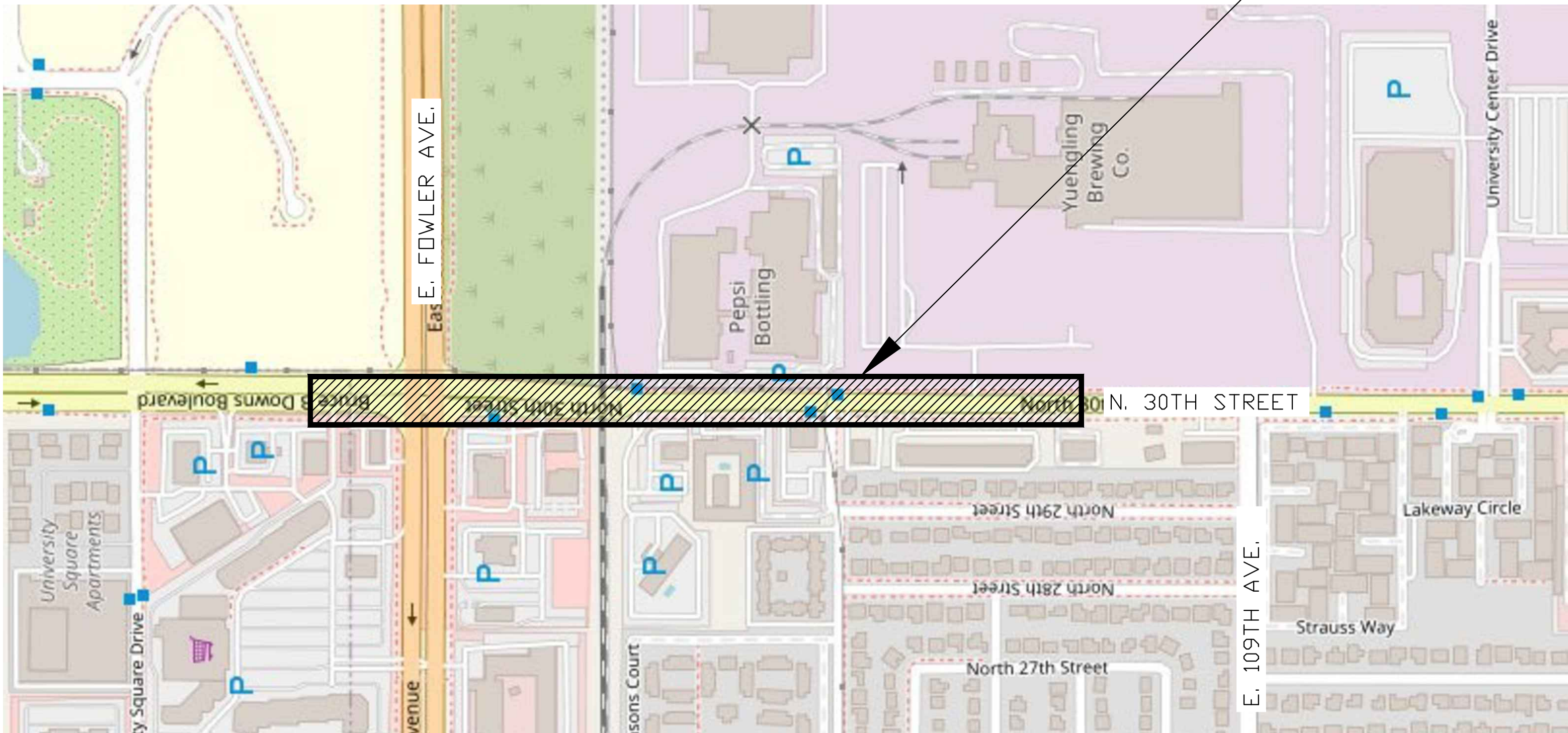


CONTRACT 25-C-00010

30TH STREET / USF FORCE MAIN RELOCATION

CITY OF TAMPA  
WASTEWATER DEPARTMENT  
2545 GUY N. VERGER BOULEVARD  
TAMPA, FL 33605

PROJECT LOCATION



INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
C0.0	COVER SHEET
C1.0	OVERALL PROJECT AREAS
C2.0	STA. 1+00 TO 4+03.31
C2.1	STA. 4+03.31 TO 6+88.31
C2.2	STA. 6+88.31 TO 11+68.31
C2.3	STA. 11+68.31 TO 16+48.31
C2.4	STA. 16+48.31 TO 20+48.31
C2.5	STA. 20+48.31 TO 22+72.02
C2.6	INTERCONNECTION DETAIL "A"
C3.0	DETAILS & NOTES
C3.1	DETAILS & NOTES
C3.2	DETAILS & NOTES

100% CONSTRUCTION DRAWINGS

BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION

MILLS & ASSOCIATES

DIVISION OF PENNONI

CONSULTING ENGINEERS & LAND SURVEYORS

3242 HENDERSON BOULEVARD • SUITE 300

TAMPA, FLORIDA 33609-3056

TELEPHONE: (813) 876-5869

FOR

CITY OF TAMPA

WASTEWATER DEPARTMENT

2545 GUY N VERGER BLVD.

TAMPA, FLORIDA 33605

DRWN BY: CVL

DATE 1/29/25

DSGN BY: CVL

DATE 1/29/25

CHKD BY: LEM

DATE 1/29/25

SCALE: NA

LAWRENCE E. MILLS

P.E. NO. 22324 - P.L.S. NO. 3141

E.B. NO. 3860 - L.B. NO. 3868

STATE OF FLORIDA

30TH STREET SANITARY

SEWER IMPROVEMENTS

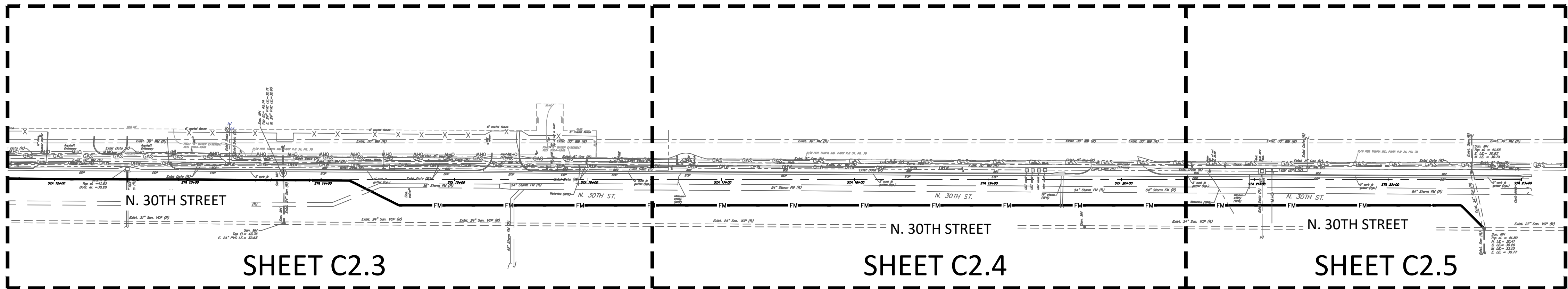
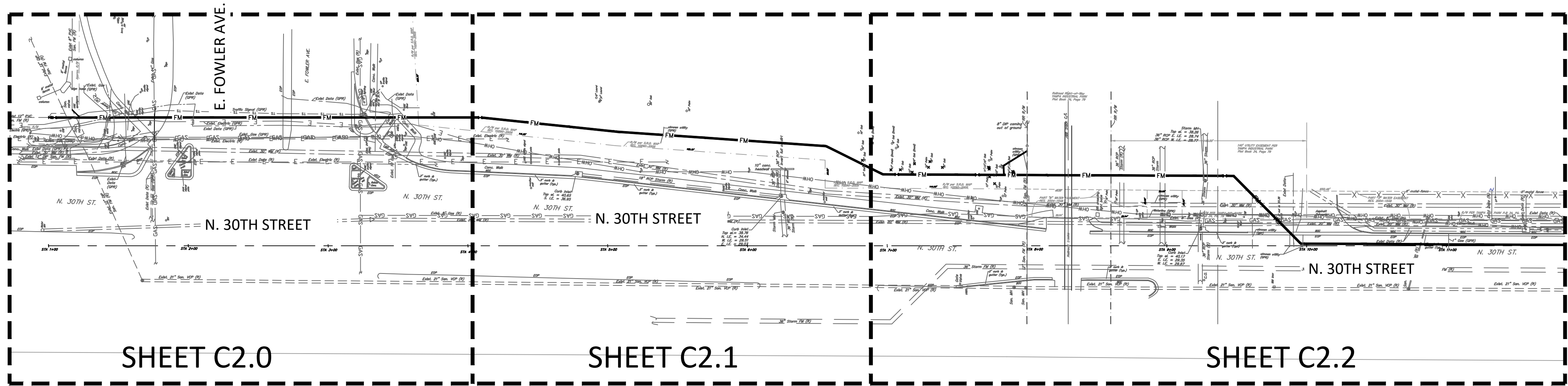
C0.0

JOB NO.

21-013.001

COVER SHEET





OVERALL PROJECT AREAS  
Scale: 1" = 50'

100% CONSTRUCTION DRAWINGS

BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION

MILLS & ASSOCIATES

DIVISION OF PENNONI

CONSULTING ENGINEERS & LAND SURVEYORS  
3242 HENDERSON BOULEVARD • SUITE 300  
TAMPA, FLORIDA 33609-3056  
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CITY OF TAMPA  
WASTEWATER DEPARTMENT  
2545 GUY N VERGER BLVD.  
TAMPA, FLORIDA 33605

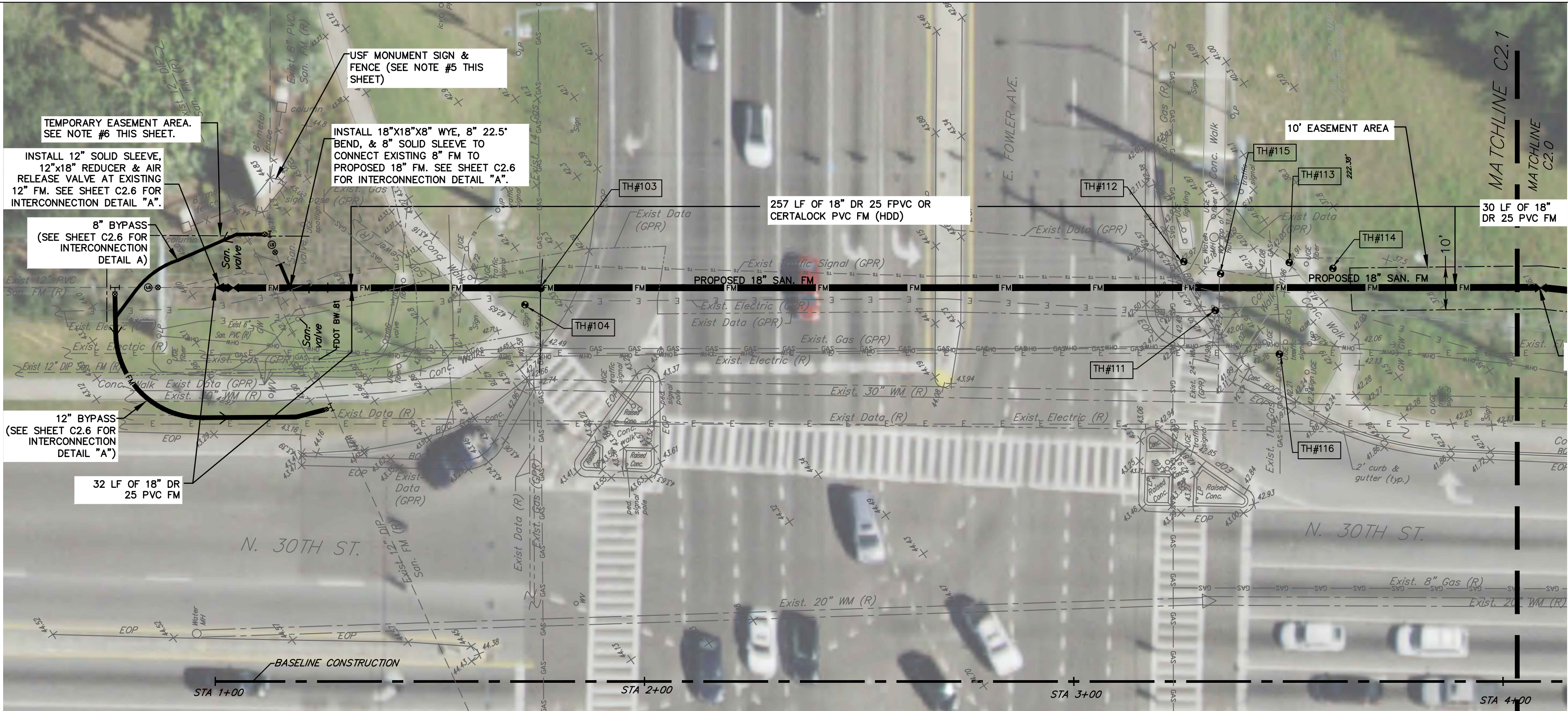
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CHKD BY: LEM  
SCALE: 1" = 50'

DATE 1/29/25  
DATE 1/29/25  
DATE 1/29/25

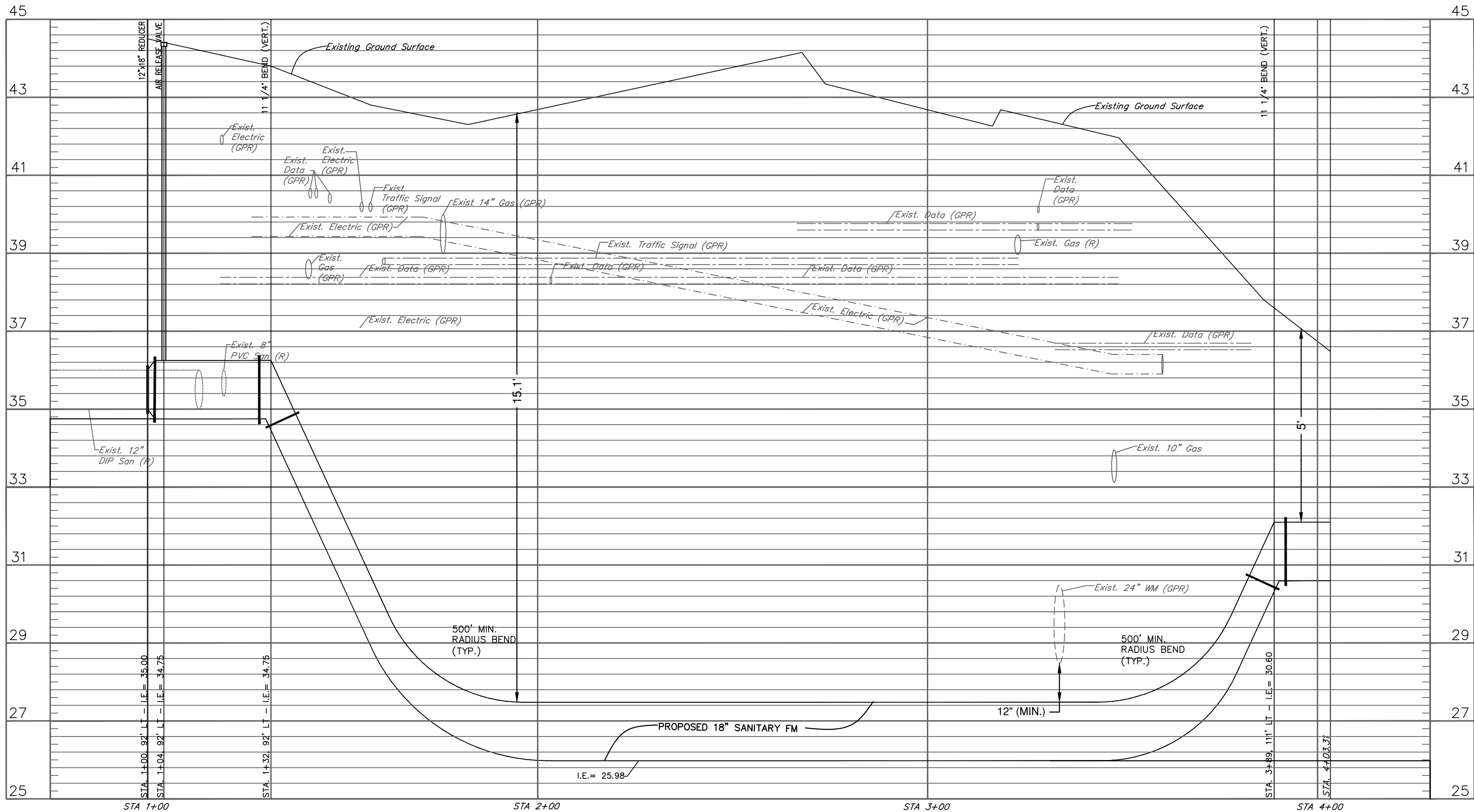
LAWRENCE E. MILLS  
P.E. NO. 22324 - P.L.S. NO. 3141  
E.B. NO. 3860 - L.B. NO. 3868  
STATE OF FLORIDA

30TH STREET SANITARY SEWER IMPROVEMENTS	C1.0
OVERALL PROJECT AREAS	JOB NO. 21-013.001

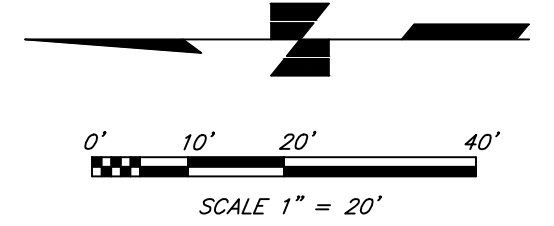




PLAN VIEW  
Horizontal Scale: 1" = 20'



PROFILE VIEW  
Horizontal Scale: 1" = 20'  
Vertical Scale: 1" = 2'



LEGEND (As Applicable)	
BC	Back of Curb
BFP	Backflow Preventer
(C)	Calculated
CLF	Chain Link Fence
CMP	Corrugated Metal Pipe
CO	Clean Out
Conc.	Concrete
EP	Edge of Pavement
FDC	Fire Department Connector
FF	Finished Floor Elevation
FL	Flow Line
GI	Gate Inlet
GW	Guy Wire
H/C	Handicapped Parking Sign
HP	High Point
ID	Identification
IE	Invert Elevation
FCIR	Found Capped Iron Rod
FCM	Found Concrete Monument
FH	Fire Hydrant
FIR	Found Iron Rod
LB	Licensed Business
L.P.	Light Pole
(M)	Measured data
MEC	Match Existing Curb
MXP	Match Existing Pavement
MES	Mitered End Section
MH	Manhole
O/A	Overall
OR	Official Records
OHW	Overhead Wires
(P)	Plot data
Ped. xing	Pedestrian Crossing
PK&D	Porter K&D Nail & Disk (as noted)
(R)	Reported
PVC	Polyvinyl chloride
RCP	Reinforced Concrete Pipe
R/W	Right of Way
San.	Sanitary
SCD	Sanitary CD
SF	Square Feet
SIR	Set 5/8" IR
S/W	Sidewalk
TEM	Temporary Bench Mark
TC	Top of Curb
TE	Top Elevation
T.O.B.	Top of Bank
(Typ)	Typical
OHW	Overhead Wires
OVH	Overhang
UGE	Underground Electric
UP	Utility Pole
Ver.	Verizon
WM	Water Meter
WV	Water Valve
●-TH#001	Test Hole Location # (See V/H Data Table sheet C3.0)

- NOTES:
- EXISTING UTILITIES ARE SHOWN FROM THE BEST INFORMATION AVAILABLE. UNDERGROUND UTILITY INFORMATION SHOWN IS FROM GPR INFORMATION COLLECTED ON 10/07/22. V/H DATA COLLECTED 12/13/23, AND ASBUILT/RECORD DRAWINGS SUPPLIED BY UTILITY PROVIDERS. PRIOR TO DIRECTIONAL DRILLING, CONTRACTOR SHALL EXCAVATE AND VERIFY EXISTING HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES VIA VACUUM, V/H, OR CONVENTIONAL EXCAVATION.
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  - CONTRACTOR SHALL LIMIT CURVATURE IN ANY DIRECTION TO REDUCE FORCE ON THE PIPE DURING PULL-BACK. THE BEND RADIUS FOR FUSIBLE POLYVINYL CHLORIDE (PVC) PIPE SHALL NOT BE LESS THAN 500' FOR 18-INCH PIPE.
  - TREES LOCATED WITHIN EASEMENT AREA MARKED WITH AN "X" TO BE REMOVED. SEE TREE TABLE SHEET C3.2.
  - CONTRACTOR SHALL PROTECT THE EXISTING USF MONUMENT SIGN AND FENCING DURING CONSTRUCTION. ANY DAMAGE SHALL BE REPAIRED AND REPLACED IN KIND TO PRE-CONSTRUCTION CONDITIONS OR BETTER.
  - SIZE OF TEMPORARY EASEMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION TO FACILITATE INSTALLATION OF PROPOSED FORCE MAIN.

100% CONSTRUCTION DRAWINGS

REVISIONS					
BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION

**MILLS & ASSOCIATES**  
DIVISION OF PENNONI  
CONSULTING ENGINEERS & LAND SURVEYORS  
3242 HENDERSON BOULEVARD • SUITE 300  
TAMPA, FLORIDA 33609-3056  
TELEPHONE: (813) 876-5869

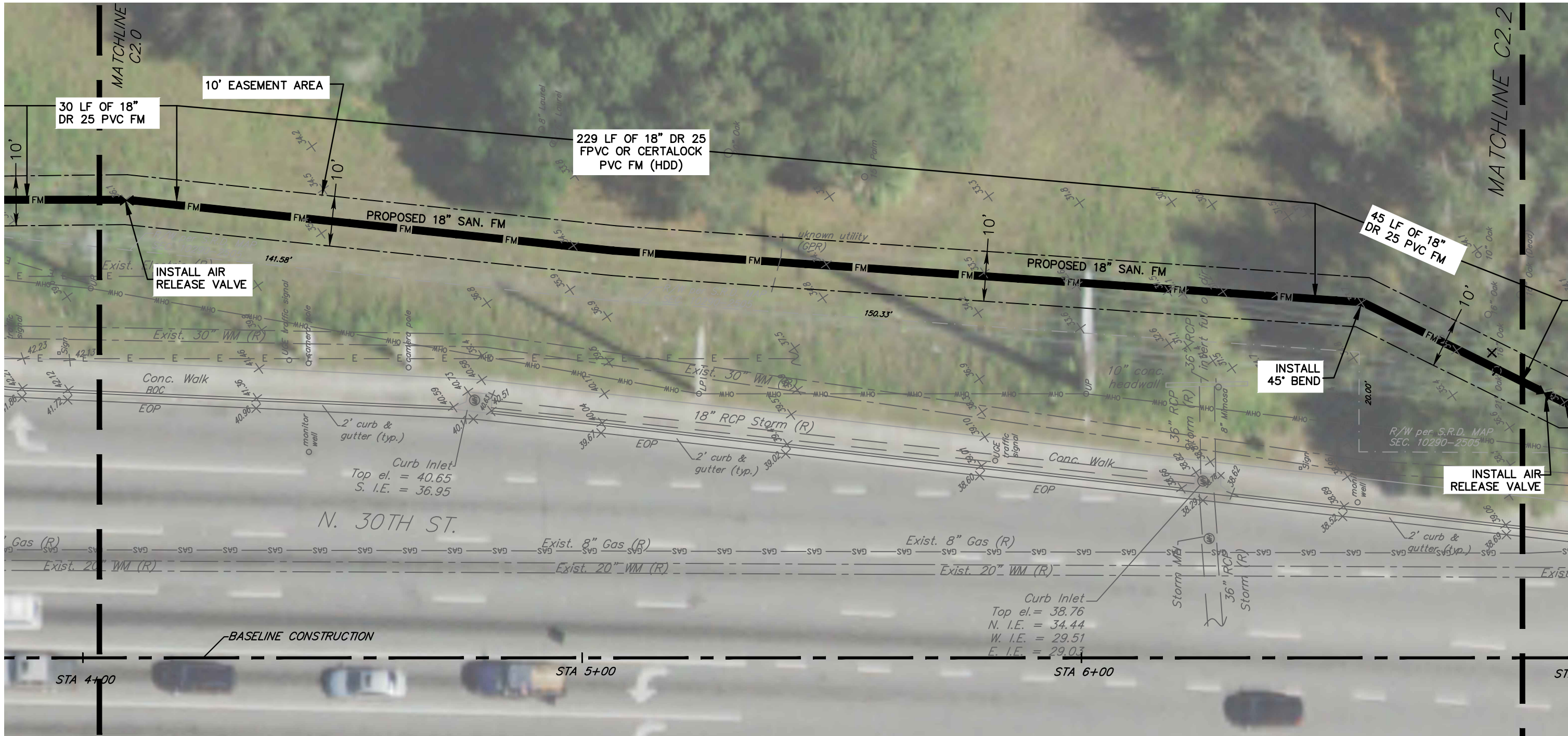
FOR  
*CITY OF TAMPA WASTE  
WATER DEPARTMENT*

DRWN BY: CVL      DATE 01/29/28  
DSGN BY: CVL      DATE 01/29/25  
CHKD BY: LEM      DATE 01/29/25  
SCALE: 1" = 20'

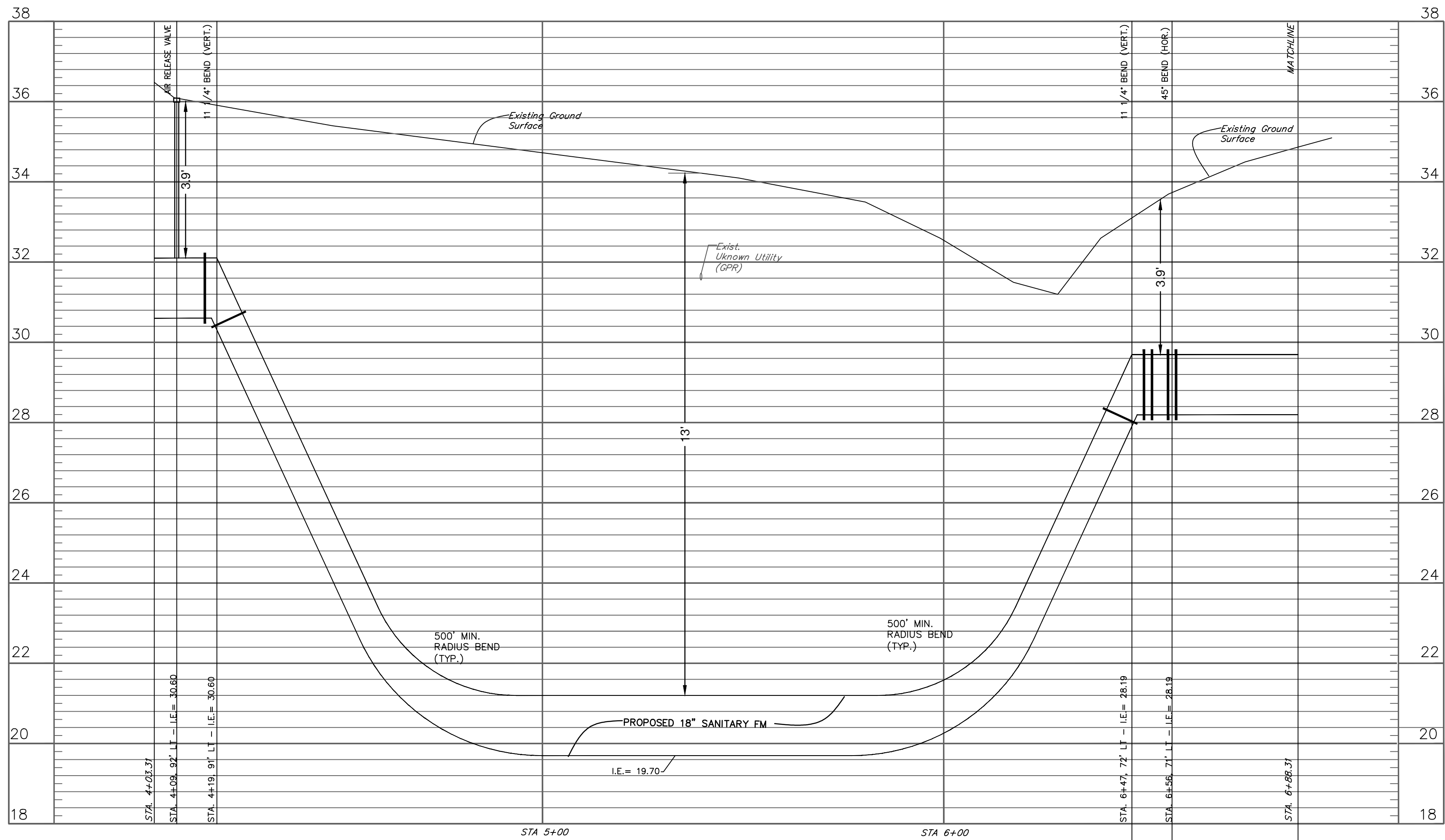
LAWRENCE E. MILLS  
P.E. NO. 22324 - E.B. NO. 3860  
P.L.S. NO. 3141 - L.B. NO. 3868  
STATE OF FLORIDA

PROJECT	SHEET
30TH ST SEWER IMPROVEMENTS	C2.0
JOB NO.	21-013.001
STA. 1+00 TO 4+03.31	

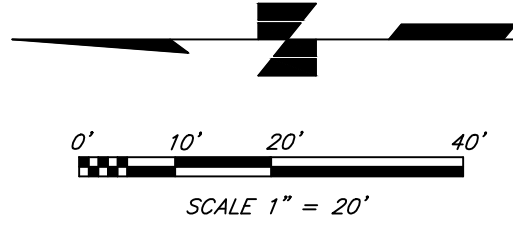




PLAN VIEW  
Horizontal Scale: 1" = 20'



PROFILE VIEW  
Horizontal Scale: 1" = 20'  
Vertical Scale: 1" = 2'



LEGEND (As Applicable)

- BC Back of Curb
- BFP Backflow Preventer
- (C) Calculated
- CLF Chain Link Fence
- CMP Corrugated Metal Pipe
- CO Clean Out
- Conc. Concrete
- EP Edge of Pavement
- FDC Fire Department Connector
- FT Finished Floor Elevation
- FL Flow Line
- GI Grate Inlet
- GW Guy Wire
- H/C Handicapped Parking Sign
- HP High Point
- ID Identification
- IE Invert Elevation
- FDR Found Capped Iron Rod
- FCM Found Concrete Monument
- FH Fire Hydrant
- FIR Found Iron Rod
- LB Licensed Business
- L.P. Light Pole
- (M) Measured data
- MEC Match Existing Curb
- MXP Match Existing Pavement
- MES Mitered End Section
- MH Manhole
- O/A Overall
- OR Official Records
- OHV Overhead Wires
- (P) Plot data
- Ped. xing Pedestrian Crossing
- PK&D Planer Kolan Nail & Disk (as noted)
- (R) Reported
- PVC Polyvinyl chloride
- RCP Reinforced Concrete Pipe
- R/W Right of Way
- San. Sanitary
- SCO Sanitary CO
- SF Square Feet
- SIR Set 5/8" IR
- S/W Sidewalk
- TBM Temporary Bench Mark
- TC Top of Curb
- TE Top Elevation
- T.O.B. Top of Bank
- (Typ.) Typical
- OHV Overhead Wires
- OHV Overhang
- U/E Underground Electric
- UP Utility Pole
- Ver. Verizon
- WM Water Meter
- WV Water Valve
- Test hole location # (See VPH Data Table sheet C3.0)

- NOTES:
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  - TREES LOCATED WITHIN EASEMENT AREA MARKED WITH AN "X" TO BE REMOVED. SEE TREE TABLE SHEET C3.2.

100% CONSTRUCTION DRAWINGS

REVISIONS					
BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION

MILLS & ASSOCIATES

DIVISION OF PENNONI

CONSULTING ENGINEERS & LAND SURVEYORS  
3242 HENDERSON BOULEVARD • SUITE 300  
TAMPA, FLORIDA 33609-3056  
TELEPHONE: (813) 876-5869

FOR

CITY OF TAMPA WASTE  
WATER DEPARTMENT

DRWN BY: CVL  
DSGN BY: CVL  
CHKD BY: LEM  
SCALE: 1" = 20'

DATE 01/29/28  
DATE 01/29/25  
DATE 01/29/25

LAWRENCE E. MILLS  
P.E. NO. 22324 - E.B. NO. 3860  
P.L.S. NO. 3141 - L.B. NO. 3868  
STATE OF FLORIDA

PROJECT

30TH ST SEWER  
IMPROVEMENTS

STA. 4+03.31 TO 6+88.31

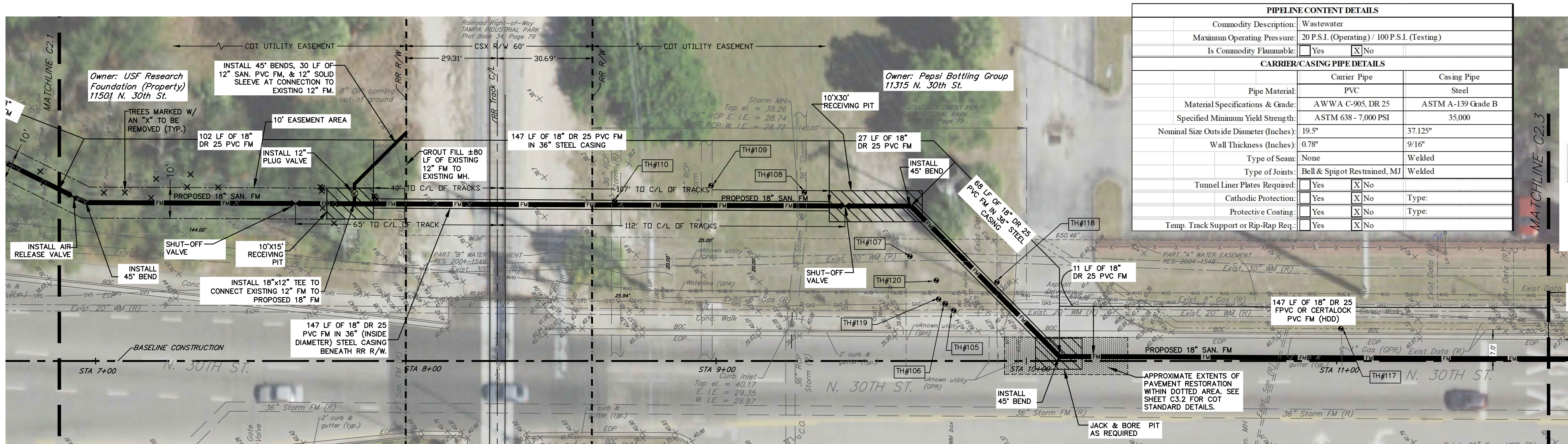
SHEET

C2.1

JOB NO.

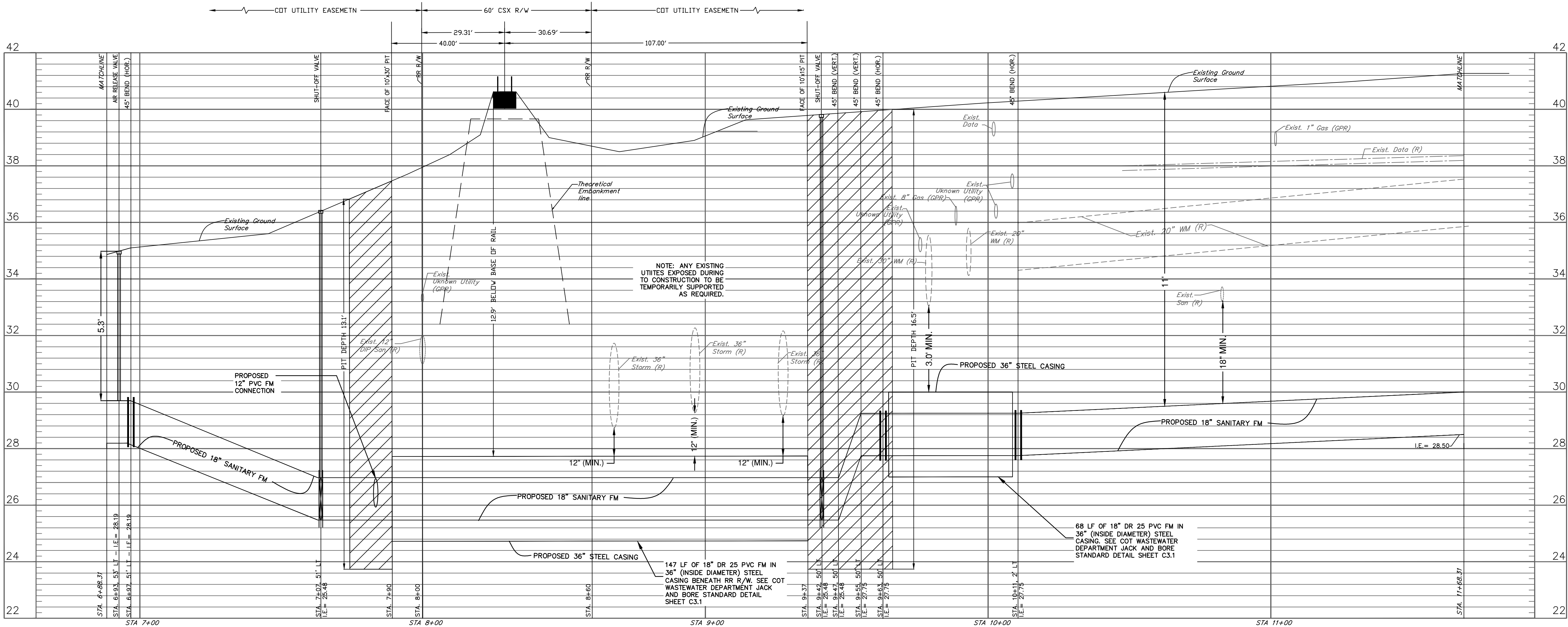
21-013.001





PLAN VIEW

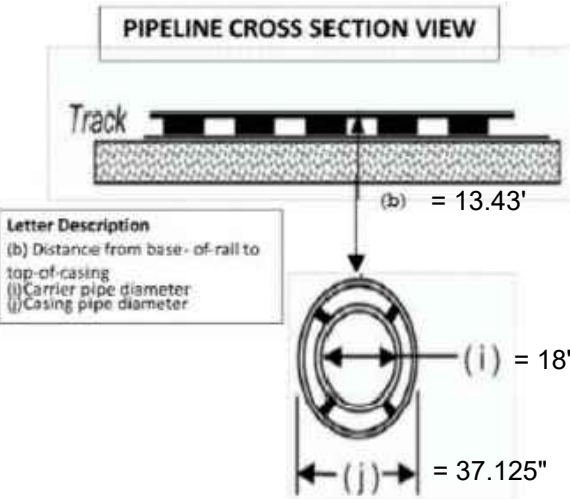
Horizontal Scale: 1" = 20'



PROFILE VIEW

Horizontal Scale: 1" = 20'  
Vertical Scale: 1" = 2'

PIPELINE CONTENT DETAILS	
Commodity Description	Wastewater
Maximum Operating Pressure	20 P.S.I. (Operating) / 100 P.S.I. (Testing)
Is Commodity Flammable	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
CARRIER/CASING PIPE DETAILS	
Pipe Material	PVC
Material Specifications & Grade	AWWA C-905, DR 25
Specified Minimum Yield Strength	ASTM 638 - 7,000 PSI
Nominal Size Outside Diameter (Inches)	19.5"
Wall Thickness (Inches)	0.78"
Type of Joints	None
Tunnel Liner Plates Required	Bell & Spigot Restrained, MJ
Cathodic Protection	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Protective Coating	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temp. Track Support or Rip-Rap Req.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



- LEGEND (As Applicable)
- BC Back of Curb
  - BFP Backflow Preventer
  - (C) Calculated
  - CLF Chain Link Fence
  - CMF Corrugated Metal Pipe
  - CO Clean Out
  - Conc. Concrete
  - EP Edge of Pavement
  - FDC Fire Department Connector
  - FF Finished Floor Elevation
  - FL Flow Line
  - G Gutter Inlet
  - GW Gutter Wire
  - H/C Handicapped Parking Sign
  - HP High Point
  - ID Identification
  - IE Invert Elevation
  - FCIR Found Capped Iron Rod
  - FCM Found Concrete Monument
  - FI Fire Hydrant
  - FIR Found Iron Rod
  - LB Licensed Business
  - L.P. Light Pole
  - (M) Measured data
  - MEC Match Existing Curb
  - MEP Match Existing Pavement
  - MES Match End Section
  - MH Manhole
  - O/A Overall
  - OP Official Records
  - OWH Overhead Wires
  - (P) Plot data
  - Ped. xing Pedestrian Crossing
  - PK&D Parker-Kalon Nail & Disk (as noted)
  - (R) Reported
  - PVC Polyvinyl chloride
  - RCP Reinforced Concrete Pipe
  - R/W Right of Way
  - San. Sanitary
  - SCO Sanitary CO
  - SF Square feet
  - SIR Set 5/8" IR
  - S/W Sidewalk
  - TBM Temporary Bench Mark
  - TC Top of Curb
  - TE Top Elevation
  - T.O.B. Top of Bank
  - (Typ.) Typical
  - OWH Overhead Wires
  - OVI Overhang
  - UGE Underground Electric
  - UP Utility Pole
  - Ver. Verizon
  - WM Water Meter
  - WV Water Valve
- Test hole location # (See V.H. Data Table sheet C3.0)

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CSX CROSSING VICINITY MAP

100% CONSTRUCTION DRAWINGS

REVISIONS					
BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION

**MILLS & ASSOCIATES**  
DIVISION OF PENNONI  
CONSULTING ENGINEERS & LAND SURVEYORS  
3242 HENDERSON BOULEVARD • SUITE 300  
TAMPA, FLORIDA 33609-3056  
TELEPHONE: (813) 876-5869

FOR  
**CITY OF TAMPA WASTE  
WATER DEPARTMENT**

DRWN BY: CVL DATE 01/29/28  
DSGN BY: CVL DATE 01/29/25  
CHKD BY: LEM DATE 01/29/25  
SCALE: 1" = 20'

LAWRENCE E. MILLS  
P.E. NO. 22324 - E.B. NO. 3860  
P.L.S. NO. 3141 - L.B. NO. 3868  
STATE OF FLORIDA

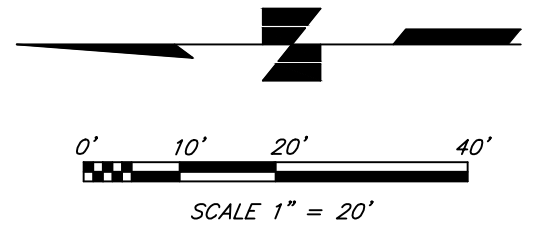
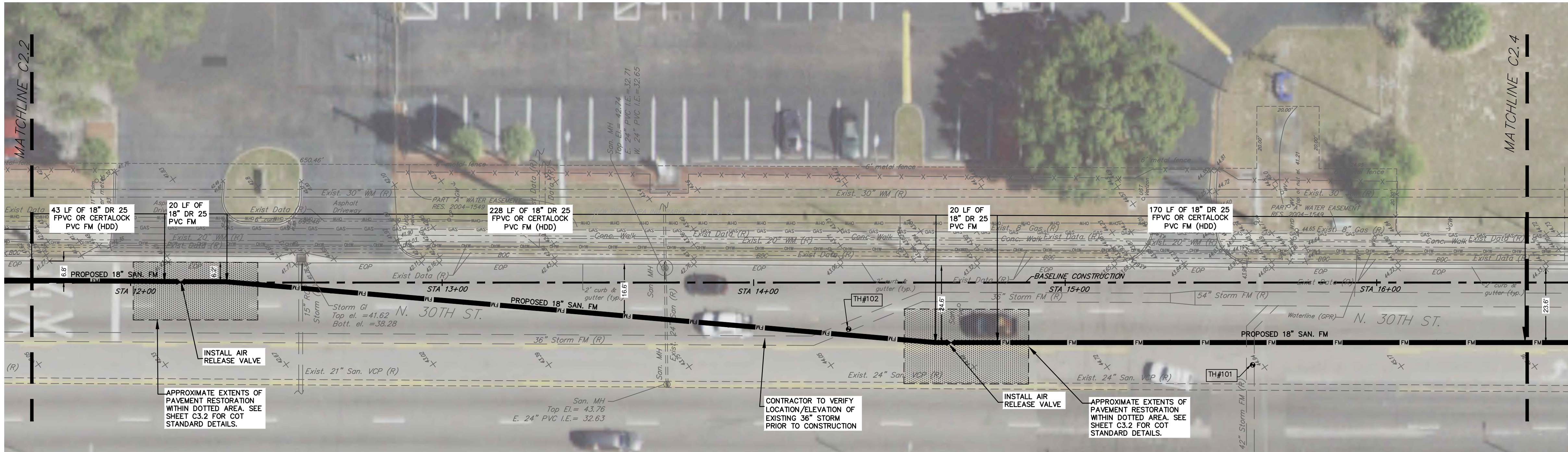
PROJECT  
**30TH ST SEWER  
IMPROVEMENTS**

SHEET  
**C2.2**

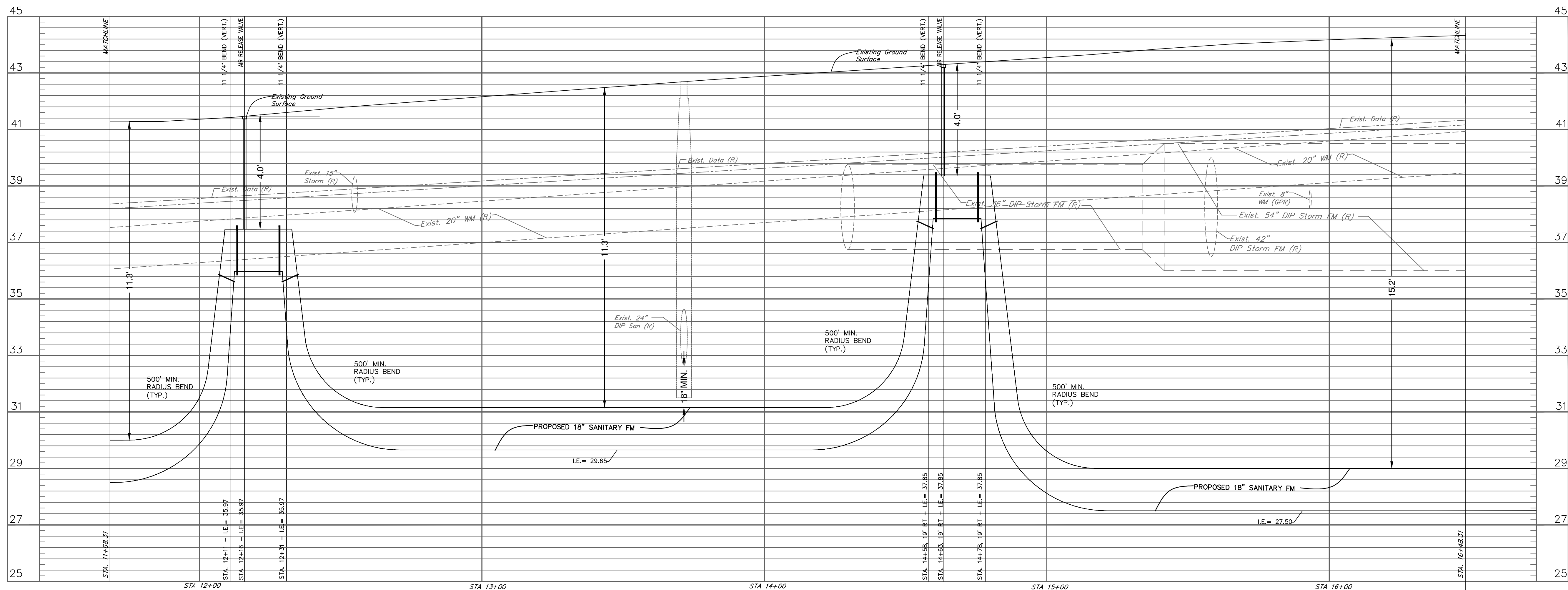
JOB NO.  
**21-013.001**

STA. 6+88.31 TO 11+68.31





- LEGEND (As Applicable)
- BC Back of Curb
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  - (C) Calculated
  - CLF Chain Link Fence
  - CMP Corrugated Metal Pipe
  - CO Clean Out
  - Conc. Concrete
  - EP Edge of Pavement
  - FDC Fire Department Connector
  - FF Finished Floor Elevation
  - FL Flow Line
  - GI Gate Inlet
  - GW Guy Wire
  - H/C Handicapped Parking Sign
  - HP High Point
  - ID Identification
  - IE Invert Elevation
  - FCM Found Concrete Monument
  - FR Found Iron Rod
  - LB Licensed Business
  - L.P. Light Pole
  - (M) Measured data
  - MEC Match Existing Curb
  - MEP Match Existing Pavement
  - MES Mitered End Section
  - MH Manhole
  - O/A Overall
  - OR Official Records
  - OHW Overhead Wires
  - (P) Plot data
  - Ped. xing Pedestrian Crossing
  - Parker-Katon Nail & Disk (as noted)
  - (R) Reported
  - PVC Polyvinyl chloride
  - RCP Reinforced Concrete Pipe
  - R/W Right of Way
  - San. Sanitary
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  - S/W Sidewalk
  - TSB Temporary Bench Mark
  - TC Top of Curb
  - TE Top of Bank
  - (Typ.) Typical
  - OHW Overhead Wires
  - UOE Underground Electric
  - UP Utility Pole
  - Ver. Verizon
  - WM Water Meter
  - WV Water Valve
  - TH#101 Test hole location # (See VTH Data Table sheet C3.0)



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100% CONSTRUCTION DRAWINGS

REVISIONS					
BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION

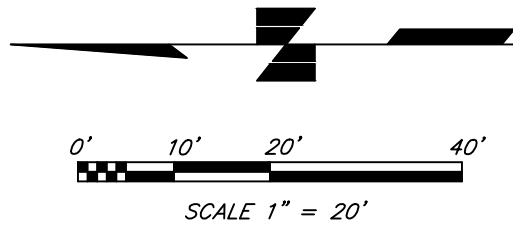
**MILLS & ASSOCIATES**  
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TAMPA, FLORIDA 33609-3056  
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FOR  
**CITY OF TAMPA WASTE  
WATER DEPARTMENT**

DRWN BY: CVL DATE 01/29/28  
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SCALE: 1" = 20'  
LAWRENCE E. MILLS  
P.E. NO. 22324 - E.B. NO. 3860  
P.L.S. NO. 3141 - L.B. NO. 3868  
STATE OF FLORIDA

PROJECT  
**30TH ST SEWER  
IMPROVEMENTS**  
SHEET  
**C2.3**  
JOB NO.  
**21-013.001**  
STA. 11+68.31 TO 16+46.31





LEGEND (As Applicable)

BC	Back of Curb
BFP	Backflow Preventer
(C)	Calculated
CLF	Chain Link Fence
CMP	Corrugated Metal Pipe
CO	Clean Out
Conc.	Concrete
EP	Edge of Pavement
FDC	Fire Department Connector
FE	Finished Floor Elevation
FL	Flow Line
GI	Gate Inlet
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H/C	Handicapped Parking Sign
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TC	Top of Curb
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T.O.B.	Top of Bank
(Typ.)	Typical
OHW	Overhead Wires
OHV	Overhang
UGE	Underground Electric
UP	Utility Pole
Ver.	Verizon
WM	Water Meter
WV	Water Valve
Test hole	Test hole location # (See VHI Data Table sheet C3.0)

NOTES:

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REVISIONS					
BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION

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TAMPA, FLORIDA 33609-3056  
TELEPHONE: (813) 876-5869

FOR

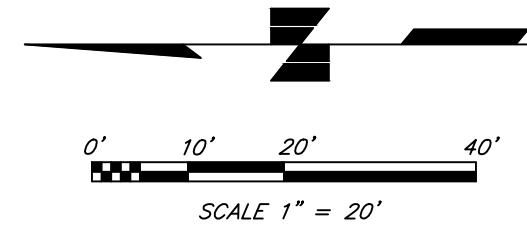
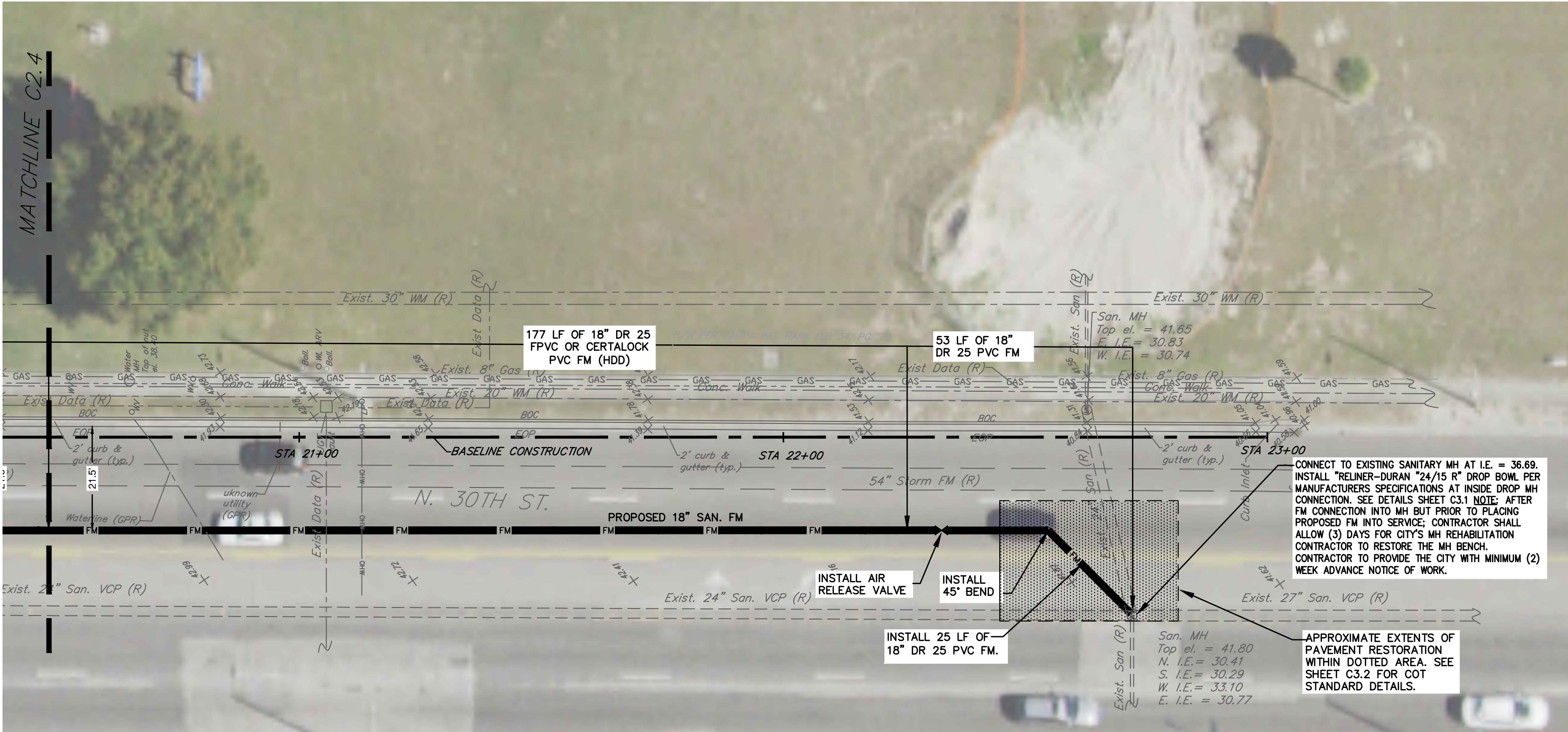
CITY OF TAMPA WASTE  
WATER DEPARTMENT

DRWN BY: CVL      DATE 01/29/28  
DSGN BY: CVL      DATE 01/29/25  
CHKD BY: LEM      DATE 01/29/25  
SCALE: 1" = 20'

LAWRENCE E. MILLS  
P.E. NO. 22324 - E.B. NO. 3860  
P.L.S. NO. 3141 - L.B. NO. 3868  
STATE OF FLORIDA

PROJECT	30TH ST SEWER IMPROVEMENTS	SHEET	C2.4
STA. 16+46.31 TO 20+48.31		JOB NO.	21-013.001





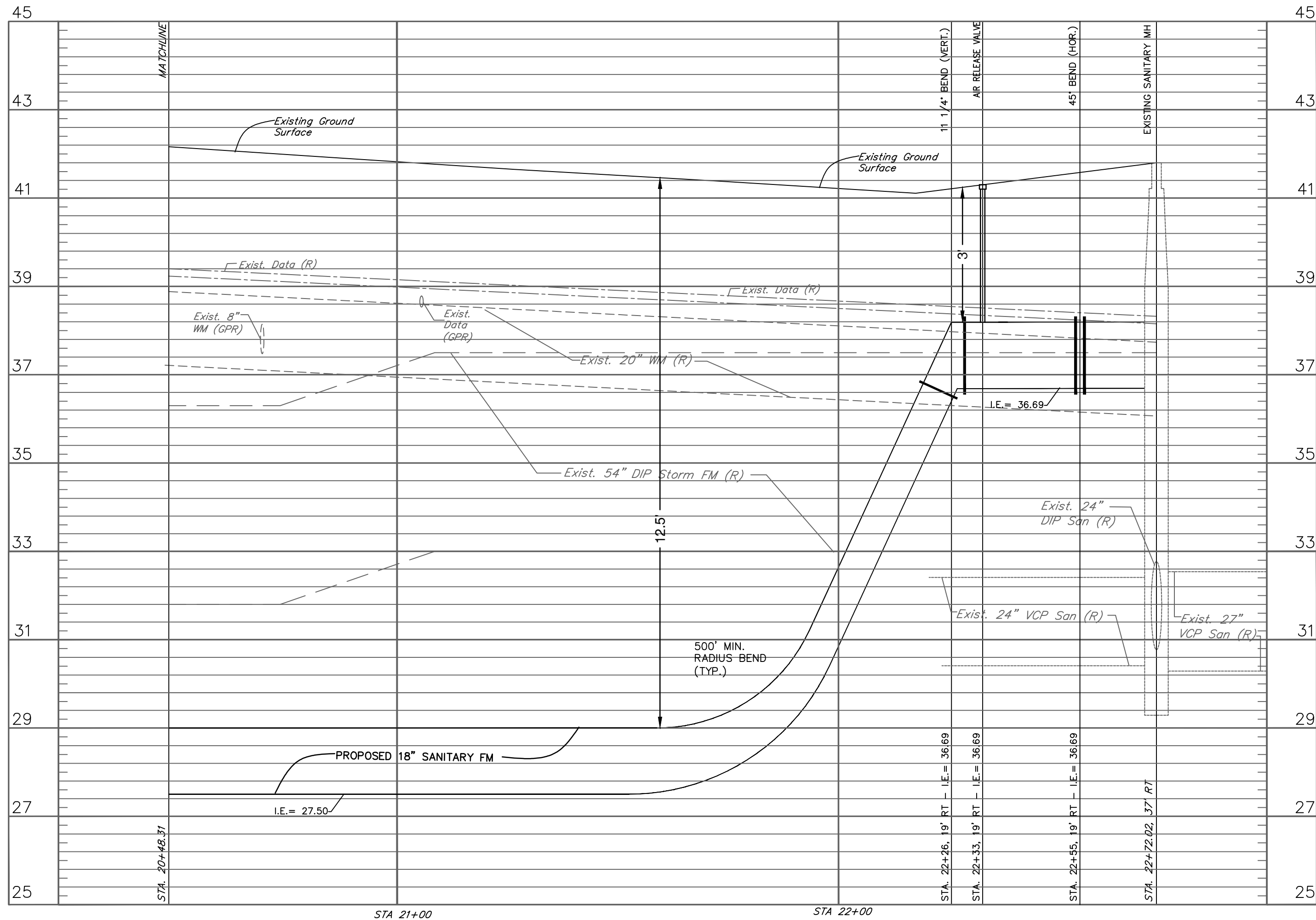
LEGEND (As Applicable)

- BC Back of Curb
- BFP Backflow Preventer
- (C) Calculated
- CLF Chain Link Fence
- CMP Corrugated Metal Pipe
- CO Clean Out
- Conc. Concrete
- EP Edge of Pavement
- FDC Fire Department Connector
- FT Finished Floor Elevation
- FL Flow Line
- GI Grate Inlet
- GW Guy Wire
- H/C Handicapped Parking Sign
- HO High Paving
- ID Identification
- IE Invert Elevation
- FOR Found Capped Iron Rod
- FCM Found Concrete Monument
- FH Fire Hydrant
- FIR Found Iron Rod
- LB Licensed Business
- L.P. Light Pole
- (M) Measured data
- MEC Match Existing Curb
- MSP Match Existing Pavement
- MES Mitered End Section
- MH Manhole
- O/A Overall
- OP Official Records
- OHW Overhead Wires
- (P) Plot data
- Ped. xing Pedestrian Crossing
- PK&D Paper Kolan Nail & Disk
- (as noted)
- (R) Reported
- PVC Polyvinyl chloride
- RCP Reinforced Concrete Pipe
- R/W Right of Way
- San. Sanitary
- SCO Sanitary CO
- SF Square Feet
- SIR Set 5/8" IR
- S/W Sidewalk
- TBM Temporary Bench Mark
- TC Top of Curb
- TE Top Elevation
- T.O.B. Top of Bank
- (Typ.) Typical
- OHW Overhead Wires
- O/H Overhang
- UGE Underground Electric
- UP Utility Pole
- Ver. Verizon
- WM Water Meter
- WV Water Valve

Test hole location #  
(See VVH Data Table sheet C3.0)

NOTES:

- EXISTING UTILITIES ARE SHOWN FROM THE BEST INFORMATION AVAILABLE. UNDERGROUND UTILITY INFORMATION SHOWN IS FROM GPR INFORMATION COLLECTED ON 10/07/22. VVH DATA COLLECTED 12/13/23, AND ASBUILT/RECORD DRAWINGS SUPPLIED BY UTILITY PROVIDERS. PRIOR TO DIRECTIONAL DRILLING, CONTRACTOR SHALL EXCAVATE AND VERIFY EXISTING HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES VIA VACUUM, VVH, OR CONVENTIONAL EXCAVATION.
- ANY EXISTING UTILITIES EXPOSED DURING CONSTRUCTION TO BE TEMPORARILY SUPPORTED AS REQUIRED.
- CONTRACTOR SHALL LIMIT CURVATURE IN ANY DIRECTION TO REDUCE FORCE ON THE PIPE DURING PULL-BACK. THE BEND RADII FOR FUSIBLE POLYVINYL CHLORIDE (PVC) PIPE SHALL NOT BE LESS THAN 500' FOR 18-INCH PIPE.
- TREES LOCATED WITHIN EASEMENT AREA MARKED WITH AN "X" TO BE REMOVED. SEE TREE TABLE SHEET C3.2.



100% CONSTRUCTION DRAWINGS

REVISIONS					
BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION

MILLS & ASSOCIATES

DIVISION OF PENNONI

CONSULTING ENGINEERS & LAND SURVEYORS  
3242 HENDERSON BOULEVARD • SUITE 300  
TAMPA, FLORIDA 33609-3056  
TELEPHONE: (813) 876-5869

FOR  
*CITY OF TAMPA WASTE  
WATER DEPARTMENT*

DRWN BY: CVL      DATE 01/29/28  
DSGN BY: CVL      DATE 01/29/25  
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LAWRENCE E. MILLS  
P.E. NO. 22324 - E.B. NO. 3860  
P.L.S. NO. 3141 - L.B. NO. 3868  
STATE OF FLORIDA

PROJECT	SHEET
30TH ST SEWER IMPROVEMENTS	C2.5
STA. 20+48.31 TO 22+72.02	JOB NO. 21-013.001



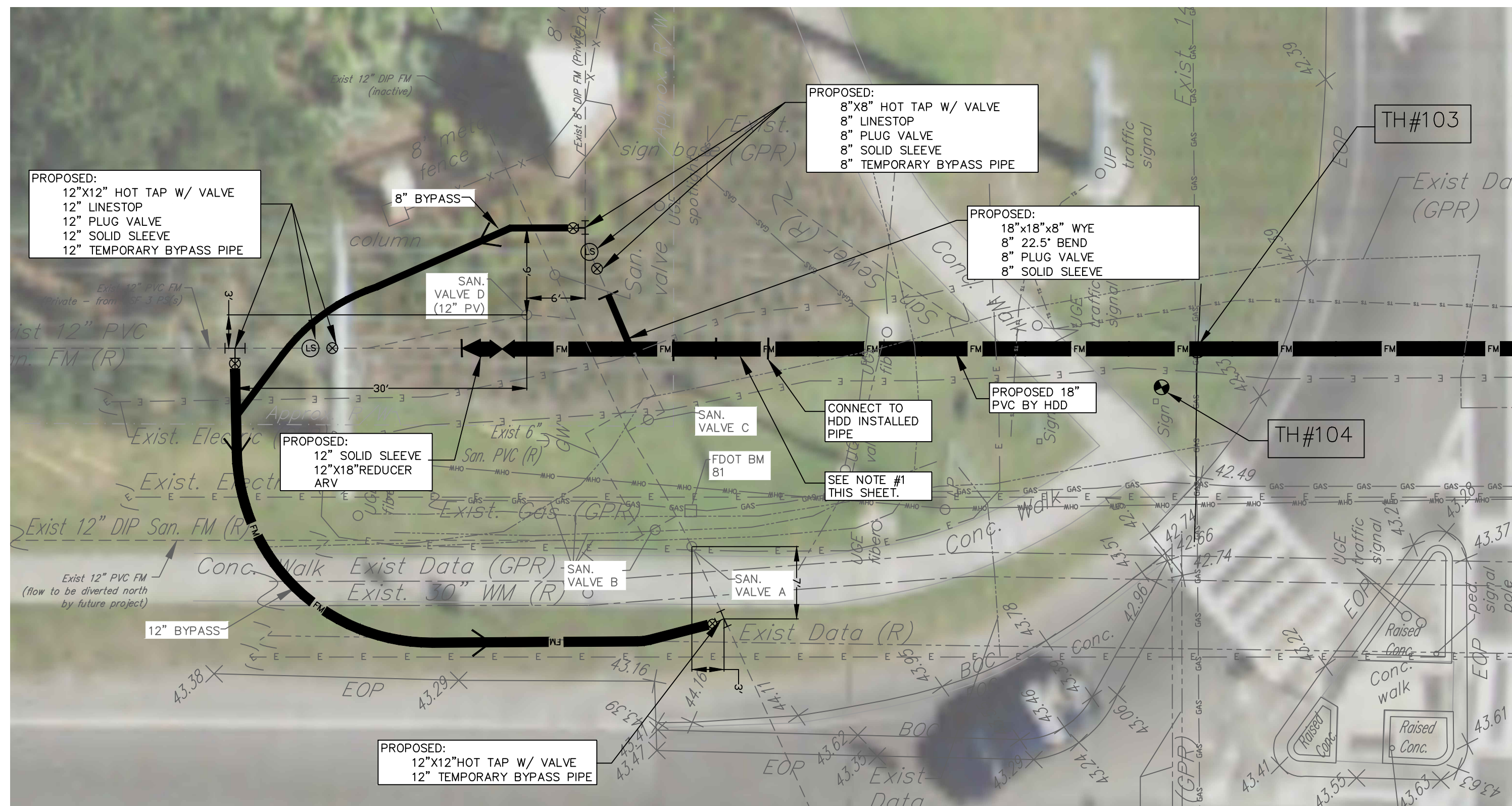
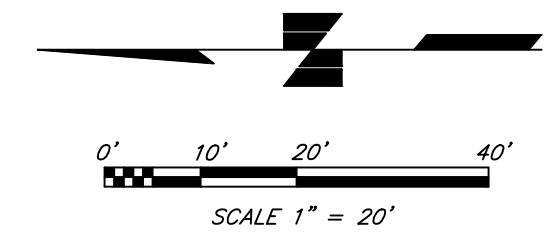


IMAGE "A"

- LEGEND (As Applicable)
- |        |                                       |
|--------|---------------------------------------|
| BC     | Back of Curb                          |
| BFP    | Backflow Preventer                    |
| (C)    | Calculated                            |
| CLF    | Chain Link Fence                      |
| CM     | Corrugated Metal Pipe                 |
| CO     | Clean Out                             |
| Conc.  | Concrete                              |
| EP     | Edge of Pavement                      |
| FDC    | Fire Department Connector             |
| FE     | Finished Floor Elevation              |
| FL     | Flow Line                             |
| GI     | Grate Inlet                           |
| GW     | Guy Wire                              |
| H/W    | Handicapped Parking Sign              |
| HP     | High Point                            |
| ID     | Identification                        |
| IE     | Invert Elevation                      |
| ICR    | Found Capped Iron Rod                 |
| FM     | Found Fire Curb Monument              |
| FH     | Fire Hydrant                          |
| FI     | Found Iron Rod                        |
| LB     | Licensed Business                     |
| L/P    | Light Pole                            |
| (M)    | Measured data                         |
| MEC    | Match Existing Curb                   |
| MEP    | Match Existing Pavement               |
| MES    | Mitered End Section                   |
| MV     | Manhole                               |
| O/A    | Overall                               |
| OR     | Official Records                      |
| OHW    | Overhead Wires                        |
| (P)    | Paving                                |
| PD     | Pedestrian Crossing                   |
| PK&D   | Parker Kalon Nol & Disk<br>(as noted) |
| (R)    | Reported                              |
| PVC    | Polyvinyl chloride                    |
| R/W    | Reinforced Concrete Pipe              |
| R/W    | Right of Way                          |
| San.   | Sanitary                              |
| SCD    | Sanitary C/D                          |
| SF     | Square Feet                           |
| S/W    | Set 5'2" R/I                          |
| S/S    | Sidewalk                              |
| TBM    | Temporary Bench Mark                  |
| TC     | Top of Curb                           |
| TE     | Top Elevation                         |
| T.O.B  | Top of Bank                           |
| (Typ.) | Typical                               |
| OHW    | Overhead Wires                        |
| OVH    | Overhang                              |
| UCE    | Underground Electric                  |
| UP     | Utility Pole                          |
| VV     | Verizon                               |
| WM     | Water Meter                           |
| WV     | Water Valve                           |
- **INDEX**
- Test Hole Location #  
(See VHM Data Table sheet C.3.0)

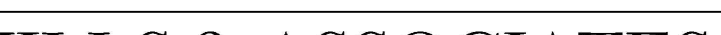
INTERCONNECTION DETAIL "A"

Scale: 1" = 10'

INTERCONNECTION DETAIL NOTES:

1. CONTRACTOR TO VERIFY EXISTING FORCE MAINS AND ALL OTHER UTILITIES ARE NOT IN CONFLICT WITH THE PROPOSED BORE PATH PRIOR TO HDD INSTALLATION.
2. RESTRAIN ALL JOINTS AND FITTINGS.
3. ALL EXISTING JOINTS UPSTREAM AND WITHIN 60' OF THE PROPOSED LINESHOT SHALL BE RESTRAINED.
4. TEMPORARY BYPASS PIPING SHALL BE INSTALLED ABOVEGROUND UNLESS IT NEEDS TO BE BURIED FOR CONSTRUCTION EQUIPMENT ACCESS OR ROUTED UNDER A SIDEWALK. PIPE SHALL BE FUSED HDPE (DR-17), PVC C-900 OR UNLINED DIP WITH ALL RESTRAINED, FLANGED OR FUSED JOINTS. TEMPORARY BYPASS PIPING WILL BE PAID PER APPROPRIATE LINE ITEM PER LINEAR FOOT. THE CITY WILL NOT TAKE POSSESSION OF THE PIPE AFTER THE PROJECT IS COMPLETED.
5. TEMPORARY BYPASS SEQUENCE SHALL BE AS FOLLOWS OR CONTRACTOR MAY SUBMIT ALTERNATE BYPASS SEQUENCE FOR REVIEW AND APPROVAL:
  - 1) PERFORM (1) 8" TAP AND (2) 12" HOT TAPS
  - 2) INSTALL TEMPORARY BYPASS PIPING CONNECTED TO THE (3) TAPS
  - 3) OPEN ALL (3) TAPPING VALVES
  - 4) RESTRAIN EXISTING JOINTS UPSTREAM OF LINESHOTS
  - 5) PERFORM (2) LINESHOTS TO DIVERT FLOWS
  - 6) CLOSE EXISTING PLUG VALVE A
  - 7) CUT EXISTING 8" AND 12" FM(S) & INSTALL PLUG VALVES DOWNSTREAM OF LINESHOTS
  - 8) REMOVE LINESHOTS
  - 9) REMOVE FM(S) IN CONFLICT WITH NEW FM INSTALLATION
  - 10) AFTER NEW FM IS READY TO BE ACTIVATED...
  - 11) OPEN (2) PLUG VALVES FROM STEP #7
  - 12) CLOSE (3) TAPPING VALVES FROM STEPS #1 & #3
  - 13) REMOVE TEMPORARY BYPASS PIPING
  - 14) INSTALL RESTRAIN CAPS ON THE PRESSURIZED 8" AND 12" CLOSED TAPPING VALVE (2 TOTAL) & ENCASE CAP IN 12X24" CONCRETE
6. THE PICTURE (IMAGE) PROVIDED ON THIS SHEET SHOWS APPROXIMATE LOCATIONS OF EXISTING VALVES A (12" PLUG VALVE), B (12" PLUG VALVE), C (8" TAPPING VALVE) AND D (12" PLUG VALVE)

100% CONSTRUCTION DRAWINGS

<div> <div> REVISIONS </div> <table> <tr> <th>BY</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table> </div> <div> <div>  <div> <div> MILLS &amp; ASSOCIATES </div> <div> DIVISION OF PENNONI </div> </div> <div> CONSULTING ENGINEERS &amp; LAND SURVEYORS  3242 HENDERSON BOULEVARD * SUITE 300  TAMPA, FLORIDA 33609-3056  TELEPHONE: (813) 876-5869 </div> </div> </div> <div> <div> FOR </div> <div> CITY OF TAMPA WASTE  WATER DEPARTMENT </div> </div> <div> <div> DRWN BY: <u>CVL</u>      DATE <u>01/29/28</u>  DSGN BY: <u>CVL</u>      DATE <u>01/29/25</u>  CHKD BY: <u>LEM</u>      DATE <u>01/29/25</u>  SCALE: <u>1" = 10'</u> </div> <div> LAWRENCE E. MILLS  P.E. NO. 28324 - E.B. NO. 3860  P.L.S. NO. 3341 - L.B. NO. 3868  STATE OF FLORIDA </div> </div> <div> <div> PROJECT  30TH ST SEWER  IMPROVEMENTS </div> <div> INTERCONNECTION DETAIL "A" </div> </div> <div> <div> SHEET  C2.6 </div> <div> JOB NO.  21-013.001 </div> </div>						BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION																																										
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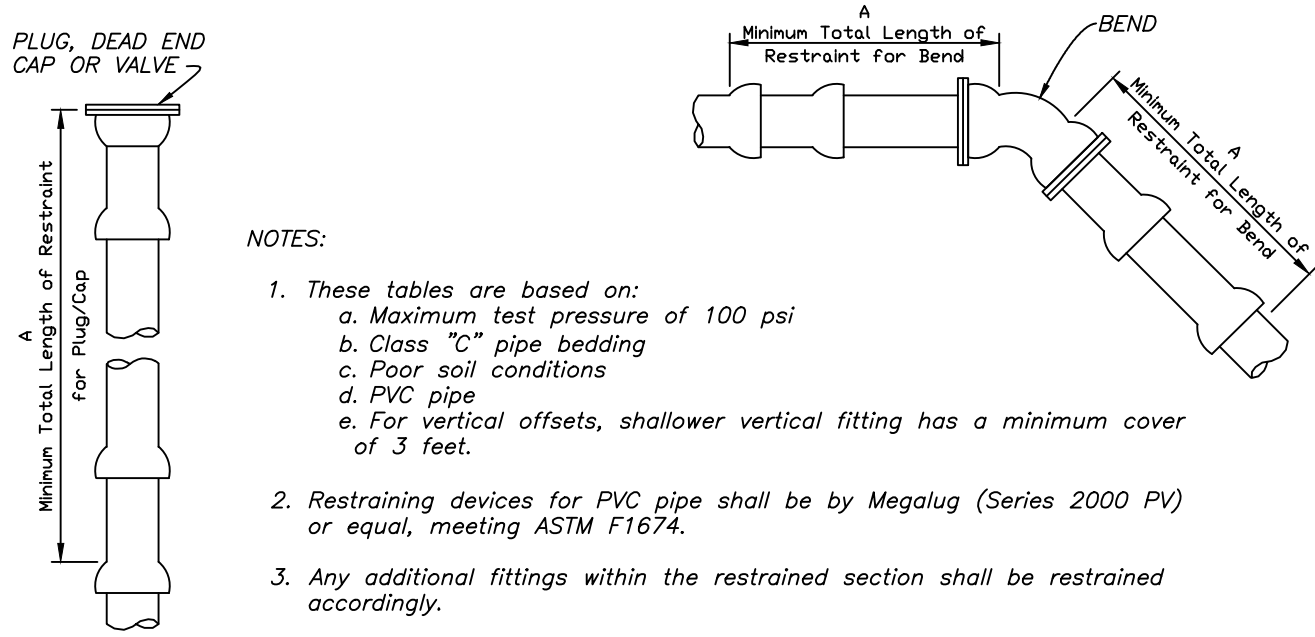


GENERAL NOTES:

1. ELEVATION INFORMATION SHOWN ON THESE PLANS IS REFERENCED TO N.A.V.D. 1988 UNLESS OTHERWISE STATED.
2. LOCATIONS OF EXISTING UNDERGROUND UTILITIES WERE PREPARED FROM THE MOST RELIABLE INFORMATION AVAILABLE. VERIFY THE LOCATION AND DEPTH OF ALL PERTINENT UTILITIES PRIOR TO CONSTRUCTION. NOTIFY UTILITY COMPANIES AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION.
3. FORCE MAIN CONNECTION LOCATIONS ARE APPROXIMATE ONLY, BASED ON AS-BUILT PLANS AND/OR VISUAL OBSERVATIONS. CONTRACTOR SHALL EXCAVATE AS NECESSARY TO VERIFY SHOWN LOCATIONS.
4. WHEN CHANGING THE SEWAGE FLOW FROM THE EXISTING FORCE MAIN TO THE NEW FORCE MAIN, THE CONTRACTOR MAY BE REQUIRED TO PERFORM THE WORK DURING LOW-FLOW TIMES AT NIGHT. CONTRACTOR SHALL COORDINATE SUCH WORK WITH CITY STAFF AND THE PROPERTY OWNERS.
5. CONTRACTOR SHALL PROVIDE A BORING LOG TO DOCUMENT THE DEPTH AND HORIZONTAL LOCATION OF THE PVC PIPE AT A MAXIMUM OF 15 FOOT INTERVALS.
6. THE MINIMUM CLEARANCE BETWEEN THE PROPOSED FORCE MAIN AND ALL CROSSING UTILITIES SHALL BE 18-INCHES, UNLESS NOTED OTHERWISE.
7. THE PROPOSED FORCE MAIN SHALL BE INSTALLED ACCORDING TO THE STATIONS, OFFSETS AND INVERT ELEVATIONS PROVIDED WITH NO INTERMEDIATE HIGH OR LOW POINTS BETWEEN THE SPECIFIED INVERT ELEVATIONS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
8. ALL FITTINGS AND BENDS SHALL BE DUCTILE IRON AWWA C-110 OR C-153. FITTINGS SHALL BE WRAPPED WITH GREEN POLYWRAP. FITTINGS SHALL BE LINED WITH PROTECTO 401 INTERIOR CERAMIC EPOXY.
9. PLUG VALVES SHALL BE DEZURIK 100% PORT PEF OR APPROVED EQUAL.
10. ALL FORCE MAIN VALVES, FITTINGS AND BENDS SHALL HAVE RESTRAINED MECHANICAL JOINTS UNLESS THE JOINTS ARE BUTT FUSED PVC. ADDITIONALLY, ANY JOINTS WITHIN THE LIMITS TO BE RESTRAINED THAT ARE SHOWN ON THE PLANS SHALL ALSO BE RESTRAINED. RESTRAINING DEVICES SHALL BE "MEGA-LUG" AS MANUFACTURED BY EBAA IRON OR APPROVED EQUAL.
11. ALL PROPOSED FORCE MAIN PIPE SHALL HAVE 2 LOCATING WIRES IN ACCORDANCE WITH THE PIPE LOCATING WIRE DETAIL. THE WIRES SHALL BE RAISED AND TERMINATED AT ALL PLUG VALVES, AIR RELEASE VALVES AND TERMINAL MANHOLES, SIMILAR TO THAT SHOWN ON THE AIR RELEASE VALVE DETAIL.
12. AIR RELEASE BOXES SHALL BE INSTALLED IN GRASSED AREAS AND NOT IN PAVEMENT OR SIDEWALKS. FINAL LOCATIONS OF BOXES WILL BE DETERMINED IN THE FIELD AT HIGH POINTS.
13. THE CONTRACTOR IS REQUIRED TO PREPARE AND SUBMIT THE MOT DRAWING TO THE CITY'S PERMITTING THROUGH THE ACCELA ONLINE PORTAL. THE CONTRACTOR SHALL MAINTAIN ONE LANE TRAFFIC IN EACH DIRECTION THROUGHOUT THE DURATION OF CONSTRUCTION.
14. CONTRACTOR SHALL ENSURE THAT WHEN PLANNING HIS LAYOUT FOR BORING ENTRANCE AND EXIT LOCATIONS, THAT HE DOES NOT BLOCK A SOLE DRIVEWAY TO THE FRONTING PROPERTY OWNER WITHOUT PROVIDING AN ALTERNATE ACCESS.
15. DURING THE M.O.T., THE CONTRACTOR SHALL MAINTAIN ALL PEDESTRIAN WALKWAYS AT ALL TIMES, INCLUDING, BUT NOT LIMITED TO, SIDEWALKS, PEDESTRIAN RAMPS, CROSSWALKS AND BUS STOPS WHEN WORK IS BEING PERFORMED ON OR IN THE VICINITY OF A SIDEWALK, CROSSWALK, BUS STOPS OR OTHER PEDESTRIAN WAY. THE CONTRACTOR SHALL RELOCATE THE PEDESTRIAN WAY TEMPORARILY OR PROVIDE PEDESTRIANS WITH A SIGNED, SAFE PASSAGE AROUND THE WORK ZONE. PEDESTRIAN DETOURS SHALL BE IN ACCORDANCE WITH FDOT INDEX 660.
16. INSTALL AIR RELEASE VALVE (ARV) AT HIGH POINTS IN ACCORDANCE WITH STANDARD DETAILS AND AS DIRECTED BY THE CITY'S INSPECTOR. ARV BOX SHALL BE RATED FOR H-20 LOADING. FINAL LOCATION OF ARV SHALL BE IN GRASSED AREAS AND NOT IN SIDEWALK OR PAVEMENT. MARK FINAL LOCATION OF ARVs ON THE AS-BUILT DRAWINGS.
17. THE CONTRACTOR SHALL PROTECT ALL TREES IN THE VICINITY OF THE PROPOSED CONSTRUCTION IN ACCORDANCE WITH CHAPTER 13 OF THE CITY OF TAMPA CODE. NO TREES SHALL BE PRUNED WITHOUT PRIOR APPROVAL FROM THE CITY OF TAMPA PARKS & RECREATION DEPARTMENT, NATURAL RESOURCE DIVISION, AND SHALL BE COMPLETED BY A CERTIFIED ARBORIST. ROOT PRUNING MAY BE REQUIRED AT CERTAIN LOCATIONS AND SHALL BE COMPLETED IN ACCORDANCE WITH CHAPTER 13 TECHNICAL MANUAL SPECIFICATIONS.
18. CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY CLOSURE PERMIT FROM THE CITY OF TAMPA RIGHT-OF-WAY DEPARTMENT
19. PAVEMENT RESTORATION SHALL BE IN ACCORDANCE WITH THE CITY OF TAMPA'S LATEST PAVEMENT RESTORATION STANDARDS. SEE DETAIL SHEET C3.2.
20. THE CONTRACTOR SHALL LIMIT CURVATURE IN ANY DIRECTION TO REDUCE FORCE ON THE PIPE DURING PULL-BACK. THE BEND RADI FOR FUSIBLE POLYVINYL CHLORIDE (PVC) PIPE SHALL NOT BE LESS THAN 500' FOR 18-INCH PIPE.
21. THE MINIMUM HORIZONTAL AND VERTICAL CLEARANCES BETWEEN THE PROPOSED FORCE MAIN AND ALL CROSSING UTILITIES SHALL BE 6 FEET AND 18 INCHES RESPECTIVELY.
22. THE MINIMUM CLEARANCE BETWEEN THE FORCE MAIN AND WATER LINE SHALL BE 12" UNDER ALL CIRCUMSTANCES. IF THE FORCE MAIN IS BELOW THE WATER LINE AND HAS BETWEEN 12" AND 18" OF CLEARANCE, OR IF THE FORCE MAIN IS ABOVE THE WATER LINE REGARDLESS OF CLEARANCE, THEN A NOMINAL 18' LENGTH OF PIPE SHALL BE CENTERED OVER/UNDER THE WATER LINE.
23. RIGHT OF WAY SHALL BE RESTORED TO PRE-EXISTING CONDITIONS OR BETTER.
24. AS-BUILT DRAWINGS SHALL BE PROVIDED SIGNED AND SEALED BY THE CONTRACTOR'S REGISTERED SURVEYOR OR TO THE ENGINEER. "AS-BUILT" DRAWINGS INFORMATION SHALL PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS CONTRACT.

*VVH DATA TABLE		
TEST HOLE #	DESCRIPTION	MEASURED DEPTH (FT)
#101	36" DIP STORM FM (CITY OF TAMPA)	5.70
#102	36" DIP STORM FM (CITY OF TAMPA)	4.26
#103	18" STEEL GAS (FGT)	2.70
#104	3X2" PVC BURIED ELECTRIC (FDOT)	2.76
#105	24" DIP WATER MAIN (CITY OF TAMPA)	5.10
#106	8" STEEL GAS (TECO)	4.26
#107	30" DIP WATER MAIN (CITY OF TAMPA)	4.84
#108	36" RCP STORM (CITY OF TAMPA)	6.60
#109	36" RCP STORM (CITY OF TAMPA)	6.12
#110	36" RCP STORM (CITY OF TAMPA)	7.00
#111	6" PVC BURIED ELECTRIC (TECO)	6.22
#112	2" PE FIBER OPTIC CABLE (MCI)	4.56
#113	3X1.5" PE FIBER OPTIC CABLE (ZAYO)	3.50
#114	2" PE FIBER OPTIC CABLE (FRONTIER)	3.74
#115	24" DIP WATER MAIN (CITY OF TAMPA)	11.74
#116	10" STEEL GAS (TECO)	8.62
#117	1" STEEL GAS (TECO)	2.22
#118	2" DBC BURIED TELEPHONE (FRONTIER)	1.76
#119	EXPLORATORY	**NA
#120	EXPLORATORY	**NA

\* VVH DATA SHOWN OBTAINED FROM TEST HOLE INVENTORY REPORT PREPARED BY COLLIER ENGINEERING & DESIGN DATED 12/12/23 & 12/13/23  
\*\*NO UTILITY FOUND TO DEPTH OF 14 FT



NOTES:

- These tables are based on:  
a. Maximum test pressure of 100 psi  
b. Class "C" pipe bedding  
c. Poor soil conditions  
d. PVC pipe  
e. For vertical offsets, shallower vertical fitting has a minimum cover of 3 feet.
- Restraining devices for PVC pipe shall be by Megalug (Series 2000 PV) or equal, meeting ASTM F1674.
- Any additional fittings within the restrained section shall be restrained accordingly.
- One standard length of PVC pipe (20 feet) shall be laid on either side of the fitting where possible.

HORIZONTAL OFFSET:

FITTING TYPE	RESTRAIN "A" (LF) *											
	4"	6"	8"	10"	12"	16"	18"	20"	24"			
11-1/4"	1*	2*	2*	2*	3*	3*	4*	4*	4*			
22-1/2"	2*	3*	3*	4*	5*	6*	6*	7*	8*			
45"	4*	5*	7*	8*	9*	11*	13*	14*	16*			
90"	9*	12*	15*	18*	21	27	29	32	37			
PLUG / CAP / ISOLATION VALVE	26	36	47	56	66	85	94	102	119			

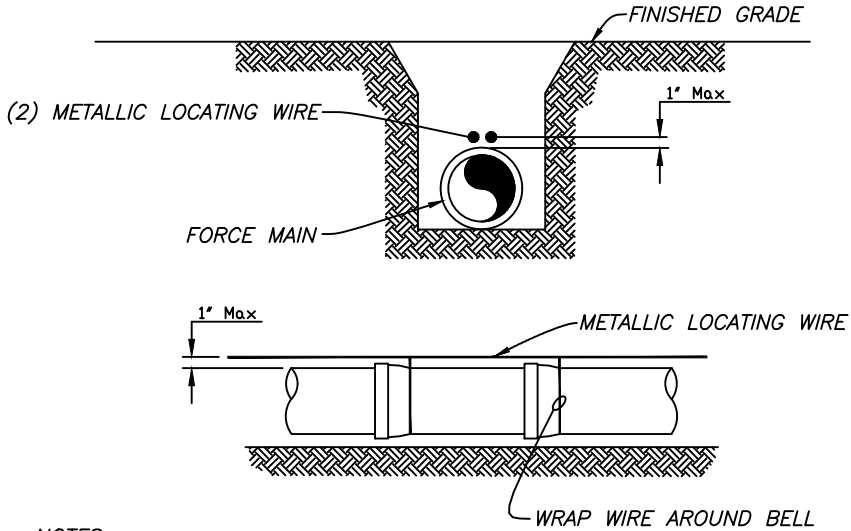
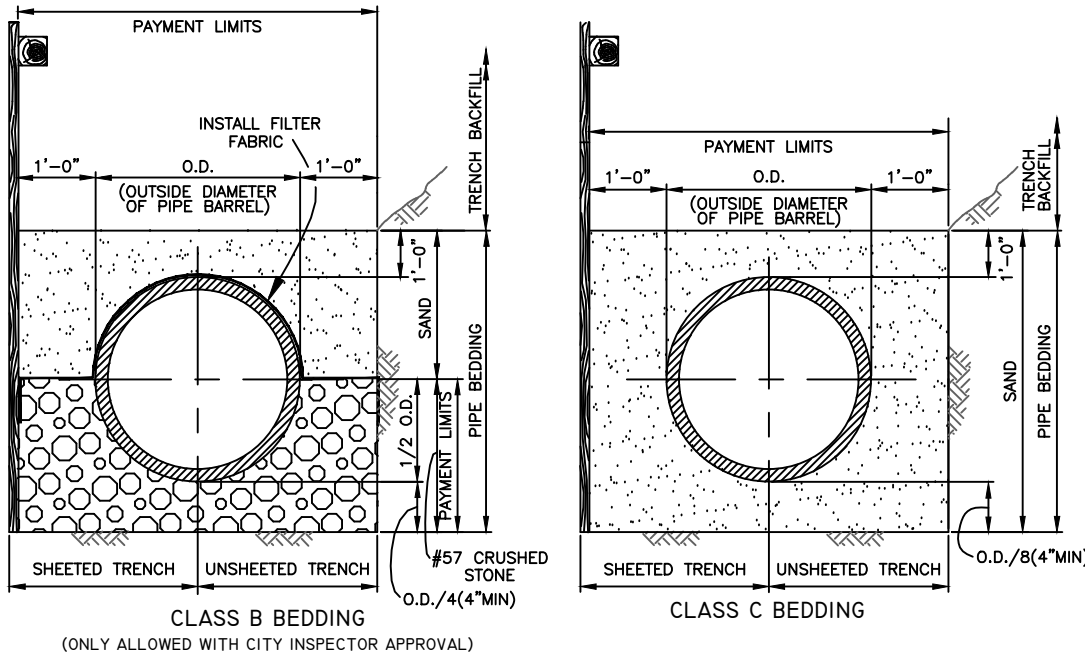
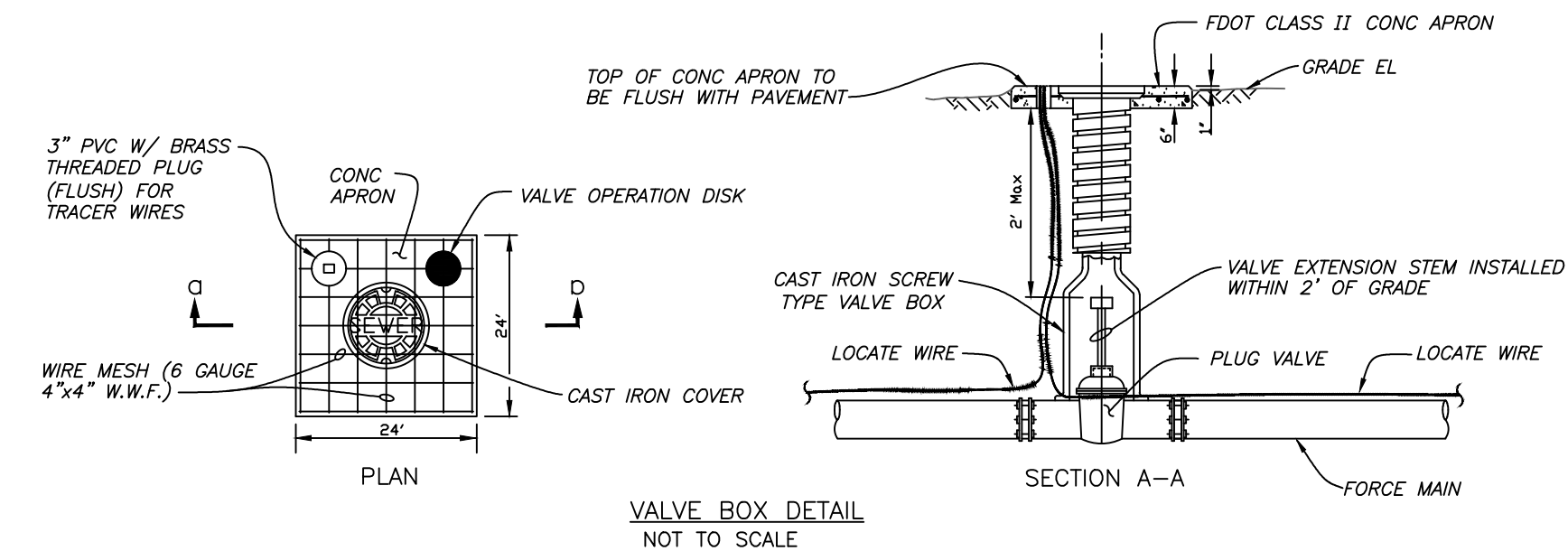
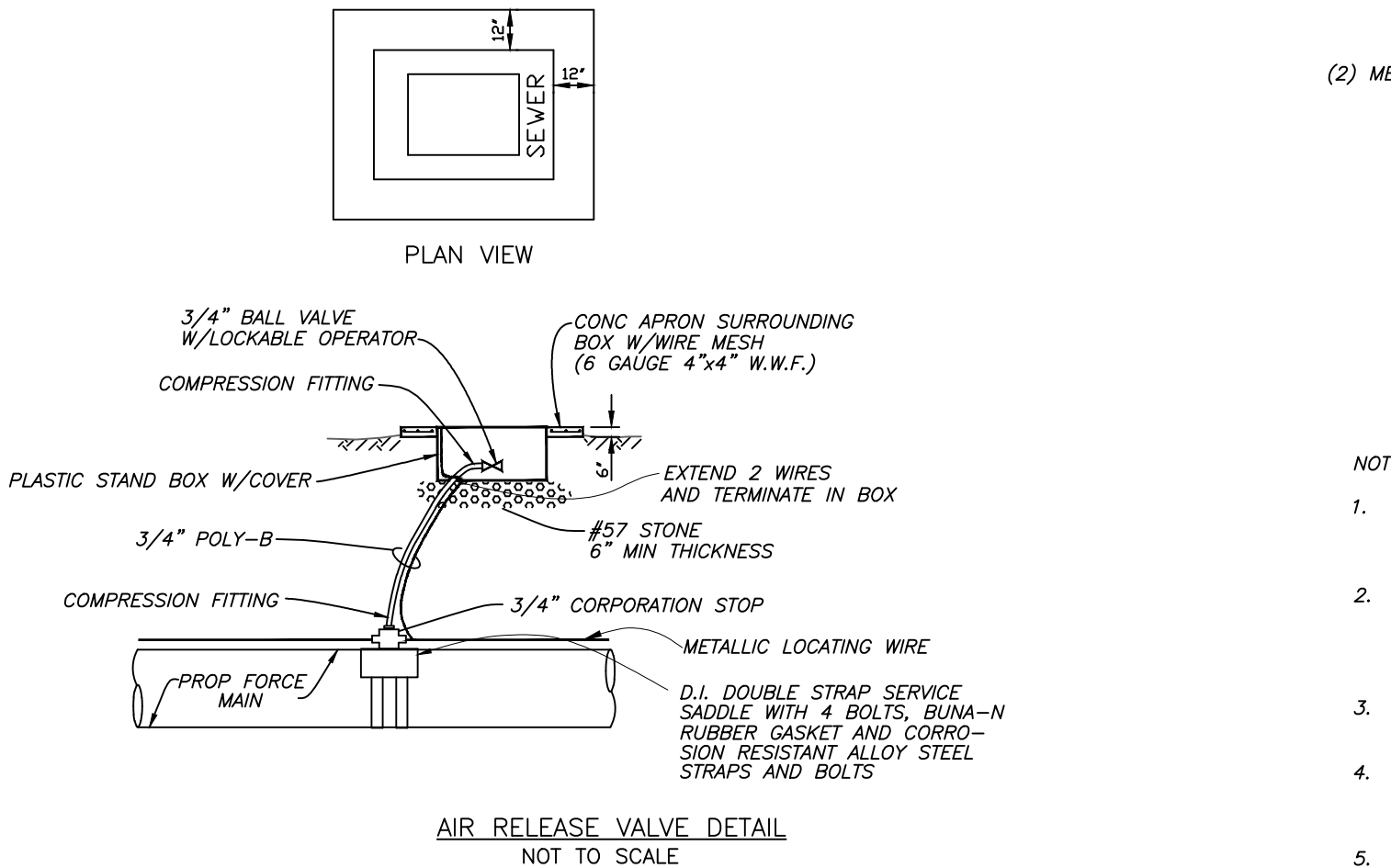
A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED  
\* MINIMUM ONE PIPE JOINT UPSTREAM AND DOWNSTREAM OF EACH FITTING SHALL BE RESTRAINED

VERTICAL OFFSET:

FITTING TYPE	RESTRAIN "A" (LF) *											
	4"	6"	8"	10"	12"	16"	18"	20"	24"			
11-1/4"	3*	4*	5*	6*	7*	9*	10*	11*	12*			
22-1/2"	5*	8*	10*	12*	14*	17*	19*	21	24			
45"	11*	15*	20	23	28	35	39	43	50			

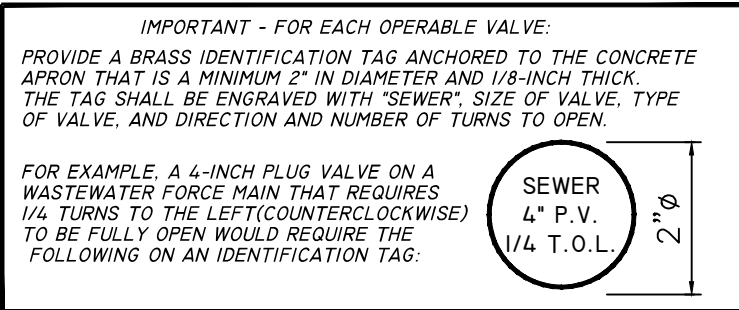
A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED  
\* MINIMUM ONE PIPE JOINT UPSTREAM AND DOWNSTREAM OF EACH FITTING SHALL BE RESTRAINED

FITTING RESTRAINT DETAIL



NOTES:

- Pipe shall require 2 green insulated metallic locating wires capable of detection by a cable locator and shall be buried directly above the centerline of the pipe. Use duct tape as necessary to hold wire directly on top of pipe.
- Direct bury pipe shall have (2) 12 gauge insulated solid copper wires. Directional drilled pipe shall have (2) 8 gauge insulated solid copper wires or (2) 10 gauge insulated copper clad steel wires. For directional drilled HDPE pipe a 1" conduit may be pulled back with the locating wires to ease installation and to prevent the wires from breaking.
- Wire insulation must be suitable for buried service. HDPE or HMWPE are acceptable insulation materials. Nylon insulation is not acceptable.
- Wires must be spliced together with wire connectors suitable for buried service. Connectors shall be corrosion and moisture proof such as DBR IGI by 3M, Snokable by Copperhead Industries or equal. Twisting the wires and sealing with electrical tape alone is not acceptable.
- All tracer wires must pass a continuity test in the presence of a City inspector. No pipe will be accepted by the City until a continuity test passes.
- Locating wire shall terminate at the top of each valve box and air release valve. Wire shall be capable of extending 24" above top of box in such a manner so as not to interfere with valve operation.



VALVE OPERATION DISK

REVISIONS					
BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION

**MILLS & ASSOCIATES**

DIVISION OF PENNONI

CONSULTING ENGINEERS & LAND SURVEYORS

3242 HENDERSON BOULEVARD \* SUITE 300  
TAMPA, FLORIDA 33609-3056

TELEPHONE: (813) 876-5869

FOR

CITY OF TAMPA WASTE  
WATER DEPARTMENT

DRWN BY: CVL DATE 01/29/28  
DSGN BY: CVL DATE 01/29/25  
CHKD BY: LEM DATE 01/29/25  
SCALE: 1" = 20'

LAWRENCE E. MILLS  
P.E. NO. 22324 - E.B. NO. 3860  
P.L.S. NO. 3141 - L.B. NO. 3868  
STATE OF FLORIDA

PROJECT

30TH ST SEWER  
IMPROVEMENTS

DETAILS & NOTES

SHEET

C3.0

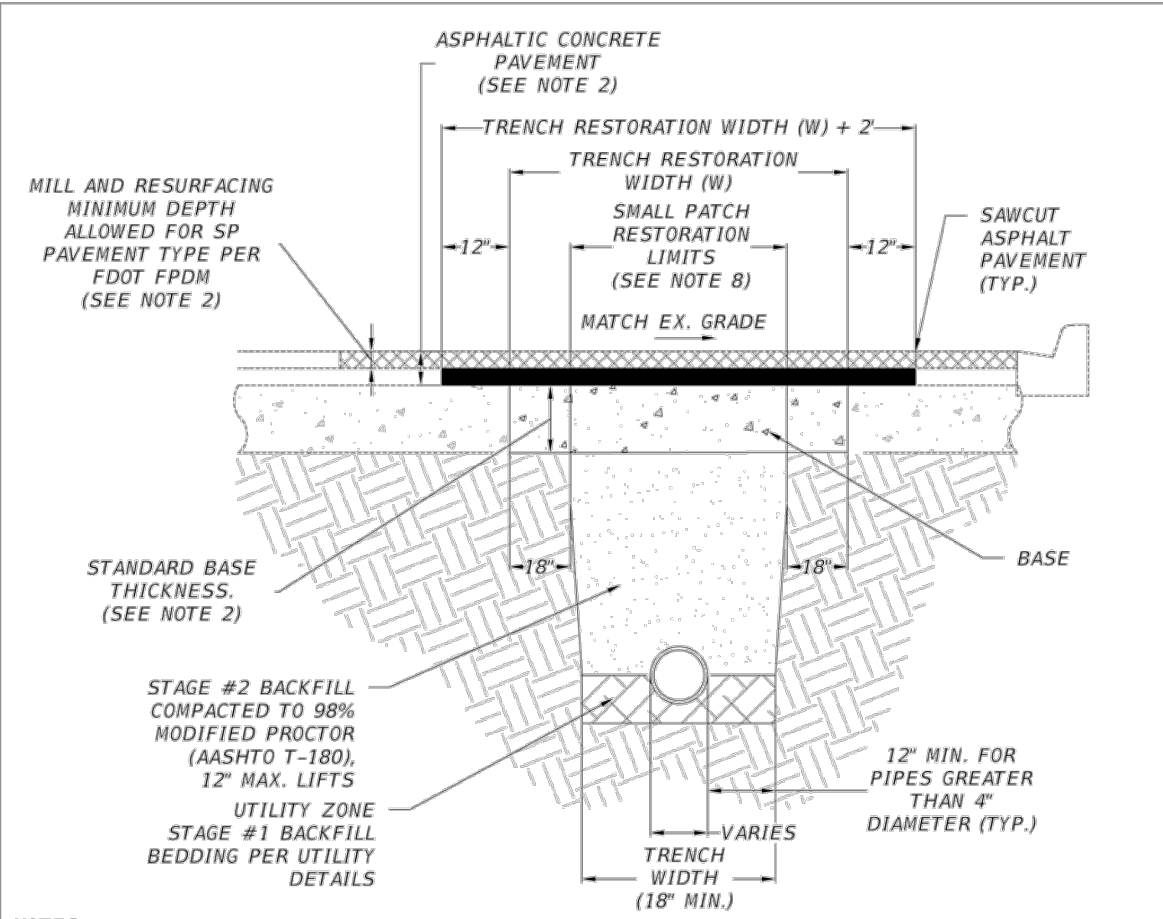
JOB NO.

21-013.001



REVISIONS						<div>MILLS &amp; ASSOCIATES</div> <div>DIVISION OF PENNONI</div> <div>CONSULTING ENGINEERS &amp; LAND SURVEYORS</div> <div>3242 HENDERSON BOULEVARD • SUITE 300</div> <div>TAMPA, FLORIDA 33609-3056</div> <div>TELEPHONE: (813) 876-5869</div>		FOR		<div>CITY OF TAMPA WASTE</div> <div>WATER DEPARTMENT</div>		<div>DRWN BY: <u>CVL</u></div> <div>DSGN BY: <u>CVL</u></div> <div>CHKD BY: <u>LEM</u></div> <div>SCALE: <u>1"= 20'</u></div>		<div>DATE <u>01/29/28</u></div> <div>DATE <u>01/29/25</u></div> <div>DATE <u>01/29/25</u></div>		<div>LAWRENCE E. MILLS</div> <div>P.E. NO. 22324 - E.B. NO. 3860</div> <div>P.L.S. NO. 3141 - L.B. NO. 3869</div> <div>STATE OF FLORIDA</div>		<div>PROJECT</div> <div>30TH ST SEWER IMPROVEMENTS</div> <div>DETAILS &amp; NOTES</div>		<div>SHEET</div> <div>C3.1</div> <div>JOB NO.</div> <div>21-013.001</div>	
BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION																





- NOTES:
1. ALL WORK, MATERIALS, AND TESTING PER CITY OF TAMPA PAVEMENT AND RIGHT OF WAY RESTORATION REQUIREMENTS.
  2. CITY OF TAMPA MINIMUM PAVEMENT THICKNESS STANDARDS ARE LOCATED ON SHEET 2 OF 2. MATERIAL, TYPE AND THICKNESS SHALL BE PER CITY OF TAMPA MINIMUM PAVEMENT DESIGN STANDARDS.
  3. SEE CITY OF TAMPA FLEXIBLE PAVEMENT RESTORATION LIMITS DETAIL (PVT-2) FOR REQUIRED LIMITS OF MILLING & RESURFACING.
  4. IF EXISTING ASPHALTIC CONCRETE PAVEMENT LAYER THICKNESS EXCEEDS MINIMUM STANDARD PER CITY OF TAMPA MINIMUM PAVEMENT DESIGN STANDARDS, MATCH EXISTING ASPHALT THICKNESS. IF EXISTING ASPHALT THICKNESS IS TWO TIMES THE MINIMUM THICKNESS REQUIRED PER CITY OF TAMPA MINIMUM PAVEMENT DESIGN STANDARDS, CONTRACTOR MAY OPT TO USE FULL DEPTH ASPHALT IN A DEPTH EQUAL TO MINIMUM SURFACE COURSE THICKNESS REQUIRED BY CITY OF TAMPA MINIMUM PAVEMENT DESIGN STANDARDS PLUS MINIMUM THICKNESS OF TYPE B-12.5 OPTIONAL BASE GROUP IN FDOT STANDARDS. IN THIS CASE, THE FULL DEPTH RESTORATION MAY SERVE AS THE BASE LAYER.
  5. ANY ROADWAY RESTORATION OUTSIDE THE LIMITS OF TRENCH RESTORATION OR ANY NEW ROADWAY CONSTRUCTION SHALL MEET THE MINIMUM MATERIAL AND THICKNESS REQUIREMENTS WITHIN THE CITY OF TAMPA PAVEMENT DESIGN STANDARDS, ON SHEET 2 OF 2.
  6. CONTRACTOR SHALL REVIEW ROADWAY LONGITUDINAL ROADWAY GRADES PRIOR TO PAVEMENT RESTORATION WORK TO ENSURE THAT ROADWAY MEETS MINIMUM SLOPE PER THE FLORIDA MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE (FLORIDA GREENBOOK).
  7. FOR BRICK PAVEMENT SECTIONS, SEE CITY OF TAMPA MISCELLANEOUS RESTORATION DETAILS, PVT-3. FOR RIGID PAVEMENT, SEE FLORIDA DEPT. OF TRANSPORTATION (FDOT) STANDARD PLANS.
  8. THE 18\"/>
  9. TEMPORARY RESTORATION SHALL BE LIMITED TO A TIME PERIOD OF NO LONGER THAN 30 DAYS, UNLESS SPECIFICALLY APPROVED BY THE CITY'S ENGINEER.
  10. ALL THERMOPLASTIC STRIPING SHALL BE REPLACED IN KIND. STRIPING SHALL BE PAINTED UNTIL THERMOPLASTIC CAN BE PLACED.

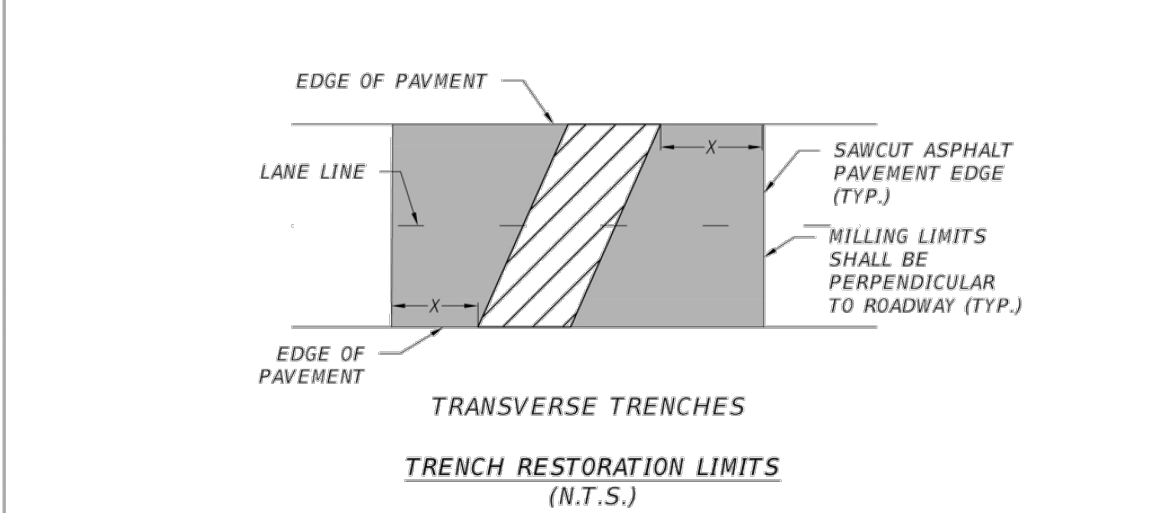
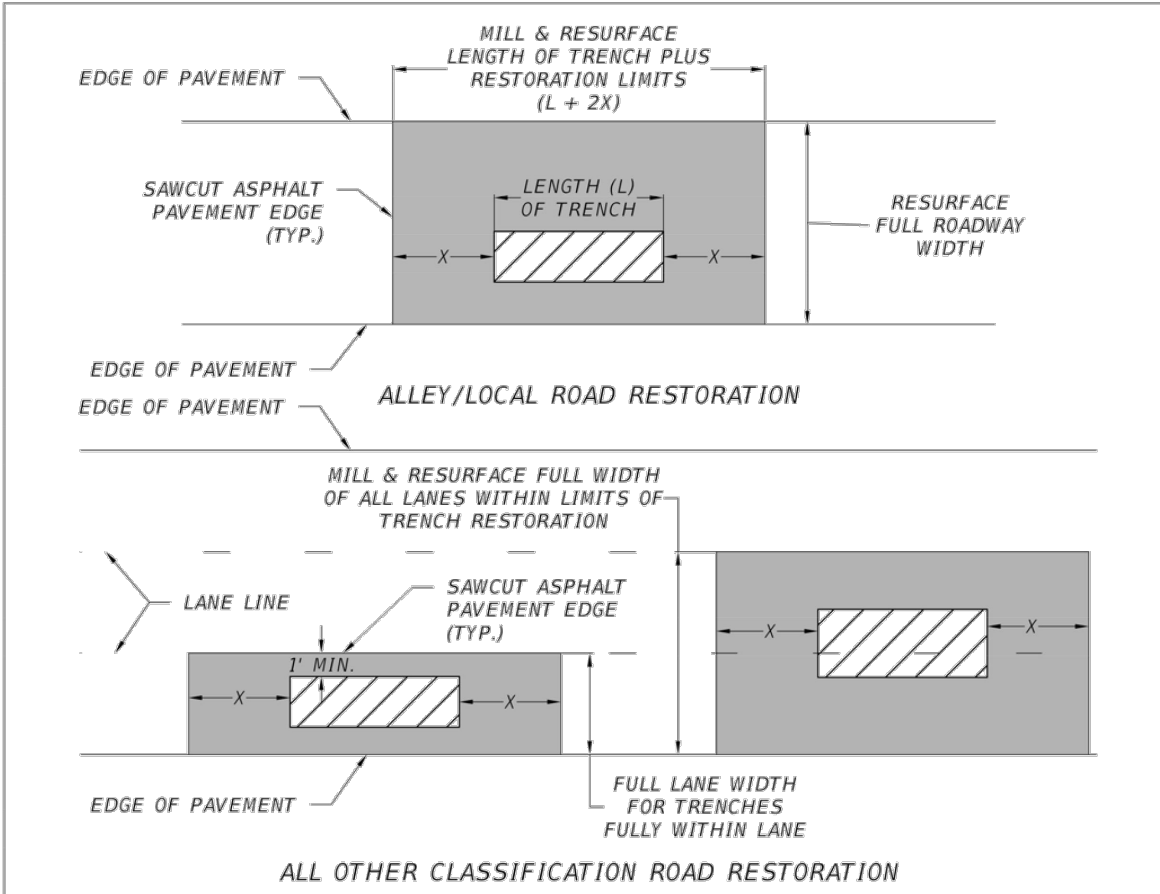
REVISION DATE	DESCRIPTION	DETAIL NO.
AUGUST 2023	TRENCH RESTORATION	PVT-1 SHEET 1 OF 2




PAVEMENT DESIGN MINIMUM STANDARDS					
ROADWAY CLASSIFICATION	BASE MATERIAL	STABILIZED SUBGRADE	ASPHALTIC CONCRETE	RIGID PAVEMENT	TYPE B STABILIZATION (MIN. LBR 40)
ALLEY	6"	12"	1"	6"	12"
LOCAL	8"	12"	2"	6"	12"
NEIGHBORHOOD COLLECTOR	8"	12"	3"	6"	12"
COLLECTOR/ ARTERIAL	12"	12"	4"	8"	12"

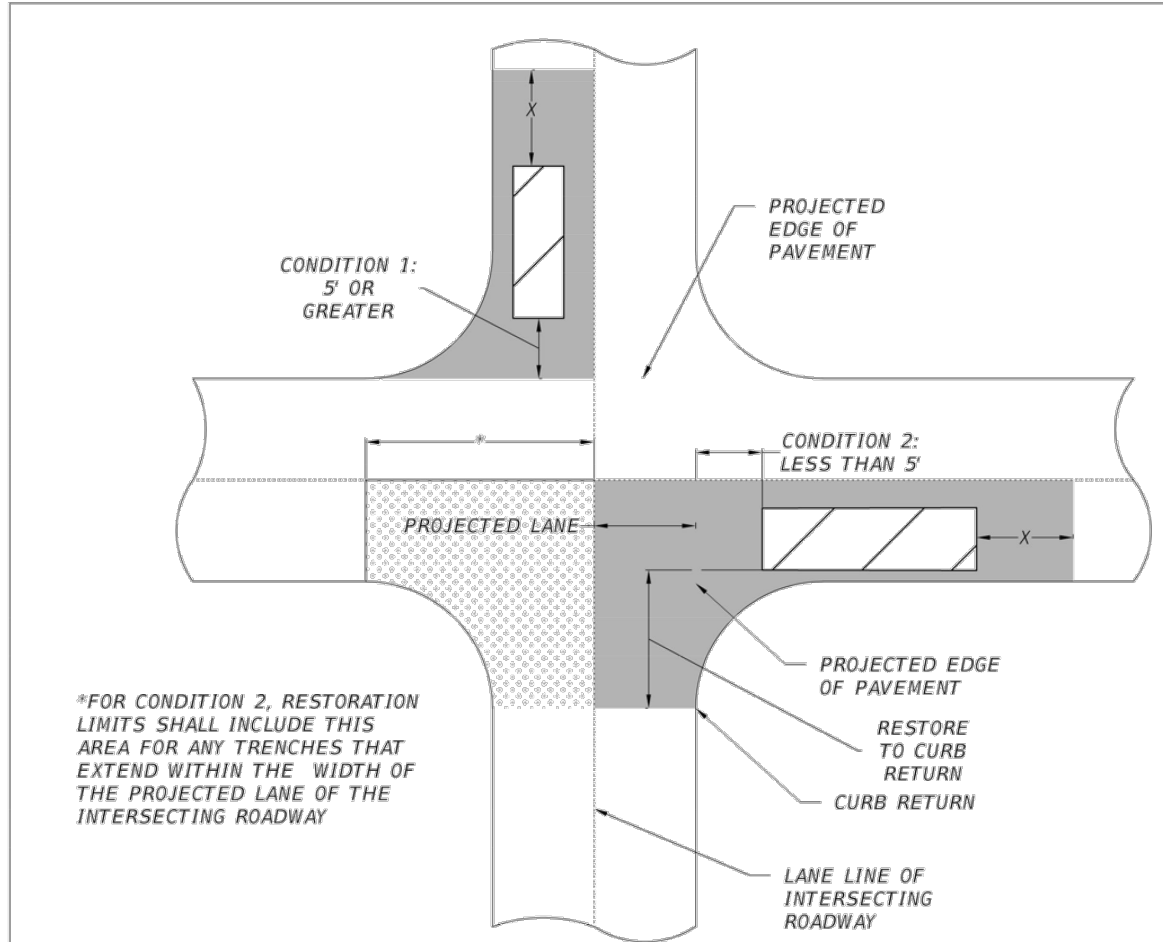
\* MINIMUM PAVEMENT SECTIONS CAN BE MODIFIED WITH AN APPROVED PAVEMENT DESIGN SUBMITTED TO THE CITY OF TAMPA MOBILITY DEPT., TRANSPORTATION ENGINEERING DIVISION.

- NOTES:
1. ALL WORK, MATERIALS, AND TESTING PER CITY OF TAMPA PAVEMENT AND RIGHT OF WAY RESTORATION REQUIREMENTS.
  2. MATERIAL, TYPE AND THICKNESS OF ASPHALTIC CONCRETE PAVEMENT AND BASE PER CITY OF TAMPA PAVEMENT DESIGN STANDARDS.
  3. ASPHALTIC CONCRETE SHALL BE TYPES SP-9.5 (TRAFFIC LEVEL C) OR SP-12.5 (TRAFFIC LEVEL C), ONLY. ARTERIALS SHALL USE SP-12.5, ONLY. MINIMUM LIFT THICKNESS PER FDOT FLEXIBLE PAVEMENT DESIGN MANUAL.
  4. OPTIONAL BASE GROUP, INCLUDING ASPHALT BASE, PER FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION MAY BE USED IN LIEU OF STANDARD DEPTH. USE CORRESPONDING LB BASE THICKNESSES TO DETERMINE REQUIRED DEPTH.

REVISION DATE	DESCRIPTION	DETAIL NO.
AUGUST 2023	PAVEMENT DESIGN	PVT-1 SHEET 2 OF 2

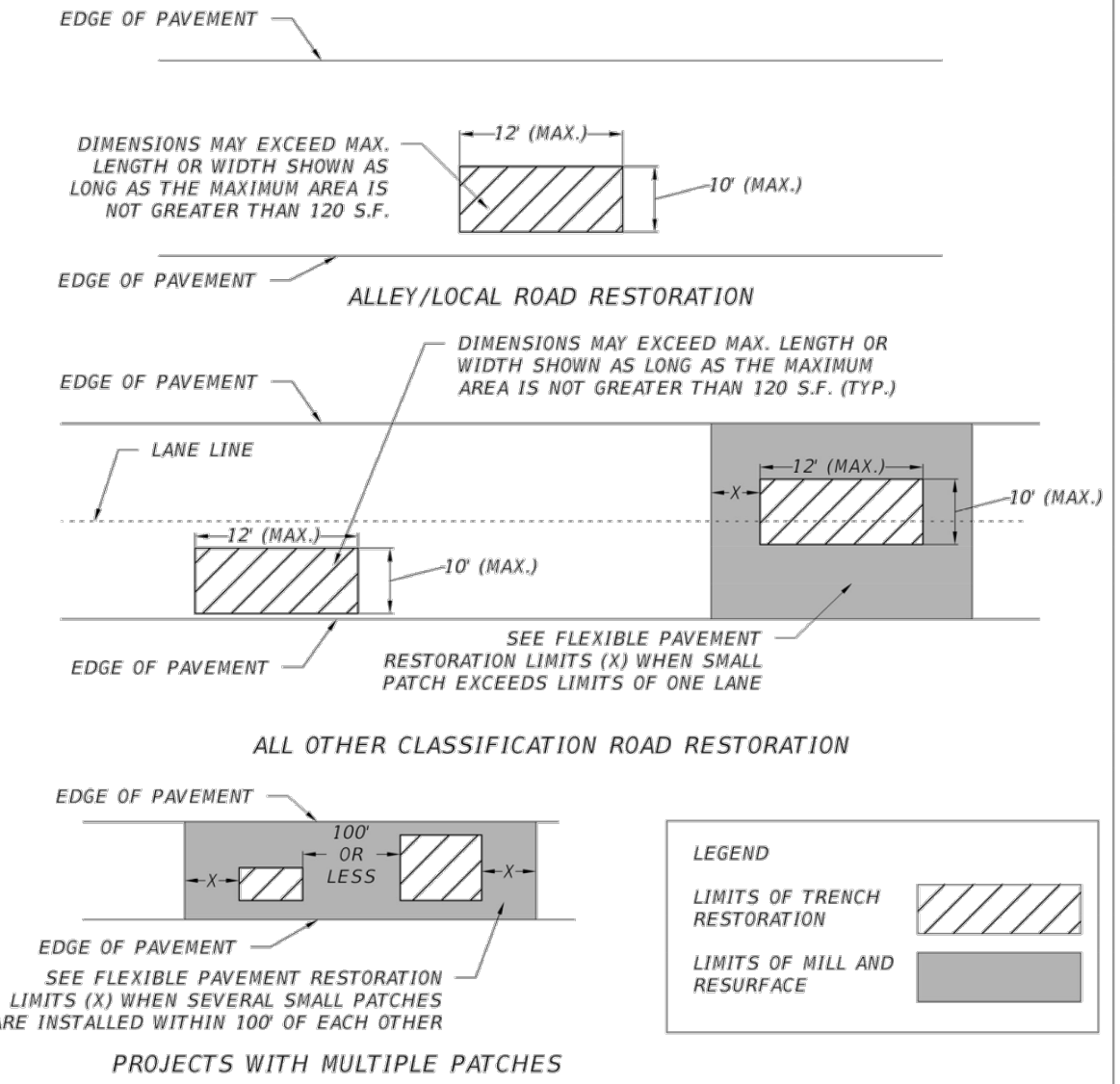


RESURFACING LIMITS		LEGEND	
ROADWAY CLASSIFICATION	LENGTH, X (LF)		
ALLEY/LOCAL	5		
ALL OTHER CLASSIFICATIONS	10		
		LIMITS OF TRENCH RESTORATION	
		LIMITS OF MILL AND RESURFACE	
	REVISION DATE	DESCRIPTION	DETAIL NO.
	AUGUST 2023	FLEXIBLE PAVEMENT RESTORATION LIMITS	PVT-2 SHEET 1 OF 2



- NOTES:
1. RESURFACING LIMITS "X" ACCORDING TO TRENCH RESTORATION LIMITS DETAIL, PVT-2 (SHEET 1 OF 2).

REVISION DATE	DESCRIPTION	DETAIL NO.
AUGUST 2023	FLEXIBLE PAVEMENT RESTORATION LIMITS	PVT-2 SHEET 2 OF 2



- NOTES:
1. SMALL PATCH RESTORATION WORK IS MEANT FOR EXPLORATORY TEST HOLES AND SHALL UTILITY CONNECTIONS AND POINT REPAIRS.
  2. MILLING LIMITS SHALL BE EXPANDED TO INCLUDE EXISTING PATCHES WHEN EXISTING PATCHES ARE WITHIN 3 FEET.
  3. ALL SMALL PATCH RESTORATION TRENCHES SHALL BE A MINIMUM 2\"/>
  4. CUTS SHALL BE DONE PERPENDICULAR TO THE EDGE OF PAVEMENT AND DIRECTION OF TRAVEL, RESPECTIVELY.
  5. RESTORATION SHALL BE DONE IN ACCORDANCE WITH TRENCH RESTORATION DETAILS, PVT-1.
  6. ALL WORK THAT EXCEED MAXIMUM DIMENSIONS OR OCCURS WITHIN MULTIPLE LANES OF A ROADWAY CLASSIFIED OTHER THAN ALLEY OR LOCAL SHALL BE PER THE CITY OF TAMPA FLEXIBLE PAVEMENT RESTORATION LIMITS, PVT-2.
  7. ALL RESTORATION, INCLUDING SMALL PATCH RESTORATION ON ROADWAYS RESURFACED WITHIN THE LAST THREE (3) YEARS, SHALL BE DONE PER THE CITY OF TAMPA FLEXIBLE PAVEMENT RESTORATION LIMITS, PVT-2.
  8. PAVEMENT RESTORATION DETAILS DO NOT APPLY TO CORING AND AUGERS.

REVISION DATE	DESCRIPTION	DETAIL NO.
AUGUST 2023	SMALL PATCH RESTORATION	PVT-4 SHEET 1 OF 1

TABLE 284.4.1-A: TREE RETENTION-MITIGATION EQUIVALENCY TABLES BY TREE TYPE [6]							
TYPE 1: TALL & WIDE							
Trees Retained	# of trees	Retention Multiplier	Total Credits	Grand Trees Retained	# of trees	# Mitigation Trees	Total Credits
Diameter (inches) / Dripline (feet)							
5" to 10"	0	-1	0	Grand tree(s)	0		0
11" to 20"	0	-2	0				
21" to 25"	0	-4	0				
26" to <32"	0	-12	0				
Subtotal	0		0	Subtotal			0
Trees Removed	# of trees	Replacement Multiplier	Total Debits	Grand Trees Removed	# of trees	# Mitigation Trees	Total Debits
Diameter (inches) / Dripline (feet)							
5" to 10"	3	1	3	Grand tree(s)	0		0
11" to 20"	8	2	16				
21" to 25"	1	3	3				
26" to <32"	0	4	0				
Subtotal	12		22	Subtotal			0
Type 1: Total Mitigation Trees Required							
				22			
TYPE 2: TALL & NARROW							
Trees Retained	# of trees	Retention Multiplier	Total Credits	Grand Trees Retained	# of trees	# Mitigation Trees	Total Credits
Diameter (inches) / Dripline (feet)							
5" to 17"	0	-1	0	Grand tree(s)	0		
18" to 29"	0	-2	0				
30" to <32"	0	-3	0				
Subtotal	0		0				
Trees Removed	# of trees	Replacement Multiplier	Total Debits	Grand Trees Removed	# of trees	# Mitigation Trees	Total Debits
Diameter (inches) / Dripline (feet)							
5" to 17"	0	1	0	Grand tree(s)	0	0	0
18" to 29"	0	2	0				
30" to <32"	0	3	0				
Subtotal	0		0				
Type 2: Total Mitigation Trees Required							
				0			
TYPE 3: SHORT & WIDE/MULTI-STEM							
Trees Retained	# of trees	Retention Multiplier	Total Credits	Grand Trees Retained	# of trees	# Mitigation Trees	Total Credits
Diameter (inches) / Dripline (feet)							
5" to 7"	0	-1	0	Grand tree(s)	0	0	0
8" to 17"	0	-2	0				
18" to 29"	0	-3	0				
30" to <32"	0	-12	0				
Subtotal	0		0	Subtotal			0
Trees Removed	# of trees	Replacement Multiplier	Total Debits	Grand Trees Removed	# of trees	# Mitigation Trees	Total Debits
Diameter (inches) / Dripline (feet)							
5" to 7"	0	1	0	Grand tree(s)	0	0	0
8" to 17"	0	2	0				
18" to 29"	0	3	0				
30" to <32"	0	4	0				
Subtotal	0		0	Subtotal			0
Type 3: Total Mitigation Trees Required							
				0			
PALMS							
Trees Retained	# of trees	Retention Multiplier	Total Credits	Trees Removed	# of trees	Replacement Multiplier	Total Debits
Diameter (inches) / Dripline (feet)							
Palms with 6' clear trunk	0	-1	0	Palms with 6' clear trunk	4	1	4
Subtotal	0		0	Subtotal	4		4
Palm: Total Mitigation Trees Required							
				4			
NOTES:							
[1] All grand tree species calculated at a "moderate" growth rate and using 10" caliper tree as standard 5-Year Parity (i.e. 154 SF replacement Crown Footprint per 2.5" caliper tree planted).							
[2] Species Rating % standardized to mid-point of range. SR ["Species Rating"]:. Rating denotes comparative value by species, based on suitability & performance as "urban trees", using FL SA's Tree Species Ratings (2016); recorded as PERCENT. If SR not available, use CR value (see Table 284.3.2-A City of Tampa Tree Matrix).							
[3] CR ["Condition Rating"]:. Rating using Tree Hazard Evaluation Method (Matheny and Clark 1994); recorded as a PERCENT (A=100%, B=90%, C=75%, D=40%, F=0%).							
[4] Refer to Table 284.4.1-A1 Range of Species Ratings below.							
[5] Credit for grand tree retention is calculated in the same manner as debits.							
[6] All mitigation trees measuring less than 5" shall be factored into this table as a 5" tree.							
Reference: "ft" means "feet"; "in" means "inches"; "SF" means "square feet"; "cal" means "caliper."							

100% CONSTRUCTION DRAWINGS

REVISIONS					
BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION

**MILLS & ASSOCIATES**  
DIVISION OF PENNONI  
CONSULTING ENGINEERS & LAND SURVEYORS  
3242 HENDERSON BOULEVARD \* SUITE 300  
TAMPA, FLORIDA 33609-3056  
TELEPHONE: (813) 876-5869

FOR

CITY OF TAMPA WASTE  
WATER DEPARTMENT

DRWN BY: CVL DATE 01/29/28  
DSGN BY: CVL DATE 01/29/25  
CHKD BY: LEM DATE 01/29/25  
SCALE: 1" = 20'

LAWRENCE E. MILLS  
P.E. NO. 28284 - E.B. NO. 3860  
P.L.S. NO. 3141 - L.B. NO. 3868  
STATE OF FLORIDA

PROJECT	SHEET
30TH ST SEWER IMPROVEMENTS	C3.2
JOB NO.	21-013.001
DETAILS & NOTES	