

# VALLEY ROAD STORM DRAIN IMPROVEMENTS CONSTRUCTION DOCUMENTS (100%)

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU  
OF ENVIRONMENTAL SERVICES  
STORMWATER MANAGEMENT DIVISION, CAPITAL PROJECT  
NO. D-1158  
VALLEY ROAD  
HOWARD COUNTY, MARYLAND

## DESIGN NARRATIVE

**PROJECT OVERVIEW**  
THE PURPOSE OF THIS PROJECT IS TO IMPROVE THE CAPACITY OF THE EXISTING STORM DRAIN SYSTEM IN RESPONSE TO A FLOODING COMPLAINT AT 3617 VALLEY ROAD RESIDENTIAL PROPERTY IN ELLICOTT CITY, MARYLAND. THE PROJECT IS LIMITED TO STORM DRAIN IMPROVEMENTS BOUNDED BY ST. JOHNS LANE AND VALLEY ROAD, ALONG THE EAST SIDE OF VALLEY ROAD FROM 3605 VALLEY ROAD TO 3617 VALLEY ROAD, AND THE WEST SIDE OF ST. JOHNS LANE FROM 3602 ST. JOHNS LANE TO 3606 ST. JOHNS LANE. THE IMPROVEMENTS INCLUDE:

- UPGRADE AND REPLACE EXISTING STORM DRAIN SYSTEM, AS SHOWN ON PLANS, TO ADEQUATELY CAPTURE AND CONVEY STORMWATER.
- RAISE TOP SLAB OF EXISTING INLETS WITH REDUCED THROAT OPENINGS TO PROVIDE FULL THROAT OPENING.
- INSTALL AND REPLACE CONCRETE CURB AND GUTTER AS SPECIFIED ON DESIGN PLANS.

## NATURAL RESOURCE PROTECTION AND ENHANCEMENT

THIS PROJECT SEEKS TO PRESERVE NATURAL RESOURCES LOCATED ON AND ADJACENT TO THE PROJECT SITE. NO IMPACTS TO EXISTING NATURAL RESOURCES ARE ANTICIPATED WITH THE INSTALLATION OF PROPOSED STORM DRAIN IMPROVEMENTS. NO IMPACTS TO WATERS OF THE U.S., WETLANDS, OR WETLAND BUFFER ARE ANTICIPATED AND AS SUCH, NO AUTHORIZATION FROM THE MDE WATERWAY CONSTRUCTION DIVISION, NON-TIDAL WETLANDS DIVISION, OR THE U.S. ARMY CORPS OF ENGINEERS IS ANTICIPATED. AREAS ADJACENT TO THE WORK AREAS WILL BE PROTECTED WITH BLAZE ORANGE CONSTRUCTION FENCING.

## MAINTENANCE OF NATURAL FLOW PATTERNS

THIS PROJECT DOES NOT ALTER THE EXISTING CONDITION GENERAL FLOW PATTERNS OF THE SITE. HOWEVER, THE CAPACITY OF THE STORM DRAIN WILL BE IMPROVED UPON COMPLETION OF THIS PROJECT AND ADDITIONAL FLOWS WILL BE CONVEYED THROUGH THE STORM DRAIN.

## REDUCTION OF IMPERVIOUS AREAS THROUGH BETTER SITE DESIGN

THIS PROJECT WILL NOT INCREASE IMPERVIOUS AREAS ON THE SITE.

## INTEGRATION OF EROSION AND SEDIMENT CONTROL CONTROLS INTO SWM STRATEGY

THE CONSTRUCTION APPROACH FOR THE PROJECT WAS DESIGNED TO MINIMIZE THE AMOUNT OF DISTURBANCE OF THE SITE AREA. EROSION AND SEDIMENT CONTROL WILL BE PROVIDED USING SAME-DAY STABILIZATION AND NOAA 3-DAY DRY WEATHER WORK RESTRICTIONS TO PROTECT THE WORK AREA FROM EROSION AND TO PROTECT THE DOWNSTREAM DRAINAGE SYSTEM FROM SEDIMENTATION. SAME-DAY STABILIZATION IS RECOMMENDED DUE TO THE LIMITED AREA AND EXTENT OF IMPROVEMENTS PROPOSED IN THE WORK AREA. TO MANAGE AND DIVERT EXISTING BASEFLOW FROM CONSTRUCTION ACTIVITIES, CLEARWATER DIVERSION PIPES WILL BE SEQUENCED APPROPRIATELY TO PROVIDE A SECURE WATER TIGHT TEMPORARY CONNECTION BETWEEN THE IMMEDIATE DOWNSTREAM AND UPSTREAM STRUCTURE.

## IMPLEMENTATION OF ESD PLANNING TECHNIQUES AND PRACTICES

THIS PROJECT IS BEING PERFORMED BY THE DPW TO DETERMINE AND IMPROVE THE CAPACITY OF THE EXISTING STORM DRAIN SYSTEM IN RESPONSE TO A FLOODING COMPLAINT. THEREFORE, STORMWATER MANAGEMENT ESD PLANNING TECHNIQUES AND PRACTICES ARE NOT APPLICABLE TO THIS PROJECT.

## DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGN IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

*Thomas G. Turney* 7/10/20  
DESIGNER'S SIGNATURE DATE

## THOMAS TURNER, JR., VICE PRESIDENT

PRINTED NAME & TITLE 16997  
MD REGISTRATION NO.  
P.E., P.L.S., OR R.L.A. (CIRCLE ONE)

## OWNER/DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION, AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

*Thomas G. Turney* 7/14/2020  
SIGNATURE OF OWNER/DEVELOPER DATE

## THOMAS MEUNIER, ACTING DIRECTOR

PRINTED NAME & TITLE

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

*Thomas G. Turney* 7/14/2020  
DATE  
*Thomas G. Turney* 7/10/20  
DATE  
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

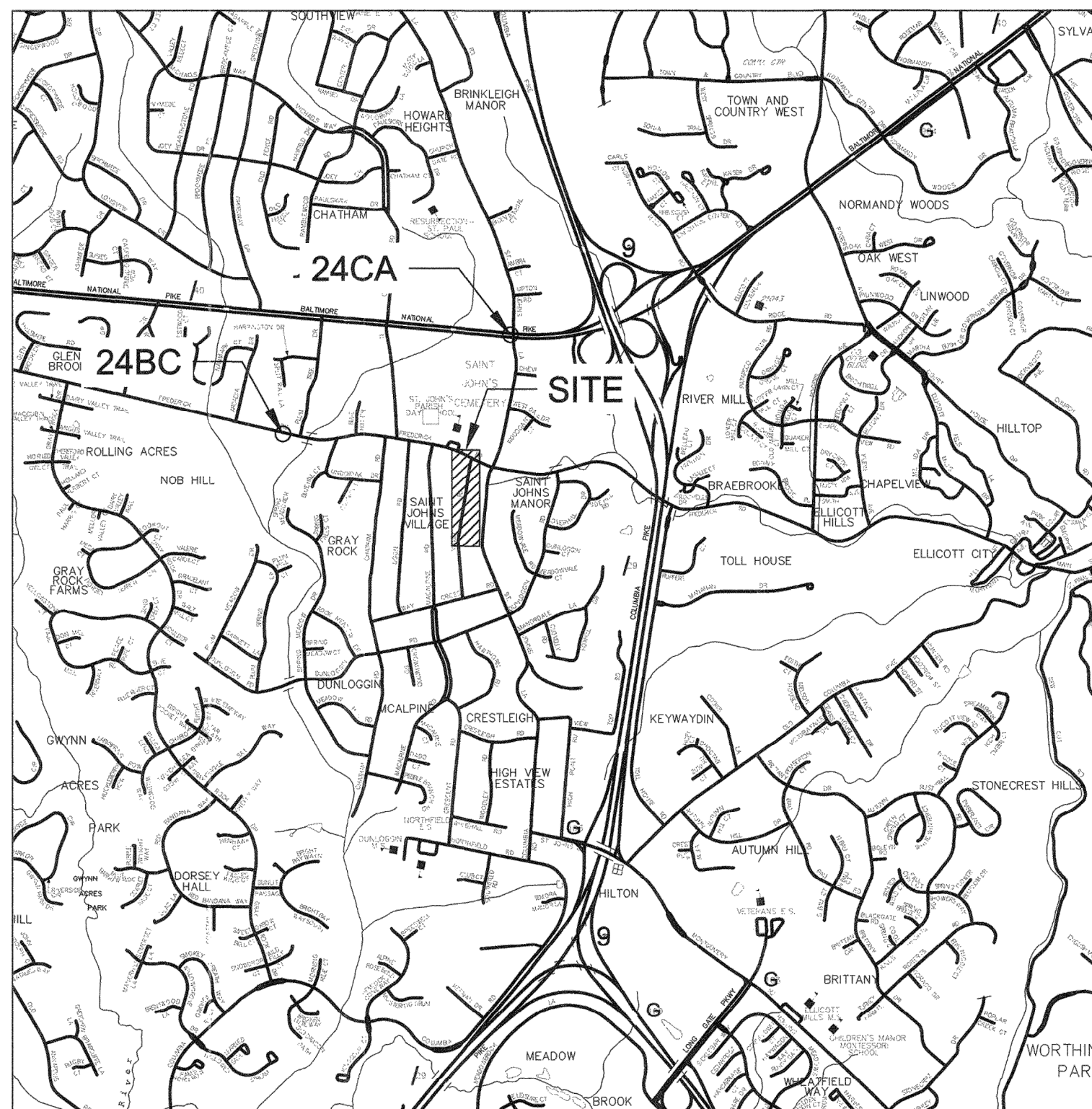
*Mark B. Behrman* 7/10/20  
DATE  
CHIEF, STORMWATER MANAGEMENT DIVISION

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
*John J. Adams* 7/17/20  
DATE  
HOWARD SOIL CONSERVATION DISTRICT

ADDRESS CHART		
UNIT	ADDRESS	
	3617 VALLEY ROAD, ELLICOTT CITY, MD, 21042	
PERMIT INFORMATION CHART		
SUBDIVISION NAME		
SECTION/AREA	LOT/PARCEL #	
	29 / 0724	
PLAT # OR L/F	GRID	ZONING
		0011 R-20
TAX MAP	ELECT. DIST.	CENSUS TRACT
0024	2	602306
SEWER CODE		
WATER CODE		

APPROVALS/PERMITS			
AGENCY	#	DATE APPLIED	DATE APPROVED
HOWARD SOIL CONS. DISTRICT	EP-20-08	10/11/2019	

TRAVERSE POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
TR1	584739.5280	1361065.4230	397.71	REBAR AND CAP
TR2	584189.6000	1360974.9450	375.21	REBAR AND CAP
TR3	583415.6440	1360868.3760	413.19	REBAR AND CAP



## VICINITY MAP

SCALE: 1"=2000'  
HOWARD COUNTY  
ADC MAP 4815 GRID H-7

SHEET INDEX		
SHEET NO.	DRAWING NAME	DESCRIPTION
01	GN-01	COVER SHEET
02	DA-01	PROPOSED DRAINAGE MAP
03	EC-01	EXISTING CONDITIONS PLAN
04	DM-01	DEMOLITION PLAN
05	PC-01	PROPOSED CONDITIONS PLAN
06	DP-01	EXISTING STORM DRAIN PROFILE
07	DP-02	PROPOSED STORM DRAIN PROFILE
08	DE-01	STORM DRAIN IMPROVEMENT DETAILS
09	SC-01	EROSION AND SEDIMENT CONTROL PLAN
10	SC-02	EROSION AND SEDIMENT CONTROL DETAILS
11	GN-02	GENERAL NOTES

## GENERAL NOTES:

1. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT 410.313.1880 AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1.800.257.7777 AT LEAST TWO (2) WORKING DAYS BEFORE STARTING WORK.
2. THE HORIZONTAL AND VERTICAL CONTROL FOR THESE PLANS ARE BASED ON THE MARYLAND STATE SYSTEM OF PLANE COORDINATES AS ESTABLISHED FROM THE FOLLOWING HOWARD COUNTY CONTROL POINTS:
  - 2.1. 24BC NORTHING 585058.416 EASTING 1358312.354 ELEVATION 364.798
  - 24CA NORTHING 586508.202 EASTING 1361634.340 ELEVATION 398.260
3. THE SYSTEM OF COORDINATES USED IS BASED ON THE FOLLOWING DATUMS:
  - 3.1. HORIZONTAL: MARYLAND STATE PLANE NAD OF 1983/1991
  - 3.2. VERTICAL: NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 GEOID 12A
4. TOPOGRAPHIC SURVEYS WERE PERFORMED BY DMW IN FEBRUARY AND AUGUST 2019.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
6. PROPERTY LINES AND EASEMENTS SHOWN ON THIS PLAN ARE APPROXIMATE AND FOR REFERENCE ONLY.
7. SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE COUNTY IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE COUNTY, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
8. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
9. UTILITY DESIGNATION WAS PERFORMED BY AB CONSULTANTS IN AUGUST 2019.
10. UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND TAKEN FROM AVAILABLE PLANS, RECORDS, AND/OR FIELD RECONNAISSANCE. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO LOCATE AND PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
  - 10.1. UTILITY CONTACTS:
    - 10.1.1. BALTIMORE GAS AND ELECTRIC - ELECTRIC: 410.597.7920
    - 10.1.2. BALTIMORE GAS AND ELECTRIC - GAS: 410.291.4844
    - 10.1.3. VERIZON: 410.224.9285
    - 10.1.4. COMCAST: 301.630.7094
  - 10.2. A WETLANDS/WATERWAY CONSTRUCTION PERMIT IS NOT REQUIRED FOR THIS PROJECT.
11. ALL SPECIFIED OR PROPRIETARY PRODUCTS SHOWN HEREON MAY BE SUBJECT TO SUBSTITUTION WITH OTHER PRODUCTS RECOMMENDED BY THE CONTRACTOR SUBJECT TO WRITTEN REVIEW AND APPROVAL BY THE COUNTY.

## PROJECT NOTES:

1. ALL WORK SHALL BE COMPLETED WITHIN THE LIMITS OF EASEMENTS OR RIGHT-OF-ENTRY AS SHOWN ON THESE PLANS.
2. NO REGULATED FEMA FLOOD PLAINS ARE LOCATED IN THE WORK AREA (FEMA FIRM 24027C0090D - EFFECTIVE NOVEMBER 2013)
3. THE SITE IS NOT LOCATED IN NOR DOES IT DISCHARGE TO A TIER II WATERBODY.
4. THE SITE IS LOCATED IN THE LOWER NORTH BRANCH PATAPSCO RIVER WATERSHED. THIS PORTION OF THE WATERSHED IS NOTED AS IMPAIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR THE FOLLOWING POLLUTANTS: PCBs, ESCHERICHIA COLI (E. COLI), CHLORIDES, SULFATES AND HABITAT ALTERATIONS.
5. THE CONTRACTOR SHALL CONTINUALLY MONITOR WEATHER FORECASTS DURING WORK ACTIVITIES AND SCHEDULE WORK DURING FAVORABLE CONDITIONS.
6. THE CONTRACTOR SHALL EXERCISE CARE IN ACTIVITIES THAT INVOLVE CUTTING, FILLING, OR GRADING IN THE VICINITY OF TREES THAT ARE TO REMAIN. THESE ACTIVITIES SHALL BE PERFORMED IN A MANNER THAT DOES NOT DISTURB THE CRITICAL ROOT ZONE WITHIN THE DRIP LINE OF THE TREE. PROTECTIVE ORANGE FENCING SHALL BE INSTALLED AROUND THE PERIMETER OF THE CRITICAL ROOT ZONE PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL NOT STORE EQUIPMENT, MATERIALS, AND/OR SUPPLIES BEYOND THE ORANGE FENCING SHOWN ON THE PLANS.
8. UPON COMPLETION OF THE WORK, BUT PRIOR TO DE-MOBILIZATION, THE CONTRACTOR SHALL REMOVE ALL REMNANTS OF CONSTRUCTION MATERIALS FROM THE SITE. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO A CONDITION EQUAL TO OR BETTER THAN THE PRE-CONSTRUCTION CONDITIONS.
9. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES, PHOTOGRAPHS OF THE PROPOSED WORK AREA AND ACCESS SHALL BE TAKEN BY THE CONTRACTOR.
10. ALL MATERIAL SHALL BE REMOVED AND DISPOSED OF OFFSITE. REMOVED TREES AND BRUSH MAY BE REDISTRIBUTED ON SITE AT THE DISCRETION OF THE COUNTY.
11. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN EXITING THE PROJECT SITE AND PAY CLOSE ATTENTION TO PEDESTRIANS WALKING NEAR THE PROJECT SITE.
12. WORKING HOURS ARE 7AM TO 7PM MONDAY THROUGH FRIDAY.
13. THE CONTRACTOR SHALL AVOID TRACKING HEAVY EQUIPMENT OVER THE CRITICAL ROOT ZONE OF SPECIMEN TREES. IF UNAVOIDABLE, SPECIAL PRECAUTIONS SHOULD BE USED WHEN TRACKING OVER THE CRITICAL ROOT ZONES.

## AS-BUILT CERTIFICATION

I CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

*Thomas G. Turney*  
SIGNATURE  
16997 3/9/2021  
PE LICENSE No. DATE

AS-BUILT  
03-09-2021  
EP-20-08  
SHEET 1 OF 04

REVISIONS		
NO.	DATE	DESCRIPTION

CLIENT/LAND OWNER:  
HOWARD COUNTY  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENVIRONMENTAL SERVICES  
9801 BROKEN LAND PARKWAY,  
COLUMBIA, MARYLAND 21046-3143  
PHONE: 410.313.6417

**CENTURY**  
ENGINEERING  
CONSULTING ENGINEERS - PLANNERS  
10710 GILROY ROAD  
HUNT VALLEY, MARYLAND 21031  
PHONE: (443) 589-2400 FAX: (443) 589-2401

VALLEY ROAD STORM  
DRAIN IMPROVEMENTS  
CAPITAL PROJECT NO.: D-1158  
HSCD #: EP-20-08  
COVER SHEET

PROJECT NO.: 171080.24	SCALE: 1"=2000'	DATE: 7/9/2020
DESIGN: JG	CHECK: TT	
DWG NO.: GN-01 of GN-02		
SHEET NO.: 01 of 11		
I/WE HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE #: 16997 EXPIRES: 07/19/2025		

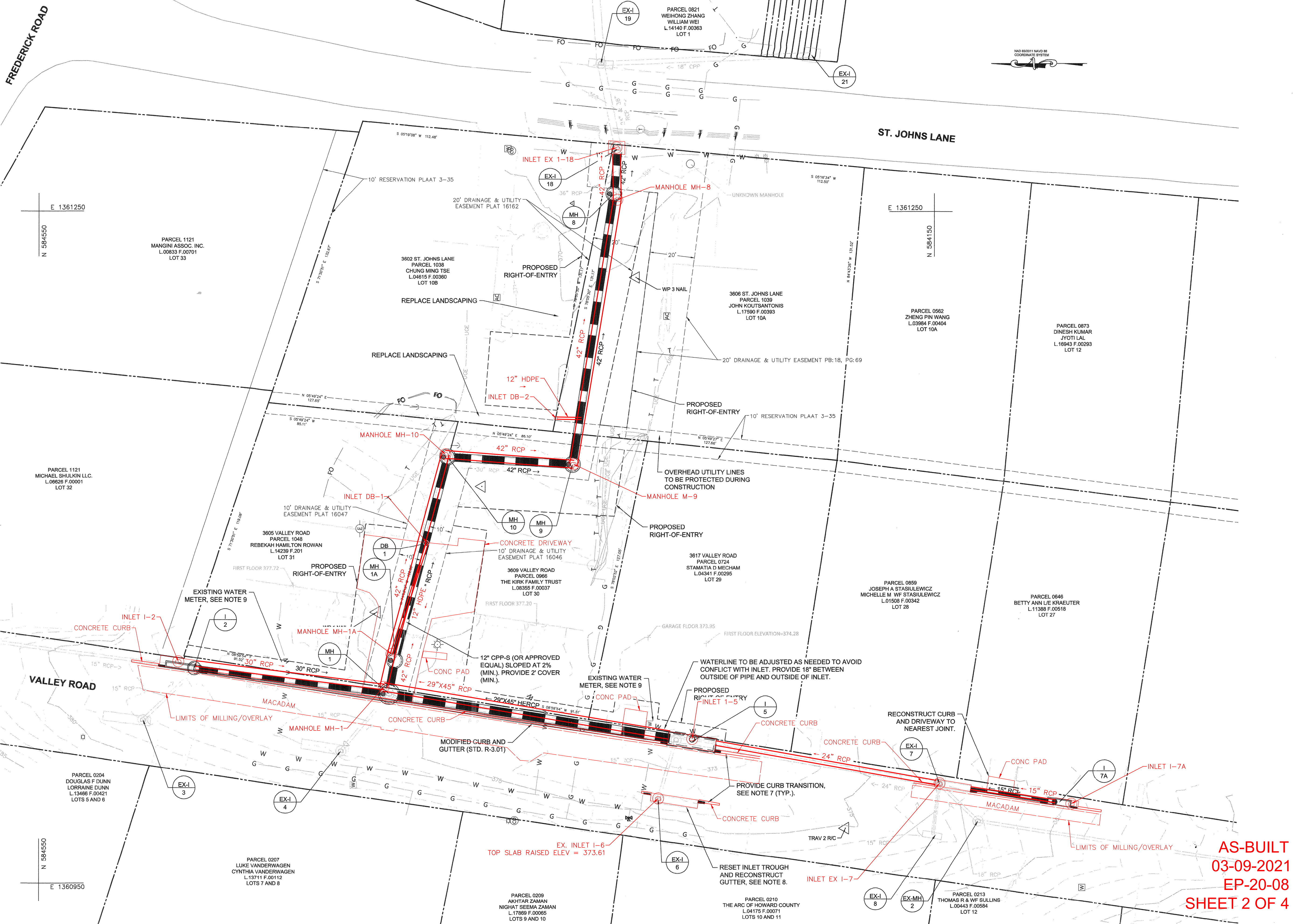
**LEGEND**

- 1' MINOR CONTOUR (SURVEY) -374-
- 5' MAJOR CONTOUR (SURVEY) -375-
- TREE LINE
- TREE
- STORM DRAIN
- RIPRAP
- IMPERVIOUS AREA
- PROPERTY BOUNDARY
- ADJACENT PROPERTY LINE
- EASEMENT
- ROW LINE
- FENCE LINE
- TRAVERSE POINT (REBAR AND CAP)
- ELECTRIC HANDBOX
- SIGN
- FIRE HYDRANT
- UNDERGROUND ELECTRIC LINE UGE UGE
- WATER LINE W W
- FIBER OPTIC LINE FO FO
- TELEPHONE LINE T T
- GAS LINE G G
- OVERHEAD LINE OH OH
- SANITARY SEWER LINE
- STORM DRAIN
- STORM DRAIN INLET
- STORM DRAIN MANHOLE
- CURB AND GUTTER PAN
- CURB TRANSITION
- ASPHALT PATCH
- PROPOSED RIGHT-OF-ENTRY

- NOTES:**
- COMPLETE ALL WORK PER THE LATEST COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
  - SEE DETAILS G-2.11 AND G-2.12 OF THE COUNTY STANDARDS FOR PIPE TRENCH DETAILS AND BEDDING REQUIREMENTS.
  - CONTRACTOR SHALL LOCATE ALL UTILITIES THROUGH TEST PITTING PRIOR TO CONSTRUCTION. PROTECT ALL UTILITIES DURING CONSTRUCTION.
  - CONTRACTOR SHALL VERIFY BY FIELD MEASURING THE ELEVATION AND DIMENSIONS OF ALL EXISTING STORM DRAIN PIPES PRIOR TO ORDERING SHOP DRAWINGS AND CONSTRUCTING NEW INLETS. CONTRACTOR SHALL SAW CUT CURB AND GUTTER AND/OR SIDEWALK AT NEAREST JOINT AS NEEDED TO COMPLETE INLET REPLACEMENTS. REPLACE CURB AND GUTTER, SIDEWALK, AND ASPHALT IN-KIND. PATCH PAVEMENT PER DPW PAVEMENT SECTION P-2, SEE DETAIL R-2.01.
  - PROVIDE IN-KIND REPLACEMENT OF ALL PRIVATELY OWNED RESIDENTIAL STRUCTURES INCLUDING DRIVEWAY PAVEMENT, FENCE, AND LANDSCAPING.
  - REPLACE ALL PIPE IN-KIND AS NEEDED TO COMPLETE NEW INLET CONNECTIONS. MATCH LINE AND GRADE OF NEW PIPE WITH EXISTING PIPE TO PROVIDE CONTINUOUS EXTENSION OF EXISTING PIPE INSIDE DIAMETER. SECURE CONNECTION BETWEEN EXISTING AND PROPOSED PIPES USING USING CONCRETE ENCASEMENT PER COUNTY STANDARD D-5.52, OR ALTERNATIVE METHOD PROPOSED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
  - PROVIDE 3" CURB TRANSITION ON EITHER SIDE OF CURB OPENING INLET FROM EXISTING MODIFIED CURB AND GUTTER (R-3.01) TO SHA TYPE A (SHA STD. MD 620.02) PER HOWARD COUNTY TRANSITION DETAIL (R-3.02) TO MATCH EXISTING CURB HEIGHT AND TO PROVIDE ADEQUATE INLET THROAT OPENING. MAINTAIN POSITIVE DRAINAGE ALONG CURB FLOW LINE. DEPRESS GUTTER AT INLET PER SHA STD. MD 374.05.
  - RESET INLET TROUGH TO ACHIEVE FULL 6 INCH THROAT OPENING AS SHOWN ON THE A-20 INLET DETAIL, DE-01.
  - LOCATE LIMITS OF WATER METER PRIOR TO STORM DRAIN INSTALLATION. ADJUST METER LOCATION IF NECESSARY TO COMPLETE STORM DRAIN INSTALLATION.

\* CONTRACTOR TO USE CAUTION WHILE WORKING UNDER OVERHEAD UTILITY LINES.

ORIGINAL SCALE: 1"=20'



**AS-BUILT**  
**03-09-2021**  
**EP-20-08**  
**SHEET 2 OF 4**

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*Mark S. Richmond* 7/10/20  
 CHIEF, STORMWATER MANAGEMENT DIVISION DATE

NO.		DATE	DESCRIPTION

CLIENT/LAND OWNER:  
 HOWARD COUNTY  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENVIRONMENTAL SERVICES  
 9801 BROKEN LAND PARKWAY,  
 COLUMBIA, MARYLAND 21046-3143  
 PHONE: 410.313.6417

**CENTURY ENGINEERING**  
 CONSULTING ENGINEERS - PLANNERS  
 10710 GILROY ROAD  
 HUNT VALLEY, MARYLAND 21031  
 PHONE: (443) 589-2400 FAX: (443) 589-2401

**VALLEY ROAD STORM DRAIN IMPROVEMENTS**  
 CAPITAL PROJECT NO. : D-1158  
 HSCD #: EP-20-08

PROPOSED CONDITIONS PLAN

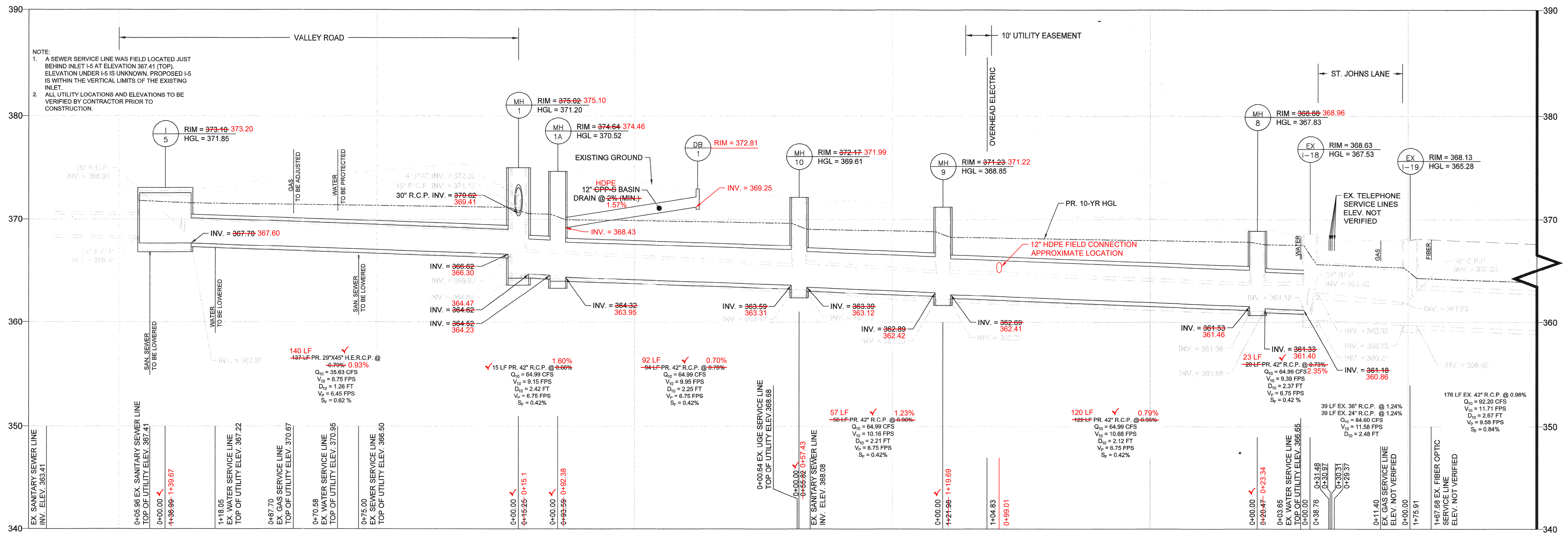
PROJECT NO: 171080.24  
 SCALE: 1"=20'  
 DATE: 7/9/2020

DESIGN: JG  
 CHECK: TT

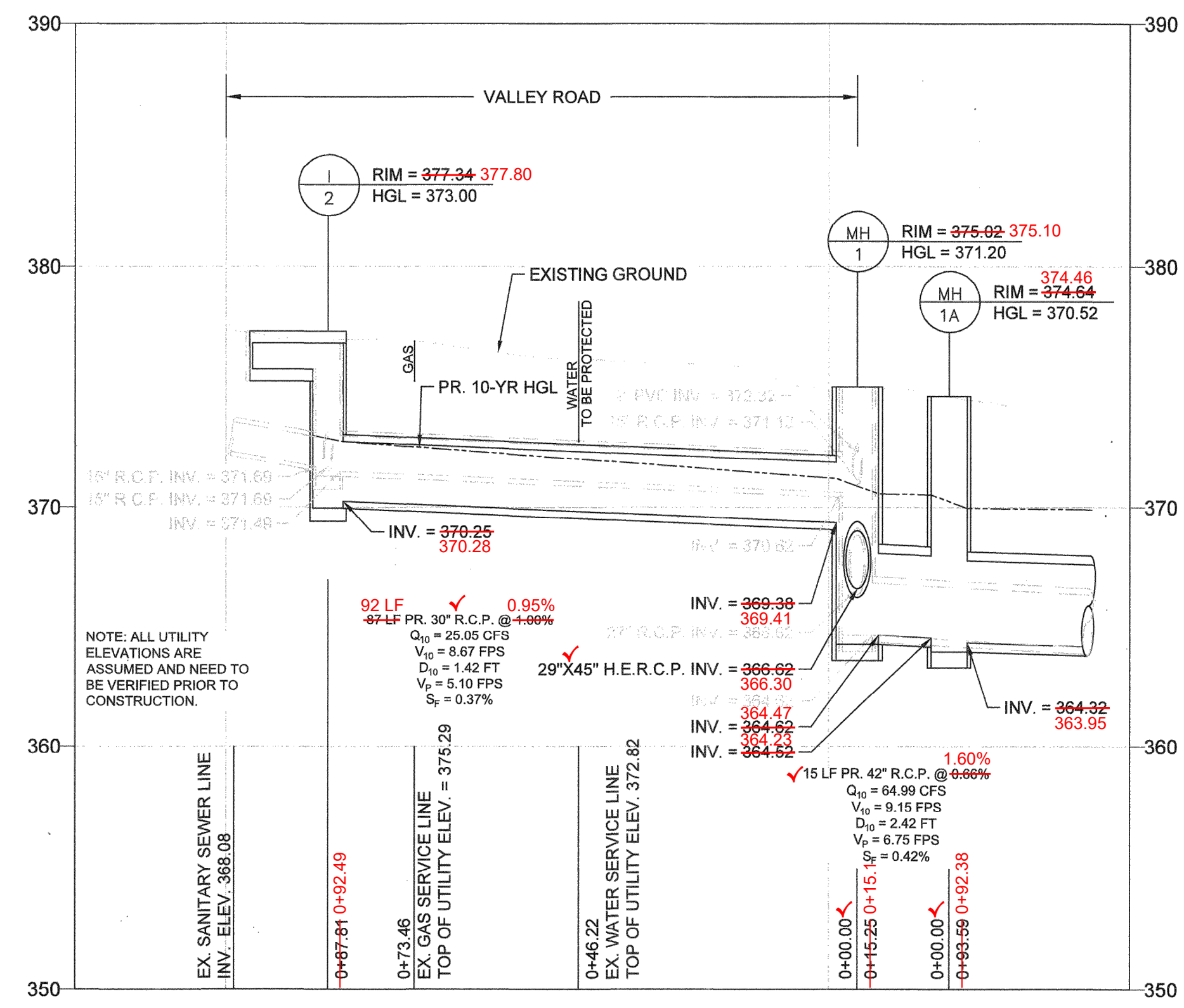
DWG NO: PC-01 of PC-01

SHEET NO: 05 of 11

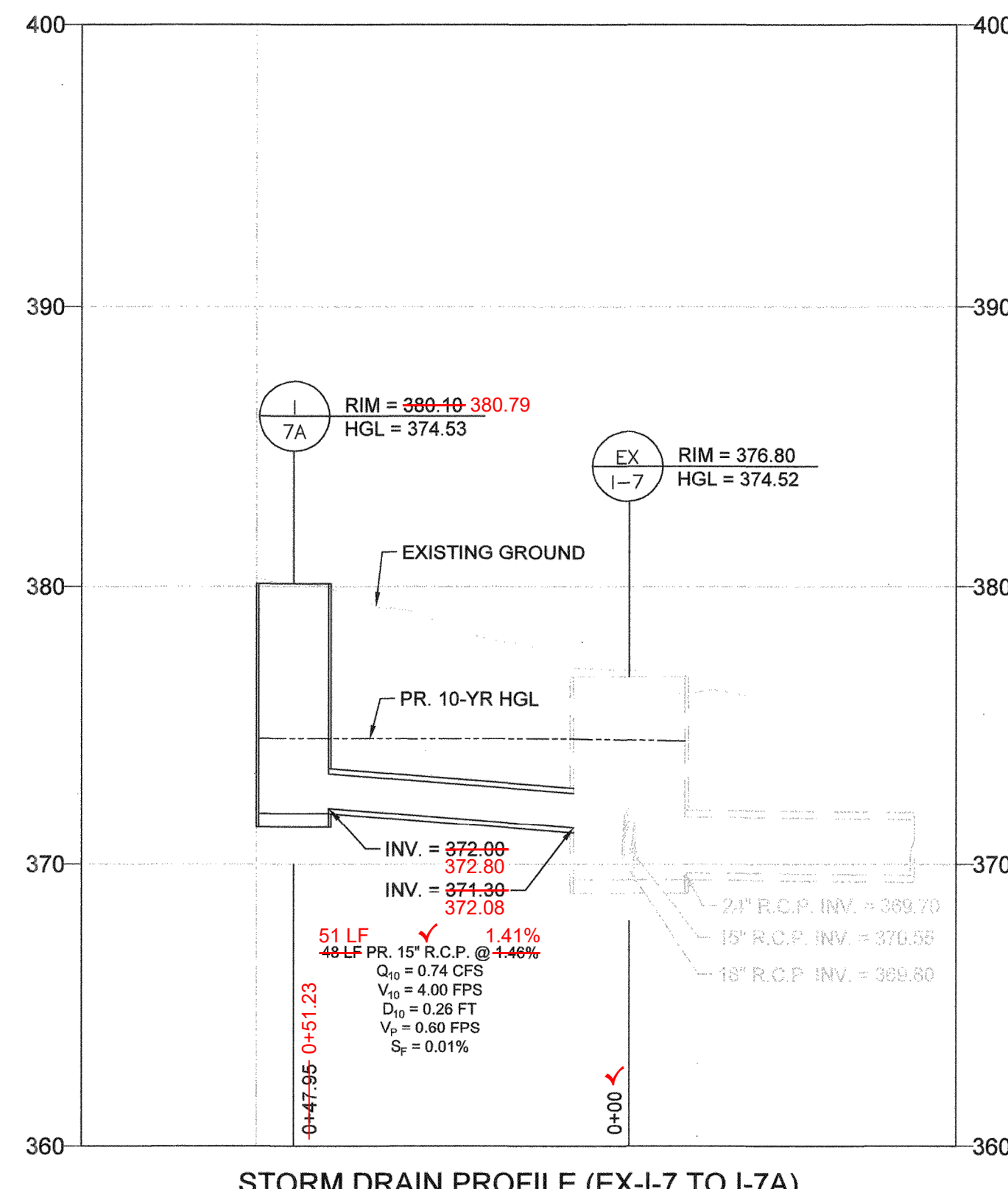
7/10/20



STORM DRAIN PROFILE (I-5 TO EX-HW-1)  
HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 5'

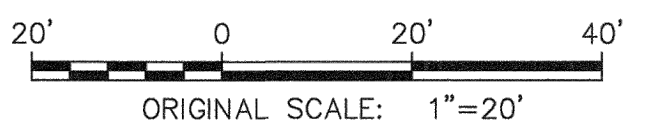


STORM DRAIN PROFILE (I-2 TO MH-1A)  
HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 5'



STORM DRAIN PROFILE (EX-I-7 TO I-7A)  
HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 5'

- UTILITY NOTES:
1. COMPLETE WATER AND SEWER MODIFICATION IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME II.
  2. WATER SERVICE LINES SHALL BE COPPER PIPE - TYPE K.
  3. PROVIDE A MINIMUM OF 1.5' HORIZONTAL CLEARANCE AND 1.0' VERTICAL CLEARANCE BETWEEN THE BOTTOM OF THE WATER SERVICE AND THE TOP OF THE SEWER LINE.
  4. PROVIDE 1.0' VERTICAL CLEARANCE BETWEEN THE TOP OR BOTTOM OF THE WATER LINE AND THE TOP OR BOTTOM OF THE STORM DRAIN PIPE.
  5. MAINTAIN 3.0' MINIMUM COVER OVER WATER LINES AT CROSSINGS, MEASURED FROM TOP OF PIPE TO FINISHED GRADE.
  6. PROVIDE 1.5' CLEARANCE BETWEEN OUTSIDE OF STORM DRAIN STRUCTURE AND EDGE OF WATER LINE.
  7. ALL DRY UTILITY CONFLICTS TO BE COORDINATED WITH THE UTILITY OWNERS.
  8. PROVIDE SEWER HOUSE DROP CONNECTION (S-2.12) TO ACHIEVE SEWER LINE LOWERING, SLOPE SEWER HOUSE CONNECTION AT 2% PIPE MATERIAL SHALL BE DIP CL 52 MATCHING THE DIAMETER OF THE EXISTING PIPE.
  9. PROVIDE 12" MINIMUM COVER BETWEEN OUTSIDE OF GAS SERVICE LINE AND STORM DRAIN.



AS-BUILT  
03-09-2021  
EP-20-08  
SHEET 3 OF 4

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Mark S. Kucharski*  
CHIEF, STORMWATER MANAGEMENT DIVISION  
7/10/20  
DATE

REVISIONS		
NO.	DATE	DESCRIPTION

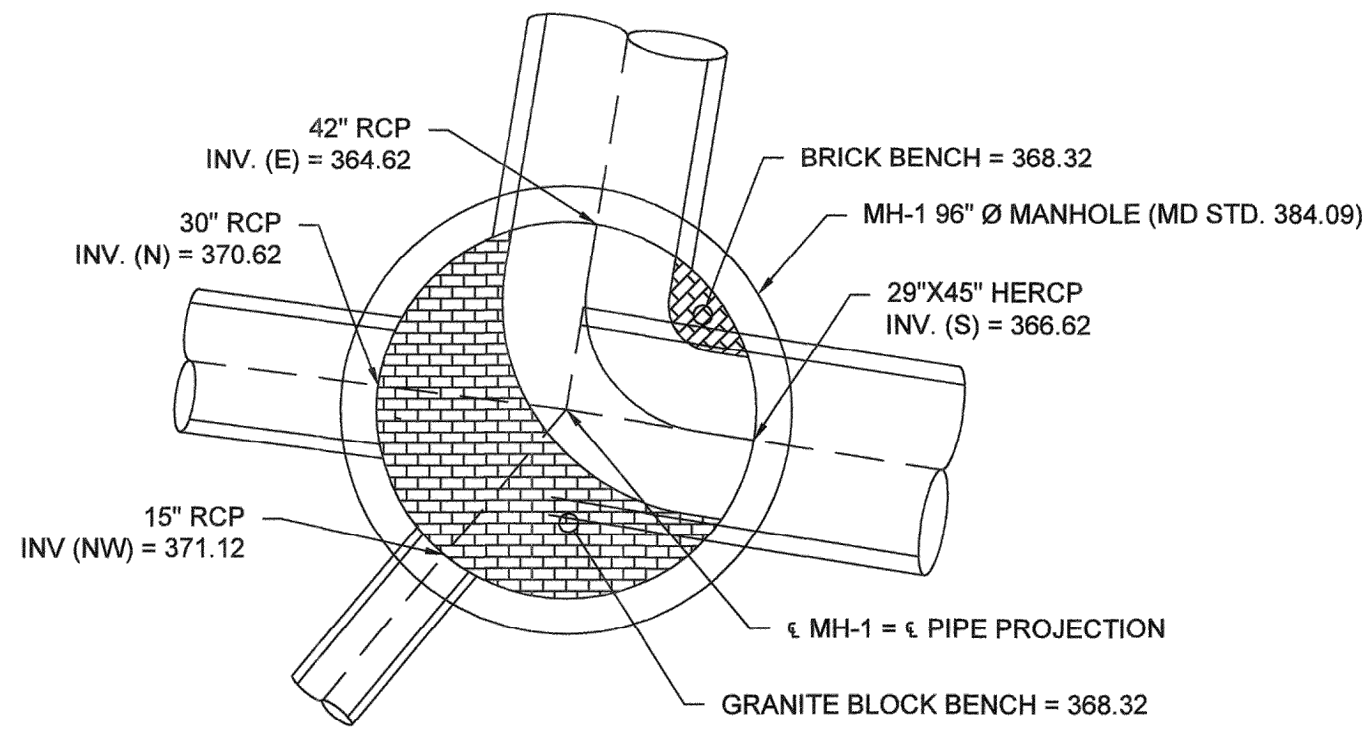
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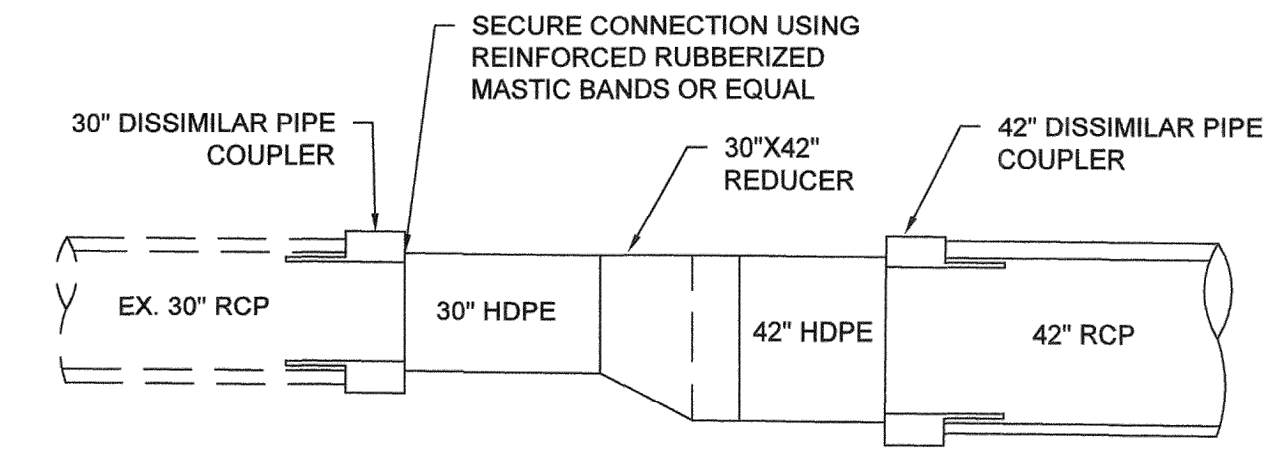
VALLEY ROAD STORM  
DRAIN IMPROVEMENTS  
CAPITAL PROJECT NO. : D-1158  
HSCD #: EP-20-08  
PROPOSED STORM DRAIN PROFILE

PROJECT NO: 171080.24  
SCALE: 1"=20'  
DATE: 7/9/2020  
DESIGN: JG  
CHECK: TT  
DWG NO: DP-02 of DP-02  
SHEET NO: 07 of 11  
STATE OF MARYLAND  
Professional Engineer  
7/10/20

STRUCTURE SCHEDULE						
ID	TYPE	NORTHING	EASTING	TOP ELEV.	STANDARD	COMMENT
✓ I-2	✓ 15" COG INLET	584487.6768	1361049.0983	377.87	N/A	SEE A-20 DETAIL THIS SHEET
✓ I-5	✓ 20" COG INLET	584258.1585	1361014.4398	377.20	N/A	SEE A-20 DETAIL THIS SHEET
✓ I-7A	✓ 10" COG INLET	584088.8347	1360985.5054	380.79	D-4.03	
✓ MH-1	✓ 96" DIAMETER PRECAST MANHOLE	584396.0852	1361037.6336	375.10	MD-384.09	SEE MH-1 DETAIL
✓ MH-1A	✓ 72" DIAMETER PRECAST MANHOLE	584392.4893	1361052.3564	374.48	MD-384.05	
✓ MH-8	✓ 72" DIAMETER PRECAST MANHOLE	584291.6056	1361255.2319	368.96	MD-384.05	
✓ MH-9	✓ 96" DIAMETER PRECAST MANHOLE	584311.1216	1361137.1399	371.22	MD-384.09	
✓ MH-10	✓ 84" DIAMETER PRECAST MANHOLE	584368.3844	1361141.5339	371.99	MD-384.07	
✓ DB-1	✓ 15" NYLOPLAST DRAIN BASIN (OR APPROVED EQUAL)	584376.6301	1361102.1320	372.81	PER MANUFACTURER	STANDARD GRATE MEETING H-20
DB-2	15" NYLOPLAST DRAIN BASIN	584319.0383	1361157.7676	369.71	PER MANUFACTURER	STANDARD GRATE MEETING H-20



MH-1 DETAIL  
N.T.S.

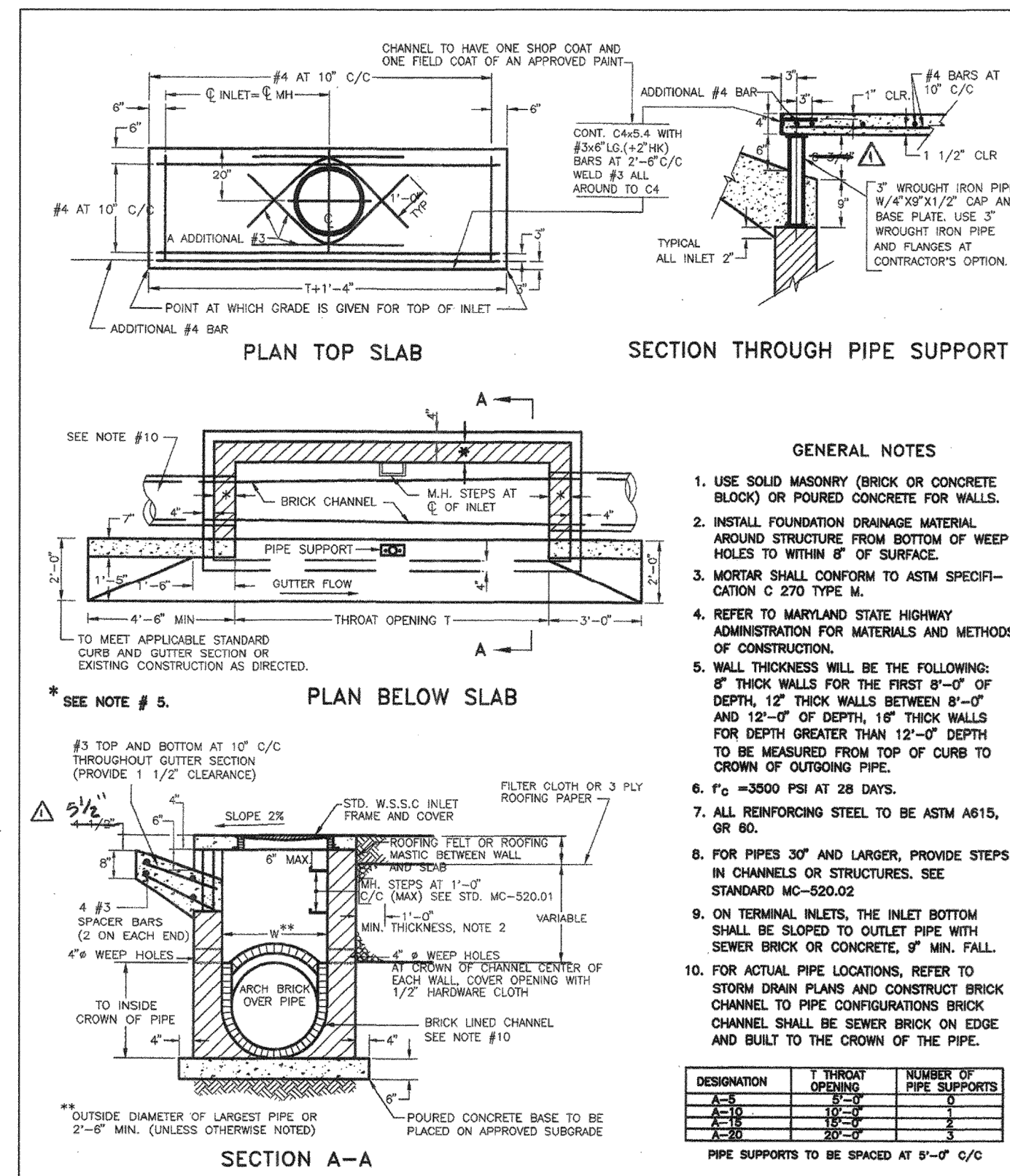


NOTES:  
1. ALTERNATIVE TEMPORARY CONNECTION MAY BE PROVIDED IF APPROVED BY THE ENGINEER AND THE CID INSPECTOR.  
2. THE TEMPORARY CONNECTION SHALL BE PROVIDED AT THE END OF EACH DAY UNLESS NO BASE FLOW OR PRECIPITATION IS ANTICIPATED BEFORE THE NEXT WORK DAY, PER LOCAL NATIONAL WEATHER SERVICE FORECAST, AND A WAIVER IS GRANTED BY THE SEDIMENT CONTROL INSPECTOR.

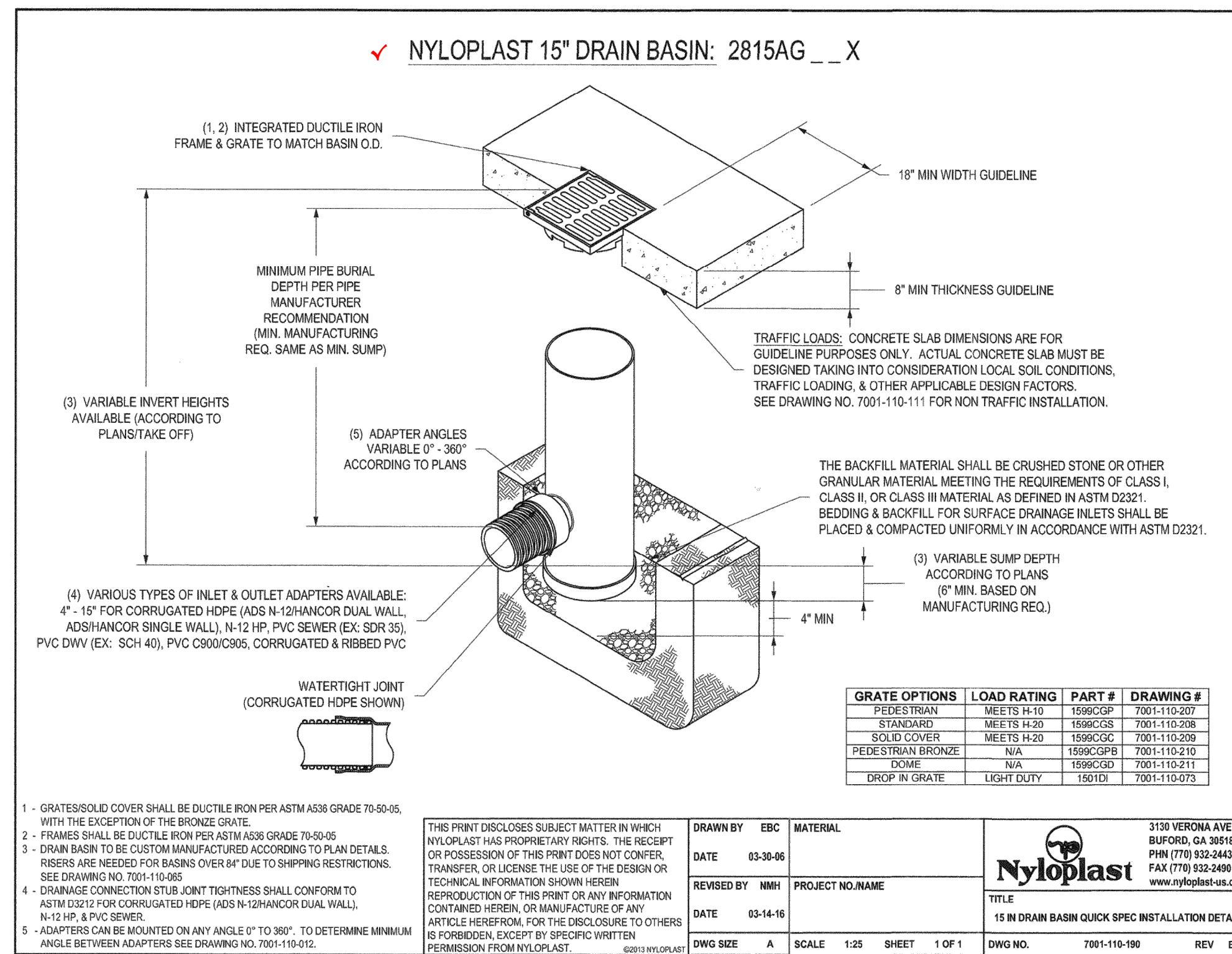
TEMPORARY PIPE CONNECTION DETAIL  
N.T.S.

PIPE SCHEDULE					
STRUCTURE	TO	LENGTH	SIZE	PIPE MATERIAL	CLASS
✓ I-7A	✓ EX-4-7	48 FT - 51 FT	✓ 15 IN	✓ R.C.P.	✓ ASTM C-76 CL. IV
✓ I-2	✓ MH-1	87 FT - 92 FT	✓ 30 IN	✓ R.C.P.	✓ ASTM C-76 CL. IV
✓ I-5	✓ MH-1	137 FT - 140 FT	✓ 42 IN	✓ R.C.P.	✓ ASTM C-76 CL. IV
✓ MH-1	✓ MH-1A	15 FT	✓ 42 IN	✓ R.C.P.	✓ ASTM C-76 CL. IV
✓ MH-1A	✓ MH-10	94 FT - 92 FT	✓ 42 IN	✓ R.C.P.	✓ ASTM C-76 CL. IV
✓ MH-10	✓ MH-9	66 FT - 57 FT	✓ 42 IN	✓ R.C.P.	✓ ASTM C-76 CL. IV
✓ MH-9	✓ MH-8	122 FT - 120 FT	✓ 42 IN	✓ R.C.P.	✓ ASTM C-76 CL. IV
✓ MH-8	✓ EX-1-18	20 FT - 23 FT	✓ 42 IN	✓ R.C.P.	✓ ASTM C-76 CL. IV
✓ DB-1	✓ MH-1A	66 FT - 52 FT	✓ 12 IN	✓ HDPE	✓ AASHTO M294, TYPE C, PROVIDE GRANULAR BACKFILL
NOTE: DB-2	42\"/>				

- NOTE:  
1. ALL STRUCTURES AND PIPES PROPOSED ARE TO BE PUBLICLY MAINTAINED.  
2. PIPE LENGTHS ARE MEASURED FROM CENTER OF UPSTREAM STRUCTURE TO CENTER OF DOWNSTREAM STRUCTURE.  
3. INSTALL ALL PIPES IN TRENCH PER HOWARD COUNTY STANDARD DETAILS G-2.11 AND G-2.12.



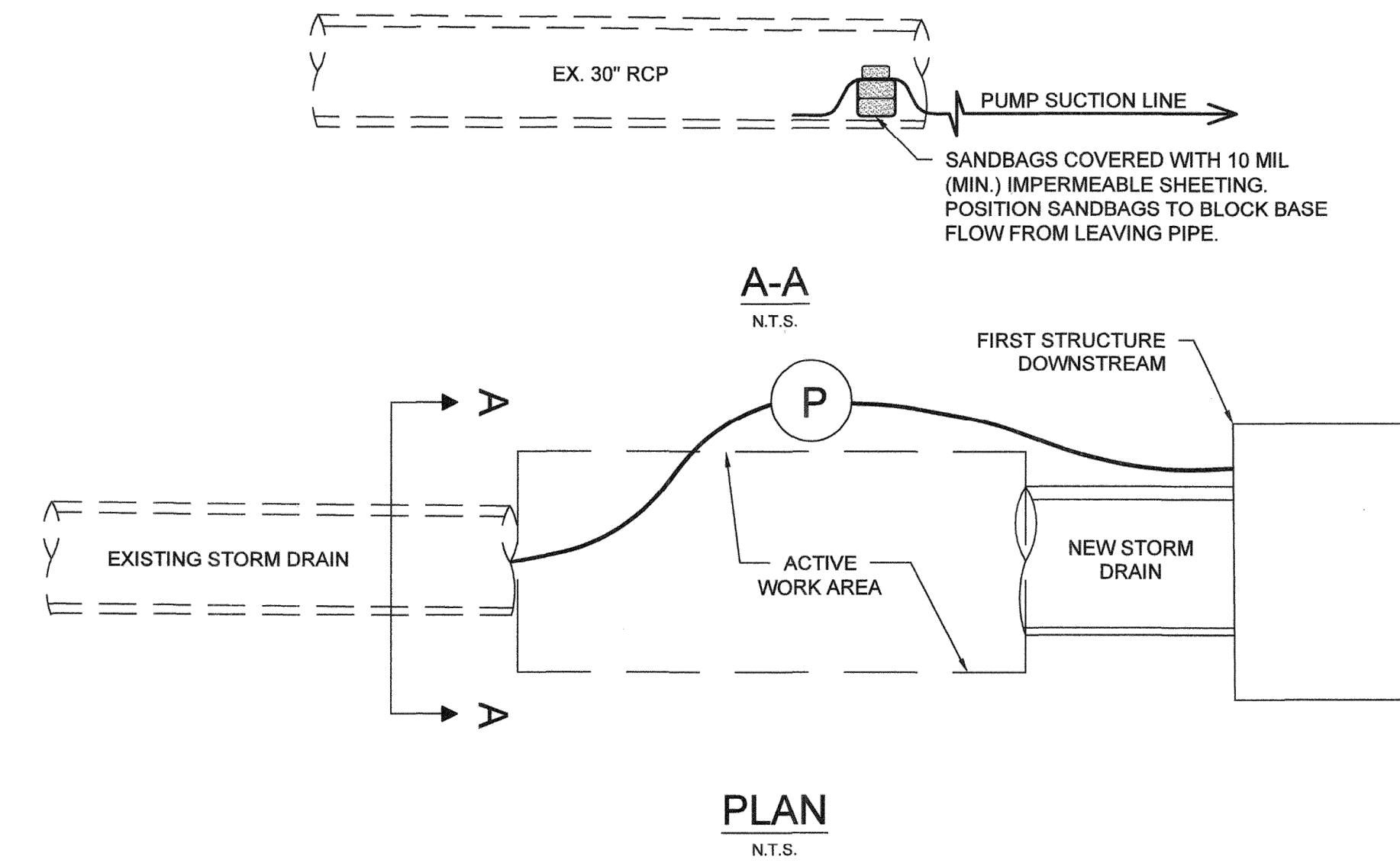
✓ A-20 DETAIL



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTAL	MEETS H-10	1596CGP	7001-110-207
STANDARD	MEETS H-20	1596CSG	7001-110-208
SOFT COVER	MEETS H-30	1596CSC	7001-110-209
PEDESTAL BRONZE	N/A	1596CGB	7001-110-210
DOM	N/A	1596CSD	7001-110-211
DROP IN GRATE	LIGHT DUTY	1560D	7001-110-073



15 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL  
DWG NO. 7001-110-190 REV. E



CLEAN WATER BYPASS DETAIL  
N.T.S.

- NOTES:  
1. ADJUST PUMP CONFIGURATION AS NEEDED TO PREVENT CLEARWATER FROM ENTERING WORK AREA. ADJUST LARGE OUTLET TO MAINTAIN A NON-EROSIVE DISCHARGE BY DISCHARGING TO A DOWNSTREAM STRUCTURE.  
2. DEWATER WORK AREA AS NEEDED BY DISCHARGING PUMPED FLOWS TO A FILTER BAG.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Mark S. Richmond* 7/10/20  
CHIEF, STORMWATER MANAGEMENT DIVISION DATE

REVISIONS		
NO.	DATE	DESCRIPTION

CLIENT/LAND OWNER:  
HOWARD COUNTY  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENVIRONMENTAL SERVICES  
9801 BROKEN LAND PARKWAY,  
COLUMBIA, MARYLAND 21046-3143  
PHONE: 410.313.6417

**CENTURY**  
ENGINEERING  
CONSULTING ENGINEERS - PLANNERS  
10710 GILROY ROAD  
HUNT VALLEY, MARYLAND 21031  
PHONE: (443) 589-2400 FAX: (443) 589-2401

VALLEY ROAD STORM  
DRAIN IMPROVEMENTS  
CAPITAL PROJECT NO. : D-1158  
HSCD #: EP-20-08  
STORM DRAIN IMPROVEMENT DETAILS

PROJECT NO. 171080.24 SCALE: N.T.S. DATE: 7/9/2020  
DESIGN: JG CHECK: TT  
DWG NO. DE-01 OF DE-01  
SHEET NO. 08 OF 11  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE #: 16997 EXPIRES: 07.13.2025

AS-BUILT  
03-09-2021  
EP-20-08  
SHEET 4 OF 4