

**Loxahatchee River District
Island Country Estates Low Pressure Force Main System**

**Addendum Number 2
August 30, 2019**

This addendum is issued as a result of additional clarifications regarding the project. The following clarifications and modifications are hereby made to the bidding documents for the above referenced project.

Acknowledge receipt of the addendum by inserting its number and date in Article 2 Item No. 12 of the bid. Failure to do so may subject the bidder to disqualification.

NEW BID DEADLINE

1. The bid deadline is hereby changed to October 3, 2019 at 2:00 pm. Any questions of clarifications must be submitted in writing to either Christine Miranda at Christine.miranda@holtzconsulting.com or Kaitlin Wood at Kaitlin.wood@holtzconsulting.com by close of business Wednesday, September 25, 2019 (5 p.m.) for inclusion in addendum prior to the revised bid opening date.

CHANGES TO CONTRACT DOCUMENTS

- Item 2-1** **ATTACHED** to this sheet are the mandatory Pre-Bid Meeting Minutes.
- Item 2-2** **REPLACE** the originally issued drawing set with the attached drawings.
- Item 2-3** **REPLACE** the originally issued bid form with the attached bid form.
- Item 2-4** **REPLACE** originally issued Specification **Section 01200** with the attached.
- Item 2-5** The Engineer's estimate for this project has been **REVISED** to \$590,000.
- Item 2-6** The following are the questions asked during the pre-bid meeting or subsequently thereafter and corresponding answers for each question.

RESPONSES TO BIDDER'S QUESTIONS

1. Is locate wire required from beginning to end?

No, locate wire is not required.

2. The area is very wet and low lying which could cause problems for installation if there are hurricanes/storms. Will time accommodations be made in the event of storm events?

The District and Engineer will work to accommodate the Contractor's schedule in the event that large storm events cause issues for installation.

3. Boring vs. HDD: If Contractor elects to directional drill entire neighborhood, how will this impact the pipe sizing?

If project is installed via open cut, pipe will be 2" PVC everywhere with 3" HDPE installed at bores beneath roadways. If project is entirely installed via directional drill, piping installed will be a combination of 2-3" HDPE.

4. Will LRD be providing any sort of support for the tie in to the existing main?

LRD will provide assistance with shutdown of the main. However, they will not provide any sort of vac truck assistance.

5. In what line item does Contractor get compensated for sod restoration?

Cost of sod restoration shall be included in unit price of pipe.

6. How thick is the existing asphalt that is being milled? If at any point the 1.5" milling is performed and rock is exposed, will the Contractor be required to pave within 24 hours?

The existing asphalt is 1" thick. The drawings have been revised to reflect milling the 1" of existing asphalt and replacement with 1.5" of SP-12.5 asphalt. Pavement resurfacing should commence directly after milling operations are complete in the neighborhood, however due to the time to mill the entire neighborhood this time frame may be longer than 24 hours.

7. Does Pay Item No. 6 include all fittings for the force main?

Yes. Pay item No. 6 is inclusive of all fittings required for complete successful installation of the force main. No additional pay item will be included for payment.

8. For the sections of piping that are directional drilled (HDPE), will the contractor be required to use compression fittings or fused fittings?

Fused HDPE fittings will be required. For services, a 2" x 2" x 1.5" HDPE tee with a 16" stub-out shall be required. The fused tee shall attach to the service lateral with a brass ball valve with pack joint x pack joint coupling B777-XXX-NL style with stainless steel stiffener. This shall be required at all isolation and service valves.

9. There is a property on Canaan Way that shows a service located near a preservation easement. Is this correct? Will the Contractor need to work within the Preservation easement?

The location of the terminus of the service will be outside of the preservation easement, such that the Contractor will not need to work within the preservation easement.

10. The subject project calls for 2-1/2" HDPE Directional Bores. My supplier is telling me that 2-1/2" HDPE is not made. Please clarify if you want 2" or 3" HDPE.

All directional bores will be constructed utilizing 3" HDPE.

11. Regarding the asphalt paving spec; will the District accept a TLC in lieu of a TLA?

Asphalt types and mixtures must be in accordance with Martin County Standards and Specifications.

12. Please confirm striping is to be calculated per existing layout

Striping will be per the existing layout. No new additional striping is proposed for the project.

13. Technical specifications, sheet 01200-10 shows "milling and resurfacing areas shall not overlap areas included in the Asphalt Pavement Replacement bid item. Please confirm this sentence is to be disregarded, or clarify where is the reference "Asphalt Pavement Replacement" to be installed.

The drawings have been revised and now reflect specific areas in which point repairs of the existing asphalt and base will be removed and replaced. Please refer to the revised drawings.

END OF ADDENDUM NO. 2



HOLTZ CONSULTING ENGINEERS, INC

Prebid Meeting Agenda

Client: Loxahatchee River District
Project: Island Country Estates Low Pressure Force Main System
Date: 07/23/2019
Time: 2:00 PM
Engineer: Holtz Consulting Engineers, Inc.

1. Introduction and Sign-In:
2. Bid Opening – August 6, 2019 at 2:00 PM.
3. Questions asked at today’s pre-bid meeting will be recorded and will be responded to in writing in an addendum unless the questions can be answered directly by way of reference to specific specification section or plan sheet.
4. Award will be made to the lowest responsive and responsible bidder submitted within budget.
5. Summary of work (per Section 01000):
 - A. Installation of approximately 5,500 linear feet of 2-inch PVC low-pressure force main (or a combination of 2-inch and 3-inch HDPE) with service connections, cleanouts, valves and other appurtenances per District standards. This will be installed via either open-cut or horizontal directional methods along SE Country Estates Way, SE Peach Way, SE Canaan Way, and SE Red Apple Lane.
 - B. Connection of proposed low-pressure force main to the existing 2.5-inch low pressure force main located at the west side of Loxahatchee River Road.
 - C. Mill and resurfacing of all paved areas in the development.
 - D. Restoration of all affected areas to existing conditions or better.
 - E. Testing and startup services.
 - F. Restoration of all areas affected by construction activities to existing conditions or better.



6. Mandatory that all contractors planning to submit Bids on this Project attend this meeting or listen to the complete tapes of the prebid conference and sign a certification attesting that they have listened to and understood the contents of the meeting as recorded. The tapes will be available for listening at the District's Engineering Office at 2500 Jupiter Park Drive, Jupiter, Florida 33458, between the hours of 9:00 a.m. and 5:00 p.m. local time, Monday through Friday (except legal holidays) through and including August 6, 2019.
7. Bids are to be submitted to the office of the District – same location as this meeting – 2500 Jupiter Park Drive, Jupiter, FL 33458. Bids will be opened in the Board Room.
8. All blanks on the Bid Forms must be printed in blue or black ink or typed.
9. All Addenda must be acknowledged.
10. A single Bid shall be submitted for all portions of the Work.
11. Bid requirements:
 1. Instructions to Bidders – Article 1
 2. Proposal – Article 2
 - Bid form
 - Article 2a- Questionnaire
 - List of subcontractors. If work is to be self-performed, please indicate so.
 - Sworn Statement on Public Entity Crimes
 - Condensed Financial Statement
 3. Bid Security – Article 3
12. No separate line items for sod, trees and shrubbery, irrigation, etc. restoration costs. Any restoration costs are to be included in the unit price for the low- pressure force main. No separate payment shall be made for these items. Roadway Items have their own line items.
13. Mobilization and Demobilization line item shall not exceed 10% of the total bid.
14. Provide public construction bonds in the full amount of the contract price.
15. Adhere to all requirements included within the permits from Florida Department of Environmental Protection (FDEP) and Martin County Engineering. Contractor is responsible for obtaining a Martin County ROW permit for the tie-in on Loxahatchee River Road. A copy of the FDEP permit is provided in the Appendix.



17. Project Schedule:
 - A. Contract time is 120 calendar days to reach substantial completion and 65 calendar days from substantial to reach final completion. Substantial completion is considered the point at which all tasks necessary to receive FDEP clearance to place the system into service have been completed.
 - B. Liquidated damages are \$100 per day for failure to meet the substantial completion and \$75 per day for failure to meet final completion milestones.
18. Any questions or clarifications must be submitted in writing to HCE by close of business Friday, July 30, 2019 by 5 p.m. for inclusion in addendum.
19. Current LRD standards require the use of a live-wire tracing system during horizontal directional drilling operations. Due to the size of the proposed low-pressure force main, this method of tracking will not be required on this project.
20. “Missile” or “Mole” type installation methods are not permitted to be used on this project as an alternative to horizontal directional drilling.
21. The Engineering Construction Cost Estimate is approximately \$512,000.

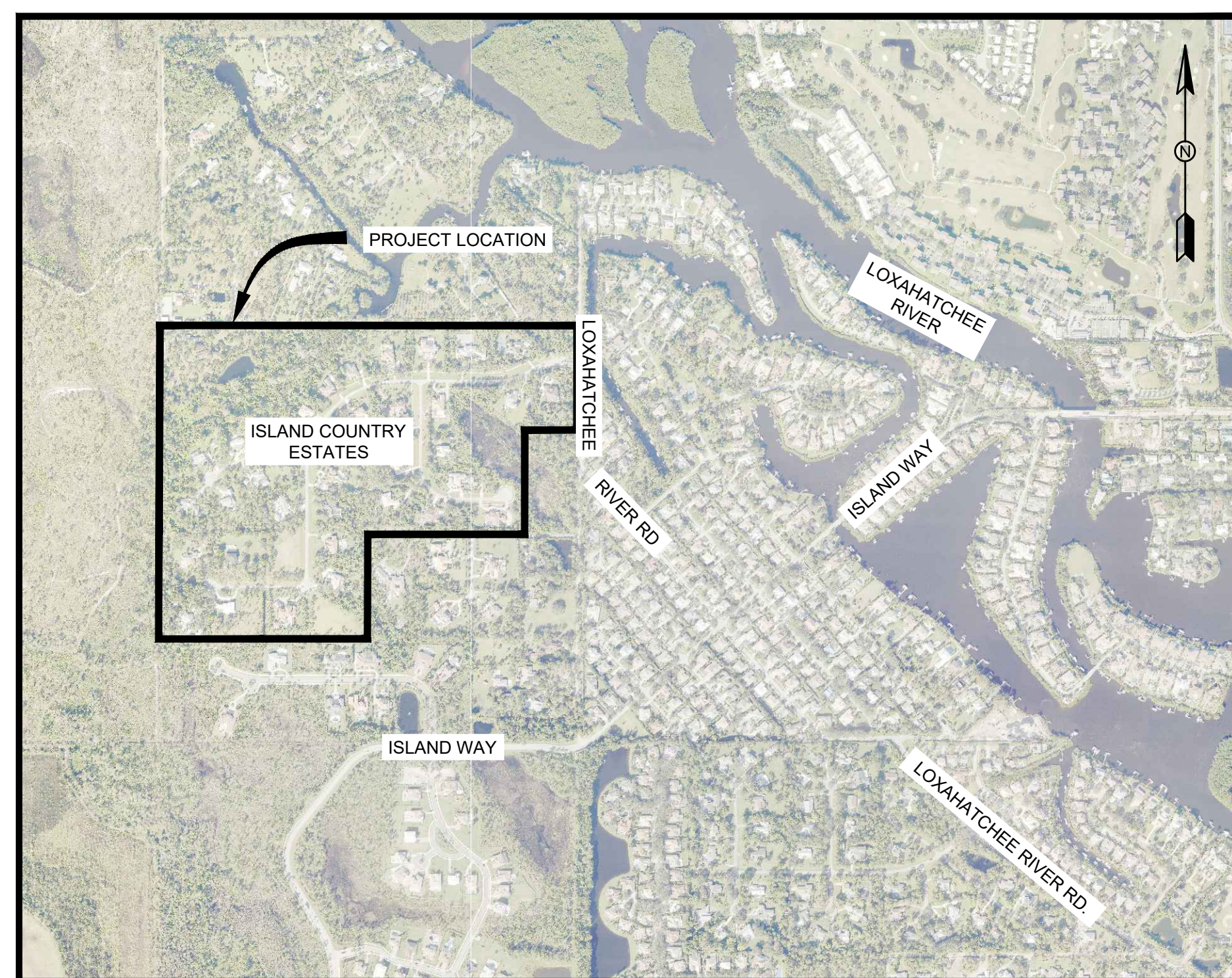
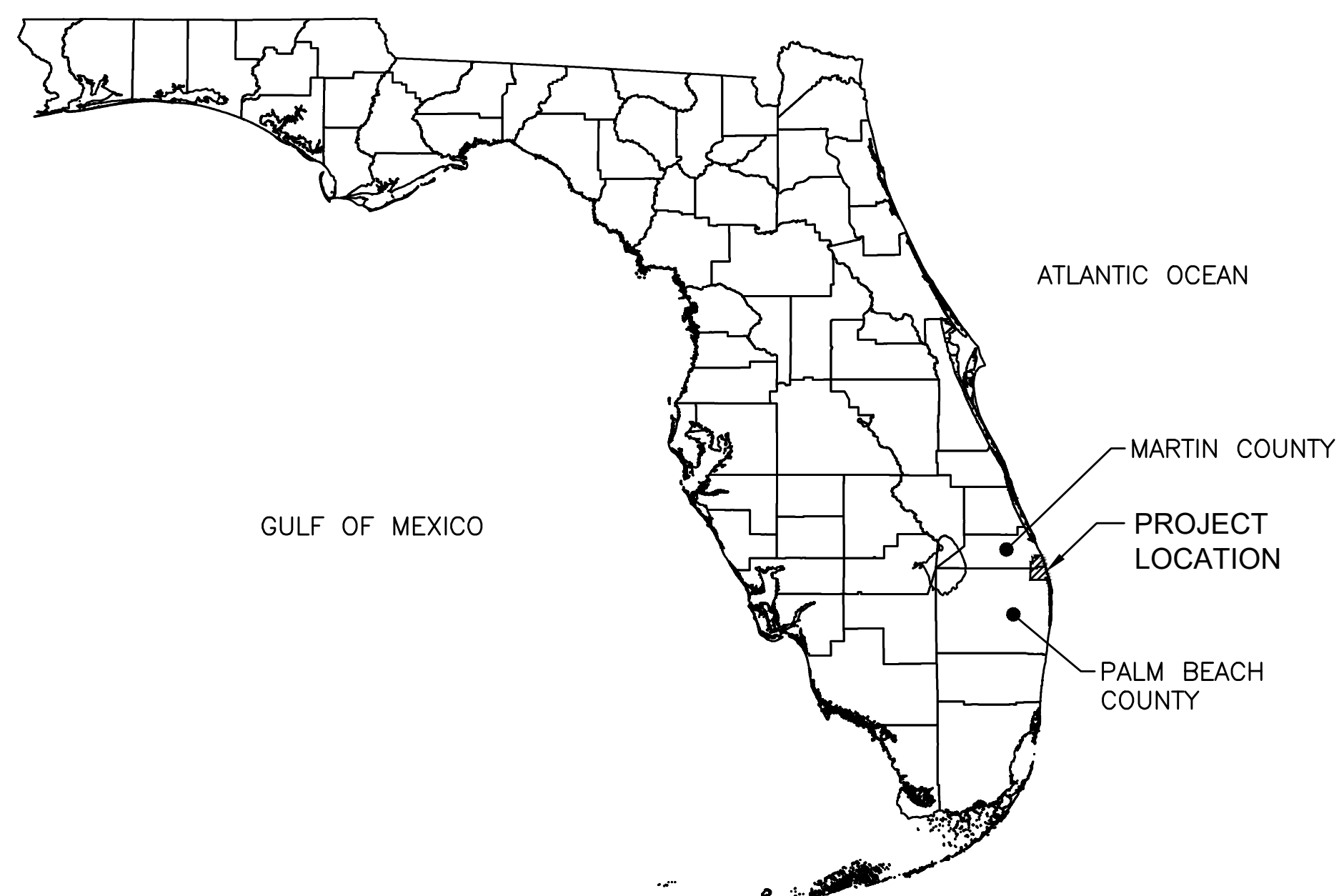


ISLAND COUNTRY ESTATES LOW PRESSURE FORCE MAIN

PREPARED FOR
LOXAHATCHEE RIVER DISTRICT

MARTIN COUNTY, FLORIDA

SECTION 21, TOWNSHIP 40S, RANGE 42E



VICINITY MAP

NTS

**LOXAHATCHEE RIVER
DISTRICT GOVERNING BOARD**

CHAIRMAN	DR. MATT H. ROSTOCK
VICE CHAIRMAN	STEPHEN B. ROCKOFF
TREASURER	GORDON M. BOGGIE
SECRETARY	HARVEY M. SILVERMAN
ASST. SEC'Y/TREAS.	JAMES D. SNYDER

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C-2	PLAN SHEET - SE COUNTRY ESTATES WAY - STA. 6+40 TO STA. 14+00
C-3	PLAN SHEET - SE COUNTRY ESTATES WAY & SE PEACH WAY
C-4	PLAN SHEET - SE COUNTRY ESTATES WAY & SE RED APPLE LANE
C-5	PLAN SHEET - SE COUNTRY ESTATES WAY - STA. 28+00 TO STA. 34+95
C-6	PLAN SHEET - SE PEACH WAY
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ISLAND COUNTRY ESTATES LOW PRESSURE FORCE MAIN

JUNE 2019

FOR BIDDING PURPOSES ONLY
NOT FOR CONSTRUCTION

HOLTZ CONSULTING ENGINEERS, INC.
HCE 270 SOUTH CENTRAL BLVD., SUITE 207
JUPITER, FLORIDA 33458
PH. (561) 575-2005
Cert. No. 26960

CHRISTINE J. MIRANDA, P.E.
License No. 60906

G-1

GENERAL ABBREVIATIONS

ABND	Abandon or Abandoned	MAX	Maximum
ACP	Asbestos Cement Pipe	MB	Mailbox
ADD'L	Additional	MECH	Mechanical
AL, Alum	Aluminum	MH	Manhole
APPROX	Approximate	MIN	Minimum
ARV	Air Release Valve	MISC	Miscellaneous
ASP, Asph	Asphalt	MJ	Mechanical Joint
BFP	Backflow Preventer	N/D	Nail and Disk
BFV	Butterfly Valve	No	Number
B/L	Base Line	NTS	Not to Scale
BLDG	Building	OC,O/C	On Center
BM	Benchmark	OD	Outside Diameter
BO	Blowoff	OHW	Overhead Wire
BOP	Bottom of Pipe	ORB	Official Records Book
CATV	Cable Television	PB	Plat Book
CB	Catch Basin	PGL	Profile Grade Line
CO	Cleanout	PVC	Polyvinyl Chloride/Polyvinyl Chloride Pipe
CL	Center Line	RC	Reinforced Concrete
CLF	Chain Link Fence	RCP	Reinforced Concrete Pipe
CIP	Cast Iron Pipe / Cast in Place	RCW	Reclaimed Water
CMP	Corrugated Metal Pipe	RED	Reducer
CONC	Concrete	REINF	Reinforce/Reinforced
CONST	Construct/Construction	RJ	Restrained Joint
DE	Drainage Easement	RWM	Raw Water Main
DI	Ductile Iron	R/W,ROW	Right of Way
DIP	Ductile Iron Pipe	S=	Slope (FT/FT)/(Rise/Run)
DIA	Diameter	SAN	Sanitary
DR	Dimensional Ratio/Drainage	SCH/SCHED	Schedule
DWY	Driveway	SEC	Section
EL	Elevation	SF	Silt Fence
EOP	Edge of Pavement	SP	Sample Point
ESMT	Easement	SS	Sanitary Sewer
EOW	Edge of Water	SS	Sanitary Sewer
EX, EXIST	Existing	STA	Station
FDOT	Florida Department of Transportation	TBM	Temporary Benchmark
FH	Fire Hydrant	TEMP	Temporary
FM	Force Main	TOB	Top of Bank
FND	Found	TON	Top of Nut
FNPT	Female Nominal Pipe Thread	TOP	Top of Pipe
FPL	Florida Power and Light	TOS	Toe of Slope
FW	Finished Water	TYP	Typical
GPS	Global Positioning System	UE	Utility Easement
GV	Gate Valve	UEC	Underground Electric Conduit
HB	Hose Bibb	UEE	Underground Electric
HDD	Horizontal Directional Drill	UGT	Underground Telephone
HDPE	High Density Polyethylene	UNK	Unknown
HYD	Hydrant	W/	With (Combined Form)
ID	Identification	WF	Wood Fence
INV	Invert/Invert Elevation	WM	Water Main or Water Meter
IRC	Iron Rod & Cap	WPB	Wire Pullbox
IRR	Irrigation	WTP	Water Treatment Plant
LAE	Limited Access Easement	WV	Water Valve
LF	Linear Feet	WWTP	Waste Water Treatment Plant
LP	Light Pole		
LS	Lift Station		
LSA	Landscape Area		

SURVEY ABBREVIATIONS & LEGEND

(C) = CALCULATED	(W) = WATER SERVICE
C.B.S. = CONCRETE BLOCK STRUCTURE	(L) = LANDSCAPE LIGHT
C.M.B. = COMMISSIONERS' MINUTES BOOK	(●) = LIGHT POLE
CMH = CONFLICT MANHOLE	(E) = ELECTRIC BOX
CONC. = CONCRETE	(W) = WATER METER
D.B. = DEED BOOK	(V) = WATER VALVE
F.H. = FIRE HYDRANT	(F) = FIRE HYDRANT
FND. = FOUND	(I) = IRON PIPE
F.P.L. = FLORIDA POWER & LIGHT	(I.R.) = IRON ROD
I.P. = IRON PIPE	(L.B.) = LICENSE BUSINESS
INV. = INVERT	(L.P.) = LIGHT POLE
I.R. = IRON ROD	(L.S.) = LICENSE SURVEY
LB = LICENSE BUSINESS	(M) = MEASURED
LP = LIGHT POLE	(M.H.W.) = MEAN HIGH WATER
LS = LICENSE SURVEY	(MON.) = MONUMENT
(M) = MEASURED	(O.R.B.) = OFFICIAL RECORD BOOK
M.H.W. = MEAN HIGH WATER	(P) = PLAT
MON. = MONUMENT	(P.B.) = PLAT BOOK
O.R.B. = OFFICIAL RECORD BOOK	(P.R.M.) = PERMANENT REFERENCE MONUMENT
(P) = PLAT	(R.O.W.) = RIGHT-OF-WAY
P.B. = PLAT BOOK	(RCP) = REINFORCED CONCRETE PIPE
P.R.M. = PERMANENT REFERENCE MONUMENT	(R.P.B.) = ROAD PLAT BOOK
R.O.W. = RIGHT-OF-WAY	(S) = SURVEY
RCP = REINFORCED CONCRETE PIPE	(S.L.P.) = STOP LIGHT POLE
R.P.B. = ROAD PLAT BOOK	(SMH) = SANITARY MANHOLE
(S) = SURVEY	(S.B.M.H.) = SOUTHERN BELL TELEPHONE MANHOLE
S.L.P. = STOP LIGHT POLE	(STMH) = STORM MANHOLE
SMH = SANITARY MANHOLE	(TB) = TRAFFIC BOX
S.B.M.H. = SOUTHERN BELL TELEPHONE MANHOLE	(T.L.P.) = TRAFFIC LIGHT POLE
STMH = STORM MANHOLE	(TV) = TELEVISION
(TB) = TRAFFIC BOX	(U.E.) = UTILITY EASEMENT
(T.L.P.) = TRAFFIC LIGHT POLE	(WP) = WOOD POLE
(TV) = TELEVISION	(WUP) = WOOD UTILITY POLE
(U.E.) = UTILITY EASEMENT	(WV) = WATER VALVE
(WP) = WOOD POLE	
(WUP) = WOOD UTILITY POLE	
(WV) = WATER VALVE	

LINETYPES

	EXISTING*	PROPOSED*
CABLE TV	--- CATV --- CATV ---	---
CENTER LINE	---	---
DRAIN	--- DR --- DR ---	--- DR --- DR ---
EASEMENT	---	---
ELECTRIC	--- E --- E ---	---
FENCE	--- X --- X ---	--- X --- X ---
FIBER OPTIC	--- FOC --- FOC ---	--- FOC --- FOC ---
FIRE MAIN	--- FIRE --- FIRE ---	--- FIRE --- FIRE ---
FORCE MAIN	--- FM --- FM ---	--- FM --- FM ---
GAS	--- GAS --- GAS ---	---
GUARDRAIL	---	---
IRRIGATION	--- IRR --- IRR ---	---
OVERHEAD UTILITIES	--- OHU --- OHU ---	---
RAILROAD TRACK	---	---
RAW WATER MAIN	--- RWM --- RWM ---	--- RWM --- RWM ---
RECLAIMED WATER MAIN	--- RCW --- RCW ---	--- RCW --- RCW ---
RIGHT-OF-WAY	---	---
SANITARY SEWER	--- S --- S --- S ---	--- S --- S --- S ---
SANITARY SEWER SERVICE	--- SS --- SS ---	--- SS --- SS ---
SILT FENCE	--- SF --- SF ---	--- SF --- SF ---
STORM DRAINAGE	--- ST --- ST --- ST ---	--- ST --- ST --- ST ---
TELEPHONE	--- T --- T --- T ---	---
TOP OF BANK	---	---
TOE OF SLOPE	---	---
TRAFFIC SIGNAL	--- TS --- TS --- TS ---	--- TS --- TS --- TS ---
TURBIDITY BARRIER	---	--- TB --- TB ---
UNKNOWN	--- UNK --- UNK ---	---
VACUUM SEWER	--- VS --- VS --- VS ---	--- VS --- VS --- VS ---
WATER MAIN	--- WM --- WM ---	--- WM --- WM ---
WATER SERVICE	--- WS --- WS ---	--- WS --- WS ---
WOOD FENCE	--- WF --- WF ---	--- WF --- WF ---

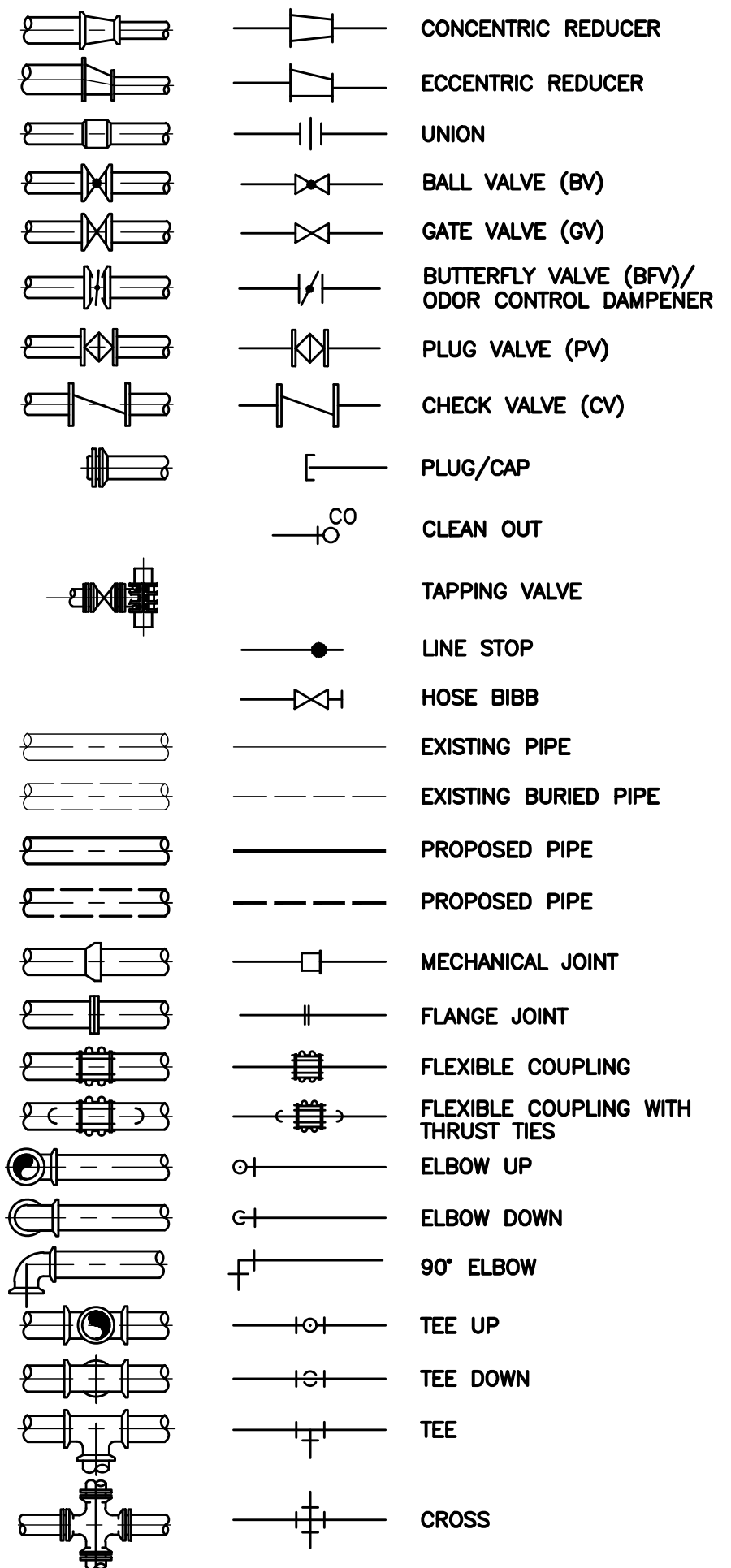
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LOW-PRESSURE SYSTEM LEGEND

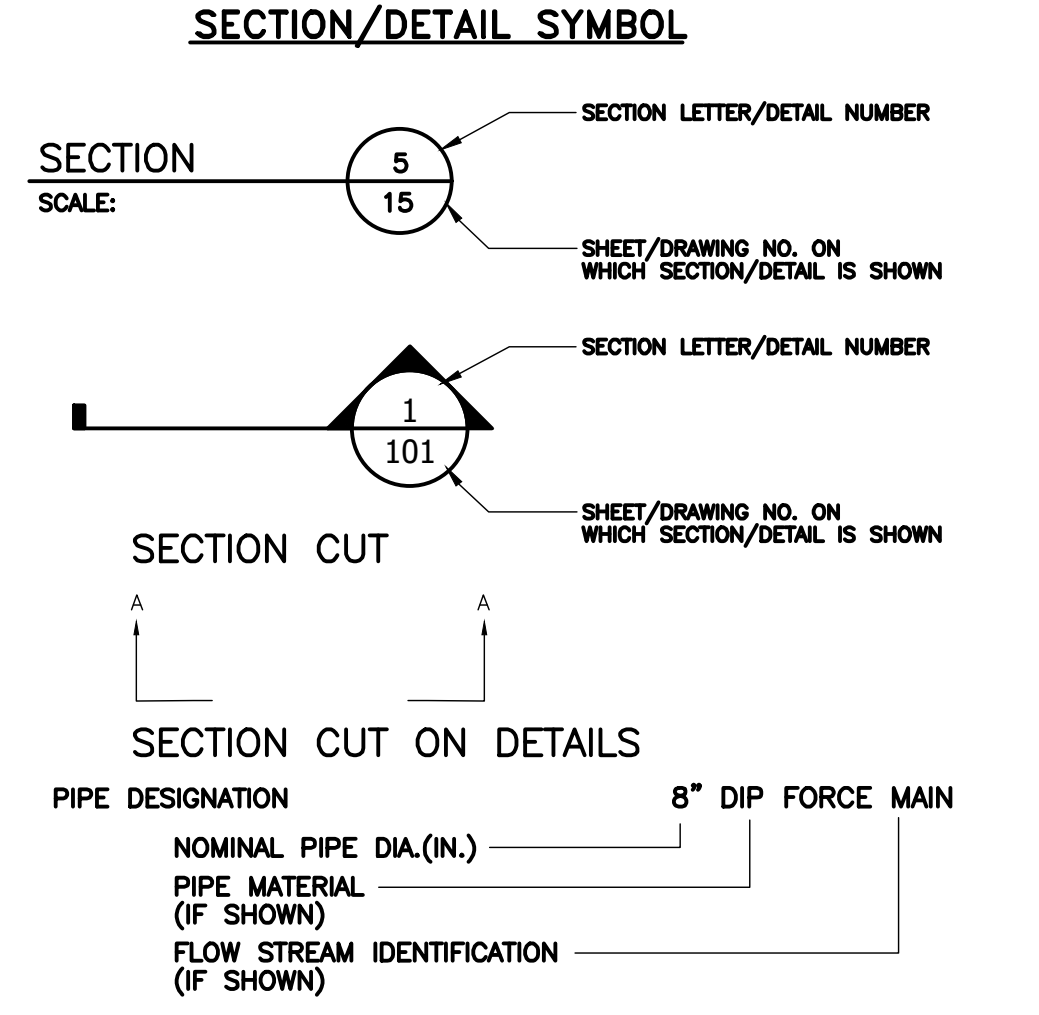
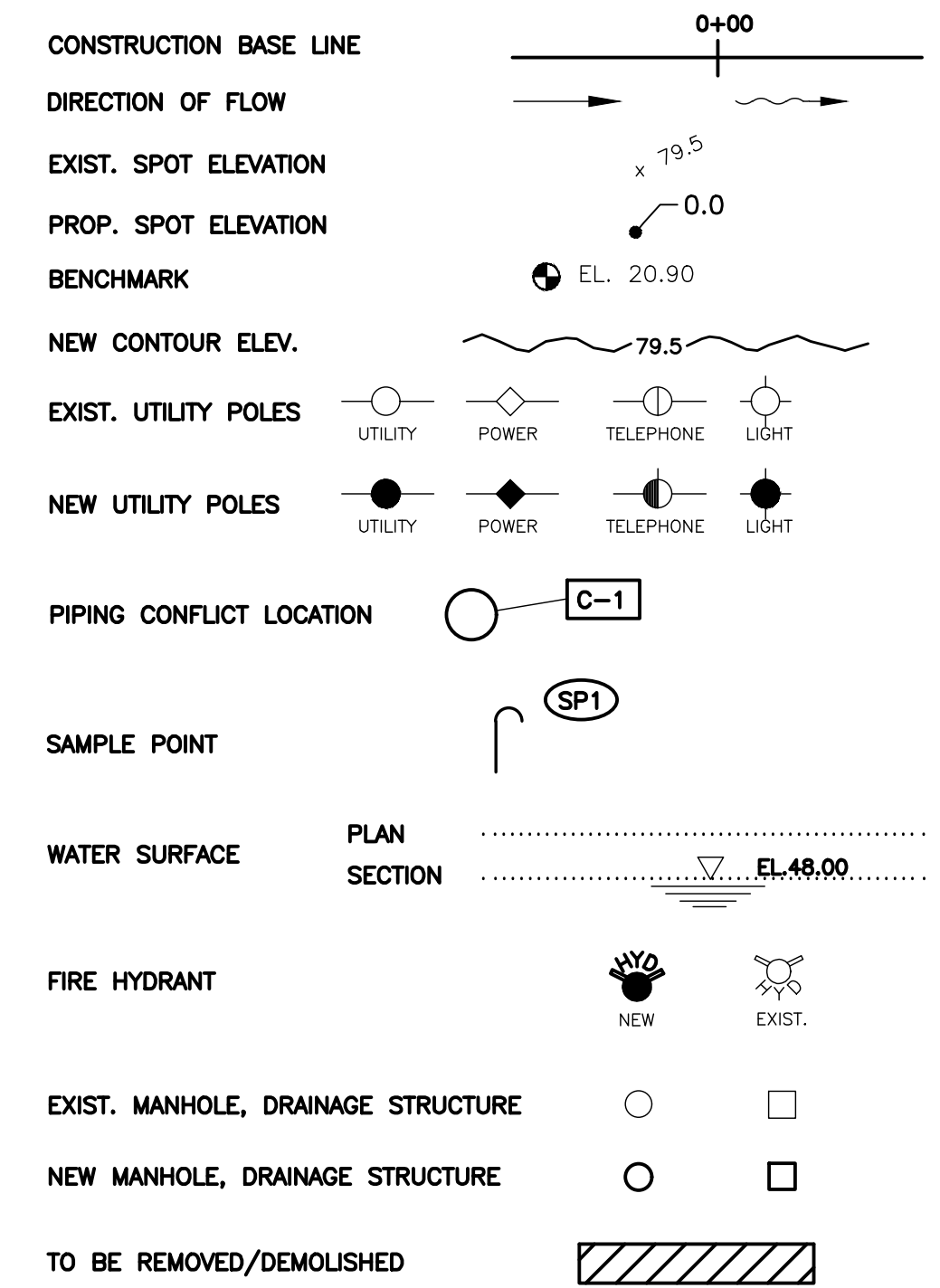


NOTE: ACTUAL LOCATION SHALL BE FIELD VERIFIED BY CONTRACTOR WITH PROPERTY OWNER, LRD STAFF, AND ENGINEER PRIOR TO CONSTRUCTION.

PIPING SYMBOLOGY



CIVIL SYMBOLOGY



Symbols:
 # Pounds/Number
 < Angle
 Ø Round/Diameter

NOTE: ELEVATIONS SHOWN ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88). TO CONVERT FROM NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88) TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (N.G.V.D. 29) ADD 1.50 FEET.



Know what's below. Call before you dig.

DATE	BY	REVISIONS

Date: 12-28-18
 Scale: AS NOTED
 Design By: CM
 Drawn By: RR
 Check By: DH

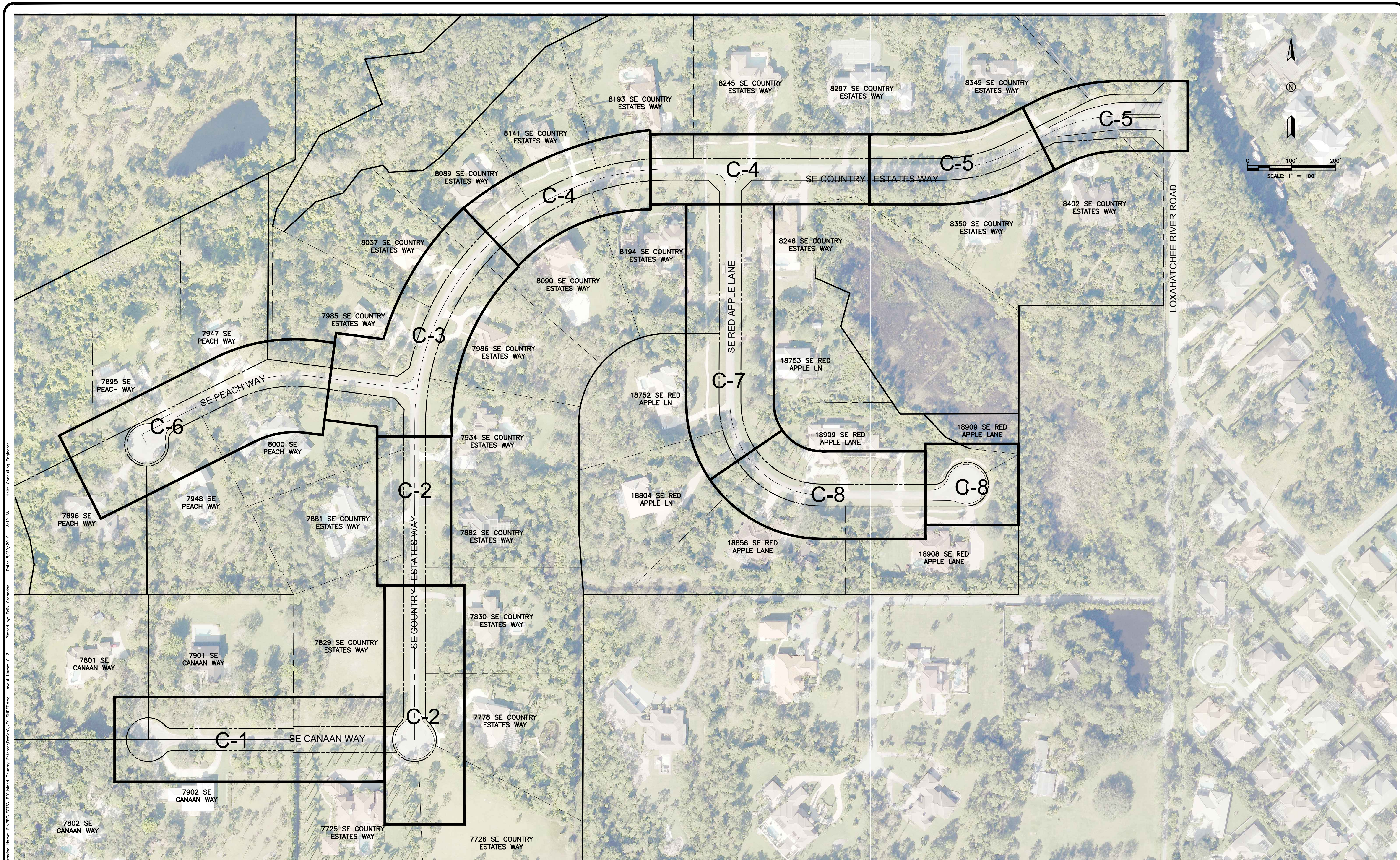
LOXAHATCHEE RIVER DISTRICT
 ISLAND COUNTRY ESTATES
 LOW PRESSURE FORCE MAIN

LEGEND

HOLTZ CONSULTING ENGINEERS, INC.
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 Cert. No. 26960

CHRISTINE J. MIRANDA, P.E.
 License No: 60906

G-2



DATE	BY	REVISIONS

Date: 12-28-18
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 Check By: DH

LOXAHATCHEE RIVER DISTRICT
 ISLAND COUNTRY ESTATES
 LOW PRESSURE FORCE MAIN

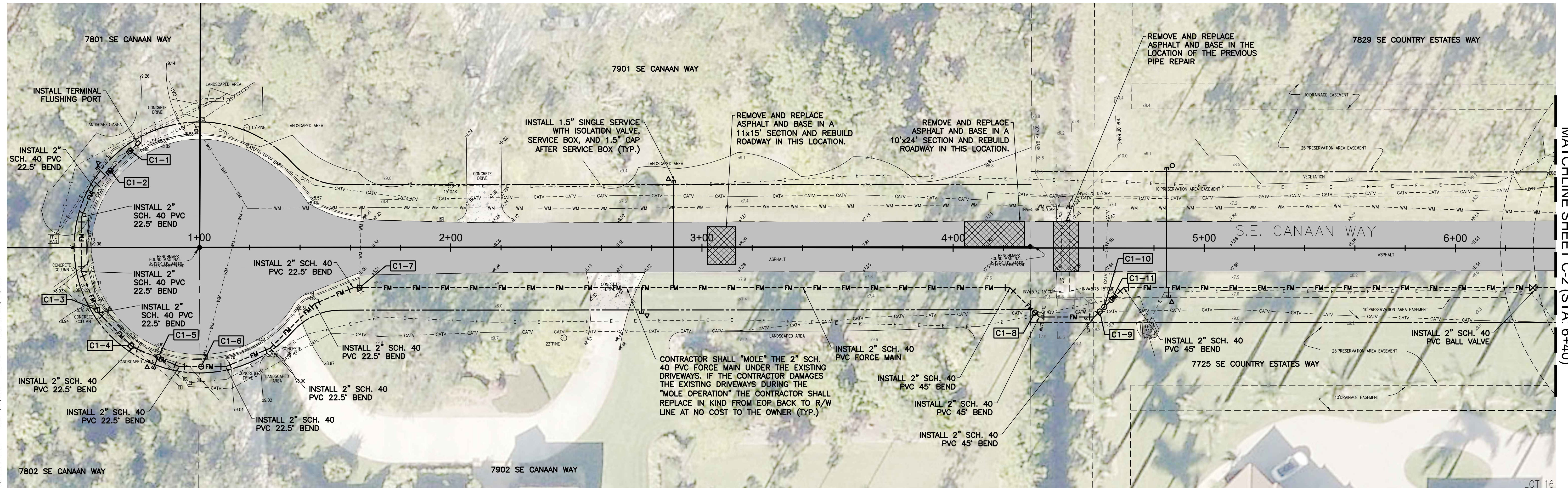
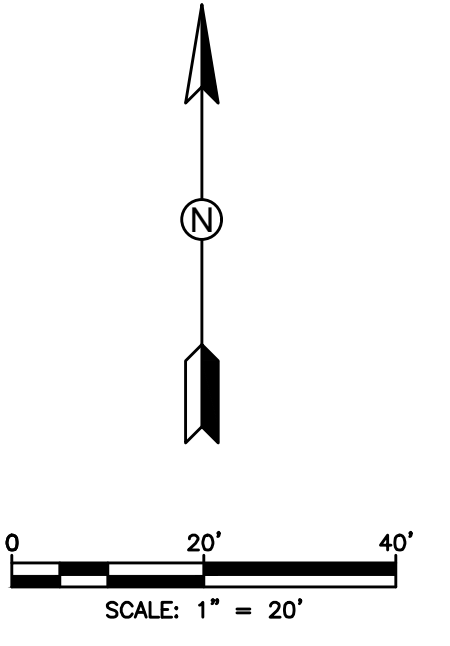
KEY SHEET

HOLTZ CONSULTING ENGINEERS, INC.

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G-3



MATCHLINE SHEET C-2 (STA: 6+40)

LOT 16

C1-1	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE
C1-2	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE
C1-3	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING BURIED ELECTRIC. MAINTAIN MINIMUM 12" CLEARANCE
C1-4	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING ATT TELEPHONE. MAINTAIN MINIMUM 12" CLEARANCE
C1-5	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV AND EXISTING BURIED ELECTRIC. MAINTAIN MINIMUM 12" CLEARANCE
C1-6	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE
C1-7	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE

C1-8	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV AND BURIED ELECTRIC. MAINTAIN MINIMUM 12" CLEARANCE
C1-9	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE
C1-10	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE
C1-11	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING BURIED ELECTRIC. MAINTAIN MINIMUM 12" CLEARANCE

- NOTES:**
1. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL UTILITIES IN THE VICINITY OF THE PROJECT WORK LOCATED AND VERIFIED PRIOR TO INITIATING WORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITIES DURING CONSTRUCTION.
 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING, REMOVING, AND REPLACING ALL UTILITY POLES AND LIGHT POLES AS NECESSARY.
 3. THE LOCATION OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL LOCATE AND FIELD VERIFY PRIOR TO CONSTRUCTION.
 4. SERVICE LOCATIONS SHOWN ARE APPROXIMATE ONLY. CONTRACTOR TO COORDINATE SERVICE LOCATION WITH PROPERTY OWNER, LRD, AND THE ENGINEER AFTER SEPTIC TANK IS LOCATED AND PRIOR TO CONSTRUCTION.
 5. CONTRACTOR SHALL COORDINATE ANY EXISTING VEGETATION REMOVAL WITH PROPERTY OWNER PRIOR TO BEGINNING CONSTRUCTION ON EACH PROPERTY.
 6. THE ROADS SHALL BE MILLED 1" AND RESURFACED WITH A 1-1/2" OF SP12.5 STRUCTURAL COURSE (TRAFFIC LEVEL A) WITH TACK COAT AT 0.05 GAL/SY AND RC-70 PRIME COAT AT 0.10 GAL/SY.
 7. DUE TO THE PROJECT'S CLOSE PROXIMITY TO THE LOXAHATCHEE RIVER, THE WATER TABLE ELEVATIONS ARE HIGHLY VARIABLE AND DEWATERING MAY BE NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY REQUIRED DEWATERING AND DETERMINING ALL REQUIREMENTS AND GOVERNMENTAL REGULATIONS PRIOR TO COMMENCEMENT OF WORK INCLUDING, BUT NOT LIMITED TO, METHODS OF DRAINAGE, REMOVAL OF WATER, DISPOSAL OF WATER AND PERMITTING.

LEGEND:

	EXISTING CONCRETE DRIVEWAY
	EXISTING STAMPED CONCRETE DRIVEWAY
	EXISTING PAVER DRIVEWAY
	MILL AND RESURFACE ASPHALT PAVEMENT (SEE NOTE 6)
	ROAD POINT REPAIRS

DATE	BY	REVISIONS

Date: 12-28-18
 Scale: AS NOTED
 Design By: CM
 Drawn By: RR
 Check By: DH

LOXAHATCHEE RIVER DISTRICT
 ISLAND COUNTRY ESTATES
 LOW PRESSURE FORCE MAIN

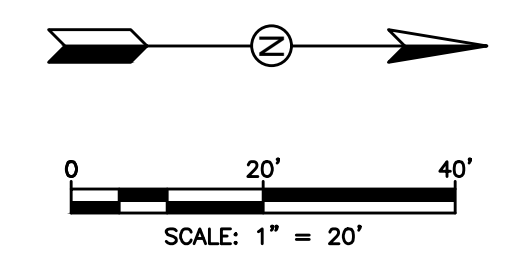
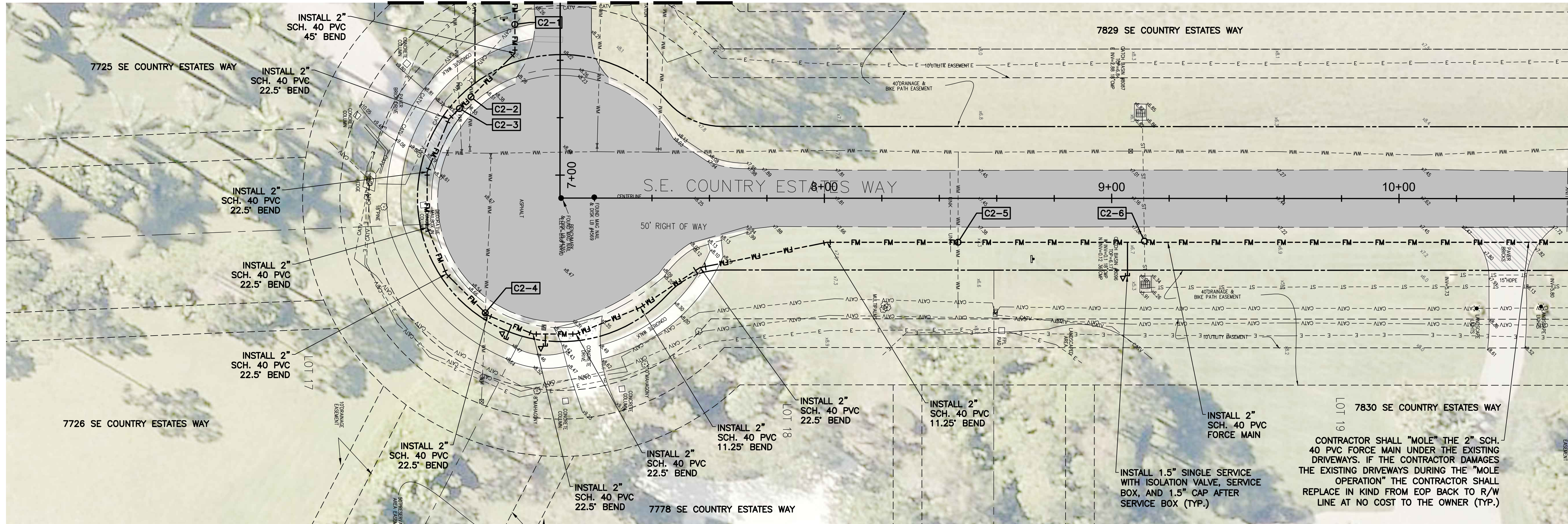
PLAN SHEET
 SE CANAAN WAY

HOLTZ CONSULTING ENGINEERS, INC.
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 PH. (561) 575-2005
 Cert. No. 26960

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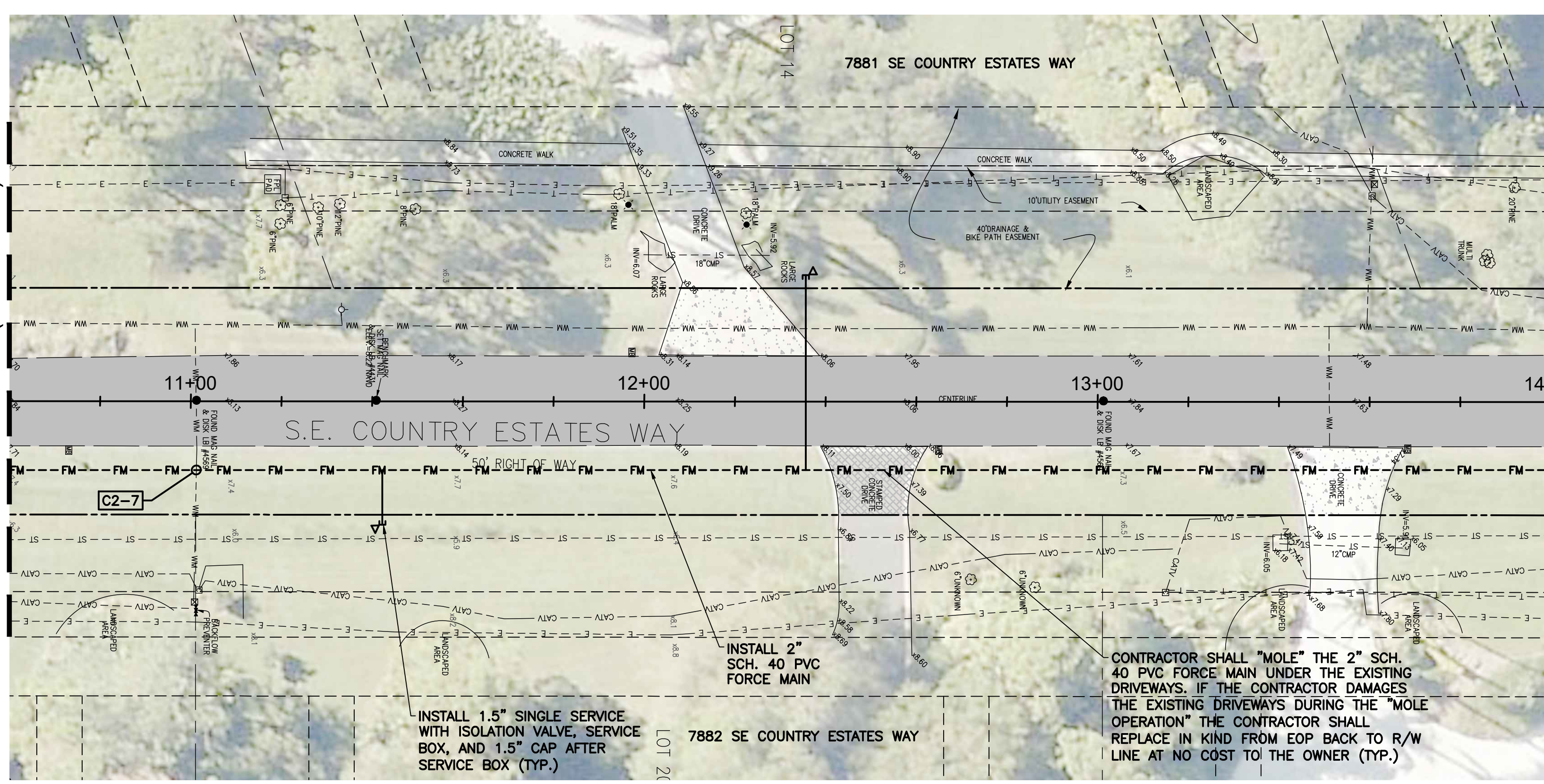
C-1

MATCHLINE SHEET C-1 (STA: 6+40)



MATCHLINE BELOW (STA: 10+60)

MATCHLINE ABOVE (STA: 10+60)



MATCHLINE SHEET C-3 (STA: 14+00)

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL UTILITIES IN THE VICINITY OF THE PROJECT WORK LOCATED AND VERIFIED PRIOR TO INITIATING WORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITIES DURING CONSTRUCTION.
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5. CONTRACTOR SHALL COORDINATE ANY EXISTING VEGETATION REMOVAL WITH PROPERTY OWNER PRIOR TO BEGINNING CONSTRUCTION ON EACH PROPERTY.
6. THE ROADS SHALL BE MILLED 1" AND RESURFACED WITH A 1-1/2" OF SP12.5 STRUCTURAL COURSE (TRAFFIC LEVEL A) WITH TACK COAT AT 0.05 GAL/SY AND RC-70 PRIME COAT AT 0.10 GAL/SY.
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LEGEND:

- EXISTING CONCRETE DRIVEWAY
- EXISTING STAMPED CONCRETE DRIVEWAY
- EXISTING PAVER DRIVEWAY
- MILL AND RESURFACE ASPHALT PAVEMENT (SEE NOTE 6)
- ROAD POINT REPAIRS

C2-1	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE.
C2-2	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE
C2-3	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE
C2-4	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE
C2-5	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE
C2-6	PROPOSED 2" SCH. 40 PVC FORCEMAIN OVER EXISTING STORM PIPE. MAINTAIN MINIMUM 12" CLEARANCE
C2-7	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE

DATE	BY	REVISIONS

Date: 12-28-18
 Scale: AS NOTED
 Design By: CM
 Drawn By: RR
 Check By: DH

**LOXAHATCHEE RIVER DISTRICT
 ISLAND COUNTRY ESTATES
 LOW PRESSURE FORCE MAIN**

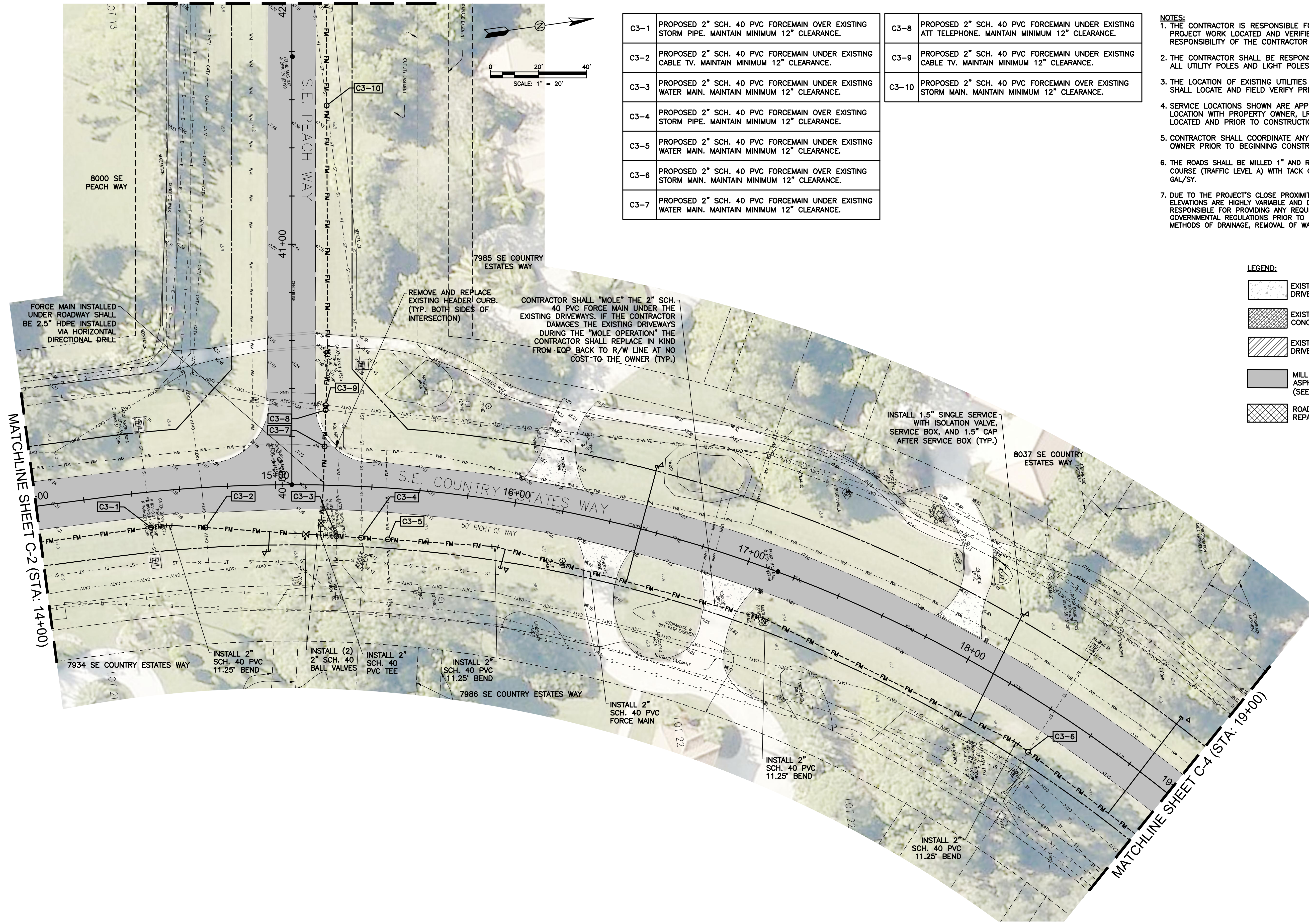
**PLAN SHEET
 SE COUNTRY ESTATES WAY
 STA. 6+40 TO STA. 14+00**

HOLTZ CONSULTING ENGINEERS, INC.
 270 SOUTH CENTRAL BLVD., SUITE 207
 JUPITER, FLORIDA 33458
 PH. (561) 575-2005
 Cert. No. 26960

CHRISTINE J. MIRANDA, P.E.
 License No: 60906

C-2

MATCHLINE SHEET C-6 (STA: 42+00)



C3-1	PROPOSED 2" SCH. 40 PVC FORCE MAIN OVER EXISTING STORM PIPE. MAINTAIN MINIMUM 12" CLEARANCE.	C3-8	PROPOSED 2" SCH. 40 PVC FORCE MAIN UNDER EXISTING ATT TELEPHONE. MAINTAIN MINIMUM 12" CLEARANCE.
C3-2	PROPOSED 2" SCH. 40 PVC FORCE MAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE.	C3-9	PROPOSED 2" SCH. 40 PVC FORCE MAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE.
C3-3	PROPOSED 2" SCH. 40 PVC FORCE MAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.	C3-10	PROPOSED 2" SCH. 40 PVC FORCE MAIN OVER EXISTING STORM MAIN. MAINTAIN MINIMUM 12" CLEARANCE.
C3-4	PROPOSED 2" SCH. 40 PVC FORCE MAIN OVER EXISTING STORM PIPE. MAINTAIN MINIMUM 12" CLEARANCE.		
C3-5	PROPOSED 2" SCH. 40 PVC FORCE MAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.		
C3-6	PROPOSED 2" SCH. 40 PVC FORCE MAIN OVER EXISTING STORM MAIN. MAINTAIN MINIMUM 12" CLEARANCE.		
C3-7	PROPOSED 2" SCH. 40 PVC FORCE MAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.		

- NOTES:**
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- LEGEND:**
- EXISTING CONCRETE DRIVEWAY
 - EXISTING STAMPED CONCRETE DRIVEWAY
 - EXISTING PAVER DRIVEWAY
 - MILL AND RESURFACE ASPHALT PAVEMENT (SEE NOTE 6)
 - ROAD POINT REPAIRS

MATCHLINE SHEET C-2 (STA: 14+00)

MATCHLINE SHEET C-4 (STA: 19+00)

DATE	BY	REVISIONS

Date: 12-28-18
 Scale: AS NOTED
 Design By: CM
 Drawn By: RR
 Check By: DH

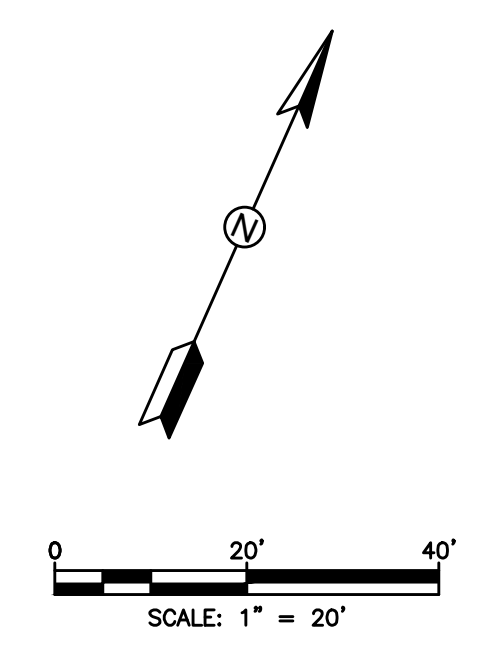
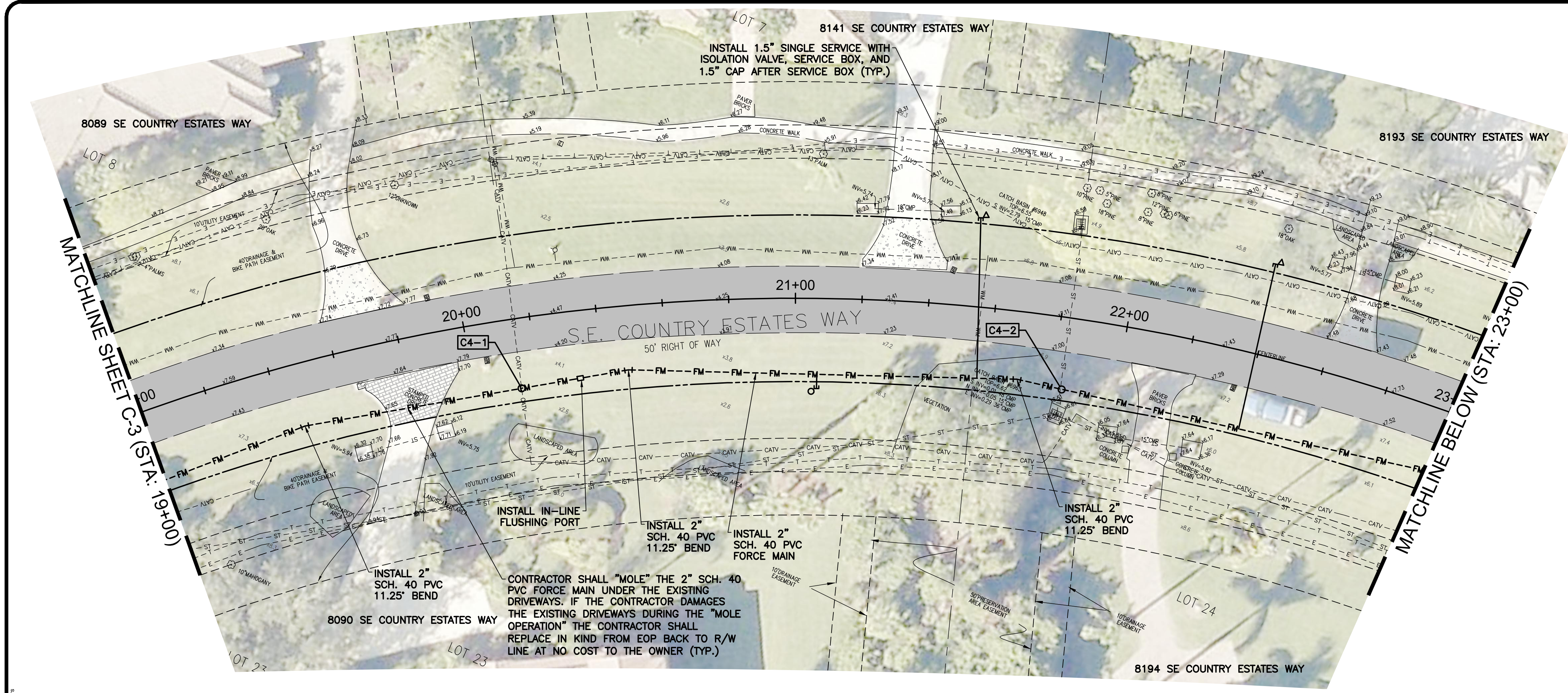
LOXAHATCHEE RIVER DISTRICT
 ISLAND COUNTRY ESTATES
 LOW PRESSURE FORCE MAIN

PLAN SHEET
 SE COUNTRY ESTATES WAY
 & SE PEACH WAY

HOLTZ CONSULTING ENGINEERS, INC.
 270 SOUTH CENTRAL BLVD., SUITE 207
 JUPITER, FLORIDA 33458
 PH. (561) 575-2005
 Cert. No. 26960

CHRISTINE J. MIRANDA, P.E.
 License No: 60906

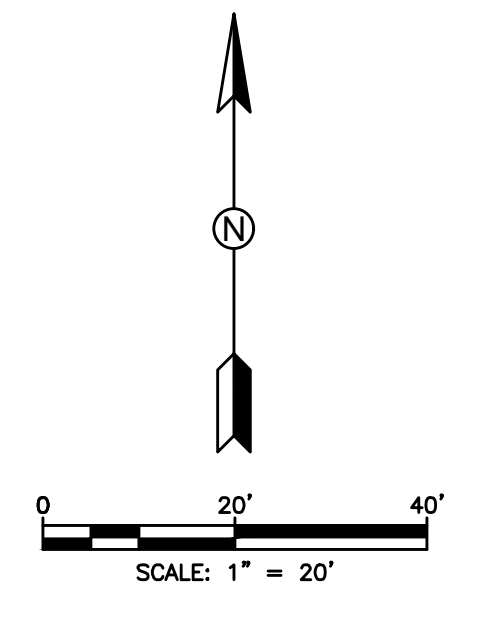
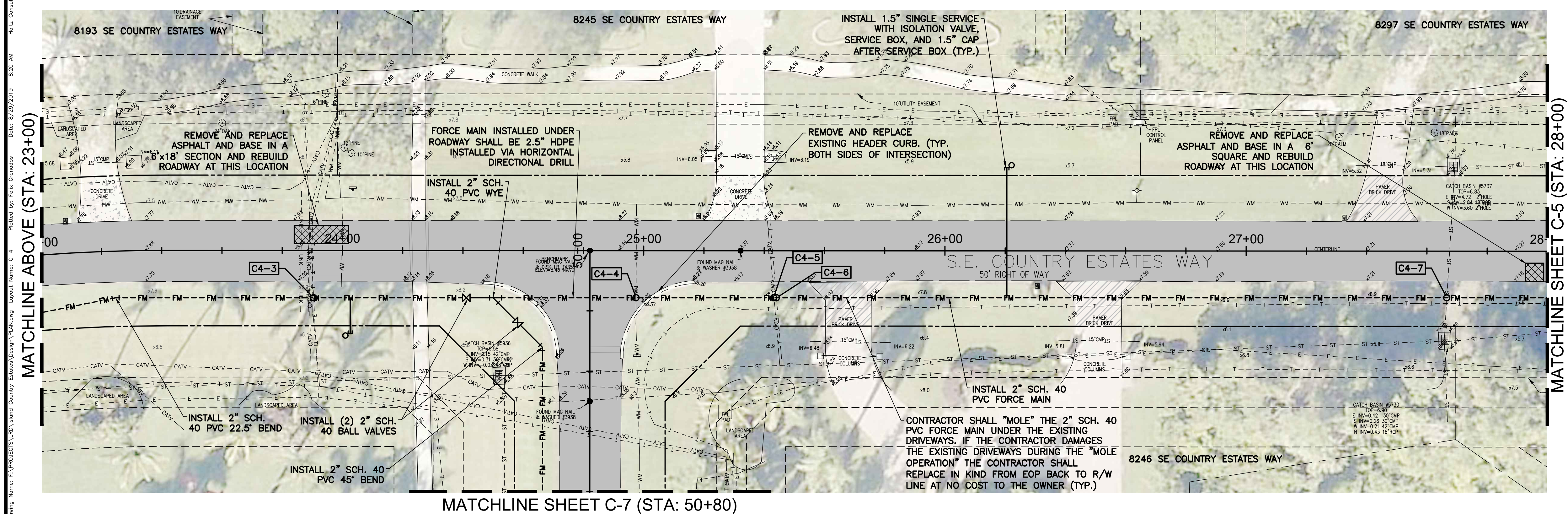
C-3



LEGEND:

	EXISTING CONCRETE DRIVEWAY
	EXISTING STAMPED CONCRETE DRIVEWAY
	EXISTING PAVER DRIVEWAY
	MILL AND RESURFACE ASPHALT PAVEMENT (SEE NOTE 6)
	ROAD POINT REPAIRS

- NOTES:**
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C4-1	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE.
C4-2	PROPOSED 2" SCH. 40 PVC FORCEMAIN OVER EXISTING STORM. MAINTAIN MINIMUM 12" CLEARANCE.
C4-3	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV, EXISTING BURIED ELECTRIC, EXISTING ATT TELEPHONE AND UNKNOWN. MAINTAIN MINIMUM 12" CLEARANCE.
C4-4	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.
C4-5	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE.
C4-6	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING ATT TELEPHONE. MAINTAIN MINIMUM 12" CLEARANCE.
C4-7	PROPOSED 2" SCH. 40 PVC FORCEMAIN OVER EXISTING STORM PIPE. MAINTAIN MINIMUM 12" CLEARANCE.

DATE	BY	REVISIONS

Date: 12-28-18
 Scale: AS NOTED
 Design By: CM
 Drawn By: RR
 Check By: DH

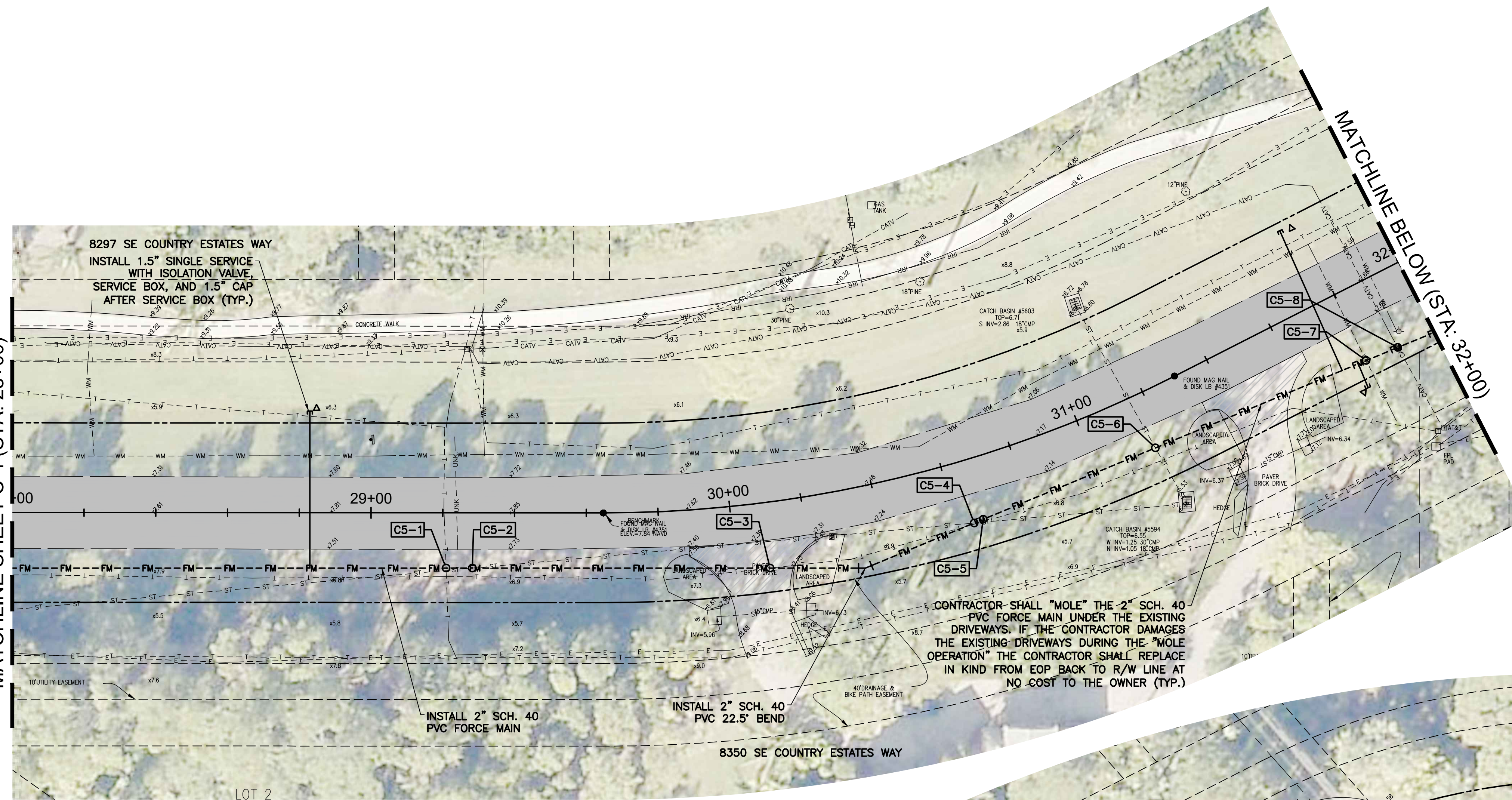
LOXAHATCHEE RIVER DISTRICT
 ISLAND COUNTRY ESTATES
 LOW PRESSURE FORCE MAIN

PLAN SHEET
 SE COUNTRY ESTATES WAY
 & SE RED APPLE LANE

HOLTZ CONSULTING ENGINEERS, INC.
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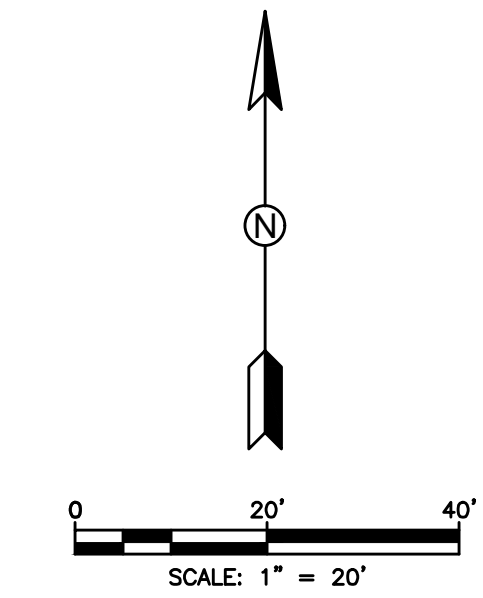
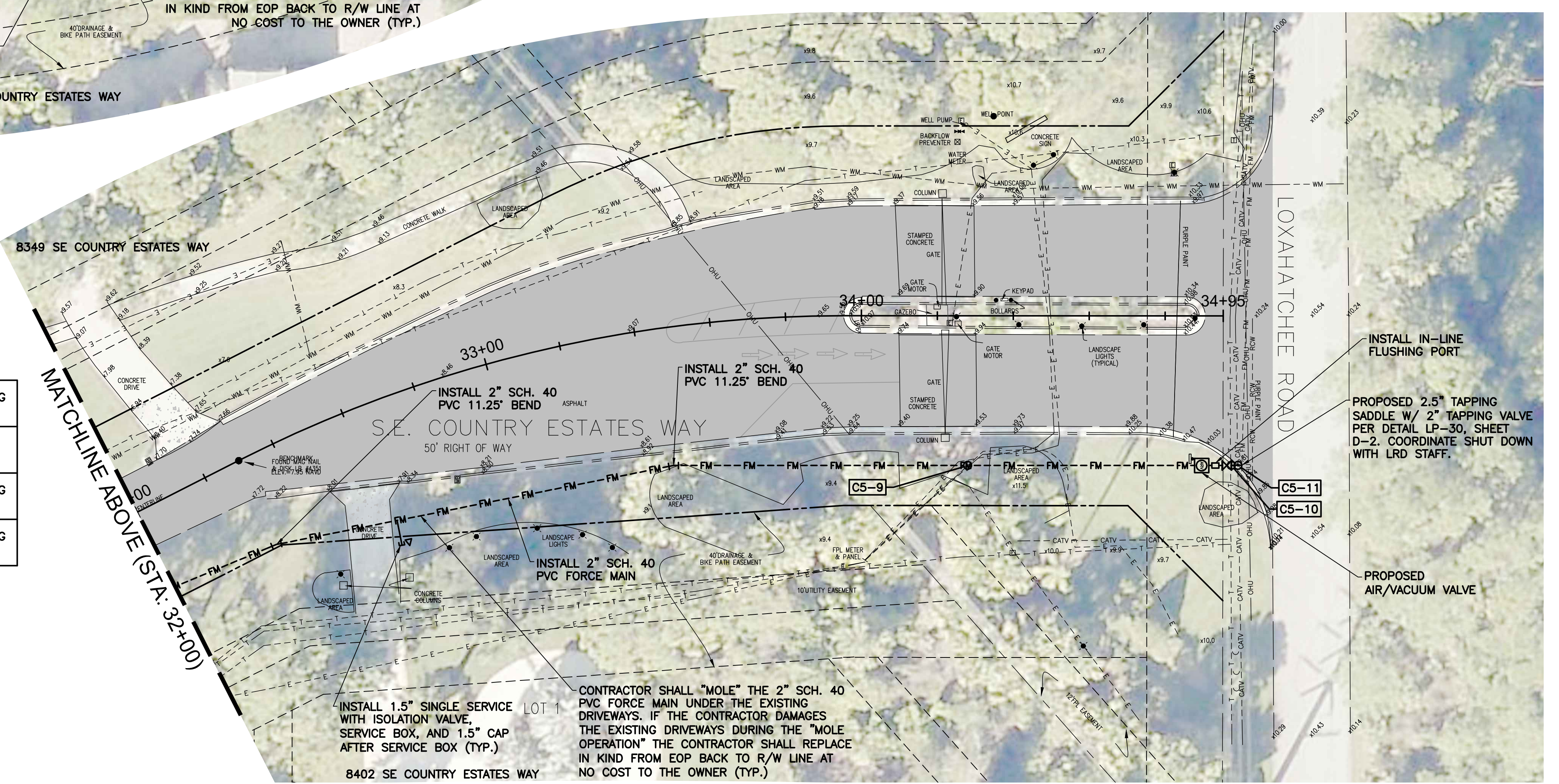
MATCHLINE SHEET C-4 (STA: 28+00)



Date: 12/28/18
 Scale: AS NOTED
 Design By: CM
 Drawn By: RR
 Check By: DH

C5-1	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING ATT TELEPHONE. MAINTAIN MINIMUM 12" CLEARANCE.
C5-2	PROPOSED 2" SCH. 40 PVC FORCEMAIN OVER EXISTING STORM PIPE. MAINTAIN MINIMUM 12" CLEARANCE.
C5-3	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING ATT TELEPHONE. MAINTAIN MINIMUM 12" CLEARANCE.
C5-4	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING ATT TELEPHONE. MAINTAIN MINIMUM 12" CLEARANCE.
C5-5	PROPOSED 2" SCH. 40 PVC FORCEMAIN OVER EXISTING STORM PIPE. MAINTAIN MINIMUM 12" CLEARANCE.
C5-6	PROPOSED 2" SCH. 40 PVC FORCEMAIN OVER EXISTING STORM PIPE. MAINTAIN MINIMUM 12" CLEARANCE.
C5-7	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.

C5-8	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE.
C5-9	PROPOSED 2" SCH. 40 PVC FORCEMAIN OVER EXISTING TOW (2) BURIED ELECTRIC. MAINTAIN MINIMUM 12" CLEARANCE.
C5-10	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING ATT TELEPHONE. MAINTAIN MINIMUM 12" CLEARANCE.
C5-11	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE.



LEGEND:

	EXISTING CONCRETE DRIVEWAY
	EXISTING STAMPED CONCRETE DRIVEWAY
	EXISTING PAVER DRIVEWAY
	MILL AND RESURFACE ASPHALT PAVEMENT (SEE NOTE 6)
	ROAD POINT REPAIRS

- NOTES:**
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DATE	BY	REVISIONS

Date: 12-28-18
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LOXAHATCHEE RIVER DISTRICT
ISLAND COUNTRY ESTATES
LOW PRESSURE FORCE MAIN

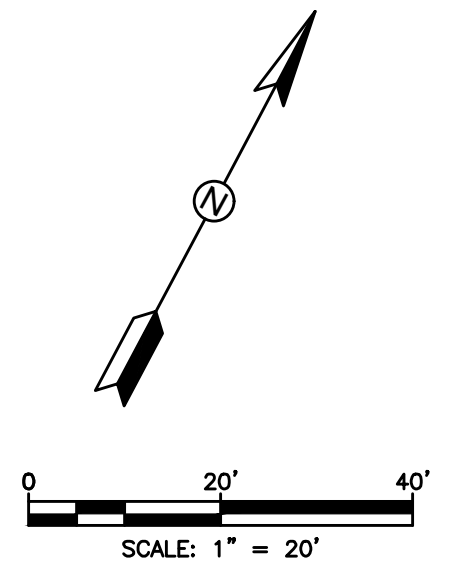
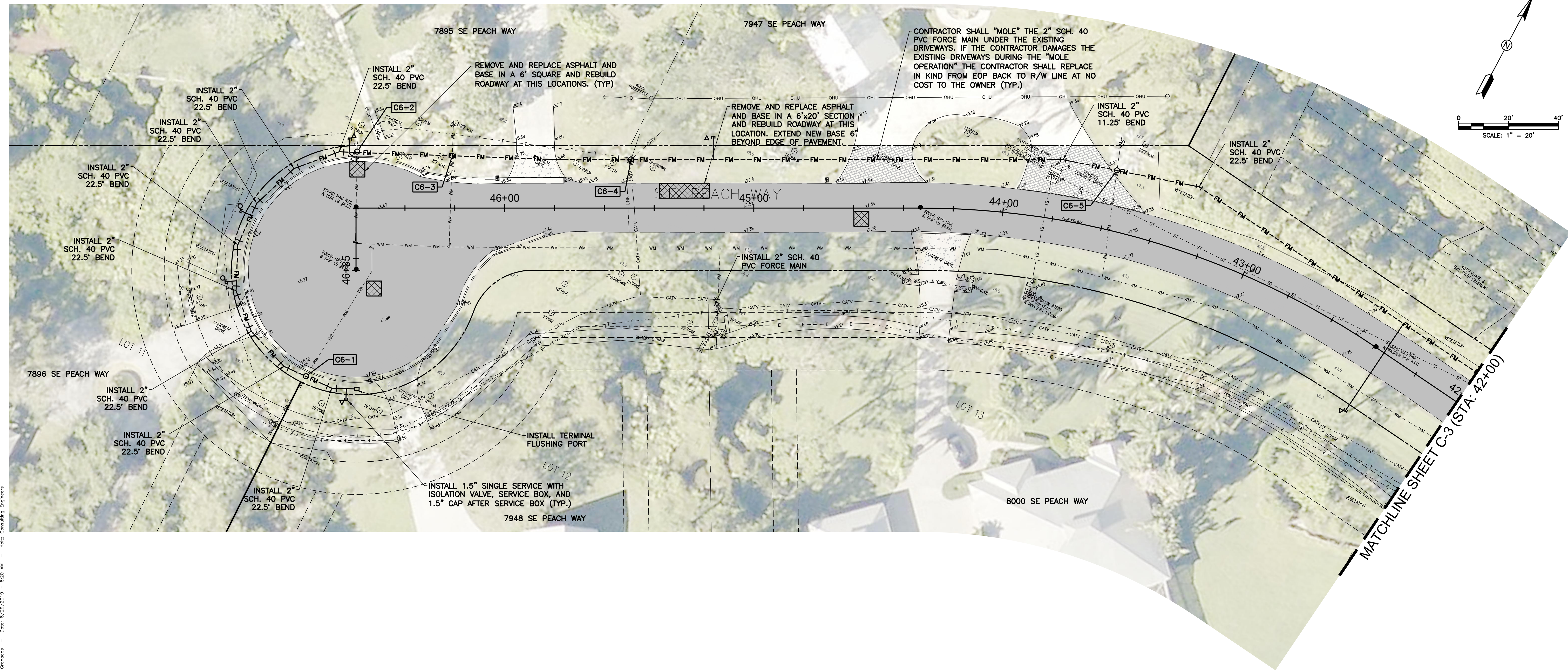
PLAN SHEET
SE COUNTRY ESTATES WAY
STA. 28+00 TO STA. 34+95

HOLTZ CONSULTING ENGINEERS, INC.

 270 SOUTH CENTRAL BLVD., SUITE 207
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 PH. (561) 575-2005
 Cert. No. 26960

CHRISTINE J. MIRANDA, P.E.
 License No: 60906

C-5




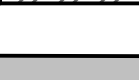



C6-1	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.
C6-2	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.
C6-3	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.
C6-4	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV AND EXISTING TELEPHONE. MAINTAIN MINIMUM 12" CLEARANCE.
C6-5	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.

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LEGEND:

-  EXISTING CONCRETE DRIVEWAY
-  EXISTING STAMPED CONCRETE DRIVEWAY
-  EXISTING PAVER DRIVEWAY
-  MILL AND RESURFACE ASPHALT PAVEMENT (SEE NOTE 6)
-  ROAD POINT REPAIRS

DATE	BY	REVISIONS

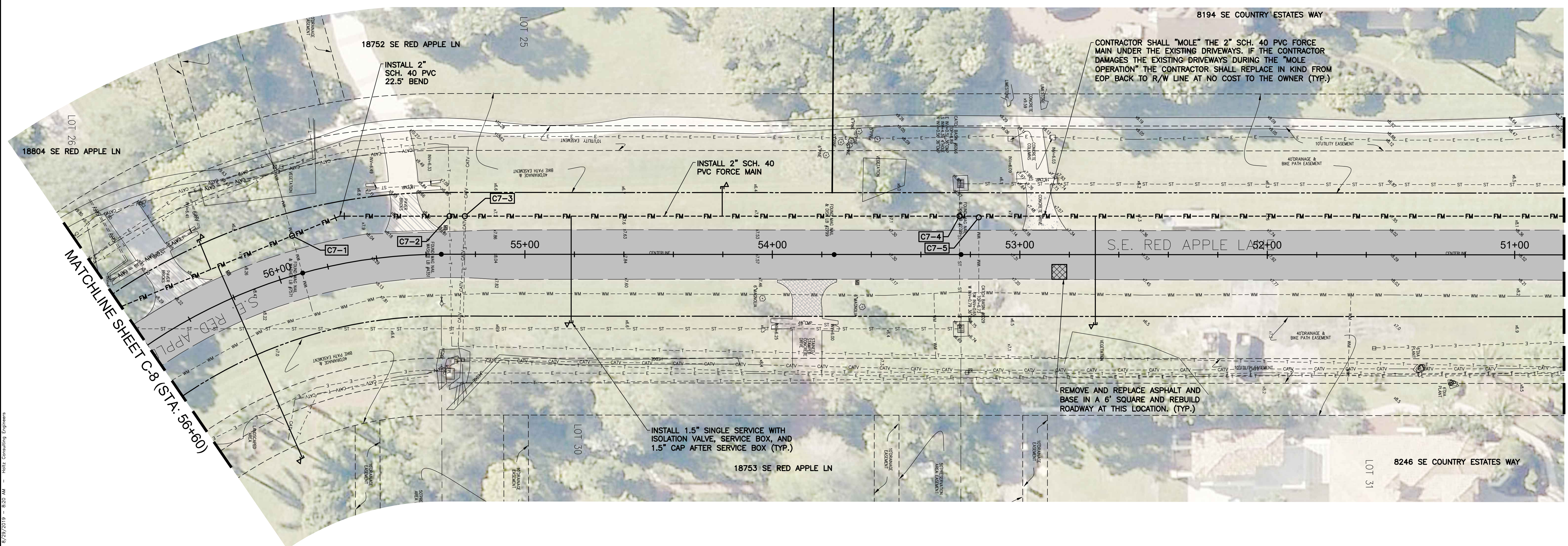
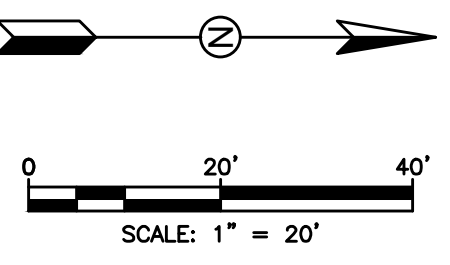
Date: 12-28-18
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 Design By: CM
 Drawn By: RR
 Check By: DH

LOXAHATCHEE RIVER DISTRICT
 ISLAND COUNTRY ESTATES
 LOW PRESSURE FORCE MAIN

PLAN SHEET
 SE PEACH WAY

HOLTZ CONSULTING ENGINEERS, INC.
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 License No: 60906



C7-1	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.
C7-2	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING ATT TELEPHONE MAINTAIN MINIMUM 12" CLEARANCE.
C7-3	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV. MAINTAIN MINIMUM 12" CLEARANCE.
C7-4	PROPOSED 2" SCH. 40 PVC FORCEMAIN OVER EXISTING STORM PIPE. MAINTAIN MINIMUM 12" CLEARANCE.
C7-5	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.

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LEGEND:

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	EXISTING STAMPED CONCRETE DRIVEWAY
	EXISTING PAVER DRIVEWAY
	MILL AND RESURFACE ASPHALT PAVEMENT (SEE NOTE 6)
	ROAD POINT REPAIRS

DATE	BY	REVISIONS

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 Check By: DH

LOXAHATCHEE RIVER DISTRICT
 ISLAND COUNTRY ESTATES
 LOW PRESSURE FORCE MAIN

PLAN SHEET
 SE RED APPLE LANE
 STA. 50+80 TO STA. 56+60

HCE HOLTZ CONSULTING ENGINEERS, INC.
 270 SOUTH CENTRAL BLVD., SUITE 207
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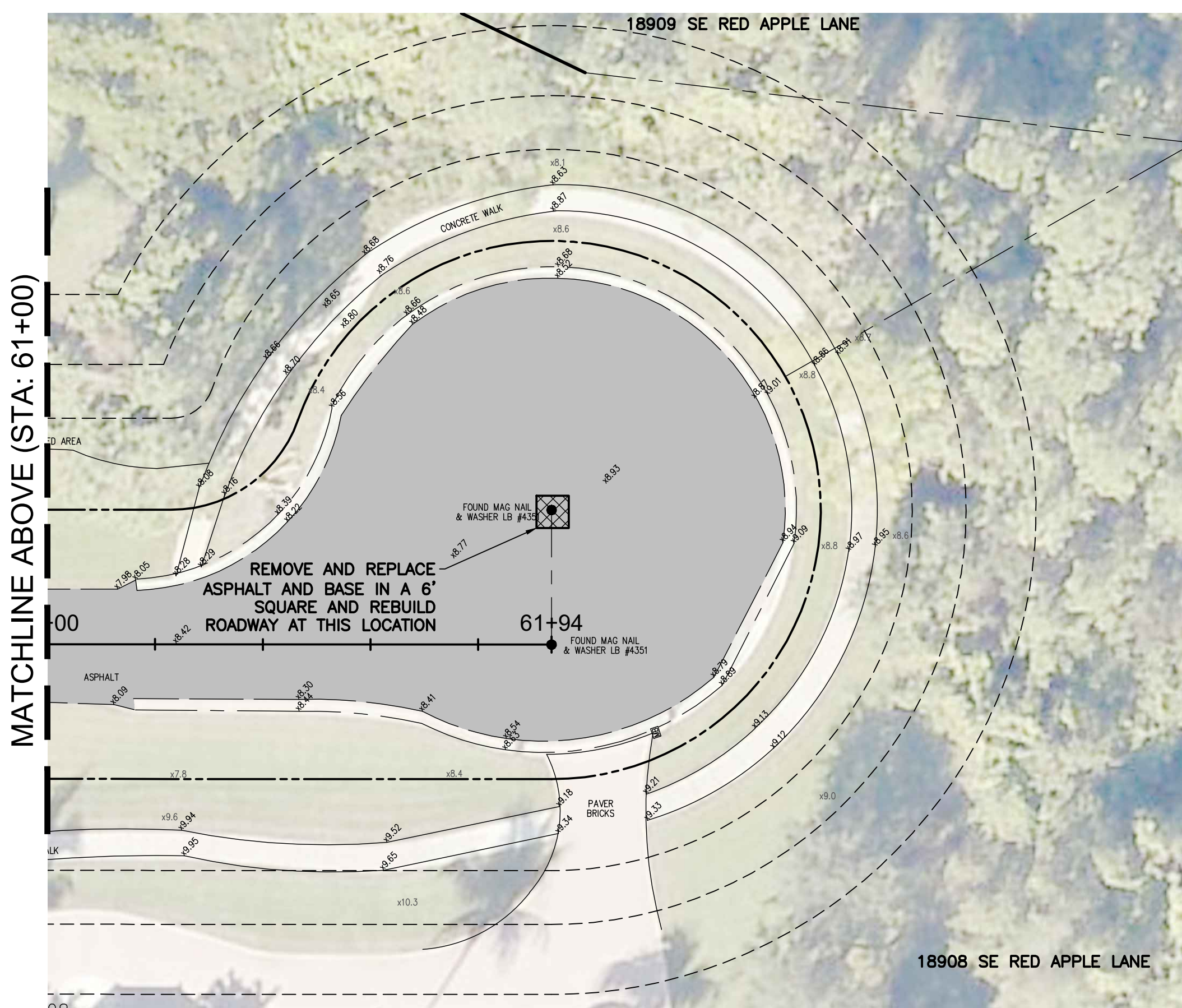
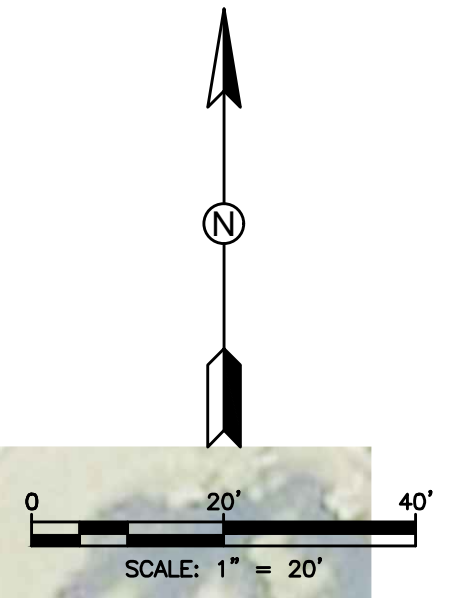
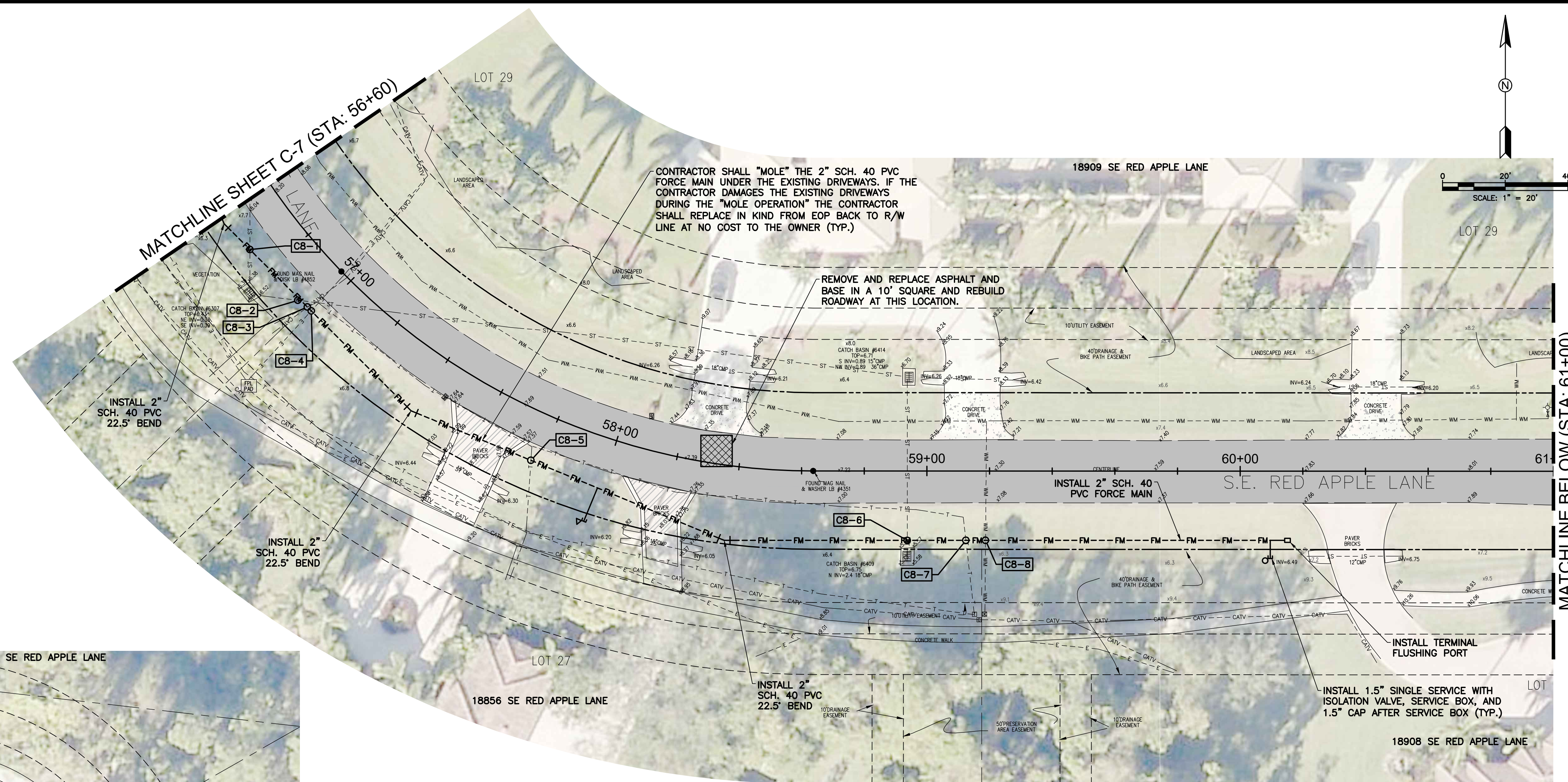
CHRISTINE J. MIRANDA, P.E.
 License No: 60906

C-7

Drawing Name: F:\Projects\2018\Island Country Estates\Utility\PLAN.dwg, Layout Name: C-7, Plotted By: Elna Grossman, Date: 12/28/2018 10:20 AM, HCE Consulting Engineers






MATCHLINE SHEET C-4 (STA: 50+80)

MATCHLINE SHEET C-8 (STA: 56+60)



C8-1	PROPOSED 2" SCH. 40 PVC FORCEMAIN OVER EXISTING STORM PIPE. MAINTAIN MINIMUM 12" CLEARANCE.
C8-2	PROPOSED 2" SCH. 40 PVC FORCEMAIN OVER EXISTING STORM PIPE. MAINTAIN MINIMUM 12" CLEARANCE.
C8-3	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING CABLE TV AND EXISTING ATT TELEPHONE. MAINTAIN MINIMUM 12" CLEARANCE.
C8-4	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING BURIED ELECTRIC. MAINTAIN MINIMUM 12" CLEARANCE.
C8-5	PROPOSED 2" SCH. 40 PVC FORCEMAIN OVER EXISTING ATT TELEPHONE. MAINTAIN MINIMUM 12" CLEARANCE.
C8-6	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING STORM PIPE. MAINTAIN MINIMUM 12" CLEARANCE.
C8-7	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING ATT TELEPHONE. MAINTAIN MINIMUM 12" CLEARANCE.
C8-8	PROPOSED 2" SCH. 40 PVC FORCEMAIN UNDER EXISTING WATER MAIN. MAINTAIN MINIMUM 12" CLEARANCE.

- NOTES:**
1. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL UTILITIES IN THE VICINITY OF THE PROJECT WORK LOCATED AND VERIFIED PRIOR TO INITIATING WORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITIES DURING CONSTRUCTION.
 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING, REMOVING, AND REPLACING ALL UTILITY POLES AND LIGHT POLES AS NECESSARY.
 3. THE LOCATION OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL LOCATE AND FIELD VERIFY PRIOR TO CONSTRUCTION.
 4. SERVICE LOCATIONS SHOWN ARE APPROXIMATE ONLY. CONTRACTOR TO COORDINATE SERVICE LOCATION WITH PROPERTY OWNER, LRD, AND THE ENGINEER AFTER SEPTIC TANK IS LOCATED AND PRIOR TO CONSTRUCTION.
 5. CONTRACTOR SHALL COORDINATE ANY EXISTING VEGETATION REMOVAL WITH PROPERTY OWNER PRIOR TO BEGINNING CONSTRUCTION ON EACH PROPERTY.
 6. THE ROADS SHALL BE MILLED 1" AND RESURFACED WITH A 1-1/2" OF SP12.5 STRUCTURAL COURSE (TRAFFIC LEVEL A) WITH TACK COAT AT 0.05 GAL/SY AND RC-70 PRIME COAT AT 0.10 GAL/SY.
 7. DUE TO THE PROJECT'S CLOSE PROXIMITY TO THE LOXAHATCHEE RIVER, THE WATER TABLE ELEVATIONS ARE HIGHLY VARIABLE AND DEWATERING MAY BE NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY REQUIRED DEWATERING AND DETERMINING ALL REQUIREMENTS AND GOVERNMENTAL REGULATIONS PRIOR TO COMMENCEMENT OF WORK INCLUDING, BUT NOT LIMITED TO, METHODS OF DRAINAGE, REMOVAL OF WATER, DISPOSAL OF WATER AND PERMITTING.

- LEGEND:**
-  EXISTING CONCRETE DRIVEWAY
 -  EXISTING STAMPED CONCRETE DRIVEWAY
 -  EXISTING PAVER DRIVEWAY
 -  MILL AND RESURFACE ASPHALT PAVEMENT (SEE NOTE 6)
 -  ROAD POINT REPAIRS

DATE	BY	REVISIONS

Date: 12-28-18
 Scale: AS NOTED
 Design By: CM
 Drawn By: RR
 Check By: DH

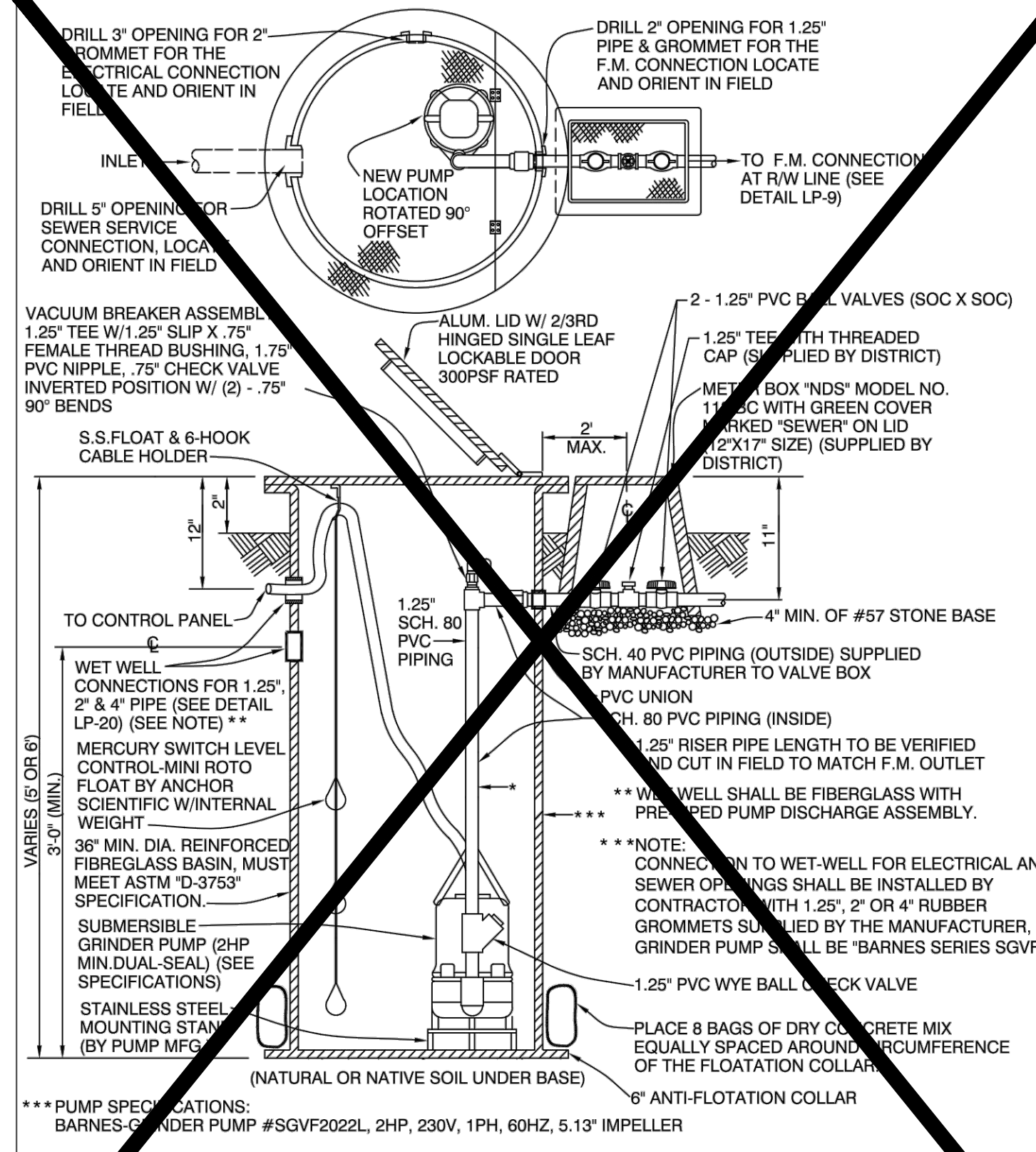
LOXAHATCHEE RIVER DISTRICT
 ISLAND COUNTRY ESTATES
 LOW PRESSURE FORCE MAIN

PLAN SHEET
 SE RED APPLE LANE
 STA. 56+60 TO STA. 61+94

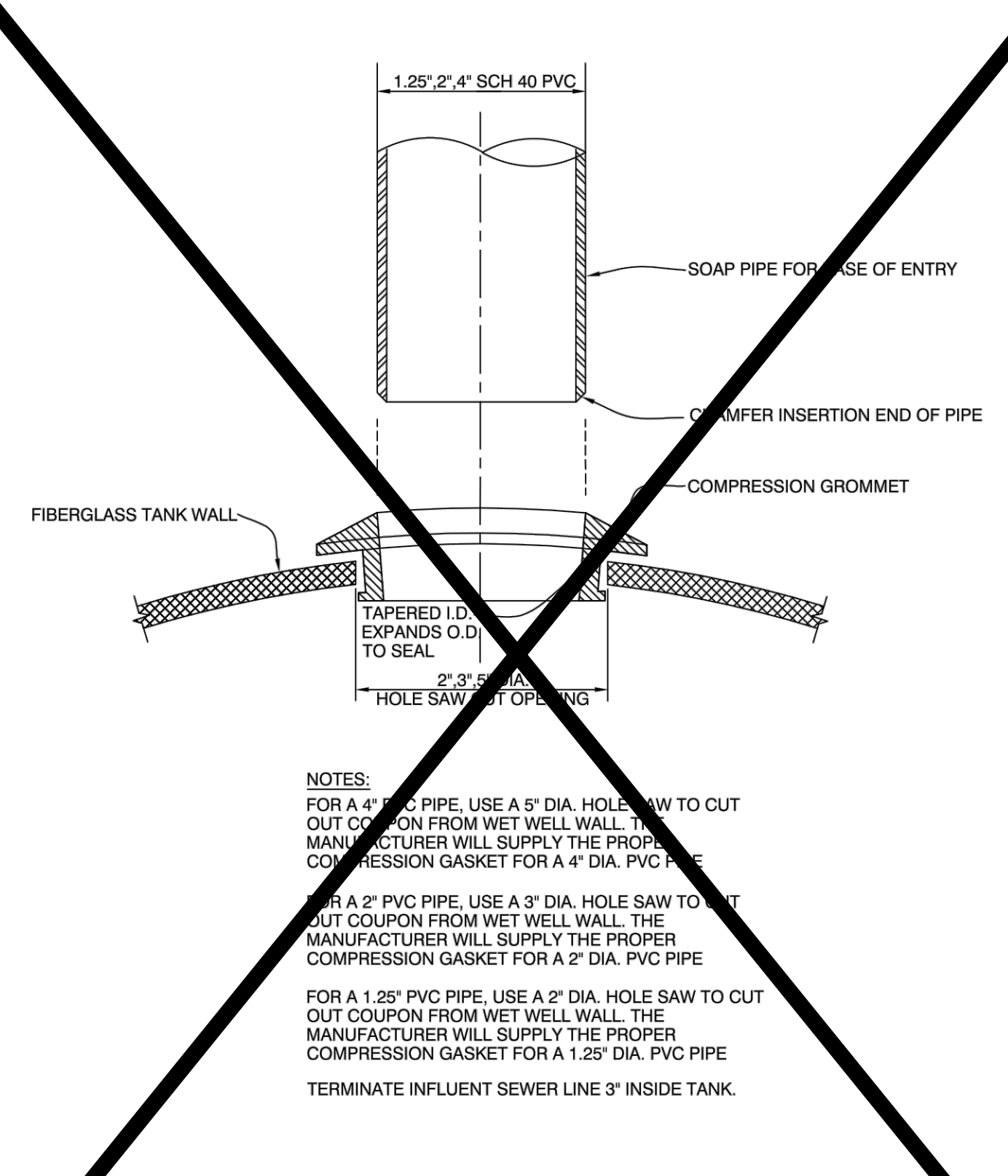
HOLTZ CONSULTING ENGINEERS, INC.
 270 SOUTH CENTRAL BLVD., SUITE 207
 JUPITER, FLORIDA 33458
 PH. (561) 575-2005
 Cert. No. 26960

CHRISTINE J. MIRANDA, P.E.
 License No: 60906

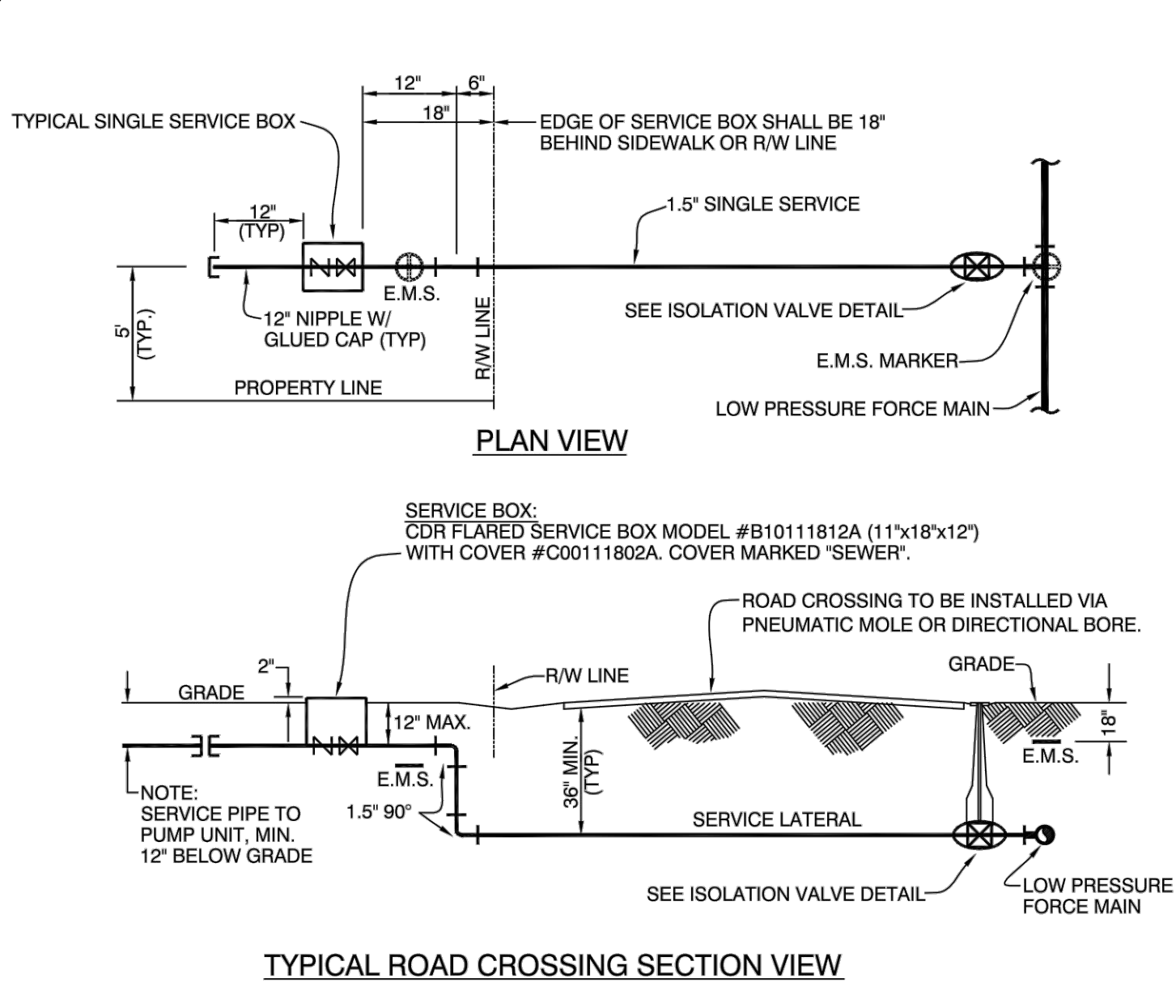
C-8



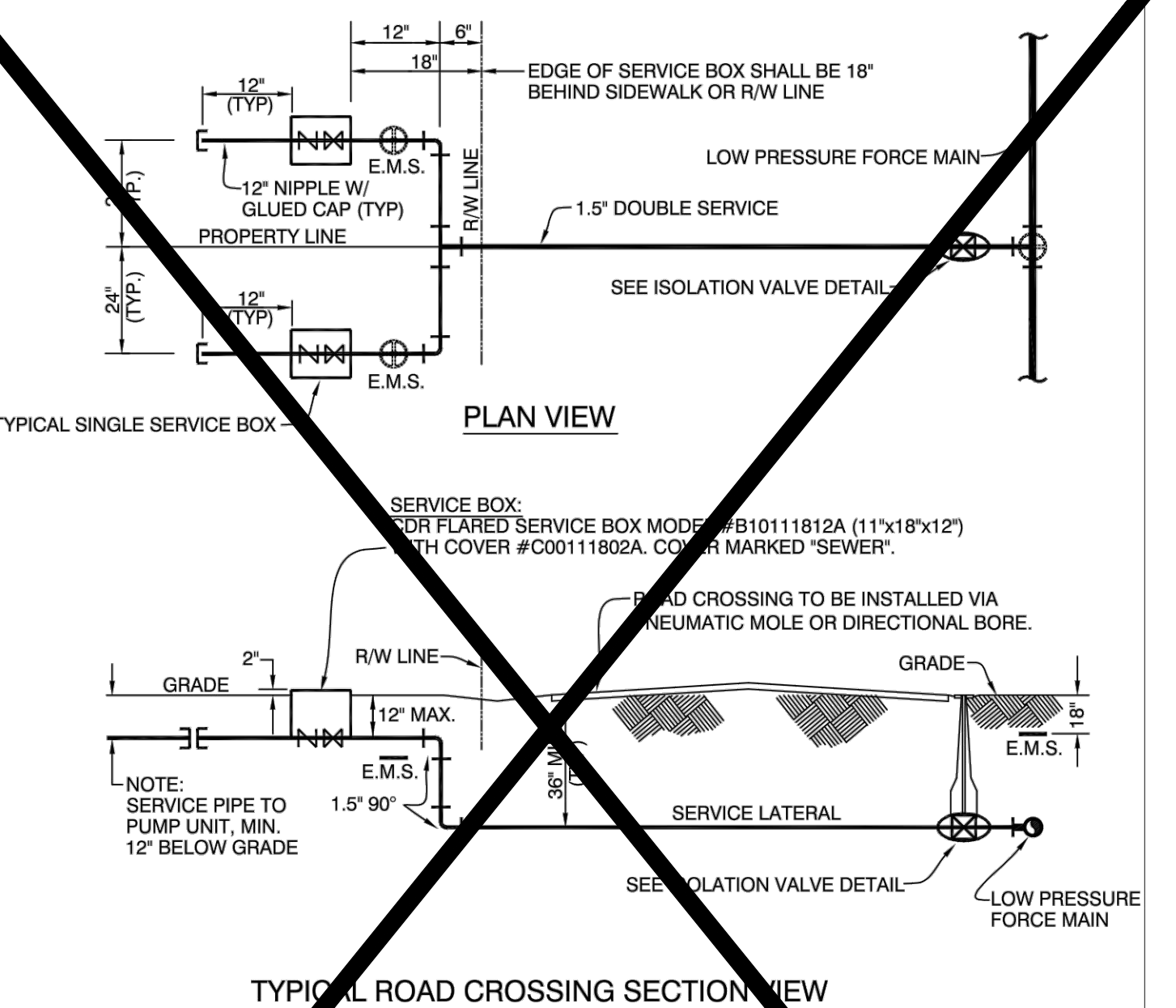
LOXAHATCHEE RIVER DISTRICT
RESIDENTIAL SIMPLEX
TYPICAL WET WELL
LP-21



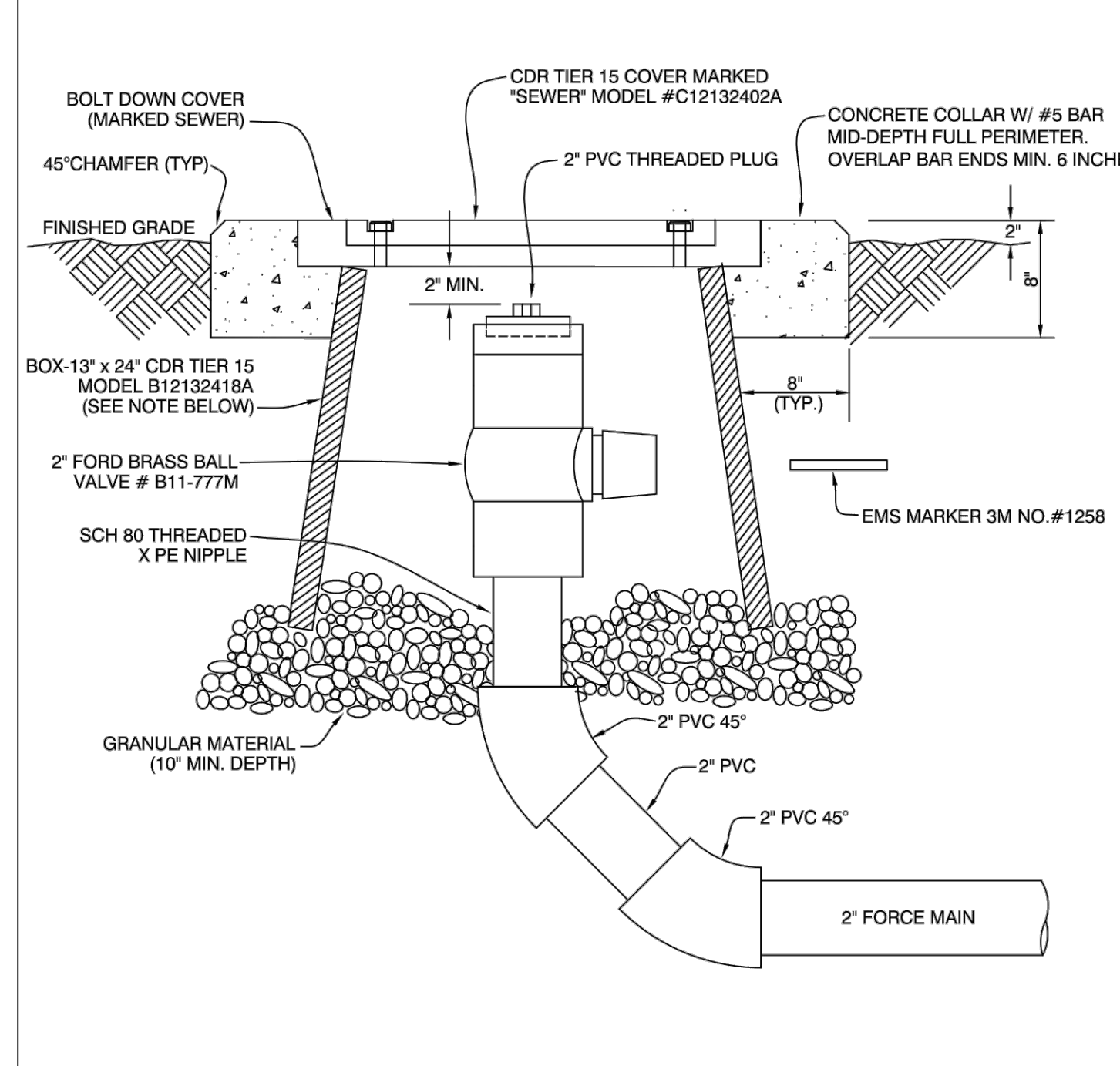
LOXAHATCHEE RIVER DISTRICT
PIPE CONNECTION DETAIL
LP-22



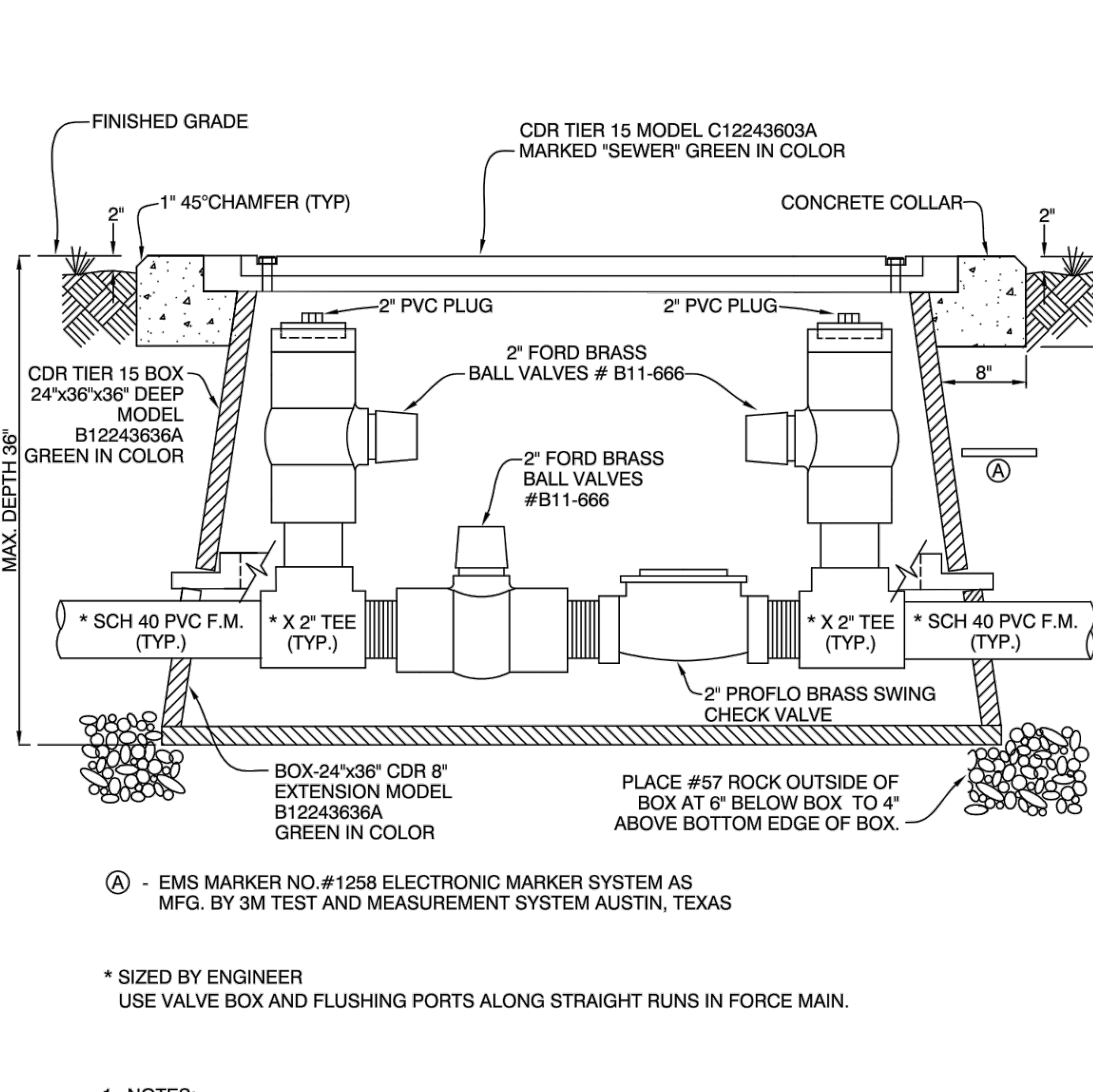
LOXAHATCHEE RIVER DISTRICT
TYPICAL SINGLE SERVICE SCHEMATIC
LP-22



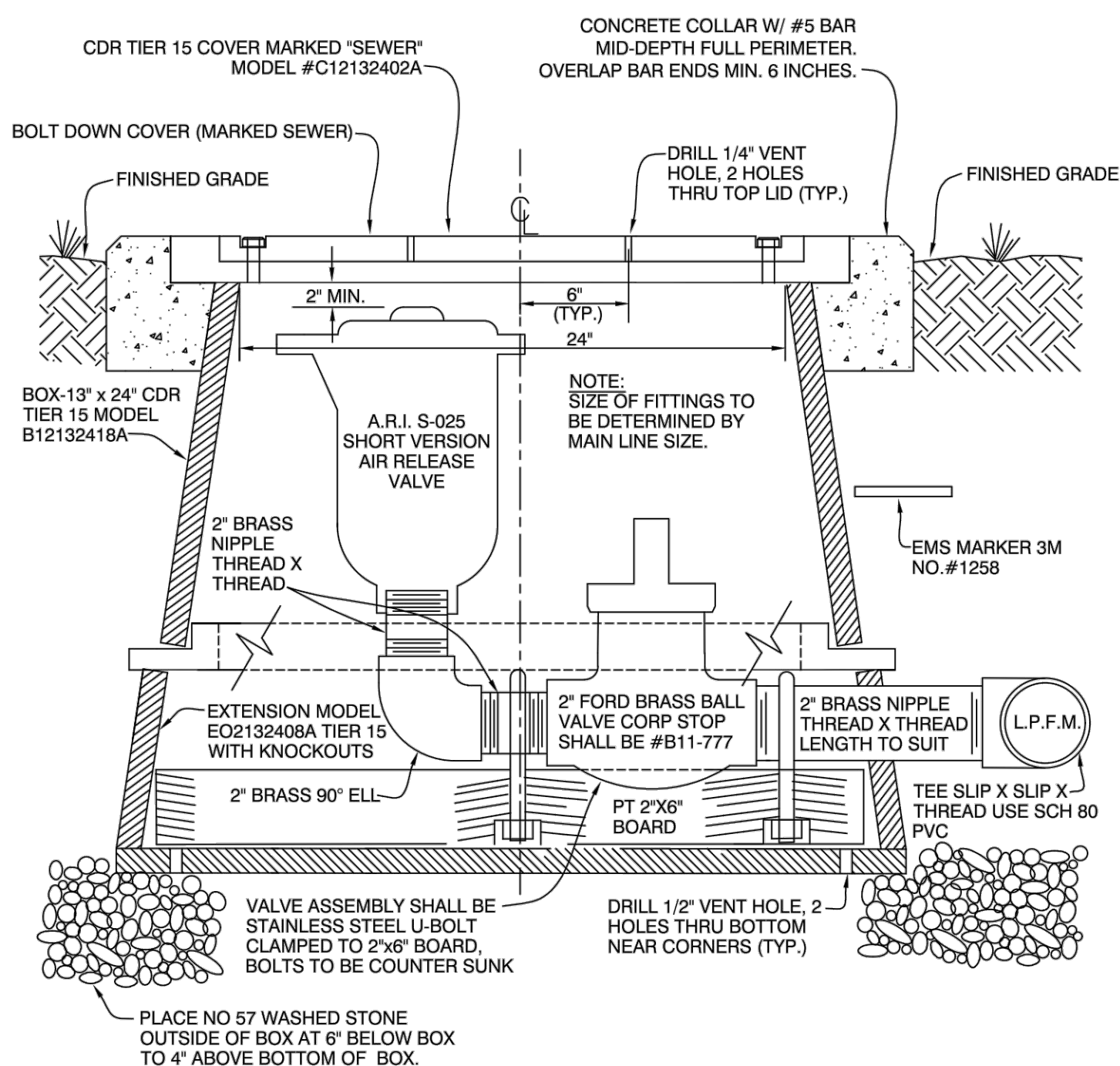
LOXAHATCHEE RIVER DISTRICT
TYPICAL DOUBLE SERVICE SCHEMATIC
LP-22



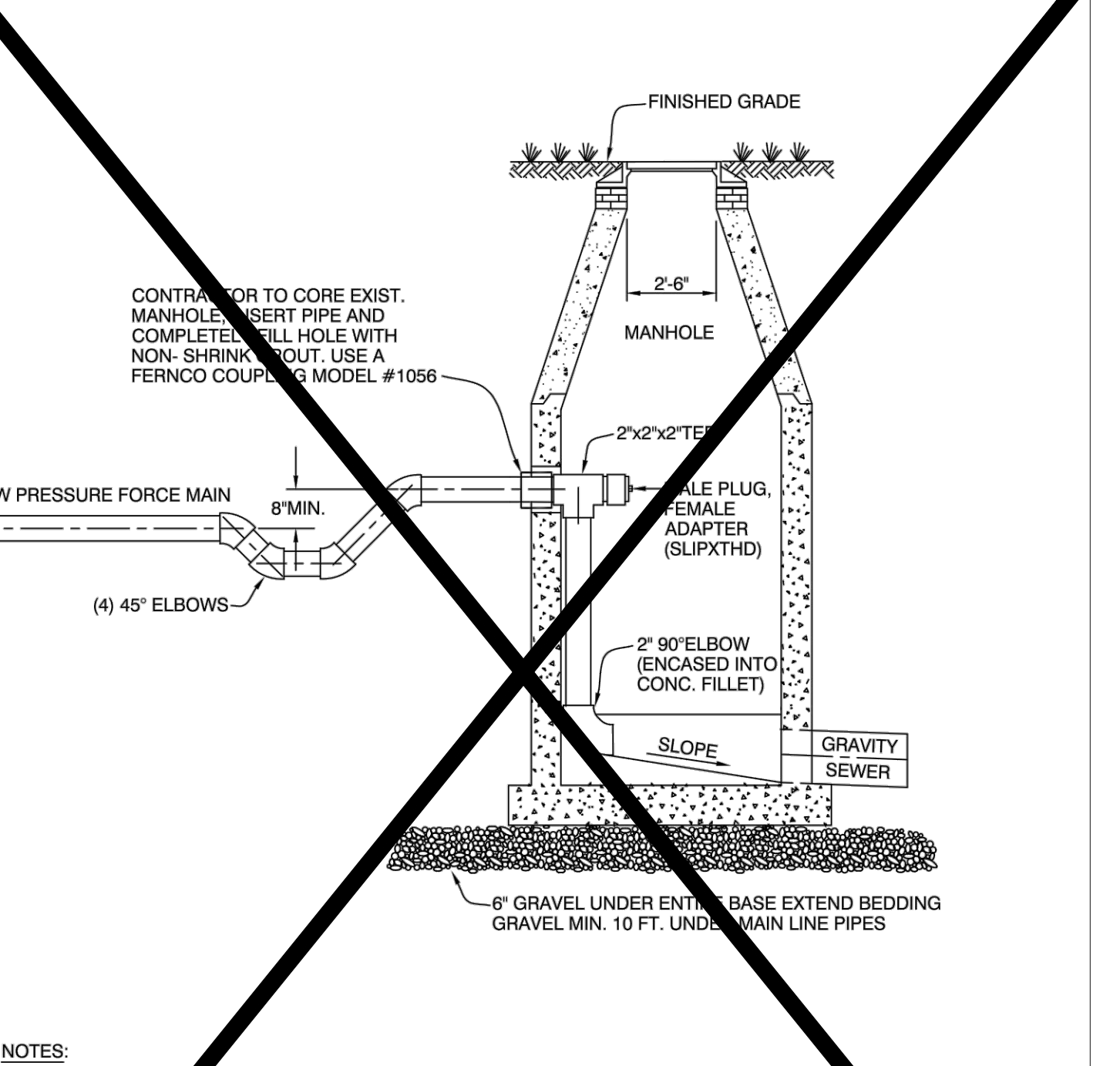
LOXAHATCHEE RIVER DISTRICT
TERMINAL FLUSHING PORT DETAIL
LP-24



LOXAHATCHEE RIVER DISTRICT
IN LINE FLUSHING PORT AT FORCE MAIN
LP-25A



LOXAHATCHEE RIVER DISTRICT
AIR / VACUUM VALVE DETAIL
LP-26



LOXAHATCHEE RIVER DISTRICT
LOW PRESSURE MAIN INTO DEEP MANHOLE
LP-27

Date: 12-28-18
 Scale: AS NOTED
 Design By: CM
 Drawn By: RR
 Check By: DH

LOXAHATCHEE RIVER DISTRICT
ISLAND COUNTRY ESTATES
LOW PRESSURE FORCE MAIN

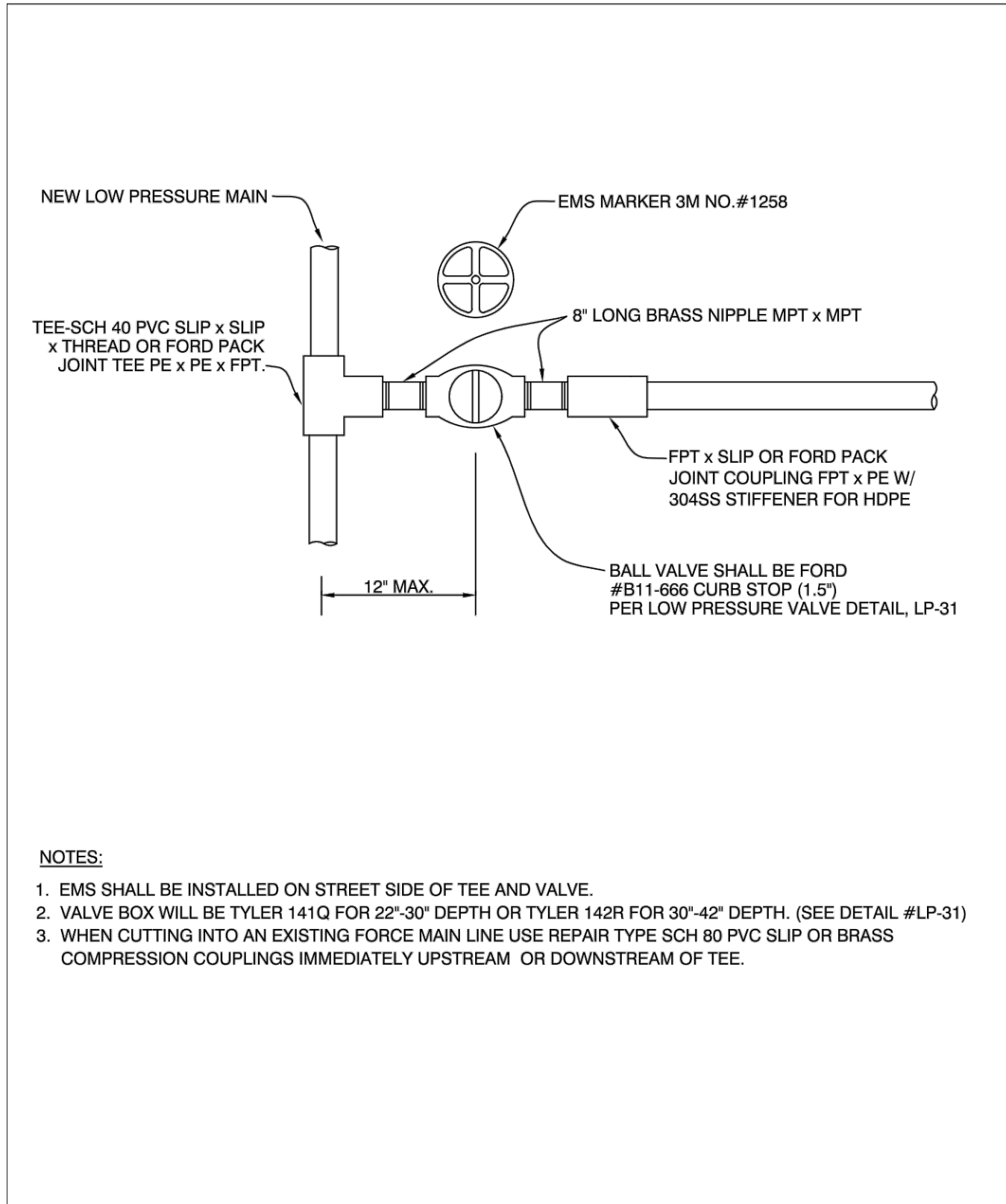
DETAILS

HOLTZ CONSULTING ENGINEERS, INC.
270 SOUTH CENTRAL BLVD., SUITE 207
JUPITER, FLORIDA 33458
PH. (561) 575-2005
Cert. No. 26960

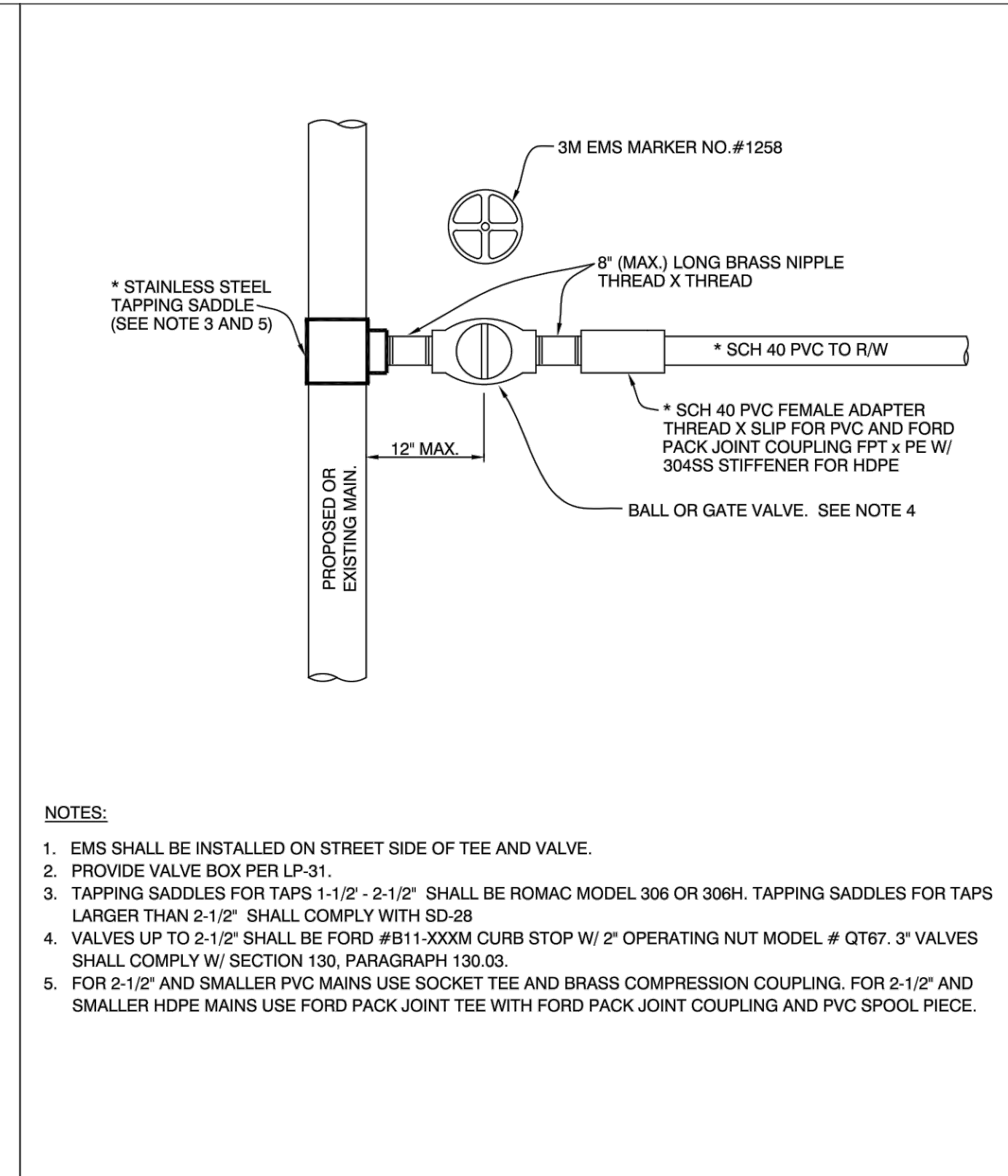
CHRISTINE J. MIRANDA, P.E.
License No: 60906

D-1

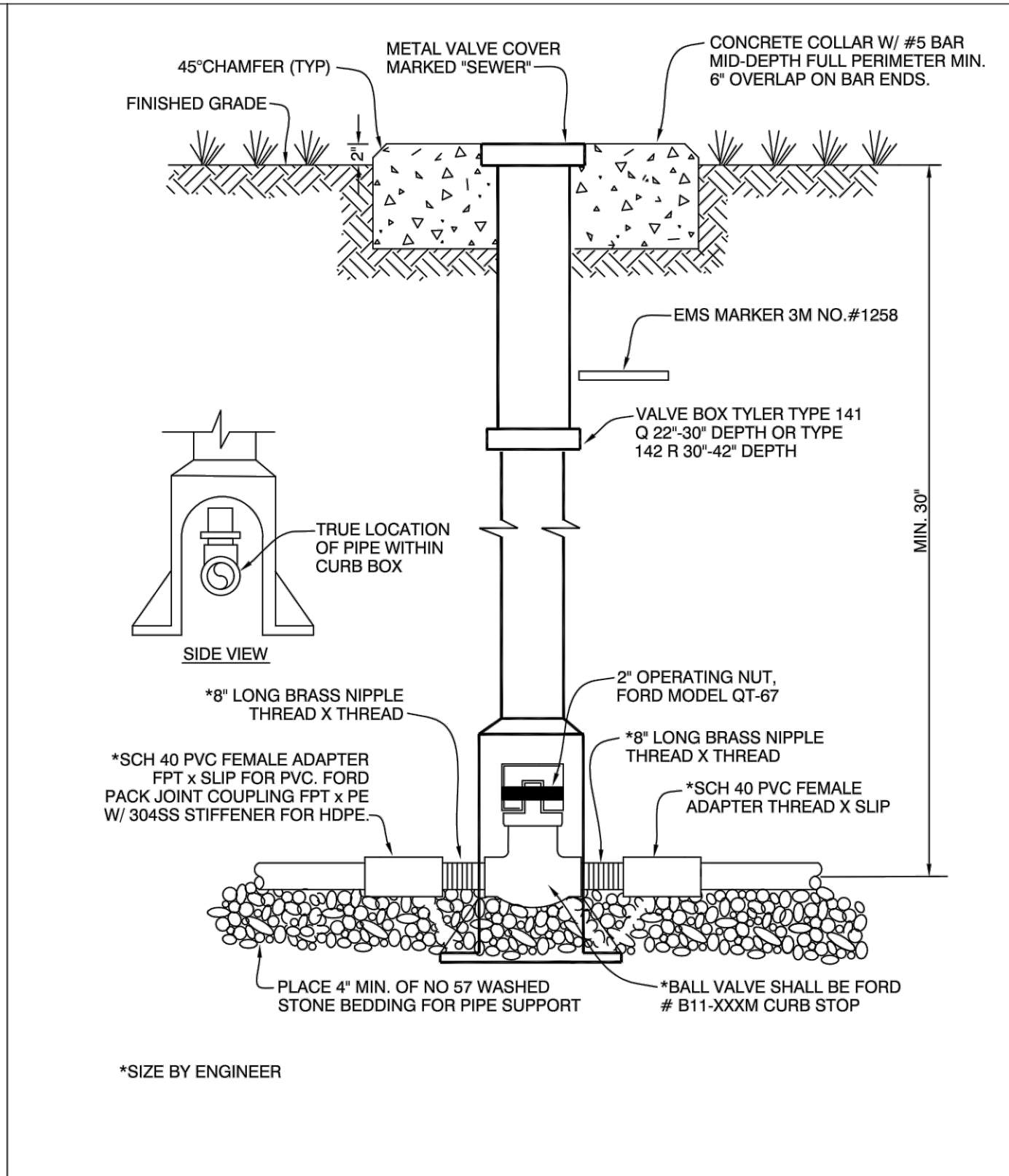
DATE	BY	REVISIONS



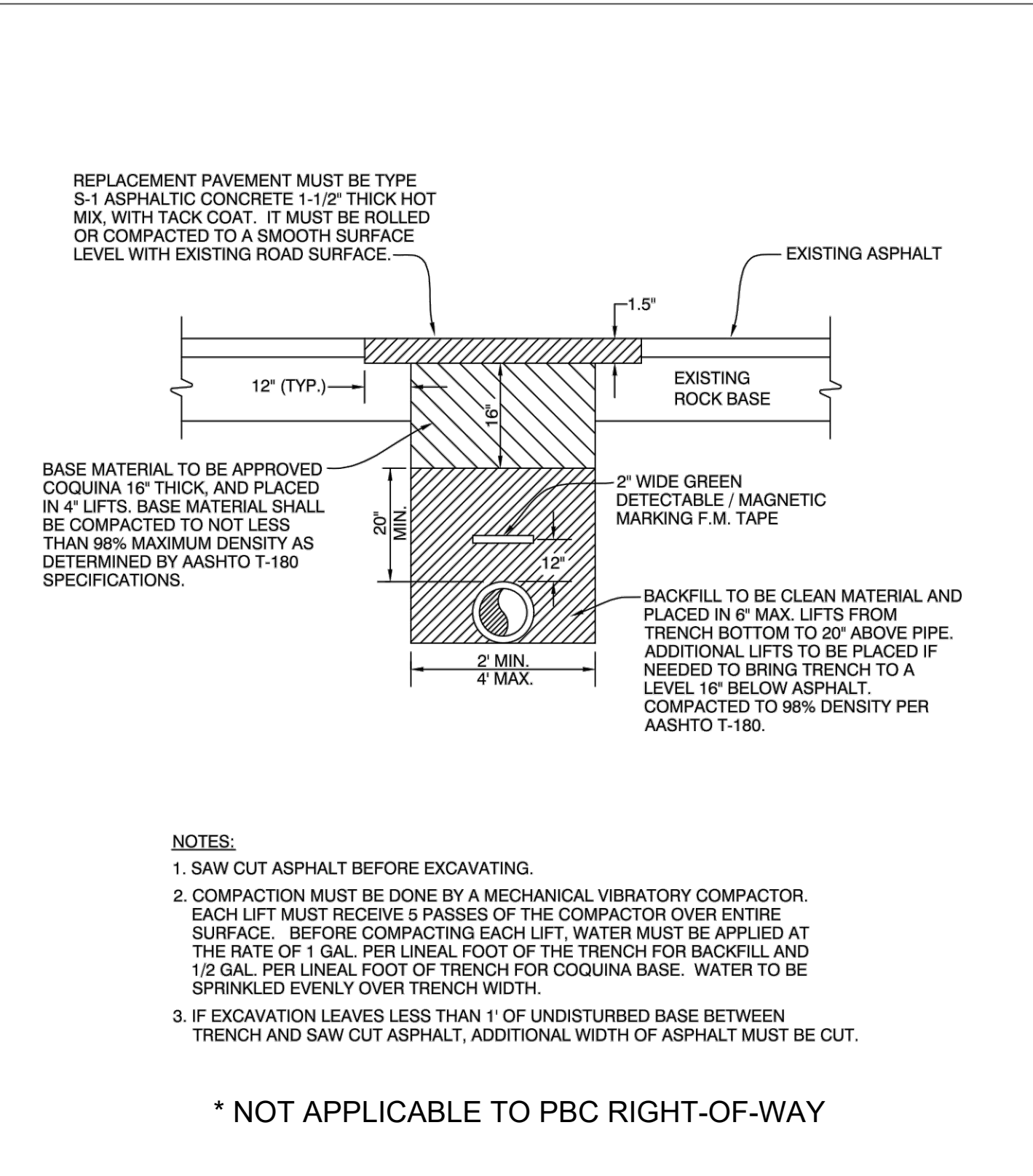
LOXAHATCHEE RIVER DISTRICT
 N.T.S.
 REVISION: MARCH, 2017
TYPICAL ISOLATION VALVE DETAIL
 LP-29



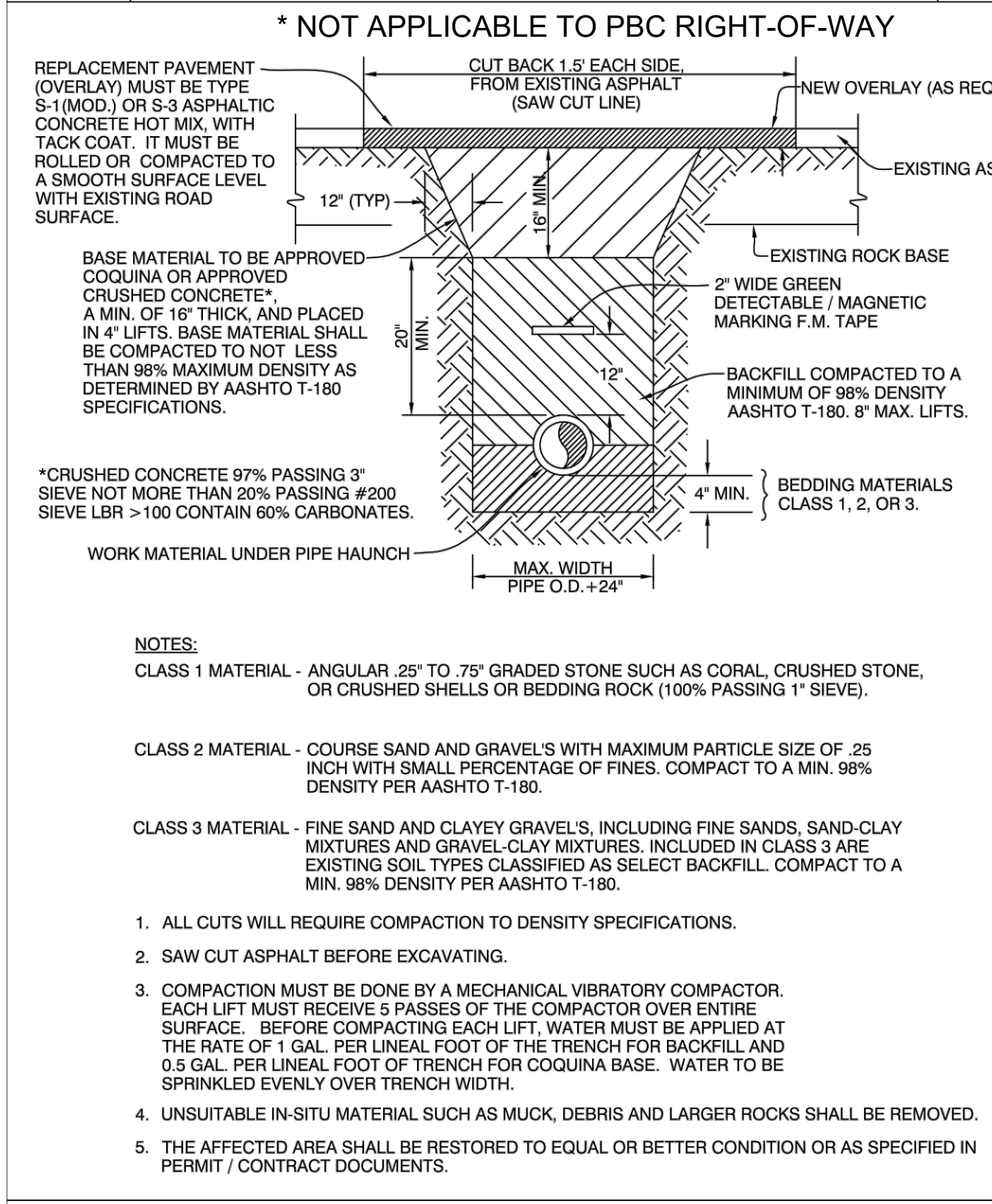
LOXAHATCHEE RIVER DISTRICT
 N.T.S.
 REVISION: MARCH, 2017
LOW PRESSURE TIE - IN DETAIL
 LP-30



LOXAHATCHEE RIVER DISTRICT
 N.T.S.
 REVISION: MARCH, 2017
LOW PRESSURE VALVE DETAIL
 LP-31



LOXAHATCHEE RIVER DISTRICT
 N.T.S.
 REVISION: APRIL, 2012
TYPICAL ROAD CROSSING REPAIR DETAIL
 LP-32



LOXAHATCHEE RIVER DISTRICT
 N.T.S.
 REVISION: APRIL, 2012
TYPICAL TRENCH & PAVEMENT RESTORATION DETAIL
 SD-2

THE FOLLOWING SHALL BE USED AS A GUIDE FOR SUBMITTAL OF RECORD DRAWINGS TO THE LOXAHATCHEE RIVER DISTRICT

- TWO (2) SETS OF PRINTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW 48 HOURS PRIOR TO REQUESTING INSPECTIONS SUCH AS FINAL INSPECTION, PRESSURE TESTS, SANITARY SEWER LAMPING OR ANY OTHER ELEMENT OF THE SYSTEM WHICH IS DETERMINED BY THE DISTRICT TO REQUIRE CLARIFICATION.
- THE DRAWINGS WILL BE REVIEWED BY THE DISTRICT FOR DEFICIENCIES. DEFICIENCIES WILL BE INDICATED ON ONE (1) SET OF PRINTS WHICH WILL BE RETURNED TO THE E.O.R. OR CONTRACTOR FOR NECESSARY CORRECTIVE ACTION.
- UPON CORRECTION, TWO (2) SETS OF PRINTS (SIGNED/SEALED BY A FLORIDA LICENSED SURVEYOR) SHALL BE SUBMITTED.
- NO DISCLAIMERS ON DRAWINGS WILL BE ACCEPTED.
- UPON FINAL SUBMITTAL OF RECORD DRAWINGS, AN AUTOCAD VER. 2009 OR LATER AND ADOBE PDF (24"x36") ELECTRONIC DATA FILE SHALL BE FURNISHED ON A CD-R DISK TO THE DISTRICT. ONLY ONE CAD FILE WITH ALL SHEETS OF RECORD DRAWINGS ALLOWED.
- ALL SEWER ITEMS SHALL BE CATEGORIZED AND ASSIGNED TO THE DRAWING LAYERS SUCH AS: AB-MANHOLES, AB-FORCEMAIN, AB-VALVE, AB-GRAVITY MAIN, ETC.
- REDRAW ALL SEWER LINES AND INFRASTRUCTURE ON RECORD DRAWINGS AS CONSTRUCTED HORIZONTALLY & VERTICALLY. USING ORIGINAL DESIGN LINEWORK & ONLY UPDATING THE CORRESPONDING TEXT CALLOUTS WILL NOT BE ACCEPTED AS RECORD DRAWINGS.

REQUIRED INFORMATION ON RECORD DRAWINGS

GENERAL

- DRAWINGS ON 24" x 36" BOND PAPER THAT WILL REPRODUCE LEGIBLY.
- LABEL DRAWINGS "RECORD DRAWINGS" WITH DATE. COMPLETE TITLE BLOCK WITH CURRENT FILE NAME.
- DRAWINGS SHALL BE SIGNED / SEALED BY A FLORIDA LICENSED PROFESSIONAL LAND SURVEYOR.
- CORRECT STREET/ROAD NAMES AND LOT AND BLOCK NUMBERS.
- SHOW AS-BUILT CONSTRUCTED SEWER FACILITIES HEAVED UP, BOLD OR BOXED OUT TO STAND OUT FROM REST OF EACH DRAWING.
- ALL ITEMS LISTED BELOW MUST BE CORRECTLY GEOREFERENCED WITH NORTHINGS/EASTINGS CLEARLY SHOWN. THE AS BUILTS SHALL BE GEOREFERENCED TO THE STATE PLANE COORDINATES IN NAD 83, FLORIDA EAST ZONE, WHILE THE VERTICAL DATUM SHALL BE NGVD 29.

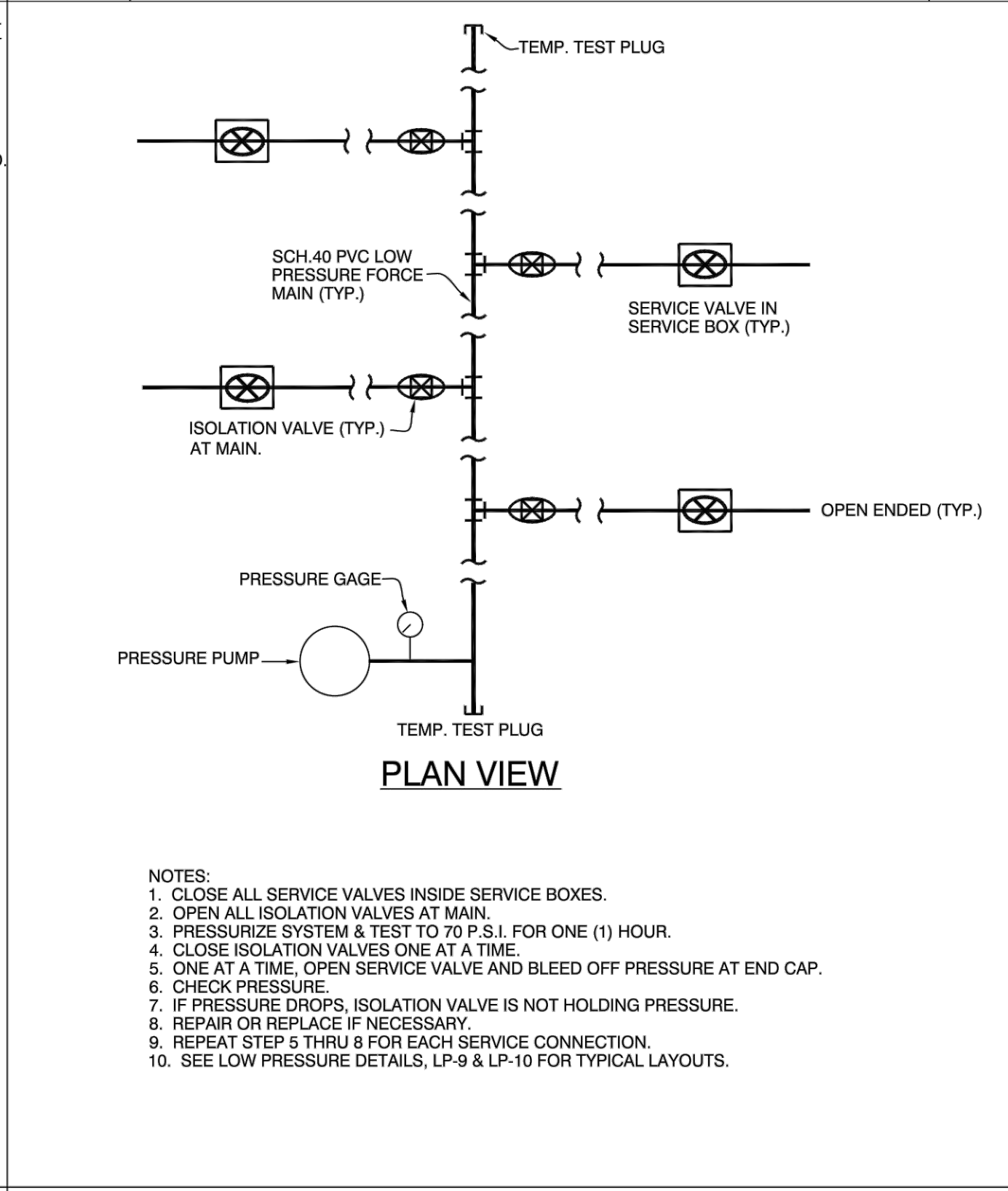
GRAVITY SEWER

- AS-BUILT DISTANCE OF GRAVITY MAIN FROM CENTER LINE OF ROAD OR EASEMENT RIGHT- OF-WAY LINE, BUILDINGS, OR AS DETERMINED BY THE LOXAHATCHEE RIVER DISTRICT. EXTENSIONS OF AN IMAGINARY LINE WILL NOT BE ACCEPTABLE AS REFERENCED POINTS.
- TYPE OF MATERIALS INSTALLED - MAINS AND SERVICES.
- SHOW EACH SEWER SERVICE LATERAL INCLUDING THE CONNECTION TO THE MAIN AND PROVIDE THE NORTHING & EASTING POINTS FOR EACH CLEANOUT & INDICATE CLEANOUT DIAMETER.
- AS-BUILT LOCATIONS OF MANHOLES WITH A NORTHING & EASTING PROVIDED.
- AS-BUILT ELEVATIONS, RIM ELEVATION, EACH INVERT AND PIPE SLOPE.
- UPDATE LIFT STATION DETAILS/ELEVATIONS INCLUDING START UP DATA.
- LIFT STATION AND UTILITY EASEMENTS, INCLUDING LOCATION OF F.P.&L. SERVICE TO CONTROL PANEL.

PRESSURE PIPE

- AS-BUILT DISTANCE OF MAINS AT 100' INTERVALS FROM CENTER LINE OF ROAD, EASEMENT, RIGHT-OF-WAY LINE, BUILDINGS, SEWER MAINS OR AS DETERMINED BY THE LOXAHATCHEE RIVER DISTRICT. EXTENSIONS OF AN IMAGINARY LINE WILL NOT BE ACCEPTABLE AS REFERENCED POINTS.
- SHOW ELEVATIONS, NORTHING/EASTING OF EACH VALVE, FITTING, AIR RELEASE VALVE, SERVICE LINE, TAP, ETC., AND RADIAL DIMENSIONS (TIES) FROM A NEARBY PERMANENT OBJECT WHERE POSSIBLE. (SEE NOTE NO. 6 IN GENERAL).
- TYPE OF MATERIALS INSTALLED - PIPE AND APPURTENANCES. INDICATE ALL LOCATIONS OF CHANGE OF MATERIAL INCLUDING JOINT TYPE (M.J., SLIP, RESTRAINED).
- VALVE TYPE (BUTTERFLY, GATE, PLUG) INCLUDING THE NORTHING & EASTING POINT.
- AS-BUILT LENGTH OF ALL JACK AND BORE CASINGS INDICATING DISTANCE FROM CENTER LINE OF PAVING TO EACH END OF CASING. THE AS-BUILT INVERT ELEVATION OF EACH END OF CASING, INCLUDING NORTHING/EASTING AND AS-BUILT DISTANCE FROM EACH END OF CASING TO LIMITS OF MECHANICAL JOINT PIPE IS ALSO REQUIRED.
- AS-BUILT ELEVATIONS AT 100' INTERVALS AS WELL AS ANY MAJOR CHANGES IN DIRECTION AND/OR ELEVATION. ELEVATIONS SHOWN AT THESE INTERVALS AND CHANGES MUST SHOW TOP OF PIPE ELEVATION, NORTHING/EASTING AND FINISHED GRADE ELEVATION AT THAT LOCATION. SHOW LOCATION OF EMS MARKERS.
- UTILITY EASEMENTS SHALL BE CORRECTLY SHOWN AND DIMENSIONED WITH REFERENCED SEWER FACILITY.

LOXAHATCHEE RIVER DISTRICT
 N.T.S.
 REVISION: APRIL, 2012
RECORD DRAWING SUBMITTAL GUIDE
 SD-29



LOXAHATCHEE RIVER DISTRICT
 N.T.S.
 REVISION: APRIL, 2012
TESTING PROCEDURE
 LP-34

GENERAL NOTES

- LOW PRESSURE PUMPING UNITS SHALL BE LOCATED SO THAT SURFACE WATER RUN OFF SHALL NOT INTERFERE WITH ELECTRICAL COMPONENTS.
- MANUFACTURER SHALL SUPPLY AND ATTACH ELECTRICAL CONTROL PANEL SCHEMATIC TO INSIDE FACE OF CONTROL PANEL DOOR (LAMINATED).
- THE DISTRICT WILL BE CERTIFYING ALL LOW PRESSURE LIFT STATIONS WHEN COMPLETE. MANUFACTURER SHALL SCHEDULE A START UP TEST AND SUBMIT ALL AS-BUILT DATA TO THE DISTRICT FOR CERTIFICATION.
- LIFT STATION AND CONTROL PANEL SHALL BE LOCATED SO THAT BOTH ARE ACCESSIBLE FOR MAINTENANCE.
- WHERE FEASIBLE, HOMEOWNER SHALL PROVIDE WATER HOSE BIB. HOSE FOR MAINTENANCE OPERATIONS.
- AIR RELEASE VALVE AND/OR VACUUM RELIEF VALVES SHALL BE PROVIDED ON ALL LOW PRESSURE FORCE MAIN INSTALLATION IMMEDIATELY UPSTREAM OF DISCHARGE POINT TO REGIONAL GRAVITY OR FORCE MAIN SYSTEMS.
- FORCE MAIN DETECTABLE TAPE & MAGNETIC LOCATING DEVICES WILL BE INSTALLED OVER FORCE MAIN, VALVES, AND SERVICES.

LOXAHATCHEE RIVER DISTRICT
 N.T.S.
 REVISION: APRIL, 2012
GENERAL NOTES
 LP-35

Drawing Name: F:\Projects\2012\Island Country Estates\IslandCountry\ISLANDS.dwg Layout Name: D-2 Modified By: Rick Grossman Date: 8/29/2012 8:20 AM Plot Date: 8/29/2012 8:20 AM Plot By: HCE Consulting Engineers

DATE	BY	REVISIONS

Date: 12-28-18
 Scale: AS NOTED
 Design By: CM
 Drawn By: RR
 Check By: DH

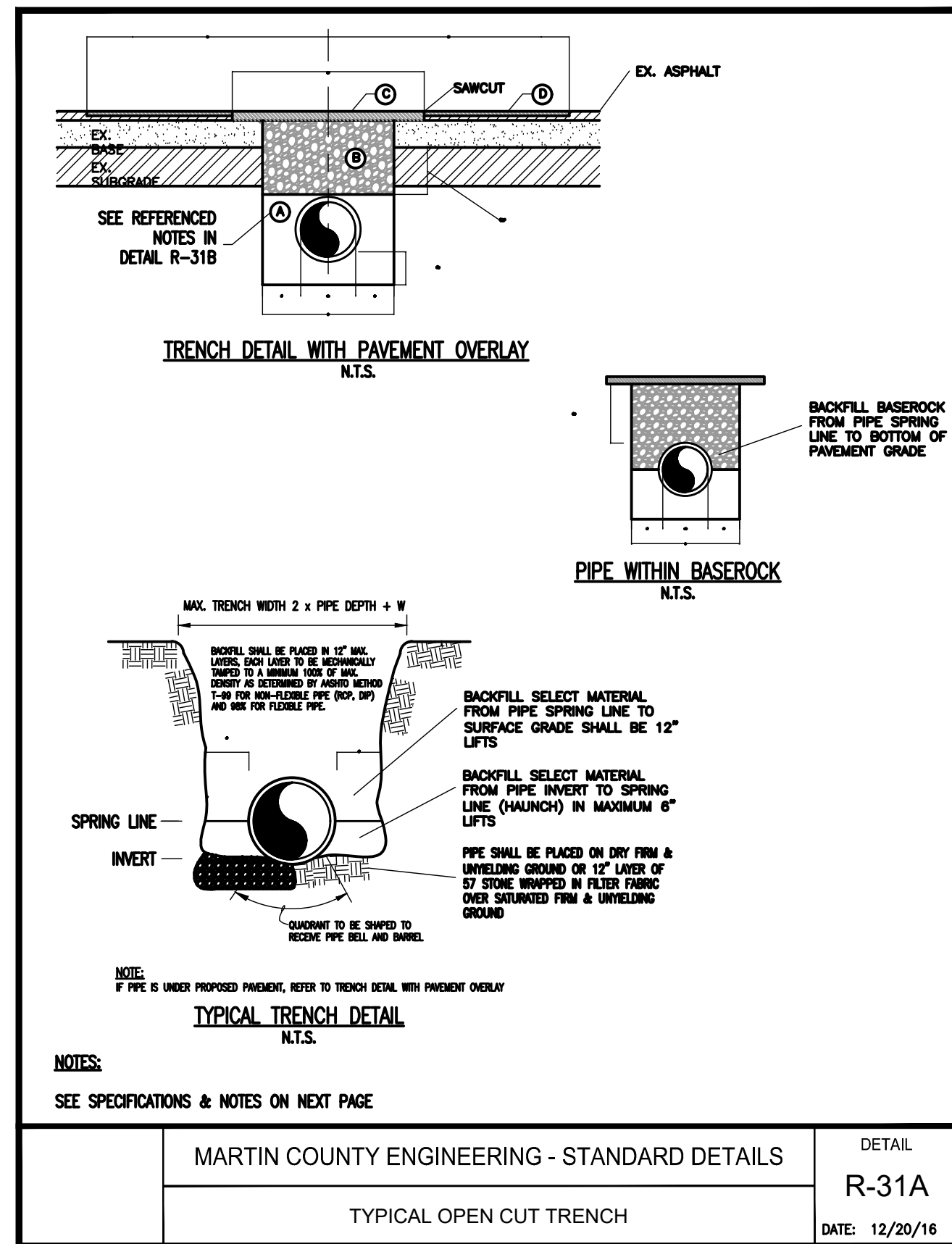
LOXAHATCHEE RIVER DISTRICT
 ISLAND COUNTRY ESTATES
 LOW PRESSURE FORCE MAIN

DETAILS

HOLTZ CONSULTING ENGINEERS, INC.
 270 SOUTH CENTRAL BLVD., SUITE 207
 JUPITER, FLORIDA 33458
 PH. (561) 575-2005
 Cert. No. 26960

CHRISTINE J. MIRANDA, P.E.
 License No: 60906

D-2



MARTIN COUNTY ENGINEERING - STANDARD DETAILS
TYPICAL OPEN CUT TRENCH
DETAIL R-31A
DATE: 12/20/16

BACKFILL AND BASE

- PROVIDE CLEAN BACKFILL. BACKFILL SHALL BE REPLACED IN 12" LAYERS. EACH LAYER SHALL BE MECHANICALLY COMPACTED TO A MINIMUM 100% DENSITY AS DETERMINED BY MSHTD T-180, METHOD "C" (MINIMUM LBR OF 40).
- BASE ROCK MATERIAL SHALL BE A MINIMUM OF 2" THICK AND BE PLACED IN 6" LAYERS OR AS OTHERWISE APPROVED AND EACH LAYER THOROUGHLY MECHANICALLY COMPACTED TO (100%) DENSITY AS DETERMINED BY MSHTD T-180. ALL BASE MATERIAL MUST MEET FDOT SPECIFICATIONS FROM A CERTIFIED MINING OPERATION. DEPTH OF BASE MATERIAL VARIES ON ROADWAY TYPE AS PER MARTIN COUNTY ENGINEERING STANDARD DETAIL R-10.

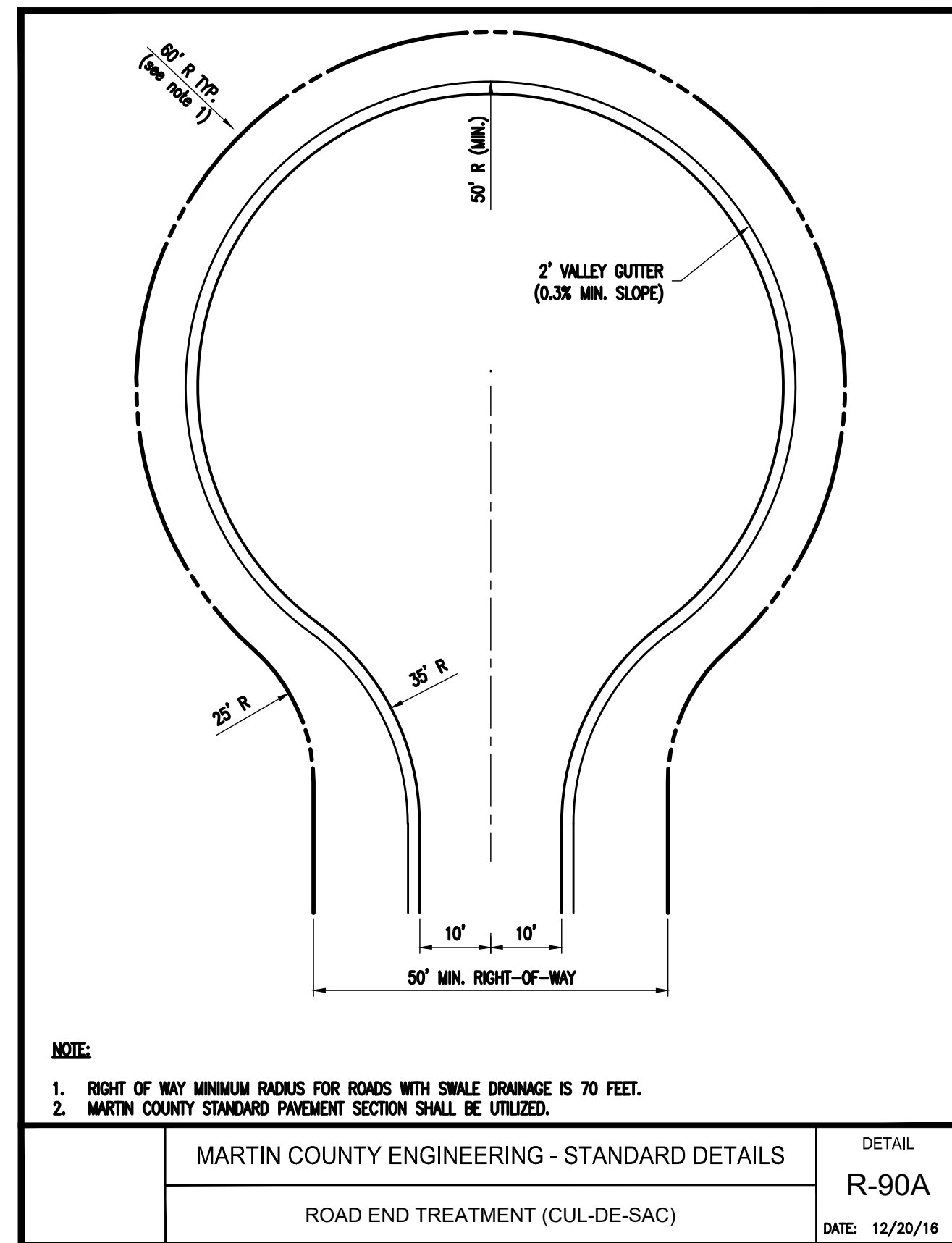
PAVING

- TEMPORARY PATCH SHALL BE NO LESS THAN 2" THICK OR MATCHING EXISTING PAVEMENT THICKNESS, WHICHEVER IS GREATER. ASPHALT PATCHES MUST BE OF A HOT MIX TYPE FRICTION COURSE. MARTIN COUNTY DOES NOT ALLOW COLD PATCH IN COUNTY MAINTAINED ROADWAYS. THE PATCH IS TO REMAIN 30 DAYS AT MINIMUM TO ASSURE ANY SETTLING OF THE ROADWAY TRENCH HAS TAKEN PLACE.
- MILL 1" OF ASPHALT A MINIMUM OF 25' FROM CENTER OF TRENCH ON BOTH SIDES, SEE NOTE #1. PAVE AND COMPACT 1" OF SP-9.5 OR MATCH EXISTING TYPE OF FRICTION COURSE.
- ASPHALT MIX TO CONTAIN NO MORE THAN 30% RECLAIMED ASPHALT PAVEMENT (R.A.P.)

NOTES:

- ALL OPEN CUT OF PAVEMENT MUST BE REVIEWED BY MARTIN COUNTY ENGINEERING PRIOR TO ANY WORK BEING DONE IN COUNTY MAINTAINED RIGHT-OF-WAY. DEPENDING ON THE LOCATION OF THE OPEN CUT ADDITIONAL MILLING AND PAVING MAY BE REQUIRED; ALL PAVEMENT JOINTS SHALL BE MECHANICALLY SAVED.
- ALL MATERIAL USED WITHIN THE ROADWAY MUST MEET FDOT SPECIFICATIONS AND BE SUPPLIED FROM A FDOT CERTIFIED MINING OPERATION AND ASPHALT PLANT.
- A MINIMUM OF TWO DENSITY TESTS SHALL BE TAKEN FOR EACH SIX (6) INCH LIFT OF SUB GRADE AND EACH OPEN CUT CROSSING. WHEN THE SPECIFIED COMPACTED BASE IS GREATER THAN SIX AND ONE-HALF (6 1/2) INCHES THE BASE SHALL BE CONSTRUCTED IN TWO OR MORE COURSES. PROCTORS FOR MATERIALS USED IN BACK-FILLING SHALL BE OBTAINED BY A CERTIFIED LABORATORY. DENSITY TESTS SHALL BE CONDUCTED BY A CERTIFIED LABORATORY OR THE PERMITTEE'S CONSULTANTS. THE PERCENTAGE OF MAXIMUM DENSITY REQUIRED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. A COPY OF ALL COMPLETED AND ACCEPTED DENSITY TESTS SHALL BE FURNISHED TO THE COUNTY ENGINEER'S OFFICE PRIOR TO FINAL INSPECTION.
- MARTIN COUNTY DOES NOT ALLOW CRUSHED CONCRETE WITHIN COUNTY MAINTAINED ROADWAY.

MARTIN COUNTY ENGINEERING - STANDARD DETAILS
TYPICAL OPEN CUT TRENCH
DETAIL R-31B
DATE: 12/20/16



MARTIN COUNTY ENGINEERING - STANDARD DETAILS
ROAD END TREATMENT (CUL-DE-SAC)
DETAIL R-90A
DATE: 12/20/16

SEPARATION REQUIREMENTS

62-555.314 F.A.C. AUGUST 28, 2003

- HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.**
 - NEW OR RELOCATED UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
 - NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
 - NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART II OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
 - VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER PIPELINES.**
 - 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.
 - 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.
 - AT THE UTILITY CROSSING DESCRIBED IN PARAGRAPHS (A) AND (B) 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 REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
- *REQUIRED BY: HRS, STATE OF FLORIDA, PALM BEACH COUNTY PUBLIC HEALTH UNIT

LOXAHATCHEE RIVER DISTRICT
STANDARD WATER AND SEWER
SEPARATION STATEMENT
SD-30
REVISION: APRIL, 2012

DATE	BY	REVISIONS

Date: 12-28-18
Scale: AS NOTED
Design By: CM
Drawn By: RR
Check By: DH

LOXAHATCHEE RIVER DISTRICT
ISLAND COUNTRY ESTATES
LOW PRESSURE FORCE MAIN

DETAILS

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License No: 60906

BID FORM — BASE BID
LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT
ISLAND COUNTRY ESTATES LOW PRESSURE FORCE MAIN SYSTEM

UNIT PRICES

No.	Description	Unit	Qty	Unit Cost	Total
<u>Low Pressure Force Main Items</u>					
1	Force Main Mobilization/Demobilization	1	LS		
2	Maintenance of Traffic	1	LS		
3	Record Drawings	1	LS		
4	Preconstruction Video	1	LS		
5	NPDES Permit/Erosion Measures	1	LS		
6	2" PVC Force Main & Fittings	5,470	LF		
7	1.5" Single Service (Short)	23	EA		
8	1.5" Single Service (Long) – Directional Drilled or Moled	15	EA		
9	Driveway Crossing (Moled)	26	EA		
10	Sidewalk Crossing (Moled)	4	EA		
11	2" Isolation Valve	6	EA		
12	In-Line Flushing Port	3	EA		
13	Terminal Flushing Port	5	EA		
14	Air Release Valve	1	EA		
15	Connect 2" PVC Force Main to Existing 2.5" PVC Force Main	1	EA		
16	Roadway Crossing (Directional Drill)	2	EA		
<u>Roadway Items</u>					
17	Roadway Mobilization/Demobilization	1	LS		

18	Maintenance of Traffic	1	LS		
19	Mill and Resurface Asphalt Roadway, Including Pavement Markings	14,300	SY		
20	Header Curb Replacement		LF		
21	Asphalt Roadway Removal and Repair, Including Compaction		SY		

TOTAL BASE BID ITEMS 1-19 (in words)

_____ Dollars

_____ Cents

THE CONTRACT AWARD SHALL BE EVALUATED BASED ON THE TOTAL BASE BID PRICE FOR ITEMS 1 THROUGH 21 AS SUBMITTED BY THE LOWEST, QUALIFIED, RESPONSIBLE, RESPONSIVE BIDDER.

(Name of Bidder)

Bidders Name: _____

By: _____
Signature of Authorized Officer, Partner, Member, Manager

Print Name of Person signing: _____

Title: _____

Business Address: _____

Incorporated or formed under the laws of the State of _____.

SECTION 01200

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. The Unit prices stated in the Contract shall be considered payment in full for the completion of all work. Payment shall be made under each item only for work as it is not specifically included under other items.
- B. The CONTRACTOR shall furnish all labor, equipment and material required to complete the construction of a new 2-inch Sch. 40 PVC and/or 2-inch SDR-11 HDPE low pressure force main. The proposed low pressure force main will be installed along SE Country Estates Way, SE Peach Way, SE Canaan Way, and SE Red Apple Lane and will connect to the proposed low-pressure force main located at the west side of Loxahatchee River Road.

1.02 PERFORMANCE

- A. Section generally defines unless otherwise indicated, the following:
 - 1. Payment item descriptions.
 - 2. Payment application descriptions.
- B. The cost of temporary facilities, bonds, insurance, attending project meetings, administration, record drawings, policing, and other general duties shall be considered incidental to all items.
- C. The OWNER may direct the CONTRACTOR to install certain portions of the work in advance of other portions without extra payment to the CONTRACTOR.

1.03 RELATED SECTIONS

- A. Notice to Contractors
- B. Article 1 - Instructions to Bidders.
- C. Article 2 - Bid Form.
- D. Article 4 – Contract.

E. Article 10 - General Conditions.

1.04 LUMP SUM ITEMS

A. The lump sum price shall be full compensation for all labor, materials and equipment to satisfactorily complete the installation of the items as shown on the plans and indicated in the details for lump sum bid items.

1.05 UNIT PRICE ITEMS

A. The ENGINEER or his representative shall determine the number of units of each work item installed.

1.06 SATISFACTORY COMPLETION

A. Satisfactory completion shall include dewatering, if any, and repair or replacement of damaged landscaping, irrigation systems, pavement or other existing improvements.

1.07 PAYMENT ITEMS

A. Unit Price Bid

1. Payment shall constitute summation of measured quantities multiplied by the respective unit price for items constructed as specified herein and shown on the engineering drawings; including installation and removal of all temporary facilities, piping; and supply of all incidental materials, equipment and labor necessary to complete the contemplated Work whether specifically identified herein or not.
2. Partial progress payments will be made at monthly intervals and will be based upon the value of the Work completed on the date that a partial payment application is submitted less deductions for retainage as defined elsewhere. Signed and Sealed Record Drawings shall be submitted and approved with each partial and final pay request.

1.08 PAYMENT APPLICATION DESCRIPTION

A. Preparation of Applications:

1. Present required information in type written form, or equivalent.
2. Execute certification by signature of authorized officer.
3. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed.

4. List each authorized Change Order as an extension on the Application for Payment, listing Change Order number and dollar amount as for an original item of Work.

B. Submittal Procedures

1. Submit three (3) copies of each Application for Payment.

Payment Period: Submit monthly as directed by the OWNER.

Submit signed and sealed record drawings covering work for which payment is being requested.

Submit revised progress schedule accurately reflecting the work completed and the schedule of future work items.

C. Substantiating Data

1. When OWNER requires substantiating information, submit data justifying dollar amounts in question.
2. Provide one (1) copy of data with cover letter of each copy of application. Show Application number and date, and line item by number and description on each piece of data.

PART 2 – PRODUCTS

NOT USED

PART 3 - EXECUTION

3.01 BID ITEM DESCRIPTIONS

A. PAY ITEM NO. 1 – MOBILIZATION/DEMobilIZATION

The Contract Lump Sum for this item shall constitute full compensation for mobilization, demobilization, general conditions, insurances, monthly photos, shop drawings, permits, temporary facilities, and bonding in accordance with the contract documents. The first payment shall not include mobilization / demobilization if the CONTRACTOR has not started work at the project site. Payment for this item shall be by Lump Sum (LS). Total cost of this item shall not exceed 10% of the total contract value.

B. PAY ITEM NO. 2 – MAINTENANCE OF TRAFFIC

The Contract Lump Sum for this item shall constitute full compensation for providing all necessary permits and traffic devices to maintain traffic during construction and restoration. Traffic devices may be in the form of barricades, personnel, lights, signs, temporary rock roadways, etc. All work shall be in accordance with all applicable Florida Department of Transportation specifications, and in accordance with the governing municipalities and other governing agencies. Payment for this item shall be by Lump Sum (LS).

C. PAY ITEM NO. 3 – RECORD DRAWINGS

The Contract Lump Sum for this item shall constitute full compensation for providing a Professional Surveyor licensed in the State of Florida to perform as-built surveying including: signed and sealed record drawings; AUTOCAD record drawings and other items described in **Section 01720 - Record Documents**. Payment for record drawing information will be made upon completion of all required items in accordance with the requirements of the Contract Documents. Payment for record drawings will be processed after drawings are approved. No partial payments shall be made for record drawings. Payment for this item shall be by Lump Sum (LS).

D. PAY ITEM NO. 4 – PRECONSTRUCTION VIDEO

The Contract Unit Price for this item shall constitute full compensation for providing, prior to start of construction, a video of the project by a professional video-taping service acceptable to the OWNER. The video may include all driveways, landscaping area, etc. for each side of the streets. The video should extend from right-of-way to right-of-way and 10' beyond. A copy of the video shall be turned over to the OWNER and ENGINEER for their use. Payment for this item shall be by Lump Sum (LS).

E. PAY ITEM NO. 5 – NPDES PERMIT/EROSION MEASURES

The Contract Lump Sum for this item shall constitute full compensation for establishing, constructing and maintaining erosion and sediment control measures. The erosion control programs shall be maintained during the entire period of construction, including any extensions in Contract time. Temporary erosion and pollution control shall include construction work off-site where such work is necessary as a result of borrow pit operations, haul roads or equipment storage sites, etc. This work shall also include the preparation of any required Stormwater Pollution Prevention Plan (SWPPP), including modifications and updates. The CONTRACTOR shall obtain and comply with all provisions of the State of Florida, Department of Environmental Protection, Permit for Stormwater Discharge from Large and Small Construction Activities (NPDES Construction Site Permit Program). Payment for this item shall be by Lump Sum (LS).

F. PAY ITEM NO. 6 – 2-INCH PVC FORCE MAIN AND FITTINGS

The Contract Unit Price for this item shall constitute full compensation for furnishing all materials, labor, equipment and tools necessary to furnish and install PVC force main as shown on the contract drawings, as specified herein and as directed by the ENGINEER, including but not limited to: the excavation for the pipe trench, together with the disposal of all excess materials, bracing, sheeting, and dewatering, the installation of the PVC pipe, fittings, pipe restraints, and trace wire, the backfilling and compaction of the pipe trenches, density testing, hydrostatic testing, maintaining uninterrupted flow of existing utilities, providing access to driveways and roadways at all time, maintaining traffic control, cleaning the site of the work location and protection of utilities, structures, trees, shrubs and lawns, and all other work required for the complete installation of the water main. This work also includes repairs to irrigation systems damaged or removed during the construction activities and shall include piping, valves, heads, controls, conduit, boxes, wires, panels, etc. All irrigation systems shall be restored to the pre-existing condition or better. This item shall also include removal and proper restoration of miscellaneous items such as mailboxes, decorative landscaping, driveway and drainage culverts, irrigation piping, etc. All mailboxes and irrigation piping removed during the course of construction are to be properly restored to the pre-existing condition or better, as directed by the ENGINEER. Where so directed by the OWNER, decorative landscaping shall be replaced. Restoration of all landscaped and sodded areas shall be equal or better than the original condition. If the CONTRACTOR elects to remove landscape material and reinstall the material at a later date, they shall be responsible for properly maintaining and watering the material while it is under their care for thirty (30) days. Payment of this item shall be per Linear Foot (LF) installed.

G. PAY ITEM NO. 7 – 1.5-INCH SINGLE SERVICE (SHORT)

The Contract Unit Price for this item shall constitute full compensation for providing all labor, materials, equipment, and incidentals necessary to furnish and install PVC service piping (up to 30 feet), fittings, adapters, EMS markers, curb stops, ball valves, swing check valves, service boxes, and any other appurtenances necessary to connect the single service to the force main shown on the contract drawings, as specified herein and as directed by the ENGINEER, including but not limited to: the excavation and backfill thereof, together with the disposal of all excess materials, bracing, sheeting and dewatering, the furnishing and compaction, hydrostatic testing, disinfection, maintaining uninterrupted flow of existing utilities, providing access to driveways at all times, constructing and maintaining all bridges required for traffic control, cleaning the site of the work location and protection of utilities, structures, trees, shrubs and lawns, and all other work required for the complete installation of sewer service lines, service boxes, valves, and appurtenances. Payment for this item shall be the actual number of Each (EA) single service installed.

H. PAY ITEM NO. 8 – 1.5-INCH SINGLE SERVICE (LONG) – (HORIZONTAL DIRECTIONALLY DRILLED OR MOLED)

The Contract Unit Price for this item shall constitute full compensation for providing all labor, materials, equipment, and incidentals necessary to furnish and install HDPE service piping (up to 75 feet), fittings, adapters, EMS markers, curb stops, ball valves, swing check valves, service boxes, and any other appurtenances necessary to connect the single service to the force main via horizontal directional drill or pneumatic mole method below existing roadway as shown on the contract drawings, as specified herein and as directed by the ENGINEER, including but not limited to: the excavation and backfill thereof, together with the disposal of all excess materials, bracing, sheeting and dewatering, the furnishing and compaction, hydrostatic testing, disinfection, maintaining uninterrupted flow of existing utilities, providing access to driveways at all times, cleaning the site of the work location and protection of utilities, structures, trees, shrubs and lawns, and all other work required for the complete installation of low pressure force main service lines, service boxes, valves, and appurtenances. Payment for this item shall be the actual number of Each (EA) single service installed.

I. PAY ITEM NO. 9 – DRIVEWAY CROSSING (MOLED)

The Contract Unit Price for this item shall constitute full compensation for providing all labor, material, and equipment required for the driveway bore with a new casing for the construction of new low pressure force mains. The quantities for driveway bores are estimated based on where pipeline is installed under existing driveways and is in lieu of open cut methods to restore driveways. If the driveway is damaged during construction, the CONTRACTOR shall be responsible to restoring the driveway to pre-existing or better condition at no additional cost to the OWNER. Payment for this item shall be the actual number of Each (EA) driveway crossing installed.

J. PAY ITEM NO. 10 – SIDEWALK CROSSING (MOLED)

The Contract Unit Price for this item shall constitute full compensation for providing all labor, material, and equipment required for the sidewalk bore with a new casing for the construction of new low pressure force mains. The quantities for sidewalk bores are estimated based on where pipeline is installed under existing sidewalks and is in lieu of open cut methods to restore sidewalks. If the sidewalk is damaged during construction, the CONTRACTOR shall be responsible to restoring the sidewalk to pre-existing or better condition at no additional cost to the OWNER. Payment for this item shall be the actual number of Each (EA) sidewalk crossing installed.

K. PAY ITEM NO. 11– 2-INCH ISOLATION VALVE

The Contract Unit Price for this item shall constitute full compensation for furnishing all materials, labor, equipment and tools for the complete installation of 2-inch ball valve curb stops as shown on the construction drawings, specified herein and as directed by the ENGINEER. This item includes, but is not limited to, all excavation, disposal of excess materials, bracing, sheeting, rock removal, dewatering, the furnishing and installation of the ball valves, valve boxes, valve key extensions, bolts, nuts, gaskets, restraints, glands, adapters, backfilling, compaction, rock bedding, concrete thrust blocks, concrete collars, Operation and Maintenance Manuals, and concrete supports, and protection of utilities, structures, trees, and shrubs. Payment for this item shall be the actual number of Each (EA) valve installed.

L. PAY ITEM NO. 12 – IN-LINE FLUSHING PORT

The Contract Unit Price for this item shall constitute full compensation for furnishing all materials, labor, equipment and tools necessary to install in-line flushing ports, as shown on the drawings, as specified herein and as directed by the ENGINEER, including but not limited to: excavation, disposal of excess materials, bracing, sheeting and dewatering, the installation of the materials of the in-line flushing port assembly, box, cover, PVC piping, ball valves, plugs, fittings, gaskets, flanges, and restraints, backfill and compaction, rock bedding, hydrostatic testing, concrete thrust blocks, maintaining uninterrupted service in existing utilities, location and protection of utilities, maintenance of traffic, and all other work required for the complete installation of the in-line flushing port. Payment for this item shall be the actual number of Each (EA) in-line flushing port installed.

M. PAY ITEM NO. 13 – TERMINAL FLUSHING PORT

The Contract Unit Price for this item shall constitute full compensation for furnishing all materials, labor, equipment and tools necessary to install terminal flushing ports, as shown on the drawings, as specified herein and as directed by the ENGINEER, including but not limited to: excavation, disposal of excess materials, bracing,

sheeting and dewatering, the installation of the materials of the terminal flushing port assembly, box, cover, PVC piping, ball valves, plugs, fittings, gaskets, flanges, and restraints, backfill and compaction, rock bedding, hydrostatic testing, concrete thrust blocks, maintaining uninterrupted service in existing utilities, location and protection of utilities, maintenance of traffic, and all other work required for the complete installation of the terminal flushing port. Payment for this item shall be the actual number of Each (EA) terminal flushing port installed.

N. PAY ITEM NO. 14 – AIR RELEASE VALVE

The Contract Unit Price for this item shall constitute full compensation for furnishing all materials, labor, equipment and tools necessary to install air release valves as shown on the contract drawings, as specified herein and as directed by the ENGINEER, including but not limited to: the excavation for the valves, together with the disposal of all excess materials, bracing, sheeting and dewatering, the installation of the air release valve, valve boxes, bolts, nuts, and gaskets, backfilling, hydrostatic testing, concrete thrust block and restraints and concrete supports, maintaining uninterrupted flow of existing utilities, providing access to driveways and roadways at all times, maintaining traffic control, cleaning the site of the work location and protection of utilities, structures, trees, shrubs and lawns, and all other work required for the complete installation of the air release valves. Payment for this item shall be the actual number of Each (EA) air release valve installed.

O. PAY ITEM NO. 15 – CONNECT 2” PVC FORCE MAIN TO EXISTING 2.5” PVC LOW PRESSURE FORCE MAIN

The Contract Unit Price for this item shall constitute full compensation for furnishing all materials, labor, equipment and tools necessary to connect to the proposed 2-inch PVC force main to the existing 2.5-inch PVC force main where shown on the contract drawings, as specified herein and as directed by the ENGINEER, including but not limited to: removing existing pipe and fittings, excavation and backfill thereof, sheeting and bracing, dewatering, protection and support of existing utilities, proper handling and disposal of pipe at an approved facility, installing adapters for new the new pipe and fittings, providing access to roadway, driveways, and sidewalks at all times, backfilling and compaction, maintaining traffic control, cleaning the site of the work location and protection of utilities, structures, trees, shrubs, and lawns, and all other work required for connecting to the existing force main. Payment for this item shall be the actual number of Each (EA) connection installed.

P. PAY ITEM NO. 16 – ROADWAY CROSSING (DIRECTIONAL DRILL)

The Contract Unit Price for this item shall constitute full compensation for furnishing all materials, labor, equipment and tools for the complete construction of a 2.5-inch HDPE low pressure force main installed via horizontal directional drill methods as shown on the construction Drawings, specified herein and as directed by the ENGINEER. This item includes, but is not limited to, surveying, erosion control, excavation, backfill, and compaction for entry and exit pits, maintenance of traffic, supporting and protecting existing utilities, dewatering, all pipe, fusing, drilling, reaming, slurry, pulling of pipe through the borehole, disposal of excess materials, frac-out control, pipe marking tape, tracer wire, tracer wire termination boxes, adapters, temporary restoration of irrigation systems (irrigation piping, sprinkler heads, etc.), providing temporary sidewalks and walkways interrupted during

construction activities, temporary restoration of mailboxes, temporary restoration of fences, temporary restoration of driveways, temporary restoration of roads, temporary restoration of structures, etc., and removal and disposal of sidewalks, driveways, asphaltic concrete, rock base and subgrade (including necessary sawcutting). Payment for this item is per actual number of each (EA) horizontal directional drill performed not actual quantity of piping installed. Payment for this item will be from the end of the 2.5-inch pipe with the pulling head connected to it to the end of the last section of 2.5-inch pipe pulled as part of the HDD.

Q. PAY ITEM NO. 17 – ROADWAY WORK MOBILIZATION/DEMobilIZATION

The Contract Lump Sum for this item shall constitute full compensation for mobilization, demobilization, general conditions, insurances, monthly photos, shop drawings, permits, temporary facilities, and bonding in accordance with the contract documents. The first payment shall not include mobilization / demobilization if the CONTRACTOR has not started work at the project site. Payment for this item shall be by Lump Sum (LS). Total cost of this item shall not exceed 10% of the total contract value.

R. PAY ITEM NO. 18 – MAINTENANCE OF TRAFFIC FOR ROADWAY WORK

The Contract Lump Sum for this item shall constitute full compensation for providing all necessary permits and traffic devices to maintain traffic during construction and restoration of the roadway work. Traffic devices may be in the form of barricades, personnel, lights, signs, temporary rock roadways, etc. All work shall be in accordance with all applicable Florida Department of Transportation specifications, and in accordance with the governing municipalities and other governing agencies. Payment for this item shall be by Lump Sum (LS).

S. PAY ITEM NO. 19 – MILL AND RESURFACE ASPHALT ROADWAY, INCLUDING PAVEMENT MARKINGS

Under this Item, CONTRACTOR shall provide all labor, material, and equipment required for the milling and resurfacing of asphalt pavement areas as shown by hatching on the Drawings. The bid shall include work, labor and materials associated with the sawcutting, MOT, pavement markings, cleaning, milling and resurfacing of the asphalt pavement in accordance with FDOT requirements. The cost shall include the milling of 1 inch and resurfacing asphalt pavement a minimum of one and a half inches (1½ inches) deep in accordance with the specifications, FDOT requirements and to the approval of the OWNER and permitting requirements. Any milling and resurfacing outside of the areas depicted on the Drawings will be paid for by the CONTRACTOR at no additional cost to the OWNER. Payment for this item shall be by Square Yard (SY) of asphalt pavement installed.

T. PAY ITEM NO. 20– HEADER CURB REPLACEMENT

The Contract Unit Price for this item shall constitute full compensation for furnishing all materials, labor, equipment and tools necessary to remove and replace flush header curb where shown on the contract drawings, as specified herein and as directed by the ENGINEER, including but not limited to: the removal of existing curb, together with the disposal of all excess materials, installation of new curb, providing access to driveways and roadways at all time, maintaining traffic control, cleaning the site of the work location and protection of utilities, structures, trees, shrubs and lawns, and all other work required for the complete installation of the curb. This work also includes restoration of any landscaping damaged during the course of construction. All damaged areas are to be properly restored to the pre-existing condition or better, as directed by the ENGINEER. Where so directed by the OWNER, decorative landscaping shall be replaced. Restoration of all landscaped areas shall be equal or better than the original condition. If the CONTRACTOR elects to remove landscape material and reinstall the material at a later date, they shall be responsible for properly maintaining and watering the material while it is under their care for thirty (30) days. Payment of this item shall be per Linear Foot (LF) installed.

U. PAY ITEM NO. 21– ASPHALT ROADWAY REMOVAL AND REPAIR, INCLUDING COMPACTION

Under this Item, CONTRACTOR shall provide all labor, material, and equipment required for the replacement in accordance with FDOT requirements, in kind and to the same thickness, but not less than one and a half inches (1½ inches) of asphalt pavement that are damaged by construction activities and as shown by hatching on the Drawings. The bid price shall include but not be limited to installation, compaction, preparation and fine grading of subgrade and base, tack coat, erosion control, placement of the temporary asphalt patch, and final asphalt pavement, finishing, maintenance of traffic, and pavement markings. The cost shall include the replacement of any damaged asphalt pavement as a result of the construction activities in accordance with the specifications and to the approval of the OWNER. Any roadway restoration outside of the areas depicted on the Drawings will be paid for by the CONTRACTOR at no additional cost to the OWNER. Payment for this item shall be by Square Yard (SY) of asphalt pavement installed.

END OF SECTION