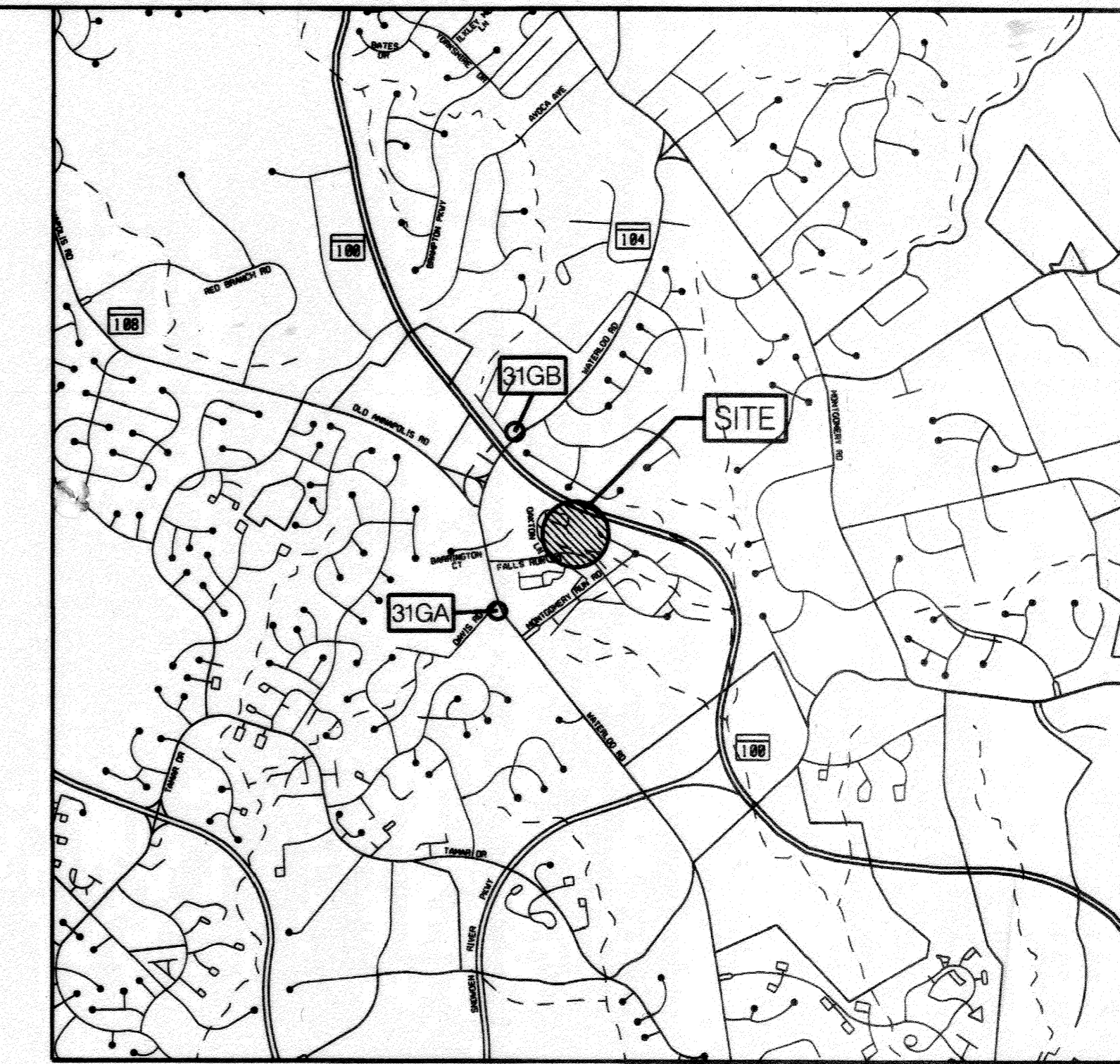


INDEX OF SHEETS

SHEET NO.	DESCRIPTION	(1) CONSTRUCTION MODIFICATION 06/06/2019 (2) AS-BUILT 06/07/2019
(2) 1	TITLE SHEET	
(2) 2	ENVIRONMENTAL RESOURCES MAP	
(2) 3	STORMWATER MANAGEMENT GRADING PLAN	
(2)(1) 4	STORMWATER MANAGEMENT PROFILES	
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7	EROSION & SEDIMENT CONTROL PLAN	
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# ASHTON WOODS STORMWATER POND REPAIR

HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
CAPITAL PROJECT D-1160



VICINITY MAP  
SCALE: 1" = 2000'  
ADC MAP 16-F5

DESIGN INFORMATION

WATERSHED ID	02-13-09
IMPERVIOUS AREA (AC)	3.97
IMPERVIOUS TREATED (AC)	0.00*
DRAINAGE AREA (AC)	11.60
WATER QUALITY VOLUME (CF)	0.00*
% TREATED	0.00*

\* THE REPAIRED POND FACILITY DOES NOT INCLUDE IMPROVEMENTS OR HAVE CAPACITY TO PROVIDE WATER QUALITY TREATMENT. THE PROPOSED DESIGN INCLUDES TWO (2) FOREBAYS TO ENHANCE WATER QUALITY.

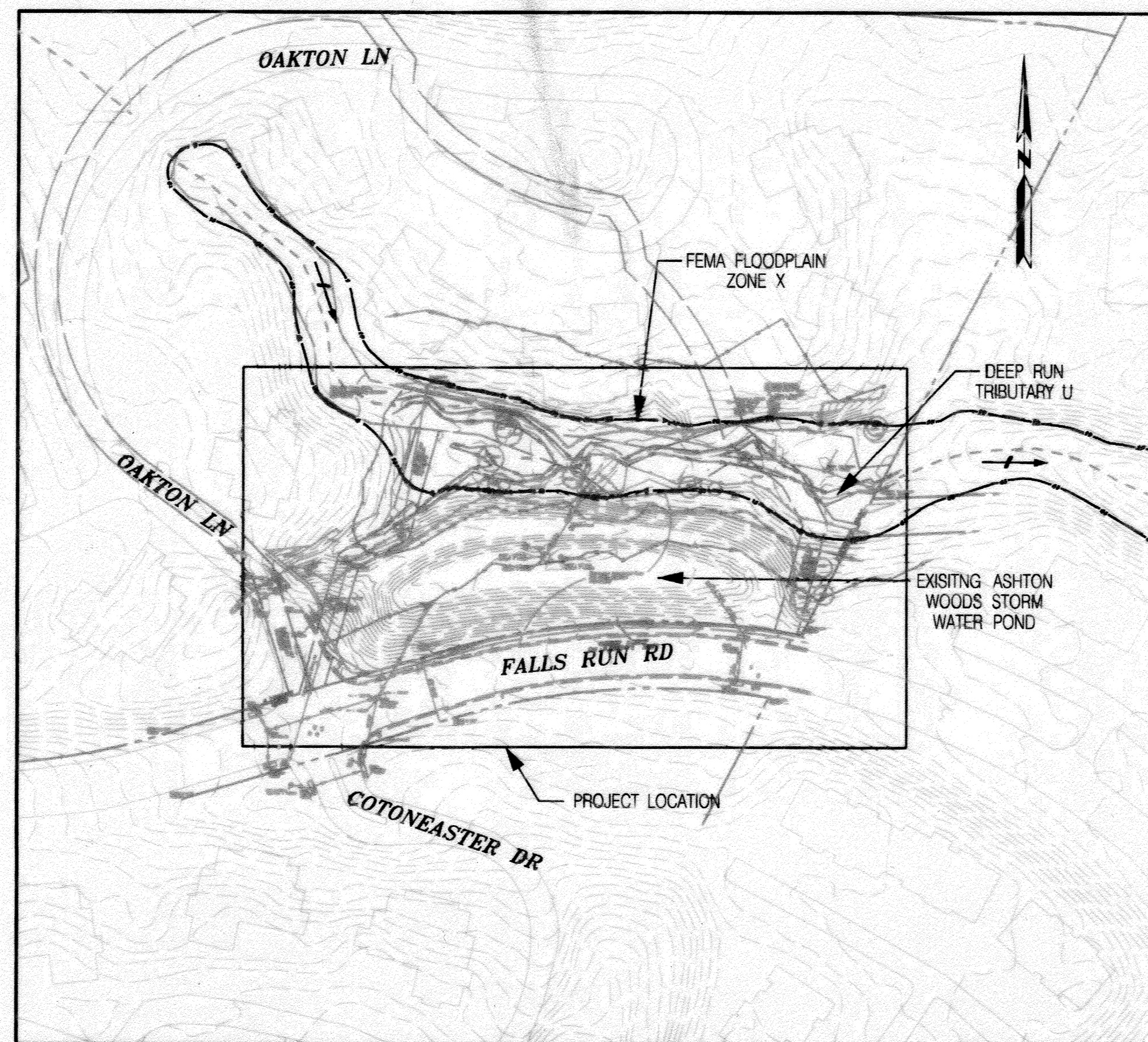
SITE ANALYSIS DATA

SITE AREA (AC)	1.16
WETLAND AREA (AC)	0.02
WETLAND BUFFER (AC)	0.15
FLOODPLAIN AREA (AC)	0.05
FOREST LIMITS (AC)	0.10
STEEP SLOPE AREA <15% (AC)	0.66
ERODIBLE SOILS (AC)	0.00
LIMIT OF DISTURBANCE (AC)	1.16
PROPOSED SITE USE	STORMWATER MANAGEMENT
PROPOSED IMPERVIOUS AREA (AC)	0.00

SPECIAL CONTRACTOR NOTES

- PROJECT SITE IS NOT LOCATED WITHIN THE 100-YEAR FLOODPLAIN.
- CONTRACTOR SHALL NOT STORE EQUIPMENT, MATERIALS AND/OR SUPPLIES BEYOND THE LIMIT OF DISTURBANCE SHOWN ON THE PLANS.
- 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.
- PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES, PHOTOGRAPHS OF THE PROPOSED WORK AREA AND ACCESS SHALL BE TAKEN.
- CONTRACTOR SHALL CONTINUOUSLY MONITOR WEATHER FORECASTS DURING WORK ACTIVITIES AND SCHEDULE WORK DURING FAVORABLE CONDITIONS.
- THE CONTRACTOR SHALL EXERCISE CARE IN ACTIVITIES INVOLVING EITHER CUT AND FILL OR GRADING IN THE VICINITY OF TREES THAT ARE TO REMAIN. ACTIVITIES NEAR TREES THAT ARE TO REMAIN SHALL BE DONE IN A MANNER THAT DOES NOT DISTURB THE CRITICAL ROOT ZONE OR WITHIN THE DRILLING OF THE TREES. ORANGE RENCING SHALL BE INSTALLED AROUND THE PERIMETER OF THE CRITICAL ROOT ZONE PRIOR TO CONSTRUCTION.
- ALL TREES TO BE REMOVED SHALL BE CUT AT THE BASE WITH A SAW AND NOT PUSHED OVER. TREE STUMPS OUTSIDE THE EMBANKMENT MAY BE LEFT IN PLACE, UNLESS OTHERWISE DIRECTED ON THE PLANS OR BY THE ENGINEER.
- ALL MATERIAL SHALL BE REMOVED AND DISPOSED OF OFFSITE. REMOVED TREES AND BRUSH MAY BE REDISTRIBUTED ON SITE AT THE DISCRETION OF THE ENGINEER OR HIS/HER REPRESENTATIVE.
- THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN EXITING THE PROJECT SITE AND PAY CLOSE ATTENTION TO PEDESTRIANS WALKING NEAR THE SITE.
- WORKING HOURS ARE 7 A.M. TO 7 P.M. MONDAY THROUGH FRIDAY. WITH PERMISSION CONTRACTORS MAY WORK ON WEEKENDS.
- THE CONTRACTOR SHALL AVOID TRACKING HEAVY EQUIPMENT OVER CRITICAL ROOT ZONE OF SPECIMEN TREES. IF UNAVOIDABLE LOAD MATS SHOULD BE USED WHEN TRACKING OVER THE CRITICAL ROOT ZONES.
- CONTRACTOR SHALL USE AN ADEQUATELY SIZED PUMP TO DEWATER THE POND AT ALL TIMES. THE PUMP IS NOT TO PRODUCE MORE THAN 55 DECIBELS AT THE PROPERTY LINE.
- THE CONTRACTOR MAY ELECT TO USE 24-HOUR SUBMERSIBLE PUMPS FOR CLEAR WATER DIVERSIONS INSTEAD OF THE GRAVITY FLOW CLEAR WATER DIVERSION PIPES FOR THE EAST AND WEST INLET PIPES.

PROPERTY OWNER:  
STELLAR ASHTON WOODS, LLC.  
3520 PIEDMONT ROAD, NE  
SUITE 410  
ATLANTA, GA 30305



SITE LOCATION  
SCALE: 1" = 100'

HOWARD COUNTY SURVEY CONTROL

DESIGNATION	NORTHING	EASTING	ELEVATION
31GA	564925.766	1367067.712	511.698
31GB	567567.474	1367353.446	511.318

GENERAL INFORMATION

- EXISTING FACILITY WAS CONSTRUCTED UNDER HOWARD COUNTY, MARYLAND STORMWATER MANAGEMENT AS-BUILT PLAN F-90-11, DATED 12-05-1989, AS ACCEPTED BY HOWARD SOIL CONSERVATION DISTRICT.
- THERE ARE NO KNOWN BURIAL GROUNDS OR CEMETERY SITES LOCATED ON THE PROJECT SITE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY AND SPECIFICATIONS, AS APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 24 HOURS IN ADVANCE OF ANY WORK BEING DONE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, NAD83 (2011).
- WATER IS PUBLIC.
- SEWER IS PUBLIC.
- EXISTING UTILITIES ARE BASED ON MISS UTILITY MARKOUT OCTOBER 2015 AND FIELD SURVEYS. CONTRACTOR TO VERIFY INFORMATION TO HIS/HER OWN SATISFACTION.
- KCI PERFORMED A SITE VISIT ON OCTOBER 7, 2015 TO VERIFY THE PRESENCE OF WETLANDS AND "WATERS OF THE U.S." AT THE SITE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH ONE FOOT CONTOUR INTERVALS IN NAVD88 VERTICAL DATUM PREPARED BY KCI TECHNOLOGIES, INC., IN OCTOBER 2015.
- NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
- OBSTRUCTIONS SHOWN ON THIS DRAWING ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND KCI TECHNOLOGIES, INC. DOES NOT WARRANT OR GUARANTEE THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION GIVEN.
- SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES BETWEEN THE PLANS AND THE FIELD CONDITIONS, THE CONTRACTOR MUST VERIFY SUCH INFORMATION TO HIS OWN SATISFACTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO 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.
- THERE ARE NO CRITICAL AREAS WITHIN THE STUDY AREA.
- AN EASEMENT AND RIGHT-OF-WAY FOR EASEMENTS SHOWN ON PLAT NO. 9110, INCLUDING THE STORMWATER MANAGEMENT POND AND UTILITY EASEMENT, WAS GRANTED TO HOWARD COUNTY, MARYLAND IN LIBER 2683, FOLIO 692.
- THE STORMWATER MANAGEMENT POND IS NOT WITHIN A TIER II WATERSHED. THE POND DISCHARGES INTO DEEP RUN TRIBUTARY U, WHICH CONTRIBUTES TO DEEP RUN WITHIN THE PATAPSCO RIVER LOWER NORTH BRANCH WATERSHED. THE STREAM IS IN USE 1 WATERS, WHICH ARE PROTECTED FOR CONTACT RECREATION AND NONTIDAL WARMWATER AQUATIC LIFE. THE PATAPSCO RIVER LOWER NORTH BRANCH IS LISTED AS IMPAIRED FOR SULFATES AND CHLORIDES.

DESIGN NARRATIVE

THIS PROJECT WILL SERVE TO PROTECT NATURAL RESOURCES BY PROVIDING STORMWATER MANAGEMENT AND PREVENTING EMBANKMENT FAILURE WHICH COULD RESULT IN DISCHARGE OF SEDIMENT DOWNSTREAM. ADDITIONALLY, IMPROVEMENTS ARE PROPOSED TO ENHANCE WATER QUALITY. IMPROVEMENTS WILL HELP REDUCE THE DISCHARGE OF SEDIMENT AND NUTRIENTS DOWNSTREAM. AS THIS PROJECT INVOLVES REPAIR TO AN EXISTING STORMWATER FACILITY, THERE IS NO ALTERATION TO A NATURAL FLOW PATH. THERE IS NO IMPERVIOUS AREA WITHIN THE SITE TO BE REDUCED; HOWEVER WATER QUALITY TREATMENT OF EXISTING IMPERVIOUS AREA WILL BE ENHANCED. SEDIMENT CONTROL WILL BE PROVIDED THROUGH PROVISION OF A SANDBAG BERM AROUND THE EXCAVATED PORTION OF THE EMBANKMENT, ENTRAPMENT OF SEDIMENT LADEN WATER AND DEWATERING THROUGH A FILTER BAG, AND PROTECTION OF UNDISTURBED AREA ADJACENT TO THE STOCKPILE AREA THROUGH USE OF A FILTER LOG. THE PROPOSED WORK IS WITHIN AN EXISTING STRUCTURAL BMP; THEREFORE, IMPLEMENTATION OF ESD PRACTICES IS NOT APPLICABLE.

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	PARCEL#
ASHTON WOODS		423
PLAT# of L/P	GRID #	ZONING
9110	20	R-SA-B
TAX MAP NO.	ELECT. DISTR.	CENSUS TRACT
31	2	6011.05
WATER CODE	SEWER CODE	
PUBLIC	PUBLIC	

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

*Raymond J. Krahe* 5-3-18  
DIRECTOR OF PUBLIC WORKS DATE

*Michael P. ...* 5/1/18  
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE

*Paul L. ...* 5/1/18  
CHIEF, STORMWATER MANAGEMENT DIVISION DATE

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION AND SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY 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 COUNTY SOIL CONSERVATION DISTRICT WITH "AS-BUILT" PLANS OF THE POND WITHIN 30 DAYS OF COMPLETION."

RAYMOND J. KRAHE P.E. # 28634  
SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT."

*James M. ...* 5/1/18  
SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE

AS-BUILT CERTIFICATION

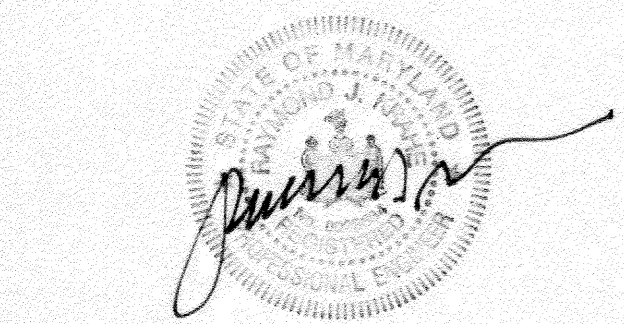
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

*Raymond J. Krahe*  
SIGNATURE  
MPPE 28634  
PE NO.  
11/12/2019  
DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS  
EP-16-22

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

*Paul L. ...* 5/10/18  
HOWARD SCD DATE

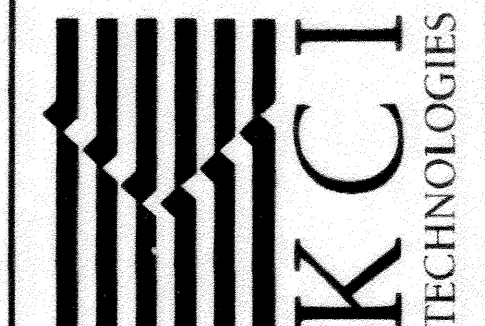


PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, RAYMOND J. KRAHE, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 28634. EXPIRATION DATE: 2019-03-26

OWNER:  
HOWARD COUNTY  
DEPARTMENT OF PUBLIC WORKS  
6751 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MD 21046  
410-313-6444

NO.	REVISIONS DESCRIPTION	DATE

936 RIDGEBROOK ROAD  
SPARKS, MARYLAND 21152  
TELEPHONE: (410) 316-7800  
FAX: (410) 316-7818  
www.kci.com

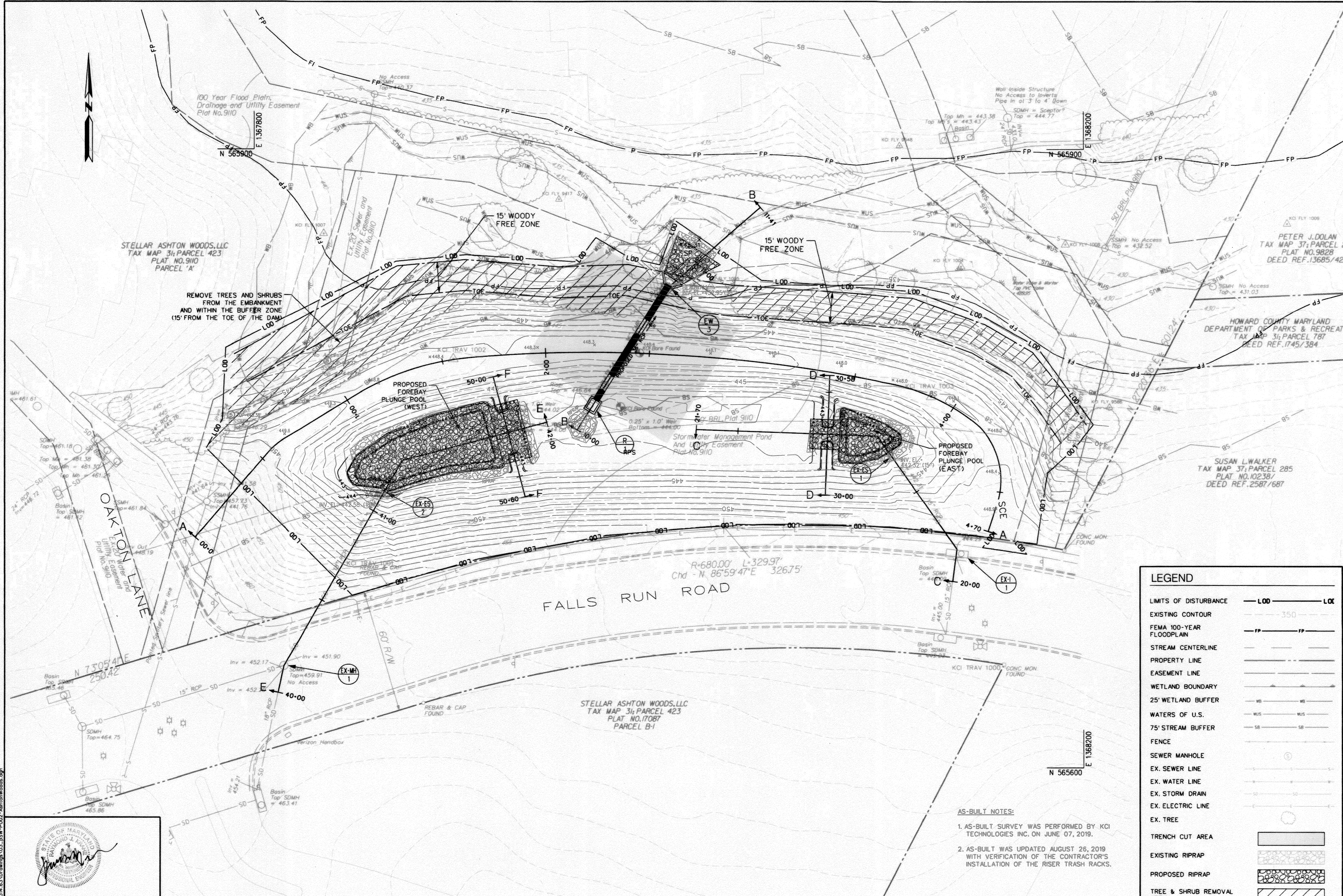


ASHTON WOODS  
STORMWATER POND REPAIR  
CAPITAL PROJECT D-1160  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
STORMWATER MANAGEMENT DIVISION  
6751 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MD 21046

AS-BUILT  
TITLE SHEET

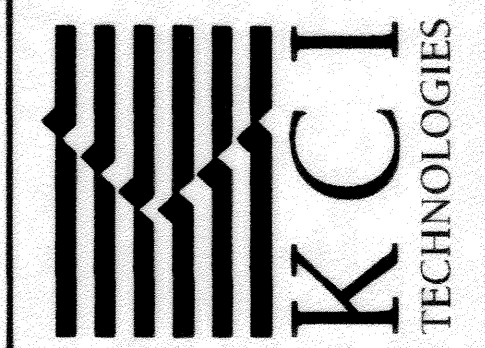
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DATE:	JANUARY 2018
KCI JOB NO.:	17133314.63
CAPITAL PROJECT NO.:	D-1160
PERMIT ISSUE:	
CONSTRUCTION ISSUE:	
SHEET NO.:	1 OF 11





NO.	REVISIONS DESCRIPTION	DATE

936 RIDGEBROOK ROAD  
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ASHTON WOODS  
 STORMWATER POND REPAIR  
 CAPITAL PROJECT D-1160  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 STORMWATER MANAGEMENT DIVISION  
 6751 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MD 21046

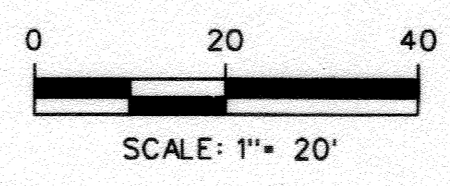
AS-BUILT  
 STORMWATER  
 MANAGEMENT  
 GRADING  
 PLAN

SCALE: 1" = 20'  
 DATE: JANUARY 2018  
 KCI JOB NO.: 17133314.63  
 CAPITAL PROJECT NO.: D-1160  
 PERMIT ISSUE:  
 CONSTRUCTION ISSUE:

SHEET NO.: 3 OF 11

LEGEND	
LIMITS OF DISTURBANCE	--- LOD --- LOC
EXISTING CONTOUR	--- 350 ---
FEMA 100-YEAR FLOODPLAIN	--- FP ---
STREAM CENTERLINE	---
PROPERTY LINE	---
EASEMENT LINE	---
WETLAND BOUNDARY	---
25' WETLAND BUFFER	---
WATERS OF U.S.	---
75' STREAM BUFFER	---
FENCE	---
SEWER MANHOLE	⊙
EX. SEWER LINE	---
EX. WATER LINE	---
EX. STORM DRAIN	---
EX. ELECTRIC LINE	---
EX. TREE	⊙
TRENCH CUT AREA	▒
EXISTING RIPRAP	⊘
PROPOSED RIPRAP	⊘
TREE & SHRUB REMOVAL AREA	▨
15' WOODY FREE ZONE LINE	---
TOE OF BANK	--- TOE ---

- AS-BUILT NOTES:
- AS-BUILT SURVEY WAS PERFORMED BY KCI TECHNOLOGIES INC. ON JUNE 07, 2019.
  - AS-BUILT WAS UPDATED AUGUST 26, 2019 WITH VERIFICATION OF THE CONTRACTOR'S INSTALLATION OF THE RISER TRASH RACKS.



AS-BUILT  
 06/07/2019  
 EP-16-22

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, RAYMOND J. KRAHE, PE, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 28634 EXPIRATION DATE: 2019-03-26

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD  
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES  
 DATE: 5/1/18

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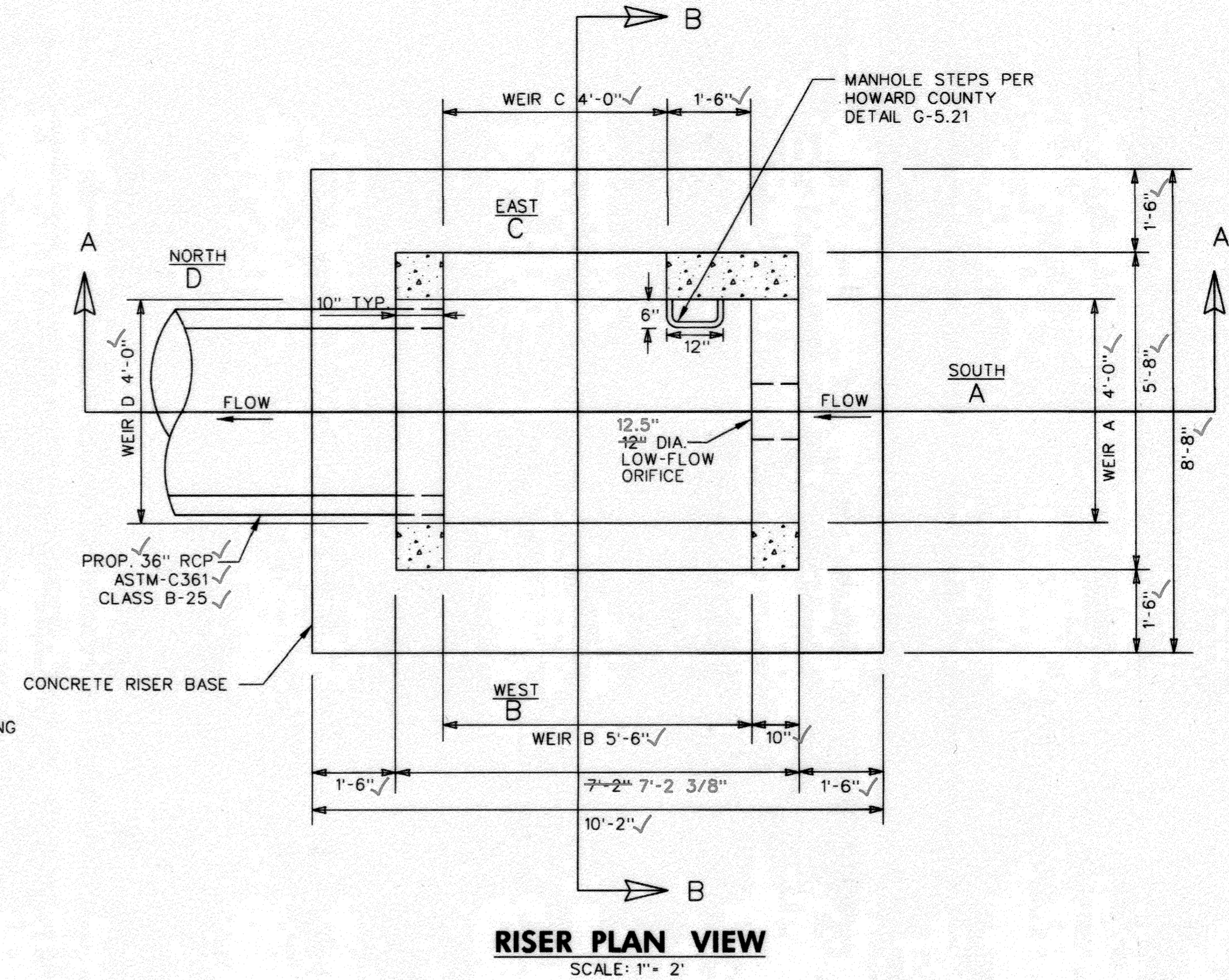
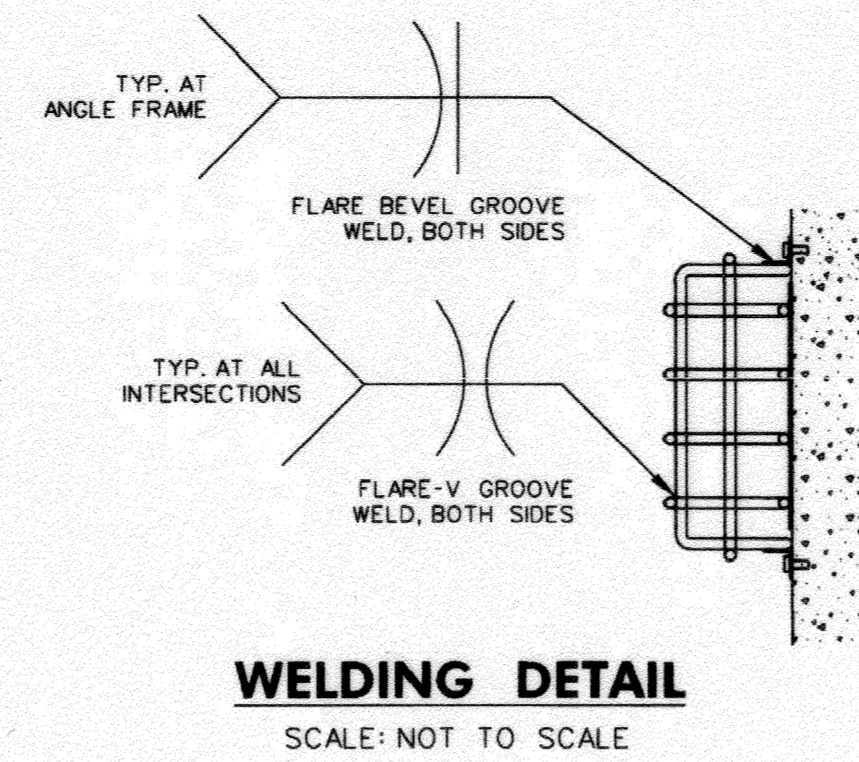
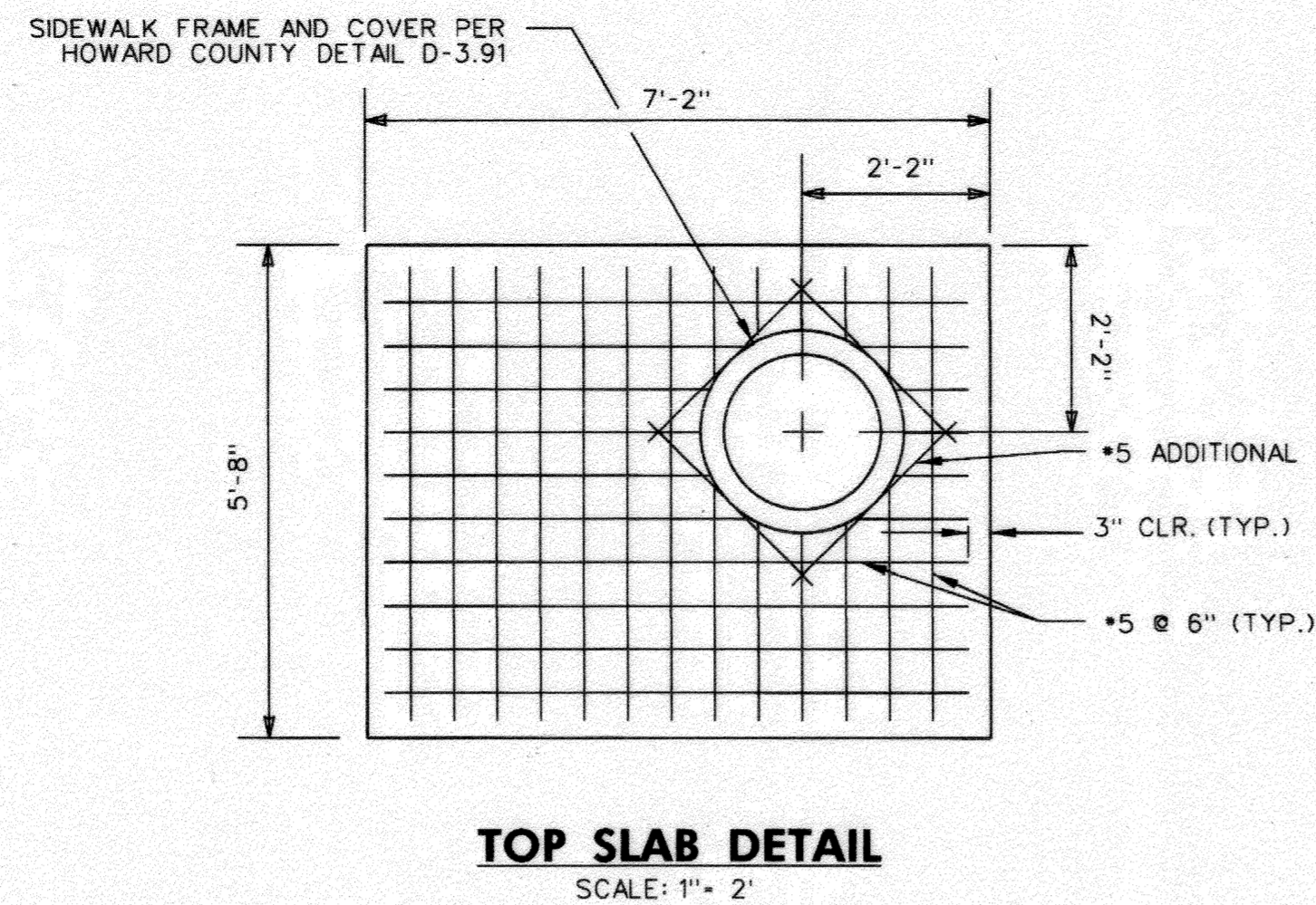
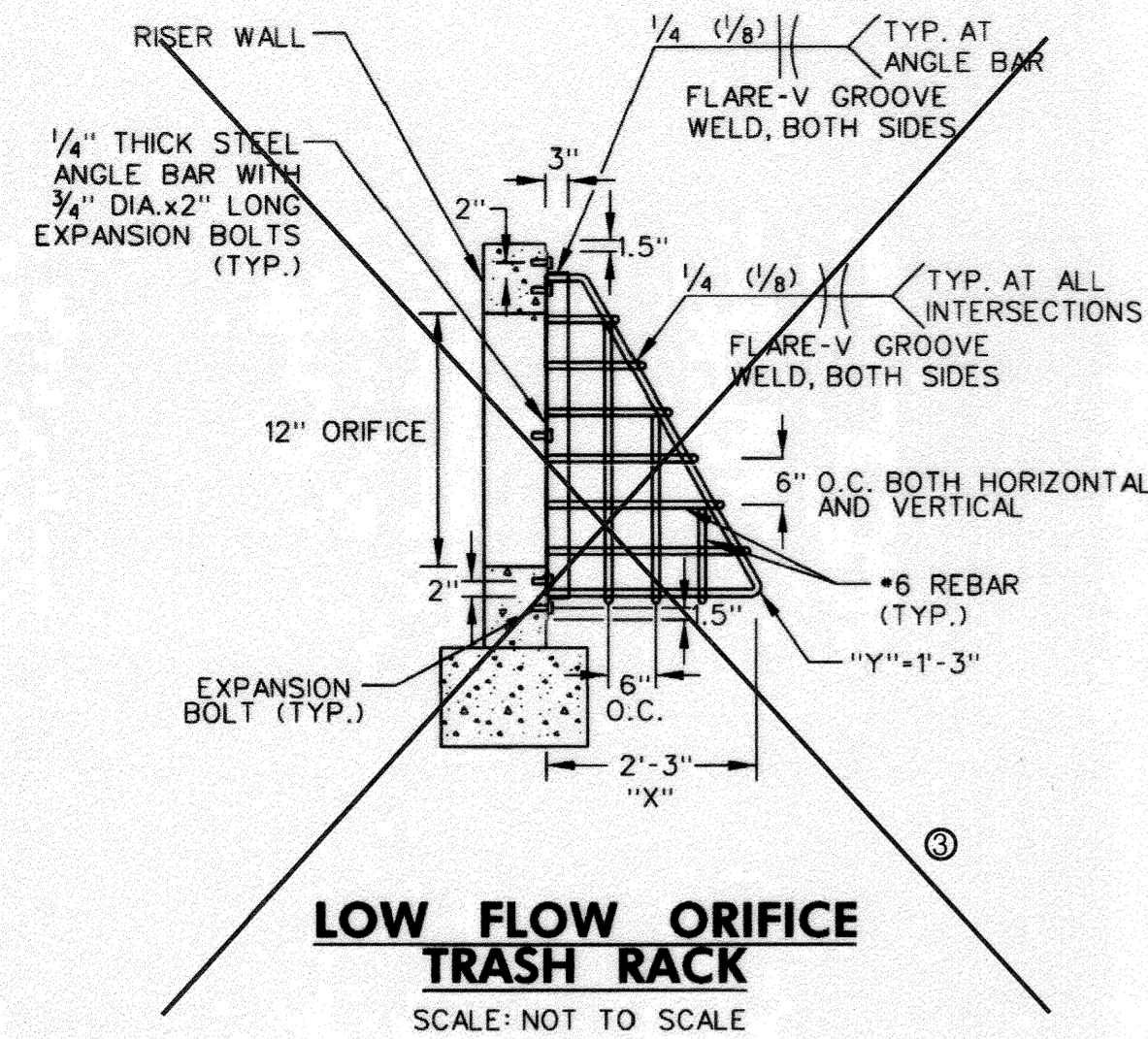






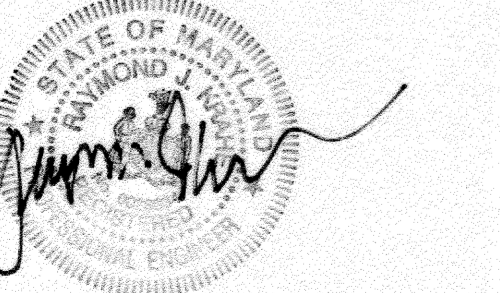
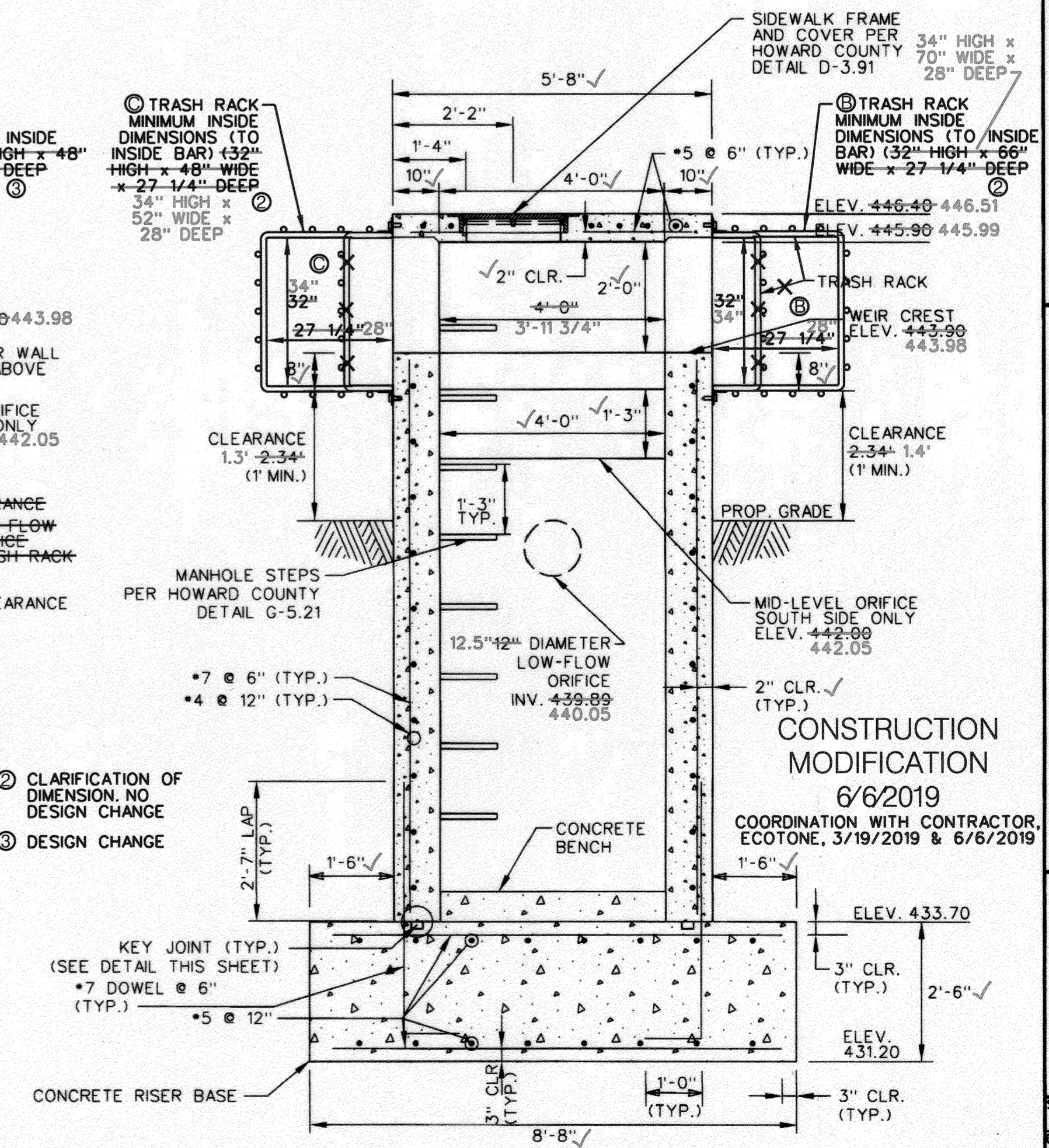
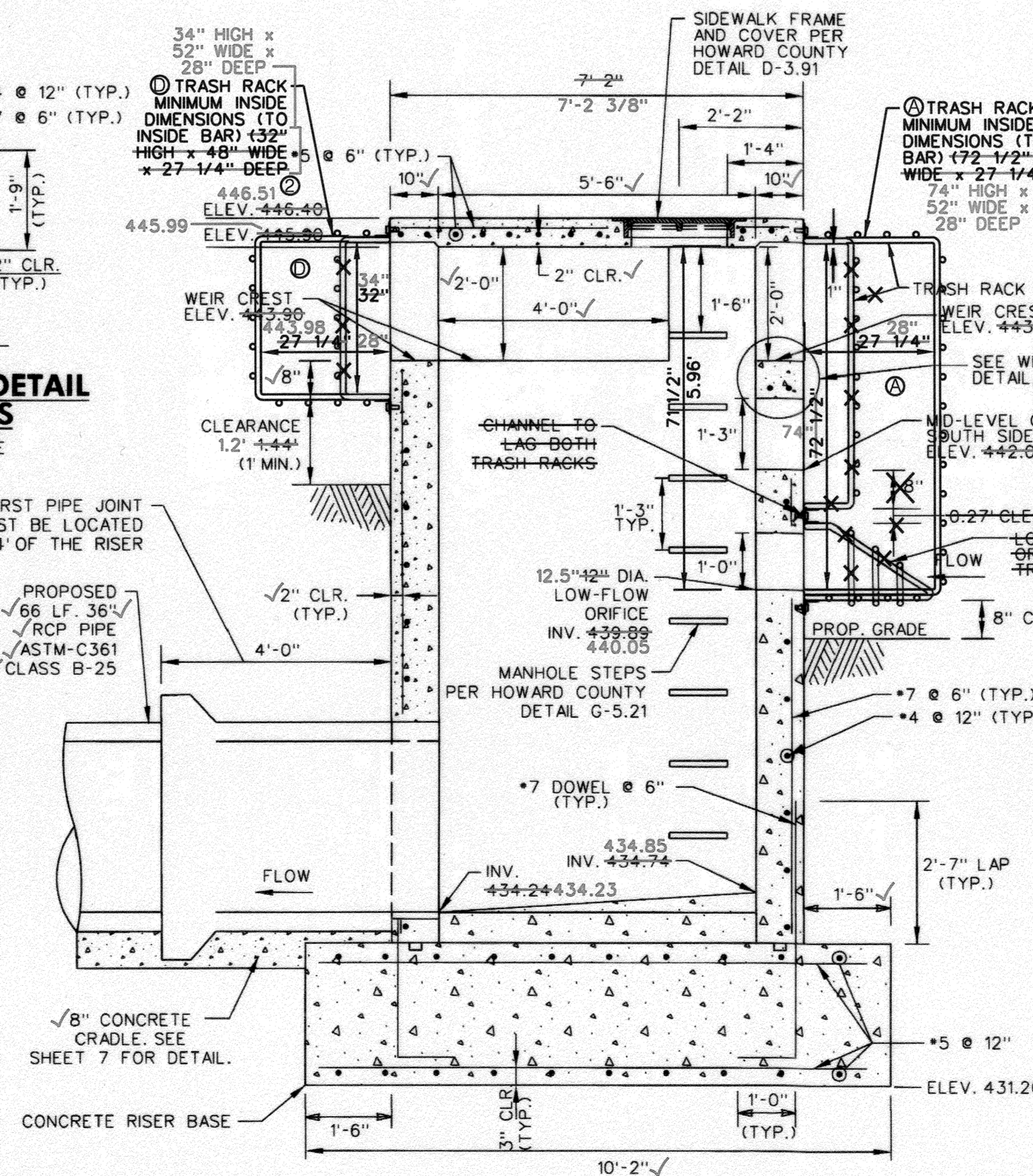
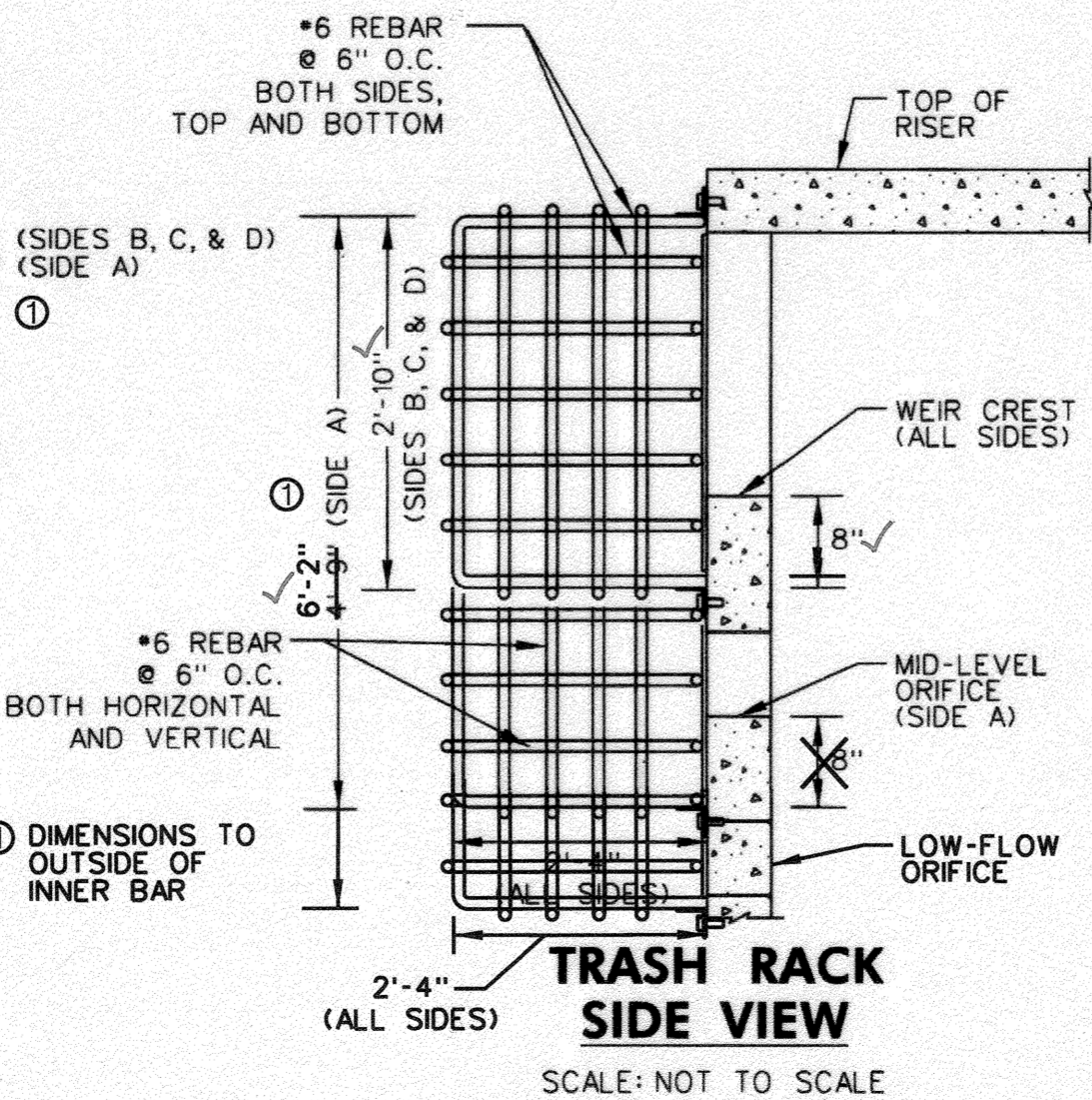
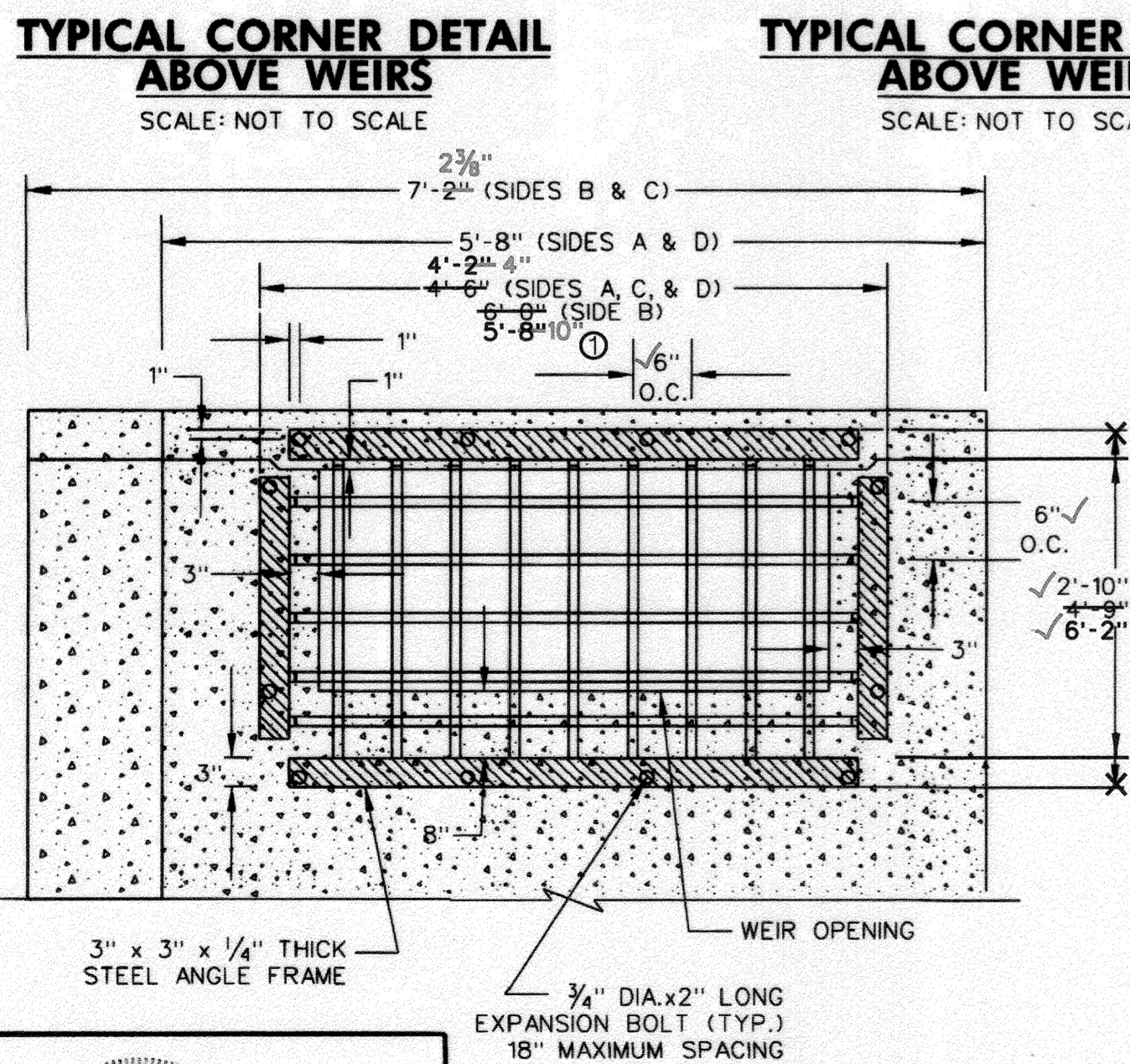
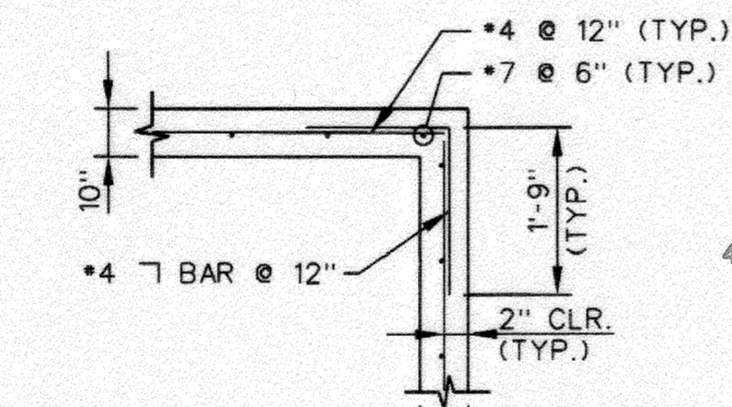
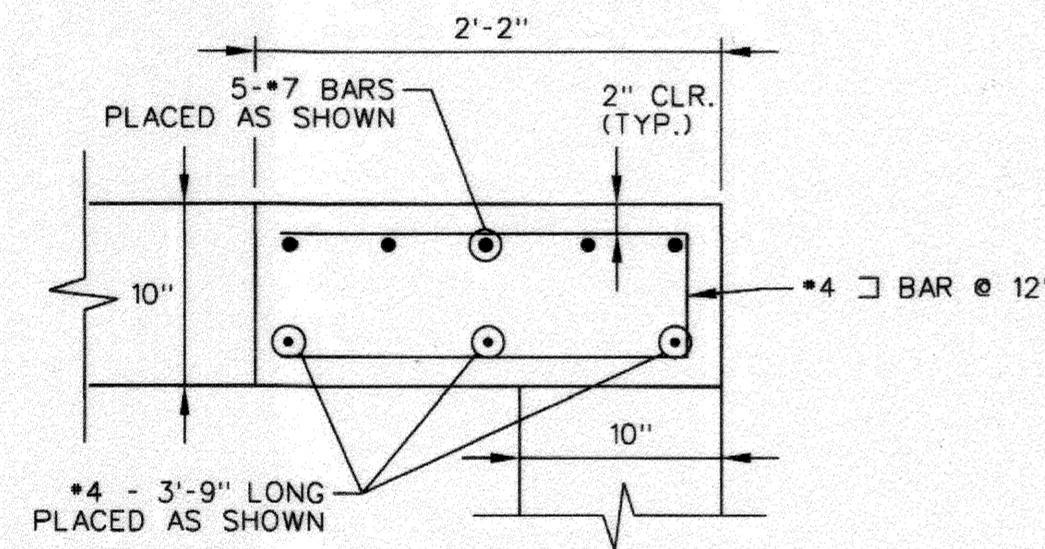
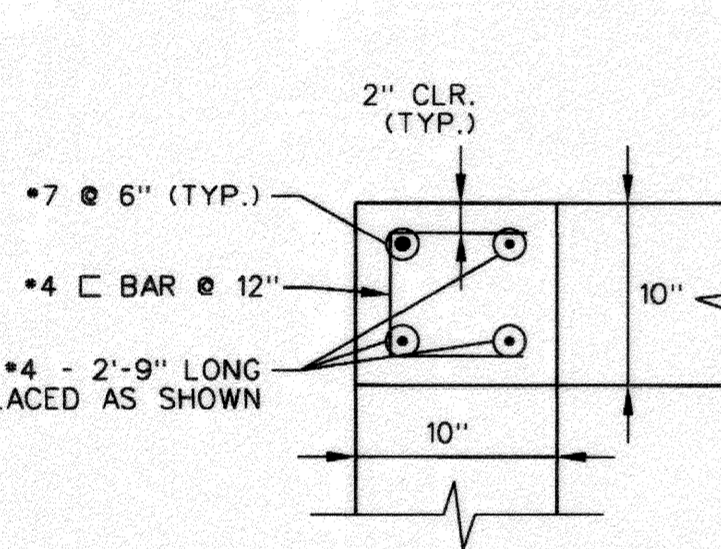
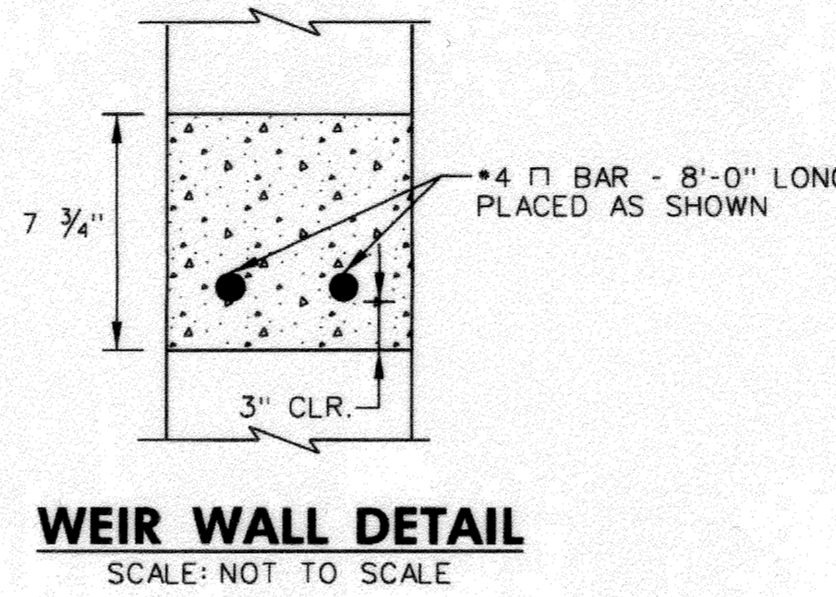
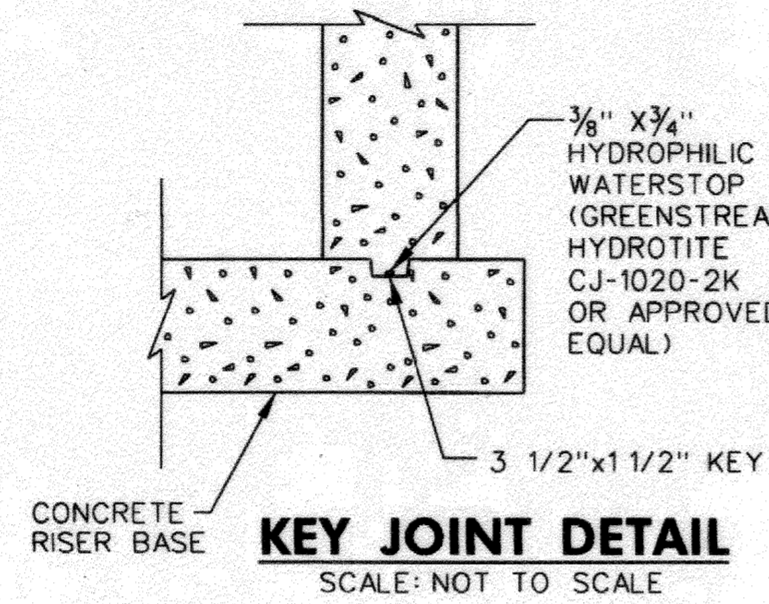






**RISER STRUCTURAL NOTES:**

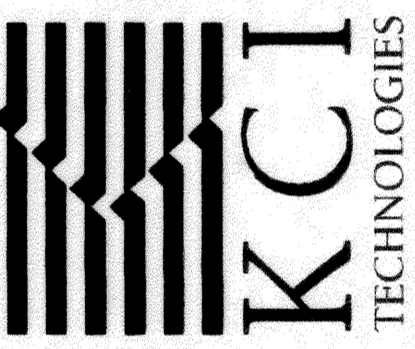
1. DETAILS ARE FOR CAST-IN-PLACE CONSTRUCTION.
2. CONCRETE UNLESS OTHERWISE NOTED SHALL BE SHA MIX. NO. 6 (4500 PSI).
3. REINFORCING STEEL SHALL CONFORM TO A 615, GRADE 60.
4. MINIMUM COVER FOR ANY BAR SHALL BE 2" UNLESS OTHERWISE NOTED.
5. ENTIRE TRASH RACK ASSEMBLY SHALL BE SHOP FABRICATED AND HOT-DIPPED GALVANIZED PER ASTM A-123 AFTER FABRICATION.
6. TRASH RACK SHALL BE CENTERED OVER EACH OPENING AND TO PROVIDE THE CLEARANCE SHOWN HEREON.



DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD  
 Chief, Bureau of Environmental Services  
 DATE: 5/6/18

NO.	REVISIONS DESCRIPTION	DATE

936 RIDGEBROOK ROAD  
 SPARKS, MARYLAND 21152  
 TELEPHONE: (410) 316-7800  
 FAX: (410) 316-7818  
 www.kci.com



ASHTON WOODS  
 STORMWATER POND REPAIR  
 CAPITAL PROJECT D-180  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 STORMWATER MANAGEMENT DIVISION  
 6751 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MD 21046

AS-BUILT  
 STORMWATER  
 MANAGEMENT  
 DETAILS

SCALE: AS SHOWN  
 DATE: JANUARY 2018  
 KCI JOB NO.: 17133314.63  
 CAPITAL PROJECT NO.: D-1160  
 PERMIT ISSUE:  
 CONSTRUCTION ISSUE:

RISER TRASH RACKS WERE  
 CONSTRUCTED 08/13/19  
 AND VERIFIED 08/26/19  
 AS-BUILT  
 06/07/2019  
 EP-16-22