CITY OF TAMPA

Bob Buckhorn, Mayor **CONTRACT ADMINISTRATION DEPARTMENT**

Michael W. Chucran, Director

ADDENDUM NO. 4

DATE: April 12, 2016

Contract 15-C-00059; Upper Peninsula Stormwater Improvements Phase 2 (Vasconia Outfall)

Bidders on the above referenced project are hereby notified that the following addendum is made to the Contract Documents. BIDS TO BE SUBMITTED SHALL CONFORM TO THIS NOTICE.

Item 1: Replace Proposal pages P-3, P-4, P-5, P-6, P-7, P-8 and P-9 with the attached pages P-3R, P-4R, P-5R, P-6R, P-7R, P-8R, and P-9R.

Item 2: **ADD,** to SP-15 Contractor's Field Office, the following:

The Field office supplied by the Contractor shall provide bathroom, water and electricity.

Item 3: **CHANGE**, SP-20 Project Sign in the first sentence, "two" to read "three".

Item 4: **ADD** to Contract Items – Stormwater, Wastewater and Roadway the following:

CONTRACT ITEM 711 SERIES – THERMOPLASTIC MARKINGS

The Contractor shall furnish all labor, equipment, and materials to install thermoplastic, standard, white, yellow, solid, 6"-12" traffic stripes and markings as shown on the Plans and as directed by the Engineer.

The work includes all necessary labor, equipment, and materials required to apply new thermoplastic traffic stripes and markings, or refurbish existing thermoplastic traffic stripes and markings, as shown in the plans and in accordance with the details and Contract Documents and the latest version of the FDOT Standard Specifications – Workmanship and Materials – Section 711 – Thermoplastic Traffic Stripes and Markings.

Payment for Thermoplastic Markings shall be made under the appropriate Contract Item Unit Price.

Item 5: Water Technical Specifications, Page TS-16, in Sub-Section T2.07 Valves, 2nd paragraph: **REPLACE** the last sentence with the following:

Valves shall be furnished with extension stems if operating nut is greater that 48-inches deep, such that the top of nut is no more than 24-inches from of the top of the valve box (see Detail 3.05). Connection to the valve shall be with a wrench nut coupling and set screw(s) to secure the coupling to the valve's operating nut. The coupling and square nut wrench shall be welded to the extension stem. Rock guard and centering plate are required. Extension stems shall be equal to or better than ProSelect Gate Valve Extension – with Centering Plate, or Trumbull Gate Valve Extension Stems, Style B.

Item 6: In Schedule A – Water Contract Pay Items, in section C6.00 Valves, page CP-13:

i) after "…Payment shall be made for the number of each size valve and valve box installed and incorporated into the piping system complete, working and operating to the satisfaction of the Engineer…", add the following:

Separate compensation will be provided for each valve nut extension required, installed and accepted by the Engineer, per length of extension required.

ii) After Pay Item 6005, insert the following valve extension Pay Items:

6080 Furnish and install 2' valve nut extension
6081 Furnish and install 3' valve nut extension

Item 7: Replace Plan Sheets 2, 5, 6, 7, 7A, 7B, 7C, 8, 9, 11, 12A, 49, 55, 60, 61, 82A, 89, 90, 91, 92, 93, 94, S-1, S-2, S-3, S-4, S-5, S-6, S-13, W-104, W-108, W-110, W-111, W-113, W-115, W-116, W-120, W-120B, W-121, W-122, W-123, W-123C, W-124 and W-125

with the attached sheets 2, 5, 5A, 6, 7, 7A, 7B, 7C, 8, 9, 11, 12A, 49, 55, 60, 61, 82A, 89, 90, 91, 92, 93, 94, S-1, S-2,S-3, S-4, S-5, S-6, S-13, W-104, W-108, W-110, W-111, W-113, W-115, W-116, W-120,W-120B, W-121, W-122, W-123, W-123C, W-124, W-124A, W-124B and W-125.

All other provisions of the Contract Documents and Specifications not in conflict with this Addendum shall remain in full force and effect. Questions are to be e-mailed to Contract Administration@tampagov.net.

Jim Greiner

Jim Greiner, P.E., Contract Management Supervisor

Schedule A- Stormwater

Item No.	Description	Unit	Quantity	Unit Price in Words		Unit Price		Total Computed Price
100	CONTINGENCY - Stormwater	EA	1	Two Hundred Ten Thousand	$	210,000.00	$	210,000.00
101	MOBILIZATION	LS	1		$		$	
102	MAINTENANCE OF TRAFFIC	LS	1		$		$	
104-1	SILT FENCE & EROSION CONTROL	LF	9,560		$		$	
104-18	INLET PROTECTION SYSTEM	EA	38		$		$	
105-1	Root Pruning	LF	265		$		$	
105-2	Tree Removal	LS	1		$		$	
105-3	Tree Trimming	LS	1		$		$	
108	DEWATERING	LS	1		$		$	
110-1	CLEARING & GRUBBING (INCLUDES CONCRETE REMOVAL)	LS	1		$		$	
110-2	Demoliton of Storm Concrete Infrastructure	LF	228		$		$	
110-3	Grouting of Storm Pipes	CY	1,060		$		$	
112	Landscape Replacement Per Parcel	EA	78		$		$	
120	REGULAR SUBSOIL EXCAVATION	CY	11,695		$		$	
120-2	Removal of Unsuitable Material	CY	3,600		$		$	
120-3	Removal of Rock Material	CY	1,000		$		$	
160	TYPE B STABILIZATION	SY	17,734		$		$	
285	OPTIONAL BASE, BASE GROUP 06	SY	17,734		$		$	
334	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	TN	2,644		$		$	

Schedule A- Stormwater

Item No.	Description	Unit	Quantity	Unit Price in Words		Unit Price		Total Computed Price
337	TRAFFIC B, FC-9.5 (RUBBER)	TN	608		$		$	
400	COLLAR CONNECTION	EA	31		$		$	
410-1	PRECAST BOX CULVERT 9'X6'	LF	1,204		$		$	
410-2	PRECAST BOX CULVERT 10'X5'	LF	158		$		$	
410-3	PRECAST BOX CULVERT 9'X5'	LF	1,497		$		$	
410-4	PRECAST BOX CULVERT 6'X5'	LF	525		$		$	
410-5	PRECAST BOX CULVERT Double 5'X4'	LF	299		$		$	
410-6	PRECAST BOX CULVERT Double 5'X3'	LF	287		$		$	
410-7	CUT INTERNAL WALL SEPERATION (BOX CULVERTS)	EA	3		$		$	
425-1-1	TYPE J JUNCTION BOX (Dimensions less than 10')	EA	6		$		$	
425-1-2	TYPE J JUNCTION BOX (Dimensions 10' or higher)	EA	13		$		$	
425-1-1A	CUSTOM JUNCTION BOX / CONFLICT STRUCTURE	EA	8		$		$	
425-1-1B	TYPE J JUNCTION BOX / CONFLICT STRUCTURE	EA	1		$		$	
425-2-41	MANHOLE RISER, P-7, <10'	EA	15		$		$	
425-2-42	TYPE P JUNCTION BOX	EA	1		$		$	
425-9-1	INLET, COT CURB TYPE 1, <10'	EA	19		$		$	
425-9-1A	INLET, COT CURB TYPE 1 MODIFIED, <10'	EA	1		$		$	
425-9-2A	INLET, COT CURB TYPE BS-1, <10	EA	11		$		$	
425-9-4	INLET, COT CURB TYPE BV-1, <10	EA	13		$		$	
425-9-5	INLET, COT CURB TYPE BR-2, <10	EA	1		$		$	
425-9-6	INLET, COT GRATE TYPE T, <10'	EA	3		$		$	

Schedule A- Stormwater

Item No.	Description	Unit	Quantity	Unit Price in Words		Unit Price		Total Computed Price
425-9-8	INLET, COT GRATE TYPE H, <10'	EA	2		$		$	
425-9-2A	INLET, COT CURB TYPE BR-1, <10	EA	2		$		$	
425-9-2A	INLET, COT CURB TYPE BR-2, <10	EA	1		$		$	
430-174-115	15" ROUND STORMWATER PIPE (RCP)	LF	480		$		$	
430-174-115A	15" ROUND STORMWATER PIPE (CLASS IV) (RCP)	LF	102		$		$	
430-174-118	18" ROUND STORMWATER PIPE (RCP)	LF	280		$		$	
430-174-124	24" ROUND STORMWATER PIPE (RCP)	LF	645		$		$	
430-174-124A	24" ROUND STORMWATER PIPE (CLASS IV) (RCP)	LF	82		$		$	

Schedule A- Stormwater

Item No.	Description	Unit	Quantity	Unit Price in Words		Unit Price		Total Computed Price
430-174-130	30" ROUND STORMWATER PIPE (RCP)	LF	44		$		$	
430-174-136	36" ROUND STORMWATER PIPE (RCP)	LF	27		$		$	
430-174-148	48" ROUND STORMWATER PIPE (RCP)	LF	164		$		$	
430-174-154	54" ROUND STORMWATER PIPE (RCP)	LF	60		$		$	
430-174-114-123	14"x23" ELLIPTICAL STORMWATER PIPE, (CROSS DRAIN) (ERCP)	LF	80		$		$	
430-174-119-130	19"x30" ELLIPTICAL STORMWATER PIPE, (CROSS DRAIN) (ERCP)	LF	162		$		$	
430-174-119-130A	19"x30" ELLIPTICAL STORMWATER PIPE, (CROSS DRAIN) (CLASS IV) (ERCP)	LF	155		$		$	
430-174-124-138	24"x38" ELLIPTICAL STORMWATER PIPE, (CROSS DRAIN) (ERCP)	LF	95		$		$	
430-174-124-138A	24"x38" ELLIPTICAL STORMWATER PIPE, (CROSS DRAIN) (CLASS IV) (ERCP)	LF	155		$		$	
430-174-129-145	29"x45" ELLIPTICAL STORMWATER PIPE, (CROSS DRAIN) (ERCP)	LF	153		$		$	
430-174-129-145A	29"x45" ELLIPTICAL STORMWATER PIPE, (CROSS DRAIN) (CLASS IV) (ERCP)	LF	79		$		$	
520-1-1	CONCRETE CURB & GUTTER, TYPE D	LF	1,736		$		$	
520-1-7	CONCRETE CURB & GUTTER, DROP CURB	LF	2,483		$		$	
520-1-10	CONCRETE CURB & GUTTER, TYPE F	LF	6,886		$		$	
522-1	SIDEWALK CONCRETE, 4" THICK	SY	765		$		$	
522-2	SIDEWALK CONCRETE, 6" THICK (DRIVEWAYS, CURB RAMPS)	SY	3,992		$		$	
522-3	BRICK DRIVEWAYS REPLACEMENT	EA	24		$		$	
535	WINGWALL PER FDOT INDEX 289	CY	50		$		$	
548	Retaining Wall System (Interlocking Block Wall)	SF	145		$		$	
711-11-111	THERMOPLASTIC, STD., WHITE, SOLID, 6"	L.F.	2,858		$		$	
711-11-123	THERMOPLASTIC, STD., WHITE, SOLID, 12"	L.F.	531		$		$	
711-11-125	THERMOPLASTIC, STD., WHITE, SOLID, 24"	L.F.	124		$		$	

Schedule A- Stormwater

Item No.	Description	Unit	Quantity	Unit Price in Words		Unit Price		Total Computed Price
711-11-131	THERMOPLASTIC, STD., WHITE, SKIP 6"	L.F.	2,831		$		$	
711-11-160	THERMOPLASTIC, STD., WHITE, MESSAGE	EA	1		$		$	
711-11-170	THERMOPLASTIC, STD., YELLOW, SOLID, 6"	EA	6		$		$	
711-11-211	THERMOPLASTIC, STD., WHITE, ARROW	L.F.	956		$		$	
908	8" Dia. PVC Pipe (C-900, DR-18)	L.F.	3,694		$		$	
924	24" Dia. PVC Pipe (C-900, DR-18)	L.F.	45		$		$	
1706	6-Inch Diameter PVC Pipe House Lateral (SDR-35)	L.F.	3,338		$		$	
1707	6-Inch Diameter PVC Pipe House Lateral (SDR-35) Through Box Culvert	EA	15		$		$	
1708	6-Inch Diameter PVC Pipe House Lateral (SDR-35) Under Box Culvert	EA	2		$		$	
2700	8"x6" PVC Wye	EA	86		$		$	
3508	8-Inch Flexible Connector	EA	2		$		$	
3524	24-Inch Flexible Connector	EA	1		$		$	
4000	Precast Concrete Standard or Doghouse Manhole Base	EA	20		$		$	
4100	Precast Concrete Manhole Barrel	LF	167		$		$	
4200	Precast Concrete Manhole Cone	EA	20		$		$	
4300	Standard Sewer Manhole	EA	2		$		$	
4301	Drop Manhole	EA	1		$		$	
4600	Cast Iron Manhole Frame and Cover	EA	23		$		$	
4660	6-Inch Diameter PVC Cleanout and Cover	EA	86		$		$	
4900	Connect to Existing Manhole	EA	1		$		$	
5000	Security Services	HR	2,190		$		$	
8901	LAWN REPLACEMENT AND SODDING	SY	2,693		$		$	
						Total Sch. A	$	

Item No.	Description	Unit	Quantity	Unit Price in Words		Unit Price		Total Computed Price
Schedule B- Water					$		$	
2102	F&I 6" ductile iron pipe	LF	4,598		$		$	
2104	F&I 8" ductile iron pipe	LF	200		$		$	
2200	F&I 2" HDPE tubing by HDD w/HDPE adapters and HDPE fittings at various depths	LF	30		$		$	
2500	Removal of abandoned pipe 3" and smaller in diameter	LF	340		$		$	
2501	Removal of abandoned pipe 4" - 10" in diameter	LF	910		$		$	
2600	Cut and plug 3" and smaller in diameter pipe	EA	7		$		$	
2601	Cut and plug 4", 6" and 8" diameter pipe	EA	2		$		$	
2800	Make tap and furnish materials to connect 3" and smaller water mains to new/existing mains (0-15 ft. in length)	EA	2		$		$	
3041	Furnish & install 6" bell restraint on existing pipe	EA	8		$		$	
3042	Furnish & install 8" bell restraint on existing pipe	EA	4		$		$	
3071	Furnish 6" push-on restraint gaskets	EA	62		$		$	
3072	Furnish 8" push-on restrain gaskets	EA	5		$		$	
4004	F&I 6" ductile iron plug or cap w/ DIP, CIP or PVCP	EA	1		$		$	
4005	F&I 6" ductile iron bends, offset, sleeves or reducers w/ DI	EA	104		$		$	

Item No.	Description	Unit	Quantity	Unit Price in Words		Unit Price		Total Computed Price
4006	F&I 6" ductile iron tee w/ DIP, CIP or PVC	EA	15		$		$	
4009	F&I 8" ductile iron bends, offsets, sleeves or reducers w/ D	EA	10		$		$	
4010	F&I 8" ductile iron tee w/ DIP, CIP or PVC	EA	2		$		$	
5000	F&I full fire hydrant assembly	EA	8		$		$	
5200	Remove and salvage of fire hydrant	EA	2		$		$	
6000	F&I 2" gate valve with box on DIP, CIP or PVCP	EA	2		$		$	
6002	F&I 6" gate or tapping valve with box on DIP, CIP or PVCP	EA	28		$		$	
6003	F&I 8" gate or tapping valve with box on DIP, CIP or PVCP	EA	1		$		$	
6080	F&I 2' long Valve Nut Extension	EA	5		$		$	
6081	F&I 3' long Valve Nut Extension	EA	5		$		$	
6102	F&I 6" Linestop on Existing Water Main	EA	4		$		$	
6104	F&I 8" Linestop on Existing Water Main	EA	1		$		$	
6205	F&I 8" TEAM Insertion Valves on Existing Water Main	EA	2		$		$	
7002	F&I 8" tapping sleeve and make tap	EA	1		$		$	
7003	F&I 12" tapping sleeve and make tap	EA	1		$		$	
8100	Furnish tap and install 3/4" or 1" meter service on PVCP, DIP, or CIP (0-15')	EA	42		$		$	
8101	Furnish, tap and install 3/4" meter service on PVCP, DIP or CIP (+15-80')	EA	25		$		$	
9200	Furnish, place and compact limerock base	CY	170		$		$	
9980	Contingency (Water)	EA	1	Eighty Seven Thousand Dollars	$	87,000.00	$	87,000.00

Total Sch. B $

Total Computed Price for Contract 15-C-00059 Sch. A + Sch. B $

SHEET INDEX	
SHT. NO.	DESCRIPTION
1	COVER SHEET
2	INDEX & LOCATION MAP
3	LEGEND & KEY MAP
4–5A	GENERAL NOTES
6–7	STORM STRUCTURE TABLE
8–9	STORM PIPE TABLE
10	STORM SEWER LAYOUT

SHEET INDEX	
SHT. NO.	DESCRIPTION
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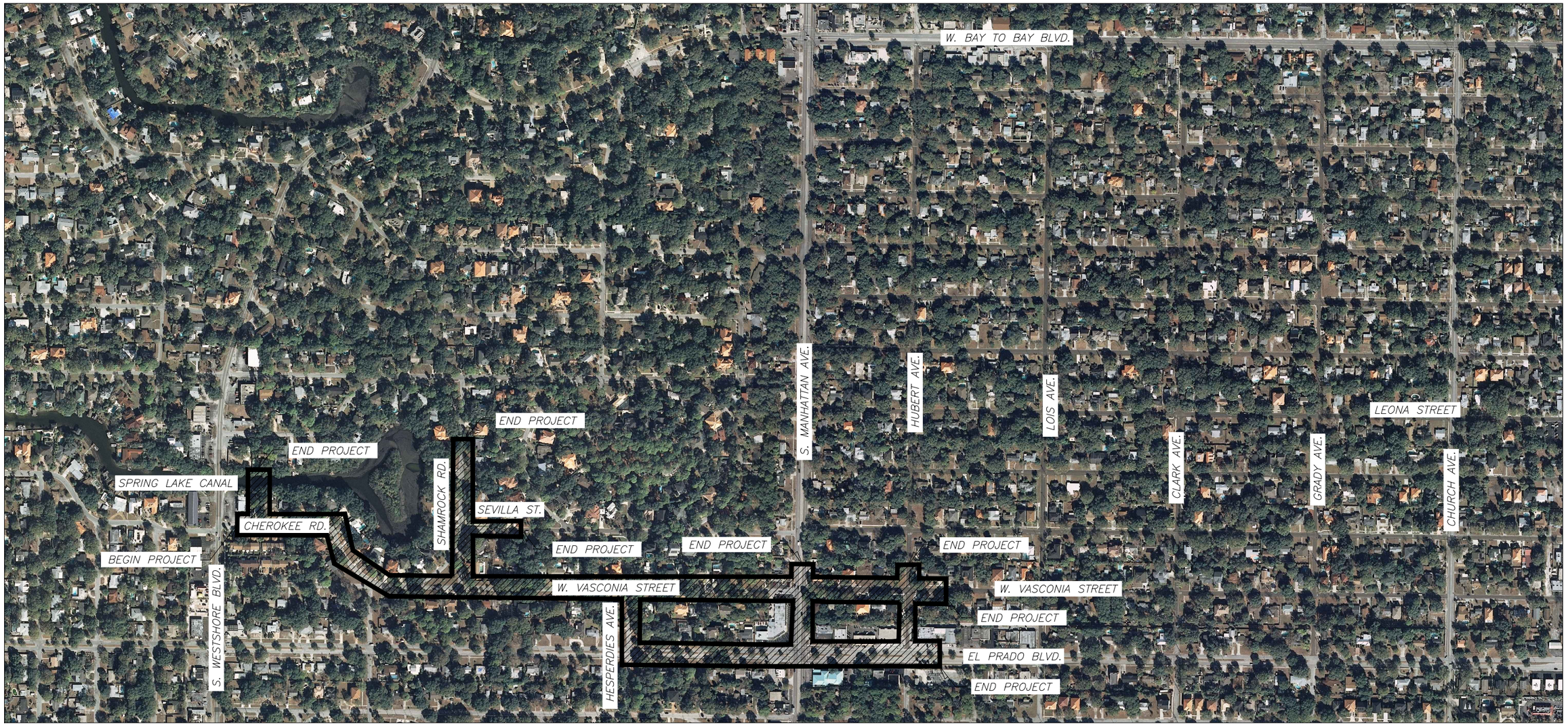
68–68I	DETAILED GRADING PLAN
69–69A	TYPICAL SECTIONS
69B–81	CROSS SECTIONS
81A–81C	STORMWATER DETAILS
82A–94	PAVING AND STRIPING PLAN
94A–94B	TRAFFIC CONTROL PLANS

SHEET INDEX	
SHT. NO.	DESCRIPTION
95A–105	TREE REMOVAL PLAN
S–1–S–14	STRUCTURAL DETAILS
W–100–W–123	WATER PLANS
W–124–W–125	WATER DETAILS
WW–100	SANITARY STRUCTURE & PIPE TABLE
WW–100A–WW–117	WASTEWATER PLANS
WW–119–WW–129	WASTEWATER DETAILS

SW



PROJECT LOCATION MAP

NTS

PROJECT AREA

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

INDEX & LOCATION MAP

SHEET 2 OF 105

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-Index and Location Map.dwg - Printed Apr 07, 2016-2:49pm by: JenP

SW

TREE PROTECTION NOTES

1. PROTECTIVE BARRICADES SHALL BE PLACED AROUND ALL PROTECTED TREES AND GRAND TREES DURING SITE CLEARING, AND SHALL REMAIN IN PLACE UNTIL LAND ALTERATION, SITE CLEARING AND CONSTRUCTION ACTIVITIES ARE COMPLETE. BARRICADES SHALL BE ERECTED AT A MINIMUM DISTANCE OF TEN FEET (10') FROM THE BARK OF PROTECTED TREES AND TWENTY FEET (20') FROM THE BARK OF GRAND TREES.
2. REQUIRED TREE BARRICADES AND EROSION CONTROL MEASURES MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. ENCROACHMENT INTO OR FAILURE TO MAINTAIN TREE BARRICADES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS AND/OR PERMIT REVOCATION.
3. A MINIMUM DISTANCE OF TEN FEET (10') SHALL BE MAINTAINED FROM ALL PROTECTED TREES WHEN INSTALLING UNDERGROUND UTILITIES. IF THIS RESULTS IN UNREASONABLE HARDSHIP, A SOIL AUGER SHALL BE USED TO TUNNEL UNDER THE ROOT SYSTEMS.
4. THE CONTRACTOR IS REQUIRED TO PREVENT DAMAGE TO TREES WHICH ARE TO REMAIN. THE CONTRACTOR SHALL BE LIABLE FOR FINES DUE TO ALL DAMAGE OF TREES THAT ARE DESIGNATED TO BE SAVED DURING CONSTRUCTION. SPECIAL CARE IS REQUIRED TO PREVENT DAMAGE TO TREES WHICH ARE TO REMAIN.
5. INSTALLATION OF ARTIFICIAL BARRIERS SUCH AS PROTECTIVE BARRICADES, FENCES, POSTS, OR WALLS SHALL NOT DESTROY OR IRREVERSIBLY HARM THE ROOT SYSTEM OF PROTECTED TREES AND GRAND TREES. FOOTERS FOR WALLS SHALL BE AT THE POINT WHERE LARGER ROOTS ARE ENCOUNTERED, AND THE ROOTS SHALL BE BRIDGED. POST HOLES AND TRENCHES LOCATED CLOSE TO PROTECTED TREES OR GRAND TREES SHALL BE ADJUSTED TO AVOID DAMAGE TO MAJOR ROOTS.
6. ALL ROOTS TO BE REMOVED DURING THE SITE CLEARING PHASE SHALL BE SEVERED CLEAN AT THE PERIMETER OF THE DESIGNATED PROTECTED RADIUS AND SHALL BE DONE BY A CERTIFIED ARBORIST.
7. ALL TREES SHALL BE PROTECTED, ROOT PRUNING AND CANOPY PRUNING SHALL BE PERFORMED BY A CERTIFIED ARBORIST. ALL ROOT PRUNING AS WELL AS CANOPY PRUNING SHALL BE PERFORMED UNDER THE CITY OF TAMPA PARKS DEPARTMENT SUPERVISION.
8. A TWO-INCH (2") LAYER OF MULCH SHALL BE APPLIED OVER THE SURFACE OF EXPOSED ROOTS OF PROTECTED TREES AND GRAND TREES DURING THE SITE CLEARING PHASE.
9. CONTRACTOR SHALL COORDINATE WITH CITY ARBORIST AND APPROVAL FOR ROOT PRUNING AND LIMB TRIMMING FOR CONSTRUCTION ACTIVITIES.
10. CONTRACTOR IS RESPONSIBLE FOR ANY PERMITS FOR TREE REMOVAL, TRIMMING, AND ROOT PRUNING, AS WELL AS ANY NECESSARY NOTICING FOR BOTH GRAND TREES AND NON GRAND TREES.

NPDES/FDEP NOTICE OF INTENT AND REPORTING NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION OF THE EROSION AND SEDIMENTATION CONTROL PLAN TO BE SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROECTION. THE PLAN SHALL INCLUDE THE FOLLOWING:
   A. NARRATIVE: A BRIEF DESCRIPTION OF THE OVERALL STRATEGY FOR EROSION AND SEDIMENT CONTROL.
   B. MAP/SITE PLAN: SITE PLAN WHICH SHOWS THE EXISTING AND FINAL ELEVATION CONTOURS, CRITICAL AREAS WITHIN OR NEAR THE PROJECT AREA, EXISTING VEGETATION, LIMITS OF CLEARING AND GRADING, AND LOCATIONS AND NAMES OF EROSION AND SEDIMENT CONTROL MEASURES, WITH DIMENSIONS.
   C. CONSTRUCTION DETAILS
   D. CALCULATIONS: INCLUDE CALCULATIONS USED TO SIZE THE CONTROL MEASURES AND THE DESIGN ASSUMPTIONS FOR SEDIMENT BASINS AND TRAPS.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BEFORE AND AFTER EACH RAIN EVENT OF 1/4 INCH OR MORE.
3. DISTURBED AREAS WHICH HAVE BEEN BROUGHT TO FINAL GRADE OR WHICH WILL REMAIN AT ROUGH GRADE FOR 14 DAYS OR MORE SHALL RECEIVE PERMANENT STABILIZATION IMMEDIATELY.
4. CONTRACTOR SHALL MAINTAIN ON-GOING INSPECTION REPORTS FOR EROSION & SEDIMENT CONTROL INSPECTIONS AND MAINTENANCE.
5. CONTRACTOR SHALL HAVE A CERTIFIED INSPECTOR ON STAFF AND BE RESPONSIBLE FOR ALL NPDES REPORTING.
6. ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATIVE MATERIAL THAT WILL, WITHIN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE. SODDING, PLUGGING, SPRIGGING, OR SEEDING IS ACCEPTABLE FOR STABILIZATION; HOWEVER, SODDING MAY BE REQUIRED IN AREAS OF EROSION-PRONE SOILS OR WHERE SLOPES ARE GREATER THAN 5:1. VEGETATION OTHER THAN GRASS IS ACCEPTABLE UNLESS OTHERWISE SPECIFIED.
7. THE CONTRACTOR SHALL SUBMIT THE REQUIRED NPDES/FDEP NOTICE OF INTENT 30 DAYS PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL RAINFALL AND DISCHARGE LOGS DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION A NOTICE OF TERMINATION SHALL BE FILED WITH FDEP.

EROSION/TURBIDITY-CONTROL NOTES

1. THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.
2. THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL USUALLY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHALL BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORMWATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.
3. CONSTRUCTION OPERATIONS IN OR ADJACENT TO WETLANDS SHALL BE RESTRICTED TO THOSE AREAS IDENTIFIED IN THE PLANS AND IN THE SPECIFICATIONS.
4. EXCAVATED MATERIAL SHALL NOT BE DEPOSITED IN THE WETLANDS OR IN A POSITION CLOSE ENOUGH THERETO TO BE WASHED AWAY BY HIGH WATER OR RUNOFF.
5. WHERE PUMPS ARE TO BE USED TO REMOVE TURBID WATERS FROM CONSTRUCTION AREAS, THE WATER SHALL BE TREATED PRIOR TO DISCHARGE TO THE WETLANDS. TREATMENT METHODS INCLUDE AND ARE NOT LIMITED TO, TURBID WATER BEING PUMPED INTO GRASSED SWALES OR APPROPRIATE VEGETATED AREAS, SEDIMENT BASINS, OR CONFINED BY AN APPROPRIATE ENCLOSURE SUCH AS TURBIDITY BARRIERS, AND KEPT CONFINED UNTIL ITS TURBIDITY LEVEL MEETS STATE WATER QUALITY STANDARDS.
6. THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATIONS, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SO SCHEDULED AND 3PERFORMED THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER, AND GRADING OPERATIONS SHALL BE SCHEDULED AND PERFORMED THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT.
7. THE CONTRACTOR AND/OR OWNER'S REPRESENTATIVE SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOILS ARE STABILIZED.
8. SILT FENCE SHALL BE LOCATED AT THE PERIMETER OF CONSTRUCTION LIMITS, AS DEFINED BY FIELD CONDITIONS.
9. CONTRACTOR IS TO PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.
10. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.

BIDDING NOTES

1. ALL PROPOSED CONSTRUCTION WITHIN LIMITS OF WORK AREAS ARE PART OF PIPE, INLET AND / OR MANHOLE CONSTRUCTION.
2. PRICE FOR ALL REMOVAL, AS SHOWN ON THE PLANS OUTSIDE OF CONSTRUCTION EXCAVATION AREA, SHALL BE INCLUDED IN THE VARIOUS ITEMS OF THE STORMWATER UNIT PRICES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING RIGHT-OF-WAY USE PERMITS FOR CITY OF TAMPA.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING RIGHT-OF-WAY USE PERMIT FOR HILLSBOROUGH COUNTY IF DETERMINED ONE IS NEEDED.
5. CONTRACTOR RESPONSIBLE FOR OBTAINING TREE REMOVAL PERMITS AND GRAND TREE REMOVAL NOTICING. CONTRACTOR RESPONSIBLE FOR ANY PERMITTING NECESSARY FOR TREE TRIMMING AND ROOT PRUNING FOR BOTH GRAND AND NON-GRAND TREES.
6. CONTRACTOR RESPONSIBLE FOR SUPPLYING ALL MOT PLANS.
7. PRIOR TO CONSTRUCTION CONTRACTOR TO RECORD LIMITS OF CONSTRUCTION AREA AND DOCUMENT ALL UNIQUE AND SPECIAL FEATURES OF RESIDENTIAL YARD AREAS WITHIN ROW LIMITS. CONTRACTOR SHALL AT BEST EFFORT PRESERVE ALL SPECIAL AND UNIQUE FEATURES INCLUDING BUT NOT LIMITED TO BRICK PAVERS FOR DRIVEWAYS AND WALKWAYS, MAILBOXES, LANDSCAPE PLANTERS AND OTHER FEATURES, TREES, ETC.
8. ALL BOX CULVERTS AND STORMPIPE SHALL BE WATER TIGHT. BOX CULVERT AND STORMPIPE TRENCH BACKFILLING SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS 125. BOX CULVERT BACKFILLING WILL BE UNDER WET CONDITIONS AND SHALL CONFORM SPECIFICALLY TO FDOT STANDARD SPECIFICATION 125.8.3.4 WITH COARSE AGGREGATE PIPE BEDDING WRAPPED IN FILTER FABRIC.
9. LIMITS OF DISTURBED OPEN CUT AREAS MAY VARY DEPENDENT UPON CONTRACTOR MEANS AND METHODS. CONSTRUCTION OPTIONS INCLUDE BUT NOT LIMITED TO INCLUDE SHEET PILING, SLOPED OPEN CUT, AND TRENCH BOX. CONSTRUCTION PLANS AND SPECS ASSUME A SLOPED OPEN CUT TRENCH.

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

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WATER NOTES

1. ALL WORKMANSHIP AND MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO WATER DEPARTMENT SPECIFICATIONS AS PROVIDED IN CONTRACT 15-C-00059 BID DOCUMENTS.
2. THE LOCATIONS AND SIZE OF THE UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. HOWEVER, THERE IS NO GUARANTEE THAT ALL EXISTING UTILITIES HAVE BEEN FOUND OR SHOWN. THE CONTRACTOR IS FOREWARNED TO ASCERTAIN AND DETERMINE PRECISE LOCATIONS PRIOR TO EXCAVATION AND ALSO TO FAMILIARIZE HIM/HER SELF WITH ALL VOLTAGES CARRIED IN OVERHEAD OR UNDERGROUND UTILITY SERVICES. NO CLAIM FOR EXTRA COST SHALL BE MADE AS A RESULT OF THE AFOREMENTIONED APPROXIMATIONS.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION. CALL "SUNSHINE ONE CALL" AT 1-800-432-4770.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO USE WHATEVER MEANS NECESSARY TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT TO SURFACE DRAINS AND THE DITCHES DURING CONSTRUCTION. SEE EROSION AND SILTATION CONTROL NOTES FOR ADDITIONAL INFORMATION.
5. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS ARE BASED.
6. ALL PIPE LENGTHS ARE PLUS OR MINUS AND MAY BE ADJUSTED IN THE FIELD AS REQUIRED. PIPE MEASUREMENTS ARE TO CENTER OF STRUCTURES OR FITTINGS.
7. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION SAFETY. SPECIAL PRECAUTIONS MAY BE REQUIRED IN THE VICINITY OF POWER LINES AND OTHER UTILITIES.
8. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FROM PROVIDING A CONTINUOUS SAFE WORKSPACE.
9. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS, PERMIT REQUIREMENTS, AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
10. WATER MAIN CONSTRUCTION SHALL INCLUDE EXCAVATION AS REQUIRED, INSTALLATION, AND BACKFILL ONLY – RESTORATION SHALL BE PER THE PROJECT ROADWAY PLANS AND PAID THROUGH THE CONTRACT ROADWAY PAY ITEMS.
11. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD RIGHT-OF-WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO PERFORM HIS WORK.
13. THE CONTRACTOR SHALL PROVIDE SUPPORT FOR UTILITY POLES WHERE CONSTRUCTION MAY CAUSE THE POLE TO LOSE ITS SELF-SUPPORTING ABILITY.
14. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY CONSTRUCTION EASEMENTS NECESSARY TO COMPLETE THE WORK. IF SUCH EASEMENTS ARE OBTAINED, THEY MUST CONTAIN PROVISIONS TO HOLD THE CITY OF TAMPA HARMLESS FROM ANY OPERATIONS OF THE CONTRACTOR WITHIN THE EASEMENT LIMITS. THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER TO RESTORE PRIVATE PROPERTY TO ITS ORIGINAL OR BETTER CONDITION.
15. N/A
16. THE INTENT OF THIS PROJECT'S PLANS AND TECHNICAL PROVISIONS IS FOR ALL WATER MAINS TO BE INSTALLED AS A CONTINUOUS PROJECT. CONNECTIONS TO EXISTING WATER MAINS SHALL BE DONE IN A TIMELY MANNER. AT NO TIME SHALL THE FLOW OF WATER RUNNING THE LENGTH OF THE PROJECT BE STOPPED EXCEPT TO RECONNECT WATER MAINS THAT HAVE BEEN TESTED AND CLEARED FOR POTABLE WATER USE.
17. CONNECTIONS TO EXISTING SYSTEMS: THE CITY WATER DEPARTMENT REQUIRES THAT ITS CUSTOMERS BE KEPT IN SERVICE AT ALL TIMES. THE CONTRACTOR MUST PROVIDE TEMPORARY SERVICE TO CUSTOMERS WHOSE SERVICE WILL BE AFFECTED BY A SHUTDOWN.
18. WHEN A SHUTDOWN IS AUTHORIZED BY THE CITY WATER DEPARTMENT AND CUSTOMERS WILL HAVE THEIR WATER SHUT OFF, THE CONTRACTOR MUST HAVE PRE-ASSEMBLED ALL NEW PIPING EXCEPT AT THE POINT OF TIE-IN INCLUDING SERVICE LINES BEING TRANSFERRED TO THE NEW MAIN. THE ENTIRE PRE-ASSEMBLY SHALL BE SUCCESSFULLY PRESSURE TESTED AND BACTERIOLOGICAL TESTED PRIOR TO THE SHUTDOWN. THE CONTRACTOR SHALL HAVE SUFFICIENT CREWS ON SITE TO ACCOMPLISH THE SHUTDOWN IN LESS THAN FOUR HOURS.
19. CONTRACTOR SHALL INSTALL LINESTOPS IF AND AS REQUIRED TO KEEP CUSTOMERS IN SERVICE DURING SHUTDOWNS, WITH THE CONCURRENCE OF THE CITY WATER DEPARTMENT. SEVERAL REQUIRED LINESTOPS HAVE BEEN SHOWN IN THE PLANS, BASED ON KNOWN EXISTING CONDITIONS – HOWEVER, OTHERS MAY BE REQUIRED BASED ON THE CONTRACTOR'S AGREED SEQUENCING OF CONSTRUCTION.
20. THE CONTRACTOR'S SCHEDULE PROPOSED FOR WATER MAIN RELOCATION CONSTRUCTION AND REMOVALS SHALL BE SUBMITTED TO, AND MUST BE APPROVED BY, THE CITY WATER DEPARTMENT. NOTE THAT THE SCHEDULE PROPOSED IN THE PROJECT ROADWAY PLANS IS INTENDED FOR ROADWAY & DRAINAGE CONSTRUCTION ONLY – WATER MAINS CANNOT BE CONSTRUCTED IN THE PROPOSED BLOCK-BY-BLOCK MANNER. IT IS RECOMMENDED THAT WATER MAIN RELOCATIONS BE ACCOMPLISHED PRIOR TO THE DRAINAGE AND ROADWAY CONSTRUCTION.
21. CONNECTIONS TO EXISTING SYSTEMS: THE CITY WATER DEPARTMENT REQUIRES THAT ITS CUSTOMERS BE KEPT IN SERVICE AT ALL TIMES. THE CONTRACTOR MUST PROVIDE TEMPORARY SERVICE TO CUSTOMERS WHOSE SERVICE WILL BE AFFECTED BY A SHUTDOWN.

SANITARY NOTES

1. PROPOSED SANITARY SEWER SHALL BE CONSTRUCTED PER CITY OF TAMPA WASTEWATER DEPARTMENT TECHNICAL STANDARDS.
2. UNLESS INDICATED, ALL PROPOSED GRAVITY SEWER SHALL BE PVC ASTM D3034 SDR-35.
3. CONTRACTOR SHALL MAINTAIN CONTINUOUS SEWER SERVICE.
4. CONTRACTOR SHALL RAISE OR LOWER EXISTING MANHOLE FRAME AND COVER TO MATCH PROPOSED GRADE AS REQUIRED.
5. ALL ABANDONED SANITARY SEWERS SHALL BE REMOVED OR ABANDONED IN PLACE WITH FLOWABLE FILL.
6. OSHA STANDARD SAFETY EQUIPMENT SUCH AS SAFETY HARNESSES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, ETC. SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE.
7. PLASTIC SHEET LINER "T-LOCK" SHALL BE BY AMERON INTERNATIONAL OR APPROVED EQUAL.

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

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STORM STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM ELEV./ TOP SLAB	INVERTS	COMMENTS
CS-1	PROPOSED WINGWALL PER FDOT INDEX 289	102+01.52	1'LT.	1.09	-7.20 (S)	
S-1	CUSTOM J-BOX/CONFLICT STRUCTURE W/MH RISER	901+74.69	7'RT.	0.25	-7.00 (E) -7.04 (N)	
S-2	MANHOLE RISER ON BOX CULVERT	904+15.23	5'RT.	4.43	0.90 (SE) 1.35 (N)	
S-3	COT TYPE 1 CURB INLET	904+16.72	14'LT.	4.81	1.43 (S)	
S-4	COT TYPE 1 CURB INLET	904+27.65	14'RT.	4.77	1.00 (NW)	
S-5	CUSTOM J-BOX W/MH RISER	905+06.00	3'RT.	0.60	-6.65 (SE) -6.67 (W)	
S-6	CUSTOM J-BOX W/MH RISER	905+51.92	6'RT.	0.65	-6.60 (S) -6.62 (NW)	
S-7	CUSTOM J-BOX W/MH RISER	906+20.47	5'RT.	0.72	-6.53 (SE) -6.54 (N)	
S-8	CUSTOM J-BOX W/MH RISER	907+29.17	0'RT.	0.84	-6.41 (SE) -6.42 (NW)	
S-9	MANHOLE RISER ON BOX CULVERT	908+40.07	0'RT.	4.17	1.30 (NE) 1.30 (S)	
S-10	COT TYPE BV-1 CURB INLET	908+42.77	16'RT.	4.45	1.40 (N)	
S-12	COT TYPE BS-1 CURB INLET	1000+20.03	16'LT.	4.39	-1.00 (E)	
S-12A	FDOT J-BOX W/MH RISER PER INDEX 200	1000+25.30	0'LT.	2.85	-1.10 (E) -1.10 (W) -1.25 (N)	
S-13	COT TYPE BR-1 CURB INLET	10+93.57	16'RT.	4.21	-3.00 (N) -0.72 (W)	
S-15	CUSTOM J-BOX/CONFLICT STRUCTURE W/MH RISER	10+97.49	0'RT.	4.25	-6.22 (E) -6.25 (NW)	
S-16	COT TYPE 1 CURB INLET	908+44.50	14'LT.	4.38	1.50 (SW)	
S-17	MANHOLE RISER ON BOX CULVERT	13+75.05	2'RT.	4.22		
S-18	COT TYPE BV-1 CURB INLET	13+78.44	16'LT.	4.51	-1.74 (NW) -1.85 (S)	
S-18A	COT TYPE 1 CURB INLET	911+70.17	14'RT.	4.52	-1.00 (NW) -1.12 (SE)	
S-18B	COT TYPE 1 CURB INLET	911+70.75	14'LT.	4.52	-0.72 (SE)	

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STORM STRUCTURE TABLE

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STORM STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM ELEV./ TOP SLAB	INVERTS	COMMENTS
S-19	FDOT J-BOX W/MH RISER PER INDEX 200	15+05.05	3'RT.	3.57	-5.79 (E) -5.84 (W) -0.60 (N) -0.60 (N)	
S-20	COT TYPE BV-1 CURB INLET	13+78.74	16'RT.	4.51	-1.68 (N)	
S-21	FDOT J-BOX W/MH RISER PER INDEX 200	16+62.29	4'RT.	4.76	-5.65 (E) -5.65 (W)	
S-22	MANHOLE RISER ON BOX CULVERT	17+39.37	4'RT.	4.95	1.70 (S) 1.70 (N)	
S-23	COT TYPE BV-1 CURB INLET	17+41.59	16'RT.	5.23	1.90 (N)	
S-24	COT TYPE BV-1 CURB INLET	17+41.50	16'LT.	5.23	1.90 (S)	
S-25	MANHOLE RISER ON BOX CULVERT	19+57.42	4'RT.	5.48		
S-26	MANHOLE RISER ON BOX CULVERT	23+09.31	4'RT.	4.80		
S-27	COT TYPE 1 CURB INLET	23+15.88	32'RT.	5.03	-1.40 (E) -1.50 (N)	
S-29	COT TYPE 1 CURB INLET	23+43.54	32'LT.	4.81	0.80 (W)	
S-30	COT TYPE 1 CURB INLET	23+15.60	32'LT.	4.81	0.55 (E) -3.36 (S)	
S-32	COT TYPE 1 CURB INLET	23+43.61	32'RT.	5.03	-1.00 (W)	
S-34	COT TYPE BV-1 CURB INLET	25+71.30	16'RT.	5.17	-1.00 (NW)	
S-34A	MANHOLE RISER ON BOX CULVERT	25+65.90	4'RT.	4.82		
S-36	COT TYPE BV-1 CURB INLET	25+67.25	16'LT.	5.18	-1.91 (S)	
S-37	COT TYPE 1 CURB INLET	28+37.40	14'LT.	5.58	-1.70 (S)	
S-37A	COT TYPE 1 CURB INLET	28+39.62	14'RT.	5.61	-1.05 (NW)	
S-38	MANHOLE RISER ON BOX CULVERT	28+35.89	5'RT.	5.23		
S-39	FDOT J-BOX W/MH RISER PER INDEX 200	29+54.43	5'RT.	3.39	-3.36 (W) -3.36 (E)	
S-39A	COT TYPE "T" GRATE INLET	29+63.06	14'RT.	5.63	-1.00 (N)	

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STORM STRUCTURE TABLE 2

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STORM STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM ELEV./ TOP SLAB	INVERTS	COMMENTS
S-40	FDOT J-BOX/CONFLICT STRUCTURE W/MH RISER PER INDEX 292	31+40.72	3'LT.	3.15	-3.10 (E) -3.10 (W)	
S-41	FDOT J-BOX W/MH RISER PER INDEX 200	31+59.75	1'LT.	3.57	-3.07 (N) -2.60 (E) -3.07 (W)	
S-42	FDOT J-BOX W/MH RISER PER INDEX 200	32+10.42	0'RT.	3.71	-2.46 (E) -2.48 (W)	
S-43	COT TYPE BS-1 CURB INLET	33+97.26	16'LT.	5.15	-0.06 (S)	
S-43A	MANHOLE RISER ON BOX CULVERT	33+93.46	0'RT.	4.89		
S-45	COT TYPE BS-1 CURB INLET	33+97.06	16'RT.	5.15	-0.06 (N)	
S-47	FDOT J-BOX W/MH RISER PER INDEX 200	36+85.03	0'RT.	4.57	-1.60 (E) -0.50 (S) -1.60 (W)	
S-48	COT TYPE BS-1 CURB INLET	36+57.30	16'LT.	6.09	0.45 (SW)	
S-48A	MANHOLE RISER ON BOX CULVERT	36+51.95	0'RT.	5.80		
S-50	COT TYPE BS-1 CURB INLET	37+18.62	16'LT.	6.19	0.03 (S)	
S-50A	FDOT J-BOX W/MH RISER PER INDEX 200	37+15.60	0'RT.	3.93	-0.06 (S) -0.15 (N) -1.54 (W)	
S-52	COT TYPE BV-1 CURB INLET	36+56.57	16'RT.	6.08	0.82 (N)	
S-52A	COT TYPE 1 CURB INLET	702+90.65	15'LT.	6.13	1.75 (E)	
S-52B	FDOT J-BOX W/MH RISER PER INDEX 200	702+95.46	2'LT.	4.29	1.50 (E) 1.50 (W) 1.00 (S) 1.00 (N)	
S-54	COT TYPE BS-1 CURB INLET	37+16.89	16'RT.	6.11	0.11 (N)	
S-54A	COT TYPE 1 CURB INLET	702+90.65	14'RT.	6.03	1.75 (W)	
S-55	FDOT J-BOX W/MH RISER PER INDEX 200	703+57.85	3'LT.	3.67	-0.16 (S) -0.16 (N)	
S-56A	COT TYPE BS-1 CURB INLET	700+23.43	37'RT.	5.44	2.00 (N)	
S-56B	COT TYPE BS-1 CURB INLET	701+01.49	37'RT.	5.14	1.88 (S) 1.88 (NW)	
S-56C	FDOT J-BOX W/MH RISER PER INDEX 200	701+17.94	19'RT.	5.07	1.78 (SE) 1.78 (W) 1.78 (N)	

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UPPER PENINSULA STORMWATER IMPROVEMENTS
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STORM STRUCTURE TABLE 3

STORM STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM ELEV./ TOP SLAB	INVERTS	COMMENTS
S-56E	COT TYPE BS-1 CURB INLET	700+23.15	36'LT.	5.14	2.00 (N)	
S-56F	COT TYPE "H" GRATE INLET	700+98.27	48'LT.	4.94	1.90 (S) 1.90 (NE)	
S-56G	FDOT J-BOX W/MH RISER PER INDEX 200	701+18.39	17'LT.	4.65	1.84 (SW) 1.84 (E)	
S-92	COT TYPE BS-1 CURB INLET	200+31.06	16'RT.	5.01	0.50 (NW)	
S-92A	MANHOLE RISER ON BOX CULVERT	200+37.08	0'LT.	4.77		
S-93	COT TYPE BS-1 CURB INLET	14+74.11	16'LT.	4.91	-2.12 (S)	
S-93A	MANHOLE RISER ON BOX CULVERT	14+71.46	2'RT.	4.60		
S-96	FDOT J-BOX W/MH RISER PER INDEX 200	202+91.02	3'LT.	4.37	-0.80 (S) -0.75 (E) -0.80 (S) -0.80 (N) -0.80 (N)	
S-96A	COT TYPE 1 CURB INLET	300+32.39	14'RT.	5.70	2.02 (N)	
S-96B	COT TYPE 1 CURB INLET	300+33.61	14'LT.	5.77	2.24 (SW)	
S-96C	FDOT J-BOX W/MH RISER PER INDEX 200	300+27.45	7'LT.	4.19	-0.73 (E) 2.17 (NE) 1.83 (S) -0.73 (W)	
S-97	CUSTOM J-BOX W/MH RISER	205+84.33	3'LT.	6.12	-0.95 (W) -0.95 (W)	
S-97A	COT TYPE 1 CURB INLET	205+63.24	14'RT.	5.39	0.23 (W)	
S-97B	MANHOLE RISER ON BOX CULVERT	205+64.87	0'LT.	5.06		
S-98	TYPE "T" RISER ON TOP OF FDOT J-BOX	301+59.90	8'LT.	5.40	0.74 (S) -0.64 (W)	
S-99	COT TYPE 1 CURB INLET	301+56.40	14'RT.	5.82	1.48 (N)	
S-100	COT TYPE BR-1 CURB INLET	31+25.34	20'RT.	4.97	-1.17 (N)	
S-100A	MANHOLE RISER ON BOX CULVERT	31+19.27	4'LT.	4.89		
S-101	COT TYPE 1 CURB INLET MODIFIED	608+23.59	33'LT.	5.16	1.38 (E)	
S-101A	FDOT J-BOX W/MH RISER PER INDEX 200	608+14.51	3'LT.	3.74	0.99 (W) 1.36 (E) -2.93 (S)	

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PHASE II (VASCONIA OUTFALL)

STORM STRUCTURE TABLE 4

SHEET 7B

STORM STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM ELEV./ TOP SLAB	INVERTS	COMMENTS
S–102	COT TYPE 1 CURB INLET	607+59.55	31'RT.	5.02	1.55 (S) –0.23 (N)	
S–102A	MANHOLE RISER ON BOX CULVERT	31+83.12	2'RT.	4.99		
S–102B	COT TYPE "T" GRATE INLET	606+88.94	36'RT.	4.73	2.25 (N)	
S–103	COT TYPE 1 CURB INLET	31+94.79	32'LT.	5.11	1.73 (W)	
S–1429	FDOT P–BOX W/MH RISER PER INDEX 200	506+43.25	37'LT.	5.08	1.58 (E) 1.58 (N)	
S–1430	COT TYPE "H" GRATE INLET	507+37.13	38'LT.	5.33	2.00 (S) 1.75 (W) 2.00 (E)	
S–1430A	FDOT J–BOX W/MH RISER PER INDEX 200	508+19.67	27'LT.	4.49	1.68 (W) 1.68 (N) 1.68 (E)	
S–1431	COT TYPE BV–1 CURB INLET	508+19.95	40'LT.	5.51	1.70 (S)	
S–1432	FDOT J–BOX W/MH RISER PER INDEX 200	605+03.10	28'LT.	4.39	1.58 (W) 1.34 (S) 1.34 (N)	
S–1434	FDOT J–BOX W/MH RISER PER INDEX 200	604+49.26	29'LT.	4.24	1.49 (S) 1.49 (SW) 1.49 (N)	
S–1434A	COT TYPE BV–1 CURB INLET	508+15.61	40'RT.	2.08	1.90 (NE)	
S–1438	COT TYPE BV–1 CURB INLET	509+23.95	39'LT.	5.34	1.85 (S) 1.85 (N)	
S–1439	COT TYPE BV–1 CURB INLET	509+24.89	39'RT.	5.59	2.32 (N)	
S–1440	COT TYPE BV–1 CURB INLET	507+17.80	40'RT.	5.40	2.15 (N)	
S–1444	COT TYPE BR–2 CURB INLET	601+86.27	36'LT.	6.50	1.90 (S) 1.90 (N)	

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

STORM STRUCTURE TABLE 5

SHEET 7C

STORM PIPE TABLE

STRUC. START	STRUC. END	PIPE SIZE & MATERIAL	LENGTH	SLOPE %	START INV.	END INV.	FALL IN FEET
	S-96	5'X3' CONCRETE BOX CULVERT	84	0.07%	-0.74	-0.80	0.06
	S-96	5'X3' CONCRETE BOX CULVERT	84	0.07%	-0.74	-0.80	0.06
S-19		5'X3' CONCRETE BOX CULVERT	203	0.07%	-0.60	-0.74	0.14
S-19		5'X3' CONCRETE BOX CULVERT	202	0.07%	-0.60	-0.74	0.14
	S-97	5'X4' CONCRETE BOX CULVERT	17	0.00%	-0.95	-0.95	0.00
	S-97	5'X4' CONCRETE BOX CULVERT	17	0.00%	-0.95	-0.95	0.00
		5'X4' CONCRETE BOX CULVERT	122	0.05%	-0.88	-0.94	0.06
S-96		5'X4' CONCRETE BOX CULVERT	159	0.05%	-0.80	-0.88	0.08
		5'X4' CONCRETE BOX CULVERT	122	0.05%	-0.88	-0.94	0.06
S-96		5'X4' CONCRETE BOX CULVERT	159	0.05%	-0.80	-0.88	0.08
	S-47	6'X5' CONCRETE BOX CULVERT	85	0.18%	-1.76	-1.60	0.16
		6'X5' CONCRETE BOX CULVERT	250	0.18%	-2.22	-1.76	0.46
S-42		6'X5' CONCRETE BOX CULVERT	140	0.17%	-2.46	-2.22	0.24
S-41	S-42	6'X5' CONCRETE BOX CULVERT	50	0.24%	-2.60	-2.48	0.12
	S-39	9'X5' CONCRETE BOX CULVERT	96	-0.14%	-3.23	-3.36	0.13
	S-40	9'X5' CONCRETE BOX CULVERT	90	0.14%	-3.23	-3.10	0.13
	S-39	9'X5' CONCRETE BOX CULVERT	104	0.18%	-3.55	-3.36	0.19
		9'X5' CONCRETE BOX CULVERT	250	0.18%	-5.05	-4.61	0.44
S-40	S-41	9'X5' CONCRETE BOX CULVERT	19	0.16%	-3.10	-3.07	0.03
		9'X5' CONCRETE BOX CULVERT	300	0.18%	-5.58	-5.05	0.53
		9'X5' CONCRETE BOX CULVERT	300	0.18%	-4.61	-4.08	0.53
		9'X5' CONCRETE BOX CULVERT	300	0.18%	-4.08	-3.55	0.53
S-21		9'X5' CONCRETE BOX CULVERT	38	0.18%	-5.65	-5.58	0.07
S-15		9'X6' CONCRETE BOX CULVERT	88	0.10%	-6.25	-6.34	0.09
S-19		9'X6' CONCRETE BOX CULVERT	105	0.09%	-5.84	-5.94	0.10
	S-15	9'X6' CONCRETE BOX CULVERT	96	0.09%	-6.13	-6.22	0.09
	S-8	9'X6' CONCRETE BOX CULVERT	64	0.11%	-6.34	-6.41	0.07
	S-5	9'X6' CONCRETE BOX CULVERT	9	0.12%	-6.64	-6.65	0.01
	S-1	9'X6' CONCRETE BOX CULVERT	143	0.10%	-6.85	-7.00	0.15
		9'X6' CONCRETE BOX CULVERT	200	0.09%	-5.94	-6.13	0.19

STORM PIPE TABLE

STRUC. START	STRUC. END	PIPE SIZE & MATERIAL	LENGTH	SLOPE %	START INV.	END INV.	FALL IN FEET
S-1	CS-1	9'X6' CONCRETE BOX CULVERT	161	0.10%	-7.04	-7.20	0.16
S-5		9'X6' CONCRETE BOX CULVERT	172	0.10%	-6.67	-6.85	0.18
S-6		9'X6' CONCRETE BOX CULVERT	16	0.12%	-6.62	-6.64	0.02
S-7	S-6	9'X6' CONCRETE BOX CULVERT	52	0.11%	-6.54	-6.60	0.06
S-8	S-7	9'X6' CONCRETE BOX CULVERT	97	0.11%	-6.42	-6.53	0.10
S-21	S-19	10'X5' CONCRETE BOX CULVERT	157	0.09%	-5.65	-5.79	0.14
S-1430	S-1440	14"X23" ERCP	80	0.19%	2.00	2.15	0.15
S-39A		15" RCP	5	4.62%	-1.00	-1.25	0.25
S-37A		15" RCP	5	3.27%	-1.05	-1.21	0.16
S-37		15" RCP	14	3.90%	-1.70	-2.24	0.54
	S-97A	15" RCP	11	-2.98%	-0.10	0.23	0.33
S-102B	S-102	15" RCP	71	0.99%	2.25	1.55	0.70
S-1434A	S-1434	15" RCP	31	1.31%	1.90	1.49	0.41
S-96B	S-96C	15" RCP	6	1.00%	2.24	2.17	0.06
S-96A	S-96C	15" RCP	18	1.00%	2.02	1.83	0.18
S-18B	S-18A	15" RCP	28	1.00%	-0.72	-1.00	0.28
S-99	S-98	15" RCP	22	3.38%	1.48	0.74	0.75
S-102		15" RCP	28	1.40%	-0.23	-0.62	0.39
	S-100	15" RCP	20	1.44%	-1.45	-1.17	0.28
S-52		15" RCP	13	1.54%	0.82	0.62	0.20
S-54	S-50A	15" RCP	12	1.50%	0.11	-0.06	0.17
S-50	S-50A	15" RCP	12	1.48%	0.03	-0.15	0.18
S-48		15" RCP	13	1.48%	0.45	0.25	0.20
S-45		15" RCP	13	1.55%	-0.06	-0.26	0.20
S-43		15" RCP	13	1.54%	-0.06	-0.26	0.20
S-4	S-2	15" RCP	16	0.63%	1.00	0.90	0.10
S-23	S-22	15" RCP	12	1.73%	1.90	1.70	0.20
S-20		15" RCP	10	2.51%	-1.68	-1.92	0.24
S-93		15" RCP	13	1.03%	-2.12	-2.26	0.14
S-92		15" RCP	14	3.54%	0.50	0.00	0.50

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3			6		
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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

STORM PIPE TABLE

SHEET 8 OF 105

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SW

STORM PIPE TABLE

STRUC. START	STRUC. END	PIPE SIZE & MATERIAL	LENGTH	SLOPE %	START INV.	END INV.	FALL IN FEET
S-36		15" RCP	15	1.29%	-1.91	-2.11	0.20
S-34		15" RCP	7	5.52%	-1.00	-1.40	0.40
S-29	S-30	15" RCP	28	0.90%	0.80	0.55	0.25
S-32	S-27	15" RCP	28	1.44%	-1.00	-1.40	0.40
S-103	S-101A	15" RCP C-IV	32	1.15%	1.73	1.36	0.37
S-2	S-3	15" RCP C-IV	19	0.43%	1.35	1.43	0.08
S-24	S-22	15" RCP C-IV	20	0.99%	1.90	1.70	0.20
S-10	S-9	15" RCP C-IV	16	0.64%	1.40	1.30	0.10
S-16	S-9	15" RCP C-IV	15	1.32%	1.50	1.30	0.20
S-18A	S-18	18" RCP	25	2.50%	-1.12	-1.74	0.63
S-1444		18" RCP	156	0.20%	1.90	2.21	0.31
S-54A	S-52B	18" RCP	17	1.50%	1.75	1.50	0.25
S-52A	S-52B	18" RCP	13	1.87%	1.75	1.50	0.25
S-18		18" RCP	13	2.46%	-1.85	-2.17	0.32
S-30		18" RCP	32	0.44%	-3.36	-3.50	0.14
S-27		18" RCP	24	1.26%	-1.50	-1.80	0.30
	S-1430A	19"X30" ERCP	70	0.38%	1.95	1.68	0.27
S-1438	S-1439	19"X30" ERCP	78	0.60%	1.85	2.32	0.47
S-1430		19"X30" ERCP	13	0.38%	2.00	1.95	0.05
S-56E	S-56F	19"X30" ERCP C-IV	76	0.13%	2.00	1.90	0.10
S-56A	S-56B	19"X30" ERCP C-IV	78	0.15%	2.00	1.88	0.12
	S-1438	24" RCP	90	0.41%	1.48	1.85	0.37
	S-1444	24" RCP	114	0.18%	1.70	1.90	0.20
		24" RCP	21	0.41%	1.40	1.48	0.08
S-1434		24" RCP	149	0.14%	1.49	1.70	0.21
S-1429	S-1430	24" RCP	94	0.18%	1.58	1.75	0.17
	S-1429	24" RCP	111	0.39%	1.15	1.58	0.43
S-12A	S-12	24" RCP	17	0.60%	-1.10	-1.00	0.10
S-12A	S-13	24" RCP	25	1.50%	-1.10	-0.72	0.38
S-13		24" RCP	17	5.81%	-3.00	-4.00	1.00

STORM PIPE TABLE

STRUC. START	STRUC. END	PIPE SIZE & MATERIAL	LENGTH	SLOPE %	START INV.	END INV.	FALL IN FEET
S-1432	S-1434	24" RCP C-IV	54	0.28%	1.34	1.49	0.15
S-101	S-101A	24" RCP C-IV	27	1.42%	1.38	0.99	0.39
S-1430A	S-1432	24"X38" ERCP	25	0.40%	1.68	1.58	0.10
S-56F	S-56G	24"X38" ERCP	34	0.18%	1.90	1.84	0.06
S-56B	S-56C	24"X38" ERCP	25	0.40%	1.88	1.78	0.10
S-1431	S-1430A	24"X38" ERCP	13	0.16%	1.70	1.68	0.02
S-56G	S-56C	24"X38" ERCP C-IV	36	0.17%	1.84	1.78	0.06
		24"X38" ERCP C-IV	20	0.17%	1.18	1.15	0.03
S-1432		24"X38" ERCP C-IV	97	0.17%	1.34	1.18	0.16
S-56C		29"X45" ERCP	90	0.09%	1.78	1.70	0.08
S-55	S-52B	29"X45" ERCP	62	1.86%	-0.16	1.00	1.16
S-52B		29"X45" ERCP C-IV	78	0.83%	1.00	1.65	0.65
	S-12A	30" RCP	43	6.76%	-4.18	-1.25	2.93
S-47	S-55	36" RCP	27	1.27%	-0.50	-0.16	0.34
S-96C	S-98	48" RCP	132	0.07%	-0.73	-0.64	0.09
S-96	S-96C	48" RCP	31	0.06%	-0.75	-0.73	0.02
S-41	S-101A	54" RCP	29	0.48%	-3.07	-2.93	0.14
S-47	S-50A	54" RCP	31	0.19%	-1.60	-1.54	0.06

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

STORM PIPE TABLE 2

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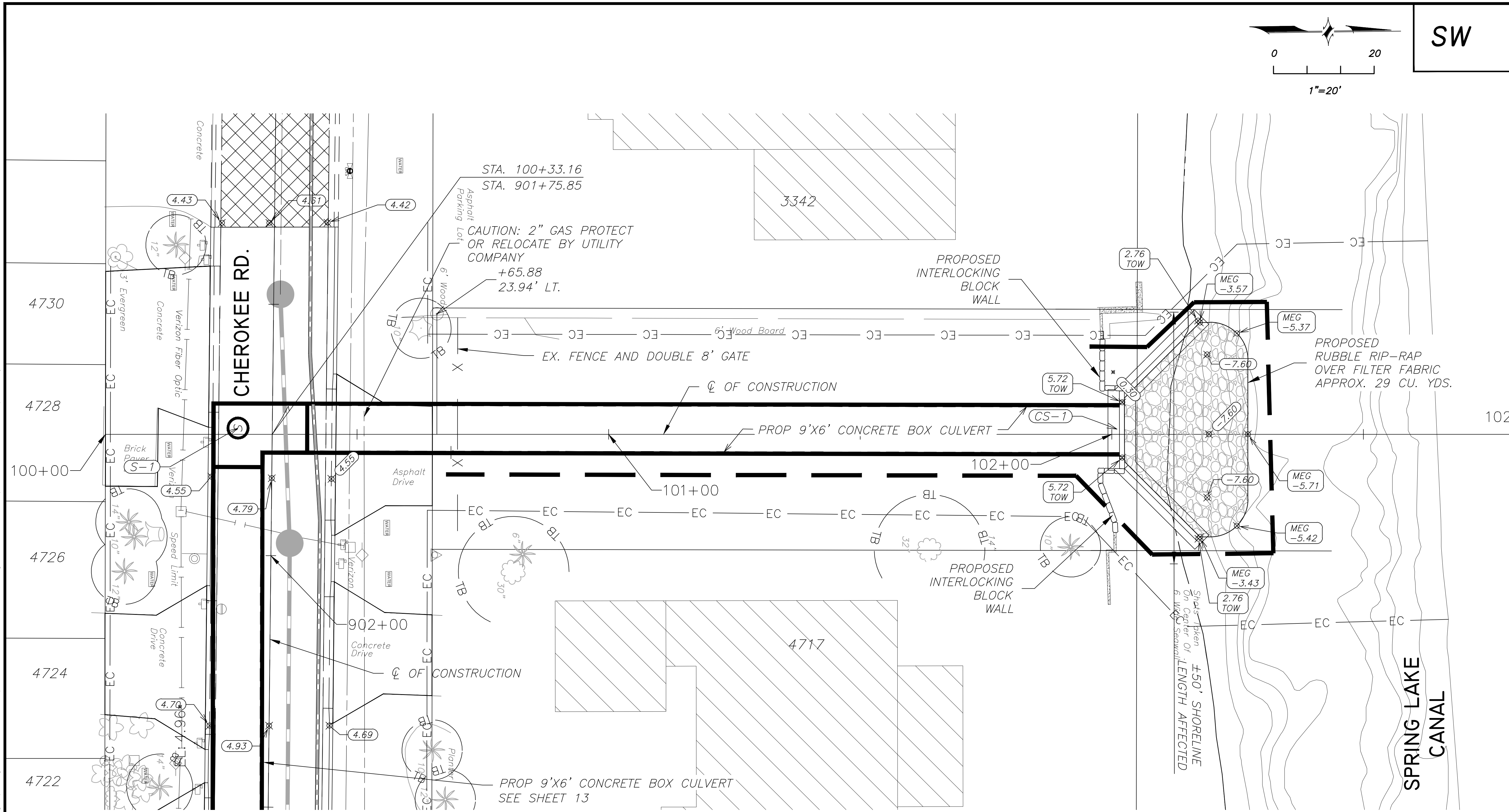
SW



S-1
STA. 901+74.69, 6.81' RT.
PROP CUSTOM J-BOX/CONFLICT STRUCTURE W/MH RISER
INV EL: 9'X6' CONCRETE BOX CULVERT (E) = -7.00
INV EL: 9'X6' CONCRETE BOX CULVERT (N) = -7.04
TOP SLAB EL: -0.291
MH RISER RIM: 4.62
SEE STRUCTURE DETAILS SHEET FOR SIZING AND MORE INFORMATION

CS-1
STA. 102+01.52, 0.89' LT.
PROPOSED WINGWALL PER FDOT INDEX 289
INV EL: 9'X6' CONCRETE BOX CULVERT (S) = -7.20
NO MANATEE GRATE REQUIRED FOR 9X6 OUTFALL

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)

OUTFALL - STORMWATER - PLAN

SHEET 11 OF 105

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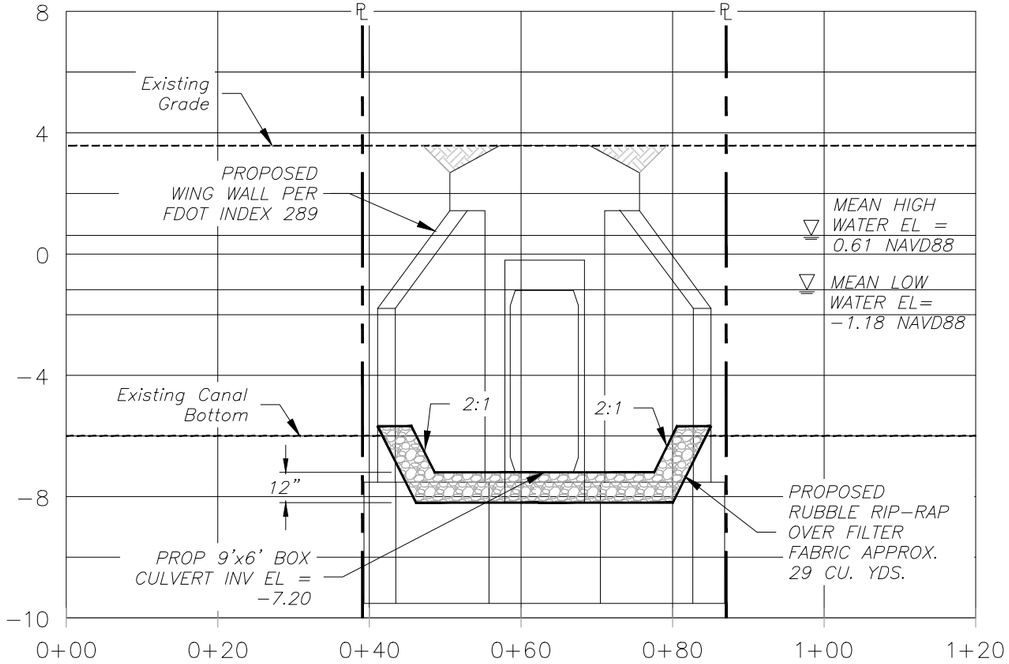
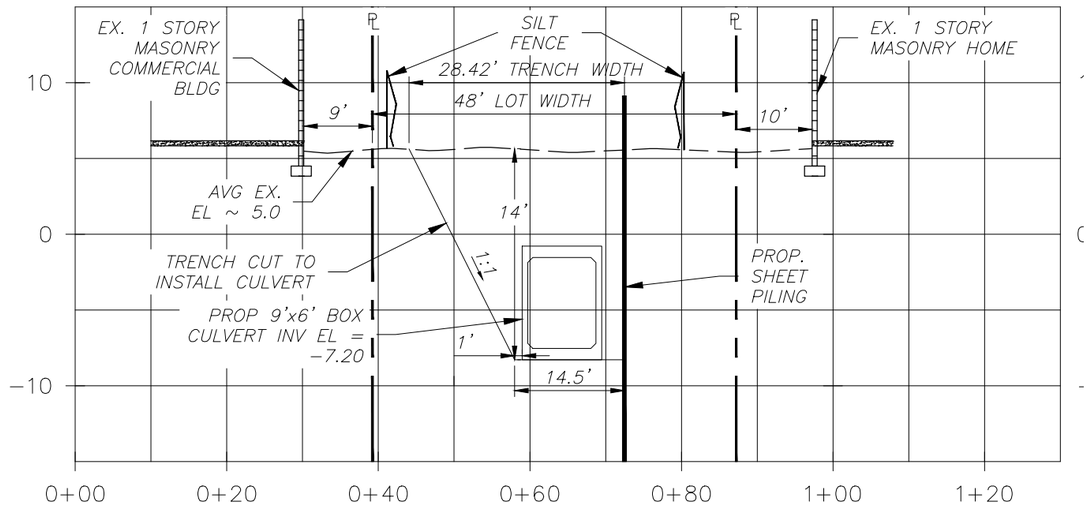


OUTFALL CROSS SECTION
SCALE: HORZ. 1"=20'; VERT. 1"=5'



OUTFALL CROSS SECTION
SCALE: HORZ. 1"=20'; VERT. 1"=10'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
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DATE: 10/13/15

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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

OUTFALL - STORMWATER - CROSS SECTIONS

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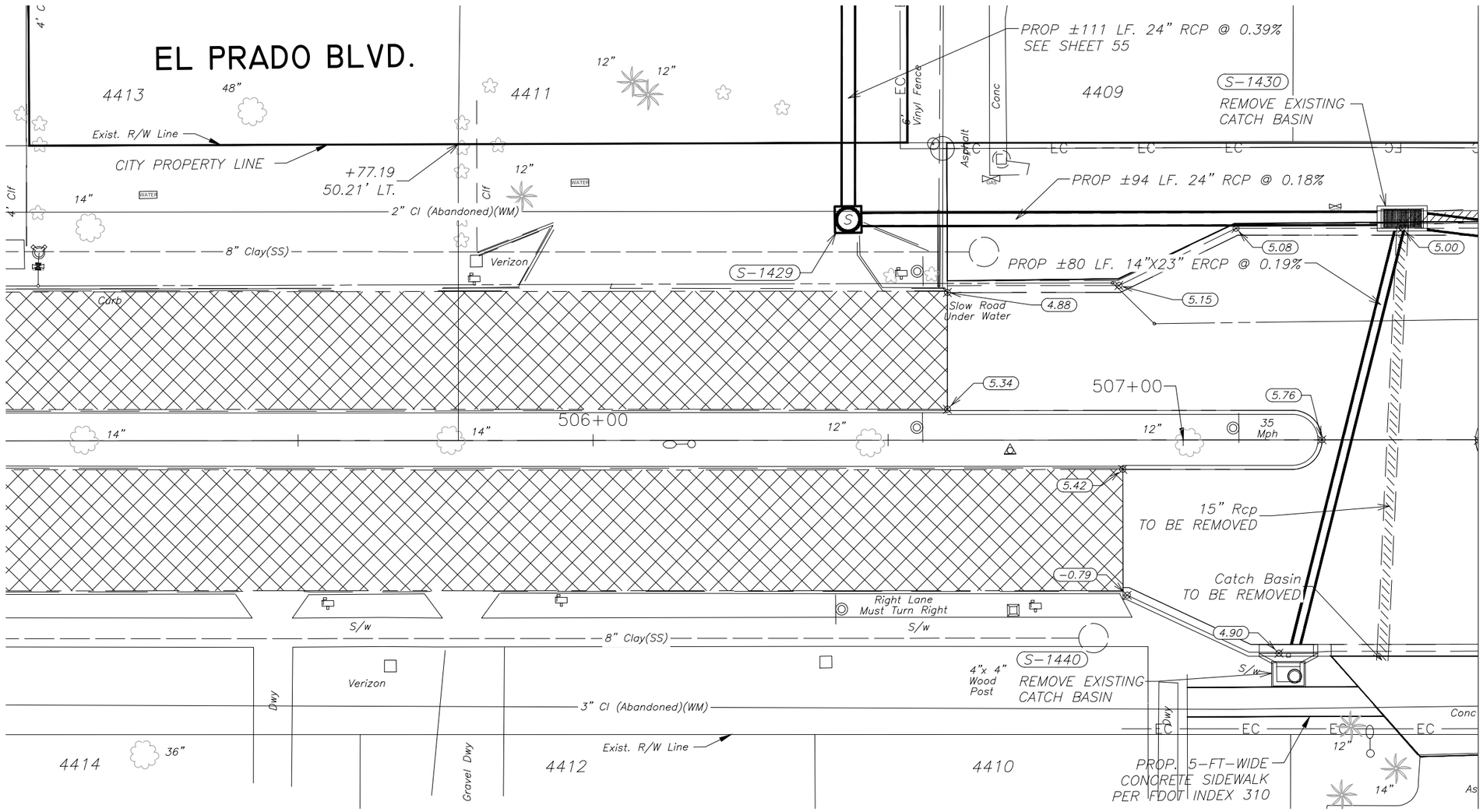
SW



S-1429
STA. 506+43.25, 37.39' LT.
PROP FDOT P-BOX W/MH RISER PER INDEX
RIM: 5.08
INV EL: 24" RCP (E) = 1.58
INV EL: 24" RCP (N) = 1.58

S-1430
STA. 507+37.13, 37.51' LT.
PROP COT TYPE "H" GRATE INLET
GRATE: 5.00
INV EL: 14"X23" ERCP (S) = 2.00
INV EL: 24" RCP (W) = 1.75
INV EL: 19"X30" ERCP (E) = 2.00

S-1440
STA. 507+17.80, 39.72' RT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.40
INV EL: 14"X23" ERCP (N) = 2.15
FLOWLINE EL: 4.90

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD. - STORMWATER
PLAN

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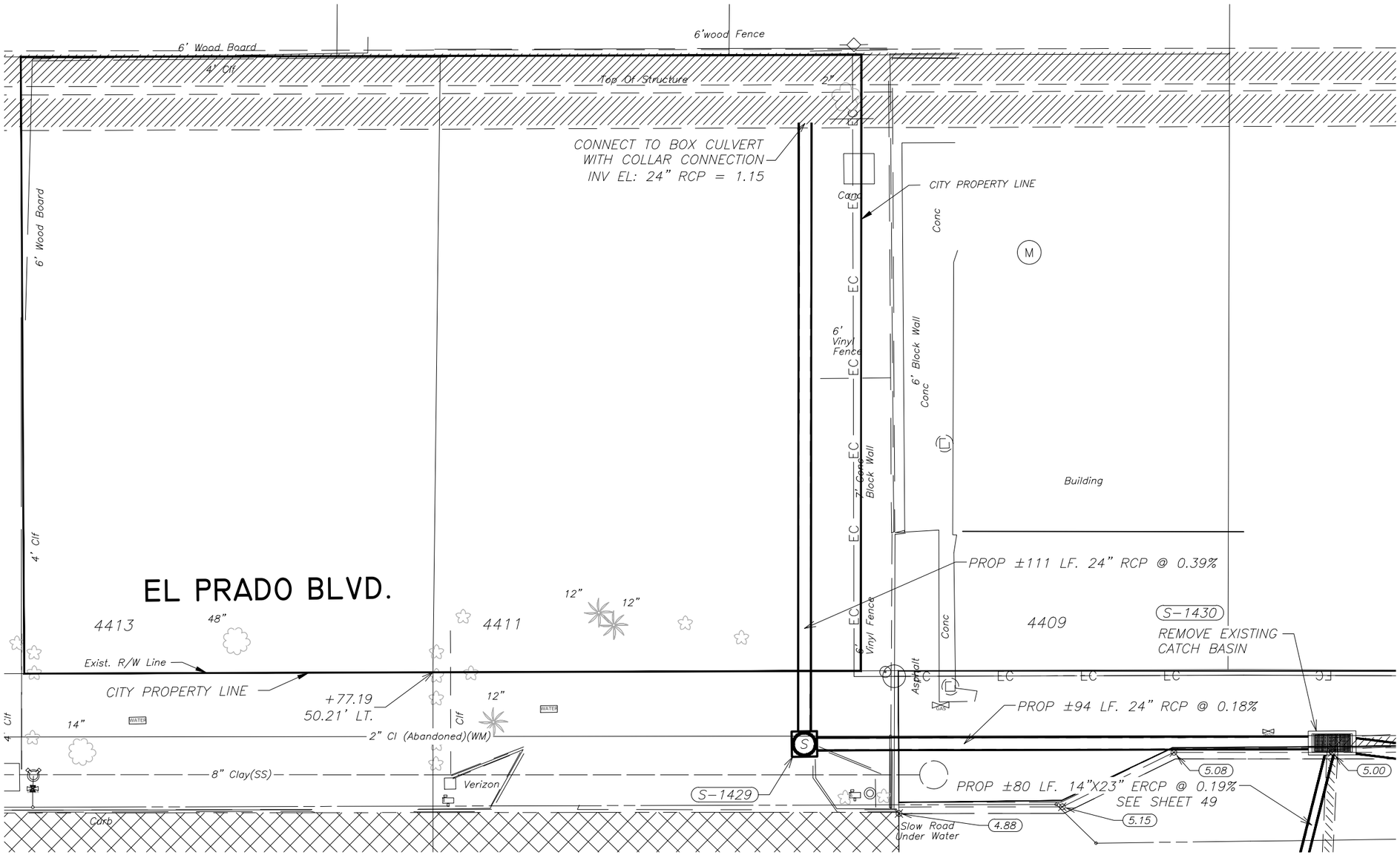
SW



S-1429
STA. 506+43.25, 37.39' LT.
PROP FDOT P-BOX W/MH RISER PER INDEX
RIM: 5.08
INV EL: 24" RCP (E) = 1.58
INV EL: 24" RCP (N) = 1.58

S-1430
STA. 507+37.13, 37.51' LT.
PROP COT TYPE "H" GRATE INLET
GRATE: 5.00
INV EL: 14"X23" ERCP (S) = 2.00
INV EL: 24" RCP (W) = 1.75
INV EL: 19"X30" ERCP (E) = 2.00

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
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DATE: 10/13/15

CITY of TAMPA
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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD. - STORMWATER
PLAN

SHEET 55
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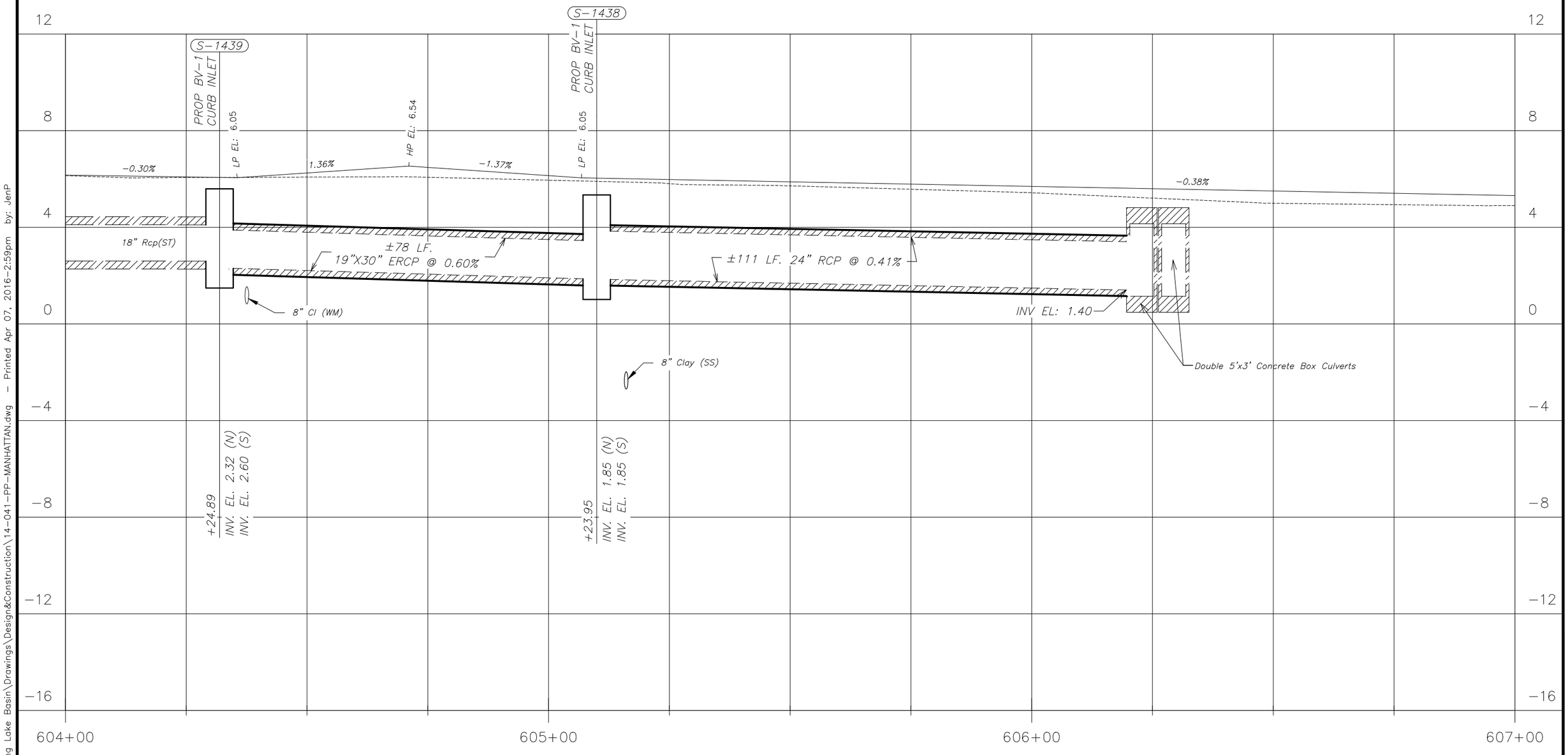
SW



S. MANHATTAN AVE. PROFILE EAST SIDE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
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CITY of TAMPA
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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - STORMWATER
PROFILE

SHEET 60 OF 105

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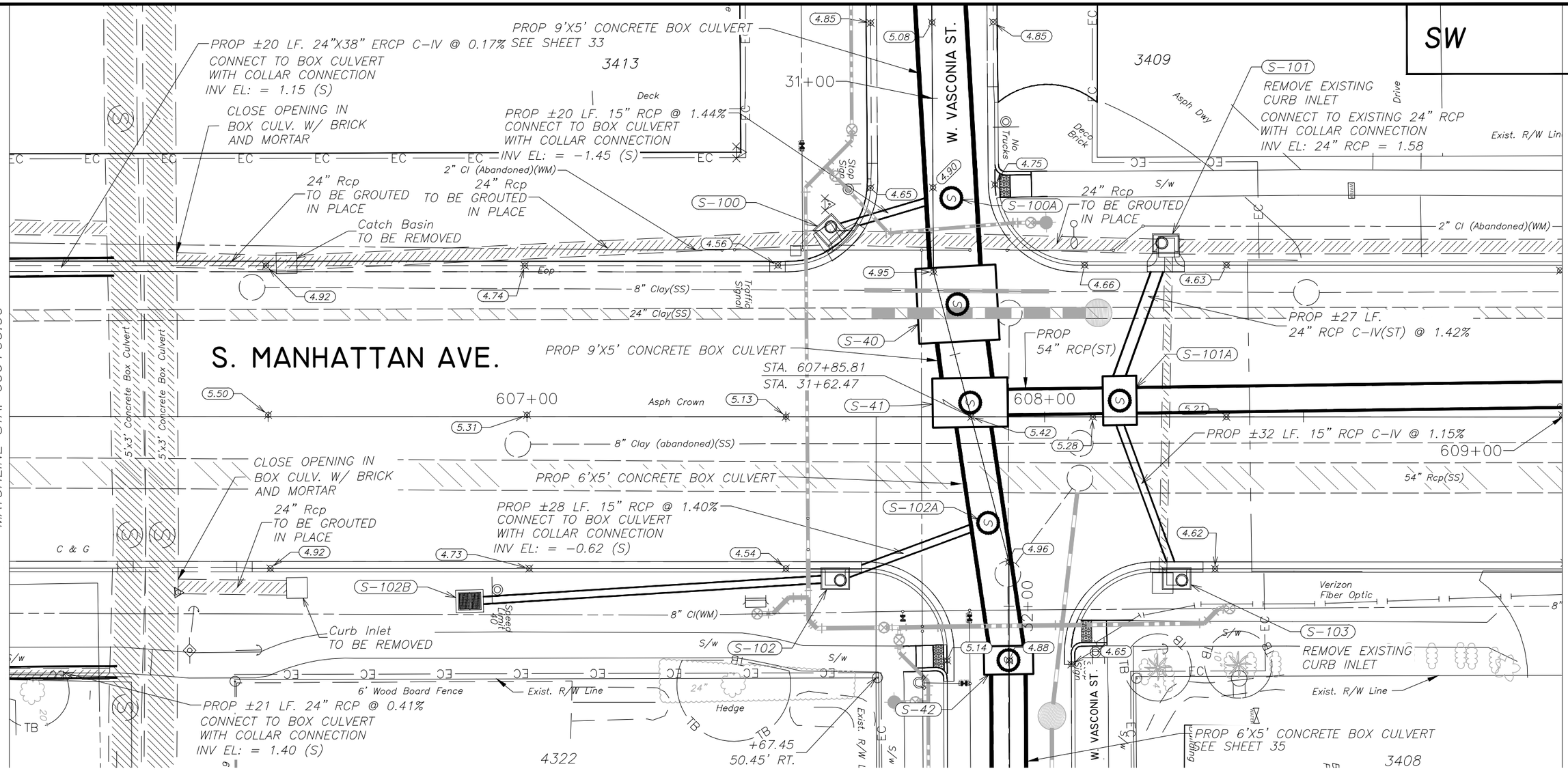

S-41
STA. 31+59.75, 0.51' LT.
PROP 13'X8' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 54" RCP (N) = -3.07
INV EL: 6'X5' CONCRETE BOX CULVERT (E) = -2.60
INV EL: 9'X5' CONCRETE BOX CULVERT (W) = -3.07
MH RISER RIM: 5.41

S-101A
STA. 608+14.51, 3.15' LT.
PROP 8'X5' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 54" HOLE W/BULKHEAD FOR FUTURE CONNECTION (N) = -2.93
INV EL: 24" RCP C-IV (W) = 0.99
INV EL: 15" RCP C-IV (E) = 1.36
INV EL: 54" RCP (S) = -2.93
MH RISER RIM: 5.18

S-102
STA. 607+59.55, 31.27' RT.
PROP COT TYPE 1 CURB INLET
RIM: 5.02
INV EL: 15" RCP (S) = 1.55
INV EL: 15" RCP (N) = -0.23
THROAT EL: 4.51

S-103
STA. 31+94.79, 32.41' LT.
PROP COT TYPE 1 CURB INLET
RIM: 5.11
INV EL: 15" RCP C-IV (W) = 1.73
THROAT EL: 4.60

S-101
STA. 608+23.59, 33.29' LT.
PROP COT TYPE 1 CURB INLET MODIFIED
RIM: 5.10
INV EL: 24" RCP (N) = 1.58
INV EL: 24" RCP C-IV (E) = 1.38
THROAT EL: 4.60

S-102B
STA. 606+88.94, 35.67' RT.
PROP COT TYPE "T" GRATE INLET
INV EL: 15" RCP (N) = 2.25
GRATE EL: 4.73

0 20
1"=20'

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - STORMWATER PLAN

SHEET 61 OF 105

SW

CHEROKEE RD.

MATCHLINE STA. 903+25

Curb Stop
Asphalt Parking Lot
Clean Out
3342
Asphalt Parking Lot
Exist. R/W Line
6' Wood
EC
TB
X
19.8'
4717
16.1'
Planter
4715
23.2'
Brick Paver Drive
BEGIN MILLING AND RESURFACING
MATCH EXISTING
STA. 900+22.33
Stop Sign
+34.52, 10.67 LT.
BEGIN CURB & GUTTER
MATCH EXISTING
Asphalt Drive
+79.98
Verizon
+18.64
Concrete Drive
+88.80
STA. 901+75.85
STA. 100+33.16
32.1'
28.2'
PROP. TYPE F
CURB AND GUTTER
35'
901+00
902+00
903+00
END MILLING AND RESURFACING
BEGIN ROAD RECONSTRUCTION
MATCH EXISTING
STA. 901+34.66
PROP. TYPE F
CURB AND GUTTER
PROP. DROP CURB TYP.
32.1'
32.6'
32.7'
22.7'
16"
Verizon
Concrete
Concrete
+34.80, 10.67 RT.
BEGIN CURB & GUTTER
MATCH EXISTING
+57.11
SPEED LIMIT
SIGN TO REMAIN
Verizon
Speed Limit
+22.30
Concrete Drive
+61.80
4'hedge
+96.54
Asphalt Drive
14"
S/W
Concrete
3' Evergreen
100+00
Brick Paver Drive
Asphalt Drive
Cable Tv
Clean Out
10"
Exist. R/W Line
42.8'
20.2'
20.5'
10.9'
4730
4728
4726
4724
4722
4720
4718
4716
0
20
1"=20'

Exist. R/W Line
4713
4711
4709
11.5'
11'
2.4'
21.8'
Planter
Concrete Drive
+67.24
24"
8'hedge
+35.16
Concrete Drive
+54.82
8'hedge
+09.65
Concrete Drive
24.7'
24.1'
PROP. TYPE F
CURB AND GUTTER
+98.59
10.67 LT.
31'
904+00
905+00
CHEROKEE RD.
PROP. TYPE F
CURB AND GUTTER
+98.59
10.67 RT.
23'
23'
25'
PROP.
DROP CURB TYP.
+55.52
+96.02
Concrete Drive
Verizon
+21.31, 21.97 RT.
BEGIN SIDEWALK
RECONSTRUCTION
+83.63
Brick Paver Drive
8'hedge
Concrete Drive
14"
10"
12.5'
13'
9.6'
Exist. R/W Line
4710
4708
0
20
1"=20'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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1	4/7/2016	ADDENDUM 3	4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 82A
CF 105

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SW

4601

HESPERIDES AVE.

SEE SHEET #88

40

(S)

(S)

BEGIN MILLING AND RESURFACING
MATCH EXISITING
STA. 500+16.58

500+00

501+00

502+00

STA. 500+43.28
STA. 400+49.99

BEGIN MILLING AND RESURFACING
MATCH EXISITING
STA. 400+04.96

00

4423

Exist. R/W Line

10"

15"

8"

24"

18"

EXISITING CURB TO REMAIN

6" SOLID WHITE 10-30 SKIP

6" SOLID YELLOW

12"

6" SOLID YELLOW

6" SOLID WHITE 10-30 SKIP

EL PRADO BLVD.

EXISITING CURB TO REMAIN

EXISITING CURB TO REMAIN

STOP SIGN TO REMAIN

4424

WATER

30"

4422

0 20

1"=20'

4602

4419

Concrete Drive

Verizon

Concrete Drive

WATER

12"

15"
Twin
Elm

4417

36"

Conc D

12"
Elm

2"

4415

36"

Brick Dwy

S/w

S/w

EXISITING CURB TO REMAIN

MATCHLINE STA: 502+50.00

6" SOLID WHITE 10-30 SKIP

6" SOLID YELLOW

503+00

EXISITING CURB TO REMAIN

15"

14"

504+00

HIGH WATER SIGN TO BE REMOVED

14"

6" SOLID YELLOW

6" SOLID WHITE 10-30 SKIP

EL PRADO BLVD.

6" SOLID YELLOW

EXISITING CURB TO REMAIN

10"

S/w

S/w

S/w

MATCHLINE STA: 505+00.00

0 20

1"=20'

WATER

10"

4420

Concrete

Verizon

10" Elm

9"

4418

Dwy

HIGH WATER SIGN TO BE REMOVED

4416

Dwy

36"

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET
89
of
105

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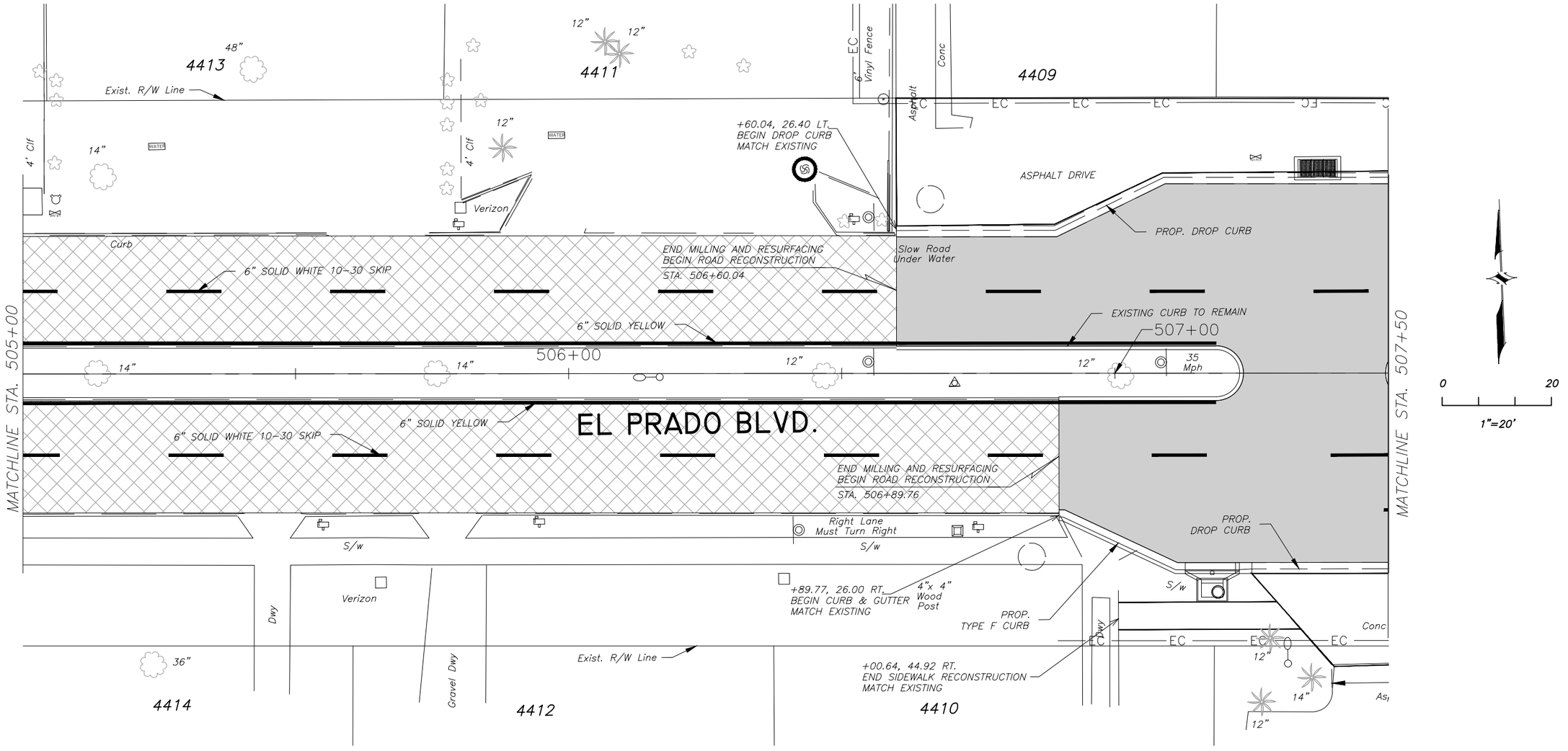
SW



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2			5		
1	4/7/2016	ADDENDUM 3	4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 90 OF 105

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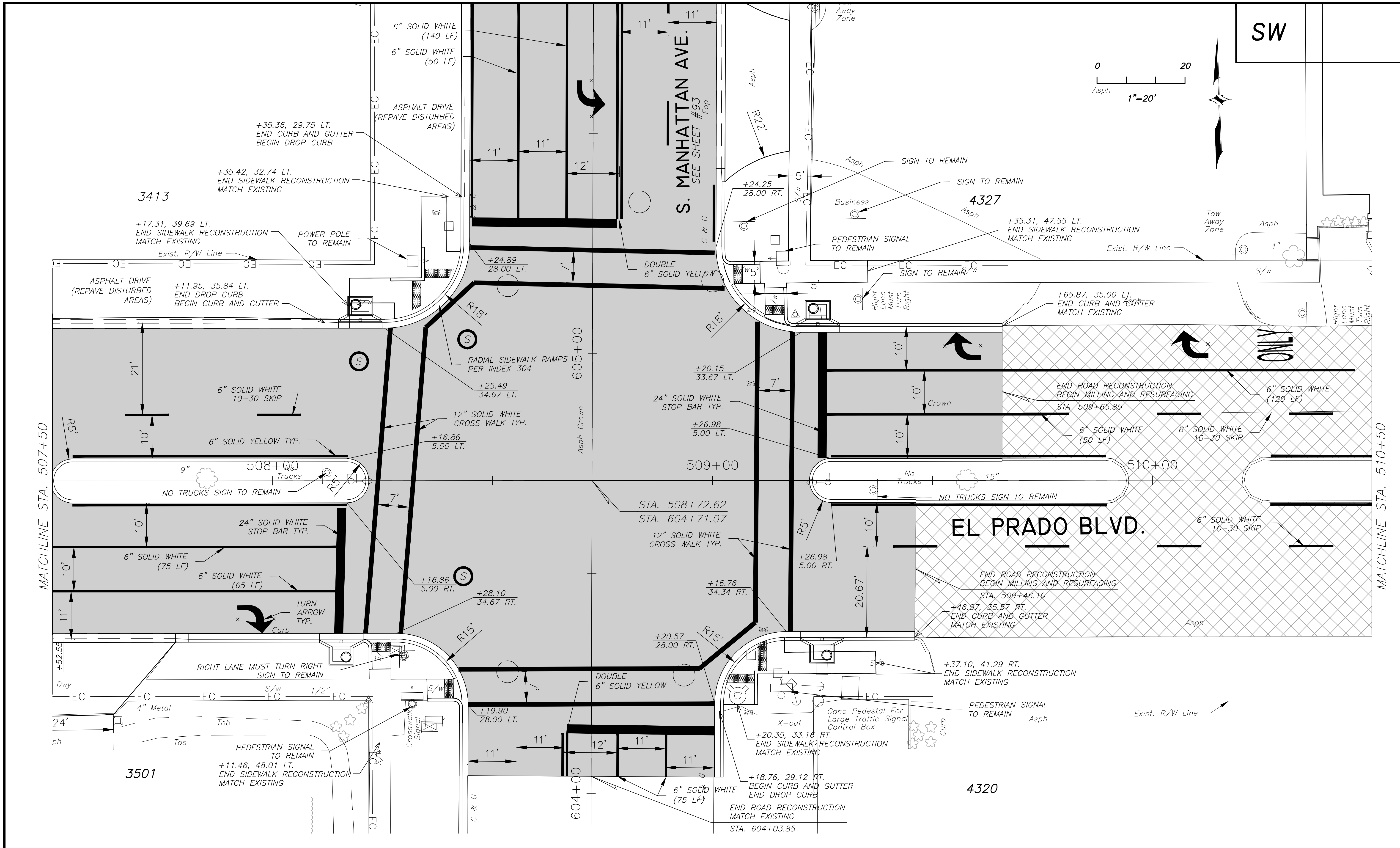

SW
0
20
1"=20'
S. MANHATTAN AVE.
SEE SHEET #93
EL PRADO BLVD.
MATCHLINE STA. 507+50
MATCHLINE STA. 510+50
6" SOLID WHITE (140 LF)
6" SOLID WHITE (50 LF)
ASPHALT DRIVE (REPAVE DISTURBED AREAS)
+35.36, 29.75 LT. END CURB AND GUTTER BEGIN DROP CURB
+35.42, 32.74 LT. END SIDEWALK RECONSTRUCTION MATCH EXISTING
3413
+17.31, 39.69 LT. END SIDEWALK RECONSTRUCTION MATCH EXISTING
POWER POLE TO REMAIN
Exist. R/W Line
ASPHALT DRIVE (REPAVE DISTURBED AREAS)
+11.95, 35.84 LT. END DROP CURB BEGIN CURB AND GUTTER
+24.89 28.00 LT.
DOUBLE 6" SOLID YELLOW
R18'
RADIAL SIDEWALK RAMPS PER INDEX 304
+25.49 34.67 LT.
605+00
Asph Crown
6" SOLID WHITE 10-30 SKIP
12" SOLID WHITE CROSS WALK TYP.
+16.86 5.00 LT.
6" SOLID YELLOW TYP.
508+00
509+00
510+00
NO TRUCKS SIGN TO REMAIN
STA. 508+72.62
STA. 604+71.07
24" SOLID WHITE STOP BAR TYP.
6" SOLID WHITE (75 LF)
6" SOLID WHITE (65 LF)
TURN ARROW TYP.
+16.86 5.00 RT.
+28.10 34.67 RT.
R15'
RIGHT LANE MUST TURN RIGHT SIGN TO REMAIN
DOUBLE 6" SOLID YELLOW
+19.90 28.00 LT.
PEDESTRIAN SIGNAL TO REMAIN
+11.46, 48.01 LT. END SIDEWALK RECONSTRUCTION MATCH EXISTING
3501
604+00
6" SOLID WHITE (75 LF)
R22'
+24.25 28.00 RT.
SIGN TO REMAIN
SIGN TO REMAIN
4327
Business
PEDESTRIAN SIGNAL TO REMAIN
+35.31, 47.55 LT. END SIDEWALK RECONSTRUCTION MATCH EXISTING
Tow Away Zone
Exist. R/W Line
SIGN TO REMAIN
+65.87, 35.00 LT. END CURB AND GUTTER MATCH EXISTING
Right Lane Must Turn Right
ONLY
+20.15 33.67 LT.
24" SOLID WHITE STOP BAR TYP.
+26.98 5.00 LT.
END ROAD RECONSTRUCTION BEGIN MILLING AND RESURFACING STA. 509+65.85
6" SOLID WHITE (120 LF)
6" SOLID WHITE (50 LF)
6" SOLID WHITE 10-30 SKIP
NO TRUCKS SIGN TO REMAIN
12" SOLID WHITE CROSS WALK TYP.
+26.98 5.00 RT.
+16.76 34.34 RT.
6" SOLID WHITE 10-30 SKIP
END ROAD RECONSTRUCTION BEGIN MILLING AND RESURFACING STA. 509+46.10
+46.07, 35.57 RT. END CURB AND GUTTER MATCH EXISTING
+20.57 28.00 RT.
+37.10, 41.29 RT. END SIDEWALK RECONSTRUCTION MATCH EXISTING
PEDESTRIAN SIGNAL TO REMAIN
Exist. R/W Line
Conc Pedestal For Large Traffic Signal Control Box
+20.35, 33.16 RT. END SIDEWALK RECONSTRUCTION MATCH EXISTING
+18.76, 29.12 RT. BEGIN CURB AND GUTTER END DROP CURB
END ROAD RECONSTRUCTION MATCH EXISTING STA. 604+03.85
4320

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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1	4/7/2016	ADDENDUM 3	4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 91
105

SW

0 20
1"=20'

MATCHLINE STA: 510+50.00

MATCHLINE STA: 513+00.00

Center Line

6" SOLID WHITE 10-30 SKIP

6" SOLID YELLOW TYP.

511+00

512+00

6"

18"

EL PRADO BLVD.

Conc S/w

Speed Limit 30

Hart Bus Stop

SPEED LIMIT SIGN TO REMAIN

BUS STOP SIGN TO REMAIN

Asphalt

Exist. R/W Line

ASPHALT DRIVE (REPAVE DISTURBED AREAS)

+25.00, 33.67 LT.
END DROP CURB
MATCH EXISTING

+65.89
33.67 LT.

+58.49, 33.67 LT.
END CURB AND GUTTER
BEGIN DROP CURB

END ROAD RECONSTRUCTION
BEGIN MILLING AND RESURFACING
STA. 513+25.00

701+00

HUBERT AVE.

SEE SHEET #94

+30.61
33.67 LT.

+42.03, 34.59 LT.
END CURB AND GUTTER
BEGIN DROP CURB

+00.00, 34.67 LT.
END DROP CURB
MATCH EXISTING

EC

END ROAD RECONSTRUCTION
STA. 515+00.10

20'

10'

+24.96
5.00 LT.

+71.08
5.00 LT.

514+00

515+00

10"

8"

LIGHT POLE TO REMAIN

+24.96
5.00 RT.

+71.08
5.00 RT.

STA. 513+97.68
STA. 604+73.05

20.67'

+25.00, 34.34 RT.
END DROP CURB
MATCH EXISTING

+55.69, 34.34 RT.
END CURB AND GUTTER
BEGIN DROP CURB

+64.14
34.34 RT.

PROP. TYPE F
CURB AND GUTTER

+30.81
34.34 RT.

+43.97, 35.51 RT.
END CURB AND GUTTER
BEGIN DROP CURB

+00.00, 34.34 RT.
END DROP CURB
MATCH EXISTING

+55.60, 44.20 RT.
END SIDEWALK RECONSTRUCTION
MATCH EXISTING

RADIAL SIDEWALK RAMPS
PER INDEX 304

+51.68, 43.28 RT.
END SIDEWALK RECONSTRUCTION
MATCH EXISTING

12"

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 92 of 105

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SW

S. MANHATTAN AVE.

MATCHLINE STA: 603+00.00

MATCHLINE STA: 606+00.00

MATCHLINE STA: 606+00.00

MATCHLINE STA: 609+00.00

EL PRADO BLVD.

SEE SHEET #90

W. VASCONIA ST.

SEE SHEET #83D

W. VASCONIA ST.

Parking Blockers

Crosswalk
+20.61 Signal
28.00 LT.

Speed Limit 40

C & G

+03.93, 30.00 LT.
BEGIN CURB AND GUTTER
MATCH EXISTING

+28.10
34.67 RT.

R15'

PROP. TYPE F
CURB AND GUTTER.

+25.49
34.67 LT.

PROP. TYPE F
CURB AND GUTTER.

R18'

ASPHALT DRIVE
(REPAVE DISTURBED AREAS)

0 20

1"=20'

Eop

+35.41, 29.20 LT.
END CURB AND GUTTER
BEGIN DROP CURB

6" SOLID WHITE

24" SOLID WHITE
STOP BAR TYP.

6" SOLID WHITE
(50 LF)

604+00

12'

11'

11'

END ROAD RECONSTRUCTION
MATCH EXISTING
STA. 604+03.81

Asph Crown

605+00

STA. 604+71.07
STA. 508+72.62

12" SOLID WHITE
CROSS WALK TYP.

TURN
ARROW
TYP.

DOUBLE
6" SOLID YELLOW

24" SOLID WHITE
STOP BAR TYP.

C & G

R15'

PROP. TYPE F
CURB AND GUTTER.

+16.76
34.34 RT.

509+00

PROP. TYPE F
CURB AND GUTTER.

R18'

+20.15
33.67 LT.

12" SOLID WHITE
CROSS WALK TYP.

C & G

Eop

47'

+19.96
28.00 RT.

+03.77, 30.00 RT.
BEGIN CURB AND GUTTER
MATCH EXISTING

Asph

X-cut

+24.25
28.00 RT.

61.37'

Asph

R22'

30'

PROP. DROP
CURB TYP.

S/w

EC

PROP. DROP CURB TYP.

ASPHALT DRIVE
(REPAVE TO DISTURBED AREAS)

PROP. DROP CURB TYP.

Eop

Traffic Signal

+50.39
28.00 LT.

6" SOLID WHITE
(10-30 SKIP)

6" SOLID WHITE
(10-30 SKIP)

6" SOLID WHITE

6" SOLID WHITE
(140 LF)

DOUBLE
6" SOLID YELLOW

+46.90, 28.00 LT.
END CURB AND GUTTER
BEGIN DROP CURB

607+00

Asph Crown

608+00

PROP. TYPE F
CURB AND GUTTER.

+06.40
28.00 LT.

6" SOLID WHITE

PROP. RADIAL
CURB RAMP
PER INDEX 304

DOUBLE
6" SOLID YELLOW

+39.18, 29.33 LT.
END CURB AND GUTTER
MATCH EXISTING

0 20

1"=20'

END ROAD RECONSTRUCTION
MATCH EXISTING
STA. 608+39.59

STA. 31+62.47
STA. 607+85.81

6" SOLID WHITE
(10-30 SKIP)

+23.94, 29.00 RT.
END DROP CURB
BEGIN CURB AND GUTTER

DOUBLE
6" SOLID YELLOW

DOUBLE
6" SOLID YELLOW

S. MANHATTAN AVE.

6" SOLID WHITE

+40.01, 29.33 RT.
END CURB AND GUTTER
MATCH EXISTING

+43.94, 29.00 RT.
END CURB AND GUTTER
BEGIN DROP CURB

6" SOLID WHITE

PROP. TYPE F
CURB AND GUTTER.

C & G

+65.18
28.00 RT.

PROP. TYPE F
CURB AND GUTTER.

+21.17
28.00 RT.

PROP. TYPE F CURB AND GUTTER.

PROP. DROP CURB TYP.

Speed Limit 40

5'

S/w

S/w

32+00

W. VASCONIA ST.

S/w

EC

No.	DATE	REVISIONS
3		
2		
1	4/7/2016	ADDENDUM 3

No.	DATE	REVISIONS
6		
5		
4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET
93
105

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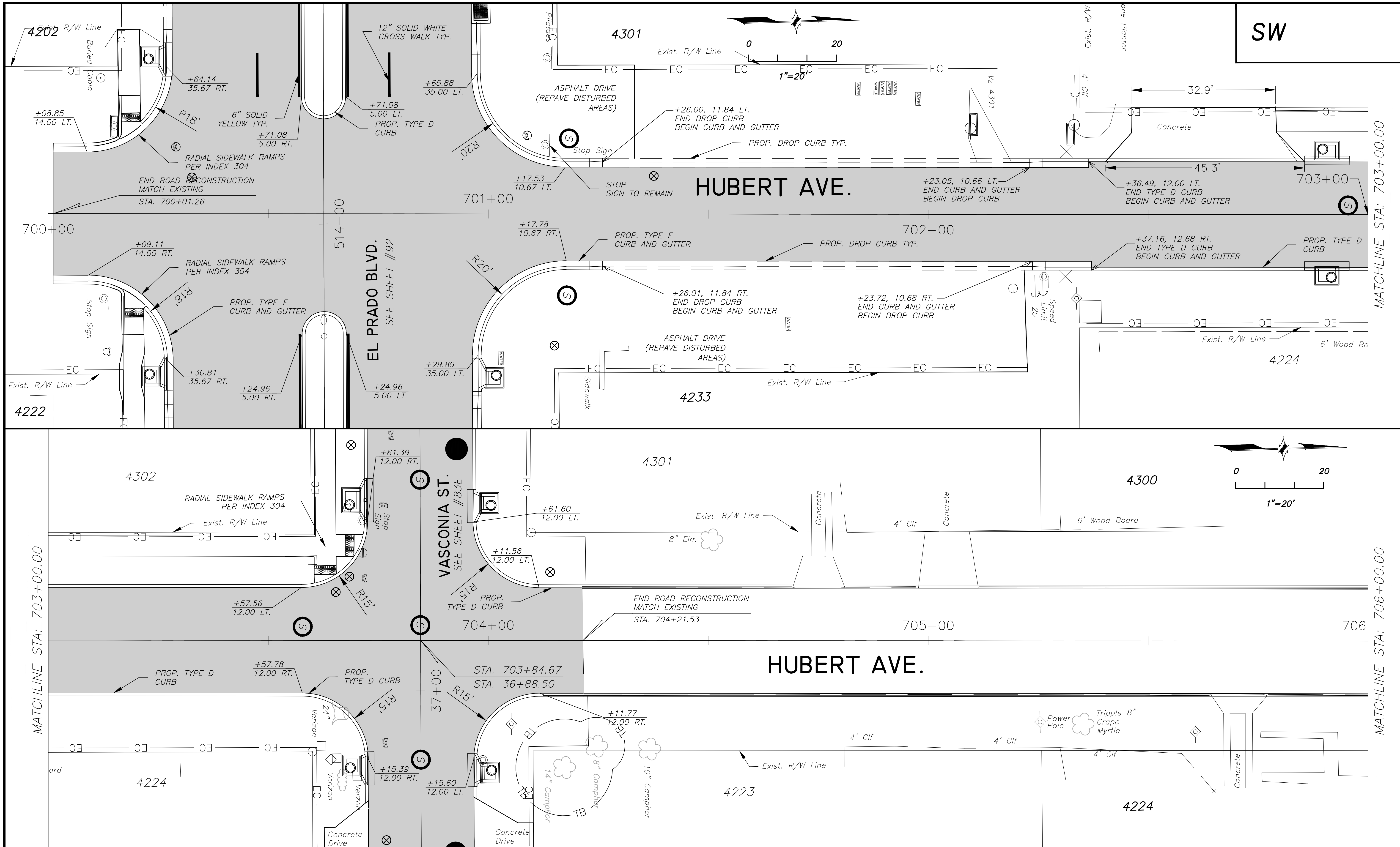

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HUBERT AVE.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 94 of 105

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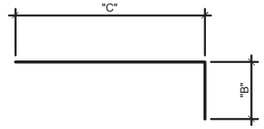
JUNCTION BOX DATA TABLE

BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 901+75.57	9	7	9	9	9	N/A	1	32	VARIES

JUNCTION BOX BAR SCHEDULE															
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.		
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR
6	101	10-2			39	1			10-2					
7	102	10-2			39	1			10-2					
7	103	10-2			48	1			10-2					
7	104	10-2			43	1			10-2					
7	105	8-6 3/4			76	10			2-11 3/4			5-7		
7	106	8-6 3/4			76	10			2-11 3/4			5-7		
4	108	8-2			76	1			8-2					
3	109	34-8			12	1			34-8					
3	110	31-8			12	1			31-8					
3	111	31-0 1/4			12	1			31-0 1/4					
3	112	34-8			12	1			34-8					
3	113	31-8			16	1			31-8					
3	114	31-8			16	1			31-8					

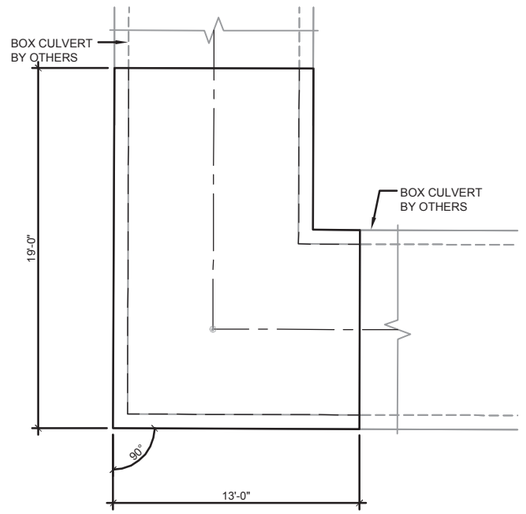
NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE



Bar Type 10
SCALE: N.T.S.

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 12-14-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	7	9	7	23		23

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 12-14-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	9	9	10	10	10	-	10	12	12	12	12	12	12



S-1 Junction Box Plan - STA. 901+75.57
SCALE: 1/8" = 1'-0"

STRUCTURE S1 STA. 901+75.57 IS A CONFLICT STRUCTURE THAT REQUIRES CORING FOR 12" DIAMETER STEEL PIPE PER DETAIL ON SHEET S-11

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 8,100 LBS
6. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

AREHNA | Engineering,Inc.
5012 W. Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959

MATTHEW D. BRAKEFIELD
FL. LIC. NO. 70852

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: MDB
DRN: MPS
CKD: JPF
DATE: 12/21/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

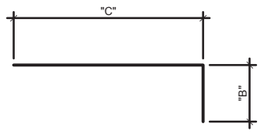
SHEET S-1 OF S-14

JUNCTION BOX DATA TABLE

BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 905+06.00	9	6	9	9	9	N/A	1	19.62	VARIES

JUNCTION BOX BAR SCHEDULE															
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.			
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	
6	101	10-2			25	1			10-2						
7	102	10-2			25	1			10-2						
7	103	10-2			31	1			10-2						
7	104	10-2			28	1			10-2						
7	105	8-0 3/4			48	10			2-11 3/4			5-1			
7	106	8-0 3/4			48	10			2-11 3/4			5-1			
4	108	7-2			48	1			7-2						
3	109	22-3 1/2			12	1			22-3 1/2						
3	110	19-3 1/2			12	1			19-3 1/2						
3	111	18-7 5/8			12	1			18-7 5/8						
3	112	22-3 1/2			12	1			22-3 1/2						
3	113	19-3 1/2			14	1			19-3 1/2						
3	114	19-3 1/2			14	1			19-3 1/2						

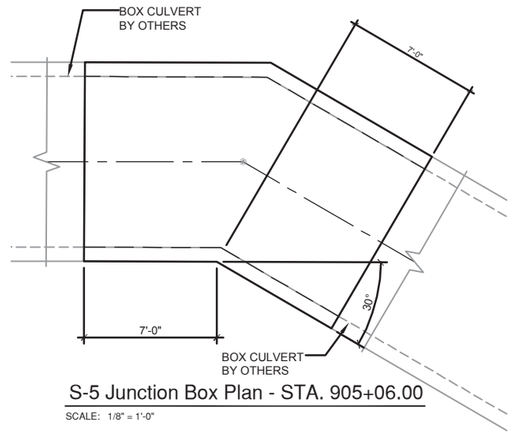
NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE



Bar Type 10
SCALE: N.T.S.

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	5	5	5	15		15

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 09-04-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	10	9	10	10	10	-	10	12	12	12	12	12	12



S-5 Junction Box Plan - STA. 905+06.00
SCALE: 1/8" = 1'-0"

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 5,000 LBS
6. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

AREHNA | Engineering,Inc.
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MATTHEW D. BRAKEFIELD
FL. LIC. NO. 70852

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: MDB
DRN: MPS
CKD: JPF
DATE: 12/21/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-2 OF S-14

P:\2003 - Arehna Engineering\2003-003 Spring Lake Junction Boxes\Sdwg\Spring Lake - Plans.dwg - Printed Apr 06, 2016-3:24pm by: matt

JUNCTION BOX DATA TABLE

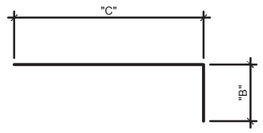
BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 905+51.92	9	6	9	9	9	N/A	1	19.12	VARIES

JUNCTION BOX BAR SCHEDULE														
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.		
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR
6	101	10-2			24	1			10-2					
7	102	10-2			24	1			10-2					
7	103	10-2			31	1			10-2					
7	104	10-2			28	1			10-2					
7	105	8-0 3/4			46	10			2-11 3/4			5-1		
7	106	8-0 3/4			46	10			2-11 3/4			5-1		
4	108	7-2			46	1			7-2					
3	109	21-9 1/2			12	1			21-9 1/2					
3	110	18-9 1/2			12	1			18-9 1/2					
3	111	18-1 5/8			12	1			18-1 5/8					
3	112	21-9 1/2			12	1			21-9 1/2					
3	113	18-9 1/2			14	1			18-9 1/2					
3	114	18-9 1/2			14	1			18-9 1/2					

NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE

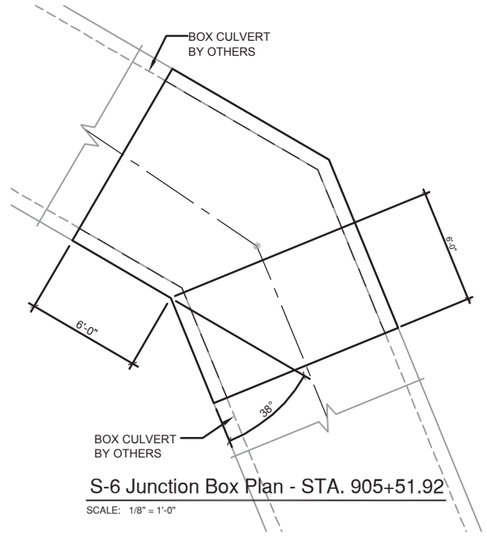
ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	5	4	5	14		14

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 09-04-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	10	9	10	10	10	-	10	12	12	12	12	12	12



Bar Type 10

SCALE: N.T.S.



S-6 Junction Box Plan - STA. 905+51.92

SCALE: 1/8" = 1'-0"

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 5,200 LBS
6. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

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MATTHEW D. BRAKEFIELD
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No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: MDB
DRN: MPS
CKD: JPF
DATE: 12/21/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-3 OF S-14

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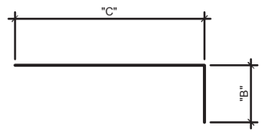
JUNCTION BOX DATA TABLE

BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 906+20.47	9	6	9	9	9	N/A	1	12	VARIES

JUNCTION BOX BAR SCHEDULE															
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.		
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR
6	101	10-2			15	1			10-2					
7	102	10-2			15	1			10-2					
7	103	10-2			21	1			10-2					
7	104	10-2			19	1			10-2					
7	105	8-0 3/4			28	10			2-11 3/4			5-1		
7	106	8-0 3/4			28	10			2-11 3/4			5-1		
4	108	7-2			28	1			7-2					
3	109	14-8			12	1			14-8					
3	110	11-8			12	1			11-8					
3	111	11-0 1/4			12	1			11-0 1/4					
3	112	14-8			12	1			14-8					
3	113	11-8			14	1			11-8					
3	114	11-8			14	1			11-8					

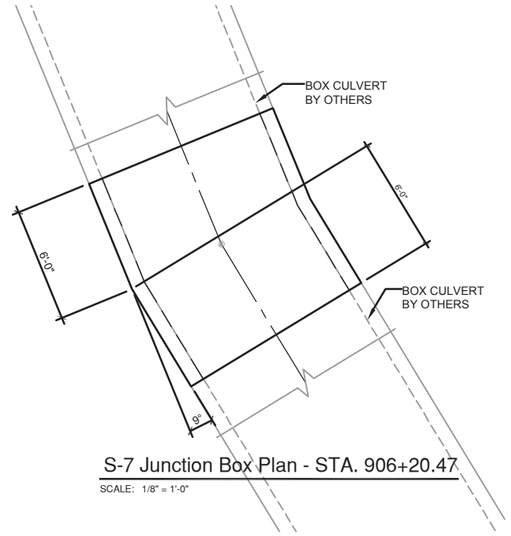
NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE



Bar Type 10
SCALE: N.T.S.

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	4	3	4	11		11

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 09-04-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	10	9	10	10	10	-	10	12	12	12	12	12	12



S-7 Junction Box Plan - STA. 906+20.47
SCALE: 1/8" = 1'-0"

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 3,100 LBS
6. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

AREHNA | Engineering,Inc.
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MATTHEW D. BRAKEFIELD
FL. LIC. NO. 70852

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: MDB
DRN: MPS
CKD: JPF
DATE: 12/21/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-4 OF S-14

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JUNCTION BOX DATA TABLE

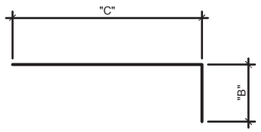
BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 907+29.17	9	6	9	9	9	N/A	1	14	VARIES

JUNCTION BOX BAR SCHEDULE															
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.		
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR
6	101	10-2			18	1			10-2					
7	102	10-2			18	1			10-2					
7	103	10-2			24	1			10-2					
7	104	10-2			21	1			10-2					
7	105	8-0 3/4			34	10			2-11 3/4			5-1		
7	106	8-0 3/4			34	10			2-11 3/4			5-1		
4	108	7-2			34	1			7-2					
3	109	16-8			12	1			16-8					
3	110	13-8			12	1			13-8					
3	111	13-0 1/4			12	1			13-0 1/4					
3	112	16-8			12	1			16-8					
3	113	13-8			14	1			13-8					
3	114	13-8			14	1			13-8					

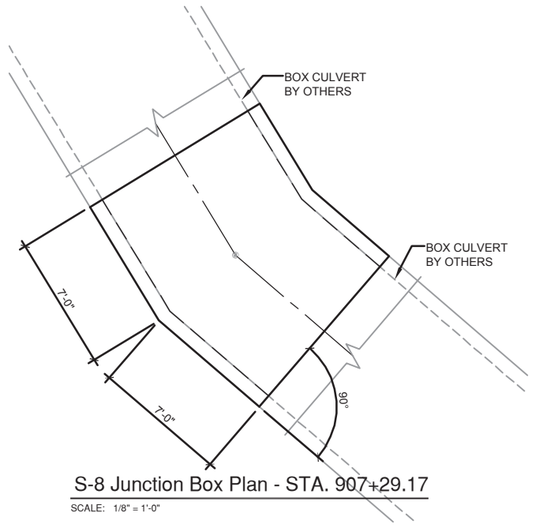
NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	4	4	4	12		12

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 09-04-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	10	9	10	10	10	-	10	12	12	12	12	12	12



Bar Type 10
SCALE: N.T.S.



S-8 Junction Box Plan - STA. 907+29.17
SCALE: 1/8" = 1'-0"

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 3,700 LBS
6. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

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MATTHEW D. BRAKEFIELD
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1	4/7/2016	ADDENDUM 3	4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-5 OF S-14

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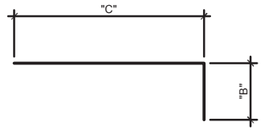
JUNCTION BOX DATA TABLE

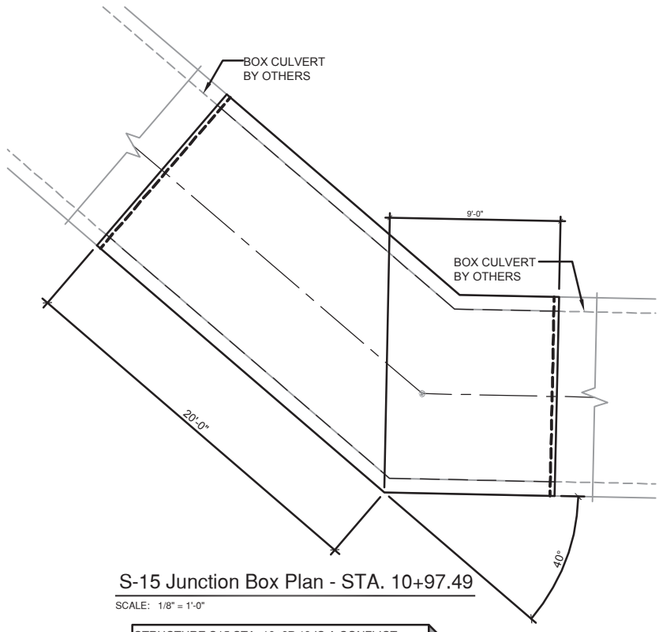
BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 10+97.49	9	6	9	9	9	N/A	1	29	VARIES

JUNCTION BOX BAR SCHEDULE														
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.		
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR
6	101	10-2			36	1			10-2					
7	102	10-2			36	1			10-2					
7	103	10-2			39	1			10-2					
7	104	10-2			39	1			10-2					
7	105	8-0 3/4			70	10			2-11 3/4			5-1		
7	106	8-0 3/4			70	10			2-11 3/4			5-1		
4	108	7-2			70	1			7-2					
3	109	31-8			12	1			31-8					
3	110	28-8			12	1			28-8					
3	111	28-0 1/4			12	1			28-0 1/4					
3	112	31-8			12	1			31-8					
3	113	28-8			14	1			28-8					
3	114	28-8			14	1			28-8					

NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE



Bar Type 10
SCALE: N.T.S.



S-15 Junction Box Plan - STA. 10+97.49
SCALE: 1/8" = 1'-0"

STRUCTURE S15 STA. 10+97.49 IS A CONFLICT STRUCTURE THAT REQUIRES CORING FOR 12" DIAMETER STEEL PIPE PER DETAIL ON SHEET S-11

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	8	7	8	23		23

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 09-04-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	10	10	10	10	10	-	10	12	12	12	12	12	12

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 7,100 LBS
6. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

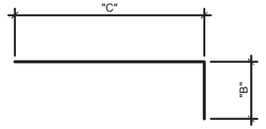
SHEET S-6 OF S-14

JUNCTION BOX DATA TABLE

BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 205+84.33	VARIES - SEE PLAN	4	9	9	9	9	2	40	VARIES

JUNCTION BOX BAR SCHEDULE															
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.			
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	
7	101	16-11			49	1			16-11						
7	102	16-11			54	1			16-11						
7	103	16-11			58	1			16-11						
7	104	16-11			52	1			16-11						
7	105	7-0 3/4			96	10			2-11 3/4			4-1			
7	106	7-0 3/4			96	10			2-11 3/4			4-1			
7	107	13-5			192	10			9-4			4-1			
7	108	5-2			96	1			5-2						
3	109	42-4			18	1			42-4						
5	110	34-4			22	1			34-4						
5	111	38-8 1/4			22	1			38-8 1/4						
3	112	42-4			18	1			42-4						
3	113	39-4			10	1			39-4						
3	114	39-4			10	1			39-4						
3	115	38-8 1/4			10	1			38-8 1/4						

NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE

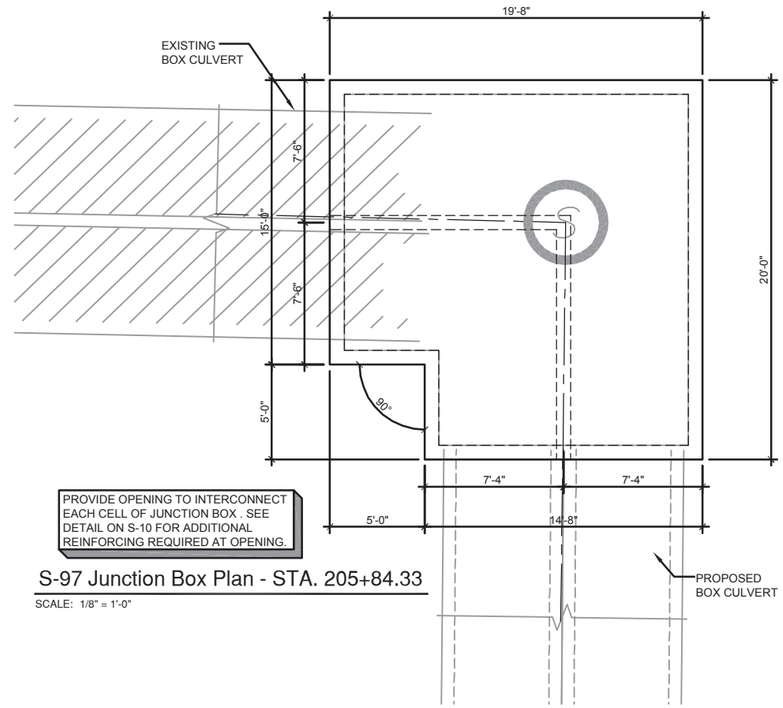


Bar Type 10

SCALE: N.T.S.

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 12-14-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	11	8	11	30		30

MAIN STEEL REINFORCEMENT SPACING (inches)															TABLE DATE 12-14-15
STRUCTURE	BOX														
	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115
JUNCTION BOX	10	9	9	10	10	10	10	10	12	10	10	12	12	12	12



S-97 Junction Box Plan - STA. 205+84.33

SCALE: 1/8" = 1'-0"

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 20,900 LBS
6. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

AREHNA | Engineering,Inc.
5012 W. Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959

MATTHEW D. BRAKEFIELD
FL. LIC. NO. 70852

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: MDB
DRN: MPS
CKD: JPF
DATE: 12/21/15

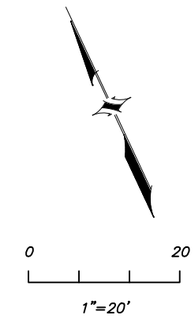
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

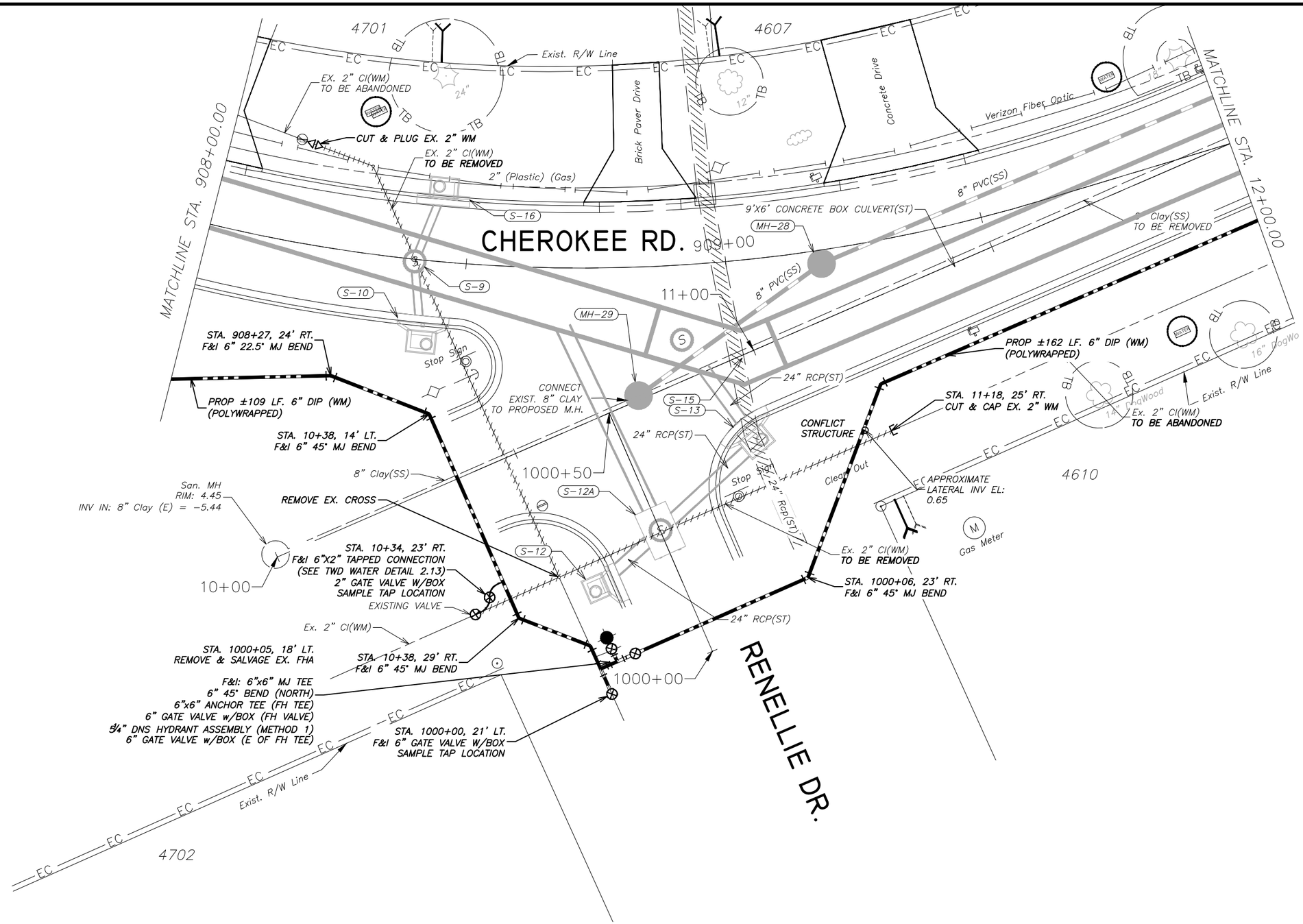
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-13
OF S-14

P:\2003 - Arehna Engineering\2003-003 Spring Lake Junction Boxes\Sdwg\Spring Lake - Plans.dwg - Printed Apr 06, 2016-3:26pm by: matt

SW





NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

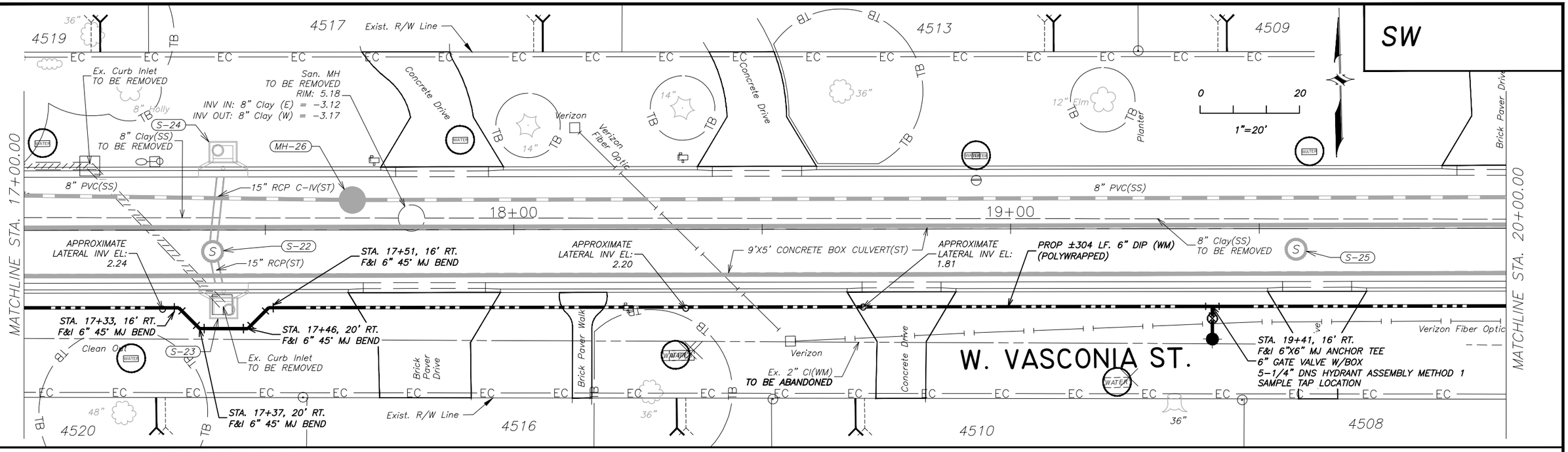
No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

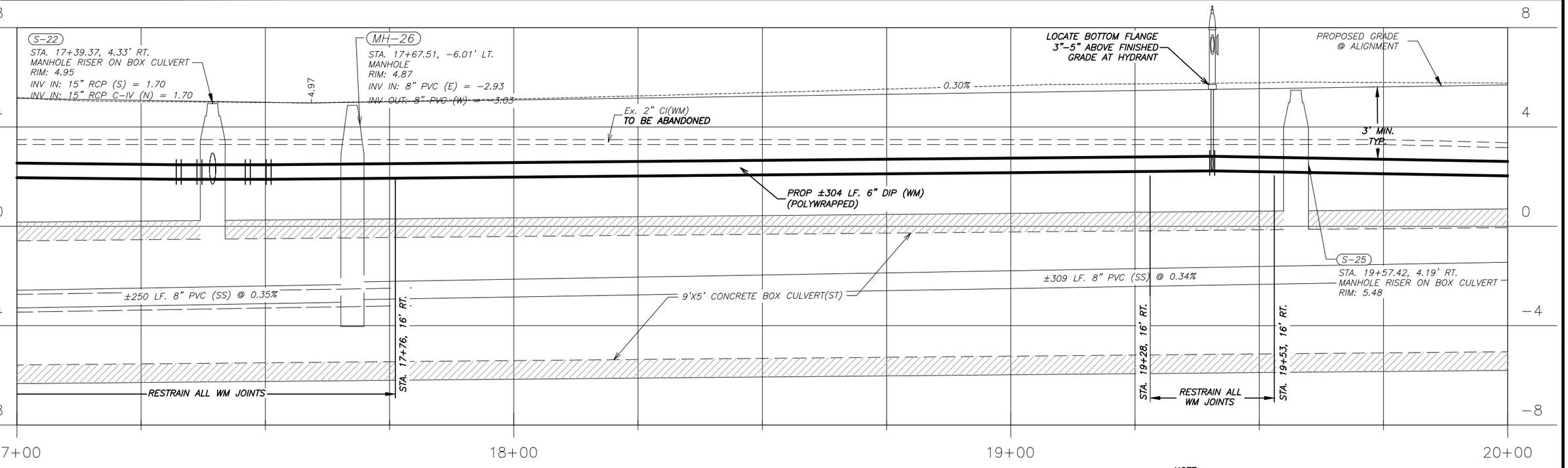
DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - WATER MAIN PLAN

SHEET
W-104
of
W-125





W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

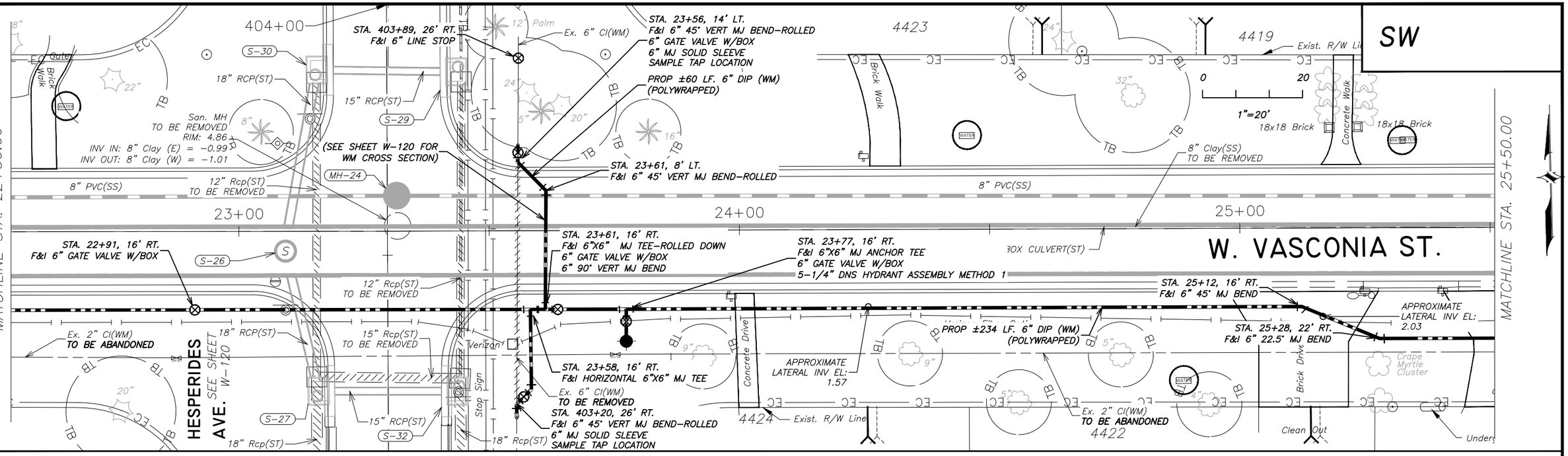
DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

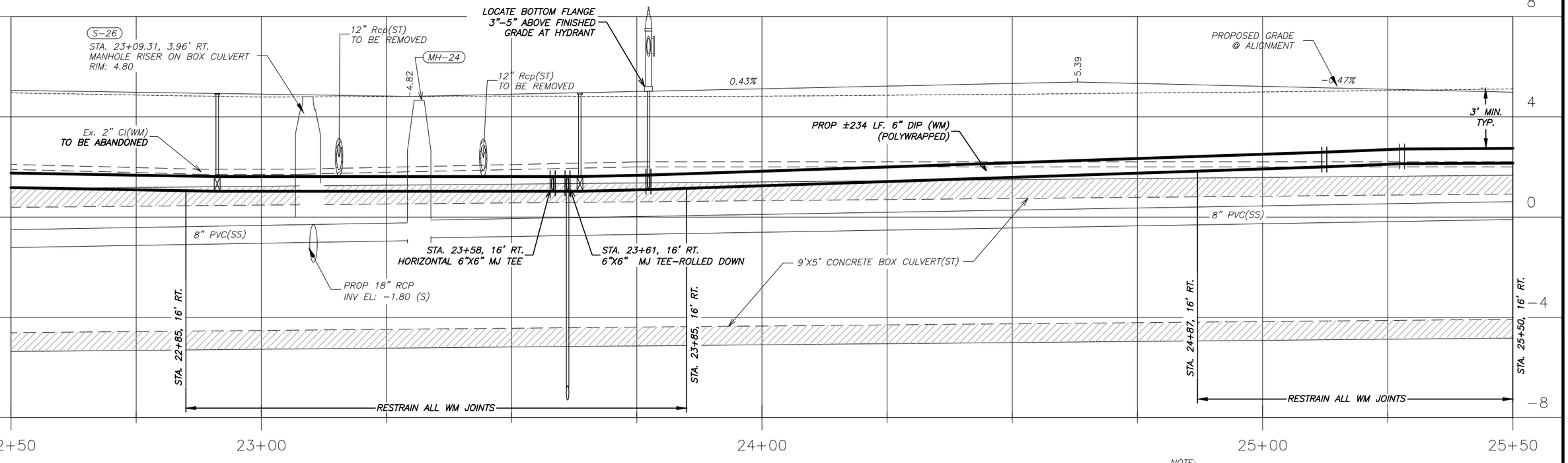
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN PLAN & PROFILE

SHEET W-108 of W-125

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-CHEROKEE-VASCONIA-WM.dwg - Printed Apr 07, 2016-3:04pm by: JenP





W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN PLAN & PROFILE

SHEET W-110 OF W-125

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-CHEROKEE-VASCONIA-WM.dwg - Printed Apr 07, 2016-3:04pm by: JenP

SW

MATCHLINE STA. 25+50.00

MATCHLINE STA. 28+50.00

0 20

1"=20'

4415

4411

Exist. R/W Line

Clean Out

10" Magnolia

4" Crape Myrtle

5" Elm

San. MH
RIM: 5.25
TO BE REMOVED
INV IN: 8" Clay (E) = 0.27
INV OUT: 8" Clay (W) = 0.26

Brick Drive

Concrete

Concrete Drive

Brick Walk

18x18 Brick

S-36

8" PVC(SS)

MH-23

S-37

S-38

26+00

27+00

28+00

W. VASCONIA ST.

S-34A

8" Clay(SS)
TO BE REMOVED

9'X5' CONCRETE BOX CULVERT(ST)

APPROXIMATE
LATERAL INV EL:
2.49

S-37A

S-34

APPROXIMATE
LATERAL INV EL:
2.22

Verizon Fiber Optic

PROP ±300 LF. 6" DIP (WM)
(POLYWRAPPED)

APPROXIMATE
LATERAL INV EL:
2.02

Concrete Walk

Ex. 2" CI(WM)
TO BE ABANDONED

5'hedge

Decorative

Verizon

4418

4416

4414

4412

Exist. R/W Line

Clean Out

24"

26"

35"

34"

STA. 28+30, 22' RT.
F&I 6"X6" MJ ANCHOR TEE
6" GATE VALVE W/BOX
5-1/4" DNS HYDRANT ASSEMBLY METHOD 1
(LOCATE FH BONNET ALONG PROPERTY LINE
BETWEEN ADJACENT PROPERTIES)
SAMPLE TAP LOCATION

ground Lp Tank

PROPOSED GRADE
@ ALIGNMENT

LOCATE BOTTOM FLANGE
3"-5" ABOVE FINISHED
GRADE AT HYDRANT

-4.90

-5.53

-5.31

0.31%

-0.30%

3' MIN.
TYP.

PROP 15" RCP
INV EL: -2.11 (N)

PROP 15" RCP
INV EL: -1.40 (SE)

PROP 15" RCP
INV EL: -1.21 (SE)

PROP 15" RCP
INV EL: -2.24 (N)

8

4

0

-4

-8

25+50

26+00

27+00

28+00

28+50

W. VASCONIA ST. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN
PLAN & PROFILE

SHEET
W-III
OF
W-125

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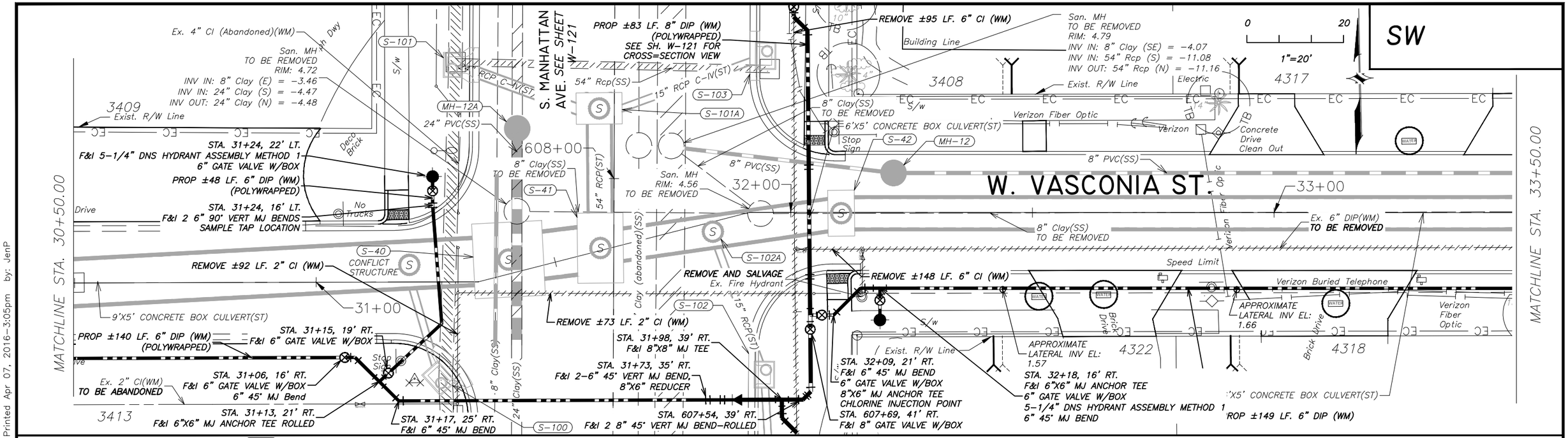
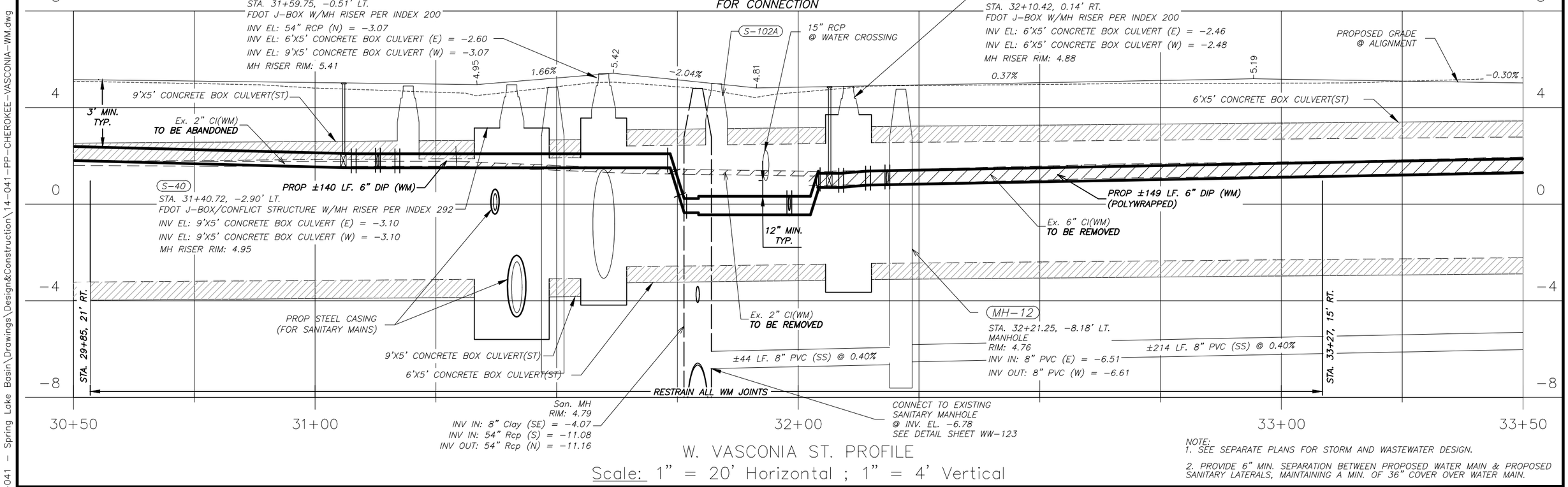


SEE SH. W-121 FOR CONNECTION



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

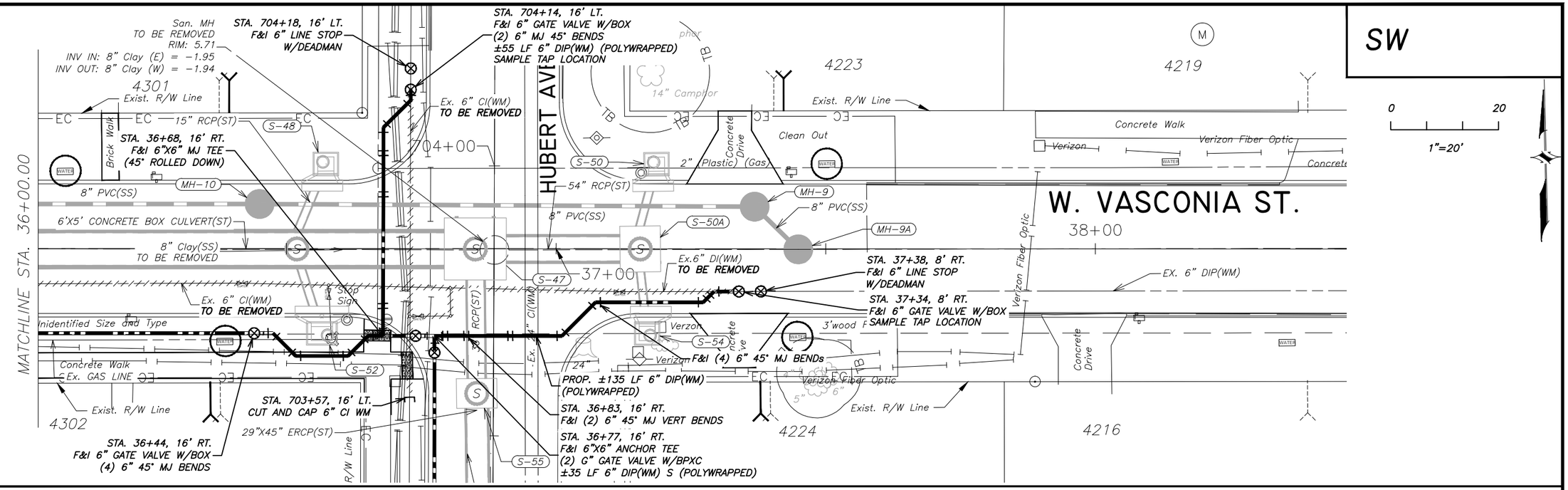
No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

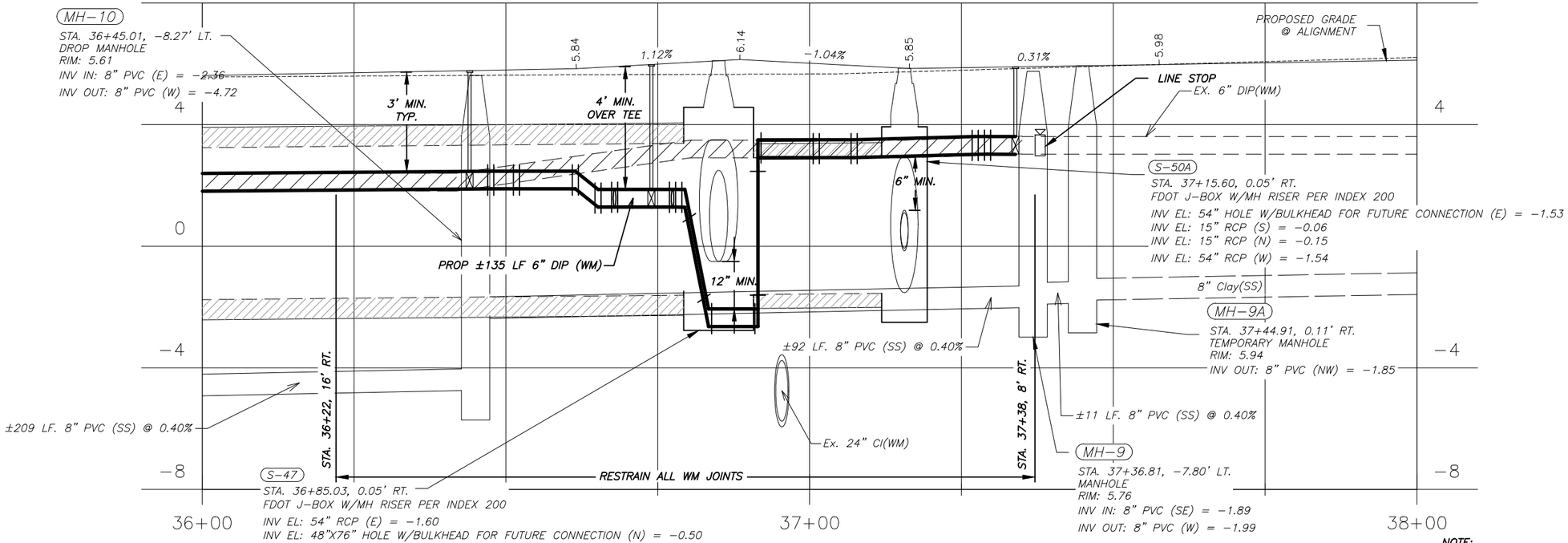
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN
PLAN & PROFILE

SHEET W-113 of W-125



SEE SH. W-123



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN PLAN & PROFILE

SHEET
W-115
of
W-125

SW

4605

3327

3325

3323

S. SHAMROCK RD.

911+00

912+00

913+00

202+00

201+00

MH-28A

S-18B

S-18A

S-18

S-17

S-20

15" RCP(ST)

18" RCP(ST)

8" PVC(SS)

9'X6' CONCRETE BOX CULVERT(ST)

5'X3' CONCRETE BOX CULVERT(ST)

W. VASCONIA ST.
SEE SHEET W-107 FOR WM CONTINUATIONS

SHAMROCK RD.
(SEE SHEET W-117)

Exist. R/W Line

Ex. 6" DIP (WM)
CONSTRUCTED JAN 2016 BY OTHERS.
CONTRACTOR SHALL OBTAIN AS-BUILTS
OF THE RECENTLY CONSTRUCTED
PHASE PRIOR TO SCHEDULING OF
CONSTRUCTION

Clean Out

Stop Sign

Brick Paver Drive

4" magnolia

Electric

Basketball

Concrete Drive

Verizon

2" (Plastic) (Gas)

3'hedge

Pet Waste

WATER

4606

3328

0 20

1"=20'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. - WATER MAIN
PLAN

SHEET W-116
OF W-125

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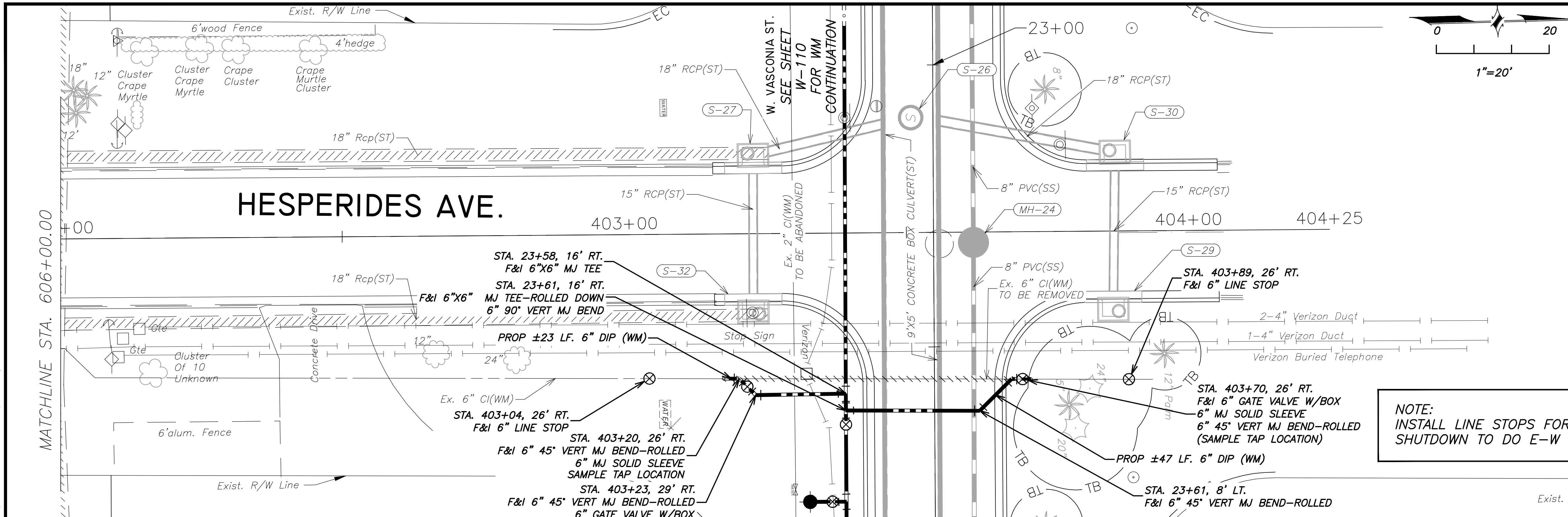
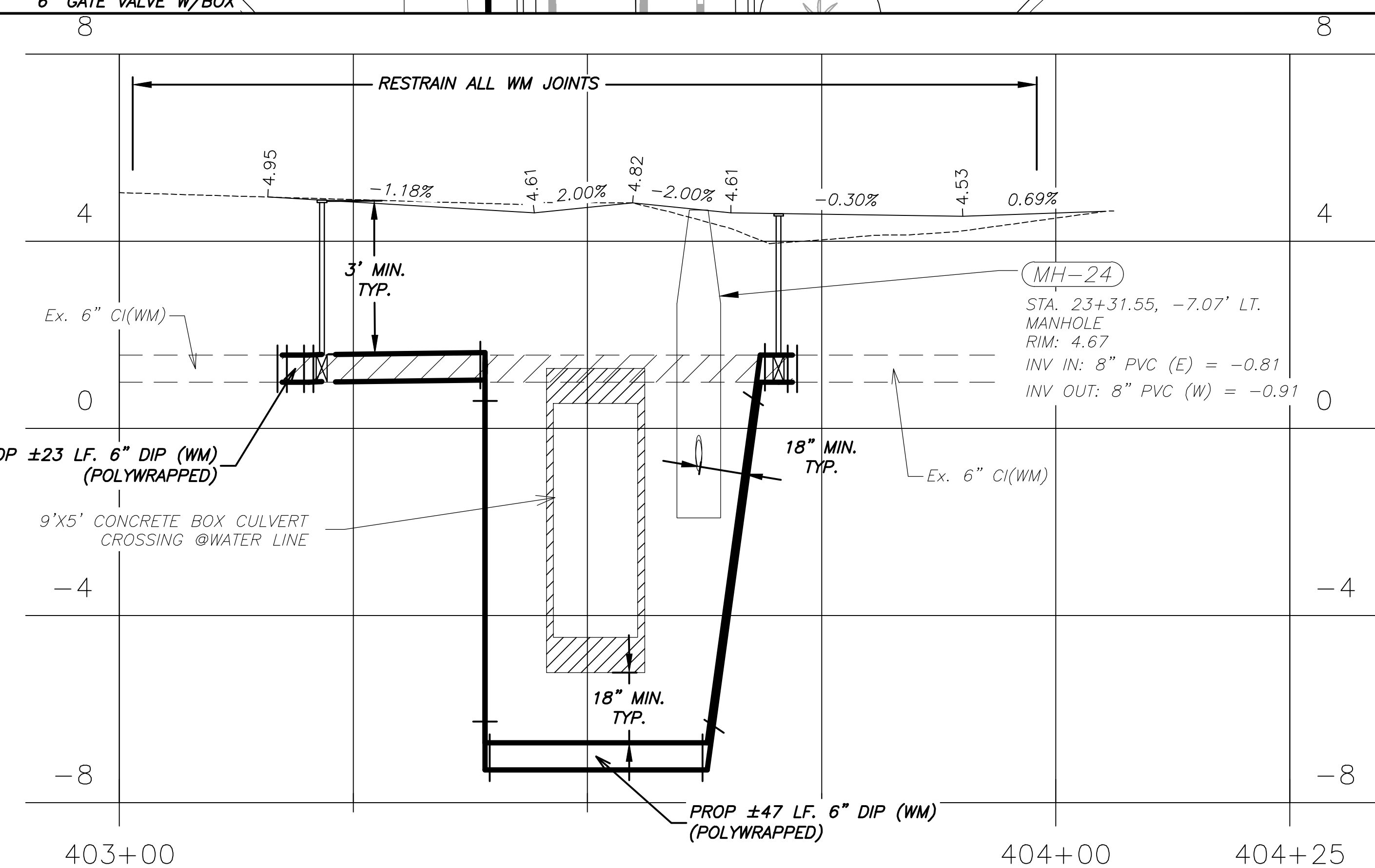
SW





HESPERIDES AVE PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

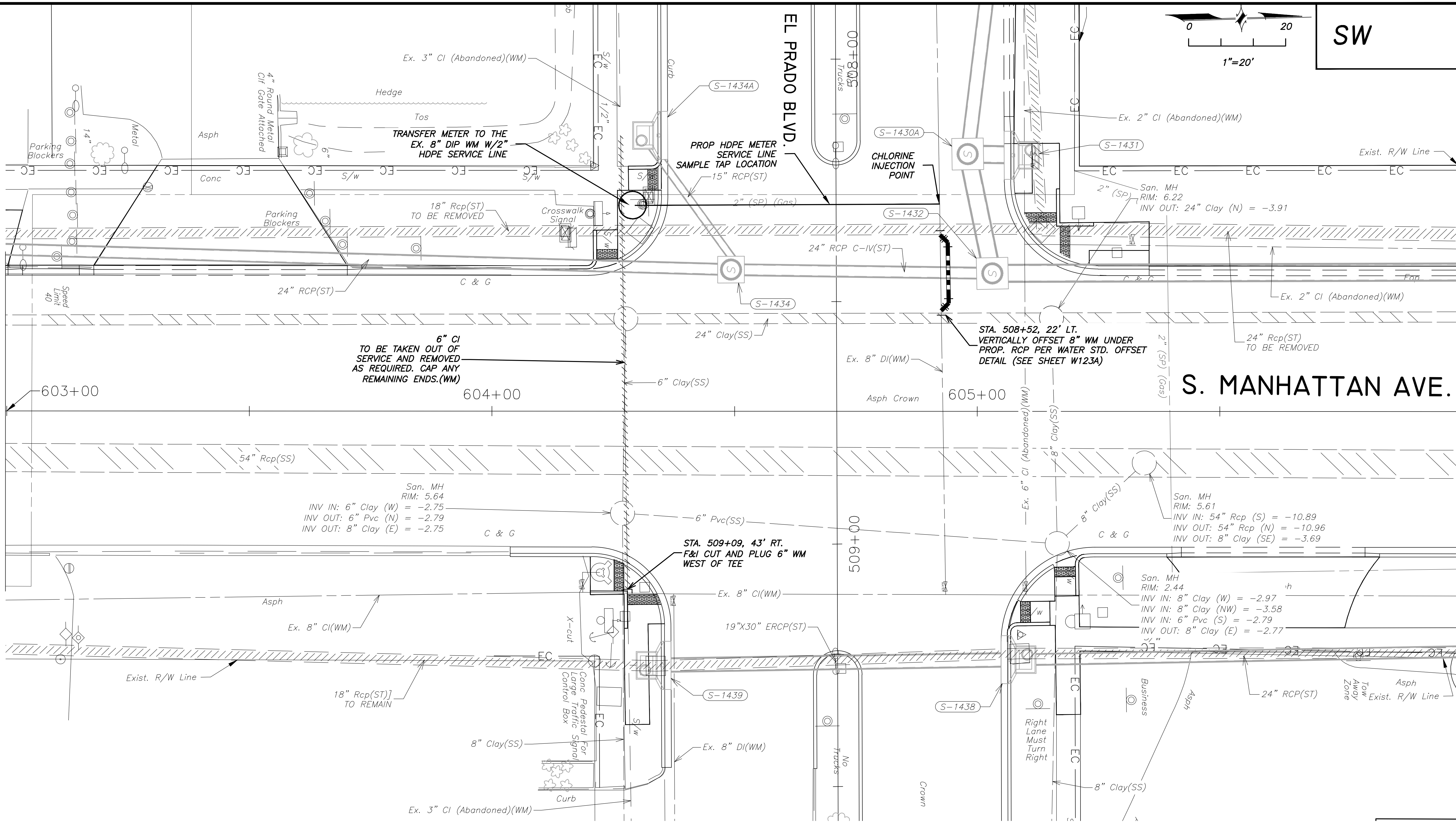
No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HESPERIDES AVE. - WATER MAIN
PLAN & PROFILE

SHEET W-120 OF W-125


0
20
1"=20'
EL PRADO BLVD.
S. MANHATTAN AVE.
MATCHLINE STA. 603+00.00
MATCHLINE STA. 606+00.00
603+00
604+00
605+00
508+00
509+00
Ex. 3" CI (Abandoned)(WM)
Hedge
Tos
4" Round Metal Clf Gate Attached
Metal
Asph
Parking Blockers
TRANSFER METER TO THE EX. 8" DIP WM W/2" HDPE SERVICE LINE
PROP HDPE METER SERVICE LINE SAMPLE TAP LOCATION
CHLORINE INJECTION POINT
S-1434A
S-1430A
S-1431
S-1432
S-1434
S-1439
S-1438
Ex. 2" CI (Abandoned)(WM)
Exist. R/W Line
Conc
15" RCP(ST)
2" (SP) (Gas)
18" Rcp(ST) TO BE REMOVED
Crosswalk Signal
San. MH
RIM: 6.22
INV OUT: 24" Clay (N) = -3.91
24" RCP C-IV(ST)
24" RCP(ST)
C & G
Speed Limit 40
24" Clay(SS)
STA. 508+52, 22' LT. VERTICALLY OFFSET 8" WM UNDER PROP. RCP PER WATER STD. OFFSET DETAIL (SEE SHEET W123A)
24" Rcp(ST) TO BE REMOVED
6" CI TO BE TAKEN OUT OF SERVICE AND REMOVED AS REQUIRED. CAP ANY REMAINING ENDS.(WM)
Ex. 8" DI(WM)
6" Clay(SS)
Asph Crown
Ex. 6" CI (Abandoned)(WM)
8" Clay(SS)
54" Rcp(SS)
San. MH
RIM: 5.64
INV IN: 6" Clay (W) = -2.75
INV OUT: 6" Pvc (N) = -2.79
INV OUT: 8" Clay (E) = -2.75
6" Pvc(SS)
San. MH
RIM: 5.61
INV IN: 54" Rcp (S) = -10.89
INV OUT: 54" Rcp (N) = -10.96
INV OUT: 8" Clay (SE) = -3.69
STA. 509+09, 43' RT. F&I CUT AND PLUG 6" WM WEST OF TEE
Ex. 8" CI(WM)
San. MH
RIM: 2.44
INV IN: 8" Clay (W) = -2.97
INV IN: 8" Clay (NW) = -3.58
INV IN: 6" Pvc (S) = -2.79
INV OUT: 8" Clay (E) = -2.77
19"X30" ERCP(ST)
X-cut
18" Rcp(ST)] TO REMAIN
Conc Pedestal For Large Traffic Signal Control Box
8" Clay(SS)
Ex. 8" DI(WM)
Curb
Ex. 3" CI (Abandoned)(WM)
No Trucks
Crown
Right Lane Must Turn Right
Business
24" RCP(ST)
Tow Away Zone
Asph

SW

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - WATER MAIN
PLAN & PROFILE

SHEET W-120B of W-125

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SW

0 20

1"=20'

SEE SHEET W-113 FOR WM CONTINUATION

MATCHLINE STA. 606+00.00

MATCHLINE STA. 609+00.00

S. MANHATTAN AVE.

W. VASCONIA ST.

Eop

24" Rcp(ST)

8" Clay(SS)

24" Clay(SS)

24" PVC(SS)

Traffic Signal

S-100

S-101

MH-12A

24" RCP C-IV(ST)

S-41

San. MH (Abandoned)
Buried Under Pavement
(NOT FOUND BY SURVEYOR)
RIM: 4.77
INV IN: 8" Clay (abandoned) (N) = -0.43

607+00

Asph Crown

608+00

S-101A

6'X5' CONCRETE BOX CULVERT(ST)

5'x3' Concrete Box Culvert(ST)

8" Clay (abandoned)(SS)

54" Rcp(SS)

S-102

S-102A

15" RCP(ST)

32+00

C & G

S-102B

S-103

Ex. 8" CI(WM)
TO BE REMOVED

Verizon Fiber Optic

Ex. 8" CI(WM)

6' Wood Board Fence

Exist. R/W Line

24" 6'X5' CONCRETE BOX CULVERT(ST)

Exist. R/W Line

S/w

STA. 607+80, 41' RT.
F&I 8" 90° MJ BEND

STA. 607+72, 41' RT.
F&I 8"X6" MJ ANCHOR TEE
2 6" GATE VALVE W/BOX
6" 45° MJ BEND

STA. 607+54, 35' RT.
F&I 8"X8" MJ TEE

STA. 607+51, 35' RT.
F&I 8" 45° VERT MJ BEND-ROLLED

PROP ±14 LF. 8" DIP (WM)
SAMPLE TAP LOCATION

STA. 607+44, 38' RT.
F&I 8" TEAM INSERTION VALVE W/BOX
8" 45° VERT MJ BEND-ROLLED
8" DIP NIPPLE INTO VALVE

STA. 607+54, 39' RT.
F&I 8" 45° VERT MJ BEND-ROLLED

STA. 607+56, 41' RT.
F&I 8" 45° VERT MJ BEND-ROLLED

STA. 608+03, 40' RT.
F&I 8" 90° MJ BEND

STA. 608+36, 37' RT.
F&I 8" TEAM INSERTION VALVE W/BOX
8" 45° VERT MJ BEND-ROLLED
8" DIP NIPPLE INTO VALVE

PROP ±98 LF. 8" DIP (WM)
SAMPLE TAP LOCATION

STA. 608+31, 40' RT.
F&I 8" 45° VERT MJ BEND-ROLLED

SEE SHEET W-113 FOR WM CONTINUATION

RESTRAIN ALL WM JOINTS

PROPOSED GRADE
@ ALIGNMENT

-0.38%

1.26%

-0.61%

0.30%

5.09

5.42

5.18

5.27

3' MIN.
TYP.

Ex. 8" CI(WM)
TO BE REMOVED

Ex. 8" CI(WM)

8" TEAM INSERTION VALVE W/BOX

Ex. 8" CI(WM)

PROP ±91 LF. 8" DIP (WM)
(POLYWRAPPED)

6'X5' CONCRETE BOX CULVERT
CROSSING @WATER LINE

San. MH
RIM: 4.79
INV IN: 8" Clay (SE) = -4.07
INV IN: 54" Rcp (S) = -11.08
INV OUT: 54" Rcp (N) = -11.16
INV IN 8" PVC (SE) = -6.79

54" Rcp(SS)

CENTER 16' MIN JOINTLESS
8" DIP UNDER PROP. STORM BOX

18" MIN.
TYP.

4

0

-4

-8

606+00

607+00

608+00

609+00

S. MANHATTAN AVE. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - WATER MAIN
PLAN & PROFILE

SHEET W-121 of W-125

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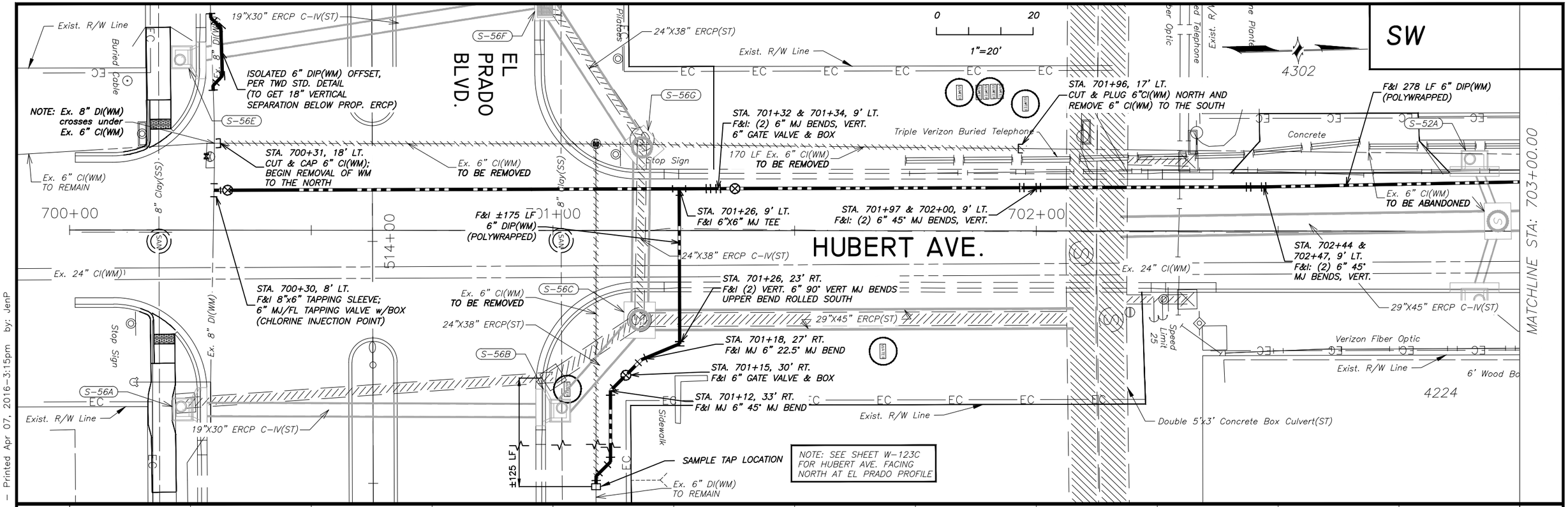

HUBERT AVE. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HUBERT AVENUE - WATER MAIN
PLAN & PROFILE

SHEET W-122
of W-125

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SW

6'X5' CONCRETE BOX CULVERT(ST)
MH-10
8" PVC(SS)
STA. 703+95, 21' LT.
F&I 6" MJ 45° VERT BEND
STA. 703+74, 21' LT.
F&I 6" MJ 45° VERT BEND
S-52
S-48A
S-48
STA. 704+02, 21' LT.
F&I 6" MJ 45° VERT BEND
STA. 703+68, 21' LT.
F&I 6" MJ TEE
(ROLLED DOWN)
STA. 704+07, 21' LT.
F&I 6" MJ 6" 45° MJ BEND
4302
4301
4300
STA. 704+12, 16' LT.
F&I 6" MJ 6" 45° VERT BEND
Ex. 6" CI(WM)
TO BE ABANDONED
STA. 703+57, 16' LT.
CUT AND CAP 6" CI WM
Exist. R/W Line
Concrete
4' Clf
Concrete
6' Wood Board
STA. 704+14, 16' LT.
F&I SOLID SLEEVE
6" GATE VALVE W/BOX
(SAMPLE TAP LOCATION)
Buried Gas Unidentified Size and Type
STA. 703+65, 11' LT.
F&I: 6"x6" ANCHOR TEE
6" GATE VALVE W/BOX
(SAMPLE TAP LOCATION)
Triple Verizon Buried Telephone
Verizon Fiber Optic
0 20
1"=20'
Verizon Fiber Optic
STA. 704+18, 16' LT.
F&I 6" LINE STOP
W/DEADMAN (FOR SHUTDOWN)
Ex. 6" CI(WM)
HUBERT AVENUE
29"X45" ERCP(ST)
29"X45" ERCP(ST)
36" RCP(ST)
704+00
705+00
PROP. ±55 LF 6" DIP(WM)
(POLYWRAPPED)
STA. 703+33, 11' LT.
BEGIN HORIZONTAL
DEFLECTION
S-55
S-47
24" CI(WM)
24" CI(WM)
37+00
PROP. ±70 LF 6" DIP(WM)
(POLYWRAPPED)
54" RCP(ST)
S-54A
Verizon Fiber Optic
S-50A
VASCONIA ST.
FOR WM CONTINUATION
SEE SH. W-115
Power
Pole
Tripple 8"
Crape
Myrtle
4' Clf
4' Clf
4' Clf
S-54
S-50
4224
4223
4224
Exist. R/W Line
Concrete
SEE SHEET W-122
MATCHLINE STA: 703+00.00

8

PROP. WM @ 11' LT.
PROP. WM @ 21' LT.

8

0.69%
-0.30%
2.00%
-2.00%
0.39%
0.47%
6.01
5.90
6.14
5.90
6.00
6.61
36" RCP(ST)
Ex. 6" CI(WM)
(TO REMAIN)
INST. 6" LINE STOP
11' LT: PROP. 70 LF
6" DIP(WM)
(POLYWRAPPED)
3' MIN.
TYP.
4' MIN.
OVER TEE
PROP ±55 LF. 6" DIP (WM)
4
4
29"X45" ERCP(ST)
24" CI(WM)
0
0
S-47
STA. 703+84.60, -3.47' LT.
FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 54" RCP (E) = -1.60
INV EL: 48"X76" HOLE W/BULKHEAD FOR FUTURE CONNECTION (N) = -0.50
INV EL: 36" RCP (S) = -0.50
INV EL: 6'X5' CONCRETE BOX CULVERT (W) = -1.60
18" MIN.
6" MIN.
S-55
STA. 703+57.85, -3.09' LT.
FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 29"X45" ERCP (S) = -0.16
INV EL: 36" RCP (N) = -0.16
8" PVC(SS)
-4
-4
STA. 703+45, 11' LT.
STA. 704+18, 23' LT.
24" CI(WM)
RESTRAIN ALL WM JOINTS
-8
-8
703+00
704+00
705+00
706+00

HUBERT AVE. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS
3		
2		
1	4/7/2016	ADDENDUM 3

No.	DATE	REVISIONS
6		
5		
4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HUBERT AVENUE - WATER MAIN
PLAN & PROFILE

SHEET W-123 of W-125

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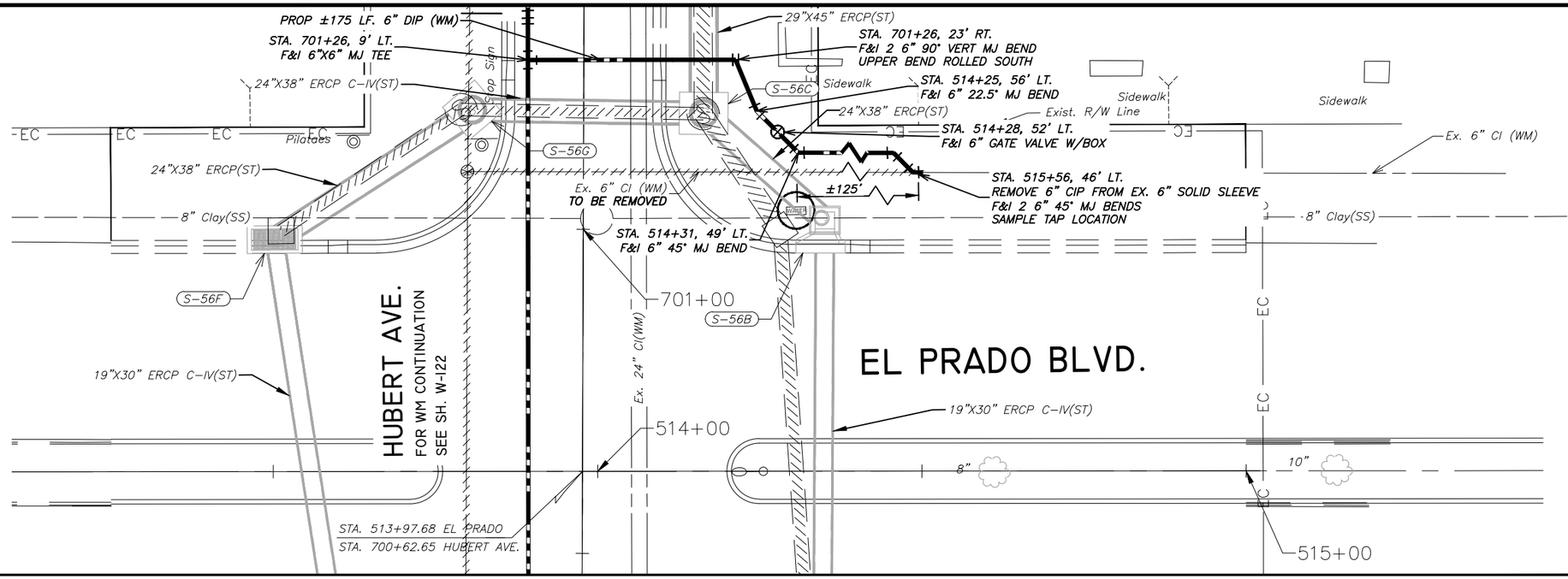

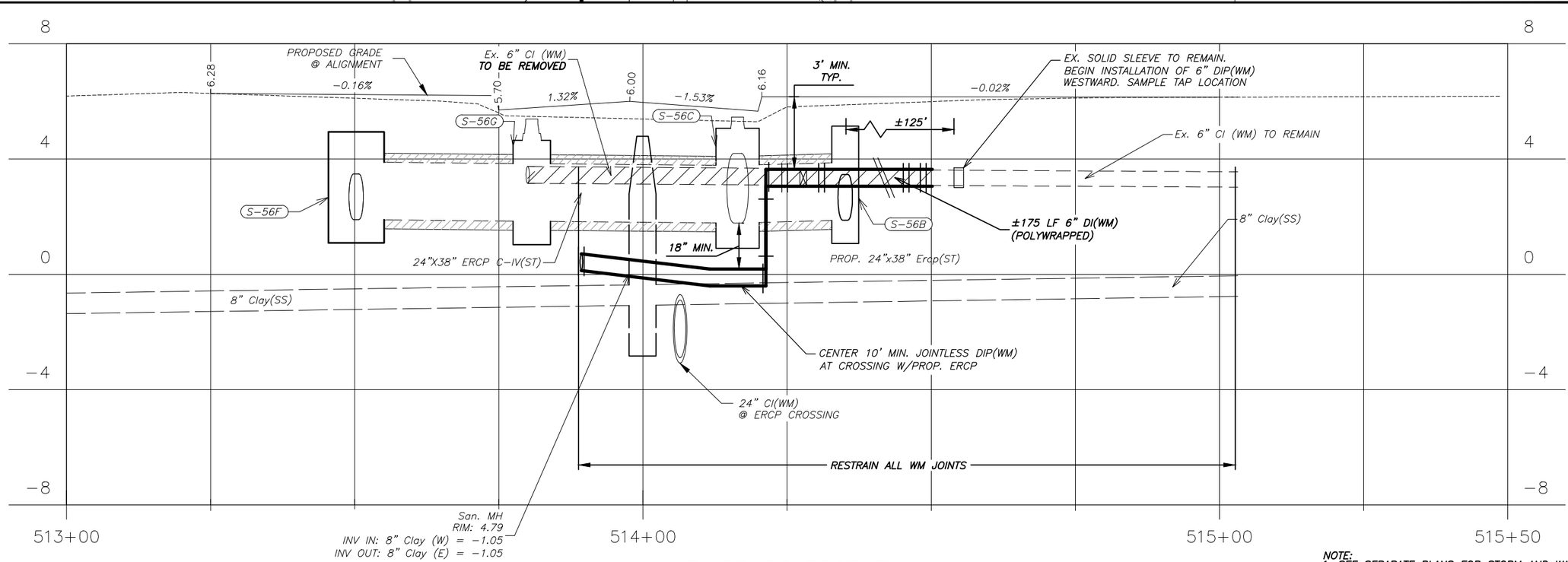

EL PRADO PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD - WATER MAIN
PLAN & PROFILE

SHEET W-123C of W-125

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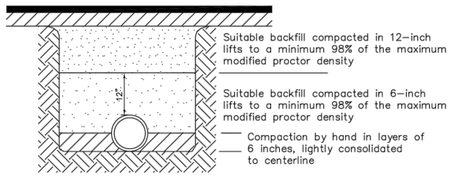
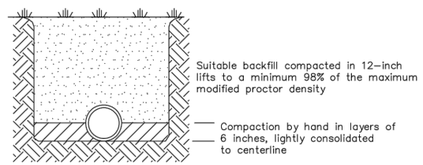


NOTES:

1. Type 2 trench is defined as a flat–bottom trench. Lightly consolidate backfill to centerline of pipe.
2. This standard shall be utilized in the absence of specific standards. The standard of the agency controlling the Right–of–Way shall govern unless otherwise directed by the Engineer.
3. Suitable backfill shall be defined as material free from cinders, ashes, refuse, clay, organic matter, boulders, rocks or stones, or other material that in the opinion of the Engineer is unsuitable.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TYPICAL TRENCHING, BEDDING AND BACKFILL DETAIL FOR PAVED AREAS	2.01

K:\Standard Details 02\202

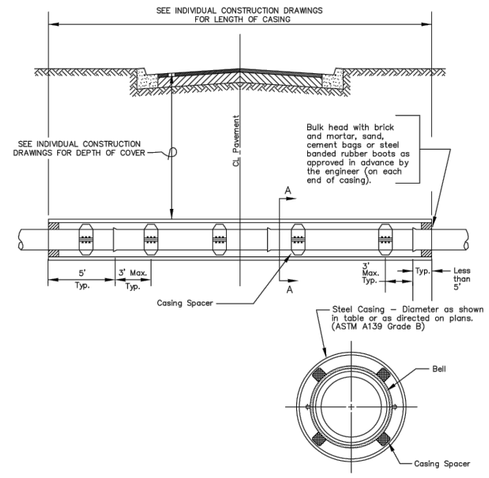


NOTES:

1. Type 2 trench is defined as a flat–bottom trench. Lightly consolidate backfill to centerline of pipe.
2. This standard shall be utilized in the absence of specific standards. The standard of the agency controlling the Right–of–Way shall govern unless otherwise directed by the Engineer.
3. Suitable backfill shall be defined as material free from cinders, ashes, refuse, clay, organic matter, boulders, rocks or stones, or other material that in the opinion of the Engineer is unsuitable.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TYPICAL TRENCHING,BEDDING AND BACKFILL DETAIL FOR NON–PAVED AREAS	2.02

K:\Standard Details 02\203



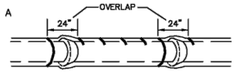
SECTION A – A

D.I.P. Carrier Pipe (P.O.) Nominal Diameter (Inches)	Casing O.D. (Inches)	Thickness
2	4	1/4"(.250)
4	12	1/4"(.250)
6	14	9/32"(.28125)
8	16	9/32"(.28125)
12	20	11/32"(.34375)
16	24	13/32"(.40625)
20	30	15/32"(.46875)
24	36	17/32"(.53125)
30	42	9/16"(.5625)
36	48	9/16"(.5625)

NOTES: 1. Pipelines with bends less than 20' from casing entrance shall be secured by both retainer glands and thrust blocks.
2. Casing pipe sizes listed are for push–on joint carrier pipe only.
3. Two spacers per joint minimum spaced as shown or as directed by the Engineer.

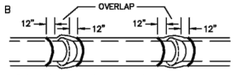
TAMPA WATER DEPARTMENT	APPROVED	REVISED	JACKING & BORING FOR PAVEMENT CROSSING	2.03

METHOD A



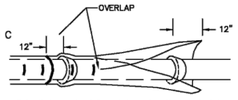
Polyethylene tube is cut into lengths approximately two feet longer than the pipe section and placed around it. After the pipe joint is assembled, the polyethylene tube is made to overlap the joint and the overlap secured in place. Since the tube is considerably larger than the barrel of pipe, it is made to fit snugly by folding over at the top and securing with tape every 24" along the pipe section.

METHOD B



Polyethylene tube is cut one foot shorter than the length of the pipe section. After placement of the pipe, it is folded and secured snugly overall. A three foot length of polyethylene tube placed over the end of the preceeding section is then pulled in place over the joint after assembly and secured.

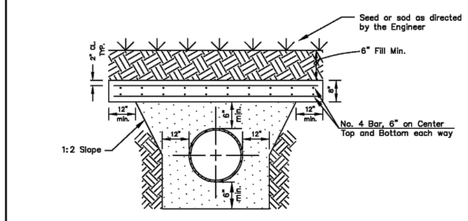
METHOD C



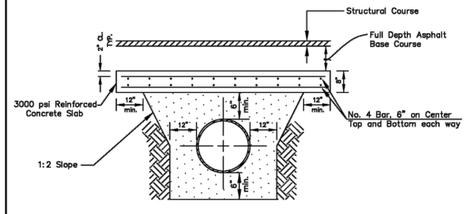
Polyethylene sheet is cut to a length two feet longer than the pipe section. The sheet is wrapped around the pipe so that it overlaps circumferentially over the top quadrant of the pipe, then secured. After joint assembly, the surplus length of polyethylene film is secured around the joint, providing an overlap of each joint. Tape at each joint and at 3' intervals in between.

NOTES: 1. Use blue polyethylene film and tape only.
2. Polyethylene film shall be a minimum of 8 mil. thickness.
3. Spiral Wrap not required with polywrap.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	POLYETHYLENE ENCASEMENT INSTALLATION DETAIL	2.05
	Sept. 2011	JRD 4/09 JRD 9/2011		



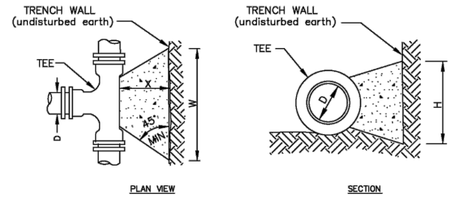
GRASSED SECTION



ROADWAY SECTION

NOTES:
1. Structural course and base course requirement shall be established by the agency having jurisdiction.
2. Shock pads for mains too shallow for the above configuration shall be designed on a case–by–case basis.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	REINFORCED CONCRETE SHOCK PAD (FOR COVER LESS THAN 2.5')	2.06
	Sept. 2011			



DIMENSIONS OF THRUST BLOCKS FOR GOOD SOIL

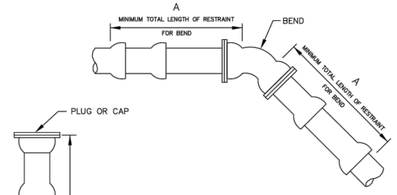
	SIZE (D)	4"	6"	8"	12"	16"	20"	24"
TEES	THRUST (lbs.)	3439	7104	12,223	26,002	45,180	69,624	99,330
	BEARING AREA (ft^2)	2.58	5.33	9.17	19.50	33.89	52.22	74.50
	CONCRETE ($yds.^3$)	0.042	0.126	0.285	0.891	1.811	3.005	4.594
	H (ft.)	1.3	1.9	2.5	3.6	4.8	5.9	7.0
	W (ft.)	2.0	2.8	3.7	5.4	7.1	8.9	10.6
	X (ft.)	1.0 Min.	1.4 Min.	1.9 Min.	2.7 Min.	3.0 Min.	3.0 Min.	3.0 Min.

NOTES:
1. Size (D), shall be the branch size of tees.
2. Concrete shall be kept at sufficient distance from joint for removal of all joint accessories including bolts.
3. All bearing surfaces to be carried to undisturbed soil.
4. This table shows the minimum size thrust blocks for soil bearing pressure of 2000 psf and an internal pressure of 190 psi.
*5. Cover to T.O.P. is 3 feet for 12" and smaller mains; 4 feet for 16" and larger mains. poor and wet soil (silty soils, clay, muck and peat) will require larger thrust blocks.
6. Tees shall be completely polywrapped prior to pouring thrust block.

*WARNING

TAMPA WATER DEPARTMENT	APPROVED	REVISED	THRUST BLOCKS FOR TEES	2.09
	Sept. 2011			

K:\Standard Details 02\211



Fitting	RESTRAIN "A" (LF) 4"	6"	8"	12"	16"	20"	24"	30"	36"
11–1/4°	3	4	6	8	9	10	12	15	17
22–1/2°	6	9	12	16	17	21	25	30	35
45°/Offset	13	18	24	34	36	44	52	62	73
90°	31	44	58	82	87	106	125	151	176
Plug/Cap	55	78	102	143	143	174	204	245	285

A=Minimum footage of pipe to be restrained.

NOTES: 1. This table is based on:
a) maximum test pressure of 190 psi
b) laying condition type 2 (see Details 2.01 and 2.02)
c) poor soil conditions
d) using D.I.P.
e) 3 feet of cover for 12" and smaller mains; 4 feet of cover for 16" and larger mains
f) Horizontal bends only – Engineer to submit calculations for vertical restraints
2. For polywrapped D.I.P., multiply the footage by 1.25
3. For PVC pipe, multiply footage by 1.2.
4. Restrained pipe shall be manufactured restrained pipe, push–on restraints or mechanical joint pipe restrained by Megalug or equivalent.
5. Any additional fittings within the restrained section shall be restrained accordingly.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	RESTRAINED JOINT STANDARD FOR BENDS, PLUGS, AND CAPS	2.11

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)

WATER DETAILS (1 OF 4)

SHEET W-124 OF W-125

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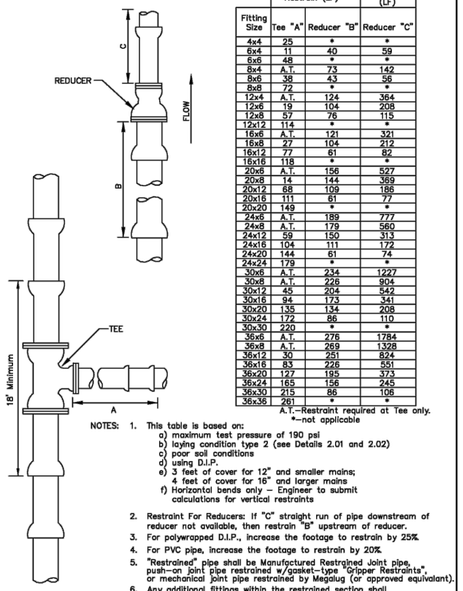
SW



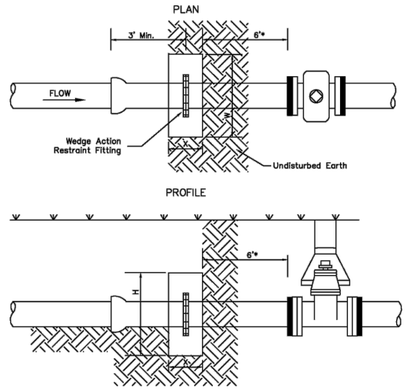
Fitting Size	Restrain (LF) Tee "A"	Reducer "B"	Unrestrained Straight Run (LF) Reducer "C"
4x4	25	*	*
6x4	11	40	59
6x6	48	*	*
8x4	A.T.	73	142
8x6	38	43	56
8x8	72	*	*
12x4	A.T.	124	364
12x6	19	104	208
12x8	57	76	115
12x12	114	*	*
16x6	A.T.	121	321
16x8	27	104	212
16x12	77	61	82
16x16	118	*	*
20x6	A.T.	156	527
20x8	14	144	369
20x12	68	109	186
20x16	111	61	77
20x20	149	*	*
24x6	A.T.	189	777
24x8	A.T.	179	560
24x12	59	150	313
24x16	104	111	172
24x20	144	61	74
24x24	179	*	*
30x6	A.T.	234	1227
30x8	A.T.	226	904
30x12	45	204	542
30x16	94	173	341
30x20	135	134	208
30x24	172	86	110
30x30	220	*	*
36x6	A.T.	276	1784
36x8	A.T.	269	1328
36x12	30	251	824
36x16	83	226	551
36x20	127	195	373
36x24	165	156	245
36x30	215	86	106
36x36	261	*	*

A.T.–Restraint required at Tee only.
*–not applicable

NOTES:
1. This table is based on:
   a) maximum test pressure of 190 psi
   b) laying condition type 2 (see Details 2.01 and 2.02)
   c) poor soil conditions
   d) using D.I.P.
   e) 3 feet of cover for 12" and smaller mains; 4 feet of cover for 16" and larger mains
   f) Horizontal bends only – Engineer to submit calculations for vertical restraints
2. Restraint For Reducers: If "C" straight run of pipe downstream of reducer not available, then restrain "B" upstream of reducer.
3. For polywrapped D.I.P., increase the footage to restrain by 25%.
4. For PVC pipe, increase the footage to restrain by 20%.
5. "Restrained" pipe shall be Manufactured Restrained joint pipe, push-on joint pipe restrained w/gasket-type "Gripper Restraints", or mechanical joint pipe restrained by Megalug (or approved equivalent).
6. Any additional fittings within the restrained section shall be restrained accordingly.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	RESTRAINED JOINT STANDARD FOR TEES AND REDUCERS	2.12
	Sept., 2011			

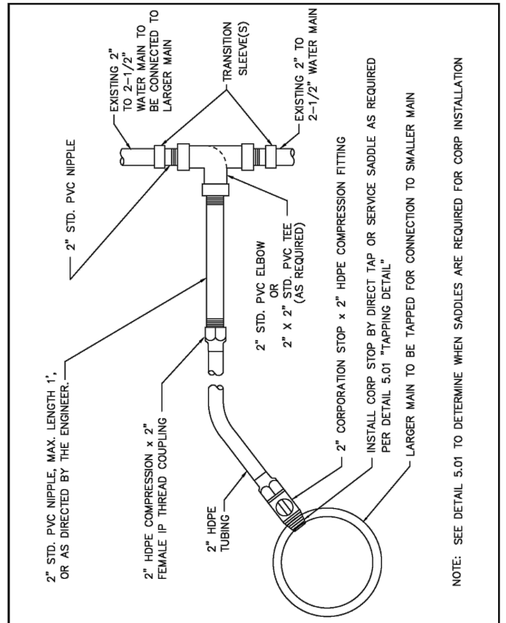
STD/OTHER/DEADMAN



SIZE (D) / THRUST (lbs.)	4" 3439	6" 7104	8" 12,223	12" 26,002	16" 45,180	20" 69,624	24" 99,330
BEARING AREA (ft^2)	2.58	5.33	9.17	19.50	33.89	52.22	74.50
CONCRETE ($yds.^3$)	0.15	0.31	0.71	1.51	3.29	5.07	7.23
H (ft.)	1.6	2.4	3.1	4.5	6.0	7.4	8.8
W (ft.)	1.6	2.4	3.1	4.5	6.0	7.4	8.8
X (ft.)	1.5 Min.	1.5 Min.	2.0 Min.	2.0 Min.	2.5 Min.	2.5 Min.	2.5 Min.

NOTES:
1. Concrete shall be kept at sufficient distance from joint for removal of all joint accessories including bolts.
2. All bearing surfaces to be carried to undisturbed soil.
3. This table shows the minimum size thrust blocks for soil bearing pressure of 2000 psf and an internal pressure of 190 psi. Cover to T.O.P. is 3 feet for 12" and smaller mains; 4 feet for 16" and larger mains.
4. Poor and wet soil (silty soils, clay, muck and peat) will require larger thrust blocks, as directed by the Engineer.
5. Fittings shall be completely polywrapped prior to pouring thrust blocks.
*6. Closest distance to valve for deadman to remain effective.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	DEADMAN THRUST BLOCK	2.12A
	Sept. 2011			



NOTE: SEE DETAIL 5.01 TO DETERMINE WHEN SADDLES ARE REQUIRED FOR CORP INSTALLATION

TAMPA WATER DEPARTMENT	APPROVED	REVISED	"TAPPED" CONNECTION FROM DI,CI, OR PVC PIPE TO <4" WATER MAINS	2.13
	Sept. 2011			

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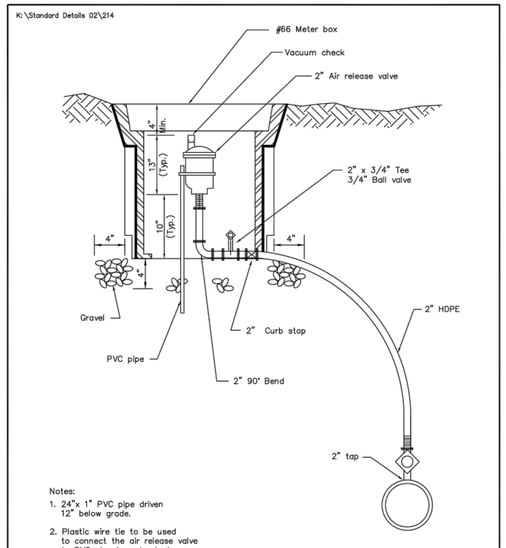

Notes:
1. 24"x 1" PVC pipe driven 12" below grade.
2. Plastic wire tie to be used to connect the air release valve to PVC pipe in order to keep the valve in the vertical position.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	SUB-SURFACE AIR RELEASE VALVE	2.14

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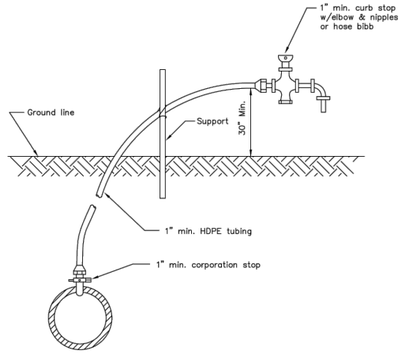

Notes:
1. Water outlet shall be held up off the ground so as not to interfere with the sampling process.
2. Corporation stop to be removed and plugged after operation.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TEMPORARY SAMPLE TAP INSTALLATION	2.17

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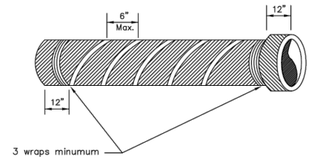
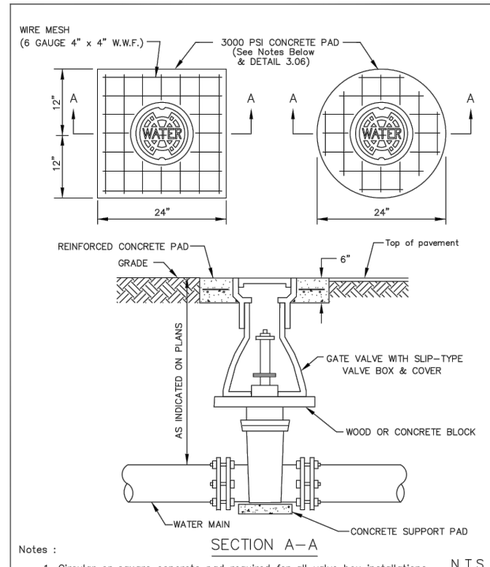


SPIRAL WRAP

NOTES:
1. To ensure proper adhesion, each pipe run shall be wrapped with a continuous run of tape.
2. All tape shall be min. 2" blue vinyl tape for potable water.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	PIPE IDENTIFICATION DETAIL D.I.P. ONLY	2.19



SECTION A–A

Notes :
1. Circular or square concrete pad required for all valve box installations. N.T.S.
2. Cast iron valve boxes shall be firmly supported and centered and plumb over the operating nut of the valve. Valve box cover shall be flush with the surface of the finished pavement, or grade or at such other level as may be directed by the Department.
3. "Blue" Water Valve locate markers (curb markers) required for all valve installations.
4. Embed bronze valve info disk into concrete valve box collar, per Detail 3.06.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	VALVE INSTALLATION W/VALVE BOX & PAD FOR DI OR CI PIPE	3.01
	Sept. 2015			

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)

WATER DETAILS (2 OF 4)

SHEET W-124A OF W-125

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SW

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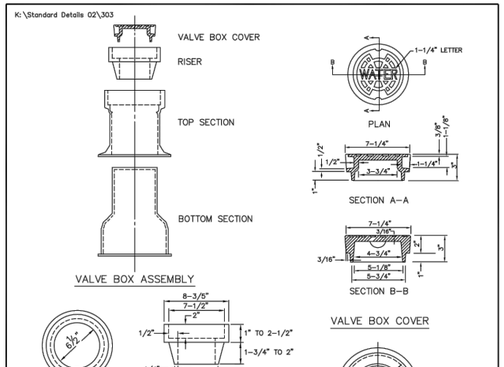

TOP SECTION	SIZE	A
	10"	10"
	16"	16"

BOTTOM SECTION	SIZE	A	B
	15"	15"	6-1/2"
	24"	24"	15-1/2"
	36"	36"	27-1/2"

TAMPA WATER DEPARTMENT	APPROVED	REVISED	VALVE BOX	3.03

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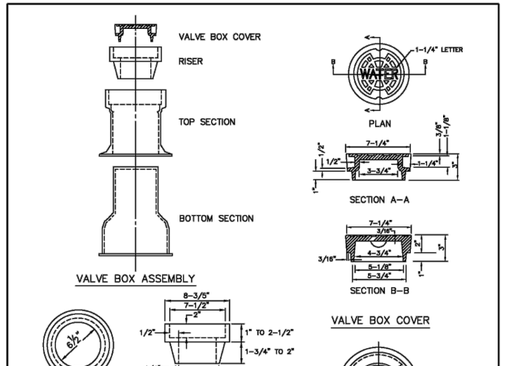
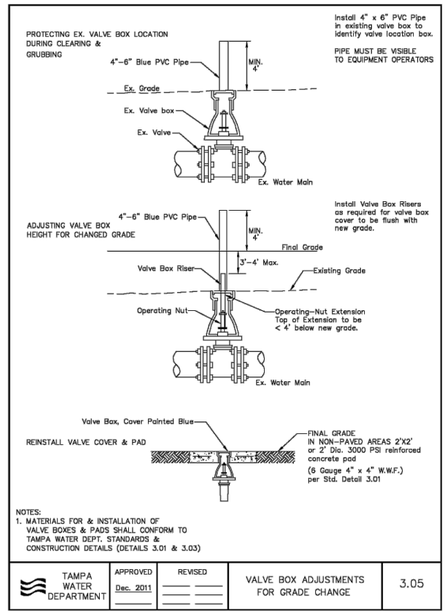


TOP SECTION	SIZE	A
	10"	10"
	16"	16"

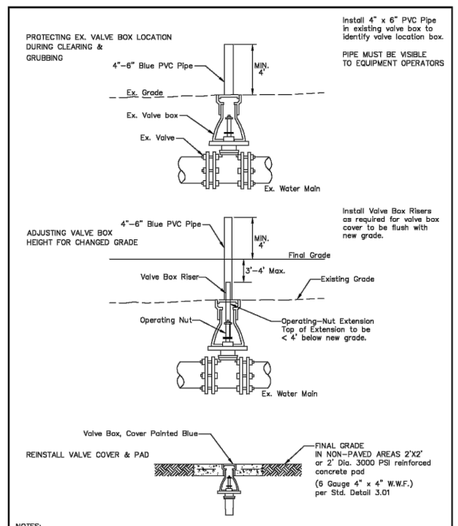
BOTTOM SECTION	SIZE	A	B
	15"	15"	8-1/2"
	24"	24"	15-1/2"
	36"	36"	27-1/2"

TAMPA WATER DEPARTMENT	APPROVED Sept. 2011	REVISED	VALVE BOX, SLIP-TYPE	3.04



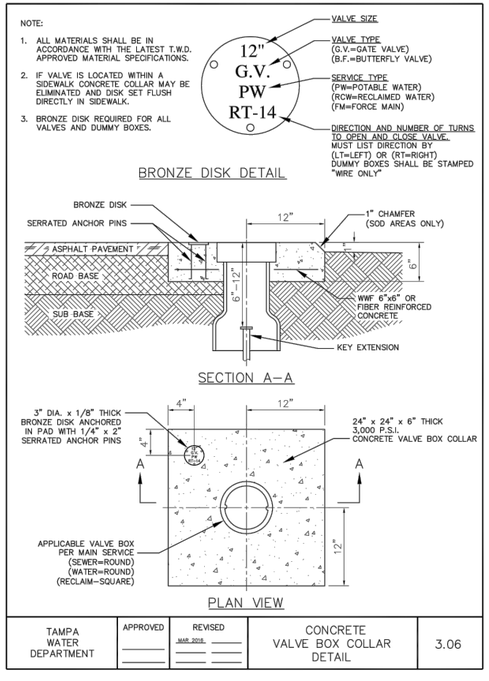
NOTES:
1. MATERIALS FOR & INSTALLATION OF VALVE BOXES & PADS SHALL CONFORM TO TAMPA WATER DEPT. STANDARDS & CONSTRUCTION DETAILS (DETAILS 3.01 & 3.03)

TAMPA WATER DEPARTMENT	APPROVED Dec. 2011	REVISED	VALVE BOX ADJUSTMENTS FOR GRADE CHANGE	3.05



NOTES:
1. MATERIALS FOR & INSTALLATION OF VALVE BOXES & PADS SHALL CONFORM TO TAMPA WATER DEPT. STANDARDS & CONSTRUCTION DETAILS (DETAILS 3.01 & 3.03)

TAMPA WATER DEPARTMENT	APPROVED Dec. 2011	REVISED	VALVE BOX ADJUSTMENTS FOR GRADE CHANGE	3.05



TAMPA WATER DEPARTMENT	APPROVED	REVISED MAR 2016	CONCRETE VALVE BOX COLLAR DETAIL	3.06

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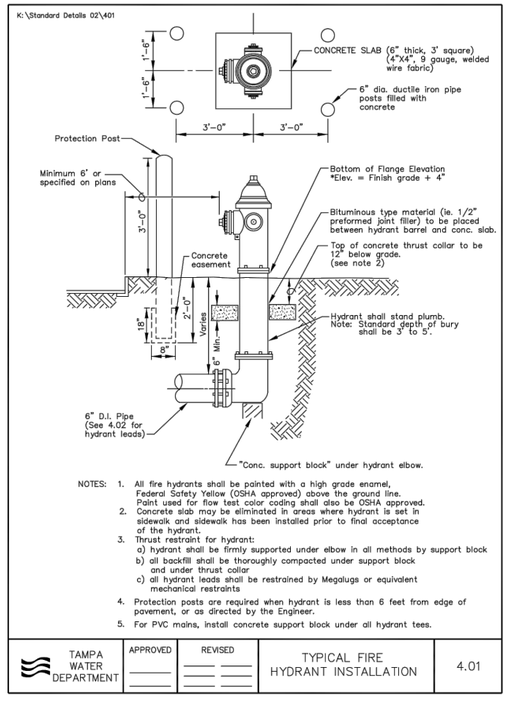

NOTES:
1. All fire hydrants shall be painted with a high grade enamel, Federal Safety Yellow (OSHA approved) above the ground line. Paint used for flow test color coding shall also be OSHA approved.
2. Concrete slab may be eliminated in areas where hydrant is set in sidewalk and sidewalk has been installed prior to final acceptance of the hydrant.
3. Thrust restraint for hydrant:
   a) hydrant shall be firmly supported under elbow in all methods by support block
   b) all backfill shall be thoroughly compacted under support block and under thrust collar
   c) all hydrant leads shall be restrained by Megalugs or equivalent mechanical restraints
4. Protection posts are required when hydrant is less than 6 feet from edge of pavement, or as directed by the Engineer.
5. For PVC mains, install concrete support block under all hydrant tees.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TYPICAL FIRE HYDRANT INSTALLATION	4.01

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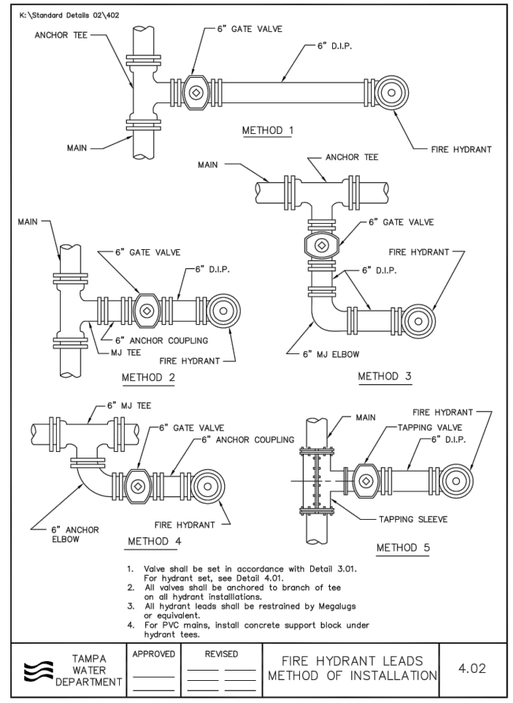

1. Valve shall be set in accordance with Detail 3.01. For hydrant set, see Detail 4.01.
2. All valves shall be anchored to branch of tee on all hydrant installations.
3. All hydrant leads shall be restrained by Megalugs or equivalent.
4. For PVC mains, install concrete support block under hydrant tees.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	FIRE HYDRANT LEADS METHOD OF INSTALLATION	4.02

No.	DATE	REVISIONS
3		
2		
1	4/7/2016	ADDENDUM 3

No.	DATE	REVISIONS
6		
5		
4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

WATER DETAILS (3 OF 4)

SHEET W-124B
OF W-125

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SW

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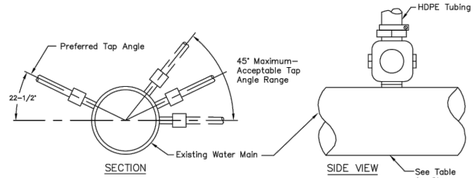
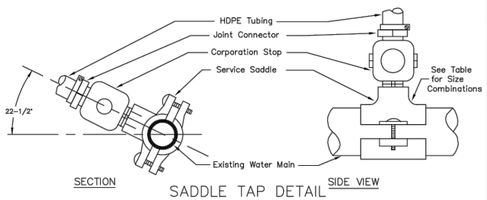


DIRECT TAP DETAIL



SADDLE TAP DETAIL

PIPE	SIZE	CORPORATION TAP SIZE	
		1"	2"
DI/CI	12"	DT	DT
	8"	DT	SS
	6"	DT	SS
	4"	SS	SS
PVC	2",2–1/2"	SS	NA
	8" C–900	SS	SS
	6" C–900	SS	SS
	2"–SDR21	SS	NA
OTHER*	12"	SS	SS
	10"	SS	SS
	8"	SS	SS
	6"	SS	SS
	4"	SS	NA
	3"	SS	NA
	2",2–1/2"	SS	NA

LEGEND

DT– Direct Tap Can be Allowed
SS– Service Saddle is Required
NA– Not Allowed
*Asbestos Cement, Steel, Galvanized Iron Pipe, Non Std PVC, etc.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TAPPING DETAIL FOR 3/4", 1", 1–1/2" & 2" CORPORATION STOP	5.01

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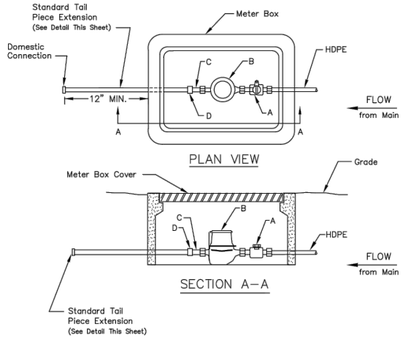
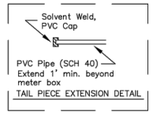


METER INSTALLATION –PARTS LIST–

ITEM	DESCRIPTION
A	HDPE CJ X METER, SWIVEL NUT
B	METER
C	BRASS METER COUPLING
D	PVC FIP X WELD COUPLING



* All PVC pipe and fittings shall be SCH 80 except for standard tail piece section which will be SCH 40.
NOTE: Parts list is for standard installation; actual parts required may vary as directed by the Engineer.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	SINGLE METER SET DETAIL 3/4", 1", 1–1/2", 2"	5.02

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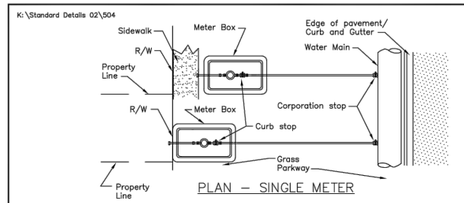

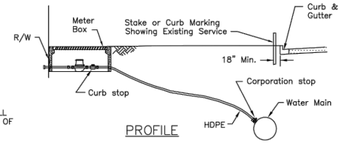

DO NOT INSTALL METER WITHIN SIDEWALK. WHEN SIDEWALK EXISTS, INSTALL METER ON STREET SIDE OF SIDEWALK OR WHERE DIRECTED BY ENGINEER.

SINGLE METER SIZE (inches)	SERVICE LINE SIZE (inches) (0–15')
3/4	1
1	1
1–1/2	2
2	2

DUAL METER SIZE (inches)	SERVICE LINE SIZE (inches) (0–15')
3/4	2
1	N/A
1–1/2	N/A
2	N/A

TAMPA WATER DEPARTMENT	APPROVED	REVISED	SINGLE & DUAL METERED SERVICE – SHORT SIDE 3/4", 1", 1–1/2" AND 2"	5.04

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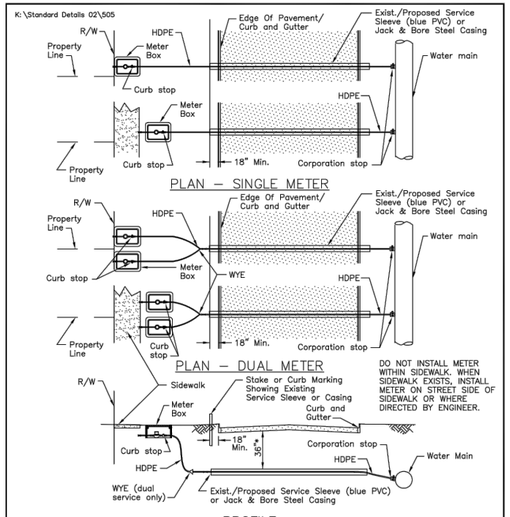


CASING SPECIFICATION:
1. If pushed–SCH 40 steel pipe (min.)
2. If layed in open trench–SCH 40 steel pipe or SCH 80 PVC solvent weld pipe.

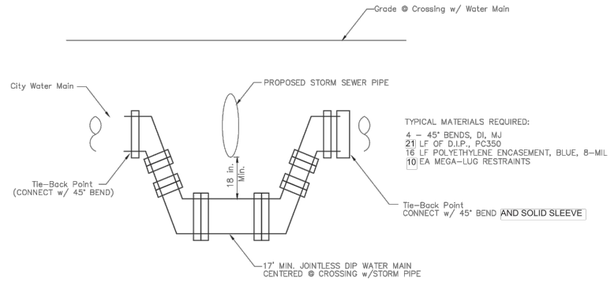
*36" min. or greater if required by appropriate agency.
**These line size requirements are also for 2" S.D.C.V.s

SINGLE METER SIZE (inches)	SERVICE LINE SIZE (inches) (>15'–80')	(>80'–150')	CASING SIZE (inches)
3/4	1	2	4
1	2	2	4
1–1/2	2	2	4
2**	4" D.I.P.	4" D.I.P.	12

DUAL METER SIZE (inches)	SERVICE LINE SIZE (inches) (>15'–80')	(>80'–150')	CASING SIZE (inches)
3/4	2	2	4
1	2	4" D.I.P.	4 – 12
1–1/2	N/A	N/A	N/A
2	N/A	N/A	N/A

TAMPA WATER DEPARTMENT	APPROVED	REVISED	SINGLE & DUAL METERED SERVICE – LONG SIDE 3/4", 1", 1–1/2" AND 2"	5.05

Offset of City X" Water Main @ Sta xx+xx, for Prop. CITY Storm Pipe



"OFFSET" CONSTRUCTION DETAIL (nts) (WATER)

CONSTRUCTION NOTES:

1. RESTRAIN ALL JOINTS OF PIPE AND FITTINGS INSTALLED
2. RESTRAIN ALL JOINTS OF EXISTING WATERMAIN PIPE WITHIN 30 ft. OF THE TIE–BACK POINTS
3. POLYWRAP ALL NEW D.I. PIPE & FITTINGS INSTALLED

WATER MAIN DIVERSION/OFFSET NOTES:

1. PRIOR TO STARTING ANY WORK CONTRACTOR SHALL SCHEDULE A PRE–CONSTRUCTION MEETING THROUGH CITY OF TAMPA WATER CONTRACT ADMIN/INSPECTION TEAM AT (813) 635–3400 TO DISCUSS PROCEDURES FOR SHUTTING DOWN THE WATER LINE. ITEMS TO DISCUSS AT MEETING INCLUDE: 1)WHAT VALVES DOES THE CONTRACTOR PROPOSE TO CLOSE? 2) ARE THESE VALVES OPERABLE? 3) WHAT IS PLAN "B" IF THESE VALVE DO NOT WORK (SCHEDULE A PRE–VALVE EXERCISE) ADDITIONAL LINE STOPS MAY BE NECESSARY.
2. TEST AND DISINFECT NEW OFFSET WATER MAIN SEGMENTS AND PULL AT LEAST ONE BACTERIOLOGICAL TEST.
3. TURN ON THE WATER AND COMPLETE A VISUAL INSPECTION ON THE TWO TOP 45° MJ FITTINGS TO INSURE NO LEAKS.
4. FLUSH GENTLY FROM THE NEAREST FIRE HYDRANT TO INSURE NO SEDIMENTS OR DIRTY WATER.
5. COMPLETE BACK FILL WITH COMPACTION AND PROCURE DENSITY TESTS.
6. AS–BUILT THE NEW ELEVATIONS AND VERIFY THE SEPARATION BETWEEN THE WATER MAIN AND THE NEW STORM IN ACCORDANCE WITH CONTRACT DOCUMENTS WATER ASBUILT SPECIFICATIONS.
7. ALL PIPING TO BE DUCTILE IRON. ALL PIPING AND FITTINGS TO BE POLY WRAPPED.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1	4/7/2016	ADDENDUM 3	4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)

WATER DETAILS (4 OF 4)

SHEET W-125 OF W-125

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