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AC	ASBESTOS CEMENT	INT.	INTERSECTION
AG	ALLEY GRATE	INV.	INVERT
2	BASE LINE	I.P.	IRON PIPE
3	BENCH MARK	J.W.V.W.	JACKSONVILLE WATER WORKS
4	BOC OF CURVE		
5	CATCH BASIN	L.F.	LINEAR FOOT
6	CAST IRON	L.T.	LEFT
7	CENTER LINE	MB	MAIL BOX
8	CITY ELECTRIC POLE	M.H.	MANHOLE
9	CONCRETE	N.T.S.	NOT TO SCALE
10	CONCRETE	O.C.	ON CENTER
11	CORRUGATED METAL PIPE	O.E.	OVERHEAD ELECTRIC
12	CORRUGATED METAL PIPE ARCH	O.T.	OVERHEAD TELEPHONE
13	CULVERT	P.R.M.	PERMANENT REFERENCE MONUMENT
14	CURB & GUTTER		
15	CUT	P.V.C.	POLYVINYL CHLORIDE
16	DITCH BOTTOM INVERT	R	RADIUS
17	D.R.W. WAY	R.C.P.	REINFORCED CONCRETE PIPE
18	DUCTILE IRON PIPE	RT	RIGHT
19	EDGE OF PAVEMENT	R/W	RIGHT OF WAY
20	ELEVATION	R.D.	ROOF DRAIN
21	ELLIPTICAL REINFORCED	S/W	SIDE WALK
22	CONC. PIPE	S.B.T.	SOUTHERN BELL TELEPHONE
23	EXPANSION JOINT	STA	STATION
24	FIX	TC	TOP OF CURVE
25	FIRE HYDRANT	U.G.E.	UNDERGROUND ELECTRIC
26	FLOW LINE	U.G.T.	UNDERGROUND TELEPHONE
27	FORCE MAIN	U.S.C. & G.S.	UNITED STATES COASTAL & GEODETIC SURVEY
28	GALVANIZED		
29	GAS LINE	V.C.	VITRIFIED CLAY
30	GAS VALVE	W.M.	WATER METER
31	HIGH DENSITY	W.V.	WATER VALVE
32	POLYETHYLENE PIPE	WLP	WOOD LIGHT POLE
33	HEAD WALK	WPP	WOOD POWER POLE
34	H.C. CURB		

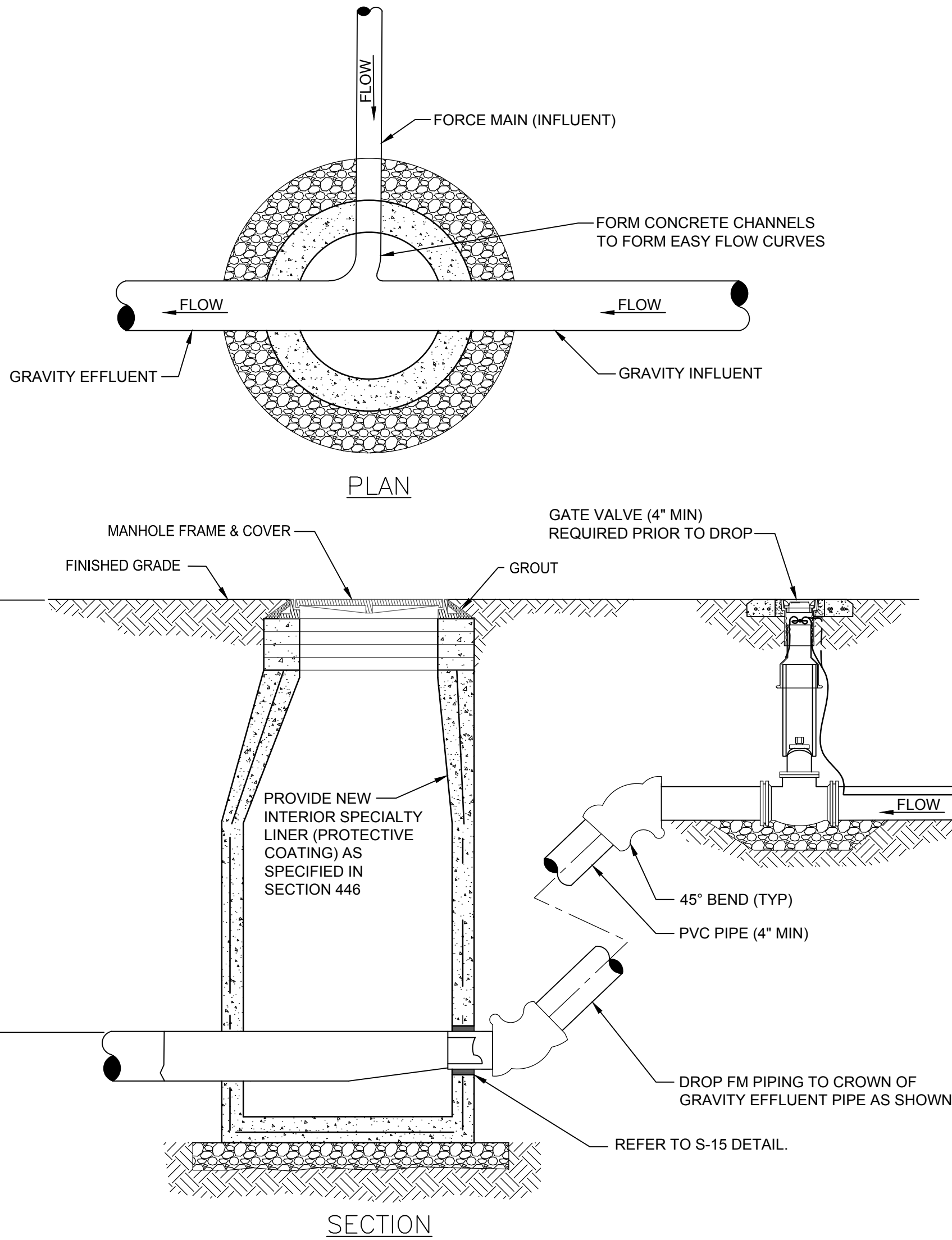
NO. SHEETS 13	PROJ. NO. 17016
SHEET NO.	DATE: JULY 2018
2	SCALE: NONE
DRAWING NO. C-2	

GENERAL SITE NOTES

- ALL WORK AND MATERIALS SHALL BE IN COMPLETE ACCORDANCE WITH CITY OF JACKSONVILLE AND JEA STANDARD DETAILS AND SPECIFICATION INCLUDING ALL APPLICABLE LOCAL AND STATE REQUIREMENTS.
- ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF O.S.H.A. SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES OF HIS EMPLOYEES, AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT. ALL COSTS ASSOCIATED WITH COMPLYING WITH OSHA REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST BE INCLUDED IN THE CONTRACTORS BID.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE JOB SITE PRIOR TO PREPARING THE BID FOR FAMILIARIZING HIMSELF WITH THE NATURE AND THE EXTENT OF THE WORK AND LOCAL CONDITIONS, EITHER SURFACE OR SUBSURFACE, WHICH MAY AFFECT THE WORK TO BE PERFORMED, AND THE EQUIPMENT, LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THIS CONTRACT. THE CONTRACTOR IS URGED TO TAKE COLOR PHOTOGRAPHS ALONG THE ROUTE OF THE PROJECT TO RECORD EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND TO AID IN RESOLVING POSSIBLE FUTURE COMPLAINTS THAT MAY OCCUR DUE TO THE CONSTRUCTION OF THE PROJECT.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EITHER CONDUCT ANY FIELD EXPLORATION OR ACQUIRE ANY GEOTECHNICAL ASSISTANCE REQUIRED TO ESTIMATE THE AMOUNT OF UNSUITABLE MATERIAL THAT WILL REQUIRE REMOVAL AND/OR TO ESTIMATE THE AMOUNT OF OFF SITE BORROW THAT WILL BE REQUIRED.
- ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO JEA FOR A PERIOD OF TWO YEARS FROM DATE OF ACCEPTANCE BY JEA. SEE JEA STANDARD MANUAL SECTION 429.
- ELEVATIONS SHOWN THUS: (20.00) AND REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON TAKEN FROM MAP PROVIDED BY CLARSON & ASSOCIATES: DATED, OCTOBER 30, 2017.
- REFERENCE PROJECT BENCHMARK: FOUND FDOT CONCRETE MONUMENT "7209006 GPS 3". ELEVATION 18.566 (NAVD 88) AS PROVIDED BY FDOT PRIMARY CONTROL POINT FORM.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE REQUIRED FOR THE PROJECT INCLUDING RIGHT-OF-WAY PERMITS FOR WORK IN THE RIGHT-OF-WAY OR EASEMENTS.
- THE CONTRACTOR SHALL COORDINATE THE WORK WITHIN COUNTY OR STATE RIGHT-OF-WAY WITH THE PROPER AGENCIES FOR MAINTENANCE OF TRAFFIC AND METHOD OF CONSTRUCTION & REPAIR.
- THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION WITH ALL OTHER CONTRACTORS. IN THE EVENT OF ANY CONFLICT WHATSOEVER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- ALL CLEARING AND GRUBBING REQUIRED FOR 16" SANITARY SEWER FORCE MAIN INSTALLATION IS INCLUDED IN THIS PROJECT AND THE CLEARING AND GRUBBING OF ALL RIGHT-OF-WAY OR EASEMENTS SHALL BE INCLUDED AS PART OF THIS PROJECT.
- CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS. IF A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL CONTRACT WITH THE SURVEYOR OF RECORD FOR REINSTALLATION OF THE MONUMENT.
- ALL DEBRIS RESULTING FROM ALL ACTIVITIES SHALL BE DISPOSED OF OFF-SITE BY CONTRACTOR, IN ACCORDANCE WITH COUNTY REGULATIONS.
- ALL EXCESS SUITABLE AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE BY ENGINEER OR OWNER.
- ALL EXISTING TREES TO REMAIN SHALL BE PRESERVED AND PROTECTED.
- BURNING OF TREES, BRUSH AND OTHER MATERIAL IS NOT ALLOWED.
- IF DEWATERING CAPACITY REQUIRES A CONSUMPTIVE USE PERMIT (C.U.P.) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
- THE CONTRACTOR SHALL USE NECESSARY MEANS AND METHODS TO CONTROL SURFACE AND GROUNDWATER DURING CONSTRUCTION, BUT NOT LIMITED TO SURFACE, GRADING, DEWATERING TRENCHES WITH SUMP PUMPS, WELL POINTS, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL AND LIKELY DEPTHS TO GROUNDWATER AND THE WATER CONTROL NECESSARY TO MEET MOISTURE AND DENSITY REQUIREMENTS FOR THE NATIVE OR IMPORTED SOILS.
- THE CONTRACTOR SHALL COORDINATE WITH THE JEA AND THE ENGINEER FOR APPROVAL OF ALL DEWATERING OPERATIONS PRIOR TO COMMENCEMENT.
- THE LOCATION OF ALL EXISTING UTILITIES, STRUCTURES AND IMPROVEMENTS SHOWN ON THE DRAWINGS IS BASED ON LIMITED INFORMATION AND MAY NOT HAVE BEEN FIELD VERIFIED. THE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL NOTIFY RESPECTIVE UTILITY OWNERS AND FIELD VERIFY LOCATIONS OF EXISTING UTILITIES AND OTHER IMPROVEMENTS PRIOR TO COMMENCING ANY CONSTRUCTION. IF THE LOCATIONS SHOWN ARE CONTRARY TO THE ACTUAL LOCATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE DISCREPANCY. THIS DISCREPANCY SHOULD BE RESOLVED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN AREAS NEAR EXISTING UTILITIES AND IMPROVEMENTS AND SHALL BE RESPONSIBLE FOR AND SHALL REPAIR OR PAY FOR ALL DAMAGE MADE TO EXISTING UTILITIES OR OTHER IMPROVEMENTS. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL GRADES, INVERTS AND TYPE OF MATERIAL OF EXISTING UTILITIES TO WHICH HE SHALL CONNECT.
- FOR SEDIMENT AND EROSION CONTROL PLANS, DETAILS AND NOTES REFER TO SHEETS C-9, C-10 AND C-11.
- EROSION CONTROL MEASURES SHALL REMAIN IN PLACE AND MAINTAINED PROPERLY UNTIL PERMANENT VEGETATIVE COVER HAS BEEN ESTABLISHED.
- ANY DAMAGE INCURRED BY EROSION SHALL BE RECTIFIED IMMEDIATELY.
- AFTER RESTORATION IS COMPLETE, TEMPORARY CONTROL MEASURES SHALL BE REMOVED AND DISPOSED OF PROPERLY.
- THESE ENGINEERING DRAWINGS MAY NOT SHOW ALL THE STANDARD DETAILS REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY THAT THE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL CURRENT CITY OF JACKSONVILLE AND JEA UTILITIES STANDARD DETAILS AND SPECIFICATIONS. THE CONTRACTOR SHALL OBTAIN A COPY OF JEA UTILITIES AND CITY OF JACKSONVILLE STANDARD DETAILS AND SPECIFICATIONS PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER CITY OF JACKSONVILLE STANDARDS AND MEETING THE NPDES FINAL STABILIZATION REQUIREMENTS.
- UNSUITABLE MATERIALS UNDER NEW FORCE MAIN PIPES OR STRUCTURES SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL, PROPERLY COMPACTED.
- "AS-BUILT" DRAWINGS - FORCE MAIN AS-BUILTS PROVIDED TO JEA ARE REQUIRED TO BE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTRACT WITH A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA FOR THE PREPARATION, FIELD LOCATIONS, CERTIFICATION AND SUBMITTAL OF "AS-BUILT" DRAWINGS IN ACCORDANCE WITH CURRENT JEA UTILITIES. CONTRACTOR SHALL ALSO SHOW ALL PIPE INVERTS. ITEMS INTENDED FOR DEDICATION TO JEA UTILITIES SHALL NOT BE CONSIDERED COMPLETE UNTIL "AS-BUILT" DRAWINGS ARE APPROVED, AND THE WORK ACCEPTED FOR DEDICATION BY JEA UTILITIES.
- SHOP DRAWINGS FOR FORCE MAIN CONSTRUCTION: ALL PIPES, STRUCTURES AND MANUFACTURERS LITERATURE FOR ALL MATERIALS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION COMMENCING BY THE CONTRACTOR.
- THE CONTRACTOR SHALL MAINTAIN A COPY OF ALL PERMITS ON THE JOB SITE AND SHALL ADHERE TO ALL CONDITIONS.
- UPON COMPLETION OF ALL CONSTRUCTION, PROJECT SHALL LEFT CLEAN.

FORCE MAIN NOTES

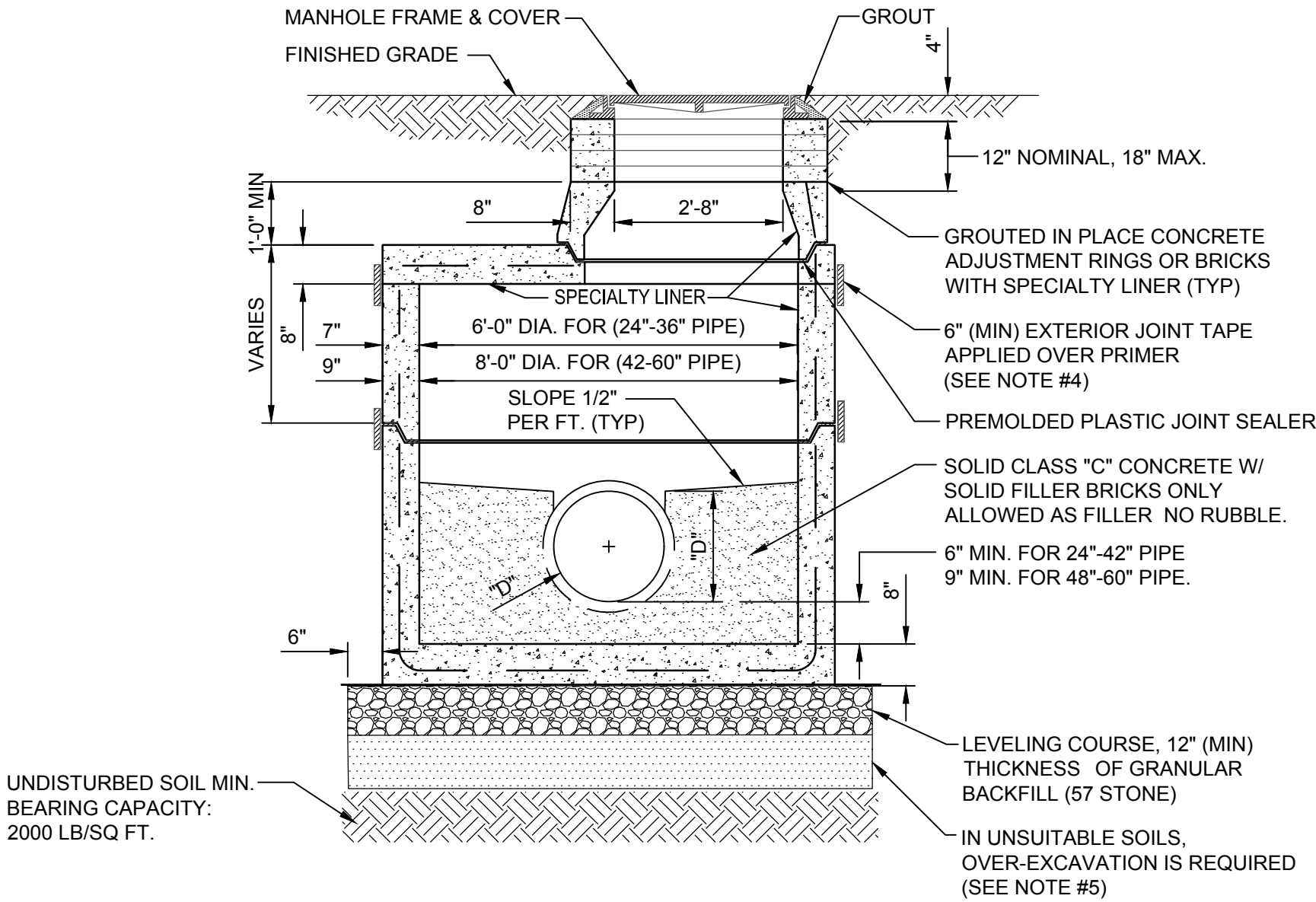
- FORCE MAIN LINES 16 INCHES AND LARGER SHALL BE AWWA STANDARD C-905, DR25 PIPE WITH DUCTILE IRON MJ FITTINGS, UNLESS OTHERWISE INDICATED ON THE PLANS. FORCE MAIN MUST HAVE 36 INCHES MINIMUM COVER, EXCEPT AS INDICATED OTHERWISE. WHERE CALLED FOR, DUCTILE IRON PIPE, CLASS 51 MINIMUM THICKNESS IS REQUIRED.
- A HORIZONTAL AND VERTICAL SEPARATION FROM OTHER UTILITIES SHALL BE MAINTAINED PER JEA STANDARD DETAILS (PLATE S-26).
- FORCE MAIN LINES SHALL BE PRESSURE TESTED AND LEAKAGE TESTED TO 150 PSI FOR TWO HOURS IN ACCORDANCE WITH JEA STANDARD SPECIFICATION SECTION 429 IN THE PRESENCE OF THE ENGINEER AND JEA REPRESENTATIVE
- PVC PIPE RESTRAINT SHALL CONFORM TO JEA PLATE NUMBERS S-38A TO S-38D, S-39 TO S-42 AND THRUST BLOCK ING SHALL CONFORM TO JEA PLATE S-45.
- NO PART OF EXISTING 18" FORCE MAIN LINES SHALL BE DEMOLISHED, GROUT FILLED OR DISRUPTED UNTIL THE NEW 16" PVC FORCE MAIN HAS BEEN INSTALLED AND IS CLEARED TO BE PLACED INTO OPERATION.



MODIFIED TYPICAL FORCE MAIN CONNECTION TO MANHOLE

JANUARY 2016

PLATE S-18



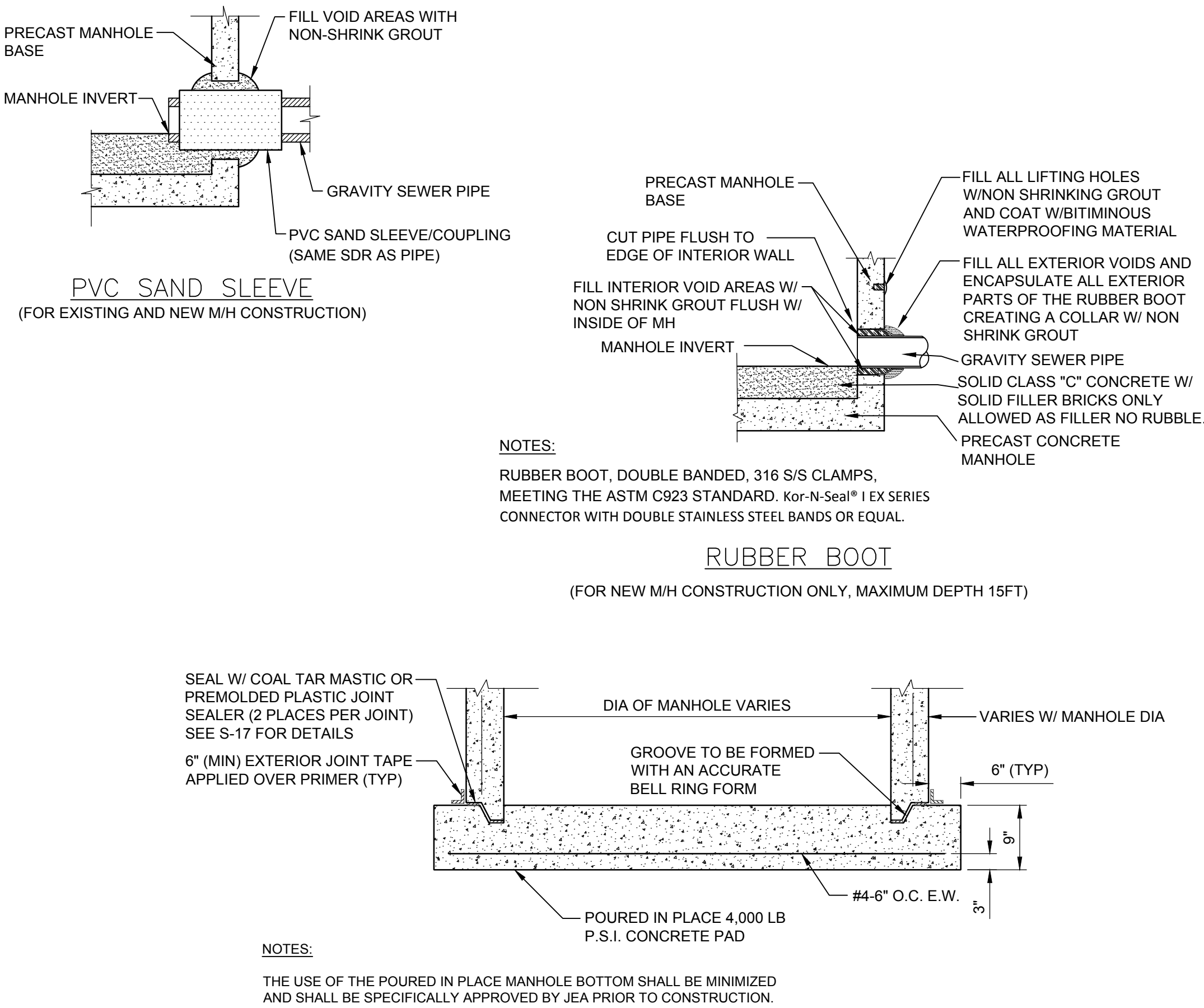
NOTES:

- PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF A.S.T.M. C-478 WITH 4000 LB. CONC., TYPE II CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT AND COATED WITH BITUMINOUS WATERPROOFING MATERIAL.
- THE EXTERIOR ONLY OF MANHOLE SHALL BE GIVEN TWO COATS OF BITUMINOUS WATERPROOFING MATERIAL.
- SPECIALTY LINER IS TO BE INSTALLED ON INSIDE SURFACE OF MANHOLE IN ACCORDANCE WITH AS-602, THEREFORE, THE BITUMINOUS WATERPROOFING SHALL BE OMITTED ON INSIDE.
- ALL MH JOINTS BELOW THE TOP CONE SECTION SHALL INCLUDE A 6" WIDE (MIN) EXTERIOR JOINT TAPE (W/PRIMER). TAPE ON THE CONE SECTION IS OPTIONAL.
- IN SILTS, CLAY OR HIGHLY ORGANIC SOILS (FINE-GRAINED SOILS INCLUDING SOIL GROUPS ML, CL, OL, MH, CH, OH AND PT) THE SOILS SHALL BE OVER-EXCAVATED AN ADDITIONAL 24" (AT A MIN.) AND BACKFILLED WITH AASHTO CLASS A-3 SOIL (COMPACTED TO 98%, ASTM D1557) OR OVER-EXCAVATE AN ADDITIONAL 12" (AT A MIN.) AND BACKFILL WITH GRANULAR BACKFILL (57 STONE).

SANITARY SEWER TYPE "G" MANHOLE
24" - 60" SEWERS

JANUARY 2018

PLATE S-11



NOTES:

THE USE OF THE POURED IN PLACE MANHOLE BOTTOM SHALL BE MINIMIZED AND SHALL BE SPECIFICALLY APPROVED BY JEA PRIOR TO CONSTRUCTION.

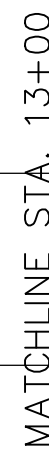
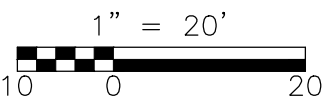
MANHOLE BOTTOM

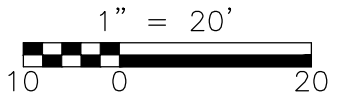
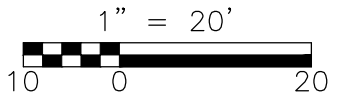
MANHOLE PIPE CONNECTION DETAIL


JANUARY 2018

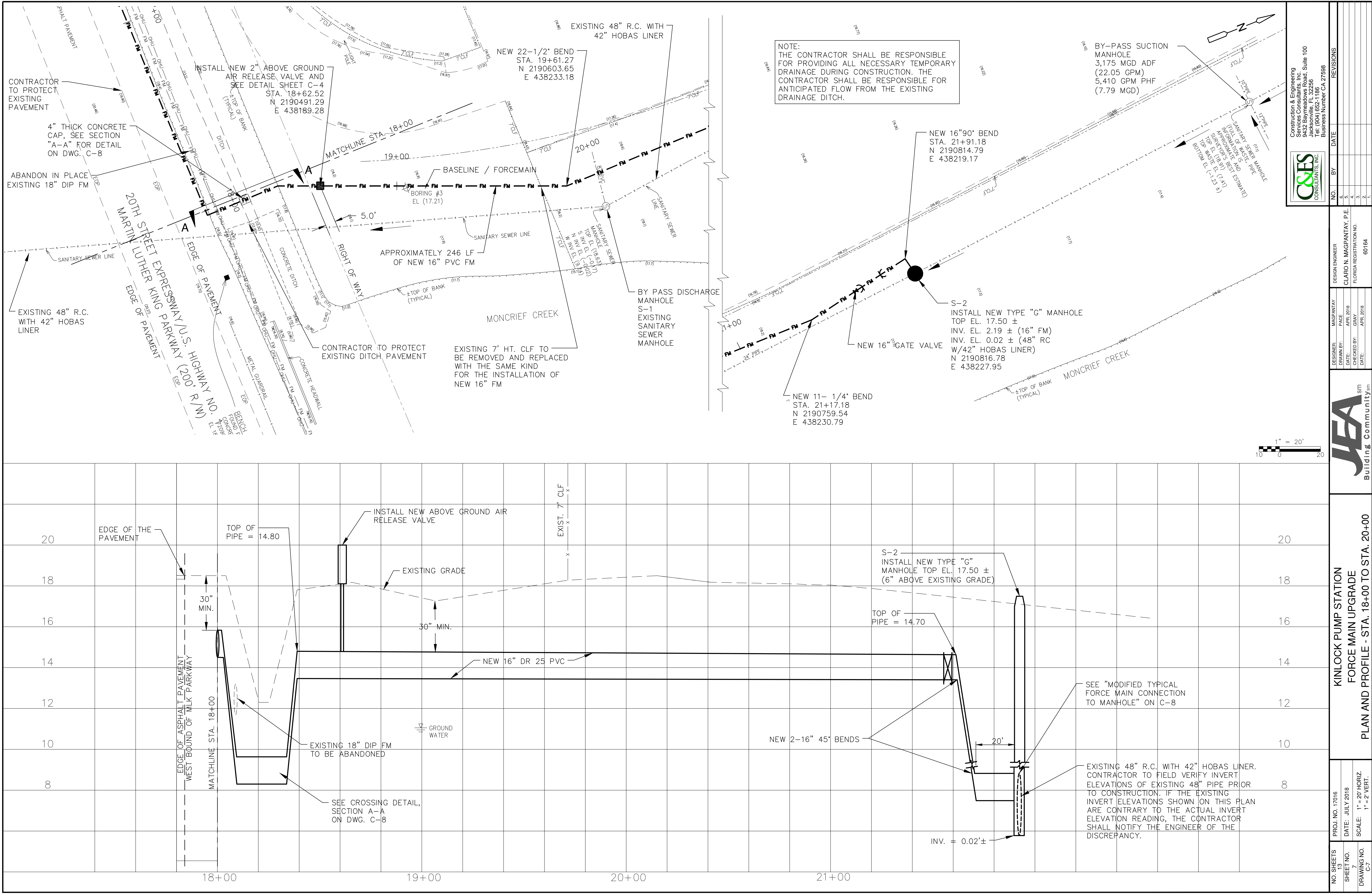
PLATE S-15

Construction & Engineering Services Consultants, Inc. 9432 Baymeadows Road, Suite 100 Jacksonville, FL 32256 Tel: (904) 652-1186 Business Number CA 27598		DESIGNER: MAGPANTAY DRAWN BY: PACE DATE: APR. 2018 CHECKED BY: GRAY DATE: APR. 2018		DESIGN ENGINEER CLARO N. MAGPANTAY, P.E. FLORIDA REGISTRATION NO. 60164		NO. SHEETS 13		PROJ. NO. 17016		DATE: JULY 2018		SCALE: NONE		SHEET NO.		DRAWING NO. C-3	
C&ES CONSULTANTS, INC.		NO.		BY		DATE		REVISIONS									
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NO. SHEETS 13	PROJ. NO. 17016		KINLOCK PUMP STATION FORCE MAIN UPGRADE PLAN AND PROFILE - STA. 13+00 TO STA. 18+00	DESIGN ENGINEER CLAUDIO N. MAGPANTAY, P.E. FLORIDA REGISTRATION NO. 60164	NO.	BY	DATE	REVISIONS
SHEET NO. 6	DRAWN BY: PACE				5.			
DRAWING NO. C-6	DATE: JULY 2018				4.			
	CHECKED BY: GRAY				3.			
	DATE: APRIL 2018				2.			
		1.						



Construction & Engineering
Services, Inc.
9432 Baymeadows Road, Suite 100
Jacksonville, FL 32256
Tel: (904) 652-1186
Business Number CA 27598

C&ES
CONSULTANTS, INC.

NO.	BY	DATE	REVISIONS
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DESIGNER:	MAGPANTAY
DRAWN BY:	FACE
DATE:	APR. 2018
CHECKED BY:	GRAY
DATE:	APR. 2018
DESIGN ENGINEER:	CLARO N. MAGPANTAY, P.E.
FLORIDA REGISTRATION NO.:	60164

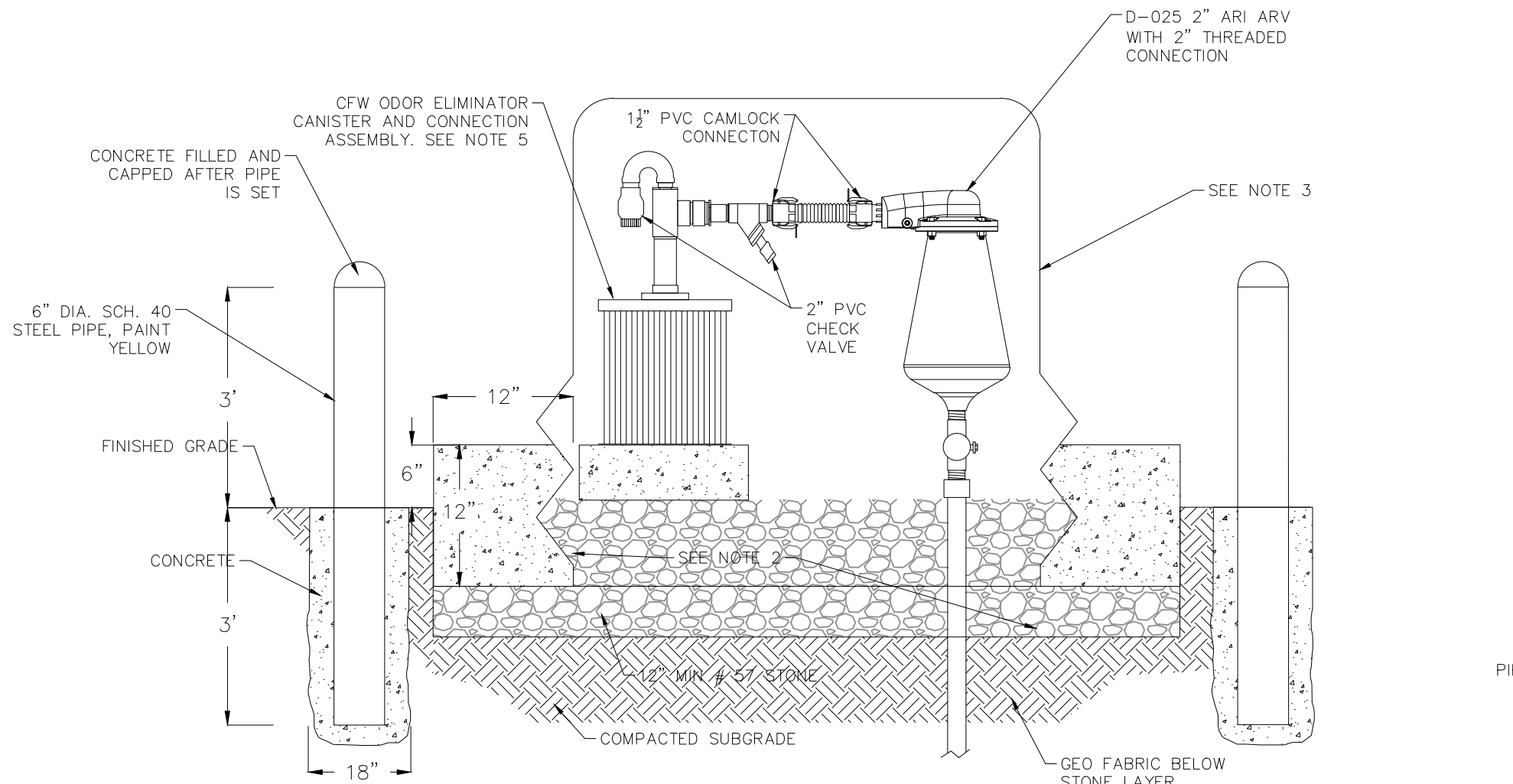
PROJ. NO. 17016	DATE: JULY 2018
SCALE: 1" = 20' HORIZ. 1" = 2' VERT.	

JEAS
Building Community

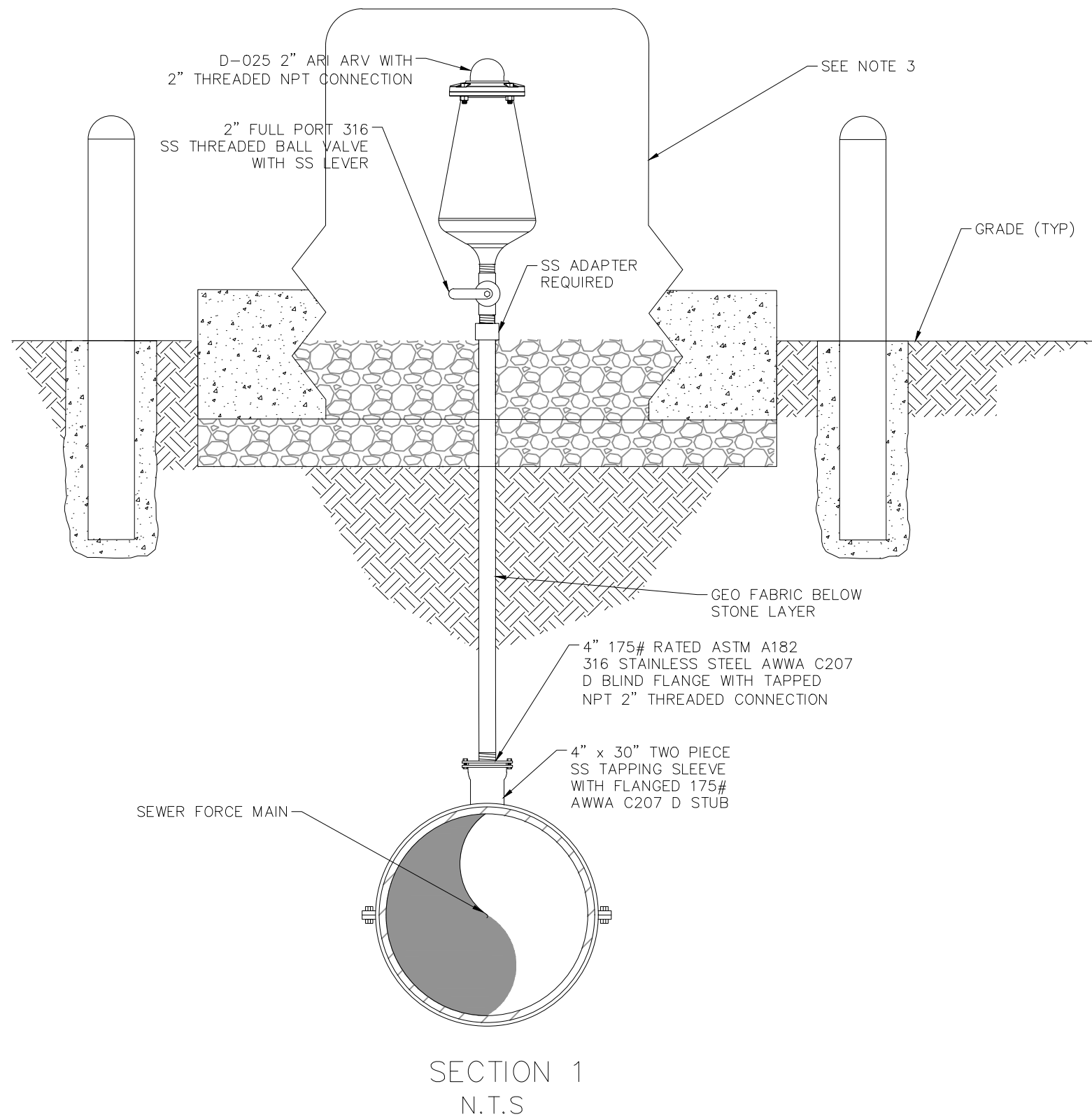
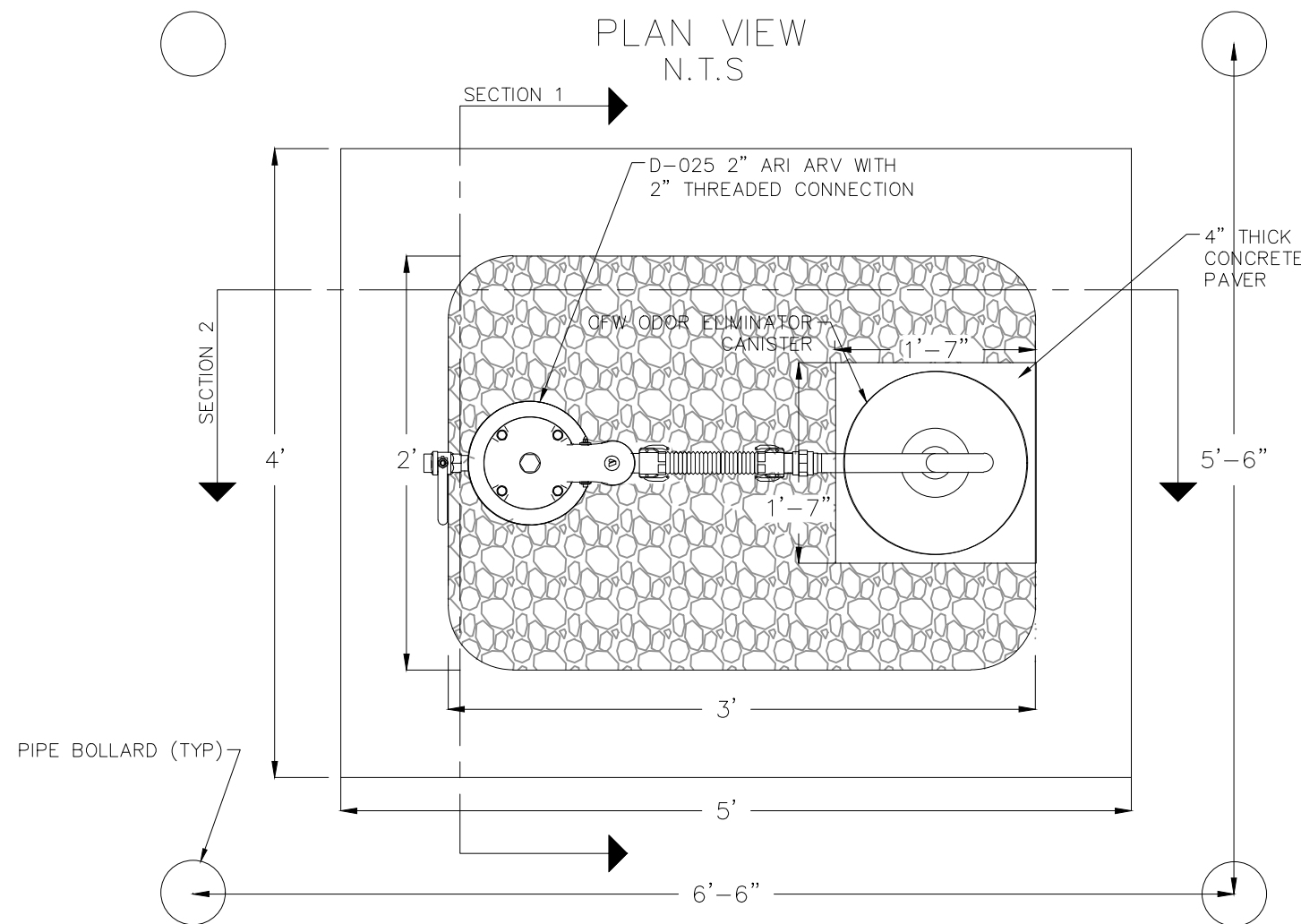
**KINLOCK PUMP STATION
FORCE MAIN UPGRADE
PLAN AND PROFILE - STA. 18+00 TO STA. 20+00**

NO. SHEETS	13
SHEET NO.	C-7
DRAWING NO.	

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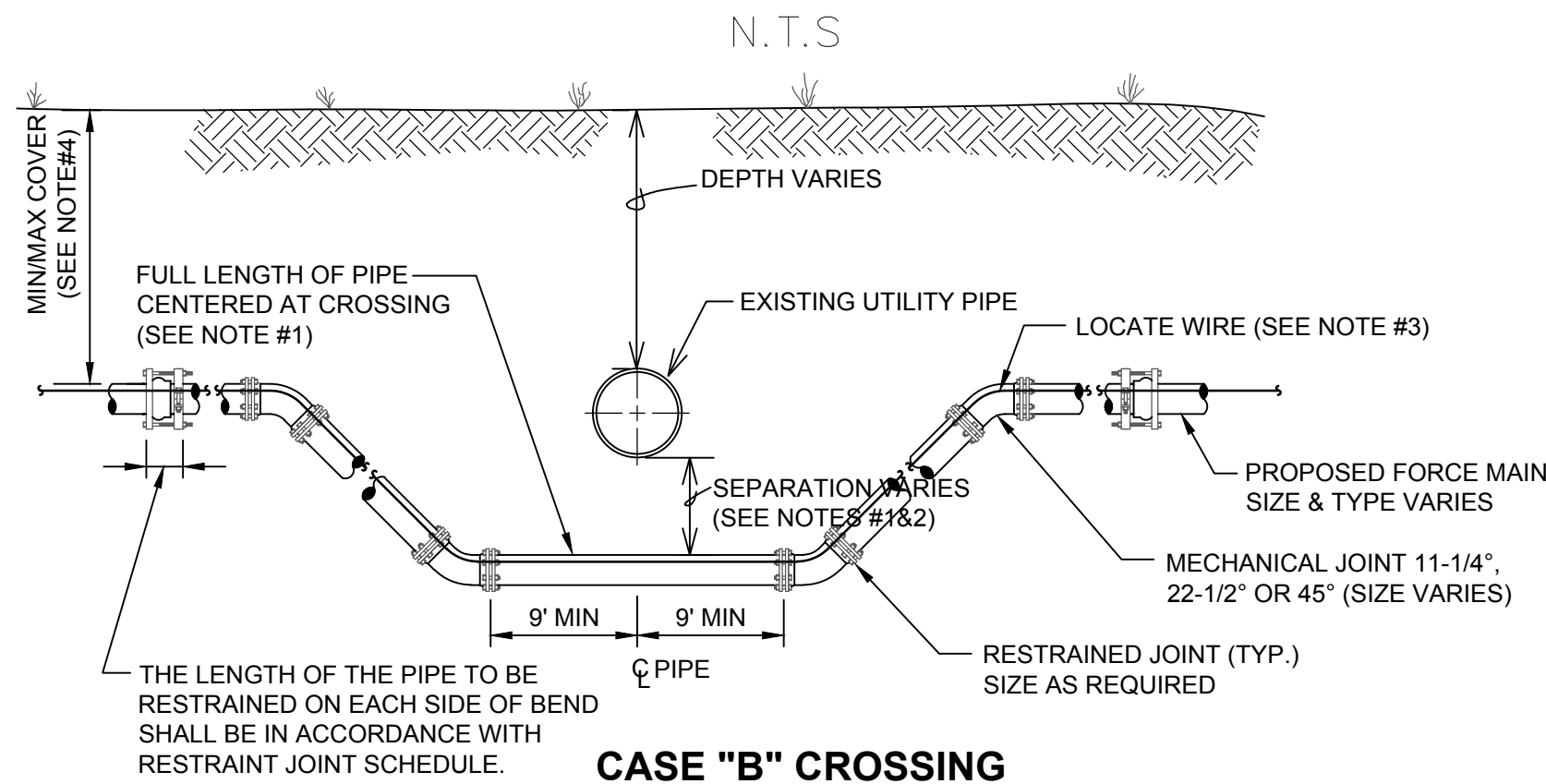
SECTION 2
N.T.S.



NOTES:

1. THE AIR ASSEMBLY ENCLOSURE SHALL BE FIELD LOCATED IN THE JEA T-LINE EASEMENT. PIPING SHALL BE 316 STAINLESS STEEL SCH.40, STD GRADE, THREADED.
2. THE ENCLOSURE SHALL BE CONSTRUCTED OVER COMPACTED SUBGRADE WITH A 12" MINIMUM LAYER OF #57 STONE FILLED TO EXISTING GRADE ON TOP OF GEO FABRIC. THE BASE OF THE CONCRETE PAD SHALL BE BURIED AT LEAST 6" IN THE #57 STONE. CONCRETE PAD DIMENSIONS AS PER ENCLOSURE MANUFACTURER'S REQUIREMENTS. THE CONCRETE PAD SHALL BE POURED 12" FROM THE BOTTOM OF THE ENCLOSURE.
3. THE ENCLOSURE SHALL BE RUTT H-80 TWO PIECE, LOCKABLE, DROP OVER ENCLOSURE OR APPROVED EQUIVALENT WITH DIMENSIONS LxWxH BEING GREATER THAN OR EQUAL TO 36"x24"x40" AND FOREST GREEN IN COLOR.
4. PROVIDE A TWO PIECE SS TAPPING SLEEVE. PROVIDE A GATE VALVE (INSTALLED VERTICALLY NEAR MAIN).
5. ODOR ELIMINATOR CANISTER, ARV CONNECTION, AND VALVING ASSEMBLY SHALL BE THE MODEL CFW #2800 BY CENTRAL FLORIDA WELD AND FAB LLC.

DETAIL S-29* ABOVE GRADE ARV IN ENCLOSURE



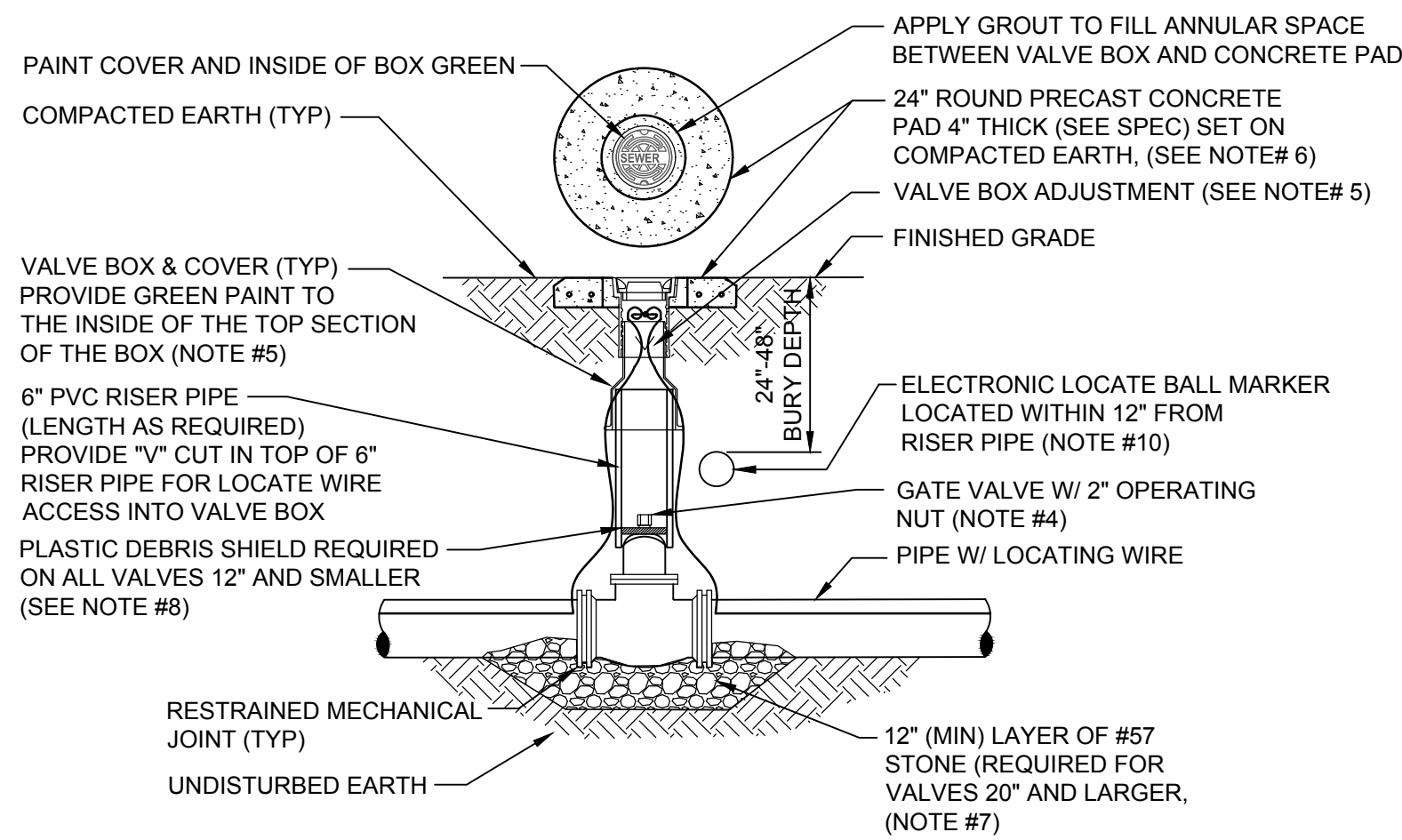
NOTES:

1. IF EXISTING CONFLICT PIPE IS A WATER OR RECLAIMED WATER MAIN, 12-INCHES OF SEPARATION IS REQUIRED A FULL LENGTH OF PIPE SHALL BE CENTERED OVER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSINGS.
2. FOR OTHER LOCATION LIMITATIONS SEE DETAIL (S-26 & S-27).
3. LOCATING WIRE REQUIRED: SEE DETAIL S-49.
4. THE COVER FOR PIPING LESS THAN 24" SIZE SHALL BE 30" (MIN) IN UNPAVED AREAS, 36" (MIN) IN PAVED AREAS AND A MAXIMUM COVER OF 60", UNLESS PRE-APPROVED BY JEA. THE COVER FOR PIPING 24" SIZE AND LARGER SHALL BE 36" (MIN) IN PAVED AND UNPAVED AREAS AND A MAXIMUM COVER OF 84", UNLESS APPROVED BY JEA.
5. THE SOILS BETWEEN THE MAIN AND THE CONFLICT PIPE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST ASTM D 1557.

ADJUSTMENT UNDER EXISTING UTILITIES MECHANICAL RESTRAINTS

JANUARY 2018

PLATE S-41



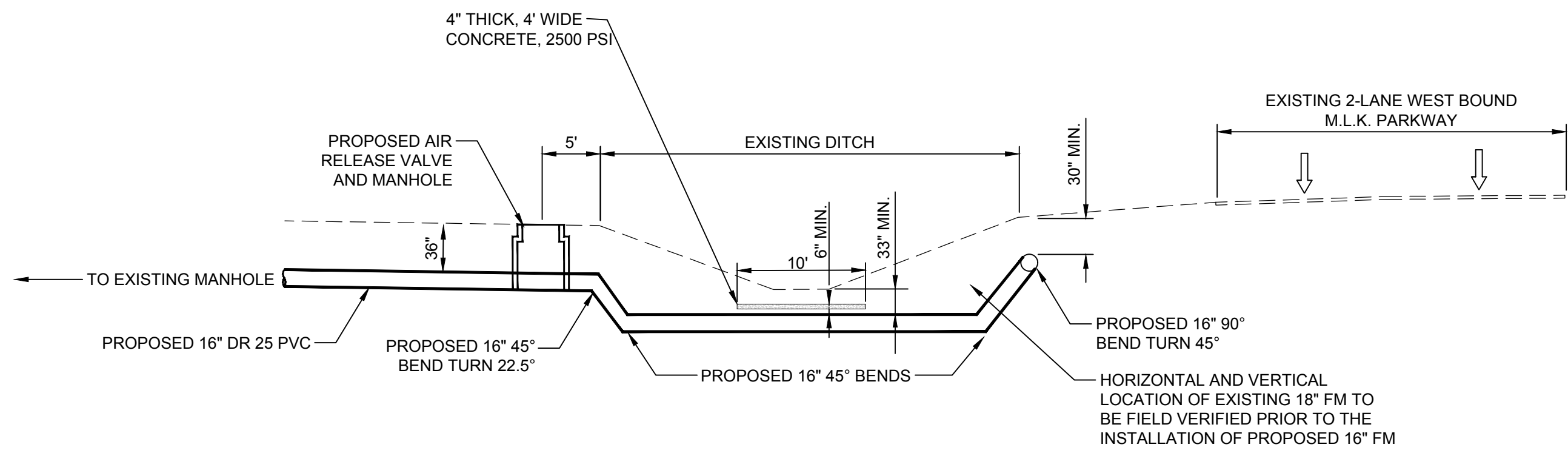
NOTES:

1. FOR UNPAVED LOCATIONS, A PRECAST CONCRETE VALVE PAD SHALL BE PROVIDED AND INSTALLED FLUSH WITH GRADE. CONCRETE PAD IS NOT REQUIRED FOR VALVE LOCATED IN THE ROADWAY, UNLESS SHOWN OR NOTED OTHERWISE.
2. LOCATING WIRE IS REQUIRED ON ALL PRESSURE PIPING (SEE DETAIL S-49).
3. A "V" CUT SHALL BE CARVED IN THE CURB CLOSEST/(ASPHALT IF NO CURB) ADJACENT TO ALL BELOW GRADE VALVES. THE "V" CUT IS TO BE PAINTED GREEN.
4. IN PAVED AREAS, INSTALL VALVE AT A DEPTH TO ALLOW A 12" MIN. DISTANCE BETWEEN THE VALVE COVER PLATE AND THE TOP OF THE VALVE OPERATING NUT. OUTSIDE OF PAVED AREAS (GRASS), INSTALL VALVE AT A DEPTH TO ALLOW A 6" MINIMUM DISTANCE BETWEEN THE VALVE COVER AND THE TOP OF THE VALVE OPERATING NUT. OPERATING NUT/STEM EXTENSION SHALL BE PROVIDED (WHERE APPLICABLE) SO THAT THE OPERATING NUT WILL BE NO MORE THAN 30 INCHES BELOW FINISHED GRADE.
5. FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS. ROUTE LOCATE WIRES THRU A "V" CUT IN THE TOP OF THE 6" PVC RISER PIPE FOR LOCATE WIRE ACCESS INTO VALVE BOX. THE LOCATE WIRES WITH A 12" LONG PIG-TAIL AT THE TOP SHALL BE CONNECTED TOGETHER WITH A WIRE NUT.
6. BRASS IDENTIFICATION TAG INDICATING "SEWER", VALVE SIZE, DIRECTION AND TURNS TO OPEN & VALVE TYPE. PROVIDE A 1/4" HOLE IN BRASS TAG AND ATTACH TAG (TWIST WIRE AROUND TAG) TO THE END OF THE LOCATE WIRE. TAGS ARE NOT REQUIRED ON VALVES INSTALLED ON FIRE HYDRANT BRANCH LINES.
7. IN LIEU OF PRECAST CONCRETE PAD, A 6" THICK X 24" (ROUND OR SQUARE) POURED CONCRETE PAD W/2 - #4 REBAR AROUND PERIMETER, MAY BE USED.
8. GRAVEL SHALL BE PROVIDED UNDER ALL VALVES 20" AND LARGER. THE MINIMUM VERTICAL LIMIT OF GRAVEL IS 12" UNDER THE VALVE UP TO 1/2 THE OVERALL HEIGHT OF THE VALVE.
9. FOR VALVES 12 INCH AND SMALLER, PROVIDE A WHITE OR BLACK PLASTIC DEBRIS SHIELD WHICH INSTALLS BELOW THE OPERATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE BOX OVER THE OPERATING NUT AND MINIMIZE INFILTRATION. SHIELD SHALL BE BY AFC, BOXLOK OR APPROVED EQUAL.
10. ALL VALVES SHALL BE INSTALLED WITH AN ELECTRIC LOCATE MARKER. MARKER SHALL BE 4" DIA. COLOR CODED BALL MARKER (3M-1404XR FOR SEWER).

SEWER VALVE DETAIL

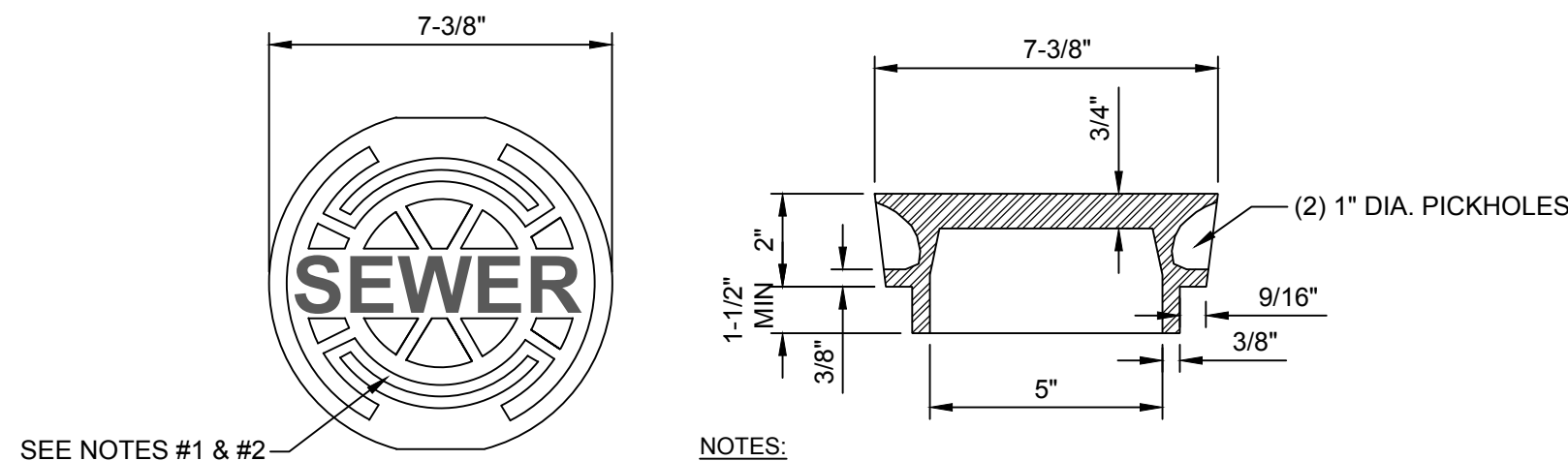
JANUARY 2016

PLATE S-30



SECTION A-A PROPOSED 16" FORCE MAIN UNDER THE EXISTING DITCH

SCALE: 1" = 10'



NOTES:

1. PAINT TOP OF THE COVER WITH ENAMEL PAINT (GREEN COLOR).
2. LID WEIGHT: APPROX. 12 LBS.

HEAVY DUTY RATING

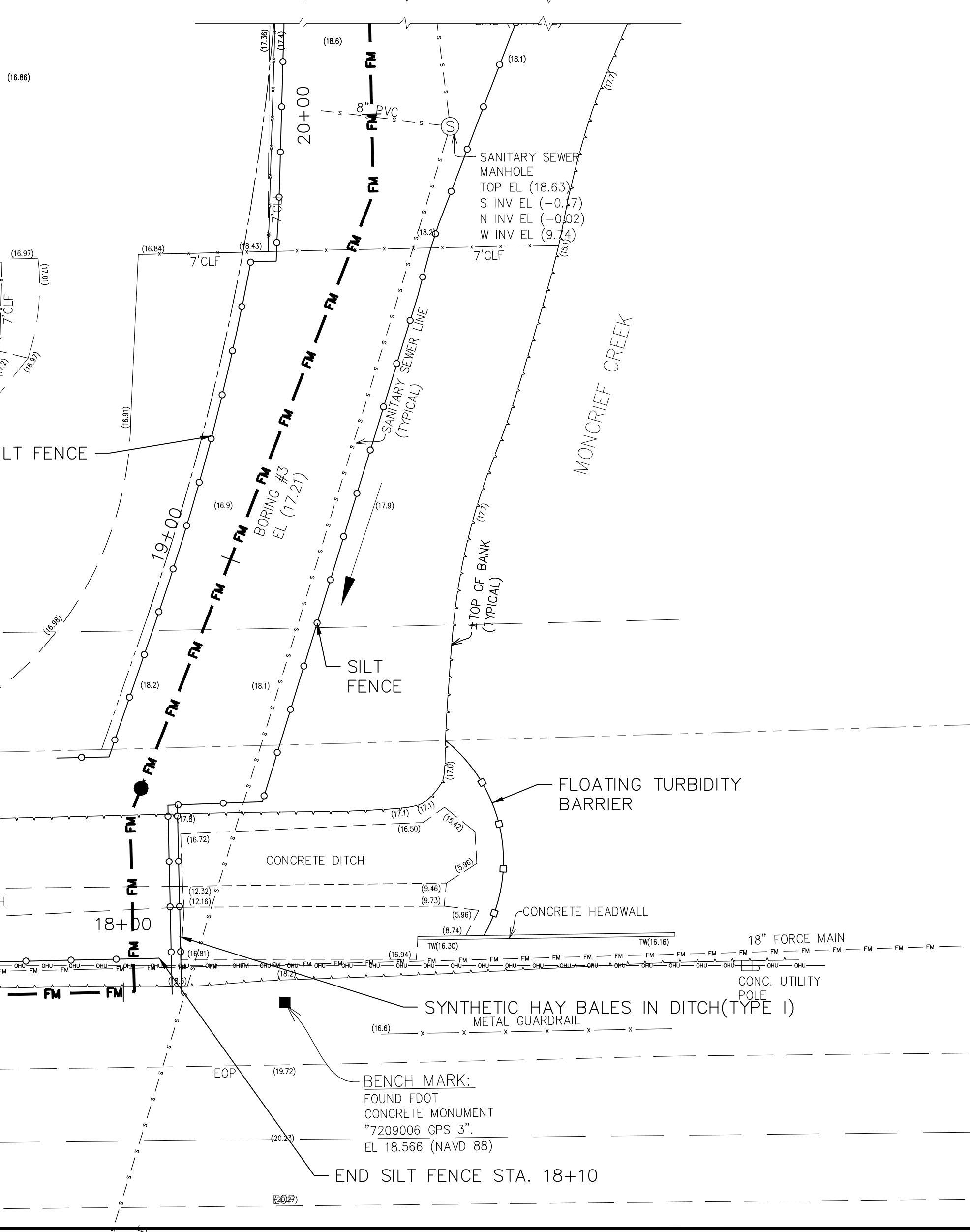
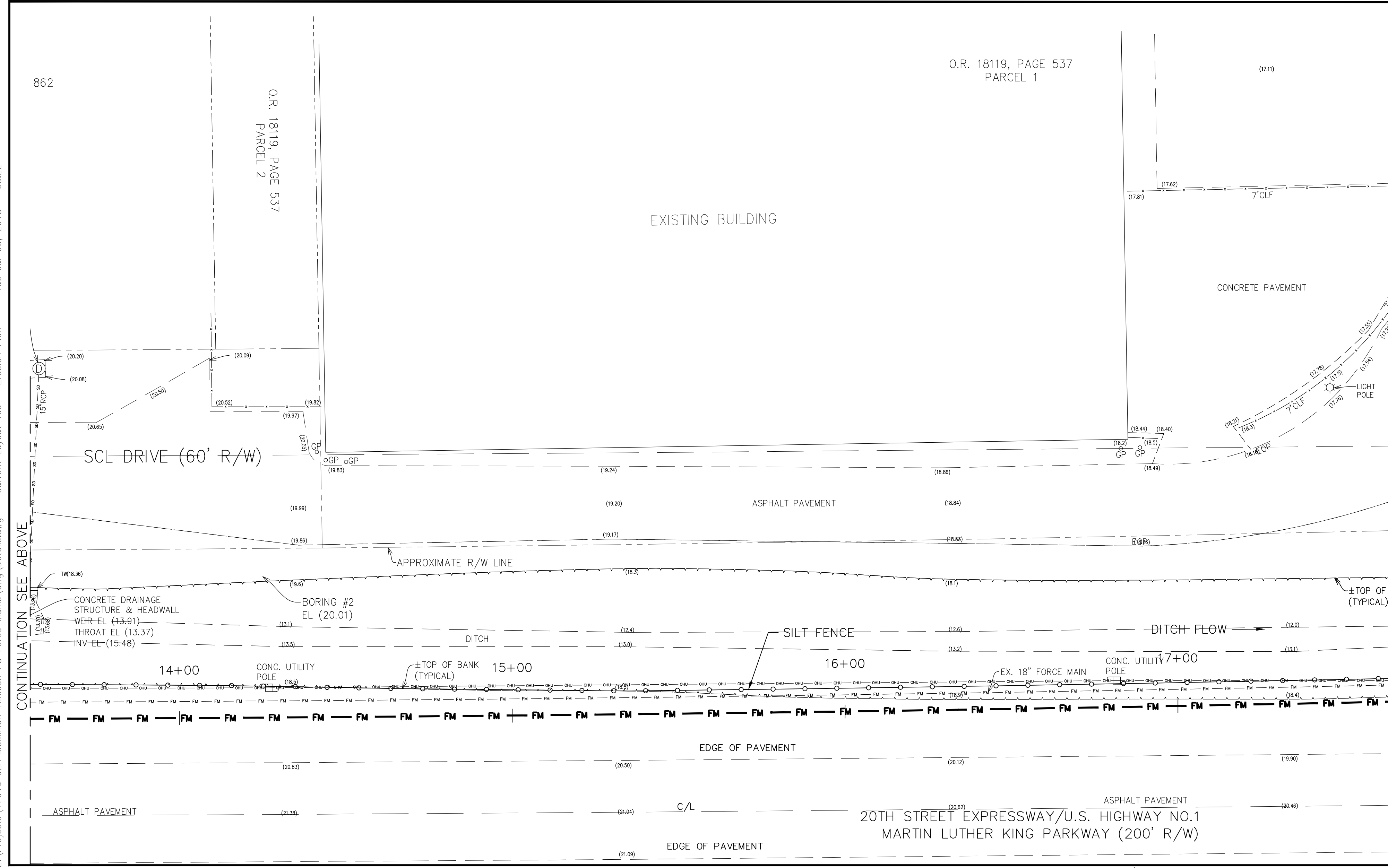
SEWER SYSTEM VALVE BOX COVER

JANUARY 2016

PLATE S-31

<div>Construction & Engineering Services Consultants, Inc. 9432 Baymeadows Road, Suite 100 Jacksonville, FL 32256 Tel: (904) 652-1188 Business Number CA 27598</div> <div>C&ES CONSULTANTS, INC.</div>		<div>DESIGNER: MAGPANTAY DRAWN BY: PACE DATE: APR. 2018 CHECKED BY: GRAY DATE: APR. 2018</div> <div>DESIGN ENGINEER CLARO N. MAGPANTAY, P.E. FLORIDA REGISTRATION NO. 60164</div>		<div>NO. BY DATE REVISIONS</div> <div>6</div> <div>4</div> <div>3</div> <div>1</div>	
<div>KINLOCK PUMP STATION FORCE MAIN UPGRADE SANITARY SEWER FORCE MAIN DETAILS</div> <div>PROJ. NO. 17016 DATE: JULY 2018 SCALE: NONE</div> <div>NO. SHEETS 13 SHEET NO. DRAWING NO. C-8</div>		<div>JEA Building Community</div> <div>SM</div>			

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Construction & Engineering 10000 Wilshire Blvd., Suite 100 9432 Baymeadows Road, Suite 100 Jacksonville, FL 32256 Tel: (904) 652-1186 Business Number CA 27598		REVISIONS	
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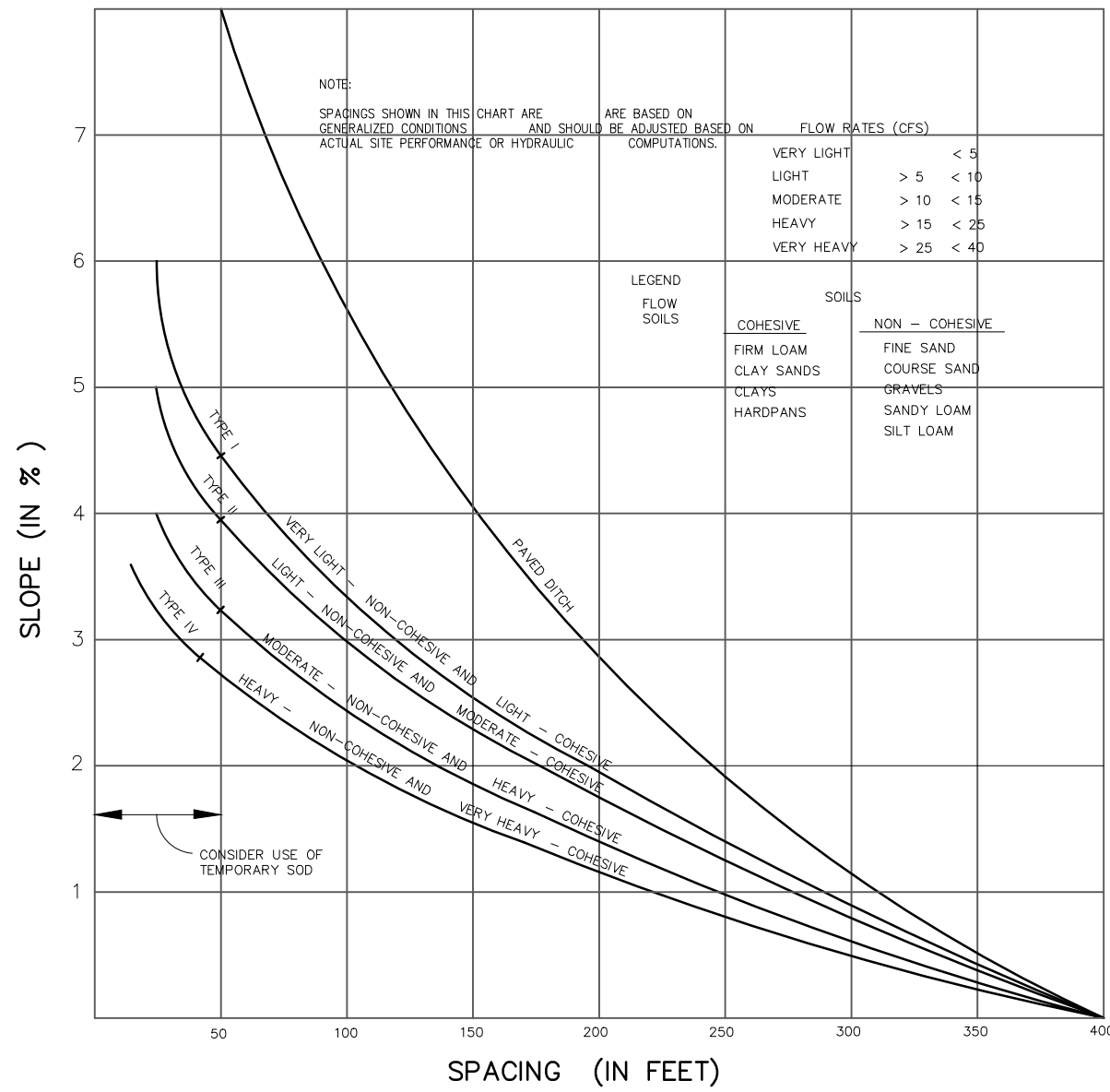
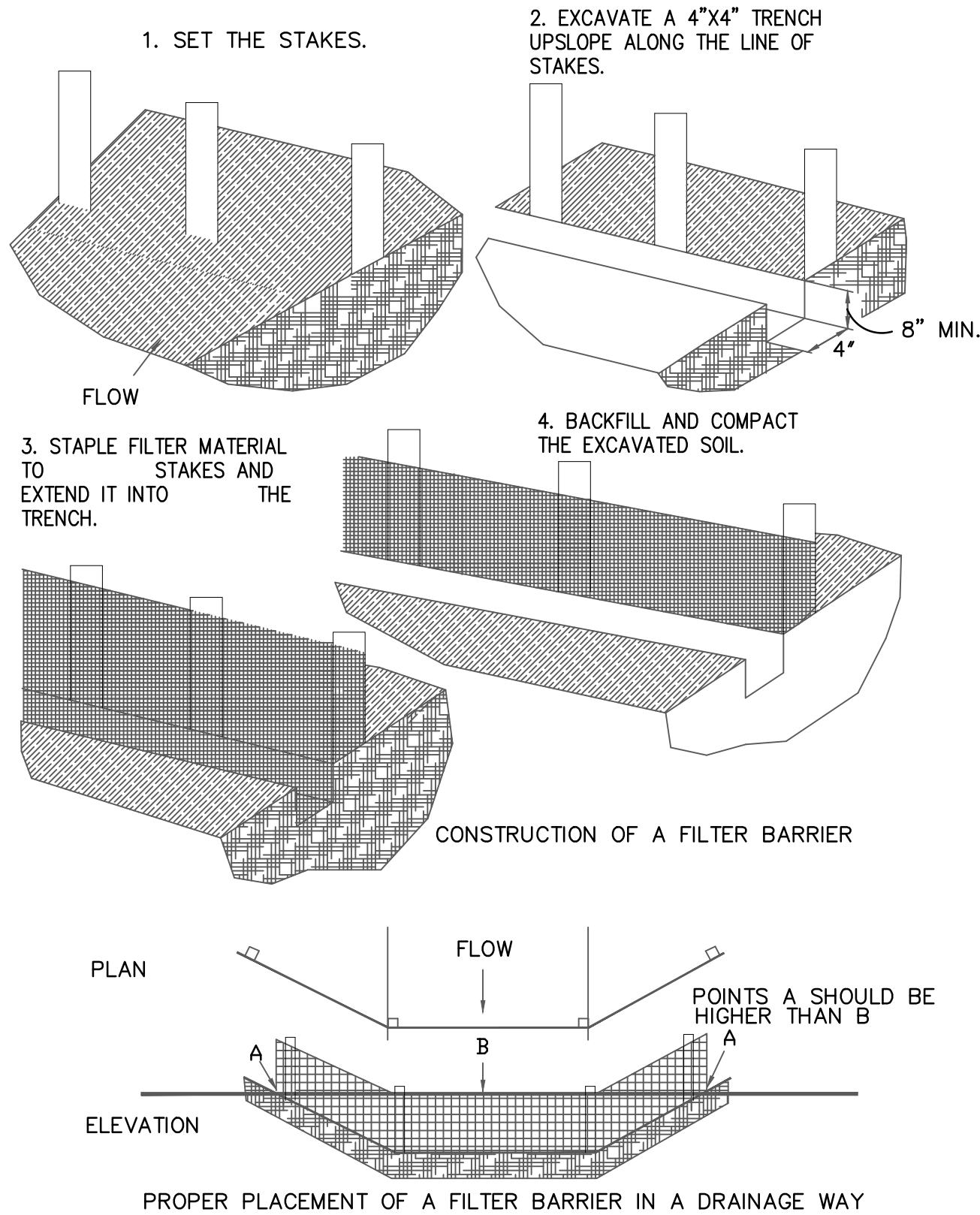


CHART I
RECOMMENDED SPACING FOR TYPE I AND TYPE II HAY BALE BARRIERS, AND TYPE III AND TYPE IV SILT FENCES AND PAVED DITCH HAY BALE BARRIERS

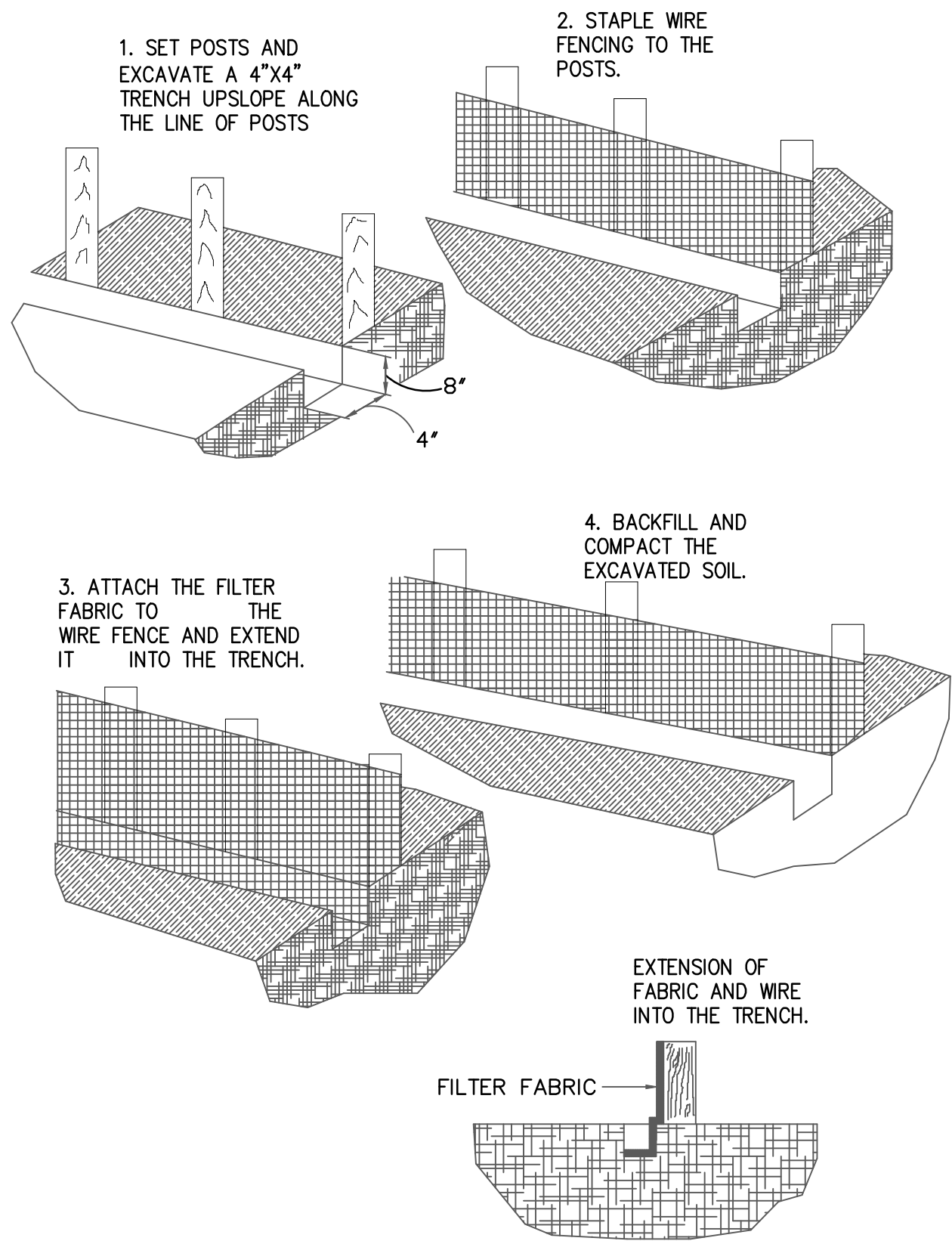
SPACING RECOMMENDATION FOR SILT FENCES & HAY BALES

(D-906)
N.T.S.



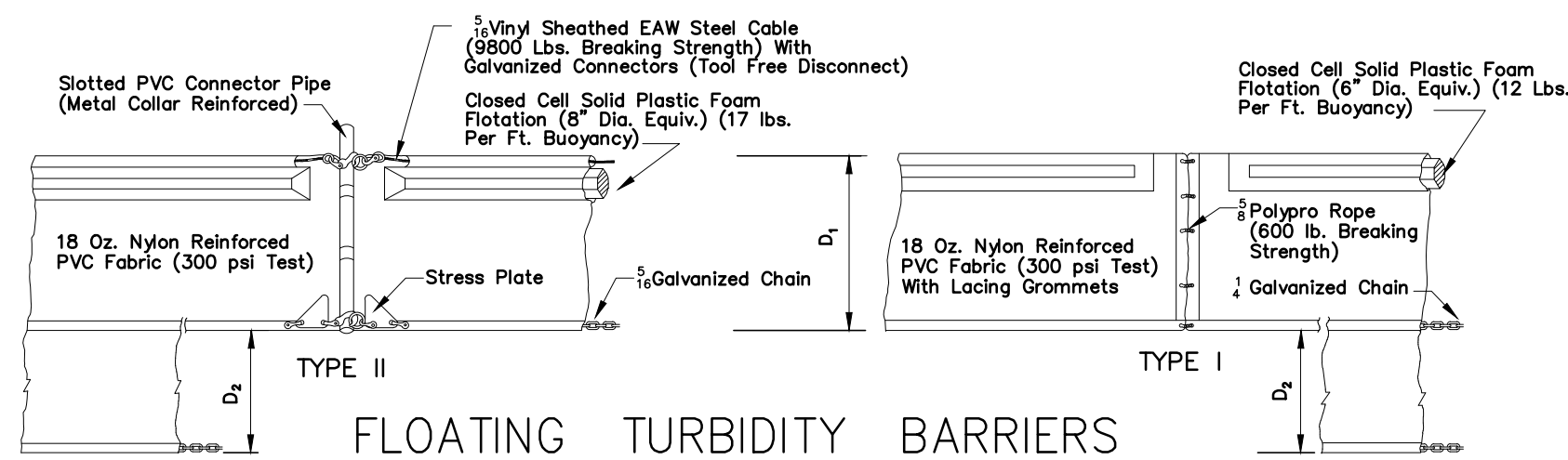
FILTER BARRIER CONSTRUCTION DETAIL

(D-910)
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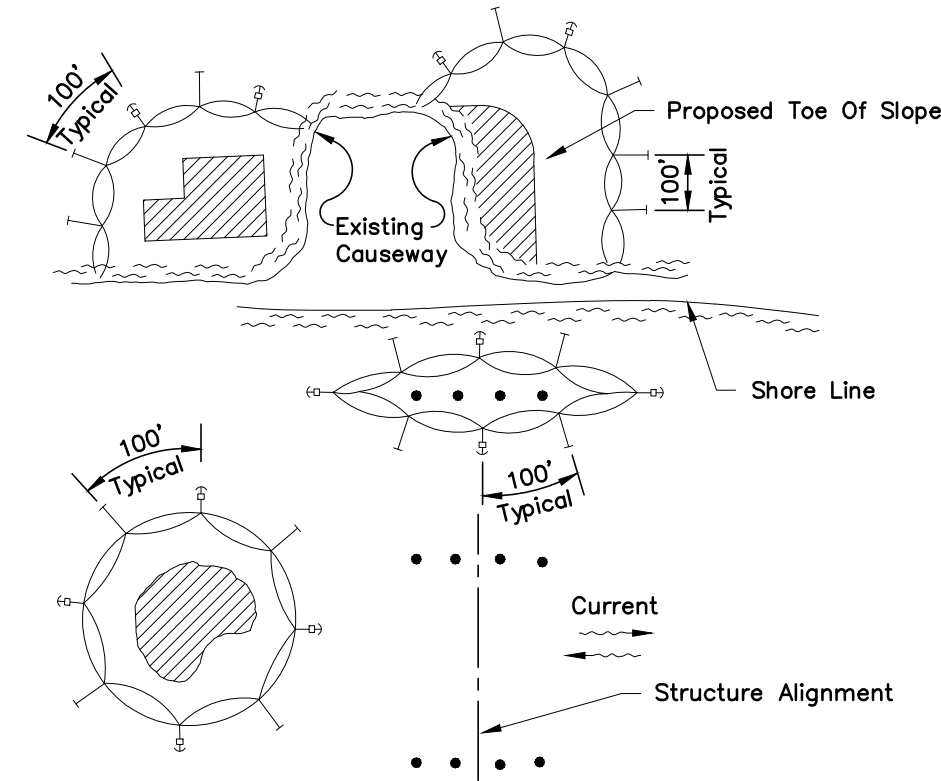


CONSTRUCTION DETAILS FOR SILT FENCES

(D-909)



FLOATING TURBIDITY BARRIERS



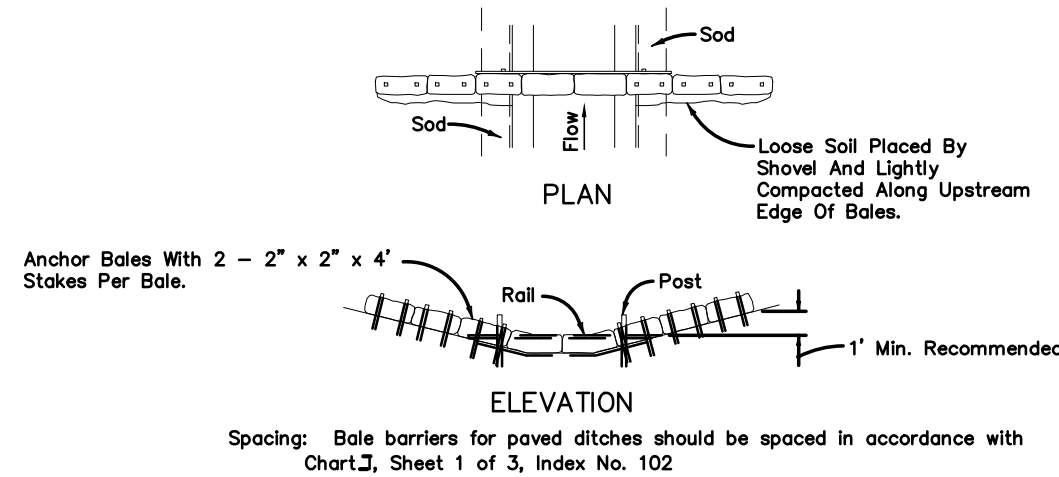
- LEGEND
- Pile Locations
 - ▨ Dredge Or Fill Area
 - Mooring Buoy w/ Anchor
 - Anchor
 - Barrier Movement Due To Current Action

- NOTES:
1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
 2. Number and spacing of anchors dependent on current velocities.
 3. Deployment of barrier around pile locations may vary to accommodate construction operations.
 4. Navigation may require segmenting barrier during construction operations.
 5. For additional information see Section 104 of the FDOT Standard Specifications.

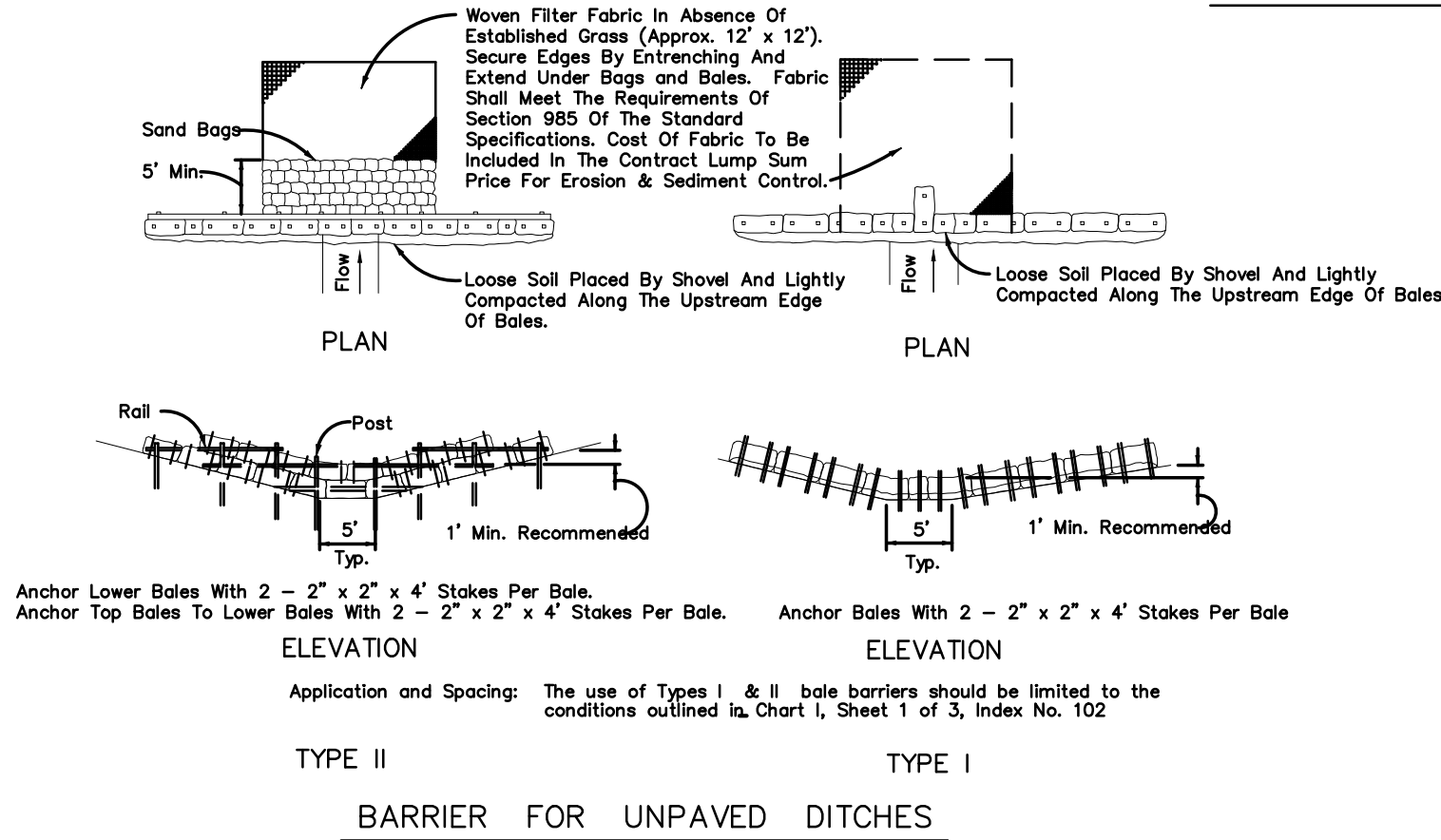
TURBIDITY BARRIER APPLICATIONS

TURBIDITY BARRIERS

(D-907)
N.T.S.



BARRIER FOR PAVED DITCH



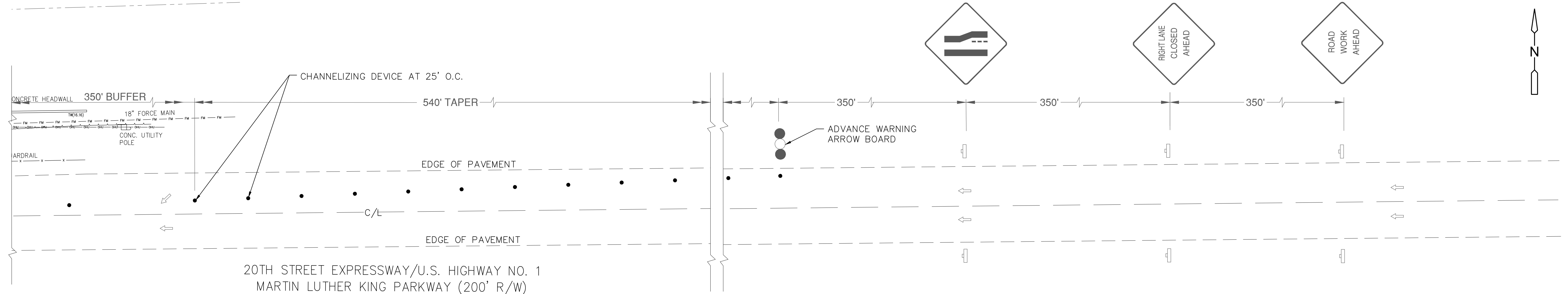
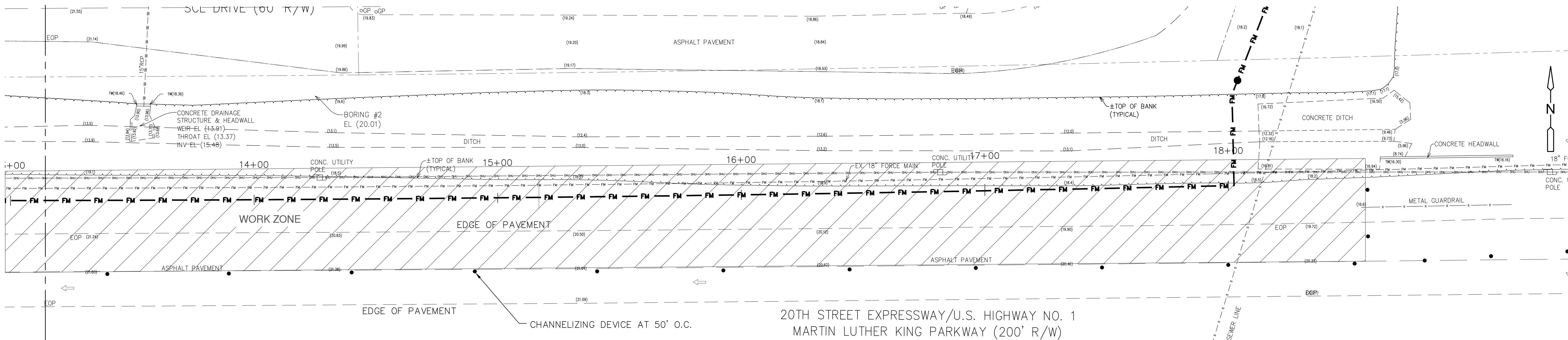
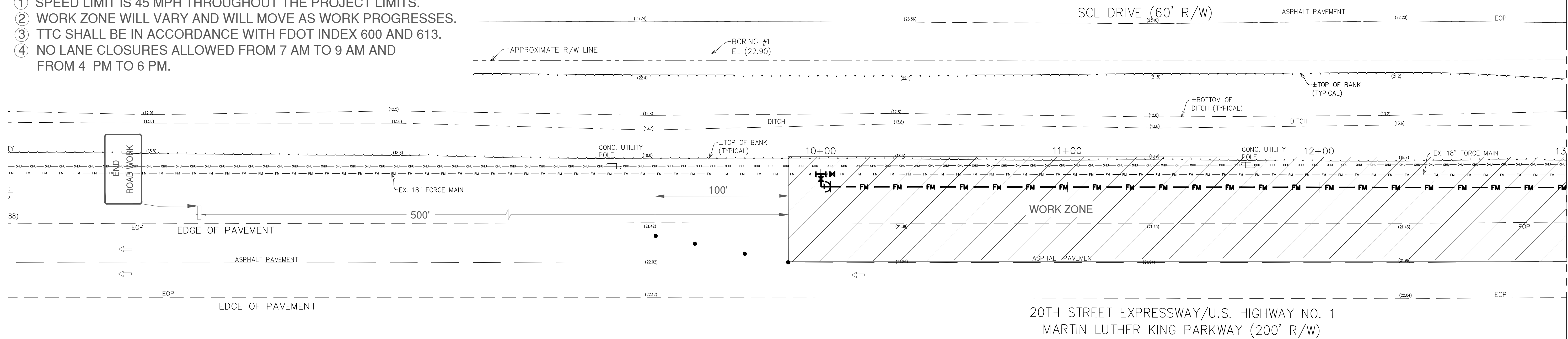
HAY BALE BARRIERS TYPE I & II

(D-912)
N.T.S.

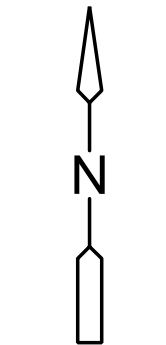
Construction & Engineering Services Consultants, Inc. 9432 Baymeadows Road, Suite 100 Jacksonville, FL 32256 Tel: (904) 652-1188 Business Number CA 27598		DESIGNER: MAGPANTAY DRAWN BY: PACE DATE: APR. 2018 CHECKED BY: GRAY DATE: APR. 2018		DESIGN ENGINEER CLARO N. MAGPANTAY, P.E. FLORIDA REGISTRATION NO. 60164		NO. SHEETS 13 SHEET NO. C-10		PROJ. NO. 17016 DATE: JULY 2018 SCALE: NONE		KINLOCK PUMP STATION FORCE MAIN UPGRADE STORMWATER POLLUTION PREVENTION DETAILS		JEA Building Community	
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- ① SPEED LIMIT IS 45 MPH THROUGHOUT THE PROJECT LIMITS.
- ② WORK ZONE WILL VARY AND WILL MOVE AS WORK PROGRESSES.
- ③ TTC SHALL BE IN ACCORDANCE WITH FDOT INDEX 600 AND 613.
- ④ NO LANE CLOSURES ALLOWED FROM 7 AM TO 9 AM AND FROM 4 PM TO 6 PM.



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DATE:	APR. 2018		

PROJ. NO. 17016	NO. SHEETS 13
DATE: JULY 2018	SHEET NO. 12
SCALE: 1" = 20'	DRAWING NO. C-12

KINLOCK PUMP STATION
FORCE MAIN UPGRADE
TEMPORARY TRAFFIC CONTROL PLAN

JEA Building Community

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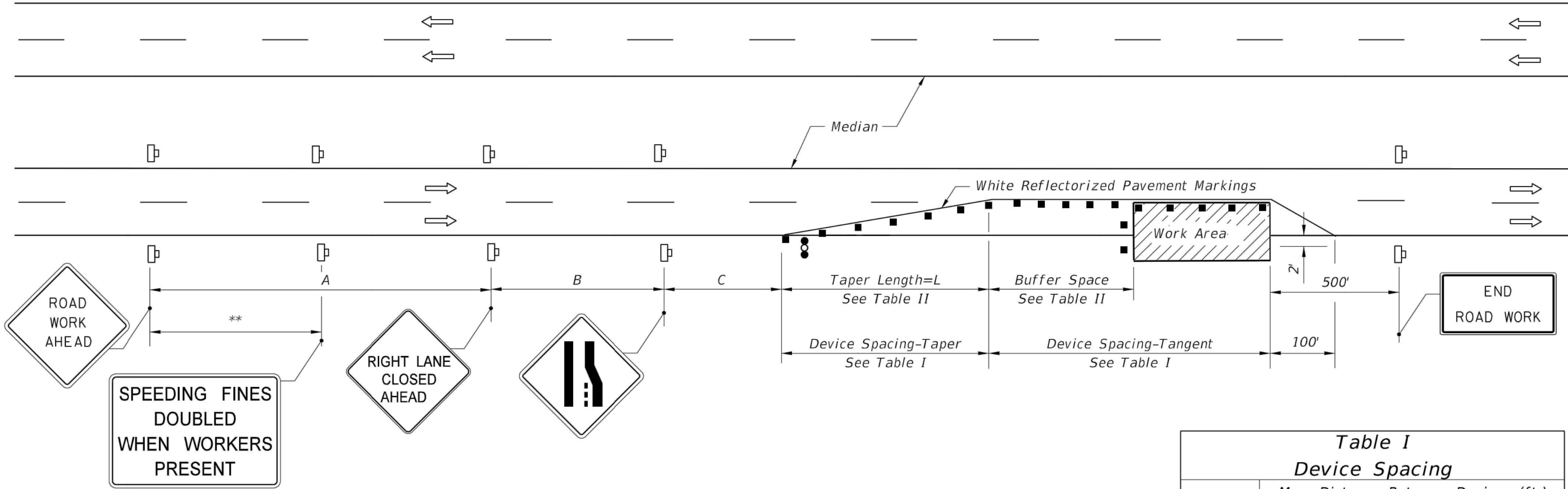


Table II Buffer Space and Taper Length			
Speed (mph)	Buffer Space	Taper Length (12' Lateral Transition)	
	Dist. (ft.)	L (ft.)	Notes (Merge)
25	155	125	$L = \frac{WS^2}{60}$
30	200	180	
35	250	245	
40	305	320	
45	360	540	$L = WS$
50	425	600	
55	495	660	
60	570	720	
65	645	780	
70	730	840	

When Buffer Space cannot be attained due to geometric constraints, the greatest attainable length shall be used, but not less than 200 ft.

For lateral transitions other than 12', use formula for L shown in notes column. Where:

L = Length of taper in feet
W = Width of lateral transition in feet
S = Posted speed limit (mph)

DISTANCE BETWEEN SIGNS			
Speed	Spacing (ft.)		
	A	B	C
40 mph or less	200	200	200
45 mph	350	350	350
50 mph	500	500	500
*55 mph or greater	2640	1640	1000

* The ROAD WORK 1 MILE sign may be used as an alternate to the ROAD WORK AHEAD sign and the RIGHT LANE CLOSED ½ MILE sign may be used as an alternate to the RIGHT LANE CLOSED AHEAD sign.

** 500' beyond the ROAD WORK AHEAD sign or midway between signs whichever is less.

SYMBOLS

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Advance Warning Arrow Board

GENERAL NOTES

- Work operations shall be confined to one traffic lane, leaving the adjacent lane open to traffic.
- On undivided highways the median signs as shown are to be omitted.
- When work is performed in the median lane on divided highways, the channelizing device plan is inverted and left lane closed and lane ends signs substituted for the right lane closed and lane end signs.

The same applies to undivided highways with the following exceptions:

 - Work shall be confined within one median lane.
 - Additional barricades, cones, or drums shall be placed along the centerline abutting the work area and across the trailing end of the work area.

When work on undivided highways occurs across the centerline so as to encroach on both median lanes, the inverted plan is applied to the approach of both roadways.
- Signs and traffic control devices are to be modified in accordance with INTERMITTENT WORK STOPPAGE details (sheet 2 of 2) when no work is being performed and the highway is open to traffic.
- The two channelizing devices directly in front of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
- When paved shoulders having a width of 8 ft. or more are closed, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the travel way. See Index No. 612 for shoulder taper formulas.
- When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
- This TCZ plan does not apply when work is being performed in the middle lane(s) of a six or more lane highway. See Index No. 614.
- For general TCZ requirements and additional information, refer to Index No. 600.

Table I Device Spacing				
Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100

DURATION NOTES

- Temporary white edgeline may be omitted for work operations less than 3 consecutive calendar days.
- For work operations up to approximately 15 minutes, signs, channelizing devices, arrow board, and buffer space may be omitted if all of the following conditions are met:
 - Speed limit is 45 mph or less.
 - No sight obstructions to vehicles approaching the work area for a distance equal to the buffer space and the taper length combined.
 - Volume and complexity of the roadway has been considered.
 - The closed lane is occupied by a class 5 or larger, medium duty truck(s) with a minimum gross weight vehicle rating (GWVR) of 16,001 lb with high-intensity, rotating, flashing, oscillating, or strobe lights mounted above the cab height and operating.
- For work operations up to 60 minutes, arrow board and buffer space may be omitted if conditions a, b, and c in DURATION NOTE 2 are met, and vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE LANE ADJACENT TO EITHER SHOULDER AND THE AREA 2' OUTSIDE THE EDGE OF TRAVEL WAY.

LAST REVISION 01/01/16	REVISION	DESCRIPTION:	FY 2017-18 DESIGN STANDARDS	MULTILANE, WORK WITHIN TRAVEL WAY MEDIAN OR OUTSIDE LANE	INDEX NO. 613	SHEET NO. 1 of 2
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DATE: APR. 2018
CHECKED BY: GRAY
DATE: APR. 2018

DESIGN ENGINEER
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FLORIDA REGISTRATION NO.
60164

KINLOCK PUMP STATION
FORCE MAIN UPGRADE
TEMPORARY TRAFFIC CONTROL - NOTES AND DETAILS

PROJ. NO. 17016
DATE: JULY 2018
SCALE: NONE

NO. SHEETS
13
SHEET NO.
DRAWING NO.
C-13

Building Community

REVISIONS
NO. BY DATE
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2. 4
3. 3
4. 2

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