CURVATURE
- P.O.B. = POINT OF BEGINNING
- P.O.C. = POINT OF COMMENCEMENT
- P.R.C. = POINT OF REVERSE CURVATURE
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- C.L.I. = CENTERLINE INTERSECTION
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- CB = CURVE BEARING
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- RCL = RIGHT OF WAY CURVE NUMBER
- FPLE = FLORIDA POWER & LIGHT EASEMENT
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- R.P. = RADIUS POINT
- ± = CENTERLINE
- ± = PLUS OR MINUS
- R = ARC RADIUS
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- Δ = ARC CENTRAL ANGLE (DELTA)
- CH = ARC CHORD LENGTH
- CB = ARC CHORD BEARING
- SQ FT = SQUARE FEET
- UDE = UTILITY DRAINAGE EASEMENT
- ID. = IDENTIFICATION

PROPERTY IDENTIFICATION NUMBER (PIN):
PARCEL 1: 04-3N-24-0000-0006-0010
PARCEL 2: 04-3N-24-0000-0004-0100

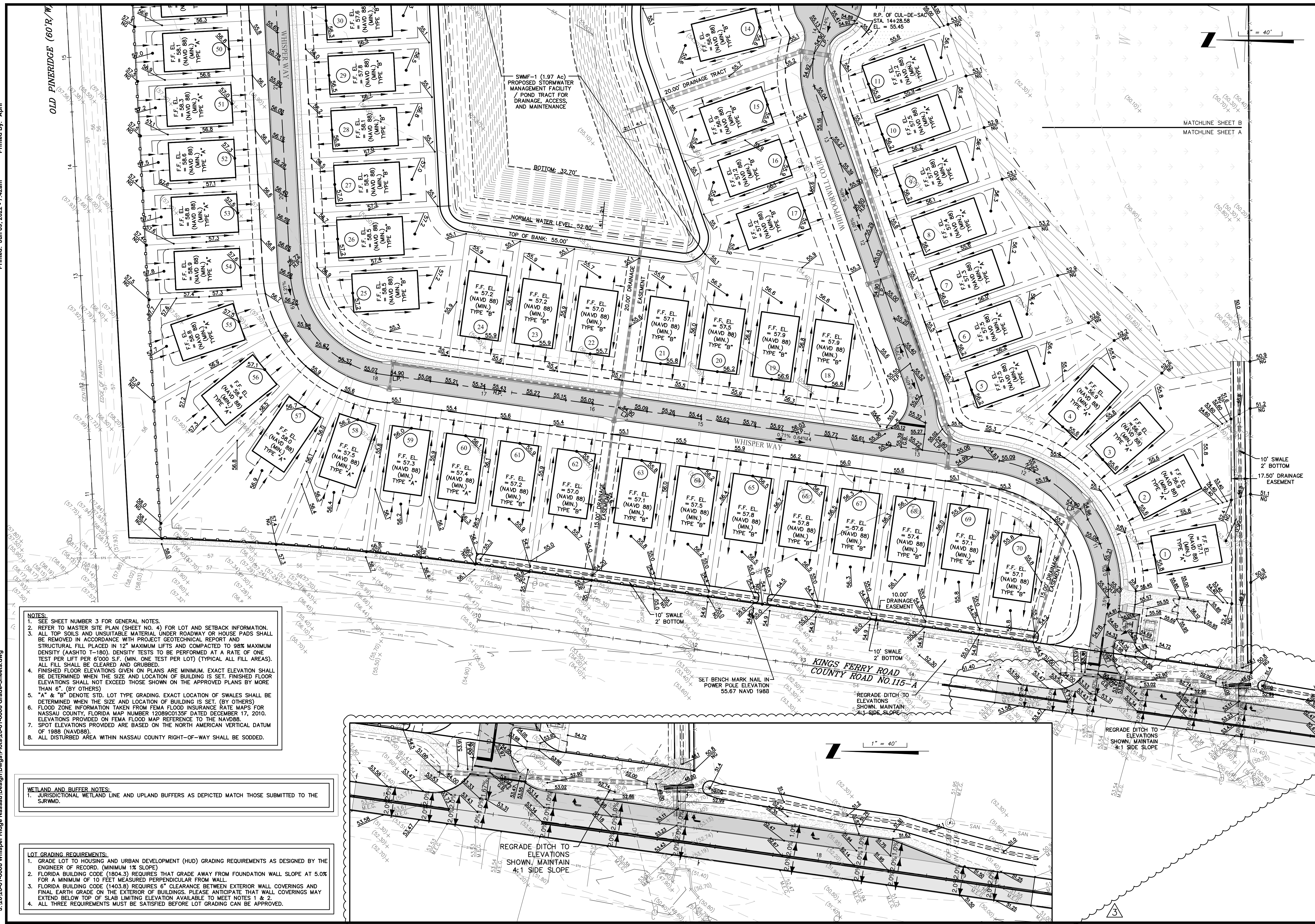
PREPARED BY
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CERTIFICATE OF AUTHORIZATION No. LB 7908
2426 PHILIPS HIGHWAY
JACKSONVILLE, FLORIDA 32207
(904) 886-0071
www.SAM.biz (904) 886-7174 FAX

SEE SHEET 2 (KEY MAP) OF 3 FOR P.O.B. (PARCEL 1)



Printed: Jun 09, 2022 7:42am Printed By: April

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- NOTES:**
- SEE SHEET NUMBER 3 FOR GENERAL NOTES.
 - REFER TO MASTER SITE PLAN (SHEET NO. 4) FOR LOT AND SETBACK INFORMATION.
 - ALL TOP SOILS AND UNSUITABLE MATERIAL UNDER ROADWAY OR HOUSE PADS SHALL BE REMOVED IN ACCORDANCE WITH PROJECT GEOTECHNICAL REPORT AND STRUCTURAL FILL PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 98% MAXIMUM DENSITY (AASHTO T-180). DENSITY TESTS TO BE PERFORMED AT A RATE OF ONE TEST PER LIFT PER 6'000 S.F. (MIN. ONE TEST PER LOT) (TYPICAL ALL FILL AREAS). ALL FILL SHALL BE CLEARED AND GRUBBED.
 - FINISHED FLOOR ELEVATIONS GIVEN ON PLANS ARE MINIMUM. EXACT ELEVATION SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET. FINISHED FLOOR ELEVATIONS SHALL NOT EXCEED THOSE SHOWN ON THE APPROVED PLANS BY MORE THAN 6" (BY OTHERS).
 - "A" & "B" DENOTE STD. LOT TYPE GRADING. EXACT LOCATION OF SWALES SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET. (BY OTHERS)
 - FLOOD ZONE INFORMATION TAKEN FROM FEMA FLOOD INSURANCE RATE MAPS FOR NASSAU COUNTY, FLORIDA MAP NUMBER 12089C0135F DATED DECEMBER 17, 2010. ELEVATIONS PROVIDED ON FEMA FLOOD MAP REFERENCE TO THE NAVD88.
 - SPOT ELEVATIONS PROVIDED ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 - ALL DISTURBED AREA WITHIN NASSAU COUNTY RIGHT-OF-WAY SHALL BE SODDED.

- WETLAND AND BUFFER NOTES:**
- JURISDICTIONAL WETLAND LINE AND UPLAND BUFFERS AS DEPICTED MATCH THOSE SUBMITTED TO THE SURVMD.

- LOT GRADING REQUIREMENTS:**
- GRADE LOT TO HOUSING AND URBAN DEVELOPMENT (HUD) GRADING REQUIREMENTS AS DESIGNED BY THE ENGINEER OF RECORD. (MINIMUM 1% SLOPE)
 - FLORIDA BUILDING CODE (1804.3) REQUIRES THAT GRADE AWAY FROM FOUNDATION WALL SLOPE AT 5.0% FOR A MINIMUM OF 10 FEET MEASURED PERPENDICULAR FROM WALL.
 - FLORIDA BUILDING CODE (1403.8) REQUIRES 6" CLEARANCE BETWEEN EXTERIOR WALL COVERINGS AND FINAL EARTH GRADE ON THE EXTERIOR OF BUILDINGS. PLEASE ANTICIPATE THAT WALL COVERINGS MAY EXTEND BELOW TOP OF SLAB LIMITING ELEVATION AVAILABLE TO MEET NOTES 1 & 2.
 - ALL THREE REQUIREMENTS MUST BE SATISFIED BEFORE LOT GRADING CAN BE APPROVED.

Connelly & Wicker Inc.
 Planning · Engineering · Landscape Architecture
 10060 Skimmer Lake Drive, Suite 500 Jacksonville, Florida 32246
 (904) 256-3030 FAX: (904) 265-3031 www.connelly-wicker.com
 Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision
1	4/25	NASSAU COUNTY ROW REVISIONS.

NEIGHBORHOOD SITE PLAN (GRADING PLAN)

PREPARED FOR
B.A.M.S. PROPERTIES LLC

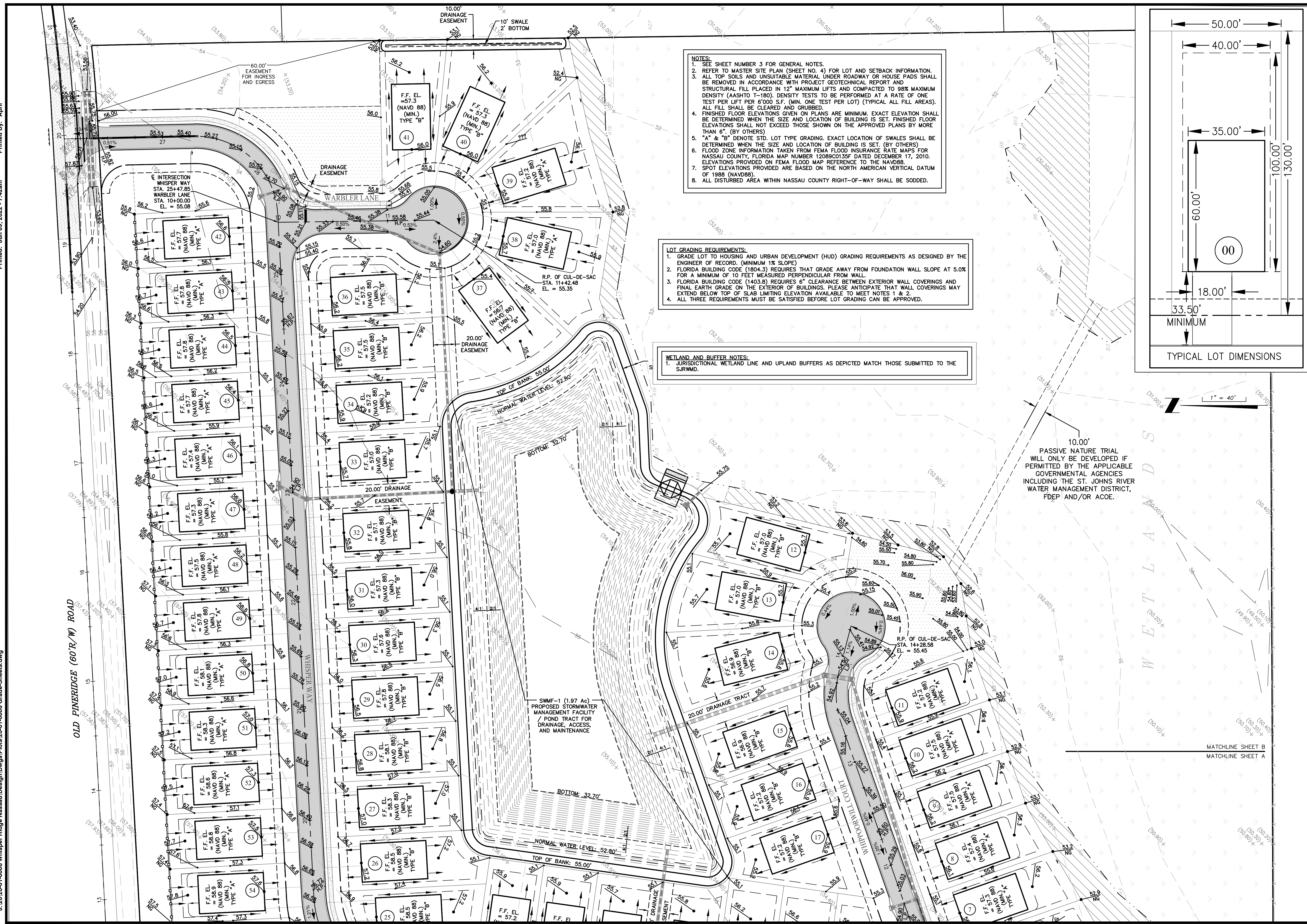
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Professional Engineer
 No. 61449
 STATE OF FLORIDA

Project No.: 20-01-0008
 Designed: MEL Drawn: ANB
 Date: 12/21/21 Scale: 1"=40'
 Sheet **7A**

Printed: Jun 09, 2022 7:42am

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NOTES:

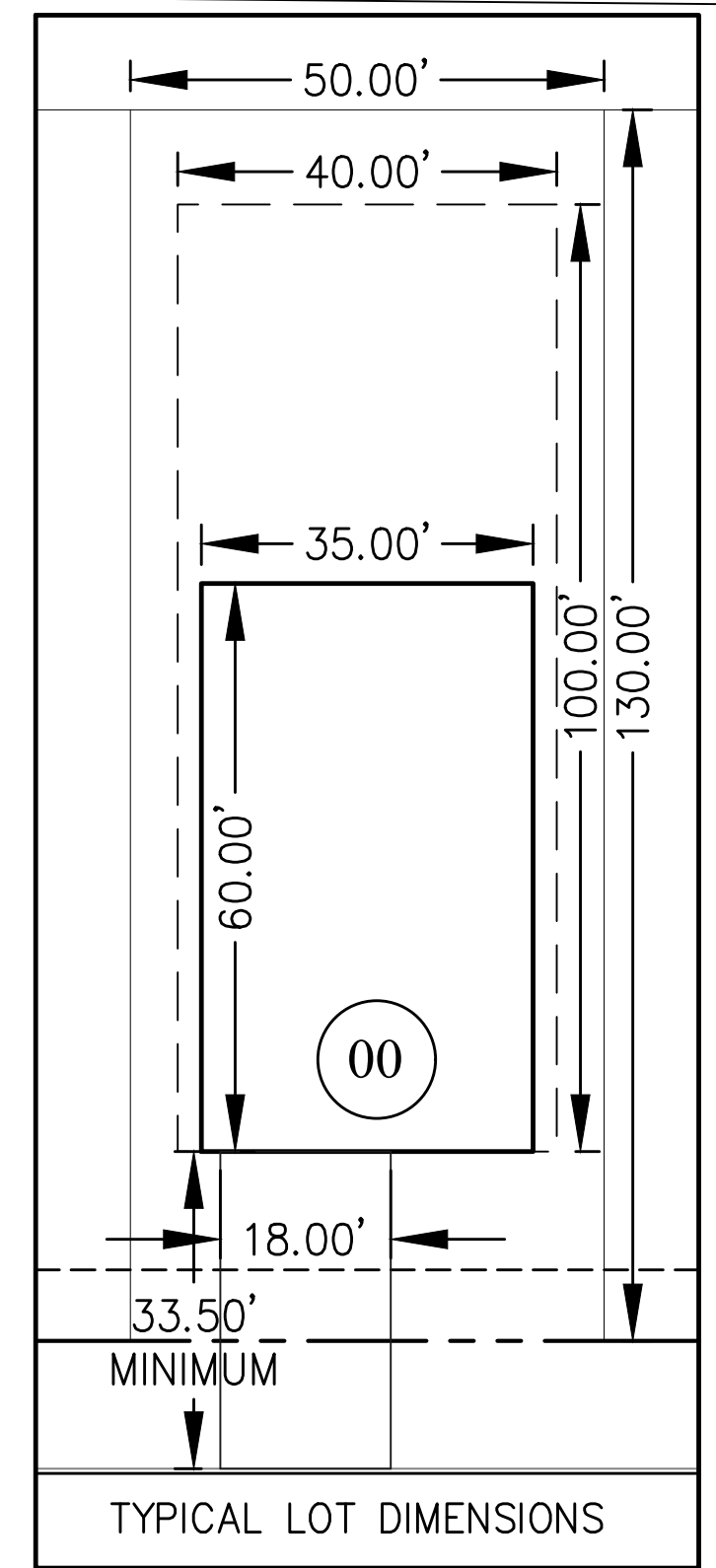
- SEE SHEET NUMBER 3 FOR GENERAL NOTES.
- REFER TO MASTER SITE PLAN (SHEET NO. 4) FOR LOT AND SETBACK INFORMATION.
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- SPOT ELEVATIONS PROVIDED ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
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LOT GRADING REQUIREMENTS:

- GRADE LOT TO HOUSING AND URBAN DEVELOPMENT (HUD) GRADING REQUIREMENTS AS DESIGNED BY THE ENGINEER OF RECORD. (MINIMUM 1% SLOPE)
- FLORIDA BUILDING CODE (1904.3) REQUIRES THAT GRADE AWAY FROM FOUNDATION WALL SLOPE AT 5.0% FOR A MINIMUM OF 10 FEET MEASURED PERPENDICULAR FROM WALL.
- FLORIDA BUILDING CODE (1403.8) REQUIRES 6" CLEARANCE BETWEEN EXTERIOR WALL COVERINGS AND FINAL EARTH GRADE ON THE EXTERIOR OF BUILDINGS. PLEASE ANTICIPATE THAT WALL COVERINGS MAY EXTEND BELOW TOP OF SLAB LIMITING ELEVATION AVAILABLE TO MEET NOTES 1 & 2.
- ALL THREE REQUIREMENTS MUST BE SATISFIED BEFORE LOT GRADING CAN BE APPROVED.

WETLAND AND BUFFER NOTES:

- JURISDICTIONAL WETLAND LINE AND UPLAND BUFFERS AS DEPICTED MATCH THOSE SUBMITTED TO THE SURVMD.



10.00' PASSIVE NATURE TRIAL WILL ONLY BE DEVELOPED IF PERMITTED BY THE APPLICABLE GOVERNMENTAL AGENCIES INCLUDING THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, FDEP AND/OR ACOE.

1" = 40'

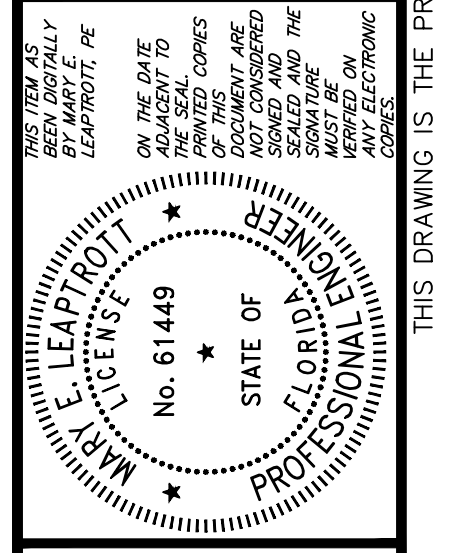
MATCHLINE SHEET B
MATCHLINE SHEET A

Connelly & Wicker Inc.
 Planning · Engineering · Landscape Architecture
 10060 Skimmer Lake Drive, Suite 500 Jacksonville, Florida 32246
 (904) 256-3030 FAX: (904) 265-3031 www.connelly-wicker.com
 Florida Registry 5650 L.A. Number: LC26000311

No.	Date	Revision
1		ISSUED FOR PERMIT
2		REVISIONS
3		REVISIONS
4		REVISIONS
5		REVISIONS
6		REVISIONS
7		REVISIONS
8		REVISIONS
9		REVISIONS
10		REVISIONS

**WHISPER RIDGE
NEIGHBORHOOD SITE
PLAN (GRADING PLAN)**

PREPARED FOR
B.A.M.S. PROPERTIES LLC



Project No.: 20-01-0008
 Designed: MEL Drawn: ANB
 Date: 12/21/21 Scale: 1"=40'
 Sheet **7B**

THIS DRAWING IS THE PROPERTY OF CONNELLY & WICKER INC. AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS NOT TO BE USED ON ANY OTHER PROJECT AND IS TO BE RETURNED ON REQUEST.

Completion Bond for Plat Recording

Bond No. _____

KNOW ALL MEN BY THESE PRESENT, that we, LGI Homes – Florida, LLC, hereinafter called Principal, and (BOND ISSUER), hereinafter called Surety, are held and firmly bound unto The Town of Hilliard, hereinafter called Obligee, in the full and just sum of \$ Six Hundred thirty two thousand five hundred fourteen dollars and 74/100 (\$632,514.74, lawful money of the United States, for the payment of which we bind ourselves, our heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION ON THIS OBLIGATION is such that, Principal will perform certain work as described in the Engineering Plans prepared by Connelly & Whicker dated September 14th, 2021 approved by the Town of Hilliard, Town Council on September 14th, 2021 hereinafter the “Plans”, and that such work shall be completed no later than two years from the date hereof.

WHEREAS, the said Principal will complete the remaining items per Exhibit “A” at Whisper Ridge within the Town of Hilliard, Nassau County, State of Florida.

NOW THEREFORE if the said Principal shall indemnify and save harmless the Obligee against any loss or damage occasioned by the failure of the workmanship or materials, then this obligation is to be void, otherwise to remain in full force and effect until such time as the Obligee approves the work on which this obligation is conditioned. It is understood, however, the Obligee may call the bond based on an estimate of the cost to complete deficiencies if, in the sole discretion of the Obligee, the Obligee determines a deficiency exists. This bond shall not include loss or damage due to hurricane, cyclone, tornado, earthquake, volcanic eruption or similar disturbance of nature, or military, naval or usurped power, insurrection, riot or civil commotion, nor any act of God.

No right of action shall accrue upon or by reason of this obligation, to or for the benefit of any persons, firm, or corporation other than the Obligee herein named. This bond shall be governed by the laws of the State of Florida, and any and all legal action necessary to enforce it will be held in The Town of Hilliard, Nassau County, Florida.

SIGNED, sealed and dated this _____ day of _____, 20__.

Witness as to Principal

Principal Name

By LGI Homes – Florida, LLC
Name _____
Title Charles Merdian, Chief Financial Officer

Witness as to Surety

Surety Name

By _____

Exhibit "A"
PLAT BOND LETTER

Town of Hilliard
15859 West County Road 108
Hilliard, FL 32046
904.845.3555

February 7, 2023

Re: **Whisper Ridge Subdivision**

I hereby request approval by your department for a plat bond in the amount of **\$632,514.74** for the above referenced project. I have made a recent site inspection of the project and have found it to be in substantial compliance with the approved site development plans on file with the Department of Planning and Development. To the best of my knowledge and belief, the attached Schedule of Values is accurate and the total is adequate to complete the improvements in accordance with the approved plans.

Improvements already paid for, not subject to the plat bond, include underground electric, street signs, and street lights.

WORK ITEMS	CONTRACT AMOUNT	COMPLETE TO DATE	BALANCE TO COMPLETE
1. Seeding, Mulch, Sod	\$ 146,292.50	\$ 146,292.50	\$ 00.00
2. Roadway Construction	\$ 213,215.00	\$ 170,572.00	\$ 42,643.00
3. Storm Drainage	\$ 323,982.16	\$ 323,982.16	\$ 00.00
4. Roadway Under Drain	\$ 92,902.04	\$ 92,902.04	\$ 00.00
5. Onsite Water and Gravity Sewer	\$ 640,581.97	\$ 640,581.97	\$ 00.00
6. Lift Station	\$ 224,899.62	\$ 179,919.70	\$ 44,979.92
7. Turn Lane	\$ 25,499.75	\$ 25,499.75	\$ 00.00
8. Mill and Resurface	\$ 28,770.00	\$ 28,770.00	\$ 00.00
9. Offsite Water and Force Main	\$ 147,734.54	\$ 147,734.54	\$ 00.00
10. Parks & Landscaping (Gardenology)	\$ 392,827.90	\$ 00.00	\$ 392,827.90
11. Superior Fence	\$ 69,562.00	\$ 00.00	\$ 69,562.00
Total	\$2,306,267.48	\$ 1,756,254.66	\$ 550,012.82
			15% \$ 85,501.92
TOTAL BOND AMOUNT			\$ 632,514.74

* Roadway includes curb and gutter, sub-base, base, prime, and asphalt.

I have attached a copy of the latest pay request and schedule of values for your use in reviewing this request. If you have any questions or comments, please don't hesitate to call.

Sincerely,
Connolly & Wicker Inc.

Mary E. Leaptrott, P.E.
Senior Project Manager



Town of Hilliard Subdivision Application

FOR OFFICE USE ONLY	ITEM-2
File # _____	
Application Fee: _____	
Filing Date: _____ Acceptance Date: _____	

- Major Subdivision – Over 5 Lots
 Preliminary Plat Final Plat
- Minor Subdivision - 3 to 5 Lot
 Preliminary Plat Final Plat

A. PROJECT

1. Project Name: Whisper Ridge
2. Address of Subject Property: Southeast corner of Kings Ferry Road and Old Pine Ridge Road
3. Parcel ID Number(s): 04-3N-24-0000-0006-0010 and 04-3N-0000-0004-0100
4. Existing Use of Property: Agricultural
5. Future Land Use Map Designation: PUD
6. Zoning Designation: PUD
7. Acreage: 26.24

B. APPLICANT

1. Applicant's Status Owner (title holder) Agent
2. Name of Applicant(s) or Contact Person(s): Ed Kassik Title: Land Development Manager
Company (if applicable): LGI Homes - Florida, LLC
Mailing address: 17425 Bridge Hill Ct Suite 101
City: Tampa State: Florida ZIP: 33647
Telephone: (407) 452-7871 FAX: () e-mail: ed.kassik@lgihomes.com
3. If the applicant is agent for the property owner*:
Name of Owner (title holder): LGI Homes - Florida, LLC Brian Martin (authorized signatory)
Company (if applicable): LGI Homes - Florida, LLC
Mailing address: 17425 Bridge Hill Ct Suite 101
City: Tampa State: Florida ZIP: 33647
Telephone: (813) 204-9074 FAX: () e-mail: brian.martin@lgihomes.com

* Must provide executed Property Owner Affidavit authorizing the agent to act on behalf of the property owner.

C. ATTACHMENTS

ITEM-2

PRELIMINARY PLAT ATTACHMENTS (One copy: 24" X 36" with 3" left margin and ½" top, bottom, and right margins, one copy reduced to no greater than 11 x 17, plus one copy in PDF format)

1. Plans, including but not limited to:
 - a. Scale: at least 1" = 200'.
 - b. Proposed Name of Subdivision.
 - c. Name, address, and telephone number of the subdivider and agent of the subdivider.
 - d. Name, address, telephone number and registration number of the surveyor or engineer.
 - e. Date of boundary survey, north arrow, graphic scale, date of plat drawing, and space for revision dates. f. Vicinity map.
 - g. Total acreage of lots and total number of lots.
 - h. Legal description of property to be subdivided.
 - i. Names of owners of adjoining land with their approximate acreage or, if developed, names of abutting subdivisions.
 - j. Preliminary layout including streets and easements with dimensions, lot lines with approximate dimensions, land to be reserved or dedicated for public or common uses, and any land to be used for purposes other than single-family dwellings.
 - k. Block letters and lot numbers, lot lines, and scaled dimensions.
 - l. Zoning district boundaries on abutting properties.
 - m. Proposed method of water supply, sewage disposal, and drainage, and electric service.
 - n. Minimum building setback lines as required by the Land Development Regulations.
 - o. Natural features, including lakes, marshes or swamps, water courses, wooded areas, and land subject to the 100-year flood as defined by FEMA official flood maps.
 - p. Surface drainage and direction of flow and method of disposition and retention indicated. q. Tree survey.
2. Existing and/or proposed covenants and restrictions.
3. Stormwater management plan - including the following:
 - a. Existing contours at one (1) foot intervals.
 - b. Proposed finished floor elevation of each building site.
 - c. Existing and proposed stormwater management facilities with size and grades.
 - d. Proposed orderly disposal of surface water runoff.
 - e. Centerline elevations along adjacent streets.
4. Legal description with tax parcel number.
5. Warranty Deed or other proof of ownership.
6. Proof of payment of taxes.
7. Permit or Letter of Exemption from the St. Johns River Water Management District.
8. Concurrency Application

Fee.

- a. Major Subdivision – More than 5 lots: \$500 plus \$20 per lot
- i. Minor Subdivision – 3 to 5 lots: \$300

ITEM-2

No application shall be accepted for processing until the required application fee and a \$1,000 refundable deposit for consultant reviews is paid by the applicant. Any fees necessary for technical review or additional reviews of the application by a consultant will be billed to the applicant at the rate of the reviewing entity. The invoice shall be paid in full prior to any action of any kind on the development application.

All 9 attachments are required for a complete application. A completeness review of the application will be conducted within ten (10) business days of receipt. If the application is determined to be incomplete, the application will be returned to the applicant.

Within twelve (12) months of the approval of the Subdivision Preliminary Plat, Construction Plans must be reviewed

Within six (6) months of the approval of Construction Plans, the applicant must submit an application for Final Plat for review.

FINAL PLAT ATTACHMENTS - ATTACHMENTS (One copy: 24" X 36" with 3" left margin and ½" top, bottom, and right margins, one copy reduced to no greater than 11 x 17, plus one copy in PDF format)

1. A copy of this original application must accompany the submission.
2. Plans, to include but not limited to:
 - a. Name of subdivision shall be shown in bold legible letters, as stated in Chapter 177, Florida Statutes. The name of the subdivision shall be shown on each sheet included and shall have legible lettering of the same size and type including the words "section," "unit," "replat," "amended," etc.
 - b. Name and address of subdivider.
 - c. North arrow, graphic scale, and date of plat drawing.
 - d. Vicinity map.
 - e. Exact boundary line of the tract, determined by a field survey, giving distances to the nearest one-hundredth foot and angles to the nearest minute, shall be balanced and closed with an apparent error of closure not to exceed one in 5,000.
 - f. Legal description of the property to be subdivided.
 - g. Names of owners of adjoining lands with their approximate acreage or, if developed, names of abutting subdivisions.
 - h. Location of streams, lakes and swamps, and land subject to the 100-year flood as defined by the Federal Emergency Management Agency, official flood maps.
 - i. Bearing and distance to permanent points on the nearest existing street lines of bench marks or other permanent monuments (not less than three (3)) shall be accurately described on the plat.
 - j. Municipal lines shall be accurately tied to the lines of the subdivision by distance and angles when such lines traverse or are reasonably close to the subdivision.
 - k. The closest land lot corner shall be accurately tied to the lines of the subdivision by distance and angles.
 - l. Location, dimensions, and purposes of any land reserved or dedicated for public use.
 - m. Exact locations, width, and names of all streets within and immediately adjoining the proposed subdivision.
 - n. Street right-of-way lines must show deflection angles of intersection, radii, and lines of tangents.
 - o. Lot lines, dimensions, and bearings must be shown to the nearest one hundredth (1/100) foot.
 - p. Lots must be numbered in numerical order and blocks lettered alphabetically.
 - q. Accurate location and description of monuments and markers.

- r. Minimum building front yard setback lines as required by the Land Development Regulations as determined by the property's zoning.
 - s. Reference to recorded subdivision plats of adjoining platted land shall be shown by recorded names, plat book, and page number.
 - t. Covenants and restrictions notice in accordance with Chapter 177.091(28), Florida Statutes.
 - u. Dedication to the public by the owners of the land involved of all streets, drainage easements, and other rights-of-way however designated and shown on the plat for perpetual use for public purposes, including vehicular access rights where required. If the property is encumbered by a mortgage, the owner of the mortgage shall join in the dedication or in some other manner subordinate the mortgagee's interest to the dedication of public right-of-way.
 - v. Certification that all payable taxes have been paid and all tax sales against the land redeemed.
 - w. Title certification as required by Chapter 177, Florida Statutes.
3. Legal description with tax parcel number.
 4. Warranty Deed or other proof of ownership.
 5. Proof of payment of taxes.
 6. Permit or Letter of Exemption from the St. Johns River Water Management District or the Florida Department of Environmental Regulations.
 7. Fee.
 - a. Major Subdivision – More than 5 lots: \$500 plus \$20 per lot
 - b. Minor Subdivision – 3 to 5 lots: \$300

No application shall be accepted for processing until the required application fee and a \$1,000 refundable deposit is paid by the applicant. Any fees necessary for technical review or additional reviews of the application by a consultant will be billed to the applicant at the rate of the reviewing entity. The invoice shall be paid in full prior to any action of any kind on the development application.

All 7 attachments are required for a complete application. A completeness review of the application will be conducted within ten (10) business days of receipt. If the application is determined to be incomplete, the application will be returned to the applicant.

I/We certify and acknowledge that the information contained herein is true and correct to the best of my/our knowledge:

Brian Martin
Signature of Applicant

Signature of Co-applicant

Brian Martin
Typed or printed name and title of applicant

Typed or printed name of co-applicant

6/30/22
Date

Date

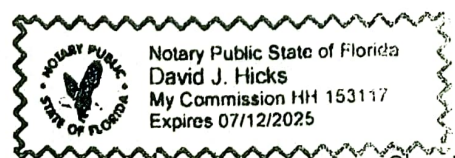
State of Florida County of Hillsborough

The foregoing application is acknowledged before me this 30th day of June, 2022, by Brian

Martin, who is/are personally known to me, or who has/have produced _____

as identification.

NOTARY SEAL



David J. Hicks
Signature of Notary Public

Signature of Notary Public, State of Florida

Town of Hilliard 15859 C.R. 108 Hilliard, FL 32046 (904) 845-3555



AGENDA ITEM REPORT

TOWN OF HILLIARD, FLORIDA

TO: Town Council Regular Meeting Meeting Date: March 2, 2023

FROM: ***Christian Waugh – Town Attorney***

SUBJECT: Town Council to establish a process to close, abandon, or vacate, streets, alleys, easements, or right of ways, within the Town of Hilliard.

BACKGROUND:

Joint Workshops between the Town Council and the Planning & Zoning Board have been held to discuss establishing a process to close, abandon, or vacate, streets, alleys, easements, or right of ways, within the Town of Hilliard on the following dates:

June 8, 2021
September 14, 2021
August 4, 2022
August 29, 2022
October 6, 2022
March 2, 2023

FINANCIAL IMPACT:

Unknown.

RECOMMENDATION:

Town Council to determine to move forward with draft Ordinance or to set another Joint Workshop to further discuss.

ORDINANCE NO. 2023-01

AN ORDINANCE AMENDING CHAPTER 46 OF THE HILLIARD TOWN CODE, SUBDIVISIONS TO ENACT A PROCESS FOR THE VACATION OF PUBLIC RIGHT-OF-WAYS WITHIN THE TOWN LIMITS; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS the Town Council desires to update the Town Code relating to a process for vacating existing right-of-ways by adopting this ordinance for placement within the Chapter related to Subdivisions.

WHEREAS the Town Council has determined that the following amendment promotes and protects the general health, safety, and welfare of the residents of the Town of Hilliard by regulating the vacation of existing right-of-ways consistent with applicable Florida law, specifically implementing Town Code Section 46-7.

NOW, THEREFORE, BE IT ORDAINED, this _____ day of _____, 2023, by the Town Council of the Town of Hilliard, Florida, that Ordinance No. 2023-01 be enacted as follows:

“Sec. 46-7. Right-of-way vacations.

(a) *Definitions.* The following words, terms, and phrases, when used in Section 46-7, shall have the meanings ascribed to them in this Subsection, except where the context clearly indicates a different meaning:

- 1. *Vacate.* Vacate shall mean the relinquishment of the Town’s right, title, or interest in a public right-of-way.
- 2. *Public right-of-way.* A public right-of-way in the Town of Hilliard shall mean public road, street, lane, thoroughfare or travelway that has been platted or dedicated for public purposes such as roads, utilities, or stormwater.

(b) *Review Procedures.*

1. *Application.* An application to vacate a public right-of-way may be submitted by the Town Council, Land Use Administrator, or by a property owner abutting or surrounding the public right-of-way.
 - a. Applicant must submit an application with a statement outlining the reason for the request, and a sketch of description and legal description of the area to be vacated, including the tax parcel identification number, if applicable. The burden will be on the applicant to show that the request complies with all of the following:
 - i. That the request is in conjunction with a new development or redevelopment;
 - ii. That the request is in the “public interest” (defined as something that benefits the public as a whole, not just a singular property owner – such as increasing size of property);
 - iii. That the request will not adversely affect surrounding property owners; and
 - iv. That the request conforms with utility company regulations by providing a letter from each utility company stating they approve or disapprove the vacate.
2. *Board review.* Applications to vacate a public right-of-way shall be reviewed by the Planning and Zoning Board and the Town Council according to the criteria provided in this section, with notice of the board hearings provided in accordance with law and this article. The Planning and Zoning Board’s review shall be a recommendation to the Town Council. Prior to the public hearing before the Planning and Zoning Board, the application shall be

reviewed by the Land Use Administrator in accordance with the development plan review process as stated in Section 46-7.

3. *Fees.* The application shall be accompanied by a fee, which amount shall be determined by a fee schedule passed by a resolution of the Town Council.

(c) *Review criteria.* Rights-of-way may only be vacated by the Town Council upon its finding that the criteria in both 1. and 2. as provided below have been met:

1. *Public Interest.* The public right-of-way no longer serves a public purpose and the vacation of the public right-of-way is in the public interest, which shall be based on a consideration of the following:
 - a. Whether the public benefits from the use of the subject right-of-way as part of the city street system;
 - b. Whether the proposed action is consistent with the Comprehensive Plan;
 - c. Whether the proposed vacation is consistent with the minimum block size requirements and other applicable street connectivity standards;
 - d. Whether the proposed action would deny access to private property;
 - e. The effect of the proposed action upon public safety;
 - f. The effect of the proposed action upon the safety of pedestrians and vehicular traffic;
 - g. The effect of the proposed action upon the provision of municipal services including, but not limited to, emergency service and waste removal;
 - h. The necessity to relocate utilities both public and private; and

- i. The effect of the proposed action on the design and character of the area.
2. *Streets*. If the public right-of-way is a street, the city shall not vacate the right-of-way except if the following additional criteria are met:
 - a. The loss of the street will not foreclose reasonably foreseeable future bicycle/pedestrian use;
 - b. The loss of the street will not foreclose non-motorized access to adjacent land uses or transit stops;
 - c. The loss of the street is necessary for the construction of a high density, mixed-use project containing both residential and non-residential uses or creating close proximity of residential and non-residential uses; and
 - d. There is no reasonably foreseeable need for any type of transportation corridor for the area.

(d) *Notice requirements.*

1. *Specific Notice Requirements for Vacations*. Public hearing notices to vacate a public right-of-way or portion thereof shall be published in a manner consistent with Florida and Town law regarding ordinances.
2. *Neighbors*. If the parcel to be vacated includes an alley, all property owners serviced by the alley and all property owners serviced by a connecting alley shall be noticed.
3. *Petitioner's Responsibility*. The Town, Town Council, and all officers, employees, and agents thereof shall not assume any responsibility or liability for any matters and things to be done or completed by the petitioner pursuant to the provisions hereof. It is recognized that this procedure may

affect substantial interests in real property and other proprietary rights, and the petitioner shall assume full and complete responsibility for compliance with the requirements of law and these procedures in connection with or arising out of any vacation proceedings instituted by the petitioner.

(e) *Effective date.* This ordinance shall become effective upon its passage.

(f) *Severability.* If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by any Court of competent jurisdiction such portion shall not affect the validity of the remaining portion of this Ordinance.”

ADOPTED this _____ day of _____, 2023, by the Hilliard

Town Council.

Kenneth A. Sims, Jr.
Council President

ATTEST:

Lisa Purvis
Town Clerk

APPROVED:

John P. Beasley
Mayor

PHONE: 321-800-6008
FAX: 844-206-0245
WAUGHGRANT.COM

GERRARD GRANT*
CHRISTIAN W. WAUGH^
MORGAN FAYOCAVITZ
EMAIL: CWAUGH@WAUGHGRANT.COM

*BOARD CERTIFIED IN TAX LAW
^BOARD CERTIFIED IN REAL ESTATE LAW

June 1, 2021

Via Email

Janis Fleet
Land Use Administrator

RE: Application and Amendment for Permitting Closure, Abandonment, and Vacation of Town Streets, Easements, Alleys

Dear Janis,

I have prepared an application that is worth discussing with the P&Z Board regarding the above-described topic. There are a couple of things to note:

- This application is based on the City of Jacksonville's application per your recommendation.
- Jacksonville, like most entities, has a lengthy statutory regime for this application. Jacksonville is a bit more complicated because its regime falls under statutory requirements, i.e. §336.09, Fla. Stat., which do not apply to municipalities like Hilliard's.
- Still, if we are going to implement an application like this, we should probably consider an amendment to the Code. We do not want to lack a statutory basis for our requirements, such as notice to neighboring owners, or a finding that we have no interest in the alleyway, or for the fees.

The Town Charter provides the Town the authority to deal with its roads and this would seem obvious under Home Rule powers. But, interestingly, this responsibility is not described within the Planning and Zoning Board's purview under Town Code §62-93, which states in relevant part:

...the planning and zoning board shall have the following duties and responsibilities:

- (1) Review and recommend changes in the town's comprehensive plan.*
- (2) Coordinate planned development with adjacent municipalities and the county.*

Orlando office
201 E. Pine Street, Ste. 315
Orlando, FL 32801
(Primary Office)

Miami office
2828 Coral Way, Ste. 201
Miami, FL 33145
(By Appointment Only)

The Villages office
561 Fieldcrest Drive
The Villages, FL 32162
(By Appointment Only)

Report to Land Use Administrator
RE: Vacating Roads
June 1, 2021

- (3) *Review and make recommendations on petitions for changes in zoning classifications, amendments and district boundary changes.*
- (4) *Review and approve requests for special exceptions.*
- (5) *Review and approve site plans for all proposed zoning changes for multifamily, mobile home parks, mobile home subdivisions, commercial and industrial development and redevelopment and planned unit developments and all special exceptions.*
- (6) *Hear and decide appeals where it is alleged that there is an error in any order, requirement, decision or determination made by the land use administrator in the enforcement of this chapter.*
- (7) *Authorize upon appeal such variances from the terms of this chapter which will not be contrary to the public interest when, due to special conditions, a literal enforcement of the provisions of this chapter will result in unnecessary and undue hardship upon the owner of the subject property or structure or the applicant for the variance.*
- (8) *Recommend to the town council the removal of the land use administrator for noncompliance with or nonenforcement of the land development regulations.*

So I am concerned that the Planning and Zoning Board does not have the authority to deal with this.

Therefore, I believe that when we consider a statutory revision, that we should also include the purview to advise the Town Council on vacating alleys, streets, rights-of-way, etc. If the Board is interested in pursuing something along these lines, with the attached application, then I will prepare the comprehensive statute needed to implement it and have it ready by the July meeting.

Please let me know. If you have any input, as well, I would appreciate it.

Regards,
/s/Christian W. Waugh
Christian W. Waugh

cc: Town Clerk
Councilman Kenny Sims

WAUGH GRANT PLLC
ATTORNEYS AT LAW

PHONE: 321-800-6008
FAX: 844-206-0245
WAUGHGRANT.COM

GERRARD GRANT*
CHRISTIAN W. WAUGH^
MORGAN FAYOCAVITZ
EMAIL: CWAUGH@WAUGHGRANT.COM

*BOARD CERTIFIED IN TAX LAW
^BOARD CERTIFIED IN REAL ESTATE LAW

June 3, 2021

Via Email
Hilliard Town Council

RE: Vacating an Alley, Right-of-Way, or Street

Dear Town Council,

Recently, a controversy has arisen regarding the method by which the Town may vacate an alley, right-of-way, or street. There are several aspects to this controversy and different stakeholders have different opinions. However, I have been asked to present options to the Town Council for vacating alleys, in particular, and I wanted to discuss them with you.

I. Introduction

By the terms of the Town Charter, the Town Council may deal with its property as it deems fit, so long as it is in the public interest. See Section 3.01, Town Charter. However, there are no regulations, laws, or procedures defined in our Town Code for how to accomplish that. That does not mean it cannot be done. You clearly have the power. The question is just a matter of how.

II. Town Council or Planning & Zoning

And the first thing that needs to be resolved when figuring out *how* is: by which board? The Town Council or Planning & Zoning? The Planning & Zoning Board's powers and duties are described in §62-93 of the Town Code:

- (1) Review and recommend changes in the town's comprehensive plan.
- (2) Coordinate planned development with adjacent municipalities and the county.
- (3) Review and make recommendations on petitions for changes in zoning classifications, amendments and district boundary changes.
- (4) Review and approve requests for special exceptions.
- (5) Review and approve site plans for all proposed zoning changes for multifamily, mobile home parks, mobile home subdivisions, commercial and industrial development and

Orlando office
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(Primary Office)

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(By Appointment Only)

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561 Fieldcrest Drive
The Villages, FL 32162
(By Appointment Only)

*Brief Memo to the Town Council re: Vacating Rights of Way, Alleys, Etc.
June 3, 2021*

redevelopment and planned unit developments and all special exceptions.

(6) Hear and decide appeals where it is alleged that there is an error in any order, requirement, decision or determination made by the land use administrator in the enforcement of this chapter.

(7) Authorize upon appeal such variances from the terms of this chapter which will not be contrary to the public interest when, due to special conditions, a literal enforcement of the provisions of this chapter will result in unnecessary and undue hardship upon the owner of the subject property or structure or the applicant for the variance.

(8) Recommend to the town council the removal of the land use administrator for noncompliance with or nonenforcement of the land development regulations.

As you can see, all of these have to do with zoning, special exceptions, variances, and other matters contained within the land development code. They very specifically do not have anything to do with vacating alleys or streets.

This should not be too surprising. Most cities and counties do not delegate this duty to another board, though many will allow the Planning & Zoning Board to make a recommendation. Regardless, as it stands in the Town of Hilliard, this duty resides with the Town Council.

III. Ordinance or Resolution

As you know, the Town Council primarily acts by way of ordinance or resolution. As the Town Clerk pointed out at the last Planning & Zoning Board meeting, there are certain important acts that can *only* be performed by ordinance. Those are listed in Section 4.11 of your Town Charter as well:

- (1) Adopt or amend an administrative code or establish, alter, or abolish any Town department;*
- (2) Provide for a fine or other penalty or establish a rule or regulation for violation of which a fine or other penalty is imposed;*
- (3) Levy taxes;*
- (4) Grant, renew or extend a franchise;*
- (5) Regulate the rate charged for its services by a public utility;*
- (6) Authorize the borrowing of money;*
- (7) Convey or lease or authorize the conveyance or lease of any lands of the Town;*
- (8) Regulate land use and development;*

*Brief Memo to the Town Council re: Vacating Rights of Way, Alleys, Etc.
June 3, 2021*

- (9) *Amend or repeal any ordinance previously adopted; and*
- (10) *[Adopt an] annual budget.*

Again, you do not find vacating public roads, alleys, etc. in this list. Conveying, leasing, or authorizing the same is simply a different action. Neither does this action regulate land use in any way because it does not relate to the uses of anyone's property or what can be developed on a piece of property.

The next sentence is instructive: "Acts other than those referred to in the preceding sentence may be done either by ordinance or by resolution."

Thus, if the Town Council decides, it may vacate an alley either by ordinance *or* resolution.

IV. Weighing the Options

Again, this is not surprising. Florida Statutes permit counties to do this by resolution and some cities permit this as well, though just as many seem to require ordinances. And just because a Town *may* do a thing does not mean that the Town *must* do a thing.

A resolution would be faster, but the ordinance process slows the process down and ensures that the Town is sure of what is doing before going on. But if the Town does pursue an ordinance, the following would still be required:

1. A survey in order to provide the legal description for the portion of alley, street, etc. to be vacated.
2. Notice to any surrounding or potentially affected property owner.
3. A public hearing regarding the resolution so that people who are affected could oppose it.
4. A determination by the Town that vacating the road or alley is in the public interest and beneficial to the Town of Hilliard.
5. Based on your input and comments of others before, I think we would need to have a utility easement agreement approved in the same resolution, executed, and recorded as a contingency of the vacation.

V. Plan of Action

If you believe that this is something we need to consider for any pending vacation items, then I will be prepared to discuss the necessary plan of action. We would, theoretically, be able to complete this process no later than the second meeting of July, allowing for sufficient notice and a public hearing at that time.

*Brief Memo to the Town Council re: Vacating Rights of Way, Alleys, Etc.
June 3, 2021*

However, it is my recommendation that an ordinance be prepared to implement a process for the Town in order to consider these types of requests in the future. It may be a good idea to set a workshop for all stakeholders to have input on the best method, including the P&Z Board and the Land Use Administrator, as they may be involved in making a recommendation.

There are other reasons that we need a workshop: there needs to be substantial discussion about the fees involved because giving up rights-of-way, alleys, etc. involves a loss to the Town. But it is important to give all potential members of the public this same opportunity and to create a standardized method and policy for how this is achieved. For example, will the Town always require retaining a utility easement?

I will be prepared to discuss this with you tonight and I apologize for the late notice, but this is all a late-breaking matter.

Regards,

Christian W. Waugh

cc: Town Clerk
Land Use Administrator



Town of Hilliard

Application to Close, Abandon, or Vacate Street, Alley, Easement, or Right of Way

FOR OFFICE USE ONLY

File # _____

Application Fee: _____

Filing Date: _____ Acceptance Date: _____

A. PROPOSED CLOSING, ABANDONING, OR VACATON

1. Street, Alley, Right of Way Name to be closed, vacated, or abandoned: _____
2. Legal Description: _____
3. Parcel ID Number(s) and/or Adjoining Parcel ID Number(s): _____
4. Acreage of closure, abandonment, or vacation: _____

B. APPLICANT

1. Applicant's Status Owner (title holder) Agent

2. Name of Applicant(s) or Contact Person(s): _____ Title: _____

Company (if applicable): _____

Mailing address: _____

City: _____ State: _____ ZIP: _____

Telephone: (____) _____ FAX: (____) _____ e-mail: _____

3. If the applicant is agent for the property owner*:

Name of Owner (title holder): _____

Company (if applicable): _____

Mailing address: _____

City: _____ State: _____ ZIP: _____

Telephone: (____) _____ FAX: (____) _____ e-mail: _____

* Must provide executed Property Owner Affidavit authorizing the agent to act on behalf of the property owner.

C. STATEMENT OF PROPOSED CLOSING, ABANDONING, OR VACATON SOUGHT

1. Reason for Request: _____

2. How was the street / alley / easement / right-of-way established? _____

Subdivision Plat Book No: _____ Page No. _____

Plat Name: _____

Official Records Book No: _____ Page No. _____

Other: _____

3. Do you propose to close, abandon, or vacate the entirety of a street, easement, alley, or right-of-way, or only a portion? If a portion, please attach a survey of the portion that you desire the Town to close, abandon, or vacate.:

4. Do public facilities now occupy area to be closed, vacated, or abandoned? If yes, you must provide a current certified survey showing all existing conditions, including locations, and elevations of both open ditches and swales, and subsurface drainage facilities.

5. What is the Purpose of the Easement?

- _____ Drainage
- _____ Utility
- _____ All Utilities
- _____ Others – please specify _____

6. What are the dimensions of the Easement? _____

7. Is there an existing encroachment? _____

- _____ Building
- _____ Pool
- _____ Other

8. Is there a building or mobile home encroachment is involved? If so, the survey is to also show ties from the right-of-way and/or easement lines to the footing, building wall, and edge of eaves.

9. Is a swimming pool encroachment is involved? If so, the survey is to show complete locations and pertinent elevations of the pool and its appurtenances.

D. ATTACHMENTS (One hard copy or one copy in PDF format)

1. Legal description

2. Survey

3. List of property owners by name and address who own property abutting the street, alley, easement, or right-of-way, or portion thereof, to be abandoned, closed, or vacated.

4. List of abutting property owners (with addresses).

5. Copy of executed Adjacent Property Owner

6. Acknowledgement Letter(s) from each abutting property owner.

7. Location Map clearly identifying the location of the proposed closure.

E. FEES

1. Right of Way (streets or alley) - \$2,000 per right of way and Easement - \$1,000

a. The Cost of postage, signs, advertisements, and outside consultants are in addition to the application fee.

b. The applicant is responsible to pay the cost of the advertisement and signs.

c. All applications must pay the cost of any outside consultants' fees.

No application shall be accepted for processing until the required application fee is paid in full by the applicant. Any fees for advertising, signs, necessary technical review or additional reviews of the application by a consultant will be billed to the applicant at the rate of the reviewing entity. The invoice shall be paid in full prior to any action of any kind on the development application.

All attachments are required for a complete application. A completeness review of the application will be conducted within fourteen (14) business days of receipt. If the application is determined to be incomplete, the application will be returned to the applicant.

The Town reserves the right to retain a utility easement where the alley or roadway is located and grant the Town all necessary rights in such utility easement as it may require.

I/We certify and acknowledge that the information contained herein is true and correct to the best of my/our knowledge:

Signature of Applicant

Signature of Co-applicant

Typed or printed name and title of applicant

Typed or printed name of co-applicant

Date

Date

State of _____ County of _____

The foregoing application is acknowledged before me this _____ day of _____, 20_____,

by _____, who is/are personally known to me, or who has/have produced

_____ as identification.

NOTARY SEAL

Signature of Notary Public, State of _____

Town of Hilliard ♦ 15859 West CR 108 ♦ Hilliard, FL 32046 ♦ (904) 845-3555

Abutting Property Owner Acknowledgement Template

DATE: _____

Name: _____ (Abutting Owner)

Address: _____

RE: NOTICE TO ABUTTING OWNER OF REQUEST TO CLOSE
(R/W being Closed)

Dear Mr/Ms _____ (Abutting Owner) _____:

The Town of Hilliard is processing a request to close a right-of-way commonly known as _____ abutting your property. I am seeking your written approval of this closure request so I may provide confirmation to the Town. I intend to use the closed property for _____.

If the closure is approved, a portion of the closed right-of-way adjacent to your property may become your private property. This may result in an increase in your property taxes as to be determined by the Property Appraiser's Office after the closure is complete. The area I'm seeking to close is delineated on a map attached for your reference. If you agree/approve the closure request, please sign the acknowledgement and approval of the closure request below and return to me at _____.

If you wish to speak with someone from the Town of Hilliard concerning this closure request, you may call the _____ at _____ and ask for _____.

Your prompt response is greatly appreciated.

Sincerely,

I ACKNOWLEDGE RECEIPT OF THE ABOVE LETTER AND AGREE TO THE REQUEST FOR CLOSURE OF THE RIGHT OF WAY DESCRIBED HEREIN:

(Sign): _____

(Print Name): _____

**ATTACHMENT
TOWN OF HILLIARD
RESOLUTION NO. 2023-04**

ITEM-3

LAND DEVELOPMENT REGULATIONS FEES

<u>APPLICATION TYPE</u>	<u>FEES</u>
Address	\$10
Annexation	\$500 plus \$20 per acre
Appeals	\$300
Change of Use Zoning Review *	\$25
Comprehensive Plan - Large Scale Amendment >50 acres	\$1,500 plus \$20 per acre
Comprehensive Plan - Small Scale Amendment <50 acres	\$1,000
Comprehensive Plan - Text Amendment	\$1,500
Concurrency	\$300
Consultant Review	Cost plus 10% (Plus \$1,000 Deposit added to Application Fee)
Extension Request	1/2 original filing fee
Home Occupation	\$50
Land Use Approval of Alcohol License	\$25
Land Use Permit Review Fee - Res/Multi/MH/Comm	\$63
Land Use Permit Review Fee - Accessory Structure	\$25
LDR Interpretation	\$25
Letter to Verify Land Use or Zoning	\$25
Lien Research	\$25
Lot Split/Reconfiguration	\$100
Plat Final - Major > 5 lots	\$500 plus \$20 per lot
Plat Final - Minor < 5 lots	\$300
Plat Preliminary - Major > 5 lots	\$500 plus \$20 per lot
Plat Preliminary - Minor < 5 lots	\$300
PUD - Major Deviation	\$1,250 plus \$20 per acre
PUD - Minor Deviation/Amendment	\$1,250 plus \$20 per acre
Replat - Major > 5 lots	\$500 plus \$20 per lot
Replat - Minor < 5 lots	\$300
Rezoning - Conventional	\$1,000
Rezoning PUD - Mixed Use (Fee Based on 1/2 Res. & 1/2 Com.)	\$2,500 plus \$20 per acre
Rezoning PUD - Non-Residential	\$2,500 plus \$20 per acre
Rezoning PUD - Residential	\$2,500 plus \$20 per acre
Sign Review Fee \$0 - \$100	\$60
Sign Review Fee \$1,000 (plus \$5 for each \$1,000 valuation)	\$80
Sign Review Fee \$100 - \$500	\$70
Sign Review Fee \$500 - \$1,000	\$80
Site Clearing/Site Work (Horizontal construction only)	\$100 plus \$20 per acre
Site Plan Review	<10,000 s.f. \$200 or >10,000 s.f \$1,000 plus \$20 per acre
Special Exception - Non-Residential	\$500
Special Exception - Residential	\$300
Street/Right-of-Way Vacation/Abandonment Preliminary Review	\$200
Street/Right-of-Way Vacation/Abandonment Final	TBD
Temporary Use/Special Event	\$50
Variance - Non-Residential	\$500
Variance - Residential	\$300
*Charged by and inspected by zoning, building and fire.	
The cost of postage, letters, signs, advertisements and consultants are in addition to the application fee.	
All applications are voided after one year from date of approval if no action is taken. Extensions may be granted if requested prior to voiding, upon good cause shown.	



AGENDA ITEM REPORT TOWN OF HILLIARD, FLORIDA

TO: Town Council Regular Meeting Meeting Date: March 2, 2023

FROM: ***Ritchie Rowe – Public Works Director***

SUBJECT: Town Council approval of Right of Way Mowing Contract for mowing, weed eating, and trash clean-up, a quantity of eight (8) times per contract year, at a bid unit price from April 10, 2023, through the last cycle in 2025.

BACKGROUND:

Review of 3-year mowing contract. The contract will consist of 8 mow cycles each year.

Advertising took place on February 15th & 22nd in the Nassau County Record and February 16th & 23rd in the Westside Journal. Also, on the Town's website from February 15th until February 23rd. Bids were due on February 23, 2023, by 2:00 p.m. est.

The bidders were requested to provide the following required items:

Business Registration, Workers Comp Insurance Certificate, Liability & Automobile Insurance Certificates, Business Information Sheet, Signed Contract, and a Cashier's Check in the amount of \$2,500.00.

The attached bids were received and opened at 2:00 p.m. February 23, 2023

FINANCIAL IMPACT:

Approval of General Fund Streets Department maintenance expense account contract cost. Annual amount based on bid award.

RECOMMENDATION:

Town Council evaluate bids and make selection.

**RIGHT OF WAY MOWING CONTRACT
TOWN OF HILLIARD, FLORIDA
FEBRUARY 23, 2023 AT 2PM**

**DESCRIPTION: MOWING, WEED EATING, AND TRASH CLEAN UP
(APRIL 10, 2023 THROUGH THE LAST CYCLE IN 2025)**

ESTIMATED QUANTITY: 8 MOW CYCLES PER YEAR FOR A TOTAL OF 24 CYCLES

NO.	BIDDER NAME/ADDRESS	BID UNIT PRICE	BID PRICE ANNUALLY	BID BOND	INSURANCE WORK COMP GEN LIAB \$500,000 MIN TOWN LISTED AS ADDITIONALL INSURED
1	North Florida Lawn Maintnenace, Inc. PO Box 910 - Callahan, Florida 32011	\$4,123.71	\$32,989.68	\$2,500.00	UPON AWARD
2	Eagle Lawn Care of NE FL, Inc. 11828 New Kings Road #109 Jacksonville, Florida 32219	\$8,500.00	\$68,000.00	\$2,500.00	UPON AWARD
3	Dixon Tree and Lawn Service 55071 MT Olive Road - Callahan, Florida 32011	\$8,855.00	\$70,840.00	\$2,500.00	PROVIDED



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Macclenny, FL 32063

NOTICE TO MEMBERS

The purchase of an indemnity bond may be required before any official check will be replaced or refunded in the event it is lost, misplaced or stolen.

No. 0000084

ITEM-4

NOT VALID AFTER 90 DAYS

DATE 02/23/23

OFFICIAL CHECK

PAY

EXACTLY **2,500 Dollars 00 Cents**
two five zero zero dollars zero zero cents

AMOUNT
\$2,500.00

*** Two Thousand Five Hundred Dollars and 00 Cents ***

TO THE
ORDER
OF

TOWN OF HILLIARD

RE: NORTH FL LAWN MAINTENANCE, INC.

PRESIDENT/CEO

*Second Signature Required if over \$10,000

37

⑈0000084348⑈ ⑆263179914⑆ 732200⑈

**BID FORM
RIGHT-OF-WAY MOWING CONTRACT
TOWN OF HILLIARD, FLORIDA**

SUBMITTED BY: North Florida Lawn Maintenance, Inc. **DATE:** 2/23/2023
PO Box 910 **TELE:** 904-879-9812
Callahan, FL 32011 **FAX:** 904-628-0173
EMAIL ADDRESS: emily@nflawninc.com

- 1.01 This Bid is submitted to:
 Town of Hilliard
 15859 West County Road 108
 Hilliard, Florida 32046
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S REPRESENTATIONS

- 2.01 In submitting this Bid, Bidder represents that:
- A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:
- | <u>Addendum No.</u> | <u>Addendum Date</u> |
|---------------------|----------------------|
| n/a | n/a |
| _____ | _____ |
| _____ | _____ |
- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- E. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- F. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the

Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 3 – BIDDER’S CERTIFICATION

3.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 4 – BASIS OF BID

4.01 Bidder will complete the Work in accordance with the Contract Documents for the following prices:

UNIT PRICE BID

Item No.	Description	Estimated Quantity	Unit	Bid Unit Price	Bid Price
	Mowing, Weed Eating, and Trash Clean-up (April 10, 2023 through the last cycle in 2025)	8 Mow Cycles per year for a total of 24 cycles	Each	\$4123.71	\$32,989.68

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, (2) estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and (3) final payment for all unit price Bid items will be based on actual satisfactorily installed quantities, determined as provided in the Contract Documents.

ARTICLE 5 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

North Florida Lawn Maintenance, Inc.

By:

[Signature]

[Printed name]

Aaron Bailey

(Title)

President

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature]

[Printed name]

Emily Bailey

[Title]

Vice-President

Bidder's Business License No.: n/a

Affix corporate seal, if applicable.





ARTICLES OF INCORPORATION OF

NORTH FLORIDA LAWN MAINTENANCE, INC.

The undersigned subscriber to these Articles of Incorporation is a natural person competent to contract and hereby form a Corporation for profit under Chapter 607 of the Florida Statutes.

ARTICLE 1 - NAME

The name of the Corporation is **NORTH FLORIDA LAWN MAINTENANCE, INC.**, (hereinafter, "Corporation").

ARTICLE 2 - PURPOSE OF CORPORATION

The Corporation shall engage in any activity or business permitted under the laws of the United States and of the State of Florida.

ARTICLE 3 - PRINCIPAL OFFICE

The address of the principal office of this Corporation is 4883 Higginbotham Avenue, Callahan, Florida 32011 and the mailing address is the same.

ARTICLE 4 - INCORPORATOR

The name and street address of the incorporator of this Corporation is:

Elsie Sanchez
1840 Southwest 22 Street, 4th Floor
Miami, Florida 33145

ARTICLE 5 - OFFICERS

The officers of the Corporation shall be:

President: Aaron Bailey
Vice-President: Emily Bailey
Secretary: Emily Bailey
Treasurer: Emily Bailey

whose addresses shall be the same as the principal office of the Corporation.



SPIEGEL & UTRERA, P.A.

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ARTICLE 6 - DIRECTOR(S)

The Director(s) of the Corporation shall be:

Emily Bailey
Aaron Bailey

whose addresses shall be the same as the principal office of the Corporation.

ARTICLE 7 - CORPORATE CAPITALIZATION

7.1 The maximum number of shares that this Corporation is authorized to have outstanding at any time is **SEVEN THOUSAND FIVE HUNDRED (7,500)** shares of common stock, each share having the par value of **ONE DOLLAR (\$1.00)**.

7.2 All holders of shares of common stock shall be identical with each other in every respect and the holders of common shares shall be entitled to have unlimited voting rights on all shares and be entitled to one vote for each share on all matters on which Shareholders have the right to vote.

7.3 All holders of shares of common stock, upon the dissolution of the Corporation, shall be entitled to receive the net assets of the Corporation.

7.4 No holder of shares of stock of any class shall have any preemptive right to subscribe to or purchase any additional shares of any class, or any bonds or convertible securities of any nature; provided, however, that the Board of Director(s) may, in authorizing the issuance of shares of stock of any class, confer any preemptive right that the Board of Director(s) may deem advisable in connection with such issuance.

7.5 The Board of Director(s) of the Corporation may authorize the issuance from time to time of shares of its stock of any class, whether now or hereafter authorized, or securities convertible into shares of its stock of any class, whether now or hereafter authorized, for such consideration as the Board of Director(s) may deem advisable, subject to such restrictions or limitations, if any, as may be set forth in the bylaws of the Corporation.

7.6 The Board of Director(s) of the Corporation may, by Restated Articles of Incorporation, classify or reclassify any unissued stock from time to time by setting or changing the preferences, conversions or other rights, voting powers, restrictions, limitations as to dividends, qualifications, or term or conditions of redemption of the stock.



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MAILING ADDRESS - POST OFFICE BOX 450605, MIAMI, FL 33245-0605

ARTICLE 8 - SUB-CHAPTER S CORPORATION

The Corporation may elect to be an S Corporation, as provided in Sub-Chapter S of the Internal Revenue Code of 1986, as amended.

8.1 The shareholders of this Corporation may elect and, if elected, shall continue such election to be an S Corporation as provided in Sub-Chapter S of the Internal Revenue Code of 1986, as amended, unless the shareholders of the Corporation unanimously agree otherwise in writing.

8.2 After this Corporation has elected to be an S Corporation, none of the shareholders of this Corporation, without the written consent of all the shareholders of this Corporation shall take any action, or make any transfer or other disposition of the shareholders' shares of stock in the Corporation, which will result in the termination or revocation of such election to be an S Corporation, as provided in Sub-chapter S of the Internal Revenue Code of 1986, as amended.

8.3 Once the Corporation has elected to be an S Corporation, each share of stock issued by this Corporation shall contain the following legend:

"The shares of stock represented by this certificate cannot be transferred if such transfer would void the election of the Corporation to be taxed under Sub-Chapter S of the Internal Revenue Code of 1986, as amended."

ARTICLE 9 - SHAREHOLDERS' RESTRICTIVE AGREEMENT

All of the shares of stock of this Corporation may be subject to a Shareholders' Restrictive Agreement containing numerous restrictions on the rights of shareholders of the Corporation and transferability of the shares of stock of the Corporation. A copy of the Shareholders' Restrictive Agreement, if any, is on file at the principal office of the Corporation.

ARTICLE 10 - POWERS OF CORPORATION

The Corporation shall have the same powers as an individual to do all things necessary or convenient to carry out its business and affairs, subject to any limitations or restrictions imposed by applicable law or these Articles of Incorporation.

ARTICLE 11 - TERM OF EXISTENCE

This Corporation shall have perpetual existence.



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ARTICLE 12 - REGISTERED OWNER(S)

The Corporation, to the extent permitted by law, shall be entitled to treat the person in whose name any share or right is registered on the books of the Corporation as the owner thereto, for all purposes, and except as may be agreed in writing by the Corporation, the Corporation shall not be bound to recognize any equitable or other claim to, or interest in, such share or right on the part of any other person, whether or not the Corporation shall have notice thereof.

ARTICLE 13 - REGISTERED OFFICE AND REGISTERED AGENT

The initial address of registered office of this Corporation is Spiegel & Utrera, P.A., located at 1840 Southwest 22 Street, 4th Floor, Miami, Florida 33145. The name and address of the registered agent of this Corporation is Spiegel & Utrera, P.A., 1840 Southwest 22 Street, 4th Floor, Miami, Florida 33145.

ARTICLE 14 - BYLAWS

The Board of Director(s) of the Corporation shall have power, without the assent or vote of the shareholders, to make, alter, amend or repeal the Bylaws of the Corporation, but the affirmative vote of a number of Directors equal to a majority of the number who would constitute a full Board of Director(s) at the time of such action shall be necessary to take any action for the making, alteration, amendment or repeal of the Bylaws.

ARTICLE 15 - EFFECTIVE DATE

These Articles of Incorporation shall be effective immediately upon approval of the Secretary of State, State of Florida.

ARTICLE 16 - AMENDMENT

The Corporation reserves the right to amend, alter, change or repeal any provision contained in these Articles of Incorporation, or in any amendment hereto, or to add any provision to these Articles of Incorporation or to any amendment hereto, in any manner now or hereafter prescribed or permitted by the provisions of any applicable statute of the State of Florida, and all rights conferred upon shareholders in these Articles of Incorporation or any amendment hereto are granted subject to this reservation.



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MAILING ADDRESS - POST OFFICE BOX 450605, MIAMI, FL 33245-0605

ARTICLE 17 - INDEMNIFICATION

The Corporation shall indemnify a director or officer of the Corporation who was wholly successful, on the merits or otherwise, in the defense of any proceeding to which the director or officer was a party because the director or officer is or was a director or officer of the Corporation against reasonable attorney fees and expenses incurred by the director or officer in connection with the proceeding. The Corporation may indemnify an individual made a party to a proceeding because the individual is or was a director, officer, employee or agent of the Corporation against liability if authorized in the specific case after determination, in the manner required by the board of directors, that indemnification of the director, officer, employee or agent, as the case may be, is permissible in the circumstances because the director, officer, employee or agent has met the standard of conduct set forth by the board of directors. The indemnification and advancement of attorney fees and expenses for directors, officers, employees and agents of the Corporation shall apply when such persons are serving at the Corporation's request while a director, officer, employee or agent of the Corporation, as the case may be, as a director, officer, partner, trustee, employee or agent of another foreign or domestic Corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, whether or not for profit, as well as in their official capacity with the Corporation. The Corporation also may pay for or reimburse the reasonable attorney fees and expenses incurred by a director, officer, employee or agent of the Corporation who is a party to a proceeding in advance of final disposition of the proceeding. The Corporation also may purchase and maintain insurance on behalf of an individual arising from the individual's status as a director, officer, employee or agent of the Corporation, whether or not the Corporation would have power to indemnify the individual against the same liability under the law. All references in these Articles of Incorporation are deemed to include any amendment or successor thereto. Nothing contained in these Articles of Incorporation shall limit or preclude the exercise of any right relating to indemnification or advance of attorney fees and expenses to any person who is or was a director, officer, employee or agent of the Corporation or the ability of the Corporation otherwise to indemnify or advance expenses to any such person by contract or in any other manner. If any word, clause or sentence of the foregoing provisions regarding indemnification or advancement of the attorney fees or expenses shall be held invalid as contrary to law or public policy, it shall be severable and the provisions remaining shall not be otherwise affected. All references in these Articles of Incorporation to "director", "officer", "employee" and "agent" shall include the heirs, estates, executors, administrators and personal representatives of such persons.



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1840 CORAL WAY, 4TH FLOOR, MIAMI, FL 33145 - (305) 854-6000 - (800) 603-3900 - FACSIMILE (305) 857-3700
MAILING ADDRESS - POST OFFICE BOX 450605, MIAMI, FL 33245-0605

IN WITNESS WHEREOF, I have hereunto set my hand and seal, acknowledged and filed the foregoing Articles of Incorporation under the laws of the State of Florida, this July 27 2001.

Elsie Sanchez, Incorporator

**ACCEPTANCE OF REGISTERED AGENT DESIGNATED
IN ARTICLES OF INCORPORATION**

Spiegel & Utrera, P.A., having a business office identical with the registered office of the Corporation name above, and having been designated as the Registered Agent in the above and foregoing Articles of Incorporation, is familiar with and accepts the obligations of the position of Registered Agent under the applicable provisions of the Florida Statutes.

Spiegel & Utrera, P.A.

By: _____
Natalia Utrera, Vice President

01 JUL 27 AM 11:18
SECRETARY OF STATE
TALLAHASSEE FLORIDA
FILED



SPIEGEL & UTRERA, P.A.

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**BY LAWS
OF
NORTH FLORIDA LAWN
MAINTENANCE, INC.**



SPIEGEL & UTRERA, P.A.

L A W Y E R S

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1840 CORAL WAY, 4TH FLOOR, MIAMI, FL 33145 - (305) 854-6000 - (800) 603-3900 - FACSIMILE (305) 857-3700
MAILING ADDRESS - POST OFFICE BOX 450605, MIAMI, FL 33245-0605

ARTICLE I - OFFICES

The principal office of the Corporation shall be established and maintained as designated in the Articles of Incorporation. The Corporation may also have offices at such places within or without the State of Florida as the Board of Directors (hereinafter, "Board") may from time to time establish.

ARTICLE II - STOCKHOLDERS

1. **PLACE OF MEETINGS.** Meetings of the Stockholders shall be held at the principal office of the Corporation or at such place within or without the State of Florida as the Board shall authorize.
2. **ANNUAL MEETING.** The annual meeting of Stockholders shall be held within six months of the first Monday of each year in the month in which the Corporation's initial Articles of Incorporation were first filed with the Secretary of State. If such day falls on a legal holiday, then the annual meeting of the Stockholders shall be held on the next business day. The Stockholders shall elect the Board and transact such other business as may properly come before the meeting.
3. **SPECIAL MEETINGS.** Special meetings of the Stockholders may be called by the Board or by the President or at the written request of Stockholders owning a majority of the stock entitled to vote at such meeting. A meeting requested by the Stockholders shall be called for a date not less than ten nor more than sixty days after a request is made. The Secretary shall issue the call for the meeting unless the President, the Board or the Stockholders shall designate another to make said call.
4. **NOTICE OF MEETINGS.** Written Notice of each meeting of Stockholders shall state the purpose of the meeting and the time and place of the meeting. Notice shall be mailed to each Stockholder having the right and entitled to vote at such meetings, at the Stockholder's last address as it appears on the records of the Corporation, not less than ten nor more than sixty days before the date set for such meeting. Such notice shall be sufficient for the meeting and any adjournment thereof. If any Stockholder (s) shall transfer their stock after notice, it shall not be necessary to notify the transferee. Any Stockholder may waive notice of any meeting either before, during or after the meeting.
5. **RECORD DATE.** The Board may fix a record date not more than forty days prior to the date set for a meeting of Stockholders as the date of which the Stockholders of record who have the right to and are entitled to notice of and to vote at such meeting and any adjournment thereof shall be determined. Notice that such date has been fixed may be published in the city, town or county where the principal office of the Corporation is located and in each city or town where a transfer agent of the stock of the Corporation is located.
6. **VOTING.** Every Stockholder shall be entitled at each meeting and upon each proposal presented at each meeting to one vote for each share of voting stock recorded in the Stockholder's name on the books of the Corporation on the record date as fixed by the Board. If no record date was fixed, on the date of the meeting the book of records of Stockholders shall be produced at the meeting upon the request of any Stockholder. Upon demand of any Stockholder, the vote for Directors and the vote upon any question before the meeting, shall be by ballot. All elections for Directors shall be decided by plurality vote; all other questions shall be decided by majority vote.

7. **QUORUM.** The presence, in person or by proxy, of Stockholders holding a majority of the stock of the Corporation entitled to vote shall constitute a quorum at all meetings of the Stockholders. In case a quorum shall not be present at any meeting, a majority in interest of the Stockholders entitled to vote thereat present in person or by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until the requisite amount of stock entitled to vote shall be present. At any such adjourned meeting at which the requisite amount of stock entitled to vote be represented, any business may be transacted which might have been transacted at the meeting as originally noticed; but only those Stockholders entitled to vote at the meeting as originally noticed shall be entitled to vote at any adjournment or adjournments thereof.

8. **PROXIES.** At any Stockholders' meeting or any adjournment thereof, any Stockholder of record having the right and entitled to vote thereat may be represented and vote by proxy appointed in a written instrument. No such proxy shall be voted after three years from the date of the instrument unless the instrument provides for a longer period. In the event that any such instrument provides for two or more persons to act as proxies, a majority of such persons present at the meeting, or if only one be present, that one, shall have all the powers conferred by the instrument upon all persons so designated unless the instrument shall otherwise provide.

9. **STOCKHOLDER LIST.** After fixing a record date for a meeting, the Corporation shall prepare an alphabetical list of the names of all its Stockholders who are entitled to notice of a Stockholders' meeting. Such list shall be arranged by voting group with the names and addresses of and the number and class and series, if any, of shares held by each. This list shall be available for inspection by any Stockholder for a period of ten days prior to the meeting.

ARTICLE III - DIRECTORS

1. **BOARD OF DIRECTORS.** The business of the Corporation shall be managed and its corporate powers exercised by a Board each of whom shall be of full age. It shall not be necessary for Directors to be Stockholders. The number of Director(s) shall be determined by the Stockholders at their annual meeting.

2. **ELECTION AND TERM OF DIRECTORS.** Directors shall be elected at the annual meeting of Stockholders and each Director elected shall hold office until the Director's successor has been elected and qualified, or until the Director's prior resignation or removal.

3. **VACANCIES.** If the office of any Director, member of a committee or other office becomes vacant the remaining Directors in office, by a majority vote, may appoint any qualified person to fill such vacancy, who shall hold office for the unexpired term and until a successor shall be duly chosen.

4. **REMOVAL OF DIRECTORS.** Any or all of the Directors may be removed with or without cause by vote of a majority of all the stock outstanding and entitled to vote at a special meeting of Stockholders called for that purpose.

5. **NEWLY CREATED DIRECTORSHIPS.** The number of Directors may be increased by amendment of these By-laws, by the affirmative vote of a majority of the Directors, though less than a quorum, or by the affirmative vote of a majority in interest of the Stockholders, at the annual meeting or at a special meeting called for that purpose, and by like vote the additional

Directors may be chosen at such meeting to hold office until the next annual election and until their successors are elected and qualified.

6. **RESIGNATION.** A Director may resign at any time by giving written notice to the Board, the President or the Secretary of the Corporation. Unless otherwise specified in the notice, the resignation shall take effect upon receipt thereof by the Board or such officer, and the acceptance of the resignation shall not be necessary to make it effective.

7. **QUORUM OF DIRECTORS.** A majority of the Directors shall constitute a quorum for the transaction of business. If at any meeting of the Board there shall be less than a quorum present, a majority of those present may adjourn the meeting until a quorum is obtained and no further notice thereof need be given other than by announcement at the meeting which shall be so adjourned.

7.1 **VOTING.** Each Director shall be entitled at each meeting of the Directors, and upon each proposal, matter or motion therein, to one vote. All proposals, matters or motions presented at any Board of Directors meeting shall be decided by a majority vote of the Directors present at said meeting.

8. **PLACE AND TIME OF BOARD MEETINGS.** The Board may hold its meetings at the office of the Corporation or at such other places either within or without the State of Florida as it may from time to time determine.

9. **REGULAR ANNUAL MEETING.** A regular meeting of the Board shall be held immediately following the annual meeting of the Stockholders at the place of such annual meeting of Stockholders.

10. **NOTICE OF MEETINGS OF THE BOARD.** Regular meetings of the Board may be held without notice at such time and place as it shall from time to time determine. Special meetings of the Board shall be held upon notice to the Directors and may be called by the President upon three days notice to each Director either personally or by mail or by wire or by facsimile; special meetings shall be called by the President or by the Secretary in a like manner on written request by two Directors. Notice of a meeting need not be given to any Director who submits a Waiver of Notice whether before or after the meeting or who attends the meeting without protesting prior thereto or at its commencement, the lack of notice to said Director.

11. **EXECUTIVE AND OTHER COMMITTEES.** The Board, by resolution, may designate two or more of their number to one or more committees, which, to the extent provided in said resolution or these By-laws may exercise the powers of the Board in the management of the business of the Corporation.

12. **COMPENSATION.** No compensation shall be paid to Directors, as such for their services, but by resolution of the Board a fixed sum and expenses for actual attendance, at each regular or special meeting of the Board may be authorized. Nothing herein contained shall be construed to preclude any Director from serving the Corporation in any other capacity and receiving compensation therefore.

ARTICLE IV - OFFICERS

1. OFFICERS, ELECTION AND TERM.

1.1 The Board may elect or appoint a Chairperson, a President, one or more Vice-Presidents, a Secretary, an Assistant Secretary, a Treasurer and an Assistant Treasurer and such other officers as it may determine who shall have duties and powers as hereinafter provided.

1.2 All officers shall be elected or appointed to hold office until the meeting of the Board following the next annual meeting of Stockholders and until their successors have been elected or appointed and qualified.

2. REMOVAL, RESIGNATION, SALARY, ETC..

2.1 Any officer elected or appointed by the Board may be removed by the Board with or without cause.

2.2 In the event of the death, resignation or removal of an officer, the Board in its discretion may elect or appoint a successor to fill the unexpired term.

2.3 Any two or more offices may be held by the same person.

2.4 The salaries of all officers shall be fixed by the Board.

2.5 The Directors may require any officer to give security for the faithful performance of his duties.

3. CHAIRPERSON. The Chairperson of the Board, if one be elected, shall preside at all meetings of the Board and shall have and perform such other duties from time to time as may be assigned to the Chairperson by the Board or the executive committee.

4. PRESIDENT. The President may be the chief executive officer of the Corporation and shall have the general powers and duties of supervision and management usually vested in the office of the President of the Corporation. The President shall preside at all meetings of the Stockholders if present thereat, and in the absence or non-election of the Chairperson of the Board, at all meetings of the Board, and shall have general supervision, direction and control of the business of the Corporation. Except as the Board shall authorize the execution thereof in some other manner, the President shall execute bonds, mortgages and other contracts in behalf of the Corporation and shall cause the seal to be affixed to any instrument requiring it and when so affixed, the seal shall be attested by the signature of the Secretary or the Treasurer or an Assistant Secretary or an Assistant Treasurer.

5. VICE PRESIDENTS. During the absence or disability of the President, the Vice-President, or if there be more than one, the executive Vice-President, shall have all the powers and functions of the President. Each Vice-President shall perform such other duties as the Board shall prescribe.

6. SECRETARY. The Secretary shall attend all meetings of the Board and of the Stockholders, record all votes and minutes of all proceedings in a book to be kept for that purpose, give or cause to be given notice of all meetings of Stockholders and of meetings and special meetings of the Board, keep in safe custody the seal of the Corporation and affix it to any instrument when authorized by the Board or the President, when required, prepare or cause to be prepared and available at each meeting of Stockholders a certified list in alphabetical order of the names of Stockholders entitled to vote thereat, indicating the number of shares of each respective class held

by each, keep all the documents and records of the Corporation as required by law or otherwise in a proper and safe manner, and perform such other duties as may be prescribed by the Board or assigned by the President.

7. **ASSISTANT SECRETARIES.** During the absence or disability of the Secretary, the Assistant-Secretary, or if there are more than one, the one so designated by the Secretary or by the Board, shall have all the powers and functions of the Secretary.

8. **TREASURER.** The Treasurer shall have the custody of the corporate funds and securities, keep full and accurate accounts of receipts and disbursements in the corporate books, deposit all money and other valuables in the name and to the credit of the Corporation in such depositories as may be designated by the Board, disburse the funds of the Corporation as may be ordered or authorized by the Board and preserve proper vouchers for such disbursements, render to the President and Board at the regular meetings of the Board, or whenever they require it, an account of all the transactions made as Treasurer and of the financial condition of the Corporation. The Treasurer shall also render a full financial report at the annual meeting of the Stockholders if so requested. The Treasurer may request and shall be furnished by all corporate officers and agents with such reports and statements as he may require as to all financial transactions of the Corporation, and perform such other duties as are designated by these By-laws or as from time to time are assigned by the Board.

9. **ASSISTANT TREASURERS.** During the absence or disability of the Treasurer, the Assistant Treasurer, or if there be more than one, the one so designated by the Treasurer or the Board, shall have all the powers and functions of the Treasurer.

10. **SURETIES AND BONDS.** In case the Board shall so require, any officer or agent of the Corporation shall execute to the Corporation a bond in such sum and with such surety or sureties as the Board may direct, conditioned upon the faithful performance of duties to the Corporation and including responsibility for negligence and for the accounting of all property, funds or securities of the Corporation which the officer or agent may be responsible for.

ARTICLE V - CERTIFICATES FOR SHARES

1. **CERTIFICATES.** The shares of the Corporation shall be represented by certificates. They shall be numbered and entered in the books of the Corporation as they are issued. They shall exhibit the holder's name, the number of shares and shall be signed by the President and Secretary and shall bear the corporate seal. When such certificates are signed by the transfer agent or an assistant transfer agent or by a transfer clerk acting on behalf of the Corporation and a registrar, the signatures of such officers may be facsimiles.

2. **LOST OR DESTROYED CERTIFICATES.** The Board may direct a new certificate or certificates to be issued in place of any certificates theretofore issued by the Corporation alleged to have been lost or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate to be lost or destroyed. When authorizing such issue of a new certificate or certificates, the Board may, in its discretion as a condition preceding the issuance thereof, require the owner of such lost or destroyed certificate or certificates, or the owner's legal representative, to advertise the same in such manner as it shall require and/or give the Corporation a bond in such sum and with such surety or sureties as it may direct as indemnity

against any claim that may be made against the Corporation with respect to the certificate alleged to have been lost or destroyed.

3. TRANSFER OF SHARES. Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the Corporation to issue a new certificate to the person entitled thereto, and cancel the old certificate; every such transfer shall be entered on the transfer book of the Corporation which shall be kept at its principal office. Whenever a transfer shall be made for collateral security, and not absolutely, it shall be so expressed in the entry of the transfer ledger. No transfer shall be made within ten days next preceding the annual meeting of the Stockholders.

4. CLOSING TRANSFER BOOKS. The Board shall have the power to close the share transfer books of the Corporation for a period of not more than ten days during the thirty day period immediately preceding

4.1 any Stockholder's meeting, or

4.2 any date upon which Stockholders shall be called upon to or have a right to take action without a meeting, or

4.3 any date fixed for the payment of a dividend or any other form of distribution, and only those Stockholders of record at the time the transfer books are closed, shall be recognized as such for the purpose of

4.3.1 receiving notice of or voting at such meeting,

4.3.2 allowing them to take appropriate action, or

4.3.3 entitling them to receive any dividend or other form of distribution.

ARTICLE VI - DIVIDENDS

The Board may out of funds legally available, at any regular or special meeting, declare dividends upon the capital stock of the Corporation as and when it deems expedient. Before declaring any dividend there may be set apart out of any funds of the Corporation available for dividends, such sum or sums as the Board from time to time in their discretion deem proper for working capital or as a reserve fund to meet contingencies or for equalizing dividends for such other purposes as the Board shall deem conducive to the interest of the Corporation.

ARTICLE VII - CORPORATE SEAL

The seal of the Corporation shall bear the name of the Corporation, the year of its organization and the words "CORPORATE SEAL, FLORIDA" or "OFFICIAL CORPORATE SEAL, FLORIDA". The seal may be used by causing it to be impressed directly on the instrument or writing to be sealed, or upon adhesive substance affixed thereto. The seal on the certificates for shares or on any corporate obligation for the payment of money may be a facsimile, or in the alternative, engraved or printed.

ARTICLE VIII - EXECUTION OF INSTRUMENTS

All corporate instruments and documents shall be signed or countersigned, executed, verified or acknowledged by such officer or officers or other person or persons as the Board may from time to time designate. All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, agent or agents of the Corporation, and in such manner as shall be determined from time to time by resolution of the Board.

ARTICLE IX - FISCAL YEAR

The fiscal year shall begin on the first day of each year.

ARTICLE X - NOTICE AND WAIVER OF NOTICE

- SUFFICIENCY OF NOTICE.** Whenever any notice is required by these By-laws to be given, personal notice is not meant unless expressly so stated, and any notice so required shall be deemed to be sufficient if given by depositing the same in a United States Postal Service post office mail collecting container in a sealed postage-paid wrapper, addressed to the person entitled thereto at the last known post office address, and such notice shall be deemed to have been given on the day of such mailing. Stockholders not entitled to vote shall not be entitled to receive notice of any meetings except as otherwise provided by Statute.
- WAIVERS.** Whenever any notice whatever is required to be given under the provisions of any law, or under the provisions of the Articles of Incorporation of the Corporation or these By-laws, a waiver thereof in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent thereto.

ARTICLE XI - CONSTRUCTION

Whenever a conflict arises between the language of these By-laws and the Articles of Incorporation, the Articles of Incorporation shall govern.

ARTICLE XII - CLOSE CORPORATION

- CONDUCT OF BUSINESS WITHOUT MEETINGS.** Any action of the Stockholders, Directors or committees may be taken without a meeting if consent in writing, setting forth the action so taken, shall be signed by all persons who would be entitled to vote on such action at a meeting and filed with the Secretary of the Corporation as part of the proceedings of the Stockholders, Director or committees as the case may be.
- MANAGEMENT BY STOCKHOLDERS.** In the event the Stockholders are named in the Articles of Incorporation and are empowered therein to manage the affairs of the Corporation in lieu of Directors, the Stockholders of the Corporation shall be deemed Directors for the purposes of these By-laws and wherever the words "Directors", "Board of Directors" or "Board" appear in these By-laws those words shall be taken to mean Stockholders.
- MANAGEMENT BY A BOARD.** The Stockholders may, by majority vote, create a Board to manage the business of the Corporation and exercise its corporate powers.

ARTICLE XIII - AMENDMENTS

These By-laws may be altered or repealed by the affirmative vote of a majority of the Board of Directors if notice of the proposed alteration or repeal to be made is contained in the notice of such annual or special meeting of the Board of Directors.

ARTICLE XIV - EMERGENCY BY-LAWS

1. **CONDUCT OF BUSINESS WITHOUT MEETINGS.** Pursuant to Florida Statute 607.0207 the Corporation adopts the following By-laws, which shall be effective only if a quorum of the Directors of the Corporation cannot be readily assembled because of some catastrophic event.
2. **CALLING A MEETING.** In the event of such catastrophic event, any member of the Board shall be authorized to call a meeting of the Board. Such member calling an emergency meeting shall use any means of communication at the member's disposal to notify all other members of the Board of such meeting.
3. **QUORUM.** Any one member of the Board shall constitute a quorum of the Board. The members of the Board meeting during such an emergency, may select any person or persons as additional Board members, officers or agents of the Corporation.
4. **INDEMNIFICATION.** The members of such emergency Board are authorized to utilize any means at their disposal to preserve and protect the assets of the Corporation. Any action taken in good faith and acted upon in accordance with these By-laws shall bind the Corporation; and the Corporation shall hold harmless any Director, officer, employee or agent who undertakes an action pursuant to these By-laws.
5. **TERMINATION OF EMERGENCY BY-LAWS.** These emergency By-laws shall not be effective at the end of the emergency period.

NORTH  FLORIDA
LAWN MAINTENANCE

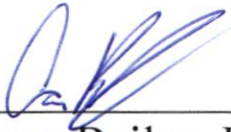
ITEM-4

PO Box 910, Callahan, FL 32011 ~ p 904-879-9812
f 904-628-0173 ~ office@nflawninc.com

February 23, 2023

Re: Town of Hilliard
Right-of-Way Mowing

Per conditions of bidding documents related to Right-of-Way mowing for the Town of Hilliard, the undersigned agrees and provides a bond via cashier's check in the amount of \$2,500.00.



Aaron Bailey, President

CASHIER'S CHECK

6623802117

ITEM-4

0066238 11-24
Office AU # 1210(8)

Remitter: **BOBBY WILLIAMS**
Operator I.D.: **u820950**

February 22, 2023

PAY TO THE ORDER OF *****THE TOWN OF HILLARD FLORIDA*****

****Two Thousand Five Hundred and 00/100 -US Dollars ****

****\$2,500.00****

Payee Address:
Memo:

VOID IF OVER US \$ 2,500.00

WELLS FARGO BANK, N.A.
542196 US HWY 1
CALLAHAN, FL 32011
FOR INQUIRIES CALL (480) 394-3122

Murva S. Can
CONTROLLER

Security Features Included. Details on Back.

59

⑈6623802117⑈ ⑆121000248⑆4861 513240⑈

BID FORM
RIGHT-OF-WAY MOWING CONTRACT
TOWN OF HILLIARD, FLORIDA

SUBMITTED BY: Eagle Lawn Care of DATE: 2-20-2023
NE FL, INC TELE: 904 813 9727
11828 New Kings Rd FAX: 904 879 2518
#109
Jacksonville FL 32219
EMAIL ADDRESS: _____

1.01 This Bid is submitted to:
Town of Hilliard
15859 West County Road 108
Hilliard, Florida 32046

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S REPRESENTATIONS

2.01 In submitting this Bid, Bidder represents that:
A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum Date</u>
<u>N/A</u>	_____
_____	_____
_____	_____

- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- E. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- F. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the

Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 3 – BIDDER’S CERTIFICATION

3.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 - 2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 4 – BASIS OF BID

4.01 Bidder will complete the Work in accordance with the Contract Documents for the following prices:

UNIT PRICE BID

Item No.	Description	Estimated Quantity	Unit	Bid Unit Price	Bid Price
	Mowing, Weed Eating, and Trash Clean-up (April 10, 2023 through the last cycle in 2025)	8 Mow Cycles per year for a total of 24 cycles	Each	8500.00	68,000.00 annually

24 cycles (3yrs) = \$204,000.00

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, (2) estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and (3) final payment for all unit price Bid items will be based on actual satisfactorily installed quantities, determined as provided in the Contract Documents.

ARTICLE 5 – BID SUBMITTAL

BIDDER: [Indicate correct name of bidding entity]

Eagle Lawn Care of NE Florida, Inc

By: [Signature] Bobby Williams

[Printed name] Bobby Williams

(Title) VP

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: [Signature]

[Printed name]

[Title]

Bidder's Business License No.:

Affix corporate seal, if applicable.



[Department of State](#) / [Division of Corporations](#) / [Search Records](#) / [Search by Entity Name](#) /

Detail by Entity Name

Florida Profit Corporation
EAGLE LAWN CARE OF NE FLORIDA INC

Filing Information

Document Number	P08000046491
FEI/EIN Number	26-2575977
Date Filed	05/08/2008
Effective Date	05/08/2008
State	FL
Status	ACTIVE
Last Event	REINSTATEMENT
Event Date Filed	04/17/2013

Principal Address

11828 NEW KINGS ROAD
109
JACKSONVILLE, FL 32219

Changed: 04/23/2012

Mailing Address

PO BOX 1541
CALLAHAN, FL 32011

Registered Agent Name & Address

WILLIAMS, BOBBY L.
54001 PADDOCK COURT
CALLAHAN, FL 32011

Name Changed: 08/07/2008

Officer/Director Detail

Name & Address

Title P

WILLIAMS, BRENDA D
54001 PADDOCK COURT
CALLAHAN, FL 32011

Title VP

**TOWN OF HILLIARD, FLORIDA
RIGHT-OF-WAY MOWING SERVICES CONTRACT**

THIS AGREEMENT, made this _____ day of _____, _____, between the Town of Hilliard, Florida (hereinafter designated the Town) and

Name: Eagle Lawn Care of NE Florida, Inc

Address: 11828 New Kings Rd #109, Jacksonville FL 32219
(hereinafter designated the Contractor)

WITNESSETH, that for and in consideration of the payments and agreements hereinafter mentioned, the parties agree as follows.

ARTICLE 1

The Contractor agrees to furnish **Mowing Services** all in accordance with the Request for Proposals, including the bidding requirements, specifications, and other supporting documents incorporated therein, attached hereto and made a part hereof for the price specified in its bid dated February 23, 2023, except as otherwise stated or contradicted more specifically in this main Agreement document. A copy of Contractor's Standard Bid Form is also attached hereto and made a part hereof. Upon 24 hours written notice provided by the Town, either in email or other writing, the Town may cancel a regularly scheduled mow without cause and Contractor shall not be entitled to payment for the mow. The Total contract price shall be reduced by the *pro rata* amount Contractor would have earned but for the cancellation.

ARTICLE 2

In consideration of the foregoing, the Town agrees to pay to the Contractor as compensation for everything furnished and done by the Contractor under this contract, and for well and faithfully completing the work, as herein provided, such sums of money as is set out in the accompanying bid. Once the work is completed, Contractor shall submit invoices to PWD Designee for approval. PWD shall provide approved invoices to Town Council at least one week prior to the town council meeting in which the invoice is being approved. The Town shall have at least 30 days to pay out all outstanding approved invoices.

ARTICLE 3

The Contractor will defend, indemnify, and hold harmless the Town of Hilliard, Florida, its officers, agents, servants and employees against any and all claims, demands, liabilities, losses, damages and expenses the Town of Hilliard, Florida, its officers, agents, servants and employees may incur arising out of or in any way connected with the Contractor's performance of or failure to perform its obligations under this contract.

ARTICLE 4

- a. The Contractor shall not assign, sub-contract, or in any way transfer any interest in this contract in whole or in part, or delegate any of the work to be performed hereunder to any other person, firm, company, corporation, or organization without the express written permission of the Town. The Contractor shall not assign any moneys due, or to become due to him under this Contract, without prior express written consent of the Town.
- b. The bankruptcy, takeover or merger, outright purchase, majority stock purchase by another organization, or other change in ownership or status of the Contractor, or any assignment for the benefit of creditors, shall at the election of the Town:
 - 1) Terminate this Contract with all pertinent contractual conditions contained herein affected in favor of the Town.
 - 2) Fully obligate the newly formed organization, corporation, and/or legal entity to fulfill all terms and conditions of the Contract, and to perform or supply items in accordance with the specification or descriptions contained herein.
- c. Failure of any subcontractor to perform shall not relieve the Contractor of its obligations to fulfill all terms and conditions of the Contract as set forth herein.

ARTICLE 5

- a. The failure of either party to fulfill a material obligation of the Agreement, which continues for fourteen days after written notice, the falseness of any statement by the Contractor in its bid documents, the institution by or against the Contractor of any bankruptcy, receivership or insolvency proceedings, or the making of any assignment for the benefit of its creditors, shall constitute an event of default. Upon an event of default, the other party to the contract may terminate the contract, in addition to all other remedies to which it may be entitled by law or in equity, including without limit all rights the Town may have to the bond required hereunder.
- b. The failure of the Town at any time to require performance by the Contractor of any provisions hereof shall in no way affect the right of the Town to enforce same, nor shall waiver by the Town of any breach of said provisions be taken to be a waiver of said provisions or any subsequent breach of said provisions.

ARTICLE 6

If any portion of this contract is found to be unenforceable or contrary to law, it shall not affect the validity of the remainder of the Contract.

ARTICLE 7

The documents expressly incorporated herein comprise the parties' entire contract and there are no other agreements between the parties. Any amendments to the contract must be in writing and signed by the duly authorized representatives of the parties.

ARTICLE 8

Florida law governs this Agreement. The sole and exclusive venue for any dispute between the parties shall be Nassau County, Florida.

CONTRACTOR

TOWN OF HILLIARD, FLORIDA

By: Bobby Williams
Signature

By: _____
Kenny A Sims, Sr., Council President

Bobby Williams, VP
Printed Name and Title

Attests: _____
Lisa Purvis, Town Clerk

Approved: _____
John P. Beasley, Mayor

Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

▶ Go to www.irs.gov/FormW9 for instructions and the latest information.

Print or type.
See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
EAGLE LAWN CARE OF NE FLORIDA, INC

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

Individual/sole proprietor or single-member LLC

C Corporation

S Corporation

Partnership

Trust/estate

Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

Other (see instructions) ▶ _____

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.
11828 NEW KINGS ROAD, SUITE 109

6 City, state, and ZIP code
JACKSONVILLE, FL 32219

7 List account number(s) here (optional)

Requester's name and address (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			-					
--	--	--	---	--	--	--	--	--

or

Employer identification number


2	6	-	2	5	7	5	9	7	7
---	---	---	---	---	---	---	---	---	---

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person ▶  Date ▶ **2-21-2023**

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
 - Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
 - Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
 - Form 1099-S (proceeds from real estate transactions)
 - Form 1099-K (merchant card and third party network transactions)
 - Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
 - Form 1099-C (canceled debt)
 - Form 1099-A (acquisition or abandonment of secured property)
- Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

THIS DOCUMENT HAS A TRUE WATERMARK AND HOLOGRAM.

OFFICIAL CHECK

ABSENCE OF THESE FEATURES WILL INDICATE A COPY.



VyStar[®]

Credit Union

Date: 02/22/23

49-55

1031

Check No.

ITEM-4

5366503

Notice to Purchaser:
As a condition to this institution's insurance of this check, in the event this check is lost, stolen or destroyed, a sworn affidavit and 90-day waiting period from the date of check issuance will be required prior to replacement of this check.

PAY Two Thousand Five Hundred Dollars and 00 Cents

\$2,500.00

DRAWER: VYSTAR CREDIT UNION

Chief Executive Officer

Issued by MoneyGram Payment Systems, Inc.
PO Box 9476 Minneapolis, MN 55480
Drawee: BOKF, NA, EUFAULA, OK

TO Town of Hilliard
THE RE: DIXON TREE AND LAWN SERVICE
ORDER
OF

Bid Bond

69

⑈ 5366503 ⑆ ⑆ 10310055 ⑆ ⑆ 01600 ⑆ ⑆ 1897008 ⑆ ⑆

95082 / M 7404987-D

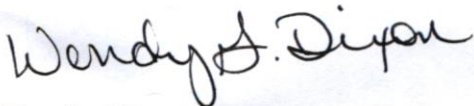
Dixon Tree and Lawn Service**55071 MT Olive Rd****Callahan, FL 32011****904-226-4557**

February 22, 2023

Town Of Hilliard,

This letter is to acknowledge that we, Dixon Tree and Lawn Service agree to the terms of the bid bond. Dixon Tree and Lawn Service has provided a cashier's check in the amount of \$2500 payable to the Town of Hilliard. Funds are to be returned to Dixon Tree and Lawn Service as indicated in line #20 of the Town of Hilliard's mowing contract.

Thank you,



Wendy Dixon

Chapman County of Georgia
1807
February 23, 1807
1807-1808

February 23, 1807

This is to acknowledge that on the 23rd day of February 1807
of the County of Chapman and State of Georgia
I, the undersigned, have received from the said
County of Chapman, the sum of \$100.00
and I hereby certify that the same is
correctly paid to the said County of Chapman
for the purpose of the said bill of Hilliard's mowing
contract.

Blank page

[Handwritten signature]
Wendell D. ...

Dixon Tree and Lawn Service

55071 Mt Olive Rd

Callahan, FL 32011

904-879-6709

dixontreeandlawnservice@comcast.net

Town of Hilliard

15859 West County Road 108

Hilliard, FL 32046

904-845-3555

February 23, 2023

We appreciate your business and enjoyed working with you this past year. We also look forward to serving the Town of Hilliard in the upcoming months and years to come.

I have enclosed our bid as well as our current insurance documents for your review. We appreciate your consideration.

Kindest Regards,

Wendy Dixon

BID FORM
RIGHT-OF-WAY MOWING CONTRACT
TOWN OF HILLIARD, FLORIDA

SUBMITTED BY: Dixon Tree and Lawn Service DATE: 2/23/2023
55071 MT Olive Rd. TELE: 904-226-4457
Callahan, FL 32011 FAX: _____
EMAIL ADDRESS: dixontree and lawnservice@comcast.net

1.01 This Bid is submitted to:
Town of Hilliard
15859 West County Road 108
Hilliard, Florida 32046

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S REPRESENTATIONS

2.01 In submitting this Bid, Bidder represents that:
A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- E. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- F. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the

Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 3 – BIDDER’S CERTIFICATION

3.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 4 – BASIS OF BID

4.01 Bidder will complete the Work in accordance with the Contract Documents for the following prices:

UNIT PRICE BID

Item No.	Description	Estimated Quantity	Unit	Bid Unit Price	Bid Price
	Mowing, Weed Eating, and Trash Clean-up (April 10, 2023 through the last cycle in 2025)	8 Mow Cycles per year for a total of 24 cycles	Each	8,855	\$212,520

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, (2) estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and (3) final payment for all unit price Bid items will be based on actual satisfactorily installed quantities, determined as provided in the Contract Documents.

ARTICLE 5 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

Dixon Tree and Lawn Service

By: *[Signature]* Wendy S. Dixon

[Printed name] Wendy Dixon

[Title] Owner

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: *[Signature]* _____

[Printed name] _____

[Title] _____

Bidder's Business License No.: _____

Affix corporate seal, if applicable.



AGENDA ITEM REPORT TOWN OF HILLIARD, FLORIDA

TO: Town Council Regular Meeting

Meeting Date: March 02, 2023

FROM: ***Alicia Head – Administrative Assistant***

SUBJECT: Town Council to discuss a Car show lead by David Taylor to be held on Town Hall Property at the Town Hall Park in October 2023.

BACKGROUND:

Mr. Taylor hosts a car show every year in October and reached out to utilize our Town Hall Park for his next event. He is requesting the Town to advise where the proceeds could be utilized. He also asked that we partner up to make this an annual Town Event.

FINANCIAL IMPACT:

TBD

RECOMMENDATION:

Town Council to allow the Town Hall Park to be used for the Car show and discuss if this will be added to The Town of Hilliard Events that are scheduled.



AGENDA ITEM REPORT

TOWN OF HILLIARD, FLORIDA

TO: Town Council Regular Meeting

Meeting Date: March 2, 2023

FROM: **Lee Anne Wollitz - Land Use Administrator**

SUBJECT: Town Council Adoption of Resolution No. 2023-06; Water and Wastewater Utility Specifications and Documentation Requirements; Manual of Standards and Specifications for Utilities Construction, for the Town of Hilliard; and providing for an effective date.

BACKGROUND:

The Town held several Joint workshops involving the following: Town Council, Planning and Zoning Board, Town Attorney, Town engineer and our Town departments in early 2022 to discuss the creation of design standards regarding infrastructure requirements for future development.

As a result of these workshops Mittauer and Associates produced the "Manual of Standards and Specifications for Utilities Construction, Town of Hilliard" dated March 2022.

At the workshop held on February 2, 2023, the council requested several changes. Those have been made.

During the February 2nd town Council meeting the council requested to see this adoption in form of resolution for the March 2, 2023, meeting.

FINANCIAL IMPACT:

The Town has been invoiced and has paid through our regular monthly use of Mittauer & Associates to produce this document. No future financial impact is expected.

RECOMMENDATION:

This will be a joint recommendation from Lee Anne Wollitz, Land Use Administrator and Richie Rowe, Public Works Director.

It is our recommendation that the Council adopt the manual via Resolution 2023-06 and give an effective date.

RESOLUTION NO. 2023-06

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF HILLIARD, FLORIDA, A MUNICIPAL CORPORATION ADOPTING WATER AND WASTEWATER UTILITY SPECIFICATIONS AND DOCUMENTATION REQUIREMENTS; MANUAL OF STANDARDS AND SPECIFICATIONS FOR UTILITY CONSTRUCTION FOR THE TOWN OF HILLIARD; A MANUAL TO SUPPLEMENT THE TOWN OF HILLIARD CODE OF ORDINANCES; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Town of Hilliard desires to supplement Chapter 58 Utilities of the Hilliard Town Code; and provide Water and Wastewater Specifications and Documentation Requirements; and

WHEREAS, the Town of Hilliard desires to have standards and specifications adopted to establish minimum acceptable standards for the design and construction of water distribution and transmission facilities, wastewater collection and transmission facilities and reclaim water distribution in the TOWN. Such facilities include water main, gravity sewers, wastewater fore mains, wastewater pump stations, reclaim water mains, and miscellaneous related appurtenances associated with such systems; and

NOW THEREFORE BE IT RESOLVED, that the Town of Hilliard has adopted Water and Wastewater Utility Specifications and Documentation Requirements to be called, "Utility Manual" as a supplement to Chapter 58 Utilities of the Hilliard Town Code.

THIS RESOLUTION adopted and effective this _____, day of _____, _____ by the Town Council of the Town of Hilliard, Florida.

Kenneth A. Sims, Sr.
Council President

ATTEST:

Lisa Purvis
Town Clerk

APPROVED:

John P. Beasley
Mayor

WATER & WASTEWATER UTILITY SPECIFICATIONS AND DOCUMENTATION REQUIREMENTS



TOWN OF HILLIARD, FLORIDA

EFFECTIVE DATE
February 2023

**MANUAL OF STANDARDS AND SPECIFICATIONS
FOR UTILITIES CONSTRUCTION**

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INTRODUCTION

DOCUMENT TITLE

The title of this document is "Manual of Standards and Specifications for Utilities Construction, Town of Hilliard ("TOWN"), Florida." Other Town of Hilliard documents that supplement this document include the Town of Hilliard Code of Ordinances.

JURISDICTION

This MANUAL shall apply to all proposed water, wastewater and reclaimed water systems to be owned, operated or maintained by the TOWN.

Private facilities connecting to the TOWN's infrastructure will require review to ensure proposed infrastructure meets minimum requirements and minimizes potential for infiltration and inflow to the sewer system as well as limits water loss in the water system(s).

PURPOSE

These standards and specifications are adopted to establish minimum acceptable standards for the design and construction of water distribution and transmission facilities, wastewater collection and transmission facilities and reclaimed water distribution in the TOWN. Such facilities include water mains, gravity sewers, wastewater force mains, wastewater pump stations, reclaimed water mains, and miscellaneous related appurtenances associated with such systems.

SCOPE

This document is divided into three parts. Part 1 - Standards, includes Divisions I and II. Division I presents general requirements governing review and approval of plans, and construction inspection and acceptance. Division II presents design standards for water, wastewater and reclaimed water systems.

Part 2 of this document, Specifications, includes Divisions III, IV, V and VI. These three Divisions contain detailed technical specifications governing construction of water, wastewater and reclaimed water systems.

Part 3 of this document is Standard Drawings (Appendix C). This part contains Drawings showing standard details associated with the installation of water, wastewater and reclaimed water systems.

This document applies to facilities constructed by private entities that will be conveyed to the TOWN for final ownership, maintenance, and operation. These standards and specifications do not apply to private developments such as, but not limited to: apartment complexes, condominium developments, and/or other developments that operate under a common ownership where private members pay rent to live within a development. These locations shall be coordinated with TOWN on an individual basis where the TOWN will provide bulk water through a master meter with backflow preventor assembly and/or accept bulk wastewater from one or more private pump stations. The TOWN's ownership of improvements will be coordinated with the individual developer and will extend no further than existing public rights of way and/or utility easement locations specifically agreed to by the TOWN and developer.

PART 1 - STANDARDS
DIVISION I
GENERAL REQUIREMENTS

SECTION 10

DEFINITIONS

10.1 DEFINITIONS

Except where specific definitions are used within a specific section, the following terms, phrases, words, and their derivation shall have the meaning given herein when consistent with the context. Words used in the present tense include the future tense, words in the plural number include the singular number, and words in the singular number include the plural number. The word “shall” is mandatory, and the word “may” is permissive.

AASHTO - means American Association of State Highway and Transportation Officials. Any reference to AASHTO standards shall be taken to mean the most recently published revision unless otherwise specified.

ANSI - means American National Standards Institute. Any reference to ANSI standards shall be taken to mean the most recently published revision unless otherwise specified.

ASTM - means American Society for Testing Materials. Any reference to ASTM standards shall be taken to mean the most recently published revision unless otherwise specified.

AWWA - means American Water Works Association. Any reference to AWWA Standards shall be taken to mean the most recently published revision unless otherwise specified.

CONTRACTOR - means the person, firm, or corporation with whom the contract for work has been made by the Owner, the Developer or the TOWN.

TOWN - means the Town of Hilliard Commissioners and/or its designated representative(s).

TOWN ENGINEER - Town’s designated Town Engineer.

DEVELOPER - means the person, firm, or corporation engaged in developing or improving real estate for use or occupancy.

DESIGN ENGINEER - means an engineer or engineering firm registered with the State of Florida Department of Professional Regulation, retained to provide professional engineering services for a project.

DIPRA - means Ductile Iron Pipe Research Association.

DIRECTOR - means the Director of Public Works of the Town of Hilliard, Florida, acting directly or through an assistant or other representative authorized by him.

DRAWINGS - means engineering drawings prepared by an ENGINEER to show the proposed construction.

ENGINEER - means an engineer or engineering firm registered with the State of Florida Department of Professional Regulation.

FDOT - means the Department of Transportation, State of Florida.

GEOTECHNICAL/SOILS ENGINEER - means a Registered Florida Engineer who provides services related to terrain evaluation and site selection, subsurface exploration and sampling, determination of soil and rock properties, foundation engineering, settlement and seepage analysis, design of earth and earth retaining structures, the design of subsurface drainage systems and the improvement of soil properties and foundation conditions, and testing and evaluation of construction materials.

MANUAL - means this the Town of Hilliard Manual of Standards and Specifications for Utilities Construction.

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES - means the United States Department of Transportation Manual on Traffic Control Devices, latest edition.

NEMA - means National Electrical Manufacturers Association. Any reference to NEMA Standards shall be taken to mean the most recently published revision unless otherwise specified.

NSF - means National Sanitation Test Laboratory Foundation. Any reference to NSF Standards shall be taken to mean the most recently published revision unless otherwise specified.

OSHA - means the Federal Occupational Safety and Health Administration.

OWNER - means the person, firm, corporation, or governmental unit holding right of possession of the real estate upon which construction is to take place.

PLANS - means DRAWINGS as defined herein above.

PUBLIC WORKS - means the Public Works Department of the Town of Hilliard, Florida.

SANITARY SEWER - means pipes, manholes and structures that collect and convey wastewater by means of gravity, including laterals, clean-outs, etc.

SITE DEVELOPMENT ORDINANCE - means the Town of Hilliard Site Development Ordinance, including latest amendments.

SPECIFICATIONS - means the specifications contained in Part 2 of this MANUAL.

STANDARDS - means the minimum design standards contained in Part 1 of this MANUAL.

STANDARD DRAWINGS - means the detailed drawings in Part 3 of this MANUAL related to water, wastewater and reclaimed water main materials and installation.

STANDARD SPECIFICATIONS - means the Department of Transportation, State of Florida, Standard Specification for Road and Bridge Construction, latest edition.

SUBDIVISION REGULATIONS - means the Town of Hilliard Subdivision Regulations, latest edition.

UTILITY ACCOMMODATION GUIDE - means the State of Florida Department of Transportation Utility Accommodation Guide, latest edition.

WATER MAINS - means water transmission mains, distribution mains, pipes, fittings, valves, hydrants, services, meters and miscellaneous related appurtenances.

WASTEWATER MAINS - means wastewater gravity sewers, force mains, pump stations, fittings, valves, service laterals, and miscellaneous related appurtenances.

WORK - means the labor, materials, equipment, supplies, services and other items necessary for the execution, completion and fulfillment of the contract.

SECTION 11**PLAN REVIEW, APPROVAL, CONSTRUCTION, AND ACCEPTANCE OF WATER, WASTEWATER, AND RECLAIMED WATER SYSTEM IMPROVEMENTS****11.1 PLANS AND SPECIFICATIONS****11.1.1 GENERAL**

All submitted plans shall be standard size sheet (24" x 36", 22" x 34", or 11" x 17") with title block. Graphic scale(s) shall be provided on each sheet and all lettering shall be 1/8" or larger to permit photographic reproduction. Submittal of specifications will only be required when special facilities outside the scope of this MANUAL are proposed. All PLANS sheets and the title page of submitted specifications must be signed, sealed and dated by the DEVELOPER's ENGINEER.

11.1.2 MASTER PLAN

Whenever possible, the entire water, wastewater and reclaimed water systems shall be shown on a single Master Plan. The Master Plan shall indicate the general locations of all mains, manholes, valves, hydrants, services and service laterals with respect to the proposed development improvements and the existing water, wastewater and reclaimed systems. Main sizes shall be indicated on the Master Plan.

11.1.3 PLAN AND PROFILE

All gravity sewers, wastewater force mains, reclaimed water mains and off-site water mains shall be drawn in plan and profile. On-site water mains may be shown in plan view only.

Whenever possible, on-site water, wastewater and reclaimed water systems shall be shown on the same PLANS sheet. As a minimum, the plan and profile drawings shall include the following information:

1. General information such as north arrow, names of designer and engineer, revision block with dates, graphic scale(s) and sheet number.
2. Profile with elevations at 100 foot interval, or more frequently if required by good design practice.
3. Development layout with horizontal and vertical controls.
4. All conflicts with other utility and drainage systems.
5. All manhole locations and rim elevations for manholes outside of paved areas.
6. Pipe data including size, lengths, material, and slopes.
7. Size, type, and locations of fittings, valves, hydrants, air release/vacuum release, and other related appurtenances.

8. Limits of pipe deflection.
9. Limits of special exterior coatings.
10. Limits of special bedding requirements.
11. Pipe restraint requirements.
12. Details of connection to existing systems.
13. Location(s) and general layout of wastewater pumping stations.
14. Construction notes regarding cover, horizontal and vertical control, special construction requirements, and references to standard and special details.

11.1.4 **DETAILS**

The PLANS shall include all applicable STANDARD DRAWINGS as shown in Part 3 of this MANUAL. Special details shall be prepared by the DESIGN ENGINEER for aerial and underwater crossings of rivers, streams, canals and ditches. Other special details shall be prepared by the DESIGN ENGINEER as required.

11.1.5 **SCALE**

The master plan shall be prepared at a scale not to exceed 1" to 200'. Plan and profile sheets shall not exceed a scale of 1" to 30'. Special details shall be of sufficiently large scale to show pertinent construction information.

11.2 **SUBDIVISION RELATED WATER, WASTEWATER AND RECLAIMED WATER IMPROVEMENTS**

11.2.1 **GENERAL**

This section covers all water, wastewater and reclaimed water system improvements that are dedicated to the TOWN and constructed in compliance with the TOWN Subdivision Regulations.

11.2.2 **DESIGN AND PLAN REVIEW**

Design of water, wastewater and reclaimed water system improvements associated with the TOWN approved subdivisions shall be in compliance with the design standards in Division II, and the specification outlined in Divisions III, IV, and V of this MANUAL. PLANS will be reviewed and approved by the TOWN Utilities Division as part of the subdivision review and approval process. Refer to the TOWN's Subdivision Regulations for other requirements governing plan review and approval.

11.2.3 CONSTRUCTION INSPECTION

The DIRECTOR or his designated representative shall inspect the water, wastewater and reclaimed water improvements to ensure their compliance with requirements in Divisions II, III, IV and V of this MANUAL.

11.2.4 APPROVAL AND ACCEPTANCE

Approval and acceptance of water, wastewater and reclaimed improvements shall be in accordance with the criteria established in the TOWN Subdivision Regulations.

11.3 WATER, WASTEWATER AND RECLAIMED WATER SYSTEM IMPROVEMENTS ASSOCIATED WITH THE TOWN OF HILLIARD SITE DEVELOPMENT ORDINANCE**11.3.1 GENERAL**

This section covers all water, wastewater and reclaimed water system improvements that are constructed in compliance with the Town of Hilliard Site Development Ordinance as amended and are to be dedicated to the Town of Hilliard. Such improvements shall be designed, reviewed, constructed and accepted in accordance with the criteria established in Section 11.3 herein.

11.3.2 DESIGN AND PLAN REVIEW

Design of water, wastewater and reclaimed water system improvements shall be in compliance with the design standards in Division II and the specifications outlined in Divisions III, IV and V of this MANUAL. PLANS will be reviewed and approved by the TOWN's Engineer as part of the Commercial Site Plan review process.

11.3.3 CONSTRUCTION INSPECTION

The DIRECTOR or his designated representatives) shall periodically inspect all construction subject to these standards and specifications.

After all required improvements have been installed, the DESIGN ENGINEER shall submit certification to the TOWN that the improvements have been constructed substantially according to approved plans and specifications. Non-compliance with approved plans or specifications or evidence of faulty materials or workmanship shall be called to the attention of the CONTRACTOR or DEVELOPER's DESIGN ENGINEER and, if not corrected in an expeditious manner, all work on the project will be suspended and/or certificate of occupancy withheld. Laboratory tests may be required when appropriate.

11.3.4 MAINTENANCE, MATERIALS AND WORKMANSHIP WARRANTY BOND

A bond shall be posted by the DEVELOPER or CONTRACTOR and executed by a company authorized to do business in the State of Florida that is satisfactory to the TOWN, payable to the Town of Hilliard in the amount of twenty (20) percent of the estimated construction cost of all required water, wastewater and reclaimed water system improvements to be owned and maintained by the TOWN. Such bond shall guarantee maintenance of all improvements intended to be owned and maintained by the TOWN for a two (2) year period, and the materials, workmanship and structural integrity of utility systems, and miscellaneous related facilities, excluding mechanical equipment for a two (2) year period, commencing after a Certificate of Completion has been issued by the TOWN. The manufacturer's warranty will be acceptable for mechanical equipment. As an alternative to the provision of a surety bond, the, DEVELOPER/CONTRACTOR may provide for the deposit of cash in an escrow account or a letter of credit acceptable to the TOWN.

11.3.5 CERTIFICATE OF COMPLETION/APPROVAL FOR MAINTENANCE

After successful completion of all water, wastewater, and reclaimed water system improvements, and after receipt of the required documents. The TOWN will provide a "Certificate of Completion" verifying the satisfactory construction of all improvements intended to be owned and maintained by the TOWN. After the two (2) year Warranty Period and verification by the TOWN of satisfactory performance of all water, wastewater, and reclaimed water system improvements, the TOWN will issue the "Approval for Maintenance", thereby releasing the DEVELOPER or CONTRACTOR from further responsibilities.

11.4 MISCELLANEOUS WATER, WASTEWATER AND RECLAIMED WATER SYSTEM IMPROVEMENTS

All water, wastewater and reclaimed water system improvements constructed which are intended to be owned, operated or maintained by the TOWN, excluding the improvements discussed in Sections 11.2 and 11.3 hereinabove, shall be designed, reviewed, inspected and accepted in strict compliance with the criteria established in Section 11.3 hereinbefore.

11.5 COMPLIANCE WITH OTHER REGULATORY REQUIREMENTS

It shall be the responsibility of the DEVELOPER to obtain and comply with all applicable Federal, State and Local regulatory permits.

11.6 RECORD DRAWINGS

The DESIGN ENGINEER shall submit two (2) certified sets of Record Drawings to the TOWN prior to issuance of Certificate of Completion for the improvements. The DESIGN ENGINEER shall be responsible for recording information on the approved PLANS concurrently with construction progress. Record Drawings submitted to the TOWN as part of the project acceptance shall comply with the following requirements:

- 1. Drawings shall be legibly marked to record actual construction.

2. Drawings shall show actual location of all underground and above ground water, wastewater and reclaimed water piping and related appurtenances. All changes to piping location including horizontal and vertical locations of utilities and appurtenances shall be clearly shown and referenced to permanent surface improvements. Drawings shall also show lengths and diameters of mains, actual installed pipe material, class, etc.
3. Global Positioning System (GPS) coordinates included as follows:

Potable Water and Fire Mains

- a. The location of all valves, fittings, fire hydrants, water meter boxes, casings and points of connection to the existing system shall be referenced by coordinates.
- b. The positional accuracy relative to the referenced published control points used shall not exceed 0.5' horizontally and 0.1' vertically. Elevations relative to the site facilities must be within 0.1' of each other.
- c. Coordinates or elevations on the main and finished grade will also be required at all pipe dead-ends, intersections, size changes, points of connection to existing system, fittings (bends, valves, tees, plugs, etc.), at intersections of pipe, at 100' intervals, or to the nearest fitting/structure, whichever is less, and where the standard depth of cover is not provided.

Gravity Wastewater

- a. The location of all piping, wyes, tees, manholes, cleanouts, and points of connection to the existing system shall be referenced by coordinates.
- b. The positional accuracy relative to the referenced published control points used shall not exceed 0.5' horizontally and 0.1' vertically. Elevations relative to the site facilities must be within 0.1' of each other.
- c. Runs of gravity wastewaters shall be identified (i.e., 300' of 8" PVC SDR26 at S = .004).
- d. Elevations shall be given for the north rim of the top of all manhole covers and all manhole inverts.
- e. Elevations on the service piping and finished grade will be required at the property line for only those wastewater service laterals which result in more than 60 inches of cover or less than 30 inches of cover (these exceptions must be TOWN approved).
- f. For wastewater service laterals which are totally perpendicular to the main, the location of the end of wastewater services shall be given to the plug and be located from the side property line or by station and offset. For wastewater service laterals, which include bends and off-sets which result in a service which is not totally perpendicular to the main, the location of all fittings between the sanitary tee and the plug (at the property line) shall be provided.

- g. Manhole types shall be identified (i.e., Type "A", "B", etc.)
- 1) Identify Exterior joint tape type used at the manhole joints.
 - 2) List manhole manufacturer name.

Force Mains

- a. The location of valves, fittings, casings, and points of connection to the existing system shall be referenced by coordinates.
- b. The positional accuracy relative to the referenced published control points used shall not exceed 0.5' horizontally and 0.01' vertically. Elevations relative to the site facilities must be within 0.1' of each other.
- c. Coordinates or elevations on the main and finished grade will be required at points of connection to the existing system, fittings (bends, valves, tees, plugs, etc.), 100' intervals, at high points, and where the standard depth of cover is not provided.

Pumping Stations

- a. Wetwell size and location shall be indicated and located relative to property lines and/or right-of-way lines.
- b. All utilities within the pump station site shall be located relative to property lines and/or right-of-way lines.
- c. Elevations shall be indicated at inverts, wetwell top (rim elevation) and invert, and at ground adjacent to wetwell. All utilities materials and sizes of lines and fittings shall be indicated.
- d. All schedules that show pump, motor, and electrical data shall be corrected to show the as-built condition and submitted with the pump station drawings.
- e. As-built information should be provided for the pump station site plan. Within the pump station boundaries, the following shall be located horizontally: pump-out, water service and cross-connection control device, wetwell, control panel, bends, fittings, manholes, generator and fuel tank (if applicable), transformer, fence, and auxiliary electrical enclosures, as applicable.

Reclaimed Water

- a. The location of valves, fittings, water meter boxes, casings, and points of connection to the existing system shall be referenced by coordinates.
- b. The positional accuracy relative to the referenced published control points used shall not exceed 0.5' horizontally and 0.1' vertically. Elevations relative to the site facilities must be within 0.1' of each other.
- c. Coordinates or elevations on the main and finished grade will be required at points of connection to the existing system, fittings (bends, valves, tees, plugs, etc.), 100' intervals, at high points, and where the standard depth of cover is not provided.

Storm Drain

- a. The location of all piping, wyes, tees, manholes, inlets, cleanouts, and points of connection to the existing system shall be referenced by coordinates.
- b. The positional accuracy relative to the referenced published control points used shall not exceed 0.5' horizontally and 0.1' vertically. Elevations relative to the site facilities must be within 0.1' of each other.
- c. Runs of storm wastewaters shall be identified (i.e., 300' of 15" RCP at S = .004).
- d. Elevations shall be given for the north rim of the top of all manhole covers and inlets and catch basins and all manhole, inlet, and catch basin inverts.
- e. Storm drain, manhole, inlet, and catch basin types shall be identified.

Horizontal Directional Drill (HDD)

- a. The beginning and ending points of the HDD main shall be provided by a registered Professional Surveyor and Mapper. The HDD contractor shall provide an approved certified as-built drawing, directional bore log plan and profile on a 24" x 36" or 22" x 34" sheet and AutoCAD file (certified by the HDD contractor) of the HDD work indicating horizontal and vertical location data (continuous or data every 25 LF of main). A copy of the bore log shall be placed on the correct "As-Built" sheet where drills are performed. An electronic PDF file containing this same information shall also be provided.
4. Drawings shall clearly show all field changes of dimension and detail including changes made by field order or by change order.
5. Drawings shall clearly show all details not on original contract drawings but constructed in the field. All equipment and piping relocation shall be clearly shown.
6. Dimensions between all manholes shall be field verified and shown. The inverts and grade elevations of all manholes shall be shown.
7. Each sheet of the PLANS shall be signed, sealed and dated by the DESIGN ENGINEER as being "Record Drawings". Construction PLANS simply stamped "As-Builts" or "Record Drawings" and lacking in above requirements will not be accepted, and will be returned to the DESIGN ENGINEER. The "Certificate of Completion" will not be issued until correct "Record Drawings" have been submitted.
8. Two (2) electronic files of record drawings shall be provided to the TOWN. One Drawing file shall be PDF format and the second shall be in AutoCAD format.

11.7 LIST OF MATERIALS AND APPROVED MANUFACTURERS

A list of Materials and Approved Manufacturers for the various products specified in this MANUAL is included in Appendix A. It is the intent of the TOWN to review and update Appendix A as appropriate to ensure efficient operation of the services and facilities under the jurisdiction of this MANUAL. For this purpose, the TOWN shall evaluate technical submittals from interested manufacturers or suppliers at least once every three years.

DIVISION II
DESIGN STANDARDS

SECTION 20

GRAVITY SEWERS

20.1 GENERAL CONSIDERATIONS

20.1.1 TYPE OF SEWERS

The TOWN will approve PLANS for new sewer systems and extensions only when designed as separate systems in which precipitation, runoff and groundwater are excluded.

20.1.2 DESIGN PERIOD

Sewer systems should be designed for the estimated ultimate tributary population, as delineated in the approved TOWN Wastewater Master Plan (latest edition) except in considering parts of the systems that can be readily increased in capacity.

20.1.3 LOCATION

Gravity sewers required to serve customers within county or state right-of-way shall be placed within the right-of-way or utility easements. Alternative locations may be approved at the TOWN’s sole discretion.

Gravity sewers within TOWN right-of-way or private streets shall be located in dedicated rights-of-way or utility easements under pavement. All sewers located outside of dedicated rights-of-way shall require a minimum 30-foot easement. Additional easement widths shall be provided when the pipe size or depth of cover so dictate. If a gravity sewer is located adjacent to a road right-of-way, a minimum 10-foot easement shall be provided. Additional easement widths shall be provided if the pipe size or depth of cover so dictate. No gravity sewers shall be placed under retention ponds or structures. In general, gravity sewers shall not be located along side or rear lot lines. Placement of a gravity sewer alongside or rear lot line may be allowed on a case by case basis if such a sewer configuration results in efficient placement and utilization of the sewer system.

Trees shall not be planted within any rights-of-way, utility easements, or drainage easements that are dedicated to the TOWN.

20.2 DESIGN BASIS

20.2.1 AVERAGE DAILY FLOW

The gravity sewer design shall be based on full ultimate development as known, or projected. Average daily wastewater flow shall be calculated by the Equivalent Residential Unit (ERU) method.

20.2.2 PEAK DESIGN FLOW

Gravity sewers shall be designed on the basis of ultimate development maximum rates of flow, which shall be the product of selected peak factors times the accumulative average daily flow as calculated above. In general, the following minimum peak factors shall be applicable for the range of average daily flow rates.

<u>Flow Range</u>	<u>Minimum Peak Factor</u>
Flows to 100,000 GPD	4.0
100,000 GPD to 250,000 GPD	3.5
250,000 GPD to 1,000,000 GPD	3.0
Flows greater than 1,000,000 GPD	2.5

20.2.3 DESIGN CALCULATIONS

DESIGN ENGINEER shall submit signed, sealed and dated design calculations with the PLANS for all sewer projects. Calculations shall show that sewers will have sufficient hydraulic capacity to transport all design flows.

20.3 DETAILS OF DESIGN AND CONSTRUCTION**20.3.1 MINIMUM SIZE**

No gravity sewer main conveying wastewater shall be less than 8 inches in diameter.

20.3.2 MINIMUM COVER

The minimum cover over gravity sewers shall be no less than 3 feet calculated from the finished grade. Exceptions to this requirement may be made for a short length of pipe where structural considerations are incorporated in the design.

20.3.3 SLOPE

All sewers shall be designed and constructed to give minimum velocities, when flowing full, of not less than 2.0 feet per second, based on Manning's formula using an "n" value of 0.012 for PVC and 0.013 for other pipe materials. The following minimum slopes shall be provided; however, slopes greater than these are desirable:

<u>Minimum Slope in Feet Per 100 Feet</u>	
<u>Sewer Size</u>	<u>PVC</u>
8 inch	0.40
10 inch	0.28
12 inch	0.22
15 inch	0.15
18 inch	0.12
21 inch	0.10
24 inch	0.08

Under special conditions, if detailed justifiable reasons are given, slopes slightly less than those required for the 2.0 feet per second velocity when flowing full may be permitted. Such decreased slopes will only be considered where the depth of flow will be 0.3 of the diameter or greater for design average flow. Whenever such decreased slopes are selected, the DESIGN ENGINEER must furnish his computations of the depths of flow in such pipes at minimum, average, and peak rates of flow.

Where design velocities greater than 15 feet per second are attained, due to topography or other reasons, special provisions shall be provided for sewer protection.

Sewers shall be laid with uniform slope between manholes.

20.3.4 SIZE AND ALIGNMENTS

Size conversion between manholes shall not be allowed. All sewers shall be laid with straight alignments between manholes.

20.3.5 ADDITIONAL REQUIREMENTS

Main drain and back wash systems for pools and spas and storm drain systems shall not connect to the gravity sewer system.

In general, all sewer extensions for future connections shall terminate at a manhole. The TOWN may allow such extensions without a terminal manhole on a case by case basis subject to all of the following conditions:

- 1. Total sewer extension length shall be limited to 50 feet.
- 2. Sewer extension location at the initiating manhole shall be plugged to the satisfaction of the TOWN.
- 3. Such sewer extensions shall not be a part of the accepted sewer facilities. This shall be clearly delineated on the PLANS.
- 4. All such sewer extensions shall be inspected and accepted as part of the future construction phase.

20.4 MANHOLES

20.4.1 LOCATION

Manholes shall be installed at the end of each gravity sewer main; at all changes in grade, size or alignment; at all sewer intersections; and at distances not greater than 400 feet. Private sewer systems must be separated from the TOWN sewer system by a manhole located at the right-of-way line on the private side.

20.4.2 TYPE

An inside drop pipe shall be provided for a sewer entering a manhole where its invert elevation is 24 inches or more above the manhole invert.

Where the difference in elevation between the incoming sewer invert and the manhole invert is less than 24 inches, the manhole invert shall be filleted to prevent solids deposition.

20.4.3 **DIAMETER**

For sewers 24 inches in diameter and smaller, the minimum inside diameter of manholes shall be 48 inches. For sewers between 24 inches and 36 inches, the minimum inside diameter shall be 60 inches. For sewers larger than 36 inches in diameter, a 72-inch inside diameter manhole shall be provided.

A minimum access cover diameter of 24 inches shall be provided.

20.4.4 **FLOW CHANNEL**

The flow channel through manholes shall be made to conform in shape and slope to that of the sewers. Flow direction changes in excess of 90 degrees shall not be included in sewer alignments without special consideration. Benching shall be provided which shall have a minimum slope of 2 inches per foot.

20.4.5 **MATERIALS**

Manholes shall be constructed of precast units as specified in Section 42. Brick manholes shall not be permitted. Cast-in-place manholes may be accepted on a case by case basis for conflict resolution.

20.4.6 **CASTINGS**

Cast iron frames and covers shall be as specified in Section 42.3. Bolt down and/or gasketed covers shall be provided where manholes are located in areas subject to ponding or flooding.

20.4.7 **ACCESS**

A 10-foot wide access road shall be provided for all manholes which are located outside of TOWN roadways. The top 8 inches of the access road shall be stabilized to a Florida Bearing value of 50 psi, and compacted to 98 percent of AASHTO T-180 for the top 8 inches.

20.5 **SERVICE CONNECTIONS**

20.5.1 **GENERAL**

Service connection shall be through lateral and miscellaneous appurtenances, all as shown on the STANDARD DRAWINGS, to connect the gravity sewer to the house or establishment being served.

20.5.2 **SIZE AND LENGTH**

Service laterals and fittings shall be a minimum of 6 inches in diameter. All service laterals shall be less than 100 feet in length,

20.5.3 SLOPE

Service laterals shall have a minimum slope of 1 percent.

20.5.4 CONNECTION

In general, service laterals shall not be allowed to discharge into sanitary manholes. A case by case exception to this requirement may be allowed if the lateral discharges at the same elevation as the manhole invert.

20.6 GREASE TRAPS**20.6.1 GENERAL**

All Food Preparation/Service Establishments shall have outside grease traps sized as required herein. All wastewater flow from the kitchen areas of these establishments must flow through approved grease traps prior to entering the TOWN system.

20.6.2 FAST FOOD RESTAURANTS

Single grease trap capacity shall be sized at the rate of 10 gallons per seat. If two grease traps are used in series, total capacity of the grease traps shall be based on 5 gallons per seat.

20.6.3 GENERAL RESTAURANTS

Single grease trap capacity shall be sized at the rate of 20 gallons per seat. If two grease traps are used in series, total capacity of the grease traps shall be based on 10 gallons per seat.

20.6.4 24-HOUR RESTAURANTS

Single grease trap capacity shall be sized at the rate of 30 gallons per seat. If two grease traps are used in series, total capacity of the grease traps shall be based on 15 gallons per seat.

20.6.5 CONVENTION CENTER/MANUFACTURING CAFETERIAS

Single grease trap capacity shall be sized at the rate of 3 gallons per meal. If two grease traps are used in series, total capacity of the grease traps shall be based on 1.5 gallons per meal.

20.6.6 MISCELLANEOUS FOOD PREPARATION/SERVICE ESTABLISHMENTS

DESIGN ENGINEER shall consult with the TOWN Utilities Division personnel before finalizing the design.

20.7 MATERIALS, INSTALLATION, AND TESTING

Applicable provisions of Divisions III, IV and V shall apply.

SECTION 21**WASTEWATER FORCE MAINS****21.1 GENERAL CONSIDERATIONS****21.1.1 DESIGN PERIOD**

Force main systems shall be designed for the estimated ultimate service population, and (where applicable) as delineated in the TOWN's Wastewater Master Plan (latest edition).

21.1.2 LOCATION

Force main required to serve customers within county or state right-of-way shall be placed within right-of-way or utility easements. Alternative locations may be approved at the TOWN's sole discretion.

Force mains within TOWN right-of-way or private streets shall be located in dedicated rights-of-way or utility easements. When installed in rights-of-way, force mains shall maintain a consistent alignment with respect to the centerline of the road. All force mains located outside of dedicated rights-of-way shall require a minimum 10-foot easement. Additional easement widths shall be provided when the pipe size or depth of cover so dictate. If a force main is located adjacent to a road right-of-way, a minimum 15-foot easement shall be provided. Additional easement widths shall be provided if the pipe size or depth of cover so dictate. Force mains shall not be placed under retention ponds or structures.

Trees shall not be planted within any rights-of-way, utility easements, or drainage easements that are dedicated to the TOWN.

21.2 DESIGN BASIS**21.2.1 AVERAGE DAILY FLOW**

Provisions of Section 20.2.1 shall apply.

21.2.2 PEAK DESIGN FLOW

Provisions of Section 22.1.1 shall apply.

21.2.3 DESIGN CALCULATIONS

DESIGN ENGINEER shall submit signed, sealed and dated design calculations with the PLANS for all force main projects. Calculations shall show that force mains will have sufficient hydraulic capacity to transport all design flows.

21.3 DETAILS OF DESIGN AND CONSTRUCTION

21.3.1 VELOCITY AND DIAMETER

At design pumping rates, a cleansing velocity of at least 2 feet per second should be maintained. Maximum velocity at design pumping rates should not exceed 6 feet per second. The minimum force main diameter shall be 4 inches. Only 4", 6", 8", 10", 12", 16", 20", 24", 30", 36", 42", and 48" diameter force mains shall be permitted.

21.3.2 DESIGN FRICTION LOSSES

Friction losses through force mains shall be based on the Hazen and Williams formula. In the use of Hazen and Williams formula, the value for "C" shall be 120 for ductile iron pipe and 130 for PVC pipe. "C" values greater than 130 shall not be allowed.

When initially installed, force mains may have a significantly higher "C" factor. The higher "C" factor should be considered only in calculating maximum power requirements and duty cycle time of the motor.

21.3.3 DESIGN PRESSURE AND RESTRAINT

The force main and fittings, including all restrained joint fittings shall be designed to withstand pump operating pressures and pressure surges, but not less than 100 psi.

21.3.4 TERMINATION

Force mains shall not terminate directly into a gravity sewer line. Force mains should enter the gravity sewer system at a point not more than 1 foot above the flow line of the receiving manhole.

21.3.5 AIR RELEASE AND VACUUM RELEASE VALVES

Air release valves shall be provided, as necessary, to prevent air from accumulating at high points in the force main. All such valves shall be clearly delineated on the force main profile in the DRAWINGS. The DESIGN ENGINEER shall submit calculations to the TOWN justifying the valve sizing. See additional requirements in Section 42.7.

21.3.6 AERIAL CROSSINGS

STRUCTURAL SUPPORT

Support shall be provided for all joints in pipes utilized for aerial crossings. The supports shall be designed to prevent overturning and settlement.

FLOOD CLEARANCE

For aerial stream crossings, the impact of flood waters and debris shall be considered. The bottom of the pipe shall be placed no lower than 1 foot above the 100-year flood elevation.

PIPE MATERIAL AND JOINTS

Flanged joints shall be used. Pipe and flange material shall be ductile iron, minimum class 53. All above ground pipe shall be painted as specified in Section 45.4.4 for aboveground wastewater force mains. Use of epoxy coated steel pipe may be allowed on a case by case basis.

VALVES

Underground valves shall be provided at both ends of the crossing so that the section can be isolated for testing or repair. The valves shall be easily accessible and not subject to flooding. An air release/vacuum release valve shall be installed at the high point of the crossing.

GUARDS

Appropriate guards shall be installed at both ends of the crossing to prevent pipe access to the public.

PERMITS AND REQUIREMENTS OF OTHER AGENCIES

It shall be the responsibility of the DEVELOPER or DESIGN ENGINEER to obtain all applicable regulatory permits. When the Aerial Crossing is accomplished by attachment to a bridge or drainage structure, the DEVELOPER shall meet all requirements of the Agencies who own or have jurisdiction over such structures.

21.3.7 UNDERWATER CROSSINGS**PIPE MATERIAL AND COVER**

A minimum cover of five (5) feet shall be provided over the pipe. The pipe material shall meet appropriate AWWA Standards for use in submerged conditions.

VALVES

Valves shall be provided at both ends of the water crossings so that the section can be isolated for testing or repair. The valves shall be easily accessible, and not subject to flooding. Both valves shall be provided in a manhole or a valve vault.

PERMITS

It shall be the responsibility of the DEVELOPER to obtain all applicable regulatory permits, including dredge and fill permits.

21.3.8 VALVES

Sufficient valves shall be provided on force main systems to facilitate effective isolation of the pipe system for repairs and maintenance. On straight runs of force mains, valve spacing shall not exceed 2000 feet. Additional valves shall be provided where force mains intersect to facilitate isolation of pipe segments.

21.4 MATERIALS, INSTALLATION AND TESTING

Applicable provisions of Divisions III, IV and V shall apply.

21.5 LOCATION AND IDENTIFICATION

A means for locating and identifying all force mains and valves shall be provided in accordance with the provisions in Section 45 and the STANDARD DRAWINGS.

21.6 ADDITIONAL REQUIREMENTS

While designing force main systems, consideration shall be given to possible future connecting pumping stations. If applicable, this requirement shall be reviewed with the TOWN prior to finalization of the design.

SECTION 22

WASTEWATER PUMP STATIONS

22.1 DESIGN BASIS

22.1.1 DESIGN FLOWS

Design flows shall be based upon the total ultimate development flow from all contributory areas to the pump station. The design average daily flow shall be computed as outlined in Section 20.2.1. The design pumping capability of the station shall be based upon the Peak Design Flow which shall be calculated by multiplying the design average flow with the applicable minimum peaking factors as outlined below:

<u>Design Average Daily</u>	<u>Minimum Peaking Factor</u>
Flows to 100,000 GPD	4.0
100,000 GPD to 250,000 GPD	3.5
250,000 GPD to 1,000,000 GPD	3.0
Flows greater than 1,000,000 GPD	2.5

22.1.2 NUMBER OF PUMPS

For pump stations with a peak design flow of 1500 GPM or less, a minimum of two pump units shall be provided. Where the peak design flow exceeds 1500 GPM, three or more units shall be provided.

22.1.3 PUMP AND MOTOR SELECTION

Pump station shall be capable of pumping the peak design flow with the largest pumping unit out of service. Pumps shall be capable of meeting all system hydraulic conditions without overloading the motors. In addition, a minimum 5 HP motor shall be required. Head capacity curves shall be prepared and submitted to the TOWN along with the pump station plans. Such curves shall be based upon the friction losses outlined in Section 21.3.2 of these specifications. Head capacity curves shall verify that the pumps are operating at peak efficiency and are suitable for the design flow application. Pump and motor selection and head capacity curves shall reflect hydraulic conditions in cases where receiving force main systems are interconnected to additional pumping stations.

22.1.4 DESIGN CALCULATIONS

DESIGN ENGINEER shall submit signed, sealed, and dated design calculations for all wastewater pump stations. Calculations shall include head capacity curves with copies of manufacturers pump curves, hydraulic analysis of force main system, operating cycle calculations with wetwell sizing, and buoyancy calculations.

22.2 DETAILS OF DESIGN AND CONSTRUCTION

22.2.1 FLOODING

Wastewater pumping station structures and electrical and mechanical equipment shall be protected from physical damage by the 100 -year flood. Wastewater pumping stations should remain fully operational and accessible during the 100-year flood. Regulations of Local, State and Federal agencies regarding flood plain obstructions shall be considered.

22.2.2 ACCESSIBILITY

The pumping station shall be readily accessible by maintenance vehicles during all weather conditions. A paved or stabilized access road to the pumping station shall be provided.

22.2.3 BUOYANCY

Buoyancy of the pump station structures shall be considered and adequate provisions shall be made for protection.

22.2.4 PUMP REQUIREMENTS

Submersible wastewater pump stations shall comply with the requirements spelled out in Section 43. Only approved pumps listed in Appendix A shall be allowed. Submersible pumps and motors shall be designed specifically for raw sewage use, including totally submerged operation during a portion of each pumping cycle. Submersible pumps shall be readily removable and replaceable without dewatering the wetwell or disconnecting any piping in the wetwell.

Pumps shall be capable of handling raw sewage and passing spheres of at least 3 inches in diameter. Pump suction and discharge openings shall be at least 4 inches in diameter.

22.2.5 WETWELL REQUIREMENTS

Wetwell shall be minimum 6-foot diameter and shall have a minimum 6-foot depth below the lowest invert to the floor surface. Additional depth shall be provided based on station design and cycle time.

Pumping levels shall be set to provide a minimum capacity between operational water levels sufficient to allow a minimum of ten (10) minutes between successive starts of the pumps.

Pump-off water levels shall provide adequate submergence to preclude pump inlet vortexing, or air binding. Operational maximum water levels shall not exceed the invert elevation of the influent pipe.

The wetwell floor shall have a minimum slope of 1 to 1 to the hopper bottom. The horizontal area of the hopper bottom shall be no greater than necessary for proper installation and function of the pump inlet.

No interior ladders shall be permitted in the wetwell.

Only one inlet connection shall be permitted to a wetwell.

All wetwells shall have a protective coating.

All hardware materials utilized within the wetwell shall be 316 SS.

22.2.6 PUMP STATION WATER SERVICE

All wastewater pump stations shall be provided with a water service with adequate capacity and pressure for station wash down and other requirements. The station water service system shall be completely separated from the potable water supply by means of a reduced pressure type backflow preventer.

22.2.7 ELECTRICAL EQUIPMENT, POWER SUPPLY AND POWER CORDS

Requirements in Sections 45 shall apply.

22.2.8 CONTROLS

Requirements in Section 45 shall apply.

22.2.9 SITE SIZING AND EASEMENT REQUIREMENTS

Pump station sites shall be sized as delineated on the "Pump Station Site Plan" in the STANDARD DRAWINGS. The DEVELOPER shall dedicate pump station site by warranty deed or plat to the TOWN. Dedicated easements shall also be required around the site as delineated on the "Pump Station Site Plan" in the STANDARD DRAWINGS. In general, the site for the access road shall also be dedicated to the TOWN by Warranty deed or plat. An exception to this requirement may be allowed on a case-by-case basis in the form of an ingress/egress easement for the access road.

22.2.10 SITE FENCING

Fencing at the pump station site perimeter shall comply with the technical criteria established in Section 43.10. In general, all pump station sites shall be fenced. However, exception to this requirement may be made for pump stations serving residential areas only, on a case-by-case basis and subject to sufficient landscape screening.

22.3 FLOWMETERS

Indicating, totalizing, and recording flow measurement shall be provided at pumping stations designed to handle peak flows of 1000 gpm or more. Applicable provisions of Section 43.9 shall apply.

Bypass piping around the meter shall be provided for all stations with flowmeters to facilitate meter maintenance.

22.4 EMERGENCY OPERATION

All pump stations shall be provided with emergency power receptacles as specified in Section 43.8. Determination of pump station critical points shall be at the discretion of the TOWN. All pump stations having one (1) of the following characteristics shall be designed to provide emergency power generation by on-site stand-by diesel engine generators.

1. Stations that repump flow from another pump station.
2. Stations that are designed to discharge a peak flow of 1,000 gpm or greater.
3. Stations that are designed with a discharge force main of 12-inches or greater.
4. Stations that require pumps that are 30 horsepower (each) or greater.
5. Stations that require 460 volt electrical power.
6. Stations located within 200 feet of a natural water body or environmentally sensitive area.
7. As determined by the TOWN.

Such stand-by generator facilities shall comply with the requirements included in Section 43.8. All such generators shall be rated and designed to operate the pump station under design conditions.

SECTION 23

WATER MAINS

23.1 GENERAL CONSIDERATIONS

23.1.1 TYPE OF WATER MAINS

The TOWN will approve PLANS for water supply mains and extensions only when such mains are designed and constructed in accordance with the criteria set forth in this MANUAL.

23.1.2 DESIGN PERIOD

Water mains should be designed for the estimated ultimate tributary population, as delineated in the approved TOWN Water Master Plan (latest edition) except in considering parts of the system that can be readily increased in capacity. Water systems shall be designed to satisfy the domestic water demand and fire protection requirements for the area.

23.1.3 LOCATION

Water main required to serve customers within county or state right-of-way shall be placed within utility easements. Alternative locations may be approved at the TOWN's sole discretion.

Water mains within TOWN right-of-way or private streets shall be located in dedicated rights-of-way or utility easements not under concrete sidewalks whenever possible. When installed in rights-of-way, water mains shall, in general, maintain a consistent alignment with respect to the centerline of the road. All water mains located outside of dedicated rights-of-way shall require a minimum 10-foot easement. Additional easement widths shall be provided when the pipe size or depth of cover so dictate. If a water main is located adjacent to a road right-of-way, a minimum 15-foot easement shall be provided. Additional easement widths shall be provided if the pipe size or depth of cover so dictate. Water mains shall not be placed under retention ponds or structures.

Trees shall not be planted within any rights-of-way, utility easements, or drainage easements that are dedicated to the TOWN.

23.2 DESIGN BASIS

23.2.1 AVERAGE DAILY DEMAND AND PEAK DEMAND

Average daily water demand shall be calculated by referencing the Equivalent Residential Connection (ERU) flow rates. Maximum daily and peak hourly water demand rates shall be two times (2x) and four times (4x) the average daily demand, respectively.

23.2.2 FIRE FLOW FOR SUBDIVISIONS AND COMMERCIAL PROPERTY

The approval of fire flow design is for the utility system only and does not address building plan review. Developers are advised to consider proposed

building requirements when designing utility systems, specifically proposed buildings requiring Needed Fire Flow that exceed minimum fire flows provided by the utility system. Sprinkled systems may be required per the Florida Building Code and/or the Authority Having Jurisdiction.

The developer shall provide the basis of design and fire flow requirements for review and approval by the TOWN. Fire flow requirements and calculations shall be supported by the Insurance Services Office (ISO) and National Fire Protection Association (NFPA).

The TOWN's utility system may be limited in the amount of fire flow that can be provided to a specific location in the TOWN'S SERVICE AREA. The Developer may be required to provide capital improvements and/or on-site systems to meet the Needed Fire Flow.

23.2.3 DESIGN CALCULATIONS

DESIGN ENGINEER shall submit signed, sealed and dated design calculations with the PLANS for all water distribution projects. Calculation shall show the water mains will have sufficient hydraulic capacity to transport peak hourly flows and the combination of maximum daily flows and fire flows while meeting the requirements of Section 23.2.1. Head losses through meters and backflow devices shall also be included in calculations. Flow in pipelines shall not exceed a velocity of 6 feet per second.

23.3 DETAILS OF DESIGN AND CONSTRUCTION

23.3.1 PRESSURE

All water mains shall be designed in accordance with Section 23.2 above. The system shall be designed to maintain a minimum pressure of 20 psi at all points in the distribution system under all conditions of flow. Higher pressures may be required at commercial, industrial and high-density residential areas. The normal working pressure in the distribution system should be approximately 55 psi, but in no case less than 35 psi on the downstream side of a meter. For pressures greater than 90 psi, special provisions may be required. Design Friction Losses for water mains shall meet 10 State Standard Requirements.

23.3.2 DIAMETER

Pipe diameters shall be standard sizes. Four (4) inch water mains shall be permitted only in cul-de-sac areas with a maximum length of 500 feet of pipe. In cul-de-sac areas only, a 4-inch looped connection may be allowed to prevent dead ends. As a minimum, 6-inch looped systems shall be required in low density residential projects. In commercial, industrial, and high-density residential areas, minimum 8-inch looped mains shall be required. Larger size mains shall be required if necessary to allow the withdrawal of the required fire flow while maintaining the minimum residual pressure specified in Section 23.3.1.

23.3.3

FIRE HYDRANT LOCATION, SPACING AND TESTING

As a minimum, specifications outlined in the latest version of the TOWN's Subdivision Regulations and applicable TOWN Fire Department Codes shall apply.

Fire hydrants shall be spaced in distance according to zoning classification:

- Residential - 500 ft.
- Commercial - 500 ft.
- Industrial - 300 ft.

Flow tests shall be performed by the DEVELOPER/CONTRACTOR to determine pressure and flow-producing capabilities within the distribution system. The flow tests shall be performed according to the American Water Works Association Manual of Water Supply Practices M17, "INSTALLATION, FIELD TESTING, AND MAINTENANCE OF HYDRANTS" Third Edition.

A test report shall be submitted to the TOWN and shall include the following information:

1. Manufacturer
2. Number of Locations
3. Date
4. Time
5. Nozzle Size
6. Static Pressure
7. Residual Pressure
8. Pitot Pressure
9. Flow in Gallons Per Minute
10. Flow at 20 psi
11. Time of Flow in Minutes
12. Gallons of Water Used

23.3.4

DEAD ENDS

In order to provide increased reliability of service and reduce head loss, dead ends shall be prohibited unless approved by the TOWN by making appropriate tie-ins whenever practical, as determined by the TOWN.

Where dead-end mains occur, they shall be provided with a fire hydrant or with an approved hydrant or blow-off for flushing purposes. Flushing devices shall be sized to provide flows which will give a velocity of at least 2.5 feet per second in the water main being flushed. No flushing device shall be directly connected to any sewer.

23.3.5

VALVES

Sufficient valves shall be provided on water mains so that inconvenience and sanitary hazards will be minimized during repairs. Valves shall be located at not more than 500-foot intervals in commercial, industrial, and high-density residential areas and at not more than 1000-foot intervals in all other areas. Appropriate valving shall also be provided at all areas where

water mains intersect to ensure effective isolation of water lines for repair, maintenance or future extension.

23.3.6 SEPARATION OF WATER MAINS AND SEWERS

Refer to FDEP rules for applicable requirements. No water pipe shall pass through or come in contact with any part of a sewer manhole.

Extreme caution should be exercised when locating water mains at or near certain sites such as sewage treatment plants or industrial complexes. Individual septic tanks must be located and avoided.

23.3.7 SURFACE WATER CROSSINGS

The TOWN shall be consulted before final PLANS are prepared. Requirements outlined in Section 11. All above ground pipe shall be epoxy-coated.

23.3.8 AIR RELEASE VALVES

At high points in water mains where air can accumulate, provisions shall be made to remove the air by means of hydrants or automatic air release valves. Automatic air release valves shall not be used in situations where flooding of the manhole or chamber may occur. See details in Section 50, Appendix A, and Appendix C - STANDARD DRAWINGS.

23.3.9 CHAMBER DRAINAGE

Chambers, pits or manholes containing valves, blow-offs, meters, or other such appurtenances to a distribution system shall not be connected directly to any storm drain or sanitary sewer, nor shall blow-offs or air release valves be connected directly to any sewer.

23.3.10 DISINFECTION FOLLOWING REPAIR OR REPLACEMENT

Any part of the TOWN water system which has direct contact with finished water and has been out of service for repair, alteration, or replacement shall be disinfected as outlined in Section 50 of these specifications.

23.4 WATER SERVICES AND CONNECTIONS

Water services and connections shall conform to the applicable provisions of Section 50 and the STANDARD DRAWINGS. Only 1", 1-1/2", 2", 4", 6", 8" and 12" services will be permitted. Where water services greater than 12" are required, dual services shall be provided. Water services and connections to existing TOWN systems shall be made by the CONTRACTOR.

23.5 WATER METERING

23.5.1 GENERAL

All water service connections shall be metered. In general, the method of metering will follow the guidelines listed below. However, the DESIGN ENGINEER must obtain approval before finalizing the design of the metering system.

**23.5.2 SINGLE FAMILY, DUPLEX, AND MULTI-FAMILY
SUBDIVISIONS WITH PUBLIC RIGHTS-OF-WAYS**

Each unit shall be individually metered. Single and Double services shall be installed at property lines as indicated by the STANDARD DRAWINGS.

**23.5.3 SINGLE FAMILY AND DUPLEX SUBDIVISIONS WITH
PRIVATE STREETS**

Individual meters are required in accordance with Section 23.5.2 if the private streets are designed to TOWN Standards and easements are dedicated over the entire private street common areas. In addition, sufficient area must be available outside of paved areas to locate water mains, services, and meters.

**23.5.4 COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL
PROJECTS WITHOUT PRIVATE FIRE LINES**

In general, a master meter shall be required for these developments. The developer may elect to meter each building, tenant space, etc. Master meter(s) shall be located in the public rights of way at the property line.

**23.5.5 COMMERCIAL, INDUSTRIAL, INSTITUTIONAL, MULTI-FAMILY
WITH PRIVATE STREETS, APARTMENTS, AND
CONDOMINIUM PROJECTS WITH PRIVATE FIRE LINES**

In general, all such projects shall require installation of a fire line master meter and potable master meter. Where on-site fire systems contain less than 75 feet of main, a dual system (separate domestic and fire lines) may be considered. Dual systems shall require installation of a detector check or double detector check as determined by the TOWN. Individual meters to each unit may be considered on a case-by-case basis.

23.5.6 SHOPPING CENTERS

In general, shopping centers shall require installation of a fire line master meter and potable master meter. The developer may elect to have their own individual submeters to each unit may be considered on a case-by-case basis.

23.5.7 METER INSTALLATION

Meters will be installed by the TOWN after payment of applicable fees and charges, AND confirmation of full compliance with TOWN ordinances, rules, specifically service contracts, payment of all fees and changes, and CO issued. All meters less than two inch in size will be installed underground in an approved meter box. Meters two inch and larger shall be installed above ground. In general, meters larger than two inches shall be located in a meter easement located adjacent to the public right-of-way.

23.5.8 METER SIZING

Size of all meters shall be determined by the TOWN Public Works Department. The DESIGN ENGINEER shall provide sufficient information on estimated peak flows and low flows so that meter size can be determined. The DESIGN ENGINEER shall include headlosses through metering device when designing the water system.

23.6 MATERIALS, INSTALLATION AND TESTING

Applicable provisions of Division III, IV, and V shall apply.

23.7 LOCATION AND IDENTIFICATION

A means for locating and identifying all water mains and valves shall be provided in accordance with Sections 50 and the STANDARD DRAWINGS.

23.8 CROSS-CONNECTION CONTROL

23.8.1 GENERAL

In order to protect the public water supply system from contamination due to cross-connections, the DEVELOPER shall install TOWN approved backflow prevention devices where there is the potential of a non-potable substance coming into contact with the public water system. Some of the common instances requiring installation of cross connection control devices are listed below. However, the DESIGN ENGINEER must obtain TOWN approval before finalizing the design of a Cross Connection Control Device.

23.8.2 COMMERCIAL, INDUSTRIAL AND MULTI-FAMILY RESIDENTIAL

All commercial and industrial projects shall, as a minimum, require installation of approved double check valve assembly. Projects with a higher degree of hazard may be required to install an approved reduced pressure principle device or other device.

All projects with fire sprinkler and standpipe systems, and projects with extensive on-site water systems shall be required, as a minimum, to install an approved double check valve assembly.

23.8.3 IRRIGATION SYSTEMS

Pressure-type vacuum breakers or double check valve assembly shall be utilized on all irrigation systems.

23.8.4 LOCATION AND INSTALLATION

In general, all backflow prevention devices are to be located directly following the water meter on DEVELOPER'S/OWNER'S property. Backflow prevention devices shall be installed above ground to facilitate maintenance and testing. It shall be the OWNER'S responsibility to pay for, install and maintain all backflow prevention devices.

PART 2 - SPECIFICATIONS

DIVISION III

GENERAL CONSTRUCTION REQUIREMENTS

SECTION 30

GRADES, SURVEY LINES AND PROTECTION OF MONUMENTS

30.1 GENERAL

30.1.1 GRADE

All WORK shall be constructed in accordance with the lines and grades shown on the PLANS. The full responsibility for keeping alignment and grade shall rest upon the CONTRACTOR.

Bench marks and base line controlling points shall be established prior to beginning work. Reference marks for lines and grades as the work progresses will be located to cause as little inconvenience to the prosecution of the work as possible. The CONTRACTOR shall so place excavation and other materials as to cause no inconvenience in the use of the reference marks provided. CONTRACTOR shall remove any obstructions placed contrary to this provision.

30.1.2 SURVEYS

The CONTRACTOR shall furnish and maintain, at his own expense, stakes and other such materials, and give such assistance, including qualified helpers, for setting reference marks to the satisfaction of the TOWN and the ENGINEER. The CONTRACTOR shall check such reference marks by such means as he may deem necessary and, before using this, shall call the TOWN's attention to any inaccuracies. The CONTRACTOR shall, at his own expense, establish all working or construction lines and grades as required from the reference marks, and shall be solely responsible for the accuracy thereof. The CONTRACTOR shall, however, be subject to the check and review of the TOWN.

30.1.3 MONUMENT PRESERVATION

Property corners and survey monuments shall be preserved using care not to disturb or destroy them. If a property corner or survey monument is disturbed or destroyed during construction, whether by accident, careless work, or required to be disturbed or destroyed by the construction work, said property corner or survey monument shall be restored by a land surveyor registered in the State of Florida. All costs for this work shall be paid for by the CONTRACTOR.

30.2 UTILITY COORDINATION

30.2.1 LOCATION OF UTILITIES

Prior to proceeding with trench excavation, the CONTRACTOR shall contact all utility companies in the area to aid in locating their underground services. It shall be the CONTRACTOR's responsibility to contact utility companies at least three (3) normal working days before starting construction. The CONTRACTOR shall proceed with caution in the excavation and preparation of the trench so that the exact location of underground utilities may be determined.

The CONTRACTOR shall take all reasonable precautions against damage to existing utilities. However, in the event of a break in an existing water main, gas main, sewer or underground cable, the CONTRACTOR shall immediately notify the responsible official of the organization operating the interrupted utility. The CONTRACTOR shall lend all possible assistance in restoring services and shall assume all cost, charges, or claims connected with the interruption and repair of such services.

30.2.2 DEVIATIONS OCCASIONED BY STRUCTURES OR UTILITIES

Design Engineer shall coordinate relocation of existing private utility line(s) during the design phase.

Wherever obstructions are encountered during the progress of the WORK, which interfere to such an extent that an alteration in the PLANS is required, the TOWN shall have the authority to order a deviation from the line and grade or arrange with the owners of the structures for the removal, relocation or reconstruction of the obstructions. Where gas, water, sewer, telephone, electrical, or other existing utilities are an impediment to the vertical or horizontal alignment of the proposed pipe line, the TOWN shall order a change in grade or alignment or shall direct the CONTRACTOR to arrange with the owners of the utilities for their removal/relocation.

30.2.3 TEST PITS

Test pits for the purpose of locating underground pipeline, utilities, or structures in advance of the construction shall be excavated and backfilled by the CONTRACTOR. Test pits shall be backfilled immediately after their purpose has been satisfied and maintained in a manner satisfactory to the TOWN. The costs for such test pits shall be borne by the CONTRACTOR.

30.3 MAINTENANCE OF TRAFFIC AND CLOSING OF STREETS

Projects that may impact traffic flow or require street closings temporarily shall comply with the following minimum requirements.

1. The Maintenance of Traffic design, devices, implementation, construction, maintenance, etc. shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), latest edition, and the Florida Department of Transportation Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Florida Green Book), latest edition.
2. The CONTRACTOR shall submit a Maintenance of Traffic Plan to the TOWN for review and approval two (2) weeks prior to construction.
3. The CONTRACTOR shall carry on the WORK in a manner which will cause a minimum of interruption to traffic. Where traffic must cross open trenches, the CONTRACTOR shall provide suitable plates at street intersections and driveways. The CONTRACTOR shall post suitable signs indicating that a street is closed and necessary detour signs for the proper maintenance of traffic. Seventy-two (72) hours prior to closing of any streets, the CONTRACTOR shall notify and obtain the approval of responsible authorities and the TOWN.

4. Unless permission to close a street is received in writing from the proper authority (TOWN, FDOT, c etc.), all excavated material shall be placed so that vehicular and pedestrian traffic may be maintained at all times. If the CONTRACTOR's operations cause traffic hazards, he shall repair the road surface, provide temporary ways, erect wheel guards or fences, or take other measures for safety satisfactory to the TOWN.
5. Detours around construction will be subject to the approval of the authority having jurisdiction and the TOWN. Where detours are permitted, the CONTRACTOR shall provide all necessary barricades and signs as required to divert the flow of traffic. While traffic is detoured, the CONTRACTOR shall expedite construction operations. Periods when traffic is being detoured will be strictly controlled by the TOWN.
6. It shall be the sole responsibility of the CONTRACTOR to take precautions to prevent injury to the public due to open trenches. Night watchmen may be required where special hazards exist, or police protection provided for traffic while work is in progress. The CONTRACTOR shall be fully responsible for damage or injuries whether or not police protection has been provided.

30.4 PROTECTION OF PUBLIC AND PROPERTY

30.4.1 BARRICADES, GUARDS AND SAFETY PROVISIONS

The CONTRACTOR shall be solely responsible for adhering to the rules and regulations of OSHA and appropriate authorities regarding safety provisions. To protect persons from injury and to avoid property damage, adequate barricades, construction signs, lights and guards as required shall be placed and maintained by the CONTRACTOR at his expense during the progress of the WORK and until it is safe for traffic to use the roads and streets. All material piles, equipment and pipe which may serve as obstructions to traffic shall be enclosed by fences or barricades and shall be protected by proper lights when the visibility is poor.

30.4.2 PROTECTION OF UTILITY STRUCTURES

Temporary support, adequate protection and maintenance of all underground and surface utility structures including drains, sewers, manholes, hydrants, valves, valve covers, power poles and miscellaneous other utility structures encountered in the progress of the WORK shall be furnished by the CONTRACTOR at his expense. Any such structures which may have been disturbed shall be restored upon completion of the WORK.

30.4.3 OPEN EXCAVATION

All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property. The CONTRACTOR shall, at his own expense, provide suitable and safe bridges with hand railings and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access to private property during construction shall be removed when no longer required. The length of open trench will be

controlled by the particular surrounding conditions, but shall be limited to 300 feet unless otherwise approved by the TOWN. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the TOWN may require special construction procedures such as limiting the length of open trench, fencing, prohibiting excavated material in the street and requiring that the trench shall not remain open overnight. The CONTRACTOR shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment or other obstacles which could be dangerous to the public shall be well lighted at night.

30.4.4 PROTECTION OF TREES AND SHRUBS

All trees and shrubs not shown to be removed on the PLANS shall be protected by the CONTRACTOR at his expense. No excavated materials shall be placed so as to injure such trees or shrubs. Trees or shrubs destroyed by negligence of the CONTRACTOR or his employees shall be replaced by him with new stock of similar size and age at the sole expense of the CONTRACTOR.

30.4.5 PROTECTION OF LAWN AREAS

Lawn areas shall be left in as good or better condition as before starting of the WORK. Where sod is to be removed, it shall be carefully restored with new sod of the same type.

30.4.6 RESTORATION OF FENCES

Any fence, or part thereof, that is damaged or removed during the course of the WORK shall be replaced or repaired by the CONTRACTOR and shall be left in as good a condition as before the starting of the WORK. The manner in which the fence is repaired or replaced and the materials used shall be subject to the approval of the TOWN.

30.4.7 PROTECTION AGAINST SILTATION AND BANK EROSION

The CONTRACTOR shall arrange his operations to minimize siltation and bank erosion on construction sites and on existing or proposed water courses and drainage ditches. The CONTRACTOR, at his own expense, shall remove any siltation deposits and restore to original grade.

30.5 ACCESS TO THE PUBLIC SERVICES

Neither the materials excavated nor the materials or equipment used in the construction of the WORK shall be so placed as to prevent free access to public services. All excavated material shall be piled in a manner that will not endanger the WORK and that will avoid obstructing streets, sidewalks and driveways. Excavated material suitable for backfilling shall be stockpiled separately on the site. No material shall be placed closer than 2'0" from the edge of an excavation. Fire hydrants under pressure, valve pit covers, valve boxes, curb stop boxes, or other utility controls shall be left unobstructed and accessible until the WORK is completed. Gutters shall be kept clear or other satisfactory provisions made for street drainage. Natural water courses shall not be obstructed or polluted. Surplus material and excavated material unsuitable for backfilling shall be transported and disposed of off the site in disposal areas obtained by the CONTRACTOR.

30.6 PUBLIC NUISANCE

The CONTRACTOR shall not create a public nuisance including but not limited to encroachment on adjacent lands, flooding of adjacent lands, or excessive noise or dust. The CONTRACTOR shall eliminate noise to as great an extent as practicable at all times.

30.7 CONSTRUCTION HOURS

No WORK shall be occur between dusk and dawn, or on Sundays, unless the proper and efficient prosecution of the WORK requires operations during the night or weekend. Written notification for doing the WORK shall be provided to the TOWN a minimum 72 hours before starting such items of the WORK.

30.8 CONSTRUCTION IN EASEMENTS AND RIGHTS-OF-WAY

30.8.1 CONSTRUCTION IN EASEMENTS

In easements across private property, the CONTRACTOR shall confine all operations within the easement area and shall be responsible and liable for all damage outside of the easement area. Trees, fences, shrubbery or other type of surface improvements located in easements will require protection during construction. Precautions shall be taken by adequate sheeting or other approved method to prevent any cave-in or subsidence beyond the easement limits or damage to improvements within the easement. In general, the easement area is intended to provide reasonable access and working area for efficient operation by the CONTRACTOR. Where easement space for efficient operation is not provided, the CONTRACTOR shall be responsible for organizing his operations to perform within the restrictions shown on the PLANS.

30.8.2 CONSTRUCTION IN FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY

The CONTRACTOR shall strictly adhere to the requirements of the Florida Department of Transportation where construction work is in a right-of-way under the jurisdiction of the State of Florida, and shall take care to avoid any unreasonable traffic conflicts due to the WORK in road right-of-way.

30.8.3 CONSTRUCTION IN TOWN RIGHT-OF-WAY

WORK shall be governed by the TOWN Right-of-Way Utilization Regulations as amended. The CONTRACTOR shall show proof of valid State of Florida, Contractor's License applicable to the work to be performed.

30.9 SUSPENSION OF WORK DUE TO WEATHER

During inclement weather, all WORK which might be damaged or rendered inferior by such weather conditions shall be suspended. During suspension of the WORK from any cause, the WORK shall be suitably covered and protected so as to preserve it from injury by the weather or otherwise.

30.10 USE OF CHEMICALS

All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, must show approval of either United States Environmental Protection Agency or United States Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict conformance with label instructions.

30.11 COOPERATION WITH OTHER CONTRACTORS AND FORCES

During construction progress, it may be necessary for other contractors and persons employed by the TOWN to work in or about the site. The TOWN reserves the right to put such other contractors to work and to afford such access to the construction site and at such times as the TOWN deems proper. The CONTRACTOR shall not impede or interfere with the work of such other contractors and shall cooperate with the other contractor(s) for proper prosecution of the work.

30.12 SUBSURFACE EXPLORATION

The CONTRACTOR shall make such subsurface explorations as he believes necessary to perform the WORK.

30.13 CLEANING

30.13.1 DURING CONSTRUCTION

During construction the CONTRACTOR shall, at all times, keep the construction site and adjacent premises as free from material, debris and rubbish as is practicable and shall remove the same from any portion of the site if, in the opinion of the TOWN, such material, debris, or rubbish constitutes a nuisance or is objectionable.

30.13.2 FINAL CLEANING

At the conclusion of the WORK, all tools, temporary structures, and materials belonging to the CONTRACTOR shall be promptly taken away. The CONTRACTOR shall remove and promptly and properly dispose of all water, dirt, rubbish, or any other foreign substances.

30.14 SALVAGE

Any existing TOWN owned equipment or material including but not limited to bricks, valves, pipes, fittings, couplings, etc., which is removed or replaced as a result of construction may be designated as salvage by the TOWN, and if so, shall be carefully excavated if necessary and delivered to the TOWN at a location within the TOWN. Any materials not claimed by the TOWN shall become the property of the CONTRACTOR and shall be properly disposed of by CONTRACTOR at his expense.

30.15 SHOP DRAWINGS AND SAMPLES

Prior to construction, the CONTRACTOR shall submit three (3) copies of the shop drawings, signed by the DESIGN ENGINEER, to the TOWN. The data shown on the shop drawings shall be complete with respect to dimensions, design criteria, materials of construction and the like to enable review of the information as required.

The CONTRACTOR shall, if requested by the TOWN, furnish certificates, affidavits of compliance, test reports, or samples for check analysis for any of the materials specified in this MANUAL.

SECTION 31

BORING AND JACKING

31.1 GENERAL

The installation of a casing pipe by the method of boring and jacking shall be covered by these specifications. The overall work scope shall include, but not be limited to, boring and jacking pits and equipment, sheeting, steel casing pipe, skid, steel straps, coatings, location signs as required, miscellaneous appurtenances to complete the entire WORK as shown on the STANDARD DRAWINGS, and restoration. Applicable provisions of Division III, IV, and V shall apply concurrently with these specifications. Boring and jacking operations shall be performed within the right-of-way and/or easements shown on the DRAWINGS.

31.2 PIPE MATERIAL

31.2.1 STEEL CASING

Steel casings shall conform to the requirements of ASTM Designation A139 (straight seam pipe only) Grade "B" with a minimum yield strength of 35,000 psi. The casing pipes shall have the minimum nominal diameter and wall thickness as shown on the following table:

<u>Carrier Pipe</u> Nominal Diameter	<u>Casing</u> Outside Diameter	<u>Casing</u> Wall Thickness
4"	16"	.250"
6"	18"	.250"
8"	20"	.250"
10"	24"	.250"
12"	30"	.312"
16"	30"	.312"
20"	36"	.375"
24"	42"	.500"
30"	48"	.500"
36"	54"	.500"
42"	60"	.500"

Field and shop welds of the casing pipes shall conform with the American Welding Society (AWS) standard specifications. Field welds shall be complete penetration, single-bevel groove type joints. Welds shall be airtight and continuous over the entire circumference of the pipe and shall not increase the outside pipe diameter by more than 3/4-inch.

31.2.2 CARRIER PIPE

The carrier pipe shall be minimum Pressure Class 250 ductile iron pipe with restrained joints. Ductile iron pipe shall comply with the specification outlined in Division IV and V.

31.2.3 INSPECTION

All casing pipe to be installed may be inspected at the site of manufacture for compliance with these Specifications by an independent laboratory selected and paid for by the TOWN. The manufacturer's cooperation shall be required in these inspections.

All casing pipe shall be subjected to a careful inspection prior to being installed. If the pipe fails to meet the specifications it shall be removed and replaced with a satisfactory replacement at no additional expense to the TOWN.

31.3 PIPE HANDLING

Care shall be taken in loading, transporting, and unloading to prevent injury to the pipe or coatings. Pipe shall not be dropped. All pipe shall be examined before laying, and no piece shall be installed which is found to be defective. Any damage to the pipe or coatings shall be repaired to the satisfaction of the TOWN.

31.4 CONSTRUCTION REQUIREMENTS

31.4.1 WORK COORDINATION

It shall be the CONTRACTOR'S responsibility to perform the boring and jacking work in strict conformance with the requirements of the agency in whose right-of-way or easement the work is being performed. Any special requirements of the agency such as insurance, flagmen, etc., shall be strictly adhered to during the performance of WORK. The special requirements shall be performed by the CONTRACTOR at no additional cost to the TOWN.

31.4.2 DEWATERING

Dewatering through the casing during construction shall not be permitted. All dewatering methods shall be approved by the TOWN before construction work begins.

31.4.3 CARRIER PIPE SUPPORT

The carrier pipes shall be supported within the casing pipes so that the pipe bells do not rest directly on the casing. The load of the carrier pipes shall be distributed along the casing by casing spacers. Casing spacers shall be bolt on style split shells made of either T-304 stainless steel or fusion coated steel (a minimum 0.010" thick coating of PVC shall be provided over the entire band). The shell shall be lined with a PVC liner 0.090" thick with 85-90 Durometer. All nuts and bolts shall be high strength, low alloy meeting AWWA C111. Runners shall be made of a high molecular weight polymer with inherent high abrasion resistance and a low coefficient of friction.

31.4.4 JACKING PITS

Excavation adjacent to the roads shall be performed in a manner to adequately support the roads. Bracing, shoring, sheeting or other supports shall be installed as needed. CONTRACTOR shall install suitable reaction blocks for the jacks as required. Jacking operations shall be continuous and precautions shall be taken to avoid interruptions which might cause the casing to "freeze" in place. Upon completion of jacking operations, the reaction blocks, braces, and all other associated construction materials shall be completely removed from the site.

31.4.5 MISCELLANEOUS REQUIREMENTS

Correct line and grade shall be carefully maintained. Earth within the casing shall not be removed too close to the cutting edge in order to prevent the formation of voids outside the casing. If voids are formed, they shall be satisfactorily filled with grout by pumping.

The sections of steel casing shall be field welded in accordance with the applicable portions of AWWA C206 and AWS D7.0 for field welded pipe joints. CONTRACTOR shall wire brush the welded joints and paint with Inertol Quick-Drying Primer 626 by Koppers Company or approved equal. After completion of jacking, CONTRACTOR shall clean the interior of the casing of all excess material.

The annular space between the carrier pipe and casing shall be filled with clean sand, if required in the Bore and Jack permit. Masonry plugs are to be installed at each open end of the casing. Plugs shall be suitable for restraining the earth load while allowing drainage of the casing.

SECTION 32**PRESSURE CONNECTION****32.1 GENERAL**

Installations of pressure connections 4" and larger shall be made in accordance with this section.

32.2 TAPPING SLEEVES**32.2.1 GENERAL**

Tapping sleeves shall be mechanical joint sleeves or fabricated steel sleeves as specified below. All pressure connections to asbestos cement pipe and all "size on size" taps shall utilize mechanical joint sleeves.

32.2.2 MECHANICAL JOINT SLEEVES

Sleeves shall be cast of gray-iron or ductile-iron and have an outlet flange with the dimensions of the Class 125 flanges shown in ANSI B16.1 properly recessed for tapping valve. Glands shall be gray-iron or ductile iron. Gaskets shall be vulcanized natural or synthetic rubber. Bolts and nuts shall comply with ANSI/AWWA C111/A21.11. Sleeves shall be capable of withstanding a 200 psi working pressure.

32.2.3 STEEL TAPPING SLEEVES

Sleeves shall be fabricated of stainless steel, 18-8 grade. Outlet flange shall meet AWWA C-207, Class "D" ANSI 150 lb. drilling and be properly recessed for the tapping valve. Flange shall be coated with fusion bonded epoxy by manufacturer. Bolts and nuts shall be high strength low alloy steel to AWWA C111 (ANSI A21.11). Gasket shall be vulcanized natural or synthetic rubber.

32.2.4 TAPPING VALVES

Tapping valves shall meet the requirements of Section 45, 50, or 60 except that units shall be flange by mechanical joint ends. Valves shall be compatible with tapping sleeves as specified above and specifically designed for pressure connection operations.

32.3 LINE STOP

All line stops shall be manufactured with a 316 SS sleeve and have a pressure rating of 150 psi. Buna-N gaskets shall be provided and all accessories (flange, completion plug, bolt kits, etc.) shall be 316 SS. A minimum 3/4" test port shall be provided in the neck of the assembly. If indicated on the Drawings, the line stop shall be capable of bypassing sewage through the assembly.

32.4 INSERTION VALVES

All insertion valves shall be provided as shown in the plans and as specified herein. Buried insertion valves shall be non-rising stem and wrench operated. The valve

assemblies shall be furnished complete and adequate for the specified or shown purpose and shall include all essential components of equipment, together with all mountings and other appurtenances normal and necessary for proper installation, whether shown or not. Insertion valves shall be equipped with a 2-inch square AWWA operating nut.

The insertion valve shall be capable of pressure-tight assembly to exterior of the pipe in which flow is to be stopped at a working pressure not to exceed 250 psi.

The insertion valve shall be constructed of a two (2) piece ductile iron or stainless steel (top and bottom) to be bolted together using ductile iron bolts with zinc alloy anodes (corrosion protection) manufactured to the ductile iron specification of ASTM 536 65-45-12.

The insertion valve shall meet AWWA material specification of C509-09 for resilient seal valves suitable for potable water service.

The valve stem shall be made of stainless steel.

The insertion valve shall use stainless steel fasteners joining the valve bonnet to the valve top casting, unless otherwise noted in assembly drawings.

Valve shall be coated with a minimum of 8 mils of fusion bonded epoxy in compliance with AWWA C550 and shall be certified to meet NSF-61.

The design of the valve shall have a satisfactory seal against the pipe exterior in the following ranges using multiple gaskets, if necessary. Valves shall conform to the operational (turns) requirements of AWWA C509-09 with specified turns to open left (counter clockwise). Valves shall be capable of working on IPS PVC, C900 PVC, cast iron, ductile iron, and asbestos cement pipe diameters.

Acceptable Manufacturers: TEAM InsertValve, EZ Valve, Insta-Valve, and Hydra-Stop, or equal.

32.5 NOTIFICATION AND CONNECTION TO EXISTING MAINS

All connections to existing mains shall be made by the CONTRACTOR only after the connection procedure and his work scheduling has been reviewed and approved by the TOWN. The CONTRACTOR shall submit a written request to the TOWN a minimum of five (5) working days prior to scheduling said connections. In his request, he shall outline the following:

1. Points of Connection, fittings to be used, and method of flushing and disinfection if applicable.
2. Estimated construction time for said connections.

The TOWN shall review the submittal within three (3) working days after receiving it and inform the CONTRACTOR regarding approval or denial of his request. If his request is rejected by the TOWN, the CONTRACTOR shall resubmit his request modifying it in a manner acceptable to the TOWN.

All connections shall only be made on the agreed upon date and time. If the CONTRACTOR does not initiate and complete the connection work in the agreed upon manner, he shall be required to reschedule the said connection by following the procedure outlined above.

The CONTRACTOR shall not operate any valves in the system.

32.6 INSTALLATION

32.6.1 EXCAVATION, BACKFILL, COMPACTION AND GRADING

The applicable provisions of Sections 45, 50, and 60 shall apply.

32.6.2 CONSTRUCTION DETAILS

Sufficient length of main shall be exposed to allow for installation of the tapping sleeve and valve and the operation of the tapping machinery. The main shall be supported on concrete pedestals or bedding rock at sufficient intervals to properly carry its own weight, plus the weight of the tapping sleeve valve and machinery. Any damage to the main due to improper or insufficient supports shall be repaired at the CONTRACTOR's expense.

The inside of the tapping sleeve and valve, the outside of the main, and the tapping machine shall be cleaned and swabbed or sprayed with 10 percent liquid chlorine prior to beginning installation for water system pressure connections.

After the tapping sleeve has been mounted on the main, the tapping valve shall be bolted to the outlet flange, making a pressure tight connection. Prior to beginning the tapping operation, the sleeve and valve shall be pressure tested at 150 psi to ensure that no leakage will occur.

For pressure connections through 12" diameter or less, the minimum diameter cut shall be 1/2" less than the nominal diameter of the pipe to be attached. For 14" through 20" installations the minimum diameter shall be 1 1/2" less; for larger taps the allowable minimum diameter shall be 2" to 3" less than the nominal diameter of the pipe being attached. After the tapping procedure is complete the CONTRACTOR shall submit the coupon to the TOWN.

For pressure connections to wastewater force mains, the tapping valve shall be placed horizontally. After the tapping procedure is complete, a plug valve shall be attached to the tapping valve. The tapping valve shall be left in the open position prior to backfilling.

Adequate restraining devices at pipe joints or restrained joint fittings shall be provided to prevent movement of the installation when test pressure is applied. Provisions of Section 34 shall apply.

DIVISION IV
GRAVITY SEWERS, FORCE MAINS AND PUMP STATIONS

SECTION 40

GRAVITY SEWERS

40.1 GENERAL

Pipe used in gravity sewer construction shall be polyvinyl chloride (PVC) or ductile iron pipe. Other pipe materials shall not be allowed.

The CONTRACTOR shall be responsible for all materials furnished and storage of same, until the date of substantial completion. He shall replace at his expense all materials found to be defective or damaged in handling or storage. The CONTRACTOR shall, if requested by the TOWN, furnish certificates, affidavits of compliance, test reports, or samples for check analysis for any of the materials specified herein.

40.2 PIPE MATERIALS

40.2.1 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS

The work under this Contract shall be in strict accordance with the following codes and standards.

1. All Local, County, Municipal and Federal Codes.
2. American National Standards Institute (ANSI).
3. American Society for Testing and Materials (ASTM).
4. American Water Works Association (AWWA).
5. American Association of State Highway and Transportation Officials (AASHTO).
6. Florida Department of Transportation Standard Specifications for Road & Bridge Construction (DOT).
7. Recommended Standards for Wastewater Facilities, (10-States Standards).
8. Florida Dept. of Environmental Protection

40.2.2 QUALITY ASSURANCE STANDARDS

1. American National Standards Institute, Inc. (ANSI)/American Water Works Association (AWWA):
 - a. ANSI/AWWA C105, Polyethylene Encasement for Ductile - Iron Piping for Water and Other Liquids.
 - b. ANSI/AWWA C110, Ductile-Iron and Gray-Iron Fittings, 3 In. through 48 In., for Water and Other Liquids.

- c. ANSI/AWWA C111, Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings.
 - d. ANSI/AWWA C115, Flanged Ductile-Iron Pipe with Threaded Flanges.
 - e. ANSI/AWWA C150, Thickness Design of Ductile-Iron Pipe.
 - f. ANSI/AWWA C151, Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds for Water or Other Liquids.
 - g. ANSI/AWWA C153, Ductile Iron Compact Fittings, 3-inch through 16 inch, for water and other liquids.
 - h. AWWA C600, Installation of Ductile-Iron Water Mains and Their Appurtenances.
 - i. AWWA C605 Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water
2. American Society for Testing and Materials (ASTM):
- a. ASTM C828, Standard Practice for Low-Pressure Air Test of Vitrified Clay Pipe Lines.
 - b. ASTM D2321, Standard Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe.
 - c. ASTM D2412, Standard Practice for external loading properties of plastic pipe by parallel plate loading.
 - d. ASTM D2444, Standard Test Method for determination of the impact resistance of thermoplastic pipe and fittings by means of a TUP (falling weight).
 - e. ASTM D3034, Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
 - f. ASTM D3212, Joints for Drain and Sewer Pipes using Flexible Elastomeric Seals.
 - g. ASTM F477, Standard Specification for Elastomeric seals (gaskets) for joining plastic pipe.
 - h. ASTM F679, Standard Specification for Poly (Vinyl Chloride) (PVC) large diameter plastic gravity sewer pipe and fittings.

40.2.3

SUBMITTALS

1. Submit manufacturer's certification of materials' conformance to specifications.

2. Submit manufacturer's literature, catalog data and installation instructions.
3. Submit certified field pressure test reports.
4. Submit pipeline video testing results.
5. Submit as-built drawings of completed system.

40.2.4 PRODUCT DELIVERY AND HANDLING

1. Exercise care to prevent damage of product during loading, transporting, unloading and storage.
2. Do NOT drop pipe or fittings.
3. Do not store directly on ground and assure that materials are kept clean. Pipe shall be kept bundled and strapped until it is ready for installation in order to prevent warping or disfiguring.
4. Store material in areas approved by the Owner.
5. Store material in such a manner as to not create a nuisance or safety hazard.

40.3 PIPE

40.3.1 GENERAL

Pipe shall be furnished free from defects impairing strength and durability and should be of best commercial quality for purpose specified. Structural properties shall be sufficient to safely sustain or withstand strains to which it is normally subjected.

40.3.2 PIPE MATERIALS

1. Ductile Iron (D.I.) ANSI/AWWA C151.:
 - a. Metal Thickness, ANSI/AWWA C150:
 - 1) 3 Inch through 12 Inch: Pressure Class 350.
 - 2) 14 Inch and Larger: Pressure Class 250.
 - 3) Jack and Bore Crossings: Pressure Class 350.
 - b. Interior Lining, 40 mils of Protecto 401 Epoxy, or equal.
 - c. Exterior Coating, Bituminous Coating, 1 Mil thick.
2. Polyvinyl Chloride (PVC):
 - a. Specification: ASTM D-3034 (4 Inch through 16 Inch)
ASTM F679 (18 Inch through 48 Inch)
 - b. Thickness: SDR 26 for sewers over 12 feet deep.
 - c. All PVC gravity sewer pipe is to be green in color.

3. Pipe Joints:
 - a. Ductile Iron: Push On: ANSI/AWWA C111, single gasket type.
 - b. Polyvinyl Chloride: Push On: ASTM D-3212.

40.3.3 PIPE FITTINGS

1. Ductile Iron:
 - a. ANSI/AWWA C110, Ductile Iron Fittings.
 - b. ANSI/AWWA C153, Ductile Iron Compact Fittings.
 - c. Lining: 40 mils Protecto 401 Epoxy or equal.
 - d. Mechanical: ANSI/AWWA C111.
 - e. Push On: AWSI/AWWA C111.
 - f. Thickness: Match class of gravity main.
2. Polyvinyl Chloride:
 - a. ASTM D3034, PVC Bell and Spigot Fittings.
 - b. ASTM D3212, Joints.
 - c. Thickness: Match SDR of gravity main.

40.3.4 FLOWABLE FILL

1. General: Excavatable Flowable Fill shall be provided for filling abandoned gravity sewers.
2. FDOT Standard Specifications for Road and Bridge Construction, Section 121.

40.3.5 CONCRETE

1. Benches and Flow Channels: 4,000 psi 28 day mix, Type II Cement.
2. Encasement: 3,000 psi 28 day mix, Type I or II Cement.

40.3.6 EXCAVATION

1. General: The CONTRACTOR shall perform all excavation of every description and of whatever substances encountered to the depths indicated on the drawings or as necessary. This shall include all necessary clearing and grubbing of any foreign substance encountered within the structure or trench area. Excavated material suitable for backfill shall be piled in an orderly manner at a sufficient distance from the trench to prevent slides or cave-ins.
2. Protection of Existing Facilities and Utilities: All existing improvements such as pavements, conduit, poles, pipes and other structures, shall be carefully supported and fully protected from injury and, in case of damage, they shall be restored by the CONTRACTOR without compensation. Existing utilities and other

underground obstructions are shown on the plans, but the accuracy of the locations and depths is not guaranteed. The CONTRACTOR shall contact all utilities prior to construction and arrange for the necessary assistance in locating and protecting the existing utilities. The CONTRACTOR shall be responsible for damages to these existing utilities and shall, in case they are damaged, restore them to their preconstruction or better condition.

- 3. Trench Excavation: The minimum width of the trench shall be equal to the outside diameter of the pipe at the joint plus 8 in. each side of pipe for unsheeted or sheeted trench, with the maximum width of trench, measured at the top of the pipe, not to exceed the outside pipe diameter, plus 24 in., unless otherwise shown on the drawings. Trench walls shall be maintained vertical from the bottom of the trench to a line measured one foot above the top of the pipe. From the top of the pipe to the surface of the trench walls shall be as vertical as possible under soil conditions.

No more than 300 linear feet of trench shall be open in advance of the completed pipe laying operation without prior approval of the Engineer. Pipe trenches across roadways and driveways shall be backfilled as soon as the pipe is installed. Where, in the opinion of the Engineer, adequate detour facilities are not available, no trench shall be left open across a roadway or commercial property driveway where adequate detour routes are not available for a period in excess of 30 minutes, or as directed by the governing authority. No trench shall be left open across any roadway or driveway for more than 24 hours. It shall be the CONTRACTOR 's responsibility to provide traffic control and barricades as necessary.

- 4. Shoring, Sheet piling and Bracing: The CONTRACTOR shall design, furnish, and install all shoring, sheet piling and bracing or provide other approved facilities required to perform and protect the excavation and as necessary for the safety of the public, the employees, and the preservation of existing roads, structures and other utilities. The top of such sheet piling left in place shall be cut off at a minimum elevation of 2.5 ft. below finished grade. All work shall be in accordance with the Florida Trench Safety Act.
- 5. Pavement Removal: The CONTRACTOR shall remove pavements as part of the trench excavation. The material from permanent pavement removal shall be carefully separated from trench excavation material and properly disposed of by the CONTRACTOR.
- 6. Boulder Removal: All rocks, stones, boulders or concrete, having any dimension larger than permitted to be used for backfill in the paragraph entitled "Backfilling" of these Specifications, shall be removed from the site and disposed of by the CONTRACTOR.
- 7. Unsuitable Soil Conditions and Overdepth Excavation: In the event the project encounters unsuitable materials, the CONTRACTOR shall construct an adequate foundation to support the pipe.

- a. Foundation shall consist of 12" of granular fill (No. 57 stone) or 24" of A-3 sand (ASTM D2321, Class II) compacted to 95% of maximum density (ASSHTO-T180).
 - b. Where granular fill foundations are used, bedding material shall be added to fill voids in foundation material prior to constructing required bedding depth.
 - c. Granular fill foundation shall be overlain by 4" of bedding material. Bedding material shall be A-3 sand (ASTM D2321, Class II).
 - d. Shape bedding material to receive pipe bells and support 1/4 of the pipe surface.
 - e. Limits of over-excavation shall be determined by a qualified geotechnical observer or as described on the drawings.
8. Disposal of Excess Material: The CONTRACTOR shall dispose of the excavated materials not required or suitable for backfill. All surplus excavated material which is unsuitable for fill shall become the property of the CONTRACTOR and shall be disposed of by the CONTRACTOR at his expense. Pieces of broken asphalt shall be carefully separated from suitable fill material and hauled to an asphalt plant for disposal or shall be disposed of by some other acceptable means by the CONTRACTOR at no expense to Owner. All excavated material not suitable for backfill (e.g., concrete, boulders, roots, etc.) shall be carefully separated from suitable fill material and disposed of by the CONTRACTOR at no expense to Owner. Owner has first right of refusal to accept suitable backfill material from the CONTRACTOR at no cost to the Owner.

40.3.7

INSTALLATION OF GRAVITY SEWERS AND SERVICES

1. Manufacturer's Instructions: Gravity sewer pipe shall be handled, stored and installed in strict accordance with the pipe manufacturer's instructions. A copy of the manufacturer's instructions shall be kept at the site of the work at all times by the CONTRACTOR.
2. Pipe Laying: The trench shall be excavated as specified and the bottom of the trench shall be shaped to give sufficient uniform circumferential support to the lower, one-fourth of each pipe. Pipe laying shall proceed upgrade. Each pipe shall be laid true to line and grade. As the work progresses, the interior of the pipe shall be cleaned of all dirt and superfluous materials.

Where cleaning of the pipe after laying is difficult because of the small diameter, the CONTRACTOR shall keep a suitable swab in the pipe and shall pull the swab forward past each joint immediately after the jointing operation. At all times when the work is not in progress on the sewer lines, the CONTRACTOR shall

securely seal the open ends of all pipes in order to prevent the entrance of foreign matter. Stoppers shall be installed in the ends of all services.

In the event that it is necessary to clean the pipe by flushing with water, no water or debris shall be permitted to enter an existing or previously approved sewer. Under no conditions shall the water and debris be removed with lift station pumps or discharged into or through force mains.

3. Jointing: The bell and spigot surfaces shall be wiped free of dust, dirt, gravel or other foreign material before the application of the lubricant sealer. The resilient joint shall be connected by first brushing upon the mating surfaces the proper lubricant sealer as recommended by the pipe manufacturer. The spigot end shall then be centered on grade into the bell end of the last downstream pipe length and shoved home and properly seated with the application of moderate force by a pry or lever device. The pipes shall be jointed no later than five minutes after the application of the lubricant sealer. Jointing for connections with existing mains, or other special joints, shall be approved by the Engineer before use.

4. Building Service Laterals:
 - a. The location and type (i.e., single or double) of sewer lateral shall be determined in the field. CONTRACTOR working in the area. CONTRACTOR shall be responsible for recording location of installed sewer laterals on record drawings.

 - b. Sewer laterals serving dwellings whose finish floor elevation is significantly below the crown elevation of the road shall be laid at a constant 1.00% slope from the point of connection at the new gravity sewer to the property line. This is necessary so that these dwellings' sewage will be able to flow by gravity into the new gravity sewer system.

 - c. Sewer laterals serving dwellings whose finish floor elevation is above the crown of the road may be brought up at a 30° to 60° angle from the elevation of the gravity sewer where there is sufficient natural fall from the dwellings to the gravity sewer (see Sewer Lateral Detail). Once the lateral has been raised to the desired elevation, it shall be installed at a constant 1.00% to the property line. Laterals shall have a minimum depth to invert of 4.00 ft at the property line based on existing grade, unless conditions or Engineer dictate otherwise.

 - d. CONTRACTOR shall provide all pipe and fittings necessary to install sewer laterals from point of connection at 8-inch PVC gravity sewer to property line.

5. Connections to Existing Manholes: Pipe connections to existing manholes shall be made so that finished work will conform as

nearly as possible to essential requirements for new manhole construction. This shall include core drilling manhole, installing flexible boot connector and reconstructing the existing concrete benches and flow channel.

6. Quality Assurance: It is the responsibility of the CONTRACTOR to install the gravity sewer pipe as shown on the plans. Prior to backfilling, the CONTRACTOR shall survey each gravity sewer section (i.e. manhole to manhole) to determine actual invert elevations and slope of the pipe. Invert elevations must be within ± 0.05 ft. of design invert elevations. Resulting calculated minimum pipe slope shall be as follows, depending on diameter of gravity sewer:

<u>Gravity Sewer Diameter (in)</u>	<u>Minimum Allowable Slope</u>
4	0.85%
6	0.50%
8	0.40%
10	0.28%
12	0.22%
15	0.15%
18	0.12%
21	0.10%
24	0.08%

CONTRACTOR shall provide invert elevations to TOWN or TOWN's representative each day to verify above requirements are met. If invert elevations and/or calculated pipe slopes do not meet requirements, CONTRACTOR shall remove and reinstall gravity sewer pipe and/or manholes such that the above requirements are met, at his own expense. See Paragraph 40.3.10 for gravity sewer testing requirements.

40.3.8

SEPARATION REQUIREMENTS BETWEEN GRAVITY SEWERS AND POTABLE WATER/RECLAIMED WATER MAINS

1. Horizontal Separation: Gravity sewers shall be laid at least ten feet (outside to outside) horizontally from water mains and at least three feet (outside to outside) horizontally from any existing or proposed reclaimed water line. Smaller horizontal separation distances for gravity sewers are allowed if one or more of the following conditions is met:
 - a. The top of the gravity sewer is installed at least 18-inches below the bottom of the potable water line.
 - b. The gravity sewer is encased in watertight carrier pipe or concrete.
 - c. Both the gravity sewer and the water main are constructed of slip-on or mechanical joint pipe complying with public water supply design standards and pressure tested to 150 psi to assure watertightness.
2. Vertical Separation: Gravity Sewers shall cross under water

mains, unless there is no alternative. Gravity sewers crossing water mains or reclaimed water lines shall be laid to provide a minimum vertical distance of 18-inches between the invert of the upper pipe and the crown of the lower pipe. The minimum vertical separation shall be maintained whether the water main is above or below the gravity sewer. For sewer crossings, the crossing shall be arranged so that the gravity sewer pipe joints are equidistant and as far as possible from the water main joints. Adequate structural support shall be provided for the gravity sewer to maintain line and grade. For gravity sewers, smaller vertical separation distances if one of the following conditions are met.

- a. The gravity sewer is encased in a watertight carrier pipe or concrete.
 - b. The gravity sewer is designed and constructed equal to water pipe and pressure tested to 150 psi to assure watertightness.
 - c. No vertical or horizontal separation distances are required for above-ground crossings.
3. Concrete Encasement of Pipe: Where concrete encasement of pipe is required for obtaining separation from other pipes or for other reasons (e.g., inadequate cover), the pipe shall be encased with 3,000 psi concrete having a minimum thickness of 6 inches all around the outside of the pipe. Pipe must be supported in trench to allow 6 inches of concrete on all sides. Concrete must be mechanically vibrated into place.
4. CONTRACTOR shall notify TOWN immediately where separation criteria cannot be met.

40.3.9 BACKFILLING

- 1. Material: All backfill shall be excavated material, essentially free of organic material, asphaltic concrete, clay, concrete, boulders and other deleterious material.
 - a. Bedding and Pipe Embedment to 12" Above Top of Pipe: The CONTRACTOR shall furnish, place, and compact AASHTO Class A-3 sandy material containing less than 1% of organics or other unsuitable material.
 - b. Above Pipe Embedment: The material shall be AASHTO Class A-3 material or AASHTO Class A-2-4 with prior approval from the Engineer. If the CONTRACTOR elects to use A-2-4 material, stringent moisture control will be required during the placement to achieve the required compaction, particularly during rainy periods which could cause delays in construction time.
 - c. Top of Backfill: The top 12 inches of the backfill shall be topsoil and/or AASHTO Class A-3 material with mixed organics.

- d. Additional Fill: If sufficient suitable backfill material is not available from the excavation, additional fill meeting the above requirements shall be provided by the CONTRACTOR.
- e. If deemed necessary by TOWN or its representative, backfill shall be tested for compliance with above requirements prior to placement.

2. Placing and Compaction:

- a. Bedding and Pipe Embedment: The backfill shall be placed by hand under and around the pipe to the springline and compacted. Particular care shall be taken to ensure that the backfill at the pipe haunch is free from voids and is properly compacted. The backfill shall be compacted to a density of not less than 98% of maximum as determined by AASHTO T-180.
 - 1) Above Pipe Embedment in Areas of Permanent Pavement: The backfill shall be placed in layers having a depth that will permit proper compaction but not exceeding 8" of loose measure. The backfill shall be compacted to a density of not less than 98% of maximum as determined by AASHTO T-180.
 - 2) Above Pipe Embedment In Areas Not Under Permanent Pavement: Within rights-of-way or other areas where permanent pavement does not exist or is not proposed, (including roads, walks and driveways consisting of broken stone, gravel, clay, marl, shell, shellrock or conglomerate), the entire backfill above the pipe embedment to the subgrade of the pavement or structures shall be made with predominantly sandy material free from rock, stones or organic matter, except that rocks having a maximum dimension of 3 ½ inch will be permitted in the backfill between the elevation 1 ft. above the top of the pipe and 1 ft. below the surface. The backfill material above 1 ft. over the pipe shall be compacted to a density of not less than 90 percent of the maximum density, as determined by AASHTO T-180.
- b. In areas where unpaved, stabilized roads exist, the CONTRACTOR shall restore the road to its original grade and condition. The finished stabilized road shall have a minimum LBR value of 50 for the top 12" of the roadbed.
- c. Miscellaneous: Backfilling around manholes, cleanouts and other structures shall be accomplished in the same manner as the connected pipe. Extreme care shall be used in backfilling wellpoint holes to prevent voids and

settlement. If necessary, the holes should be plugged with a concrete slurry, such plugging to be at the expense of the CONTRACTOR.

- d. Compaction: Shall be by hand or by mechanical tampers. Care shall be taken that the pipe is not struck by the tamper. Compaction by flooding may be allowed by written authorization of the Engineer although this will not release the CONTRACTOR of the responsibility to meet the required density.
- e. The CONTRACTOR is to compact the backfill in such a manner to prevent settlement. Although the requirements of 3.04 may be met, non-settlement is not assured and CONTRACTOR is not relieved of his responsibility by such compliance.
- f. PVC Pipe shall be laid and backfilled so that pipe deflection does not exceed five (5) percent.
- g. The CONTRACTOR shall perform density tests at 1 foot elevation increments, starting at the base of the pipe at the following locations:
 - 1) Within 20 feet of each manhole.
 - 2) At a point halfway between manholes.
 - 3) At every road lane crossing.
- h. The CONTRACTOR shall perform LBR Test at a minimum of 300' on center.

40.3.9 CULVERT REMOVAL AND REPLACEMENT

- 1. Culverts, catch basins and other drainage structures that are removed or damaged during construction shall be replaced with materials and structures equal and similar to those removed or damaged. Manhole covers and gratings shall be set at the original elevations unless otherwise directed.
- 2. The CONTRACTOR shall take precautions against the entry of excavated and other loose material resulting from his operations from entering catch basins, culverts and other drainage structures in the vicinity of his operations. He shall maintain the cleanliness of these drainage structures in a condition equal to that prior to the commencement of his operations during the construction. The CONTRACTOR shall be responsible for all damage to persons, roads, buildings, vehicles and other property resulting from the failure of the CONTRACTOR to maintain these drainage structures.

40.3.10 TESTING

- 1. Flushing of Completed Pipelines: Each section of completed pipeline shall be as thoroughly flushed as is possible. A minimum flow shall be used for flushing that will ensure a velocity in the pipe

of 2.5 ft. per second. Water required for testing and flushing shall be furnished by the TOWN at existing pipes and outlets. CONTRACTOR shall be responsible for removal of all dirt and debris from all manholes/wetwells prior to Owner's acceptance. Any water utilized for flushing shall be properly metered and paid for by the CONTRACTOR.

2. The CONTRACTOR shall furnish all necessary equipment and labor to perform testing of all gravity sewers as set forth in the following and shall conduct such tests in the presence of the TOWN and other authorized agencies, with five days advance written notice provided.
3. The installed sewers shall be visually inspected by "lamping" between manholes, lamp holes or other structures in order to ascertain that they are clear and to correct alignment. The concentricity of the lamp image received shall be such that the diameter of said image shall have no vertical or horizontal reduction from that of the pipe inside diameter.
4. The watertightness of a sewer which has a crown lying below groundwater level shall be tested by measuring the infiltration. The watertightness of sewers having a crown 1 inch or more above groundwater level shall be tested by filling the pipe with water to produce a hydrostatic head of 2 feet or more above the crown of the sewer at the upper end of the test section or the water table outside of the sewer, whichever is higher, and then measuring the exfiltration. In no case shall the infiltration or exfiltration exceed 75 gallons per mile per inch of diameter of sewer per 24-hour day when field tested by actual infiltration conditions. If exfiltration testing is required an allowance of an additional 10 percent of gallonage shall be permitted for each additional 2-foot head over a basic 2-foot minimum internal head.
5. Leakage testing shall proceed for a continuous period of eight hours with exfiltration or infiltration amounts measured by methods approved by the TOWN. Upon application of internal hydrostatic pressure for exfiltration testing, care shall be taken to preclude unseating the joint gaskets for a specific type of pipe by exceeding the pressure capability thereof.
6. The CONTRACTOR may use, as an alternate leakage test, air testing by compressed air from manhole to manhole. Plugs, caps and branch connections must be secured against blow-off during the test. The pipe and manholes shall be free of water during the test.
 - a. The air testing shall be performed in accordance with ASTM C828 for Vitrified Clay Pipe of Sizes 4 Inch through 12 Inch.
 - b. Laterals shall be temporarily plugged and manhole to manhole pipe brought to a stable 3.5 psig air pressure.
 - c. Air supply hose shall be shut off and time recorded.

- d. Pipe section shall be acceptable if time to drop from 3.5 psig to 2.5 psig is less than or equal to one half the pipe diameter, in minutes.
7. Deflection Testing: The CONTRACTOR shall perform deflection tests of the pipe along the entire length of the sewer main. The internal diameter of the barrel shall not be reduced by more than five percent (5%) of its base inside diameter when measured not less than thirty (30) days following completion of installation. A deflection of more than the specified amount shall be cause for rejection of that particular segment of pipe located between successive manholes. All locations with excessive deflection shall be excavated and repaired by rebedding or replacement of the pipe. A properly sized nine (9) point go-no-go mandrel shall be used for testing the sewer. Deflection testing for pipe under roadways shall be performed after road base is complete.
8. Should any of the test fail, necessary repairs shall be accomplished by the CONTRACTOR and the test repeated until within the established limits. The CONTRACTOR shall furnish the necessary labor, and all other items required to conduct the required testing, and shall perform the necessary system repairs required to comply with the specified test.
9. No installation of roadway base or paving shall occur over a gravity sewer until said section of sewer has passed all required testing including televising, lamping, leakage, and deflection.

40.3.11 PROTECTION

At the end of each workday, the mains under construction shall be plugged to prevent the entry of small animals and rodents. Temporary plugs shall be provided for this purpose.

40.3.12 RESTORATION OF DAMAGED SURFACES, STRUCTURES, AND PROPERTY

Where pavement, trees, shrubbery, fences, or other property and surface structures not designated as pay items have been damaged, removed, or disturbed by the CONTRACTOR, whether deliberately or through failure to carry out the requirements of the contract documents, state laws, municipal ordinances, or the specific directions of the Engineer, or through failure to employ usual and reasonable safeguards, such property and surface structures shall be replaced or repaired at the expense of the CONTRACTOR to a condition equal to that before work began within a time frame approved by the TOWN.

40.3.13

RESTORATION AND CLEAN-UP

1. Restoration:
 - a. General: Restoration of areas disturbed by the CONTRACTOR's operations shall begin as soon as practical. CONTRACTOR's restoration operations shall keep pace with utility installation. TOWN reserves the right to halt utility installation until restoration and clean-up requirements are satisfied.
 - b. Time Frame for Restoration: Restoration of areas disturbed by the CONTRACTOR's operations shall begin no later than 14 days and shall be completed (excluding punch list items) no later than 28 days from the time construction first began in the area. No more than 1,000 LF along the path of the work may be completely unrestored (excluding punch list items) at the end of each day.
2. Clean-up: The CONTRACTOR shall maintain the site of the work in a neat condition. The CONTRACTOR shall remove all excess materials, excess excavated materials, and all debris resulting from his operations a minimum of once per week.

SECTION 41

MANHOLES

41.1 GENERAL

Manholes shall be leak-tight and constructed of precast concrete units. Any manhole that forms a leak during the one-year warranty shall be removed and replaced with new manhole at the expense of the installing CONTRACTOR.

41.2 PRECAST CONCRETE SECTIONS

41.2.1 GENERAL

Precast manholes shall conform to specifications for Precast Reinforced Concrete Manhole Sections, ASTM Designation C478, except as otherwise specified below. Structural design shall be the responsibility of the precaster. Precast products shall be designed by Engineer registered in the State of Florida.

41.2.2 MISCELLANEOUS REQUIREMENTS

The minimum wall thickness shall be 5 inches. Precast manholes shall be constructed with a precast monolithic base structure as shown on the STANDARD DRAWINGS. The minimum base thickness shall be 8 inches.

Concrete for manholes shall be Type II, 4000 psi at 28 days. Barrel, top and base sections shall have tongue and groove joints. All jointing material shall be cold adhesive preformed plastic gaskets, conforming with FDOT Article 942-2. (See approved manufacturers' list in Appendix A.)

The date of manufacture and the name or trademark of the manufacturer shall be clearly marked on each precast section.

Sections shall be cured by an approved method for at least 28 days prior to painting and shall not be shipped until at least 2 days after having been painted.

Precast concrete top slabs shall be used where cover over the top of the pipe is less than 5 ft. Lift rings or non-penetrating lift holes shall be provided for handling precast manhole sections. Non-penetrating lift holes shall be filled with non-shrink grout after installation of the manhole sections.

Interior surfaces of manholes shall have a protective coal tar epoxy coating with a minimum dry mil thickness of 16 mils. Exterior surfaces shall have a protective epoxy coal tar coating with a minimum dry mil thickness of 9 mils. Coatings shall be applied in two (2) applications by the manhole manufacturer in strict accordance with the paint manufacturer's recommendations. (See approved manufacturer's list in Appendix A.)

Manholes receiving flow from wastewater force main shall be lined as per Section 43.3.

41.2.3 INSPECTION

The quality of all materials, the process of manufacture, and the finished sections shall be subject to inspection and approval by the TOWN. Such inspection may be made at the place of manufacture, or at the site after delivery, or at both places, and the sections shall be subject to rejection at any time on account of failure to meet any of the specification requirements; even though sample sections may have been accepted as satisfactory at the place of manufacture. Sections rejected after delivery to the job shall be marked for identification and shall be removed from the job at once. All sections which have been damaged after delivery will be rejected and, if already installed, removed and replaced, entirely at the CONTRACTOR's expense. Any manhole that forms a leak during the one-year warranty shall be at the expense of the installing CONTRACTOR.

At the time of inspection, the sections will be carefully examined for compliance with the specified ASTM designation, and with the approved manufacturer's drawings. All sections shall be inspected for general appearance, dimension, "scratch-strength" blisters, cracks, roughness, soundness, etc. The surface shall be dense and close-textured.

41.3.4 CASTINGS

Gray iron castings for manhole frames, covers, adjustment rings and other items shall conform to the ASTM Designation A48, Class 35B. Castings shall be true to pattern in form and dimensions and free of pouring faults and other defects which would impair their strength, or otherwise make them unfit for the service intended. The seating surfaces between frames and covers shall be machined to fit true. No plugging or filling will be allowed. Lifting or "pick" holes shall be provided, but shall not penetrate the cover. Lifting rings shall be cut off and patched after assembly of manhole is completed. Casting patterns shall conform to those shown or indicated on the STANDARD DRAWINGS. All manhole frames and covers shall be traffic bearing to meet AASHTO H-20 loadings. Frames shall be suitable for the future addition of a cast iron ring for upward adjustment of top elevation. In certain locations, bolt down covers and gasketed covers shall be located as shown on the DRAWINGS (i.e., flood prone areas).

41.3 CONSTRUCTION DETAILS

41.3.1 BEDDING

Base sections shall be placed on bedding rock conforming to the requirements in Section 40. The bedding rock shall be firmly tamped and made smooth and level to assure uniform contact and support of the precast element. Refer to Section 40 for density requirements. Refer to the STANDARD DRAWINGS for additional bedding details.

41.3.2 CAST-IN-PLACE BASES

Cast-in-place bases shall be utilized only when specifically approved by the TOWN. Unless otherwise specified, cast-in-place bases shall be at least eight (8) inches in thickness and shall extend at least six (6) inches radially outside

of the outside dimension of the manholes section. Anti-floatation, reinforcement, and connection to the riser sections shall be designed by the DESIGN ENGINEER and submitted to the TOWN for approval.

41.3.3 PRECAST MANHOLES

A precast base section shall be carefully placed on the prepared bedding so as to be fully and uniformly supported in true alignment and making sure that all entering pipes can be inserted on proper grade.

Precast manhole sections shall be handled by lift rings or non-penetrating lift holes. Such holes shall be filled with non-shrink grout after installation of the manhole.

The first precast section shall be placed and carefully adjusted to true grade and alignment. All inlet pipes shall be properly installed so as to form an integral watertight unit. The sections shall be uniformly supported by the base structure, and shall not bear directly on any of the pipes. All joints shall be wrapped.

Precast sections shall be placed and aligned to provide vertical alignment with a 1/4-inch maximum tolerance per 5 feet of depth. The completed manhole shall be rigid, true to dimensions, and watertight.

41.3.4 EXCAVATION AND BACKFILLING

Requirements of Section 40 shall apply.

41.3.5 PLACING CASTINGS

Casting shall be fully bedded in mortar with adjustment brick courses placed between the frame and manhole. Bricks shall be a minimum two (2) and maximum four (4) courses. Mortar shall conform to ASTM C270, type M. and the bricks shall be clay and conform to ASTM C216, grade SW, size 3-1/2" (w) x 8" (L) x 2-1/4" (h).

Top of manhole castings located in pavement, shouldered areas, and sidewalks shall be set flush with grade. Top of manhole castings located outside these areas shall be placed 2" above grade.

41.3.6 CHANNELS

Manhole flow channels shall be as shown in the STANDARD DRAWINGS, with smooth and carefully shaped bottoms, built up sides and benching constructed using cement and brick with no voids. Channels shall conform to the dimension of the adjacent pipe and

provide changes in size, grade and alignment evenly. Cement shall be Portland Cement Type II only.

41.3.7 PIPE CONNECTIONS

Special care shall be taken to see that the openings through which pipes enter the structure are provided with watertight connections. Connections shall conform with ASTM C923, "Standard Specifications for Resilient Connectors between Reinforced Concrete Manhole Structures and Pipes".

41.3.8 DROP MANHOLE CONNECTIONS

Drop manhole connections shall conform in all respects to details shown on the STANDARD DRAWINGS or DRAWINGS.

41.4 CLEANING

All newly constructed manholes shall be cleaned of any accumulation of silt, debris, or foreign matter of any kind, and shall be free from such accumulations at the time of final inspection.

41.5 INSPECTION FOR ACCEPTANCE

No visible leakage in the manhole or at pipe connections shall be permitted. All manholes shall be inspected by the TOWN prior to acceptance. All manholes failing to meet the specification set forth in Section 41 above shall be reconstructed or replaced by the CONTRACTOR to comply with these specifications. Pressure grouting of manholes for repair shall not be accepted.

SECTION 42

WASTEWATER FORCE MAIN

42.1 GENERAL

These specifications cover the pipe, fittings, and accessory items used for wastewater force main systems.

Pipe used in wastewater (transmission) force main systems shall be Polyvinyl Chloride (PVC), unless otherwise approved by the Town. Pipe used at pumping stations and lift stations shall include ductile iron pipe (DIP).

The CONTRACTOR shall be responsible for all materials furnished and storage of same, until the date of project completion. He shall replace at his expense all materials found to be defective or damaged in handling or storage. The CONTRACTOR shall, if requested by the TOWN, furnish certificates, affidavits of compliance, test reports, or samples for check analysis for any of the materials specified herein. All pipe delivered to project site for installation is subject to random testing for compliance with the designated specifications.

42.1.1 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS

The work under this Contract shall be in strict accordance with the following codes and standards.

1. All local, county, municipal, and federal codes.
2. American National Standards Institute (ANSI).
3. American Society for Testing and Materials (ASTM).
4. American Water Works Association (AWWA).
5. American Association of State Highway and Transportation Officials (AASHTO).
6. Florida Department of Transportation Specifications (DOT).
7. Recommended Standards for Wastewater Facilities (10-States Standards).
8. Florida Dept. of Environmental Protection.

42.1.2 QUALITY ASSURANCE STANDARDS

1. American National Standards Institute, Inc. (ANSI)/American Water Works Association (AWWA), latest edition:
 - a. ANSI/AWWA C105, Polyethylene Encasement for Ductile - Iron Piping for Water and Other Liquids.
 - b. ANSI/AWWA C111, Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings.

- c. ANSI/AWWA C115, Flanged Ductile-Iron Pipe with Threaded Flanges.
 - d. ANSI/AWWA C150, Thickness Design of Ductile-Iron Pipe.
 - e. ANSI/AWWA C151, Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds for Water or Other Liquids.
 - f. ANSI/AWWA C153, Ductile-Iron Compact Fittings, 3 In. Through 16 In., for Water and Other Liquids.
 - g. AWWA C508, Swing-Check Valves for Waterworks Service, 2 In. Through 24 In.
 - h. AWWA C515, Reduced Wall, Resilient-Seated Gate Valves for Water Supply Service
 - i. AWWA C600, Installation of Ductile-Iron Water Mains and Their Appurtenances.
 - j. AWWA C605, Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water.
 - k. AWWA C900, Polyvinyl Chloride (PVC) Pressure Pipe, 4 In. Through 12 In., for Water Distribution.
 - l. AWWA C905, Polyvinyl Chloride (PVC) Pressure Pipe, 14-inch through 48-inch for Water Transmission and Distribution.
2. American Society for Testing and Materials (ASTM):
- a. D1785, Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120.
 - b. D-2464, Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fillings, Schedule 80.
 - c. D2467, Socket Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
 - d. D2564, Solvent Chemicals for Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings.
 - e. D2855, Making Solvent Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.
3. Manufacturer's name and model numbers are listed to establish a standard of quality. Equivalent items of other manufacturers are acceptable.

42.1.3 SUBMITTALS

1. Submit manufacturer's certification of materials' conformance to specifications.
2. Submit manufacturer's literature, catalog data and installation instructions.
3. Submit certified field pressure test reports.

42.1.4 PRODUCT DELIVERY AND HANDLING

1. Exercise care to prevent damage of product during loading, transporting, unloading and storage.
2. Do NOT drop pipe or fittings.
3. Do not store directly on ground and assure that materials are kept clean. Pipe shall be kept bundled and strapped until it is ready for installation in order to prevent warping or disfiguring.
4. Store material in such a manner as to not create a nuisance or safety hazard.

42.2 PIPE**42.2.1 GENERAL**

Pipe shall be furnished free from defects impairing strength and durability and should be of best commercial quality for purpose specified. Structural properties shall be sufficient to safely sustain or withstand strains to which it is normally subjected.

42.2.2 PIPE MATERIALS

1. Ductile Iron (D.I.) ANSI/AWWA C151.:
 - a. Metal Thickness, ANSI/AWWA C150:
 - 1) 3 Inch through 12 Inch: Pressure Class 350.
 - 2) 14 Inch and Larger: Pressure Class 250.
 - 3) Jack and Bore Crossings: Pressure Class 350.
 - b. Interior Lining, 40 mils of Protecto 401 Ceramic Epoxy or equal.
 - c. Exterior Coating, Bituminous Coating, 1 Mil thick.
2. Polyvinyl Chloride (PVC), 14-in. and larger:
 - a. Specification: AWWA C905.
 - b. Compound: PVC 12454-B, ASTM D1784.
 - c. Thickness: Class 165, DR 25.

3. Polyvinyl Chloride (PVC) 4 In. Through 12 In.:
 - a. Specification: AWWA C900.
 - b. Compound: PVC 12454-B, ASTM D 1784.
 - c. Thickness: Class 235, DR 18.
4. Polyvinyl Chloride (PVC), 3-inch:
 - a. Specification: ASTM D2241.
 - b. Compound: PVC 12454-B, ASTM D1784.
 - c. Thickness: Class 200, SDR 21.
5. Polyvinyl Chloride (PVC), 2 1/2 In. and Smaller:
 - a. Specification: ASTM D1785.
 - b. Compound: PVC 12454-B, ASTM D1784.
 - c. Thickness: Schedule 80.

42.2.3 PIPE JOINTS

1. Ductile Iron:
 - a. Mechanical: ANSI/AWWA C111.
 - b. Push On: ANSI/AWWA C111, single gasket type.
 - c. Flanged: ANSI B16.1, 125lb.
 - d. Restrained: Acceptable: Lock-Fast, American Ductile Iron Pipe, TR Flex, U.S. Pipe, Super-Lock, Clow Corporation, Megalug 1100 and 1700 Series, or equal.
2. Polyvinyl Chloride, 3 In. Through 12 In.:
 - a. Push On: ASTM F477 Elastomeric Gaskets
 - b. Restrained: UNI-BELL B-13, Uni-Flange Restrainer, Megalug 2000 and 1600 Series, or equal.
 - c. Polyvinyl Chloride, 2 1/2 In. and Smaller:
 - 1) Screwed: ASTM D2464.
 - 2) Solvent Weld: ASTM D2855.
 - 3) Solvent: ASTM D2564.

3. Pipe Fittings:
 - a. Ductile Iron and Polyvinyl Chloride (PVC) 3 In. and Larger:
 - 1) ANSI/AWWA C153, compact fittings.
 - 2) Mechanical: ANSI/AWWA C111.
 - 3) Push On: AWSI/AWWA C111.
 - 4) Flanged: ANSI B16.1, 125 lb.
 - 5) Restrained-Ductile Iron: Same as Ductile Iron Pipe Joints.
 - 6) Restrained-PVC: Same as PVC Pipe Joints.
 - 7) Linings and Coatings: Same as for Ductile-Iron Pipe.
 - b. Polyvinyl Chloride (PVC) 2 1/2 In. and Smaller:
 - 1) ASTM D2464, Schedule 80 PVC threaded fittings.
 - 2) ASTM D2467, Schedule 80 PVC socket type fittings.
 - 3) ASTM D2855, solvent weld joints.
4. Pipe Marking and Identification:
 - a. Ductile Iron Pipe: Permanent marking tape, with the words "SANITARY FORCE MAIN" printed along the tape, shall be attached to the pipe for its entire length. In addition, similar marking tape shall be placed in the trench over the pipe, six to twelve inches below finished grade, for the entire length of pipe.
 - b. PVC Pipe: All PVC force main pipe shall be manufacturer's standard green color for sanitary force mains. In addition, permanent marking tape with the words "SANITARY FORCE MAIN" shall be placed in the trench over the pipe, six to twelve inches below finish grade, for the entire length of pipe.

In addition, all PVC or HDPE force main pipe installed underground shall have a #12 gauge, solid strand, type UF insulation trace wire (green in color for sewer) attached for locating purposes. Half hitches shall be made behind each pipe bell and on each side of a valve or fitting. Branch splices shall be made at all tees and service lines. Trace wire shall be run into valve boxes as shown on valve detail. Watertight splicing connectors shall be utilized for all splices. CONTRACTOR shall be responsible for continuity of trace wire.
5. Above-ground piping coatings: Non-Submerged Ferrous Metals (Includes all exposed piping, valves, fittings, and supports which are not aluminum, galvanized or stainless steel).
 - a. Surface Preparation: Degrease before proceeding. SSPC-SP-10 Near-White Blast Cleaning. Coat all steel before any rust bloom

forms. The surface should be dry and free of any contamination. Consult the manufactures application instructions for the recommended Blast profile.

- b. Primer: High-build polyamide epoxy primer applied at 6.0 mils DFT. Use Sherwin-Williams Macropoxy 646 Fast Cure Epoxy, or equal.
- c. Finish: Polyurethane applied at 4.0 mils. Use Sherwin-Williams Acrolon 218 HS Acrylic Polyurethane, or equal.

Minimum system dry film thickness 10.0 mils. All colors shall be in accordance with 10 State Standards as approved by the TOWN.

42.3 PLUG VALVES

42.3.1 Non-lubricated, eccentric plug type with cast iron body, stainless steel bearings, balanced plug coated with E.P.T. (ethylene-propylene terpolymer or neoprene).

- 1. Minimum port area:
 - a. Valves less than 24 inch: 80% of pipe area
 - b. Valves 24 inch or larger: 70% of pipe area
- 2. Valve shall be designed for easy conversion from wrench-operated to gear-operated in field.
- 3. Operators: All valves 8 inch or larger shall have totally enclosed worm and gear operators.
- 4. Accessories:
 - a. Buried Valves 6 Inch and Smaller: Provide 2-inch square nut.
 - b. Buried Plug Valves 8 Inch or Larger: Provide buried worm gear activator.
 - c. Valves Not Buried: Provide handwheels for valves equipped with geared operators and valve wrenches of adequate size and length for all valves without geared operators.
 - d. Acceptable Manufacturers or Equal: DeZurik, Val-Matic, or equal.

42.4 GATE VALVES (2-inch and larger)

- 42.4.1** Shall be AWWA C515, iron body, resilient seat, non-rising bronze stem with 2" square operating nut on buried valves, turn to left (counter clockwise) to open.
- 42.4.2** Working pressure of 200 psi.
- 42.4.3** Internal Metal Surfaces shall have two-part thermosetting epoxy coating, 4 mils thick meeting AWWA C550.

42.4.4 Sealing Mechanism shall have zero leakage at 200 psi with flow in either direction.

42.4.5 End Conditions:

1. Above ground, \geq 2-inch: Flanged Joint
2. Below ground, \geq 3-inch: Mechanical Joint
3. Below ground, 2-inch and 2-1/2-inch: Threaded Joint

42.4.6 Acceptable Manufacturers: Mueller, American, or equal.

42.5 CHECK VALVES

42.5.1 Shall be AWWA C508, cast iron or steel body, resilient coated disc ring, bronze seating ring, stainless steel bolting and hinge pin, and outside pin and lever.

42.5.2 Swing type with weighted cantilever operator and externally mounted piston operated cushion chamber to prevent slamming or hammering.

42.5.3 Swing shaft shall be non-corrosive material (303 stainless steel).

42.5.4 Rated to 175 psig operating pressure.

42.5.5 Interior surface shall be epoxy coated in accordance with AWWA C550.

42.5.6 Acceptable: Golden Anderson, Mueller, American, or equal.

42.6 VALVE BOXES

42.6.1 Provide at all manually operated valves installed on underground lines.

42.6.2 ASTM A48, cast iron, Class 30-B, 3-piece screw extension type, with cover marked "SEWER" and flared base to suit valve furnished.

42.6.3 Acceptable: Figure No. F-2450, Clow Corporation; Catalog No. H10357, Mueller Co.; Figure No. E-3002, M & H Valve and Fittings Co. or equal.

42.7 WASTEWATER AIR RELEASE VALVE

All force mains and other pressure non-treated mains shall have air and vacuum release valves installed as they are indicated on the plans. The body of these valves shall be conical shaped to maintain maximum air gap with the spring-loaded float and seal plug connection combining to ensure no contact between the sewage and the seal. The valve shall have a double float design with the upper float being enclosed in the upper section of the valve and shall be made of polypropylene. The lower float shall be in the main body of the valve and shall be constructed of 316 stainless steel or foam polypropylene. The body, cover flange, and lower flange shall be constructed of 316 stainless steel, and shall have a funnel shaped lower body to automatically drain sewage back into the system. All internal metal parts are to be made from corrosion resistant 316 stainless steel, with all operating parts in the upper and lower sections to be non-metallic plastic materials. The hinge for operation for the opening and closing of the seal on the orifice shall be made of EPDM rubber. The rolling resilient seal shall provide smooth positive opening, closing, and leak-free sealing over the fluctuation of pressure differentials. The

working pressure shall be 150 psi and tested to 230 psi. All hardware shall be of stainless steel bolts and nuts, and the entire valve, except to upper outlet, shall be constructed of 316 stainless steel. All valves shall be equipped for backflushing maintenance with easy connection or disassembly. Valves with a total weight of more than 45 pounds shall be anchored to relieve the excessive weight to the saddle and PVC pipe. Those valves weighing less than 45 pounds will not be required to be anchored. The connection on all pipelines shall be the following sizing with an isolation valve of the same size:

8-inch and smaller	2-inch threaded
10-inch through 16-inch	3-inch flange
18-inch through 24-inch	4-inch flange
30-inch through 48-inch	6-inch flange
54-inch and larger	8-inch flange

All air and vacuum combination release valves shall be Model ARI D- 020S, ARI D-025SS, or approved equal, and the automatic air release valves shall be ARI Model S-020S or approved equal. All valves shall be installed in accordance with manufacturer recommendations and shall have an isolation valve connection for control. All ARV shall have ISO 9002 certification in order to be supplied on this project.

42.8 TAPPING SADDLES

All tapping saddles shall be suitable for the size and type of pipe being tapped. Saddle for pipe 4-inch and larger shall be brass with stainless steel double band and bolts. Acceptable: Ford 202BS or equal. Saddles for pipe less than 4-inch diameter shall be Ford S70 or 202B, as required, or equal.

42.9 CORPORATION STOPS

Corporation Stops shall be Mueller, Hayes or Ford threaded on the inlet side with Mueller threads and the outlet side fitted with connections to suit the connecting pipe or appurtenance.

42.10 PLASTIC LOCATING AND MARKING TAPE

Tape shall be plastic coated foil with a minimum width of 2 inches. Tape shall be highly visible and shall have the words "SANITARY FORCE MAIN" in at least 1" letters printed at least every 36 inches along the tape. Tape shall be Allen Marking Tape, or equal.

42.11 PRESSURE GAUGE ASSEMBLIES

42.11.1 Pressure gauges shall be glycerin filled, 4-1/2" dial and black numerals on white background and fully compatible with pressure sensor. They shall have a 1/4" mounting and be provided with blowout protection.

1. Provide stainless steel bourdon tube and movement and 316 stainless steel or noncorrosive case with safety glass lens and threaded lens retaining ring.
2. Provide adjustable pointer with overpressure stop and zero pointer stop.

- 3. Pressure gauge shall be accurate to + 1% of full range. Range shall be such that normal operating pressure is at midrange of scale.
- 4. Diaphragm protection seals and gauges shall be fitted at factory. Seals shall be removable for cleaning without disturbing the diaphragm.
- 5. Acceptable Manufacturers: Ashcroft, McDaniel, Ametek, General Instruments, Wika, or equal.

42.11.2 Pressure Sensor shall be flanged type with 360 circumferential reading.

- 1. Instrument shall be capable of being through bolted in-line with a 125# flange with full face gaskets.
- 2. Pressure sensor shall be factory sealed and capped, capable of operating pressures to 200 psi.
- 3. Body and end covers of sensors shall be 316 stainless steel and sleeve material shall be Buna-N rubber.
- 4. Flow passages of sensor shall be self-cleaning.
- 5. Pressure sensor shall be equal to the Series 40 as manufactured by the Red Value Co.

42.12 EXCAVATION

42.12.1 GENERAL

The CONTRACTOR shall perform all excavation of every description and of whatever substances encountered to the depths indicated on the drawings or as necessary. This shall include all necessary clearing and grubbing of any foreign substance encountered within the structure or trench area. Excavated material suitable for backfill shall be piled in an orderly manner at a sufficient distance from the trench to prevent slides or cave-ins.

42.12.2 PROTECTION OF EXISTING FACILITIES AND UTILITIES

All existing improvements such as pavements, conduit, poles, pipes and other structures, shall be carefully supported and fully protected from injury and, in case of damage, they shall be restored by the CONTRACTOR without compensation. Existing utilities and other underground obstructions are shown on the plans, but the accuracy of the locations and depths is not guaranteed. The CONTRACTOR shall contact all utilities prior to construction and arrange for the necessary assistance in locating and protecting the existing utilities. The CONTRACTOR shall be responsible for damages to these existing utilities and shall, in case they are damaged, restore them to their original condition.

42.12.3 TRENCH EXCAVATION

All excavation shall be in accordance with the Florida Trench Safety Act. The minimum width of the trench shall be equal to the outside diameter of the pipe

at the joint plus 8 in. each side of pipe for unsheeted or sheeted trench, with the maximum width of trench, measured at the top of the pipe, not to exceed the outside pipe diameter, plus 24 in., unless otherwise shown on the drawings. Trench walls shall be maintained vertical from the bottom of the trench to a line measured at the top of the pipe. From the top of the pipe to the surface of the trench walls shall be as vertical as possible under soil conditions.

No more than 300 linear feet of trench shall be open in advance of the completed pipe laying operation without prior approval of the TOWN. Pipe trenches across roadways and driveways shall be backfilled as soon as pipe is installed. Where, in the opinion of the TOWN, adequate detour facilities are not available, no trench shall be left open across a roadway or commercial property driveway where adequate detour routes are not available for a period in excess of 30 minutes, or as directed by the governing authority. No trench shall be left open across any roadway or driveway for more than 24 hours. It shall be the CONTRACTOR's responsibility to provide suitable traffic control and barricades as necessary meeting governing jurisdiction (i.e., TOWN, County, FDOT, etc).

42.12.4 SHORING, SHEETING AND BRACING

The CONTRACTOR shall design, furnish and install all shoring, sheeting and bracing or provide other approved facilities required to perform and protect the excavation and as necessary for the safety of the public, the employees, and the preservation of existing roads, structures and other utilities. The top of such sheeting left in place shall be cut off at a minimum elevation of 2.5 ft. below finished grade.

42.12.5 PAVEMENT REMOVAL

The CONTRACTOR shall remove pavements as part of the trench excavation. The material from permanent pavement removal shall be carefully separated from trench excavation material and disposed of by the CONTRACTOR.

42.12.6 BOULDER REMOVAL

All rocks, stones, boulders or concrete, having any dimension larger than permitted to be used for backfill in the paragraph entitled "Backfilling" of these Specifications, shall be removed from the site and disposed of by the CONTRACTOR.

42.12.7 UNSUITABLE SOIL CONDITIONS AND OVERDEPTH EXCAVATION

Where determined by the TOWN or its representative that the soils encountered in the utility trench excavation are unsuitable for pipe bedding and/or backfill, the depth of excavation shall be increased as directed by the TOWN or its representative. The bottom of the excavation shall be brought up to the proper excavation elevation utilizing suitable and properly-compacted backfill material or bedding material as directed by the Engineer or his representative. Bedding material if required, shall consist of 1/2" to 1" diameter stone placed in bottom of trench at a thickness of 4 to 6 inches. Suitable backfill material shall then be installed and compacted over pipe as

described in Paragraph 42.15. CONTRACTOR shall be compensated for removal and replacement of unsuitable soils in accordance with applicable bid items.

42.12.8 DISPOSAL OF EXCESS MATERIAL

The CONTRACTOR shall dispose of the excavated materials not required or suitable for backfill. All surplus excavated material which is unsuitable for fill shall become the property of the CONTRACTOR and shall be disposed of by the CONTRACTOR at his expense. Pieces of broken asphalt shall be carefully separated from suitable fill material and hauled to an asphalt plant for disposal or shall be disposed of by some other acceptable means by the CONTRACTOR. All excavated material not suitable for backfill (e.g., concrete, boulders, roots, etc.) shall be carefully separated from suitable fill material and disposed of by the CONTRACTOR. TOWN has the option to accept suitable backfill material from the CONTRACTOR.

42.13 INSTALLATION OF FORCE MAINS

42.13.1 GENERAL

Unless otherwise noted on the drawings or in other sections of this Specification, the pipe shall be handled and installed in strict accordance with the manufacturer's instructions and with the applicable AWWA or ASTM Standards.

1. Ductile Iron Pipe: AWWA C600.
2. Polyvinyl Chloride Pipe: ASCE Manual No. 37, ASTM D2321.
3. If a conflict exists between the manufacturer's instructions and the AWWA or ASTM Standards, the manufacturer's instructions shall govern.
4. Examine area to receive pipe work for defects that adversely affect execution of work or cause deviation beyond allowable tolerances for piping clearances.
5. Carefully examine each section of pipe or valve before installation. Do not use defective or damaged pipe or materials. Remove such pipe or material from project site immediately.

42.13.2 PREPARATION

The CONTRACTOR shall use every precaution during construction to protect the pipe against the entry of non-potable water, dirt, wood, small animals and other foreign material that would hinder the operation of the pipeline. All valves installed in main shall be kept tightly closed during installation. Where the groundwater elevation is above the bottom of the trench, the CONTRACTOR shall provide suitable dewatering equipment. All piping shall be placed in a dry trench, unless wet trench installation is approved by the Engineer.

42.13.3 DEPTH OF COVER

Unless otherwise shown on the drawings, or otherwise authorized by the TOWN, the pipe shall have a minimum cover of 36 inches.

42.13.4 CONNECTIONS TO EXISTING MAIN

The CONTRACTOR shall make connections to existing mains as shown on the drawings. Connections shall be made only after arrangements have been completed by the CONTRACTOR with the TOWN and shall be under the TOWN's immediate supervision. CONTRACTOR shall be required to restrain existing pipe as necessary in accordance with pipe restraint schedule.

42.13.5 PIPE THRUST RESTRAINTS

Mechanical restrainers shall be installed as required to properly restrain all piping systems. At a minimum, restrainers shall be provided on all below-grade valves and fittings and at the required number of pipe joints in each direction. Required lengths of restrained pipe shall be as shown in pipe restraint schedule at end of this paragraph for the type of soil encountered. For above-grade piping, all valves and fittings shall be threaded, flanged or solvent welded with supports as required.

PIPE RESTRAINT SCHEDULE

MINIMUM LENGTH OF PIPE (IN FEET) REQUIRED TO BE RESTRAINED ON EACH SIDE OF A VALVE OR FITTING FOR SANDY SOILS (SW, SP, SM, SC)

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL OFFSET ^a		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
P V C P I P E	≤4	18	18	18	18	18	22	36	18	52
	6	24	18	18	18	18	30	38	36	73
	8	31	18	18	18	18	40	69	36	96
	10	37	18	18	18	18	48	93	54	115
	12	43	18	18	18	18	56	99	54	136
	14	49	20	18	18	18	64	101	72	155
	16	55	23	18	18	18	72	103	72	174
	18	60	25	18	36	20	80	104	72	192
	20	65	27	18	36	21	87	105	72	211
	24	75	31	18	36	25	102	134	90	246
	30	88	37	18	36	29	122	185	90	295

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL OFFSET ^a		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
D U C T I L E I R O N	≤4	18	18	18	18	18	18	18	18	33
	6	20	18	18	18	18	19	35	36	47
	8	26	18	18	18	18	25	44	36	61
	10	31	18	18	18	18	30	60	54	73
	12	37	18	18	18	18	36	63	54	86
	14	41	18	18	18	18	41	64	72	98
	16	46	19	18	36	18	46	66	72	111
	18	51	21	18	36	18	51	66	72	122
	20	56	23	18	36	18	56	67	72	134
	24	64	27	18	36	21	65	85	90	156
	30	75	31	18	36	25	78	118	90	188

PIPE RESTRAINT SCHEDULE

MINIMUM LENGTH OF PIPE (IN FEET) REQUIRED TO BE RESTRAINED ON EACH SIDE OF A VALVE OR FITTING FOR CLAYEY AND SILTY SOILS (CL, CH, ML, MH)

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL OFFSET ^a		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
P V C P I P E	≤4	19	18	18	18	18	23	36	18	55
	6	26	18	18	18	18	32	40	36	77
	8	35	18	18	18	18	42	73	36	101
	10	42	18	18	18	18	50	98	54	121
	12	50	21	18	18	18	59	104	54	143
	14	57	23	18	36	20	67	106	72	163
	16	64	27	18	36	23	76	109	72	183
	18	71	29	18	36	25	84	109	72	202
	20	78	32	18	36	28	92	110	72	221
	24	92	38	18	36	33	107	140	90	258
	30	110	46	22	54	40	127	193	90	308

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL OFFSET ^a		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
D U C T I L E I R O N	≤4	18	18	18	18	18	18	18	18	35
	6	22	18	18	18	18	20	25	36	49
	8	29	18	18	18	18	27	46	36	64
	10	35	18	18	18	18	32	62	54	77
	12	41	18	18	18	18	37	66	54	90
	14	47	20	18	18	18	43	67	72	103
	16	53	22	18	36	19	48	68	72	115
	18	59	24	18	36	21	53	69	72	127
	20	65	27	18	36	23	58	70	72	140
	24	76	31	18	36	27	67	89	90	162
	30	91	38	18	36	32	80	122	90	194

- Assumptions:
1. Pipe Test Pressure = 150 PSI
 2. Minimum Pipe Depth = 3.0 Feet
 3. Laying Condition = Type 5
 4. Safety Factor = 2.0

- a “Low” represents the minimum length of pipe (in feet) required to be restrained on the low side of the vertical offset, which is typically downstream of the offset fitting. “High” represents the minimum length of pipe (in feet) required to be restrained on the high side of the vertical offset, which is typically upstream of the offset fitting. Required restrained lengths assume an offset angle $\leq 45^\circ$.
- b Distance represents the linear feet of large diameter pipe upstream of the reducer required to be restrained. Restrain small diameter pipe at reducer at a minimum. If there is an unobstructed run downstream of the reducer (i.e. small diameter pipe) of at least 2.5 times the required length of large diameter pipe to be restrained, then restraint is required only at the reducer fitting. If small end of reducer is more than three pipe sizes smaller than large end, consult Engineer for required length to be restrained.

42.14 SEPARATION REQUIREMENTS BETWEEN FORCE MAINS AND POTABLE WATER/RECLAIMED WATER MAINS

42.14.1 HORIZONTAL SEPARATION

Force mains shall be laid at least ten feet (outside to outside) horizontally from water mains at least three feet (outside to outside) horizontally from any existing or proposed reclaimed water line. Smaller horizontal separation distances for force mains are allowed if one of the following conditions is met:

1. The top of the force main is installed at least 18-inches below the bottom of the potable water line.
2. The force main is encased in watertight carrier pipe or concrete.
3. Both the force main and the water main are constructed of slip-on or mechanical joint pipe complying with public water supply design standards and pressure tested to 150 psi to assure watertightness.

42.14.2 VERTICAL SEPARATION

Force mains shall cross under water mains, unless there is no alternative. Force mains crossing water mains or reclaimed water lines shall be laid to provide a minimum vertical distance of 18-inches between the invert of the upper pipe and the crown of the lower pipe. The minimum vertical separation shall be maintained whether the water main is above or below the force main. For sewer crossings, the crossing shall be arranged so that the force main pipe joints are equidistant and as far as possible from the water main joints. For force mains, smaller vertical separation distances if one of the following conditions are met.

1. The force main is encased in a watertight carrier pipe or concrete.
2. The force main is designed and constructed equal to water pipe and pressure tested to 150 psi to assure watertightness.

- 3. No vertical or horizontal separation distances are required for above-ground crossings.

42.14.3 CONCRETE ENCASEMENT OF PIPE

Where concrete encasement of pipe is required for obtaining separation from other pipes or for other reasons (e.g., inadequate cover), the pipe shall be encased with 3,000 psi concrete having a minimum thickness of 6 inches all around the outside of the pipe. Pipe must be supported in trench to allow 6 inches of concrete on all sides. Concrete must be mechanically vibrated into place. The Engineer or his representative must be present at the time of encasement.

- 42.14.4** CONTRACTOR shall notify the TOWN immediately where separation criteria cannot be met.

42.15 BACKFILLING

42.15.1 MATERIAL

All backfill shall be excavated material, essentially free of organic material, asphaltic concrete, clay, concrete, boulders and other deleterious material.

- 1. Bedding and Pipe Embedment: The material in the bedding, around the pipe and to a depth of 1 ft. over the pipe, shall be sand or a mixture of sand, shell or crushed stone properly graded and mixed so that fine grain material from the side walls of the trench or backfill above the embedment will not migrate into the backfill material. The backfill shall meet the following limitations.
 - a. Ductile Iron Pipe: All material shall pass through a 3/4 in. square opening laboratory sieve.
 - b. Plastic Pipe: All materials shall pass through a 1/2 in. square opening laboratory sieve.
- 2. Above Pipe Embedment: The material shall be sand or a mixture of sandy material with rock, stone and shell. Rock, stone, and shell shall pass through a 3-1/2 inch ring.
- 3. Top of Backfill: The top 12 inches of the backfill shall be topsoil and/or sandy material.
- 4. Additional Fill: If sufficient suitable backfill material is not available from the excavation, additional fill meeting the above requirements shall be provided by the CONTRACTOR.

42.15.2 PLACING AND COMPACTION

- 1. Under Pavement: Where the excavation is made through existing or proposed pavements, including shoulders, curbs, driveways, sidewalks, or structures, the entire backfill to the subgrade of the pavement or structures shall be made with predominantly sandy material free from rock, stones or organic matter, except that rocks

passing a 3-1/2 inch ring will be permitted in the backfill between the elevation one foot above the top of the pipe and the bottom of the pavement subgrade.

The entire backfill material, including the material placed around and one foot above the pipe, shall be compacted to a density of not less than 98% of the maximum density, as determined by AASHTO T-180, in 12" lifts. Particular care shall be taken to ensure that the backfill at the haunch is free from voids and is properly compacted. Compaction by flooding or puddling will be permitted only by written authorization from the Engineer.

Roads, walks and driveways consisting of broken stone, gravel, clay, marl, shell, shellrock, or a conglomerate of such materials, are not considered as being permanent pavement.

- 2. In Areas Not Under Permanent Pavement: Within rights-of-way or other areas where permanent pavement does not exist or is not proposed, including roads, walks and driveways consisting of broken stone, gravel, clay, marl, shell, shellrock or conglomerate, the entire backfill to the subgrade of the pavement or structures shall be made with predominantly sandy material free from rock, stones or organic matter, except that rocks having a maximum dimension of 3 1/2 inch will be permitted in the backfill between the elevation 1 ft. above the top of the pipe and 1 ft. below the surface. Particular care shall be taken to ensure that the backfill at the haunch is free from voids and is properly compacted. The bedding and embedment shall be compacted to a density of not less than 98 percent of maximum as determined by AASHTO T-180, in 12" lifts. The backfill material above 1 ft over the pipe shall be compacted to a density of not less than 90 percent of the maximum density, as determined by AASHTO T-180, in 12" lifts. Compaction by flooding or puddling will be permitted only by written authorization from the Engineer.

In areas where unpaved, stabilized roads exist, the CONTRACTOR shall restore the road to its original grade and condition. The finished stabilized road shall have a minimum LBR value of 50 for the top 12" of the roadbed.

- 3. Miscellaneous: Backfilling around meter boxes, valve boxes and other structures shall be accomplished in the same manner as the connected pipe. Extreme care shall be used in backfilling wellpoint holes to prevent voids and settlement. If necessary, the holes should be plugged with a concrete slurry, such plugging to be at the expense of the CONTRACTOR.
- 4. Compaction Tests: The TOWN or its representative may at any time instruct the CONTRACTOR to partially excavate a previously backfilled trench or temporarily backfilling of a short section of the trench for the purpose of obtaining measurements of the density of the backfill. All density testing shall be paid for by the CONTRACTOR. Density tests shall be taken along the pipe a minimum of every 300 feet, at each road lane crossing, and as directed by the TOWN. Density tests shall be taken in one-foot lifts from bottom of trench to finished grade.

42.16 CULVERT REMOVAL AND REPLACEMENT

42.16.1 Culverts, catch basins and other drainage structures that are removed or damaged during construction shall be replaced with materials and structures equal and similar to those removed or damaged. Manhole covers and gratings shall be set at the original elevations unless otherwise directed.

42.16.2 The CONTRACTOR shall take precautions against the entry of excavated and other loose material resulting from his operations from entering catch basins, culverts and other drainage structures in the vicinity of his operations. He shall maintain the cleanliness of these drainage structures in a condition equal to that prior to the commencement of his operations during the construction. The CONTRACTOR shall be responsible for all damage to persons, roads, buildings, vehicles and other property resulting from the failure of the CONTRACTOR to maintain these drainage structures.

42.17 TESTING

42.17.1 FLUSHING OF COMPLETED PIPELINES

Each section of completed pipeline shall be thoroughly flushed. A minimum flow shall be used for flushing that will ensure a velocity in the pipe of 2.5 ft. per second. Water required for testing and flushing will be furnished by the TOWN at existing pipes and outlets. CONTRACTOR shall slowly fill system to eliminate air pockets, then flush to remove particulates. Flushing shall comply with Figures 1 and 2, and Table 3 of AWWA C651. Provide corporation stops at any high points in line in order to bleed air from pipe. CONTRACTOR shall make provisions to properly dispose of water from his flushing operations. Flooding of streets and private property shall not be permitted. CONTRACTOR shall arrange with TOWN 72 hours in advance of the time of flushing for the availability of water. Water required for testing and flushing shall be furnished by the TOWN from a potable water source satisfactory to the TOWN. CONTRACTOR shall be required to meter and pay for any water used for flushing.

42.17.2 LEAKAGE TEST

Leakage and pressure tests shall be conducted in the presence of the TOWN. The CONTRACTOR shall provide all necessary apparatus including a pump, flow measuring device, piping connections and fittings and the necessary labor to conduct the tests. The test shall be of not less than two (2) hours in duration. During the test, the pipe being tested shall be maintained at a pressure of not less than 100 psi. All leaks evident at the surface shall be repaired and leakage eliminated regardless of total leakage shown by test. Lines which fail to pass tests shall be repaired and retested as necessary until test requirements are complied with. Defective materials, pipes, valves, and accessories shall be removed and replaced. The pipe lines shall be tested in sections between every consecutive in-line valve unless otherwise directed by the TOWN. The line shall be filled with water and all air removed, and the test pressure shall be maintained in the pipe for the entire test period by means of a force pump to be furnished by the CONTRACTOR. Accurate means shall be provided by the CONTRACTOR for measuring the makeup water required to maintain this pressure. Leakage is defined as the quantity

of makeup water added to the pipe being tested during the test period. No pipe installation will be accepted if the leakage exceeds the quantities specified in AWWA C605-05, which is represented by the following equation.

Where:

- Q = Quantity of makeup water (allowed) in gallons per hour
- L = Length of pipe section being tested, in feet
- D = Nominal diameter of the pipe, in inches
- P = Average test pressure during the hydrostatic test, in pounds per square inch (gauge)

42.17.3 TESTING PLAN

The CONTRACTOR must review his plan for testing with the TOWN at least two (2) working days before starting the test. The CONTRACTOR shall remove and adequately dispose of all blocking material and equipment after completion and acceptance of the field hydrostatic test, unless otherwise directed by the Engineer. Any damage to the pipe coating shall be repaired by the CONTRACTOR. Lines shall be totally free of debris prior to final acceptance.

42.18 PROTECTION

At the end of each workday, the mains under construction shall be plugged to prevent the entry of small animals and rodents. Temporary plugs shall be provided for this purpose. Keep all valves closed during construction.

42.19 RESTORATION OF DAMAGED SURFACES, STRUCTURES, AND PROPERTY

Where pavement, trees, shrubbery, fences, or other property and surface structures not designated as pay items have been damaged, removed, or disturbed by the CONTRACTOR, whether deliberately or through failure to carry out the requirements of the contract documents, state laws, county or municipal ordinances, or the specific directions of the TOWN, or through failure to employ usual and reasonable safeguards, such property and surface structures shall be replaced or repaired at the expense of the CONTRACTOR to a condition equal to that before work began within a time frame approved by the TOWN.

42.20 RESTORATION AND CLEAN-UP

42.20.1 RESTORATION

1. General: Restoration of areas disturbed by the CONTRACTOR's operations shall begin as soon as practical. CONTRACTOR's restoration operations shall keep pace with utility installation. TOWN reserves the right to halt utility installation until restoration and clean-up requirements are satisfied.
2. Time Frame for Restoration: Restoration of areas disturbed by the CONTRACTOR's operations shall begin no later than 14 days and shall be completed (excluding punch list items) no later than 28 days from the time construction first began in the area. No more than 1,000 LF along the path of the work may be completely unrestored (excluding punch list items) at the end of each day.

42.20.2 CLEAN-UP

The CONTRACTOR shall maintain the site of the work in a neat condition. The CONTRACTOR shall remove all excess materials, excess excavated materials, and all debris resulting from his operations a minimum of once per week.

SECTION 43**WASTEWATER PUMP STATIONS****43.1 GENERAL**

This section includes the specifications for equipment, materials, site work, fences and appurtenances for the installation of wastewater pump stations.

43.2 WETWELL

Wetwell shall be constructed as shown on the STANDARD DRAWINGS and in conformance with the specifications outlined in Section 41. All wetwells shall be watertight and have no leaks.

43.3 WETWELL LINER

All wastewater pump stations shall be provided with wetwell interior lining, as per one of the following:

43.3.1 FIBERGLASS LINER

Fiberglass reinforced polyester wetwell liner shall be manufactured from commercial grade polyester resin or vinyl ester resin with fiberglass reinforcements. The resin system shall be suitable for atmospheres containing hydrogen sulphide and dilute sulfuric acid, as well as other gases associated with the wastewater collection systems. The wetwell liner shall be a one-piece unit, 1/8-inch minimum thickness, manufactured in accordance with the requirements of ASTM D3753. Fiberglass liner system shall be as manufactured by GLI-Florida or approved equal. All inserts and sleeves for piping shall be in accordance with the liner manufacturer's recommendations and shall result in complete coverage of all precast sections and be capable of passing a spark test.

43.3.2 HDPE LINER

The HDPE embedment sheeting shall be mechanically bonded to the concrete by integral studs. The liner shall be cast in place by the precast manufacturer and the CONTRACTOR shall field weld the joints. Minimum thickness of liner is 80 mils. HDPE liner system shall be as manufactured by Agru Sure Grip or approved equal. All inserts and sleeves for piping shall be in accordance with the liner manufacturer's recommendations and shall result in complete coverage of all precast sections and be capable of passing a spark test.

43.3.3 EPOXY LINER

Epoxy coating shall be solvent-free 100 percent solids, ultra-high build epoxy coating specifically formulated for service in wastewater pump stations and manholes. The epoxy coating shall have broad range of chemical resistance, high physical strength and superior bond to concrete, steel, masonry, and fiberglass surfaces. The epoxy coating shall be designed for operating temperatures up to 200°F. The epoxy coating may

be spray-applied at the precaster’s facility or at the site. Epoxy coating for wastewater pump stations shall be:

Green Monster: Product shall be Green Monster Liner by GML Coatings, LLC at 125 mils DFT. Applied per the manufacturer’s recommendations by experienced applicators and shall be capable of passing a spark test.

Raven Lining Systems: Raven 405 as manufactured by Raven Lining Systems or approved equal. Epoxy coating shall be 80-mil thickness DFT. Applied per the manufacturer’s recommendations by experienced applicators and shall be capable of passing a spark test.

43.4 PRECAST CONCRETE SECTIONS

43.4.1 Precast wetwells shall conform to specifications for ASTM C478 “Precast Reinforced Concrete Manhole Sections”, except as otherwise specified below.

43.4.2 The minimum wall thickness shall be seven (7) inches. Precast wetwells shall be constructed with a precast monolithic base structure as shown on the Standard Drawings. The minimum base thickness shall be eight (8) inches.

43.4.3 Concrete shall be Type II, 4,000 psi at 28 days. All sections shall have tongue and groove joints except for top slab. All jointing material shall be a cold adhesive preformed plastic gasket, conforming to ASTM C443 “Manhole Section Connections”.

43.4.4 The date of manufacture and the name or trademark of the manufacturer shall be clearly marked on each precast section.

43.4.5 Sections shall be cured by an approved method as per ASTM C478 for at least 28 days prior to coating and shall not be shipped until at least two (2) days after having been coated.

43.5 ACCESS FRAMES AND COVERS

The wetwell shall be furnished with an access frame and cover. Equipment furnished shall include the necessary aluminum access frames, complete with hinged and slide bar equipped covers, stainless steel upper guide holder and level sensor cable holder. The frames shall be securely mounted above the pumps. Doors shall be of aluminum checkered plate. The access cover and frame with stainless steel hardware shall be sized as shown on the DRAWINGS. (See approved manufacturers' list in Appendix A.)

43.6 PUMPS AND CONTROLS

Wastewater pumps shall be submersible type only. Submersible wastewater pumps and miscellaneous accessories shall be as specified in Section 44. Controls and miscellaneous accessories shall be as specified in Section 45.

43.7 PIPING, VALVES, AND ACCESSORIES

43.7.1 PIPING

Influent piping to the wetwell shall meet the requirements of Sections 40. All pipe inside the wetwell shall be 316 SS pipe and as shown on the STANDARD DRAWINGS. Aboveground piping outside the wetwell shall be 316 stainless steel or ductile iron. Ductile iron piping shall be lined with Protecto 401. Thickness of lining shall be 40 mil nominal thickness with no holidays and shall meet all requirements as specified in the Protecto 401 Ceramic Epoxy – Standard for Lining Ductile Iron Pipe and Fittings for Sewer Service.

43.7.2 PLUG VALVES

Plug valves shall meet the requirements of Section 42.

43.7.3 CHECK VALVES

Check valves for ductile iron pumping stations shall be swing type and shall meet the material requirements of AWWA C500. The valves shall be iron body, bronze mounted, single disc, 150 psi working water pressure, non-shock, and hydrostatically tested at 300 psi. Ends shall be 125 pound ANSI B16.1 flanges.

When there is no flow through the line the disc shall hang lightly against its seat in practically a vertical position. When open, the disc shall swing clear of the waterway.

Check valves shall have bronze seat and body rings, extended bronze hinge pins and stainless steel nuts on the bolts of bolted covers.

Valves shall be so constructed that disc and body seat may easily be removed and replaced without removing the valve from the line. Valves shall be fitted with an extended hinge arm with outside lever and weight. If pump shut off head exceeds 75 feet, then an air cushioned assembly shall be installed.

43.7.4 PRESSURE GAUGES

1. Pressure gauges shall be glycerin filled, 4-1/2" dial and black numerals on white background and fully compatible with pressure sensor. They shall have a 1/4" mounting and be provided with blowout protection.
 - a. Provide stainless steel bourdon tube and movement and 316 stainless steel or noncorrosive case with safety glass lens and threaded lens retaining ring.
 - b. Provide adjustable pointer with overpressure stop and zero pointer stop.
 - c. Pressure gauge shall be accurate to + 1% of full range. Range shall be such that normal operating pressure is at midrange of scale.

- d. Diaphragm protection seals and gauges shall be fitted at factory. Seals shall be removable for cleaning without disturbing the diaphragm.
- e. Acceptable Manufacturers: Ashcroft, McDaniel, Ametek, General Instruments, Wika, or equal.

43.7.5 AIR RELEASE VALVES

All pump stations shall have an air release valve installed at the high point of the discharge piping center-line of the top. The minimum size shall be 2-inch. A stainless steel ball valve and nipple shall be provided. All air and vacuum combination release valves shall be Model ARI D-025SS, or approved equal.

43.8 STANDBY POWER GENERATOR SYSTEM

43.8.1 GENERAL

A standby power generator system shall be installed at pump stations as required by Section 22.4 for electrical power during the loss of normal power.

43.8.2 GENERATOR SET

- 1. General: The generator set shall consist of a diesel engine directly coupled to an electric generator, together with the necessary controls and accessories to provide continuous electric power to the lift station for the minimum duration of a 48 hour failure of the normal power supply.
 - a. A complete engine generator system shall be furnished and installed with fuel transfer pump, fuel day tank, battery, battery charger, muffler, radiator, control panel, remotely mounted automatic transfer switch (part of the control panel), and all other accessories required for an operational system. All materials and parts of the generator set shall be new and unused. Each component shall be of current manufacture from a firm regularly engaged in the production of such equipment. The set shall be of a standard model in regular production at the manufacturer's place of business. Units and components offered under the Specifications shall be covered by the manufacturer's standard warranty on new machines.
- 2. Requirements: The emergency generator set and accessories shall be of a type that complies with the latest edition of the National Electrical Code and all applicable state and local building codes.

The material and workmanship used in the manufacture of this equipment shall be of the highest quality consistent with the current standards for like equipment, and the equipment shall be manufactured in such a manner so as to conform to the latest applicable IEEE, ANSI, ISA, NEMA, and EEIA Standards.

The equipment supplier shall be liable for any latent defects due to faulty materials or workmanship in the equipment which may appear within one (1) year from the date of equipment start-up.

- 3, Tests: Equipment shall be completely assembled and tested at the factory prior to shipment. Certified copies of the data obtained during these tests shall be submitted to the TOWN.
 - a. Final tests shall be conducted at the site, after installation has been completed, in the presence of the TOWN's representative. The emergency generator manufacturer shall furnish a service representative to operate the engine during the tests, to check all details of the installation and to instruct the TOWN's representatives in proper equipment operation.
 - b. Field tests shall include operating the diesel generating set for eight (8) hours, carrying normal lift station loads. The CONTRACTOR shall refill the main fuel tank at the completion of the tests.

4. Ratings: The rating of the generator shall be as shown on the DRAWINGS. These ratings must be substantiated by the manufacturer's standard published curves. Special ratings shall not be acceptable. The set shall be capable of supplying the specified usable KW for the specified duration, including the power required for the pump start- up, without exceeding its safe operating temperature.

5. Engine: The engine shall be water-cooled, four-stroke cycle, compression ignition diesel. It shall meet specifications when operating on No. 2 domestic burner oil. The engine shall be equipped with fuel, tube oil and intake air filters; lube oil coolers, fuel transfer pump, fuel priming pump, and gear-driven water pump.

The engine and generator shall be torsionally compatible to prevent damage to either engine or generator. An engine instrument panel shall be installed on the generator set in an approved location. The panel shall include oil and fuel pressure and water temperature gauges. A mechanically driven engine hour meter shall also be provided.

The engine governor shall be of the isochronous electronic type. Frequency regulation shall not exceed plus/minus 0.25 percent under steady state conditions. The engine shall start and assume its rated load within 10 seconds, including transfer time.

6. Generator: The generator shall be a three-phase, 60 hertz, single bearing, synchronous type, built to NEMA Standards. Epoxy impregnated Class F insulation shall be used on the stator and the rotor.

The excitation system shall employ a generator-mounted volts per hertz type regulator. Voltage regulation shall be plus/minus 2 percent

from no load to full load. Readily accessible voltage drop, voltage level and voltage gain controls shall be provided. Voltage level adjustment shall be a minimum of plus/minus 5 percent.

7. Engine Generator Control Panel: A generator mounted NEMA 3R type 304, vibration isolated, 14 gauge stainless steel control panel shall be provided. Panel shall contain, but not be limited to, the following equipment:
 - a. Control Equipment: Control equipment shall consist of all necessary exciter control equipment, generator voltage regulators, voltage adjusting rheostat, and speed control equipment and automatic starting controls, as required to satisfactorily control the engine/generator set. In addition, an automatic safety shut down shall be provided for low oil pressure and/or high temperature conditions in the engine. An emergency shut down lever switch shall be provided on the air intake.
 - b. Metering Equipment: Metering equipment shall include 3- 1/2-inch meters (dial or digital type frequency meter, 2 percent accuracy voltmeter, and ammeter and ammeter- voltmeter phase selector switch). The control panel shall also include the engine water temperature, lube oil pressure and hour meter.
 - c. Fault Indicators: Individual press-to-test fault indicator lights for low oil pressure, high water temperature, low water level, overspeed, overcrank, and for day tank high and low fuel level shall be provided.
 - d. Function Switch: A four position function switch marked "Auto", "Manual", "Off/Reset", and "Stop" shall be provided.
8. Battery Charger: The battery charger shall be so designed that it shall not be damaged and shall not trip its circuit protective device during engine cranking or it shall be automatically disconnected from battery during cranking period. The charger shall be mounted in the emergency generator control panel. The charger shall have a 7 day/24 hour timer control.
9. Battery: The battery shall be lead-acid type with sufficient capacity to provide 90 seconds total cranking time without recharging. The battery shall be adequately rated for the specific generator set. The battery shall be encased in hard rubber or plastic and shall be furnished with proper cables and connectors, together with rack and standard maintenance accessories. The battery shall be provided with a 48 month warranty for the replacement of the battery if found to be defective.
10. Base and Mounting: A suitable number of spring-type vibration isolators with a noise isolation pad shall be provided to support the set and its liquids.

11. Utility Connections: All connections to the generator set shall be flexible.
12. Cooling System: The generator set shall be equipped with an engine mounted radiator sized to maintain safe operation at 110 degree F maximum ambient at the pump station altitude. A blower type fan shall be used directing the air flow from the engine through the radiator. The entire cooling system shall be filled with 50 percent glycol-water solution.
13. Fuel System: An above ground, main fuel oil storage tank with float Switch and fuel level indication shall be furnished and installed by the CONTRACTOR. The emergency system shall include low fuel level contacts for remote alarm. If necessary to guard against loss of prime to pump, a check valve shall be mounted on pump intake. The emergency system shall include a float switch, fuel level gauge and standard control panel.

Fuel oil piping, including mounting of any required fuel tanks, shall be furnished and installed by the CONTRACTOR.

14. Exhaust System: The generator set supplier shall provide a critical-type silencer, with flexible exhaust fittings, properly sized and installed, according to the manufacturer's recommendation. The silencer shall be mounted so that its weight is not supported by the engine.

Exhaust pipe size shall be sufficient to ensure that measured exhaust back pressure does not exceed the maximum limitations specified by the generator set manufacturer. The exhaust system shall include a flexible, seamless, stainless steel connection between the engine exhaust outlet and the rest of the exhaust system. The exhaust system shall be a part of generator enclosure.

15. Weatherproof Enclosure: Enclosure and all other items shall be designed and built by engine manufacturer as an integral part of the entire generator set and shall be designed to perform without overheating in the ambient temperature specified.

Enclosure shall be constructed of 14 or 16 gauge sheet metal suitably reinforced to be vibration free in the operating mode.

Four hinged doors shall be provided to allow complete access without their removal.

Each door shall have at least two catch-bearing points.

Side and rear panels shall be completely and simply removable for major service access.

Roof shall be peaked to allow drainage of rain water. Baked enamel finish with primer and finish coat shall be painted before assembly. All fasteners shall be rust resistant.

Unit shall have sufficient guards to prevent entrance by small animals. Padlocks shall be provided.

Batteries shall be designed to fit inside enclosure and alongside the engine. Batteries under the generator are not acceptable.

Unit shall have coolant and oil drains outside the unit to facilitate maintenance. Each drain line shall have a high quality valve located near the fluid source.

Fuel filter shall be inside the base perimeter and located so spilled fuel cannot fall on hot parts of engine or generator. A cleanable primary fuel strainer shall be used to collect water and sediment between tank and main engine fuel filter.

Crankcase fumes disposal shall terminate in front of the radiator to prevent oil from collecting on the radiator core and reducing cooling capacity.

16. Automatic Transfer Switch: The automatic transfer switch shall be part of the control panel described in Section 48.

The transfer switch shall be provided with the following features:

Complete protection, close differential voltage sensing relays monitoring all three phases (pick-up set for 95 percent of nominal voltage, drop-out set for 85 percent nominal voltage).

Voltage sensing relay on emergency source (pick-up set for 95 percent of nominal frequency).

Time delay on engine starting - adjustable from 1 second to 300 seconds (factory set at 3 second).

Time delay normal to emergency transfer - adjustable from zero second to 300 seconds (factory set at 1 second). The CONTRACTOR shall request time delay settings in accordance with the priority rating or their respective loads.

Time delay emergency to normal transfer - adjustable 30 seconds to 30 minutes (factory set at 5 minutes) and time delay bypass switch shall be provided on door of the switch cabinet.

Unload running time delay for emergency engine generator cooling down-adjustable from 0 to 5 minutes (factory set at 5 minutes) unless the engine generator control panel includes the cool down timer.

17. Warranty: Products shall be guaranteed to be free from defects in material and workmanship under normal use and service for a period of one (1) year after start-up.

43.9 FLOW MONITORING SYSTEM

43.9.1 GENERAL

When indicated on the DRAWINGS or as required by Section 22.3, a flow monitoring system capable of indicating, recording, and totalizing wastewater flows shall be provided. The system shall include magnetic flowmeter/transmitter, electronic recording receiver, and miscellaneous related accessories as specified herein. It shall be the CONTRACTOR's responsibility to provide and install such equipment resulting in a completely operational flow monitoring system.

43.9.2 MAGNETIC FLOWMETER TRANSMITTERS

The magnetic flowmeter shall be of the low frequency electromagnetic induction type and shall produce a DC pulsed signal directly proportional and linear to the liquid flowrate. The meter shall be designed for operation on 120 VAC \pm 10 percent, 60 Hz \pm 5 percent with a power consumption of less than 20 watts for sizes through 12-inches.

The metering tubes shall be constructed of stainless steel. All magnetic flowmeters shall be designed to mount directly in the pipe between ANSI Class 150 flanges and shall consist of a flanged pipe spool piece with laying length of at least 1 1/2 times the meter diameter. Meters shall have polyurethane liners with stainless steel electrodes.

The electronics portion of the magnetic flowmeter shall include both a magnet driver to power the magnet coils and a signal converter. The signal converter shall be integrally mounted. The converter shall include a separate customer connection section to isolate the electronics compartment and protect the electronics from the environment. A separate terminal strip for power connection shall be supplied. The electronics shall be of the solid state, feedback type and utilize integrated circuitry. The input span of the signal converter shall be continuously adjustable between 0-1 and 0-31 fps for both analog and frequency outputs. The converter shall not be affected by quadrature noise nor shall it require zero adjustment or special tools for start-up.

Input and output signals shall be fully isolated. The converter output shall be 4 to 20 mA DC into 0 to 900 ohms.

Meter shall be suitable for outdoors installation and shall be furnished complete with grounding rings and installation hardware including studs, nuts, gaskets, and flange adapter hardware.

The converter shall include an integral zero return to provide a constant zero output signal in response to an external dry contact closure.

Converter shall also include digital type switches for direct adjustment of scaling factor in engineering units along with integral calibration self-test feature to verify proper operation of the electronics.

The meter shall be hydraulically calibrated at a facility located in the United States and the calibration shall be traceable to the National Bureau of

Standards. A computer printout of the actual calibration data giving indicated versus actual flows at a minimum of three (3) flow rates shall be provided with the meter. A certification letter shall accompany the computer printout of the calibration data for each meter referencing the meter's serial number. The accuracy of the metering system shall be 1 percent of rate from 10 to 100 percent of flow for maximum flow velocities of 3 to 31 feet per second.

Complete zero stability shall be an inherent characteristic of the meter system to eliminate the need to zero adjust the system with a full pipe at zero flow.

The meter housing shall be splash-proof and weather resistant design. The meter shall be capable of accidental submergence in up to 30 feet of water for up to 48 hours without damage to the electronics or interruption of the flow measurement.

43.9.3 ELECTRONIC RECORDING RECEIVER

The electronic recording receiver shall be of the solid state, null-balance, servo operated potentiometer type.

The instrument shall contain a differential amplifier, a TORQ-ER driving motor to position the pen, and a Flux Bridge contactless solid state position feedback device for balancing. The instrument shall be capable of receiving one process variable input. Inputs shall be provided with electrical isolation. The instrument shall accept an input signal of 4 to 20 mADC. Electrical zero and span adjustments shall be provided. Power requirements shall be 120 VAC \pm 10 percent, 60 Hz. A power supply shall be provided for two-wire transmitters. Accuracy shall be \pm 0.5 percent of span, with repeatability of \pm 0.2 percent of span.

The receiver shall be provided with an indicating 5-inch segmental scale.

The electronic recording receiver shall be housed in a cast aluminum case suitable for panel mounting. The case shall have a gasketed door with glass window. A 12-inch circular chart shall be provided, with 7 day/rev. and chart rotation. An eight (8) digit electronic totalizing counter shall also be provided.

43.9.4 WARRANTY AND SERVICE

1. Warranty: Products shall be guaranteed to be free from defects in material and workmanship under normal use and service for a period of one (1) year after start-up.
2. Service: Service shall be available for insitu repair of the products. Manufacturer's repair personnel shall be based in Florida to ensure a reasonable response time of not more than two (2) working days.

43.10 CHAIN LINK FENCE

43.10.1 GENERAL

The CONTRACTOR shall furnish and erect the chain link fence and gate in accordance with these specifications and in conformity with the lines, grades,

notes, and typical sections shown on the DRAWINGS and the STANDARD DRAWINGS.

43.10.2 **MATERIALS**

The fabric, posts, fastenings, fittings, and other accessories for chain link fence shall meet the requirements of AASHTO M 181 with the following changes:

1. The weight of coating of wire fabric shall be 1.2 ounces of zinc per square foot (Class B).
2. The galvanizing of steel materials shall be hot-dipped galvanized.
3. The weight of coating on posts and braces shall be 1.8 ounces of zinc per square foot, both inside and outside to meet the requirements of AASHTO M 111.

The base metal of the fabric shall be a good commercial quality 9 gauge steel wire. The fabric shall be of uniform quality, and shall be 6 foot high with a 2 inch mesh size. Fabric shall be coated with vinyl, green color. All posts and rails shall be in accordance with the following schedule:

- End, corner and pull posts - 2 3/8" O.D., Schedule 40.
- Line posts and gate frames - 2" O.D., Schedule 40.
- Gate Posts - 3" O.D., Schedule 40.
- Post braces and top rail - 1 5/8" O.D., Schedule 20.

Tension wire shall be 0.177 inch coiled spring wire tensioned along the bottom of the fabric and shall be coated similarly to the wire fabric.

Miscellaneous fittings and hardware shall be zinc coated commercial quality or better steel or zinc coated cast or malleable iron as appropriate for the article.

Post caps, designed to provide a drive fit over the top of the tubular post to exclude moisture, shall be provided.

43.10.3 **INSTALLATION**

1. Post Setting: All posts shall be set three (3) feet deep in concrete footings, 12" diameter for line posts, gate and corner posts.

After the post has been set, aligned and plumbed, the hole shall be filled with 2500 psi concrete. The concrete shall be thoroughly worked into the hole so as to leave no voids. The exposed surface of the concrete shall be crowned to shed water.

End, corner, pull and gate posts shall be braced to the nearest post with horizontal brace used as a compression member and a galvanized 3/8-inch steel truss rod and truss tightener used as a tension member. Corner posts and corner bracing shall be constructed at all changes of fence alignment of 30 degrees or more. All chain link fence shall be constructed with a top rail and bottom tension wire.

2. Gates: Swing gates shall be two 6-foot wide double hung gates as indicated on the STANDARD DRAWINGS and hinged to swing through 180 degrees from closed to open and shall be complete with latches, locking device, stops keeper, hinges, fabric and braces. Gates shall be the same height as the fence and the gate fabric shall be the same as the fence fabric.

Gate leaves less than 8 feet wide shall have truss rods or intermediate braces and gate leaves 8 feet or more in width shall have intermediate braces and diagonal truss rods or shall have tubular members as necessary to provide rigid construction, free from sag or twist.

3. Placing Fabric: The fabric shall not be placed until the posts have been permanently positioned and concrete foundations have attained adequate strength. The fabric shall be placed by securing one end and applying sufficient tension to remove all slack before making permanent attachments at intermediate points.

The fabric shall be fastened to all corner, end and pull posts by substantial and approved means. Tension for stretching the fabric shall be applied by mechanical fence stretchers.

43.11 REQUIRED SUBMITTALS

43.11.1 Submittals shall be provided to the TOWN electronically and include the following:

1. Shop and erection drawings showing all important details of construction, dimensions and anchor bolt locations.
2. Descriptive literature, bulletins, and/or catalogs of the equipment.
3. Data on the characteristics and performance of each pump. Data shall include guaranteed performance curves, based on actual shop tests of similar units, which show that they meet the specified requirements for head, capacity, efficiency, NPSHR, submergence and horsepower. Curves shall be submitted on eight and one-half (8 1/2) inch by eleven (11) inch sheets, at as large a scale as is practical. Curves shall be plotted from no flow at shut off head to maximum manufacturer recommended pump capacity. Catalog sheets showing a family of curves will not be acceptable.
4. Complete layouts, wiring diagrams, elementary or control schematics, including coordination with other electrical control devices operating in conjunction with the pump control system. Suitable outline drawings shall be furnished for approval before proceeding with manufacture of any equipment. Standard preprinted sheets or drawings simply marked to indicate applicability will not be acceptable.
5. A drawing showing the layout of the pump control panel shall be furnished. The layout shall indicate all devices mounted on the door and in the panel shall be completely identified.

- 6. The weight of each pump.
- 7. Complete motor data shall be submitted including:
 - Nameplate identification
 - No-load current
 - Full load current
 - Pull load efficiency
 - Locked rotor current
 - High potential test data
 - Bearing Inspection report

43.12 ELECTRICAL GROUNDING SYSTEM

43.12.1 GENERAL

A grounding system shall be installed as per National Electrical Code, Local Codes and Ordinances. The DRAWINGS shall clearly show the Electrical Grounding System. An underground perimeter cable grounding system shall be installed with connections to at least the following equipment:

- 1. Wetwell Cover
- 2. Valve Vault Cover
- 3. Control Panels
- 4. Generator
- 5. Utility Company Transformer
- 6. Main Disconnect Switch
- 7. Fence

43.13 INSPECTION AND TESTING

43.13.1 A factory representative knowledgeable in pump operation and maintenance shall inspect and supervise a test run at the pumping station covered by this MANUAL. A minimum of one (1) working day shall be provided for the inspections. Additional time made necessary by faulty or incomplete WORK or equipment malfunctions shall be provided as necessary to meet the requirements in this MANUAL at no additional cost to the TOWN. Upon satisfactory completion of the test run, the factory representative shall issue the required manufacturer's certificate.

The test run shall demonstrate that all items of this MANUAL have been met by the equipment as installed and shall include, but not be limited to, the following tests:

- 1. That all units have been properly installed.
- 2. That the units operate without overheating or overloading any parts and without objectional vibration.
- 3. That there are no mechanical defects in any of the parts.
- 4. That the pumps can deliver the specified pressure and quantity.
- 5. That the pumps are capable of pumping the specified material.
- 6. That the pump controls perform satisfactorily.

SECTION 44**SUBMERSIBLE WASTEWATER PUMPS****44.1 GENERAL**

The equipment covered by these specifications is intended to be standard pumping equipment of proven ability as manufactured by a reputable firm having at least five (5) years of experience in the production of such equipment. The equipment furnished shall be designed, constructed, and installed in accordance with the best practices and methods, and shall operate satisfactorily when installed as shown on the DRAWINGS.

All parts shall be so designed and proportioned as to have liberal strength, and stiffness and to be especially adapted for the work to be done. Ample space shall be provided for inspection, repairs, and adjustment. All necessary foundation bolts, plates, nuts, and washers shall be furnished by the equipment manufacturer, and shall be of Type 304 stainless steel. Brass or stainless steel nameplates giving the name of the manufacturer, voltage, phase, rated horsepower, speed, and any other pertinent data shall be attached to each pump. The nameplate rating of the motors shall not be exceeded.

The pumps shall be capable of handling raw unscreened domestic wastewater and minimum 3" diameter solid spheres. Pump operation shall be controlled automatically by means of float-type liquid level sensors in the wetwell. Pumps shall be mounted in the wetwell as shown on the DRAWINGS. (See approved manufacturer's list in Appendix A)

44.2 PUMP CONSTRUCTION DETAILS**44.2.1 SHAFT**

The pump shaft shall be of Series 300 or 400 stainless steel. The shaft and bearings shall be adequately designed to meet the maximum torque required for any start-up or operating condition and to minimize vibration and shaft deflection. As a minimum, the pump shaft shall rotate on two (2) permanently lubricated bearings. The upper bearing shall be a single row ball bearing. The lower bearing shall be a two-row angular contact ball bearing, if required to minimize vibration and provide maximum bearing life.

44.2.2 IMPELLER

The impeller shall be constructed of gray cast iron, ASTM A-48, class 30, All external bolts and nuts shall be of Type 304 stainless steel. Each pump shall be provided with a replaceable metallic wear ring system to maintain pump efficiency. As a minimum, one stationary wear ring provided in the pump volute or one rotating wear ring provide on the pump impeller shall be required. A two-part system is acceptable.

44.2.3 MECHANICAL SEAL

Each pump shall be provided with a tandem double mechanical seal running in an oil reservoir, composed of two separate lapped face seals, each consisting of one stationary and one rotating tungsten carbide ring with each pair held in contact by a separate spring, so that the outside pressure assists spring compression in preventing the seal faces from opening. The compression spring shall be protected against exposure to the pumped liquid. Silicon carbide may be used in place of tungsten carbide for the lower seal. The pumped liquid shall be sealed from the oil reservoir by one face seal and the oil reservoir from the air-filled motor chamber by the other. The seals shall require neither maintenance nor adjustment, and shall be easily replaced. Conventional double mechanical seals with a single spring between the rotating faces, requiring constant differential pressure to effect sealing and subject to openings and penetration by pumping forces shall not be considered equal to tandem seal specified and required.

44.2.4 GUIDES

A sliding guide bracket shall be an integral part of the pump casing and shall have a machined connecting flange to connect with the cast iron discharge connection, which shall be bolted to the floor of the wet well with stainless steel anchor bolts and so designed as to receive the pump discharge flange without the need of any bolts or nuts, Sealing of the pumps to the discharge connection shall be accomplished by a simple linear downward motion of the pump with the entire weight of the pumping unit guided by no less than two (2) Type 316 seamless tubular stainless steel guides which will press it tightly against the discharge connection. No portion of the pump shall bear directly on the floor of the wetwell and no rotary motion of the pump shall be required for sealing. Sealing at the discharge connection by means of a diaphragm or similar method of sealing will not be accepted as an equal to a metal-to-metal contact of the pump discharge and mating discharge connection specified and required. Approved pump manufacturers, if necessary to meet the above specification, shall provide a sliding guide bracket adapter. The design shall be such that the pumps shall be automatically connected to the discharge piping when lowered into place on the discharge connection. The pumps shall be easily removable for inspection or service, requiring no bolts, nuts, or fastenings to be removed for this purpose, and no need for personnel to enter the wetwell. Each pump shall be fitted with a Type 304 stainless steel, 3/4" lifting chain of adequate strength. A 1/4" stainless steel cable, aircraft rating, shall be provided between the cable holder and the lifting chain.

44.3 MOTORS

44.3.1 GENERAL REQUIREMENTS

All motors shall be built in accordance with latest NEMA, IEEE, ANSI and AFBMA Standards where applicable. Pump motors shall be housed in an air-filled, water-tight casing and shall have Class F insulated windings which shall be moisture resistant. Motors shall be NEMA Design B, rated 155°C maximum. Pump motors shall have cooling characteristics suitable to permit continuous operation, in a totally, partially or non-submerged condition. The pump shall be capable of running continuously in a non-submerged condition under full load without damage, for extended periods. The motor shall be capable of a

minimum of 10 starts per hour. If required by the TOWN, before final acceptance, a field running test demonstrating this ability, with 24 hours of continuous operation under the above conditions, shall be performed for all pumps being supplied. Motors 25 horsepower and below shall be rated 230/460 volt, 3 phase. Motors greater than 25 horsepower shall be 460 volt, 3 phase.

44.3.2 HEAT AND MOISTURE SENSORS

Each motor shall incorporate a minimum of one ambient temperature compensated overheat sensing device and one moisture sensing device. These protective devices shall be wired into the pump controls in such a way that if excessive temperature or moisture is detected the pump will shut down. These devices shall be self-resetting.

44.3.3 CABLES

Cables shall be designed specifically for submersible pump applications and shall be properly sealed. A type CGB water-tight connector with a neoprene gland shall be furnished with each pump to seal the cable entry at the control panel. The pump cable entry seal design shall preclude specific torque requirements to ensure a water-tight and submersible seal. The cable entry shall be comprised of a single cylindrical elastomer grommet, flanked by washers, all having a close tolerance fit against the cable outside diameter and the entry inside diameter and compressed by the entry body containing a strain relief function, separate from the function of sealing the cable. The assembly shall bear against a shoulder in the pump top. The cable entry junction chamber and motor shall be separated by a stator lead sealing gland or terminal board, which shall isolate the motor interior from foreign material gaining access through the pump top. Secondary sealing systems utilizing epoxy potting compounds may be used. When this type of sealing system is used, the manufacturers shall supply a cable cap as part of the spare parts for each pump. All cables shall be continuous, without splices from the motor to the control panel, unless otherwise approved by the TOWN.

The junction chamber, containing the terminal board, shall be perfectly leak proof.

44.4 PUMP CONTROL SYSTEM

Refer to Section 45 for control system specifications.

44.5 SHOP PAINTING

Before exposure to weather and prior to shop painting, all surfaces shall be thoroughly cleaned, dry and free from all mill-scale, rust, grease, dirt and other foreign matter. All pumps and motors shall be shop coated with a corrosion resistant paint proven to withstand an environment of raw wastewater. All nameplates shall be properly protected during painting.

Gears, bearing surfaces, and other similar surfaces obviously not to be painted shall be given a heavy shop coat of grease or other suitable rust-resistant coating. This coating shall be maintained as necessary to prevent corrosion during periods of storage and erection and shall be satisfactory to the TOWN up to the time of the final acceptance test.

44.6 HANDLING

All parts and equipment shall be properly protected so that no damage or deterioration will occur during a prolonged delay from the time of shipment until installation is completed and the units and equipment are ready for operation. Finished surfaces of all exposed pump openings shall be protected by wooded planks, strongly built and securely bolted thereto. Finished iron or steel surfaces not painted shall be properly protected to prevent rust and corrosion.

44.7 WARRANTY

The pump manufacturer shall warrant the units being supplied to the TOWN against defects in workmanship and material for a period of one (1) year.

44.8 TOOLS AND SPARE PARTS

44.8.1 One (1) set of all special tools required for normal operation and maintenance shall be provided. All such tools shall be furnished in a suitable steel tool chest complete with lock and duplicate keys.

The manufacturer shall furnish the following spare parts for each size pump supplied:

1. 1 - upper bearing.
2. 1 - lower bearing.
3. 1 - set of upper and lower shaft seals.
4. 1 - set of "O-Rings" or gaskets required for replacement of bearings and seals.
5. 1 - set impeller wear ring.
6. 1 - shaft sleeve (if applicable).
7. 1 - cable cap (if applicable).

Spare parts shall be properly packaged and labeled for easy identification without opening the packaging and suitably protected for long term storage under humid conditions. Spare parts and tools shall be delivered to the TOWN at or prior to the time of pump station start-up.

SECTION 45

PUMP STATION ELECTRICAL POWER AND CONTROL SYSTEM

45.1 GENERAL

This section specifies the electrical power and control system requirements for wastewater pump stations. These requirements apply to duplex pump panels. Similar requirements shall apply when more than two pumps are involved except for the quantity of control equipment and panel size shall be increased accordingly. The manufacturer of the control panel shall provide data to indicate that the manufacturer has a minimum of 3 years' experience in the building of pump control panels.

A pump station control panel shall be provided for each wastewater pump station. (See approved manufacturers' list in Appendix A) The control panel shall respond to liquid level float switches to automatically start and stop pumps as well as sound an alarm upon high or low wetwell levels. The control panel shall operate two (2) electrical submersible pumps at the power characteristics stipulated. The control function shall provide for the operation of the lead pump under normal conditions. If the incoming flow exceeds the pumping capacity of the lead pump, the lag pump shall automatically start to handle this increased flow. As the flow decreases, pumps shall be cut off at elevation as shown on the PLANS. Pumps shall alternate positions as lead pump at the end of each cycle. A failure of the alternator shall not disable the pumping system. The alternator shall include a safe, convenient method of manual alternation and also have provisions to prevent automatic alternation without disturbing any wiring. Should the "pump off" regulator fail, the system shall keep the station in operation and provide a visual indication of the regulator failure.

The control panel shall consist of main circuit breakers and generator breaker with mechanical interlock, an emergency power receptacle, a circuit breaker and magnetic starter for each pump motor, and 15 amperes, 120 volt circuit breakers as required. All pump control operations shall be accomplished by a float type liquid level control system with all control components mounted in one common enclosure. Control switches shall provide means to operate each pump manually or automatically. When operated in the automatic mode, the control assembly shall provide means to manually select or automatically alternate the position of the "lead" and "lag" pumps after each pumping cycle. A float type liquid level control system shall continuously monitor wetwell liquid level and control operation of the low-level cutoff for the pumps and shall operate off a 24 volt circuit.

45.2 PANEL CONSTRUCTION

The duplex pump panel shall be housed in a NEMA 3R, Type 304, 14 gauge stainless steel enclosure with 30 percent extra mounting space for additional equipment. Enclosure shall have provisions for padlocking the door and a dead front inner door unit for mounting controls. All exterior hardware end hinges shall be stainless steel.

There shall be permanently affixed to the interior side of the exterior enclosure door both a nameplate and a 10" x 12" pocket for log sheet storage. The nameplate shall contain the following information, voltage, phase, rated horsepower, speed, date manufactured and pump and control panel manufacturer's name, address and telephone number, pump data, including impeller data, operating point and head, KW input, and amps at the operating point and at least two other points on the pump curve. The control panel enclosure shall be Underwriters Laboratories (UL) 50 type 3R listed.

45.3 POWER SUPPLY AND MAIN DISCONNECT

Power supply to the control panel shall be either 240 volt, 3 phase, 4 wire or 480 volt, 3 phase, 4 wire. Minimum service shall be 100 AMP. Single phase power shall not be accepted.

Non-fusible safety service main disconnects shall be installed at all stations. In all 240 volt systems, disconnects should be installed between the meter and the panel and on all 480 volt systems disconnect should be installed ahead of the meter. LED power available indicators shall be supplied on all legs.

45.4 CIRCUIT BREAKERS

45.4.1 MAIN BREAKERS

The panel shall have an inter-lock system between the normal power main breaker and the emergency breaker to ensure only one breaker is in the "on" position at a time. Both breakers shall be equal in size. (See approved manufacturers' list in Appendix A)

45.4.2 CIRCUIT BREAKERS

All circuit breakers shall be heavy duty molded case breakers. The handle on the circuit breakers shall be operational through the inner door. (See approved manufacturers' list in Appendix A)

45.5 MOTOR CIRCUIT PROTECTORS

Each pump motor shall be protected by a 3-pole motor circuit protector. (See approved manufacturers' list in Appendix A) The Motor Circuit Protector shall be operated by a toggle-type handle and shall have a quick-make, quick-break overcenter switching mechanism that is mechanically trip-free from the handle so that the contacts cannot be held closed against a short circuit and abnormal currents which cause the Motor Circuit Protector to trip. Tripping shall be clearly indicated by the handle automatically assuming a position midway between the normal ON and OFF positions. All latch surfaces shall be ground and polished. All poles shall be so constructed that they open, close, and trip simultaneously. Motor Circuit Protector must be completely enclosed in a high-strength glass polyester molded case. Ampere ratings shall be clearly visible. Contacts shall be of non-welding silver alloy. Arc extinction must be accomplished by means of arc chutes. A manual push-to-trip button shall be provided for manual exercising of the trip mechanism. Each pole of these Motor Circuit Protector's shall provide instantaneous short circuit protection by means of an adjustable magnetic-only element.

45.6 MOTOR STARTER AND SELECTOR SWITCHES

The panel shall contain two motor starters. The motor starter shall be across the line magnetic starter with individual overload protection on each power leg with reset installed through the inner door unit. (See approved manufacturers' list in Appendix A) Local Power Company Regulations shall govern.

Selector switches shall be installed on the face of the inner door unit. Selector switch shall be a heavy duty oil tight "Hand-Off-Auto" three position switch to control the operation mode of each pump motor starter.

45.7 PUMP ALTERNATOR

An eight-pin plug-in solid state alternator (see approved manufacturers' list in Appendix A) shall be provided to change the pump starting sequence on each pumping cycle. A three-position alternator test switch shall be provided to control the alternation operation. Switch positions to include the "Auto" to provide normal automatic sequence, "Off" position to disable alternator, and "test" position with a spring return to allow the alternating of the pump sequence to check alternator operation.

45.8 LIGHTS AND ALARMS

45.8.1 INDICATOR LIGHTS

There shall be installed on the face of the inner door unit, heavy duty oil tight indicator lights as shown on the STANDARD DRAWINGS.

45.8.2 HIGH LEVEL ALARM

A vapor proof red light and horn shall be mounted on top of the panel for high level alarm. Also, there shall be an alarm silence pushbutton on the inner door and a silence relay which will silence the horn and automatically reset when these signals are restored to normal. The pushbutton shall be heavy duty oil tight. The red globe shall be the screw-on type.

45.9 EMERGENCY POWER RECEPTACLE

This item shall only be required on stations that do not have a permanent standby generator system. The panel shall have an external mounted generator receptacle of the required size. (See approved manufacturer's list.)

45.10 ADDITIONAL REQUIREMENTS

45.10.1 WIRING

All power wires shall be THW or THWN 75°C insulated stranded copper conductors and shall be appropriately sized for the given load application. All control circuit wire shall be type THW Size 14, stranded type. All wiring within the enclosure shall be neatly routed by the use of slotted type wiring duct with snap on type covers. Wiring on the rear of the inner door shall be neatly bundled with nylon ties and include sufficient loop across the hinges to prevent wire damage, with each end of conductor marked (I.D.), Color: Red, 24 volt; white, neutral; black, 120 volts.

45.10.2 TERMINAL POINTS

Terminal points of all terminal strips shall be permanently identified. All terminal numbers and identifying nomenclature shall correspond to and be shown on electrical diagrams. All wiring shall be permanently shown on electrical schematic diagrams.

45.10.3 ENGRAVED NAMEPLATES

All circuit breakers, control switches, indicator pilot lights and other control devices shall be identified with permanently affixed legend plates and lamicoi-d-type engraved nameplates where applicable.

45.10.4 SURGE PROTECTOR

A surge protector shall be included and wired to protect motors and control equipment from lightning induced line surges. All surge protectors shall be U.L. approved and installed per respective power company requirements and manufacturers' specifications, surge protectors shall be attached to the main disconnects.

45.10.5 ELAPSED TIME METERS

Elapsed time meters shall be 115 volt not-reset type and shall totalize pump running time in hours and tenths of hours to 99999.9 hours.

45.10.6 CONVENIENCE RECEPTACLE

On the face of the inner door unit, there shall be installed a 15 AMP 120volt, duplex convenience receptacle. It shall be provided with its own single pole, 15 AMP circuit breaker for protection. Ground fault interrupt type shall be required.

45.10.7 CONTROL TERMINAL BLOCKS

Control terminal blocks shall be of the clamp screw type, rated for 600 volts. Amperage rating shall accommodate the control circuit amperage. An additional 30 space terminal strip shall be installed in the cabinet for future use, with RTU equipment.

45.10.8 CONTROL POWER TRANSFORMERS

There shall be a control power transformer with a minimum size of 500VA to provide 120VAC power for: coils for starters, 15A duplex receptacle, indicator pilot lights, alarm horn, alarm light, pump alternator, elapsed time meters etc. The secondary side shall have one leg fused and the other grounded. This control power transformer is required only on 480 volt control panels.

The signal required by the float switches and relays shall be 24VAC. This shall be provided by a 24VAC control power transformer properly sized with a fused secondary.

45.10.9 CONTROL RELAY

The level control relays shall operate from 24VAC. They shall be enclosed, plug-in 8 pin type with octal-style screw terminal sockets.

45.10.10 ELECTRICAL SCHEMATIC

There shall be permanently affixed to the interior side of the exterior enclosure door an electrical schematic diagram and a copy supplied to TOWN personnel at start-up. The schematic diagram shall include the rated amperage and voltage for all components.

45.10.11 PHASE MONITOR

For all 240 volt stations an eight pin plug-in type phase monitor shall be provided for protection of electrical components due to phase loss. Adequate dummy pin protection shall be provided to prevent accidental interchanging of the eight-pin phase monitor with the eight-pin alternator. All 480 volt stations shall have surface mount type phase monitors.

45.11 TESTING, SERVICE AND WARRANTY**45.11.1 TESTING**

After fabrication in the control panel manufacturer's plant, an operational test shall be performed to check out the entire panel before delivery. Three phase source voltage to which the panel is intended for shall be used for the testing.

45.11.2 SERVICE

The control panel manufacturer shall maintain a service organization within 150 miles of the TOWN.

45.11.3 WARRANTY

The manufacturer shall furnish a five (5) year warranty against defects in materials and workmanship covering parts and labor on all items supplied under this section.

DIVISION V
WATER DISTRIBUTION SYSTEMS

SECTION 50

WATER DISTRIBUTION SYSTEMS

50.1 GENERAL

These specifications include the pipe, fittings, and accessory items used for water distribution systems.

Pipe used in water distribution systems shall be either polyvinyl chloride (PVC), or ductile iron pipe (DIP).

The CONTRACTOR shall be responsible for all materials furnished and storage of same, until the date of substantial completion. He shall replace at his expense all materials found to be defective or damaged in handling or storage. The CONTRACTOR shall, if requested by the TOWN, furnish certificates, affidavits of compliance, test reports, or samples for check analysis for any of the materials specified herein. All pipe delivered to project site for installation is subject to random testing for compliance with the designated specifications.

50.2 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS

The work under this Contract shall be in strict accordance with the following codes and standards.

1. All local, county, municipal, and federal codes.
2. American National Standards Institute (ANSI).
3. American Society for Testing and Materials (ASTM).
4. American Water Works Association (AWWA).
5. American Association of State Highway and Transportation Officials (AASHTO).
6. Florida Department of Transportation Specifications (DOT).
7. Recommended Standards for Water Works, 10-States Standards.
8. Florida Dept. of Environmental Protection

50.3 QUALITY ASSURANCE STANDARDS

50.3.1 American National Standards Institute, Inc. (ANSI)/American Water Works Association (AWWA):

1. ANSI/AWWA C104, Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
2. ANSI/AWWA C105, Polyethylene Encasement for Ductile - Iron Piping for Water and Other Liquids.

3. ANSI/AWWA C111, Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings.
4. ANSI/AWWA C115, Flanged Ductile-Iron Pipe with Threaded Flanges.
5. ANSI/AWWA C150, Thickness Design of Ductile-Iron Pipe.
6. ANSI/AWWA C151, Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds for Water or Other Liquids.
7. ANSI/AWWA C153, Ductile-Iron Compact Fittings, 3 In. Through 16 In., for Water and Other Liquids.
8. AWWA C502, Dry-Barrel Fire Hydrants.
9. AWWA C504, Rubber-Seated Butterfly Valves.
10. AWWA C515, Reduced Wall, Resilient-Seated Gate Valves for Water Supply Service.
11. AWWA C600, Installation of Ductile-Iron Water Mains and Their Appurtenances.
12. AWWA C605, Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water.
13. AWWA C651, Disinfecting Water Mains.
14. AWWA C701, Cold-Water Meters - Turbine Type, for Customer Service.
15. AWWA C800, Underground Service Line Valves and Fittings.
16. AWWA C900, Polyvinyl Chloride (PVC) Pressure Pipe, 4 In. Through 12 In., for Water Distribution.
17. AWWA C905, Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 In. through 48 In. for Water Transmission and Distribution.

50.3.2 American Society for Testing and Materials (ASTM):

1. D1785, Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120.
2. D-2464, Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fillings, Schedule 80.
3. D2467, Socket Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
4. D2564, Solvent Chemicals for Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings.

- 5. D2855, Making Solvent Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.

50.3.3 Manufacturer's name and model numbers are listed to establish a standard of quality. Equivalent items of other manufacturers are acceptable.

50.4 SUBMITTALS

50.4.1 Submit manufacturer's certification of materials' conformance to specifications.

50.4.2 Submit manufacturer's literature, catalog data and installation instructions.

50.4.3 Submit certified field pressure test reports.

50.5 PRODUCT DELIVERY AND HANDLING

50.5.1 Exercise care to prevent damage of product during loading, transporting, unloading and storage.

50.5.2 Do NOT drop pipe or fittings.

50.5.3 Do not store directly on ground and assure that materials are kept clean. Pipe shall be kept bundled and strapped until it is ready for installation in order to prevent warping or disfiguring.

50.5.4 Store material in areas approved by the Owner.

50.5.5 Store material in such a manner as to not create a nuisance or safety hazard.

50.6 PIPE

50.6.1 General: Pipe shall be furnished free from defects impairing strength and durability and should be of best commercial quality for purpose specified. Structural properties shall be sufficient to safely sustain or withstand strains to which it is normally subjected. All pipe shall bear the National Sanitation Foundation Seal for potable water pipe.

50.6.2 Pipe Materials

- 1. Ductile Iron (D.I.) ANSI/AWWA C151:
 - a. Metal Thickness, ANSI/AWWA C150:
 - 1) 3 Inch through 12 Inch: Pressure Class 350.
 - 2) 14 Inch and Larger: Pressure Class 250.
 - 3) Jack and Bore Crossings: Pressure Class 350.
 - b. Interior Lining, ANSI/AWWA C104: mortar lined.
 - c. Exterior Coating, Bituminous Coating, 1 Mil thick.

2. Polyvinyl Chloride (PVC) 14 In. and larger:
 - a. Specification: AWWA C905.
 - b. Compound: PVC 12454-B, ASTM D 1784.
 - c. Thickness: Class 165, DR 25.
3. Polyvinyl Chloride (PVC) 4 In. Through 12 In.:
 - a. Specification: AWWA C900.
 - b. Compound: PVC 12454-B, ASTM D 1784.
 - c. Thickness: Class 150, DR 18.
4. Polyvinyl Chloride (PVC), 3 In. and Smaller:
 - a. Specification: ASTM D1785.
 - b. Compound: PVC 12454-B, ASTM D1784.
 - c. Thickness: Schedule 80.

50.6.3 Pipe Joints

1. Ductile Iron:
 - a. Mechanical: ANSI/AWWA C111.
 - b. Push On: ANSI/AWWA C111, single gasket type.
 - c. Flanged: ANSI B16.1, 125 lb.
 - d. Restrained: Acceptable: Lock-Fast, American Ductile Iron Pipe; TR Flex, U.S. Pipe; Super-Lock, Clow Corporation; Megalug 1100 and 1700 Series.
2. Polyvinyl Chloride, 4 In. and Larger:
 - a. Push On: ASTM F477 Elastomeric Gaskets
 - b. Restrained: UNI-BELL B-13, Uni-Flange Restrainer; Megalug 2000 PV and 1600 Series.
3. Polyvinyl Chloride, 3 In. and Smaller:
 - a. Screwed: ASTM D2464.
 - b. Solvent Weld: ASTM D2855.
 - c. Solvent: ASTM D2564.

50.6.4 Pipe Fittings

1. Ductile Iron and Polyvinyl Chloride (PVC) 3 In. and Larger:
 - a. ANSI/AWWA C153, ductile iron compact fittings.
 - b. ANSI/AWWA C104, mortar lined.
 - c. Mechanical: ANSI/AWWA C111.
 - d. Push On: AWSI/AWWA C111.
 - e. Flanged: ANSI B16.1, 125 lb.
 - f. Restrained-Ductile Iron: Same as Ductile Iron Pipe Joints.
 - g. Restrained-PVC: Same as PVC Pipe Joints.
2. Polyvinyl Chloride (PVC) 3 In. and Smaller:
 - a. ASTM D2464, Schedule 80 PVC threaded fittings.
 - b. ASTM D2467, Schedule 80 PVC socket type fittings.
 - c. ASTM D2855, solvent weld joints.

50.6.5 Pipe Marking and Identification

1. Ductile Iron Pipe: Permanent marking tape, with the words "WATER MAIN" printed along the tape, shall be attached to the pipe for its entire length. In addition, similar marking tape shall be placed in the trench over the pipe, six to twelve inches below finished grade, of the entire length of pipe.
2. PVC Pipe:
 - a. All non-metallic water main pipe installed underground shall have a #12 gauge, solid strand, copper type UF insulation trace wire (blue in color) attached for locating purposes. Half hitches shall be made behind each pipe bell and on each side of a valve or fitting. Branch splices shall be made at all tees, fire hydrants, and service lines. Trace wire shall be run into valve boxes. Watertight splicing connectors shall be utilized for all splices. Contractor shall be responsible for continuity of trace wire between valve boxes.
 - b. All PVC water main pipe shall be manufacturer's standard blue color or shall have permanent marking tape attached with the words "WATER MAIN" printed along the tape. In addition, similar marking tape shall be placed in the trench over the pipe, six to twelve inches below finish grade, for the entire length of pipe.

3. Above-ground Piping Coatings: Non-Submerged Ferrous Metals (Includes all exposed piping, valves, fittings, and supports which are not aluminum, galvanized or stainless steel).
 - a. Surface Preparation: Degrease before proceeding. SSPC-SP-10 Near-White Blast Cleaning. Coat all steel before any rust bloom forms. The surface should be dry and free of any contamination. Consult the manufactures application instructions for the recommended Blast profile.
 - b. Primer: High-build polyamide epoxy primer applied at 6.0 mils DFT. Use Sherwin-Williams Macropoxy 646 Fast Cure Epoxy, or equal.
 - c. Finish: Polyurethane applied at 4.0 mils. Use Sherwin-Williams Acrolon 218 HS Acrylic Polyurethane, or equal.

Minimum system dry film thickness 10.0 mils. All colors shall be in accordance with 10 State Standards as approved by the Owner. All piping shall be labeled in accordance with the 10 State Standard requirements, and flow arrows shall be provided. Stenciling shall be accomplished through painting or vinyl tape. All lettering shall be two inches high, appear on both sides of pipes, and be spaced on 10-foot intervals.

50.7 GATE VALVES

50.7.1 Two Inch and Larger: Shall be AWWA C515, iron body, resilient wedge, resilient seat, non-rising bronze stem with 2" square operating nut on buried valves, turn to left (counter clockwise) to open.

1. Working pressure of 200 psi.
2. Internal Metal Surfaces shall have two-part thermosetting epoxy coating, 4 mils thick.
3. Sealing Mechanism shall have zero leakage at 200 psi with flow in either direction.
4. End Conditions:
 - a. Above ground, \geq 2-inch: Flanged Joint
 - b. Below ground, \geq 3-inch: Mechanical Joint
 - c. Below ground, \leq 2-1/2-inch: Threaded Joint
5. Acceptable: Mueller, American, or equal.

50.7.2 Two Inch and Smaller:

1. Type III (double wedge disc, rising stem, inside screw).
2. Class B (150 lb. steam rating).
3. Threaded ends.

50.8 VALVE BOXES

1. Provide at all manually operated valves installed on underground lines.
2. ASTM A48, cast iron, Class 30-B, 3-piece extension type, with cover marked "WATER" and flared base to suit valve furnished.
3. Acceptable: Figure No. F-2450, Clow Corporation; Catalog No. H10357, Mueller Co.; Figure No. E-3002, M & H Valve and Fittings Co. or equal.

50.9 FIRE HYDRANTS

- A. AWWA C502 Dry-Barrel type fire hydrant with 5 ¼" main valve.
- B. Working Pressure Rating 150 psi.
- C. Provided with two 2 ½ Inch hose connections and one 4 ½ In. hose connection.
- D. Acceptable: American Darling B-62-B; Clow Medallion Hydrant, Mueller BSR 5 ¼" or equal.

50.10 FLUSHING VALVE

- A. Blow offs shall be box hydrants with a 2" main valve and a 2" bronze, male, thread discharge nozzle.
- B. All hydrants shall have lockable iron lids, all bronze working parts and removable bronze seats with rubber seals.
- C. One 24"-long operating wrench shall be provided for every three hydrants furnished.
- D. Acceptable: Kupferle Foundry, Model 85B; H20K, Inc., the Sample Station; or equal.

50.11 AIR RELEASE VALVES

All potable water lines shall have air and vacuum release valves installed as they are indicated on the plans. The body/base of these valves shall be made from high strength lightweight non-corroding fiberglass reinforced nylon, with total weight of no more than three (3) pounds, and all operating parts are to be made of engineered corrosion resistance plastic materials. The rolling resilient seal shall provide smooth positive opening, closing, and leak free sealing over the fluctuation of pressure differentials. The valve shall be designed to allow larger than normal automatic orifice providing efficient air release and minimize potential debris build up and clogging. The working pressure shall be 200 psi and shall have a ¾-inch, 1-inch, 2-inch threaded connection, or 3-inch and 4- inch flange connection. All air and vacuum release valves shall be Model ARI D-040, D-040C or approved equal. The connection to the system shall be a direct threaded connection, or flange, on the top of the pipe with a saddle, with an isolation valve. The height of valve shall not be more that 9-inches. If room does not allow for a direct connection, the use of a 90 degree bend can be used of offset the connection to the side. This connection must have a grade that increases as it leaves the connection at the pipe. All ARV valves must be ISO-9000 and NSF 61 certified.

All potable water lines that require automatic air release only, shall have as shown on the plans a 1/2-inch, 3/4-inch, or 1-inch threaded air release valve. This valve shall be made from lightweight non-corroding fiberglass reinforced nylon plastic, with a total weight of no more than one (1) pound, with all non-metallic operating parts. The rolling resilient seal shall provide smooth positive opening, closing, and leak free sealing over the fluctuation of pressure differentials. The valve shall be designed to allow larger than normal automatic orifice providing efficient air release and minimize potential debris build up and clogging. The working pressure shall be 200 psi and tested to 350 psi. All air release valves shall be Model ARI S-050 or approved equal. The connection to the system shall be a direct connection to the pipeline with the use of a saddle and an isolation valve. All ARV valves must be ISO-9000 certified, and those valves for potable water applications must have NSF 61 certification.

50.12 TAPPING SADDLE

All tapping saddles shall be suitable for the size and type of pipe being tapped. Saddle for pipe 4-inch and larger shall be brass with stainless steel double band and bolts. Acceptable: Ford 202BS or equal. Saddles for pipe less than 4-inch diameter shall be Ford S70 or 202B, as required, or equal.

50.13 CORPORATION STOPS

Corporation Stops shall be Mueller, Hayes or Ford threaded on the inlet side with Mueller threads and the outlet side fitted with connections to suit the connecting pipe.

50.14 CURB STOPS

50.14.1 Curb stops shall be Mueller, Hayes or Ford.

50.14.2 All curb stops shall have a locking wing.

50.15 METER COUPLINGS

50.15.1 Meter Couplings shall be Mueller, Hayes or Ford.

50.15.2 Couplings shall be straight meter couplings with M.I.P.T.

50.16 SERVICE PIPE

50.16.1 Service piping shall be polyethylene, SDR 9, AWWA C901, ASTM D2737, PE 3408, colored blue, NSF Seal, with Type 316 stainless steel inserts.

50.17 WATER METERS

Water meters shall be furnished by the TOWN for CONTRACTOR to install.

50.18 METER BOXES

50.18.1 Water Meter Boxes shall be plastic or polymer material with an in-ground base and a removable cast iron cover. The overall size of the box shall accommodate the size of the water meter and the curb stop with additional space at each end of the box.

50.18.2 Boxes located within traffic-loaded areas shall be suitable for wheel loads.

50.18.3 Acceptable: DFW Plastics, Inc. (Model DFW 1200)

50.19 PLASTIC LOCATING AND MARKING TAPE

Tape shall be plastic coated foil with a minimum width of 2 inches. Tape shall be highly visible and shall have the words "WATER MAIN" in at least 1" letters printed at least every 36 inches along the tape. Tape shall be located one foot below ground surface directly above the centerline of the pipe. Tape shall be Allen Marking Tape or equal.

50.20 LOCATE WIRING

Locate wire shall be installed on all PVC, ductile iron and HDPE water main piping, and services 10 LF or greater in length. No wire shall be installed on above ground installations (must meet minimum installation requirements, see details). Locate wiring for direct bury shall be 12 gauge, copper wire with 0.03 inches (minimum) HDPE insulation thickness, 0.141 inches (minimum) O.D. rated break load 250 lbs., 30 volt, 21% IACS. The outside color of the wire shall be blue. Copperhead and Protrace tracer wire or approved equal.

50.21 PIPE COUPLINGS

The Contractor shall furnish and install pipe couplings as required to complete the work. Pipe couplings used to join two pieces of ductile iron pipe or PVC pipe shall be sized to match the outside diameter of the pipeline. Transition couplings shall be used to join pipes of different outside diameters. The coupling sleeve shall be manufactured of ductile iron conforming to ASTM A536 and be coated with 14 mils of epoxy. The bolts shall be manufactured of a metal of high corrosion resistance and shall conform to ANSI 21.11 (AWWA C111). Gaskets shall be wedge-type and manufactured of virgin SBR for water and sewer service. The installation of all couplings shall be in accordance with latest manufacturer's recommendations. Unless approved otherwise by the Engineer, the maximum gap between pipe ends shall be: (based upon sleeve length) 5" sleeve, 1" gap; 7" sleeve, 2" gap, 10" sleeve, 3-1/2" gap; other per manufacturer's recommendation. Couplers and adapters for polyethylene pipe shall be brass conforming to AWWA C800 and shall be female IPS, pack joint or compression nut.

50.22 EXCAVATION

50.22.1 GENERAL

The Contractor shall perform all excavation of every description and of whatever substances encountered to the depths indicated on the Drawings or as necessary. This shall include all necessary clearing and grubbing of any foreign substance encountered within the structure or trench area. Excavated material suitable for backfill shall be piled in an orderly manner at a sufficient distance from the trench to prevent slides or cave-ins.

50.22.2 PROTECTION OF EXISTING FACILITIES AND UTILITIES

All existing improvements such as pavements, conduit, poles, pipes and other structures, shall be carefully supported and fully protected from injury and, in case of damage, they shall be restored, pressure tested and disinfected by the Contractor without compensation. Existing utilities and other underground obstructions are shown on the plans, but the accuracy of the locations and depths is not guaranteed. The Contractor shall contact all utilities prior to construction and arrange for the necessary assistance in locating and protecting

the existing utilities. The Contractor shall be responsible for damages to these existing utilities and shall, in case they are damaged, restore them to their original condition.

50.22.3 TRENCH EXCAVATION

Shall be in accordance with the Florida Trench Safety Act. The minimum width of the trench shall be equal to the outside diameter of the pipe at the joint plus 8 in. each side of pipe for unsheeted or sheeted trench, with the maximum width of trench, measured at the top of the pipe, not to exceed the outside pipe diameter, plus 24 in., unless otherwise shown on the Drawings. Trench walls shall be maintained vertical from the bottom of the trench to a line measured at the top of the pipe. From the top of the pipe to the surface of the trench walls shall be as vertical as possible under soil conditions.

No more than 300 linear feet of trench shall be open in advance of the completed pipe laying operation without prior approval of the Engineer. Pipe trenches across roadways and driveways shall be backfilled as soon as the pipe is installed. Where, in the opinion of the Engineer, adequate detour facilities are not available, no trench shall be left open across a roadway or commercial property driveway where adequate detour routes are not available for a period in excess of 30 minutes, or as directed by the governing authority. No trench shall be left open across any roadway or driveway for more than 24 hours. It shall be the Contractor's responsibility to provide traffic control and barricades as necessary.

50.22.4 SHORING, SHEETING AND BRACING

The Contractor shall do all shoring, sheeting and bracing or provide other approved facilities required to perform and protect the excavation and as necessary for the safety of the public, the employees, and the preservation of existing roads, structures and other utilities. The top of such sheeting left in place shall be cut off at a minimum elevation of 2.5 ft. below finished grade.

50.22.5 PAVEMENT REMOVAL

The Contractor shall remove pavements as part of the trench excavation. The material from permanent pavement removal shall be carefully separated from trench excavation material and disposed of by the Contractor.

50.22.6 BOULDER REMOVAL

All rocks, stones, boulders or concrete, having any dimension larger than permitted to be used for backfill in the paragraph entitled "Backfilling" of these Specifications, shall be removed from the site and disposed of by the Contractor.

50.22.7 UNSUITABLE SOIL CONDITIONS AND OVERDEPTH EXCAVATION

Where determined by Engineer or his representative that the soils encountered in the utility trench excavation are unsuitable for pipe bedding and/or backfill, the depth of excavation shall be increased as directed by Engineer or his representative. The bottom of the excavation shall be brought up to the proper

excavation elevation utilizing suitable and properly-compacted backfill material or bedding material as directed by the Engineer or his representative. Bedding material if required, shall consist of 1/2" to 1" diameter gravel placed in bottom of trench at a thickness of 4 to 6 inches. Suitable backfill material shall then be installed and compacted over pipe as described in Paragraph 3.04. Contractor shall be compensated for removal and replacement of unsuitable soils in accordance with the applicable bid items.

50.22.8 DISPOSAL OF EXCESS MATERIAL

The Contractor shall dispose of the excavated materials not required or suitable for backfill. All surplus excavated material which is unsuitable for fill shall become the property of the Contractor and shall be disposed of by the Contractor at his expense. Pieces of broken asphalt shall be carefully separated from suitable fill material and hauled to an asphalt plant for disposal or shall be disposed of by some other acceptable means by the Contractor at no expense to Owner. All excavated material not suitable for backfill (e.g., concrete, boulders, roots, etc.) shall be carefully separated from suitable fill material and disposed of by the Contractor at no expense to Owner. Owner has the option to accept suitable backfill material from the Contractor.

50.23 INSTALLATION OF WATER MAINS AND SERVICES

50.23.1 GENERAL

Unless otherwise noted on the Drawings or in other sections of this Specification, the pipe shall be handled and installed in strict accordance with the manufacturer's instructions and with the applicable AWWA or ASTM Standards.

1. Ductile Iron Pipe: AWWA C-600.
2. Polyvinyl Chloride Pipe: ASCE Manual No. 37, ASTM D2321.
3. If a conflict exists between the manufacturer's instructions and the AWWA or ASTM Standards, the manufacturer's instructions shall govern.
4. Examine area to receive pipe work for defects that adversely affect execution of work or cause deviation beyond allowable tolerances for piping clearances.
5. Carefully examine each section of pipe or valve before installation. Do not use defective or damaged pipe or materials. Remove such pipe or material from project site immediately.

50.23.2 PREPARATION

The Contractor shall use every precaution during construction to protect the pipe against the entry of non-potable water, dirt, wood, small animals and other foreign material that would hinder the operation of the pipeline. All valves installed in main shall be kept tightly closed until flushing and testing are to be performed. Where the groundwater elevation is above the bottom of the trench,

the Contractor shall provide suitable dewatering equipment. All piping shall be placed in a dry trench, unless wet trench installation is approved by the Engineer.

50.23.2 **DEPTH OF COVER**

Unless otherwise shown on the Drawings, or otherwise authorized by the Engineer, the pipe shall have a minimum cover of 36 inches.

50.23.3 **CONNECTIONS TO EXISTING MAINS**

The Contractor shall make connections to existing mains as shown on the Drawings. Connections shall be made only after arrangements have been completed by the Contractor with the Owner of the system and shall be under the System Owner's immediate supervision. Contractor shall be required to restrain existing pipe as necessary in accordance with pipe restraint schedule.

50.23.5 **PIPE THRUST RESTRAINTS**

Mechanical restrainers shall be installed as required to properly restrain all piping systems. At a minimum, restrainers shall be provided on all below-grade valves and fittings and at the required number of pipe joints in each direction. Required lengths of restrained pipe shall be as shown in pipe restraint schedule at end of this paragraph for the type of soil encountered. For above-grade piping, all valves and fittings shall be threaded, flanged or solvent welded with supports as required.

PIPE RESTRAINT SCHEDULE

MINIMUM LENGTH OF PIPE (IN FEET) REQUIRED TO BE RESTRAINED ON EACH SIDE OF A VALVE OR FITTING FOR SANDY SOILS (SW, SP, SM, SC)

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL OFFSET ^a		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
P V C P I P E	<4	18	18	18	18	18	22	36	18	52
	6	24	18	18	18	18	30	38	36	73
	8	31	18	18	18	18	40	69	36	96
	10	37	18	18	18	18	48	93	54	115
	12	43	18	18	18	18	56	99	54	136
	14	49	20	18	18	18	64	101	72	155
	16	55	23	18	18	18	72	103	72	174
	18	60	25	18	36	20	80	104	72	192
	20	65	27	18	36	21	87	105	72	211
	24	75	31	18	36	25	102	134	90	246
	30	88	37	18	36	29	122	185	90	295

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL OFFSET ^a		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
D U C T I L E I R O N	≤4	18	18	18	18	18	18	18	18	33
	6	20	18	18	18	18	19	35	36	47
	8	26	18	18	18	18	25	44	36	61
	10	31	18	18	18	18	30	60	54	73
	12	37	18	18	18	18	36	63	54	86
	14	41	18	18	18	18	41	64	72	98
	16	46	19	18	36	18	46	66	72	111
	18	51	21	18	36	18	51	66	72	122
	20	56	23	18	36	18	56	67	72	134
	24	64	27	18	36	21	65	85	90	156
	30	75	31	18	36	25	78	118	90	188

PIPE RESTRAINT SCHEDULE

MINIMUM LENGTH OF PIPE (IN FEET) REQUIRED TO BE RESTRAINED ON EACH SIDE OF A VALVE OR FITTING FOR CLAYEY AND SILTY SOILS (CL, CH, ML, MH)

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL OFFSET ^a		REDUCER ^b	VALVE	DEAD END
						LOW	HIGH			
P V C P I P E	≤4	19	18	18	18	18	23	36	18	55
	6	26	18	18	18	18	32	40	36	77
	8	35	18	18	18	18	42	73	36	101
	10	42	18	18	18	18	50	98	54	121
	12	50	21	18	18	18	59	104	54	143
	14	57	23	18	36	20	67	106	72	163
	16	64	27	18	36	23	76	109	72	183
	18	71	29	18	36	25	84	109	72	202
	20	78	32	18	36	28	92	110	72	221
	24	92	38	18	36	33	107	140	90	258
	30	110	46	22	54	40	127	193	90	308

PIPE TYPE	PIPE SIZE	90° BEND	45° BEND	≤22.5° BEND	TEE OR CROSS	VERTICAL OFFSET ^a		REDUCER ^b	VALVE	DEAD END
						LOW	HIG			
D U C T I L E I R O N	≤4	18	18	18	18	18	18	18	18	35
	6	22	18	18	18	18	20	25	36	49
	8	29	18	18	18	18	27	46	36	64
	10	35	18	18	18	18	32	62	54	77
	12	41	18	18	18	18	37	66	54	90
	14	47	20	18	18	18	43	67	72	103
	16	53	22	18	36	19	48	68	72	115
	18	59	24	18	36	21	53	69	72	127
	20	65	27	18	36	23	58	70	72	140
	24	76	31	18	36	27	67	89	90	162
	30	91	38	18	36	32	80	122	90	194

- Assumptions:
1. Pipe Test Pressure = 150 PSI
 2. Minimum Pipe Depth = 3.0 Feet
 3. Laying Condition = Type 5
 4. Safety Factor = 2.0

- a “Low” represents the minimum length of pipe (in feet) required to be restrained on the low side of the vertical offset, which is typically downstream of the offset fitting. “High” represents the minimum length of pipe (in feet) required to be restrained on the high side of the vertical offset, which is typically upstream of the offset fitting. Required restrained lengths assume an offset angle $\leq 45^\circ$.
- b Distance represents the linear feet of large diameter pipe upstream of the reducer required to be restrained. Restrain small diameter pipe at reducer at a minimum. If there is an unobstructed run downstream of the reducer (i.e. small diameter pipe) of at least 2.5 times the required length of large diameter pipe to be restrained, then restraint is required only at the reducer fitting. If small end of reducer is more than three pipe sizes smaller than large end, consult Engineer for required length to be restrained.

50.24 WATER AND SEWER LINE ORIENTATION

50.24.1 HORIZONTAL SEPARATION

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.
2. 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. 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.

50.24.2 VERTICAL SEPARATION

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 six inches, and preferably 12 inches, above or at least 12 inches below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline.
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.

3. At the utility crossings described in paragraphs B.1. and B.2. 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 crossings, 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, and at least six feet from all joints in gravity- or pressure-type sanitary sewers, wastewater force mains, or pipelines conveying reclaimed water.

50.24.3 ALTERNATE SEPARATION

1. Where an underground water main is being laid less than the required minimum horizontal distance from another pipeline and where an underground water main is crossing another pipeline and joints in the water main are being located less than the required minimum distance from joints in the other pipeline, equivalent separation can be achieved by:
 - a. Use of pressure-rated pipe conforming to the American Water Works Association standards C-900 or C-905 for the other pipeline if it is a gravity- or vacuum-type pipeline;
 - b. Use of welded, fused, or otherwise restrained joints for either the water main or the other pipeline; or
 - c. Use of watertight casing pipe or concrete encasement at least six inches thick for either the water main or the other pipeline.
2. Where an underground water main is being laid less than three feet horizontally from another pipeline and where an underground water main is crossing another pipeline and is being laid less than the required minimum vertical distance from the other pipeline, equivalent separation can be achieved by:
 - a. Use of ductile iron carrier or casing pipe, or concrete encasement at least four inches thick for the water main; and
 - b. Use of ductile iron carrier or casing pipe, or concrete encasement at least four inches thick for the other pipeline if it is new and is conveying wastewater or reclaimed water.

50.24.5 CONCRETE ENCASEMENT OF PIPE

Where concrete encasement of pipe is required for obtaining separation from other pipes or for other reasons (e.g., inadequate cover), the pipe shall be encased with 3,000 psi concrete having a minimum thickness of 6 inches all around the outside of the pipe. Pipe must be supported in trench to allow 6 inches of concrete on all sides. Concrete must be mechanically vibrated into place. The Engineer or his representative must be present at the time of encasement.

50.25 BACKFILLING

50.25.1 MATERIAL

All backfill shall be excavated material, essentially free of organic material, asphaltic concrete, clay, concrete, boulders and other deleterious material.

1. Bedding and Pipe Embedment: The material in the bedding, around the pipe and to a depth of 1 ft. over the pipe, shall be sand or a mixture of sand, shell or crushed stone properly graded and mixed so that fine grain material from the side walls of the trench or backfill above the embedment will not migrate into the backfill material. The backfill shall meet the following limitations.
 - a. Ductile Iron Pipe: All material shall pass through a 3/4 in. square opening laboratory sieve.
 - b. Plastic Pipe: All materials shall pass through a 1/2 in. square opening laboratory sieve.
2. Above Pipe Embedment: The material shall be sand or a mixture of sandy material with rock, stone and shell. Rock, stone, and shell shall pass through a 3-1/2 inch ring.
3. Top of Backfill: The top 12 inches of the backfill shall be topsoil and/or sandy material.
4. Additional Fill: If sufficient suitable backfill material is not available from the excavation, additional fill meeting the above requirements shall be provided by the Contractor.

50.25.2 PLACING AND COMPACTION

1. Under Pavement: Where the excavation is made through existing or proposed pavements, including shoulders, curbs, driveways, sidewalks, or structures, the entire backfill to the subgrade of the pavement or structures shall be made with predominantly sandy material free from rock, stones or organic matter, except that rocks passing a 3-1/2 inch ring will be permitted in the backfill between the elevation one foot above the top of the pipe and the bottom of the pavement subgrade.

The entire backfill material, including the material placed around and one foot above the pipe, shall be compacted to a density of not less than 98% of the maximum density, as determined by AASHTO T-180. Particular care shall be taken to ensure that the backfill at the haunch is free from voids and is properly compacted. Compaction by flooding or puddling will be permitted only by written authorization from the Engineer.

Roads, walks and driveways consisting of broken stone, gravel, clay, marl, shell, shellrock, or a conglomerate of such materials, are not considered as being permanent pavement.

- 2. In Areas Not Under Permanent Pavement: Within rights-of-way or other areas where permanent pavement does not exist or is not proposed, including roads, walks and driveways consisting of broken stone, gravel, clay, marl, shell, shellrock or conglomerate, the entire backfill to the subgrade of the pavement or structures shall be made with predominantly sandy material free from rock, stones or organic matter, except that rocks having a maximum dimension of 3 ½ inch will be permitted in the backfill between the elevation 1 ft. above the top of the pipe and 1 ft. below the surface. Particular care shall be taken to ensure that the backfill at the haunch is free from voids and is properly compacted. The bedding and embedment shall be compacted to a density of not less than 98 percent of maximum as determined by AASHTO T-180. The backfill material above 1 ft over the pipe shall be compacted to a density of not less than 90 percent of the maximum density, as determined by AASHTO T-180. Compaction by flooding or puddling will be permitted only by written authorization from the Engineer.

In areas where unpaved, stabilized roads exist, the CONTRACTOR shall restore the road to its original grade and condition. The finished stabilized road shall have a minimum LBR value of 40 for the top 12" of the roadbed.

- 3. Miscellaneous: Backfilling around meter boxes, valve boxes and other structures shall be accomplished in the same manner as the connected pipe. Extreme care shall be used in backfilling wellpoint holes to prevent voids and settlement. If necessary, the holes should be plugged with a concrete slurry, such plugging to be at the expense of the CONTRACTOR.
- 4. Compaction Tests: The TOWN or its representative may at any time instruct the CONTRACTOR to partially excavate a previously backfilled trench or temporarily backfill a short section of the trench for the purpose of obtaining measurements of the density of the backfill. All density tests shall be paid for by the Contractor. Density tests shall be taken along the pipe a minimum of every 300 feet, at each road lane crossing, and as directed by Engineer. Density tests shall be taken in one-foot lifts from bottom of trench to finished grade.

50.26 CULVERT REMOVAL AND REPLACEMENT

50.26.1 Culverts, catch basins and other drainage structures that are removed or damaged during construction shall be replaced with materials and structures equal and similar to those removed or damaged. Manhole covers and gratings shall be set at the original elevations unless otherwise directed.

50.26.2 The CONTRACTOR shall take precautions against the entry of excavated and other loose material resulting from his operations from entering catch basins, culverts, and other drainage structures in the vicinity of his operations. He shall maintain the cleanliness of these drainage structures in a condition equal to that prior to the commencement of his operations during the construction. The CONTRACTOR shall be responsible for all damage to persons, roads, buildings, vehicles, and other property resulting from the failure of the CONTRACTOR to maintain these drainage structures.

50.27 TESTING AND DISINFECTION

50.27.1 FLUSHING OF COMPLETED PIPELINES

Each section of completed pipeline shall be thoroughly flushed. A minimum flow shall be used for flushing that will ensure a velocity in the pipe of 2.5 ft. per second. Water required for testing and flushing will be furnished by the TOWN at existing pipes and outlets. CONTRACTOR shall slowly fill system to eliminate air pockets, then flushed to remove particulates. Flushing shall comply with Figures 1 and 2, and Table 3 of AWWA C651. Provide corporation stops at any high points in line in order to bleed air from pipe. CONTRACTOR shall make provisions to properly dispose of water from his flushing operations. Flooding of streets and private property shall not be permitted. CONTRACTOR shall arrange with TOWN 72 hours in advance of the time of flushing for the availability of water. Water required for testing and flushing will be furnished by the TOWN from a potable water source satisfactory to the TOWN and shall be properly metered and paid for by the CONTRACTOR.

50.27.2 LEAKAGE TEST

Leakage and pressure tests shall be conducted in the presence of the TOWN. The CONTRACTOR shall provide all necessary apparatus including a pump, flow measuring device, piping connections and fittings and the necessary labor to conduct the tests. The test shall be of not less than two (2) hours in duration. During the test, the pipe being tested shall be maintained at a pressure of not less than 150 psi. All leaks evident at the surface shall be repaired and leakage eliminated regardless of total leakage shown by test. Lines which fail to pass tests shall be repaired and retested as necessary until test requirements are complied with. Defective materials, pipes, valves, and accessories shall be removed and replaced. The pipe lines shall be tested in sections between every consecutive in-line valve unless otherwise directed by the TOWN with all water services connected to the curb stop. The line shall be filled with water and all air removed, and the test pressure shall be maintained in the pipe for the entire test period by means of a force pump to be furnished by the Contractor. Accurate means shall be provided by the Contractor for measuring the makeup water required to maintain this pressure. Leakage is defined as the quantity of makeup water added to the pipe being tested during the test period. No pipe installation will be accepted if the leakage exceeds the quantities specified in AWWA C605-05, which is represented by the following equation.

Where:

- Q = Quantity of makeup water (allowed) in gallons per hour
- L = Length of pipe section being tested, in feet
- D = Nominal diameter of the pipe, in inches
- P = Average test pressure during the hydrostatic test, in pounds per square inch (gauge)

50.27.3 TESTING PLAN

The CONTRACTOR must review his plan for testing with the TOWN at least two (2) working days before starting the test. The CONTRACTOR shall remove and adequately dispose of all blocking material and equipment after completion and acceptance of the field hydrostatic test, unless otherwise directed by the Engineer. Any damage to the pipe coating shall be repaired by the CONTRACTOR. Lines shall be totally free of debris prior to final acceptance.

50.27.4 DISINFECTION

The disinfection of water main piping shall be conducted in accordance with AWWA C651 using the continuous-feed method and shall be performed by specialty trained personnel. The new water piping shall be kept isolated from the existing distribution system using a physical separation (Figure 1 of AWWA C651) until satisfactory bacteriological testing has been completed. Provide all temporary filling, flushing and testing connections (complying with Figures 1 and 2 of AWWA C651), potable water, chemicals, sampling and bacteriological test results. The continuous-feed method shall include slowly and completely filling the main to remove air pockets, preliminary flushing, and filling the main with chlorinated water having a free chlorine concentration of no less than 25 mg/l. At the end of a 24-hour contact time, the heavily chlorinated water, having a free chlorine residual of not less than 10 mg/l, shall be flushed from the main until the chlorine concentration leaving the main is no higher than that prevailing in the existing distribution system. Neutralize the heavily chlorinated water leaving the main with one of the chemicals named in Appendix C of AWWA C651. Make final, permanent connections to existing mains in accordance with Section 4.6 of AWWA C651. Conduct bacteriological sampling and testing in accordance with Section 5 of AWWA C651. After sampling, maintain a minimum pressure of 20 psig in the mains until regulatory permission is granted to place the mains into service. Provide satisfactory test results consisting of two consecutive sets of samples, taken at least 24 hours apart, showing the absence of total coliform organisms and the presence of a chlorine residual. If necessary, re-disinfect until satisfactory test results are obtained.

50.28 PROTECTION

At the end of each workday the mains under construction shall be plugged to prevent the entry of small animals or rodents. Temporary plugs shall be provided for this purpose. Keep all valves closed during construction.

50.29 RESTORATION OF DAMAGED SURFACES, STRUCTURES AND PROPERTY

Where pavement, trees, shrubbery, fences or other property and surface structures not designated as pay items, have been damaged, removed or disturbed by the CONTRACTOR, whether deliberately or through failure to carry out the requirements of the Contract Documents, state laws, municipal ordinances or the specific direction of the Engineer, or through failure to employ usual and reasonable safeguards, such property and surface structures shall be replaced and repaired at the expense of the CONTRACTOR to a condition equal to that before work began within a time frame approved by the Engineer.

50.30 RESTORATION AND CLEAN-UP**50.30.1 RESTORATION**

1. General: Restoration of areas disturbed by the CONTRACTOR's operations shall begin as soon as practical. CONTRACTOR's restoration operations shall keep pace with utility installation. Engineer reserves the right to halt utility installation until restoration and clean-up requirements are satisfied.
2. Time Frame for Restoration: Restoration of areas disturbed by the CONTRACTOR's operations shall begin no later than 14 days and shall be completed (excluding punch list items) no later than 28 days from the time construction first began in the area. No more than 1,000 LF along the path of the work may be completely unrestored (excluding punch list items) at the end of each day.

50.30.2 CLEAN-UP

The CONTRACTOR shall maintain the site of the work in a neat condition. The CONTRACTOR shall remove all excess materials, excess excavated materials, and all debris resulting from his operations a minimum of once per week.

APPENDIX A
LIST OF MATERIALS AND APPROVED MANUFACTURERS
(FEBRUARY 2023)

STANDARD SPECIFICATIONS
FOR UTILITY CONSTRUCTION

APPENDIX A
LIST OF MATERIALS AND APPROVED MANUFACTURERS
(Revised February 2023)

ITEM	MANUFACTURERS	PART NUMBER
WATER DISTRIBUTION		
Gate Valves:		
4-inch and larger (Mech. Joint)	1. United Water Products	1. 2010
	2. American Flow Control (American Cast Iron Co.)	2. 2500 Series
	3. AVK (S/S Stem Only)	3. Series 45
	4. Clow Valve	4. F-6100
	5. Kennedy Valve Company	5. 8571
	6. Mueller	6. A2360, A2361
	7. M & H Valve Company	7. 4067
	8. U.S. Pipe	8. 250
	9. Mueller Co.	9. A-2361 Series
	10. American-RD (Product line of Kennedy Valve)	10. D100
Swing Check Valve:		
	1. Kennedy/Clow/M&H	1. 159-02/106 ALW
	2. Mueller	2. A-2604-6-01
	3. American Flow Controls	3. 52SC
	4. Flomatic	4. Model 90/92
Fittings:		
(DI), (C153 SSB/C110 FLG, Cement Lined)	1. Tyler Union	1. N/A
	2. Star Pipe Products	2. N/A
	3. Sigma Corp. (Russell Pipe)	3. N/A
	4. SIP Industries	4. N/A
Pipe:		
2-inch Service Pipe (Color Coded)	1. JM Eagle Manufacturing	1. N/A
	2. National Pipe and Plastics	2. N/A
	3. North American Pipe Co. (NAPCO)	3. N/A
	4. Universal 100 / Accord	4. N/A
	5. Charlotte Pipe and Foundry Co.	5. N/A

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LIST OF MATERIALS AND APPROVED MANUFACTURERS
(Revised February 2023)

ITEM	MANUFACTURERS	PART NUMBER
WATER AND DISTRIBUTION (Cont'd)		
4-inch to 16-inch - PVC WM (Color Coded)		
4-inch to 12-inch	1. Diamond Plastics	1. N/A
4-inch to 12-inch	2. JM Eagle	2. N/A
4-inch to 12-inch	3. National Pipe & Plastics/ National PVC)	3. N/A
4-inch to 12-inch	4. North American Pipe Co. (NAPCO	4. N/A
4-inch to 12-inch	5. Ipex	5. N/A
4-inch to 12-inch	6. Sanderson Pipe Corp.	6. N/A
16-inch	1. Diamond Plastics	1. N/A
16-inch	2. JM Eagle	2. N/A
16-inch	3. National Pipe & Plastics/	3. N/A
16-inch	4. North American Pipe Co.	4. N/A
16-inch	5. Ipex	5. N/A
4-inch and larger Ductile Iron		
	1. American Cast Iron Pipe Company	1. N/A
	2. McWane Ductile	2. N/A
	3. U.S. Pipe	3. N/A
Tubing:		
3/4, 1 and 1-1/2-inch	1. Endot-Yardley	1. EndoPure
	2. Phillips Driscopipe/ Performance Pipe	2. N/A
	3. Charter Plastics	3. Blue Ice
	4. Silver-Line Plastics	4. N/A
Tapping Valve:		
	1. American Flow Control (American Cast Iron Co.)	1. N/A
	2. AVK (S/S Stem Only)	2. 25/30081
	3. Clow Valve	3. F6114, 2638
	4. Kennedy Valve Company	4. 950-X
	5. M & H Valve	5. 4751
	6. Mueller	6. T-2360, T-2361
	7. U.S. Pipe	7. 5860
	8. Mueller-Aqua Grip	8. A-2361-76
	9. American – RD (Product Line of Kennedy Valve)	9. NA

Tapping Sleeve:		
(Stainless Steel) for size on size tap	1. Cascade Waterworks Mfg.	1. CST-EX
4-inch and larger	2. Dresser Inc./GE	2. 630
	3. Ford Meter Box Company	3. FAST Series, FTSS
	4. JCM Industries, Inc.	4. 432, 439, 452 (14-inch and larger)
	5. Power Seal	5. 3490, 3490 MJ (8-inch and smaller)
	6. Romac Industries, Inc.	6. SST
	7. Smith-Blair	7. 663 & 665
	8. Mueller	8. H304
Restraining Devices:		
(PVC Pipe)	1. EBAA Iron	1. 2000 PV, 2000 SV
All sizes	2. Ford Meter Box Co. (Uniflange)	2. 1500
	3. Sigma (Russell Pipe)	3. One-Lok SLCE
	4. Star Pipe Products	4. AllGrip
	5. Star Pipe Products	5. Stargrip 4000
	6. Tyler Union	6. TUFGrip TLP
	7. SIP	7. EZPVC/EZVCU
	1. EBAA Iron	1. 1500, 1600 Series
	2. EBAA Iron	2. 2500 Series
	3. EBAA Iron	3. 2800 Series
	4. Ford Meter Box Co. (Uniflange)	4. 1300 Series
	5. Ford Meter Box Co. (Uniflange)	5. 1350, 1360 Series
	6. Ford Meter Box Co. (Uniflange)	6. 1390 Series
	7. JCM	7. 610 Series
	8. JCM	8. 621 Series
	9. Romac	9. Grip Ring
	10. Star Pipe Products, Inc.	10. 1000, 1100
	11. Star Pipe Products, Inc.	11. 1200 Series
	12. Star Pipe Products, Inc.	12. ALLGRIP 3600
	13. Star Pipe Products, Inc.	13. 4100
	14. Sigma (Russell Pipe)	14. PWP
	15. Tyler Union	15. 3000
	16. SIP	16. PTPVC
(DIP)	1. EBAA Iron	1. 1100
All sizes	2. Ford Meter Box Co. (Uniflange)	2. 1400
	3. Sigma (Russell Pipe)	3. One-Lok SLDE
	4. Star Pipe Products	4. Stargrip 3000
	5. Star Pipe Products	5. AllGrip
	6. Tyler Union	6. TUFGrip TLD
	7. SIP	7. EZD
	1. EBAA Iron	1. 1500, 1600 Series
	2. Ford Meter Box Co. (Uniflange)	2. 1300 Series
	3. Ford Meter Box Co. (Uniflange)	3. 1390 Series
	4. JCM	4. 610 Series
	5. JCM	5. 621 Series
	6. Romac	6. Grip Ring
	7. Star Pipe Products, Inc.	7. 1000, 1100
	8. Star Pipe Products, Inc.	8. ALLGRIP 3600

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WATER DISTRIBUTION (Cont'd)		
	9. Star Pipe Products, Inc.	9. Stargrip 3100
	10. Sigma (Russell Pipe)	10. PWP
Corporation Stops:		
2-inch and smaller	1. Ford Meter Box Company	1. 1000 Series
	2. A.Y. McDonald Mfg.	2. 4700 Series
	3. Mueller	3. H Series
	4. Mueller	4. B Series
	5. James Jones Company	5. N/A
	6. Cambridge Brass	6. N/A
Curb Stops:		
2-inch and smaller	1. Ford Meter Box Company	1. B11 Series (w/lockwing, FIPxFIP)
	2. Ford Meter Box Company	2. B41 Series (w/lockwing)
	3. McDonald A.Y. McDonald Mfg	3. 6100 Series (w/lockwing)
	4. Mueller	4. B20200 (w/lockwing, FIPxFIP)
	5. Mueller	5. B25170 (w/lockwing)
	6. James Jones	6. N/A
	7. Cambridge Brass	7. N/A
Boltless Coupling:		
2-inch and smaller	1. Dresser, Inc./GE	1. Style 65
	2. Smith-Blair	2. 525
	3. TPS	3. Series 6000
Brass Adapter & Coupler:		
2-inch and smaller	1. The Ford Meter Box Co.	
	2. McDonald A.Y. McDonald Mfg	
	3. Mueller	
	4. James Jones	
	5. Cambridge Brass	
Service Saddle, Double Strap:		
2-inch and smaller	1. Cascade Waterworks Mfg	1. CDS2/CDS-LD
	2. Dresser, Inc./GE	2. 291DS
	3. Ford Meter Box Co.	3. FC-202, 202BS
	4. JCM Industries	4. 406
	5. Smith-Blair	5. 317
	6. Mueller	6. DR 25
	7. Power Seal	7. 3417, 3409

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WATER DISTRIBUTION (Cont'd)		
Service Saddle, Single Strap:		
1-inch and smaller	1. Cascade Waterworks Mfg	1. CDS2
	2. Dresser, Inc./GE	2. 291-SS
	3. Ford Meter Box Co.	3. FC-101
	4. JCM Industries	4. 405
	5. Smith-Blair	5. 315
	6. Mueller	6. DR1S
	7. Power Seal	7. 3417, 3409
Fire Hydrants:		
(Size - 5 1/4" Barrel)	1. American Flow Control	1. B-84-B
	2. M & H Valve Company	2. 129
	3. Mueller Co.	3. A-423
	4. US Pipe/Muller	4. Met M94
	5. AVK	5. 2780
WATER METER BOX SPECIFICATIONS		
Single Meter Box:	1. Glassmasters	1. N/A
	2. Southern Meter Box	2. N/A
	3. Pentek	3. N/A
Single Meter Box Lids:		
*All meter box lids are to have an AMR hole for radio read meters		
Backflow Assembly RPZ & Check Valve Assemblies:	Determined by the Town of Hilliard	
WASTEWATER COLLECTION/TRANS.		
Plug Valve:	1. Clow Valve /Kennedy	1. N/A
	2. Dezurik	2. N/A
	3. DeZurik	3. N/A
	4. TYCO/Keystone	4. Eccentric Valve
	5. Milliken Valve or Mueller Water Products	5. 600 N (MJ)
	6. Milliken Valve or Mueller Water Products	6. 601 N (MJ)
	7. Henry Pratt Co.	7. N/A
	8. Val-Matic	8. N/A
	9. Golden Anderson	9. N/A
	10. Homestead	10. NA

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ITEM	MANUFACTURERS	PART NUMBER	
Check Valve:	1. American Flow Control	1, 59SC-LW	
	2. Clow Valve/Kennedy	2. 106LW	
	3. M & H Valve	3. 159-02	
	4. Mueller/CNNE (Charles	4. 8001	
	5. NIBCO	5. F938-31-BL&W	
	6. Matco-Norca		
	7. Golden Anderson		
	8. United		
Air Release Valve:	1. Vent-O-Mat	1. Series RGX II	
	2. A.R.I. USA	2. D-025-ST/D-26 NS	
	3. H-TEC USA	3. Series 989986	
Fittings (DI) (C153 SSB/C110 FLG &	1. Tyler Union	1. N/A	
	2. Star Pipe Products	2. N/A	
	3. Sigma Corp. (Russell Pipe)	3. N/A	
	4. SIP Industries	4. N/A	
	5. US Pipe	5. N/A	
Restraining Devices:			
	(PVC) 3-inch and larger	1. EBAA Iron	1. 2000 PV, 2000 SV
	3-inch and larger	2. Ford Meter Box Co. (Uniflange)	2. 1500
	3-inch to 10-inch	3. Sigma (Russell Pipe)	3. One-Lok SLCE
	12-inch and larger	3. Sigma (Russell Pipe)	3. One-Lok SLCE
	3-inch and larger	5. Star Pipe Products	5. Stargrip 4000
	3-inch and larger	6. Tyler Union	6. TUFGRIP TLP
	3-inch and larger	7. SIP	7. EZPVC/EZVCU
	3-inch and larger	1. EBAA Iron	1. 1500, 1600 Series
	3-inch and larger	2. EBAA Iron	2. 2500 Series
	3-inch and larger	3. EBAA Iron	3. 2800 Series
	3-inch and larger	4. Ford Meter Box Co. (Uniflange)	4. 1300 Series
	3-inch and larger	5. Ford Meter Box Co. (Uniflange)	5. 1350, 1360 Series
	3-inch and larger	6. Ford Meter Box Co. (Uniflange)	6. 1390 Series
	3-inch and larger	7. JCM	7. 610 Series
	3-inch and larger	8. JCM	8. 621 Series
	3-inch and larger	9. Romac	9. Grip Ring
	3-inch and larger	10. Star Pipe Products, Inc.	10. 1000, 1100
	3-inch and larger	11. Star Pipe Products, Inc.	11. 1200 Series
	3-inch and larger	12. Star Pipe Products, Inc.	12. ALLGRIP 3600
	3-inch and larger	13. Star Pipe Products, Inc.	13. 4100
	3-inch and larger	14. Sigma (Russell Pipe)	14. PWP
	3-inch and larger	15. Tyler Union	15. 3000
	3-inch and larger	16. SIP	16. PTPVC

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ITEM	MANUFACTURERS	PART NUMBER
(DIP) 3-inch and larger	1. EBAA Iron	1. 1100
3-inch and larger	2. Ford Meter Box Co. (Uniflange)	2. 1400
3-inch and larger	3. Sigma (Russell Pipe)	3. One-Lok SLDE
3-inch and larger	4. Star Pipe Products	4. Stargrip 3000
3-inch and larger	5. Tyler Union	5. TUFgrip TLD
3-inch and larger	6. SIP	6. EZD
3-inch and larger	1. EBAA Iron	1. 1500, 1600 Series
3-inch and larger	2. Ford Meter Box Co. (Uniflange)	2. 1300 Series
3-inch and larger	3. Ford Meter Box Co. (Uniflange)	3. 1390 Series
3-inch and larger	4. JCM	4. 610 Series
3-inch and larger	5. JCM	5. 621 Series
3-inch and larger	6. Romac	6. Grip Ring
3-inch and larger	7. Star Pipe Products, Inc.	7. 1000, 1100
3-inch and larger	8. Star Pipe Products, Inc.	8. ALLGRIP 3600
3-inch and larger	9. Star Pipe Products, Inc.	9. Stargrip 3100
3-inch and larger	10. Sigma (Russell Pipe)	10. PWP
Sewer Pipe (Green PVC), Gravity: 6-inch and larger	1. Charlotte Pipe	1. N/A
	2. Diamond Plastics Corp.	2. N/A
	3. JM Eagle	3. N/A
	4. National Pipe & Plastics	4. N/A
	5. North American Pipe (NAPCO)	5. N/A
	6. Sanderson Pipe Co.	6. NA
	7. HAWK Plastics Corp.	7. SDR-26
Sewer Gravity Sewer Fittings (PVC): 16-inch	1. Diamond Plastics	1. N/A
	2. JM Eagle	2. N/A
	3. National Pipe & Plastics/ National PVC)	3. N/A
	4. North American Pipe (NAPCO)	4. N/A
	5. Ipex	5. N/A
Casing Spacers:	1. Cascade Waterworks Mfg.	1. CCS
	2. Pipeline Seal & Insulator, Co (EnPro Industries, Inc.)	2. S/S Type
	3. Pipeline Seal & Insulator, Co (EnPro Industries, Inc.)	3. PVC Coated Steel
	4. Pipeline Seal & Insulator, Co (EnPro Industries, Inc.)	4. Ranger II
	5. Raci Spacers	5. High Density Polyethylene
	6. BWM Company	6. N/A
	7. Advanced Products & Sys.	7. SSI, SI, CI
	8. CCI Pipeline Systems	8. CSC, CSS

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ITEM	MANUFACTURERS	PART NUMBER	
Manhole Frame and Cover 32-inch	1. U.S. Foundry	1. USF-655	
	2. East Jordan Iron Works	2. N/A	
Manhole Riser Rings	1. Old Castle		
	2. Lad Tech, HDPE Rings		
	3. EJ, Steel Adjustment Ring		
	4. EJ, infra-riser		
	5. Cretex Pro-Ring, EPP Adjustment Ring		
Precast Manhole	1. Old Castle	1. N/A	
	2. Del Zotto Precast	2. N/A	
	3. FORTERRA	3. N/A	
	4. American Precast	4. N/A	
Manhole Joint Sealant			
	1-inch	1. Con-Seal	1. CS102, 202
	1-1/2 inch	2. Ram-Nek/Henry Company	2. Ram-Nek
		3. NPC Bidco/Trelleborg	3. C-56
	4. Evergrip	4. 990	
Manhole Exterior Joint Material			
	0.1-inch x 8-inch W (min)	1. Con Seal	1. CS-300, CS-212
	9-inch W (min)	2. Rub-R-Nek/Henry Company	2. N/A
	18-inch W (min)	3. Wrapid Seal (CCI Pipeline Systems)	3. N/A
Manhole Surface Coatings	1. Sherwin-Williams	1. Josh Hinson, 904-591-3137 swrep4538@sherwin.com	
	2. Corrocoat USA, Inc.	2. Josh Tankersley, 904-472-0768 Josht@corrocoat.com	
	3. PPG Protective & Marine Coatings	3. Jim Hartley, 904-626-6382 jim.hartley@ppg.com	
	4. Tnemec (Capital Only)		
Station Basins – Concrete:	1. Associated Fiberglass Enterprises	1. Hard Shell Liner (****)	
Station Basins - FRP	2. Concrete Conservation, Inc.	2. Spectra-Shield (**)	
	3. L.F. Manufacturing, Inc.	3. Hard Shell Liner (****)	
	4. LaFarge/Kerneos, Inc. Calcium Aluminates	4. SEWPERCOAT (**)	
	5. GML Coatings, LLC	5. Green Monster (***)	
	6. Derakane	6. 8084 Resin (*)	
	7. Armorock	7. Rehabilitation Insert (****)	
	8. Sprayroq	8. Spraywall (****)	
	NOTES: (*) Surface Primer; (**) Cementitious or Polymer Modified Cementitious Coating; (***) Epoxy, Polyurea or Polyurethane Corrosion Inhibiting Coating; (****) Epoxy, Polyurea or Polyurethane Structural Coating; (*****) Fiberglass or Polymer Concrete Liner Material		

APPENDIX B

CLOSED CIRCUIT TELEVISION INSPECTION OF SEWER MAINS AND LATERALS

TOWN OF HILLIARD
STANDARD SPECIFICATIONS FOR UTILITIES CONSTRUCTION

APPENDIX B

**CLOSED CIRCUIT TELEVISION INSPECTION
OF SEWER MAINS AND LATERALS**

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. Section Includes: Requirements to execute internal closed circuit television (CCTV) survey to inspect sewer mains and laterals.

1.02 SUBMITTALS:

- A. Submit the following:
 - 1. Sample of television survey log, DVD/CD-ROMs, and equipment list for approval before commencement of work.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. General:
 - 1. Provide equipment to perform inspections of sewer mains located in streets, street rights-of-way, and off-road easements.
 - a. Including but not limited to portable CCTV equipment, vehicles capable of transporting TV equipment and accessing remote easements, and adequate cleaning equipment.
 - b. Pipe plugs, pumps, equipment, and operators as needed to prepare and maintain sewer system conditions for test period.
 - 2. Certify that backup equipment is available and can be delivered to site within 48 hours.
- B. Software Requirements: PACP certification and video recording.
- C. CCTV:
 - 1. Color Video Camera
 - a. Specifically designed and constructed for this application.

- b. Camera, 17-inch minimum, Closed Circuit, Color Television Monitor, and Other Components: Capable of producing a color video picture with a standard resolution of 720 x 480.
- c. Produce 720 x 480 line resolution minimum.
- d. Pan and tilt type, capable of turning at right angles to pipe's axis over an entire vertical circle (minimum pan of 270 degrees and rotation of 360 degrees).
- e. Lighting: Suitable to allow clear picture of entire inner pipe wall extending at least 10 feet in front, including black High Density Polyethylene (HDPE) pipe.
- f. Operative in 100 percent humidity conditions.
- g. Image: Capable of self righting itself.
- h. Include data view display feature capable of showing on tape following information.
 - 1) Lateral addresses.
 - 2) Town and state.
 - 3) Date and time.
 - 4) Project name.
 - 5) Contractor's name.
 - 6) Inside pipe diameter and type.
 - 7) Manhole identification (upstream manhole to downstream manhole).
 - 8) On-going footage counter accurate within 0.2 foot, per 100 feet.
 - 9) Include operator narration, in format approved by Town Inspector, using Commission approved terminology.
 - 10) Recording of single section of sewer onto 2 DVD/CD-ROMs will not be acceptable.
 - 11) Clearly label each DVD/CD-ROM as approved by the City Inspector.
- i. Mounting
 - 1) Launched From Within Mainline Sewer: Mounted on tread tractor that moves through sewers and positions inspection camera launcher opposite lateral line connection.
 - 2) Launched From Within A Cleanout: Able to travel to mainline sewer.
- j. Attachment: Push cable with a fiberglass rod core.

D. Recording Media:

- 1. Provide a high quality DVD in a MPEG2 format video with a standard resolution of 720 x 480.

2. Camera, Television Monitor, and Other Components: Capable of producing a minimum 720 x 480 line resolution color video picture.

PART 3 - EXECUTION

3.01 PRE-CONSTRUCTION SURVEY:

A. Procedure:

1. CCTV:

a. Mainline:

- 1) Before repair work, light clean and inspect sewer line from manhole to manhole, preferably upstream to downstream, one section at a time.
 - a) Light cleaning includes up to 3 passes with a hydraulic jet cleaner.
 - b) Heavy cleaning by method approved by Town Inspector.
- 2) Maintain sewer main isolation by plugging or bypass pumping while camera is moving and recording.
 - a) Plugs: Secured so as to remain in place during inspection.
 - b) Conduct operations to prevent building backups and sewer overflows.
 - c) Be responsible for clean-up, repair, fines, property damage costs and claims for any sewage backup, bypass spillage or sanitary sewer overflow.

b. Lateral: Follow mainline above, except as modified below.

- 1) Inspect entire lateral. Simultaneous with CCTV inspection clean and flush lateral with clean water.
- 2) Isolate section inspected
 - a) Method may include turning off property water, or bypassing flow.
- 3) Prevent backflow into laterals.
- 4) Identify inspection by building address and mainline.
 - a) If lateral services 2 addresses, identify both addresses.

2. Placement of Camera:

a. Manhole:

- 1) Place at center of manhole and commence video recording before entering pipe.
- 2) Start footage counter at center of manhole.

b. Mainline: Mount on a transport platform that will keep it centered along longitudinal axis of sewer mainline and above water.

- c. Laterals From Mainline:
 - 1) Place camera into connection and commence video recording before entering connection.
 - 2) Start footage counter at connection.
 - d. Laterals From Cleanout:
 - 1) Place camera into sweep and commence video recording before entering lateral or before lowering through cleanout stack.
 - 2) Start footage counter at sweep.
3. Operation of Camera:
- a. Provide full 360 degree pan of all pipe joints. Camera shall be located precisely at each joint. Film the entire circumference at each joint.
 - b. Show inside of manhole walls, manhole channel, and pipe connection to wall at both upstream and downstream manhole and lateral connections.
 - c. Move through line at speed no greater than 30 feet per minute stopping for minimum 10 seconds to record lateral connections, mainline connections, defects, and features and points of interest.
 - d. Maintain technical quality, sharp focus, and distortion free picture.
 - e. Videotape a section of sewer in its entirety with no breaks or interruptions.
 - f. Pan, tilt, and rotate as necessary to best view and evaluate lateral connections, defects, features, and points of interest.
 - g. Use power winches, powered rewinds, tractors, or other devices that do not obstruct camera view or interfere with proper documentation of sewer conditions to move camera through sewer.
 - 1) Whenever non-remote powered and controlled winches are used set up telephones or other suitable means of communication between manholes to ensure good communications.
 - h. Use hydraulic jet nozzle if necessary to remove standing water from line.
 - i. Eliminate steam in line for duration of inspection.
 - 1) Utilize blower as needed to defog sewer line.
 - j. Measurement for Location of Defects and Service Laterals:
 - 1) At ground level by means of Town Inspector-approved footage counter or metering device.
 - 2) Measurement Meters: Accurate to 0.2 foot over length of section being televised.
 - 3) Use measuring target in front of television as exact measurement reference point.

- k. Movement of Television Camera:
- 1) Mainline:
 - a) Stop camera at service connections and inspect lateral with pan and tilt camera.
 - b) At active service connections where flow is discharging.
 - (1) Identify building address and confirm that laterals are active by obtaining flush, with or without dye, of property owner's commode or by using outside cleanout, if available.
 - (2) If no flows are being discharged from building, consider observed flow as infiltration/inflow.
 - 2) Laterals:
 - a) Move camera through lateral at uniform rate.
 - (1) Stop at each suspected defect to allow adequate evaluation.
- l. Identification of Defects:
- 1) If roots, sludge, or sediment material impedes inspection, withdraw camera and re-clean mainline by hydraulic jet.
 - a) Upon completion of re-cleaning operation, resume internal inspection.
 - b) Furnish media confirmation for heavy cleaning (more than 3 passes with jet cleaner) to Town Inspector.
 - 2) If protruding tap impedes inspection, trim protruding tap to 1/2 inch.
 - 3) If obstructions are not passable and cannot be removed by sewer cleaning or reaming, withdraw CCTV equipment and perform inspection from opposite end.
 - a) Extract camera stuck in sewer line.
 - b) When additional obstructions are encountered after re-deployment of equipment and no means are available for passing obstructions, remand to Town Inspector for resolution.

B. Field Documentation:

1. Mainline:
 - a. Submit original records, logs, DVD's, CD-ROMs, and electronic data for sewer line inspection to Town Inspector at the end of the day's inspection. Copies of the inspection will be provided by the Town at Contractor's request.
 - b. Include, but not be limited to, the following information:
 - 1) Project Number.
 - 2) Basin Name.
 - 3) Owner.
 - 4) Date, time (begin to end inspections).
 - 5) Weather condition.
 - 6) Operator name.
 - 7) QA reviewer name.
 - 8) DVD/CD number and index.

- 9) Address of upper most lateral.
 - 10) Manhole number to manhole number.
 - 11) Manhole depths.
 - 12) Length of pipe segment.
 - 13) Direction of CCTV (Upstream or Downstream).
 - 14) Pipe size.
 - 15) Pipe material.
 - 16) General physical conditions.
 - 17) Footage locations, clock position, descriptions, and estimated leakage rates for visible point sources of infiltration/inflow.
 - 18) Footage locations, clock position, and descriptions for lateral connections and estimated flow from laterals.
 - 19) Footage locations, clock position, and descriptions of defects such as obstructions, root intrusion, blockages in pipe, deteriorated joints, offset joints, holes, breaks, cracks, collapses, bends or sags in alignment, or protruding lateral connections.
 - 20) Footage locations, clock position, and descriptions of other defects, features and points of interest found.
 - 21) Whether CCTV was complete or incomplete.
- c. DVD/CD-ROM Recording/Playback:
- 1) At same speed that it was recorded.
 - 2) Supply slow motion or stop motion playback features.
 - 3) Once recorded, DVD/CD-ROM becomes property of the Commission.
 - 4) Have DVD/CD-ROM and necessary playback equipment readily accessible for review by Town Inspector during Project.
- d. Observation Terminology Utilized During Audio Narration: Follow the Commission approved terminology.
- e. DVD/CD-ROMs displaying poor video quality refers to, but is not limited to, grease or debris on lens, camera under water, image too dark, washed-out, distorted, or out of focus, lines improperly cleaned, and poor/no audio.
- 1) Re-televiser line if necessary and resubmit DVD/CD- ROM.
2. Laterals:
- a. Submit as above for mainline documentation.
 - b. Include, but not limited to, the following information.
 - 1) Project Number.
 - 2) Basin Name.
 - 3) Owner.
 - 4) Date, time (begin to end inspections).
 - 5) Weather condition.
 - 6) Operator name.
 - 7) QA reviewer name.
 - 8) DVD/CD number and index.
 - 9) Address of each lateral.
 - 10) Length of lateral segment.

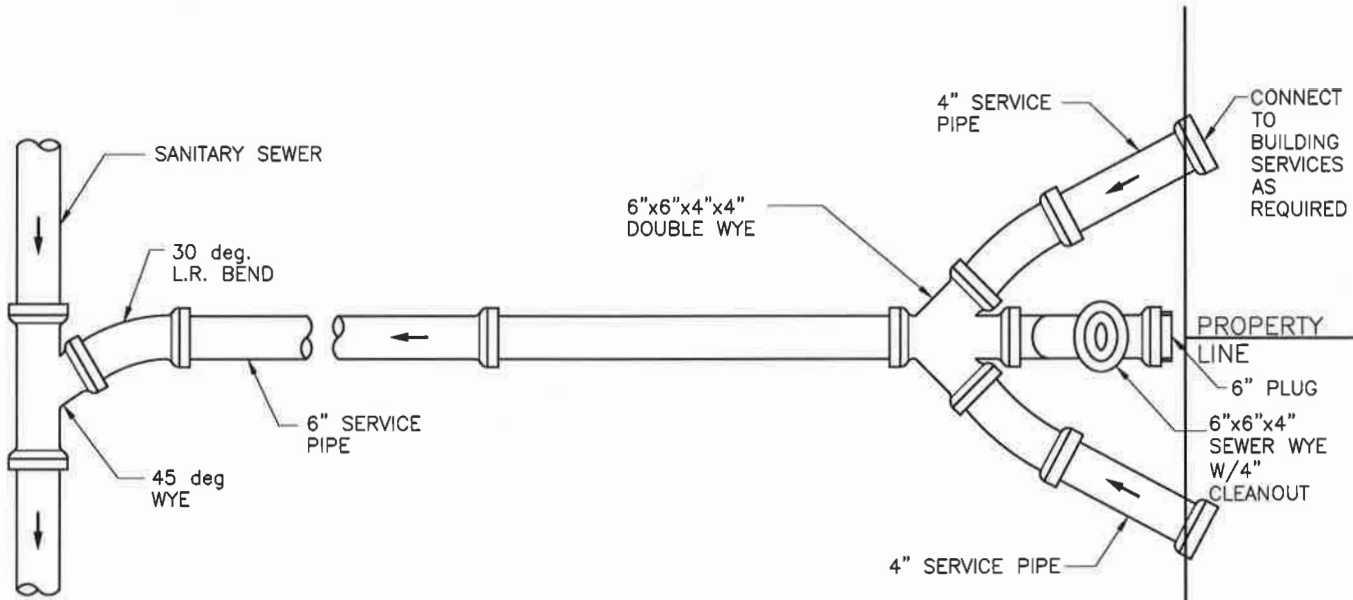
- 11) Direction of CCTV (from property line or from mainline connection).
- 12) Lateral size; lateral material.
- 13) General physical conditions.
- 14) Footage locations, clock position, and descriptions of defects and estimated leakage rates for visible point sources of infiltration/inflow.

3.02 POST-CONSTRUCTION SURVEY:

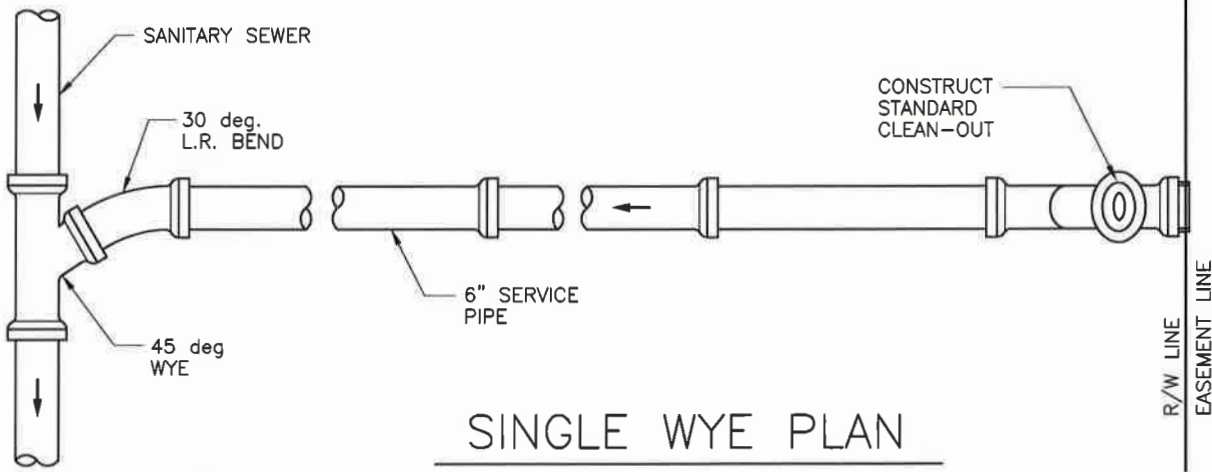
- A. Procedure: Follow procedures as specified for pre-construction survey above and as specified below.
 1. Stop camera (minimum 10 seconds) at beginning and end of repairs and inspect repaired section.

END OF SECTION

APPENDIX C
STANDARD UTILITY DRAWINGS



DOUBLE WYE PLAN



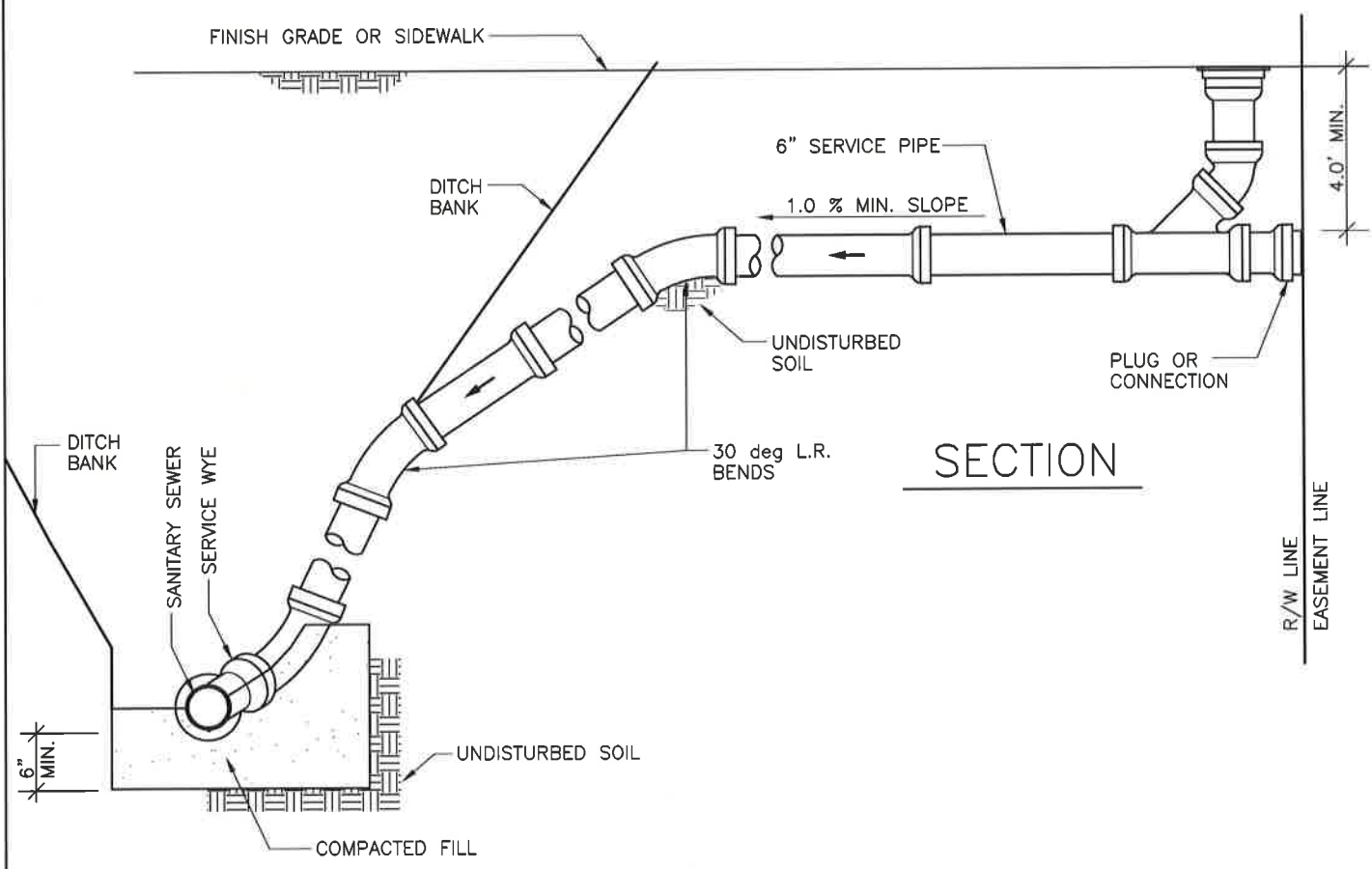
SINGLE WYE PLAN

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TOWN OF HILLIARD
Standard Specifications for Utility Construction
Sanitary Sewer Service Connections (Plan View)
Nassau County, Florida

FIGURE
S-1
March 2022
Project
9610-21
(Standard



SECTION

NOTES:

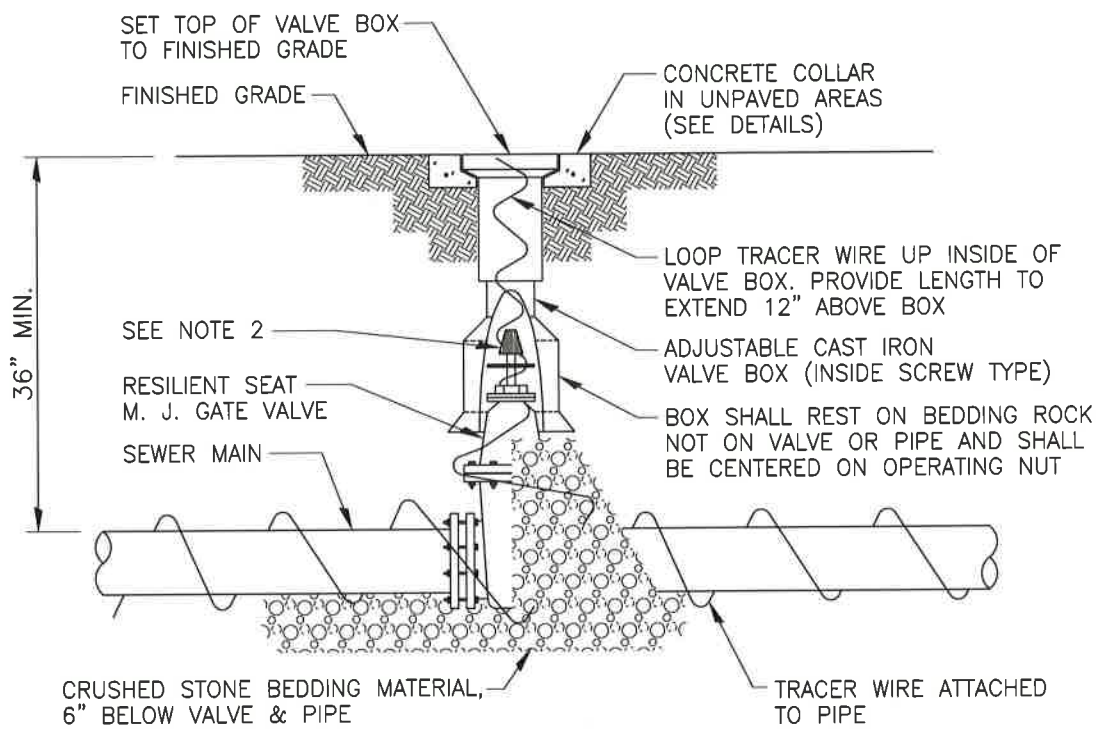
1. CONTRACTOR SHALL PROVIDE AN ADEQUATE SUPPLY OF 30' & 45' BENDS TO MEET VARYING FIELD CONDITIONS.
2. PROVIDE CLEANOUT AT RIGHT-OF-WAY
3. LENGTH OF SERVICE PIPE VARIES AT EACH SERVICE CONNECTION AND SHALL BE PROVIDED AS REQUIRED. TERMINATE SERVICE AT LOCATION DIRECTED BY THE ENGINEER.
4. SEWER LATERALS SERVING DWELLINGS WHOSE FINISH FLOOR ELEV. IS BELOW THE CROWN OF THE ROAD SHALL BE LAID AT A CONSTANT 1.00% SLOPE FROM THE POINT OF CONNECTION AT THE NEW GRAVITY SEWER TO THE PROPERTY LINE.

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Sanitary Sewer Service Connections (Section View)
 Nassau County, Florida

FIGURE
 S-2
 March 2022
 Project
 9610-2
 (Standard
 238



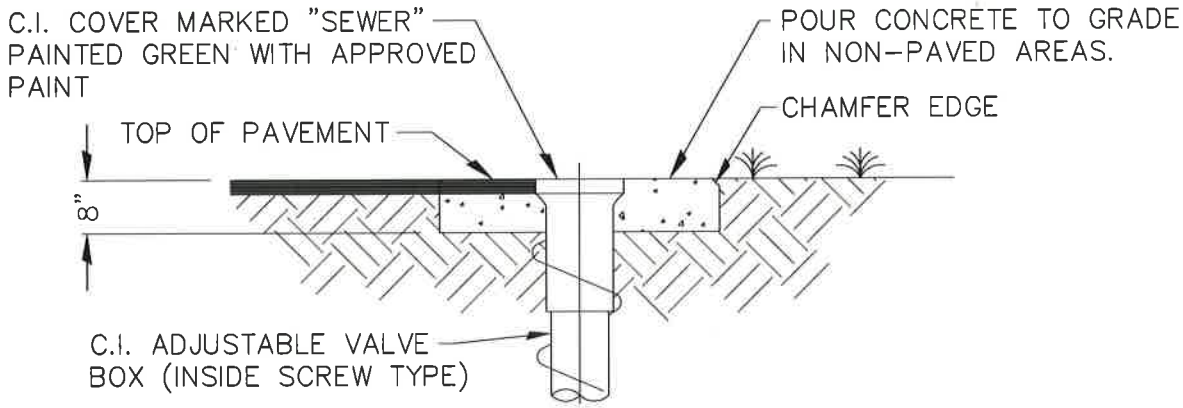
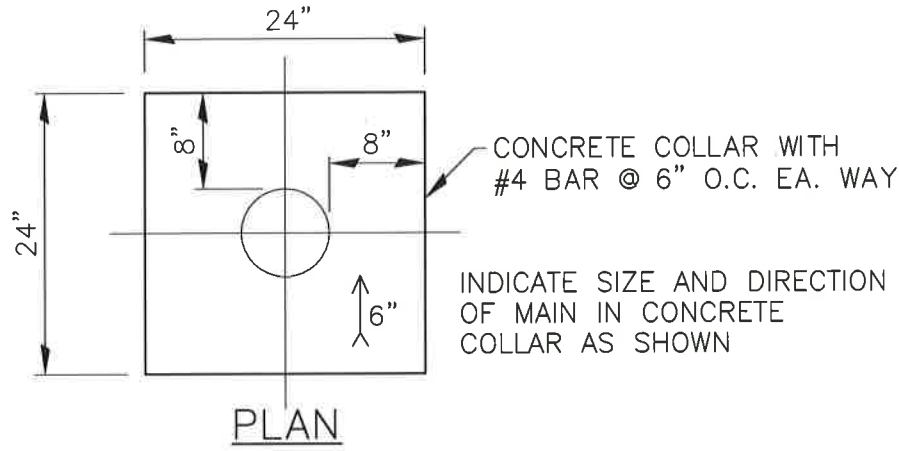
- NOTES:
1. PVC EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
 2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO A MAXIMUM OF 4 FEET BELOW FINISHED GRADE.

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Gate Valve Detail
 Nassau County, Florida

FIGURE
 S-3
 March 2022
 Project
 9610-2
 (Standards)
 239



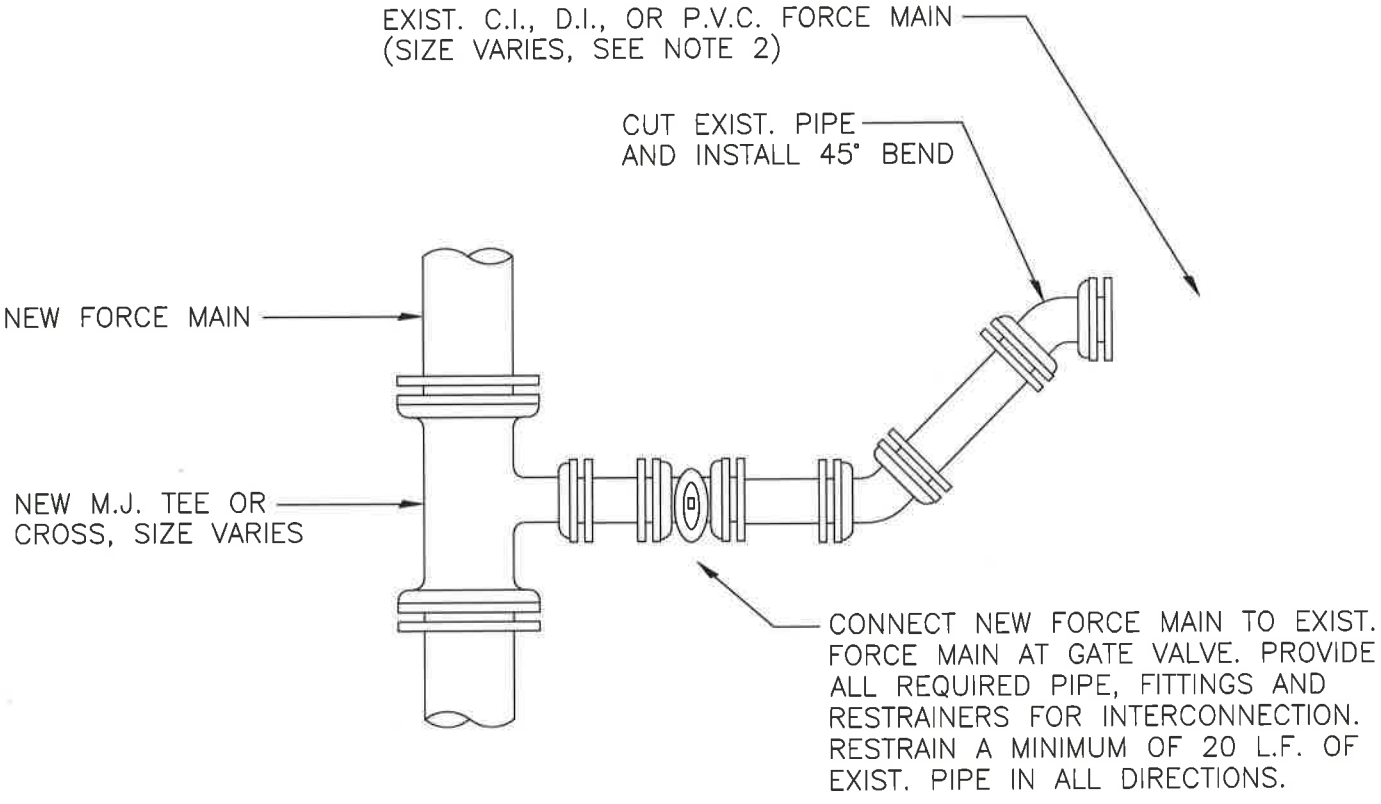
SECTION

- NOTES:
1. CONCRETE COLLAR IS NOT REQUIRED IN PAVED AREAS IF PAVEMENT SURFACE IS FINISHED PRIOR TO CONDITIONAL FINAL INSPECTION.

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TOWN OF HILLIARD
Standard Specifications for Utility Construction
Valve Collar Detail
Nassau County, Florida

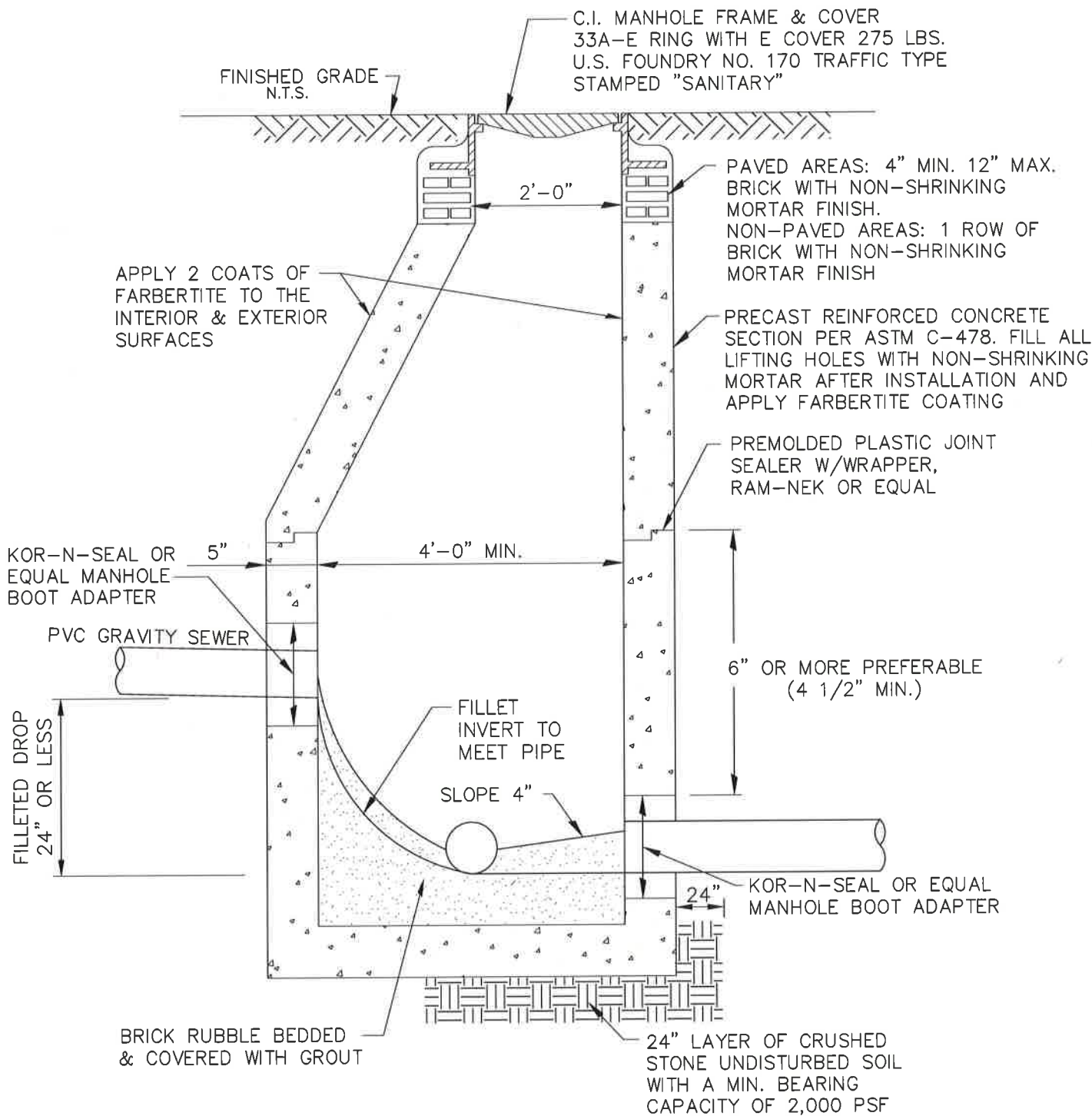


NOTES:

1. ALL PIPE, VALVES AND FITTINGS SHALL BE RESTRAINED IN ACCORDANCE WITH THE UTILITY STANDARDS.
2. THE CONTRACTOR/DEVELOPER SHALL PROVIDE ALL LINE STOP AND/OR INSERT-A-VALVE MECHANISMS AS REQUIRED TO ISOLATE THE TOWN'S SYSTEM PRIOR TO TIE-IN. THE TOWN DOES NOT WARRANTY ANY EXISTING PIPING CAN BE ISOLATED FOR CONNECTION.

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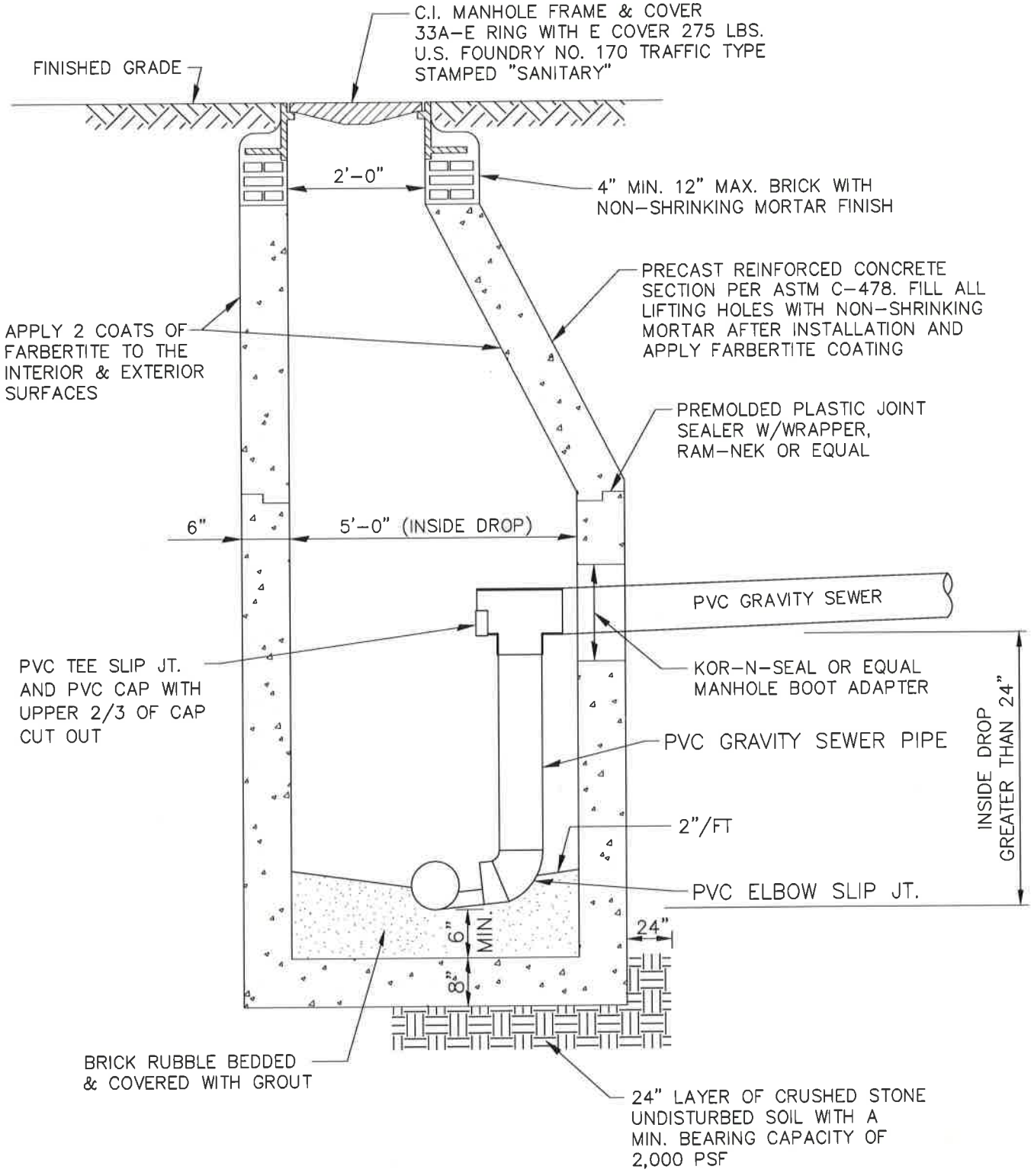




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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Standard Manhole Detail
 Nassau County, Florida



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TOWN OF HILLIARD
Standard Specifications for Utility Construction
Sanitary Sewer Drop Manhole Detail
Nassau County, Florida

FIGURE
S-7
March 2022
Project
9610-2
(Standards)

U.S. FOUNDRY E-170
RING & COVER OR
APPROVED EQUAL



RAISED LETTERS FLUSH WITH TOP
OF COVER. TO READ "SANITARY
SEWER" OR "STORM SEWER" AS
APPROPRIATE

2- CONCEALED
PICKHOLES

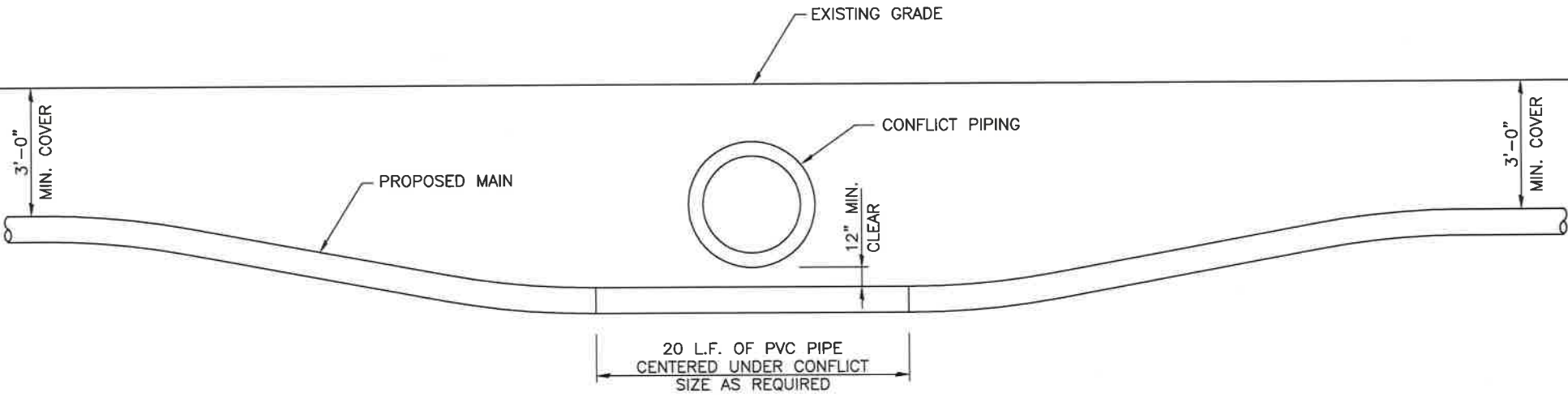
NOTE:
FRAME & COVER SHALL BE
MACHINED OR GROUND AT ALL
BEARING SURFACES SO AS TO
SEAT FIRMLY AND PREVENT
ROCKING.

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TOWN OF HILLIARD
Standard Specifications for Utility Construction
Manhole Cover Detail
Nassau County, Florida

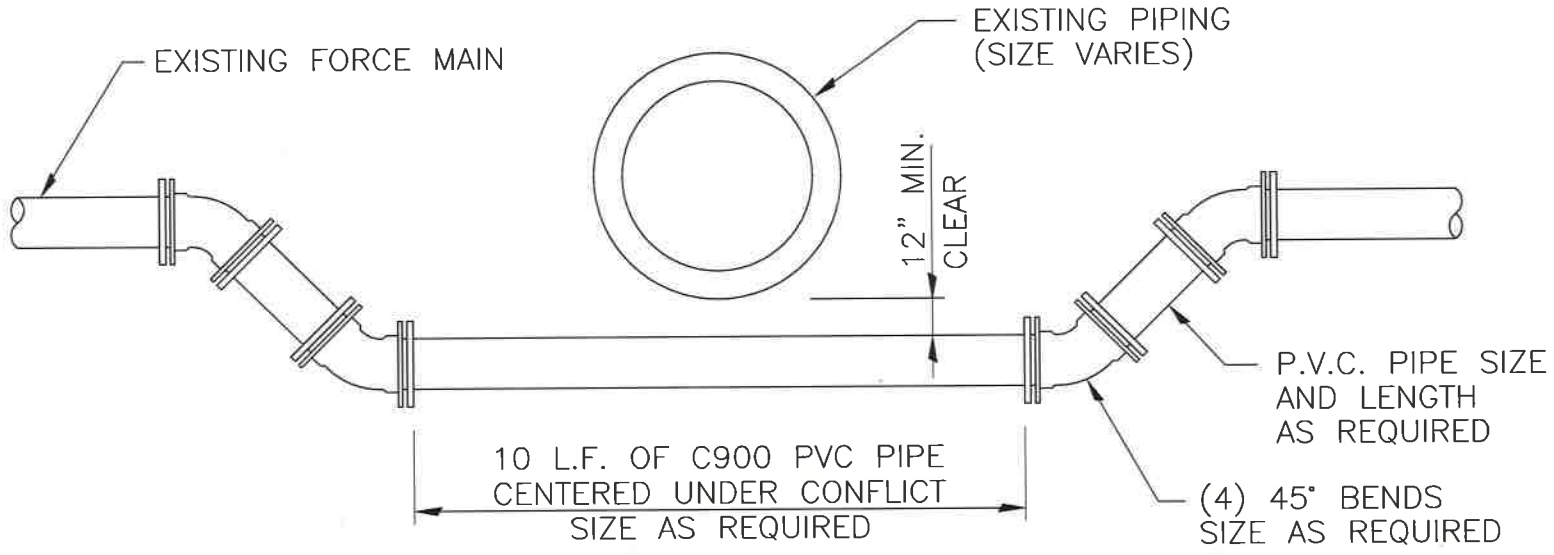
FIGURE
S-8
March 2022
Project
9610-2
(Standard)



- NOTES:
1. CONTRACTOR SHALL FULLY SUPPORT/BRACE ALL CONFLICT PIPING THROUGHOUT ENTIRE DURATION OF CONVENTIONAL INSTALLATION OF WATER MAIN UNDER CONFLICT MAIN.
 2. CONTRACTOR SHALL BE REQUIRED TO FULLY REPAIR OR REPLACE ANY EXISTING PIPING DAMAGED DURING THE INSTALLATION PROCESS.
 3. CONTRACTOR SHALL BE REQUIRED TO DIRECTIONAL DRILL UNDER ANY PIPING GREATER THAN 24" DIAMETER AND ANY CULVERTS WITH MORE THAN ONE CROSS DRAIN.



TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Utility Conflict Type A
 Nassau County, Florida

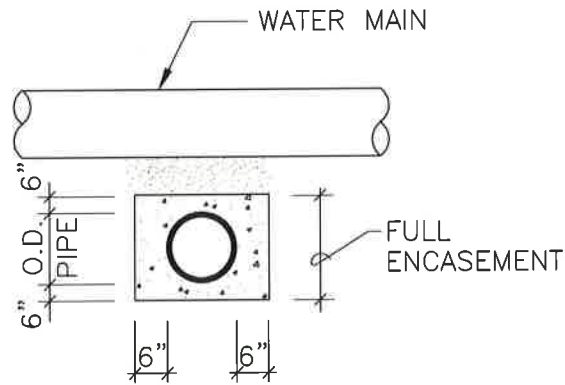
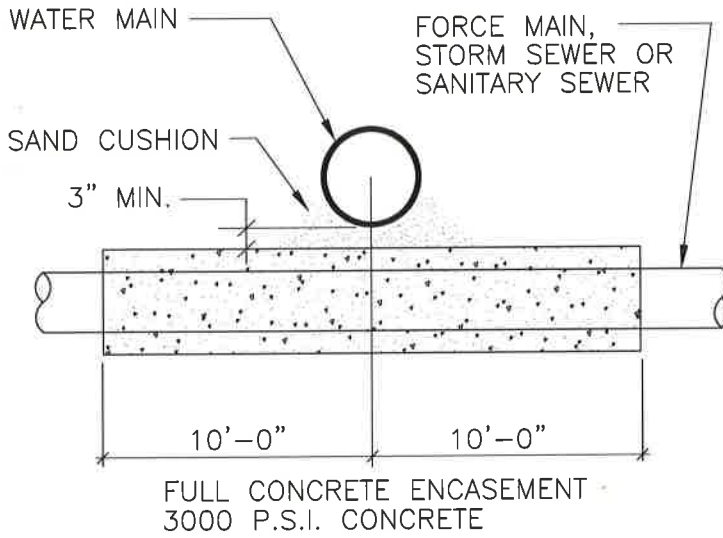


NOTES:

1. CONTRACTOR TO VERIFY EXISTING AND PROPOSED ELEVATIONS AT ALL UTILITY CONFLICT LOCATIONS.
2. ALL JOINTS (PROPOSED AND EXISTING) AT UTILITY CONFLICTS SHALL BE MECHANICALLY RESTRAINED.



TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Utility Conflict Type B
 Nassau County, Florida

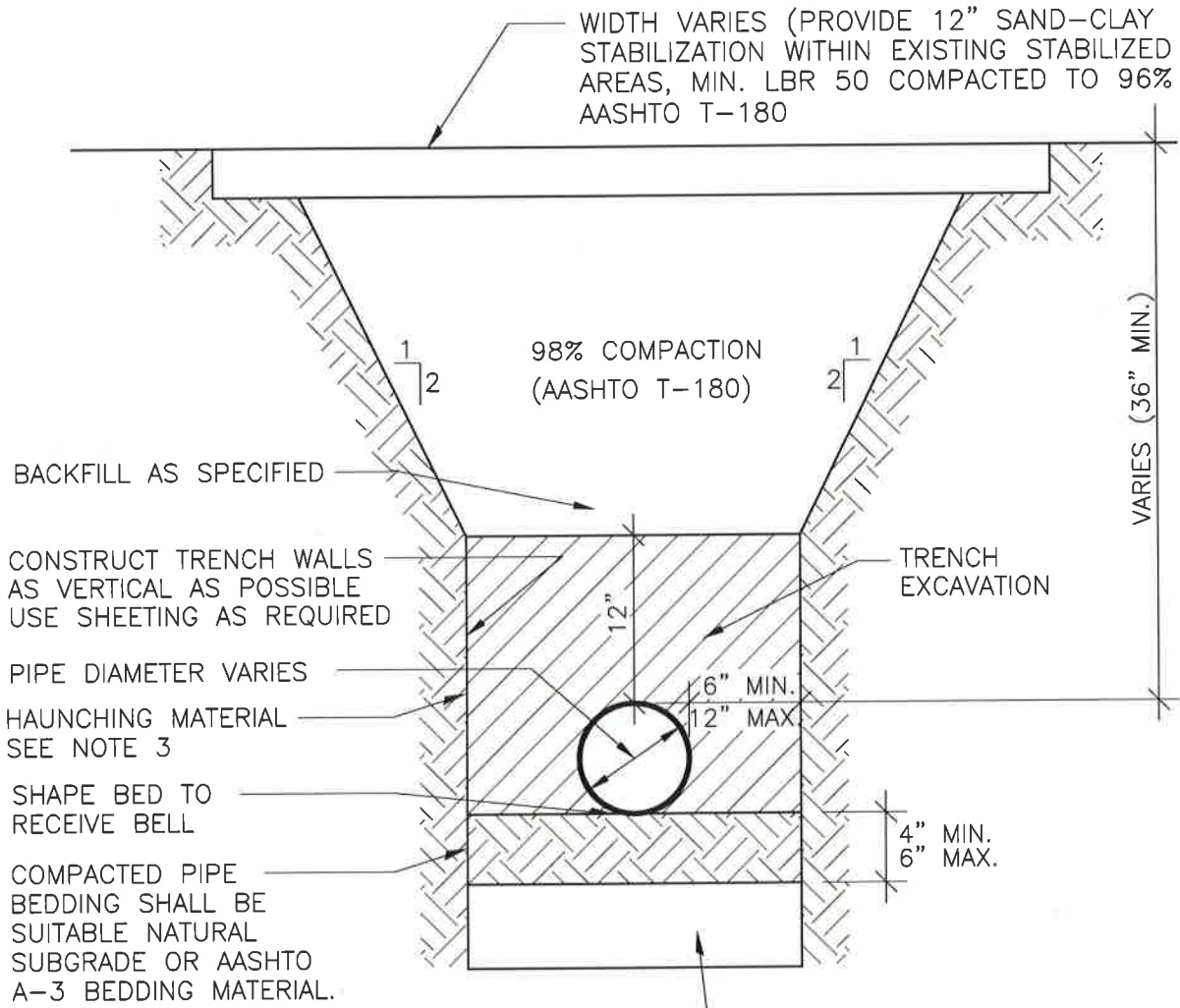


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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Typical Concrete Encasement
 Nassau County, Florida

FIGURE
S-11
 March 2022
 Project
 9610-21
 (Standard



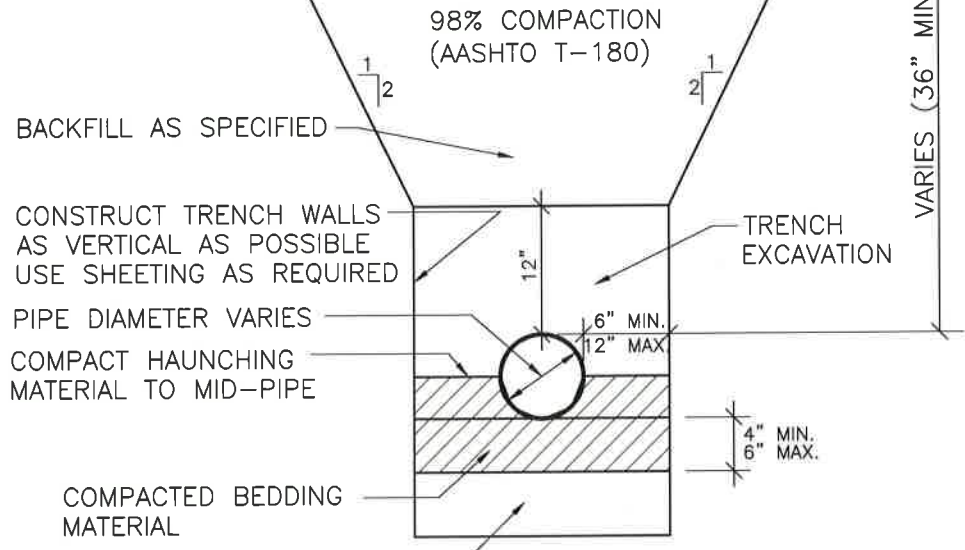
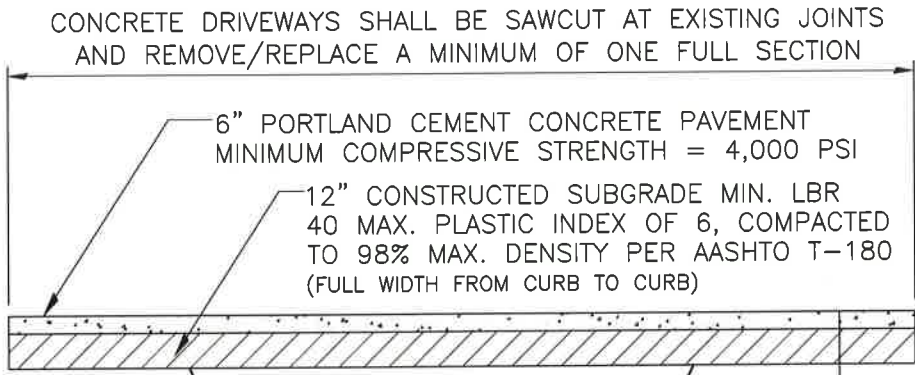
SEE SPECIFICATIONS FOR OVEREXCAVATION AND REPLACEMENT OF UNSUITABLE BEARING MATERIAL (IF REQ'D.)

NOTES:

1. DEWATERING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE WATER TABLE.
2. PIPE INSTALLATION SHALL MEET THE REQUIREMENTS OF AWWA C-605 TYPE 4 LAYING CONDITION AND AS MODIFIED BY THIS DETAIL.
3. HAND COMPACT HAUNCHING MATERIAL IN 6" LIFTS COMPACTED TO 95% OF THE MAXIMUM DENSITY PER AASHTO T-180 TO 12 INCH ABOVE TOP OF PIPE.

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SEE SPECIFICATIONS FOR EXCAVATION OF UNSUITABLE BEARING MATERIAL (IF REQ'D.)

- NOTES:**
1. DEWATERING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE WATER TABLE.
 2. MAXIMUM WIDTH OF REPLACEMENT SHALL BE 10 FT. OR TO NEAREST EXISTING JOINT, WHICHEVER IS LESS
 3. PROVIDE SAW CUT CONTROL JOINTS AT 10' C-C EACH WAY

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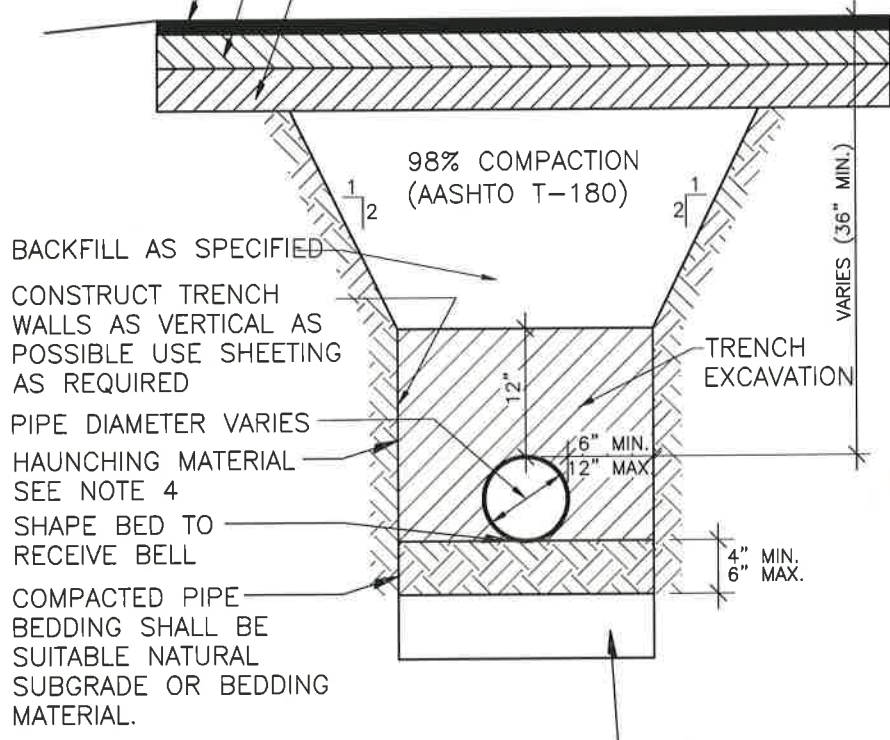
TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Trench Detail in Concrete Roadways
 Nassau County, Florida

FIGURE
S-13
 March 2022
 Project
 9610-2
 (Standard
 249

1 1/2" TYPE SP9.5 (TRAFFIC LEVEL 'C')ASPHALTIC CONCRETE (FULL WIDTH FROM CURB TO CURB)

8" COMPACTED LIMEROCK BASE, MIN. LBR 100, 100% COMPACTION PER AASHTO T-180 (FULL WIDTH FROM CURB TO CURB)

12" CONSTRUCTED SUB-BASE, MIN. LBR 40 98% COMPACTION PER AASHTO T-180 (FULL WIDTH FROM CURB TO CURB)



BACKFILL AS SPECIFIED

CONSTRUCT TRENCH WALLS AS VERTICAL AS POSSIBLE USE SHEETING AS REQUIRED

PIPE DIAMETER VARIES

HAUNCHING MATERIAL SEE NOTE 4

SHAPE BED TO RECEIVE BELL

COMPACTED PIPE BEDDING SHALL BE SUITABLE NATURAL SUBGRADE OR BEDDING MATERIAL.

SEE SPECIFICATIONS FOR OVEREXCAVATION AND REPLACEMENT OF UNSUITABLE BEARING MATERIAL (IF REQ'D.)

NOTES:

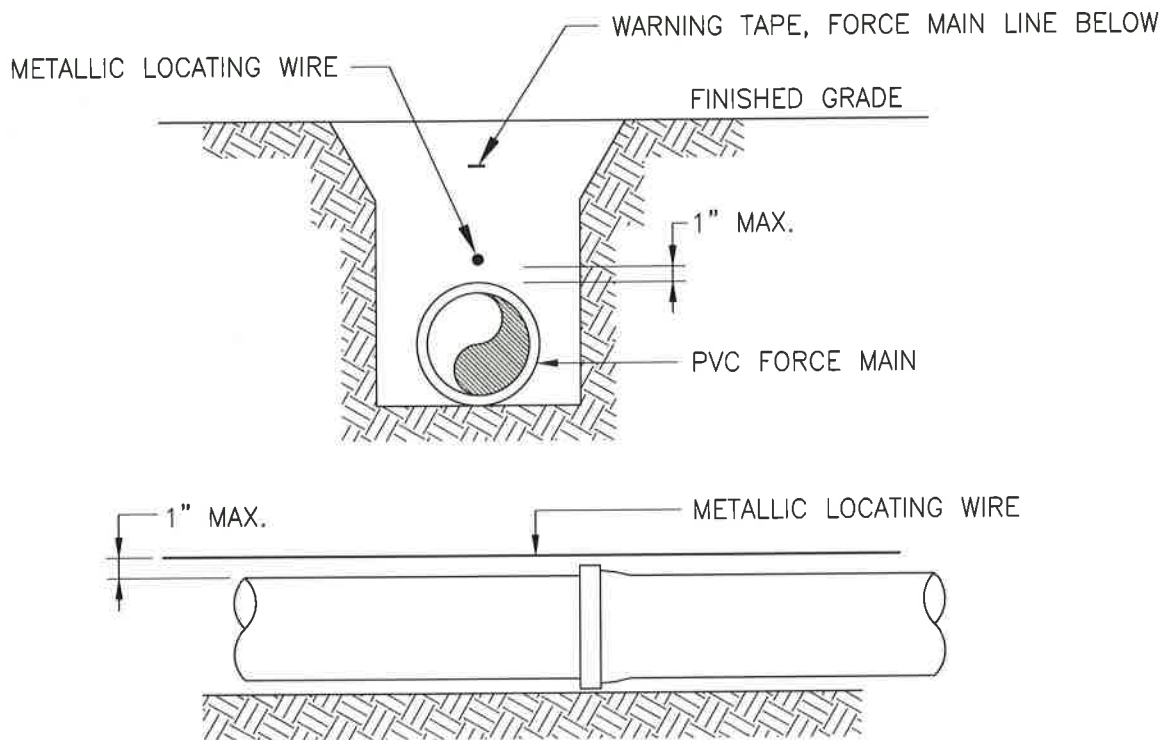
1. DEWATERING SHALL CONTINUE UNTIL BACKFILL IS COMPACTIONED AT LEAST 2 FEET ABOVE WATER TABLE.
2. SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPPED AND FEATHERED.
3. PIPE INSTALLATION SHALL MEET THE REQUIREMENTS OF AWWA C-600 TYPE 2 LAYING CONDITION AND AS MODIFIED BY THIS DETAIL.
4. COMPACT HAUNCHING MATERIAL IN 6" LIFTS COMPACTIONED TO 98% OF THE MAXIMUM DENSITY PER AASHTO T-180 TO 12 INCH ABOVE TOP OF PIPE.

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Trench Detail in Asphalt Roadways
 Nassau County, Florida

FIGURE
S-14
 March 2022
 Project
 9610-2
 (Standards)
 250

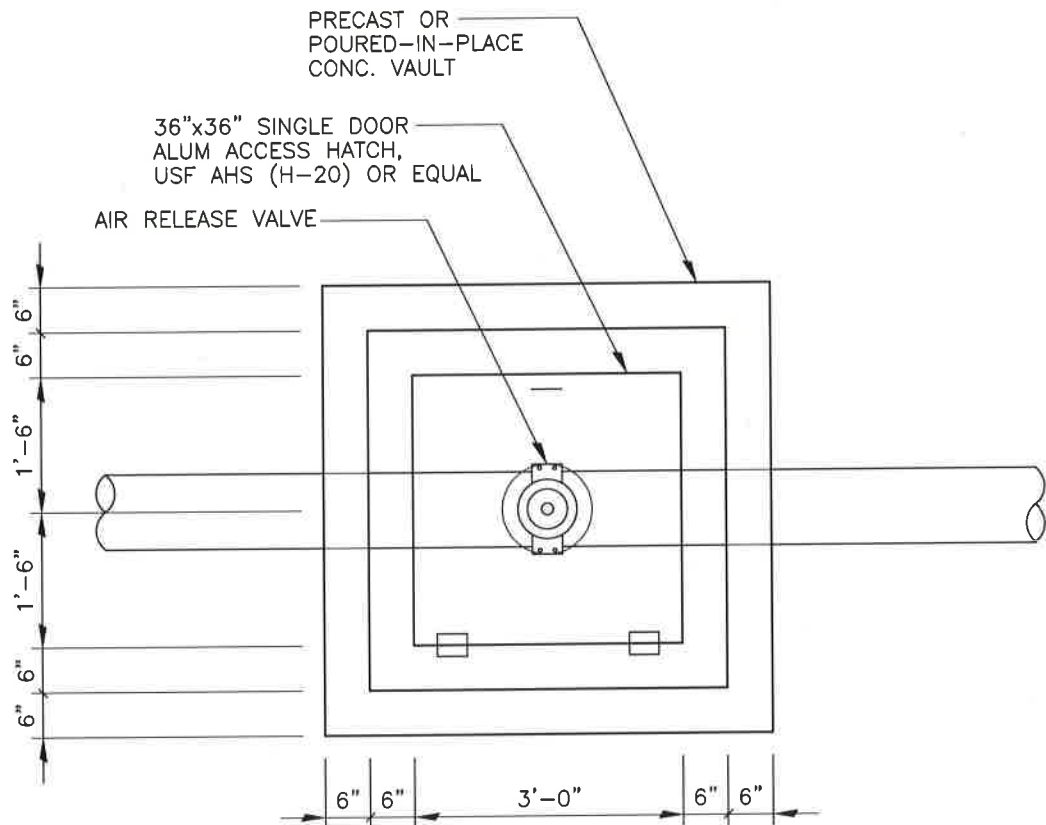


NOTES:

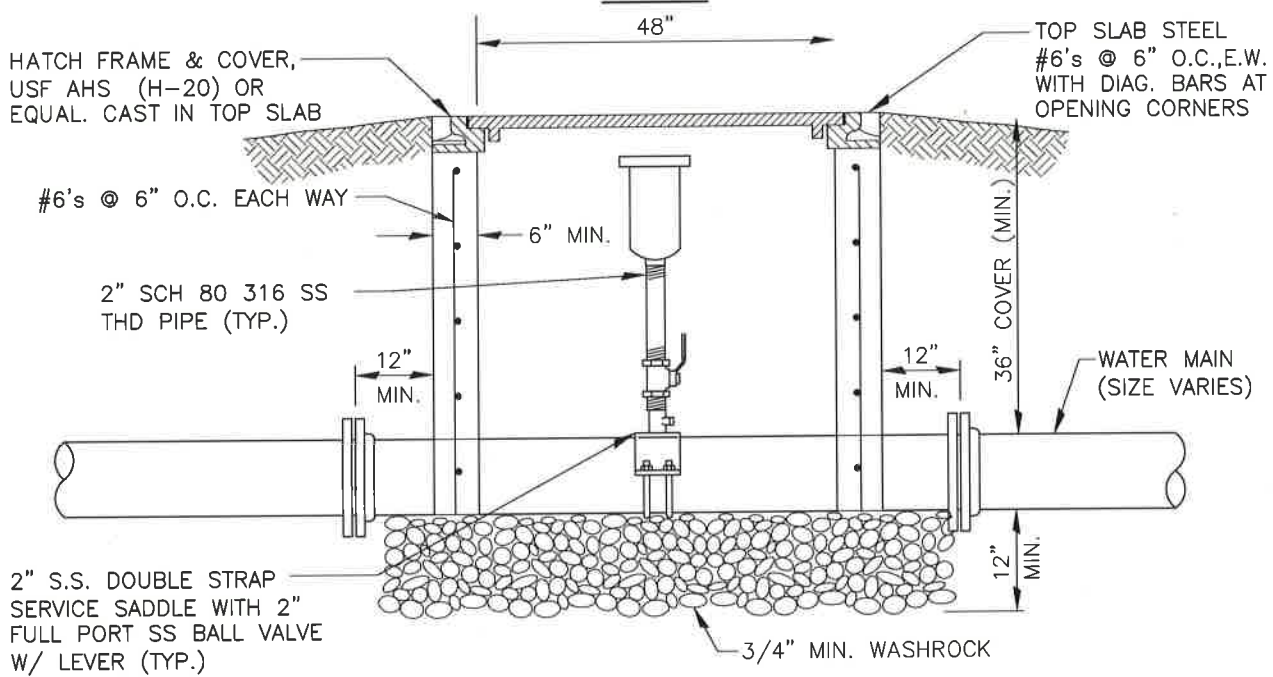
1. ALL PVC FORCE MAIN SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (12 GAUGE, SOLID STRAND COPPER W/TYPE UF INSULATION) CAPABLE OF DETECTION BY A CABLE LOCATOR
2. WIRE SHALL BE ATTACHED TO THE TOP OF PIPE WITH DUCT TAPE, A MINIMUM OF THREE TIMES PER JOINT OF PIPE. LOCATING WIRE SHALL TERMINATE AT THE TOP OF EACH VALVE BOX
3. PROVIDE WIRE LENGTH CAPABLE OF EXTENDING 12" ABOVE TOP OF VALVE BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION.

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PLAN



SECTION

- NOTES:
1. 4000 P.S.I., CONCRETE.
 2. VAULT SHALL BE PRECAST OR POURED IN PLACE CONCRETE ALL WITH STEEL REINFORCING. BOX MAY HAVE SLOTTED BOTTOM (I.E. DOGHOUSE) TO ALLOW BOX TO BE SET OVER PIPE.

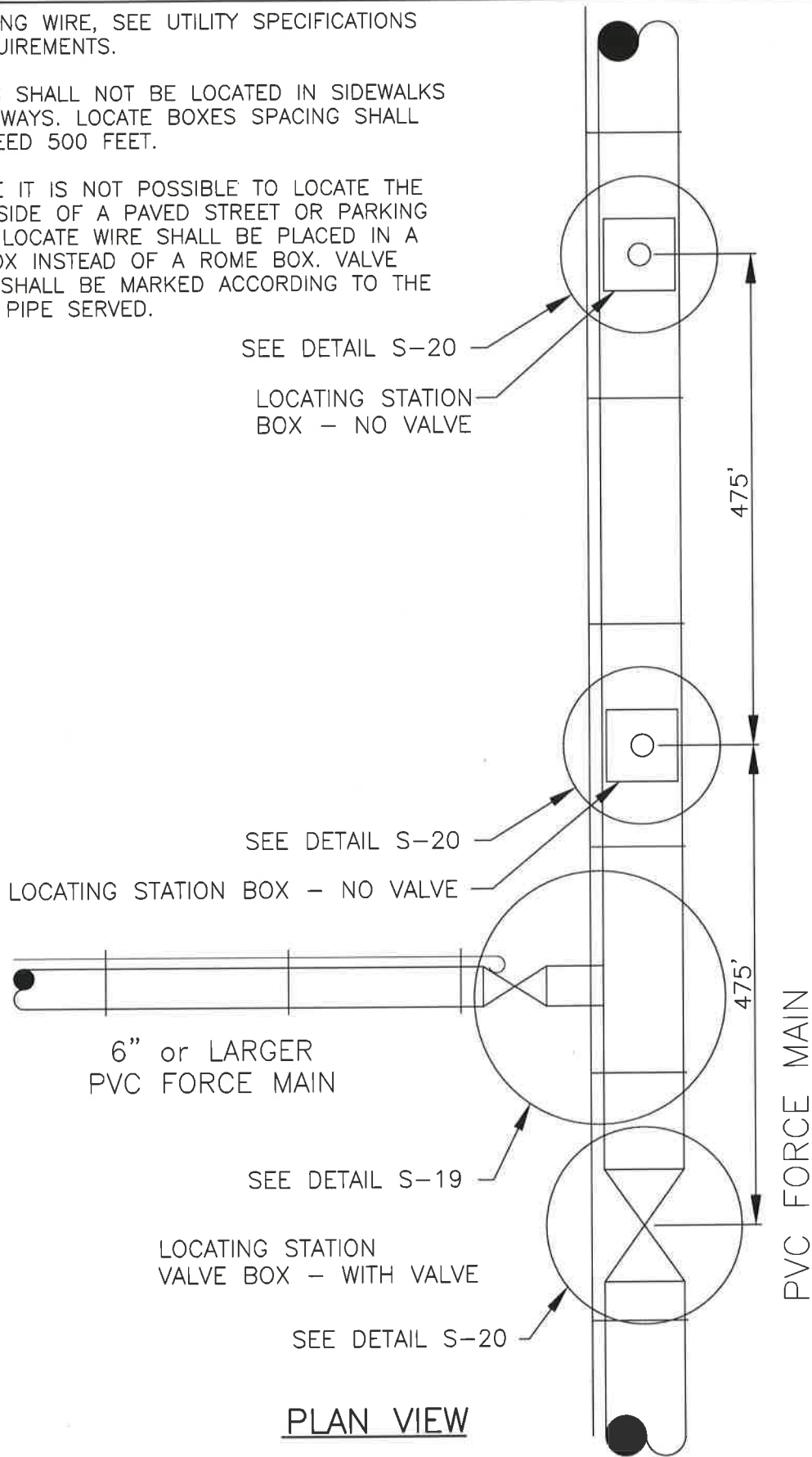


TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Air Release Valve
 Nassau County, Florida

FIGURE
 S-16
 March 2022
 Project
 9610-2
 (Standards)

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1. LOCATING WIRE, SEE UTILITY SPECIFICATIONS FOR REQUIREMENTS.
2. BOXES SHALL NOT BE LOCATED IN SIDEWALKS OR DRIVEWAYS. LOCATE BOXES SPACING SHALL NOT EXCEED 500 FEET.
3. WHERE IT IS NOT POSSIBLE TO LOCATE THE BOX OUTSIDE OF A PAVED STREET OR PARKING LOT THE LOCATE WIRE SHALL BE PLACED IN A VALVE BOX INSTEAD OF A ROME BOX. VALVE BOX LID SHALL BE MARKED ACCORDING TO THE TYPE OF PIPE SERVED.



PLAN VIEW

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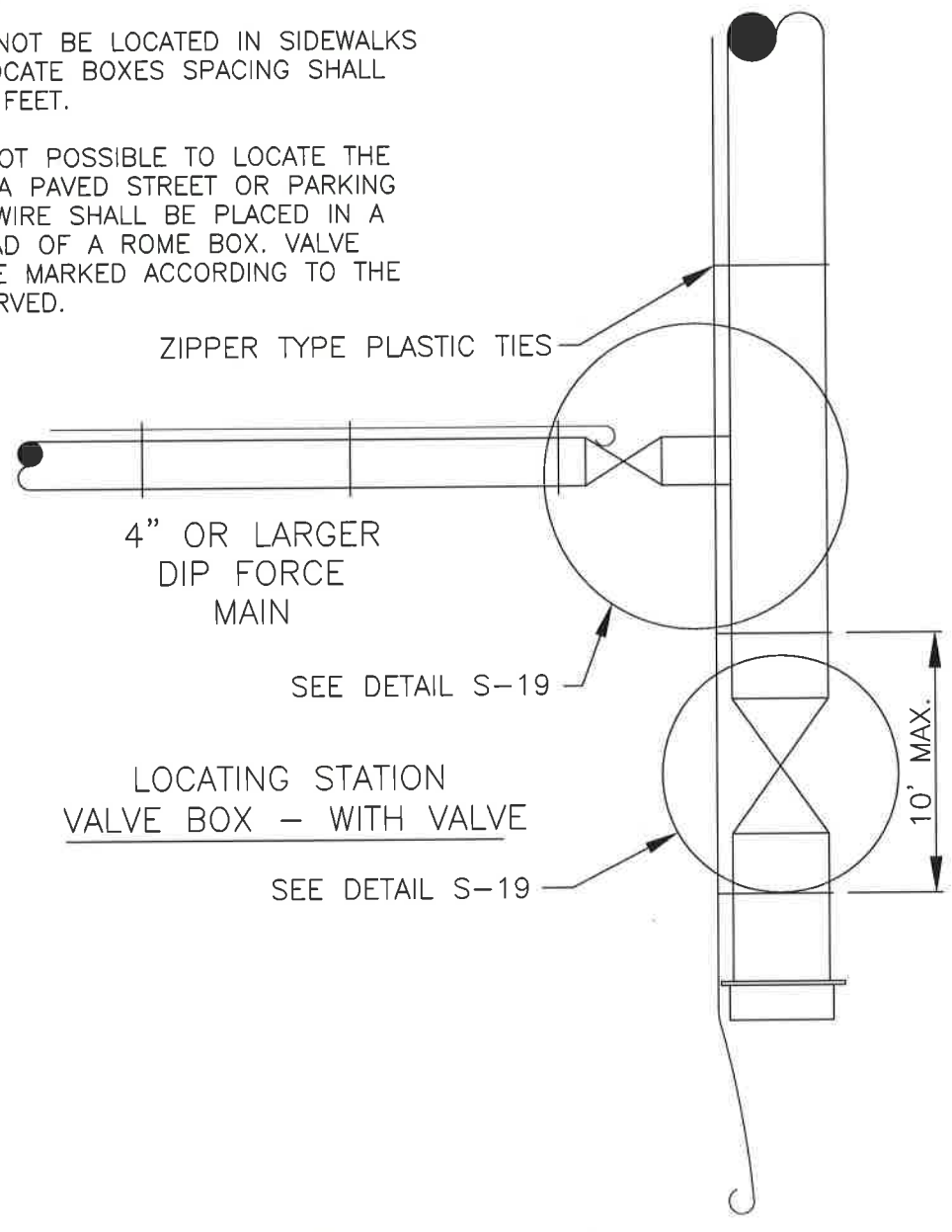


TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Locate Wire Installation Details
 Nassau County, Florida

FIGURE
S-17
 March 2022
 Project
 9610-2
 (Standard)

NOTES:

- 1. LOCATING WIRE, SEE UTILITY SPECIFICATIONS FOR REQUIREMENTS.
- 2. BOXES SHALL NOT BE LOCATED IN SIDEWALKS OR DRIVEWAYS. LOCATE BOXES SPACING SHALL NOT EXCEED 500 FEET.
- 3. WHERE IT IS NOT POSSIBLE TO LOCATE THE BOX OUTSIDE OF A PAVED STREET OR PARKING LOT THE LOCATE WIRE SHALL BE PLACED IN A VALVE BOX INSTEAD OF A ROME BOX. VALVE BOX LID SHALL BE MARKED ACCORDING TO THE TYPE OF PIPE SERVED.



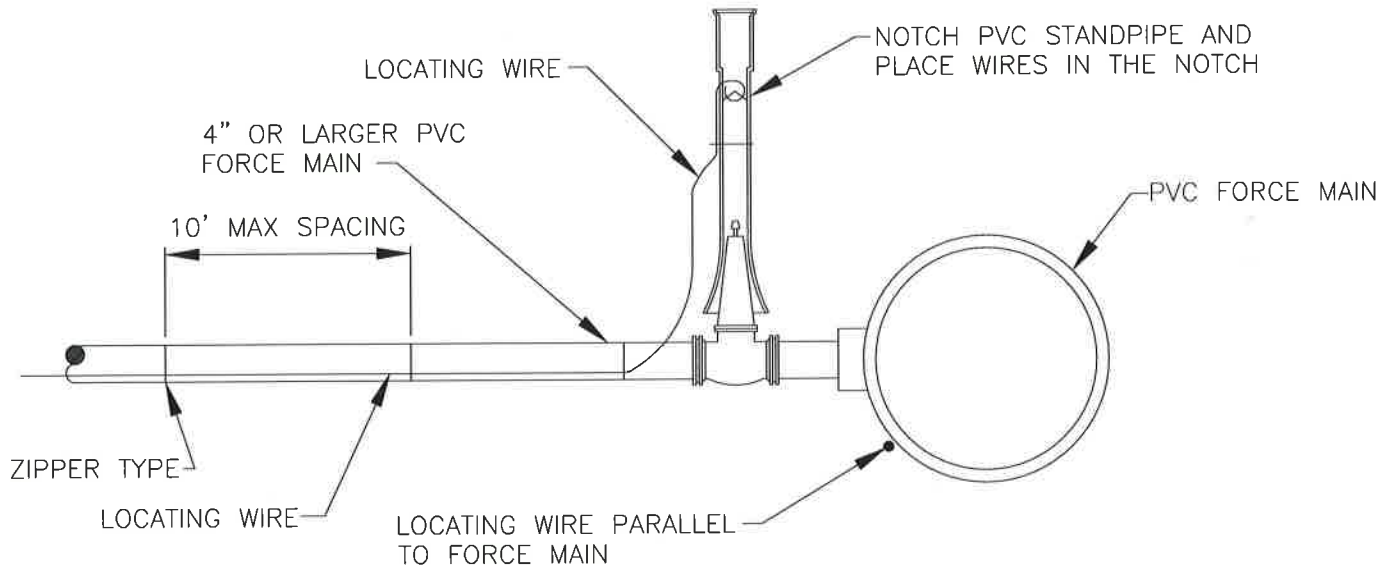
PLAN VIEW

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Locate Wire Installation Details
 Nassau County, Florida

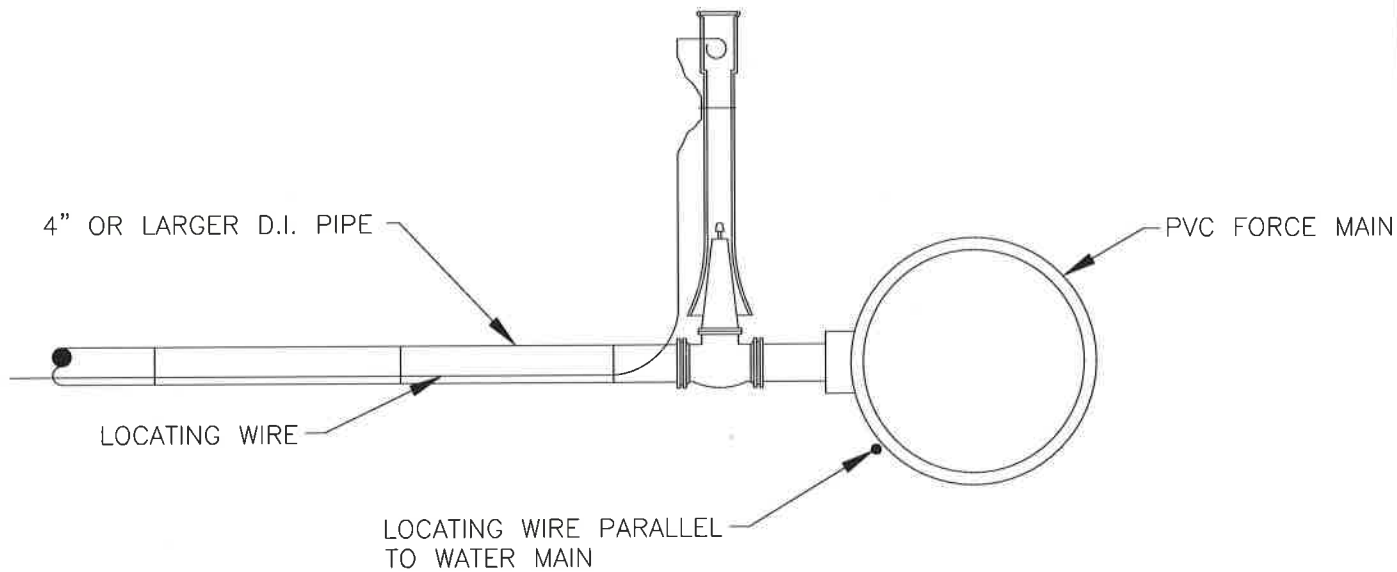
FIGURE
S-18
 March 2022
 Project
 9610-2
 (Standards)
 254



CONNECTION TO PVC MAINS

4" OR LARGER PVC FORCE MAIN

DETAIL - A



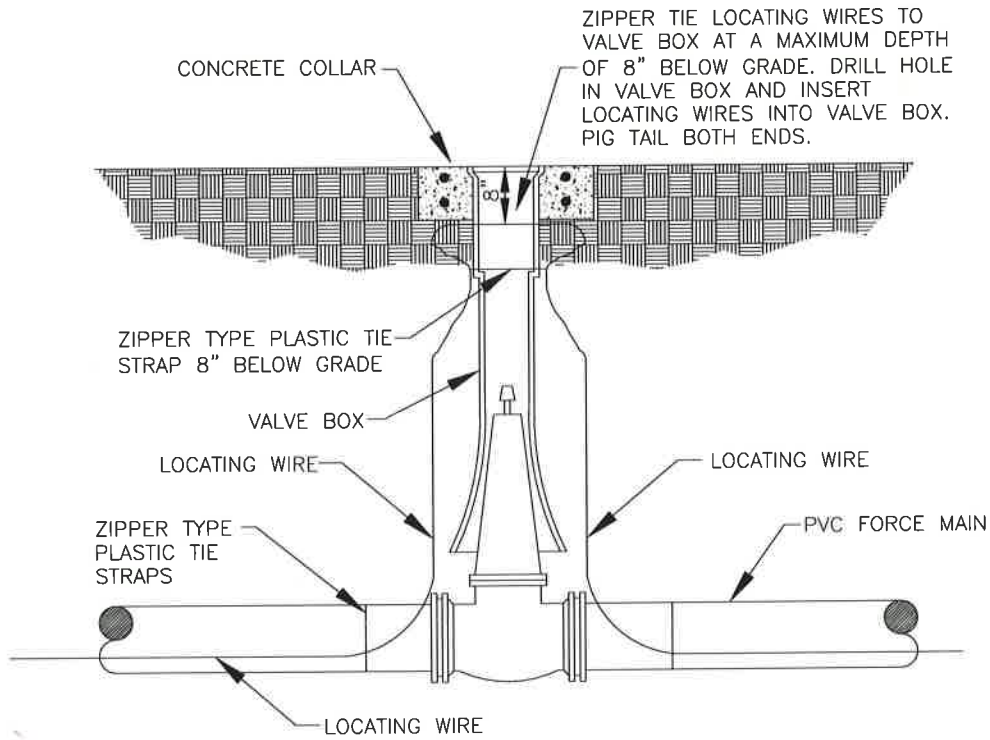
CONNECTION TO D.I. MAINS

w/4" OR LARGER D.I. FORCE MAIN

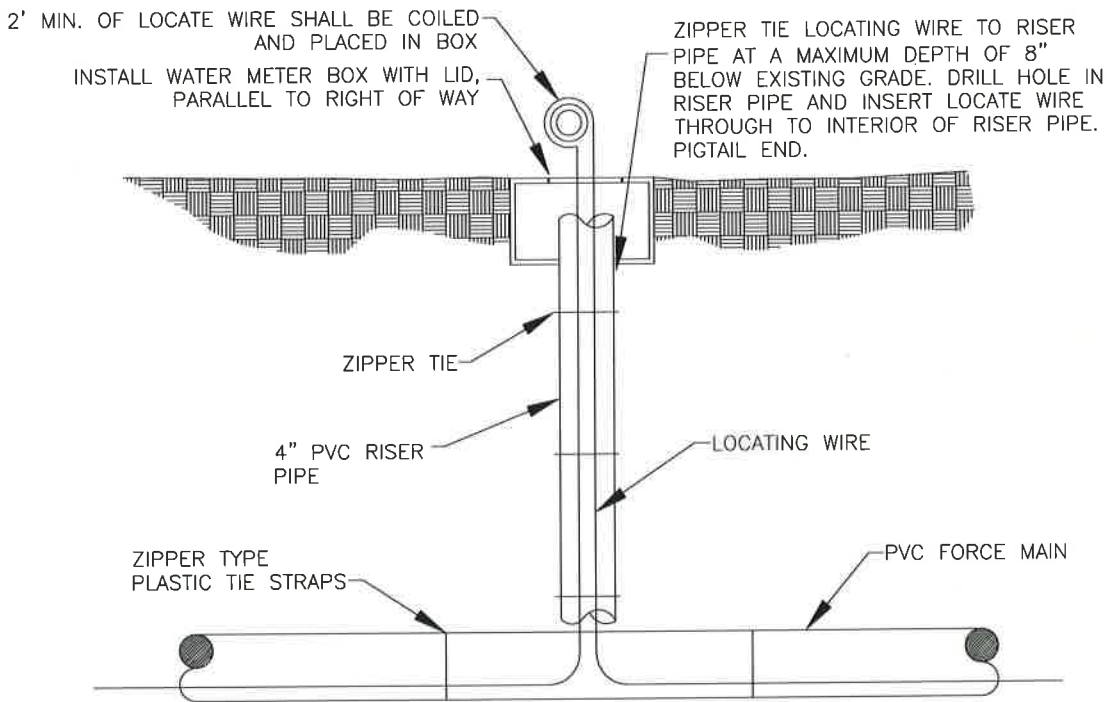
DETAIL - B

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IN LINE LOCATING STATION— PVC PIPE
 VALVE BOX WITH VALVE



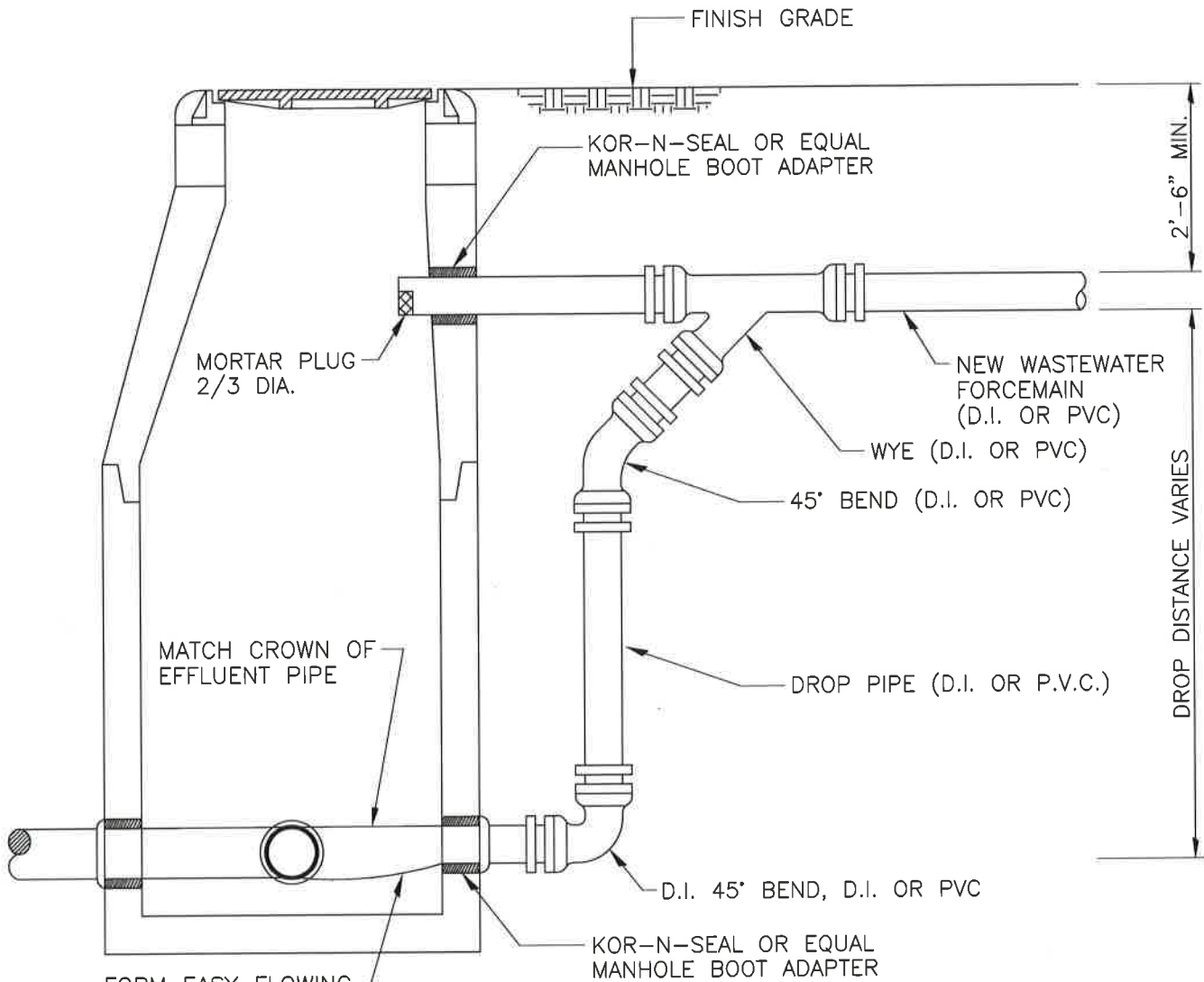
IN LINE LOCATING STATION — PVC PIPE
 METER BOX

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Locate Wire Installation Details
 Nassau County, Florida

FIGURE
S-20
 March 2022
 Project
 9610-2
 (Standards)



FORM EASY FLOWING CHANNEL IN MANHOLE

NOTES:

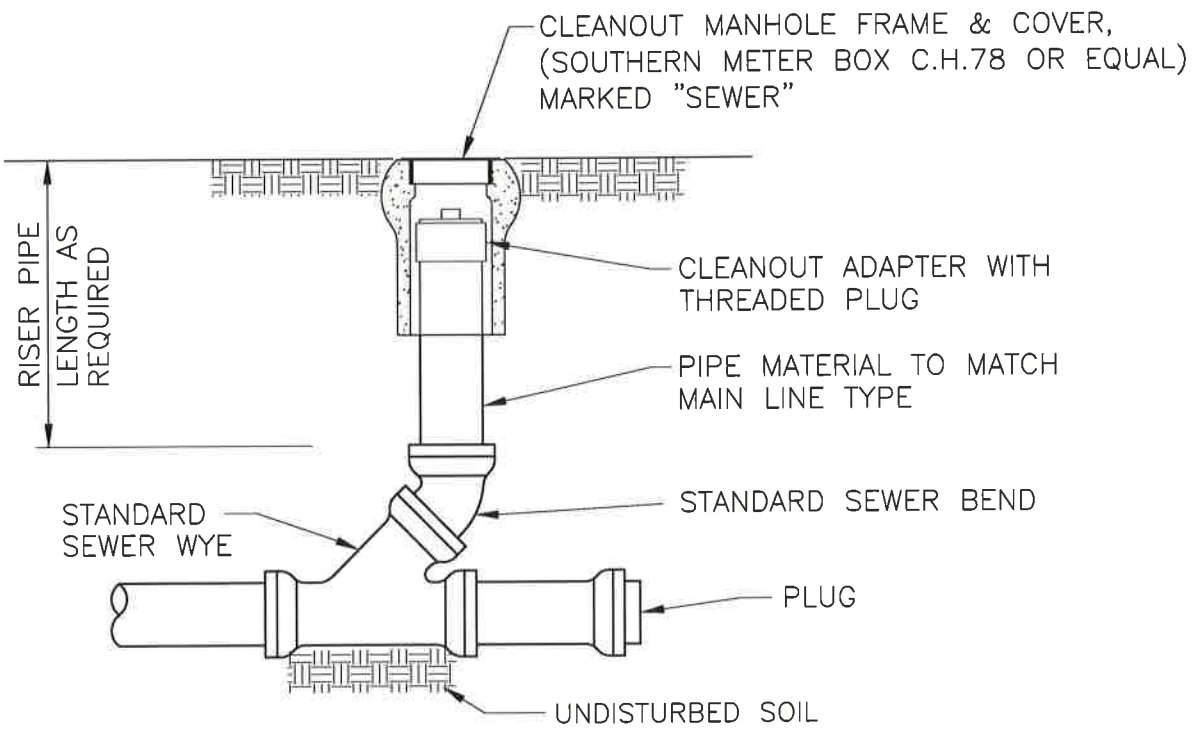
1. IF DROP IS EQUAL TO OR LESS THAN 2.0', CONTRACTOR MAY INSTALL 45° BENDS IN LIEU OF WYE, DROP PIPE AND 90° BEND AT HIS OPTION.
2. IF FORCE MAIN <3" DIA., CONNECT FORCE MAIN AT MANHOLE INVERT USING 45° BENDS AND ELIMINATE UPPER MANHOLE PENETRATION.

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Force Main Connection to Manhole Detail
 Nassau County, Florida

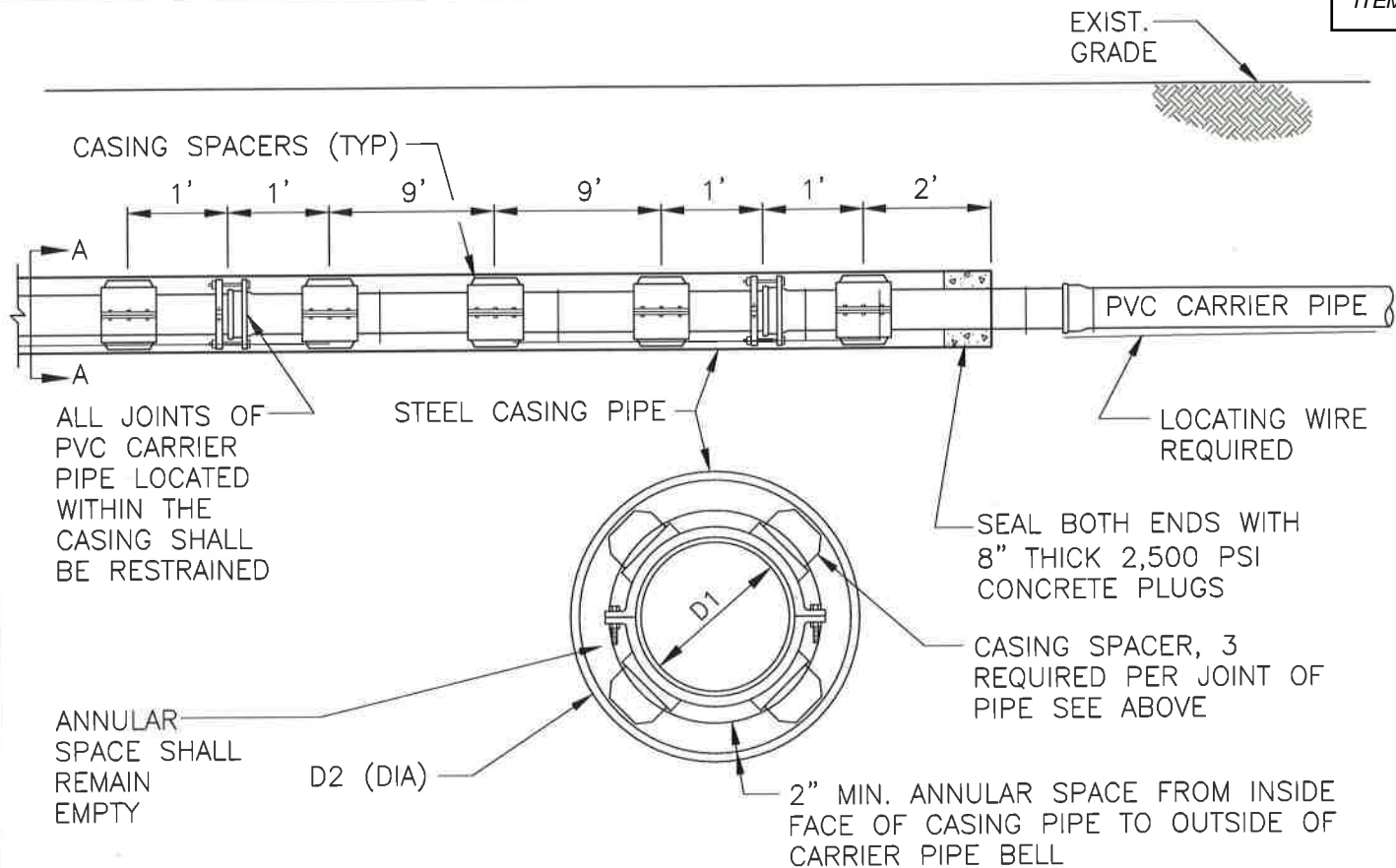
FIGURE
S-21
 March 2022
 Project
 9610-2
 (Standards)



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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Sewer Cleanout Detail
 Nassau County, Florida



SECTION "A-A"

CARRIER PIPE AND CASING PIPE SIZES (MIN.) IN INCHES												
CARRIER PIPE NOM. DIA. (D ₁)	4	6	8	10	12	14	16	18	20	24	30	36
CASING PIPE NOM. DIA (D ₂)	14	16	20	24	24	30	30	36	36	42	48	54
D.O.T. WALL THICKNESS	0.25	0.25	0.25	0.25	0.25	0.312	0.312	0.375	0.375	0.50	0.50	0.50

NOTES:

1. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4-INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE CARRIER PIPE BELL OR RESTRAINER COUPLING.
2. ALL PVC CARRIER PIPE JOINTS WITHIN CASING PIPE SHALL BE MECHANICAL RESTRAINED JOINTS.
3. FOR STREET USES WHICH ARE NOT D.O.T., USE D.O.T. CASING THICKNESS UNLESS OTHERWISE INDICATED BY ENGINEER.
4. CASING PIPE SHALL BE FURNISHED IN NOMINAL 8-FOOT LENGTHS (MIN.) UNLESS OTHERWISE INDICATED ON THE DRAWING.
5. CASING PIPE SHALL CONFORM TO EITHER ASTM STANDARD A139 FOR "ELECTRIC FUSION (ARC) WELDED STEEL PIPE". WITH A SPECIFIED MINIMUM YIELD STRENGTH (SMYS) OF 35,000 PSI OR "API SPECIFICATION API-5LX, GRADE X-42 WELDED STEEL PIPE".

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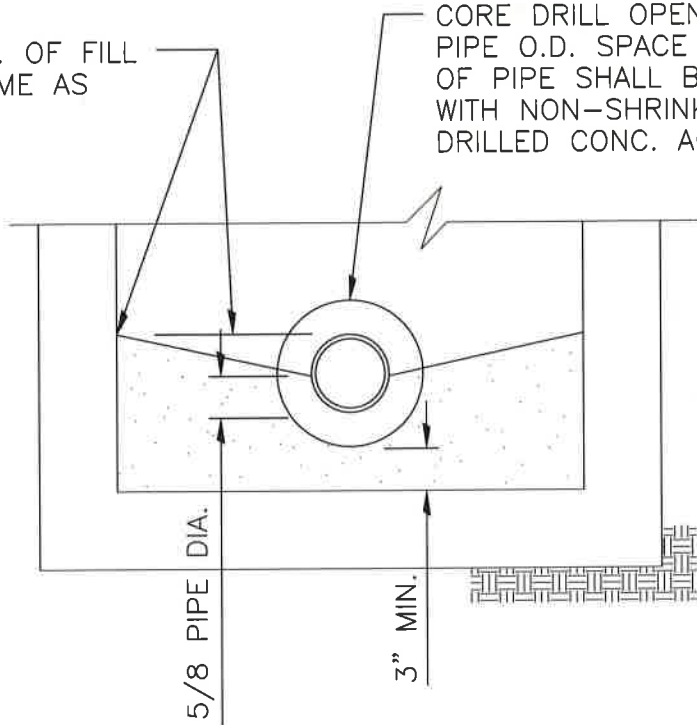


TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Jack and Bore Detail
 Nassau County, Florida

FIGURE
 S-23
 March 2022
 Project
 9610-2
 (Standard
 259

HIGH POINT ELEV. OF FILL CONC. TO BE SAME AS O.D. OF PIPE

CORE DRILL OPENING 6" LARGER THAN PIPE O.D. SPACE AROUND OUTSIDE OF PIPE SHALL BE COMPLETELY FILLED WITH NON-SHRINK GROUT. REMOVE DRILLED CONC. AND FORM NEW INVERT.

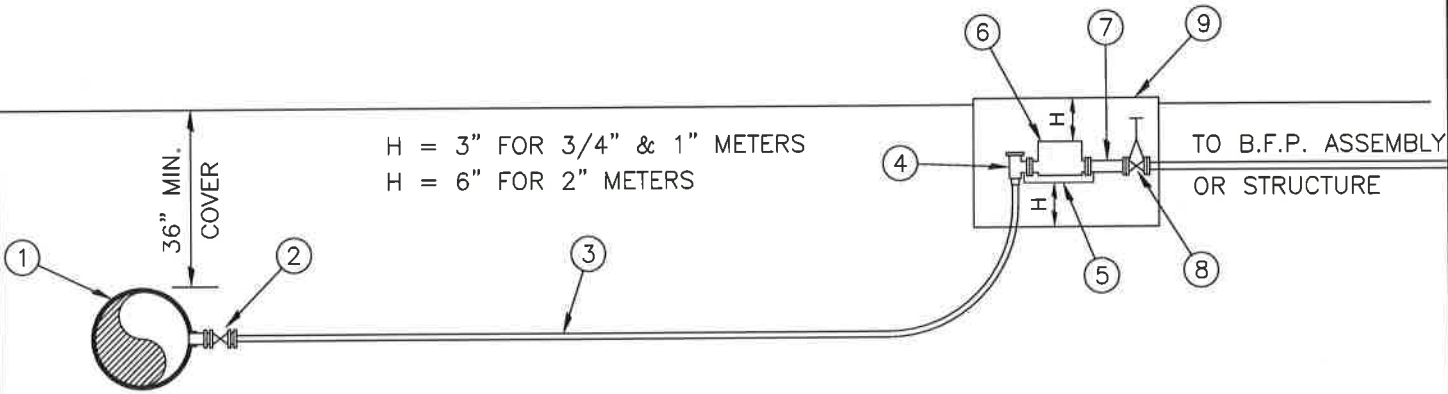


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TOWN OF HILLIARD
Standard Specifications for Utility Construction
Connection to Existing Manhole
Nassau County, Florida

FIGURE
S-24
March 2022
Project
9610-2
(Standards)



	1	2	3	4	5
COMPONENT	BRASS TAPPING SADDLE OR TEE	FORD-BRASS CORP. STOP	POLY-ETHYLENE	FORD-BRASS ANGLE YOKE VALVE	FORD METER YOKE
SERVICE					
SINGLE POTABLE WATER SERVICE FOR 1" METER	1" (SMITH-BLAIR)	1" F1000 OR F1100	1"	AV94-324W 1" PJ/CTS	Y504
SINGLE POTABLE WATER SERVICE FOR 2" METER	2" (SMITH-BLAIR)	2" F1000 OR F1100	2"	FV63-77W 2" PJ/CTS	N/A

	6	7	8	9
COMPONENT	METER	BRASS NIPPLE	RED & WHITE GATE VALVE W/ALUMINUM HANDWHEEL	BROOKS OR CDR METER BOX
SERVICE				
SINGLE POTABLE WATER SERVICE FOR 1" METER	SEE SPECS	1" MIPT x MIPT 6" LONG	1"	#1324
SINGLE POTABLE WATER SERVICE FOR 2" METER	SEE SPECS	2" MIPT x MIPT 6" LONG	2"	#1324

NOTES:

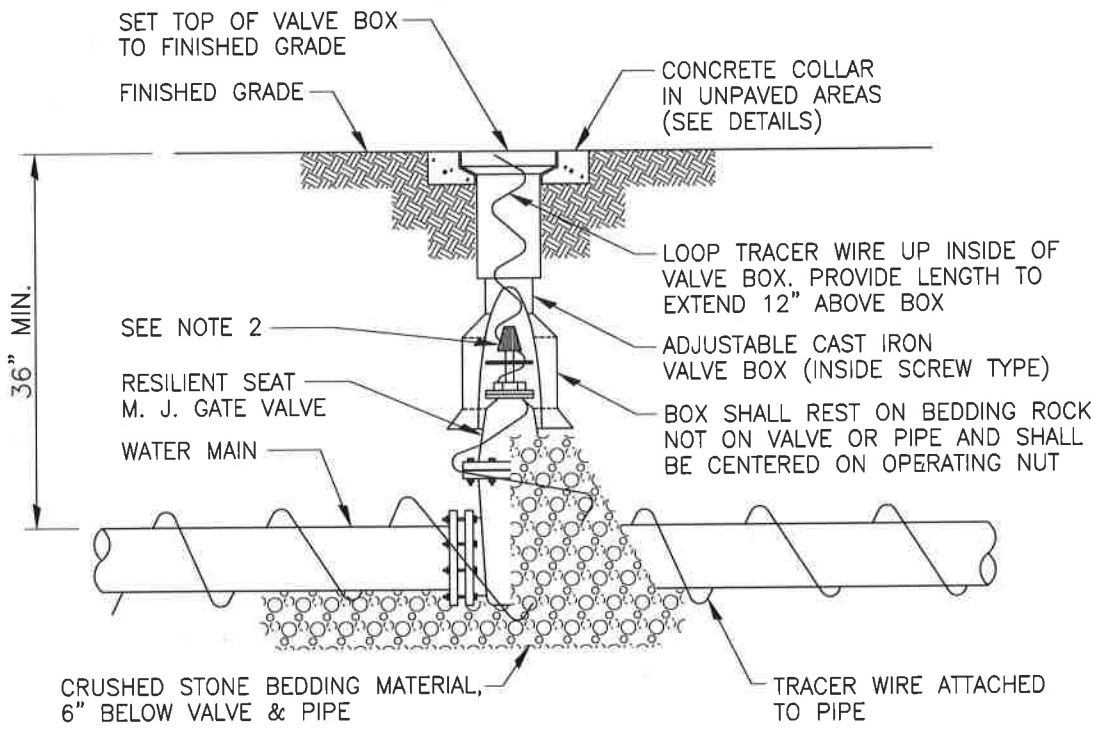
1. POLYETHYLENE SHALL BE IN ACCORDANCE WITH ASTM 2737 AND AWWA C-901, SHALL BE SDR 11, AND RATED FOR 160 PSI SERVICE.
2. TUBING SHALL BE MARKED WITH SIZE, MANUFACTURERS NAME, WORKING PRESSURE, NATIONAL SANITATION FOUNDATION APPROVAL, A.S.T.M. SPECIFICATION AND PRODUCTION CODE. TUBING SHALL HAVE AN OUTSIDE DIAMETER EQUIVALENT TO THE OUTER DIAMETER OF COPPER TUBING.

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Water Service Detail for 1" and 2" Meters
 Nassau County, Florida

FIGURE
W-1
 March 2022
 Project
 9610-2
 (Standards)
 261

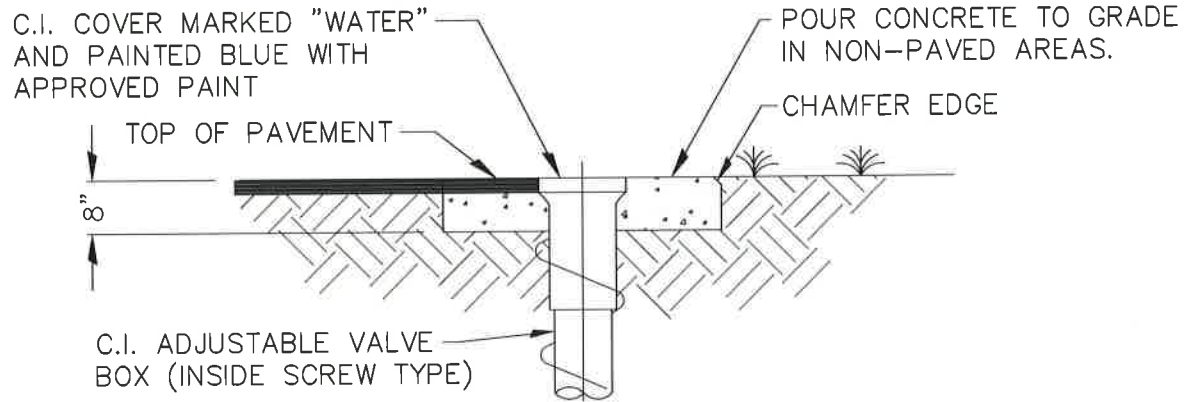
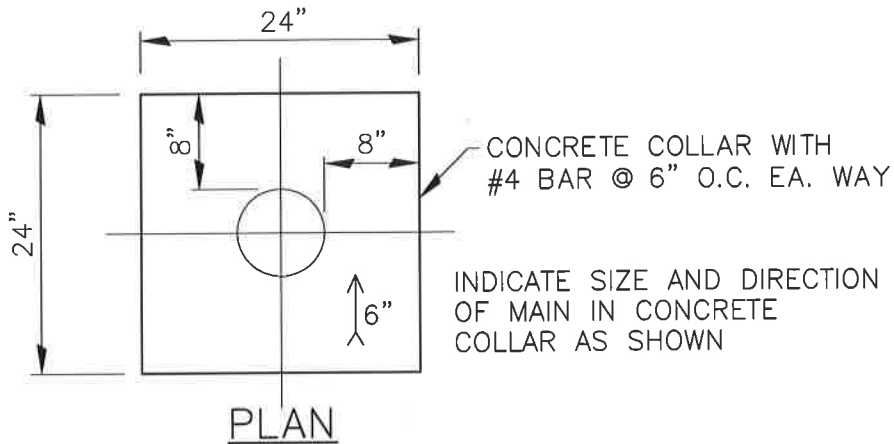


- NOTES:
1. PVC EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
 2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO A MAXIMUM OF 4 FEET BELOW FINISHED GRADE.

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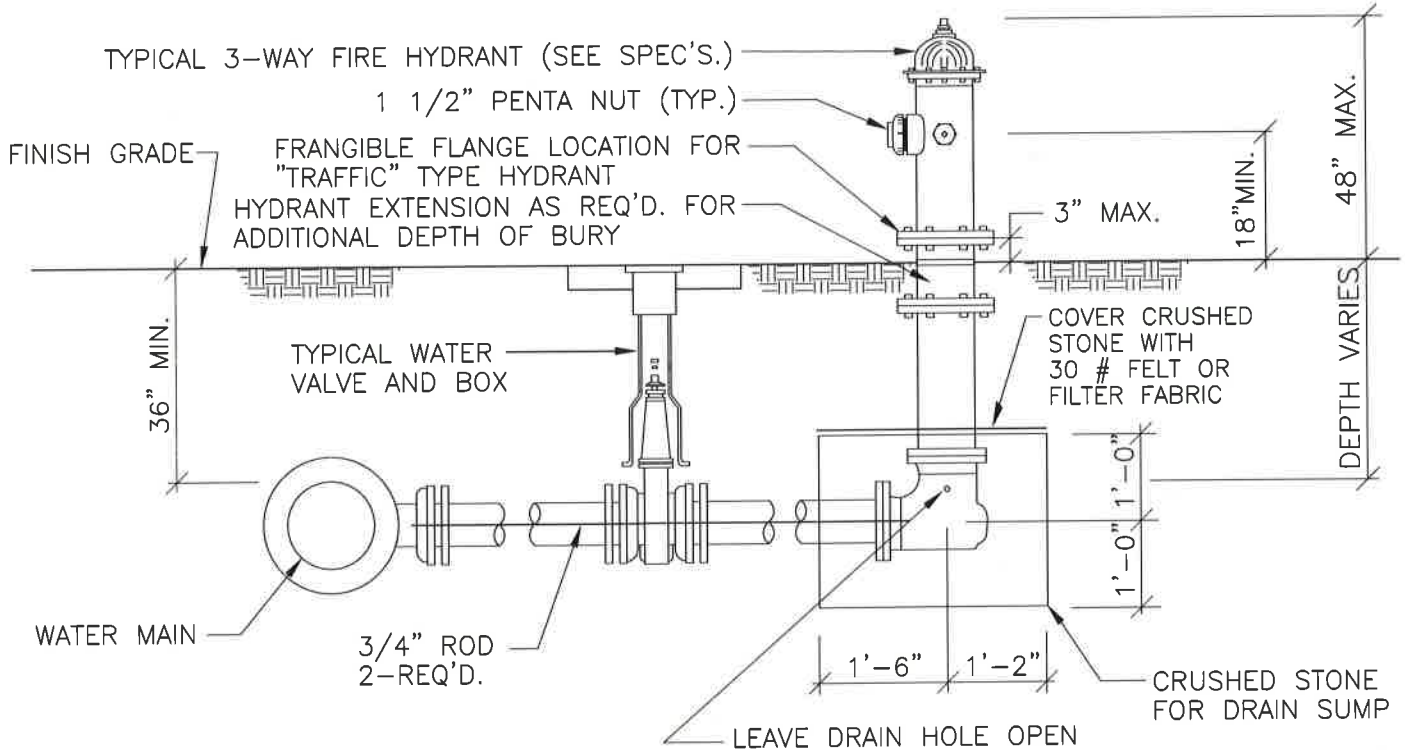
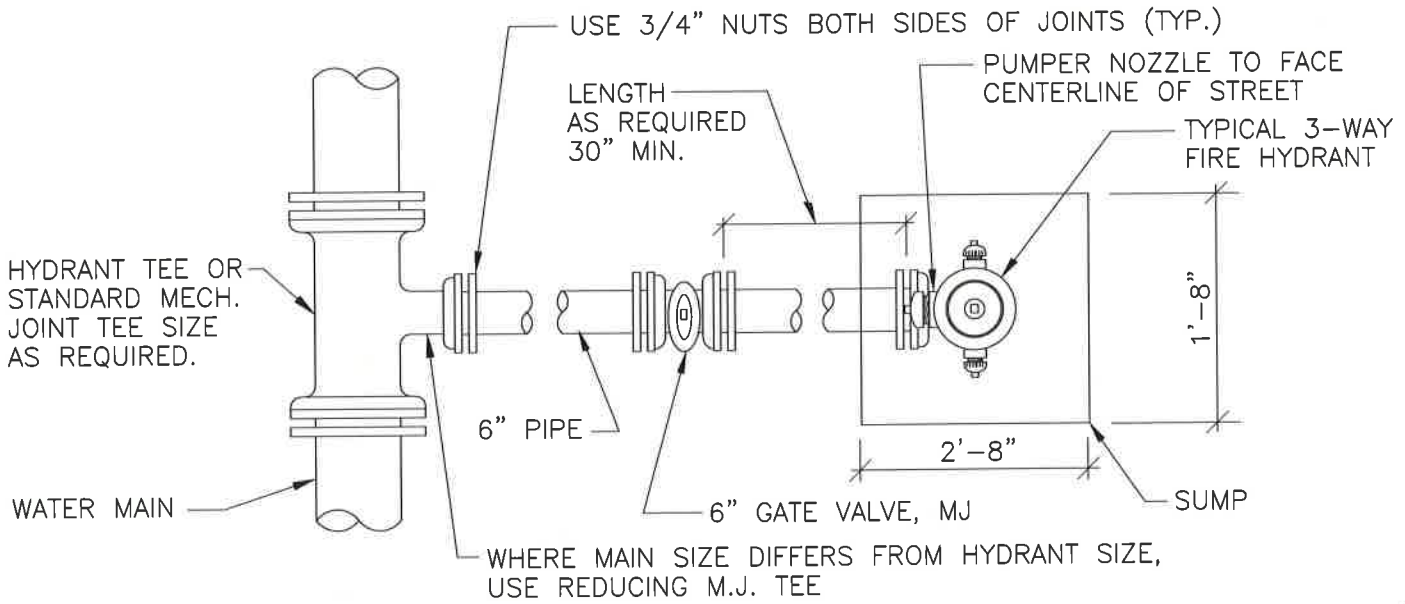
TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Gate Valve and Box Detail
 Nassau County, Florida



- NOTES:
1. CONCRETE COLLAR IS NOT REQUIRED IN PAVED AREAS IF PAVEMENT SURFACE IS FINISHED PRIOR TO CONDITIONAL FINAL INSPECTION.

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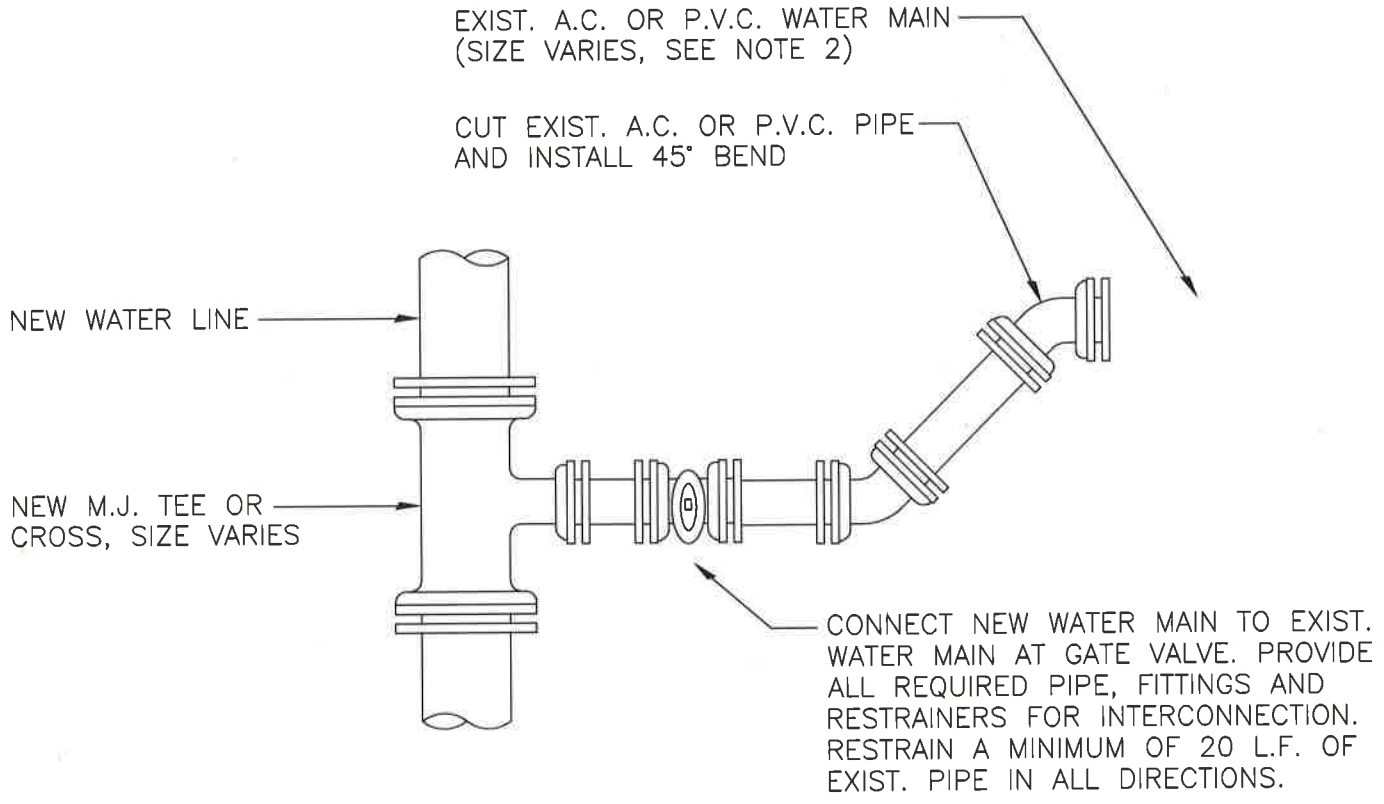


NOTES:

1. TIE RODS, NUTS, WASHERS AND OTHER FASTENERS SHALL BE ASTM A 246 CORROSION RESISTANT STEEL, GALVANIZED OR TYPE 316 STAINLESS STEEL.
2. ALL PIPE, VALVES AND FITTINGS OF HYDRANT SHALL BE RESTRAINED.

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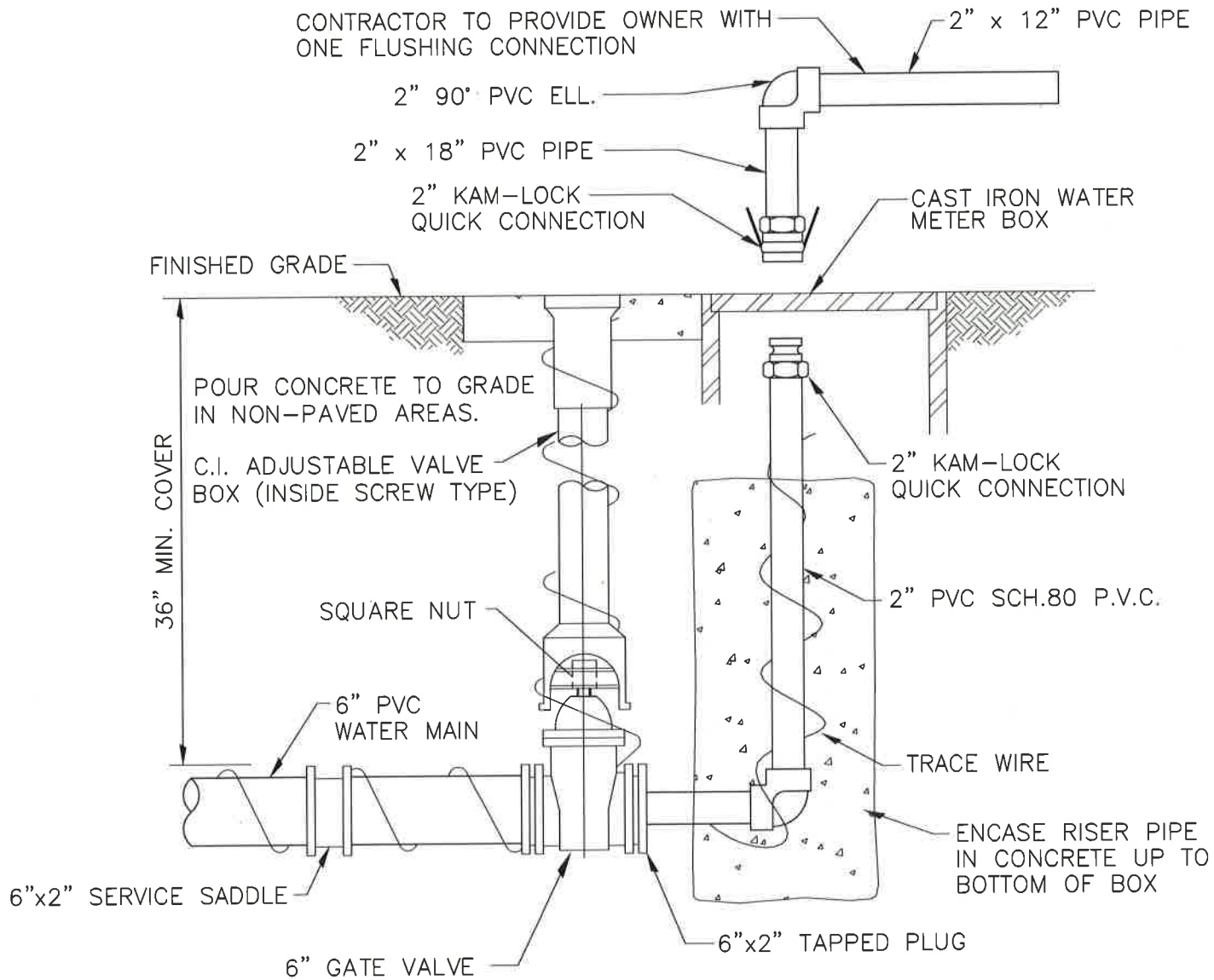
NOTES:

1. ALL PIPE, VALVES AND FITTINGS SHALL BE RESTRAINED IN ACCORDANCE WITH THE UTILITY STANDARDS.
2. THE CONTRACTOR/DEVELOPER SHALL PROVIDE ALL LINE STOP AND/OR INSERT-A-VALVE MECHANISMS AS REQUIRED TO ISOLATE THE TOWN'S SYSTEM PRIOR TO TIE-IN. THE TOWN DOES NOT WARRANTY ANY EXISTING PIPING CAN BE ISOLATED FOR CONNECTION.

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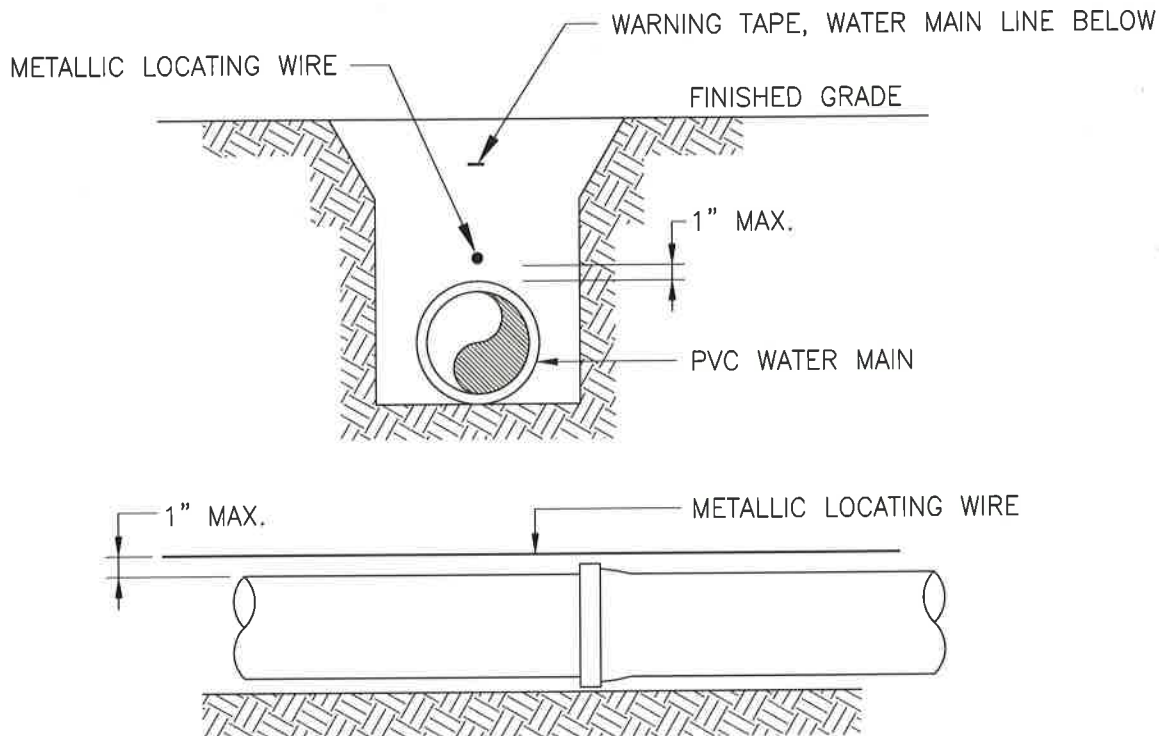
TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Typical Existing Water Main Connection Detail
 Nassau County, Florida



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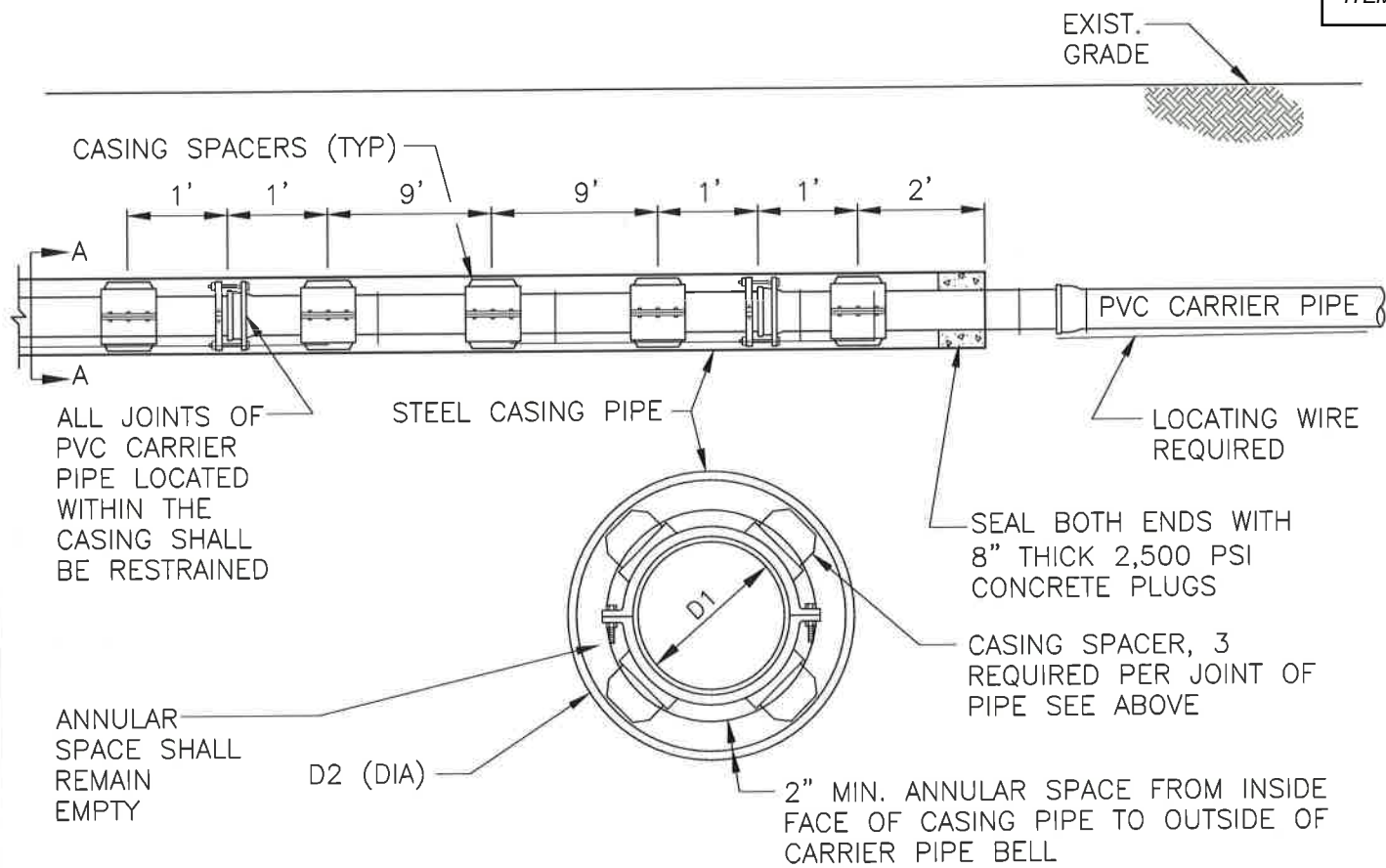
TOWN OF HILLIARD
 Standard Specifications for Utility Construction
Flushing Hydrant Assembly
 Nassau County, Florida



- NOTES:
1. ALL PVC WATER MAIN SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (12 GAUGE, SOLID STRAND COPPER W/TYPE UF INSULATION) CAPABLE OF DETECTION BY A CABLE LOCATOR
 2. WIRE SHALL BE ATTACHED TO THE TOP OF PIPE WITH DUCT TAPE, A MINIMUM OF THREE TIMES PER JOINT OF PIPE. LOCATING WIRE SHALL TERMINATE AT THE TOP OF EACH VALVE BOX
 3. PROVIDE WIRE LENGTH CAPABLE OF EXTENDING 12" ABOVE TOP OF VALVE BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION.

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SECTION "A-A"

CARRIER PIPE AND CASING PIPE SIZES (MIN.) IN INCHES												
CARRIER PIPE NOM. DIA. (D ₁)	4	6	8	10	12	14	16	18	20	24	30	36
CASING PIPE NOM. DIA (D ₂)	14	16	20	24	24	30	30	36	36	42	48	54
D.O.T. WALL THICKNESS	0.25	0.25	0.25	0.25	0.25	0.312	0.312	0.375	0.375	0.50	0.50	0.50

NOTES:

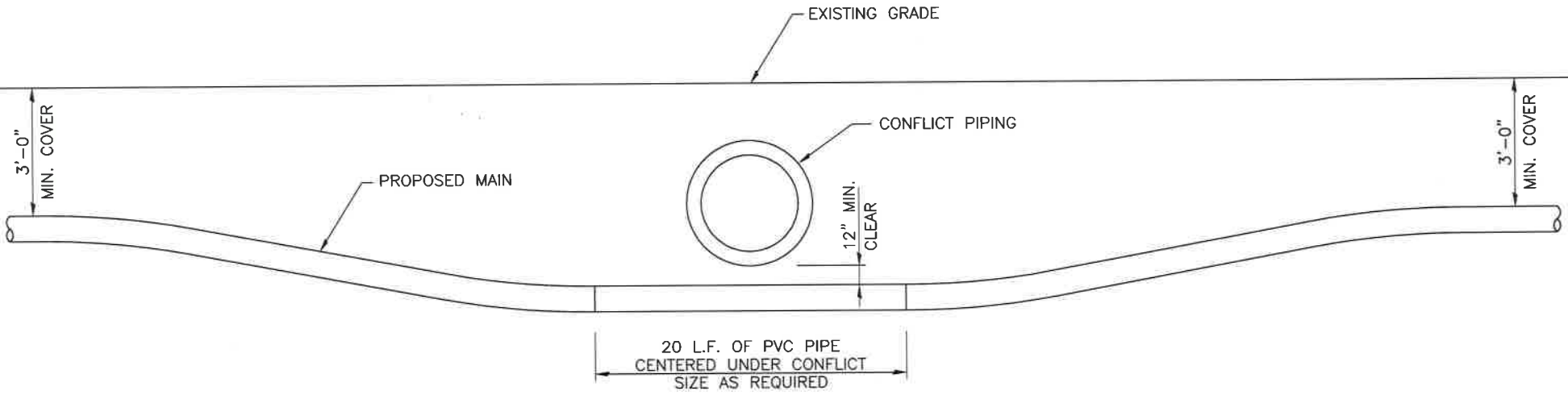
1. THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4-INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE CARRIER PIPE BELL OR RESTRAINER COUPLING.
2. ALL PVC CARRIER PIPE JOINTS WITHIN CASING PIPE SHALL BE MECHANICAL RESTRAINED JOINTS.
3. FOR STREET USES WHICH ARE NOT D.O.T., USE D.O.T. CASING THICKNESS UNLESS OTHERWISE INDICATED BY ENGINEER.
4. CASING PIPE SHALL BE FURNISHED IN NOMINAL 8-FOOT LENGTHS (MIN.) UNLESS OTHERWISE INDICATED ON THE DRAWING.
5. CASING PIPE SHALL CONFORM TO EITHER ASTM STANDARD A139 FOR "ELECTRIC FUSION (ARC) WELDED STEEL PIPE". WITH A SPECIFIED MINIMUM YIELD STRENGTH (SMYS) OF 35,000 PSI OR "API SPECIFICATION API-5LX, GRADE X-42 WELDED STEEL PIPE".

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Roadway Jack & Bore Crossing Detail
 Nassau County, Florida

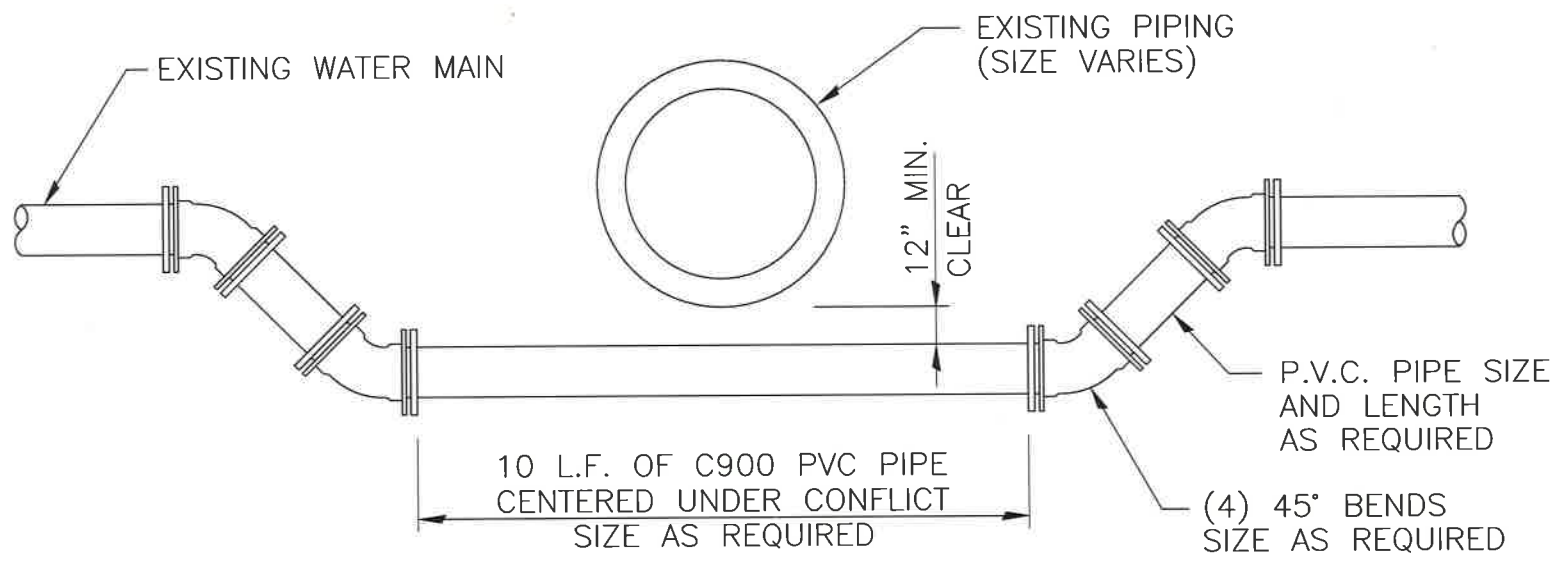
FIGURE
W-8
 March 2022
 Project
 9610-2
 (Standards)



- NOTES:
1. CONTRACTOR SHALL FULLY SUPPORT/BRACE ALL CONFLICT PIPING THROUGHOUT ENTIRE DURATION OF CONVENTIONAL INSTALLATION OF WATER MAIN UNDER CONFLICT MAIN.
 2. CONTRACTOR SHALL BE REQUIRED TO FULLY REPAIR OR REPLACE ANY EXISTING PIPING DAMAGED DURING THE INSTALLATION PROCESS.
 3. CONTRACTOR SHALL BE REQUIRED TO DIRECTIONAL DRILL UNDER ANY PIPING GREATER THAN 24" DIAMETER AND ANY CULVERTS WITH MORE THAN ONE CROSS DRAIN.



TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Utility Conflict Type A
 Nassau County, Florida



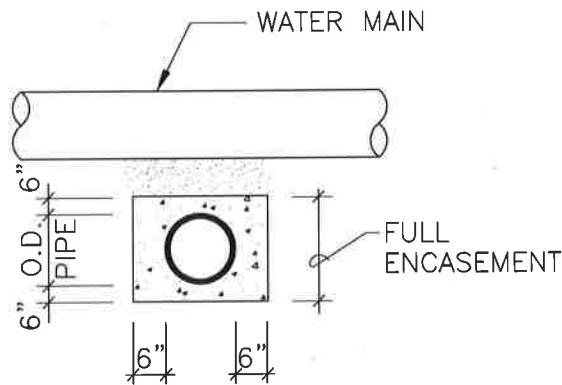
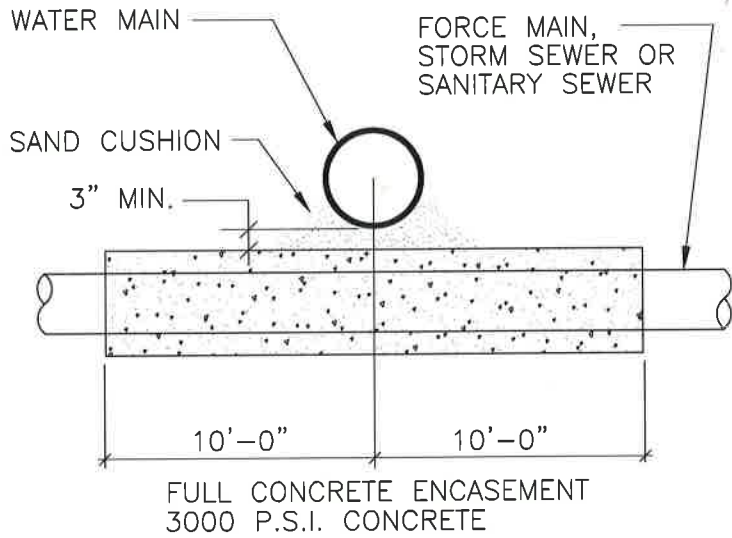
NOTES:

1. CONTRACTOR TO VERIFY EXISTING AND PROPOSED ELEVATIONS AT ALL UTILITY CONFLICT LOCATIONS.
2. ALL JOINTS (PROPOSED AND EXISTING) AT UTILITY CONFLICTS SHALL BE MECHANICALLY RESTRAINED.



TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Utility Conflict Type B
 Nassau County, Florida

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

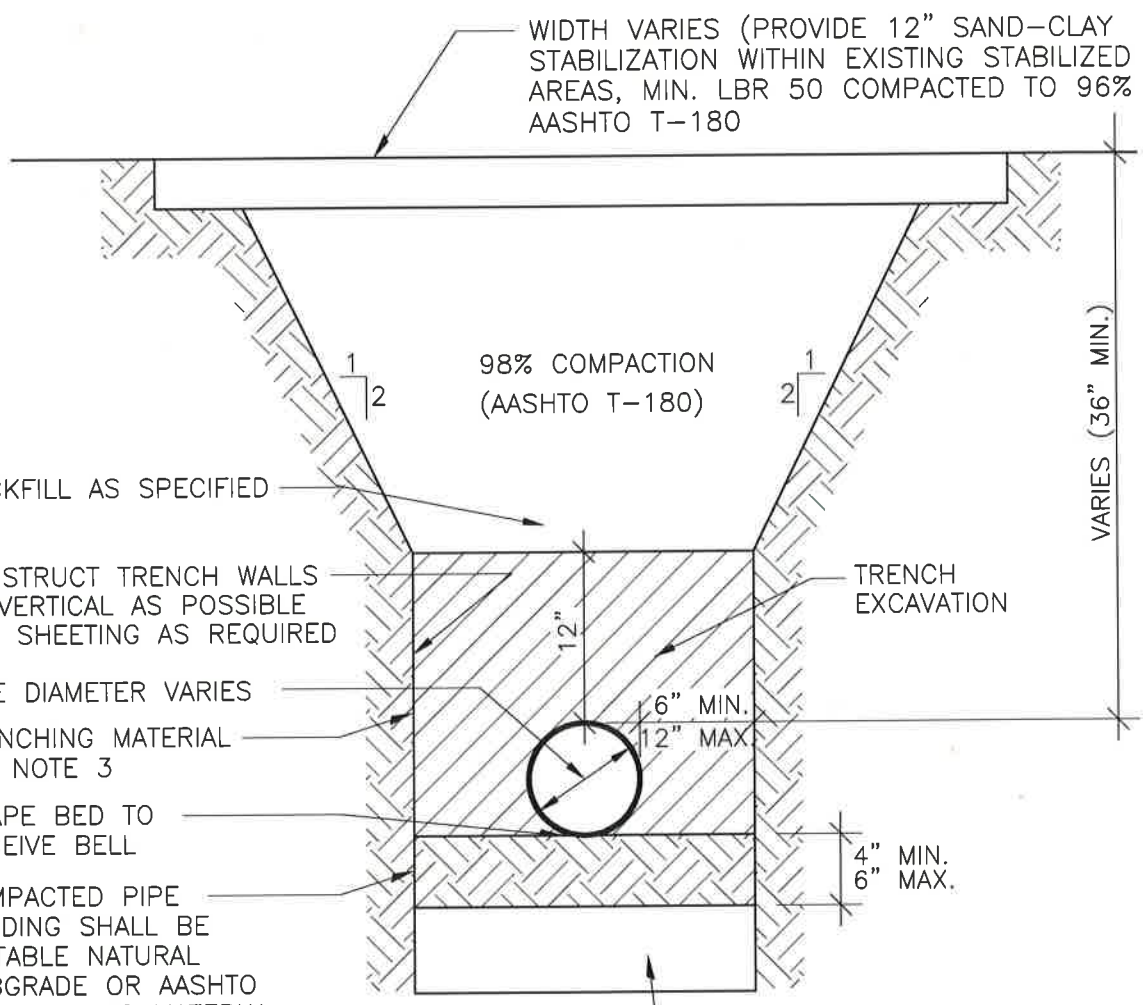


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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Typical Concrete Encasement
 Nassau County, Florida

FIGURE
W-11
 March 2022
 Project
 9610-2
 (Standard)



BACKFILL AS SPECIFIED

98% COMPACTION
(AASHTO T-180)

TRENCH
EXCAVATION

CONSTRUCT TRENCH WALLS
AS VERTICAL AS POSSIBLE
USE SHEETING AS REQUIRED

PIPE DIAMETER VARIES

HAUNCHING MATERIAL
SEE NOTE 3

SHAPE BED TO
RECEIVE BELL

COMPACTED PIPE
BEDDING SHALL BE
SUITABLE NATURAL
SUBGRADE OR AASHTO
A-3 BEDDING MATERIAL.

SEE SPECIFICATIONS FOR OVEREXCAVATION
AND REPLACEMENT OF UNSUITABLE
BEARING MATERIAL (IF REQ'D.)

NOTES:

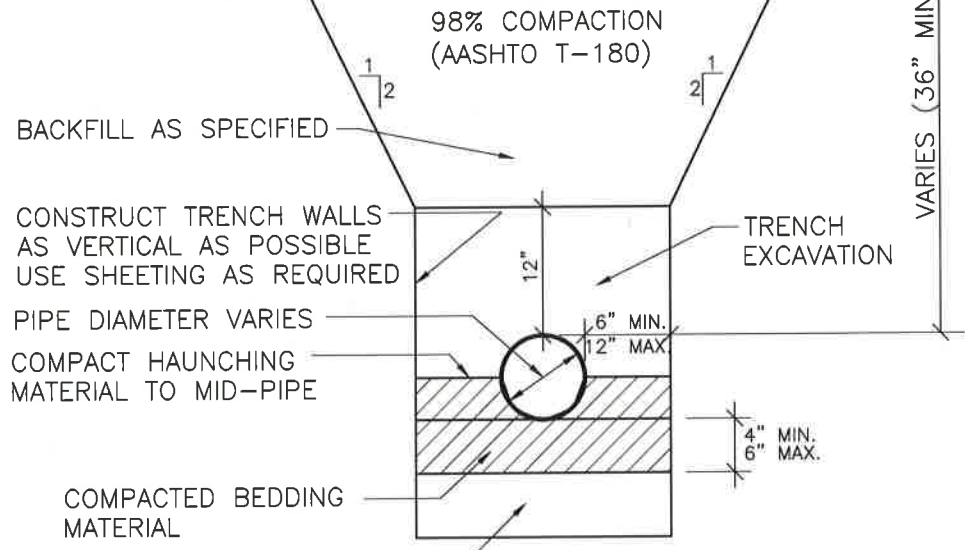
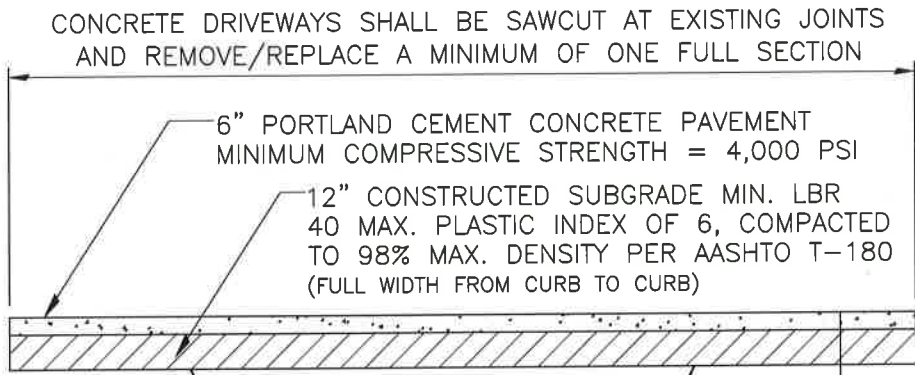
1. DEWATERING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE WATER TABLE.
2. PIPE INSTALLATION SHALL MEET THE REQUIREMENTS OF AWWA C-605 TYPE 4 LAYING CONDITION AND AS MODIFIED BY THIS DETAIL.
3. HAND COMPACT HAUNCHING MATERIAL IN 6" LIFTS COMPACTED TO 95% OF THE MAXIMUM DENSITY PER AASHTO T-180 TO 12 INCH ABOVE TOP OF PIPE.

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
Trench Detail
 Nassau County, Florida

FIGURE
W-12
 March 2022
 Project
 9610-2
 (Standard)



SEE SPECIFICATIONS FOR EXCAVATION OF UNSUITABLE BEARING MATERIAL (IF REQ'D.)

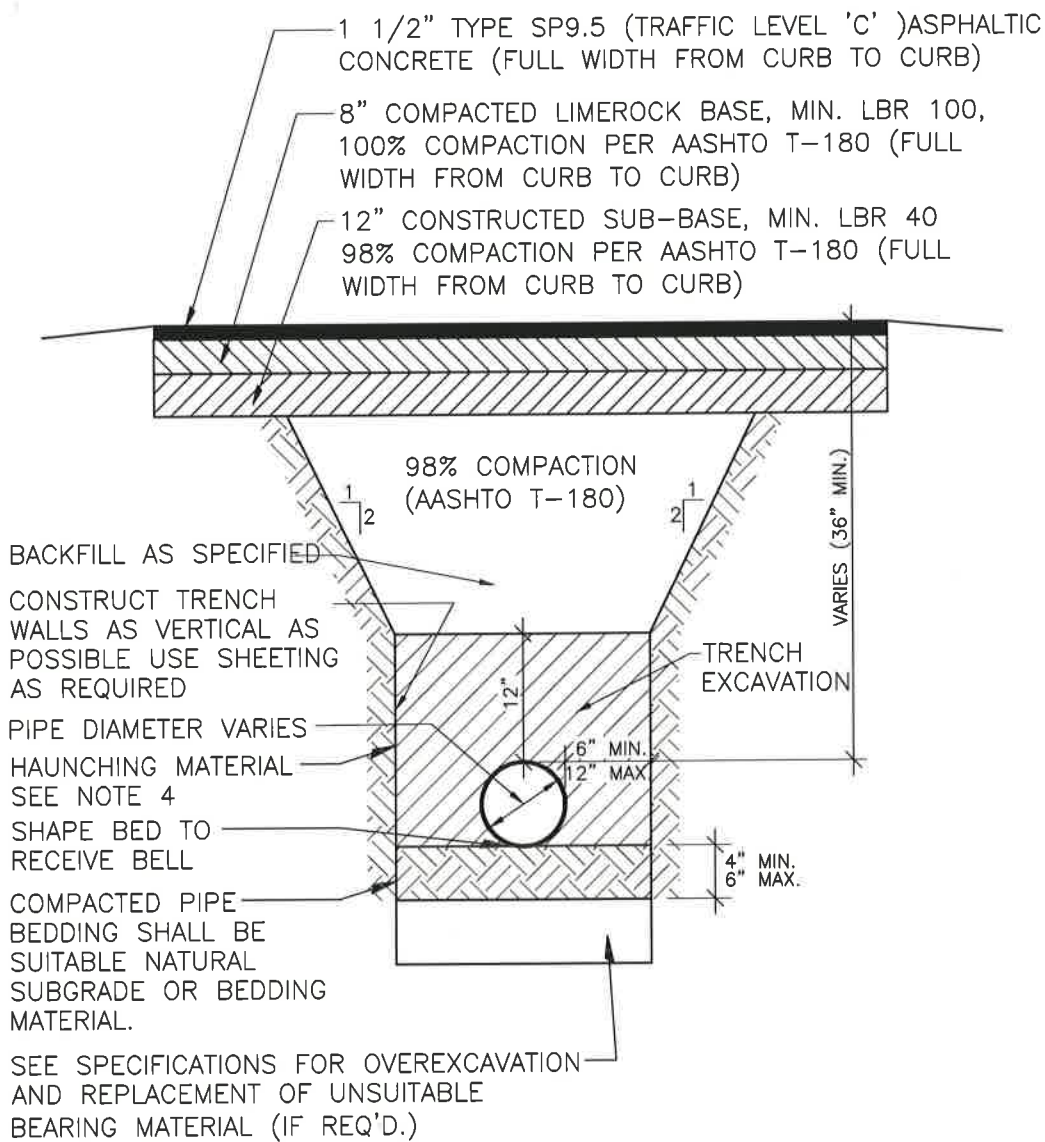
- NOTES:**
1. DEWATERING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE WATER TABLE.
 2. MAXIMUM WIDTH OF REPLACEMENT SHALL BE 10 FT. OR TO NEAREST EXISTING JOINT, WHICHEVER IS LESS
 3. PROVIDE SAW CUT CONTROL JOINTS AT 10' C-C EACH WAY

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Trench Detail in Concrete Roadways
 Nassau County, Florida

FIGURE
W-13
 March 2022
 Project
 9610-2
 (Standard)



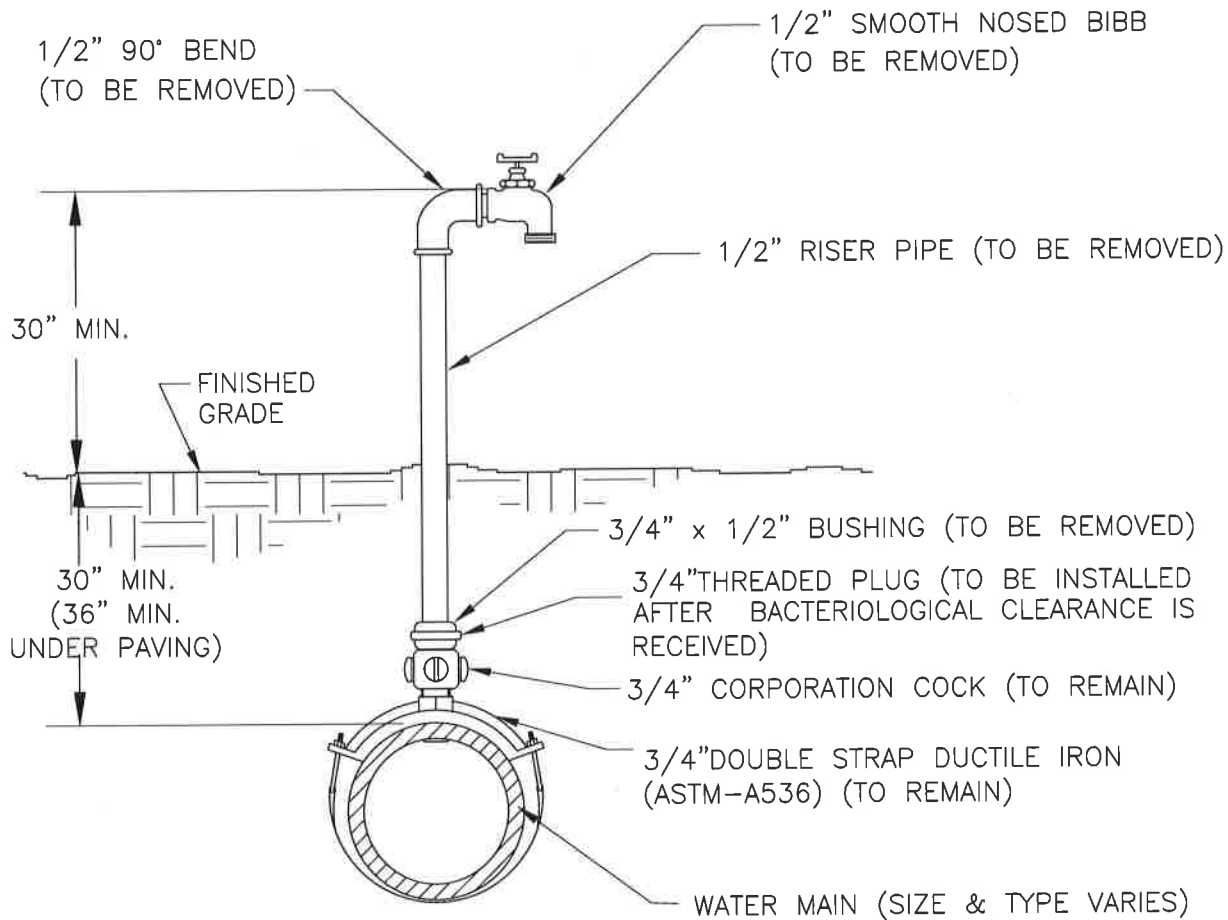
- BACKFILL AS SPECIFIED
- CONSTRUCT TRENCH WALLS AS VERTICAL AS POSSIBLE USE SHEETING AS REQUIRED
- PIPE DIAMETER VARIES
- HAUNCHING MATERIAL SEE NOTE 4
- SHAPE BED TO RECEIVE BELL
- COMPACTED PIPE BEDDING SHALL BE SUITABLE NATURAL SUBGRADE OR BEDDING MATERIAL.
- SEE SPECIFICATIONS FOR OVEREXCAVATION AND REPLACEMENT OF UNSUITABLE BEARING MATERIAL (IF REQ'D.)
- NOTES:
1. DEWATERING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE WATER TABLE.
 2. SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPPED AND FEATHERED.
 3. PIPE INSTALLATION SHALL MEET THE REQUIREMENTS OF AWWA C-600 TYPE 2 LAYING CONDITION AND AS MODIFIED BY THIS DETAIL.
 4. COMPACT HAUNCHING MATERIAL IN 6" LIFTS COMPACTED TO 98% OF THE MAXIMUM DENSITY PER AASHTO T-180 TO 12 INCH ABOVE TOP OF PIPE.

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Trench Detail in Asphalt Roadways
 Nassau County, Florida

FIGURE
W-14
 March 2022
 Project
 9610-2
 (Standard)
 274



NOTE:

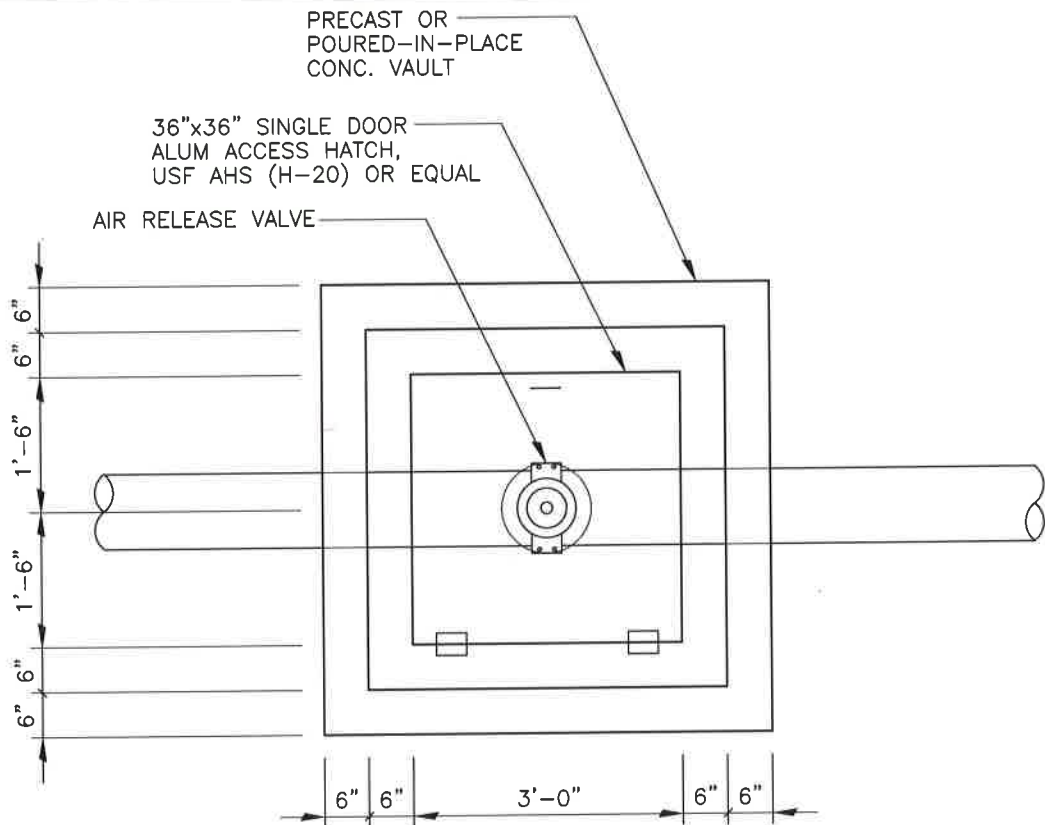
- 1) LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN THE ROADWAY BUT ROUTED TO THE ROADWAY SHOULDERS (NON-TRAFFIC AREAS) OF THE ROAD (WHERE APPLICABLE)
- 2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL PIPING & FITTINGS NOTED AFTER BACTERIOLOGICAL CLEARANCE FROM THE HEALTH DEPARTMENT.

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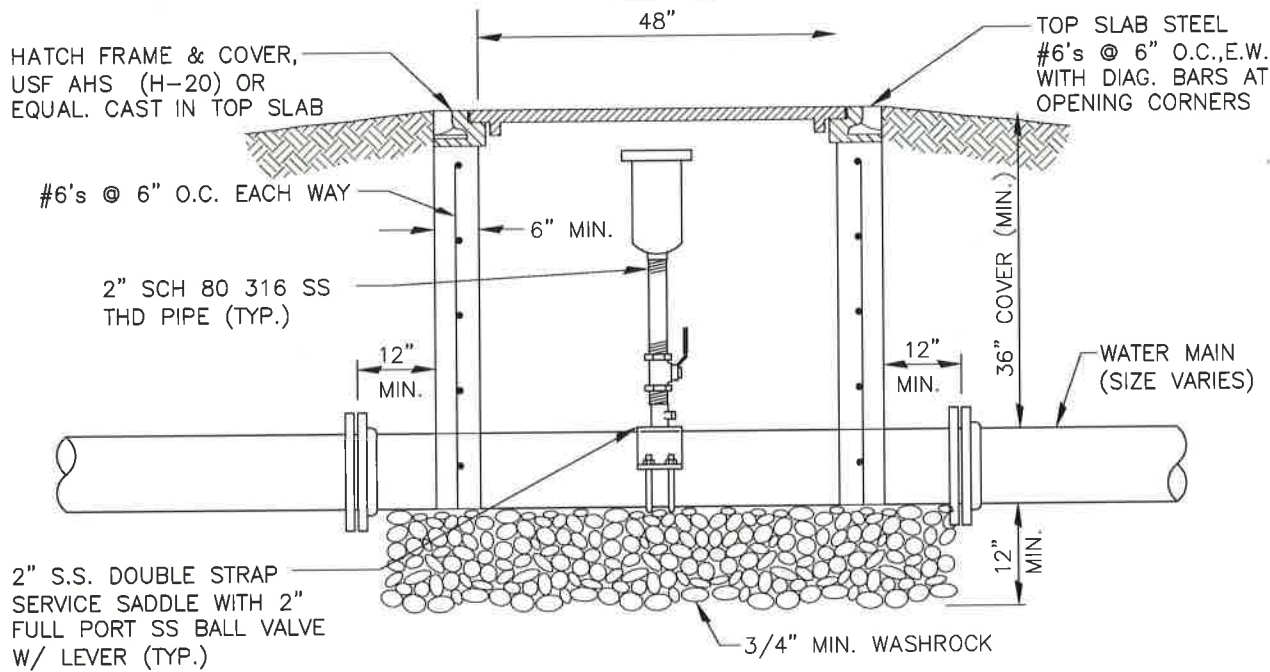


TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Temporary Sample Tap
 Nassau County, Florida

FIGURE
W-15
 March 2022
 Project
 9610-2
 (Standard)



PLAN



SECTION

- NOTES:
1. 4000 P.S.I., CONCRETE.
 2. VAULT SHALL BE PRECAST OR POURED IN PLACE CONCRETE ALL WITH STEEL REINFORCING. BOX MAY HAVE SLOTTED BOTTOM (I.E. DOGHOUSE) TO ALLOW BOX TO BE SET OVER PIPE.

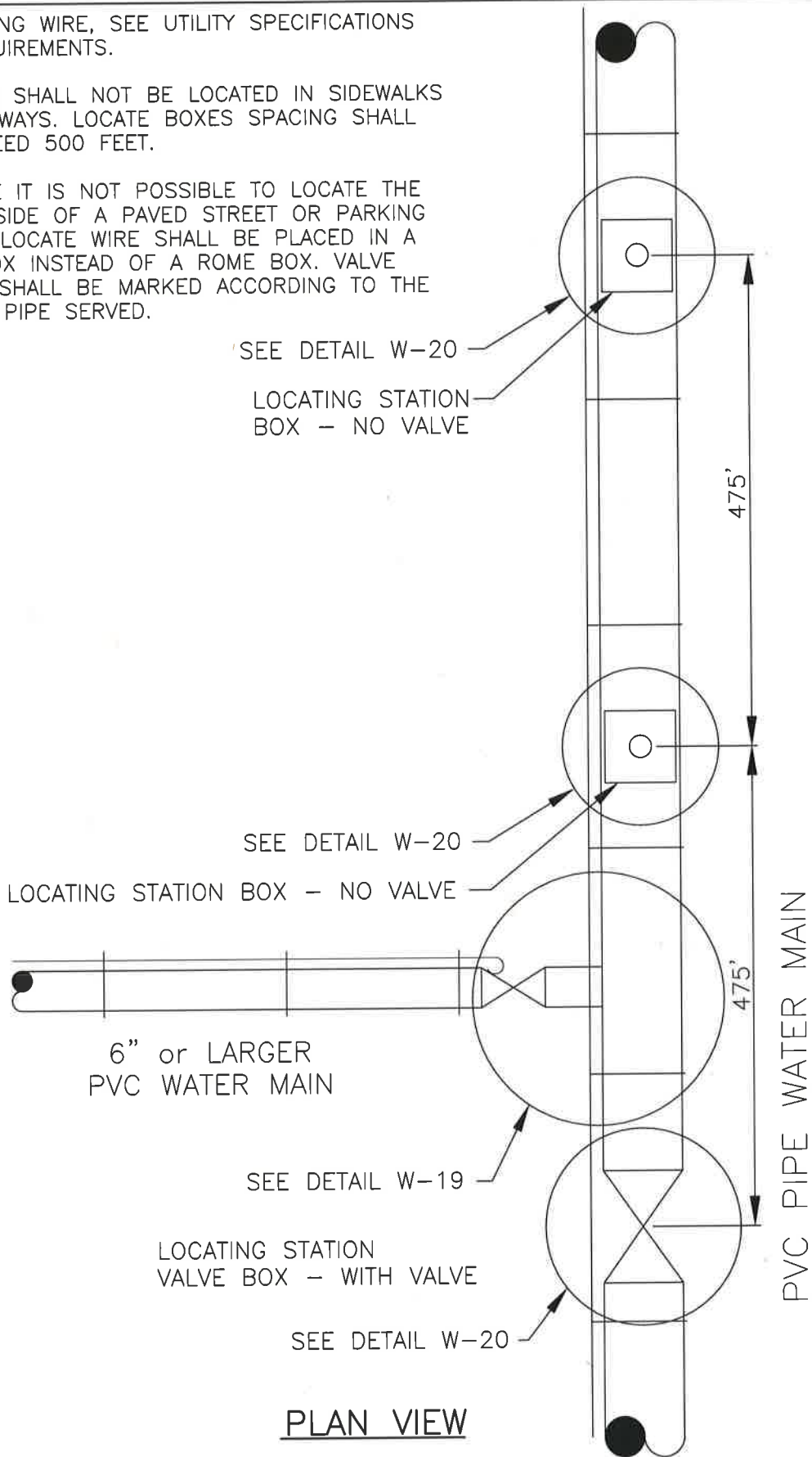
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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Air Release Valve
 Nassau County, Florida

FIGURE
W-16
 March 2022
 Project
 9610-2
 (Standard)

- 1. LOCATING WIRE, SEE UTILITY SPECIFICATIONS FOR REQUIREMENTS.
- 2. BOXES SHALL NOT BE LOCATED IN SIDEWALKS OR DRIVEWAYS. LOCATE BOXES SPACING SHALL NOT EXCEED 500 FEET.
- 3. WHERE IT IS NOT POSSIBLE TO LOCATE THE BOX OUTSIDE OF A PAVED STREET OR PARKING LOT THE LOCATE WIRE SHALL BE PLACED IN A VALVE BOX INSTEAD OF A ROME BOX. VALVE BOX LID SHALL BE MARKED ACCORDING TO THE TYPE OF PIPE SERVED.



PLAN VIEW

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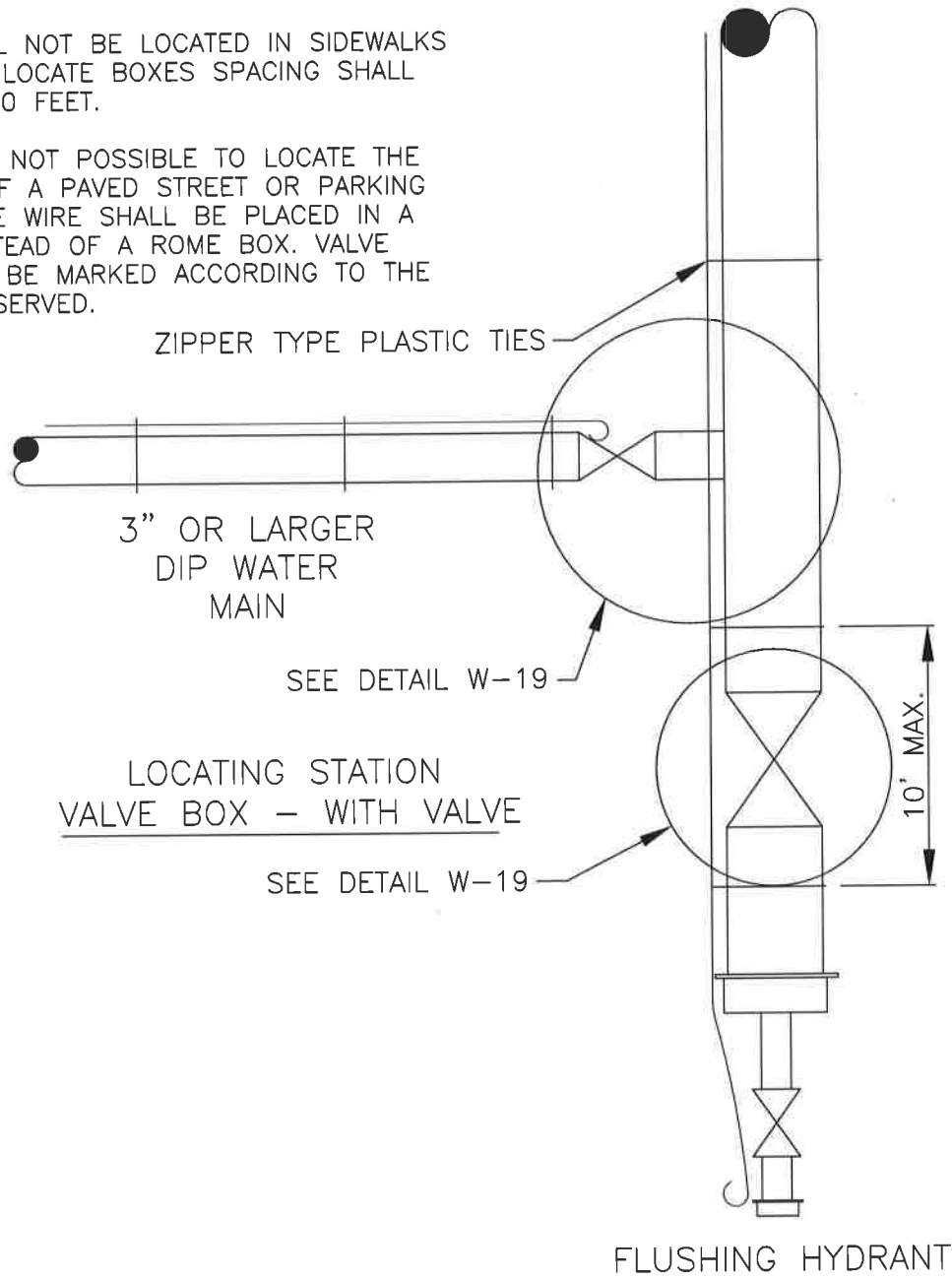


TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Locate Wire Installation Details
 Nassau County, Florida

FIGURE
W-17
 March 2022
 Project
 9610-2
 (Standard)

NOTES:

- 1. LOCATING WIRE, SEE UTILITY SPECIFICATIONS FOR REQUIREMENTS.
- 2. BOXES SHALL NOT BE LOCATED IN SIDEWALKS OR DRIVEWAYS. LOCATE BOXES SPACING SHALL NOT EXCEED 500 FEET.
- 3. WHERE IT IS NOT POSSIBLE TO LOCATE THE BOX OUTSIDE OF A PAVED STREET OR PARKING LOT THE LOCATE WIRE SHALL BE PLACED IN A VALVE BOX INSTEAD OF A ROME BOX. VALVE BOX LID SHALL BE MARKED ACCORDING TO THE TYPE OF PIPE SERVED.



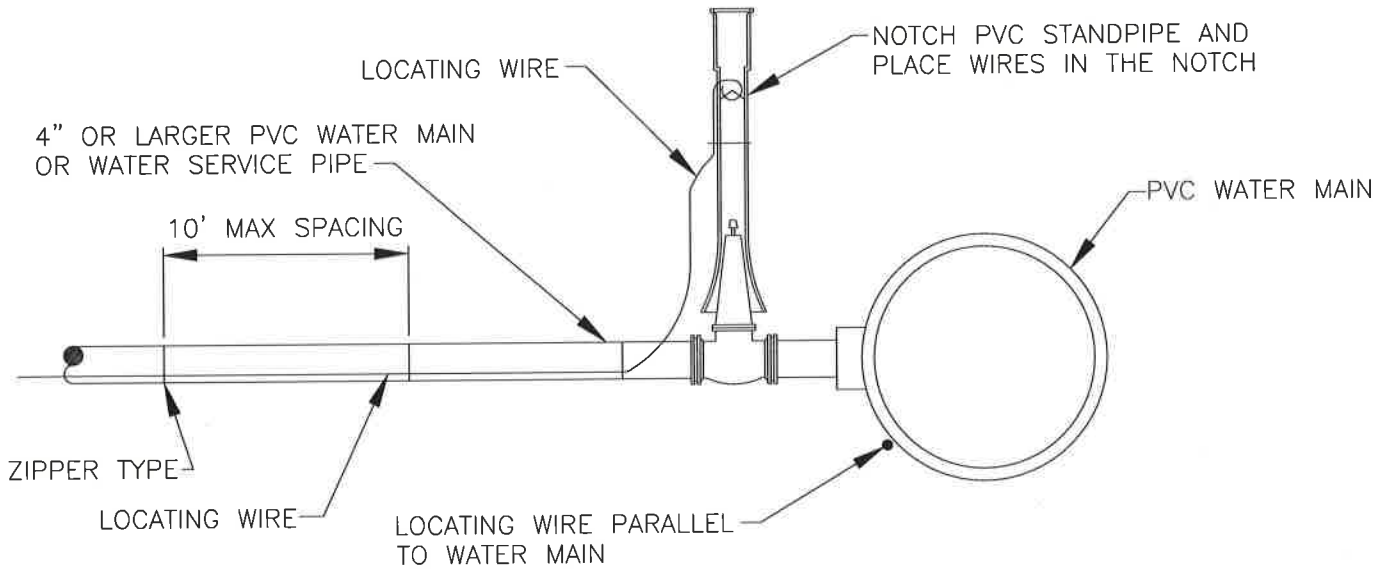
PLAN VIEW

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Locate Wire Installation Details
 Nassau County, Florida

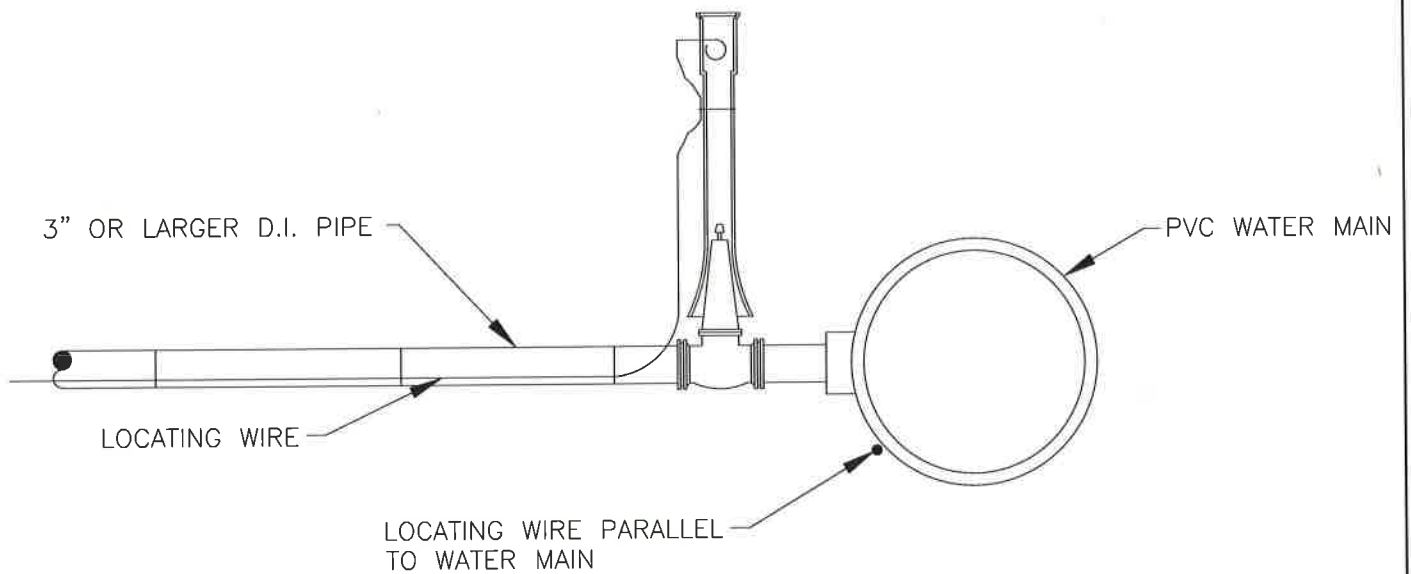
FIGURE
W-18
 March 2022
 Project
 9610-2
 (Standard)



CONNECTION TO PVC MAINS

4" OR LARGER PVC WATER MAIN

DETAIL - A



CONNECTION TO PVC MAINS

w/3" OR LARGER D.I. WATER MAIN

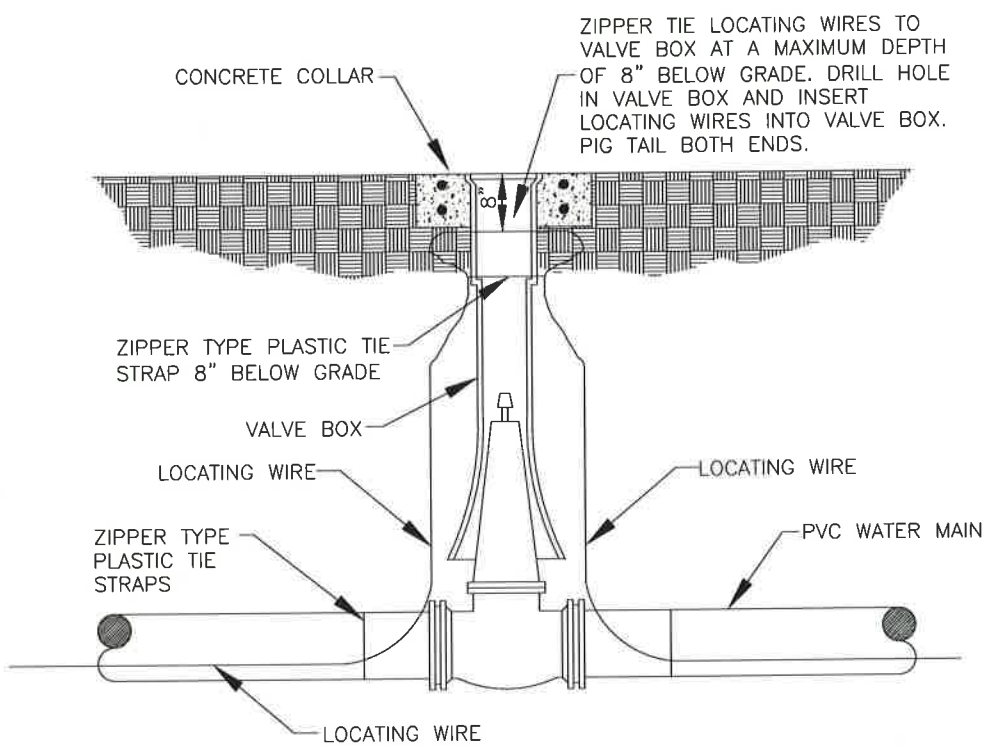
DETAIL - B

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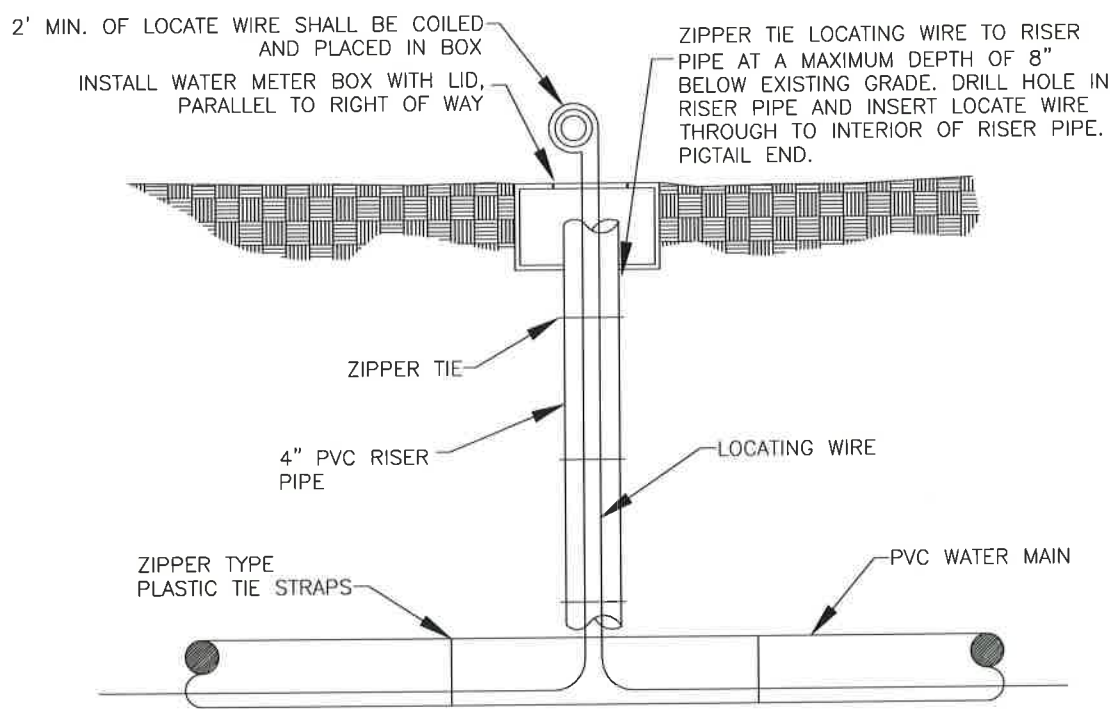


TOWN OF HILLIARD
Standard Specifications for Utility Construction
Locate Wire Installation Details
Nassau County, Florida

FIGURE
W-19
March 2022
Project
9610-2
(Standards)



IN LINE LOCATING STATION— PVC PIPE
 VALVE BOX WITH VALVE



IN LINE LOCATING STATION – PVC PIPE
 METER BOX

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TOWN OF HILLIARD
 Standard Specifications for Utility Construction
 Locate Wire Installation Details
 Nassau County, Florida

FIGURE
W-20
 March 2022
 Project
 9610-2
 (Standard)



AGENDA ITEM REPORT

TOWN OF HILLIARD, FLORIDA

TO: Town Council Regular Meeting Meeting Date: March 02, 2023

FROM: ***Richie Rowe - Public Works Director***

SUBJECT: Town Council approval to hire Justin C. Tuten as a Streets and Water & Wastewater Technician at \$15.00 per hour as a Non-Exempt, Introductory or Probationary Employee.

BACKGROUND:

Justin C. Tuten is presently employed with J.B. Coxwell as a pipe layer. He also has previous experience with other Utility Companies.

FINANCIAL IMPACT:

Justin will begin employment with the Town at \$15.00 an hour.

RECOMMENDATION:

To hire Justin C. Tuten at \$15.00 an hour in the Public Works Department.

**TOWN OF HILLIARD
PUBLIC WORKS DEPARTMENT
Position Process**

Regular Meeting: March 2, 2023

Applicant: Justin C. Tuten
374331 Kings Ferry Rd.
Hilliard, Florida 32046

Position: Streets and Water & Wastewater Technician

Pay Rate: \$15.00 per hour

Position Starts: March 6, 2023 – Introductory/Probationary Period
Position Status: June 15, 2023 – Non-Exempt – Regular Full Time Position

Position Requirements:

A current Driver's License and High School Diploma are required. Certification in Water or Wastewater Plant Operation preferred or two years' experience in Water or Wastewater. Experience in landscaping, water, and sewer utility work is a plus.

Position Information:

- Maintain accurate records of all duties performed.
- Assist in the maintenance and installation of driveway culverts and drainage, using and operating equipment as needed,
- Perform the installation of street signs throughout the Town.
- Maintain inventory of the Town's Street signs.
- Assist in maintaining the Town right of ways and parks.
- Assist in trimming trees on Town right of ways.
- Assist in the maintenance of water meters in Town, i.e., trouble shoot and change out as needed.
- Assist in reading water meters on an as needed basis for billing purposes.
- Performs water service cutoffs for non-payment as directed.
- Assists in maintenance of water main valved as scheduled.
- Perform water and sewer taps.
- Perform scheduled and emergency water and sewer repairs.
- Help to maintain inventory of water and wastewater supplies and stock.
- Locate and mark Town utilities as required for construction purposes.
- Check and maintain lift stations as needed.
- Assist in preventative and emergency maintenance of all equipment and property of the Town.
- Assist with special projects as directed by the Public Works Director, i.e., Holiday Decorations, July 4th celebration, Town Cleanup, etc.
- Monitors and stays current with technology as it pertains to the operations of this department.

- Take on additional duties as required by the Public Works Director and/or the Assistant Public Works Director.
- Assist with afterhours emergencies.
- Check generator equipment weekly.

These examples are intended only as illustrations of various types of work performed and are not necessarily all inclusive. The job description is subject to change as the needs of the employer and requirements of the job change.

Conditions of Employment:

Offer of employment is contingent upon the following: An interview of references and previous employers. Satisfactory results of a background investigation and/or medical examination or inquiry, including a drug screen test.

The Town of Hilliard is an Equal Opportunity Employer and a Drug Free Workplace.

Employee Information:

Justin C. Tuten has the following work experience:

2021- Present: J.B. Coxwell – Pipelayer

2020 – 2021: Advanced Utilities and Septic – Pipelayer

2019 – 2020: Precision Cuts Tree Specialists – Laborer

2019 – 2020: J.B. Coxwell – Laborer/Operator



AGENDA ITEM REPORT TOWN OF HILLIARD, FLORIDA

TO: Town Council Regular Meeting Meeting Date: March 2, 2023

FROM: *Lisa Purvis, MMC – Town Clerk*

SUBJECT: Town Council approval of Contract for Audit and Accounting Services for the fiscal years ended September 30, 2023, 2024, and 2025, with Powell and Jones CPA.

BACKGROUND:

The Town of Hilliard has contracted with Powell and Jones CPAs since 2014 with a renewal option contract. (See attached)

FINANCIAL IMPACT:

September 30, 2023, \$37,000.00

September 30, 2024, \$38,000.00

September 30, 2025, \$39,000.00

Additional - \$3,000.00, each fiscal year that a Single Audit is required.

RECOMMENDATION:

Town Council approval of Powell and Jones CPAs, Contract for Audit and Accounting Services for 2023, 2024 and 2025.

| Powell & Jones CPA's | | | | | | |
|---------------------------------|-------------|--------|--------|-------------|--------------|------------------|
| | | AFR | USDA | Total Paid | Single Audit | Total Add Single |
| First - 3 Year Contract | | | | | | |
| 2014 | \$33,500.00 | \$0.00 | \$0.00 | \$33,500.00 | \$2,500.00 | \$36,000.00 |
| 2015 | \$34,500.00 | \$0.00 | \$0.00 | \$34,500.00 | \$2,500.00 | \$37,000.00 |
| 2016 | \$35,500.00 | \$0.00 | \$0.00 | \$35,500.00 | \$2,500.00 | \$38,000.00 |
| Second - 3 Year Contract | | | | | | |
| 2017 | \$33,000.00 | \$0.00 | \$0.00 | \$33,000.00 | \$2,500.00 | \$35,500.00 |
| 2018 | \$34,000.00 | \$0.00 | \$0.00 | \$34,000.00 | \$2,500.00 | \$36,500.00 |
| 2019 | \$34,500.00 | \$0.00 | \$0.00 | \$34,500.00 | \$2,500.00 | \$37,000.00 |
| Third - 3 Year Contract | | | | | | |
| 2020 | \$34,000.00 | \$0.00 | \$0.00 | \$34,000.00 | \$2,500.00 | \$36,500.00 |
| 2021 | \$35,000.00 | \$0.00 | \$0.00 | \$35,000.00 | \$2,500.00 | \$37,500.00 |
| 2022 | \$36,000.00 | \$0.00 | \$0.00 | \$36,000.00 | \$2,500.00 | \$38,500.00 |
| Fourth - 3 Year Contract | | | | | | |
| 2023 | \$37,000.00 | \$0.00 | \$0.00 | \$37,000.00 | \$3,000.00 | \$40,000.00 |
| 2024 | \$38,000.00 | \$0.00 | \$0.00 | \$38,000.00 | \$3,000.00 | \$41,000.00 |
| 2025 | \$39,000.00 | \$0.00 | \$0.00 | \$39,000.00 | \$3,000.00 | \$42,000.00 |

CONTRACT FOR AUDIT AND ACCOUNTING SERVICES

A. NAME OF CONTRACTING PARTIES

This Contract is entered this _____ day of _____, 2023, between the Town of Hilliard, State of Florida, hereafter referred to as the Town, and Powell and Jones CPA of 1359 SW Main Blvd, Lake City, FL 32025 hereinafter referred to as the Auditor.

B. AUDIT SCHEDULE

The Auditor shall conduct an examination of the records, accounts and procedures of the Town for the fiscal years ended September 30, 2023, 2024, and 2025. The audit for each year shall begin on or about January 15th and shall be completed and the audit report submitted to the Town Council no later than March 15th of each succeeding year, unless extended by the Town Council.

The Auditor shall submit, not later than fifteen (15) working days after the end of the fieldwork, a draft of the management letter, which shall identify material weaknesses observed in the system of internal accounting control, assess their effect on financial management and propose steps to eliminate the weaknesses. The final management letter and audit report shall be submitted no later than March 15th of each succeeding year.

In each of the years, certain audit procedures will be performed throughout the year as determined by the Auditors and the Town.

C. SCOPE OF AUDIT

1. The examination shall be made of all funds and account groups of the Town.
2. By January 15th of each year,
 - a. The Town shall have closed and balanced all accounts and have prepared financial reports for all funds to be examined by the Auditor, in compliance with Section 218.32(1)(a), *Florida Statutes*.
 - b. The Town will prepare for examination the following financial reports for each fund required by generally accepted accounting principles and Section 218.32(1)(a), *Florida Statutes*.
 - (1) a balance sheet,
 - (2) a statement of revenues and expenditures,
 - (3) a statement of changes in fund balances.

- c. The Auditor will prepare financial statements, notes and management’s discussion and analysis with assistance from the Town.
- 3. The Town shall provide space deemed adequate by the Auditor to efficiently conduct the audit. The Auditor will perform a substantial portion of the audit on Town premises.
- 4. The Auditor shall observe the adequacy of the system of internal control. If weaknesses are noted, appropriate recommendations should first be reviewed with the appropriate official and then included in the audit report, as appropriate to the situation.

D. AUDITING STANDARDS AND PROCEDURES

The basic purpose of the engagement is to express an unqualified opinion on the fairness of presentation of the Town’s financial statements for the fiscal year and their conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year. If the audit opinion will be other than unqualified, the reasons would be discussed with the Town.

The audit will be conducted in accordance with the current editions of:

- 1. *Florida Statutes* Section 11.45
- 2. *Rules of the Auditor General*, Chapter 10.550 F.A.C.
- 3. “Audits of State and Local Governments” American Institute of Certified Public Accountants.
- 4. GAO Government Auditing Standards, Current Revision (the Yellow Book).
- 5. Title 2 *U.S. Code of Federal Regulations (CFR) Part 200, Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards (Uniform Requirements)*.
- 6. OMB Single Audit Compliance Supplement.
- 7. State of Florida “Single Audit Act.”
- 8. Single Audit Act and Amendments of 1996 and thereafter.

The audit will include a review of the system of internal control and tests of transactions to the extent the Auditor believes necessary. Accordingly, it will not include a detailed audit of transactions to the extent which would be required if intended to disclose defalcations or other irregularities, although the discovery may result.

The audit will also include a review of the Town’s compliance with certain laws, ordinances, contracts and written policies.

The Town’s management has the responsibility for proper recording of transactions of books of account, for the safeguarding of assets, and for substantial accuracy of the financial statements. Such statements are representations of management.

In addition to expressing an opinion on the financial statements, the Auditor will submit as a normal part of the audit a letter advising the Town of opportunities the Auditor observes for economies in operating or improvements in internal control and accounting procedures, adequacy of accounting systems, and conformity of operations to appropriate statutory requirements. The Auditor will discuss any findings with appropriate Town officials prior to finalizing them in the report.

Should irregularities be discovered during the course of the audit, the appropriate law enforcement agencies and Town officials would be notified.

E. OTHER SERVICES INCLUDED

During the term of this Contract, the Auditor shall provide the following additional services at no additional cost to the Town:

1. Routine telephone consultation to Town Council, Town Clerk, and financial staff.
2. Preparation of the following reports:
 - a. State of Florida Annual Financial Report
 - b. State of Florida Transportation Financial Report
 - c. Electronic report to Auditor General
 - d. USDA Financial Report
 - e. Federal Audit Clearinghouse (if required)

F. COMPENSATION AND TERMS OF PAYMENT

1. The Town shall pay the Auditor the following total fees for each of the annual audits:

| | Year Ended September 30 | | |
|--|-------------------------|--------|--------|
| | 2023 | 2024 | 2025 |
| A. Basic audit Services | 37,000 | 38,000 | 39,000 |
| B. Additional for each Federal or State Single | 3,000 | 3,000 | 3,000 |

2. Periodic progress billings may be submitted as actual work is completed on any of the annual audits, but no more often than monthly. Progress billings shall be submitted in such a form as to provide the Town with sufficient information to ascertain that at any point total billings will not exceed the proportional fee earned for any year.
3. If significant new activities are entered into by the Town creating a subsequent need for significant additional auditing services in any year, the Auditor and Town shall negotiate a fee basis for those additional services prior to beginning the audit for the concerned year. If such services are of a repetitive nature, the increase shall be added to the basis fee in Section F for the effective years.

- 4. The Auditor may invoice the Town monthly for work performed in the manner set forth in Paragraph F.2, but in no event more than the maximum price, except for increases caused by the Town’s request for extra services under Section G of this Agreement. All payments for these services will be made payable to the Auditor.

In the event that unforeseen conditions are encountered which might necessitate the extension of the auditing work beyond the scope of normal auditing procedures, the Auditor agrees to advise the Town in writing of the circumstances and to request an increase in the fee before significant additional time is incurred.

Any such requests for additional fees shall contain a detailed explanation of the conditions of irregularities and why the additional fees are necessary. The Town will then determine whether or not to incur the additional expense.

- 5. All mileage, per diem, and other incidental expenses related to the provision of audit services are included in the lump sum fee in Section F.1. and will not be billed separately.

G. OTHER SERVICES

As specifically authorized from time to time during our Contract period, the Auditor may provide consulting and management advisory services to the Town at the following hourly rates:

| | |
|----------------------|----------------|
| Firm partner | \$150 per hour |
| Other CPA/Supervisor | \$125 per hour |
| Accountant | \$100 per hour |
| Technician | \$75 per hour |

Mileage, per diem expenses, and other incidental expenses related to the provision of additional services will be billed at the current State of Florida rates.

H. AUDIT REPORT

The Auditor will prepare the finance statements and notes, and Management’s Discussion and Analysis with assistance from the Town.

The report shall be presented and delivered by the Auditor at a scheduled meeting of the Town Council. The Auditor will attend up to 3 additional virtual meetings at no additional cost.

I. RENEWAL AND TERMINATION

This contract may be renewed for an additional three years with substantially the same terms and fees upon mutual consent by the Town and Auditor. This Contract will be renewed automatically if not otherwise renegotiated by the Town and Auditor by July 31st 2026 with a fee adjusted for any increases in the Consumer Price Index capped at 5%. The Town reserves the right to terminate this Contract at the end of each audit year.

J. APPLICABLE LAW AND VENUE

This Agreement shall be interpreted by Florida Law and venue of any litigation shall be exclusively in Nassau County, Florida.

K. WAIVER OF JURY TRIAL

Each party hereby knowingly, voluntarily and intentionally waives the right to a trial by jury with respect to any litigation (including but not limited to any counterclaims, cross claims, or third party claims), whether now existing or hereafter arising, and whether sounding in contract, tort, equity or otherwise, regardless of the cause or causes of action, defenses or counter claims alleged or the relief sought by any party, and regardless of whether such causes of action, defenses or counterclaims are based on, or arise out of, under or in connection with this agreement or its subject matter, our of any alleged conduct or course of conduct, dealing or course of dealing, statement (whether verbal or written), or otherwise. Any party hereto may file a copy of this agreement with any court as conclusive evidence of the consent of the parties hereto to the waiver of any right they may have to trial by jury.

L. OTHER PROVISIONS

- 1. **Changes in Laws.** In the event that the laws requiring this audit to be performed are amended this Agreement may be amended to the extent required by such a change in law.
- 2. **Waiver of Liability.** The Auditor shall indemnify, defend, and hold harmless the Town, its elected and appointed Council members, officers, employees, successors and assigns from and against any and all third-party claims, suits, demands, actions, causes of actions, proceedings, judgments, losses, damages, injuries, penalties, costs, expenses (including reasonable attorneys’ fees) to the extent they arise from the respective Auditor’s negligent performance of services under this Agreement. The terms of this paragraph shall survive termination of this Agreement.
- 3. **Insurance.** Without limiting its liability hereunder, the Auditor shall maintain and provide proof of compliance with the Rules of the Department of Professional Regulations Chapter 21 A-26.002 regarding minimum capitalization or Adequate Public Liability Insurance for Public Accounting Corporations.

Nothing in this Contract shall be interpreted as a waiver of the Town’s sovereign immunity under *Florida Statutes* 768.28.

- 4. **Assignment.** This Contract shall not be assigned by the Auditor or any successor thereto without the prior written consent of the Town.
- 5. **Entire Agreement.** This Contract constitutes the entire Agreement between the parties hereto with respect to the subject matter thereof. No modification or amendment of this Contract shall be binding upon either party unless the same is in writing and signed by the respective parties hereto.
- 6. **Notices.** Any notice of cancellation or breach of this Contract from either party to the other party shall be in writing and sent by certified mail, return receipt requested, and shall be deemed to have been received when either deposited in a United States Postal Service mailbox or personally delivered with signed proof of delivery.

IN WITNESS WHEREOF, the parties have signed this agreement as of the day and year herein first above written.

Representative of the Town of Hilliard, Florida

Name: _____

Title: _____

Signature: _____

Representative of Powell and Jones CPA

Name: Caleb Perla, CPA

Title: Partner

Signature: 



AGENDA ITEM REPORT

TOWN OF HILLIARD, FLORIDA

TO: Town Council Regular Meeting Meeting Date: March 02, 2023

FROM: ***Christian Waugh – Town Attorney***

SUBJECT: Town Council to approve Town Attorney entering, into discussion with CSX Railroad to renegotiate maintenance of the Easement Agreement with the Town of Hilliard.

BACKGROUND:

The Town is a party to an easement agreement with CSX which obligates the Town to pay to maintain access across the railroad on CR 108. Staff desires renegotiating the agreement.

FINANCIAL IMPACT:

Unknown, but we can accept immediate short-term savings at a minimum or negotiate with a harder position to obtain long term savings.

RECOMMENDATION:

Pursue negotiation of CSX agreement.

Subject: RE: [E] CSX Easement Agreement with Town of Hilliard
Date: Tuesday, February 14, 2023 at 12:30:44 PM Eastern Standard Time
From: Bardroff, Tracey
To: Christian Waugh, Kennedy, KatyShay
CC: Lisa Purvis, Mary Norberg, Sofie Bayer
Attachments: 7315448 adjusted.pdf

Some people who received this message don't often get email from tracey_bardroff@csx.com. [Learn why this is important](#)

In the continued interest of doing business between CSX and the Town of Hilliard, I am presenting the following one time discounts.

Invoice 7286107 – 50%, \$8,306.03
Invoice 7315448 – 50%, \$10,524.94

We have applied these credits to invoice 7315448. The new balance on invoice 7315448 is \$2,218.91. Please see the attached adjusted invoice. Thank you.

Tracey L. Bardroff

Account Receivable Specialist
CSX Transportation
PO Box 530192, Atlanta, GA 30353-0192
904-359-2463, tracey_bardroff@csx.com

From: Christian Waugh <waughlaw@townofhilliard.com>
Sent: Friday, February 3, 2023 1:59 PM
To: Bardroff, Tracey <Tracey_Bardroff@csx.com>
Cc: Lisa Purvis <lpurvis@townofhilliard.com>; Mary Norberg <mnorberg@waughgrant.com>; Sofie Bayer <SBayer@waughgrant.com>
Subject: [E] CSX Easement Agreement with Town of Hilliard

You don't often get email from waughlaw@townofhilliard.com. [Learn why this is important](#)

This Message Is From an External Sender

This message came from outside your organization.

Hi Tracey,

My name is Christian Waugh and I'm the Town Attorney for Hilliard, Florida. I've reviewed the easement agreement and related invoices from the past few years for our crossing at CR 108. I had a few questions.

First, it seems to me that CSX has lumped the expenses it has in maintenance of the crossing in with the Town's and not differentiated between them. In the easement agreement, Grantor "will, at its expense, maintain thereafter the portion of said crossing between the rails of said track or tracks and for two feet on the outside of each rail thereof." This is actually a fairly large portion of the crossing. Can you confirm this to be the case? If so, can you also revise the current invoice, as well as calculate a refund on the prior years for amounts owed back to the Town and apply them as a credit for this year's invoice?

Second, it is difficult for the Town to afford this agreement going forward. We would like to speak with someone about renegotiating it, vacating it, or otherwise discussing how it works. Would you be able to put us in touch with someone on this score?

Any help would be appreciated. Have a good weekend.

Regards,
Christian

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Christian W. Waugh
Town Attorney
Town of Hilliard, Florida
Waugh Grant PLLC
201 E. Pine Street, Suite 315
Orlando, FL 32801
321-800-6008: Phone
844-206-0245: Fax
waughlaw@townofhilliard.com

Board Certified Real Estate Attorney

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This email transmission and any accompanying attachments may contain CSX privileged and confidential or business proprietary information intended only for the use of the intended addressee. Any dissemination, distribution, forwarding, copying, or action taken in reliance on the contents of this email by anyone other than the intended recipient is strictly prohibited. If you have received this email in error please immediately delete it, destroy all copies, and notify the sender at the above CSX email address.

Form 3517-Sheet 1
Revised Jan. 1981
RE-45314
15TE02161 21

501234562

THIS EASEMENT AGREEMENT, Made and entered into this 22nd day of February, 1982, by and between the SEABOARD COAST LINE RAILROAD COMPANY, a Virginia corporation, hereinafter referred to as Grantor, and the CITY OF HILLIARD, a municipal corporation under the laws of the State of Florida, hereinafter referred to as Grantee:

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WITNESSETH: That Grantor, for and in consideration of One Dollar to it in hand paid by Grantee, the receipt whereof is hereby acknowledged, and of the covenants and agreements to be kept and performed by Grantee as hereinafter expressed, hereby grants to Grantee an easement or right of way, within the limits hereinafter set out, for realigning, improving and maintaining a highway or street crossing (including the usual appurtenances such as approaches, paved roadway, curbs, gutters, sidewalks, shoulders, slopes, fills, cuts and drainage facilities) at grade across the right of way and track or tracks of Grantor at 6th Street, Hilliard, Florida, said crossing being 60 feet in width, i.e., 30 feet wide on each side of a line which extends across said right of way in a northeast-southwest direction and intersects the center line of Grantor's east track, formerly the northbound main track, at a point 2,397 feet southeastwardly measured along said center line from Milepost A-613; said crossing being shown outlined in red on print of Grantor's Drawing No. 3237-14, dated March 27, 1981, attached hereto and made a part hereof; Grantor's right of way being 100 feet wide on each side of said center line.

And Grantee hereby covenants and agrees in consideration of said easement:

1. Said crossing shall be realigned, improved and maintained at the cost and expense of Grantee, but in a manner and of materials satisfactory to the Division Engineer of Grantor, and that all incidental expenses necessarily incurred in connection therewith shall be borne by Grantee, except, however, that Grantor will, at its expense, maintain thereafter the portion of said crossing between the rails of said track or tracks and for two feet on the outside of each rail thereof. Incident to the improvement of said crossing, Grantee hereby agrees to reimburse Grantor for the actual cost, estimated at \$6,677.00, for Grantor to realign and improve the portion of said crossing between the rails of said tracks and for two feet on the outside of each rail thereof, and for relocating an existing communication pole.

2(a). The Grantor reserves the right at any time, if it so desires, to construct an additional track or tracks across said crossing; in such event, Grantor shall have the right and is hereby granted the privilege to remove any paving from said crossing to the extent necessary for the construction of said track or tracks and, upon completion of the trackage construction, Grantor will, but at Grantee's entire cost and expense, (i) restore said crossing and (ii) install flange boards between the rails of said track or tracks and for two feet on the outside of each rail thereof; thereafter, Grantor will, at Grantor's expense, maintain the portion of said crossing between the rails of said track or tracks and for two feet on the outside of each rail thereof. In the event relocation of signals is required due to construction of said track or tracks, the cost thereof shall also be borne by Grantee.

34562

(b). The Grantor also reserves the right at any time, if it so desires, to remove (abandon) any trackage located within the limits of said crossing; in such event Grantor shall have the right and is hereby granted the privilege to remove any paving from said crossing to the extent necessary for the removal of said trackage and, upon completion of said trackage removal, Grantee will restore said crossing at Grantee's entire cost and expense. Σ

3. Grantee, for and in consideration of the privileges and benefits granted by Grantor, and benefits flowing therefrom unto Grantee, agrees to save harmless Grantor, its successors and assigns, from any and all claims, including attorneys' fees, arising out of any suit, on account of personal injuries or damage to property of whatsoever nature arising during the construction or reconstruction of said crossing; and Grantee agrees to indemnify and save harmless Grantor, its successors and assigns, from any and all damages, including attorneys' fees, that might occur to Grantor on account of improper or faulty drainage at said crossing due to the construction or reconstruction thereof.

4. The cost of all work performed by Grantor (including flagging and engineering services, if any) and all materials furnished by Grantor within the scope of this agreement to which Grantee is obligated to reimburse Grantor for the cost thereof shall have surcharges added thereto in accordance with Federal-Aid Highway Program Manual Transmittal 129, dated April 25, 1975, in effect at the time the work is accomplished. All other accounting and reimbursement shall be in accordance with Grantor's usual practice in effect for similar work at the time the project is in progress.

5. Simultaneously with the realignment and improvement of said crossing, Grantee agrees, at its expense and in a manner satisfactory to said Division Engineer, to abandon and remove from said right of way the existing crossing shown in yellow on said attached print.

6. In consideration for the easement hereby granted, it is expressly agreed that the Grantor shall not at any time or in any manner be assessed with the cost or any part of the cost of the construction and maintenance of any improvement constructed now or at any time in the future on or adjacent to said crossing.

It is understood and agreed that this easement agreement shall not be binding until it has been authorized or ratified by a proper ordinance or resolution of the City Council of the City of Hilliard, Florida, a certified copy of which ordinance or resolution is attached hereto and made a part hereof.

34562

IN WITNESS WHEREOF the parties hereto have executed these presents in duplicate the day and year first above written.

Witnesses for Grantor:

SEABOARD COAST LINE RAILROAD COMPANY

A.S. Smith

By *R. Frame* (L.S.)
Chief Engineering Officer

BL Parker

Witnesses for Grantee:

CITY OF HILLIARD, FLORIDA

John P. Brown

By *Ivor G. Buchanan* (L.S.)
Ivor G. Buchanan, Council President

Steven B. W...ate

Attest *Lynda Watson* (SEAL)
Clerk
Lynda Watson

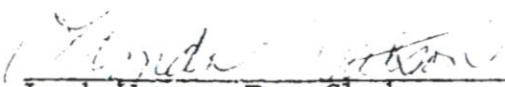
34562

RESOLUTION NO. 126

BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF HILLIARD, FLORIDA, in regular meeting assembled that the Council President of said Town be, and he herby is, authorized to enter into an agreement with the SEABOARD COAST LINE RAILROAD COMPANY, and to sign same on behalf of said Town whereby said Railroad Caompany grants to Town an easement or right of way for realigning, improving and maintaining 6th Street across the right of way and trackage of said Railroad Company at Hilliard, Florida, as particularly described in said agreement, which agreement is dated February 22, 1982, a copy of which agreement is filed with the Town Council.


 Ivor G. Buchanan, Council President

ATTEST:

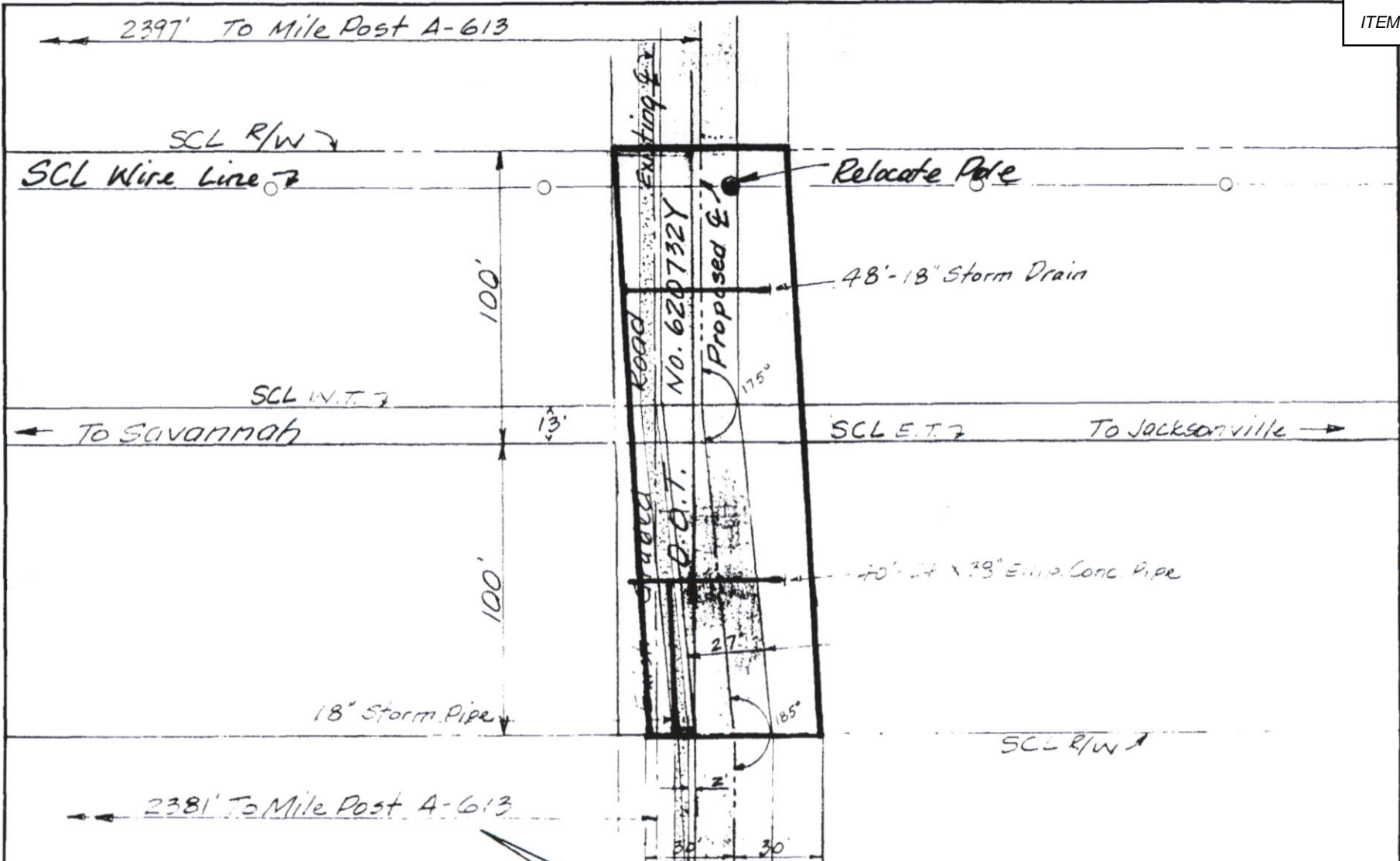

 Lynda Watson, Town Clerk

I certify the above to be a true and correct copy.


 Town Clerk

2-15-81

ITEM-9



V.I.Flo.
3

NASSAU CO., FLA.

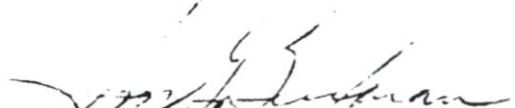
| | | |
|--|---------|---------------|
| REVISIONS | | |
| SEABOARD COAST LINE
RAILROAD COMPANY | | |
| DIVISION ENGR. | | WAYCROSS, GA. |
| TRACKS & PROPERTY
HILLIARD, FLORIDA | | |
| SCALE | DATE | DWG. NO. |
| 1" = 50' | 3-27-81 | 3297-14 |

HE
299

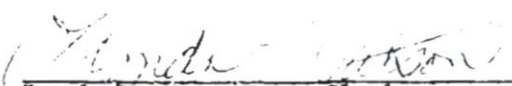
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 Ivor G. Buchanan, Council President

ATTEST:


 Lynda Watson, Town Clerk

I certify the above to be a true and correct copy.


 Town Clerk



AGENDA ITEM REPORT

TOWN OF HILLIARD, FLORIDA

TO: Town Council Regular Meeting Meeting Date: March 2, 2023

FROM: *Lisa Purvis, MMC – Town Clerk*

SUBJECT: Town Council approval of Resolution No. 2023-05; a Resolution amending Resolution No. 2022-08, adding a fee for Development Investigation Applications; adding a deposit in addition to consultant cost plus 10%, for the Town of Hilliard; and providing for an effective date.

BACKGROUND:

The Town has found it necessary to recoup costs for staff time spent determining the feasibility and availability to connect to water and sewer within the Town Limits. The Town has been using an application called Site Clearing/Site Work (Single Lot) with a charge of \$100 plus \$20 per acre to cover these costs. If it is determined that the Town's Engineer will need to be involved in making the determination an additional application requiring a \$1,000 deposit and consultant cost plus 10% is required. The desire is to have an application that states the purpose of the application as a development investigation application and a development investigation application (Consultant Needed).

FINANCIAL IMPACT:

None

RECOMMENDATION:

Town Council approval in adopting Resolution No. 2023-05, establishing application to cover staff time.

RESOLUTION NO. 2023-05

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF HILLIARD, FLORIDA, A MUNICIPAL CORPORATION AMENDING RESOLUTION NO. 2022-08, ADDING A FEE FOR DEVELOPMENT INVESTIGATION APPLICATIONS; ADDING A DEPOSIT IN ADDITION TO CONSULTANT COST PLUS 10%; FOR THE TOWN OF HILLIARD; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Town of Hilliard in providing services has found it necessary to establish a process with an application fee associated for providing the service of determining if adequate infrastructure is currently in place for the development; and

WHEREAS, the Town of Hilliard in providing the services has found it necessary to establish a process to determine what may be necessary to service the proposed development; and

NOW, THEREFORE, BE IT RESOLVED, that the Town of Hilliard, has established that the following shall apply as the water and sewer fees schedule under Chapter 58 of the Hilliard Utilities Code as an attachment to this Resolution.

THIS RESOLUTION adopted this _____ day of _____, _____, by the Town Council of the Town of Hilliard, Florida, and shall become effective this date.

Kenneth A. Sims, Sr.
Council President

ATTEST:

Lisa Purvis
Town Clerk

APPROVED:

John P. Beasley
Mayor

**ATTACHMENT
TOWN OF HILLIARD
RESOLUTION NO. 2023-05
WATER & SEWER CHARGES AND FEES**

SECTION 1. DEPOSITS

A new user shall provide a deposit to guarantee payment of delinquent bills, according to the following schedule:

| | | |
|--------------|-------------|-------------------|
| \$70.00 | | Residential Water |
| \$80.00 | | Residential Sewer |
| Under 10,000 | Over 10,000 | Gallons |
| \$100.00 | \$150.00 | Commercial Water |
| \$150.00 | \$200.00 | Commercial Sewer |

SECTION 2. TAP-IN, TURN-ON/OFF AND TRANSFER FEES

WATER TAP-IN FEES

| | |
|------------|--|
| \$1,700.00 | <u>Single Short (existing water main on same side of the road)</u> - Tap-in fee includes the following: locating and excavating existing water main to be tapped; furnishing and installing tapping saddle, corporation stop, 1' poly service tubing, angle yoke valve, meter yoke, radio read water meter, gate valve, and meter box; and associated restoration. |
| \$2,500.00 | <u>Single Long (existing water main on opposite side of the road)</u> - Tap-in fee includes the following: locating and excavating existing water main to be tapped; furnishing and installing tapping saddle, corporation stop, punching or directional drilling 1' poly service tubing under existing roadway, angle yoke valve, meter yoke, radio read water meter, gate valve, and meter box; and associated restoration. |

SEWER TAP-IN FEES

| | |
|------------|---|
| \$3,500.00 | <u>Single Service</u> - Tap-in fee includes the following: locating and excavating existing sewer main to be tapped; tapping existing sewer main; installing 6" PVC service pipe and fittings; installing cleanout; and associated restoration (including asphalt pavement patch). |
|------------|---|

\$3,800.00 **Double Service** - Tap-in fee includes the following: locating and excavating existing sewer main to be tapped; tapping existing sewer main; installing 6" PVC service pipe and fittings; installing cleanout; and associated restoration (including asphalt pavement patch).

Additional charges shall apply for any items not included in a standard water and/or sewer tap-in fees listed above.

TURN-ON/OFF FEES

- \$45.00 Turn-on/off fee for all new water and/or sewer service, in addition to the deposits.
- \$25.00 Turn-on/off fee for emergency maintenance and repairs.
- \$45.00 Turn-on/off fee for emergency maintenance and repairs required outside of normal working hours.

TRANSFER FEES

- \$30.00 Turn-on/off fee for all new water and/or sewer service, in addition to the deposits.

SECTION 3. PENALTIES

Penalties shall be added to the amount of the bill if not paid by 5 pm on the 15th day of the month following the reading date, if the bill remains unpaid at 5 pm on the 25th day of the month a second penalty shall be added, which shall be payable as if a part of the amount originally billed. If the 15th or 25th day of the month falls on a weekend or a holiday, penalties shall be assessed on the next working day at 5 pm. Hilliard Town Code Chapter 58, Section 58-85(e).

- \$15.00 A penalty shall be added to monthly bill if not paid by 5 pm on the 15th day of the month following the reading date.
- \$25.00 An additional penalty shall be added to monthly bill if not paid by 5 pm on the 25th day of the month following the reading date.
- 3% Contracts entered into with large and/or out of town commercial and/or residential users of water and/or sewer service shall be assessed percentage penalties based on the unpaid bill amount.

SECTION 4. RESTORATION CHARGES

Charges for restoration of services shall be collected as follows:

\$50.00 Restoration after termination for non-payment (meter still in place) requested outside of normal working hours.

\$50.00-\$500.00 Restoration fee as a result of meter tampering and based upon any damages to meter tap including installation of removed meter.

SECTION 5. TERMINATION OF SERVICE

Termination of services due to non payment.

If services are terminated, the user shall have two business days prior to the end of the month in which services were terminated to have services restored. If services are not paid the deposit on the account shall be applied toward payment of the delinquent amount, including late penalties. A new deposit will have to be paid to restore services and reopen the account. Hilliard Town Code Chapter 58, Section 58-7(a).

Any customer whose water and/or sewer service is terminated a second time due to non payment or a returned check or draft shall have his water and/or sewer deposit increased to the current deposit fee plus an additional 50 percent, prior to the water and/or sewer service being restored. Hilliard Town Code Chapter 58, Section 58-84.

SECTION 6. RETURN CHECK OR DRAFT SERVICE CHARGE

\$25.00 If face value of check is \$0.01 to \$50.00.

\$30.00 If face value of check is \$50.01 to \$300.00.

\$40.00 If face value of check is over \$300.00.

Upon receipt of two return checks or drafts within a period of one year, the customer shall be required to pay by certified funds (cash or money order) for a period of three years from the date of the redemption of the second returned check or draft.

SECTION 7. APPLICATION FEES

\$250.00 **Septic Tank Exception Application Fee** - Request for information and recommendation to Town Council.

| | |
|------------|---|
| \$2,000.00 | Right-of-Way Permit Application Fee - Request for Town Engineer to prepare necessary documents and obtain Nassau County Right-of-Way Permit for Town Utilities to cross Nassau County Roads. |
| \$100.00 | Plus \$20 per acre <u>Development Investigation Application Fee</u> - For Public Works to determine if adequate infrastrucute is in place for the proposed development. |
| \$1,000.00 | Deposit & Consultant Cost plus 10% <u>Development Investigation Application (Consultant Needed)</u> - In addition to Development Investigation Application Fee, if a consutant is needed to determine what may be necessary to service the proposed development. |



AGENDA ITEM REPORT

TOWN OF HILLIARD, FLORIDA

TO: Town Council Regular Meeting Meeting Date: March 2, 2023

FROM: *Lisa Purvis, MMC – Town Clerk*

SUBJECT: Town Council approval of the FY 2023 Revenues and Expenditures Report for the period ending December 31, 2022.

BACKGROUND:

The attached Revenues and Expenditures Report is for the period October 1, 2022, through December 31, 2022. In all funds, the budgeted figures are presented first with the actual expenditures and the variance between the budget and actual listed next. The percent of actual is the amount that has actually been received (or accrued in the case of state shared revenues) or the amount expended as a percent of the budget for the period ending December 31, 2022. The report is prepared on a modified accrual basis with state shared revenues for the month of December 2022 (received in January 2023) accrued for the month of December 2022.

FINANCIAL IMPACT:

None

RECOMMENDATION:

Approve the FY 2023 Revenues and Expenditures Report for the Period Ending December 31, 2022.

**GENERAL FUND
REVENUES AND EXPENDITURES
AS OF DECEMBER 31, 2022
25% OF YEAR**

| GENERAL FUND REVENUES | ORIGINAL
BUDGET | FY 2022/2023
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|-----------------------------------|----------------------------|--------------------------------|------------------------------------|------------------------|
| CASH CARRY FORWARD | <u>250,492</u> | <u>0</u> | <u>250,492</u> | <u>0.00%</u> |
| GENERAL GOVERNMENT REVENUE | | | | |
| AD VALOREM TAXES | 389,836 | 301,804 | 88,032 | 77.42% |
| UTILITY SERVICE TAX - ELECTRIC | 75,000 | 13,944 | 61,056 | 18.59% |
| UTILITY SERVICE TAX - WATER | 23,000 | 5,868 | 17,132 | 25.51% |
| UTILITY SERVICE TAX - PROPANE | 10,500 | 2,975 | 7,525 | 28.33% |
| COMMUNICATION SERVICE TAX | 96,881 | 26,241 | 70,640 | 27.09% |
| BUSINESS TAX RECEIPTS | 30,000 | 8,608 | 21,392 | 28.69% |
| PEN & INT - BUSINESS TAX RECEIPT | 1,000 | 330 | 670 | 32.97% |
| BUILDING PERMITS | 70,000 | 5,277 | 64,723 | 7.54% |
| FRANCHISE FEES - ELECTRIC | 200,000 | 47,007 | 152,993 | 23.50% |
| ZONING REVENUE | 35,000 | 9,324 | 25,676 | 26.64% |
| MOVE-ON PERMIT | 100 | 0 | 100 | 0.00% |
| RADON | 2,000 | 137 | 1,863 | 6.85% |
| BUSINESS LICENSE INSPECT | 500 | 0 | 500 | 0.00% |
| MOBILE HOME INSPECTS | 500 | 0 | 500 | 0.00% |
| STATE REVENUE SHARING | 159,305 | 37,148 | 122,157 | 23.32% |
| MOBILE HOME LICENSES | 1,000 | 1,174 | (174) | 117.38% |
| ALCOHOLIC BEV LICENSE | 500 | 0 | 500 | 0.00% |
| LOC HALF CENT SALE TAX | 232,991 | 59,925 | 173,066 | 25.72% |
| EDUCATIONAL ADMINISTRATIVE | 5,000 | 0 | 5,000 | 0.00% |
| FAX | 100 | 0 | 100 | 0.00% |
| COPIES | 50 | 0 | 50 | 0.00% |
| FIRE INSPECTIONS | 5,000 | 625 | 4,375 | 12.50% |
| FINES & FORFEITURES | 3,000 | 357 | 2,643 | 11.92% |
| VIOLATION OF LOCAL ORDINANCE | 2,000 | 0 | 2,000 | 0.00% |
| INTEREST INCOME SBA | 10,000 | 16,808 | (6,808) | 168.08% |
| INTEREST INCOME CKG | 100 | 12 | 88 | 11.88% |
| SURPLUS MATERIALS - GENERAL | 0 | 0 | 0 | 0.00% |
| NSF FEES - GENERAL | 0 | 0 | 0 | 0.00% |
| MISCELLANEOUS REVENUE - GEN | 5,000 | (32,483) | 37,483 | -649.65% |
| | <u>1,358,363</u> | <u>505,081</u> | <u>853,282</u> | <u>37.18%</u> |
| TRANSFERS: | | | | |
| INTERFUND TRANS SALES TAX - GEN | 95,753 | 41,217 | 54,536 | 43.05% |
| SUB TOTAL TRANSFERS | <u>95,753</u> | <u>41,217</u> | <u>54,536</u> | <u>43.05%</u> |
| TOTAL REVENUES | <u>1,704,608</u> | <u>546,298</u> | <u>1,158,310</u> | <u>32.05%</u> |

| GENERAL FUND EXPENDITURES | ORIGINAL
BUDGET | FY 2022/2023
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|--|----------------------------|--------------------------------|------------------------------------|------------------------|
| GENERAL GOVERNMENT EXPENDITURES | | | | |
| PERSONNEL EXPENSES: | | | | |
| EXECUTIVE SALARIES | 39,000 | 9,750 | 29,250 | 25.00% |
| FICA TAXES | 2,984 | 746 | 2,238 | 25.00% |
| RETIREMENT CONTRIBUTIONS | 18,000 | 4,447 | 13,553 | 24.71% |
| REGULAR SALARIES & WAGE | 87,658 | 19,574 | 68,084 | 22.33% |
| FICA TAXES | 6,706 | 1,444 | 5,262 | 21.53% |
| RETIREMENT CONTRIBUTIONS | 27,674 | 6,180 | 21,494 | 22.33% |
| LIFE & HEALTH INSURANCE | 19,379 | 6,460 | 12,919 | 33.33% |
| REGULAR SALARIES & WAGE | 157,344 | 33,562 | 123,782 | 21.33% |
| OVERTIME | 6,000 | 1,167 | 4,833 | 19.46% |
| FICA TAXES | 12,495 | 2,602 | 9,893 | 20.82% |
| RETIREMENT CONTRIBUTIONS | 19,454 | 4,136 | 15,318 | 21.26% |
| LIFE & HEALTH INSURANCE | 58,137 | 19,379 | 38,758 | 33.33% |
| WORKER'S COMPENSATION | 4,865 | 2,432 | 2,433 | 49.99% |
| | 459,696 | 111,878 | 347,818 | 24.34% |
| OPERATING EXPENSES: | | | | |
| PROFESSIONAL SERVICES | 54,000 | 13,094 | 40,906 | 24.25% |
| ACCOUNTING & AUDITING | 19,000 | 0 | 19,000 | 0.00% |
| CLEANING CONTRACT | 5,540 | 773 | 4,767 | 13.96% |
| TRAVEL & EDUCATION | 10,000 | 2,601 | 7,399 | 26.01% |
| COMMUNICATIONS & FREIGHT | 15,000 | 3,444 | 11,556 | 22.96% |
| UTILITY SERVICES | 13,000 | 2,594 | 10,406 | 19.95% |
| RENTALS & LEASES | 1,000 | 0 | 1,000 | 0.00% |
| INSURANCE | 21,239 | 10,619 | 10,620 | 50.00% |
| REPAIRS & MAINTENANCE | 20,000 | 18,255 | 1,745 | 91.27% |
| PROMOTIONAL ACT-PUB NOTIC | 5,000 | 1,105 | 3,895 | 22.09% |
| OTHER CURRENT OBLIGATIONS | 2,000 | 0 | 2,000 | 0.00% |
| OPERATING SUPPLIES | 30,000 | 9,612 | 20,388 | 32.04% |
| BOOKS, SUBSCRIP & PUBLIC | 20,000 | 10,281 | 9,719 | 51.41% |
| BUILDING PERMIT SURCHARGE | 2,000 | 0 | 2,000 | 0.00% |
| BANK SERVICE CHARGES | 200 | 38 | 162 | 19.03% |
| LAND USE & ZONING BOARD | 80,000 | 10,313 | 69,688 | 12.89% |
| FIRE MARSHALL CONTRACT | 5,000 | 1,635 | 3,365 | 32.70% |
| BUILDING INSPECTOR | 33,990 | 5,665 | 28,325 | 16.67% |
| CODE ENFORCEMENT | 13,200 | 2,200 | 11,000 | 16.67% |
| CODE ENFORCEMENT CONTINGY | 0 | 0 | 0 | 0.00% |
| | 350,169 | 92,227 | 257,942 | 26.34% |
| SUB TOTAL OPERATING EXPENSES | <u>809,865</u> | <u>204,106</u> | <u>605,759</u> | <u>25.20%</u> |

| GENERAL FUND EXPENDITURES | ORIGINAL
BUDGET | FY 2022/2023
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|--|----------------------------|--------------------------------|------------------------------------|------------------------|
| GENERAL GOVERNMENT EXPENDITURES | | | | |
| CAPITAL IMPROVEMENTS: | | | | |
| LAND | 0 | 0 | 0 | 0.00% |
| BUILDINGS | 85,753 | 41,217 | 44,536 | 48.07% |
| INFRASTRUCTURE | 0 | 0 | 0 | 0.00% |
| MACHINERY & EQUIPMENT | 10,000 | 0 | 10,000 | 0.00% |
| WORK IN PROGRESS (WIP) | 0 | 0 | 0 | 0.00% |
| DOCUMENTS & MATERIALS | 0 | 0 | 0 | 0.00% |
| SUB TOTAL CAPITAL EXPENSES | <u>95,753</u> | <u>41,217</u> | <u>54,536</u> | <u>43.05%</u> |
| TRANSFERS: | | | | |
| TRANSFERS TO STREETS | 519,780 | 129,945 | 389,835 | 25.00% |
| TRANSFERS TO RECREATION | 158,878 | 34,304 | 124,574 | 21.59% |
| TRANSFERS TO CULTURE | 46,000 | 16,916 | 29,084 | 36.77% |
| TRANSFERS TO FIRE | 69,332 | 17,333 | 51,999 | 0.00% |
| TRANSFERS TO WATER & SEWER | 0 | 0 | 0 | 0.00% |
| SUB TOTAL INTER FUND TRANSFERS | <u>793,990</u> | <u>198,498</u> | <u>595,492</u> | <u>25.00%</u> |
| DONATIONS: | | | | |
| AID TO PVT ORGANIZATION | 5,000 | 2,250 | 2,750 | 45.00% |
| SUB TOTAL DONATIONS | <u>5,000</u> | <u>2,250</u> | <u>2,750</u> | <u>45.00%</u> |
| TOTAL EXPENDITURES | <u>1,704,608</u> | <u>446,072</u> | <u>1,258,536</u> | <u>26.17%</u> |
| REVENUES | 1,704,608 | 546,298 | 1,158,310 | 32.05% |
| EXPENDITURES | <u>1,704,608</u> | <u>446,072</u> | <u>1,258,536</u> | <u>26.17%</u> |
| (OVER) UNDER | <u>0</u> | <u>100,226</u> | <u>(100,226)</u> | |

| GENERAL FUND REVENUES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|--------------------------------|----------------------------|--------------------------------|------------------------------------|------------------------|
| GENERAL STREETS REVENUE | | | | |
| GAS TAX - STATE | 1,000 | 0 | 1,000 | 0.00% |
| CULVERT PERMITS - STREETS | 7,000 | 0 | 7,000 | 0.00% |
| SURPLUS MATERIALS - STREETS | 0 | 0 | 0 | 0.00% |
| MISCELLANEOUS REVENUE - STR | 12,401 | 969 | 11,432 | 7.81% |
| | <u>20,401</u> | <u>969</u> | <u>19,432</u> | <u>4.75%</u> |
| TRANSFERS: | | | | |
| INTERFUND TRANS-GEN FUND | 519,780 | 129,945 | 389,835 | 25.00% |
| INTERFUND TRANS SALES TAX | 239,220 | 0 | 239,220 | 0.00% |
| INTERFUND TRAN SPEC REV | 0 | 0 | 0 | 0.00% |
| SUB TOTAL TRANSFERS | <u>759,000</u> | <u>129,945</u> | <u>629,055</u> | <u>17.12%</u> |
| TOTAL REVENUES | <u>779,401</u> | <u>130,914</u> | <u>648,487</u> | <u>16.80%</u> |

| GENERAL FUND EXPENDITURES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|---------------------------------------|-----------------------|------------------------|---------------------------|----------------------|
| GENERAL STREETS EXPENDITURES | | | | |
| PERSONNEL EXPENSES: | | | | |
| REGULAR SALARIES & WAGE | 158,085 | 60,887 | 97,198 | 38.52% |
| OVERTIME | 6,000 | 190 | 5,810 | 3.17% |
| FICA TAXES | 12,553 | 4,577 | 7,976 | 36.46% |
| RETIREMENT CONTRIBUTIONS | 19,543 | 3,068 | 16,475 | 15.70% |
| LIFE & HEALTH INSURANCE | 58,137 | 17,764 | 40,373 | 30.56% |
| WORKER'S COMPENSATION | 4,865 | 2,432 | 2,433 | 49.99% |
| | 259,183 | 88,919 | 170,264 | 34.31% |
| OPERATING EXPENSES: | | | | |
| PROFESSIONAL SERVICES | 0 | 0 | 0 | 0.00% |
| TRAVEL & EDUCATION | 2,000 | 0 | 2,000 | 0.00% |
| COMMUNICATIONS & FREIGHT | 1,200 | 258 | 942 | 21.52% |
| UTILITY SERVICES | 44,000 | 9,980 | 34,020 | 22.68% |
| RENTALS AND LEASES | 6,000 | 0 | 6,000 | 0.00% |
| INSURANCE | 22,298 | 11,149 | 11,149 | 50.00% |
| REPAIRS & MAINTENANCE | 120,000 | 11,955 | 108,045 | 9.96% |
| PROMOTIONAL ACT-PUB NOTIC | 500 | 93 | 407 | 18.63% |
| OTHER CURRENT OBLIGATIONS | 1,000 | 0 | 1,000 | 0.00% |
| OPERATING SUPPLIES | 36,000 | 4,762 | 31,238 | 13.23% |
| ROAD MATERIALS & SUPPLIES | 30,000 | 0 | 30,000 | 0.00% |
| | 262,998 | 38,198 | 224,800 | 14.52% |
| SUB TOTAL OPERATING EXPENSES | <u>522,181</u> | <u>127,116</u> | <u>395,065</u> | <u>24.34%</u> |
| GENERAL STREETS EXPENDITURES | | | | |
| CAPITAL IMPROVEMENTS: | | | | |
| LAND | 0 | 0 | 0 | 0.00% |
| BUILDINGS | 0 | 0 | 0 | 0.00% |
| INFRASTRUCTURE | 129,220 | 0 | 129,220 | 0.00% |
| MACHINERY & EQUIPMENT | 110,000 | 0 | 110,000 | 0.00% |
| WORK IN PROGRESS (WIP) | 0 | 0 | 0 | 0.00% |
| DOCUMENTS & MATERIALS | 0 | 0 | 0 | 0.00% |
| SUB TOTAL CAPITAL EXPENSES | <u>239,220</u> | <u>0</u> | <u>239,220</u> | <u>0.00%</u> |
| HEALTH: | | | | |
| ANIMAL CONTROL | 0 | 0 | 0 | 0.00% |
| OPERATING SUPP-MOSQUITO | 18,000 | 0 | 18,000 | 0.00% |
| SUB TOTAL HEALTH EXPENSES | <u>18,000</u> | <u>0</u> | <u>18,000</u> | <u>0.00%</u> |
| TRANSFERS: | | | | |
| TRANSFER TO DEBT SERVICE | 0 | 0 | 0 | 0.00% |
| SUB TOTAL INTER FUND TRANSFERS | <u>0</u> | <u>0</u> | <u>0</u> | <u>0.00%</u> |
| TOTAL EXPENDITURES | <u>779,401</u> | <u>127,116</u> | <u>652,285</u> | <u>16.31%</u> |
| REVENUES | 779,401 | 130,914 | 648,487 | 16.80% |
| EXPENDITURES | <u>779,401</u> | <u>127,116</u> | <u>652,285</u> | <u>16.31%</u> |
| (OVER) UNDER | <u>0</u> | <u>3,797</u> | <u>(3,797)</u> | |

| GENERAL FUND REVENUES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|--|----------------------------|--------------------------------|------------------------------------|------------------------|
| GENERAL RECREATION REVENUE | | | | |
| PARKS & RECREATION - SPORTS: | | | | |
| P&R - SOCCER | 5,000 | 0 | 5,000 | 0.00% |
| P&R - BASKETBALL | 9,500 | 19,802 | (10,302) | 208.44% |
| P&R - FLAG FOOTBALL | 5,000 | 0 | 5,000 | 0.00% |
| P&R - SOFTBALL | 1,000 | 0 | 1,000 | 0.00% |
| P&R - GYMNASTICS | 6,000 | 3,545 | 2,455 | 59.08% |
| P&R - MARTIAL ARTS | 0 | 0 | 0 | 0.00% |
| P&R - CONCESSIONS | 1,800 | 0 | 1,800 | 0.00% |
| P&R - VOLLEYBALL | 2,000 | 0 | 2,000 | 0.00% |
| P&R - SWIM TEAM | 1,000 | 0 | 1,000 | 0.00% |
| P&R - TENNIS | 800 | 0 | 800 | 0.00% |
| P&R - TRACK | 800 | 0 | 800 | 0.00% |
| SUB TOTAL SPORTS | <u>32,900</u> | <u>23,347</u> | <u>9,553</u> | <u>70.96%</u> |
| PARKS & RECREATION - EVENTS: | | | | |
| P&R - KIDZ SQUAD | 40,000 | 15,425 | 24,575 | 38.56% |
| P&R - SUMMER CAMP | 30,000 | 0 | 30,000 | 0.00% |
| P&R - SWIM LESSON | 3,000 | 0 | 3,000 | 0.00% |
| P&R - BASKETBALL CAMP | 2,500 | 0 | 2,500 | 0.00% |
| P&R - FOOTBALL CAMP | 2,000 | 0 | 2,000 | 0.00% |
| P&R - VOLLEYBALL CAMP | 1,000 | 0 | 1,000 | 0.00% |
| SUB TOTAL EVENTS | <u>78,500</u> | <u>15,425</u> | <u>63,075</u> | <u>19.65%</u> |
| PARKS & RECREATION - MEMBERS: | | | | |
| P&R - CHILD WATCH | 500 | 0 | 500 | 0.00% |
| P&R - DRAFT MEMBER | 60,000 | 28,219 | 31,781 | 47.03% |
| P&R - SEMI ANNUAL MEMBER | 3,000 | 1,926 | 1,074 | 64.20% |
| P&R - ANNUAL MEMBER | 1,000 | 440 | 560 | 44.00% |
| P&R - DAILY MEMBER | 2,000 | 453 | 1,547 | 22.65% |
| P&R - HEALTHWAYS PRIME | 1,000 | 77 | 923 | 7.70% |
| P&R - HEALTHWAYS SILVERSNEEK | 2,500 | 411 | 2,089 | 16.44% |
| P&R - POOL MEMBER | 7,000 | 0 | 7,000 | 0.00% |
| P&R - GROUP MEMBERS | 1,000 | 0 | 1,000 | 0.00% |
| P&R - RENEW ACTIVE MEMBERSHIP | 2,000 | 280 | 1,720 | 14.00% |
| P&R - ALL INCLUSIVE MEMBERSHIP | 2,000 | 290 | 1,710 | 14.50% |
| SUB TOTAL MEMBERSHIPS | <u>82,000</u> | <u>32,096</u> | <u>49,904</u> | <u>39.14%</u> |
| PARKS & RECREATION - RENTAL: | | | | |
| P&R - POOL & SPLASH PAD RENTAL | 6,500 | 0 | 6,500 | 0.00% |
| P&R - SPLASH PAD RENTAL | 500 | 0 | 500 | 0.00% |
| P&R - LIFEGUARD(S) RENTAL | 0 | 0 | 0 | 0.00% |
| P&R - GYM RENTAL | 500 | 0 | 500 | 0.00% |
| P&R - OXFORD BALL PARK RENTAL | 400 | 0 | 400 | 0.00% |
| P&R - BUCK PARK LG PAVI RENTAL | 500 | 215 | 285 | 43.00% |
| P&R - BUCK PARK SM PAVI RENTAL | 250 | 45 | 205 | 18.00% |
| P&R - OXFORD PICNIC AREA | 150 | 45 | 105 | 30.00% |
| SUB TOTAL RENTALS | <u>8,800</u> | <u>305</u> | <u>8,495</u> | <u>3.47%</u> |

| GENERAL FUND REVENUES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|-----------------------------------|----------------------------|--------------------------------|------------------------------------|------------------------|
| GENERAL RECREATION REVENUE | | | | |
| MISC REVENUES: | | | | |
| P&R - CREDIT CARD FEE | 3,500 | 1,072 | 2,428 | 30.61% |
| LEASE - NEXTEL TOWER | 14,688 | 5,006 | 9,682 | 34.08% |
| SURPLUS MATERIALS - RECREATION | 0 | 0 | 0 | 0.00% |
| MISCELLANEOUS REVENUE - REC | 6,500 | 5,980 | 520 | 92.00% |
| SUB TOTAL MISC | <u>24,688</u> | <u>12,057</u> | <u>12,631</u> | <u>48.84%</u> |
| GRANTS: | | | | |
| GRANTS DEP FRDAP - RECREATION | 400,000 | 0 | 400,000 | 0.00% |
| GRANTS - MISC | 0 | 0 | 0 | 0.00% |
| SPECIAL EVENTS & DONATIONS | 2,000 | 600 | 1,400 | 30.00% |
| SUB TOTAL GRANTS | <u>402,000</u> | <u>600</u> | <u>401,400</u> | <u>0.15%</u> |
| TRANSFERS: | | | | |
| INTERFUND TRANS-GEN FUND | 204,878 | 51,220 | 153,658 | 25.00% |
| INTERFUND TRANS SALES TAX | 228,000 | 6,000 | 222,000 | 2.63% |
| SUB TOTAL TRANSFERS | <u>432,878</u> | <u>57,220</u> | <u>375,658</u> | <u>13.22%</u> |
| TOTAL REVENUES | <u>1,061,766</u> | <u>141,049</u> | <u>920,717</u> | <u>13.28%</u> |

| GENERAL FUND EXPENDITURES | ORIGINAL BUDGET | FY 2021/2022 ACTUAL | (OVER) UNDER BUDGET | % OF BUDGET |
|--|-------------------------|----------------------------|----------------------------|----------------------|
| GENERAL RECREATION EXPENDITURES | | | | |
| PERSONNEL EXPENSES: | | | | |
| REGULAR SALARIES & WAGES | 135,000 | 13,636 | 121,364 | 10.10% |
| PART TIME SALARIES & WAGES | 41,000 | 15,636 | 25,364 | 38.14% |
| OVERTIME | 250 | 0 | 250 | 0.00% |
| FICA TAXES | 13,484 | 2,231 | 11,253 | 16.54% |
| RETIREMENT CONTRIBUTIONS | 20,991 | 3,248 | 17,743 | 15.47% |
| LIFE & HEALTH INSURANCE | 19,379 | 6,460 | 12,919 | 33.33% |
| WORKER'S COMPENSATION | 4,864 | 2,432 | 2,432 | 50.00% |
| | 234,968 | 43,642 | 191,326 | 18.57% |
| OPERATING EXPENSES: | | | | |
| PROFESSIONAL SERVICES | 1,000 | 0 | 1,000 | 0.00% |
| CLEANING CONTRACT | 1,000 | 1,360 | (360) | 136.00% |
| TRAVEL & EDUCATION | 1,000 | 0 | 1,000 | 0.00% |
| COMMUNICATIONS & FREIGHT | 2,500 | 444 | 2,056 | 17.77% |
| UTILITY SERVICES | 30,000 | 7,095 | 22,905 | 23.65% |
| RENTALS & LEASES | 1,000 | 0 | 1,000 | 0.00% |
| INSURANCE | 22,298 | 11,149 | 11,149 | 50.00% |
| REPAIRS & MAINTENANCE | 20,000 | 1,323 | 18,677 | 6.61% |
| PROMOTIONAL ACT-PUB NOTICE | 2,000 | 262 | 1,738 | 13.10% |
| OTHER CURRENT OBLIGATION | 10,000 | 0 | 10,000 | 0.00% |
| OPERATING SUPPLIES | 52,000 | 9,338 | 42,662 | 17.96% |
| BOOKS, SUBSCRIP & PUBLICATION | 2,500 | 400 | 2,100 | 16.00% |
| BANK SERVICE CHARGE | 5,500 | 1,739 | 3,761 | 31.62% |
| | 150,798 | 33,110 | 117,688 | 21.96% |
| SUB TOTAL OPERATING EXPENSES | <u>385,766</u> | <u>76,752</u> | <u>309,014</u> | <u>19.90%</u> |
| GENERAL RECREATION EXPENDITURES | | | | |
| CAPITAL IMPROVEMENTS: | | | | |
| LAND | 0 | 0 | 0 | 0.00% |
| BUILDINGS | 143,000 | 0 | 143,000 | 0.00% |
| INFRASTRUCTURE | 50,000 | 0 | 50,000 | 0.00% |
| MACHINERY & EQUIPMENT | 435,000 | 6,000 | 429,000 | 1.38% |
| WORK IN PROGRESS (WIP) | 0 | 0 | 0 | 0.00% |
| SUB TOTAL CAPITAL EXPENSES | <u>628,000</u> | <u>6,000</u> | <u>622,000</u> | <u>0.96%</u> |
| DONATIONS: | | | | |
| SPECIAL EVENTS | 40,000 | 9,516 | 30,484 | 23.79% |
| AID TO PRIVATE ORGANIZATION | 8,000 | 8,000 | 0 | 100.00% |
| SUB TOTAL DONATIONS | <u>48,000</u> | <u>17,516</u> | <u>30,484</u> | <u>36.49%</u> |
| TOTAL EXPENDITURES | <u>1,061,766</u> | <u>100,268</u> | <u>961,498</u> | <u>9.44%</u> |
| REVENUES | 1,061,766 | 141,049 | 920,717 | 13.28% |
| EXPENDITURES | <u>1,061,766</u> | <u>100,268</u> | <u>961,498</u> | <u>9.44%</u> |
| (OVER) UNDER | 0 | <u>40,781</u> | <u>(40,781)</u> | |

| GENERAL FUND REVENUES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|------------------------------|----------------------------|--------------------------------|------------------------------------|------------------------|
| GENERAL FIRE REVENUE | | | | |
| GRANTS FORESTRY 50/50 - FIRE | 0 | 0 | 0 | 0.00% |
| NASSAU COUNTY - FIRE | 0 | 0 | 0 | 0.00% |
| FIRE PROTECTION SERVICES | 0 | 0 | 0 | 0.00% |
| SURPLUS MATERIALS - FIRE | 0 | 0 | 0 | 0.00% |
| HVFD DONATIONS | 0 | 1,200 | (1,200) | 0.00% |
| MISCELLANEOUS REVENUE - FIRE | 0 | 0 | 0 | 0.00% |
| | <u>0</u> | <u>1,200</u> | <u>(1,200)</u> | <u>0.00%</u> |
| TRANSFERS: | | | | |
| INTERFUND TRANS-GEN FUND | 69,332 | 17,333 | 51,999 | 25.00% |
| INTERFUND TRANS SALES TAX | 15,800 | 0 | 15,800 | 0.00% |
| SUB TOTAL TRANSFERS | <u>85,132</u> | <u>17,333</u> | <u>67,799</u> | <u>20.36%</u> |
| TOTAL REVENUES | <u>85,132</u> | <u>18,533</u> | <u>66,599</u> | <u>21.77%</u> |

| GENERAL FUND EXPENDITURES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|-------------------------------------|----------------------------|--------------------------------|------------------------------------|------------------------|
| GENERAL FIRE EXPENDITURES | | | | |
| OPERATING EXPENSES: | | | | |
| WORKER'S COMPENSATION | 4,864 | 2,432 | 2,432 | 50.00% |
| REIMBURSEMENT EXPENSE | 4,250 | 4,247 | 3 | 99.93% |
| COMMUNICATIONS & FREIGHT | 2,500 | 346 | 2,154 | 13.84% |
| UTILITY SERVICES | 2,500 | 536 | 1,964 | 21.44% |
| RENTALS & LEASES | 0 | 0 | 0 | 0.00% |
| INSURANCE | 22,298 | 11,399 | 10,899 | 51.12% |
| REPAIRS & MAINTENANCE | 16,200 | 1,332 | 14,868 | 8.22% |
| OPERATING SUPPLIES | 8,520 | 1,136 | 7,384 | 13.33% |
| BOOKS, SUBSCRIP & PUBLIC | 8,200 | 1,573 | 6,627 | 19.18% |
| SUB TOTAL OPERATING EXPENSES | <u>69,332</u> | <u>23,001</u> | <u>46,331</u> | <u>33.18%</u> |
| CAPITAL IMPROVEMENTS: | | | | |
| LAND | 0 | 0 | 0 | 0.00% |
| BUILDINGS | 0 | 0 | 0 | 0.00% |
| INFRASTRUCTURE | 0 | 0 | 0 | 0.00% |
| MACHINERY & EQUIPMENT | 15,800 | 0 | 15,800 | 0.00% |
| WORK IN PROGRESS (WIP) | 0 | 0 | 0 | 0.00% |
| DOCUMENTS & MATERIALS | 0 | 0 | 0 | 0.00% |
| SUB TOTAL CAPITAL EXPENSES | <u>15,800</u> | <u>0</u> | <u>15,800</u> | <u>0.00%</u> |
| TOTAL EXPENDITURES | <u>85,132</u> | <u>23,001</u> | <u>62,131</u> | <u>27.02%</u> |
| REVENUES | 85,132 | 18,533 | 66,599 | 21.77% |
| EXPENDITURES | <u>85,132</u> | <u>23,001</u> | <u>62,131</u> | <u>27.02%</u> |
| (OVER) UNDER | <u>0</u> | <u>(4,468)</u> | <u>4,468</u> | |

| GENERAL FUND REVENUES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|----------------------------------|----------------------------|--------------------------------|------------------------------------|------------------------|
| GENERAL AIR PARK REVENUES | | | | |
| FEDERAL GRANTS: | | | | |
| GRANTS FAA - AIRPARK | 887,545 | 0 | 887,545 | 0.00% |
| SUB TOTAL FEDERAL GRANTS | <u>887,545</u> | <u>0</u> | <u>887,545</u> | <u>0.00%</u> |
| STATE GRANTS: | | | | |
| GRANTS DOT - AIRPARK | 880,000 | 0 | 880,000 | 0.00% |
| SUB TOTAL STATE GRANTS | <u>880,000</u> | <u>0</u> | <u>880,000</u> | <u>0.00%</u> |
| MISC REVENUES: | | | | |
| HILLIARD AVIATION - AIRPARK | 0 | 10,000 | (10,000) | 0.00% |
| SURPLUS MATERIALS - AP | 0 | 0 | 0 | 0.00% |
| MISCELLANEOUS REVENUE - AP | 0 | 0 | 0 | 0.00% |
| SUB TOTAL MISC | <u>0</u> | <u>10,000</u> | <u>(10,000)</u> | <u>0.00%</u> |
| TOTAL REVENUES | <u>1,767,545</u> | <u>10,000</u> | <u>1,757,545</u> | <u>0.57%</u> |

| GENERAL FUND EXPENDITURES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|--------------------------------------|----------------------------|--------------------------------|------------------------------------|------------------------|
| GENERAL AIR PARK EXPENDITURES | | | | |
| CAPITAL IMPROVEMENTS: | | | | |
| LAND | 1,374,845 | 0 | 1,374,845 | 0.00% |
| BUILDINGS | 340,000 | 0 | 340,000 | 0.00% |
| INFRASTRUCTURE | 36,000 | 0 | 36,000 | 0.00% |
| MACHINERY & EQUIPMENT | 16,700 | 0 | 16,700 | 0.00% |
| WORK IN PROGRESS (WIP) | 0 | 0 | 0 | 0.00% |
| DOCUMENTS & MATERIALS | 0 | 0 | 0 | 0.00% |
| SUB TOTAL CAPITAL EXPENSES | <u>1,767,545</u> | <u>0</u> | <u>1,767,545</u> | <u>0.00%</u> |
| RESERVE | <u>0</u> | <u>0</u> | <u>0</u> | <u>0.00%</u> |
| TOTAL EXPENDITURES | <u>1,767,545</u> | <u>0</u> | <u>1,767,545</u> | <u>0.00%</u> |
| REVENUES | 1,767,545 | 10,000 | 1,757,545 | 0.57% |
| EXPENDITURES | <u>1,767,545</u> | <u>0</u> | <u>1,767,545</u> | <u>0.00%</u> |
| (OVER) UNDER | <u>0</u> | <u>10,000</u> | <u>(10,000)</u> | |

| GENERAL FUND TOTALS | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|---|--------------------|------------------------|---------------------------|----------------|
| GENERAL FUND REVENUES | | | | |
| CASH CARRY FORWARD | <u>250,492</u> | <u>0</u> | <u>250,492</u> | <u>0.00%</u> |
| GENERAL GOVERNMENT REVENUE | 1,704,608 | 546,298 | 1,158,310 | 32.05% |
| GENERAL STREETS REVENUE | 779,401 | 130,914 | 648,487 | 16.80% |
| GENERAL RECREATION REVENUE | 1,061,766 | 141,049 | 920,717 | 13.28% |
| GENERAL FIRE REVENUE | 85,132 | 18,533 | 66,599 | 21.77% |
| GENERAL AIR PARK REVENUES | 1,767,545 | 10,000 | 1,757,545 | 0.57% |
| | <u>5,398,452</u> | <u>846,794</u> | <u>4,551,658</u> | <u>15.69%</u> |
| GENERAL FUND REVENUES TOTAL | <u>5,398,452</u> | <u>846,794</u> | <u>4,551,658</u> | <u>15.69%</u> |
| GENERAL FUND EXPENDITURES | | | | |
| GENERAL GOVERNMENT EXPENDITURES | 1,704,608 | 446,072 | 1,258,536 | 26.17% |
| GENERAL STREETS EXPENDITURES | 779,401 | 127,116 | 652,285 | 16.31% |
| GENERAL RECREATION EXPENDITURES | 1,061,766 | 100,268 | 961,498 | 9.44% |
| GENERAL FIRE EXPENDITURES | 85,132 | 23,001 | 62,131 | 27.02% |
| GENERAL AIR PARK EXPENDITURES | 1,767,545 | 0 | 1,767,545 | 0.00% |
| GENERAL FUND EXPENDITURES TOTAL | <u>5,398,452</u> | <u>696,457</u> | <u>4,701,995</u> | <u>12.90%</u> |
| GENERAL FUND REVENUES TOTAL | <u>5,398,452</u> | <u>846,794</u> | <u>4,551,658</u> | <u>15.69%</u> |
| GENERAL FUND EXPENDITURES TOTAL | <u>5,398,452</u> | <u>696,457</u> | <u>4,701,995</u> | <u>12.90%</u> |
| REVENUES OVER/(UNDER) EXPENDITURES | <u>0</u> | <u>150,337</u> | <u>(150,337)</u> | |

**CAPITAL IMPROVEMENTS PLAN FUND
REVENUES AND EXPENDITURES
AS OF DECEMBER 31, 2021
25% OF YEAR**

| CAPITAL IMPROVEMENTS FUND REVENUES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|---|----------------------------|--------------------------------|------------------------------------|------------------------|
| CASH CARRY FORWARD | <u>614,550</u> | <u>0</u> | <u>614,550</u> | 0.00% |
| CAPITAL REVENUES | | | | |
| DISCRETIONARY SALES TAX | 468,108 | 135,805 | 332,303 | 29.01% |
| INTEREST INCOME SBA | 3,500 | 5,147 | (1,647) | 147.06% |
| | <u>471,608</u> | <u>140,952</u> | <u>330,656</u> | <u>29.89%</u> |
| TOTAL REVENUES | <u>1,086,158</u> | <u>140,952</u> | <u>945,206</u> | <u>12.98%</u> |
| | | | | |
| CAPITAL IMPROVEMENTS FUND EXPENDITURES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
| BANK SERVICE CHARGES | <u>0</u> | <u>0</u> | <u>0</u> | <u>0.00%</u> |
| TRANSFER TO GEN GOV'T | 95,753 | 41,217 | 54,536 | 43.05% |
| TRANSFER TO STREETS | 239,220 | 0 | 239,220 | 0.00% |
| TRANSFER TO RECREATION | 228,000 | 6,000 | 222,000 | 2.63% |
| TRANSFER TO FIRE | 15,800 | 0 | 15,800 | 0.00% |
| TRANSFER TO WATER & SEWER | 507,385 | 137,053 | 370,332 | 27.01% |
| TRANSFER TO AIRPARK | 0 | 0 | 0 | 0.00% |
| | <u>1,086,158</u> | <u>184,270</u> | <u>901,888</u> | <u>16.97%</u> |
| RESERVE | <u>0</u> | <u>0</u> | <u>0</u> | <u>0.00%</u> |
| TOTAL EXPENDITURES | <u>1,086,158</u> | <u>184,270</u> | <u>901,888</u> | <u>16.97%</u> |
| REVENUES | 1,086,158 | 140,952 | 945,206 | 12.98% |
| EXPENDITURES | <u>1,086,158</u> | <u>184,270</u> | <u>901,888</u> | <u>16.97%</u> |
| (OVER) UNDER | <u>0</u> | <u>(43,319)</u> | <u>43,319</u> | |

**SPECIAL REVENUE FUND
REVENUES AND EXPENDITURES
AS OF DECEMBER 31, 2021
25% OF YEAR**

| SPECIAL REVENUE REVENUES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|--------------------------------------|----------------------------|--------------------------------|------------------------------------|------------------------|
| LOCAL OPTION GAS TAX REVENUES | | | | |
| LOCAL OPTION GAS TAX (6 CENTS) | 132,695 | 31,360 | 101,335 | 23.63% |
| LOCAL OPTION GAS TAX (5 CENTS) | 88,177 | 19,925 | 68,252 | 22.60% |
| | <u>220,872</u> | <u>51,285</u> | <u>169,587</u> | <u>23.22%</u> |
| TOTAL REVENUES | <u>220,872</u> | <u>51,285</u> | <u>169,587</u> | <u>23.22%</u> |
| | | | | |
| SPECIAL REVENUE EXPENDITURES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
| INTERFUND TRANSFERS | 0 | 0 | 0 | |
| RESERVE | <u>220,872</u> | <u>0</u> | <u>220,872</u> | <u>0.00%</u> |
| TOTAL EXPENDITURES | <u>220,872</u> | <u>0</u> | <u>220,872</u> | <u>0.00%</u> |
| REVENUES | <u>220,872</u> | <u>51,285</u> | <u>169,587</u> | <u>23.22%</u> |
| EXPENDITURES | <u>220,872</u> | <u>0</u> | <u>220,872</u> | <u>0.00%</u> |
| (OVER) UNDER | <u>0</u> | <u>51,285</u> | <u>(51,285)</u> | |

**ENTERPRISE FUND
REVENUES AND EXPENDITURES
AS OF DECEMBER 31, 2022
25% OF YEAR**

| ENTERPRISE FUND REVENUES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|----------------------------------|----------------------------|--------------------------------|------------------------------------|------------------------|
| CASH CARRY FORWARD | <u>253,783</u> | <u>0</u> | <u>253,783</u> | <u>0.00%</u> |
| WATER & SEWER REVENUE | | | | |
| WATER UTILITY REVENUE | 542,778 | 128,199 | 414,579 | 23.62% |
| SEWER UTILITY REVENUE | 555,690 | 132,076 | 423,614 | 23.77% |
| TAP-ON FEES - W&S | 86,500 | 0 | 86,500 | 0.00% |
| TRANSFER FEES - W&S | 500 | 0 | 500 | 0.00% |
| TURN ON/OFF FEES - W&S | 8,000 | 2,285 | 5,715 | 28.56% |
| WATER LINE EXTENSION FEES | 20,000 | 0 | 20,000 | 0.00% |
| SEWER LINE EXTENSION FEE | 30,000 | 0 | 30,000 | 0.00% |
| RECONNECT FEE - W&S | 300 | 50 | 250 | 16.67% |
| INTEREST INCOME SBA | 10,000 | 16,808 | (6,808) | 168.08% |
| INTEREST INCOME CKG | 100 | 12 | 88 | 11.89% |
| LEASE - WATER TOWER | 18,889 | 18,889 | (0) | 100.00% |
| SYSTEM DEVELOPMENT CHARGES | 0 | 389 | (389) | 0.00% |
| SURPLUS MATERIALS - W&S | 1,000 | 0 | 1,000 | 0.00% |
| NSF FEES - W&S | 200 | 90 | 110 | 45.00% |
| PENALTIES - W&S | 40,000 | 10,650 | 29,350 | 26.62% |
| METER TAMPERING FEES - W&S | 0 | 0 | 0 | 0.00% |
| CONVENIENCE CHARGE | 8,000 | 2,761 | 5,239 | 34.51% |
| MISCELLANEOUS REVENUE - W&S | 0 | (269) | 269 | 0.00% |
| W&S SINGLE LOT | 0 | 500 | (500) | 0.00% |
| W&S INVESTIGATION | 0 | (503) | 503 | 0.00% |
| W&S SEPTIC TANK EXCEPTION | 0 | 250 | (250) | 0.00% |
| W&S NC ROW PERMIT | 0 | 0 | 0 | 0.00% |
| | <u>1,321,957</u> | <u>312,186</u> | <u>1,009,771</u> | <u>23.62%</u> |
| GRANTS: | | | | |
| GRANTS USDA RD - W&S | 0 | 0 | 0 | 0.00% |
| GRANTS DEP LEG CBIR - W&S | 40,000 | 0 | 40,000 | 0.00% |
| GRANTS DEP LEG CBIR - W&S | 609,000 | 0 | 609,000 | 0.00% |
| CDBG - WM & GENERATOR | 0 | 0 | 0 | 0.00% |
| SUB TOTAL GRANTS | <u>649,000</u> | <u>0</u> | <u>649,000</u> | <u>0.00%</u> |
| TRANSFERS: | | | | |
| TRANS FROM GENERAL | 0 | 0 | 0 | 0.00% |
| TRANS FROM SALES TAX | 507,385 | 0 | 507,385 | 0.00% |
| SUB TOTAL TRANSFERS | <u>507,385</u> | <u>137,053</u> | <u>507,385</u> | <u>27.01%</u> |
| TOTAL REVENUES | <u>2,732,125</u> | <u>449,239</u> | <u>2,419,939</u> | <u>16.44%</u> |

| ENTERPRISE FUND EXPENDITURES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|---------------------------------------|----------------------------|--------------------------------|------------------------------------|------------------------|
| WATER & SEWER EXPENDITURES | | | | |
| PERSONNEL EXPENSES: | | | | |
| REGULAR SALARIES & WAGES | 403,791 | 85,406 | 318,385 | 21.15% |
| OVERTIME | 16,000 | 3,616 | 12,384 | 22.60% |
| FICA TAXES | 32,115 | 6,618 | 25,497 | 20.61% |
| RETIREMENT CONTRIBUTIONS | 49,997 | 10,603 | 39,394 | 21.21% |
| LIFE & HEALTH INSURANCE | 155,032 | 51,678 | 103,354 | 33.33% |
| WORKER'S COMPENSATION | 4,864 | 2,432 | 2,432 | 50.00% |
| | 661,799 | 160,353 | 501,446 | 24.23% |
| OPERATING EXPENSES: | | | | |
| PROFESSIONAL SERVICES | 42,000 | 5,242 | 36,758 | 12.48% |
| ACCOUNTING & AUDITING | 19,000 | 0 | 19,000 | 0.00% |
| WASTE DISPOSAL | 20,000 | 3,300 | 16,700 | 16.50% |
| TRAVEL & EDUCATION | 4,000 | 0 | 4,000 | 0.00% |
| COMMUNICATIONS & FREIGHT | 24,000 | 3,962 | 20,038 | 16.51% |
| WATER PLANT ELECTRICITY | 20,000 | 4,412 | 15,588 | 22.06% |
| SEWER PLANT ELECTRICITY | 75,000 | 18,693 | 56,307 | 24.92% |
| RENTALS & LEASES | 5,000 | 0 | 5,000 | 0.00% |
| INSURANCE | 22,298 | 11,149 | 11,149 | 50.00% |
| REPAIRS & MAINTENANCE | 170,000 | 81,408 | 88,592 | 47.89% |
| PROMOTIONAL ACT-PUBLIC NOTICE | 1,000 | 0 | 1,000 | 0.00% |
| OTHER CURRENT OBLIGATIONS | 5,000 | 0 | 5,000 | 0.00% |
| OPERATING SUPPLIES | 260,000 | 56,032 | 203,968 | 21.55% |
| BOOKS, SUBSCRIP & PUBLICATIONS | 12,000 | 5,160 | 6,840 | 43.00% |
| INTEREST EXPENSE BONDS | 121,643 | 0 | 121,643 | 0.00% |
| BANK SERVICE CHARGES | 8,000 | 3,722 | 4,278 | 46.52% |
| | 808,941 | 193,079 | 615,862 | 23.87% |
| SUB TOTAL OPERATING EXPENSES | <u>1,470,740</u> | <u>353,432</u> | <u>1,117,308</u> | <u>24.03%</u> |
| CAPITAL IMPROVEMENTS: | | | | |
| LAND | 27,500 | 27,500 | 0 | 100.00% |
| BUILDINGS | 8,000 | 0 | 8,000 | 0.00% |
| INFRASTRUCTURE | 999,000 | 109,553 | 889,447 | 10.97% |
| MACHINERY & EQUIPMENT | 121,885 | 0 | 121,885 | 0.00% |
| WORK IN PROGRESS (WIP) | 0 | 0 | 0 | 0.00% |
| SUB TOTAL CAPITAL EXPENSES | <u>1,156,385</u> | <u>137,053</u> | <u>1,019,332</u> | <u>11.85%</u> |

| ENTERPRISE FUND EXPENDITURES | ORIGINAL
BUDGET | FY 2021/2022
ACTUAL | (OVER)
UNDER
BUDGET | % OF
BUDGET |
|--|----------------------------|--------------------------------|------------------------------------|------------------------|
| WATER & SEWER EXPENDITURES | | | | |
| NON OPERATING | | | | |
| AMORTIZATION EXPENSE | 0 | 0 | 0 | 0.00% |
| DEPRECIATION EXPENSE | 0 | 0 | 0 | 0.00% |
| BAD DEBT EXPENSE | 0 | 0 | 0 | 0.00% |
| RESERVE | 95,000 | 0 | 95,000 | 0.00% |
| SUB TOTAL NON OPERATING EXPENSE | <u>95,000</u> | <u>0</u> | <u>95,000</u> | <u>0.00%</u> |
| WATER & SEWER EXPENDITURES | | | | |
| DONATIONS: | | | | |
| AID TO PRIVATE ORGANIZATION | 10,000 | 10,000 | 0 | 100.00% |
| SUB TOTAL DONATIONS | <u>10,000</u> | <u>10,000</u> | <u>0</u> | <u>100.00%</u> |
| TOTAL EXPENDITURES | <u>2,732,125</u> | <u>500,485</u> | <u>2,231,640</u> | <u>18.32%</u> |
| REVENUES | 2,732,125 | 449,239 | 2,419,939 | 16.44% |
| EXPENDITURES | <u>2,732,125</u> | <u>500,485</u> | <u>2,231,640</u> | <u>18.32%</u> |
| (OVER) UNDER | <u>0</u> | <u>(51,246)</u> | <u>188,299</u> | |



AGENDA ITEM REPORT

TOWN OF HILLIARD, FLORIDA

TO: Town Council Regular Meeting Meeting Date: March 02, 2023

FROM: ***Lisa Purvis, MMC – Town Clerk***

SUBJECT: Town Council discussion and approval to allow the Hilliard Gardening Club to Landscape around the Welcome to Hilliard sign on US Highway 1 Northbound, and for the Town of Hilliard to fund the project.

BACKGROUND:

Ms. Jacqui Galbreath of the Hilliard Gardening club has requested the Town fund a landscaping project around the Welcome to Hilliard Sign.

FINANCIAL IMPACT:

Estimate was given in November of 2022 in the amount of \$800.00, however this price could have increased since then.

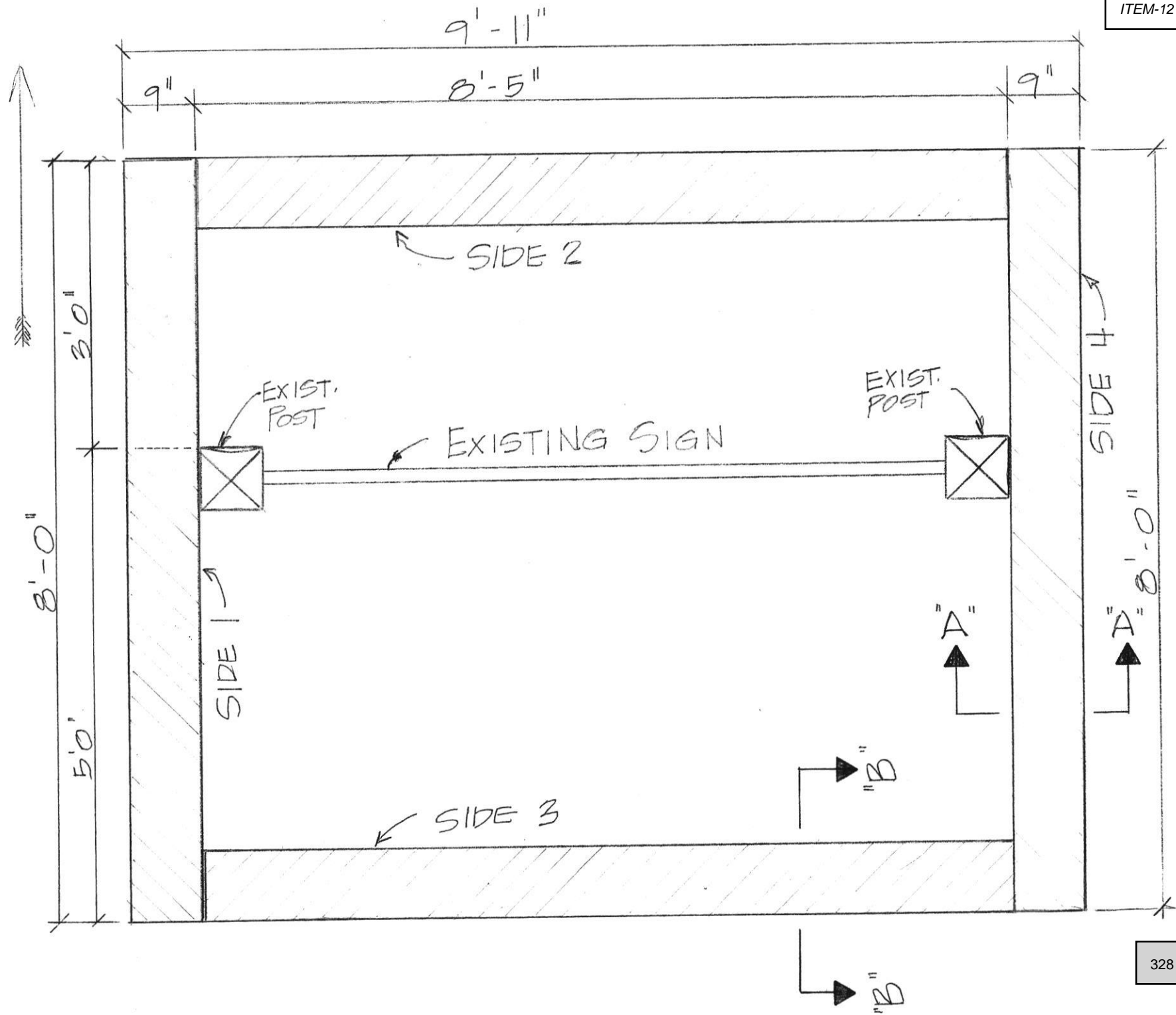
RECOMMENDATION:

Town Council to approve and fund the Hilliard Gardening Club to landscape around the Welcome to Hilliard Sign.

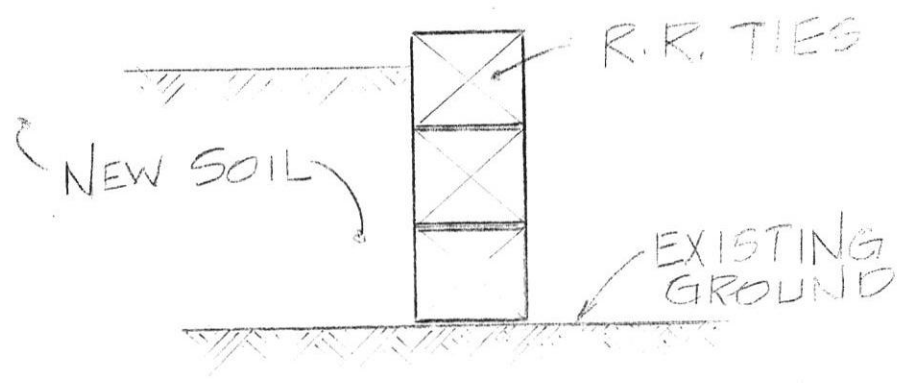
Gardening Club of Hilliard

U.S.-1 NORTH

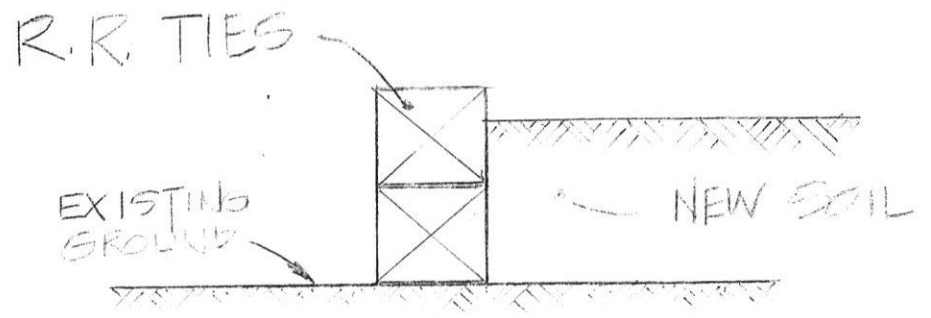
ITEM-12



NOTE: APPROX 130 CUBIC FEET
OF NEW SOIL REQUIRED



SECTION "A-A"
TYPICAL FOR SIDE 4



SECTION "B-B"
TYPICAL FOR SIDES 1, 2 & 3

COST ESTIMATE

| | | |
|----|---------------------------------|---------------|
| 7 | RAILROAD TIES (33" EA) | 297.00 |
| 8 | 90° METAL ANGLE BENDS (9.99 EA) | 79.92 |
| 10 | METAL FLAT STRAPS (4.99 EA) | 49.90 |
| 74 | BAGS OF GARDEN SOIL (3.79 EA) | 280.46 |
| | 5% MISCELLANEOUS | 35.36 |
| | TAX | 52.00 |
| | <u>TOTAL:</u> | <u>794.64</u> |
| | <u>SAY: 800.00</u> | * * |

* Estimate done in Nov 2022;
prices may have increased.

HILLIARD TOWN COUNCIL MEETING

Hilliard Town Hall / Council Chambers
15859 West County Road 108
Post Office Box 249
Hilliard, FL 32046

TOWN COUNCIL MEMBERS

John P. Beasley, Mayor
Kenny Sims, Council President
Lee Pickett, Council Pro Tem
Joe Michaels, Councilman
Jared Wollitz, Councilman
Dallis Hunter, Councilman

ADMINISTRATIVE STAFF

Lisa Purvis, Town Clerk
Richie Rowe, Public Works Director
Gabe Whittenburg, Parks & Rec Director

TOWN ATTORNEY

Christian Waugh

MINUTES

THURSDAY, FEBRUARY 16, 2023, 7:00 PM

NOTICE TO PUBLIC

Anyone wishing to address the Town Council regarding any item on this agenda is requested to complete an agenda item sheet in advance and give it to the Town Clerk. The sheets are located next to the printed agendas in the back of the Council Chambers. Speakers are respectfully requested to limit their comments to three (3) minutes. A speaker's time may not be allocated to others.

PLEDGE OF CIVILITY

WE WILL BE RESPECTFUL OF ONE ANOTHER
EVEN WHEN WE DISAGREE.
WE WILL DIRECT ALL COMMENTS TO THE ISSUES.
WE WILL AVOID PERSONAL ATTACKS.
"Politeness costs so little." – ABRAHAM LINCOLN

CALL TO ORDER

PRAYER & PLEDGE OF ALLEGIANCE

ROLL CALL

PRESENT

Mayor John Beasley
Council President Kenny Sims
Council Pro Tem Lee Pickett
Councilman Jared Wollitz
Councilman Dallis Hunter
Councilman Joe Michaels

MAYOR

To call on members of the audience wishing to address the Council on matters not on the Agenda.

No public wish to address the Council.

REGULAR MEETING

ITEM-1

Additions/Deletions to Agenda

Item-7 Town Council to discuss the Town Clerk's Duties and Responsibilities.

Motion made by Councilman Wollitz, Seconded by Council Pro Tem Pickett.
Voting Yea: Council President Sims, Council Pro Tem Pickett, Councilman Wollitz, Councilman Hunter, Councilman Michaels

Item-8 Town Council to reset the Joint Workshop to discuss the Land Development Regulations.

Motion made by Councilman Wollitz, Seconded by Council Pro Tem Pickett.
Voting Yea: Council President Sims, Council Pro Tem Pickett, Councilman Wollitz, Councilman Hunter, Councilman Michaels

Motion made to delete Item-3 from the agenda.

Motion made by Councilman Wollitz, Seconded by Council President Sims.
Voting Yea: Council President Sims, Council Pro Tem Pickett, Councilman Wollitz, Councilman Hunter, Councilman Michaels

Item-9 Town Council to discuss paying hourly employees for time spent working the Clean-Up.

Motion made by Council President Sims, Seconded by Councilman Wollitz.
Voting Yea: Council President Sims, Council Pro Tem Pickett, Councilman Wollitz, Councilman Hunter, Councilman Michaels

ITEM-2 Town Council review of the requested First Quarter FY 2021/2022 & FY 2022/2023 Water & Sewer Fund Financial Reports.
Lisa Purvis, MMC – Town Clerk

Town Clerk Lisa Purvis explained item and advised other funds financial statements to follow.

ITEM-3 Resolution No. 2023-05
A Resolution of the Town Council of the Town of Hilliard, Florida, a Municipal Corporation amending Resolution No. 2022-08, amending Water and Sewer usage rates; adding a fee for Development Investigation Applications; adding a deposit in addition to consultant cost plus 10%; for the Town of Hilliard; and providing for an effective date.
Mayor Beasley

Town Council to adopt Resolution No. 2023-05 amending the Water and Sewer usage rates, adding a fee for Development Investigation Applications, and adding a deposit in addition to consultant cost plus 10%.

Lisa Purvis, MMC - Town Clerk

Item Deleted

ITEM-4 Town Council review and approval of authority to deliver Non-Binding Letters of Intent to purchase the property adjacent to the North End of the Hilliard Airpark.
Christian Waugh – Town Attorney

Town Attorney Christian Waugh explained item.

Motion made by Council President Sims, Seconded by Council Pro Tem Pickett.
Voting Yea: Council President Sims, Council Pro Tem Pickett, Councilman Wollitz, Councilman Hunter, Councilman Michaels

- ITEM-5 Town Council approval of the Minutes from the January 31, 2023, Joint Workshop, the February 2, 2023, Public Hearing & Regular Meeting, the February 2, 2023, Workshop, and the February 6, 2023, Workshop.
Lisa Purvis, MMC - Town Clerk

Motion made by Council Pro Tem Pickett, Seconded by Councilman Hunter.
Voting Yea: Council President Sims, Council Pro Tem Pickett, Councilman Wollitz, Councilman Hunter, Councilman Michaels

- ITEM-6 Town Council approval of Court Surfaces, Payable through February 8, 2023, Project Name: Oxford Street Park Phase IV, FRDAP Project No. A21011 at the Hilliard Oxford Street Park in the amount of \$7,005.00.
FDEP FRDAP 100% GRANT FUNDED PROJECT LUMP SUM GRANT \$200,000.00

Motion made by Council Pro Tem Pickett, Seconded by Councilman Wollitz.
Voting Yea: Council President Sims, Council Pro Tem Pickett, Councilman Wollitz, Councilman Hunter, Councilman Michaels

ADDED ITEMS

- ITEM-7 Discussion of the Town Clerk's Authority and Duties as the Chief Administrator Officer of the Town of Hilliard, responsible to the Council for the Administration of all Town affairs placed in the Clerk's charge by or under the Charter.
Lisa Purvis, MMC – Town Clerk

Motion made to set a Workshop for Monday, February 27, 2023, at 6:30 p.m., and for the cameras to continue as they are.

Motion made by Council President Sims, Seconded by Councilman Hunter.
Voting Yea: Council President Sims, Council Pro Tem Pickett, Councilman Wollitz, Councilman Hunter, Councilman Michaels

- ITEM-8 Town Council to reschedule the Joint Workshop to discuss the Land Development Regulations from Monday, February 27, 2023, to Tuesday, February 28, 2023, at 6:30 p.m.

Motion made by Council President Sims, Seconded by Council Pro Tem Pickett.
Voting Yea: Council President Sims, Council Pro Tem Pickett, Councilman Wollitz, Councilman Hunter, Councilman Michaels

- ITEM-9 Town Council to pay hourly employees that work at the Hilliard Town Clean up a maximum of four hours.

Motion made by Council President Sims, Seconded by Councilman Wollitz.
Voting Yea: Council President Sims, Council Pro Tem Pickett, Councilman Wollitz, Councilman Hunter, Councilman Michaels

James Davis, 37375 Mill Street, Hilliard, states the employees should be paid for their time.

ADDITIONAL COMMENTS

PUBLIC

No comment.

MAYOR & TOWN COUNCIL

Council President Sims states OREMC has lost several employees recently and one of the services was about Mental Health Awareness and the importance of checking in with people.

Mayor Beasley reminds everyone of the car show that will be held on March 4, 2023, at Journey Church, and also of the HAC Meeting that will be held on March 16, 2023 at 6:00 p.m.. Further states the Nassau County Economic Development Board has invited the Town of Hilliard to join them in Tallahassee for Rural Counties Day on April 26, 2023, from 10:00 a.m. to 2:00 p.m., to promote the Town of Hilliard's Legislative Appropriation Funds Request.

Council President Sims states he is glad to see unfamiliar faces as well as familiar faces in the crowd.

ADMINISTRATIVE STAFF

PRESENT

Town Clerk, Lisa Purvis

Public Works Director, Ritchie Rowe

ABSENT

Parks & Recreation Director, Gabe Whittenburg

Town Clerk Lisa Purvis states that the Legislative Appropriations Funds Requests were submitted to Tallahassee prior to 5:00 p.m. on Monday, February 13, 2023. Further states Doug Adkins did approve for the Town to use his lobbyist to promote all six of the Town of Hilliard Legislative Appropriation Fund Requests, so the Town of Hilliard submitted Mr. Adkins' West Sixth Street Paving Project as the Town of Hilliard's seventh request.

TOWN ATTORNEY

No comment.

ADJOURNMENT

Motion made to adjourn at 7:28 p.m.

Motion made by Council President Sims, Seconded by Councilman Hunter.

Voting Yea: Council President Sims, Council Pro Tem Pickett, Councilman Wollitz, Councilman Hunter, Councilman Michaels

Approved this _____ day of _____, _____ by the Hilliard Town Council,
Hilliard, Florida.

Kenneth A. Sims, Sr.
Council President

ATTEST:

Lisa Purvis
Town Clerk

APPROVED:

John P. Beasley
Mayor



CXT Incorporated
901 N Highway 77
Hillsboro, TX 76645

Invoice

Bill-To-Party
 Town of Hilliard
 15859 CR 108
 Hilliard FL 32046

Ship-To-Party
 Town of Hilliard
 Town Hall Park
 32046 W 1st Street
 Hilliard FL 32046

Remit-To
Remitting by check:
 CXT Incorporated
 PO BOX 676208
 DALLAS TX 75267-6208

Remitting by ACH or Wire Transfer:
 Beneficiary: CXT Incorporated
 Beneficiary Bank: PNC Bank, NA
 Pittsburgh, PA
 Account: 1077766885
 ABA / Routing: 043000096

Information
Invoice No. 90057190
Invoice Date 02/23/2023
Delivery No. 80109730
Sales Order No. 431554
Customer PO No. JCHA101G601
Customer 1005298
Customer Name Town of Hilliard
Term of Payment Net 30
Incoterm DAP Delivered at Place

| Item | Material/Description | Quantity | Unit Price | Value |
|---------------------------|----------------------|----------|------------|-----------|
| 10 | CR-1677
CR-1677 | 1 EA | 82,217.73 | 82,217.73 |
| Total Before Tax | | | | 82,217.73 |
| Total Amount (USD) | | | | 82,217.73 |

L.B. Foster Standard Terms and Conditions apply to this transaction and are available on our website at:
http://www.lbfoster.com/Index_Corp_Business_Units-1.asp

MAE CONTRACTING LLC

542749 US Highway 1
Callahan, FL 32011 US
+1 9045072632
cethridge@maecontracting.site
<https://www.facebook.com/maecontracting20>



Invoice

BILL TO
Gabe Whittenburg
Town of Hilliard
15859 West CR 108
Hilliard, FL 32046

INVOICE 2023-05-Commercial
DATE 02/20/2023
TERMS Due on receipt
DUE DATE 02/20/2023

INVOICE
Play Ground Area

| DESCRIPTION | AMOUNT |
|--|--------------------------------|
| Provide and install (1) 18x40x8 | 10,936.00 |
| Provide and install 8x8 posts | |
| Cut (5) 3x3 holes in concrete | |
| ----- | |
| We appreciate your business. | SUBTOTAL 10,936.00 |
| Please make checks out to MAE Contracting, LLC | TAX 0.00 |
| | TOTAL 10,936.00 |
| ----- | |
| | BALANCE DUE \$10,936.00 |

MAE CONTRACTING LLC

542749 US Highway 1
Callahan, FL 32011 US
+1 9045072632
cethridge@maecontracting.site
<https://www.facebook.com/maecontracting20>



Invoice

BILL TO
Gabe Whittenburg
Town of Hilliard
15859 West CR 108
Hilliard, FL 32046

INVOICE 2023-06-Commercial
DATE 02/20/2023
TERMS Due on receipt
DUE DATE 02/20/2023

INVOICE
Pool Area

| DESCRIPTION | AMOUNT |
|--|--------------------------------|
| Provide and install (1) 24x48x8 | 17,187.00 |
| Provide and install 8x8 posts | |
| Cut (10) 3x3 holes in cool deck | |
| Adjustment made for error on contractor | -1,920.00 |
| ----- | |
| We appreciate your business. | SUBTOTAL 15,267.00 |
| Please make checks out to MAE Contracting, LLC | TAX 0.00 |
| | TOTAL 15,267.00 |
| ----- | |
| | BALANCE DUE \$15,267.00 |